MARINE CITY HALL

New City Hall Renovation 260 South Parker St., Marine City, MI 48039



Architect: PARTNERS in Architecture, PLC

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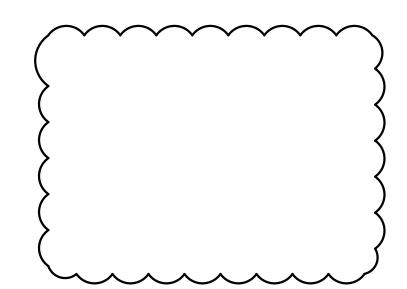
Mechanical / Electrical Engineer: MA Engineering

> 400 S. Old Woodward Ave Birmingham MI (Phone) 248-258-1610

Owner:

Marine City

303 South Water St. Marine City, MI 48039 (Phone) 586-445-5500

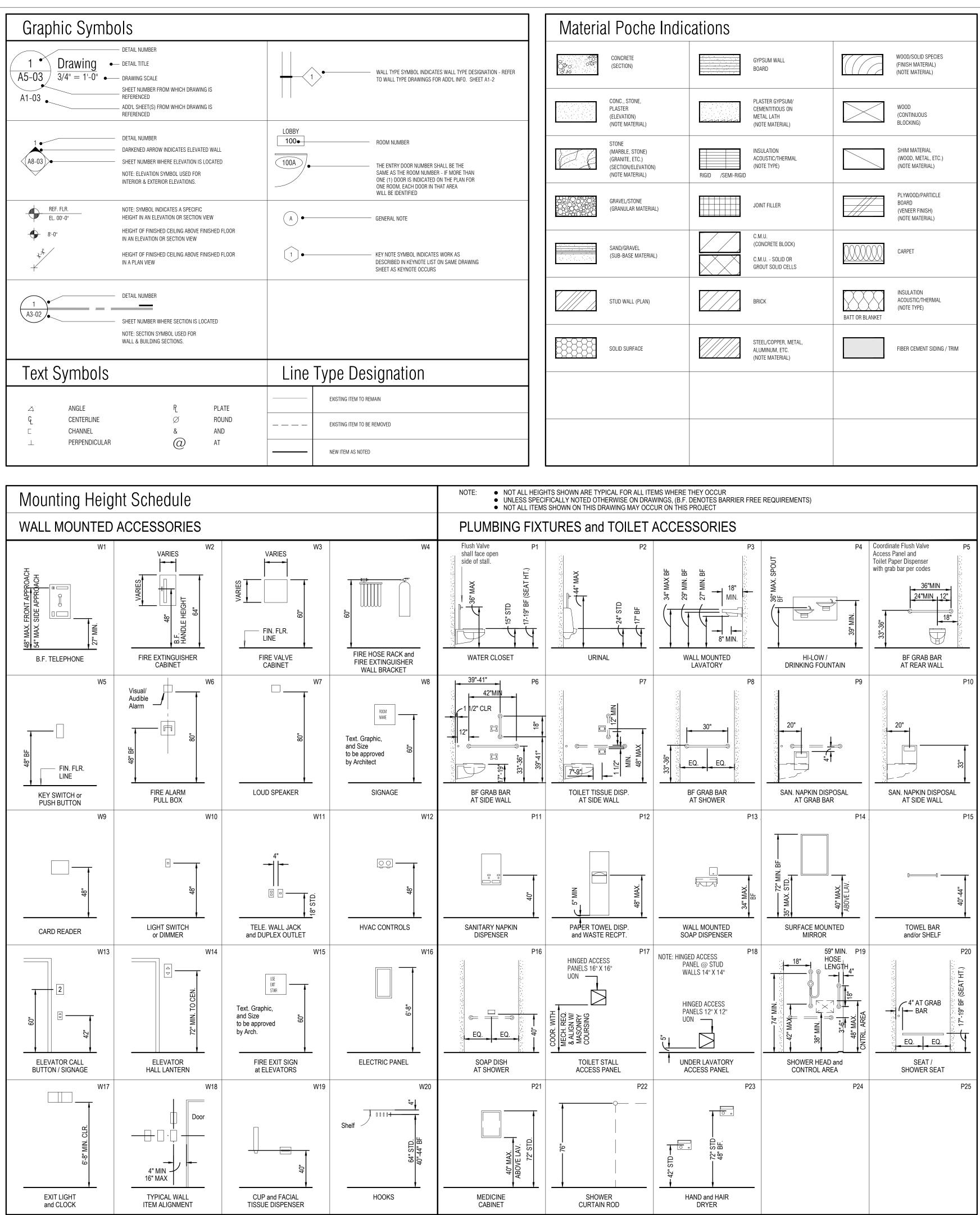


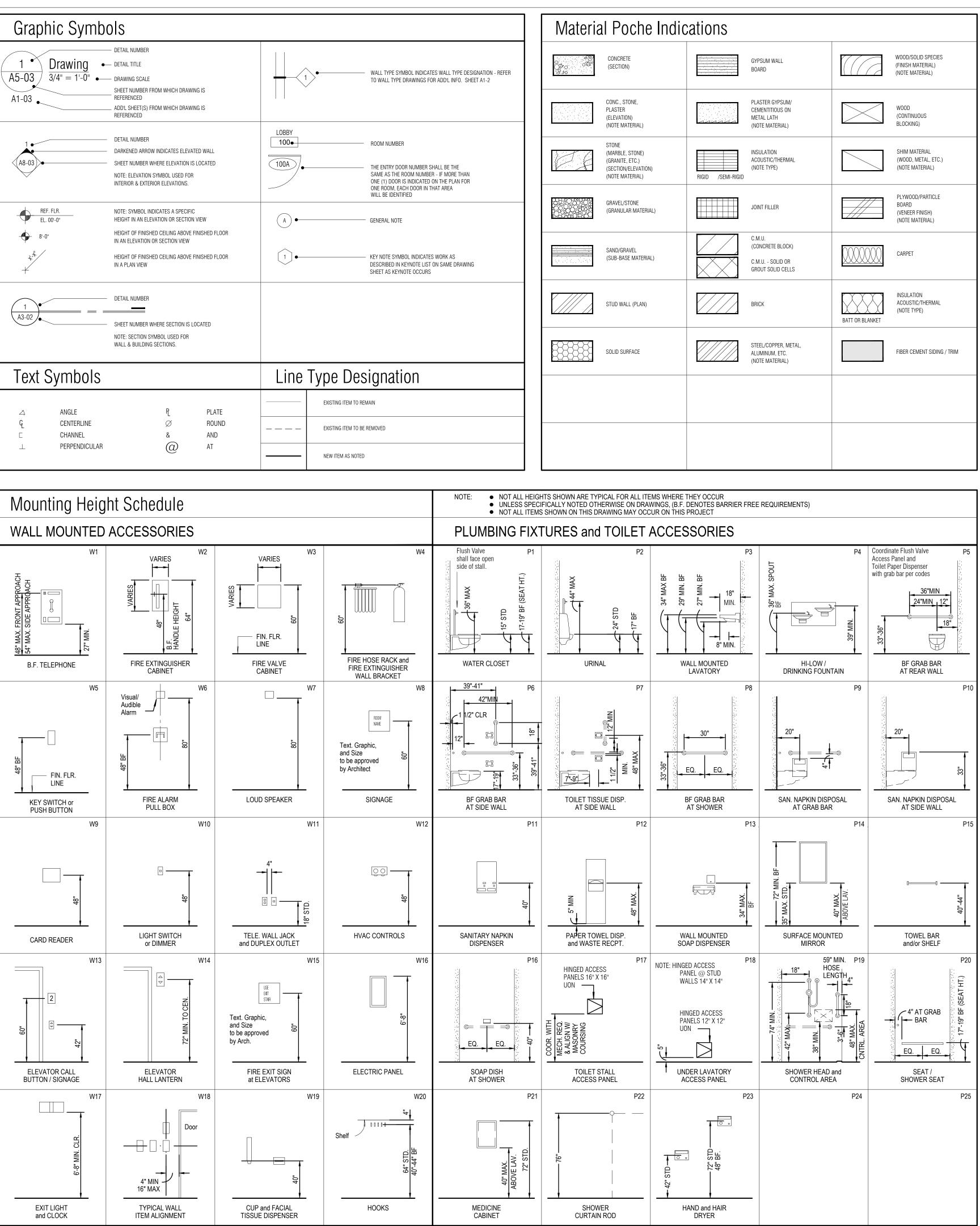
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	\mathbf{x}	PARTNERS in Architecture, PLC
		65 MARKET STREET MOUNT CLEMENS, MI 48043 P 586.469.3600
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General Project Information		
Life Safety Code Information		
Schedules, Door, Frame, & Wall Types	_	
Demolition Floor Plan-Area 'A'	_	
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	2	
Floor Plan-Area 'A' Floor Plan-Area 'B'	_	KEY PLAN
Reflected Ceiling Plan-Area 'A'	_	
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Interior Elevations	2	
Finished Floor-Area 'A'		OWNER
Finished Floor-Area 'B'	_	Marine City
	_	330 South Water St. Marine City, MI48039
	_	PROJECT NAME
Mechanical Cover Sheet		New Marine City Hall
Mechanical Specifications		Renovation
Mechanical Specifications		
Mechanical Schedules		260 South Parker St.
Mechanical Schedules		Marine, MI 48039
Mechanical Details		PROJECT NO.
Mechanical Demo Plan Area 'A'		20-106
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Plumbing Floor Plan Area 'A'	_	ISSUES / REVISIONS 99% CD's 07/15/2020
Plumbing Floor Plan Area 'B'		100% CD's 07/30/2020
HVAC Floor Plan Area 'A'	_	RE-BIDDING / CONSTRUCTION 09/14/2020
HVAC Floor Plan Area 'B'	_	
Floatrical Logand Drawing Index & Light Fixture Cohedula	_	
Electrical Legend, Drawing Index & Light Fixture Schedule Electrical Specifications	_	
Panel Schedule & One Line Diagram	_	DRAWN BY
Lighting Control Matrix Schedule	-	
Electrical Demo Plan Area - A	-	CHECKED BY BAH
Electrical Demo Plan Area - B	-	APPROVED BY DWG
Lighting Floor Plan Area - A		DWG Sheet Name
Lighting Floor Plan Area - B	-	COVER SHEET
Power Floor Plan Area - A		
Power Floor Plan Area - B	-	
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		SHEET NO.
		A0-00

PARTNERS

	iations						
А		F		М		R (CONT.)	
AFF	ABOVE FINISHED FLOOR	FWP	FABRIC WRAPPED PANEL	MAG	MAGNETIC	RD	ROOF DRAIN
ARF	ABOVE REFERENCE FLOOR	FB	FACE BRICK	MH	MANHOLE	RS RFG	ROOF SUMP ROOFING
ACCT AP	ACCENT ACCESS PANEL	FOC FF	FACE OF CONCRETE FACTORY FINISH	MFR MAR	MANUFACTURE(R) MARBLE	RM	ROOM
AC ACT	ACOUSTICAL ACOUSTICAL TILE (OR ACTIVE)	FS F°	FAR SIDE DEGREES FAHRENHEIT	MAR T. MKB	MARBLE THRESHOLD MARKER BOARD	RO RUB	rough opening Rubber
ADD	ADDENDUM	FT	FEET/FOOT	MAS	MASONRY	RB	RUBBER BASE (OR RESILIENT BASE)
ADD'L ADJ	ADDITIONAL ADJACENT	FIN FE	Finish(ED) Fire extinguisher	MO MAT	MASONRY OPENING MATERIAL(S)	S	
AGG	AGGREGATE	FEC FVC	FIRE EXTINGUISHER CABINET FIRE VALVE CABINET	MAX	MAXIMUM		CANITADY
A/C ALT	AIR CONDITIONING ALTERNATE OR ALTERNATIVE	FLD	FIRE VALVE CABINET	MECH MC	MECHANICAL MEDICINE CABINET	SAN SND	SANITARY SANITARY NAPKIN DISPENSER
AL,ALUM ANCH	ALUMINUM ANCHOR, ANCHORAGE	FHS FPR	FIRE HOSE STATION FIRE PROOFING	MED MEM	MEDIUM MEMBER	SNWR	SANITARY NAPKIN WASTE RECEPTACLE
AB	ANCHOR BOLT	FL	FLOOR(ING)	MEMB	MEMBRANE	SCH	SCHEDULE
ANOD ARCH	ANODIZED ARCHITECT(URAL)	FD FLUOR	FLOOR DRAIN FLUORESCENT	MET MDS	METAL METAL DIVIDER STRIP	SJ S.CONC	SCORED JOINT SEALED CONCRETE
ASPH	ASPHALT	FTG	FOOTING	ML	METAL LATH	SEAL	SEALER
AUTO	AUTOMATIC	FDN FA	FOUNDATION FRESH AIR	MET T. MEZZ	METAL THRESHOLD MEZZANINE	SECT SS	SECTION SERVICE SINK
В		FSRS	FULLY-ADHERED SHEET ROOFING SYSTEM	mm MIN	MILLIMETER(S) MINIMUM	SHT SLO	SHEET SHORT LEG OUTSTANDING
8.F.	BARRIER FREE	FURR	FURR(ED), (ING)	MIR	MIRROR	SIM	SIMILAR
BP BP _L	BASE PLATE OR	C		MISC MISC	MISCELLANEOUS MISCELLANEOUS IRON	SK SB	SINK Soil Boring
BRG	BEARING P _L BEARING	G		MON.	MONITOR(ED)	STC	SOUND TRANSMISSION CLASS
BM	BENCH MARK OR BEAM	GA GAL	GAGE, GAUGE GALLON	MCC MTD	MOTOR CONTROL CENTER MOUNT(ED), (ING)	S SPC	South Spacer, spacing
BETW BIT	BETWEEN BITUMINOUS	GALV GL	GALVANIZED GLASS. GLAZING	MULL	MULLION	SPK	SPEAKER
BLKG BD	BLOCKING BOARD	GR	GRADE, GRADING			SPEC(S) SPEC'D	SPECIFICATION(S) SPECIFIED
3S	BOTH SIDES	g GRD	GRAM GROUND	NI		SQ cm 2	SQUARE SQUARE CENTIMETER
BOT BC	BOTTOM BOTTOM OF CURB	GYP	GYPSUM	Ν		SF	SQUARE FOOT (OR STOREFRONT)
BRK	BRICK	GYP L GP	GYPSUM LATH GYPSUM PLASTER	NAT		STAG	(OR SPORTS FLOORING) STAGGERED
ILDG IL	BUILDING BUILDING LINE	GWB	GYPSUM WALL BOARD	NCA NEG	NATURAL COLOR ANODIZED NEGATIVE	SST	STAINLESS STEEL
<u>`</u>	SOLUTIN LITE	Н		NRC	NOISE REDUCTION	STD STA	STANDARD STATION
5		П		NONCOMB	COEFFICIENT NONCOMBUSTIBLE	STL	STEEL
ABT	CABINET	HDCP HDBD	HANDICAP(PED) HARDBOARD	NOM N	NOMINAL NORTH	STN STOR	STONE STORAGE
CR CPT	CARD READER CARPET(ED)	HDWE	HARDWARE	NA	NOT APPLICABLE	SD	STORM DRAIN
CES	CARPET EDGE STRIP	HWD HTG	HARDWOOD HEATING	NIC NTS	NOT IN CONTRACT NOT TO SCALE	ST STRUCT	STREET STRUCTURAL
CI CIP	CAST IRON CAST-IN-PLACE	H&V	HEATING & VENTILATING	N0 (#)	NUMBER	SA SUPP	SUPPLY AIR SUPPORTS
CB	CATCH BASIN	HVAC	HEATING/VENTILATION/ AIR CONDITIONING			SUSP	SUSPENDED
CLG CEM	CEILING CEMENT	HT	HEIGHT	0		SW SWBD	SWITCH SWITCHBOARD
C TO C	CENTER TO CENTER	H HP	High High Point	OFF	OFFICE	SWGR	SWITCHGEAR
CM C°	CENTIMETER(S) DEGREES CENTIGRADE	HS HC	HIGH STRENGTH	0/C	ON CENTER(S)	SYM	SYMMETRY(ICAL)
CER CT	CERAMIC CERAMIC TILE	HM	HOLLOW CORE HOLLOW METAL	OPG OPP	OPENING OPPOSITE	т	
CHAN	CHANNEL	HORIZ HP	HORIZONTAL HORSE POWER	OPP HD	OPPOSITE HAND	I	
CHDK PL CL	CHECKERED PLATE CLEAR(ANCE)	HB	HOSE BIBB	ORIG Oz	ORIGINAL OUNCE	TKB TP	TACKBOARD TANGENT POINT
CLOS	CLOSET	HW HWH	HOT WATER HOT WATER HEATER	OS OA	OUTSIDE OUTSIDE AIR	TEL	TELEPHONE
CO CHK	CLEAN OUT COAT HOOK	HR	HOUR	OD	OUTSIDE DIAMETER	TV TEMP	TELEVISION TEMPERATURE, TEMPERED
CW COL	COLD WATER	1		OH	OVERHEAD	TERR	TERRAZZO
COMB	COLUMN COMBINATION	I				TT THERM	TERRAZZO TILE THERMOSTAT
OMP	COMPRESS(ED),(ION),(IBLE)	IN(") INCL	INCH(ES) INCLUDE(D), (ING)	Р		THK	THICK(NESS)
CONCE	CONCEALED CONCRETE	INFO	INFORMATION	Р		THRES THRU	THRESHOLD THROUGH/THOUGHOUT
CMU	CONCRETE MASONRY UNIT	ID INSUL	INSIDE DIMENSION INSULATE(D), (ION)	PH	PHYSICALLY HANDICAPPED	TOIL	
CONN	(CONCRETE BLOCK) CONNECTION	ICA	INTEGRAL COLOR	PT PR	PAINT(ED) (OR POINT) PAIR	TPH TOL	TOILET PAPER HOLDER TOLERANCE
CONST CONST JT	CONSTRUCTION CONSTRUCTION JOINT	INT	ANODIZED INTERIOR/INTERNAL	PNL PTD	PANEL PAPER TOWEL DISPENSER	T&G T&B	TONGUE AND GROOVE TOP & BOTTOM
CONT	CONTINUOUS OR CONTINUE	INTERM INV	INTERMEDIATE INVERT	PTD/R	PAPER TOWEL DISPENSER &	TE	TOP ELEVATION
CONTR CJ	CONTRACT(OR) CONTROL JOINT	IRR	IRRIGATION	PKG	RECEPTACLE COMBINATION PARKING	TOC TC	TOP OF CONCRETE TOP OF CURB
ORR	CORRUGATED OR CORRIDOR			PBD	PARTICLE BOARD	TOS	TOP OF STEEL
CTR CTSK	CENTER COUNTERSUNK	J		PARTN PE	PARTITION PASSENGER ELEVATOR	TWC TRAN	TOWEL & WASTE CABINET TRANSFORMER
F	CUBIC FOOT	JC	JANITOR'S CLOSET	PERM	PERMANENT	T	TREAD
CY CYL	CUBIC YARD CYLINDER	JT	JOINT	PLAS PL	PLASTER PLASTIC LAMINATE	TYP	TYPICAL
		JST JB	JOIST JUNCTION BOX	PL	PLATE	U	
)		17		PLBG PLWD	PLUMBING PLYWOOD	UH	UNIT HEATER
)PR)P		K		POL PVC	Polished Polyvinyl Chloride	UON	UNLESS OTHERWISE NOTED
DL	DAMPROOFING DEAD LOAD	kg	KILOGRAMS	lb/#	POUND(S)	UR	URINAL
DET DIAG	DETAIL DIAGONAL	KV KVA	KILOVOLT KILOVOLT/AMPERE	PCF PPF	Pounds Per Cubic Foot Pounds Per Foot	V	
Ø	DIAMETER	KW	KILOWATT(S)	PLF	POUNDS PER LINEAL FOOT	•	\/AI \/E
DIFF DIM	DIFFUSER DIMENSION	KWH kg/m	KILOWATT-HOUR KILOGRAM PER METER	PSF PC	POUNDS PER SQUARE FOOT PRECAST CONCRETE	VA VB	VALVE VAPOR BARRIER
D/W	DISHWASHER	kg/cm 2	KILOGRAM PER SQUARE	PRE-FAB	PREFABRICATE(D)	VR VAR	VAPOR RETARDER VARNISH
DO DN	DOOR OPENING DOWN	К	CENTIMETER KIPS			VERT	VERTICAL
DT DWG	DRAIN TILE DRAWING	KSI KIT	KIPS PER SQUARE INCH KITCHEN	Q		VEST VIN	VESTIBULE VINYL
DWG DF	DRINKING FOUNTAIN	КО	KNOCKOUT			VCT	VINYL COMPOSITION TILE
-				QT QB	QUARRY TILE QUARRY TILE BASE	VT VWC	VINYL TILE VINYL WALL COVERING
E		L		QTR	QUARTER	VIT	VITREOUS VINYL RESILIENT STRIP
EA	EACH	LAB	LABORATORY	Р		VRS	VINTL RESILIENT STRIP
EF EW	EACH FACE EACH WAY	LAM LAV	LAMINATE(D) LAVATORY	R		W	
Ē	EAST	LCC	LEAD COATED COPPER	RAD	RADIUS, RADIATOR, RADIATION	WAIN	WAINSCOT
ELEC EWC	ELECTRIC(AL) ELECTRIC WATER COOLER	LH LHR	LEFT HAND LEFT HAND REVERSE	RC RECVG	RAINWATER CONDUCTOR RECEIVING	WHYD	WALL HYDRANT
EL	ELEVATION	L	LENGTH	REC	RECESS(ED) REFERENCE	WH WC	WATER HEATER WATER CLOSET
elev Emer	ELEVATOR EMERGENCY	LTG	LIGHT LIGHTING	REFL	REFLECT(ED), (IVE), (OR)	WM	WATER MAIN
ENC	ENCLOS(E), (URE)	LP LIN	LIGHTING PANEL LINEAR, LINEAL	REFR REG	REFRIGERATOR REGISTER	WP WR	WATERPROOFING WATER RESISTANT
	EPOXY EQUAL	LSWD	LINEAR SUSPENDED WOOD CEILING	REINF	REINFORCE(D), (ING)	WS	WATERSTOP
P Q	EQUIPMENT ESCALATOR	LL LG	LIVE LOAD LONG	REQD RESIL	REQUIRED	WT WWF	WEIGHT WELDED WIRE FABRIC
ep Eq Equip		LG LLBB	LONG LEGS BACK	RT	RESILIENT TILE	WWM	WELDED WIRE MESH WIDTH, WIDE, WEST
EP EQ EQUIP ESC	ETHYLENE PROPYLENE	LLDD		D.4	RETURN AIR	W	WILLE WILL WEST
EP EQ EQUIP ESC EPDM	ETHYLENE PROPYLENE DIENE MONOMERS		TO BACK LONG LEG HORIZONTAL	RA RFV		W/	WITH
EP EQ EQUIP ESC EPDM EXH EB	ETHYLENE PROPYLENE DIENE MONOMERS EXHAUST EXPANSION BOLT	LLH LLO	LONG LEG HORIZONTAL LONG LEG OUTSTANDING	REV RH	REVISION(S), REVISED RIGHT HAND	W/ W/O	WITH WITHOUT
EP EQ EQUIP ESC EPDM EXH EB EJ	ETHYLENE PROPYLENE DIENE MONOMERS EXHAUST EXPANSION BOLT EXPANSION JOINT	LLH	LONG LEG HORIZONTAL	REV RH RHR	REVISION(S), REVISED RIGHT HAND RIGHT HAND REVERSE	W/	WITH
EP EQ EQUIP ESC EPDM EXH EB	ETHYLENE PROPYLENE DIENE MONOMERS EXHAUST EXPANSION BOLT	LLH LLO LLV	LONG LEG HORIZONTAL LONG LEG OUTSTANDING LONG LEG VERTICAL	REV RH	REVISION(S), REVISED RIGHT HAND	W/ W/O	WITH WITHOUT



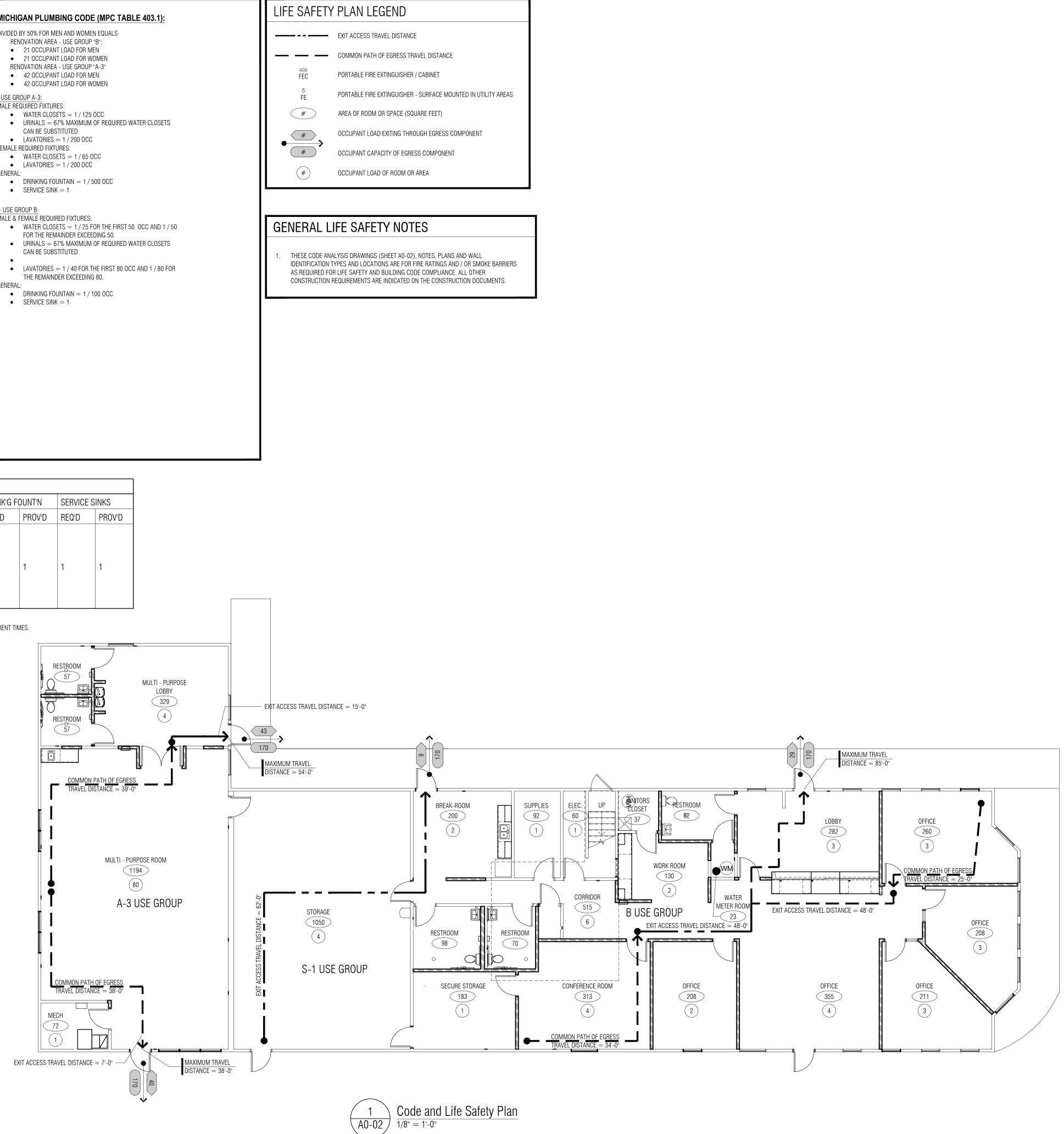


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CONSULTANT	
KEY PLAN	
OWNER	
Marine City 330 South Water St.	
Marine City, MI48039	
PROJECT NAME	
New Marine City Hall Renovation	
Ποπονατιστι	
260 South Parker St.	
Marine, MI 48039	
PROJECT NO.	
20-106	
ISSUES / REVISIONS	
99% CD's 07/15/20 100% CD's 07/30/20	
RE-BIDDING / CONSTRUCTION 09/14/20	20
DRAWN BY	
BH/AM	
снескед ву ВАН	
APPROVED BY DWG	
SHEET NAME	
General Project	
General Project	
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sheet no. A0-01

PROJECT: NEW MARINE CIT HALL ADDRESS: 260 S. PARKER ST MARINE CITY, MI	• (B) BUSINESS 39 • (S-1) STORAGE 6					
GOVERNING CODES: 2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS 2015 MICHIGAN BUILDING CODE (MBC) 2015 MICHIGAN MECHANICAL CODE	 TOTAL 129 1005.1 - MEANS OF EGRESS SIZING: USE GROUP A-3, B, & S-1 (0.2" PER OC REFER TO PLANS FOR EGRESS COMPOI 					
2015 MICHIGAN MICHANICAL CODE 2015 MICHIGAN PLUMBING CODE 2017 NATIONAL ELECTRICAL CODE	 THROUGH IT. TABLE 1006.2.1 - MINIMUM 2 EXITS REQUIRE A-3: GREATER THAN 49 PERSONS 					
MICHIGAN BUILDING CODE SUMMARY: CHAPTER 3 - USE / OCCUPANCY CLASSIFICATION	 MAXIMUM COMMON PATH OF EGRESS B: LESS THAN 49 PEOPLE MAXIMUM COMMON PATH OF EGRESS 			,		
• 303.4 - <u>ASSEMBLY GROUP A-3</u> . (FOR MULTI PURPOSE ROOM) GROUP A-3 OCCUPANCY INCLUDES ASSEMBLY USES INTENDED FOR WORSHIP, RECREATION OR AMUSEMENT AND OTHER ASSEMBLY USES NOT CLASSFIED ELSEWHERE IN GROUP A.	 S-1: LESS THAN 29 PEOEPLE MAXIMUM COMMON PATH OF EGRESS TABLE 1006.3.1 - MINIMUM NUMBER OF EXIT 2 EXITS REQUIRED FOR 1-500 OCCUPANIES 	'S PER STORY NTS	,	Sprinklered)		
 304.1 - <u>BUSINESS GROUP B</u>. (FOR CITY HALL) BUSINESS GROUP B OCCUPANCY INCLUDES, AMOUNG OTHER, THE USE OF A BUILDING OR STRUCTURE, OR A PORTION THEREOF, FOR OFFICE, PROFESSIONAL OR SERVICE TYPE TRANSACTIONS, INCLUDING STORAGE OF RECORDS AND ACCOUNTS. (A-2) 	 1007.1.1 - 2 OR MORE EXITS FROM ANY POR MUST BE MINIMUM DISTANCE APART E DIMENSION OF BUILDING OR AREA MEA 1009.1 - MINIMUM OF ONE ACCESSIBLE MEA WHERE MORE THAN ONE MEANS OF EG 	Equal to 1/2 of Asured in a st INS of egress	F LENGTH OF M RAIGHT LINE BE FROM ANY ACC	TWEEN THEM. SESSIBLE SPAC	CE	
 311.2 - <u>MODERATE-HAZARD STORAGE S-1</u>, (FOR STORAGE ROOM) STORAGE GROUP S-1 OCCUPANCIES ARE BUILDINGS OCCUPIED FOR STORAGE USES THAT ARE NOT CLASSIFIED AS GROUP S-2. 	0F 2 ACCESSIBLE MEANS OF EGRESS M 1009.10 - DIRECTIONAL SIGNAGE INDICATING ARE ACCESSIBLE MUST BE POSTED AT LANDINGS, AND AREAS OF REFUGE	MUST BE PROVI THE LOCATION	DED. OF OTHER ME <i>F</i>	ANS OF EGRES	S AND WHCIH	
CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS	1010.1.1 DOOR SIZES BASED ON OCCUPANT MAXIMUM. TABLE 1017.2 - EXIT ACCESS TRAVEL DISTAN					
 TABLE 504.3 - ALLOWABLE BLDG. HT. IN FEET ABOVE GRADE PLANE: OCCUPANCY: B (BUSINESS) SUPPRESSION: NON-SPRINKLERED 	SPRINKLER SYSTEM TABLE 1020.2 - MINIMUM CORRIDOR WIDTH 1104.1 - AT LEAST ONE ACCESSIBLE ROUTE N	44" (A-3, S-	1, AND B)			
 CONSTRUCTION TYPE: V B MAX. HEIGHT OF 40'-0" EXISTING BUILDING HEIGHT LESS THAN 25 FEET 	SIDEWALKS, AND PUBLIC TRANSPOR 1105.1 - AT LEAST 60% OF ALL PUBLIC ENTR	TATION ANCES TO BE A			and, officero,	
 TABLE 504.4 - ALLOWABLE NO. OF STORIES ABOVE GRADE PLAN: MAX. STORIES OF 2 (EXISTING) TABLE 506.2.4 ALLOWABLE AREA 	 TABLE 1106.1 - REQUIRED ACCESSIBLE PARK FOR THE FIRST 100 SPACES, 1/25 OF S FOR ADDITIONAL SPACES AFTER 100, 1 1106.5 - PROVIDE 1 VAN-ACCESSIBLE SPACE 	PACES MUST B /50 SPACES MI PER 6 ACCESS	JST BE ACCESS IBLE SPACES			
$Aa = [At + (NS \times If)]$ At = TABULAR ALLOWABLE AREA FACTOR PER 506.2 = 6,000SF NS = TABULAR ALLOWABLE AREA FACTOR PER 506.2 FOR NON-SPRINKLERED BUILDINGS (A-3 MOST RESTRICTIVE) = 6,000SE	1106.6 - ACCESSIBLE PARKING SHALL BE LO DISTANCE TO AN ACCESSIBLE ENTRANCE	CATED ON THE	SHORTEST ACC	ESSIBLE ROUT	e of travel	
MOST RESTRICTIVE) = $6,000$ SF If = AREA FACTOR INCREASE DUE TO FRONTAGE PERCENT PER 506.3.3 If = [F/P - 0.25] W/30 W (WIDTH) = 30; D (CFEDWARTED) = 444 FEET	MICHIGAN REHABILITATION CODE FOR CHAPTER 9 - ALTERATION - LEVEL 3	EXISTING BUI	LDINGS SUMN	<u>IARY:</u>		
P (PERIMETER) = 414 FEET F (FRONTAGE) = 470 FEET (113%) If = $(470/417 - 0.25) 30/30$ If = $(1.13 - 0.25) 1 = .88$	 908.1 MINIMUM REQUIREMENTS ENTIRE BUILDING NOT REQUIRED TO CO INTERNATIONAL ENERGY CONSERVATIO ENERGY REQUIREMENTS OF THE INTERI TO NEW CONSTRUCTION ONLY. 	N CODE. THE A	LTERATIONS SH	HALL CONFORM	M TO THE	
Aa =6,000 + (6,000 X .88) = ALLOWABLE BUILDING AREA (Aa) = 11,280 SF TOTAL EXISTING BUILDING AREA:	PER MICHIGAN PLUMBING CODE SECTION 403					
6,371 SF GROSS (INSIDE FACE OF EXTERIOR WALLS) TABLE 508.4 - REQUIRED SEPARATION BETWEEN OCCUPANCIES	OCCUPANCY / OCCUPANT LOAD	DESCRIPT WATER C		LAVATO	RIES	
 BETWEEN S1 & A-3 : NO SEPARATION REQUIREMENT (PER 508.3) BETWEEN S1 & B : NO SEPARATION REQUIREMENT (PER 508.3) 		REQ'D	PROVD	REQ'D	PROV'D	F
CHAPTER 6 - TYPES OF CONSTRUCTION TABLE 601 - FIRE RATING REQUIREMENTS FOR BUILDING ELEMENTS V-B CONSTRUCTION 0 (HOURS)	ASSEMBLY (A-3) - 78TOTAL MALE (WC/UR) - 42	1	1	1	1	
CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES	FEMALE - 42	1	1	1	1	
 TABLE 705.8 - MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION. UNLIMITED OPENING ALLOWED ALONG PERIMETER 	BUSINESS (B) - 43 TOTAL MALE (WC/UR) - 22 FEMALE - 22	1	1	1	1	
 705.8.3 UNPROTECTED OPENINGS WHERE UNPROTECTED OPENINGS ARE PERMITTED, WINDOWS AND DOORS SHALL BE CONSTRUCTED OF ANY APPROVED MATERIALS. GLAZING SHALL CONFORM TO THE REQUIREMENTS 	NOTES: 1. ASSEMBLY (MULTI-PURPOSE ROOM) & 2. STORAGE AREA OCCUPANTS INCLUDED			PPING FUNCTIO	DNS OPERATING A	AT D
OF CHAPTERS 24 AND 26. 718.4 DRAFTSTOPPING IN ATTICS 718.4.3 Other groups. Draftstopping shall be installed in						
attics and concealed roof spaces, such that any horizontal area does not exceed 3,000 square feet						
CHAPTER 8 - INTERIOR FINISHES						
 803.1 - INTERIOR WALL AND CEILING FINISH MATERIALS CLASS A = FLAME SPREAD INDEX OF 0-25; SMOKE DEVELOPED INDEX OF 0-450 CLASS B = FLAME SPREAD INDEX OF 26-75; SMOKE DEVELOPED INDEX OF 0-450 CLASS C = FLAME SPREAD INDEX OF 76-200; SMOKE DEVELOPED INDEX OF 0-450 TABLE 803.11 - INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY USE: (A-3) MULTI-PURPOSE ROOM, (B) BUSINESS, (S-1) STORAGE SPRINKLERED: NO LOCATION (A-3) 						
INTERIOR EXIT STAIRWAYS & RAMPS & EXIT PASSAGEWAYS CLASS A CORRIDORS & ENCL. FOR EXIT ACCESS STAIRS & RAMPS CLASS A ROOMS & ENCLOSED SPACES CLASS C LOCATION (B) MIN. FINISH CLASS						
INTERIOR EXIT STAIRWAYS & RAMPS & EXIT PASSAGEWAYS CLASS A CORRIDORS & ENCL. FOR EXIT ACCESS STAIRS & RAMPS CLASS B ROOMS & ENCLOSED SPACES CLASS C LOCATION (S-1) MIN. FINISH CLASS INTERIOR EXIT STAIRWAYS & RAMPS & EXIT PASSAGEWAYS CLASS B						
CORRIDORS & ENCL. FOR EXIT ACCESS STAIRS & RAMPSCLASS BROOMS & ENCLOSED SPACESCLASS C						
803.12 STABILITY						
 803.12 STABILITY INTERIOR FINISH MATERIALS REGULATED BY THIS CHAPTER SHALL BE APPLIED OR OTHERWISE FASTENED IN SUCH A MANNER THAT SUCH MATERIALS WILL NOT READILY BECOME DETACHED WHERE SUBJECTED TO ROOM TEMPERATURES OF 200°F (93°C) FOR NOT LESS THAN 30 MINUTES. 804.4 - INTERIOR FLOOR FINISH REQUIREMENTS: MIN. CLASS II CRITICAL RADIANT FLUX FOR USE GROUPS A-3,S-1 AND B, NON-SPRINKLERED 						
 INTERIOR FINISH MATERIALS REGULATED BY THIS CHAPTER SHALL BE APPLIED OR OTHERWISE FASTENED IN SUCH A MANNER THAT SUCH MATERIALS WILL NOT READILY BECOME DETACHED WHERE SUBJECTED TO ROOM TEMPERATURES OF 200°F (93°C) FOR NOT LESS THAN 30 MINUTES. 804.4 - INTERIOR FLOOR FINISH REQUIREMENTS: 						
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P:\2020\20-106-Marine City – City Hall Renovation\02_CAD\A0-02 Code_Life Safety.dwg, 9/16/2020 11:44:35 AM, pelderkin





PARTNERS in Architecture, PLC 65 MARKET STREET MOUNT CLEMENS, MI 48043 P 586.469.3600 F 586.469.3607

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CONSULTANT

KEY PLAN



OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS	
99% CD's	07/15/202
100% CD's	07/30/202
	00/14/202

RE-BIDDING / CONSTRUCTION

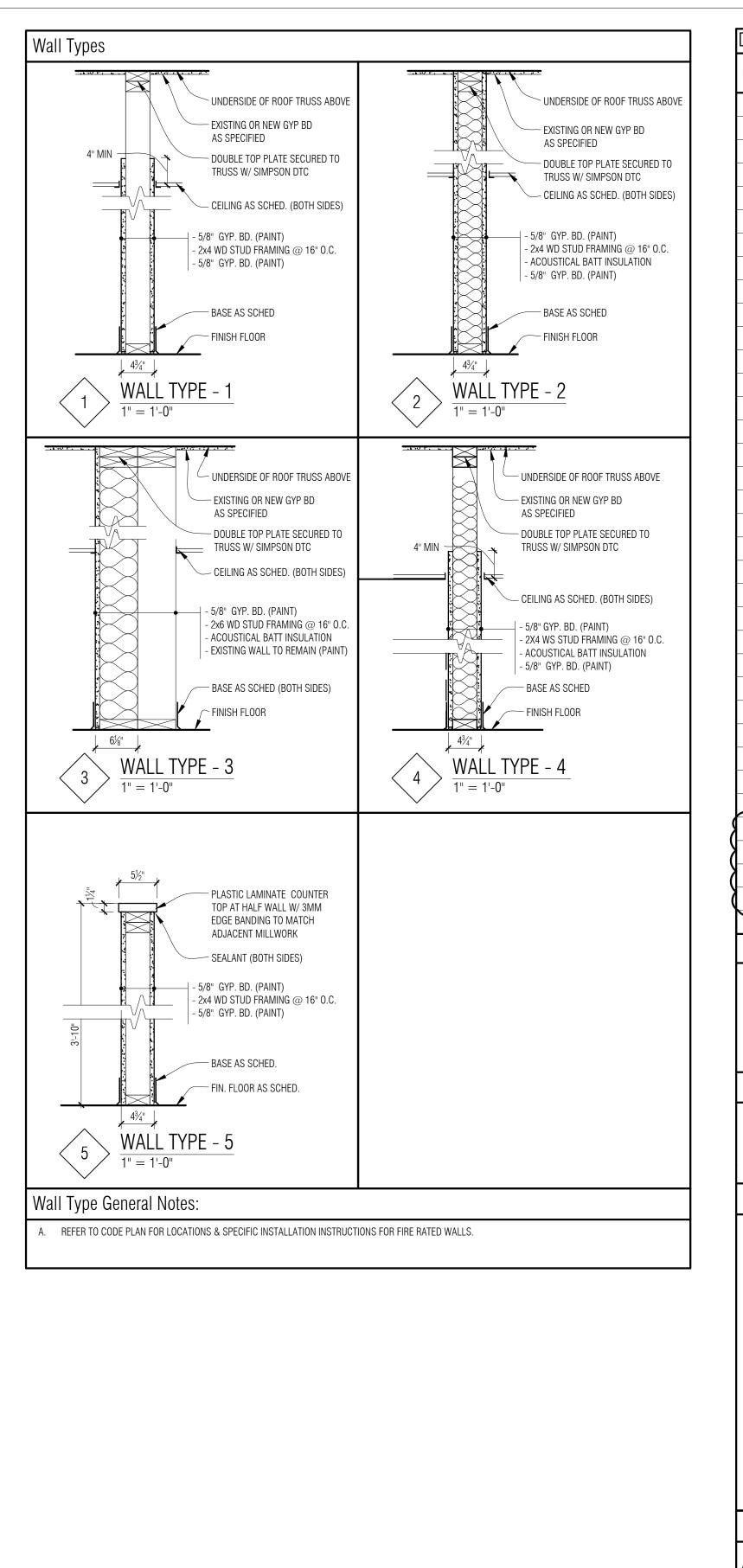
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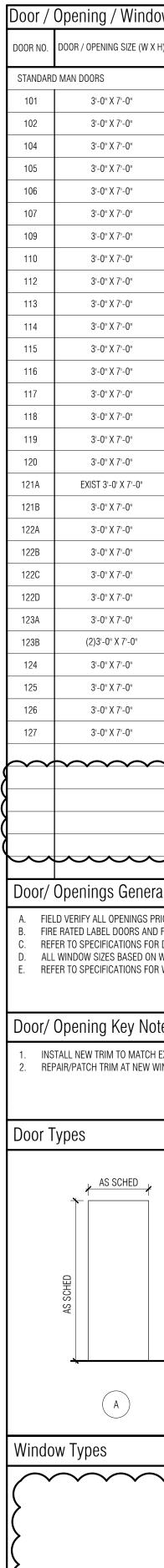
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LIFE SAFETY CODE

SHEET NO. **A0-02**





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loom F	inish Schedule		
ROOM NO.	ROOM NAME	FLOOR	
102	LOBBY	VCT-A/RF-1	
103	PASSAGE	VCT-A	
104	OFFICE	VCT-1	
105	OFFICE	VCT-1	
106	OFFICE	VCT-1	
107	OFFICE	VCT-A	
108	CORRIDOR	VCT-A	
109	OFFICE	VCT-1	
110	CONFERENCE ROOM	VCT-1	
111	WORK ROOM	VCT-A	
112	WATER METER ROOM	CONC	
113	STORAGE	VCT-B	
114	JANITORS CLOSET		
115	CLOSET	VCT-1	
116	WOMENS RESTROOM	VCT-B	
117 118	MENS RESTROOM SECURE STORAGE	VCT-B VCT-1	
110	BREAK ROOM	VCT-A	
120	SUPPLIES	VCT-1	
121	ELEC/MDF	CONC	
122	STORAGE	ETR	
123	MULTI PURPOSE LOBBY	VCT-A/RF-1	
124	MENS RESTROOM	VCT-3	
125	WOMENS RESTROOM	VCT-3	
126	MULTI-PURPOSE ROOM	VCT-B	
127	MECHANICAL	CONC	
Room	Finish General Notes:		
A. R00	M FINISH SCHEDULE WALL ORIENTAT	ION BASED ON P	PLAN
	ER TO SPECIFICATIONS FOR DETAILED ER TO REFLECTED CEILING PLANS ANI		
Koom	Finish Key Notes:		
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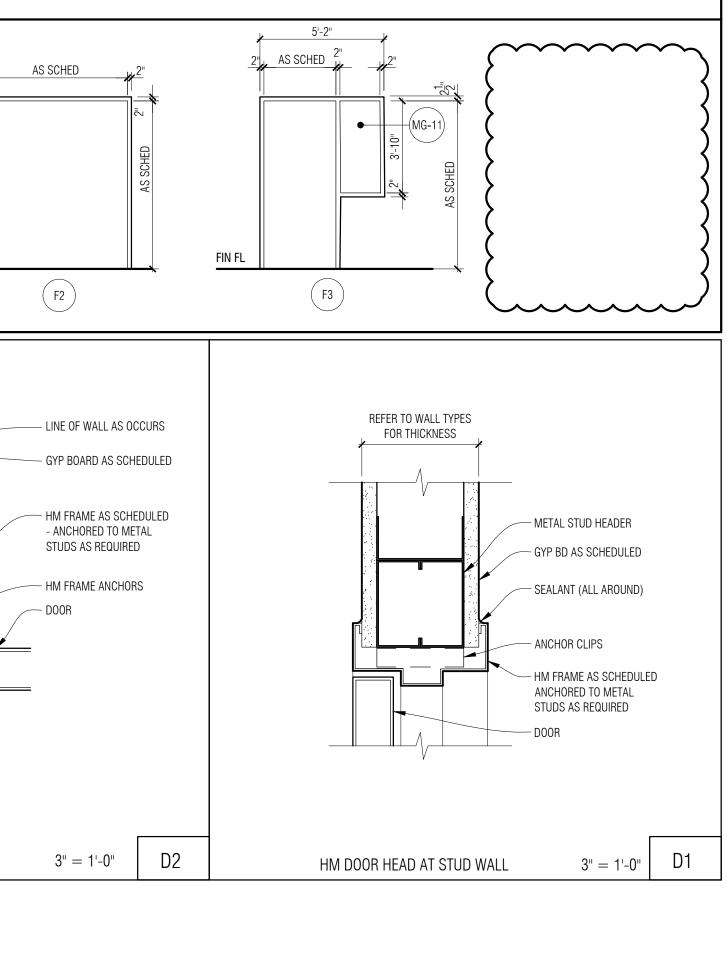
HM DOOR JAMB AT STUD WALL

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RB-1	RNT-6	PNT-4		PNT-4	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-6	ACT	
RB-1	PNT-6	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-6	ACT	
RB-1		PNT-4	PNT-4	PNT-4	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	2
RB-1	PNT-4	PNT-6	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-6	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-6	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ETR	
RB-1	ETR	ETR	ETR	ETR	ETR	
ETR	ETR	ETR	ETR	ETR	EXIST/GYP	1
RB-1	PNT-4	PNT-4	PNT-4	PNT-6	ACT	2
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-4	PNT-4	ACT	
RB-1	PNT-4	PNT-4	PNT-6	PNT-4	ACT	2
RB-1	ETR	PNT-4	ETR	ETR	EXIST	

AN NORTH - NOT TRUE NORTH

MATERIAL INFORMATION TIONS FOR LOCATIONS OF MATERIALS

CEILING PLAN. VCT-B DESIGNATES VCT TILE PATTERN B ON SHEET A9-01.



PARTNERS



PARTNERS in Architecture, PLC 65 MARKET STREET MOUNT CLEMENS, MI 48043 P 586.469.3600

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CONSULTANT

KEY PLAN

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

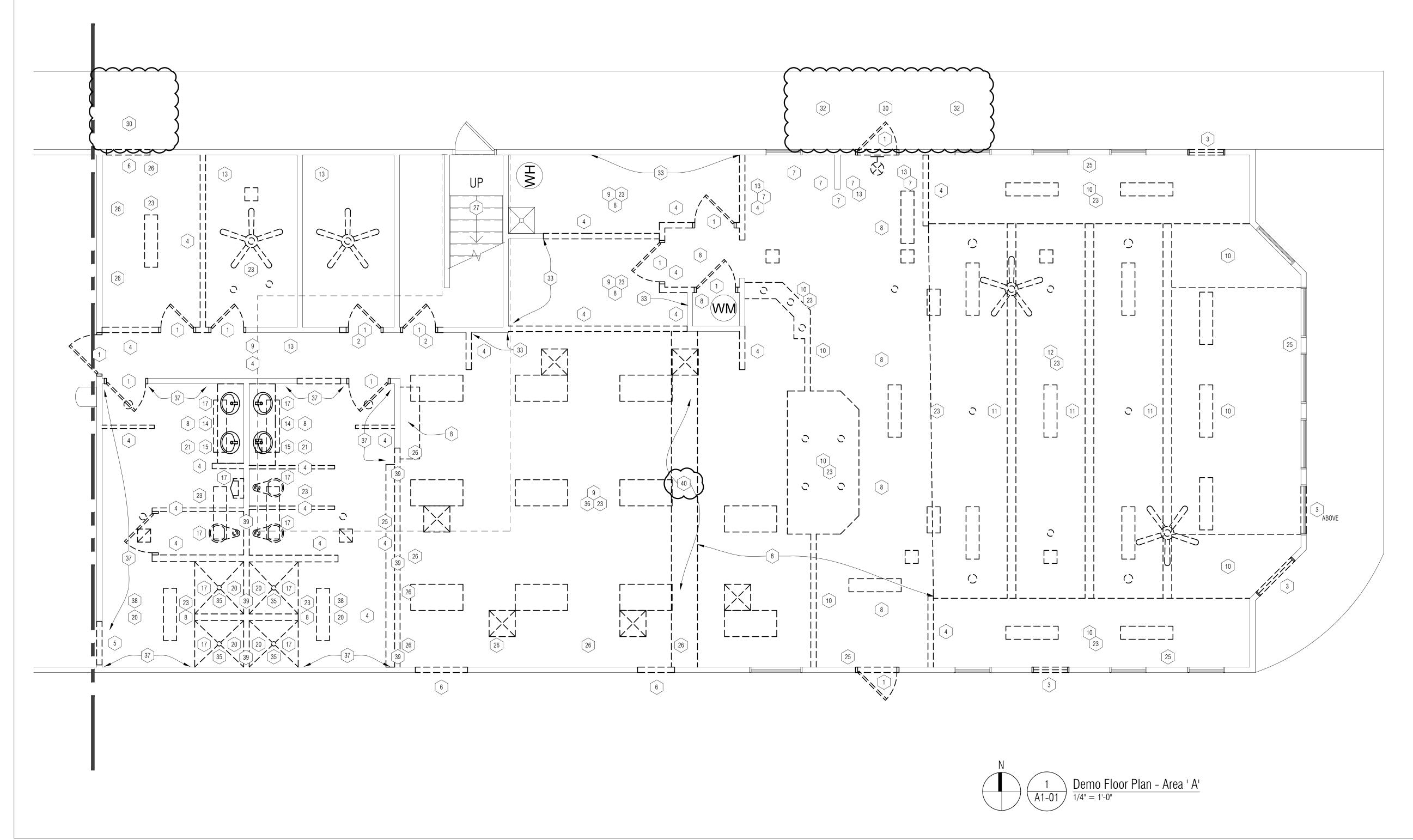
07/15/2020 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY
BH/AM
CHECKED BY
ВАН
APPROVED BY
DWG
SHEET NAME
Schedules, Door,
Frame, & Wall
i anno, a vvan

Types

SHEET NO. A0-03



P:\2020\20-106-Marine City – City Hall Renovation\02_CAD\A1-01 Demo Floor Plans.dwg, 9/16/2020 11:46:03 AM, pelderkin

DEMOLITION PLAN - GENERAL NOTES:

- A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.
- B. ALL REMOVED ITEMS, WALLS, FLOORS CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.
- C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- D. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH
- E. DISPOSE AND/OR RECYCLE ALL DEMOLITION MATERIALS LEGALLY OFF-SITE.
- F. AT DEMOLISHED WALLS AND CEILINGS, REMOVE ELECTRICAL DEVICES, FIXTURES, & WIRING BACK TO ELECTRICAL PANEL.
- G. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.

- G. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER, ARCHITECT, OR CONSTRUCTION MANAGER) AT NO ADDITIONAL COST.
- MANAGER'S INSTRUCTIONS.
- AND OWNER.

- HAZARDOUS MATERIALS.

H. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS. PRIOR TO BIDDING

- H. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS CONSTRUCTION
- I. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, CONSTRUCTION MANAGER,
- L. CONTRACTOR IS TO DEMO AND PREPARE EXISTING WALL CONSTRUCTION AS REQUIRED FOR INSTALLATION OF NEW MECHANICAL AND ELECTRICAL WORK WITHIN EXISTING WALL.
- M. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.
- P. ALL CONTRACTORS TO FOLLOW OSHA RULES AND REGULATIONS FOR

DEMOLITION SITE PLAN - KEY NOTES:

- 1 REMOVE EXISTING DOORS, FRAMES, GLAZING AND ALL ASSOCIATED COMPONENTS. CAREFULLY REMOVE FRAMES TO PRESERVE EXTERIOR AND INTERIOR FINISHES TO REMAIN.
- 2 REMOVE PORTION OF WALL TO ACCOMMODATE WIDTH OF NEW OPENING
- 3 REMOVE EXIST WINDOW, FRAME AND ALL ASSOCIATED COMPONENTS
- 4 EXISTING GYP BD. FRAMED PARTITION CONSTRUCTION TO BE REMOVED FOR THE FULL HEIGHT OF WALL.
- [5] REMOVE PORTION OF EXISTING GYP. BD. WALL PARTITION TO
- ACCOMMODATE NEW OPENING OR NEW DOOR AND FRAME -COORDINATE WITH NEW WORK. 6 REMOVE PORTION OF EXISTING EXTERIOR WALL CONSTRUCTION
- (WOOD SIDING ON INSULATED WOOD STUDS AND GYP BD INTERIOR FINISH) TO ACCOMMODATE NEW OPENING OR NEW DOOR AND FRAME - COORDINATE WITH NEW WORK.
- 7 REMOVE BEAD BOARD AND TRIM
- 8 REMOVE HARD TILE FLOORING ASSEMBLY COMPLETE
- 9 REMOVE LAY-IN CEILING SYSTEM AND ALL ASSOCIATED
- COMPONENTS COMPLETE. 10 REMOVE DROPPED SOFFIT/CEILING SYSTEM COMPLETE
- 11 REMOVE FAUX WOOD BEAM
- 12 REMOVE CARPET, PAD, BASE AND MASTIC COMPLETE. PREP FLOOR TO RECEIVE NEW FINISH. REMOVE FLOOR BASE CAREFULLY TO PRESERVE WALL FINISHED TO REMAIN. REFER TO NEW WORK PLAN.
- 13 REMOVE WOOD BASE. REMOVE FLOOR BASE CAREFULLY TO PRESERVE WALL FINISHED TO REMAIN. REFER TO NEW WORK PLAN.
- 14 REMOVE MIRROR, TOILET ROOM ACCESSORIES AND ASSOCIATED COMPONENTS
- 15 REMOVE EXIST COUNTERTOP WING WALL, SINK & ACCESSORIES COMPLETE TO PREPARE FOR NEW WORK
- 16 REMOVE EXISTING PL. LAM. COUNTERTOP, BASE CABINETS, AND ALL ASSOCIATED ITEMS.
- [17] REMOVE EXISTING PLUMBING FIXTURE(S) AND ALL ASSOCIATED COMPONENTS. PATCH FLOOR AND WALLS AS REQUIRED FOR INSTALLATION OF NEW WORK. COORDINATE WITH MECHANICAL.
- 18 SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW SANITARY LINE - REFER TO MECHANICAL - COORDINATE ACTUAL AREA IN FIELD.
- 19 NOT USED.
- 20 DEMO EXISTING FLOOR DRAIN REFER TO MECHANICAL. CUT & CAP 4" BELOW SLAB. PREP EXISTING ADJACENT CONC FLOOR FOR NEW PATCHED-IN CONC. FLOOR SLAB.
- 21 SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW FLOOR DRAIN - REFER TO MECHANICAL.
- 22 WATER METER TO REMAIN PROTECT DURING CONSTRUCTION.
- 23 EXISTING LIGHTING TO BE REMOVED, INCLUDING HANGERS, CEILING MOUNTED EQUIPMENT AND FIXTURES - REFER TO ELECTRICAL.
- 24 REMOVE EXISTING WINDOW BLINDS.
- 25 REMOVE MISC WALL MTD ITEMS, NAILS AND SCREWS, TYP.
- 26 REMOVE AND REPLACE (1) LAYER OF GYP BD DUE TO WALL DEFECTS.
- 27 EXISTING STAIR TO REMAIN.

OWNE

- 28 EXISTING ELECTRICAL PANEL TO REMAIN REFER TO ELEC.
- 29 EXISTING ELECTRICAL MAIN PROTECT DURING CONSTRUCTION.
- $\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim$ REMOVAL OF EXISTING CONC WALK AND SUB-STRUCTURE BY
- \sim DEMO LEAD LINED WALL
- $\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim$ REMOVAL OF EXISTING CONC WALK / RAMP AND SUB-STRUCT
- 33 REMOVE EXISTING FRP PANEL AND GYP BOARD SUBSTRATE ON WALL.
- 34 REMOVE AND PROPERLY DISPOSE OF EXISTING X-RAY MACHINE, CONTROL PANEL, VIEW PORT AND WIRING BACK TO SOURCE.
- 35 REMOVE EXISTING HARD TILE WALL TILE SYSTEM COMPLETE.
- 36 VCT FLOOR FINISH, ATHLETIC FLOORING OVER VCT, BASE AND ALL ASSOCIATED MASTIC TO BE REMOVED AS REQUIRED TO INSTALL NEW FLOORING. PREP AREA TO RECEIVE NEW WORK. COORDINATE W/ FLOOR FINISH PLANS.
- 37 REMOVE WALL PANELING WAINSCOT, ASSOCIATED TRIM, AND METAL PLATE DETAIL.
- 38 REMOVE POST MOUNTED LOCKER ROOM BENCH.

39] WALL ASSUMED TO BE STRUCTURAL. SHORE AS REQUIRED FOR NEW BEAM AND COLUMNS.

40 GRIND OFF HYDRAULIC UNDERLAYMENT AND PREP FLOOR FOR NEW FINISH.

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CONSULTANT

KEY PLAN AREA B AREA A

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

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260 South Parker St. Marine, MI 48039

PROJECT NO.

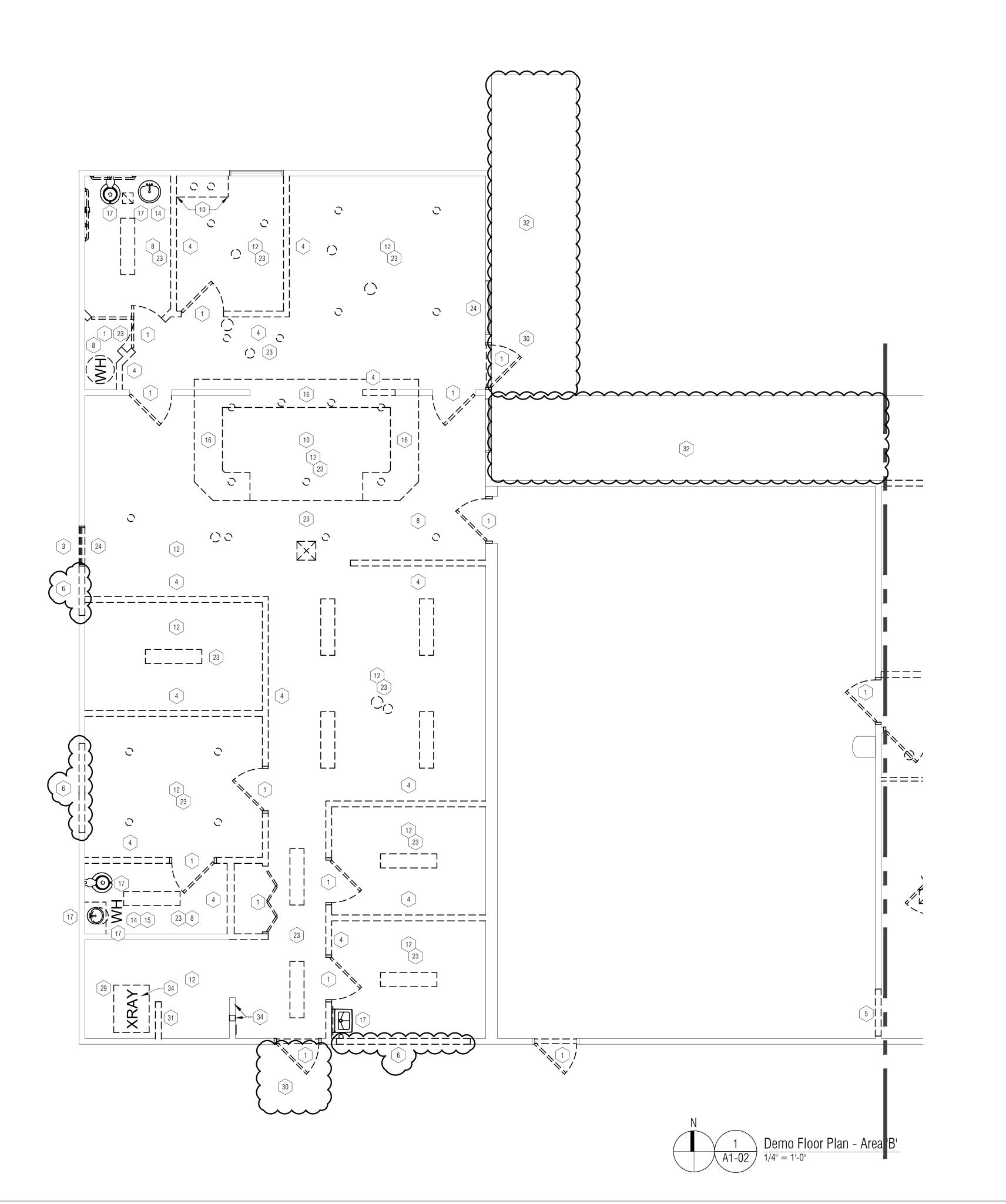
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07/15/2020
07/30/2020
08/14/2020
09/14/202

DRAWN BY BH/AM CHECKED BY BAH APPROVED BY DWG

SHEET NAME DEMO FLOOR PLAN-AREA 'A'

SHEET NO. A1-01



P:\2020\20-106-Marine City – City Hall Renovation\02_CAD\A1-02 Demo Floor Plans.dwg, 9/16/2020 11:46:44 AM, pelderkin

- AND/OR FINISHES.
- CONTRACTOR.
- NEW FINISH
- OFF-SITE.
- READY TO RECEIVE NEW WORK.
- AT NO ADDITIONAL COST.
- MANAGER'S INSTRUCTIONS.
- AND OWNER.

- HAZARDOUS MATERIALS.

DEMOLITION PLAN - GENERAL NOTES:

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.

B. ALL REMOVED ITEMS, WALLS, FLOORS CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK

C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE

D. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR

E. DISPOSE AND/OR RECYCLE ALL DEMOLITION MATERIALS LEGALLY

F. AT DEMOLISHED WALLS AND CEILINGS, REMOVE ELECTRICAL DEVICES, FIXTURES, & WIRING BACK TO ELECTRICAL PANEL.

G. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS,

H. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS. PRIOR TO BIDDING

G. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER, ARCHITECT, OR CONSTRUCTION MANAGER)

H. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS CONSTRUCTION

I. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, CONSTRUCTION MANAGER,

L. CONTRACTOR IS TO DEMO AND PREPARE EXISTING WALL CONSTRUCTION AS REQUIRED FOR INSTALLATION OF NEW MECHANICAL AND ELECTRICAL WORK WITHIN EXISTING WALL.

M. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

P. ALL CONTRACTORS TO FOLLOW OSHA RULES AND REGULATIONS FOR

DEMOLITION SITE PLAN - KEY NOTES:

- 1 REMOVE EXISTING DOORS, FRAMES, GLAZING AND ALL ASSOCIATED COMPONENTS. CAREFULLY REMOVE FRAMES TO PRESERVE EXTERIOR AND INTERIOR FINISHES TO REMAIN.
- 2 REMOVE PORTION OF WALL TO ACCOMMODATE WIDTH OF NEW OPENING
- 3 REMOVE EXIST WINDOW, FRAME AND ALL ASSOCIATED
- COMPONENTS
- 4 EXISTING GYP BD. FRAMED PARTITION CONSTRUCTION TO BE REMOVED FOR THE FULL HEIGHT OF WALL.
- 5 REMOVE PORTION OF EXISTING GYP. BD. WALL PARTITION TO ACCOMMODATE NEW OPENING OR NEW DOOR AND FRAME -COORDINATE WITH NEW WORK.
- 6 REMOVE PORTION OF EXISTING EXTERIOR WALL CONSTRUCTION (WOOD SIDING ON INSULATED WOOD STUDS AND GYP BD INTERIOR FINISH) TO ACCOMMODATE NEW OPENING OR NEW DOOR AND FRAME - COORDINATE WITH NEW WORK.
- 7 REMOVE BEAD BOARD AND TRIM
- 8 REMOVE HARD TILE FLOORING ASSEMBLY COMPLETE
- 9 REMOVE LAY-IN CEILING SYSTEM AND ALL ASSOCIATED
- COMPONENTS COMPLETE. 10 REMOVE DROPPED SOFFIT/CEILING SYSTEM COMPLETE
- 11 REMOVE FAUX WOOD BEAM
- 12 REMOVE CARPET, PAD, BASE AND MASTIC COMPLETE. PREP FLOOR TO RECEIVE NEW FINISH. REMOVE FLOOR BASE CAREFULLY TO PRESERVE WALL FINISHED TO REMAIN. REFER TO NEW WORK PLAN.
- 13 REMOVE WOOD BASE. REMOVE FLOOR BASE CAREFULLY TO PRESERVE WALL FINISHED TO REMAIN. REFER TO NEW WORK PLAN.
- [14] REMOVE MIRROR, TOILET ROOM ACCESSORIES AND ASSOCIATED
- COMPONENTS 15 REMOVE EXIST COUNTERTOP WING WALL, SINK & ACCESSORIES
- COMPLETE TO PREPARE FOR NEW WORK [16] REMOVE EXISTING PL. LAM. COUNTERTOP, BASE CABINETS, AND ALL
- ASSOCIATED ITEMS.
- 17 REMOVE EXISTING PLUMBING FIXTURE(S) AND ALL ASSOCIATED COMPONENTS. PATCH FLOOR AND WALLS AS REQUIRED FOR INSTALLATION OF NEW WORK. COORDINATE WITH MECHANICAL.
- [18] SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW SANITARY LINE - REFER TO MECHANICAL - COORDINATE ACTUAL AREA IN FIELD.
- 19 NOT USED.
- 20 DEMO EXISTING FLOOR DRAIN REFER TO MECHANICAL. CUT & CAP 4" BELOW SLAB. PREP EXISTING ADJACENT CONC FLOOR FOR NEW PATCHED-IN CONC. FLOOR SLAB.
- 21 SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW FLOOR DRAIN - REFER TO MECHANICAL.
- 22 WATER METER TO REMAIN PROTECT DURING CONSTRUCTION.
- 23 EXISTING LIGHTING TO BE REMOVED, INCLUDING HANGERS, CEILING MOUNTED EQUIPMENT AND FIXTURES - REFER TO ELECTRICAL.
- 24 REMOVE EXISTING WINDOW BLINDS.
- 25 REMOVE MISC WALL MTD ITEMS, NAILS AND SCREWS, TYP.
- 26 REMOVE AND REPLACE (1) LAYER OF GYP BD DUE TO WALL
- [27] EXISTING STAIR TO REMAIN.

DEFECTS.

WALL.

- 28 EXISTING ELECTRICAL PANEL TO REMAIN REFER TO ELEC.
- 29 EXISTING ELECTRICAL MAIN PROTECT DURING CONSTRUCTION.
- $\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim\!\!\sim$ REMOVAL OF EXISTING CONC WALK AND SUB-STRUCTURE BY
- OWNFR 31 DEMO LEAD LINED WALL.
- REMOVAL OF EXISTING CONC WALK / RAMP AND SUB-STRUCT
- BY OWNER 33 REMOVE EXISTING FRP PANEL AND GYP BOARD SUBSTRATE ON
- [34] REMOVE AND PROPERLY DISPOSE OF EXISTING X-RAY MACHINE, CONTROL PANEL, VIEW PORT AND WIRING BACK TO SOURCE.
- [35] REMOVE EXISTING HARD TILE WALL TILE SYSTEM COMPLETE.
- 36 VCT FLOOR FINISH, ATHLETIC FLOORING OVER VCT, BASE AND ALL ASSOCIATED MASTIC TO BE REMOVED AS REQUIRED TO INSTALL NEW FLOORING. PREP AREA TO RECEIVE NEW WORK. COORDINATE W/ FLOOR FINISH PLANS.
- 37 REMOVE WALL PANELING WAINSCOT, ASSOCIATED TRIM, AND METAL PLATE DETAIL.
- 38 REMOVE POST MOUNTED LOCKER ROOM BENCH.

[39] WALL ASSUMED TO BE STRUCTURAL. SHORE AS REQUIRED FOR NEW BEAM AND COLUMNS.

40 GRIND OFF HYDRAULIC UNDERLAYMENT AND PREP FLOOR FOR NEW FINISH.

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Statement of Intellectual Property

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CONSULTANT

KEY PLAN AREA B AREA A

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

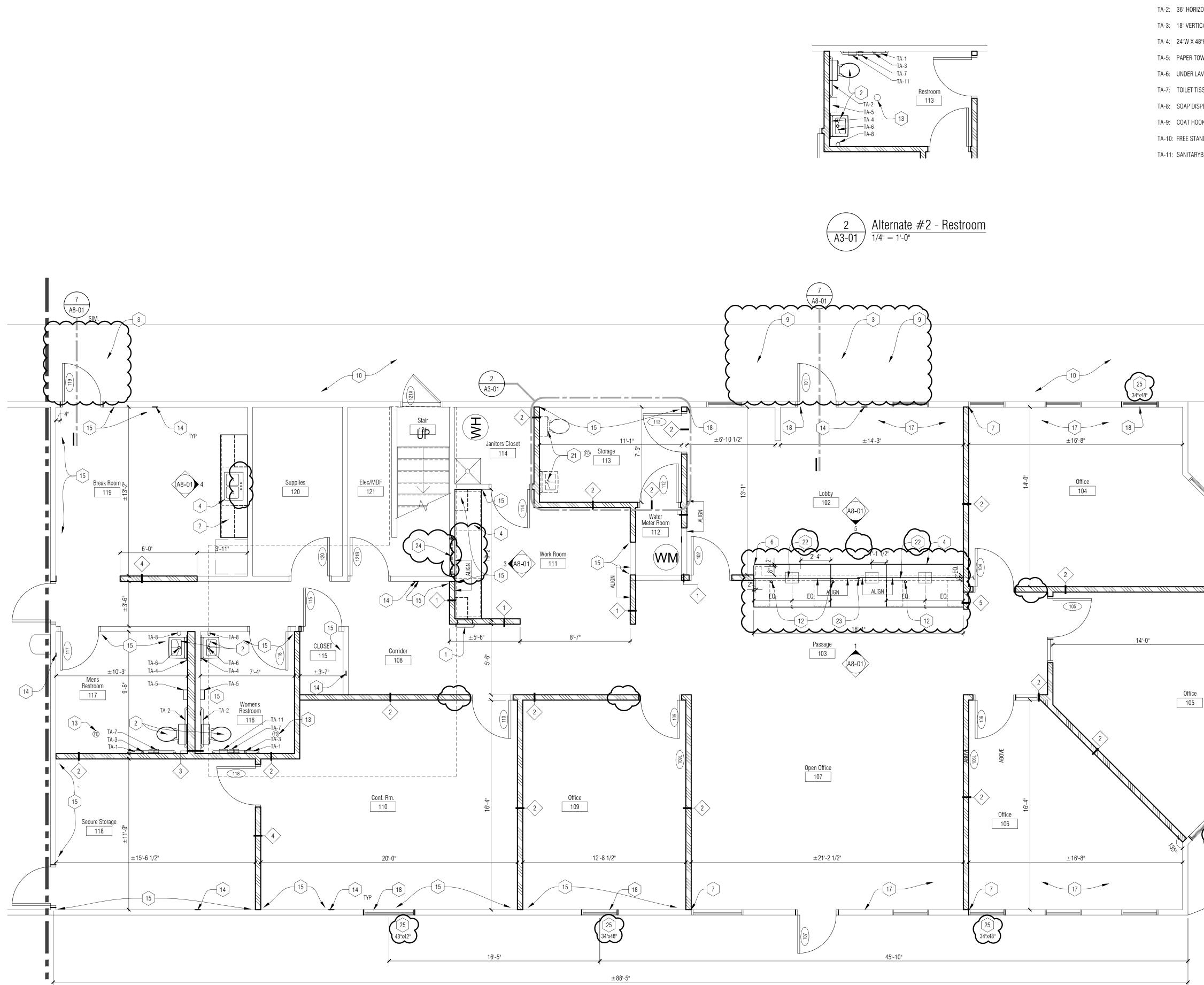
20-106

07/15/2020
07/30/2020
08/14/2020
09/14/2020

DRAWN BY BH/AM CHECKED BY BAH APPROVED BY DWG

SHEET NAME DEMO FLOOR PLAN-AREA 'B'

SHEET NO. A1-02



TOILET ROOM ACCESSORIES:

- TA-1: 42" HORIZONTAL GRAB BAR, ON WALL ADJACENT TO TOILET
- TA-2: 36" HORIZONTAL GRAB BAR, ON WALL BEHIND TOILET
- TA-3: 18" VERTICAL GRAB BAR, ON WALL ADJACENT TO TOILET
- TA-4: 24"W X 48"H MIRROR, ON WALL ABOVE SINK
- TA-5: PAPER TOWER DISPENSER, ON WALL ADJACENT TO SINK
- TA-6: UNDER LAVATORY GUARD INSTALLED ON SINK.
- TA-7: TOILET TISSUE DISPENSER, ON WALL ADJACENT TO TOILET
- TA-8: SOAP DISPENSER, ON WALL ADJACENT TO SINK
- TA-9: COAT HOOK, ON INTERIOR FACE OF DOOR
- TA-10: FREE STANDING WASTE RECEPTACLE
- TA-11: SANITARYB NAPKIN DISPOSAL



- A. ALL PLAN DIMENSIONS ARE TO FACE OF WALL.
- B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS.
- C. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.
- D. REFER TO FINISH FLOOR PLAN FOR ALL FLOOR PATTERNS, FLOOR TRANSITIONS AND MARKER/TACK BOARD DESIGNATIONS.

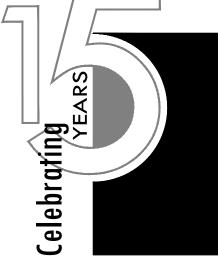
FLOOR PLAN KEY NOTES:

1 FIRE EXTINGUISHER IN SEMI-RECESSED CABINET - REFER TO SPECIFICATIONS.

- 2 PLUMBING FIXTURE COORDINATE WITH MECHANICAL.
- FROST PROTECTED SLAB BY OWNER.
- FROST PROTECTED SLAB BY OWNER.
- \sim ▲ BUILT-IN MILLWORK - REFER TO INTERIOR ELEVATIONS.
- $\sim\sim\sim\sim\sim$ NEW CONC SLOPED WALK BY OWNER.
- \sim 2" RADIUS AT COUNTERTOP ED
- ALIGN NEW WALL WITH EDGE OF WINDOW JAMB/TRIM -
- COORDINATE WITH DIMENSIONS SHOWN ON PLAN.
- 8 NEW FURNACE-REFER TO MECH.
- NEW CONC REPLACEMENT BY OWNER. \cdots
- 10] EXISTING CONC TO REMAIN PROTECT DURING CONSTRUCTION.
- 11 NEW WINDOW IN EXISTING DOOR OPENING FRAME AS NEEDING
- FOR NEW WINDOW AND TRIM. [12] GROMMET IN PLAM COUNTERTOP.
- 13 NEW FLOOR DRAIN REFER TO MECH.
- [14] PATCH GYPSUM WALL WHERE EXISTING WALL HAS BEEN REMOVED - TYP AT ALL WALL REMOVAL LOCATIONS.
- [15] PATCH (REPLACE IF REQUIRED) GYPSUM WALL BOARD AT REMOVED WALL MOUNTED ITEM FOR LIKE NEW APPEARANCE.
- 16 INSTALL SELF-LEVELING UNDERLAYMENT, MAX 1/2" THICK AND TAPERED TO MEET EXISTING ELEVATIONS. APPROXIMATE AREA AND NUMBER OF 55LB BAGS LISTED AS AN ALLOWANCE. FINAL AREA WILL BE DETERMINED ONCE THE SPACE IS DEFINED WITH NEW WALLS, AND THE BUILDER AND ARCHITECT WILL REVIEW PRIORITY AREAS IN THE ROOM TO ADDRESS.
- [17] INSTALL GYP BD ON EXISTING WALL AT REMOVED SOFFIT -COORDINATE W/ NEW CEILING HEIGHT.
- 18 INSTALL NEW INTERIOR WOOD TRIM, SILL AND CASING AROUND
- WINDOW / DOOR OPENING MATCH EXISTING PAINT.
- 19 INSTALL GYP BOARD ON LOWER PART OF EXISTING WALL WHERE GYP BOARD HAS BEEN REMOVED $(\pm 2-4')$.
- 20 REPLACE GYP BOARD ON ENTIRE WALL DUE TO IMPERFECTIONS IN EXISTING FINISH.
- BASE BID: PREP ROOM FOR FUTURE PLUMING FIXTURES REFER TO MECH.
- 1/4" TEMPERED GLASS W/ UPPER ALUM FRAME AND LOWER ALUM -CHANNEL - REFER TO INTERIOR ELEVATIONS.
- 23 GLASS PASS-THRU WINDOW SYSTEM W/ 1/4" TEMPERED GLASS-BASIS OF DESIGN: CR LAWRENCE, MODEL #SHCYO_A_LK. FIELD VERIFY HEIGHT AND WIDTH.
- 24 ALTERNATE #1: NEW LOUVER AT SECOND FLOOR REFER TO MECH. - FRAME OUT OPENING, INSTALL NEW FLASHING, AND REPAIR INTERIOR GYPSUM WALL FINISH. PAINT LOUVER TO MATCH EXISTING SIDING COLOR.

25 PROVIDE ROUGH OPENING FOR INSTALLATION OF WINDOW BY OWNER - SIZES LISTED ARE FOR FUTURE WINDOW SIZE.





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KEY PLAN AREA B AREA A

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

07/15/2020 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY BH/AM CHECKED BY BAH APPROVED BY DWG

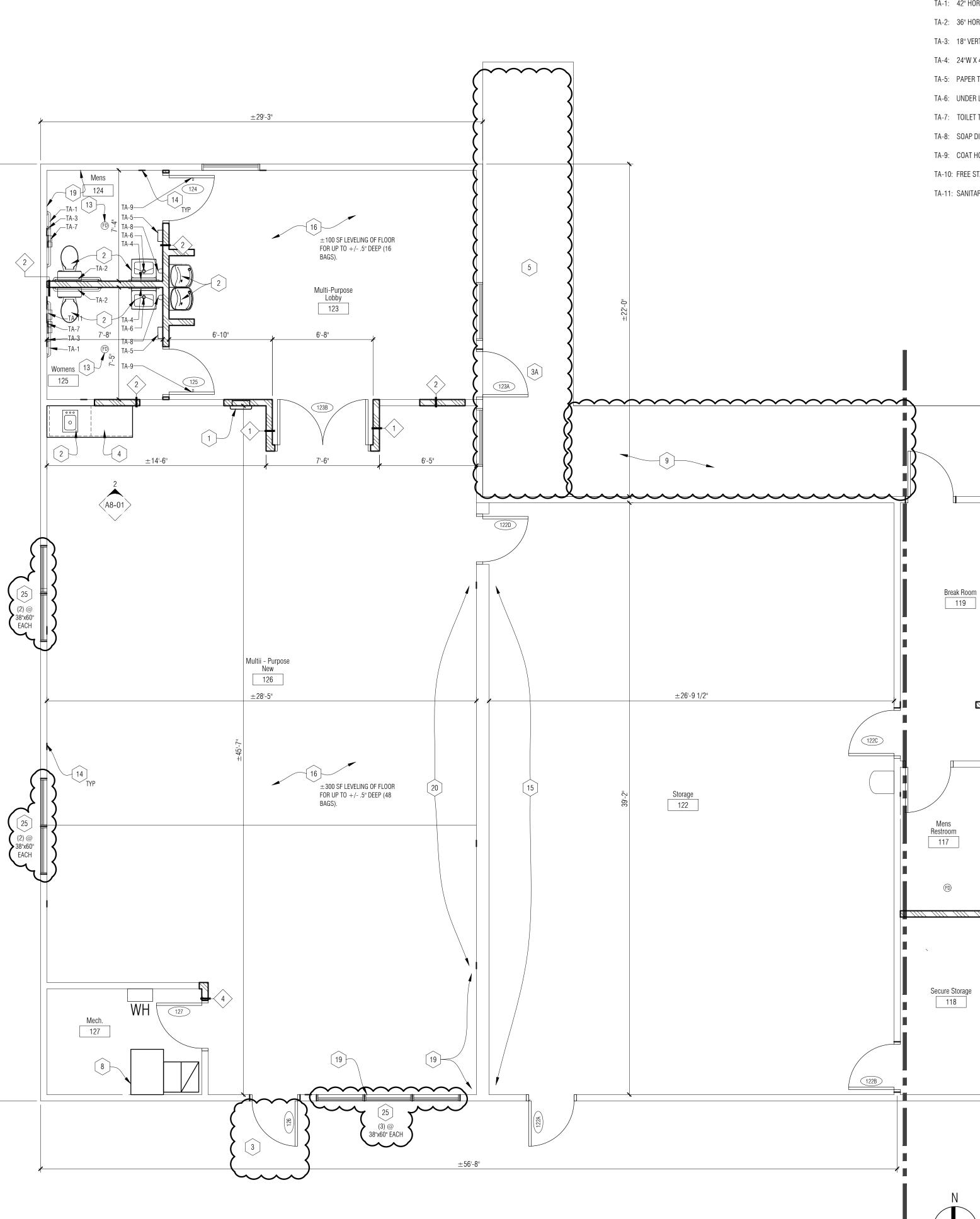
SHEET NAME FLOOR PLAN-AREA 'A'

Floor Plan - Area 'A'
1/4" = 1'-0"

ABOVE

46"x58"

SHEET NO. A3-01



TOILET ROOM ACCESSORIES:

- TA-1: 42" HORIZONTAL GRAB BAR, ON WALL ADJACENT TO TOILET
- TA-2: 36" HORIZONTAL GRAB BAR, ON WALL BEHIND TOILET
- TA-3: 18" VERTICAL GRAB BAR, ON WALL ADJACENT TO TOILET
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 ∇

FLOOR PLAN – GENERAL NOTES:

- A. ALL PLAN DIMENSIONS ARE TO FACE OF WALL.
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- NEW CONC SLOPED WALK BY OWNER.
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KEY PLAN					
AREA B	AREA A				

OWNER Marine City

330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

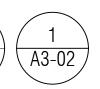
ISSUES

07/15/2020 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY BH/AM CHECKED BY BAH APPROVED BY DWG

SHEET NAME FLOOR PLAN-AREA 'B'



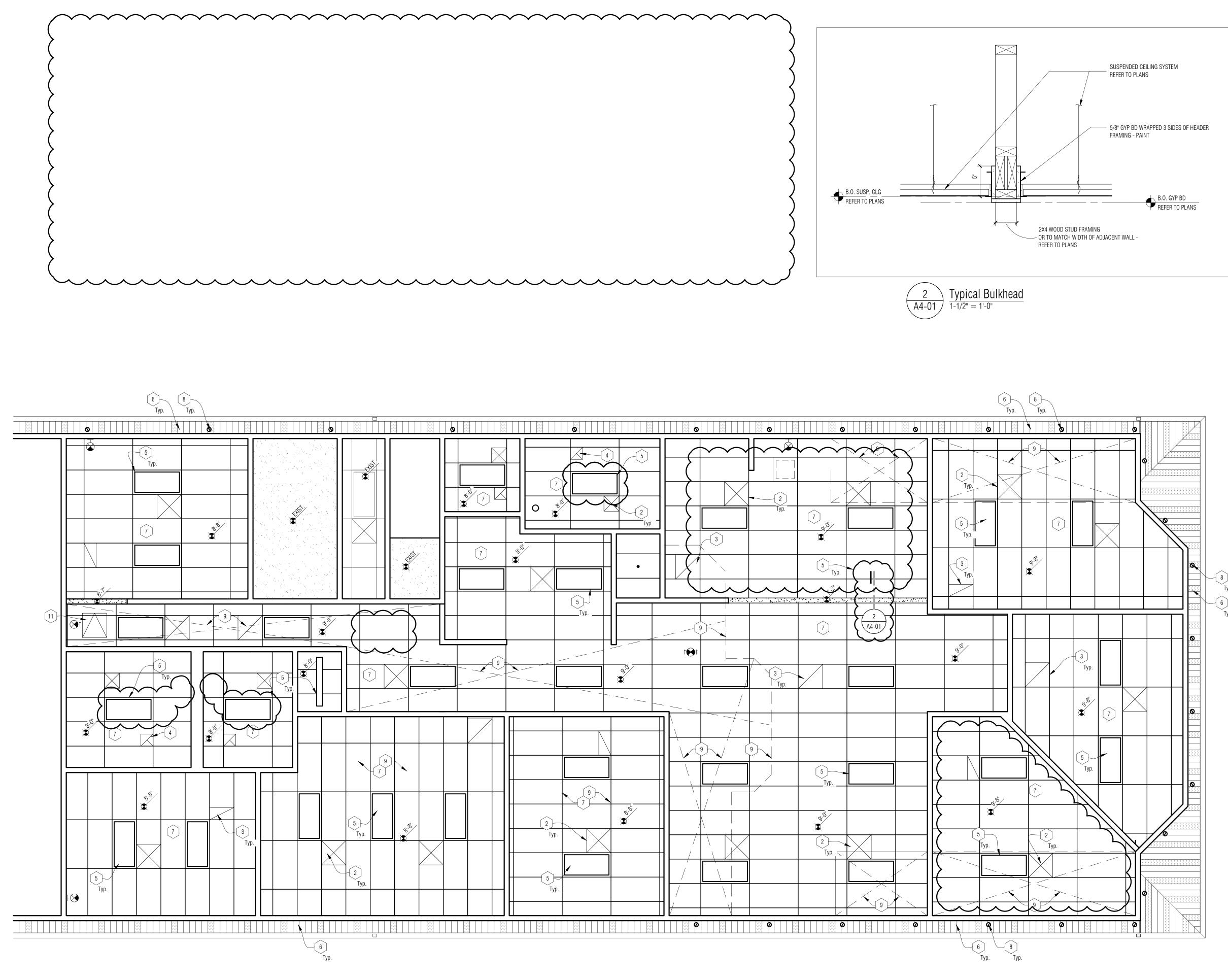
SHEET NO. A3-02

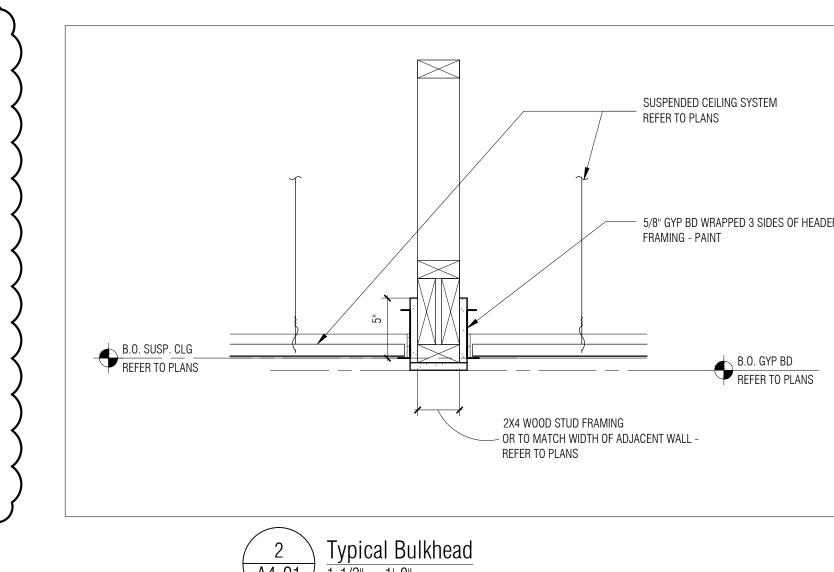
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100% CD's

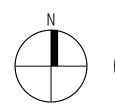
ISSUES / REVISIONS	
99% CD's	
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 $\frac{\text{Reflected Ceiling Plan - Area 'A'}}{\frac{1}{4"} = 1'-0"}$ A4-01

Ceiling Symbols Legend

0,	9
	5/8" GYP BD ON METAL STUD CONSTRUCTION SECURE TO STRUCTURE ABOVE
	2' X 4' LAY-IN LIGHT FIXTURE IN GRID
	2' X 2' LAY-IN LIGHT FIXTURE IN GRID
•	4" RECESSED ROUND LIGHT FIXTURE
٠	4" RECESSED EXTERIOR GRADE FIXTURE
0	6" RECESSED E LIGHT FIXTURE
\oslash	6" RECESSED EXTERIOR GRADE LIGHT FIXTURE
\bigotimes	EXIT LIGHT - CEILING MOUNTED
HN	EXIT LIGHT - WALL MOUNTED
	SUPPLY AIR DIFFUSER (MECHANICAL)
	RETURN AIR GRILLE (MECHANICAL)
	4 FT LED LINEAR LIGHT FIXTURE
SD	SMOKE DETECTOR
	LED RETROFIT KIT

REFLECTED CEILING PLAN - GENERAL NOTES:

- A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.
- B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND

SPECIFICATIONS.

Typ

Tvp

- C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.
- D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING U.O.N.
- E. PAINT ALL EXPOSED STRUCTURE, MECH, AND ELEC REFER TO SPEC SECTION 000200 MATERIAL / FINISH COLOR SCHEDULE AND DRAWINGS FOR EXACT COLORS.
- F. PATCH ALL GYPSUM BOARD CEILINGS AT REMOVED WALLS, SOFFITS, BEAMS, ETC. TAPE, MASTIC, AND SEAL TO MAINTAIN VAPOR BARRIER.

REFLECTED CEILING PLAN - KEY NOTES:

- 1 EXISTING LIGHT FIXTURES AND CEILING TO REMAIN.
- 2 SUPPLY AIR DIFFUSER- REFER TO MECH.
- 3 RETURN AIR-REFER TO MECH.
- 4 EXHAUST FAN- REFER TO MECH.
- 5 LIGHT FIXTURE COORDINATE WITH ELEC.
- 6 EXISTING VENTED ALUMINUM SOFFIT PANELS TO REMAIN POWER WASH IN THREE STEPS - WATER, TSP SOLUTION, RINSE. PROTECT LANDSCAPING, SITE AND BUILDING DURING PROCESS.
- 7 2 x 4 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-1)
- 8 REPLACE EXISTING EXTERIOR RECESSED LIGHT AND TRIM REFER TO ELEC FOR EXTENT OF WORK.
- 9 BATT INSULATION IN ATTIC TO REMAIN. SECURE 5/8" GYPSUM DIRECTLY TO BOTTOM TRUSS. TAPE, MASTIC, SEAL AND PAINT TO MAINTAIN VAPOR BARRIER.
- 10 PATCH AREA OF DAMAGED GYP BOARD TEXTURED CEILING TO MATCH ADJACENT CEILING - PAINT AREA TO MATCH EXISTING.
- (11) ACCESS PANEL ABOVE SUSPENDED ACOUSTICAL CEILING TILE SYSTEM. AVOID INSTALLING MAINS OVER OPENING. PROVIDE REMOVABLE GRID MEMBER TO ALLOW FOR A 4'X4' OPENING.



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CONSULTANT

KEY PLAN AREA B AREA A

OWNER

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PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

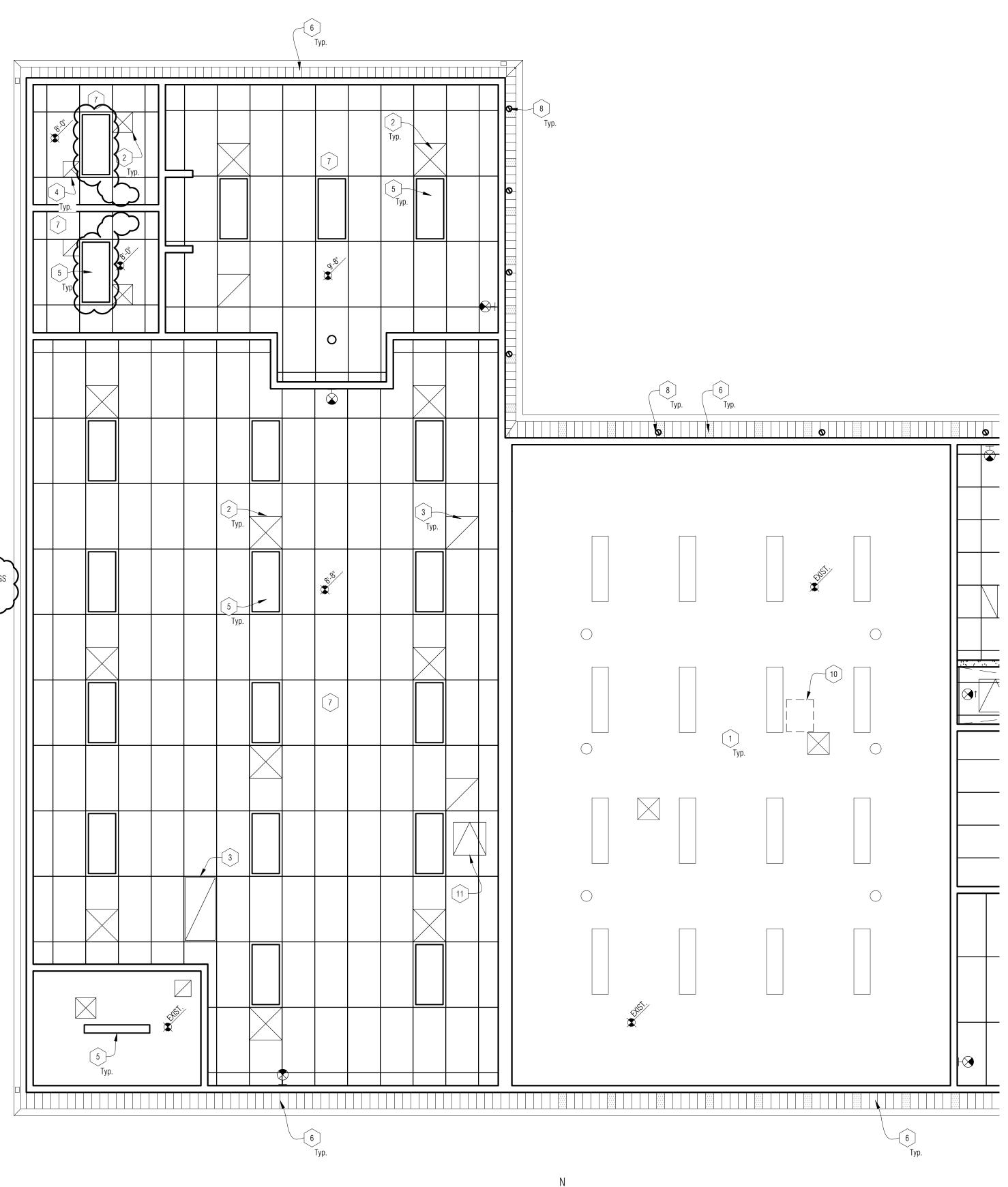
ISSUES / REVISIONS 99% CD's 100% CD's ADDENDUM-1 RE-BIDDING / CONSTRUCTION 09/14/2020

07/15/2020 07/30/2020 08/14/2020

DRAWN BY BH/AM CHECKED BY BAH APPROVED BY DWG

SHEET NAME REFLECTED CEILING PLAN-AREA 'A'

SHEET NO. A4-01





 $\begin{array}{c} 1\\ \hline A4-02 \end{array} \begin{array}{c} \hline Reflected Ceiling Plan - Area 'B'\\ \hline 1/4" = 1'-0" \end{array}$

Ceiling Symbols Legend				
	5/8" GYP BD ON METAL STUD CONSTRUCTION SECURE TO STRUCTURE ABOVE			
	2' X 4' LAY-IN LIGHT FIXTURE IN GRID			
	2' X 2' LAY-IN LIGHT FIXTURE IN GRID			
•	4" RECESSED ROUND LIGHT FIXTURE			
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>	EXIT LIGHT - CEILING MOUNTED			
HX	EXIT LIGHT - WALL MOUNTED			
	SUPPLY AIR DIFFUSER (MECHANICAL)			
	RETURN AIR GRILLE (MECHANICAL)			
	4 FT LED LINEAR LIGHT FIXTURE			
SD	SMOKE DETECTOR			
	LED RETROFIT KIT			



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KEY PLAN	
AREA B	AREA A

REFLECTED CEILING PLAN - GENERAL NOTES:

- A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.
- B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS.
- C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.
- D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING U.O.N.
- E. PAINT ALL EXPOSED STRUCTURE, MECH, AND ELEC REFER TO SPEC SECTION 000200 MATERIAL / FINISH COLOR SCHEDULE AND DRAWINGS FOR EXACT COLORS.
- F. PATCH ALL GYPSUM BOARD CEILINGS AT REMOVED WALLS, SOFFITS, BEAMS, ETC. TAPE, MASTIC, AND SEAL TO MAINTAIN VAPOR BARRIER.

REFLECTED CEILING PLAN - KEY NOTES:

- 1 EXISTING LIGHT FIXTURES AND CEILING TO REMAIN.
- 2 SUPPLY AIR DIFFUSER- REFER TO MECH.
- 3 RETURN AIR-REFER TO MECH.
- 4 EXHAUST FAN- REFER TO MECH.
- 5 LIGHT FIXTURE COORDINATE WITH ELEC.
- 6 EXISTING VENTED ALUMINUM SOFFIT PANELS TO REMAIN POWER WASH IN THREE STEPS - WATER, TSP SOLUTION, RINSE. PROTECT LANDSCAPING, SITE AND BUILDING DURING PROCESS.
- 7 2 x 4 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-1)
- [8] REPLACE EXISTING EXTERIOR RECESSED LIGHT AND TRIM REFER TO ELEC FOR EXTENT OF WORK.
- 9 BATT INSULATION IN ATTIC TO REMAIN. SECURE 5/8" GYPSUM DIRECTLY TO BOTTOM TRUSS. TAPE, MASTIC, SEAL AND PAINT TO MAINTAIN VAPOR BARRIER.
- 10 PATCH AREA OF DAMAGED GYP BOARD TEXTURED CEILING TO MATCH ADJACENT CEILING PAINT AREA TO MATCH EXISTING.
- 11 ACCESS PANEL ABOVE SUSPENDED ACOUSTICAL CEILING TILE SYSTEM. AVOID INSTALLING MAINS OVER OPENING. PROVIDE REMOVABLE GRID MEMBER TO ALLOW FOR A 4'X4' OPENING.

OWNER Marine City

330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

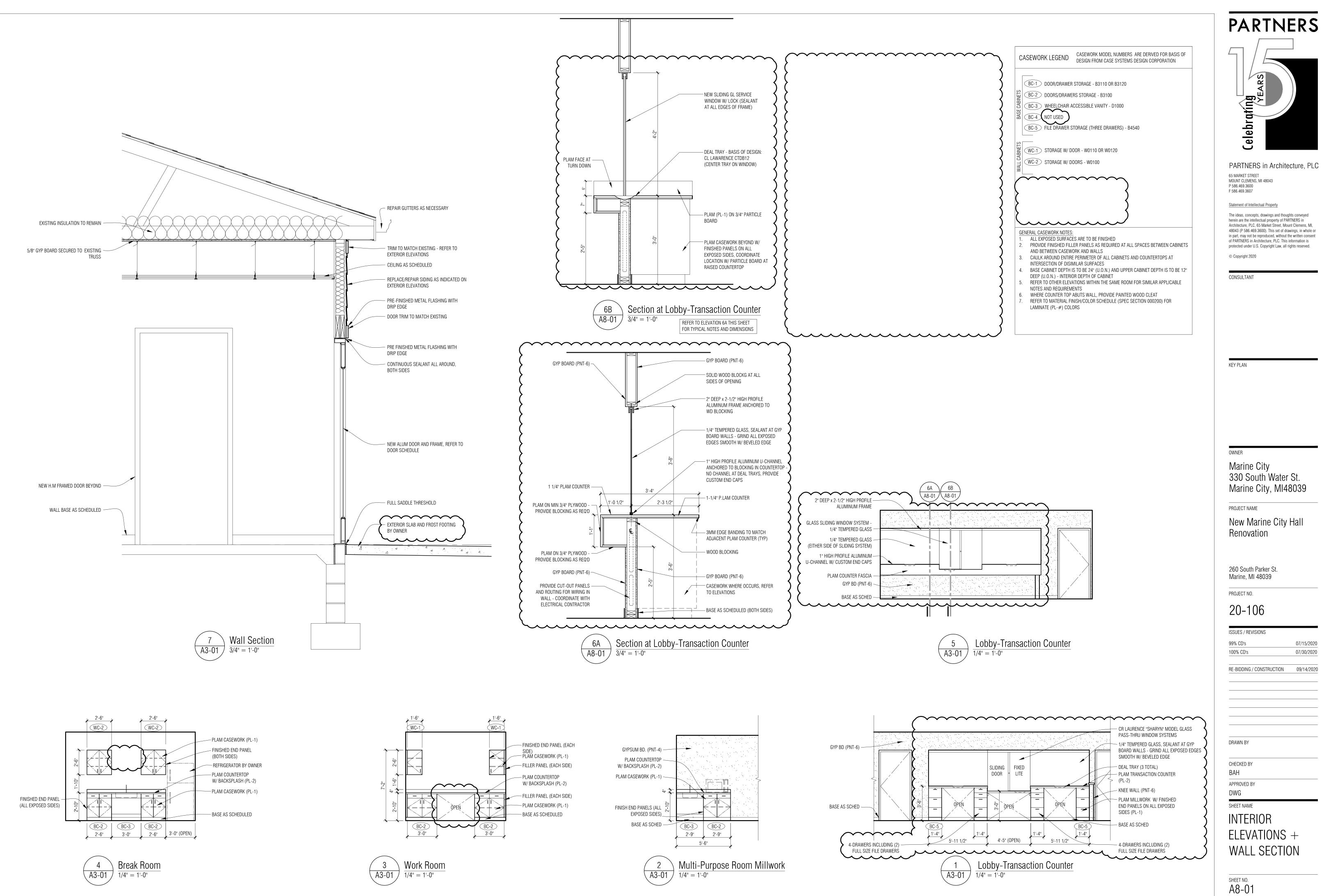
ISSUES / REVISIONS 99% CD's 100% CD's ADDENDUM-1 RE-BIDDING / CONSTRUCTION 09/14/2020

07/15/2020 07/30/2020 08/14/2020

DRAWN BY BH/AM CHECKED BY BAH APPROVED BY DWG

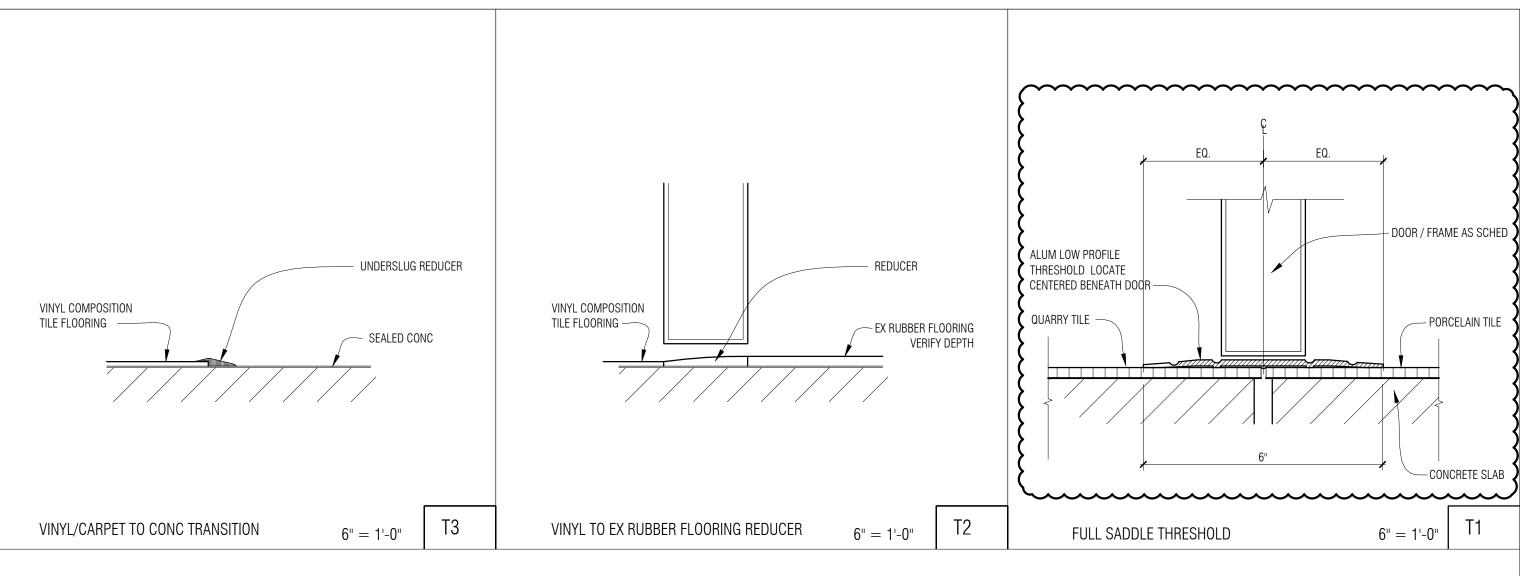
SHEET NAME REFLECTED CEILING PLAN-AREA 'B'

SHEET NO. A4-02



(-(-(> > >				 CR LAURENCE "SHARYN" MODEL GLASS PASS-THRU WINDOW SYSTEMS 1/4" TEMPERED GLASS, SEALANT AT GYP BOARD WALLS - GRIND ALL EXPOSED EDG
		SLIDING FIXED DOOR LITE		4	SMOOTH W/ BEVELED EDGE – DEAL TRAY (3 TOTAL) – PLAM TRANSACTION COUNTER (PL-2)
		DPEN OPEN			 KNEE WALL (PNT-6) PLAM MILLWORK W/ FINISHED END PANELS ON ALL EXPOSED SIDES (PL-1)
7 ~	BC-5 1'-4" 5'-11 1/2"	4'-5" (OPEN)	BC-5 1'-4" 5'-11 1/2"		- BASE AS SCHED - 4-DRAWERS INCLUDING (2)





1														
		VCT-	3				VCT-	1				VCT-	4	
V	CT-4			VCT-	3				VCT-	2			VCT-	1
	VCT-	1				VCT-	1				VCT-	3		VCT
			VCT-	3				VCT-	1			VCT-	2	
	VCT-	1			VCT-	1				VCT-	3		VCT	-1
		VCT-	2				VCT-	4				VCT-	1	
V	CT-3			VCT-	1				VCT-	1			VCT	-1
		VCT-	-1			VCT-	3				VCT-	2		VCT
			VCT-	4				VCT-	1			VCT-	3	
	VCT-	3			VCT-	1				VCT-	4		VCT	-1
		VCT-	3				VCT-	2				VCT-	1	

PARTNERS



PARTNERS in Architecture, PLC 65 MARKET STREET MOUNT CLEMENS, MI 48043 P 586.469.3600

Statement of Intellectual Property

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KEY PLAN AREA B AREA A

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

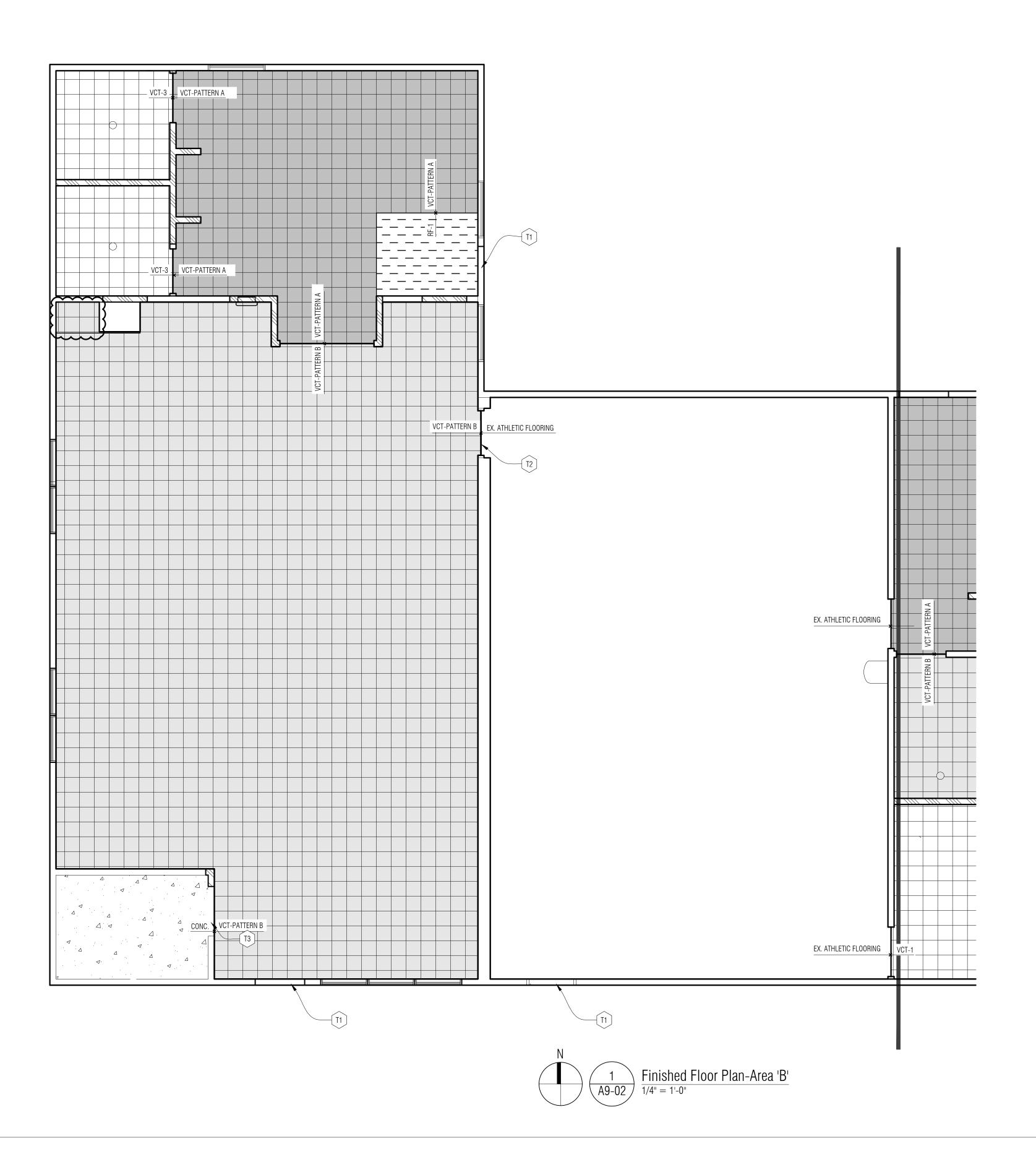
20-106

ISSUES / REVISIONS	
99% CD's	07/15/2020
100% CD's	07/30/2020
RE-BIDDING / CONSTRUCTION	09/14/2020

DRAWN BY
3H/AM
CHECKED BY BAH
APPROVED BY
SHEET NAME

FINISHED FLOOR PLAN-AREA 'A'

SHEET NO. A9-01





PARTNERS in Architecture, PLC 65 MARKET STREET MOUNT CLEMENS, MI 48043 P 586.469.3600 F 586.469.3607

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GENERAL NOTES - FINISH FLOOR PLANS:

- A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200) FOR ADDITIONAL FINISH INFORMATION.
- B. VCT COLOR TRANSITION TO BEGIN AT FIRST JOINT INSIDE CORNER OF WALL AT ALL DOORWAYS SHOWN AS HAVING A COLOR TRANSITION.
- C. ALL DIMENSIONS ARE SHOWN AS +/- AND NEED TO BE VERIFIED IN FIELD.
- D. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).
- E. KEYNOTE TAG WITH "T#" REFERENCES THRESHOLD DETAILS ON DRAWING A9-01.
- F. ALIGN TILE GRID AT DIFFERENT TILE TYPE CHANGES BELOW CENTERLINE OF DOOR.

Flooring Symbols Legend

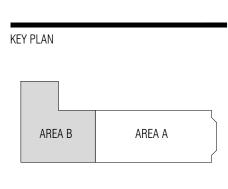
EXISTING TO REMAIN	
CONCRETE SEALER	
 RUBBER FLOORING - RF-1	
12"X12" VCT INDICATES PATTERN A INDICATES PATTERN B	

1		VCT-	3				VCT-	1				VCT-	4	
V	CT-4			VCT-	3				VCT-	2			VCT-	·1
	VCT-	1				VCT-	1				VCT-	3		VCT
			VCT-	3				VCT-	1			VCT-	2	
	VCT-	1			VCT-	1				VCT-	3		VCT	-1
		VCT-	2				VCT-	4				VCT-	1	
V	CT-3			VCT-	1				VCT-	1			VCT	-1
		VCT-	1			VCT-	3				VCT-	2		VCT
			VCT-	4				VCT-	1			VCT-	3	
	VCT-	-3			VCT-	1				VCT-	4		VCT	-1
		VCT-	3				VCT-	2				VCT-	1	

VCT Tile Pattern A

		VCT-	3				VCT-	1				VCT-	5	
V	CT-5			VCT-	3				VCT-	2			VCT-	.1
	VCT-	1				VCT-	5				VCT-	3		VCT
			VCT-	3				VCT-	1			VCT-	2	
	VCT-	5			VCT-	1				VCT-	3		VCT	-1
		VCT-	2				VCT-	-5				VCT-	1	
V	CT-3			VCT-	1				VCT-	-5			VCT-	.1
		VCT-	-1			VCT-	3				VCT-	2		VCT
			VCT-	5				VCT-	1			VCT-	3	
	VCT-	-3			VCT-	1				VCT-	5		VCT	-1
		VCT-	3				VCT-	2				VCT-	1	

VCT Tile Pattern B



OWNER

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ISSUES / REVISIONS	
99% CD's	07/15/2020
100% CD's	07/30/2020
RE-BIDDING / CONSTRUCTION	09/14/2020

sheet name FINISHED FLOOR PLAN-AREA 'B'

sheet no. A9-02

GENERAL DEMOLITION NOTES:

- 1. REMOVE EXISTING MECHANICAL SERVICES AND EQUIPMENT AS INDICATED AND/OR DESCI ALONG WITH SUPPORTS, HANGERS, CONTROLS, AND ALL RELATED ACCESSORIES.
- 2. ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED TO BE EXISTING UNLESS OTHE NOTED.
- 3. FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SERVICES PRIOR TO DEMOLI
- 4. COORDINATE SHUTDOWN OF ANY EXISTING SYSTEMS WITH THE BUILDING SERVICES PERS
- 5. WHERE DUCT AND/OR PIPE INSULATION HAS BEEN DAMAGED, THE CONTRACTOR SHALL INSULATION AS REQUIRED TO MATCH EXISTING.
- 6. ALL ITEMS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSIO ARE WAIVED. REFER TO SPECIFICATIONS.
- 7. LIMITS OF DEMOLITION ARE INDICATED ON THE DRAWINGS. SHOULD EXISTING FIELD CON REQUIRE MODIFICATIONS OF THESE LIMITS FOR THE PROPER INSTALLATION OF NEW WOF CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH MODIFICATIONS.
- 8. ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED UNLESS OTHERWISE CAP EXISTING PIPING, DUCTWORK, ETC. AT BRANCH MAINS. REMOVE ALL RELATED CONT WIRING, ETC., UNLESS OTHERWISE NOTED.

GENERAL HVAC NOTES:

- 1. COORDINATE NEW DUCTWORK WITH EXISTING SITE CONDITIONS. EQUIPMENT MANUFACTUR ALL OTHER TRADES TO PREVENT INTERFERENCE. RESIZE & FIELD ROUTE AS REQUIRED. EQUIVALENT DUCT SIZING.
- 2. PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURERS RECOMMENDATION
- 3. ALL CORING THROUGH FLOORS SHALL BE BY MECHANICAL CONTRACTOR.
- 4. ALL DUCTWORK SHALL BE ROUTED AS HIGH AS POSSIBLE, UNLESS OTHERWISE NOTED. COORDINATE ROUTING WITH OTHER TRADES TO PREVENT INTERFERENCE.
- 5. BALANCE AIR HANDLING SYSTEMS & DISTRIBUTION INCLUDING SUPPLY, RETURN & OUTD TO INDICATED FLOW RATES. REFER TO HVAC PLAN & VENTILATION SCHEDULE.
- 6. DUCT SIZES TO DIFFUSERS SHALL MATCH NECK SIZE OF EACH. REFER TO SCHEDULES.
- 7. ALL CONCEALED SUPPLY AIR DUCTWORK SHALL BE INSULATED PER SPECIFICATIONS. 8. UNLESS NOTED ALL DUCTWORK SHALL BE CONCEALED IN WALLS, CEILING SPACE AND/
- 9. SEAL ALL PENETRATIONS THROUGH WALLS PER SPECIFICATIONS.
- 10. COORDINATE EXACT LOCATIONS OF DIFFUSERS AND RETURN GRILLES WITH ARCHITECTUR ELECTRICAL REFLECTED CEILING PLAN.
- 11. PROVIDE SPIN-IN DAMPERS AT ALL ROUND BRANCH DUCT CONNECTIONS TO DIFFUSERS. MANUAL VOLUME DAMPERS AT EACH BRANCH DUCT AT CONNECTION TO MAIN AS WELL EACH DUCT AFTER A BRANCH DUCT SPLIT. THESE ARE NOT INDICATED ON PLANS, HOW REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING LOCATIONS NEC PROPERLY BALANCE THE SYSTEM.

GENERAL UTILITY NOTES:

- 1. UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF ONLY. AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. N GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.
- 2. PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROV SHALL BE VERIFIED IN THE FIELD.
- 3. DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING OVERHEAD AND/OR BURIED UTILITIES.

MECHANICAL ADD ALTERNATES:

- 1. REFER TO DRAWING NOTES FOR ADD ALTERNATE DESCRIPTIONS.
- 2. ELECTRICAL TRADES SHALL PROVIDE THE CORRESPONDING WORK AS SUGGESTED BY THE ALTERNATE DESCRIPTIONS.

GENERAL MECHANICAL NOTES:

	1.	REMOVE EXISTING MECHANICAL SERVICES AND EQUIPMENT AS INDICATED AND/OR DESCRIBED ALONG WITH SUPPORTS, HANGERS, CONTROLS, AND ALL RELATED ACCESSORIES.	1.	SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS & SPECIFICATIONS THE GREATER QUANTITY OR QUALITY WORK SHALL BE PERFORMED. THIS WORK MUST BE		FIRE DEPT. SIAMESE CON
	2.	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED TO BE EXISTING UNLESS OTHERWISE		SUBMITTED IN WRITING TO ENGINEER PRIOR TO FINAL BID FOR APPROVAL. NO EXTRAS SHALL BE ALLOWED AFTER THAT TIME. THIS SHALL ALSO PERTAIN TO ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS OF RETWEEN TRADES ALL ITEMS SHALL BE ADDRESSED IN WRITING PRIOR TO FINAL		AIR BALANCING DAMPER
	-			DOCUMENTS OR BETWEEN TRADES. ALL ITEMS SHALL BE ADDRESSED IN WRITING PRIOR TO FINAL BIDS.	-BFP-	BACKFLOW PREVENTER (B
	3.	FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SERVICES PRIOR TO DEMOLITION.	2.	CONTRACTORS ARE CAUTIONED NOT TO SUBMIT A BID WITHOUT CAREFULLY REVIEWING THE	GM	GAS METER
	4.	COORDINATE SHUTDOWN OF ANY EXISTING SYSTEMS WITH THE BUILDING SERVICES PERSONNEL.		<u>COMPLETE</u> CONTRACT DOCUMENTS INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL TRADES, DRAWINGS, AND THE COMPLETE PROJECT MANUAL. NO ADDITIONAL CHARGE	[₩м]	WATER METER
	5.	WHERE DUCT AND/OR PIPE INSULATION HAS BEEN DAMAGED, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.		TO CONTRACT PRICE WILL BE ALLOWED FOR ADDITIONAL CONTRACTOR EXPENSE RESULTING FROM A FAILURE TO COMPLY WITH THIS REQUIREMENT.		NEW CONNECTION TO EXI
	6.	ALL ITEMS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSION RIGHTS	3.	NO MODIFICATIONS TO THE SPECIFICATIONS, CONSTRUCTION DOCUMENTS, OR INTENT OF THE SCOPE OF WORK SHALL BE ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE	\square	DEMOLITION LIMITS
	-	ARE WAIVED. REFER TO SPECIFICATIONS.		ENGINEER. ALL MODIFICATIONS, CHANGE ORDERS, ALTERNATES, VALUE ENGINEERING, OR ANY REVISIONS SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND ENGINEER FOR REVIEW.	ø	DIAMETER
	7.	LIMITS OF DEMOLITION ARE INDICATED ON THE DRAWINGS. SHOULD EXISTING FIELD CONDITIONS REQUIRE MODIFICATIONS OF THESE LIMITS FOR THE PROPER INSTALLATION OF NEW WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH MODIFICATIONS.	4.	GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED EQUIPMENT AND		PLUG VALVE NON LUBRIC
	8	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED UNLESS OTHERWISE NOTED.		OWNER PROVIDED EQUIPMENT. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL TRADES RESPONSIBLE FOR FINAL CONNECTION OF ALL EXISTING AND RELOCATED	 б	(KEYPORT 400 SERIES) ((BALL VALVE
	0.	CAP EXISTING PIPING, DUCTWORK, ETC. AT BRANCH MAINS. REMOVE ALL RELATED CONTROLS, WIRING, ETC., UNLESS OTHERWISE NOTED.		EQUIPMENT.		GATE VALVE
						CHECK VALVE
	GFN	ERAL HVAC NOTES:	GEN	IERAL PLUMBING & PIPING NOTES:		
						O.S. & Y VALVE
	1.	COORDINATE NEW DUCTWORK WITH EXISTING SITE CONDITIONS. EQUIPMENT MANUFACTURER AND ALL OTHER TRADES TO PREVENT INTERFERENCE. RESIZE & FIELD ROUTE AS REQUIRED. USE	1.	COORDINATE NEW PIPING WITH EXISTING SITE CONDITIONS, EQUIPMENT, MANUFACTURER, AND ALL OTHER TRADES TO PREVENT INTERFERENCE.	22	RELIEF VALVE
		EQUIVALENT DUCT SIZING.	2.	PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS.	. Ф	THERMOMETER
	2.	PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS.	3.	ALL CORING THROUGH FLOORS AND FLOOR TRENCHING SHALL BE BY MECHANICAL CONTRACTOR.	(T)	THERMOSTAT (ELECTRIC)
	3.	ALL CORING THROUGH FLOORS SHALL BE BY MECHANICAL CONTRACTOR.	4.	ALL PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE, UNLESS OTHERWISE NOTED. COORDINATE		RECIRCULATING PUMP
	4.	ALL DUCTWORK SHALL BE ROUTED AS HIGH AS POSSIBLE, UNLESS OTHERWISE NOTED. COORDINATE ROUTING WITH OTHER TRADES TO PREVENT INTERFERENCE.	_	ROUTING WITH OTHER TRADES TO PREVENT INTERFERENCE.	<u>*</u>	MANUAL AIR VENT
	5.	BALANCE AIR HANDLING SYSTEMS & DISTRIBUTION INCLUDING SUPPLY, RETURN & OUTDOOR AIR	5.	BALANCE WATER SYSTEMS TO INDICATED FLOW RATES.	_D	SHOCK ABSORBER
	c	TO INDICATED FLOW RATES. REFER TO HVAC PLAN & VENTILATION SCHEDULE.	ь. -	ALL PIPING SHALL BE INSULATED PER SPECIFICATIONS.		GAUGE
	о. 7	DUCT SIZES TO DIFFUSERS SHALL MATCH NECK SIZE OF EACH. REFER TO SCHEDULES.	7.	ALL PIPING SHALL BE CONCEALED IN WALLS AND/OR CEILING SPACE.	ı lı	UNION
	· · ·		8.	SEAL ALL PENETRATIONS THROUGH WALLS. REFER TO SPECIFICATIONS.	C	PIPE DOWN
	0.	UNLESS NOTED ALL DUCTWORK SHALL BE CONCEALED IN WALLS, CEILING SPACE AND/OR ATTIC SPACE.	9.	SWING JOINTS ARE TO BE USED ON ALL HOT WATER AND HOT WATER RETURN PIPING. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.	<u> </u>	PIPE UP
	9.	SEAL ALL PENETRATIONS THROUGH WALLS PER SPECIFICATIONS.	11.	COORDINATE ALL LOCATION, SIZE, AND ELEVATIONS OF ALL SLEEVES THROUGH WALLS AND SLABS		PIPE TEE
	10.	COORDINATE EXACT LOCATIONS OF DIFFUSERS AND RETURN GRILLES WITH ARCHITECTURAL AND ELECTRICAL REFLECTED CEILING PLAN.	11.	WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.		STRAINER
	11.	PROVIDE SPIN-IN DAMPERS AT ALL ROUND BRANCH DUCT CONNECTIONS TO DIFFUSERS. PROVIDE	12.	ALL OUTLETS FOR FUTURE CONNECTIONS SHALL BE VALVED, CAPPED, AND INSTALLED TO PERMIT EASY CONNECTION. COORDINATE LOCATION WITH STRUCTURAL AND ARCH. CONDITIONS.		FLOOR DRAIN
		MANUAL VOLUME DAMPERS AT EACH BRANCH DUCT AT CONNECTION TO MAIN AS WELL AS IN EACH DUCT AFTER A BRANCH DUCT SPLIT. THESE ARE NOT INDICATED ON PLANS, HOWEVER, ARE	13.	VERIFY DEPTHS, SIZES, AND LOCATIONS OF EXISTING UTILITIES IN THE FIELD. INCLUDING POINTS	==	PIPE GUIDES
		REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING LOCATIONS NECESSARY TO PROPERLY BALANCE THE SYSTEM.		OF CONNECTION BEFORE STARTING WORK.	Ř	CIRCUIT SETTER
			14.	FAUCETS AND PLUMBING FIXTURES SHALL BE OF WATER CONSERVATION TYPE AND COMPLY WITH THE STATE ENERGY STANDARDS.		
			15.	RUN ALL SANITARY PIPING AT 1/8" PER FOOT, MINIMUM SLOPE, UNLESS OTHERWISE NOTED.		
	GEN	<u>NERAL UTILITY NOTES</u> :		1-1/2" TO $2-1/2$ " PIPES SHALL PITCH AT $1/4$ " PER FOOT.		
	1.	UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.	16.	COORDINATE INTERRUPTIONS OF SERVICES INCLUDING WATER, SEWER, AND NATURAL GAS WITH OWNER AND UTILITY COMPANIES A MINIMUM OF 72 HOURS IN ADVANCE OF ALTERATIONS.		
	2	PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND	17.	CONTRACTOR SHALL MAINTAIN ADEQUATE CLEARANCES ABOVE AND AROUND ELECTRICAL PANELS, EQUIPMENT, AND TRANSFORMERS WHEN ROUTING OVERHEAD DOMESTIC WATER, SANITARY, OR		
	2.	UNDERGROUND UTILITIES IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS SHALL BE VERIFIED IN THE FIELD.		STORM PIPING.		
	3.	DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR	18.	REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE TYPES, CONNECTIONS, AND ADDITIONAL REQUIREMENTS.		
	_ •	OVERHEAD AND/OR BURIED UTILITIES.	19.	PROVIDE ONE OF THE FOLLOWING METHODS FOR ALL FLOOR DRAINS, FLOOR SINKS WHERE TRAP		
\sim	\sim	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		IS SUBJECT TO EVAPORATION LOSS.		
5	<u>ME(</u>	CHANICAL ADD ALTERNATES:		A. PROVIDE TRAP SEAL DEVICE EQUAL TO RECTORSEAL SURSEAL-PLUS OR J.R. SMITH 2692 QUAD CLOSE, CONFIRM ACCEPTANCE OF THIS METHOD WITH LOCAL PLUMBING AUTHORITY.		
<	1.	REFER TO DRAWING NOTES FOR ADD ALTERNATE DESCRIPTIONS.		B. PROVIDE DEDICATED TRAP PRIMER VALVE AND PIPING TO EACH TRAP, TRAP PRIMER VALVE SHALL CONFORM TO ASSE 1018 OR ASSE 1044.		
		N				

20. PROVIDE CLEANOUTS AT THE BASE OF ALL STACKS.

21. ALL VENTS THROUGH THE ROOF MUST BE A MINIMUM OF 10'-0" FROM OUTDOOR AIR INTAKES AND 12" ABOVE THE ROOF.

22. JOINTS, FLANGES, UNIONS OR VALVES OF ANY KIND SHALL NOT BE INSTALLED IN THE NATURAL GAS PIPING LOCATED ABOVE CEILING IN A RETURN AIR PLENUM.

23. AT EACH CONNECTION OF GAS SUPPLY TO EQUIPMENT, PROVIDE A PIPE UNION, GAS SERVICE COCK, TEE, AND 12" LONG DIRT LEG WITH CAP.

Ν	IECH	ANICAL LEGEN	D					
FIRE DEPT. SIAMESE CONNECTION		RETURN GRILLE	HW	HOT WATER				
AIR BALANCING DAMPER		SUPPLY DIFFUSER	HWR	HOT WATER RETURN				
• BACKFLOW PREVENTER (BFP)		EXHAUST GRILLE	I.E.	INVERT ELEVATION				
GAS METER	C~~~~	FLEXIBLE DUCT	IW	INDIRECT WASTE				
WATER METER	— - —M	MOTORIZED DAMPER	LAV	LAVATORY				
NEW CONNECTION TO EXISTING	- E I	SPIN-IN FITTING WITH VOLUME DAMPER	MT	MECHANICAL TRADES				
DEMOLITION LIMITS	A.F.F.	ABOVE FINISHED FLOOR	MS	MOP SINK				
DIAMETER	AHJ	AUTHORITY HAVING JURISDICTION	0.A.	OUTSIDE AIR				
PLUG VALVE NON LUBRICATED TYPE (KEYPORT 400 SERIES) (GAS COCK)	AHU	AIR HANDLING UNIT	R.A.	RETURN AIR				
BALL VALVE	ASR	AUTO SPRINKLER RISER	RG/EG	RETURN GRILLE OR EXHAUST GRILLE				
GATE VALVE	AT	ARCHITECTURAL TRADES	RTU	ROOFTOP UNIT				
CHECK VALVE	СА	COMPRESSED AIR	S	SINK				
O.S. & Y VALVE	CD	CEILING DIFFUSER	S.A.	SUPPLY AIR				
RELIEF VALVE	CFH	CUBIC FEET PER HOUR	SAN	SANITARY				
THERMOMETER	CFM	CUBIC FEET PER MINUTE	SR	SUPPLY REGISTER				
THERMOSTAT (ELECTRIC)	со	CLEANOUT	TCC	TEMPERATURE CONTROLS CONTRACTOR				
RECIRCULATING PUMP	CW	COLD WATER (DOMESTIC)	UR	URINAL				
MANUAL AIR VENT	DN	DOWN	VAV	VARIABLE AIR VOLUME				
SHOCK ABSORBER	(E)	EXISTING	V.T.R.	VENT THRU ROOF				
GAUGE	EF	EXHAUST FAN	W	WASTE				
UNION	ET	ELECTRICAL TRADES	WC	WATER CLOSET				
PIPE DOWN	EWC	ELECTRIC WATER COOLER		DOMESTIC COLD WATER				
PIPE UP	EWH	ELECTRIC WATER HEATER		DOMESTIC HOT WATER				
PIPE TEE	FD	FLOOR DRAIN		DOMESTIC HOT WATER RETURN				
STRAINER	GC	GENERAL CONTRACTOR	G	NATURAL GAS				
FLOOR DRAIN	НО	HUB OUTLET	DX	REFRIGERANT LINES				
PIPE GUIDES	HVAC	HEATING VENTILATING & AIR CONDITIONING	— —SAN— —	SANITARY SEWER				
CIRCUIT SETTER	ΗV	HEATING VENTILATING UNIT	~~~	VENT PIPING				
	· · ·							
		NG INDEX						
	SHEET NO.		E					
	M0-01	MECHANICAL LEGEND, DRAWING INDEX	AND GENERAL	NOTES				
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MECHANICAL BID ALTERNATES:

PROVIDE ADD ALTERNATE PRICING. FOR THE FOLLOWING WORK INCLUDING ASSOCIATED WORK OF OTHER TRADES.

PROVIDE MIN R-6 DUCT INSULATION ON ALL EXISTING DUCTWORK ROUTED IN ATTIC TO COMPLY WITH 2013 ASHRAE 90.1 ENERGY CODE. BASE BID: NEW DUCTWORK ROUTED IN ATTIC TO COMPLY WITH 2013 ASHRAE 90.1 ENERGY CODE.

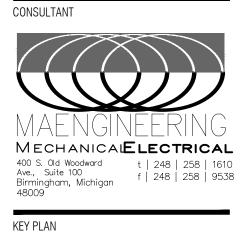


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OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS	
99% CD's	07/15/2020
100% CD's	07/30/2020
RE-BIDDING / CONSTRUCTION	09/14/2020

DRAWN BY	
VIJ	
CHECKED BY	
LS	
APPROVED BY	
GS	
SHEET NAME	
MECHANICAL COVE	F

SHEET

SHEET NO. M0-01

GENERAL MECHANICAL SPECIFICATIONS

GENERAL REQUIREMENTS:

READ AND BE BOUND BY THE ARCHITECTURAL SPECIFICATIONS.

THESE SPECIFICATIONS, ALL OTHER DOCUMENTS ATTACHED HERETO, ALL ADDENDA ISSUED AND THE ACCOMPANYING PLANS ARE INTENDED TO PROVIDE FOR THE COMPLETE FURNISHING AND INSTALLATION OF THE ENTIRE MECHANICAL SYSTEM.

THE WORK SHALL BE DONE IN ACCORDANCE WITH BEST PRACTICE SO AS TO CONTRIBUTE TO EFFICIENCY OF OPERATION AND MINIMUM MAINTENANCE AND SHALL BE INSTALLED WITH PROPER ACCESSIBILITY. THE MATERIALS AND EQUIPMENT, INCLUDING ALL NECESSARY ACCESSORIES, SHALL BE PUT INTO PROPER ADJUSTMENT SO THAT THE COMPONENT PARTS FUNCTION TOGETHER AS A WORKABLE SYSTEM. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS AND OPERATIONS AS INDICATED EITHER ON THE DRAWINGS OR CONTAINED HEREIN OR AS MAY BE REASONABLY IMPLIED BY EITHER TO ACCOMPLISH THE COMPLETE INSTALLATION.

PROVIDE ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE MECHANICAL SYSTEMS. PROVIDE ALL NECESSARY TESTS AND PAY FOR ALL FEES, PERMITS, INSPECTIONS, ETC. AS REQUIRED BY LOCAL AUTHORITIES. SECURE PERMITS PRIOR TO STARTING WORK. OBTAIN ALL PERMITS, LICENSES, INSPECTIONS AND BONDS. PERFORM ALL TESTS REQUIRED. UPON COMPLETION OF THE WORK, OBTAIN AND SEND CERTIFICATES OF INSPECTION AND APPROVAL TO THE ARCHITECT/OWNER. PAY ALL FEES AND EXPENSES FOR PERMITS, LICENSES, TESTS AND INSPECTIONS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR THAT HIS WORK IS INSTALLED IN THE MOST DIRECT AND WORKMANLIKE MANNER AND THAT INTERFERENCE IS AVOIDED.

THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE EQUIPMENT AND SYSTEMS TO BE INSTALLED AND THE GENERAL LOCATION AND ARRANGEMENT OF MECHANICAL WORK. DUE TO THE SCALE OF THE DRAWINGS IT IS NOT POSSIBLE TO INDICATE THE EXACT LOCATION AND ROUTING OF MECHANICAL WORK, UNLESS REFERENCE DIMENSIONS ARE SPECIFICALLY INDICATED ON DRAWINGS. DEVIATIONS FROM CONTRACT DRAWING LAYOUT IN ORDER TO AVOID INTERFERENCES WITH OTHER TRADES. OR OTHER MECHANICAL WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, WITH NO INCREASE IN CONTRACT PRICE. ALL COSTS FOR REMOVAL AND RELOCATION OF MECHANICAL WORK RESULTING FROM FAILURE TO COORDINATE WITH OTHER TRADES SHALL BE PAID BY THE MECHANICAL SUBCONTRACTOR.

INSTALLATION SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES. THE CONTRACTOR SHALL BE HELD TO BE FULLY INFORMED OF ALL LAWS, ORDINANCES AND CODES, AND SHALL, IN THE PERFORMANCE OF THE CONTRACT, COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL AFORESAID REGULATIONS. ANY DEVIATION FROM THE PLANS OR SPECIFICATIONS AND ANY ADDITIONAL WORK NECESSARY TO MEET CODE REQUIREMENTS, SHALL BE MADE BY THE CONTRACTOR WITHOUT EXTRA COST TO THE OWNER.

WORK SHALL BE DONE IN ACCORDANCE WITH THE RULES OF LOCAL UTILITY COMPANIES. BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL CHECK WITH EACH UTILITY (WATER, SEWER, GAS, ETC.) AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE. INCLUDE COST OF SAME IN THE BID.

ALL EQUIPMENT IS TO BE U.L. LISTED AND LABELED.

THE MECHANICAL TRADES (M.T.) SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. NOTIFY THE ARCHITECT OF INTERFERENCES OR DISCREPANCIES.

LOCATIONS AND SIZES OF EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC., HAVE BEEN TAKEN FROM ORIGINAL DESIGN DRAWINGS AND MAY NOT BE EXACTLY AS SHOWN. THE M.T. SHALL FIELD VERIFY LOCATIONS, SIZES, ETC., PRIOR TO ANY NEW WORK.

ALL MECHANICAL EQUIPMENT IS TO BE IDENTIFIED WITH THE UNIT NAME AND NUMBER USING 2" HIGH LETTERS. RE-LABEL EXISTING EQUIPMENT FOR NEW SCHEDULING AND ZONING AS APPROVED BY OWNER.

EACH TRADE SHALL BE RESPONSIBLE FOR ITS OWN CLEAN-UP. COORDINATE WITH THE ARCHITECTURAL TRADES (A.T.).

UNLESS OTHERWISE NOTED, ALL CUTTING SHALL BE PROVIDED BY THE M.T. AND PATCHING BY THE A.T. ROOF PENETRATIONS ARE TO BE PERFORMED BY THE OWNER'S (LANDLORD'S) ROOFER AND PAID FOR BY THE M.T. COORDINATE ALL OPENINGS WITH THE A.T.

FURNISH ELECTRIC MOTORS AND CONTROL DEVICES IN CONNECTION WITH THE VARIOUS PIECES OF MOTOR-DRIVEN EQUIPMENT SPECIFIED IN MECHANICAL WORK SECTIONS, AS SPECIFIED HEREIN. ALL MOTORS SHALL BE OF THE "PREMIUM" HIGH EFFICIENCY TYPE.

SHOP DRAWING SUBMITTALS ARE REQUIRED. REFER TO THE A.T. SPECIFICATIONS.

AIR SYSTEMS BALANCING IS REQUIRED. REFER TO THE HVAC SPECIFICATIONS.

PROVIDE ACCESS DOORS IN CEILINGS AND WALLS FOR ACCESS TO ALL VALVES, VENTS, CONTROLS, DAMPERS, MOTORS, ETC. DOORS SHALL BE SAME AS SPECIFIED BY ARCHITECTURAL TRADES. ACCESS DOORS ARE NOT REQUIRED IN LAY-IN CEILINGS. LABEL GRID AT LOCATIONS OF VALVES, VENTS, CONTROLS, DAMPERS, MOTORS, ETC.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEALING AND FIRE-STOPPING OF ALL HOLES ASSOCIATED WITH THE PIPING, CONDUIT, ETC., IN WALLS, FLOORS AND ROOF. IN WALLS, FLOORS AND ROOF, WRAP EACH RISER, PIPE, ETC., WITH NON-COMBUSTIBLE MATERIAL AND FILL ALL FLOOR OPENINGS WITH A MINIMUM OF 5" OF INTUMESCENT FIRE-STOPPING MATERIAL EQUAL TO 3M OR FIBERFRAX "FYRE PUTTY". PIPES REQUIRING INSULATION SHALL BE INSULATED BEFORE PLACING FIRE-STOPPING MATERIAL.

DEMOLITION: SELECTED EXISTING PLUMBING SYSTEMS & HVAC SYSTEMS ARE TO BE REMOVED OR ABANDONED BY THE M.T. REFER TO MECHANICAL AND ARCHITECTURAL DEMOLITION DRAWINGS AND NOTES.

FURNISH THE OWNER WITH TWO COPIES OF OPERATION/MAINTENANCE MANUALS FOR ALL EQUIPMENT AND PROVIDE FULL OPERATION INSTRUCTIONS TO THE OWNERS PERSONNEL.

GUARANTEE: THE M.T. SHALL REPAIR OR REPLACE ANY PART OF THE MECHANICAL SYSTEMS INSTALLATION WHICH MAY FAIL WITHIN A PERIOD OF TWO YEARS AFTER FINAL ACCEPTANCE.

PLUMBING SPECIFICATIONS

<u>GENERAL</u>

SEWERS 3" AND LARGER ARE TO BE PITCHED DOWN IN DIRECTION OF FLOW AT 1/8" PER FOOT UNLESS OTHERWISE NOTED. 1-1/2" TO 2-1/2" PIPES TO PITCH AT 1/2" PER FOOT. PITCH VENT PIPING UP. WATER PIPING SHALL BE PITCHED TO FACILITATE DRAINAGE.

PROVIDE MINIMUM 10 PIPE DIAMETERS DISTANCE BETWEEN FIXTURE CONNECTIONS TO HORIZONTAL UNDERGROUND WASTE OR SOIL STACKS. MINIMUM 3" SIZE FOR ALL UNDERGROUND SEWERS, UNLESS NOTED.

NEW PLUMBING SERVICES ARE TO CONNECT TO EXISTING STUBS OR MAINS. FIELD VERIFY EXACT SIZE AND LOCATIONS.

ALL PIPING SHALL BE CONCEALED UNLESS NOTED OR APPROVED BY THE ARCHITECT. EXPOSED PIPING SERVING PLUMBING FIXTURES SHALL BE CHROME PLATED.

PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, CHANGES IN DIRECTION GREATER THAN 45 DEGREES AND 50 FEET ON CENTER ON STRAIGHT RUNS.

PROVIDE PVC "P" TRAPS AT ALL AIR CONDITIONING UNITS. TO INDIRECT WASTE WITHIN BUILDING OR DISCHARGE TO SPILL ON GRADE.

PROVIDE PVC "P" TRAPS AT ALL INDOOR AIR CONDITIONING UNITS. DISCHARGE TO SPILL OVER A FLOOR DRAIN. PROVIDE TRENT INDUSTRIES "COSTGARD" CONDENSATE DRAIN SEALS FOR ALL AIR CONDITIONING UNITS MOUNTED ON THE ROOF. SIZE AND INSTALL PER MANUFACTURERS RECOMMENDATIONS.

PROVIDE MINIMUM 12" LONG DRIP LEGS AND PIPE UNIONS AT NATURAL GAS PIPE CONNECTIONS TO APPLIANCES.

PROVIDE BRANCH LINE SHUT-OFF VALVES ON DOMESTIC WATER PIPING TO EACH GROUP OF PLUMBING FIXTURES OR EQUIPMENT. PROVIDE CHROME PLATED RIGID SUPPLIES WITH LOOSE KEY STOPS AT EACH FIXTURE.

ALL HOSE END FITTINGS ARE TO BE FURNISHED WITH WATTS 84 VACUUM BREAKERS. OTHER BACKFLOW PREVENTION INCLUDES WATTS 9BD AT VENDING MACHINES, ICE MAKERS, ETC., AS INDICATED ON THE DRAWINGS AND/OR AS REQUIRED BY THE LOCAL AUTHORITIES.

ALL VALVES ARE TO BE TYPES AS RECOMMENDED BY THE MANUFACTURER FOR THE INTENDED SERVICE AND SHALL BE PROPERLY RATED FOR PRESSURE AND TEMPERATURE.

TO PREVENT ELECTROLYTIC CORROSION, PROVIDE INSULATED COUPLINGS WHERE DISSIMILAR METALS ARE JOINED. COUPLINGS SHALL BE EQUAL TO LOCHINVAR "V-LINE" WITH AN INERT, NON-CONDUCTIVE, LINED-IMPREGNATED LAMINATE MATERIAL AND THREADED TO NPS STANDARDS. COUPLINGS SHALL BE SUITABLE FOR HYDROSTATIC PRESSURE UP TO 300 PSI AND 225 DEGREE F. TEMPERATURE.

PROVIDE WATER HAMMER ARRESTERS (SHOCK ABSORBERS) EQUAL TO ZURN Z-1700 OR SIOUX CHIEF 600 SERIES AT ALL QUICK CLOSING VALVES AND AT ENDS OF PIPING MAINS SERVING PLUMBING FIXTURES. ARRESTER CASING AND BELLOWS SHALL BE OF TYPE 304 STAINLESS STEEL CONSTRUCTION OR COPPER TUBE STYLE WITH LUBRICATED POLYPRO PISTON.

PIPE INTERIOR CLEANING:

PROVIDE ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO FLUSH THE LISTED PIPING SYSTEM WITH CLEAN WATER AT A MINIMUM VELOCITY OF 6 FEET/SECOND UNTIL DIRTY WATER DOES NOT APPEAR AT THE OUTLETS. USE OPEN END BRANCHES, SETTLING BASINS, PUMPS, OR TEMPORARY FILTERS AS SUITABLE FOR THE JOB CONDITIONS AND AS THE REASONABLE DISPOSAL OF FLUSHING WATER PERMITS. THE CONTRACTOR HAS THE OPTION OF HIGH PRESSURE HYDRAULIC JET CLEANING IN LIEU OF FLUSHING.

PROTECT ALL VALVES AND DEVICES FROM DAMAGE DURING THE CLEANING OPERATION.

DISINFECTION:

- AWWA C652 OR AS FOLLOWS:
 - THE SYSTEM.

2. CHLORINATION PROCEDURES SHALL CONFORM TO AWWA C651 OR AWWA C652. REPEAT CHLORINATION AS NECESSARY UNTIL NO CONTAMINANTS REMAIN IN THE SYSTEM.

PROVIDE PIPE CONTENT AND FLOW DIRECTION IDENTIFICATION LABELS EQUAL TO SETON SETMARK ON ALL PIPE MAINS, ADJACENT TO EACH VALVE, AT EACH FITTING, AT BUILDING ENTRANCE, AT LEAST ONCE IN EACH ROOM AND AT INTERVALS NO LONGER THAN 20 FEET. TEXT TO BE 2" HIGH ON PIPES 4" AND LARGER AND 3/4" HIGH ON PIPES 3" AND SMALLER.

DRAWINGS OF ALL PLUMBING WORK.

PLUMBING MATERIALS

FITTINGS OR SCHEDULE 40 PVC.

ABOVEGROUND WASTE AND VENT PIPING SHALL BE CAST IRON WITH NO-HUB JOINTS, SCHEDULE 40 GALVANIZED STEEL, ALUMINUM WITH NO-HUB CAST IRON JOINTS OR DWV COPPER. SCHEDULE 40 PVC MAY BE USED ABOVEGROUND WHERE CODE PERMITS. ALL PIPING IN RETURN AIR PLENUMS SHALL BE PLENUM RATED WITH MAXIMUM FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 OR LESS.

DOMESTIC WATER PIPING 2-1/2" AND SMALLER SHALL BE TYPE "L" HARD DRAWN COPPER WITH LEAD-FREE SOLDER TYPE FITTINGS. 3" AND LARGER SHALL BE THE SAME MATERIAL AS THE WATER SERVICE, DUCTILE IRON MEETING ASTM A377 OR OTHER AS APPROVED BY THE LOCAL WATER DEPARTMENT. REFER TO CIVIL ENGINEERING DRAWINGS AND SPECIFICATIONS. ALL UNDERFLOOR PIPING IS TO BE TYPE "K" COPPER WITH NO JOINTS.

NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS, SCREWED TO 2" SIZE AND WELDED FOR 2-1/2" AND LARGER. PIPING LOCATED IN CEILING PLENUMS SHALL BE WELDED STEEL OR BRAZED TUBING AND SHALL NOT HAVE UNIONS, COUPLINGS OR OTHER AS IDENTIFIED IN THE INTERNATIONAL FUEL GAS CODE. PIPING LOCATED OUTDOORS SHALL BE WEATHER PROTECTED IN ACCORDANCE WITH UTILITY COMPANY RECOMMENDATIONS. MOUNT PIPING ABOVE THE ROOF ON PRE-FAB PIPE SUPPORTS EQUAL TO B-LINE, MAPA, MIRO OR E-Z SLEEPER SPACED PER INTERNATIONAL FUEL GAS CODE RECOMMENDATIONS. PAINT ALL PIPING ON EXTERIOR WALLS SAME COLOR AS THE WALL AND ALL OTHER PIPING ABOVE THE ROOF IS TO BE PAINTED YELLOW.

WATER, SEWER AND VENT PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE ON CLEVIS TYPE HANGERS SPACED IN ACCORDANCE WITH ASHRAE GUIDE RECOMMENDATIONS. PIPE SUPPORT SPACING FOR NATURAL GAS PIPING SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE.

ROOF PIPE PENETRATIONS

SINGLE PIPE: ONE PIECE SPUN ALUMINUM BASE WITH FIVE (5") INCH SLOPED ROOF SURFACE FLANGE, GRADUATED, STEPPED PVC BOOT AND ADJUSTABLE STAINLESS STEEL CLAMPS. PATE "PATE PIPE SEAL" OR THYCURB.

MULTIPLE PIPES: 12" X 12", WELDED, GALVANIZED STEEL RAISED CANT CURB WITH 2" X 2" NAILER, ACRYLIC CLAD ABS PLASTIC COVER, FASTENING SCREWS, GRADUATED NEOPRENE STEP BOOTS WITH STAINLESS STEEL BAND CLAMPS. PATE MODEL PCA-2 OR THYCURB.

PLUMBING SPECIALTIES

CLEANOUTS: THREADED BRASS PLUGS WITH ZURN Z-1460-9 STAINLESS STEEL COVER IN WALLS AND Z-1400-2 NICKEL BRONZE SCORIATED COVER IN FLOORS.

FLOOR DRAINS: ZURN ZN-415 WITH 5" DIAMETER NICKEL BRONZE TYPE "B" STRAINER IN FINISHED AREAS, Z-507 MEDIUM DUTY DRAIN WITH 7" DIAMETER DURA-COATED STRAINER IN UTILITY ROOMS AND UNFINISHED AREAS AND Z-508 HEAVY DUTY DRAIN WITH 9" DIAMETER DURA-COATED STRAINER IN HIGH TRAFFIC AREAS. PROVIDE DEEP SEAL TRAPS WITH RECTORSEAL "SURE SEAL" OR EQUAL TRAP SEAL (PRIMER TAPPING) FOR ALL FLOOR DRAINS UNLESS OTHERWISE NOTED.

TRAP SEALS SHALL BE PROVIDED FOR ALL FLOOR DRAINS, FLOOR SINKS AND OTHERS TO PREVENT TRAP EVAPORATION. SEALS SHALL BE EQUAL TO RECTORSEAL "SURESEAL", SIZED TO MATCH THE DRAIN TRAP.

TRAP PRIMERS SHALL BE MIFAB, SMITH OR ZURN Z-1022 "SANI-GARD", ALL BRONZE BODY WITH INTERNAL VACUUM BREAKER, ANTI-BACK-SIPHON DESIGN, NON-LIMING OPERATING ASSEMBLY, REPLACEABLE VALVE SEAT, GASKETED BRONZE COVER, CHROME PLATED FINISH.

PLUMBING FIXTURES

PLUMBING FIXTURES SHALL BE AS MANUFACTURED BY AMERICAN STANDARD, KOHLER, SLOAN OR MANSFIELD COMPLETE WITH ALL STANDARD ACCESSORIES. FIXTURES TO BE WHITE VITREOUS CHINA UNLESS NOTED.

PLUMBING FIXTURES FOR PHYSICALLY HANDICAPPED USE SHALL BE MOUNTED AND PIPED PER STATE OF

A. ALL DOMESTIC WATER SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. THE METHOD TO BE FOLLOWED SHALL BE AS PRESCRIBED BY THE HEALTH AUTHORITY HAVING JURISDICTION, OR IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE IN EITHER AWWA C651 OR

> 1. FLUSH OUT SYSTEM FIRST, THEN HOLD A SOLUTION MIXTURE OF 50 PPM OF CHLORINE/ WATER FOR A 24 HOUR PERIOD OR THE SYSTEM SHALL BE FILLED WITH WATER/CHLORINE SOLUTION CONTAINING AT LEAST 200 PPM OF CHLORINE AND ALLOWED T REMAIN TO STAND FOR AT LEAST 3 HOURS. DRAIN SYSTEMS AND FLUSH WITH CLEAN WATER UNTIL THE CHLORINE IS PURGED FROM

AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE REPRODUCIBLE TRANSPARENCY "AS-BUILT"

UNDERGROUND SEWERS AND VENTS SHALL BE STANDARD WEIGHT CAST IRON SOIL PIPE WITH COMPRESSION TYPE

PLUMBING SPECIALTIES SHALL BE JOSAM, J.R. SMITH, WADE, MIFAB, SIOUX CHIEF OR ZURN.

MICHIGAN "BARRIER FREE CODE" (ADA) REQUIREMENTS AND PROVIDED WITH DELTA, LEONARD, POWERS "HYDROGUARD" SERIES 480 (BRASS SCREWED) OR WATTS MMV SWEAT JOINT OR THREADED UNION TEMPERING VALVES TO SUPPLY MAXIMUM 110 DEGREE HOT WATER. PROVIDE ADJUSTMENT CAP WITH LOCKING FEATURE. VALVES SHALL COMPLY WITH ASSE 1070 STANDARD.

JOINTS BETWEEN PLUMBING FIXTURES AND WALLS OR COUNTERTOPS SHALL BE FILLED WITH WHITE PLASTIC SEAM COMPOUND EQUAL TO DE WITT "TUB AND TILE CAULK".

FAUCETS AND CONTROL VALVES SHALL BE AS MANUFACTURED BY DELTA, SPEAKMAN, SYMMONS, LEONARD, AMERICAN STANDARD, KOHLER, MOEN, GROHE, CHICAGO FAUCET OR T&S BRASS, CHROME PLATED ALL METAL UNLESS OTHERWISE NOTED. FLUSH VALVES SHALL BE CHROME PLATED AS MANUFACTURED BY SLOAN, SPEAKMAN, DELTA, ZURN OR ELKAY.

ELECTRIC WATER COOLERS: OASIS, HAWS, SUNROC, ACORN-AQUA OR HALSEY TAYLOR, VINYL CLAD FINISH CABINET. HARD WIRE 120 VOLT ELECTRICAL TO JUNCTION BOX BY ELECTRICAL TRADES.

STAINLESS STEEL SINKS: MOEN, ELKAY OR JUST WITH SOUND DEADENED BOTTOMS, "P" TRAP(S), CRUMB CUP STRAINER(S), SUPPLY FITTINGS AS NOTED.

DISPOSAL: EQUAL TO IN-SINK-ERATOR "BADGER 5" WITH GALVANIZED STEEL GRIND CHAMBER, STAINLESS STEEL SWIVEL LUGS, 1/2 H.P. MOTOR, 120 VOLT, 3 PRONG CORD AND PLUG. TWO (2) YEAR PARTS AND LABOR WARRANTY.

PLUMBING EQUIPMENT

DOMESTIC WATER HEATER IS EXISTING IN PLACE FOR RE-USE. SEE DRAWING NOTES.

HEATING, VENTILATING AND AIR CONDITIONING SPECIFICATIONS

<u>GENERAL</u>

SUPPLY, RETURN AND EXHAUST AIR DUCTWORK SHALL BE GALVANIZED STEEL. CONSTRUCTED OF PROPER PRESSURE CLASSIFICATION GAUGES AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.

RECTANGULAR DUCT JOINTS SHALL BE CONNECTED WITH DUCTMATE 25/35/45 JOINT SYSTEMS THAT UTILIZE ROLL-FORMED FLANGES, CORNER PIECES, GASKET AND CLEAT. DUCT JOINTS MAY BE INDIVIDUALLY REMOVED. SEAL ALL JOINTS WITH UL 181B-M LISTED JOINT SEALANT EQUAL TO DUCTMATE PROSEAL, HARDCAST OR AIRSEAL FOR THE APPROPRIATE PRESSURE CLASSIFICATION, TEMPERATURE AND WEATHER-RESISTANCE.

AS REQUIRED MATCH EXISTING FIBERGLASS DUCT MAIN CONSTRUCTION WHERE APPLICABLE. PROVIDE SYSTEM EQUAL TO OWENS CORNING TYPE 475-FR.

ROUND SPIRAL DUCT FITTINGS AND ELBOWS SHALL BE JOINED USING SLIP-JOINT FITTINGS. FITTING SHALL HAVE A STOP BEAD TO LOCATE FITTING INSIDE PIPE. ALL PIPE TO PIPE CONNECTIONS REQUIRE A SLIP COUPLING THAT FITS INSIDE BOTH MATING SECTIONS. SEAL ALL JOINTS WITH UL 181B-M LISTED JOINT SEALANT EQUAL TO DUCTMATE PROSEAL, HARDCAST OR AIRSEAL FOR THE APPROPRIATE PRESSURE CLASSIFICATION, TEMPERATURE AND WEATHER-RESISTANCE.

ALL DUCTWORK AND PIPING INSIDE THE BUILDING IS TO BE SUSPENDED FROM THE WOOD TRUSSES. DO NOT CONNECT TO THE ROOF DECK.

DUCT SIZES INDICATED ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS.

PROVIDE DUCT VOLUME DAMPERS AT EACH BRANCH CONNECTION TO DIFFUSERS AND REGISTERS FOR PROPER AIR SYSTEMS BALANCING. REFER TO DETAILS ON THE DRAWINGS.

PROVIDE GRAVITY BACKDRAFT DAMPERS FOR ALL EXHAUST FANS.

THE CONTRACTOR HAS THE OPTION OF USING EQUIVALENT SIZE ROUND DUCT (NOT FLEXIBLE DUCT) WHERE SPACE PERMITS.

NO OUTDOOR AIR INTAKES ARE TO BE LOCATED WITHIN 10 FEET OF EXHAUST FAN DISCHARGE OR PLUMBING VENTS.

PROVIDE FLEXIBLE CONNECTORS ON ALL DUCT CONNECTIONS TO AIR HANDLING UNITS. MAXIMUM FLAME SPREAD/SMOKE DEVELOPED RATING NOT TO EXCEED 25/50. FLEXIBLE CONNECTORS SHALL BE MINIMUM 8" LONG, MADE OF TWO LAYERS OF 8 OZ. OR ONE LAYER OF 16 OZ. NEOPRENE COATED CLOTH WITH AIRTIGHT SEAMS. FASTEN WITH BOLTED GALVANIZED METAL BANDS.

M.T. SHALL FURNISH AND INSTALL ALL REQUIRED AUTOMATIC TEMPERATURE CONTROLS INCLUDING ELECTRICAL WIRING, TRANSFORMERS AND THERMOSTATS FOR PROPER OPERATION OF THE HVAC SYSTEMS. WIRING SHALL BE IN ACCORDANCE WITH N.E.C. STANDARDS. POWER FOR CONTROLS IS AVAILABLE IN ONE OF THE ELECTRICAL PANELS. COORDINATE CIRCUIT AND BREAKER SIZE REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.

PAINT ALL DUCTWORK, STRUCTURAL MEMBERS, CONDUIT, ETC., VISIBLE BEHIND GRILLES (ESPECIALLY EGG-CRATE) MATTE BLACK. REFER TO ARCHITECTURAL PAINTING SPECIFICATIONS.

AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE REPRODUCIBLE TRANSPARENCY "AS-BUILT" DRAWINGS OF ALL HVAC WORK.

FLEXIBLE AIR DUCT

FLEXIBLE AIR DUCT (INSULATED) SHALL BE CLEVAFLEX OR FLEXMASTER TYPE 5, U.L.-181 LISTED, LOW PRESSURE RATED (6") WITH A TRILAMINATE OF ALUMINUM FOIL, FIBERGLASS AND POLYESTER INNER LINER ON GALVANIZED STEEL HELIX WITH R-5.0 (6.0)(8.0) FIBERGLASS INSULATION WITH 25/50 FIRE RETARDANT VAPOR BARRIER JACKET.

FLEXIBLE AIR DUCT (NON-INSULATED) SHALL BE CLEVAFLEX OR FLEXMASTER TYPE NI 45, U.L -181 LISTED, LOW AND HIGH PRESSURE RATED WITH 25/50 FIBERGLASS CLOTH FABRIC ON GALVANIZED (ALUMINUM) (STAINLESS) STEEL HELIX.

ALL CONNECTIONS ARE TO BE MADE WITH ADJUSTABLE CLAMPS AND TAPED AIR TIGHT.

FLEXIBLE DUCT SHALL ONLY BE USED WHERE CONCEALED ABOVE CEILINGS.

EXHAUST DUCTS THAT PASS THROUGH RETURN AIR PLENUMS MUST BE ENCASED SO THAT NO PART OF THE EXHAUST DUCT IS EXPOSED TO THE PLENUM.

SMOKE DETECTION

AT EACH AIR HANDLING UNIT (AHU) SYSTEM OF 2,000 CFM OR GREATER CAPACITY, PROVIDE A SMOKE DETECTOR IN THE RETURN AIR SYSTEM UPSTREAM OF THE FILTERS AND RELIEF AIR DAMPERS. WHERE MULTIPLE AHU SYSTEMS HAVE A COMBINED CAPACITY GREATER THAN 2,000 CFM AND SHARE A COMMON SUPPLY OR RETURN PLENUM, EACH UNIT SHALL BE PROVIDED WITH SMOKE DETECTION. IN RETURN AIR SYSTEMS SERVING TWO OR MORE STORIES AND HAVING A CAPACITY GREATER THAN 15,000 CFM, SMOKE DETECTORS SHALL BE LOCATED AT EACH STORY. SUCH SMOKE DETECTORS SHALL BE LOCATED UPSTREAM OF THE CONNECTION BETWEEN THE RETURN AIR RISER AND ANY AIR DUCTS OR PLENUMS. AIR DUCT SMOKE DETECTORS SHALL COMPLY WITH UL 268A.

ACTIVATION OF THE AHU SMOKE DETECTION SYSTEM SHALL STOP ALL OF THE EQUIPMENT SHARING A COMMON RETURN AIR PLENUM OR SYSTEM, CLOSE THE OUTDOOR AIR DAMPERS AND SHALL ACTIVE AN ALARM EITHER THROUGH AN ALARM DEVICE OR THROUGH A CENTRAL FIRE ALARM SYSTEM AS FOLLOWS:

IF A CENTRAL FIRE ALARM SYSTEM IS NOT BEING INSTALLED AS PART OF THIS PROJECT, EACH UNIT SHALL BE PROVIDED WITH AN INDEPENDENT VISIBLE AND AUDIBLE TROUBLE ALARM DEVICE TO BE LOCATED IN A CONSPICUOUS AND LOCAL FIRE MARSHAL APPROVED LOCATION. EACH DEVICE SHALL LABELED WITH ITS "ASSOCIATED UNIT TAG" AND "AIR DUCT DETECTOR TROUBLE." ALARM DEVICES SHALL BE EQUAL TO MAPLE CHASE OR AIR PRODUCTS & CONTROLS, LTD. MODEL MS-RH/KA/P/A/T WITH ALARM HORN, ALARM L.E.D. (RED), PILOT L.E.D. (GREEN), FAULT/TROUBLE L.E.D. (YELLOW), KEY OPERATED TEST/RESET SWITCH. BRUSHED STAINLESS STEEL DOUBLE GANG FACE PLATE. MOUNT IN A GALVANIZED STEEL DOUBLE GANG BOX. AIR PRODUCTS & CONTROLS AVAILABLE THROUGH NATIONAL TIME & SIGNAL CORP. 248-380-6264.

MECHANICAL, ELECTRICAL, AND FIRE ALARM TRADES/CONTRACTORS SHALL COORDINATE AND INCLUDE ALL SMOKE DETECTION AND FIRE ALARM RELATED WORK IN THEIR BID PROPOSAL INCLUDING FURNISHING, INSTALLATION, AND WIRING FOR A COMPLETE SYSTEM.

AIR SYSTEMS BALANCING

THE AIR (AND WATER) SYSTEMS ARE TO BE BALANCED TO WITHIN 5% OF THE QUANTITIES INDICATED ON THE DRAWINGS.

PREPARE AN AIR BALANCE REPORT COMPLETE WITH AN 8-1/2" X 11" SKETCH OF EACH SYSTEM ON FORMS SIMILAR TO AABC OR NEBB AND SCHEDULE EACH OUTLET, FAN, TERMINAL UNIT, ETC. INCLUDE SUCTION AND DISCHARGE STATIC PRESSURES AND OUTDOOR AIR, RETURN AIR AND MIXED AIR TEMPERATURES AT EACH FAN. SUBMIT (6) COPIES OF THE REPORT TO THE ARCHITECT.

ALL SHEAVE, BELT AND IMPELLER CHANGES REQUIRED TO MEET DESIGN PERFORMANCE WILL BE MADE BY THE MECHANICAL SUBCONTRACTOR AS REQUIRED AND DIRECTED BY THE TESTING AND BALANCING CONSULTANT, WITH NO INCREASE IN THE CONTRACT AMOUNT.

BALANCE IS TO BE PERFORMED BY AN INDEPENDENT AND CERTIFIED SYSTEMS BALANCE CONTRACTOR.

EXISTING HVAC EQUIPMENT

THE EXISTING HVAC FURNACE SYSTEMS ARE TO BE REUSED. THE M.T. SHALL PROVIDE A COMPLETE CHECK, TEST AND START OF THE EQUIPMENT AND MAKE ANY NECESSARY REPAIRS AND ADJUSTMENTS TO PLACE THE EQUIPMENT BACK INTO SERVICE. SUBMIT A REPORT TO THE ARCHITECT.

SPIN-IN FITTINGS

ROUND BRANCH CONNECTIONS TO DIFFUSERS MAY BE MADE WITH SPIN-IN FITTINGS WITH VOLUME DAMPERS AND SCOOP EQUAL TO FLEXMASTER FL/DB FOR SHEET METAL DUCT.

DIFFUSERS AND REGISTERS

DIFFUSERS AND REGISTERS SHALL BE MANUFACTURED BY PRICE, CARNES, TUTTLE & BAILEY, TITUS OR KRUEGER. PROVIDE DAMPERS AT EACH DIFFUSER AND REGISTER. PROVIDE PLASTER FRAME FOR LAY-IN TYPE DIFFUSERS MOUNTED IN GYPSUM BOARD CEILINGS. BAKED OFF-WHITE ENAMEL FINISH UNLESS NOTED.

FLUES & COMBUSTION AIR INTAKES

ALL GAS FIRED EQUIPMENT IS TO BE HIGH EFFICIENCY/ SEALED COMBUSTION TYPE. VENTING, MATERIALS, INSTALLATION, TERMINATIONS ETC. SHALL BE PER THE MFR I.O.M., 2015 MMC, AND INTERNATIONAL FUEL GAS CODE.

<u>FANS</u>

CEILING EXHAUST FANS SHALL BE PENN, COOK, ACME OR GREENHECK EQUAL TO MODEL AS SCHEDULED ON THE DRAWINGS. FANS COMPLETE WITH HOUSING, FACE GRILLE, INTEGRAL BACKDRAFT DAMPER, DIRECT DRIVE SPEED ADJUSTABLE MOTOR FOR BALANCING, INTEGRAL DISCONNECT MEANS FOR SERVICING.

<u>LOUVERS</u>

INTAKE, DISCHARGE AIR LOUVERS SHALL BE EQUAL TO UNITED ENERTECH, NAILOR, RUSKIN, PREFCO, AIR BALANCE OR AMERICAN WARMING MODEL LE-24, 4" STATIONARY BLADE LOUVER WITH DRAINABLE BLADES, 0.081" MILL FINISH EXTRUDED ALUMINUM ALLOY CONSTRUCTION WITH 1" EXTERIOR FLANGE, 1/2" REMOVABLE ALUMINUM MESH BIRD SCREEN ON INTERIOR.

SHUTTER DAMPERS

SHUTTER / DAMPERS SHALL BE EQUAL TO UNITED ENERTECH, AMERICAN WARMING, GREENHECK, AIR BALANCE OR RUSKIN MODEL CBD4. 4" BLADE LOUVER WITH ADJUSTABLE COUNTERBALANCE, EXTRUDED ALUMINUM CONSTRUCTION WITH 1" INTERIOR AND EXTERIOR FLANGE.

PARTNERS



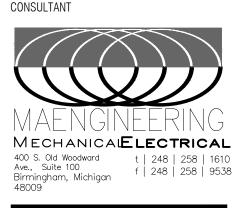
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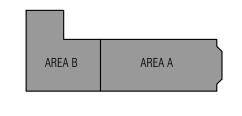
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KFY PI AN



OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

07/15/2020 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY
MJ
CHECKED BY
LS

APPROVED BY

SHEET NAME

GS

MECHANICAL SPECIFICATIONS

SHEET NO. M0-02

CONTROL DAMPERS

THE CONTRACTOR SHALL PROVIDE ALL CONTROL DAMPERS OF THE TYPES INDICATED ON THE PLANS, UNITED ENERTECH, NAILOR, RUSKIN, PREFCO, AIR BALANCE OR AMERICAN WARMING. FRAMES SHALL NOT BE LESS THAN 13 GAUGE GALVANIZED STEEL. BLADES MUST NOT BE OVER 8" WIDE NOR LESS THAN 16 GAUGE, GALVANIZED STEEL, ROLL FORMED. BEARINGS SHALL BE OILTITE, BALL BEARING OR NYLON WITH ½" SHAFTS. SIDE SEALS SHALL BE STAINLESS STEEL OF THE TIGHT-SEAL SPRING TYPE. DAMPERS AND SEALS SHALL BE SUITABLE FOR TEMPERATURE RANGES OF -40 TO 200? F.

ALL PROPORTIONAL CONTROL DAMPERS SHALL BE OPPOSED BLADE TYPE AND ALL TWO-POSITION DAMPERS SHALL BE PARALLEL-BLADE TYPES.

DAMPERS SHALL BE MINIMUM LEAKAGE TYPE TO CONSERVE ENERGY AND THE MANUFACTURER SHALL SUBMIT LEAKAGE AND FLOW CHARACTERISTIC DATA FOR ALL CONTROL DAMPERS WITH THE ENVIRONMENTAL CONTROL SUBMITTED. MAXIMUM LEAKAGE SHALL BE 2% AT STATIC PRESSURE OF 4" OF W.C.

DAMPER ACTUATORS

ALL DAMPER OPERATORS SHALL BE FULLY PROPORTIONING, UNLESS OTHERWISE SPECIFIED. THEY SHALL BE QUIET IN OPERATION AND SHALL HAVE AMPLE POWER TO OVERCOME FRICTION OF DAMPER LINKAGE AND AIR PRESSURE ACTING ON LOUVERS TO POSITION DAMPERS ACCURATELY AND SMOOTHLY. THE CONTROL MANUFACTURER SHALL FURNISH AND INSTALL A SUITABLE SPRING LINKAGE BETWEEN OPERATOR AND DAMPER.

THE OPERATORS SHALL BE CAPABLE OF OPERATING AT VARYING RATES OF SPEED TO CORRESPOND TO THE DICTATES OF THE CONTROLLERS AND VARIABLE LOAD REQUIREMENTS. THE OPERATORS SHALL BE CAPABLE OF OPERATING IN SEQUENCE AS REQUIRED BY THE SEQUENCE OF OPERATION.

THE OPERATORS SHALL HAVE EXTERNAL ADJUSTABLE STOPS TO LIMIT THE STROKE IN EITHER DIRECTION. THE OPERATOR LINKAGE ARRANGEMENTS SHALL BE SUCH AS TO PERMIT NORMALLY OPEN OR NORMALLY CLOSED POSITIONS OF THE DAMPERS AS REQUIRED. OPERATORS SHALL BE POWER OPEN, SPRING CLOSE (POWER OPEN, POWER CLOSE) TYPE.

ELECTRIC HEATER

ELECTRIC HEATER (EH) SHALL BE EQUAL TO ERINCRAFT, QMARK OR MARKEL 120V SINGLE PHASE WITH INTEGRAL THERMOSTAT, DISCONNECT SWITCH, FAN DELAY, WALL SLEEVE, LOUVERED GRILLE.

ELECTRIC DUCT HEATER

ELECTRIC DUCT HEATERS SHALL BE EQUAL TO MARKEL, QMARK, THERMOLEC, GREENHECK OR BRASCH WITH OPEN COIL ELEMENTS, SLIP-IN DUCT DESIGN, TERMINAL BOX FOR HOUSING ELECTRICAL TEMPERATURE AND SAFETY CONTROLS, AIR FLOW SWITCH, 24V CONTROL TRANSFORMER, DISCONNECT SWITCH, SCR CONTROLS.

FURNACES AND CONDENSING UNITS

FURNACES SHALL BE HIGH EFFICIENCY TYPE (95+%), SEALED COMBUSTION CONDENSING TYPE DESIGN, AS MANUFACTURED BY ARMSTRONG, CARRIER, TRANE OR LENNOX. FURNISH WITH NATURAL GAS FIRED HEAT, ELECTRONIC IGNITION, DRAFT INDUCER BLOWER, CONDENSATE DRAIN KIT, TEMPERATURE CONTROLS, 7 DAY THERMOSTAT WITH NIGHT SET-BACK, 1" THROWAWAY FILTERS, COOLING COIL, LINE SET, FULL CHARGE REFRIGERANT.

FURNACES ARE TO BE VERTICAL OR HORIZONTAL DESIGN AS SHOWN ON THE PLANS. PROVIDE SUPPORT CHANNELS AND VIBRATION ISOLATOR HANGERS FOR HORIZONTAL UNITS. WHERE THE RETURN AIR DUCT MUST CONNECT AT THE BOTTOM, PROVIDE AN ANGLE IRON SUPPORT FRAME TO ELEVATE THE FURNACE.

PROVIDE CONDENSATE DRAINS AND HORIZONTAL OR VERTICAL CONCENTRIC TERMINATION KITS FOR ALL SEALED COMBUSTION TYPE FURNACES. UNLESS NOTED OTHERWISE, ALL VENTS ARE TO BE VERTICAL TYPE THROUGH THE ROOF.

PROVIDE A WATER LEVEL DETECTOR IN THE CONDENSATE DRAIN PAN HIGHER THAN THE PRIMARY DRAIN CONNECTION AND LOWER THAN THE OVERFLOW RIM. ACTIVATION WILL SHUT DOWN THE UNIT.

AIR COOLED CONDENSING UNITS SHALL BE BY THE SAME MANUFACTURER AS THE FURNACES AND SHALL INCLUDE SCROLL COMPRESSOR, FILTER-DRYER, HIGH-LOW PRESSURE CUTOUT, EXPANSION VALVE KIT, SERVICE VALVES, ANTI-SHORT CYCLE TIMER, 45° (0°) LOW AMBIENT CONTROL AND ADDITIONAL 4 YEAR COMPRESSOR REPAIR/REPLACEMENT WARRANTY. MINIMUM SEER 14.0, 208/230 VOLT, SINGLE PHASE.

MOUNT CONDENSING UNITS ON 3" THICK, VIBRATION ABSORBING, PRE-FABRICATED, CEMENT COMPOSITE PADS EQUAL TO DIVERSITECH CORP. "ULTRALITE" WITH POLYSTYRENE CORE AND HEAT RESISTANT OUTER SKIN. EACH PAD IS TO BE 4" LARGER THAN THE EQUIPMENT IN EACH DIRECTION.

TESTS, ADJUSTMENTS AND ACCEPTANCE

UPON COMPLETION OF THE ERECTION OF ALL EQUIPMENT AND ALL WORK SPECIFIED HEREIN AND/OR SHOWN ON THE APPROVED SHOP DRAWINGS, OR AT SUCH TIME AS DIRECTED BY THE ARCHITECT, THIS SUBCONTRACTOR SHALL START ALL APPARATUS, MAKE NECESSARY TESTS AS DIRECTED AND AS SPECIFIED HEREIN, AND MAKE COMPLETE ADJUSTMENTS OF ALL ITEMS OF EQUIPMENT BEFORE ACCEPTANCE BY THE ARCHITECT TO WHOSE REPRESENTATIVE THIS SUBCONTRACTOR SHALL DEMONSTRATE (BY PERFORMANCE) ALL OF THE VARIOUS APPARATUS AND EQUIPMENT. START UP AND ADJUSTMENT OF EQUIPMENT SHALL INCLUDE ALL EQUIPMENT FURNISHED AND INSTALLED BY THIS CONTRACTOR.

MANUFACTURER'S AUTHORIZED PERSONNEL MUST BE PRESENT AT THE START-UP AND CALIBRATION OF ALL MAJOR EQUIPMENT INCLUDING THE BOILERS, WATER HEATERS, CHILLER, CONDENSING UNITS, HVAC UNITS, PUMPS AND MAKE-UP AIR UNITS.

WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL NOT BE CONSIDERED COMPLETE UNTIL THIS SUBCONTRACTOR HAS OBTAINED REQUIRED INSPECTIONS, CONDUCTED PERFORMANCE TESTS, MADE NECESSARY ADJUSTMENTS AND HAS SUBMITTED SATISFACTORY EVIDENCE OF COMPLIANCE. THE ARCHITECT SHALL MAKE SPOT CHECKS TO DETERMINE THE ACCURACY AND COMPLETENESS OF FINAL ADJUSTMENTS. SHOULD SPOT CHECKS INDICATE MORE THAN A REASONABLE DEVIATION FROM DESIGN DRAWINGS AND REQUIREMENTS, THIS SUBCONTRACTOR SHALL REPEAT TESTS AND ADJUSTMENTS TO THE SATISFACTION OF THE ARCHITECT. DURING THE TESTING PERIOD, THIS SUBCONTRACTOR SHALL MAINTAIN ON THE JOB A COMPETENT INDIVIDUAL, THOROUGHLY FAMILIAR WITH ALL PHASES OF THE HEATING AND VENTILATION SYSTEMS, FOR AS LONG AS MAY BE REQUIRED TO THOROUGHLY ADJUST ALL OF THE SYSTEMS AND TO DEMONSTRATE TO THE ARCHITECT AND/OR ENGINEER THAT THEY ARE FUNCTIONING PROPERLY.

AUTOMATIC TEMPERATURE CONTROLS

M.T. SHALL FURNISH AND INSTALL ALL REQUIRED AUTOMATIC TEMPERATURE CONTROLS INCLUDING ELECTRICAL WIRING, TRANSFORMERS AND THERMOSTATS FOR PROPER OPERATION OF THE HVAC SYSTEMS. WIRING SHALL BE IN ACCORDANCE WITH N.E.C. STANDARDS. POWER FOR CONTROLS IS AVAILABLE IN ONE OF THE ELECTRICAL PANELS. COORDINATE CIRCUIT AND BREAKER SIZE REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.

GAS FIRED FURNACES

UNITS ARE AUTOMATICALLY CYCLED FOR HEATING AND COOLING BY THEIR PROGRAMMABLE THERMOSTAT AND SPACE SETPOINT.

ACTIVATION OF THE UNIT OR DUCT MOUNTED SMOKE DETECTORS SHALL STOP THE FAN, OPEN THE RETURN AIR DAMPERS AND CLOSE THE OUTDOOR AIR DAMPERS AND ACTIVATE A VISIBLE AND AUDIBLE ALARM.

<u>FANS</u>

EXHAUST FANS ARE CONTROLLED BY AN INTERLOCK, A TIME SWITCH, A SEPARATE WALL SWITCH OR MOTION SENSOR BY ELECTRICAL TRADES. REFER TO FAN SCHEDULE.

INSULATION SPECIFICATIONS

<u>GENERAL</u>

INSULATION SHALL BE INSTALLED ON ALL PIPING AND DUCTWORK SYSTEMS WHERE SPECIFIED BELOW. INSULATION PRODUCTS SHALL BE MANUFACTURED BY OWENS CORNING, CERTAINTEED, JOHNS-MANVILLE OR KNAUF AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

INSULATION MATERIALS SHALL MEET CURRENT ASHRAE 90.1 REQUIREMENTS INCLUDING MAXIMUM FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 OR LESS.

DUCTWORK THAT IS ACOUSTICALLY LINED SHALL NOT BE INSULATED.

INSULATION PRODUCTS

ALL DOMESTIC HOT AND COLD WATER PIPING EXCEPT FOR SHORT RUNS TO FIXTURES SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION WITH VAPOR BARRIER. TAPE JOINTS AND COVER ELBOWS WITH PRE-FABRICATED PVC OR ALUMINUM ELBOW WRAPS. NOTE THAT PVC USED IN CEILING SPACES USED AS RETURN AIR PLENUMS MUST BE PLENUM RATED.

AT THE CONTRACTOR'S OPTION, CLOSED CELL POLYMER FOAM INSULATION EQUAL TO ARMAFLEX OR NOMACO MAY BE USED ON DOMESTIC WATER PIPING. 3/4" THICKNESS FOR PIPES UP TO 1-1/4" IN SIZE AND 1" THICK FOR PIPES 1-1/2" AND LARGER.

PHYSICALLY HANDICAPPED LAVATORIES SHALL BE PROVIDED WITH "P" TRAP AND WATER INSULATION KITS EQUAL TO TRUEBRO "HANDI-LAV-GUARD". INSULATION SHALL THOROUGHLY COVER THE HOT AND COLD WATER AND WASTE PIPES FROM THE LAVATORY TO THE WALL ESCUTCHEONS AND PROVIDE ACCESS TO WATER ANGLE STOP VALVES. WHITE FINISH.

ALL CONCEALED INDOOR HEATING AND/OR COOLING SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED WITH 1-1/2" THICK FIBERGLASS INSULATION WITH VAPOR BARRIER. TAPE ALL JOINTS WITH VAPOR BARRIER TAPE. MINIMUM INSTALLED "R" VALUE TO BE 4.2.

REFRIGERANT PIPING SHALL BE INSULATED WITH 3/4" NOMACO OR ARMAFLEX. PIPING LOCATED OUTDOORS SHALL BE FINISHED WITH ARMAFLEX SEAL PAINT PER MANUFACTURERS RECOMMENDATIONS.

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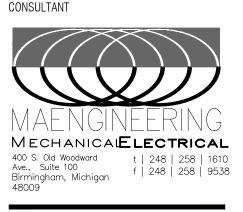
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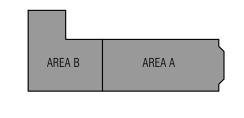
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KEY PLAN



OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

07/15/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

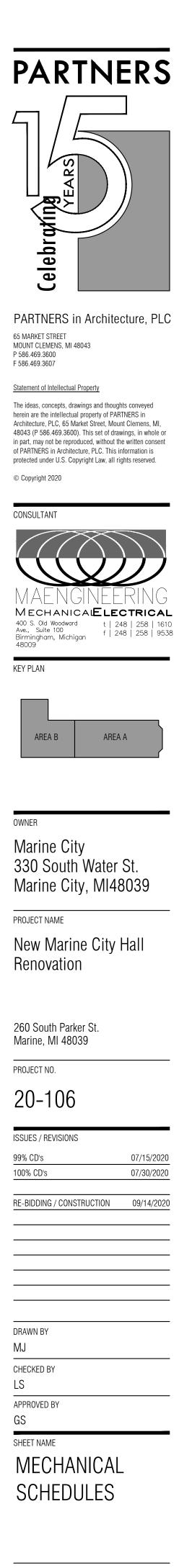
09/14/202

DRAWN BY		
MJ		
CHECKED BY		
LS		
APPROVED BY		
GS		
SHEET NAME		

MECHANICAL SPECIFICATIONS

SHEET NO.

	VENTILATION COMPLIANCE SCHEDULE																																
NUMBER	ROOM NUMBER ROOM NAME ROOM NAME																																
ROOM	ROOT	OCCUPANCY ((SPACES W/ AST 2007 T	FLOOR AF	AVERAGE CEII	SPACE VOLL	MMC TABLE OCCUPANT DEN (OR)	CALCULATED NUI OR SEATING STRIN	QTY WATE	ату ц ату зно		MIN. OUTDOOR A PER SQ. FT. F/ MIN. OUTDOOR A PFR PFRSON F		OUTDOOR AIR CHANGES PER	CFM EXHAUS1 WATER CLO	CFM EXHAUS1 URINAL	CFM EXHAUS1 SHOWER HE	CFM GENERAL E PER SQUARE	SUPPLY A EFFECTIVENESS	CALCULATED M AIR CFM REQUIR & OCCUPAI	CALCULATED O CFM REQUIRI CHANGES P	CALCULATEE EXHAUST AIR CI	MAX ROOM SUP	VAV BOX MIN S 100% FOR CONSI	MINIMUM SUPP BOX MIN CFM AS	RETURN A	GENERAL EX SYSTEM	SYSTEM DESIG AIR % AT MIN SP	OUTDOOR AIR S THE SPAC	ROOM PRESS	SPACE SUPPLY SQUARE FOOT A	ROOM SUPPLY	ROOM EXHAUST	UN N
													F	URN/		F-1 S	YSTE	Μ															
101	VESTIBULE	PUBLIC SPACES - CORRIDORS	59	8.50	502	0	0	0	0 0	(0.06 0.00	0 0	0.00	0.00	0.00	0.00	0.00	0.80	5	0	0	50	100	50	NOTE 2	0	20	10	10	0.8	F-1		SEE NOTES BELOW
102	LOBBY	OFFICES - MAIN ENTRY LOBBIES	244	8.50	2,074	ARCHITECTURAL OCCUPANCY	3	0	0 0	(0.06 5.00) C	0.00	0.00	0.00	0.00	0.00	0.80	38	0	0	250	100	250	NOTE 2	0	20	50	50	1.0	F-1		SEE NOTES BELOW
103	OFFICE	OFFICES - OFFICE SPACES	260	8.50	2,210	ARCHITECTURAL OCCUPANCY	3	0	0 0	(0.06 5.00) C	0.00	0.00	0.00	0.00	0.00	0.80	39	0	0	200	100	200	NOTE 2	0	20	40	40	0.8	F-1		SEE NOTES BELOW
104	OFFICE	OFFICES - OFFICE SPACES	208	8.50	1,768	ARCHITECTURAL OCCUPANCY	3	0	0 0	(0.06 5.00	0 0	0.00	0.00	0.00	0.00	0.00	0.80	35	0	0	250	100	250	NOTE 2	0	20	50	50	1.2	F-1		SEE NOTES BELOW
105	OFFICE	OFFICES - OFFICE SPACES	226	8.50	1,921	ARCHITECTURAL OCCUPANCY	3	0	0 0	(0.06 5.00) C	0.00	0.00	0.00	0.00	0.00	0.80	36	0	0	200	100	200	NOTE 2	0	20	40	40	0.9	F-1		SEE NOTES BELOW
106 - 109	OFFICE	OFFICES - OFFICE SPACES	362	8.50	3,077	ARCHITECTURAL OCCUPANCY	4	0	0 0	(0.06 5.00) (0.00	0.00	0.00	0.00	0.00	0.80	53	0	0	300	100	300	NOTE 2	0	20	60	60	0.8	F-1		SEE NOTES BELOW
110	OFFICE	OFFICES - OFFICE SPACES	196	8.50	1,666	ARCHITECTURAL OCCUPANCY	2	0	0 0	(0.06 5.00) (00.0	0.00	0.00	0.00	0.00	0.80	28	0	0	190	100	190	NOTE 2	0	20	38	38	1.0	F-1		SEE NOTES BELOW
116	REST ROOM	TOILET ROOMS - PUBLIC	68	8.50	578	0	0	1	0 0	(0.00 0.00) (0.00	70.00	0.00	0.00	0.00	0.80	0	0	70	50	100	50	NOTE 2	100	20	10	-90	0.7	F-1	EF-1	SEE NOTES BELOW
117	WORK ROOM	OFFICES - OFFICE SPACES	130	8.50	1,105	ARCHITECTURAL OCCUPANCY	2	0	0 0	(0.06 5.00) C	0.00	0.00	0.00	0.00	0.00	0.80	23	0	0	80	100	80	NOTE 2	0	20	16	16	0.6	F-1		SEE NOTES BELOW
121	JANITOR CLOSET	JANITOR CLOSET	37	8.50	315	0	0	0	0 0	(0.00 0.00	0 0	0.00	0.00	0.00	0.00	1.00	0.80	0	0	37	30	100	30	NOTE 2	100	20	6	-94	0.8	F-1	EF-2	SEE NOTES BELOW
	тот	ALS	1,790		15,215		20												257	0	107	1,600				200		320	120	0.9			
		1		1 1		1		I I					F	URN/	ACE	F-2 S	YSTE	M	1	1	1	1	1	1			T	1	I	1		T	SEE
111	CONF.	OFFICES - CONFERENCE ROOMS	294	8.50	2,499	ARCHITECTURAL OCCUPANCY	3	0	0 0	(0.06 5.00) C	00.00	0.00	0.00	0.00	0.00	0.80	41	0	0	300	100	300	NOTE 2	0	20	60	60	1.0	F-2		NOTES BELOW
112	CORRIDOR	PUBLIC SPACES - CORRIDORS	221	8.50	1,879	ARCHITECTURAL OCCUPANCY	6	0	0 0		0.06 0.00) (0.00	0.00	0.00	0.00	0.00	0.80	17	0	0	180	100	180	NOTE 2	0	20	36	36	0.8	F-2		SEE NOTES BELOW
113	WOMEN'S REST ROOM	TOILET ROOMS - PUBLIC	98	8.50	833	0	0	1	0 0		0.00 0.00) C	00.00	70.00	0.00	0.00	0.00	0.80	0	0	70	50	100	50	NOTE 2	100	20	10	-90	0.5	F-2	EF-3	SEE NOTES BELOW
114	MEN'S REST ROOM	TOILET ROOMS - PUBLIC	98	8.50	833	0	0	1	0 0		0.00 0.00) C	0.00	70.00	0.00	0.00	0.00	0.80	0	0	70	50	100	50	NOTE 2	100	20	10	-90	0.5	F-2	EF-4	SEE NOTES BELOW
115	SECURE STORAGE	OCCUPIABLE DRY STORAGE - ASHRAE 62.1	182	8.50	1,547	ARCHITECTURAL OCCUPANCY	1	0	0 0		0.06 5.00		00.00	0.00	0.00	0.00	0.00	0.80	20	0	0	150	100	150	NOTE 2	0	20	30	30	0.8	F-2		SEE NOTES BELOW SEE
118	ELEC MDF	ELECTRICAL EQUIPMENT ROOMS - ASHRAE 62.1	60	8.50	510	ARCHITECTURAL OCCUPANCY	1	0	0 0		0.06 0.00) (00.00	0.00	0.00	0.00	0.00	0.80	5	0	0	40	100	40	NOTE 2	0	20	8	8	0.7	F-2		NOTES BELOW SEE
119	SUPPLIES	STORAGE ROOMS	92	8.50	782	ARCHITECTURAL OCCUPANCY	1	0	0 0		0.12 0.00		00.00	0.00	0.00	0.00	0.00	0.80	14	0	0	80	100	80	NOTE 2	0	20	16	16	0.9	F-2		NOTES BELOW SEE
120	BREAK ROOM	BREAK ROOMS - ASHRAE 62.1	197	8.50	1,675	ARCHITECTURAL OCCUPANCY	2	0	0 0		0.06 5.00) a	00.00	0.00	0.00	0.00	0.00	0.80	28	0	0	150	100	150	NOTE 2	0	20	30	30	0.8	F-2		NOTES BELOW SEE
122	STORAGE	OCCUPIABLE DRY STORAGE - ASHRAE 62.1	1,030	8.50	8,755	ARCHITECTURAL OCCUPANCY	4	0	0 0	(0.06 5.00	0 0	00.00	0.00	0.00	0.00	0.00	0.80	103	0	0	600	100	600	NOTE 2	0	20	120	120	0.6	F-2		NOTES BELOW
	TOT	ALS	2,272		19,312		18								0 5 0	0 5	4.0.20		228	0	140	1,600				200	<u> </u>	320	120	0.7			
		HOTELS, MOTELS, RESORTS &				ARCHITECTURAL									5 F-3	& F-	4 SYS		5						NOTE								SEE
123	MULTI-PURPOSE LOBBY		310	8.50	2,635	OCCUPANCY	4	0	0 0		0.06 7.50		00.00	0.00	0.00	0.00	0.00	0.80	61	0	0	380	100	380	NOTE 2	0	20	76	76	1.2	F-3		NOTES BELOW
105	MULTI-PURPOSE - NEW	HOTELS, MOTELS, RESORTS & DORMITORIES - MULTI-PURPOSE ASSEMBLY	1,073	8.50	9,121	ARCHITECTURAL OCCUPANCY	60	0	0 0	0	0.06 5.00		00.00	0.00	0.00	0.00	0.00	0.80	456	0	0	2,500	100	2,500	NOTE 2	0	20	500	500	2.3	F-3		SEE NOTES BELOW
124	MEN'S REST ROOM	TOILET ROOMS - PUBLIC	57	8.50	485	0	0	1	0 0	(0.00 0.00) C	0.00	70.00	0.00	0.00	0.00	0.80	0	0	70	60	100	60	NOTE 2	100	20	12	-88	1.1	F-3	EF-5	SEE NOTES BELOW
125	WOMEN'S REST ROOM	TOILET ROOMS - PUBLIC	57	8.50	485	0	0	1	0 0	(0.00 0.00) a	0.00	70.00	0.00	0.00	0.00	0.80	0	0	70	60	100	60	NOTE 2	100	20	12	-88	1.1	F-3	EF-6	SEE NOTES BELOW
127	MECH (ELECTRICAL PANELS)	ELECTRICAL EQUIPMENT ROOMS - ASHRAE 62.1	72	8.50	612	ARCHITECTURAL OCCUPANCY	1	0	0 0	(0.06 0.00		0.00	0.00	0.00	0.00	0.00	0.80	6	0	0	70	100	70	NOTE 2	0	20	14	14	1.0	F-3		SEE NOTES BELOW
128	VESTIBULE	PUBLIC SPACES - CORRIDORS	46	8.50	391	0	0	0	0 0	(0.06 0.00) a	0.00	0.00	0.00	0.00	0.00	0.80	4	0	0	50	100	50	NOTE 2	0	20	10	10	1.1	F-3		SEE NOTES BELOW
	тот	ALS	1,615		13,728		65				·								527	0	140	3,120				200		624	424	1.9			
	NOTES																																
		TON AIR CALCULATION BASED ON: (
		ATELY EQUAL TO SUPPLY AIR LESS D PER CODE OR PER SEATING PLAI				KELIEF/EXHAUST RATI	L IS SUB.	IECT TO E	CONOMIZ	LER PC	DSTHON AND C	PERAT	ION																				



SHEET NO.	
M0-04	

SUPPLY AIR DIFFUSER NECK SIZING SCHEDULE (UNLESS OTHERWISE NOTED)											
TAG AIR QUANTITY RANGE NECK SIZE (IN)											
S-1 UP TO 120 CFM 6											
S-2	UP TO 120 CFM	D									
S-1	UP TO 260 CFM	8									
S-2	UP TO 240 CFM	0									
S-1	265 TO 400 CFM	10									
S-1	405 TO 550 CFM	12									
S-1	555 TO 745 CFM	14									
(FOR STANDA	RD 3 OR 4 CONE SQUARE CEILIN	G DIFFUSERS)									

SUPPLY AIR REGISTER												
NECK SIZING SCHEDULE												
	(UNLESS OTHERWISE NO	TED)										
TAG AIR QUANTITY RANGE NECK SIZE (IN)												
S-3	0-200 CFM	8x6										
S-3	205-300 CFM	12x6										
S-3	305-400 CFM	12x8										
S-3	S-3 405-500 CFM 16x8											
(FOR DOUBLE	DEFLECTION SUPPLY AIR RE	GISTERS)										

TAG

S-1

S-2

S-3

S-4

R-1

R-2

R-3

R-4

R-5

EXHA	EXHAUST REGISTER SIZING SCHEDULE (UNLESS OTHERWISE NOTED)												
TAG	CFM RANGE	NECK SIZE (IN)											
E-1	0-90	6x6											

E-1	0-90	6x6								
E-1	95-190	8x8, 12 X 6								
E-1	195-300	10 X 10, 12 X 8, 18 X 6								
E-1	305-400	12 X 12, 16 X 10, 18 X 8								
E-1	405-500	16 X 14, 18 X 12, 22x10								
E-1	E-1 505-600 16 X 16, 18 X 14, 22x12									
(FOR SINGLE DEFLECTION EXHAUST GRILLES)										

RETURN/TRANSFER GRILLE SIZING SCHEDULE (UNLESS OTHERWISE NOTED)											
TAG CFM RANGE NECK SIZE (IN)											
R-3, R-4 0-50 6x6											
R-3, R-4 55-120 8x8											
R-3, R-4	R-3, R-4 125-180 10x10, 12x8										
R-3, R-4	185-270	12x12, 16x10, 18x8									
R-3, R-4	275-470	16 x 14, 18x12, 22x10									
R-3, R-4	475-560	16x16, 18x14, 22x12									
R-3, R-4	565-700	18x16, 20x14, 24x12									
R-3, R-4	705-900	20x18, 24x16, 28x14,									
		32x12									
R-3, R-4	905-1100	24x18, 26x16, 30x14, 36x12									
(FOR SINGLE	DEFLECTION RETURN/TRANS	SFER GRILLES)									

GRILLE REGISTER AND DIFFUSER SCHEDUL BASIS OF DESIGN FACE DIMENSIO SERVICE BASIS OF DESIGN MFR CFM RANGE NECK SIZE (IN) MODEL NUMBER (IN) SEE NECK SIZING SEE NECK SIZING SUPPLY AIR DIFFUSER PRICE SCD 4-CONE 24 X 24 SCHEDULE SCHEDULE SEE NECK SIZING SEE NECK SIZING SUPPLY AIR DIFFUSER SCD 3-CONE 12 X 12 PRICE SCHEDULE SCHEDULE SEE NECK SIZING SEE NECK SIZING NECK SIZE + 1-3 SUPPLY AIR REGISTER PRICE 520 SCHEDULE FOR BORDER SCHEDULE 3-HOUR FIRE RATED SUPPLY AIR SEE NECK SIZING SEE NECK SIZING PRICE SCD-FR 3-CONE 12 X 12 DIFFUSER WITH FUSIBLE LINK SCHEDULE SCHEDULE RADIATION DAMPER RETURN AIR/ TRANSFER AIR PRICE 81 EGG CRATE 0 - 500 24 X 12 22 X 10 GRILLE RETURN AIR/ TRANSFER AIR PRICE 81 EGG CRATE 24 X 24 0 - 1000 22 X 22 GRILLE RETURN AIR/ TRANSFER AIR SEE NECK SIZING SEE NECK SIZING NECK SIZE + 1-3 PRICE 535 SCHEDULE SCHEDULE FOR BORDER GRILLE B-HOUR FIRE RATED RETURN AIR SEE NECK SIZING SEE NECK SIZING NECK SIZE + 1-3 TRANSFER AIR GRILLE WITH PRICE 535-FR FOR BORDER SCHEDULE SCHEDULE USIBLE LINK RADIATION DAMPER RETURN AIR/ TRANSFER AIR PRICE 81 EGG CRATE 0 - 2000 22 X 46 24 X 48 GRILLE NOTES & ACCESSORIES CONTRACTOR SHALL COORDINATE INSTALLATION WITH THE ARCHITECTS REFLECTED CEILING PLAN. MATCH MOUNTING FRAME TO CEILING TYPE / INSTALLED IN LAY-IN CEILINGS SHALL BE CENTERED IN ONE DIMENSION FOR APPEARANCE. PROVIDE ADAPTER FRAME FOR LAY-IN TYPES INSTALLI PROVIDE OFF-WHITE FINISH UNLESS OTHER WISE NOTED OR DICTATED BY THE ARCHITECT. 4-WAY THROW STAMPED SQUARE CONE DIFFUSER.

3 1/2 INCH SQUARE GRID X 1 INCH THICK ALL ALUMINUM EGGCRATE RETURN AIR GRILLE. 4 FIXED BLADE GRILLE, 3/4" BLADE SPACING, 45 DEG BLADE ANGLE, STEEL CONSTRUCTION, BLADES PARALLEL TO LONG DIMENSION. 5 ADJUSTABLE BLADE REGISTER, 3/4" BLADE SPACING, STEEL CONSTRUCTION, FRONT BLADES PARALLEL TO LONG DIMENSION. 6 PROVIDE FACTORY OR FIELD FABRICATED BOOT PLENUM WITH ROUND DUCT COLLAR FOR RETURN AIR RUNOUT.

	PLUMBING FIXTURE SCHEDULE													
	TAG ITEM MAKE				MODEL NAME		F	PIPE CC	ONNEC	TION SIZE	S	NOTES/ ACCESSORIES		
	TAG		IVIANE				W	V	•		HW	NOTES/ACCESSORIES		
	AAV	AIR ADMITTANCE VALVE	STUDOR		MINI-VENT	20301		SE PLA				КК		
E	EWC-1	ELECTRIC WATER COOLER (ADA)	OASIS		SPLIT-LEVEL ERSACOOLER	PG8ACSL	1-1/2"	1-1	/2"	1/2"		D, R		
	FD-1	FLOOR DRAIN	MIFAB			F1100	SEE PLANS					A, B, Q, NN, OO		
	FD-2	MECHANICAL ROOM FLOOR DRAIN	MIFAB				SEE PLANS							
	LAV-1 LAVATORY MANSFIELD (WALL MTD, ADA)				GRAND ISLE	2018HBNS	1-1/2"	1-1.	/2"	1/2"	1/2"	A, B, D, E, K, R, S, BB, DD		
	S-1 SINK ELKAY (1-COMP)			l	USTERTONE	LR-2522	1-1/2"	1-1.	/2"	1/2"	1/2"	А, В, D, F, T, W, DD, MM		
	S-2	SINK (2-COMP)	ELKAY	l	LUSTERTONE	LR-3322	1-1/2"	1-1.	/2"	1/2"	1/2"	A, B, D, F, T, W, DD, MM		
	WC-1 WATER CLOSET MANSFIELD				SUMMIT	384-386	4''	2"		1/2"		A, B, C, D		
			PLU	JMB		RE NOTES/A	CCESS	OR	IES					
A	VERIFY C	OLOR/FINISH WITH ARCHI	TECT	В	WITH CORD AND F	EVES, TEMPLATES, ET PLUG, 1/2 HP, 120V, 1¢ H ARCHITECTURAL TF	5, 6.9 AMPS	с		VIDE SEAT TENERS	EBEMIS: 19	955SSTFR W/ STA-TITE		
D	SUPPLYV	BRASSCRAFT COMMERC	IAL ANGLE	E	PROVIDE WRAP O PIPING EQUAL TO	N SUPPLY AND WASTI KEENEY "TRAP WRAP	E	F	PROVIDE BRASSCRAFT: 1-1/2" CAST BRASS "P" TRAP					
К	DELTA: 22			Q	PROVIDE J.R. SMIT SIZED TO MATCH [TH 2692 TRAP SEALER DRAINING OUTLET	R	R		VIDE BRAS " CAST BR	SSCRAFT RASS "P" TR	XAP		
S		BRASSCRAFT	CE	Т	DRAIN OUTLET WI			U	BACI	<flow ch<="" td=""><td>IECK & WA</td><td>LL BOX</td></flow>	IECK & WA	LL BOX		
V		VACUUM BREAKER DDEL P-003		W	SINK FAUCET: DELTA 120LF, SING	GLE LEVER		BB			R CARRIEF OUNT PER	R W/ FOOT ADA REQUIREMENTS		
DD		NG VALVE: : LFe480, ASSE 1070		КК	MOUNT AIR ADMIT MULTI-PURPOSE F	,	MM				-SINK ERATOR BADGER 5, /2 HP, 120V, 1ø, 6.9 AMPS			
NN	USE F110 IS USED	OC WHERE MEMBRANE F	LOOR	00	PROVIDE DEEP SEAL TRAP UNLESS OTHERWISE NOTED									

1

								FAN S	SCH	EDUL	_E								
			MOTOR																
TAG	SPACE/ SYSTEM SERVED	TYPE	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL NUMBER	DRIVE TYPE	CFM	ESP (IN WC)	TSP (IN WC) INCLUDING BACKDRAFT DPR	FAN SPEED (RPM)	HP (WATTS)	VOLTAGE	FAN SPEED ADJUSTMENT FOR BALANCING	CONTROLED BY	INLET DBA (DB)	INLET SONES	BASE FAN WEIGHT (LBS)	WEIGHT OF CURB & ACCESSORIES (LBS)	TOTAL OPERATING WEIGHT (LBS)	NOTES/ ACCESSORIES
EF-1	WOMEN'S 113	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	INTERLOCK WITH LIGHTING CIRCUIT	45	3.5	12	N/A	12	1
EF-1	RESTROOM 116	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	INTERLOCK WITH LIGHTING CIRCUIT	45	3.5	12	N/A	12	1
EF-2	JANITOR CLOSET 121	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	RUNS CONTINUOUSLY	45	3.5	12	N/A	12	1
EF-3	WOMEN'S RESTROOM 113	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	INTERLOCK WITH LIGHTING CIRCUIT	45	3.5	12	N/A	12	1
EF-4	MEN'S RESTROOM 114	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	INTERLOCK WITH LIGHTING CIRCUIT	45	3.5	12	N/A	12	1
EF-5	MEN'S RESTROOM 124	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	INTERLOCK WITH LIGHTING CIRCUIT	45	3.5	12	N/A	12	1
EF-6	WOMEN'S RESTROOM 125	CEILING	GREENHECK	SP-B150	DIRECT	100	0.8	N/A	969	(128)	120/1/60	SOLID STATE SPEED CONTROL IN FAN CABINET	INTERLOCK WITH LIGHTING CIRCUIT	45	3.5	12	N/A	12	1

NOTES & ACCESSORIES

CEILING CABINET EXHAUST FAN WITH INTEGRAL BACKDRAFT DAMPER, SOLID STATE SPEED CONTROL IN FAN CABINET FOR BALANCING, DISCONNECT, SEE PLAN FOR EXHAUST DUCT TERMINATION.

GAS	FIRED	FUF

				BLOWER			GAS	DATA	<u> </u>	DX AC EV			ELECTRICAL		r		
TAG	MFR	MODEL	CFM	MAX ESP (IN WC)	DRIVE TYPE	TYPE	MBH INPUT	MBH OUTPUT	AFUE	MODEL	NOMINAL TONS	VOLTAGE	MCA	MOP	OA CFM	WEIGHT (LBS)	NOTES/ ACCESSORIES
F-1	CARRIER	59TP	1,600	0.5	DIRECT	NATURAL	80.0	78.0	96%	24ACC SIZE 48	4.0	115/1/60	14.7	20.0	320.0	160.0	1
	FURNACE NOTES/ ACCESSORIES																
1	CASED EVAP CO	OIL, PROGRAMMABLE THE	ERMOSTAT, E	ECMBLOWER	MOTOR, VAR	IABLE SPEE	D FAN CONTR	OLS, VERTIC	AL UPFLOW	CONFIGURAT	TION, SIDE RE	ETURN WITH	30% MERV8	FILTER RACI	≺, CONDENSAT	E DRAIN ACID	NEUTRALIZING

		EL	ECTRIC FA	N FC	RCE	ED H	EAT	ER S	SCHI	EDULE			
TAG	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL NUMBER	ARRANGEMENT	ĸw	BTU/HR	CFM	TEMP RISE (°F)	VOLTAGE	High Speed Amps	MOUNTING	ROUGH DIMENSIONS (IN)	WEIGHT (LBS)	Notes/ Accessories
EH-1	MARKEL	SERIES 3320 HEAVY DUTY COMMERCIAL WALL HEATER	FRONT RETURN/ DISCHARGE	4.0	13800	175	27	208/1/60	19.2	RECESSED WALL	14-3/16" WIDE X 19-7/16" HIGH X 4" DEPTH	30	1
EH-2	MARKEL	3480 SERIES COMMERCIAL FAN FORCED RECESSED MOUNTED CEILING HEATER	FRONT RETURN/ DISCHARGE	4.0	13600	420	30	208/1/60	19.2	RECESSED CEILING	24" SQUARED x 10" HIGH	35	2
	NOTES & ACCESSORIES												
1	DISCONNECT SWITCH, AUTOMATIC FAN DELAY CIRCUIT, AUTOMATIC RESET THEMAL LIMIT, BRONZE POWDER COATED 18 GAUGE STEEL GRILL WITH EXTRUDED ALUMINUM FRONT FRAME, STEEL BLOCK FINNED TUBULAR HEATING ELEMENT, VANE AXIAL FAN BLADE, BUILT-IN TAMPER PROOF THERMOSTAT, ETL LISTED, 1-YEAR LIMITED WARRANTY, INSTALLATION TEMPLATES.												
2	DISCONNECT SWITCH WHITE POWDER COATED 20 GAUGE GRUL MANUAL RESET THERMAL UNIT. 24V CONTROL TRANSFORMER, ENCLOSED STEELEIN SHEATH FLEMENT, MAXIMUM MOUNTING IS 12' REMOTE												

	PUMP SCHEDULE													
TAG	SERVICE	TYPE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	GPM	HEAD (FT H2O)	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	FLUID	MOTOR NAMEPLATE HP	NOMINAL MOTOR SPEED (RPM)	MOTOR VOLTAGE	OPERATING WIEGHT (LBS)	REMARKS
CP-1	DOMESTIC HOT WATER CIRCULATING PUMP	INLINE LEAD FREE BRONZE CIRCULATOR	B&G	PL-30	2	22	3/4	3/4	POTABLE WATER	1/12	2,650	120V	12	SEE ALL BELOW

PROVIDE LEAD FREE BRONZE CONSTRUCTION CIRCULATOR SUITABLE FOR DOMESTIC HOT WATER DUTY. PROVIDE AQUA-STAT AND TIMECLOCK TO START/ STOP PUMP BASED ON RETURN WATER TEMP AND ENABLE/ DISABLE PUMP CIRCUIT BASED ON OCCUPANCY SCHEDULF.

FURNACE DX AC REMOTE AIR COOLED CONDENSING UNIT SCHEDULE													
								AMBIENT	E	LECTRICAL			
TAG	FURNACE SERVED	MFR	MODEL NUMBER	NOMINAL TONS COOLING	TOTAL MBH	SENS MBH	ARI RATED EFFICIENCY	TEMP (DEG. F)	VOLTAGE	МСА	МОР	WEIGHT (LBS)	NOTES/ ACCESSORIES
ACCU-4	F-4	CARRIER	24ACC648A003	4	44.0	37.1	15.0 SEER	95	208/230/1/60	26.1	40	250	1
	NOTES/ ACCESSORIES												
1	R-INSULATED DX	REFRIGERANT PI	PING SIZED BY MF	FR FOR LENGTH OF	RISE AND	D RUN, ASHF	RAE 90.1 2013 COM	MPLIANT, PRE	FABRICATED PA	D FOR GRAD	E MOUNTING		

CONNECTED GAS LOAD SUMMARY AND NOTES										
ITEM	QUANTITY	HIGH FIRE INPUT (MBH)	TOTAL MBH	REQUIRED GAS PRESSURE RANGE AT EQUIPMENT						
EXISTING GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC						
EXISTING GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC						
EXISTING GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC						
NEW GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC						
EXISTING DOMESTIC WATER HEATER	1	76	76	5 - 14 IN WC						
IENT: TOTAL MBH & RECOMMENDED MINIMUM DELIVERY PRESSURE 396 FIELD VERIFY EXISTING DELIVERY PRESSURE. UTILITY TO ADJUST AS REQUIRED										

CONNECTED GAS LOAD SUMMARY AND NOTES									
TAG	ITEM	QUANTITY	HIGH FIRE INPUT (MBH)	TOTAL MBH	REQUIRED GAS PRESSURE RANGE AT EQUIPMENT				
F-1	EXISTING GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC				
F-2	EXISTING GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC				
F-3	EXISTING GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC				
F-4	NEW GAS FIRED FURNACE	1	80	80	4.5 - 13.6 IN WC				
DWH	EXISTING DOMESTIC WATER HEATER	1	76	76	5 - 14 IN WC				
SERVICE REQUIREMENT: TOTAL MBH & RECOMMENDED MINIMUM DELIVERY PRESSURE 396 FIELD VERIFY EXISTING DELIVERY PRES UTILITY TO ADJUST AS REQUIRED									

NATURAL GAS SERVICE NOTES:

1) COORDINATE GAS SERVICE UPGRADE WITH THE GAS UTILITY COMPANY.

2) GENERAL CONTRACTOR SHALL ASSIST THE OWNER WITH APPLYING FOR AND OBTAINING GAS SERVICE WORK FROM THE UTILITY. 3) SUMMARY TABLE INFORMATION IS PER BASIS OF DESIGN EQUIPMENT ONLY. CONFIRM ACTUAL WITH PURCHASED EQUIPMENT AND ADJUST DESIGN ACCORDINGLY

4) GAS DELIVERY PRESSURE SHALL BE PROVIDED AND ADJUSTED BY THE UTILITY TO BE ADEQUATE FOR ALL EQUIPMENT WITHOUT ISSUE.

5) PROVIDE BALANCED VALVE POSITIVE LOCK-UP GAS PRESSURE REGULATORS EQUAL TO MAXITROL 210 FOR EQUIPMENT WHERE DELIVERY PRESSURE EXCEEDS THE MAXIMUM RECOMMENDED INLET PRESSURE OF THE EQUIPMENT. PROPERLY VENT ALL REGULATORS TO THE OUTDOORS AND IN COMPLIANCE WITH THE INTERNATIONAL FUEL GAS CODE AND EQUIPMENT MFR'S IOM. SELECT REGULATORS TO PROVIDE INTERMITTENT 10 PSIG OVER PRESSURE PROTECTION ABOVE THE NORMAL LINE PRESSURE TO THE EQUIPMENT.

_E		
ONS	MOUNTING	NOTES/ ACCESSORIES
	NOTE 1	1, 2, 3
	SURFACE	1, 2, 3
-3/4" ER	SURFACE	1, 2, 6
	SURFACE	1, 2, 3
	NOTE 1	1, 2, 4, 7
	NOTE 1	1, 2, 4, 7
-3/4" ER	SURFACE	1, 2, 5
-3/4" ER	SURFACE	1, 2, 5
	NOTE 1	1, 2, 4, 7
	PPLICABLE. SURF N HARD CEILINGS.	ACE MOUNTING TYPES

IRNACE SCHEDULE



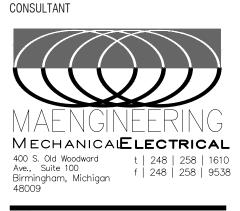
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Statement of Intellectual Property

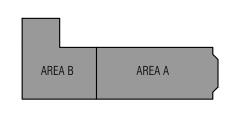
F 586.469.3607

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KEY PLAN



OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

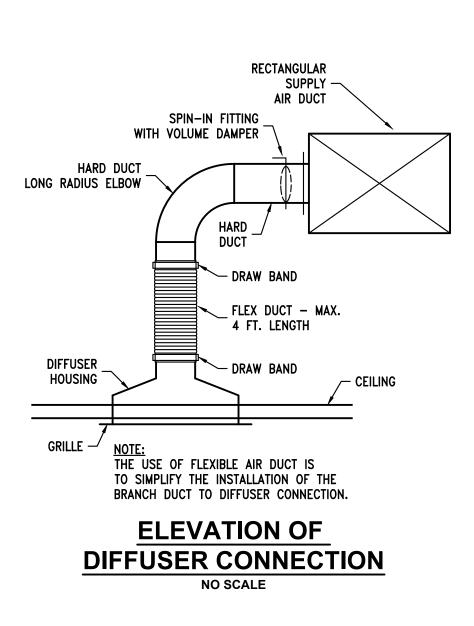
07/15/2020 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY
MJ
CHECKED BY LS
APPROVED BY GS

SHEET NAME MECHANICAL SCHEDULES

SHEET NO. M0-05



RECTANGULAR SUPPLY

- DRAW BAND

- DRAW BAND

<u>NOTE:</u> THE USE OF FLEXIBLE AIR DUCT IS TO SIMPLIFY THE INSTALLATION OF THE BRANCH DUCT TO DIFFUSER CONNECTION.

ELEVATION OF

DIFFUSER CONNECTION

NO SCALE

FLEX DUCT - MAX.

- CEILING

4 FT. LENGTH

AIR DUCT

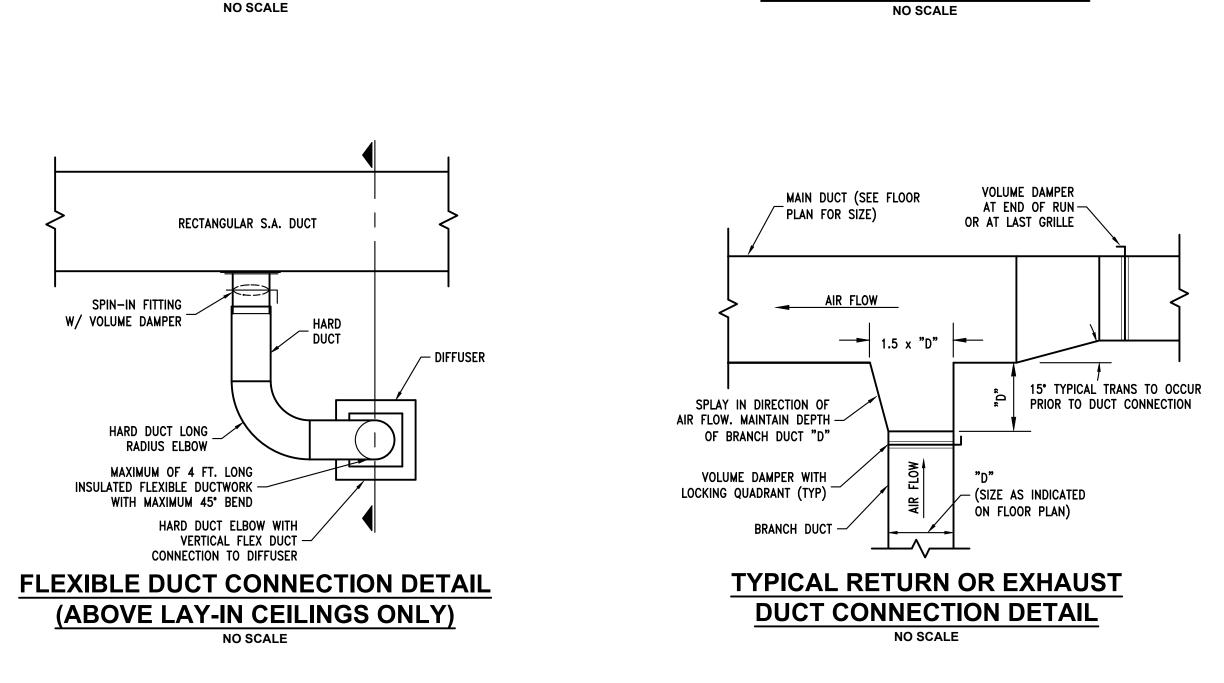
SPIN-IN FITTING

DIFFUSER

HOUSING

GRILLE -

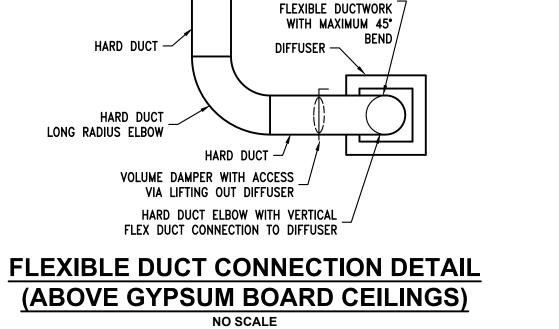
WITH VOLUME DAMPER





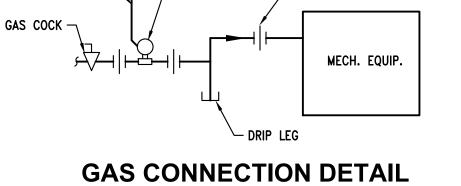
SPIN-IN FITTING -

RECTANGULAR S.A. DUCT



MAXIMUM OF 4 FT.

LONG INSULATED



VENT TO OUTDOORS —

PROVIDE GAS PRESSURE REGULATOR(S) TO HANDLE INDIVIDUAL OR GROUPS OF EQUIPMENT. FIELD VERIFY LINE PRESSURE WITH GAS UTILITY. REDUCE PRESSURE TO REQUIREMENT OF - EQUIPMENT REGULATORS SHALL BE EQUAL TO MAXITROL 210 SERIES, BALANCED VALVE, POSITIVE LOCK-UP TYPE. REGULATORS SHALL BE CAPABLE OF 10 PSIG OVERPRESSURE WITHOUT FAILURE.

– UNION (TYPICAL)



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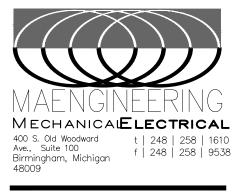
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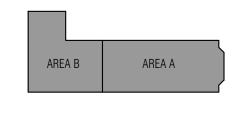
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KEY PLAN



OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

07/15/2020 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

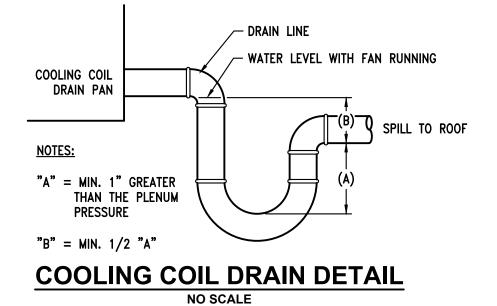
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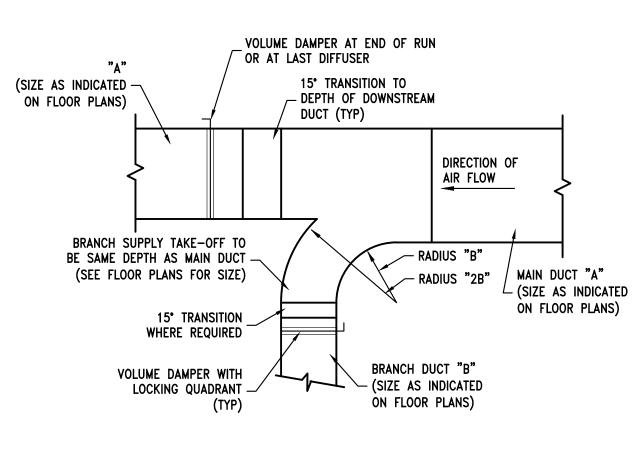
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SHEET NAME

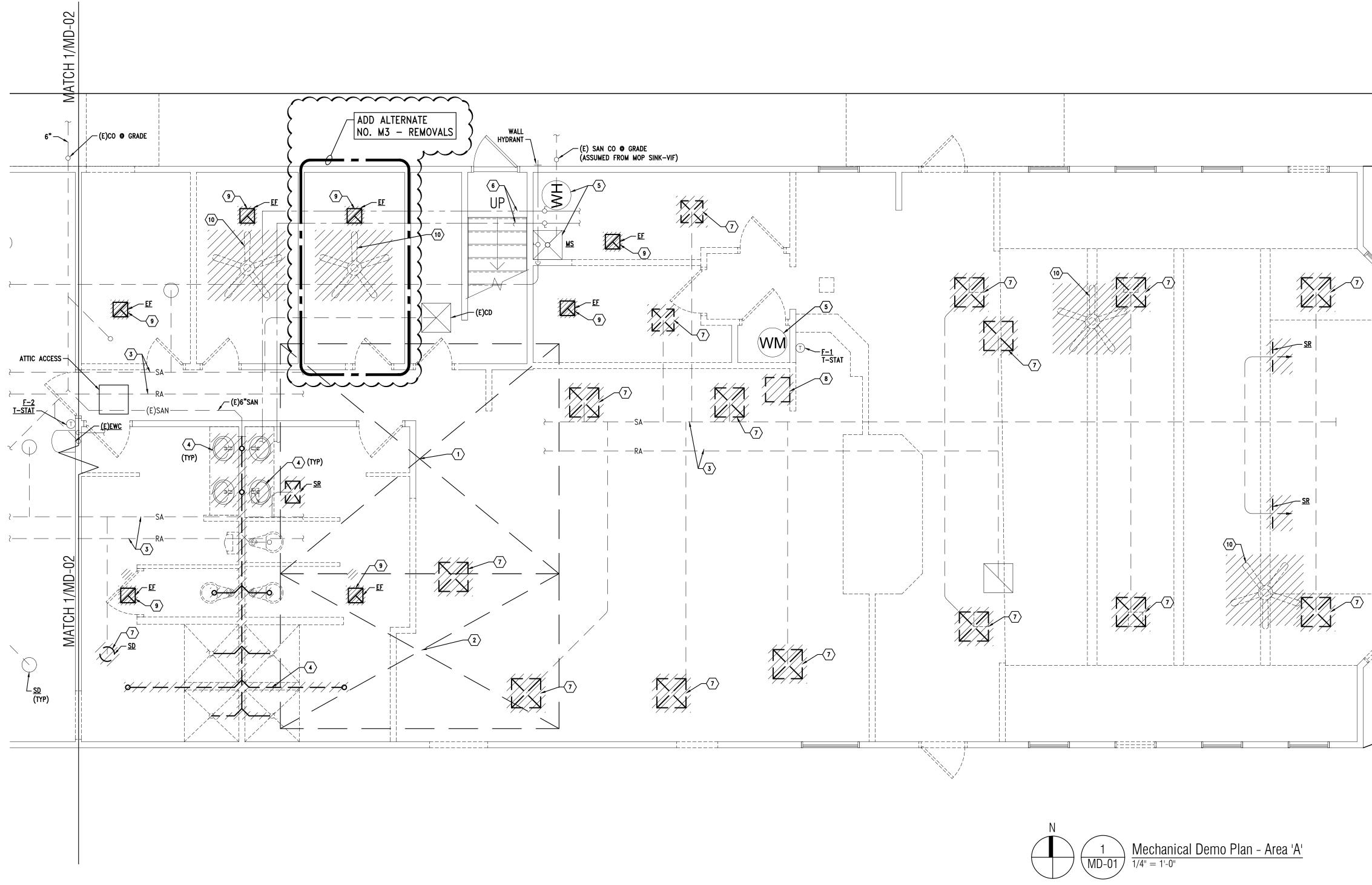
MECHANICAL DETAILS

SHEET NO. M0-06











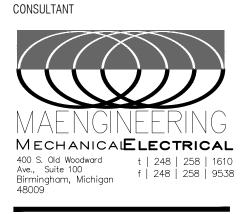


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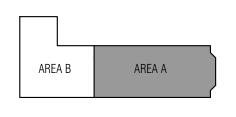
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KEY PLAN



KEYED NOTES:

- $\langle 1 \rangle$ (E) ATTIC FURNACE ROOM. SEE ENLARGED SCALE NEW WORK PLAN.
- $\overline{\langle 2 \rangle}$ (E) CONDENSING UNIT/SERVICE PLATFORM ON ROOF. SEE ENLARGED SCALE NEW WORK PLAN.
- $\langle 3 \rangle$ (E) SUPPLY AIR & RETURN AIR DUCTWORK ROUTED IN ATTIC TRUSS SPACE. FIELD VERIFY. TO REMAIN FOR RE-USE.
- $\langle 4 \rangle$ remove (e) toilet room fixtures & rework (e) cw, hw, san & vent piping for new FIXTURES. CAP & ABANDON (E) SAN UNDERGROUND INDICATED BY CROSS HATCH. REMOVE SAN WASTE & FLOOR DRAINS TO BELOW FLOOR, CAP & PATCH FLOOR. REMOVE VENT TO COMMON OR CONCEALED LOCATION & CAP. FLOOR GRIND OFF. FLUSH WITH FINISHED FLOOR. ISOLATE/CAP & ABANDON CONCEALED CW & HW PIPING SERVING SHOWERS & TOILET LOCATIONS NOT REUSED.
- $\langle 5 \rangle$ (E) DOMESTIC WATER METER (WM), WATER HEATER (WH) & MOP SINK (MS) SHALL REMAIN IN SERVICE.
- $\langle \mathbf{6} \rangle$ (E) 1"HW & CW VALVED. THESE ARE ASSUMED TO SERVE MEN'S & WOMEN'S TOILET/SHOWER ROOMS. VIF & TAG VALVES.
- $\langle 7
 angle$ remove (e) ceiling sa diffuser or sa register. Runouts that are not re-used for new SA DIFFUSERS SHALL BE REMOVED TO DUCT MAIN & CAPPED. SIZING OF RUNOUTS TO BE RE-USED SHALL BE EQUAL TO OR LARGER THAN NEW DIFFUSER SIZING.
- $\langle 8 \rangle$ REMOVE (E) ELECTRIC WATER COOLER & PLUMBING SERVICES. REMOVE CW TO SOURCE & CAP. REMOVE SAN TO BELOW FLOOR, CAP & PATCH FLOOR. REMOVE VENT TO COMMON OR CONCEALED LOCATION & CAP.
- $\langle \mathfrak{P} \rangle$ remove (e) ceiling exhaust fan.
- $\langle 10 \rangle$ REMOVE (E) CEILING PROP FAN.

GENERAL NOTES:

1. DUCTWORK SHOWN DASHED IS ROUTED IN ATTIC.

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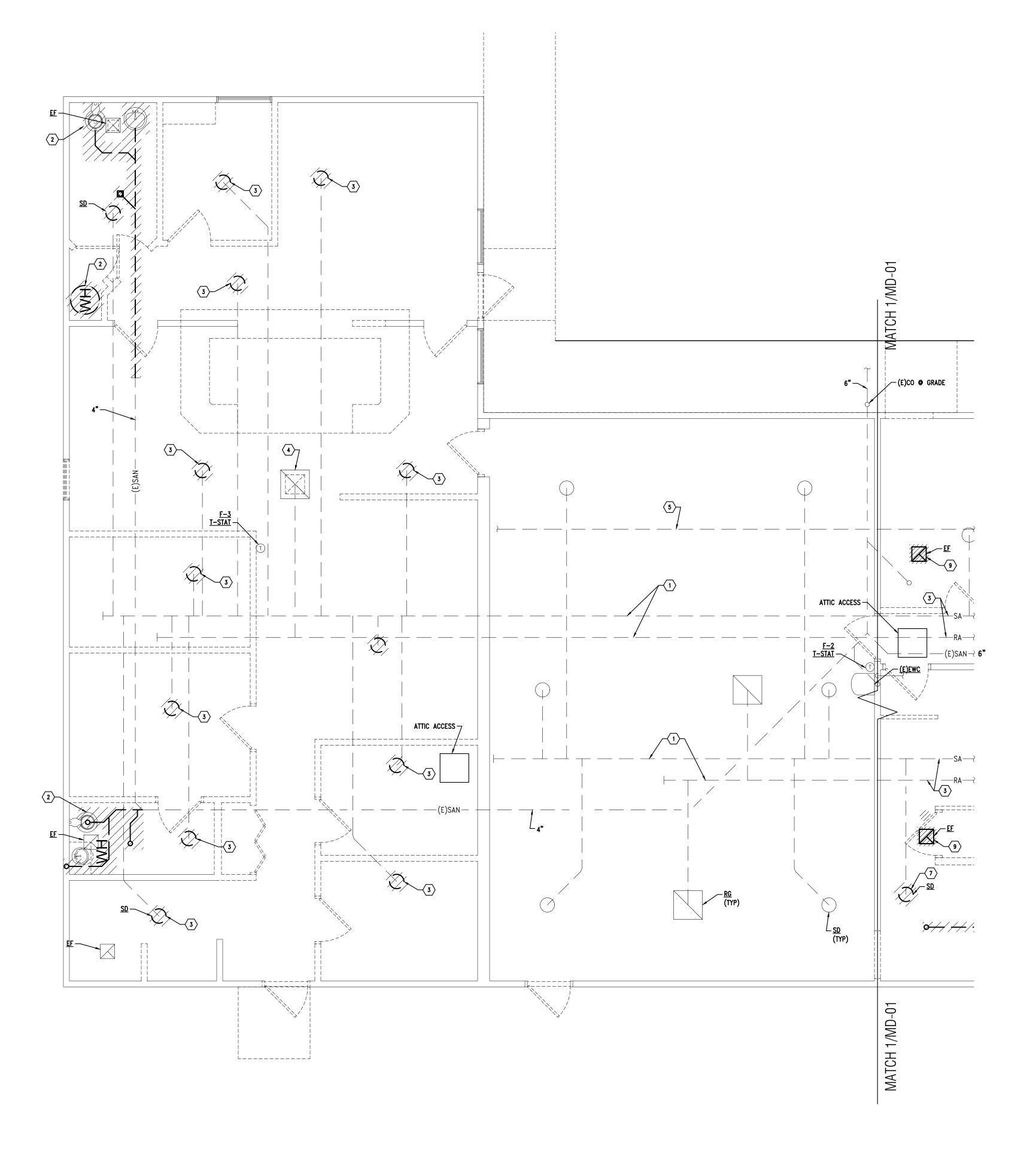
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MECHANICAL DEMO PLAN -AREA 'A'

SHEET NO. MD-01



KEYED NOTES:

- REMAIN FOR RE-USE.

- FLOOR IS NOT KNOWN.

GENERAL NOTES:

Mechanical Demo Plan - Area 'B' 1/4" = 1'-0" MD-02/

(1) (E) SUPPLY AIR & RETURN AIR DUCTWORK ROUTED IN ATTIC TRUSS SPACE. FIELD VERIFY. TO

 $\langle 2 \rangle$ REMOVE (E) PLUMBING FIXTURES & PLUMBING SERVICES. REMOVE SAN TO POINT INDICATED. REMOVE DOMESTIC HOT & COLD WATER TO BELOW FLOOR. ABANDON UNDERFLOOR SYSTEM COMPLETELY. REMOVE SAN VENT TO CEILING FOR REWORK.

 $\langle \overline{3} \rangle$ remove (e) ceiling sa diffuser or sa register. Runouts that are not re-used for new SA DIFFUSERS SHALL BE REMOVED TO DUCT MAIN & CAPPED. SIZING OF RUNOUTS TO BE RE-USED SHALL BE EQUAL TO OR LARGER THAN NEW DIFFUSER SIZING.

 $\langle 4
angle$ (e) ra grille to remain in service & open to new ceiling ra plenum.

 $\langle 5 \rangle$ ABANDON (E) 1"CW UNDERFLOOR. TO BE REPLACED WITH OVERHEAD SERVICE. ROUTING BELOW

 $\langle \mathbf{6} \rangle$ remove (e) electric water cooler. To be replaced with new bi-level ada unit.

1. DUCTWORK SHOWN DASHED IS ROUTED IN ATTIC.



2 Æ Celebro

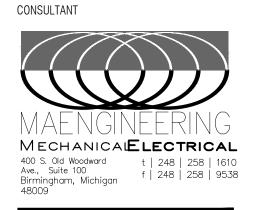
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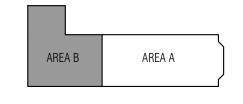
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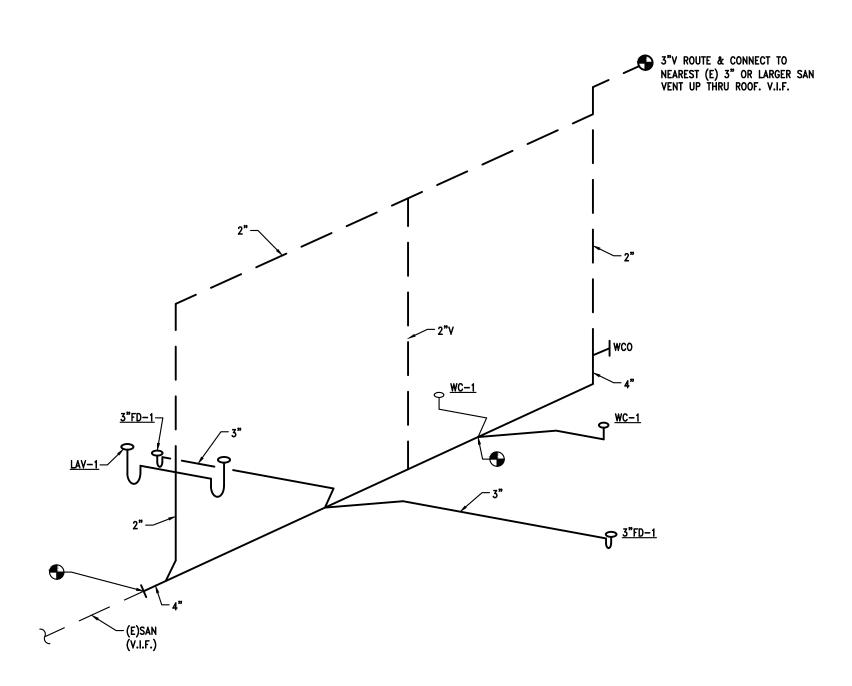
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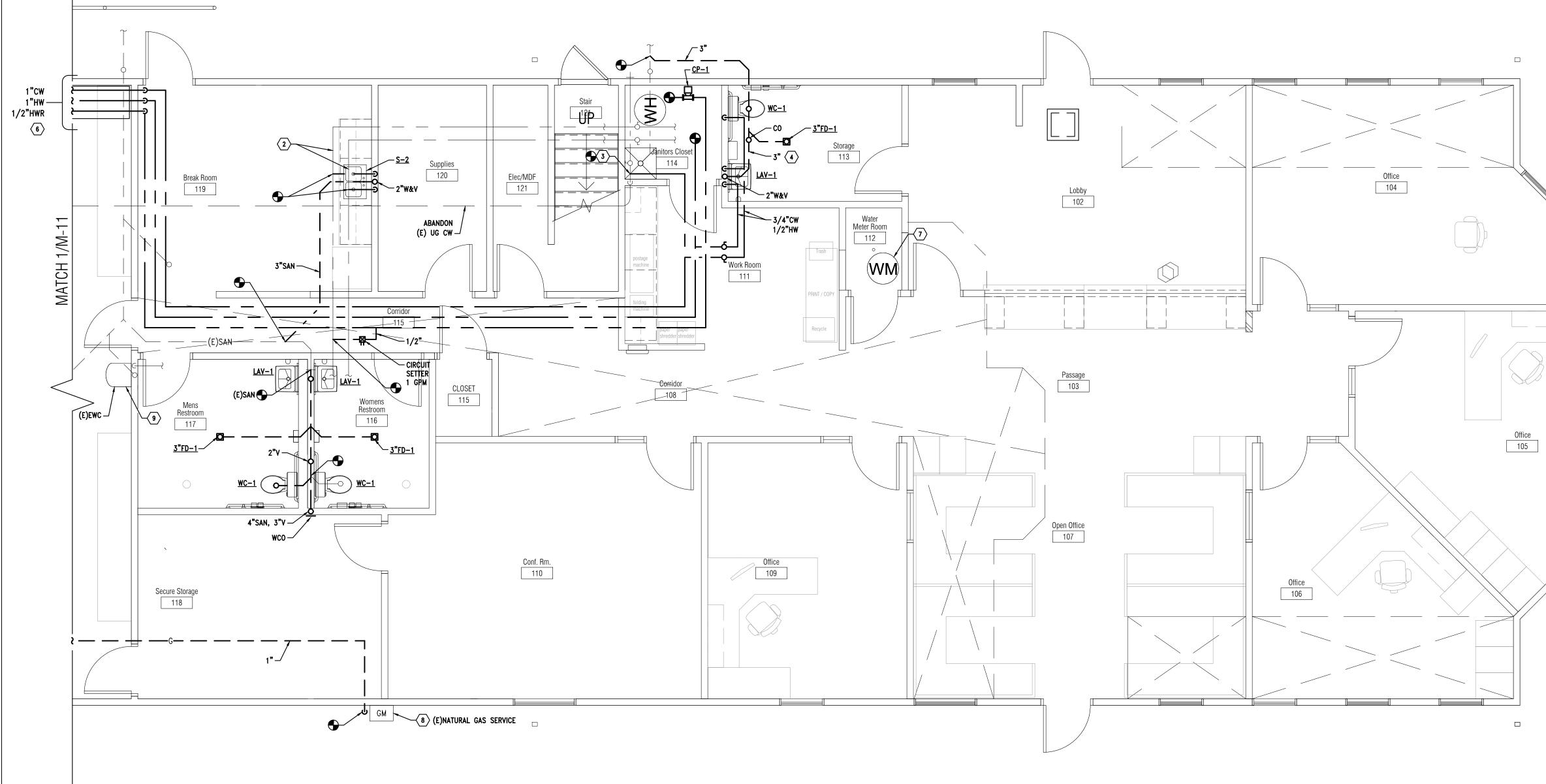
GS SHEET NAME

MECHANICAL DEMO PLAN -AREA 'B'

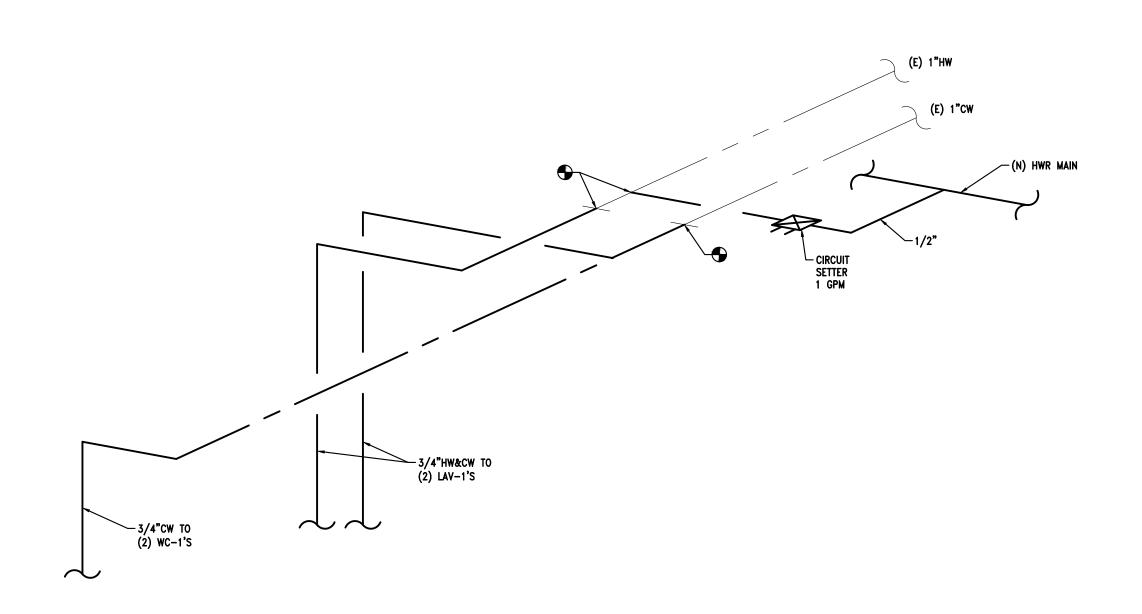
SHEET NO. MD-02





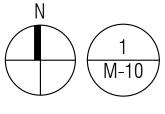


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WOMEN'S 116 & MEN'S 117 DOMESTIC WATER PIPING DIAGRAM

NO SCALE



Plumbing Floor Plan - Area 'A' 1/4'' = 1'-0''

KEYED NOTES:

- $\langle 1 \rangle$ EXISTING DOMESTIC WATER HEATER: BRADFORD WHITE, MIN: M17556BN, 75 GAL TANK, 76 MBH GAS INPUT, 5"-14" IN WC GAS PRESSURE.
- 2 EXISTING 1" DOMESTIC HOT & COLD WATER. VERIFY IN FIELD. LOCATION & FIXTURES SERVED IS ASSUMED.
- $\langle 3 \rangle$ EXISTING 1" DOMESTIC COLD WATER. ASSUMED TO SERVE FIXTURES AT WEST END OF BUILDING. PLUMBING CONTRACTOR SHALL VERIFY & CAP OFF PIPING ROUTED DOWN TO BELOW FLOOR & ABANDON IN FAVOR OF ROUTING NEW PIPING OVERHEAD AS INDICATED INCLUDING NEW HW & HWR DISTRIBUTION SYSTEM. VERIFY EXTENT OF EXISTING FIXTURES FED FROM UG SOURCE & REPORT FINDINGS & DISCREPANCIES TO GC/AE FOR CORRECTION.
- $\langle 4 \rangle$ NEW TOILET ROOM FIXTURES: CONNECT TO NEW DOMESTIC WATER SERVICES. ROUTE NEW SANITARY TO OUTSIDE BUILDING & CONNECT TO EXISTING 3" OR LARGER SAN ASSUMED FROM MOP SINK (V.I.F.) SAW CUT & PATCH FLOOR & WALKWAY. CONNECT 2" VENT FROM LAV TO EXISTING IN ATTIC (V.I.F.)
- $\langle 5 \rangle$ REPLACE (E) ELECTRIC WATER COOLER WITH NEW ADA HI/LOW UNIT. REWORK WASTE/VENT & CW SERVICES IN WALL FOR NEW FIXTURE.
- 6 NEW OVERHEAD CW, HW & HWR PIPING TO WEST BLDG FIXTURES. SEE M-11 FOR CONTINUATION.
- $\overline{7}$ existing domestic water service meter. Verify CW runouts from space & clean up INSTALLATION BY CAPPING & REMOVING ABANDONED PIPING. (V.I.F.)
- $\langle s \rangle$ rework exist gas service for one meter. Coordinate with utility company.
- (e) CW SUPPLY TO EWC IS TO BE MAINTAINED. CONNECT TO CW SUPPLY & REWORK AS REQUIRED.

GENERAL NOTES:

1. SALVAGE & REWORK EXISTING SANITARY UNDERGROUND, SAN VENT & DOMESTIC WATER AS MUCH AS POSSIBLE.



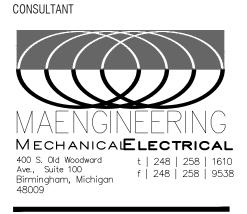
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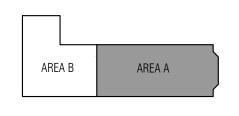
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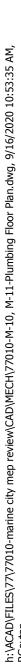
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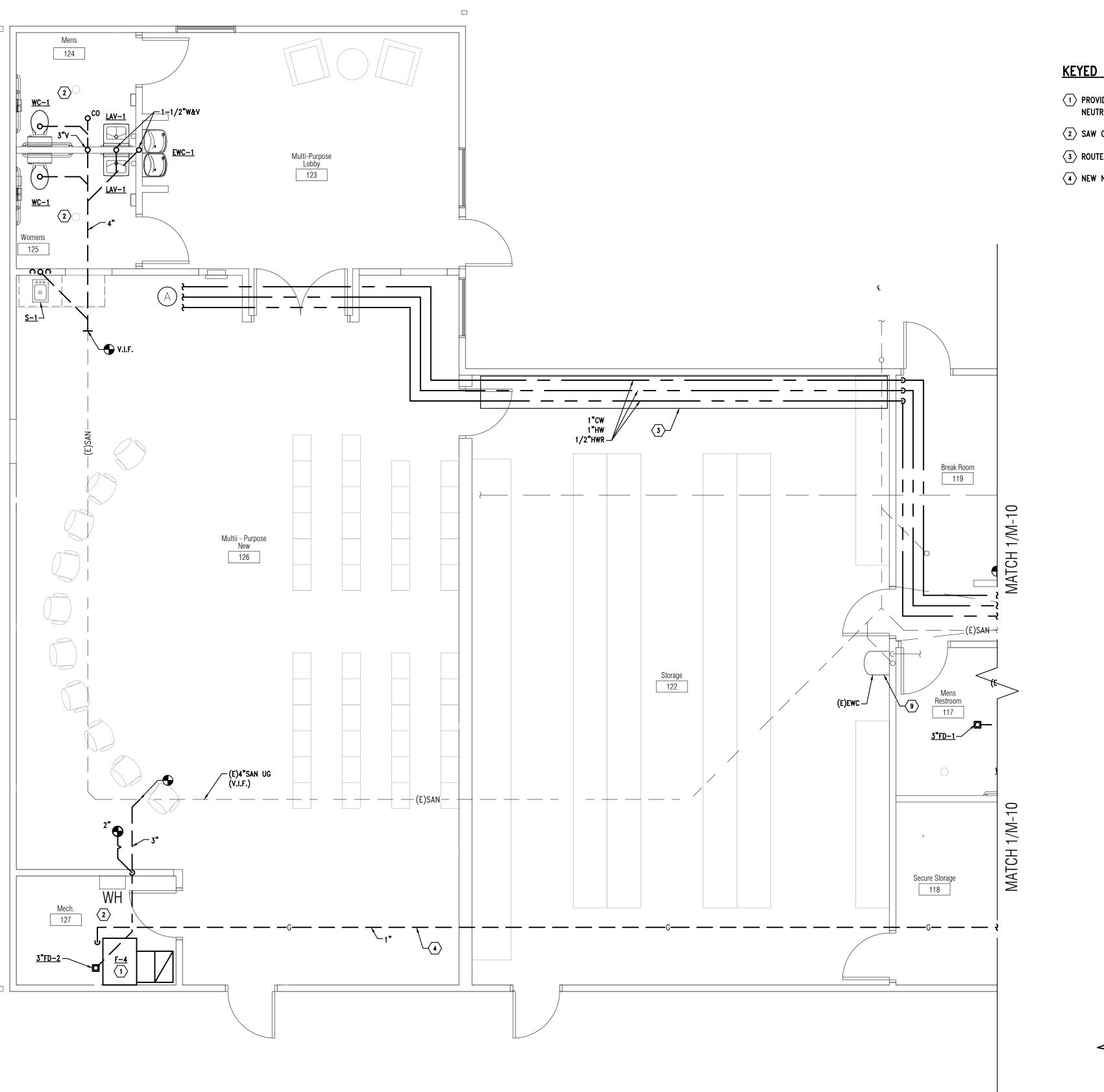
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SHEET NAME PLUMBING FLOOR PLAN -AREA 'A'

SHEET NO. M-10

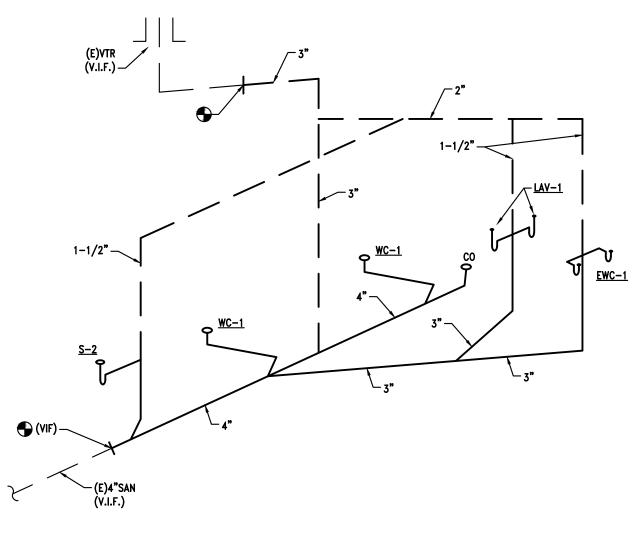




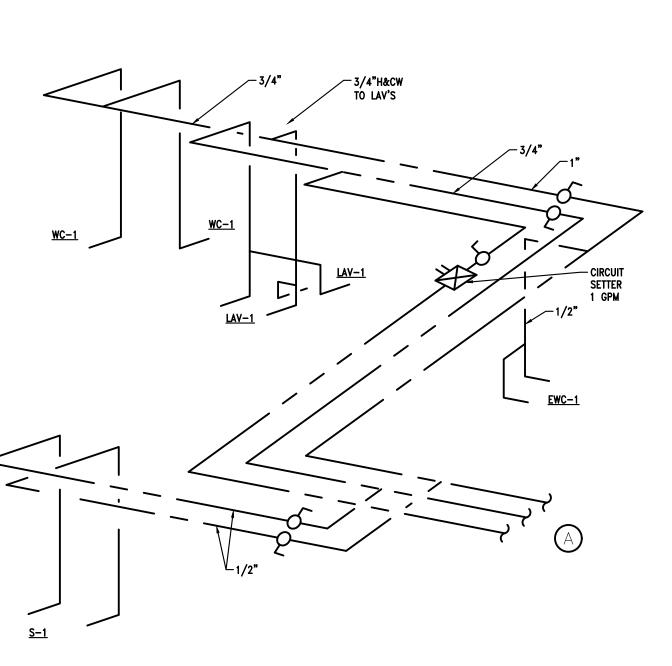
Plumbing Floor Plan - Area 'B' 1/4'' = 1'-0''M-11

KEYED NOTES:

- $\langle 1 \rangle$ provide floor drain for new high efficiency furnace F-4. Pipe acid condensate with neutralizing tank to floor drain. Connect 2"V to (E) in attic.
- 2 SAW CUT & PATCH FLOOR FOR SAN REWORK TO NEW FIXTURES.
- $\overline{3}$ route piping exposed at ceiling/wall junction.
- \checkmark NEW NATURAL GAS TO FURNACE F-4. ROUTE IN ATTIC OR OTHERWISE DETERMINED IN FIELD.



SANITARY & VENT PIPING DIAGRAM NO SCALE



DOMESTIC WATER PIPING DIAGRAM NO SCALE

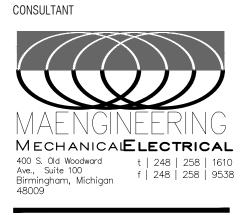


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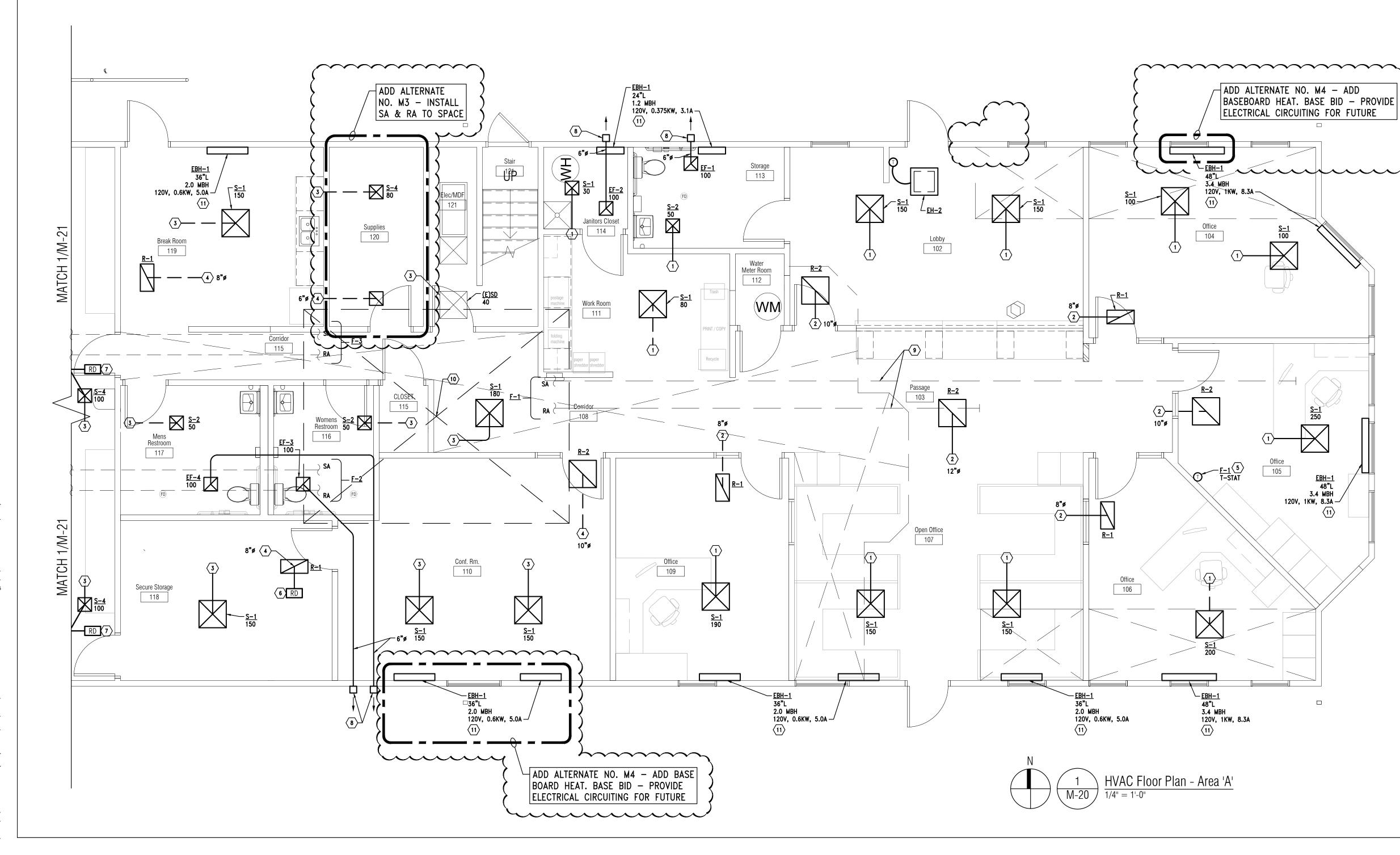
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SHEET NAME
PLUMBING
FLOOR PLAN -
AREA 'B'

SHEET NO. M-11





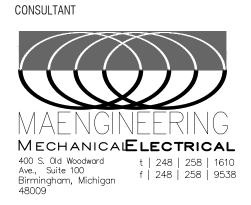
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GS SHEET NAME

HVAC FLOOR PLAN - AREA 'A'

M-20

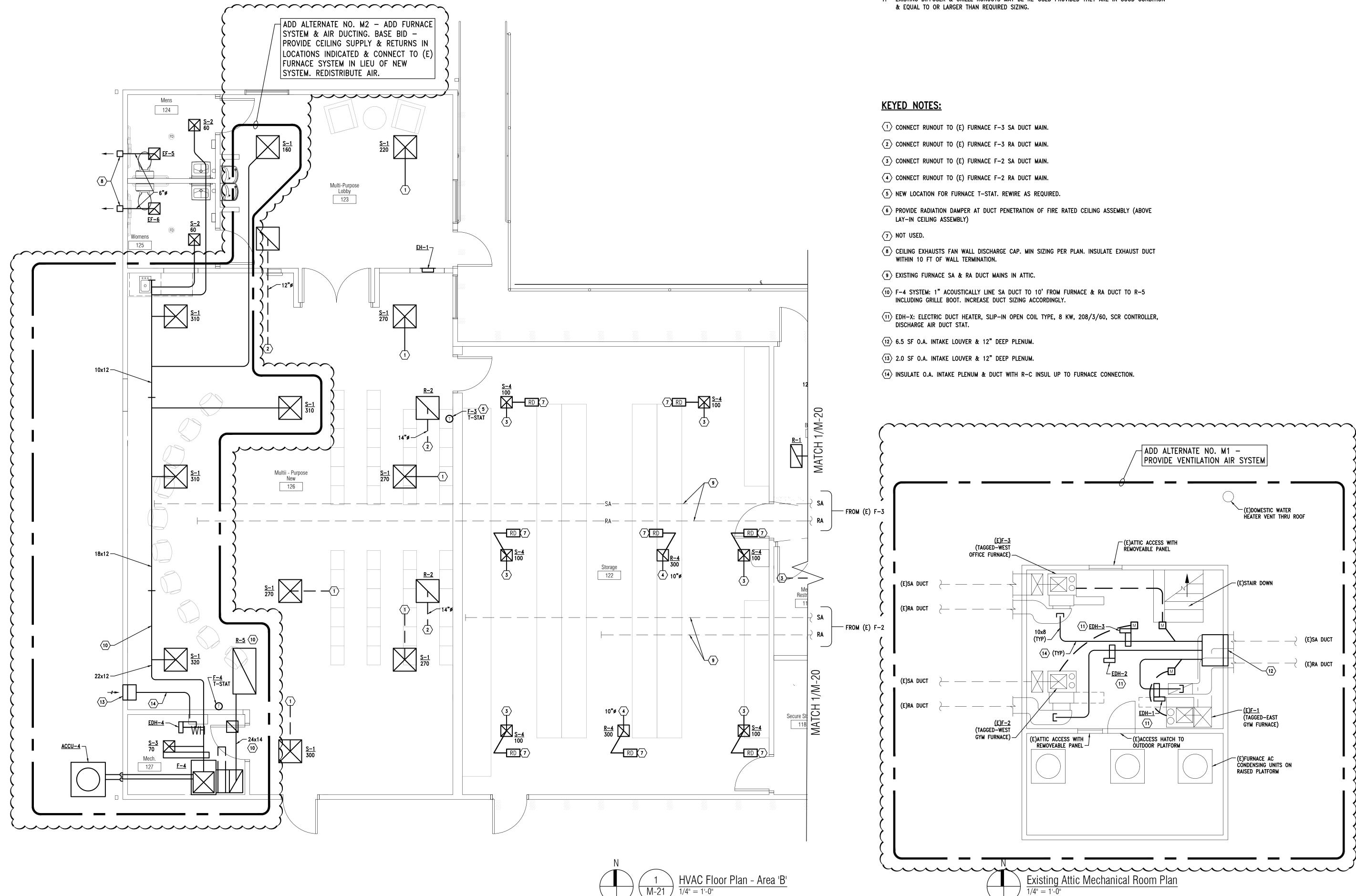
GENERAL NOTES:

- 1. EXISTING DIFFUSER & GRILLE RUNOUTS MAY BE RE-USED PROVIDED THEY ARE IN GOOD CONDITION & EQUAL TO OR LARGER THAN REQUIRED SIZING.
- 2. REFER TO DIFFUSER, GRILLE & REGISTER NECK SIZING SCHEDULES FOR NECK & RUNOUT SIZING UNLESS OTHERWISE INDICATED ON PLAN.

KEYED NOTES:

- (1) CONNECT RUNOUT TO (E) FURNACE F-1 SA DUCT MAIN.
- $\langle 2 \rangle$ connect runout to (e) furnace f-1 ra duct main.
- $\langle 3 \rangle$ connect runout to (e) furnace F-2 sa duct main.
- $\langle 4 \rangle$ connect runout to (e) furnace F-2 ra duct main.
- $\langle 5 \rangle$ NEW LOCATION FOR F-1 T-STAT. REWIRE AS REQUIRED.
- 6 PROVIDE RADIATION DAMPER AT DUCT PENETRATION OF FIRE RATED CEILING ASSEMBLY (ABOVE LAY-IN CEILING ASSEMBLY)
- $\langle \overline{7} \rangle$ radiation damper is integral to diffuser/grille.
- $\langle 8 \rangle$ CEILING EXHAUSTS FAN WALL DISCHARGE CAP. MIN SIZING PER PLAN. INSULATE EXHAUST DUCT WITHIN 10 FT OF WALL TERMINATION.
- $\langle 9 \rangle$ EXISTING FURNACE SA & RA DUCT MAINS IN ATTIC.
- $\langle 10 \rangle$ OUTLINE OF ATTIC FURNACE ROOM ABOVE. SEE SHEET M-21.
- $\langle 11 \rangle$ EBH-1: ELECTRIC BASEBOARD HEATERS EQUAL TO MARKEL 3700 SERIES ARCHITECTURAL STYLE, WHITE FINISH, INTEGRAL DISCONNECT SWITCH.

SHEET NO.



GENERAL NOTES:

1. EXISTING DIFFUSER & GRILLE RUNOUTS MAY BE RE-USED PROVIDED THEY ARE IN GOOD CONDITION

1/4" = 1'-0"

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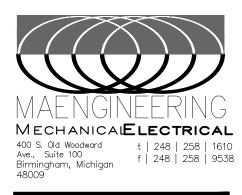
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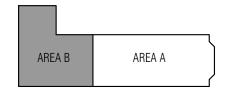
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	00/11/2020
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GS SHEET NAME

HVAC FLOOR PLAN - AREA 'B'

SHEET NO. M-21

"A"	FIXTURE TYPE		MANUAL SINGLE PHASE MOTOR STARTER WITH PILOT LIGHT, LOCKABLE OFF, FOR MOTOR APPLICATIONS. MANUAL SINGLE PHASE MOTOR SWITCH WITH PILOT LIGHT, LOCKABLE OFF AND WITHOUT OVERLOADS FOR DISCONNECT APPLICATIONS TO EQUIPMENT NOT REQUIRING	TS	DIGITAL TIME SWITCH WITH ASTRONOMICAL CONTROL AND AUTO DAYLIGHT SAVING ADJUSTMENT, 120V, 4-CHANNEL	
—	FLUORESCENT/LED STRIP LIGHTING FIXTURE		OVERLOADS AND FOR APPLICATIONS WHERE OVERLOADS ARE INTEGRAL TO MOTOR-BASED LOADS. FLUSH MOUNT STARTERS / SWITCHES IN FINISHED SPACES. SURFACE MOUNT IN	©	COMBINATION FIRE/SMOKE DAMPER - WIRE TO 120V CIRCUIT FROM THE CLOSET PANELBOARD.	ТҮРЕ
	FLUORESCENT/LED LIGHTING FIXTURE		UNFINISHED SPACES. MOTOR STARTER		FANELDUARD.	"L1" 2X4 LED R SATIN WH
 /o	EMERGENCY FIXTURE (NIGHT LIGHT) UNSWITCHED				WORKING CLEARANCE AROUND ELECTRICAL EQUIPMENT	LITHONIA
/ 0	EMERGENCY FIXTURE SAME AS NIGHT LIGHT EXCEPT SWITCHED	<u> </u>	COMBINATION MAGNETIC FUSIBLE MOTOR STARTER FUSIBLE DISCONNECT SWITCH		SECURITY CAMERA PROVIDE JUNCTION BOX ABOVE CAMERA LOCATION AND 1°C TO CARLE	ORACLE L
0/ נ	LIGHTING FIXTURE WITH EMERGENCY EGRESS POWER LTG. FIXTURE				SECURITY CAMERA. PROVIDE JUNCTION BOX ABOVE CAMERA LOCATION AND 1"C TO CABLE TRAY. PROVIDE CAT 5E TO COMMUNICATIONS CLOSET SECURITY PANEL	LZ SAIVIE AS
с/п	WALL MOUNTED LIGHTING FIXTURE		NON-FUSIBLE DISCONNECT SWITCH MOTOR - SINGLE PHASE	c	UNDERGROUND TELECOMMUNICATIONS SERVICE CONDUIT	LITHONIA ORACLE L
9/9	EXIT LIGHTING FIXTURE (WALL / CEILING MOUNTED) – SHADING INDICATES ILLUMINATED FACE-CHEVRONS AS INDICATED		MOTOR - THREE PHASE	— — — FA — —	UNDERGROUND FIRE ALARM SERVICE CONDUIT	"L3" 6" DIAME LENS, CLE
∞/4₽	EMERGENCY LIGHTING UNIT EQUIPMENT	<u>Ø</u>		_		DRIVER - :
S	SINGLE POLE LIGHT SWITCH, IVORY. HUBBELL HBL1221 OR APPROVED EQUAL		TRANSFORMER	_		ORACLE H
S2	DOUBLE POLE LIGHT SWITCH (SAME SERIES AS SINGLE POLE SWITCH)		CONTACTOR	_		"L4" SAME AS
S₃	THREE WAY LIGHT SWITCH (SAME SERIES AS SINGLE POLE SWITCH)		LIGHTING AND/OR RECEPTACLE PANEL (FLUSH/SURFACE MOUNTED)			GOTHAM
Sı	FOUR WAY LIGHT SWITCH (SAME SERIES AS SINGLE POLE SWITCH)		DISTRIBUTION PANEL RELAY PANEL. PROVIDE NEW (8) RELAY LIGHTING CONTROL PANEL (LRP-1) WITH			ORACLE H
Sĸ	KEY OPERATED SWITCH - MATCH EXISTING KEYING	LRP-1	4-30A,1P/120V RELAYS AND (2)-30A,2P/208V RELAYS. WIRE EXTERIOR LIGHTING CIRCUITS INDICATED THRU RELAYS AND PROGRAM SCHEDULE AS DIRECTED BY OWNER.		IECHANICAL ADD ALTERNATES:	WHITE EN
Sp	SWITCH WITH PILOT LIGHT - FOR EMERGENCY CIRCUITS, RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL	<u> </u>	PANEL SHALL BE LEVITON EZ-MAX PLUS OR APPROVED EQUAL. FUSIBLE SWITCH "A/3P/AF" DENOTES SWITCH SIZE (AMPS)/POLES/FUSE SIZE (AMPS)		IECHANICAL ADD ALIERNATES.	LITHONIA
S₀	DIMMER SWITCH - LUTRON NOVA T-STAR. FOR INCANDESCENT LOAD PROVIDE LARGE CONTROL, IVORY WITH STAIN NICKEL METAL WALL PLATE. 1500W NT-1503P-IV. FOR		GROUND BUS 1/4"x2"x12" COPPER, PANDUIT GB2B0306TPI-1		FER TO MECHANICAL ADD ALTERNATES M1, M2 & M4. PROVIDE ELECTRICAL ACCORDINGLY AS INDICATED. SE BID: PROVIDE CIRCUITS INDICATED FOR ELECTRIC BASEBOARD HEATERS IDENTIFIED AS ADD ALTERNATE M4.	"L6" PORCELA
	FLUORESCENT OR LED LOADS, COORDINATE SWITCH TYPE WITH SELECTED BALLAST OR DRIVER FOR COMPATIBILITY.	┝─ ТВВ ─┥	TELEPHONE BACKBOARD. 3/4"C FIRE RATED PLYWOOD. 8' TALL BY WIDTH AS INDICATED. NOT PAINTED.	\neg		
SS	DUAL LEVEL SWITCHING – WIRE ONE SWITCH TO OUTER LAMPS AND OTHER SWITCH TO REMAINING INNER LAMP/S. GANG SWITCHES UNDER COMMON FACEPLATE ALONG WITH ANY ADDITIONAL SWITCHES AND DIMMERS.	GDP	GENERATOR DERANGEMENT PANEL			
G	ADDITIONAL SWITCHES AND DIMMERS. FACELESS GFCI DEVICE IN SERIES WITH LOCAL SWITCH. GANG IN SAME OUTLET BOX AS SWITCH.		GROUND	_		"L7" NOT USEE
OS	CEILING MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY (PASSIVE INFRARED AND		HOMERUN TO PANEL: 3/4"C, 2#12 & 1#12G UNLESS OTHERWISE NOTED FOR ONE 20A. 1P BRANCH CIRCUITS FOR CIRCUITS UP TO 100' IN LENGTH. INCREASE CONDUIT AND			
	MICROPHONIC/ULTRASONIC), WITH AUXILIARY RELAY FOR HVAC CONTROL. SENSOR SWITCH CM-PDT-10-R OR WATTSTOPPER DT-300. NO SUBSTITUTIONS. PROVIDE QUANTITY OF 20A, 120V/277V RATED POWER PACKS AND RELAY PACKS AS REQUIRED TO CONTROL SWITCH		WIRE SIZE FOR CIRCUITS OVER 100' IN LENGTH.HOMERUN TO PANEL: 3/4"C, 4#10 & 1#10G UNLESS OTHERWISE NOTED FOR TWO 20A.	_		
	LEGS INDICATED. ALL FIXTURES IN ROOM/SPACE EXCEPT NIGHT LIGHTS ARE TO BE CONTROLLED BY THE SENSORS. INDICATED	_	1P BRANCH CIRCUITS FOR CIRCUITS UP TO 100' IN LENGTH. INCREASE CONDUIT AND WIRE SIZE FOR CIRCUITS OVER 100' IN LENGTH.		POWER RECEPTACLES NOTE	"L8" NOT USED
HOS	WALL MOUNTED OCCUPANCY SENSOR, SINGLE POLE. DUAL TECHNOLOGY (PIR/MICROPHONICS/ULTRASONIC), 120/277V. SENSOR SWITCH WSD-PDT OR WATTSTOPPER DW-100		HOMERUN TO PANEL: 3/4"C, 6#10 & 1#10G UNLESS OTHERWISE NOTED FOR THREE 20A. 1P BRANCH CIRCUITS FOR CIRCUITS UP TO 100' IN LENGTH. INCREASE CONDUIT			
	(NO SUBSTITUTIONS). SWITCH IS RATED 800W AT 120V AND 1200W AT 277V, 1/4 HP. IVORY WITH STAINLESS STEEL COVERPLATE. FACTORY COLOR-MATCHED PLATE IS NOT ACCEPTABLE.	-	AND WIRE SIZE FOR CIRCUITS OVER 100' IN LENGTH.		L RECEPTACLES IN PUBLIC AREAS, CORRIDORS, AND GUESTROOMS SHALL BE TAMPER-RESISTANT.	"L9" 13.3"W X
HOS2	WALL MOUNTED OCCUPANCY SENSOR, TWO-POLE. DUAL TECHNOLOGY (PIR AND MICROPHONIC / ULTRASONIC), TWO POLE, 120/277V WITH TWO PUSHBUTTONS FOR INDEPENDENT CONTROL OF TWO	►SR1-	SURFACE RACEWAY		LIGHT FIXTURE SCHEDULE NOTE	HOUSE SII REFRACTI
	LOADS (DUÁL-LEVEL SWITCHING). SENSOR SWITCH WSD-PDT OR WATTSTOPPER DW-200 (NO SUBSTITUTIONS). SWITCH IS RATED 800W AT 120V AND 1200W AT 277V, 1/4 HP. IVORY WITH STAINLESS STEEL COVERPLATE. FACTORY COLOR-MATCHED PLATE IS NOT ACCEPTABLE.	A	ABOVE COUNTER GFI/GFR GROUND FAULT CIRCUIT INTERRUPTER-WIRE GFR RECEPTACLES FOR SELF PROTECTION AND NOT		LIGHT FIXTURE SCHEDULE NUTE	LITHONIA
HOSD	0-10V DIMMER AND OCCUPANCY SENSOR. SIMILAR TO ACUITY CONTROLS WSX-D.	A/E	DOWNSTREAM PROTECTION OF OTHER	R	REFER TO PROJECT MASTER LIGHT FIXTURE MATRIX FOR ADDITIONAL LIGHTING FIXTURES DETAILS.	"EM1" SINGLE RE
	LIGHTING CONTROL TYPE – APPLIES TO WHOLE ROOM. REFER TO LIGHTING CONTROL		ABOVE FINISH FLOOR AUTHORITY HAVING JURISDICTION			WITH GRA COMPATI
	MATRIX SHEET E.003 FOR ADDITIONAL REQUIREMENTS.	AHJ	GRS GALVANIZED RIGID STEEL	_		LITHONIA DUALLITE
φ	SINGLE RECEPTACLE, 20A, TAMPER RESISTANT, IVORY WITH STAINLESS STEEL COVERPLATE UNLESS WEATHERPROOF COVER IS INDICATED.	AV OR	GID GENERATOR TRANSFER DEVICE	_		SURELITE "EM2" LED EMER HEADS, SE
P USB	COMBINATION DUPLEX RECEPTACLE/USB CHARGER, TAMPER RESISTANT, 20A, 125VAC, 2-POLE, 3-WIRE GROUNDING, DUPLEX WITH 5VDC 2-PORT USB CHARGING AND LED			_		OPERATIC DIAGNOS
U 020	CHARGING INDICATOR LIGHT, IVORY WITH STAINLESS STEEL COVERPLATE.	AFCI	ARC FAULT CIRCUIT INTERRUPTER IG ISOLATED GROUND AIR HANDLING UNIT NIC NOT IN CONTRACT	_		LITHONIA DUALLITE
ΦTV	SAME AS DUPLEX RECEPTACLE EXCEPT MOUNTED AT SAME HEIGHT AS TV OUTLET	опа С		_	ELECTRICAL DRAWING INDEX	SURELITE "X" LED EXIT L MOUNTIN
\	QUAD. RECEPTACLE – SAME AS DUPLEX RECEPTACLE EXCEPT TWO DEVICES	DW		_	SHEET DESCRIPTION	FOR 90 M MULTI-VC
USB	QUAD. RECEPTACLE - SAME AS USB DUPLEX RECEPTACLE EXCEPT TWO DEVICES UNDER	EF		_	E0-01 ELECTRICAL LEGEND, DRAWING INDEX AND LIGHT FIXTURE SCHEDULE E0-02 ELECTRICAL SPECIFICATIONS	
	COMMON STAINLESS STEEL COVERPLATE	FRE		_	E0-02 ELECTRICAL SPECIFICATIONS E0-03 PANEL SCHEDULE AND ONE LINE DIAGRAM	DUALLITE SURELITE
₽	SAME AS DUPLEX RECEPTACLE EXCEPT GROUND FAULT CIRCUIT INTERRUPTER TYPE WITH LED TO INDICATE LOSS OF PROTECTION. WIRE FOR SELF PROTECTION AND NOT PROTECTION OF DOWNSTREAM DEVICES. HUBBELL GFR8300HIL OR APPROVED EQUAL	EG		_	E0-04 LIGHTING CONTROL MATRIX SCHEDULE	"X1" LED EXIT L MOUNTIN CONTAIN
	SAME AS QUAD RECEPTACLE EXCEPT GROUND FAULT CIRCUIT INTERRUPTER TYPE WITH LED	(E)	SPD Sorge Protective Device	_	ED-01 ELECTRICAL DEMO PLAN - AREA - A	INTEGRAL
#	TO INDICATE LOSS OF PROTECTION. WIRE FOR SELF PROTECTION AND NOT PROTECTION OF DOWNSTREAM DEVICES. HUBBELL OR APPROVED EQUAL	(ER)	UH UNIT HEATER	_	ED-02 ELECTRICAL DEMO PLAN AREA - B	LITHONIA DUALLITE
•	DUPLEX RECEPTACLE ON EMERGENCY POWER (RED DEVICE)	EWC	UON UNLESS OTHERWISE NOTED	_	ES-01 ELECTRICAL SITE PLAN	SURELITE "E" SAME AS
•	QUAD RECEPTACLE ON EMERGENCY POWER (RED DEVICES)	G	ELECTRICAL WATER COOLER WP WEATHER ROOF WILL IN USE GROUND / EQUIPMENT GROUNDING CONDUCTOR VFD VARIABLE FREQUENCY DRIVE	-	EL-01 LIGHTING FLOOR PLAN AREA A EL-02 LIGHTING FLOOR PLAN AREA B	SUFFIX TRANSFEI AND AUTO 90 MINUT
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE ON EMERGENCY POWER (RED DEVICE)	GD	CONDUCTOR GARBAGE DISPOSAL N.O./N.C. NORMALLY OPEN / NORMALLY CLOSED.		EP-01 POWER FLOOR PLAN AREA - A	CHARGER
÷	WITH STAINLESS STEEL COVERPLATE JUNCTION BOX (P: POWER, D: VOICE/DATA)	S	SPEAKER		EP-02 POWER FLOOR PLAN AREA - B	BODINE IOTA
н UB	OUTLET BOX WITH BLANK COVERPLATE		MICROPHONE	_		"EM" EMERGEN MAINTEN
کھ () ہ	JUNCTION BOX FOR FLEXIBLE CONNECTION TO SYSTEMS FURNITURE (P: POWER, D: DATA).		VOLUME CONTROL INTERCOM STATION	_		ADJUSTA
	PROVIDE LIQUIDTIGHT FLEXIBLE METAL CONDUIT WHIPS FOR POWER AND DATA CONNECTION TO SYSTEMS FURNITURE WHIPS TO MATCH CONDUIT SIZES NOTED. PROVIDE 1 1/4"C (EMT) FROM BOX TO NEAREST EXISTING CABLE TRAY FOR DATA ABOVE CEILING. PROVIDE	FACP	FIRE ALARM CONTROL PANEL			LITHONIA
	3/4"C EMT FROM BOX FOR POWER WITH CIRCUITING INDICATED. COORDINATE LOCATION WITH FURNITURE SYSTEM SUPPLIER.	RFAP	REMOTE FIRE ALARM PANEL			LIGHT FIXTURE GEN
	PROVIDE COVERPLATE SUITABLE FOR WHIP CONNECTION - MAKE FINAL CONNECTION TO SYSTEMS FURNITURE.	SD	SMOKE DETECTOR			 INSTALL ALL FIXTURE REFER TO ARCHIT INSTALL REMOTE
$\mathbf{\Phi}\mathbf{\nabla}$	FLOOR MOUNTED SERVICE FITTING	DS	DUCT SMOKE DETECTOR			3. INSTALL REMOTE SOURCE. COORDINA 4. PROVIDE DIMMER
	FLOOR MOUNTED SERVICE FITTING	F	MANUAL FIRE ALARM STATION			
. =	TV OUTLET - DOUBLE GANG DEEP OUTLET BOX WITH GROMMETED FACEPLATE AND 1 1/4" EMT CONDUIT TO CABLE TRAY. COORDINATE WITH ARCHITECT FOR MOUNTING LOCATION	ED	FIRE ALARM STROBE			
HT	PRIOR TO INSTALLATION. PROVIDE COAXIAL CABLE FROM FACEPLATE TO COMM ROOM. WITH 3' SLACK AT FACEPLATE AND 30' SLACK COILLED IN COMM ROOM.	Fda	FIRE ALARM AUDIBLE/STROBE, "A" INDICATES AUDIBLE ONLY			
Ю	SPECIAL PURPOSE RECEPTACLE	¢۸	FIRE ALARM AUDIBLE/STROBE - CEILING MOUNTED, "A" INDICATES AUDIBLE ONLY			
	PUSH BUTTON STATION	DH	DOOR HOLD OPEN CONNECTED TO FIRE ALARM SYSTEM			
H EPO	EMERGENCY POWER OFF PUSHBUTTON. PROVIDE CLEAR PLASTIC HINGED COVER. MOUNT AT 60" AFF UNLESS OTHERWISE NOTED.	HCR	CARD READER CONTROLLED DOOR			
Ю	ELECTRIC CLOCK OUTLET	RTE	REQUEST TO EXIT CONTROL			
$\mathbf{\nabla}$	COMMUNICATIONS OUTLET. REFER TO TYPICAL COMMUNICATIONS OUTLET DETAIL FOR REQUIREMENTS	HPP	MOTORIZED DOOR PUSH PLATE.			
▼	PHONE OUTLET SAME AS COMMUNICATIONS OUTLETS (W: WALL MOUNTED AT +48")	AUTO	AUTO DOOR OPERATOR	-		
WAP	WIRELESS ACCESS POINT - SAME AS COMMUNICATIONS OUTLET EXCEPT LOCATE BOX ABOVE FINISHED CEILING IN LOCATION AS DIRECTED BY THE BUILDING IT.	СР	CONTROL PANEL	-		
		TS	DIGITAL TIME SWITCH WITH ASTRONOMICAL CONTROL AND AUTO DAYLIGHT SAVING			

		WATTS PER	
DESCRIPTION	4000 LUMENS,	FIXTURE 40W	REMARKS
/ULTI-VOLT 0-10V DIMMING DRIVER - 120V.	3500K, 80 CRI		
RIES			
-FPL1 SERIES			
ХСЕРТ 2Х2.	3200 LUMENS, 3500K, 80 CRI	30W	
RIES -FPL1 SERIES			
ED LED DOWNLIGHT WITH STEEL HOUSING, REGRESSED FROST	3000 LUMENS,	30W	
ECULAR REFLECTOR, WIDE DISTRIBUTION, 0-10V DIMMING	3500K, 80 CRI		
S			
XCEPT 4" DIAMETER AND LUMEN PACKAGE.	1500 LUMENS, 3500K, 80 CRI	14W	
S			
AR LED STRIP LIGHT WITH STEEL HOUSING, HIGH-GLOSS BAKED	4000 LUMENS,	32W	
SH, 0-10V DIMMING DRIVER - 120V.	3500K, 80 CRI	5217	
DLDER WITH MOGUL BASE LED.	700 LUMENS, 3500K	10W	
PARKING LOT LUMINAIRE WITH DIE-CAST ALUMINUM HOUSING, IP66 RATED, BRONZE POWDER COAT FINISH, ACRYLIC	5414 LUMENS, 4000K	52W	PROVIDE WITH SQUARE 20'-0"
/PE 3 DISTRIBUTION AND HOUSE SIDE SHIELD - 120V.			COAT FINISH AND CONCRETE BASE. REFER TO DETAIL.
RGENCY LED HEAD FOR OUTDOR EMERGENCY EGRESS LIGHTING RPROOF THERMOPLASTIC GASKETTED HOUSING, 8 WHITE LED'S		1W	CONNECT TO RESPECTIVE EXIT LIGHT FIXTURE "X1" EMERGENCY
YPE X1, SELF-DIAGNOSTICS.			SOURCE.
0309 SERIES			
HT FIXTURE WITH WHITE POLYCARBONATE HOUSING, (2) LED INED NICAD BATTERY FOR 90 MINUTES MINIMUM EMERGENCY	1100 LUMENS	5.3W PER LAMP HEAD	CONNECT TO NEAREST LOCAL LIGHTING CIRCUIT AHEAD OF
AL BATTERY CHARGER, MULTI-VOLT DRIVER AND SELF-			LIGHTING CONTROL.
IES			
RE WITH WHITE POLYCARBONATE HOUSING, RED LETTERS,		1W	CONNECT TO NEAREST LOCAL
ROWS AS INDICATED WITH SELF-CONTAINED NICAD BATTERY IIMUM EMERGENCY OPERATION, INTEGRAL BATTERY CHARGER, AND SELF-DIAGNOSTICS.			LIGHTING CIRCUIT AHEAD OF LIGHTING CONTROL.
S			
5			
RE WITH WHITE POLYCARBONATE HOUSING, RED LETTERS,		1W	CONNECT TO NEAREST LOCAL LIGHTING CIRCUIT AHEAD OF
ROWS AS INDICATED WITH HIGH-OUTPUT OPTION, SELF- SATTERY FOR 90 MINUTES MINIMUM EMERGENCY OPERATION, CHARGER, MULTI-VOLT DRIVER AND SELF-DIAGNOSTICS.			LIGHTING CONTROL AND RESPECTIVE TYPE "EM1".
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
IES			
PE INDICATED TOGETHER WITH INTEGRAL BATTERY AND			PROVIDE EMERGENCY 1400
ALLOW FULL CONTROL DURING NORMAL POWER OPERATION LL BRIGHT DURING POWER FAILURE. PROVIDE BATTERY WITH			LUMEN OUTPUT FOR TYPES L1 & L2.
M OPERATION AND SELF-DIAGNOSTICS AND INTEGRAL			
HT FIXTURE WITH WHITE THERMOPLASTIC HOUSING, SEALED	220 LUMENS TOTAL	2W	CONNECT TO NEAREST LOCAL
NI-CAD BATTERY, INTEGRAL BATTERY CHARGER, TWO LED PROVIDE BATTERY WITH 90 MINUTES MINIMUM EMERGENCY			LIGHTING CIRCUIT AHEAD OF LIGHTING CONTROL.
/OLT AND SELF-DIAGNOSTICS. IES			

DIRECTED BY CORRESPONDING ARCHITECTURAL DETAIL FOR THAT PARTICULAR FIXTURE TYPE.

L REFLECTED CEILING PLAN FOR EXACT LIGHT FIXTURE LOCATION. S HIDDEN IN ACCESSIBLE LOCATIONS WITHOUT EXCEEDING MANUFACTURERS RECOMMENDATIONS FOR MAXIMUM DISTANCE FROM LAMP DRIVER LOCATIONS WITH ARCHITECT.

/PATIBLE WITH LAMP TYPE AND DRIVER TYPE SPECIFIED.

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Statement of Intellectual Property

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KEY PLAN

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 07/15/2020 100% CD's 07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY SM

_____ CHECKED BY

MJM

APPROVED BY

MJM SHEET NAME

ELECTRICAL LEGEND, DRAWING INDEX AND LIGHT FIXTURE SCHEDULE _____ SHEET NO.

E0-01

SECTION 16000 - ELECTRICAL SPECIFICATIONS

<u> PART 1 – GENERAL</u> GENERAL REQUIREMENTS:

- A. ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL LOCAL AND STATE AUTHORITIES HAVING JURISDICTION THEREOF.
- B. ALL EQUIPMENT SHALL BE SPECIFICATION GRADE AND SHALL HAVE UL LABEL FOR INTENDED USE.
- C. ELECTRICAL SYSTEMS SHALL BE COMPLETE IN EVERY DETAIL, INCLUDING ALL INCIDENTAL ITEMS FOR A PROPER AND FUNCTIONING INSTALLATION SUBJECT TO FINAL APPROVAL OF ARCHITECT/ENGINEER.
- D. ALL REQUIRED PERMIT AND INSPECTIONS SHALL BE OBTAINED BY CONTRACTOR AND SUCH COSTS SHALL BE INCLUDED IN BID PRICE FOR THIS WORK.
- E. PROVIDE UL LISTED SYSTEM FOR FIRE STOPPING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. PROVIDE SYSTEM WITH EQUAL OR GREATER RATING THAN ASSEMBLY. REFER TO ARCHITECTURAL DOCUMENTS FOR RATINGS AND LOCATIONS OF ASSEMBLIES.
- F. EXAMINATION OF SITE IS MANDATORY. CONTRACTOR IS HEREBY HELD TO HAVE EXAMINED THE SITE AND HAVE INCLUDED IN HIS BID PRICE ALL COSTS DUE TO SITE AND FIELD CONDITIONS.
- G. COMPLETE IDENTIFICATION OF PROJECT ELECTRICAL COMPONENTS IS REQUIRED. IDENTIFY ALL PANELS, DISCONNECTS, CONTROL DEVICES, ETC., WITH THE NOMENCLATURE INDICATED ON THE DOCUMENTS AND WITH POWER SOURCE AND ELECTRICAL RATINGS USING PLASTIC LAMINATE NAMEPLATE. INSTALL TYPEWRITTEN DIRECTORIES OF ALL CIRCUITS ON INSIDE OF PANELS. IDENTIFY WIRING DEVICE COVERPLATES WITH PANELBOARD AND BRANCH CIRCUIT NUMBER SERVING DEVICE, E.G. "A-15". PROVIDE 1/4" MACHINE-WRITTEN BLACK LETTERING ON CLEAR PLASTIC ADHESIVE TAPE. LOCATE ON BOTTOM FRONT OF COVERPLATE, CENTERED BELOW WIRING DEVICE(S). SUBMIT SAMPLE OF LABELED TAPE WITH WIRING DEVICE/COVERPLATE SUBMITTAL. SAMPLE MAY BE ADHERED TO PAPERWORK IN SUBMITTAL, RATHER THAN TO A COVERPLATE.
- H. PROVIDE TEMPORARY POWER AND LIGHTING DURING CONSTRUCTION. REMOVE TEMPORARY WIRING UPON COMPLETION OF THE PROJECT. TEMPORARY SERVICES SHALL BE AS REQUIRED, BY N.E.C. AND OSHA.
- I. GROUND CONTINUITY SHALL BE MAINTAINED THROUGHOUT THE ELECTRICAL SYSTEM. INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH EVERY CIRCUIT.
- J. COORDINATE SIZE AND LOCATION OF ANY REQUIRED ACCESS PANELS IN WALLS OR FINISHED CEILINGS WITH ARCHITECT PRIOR TO INSTALLATION.

A. UNLESS A LONGER PERIOD IS SPECIFIED IN INDIVIDUAL PARAGRAPHS, PROVIDE A MINIMUM OF A ONE YEAR WARRANTY ON ALL ELECTRICAL WORK BEGINNING THE DATE OF FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER. SUBMITTALS:

- A. SUBMIT SHOP DRAWINGS FOR ALL MAJOR COMPONENTS OR SYSTEMS OF THE PROJECT. SUBMIT ADDITIONAL SHOP DRAWINGS IF REQUESTED BY ENGINEER. B. NO APPARATUS OR EQUIPMENT SHALL BE SHIPPED FROM STOCK OR FABRICATED UNTIL SHOP DRAWINGS FOR SAME HAVE
- BEEN STAMPED 'REVIEWED' OR "REVIEWED AS NOTED". SUBMIT DATA REQUIRED FOR TRANSFORMERS SUCH AS EFFICIENCY, REGULATION, CORE LOSS AND SOUND LEVELS. (SEE APPLICABLE SECTIONS).
- SUBMIT SYSTEM COMPONENTS, PRODUCT DATA AND SHOP DRAWINGS COMPLETE FOR EACH SYSTEM UNDER ONE SUBMITTAL. DO NOT BREAK OUT EQUIPMENT FOR ONE SYSTEM BETWEEN MULTIPLE SUBMITTALS. D. ALL SHOP DRAWINGS MUST BE CLEARLY MARKED TO SHOW EQUIPMENT SUBMITTED AND ANY DEVIATIONS FROM
- SPECIFICATIONS SHALL BE NOTED THEREON. DO NOT INCLUDE ONLY MODEL NUMBERS TO INDICATE SUBMITTED EQUIPMENT. STRIKE OUT ANY INFORMATION ON PRODUCT DATA THAT IS NOT PROJECT SPECIFIC, AND EDIT RELEVANT INFORMATION TO SHOW ACTUAL EQUIPMENT SUBMITTED. ELECTRICAL CONTRACTOR MUST SIGN AND APPROVED ALL SHOP DRAWINGS PRIOR TO SUBMITTAL.
- E. UNIQUELY NUMBER EACH PAGE IN SUBMITTAL.
- F. IF DIFFERENT SYSTEMS ARE INCLUDED IN ONE SUBMITTAL, CLEARLY SEPARATE INFORMATION AND PROVIDE DIFFERENT SUB-NUMBERING OF SYSTEMS. SHOP DRAWINGS THAT ARE INCOMPLETE, UNSIGNED AND NOT PLAINLY MARKED WILL NOT BE REVIEWED.
- DEMOLITION AND RENOVATION WORK: A. DISCONNECT, REMOVE, RELOCATE, REWIRE OR DISPOSE OF ANY EQUIPMENT INTERFERING WITH NEW CONSTRUCTION OR
- AFFECTED BY RENOVATION WORK. B. ANY ELECTRICAL EQUIPMENT OR SYSTEMS WHICH ARE TO REMAIN, AND ARE AFFECTED BY THIS WORK, SHALL BE
- IMMEDIATELY RESTORED TO FULL OPERATING CONDITION AND AT NO ADDITIONAL COST TO THE CONTRACT. C. EQUIPMENT REMOVED SHALL BE DISPOSED OF AS DIRECTED, EITHER TO STORAGE OR OFF THE PREMISES.
- D. WHERE SERVICES OR CIRCUITS ARE DISCONNECTED OR DISCONTINUED, IT IS MANDATORY THAT ANY EXISTING UNUSED WIRING BE REMOVED TO THE SOURCE UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. IT IS THE INTENT OF THIS ARTICLE TO PERMANENTLY DISCONNECT ALL UNUSED CIRCUITS AT THE MAIN SOURCE WHENEVER POSSIBLE. NO ENERGIZED CIRCUIT SHALL BE TAPED AND ABANDONED IN OUTLET BOXES UNLESS SO SPECIFIED ON DRAWINGS.
- E. CIRCUIT TRACE EXISTING TO REMAIN CIRCUITS AS NECESSARY FOR PROPER IDENTIFICATION, AND AS REQUIRED TO PERFORM WORK.
- F. REMODELING WORK INVOLVING EXISTING BRANCH CIRCUIT PANELBOARD SHALL BE SUCH THAT, WHEN ALL WORK IS COMPLETED EXISTING PANELS ARE PROVIDED WITH NEW AND UPDATED ACCURATE DIRECTORIES. ALL VACATED CIRCUITS SHALL BE MARKED SPARE. WHEN NEW BREAKERS ARE REQUIRED, THEY SHALL BE INSTALLED IN EXISTING SPACES AND SHALL MATCH THOSE THAT ARE EXISTING. IN THE EVENT THAT MORE BREAKERS ARE REQUIRED THAN THE SPACES AVAILABLE, CONTRACTOR SHALL CONSULT ENGINEER FOR DIRECTION.
- G. CONTRACTOR MAY USE EXISTING CONDUITS AND OUTLET BOXES. PROVIDED THEY ARE IN GOOD ELECTRICAL CONDITION. RE-SUPPORT EXISTING TO REMAIN CONDUIT AND BOXES IN RENOVATION AREA IF INADEQUATELY SUPPORTED. PROVIDE SUPPORT AS REQUIRED TO COMPLY WITH NEC AND LOCAL AUTHORITY REQUIREMENTS.
- H. IT IS THE INTENT OF THE OVERALL DESIGN TO CONCEAL ALL WORK EXCEPT IN UNFINISHED AREAS. IN CASES WHERE IT IS IMPOSSIBLE TO CONCEAL THE WORK, SHORT EXPOSED METAL RACEWAYS MAY BE USED SUBJECT TO APPROVAL OF ENGINEER.
- I. ALL ELECTRICAL OPENINGS THAT ARE ABANDONED IN WALLS, CEILINGS OR FLOOR SHALL BE PROVIDED WITH SUITABLE BLANK COVER PLATES. ABANDONED FLOOR OUTLET SHALL BE PROVIDED WITH .040 ALUMINUM PLATES.
- J. ALL SURFACES DAMAGED BY THIS CONTRACTOR IN THE COURSE OF PERFORMING WORK SHALL BE RESTORED TO SATISFACTORY CONDITION, AS DIRECTED BY THE ARCHITECT AND ALL COSTS OF REPAIRS SHALL BE PAID FOR BY THE CONTRACTOR.
- K. REMOVE SERVICE TO MECHANICAL, ELECTRICAL AND BUILDING EQUIPMENT INDICATED AS REMOVED OR DISCONNECTED. MAINTAIN CIRCUITS TO EXISTING-TO-REMAIN EQUIPMENT. IDENTIFY UNUSED, REMOVED CIRCUITS ON PANEL SCHEDULE AS SPARE. COORDINATE WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR EXISTING TO REMAIN EQUIPMENT AND FOR DEMOLITION WORK.
- L. SERVICE SHUTDOWN AND POWER OUTAGES SHALL BE SCHEDULED WITH THE OWNER PRIOR TO PERFORMING ANY WORK ON EXISTING SERVICE. SCHEDULE SHALL BE IN WRITING AND SHALL SHOW A DETAILED DESCRIPTION OF THE PROPOSED WORK AND THE DURATION OF OUTAGE.

UTILITY SERVICES (EXISTING BUILDINGS):

A. ELECTRIC SERVICE TO THE SITE IS EXISTING AND SHALL BE UTILIZED AS INDICATED ON THE DRAWINGS.

MICHIGAN UNIFORM ENERGY CODE:

- A. THIS IS A PERFORMANCE BASED DESIGN-BUILD SPECIFICATION.
- B. THE INTENT OF THIS SPECIFICATION ITEM IS FOR FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MICHIGAN UNIFORM ENERGY CODE AND RELATED AMENDMENTS AS THEY APPLY TO THE ASHRAE 90.1-1999 STANDARD. AUTOMATIC CONTROL APPLIES TO NEW AND TO EXISTING TO REMAIN FIXTURES.
- C. DESIGN AND PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION. INDICATE ALL COMPONENTS ON AS-BUILT DOCUMENTATION. COORDINATE WITH ARCHITECTURAL TRADES TO PROVIDE CEILING ACCESS PANELS WHERE REQUIRED.
- D. PROVIDE OCCUPANCY/VACANCY SENSOR(S) IN EVERY ROOM OR SPACE (EXCEPT WHERE TIME SWITCHES/CONTACTOR CONTROL IS INDICATED) TO AUTOMATICALLY SHUTOFF ALL NON-EMERGENCY LIGHTING WITHIN ITS SPACE WITH ADJUSTABLE TIME DELAY UP TO 30 MINUTES. WHERE INDICATED, CONTROL LIGHTING THROUGH TIME SWITCH WITH ASTRONOMICAL TIME CLOCK. PROVIDE LIGHTING CONTROLLED VIA CONTACTORS AND TIME SWITCH AS REQUIRED FOR QUANTITY OF CIRCUITS CONTROLLED. CONTROL EXTERIOR FIXTURES WITH TIME CLOCK, CONTACTOR AND PHOTOCELL.
- E. OCCUPANCY/VACANCY SENSORS SHALL BE OF ULTRASONIC, INFRARED OR MULTI-TECHNOLOGY TYPE AS RECOMMENDED BY MANUFACTURER FOR EACH SPACE/APPLICATION CEILING MOUNTED.
- F. OCCUPANCY/VACANCY SENSORS AND ACCESSORIES, TIME CLOCKS, AND CONTACTORS ARE NOT SPECIFICALLY INDICATED. CONTRACTOR TO DESIGN GROUPING OF BRANCH CIRCUITS AND QUANTITY OF TIME CLOCKS AND CONTACTORS REQUIRED AND PROVIDE ACCORDINGLY.
- G. PROVIDE LOCAL WALL SWITCHES ON-OFF TYPE IN ADDITION TO OCCUPANCY AND TIME CLOCK/CONTACTOR CONTROL.
- H. PROVIDE UNIVERSAL VOLTAGE POWER SWITCHES (RELAY) PACKS WITH LOAD CONTACT RATED 20A 120/277V FOR EACH SENSOR AS REQUIRED TO ACHIEVE THE LIGHTING CONTROL INTENDED. COORDINATE WITH SWITCH LEGS SHOWN ON PLANS. PROVIDE AUXILIARY CONTACT FOR CONTROL OF HVAC EQUIPMENT ON EACH RELAY PACK. MOUNT COMPONENTS CONCEALED ABOVE FINISHED CEILINGS WHEN PRESENT. PROVIDE ACCESS PANELS FOR NON-ACCESSIBLE CEILINGS. WHEN NO FINISHED CEILINGS ARE PRESENT, MOUNT COMPONENTS CONCEALED IN SHEET METAL ENCLOSURE WITH HINGED COVER. SIZE ENCLOSURE TO ACCOMMODATE COMPONENTS AND WIRING, AND COORDINATE LOCATION WITH ARCHITECT.
- I. REFER TO THE LIGHTING DRAWINGS FOR COORDINATION WITH FIXTURES, CIRCUITING AND SWITCHING.

<u> PART 2 – PRODUCTS</u> ELECTRICAL EQUIPMENT AND DEVICES:

- A. RECEPTACLES SHALL BE SPECIFICATION GRADE, GROUNDING TYPE, 2-POLE, 3-WIRE, AND POLARIZED. RECEPTACLES IN GENERAL SHALL BE 15A, 125V., HUBBELL #HBL5262 OR EQUAL MOUNTED 16" AFF EXCEPT AT COUNTERS WHERE THEY SHALL BE 6" ABOVE COUNTER AND IN TOILET ROOMS AT 48" AFF. RECEPTACLES ON SINGLE CIRCUIT SHALL BE 20 AMPERES, HUBBELL #HBL5362. HIGH AMPERE RATINGS AND VOLTAGES ARE INDICATED ON DRAWINGS.
- B. ISOLATED GROUND RECEPTACLES SHALL BE HUBBELL #IG-5362 WITH A SEPARATE GROUND WIRE IN CIRCUIT CONDUIT. THE ONLY WIRING THAT CAN OCCUPY THIS CONDUIT IS OTHER ISOLATED GROUND CIRCUITS.
- C. RECEPTACLES DESIGNATED GROUND FAULT INTERRUPTER RECEPTACLES, SIMILAR TO HUBBELL #GF-5362. FOR OUTDOOR OR WET LOCATIONS, PROVIDE WEATHERPROOF BOX AND GASKETTED COVER PLATE. WIRE GROUND FAULT INTERRUPTER RECEPTACLES FOR SELF PROTECTION AND NOT DOWNSTREAM PROTECTION OF OTHER WIRING DEVICES.
- D. PROVIDE TAMPER RESISTANT GROUND FAULT INTERRUPTER RECEPTACLES IN ALL GUEST ROOMS.

- E. SWITCHES SHALL BE SINGLE POLE, TWO POLE, OR THREE-WAY, AS INDICATED, TOGGLE TYPE, 20A, 120/277V., QUIET TYPE, HUBBELL #1221/1222/1223 OR EQUAL. PILOT TYPE SWITCHES HUBBELL #1251.
- F. WIRING DEVICE COLORS SHALL BE AS SELECTED BY THE OWNER/ARCHITECT. G. DEVICE COVER PLATES SHALL BE OF TYPE AND NUMBER OF GANGS FOR DEVICES INSTALLED, SMOOTH EDGED 302/304 GRADE BRUSHED STAINLESS STEEL. PROVIDE BRANCH CIRCUIT IDENTIFICATION ON ALL COVERPLATES AS
- H. PROVIDE TELEPHONE/DATA OUTLETS AND STUBS AS INDICATED. TELEPHONE/DATA OUTLETS SHALL CONSIST OF TWO GANG OUTLET BOX WITH PLASTER RING AND NO COVER PLATE. JACK AND COVER PLATE ARE SUPPLIED BY OTHERS. HEIGHT OF OUTLET FOR DESK PHONE IS 16" AFF AND FOR WALL PHONE 48" AFF. TELEPHONE/DATA OUTLETS SHALL CONTAIN OF 3/4" CONDUIT FROM OUTLET TO AN ACCESSIBLE PORTION OF CEILING SPACE. TERMINATE WITH INSULATING BUSHING.
- I. STANDARD TIME SWITCHES SHALL BE ELECTRONIC, PROGRAMMABLE, SEVEN DAY, 24 HOUR CARRYOVER, 365 DAY ASTRO DIAL, PILOT DUTY, INTERMATIC #ET816CR OR EQUAL.
- J. TIME SWITCHES SHALL BE ELECTRONIC, PROGRAMMABLE, FOUR CHANNEL, FULL YEAR OR SEVEN DAY PROGRAMMING, NI-CAD BATTERY BACK-UP WITH CHARGER, 365 DAY ASTRO DIAL AND MOMENTARY FEATURE FOR ALL CIRCUITS, WITH AUTOMATIC DAYLIGHT SAVINGS AND LEAP YEAR ADJUSTMENT AND SEASONAL PROGRAMMING, TORK DZS-400A GENERAL
- K. LIGHTING CONTACTORS SHALL BE 600V, 120V COIL, ELECTRICALLY OPERATED, MECHANICALLY HELD AMPERE RATING AND NUMBER OF POLES AS INDICATED ON DRAWINGS OR 3-POLE IF NOT INDICATED. SQUARE D CLASS 8903 OR EQUAL.
- L. LOCATE TIME SWITCHES AND CONTACTORS ADJACENT TO THE PANELS SERVING THEM, UNLESS OTHERWISE INDICATED. M. PHOTOCELL CONTROLS SHALL BE "ON-FF" CONTROL EQUIPPED WITH 1/2" THREADED STEM, ADJUSTABLE YOKE, FAIL-SAFE
- ARRESTOR, S.P.S.T. SWITCH, 120 OR 277 VOLT AS REQUIRED, 60 HZ, 1500 WATTS TUNGSTEN, TORK 2000 SERIES OR EQUAL. PROVIDE ALL MOUNTING HARDWARE IN STAINLESS STEEL. INSTALL IN ACCESSIBLE LOCATION OF ROOF. WHEN USED WITH RELAY PANEL SYSTEM, SELECT SENSOR WHICH IS COMPATIBLE WITH RELAY PANEL INPUT.

FLOOR MOUNTED SERVICE FITTING - TYPE F1:

- TO COMPLY WITH UL REQUIREMENTS FOR SCRUB WATER EXCLUSION. C. PROVIDE 20A, 125V, GROUND-FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE IN POWER COMPARTMENT WITH
- OWNER-INSTALLED DATA WIRING AND CONNECTORS. IDENTIFY RECEPTACLE BRANCH CIRCUITS AS SPECIFIED FOR WIRING DEVICE COVERPLATES. D. PROVIDE 1"C FROM DATA COMPARTMENT FROM BOX, UP WALL TO NEAREST ACCESSIBLE CEILING.
- E. PROVIDE FLANGES AND TRIM COMPONENTS SUITABLE FOR FLOOR FINISH (TILE OR CARPET). COORDINATE WITH ARCHITECTURAL FINISH FOR APPROPRIATE COMPONENTS. COORDINATE FINISH COLOR OF ALL EXPOSED COMPONENTS WITH ARCHITECT PRIOR TO SUBMITTAL - BLACK, BRUSHED ALUMINUM OR BRASS. INCLUDE ARCHITECT-APPROVED COLOR AND COORDINATED TRIM COMPONENTS WITH SUBMITTAL.
- F. CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.

G. MANUFACTURERS: HUBBELL B4233 OR APPROVED EQUAL BY LEGRAND. CONDUCTORS:

- A. ALL CONDUCTORS SHALL BE SOFT-DRAWN COPPER OF SIZES INDICATED ON THE DRAWINGS. ALL CONDUCTORS SHALL BE INSULATED FOR 600 VOLTS AND WITH 90 DEGREES (CENTIGRADE) CODE GRADE INSULATION.
- B. CONDUCTORS SIZED #10 AND SMALLER SHALL BE SOLID. ALL CONDUCTORS LARGER THAN #10 SHALL BE MADE UP OF STRANDED SINGLE CONDUCTOR CABLE. CONDUCTORS SHALL HAVE THWN OR THHN INSULATION AS APPLICABLE. CONDUCTORS IN UNDERGROUND CONDUIT AND FOR SERVICE ENTRANCE CONDUCTOR SHALL HAVE XHHW OR THWN
- C. #12 AWG SHALL BE THE MINIMUM WIRE SIZE ALLOWED EXCEPT #14 AWG MAY BE USED FOR CONTROL WIRING.
- D. TYPICAL BRANCH CIRCUITS FROM 20A, 1-POLE BRANCH OVERRCURRENT DEVICES ARE 1/2"C, 2 #12 AND 1 #12G.
- E. METAL CLAD (MC) TYPE CABLES MAY BE USED AS PERMITTED BY THE NATIONAL ELECTRIC CODE UNLESS OTHERWISE NOTED.

STARTERS, SAFETY SWITCHES, FUSES AND HEATERS:

- A. MANUAL MOTOR STARTERS SHALL BE 600V TOGGLE TYPE WITH THERMAL OVERLOAD ELEMENT FOR MOTOR PROTECTION STAINLESS STEEL COVER PLATE AND PILOT LIGHT; FLUSH IN ALL AREAS EXCEPT IN UNFINISHED SPACES. CONTRACTOR TO COORDINATE AND PROVIDE QUANTITY OF POLES AS REQUIRED FOR BRANCH CIRCUIT AND LOAD SERVED. MANUAL MOTOR SWITCHES SHALL BE THE SAME AS MANUAL STARTERS EXCEPT WITHOUT OVERLOADS AND USED AS DISCONNECTING
- B. MAGNETIC MOTOR STARTERS SHALL BE 600 VOLT 3-PHASE WITH 3 THERMAL OVERLOAD ELEMENTS, HOA SWITCH AND RESET BUTTON IN COVER AND GREEN RUNNING PILOT LIGHT, NEMA ENCLOSURE AND SIZE AS INDICATED. COMBINATION STARTERS SHALL HAVE BUILT-IN FUSED DISCONNECT. PROVIDE START-STOP PUSH BUTTONS FOR USE IN HAND (MANUAL) MODE.
- C. PROVIDE THERMAL ALLOY MELTING TYPE HEATER ELEMENTS FOR ALL MOTORS BASED ON MOTOR NAMEPLATE DATA. D. SAFETY AND DISCONNECT SWITCHES SHALL BE 250 OR 600 VOLTS AS REQUIRED, HEAVY DUTY, TWO OR THREE
- POLE, "QUICK-MAKE', "QUICK-BREAK" SWITCH MECHANISM AND COVER INTERLOCK. SWITCHES SHALL BE FUSED OR UNFUSED AS INDICATED AND SHALL HAVE PAD LOCK PROVISIONS, WITH NEMA TYPE ENCLOSURE FOR LOCATION USED. SWITCHES SHALL BE SQUARE "D" CLASS 3110 OR APPROVED EQUAL. E. PROVIDE ALL NECESSARY FUSES AND REPLACE ALL THOSE BLOWN DURING CONSTRUCTION. ALL FUSES SHALL BE TIME
- LAG, DUAL ELEMENT, BUSSMAN "LOW PEAK YELLOW" OR EQUAL.

LIGHTING SPECIFICATIONS:

- A. EMERGENCY BATTERY LED DRIVERS INTEGRAL TO FIXTURES SHALL BE SELF-DIAGNOSTIC TYPE, WITH 5 YEAR WARRANTY AND TEST SWITCH INTEGRAL TO FIXTURE. PROVIDE EXIT AND EMERGENCY BATTERY LIGHTING UNITS WITH SELF DIAGNOSTICS, MAINTENANCE-FREE NI-CAD BATTERY, AND WITH UNIVERSAL VOLTAGE INPUT 120V THROUGH 277V. REQUIREMENTS SPECIFIED HERE TAKE PRECEDENCE OVER SCHEDULED INFORMATION.
- EQUAL IF REQUESTED BY THE A/E.
- D. SUBMIT LAMP AND BALLAST PRODUCT DATA WITH EACH FIXTURE TYPE.

- B. PROVIDE FACTORY INSTALLED FUSING IN EACH FIXTURE.

SPECIFIED UNDER "GENERAL REQUIREMENTS". COVERPLATES FOR DEVICES CONNECTED TO THE EMERGENCY SYSTEM SHALL ALSO BE FACTORY LABELED WITH BLACK LETTERING TO READ "EMERGENCY".

OPERATION, ONE TO THREE FOOT CANDLE "ON" ADJUSTMENT, HERMETICALLY SEALED, LIGHTING

A. PROVIDE TWO-GANG, RECTANGULAR, FLUSH MOUNTED, DEEP CAST IRON, FULLY ADJUSTABLE, WATERTIGHT FLOOR BOX. B. PROVIDE RECTANGULAR FLIP-TOP COVER FOR EACH GANG SUITABLE FOR GROUND-FAULT STYLE RECEPTACLE. COVER IS

" CONDUIT FOR BRANCH CIRCUITING INDICATED. PROVIDE DATA COMPARTMENTS WITH COVER, READY FOR

C. PROVIDE PHOTOMETRIC CALCULATIONS FOR ANY FIXTURE SUBSTITUTIONS PROPOSED, INCLUDING FIXTURES SUBMITTED AS



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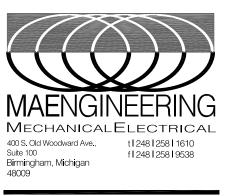
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CONSULTANT



KEY PLAN

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS 99% CD's 100% CD's

RE-BIDDING / CONSTRUCTION 09/14/2020

07/15/2020

07/30/2020

DRAWN BY SM

CHECKED BY MJM

APPROVED BY

MJM SHEET NAME

ELECTRICAL

SHEET NO. E0-02

PA		TAGE:	EXISTING LP-AMOUNTING: SURFACT208Y/120V, 3 PHASE, 4 WIRE + GAIC: EXISTING200A MCBFEEDER: REFER TSPD EQUIPPED: NOSPD EQUIPPED: NO	ì	e diagrai	И
Circ	Bre	aker	Load Information	Cor	nected Wa	atts
No		Trip	Description		Phase B	
1				2715		
3	2	40	ACCU-4 - NOTE 2		2715	
5	1	20	F-4 - NOTE 2			140
7				2667		
9	3	30	EDH-4 - NOTE 2		2667	
11						266
13			SPACE			
15					2667	
17	3	30	EDH-1 - NOTE 2			266
19				2667		
21					2667	
23	3	30	EDH-2 - NOTE 2			266
25				2667		
27	1	20	MONITORS - NOTE 2		360	
29	1		SPACE			
31	1		SPACE			
33	1	20	EXISTING LOAD			
35 37	2	60	SPARE			
39 41	2	60	SPARE			
2				2667		
4	3	30	EDH-3 - NOTE 2	2007	2667	
6	Ŭ				2007	266
8	1	20	RECEPTACLES - NOTE 2	720		200
10	1	20	AV EQUIPMENT - NOTE 2	720	360	
10	1	20	AV EQUIPMENT - NOTE 2		300	36
14	1	20	SPACE			30
14	1		SPACE			
18	1		SPACE			
20	1		SPACE			
22						
24	2	50	SPARE			
26	-					
28	2	50	SPARE			
30	1	20	RECEPTACLES			108
32	1	20	LIGHTING	1600		
34	1	20	LIGHTING, EF-5, EF-6		1196	
36	1	20	RECEPTACLES	1 1		90
38	1	20	RECEPTACLES	900		
40	1	20	MONITORS		480	
42	1	20	SPARE			
<u> </u>			CONNECTED KW: 47			
			CONNECTED AMPS: 130 Phase Watts:	16,603	15,779	14,40
			DEMAND KW: 47			
1			DEMAND AMPS: 130			

PA		TAGE:	EXISTING LP-B 208Y/120V, 3 PHASE, 4 WIRE + G 200 A MCB	MOUNTING: AIC: FEEDER: SPD EQUIPPED:	EXISTIN REFER
Circ	Brea	aker	Load Informa	ation	
No	Pole	Trip	Description		
1	1	20	PARKING LOT LIGHTING - NOTE 2 -	ALTERNATE #3	
3	1		SPACE		
5	1		SPACE		
7	1		SPACE		
9 11	2	30	EH-1 - NOTE 2		
13 15	2	40	EXISTING AC		
17	1	20	SPARE		
19	1	20	SPARE		
21	1	20	SPARE		
23	1	20	SPARE		
25	1	-	SPARE		
27	1	20	SPARE		
29	1	20	SPARE		
31	1	20	SPARE		
33	1	20			
35	1		EXISTING WATER HEATER		
37	1	20	EXISTING WATER HEATER		
39 41	1 1	20 20	SPARE SPARE		
2	1	20	SPACE		
4	1		SPACE		
6	1		SPACE		
8	1		SPACE		
10	1		SPACE		
12	1		SPACE		
14	1	15	SPARE		
16 18	2	70	SPARE		
20 22	2	20	EXISTING LOAD		
24	1	20	RECEPTACLES		
26	1	20	EWC		
28	1	20	RECEPTACLES		
30	1	20	RECEPTACLES		
32	1	20	RECEPTACLES		
34	1	20	TELEVISIONS		
36	1	20	TELEVISION		
38	1	20	SPARE		
40	1	20	SPARE		
42	1	20	SPARE		
			CONNECTED KW:	18	
			CONNECTED AMPS:	51 Pha	ase Watt
			DEMAND KW:	18	
			DEMAND AMPS:	51	

1. ALL WORK SHOWN BOLD IS NEW. 2. PROVIDE CIRCUIT BREAKER IN EXISTING SPACE.

NOTES:

PA		TAGE:	EXISTING LP-DMOUNTING: FLUSH120/208V, 1 PHASE, 3 WIRE + GAIC: EXISTING200 A MCBFEEDER: REFER TO ONE LIN SPD EQUIPPED: NO	IE DIAGRAI	И
Circ	Bre	aker	Load Information	Connected	Watts
No	Pole	Trip	Description	Phase A	Phase C
1	1	· · ·	RECEPTACLES	1080	
3 5	2		SPARE		
7	1	20	RECEPTACLES		360
9	1		SPARE		
11	1		SPARE		
13	1		SPARE		
15	2		SPARE		
17 19	1	20	SPARE		
21	1		SPARE		
23	1	20	SPACE		
25	1		SPACE		
27	1		SPACE		
29	1		SPACE		
31	1		SPACE		
33	1		SPACE		
35	1		SPACE		
37	1		SPACE		
39	1		SPACE		
2	1	20	RECEPTACLES	900	
4	1		RECEPTACLES	900	900
6	1	20	RECEPTACLES	4000	900
-	1	20	RECEPTACLES	1080	
8 10	2	20	EXISTING BUILDING LIGHTING	250	250
12	1	20	SPARE		
14 16	2	30	EXISTING PARKING LOT LIGHTING	800	800
18	1	20	EXISTING ROAD SIGN	1000	000
20	1		SPARE	1000	
20	1		SPARE		
24	1		SPARE		
24	1	20	SPACE		
28	1		SPACE		
30	1		SPACE		
32	1		SPACE		
34	1		SPACE		
36	1		SPACE		
38	1		SPACE		
40	1		SPACE		
NOTE			CONNECTED KW: 7 CONNECTED AMPS: 36 Phase Watts: DEMAND KW: 7 DEMAND AMPS: 36	5,110	2,310

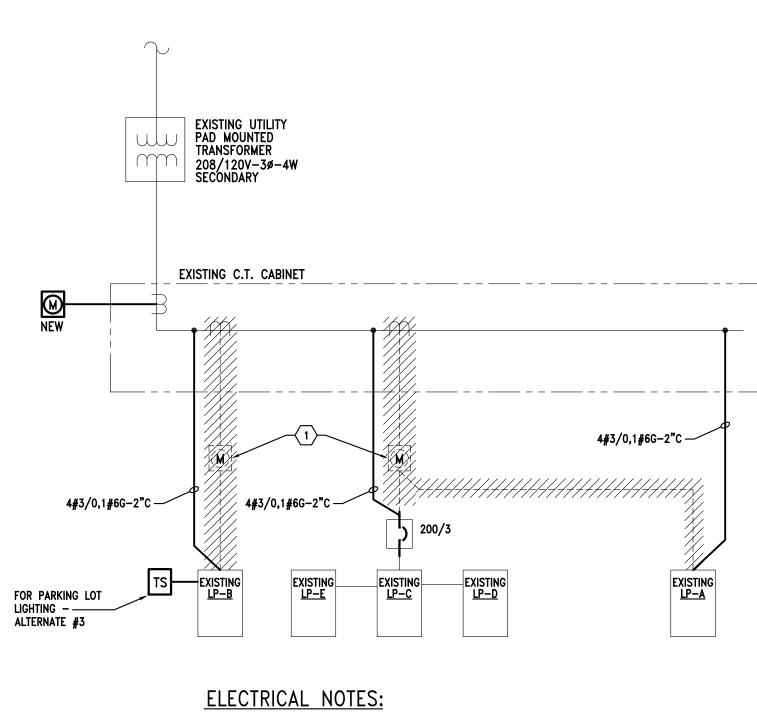
PA	NELBO)ARD:	EXISTING LP-E	MOUNTING: FLUSH		
			120/208V, 1 PHASE, 3 WIRE + G	AIC: EXISTING		
			100 A MCB		, O ONE LINE DIAGRA	N /
		ive urv.		SPD EQUIPPED: NO		411
			· · · · · · · · · · · · · · · · · · ·			
Circ	Brea	aker	Load Informatio	n	Connecte	d Watts
No	Pole	Trip	Description		Phase A	Phase C
1	2	20	EXISTING AC			
3	2	20	EXISTING AC			1
5	1		SPACE			
7	1	20	SPARE			
9	1		SPACE			
11	1	20	SPARE			1
13	1		SPACE			
15	1	20	SPARE			1
17	1		SPACE			
19	1	20	SPARE			
2	2 2 20	EXISTING AC				
4	2	20	EXISTING AC			1
6	1		SPACE			
8	1		SPACE			
10	1		SPACE			
12	1		SPACE			
14	1		SPACE			
16	1		SPACE			
18	1		SPACE			
20	1		SPACE			
			CONNECTED KW:	0		
			CONNECTED AMPS:	0 Pha	ase Watts:	0 0
			DEMAND KW:	0		
			DEMAND AMPS:	0		

NOTES: 1. ALL WORK SHOWN BOLD IS NEW.

CE NG T(: O ONE LINI	E DIAGRAI	м
	Cor	nnected Wa	atts
		Phase B	
	260		
			,
		2000	2000
	2715		
		2715	,
			,
_			
	1500		1500
	1500		
			,
_			
	500		1080
	500	1000	
			1080
	1080	480	
		400	360
s:	6,055	6,195	6,020

	VOL		208Y/120V, 3 PHASE, 4 WIRE + GAIC: EXISTING200A MCBFEEDER: REFERSPD EQUIPPED: NONO	-	e diagrai	И			
Circ	Brea	aker	Load Information	Со	Connected Watts				
No	Pole	Trip	Description	Phase A	Phase B				
1	1	· · ·	EBH-1 - NOTE 2	1000					
3	1		EBH-1 - NOTE 2		1000				
5	1	-	EBH-1 - NOTE 2			100			
7	1	20	(3)EBH-1	1350					
9		-			2715				
11	2	40	EXISTING AC		2/10	271			
13	1	20	EBH-1 - NOTE 2	1200					
15	1		EBH-1 - NOTE 2		1200				
17	1	-	EBH-1 - NOTE 2		1200	120			
19	1		TELEVISION	1		120			
21	1	20	RECEPTACLES		1080				
23	1	20	SPARE		1000				
25	1		REFRIGERATOR	500					
27	1		RECEPTACLE	500	1000				
29	1		RECEPTACLE		1000	100			
31	1		RECEPTACLE	1000		100			
33	1		RECEPTACLE	1000	1000				
35	1		RECEPTACLE		1000	400			
37	1	20	SPACE			126			
39	1		SPACE						
2				2715					
4	2	40	EXISTING AC	2110	2715				
6						231			
8	2	100	EXISTING LP-D	5110					
10	1	20	RECEPTACLES		1080				
12	1	20	EXISTING FURNACE						
14	1		LIGHTING, EF-1	1136					
16	1		LIGHTING, EF-2, EF-3, EF-4		1494				
18	1		RECEPTACLES			108			
20	1		RECEPTACLES	1080					
22		-			0				
24	2	100	EXISTING LP-E						
26	1	15	SPARE						
28	1	20	(2)EBH-1		1600				
30	_	20				200			
32	2	30	EH-2 - NOTE 2	2000					
34	1		SPACE						
36	2	20	SPARE						
38		20							
40	1		SPACE						
			CONNECTED KW: 45						
			CONNECTED AMPS: 124 Phase Watts:	17,091	14,884	12,56			
			DEMAND KW: 45						
			DEMAND AMPS: 124						

1. ALL WORK SHOWN BOLD IS NEW. 2. REPLACE CIRCUIT BREAKER AS INDICATED.



1 REMOVE METER AND RE-WORK PANEL FEEDERS AS INDICATED. COORDINATE ALL SERVICE WORK WITH LOCAL UTILITY - INCLUDE ALL ASSOCIATED COSTS.

		LOAD SU	IMMARY			
	Load Information	I			KV	Ά
Description					Conn	Dem
LP-A					46.8	46.
LP-B					18.3	18.
LP-C					44.5	44.
	CONNECTED AMP	PS: 263.7				
	CONNECTED K	VA: 109.6		Totals:	109.6	109.
	DEMAND AMF	PS: 263.7				
	DEMAND K	VA: 109.6				



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KEY PLAN

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

99% CD's	07/15/2020
100% CD's	07/30/2020
RE-BIDDING / CONSTRUCTION	09/14/2020

SM _____

_____ DRAWN BY

CHECKED BY

MJM _____

APPROVED BY MJM

SHEET NAME

PANELS SCHEDULES AND ONE LINE DIAGRAM

_____ SHEET NO. E0-03



 $\underbrace{\begin{pmatrix} 1 \\ E0-01 \end{pmatrix}}_{\text{NO SCALE}} \underbrace{\text{One Line Diagram}}_{\text{NO SCALE}}$

	LIGHTING CONTROL MATRIX SCHEDULE													
TAG	ROOM TYPE	CONTROLS		AUTOMATIC ON/OFF CONTROL		PARITAL OFF FULL C		FULL OFF	TIME-CLOCK	DAYLIGHT		DAYLIGHT	NOTES	
		SWITCH TYPE	SWITCH CONTROLS	TYPE	SENSOR	TURN ON LIGHTING TO %	TIME	%	TIME	SCHEDULE	SIDE LIGHT	TOP LIGHT	MAINTAIN FC LEVEL	
С1М	<u>C</u> LASSROOM/LECTURE HALL/TRAINING ROOM (ALL <u>O</u> THER CLASSROOMS/LECTURE HALLS/ TRAINING ROOM)	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		
СММ	<u>CONFERENCE/MEETING/MULTIPURPOSE ROOM</u>	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		
СОР	<u>C</u> ORRIDOR (ALL <u>O</u> THER CORRIDORS)	LOW VOLTAGE	ON-OFF	OCCUPANCY SENSOR	<u>F</u> ULL ON	100%	20 MIN	50%	20 MIN	NA	NA	NA		AUTOMATICALLY REDUCE GENERAL LIGHTING ≤ 50% WITHIN 20 MINUTES OF OCCUPANTS LEAVING. AUTOMATIC FULL OFF COMPLIES. (OCCUPANCY SENSOR CONTROL)
СРМ	<u>C</u> OPY/ <u>P</u> RINT ROOM	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		
E/M	<u>ELECTRICAL/M</u> ECHANICAL ROOM	LINE VOLTAGE	ON-OFF	NA	NA	NA	NA	NA	NA	NA	NA	NA		
LBM	LOUNGE/ <u>B</u> REAKROOM (ALL OTHER LOUNGE/BREAKROOMS)	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		
LOF	<u>L</u> OBBY (ALL <u>O</u> THER LOBBIES)	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>F</u> ULL ON	100%	20 MIN	50%	20 MIN	NA	NA	NA		AUTOMATICALLY REDUCE GENERAL LIGHTING ≤ 50% WITHIN 20 MINUTES OF OCCUPANTS LEAVING. AUTOMATIC FULL OFF COMPLIES. (OCCUPANCY SENSOR CONTROL)
OE1M	<u>O</u> FFICE (<u>E</u> NCLOSED AND ≤ 250 FT2)	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		
ООМ	<u>O</u> FFICE (<u>O</u> PEN PLAN)	LOW VOLTAGE	ON-OFF-DIM	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		
RLF	<u>R</u> ESTROOM <u>L</u> ARGE (ALL OTHER RESTROOMS)	LOW VOLTAGE	ON-OFF	OCCUPANCY SENSOR	<u>F</u> ULL ON	100%	20 MIN	50%	NA	NA	NA	NA		AUTOMATICALLY REDUCE GENERAL LIGHTING ≤ 50% WITHIN 20 MINUTES OF OCCUPANTS LEAVING. AUTOMATIC FULL OFF WOULD ENDANGER SAFETY OR SECURITY (OCCUPANCY SENSOR CONTROL)
STF	<u>ST</u> ORAGE ROOM (≤ 50 FT2)	LOW VOLTAGE	ON-OFF	OCCUPANCY SENSOR	<u>F</u> ULL ON	100%	NA	NA	20 MIN	NA	NA	NA		
STM	<u>ST</u> ORAGE ROOM (≥ 50 FT2 ≤ 1000 FT2)	LOW VOLTAGE	ON-OFF	OCCUPANCY SENSOR	<u>M</u> ANUAL ON	NA	NA	NA	20 MIN	NA	NA	NA		

LIGHTING CONTROL NOTES:

I. CONTRACTOR TO PROVIDE MOTION SENSORS, DAYLIGHT SENSORS, ROOM CONTROLLERS, AND ACCESSORIES AS REQUIRED FOR A FULLY OPERATIONAL INSTALLATION PER 2015 MICHIGAN ENERGY CODE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL ROOM CONTROLLERS/POWER PACKS AND ASSOCIATED WIRING FOR MULTIPLE SWITCH LEG LOCATIONS. SEE PLANS FOR EXACT SWITCH LEGS WITH-IN EACH AREA OR ROOM. ELECTRICAL CONTROL MANUFACTURER'S DEVICE LAYOUT AND SEQUENCE OF CONTROL AS PART OF SHOP DRAWINGS SUBMITTALS.

2. ELECTRICAL CONTRACTOR IS TO INCLUDE THE SCOPE OF A LIGHTING CONTROLS DESIGNER/INSTALLER AS SUBCONTRACTOR TO ELECTRICAL CONTRACTOR TO ELECTRICAL CONTRACTOR TO ENGINEER OF RECORD.

3. TO PREVENT FALSE ACTIVATION, MOUNT CEILING MOUNT SENSORS AWAY FROM DIFFUSERS AND THE PATH OF STRONG AIR TURBULENCE A MINIMUM OF FOUR FEET FOR STANDARD SENSITIVITY AND SIX FEET FOR MAXIMUM SENSITIVITY. 4. LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE TO COMPLETELY COVER THE CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. OCCUPANTS AT ANY LOCATION WITHIN THE ROOM(S).

PROVIDE THE QUANTITY OF ROOM CONTROLLERS AND POWER PACKS NEEDED TO CONTROL SWITCH LEGS AND VOLTAGES INDICATED.

6. UNLESS OTHERWISE INDICATED, ADJUST MOTION SENSOR TIME TO TURN OFF CONTROLLED LIGHTING AFTER 20 MINUTES.

7. INCLUDE TESTING BY AN INDEPENDENT THIRD PARTY TESTING AGENCY OR INDEPENDENT COMMISSIONING AGENT. TEST, CERTIFY, AND PROVIDE DOCUMENTATION OF LIGHTING CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANSI/ASHRAE/IES STANDARD 90.1-2013, SECTION 9.4.3 FUNCTION TESTING). CERTIFY OCCUPANCY SENSOR PARAMETERS, (REFER TO 9.4.3-b), VERIFY DAYLIGHT CONTROLS MEET CRITERIA (REFER TO 9.4.3-C). THE INDIVIDUAL(S) RESPONSIBLE FOR THE FUNCTIONAL TESTING MAY NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT. PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA. ALL ROOMS OR AREAS THAT DO NOT COMPLY SHALL BE NOTED AND PROBLEMS RESOLVED PRIOR TO RE-COMMISSIONING.

3. PROVIDE DAY LIGHT SENSORS WHERE LIGHTING FIXTURES FALL WITHIN TOP/SIDE LIGHTED AREAS FOR BOTH PRIMARY AND SECONDARY ZONES AS DEFINED BY ASHRAE 90.1-2013, SECTION 9.4.1.1-6. DAYLIGHT HARVESTING SHALL BE BASED ON 30 FOOTCANDLES UNLESS NOTED OTHERWISE.). INTEGRATE CONTROLS FOR UNDERCABINET LIGHTING TO PROVIDE AS MANUAL ON/AUTOMATIC OFF BY SAME SENSOR(S) SERVING GENERAL LIGHTING IN SPACE/ROOM.

10. IN ROOMS WITH PARTIAL ON CONTROL, PROGRAM ASSOCIATED SWITCH FOR FULL ON AND MANUAL OFF IN ADDITION TO AUTOMATIC OFF VIA OCCUPANCY SENSOR.



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KEY PLAN

OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

ISSUES / REVISIONS	
99% CD's	07/15/2020
100% CD's	07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

DRAWN BY SM

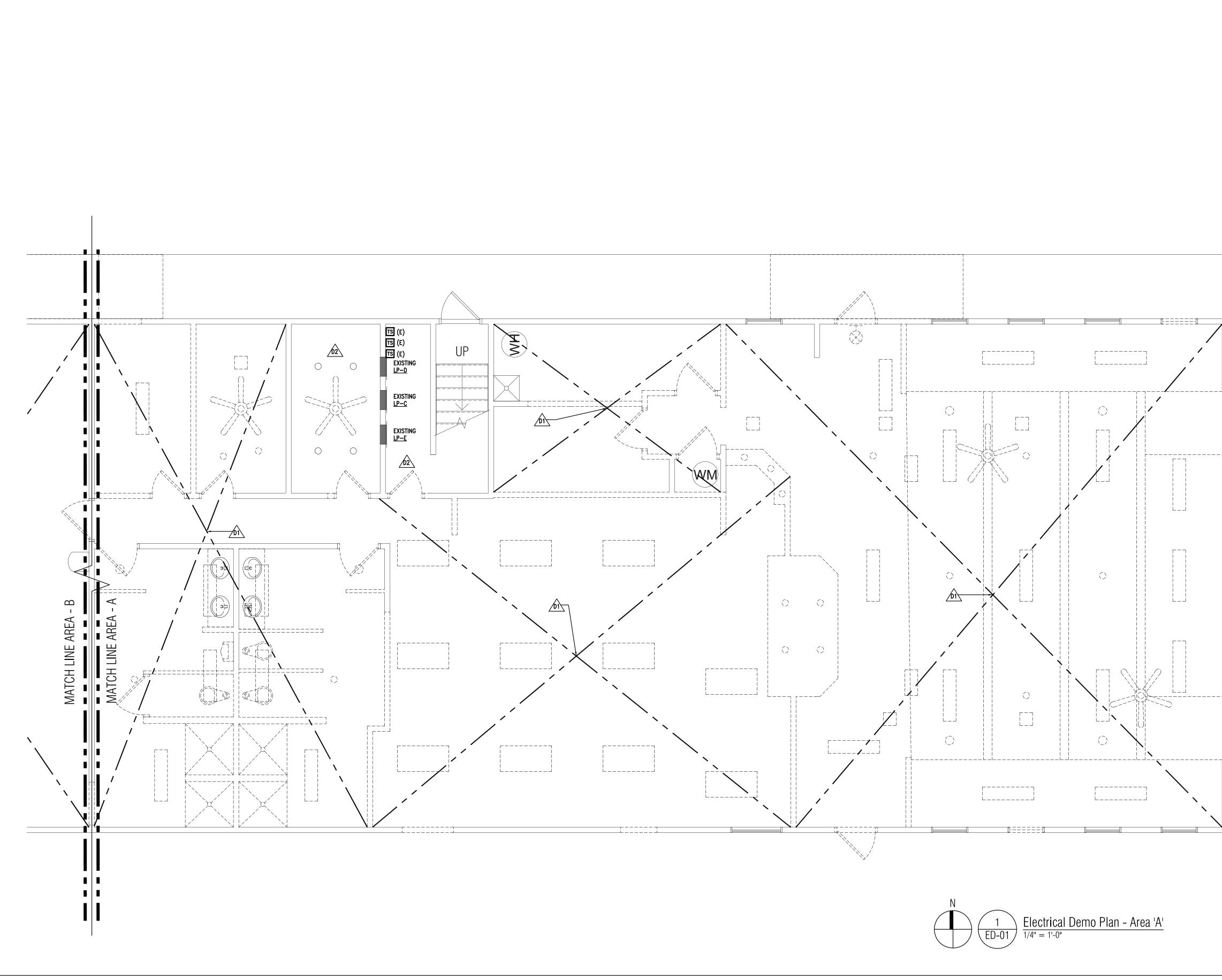
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MJM

SHEET NAME LIGHTING CONTROL MATRIX SCHEDULE

SHEET NO. E0-04



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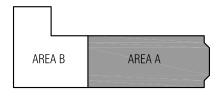
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ISSUES / REVISIONS 99% CD's 100% CD's 07/15/2020 07/30/2020 RE-BIDDING / CONSTRUCTION 09/14/2020

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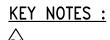
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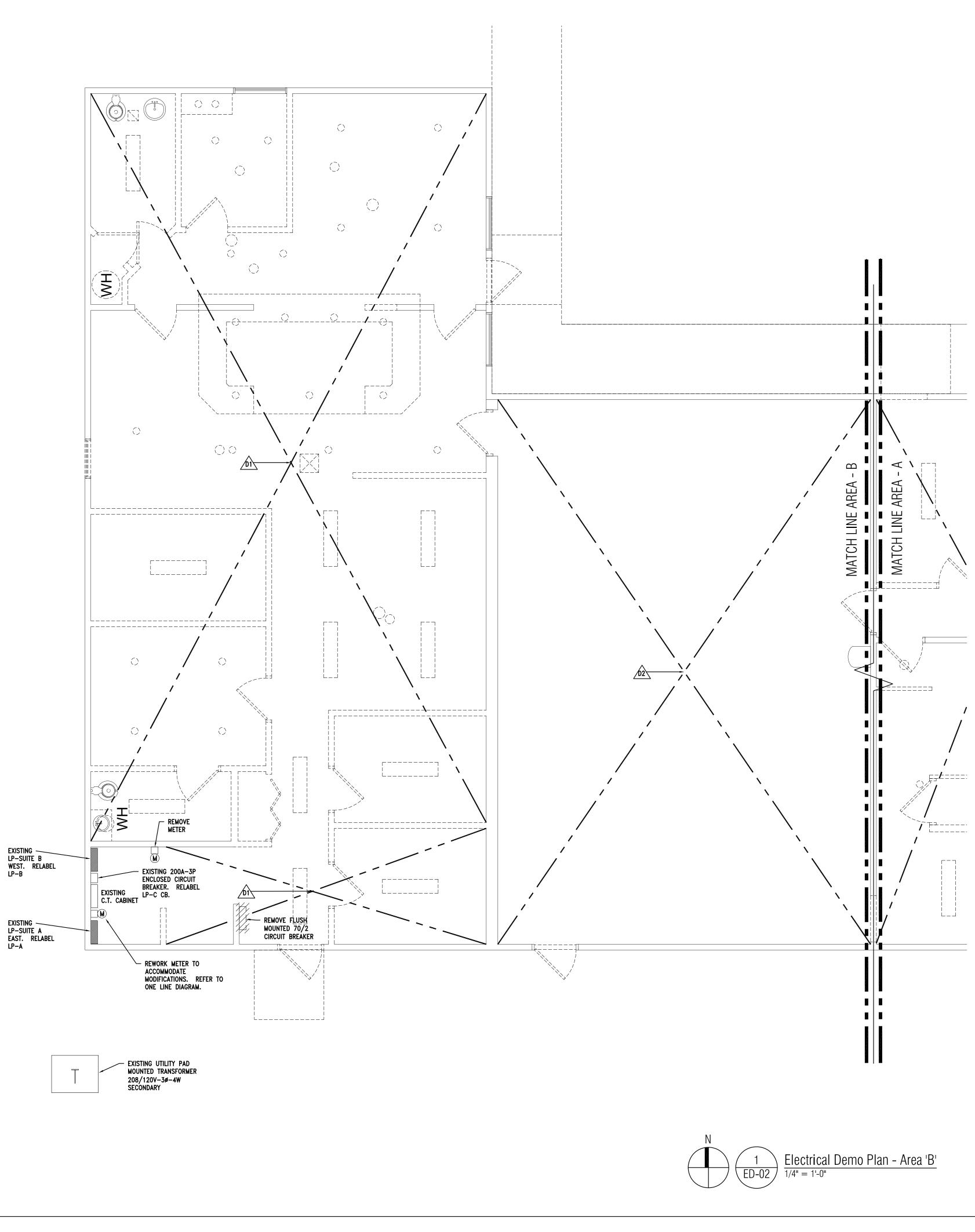
ELECTRICAL DEMO PLAN -AREA 'A'

SHEET NO. ED-01



 $2 \frac{1}{2}$ Remove all electrical equipment including light fixture, switches, receptacles AND ALL RELATED BRANCH WIRE AND CONDUIT BACK TO PANEL. UNLESS NOTED OTHERWISE.

D2 LIGHTING TO REMAIN.



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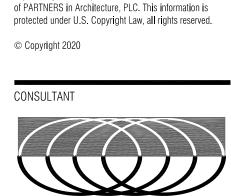
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<u>KEY NOTES :</u>

D1 REMOVE ALL ELECTRICAL EQUIPMENT INCLUDING LIGHT FIXTURE, SWITCHES, RECEPTACLES AND ALL RELATED BRANCH WIRE AND CONDUIT BACK TO PANEL. UNLESS NOTED OTHERWISE.

D2 LIGHTING TO REMAIN.





KEY PLAN



OWNER

Marine City 330 South Water St. Marine City, MI48039

PROJECT NAME

New Marine City Hall Renovation

260 South Parker St. Marine, MI 48039

PROJECT NO.

20-106

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100% CD's	07/30/2020

RE-BIDDING / CONSTRUCTION 09/14/2020

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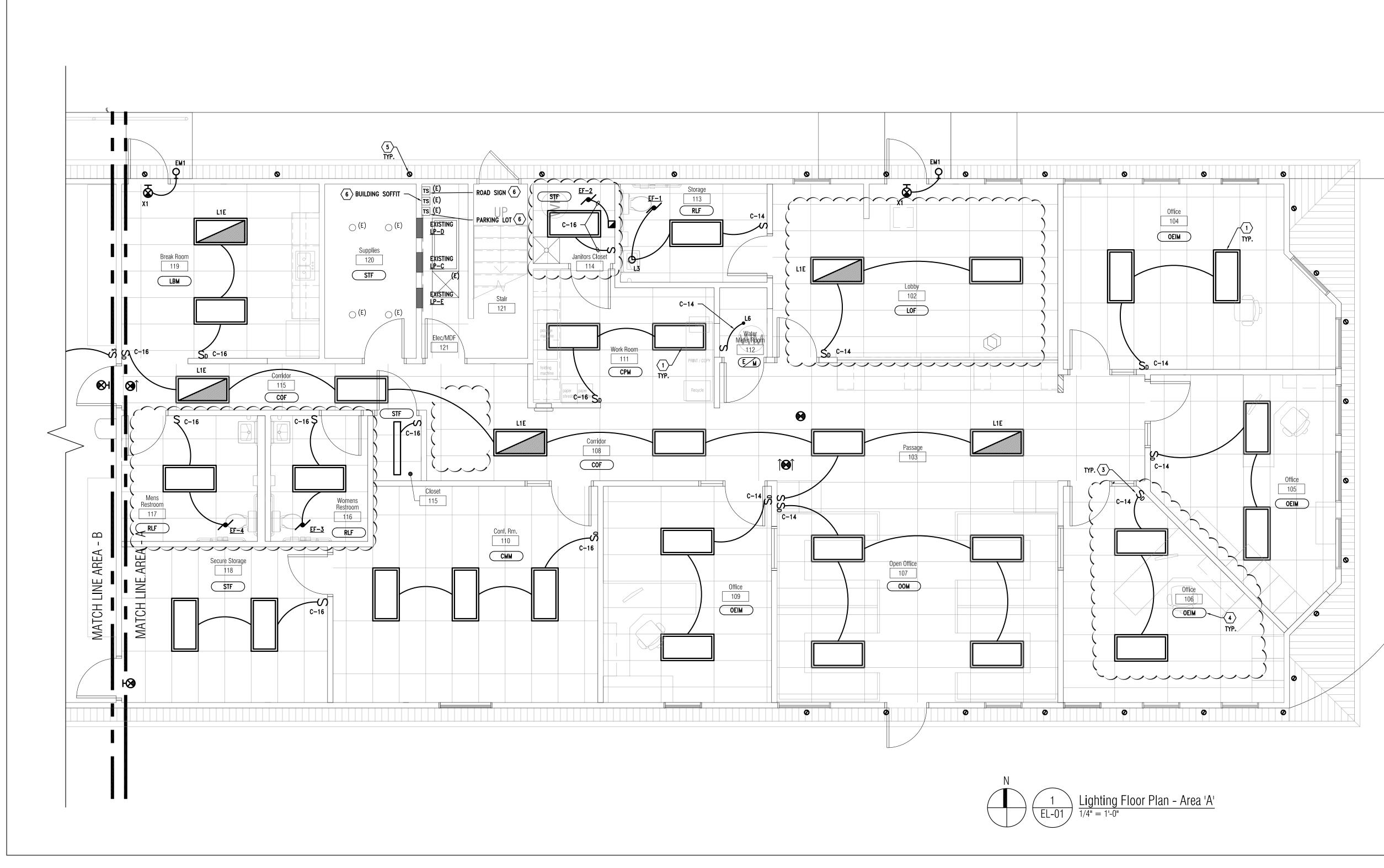
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MJM SHEET NAME

ELECTRICAL DEMO PLAN -AREA 'B'

SHEET NO. ED-02



HEET	NO.
EL-	-01

SHEET NAME LIGHTING FLOOR PLAN - AREA 'A'

RE-BIDDING / CONSTRUCTION 09/14/2020

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AREA A

VS 2

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KEY PLAN

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PROJECT NAME

Renovation

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PROJECT NO.

20-106

ISSUES / REVISIONS

07/15/2020

07/30/2020

99% CD's 100% CD's

AREA B

Marine City 330 South Water St.

Marine City, MI48039

New Marine City Hall

<u>KEY NOTES :</u>

NOTED.

(1) ALL 2x4 LIGHT FIXTURES ARE TYPE "L1", ALL 2x2 ARE TYPE "L2" UNLESS OTHERWISE

(3) MANUAL LIGHTING CONTROL LOCATION. REFER TO LIGHTING CONTROL MATRIX FOR FURTHER LIGHTING CONTROL REQUIREMENTS.

 $\langle 5 \rangle$ provide new trim and led lamp compatible with existing soffit light fixture

 $\langle 6 \rangle$ RE-USE TIME SWITCHES AS INDICATED. PROVIDE WITH NEW PHOTOCELL CONTROL.

 $\langle 2 \rangle$ All exit light fixtures are type "X" unless otherwise noted.

4 LIGHTING CONTROL MATRIX TAG – REFER TO LIGHTING CONTROL MATRIX.

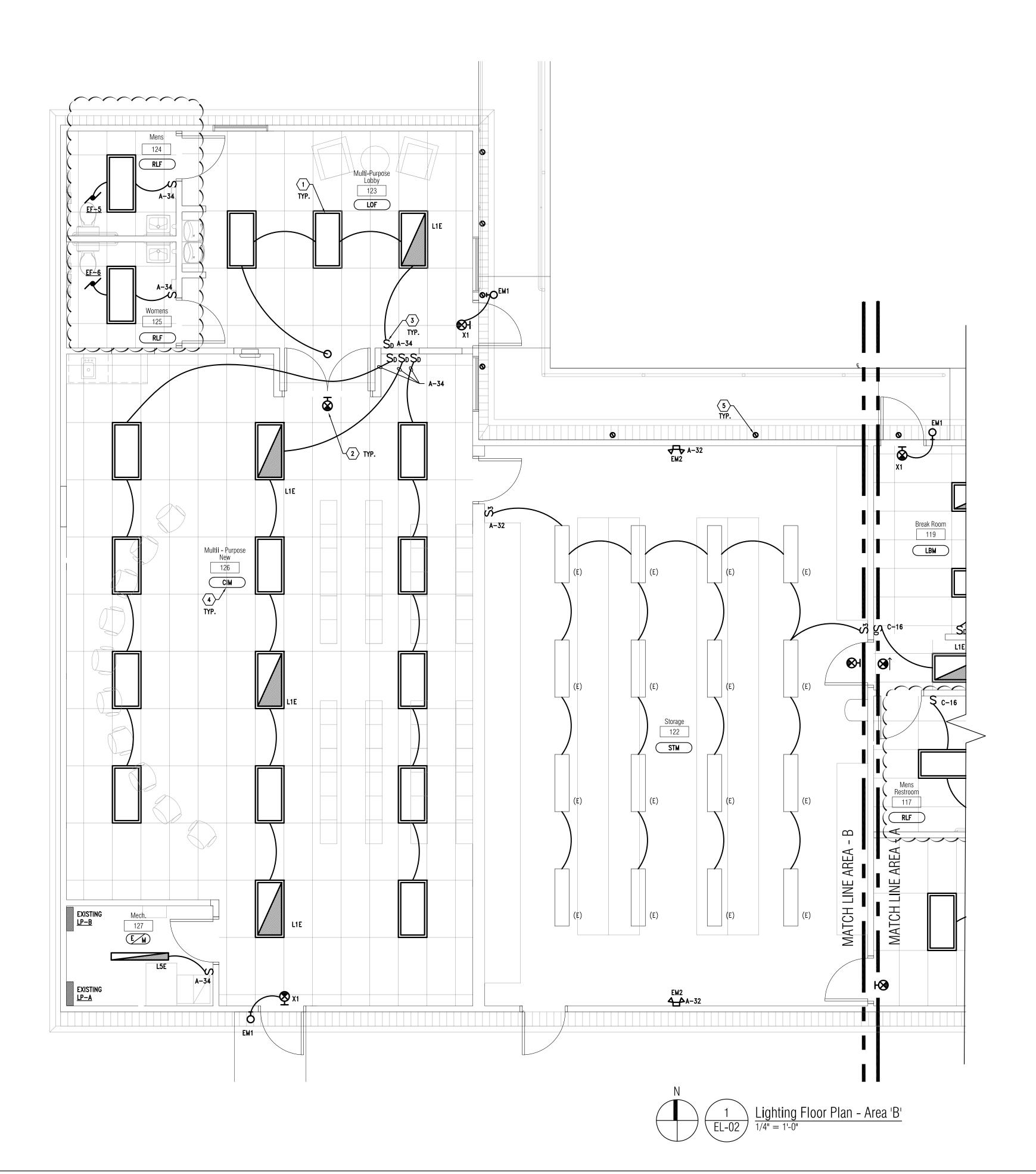
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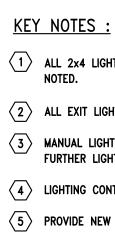
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- ALL 2x4 LIGHT FIXTURES ARE TYPE "L1", ALL 2x2 ARE TYPE "L2" UNLESS OTHERWISE NOTED.
- $\langle 2 \rangle$ All exit light fixtures are type "x" unless otherwise noted.
- **3** MANUAL LIGHTING CONTROL LOCATION. REFER TO LIGHTING CONTROL MATRIX FOR FURTHER LIGHTING CONTROL REQUIREMENTS.
- 4 LIGHTING CONTROL MATRIX TAG REFER TO LIGHTING CONTROL MATRIX.
- $\overline{(5)}$ provide new trim and led lamp compatible with existing soffit light fixture
- $\langle 6 \rangle$ RE-USE TIME SWITCHES AS INDICATED. PROVIDE WITH NEW PHOTOCELL CONTROL.



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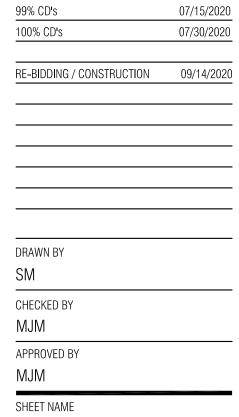
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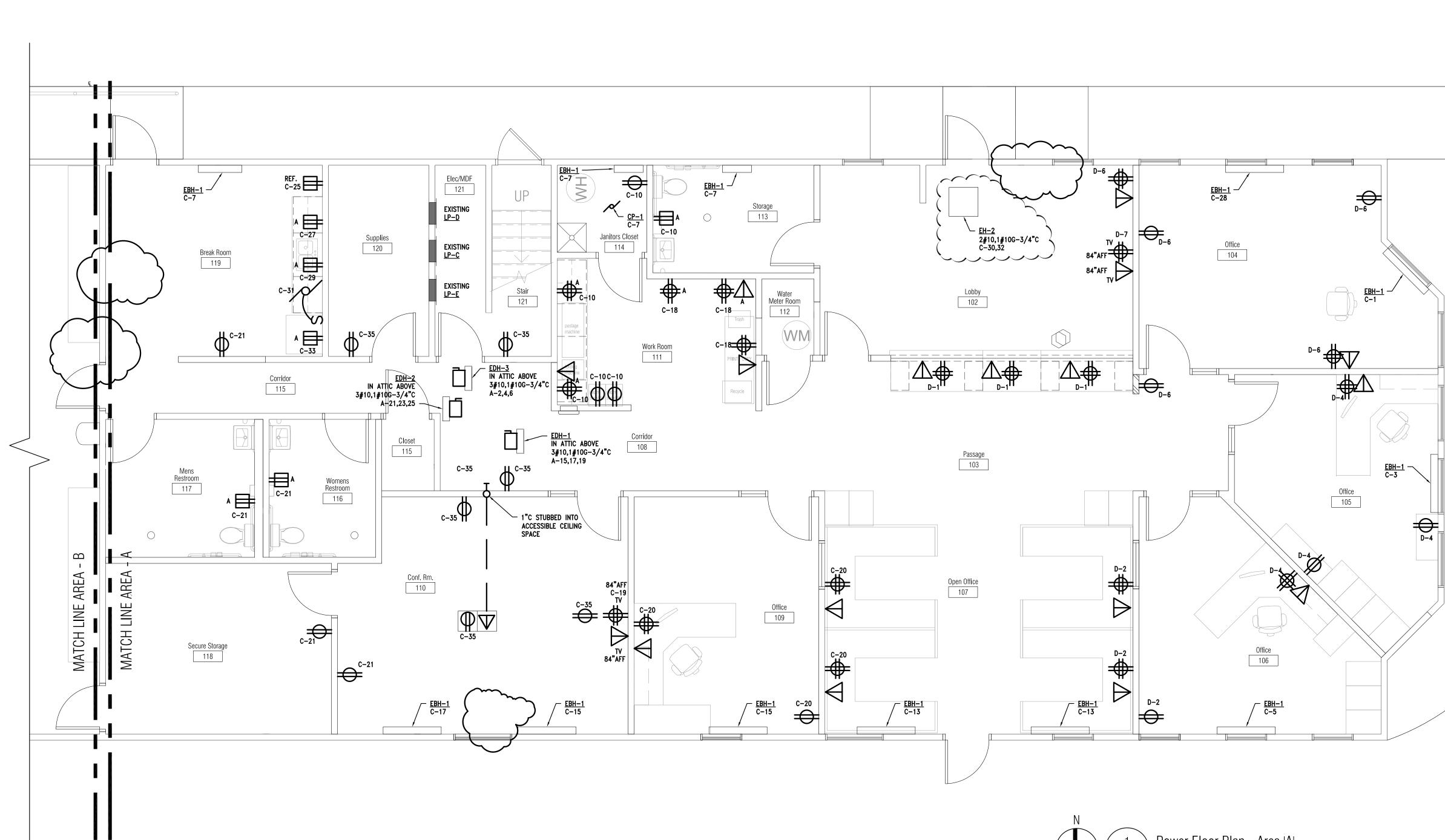
20-106

ISSUES / REVISIONS



LIGHTING FLOOR PLAN - AREA 'B'

SHEET NO. EL-02



 $(1) \quad Power Floor Plan - Area 'A'$ 1/4" = 1'-0"



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AREA E	3	AREA A

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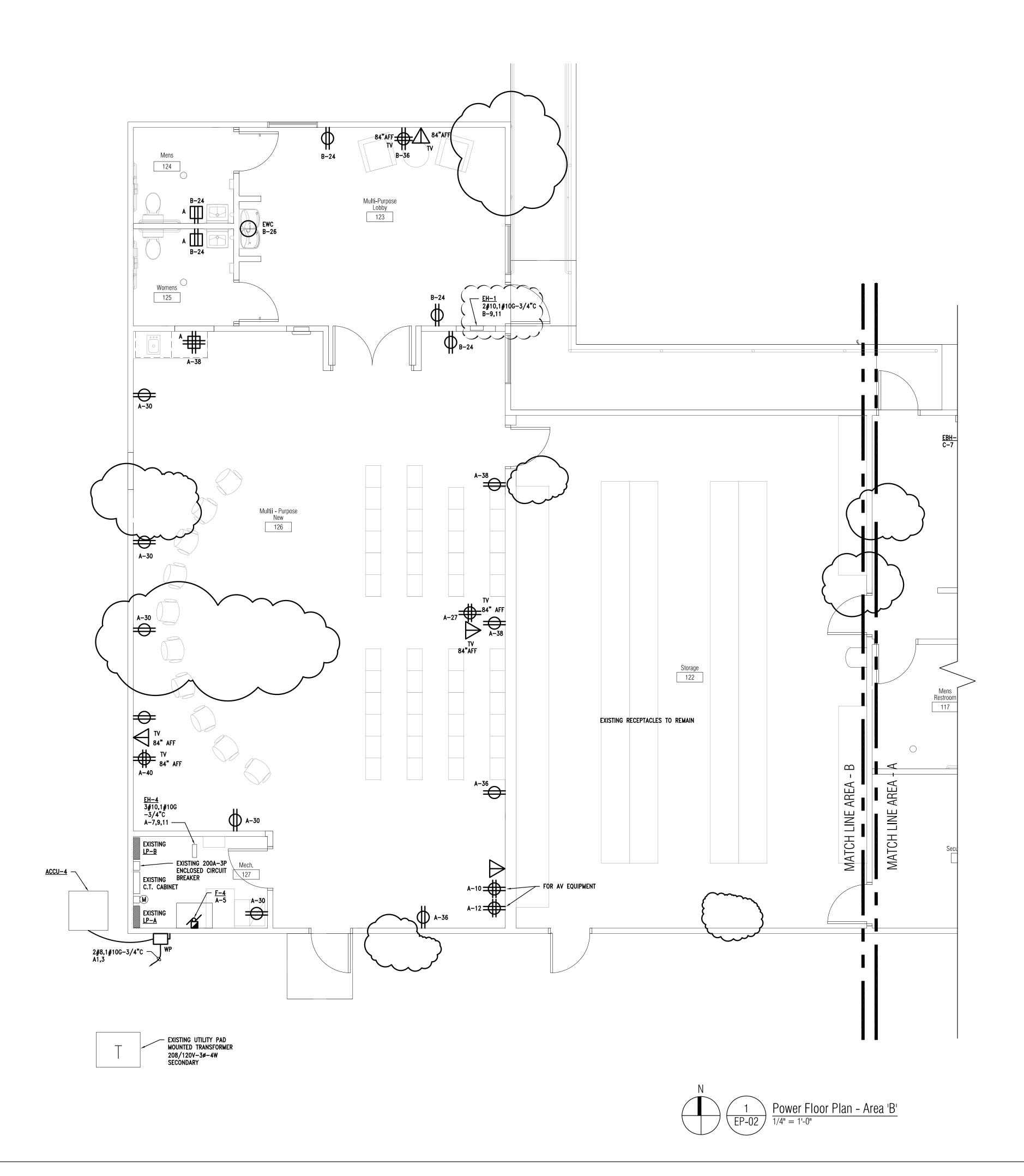
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ISSUES / REVISIONS 99% CD's 100% CD's 07/15/2020 07/30/2020 RE-BIDDING / CONSTRUCTION 09/14/2020 DRAWN BY SM CHECKED BY MJM APPROVED BY MJM SHEET NAME POWER FLOOR PLAN - AREA 'A'

SHEET NO. EP-01





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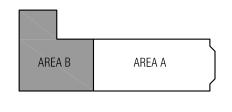
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100% CD's 07/30/2020
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RE-BIDDING / CONSTRUCTION 09/14/2020
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MJM
SHEET NAME
POWER FLOOR

PLAN – AREA 'B'

sheet no. EP-02