STANDARD ABBREVIATIONS

@	at	KO	knockout
A/C	air conditioning		
ACOUST	acoustical	LAM	laminate
AD	adjustable	LAV	lavatory
AFF	above finish floor	LH	left hand
ALT	alternate	LL	live load
ALUM	aluminum	LLH	long leg horizontal
ANCH	anchor, anchorage	LLV	long leg vertical
ARCH	architect/architectural	LTWT	light weight
BD	board		
BIT	bituminous	MB	markerboard
BLDG	building	MAS	masonry
BLK	block	MAX	maximum
BLKG	blocking	MECH	mechanic/mechanical
BM	bench mark	MET	metal
BOTT	bottom	MH	manhole
BRG	bearing	MIN	minimum
BSMT	basement	MISC	miscellaneous
		MO	masonry opening
C/C	center to center	MCJ	masonry control joint
CAB	cabinet	MT	metal threshold
CB	chalkboard/catch basin	MULL	mullion
CEM	cement		
CER	ceramic	NIC	not in contract
CF	cubic foot	NO	number
CHWR	chilled water return	NOM	nominal
CHWS	chilled water supply	NRC	noise reduction coefficient
CI	cast iron	NTS	not to scale
CJ	control joint		
CLG	ceiling	O/O	out to out
CMU	concrete masonry unit	OA	overall
CO	clean out	OC	on center
COL	column	OD	outside diameter
CONC	concrete	OPG	opening
CONST	construction	OPP	opposite
CONT	continuous/continuing	PCF	pounds per cubic foot
CONTR	contract/contractor	PLAS	plaster
CONV	convector	±	plus or minus
CRS	course(s)	PLF	pounds per lineal foot
CT	ceramic tile	PSF	pounds per square foot
CUH	cabinet unit ventilator	PSI	pounds per square inch
CW	domestic cold water	PART	partition
CY	cubic yard	PVC	polyvinyl chloride
		PMT	pavement
°	degree		
DET	detail		
DF	drinking fountain	R	riser/radius
DIAG	diagonal	RA	return air
DIA or Ø	diameter	RD	roof drain
DIM	dimension	REF.	reference
DIV	division	REF	refrigerator
DP	dampproofing	REINF	reinforce(d)/reinforcing
DS	downspout	RES	resilient
DWG	drawing	REV	revision(s)/revised
		RH	right hand
EA	each	RM	room
EIFS	exterior insulation finish system (synthetic plaster)	RO	rough opening
		ROW	right of way
		RS	roof sump
ELEC	electric/electrical	RWC	rainwater conductor
EQ	equal		
EQUIP	equipment	SAN	sanitary
EWC	electric water cooler	SD	storm drain
EXIST	existing	SECT	section
EXH	exhaust	SHT	sheet
EXT	exterior	SIM	similar
		SPEC	specification(s)
FA	fire alarm	SQ	square
FAI	fresh air intake	SS	service sink
FD	floor drain	SST	stainless steel
FE	fire extinguisher	STL	steel
FEC	fire extinguisher cabinet	STD	standard
FIN	finish(ed)	SUSP	suspended
FL	floor(ing)	SYM	symmetry/symmetrical
FOUND	foundation		
FTR	fin tube radiation	T&G	tongue/groove
FTG	footing	T	tread
		TB	tackboard
G	gas	TEL	telephone
GA	gage/gauge	TERR	terrazzo
GC	general contractor	THR	threshold
GI	galvanized iron	TV	television
GL	glass/glazing	TYP	typical
GST	glazed structural tile		
GALV	galvanized	UH	unit heater
		UR	urinal
HB	hose bibb	UV	unit ventilator
HDW	hardware		
HM	hollow metal	V	vent
HORIZ	horizontal	VERT	vertical
HGT	height		
HTG	heating	W	width/wide
HVAC	heating/ventilating/air conditioning	W/	with
HW	domestic hot water	WC	water closet
HWHR	hot water heating return	WD	wood
HWHS	hot water heating supply	WH	water heater
HWR	domestic hot water return	WI	wrought iron
		W/W	wall to wall
ID	inside dimension	WWR	welded wire reinforcement
INT	interior		
INV	invert		

SYMBOLS KEY

NORTH ARROW

NEW ELEVATION POINT

EXISTING ELEVATION POINT

ELEVATION TARGET

COLUMN NUMBER — COLUMN CENTERLINE

DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION

DETAIL NUMBER / SHEET NUMBER — WALL SECTION

1-A1 DET NUM - SHT NUM — DETAIL BUBBLE

WORKROOM 101 — ROOM NAME / ROOM NUMBER — ROOM NUMBER

100 — DOOR NUMBER

100 — WINDOW NUMBER

ELEVATION NUMBER / SHEET NUMBER — INTERIOR ELEVATION

001 — DEMOLITION NOTE

CODE SUMMARY

BUILDING CODES
- 2015 MICHIGAN BUILDING CODE (MBC)
- 2015 INTERNATIONAL FIRE CODE (IFC)
- 2015 MICHIGAN MECHANICAL CODE (IMC)
- 2015 MICHIGAN PLUMBING CODE (IPC)
- NEC 2017 (STATE OF MICHIGAN ELECTRICAL CODE)
  - 2017 NATIONAL ELECTRICAL CODE WITH PART 8 AMENDMENTS
- 2009 MICHIGAN UNIFORM ENERGY CODE - CHAPTER 5 & MICHIGAN UNIFORM ENERGY CODE, PART 10A RULES (ANSI/ASHRAE 90.1-2013)

BUILDING STANDARDS
- 2009 ICC ANSI A117.1 ACCESSIBILITY STANDARD
- 2013 NFPA 10 - STANDARD FOR PORTABLE FIRE EXTINGUISHERS
- 2013 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE
- 2018 NFPA 101 - LIFE SAFETY CODE

FIRE SUPPRESSION
- NO

USE AND OCCUPANCY CLASSIFICATIONS (CHAPTER 3)
- PROPOSED OCCUPANCIES
  - A-3 ASSEMBLY - 1,121 SF
  - S-2 STORAGE - 1,860 SF

SPECIAL DETAILED REQUIREMENTS (CHAPTER 4)
- NONE

GENERAL BUILDING HEIGHTS AND AREAS (CHAPTER 5)

ALLOWABLE HEIGHT = 40' (TABLE 504.3)
BUILDING HEIGHT = 18'-8"

ALLOWABLE STORIES = 1 (TABLE 504.4)
BUILDING STORIES = 1

ALLOWABLE AREA = 6,000 SF (TABLE 506.2)
EXISTING AREA = 3,222 SF GROSS

MIXED USE AND OCCUPANCY (SECTION 508)

SEPARATED OCCUPANCIES: (SECTION 508.3.3)
- REQUIRED SEPARATIONS OF OCCUPANCIES (TABLE 508.4)
  - AREA S-1 TO A-3 = 1 HOUR

INCIDENTAL USES (SECTION AND TABLE 509 AND 311.1.1)

AREA	SEPARATION
STORAGE = 81 SF < 100 SF <10%	0 HOUR

SPECIAL PROVISIONS (SECTION 510)
- NONE

BUILDING CONSTRUCTION TYPE- (TABLE 601)
- TYPE VB

FIRE RESISTANCE RATINGS

BUILDING ELEMENT	RATING REQUIRED	RATING PROVIDED	ASSEMBLY #
STRUCTURAL FRAME	0	0	0
BEARING WALLS			
EXTERIOR	0	0	0
INTERIOR	0	0	0
NON BEARING WALLS			
EXTERIOR	0	0	0
INTERIOR	0	0	0
FLOOR	0	0	0
ROOF	0	0	0

FIRE AND SMOKE PROTECTION FEATURES (CHAPTER 7)
ALLOWABLE AREA OF OPENINGS (TABLE 705.8)

WALL AREA	AREA OF OPENINGS PROPOSED	AREA OF OPENINGS ALLOWED
0 SF	0 SF	0 SF

FIRE RESISTANCE RATINGS	
FIRE WALLS (SECTION 706)	0 HOURS
FIRE BARRIERS (SECTION 707)	1 HOUR
FIRE PARTITIONS (SECTION 708)	0 HOURS
SMOKE BARRIERS (SECTION 709)	0 HOURS
SMOKE PARTITIONS (SECTION 710)	0 HOURS

INTERIOR FINISHES (CHAPTER 8)

USE GROUP	FINISH RATING
A-3	C

FIRE PROTECTION SYSTEMS (CHAPTER 9)
- SPRINKLER SYSTEM NONE

MEANS OF EGRESS (CHAPTER 10)
OCCUPANT LOAD (TABLE 1004.1.2)
LEVEL 1

FUNCTION	AREA	AREA/OCCUPANT	OCCUPANTS
ASSEMBLY	837 SF	15 SF NET	59

LEVEL 2

FUNCTION	AREA	AREA/OCCUPANT	OCCUPANTS
STORAGE	1,850 SF	500 SF GROSS	4

TOTAL OCCUPANTS 63

NUMBER OF EXITS (SECTION 1006) WARMING CENTER
SINGLE EXIT ALLOWABLE NO

NUMBER OF EXITS	REQUIRED	PROVIDED
	2	2

TOTAL EXIT WIDTH	REQUIRED	PROVIDED
	64"	64"

DISTANCE BETWEEN EXITS MINIMUM (SECTION 1007)

REQUIRED	PROVIDED
25'	39'

EXIT ACCESS TRAVEL DISTANCE MAXIMUM (SECTION 1017)

OCCUPANCY	W/O SPRINKLER	PROVIDED
ASSEMBLY	200'	39'

ACCESSIBILITY (CHAPTER 11)
ACCESSIBLE PARKING

SPACES PROVIDED	MIN. ACCESSIBLE SPACES
26 - 50	2

OWNER:
CITY OF OWOSSO
301 W. MAIN ST., OWOSSO, MI 48867
AMY FULLER
ASSISTANT TO THE CITY MANAGER
CITY OF OWOSSO
P: 989.725.0577
C: 989.494.7041
AMY.FULLER@CI.OWWOSO.MI.US

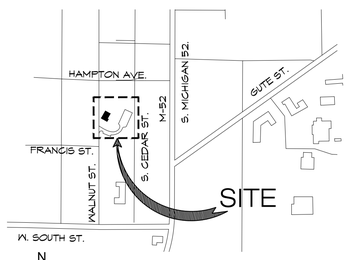
GRANT #RP20-0059

PROJECT:
GROVE HOLMAN PARK WARMING CENTER RENOVATION
1225 WALNUT ST., OWOSSO, MI 48867

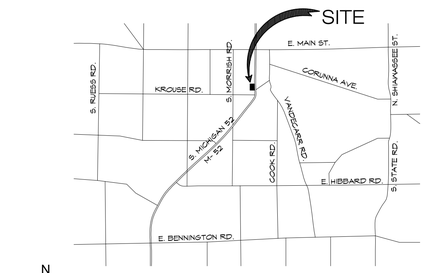
INDEX OF DRAWINGS

GENERAL NOTES

1. THE DRAWINGS ARE INTENDED TO SHOW DESIGN, GENERAL ARRANGEMENT, AND EXTENT OF THE WORK, AND ARE PARTLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED OR USED FOR ROUGH-IN MEASUREMENTS; NOT TO BE USED AS SHOP DRAWINGS. INADVERTENT DISCREPANCIES OR THE OMISSION OF NOTES OR DETAILS ON ANY DRAWING, BUT GIVEN ON ANOTHER DRAWING SHALL NOT BE CAUSE FOR ADDITIONAL CHARGE OR CLAIM.
2. NOTES IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS, AND NOT NOTED IN THE SPECIFICATIONS, IS OF LIKE EFFECT - AS IF SHOWN OR NOTED ON BOTH
3. IN CASES OF INCONSISTENCY, THE BETTER QUALITY OR GREATER QUANTITY SHALL BE PROVIDED
4. FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY DESIGN PROFESSIONAL AND OWNER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS DURING CONSTRUCTION.
6. CONTRACTOR SHALL PREVENT DAMAGE BY WEATHERPROOFING ALL OPENINGS. PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE NEW AND EXISTING BUILDING DURING CONSTRUCTION.
7. REPAIR ANY DISTURBED LANDSCAPING AND LAWN SURFACES DUE TO CONSTRUCTION TRAFFIC.



2 SITE MAP
NO SCALE



1 LOCATION MAP
NO SCALE

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

OWNER:
CITY OF OWOSSO
301 W. MAIN ST., OWOSSO, MI 48867

PROJECT:
GROVE HOLMAN PARK WARMING CENTER RENOVATION
1225 WALNUT ST., OWOSSO, MI 48867

NO.	DESCRIPTION	DATE
6		
5		
4		
3		
2		
1		

PROJECT NO. 21-450
DATE 8/5/2021
DRAWN BNR
CHECKED

SEAL

G001

CAD FILE NO. G001.dwg
SHEET 1 OF 22

PRELIMINARY 8/5/2021

PLOT DATE: 8/5/2021 11:36 AM
Z:\Projects\City of Owosso\21-450 Grove Holmer Park Warming Center\CAD\G001.dwg

SPECIFICATIONS:

DIVISION 1 - GENERAL REQUIREMENTS:

THESE DOCUMENTS AS INSTRUMENTS OF SERVICE ARE PROPERTY OF H2A ARCHITECTS INC. AND MAY NOT BE USED OR REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT OF H2A ARCHITECTS EXCEPT AS NECESSARY TO COMPLETE THE WORK HEREIN DESCRIBED FOR A SINGLE USE FOR THIS PROJECT.

CONTRACTOR SHALL REVIEW ALL DOCUMENTS AND FIELD CONDITIONS AND NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES.

H2A'S SCOPE OF SERVICE MAY OR MAY NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTORS WORK AND PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES, AND THAT SUCH SERVICE MAY BE PROVIDED FOR BY THE CLIENT. IN SUCH CASE THE ENTITY PERFORMING THOSE RESPONSIBILITIES ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE DOCUMENTS AND FOR CONSTRUCTION OBSERVATION, AND THE CLIENT AND THE CONTRACTOR WAIVES ANY CLAIMS AGAINST H2A AND THEIR CONSULTANTS THAT MAY BE IN ANY WAY CONNECTED THERETO.

WARRANTY:
THE CONTRACTOR SHALL PROVIDE A ONE-YEAR WARRANTY ON ALL WORK. WARRANTY SHALL BEGIN AT THE DATE OF SUBSTANTIAL COMPLETION.

SCHEDULE:
THE CONTRACTOR SHALL SCHEDULE WORK TO PROGRESS AT A RATE SO AS TO ACCOMMODATE CONSTRUCTION OPERATIONS AND SO AS TO PROVIDE A MINIMUM DISRUPTION TO THE OWNER AND THE OWNERS SCHEDULE.

INSURANCE:
THE CONTRACTOR SHALL PAY FOR AND CARRY ALL NECESSARY INSURANCE INCLUDING BUT NOT LIMITED TO WORKMAN'S COMPENSATION, GENERAL LIABILITY INSURANCE AND AUTOMOBILE INSURANCE. THE OWNER AND H2A ARCHITECTS (AND OWNERS REPRESENTATIVE, SHALL BE ADDITIONALLY INSURED AND SHALL BE HELD HARMLESS AGAINST ALL LOSES, EXPENSES AND CLAIMS FOR DEATH, DISEASE, OR PERSONAL INJURY AND PROPERTY DAMAGE ARISING OUT OF WORK DONE BY THE CONTRACTOR OR SUB-CONTRACTORS. THE CONTRACTOR SHALL NOTIFY THE OWNER AND H2A ARCHITECTS OF ANY CHANGES TO INSURANCE COVERAGE.

CORRELATION AND INTENT OF DRAWINGS:
ANY DRAWING IN WHICH A PORTION OF THE WORK IS DETAILED OR DRAWN OUT AND THE REMAINDER IS SHOWN IN OUTLINE, THE PART DETAILED OR DRAWN OUT WILL ALSO APPLY TO ALL OTHER LIKE PORTIONS OF THE WORK. WHEN THE WORD 'SIMILAR' APPEARS ON DRAWING, IT HAS A GENERAL MEANING AND IS NOT TO BE INTERPRETED AS MEANING IDENTICAL, AND ALL DETAILS SHALL BE WORKED OUT IN RELATION TO THEIR LOCATION AND CONNECTION TO THE WORK. IN CASE OF INCONSISTENCY BETWEEN DOCUMENTS THE BETTER QUALITY OR BETTER QUANTITY OF WORK SHALL BE PROVIDED. IN CASE OF ANY DISCREPANCY IN FIGURES OR DRAWINGS, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO H2A ARCHITECTS FOR CLARIFICATION OR INTERPRETATION. ANY ADJUSTMENT MADE BY THE CONTRACTOR WITHOUT SUCH A DETERMINATION, WILL BE AT THE CONTRACTOR'S OWN RISK AND EXPENSE.

COMPLIANCE WITH CODES AND REGULATIONS:
THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE BUILDING CODES IN EFFECT AT THE TIME OF PREPARATION AND AS DESIGNATED IN THE 'CODE DATA' SECTION OF THE DRAWINGS. CONTRACTOR SHALL COMPLETE THE WORK IN ACCORDANCE WITH ALL CODES AND REGULATIONS IN EFFECT AT THE TIME OF THE REQUEST FOR BUILDING PERMIT WHETHER LISTED IN THE 'CODE DATA' OR NOT.

PERMITS:
THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.

COORDINATION:
THE CONTRACTOR SHALL LOCATE AND BUILD INTO THE WORK INSERTS, ANCHORS, ANGLES, PLATES, OPENINGS, SLEEVES, HANGARS, SLAB DEPRESSIONS, ACCESS PANELS AND PITCHES AS MAY BE REQUIRED TO ATTACH AND ACCOMMODATE THE WORK.

QUALITY ASSURANCE:
THE CONTRACTOR SHALL PERFORM THE WORK USING PERSONNEL SKILLED IN THE TRADE/TYPE OF WORK.

TEMPORARY CONTROLS:
THE CONTRACTOR SHALL PROVIDE TEMPORARY ENCLOSURE FOR PROTECTION OF CONSTRUCTION IN PROGRESS AND COMPLETED WORK TO PROTECT THE WORK FROM DAMAGES OR INCIDENTAL DAMAGES TO OTHER WORK. COORDINATE ENCLOSURE WITH DRYING/CURING AND VENTILATING REQUIREMENTS FOR WORK. THE CONTRACTOR SHALL PROVIDE TEMPORARY HEAT WHERE HEAT IS NEEDED TO MAINTAIN APPROPRIATE TEMPERATURES FOR EXECUTING WORK OR CURING/DRYING OF THE WORK. TEMPORARILY CLOSE OPENINGS IN FLOORS/ROOFS OR WALKING SURFACES WITH LOAD-BEARING WOOD OR METAL FRAME CONSTRUCTION.

JOB CONDITIONS:
DISPOSE OF MATERIALS ON A REGULAR BASIS AT A LANDFILL APPROPRIATE TO THE MATERIALS BEING DISPOSED OF. DISPOSE OF HAZARDOUS, DANGEROUS OR UNSANITARY WASTE IN A LAWFUL MANNER . KEEP SITE CLEAN AND FREE OF DEBRIS AND REFUSE ON A DAILY BASIS. DO NOT BURN OR BURY MATERIALS ON SITE. RESTORE AND REPAIR ANY AREAS DAMAGED DURING CONSTRUCTION. PROTECT ALL AREAS ADJACENT TO CONSTRUCTION.

SUBSTITUTIONS:
WHERE SPECIFIC PRODUCTS ARE LISTED THE CONTRACTOR SHALL PROVIDE THE PRODUCT NAMED. ONLY IN CASES OF UNAVAILABILITY MAY ANOTHER PRODUCT BE SUBSTITUTED. WHERE PRODUCT IS LISTED WITH 'OR EQUAL' CONTRACTOR MAY PROVIDE A PRODUCT EQUAL IN QUALITY AND PERFORMANCE TO THE NAMED PRODUCT. WHERE PRODUCT PERFORMANCE ONLY IS LISTED, THE CONTRACTOR MAY PROVIDE ANY PRODUCT MEETING THE PERFORMANCE CRITERIA.

PROPOSED PRODUCT SUBSTITUTIONS THAT PROVIDE THE OWNER WITH A SUBSTANTIAL COST, TIME, OR ENERGY ADVANTAGE MY BE GIVEN CONSIDERATION. SUCH SUBSTITUTIONS SHALL NOT BE ALLOWED IF THEY CHANGE THE STRUCTURAL INTEGRITY, FIRE RESISTANCE, BURNING CHARACTERISTICS, OR LIFE EXPECTANCY OF THE PRODUCT OR SYSTEMS.

FINAL CLEANING:
THE CONTRACTOR SHALL EMPLOY EXPERIENCED PROFESSIONAL CLEANERS FOR THE FINAL CLEANING. CLEANING PROCEDURES SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS. CLEAN ALL PRODUCTS AND SURFACES EXPOSED TO VIEW OR ACCESSIBLE FOR A DUST-FREE, STAIN-FREE, AND FILM-FREE CONDITION.

PROJECT CLOSE-OUT:
THE CONTRACTOR SHALL PROVIDE OWNER WITH TRAINING ON EQUIPMENT OPERATIONS. PROVIDE ALL MAINTENANCE AND OPERATIONS MANUALS. PROVIDE ALL WARRANTIES AND GUARANTEES. PROVIDE SPARE PARTS AND EXTRA MATERIALS TO OWNER.

PAYMENT:
SUBMIT PAY APPLICATIONS FOR THE WORK COMPLETED TO DATE IN THE AMOUNT OF 90% OF THE WORK COMPLETED. SUBMIT WAIVERS OF LIEN WITH ALL PAY REQUESTS BEGINNING WITH PAY APPLICATION No. 2. PAY REQUESTS SHALL BE ITEMIZED AND NOTARIZED. WHEN REQUESTED, SUBMIT ON AIA G702 FORMS. THE FINAL PAY APPLICATION/RELEASE OF RETENTION SHALL BE SUBMITTED AFTER ALL WORK AND PUNCH LISTS HAVE BEEN COMPLETED AND A CERTIFICATE OF SUBSTANTIAL COMPLETION HAS BEEN ISSUED. IT SHALL BE ACCOMPANIED BY FULL WAIVERS OF LIEN, CONSENT OF SURETY, CERTIFICATE OF OCCUPANCY, AND ALL CLOSE-OUT DOCUMENTS.

DIVISION 2 - DEMOLITION:

OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL MATERIALS AND FIXTURES REMOVED FROM BUILDING. SAVE EXISTING GREEN PENDANT LIGHT FIXTURES FOR REFURBISHMENT AND REUSE.

PROVIDE, ERECT, AND MAINTAIN TEMPORARY BARRIERS. PREVENT MOVEMENT OR SETTLEMENT. PROTECT ITEMS TO REMAIN. CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH ADJACENT STRUCTURES, SITE AREAS AND WITH A MINIMUM INTERFERENCE TO PUBLIC OR PRIVATE ACCESS.

DISCONNECT, REMOVE, CAP AND IDENTIFY UTILITIES WITHIN DEMOLITION AREA. UNDERTAKE DEMOLITIONS OF COMPONENTS AS INDICATED AND IN AN ORDERLY AND CAREFUL MANNER. PROVIDE ALL TEMPORARY SHORING AND SUPPORT. CEASE OPERATIONS IMMEDIATELY IF STRUCTURE OR ADJACENT STRUCTURES APPEAR TO BE IN DANGER AND NOTIFY DESIGN PROFESSIONAL. REMOVE FOUNDATIONS COMPLETELY, DO NOT LEAVE PORTIONS BELOW GRADE OR BELOW NEW CONSTRUCTION.

TAKE ACTIONS TO MINIMIZE DUST AND AIR-BORNE DEBRIS. REMOVE DEMOLISHED MATERIALS FROM SITE AS WORK PROGRESSES. MAINTAIN WORK AREA IN CLEAN CONDITION. DO NOT BURN OR BURY MATERIALS ON SITE.

DIVISION 3 - CONCRETE:

MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4500 PSI FOR FOUNDATIONS AND 4000 PSI FOR FLOOR SLABS.

SLABS ON GRADE SHALL BE MINIMUM 4 INCH THICK AND REINFORCED WITH 6 x 6 x W2.9 xW2.9 WWF WITH MINIMUM EDGE AND END LAPS OF 8 INCHES. PLACE ON A MINIMUM 10 MIL POLYETHYLENE VAPOR BARRIER OVER A MINIMUM 4" SAND BASE COMPACTED TO 95% PROCTOR. PLACE CONTROL JOINTS AS INDICATED ON DRAWINGS OR A MAXIMUM OF 12' APART. JOINTS TO BE 25% OF THE DEPTH OF THE SLAB. PROVIDE ISOLATION JOINTS TO SEPARATE SLAB FROM OTHER BUILDING MEMBERS, COLUMNS, WALLS, EQUIPMENT FOUNDATIONS, FOOTINGS, STAIRS, SUMPS, AND DRAINS. USE PREFABRICATED JOINT FILLER OR SEALANT. FLOOR FLATNESS TO BE NO MORE THAN 1/8" IN 10'. IN AREAS WITH FLOOR DRAINS, MAINTAIN FLOOR ELEVATION AT WALLS AND PITCH SURFACES TO DRAINS AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE. WHERE CONCRETE FLOOR IS TO RECEIVE ADHERED FINISHED, PROVIDE 1100 CLEAR CURING COMPOUND BY W.R. MEADOWS. WHERE CONCRETE FLOOR IS TO RECEIVE HARD SURFACES, NO CURE/SEAL SHALL BE PROVIDED. SURFACES SCHEDULED TO REMAIN EXPOSED SHALL RECEIVE LIQUID CURING COMPOUND EQUAL TO VOCOMP-25 BY W. R. GRACE. NEW CONCRETE FLOORS SUBJECT TO INTERIOR VEHICULAR TRAFFIC, SERVICE, OR HEAVY USE SHALL RECEIVE CURING, SEALING, AND HARDENING COMPOUND EQUAL TO "ASHFORD FORMULA". WHERE WATERSTOPS, SLAB ISOLATION JOINT FILLERS, OR OTHER CONCRETE ACCESSORIES ARE INDICATED, PROVIDE APPROPRIATE PRODUCTS FROM W. R. GRACE. PROVIDE BROOM FINISH AT EXTERIOR SLABS.

WHERE INDICATED REINFORCEMENT STEEL BARS SHALL BE ASTM A615/A615M GRADE 60 DEFORMED BILLET STEEL BARS. STEEL WELDED WIRE REINFORCEMENT SHALL BE ASTM 1185/A185M PLAIN TYPE, FLAT SHEET, SIZE AND GAUGE AS INDICATED ON DRAWINGS. WIRE TIES TO BE ANNEALED, MIN 16 GAUGE.

PROVIDE MINIMUM CONCRETE COVER FOR REINFORCEMENT. CAST AGAINST EARTH - 3 INCHES OR AS NOTED ON DRAWINGS. EXPOSED TO WEATHER - 2 INCHES OR AS NOTED ON DRAWINGS. NOT EXPOSED TO EARTH OR WEATHER PRIMARY REINFORCEMENT IN BEAMS AND COLUMNS - 1 1/2 INCHES OR AS NOTED ON DRAWINGS. NOT EXPOSED TO EARTH OR WEATHER SECONDARY REINFORCEMENT IN SLABS AND WALLS - 3/4 INCH OR AS NOTED ON DRAWINGS.

PLACE CONCRETE STRUCTURAL MEMBERS IN THEIR FULL DEPTH IN ONE OPERATION.

DIVISION 3 - CONCRETE, cont.

REPRESENTATIVE CONCRETE TEST CYLINDERS SHALL BE TAKEN EACH DAY OF CONCRETE OPERATIONS. ANY WORK FOUND TO NOT MEET SPECIFICATIONS SHALL BE REMOVED AND REPLACED.

POUR FOOTINGS IN CONTINUOUS POUR ON UNDISTURBED SOIL. DO NOT PLACE CONCRETE ON FROZEN GROUND OR IN FREEZING CONDITIONS.

CONCRETE FLOOR POLISHING: REMOVE EXISTING FLOOR COVERING MATERIALS, SEAL CRACKS AND JOINTS WITH EPOXY FILLER, DIAMOND POLISH CONCRETE FLOOR WITH POWER DISC MACHINE TO LEVEL 1 - CREAM, LOW GLOSS FINISH. PROVIDE HARDENER/DENSIFIER BY L & M CONSTRUCTION CHEMICALS - FGS HARDENER PLUS. INSTALL PER MANUFACTURERS REQUIREMENTS, OBSERVE REQUIRED RINSE WATER DISPOSAL REQUIREMENTS OF LOCAL ORDINANCE. STATIC COEFFICIENT OF FRICTION TO BE NOT LESS THAN 0.5 AND DYNAMIC COEFFICIENT OF FRICTION TO BE NOT LESS THAN 0.6. IF LEVELS ARE UNACHIEVABLE BY THIS PROCESS, NOTIFY THE ARCHITECT AND OWNER IMMEDIATELY.

DIVISION 4 - MASONRY:

MORTAR AND GROUT:
FOR FOUNDATIONS AND WALLS OF UNHEATED BUILDINGS PROVIDE TYPE 'S' FOR ALL LOCATIONS UNLESS OTHERWISE NOTED. FOR EXTERIOR WALLS OF HEATED BUILDINGS PROVIDE TYPE 'N'. FOR INTERIOR WALLS PROVIDE TYPE 'N' FOR LOADBEARING AND TYPE 'O' FOR NON-LOADBEARING LOCATIONS.

GROUT SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI.

CONCRETE BLOCK SHALL BE ASTM C90 NORMAL WEIGHT STANDARD 16 x 8 WITH NOMINAL DEPTHS AS INDICATED ON DRAWINGS. PROVIDE INTEGRAL WATERPROOFING EQUAL TO 'DRY-BLOCK' FOR SINGLE WYTHE EXTERIOR WALLS. COLOR AND TEXTURE OR PATTERN AS INDICTED ON DRAWINGS. BULLNOSE ALL OPENINGS IN BLOCK WALLS.

BRICK SHALL BE ASTM C 62, GRADE SW, TYPE FBS, RATED "NOT EFFLORESCED". COLOR TO BE SELECTED BY THE ARCHITECT.

HORIZONTAL JOINT REINFORCEMENT SHALL BE EQUAL TO 220 LADDER MESH BY HOHNMANN AND BARNARD, HOT DIPPED GALVANIZED AND SHALL BE PLACED 16" O.C. OTHER REINFORCEMENTS INDICATED SHALL ALSO BE EQUIVALENT TO HOHNMANN AND BARNARD PRODUCTS.

BRICK TIES SHALL BE TWO-PIECE ADJUSTABLE, HOT DIPPED GALVANIZED STEEL WIRE ROD TYPE. AS MANUFACTURED BY WIRE-BOND OR EQUAL IN CAVITY WALL CONSTRUCTION. WHEN USING CMU AS BACK-UP WALL, LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH ADJUSTABLE BRICK TIES MAY BE USED, SERIES 600 WIRE-BOND OR EQUAL. SPACE TIES 16" O.C. VERTICALLY AND 16" O.C. HORIZONTALLY. TIES SHALL EXTEND MAX 2 1/2" INTO BRICK AND NO LESS THAN 1 1/2".

VERTICAL BARS SHALL BE PROVIDED AS SHOWN ON DRAWINGS AND SHALL BE FULLY GROUTED IN THE CORES OF THE CMU AND SHALL BE LAPPED NOT LESS THAN 24 INCHES. FOR SINGLE WYTHE CMU WALLS, PROVIDE FOAM INSULATION IN CORES WHERE THERE IS NO REINFORCEMENT.

FLASHING FOR SINGLE WYTHE CONSTRUCTION SHALL CONSIST OF PAN, WEB SPACER/BRIDGE UNIT AND DRAINAGE MATT EQUAL TO 'BLOCK FLASH'.

FLASHING FOR MULIT-WYTHE WALLS SHALL BE EQUAL TO 'PERMA-BARRIER WALL FLASHING'.

PROVIDE METAL THRU-WALL FLASHING WHERE ATTACHED TO METAL STUD BACK-UP. FABRICATE METAL FLASHING FROM 28-GAUGE STAINLESS STEEL. PROVIDE 2-PIECE SYSTEM. OVERLAP 2 PIECES MINIMUM 4 INCHES.

USE FLEXIBLE FLASHING WHERE ATTACHMENT IS TO CMU BACK-UP. USE FLASHING TYPE AS INDICATED ON THE DRAWINGS: 1) COPPER-LAMINATED FLASHING: 7 OZ./SQ.FT. COPPER. MULTIPLE LAYER CONFIGURATION BONDED BETWEEN TWO LAYERS OF ASPHALTIC COATED GLASS-FIBER CLOTH. USE ONLY WHERE FLASHING IS FULLY CONCEALED IN MASONRY. PROVIDE 12 OZ. PRE-FORMED CORNERS. 2) SELF-ADHERED AIR BARRIER MEMBRANE: 0.40-INCH-THICK MEMBRANED OF SELF-ADHESIVE RUBBERIZED ASPHALT INTEGRALLY BONDED TO CROSS-LAMINATED, HIGH DENSITY POLYETHYLENE FILM. GRACE PERM-A-BARRIER WALL MEMBRANE OR EQUAL.

PROVIDE FLASHING MANUFACTURER'S STANDARD PRODUCTS OR PRODUCTS RECOMMENDED BY FLASHING MANUFACTURER FOR BONDING FLASHING SHEETS TO EACH OTHER AND TO SUBSTRATES.

FOR MULTI-WYTHE WALLS PROVIDE WEEPS AT 24 INCHES ON CENTER AT BOTTOM OF WALL ABOVE GRADE, ABOVE THRU-WALL FLASHINGS AND ABOVE LINTELS. PROVIDE TOP OF WALL VENTS IN HEAD JOINTS AT 24 INCHES ON CENTER AT THE TOP OF WALLS AND BELOW LINTELS. PROVIDE CAVITY MORTAR CONTROL, MORTAR DIVERTER, CELLULAR PLASTIC WEEPS/VENTS FULL HEIGHT AND WIDTH OF HEAD JOINT AS MANUFACTURED BY MORTAR NET USA, HECKMANN BUILDING PRODUCTS OR EQUAL.

COURSING SHALL BE RUNNING BOND WITH CONCAVE MORTAR JOINTS UNLESS NOTED OTHERWISE.

GROUT SOLID TOP 3 BLOCK UNDER ALL BEAM, LINTEL, OR COLUMN BEARING POINTS.

CLEAN MASONRY TO REMOVE EXCESS MORTAR AND DROPPINGS. USE SURE KLEAN 600 BY PROSOCO OR EQUAL.

BRICK VERTICAL AND HORIZONTAL EXPANSION JOINTS TO BE PRE-MOLDED FILLER STRIPS ASTM D1056, GRADE 2A1, COMPRESSIBLE UP TO 50%, FORMULATED FROM CLOSED CELL EXPANDED RUBBER, 3/8" x 3". PROVIDE EXPANSION JOINTS AS INDICATED ON DRAWINGS.

MASONRY CONTROL JOINTS SHALL BE PER NCMA STANDARDS AND SHALL BE NOT LESS THAN 1.5 TIMES WALL HEIGHT AND NOT LESS THAN 25' INTERVALS FOR WALLS AND 20' INTERVALS FOR VENEERS.

DIVISION 5 - METALS:

STEEL SECTIONS SHALL BE 36 KSI UNLESS NOTED OTHERWISE.

PROVIDE SHOP DRAWINGS FOR STRUCTURAL MEMBERS INCLUDING COLUMNS, BEAMS, JOISTS, DECKING, AND MISC PIECES.

ANCHOR BOLTS SHALL BE MINIMUM 1/2 INCH DIAMETER, WITH 18 INCHES EMBEDMENT AND 2 INCH RIGHT ANGLE BEND INTO CONCRETE FOOTINGS OR PIERS.

LINTELS SHALL BE PROVIDED FOR EACH 4 INCH WYTHE OF MASONRY. PROVIDE 3 1/2 x 3 1/2 x 5/16 INCH ANGLE FOR OPENINGS UP TO 4'-0". PROVIDE 4 x 3 1/2 x 5/16 INCH ANGLE FOR OPENINGS UP TO 6'-0". PROVIDE 5 x 3 1/2 x 5/16 INCH ANGLE FOR OPENINGS UP TO 8'-0".

METAL COMPOSITE MATERIAL WALL PANELS TO BE 6 MM THICK WITH ALUMINUM FACE AND BACKING BONDED TO EXTRUDED THERMOPLASTIC CORE WITH KYNAR FINISH. COLOR SELECTED BY ARCHITECT. PROVIDE ALL REQUIRED PANEL ACCESSORIES, FLASHING AND TRIMS, AND PANEL SEALANTS FOR COMPLETE SYSTEM BY OMEGA-LITE FROM LAMINATORS INC.

ALL WELDING SHALL BE DONE BY CERTIFIED LICENSED WELDERS AND SHALL BE IN CONFORMANCE WITH STRUCTURAL WELDING CODE. ALL STRUCTURAL STEEL EXPOSED TO VIEW SHALL BE CLASSIFIED AS 'ARCHITECTURAL EXPOSED STRUCTURAL STEEL' (AESS) AND SHALL MEET REQUIREMENTS OF AISC. WORK SHALL BE FREE OF BLEMISHES, PITTING OR MARKS.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION:

WATERPROOFING SHALL BE A SELF-ADHEREING RUBBERIZED SHEET MEMBRANE EQUAL TO 'BITUTHENE 3000' BY GRACE.

FIBERGLASS BATT INSULATION SHALL BE PROVIDED AS INDICATED ON DRAWINGS. INSULATION SHALL BE CLASS A, EQUAL, WITH KRAFT FACING FOR TYPES III,IV,AND V CONSTRUCTION, AND FOIL FACING FOR TYPES 1 AND 11 CONSTRUCTION. R VALUE AS INDICATED ON DRAWINGS. PRODUCTS SUCH AS NU-WOOL OR ICYNENE ARE ACCEPTABLE ALTERNATIVES.

FILL CORES OF SINGLE WYTHE CMU WALLS WITH POLYURETHANE FOAM EQUAL TO 'CORE-FILL 500', OR 'THERMCO' MASONRY FOAM INSULATION.

PROVIDE AIR AND WEATHER MEMBRANE BARRIER EQUAL TO 'TYVEK COMMERCIAL WRAP' ON EXTERIOR FACE OF WALL SHEATHING TO BE COVERED BY SIDING. OVERLAP MINIMUM 12 INCHES AND ANCHOR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE FLUID APPLIED AIR BARRIER EQUAL TO 'AIR-SHIELD LMP' ON EXTERIOR FACE OF SHEATHING OR MASONRY SUBSTRATE IN CAVITY WALL CONSTRUCTION.

SHEET METAL FLASHING AND TRIM SHALL BE PREFINISHED ALUMINUM OR PREFINISHED GALVANIZED STEEL AS INDICATED ON THE DRAWINGS. FASCIAS SHALL COMPLY WITH G90.

STEEL FASCIAS GAUGE AS FOLLOWS: UP TO 6 INCH HIGH - 25 GAUGE
UP TO 8 INCH HIGH - 24 GAUGE
UP TO 10 INCH HIGH - 22 GAUGE.
ALUMINUM FASCIAS AS FOLLOWS: UP TO 6 INCHES HIGH - .040 INCH THICK.

DIVISION 6 - WOOD:

WOOD FRAMING FOR FLOOR AND ROOF FRAMING, JOISTS, BEAMS, AND HEADERS SHALL BE SOUTHERN PINE (SP) NO. 1 OR BETTER (SPIB) AS FOLLOWS:
BENDING FB = 1,250 PSI
SHEAR FV = 175 PSI
MOD ELAS E = 1,600,000PSI

WOOD IN CONTACT WITH MASONRY, CONCRETE, WEATHER OR GRADE SHALL BE PRESSURE TREATED.

WOOD TRUSSES SHALL BE DESIGNED BY THE TRUSS COMPANY DESIGNERS UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER EXPERIENCED IN THE TYPE OF WORK AND LICENSED IN THE STATE OF THE PROJECT. TRUSS COMPANY SHALL RECOMMEND SIZE, TYPE, AND SPACING OF BRACING. SHOP DRAWINGS SHALL BEAR THE SEAL OF THE ENGINEER. ANCHOR TRUSSES WITH (HURRICANE) TIES APPROPRIATE FOR THE APPLICATION.

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WOOD CONSTRUCTION PANELS FOR ROOFS SHALL BE EXTERIOR EXPOSURE CLASS, SPAN RATING 24/0, 5/8 INCH THICK. PANELS FOR WALLS SHALL BE EXTERIOR EXPOSURE CLASS, SPAN RATING 32/16, 5/8 INCH. PANELS FOR COMMUNICATIONS BOARDS SHALL BE 3/4 INCH PLYWOOD.

INTERIOR WOOD TRIM SHALL BE SOFTWOOD OR HARDWOOD AS INDICATED ON DRAWINGS. SIZE AND PROFILE AS INDICATED ON DRAWINGS. SPECIES SHALL BE 'CLEAR' UNLESS NOTED OTHERWISE.

EXTERIOR SYNTHETIC WOOD TRIM SHALL BE WOOD COMPOSITE TRIM UNLESS NOTED OTHERWISE. SIZES AND PROFILE AS INDICTED ON DRAWINGS, BY 'MIRATEC' OR EQUIVALENT. ADHESIVES MUST BE IN COMPLIANCE WITH MANUFACTURERS RECOMMENDED PRODUCTS.

CONTRACTOR SHALL PROVIDE BLOCKING AS NEEDED FOR ALL ANCHORAGE OF CONSTRUCTION AND MOUNTING OF EQUIPMENT, FIXTURE, AND ACCESSORIES. CONTRACTOR SHALL PROVIDE FIREBLOCKING AS REQUIRED.

FASTENERS SHALL BE GALVANIZED STEEL, SIZE AND TYPE TO SUIT CONDITION. PROVIDE STAINLESS STEEL OR ZINC FASTENERS WHERE APPROPRIATE FOR NON-STAINING CHARACTERISTICS. FASTENERS SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE STANDARDS, CODES, AND FEDERAL STANDARDS. PROVIDE HOLD-DOWN CLIPS FOR WOOD ROOF SHEATHING.

COUNTERTOPS TO BE PARTICLE BOARD SUBSTRATE COVERED WITH HPDL, CONVENTIONALLY FABRICATED AND SELF-EDGE BANDED. PLASTIC EDGE BANDING: EXTRUDED PVC, FLAT SHAPED; SMOOTH FINISH; 3 MM THICKNESS; OF WIDTH TO MATCH COMPONENT THICKNESS, COLOR AS SCHEDULED TO MATCH HPDL COLOR.

VINYL COUNTERTOP EDGE: RADIUSED PVC ANCHOR TYPE TEE-MOLDING EDGING IN WIDTH TO MATCH THICKNESS OF COUNTERTOP, COLOR AS SELECTED, USED AT LOCATIONS AS INDICATED.

DIVISION 8: DOORS AND WINDOWS:

INTERIOR STEEL DOORS SHALL BE 16 GAUGE, SOLID FOAM CORE FOR EXTERIOR APPLICATIONS, HONEYCOMB CORE FOR INTERIOR APPLICATIONS, FLUSH FACE, SEAMLESS EDGE, GALVANIZED AS MANUFACTURED BY CECO, REPUBLIC, STEELCRAFT OR EQUAL. STEEL FRAMES SHALL BE 14 GAUGE 2 INCH FACE 5 3/4 INCH DEEP SAME FINISH AND MANUFACTURER AS DOORS. DOOR AND FRAME SHALL BE FIRE RATED WHERE INDICATED OR REQUIRED.

PROVIDE SHOP WELDED, 14 GA STEEL DOOR FRAMES, UNLESS NOTED OTHERWISE

EXTERIOR DOORS SHALL BE FRP/ALUMINUM HYBRID DOORS, SL-17 PEBBLE GRAIN DOOR SYSTEM BY SPECIAL-LITE. PROVIDE MANUFACTURERS HARDWARE INCLUDING RECESSED DOOR PULLS, CONTINUOUS HINGE, CLOSER, WEATHER STRIPPING AND SWEEP, AND THRESHOLD. LOCK SYSTEM TO MATCH OWNERS SYSTEM. WHERE VISION LITES ARE SHOWN PROVIDE FL-SECURELITE FRAME WITH 1" THICK INTRUSION RESISTANT GLASS.

HARDWARE SHALL BE MEDIUM DUTY OR HEAVY DUTY, APPROPRIATE GRADE FOR USE. PROVIDE COMPLETE SYSTEM. EXTERIOR DOORS SHALL HAVE CLOSERS AND CONTINUOUS HINGES. PROVIDE CLOSERS WHERE REQUIRED FOR PROPER HARDWARE SET OPERATION. PROVIDE PANIC EGRESS EXIT DEVICES WHERE INDICATED OR REQUIRED BY CODE. THE FOLLOWING MANUFACTURERS ARE ACCEPTABLE: HAGER OR EQUAL

ALUMINUM WINDOWS SHALL BE COMMERCIAL GRADE, FIXED, THERMALLY BROKEN, 1 INCH INSULATED GLAZING, TINTED, LOW-E, ARGON FILLED GLASS, 2-1/4" INCH DEEP FRAME, EQUAL TO KAWNEER 8225TL THERMAL WINDOWS. PROVIDE SAFETY GLASS AS REQUIRED BY CODE.

ROLLING SERVICE DOOR BY CORNELL, MODEL ESD10, GALVANIZED STEEL, POWER COAT FINISH, SPECTRASHIELD COLOR BY ARCHITECT, WEATHERSTRIPPING, MANUAL CONTROLGARD CHAIN HOIST, LOCKING MECHANISM TO MATCH OWNERS SYSTEM.

DIVISION 9 - FINISHES: (FINISHES AS SELECTED BY OWNER)

GYPSUM BOARD SHALL BE 5/8 INCH, LEVEL 4 FINISH FOR PAINT UNLESS NOTED OTHERWISE. PROVIDE TYPE 'X' WHERE FIRE RATING REQUIRED. PROVIDE MOISTURE RESISTANT FOR RESTROOMS AND OTHER WET LOCATIONS. PROVIDE GLASS MAT IN EXTERIOR WALL ASSEMBLIES. PROVIDE ABUSE RESISTANT IN HEAVY USE AREAS. PROVIDE CONTROL JOINTS AT 30' INTERVALS, LOCATE AT DOOR HEADS WHEN POSSIBLE.

PAINT SHALL BE EQUAL TO SHERWIN WILLIAMS COMMERCIAL GRADE LOW VOC PAINTS UNLESS NOTED OTHERWISE - 2 COATS.
INTERIOR CEILINGS: ACRYLIC LATEX, EGGSHELL.
INTERIOR WALLS: ACRYLIC LATEX, SEMI-GLOSS.
INTERIOR TRIM: ACRYLIC LATEX, SEMI-GLOSS OR GLOSS.
STEEL: ACRYLIC LATEX, SEMI-GLOSS OR GLOSS.
STEEL DOOR FRAMES: ACRYLIC LATEX, GLOSS
INTERIOR CMU: WATERBORNE EPOXY, GLOSS
EXTERIOR CMU: (PAINT) ELASTOMERIC COATING - BASF THOROLASTIC
EXTERIOR CMU: (CLEAR) SURE SEAL-S SILOXANE WATER REPELLANT RTU OR EQUIVALENT
EXTERIOR WOOD: ACRYLIC COATING EQUAL TO 'DURATION'.
SYNTHETIC WOOD: PRODUCT MUST BE AS RECOMMENDED BY SYNTHETIC WOOD MANUFACTURER INCLUDING COLOR RECOMMENDATIONS.
PRIMER - 1 COAT.
GYPSUM BOARD: SW PROMAR 200 ZERO VOC
METAL: SW PROCRYL UNIVERSAL METAL PRIMER
EXISTING STEEL JOISTS: COVER RUSTED SECTIONS OF TRUSS WITH CORROSEAL RUST COVERTER. PREP STEEL PER MANUFACTURERS RECOMMENDATIONS.
CMU: KILZ ORIGINAL INTERIOR OIL-BASED PRIMER, NO. 1000. PREP SURFACES PER MANUFACTURERS RECOMMENDATIONS. 1 - COAT UNLESS BLEED-THROUGH OCCURS, THEN PROVIDE SECOND COAT.

STAINS AND POLYURATHANE FINSHES SHALL BE EQUAL TO SHERWIN WILLIAMS WOODCLASSICS 250 VOC STAIN & WOODCLASSICS WATERBASED POLYURETHANE SATIN.

PROVIDE IDENTIFICATION OF ALL RATED WALLS WITH SIGNAGE OR STENCILING ABOVE THE CEILING PER CODE (2015 MBC 703.7 - MARKING AND IDENTIFICATION).

PROVIDE JOINT FILLERS AND SEALANTS APPROPRIATE FOR USE AND LOCATION, AS MANUFACTURED BY BASF, PECORA OR EQUAL. SEAL TO BE PROVIDED AT DISSIMILAR MATERIALS

PROVIDE RUBBER FLOORING AS INDICATED ON DRAWINGS. FLOORING TO BE ROLL OR INTERLOCKING TILES, $\frac{3}{8}$" THICK, 100% RECYCLED RUBBER, MINIMUM HARDNESS 60 SHORE A NOMINAL, COLOR TO BE BLACK.

ACOUSTICAL PANEL LAY-IN CEILING BY ARMSTRONG OR EQUIVALENT. CORTEGA, SECOND LOOK, $\frac{15}{16}$" TEGULAR EDGE CEILING TILES. $\frac{15}{16}$" T GRID, PAINTED WHITE, PRELUDE XL OR EQUIVALENT.

DIVISION 10 - SPECIALTIES:

PROVIDE RESTROOM SOAP, PAPER TOWEL, AND TOILET TISSUE DISPENSERS, MIRROR, GRAB BARS AND DOOR HOOKS IN RESTROOMS TO COMPLY WITH ADA. PROVIDE MOP HOLDER FOR UTILITY ROOM. PRODUCTS AS MANUFACTURED BY BOBRICK OR EQUAL. PROVIDE ALL ACCESSORIES AS INDICATED ON DRAWINGS.

PROVIDE SIGNAGE WITH TEXT, BRAILLE AND PICTOGRAM (FOR RESTROOMS) COMPLYING WITH ADA. PRODUCTS AS MANUFACTURED BY ASI, APCO OR EQUAL. PROVIDE SIGNS AT RESTROOMS, EXITS, ELEVATOR, AREAS OF REFUGE, FIRE PROTECTION EQUIPMENT AND CONNECTIONS, FIRE EXTINGUISHERS. PROVIDE SIGNS INDICATING OCCUPANT LOAD IN ASSEMBLY SPACES. PROVIDE IDENTIFICATION OF ALL RATED WALLS WITH SIGNAGE OR STENCILING ABOVE THE CEILING PER CODE (2015 MBC703.7 MARKING AND IDENTIFICATION).

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

PROVIDE FIRESTOPPING AT ALL JOINTS AND PENETRATIONS IN FIRE-RESISTANT AND SMOKE-RESISTANT ASSEMBLIES. SUBJECT TO SPECIAL INSPECTIONS

1.00 SUMMARY
- A. SECTION INCLUDES:
  1. APPLICATIONS OF FIRESTOP SYSTEMS INCLUDING BUT NOT LIMITED TO:
     - A. PENETRATIONS FOR PASSAGE OF DUCT, CABLE, CABLE TRAY, CONDUIT, PIPING, ELECTRICAL BUSWAYS AND RACEWAYS THROUGH FIRE RATED VERTICAL BARRIERS (WALLS AND PARTITIONS), HORIZONTAL BEAMS (FLOOR/CEILING ASSEMBLIES) AND VERTICAL SERVICE SHAFT WALLS AND PARTITIONS.
     - B. SAFING SLOTS GAPS BETWEEN EDGE OF FLOOR SLABS AND CURTAIN WALLS.
     - C. OPENINGS BETWEEN STRUCTURALLY SEPARATE SECTIONS OF WALLS AND FLOORS.
     - D. GAPS BETWEEN TOPS OF WALLS AND CEILING OR ROOF ASSEMBLIES.
     - E. EXPANSION JOINTS IN FIRE RATED WALLS AND FLOORS.
     - F. OPENINGS AND PENETRATIONS IN FIRE RATED PARTITIONS OR WALLS CONTAINING FIRE DOORS.
     - G. OPENINGS AROUND STRUCTURAL MEMBERS WHICH PENETRATE FIRE RATED FLOORS OR WALLS.

1.01 PENETRATION FIRESTOPPING SYSTEMS
- A. PENETRATION FIRESTOPPING SYSTEMS: SYSTEMS THAT RESIST SPREAD OF FIRE, PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED. PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH PENETRATING ITEMS IF ANY.
  1. MANUFACTURERS: SUBJECT TO THE REQUIREMENTS PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
     - a. 3M FIRE PROTECTION PRODUCTS
     - b. GRABBER CONSTRUCTION PRODUCTS.
     - c. HILTI, INC.
     - d. SPECIFIED TECHNOLOGIES, INC.
- B. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: PENETRATION FIRESTOPPING SYSTEMS WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WG.

F-RATING: NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED.

ACCESSORIES: PROVIDE ALL COMPONENTS FOR EACH PENETRATION FIRESTOPPING SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS AND TO MAINTAIN RATINGS REQUIRED. INCLUDING BUT NOT LIMITED TO PRIMERS, SLEEVES, FORMS, INSULATION, PACKING, STUFFING AND ACCESSORIES.USE ONLY THOSE COMPONENTS SPECIFIED BY PENETRATION FIRESTOPPING SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR CONDITIONS INDICATED.

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CITY OF OWOSSO
WARMING CENTER RENOVATIONS
1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE
SPECIFICATIONS

PROJECT NO. 21-450
DATE 8/5/2021
DRAWN BNR
CHECKED GSA

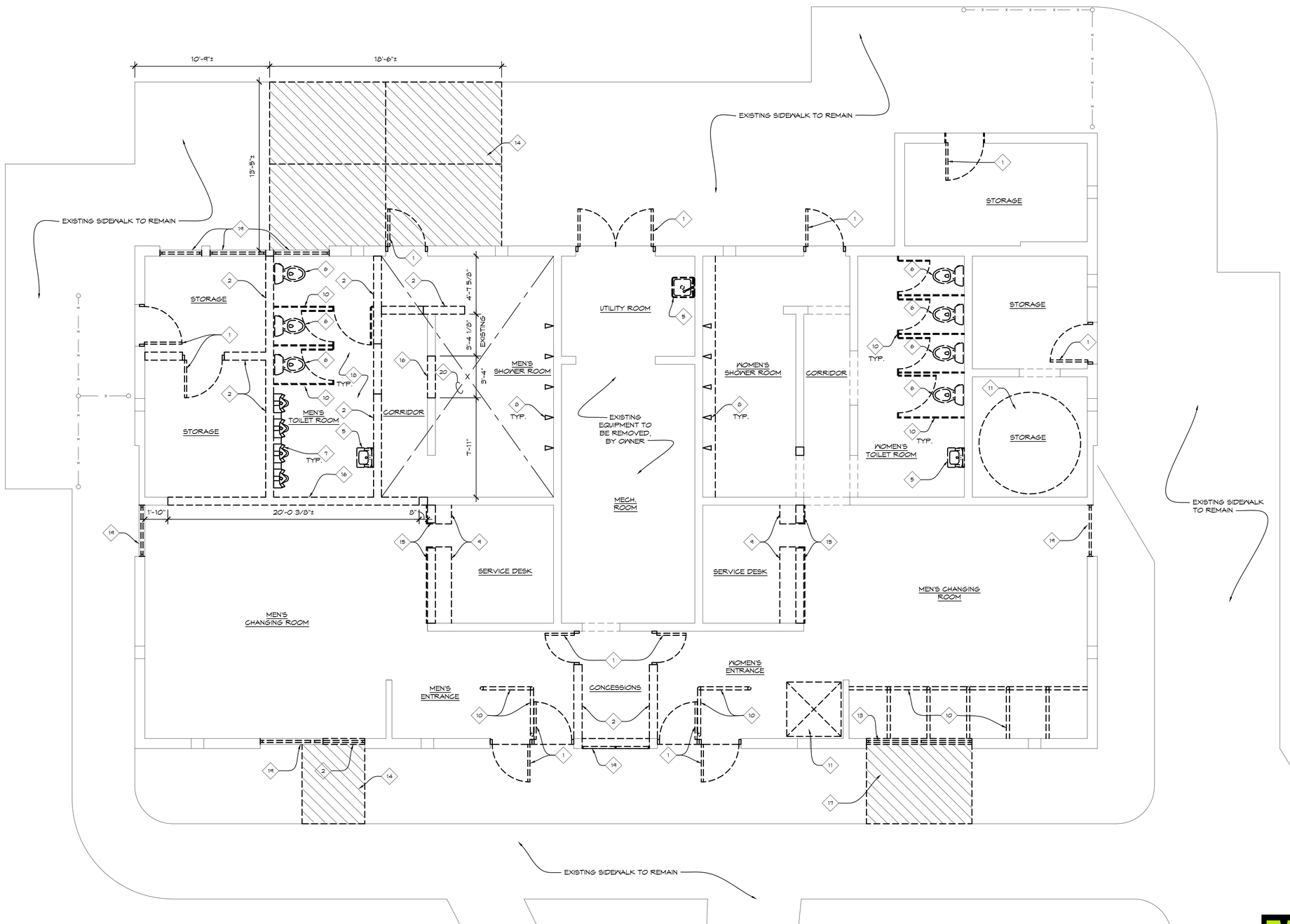
G002

CAD FILE NO. G002.dwg
SCALE 1/8" = 1'-0"
SHEET 2 OF 22

PRELIMINARY 8/5/2021

Z:\Projects\City of Owosso\21-450 Grove
Holman Park Warming Center\CAD\G002.dwg

PLOT DATE: 8/5/2021 11:41 AM



N

1 DEMOLITION PLAN

1/4" = 1'-0" | X01

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9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

DEMOLITION NOTES

1. REMOVE DOOR AND FRAME ASSEMBLY
2. REMOVE CMU WALL
3. NOT USED
4. REMOVE FLOOR DRAIN, RE: MECHANICAL
5. REMOVE SINK AND CAP LINE
6. REMOVE FLOOR MOUNTED TOILETS, RE: MECHANICAL
7. REMOVE FLOOR MOUNTED URINALS, RE: MECHANICAL
8. REMOVE SHOWERS, RE: MECHANICAL
9. REMOVE COUNTERTOP
10. REMOVE PARTITION ASSEMBLY & ACCESSORIES
11. REMOVE MECHANICAL EQUIPMENT, RE: MECHANICAL
12. NOT USED
13. REMOVE WINDOW & WALL ASSEMBLY, MAINTAIN LINTEL FOR NEW OHD
14. REMOVE PORTION OF SIDEWALK, ALONG EXISTING CONTROL JOINTS, TO PREP FOR 42" DEEP STOOP; IF EXISTING STOOP IS FOUND IN THIS LOCATION, NOTIFY THE ARCHITECT FOR FURTHER INSTRUCTION. CONTACT MISS DIG 72 HOURS BEFORE DIGGING.
15. REMOVE PARTIAL HEIGHT WALL
16. REMOVE WALL UP TO HEADER; RE: A201, A202, & A206 FOR DESIGNATED HEIGHTS
17. REMOVE 8" OF EXISTING SOIL AS NECESSARY, IN PREPARATION OF NEW FILL & CONCRETE. CONTACT MISS DIG 72 HOURS BEFORE DIGGING.
18. SAW CUT AND REMOVE IN-FLOOR PLUMBING AND SANITARY LINES AS REQUIRED FOR FIXTURE REMOVAL, SEE PLUMBING
19. REMOVE WINDOW ASSEMBLY
20. REMOVE CONCRETE FLOOR SLAB

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

DEMOLITION PLAN

PROJECT NO. 21-450

DATE 8/5/2021

DRAWN BNR

CHECKED GSA

A101

CAD FILE NO. A101.dwg

SCALE 1/4" = 1'-0"

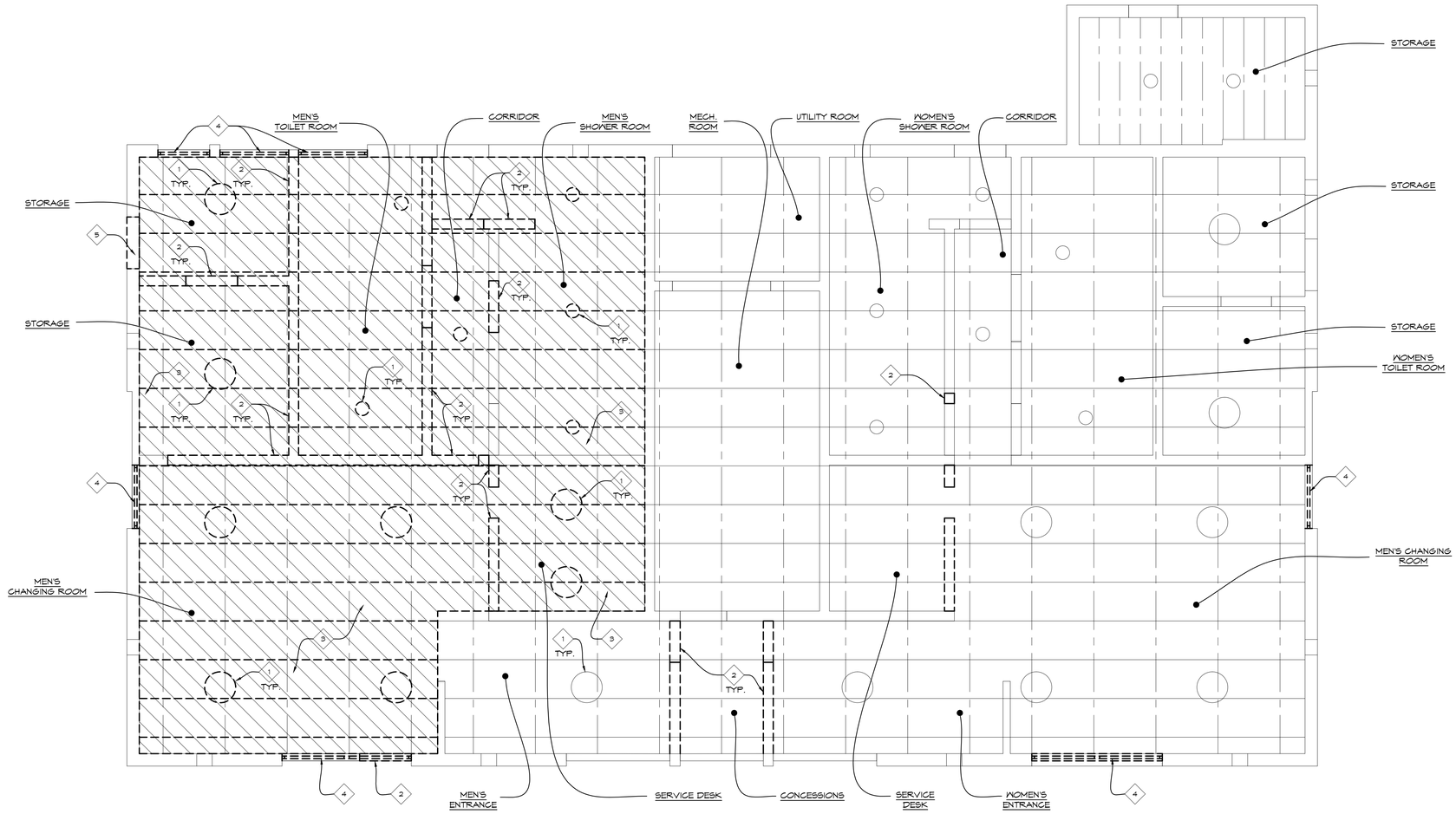
SHEET 3 OF 22

PRELIMINARY 8/5/2021

MISS DIG 811

Z:\Projects\City of Owosso\21-450 Grove Holman Park Warming Center\CAD\A101.dwg

PLOT DATE: 10/26/2021 10:40 AM



N

1 DEMOLITION REFLECTED CEILING PLAN

1/4" = 1'-0" | X01

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Davison, MI 48423
(810) 412-5640
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DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES FOR REFURBISHMENT, RE: ELECTRICAL
2. REMOVE WALL, RE: 1/ A101
3. REMOVE DAMAGED CEMENTITIOUS CEILING PANELS
4. REMOVE WINDOW ASSEMBLY
5. REMOVE DOOR, RE: 1/A101

KEY

DAMAGED CEMENTITIOUS CEILING TO BE REMOVED

EXISTING JOIST

EXISTING 4X8 CEMENTITIOUS PANEL

NO.	DESCRIPTION	DATE
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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

DEMOLITION REFLECTED CEILING PLAN

PROJECT NO. 21-450
DATE 8/5/2021
DRAWN BNR
CHECKED GSA

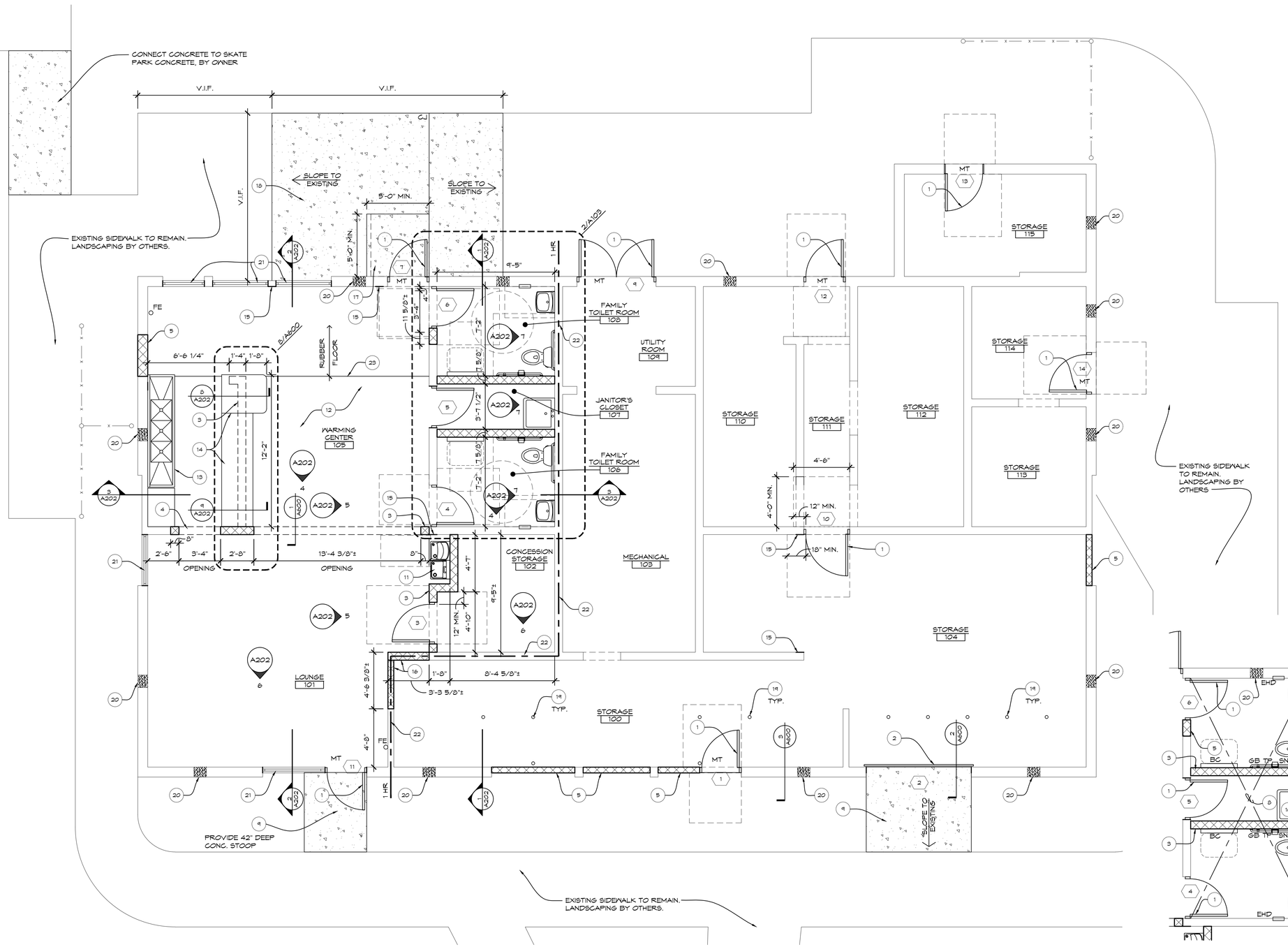
A102

CAD FILE NO. A102.dwg
SCALE 1/4" = 1'-0"
SHEET 4 OF 22

PRELIMINARY 8/5/2021

Z:\Projects\City of Owosso\21-450 Grove Holman Park Warming Center\CAD\A102.dwg

PLOT DATE: 8/5/2021 11:44 AM



1 FLOOR PLAN

1/4" = 1'-0" | X01

2 TOILET ROOM FLOOR PLAN

1/4" = 1'-0" | X01

TOILET ROOM ACCESSORIES

TP	TOILET PAPER DISPENSER
GB	GRAB BARS
BC	BABY CHANGING STATION
PTD	PAPER TOWEL DISPENSER
SND	SANITARY NAPKIN DISPOSAL
SD	SOAP DISPENSER

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF STUD OR MASONRY OR CENTERLINE OF STEEL UNLESS NOTED OTHERWISE
2. PREPARE FOR NEW WORK BY REMOVING EXISTING SURFACE FINISHES, AS NECESSARY TO PROVIDE FOR PROPER INSTALLATION OF NEW WORK AND NEW FINISHES.
3. FIT WORK TIGHT TO ADJACENT ELEMENTS. MAINTAIN INTEGRITY OF WALL, CEILING, OR FLOOR CONSTRUCTION, COMPLETELY SEAL VOIDS.
4. WHERE REMOVAL OF AN ELEMENT RESULTS IN ADJACENT SPACES BECOMING ONE, REWORK FLOORS, WALLS, AND CEILINGS TO CREATE A SMOOTH PLANE WITHOUT BREAKS, STEPS OR BULKHEADS.
5. WHERE NEW WORK ABUTS OR ALIGNS WITH EXISTING, MAKE A SMOOTH AND EVEN TRANSITION. PATCH WORK SHALL MATCH EXISTING ADJACENT WORK IN TEXTURE AND APPEARANCE. WHERE FINISH SURFACES ARE CUT SO THAT A SMOOTH TRANSITION WITH NEW WORK IS NOT POSSIBLE, TERMINATE EXISTING SURFACE ALONG A STRAIGHT LINE AT NATURAL LINE OF DIVISION.
6. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL COMPONENTS TO INTERFACE WITH WALLS, FLOORS, CEILINGS, OR ROOFS.
7. UNLESS NOTED OTHERWISE, REPAIR ALL WALLS, FLOORS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION - MATCH EXISTING ADJACENT FINISHES
8. FINISH FLOOR ELEVATION = 100'-0"
8. ALL SLABS ON GRADE SHALL BE PLACED ON SAND FILL COMPACTED TO 95% MODIFIED PROCTOR AND SHALL BE REINFORCED WITH WOVEN WIRE FABRIC
8. ALL REINFORCING BARS, UNLESS NOTED OTHERWISE SHALL BE CONTINUOUS, RUN CONTINUOUSLY AROUND CORNERS, BE LAPPED AT SPLICES AND BE HOOKED AT DISCONTINUOUS ENDS
8. PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS IN CONCRETE FLOOR SLABS

H2A architects
9100 Lapeer Rd. Suite B
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CONSTRUCTION NOTES

1. NEW DOOR AND FRAME ASSEMBLY
2. NEW ROLLING SERVICE DOOR
3. NEW 8" CMU WALL
4. MASONRY LINTEL, RE: SPEC
5. INFILL CMU WALL, MATCH EXISTING CMU
6. NEW WALL MOUNTED SINK, RE: MECHANICAL
7. NEW FLOOR MOUNTED TOILET, RE: MECHANICAL
8. NEW 4" CONCRETE FLOOR WITH VAPOR BARRIER ON 4" COMPOSITE SAND
9. NEW 4" CONCRETE SLAB ON 4" COMPACTED SAND FILL; SLOPE AWAY FROM BUILDING
10. NEW MOP SINK, RE: MECHANICAL
11. NEW DRINKING FOUNTAIN, RE: SPECS
12. INFILL CONC. FLOOR FROM DEMO UNDER FLOOR PLUMBING
13. THREE-COMPARTMENT SINK
14. NEW P.LAM COUNTER W/ ADA HEIGHT, RE: 5/A600
15. PATCH WALL, MATCH ADJACENT
16. CLOSE CMU CORNER, MATCH CMU SIZE
17. NEW CONCRETE STOOP, TO 42" BELOW GRADE
18. SLOPE CONCRETE TO EXISTING SIDEWALK
19. PATCH CONCRETE AT DAMAGED AREAS AND AREAS AFFECTED BY FLOOR MOUNTED PARTITIONS
20. INFILL EXISTING WALL VENT WITH CMU
21. NEW COMMERCIAL GRADE, ALUMINUM WINDOW, RE:SPEC
22. 2X4 WOOD STUDS AT 16" O.C. W/ 5/8" TYPE X GYP. BD. EACH SIDE. 1 HOUR FIRE RATING, UL DESIGN #U305. EACH SIDE OF RATED WALL TO HAVE SIGN OR STENCILED IDENTIFICATION STATING, "FIRE BARRIER - PROTECT ALL OPENINGS" PER MBC 703.7. FIRESTOP OPENINGS NOT ENCLOSED BY GYP ENCLOSURE.
23. REMOVABLE RUBBER FLOORING OVER CONCRETE, RE: SPEC

NO.	DESCRIPTION	DATE
6		
5		
4		
3		
2		
1		

CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

FLOOR PLAN

PROJECT NO. 21-450

DATE 8/5/2021

DRAWN BNR

CHECKED GSA

A103

CAD FILE NO. A103.dwg

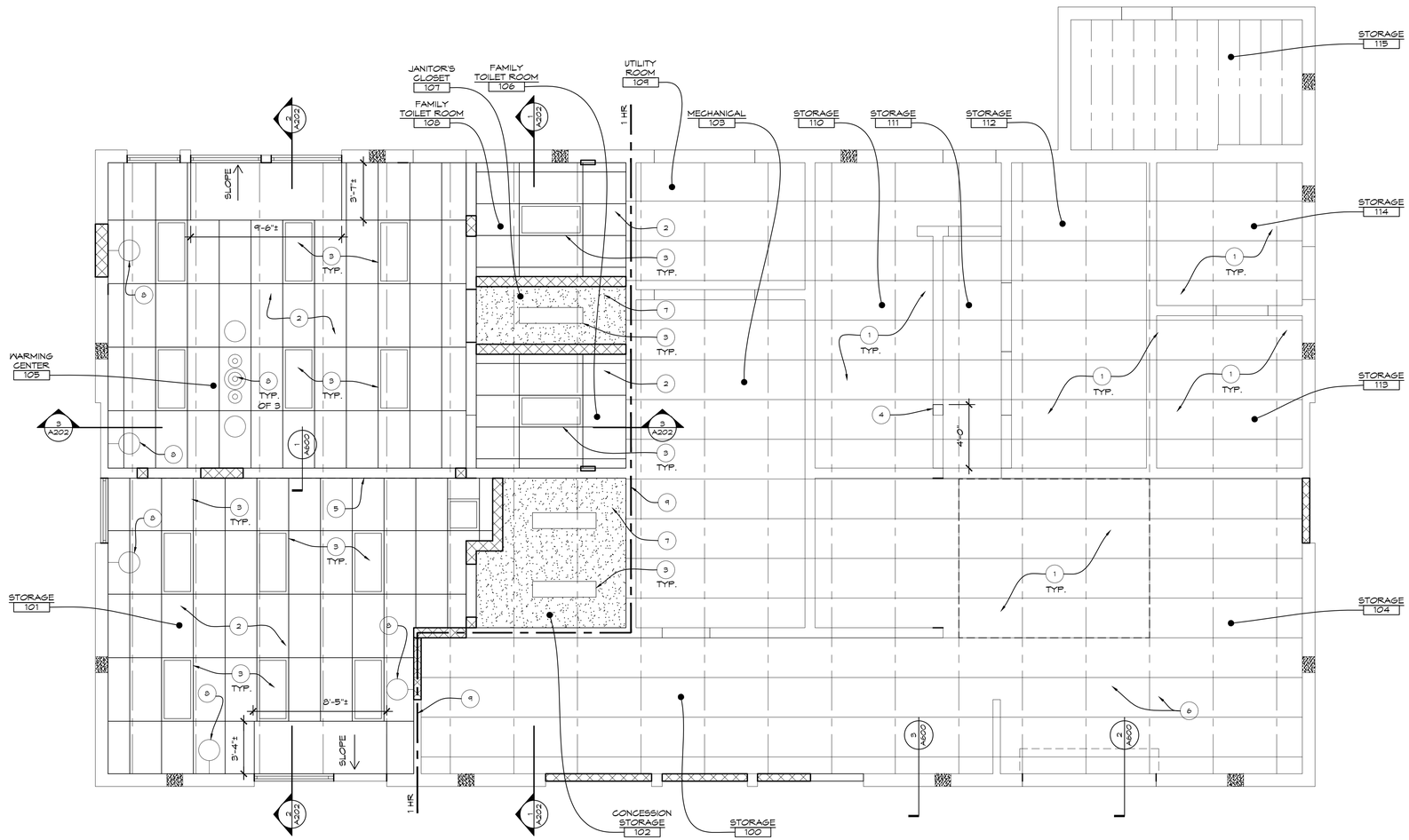
SCALE 1/4" = 1'-0"

SHEET 5 OF 22

PRELIMINARY 8/5/2021

Z:\Projects\City of Owosso\21-450 Grove Holman Park Warming Center\CAD\A103.dwg

PLOT DATE: 10/26/2021 10:34 AM



N

1 REFLECTED CEILING PLAN

1/4" = 1'-0" | X01

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www.h2aarchitects.net

CONSTRUCTION NOTES

1. PATCH CEMENTITIOUS CEILING
2. LAY-IN ACOUSTICAL CEILING
3. NEW LIGHT FIXTURE; RE: ELECTRICAL
4. EXTENDED DOOR HEADER
5. NEW BEAM, RE: 1/A600
6. NOT USED
7. NEW GYPSUM BOARD CEILING
8. RELOCATED EXISTING LIGHTS, RE: ELECTRICAL
9. 2X4 WOOD STUDS AT 16" O.C. W/ 5/8" TYPE X GYP. BD. EACH SIDE. 1 HOUR FIRE RATING, UL DESIGN #U305. EACH SIDE OF RATED WALL TO HAVE SIGN OR STENCILED IDENTIFICATION STATING, "FIRE BARRIER - PROTECT ALL OPENINGS" PER MBC 703.7. FIRESTOP AS REQUIRED.

KEY

EXISTING JOIST

NEW GYPSUM BOARD CEILING

NO.	DESCRIPTION	DATE
6		
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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

REFLECTED CEILING PLAN

PROJECT NO.	21-450
DATE	8/5/2021
DRAWN	BNR
CHECKED	GSA

A104

CAD FILE NO.	A104.dwg
SCALE 1/4" = 1'-0"	SHEET 6 OF 22

PRELIMINARY 8/5/2021

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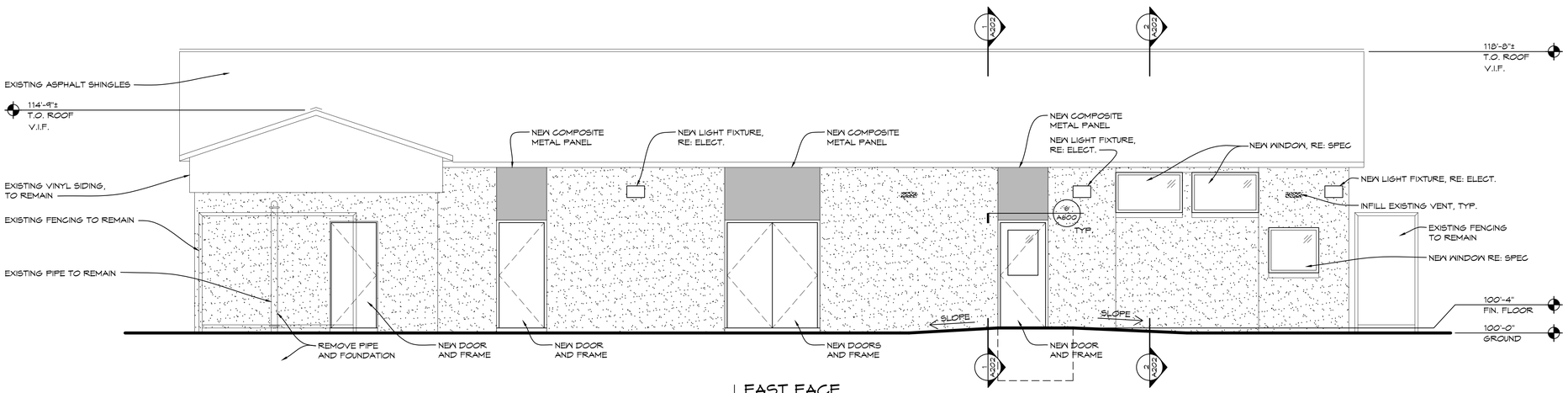
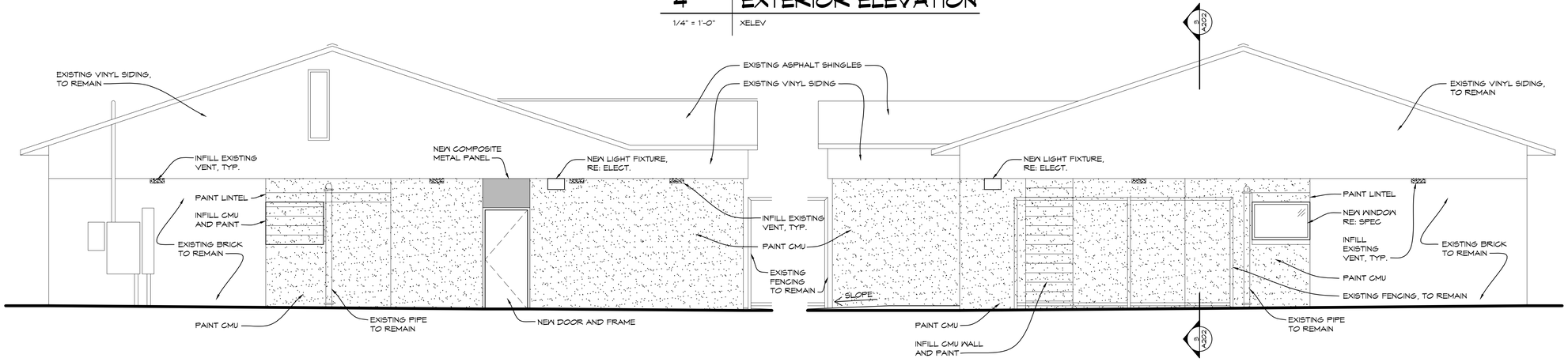


4 EAST FACE EXTERIOR ELEVATION

1/4" = 1'-0" | XELEV

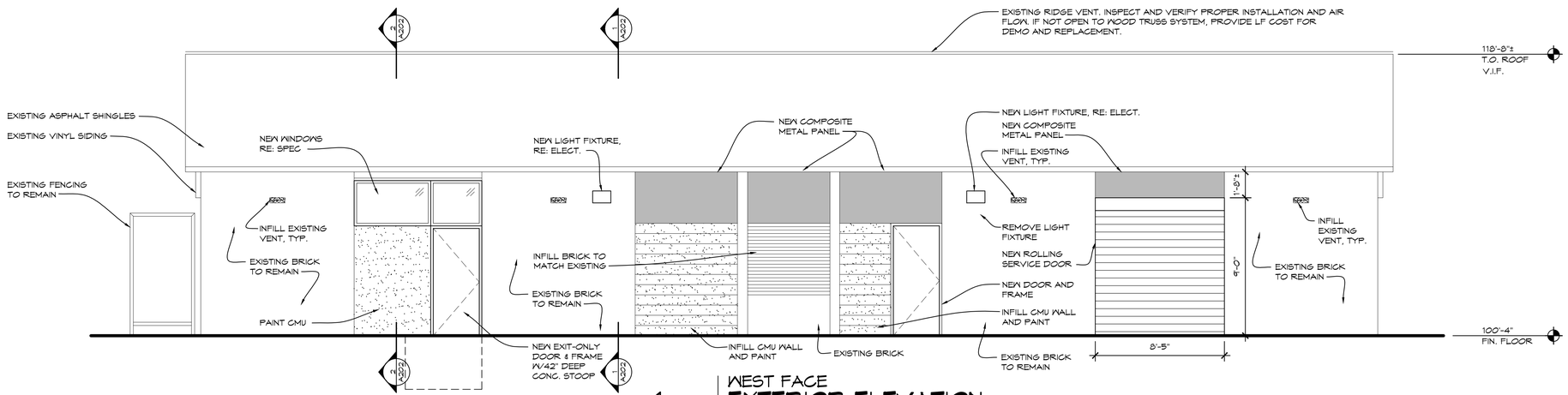


3 SOUTH FACE EXTERIOR ELEVATION

1/4" = 1'-0" | XELEV

2 NORTH FACE EXTERIOR ELEVATION

1/4" = 1'-0" | XELEV



1 WEST FACE EXTERIOR ELEVATION

1/4" = 1'-0" | XELEV

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

EXTERIOR ELEVATIONS

PROJECT NO. 21-450

DATE 8/5/2021

DRAWN BNR

CHECKED

A201

CAD FILE NO. A201.dwg

SCALE 1/4" = 1'-0"

SHEET 7 OF 22

PRELIMINARY 8/5/2021

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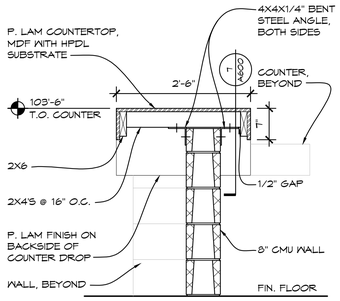
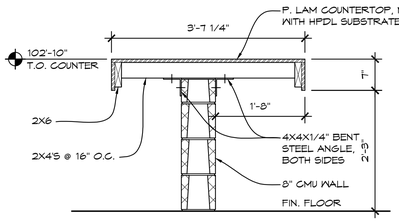


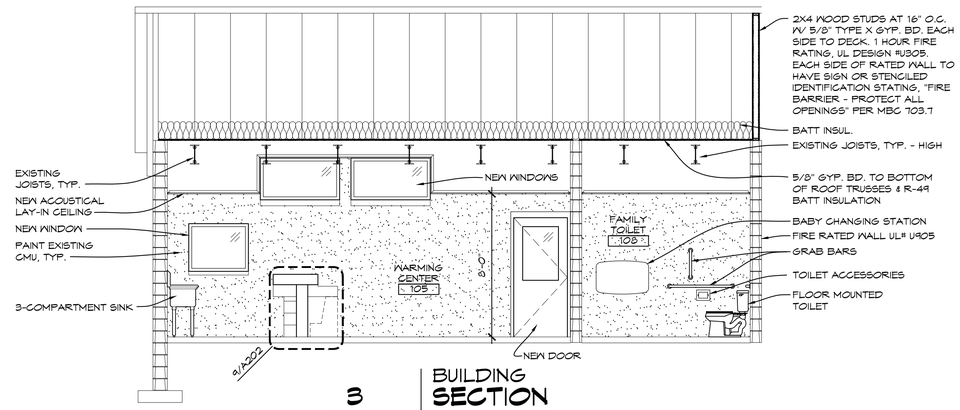
9 COUNTER DETAIL

3/4" = 1'-0" | SECTDET04



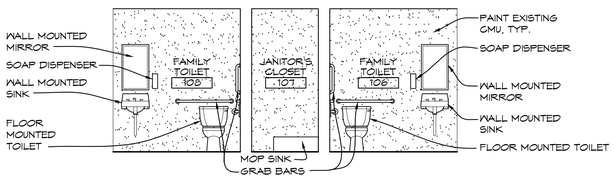
8 COUNTER DETAIL

3/4" = 1'-0" | SECTDET02



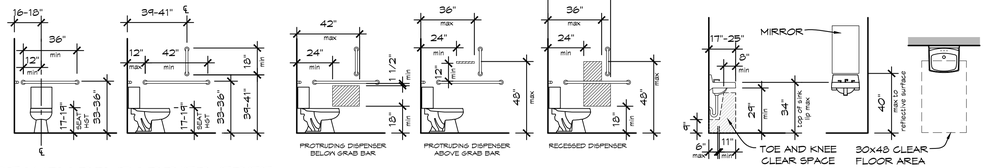
3 BUILDING SECTION

1/4" = 1'-0" | INTELEV



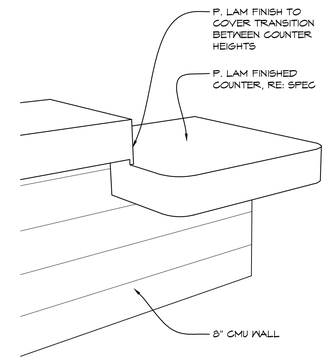
7 INTERIOR ELEVATION

1/4" = 1'-0" | INTELEV



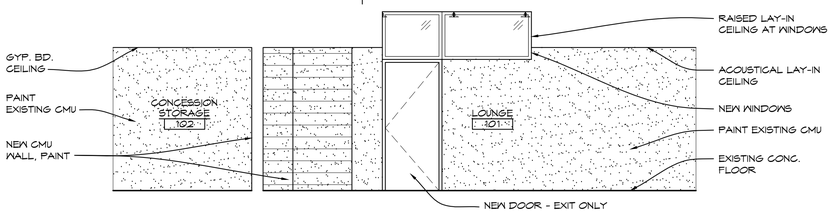
STANDARD BARRIER FREE ELEVATION

1/4" = 1'-0" | APPLY STANDARDS TO RESTROOM LAYOUT



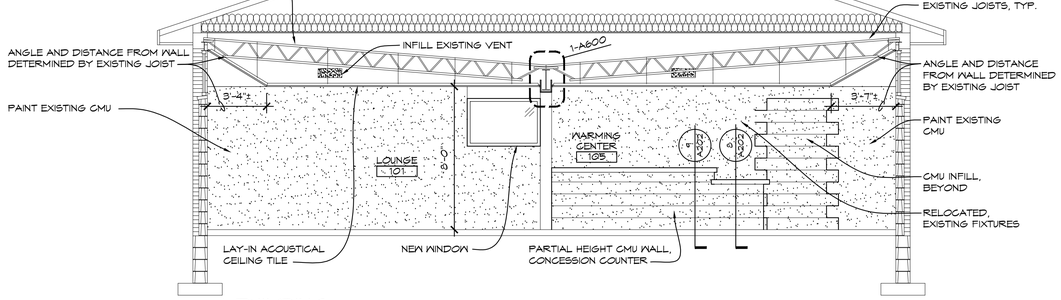
10 PERSPECTIVE COUNTER DETAIL

NO SCALE | PERSP01



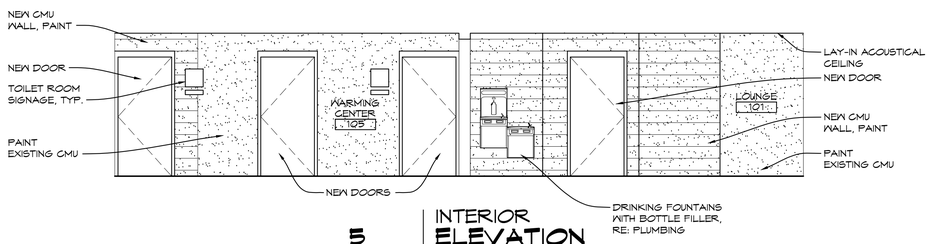
6 INTERIOR ELEVATION

1/4" = 1'-0" | INTELEV



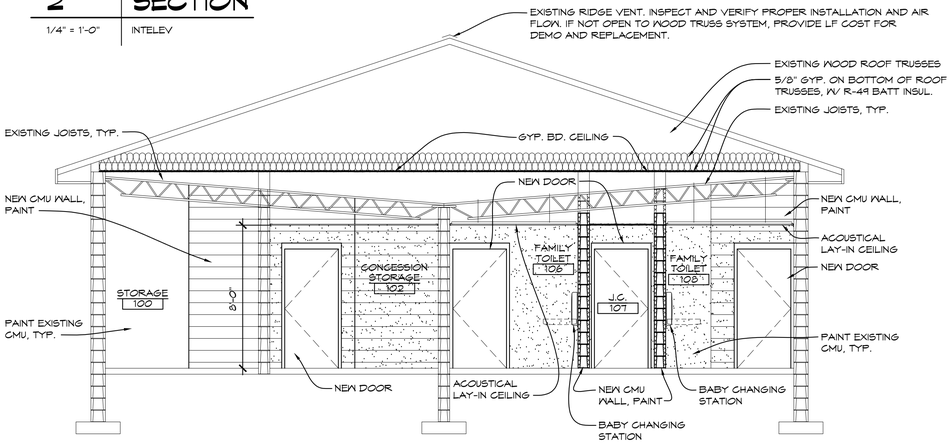
2 BUILDING SECTION

1/4" = 1'-0" | INTELEV



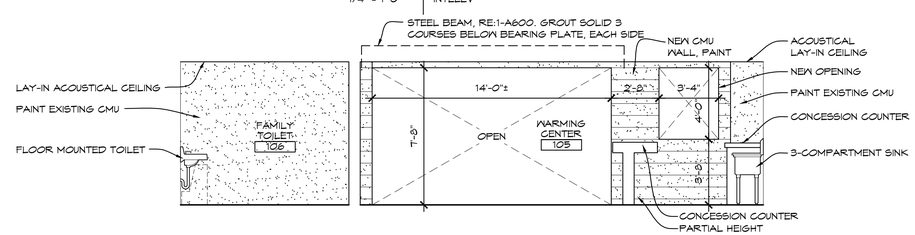
5 INTERIOR ELEVATION

1/4" = 1'-0" | INTELEV



1 BUILDING SECTION

1/4" = 1'-0" | INTELEV



4 INTERIOR ELEVATION

1/4" = 1'-0" | INTELEV

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

INTERIOR ELEVATIONS, BUILDING SECTIONS, & DETAILS

PROJECT NO. 21-450

DATE 7/23/2021

DRAWN BNR

CHECKED

A202

CAD FILE NO. A202.dwg

SCALE 1/4" = 1'-0"

SHEET 8 OF 22

PRELIMINARY 7/23/2021

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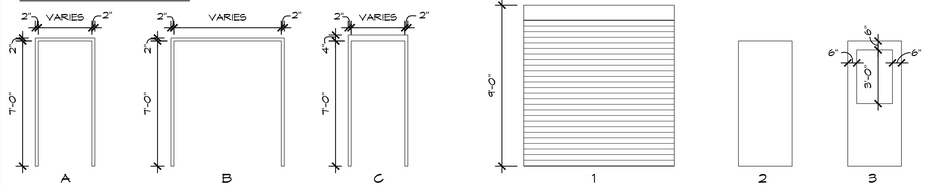
PLOT DATE: 7/29/2021 3:32 PM

DOOR AND FRAME SCHEDULE

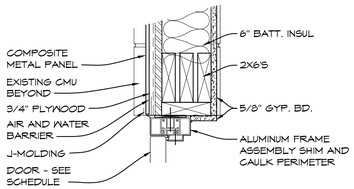
DOOR NO.	LOCATION: ROOM NAME AND NUMBER	DOOR: SIZE	DOOR: TYPE	DOOR: MATERIAL	FRAME: TYPE	FRAME: MATERIAL	FRAME: HEAD	FRAME: JAMB	FIRE RATING (IN MINUTES)	HARDWARE	NOTES
1	STORAGE 100	3'-0" X 7'-2"	2	FRP	A	ALUM	-/ -	9/ A600	-	SET #4	CLOSER
2	STORAGE 104	8'-5" X 9'-0"	1	ALUM	N/A	N/A	2/ A600	-/ -	-	-	CHAIN OPERATED COILING OHD
3	CONCESS. STOR. 102	3'-0" X 7'-0"	2	HM	C	HM	10/ A600	11/ A600	-	SET #5	-
4	FAM. TOILET RM 106	3'-0" X 7'-0"	2	HM	C	HM	10/ A600	11/ A600	-	SET #6	-
5	JAN. CLOSET 107	3'-0" X 7'-0"	2	HM	C	HM	10/ A600	11/ A600	-	SET #5	-
6	FAM. TOILET RM. 108	3'-0" X 7'-0"	2	HM	C	HM	10/ A600	11/ A600	-	SET #6	-
7	WARMING CENT. 105	3'-0" X 7'-0"	3	FRP	A	ALUM	5/ A600	9/ A600	-	SET #1	CLOSER
8	NOT USED	-	-	-	-	-	-	-	-	-	-
9	UTILITY ROOM 109	(2) 3'-0" X 7'-0"	2	FRP	B	ALUM	5/ A600	9/ A600	-	SET #3	CLOSER
10	STORAGE 104	3'-4" X 7'-0"	2	HM	A	HM	10/ A600	11/ A600	-	SET #5	-
11	STORAGE 104	3'-0" X 7'-0"	2	FRP	A	ALUM	4/ A600	9/ A600	-	SET #2	CLOSER, EXIT ONLY, NO EXT. HDWR
12	UTILITY ROOM 109	3'-0" X 7'-0"	2	FRP	A	ALUM	5/ A600	9/ A600	-	SET #4	CLOSER
13	STORAGE 104	3'-0" X 7'-0"	2	FRP	A	ALUM	5/ A600	9/ A600	-	SET #4	CLOSER
14	STORAGE 104	3'-0" X 7'-0"	2	FRP	A	ALUM	5/ A600	9/ A600	-	SET #4	CLOSER

DOOR & FRAME LEGEND:



HARDWARE SETS:

SET #1				
1	CONTINUOUS HINGE	780-112 HD X LAR	US26D	HA
1	EXIT DEVICE	4501 RIM	US26D	HA
1	RECESSED PULL	SL-86	CL	SL
1	RIM CYLINDER HOUSING	3901 SFIC	US26D	HA
1	CYLINDER CORE			BYOT
1	CLOSER	5100 HD	ALM	HA
1	DOOR BOTTOM	SL-301 X LAR	MIL	SL
1	THRESHOLD	5205 X LAR	MIL	HA
1	DOOR GASKETING	BY DOOR & FRAME SUPPLIER		
SET #2				
1	CONTINUOUS HINGE	780-112 HD X LAR	US26D	HA
1	EXIT DEVICE	4501-EO-RIM	US26D	HA
1	CLOSER	5100 HD	ALM	HA
1	DOOR BOTTOM	SL-301 X LAR	MIL	SL
1	THRESHOLD	5205 X LAR	MIL	HA
1	DOOR GASKETING	BY DOOR & FRAME SUPPLIER		
SET #3				
2	CONTINUOUS HINGE	780-112 HD X LAR	US26D	HA
2	FLUSH BOLT	282D	US26D	HA
1	MORTISE LOCK	3880 SECT MTN ICFULL T	US26D	HA
2	RECESSED PULL	SL-86	CL	SL
1	CYLINDER CORE			BYOT
2	CLOSER	5100 HDHO	ALM	HA
2	DOOR BOTTOM	SL-301 X LAR	MIL	SL
1	ASTRAGAL	AS-2B "T ASTRAGAL" - ACTIVE	CL	SL
1	THRESHOLD	5205 X LAR	MIL	HA
1	DOOR GASKETING	BY DOOR & FRAME SUPPLIER		
SET #4				
1	CONTINUOUS HINGE	780-112 HD X LAR	US26D	HA
1	MORTISE LOCK	3880 SECT MTN ICFULL T	US26D	HA
1	CYLINDER CORE			BYOT
1	CLOSER	5100 HDHO	ALM	HA
1	DOOR BOTTOM	SL-301 X LAR	MIL	SL
1	THRESHOLD	5205 X LAR	MIL	HA
1	DOOR GASKETING	BY DOOR & FRAME SUPPLIER		
SET #5				
3	HINGE(S)	BB1279 4-1/2 X 4-1/2	US26D	HA
1	MORTISE LOCK	3880 SECT MTN ICFULL T	US26D	HA
1	CYLINDER CORE			BYOT
1	CLOSER	5100 HDHO	ALM	HA
1	WALL STOP	260W (AS REQ'D.)	US26D	HA
3	DOOR SILENCER(S)	307D	GREY	HA
SET #6				
3	HINGE(S)	BB1279 4-1/2 X 4-1/2	US26D	HA
1	MORTISE LOCK	3886 SECT MTN ICFULL T	US26D	HA
1	WALL STOP	260W (AS REQ'D.)	US26D	HA
3	DOOR SILENCER(S)	307D	GREY	HA



5 DOOR HEAD DETAIL

1 1/2" = 1'-0" | DRDET01 ALUM

ROOM FINISH SCHEDULE

ROOM NO.	ROOM TITLE	FLOOR: MATERIAL	BASE: MATERIAL	WALLS: NORTH	WALLS: EAST	WALLS: SOUTH	WALLS: WEST	CEILING: MATERIAL	CEILING: HEIGHT	ACCESSORIES	NOTES
100	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
101	LOUNGE	F01	B01	W01	W01	W01	W01	C01	8'-0"	-	-
102	CONCESSION STORAGE	F01	B01	W01	W01	W01	W01	C02	8'-0"	-	-
103	MECHANICAL	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
104	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
105	WARMING CENTER	F01	B01	W01	W01	W01	W01	C01	8'-0"	-	RUBBER FLOOR RE: SPEC
106	FAMILY TOILET ROOM	F02	B01	W01	W01	W01	W01	C01	8'-0"	A01, A02, A03, & A04	-
107	JANITOR'S CLOSET	F02	B01	W01	W01	W01	W01	C02	8'-0"	-	-
108	FAMILY TOILET ROOM	F02	B01	W01	W01	W01	W01	C01	8'-0"	A01, A02, A03, & A04	-
109	UTILITY ROOM	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
110	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
111	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
112	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
113	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
114	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-
115	STORAGE	EXST	B01	EXST	EXST	EXST	EXST	EXST	EXST	-	-

ROOM FINISH LEGEND

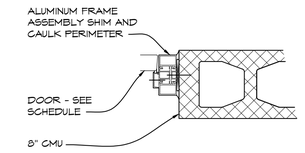
FLOOR
- F01 REPAIR & POLISH EXISTING CONC. - SEE SPEC
- F02 NEW CONCRETE - MATCH

BASE
- B01 NO BASE

WALLS
- W01 PAINTED CMU

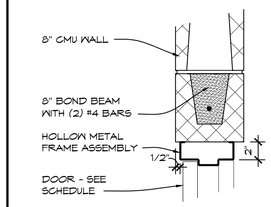
CEILING
- C01 2X4 ACOUSTICAL LAY-IN TILES
- C02 PAINTED GYPSUM BOARD

ACCESSORIES
- A01 SOAP, PAPER TOWEL, AND TOILET PAPER DISPENSERS
- A02 SANITARY NAPKIN DISPOSAL & DISPENSER
- A03 WALL-MOUNTED MIRROR
- A04 GRAB BARS (SET OF 3)



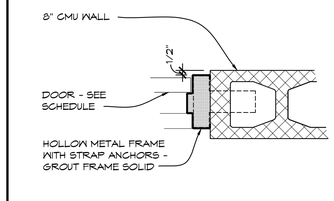
9 DOOR JAMB DETAIL

1 1/2" = 1'-0" | DRDET01 ALUM



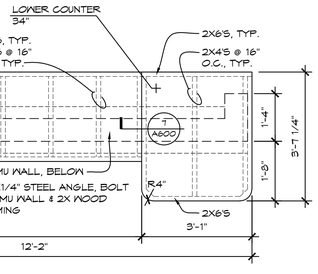
11 DOOR HEAD DETAIL

1 1/2" = 1'-0" | DRDET01 HM



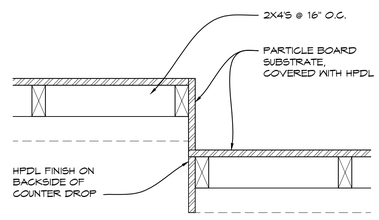
10 DOOR JAMB DETAIL

1 1/2" = 1'-0" | DRDET01 HM



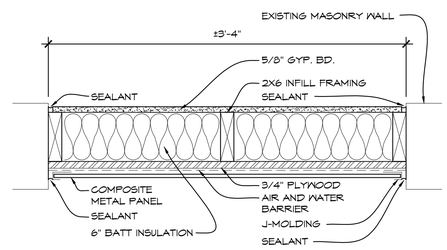
8 ENLARGED COUNTER PLAN

1/2" = 1'-0" | PLANDET01



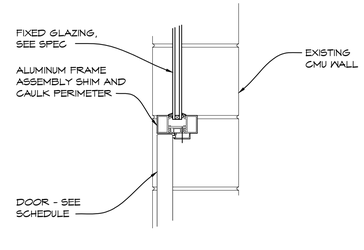
7 SECTION COUNTER DETAIL

1/8" = 1'-0" | SECTDET05



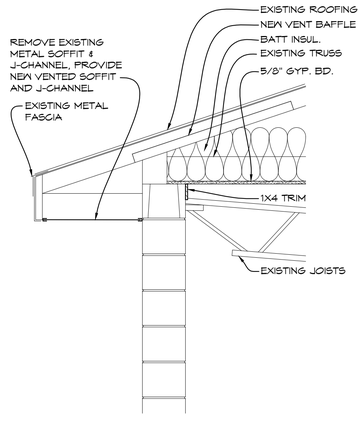
6 TYPICAL PLAN DETAIL

1 1/2" = 1'-0" | WDET01



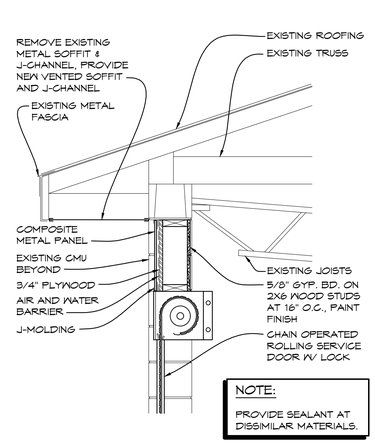
4 DOOR HEAD DETAIL

1 1/2" = 1'-0" | DRDET01 ALUM



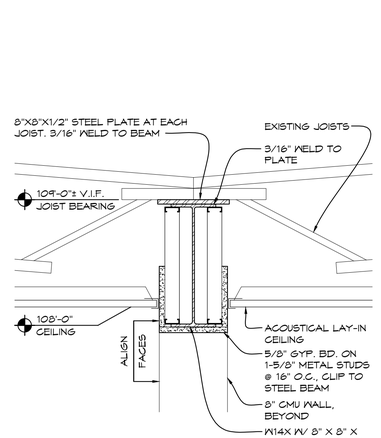
3 TYPICAL EAVE SECTION

3/4" = 1'-0" | SECTDET03 DOOR 2



2 ROLLING SERVICE DOOR DETAIL

3/4" = 1'-0" | SECTDET03 DOOR 2



1 HEADER DETAIL

1 1/2" = 1'-0" | SECTDET01

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

SCHEDULES & DETAILS

PROJECT NO. 21-450

DATE 8/5/2021

DRAWN BNR

CHECKED

A600

CAD FILE NO. A600.dwg

SCALE 1/8" = 1'-0"

SHEET 9 OF 22

PRELIMINARY 8/5/2021

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PLOT DATE: 8/16/2021 9:35 AM

GENERAL MECHANICAL SPECIFICATIONS

CODES AND ORDINANCES
COMPLY WITH ALL CODES AND ORDINANCES. CONTRACTORS SHALL INFORM THEMSELVES OF CODE REQUIREMENTS. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE, THE HIGHER STANDARD SHALL GOVERN. ALL MECHANICAL EQUIPMENT SHALL BE LISTED AND LABELED BY UL, ETL, AGA OR REQUIRED AGENCY.

PERMITS AND INSPECTIONS
THE CONTRACTOR SHALL OBTAIN AND INCLUDE COSTS FOR ALL PERMITS AND INSPECTIONS. FINAL INSPECTION CERTIFICATES SHALL BE OBTAINED BY THE CONTRACTOR AND TURNED OVER IN DUPLICATE TO THE OWNER.

ACCESSIBILITY
INSTALL EQUIPMENT AND MATERIALS TO PROVIDE REQUIRED ACCESS FOR SERVICING AND MAINTENANCE. COORDINATE THE FINAL LOCATION OF CONCEALED EQUIPMENT AND DEVICES REQUIRING ACCESS WITH FINAL LOCATION OF REQUIRED ACCESS PANELS AND DOORS. ALLOW AMPLE SPACE FOR REMOVAL OF ALL PARTS THAT REQUIRE REPLACEMENT OR SERVICING.

MECHANICAL INSTALLATIONS
COORDINATE MECHANICAL EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL MECHANICAL SERVICES AND OVERHEAD EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE. INSTALL MECHANICAL EQUIPMENT TO FACILITATE MAINTENANCE AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. COORDINATE THE INSTALLATION OF MECHANICAL MATERIALS AND EQUIPMENT ABOVE CEILINGS WITH SUSPENSION SYSTEM, LIGHT FIXTURES, AND OTHER INSTALLATIONS. INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

OPERATION AND MAINTENANCE DATA
MANUFACTURER'S PRINTED OPERATING PROCEDURES TO INCLUDE STARTUP, BREAK-IN, ROUTINE AND NORMAL OPERATING INSTRUCTIONS± REGULATION, CONTROL, STOPPING, SHUTDOWN, AND EMERGENCY INSTRUCTIONS± AND SUMMER AND WINTER OPERATING INSTRUCTIONS. MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING± DISASSEMBLY, REPAIR, AND RE-ASSEMBLE± ALIGNING AND ADJUSTING INSTRUCTIONS. TRAIN OWNER'S PERSONNEL ON PROCEDURES FOR STARTING, STOPPING, TROUBLESHOOTING, SERVICING, AND MAINTAINING EQUIPMENT. TURN OVER TO THE OWNER.

RECORD DRAWINGS
THE CONTRACTOR SHALL KEEP A RUNNING RECORD OF EACH CHANGE AND DEVIATION FROM THE DRAWINGS. UPON THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT ONE COMPLETE SET OF CLEAN DRAWINGS NEATLY SHOWING DEVIATIONS FROM THE CONTRACT DOCUMENTS WITH DIMENSIONS SHOWING THE EXACT LOCATION OF CONCEALED, INACCESSIBLE PIPING, DUCTS, ETC.

ERECTION OF WOOD SUPPORTS AND ANCHORAGE
CUT, FIT, AND PLACE WOOD, NAILERS, BLOCKING, AND ANCHORAGE TO SUPPORT AND ANCHOR MECHANICAL MATERIALS AND EQUIPMENT.

DUCT INSULATION
INSULATE CONCEALED SUPPLY AIR DUCTS WITH 1 1/2" THICK FIBERGLASS BLANKET WITH FSK JACKET. INSULATE OUTSIDE AIR DUCTS WITH 2" THICK FIBERGLASS BLANKET WITH FSK JACKET.

SHOP DRAWINGS
THE CONTRACTOR SHALL SUBMIT EQUIPMENT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF ANY OF THE FOLLOWING:

A. DUCTWORK & ACCESSORIES
B. AIR DISTRIBUTION DEVICES
C. ELECTRIC CABINET UNIT HEATERS
D. AIR CONDITIONING UNITS
E. EXHAUST FANS

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
AC	AIR COMPRESSOR
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
A.T.C.	ARCHITECTURAL TRADES CONTRACTOR
B	BOILER
B.A.S.	BUILDING AUTOMATION SYSTEM
CAF	COMBUSTION AIR FAN
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CHLR	CHILLER
CHP	CONSOLE HEAT PUMP
CONV	CONVECTOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
CWP	CHILLED WATER PUMP
DB	DRY BULB
DFU	DUCT FURNACE
DIA	DIAMETER
DN	DOWN
DPR	DAMPER
DS	DUCT SILENCER
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
E.T.C.	ELECTRICAL TRADES CONTRACTOR
EVR	EVAPORATOR
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
FF	FINISH FLOOR
FPM	FEET PER MINUTE
FT	FEET
FTR	FINNED TUBE RADIATION
FU	FURNACE
GAL	GALLON
GFRH	GAS FIRED RADIANT HEATER
GR	GRILLE
H	HUMIDIFIER
HC	HEATING COIL
HD	HEAD (FT)
HP	HORSE POWER
HHP	HORIZONTAL HEAT PUMP
HTG	HEATING
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
HWP	HEATING WATER PUMP
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
I.E.	INVERT ELEVATION
IAH	INTAKE HOOD
LAT	LEAVING AIR TEMPERATURE
LH	LATENT HEAT (MBH)
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	BTU PER HOUR (THOUSAND)
MIN	MINIMUM
M.T.C.	MECHANICAL TRADES CONTRACTOR
N.C.	NOISE CRITERIA
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NTS	NOT TO SCALE
P	PUMP
PCR	PUMPED CONDENSATE RETURN
PD	PRESSURE DROP
RCP	RADIANT CEILING PANEL
REQ'D	REQUIRED
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RLH	RELIEF HOOD
RTU	ROOF TOP UNIT
SD	SUPPLY DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SH	SENSIBLE HEAT (MBH)
SM	SHEET METAL
SQ. FT.	SQUARE FEET
SST	SATURATED SUCTION TEMPERATURE
STR	STRAINER
TC	TOTAL COOLING (MBH)
TCL	TEMPERATURE CONTROL
T&P	TEMPERATURE & PRESSURE RELIEF VALVE
TYP	TYPICAL
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME BOX
VRH	VARIABLE AIR VOLUME REHEAT BOX
FPVAV	FAN POWERED VARIABLE AIR VOLUME BOX
V.F.D	VARIABLE FREQUENCY DRIVE
ZD	ZONE DAMPER
X-SA	EXISTING ITEM (EXISTING SUPPLY AIR DUCT)
	ITEM
	EXISTING

SEQUENCE OF OPERATION:

(AC-1, AC-2, HP-1, AND SF-1)
OCCUPIED:
DURING OCCUPIED PERIODS AC-1, AC-2, HP-1, AND SF-1 SHALL BE ACTIVATED. AC-1 AND AC-2 SHALL MODULATE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SETPOINT. IF SPACE TEMPERATURE IS SATISFIED, HP-1 SHALL DEACTIVATE AND SUPPLY FANS FOR AC-1 AND AC-2 SHALL REMAIN ACTIVATED.
UNOCCUPIED:
SF-1 SHALL BE DEACTIVATED: AC-1, AC-2, AND HP-1 SHALL MODULATE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SETPOINT.

GENERAL HVAC NOTES

1. LOCATE OUTDOOR INTAKES AT LEAST 6 FEET ABOVE GROUND LEVEL OR 3 FEET ABOVE ROOF LEVEL. UNLESS OTHERWISE INDICATED.
2. FIELD VERIFY LOCATIONS OF EXISTING PIPING THAT MAY CONFLICT WITH NEW CONSTRUCTION AND RELOCATE AS NEEDED.
3. PROVIDE BALANCE DAMPERS FOR EACH DIFFUSER/GRILLE AND BRANCH DUCT.
4. PROVIDE FLEXIBLE DUCT IN ACCESSIBLE CEILINGS, 6 FT MAX LENGTH. KEEP BENDS TO A MINIMUM.
5. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER DISCIPLINES PRIOR TO CONSTRUCTION TO AVOID CONFLICTS.
6. THE CONTRACTOR SHALL FIELD VERIFY THE SIZES, LOCATION, ELEVATIONS, AND DETAILS OF ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EQUIPMENT AND MATERIALS IN A "NEW" CONDITION DURING CONSTRUCTION.
8. ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS AND SUBCONTRACTORS AS REQUIRED BY LAW.
9. ALL WORK SHALL CONFORM TO MICHIGAN MECHANICAL CODE, LATEST APPLICABLE EDITION.
10. CONTRACTOR SHALL USE LOW PRESSURE LOSS DUCT FITTINGS IN ACCORDANCE WITH SMACNA. (WYES, RADIUSED, OR VANED TEES, ETC.) DUCTWORK SHALL BE GALVANIZED SHEET METAL, MIN. 26 GA.
11. ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSION. INCREASE DUCT SIZE FOR LINING.
12. ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL.
13. IF THERE IS CONFLICTING INFORMATION IN THE PLANS OR SPECIFICATIONS THE MORE STRINGENT AND GREATER COST ITEM SHALL BE USED.
14. DRAWINGS INDICATE REQUIRED SIZES AND POINTS OF TERMINATION OF PIPES AND DUCTS AND SUGGESTED ROUTES. IT IS NOT INTENTION OF DRAWINGS TO INDICATE ALL NECESSARY OFFSETS. INSTALL WORK IN MANNER TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE FROM DRAWINGS.
15. INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

MECHANICAL SYMBOLS LEGEND

HVAC DUCTWORK SYMBOLS

- SUPPLY AIR DUCT RISER
- RETURN AIR DUCT RISER
- OUTSIDE AIR DUCT RISER (AS NOTED)
- EXHAUST AIR DUCT
- SUPPLY AIR DIFFUSER (SQUARE)
- SUPPLY AIR DIFFUSER (INLINE)
- SURFACE MTD. GRILLE
- SUPPLY AIR DIFFUSER (ROUND)
- CONICAL TAKE-OFF
- CONICAL TAKE-OFF W/ DAMPER
- BALANCE DAMPER
- RETURN AIR DUCT BOOT
- CONCENTRIC REDUCER
- UNIT HEATER
- CEILING EXHAUST FAN
- DEMOLITION

HVAC DUCTWORK & DIFFUSER TAGS

SD-1 | 250
8"ø | --

TAG | CFM
NECK | REMARKS
SIZE

MISCELLANEOUS NOTES

- POINT OF CONNECTION BETWEEN NEW AND EXISTING
- POINT OF EXISTING TO REMAIN AND EXISTING TO BE REMOVED
- (X) INDICATES PLAN NOTE
- X INDICATES DEMOLITION NOTE
- DETAIL BUBBLE
- XX DETAIL NUMBER
- XXXX PAGE LOCATION INDICATES

TEMPERATURE CONTROL SYMBOLS

- (T) THERMOSTAT

HVAC DUCTWORK

- SA SUPPLY AIR DUCT
- X-SA EXIST SUPPLY AIR DUCT
- RA RETURN AIR DUCT
- X-RA EXIST RETURN AIR DUCT
- OA OUTSIDE AIR DUCT
- X-OA EXIST OUTSIDE AIR DUCT
- EA EXHAUST AIR DUCT
- X-EA EXIST EXHAUST AIR DUCT

EXHAUST FAN SCHEDULE

TAG	MODEL	CFM	DRIVE	ESP (IN WC)	FAN RPM	SONES	WATTS	VOLTAGE	PHASE	COMMENTS
EF-1	SP-A50-90-VG	70	DIRECT	0.5	838	0.3	12	115	1	1,2,3,4
EF-2	SP-A50-90-VG	70	DIRECT	0.5	838	0.3	12	115	1	1,2,3,4

NOTES:
1. BASED ON GREENHECK
2. PROVIDE GRAVITY BACKDRAFT DAMPER
3. WC - WALL CAP W/BIRD SCREEN & B.O.D.
4. CONTROL EXHAUST FAN WITH LIGHT SWITCH, FAN TO OPERATE 5 MINUTES AFTER SWITCH IS TURNED OFF

SUPPLY FAN SCHEDULE

TAG	MODEL	CFM	DRIVE	ESP (IN WC)	FAN RPM	SONES	WATTS	VOLTAGE	PHASE	COMMENTS
S-1	CSP-1250	125	DIRECT	0.5	1,000	3.3	55	115	1	1,2,3,4

NOTES:
1. BASED ON GREENHECK
2. PROVIDE GRAVITY BACKDRAFT DAMPER
3. WC- WALL CAP WITH BIRD SCREEN & B.O.D.
4. FANS TO RUN CONTINUOSULY DURING OCCUPIED HOURS

VENTILATION REQUIREMENTS SCHEDULE

ZONE	FLOOR AREA	REQUIRED OA CFM (CFM/SQ.FT)	OCC. DENSITY PER 1000 SQFT.	POPULATION OF AREA SERVED	REQUIRED OA (CFM/PERSON)	REQUIRED OUTSIDE
WARMING CENTER - 105	433	0.06	-	7	5	61
STORAGE 101	409	0.06	-	7	5	60
					TOTAL OA REQUIRED	121

LOUVER SCHEDULE

TAG	FUNCTION	MAKE/ MODEL	NECK SIZE		DEPTH	INLET AREA	CFM	PRESSURE DROP (" WC)	SCREEN	COMMENTS
			WIDTH	HEIGHT						
L-1	INTAKE	L6375D	12	12	6	0.25	125	0.03	BIRD	1

NOTES:
1. BASED ON RUSKIN

CABINET UNIT HEATER SCHEDULE

TAG	MODEL	LOCATION	OUTPUT (BTUh)	ELECTRICAL					COMMENTS
				WATTS	VOLTS	PHASE	AMPS	DISC. BY	
CUH-1	H3424T	TOILET ROOM - 108	6,826	2000	240	1	8.3	MANU	1,2,3
NOT USED									
CUH-3	H3424T	TOILET ROOM - 106	6,826	2000	240	1	8.3	MANU	1,2,3
CUH-4	H3424T	JANITORS CLOSET - 107	6,826	2000	240	1	8.3	MANU	1,2,3

NOTES:
1. BASED ON MARKEL
2. UNIT MOUNTED TAMPER PROOF THERMOSTAT
3. RECESSED MOUNTED

SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE

TAG	INDOOR UNIT									TAG	OUTDOOR UNIT							COMMENTS
	MODEL	COOLING MBH	TONS	HEATING MBH	SA CFM	VOLTAGE	PHASE	MCA	DISC. BY		MODEL	COOLING MBH	HEATING MBH	VOLTAGE	PHASE	MCA	DISC. BY	
AC-1	BMS500-AAU018-1AHCXB	16	1-1/3	18	483	240	1	18	EC	HP-1	BMS500-AAU009-1AHWXB	36	36	240	1	35	EC	1,2,3,4,5,6,7,8,9,10
AC-2	BMS500-AAU018-1AHCXB	16	1-1/3	18	483	240	1	18	EC									

NOTES:
1. BASED ON: BOSCH
2. HEATING DESIGN BASED ON 70°F DB AND 60°F WB, OUTDOOR 43°F DB
3. COOLING DESIGN BASED ON 80°F DB AND 67°F WB, 50% RH
4. ELECTRICAL CONTRACTOR TO PROVIDE DISCONECT SWITCH FOR OUTDOOR UNIT
5. INDOOR EVAPORATOR DISCONNECT SWITCH BY E.C.
6. PROGRAMMABLE THERMOSTAT
7. FACTORY MOUNTED CONDENSATE PUMP
8. INDOOR UNIT POWERED FROM OUTDOOR UNIT
9. LOW AMBIENT KIT DOWN TO -22°F
10. FRESH AIR INTAKE KIT

STATE OF MICHIGAN · CRAIG A. THIERWECHTER · ENGINEER · NO. 49255 · REGISTERED PROFESSIONAL ENGINEER

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO
WARMING CENTER RENOVATIONS
1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE
HVAC SYMBOLS, NOTES, AND ABBREVIATIONS

PROJECT NO. 21-450
DATE 7/22/2021
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M100

CAD FILE NO.
SCALE 1/4" = 1'-0"
SHEET 10 OF 22

PRELIMINARY 7/22/2021

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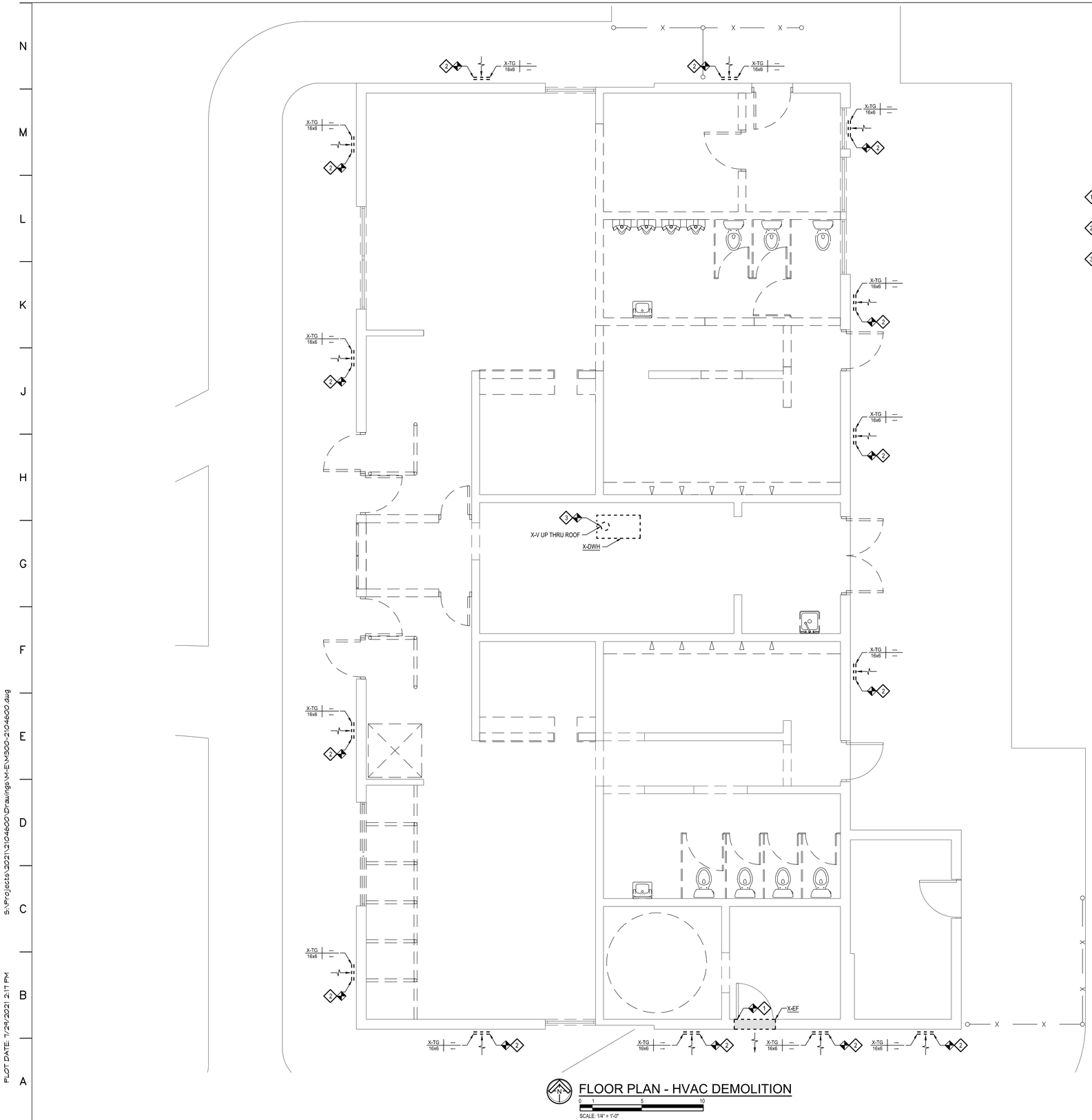

FLOOR PLAN - HVAC DEMOLITION

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

HVAC DEMOLITION NOTES

1. DISCONNECT, REMOVE, AND DEMO EXISTING EXHAUST FAN AND ALL ASSOCIATED ACCESSORIES. PATCH AND PAINT WALL OPENING. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FINISH.
2. DISCONNECT, REMOVE, AND DEMO EXISTING TRANSFER GRILLE. PATCH AND PAINT WALL OPENING. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FINISH.
3. DISCONNECT, REMOVE, AND DEMO EXISTING VENT. PATCH AND SEAL WATER TIGHT EXISTING ROOF PENETRATIONS TO MATCH EXISTING.

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

FLOOR PLAN -
HVAC DEMOLITION

PROJECT NO.	21-450
DATE	7/29/2021
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CAD FILE NO.

SCALE 1/4" = 1'-0"

SHEET 11 OF 22

7/29/2021

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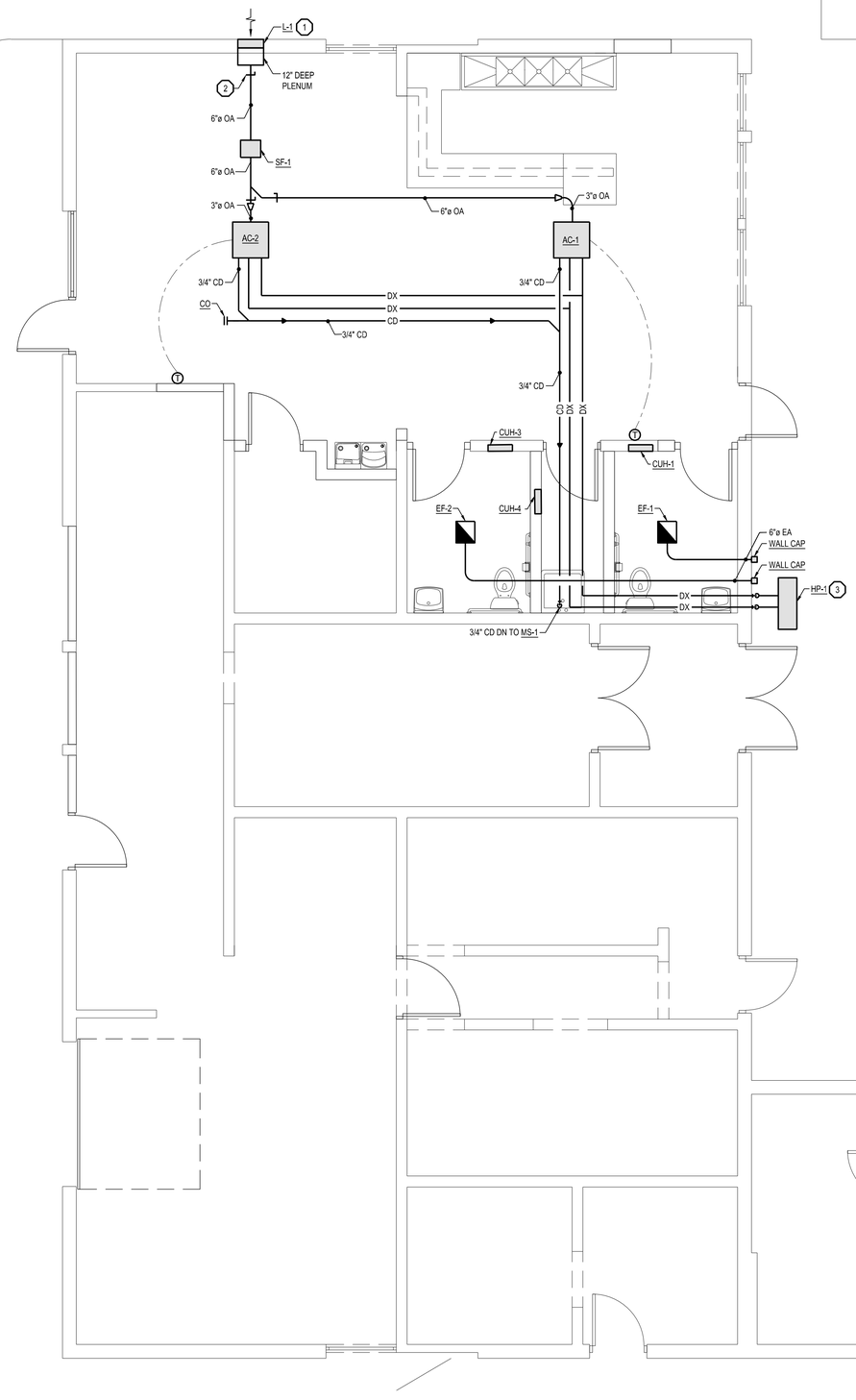

FLOOR PLAN - HVAC NEW

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

HVAC KEY NOTES

1. INSTALL LOUVER AT LOCATION SHOWN. INSTALL TOP OF LOUVER APPROXIMATELY 10' ABOVE GRADE.
2. BALANCE DAMPER TO 125 CFM.
3. INSTALL HEAT PUMP AT LOCATION SHOWN. HEAT PUMP TO BE MOUNTED ON A 24" HIGH ANGLED IRON FRAME.

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

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FLOOR PLAN - HVAC NEW

PROJECT NO.	21-450
DATE	7/29/2021
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CAD FILE NO.

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

SHEET: 12 OF 22

7/29/2021

STATE OF MICHIGAN
CRAIG A. TRIERWEILER
LICENSED PROFESSIONAL ENGINEER
No. 49255

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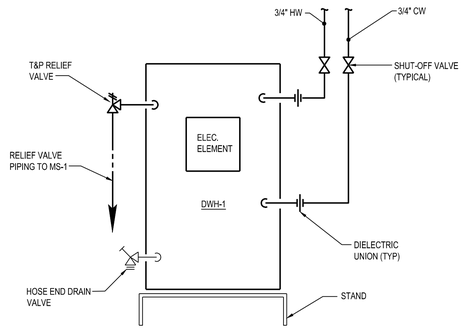
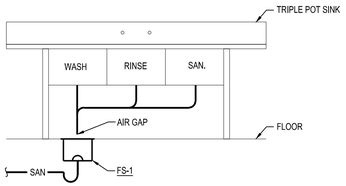


1 ELECTRIC WATER HEATER DETAIL

SCALE: NTS



2 TRIPLE POT SINK DETAIL

SCALE:NTS

PLUMBING ABBREVIATIONS

AD	AREA DRAIN
ASR	AUTOMATIC SPRINKLER RISER
BFS	BELOW FLOOR SLAB
BWV	BACK WATER VALVE
CB	CATCH BASIN
CI	CAST IRON
CO	CLEAN OUT
CV	CONTROL VALVE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DN	DOWN
DWH	DOMESTIC WATER HEATER
E.T.C.	ELECTRICAL TRADES CONTRACTOR
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FD	FLOOR DRAIN
FC	FINAL CONNECTIONS
FDC	FIRE DEPT. CONNECTION
FF	FINISH FLOOR
FHV	FIRE HOSE VALVE
FT	FEET
GAL	GALLON
GD	GARBAGE DISPOSAL
GI	GREASE INTERCEPTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIB
HD	HEAD (FT)
HP	HORSE POWER
ID	INSIDE DIAMETER
I.E.	INVERT ELEVATION
LAV	LAVATORY
LT	LAUNDRY TRAY
MA	MEDICAL AIR
MAX	MAXIMUM
MGC	MEDICAL GAS CONSOLE
MH	MAN HOLE
MIN	MINIMUM
MS	MOP SINK
M.T.C.	MECHANICAL TRADES CONTRACTOR
NTS	NOT TO SCALE
ORD	OVERFLOW ROOF DRAIN
OXY	OXYGEN
P	PUMP
PD	PRESSURE DROP
PVC	POLY-VINYL-CHLORIDE
RC	RAIN CONDUCTOR
RD	ROOF DRAIN
RI	ROUGH-IN
REQ'D	REQUIRED
SAN	SANITARY
SHWR	SHOWER
SK	SINK
SP	STAND PIPE
SQ. FT.	SQUARE FEET
SS	SERVICE SINK
ST	STORM
S&W	STOP & WASTE
STR	STRAINER
SV	STACKED VENT
TYP.	TYPICAL
UR	URINAL
VB	VACUUM BREAKER
VS	VENT STACK
V.F.D	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W	WASTE
WB	WET BULB
WC	WATER CLOSET
WH	WALL HYDRANT
WS	WASTE STACK
W&V	WASTE AND VENT
X-CW	EXIST. CW PIPING
ITEM	ITEM
EXISTING	EXISTING

PLUMBING SYMBOLS LEGEND

PLUMBING PIPING

- CW — COLD WATER
- CW — COLD WATER BELOW FINISH SLAB
- HW — HOT WATER
- HW — HOT WATER BELOW FINISH SLAB
- SAN — SANITARY WASTE
- SAN — SANITARY WASTE BELOW FINISH SLAB
- V — VENT PIPING
- V — VENT PIPING BELOW FINISH SLAB
- DEMOLITION

PLUMBING VALVES

- GATE VALVE
- GLOBE VALVE
- BALL VALVE

PLUMBING EQUIPMENT

- FLOW DIRECTION
- PIPING DROP
- PIPING RISE
- FLOOR CLEANOUT
- THERMOMETER
- CONNECTION
- FLOOR DRAIN & FLOOR SINK
- BACK FLOW PREVENTER
- FLANGE END CONNECTION
- WALL HYDRANT & HOSE BIBB
- PIPE CAP
- PIPE BREAK

MISCELLANEOUS NOTES

- POINT OF CONNECTION BETWEEN NEW AND EXISTING
- POINT OF EXISTING TO REMAIN AND EXISTING TO BE REMOVED
- (X) INDICATES PLAN NOTE
- (X) INDICATES DEMOLITION NOTE

DETAIL BUBBLE

- XX — DETAIL NUMBER
- XXXX — PAGE LOCATION INDICATES

GENERAL PLUMBING NOTES

1. ALL PLUMBING WORK SHALL CONFORM TO MICHIGAN PLUMBING CODE, LATEST APPLICABLE EDITION.
2. INSTALL ALL EQUIPMENT, MATERIALS, AND ACCESSORIES PER MANUFACTURERS WRITTEN INSTRUCTIONS.
3. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING WORK.
4. FIELD VERIFY LOCATIONS OF EXISTING PIPING THAT MAY CONFLICT WITH NEW CONSTRUCTION AND RELOCATE AS NEEDED.
5. NOTIFY OWNER OF ANY PIPING DEMOLITION THAT MAY AFFECT NORMAL OPERATION OF OTHER AREAS.
6. 1% SLOPE FOR ALL SANITARY PIPING.
7. THE CONTRACTOR SHALL FIELD VERIFY THE SIZES, LOCATION, ELEVATIONS, AND DETAILS OF ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EQUIPMENT AND MATERIALS IN A "NEW" CONDITION DURING CONSTRUCTION.
9. ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS AND SUBCONTRACTORS AS REQUIRED BY LAW.
10. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CODES AND REGULATIONS ENFORCED BY LOCAL BUILDING OFFICIALS.
11. IF THERE IS CONFLICTING INFORMATION IN THE PLANS OR SPECIFICATIONS THE MORE STRINGENT AND GREATER COST ITEM SHALL BE USED.
12. DRAWINGS INDICATE REQUIRED SIZES AND POINTS OF TERMINATION OF PIPES AND SUGGESTED ROUTES. IT IS NOT INTENTION OF DRAWINGS TO INDICATE ALL NECESSARY OFFSETS. INSTALL WORK IN MANNER TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE FROM DRAWINGS.

GENERAL PLUMBING SPECIFICATIONS

CODES AND ORDINANCES

COMPLY WITH MICHIGAN PLUMBING CODE

PIPING SPECIALTIES

ESCUTCHEONS: CHROME PLATED, MANUFACTURED WALL, CEILING, AND FLOOR PLATES. DEEP PATTERN TYPE WHERE REQUIRED TO CONCEAL PROTRUDING FITTINGS AND SLEEVES. INSTALL ON ALL PIPING EXPOSED TO VIEW IN FINISH SPACES AND UNDER SINKS. DIELECTRIC FITTINGS: INSTALL DIELECTRIC FITTINGS WHERE JOINING PIPING OF DISSIMILAR METALS.

PIPE INSULATION

DOMESTIC COLD WATER: MINIMUM OF 1" CLOSED CELL FOAM OR MINERAL FIBER WITH ASJ JACKET WITH SEALED JOINTS TO PREVENT CONDENSATION. DOMESTIC HOT WATER: INSULATE SAME AS COLD WATER.

WATER DISTRIBUTION PIPING

MATERIAL: HARD COPPER TUBE, ASTM B88, TYPE L WATER TUBE, DRAWN TEMPER WITH COPPER SOLDER JOINT PRESSURE FITTINGS. JOINING MATERIAL: SOLDER, ASTM B32, ALLOY Sn95, Sn94, OR E, LEAD FREE. CLEANING & DISINFECTING: PURGE AND DISINFECT PORTABLE WATER SYSTEMS AS PRESCRIBED BY AUTHORITIES HAVING JURISDICTION. FOR UNDERGROUND PIPING, USE TYPE K SOFT COPPER TUBE WITH NO JOINTS.

PIPE HANGERS

ADJUSTABLE STEEL CLEVIS HANGERS, NOT-METALLIC COATING FOR ELECTROLYTIC PROTECTION WHER ATTACHMENTS ARE IN DIRECT CONTACT WITH COPPER. COPPER U-STRAP HANGERS FOR UNINSULATED PIPE. COMPLY WITH MSS STANDARD PRACTICE #SP-69

DRAINAGE AND VENT PIPING

ABOVE GROUND WASTE AND VENT: HUBLESS CAST, SOIL PIPE, C1SP1 301 WITH HUBLESS CAST-IRON COUPLINGS, C1SP1 310 WITH SS CORRUGATED SHIELD, SS BANDS, AND RUBBER SLEEVE. BELOW GROUND AND CONCEALED WASTE & VENT: PVC PLASTIC PIPE, ASTM D2665, SCHEDULE 40 WITH DRAINAGE PATTERN SOCKET FITTINGS.

HANGERS FOR CAST IRON PIPE:

1 1/2" & 2" PIPE. INCH ROD	60 INCH MAX SPACING	3/8
3" PIPE INCH ROD	60 INCH MAX SPACING	1/2
4" & 5" PIPE INCH ROD	60 INCH MAX SPACING	5/8

VALVES

BALL VALVES: 2 PIECE ALLOY, BRONZE BODY WITH FULL PORT, CHORME PLATED BALL, TFE STEATS, 600 PSIG MIN CWP RATING, LEVEL HANDLE WITH EXTENDED STEM FOR INSULATION.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT EQUIPMENT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF ANY OF THE FOLLOWING:

A. PLUMBING FIXTURES
B. PLUMBING PIPE, FITTINGS, AND HANGERS

MATRIX CONSULTING ENGINEERS, INC.
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

NO.	DESCRIPTION	DATE
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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

PLUMBING SYMBOLS, NOTES, AND ABBREVIATIONS

PROJECT NO.	21-450
DATE	7/29/2021
DRAWN	NLS
CHECKED	CAT

P100

CAD FILE NO.

SCALE 1/4" = 1'-0"

SHEET 13 OF 22

7/29/2021

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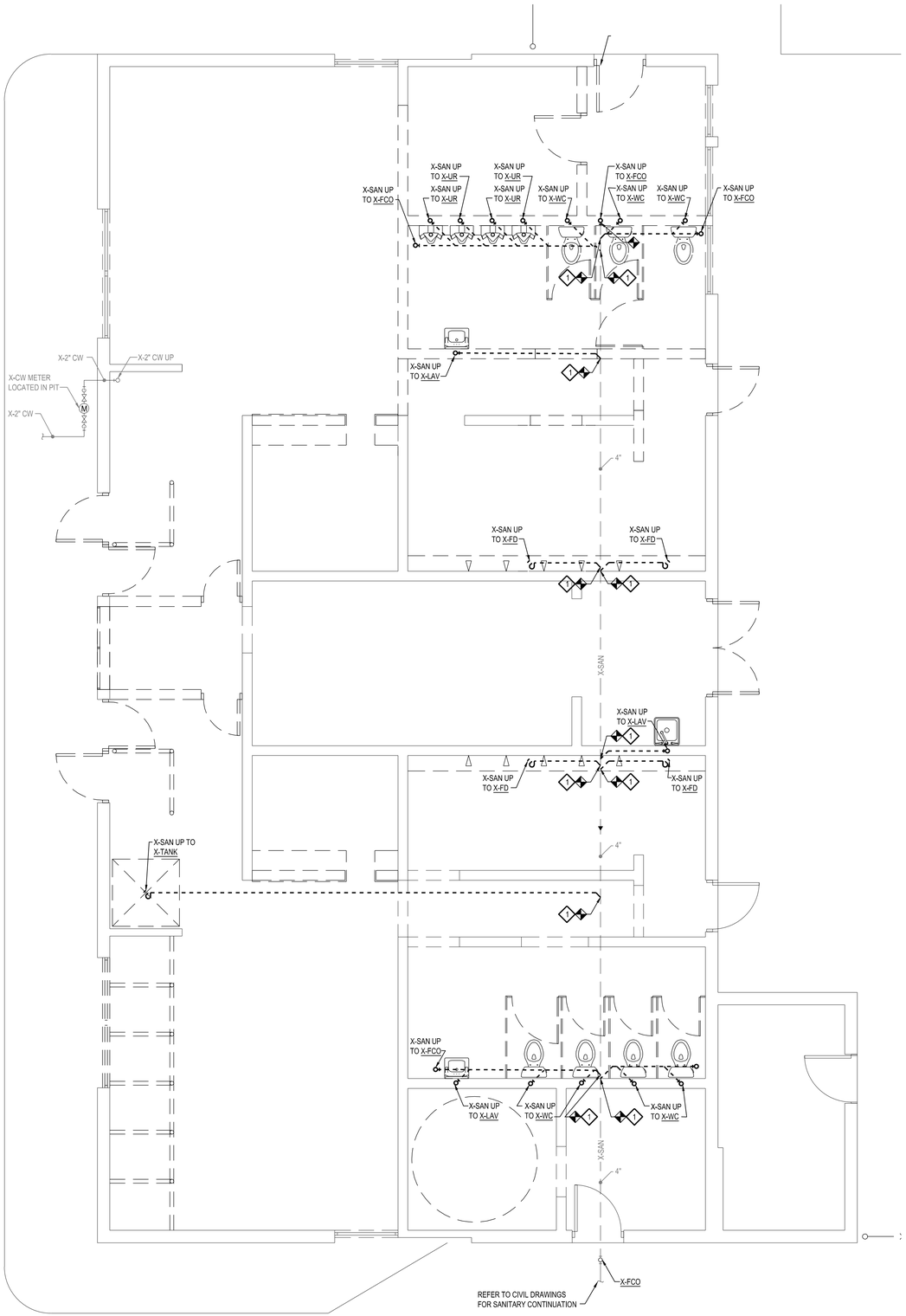

BELOW FLOOR PLAN - PLUMBING DEMOLITION

0 1 5 10

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

GENERAL PLUMBING NOTES

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING CONSTRUCTION.

DEMOLITION NOTES

1. DISCONNECT, REMOVE AND DEMO EXISTING SANITARY PIPING BACK TO MAIN AND CAP.

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1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
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Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
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(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

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BELOW FLOOR PLAN - PLUMBING DEMOLITION

PROJECT NO.	21-450
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CAD FILE NO.

SCALE 1/4" = 1'-0"

SHEET 14 OF 22

STATE OF MICHIGAN CRAIG A. TRIERWEILER ENGINEER NO. 49255 REGISTERED PROFESSIONAL ENGINEER

7/29/2021

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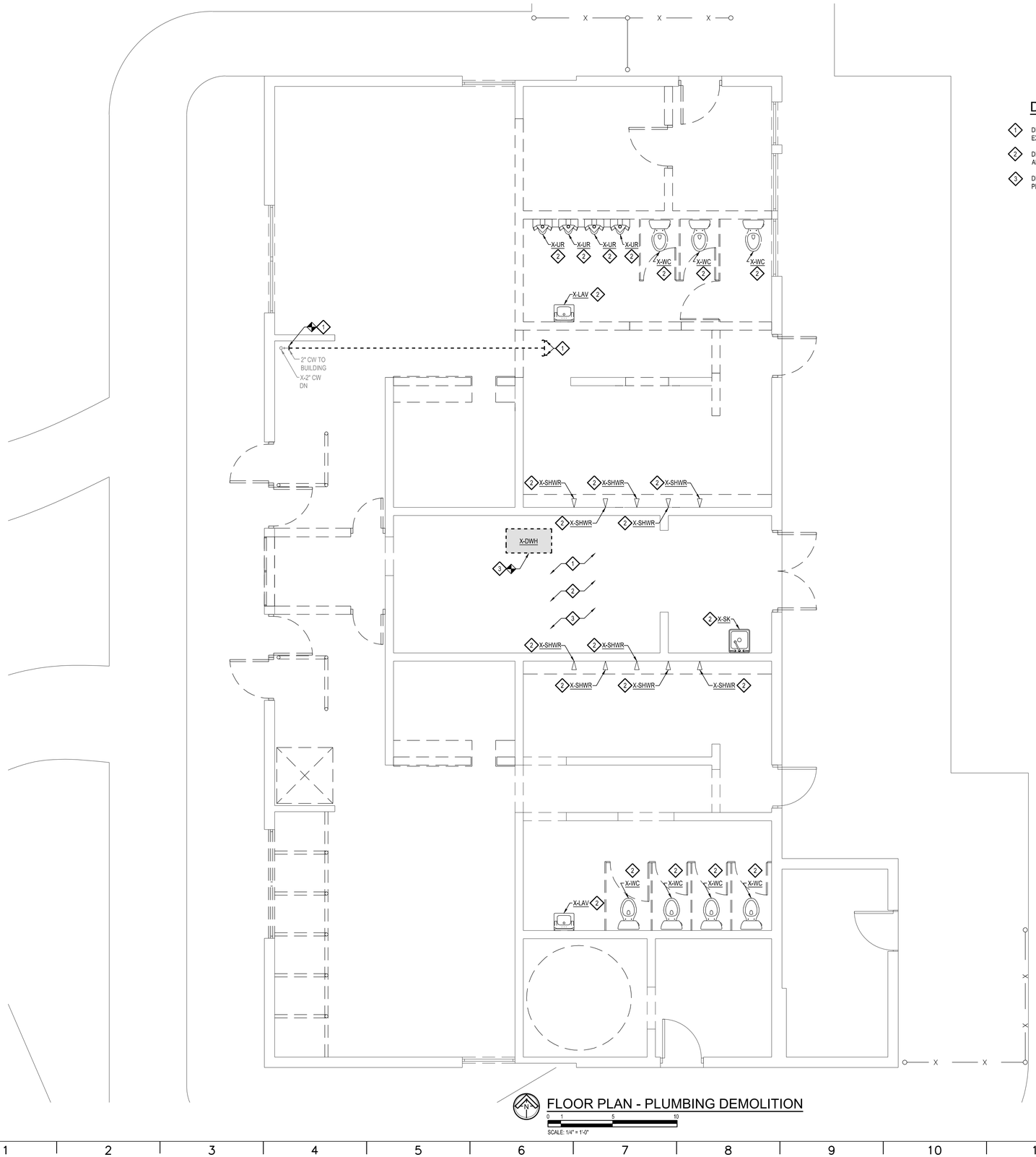

DEMOLITION NOTES

1. DISCONNECT, REMOVE AND DEMO ALL EXISTING COLD WATER PIPING BACK TO EXTENTS SHOWN.
2. DISCONNECT, REMOVE AND DEMO PLUMBING FIXTURE IN ITS ENTIRETY INCLUDING ALL PIPING.
3. DISCONNECT, REMOVE AND DEMO EXISTING WATER HEATER AND ALL ASSOCIATED PIPING IN ITS ENTIRETY.

FLOOR PLAN - PLUMBING DEMOLITION

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

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

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DRAWING TITLE

FLOOR PLAN - PLUMBING DEMOLITION

PROJECT NO.	21-450
DATE	7/29/2021
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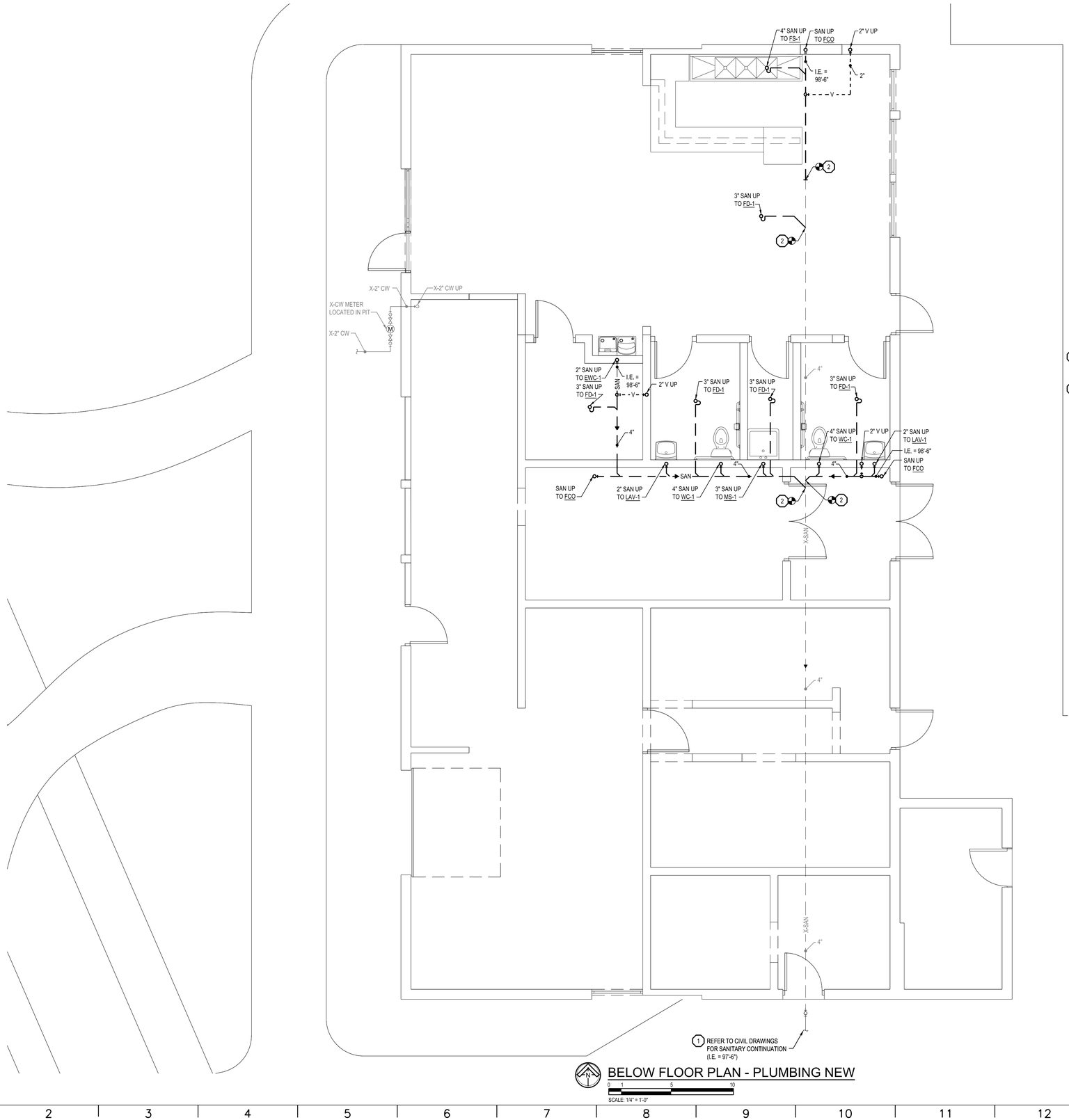
CAD FILE NO.

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

SHEET: 15 OF 22

STATE OF MICHIGAN CRAIG A. TRIERWEILER ENGINEER NO. 49255 REGISTERED PROFESSIONAL ENGINEER

7/29/2021



BELOW FLOOR PLAN - PLUMBING NEW

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

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY EXISTING SANITARY PIPING HAS REQUIRED INVERT ELEVATION TO CONNECT TO NEW FIXTURES. CONTACT ENGINEER IF EXISTING INVERT IS NOT ADEQUATE.

PLUMBING KEY NOTES

1. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SANITARY PIPING. IF EXISTING PIPING IS NOT AT THE DEPTH REQUIRED TO CONNECT TO NEW SANITARY PIPING, CONTACT ENGINEER FOR ALTERNATIVE OPTIONS.
2. MODIFY EXISTING SANITARY PIPING AS NEEDED TO CONNECT TO NEW SANITARY PIPING.

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF ONOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
ONOSSO, MI 48867

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BELOW FLOOR PLAN - PLUMBING NEW

PROJECT NO. 21-450
DATE 7/29/2021
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P400

CAD FILE NO.

SCALE 1/4" = 1'-0"
SHEET 16 OF 22

STATE OF MICHIGAN — CRAIG A. TRIERWEILER — ENGINEER — NO. 49255 — PROFESSIONAL ENGINEER

7/29/2021

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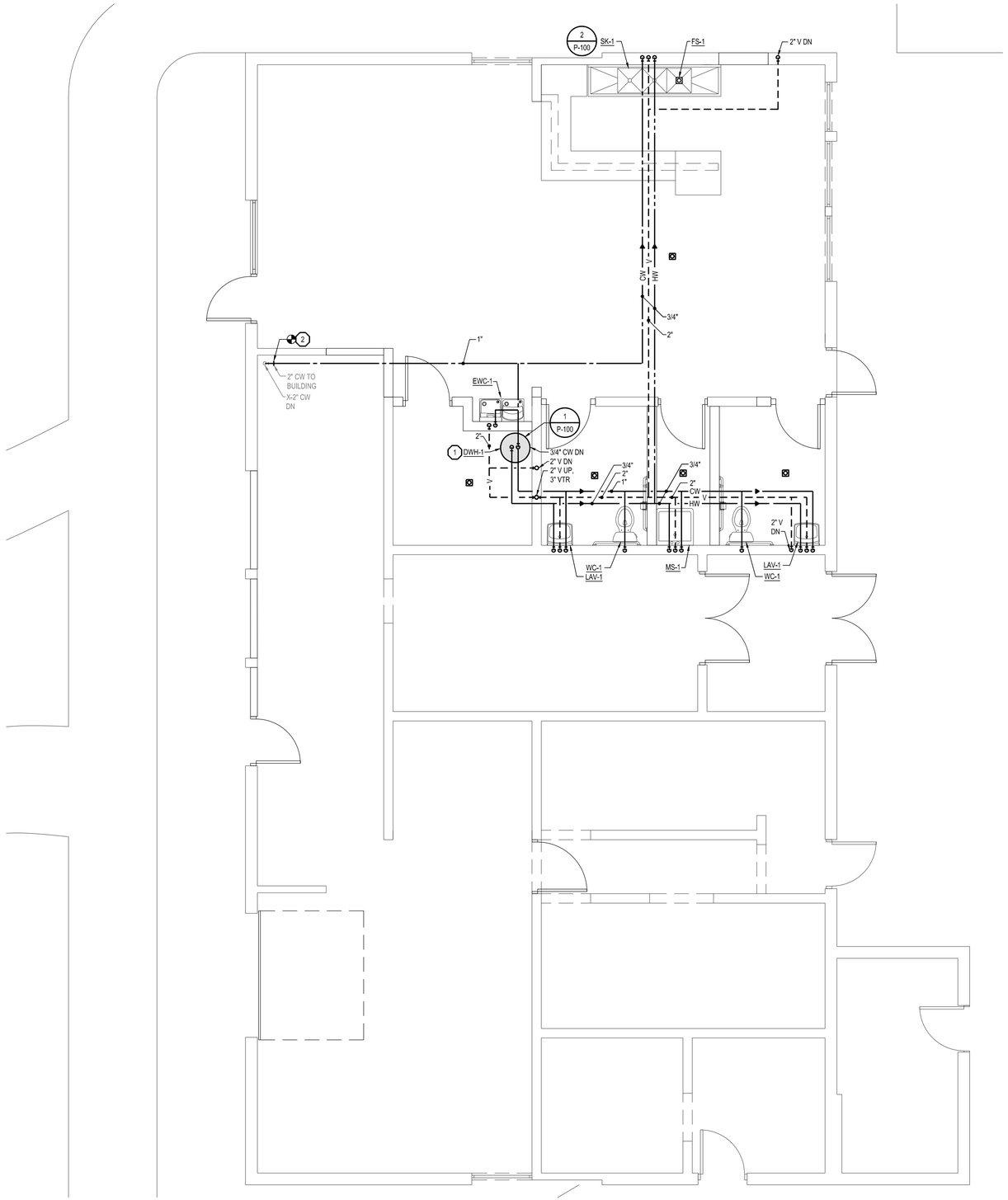

FLOOR PLAN - PLUMBING NEW

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

PLUMBING KEY NOTES

1. INSTALL ELECTRIC WATER HEATER AT LOCATION SHOWN. CONNECT TO COLD WATER AND HOT WATER PIPING.
2. MODIFY EXISTING 2" COLD WATER PIPING AS NEEDED TO CONNECT TO NEW COLD WATER PIPING.

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

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DRAWING TITLE

FLOOR PLAN - PLUMBING NEW

PROJECT NO.	21-450
DATE	7/29/2021
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CAD FILE NO.

SCALE	SHEET
1/4" = 1'-0"	17 OF 22

STATE OF MICHIGAN
CRAIG A. TRIERWEILER
ENGINEER
NO. 49255
REGISTERED PROFESSIONAL ENGINEER

7/29/2021

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ELECTRICAL SYMBOLS LEGEND

OUTLETS
- SINGLE RECEPTACLE (120 VOLT)
- DUPLEX RECEPTACLE
- EMERGENCY RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- F FLUSH FLOOR BOX
- S SURFACE FLOOR BOX
- SPECIAL EQUIPMENT RECEPTACLE
- TELEPHONE OUTLET
- DATA OUTLET
- TELEPHONE / DATA OUTLET
- PP POWER POLE
- JUNCTION BOX
- WALL JUNCTION BOX
- J PULL (JUNCTION) BOX
- UNDERFLOOR JUNCTION BOX
- CEILING MOUNTED WIFI

SWITCHES
- $ SINGLE-POLE SWITCH
- $3 THREE-WAY SWITCH
- $4 FOUR-WAY SWITCH
- $P SWITCH WITH PILOT LIGHT
- $TH THERMAL OVERLOAD SWITCH
- $M MANUAL MOTOR SWITCH
- $K KEY SWITCH
- $T TIME SWITCH
- D DIMMER SWITCH

MECHANICAL
- SINGLE PHASE MOTOR
- THREE PHASE MOTOR
- RESISTANCE HEATER, KW SHOWN
- PIPE TRACE HEATER
- EP ELECTRIC UNIT HEATER
- EWH ELECTRIC WATER HEATER

NURSE CALL
- NCC NURSE CALL CONTROLLER
- M MASTER STATION
- P EMERGENCY PULL STATION
- E EMERGENCY PUSH STATION
- CB CODE BLUE STATION
- A PENDENT INTERFACE
- I BED / LIGHT INTERFACE
- B1 SINGLE BED STATION
- B2 DUAL BED STATION
- DOME LIGHT
- SRS STAFF REGISTER STATION
- S STAFF STATION
- DS DUTY STATION

DESIGNATIONS
- 1 DEMOLITION NOTE
- 1 PLAN NOTE
- 1 ADDENDUM NOTE

FIXTURES
- LIGHT FIXTURE
- STRIP FIXTURE
- EMERGENCY LIGHT FIXTURE
- IN-GRADE LIGHT FIXTURE
- SPOTLIGHT (number of heads shown)
- EXIT SIGN (face & direction as shown)
- WALL MOUNT LIGHT FIXTURE
- CEILING LIGHT FIXTURE
- TRACK & FIXTURE
- STREET TYPE POLE FIXTURE
- POLE MOUNTED LIGHT FIXTURE
- EXTERIOR WALL MOUNT LIGHT FIXTURE
- WALLPACK LIGHT FIXTURE
- SPECIAL PURPOSE LIGHT FIXTURE
- HIGH BAY LIGHT FIXTURE
- EMERGENCY EGRESS LIGHT FIXTURE (number of heads shown)
- DOCK LIGHT FIXTURE

CIRCUITRY and RACEWAYS
- CONDUIT INSTALLED (by E.C.)
- CONDUIT INSTALLED (by others)
- CONDUIT STUB UP
- CONDUIT STUB DOWN
- 1,3 HOME RUN (with circuit numbers)
- END OF CONDUIT RUN
- END OF CONDUIT RUN, CAP AND STAKE
- "CONDUIT RUN CONTINUES" INDICATION
- OR FLEXIBLE PIGTAILS/CONNECTIONS
- WM WIREMOLD AS SPECIFIED
- PM PLUGMOLD AS SPECIFIED
- BD BUS DUCT
- UFD UNDERFLOOR DUCT

SOUND and SIGNAL
- SPEAKER
- SH WALL MOUNTED SPEAKER
- WALL MOUNTED SPEAKER / CLOCK COMBO
- SINGLE FACE CLOCK
- DUAL FACE CLOCK
- VI VIDEO INPUT
- AV AUDIO / VIDEO INPUT
- BELL
- V VOLUME CONTROL
- B BUZZER
- CHIME
- TELEVISION OUTLET
- M MICROPHONE OUTLET
- I INTERCOM OUTLET
- CAMERA
- DC DOOR CONTACT
- MD MOTION DETECTOR
- BD BEAM DETECTOR
- KP KEY PAD
- SSCP SECURITY SYSTEM CONTROL PANEL
- CCTV CCTV CONTROL PANEL
- CR CARD READER
- SS STUDENT STATION
- AS ADMINISTRATION STATION
- TS TEACHER STATION
- GLASS BREAK

SERVICE and EQUIPMENT
- TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
- VFD VARIABLE FREQUENCY DRIVE
- TRANSFORMER
- DISCONNECT SWITCH (fuse size shown)
- MAGNETIC STARTER (BY x/C U.O.N.)
- COMB. STARTER (BY x/C U.O.N.)
- PANELBOARD, SURFACE MOUNTED
- PANELBOARD, FLUSH MOUNTED
- WEATHERHEAD
- UTILITY METER, AS REQUIRED
- CT CURRENT TRANSFORMERS
- G GENERATOR, KW SHOWN
- TT TELEPHONE TERMINAL BOARD
- GROUND CONNECTION PER N.E.C.
- WW WIREWAY
- TS TRANSFER SWITCH
- ENCLOSED CIRCUIT BREAKER
- CAPACITOR

CONTROL
- THERMOSTAT
- H HUMIDISTAT
- PC PHOTOCELL (voltage as required)
- TC TIME CLOCK (24 hour U.O.N.)
- PUSHBUTTON STATION (number of buttons indicated)
- CONTROL TRANSFORMER
- LIGHTING CONTACTOR
- IC IRRIGATION CONTROLLER (120 volt xxVA connection by x/C)
- OS1 WALL MOUNT DUAL TECHNOLOGY SENSOR SENSOR SWITCH WV-PDT-16 SERIES
- OS2 OCCUPANCY SENSOR / PHOTOCELL SENSOR SWITCH CMR-PC-ADC SERIES
- OS3 ULTRASONIC SENSOR - 360° - 2 CIRCUIT SENSOR SWITCH CMR-PDT-10-2P
- OS4 ULTRASONIC SENSOR - 360° - 1000 SQ FT SENSOR SWITCH CMR-PDT-10
- OS5 ULTRASONIC SENSOR - 360° - 500 SQ FT SENSOR SWITCH CMR-PDT SERIES
- OC SWITCH STYLE OCCUPANCY SENSOR SENSOR SWITCH WSD-PDT SERIES
- PP POWER PACK SENSOR SWITCH MP20 SERIES
- $T DIGITAL TIME SWITCH WATT STOPPER TS-400

FIRE ALARM
- SMOKE DETECTOR
- H HEAT DETECTOR
- DUCT SMOKE DETECTOR
- FSD DUCT SMOKE DETECTOR
- HORN
- HORN & LIGHT
- SPEAKER
- SPEAKER & LIGHT
- F PULL STATION
- FACP FIRE ALARM CONTROL PANEL
- ANN ANNUNCIATOR PANEL
- EOL END OF LINE DEVICE
- REMOTE INDICATING LIGHT, WALL MTD.
- REMOTE INDICATING LIGHT, CLG. MTD.
- MH MAGNETIC DOOR HOLDER
- FC FIREFIGHTER COMMUNICATION JACK
- F FLOW SWITCH (furnished by FP/C)
- TAMPER SWITCH (furnished by FP/C)
- VI VISUAL ONLY UNIT
- FCPS FIRE CONTROL POWER SUPPLY
- M MONITOR MODULE
- C CONTROL MODULE
- M CARBON MONOXIDE DETECTOR

ABBREVIATIONS LEGEND

A	AMPS
AC	ABOVE COUNTER
ACU-	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU-	AIR HANDLING UNIT
AIC	AMPS INTERUPTING CAPACITY
AS	ABOVE SHELF
ATS	AUTOMATIC TRANSFER SWITCH
B-	BOILER
BC	BELOW COUNTER
BLDG	BUILDING
CHLR-	CHILLER
CND (C)	CONDUIT
CKT	CIRCUIT
CKT BKR	CIRCUIT BREAKER
CT-	COOLING TOWER
CU-	CONDENSING UNIT
CUH-	CABINET UNIT HEATER
DFU-	DUCT FURNACE
DISC	DISCONNECT
DWG	DRAWING
DWH-	DOMESTIC WATER HEATER
EBB-	ELECTRIC BASEBOARD
EC	ELECTRICAL CONTRACTOR
EF-	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EXIST (E)	EXISTING
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE CONDUIT
FLR	FLOOR
FLUOR	FLUORESCENT
FSES	FOOD SERVICE EQUIP. SUPPLIER
F/S	FIRE/SMOKE
FU-	FURNACE
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERUPTER
GND	GROUND
H-	HUMIDIFIER
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSEPOWER
HR	HOUR
HVAC	HEATING/VENTILATING/AIR CONDITIONING
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
LC	LIGHT CONTROL
LT	LIGHT
LTG	LIGHTING
LT FLEX	LIQUID TIGHT FLEXIBLE METAL CONDUIT
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MLO	MAIN LUG ONLY
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MUAU-	MAKE-UP AIR UNIT
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
P-	PUMP
PB	PULL BOX
PNL	PANEL
PRV-	POWER ROOF VENTILATOR
PVC	POLY VINYL CLORIDE
PWR	POWER
RECEPT	RECEPTACLE
RGC	RIGID GALVANIZED STEEL CONDUIT
RTU-	ROOF TOP UNIT
SF-	SUPPLY FAN
SPEC	SPECIFICATIONS
SW	SWITCH
SWBD	SWITCHBOARD
TCC	TEMPERATURE CONTROL CONTRACTOR
TR	TAMPER PROOF RECEPTACLE
TS	TAMPER PROOF SWITCH
TYP	TYPICAL
UF	UNDER FLOOR
UH-	UNIT HEATER
UL	UNDERWRITERS' LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VL	VERIFY LOCATION WITH OWNER
W	WATTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFMR	TRANSFORMER

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION AND COMMENTS	BALLAST INFO	FIXTURE MOUNTING HEIGHT	LAMPS
LA	CREE LIGHTING BARN LIGHT	LED BULB: A19-75W-P1-30K-E26-U1 WALL-MOUNTING: G26 GOOSENECK ARM-13-1/8"-615	LED A19 LAMP FOR EXISTING RLM FIXTURE. FIXTURES ABOVE COUNTER SHALL BE STEM MOUNT. WALL-MOUNTING SHALL BE G26 GOOSENECK WITH OIL-RUBBED BRONZE FINISH.	-	7' AFF	1100 LUMENS 12W, 3000K LED
LB	ORACLE LIGHTING METALUX LIGHTING LITHONIA LIGHTING DAY-BRITE	24-FPL1-LED-3000L-DIM10-MVOLT-35K-85 24FP3135C EPANL-2X4-3000LM-80CRI-35K-MIN10-ZT-MVOLT 2FPZ30L835-4-DS-UNV-DIM	LED RECESSED 2x4 FLAT PANEL.	0-10V	RECESSED	3000 LUMENS 30W, 3500K LED
LBEM	ORACLE LIGHTING METALUX LIGHTING LITHONIA LIGHTING DAY-BRITE	24-FPL1-LED-3000L-DIM10-MVOLT-35K-85-0-EMG-LED-10W 24FP3135C-EL14W EPANL-2X4-3000LM-80CRI-35K-MIN10-ZT-MVOLT-E10WCP 2FPZ30L835-4-DS-UNV-DIM-BSL10LST	LED RECESSED 2x4 FLAT PANEL WITH 10W EMERGENCY BATTERY.	0-10V	RECESSED	3000 LUMENS 30W, 3500K LED
LC	ORACLE LIGHTING METALUX LIGHTING LITHONIA LIGHTING DAY-BRITE	22-FPL1-LED-2000L-DIM10-MVOLT-35K-85 22FP2135C EPANL-2X2-2000LM-80CRI-35K-MIN10-ZT-MVOLT 2FPZ20L835-2-DS-UNV-DIM	LED RECESSED 2x2 FLAT PANEL.	0-10V	RECESSED	2000 LUMENS 20W, 3500K LED
LD	ORACLE LIGHTING METALUX LIGHTING LITHONIA LIGHTING DAY-BRITE	14-FPL1-LED-3000L-DIM10-MVOLT-35K-85-14FK 14FP2635C; DF-14W-U EPANL-1X4-3000LM-80CRI-35K-MIN10-ZT-MVOLT 1FPZ30L835-4-DS-UNV-DIM	LED RECESSED 1x4 FLAT PANEL WITH FLANGE KIT.	0-10V	RECESSED	3000 LUMENS 30W, 3500K LED
LEEM	ORACLE LIGHTING LUMARK LIGHTING LITHONIA LIGHTING GARDCO	OWP-FC-201-LED-4500L-MVOLT-40K-BZ-0-EMG-LED-PHC LDWP-FC-6B-120V-PE-EMLED-CD-7040 WST-LED-P3-40K-VW-120-PE-E20WC-DDBXD 101L-32L-530-NW-G1-3-EBPC-120-PCB-BZ	LED EXTERIOR WALL PACK WITH BRONZE FINISH. FIXTURE SHALL HAVE EMERGENCY BATTERY AND INTEGRAL PHOTOCELL.	0-10V	9' ABOVE GRADE	4500 LUMENS 45W, 4000K LED
XA	MAXILUME LIGHTING SURE-LITES LITHONIA LIGHTING CHLORIDE	ELX-603-R-B APX7RBK LQM-S-3-R-MVOLT-ELN CLX-N-RB	LED EXIT SIGN WITH BLACK HOUSING AND RED LETTERS. PROVIDE MOUNTING, FACES, AND ARROWS AS INDICATED ON DRAWING.	-	UNIVERSAL	LED

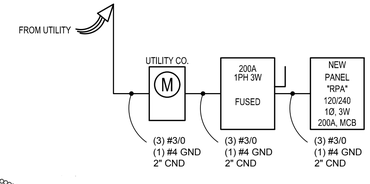
NEW PANEL "RPA"

VOLTS: 240 /120 PHASE: 1 WIRE: 3 AMPS: 200 MAIN: MCB

BRKR A	BRKR P	DESCRIPTION	CIRCUIT VA		PHASE LOADS A		C	CIRCUIT	VA	DESCRIPTION	BRKR A	BRKR P
20	1	STORAGE SPACE RECEPTACLES	540	1	720			2	180	STORAGE SPACE J-BOX	20	1
20	1	STORAGE SPACE RECEPTACLES	540	3			1260	4	720	RESTROOM/STORAGE RECEPT	20	1
20	1	EXTERIOR RECEPTACLE	180	5	900			6	720	NEW RECEPTACLES	20	1
20	1	EWC	500	7			1220	8	720	NEW RECEPTACLES	20	1
20	2	CUH-1	1000	9	1000			10		SPARE	20	1
-	-	-	1000	11			1000	12		SPARE	20	1
20	2	CUH-3	1000	13	2000			14	1000	CUH-4	20	2
-	-	-	1000	15			2000	16	1000	-	-	-
20	1	EF-1	12	17	4257			18	4245	HP-1	50	2
20	1	EF-2	12	19			4257	20	4245	-	-	-
20	1	SF-1	55	21	3055			22	3000	DWH-1	35	2
20	1	SPARE		23			3000	24	3000	-	-	-
20	1	UNDERCOUNTER RECEPTACLES	720	25	2220			26	1500	HAND DRYER	20	1
20	1	SPARE		27			1500	28	1500	HAND DRYER	20	1
20	1	SPARE		29	0			30		SPARE	20	1
20	1	SPARE		31			0	32		SPARE	20	1
		SPACE		33	0			34		SPACE		
		SPACE		35			0	36		SPACE		
		SPACE		37	0			38		SPACE		
		SPACE		39			0	40		SPACE		
		SPACE		40	0			42		SPACE		
		CONNECTED			14152		14237	TOTAL CONNECTED LOAD		28389 VOLT-AMPS		
		TOTAL CONNECTED			28389					118.29 AMPS		

GENERAL ELECTRICAL NOTES

1. ALL WALL AND FLOOR PENETRATIONS ARE TO BE SEALED TO MAINTAIN ORIGINAL RATING.
2. ALL CONDUITS TO BE FIELD ROUTED ALONG EXISTING PIPING AND STRUCTURAL STEEL.
3. THE DIVISION 26 CONTRACTORS SHALL VISIT THE PROJECT AND DETERMINE THE EXACT EXTENT OF THE DEMOLITION WORK REQUIRED BEFORE BIDDING THE PROJECT.
4. REMOVE ALL EXISTING OBSOLETE EXPOSED CONDUIT, WIRE AND UNUSED EQUIPMENT WHERE WORK IS BEING DONE EXCEPT ITEMS NOTED OTHERWISE.
5. WHERE BUILDING SURFACES ARE DAMAGED BY THE REMOVAL OF OLD WORK, SURFACES SHALL BE PATCHED TO MATCH ADJACENT.
6. EXISTING WORK WHICH IS PRESENTLY CONCEALED AND WHICH WILL REMAIN CONCEALED AND DOES NOT INTERFERE WITH ANY NEW WORK OF ANY TRADE NEED NOT BE REMOVED. HOWEVER, ALL CONDUIT SHALL BE CAPPED BELOW FINISH SURFACE AND THEN PATCHED TO MATCH, OR AS NOTED.
7. EXISTING OPENINGS, WHICH ARE TO BE REUSED, SHALL BE MODIFIED OR ENLARGED TO SUIT THE NEW SYSTEMS AS REQUIRED. PROVIDE ALL REQUIRED CUTTING AND PATCHING.
8. IF ASBESTOS IS PRESENT, IT WILL BE REMOVED OR RENDERED HARMLESS UNDER SEPARATE CONTRACT BY THE OWNER.
9. THE DIVISION 26 CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING THE EXISTING WALLS TO MATCH THE ADJACENT SURFACES BEHIND ALL SURFACE MOUNTED EQUIPMENT.
10. CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT VOLTAGES AND LOADS PRIOR TO INSTALLING SERVICE TO EQUIPMENT.
11. DRAWINGS ARE BASED ON EXISTING RECORD DOCUMENT AND CASUAL FIELD OBSERVATION. REPORT ANY DISCREPANCIES TO ENGINEER FOR CLARIFICATION.



NEW ELECTRICAL RISER DIAGRAM

SCALE: N.T.S.

STATE OF MICHIGAN
JOSEPH F. SOVIS, JR.
ENGINEER NO. 42247
LICENSED PROFESSIONAL ENGINEER

MATRIX CONSULTING ENGINEERS, INC.
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

NO.	DESCRIPTION	DATE
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CITY OF OWOSSO
WARMING CENTER RENOVATIONS
1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE
ELECTRICAL SYMBOLS, NOTES, AND ABBREVIATIONS

PROJECT NO. 21-450
DATE 7/29/2021
DRAWN BTT
CHECKED JFS

E100

CAD FILE NO.

SCALE 1/4" = 1'-0"
SHEET 18 OF 22

7/29/2021

PLOT DATE: 7/29/2021 2:03 PM
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DIVISION 26
ELECTRICAL SPECIFICATIONS

DIVISION 26 - ELECTRICAL SPECIFICATIONS

DESCRIPTION OF WORK
WORK SHALL INCLUDE, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING:
1. DEMOLITION
2. TEMPORARY POWER AND LIGHTING
3. CONDUIT AND RACEWAYS
4. CONDUCTORS
5. GROUNDING
6. SAFETY DISCONNECT SWITCHES
7. DEVICES, SWITCHES AND RECEPTACLES
8. LIGHTING AND RECEPTACLE PANELS
9. METERING EQUIPMENT
10. TRANSFORMERS - LOW VOLTAGE
11. MOTOR STARTERS AND CONTROLS
12. LIGHTING, LIGHTING CONTACTORS AND CONTROLS
13. FIRE DETECTION AND ALARM SYSTEMS

STANDARDS
ELECTRICAL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS LISTED BELOW. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. IN THE ABSENCE OF SPECIFIC INSTRUCTION IN THE TECHNICAL SPECIFICATIONS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE FOLLOWING APPLICABLE CODES, STANDARDS AND REGULATIONS, LATEST EDITIONS:
1. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM).
2. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI).
3. UNDERWRITER'S LABORATORIES, INC. (UL).
4. AMERICAN WELDING SOCIETY CODE (AWSC).
5. LOCAL BUILDING, ELECTRICAL, AND FIRE CODES.
6. NATIONAL ELECTRICAL CODE (NEC).
7. SERVICE RULES AND REGULATIONS OF LOCAL ELECTRICAL UTILITY COMPANY.
8. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
9. U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES "HRS-M-HF" 84_1.
10. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
11. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
12. AMERICANS WITH DISABILITIES ACT (ADA).

CODES AND ORDINANCES
COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES AND ORDINANCES. COMPLY WITH OWNER'S SPECIFICATIONS, GUIDELINES AND REQUIREMENTS. BIDDERS SHALL FAMILIARIZE THEMSELVES WITH CODE REQUIREMENTS FOR THE TYPE OF FACILITY WHERE THE WORK IS BEING PERFORMED.

PERMITS AND INSPECTION FEES
THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES. FINAL INSPECTION CERTIFICATES BY THE AUTHORITIES HAVING JURISDICTION, INCLUDING THE LOCAL ELECTRICAL INSPECTOR AND FIRE MARSHAL, SHALL BE OBTAINED BY THE CONTRACTOR. COPIES SHALL BE SUBMITTED IN DUPLICATE TO THE OWNER.

SUBMITTALS
SUBMIT PRODUCT DATA, SHOP DRAWINGS, WIRING DIAGRAMS, AND DESCRIPTIVE LITERATURE FOR ALL ELECTRICAL MATERIALS AND EQUIPMENT TO BE INSTALLED UNDER THIS CONTRACT. MAKE SUBMITTALS WITHIN THIRTY (30) DAYS AFTER THE SIGNING OF THE CONTRACT. PRODUCT SHIPMENTS ARE NOT PERMITTED UNTIL SUBMITTALS HAVE RECEIVED FINAL APPROVAL.

AS-CONSTRUCTED DOCUMENTS
UPON PROJECT COMPLETION, THE CONTRACTOR SHALL PROVIDE A MARKED-UP COPY OF THE ORIGINAL CONTRACT DOCUMENTS TO THE OWNER, INDICATING CHANGES, ADDITIONS AND MODIFICATIONS TO THE ORIGINAL DESIGN. DRAWINGS SHALL BE MANUALLY-PREPARED.

OPERATION & MAINTENANCE MANUALS
PROVIDE OPERATING INSTRUCTIONS AND MAINTENANCE INFORMATION, FOR EACH SYSTEM AND EQUIPMENT SPECIFIED, FOR USE BY FACILITY OPERATION AND MAINTENANCE PERSONNEL. MANUALS SHALL BE PROVIDED IN 3-RING BINDERS OR ELECTRONIC COPIES. THE MANUALS SHALL INCLUDE:
1. WIRING DIAGRAMS, CONTROL DIAGRAMS, AND CONTROL SEQUENCE FOR EACH SYSTEM AND ITEM OF EQUIPMENT.
2. START-UP, PROPER ADJUSTMENT, OPERATING, LUBRICATION, AND SHUTDOWN PROCEDURES.
3. SAFETY PRECAUTIONS.
4. THE PROCEDURE TO BE FOLLOWED IN THE EVENT OF EQUIPMENT FAILURE.
5. OTHER ITEMS OF INSTRUCTION AS RECOMMENDED BY THE MANUFACTURER OF EACH SYSTEM OR ITEM OF EQUIPMENT.

TRAINING
DURING OR UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL PROVIDE TRAINING OF OPERATION AND MAINTENANCE PERSONNEL FOR ALL REQUIRED ELECTRICAL COMPONENTS AND SYSTEMS. TRAINING SHALL BE CONDUCTED AT THE OWNER'S FACILITY. COORDINATE WITH THE OWNER FOR SCHEDULE.

SIGNAGE AND IDENTIFICATION OF SYSTEMS AND EQUIPMENT
1. OPERATING INSTRUCTIONS: PRINT OR ENGRAVE INSTRUCTIONS AND FRAME UNDER GLASS OR APPROVED LAMINATED PLASTIC. POST INSTRUCTIONS IN VIEW OF EQUIPMENT. PROVIDE WEATHER-RESISTANT MATERIALS FOR EXTERIOR APPLICATIONS.
2. EQUIPMENT: PROVIDE NAMEPLATES FOR ALL EQUIPMENT AND DEVICES. NAMEPLATES SHALL BE SELF-ADHESIVE WITH ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABELS. PROVIDE NAMEPLATES WITH WHITE LETTERS ON A BLACK BACKGROUND. MINIMUM LETTER HEIGHT SHALL BE 1/8-INCH.
3. WARNING SIGNS: PROVIDE A SELF-ADHESIVE WARNING LABEL THAT IS FACTORY PRINTED AND MULTI-COLOR. COMPLY WITH N.E.C. 70 AND 29 CFR 1910.145. LABELS FOR MULTIPLE POWER SOURCES SHALL READ: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES". LABELS FOR OTHER EQUIPMENT REQUIRING WORK SPACE CLEARANCES SHALL READ: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36-INCHES".
4. ARC-FLASH WARNING SIGNS: PROVIDE A SELF-ADHESIVE ARC-FLASH WARNING LABEL ON ALL SAFETY SWITCHES, STARTERS, SWITCHBOARDS, PANELBOARDS AND OTHER REQUIRED EQUIPMENT. LABEL SHALL READ: "WARNING. ARC FLASH AND SHOCK HAZARD. APPROPRIATE PPE AND TOOLS REQUIRED WHEN WORKING ON THIS EQUIPMENT."

GUARANTEE
PROVIDE WRITTEN GUARANTEE FOR ALL LABOR AND MATERIALS FOR ONE (1) YEAR AFTER OWNER'S WRITTEN ACCEPTANCE OF THE PROJECT.

LAYOUT OF THE WORK
THE CONTRACTOR SHALL EXAMINE THE AREA OF WORK, AND ALL OTHER DISCIPLINE DRAWINGS, BEFORE PROCEEDING WITH THE LAYOUT AND INSTALLATION OF THE ELECTRICAL WORK. LOCATE ELECTRICAL EQUIPMENT ESSENTIALLY AS SHOWN ON THE DRAWINGS. EXACT LOCATION OF EQUIPMENT SHALL BE DETERMINED AT THE JOB SITE, TO SUIT ACTUAL CONDITIONS. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO INSTALLATION, SO THAT ALL COMPONENTS WILL BE INSTALLED IN PROPER RELATIONSHIP AND SEQUENCE.

DEMOLITION
CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIAL INDICATED ON THE DEMOLITION PLANS OR AS REQUIRED TO INSTALL THE EQUIPMENT THAT IS PART OF THIS CONTRACT. LIGHT FIXTURES INDICATED TO BE REUSED SHALL BE REMOVED, CLEANED AND RE-LAMPED BEFORE REINSTALLING. REMOVED LIGHT FIXTURES TO BE DEMOLISHED SHALL BE TURNED OVER TO THE OWNER UNLESS OTHERWISE SPECIFIED. ALL OTHER ELECTRICAL DEMOLITION ITEMS SHALL BE REMOVED FROM THE SITE. EXISTING CONDUITS MAY BE REUSED WHEN PRACTICAL. CONTRACTOR SHALL PATCH EXISTING WALL AND CEILING OPENINGS IN FINISHED AREAS UPON REMOVAL OF ELECTRICAL EQUIPMENT. CONTRACTOR SHALL PROTECT ALL EXISTING ELECTRICAL EQUIPMENT, INDICATED TO REMAIN, DURING CONSTRUCTION PERIOD.

CUTTING AND PATCHING
ALL NECESSARY CUTTING AND PATCHING OF THE BUILDING WALLS, FLOORS AND CEILINGS REQUIRED FOR REMOVAL OR INSTALLATION OF THE NEW WORK, SHALL BE FURNISHED BY THE CONTRACTOR. NO STRUCTURAL MEMBERS OF THE BUILDING SHALL BE CUT WITHOUT PRIOR APPROVAL OF THE ENGINEER. ALL NECESSARY PATCHING AND PAINTING OF SURFACES SHALL BE BY CONTRACTOR. PAINT SHALL MATCH EXISTING.

TEMPORARY POWER AND LIGHTING
CONTRACTOR SHALL SUPPLY TEMPORARY POWER AND LIGHTING IN NEW WORK AREAS AND EXISTING AREAS WHERE POWER OR LIGHTING IS BEING MODIFIED. THIS INCLUDES POWER TO EXISTING CRITICAL AND LIFE SAFETY SYSTEMS. TEMPORARY LIGHTING SHALL EQUAL OR EXCEED EXISTING LIGHT LEVELS. MINIMUM ILLUMINATION LEVEL SHALL BE 10-FOOTCANDLES. COORDINATE ALL POWER AND LIGHTING SHUTDOWNS WITH OWNER.

ELECTRICAL SERVICE
NORMAL SECONDARY SERVICE IS 120/240 VOLT, 1-PHASE, 3 WIRE, AS INDICATED ON DRAWINGS. CONTRACTOR SHALL PROVIDE NEW SERVICE ENTRANCE CONDUIT AND CONDUCTORS FROM THE UTILITY TRANSFORMER TO THE NEW METERING CUBICLE OR CURRENT TRANSFORMER (CT) CABINET AS APPLICABLE.

CONTRACTOR SHALL PROVIDE AND INSTALL METERING EQUIPMENT, PANELS, DISCONNECTS AND EQUIPMENT AS SHOWN. ALL SERVICE EQUIPMENT SHALL BE RATED AS "SUITABLE FOR USE AS SERVICE EQUIPMENT." ELECTRICAL WATT-HOUR METER AND CURRENT TRANSFORMERS SHALL BE PROVIDED BY THE UTILITY COMPANY AND INSTALLED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.

GROUNDING
ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN A MANNER APPROVED BY THE AUTHORITY HAVING JURISDICTION. PROVIDE GROUND RODS AND BARE COPPER GROUND CONDUCTORS AT UTILITY TRANSFORMER PAD. PROVIDE A GROUND ROD AND GROUND CONDUCTOR AT THE BUILDING MAIN DISCONNECT SWITCH. PROVIDE A GROUND CONDUCTOR IN ALL POWER RACEWAYS. GROUND ELECTRICAL SYSTEMS PER NEC ARTICLE 250 OR AS DETAILED ON THE DRAWINGS.

ELECTRICAL DISTRIBUTION, RECEPTACLE AND LIGHTING PANELS
RECEPTACLE AND LIGHTING PANELS SHALL BE CIRCUIT BREAKER TYPE, SURFACE OR FLUSH-MOUNTED AS SHOWN, WITH COPPER BUS, MINIMUM 10,000 AIC RATED, HINGED LOCKABLE DOOR, BOLT-ON CIRCUIT BREAKERS WITH MAIN BREAKER OR MAIN LUGS ONLY (MLO) AS INDICATED ON THE DRAWINGS. VOLTAGE AS INDICATED ON THE DRAWINGS. SUPPLY WITH BRANCH CIRCUIT BREAKERS AS INDICATED ON THE PANEL SCHEDULES. SQUARE D TYPE NQ OR NF OR EQUAL.

PROVIDE GROUND FAULT CIRCUIT INTERRUPTING AND ARC FLASH CIRCUIT INTERRUPTING CIRCUIT BREAKERS WHERE INDICATED.

LOW VOLTAGE TRANSFORMERS
LOW VOLTAGE TRANSFORMERS SHALL BE ENERGY EFFICIENT, DRY-TYPE WITH VOLTAGE AND KVA RATING AS SHOWN ON DRAWINGS. COILS SHALL BE COPPER, ONE CORE PER PHASE. PROVIDE NON-VENTILATED ENCLOSURES IN DUSTY OR DAMP ENVIRONMENTS. PROVIDE NEMA 3R ENCLOSURES FOR EXTERIOR MOUNTED TRANSFORMERS. PROVIDE TAPS 2.5 PERCENT ABOVE AND 2.5 PERCENT BELOW NORMAL CAPACITY. 220 CLASS INSULATED CORE WITH 150-DEGREE C TEMPERATURE RISE. MOUNT AS INDICATED ON DRAWINGS. EATON, SIEMENS, G.E. OR SQUARE D OR EQUAL.

WIRE AND CABLE
PRIMARY FEEDERS SHALL BE TYPE UD EPR, 15KV RATED, COLORED BLACK. COLOR CODE ALL PRIMARY FEEDERS. SECONDARY FEEDERS SHALL BE TYPE THWN-2 or XHHW-2, 600V RATED, COLORED BLACK OR COLOR CODED. BRANCH CIRCUIT WIRING SHALL BE TYPE THWN-2 OR XHHW-2, 600V RATED, 7 STRAND, #12 AWG MINIMUM, COLORED HOT-BLACK, NEUTRAL-WHITE AND GROUND-GREEN. BARE COPPER GROUND WIRE SHALL BE STRANDED TYPE.

ALL BRANCH CIRCUIT WIRING SHALL BE CONTINUOUS BETWEEN JUNCTION BOXES, WITH SPLICES MADE ONLY WITHIN BOXES. SOLDERLESS PRESSURE-TYPE CONNECTORS, PROPERLY INSULATED, SHALL BE USED FOR ALL SPLICES. NO POWER WIRE SMALLER THAN #12 AWG MAY BE USED UNLESS SPECIFIED UNDER DESCRIPTIONS OF SPECIAL SYSTEMS.

LABEL ALL CONDUCTORS WITH CIRCUIT NUMBERS AT BOTH ENDS, MINIMUM.

CONDUIT AND BOXES
CONDUIT SHALL BE 3/4" MINIMUM. EXPOSED OUTDOOR CONDUIT SHALL BE RGC. BELOW GRADE CONDUIT SHALL BE SCHEDULE 40 PVC OR HDPE. EXPOSED INTERIOR CONDUIT SHALL BE EMT. CONDUIT INSTALLED IN INDUSTRIAL FACILITIES SHALL BE RGC. CONDUIT FOR CONDUCTORS GREATER THAN 480-VOLTS SHALL BE RGC. CONCEALED INTERIOR CONDUIT SHALL BE EMT. CONDUIT AND BOXES IN CORROSIVE ENVIRONMENTS SHALL BE PVC-COATED RGC. BELOW GRADE, NON-METALLIC CONDUIT CONTAINING DATA AND COMMUNICATIONS WIRING, SHALL BE INSTALLED WITH A TRACER WIRE.

WHERE FLEXIBLE CONNECTIONS ARE REQUIRED, SUCH AS CONNECTIONS TO MOTORS AND LIGHT FIXTURES, LIQUID-TIGHT, FLEXIBLE METAL CONDUIT SHALL BE USED, WHERE PERMITTED BY THE NEC.

EXTERIOR RGC CONDUIT JOINTS SHALL BE MADE WATERTIGHT BY COATING THREADS WITH A ZINC PAINT.

EXTERIOR-MOUNTED DEVICE BOXES AND BOXES INSTALLED IN INDUSTRIAL FACILITIES SHALL BE CAST TYPE. INTERIOR OUTLET BOXES SHALL BE PRESSED STEEL, COMPLETE WITH PLASTER RING IF NECESSARY, FOR EACH SWITCH, RECEPTACLE OR DEVICE SHOWN. CEILING OUTLET BOXES SHALL BE 4-INCH OCTAGON, 1-1/2-INCH DEEP. EACH OUTLET SHALL BE RIGIDLY SUPPORTED FROM THE BUILDING CONSTRUCTION (INDEPENDENT OF THE RACEWAY SYSTEM). LIGHT FIXTURE BOXES SHALL BE SUPPLIED WITH FIXTURE SUPPORT HARDWARE AND SUPPORTED TO WITHSTAND 80 LBS.

DEVICES
WALL SWITCHES SHALL BE 20A RATED, SPECIFICATION GRADE, TOGGLE TYPE, SINGLE-POLE, TWO-POSITION. PROVIDE 3-WAY AND 4-WAY AND TWO-POLE SWITCHES WHERE INDICATED. COLOR SELECTED BY OWNER OR MATCH EXISTING. LUTRON, LEVITON, G.E. OR EQUAL.

RECEPTACLES SHALL BE 20A RATED, SPECIFICATION GRADE, 125VAC, 3-WIRE DUPLEX TYPE, NEMA 5-20R UNLESS NOTED OTHERWISE. PROVIDE GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLES AND ARC FLASH CIRCUIT INTERRUPTING RECEPTACLES WHERE REQUIRED OR AS INDICATED. COLOR SELECTED BY OWNER OR MATCH EXISTING. LEVITON, G.E. OR EQUAL.

PROVIDE IN-USE, HINGED LOCKABLE COVERS FOR ALL EXTERIOR-MOUNTED RECEPTACLES. NICKEL OR GALVANIZED STEEL COVERS IN INDUSTRIAL FACILITIES AND NICKEL, PLASTIC COVERS (MATCHING OWNER'S EXISTING COVERS) IN FINISHED AREAS.

SUPPORTS AND HANGERS
PROVIDE AND INSTALL NECESSARY STEEL BRACKETS, RODS, CHANNELS, CLAMPS, ETC., FOR SUPPORT OF ALL WORK UNDER THIS CONTRACT. MOUNT SECURELY TO CEILING OR WALL.

SAFETY DISCONNECT SWITCHES
SAFETY DISCONNECT SWITCHES SHALL BE CIRCUIT BREAKER OR FUSED TYPE, 250VAC OR 480VAC, CLASS A, HEAVY DUTY, DUAL HORSEPOWER RATED IN NEMA 1 ENCLOSURE OR WEATHER-PROOF AS INDICATED ON DRAWINGS. BUILDING SAFETY DISCONNECT SWITCHES SHALL BE RATED FOR "SERVICE ENTRANCE.". VOLTAGE, CURRENT RATING, NUMBER OF POLES, CIRCUIT BREAKER OR FUSES AS INDICATED. CONSTRUCTION SHALL BE SUCH THAT, WHEN THE SWITCH HANDLE IS IN THE "ON" POSITION, THE COVER CANNOT BE OPENED. SWITCHES FOR 30-AMPERE TO 200-AMPERE LOADING SHALL BE SQUARE D TYPE HD OR EQUAL.

MOTOR STARTERS
FRACTIONAL HORSEPOWER MOTOR STARTERS SHALL BE TOGGLE TYPE, 120VAC WITH RED PILOT LIGHT.

LIGHTING FIXTURES
PROVIDE AND INSTALL LIGHT FIXTURES AS SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE. ALL LIGHTING FIXTURES AND COMPONENTS SHALL BE U.L., D.L.C., ENERGY STAR AND E.T.L. APPROVED. EMERGENCY LIGHT FIXTURES AND EXIT SIGNS SHALL BE CONNECTED TO THE CIRCUIT SUPPLYING NORMAL POWER TO LIGHTING FIXTURES IN THE AREA THEY SERVE, AHEAD OF ANY SWITCHES.

LIGHTING CONTROL
PROVIDE CEILING AND WALL-MOUNTED OCCUPANCY SENSORS AND SWITCHES AS SHOWN ON THE DRAWINGS. HONEYWELL, EATON, LUTRON, EDWARDS, LEVITON, SCHNEIDER OR EQUAL.

FIRE DETECTION AND ALARM SYSTEM
PROVIDE MANUAL PULL STATIONS, SMOKE DETECTORS, WATERFLOW SWITCH, TAMPER SWITCH, AUDIO-VISUAL SIGNALS AND VISUAL-ONLY SIGNALS AS INDICATED. ALL EQUIPMENT SHALL BE INSTALLED BY A LICENSED FIRE ALARM INSTALLER AND SHALL MEET LATEST N.F.P.A., A.D.A. AND N.E.C. CODES. SYSTEM SHALL HAVE CAPABILITY OF REMOTE SITE MONITORING. PROVIDE AS-CONSTRUCTED DRAWINGS TO THE OWNER. SIEMENS, JOHNSON CONTROLS, HONEYWELL, SCHNEIDER, ADT OR EQUAL.

END OF DIVISION 26

STATE OF MICHIGAN
JOSEPH F. SOVIS, JR.
ENGINEER NO. 42247
LICENSED PROFESSIONAL ENGINEER

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

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CITY OF OWOSSO
WARMING CENTER RENOVATIONS
1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE
ELECTRICAL SHEET SPECIFICATION

PROJECT NO. 21-450
DATE 7/29/2021
DRAWN BTT
CHECKED JFS

E101

CAD FILE NO.

SCALE 1/4" = 1'-0"
SHEET 19 OF 22

7/29/2021

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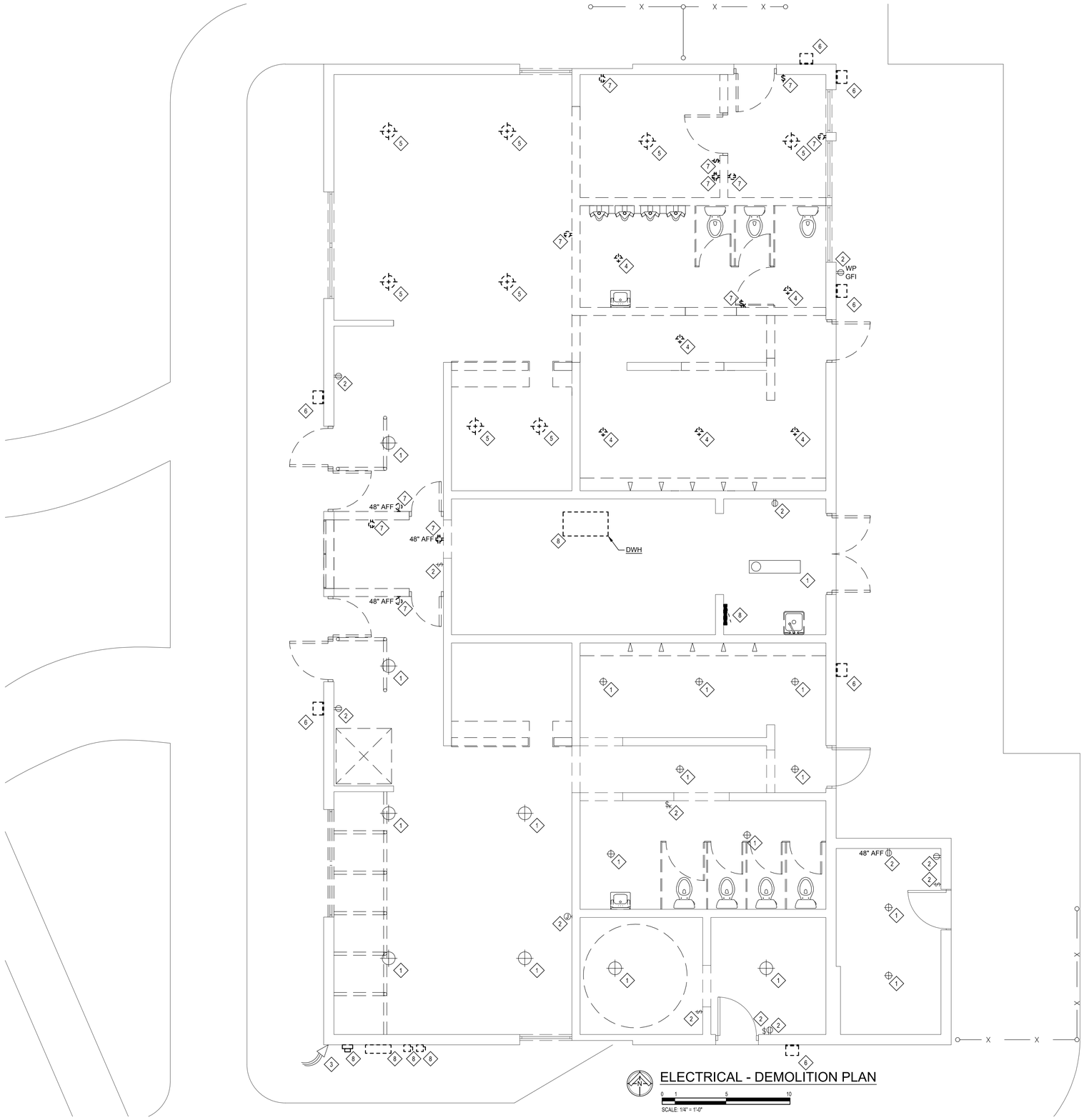

ELECTRICAL - DEMOLITION PLAN

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

DEMOLITION NOTES

1. EXISTING LIGHT FIXTURE TO REMAIN.
2. EXISTING DEVICE TO REMAIN.
3. EXISTING EQUIPMENT TO REMAIN.
4. DISCONNECT & REMOVE EXISTING LIGHT FIXTURE. REMOVE ASSOCIATED CONDUIT & WIRE.
5. DISCONNECT & REMOVE EXISTING LIGHT FIXTURE. REMOVE ASSOCIATED CONDUIT & WIRE. FIXTURE SHALL BE RELOCATED TO NEW LOCATION.
6. DISCONNECT & REMOVE EXISTING LIGHT FIXTURE. ASSOCIATED CONDUIT TO REMAIN FOR NEW FIXTURE.
7. DISCONNECT & REMOVE EXISTING DEVICE. REMOVE ASSOCIATED CONDUIT & WIRE.
8. DISCONNECT & REMOVE EXISTING EQUIPMENT. REMOVE ASSOCIATED CONDUIT & WIRE.

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

H2A architects
9100 Lapeer Rd. Suite B
Davison, MI 48423
(810) 412-5640
www.h2aarchitects.net

NO.	DESCRIPTION	DATE
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CITY OF OWOSSO

WARMING CENTER RENOVATIONS

1225 WALNUT ST.
OWOSSO, MI 48867

DRAWING TITLE

ELECTRICAL DEMOLITION PLAN

PROJECT NO.	21-450
DATE	7/29/2021
DRAWN	BTT
CHECKED	JFS

E300

CAD FILE NO.

SCALE	SHEET
1/4" = 1'-0"	20 OF 22

STATE OF MICHIGAN
JOSEPH F. SOVIS, JR.
ENGINEER NO. 42247
LICENSED PROFESSIONAL ENGINEER

7/29/2021

PLOT DATE: 7/29/2021 1:51 PM
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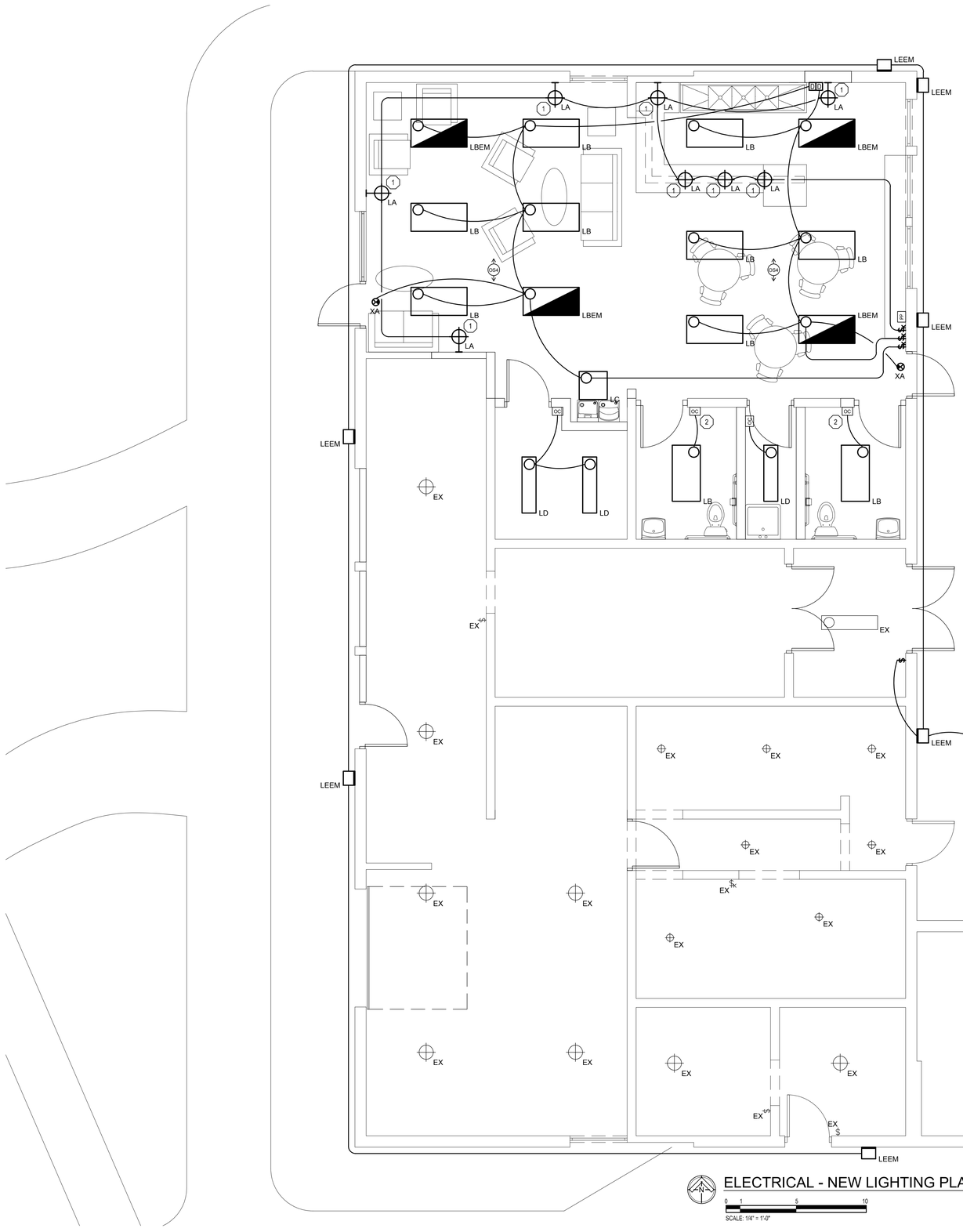


ELECTRICAL - NEW LIGHTING PLAN

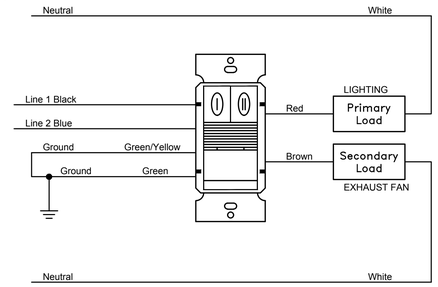
SCALE: 1/4" = 1'-0"

GENERAL ELECTRICAL NOTES

1. EMERGENCY FIXTURES SHALL BE WIRED AHEAD OF LOCAL SWITCHING.

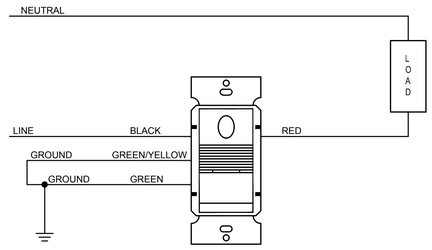
ELECTRICAL KEY NOTES

1. RELOCATED LIGHT FIXTURE. CONTRACTOR SHALL CLEAN FIXTURE BEFORE INSTALLATION.
2. OCCUPANCY SENSOR SHALL CONTROL LIGHTING AND EXHAUST FAN IN THIS ROOM.



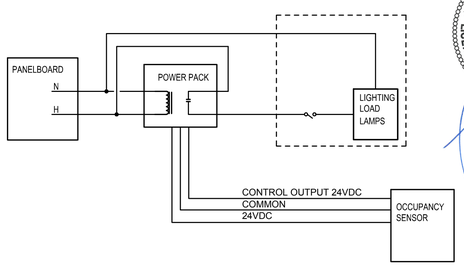
1 TYPICAL OCCUPANCY SENSOR & EXHAUST FAN WIRING DETAIL

SCALE: N.T.S.



2 WALL-MOUNTED OCCUPANCY SENSOR DETAIL

SCALE: N.T.S.



3 CEILING-MOUNTED OCCUPANCY SENSOR DETAIL

SCALE: N.T.S.

STATE OF MICHIGAN
JOSEPH F. SOVIS, JR.
ENGINEER NO. 42247
LICENSED PROFESSIONAL ENGINEER

MATRIX CONSULTING ENGINEERS, INC
1601 E. CESAR CHAVEZ AVE.
LANSING, MI 48906
PHONE: (517) 487-2511
FAX: (517) 487-2544
administrator@matrixceinc.com
Matrix Project No. 21046.00

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ELECTRICAL
NEW LIGHTING PLAN

PROJECT NO.	21-450
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E400

CAD FILE NO.

SCALE: 1/4" = 1'-0" | SHEET: 21 OF 22

7/29/2021

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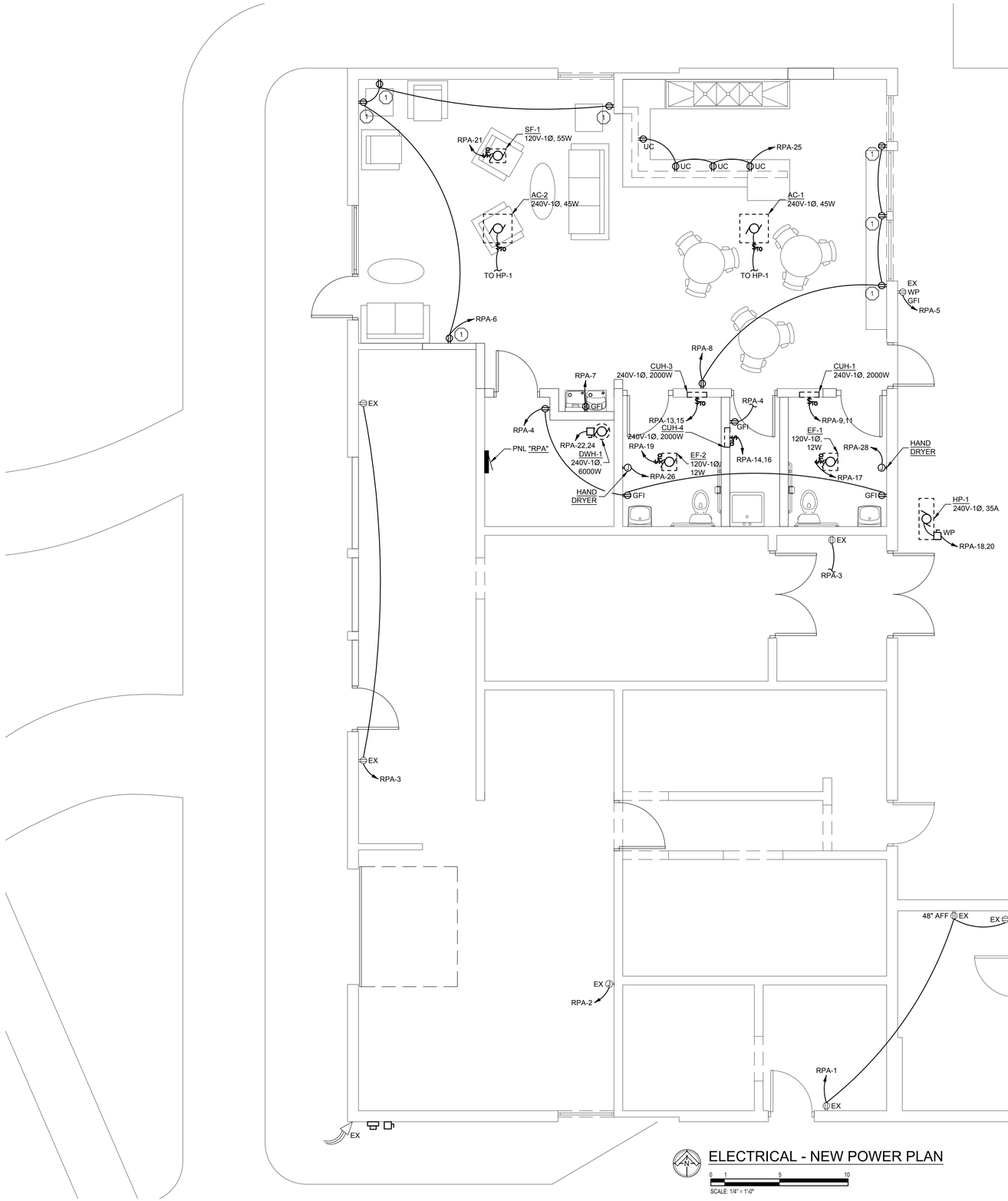

ELECTRICAL - NEW POWER PLAN

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

ELECTRICAL KEY NOTES

1. CONTRACTOR SHALL PROVIDE RECEPTACLE/(2) USB CHARGING DUPLEX.

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ELECTRICAL
NEW POWER PLAN

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E500

CAD FILE NO.

SCALE	SHEET
1/4" = 1'-0"	22 OF 22

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