

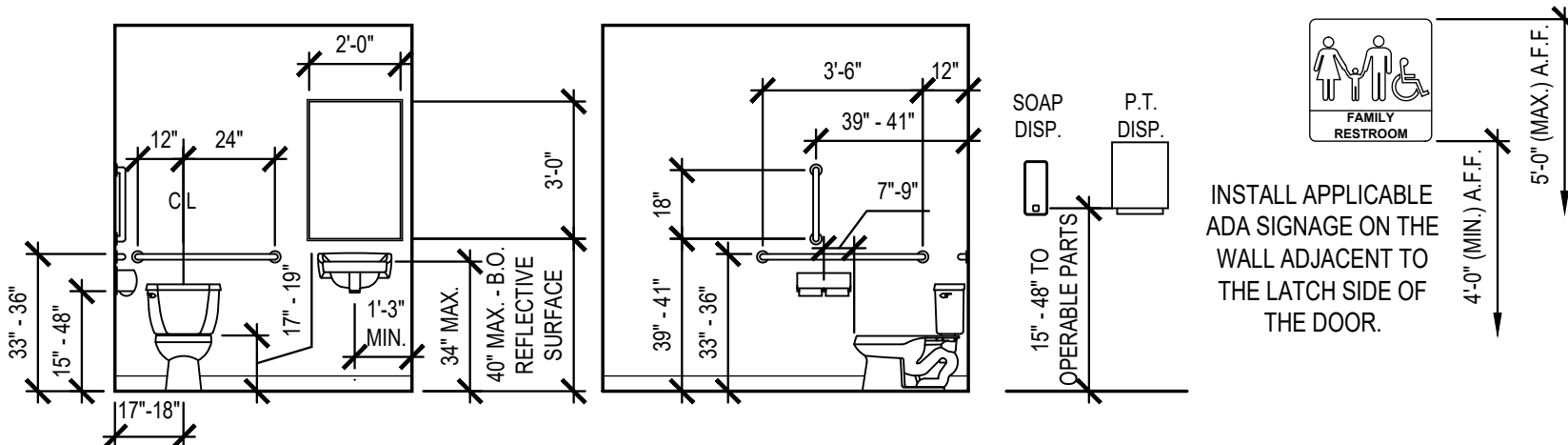
BUTLER SUPPLY

PERMIT SUBMITTAL

APRIL 29, 2025

ACCESSIBILITY NOTES:

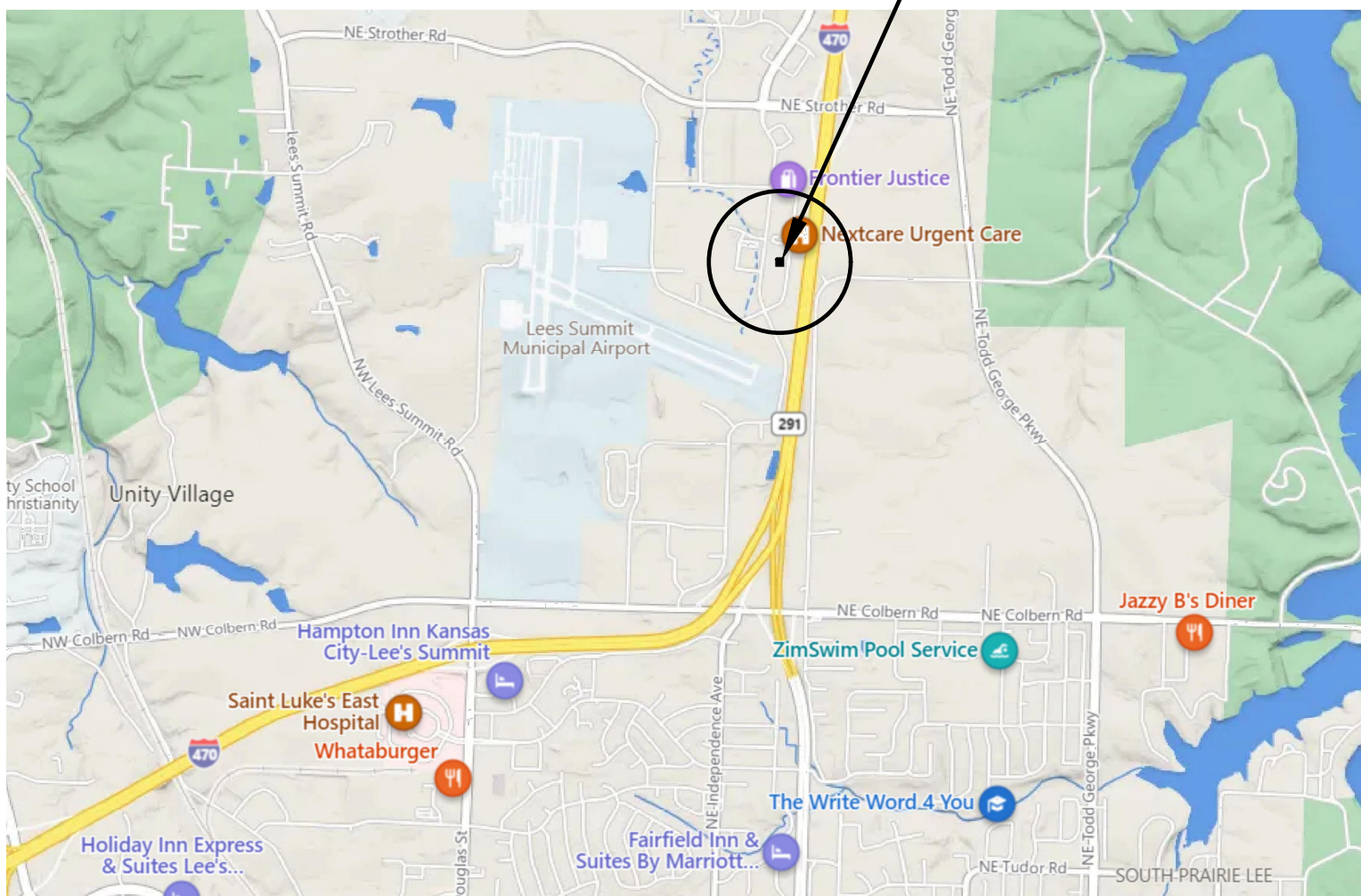
- ACCESS TO THESE FACILITIES SHALL BE PROVIDED AT PRIMARY ENTRANCES, AS REQUIRED BY ADA.
- WALKS & SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2" AND SHALL BE A MIN. OF 36" IN WIDTH.
- SURFACES WITH A SLOPE OF LESS THAN 6% GRADIENT SHALL BE AT LEAST AS SLIP RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH.
- SURFACES WITH A SLOPE OF 6% GRADIENT OR GREATER SHALL BE SLIP RESISTANT.
- SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4" PER FOOT.
- WALKS, SIDEWALKS & PEDESTRIAN WAYS SHALL BE FREE OF GRATING WHENEVER POSSIBLE. FOR GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN THE GRATINGS SHALL BE LIMITED TO 1/2" IN THE DIRECTION OF TRAFFIC FLOW.
- WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1 VERTICAL TO 20 HORIZONTAL, IT SHALL COMPLY WITH THE PROVISIONS OF A PEDESTRIAN RAMP.
- ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2". WHEN CHANGES IN LEVEL DO OCCUR, THEY SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2, EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. WHEN CHANGES IN LEVELS GREATER THAN 1/2" ARE NECESSARY, THEY SHALL COMPLY WITH THE REQUIREMENTS FOR CURB OR PEDESTRIAN RAMPS.
- EVERY REQUIRED EXIT DOORWAY SHALL BE SIZED FOR A DOOR NOT LESS THAN 3 FT. WIDE BY NOT LESS THAN 6'-8" HIGH CAPABLE OF OPENING 90° AND MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT WAY IS 32" MIN.
- THRESHOLDS MAY BE A MAX. 1/2" ABOVE ADJACENT FINISH FLOOR.
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 1/2 LBS. FOR EXTERIOR DOORS AND 5 LBS. FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS.
- THE BOTTOM 10" OF ALL DOORS, EXCEPT AUTOMATIC AND SLIDING, SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
- PROVIDE LEVER-TYPE HARDWARE, PANIC BARS, PUSH - PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE THE HARDWARE. (34" TO 48" A.F.F.)
- PROVIDE 17" (MIN.) OR 18" (MAX.) FROM ADJACENT WALL TO CENTERLINE OF WATER CLOSET.
- PROVIDE A 30"x48" CLEAR SPACE WITHIN THE TOILET ROOM THAT DOES NOT ENCROACH INTO THE DOOR SWING.
- GRAB BARS LOCATED ON EACH SIDE, OR ONE SIDE AND THE BACK OF PHYSICALLY DISABLED TOILET COMPARTMENTS SHALL BE SECURELY ATTACHED 33" MIN. AND 36" MAX. FROM THE FINISHED FLOOR TO THE TOP OF THE GRAB BAR AND PARALLEL TO THE FLOOR. THE SPACE BETWEEN WALL-MOUNTED GRAB BARS AND THE WALL SHALL BE 1 1/2". GRAB BARS AT THE SIDE SHALL BE 42" LONG, AND THE BACK END SHALL BE LOCATED 12" FROM THE BACK WALL. GRAB BARS AT THE BACK SHALL BE NOT LESS THAN 36" LONG WITH THE END CLOSEST TO THE SIDE WALL MOUNTED 12" FROM THE CENTER OF THE WATER CLOSET. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A GRAB BAR SHALL BE 1 1/4" TO 1 1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
- WATER CLOSET HEIGHT SHALL BE 17" (MIN.) OR 19" (MAX.) MEASURED TO THE TOP OF THE TOILET SEAT TO THE FINISHED FLOOR. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS, NO MORE THAN 44" A.F.F. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. OF FORCE.
- URINALS SHALL BE 17" (MAX.) ABOVE THE FLOOR AND PROJECT 13 1/2" FROM THE WALL. URINALS SHALL HAVE A CLEAR SPACE OF 30"x48" IN FRONT. FLUSH VALVES SHALL BE AUTOMATIC OR MOUNTED NO MORE THAN 44" A.F.F. IF HAND-OPERATED.
- IN FRONT OF LAVATORIES, PROVIDE A 30"x48" CLEAR SPACE LOCATED 25" (MAX.) FROM THE LEADING EDGE OF THE LAVATORY TOWARD THE MOUNTING WALL. KNEE CLEARANCE SHALL BE 11" DEEP (MIN.) AT 9" A.F.F. AND 8" DEEP (MIN.) AT 27" A.F.F. BETWEEN 9" AND 27" A.F.F., THE KNEE CLEARANCE SHALL BE PERMITTED TO REDUCE AT A RATE OF 1" IN DEPTH FOR EACH 6" IN HEIGHT.
- ALL ACCESSIBLE LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER THAN 34" A.F.F.
- HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.



H2 TYP. ADA TOILET DIMENSIONS

SCALE: =

- FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER-OPERATED, PUSH-TYPE, AND ELECTRONIC CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET IS OPEN FOR AT LEAST 10 SECONDS.
- LOCATE PAPER TOWEL DISPENSERS, SOAP DISPENSERS, SANITARY NAPKIN DISPENSERS, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS BETWEEN 15" AND 48" A.F.F.
- LOCATE TISSUE DISPENSERS ON THE WALL 7" (MIN.) AND 9" (MAX.) FROM THE FRONT EDGE OF THE TOILET SEAT TO THE CENTERLINE OF DISPENSER WITH THE OUTLET BETWEEN 15" AND 48" A.F.F.
- ACCESSIBLE RESTROOMS SHALL BE PROVIDED WITH SIGNAGE DESIGNED AND LOCATED PER SECTION 703 OF THE ADA DESIGN GUIDELINES.
- DOORS IN ACCESSIBLE ROUTES SHALL BE DESIGNED TO MEET CLEARANCE REQUIREMENTS PER SECTION 404 OF THE ADA DESIGN GUIDELINES.
- WALKS, HALLS, CORRIDORS, PASSAGEWAYS, AISLES OR OTHER CIRCULATION SPACES SHALL HAVE 80" MINIMUM CLEAR HEADROOM.
- OBJECTS PROJECTING FROM WALLS WITH THEIR LEADING EDGES BETWEEN 27" AND 80" ABOVE THE FINISH FLOOR SHALL PROTRUDE NO MORE THAN 4" INTO WALKS, HALLS, CORRIDORS, PASSAGEWAYS OR AISLES. OBJECTS MOUNTED AT OR BELOW 27" ABOVE FINISH FLOOR MAY PROTRUDE ANY AMOUNT.
- OBJECTS THAT ARE BETWEEN 27" AND 80" A.F.F. AND MOUNTED ON POSTS MAY EXTEND BEYOND THE POSTS A MAXIMUM OF 12". OBJECTS MOUNTED BETWEEN POSTS, WHERE THE SPACE BETWEEN THE POSTS IS GREATER THAN 12", THE LOWEST EDGE OF THE OBJECT SHALL BE LOCATED 27" MAX. AND 80" MIN. A.F.F.
- IF CARPET OR CARPET TILE IS USED ON A GROUND OR FLOOR SURFACE IN A COMMON USE AREA, IT SHALL HAVE FIRM BACKING OR NO BACKING. THE MAXIMUM PILE HEIGHT SHALL BE 1/2" EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE EXPOSED EDGE, AND TRIM SHALL COMPLY WITH THE REQUIREMENTS FOR CHANGES IN LEVEL.



F1 VICINITY MAP

SCALE: =

CONSTRUCTION NOTES:

- PERFORM ALL WORK IN ACCORDANCE WITH ACCEPTABLE TRADE PRACTICE TO ENSURE THE HIGHEST QUALITY FINISHED PRODUCT - EXPRESSED OR IMPLIED. PERFORM ALL WORK BY SKILLED MECHANICS IN ACCORDANCE WITH ESTABLISHED STANDARDS OF WORKMANSHIP IN EACH OF THE VARIOUS TRADES.
- WHEN THE PROJECT REQUIREMENTS REQUIRE THAT THE INSTALLATION OF WORK SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS, PERFORM THE WORK IN STRICT ACCORDANCE WITH THE MOST CURRENT WRITTEN MANUFACTURER'S INSTRUCTIONS.
- ALL PRODUCTS AND EQUIPMENT SHALL BE DELIVERED IN UNDAMAGED CONDITION AND STORED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO AVOID DISRUPTION OF THE WORK OR DAMAGE TO THE ITEMS. REPLACE DAMAGED OR UNFIT MATERIALS, AT NO COST TO THE OWNER.
- COORDINATE BLOCKING REQUIREMENTS WITH ADJACENT OR RELATED TRADES, ACCESSORIES, EQUIPMENT AND FIXTURES. INSTALL REQUIRED BLOCKING AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL WEATHER-EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER. EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WATERPROOF.
- REPAIR PROPERTY DAMAGE BY THE INSTALLERS TO A LIKE NEW CONDITION, OR REPLACE DAMAGED SURFACES AND MATERIALS OF THE PREVIOUSLY INSTALLED WORK BY OTHER TRADES, INSTALLERS, AND SUBCONTRACTORS.
- ALLOWABLE TOLERANCES - UNLESS OTHERWISE NOTED OR INDICATED, THE FOLLOWING TOLERANCES SHALL APPLY TO ALL WORK:
 - ALL VERTICAL SURFACES SHALL BE PLUMB OR CONSTRUCTED TO THE EXACT SLOPES OR ANGLES INDICATED.
 - ALL HORIZONTAL SURFACES SHALL BE LEVEL OR CONSTRUCTED TO THE EXACT ANGLE INDICATED OR INTENDED.
 - WALL AND SOFFIT INTERSECTIONS SHALL BE 90° OR THE EXACT ANGLE INDICATED OR INTENDED.
 - ALL CORNERS AND EDGES SHALL BE STRAIGHT AND TRUE WITHOUT DENTS, WAVES, BULGES OR OTHER BLEMISHES.
 - ALL JOINTS SHALL BE TIGHT, STRAIGHT, EVEN, AND SMOOTH.
 - ALL OPERABLE ITEMS SHALL OPERATE SMOOTHLY WITHOUT STICKING OR BINDING AND WITHOUT EXCESSIVE
- THE CONTRACTOR SHALL NOTIFY THE OWNER WHEN THE WORK IS SUBSTANTIALLY COMPLETE AND READY FOR INSPECTION. UPON INSPECTION, PROVIDE WRITTEN OPERATION AND MAINTENANCE INSTRUCTIONS AND WARRANTIES FOR ALL EQUIPMENT AND MATERIALS INSTALLED. PROVIDE WRITTEN GUARANTEES FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

GENERAL NOTES:

- THE CONTRACTOR SHALL SECURE AND PAY FOR GOVERNMENT LICENSES, INSPECTIONS, TESTING, TEMPORARY UTILITIES AND PERMITS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS AND/OR REGULATORY BODY HAVING AUTHORITY.
- CONTRACTORS SHALL VISIT THE SITE WHILE BIDDING AND SHALL FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND THE REQUIREMENTS OF THE PROJECT AND CONSTRUCTION DOCUMENTS PRIOR TO DEVELOPING THEIR BID, FABRICATION / CONSTRUCTION, AND PURCHASING. MATERIAL QUANTITIES SHALL BE BASED ON ACTUAL FIELD CONDITIONS AND MEASUREMENTS. DO NOT RELY ON SCALING DRAWINGS FOR ACCURATE DIMENSIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS DISCOVERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTIONS AND/OR REPAIRS REQUIRED FOR FAILING TO DO SO.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL CONSTRUCTION DOCUMENTS TO THEIR SUBCONTRACTORS AS REQUIRED FOR THEM TO DEVELOP A COMPLETE BID FOR THEIR WORK AND TO HAVE A COMPLETE UNDERSTANDING OF COORDINATION NEEDED WITH OTHER SUBCONTRACTORS FOR RELATED HIDDEN OR EXPOSED WORK TO ENSURE EFFICIENT AND ORDERLY INSTALLATION.
- THE ARCHITECT ASSUMES NO LIABILITY FOR THE SERVICES AND/OR CONSTRUCTION DOCUMENTS OF DESIGN SUB-CONSULTANTS COMPILED INTO THE SET OF DOCUMENTS ISSUED BY THE ARCHITECT. THESE DESIGN SERVICES MAY INCLUDE, BUT ARE NOT LIMITED TO, CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, PRE-ENGINEERED METAL BUILDING DESIGN, TILT-UP DESIGN, TRUSS SYSTEM DESIGN, AUTOMATIC FIRE SPRINKLER AND/OR ALARM SYSTEMS, LOW-VOLTAGE ELECTRICAL, TELECOMMUNICATION AND SECURITY SYSTEMS AND GUTTER / DOWNSPOUT DESIGN.
- UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR SHALL PROVIDE AND PAY FOR LABOR, MATERIALS, EQUIPMENT, MACHINERY, SCAFFOLDING, SHORING, TOOLS, LAYOUT, ON-SITE DIMENSIONING, TRANSPORTATION, UTILITIES, AND OTHER FACILITIES AND SERVICES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS. THIS SHALL ALSO INCLUDE NECESSARY CUTTING, PATCHING AND REPAIRING OF EXISTING CONSTRUCTION MATERIALS IN PLACE. ALL WORK AND MATERIAL SHALL COMPLY WITH THE APPLICABLE GOVERNING CODES LISTED.
- WHERE DETAILS AND DESIGN INTENT ARE NOT CLEAR, THE CONTRACTOR SHALL CONSULT THE ARCHITECT FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR STRUCTURAL MODIFICATIONS, INSTALLATIONS AND ERECTION.
- CONTRACTORS SHALL TAKE CARE TO PROTECT ADJACENT AREAS FROM DUST AND DAMAGE DURING THE CONSTRUCTION PROCESS AND SHALL CLEAN UP AFTER THEMSELVES AT THE END OF EACH WORKING DAY. ANY DAMAGE DONE TO ADJACENT AREAS MUST BE REPAIRED TO MATCH ORIGINAL CONDITIONS OR TO THE OWNER'S SATISFACTION. REPAIRS ARE TO BE PAID FOR BY THE CONTRACTOR RESPONSIBLE.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY ADDITIONAL WORK OR REVISIONS REQUIRED DUE TO SITE CONDITIONS OR ADDITIONAL REQUIREMENTS OF ANY REGULATORY BODIES HAVING AUTHORITY.
- FOR THE DURATION OF THE PROJECT AND AT ALL TIMES OF EACH DAY, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE CONDITIONS, SECURITY AND SAFETY FOR WORKERS AND THE GENERAL PUBLIC, AS REQUIRED BY THE REGULATORY BODY HAVING AUTHORITY.
- THE GENERAL CONTRACTOR SHALL PURCHASE AND MAINTAIN INSURANCE COVERAGE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER. VERIFY AND COORDINATE WITH THE OWNER'S REPRESENTATIVE FOR ANY ADDITIONAL REQUIREMENTS.
- THE OWNER OR THE OWNER'S SUBCONTRACTORS MAY OCCUPY PORTIONS OF THE PROJECT DURING THE FINAL STAGE OF CONSTRUCTION. COORDINATE AND COOPERATE WITH THE OWNER TO MINIMIZE CONFLICT AND FACILITATE THE OWNER'S OPERATION.
- THE CONTRACTOR SHALL PROVIDE SECURITY OF THE WORK, INCLUDING TOOLS AND UNINSTALLED MATERIALS. PROTECT THE WORK, STORED PRODUCTS, CONSTRUCTION EQUIPMENT, AND OWNERS' PROPERTY FROM THEFT AND VANDALISM, AND PROTECT THE PREMISES FROM ENTRY BY UNAUTHORIZED PERSONNEL UNTIL FINAL ACCEPTANCE BY THE OWNER.
- CONTRACTOR SHALL COORDINATE STAGING AREAS AS REQUIRED BY THE LANDLORD / OWNER.
- THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES.
- THE STRUCTURAL ENGINEER AND ARCHITECT MUST BE NOTIFIED AND MUST GIVE APPROVAL PRIOR TO ANY STRUCTURAL MEMBER(S) BEING CUT OR MODIFIED TO ACCOMMODATE THE INSTALLATION OF ANY PIPES, DUCTS OR OTHER CONSTRUCTION.
- THE STRUCTURAL ENGINEER AND ARCHITECT MUST BE NOTIFIED AND MUST GIVE APPROVAL PRIOR TO ANY MODIFICATION TO THE ROOF SYSTEM OR ADDING ANY ADDITIONAL ROOF-MOUNTED EQUIPMENT.

DISCLAIMER:

THESE DRAWINGS ARE CONSIDERED A "BUILDER'S SET" AND BY BEGINNING CONSTRUCTION, THE CONTRACTOR GUARANTEES TO THE ARCHITECT, THAT THE CONTRACTOR HAS THE COMPETENCE AND SKILL IN CONSTRUCTION NECESSARY TO BUILD THE PROJECT WITH THESE DRAWINGS. THE CONTRACTOR WILL BE REQUIRED TO ADAPT THE DRAWINGS TO ACTUAL FIELD CONDITIONS AND MAKE LOGICAL ADJUSTMENTS IN FIT, FORM, DIMENSION AND QUANTITY. IN THE EVENT ADDITIONAL DETAIL OR GUIDANCE IS NEEDED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT. FAILURE TO GIVE NOTICE SHALL RELIEVE THE ARCHITECT OF RESPONSIBILITY FOR ANY RESULTANT EXPENSES, REPAIRS OR ADDITIONAL WORK. IT IS UNDERSTOOD AND AGREED THAT IF THE ARCHITECT IS NOT HIRED TO DO CONSTRUCTION OBSERVATION OR ANY OTHER CONSTRUCTION PHASE SERVICES, THAT THE ENTITY HIRED TO PERFORM SUCH SERVICES ASSUMES ALL RESPONSIBILITY FOR THESE SERVICES, AND THE CLIENT WAIVES ANY CLAIMS AGAINST THE ARCHITECT THAT MAY BE IN ANY WAY CONNECTED THERETO.

ABBREVIATIONS:*

*NOTE: THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY ABBREVIATIONS NOT NOTED AND REQUEST CLARIFICATIONS.

@	AT	JT	JOINT
ACT	ACOUSTIC CEILING TILE		
ADJ	ADJUSTABLE	KS	KNEE SPACE
AFF	ABOVE FINISHED FLOOR		
ALUM	ALUMINUM	L	LONG
ANOD	ANODIZED	LB (#)	POUND
ATT	ATTENUATION	LVL	LAMINATED VENEER LUMBER
BD	BOARD	MAX	MAXIMUM
BET	BETWEEN	MDO	MEDIUM DENSITY OVERLAY
BF	BARRIER FREE	MECH	MECHANICAL
BIT	BITUMINOUS	MFR	MANUFACTURER
BLDG	BUILDING	MICRO	MICROWAVE
BO	BOTTOM OF	MIN	MINIMUM
BTM	BOTTOM	MO	MASONRY OPENING
		MR	MOISTURE RESISTANT
		MTD	MOUNTED
		MTL	METAL
		NIC	NOT IN CONTRACT
		NO	NUMBER
		NOM	NOMINAL
		O.C.	ON CENTER
		O.D.	OUTSIDE DIAMETER
		O.H.	OVERHEAD OR OPPOSITE HAND
		OSB	ORIENTED STRAND BOARD
		OZ	OUNCE
		PREFAB	PREFABRICATED
		PLAM	PLASTIC LAMINATE
		PLYWD	PLYWOOD
		PR	PAIR
		PT	PRESSURE TREATED
		PNT	PAINT
		PEMB	PRE-ENGINEERED MTL BLDG
		DISHWASHER	QUANTITY
EA	EACH	R	RISER
EJ	EXPANSION JOINT	RCP	REFLECTED CEILING PLAN
EQ	EQUAL	REF	REFRIGERATOR, REFERENCE
ETR	EXISTING TO REMAIN	REINF	REINFORCED
EXG	EXISTING	REQD	REQUIRED
EXP	EXPOSED TO STRUCTURE	RM	ROOM
		RO	ROUGH OPENING
FD	FLOOR DRAIN	RCB	RUBBER COVE BASE
FE	FIRE EXTINGUISHER, FINISHED		
END	FINISHED FLOOR	SC	SEALED CONCRETE
F&I	FURNISH AND INSTALL	SF	SQUARE FEET
FLR	FLOOR	SIM	SIMILAR
FR	FIRE RETARDANT	SQ	SQUARE
FRP	FIBER-REINFORCED PLASTIC	SS	STAINLESS STEEL
FV	FIELD VERIFY	ST	STAIN
GA	GAUGE	T	TREAD
GALV	GALVANIZED	TBD	TO BE DETERMINED
GC	GENERAL CONTRACTOR	TO	TOP OF
GFI	GROUND FAULT CIRCUIT INTERRUPTER	TYP	TYPICAL
GL	GLASS	UNO	UNLESS NOTED OTHERWISE
GYP	GYPSPUM BOARD	VCT	VINYL COMPOSITION TILE
		VERT	VERTICAL
H	HIGH		
HB	HOSE BIB		
HT	HEIGHT	W	WASHER, WIDE
HDW	HARDWARE	W	WITH
HRDWD	HARDWOOD	WD	WOOD
HM	HOLLOW METAL	WH	WATER HEATER
HR	HOUR	WC	WALK-IN CLOSET
		WWF	WELDED WIRE FABRIC

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Seal:



04.29.25

MICHAEL MOORES, MO Architect #2009032812

Project Number: 2503

Project Type: TENANT FINISH

Project Name and Address:

BUTLER SUPPLY

2736 NE McBaine Drive
Lee's Summit, Missouri 64064

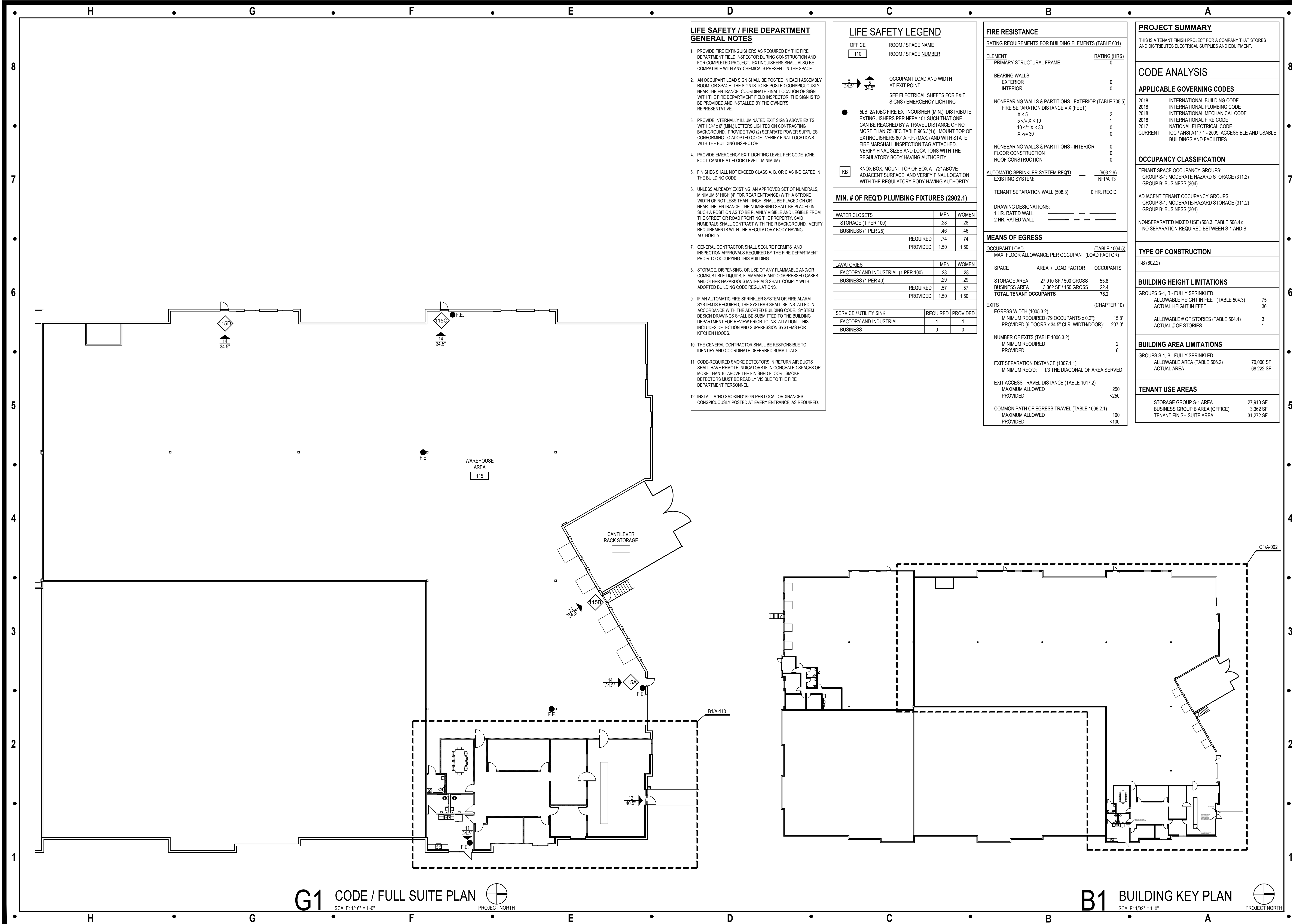
Issue: Date:

Permit Submittal 04.29.25

Sheet Title:

COVER / MAP
GENERAL NOTES
ADA NOTES

A-001



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Seal:

MICHAEL MOORES, MO Architect #2009032812

Project Number: 2503
Project Type: TENANT FINISH
Project Name and Address:
BUTLER SUPPLY
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Lee's Summit, Missouri 64064

Issue: Permit Submittal
Date: 04.29.25

Sheet Title:
BUILDING KEY PLAN
FULL SUITE PLAN
CODE INFORMATION
A-002

DOOR AND FRAME LEGEND

DOOR	MATERIAL	DESCRIPTION
	WD	STAIN-GRADE FLUSH / SLAB SOLID CORE WOOD DOOR.
	HM	HOLLOW METAL - 18 GAUGE COLD ROLLED STEEL / POLYSTYRENE FOAM CORE (CLASSIFICATION SD1 - LEVEL 2 - MODEL 1) 1 3/4"
	AL	ALUMINUM
	ETR	EXISTING TO REMAIN
FRAME	MATERIAL	DESCRIPTION
	WD	WOOD
	HM	HOLLOW METAL - 16 GAUGE COLD ROLLED STEEL
	AL	ALUMINUM
	ETR	EXISTING TO REMAIN

HARDWARE SETS

1

1 1/2 PAIR BUTT HINGES, 1" PUSH / PULL SET, KEYED (INTERIOR AND EXTERIOR) CYLINDER LOCK WITH LOCKED INDICATOR, SURFACE-MOUNTED CLOSER, ALUMINUM THRESHOLD, SWEEP AND PILE WEATHERSEAL SET

2

DOUBLE-ACTING SPRING-LOADED HINGES PER DOOR MANUFACTURER

3

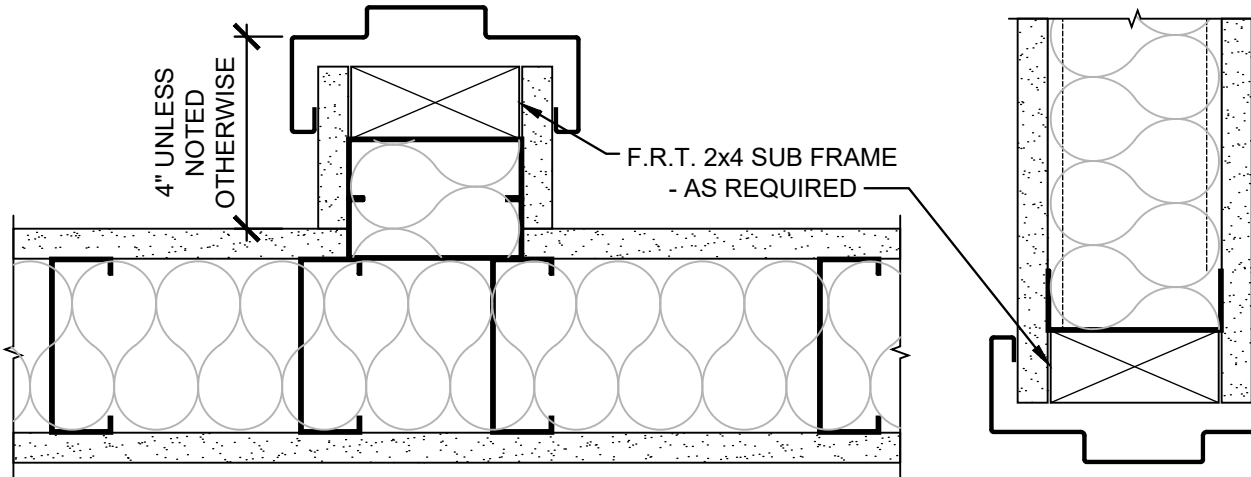
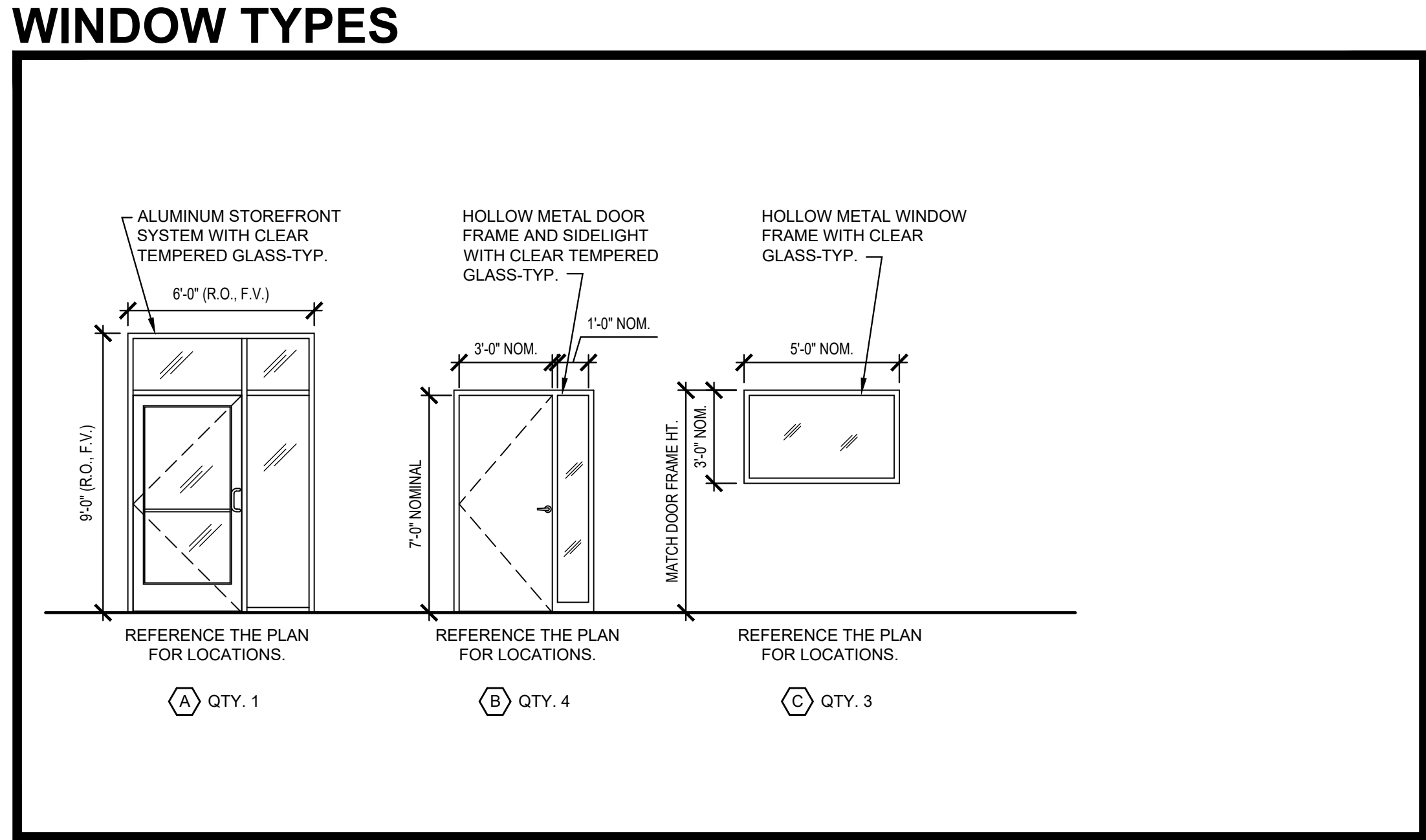
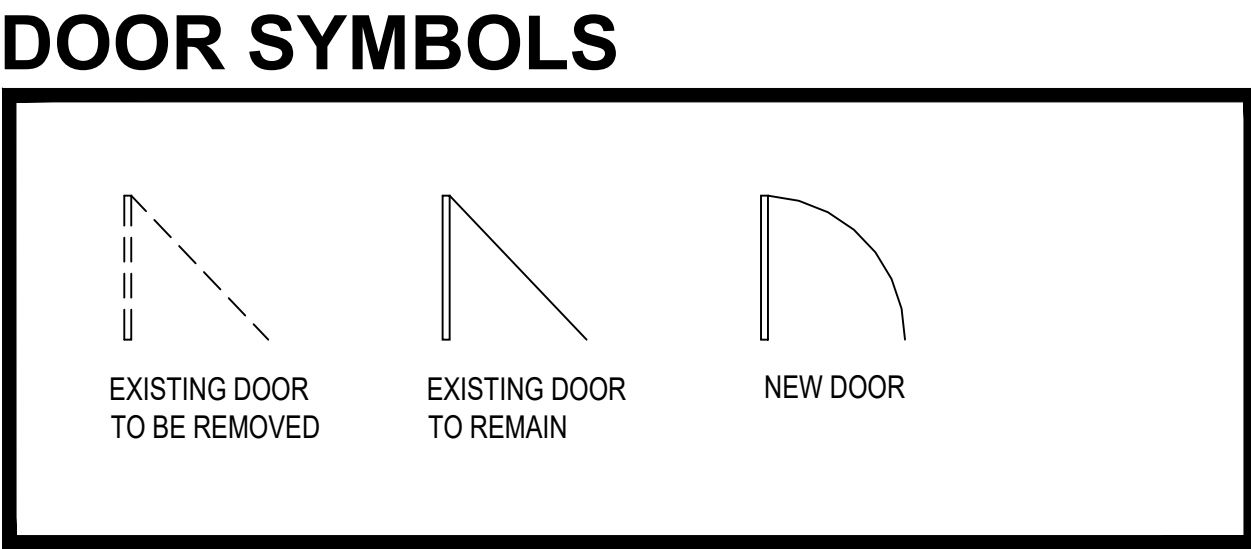
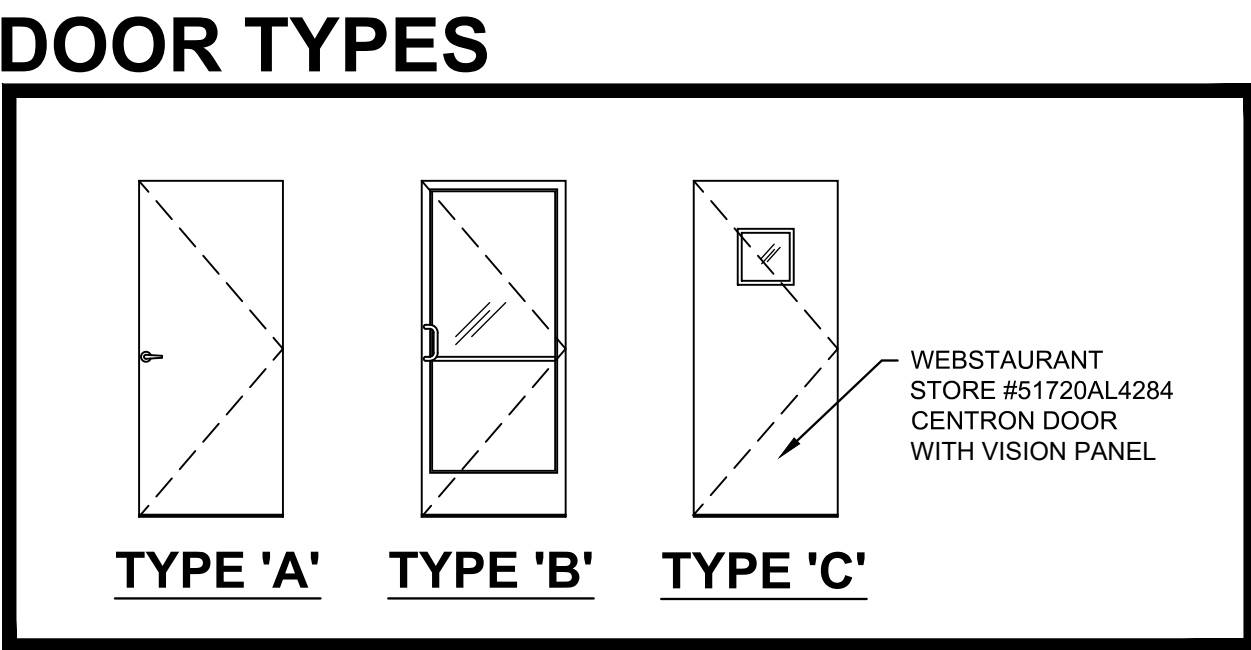
3-HINGES
1-LEVER-HANDLE OFFICE FUNCTION LOCKSET
1-WALL STOP

4

EXISTING TO REMAIN

5

3-HINGES
1-LEVER-HANDLE PRIVACY FUNCTION LOCKSET
1-WALL STOP



H2

HOLLOW METAL FRAME DETAILS

SCALE: 3" = 1'-0"

DOOR SCHEDULE

DOOR						FRAME			DETAILS - (SEE SHEET A-003)				KEY NOTES / COMMENTS
NO.	TYPE	SIZE	MATERIAL	PUSH FINISH	PULL FINISH	MATERIAL	PUSH FINISH	PULL FINISH	HEAD	JAMB	THRESHOLD	HARDWARE	
101A	B	1 3/4" X 3'-6" X 7'-0"	AL	ANOD	ANOD	AL	ANOD	ANOD	-	-	-	1	B.
101B	C	3'-6" X 7'-0"	AL	ANOD	ANOD	HM	PNT	PNT	-	H2/A-003 (SIMILAR)	-	2	C.
102A	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	
102B	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	
103	C	3'-6" X 7'-0"	AL	ANOD	ANOD	HM	PNT	PNT	-	H2/A-003 (SIMILAR)	-	2	C.
104	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	D.
106A	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	D.
106B	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	D.
107	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	
108	C	3'-6" X 7'-0"	AL	ANOD	ANOD	HM	PNT	PNT	-	H2/A-003 (SIMILAR)	-	2	C.
109	B	1 3/4" X 3'-0" X 7'-0" (ETR)	AL	ANOD	ANOD	AL	ANOD	ANOD	-	-	-	4	A., B.
110	A	1 3/4" X 3'-0" X 7'-0" (ETR)	WD	-	-	WD	-	-	-	-	-	4	A.
111	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	3	D.
112	A	1 3/4" X 3'-0" X 7'-0" (ETR)	WD	-	-	WD	-	-	-	-	-	4	A.
113	A	1 3/4" X 3'-0" X 7'-0"	WD	ST	ST	HM	PNT	PNT	-	H2/A-003	-	5	
115A	A	1 3/4" X 3'-0" X 7'-0" (ETR)	HM	-	-	HM	-	-	-	-	-	4	A.
115B	A	1 3/4" X 3'-0" X 7'-0" (ETR)	HM	-	-	HM	-	-	-	-	-	4	A.
115C	A	1 3/4" X 3'-0" X 7'-0" (ETR)	HM	-	-	HM	-	-	-	-	-	4	A.
115D	A	1 3/4" X 3'-0" X 7'-0" (ETR)	HM	-	-	HM	-	-	-	-	-	4	A.

KEY NOTES:

A.

EXISTING FRAME AND DOOR TO REMAIN

B.

INSTALL A SIGN ABOVE THIS DOOR THAT READS, "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED"

C.

DOOR FRAME DOES NOT HAVE STOPS SO THAT IT CAN SWING IN BOTH DIRECTIONS

D.

THESE HOLLOW METAL FRAMES INCLUDE AN INTEGRAL 1" (NOM.) FULL-HEIGHT SIDELIGHT. SEE PLAN AND WINDOW TYPE B.

INTERIOR FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	BASE MATERIAL	WALL FINISH (NORTH)	WALL FINISH (EAST)	WALL FINISH (SOUTH)	WALL FINISH (WEST)	CEILING		COMMENT KEY NOTES
								MATERIAL	FINISH	
101	SALES COUNTER	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
102	MANAGER OFFICE	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
103	INSIDE SALES	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
104	OFFICE 1	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
105	OUTSIDE SALES	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
106	PROJECT OFFICE	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
107	OFFICE 2	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
108	HALL	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
109	BREAK ROOM	LVT	RCB	PNT	PNT	PNT	PNT	ETR	-	
110	EXIST. MEN	ETR	ETR	PNT	PNT	PNT	PNT	ETR	-	1.
111	CONFERENCE ROOM	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
112	EXIST. WOMEN	ETR	ETR	PNT	PNT	PNT	PNT	ACT	-	1.
113	UNISEX TOILET	LVT	RCB	PNT	PNT	PNT	PNT	ETR	-	1.
114	HALL	SC	RCB	PNT	PNT	PNT	PNT	ACT	-	
115	WAREHOUSE AREA	-	RCB	-	PNT	-	-	EXP		1, 2.

COMMENTS:

1.

WALLS WITHIN 2' OF SERVICE SINKS, URINALS, AND WATER CLOSETS MUST BE PAINTED WITH EPOXY-BASED PAINT UP TO A MINIMUM OF 4' A.F.F.

2.

PAINT AND INSTALL RCB AT THE OUTSIDE WALLS OF THE OFFICE.

DOOR NOTES

DOORS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1.

ALL DOOR HANDLES TO BE LEVER TYPE.
2.

EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
3.

PROVIDE DOOR STOPS OF APPROPRIATE TYPE FOR ALL INTERIOR DOORS, MATCH ADJACENT HARDWARE FINISH.
4.

DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES WILL BE 5 SECONDS MINIMUM.
5.

MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 1/2 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS.
6.

THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC DOORS, POWER ASSISTED DOORS, AND SLIDING DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
7.

EXIT DOORS IN ASSEMBLY AND EDUCATION OCCUPANCIES SERVING AN OCCUPANT LOAD OF 50 OR MORE SHALL BE EQUIPPED WITH PANIC HARDWARE, WITH THE EXCEPTION BELOW (NOTE 8).
8.

MAIN EXIT DOORS HAVING KEY-OPERATED LOCKING DEVICES ON THE EGRESS SIDE IN GROUP A OCCUPANCIES (SERVING 300 OCCUPANTS OR LESS), GROUPS B, F, M, S, AND PLACES OF RELIGIOUS WORSHIP SHALL HAVE DURABLE SIGNAGE ABOVE THE DOOR IN 1" HIGH LETTERS ON CONTRASTING BACKGROUND STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED". LOCKING DEVICES SHALL BE READILY DISTINGUISHABLE AS LOCKED.
9.

LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN THE PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. LOCKABLE EXIT DOORS SHALL OPERATE AS ABOVE IN EGRESS DIRECTION.
10.

HAND-ACTIVATED DOOR OPENING HARDWARE TO BE CENTERED BETWEEN 34" AND 44" ABOVE THE FLOOR.
11.

EVERY DOORWAY WHICH IS LOCATED WITHIN AN ACCESSIBLE PATH OF TRAVEL SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3'-0" IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. WHEN INSTALLED, EXIT DOORS SHALL BE CAPABLE OF OPENING SO THAT THE CLEAR WIDTH OF THE EXIT IS NOT LESS THAN 32". MEASURED BETWEEN THE FACE OF THE OPENED DOOR AND THE OPPOSITE STOP.
12.

MINIMUM MANEUVERING CLEARANCES AT DOORS SHALL BE AS REQUIRED BY THE ICC/ANSI A117.1 ACCESSIBILITY CODE. THE FLOOR OR GROUND AREA WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND CLEAR. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY.
13.

DOORS SHALL NOT PROJECT MORE THAN 7" INTO THE REQUIRED CORRIDOR WIDTH WHEN FULLY OPENED OR MORE THAN ONE HALF INTO THE REQUIRED WIDTH WHEN IN ANY POSITION.
14.

WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32" WITH THE LEAF POSITIONED AT AN ANGLE OF 90° FROM ITS CLOSED POSITION.
15.

EXIT DOORS SHALL SWING IN THE DIRECTION OF EXIT TRAVEL WHEN SERVING 50 OR MORE OCCUPANTS.
16.

COORDINATE ALL DOOR HARDWARE WITH THE OWNER TO ENSURE THE MANUFACTURER, FUNCTIONS, MODELS, AND KEYING SYSTEMS MEET THE OWNER'S STANDARD REQUIREMENTS.

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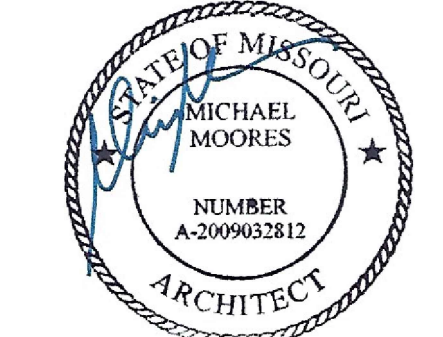
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Permit Submittal 04.29.25

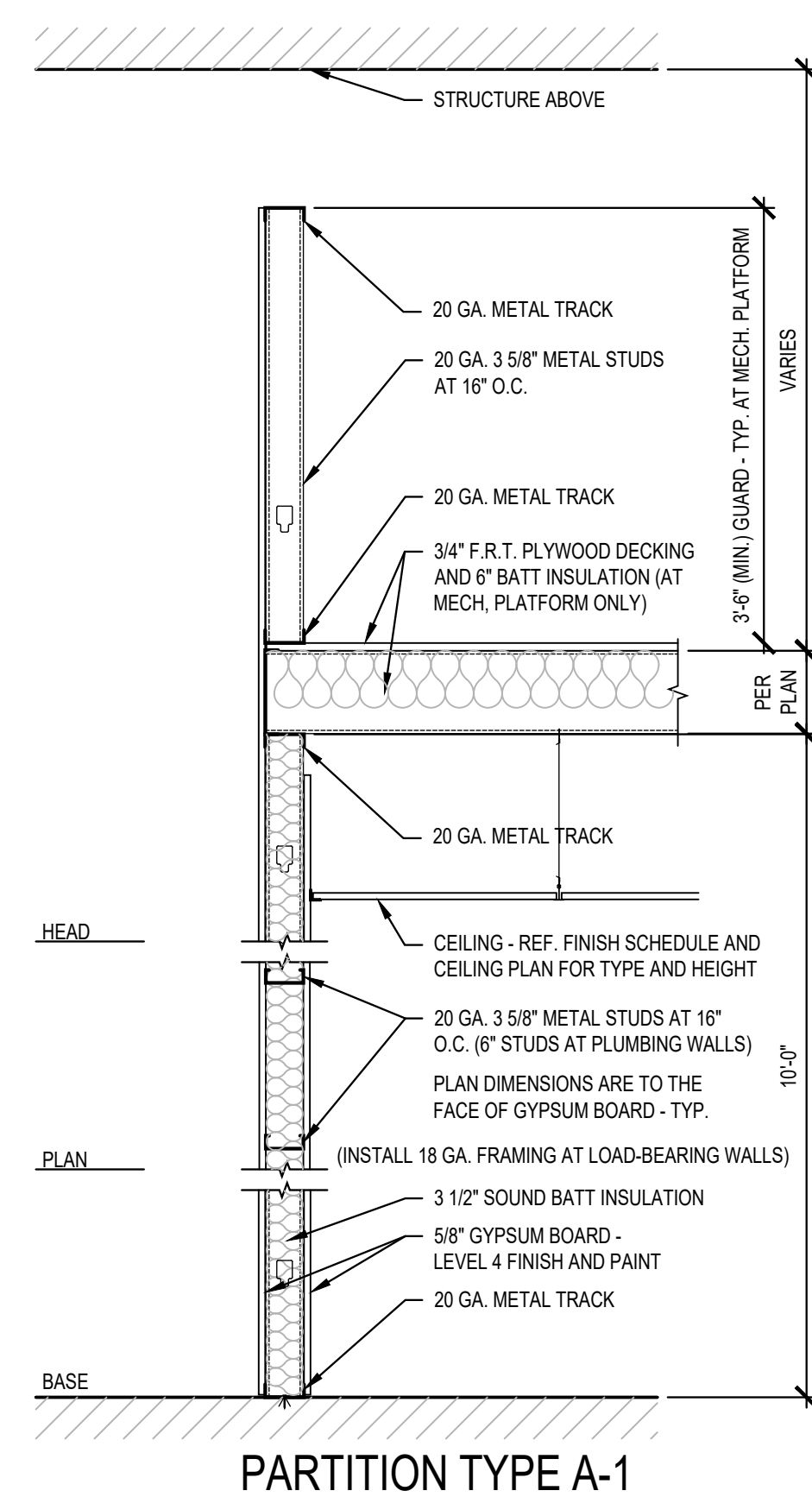
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DOOR / WINDOW /

FINISH SCHEDULES

AND NOTES

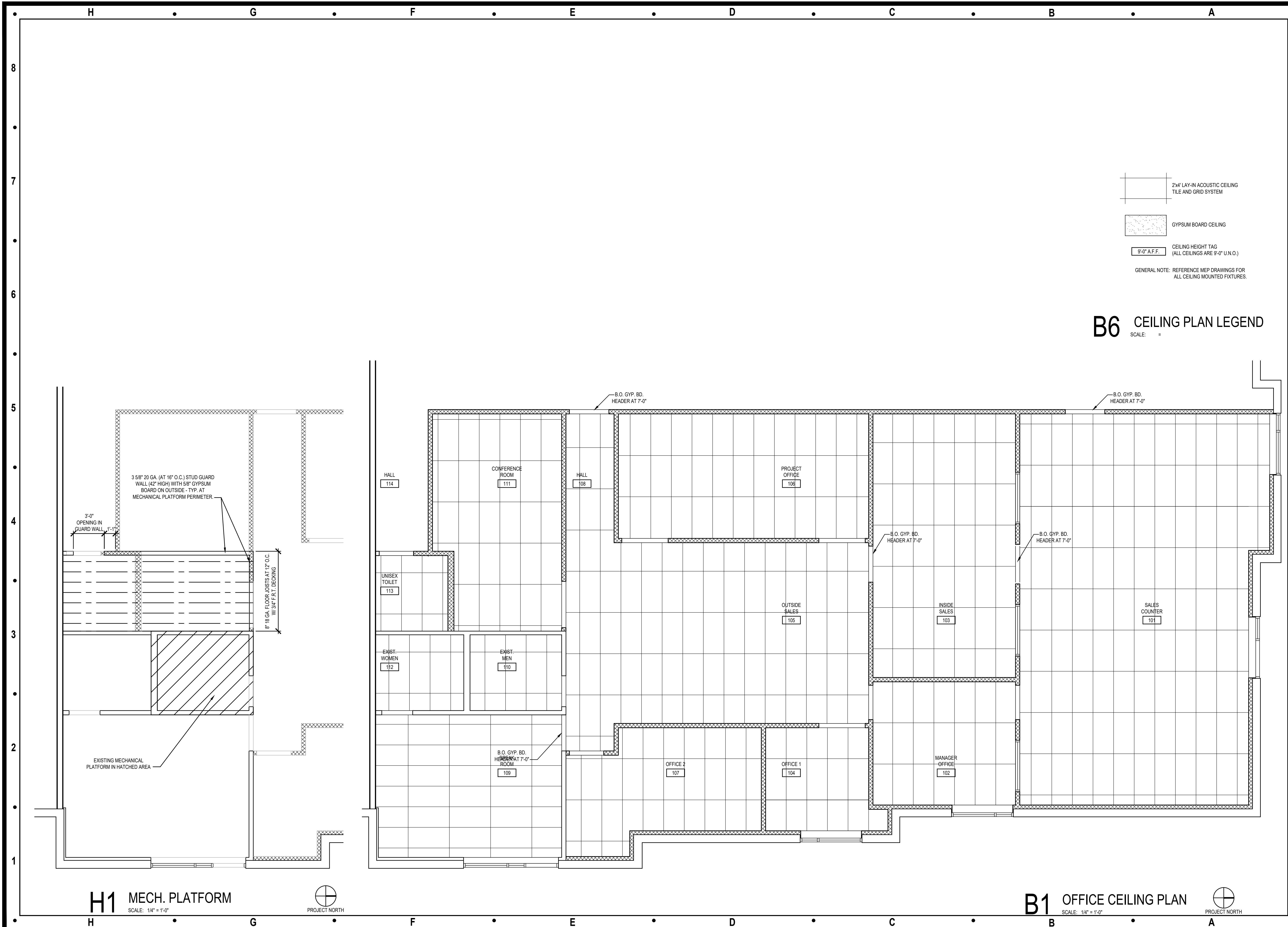
A-003



Sheet Title:

ENLARGED PLAN
PARTITION TYPES
BREAK RM. CABINETS

A-110



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CEILING PLAN
MECH PLATFORM

A-410

MECHANICAL ABBREVIATIONS	
(ALPHABETICAL BY ABBREVIATION)	
ABBREVIATION	LONG FORM
ABV	ABOVE
AC OR ACU	AIR-CONDITIONING UNIT
AHAP	AS HIGH AS POSSIBLE
AHU	AIR-HANDLING UNIT
AUTO	AUTOMATIC
BLW	BELOW
C	CHILLER
CD	CONDENSATE
CF	CABINET FAN
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CHP	CHILLED WATER PUMP
CLNG OR CLG	CEILING
CONC	CONCRETE
CP OR CWP	CONDENSER WATER PUMP
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
CRAC OR CACU	COMPUTER ROOM AIR-CONDITIONING UNIT
CREF	CHILLER ROOM EXHAUST FAN
CRU	CONDENSATE (STEAM) RETURN UNIT
CT	COOLING TOWER CELL
CTU	CONDENSATE (STEAM) TRANSFER UNIT
CU	CONDENSING UNIT
DV	CONSTANT VOLUME TERMINAL BOX
	DEPTH
DEF	DISHWASER EXHAUST FAN
DMPR	DAMPER
DN	DOWN
EA	EACH
EBH	ELECTRIC BASEBOARD HEATER
EDH	ELECTRIC DUCT-MOUNTED HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
	FILTER
FD	FIRE DAMPER
FCU	FAN-COIL UNIT
FF	FINAL FILTER
FFCH	FORCED-FLOW CABINET HEATER
FFU	FAN FILTER UNIT
FP	FAN POWERED TERMINAL BOX
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HUM	HUMIDIFIER
HWP OR HP	HEATING WATER PUMP
HX	HEAT EXCHANGER
KEF	KITCHEN (GREASE HOOD) EXHAUST FAN
KW	KILOWATTS
LD	LINEAR SUPPLY DIFFUSER
MOT	MOTORIZED
MTD	MOUNTED
MUAF	MAKE-UP AIR FAN
MUAHU	MAKE-UP AIR-HANDLING UNIT
OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OPG OR OPNG	OPENING
PF	PRE-FILTER
PLNM	PLENUM
RA	RETURN AIR
RAF	RETURN AIR FAN
RAG OR RG	RETURN AIR GRILLE
RAR OR RR	RETURN AIR REGISTER
RAS	RETURN AIR SILENCER
RE	IN REFERENCE TO
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SAF OR SF	SUPPLY AIR FAN
SAG OR SG	SUPPLY AIR GRILLE
SAR OR SR	SUPPLY AIR REGISTER
SAS	SUPPLY AIR SILENCER
SD	SMOKE DAMPER OR DETECTOR
TA	THROW AWAY (FILTER TYPE)
TEF	TOILET EXHAUST FAN
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VF	VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE

NOT ALL ABBREVIATIONS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

DUCTWORK LEGEND		
(REFER TO SPECIFICATIONS SECTIONS 15815 AND 15820 FOR ADDITIONAL INFORMATION)		
SINGLE LINE	DESCRIPTION	DOUBLE LINE
	ROUND ELBOW DOWN	
	ROUND ELBOW UP	
	OFFSET TO CHANGE ELEVATION (AT 30° WHEN POSSIBLE, ARROW SLOPES DN, U.N.O.)	
	ROUND RADIUS ELBOW	
	90° STRAIGHT TEE	
	90° CONICAL TEE	
	45° LATERAL TAP	
	45° LATERAL CONICAL TEE	
	SIZE OR SHAPE TRANSITION	
	ROUND FLEXIBLE DUCT	
	RECTANGULAR ELBOW DOWN	
	RECTANGULAR ELBOW UP	
	OFFSET TO CHANGE ELEVATION (AT 30° WHERE POSSIBLE, ARROW SLOPES DN, U.N.O.)	
	RECTANGULAR RADIUS ELBOW	
	RECTANGULAR ELBOW WITH TURNING VANES	
	SPLIT BRANCH TAKE-OFF WITH SQUARE ELBOW & SPLITTER DAMPER	
	SPLIT BRANCH TAKE-OFF WITH RADIUS ELBOW & SPLITTER DAMPER	
	SPLIT BRANCH TAKE-OFF TEE WITH STATIONARY SPLITTER DAMPER	
	BRANCH TAKE-OFF WITH 45° LEAD IN TAP	
	INSULATED LINED DUCTWORK (U.N.O.)	
	SQUARE FACED CEILING DIFFUSER 4-WAY DIRECTIONAL THROW (U.N.O.)	
	ROUND FACED CEILING DIFFUSER	
	CEILING RETURN OR EXHAUST AIR GRILLE OR REGISTER	
	SIDEALL SUPPLY GRILLE OR REGISTER	
	SUPPLY DUCT RISER	
	RETURN, EXHAUST OR OUTSIDE AIR DUCT RISER	
	MANUAL BALANCING DAMPER	
	AUTOMATIC (MOTOR-OPERATED) DAMPER	
	FIRE DAMPER	
	GRAVITY BACKDRAFT DAMPER	
	COMBINATION FIRE AND SMOKE DAMPER WITH SMOKE DETECTOR	
	SMOKE DAMPER (AUTOMATIC) WITH SMOKE DETECTOR	
	DUCT MOUNTED SMOKE DETECTOR	

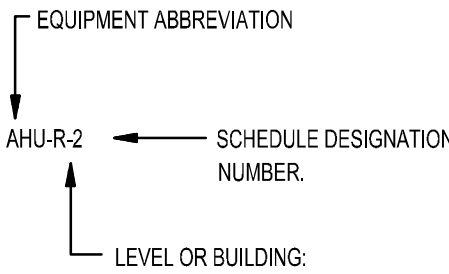
NOT ALL SYMBOLS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

STANDARD MECHANICAL SYMBOLS	
SYMBOL	DESCRIPTION
	GATE VALVE
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	ANGLE VALVE
	CHECK VALVE
	AUTOMATIC CONTROL VALVE (STRAIGHT THROUGH)
	AUTOMATIC CONTROL VALVE (3-WAY)
	AUTOMATIC CONTROL VALVE (ANGLE)
	AUTOMATIC CONTROL VALVE (STRAIGHT THROUGH)
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	THERMOMETER WELL
	TEST PLUG
	FLOW METER
	TEMPERATURE SENSOR
	PRESSURE SENSOR
	DIFFERENTIAL PRESSURE SWITCH
	IMMERSION THERMOSTAT
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	FLOW SWITCH
	ORIFICE
	PIPE SLEEVE THRU WALL OR FLOOR
	EXPANSION JOINT
	FLEXIBLE PIPE JOINT
	PIPE GUIDE
	ANCHOR
	STRAINER (Y-TYPE)
	STRAINER (BASKET TYPE)
	UNION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	DIRECTION OF FLOW
	DIRECTION OF SLOPE
	THERMOSTAT
	HUMIDISTAT
	FAN SPEED CONTROLLER
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	CONDENSATE DRAIN

NOT ALL SYMBOLS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

OTHER SYMBOLS	
SYMBOL	DESCRIPTION
	INDICATES CONNECTION TO EXISTING DUCT OR PIPE

GENERAL EQUIPMENT DESIGNATION KEY:



GENERAL MECHANICAL NOTES:

- REFER TO ARCHITECTURAL PLANS FOR RATED WALLS AND PARTITIONS.VERIFY FIRE AND/OR SMOKE DAMPER LOCATIONS AT DUCTS OR OPENINGS PENETRATING THESE WALLS.
- REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- VERIFY LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- VERIFY LOCATIONS OF EXPOSED DUCTS WITH ARCHITECT PRIOR TO INSTALLATION. DUCT DIMENSIONS INDICATED ON PLANS ARE FREE AREA DIMENSIONS.
- SUPPLY AND RETURN AIR DUCT SHALL BE INTERNALLY LINED WHERE SPECIFIED.
- ALL LOUVER SIZES ON MECHANICAL PLANS ARE GIVEN IN FREE AREA REQUIRED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS AND LOCATIONS.
- COORDINATE TERMINAL BOX AND BALANCING DAMPER LOCATIONS CAREFULLY TO ENSURE PROPER AND ADEQUATE ACCESS TO FILTERS, MOTORS, CONTROL VALVES, CONTROL PANELS, ETC. PROVIDE ACCESS PANELS AS SPECIFIED WHERE REQUIRED TO ASSURE THIS ACCESS.
- CEILING PLENUM SPACE IS VERY TIGHT. WHERE REQUIRED, DUCTS OR PIPES SHALL BE ROUTED BETWEEN LIGHT FIXTURES AND UP AND OVER OTHER DUCTS OR PIPES USING THE SPACES BETWEEN STRUCTURAL JOISTS OR BEAMS WHERE APPLICABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFULLY COORDINATING ALL TRADES. EXISTING UNKNOWN CONDITIONS MAY AFFECT EXACT DUCT OR PIPE ROUTING. OR EXISTING CONDITIONS MAY NEED TO BE MODIFIED TO ACCOMMODATE DUCTS AND PIPES.
- ALL BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS, AND GRILLES SHALL HAVE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT.
- BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
- RIGID DUCTWORK INSULATION: PROVIDE R-6 MINIMUM INSULATION WRAP ON ALL CONCEALED DUCTWORK. PROVIDE R-8 MINIMUM INTERNAL DUCT LINER ON ALL EXPOSED DUCTWORK. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE DIMENSIONS. SHEET METAL SIZES SHALL INCREASE ACCORDINGLY. PROVIDE R-12 MINIMUM INSULATION ON ALL DUCTWORK INSTALLED IN UNCONDITIONED SPACES.REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- FLEXIBLE DUCT WORK SHALL BE THERMAFLEX TYPE MKE, FLEXMASTER TYPE 9M, OR APPROVED EQUAL. SHALL BE LISTED UNDER 191 AS CLASS 1 AIR DUCT AND SHALL BE PROVIDED WITH INTEGRAL R-6 MINIMUM FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORT TO AVOID SHARP BENDS AND SAGGING.
- WALL MOUNTED DIFFUSERS AND GRILLES SHALL BE PROVIDED WITH SUITABLE MOUNTING FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.

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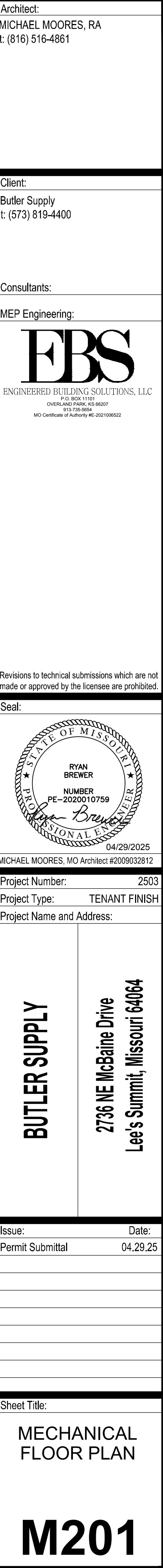
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Project Type: TENANT FINISH
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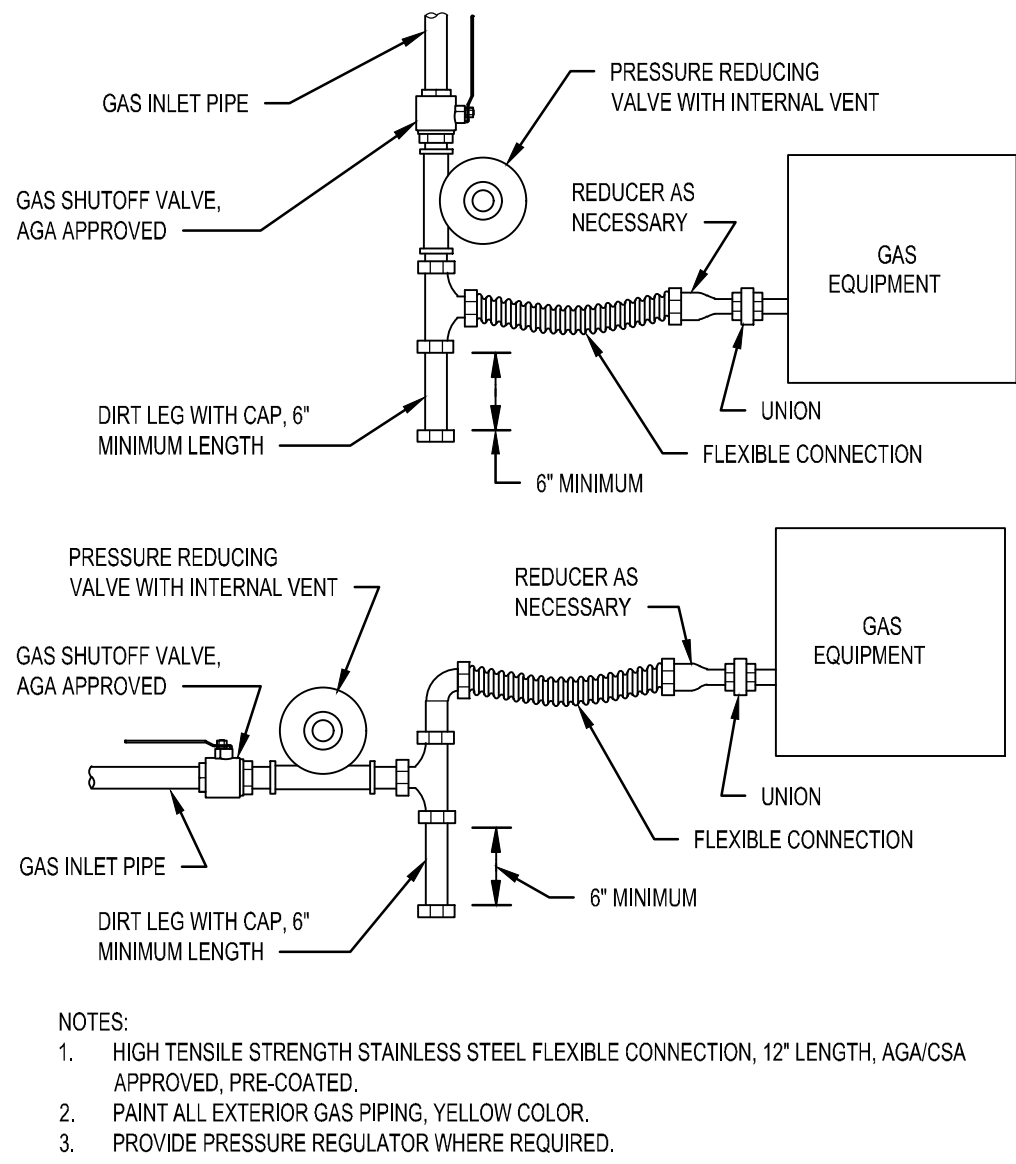
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Permit Submittal 04.29.25

Sheet Title:
MECHANICAL NOTES, SYMBOLS & ABBREVIATIONS
M101



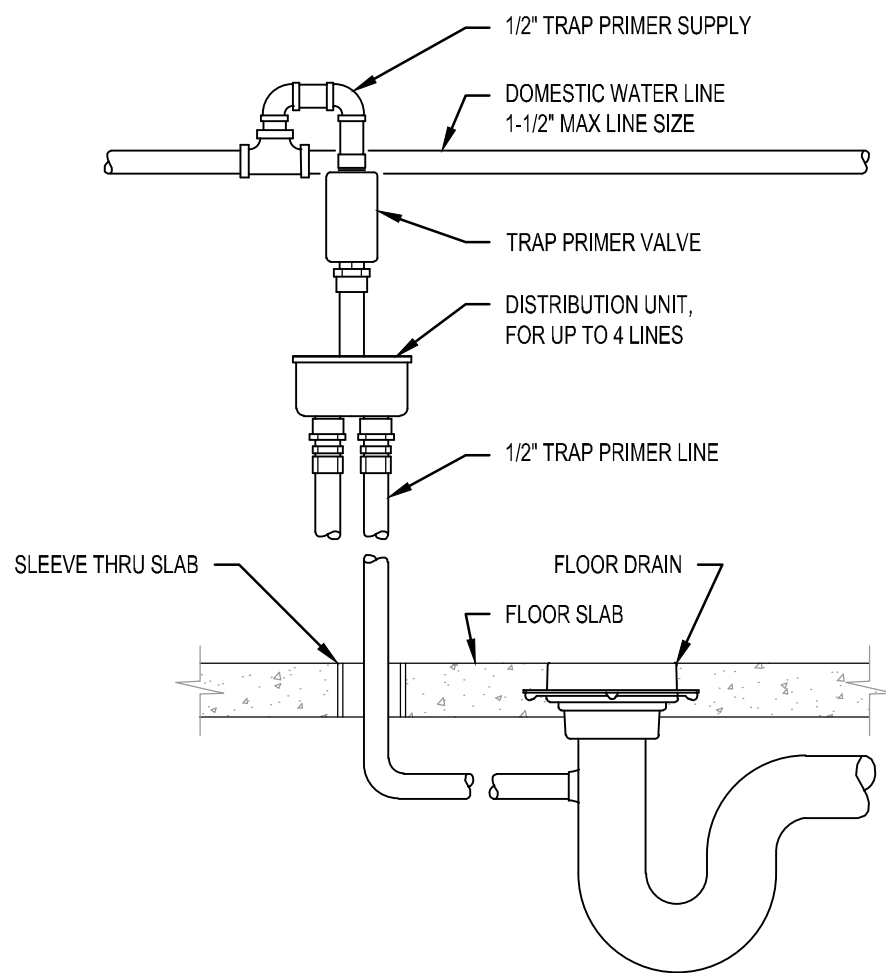
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PLUMBING PIPING SCHEDULE	
SYSTEM TYPE	MATERIAL
GAS	
ABOVE GROUND	SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON THREADED FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. PROVIDE CORROSION RESISTANT MATERIAL ON PIPING EXPOSED TO ATMOSPHERE OR IN CONTACT WITH MATERIAL EXERTING A CORROSIVE ACTION
UNDER GROUND	APPROVED PLASTIC WITH COMPATIBLE FITTINGS CONFORMING WITH ASTM D 2513 AND SHALL BE INSTALLED IN ACCORDANCE WITH GAS CODE OR WITH SCH. 40 STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. MILL COAT PIPE WITH HIGH DENSITY POLYETHYLENE OVER ADHESIVE UNDERCOATINGS WRAP FIELD JOINTS AND FITTINGS WITH REPUBLIC "X-TRU-TAPE" OR EQUAL.
SEWER, VENT, AND STORM	
ABOVE GROUND	PVC OR ABS SOLID WALL SCHEDULE 40 PIPE AND FITTINGS EXCEPT IN PLENUM RETURN AREAS IN RETURN AIR PLENUM AREAS USE ONE OF THE FOLLOWING: CAST IRON, HUB AND SPIGOT WITH RUBBER GASKETS FOLLOWING ASTM C564 AND ASTM T4. CAST IRON, NO-HUB: NEOPRENE GASKET AND CORRUGATED 304 STAINLESS STEEL SHIELD IN CONJUNCTION WITH 4 STAINLESS STEEL CLAMPS FOR 4" AND SMALLER, 6 CLAMPS FOR 5" AND LARGER
UNDER GROUND	PVC OR ABS SOLID WALL SCHEDULE 40 PIPE AND FITTINGS
WATER	
DISTRIBUTION PIPE	WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER, TYPE "A" PEX, OR TYPE "B" PEX AND CONFORM TO THE STANDARDS LISTED IN TABLE 605.4 OF THE I.P.C
SERVICE PIPE	WATER SERVICE PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER, TYPE "A" PEX, OR TYPE "B" PEX AND CONFORM TO THE STANDARDS LISTED IN TABLE 605.3 OF THE I.P.C



6 GAS EQUIPMENT PIPE CONNECTION

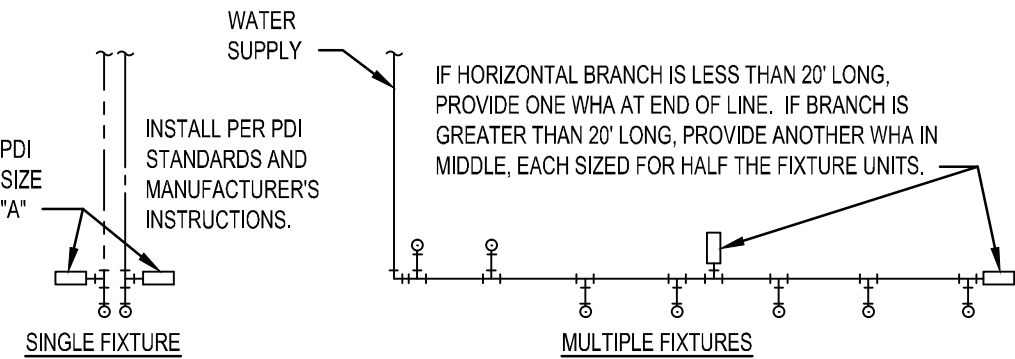
NOT TO SCALE



4 TRAP SEAL PRIMER DETAIL

NOT TO SCALE

GENERAL PLUMBING NOTES	
1.	ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
2.	PROVIDE TO OWNER A COPY OF ALL REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS AND ALL PLUMBING SYSTEMS EQUIPMENT MANUALS INCLUDING WARRANTIES.
3.	COORDINATE THE COMPLETE INSTALLATION OF SYSTEMS TO AVOID CONFLICT WITH OTHER TRADES.
4.	COORDINATE ALL ABOVE SLAB AND UNDER SLAB SANITARY, AND WATER PIPING SYSTEMS TO AVOID CONFLICT WITH ALL OTHER TRADES SYSTEMS, AND COLUMN FOOTINGS. ALL SOIL AND WASTE PIPING SHALL BE GRADED TO A UNIFORM SLOPE OF NOT LESS THAN 1/8" PER FOOT FOR PIPING 4" OR LARGER, AND NOT LESS THAN 1/4" PER FOOT FOR PIPING 3" OR SMALLER. ALL GREASE WASTE PIPING SHALL BE ROUTED AT 1/4" PER FOOT SLOPE.
5.	COORDINATE ALL FLOOR DRAINS, CLEAOUTS, AND FLOOR MOUNTED FIXTURES WITH FINISHED FLOOR SLAB ELEVATION TO ENSURE THEY ARE INSTALLED PLUMB AND FLUSH WITHOUT CRACKS, RISE IN THE SLAB, OR VOIDS AROUND GRATES OR TOPS. ALL CLEAOUTS SHALL BE INSTALLED ALONG MAINS AT 50'-0" DISTANCE MAXIMUM. ALL FLOOR AND WALL CLEAOUTS SHALL BE ACCESSIBLE FOR MAINTENANCE AND NOT INSTALLED BENEATH EQUIPMENT. ANY DRAIN GRATES THAT ARE DAMAGED AS A RESULT OF OTHER CONSTRUCTION PRIOR TO RELEASE OF THE BUILDING TO THE OWNER SHALL BE REPLACED WITH LIKE GRATE AT NO EXPENSE OF THE OWNER.
6.	ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
7.	PROVIDE TRAP AND SEAL PRIMERS ON ALL FLOOR DRAINS IF REQUIRED BY CODE OR OWNER.
8.	PLUMBING VENTS THROUGH THE ROOF ARE LOCATED AT A MINIMUM OF 5'-0" FROM BUILDING PARAPETS AND 10'-0" FROM FRESH AIR INTAKES AND AS REQUIRED TO MEET LOCAL CODES.
9.	ALL SHUT-OFF OR BALANCING VALVES TO PLUMBING ROUTED IN PIPE CHASES SHALL BE ACCESSIBLE FROM CEILING AREA OR ACCESS DOORS PROVIDED IN WALL.
10.	PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.
11.	CONTRACTOR TO FULLY INVESTIGATE ALL EXISTING PIPING TO REMAIN TO INSURE EXISTING PIPING IS IN GOOD REPAIR. IF ANY EXISTING PIPING IS FOUND TO BE DAMAGED REPLACE WITH LIKE.
12.	ALL PLUMBING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE INSTALLED AND SEALED TO MAINTAIN FIRE RATING OF ASSEMBLY. PROVIDE FIRE CAULKING, FIRESTOP COLLAR, OR OTHER APPROVED METHOD TO MAINTAIN FIRE RATING AND UL RATINGS.

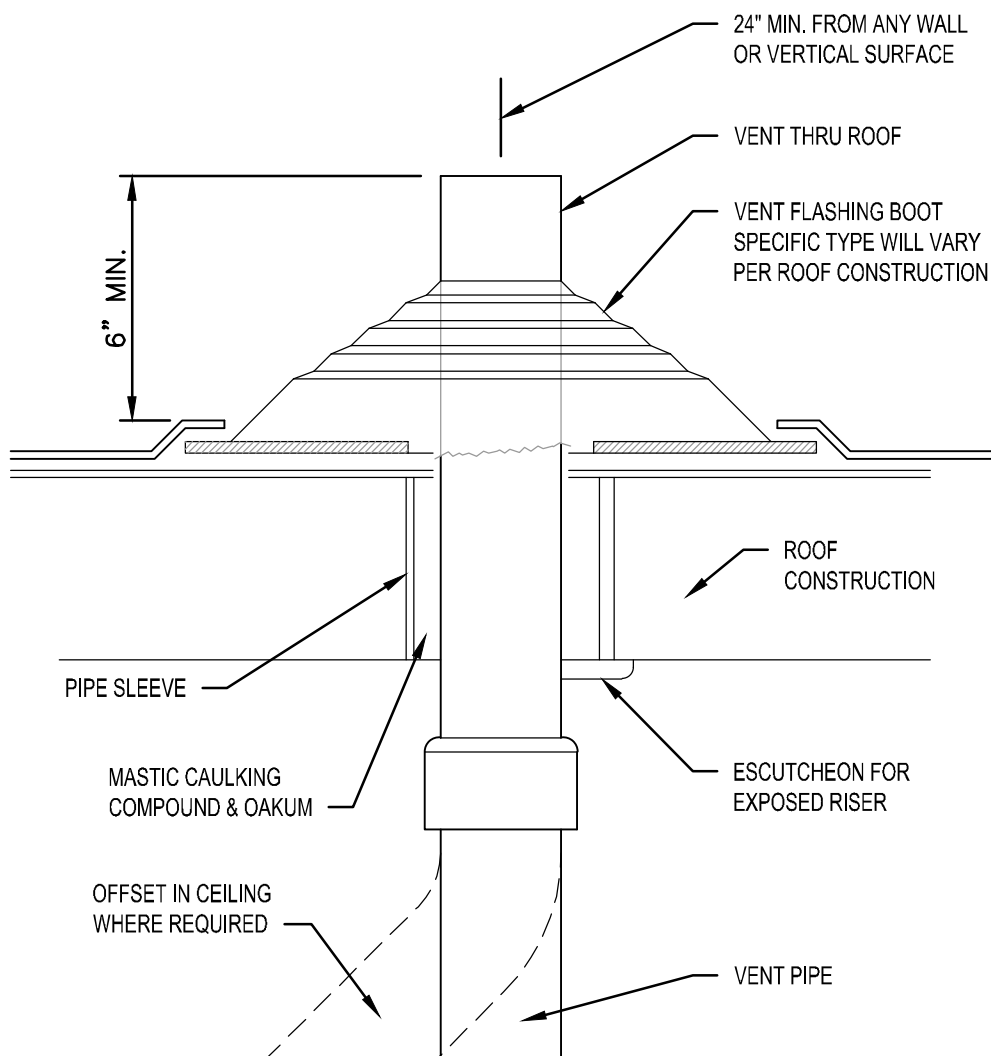


FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
TANK WATER CLOSET	5	--
URINAL	5	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATH/TUB	2	2

PROVIDE WATER HAMMER ARRESTERS ON ALL QUICK CLOSING VALVES. INSTALLED AS CLOSE TO THE FIXTURES AS POSSIBLE TO CONTROL THE EFFECTS OF WATER HAMMER INSTALLATION SHALL COMPLY WITH LOCAL PLUMBING CODE. DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS PER THE TABLES SHOWN ABOVE.

5 WATER HAMMER ARRESTERS

NOT TO SCALE



3 VENT THROUGH ROOF DETAIL (VTR)

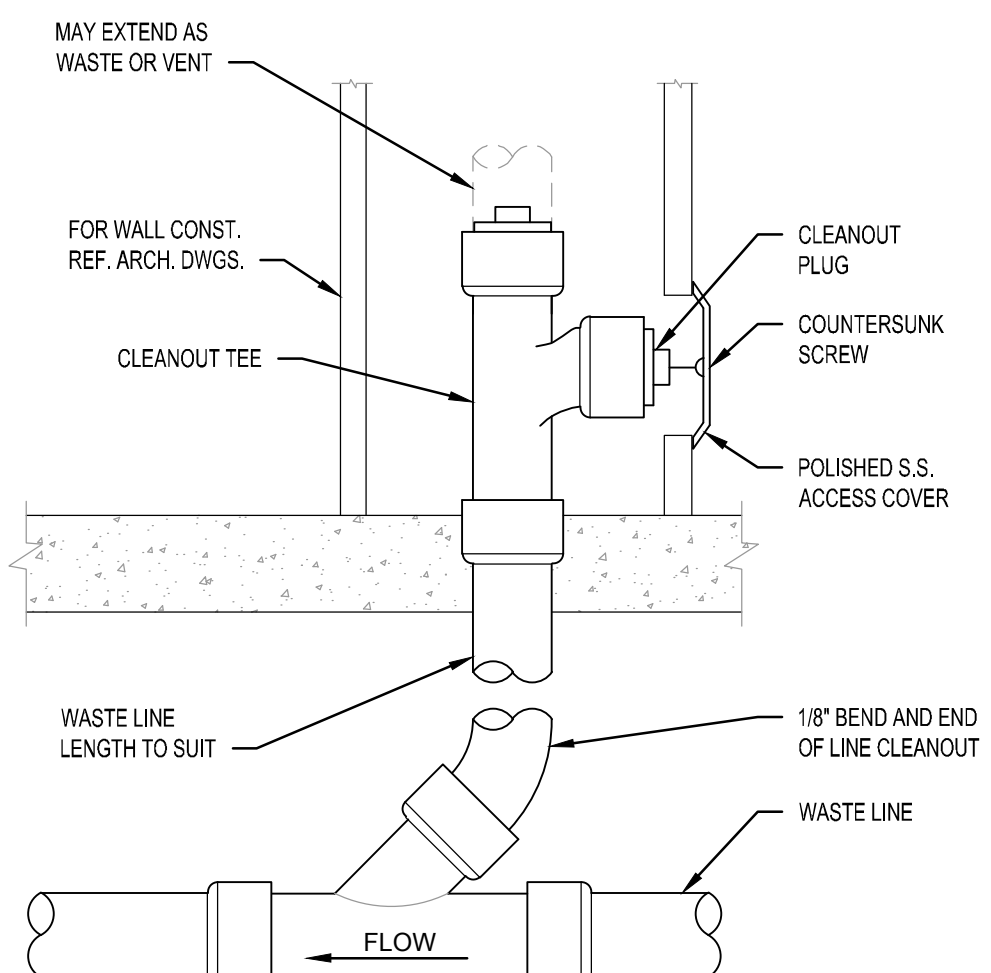
NOT TO SCALE

PLUMBING ABBREVIATIONS			
AD	AREA DRAIN, ACCESS DOOR	IE	INVERT ELEVATION
AFC	ABOVE FINISH CEILING	LP	LIQUID PETROLEUM
AFG	ABOVE FINISH GRADE	MBH	1000 BTU PER HOUR
AHU	AIR HANDLING UNIT	N/A	NOT APPLICABLE
BFP	BACKFLOW PREVENTER	ORD	OVERFLOW ROOF DRAIN
BOP	BOTTOM OF PIPE	OST	STORM OVERFLOW
BOS	BOTTOM OF STRUCTURE	PD	PUMP DISCHARGE
CD	CONDENSATE	PV	POST INDICATOR VALVE
CO	CLEANOUT	PRV	PRESSURE REDUCING VALVE
CW	DOMESTIC COLD WATER	REV	REVISION
DD	DECK DRAIN	RPM	REVOLUTIONS PER MINUTE
DN	DOWN	RTU	ROOF TOP UNIT
ETR	EXISTING TO REMAIN	SAN	SANITARY
EWC	ELECTRIC WATER COOLER	SCW	SOFT DOMESTIC COLD WATER
FCD	FLOOR CLEANOUT	SHW	SOFT DOMESTIC HOT WATER
FFA	FROM FLOOR ABOVE	SDHWR	SOFT RECIRC. HOT WATER
FP	FIRE PROTECTION	ST	STORM
FS	FLOOR SINK	TFA	TO FLOOR ABOVE
G	GAS (NATURAL)	TFB	TO FLOOR BELOW
GCD	GRADE CLEANOUT	TM	TEMPERED WATER
GPM	GALLONS PER MINUTE	UH	UNIT HEATER
HB	HOSE BIBB	V	VENT PIPE
HW	DOMESTIC HOT WATER	VTR	VENT THROUGH ROOF
HWR	HOT WATER RETURN	WCO	WALL CLEANOUT
HWS	HOT WATER SUPPLY	WH	WALL HYDRANT

PLUMBING FIXTURE SCHEDULE							
ITEM	MANUFACTURER	MODEL	DRAIN	VENT	COLD WATER	HOT WATER	DESCRIPTION
IMB	SIOUX CHIEF	696-G1010PF	---	---	1/2"	---	ICE MAKER OUTLET BOX, ABS BOX WITH NO-LEAD BRASS SHUT-OFF VALVE AND WATER HAMMER ARRESTOR.
FD	SIOUX CHIEF	832-35ANR	3"	2"	---	---	ADJUSTABLE FLOOR DRAIN WITH GRAY ABS BODY AND ROUND NICKEL-BRONZE STRAINER AND TRAP PRIMER CONNECTION.
LAV	AMERICAN STANDARD	9024.001EC	2"	1-1/2"	1/2"	1/2"	WALL-HUNG VITREOUS CHINA LAVATORY WITH 7755.105 SENSOR OPERATED FAUCET. PROVIDE ASSE 1070 COMPLIANT MIXING VALVE AND TRUEBRO LAV GUARD PIPING COVERS.
SNK	ELKAY	LRAD291855	2"	1-1/2"	1/2"	1/2"	DOUBLE COMPARTMENT STAINLESS STEEL SINK WITH LKAV3031 DECK-MOUNTED FAUCET AND IN-SINKERATOR BADGER 1 1/3 HP GARBAGE DISPOSAL PROVIDE WITH ASSE 1070 COMPLIANT MIXING VALVE.
WC	AMERICAN STANDARD	2467.016	3"	2"	1/2"	---	CADET TWO-PIECE ELONGATED WATER CLOSET WITH 5267AB5MT SEAT.

NOTES:

- MODELS IN SCHEDULE ARE A BASIS OF DESIGN. CONFIRM FINAL FIXTURE MODELS WITH OWNER PRIOR TO PURCHASING.
- FIELD COORDINATE EXACT CONNECTION REQUIREMENTS OF ACTUAL EQUIPMENT SUPPLIED WITH ALL OTHER TRADES TO ENSURE PROPER ROUGH-IN IS PROVIDED.



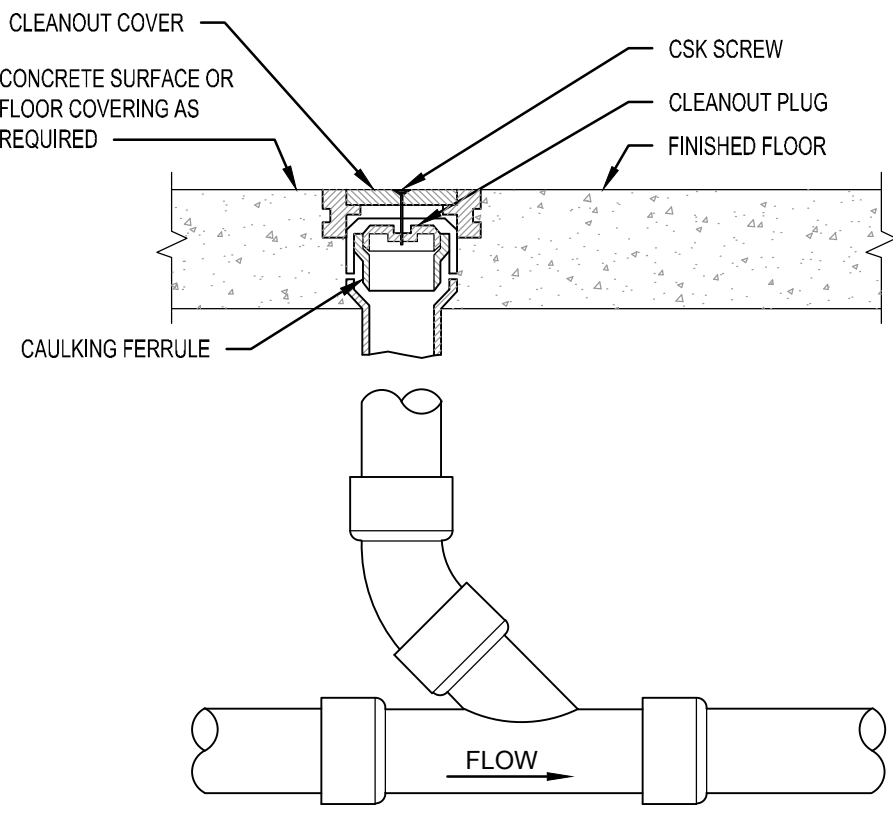
2 WALL CLEANOUT

NOT TO SCALE

PLUMBING SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GATE VALVE		FLOOR DRAIN / AREA DRAIN
	CHECK VALVE		FLOOR SINK
	PRESSURE		HOT WATER RECIRCULATION PUMP
	SOLENOID VALVE		PLUMBING VENT THRU ROOF
	GLOBE VALVE (STRAIGHT PATTERN)		POINT OF CONNECTION (CONNECT NEW TO EXISTING)
	BUTTERFLY VALVE		PLUMBING EQUIPMENT DESIGNATION
	BALL VALVE		KITCHEN EQUIPMENT DESIGNATION
	GAS COCK		PLUMBING RISER OR DETAIL DESIGNATION
	PLUG VALVE		SANITARY SEWER PIPING
	FLOOR CLEAN OUT		STORM SEWER PIPING
	WALL CLEAN OUT		VENT PIPING
	CLEAN OUT		VENT PIPING (BELOW SLAB)
	HOSE BIBB		COLD WATER PIPING
	FREEZE PROOF WALL HYDRANT		HOT WATER PIPING
	SHOWER HEAD		COLD WATER PIPING (BELOW SLAB)
	ELBOW DOWN		HOT WATER PIPING (BELOW SLAB)
	ELBOW UP		HOT WATER RECIRCULATING PIPING
	TEE UP		FILTERED WATER PIPING
	TEE DOWN		FILTERED WATER PIPING BELOW GRADE
	STRAINER		GAS PIPING
	UNION		CONDENSATE PIPING
	REDUCER		
	CAP		
	FLEX PIPE		

1 FLOOR CLEANOUT

NOT TO SCALE



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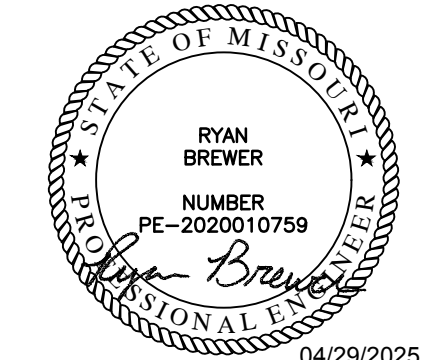
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Project Type: TENANT FINISH

Project Name and Address:

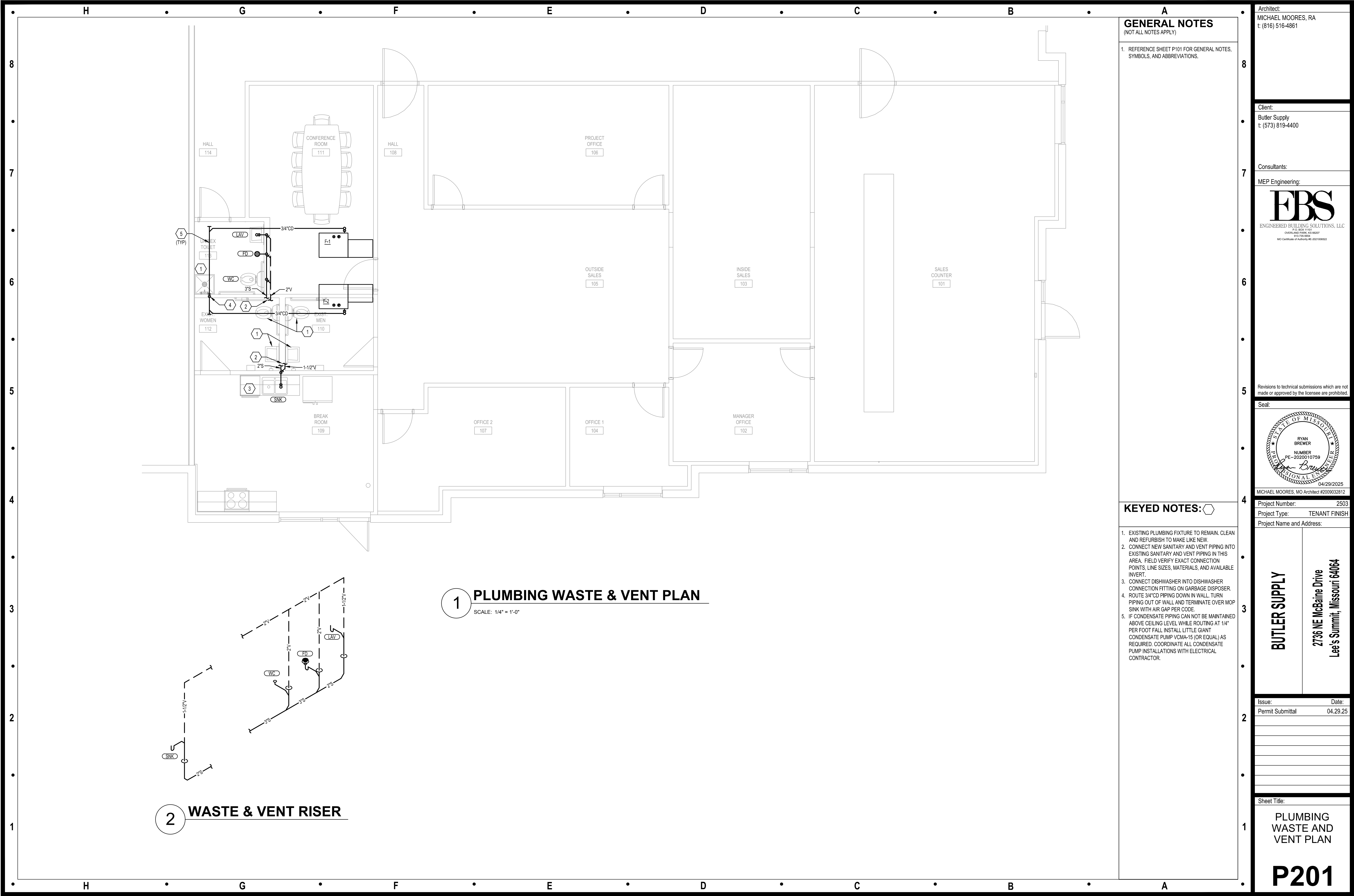
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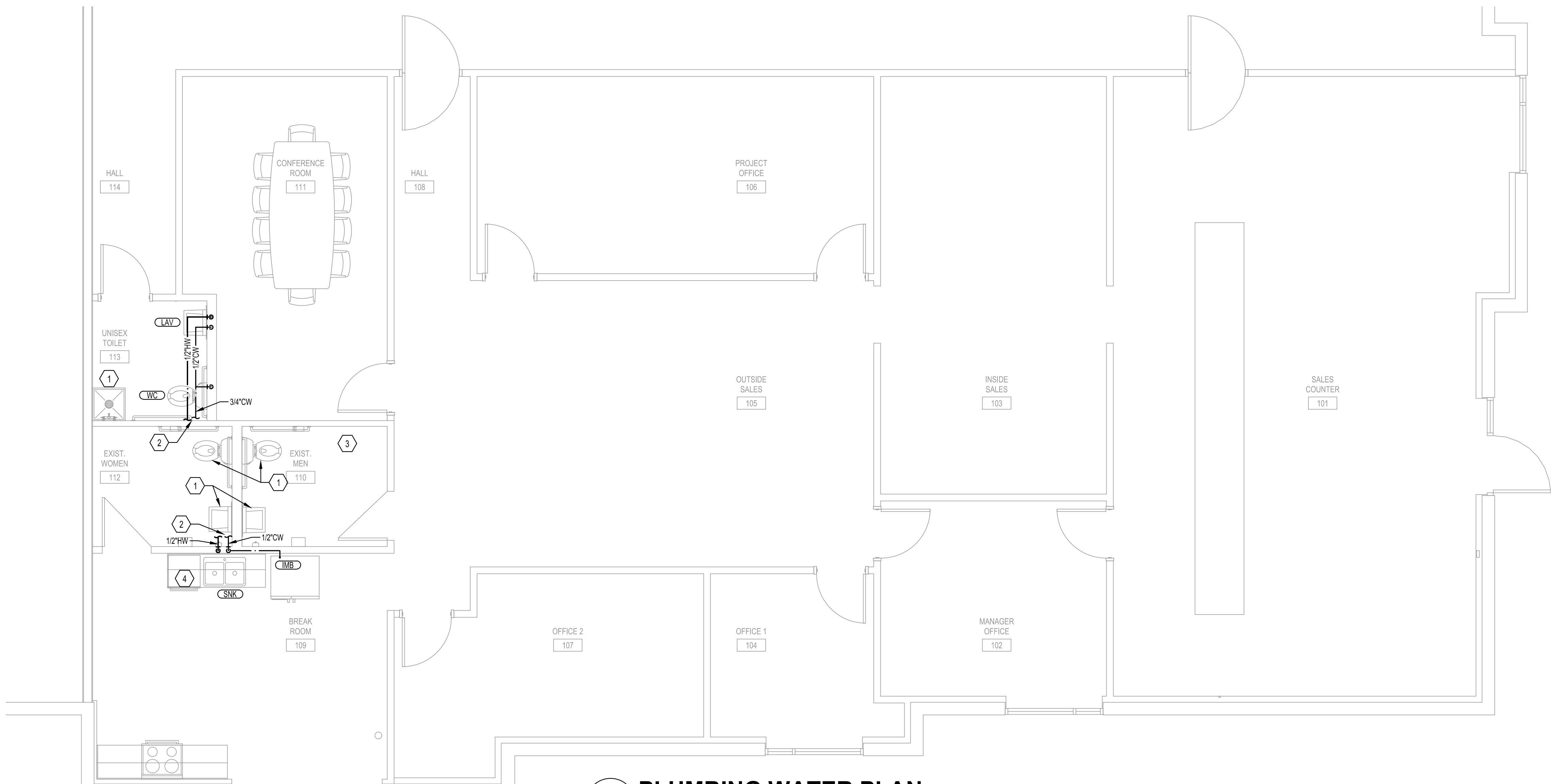
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Permit Submittal 04.29.25

Sheet Title:

PLUMBING
NOTES,
SYMBOLS &
ABBREVIATIONS

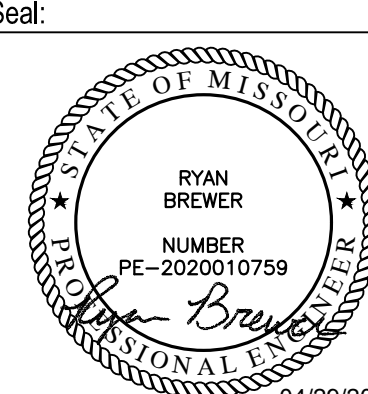
P101





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

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

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 04/29/2025 MICHAEL MOORES, MO Architect #2009032812	
Project Number: 2503	
Project Type: TENANT FINISH	
Project Name and Address:	
BUTLER SUPPLY 2736 NE McBaine Drive Lee's Summit, Missouri 64064	
Issue: _____ Date: _____	
Permit Submittal _____ 04.29.25	
Sheet Title:	
PLUMBING WATER PLAN P202	

	H	G	F	E	D	C	B	A		
8		15400 - PLUMBING WORK								
		DESCRIPTION ALL PLUMBING AND ASSOCIATED WORK IN DIVISION 15 IS GOVERNED BY THIS SECTION. PROVIDE LABOR AND MATERIALS NECESSARY TO PROVIDE THE WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. REFER TO OTHER DIVISIONS FOR CONTINUATION OF EXTERIOR AND ALLIED WORK.		ACCESS DOORS INSTALL AS REQUIRED FOR MAINTENANCE, ADJUSTMENT, REMOVAL AND REPAIR OF VALVES, EQUIPMENT AND LIKE ITEMS, DOORS SHALL BE CONVENIENTLY LOCATED AND OF SUFFICIENT SIZE.	ESCUTCHEONS PROVIDE FOR ALL PIPING THROUGH WALLS, FLOORS AND CEILING WHERE PIPING IS EXPOSED TO VIEW IN FINISHED AREA. ESCUTCHEONS SHALL BE CHROMIUM PLATED, TWO PIECE, HINGED WITH SET SCREW.	INSERTS: IN CONCRETE, GRINNELL MODEL NO. 285 OR APPROVED EQUAL, HAVING ADJUSTMENT FROM 3/4 INCH THROUGH 1-1/4 INCH, IN METAL DECKS READHEAD SD1 OR APPROVED EQUAL. POWDER PROPELLED PERMITTED IN NEW CONSTRUCTION WHERE TYPE AND LOCATION ARE APPROVED PRIOR TO INSTALLATION. IN EXISTING CONSTRUCTION, START SLUGIN NO. 6800 SERIES OR APPROVED EQUAL.	INSTALLATION DRAIN SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS; ACCESSIBLE AND LOCATED TO SUIT EQUIPMENT APPROVED FOR INSTALLATION. WHERE FLUSH VALVES ARE SPECIFIED WITH FIXTURES, THE SUPPLY TO THE VALVE IN EACH ROOM SHALL BE AT THE SAME HEIGHT FOR THE TYPE OF FIXTURE AND THE VALVE SHALL BE SET IN PLACE SO THAT THE CENTER LINE OF THE VALVE DISCHARGE IS DIRECTLY ABOVE THE CENTER LINE OF FIXTURE STUD. BENDING OF NIPPLE BETWEEN THE VALVE AND THE STUD TO ACHIEVE CONNECTION WILL NOT BE PERMITTED.	DOMESTIC WATER HEATING DESCRIPTION PROVIDE DOMESTIC WATER HEATING EQUIPMENT WHERE SHOWN ON DRAWINGS AND SPECIFIED.		
		QUALITY ASSURANCE OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND CONNECTION FEES REQUIRED BY GOVERNING BODIES IN CONNECTION WITH THE WORK. DELIVER CERTIFICATES OF INSPECTION TO THE OWNER'S REPRESENTATIVE. ALL WORK SHALL COMPLY WITH GOVERNING CODES, ORDINANCES, AND REGULATIONS OF CITY, COUNTY AND STATE.		PIPING PROVISIONS FOR FIXTURES AND EQUIPMENT SPECIFIED IN OTHER SECTIONS OR FURNISHED BY THE OWNER ROUGH IN LOCATIONS SHALL BE DETERMINED FOR SERVICES. PROVIDE ALL NECESSARY PLUMBING SERVICES, ACCESSIBLE VALVES ON PLUMBING BRANCHES AND MAKE ALL FINAL CONNECTIONS.	UNIONS PROVIDE GROUND JOINT BRASS UNIONS OR FLANGES ON EACH PIPING CONNECTION TO EQUIPMENT.	SIDE BEAM CLAMPS: PROVIDE WHEN SUPPORTING FROM STRUCTURAL STEEL MEMBERS, GRINNELL, MODEL 225 OR APPROVED EQUAL.	CHROME PLATED PIPING REQUIRING THE USE OF WRENCH SHALL BE PROTECTED FROM DAMAGE.	DISCHARGE PIPE RELIEF VALVE DISCHARGE SHALL BE COPPER WATER TUBE, TYPE M.		
		SUBMITTALS SHOP DRAWINGS: SUBMIT MATERIALS, PRODUCTS, EQUIPMENT AND SYSTEMS AS SPECIFIED UNDER EACH PLUMBING SECTION IN THIS DIVISION IN ACCORDANCE WITH THE GENERAL CONDITIONS. SHOW PIPE SIZES, LOCATION, SLOPES OF HORIZONTAL RUNS, FITTINGS, VALVES, METERS, GAGES AND CONNECTIONS.		PLUMBING OPERATION AND MAINTENANCE MANUALS DESCRIPTION FURNISH TWO COPIES OF COMPLETE OPERATION AND MAINTENANCE MANUALS TO THE OWNER'S REPRESENTATIVE. FOR APPROVAL AND FOR THE OWNER, ON PLUMBING EQUIPMENT AND SPECIALTIES. THE MANUAL SHALL BE BOUND IN HARD-BACK, THREE-RING LOOSE-LEAF BINDERS.	PROVIDE DIELECTRIC UNIONS BETWEEN COPPER AND STEEL PIPING CONNECTION TO EQUIPMENT.	OTHER SUPPORTS: OBTAIN OWNER'S REPRESENTATIVE APPROVAL FOR OTHER METHODS OF SUPPORT.	BOLT WATER CLOSET CARRIER TO FLOOR.	DISCHARGE PIPE SHALL HAVE TERMINATING END CUT AT 45 DEGREE ANGLE.	TERMINATE RELIEF VALVE DRAIN AS SHOWN ON THE DRAWINGS.	
7		PRODUCT DATA: SUBMIT ON MATERIALS, FIXTURES, AND EQUIPMENT UNLESS OTHERWISE SPECIFIED OR ACKNOWLEDGED IN WRITING.		MANUAL CONTENTS TITLE SHEET WITH JOB NAME, AND THE NAMES, ADDRESSES AND PHONE NUMBERS OF THE CONTRACTOR, SUBCONTRACTOR, CONTROL, SUBCONTRACTOR, RELATED CONTRACTOR AND MATERIAL AND EQUIPMENT SUPPLIERS.	FLASHING VENT FLASHING SHALL COMPLY WITH ROOFING MANUFACTURER'S WRITTEN SPECIFICATIONS	SPACING OF HANGERS PROVIDE HANGER AT EACH CHANGE OF DIRECTION.	GAS PIPING PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.			
		SAMPLES: SUBMIT WHEN SPECIFIED OR REQUESTED.		INDEX OF CONTENTS TYPEWRITTEN OPERATING INSTRUCTIONS FOR THE OWNER'S PERSONNEL DESCRIBING HOW TO OPERATE EACH PIECE OF EQUIPMENT, AND CAUTION AND WARNING NOTICES.	CLEANOUTS ON NO-HUB PIPE SHALL BE STANDARD NO-HUB FITTINGS. CLEANOUTS ON CAST IRON HUB AND SPOGOT PIPING, SHALL BE CADMIUM PLATED. APPROVED MANUFACTURERS: ZURN, JOSAM OR JONESPEC.	FERROUS PIPING AND COPPER TUBING: DIAMETER OF PIPE MAXIMUM SPACING ROD SIZE 1/2" THROUGH 1-1/2" 6 FT. 3/8" 2" THROUGH 3" 10 FT. 1/2" 4" THROUGH 5" 12 FT. 5/8" 6" AND LARGER 16 FT. 3/4" D.	PIPE SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE FITTINGS			
		RECORD DOCUMENTS REFER TO GENERAL CONDITIONS FOR REQUIREMENTS CONCERNING RECORD DOCUMENTS. ADDITIONAL REQUIREMENTS MAY BE SPECIFIED IN DIVISION 1. UNLESS SEPIAS OF THE DRAWINGS ARE TO BE FURNISHED BY THE ARCHITECT-ENGINEER FOR PREPARATION OF RECORD DRAWINGS, FURNISH OWNER'S REPRESENTATIVE WITH TWO SETS OF ACCURATELY MARKED COPIES OF THE DRAWINGS, INSTEAD OF ONE SET AS REQUIRED BY THE GENERAL CONDITIONS, INDICATING ALL CHANGES FROM ORIGINAL DRAWINGS AS INSTALLED.		APPROVED SHOP DRAWINGS, PRODUCT DATA AND PARTS AND MAINTENANCE BOOKLET FOR EACH ITEM OF PLUMBING, EQUIPMENT SPECIFIED IN DIVISION 15.	TRAP PRIMERS PROVIDE WHERE INDICATED ON DRAWINGS. PRECISION PRODUCTS WITH DISTRIBUTION UNIT OR APPROVED EQUAL.	CAST IRON PIPE: DIAMETER OF PIPE MAXIMUM SPACING ROD SIZE 2" AND 3" EACH JOINT 3/8" 4" AND 5" EACH JOINT 1/2" 6" AND 8" EACH JOINT 3/4" 10" THROUGH 15" EACH JOINT 3/4" (TWO HANGERS)	INSTALLATION PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.			
6		PRODUCT HANDLING PIPE, FIXTURES AND ACCESSORIES SHALL BE PROTECTED FROM DAMAGE IN SHIPMENT, HANDLING, STORAGE AND INSTALLATION; FROM MOISTURE, DIRT AND DEBRIS. PIPE, CLEANOUT AND FLOOR DRAIN OPENINGS SHALL BE TEMPORARILY PLUGGED WITH TEST PLUGS UNTIL FINAL CONNECTIONS ARE MADE.		COPIES OF CERTIFICATES OF INSPECTION, WHERE INSPECTION IS REQUIRED. GUARANTEES, INCLUDING EXTENDED GUARANTEES.	PIPE SLEEVES 1. EXTEND SLEEVE 1/4 INCH BEYOND FINISHED SURFACE. 2. SET SLEEVE BEFORE POURING CONCRETE. 3. PROVIDE CLEARANCE BETWEEN SLEEVE AND PIPE OR BETWEEN SLEEVE AND INSULATION TO ALLOW FOR PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION. 4. INSULATION SHALL PASS CONTINUOUS THROUGH THE SLEEVE. 5. CAULK BETWEEN SLEEVE AND PIPE OR SLEEVE AND INSULATION. PREFABRICATED, PRE-INSULATED, "PIPE SHIELDS" WILL BE ACCEPTABLE FOR PIPES PASSING THROUGH FLOORS, EXTERIOR WALLS, FIRE WALLS AND FIRE RESISTIVE WALLS AND PARTITIONS. 6. ESCUTCHEONS: FIT AROUND INSULATION WHERE PRESENT, PROVIDE DEEP ESCUTCHEON PLATES WHERE PIPE SLEEVES EXTEND ABOVE FLOORS. 7. WATER HAMMER ARRESTERS: INSTALL WHERE SHOWN ON DRAWINGS. 8. CLEANOUTS: INSTALL WHERE SHOWN ON DRAWINGS AND AT BASE OF ALL RISERS. PROVIDE ADDITIONAL CLEANOUTS WHERE REQUIRED BY LOCAL CODES AND FOR CONVENIENCE OF TESTING AND ERECTION AT CONTRACTOR'S OPTION. 9. FRAMES AND COVERS SHALL BE FLUSH WITH ADJOINING ARCHITECTURAL FINISH.	RISER CLAMPS INSTALL AT EACH LEVEL BELOW THE FLOOR. SUSPEND FROM TWO HANGER RODS AND INSERTS WHERE THE INSTALLATION OF ESCUTCHEON PLATES IS REQUIRED.	DESCRIPTION THE WORK INCLUDES FURNISHING AND INSTALLING HOT AND COLD WATER PIPING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.			
		GUARANTEE AND SERVICE REFER TO GENERAL CONDITIONS FOR GUARANTEE. WHERE EXTENDED GUARANTEES ARE CALLED FOR, FURNISH THREE COPIES TO BE INSERTED INTO OPERATION AND MAINTENANCE MANUALS.		DELIVERY DELIVER THE MANUALS TO THE OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING APPLICATION FOR FINAL PAYMENT.	PLUMBING PIPING DESCRIPTION FURNISH AND INSTALL PLUMBING PIPING WHERE SHOWN ON DRAWINGS AND AS SPECIFIED.	TESTING OF PLUMBING PIPING DESCRIPTION CONDUCT ALL TESTS AFTER PIPING IS INSTALLED AND BEFORE PIPING IS CONCEALED OR COVERED.	PIPING HOT AND COLD WATER PIPING SHALL BE COPPER WATER TUBE HARD TEMPER, TYPE "L" WITH WROUGHT SOLDER FITTINGS ABOVE FLOOR AND SOFT TEMPER TYPE "K" WITH WROUGHT SOLDER FITTINGS BELOW GRADE.			
		GENERAL PLUMBING SYSTEMS SHALL BE PROVIDED COMPLETE. SHOULD A SYSTEM, OR ANY PART THEREOF FAIL TO MEET PERFORMANCE REQUIREMENTS, NECESSARY REPLACEMENTS, ALTERATIONS OR REPAIRS, AS REQUIRED BY THE OWNER'S REPRESENTATIVE, SHALL BE MADE TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS AND ALL BUILDING CONSTRUCTION AND FINISHES DAMAGED OR MARRED BY SUCH REPLACEMENTS, ALTERATIONS OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITION, AT NO ADDITIONAL COST TO THE OWNER.		PIPING MATERIALS OPTIONS 1. CAST IRON HUBLESS SANITARY PIPE AND FITTINGS: CISPI STD. 301. 2. CAST IRON SOIL PIPE AND FITTINGS, SERVICE WEIGHT: ASTM A 74. 3. CAST IRON SOIL PIPE AND FITTINGS, EXTRA HEAVY WEIGHT: ASTM A 74. 4. STEEL PIPE: ASTM A 53. 5. MALLEABLE IRON FITTINGS, 150 LB.: ASTM A 197. 6. PIPE THREADS: ANSI B2.1. 7. NIPPLES, PIPE (THREADED): FED SPEC. WW-N-351. 8. COPPER WATER TUBE: ASTM B 88. 9. WROUGHT COPPER AND BRONZE SOLDER-JOINT PRESSURE FITTINGS: ANSI B16.23. 10. WROUGHT COPPER AND WROUGHT COPPER ALLOY SOLDER-JOINT DRAINAGE FITTINGS: ANSI B16.28 11. CAULKING LEAD: FED. SPEC. QQ-C-40 (2). 12. SHEET LEAD: FED. SPEC. QQ-C-201. 13. SHEET COPPER: ASTM B 152. 14. NO-HUB STAINLESS STEEL COUPLING AND GASKETS: CISPI STD. S-301. 15. WHERE ACCEPTABLE BY LOCAL AUTHORITY HAVING JURISDICTION SOLID WALL ABS PIPING MAY BE USED FOR WASTE PIPING. 15.A. PVC/ABS PIPING CANNOT BE USED IN RETURN AIR PLENUM APPLICATION.	PLUMBING VALVES DESCRIPTION INSTALL IN ACCESSIBLE LOCATION. VALVES SHALL NOT BE INSTALLED WITH THE STEMS BEHIND THE HORIZONTAL POSITION.	DESCRIPTION CONDUCT ALL TESTS AFTER PIPING IS INSTALLED AND BEFORE PIPING IS CONCEALED OR COVERED.	INSTALLATION NOTCHING OF PIPE FOR CONNECTION NOT PERMITTED.	WHERE POSSIBILITY OF BACKFLOW FROM THE DRAIN TO THE SUPPLY FITTING EXISTS, INSTALL VACUUM BREAKERS.		
5		WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED THEY SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER.		JOINTS AND CONNECTIONS OPTIONS 1. CAST IRON, HUB AND SPOGOT: PACKED WITH OAKUM AND FINISHED WITH LEAD NOT LESS THAN 1 INCH DEEP, WELL CAULKED. 2. CAST IRON, NO-HUB: NEOPRENE GASKET AND CORRUGATED 304 STAINLESS STEEL, SHIELD IN CONJUNCTION WITH 4 STAINLESS STEEL CLAMPS FOR 4" AND SMALLER, 6 CLAMPS FOR 5" AND LARGER. 3. BETWEEN LEAD AND BRASS: FERRULES OR SOLDERING NIPPLES WITH WIPE D JOINTS 3/8" THICK AND 3/4" EACH SIDE OF JOINTS. 4. SCREWED JOINTS: AMERICAN NATIONAL STANDARD WITH PIPE FREE FROM CUTTING AND BURRS, THREE THREADS EXPOSED MAXIMUM. 5. SOLDERED JOINTS: 95-5 TIN-ANTIMONY SOLDER. SLP JOINTS: USE FOR PLUMBING TRAP SEALS ON INLET SIDE ONLY. 6. BETWEEN COPPER AND FERROUS MATERIALS: INSULATING DIELECTRIC UNION. 7. FLANGED JOINTS: FURNISH WITH COMPANION FLANGE AND CLOTH INSERTED RUBBER GASKET. 8. FLANGED BOLTS: ASTM A 354, MINIMUM GRADE BD, ALLOY STEEL WITH HEX NUTS IN COMPLIANCE WITH ANSI B18.22 AND STANDARD ROLLED STEEL WASHERS. 9. ASSEMBLY FOR HUBLESS PIPING: AS RECOMMENDED BY THE MANUFACTURER. 10. CHANGES IN PIPE SIZE SHALL BE MADE WITH REDUCERS, INCREASES OR REDUCING FITTINGS. BUSHINGS WILL NOT BE PERMITTED.	ALL LEAKS DISCLOSED BY THE TESTING PROCEDURES SHALL BE REPAIRED AND TESTING REPEATED UNTIL THE SYSTEM IS PROVEN TIGHT.	PROVIDE ALL NECESSARY TEMPORARY PIPING CLOSURES.	MAKE CONNECTION TO EQUIPMENT AND FIXTURES INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.			
		INSERTS, PIPE SLEEVES, HANGERS, SUPPORTS, FIXTURES, TRIM DRAINS AND ANCHORAGE OF PLUMBING SHALL BE PROVIDED AS SPECIFIED HEREIN. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AND LAYOUT MADE AT THE PROPER TIME FOR THE SETTING OR EMBEDMENT THEREOF SO AS TO CAUSE NO DELAY IN THE WORK.		VALVES, GATE, 125# UNION BONNET, RISING STEM 3 INCH AND SMALLER: 1. SCREWED: ITT GRINNELL #3080 OR APPROVED EQUAL. 2. SOLDER JOINT: ITT GRINNELL #3080 SJ OR APPROVED EQUAL.	MATERIALS OTHER THAN THOSE SPECIFIED FOR JOINING WILL NOT BE PERMITTED IN THE PIPING SYSTEMS FOR THE PURPOSE OF STOPPING LEAKS.	SYSTEMS SHALL REMAIN UNDER TEST FOR SUFFICIENT LENGTH OF TIME TO PROVE TIGHTNESS THEREOF AND FOR ADEQUATE OBSERVATION BY THE ARCHITECT-ENGINEER.	NOT MORE THAN ONE LAVATORY, SINK, OR SIMILAR FIXTURE SHALL BE SUPPLIED BY A 1/2 INCH BRANCH. LINEAR DIMENSIONS NOT TO EXCEED 5 FEET.			
		MANUFACTURER'S NAMES AND CATALOG NUMBERS SPECIFIED REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURER'S NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT NECESSARILY INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS AN "OFF THE SHELF" ITEM. REQUIREMENTS FOR SPECIFIC FINISHES, MATERIAL OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURER'S STANDARDS. MODIFICATIONS SHALL BE FULLY CONSIDERED.		VALVES, BALL (MAY BE USED IN LIEU OF GATE VALVES UP TO 2"); 2" AND SMALLER NIBCO #T580; TWO PIECE BRONZE BODY, WITH SCREWED ENDS, CHROME PLATED BRONZE BALL WITH CONVENTIONAL PORT, 400 PSI, BLOW OUT PROOF STEM.	TESTING REQUIREMENTS ARE MINIMUM AND ARE NOT INTENDED TO BE LIMITING WHERE ADDITIONAL TESTING METHODS ARE REQUIRED BY THE AUTHORITY HAVING JURISDICTION.	STERILIZATION: PROVIDE A DATED LETTER TO THE ARCHITECT-ENGINEER'S REPRESENTATIVE STATING THAT PIPING SYSTEM HAS BEEN STERILIZED AND FLUSHED AS SPECIFIED.	ALL PIPING INSTALLED BELOW GROUND SHALL RECEIVE TWO COATS OF KOPPERS NO. 50 OR APPROVED EQUAL.			
4		CHARTS AND TAGS IN AREAS HAVING VALVES, PROVIDE SINGLE LINE DIAGRAMS FRAMED UNDER GLASS AND MOUNTED ON EQUIPMENT ROOM WALL. THE DIAGRAMS SHALL GIVE NAME, NUMBER DESIGNATION AND LOCATION OF VALVE.		VALVES, CHECK 125# REMOVABLE REGRINDABLE DISC A. 3 INCH AND SMALLER, HORIZONTAL: 1. SCREWED: ITT GRINELL #3300 OR APPROVED EQUAL. 2. SOLDER JOINT: ITT GRINELL #3300 SJ OR APPROVED EQUAL.	ALL LEAKS DISCLOSED BY THE TESTING PROCEDURES SHALL BE REPAIRED AND TESTING REPEATED UNTIL THE SYSTEM IS PROVEN TIGHT.	SUBMITTALS STERILIZATION: PROVIDE A DATED LETTER TO THE ARCHITECT-ENGINEER'S REPRESENTATIVE STATING THAT PIPING SYSTEM HAS BEEN STERILIZED AND FLUSHED AS SPECIFIED.	PLUMBING INSULATION DESCRIPTION INSULATION SHALL NOT BE INSTALLED UNTIL TESTING PROCEDURES HAVE BEEN COMPLIED WITH AND ALL SURFACES HAVE BEEN CLEANED AND FREE OF DIRT, GREASE AND COMPLETELY DRIED.			
		VALVES SHALL BE IDENTIFIED WITH 1/16 INCH THICK WHITE LAMINATED PLASTIC NAMEPLATES WITH 3/16 INCH HIGH BLACK LAMINATED LETTERS. THE NAMEPLATE IDENTIFICATION SHALL COINCIDE WITH ITEMS APPEARING ON DIAGRAMS. ATTACH NAMEPLATES TO VALVES WITH NON-CORROSIVE CHAIN OR WIRE.		VALVES, GLOBE 150# TEFLON DISC, UNION BONNET 3 INCH OR SMALLER: 1. SCREWED: ITT GRINNELL #3240 OR APPROVED EQUAL. 2. SOLDER JOINT: ITT GRINNELL #3240 SJ OR APPROVED EQUAL.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	PIPING TEST DOMESTIC HOT AND COLD WATER PIPING SHALL BE FILLED, THEN TESTED TO A HYDROSTATIC PRESSURE OF 150 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF ONE HOUR.	MATERIALS SHALL COMPLY WITH UL 723, FLAME SPREAD RATING, HOT SURFACE TEST PERFORMANCE, AND SMOKE DEVELOPED RATING.			
		ACCESS DOORS PROVIDE ACCESS DOORS AS INDICATED AND SPECIFIED IN DRAWINGS		VALVES, CHECK 125# REMOVABLE REGRINDABLE DISC A. 3 INCH AND SMALLER, HORIZONTAL: 1. SCREWED: ITT GRINELL #3300 OR APPROVED EQUAL. 2. SOLDER JOINT: ITT GRINELL #3300 SJ OR APPROVED EQUAL.	GAS PIPING SHALL BE TESTED WITH NITROGEN TO 50 PSIG, PRESSURE SHALL BE MEASURED WITH A MANOMETER, MAINTAIN TEST PRESSURE FOR A MINIMUM OF 30 MINUTES.	SANITARY PIPING, PREVIOUS TO CONNECTION OF FIXTURES, SHALL BE FILLED WITH WATER TO THE TOP OF THE SYSTEM AND PROVEN TIGHT. WHEN TESTING THE SYSTEM BY SECTIONS THE MINIMUM HEIGHT OF THE WATER COLUMN SHALL BE 10 FEET. EXAMINE ALL JOINTS FOR LEAKS.	INSULATION INSULATION FOR HOT AND COLD WATER PIPING, SHALL BE SECTIONAL GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE ASJ/SJLI OR APPROVED EQUAL, WITH FACTORY APPLIED, ALL PURPOSE, FIRE RETARDANT JACKET.			
3		INSTALLATION AND WORKMANSHIP THE WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY MATERIAL, APPARATUS OR EQUIPMENT WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, IS IMPROPERLY INSTALLED SHALL BE REMOVED AND REINSTALLED IN AN APPROVED MANNER AT NO ADDITIONAL COST TO THE OWNER.		3 INCH AND SMALLER, VERTICAL: 1. FOR SCREWED AND SOLDER JOINT INSTALLATION, SAME AS SECTION A OR APPROVED EQUAL. PROVIDE ADAPTERS FOR SOLDER JOINT CONNECTION. 2.05 HOSE BIBBS A. SEE FIXTURE SCHEDULE ON DRAWINGS. B. PLUG COCKS, 125# BRONZE COCKS. TWO (2) INCH AND SMALLER SHALL BE CRANE NO. 250 OR APPROVED EQUAL.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	INSULATION INSULATION FOR EXPOSED HOT AND COLD WATER PIPING SHALL BE SECTIONAL GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE ASJ/SJLI OR APPROVED EQUAL, WITH FACTORY APPLIED, .016 EMBOSSED ALUMINUM JACKET.			
		THE LOCATION OF PLUMBING PIPING SHALL BE COORDINATED TO ENSURE THAT IT CLEARS OPENINGS AND STRUCTURAL MEMBERS; THAT PIPING INDICATED AS CONCEALED CAN BE PROPERLY CONCEALED IN WALLS OR PARTITIONS AND THAT IT DOES NOT INTERFERE WITH LIGHTS, DUCTWORK OR EQUIPMENT HAVING FIXED LOCATIONS. MAKE NECESSARY HORIZONTAL OR VERTICAL OFFSETS WITH PIPE FITTINGS TO INSTALL THE SYSTEM IN THE AVAILABLE SPACE. CONCEAL OR INSTALL TIGHT TO STRUCTURE (IF EXPOSED) UNLESS OTHERWISE NOTED.		INSTALLATION INSTALL VALVES WHERE SHOWN ON DRAWINGS.	GAS PIPING SHALL BE TESTED WITH NITROGEN TO 50 PSIG, PRESSURE SHALL BE MEASURED WITH A MANOMETER, MAINTAIN TEST PRESSURE FOR A MINIMUM OF 30 MINUTES.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	ADHESIVE SHALL BE BENJAMIN FOSTER 30-36, OR APPROVED EQUAL, WHITE INSULATION LAGGING ADHESIVE.			
		PIPING SHALL BE EXPOSED IN FINISHED AREAS ONLY WHERE INDICATED OR WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.		PLUMBING HANGERS AND SUPPORTS DESCRIPTION PROVIDE HANGERS FOR ALL PIPING NOT INDICATED BELOW GRADE. USE HANGERS CAPABLE OF ADJUSTMENT.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
		WHERE DRAIN OR WATER CONNECTIONS NECESSARY TO THE OPERATION OF FIXTURES OR EQUIPMENT ARE NOT SPECIFICALLY SHOWN ON DIAGRAMS, EXTEND NECESSARY BRANCHES TO THE CLOSEST INDICATED BRANCH OR MAIN, AT NO ADDITIONAL COST TO THE OWNER.		HANGERS AND SUPPORTS HANGERS FOR BLACK OR GALVANIZED STEEL PIPE SHALL BE GRINNELL, MODEL NO. 65 OR APPROVED EQUAL.	GAS PIPING SHALL BE TESTED WITH NITROGEN TO 50 PSIG, PRESSURE SHALL BE MEASURED WITH A MANOMETER, MAINTAIN TEST PRESSURE FOR A MINIMUM OF 30 MINUTES.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	ADHESIVE SHALL BE BENJAMIN FOSTER 30-36, OR APPROVED EQUAL, WHITE INSULATION LAGGING ADHESIVE.			
		EACH FIXTURE, EQUIPMENT DRAIN OR FLOOR DRAIN SHALL BE SEPARATELY TRAPPED UNLESS OTHERWISE INDICATED OR SPECIFIED.		HANGERS FOR CAST IRON PIPE SHALL BE GRINNELL, MODEL NO. 260 OR APPROVED EQUAL.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
		PLUMBING PIPING AND EQUIPMENT SHALL NOT BE FIELD PAINTED, OR PRIMED BEYOND THE DEGREE OF APPLICATION FROM THE FACTORY SOURCE, OR EXCEPT AS REQUIRED BY APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION.		HANGERS FOR COPPER TUBING SHALL BE GRINNELL, MODEL NO. 97 C OR APPROVED EQUAL.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
1		WATERPROOFING DO NOT CUT OR PENETRATE WATERPROOFED SURFACES OR WATERPROOFING MEMBRANES WITHOUT FIRST MAKING ARRANGEMENTS FOR REPAIR BY A METHOD APPROVED BY THE OWNER'S REPRESENTATIVE.		TRAPEZE HANGERS OF A TYPE APPROVED BY THE OWNER'S REPRESENTATIVE MAY BE USED WHERE PIPES ARE DESIGNED TO RUN PARALLEL AT THE SAME ELEVATION.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
				PROVIDE ISOLATION HANGER WITH PROTECTIVE SHIELD, GRINNELL, MODEL NO. 300 103 OR APPROVED EQUAL. FOR ALL INSULATED PIPING. AT HANGER POINTS, PROVIDE 6 INCH LONG SECTION OF 1/2 INCH THICK CALCIUM SILICATE SECTIONAL PIPE INSULATION WITH FACTORY LONGITUDINAL LAP. SEAL BUTT JOINTS WITH INSULATING CEMENT.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
				STRAP HANGERS: NOT PERMITTED.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
				RISER CLAMPS: PROVIDE RISER CLAMPS FOR VERTICAL PIPING AT EACH LEVEL, GRINNELL MODEL NO. 261	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
				PIPE SLEEVES SCHEDULE 40 BLACK STEEL, GALVANIZED 26 GAGE STEEL, PROVIDE FOR ALL PIPES THROUGH WALLS AND FLOORS.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
					NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
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					NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
					NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.			
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					NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FIL				

ELECTRICAL ABBREVIATIONS

AC	ALTERNATING CURRENT
AHU	AIR HANDLING UNIT
A. OR AMPS.	AMPERES
AFC	ABOVE FINISH COUNTER
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BTC	BRANCH TO CONNECTION POINT AND CONNECT EQUIPMENT
C	CONDUIT ("E.C." IS EMPTY CONDUIT)
CF	CEILING FAN
CM	COFFEE MAKER
CT	COOKTOP
D	DEDICATED CIRCUIT
DCO	DUPLEX CONVENIENCE OUTLET
DP	DISPOSAL
DW	DISHWASHER
DY	DRYER
EMT	ELETRICAL METALLIC TUBING
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER (WATER-COOLED DRINKING FOUNTAIN)
EX	EXISTING
FOU	FAN COIL UNIT
GFIC/GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFI/P	GROUND FAULT INTERRUPTER PROTECTED
GRD	GROUND
H	HORIZONTAL MOUNT (RECEPTACLE)
HD	VENTILATION HOOD
HP	HORSEPOWER
HT	HEAT TRACE POWER (PROVIDE W/ 20A/1P GFI BREAKER)
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND (DUPLEX RECEPTS. - NEMA 5-20RIG)
KCM	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT-AMPERES (1000 VOLT-AMPERES)
KW	KILOWATTS (1000 WATTS)
MLO	MAIN LUGS ONLY
MCB	MAIN CIRCUIT BREAKER
MW	MICROWAVE (COORD MTG HT W/ ARCHITECT)
NIC	NOT IN CONTRACT
NEC	NATIONAL ELECTRICAL CODE
NF	NOT FUSED
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PNL	PANEL
PH OR Ø	PHASE
P	POLE
PVC	POLYVINYL CHLORIDE
RF	REFRIGERATOR
RG	RANGE
SPD	SURGE PROTECTIVE DEVICE
T	TAMPERPROOF RECEPTACLE
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION RECEPTACLE
UC	UNDERCOUNTER REFRIGERATOR (OR ICE MACHINE)
UL	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT-AMPERES
VD	VENDING MACHINE (24" AFF)
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WA	WASHER
WD	WARMING DRAWER
WO	WALL OVEN
WP	WEATHERPROOF
WP/WR	WEATHERPROOF/WEATHER RESISTANT
WI/UNIT	DISCONNECT IS SUPPLIED WITH THE UNIT

GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, REQUIREMENTS OF THE AHJ AND ALL LOCAL & STATE CODES.
2. DO NOT SCALE FROM THESE DRAWINGS.
3. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS AND BUSHINGS.
5. ALL JUNCTION BOXES SHALL HAVE A COVER.
6. COORDINATE EACH LIGHT FIXTURE INSTALLATION(S) W/ ACTUAL CEILING TO BE FURNISHED.
7. ALL BRANCH CIRCUITS WITHOUT A CONDUCTOR & CONDUIT INDICATED SHALL BE ROUTED TO A 20A-1P BREAKER W/ 2412, 1412EG 34"C.
8. ALL BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG AND ALL CONDUIT SHALL NOT BE SMALLER THAN 3/4"C. UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH DEDICATED NEUTRALS UNLESS NOTED OTHERWISE. WHERE NEUTRALS ARE INDICATED TO BE SHARED, MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH 2P OR 3P BREAKERS AS REQUIRED PER NEC210.4.
10. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. THE RACEWAY SHALL NOT BE USED AN EQUIPMENT GROUND.
11. ALL FIXTURES SHALL BE SUPPORTED FROM EACH CORNER (INDEPENDENT OF THE SUSPENDED CEILING) WITH 12 GAUGE WIRE CONNECTED TO STRUCTURAL SYSTEM OF BUILDING. THE INSTALLATION SHALL MEET OR EXCEED THE SEISMIC REQUIREMENTS OF LOCAL AND NATIONAL CODES.
12. ELECTRICAL DEVICE MOUNTING HEIGHTS, UNO:

PANELBOARDS

78" AFF TO TOP OF PANEL

SWITCHES

48" AFF TO TOP OF JUNCTION BOX

RECEPTACLES

18" AFF TO CENTER OF RECEPTACLE

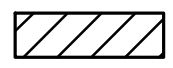
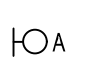
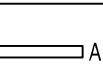
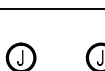
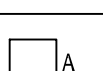
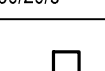
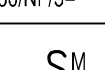
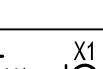
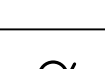
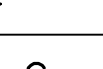
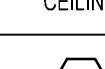
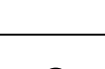
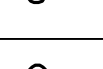
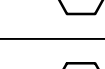
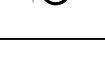
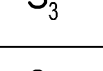
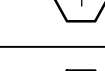
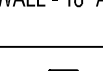
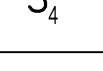
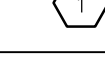
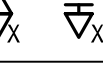
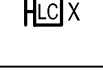
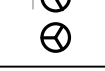
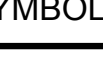
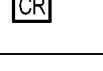
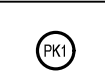
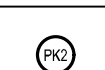
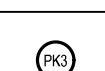
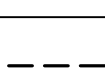
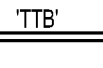
TELE/DATE OUTLETS

18" AFF TO CENTER OF RECEPTACLE

APARTMENT LOADCENTERS

PER ANSI A117.1 REQUIREMENTS (VERIFY WITH LOCAL INSPECTOR)
13. ELECTRICAL EQUIPMENT (PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, ETC.) IS SHOWN TO SCALE ON THE FLOOR PLANS.
14. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT THAT WILL FIT WITHIN THE SPACES SHOWN ON THE PLANS AND COMPLYING WITH ALL CODE REQUIRED CLEARANCES.
15. ELECTRICAL CONTRACTOR TO LABEL ALL DEVICES (RECEPTACLES, SWITCHES, PANELBOARDS, DISCONNECTS, ETC.) WITH CIRCUIT NUMBER AND PANELBOARD DESIGNATION. RECEPTACLES, SWITCHES, AND SIMILAR DEVICES TO HAVE PRE-PRINTED, SELF ADHESIVE LABEL.
16. PANELBOARDS, DISCONNECT SWITCHES, AND SIMILAR DEVICES TO HAVE ENGRAVED, SELF-ADHESIVE, LAMINATED ACRYLIC LABEL (BLACK W/ WHITE LETTERING).
17. PROVIDE TYPE-WRITTEN PANELBOARD SCHEDULES FOR ALL ELECTRICAL PANELBOARDS.

ELECTRICAL SYMBOLS

LIGHTING FIXTURES/DEVICES			POWER EQUIPMENT/DEVICES		
SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTING
	DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		SWITCHBOARD OR DISTRIBUTION PANEL REFER TO PANEL SCHEDULES	
	DIRECTIONAL DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		DRY-TYPE TRANSFORMER REFER TO PLANS FOR KVA RATING	
	WALL MOUNTED LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL		120/208V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES	
	LINEAR LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING OR SUSPENDED		277/480V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES	
	2X4 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		JUNCTION BOX	WALL OR CEILING
	2X2 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		FUSED SAFETY SWITCH (E.G. 3Ø/2Ø/3 INDICATES A 3ØA, 3-POLE SWITCH WITH 2ØA FUSES)	
	HATCHING ON FIXTURE INDICATES FIXTURE TO HAVE EMERGENCY BACK-UP			NON-FUSED SAFETY SWITCH (E.G. 3ØNF/3 INDICATES A 3ØA, 3-POLE SWITCH WITHOUT FUSES)	
	TWO HEAD EMERGENCY LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING		MOTOR RATED SWITCH	
	EMERGENCY EXIT SIGN. PROVIDE ARROW(S) AS INDICATED. SHADING INDICATES FACE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING		MOTOR	
	SINGLE POLE SWITCH 2ØA (120/277V)			NEMA 5-20R SIMPLEX RECEPTACLE	WALL - 18" AFF
	THREE WAY SWITCH 2ØA (120/277V)			NEMA 5-20R DUPLEX RECEPTACLE	WALL - 18" AFF
	FOUR WAY SWITCH 2ØA (120/277V)			NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER	
	WALL BOX DIMMER SWITCH			NEMA 5-20R QUAD-PLEX RECEPTACLE	WALL - 18" AFF
	CEILING OR WALL MOUNTED OCCUPANCY SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL OR CEILING		NEMA 5-20R SPLIT RECEPTACLE. TOP OUTLET WIRED HOT. BOTTOM OUTLET SWITCHED.	WALL - 18" AFF
	LOW-VOLTAGE CONTROL STATION (LETTER INDICATES CONTROL STATION TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL - 48" AFF TO TOP OF JUNCTION BOX		SPECIAL PURPOSE RECEPTACLE REFER TO PLANS FOR NEMA CONFIGURATION	WALL - 18" AFF OR CEILING
	PHOTOCELL SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	FIELD VERIFY		NEMA 5-20R - DUPLEX RECEPTACLE WITH USB PORTS SIMILAR TO HUBBELL #USB20ACSW	WALL - 18" AFF
	POWERPACK (LETTER INDICATES POWERPACK TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	ACCESSIBLE CEILING		NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ON CEILING	CEILING - FLUSH
COMMUNICATION/LOW-VOLTAGE DEVICES				HUBBELL CF84 SERIES FLOOR BOX (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
SYMBOL	DESCRIPTION	MOUNTING		HUBBELL 624 SERIES FLOOR BOX (OR EQUAL) WITH (1) DUPLEX RECEPTACLE AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
	CARD READER (VERIFY EXACT REQUIREMENTS)			HUBBELL B24 SERIES FLOOR BOX (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE. VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH
	DATA, TELEPHONE, OR COMBO TELEDATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	WALL - 18" AFF		HUBBELL S1PT SERIES 4" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
	DATA, TELEPHONE, OR COMBO TELEDATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	FLOOR OR CEILING		HUBBELL S1PTFF SERIES 4" POKE-THRU (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE. VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH
	TELEVISION OUTLET	WALL OR CEILING		HUBBELL S1RS SERIES 6" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION AND AVY CONNECTION CAPABILITY	FLOOR - FLUSH
	SPEAKER OUTLET	FIELD VERIFY		CONDUIT IN OR UNDER FLOOR/GRADE	
	TELEPHONE TERMINAL BOARD	WALL		CONDUCTOR HOME RUN - (H) HOT, (N) NEUTRAL, (E) EQUIPMENT GROUND, & (I) ISOLATED GROUND	
	SECURITY CAMERA OUTLET	FIELD VERIFY		EQUIPMENT CONNECTION	
	PUSH BUTTON			CONDUIT IN CEILING OR WALL	

NOTE: NOT ALL SYMBOLS MAY BE USED.

-  IF MOUNTED ABOVE A COUNTER, DEVICE TO BE WALL MOUNTED 6" ABOVE FINISHED COUNTER OR 44" TO TOP OF JUNCTION BOX (WHICHEVER IS LOWER).
- IF NOT MOUNTED ABOVE A COUNTER, DEVICE TO BE WALL MOUNTED AT 48" AFF TO TOP OF JUNCTION BOX AS REQUIRED TO MEET ADA REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS/ELEVATIONS.

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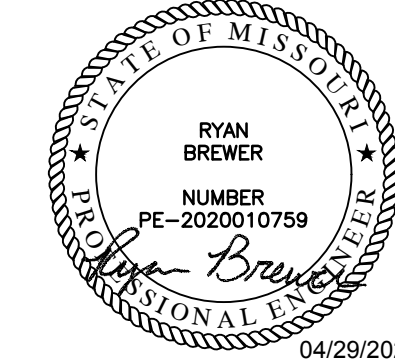
Consultants:

MEP Engineering:



Revisions to technical submissions which are not made or approved by the licensee are prohibited.

Seal:



MICHAEL MOORES, MO Architect #2009032812

Project Number: 2503

Project Type: TENANT FINISH

Project Name and Address:

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2736 NE McBaine Drive
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Issue: Date:
Permit Submittal 04.29.25

Sheet Title:

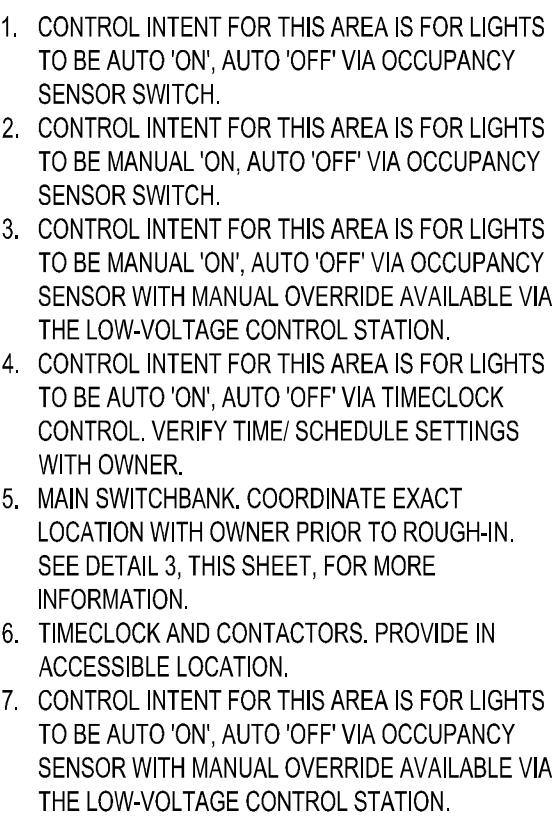
ELECTRICAL
NOTES,
SYMBOLS &
ABBREVIATIONS

E101



1. POWER FOR RANGE, FIELD VERIFY EXACT CONNECTION REQUIREMENTS OF ALL BREAKROOM APPLIANCES WITH OWNER/EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
2. EXISTING RESTROOM AREA TO REMAIN, IF NEW EXHAUST FAN IS PROVIDED, CONNECT FAN TO EXISTING LIGHTING SWITCH/LEG. CONTROL INTENT IS FOR FAN TO ENERGIZE: ON/OFF WITH THE LIGHTS IN THIS AREA. FIELD VERIFY VOLTAGE TO EXISTING LIGHTING SWITCH PRIOR TO ROUGH-IN, IF EXISTING SWITCH/LEG IS NOT 120V, PROVIDE A RIB RELAY AND ANY ADDITIONAL ACCESSORIES FOR A COMPLETE AND OPERATIONAL SYSTEM.
3. RECEPTACLE TO BE MOUNTED ON EQUIPMENT PLATFORM IN AN ACCESSIBLE LOCATION, FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
4. PROVIDE (1) 3/4" CONDUIT FOR POWER AND (1) 1-1/4" CONDUIT FOR DATA FROM FLOOR BOX TO NEAREST WALL AND UP INTO ACCESSIBLE CEILING, FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. PATCH AND REPAIR CONCRETE AS REQUIRED.
5. PROVIDE (1) 3/4" CONDUIT FOR POWER AND (1) 1-1/4" CONDUIT FOR DATA FROM SALES COUNTER TO NEAREST WALL AND UP INTO ACCESSIBLE CEILING FOR CONNECTION TO SALES COUNTER DEVICES. FIELD VERIFY EXACT CONNECTION REQUIREMENTS WITH OWNER/MILLWORK SUPPLIER PRIOR TO ROUGH-IN. PATCH AND REPAIR CONCRETE AS REQUIRED.
6. CONNECT EXHAUST FAN TO LIGHTING SWITCH/LEG FOR THIS AREA. CONTROL INTENT IS FOR FAN TO ENERGIZE: ON/OFF WITH LIGHTS IN RESTROOM.
7. FIELD COORDINATE ANY ADDITIONAL POWER REQUIREMENTS IN THIS AREA WITH OWNER PRIOR TO START OF PROJECT.
8. IF SUBMITTAL TO PHYSICAL DAMAGE FROM FORK LIFT OPERATION IN THIS AREA, PROVIDE AN ALTERNATE PRICE TO INSTALL REMOVABLE BOLLARDS IN FRONT OF THE EQUIPMENT AS REQUIRED TO PROTECT THE EQUIPMENT PER REQ. 110.2.7.
9. RECEPTACLE FOR MICROWAVE AND RE-CIRC FAN. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

E201



E301

3 SWITCHING DETAIL

SCALE: NO SCALE



LIGHTING CONTROLS SCHEDULE					
FIXTURE TAG	MANUFACTURER	MODEL #	SETTINGS	DESCRIPTION	NOTES
SC	ACUITY BRANDS: nLIGHT	nPP16 SERIES	REFER TO PLANS FOR CONTROL INTENT	ON/OFF ROOM SWITCH CONTROLLER LINE VOLTAGE - SINGLE RELAY	1,2,4
L3	ACUITY BRANDS: nLIGHT	nPODM	-	ON/OFF LOW VOLTAGE SWITCH WITH 1-CHANNEL CONTROL	1,6
S1	SENSOR SWITCH	WSX SERIES	REFER TO PLANS FOR CONTROL INTENT	WALL MOUNT OCCUPANCY SENSOR LINE VOLTAGE - SINGLE RELAY	1
S3	ACUITY BRANDS: nLIGHT	nCM-9 SERIES	-	CEILING MOUNT OCCUPANCY SENSOR - SMALL MOTION LOW VOLTAGE	3
S4	ACUITY BRANDS: nLIGHT	nCM-10 SERIES	-	CEILING MOUNT OCCUPANCY SENSOR - LARGE MOTION LOW VOLTAGE	3
WIRE	-	-	-	CAT5, CAT5e, OR CAT 6. STANDARD OR SOLID. TERMINATED AS RJ45 TIA/EIA-568B	

PANEL H2														
VOLTAGE PHASE 480Y/277/3PH 4W BUSBAR RATIO 100A/80A MAIN TYPE 100A/80A					ATC VOLT VPPRY BUSBAR RATIO 100A/80A MOUNTING SURFACE (NEMA 1)					GROUNDING BS (PJM 279-1221) ISOLATED GROUND BUS NO SERVICED ENTRANCE RATIO NO LUGS: ETHER				
LTG	ROFT	MOTOR	HEAT	COOL	MSD	KTEN/EN	ELBV	OCCUPATION			AMP	F	WIRE	ALL LOADS BY WIRE
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
653								OFFICES LTG	1	1	1	1	A	2
654								EXISTING DATA CENTER LTG	1	1	12	5	A	4
655								EXISTING DATA CENTER LTG	1	1	12	5	A	4
656								EXISTING DATA CENTER LTG	1	1	12	5	A	4
657								EXISTING DATA CENTER LTG	1	1	12	5	A	4
658								EXISTING DATA CENTER LTG	1	1	12	5	A	4
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661								EXISTING DATA CENTER LTG	1	1	12	5	A	4
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689								EXISTING DATA CENTER LTG	1	1	12	5	A	4
690								EXISTING DATA CENTER LTG	1	1	12	5	A	4
691								EXISTING DATA CENTER LTG						

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VOLTAGE DROP CHART BRANCH CIRCUIT VOLTAGE DROP WIRING SCHEDULE FOR 1Ø CIRCUITS						
BRANCH CIRCUIT RATING (AMPS)	WIRE SIZE (AWG)	MAXIMUM LENGTH OF BRANCH CIRCUIT (FEET)				
		120V	208V	240V	277V	480V
20A	#12	50	90	110	125	200
	#10	80	150	175	200	350
	#8	140	230	280	320	550
	#6	215	375	430	500	870
30A	#10	50	100	110	130	225
	#8	80	160	180	210	360
	#6	135	250	280	325	560
	#4	220	400	450	525	910

NOTES:

- PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHEREAS BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.
- CONDUCTOR SIZES ARE BASED ON SOLID COPPER CONDUCTORS FOR WIRES SMALLER THAN #6 AND STRANDED COPPER CONDUCTORS FOR WIRES #6 AND LARGER, IN A SINGLE METAL CONDUIT.
- LIMITS FOR CONDUCTOR LENGTH SHOWN ARE BASED ON A MAXIMUM OF 3% VOLTAGE DROP TO COMPLY WITH THE NEC FOR CIRCUITS LOADED UP TO 80% OF THE BRANCH BREAKER RATING. FIELD VERIFY EXACT BRANCH CIRCUIT LENGTHS AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

ENSURE ALL PANELS ARE PROPERLY LABELED. PROVIDE NEW LABELS WHERE ONE IS NOT CURRENTLY PRESENT. UPDATE PANEL DIRECTORIES AS NECESSARY.

1. PROVIDE 3P-100A BREAKER IN EXISTING PANEL 'H1' TO SERVE NEW PANEL 'H2' NEAR OFFICE AREA.
2. EXISTING DISCONNECTS AND METER TO REMAIN.
3. EXISTING METER, CT CABINET AND DISCONNECT TO REMAIN.

E401

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