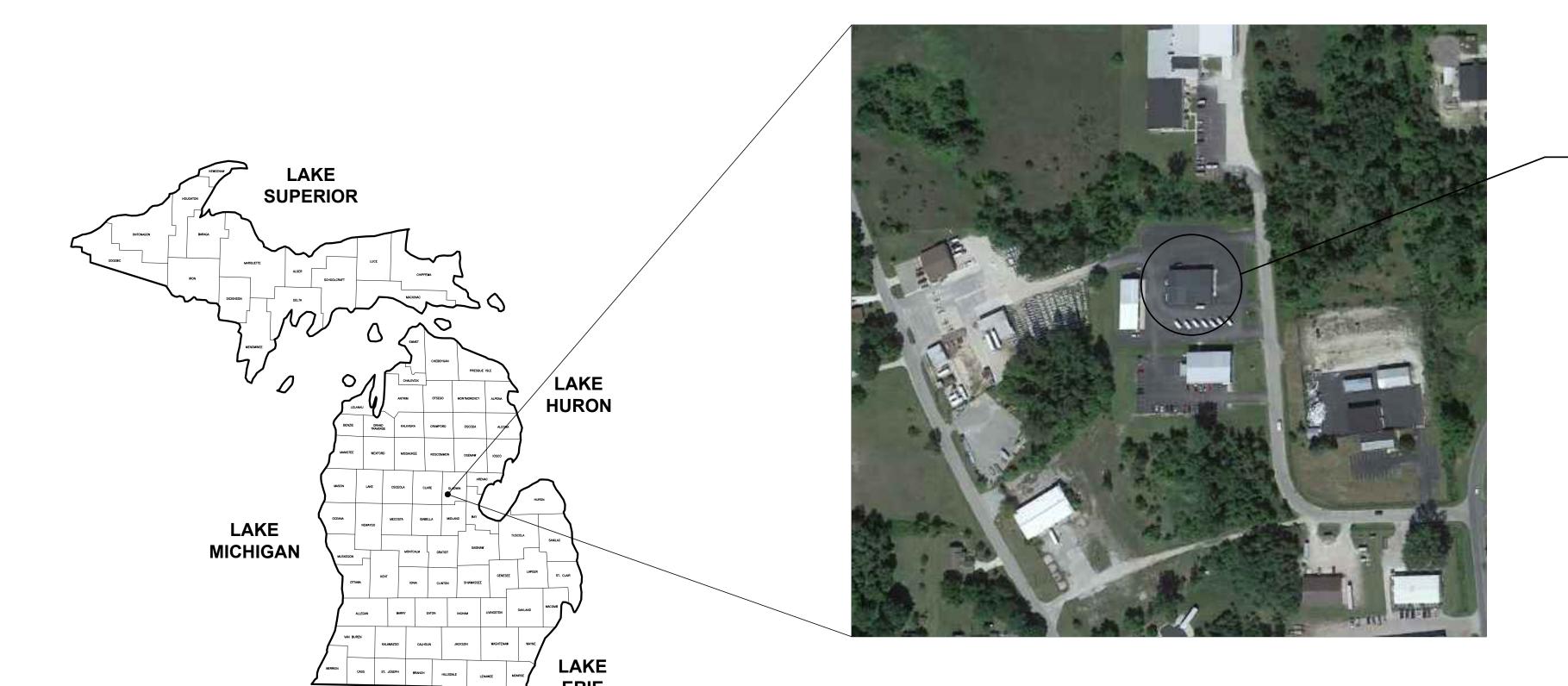
GLADWIN TRANSPORTATION MAINTENANCE EXPANSION

City of Gladwin, Gladwin County, MI



PROJECT LOCATION

Know what's below.
Call before you dig.

PROJECT INFORMATION SITE DATA MT (MANUFACTURER TECHNOLOGY) INDOOR PARKING/ PRIVATE WASH FACILITY EXIST.- NO CHANGE OF USE, NO INCREASE IN PARKING PROPOSED **BUILDING DATA**

	CODE INFORMATION		
BUILDING CODE:	2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS		
HEIGHT/AREA MODIFICATIONS:	MATCH EXIST. HEIGHT / 2,627 S.F.ADDITION		
RISK CATEGORY:	II .		
PLUMBING CODE:	MICHIGAN PLUMBING CODE - 2018		
MECHANICAL CODE:	MICHIGAN MECHANICAL CODE - 2015		
ELECTRICAL CODE:	MICHIGAN ELECTRICAL CODE - 2017, INCORPORATING THE 2017 NEC W/ MICHIGAN PART 8 RULES		
FIRE CODE:	INTERNATIONAL FIRE CODE- 2015		
ENERGY CODE:	ASHRAE STANDARD 90.1-2013 W/ 2015 MICHIGAN UNIFORM ENERGY CODE PART 10A AMENDMENTS		
CONSTRUCTION CLASSIFICATION:	VB (NOT SPRINKLERED, EXISTING)		
OCC. GROUP(S):	S-2 (LOW-HAZARD STORAGE) WITH EXISTING ACCESSORY B-OCCUPANCY MIXED OCC., SEPARATED EXIST. = S-1, ADD. = S-2		

	SHEET INC	EX			
GENERAL			STRUCTURAL		
CS-000	COVER SHEET	S-000	STRUCTURAL SPECIFICATIONS		
CS-001	CODE ANALYSIS / LIFE SAFETY	S-001	STRUCTURAL SPECIFICATIONS		
CS-002	STATEMENT OF SPECIAL INSPECTIONS, ABB., DRAWING LEGEND	S-101	FOUNDATION PLAN		
		S-102	STRUCTURAL DETAILS		
CIVIL		S-103	IN-GROUND LIFT PLAN & DETAILS		
C-100	NOTES				
C-101	LEGEND	PLUM	BING		
C-200	EXISTING CONDITIONS/DEMOLITION	PD-100	PLUMBING DEMOLITION FLOOR PLAN		
C-300	PROPOSED	P-100	PLUMBING FLOOR PLAN		
C-500	DETAILS	P-200	PLUMBING DETAILS		
C-501			MECHANICAL		
A DCHI	 TECTURAL	MD-100	MECHANICAL DEMOLITION FLOOR PLAN		
		M-100	MECHANICAL FLOOR PLAN		
AD-101	DEMOLITION FLOOR PLAN	M-200	MECHANICAL PIPING FLOOR PLAN		
A-101	FLOOR PLAN / CLERESTORY PLAN	M-300	MECHANICAL SCHEDULES		
A-109	ROOF PLAN				
A-201	EXTERIOR ELEVATIONS				
A-301	BUILDING SECTIONS	ELEC	TRICAL		
A-401	SECTIONS AND DETAILS	F 404	ELECTRICAL CITE DI ANI		
A-701	ROOM FINISH SCHEDULE, DOOR SCHEDULE & DETAILS	E-101	ELECTRICAL SITE PLAN		
A-721	WALL TYPES	E-102	ELECTRICAL DEMOLITION PLAN		
A-801	REFLECTED CEILING PLAN	E-103	POWER AND SYSTEMS PLAN		
		E-104	LIGHTING PLOTOMETRICS AND DOWER DENSIT		
		E-105	LIGHTING PHOTOMETRICS AND POWER DENSIT		
		E-106	PANEL SCHEDULES		



45650 Grand River Avenue Novi, Michigan 48374 Ph: (248)349-4500 • Fax: (248)349-1429

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No Scale

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GLADWIN CITY COUNTY TRANSIT

GLADWIN TRANSPORTATION MAINTENANCE **EXPANSION**

621 WEAVER CT

Seal:

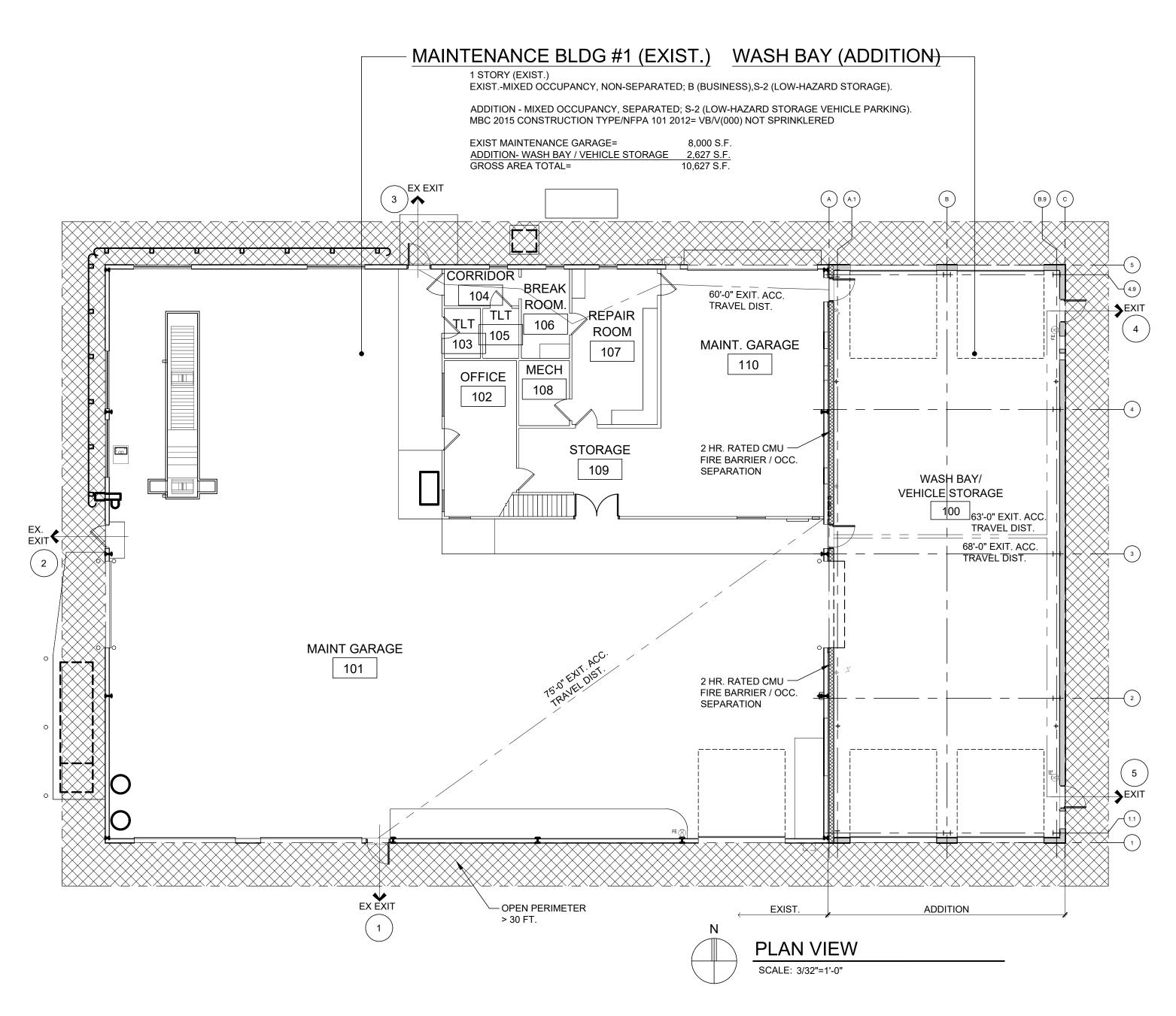
GLADWIN, MI

8.08.23 OWNER REVIEW BIDDING

Drawn:	A
Checked:	Т
Approved:	В

COVER SHEET

521558



FIRE RESISTANCE RATING REQUIREMENTS				
MBC/NFPA CONSTRUCTION TYPE - IIB				
BUILDING ELEMENT	FIRE RATINGS (MBC TABLE 601/602)			
PRIMARY STRUCTURAL FRAME	0 HOUR			
BEARING WALLS:				
EXTERIOR	0 HOUR			
INTERIOR	0 HOUR			
NON-BEARING WALLS AND PARTITIONS:				
EXTERIOR	X < 5 (1 HOUR), 5 ≤ X < 10 (1 HOUR), 10 ≤ X < 30 (0 HOUR), X ≥ 30 (0 HOUR)			
INTERIOR	0 HOUR			
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0 HOUR			
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0 HOUR			
WALL REQUIREMENTS	FIRE RATING REQUIREMENTS			
FURNACE ROOM W/ ANY PIECE OF EQUIP. OVER 400,000 BTU/HR INPUT	ONE HOUR* (MBC TABLE 509)			
ROOMS W/ BOILERS WHERE LARGEST PIECE OF EQUIP. IS OVER 15 PSI AND 10 HP	ONE HOUR* (MBC TABLE 509)			
CORRIDOR WALLS (FIRE PARTITION)	0 HOUR* (PER MBC TABLE 1020.1) W/ < 30 OCC.			
CORRIDOR WALLS (FIRE PARTITION)	ONE HOUR* (PER MBC TABLE 1020.1) W/ > 30 OCC.			
FIRE BARRIERS (OTHER)	(PER MBC SEC. 707.3)			
INCIDENTAL USES	ONE HOUR* (PER MBC TABLE 509)			
OCCUPANCY SEPARATION	TWO HR. (NON-SPRINKLED)			
* ZERO HOUR WHEN AUTOMATIC SPRINKLER	SYSTEM IS PROVIDED WHEN PERMITTED PER CODE.			

DEFERRED DOCUMENTS STATEMENT				
PLAN REVIEW ITEM NO. AND/OR SPECIFICATION SECTION NO.	DESCRIPTION OF DEFERRED ITEMS THAT SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CONTRACTOR TO THE JURISDICTION HAVING AUTHORITY.			
DIVISION 07 83 00-	FIRESTOPPING SYSTEMS (JOINTS AND PENETRATIONS) SHOP DRAWINGS			
DIVISION 13 34 00-	PREENGINEERED METAL BUILDING SYSTEM SHOP DRAWINGS			
DIVISION 26 00 00-	FIRE ALARM SYSTEM SHOP DRAWINGS			

S	CODE DATA	
	JURISDICTION:	MICHIGAN DEPARTMENT OF TRANSPORTATION GLADWIN COUNTY
	BUILDING CODE:	MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS INCORPORATING MICHIGAN BUILDING CODE - 2015 AND NFPA 101- 2012 (AS APPLICABLE)
	MBC CONSTRUCTION TYPE: OCC. GROUP:	IIB/II(000) MIXED OCCUPANCY SEPARATED (B)(S-1, S-2)
	RISK CATEGORY:	II
	PLUMBING CODE:	MICHIGAN PLUMBING CODE - 2018
	MECHANICAL CODE:	MICHIGAN MECHANICAL CODE - 2015
	ELECTRICAL CODE:	MICHIGAN ELECTRICAL CODE - 2017, INCORPORATING THE 2017 NEC W/ MICHIGAN PART 8 RULES
	FIRE CODE:	INTERNATIONAL FIRE CODE- 2015
	ENERGY CODE:	ASHRAE STANDARD 90.1-2013 W/ 2015 MICHIGAN UNIFORM ENERGY CODE PART 10A AMENDMENTS
CC.	FIRE SUPPRESSION:	N/A
0 OCC.	FIRE ALARM:	NFPA 72-2013
	FIRE EXTINGUISHERS:	NFPA 10-2013
	ACCESSIBILITY:	N/A PER MBC. SEC. 1103.2.2
R CODE.	SPACES WITH ONE EXIT: (MBC 1 MAX. OCC. LOAD S-2 OCC.	TABLE 1006.2.1) MAX. EXIT ACCESS TRAVEL DIST.
	=29 MAX.<br =29 MAX.</td <td>100 FT. (<!--= 30 OCC., NOT SPRINKLERED)<br-->75 FT. (> 30 OCC., NOT SPRINKLERED)</td>	100 FT. (= 30 OCC., NOT SPRINKLERED)<br 75 FT. (> 30 OCC., NOT SPRINKLERED)

2 PER STORY 1-500 OCC.

ALL OTHER=

STAIRS= N/A

(MBC SECTION 1020.4)

20 FT. (NOT SPRINKLERED)

REQUIRED EXIT WIDTH (STAIRS / OTHER): (MBC SECTION 1011 OR PER MIN. PER 1005.3.1 AND1009)

MBC SECTION 903.2.10.1.5

MAX. OCC. LOAD MAX. COMM. PATH EGRESS/EXIT ACCESS TRAVEL DIST. (WHEN SINGLE EXIT)

S-2 OCC. (NOT SPRINKLERED)= 300 FT.

OCC. LOAD < 50= 36 INCHES

(MBC SECTION 1020.2, MBC TABLE 1020.2)

OTHER= 0.2 INCH/OCC. (NOT SPRINKLERED,

44 INCHES

REFER TO OCC. LOAD CALCULATIONS)

5,000 S.F. (NON-SPRINKLED) FOR COMMERCIAL PARKING GARAGES

ENGINEERS+ARCHITECTS+CONSULTANTS

Corporate Headquarters 45650 Grand River Avenue Novi, Michigan 48374 Ph: (248)349-4500 • Fax: (248)349-1429

Gaylord Office

757 S. Wisconsin Ave.

Gaylord, Michigan 49735

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GLADWIN CITY COUNTY TRANSIT

Project: GLADWIN TRANSPORTATION MAINTENANCE **EXPANSION**

	EGRESS WIDTH CALCULATIONS								
	MARK	DOOR DESCRIPTION	DOOR DESCRIPTION	CLEAR OPENING /	OCC. FACT	OR = OCC. CAPACITY	PROPOSED OCC.		
	1	3'-0" x 7'-0" SWING DR.	EXISTING RESTRICTED/SECURED / ACCESSIBLE	33" (CLEAR MIN.)	0.2	165	>62/ 2 EXITS MIN.= 31 (PER REQ. EXIT)		
FLOOR	2	3'-0" x 7'-0" SWING DR.	EXISTING RESTRICTED/SECURED / NONACCESSIBLE	33" (CLEAR MIN.)	0.2	165	>62/ 2 EXITS MIN.= 31 (PER REQ. EXIT)		
	3	3'-0" x 7'-0" SWING DR.	EXISTING RESTRICTED/SECURED / ACCESSIBLE	33" (CLEAR MIN.)	0.2	165	>62/ 2 EXITS MIN.= 31 (PER REQ. EXIT)		
	4	3'-0" x 7'-0" SWING DR.	NEW RESTRICTED/SECURED / ACCESSIBLE	33" (CLEAR MIN.)	0.2	165	>13/ 2 EXITS MIN.= 7 (PER REQ. EXIT)		
	5	3'-0" x 7'-0" SWING DR.	NEW RESTRICTED/SECURED / ACCESSIBLE	33" (CLEAR MIN.)	0.2	165	>13/ 2 EXITS MIN.= 13 (PER REQ. EXIT)		
FIRST	TOTAL EGRESS WIDTH = $165'' / 0.2 = 825 \text{ MAX. OCCUPANTS} > 62 \text{ PROPOSED OCC. (OK)}$								
	OTHER: 32" MIN. @ DOORS 44" MIN. CORRIDOR								

CORRIDOR WIDTH:

DEAD END CORRIDOR:

FIRE AREA SEPARATION

NUMBER OF EXITS (STORY): (MBC TABLE 1006.3.1)

MAX. EXIT ACCESS TRAVEL DIST.: (MBC TABLE 1017.2)

STORIES WITH ONE EXIT/EXIT ACCESS: (MBC. TABLE 1006.3.2(2)

S-2 OCC. 29 MAX. 75 FT. (NOT SPRINKLERED)

621 WEAVER CT GLADWIN, MI

8.08.23

2.12.24

	DE	SIGN OCCUPANT	LOAD CA	LCULATIO	NS		
FLR.	ROOM NO.	ROOM NAME	ACTUAL FLOOR AREA (GROSS, U.N.O.)	FLOOR AREA PER OCC. (GROSS, U.N.O.)	OCC. LOAD		
	100	WASH BAY	2,453 S.F.	200 S.F.	13		
	101	MAINTENANCE GARAGE	5964 S.F.	200 S.F.	30		
	102	OFFICE	216 S.F.	100 S.F.	3		
	103	TOILET	35 S.F.	50 S.F.	1		
OOR	104	CORRIDOR	53 S.F.	100 S.F.	1		
ŏ	L 106 BREAK ROOM		35 S.F.	50 S.F.	1		
긭			82 S.F.	15 S.F.	6		
FIRST	107	REPAIR ROOM	254 S.F.	100 S.F.	3		
ᇤ	108	MECHANICAL	63 S.F.	300 S.F.	1		
	109	STORAGE	215 S.F.	300 S.F.	1		
	110	MAINTENANCE GARAGE	254 S.F.	200 S.F.	2		
			SUBTO	TAL OCCUPANTS =	62		
E	EGRESS WIDTH PER OCCUPANT SERVED (PER MBC TABLE 1005.1) STAIRWAYS: N/A						

LICENSE NUMBER #1301071719/ EXP. 10/1/2023

STAIRWAYS:	R OCCUPANT SERVED (PER MBC TABLE 1005.1) N/A SS COMPONENTS: 0.2 INCHES PER OCCUPANT (NOT SUPPRESSED)	
	DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE	Drawn: Checked:
	SIDOCK GROUP , INC. TIMOTHY J. MILLER, AIA, NCARB STATE OF MICHIGAN	Approved:

THESE CONSTRUCTION DOCUMENTS WERE PREPARED FOR
COMPLIANCE WITH THE MICHIGAN CONSTRUCTION CODES AND
GUIDELINES IN EFFECT AT THE TIME OF PERMIT SUBMITTAL. ALL
ENGINEERS, CONTRACTORS AND SUPPLIERS INVOLVED WITH THIS
PROJECT SHALL COMPLY WITH THE SAME CODES, ISSUED AND
APPROVED CODE MODIFICATIONS AND/OR LOCAL JURISDICTION
CONSTRUCTION BOARDS OF APPEALS RULINGS AND, WHENEVER
REQUIRED, SHALL PROVIDE SHOP DRAWINGS AND SUBMITTALS CLEARI
DESCRIBING COMPLIANCE TO THE REGISTERED DESIGN PROFESSIONA
IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL.

Drawn:	AM
Checked:	TM
Approved:	TM

Issued For

BIDDING

OWNER REVIEW

CODE ANALYSIS / LIFE SAFETY

Sheet Title:

Project Number:

521558

AD\/	ABOVE	ARCHI DPR.	TECTURAL DRAWI	NG AB	BREVIATIONS HORIZONTAL	R	RADIUS OR RISER
A.F.F.	ABOVE FINISHED FLOOR ABOVE SUSPENDED CEILING	DPR. DP. D.L.	DAMP PROOFING DEAD LOAD	HURIZ. H.B. HY.	HORIZONTAL HOSE BIB HYDRANT	RL. R.R.	RADIUS OR RISER RAIL (ING) RAIL ROAD
ACC.		DEMO DMT.	DEMOLITION OR DEMOLISH DEMOUNTABLE	IN. INCL.	INCH / INCHES INCLUDE	REC. RFL.	RECESS REFLECT (ED), (IVE), (OR)
ACPL.	ACCESS PANEL ACOUSTICAL PLASTER	DEP. DET.	DEPRESSED DETAIL	INFO. INL.	INFORMATION INLET	REFR. REG.	REFRIGERATOR REGISTER
AT (SP)	ACOUSTICAL CEILING TILE ACOUSTICAL CEILING (W/ SPRAYED PLASTIC FINISH)	DIAG. DIA.	DIAGONAL DIAMETER	ID. INSUL.	INSIDE DIAMETER INSULATED	REINF. RCP.	REINFORCE (D), (ING) REINFORCED CONCRETE
ACP.) ACOUSTICAL CEILING (W/TEGULAR EDGE) ACRYLIC PLASTIC	DIM. DSP.	DIMENSION (S) DISPENSER	IHM. IOHD.	INSULATED HOLLOW METAL INSULATED OVERHEAD DOOR	REM. RAF	REMOVE (ABLE) RESILIENT ATHLETIC FLOORING
ADDN'L	ADDITION ADDITIONAL	DIV. D.H. D.O.	DIVISION DOOR HEADER DOOR OPENING	IRD. INT. ILK.	INSULATED ROLLING DOOR INTERIOR	RB. RSF	RESILIENT BASE (RUBBER, VINYI RESILIENT SHEET FLOORING
ADH.	ACCESS FLOORING ADHESIVE ADJACENT	D.J. DBL.	DOOR JAMB DOUBLE	INTM. INV.	INTERLOCK INTERMEDIATE INVERT	RF RET. RA.	RAISED RUBBER FLOORING RETURN RETURN AIR
ADJT.	ADJUSTABLE AGGREGATE	DBLA. DBLH.	DOUBLE ACTION DOUBLE HUNG	I.E. IPS.	INVERT ELEVATION IRON PIPE SIZE	RVS. REF.	REVERSE (SIDE) REFERENCE
ADO	AUTOMATIC DOOR OPERATOR AIR CONDITIONING	DTA. DTS.	DOVETAIL ANCHOR DOVETAIL ANCHOR SET	JAN. JC.	JANITOR JANITOR CLOSET	REQ'D. REV.	REQUIRED REVISION (S), REVISED
A.H.U.	AIR CONDITIONING UNIT AIR HANDLING UNIT	DWL. DN.	DOWEL (S) DOWN	JT. JF.	JOINT JOINT FILLER	R.H. R.O.W.	RIGHT HAND RIGHT OF WAY
AL.	ALTERNATE ALUMINUM	DS. D.	DOWNSPOUT DRAIN	JST. J.B.	JOIST JOIST BEARING	RVT. RC.	RIVET ROOF CONDUCTOR
ANC.	ANCHOR BOLT ANCHOR, ANCHORAGE	DRB. DWR.	DRAIN BOARD DRAWER	KCP.	KEENE'S CEMENT PLASTER	RD.	ROOF DRAIN OR ROLLING DOOR
APT.	ANODIZED APARTMENT	DWG. D.F.	DRAWING DRINKING FOUNTAIN	KP. KIT.	KICKPLATE KITCHEN	RFH. RFG.	ROOF HATCH ROOFING
~	KAPPROXIMATE APPROXIMATELY ARCHITECT (URAL)	D.W. E EA.	DUMB WAITER EAST EACH	KS. KO.	KITCHEN SINK KNOCKOUT	RM. R.O.	ROOM ROUGH OPENING
A.D.	AREA DRAIN ASBESTOS	E.F. EFTR	EACH FACE EXISTING FINISH TO REMAIN	L LB.	LENGTH POUND	S SFGL.	SOUTH SAFETY GLASS
ASPH.	ASPHALT	E.W. ELEC.	EACH WAY ELECTRIC (AL)	LBS. LBL.	POUNDS LABEL	SAN. FM. SND.	SANITARY FORCE MAIN SANITARY NAPKIN DISPENSER
@		EMCH E.P.	ELECTRO-MECHANICAL CLOSER-HOLDER ELECTRICAL PANEL	LAV. LAD.	LAVATORY LADDER	SNR. SCH.	SANITARY NAPKIN RECEPTACLE SCHEDULE (D)
AWF	ACOUSTICAL WALL FABRIC (TACKABLE)	EWC. ELEV.	ELECTRIC WATER COOLER ELEVATOR	L.B. LAM.	LAG BOLTS LAMINATE (D)	SCN. SNT.	SCREEN SEALANT
B/B		EL. EMBED.	ELEVATION EMBEDMENT	LM LDRY.	LATEX MASTIC FLOORING LAUNDRY	STG. SEC.	SEATING SECTION
	BACK OF CURB OR BOTTOM CHORD	ENC. E.S.	ENCLOSE (URE) END SECTION	LAV. L.H.	LAVATORY LEFT HAND	SS. SHTH.	SERVICE SINK SHEATHING
B.P.	BACK OF CURB BACK PLASTER (ED)	EPY EQ.	EPOXY (COATINGS) EQUAL	LT. LC.	LIGHT LIGHT CONTROL	SHT. SG.	SHEET GLASS
BALC.	BALCONY	EQUIP. ERF	EQUIPMENT EPOXY RESINOUS FLOORING	LWC.	LIGHTWEIGHT LIGHTWEIGHT CONCRETE	SH. S&P	SHELF OR SHELVING SHELF AND POLE SHORE (D) (INC)
B.	BASEMENT BATHROOM BARRIER FREE	ESC. EMER. EST.	ESCALATOR EMERGENCY ESTIMATE	LMS. LTL. L.L.	LIMESTONE LINTEL LIVE LOAD	SHO. SHWR. SIM.	SHORE (D), (ING) SHOWER SIMILAR
BRG.		EXCA. EXH.	EXCAVATE EXHAUST	L.L. LR. L.G.	LIVING ROOM LONG	SIWI. SKL. SL.	SKYLIGHT SLEEVE
BJT.	BED JOINT EX	KIST./ EX. EXMP.	EXISTING EXPANDED METAL PLATE	L.L.H. L.L.V.	LONG LEG HORIZONTAL LONG LEG VERTICAL	SD. SC.	SOAP DISPENSER SOLID CORE
BR	BR BRICK (UNIT MASONRY) BENCHMARK OR BEAM	EXP. E.B.	EXPANSION EXPANSION BOLT	LVR. L.H.	LOUVER LOUVER HEADER	SP. SAB.	SOUNDPROOF SOUND ATTENUATION BATT
BEL.	BELOW BEVELED	E.J. EXP	EXPANSION JOINT EXPOSED	L.J. L.S.	LOUVER JAMB LOUVER SILL	SPC. SPK.	SPACER SPEAKER
	BITUMINOUS BLOCK	E.C. EXT.	EXPOSED CONCRETE EXTERIOR	L.P. M	LOW POINT OR LIGHT POLE MATCH	SPL. SC	SPECIAL HIGH BUILD GLAZED COATING
BD.		EXS. EXTR.	EXTRA STRONG EXTRUDE (R)	MACH. MHO	MACHINE MAGNETIC HOLD-OPEN (WALL OR FLOOR MTD)	SF	(SPECIAL COATING) SPECIAL FACED
B.W.		F.O.W.	FACE OF WALL	MH. MANUF.	MANHOLE MANUFACTURER	SPEC. SQ.	SPECIFICATION (S) SQUARE
B/		FB. F.O.C. F.O.F.	FACE BRICK FACE OF CONCRETE FACE OF FINISH	MFG. MT. MAS.	MANUFACTURING MARBLE THRESHOLD MASONRY	SQ. SQ. FT. STAG.	SQUARE SQUARE FEET / FOOT STAGGERED
B.O.F.	BOTTOM OF FOOTING	F.O.M. F.O.S.	FACE OF MASONRY	M.O. MATL./ MAT	MASONRY OPENING MATERIAL	STAG. ST. STD.	STAGGERED STAIN STANDARD
B.O.W.	BOTTOM OF FIFE BOTTOM OF WALL BOULEVARD	F/F F.F.	FACE OF STOD FACE TO FACE OR FINISHED FLOOR FACTORY FINISH	MAX. MECH.	MAXIMUM MECHANIC (AL)	STA. STL.	STATION STEEL
BRCG.	BRACING BRACKET	FF. F/G	FROST FREE FINISHED GRADE	M.C. MC	MEDICINE CABINET MULTI-COLOR COATING	STO. SD.	STORAGE STORM DRAIN
BC.	BRICK BRONZE	F.S. FAS.	FAR SIDE FASTEN (ER)	MEZZ. MIN.	MEZZANINE MINIMUM	STW. STRU.	STORM SEWER STRUCTURAL
B.L.	BUILDING BUILDING LINE	FT. FN.	FEET FENCE	MIR. MISC.	MIRROR MISCELLANEOUS	SCT. ST	STRUCTURAL CLAY TILE STONE (CAST)
BLKHD		FBD. FRP.	FIBERBOARD FIBERGLAS REINFORCED PANEL(S)		MODULAR MOLDING OR MOULDING	SUS. SURF.	SUSPEND (ED) SURFACE
CAB.	BULLETIN BOARD CABINET	FIN. FFL.	FINISH FINISHED FLOOR LINE	MR. MT.	MOP RECEPTOR MOUNT (ED), (ING)	SYM. SYN.	SYMMETRY (ICAL) SYNTHETIC
CLK.		F.A. FBRK.	FIRE ALARM FIRE BRICK FIRE EXTINGUISHER (BRACKET)	MTL. MOV. MULL.	METAL MOVEABLE MULLION	SYS. T T/	SYSTEM TREAD TOP OF
CPT.	CARPET (WITHOUT CUSHION BROADLOOM) CARPET TILE CASEMENT	F.E.C. F.H.	FIRE EXTINGUISHER (CABINET) FIRE HYDRANT	N N N.S.	NORTH NEAR SIDE	T/C	TOP OF TOP OF CURB OR TOP CHORD
C.I.	CAST IRON CAST IN PLACE CONCRETE	FHC. FHS.	FIRE HOSE CABINET FIRE HOSE STATION	NOM. NMT.	NOMINAL NON-METALLIC	T/P T/W	TOP OF PAVEMENT TOP OF WALK
C.S.	CAST STONE CATCH BASIN	F.M. F.P.	FIRE MAIN FIRE PROOF OR FIRE PLACE	NF N.I.C.	NATURAL FINISH NOT IN CONTRACT	T/S T/STL.	TOP OF SLAB TOP OF STEEL
CLG.	CEILING CEILING HEIGHT	FRC. FRT.	FIRE RESISTANT COATING FIRE RETARDANT	N.T.S. NO.	NOT TO SCALE NUMBER	TKBD. TKS.	TACK BOARD TACK STRIP
CPPL.	CEMENT CEMENT PLASTER (PORTLAND)	FIXT. FLG.	FIXTURE FLASHING OR FLANGE	O/O O.C.	OUT TO OUT ON CENTER	TEL. TV.	TELEPHONE TELEVISION
Œ	CENTER LINE	FHMS.	FLATHEAD MACHINE SCREW FLATHEAD WOOD SCREW	OPG. OPS.	OPENING OPPOSITE	TEMPGL. TEMP.	TEMPERED GLASS TEMPORARY
CM.	CENTER POINT CENTIMETER (S)	FLX. FLR.	FLEXIBLE FLOOR (ING)	O.D. OHMS. OHWS.	OUTSIDE DIAMETER OVAL HEAD MACHINE SCREW OVAL HEAD WOOD SCREW	TC. TZ. TT	TERRA COTTA TERRAZZO TERRAZZO TUE (DI ACTIO MATERI
C.T.	CERAMIC CT CERAMIC TILE (FLOOR, BASE, AND WALL) CERAMIC MOSAIC TILE	FLCO.) F.D. FPL.	FLOOR CLEANOUT FLOOR DRAIN FLOOR PLATE	OA. OA. OH.	OVAL HEAD WOOD SCREW OVERHEAD OVERHEAD	THK. THD.	TERRAZZO TILE (PLASTIC MATRI THICK (NESS) THREAD (ED)
CERT.		FLUR. FJT.	FLUORESCENT FLUSH JOINT	OHD. PT./ P	OVERHEAD DOOR PAINT (EXTERIOR, INTERIOR, TRANSPARENT	THRESH. T.O.C.	THRESHOLD TOP OF CONCRETE
CHAM.	CHAMFER CHROMIUN	FTG. FRG.	FOOTING FORGED	PNL.	FINISHES) PANEL	T.O.F. T.O.P.	TOP OF FOOTING TOP OF PIER OR PIPE
CIR.	CIRCLE CIRCUMFERENCE	FND. FRMG.	FOUNDATION FRAME (ED) (ING)	PTR. PAR.	PAPER TOWEL RECEPTOR PARALLEL	T.O.S. T.O.W.	TOP OF STEEL TOP OF WALL
	CLASS CLEAR (ANCE)	FRZR. FRA.	FREEZE (ER) TRESH AIR	PK. PBD.	PARKING PARTICLE BOARD	TOL. T&B	TOLERANCE TOP AND BOTTOM
CLR.	CLEAN OUT CLEAR	FS. F.T.	FULL SIZE FULLY TEMPERED	PTN. PV.	PARTITION PAVE (D), (ING)	T&G TB.	TONGUE AND GROOVE TOWEL BAR
COL.	COLUMN	F.B.O. F.B.O.	FURNISHED BY OTHERS FURR (ED) (ING)	PVMT. PED.	PAVEMENT PEDESTAL	TR. TD.	TRANSOM TRENCH DRAIN
COMP.	COMBINATION COMPACTED COMPARTMENT	FUT.	FUTURE	PEN. PERF.	PENETRATION PERFORATE (D)	TYP. U.N.O.	TYPICAL UNLESS NOTED OTHERWISE
COMPO	COMPOSITION (COMPOSITE)	G GA. GALV.	GUTTER ELEVATION GAGE GALVANIZE (D)	PERIM. PC. PC	PERIMETER PIECE PRECAST (ARCHITECTURAL	U.P. U/S	UTILITY POLE UNDERSIDE
CONC.	CONCRETE CONNECTION	GST. GL	GLAZED STRUCTURAL PANEL GLASS (GLAZING)	PCP	PRECAST (ARCHITECTORAL PRECAST CONCRETE PANELS) PORTLAND CEMENT PLASTER	VB. VP	VAPOR BARRIER VENEER PLASTER
CONST	CONSTRUCTION CONTROL JOINT	G.B. GD.	GRAB BAR GRADE OR GRADING	PFW PLAS./ PL	POLYPROPYLENE FABRIC WALLCOVERING PLASTER	VERT. V.I.F.	VERTICAL VERIFY IN FIELD
CONT.	CONTINUOUS OR CONTINUATION	GRN. GRAT.	GRANITE GRATING	PLAM.	PLASTIC LAMINATE PLATE	VIII VIN. VCT.	VINYL SHEET RESILIENT TILE FLOORING
C.L.L.	CONTRACT LIMIT LINE CONCRETE MASONRY UNIT	GVL. G.F.	GRAVEL GROUND FACE	PG. PLBG.	PLATE GLASS PLUMING	W	(VINYL COMPOSITION TILE) WEST, WIDTH OR WALLCOVERIN
CNJ. COORD	CONSTRUCTION JOINT COORDINATE (ION) GYP. E	GRT. BD./ GB/ GWB	GROUT GYPSUM WALLBOARD SYSTEMS	PWD. PT.	PLYWOOD POINT OR POINT TANGENT	WB	(VINYL COATED FABRIC) WALL BORDER
CPR. C.G.	COPPER CORNER GUARD	GPL. GPT.	GYPSUM PLASTER LATH GYPSUM TILE	P.C. POL.	POINT OF CURVATURE POLISH (ED)	W/ W/O	WITH WITHOUT
CORR.	CORRIDOR CORRUGATED	H H.R.	HIGH HANDRAIL	PUT PIV.	POLYURETHANE POST INDICATOR VALVE	WC. WD.	WATER CLOSET WOOD
CPPP.	CORRUGATED PERFORATED PLASTIC PIPE	IDW./ HW	HARDWARE SET (FINISH OR BUILDERS HARDWARE)	PTC. P.C.F.	POST TENSION CONCRETE POUNDS PER CUBIC FOOT	WH. WM.	WATER HEATER WATER MAIN
CFL.		HJT. HDR.	HEAD JOINT HEADER	P.L.F. P.S.F.	POUNDS PER LINEAR FOOT POUNDS PER SQUARE FOOT	WP	WALLCOVERING PROTECTIVE (RIGID PVC SHEET)
CTSK.	COUNTERSUNK	HTG. HVAC.	HEATING HEATING / VENTILATING /	P.S.I. PCC.	POUNDS PER SQUARE INCH PRECAST CONCRETE	WP. WS.	WATER PROOF (ING) WATER SERVICE
CRG.	COURSE (S) CROSS GRAIN COURTYARD	HT. H P	AIR CONDITIONING HEIGHT HIGH POINT	PEMB. PRE-FIN. PSC	PRE-ENGINEERED METAL BUILDING PRE-FINISHED PRESTRESSED CONCRETE	WR. WSF WIN	WEATHER RESISTANT WELDED SEAM SHEET FLOORING WINDOW
		H.P. H.S.B.	HIGH POINT HIGH STRENGTH BOLT	PSC. PREV.			WINDOW WELDED WIRE FABRIC/
CFT.		H C	HOLLOW CORE	PΙ	PR()PFR I V I INF	VV VV IV	MELLIELI WIGE BEIRIEV BY Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
CFT.	CUBIC YARD	H.C. H.M. HK.	HOLLOW CORE HOLLOW METAL HOOK	P.L. PROP. QT.	PROPERTY LINE PROPOSED QUARRY TILE	W.W.M. YRD.	WELDED WIRE REINFORCEMENT WELDED WIRE MESH YARD (S)

STATEMENT OF SPECIAL INSPECTIONS

UNLESS OTHERWISE NOTED, THE GENERAL CONTRACTOR MUST COORDINATE AND SCHEDULE ALL INSPECTIONS AND TESTING REQUIRED IN EACH SECTION OF THE SPECIFICATION AND THE SPECIAL INSPECTIONS MARKED BELOW. NOTIFY EACH INSPECTING OR TESTING AUTHORITY OR AGENCY 24 HOURS IN ADVANCE OF EACH INSPECTION OR TEST. SUBMIT ONE COPY OF EACH REPORT OR TEST AS IT IS MADE AVAILABLE TO THE ARCHITECT FOR THEIR REVIEW. THE GENERAL CONTRACTOR MUST HIRE AND PAY A THIRD PARTY COMPANY TO COMPLETE ALL REQUIRED INSPECTIONS, TESTING AND SPECIAL INSPECTIONS.

THE AREAS MARKED BELOW MUST HAVE SPECIAL INSPECTIONS

- [X] INSPECTION OF FABRICATORS (1704.2.5) [X] STRUCTURAL STEEL
- [X] STEEL JOISTS AND GIRDERS PRECAST CONCRETE
- PRESTRESSED CONCRETE WOOD CONSTRUCTION (SECTION 1705.5)- PREFABRICATED STRUCTURAL ELEMENTS COVERING:
- MANUFACTURED WOOD TRUSSES WALLS FLOORS
- ROOF ASSEMBLIES
- [] COLD-FORMED STEEL TRUSSES
- [X] SUBMIT FABRICATORS SHOP ACCREDITATION/ CERTIFICATION (FOR FABRICATORS REGISTERED AND APPROVED)

**FABRICATOR INSPECTION IS REQUIRED UNLESS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ). AT COMPLETION OF FABRICATION, THE TESTING AGENCY SHALL OBTAIN FROM EACH REGISTERED AND APPROVED FABRICATOR, A CERTIFICATE OF COMPLIANCE, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND SUBMIT ALL CERTIFICATES TO THE

BUILDING DEPARTMENT PER MBC 1704.2.5.2.

-] STRUCTURAL STEEL CONSTRUCTION (1705.2.1) STEEL CONSTRUCTION OTHER THAN STRUCTURAL (1705.2.2 & TABLE 1705.2.2) | MATERIAL VERIFICATION OF COLD-FROMED STEEL DECK (TABLE 1705.2.2 #1) [] WELDING (1705.2.2 & TABLE 1705.2.2 #2)
- [] COLD-FORMED STEEL DECK (1705.2.a) [] REINFORCING STEEL (1705.2.2.b) [] COLD- FORMED STEEL TRUSSES (SPANNING 60'-O" OR GREATER (1705.2.2.2)

[X] CONCRETE CONSTRUCTION (1705.3 & TABLE 1705.3)

- [X] REINFORCING STEEL (TABLE 1705.3 #1 & #2) PRESTRESSING TENDONS AND PLACEMENT (TABLE 1705.3 #1)
- [] WELDING (TABLE 1705.3 #2) [X] CAST-IN-PLACE ANCHORS (TABLE 1705.3 #3)
- [X] POST- INSTALLED ANCHORS (TABLE 1705.3 #4) [X] DESIGN MIX (TABLE 1705.3 #5)
- X] SAMPLING & STRENGTH TESTS (TABLE 1705.3 #6) X] CONCRETE PLACEMENT (TABLE 1705.3 #7)
- SHOTCRETE PLACEMENT (TABLE 1705.3 #7) X] CURING (TABLE 1705.3 #8)`
- PRESTRESSED (TABLE 1705.3 #9)] APPLICATION OF PRESTRESSING FORCES
- [] GROUTING OF BONDED PRESTRESSING TENDONS/ SEISMIC PRECAST ERECTION (TABLE 1705.3 #10)
- VERIFICATION OF IN-SITU CONRETE STRENGTH (TABLE 1705.3 #11) X] FORMWORK (TABLE 1705.3 #12)
- [X] MASONRY CONSTRUCTION (MBC 1705.4 AND MASONRY STANDARD TMS 402- 11/ACI
- 530-11/ASCE 5-11), SEE ALSO EXCEPTIONS
- [] LEVEL 'A' QUALITY ASSURANCE, RISK CATEGORY I, II OR III DESIGNED IN ACCORDANCE W/ CHP. 5, 6 OR 7, TABLE 1.19.1 (I.E. EMPIRICAL OR PERSCRIPTIVE)
- [X] LEVEL 'B' QUALITY ASSURANCE] RISK CATEGORY IV DESIGNED IN ACCORDANCE W/ CHP. 5, 6 OR 7,
- TABLE 1.19.2 (I.E. EMPIRICAL OR PERSCRIPTIVE) [X] RISK CATÈGORY I, II OR III DESIGNED IN ACCORDANCE OTHER THAN
- CHP. 5, 6 OR 7, TABLE 1.19.2 (I.E. ENGINEERED) [] LEVEL 'C' QUALITY ASSURANCE, RISK CATEGORY IV DESIGNED IN ACCORDANCE W/ CHP. 5, 6 OR 7, TABLE 1.19.3 (EMPIRICAL OR PERSCRIPTIVE)
- [] VERTICAL MASONRY FOUNDATION ELEMENTS. (1705.4.2)
- WOOD CONSTRUCTION (1705.5)
- METAL-PLATE-CONNECTED WOOD TRUSSES (SPANNING 60'-O" OR GREATER,
- [] PREFABRICATED WOOD SHEAR PANELS (1703.4 & 1705.1.1)
- [X] SOILS (1705.6 & TABLE 1705.6)
- [X] VERIFICATION OF BEARING MATERIAL CAPACITY (TABLE 1705.6 #1) X VERIFICATION OF EXCAVATION DEPTH BEARING MATERIAL (TABLÉ 1705.6 #2)
- IXI CLASSIFICATION AND TESTING OF FILL (TABLE 1705.6 #3) VERIFY ENGINEERED FILL DURING PLACEMENT AND COMPACTION (TABLE 1705.6 #4) XI VERIFY SITE/ SUBGRADE PREPARATION PRIOR TO FILL PLACEMENT (TABLE 1705.6 #5)
- DRIVEN DEEP FOUNDATIONS (1705.7, TABLE 1705.7)
-] CAST-IN-PLACE DEEP FOUNDATIONS (1705.8, TABLE 1705.8)
- [] HELICAL PILE FOUNDATIONS (1705.9)
-] SPECIAL INSPECTION FOR WIND REQUIREMENTS (1705.10) [] WIND EXPOSURE CATEGORY (1705.10)
- []B[]C[]D [] STRUCTURAL WOOD (1705.10.1)
- COLD-FORMED STEEL LIGHT- FRAME CONST. (1705.10.2)
- WIND RESISTING COMPONENTS (17010.3) [] ROOF CLADDING [] WALL CLADDING
- SPECIAL INSPECTION FOR SEISMIC RESISTANCE (1705.11)
- [] SEISMIC DESIGN CATEGORY (1705.11)
- []C[]D[]E[]F [] STRUCTURAL STEEL (1705.11.1)
- STRUCTURAL WOOD (1705.11.2) COLD-FORMED STEEL (1705.11.3
- DESIGNATED SEISMIC SYSTEMS (1705.11.4)
- ARCHITECTURAL COMPONENTS (CATEGORY D, E, F ONLY) [] EXTERIOR CLADDING
- | INTERIOR/ EXTERIOR VENEER (>5 PSF) I INTERIOR/ EXTERIOR NON-BEARING WALLS (> 15 PSF)
- | SUSPENDED CEILINGS ACCESS FLOORS (CATEGORY D, E, F ONLY)
- **N/A FOR COMPONENTS <30 FT. ABOVE GRADE OR WALKING SURFACE [] MEP COMPONENTS (1705.11.6)
- | | EMERGENCY ELECTRICAL SYSTEMS OTHER ELECTRICAL EQUIPMENT (CATEGORY E, F ONLY)
- 1 HAZARDOUS PIPING
- HAZARDOUS DUCTWORK [] VIBRATION ISOLATION SYSTEMS (W/ </= 1/4" CLEARANCE) STORAGE RACKS (>8 FT HIGH, CATEGORY D, E, F ONLY, 1705.11.7)
- [] SEISMIC ISOLATION SYSTEMS (1705.11.8)
-] STRUCTURAL TESTING FOR SEISMIC RESISTANCE (1705.12) [] SEISMIC DESIGN CATEGORY (1705.12)
- []C[]D[]E[]F I IMPORTANCE FACTOR > 1
- [] CONCRETE REINFORCEMENT (1705.12.1) STRUCTURAL STEEL (1705.12.2)
- SEISMIC CERTIFICATION OF NONSTRUCTURAL COMPONENTS (1705.12.3) | ARCHITECTURAL] MECHANICAL
- [] ELECTRICAL [] SEISMIC ISOLATION SYSTEMS (1705.12.4)
-] SPRAYED FIRE-RESISTANT MATERIALS (1705.13) MASTIC & INTUMESCENT FIRE-RESISTANT COATINGS (1705.14) EXTERIOR INSULATION & FINISH (EIFS) (1705.15 AND 1408.6)
- [X] FIRE RESISTANT PENETRATIONS AND JOINTS- HIGH RISE BLDGS. OR RISK CAT. III & IV BLDG'S. U.N.O. (1705.16) [X] PENETRATION FIRESTOPS (1705.16.1)

[] WATER-RESISTIVE BARRIER COATING (1705.15.1)

- X] FIRE- RESISTANT JOINT SYSTEMS (1705.16.2)
- SMOKE CONTROL (1705.17) SPECIAL CASES AS DETERMINED BY AHJ (1705.1.1)



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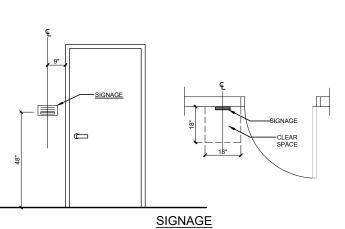
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No Scale Key Plan:



SIGNAGE AND CONTROLS

ALL ROOMS/SAPCES TO RECEIVE SIGNAGE U.N.O., REFER TO PROJECT SPECIFICATION FOR TYPE/STYLE. SIGNAGE MUST BE MOUNTED ON THE WALL ADJACENT TO LATCH SIDE OF DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, SIGNAGE MUST BE PLACED ON THE NEAREST ADJACENT WALL. MOUNTING HEIGHT MUST BE 60" A.F.F. TO THE CENTERLINE OF SIGN.

SIGNS MUST HAVE AN 18" MIN. BY 18" MIN. CLEAR FLOOR SPACE, CENTERED ON THE SIGN, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND A 45 DEGREE OPEN POSITION.

FIRE RESISTANCE RATING SIGNAGE: FIRE FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS MUST BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION

- BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR/CEILING OR ATTIC SPACES. 2. BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30
- FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND 3. INCLUDE LETTERING NOT LESS THAN 3 INCHES IN HEIGHT WITH A MINIMUM 3/8 INCH STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING "FIRE AND/OR SMOKE BARRIER PROTECT ALL OPENINGS" OR SIMILAR WORDING- PROTECTED OPENING SIGNAGE REQUIRED ONLY WHERE OPENING PROTECTION IS REQUIRED.
- 3.1. PROTECTED OPENING SIGNAGE REQUIRED ONLY WHERE OPENING PROTECTION IS REQUIRED 3.2. SMOKE BARRIER SIGNAGE ONLY REQUIRED WHEN WALL IS DESIGNATED "SMOKE BARRIER"

Project: GLADWIN **TRANSPORTATION MAINTENANCI EXPANSION**

621 WEAVER CT GLADWIN, MI

Client:

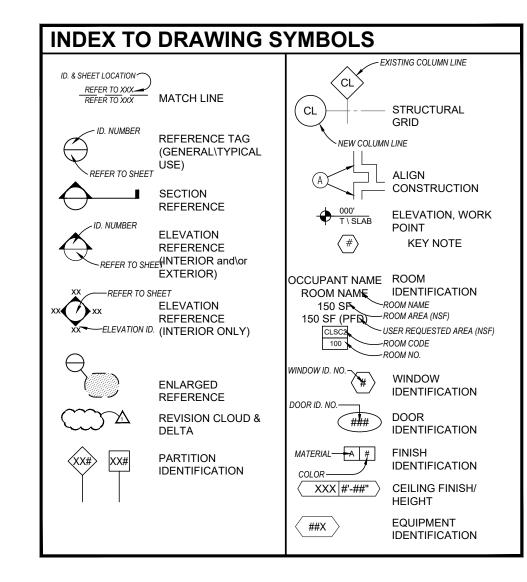
GLADWIN CITY

COUNTY TRANSIT

NOTE: ALL RECEPTACLES SHALL BE 18" AFF UNLESS NOTED OTHERWISE (100 1)	RECEPTACLE W PHONE, TV OR DATA REPROPERTOR REPROPERTOR	QUAD BOX WITH DIVIDER	80'AFF.OR 6'BELOW FINSH CELING WHICHEVER IS LESS PIRE ALARM DEVICES	TO OPERABLE PART	THERMOSTATHVAC CONTROLS CONTROLS FIRE ALARM PULL STATION	GABINETS (400)	54" CLOTHES HOOKS
ESK TELEPHONE OUTLET AND DUPLEX RECEPTACLE IN A QUAD BOX WITH DIVIDER	TYPICAL LOCATIONS WHERE TELEPHONE, TV OR DATA OUTLETS ARE INDICATED AT THE SAME LOCATION AS A DUPLEX RECEPTACLE THEY ARE TO BE IN A QUAD BOX WITH DIVIDER	SWITCHES		•		•	
ACCESSORY N		<u>IEIGHTS</u>					

GENERAL NOTES FOR LOCATION OF DEVICES

- WHEN MOUNTING MULTIPLE DEVICES FROM DIFFERENT TRADES IN THE SAME LOCATION (SUCH AS LIGHTING SWITCHES, LOW VOLTAGE, THERMOSTATS, ETC), THEIR ARRANGEMENT MUST BE IN ACCORDANCE WITH THE FOLLOWING:
- 1.1. LOCATE DEVICES AS SHOWN ON THE ARCHITECTURAL PLANS, ELEVATIONS OR SECTIONS.
- 1.2. WHEN SHOWN ON MECHANICAL OR ELECTRICAL DRAWINGS, BUT NOT ON ARCHITECTURAL DRAWINGS, DEVICES MUST BE UNIFORMLY AND SYMMETRICALLY MOUNTED. VERTICALLY ALIGN DEVICES MOUNTED AT HEIGHTS INDICATED, UNLESS SEPARATED HORIZONTALLY BY A MINIMUM OF 24".
- DEVICES INSTALLED IN MASONRY OR SURFACES TO RECEIVE WOOD PANELS, WALL COVERING OR SIMILAR MATERIALS MUST BE FLUSH WITH THE FINAL SURFACE MATERIAL.
- 1.4. IF THE CONTRACTOR HAS ANY DOUBTS REGARDING THE LOCATION OF DEVICES, THE CONTRACTOR MUST CONSULT WITH THE ARCHITECT PRIOR TO ROUGHING-IN.
- 1.5. AT MULTIPLE SWITCHES, GANG W/ SINGLE COVER
- DEVIATIONS FROM THE ABOVE INSTRUCTIONS WITHOUT PRIOR APPROVAL BY THE ARCHITECT MUST BE CORRECTED BY THE INSTALLING CONTRACTOR. ANY COST, INCLUDING CUTTING & PATCHING, ENTAILED IN THE REMOVAL, RELOCATION, AND REINSTALLATION OF ANY DEVICES WILL BE THE RESPONSIBILITY OF THAT CONTRACTOR.



Issued For 8.08.23 OWNER REVIEW 2.12.24 BIDDING

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STATEMENT OF **SPECIAL** INSPECTIONS, ABB., DRAW. LEG.

GENERAL CIVIL NOTES

- 1. PRIOR TO SUBMITTING PROPOSAL, VERIFY ALL CONDITIONS GOVERNING OR AFFECTING THE CIVIL WORK; OBTAIN AND VERIFY ALL DIMENSIONS TO ENSURE THE PROPER FIT AND LOCATION OF THE CIVIL WORK, TAKE ADDITIONAL DIMENSIONS AS REQUIRED; REPORT TO THE ENGINEER ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK; FAMILIARIZE YOURSELF WITH THE ACTUAL CONDITIONS OF THE CIVIL WORK, ACCESS TO THE SITE, AVAILABLE STORAGE SPACE, FACILITIES AND OBSTRUCTIONS THAT MAY BE ENCOUNTERED DURING THE PROGRESS OF WORK.
- 2. CONTRACTOR TO FURNISH ALL NECESSARY LABOR, MATERIAL, EQUIPMENT AND FACILITIES TO FURNISH, FABRICATE AND PERFORM THE REQUIRED CIVIL WORK.
- 3. ANY EXISTING CONSTRUCTION TO BE MODIFIED AS A PART OF THIS CONTRACT SHALL BE REBUILT AS REQUIRED TO ITS PREVIOUS CONDITION OR BETTER.
- 4. EXISTING CONSTRUCTION NOT UNDERGOING ALTERATION IS TO REMAIN UNDISTURBED, WHERE SUCH CONSTRUCTION IS DISTURBED AS A RESULT OF THE OPERATIONS OF THIS CONTRACT, THE EXISTING CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
- 5. CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED INDEPENDENT THIRD PARTY TO PROVIDE QUALITY CONTROL SERVICES AS REQUIRED FOR THIS PROJECT.
- THE OWNER MAY RETAIN AN INDEPENDENT TESTING AGENCY TO VERIFY COMPLIANCE WITH THE REQUIREMENTS OF THE WORK. CONTRACTOR SHALL PROVIDE ACCESS AND ACCOMMODATE OWNERS REPRESENTATIVE AS REQUIRED FOR TESTING PURPOSES.
- 6. ALL WORK REFERENCED TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST REVISION AND ERRATA, UNLESS MODIFIED HEREIN.
- 7. THE GENERAL CIVIL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS, AND/OR THE GENERAL CIVIL NOTES, THE STRICTEST PROVISION AS DETERMINED BY THE ENGINEER SHALL GOVERN.
- 8. ALL MATERIALS, WORK, AND WORKMANSHIP SHALL CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS.
- 9. THE CONTRACTOR SHALL COMPLY WITH THE CONSTRUCTION SAFETY STANDARDS AND THE OCCUPATIONAL SAFETY STANDARDS (OSHA) AS ISSUED BY THE U.S. DEPARTMENT OF LABOR AND THE MICHIGAN DEPARTMENT OF LABOR (MIOSHA).
- 10. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL THE EXISTING CONDITIONS AT THE SITE INCLUDING UTILITIES, SERVICES, ETC. AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES THEY CAUSE TO BOTH EXISTING, NEW CONSTRUCTION, PROPERTY AND ANY UNAUTHORIZED DISRUPTION TO ADJACENT OWNERS NORMAL USE OF UTILITIES, SERVICES, AND THE SURROUNDING FACILITIES.
- 11. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION PRIOR TO MAKING CHANGES TO, OR INTERRUPTIONS OF UTILITIES AND SHALL COMPLY WITH SPECIAL INSTRUCTIONS FROM THE OWNER TO MINIMIZE THE EFFECT ON THEIR OPERATIONS. PRIOR TO ANY EXCAVATION, EARTH MOVING WORK OR REMOVAL OF ANY PIPE FROM SERVICE, THE CONTRACTOR SHALL REVIEW WITH THE OWNER'S REPRESENTATIVE THE LOCATION OF THE UNDERGROUND UTILITIES, SERVICE AND STRUCTURES IN THE AREA WHERE THE WORK IS BEING PERFORMED. PROVIDE FULL TIME SUPERVISION DURING ALL EXCAVATION AND EARTH MOVING OPERATIONS AND TAKE ALL RESPONSIBLE PRECAUTIONS TO PROTECT EXISTING UTILITIES, SERVICES AND OPERATIONS FROM DAMAGE OR DISRUPTIONS. ALL DAMAGE SHALL BE IMMEDIATELY REPAIRED
- 12. PROVIDE BARRIER PROTECTION FOR VEHICULAR AND PEDESTRIAN TRAFFIC AT EXCAVATIONS. TEMPORARY FENCING, BARRICADING AND PEDESTRIAN ROUTING SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
- 13. ALL WORK IN THE PUBLIC RIGHT OF WAY SHALL BE DONE WITH THE PRIOR KNOWLEDGE AND CONSENT OF OFFICIALS HAVING JURISDICTION. MINIMIZE DISRUPTION OF TRAFFIC FLOW DURING WORK.
- 14. DISPOSE OF ALL UNSUITABLE SOILS AND WASTE MATERIALS (NEW AND EXISTING) OFF SITE IN A LEGAL MANNER.
- 15. PERFORM FINAL CLEANUP OF WORK AREAS. LEAVE WORK IN A COMPLETE AND ACCEPTABLE MANNER. PERFORM ALL ACTIVITIES NECESSARY TO ACHIEVE COMPLETION WHETHER SPECIFICALLY SHOWN OR DETAILED ON THE DRAWINGS.
- 16. ALL CIVIL WORK SHALL BE COORDINATED WITH AND IN CONJUNCTION WITH THE WORK OF THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND LANDSCAPE PLANS.
- 17. A GEOTECHNICAL INVESTIGATION, DATED NOVEMBER 14, 2021, WAS PREPARED BY PREIN & NEWHOF. A COPY MAY BE OBTAINED FROM THE OFFICE OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING SITE CONDITION EXAMINATION TO PROVIDE AN ACCURATE AND COMPLETE PROPOSAL TO PERFORM THE NECESSARY WORK.
- 18. IF ANY ARTIFACTS ARE DISCOVERED DURING CONSTRUCTION ALL WORK IS TO STOP AND THE OWNERS' REPRESENTATIVE/ PROJECT MANAGER SHALL BE IMMEDIATELY NOTIFIED. ARTIFACTS OR ARCHEOLOGICAL MATERIALS ARE DEFINED AS: ABORIGINAL ANTIQUITIES, AND OTHER RECORDS OF ANTIQUITY, INCLUDING MOUNDS, MINES, EARTHWORKS, VILLAGE SITES, CAMPSITES, BURIALS, HUMAN OR OTHER BONES, SHELLS, STONE IMPLEMENTS, BONE OR COPPER IMPLEMENTS, POTTERY OR SHARDS OF POTTERY, OR OTHER OBJECTS RELATING TO NATIVE AMERICAN OCCUPATION; MODERN ARTIFACTS, SUCH AS FORTS, RELICS AND OTHER ARTIFACTS RELATING TO HISTORIC, COLONIAL, TERRITORIAL AND EARLY STATEHOOD PERIODS.

CLEARING, GRUBBING, & EARTHWORK

- 1. AT THE START OF EARTHWORK OPERATIONS, ALL SURFACE VEGETATION SHALL BE CLEARED AND THE EXISTING TOPSOIL AND ANY OTHER ORGANIC SOILS SHALL BE REMOVED IN THEIR ENTIRETY FROM BELOW THE PROPOSED BUILDING AND PAVEMENT AREAS AND STOCKPILED FOR LATER RE-USE. CONCRETE, STUMPS AND OTHER DEBRIS SHALL BE REMOVED COMPLETELY FROM WITHIN THE WORK AREA. DISPOSE OF VEGETATIVE MATTER AND DEBRIS OFFSITE IN A LEGAL MANNER.
- 2. THE SUB-GRADE SHOULD BE THOROUGHLY PROOF-ROLLED WITH A HEAVY RUBBER-TIRED VEHICLE SUCH AS A LOADED DUMP TRUCK. ANY AREAS THAT EXHIBIT EXCESSIVE PUMPING AND YIELDING DURING PROOF-ROLLING SHOULD BE STABILIZED BY AERATION, DRYING AND COMPACTION IF WEATHER CONDITIONS ARE FAVORABLE, OR REMOVAL AND REPLACEMENT WITH ENGINEERED FILL.
- 3. ALL EXCAVATIONS ARE SUBJECT TO THE APPROVAL OF THE DESIGNER OF RECORD WHO SHALL BE CONSULTED WHEN POOR SOIL, WATER, OBSTRUCTIONS, PIPING, EXISTING FOOTINGS, EXCAVATIONS, ETC. ARE ENCOUNTERED.
- 4. CONTRACTOR SHALL FURNISH AND OPERATE ALL REQUIRED DEWATERING EQUIPMENT OR OBTAIN A SUBCONTRACTOR SPECIALIZING IN DEWATERING TO MAINTAIN A DRY EXCAVATION UNTIL BACKFILL IS COMPLETE.
- 5. MATERIAL FOR BACKFILL OR ENGINEERED FILL REQUIRED TO ACHIEVE DESIGN GRADES SHOULD CONSIST OF NON-ORGANIC SOILS AND HAVE NO CLUMPS LARGER THAN 2 INCH IN ANY DIMENSION. THE ON-SITE SOILS THAT ARE FREE OF ORGANIC MATTER AND DEBRIS LESS THAN 2 INCHES IN ANY DIMENSION MAY BE USED FOR ENGINEERED FILL WITH ENGINEERS APPROVAL.
- 6. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF ITS' MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHODS (ASTM D1557), IN LIFTS NOT EXCEEDING 12-INCHES IN LOOSE THICKNESS.
- 7. FROZEN MATERIAL SHALL NOT BE USED AS FILL, NOR SHALL FILL BE PLACED ON FROZEN
- 8. BACKFILL GRADE BEAMS, FOOTINGS, AND STRUCTURES EQUALLY TO PREVENT ECCENTRIC LOADINGS.
- 9. CONSTRUCTION DRAINAGE: STORM WATER ACCUMULATED IN THE PROJECT SITE EXCAVATIONS IS TO DRAIN BY NATURAL PERCOLATION.
- 10. SLOPE SMOOTHLY BETWEEN INDICATED ELEVATIONS. SLOPE ALL EARTH BANKS 4:1 OR
- 11. NEW GRADES SHOWN ARE FINISHED GRADES AND INCLUDES TOP OF TOPSOIL OR SURFACES SUCH AS PAVEMENTS AND WALKS.
- 12. PROVIDE 4 INCHES OF TOPSOIL, SEED AND MULCH AT DISTURBED LAWN AREAS, EXCEPT AS NOTED OTHERWISE. REUSE SALVAGED TOPSOIL, AUGMENT WITH IMPORTED MATERIAL TO ACHIEVE REQUIRED DEPTH. EXISTING TOPSOIL SHALL BE STOCKPILED AND PREPARED FOR RE-USE ON THE PROJECT.
- 13. TREES: TREES NOT INDICATED TO BE REMOVED OR TRANSPLANTED SHALL BE FENCED OFF WITH 4' HIGH ORANGE CONSTRUCTION FENCE 10' FROM THE DRIP LINE OF THE TREE. ALL MATERIALS GENERATED FROM REMOVING TREES OR STUMPS SHALL BE HANDLED AND DISPOSED OF AS PER THE MICHIGAN DEPARTMENT OF AGRICULTURE REQUIREMENTS. COST SHALL BE INCLUDED IN THE COST OF THE WORK.
- 14. GREAT CARE SHALL BE TAKEN BY CONTRACTOR'S TO AVOID DAMAGE TO VEGETATION OUTSIDE THE LIMITS OF CONSTRUCTION AND TO KEEP THE CONSTRUCTION AREAS TO A MINIMUM. DRIVING SHALL NOT BE PERMITTED OUTSIDE THE LIMITS OF CONSTRUCTION.
- 15. EARTHWORK QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THEIR OWN QUANTITIES FOR CONSTRUCTION PURPOSES.

SOIL EROSION AND SEDIMENTATION CONTROL

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND DOCUMENTATION OF SEDIMENTATION, EROSION CONTROL, AND STORM WATER QUALITY RELATED TO THE PROJECT. THIS SHALL BE DONE IN ACCORDANCE WITH PART 91, SOIL EROSION AND SEDIMENTATION CONTROL, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT.
- 2. INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN EVENTS TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY IMPROVEMENTS OR REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- 3. SEDIMENT AND EROSION FROM ALL WORK AREAS SHALL BE CONTAINED ON THE SITE, AWAY FROM WETLANDS, OUTFALLS, WATERWAYS, AND ENVIRONMENTALLY SENSITIVE AREAS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
- 4. PROVIDE MULCH BLANKETS FOR ALL SLOPES GREATER THAN 4:1. PROVIDE JUTE MATTING OR HI-VELOCITY MULCH BLANKETS ON SLOPES GREATER THAN 3:1. STAKE PER MANUFACTURERS RECOMMENDATIONS.
- 5. MAINTAIN EROSION CONTROL MEASURES UNTIL CONSTRUCTION IS COMPLETE AND LAWN AREAS ARE FULLY DEVELOPED.
- 6. REMOVE TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES UPON COMPLETION OF PROJECT.
- 7. IF AN EXISTING STORM SEWER SYSTEM HAS RECEIVED EXCESSIVE LOADING OF SEDIMENTATION IN THE OPINION OF THE ENGINEER, THE SYSTEM DOWN STREAM SHALL BE CLEANED IN ITS ENTIRETY. THIS MAY INCLUDE JETTING OF THE STORM SEWER AND VACTORING OF THE DRAINAGE STRUCTURES. COST WILL BE INCIDENTAL TO THE UNIT PRICE OF OTHER WORK.
- 8. IF THE CONTRACTOR FAILS TO FOLLOW THE GUIDELINES IDENTIFIED ABOVE, THE OWNER WILL SUSPEND WORK UNTIL REMEDIAL ACTION HAS BEEN PERFORMED.

SEQUENCE OF EROSION AND SEDIMENTATION CONTROL OPERATIONS:

- 1. CONTRACTOR SHALL PREPARE A CONSTRUCTION SEQUENCE AND SESC PLAN AND OBTAIN AN SESC PERMIT PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS.
- 2. A PERIMETER DEFENSE WILL BE INSTALLED PRIOR TO CONSTRUCTION TO CONTAIN RUNOFF FROM ALL PROPOSED DISTURBED AREAS. SEDIMENT CONTROL WILL BE INITIATED WHICH WILL CONSIST OF MAINTAINING ALL EXISTING VEGETATION AND DIRECTING ALL RUNOFF ON SITE.
- 3. DURING CONSTRUCTION THE ENDS OF ALL OPEN PIPES WILL BE PROTECTED BY FILTER FABRIC, STONE FILTERS OR OTHER APPROVED MEANS. ALL DRAINAGE STRUCTURES SHALL HAVE INLET PROTECTION, FABRIC DROP INSTALLED.
- 4. AT THE COMPLETION OF THE CONSTRUCTION, TEMPORARY CONTROL MEASURES ARE TO BE REMOVED AND CONVERTED TO PERMANENT CONTROLS. FINAL GRADING IS TO BE COMPLETED AND THE GROUND PERMANENTLY STABILIZED. FILTER FABRIC FENCES SHALL BE REMOVED AND ANY BARE SPOTS ARE TO BE SEEDED. CATCH BASINS AND DRAIN INLETS ARE TO BE CAREFULLY UNCOVERED AND ANY SEDIMENT OR DEBRIS IS TO BE REMOVED.
- 5. CONTRACTOR IS TO SEED CRITICAL AREAS IDENTIFIED BY OWNER OR OWNER'S REPRESENTATIVE DAILY, WHEN THOSE AREAS ARE SUBJECT TO EARTH CHANGES. CONTRACTOR IS ALSO RESPONSIBLE FOR REGULAR MAINTENANCE OF PLANT COVER IN THESE AREAS. COVER SHALL BE MAINTAINED SO AS TO CONTROL SOIL EROSION.
- 6. ALL DENUDED AREA'S ARE TO BE SEEDED AND MULCHED DAILY, UPON COMPLETION OF FINAL GRADING.
- 7. AT THE CONCLUSION OF CONSTRUCTION, THE OWNER WILL ASSUME THE RESPONSIBILITY FOR PERMANENT MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES.
- 8. PROVIDE DUST CONTROL AS NEEDED. WATER SHALL BE IMPLEMENTED AS NEEDED.

HMA PAVINO

- ALL HOT MIX ASPHALT AND CONCRETE PAVING SHALL CONFORM TO THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 2. RESTORE PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACT OPERATIONS TO THEIR ORIGINAL CONDITION OR BETTER.
- 3. PROTECT PAVEMENT AFTER FINAL ROLLING FROM VEHICULAR TRAFFIC UNTIL THE SURFACE HAS COOLED SUFFICIENTLY TO PREVENT ABRASION.
- 4. PROVIDE 4 INCH WIDE WHITE PAINT STRIPING FOR LANE STRIPING AND PARKING STALLS. PROVIDE 4 INCH WIDE YELLOW PAINT STRIPING FOR NO PARKING AREAS. PROVIDE 4 INCH WIDE BLUE PAINT STRIPING FOR HANDICAP ACCESSIBLE STALLS.
- 5. ALL PAVEMENT MARKINGS TO BE WATERBORNE BETWEEN MAY 1 AND OCTOBER 15, AND REGULAR DRY OCTOBER 16 TO APRIL 30. MATERIAL AND TEMPERATURE GUIDELINES TO BE IN ACCORDANCE WITH SECTION 811 OF THE MDOT SSFC.
- 6. LANE MARKING SYMBOLS, ARROWS, STOP BARS, ETC. SHALL BE POLYUREA, PREFORMED THERMOPLASTIC, OR MODIFIED EPOXY, PER SECTION 811 OF THE MDOT SSFC.

HAZARDOUS MATERIALS

1. HAZARDOUS MATERIALS: THERE WILL BE NO ONSITE STORAGE OF CHEMICALS, SALTS, FLAMMABLE MATERIALS, OR HAZARDOUS MATERIALS.

<u>UTILITIES</u>

- 1. FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171, 811, OR ONLINE AT ELOCATE. MISSDIG.ORG A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
- MINIMUM COVER OF UNDERGROUND UTILITIES:

WATER 6 FT OUTSIDE THE INFLUENCE OF DRIVEN WAY, 7 FT WITHIN NATURAL GAS 2.5 FT SANITARY SEWERS 4.0 FT ALL OTHERS 2.5 FT

PROVIDE TEMPORARY PROTECTION AS REQUIRED UNTIL COVER IS COMPLETED. INFORM OWNER'S REPRESENTATIVE IF AVAILABLE COVER, AT INDICATED ELEVATIONS, IS LESS THAN MINIMUM.

- 3. EXISTING UTILITIES: INFORMATION HAS BEEN OBTAINED FROM EXISTING AVAILABLE DRAWINGS AND SURFACE FEATURES SHOWN ON THE TOPOGRAPHIC SURVEY. VERIFY THE INFORMATION BEFORE CONSTRUCTION. NOTIFY THE OWNER'S REPRESENTATIVE OF DISCREPANCIES OR INTERFERENCES.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER LINES, STORM OR SEWER MAINS DURING THE CONSTRUCTION OF THIS PROJECT. THEY SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE PROJECT.
- 5. THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.
- 6. ADJUST THE FRAME AND COVER OF CATCH BASINS AND MANHOLES THAT ARE NOT INDICATED TO BE ABANDONED OR REMOVED, TO FINISH GRADE ELEVATION. ADJUSTMENTS SHALL BE MADE USING PRECAST GRADE RINGS.
- 7. PRIOR TO CONSTRUCTION, EXISTING UTILITIES AT PROPOSED CONNECTIONS AND CROSSINGS SHALL BE FIELD EXCAVATED TO VERIFY LOCATIONS, ELEVATION AND SIZE. THE OWNER'S REPRESENTATIVE MAY CONFIRM, ADJUST OR REVISE DESIGN ELEVATIONS OF THE PROPOSED UTILITIES.
- 8. ALL CONNECTIONS TO EXISTING MUNICIPAL UTILITIES SHALL BE OBSERVED BY AN OFFICIAL OF THE MUNICIPALITY OR THEIR DESIGNATED REPRESENTATIVE.
- 9. PROVIDE A MINIMUM OF 24 HOURS NOTICE TO MUNICIPALITY PRIOR TO MAKING CONNECTIONS.

CONCRETE CAST IN-PLACE

- 1. WORK SHALL BE PERFORMED BY A FIRM EXPERIENCED IN THE PLACEMENT AND FINISHING OF WORK OF THIS NATURE AND CONFORM TO THE REQUIREMENTS OF ACI 301 EXCEPT AS SPECIFIED BY STRUCTURAL REQUIREMENTS ON THE DRAWINGS OR SPECIFICATIONS.
- 2. ALL EXTERIOR CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI, MAXIMUM W/C RATIO OF 0.45%, AND AIR ENTRAINMENT OF 5%, +/- 1%.
- 3. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND BE PROVIDED IN FLAT SHEETS. OVERLAP 8 INCHES BETWEEN SHEETS.
- 4. CONSTRUCT JOINTS TRUE TO LINE WITH SURFACE'S PERPENDICULAR TO SURFACE PLANE OF CONCRETE.
- 5. CONSTRUCT CONTRACTION JOINTS AS SHOWN ON THE DRAWINGS OR MDOT STANDARD DETAILS R-28 AND R-29.
- . APPLY A NON-SLIP BROOM FINISH TO ALL EXTERIOR CONCRETE UNLESS INDICATED OTHERWISE

7. PROTECT CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT

STRENGTH. REPLACE THOSE SECTIONS PREMATURELY LOADED.

8. PREVENT TRAFFIC OR PLACEMENT OF LOADS ON CONCRETE PRIOR TO REACHING DESIGN

CONTRACTOR REQUIRED QUALITY CONTROL

AND SHOULDERS

TEMPERATURES.

- 1. CONTRACTOR SHALL RETAIN AND PAY FOR QUALITY CONTROL SERVICES FROM AN INDEPENDENT THIRD PARTY QUALIFIED TO PERFORM THESE SERVICES.
- 2. INSPECTOR / TECHNICIAN MUST HAVE CURRENT CERTIFICATION TO PERFORM THE RESPECTIVE
- 3. TESTS SHALL BE PERFORMED ON THE FOLLOWING MATERIALS AT THE SPECIFIED FREQUENCY

 A.) GRANULAR SUB-BASE: DENSITY 1/1500 SET/PER 12 IN LIFT

Α.,	GRANOLAR SOB-BASE.	GRADATION	1/500 CYD
B.)	AGGREGATE BASE,	DENSITY	1/1000 SFT
	SURFACE COURSE	GRADATION	1/300 CYD

C.) HMA: DENSITY 1/500 SYD PER LIFT

D.) CONCRETE:

SLUMP

AIR %

COMPRESSIVE STRENGTH

1/50 CYD

ONCE PER DAY OR EVERY

1/50 CYD OR PORTION THEREOF

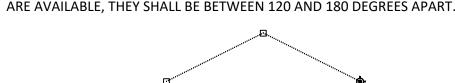
5 CYLINDERS/50 CYD (1-7 DAY, 2-28 DAY, 2 HOLD)

E.) TRENCH BACKFILL: ONCE PER LIFT EVERY 250 LINEAL FEET OF TRENCH

- 4. PROVIDE RESULTS TO OWNER AND ENGINEER NO LATER THAN 5 DAYS AFTER TESTING
- NON-PASSING TESTS ARE TO BE REWORKED BY CONTRACTOR UNTIL ACCEPTABLE RESULTS ARE OBTAINED.

AS CONSTRUCTED RECORD

- 1. CONTRACTOR TO PROVIDE ENGINEER A SET OF "AS-BUILT" RECORD DRAWINGS SHOWING ANY REVISIONS TO PROPOSED PLAN IN RED.
- 2. ALL BURIED WORK SHALL BE WITNESSED AT EACH CHANGE IN DIRECTION, CONNECTION POINT, AND FOUNDATION PENETRATION.
- 3. WITNESS POINTS SHALL BE TO PERMANENT FEATURES (POWER POLES, FIRE HYDRANTS, MANHOLE FRAME & LID, ETC.) AND SHALL BE TO THREE FEATURES. IF ONLY TWO FEATURES



4. FINAL PAYMENT WILL NOT BE MADE UNTIL THE AS-CONSTRUCTED DRAWINGS ARE PROVIDED TO AND ACCEPTED BY THE ENGINEER

TO AND ACCEPTED BY THE ENGINEER.

OTHER SUBMITTALS.

- 1. SUBMIT ELECTRONIC VERSIONS (PDF) FOR SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND
- SUBMITTALS SHALL BE NUMBERED SEQUENTIALLY. RESUBMISSIONS SHALL UTILIZE SAME NUMBER AS ORIGINAL BUT SHALL BE DESIGNATED AS A RESUBMITTAL BY THE ADDITION OF A LETTER FOLLOWING THE NUMERIC IDENTIFIER. (IE: ORIGINAL 1, RESUBMITTAL 1A)
- 3. ALLOW 10 DAYS FOR INITIAL REVIEWS, 7 DAYS FOR RESUBMITTALS.
- 4. INCLUDE FOLLOWING ON EACH SUBMITTAL: A. PRIME CONTRACTOR'S NAME
- B. SUBCONTRACTOR'S NAME (INSTALLER)
- C. NAME OF SUPPLIER D. PROJECT NAME

SUBMITTALS:

- D. PROJECT NAME E. DATE
- 5. PROVIDE ADEQUATE CLEAR SPACE (2 1/2" X 2 1/2") FOR ENGINEERS USE IN APPROVAL MARKINGS AND ACTION.
- 6. SUBMIT CATALOG CUTS, PRODUCT SPECIFICATIONS, COLOR CHARTS, COMPLIANCE STATEMENTS, TESTING AGENCY APPROVALS AND SEALS, AND OTHER INFORMATION AS REQUIRED TO VERIFY CONFORMANCE WITH PROJECT REQUIREMENTS.
- 7. CIRCLE, UNDERLINE, HIGHLIGHT OR OTHERWISE IDENTIFY SPECIFIC PRODUCTS PROPOSED FOR USE WHEN MULTIPLE ITEMS APPEAR ON A CUT SHEET.
- 8. NOTE ANY DEFICIENCIES OR WAIVER FROM REQUIRED STANDARD.
- 9. PROVIDE DATA ON FOLLOWING:
- A. PIPE (DI, PVC, HDPE, CONCRETE) & FITTINGS
- B. DRAINAGE STRUCTURES, BOOTS, AND FRAMES AND LIDSC. EROSION CONTROL PRODUCTS SILT FENCE, FABRIC DROPS AND GEOTEXTILE
- D. QA/QC TESTING RECORDS (DENSITY, GRADATION, ETC)
 E. CONCRETE MIX DESIGNS
- F. HMA MIX DESIGN
- G. MAINTENANCE DATA, CLOSEOUT SUBMITTALS, AND WARRANTIES.
 H. INSTALLER, MANUFACTURER, PRODUCT, OR MATERIAL CERTIFICATES

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Client:
GLADWIN CITY AND

COUNTY TRANSIT

Project:
GLADWIN
TRANSPORTATION
MAINTENANCE
EXPANSION

621 WEAVER CT GLADWIN, MI

Seal:

 Date
 Issued For

 02-14-2022
 SITE PLAN REVIEW

 02-12-2024
 BIDDING

Drawn: TJR
Checked: JMM

JMM

Sheet Title:

Approved:

D : (N)

Sheet Number: C-10

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WATE	R AND SEWER SYMBOLS	UNDERGROUI	ND UTILITY LINES	TYLES	
(SA)	SANITARY MANHOLE	——————————————————————————————————————	E	ELECTRIC LINE	
(ST)	STORM SEWER MANHOLE	——————————————————————————————————————	GAS	NATURAL GAS LINE	
(CB)	STORM SEWER CATCH BASIN		OIL	OIL PIPELINE	
	HEADWALL		<i>T</i> —	TELEPHONE LINE	
\triangle	CULVERT END SECTION	CTV	CTV —	CABLE TV LINE	
\ominus	WATER SERVICE CURB STOP BOX	FO	FO	FIBER OPTICS LINE	
\otimes	WATER GATE VALVE AND BOX	WM	WM	WATER MAIN	
F	FIRE HYDRANT				
	GROUND WATER MONITORING WELL	OVER	RHEAD UTILITY LII	<u>NESTYLES</u>	
→	DRAINAGE FLOW ARROW	——————————————————————————————————————	——————————————————————————————————————	ELECTRIC LINE OVERHEAD	
		——————————————————————————————————————	——————————————————————————————————————	TELEPHONE LINE OVERHEAD	
MISO	CELLANEOUS SYMBOLS	——————————————————————————————————————	OH-CTV	CABLE TV LINE OVERHEAD	
	MAILBOX				
	SIGN WITH ONE POST	ROW	AND PROPERTY L	INESTYLES	_
	SIGN WITH TWO POSTS			ROW	i.
000 000 000	RIPRAP			CITY LIMITS LINE	
$\stackrel{\wedge}{\Box}$	CONIFER TREE				-
\Box	DECIDUOUS TREE		OTHER LINESTY	<u>LES</u>	5
©	SHRUB			HEDGE LINE	
A	ABANDON			TREE LINE	
$\bigcirc B$	BULKHEAD			FENCE	
<u>C</u>	CLEARING			GUARDRAIL	
R	REMOVAL			DRAINAGE COURSE	
(ADJ)	ADJUST	ST	ST	CULVERT/STORM SEWER	
(REL)	RELOCATE	S	S ——	SANITARY SEWER	
(SALV)	SALVAGE			SWAMP AREA	
→	TRAFFIC FLOW ARROW	\times \times \times \times \times \times \times \times	\times \times \times \times	REM CURB OR CURB & GUTTER	
⊗ TH#25	TEST HOLE NUMBER	NOTE			
			PROPOSED LINESTYLES A SAME AS EXISTING EXCE		
	UTILITY SYMBOLS				
•	ELECTRICAL, GUY OR TELEPHONE POLE				
E	ELECTRICAL MANHOLE				
E	ELECTRICAL HANDHOLE				
⊟	ELECTRICAL TRANSFORMER BOX				
	ELECTRIC & LIGHT POLE				
\$	LIGHT POLE				
	LIGHT STANDARD				
	GENERIC UTILITY MANHOLE				
T	TELEPHONE MANHOLE		Know what's belo Call before		
\bigoplus	TELEPHONE PEDESTAL GAS LINE, PETROLEUM OR		dig.		
I	FIBER OPTIC MARKER				

GAS VALVE

GUY ANCHOR

PLAN SHEET PATTERNS



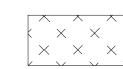
HMA APPROACH/DRIVEWAY



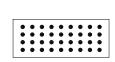
MISCELLANEOUS CONCRETE PAVEMENT



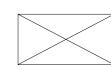
COLD-MILLING (HMA/CONCRETE)



HMA BASE CRUSH & SHAPE OR RUBBLIZE

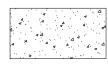


DETECTABLE WARNING SURFACE



SIDEWALK LANDING

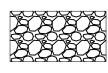
TYPICAL SECTION PATTERNS



CONCRETE PAVEMENT



HMA PAVEMENT (ALL)

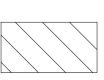


AGGREGATE BASE

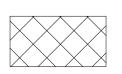


CLASS II SUB-BASE

REMOVAL / DEMOLITION PATTERNS



REMOVING SIDEWALK



REMOVING PAVEMENT

REAL ESTATE & SURVEY SYMBOLS

SECTION CORNER

QUARTER CORNER

QUARTER QUARTER CORNER

 \triangle

HALF SECTION CORNER

REFERENCE MARKER

HALF QUARTER CORNER

PROPERTY CORNER

CONTROL POINT

■ BM#___ BENCH MARK

PRESERVE

PRESERVE MONUMENT BOX



PROTECT MONUMENT CORNERS



PROPERTY OWNERSHIP ARROW



CONTIGUOUS PROPERTY SYMBOL



PARCEL NUMBER BOX

<u>DESIGN CRITERIA</u>

ADT (YEAR) ADT PROJECTED (YEAR + 20) POSTED SPEED DESIGN SPEED

APPLICABLE STANDARDS

R-28-I SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

R-29-I DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK

 $\times, \times \times$

 $\times, \times \times$

XX MPH

XX MPH

R-30-G CONCRETE CURB AND CONCRETE CURB & GUTTER

UTILITY CONTACT LIST

THE UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO IT'S ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

<u>owner</u> <u>UTILITY</u>

CONSUMERS ENERGY 2400 WEISS STREET SAGINAW, MI 48602 PHONE: 989-791-5869

CATV & TELEPHONE

GAS & ELECTRIC

SPECTRUM 5815 BAY ROAD SAGINAW, MI 48604 PHONE: 989-874-2389

COUNTY ROADS

SEWER, WATER & STORM

GLADWIN COUNTY ROAD COMMISSION 301 S. STATE STREET GLADWIN, MI 48624

SPECIAL LEGEND THIS PROJECT

ATTENTION: DAVE PETTERSCH PHONE: 989-426-7441

CITY OF GLADWIN 1000 W. CEDAR AVENUE GLADWIN, MI 48624 ATTENTION: TOM MOLSKI PHONE: 989-426-6943

EXPANSION

621 WEAVER CT GLADWIN, MI

Project:

GĽADWIN

TRANSPORTATION

MAINTENANCE

SITE PLAN REVIEW BIDDING 02-12-2024

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GLADWIN CITY AND

COUNTY TRANSIT

Key Plan:

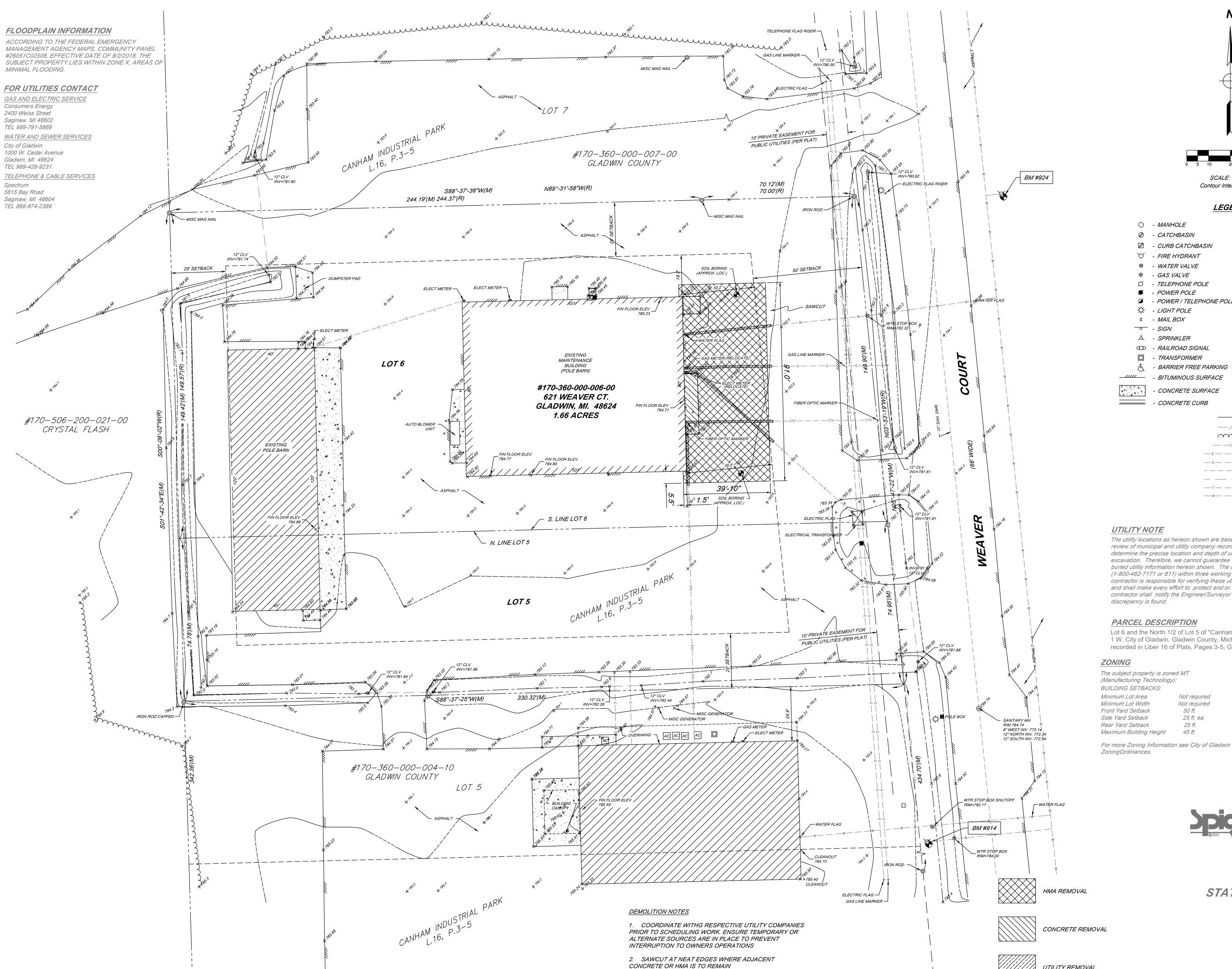
No Scale

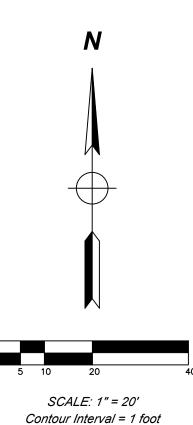
Checked: JMM Approved:

Sheet Title: LEGEND

Project Number:

521558





LEGEND

	1111 II	1	/ // L
Ø	- CATCHBASIN	Ø	- BUSH
	- CURB CATCHBASIN	\odot	- TREE
A	- FIRE HYDRANT		- TELEPHONE PEDESTAL
8	- WATER VALVE	0	- FOUND SURVEY CORNER
\oplus	- GAS VALVE	0	- SET 1/2" IRON ROD
Ø	- TELEPHONE POLE	lack	- BENCHMARK
€	- POWER POLE	⊗	- SET P.K. NAIL
Ø	- POWER / TELEPHONE POLE		CLIV ANGLIOR AND BOLE
\	- LIGHT POLE	\leftarrow \circ	- GUY ANCHOR AND POLE
0	- MAIL BOX	N.F.L.	- NOT FIELD LOCATED
	- SIGN	C	- CABLE TV PEDESTAL
٨	- SPRINKLER	\boxtimes	- ANTENNA
a⊡p	- RAILROAD SIGNAL	\otimes	- SATELLITE DISH
	- TRANSFORMER	AC	- AIR CONDITIONING UNIT
L	- BARRIER FREE PARKING	lacktriangle	- SOIL BORING
////	- BITUMINOUS SURFACE		- ELECTRICAL PEDESTAL
	- CONCRETE SURFACE	(M)	- MEASURED DIMENSION
		(R)	- RECORDED DIMENSION
	- CONCRETE CURB	M	- STUMP
		x	FENCE LINE

—E— — E— — —

---//-----//- - OVERHEAD POWER LINES

— — — - STORM SEWER LINES

— T— — T— — TELEPHONE LINES

—w— — w— — - WATERMAINS

- BURIED CABLE LINES

- BURIED ELECTRIC LINES

- TREE LINE

— G— — G— - GASMAINS

The utility locations as hereon shown are based on field observations and a careful review of municipal and utility company records. However, it is not possible to determine the precise location and depth of underground utilities without excavation. Therefore, we cannot guarantee the accuracy or completeness of the buried utility information hereon shown. The contractor shall call "MISS DIG" (1-800-482-7171 or 811) within three working days prior to any excavation. The contractor is responsible for verifying these utility locations prior to construction and shall make every effort to protect and or relocate them as required. The contractor shall notify the Engineer/Surveyor as soon as possible in the event a

PARCEL DESCRIPTION

Lot 6 and the North 1/2 of Lot 5 of "Canham Industrial Park", Section 6, T. 18 N., R. 1 W. City of Gladwin, Gladwin County, Michigan, according to the Plat thereof as recorded in Liber 16 of Plats, Pages 3-5, Gladwin County Records.

The subject property is zoned MT (Manufacturing Technology): Not required Not required 50 ft. 25 ft. ea. 25 ft. 45 ft.

BENCHMARKS

BM #914 - TOP OF FLAG MOUNTING BOLT ON HYDRANT, 73'± SOUTH OF THE SOUTHEAST PROPERTY CORNER.

NAVD88 ELEV. 781.51

BM #924 - TOP OF FLAG MOUNTING BOLT ON HYDRANT, 67'± EAST OF THE NORTHEAST PROPRTY CORNER.

NAVD88 ELEV. 782.94



PREPARED BY: ROGER P. MAHONEY PROFESSIONAL SURVEYOR NO. 4001041105 230 S. WASHINGTON AVENUE SAGINAW, MICHIGAN 48607 TEL. 989-754-4717 DRAWN BY: J. THERING DATE: JANUARY 4, 2022 JOB NUMBER: 1311365SG2021

TOPOGRAPHIC SURVEY FOR:

www.SpicerGroup.com

STATEWIDE SURVEYING PLLC 3050 SCHMIDT RD.

GLADWIN, MICHIGAN 48624

TOPOGRAPHIC SURVEY OF: PART OF THE NORTHWEST 1/4 OF SECTION 6, T.18 N. - R.1 W., CITY OF GLADWIN

GLADWIN COUNTY, MICHIGAN

131365SG2021 D-5839

Sidock Group ENGINEERS • ARCHITECTS • CONSULTANTS

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GLADWIN CITY AND COUNTY TRANSIT

GĽADWIN TRANSPORTATION **MAINTENANCE EXPANSION**

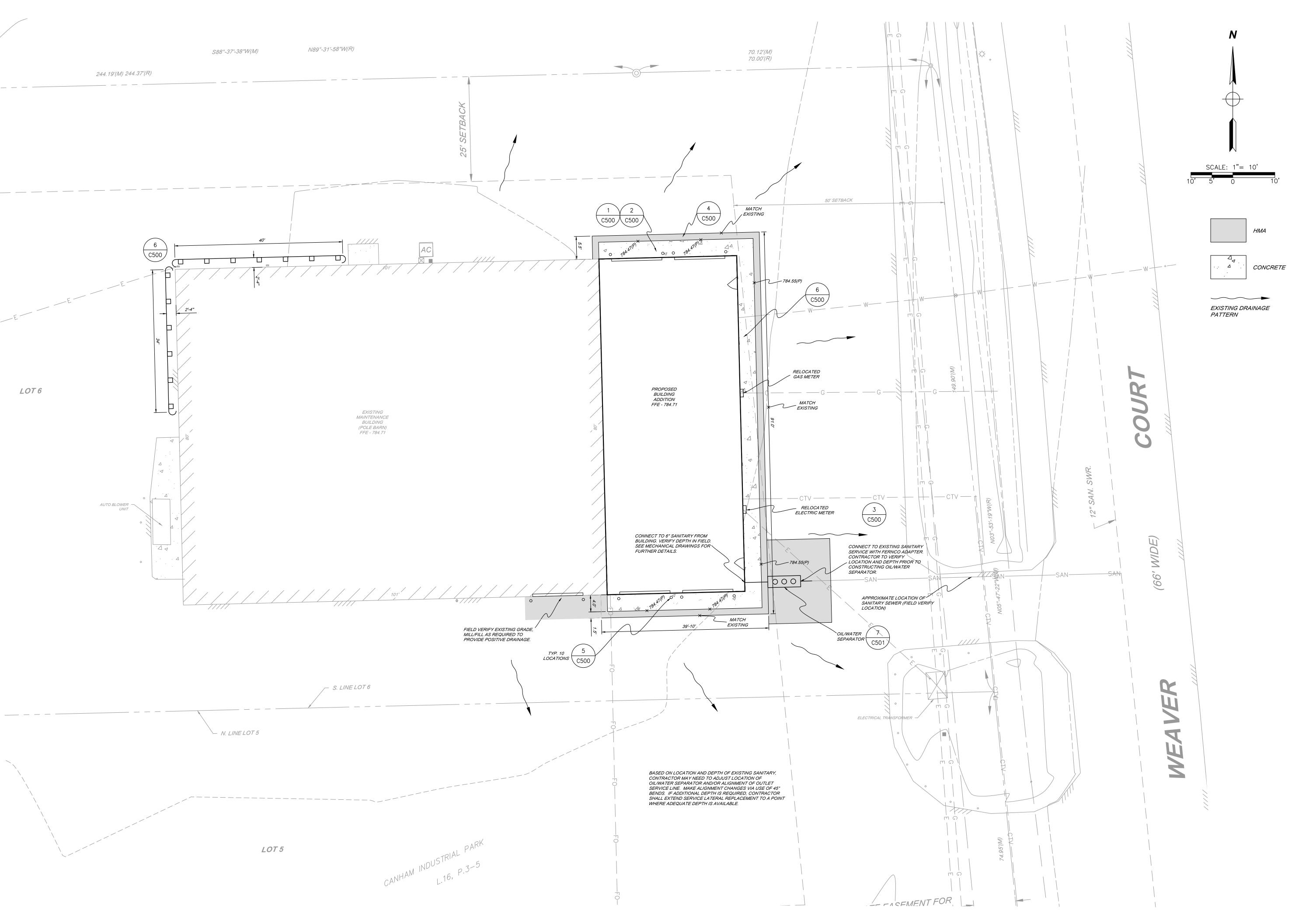
621 WEAVER CT GLADWIN, MI

02-14-2022 SITE PLAN REVIEW **BIDDING** 02-12-2024

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Sheet Title: **EXISTING** CONDITIONS/ **DEMOLITION**

521558





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Client:

GLADWIN CITY AND COUNTY TRANSIT

Project:
GLADWIN
TRANSPORTATION
MAINTENANCE
EXPANSION

621 WEAVER CT GLADWIN, MI

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Date Issued For 02-14-2022 SITE PLAN REVIEW 02-12-2024 BIDDING

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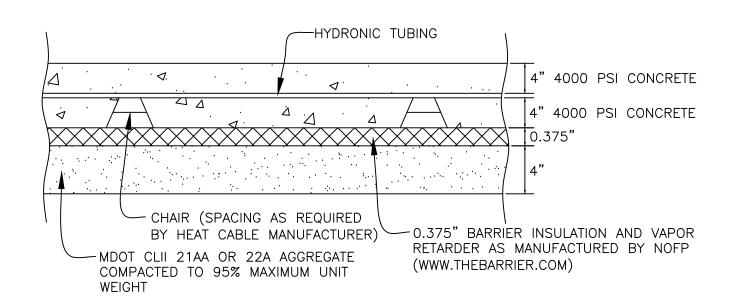
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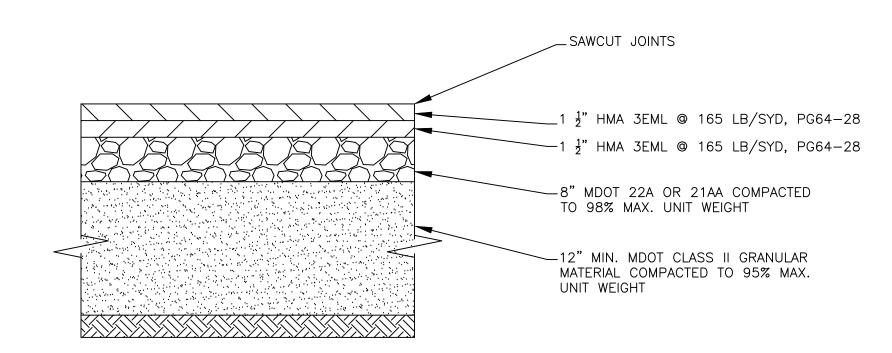
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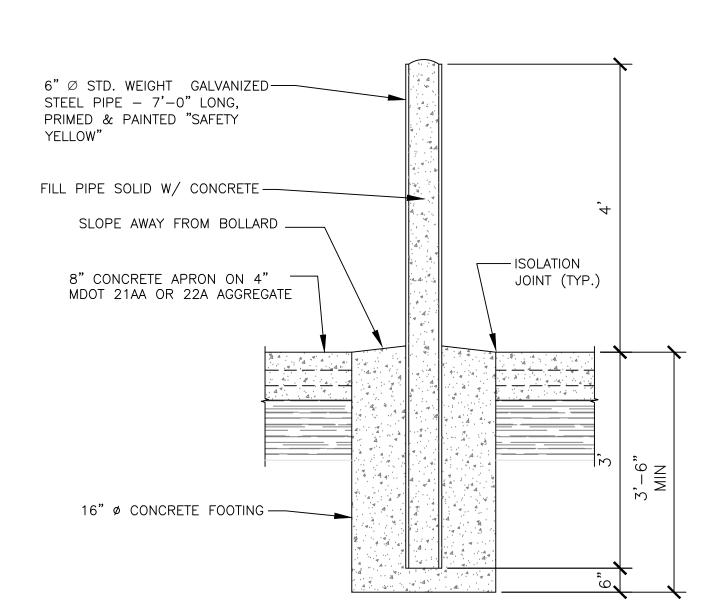




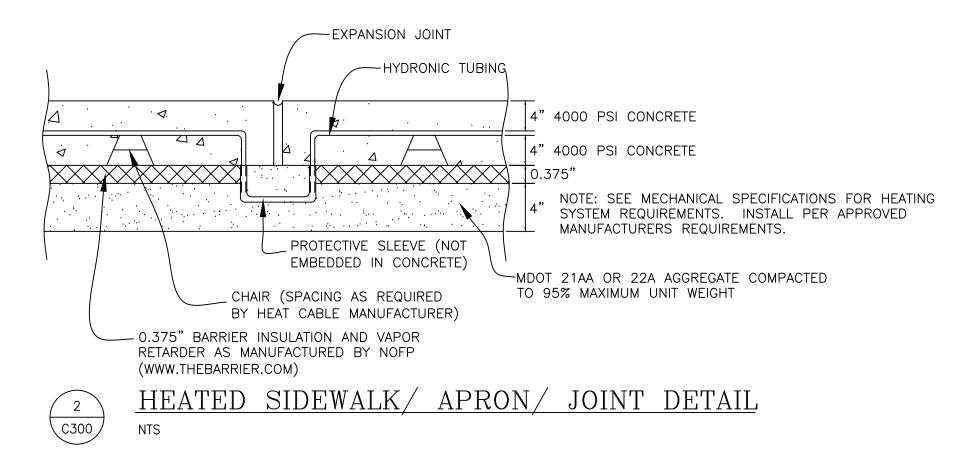
HEATED SIDEWALK/APRON DETAIL

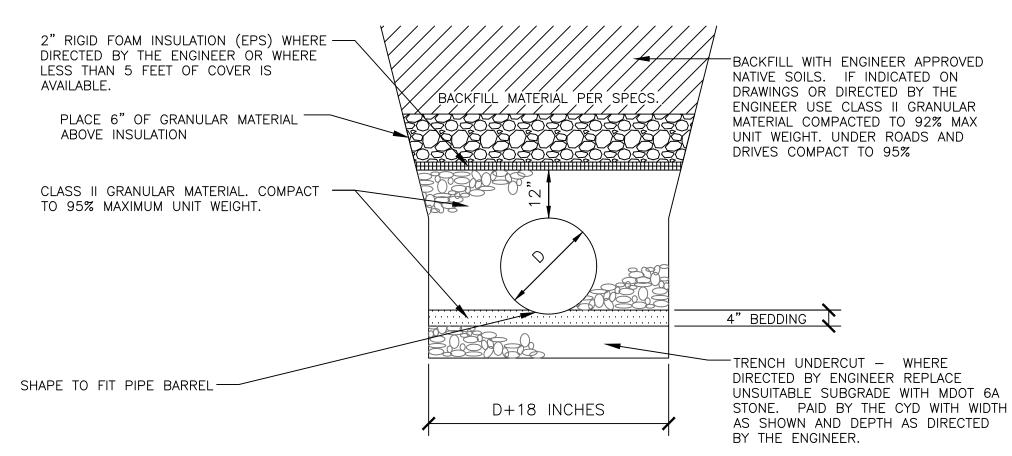


4 TYPICAL PARKING LOT HMA SECTION NTS











Project:
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Date Issued For 2-14-2022 SITE PLAN REVIEW 02-12-2024 BIDDING

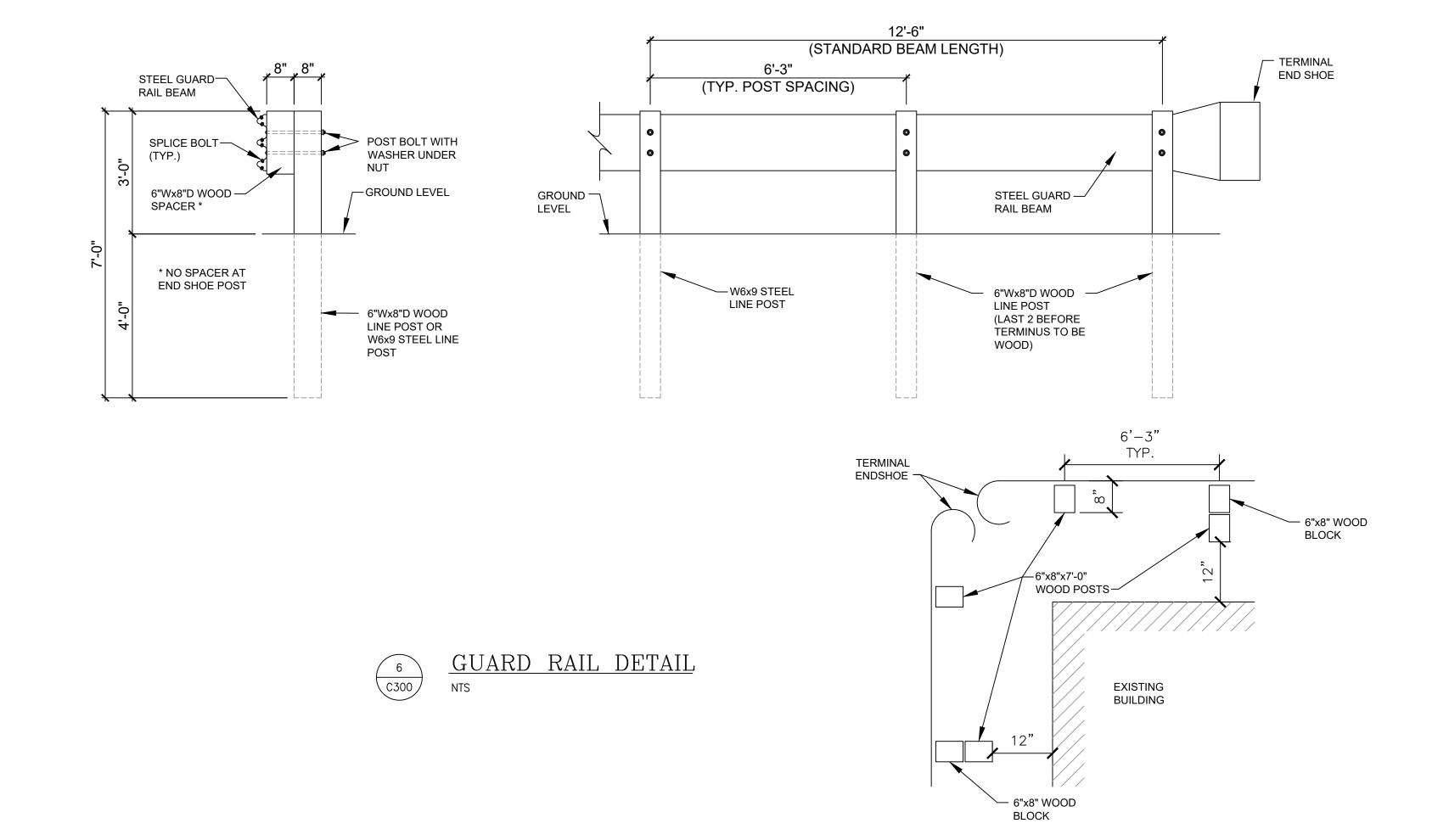
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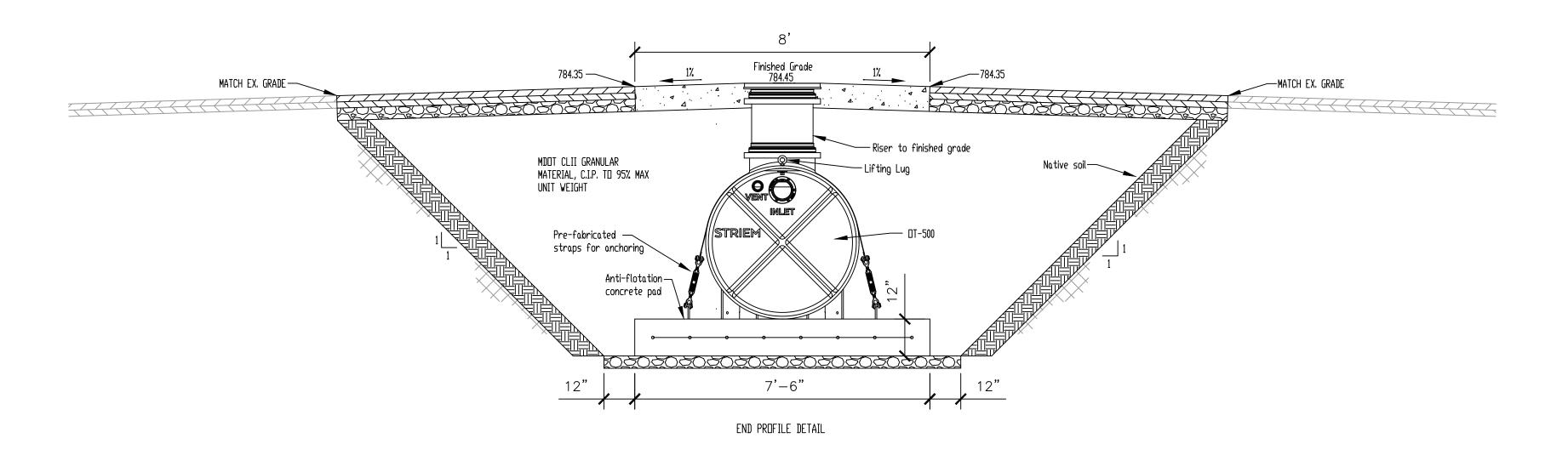
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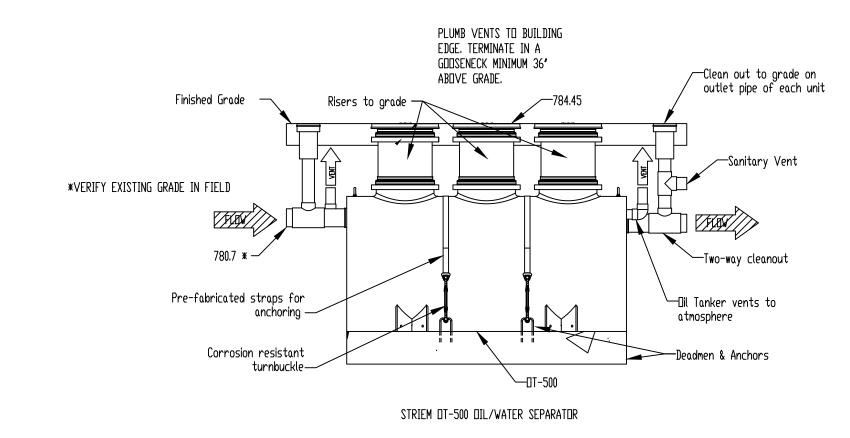
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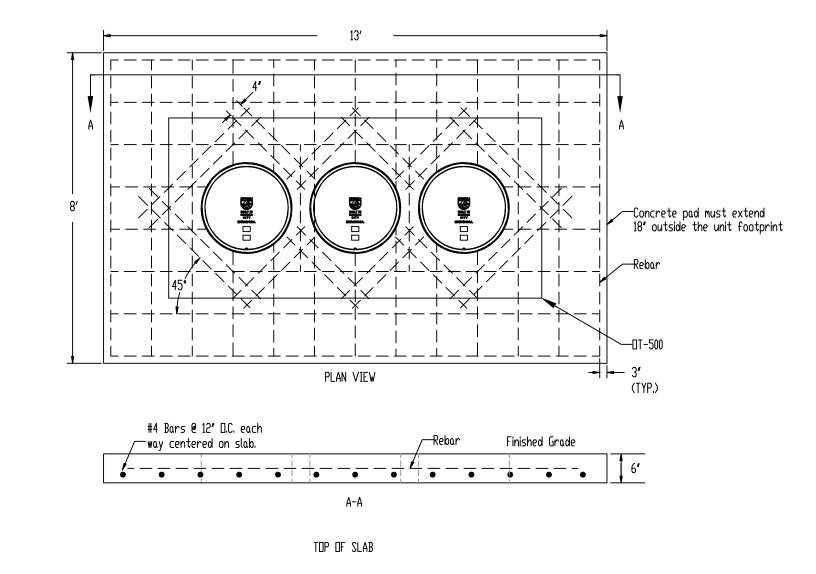
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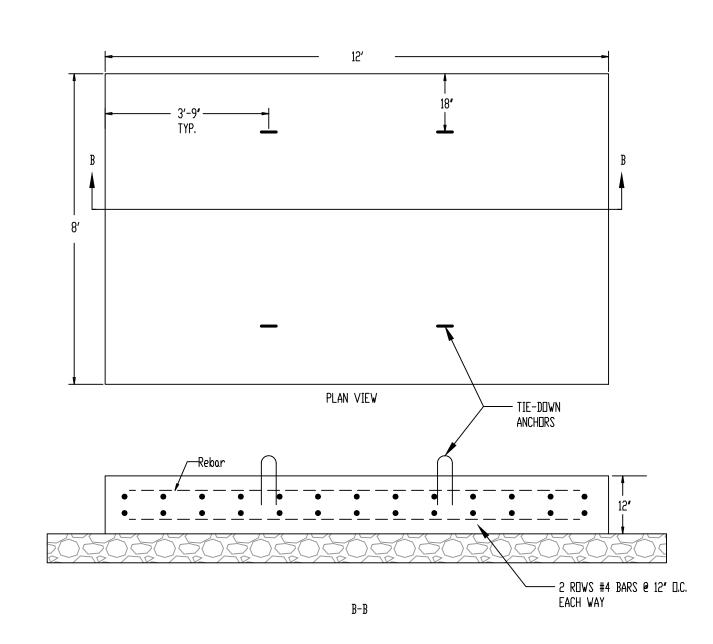
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OIL SEPARATOR DETAIL

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Key Plan:

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GLADWIN CITY AND COUNTY TRANSIT

Project: GLADWIN TRANSPORTATION MAINTENANCE **EXPANSION**

621 WEAVER CT GLADWIN, MI

SITE PLAN REVIEW 2-14-2022 02-12-2024 BIDDING

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Sheet Title: DETAILS

EXISTING NOTES

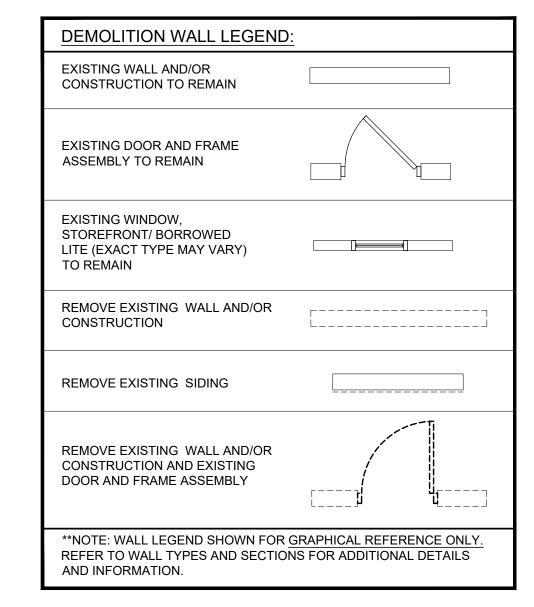
- CONTRACTOR MUST VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. VERIFY MEASUREMENTS WITH CORRESPONDING CONSTRUCTION OR EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK, AND NOTIFY THE ARCHITECT IMMEDIATELY OF SIGNIFICANT DISCREPANCIES.
- 2. VERIFY ALL CONDITIONS COVERING OR AFFECTING THE STRUCTURAL WORK; OBTAIN AND VERIFY ALL DIMENSIONS AND ELEVATIONS TO ENSURE THE PROPER STRENGTH, FIT AND LOCATION OF THE STRUCTURAL WORK; REPORT TO THE ARCHITECT ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE NEW WORK. ALL DISCREPANCIES SHALL BE FULLY RESOLVED PRIOR TO COMMENCING WORK.
- 4. WHERE THE EXISTING CONSTRUCTION IS TO BE ALTERED, OR OTHERWISE DISTURBED, PROVIDE TEMPORARY AND/OR PERMANENT BRACING AND SHORING AS MAY BE REQUIRED BEFORE AND DURING OPERATIONS AND UNTIL THE WORK IS SAFELY COMPLETED AND NO LONGER NEEDS SAME.
- 5. EACH CONTRACTOR SHALL PROVIDE ALL THE NECESSARY SUPPORT, BRACING, SHORING, ETC. (TEMPORARY AND/OR PERMANENT) OF BOTH NEW AND EXISTING CONSTRUCTION AS REQUIRED FOR THE SAFE INSTALLATION OF THE NEW CONSTRUCTION AND EQUIPMENT.
- 6. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF TEMPORARY

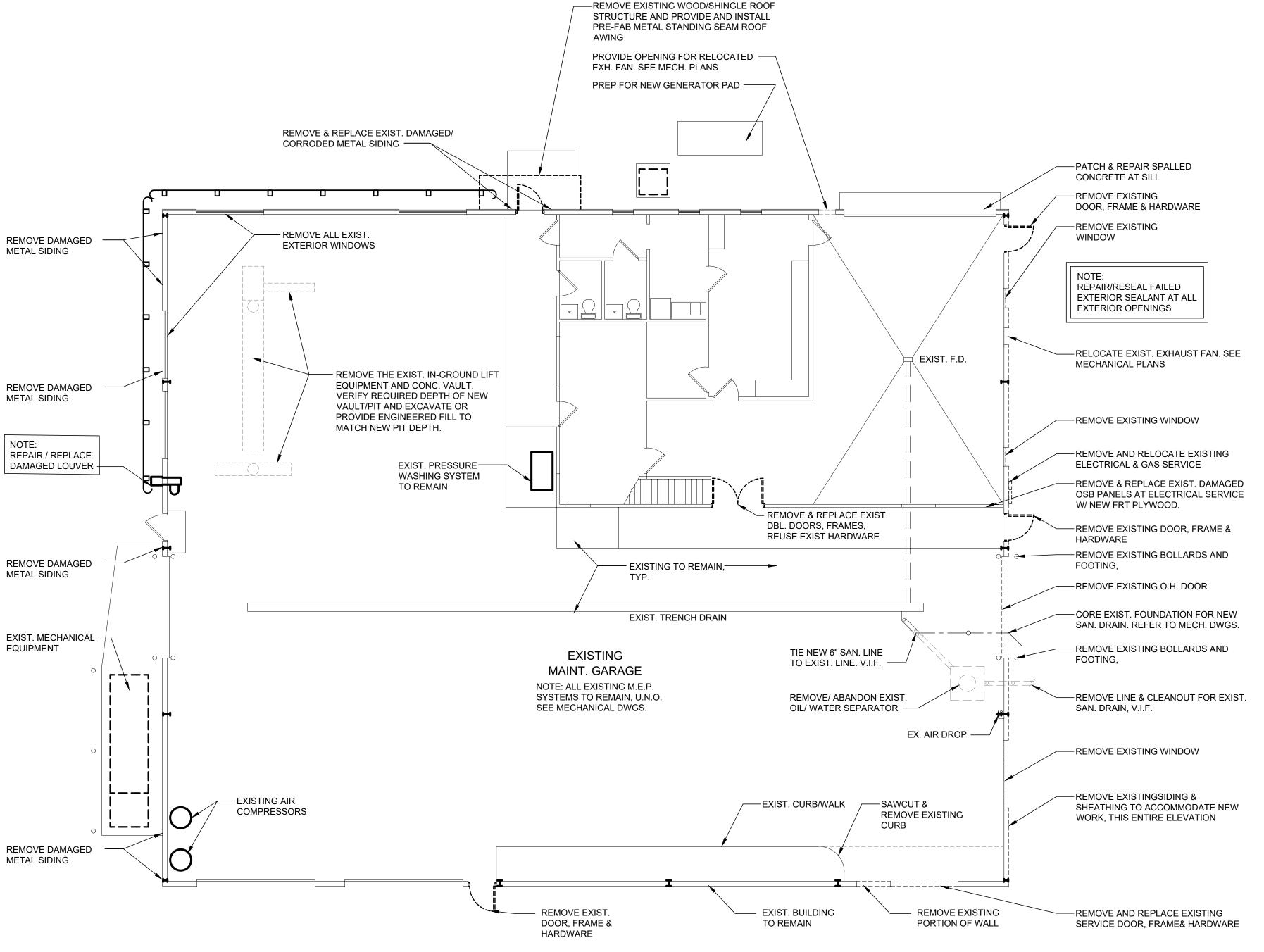
- BRACING, GUYS OR TIE-DOWNS IF NECESSARY.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.
- 8. PROVIDE FIRE WATCH DURING FIELD CUTTING AND WELDING OPERATIONS, MEETING THE OWNER'S REQUIREMENTS.
- 9. ALL EXISTING STRUCTURAL MEMBERS TO REMAIN, U.N.O.

CONTINUED USE OF FACILITIES:

- EACH CONTRACTOR SHALL AT ALL TIMES MAINTAIN A CLEAN AND SAFE PASSAGEWAY FOR
 THE OWNER'S OPERATION AND PERSONNEL IN EXISTING AREAS AND MAINTAIN CLEARANCES
 ADJACENT TO AND IN CONNECTION WITH THE WORK PERFORMED.
- 2. EACH CONTRACTOR SHALL EFFECTIVELY CONFINE DUST, DIRT AND NOISE TO THE ACTUAL CONSTRUCTION AREA AS APPROVED BY THE GENERAL CONTRACTOR IN ACCORDANCE WITH STATE OF MICHIGAN REGULATIONS.
- WORK SHALL, IF REQUIRED, BE CONSTRUCTED IN PHASES TO ACCOMMODATE THE OWNER'S USE OF THE PREMISES DURING THE CONSTRUCTION PERIOD AND FOR INSTALLATION OF HIS EQUIPMENT. COORDINATE THE CONSTRUCTION SCHEDULE WITH THE GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE.

4. DURING THE CONTRACTOR'S PERFORMANCE OF THE WORK OF THIS CONTRACT, THE OWNER'S WILL CONTINUE TO OCCUPY THE EXISTING BUILDING. INTERRUPTION OF BUILDING ACCESS AND FACILITIES BY THE CONTRACTOR WILL NOT BE PERMITTED; TO WHATEVER EXTENT SUCH INTERRUPTIONS MIGHT INTERFERE WITH OWNER'S OCCUPANCY. LIMIT CONSTRUCTION OPERATIONS TO THOSE METHODS AND PROCEDURES WHICH WILL NOT ADVERSELY AND UNDULY EFFECT THE WORKING ENVIRONMENT OF OWNER'S OCCUPIED SPACES, INCLUDING NOISE, DUST, ODORS, AIR POLLUTION, AMBIENT DISCOMFORT, POOR LIGHTING, HAZARDS AND OTHER UNDESIRABLE EFFECTS AND CONDITIONS. COORDINATE AND SCHEDULE ALL WORK IN EXISTING BUILDING WITH OWNER AND GENERAL CONTRACTOR.







DEMOLITION NOTES

- REMOVE ALL MATERIALS AND DEBRIS CREATED DURING THE DEMOLITION AND/OR CONSTRUCTION PROCESS AND DISPOSE OFF SITE IN A SAFE AND LEGAL MANNER.
- 2. PROVIDE TEMPORARY PROTECTION AND WEATHER SEAL FOR INTERIOR DURING CONSTRUCTION PROCESS. TEMPORARY CONSTRUCTION MUST BE WATER TIGHT TO PREVENT ANY DAMAGE OR VANDALISM TO EXISTING INTERIOR SPACE.
- 3. PROVIDE DUST MATS AT ALL CONSTRUCTION AREA ENTRANCE AND EXIT LOCATIONS.
- PERFORM ALL DEMOLITION WORK REQUIRED ON THE EXISTING BUILDING AS CALLED FOR ON THE DRAWINGS AND/OR AS REQUIRED TO ACCOMMODATE THE WORK.
- CAP, PATCH AND REPAIR ALL HOLES AND SURFACES IN WALLS, FLOORS AND CEILINGS WHERE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND/OR ELECTRICAL ITEMS ARE REMOVED AS A RESULT OF THE DEMOLITION OPERATIONS.
- 6. CARRY OUT ALL DEMOLITION WORK IN CLOSE COORDINATION AND COOPERATION WITH STRUCTURAL TRADES FOR PROPER SEQUENCING OF THE WORK TO ASSURE THE COMPLETE SAFETY AND STRUCTURAL INTEGRITY OF THE BUILDING AND ITS ELEMENTS AT ALL TIMES. PROVIDE TEMPORARY COLUMNS, JACKS, BEAMS, ETC., WHERE REQUIRED FOR SUPPORT OF EXISTING ELEMENTS OF CONSTRUCTION TO REMAIN IN SAFE, COMPETENT MANNER, IN CONFORMANCE WITH ALL LAWS, CODES ORDINANCES, RULES AND REGULATIONS BEARING ON THE WORK.
- 7. DEMOLITION OF ALL PORTIONS OF THE STRUCTURE TO BE REMOVED SHALL BE DONE WITH UTMOST CARE, USING TOOLS AND METHODS SUBJECT TO OWNER'S APPROVAL. ALL POSSIBLE CARE SHALL BE TAKEN TO AVOID DAMAGING, SHOCK OR VIBRATION TO PORTIONS OF EXISTING STRUCTURE TO REMAIN.
- 10. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION AND ELEVATION OF EXISTING SEWERS, DRAINS, ETC. IN DEMOLITION AREAS BEFORE PROCEEDING WITH THE WORK, ALL DISCREPANCIES SHALL BE DOCUMENTED AND REPORTED TO THE ARCHITECT.
- 11. SAW CUT & REMOVE EXISTING CONCRETE SLAB FOR PLACEMENT OF PLUMBING WORK, FOUNDATIONS, STRUCTURAL STEEL, NECESSARY CAPPING OF EXISTING LINES AND FOUNDATION WORK, ETC. COORDINATE WITH STRUCTURAL ENGINEER AND ARCHITECT.
- 12. SAWCUT AND REMOVE EXISTING MASONRY AS REQUIRED AT EXISTING WALL OPENINGS TO ACCOMMODATE NEW DOORS/ WINDOWS.
- 13. REMOVE AND RELOCATE MECHANICAL AND ELECTRICAL ITEMS, INCLUDING PIPING, FIXTURES, EQUIPMENT, DUCTWORK, WIRING DEVICES, PANELS AND ACCESSORIES AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR MECHANICAL AND ELECTRICAL DEMOLITION.
- 14. REMOVE ALL EXISTING FLOOR DRAINS AND CLEANOUTS U.N.O., REMOVE ALL EXISTING EXPOSED PIPING AND ABANDON ALL HIDDEN PIPING THROUGHOUT WORK AREA.
- 15. ALL EXISTING CONSTRUCTION TO REMAIN U.N.O.
- 16. ALL EXISTING MATERIALS INDICATED TO REMAIN SHALL BE REPAIRED TO MATCH EXISTING. MATERIALS BEYOND REPAIR SHALL BE REPLACED TO MATCH EXISTING.
- 17. PATCH AND PREPARE ALL DEMOLITION AREAS FOR NEW FINISHES, REFER TO ARCHITECTURAL DRAWINGS.
- 16. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFIC TRADE RELATED DEMOLITION WORK.
- 17. REFER TO SECTION 24100 DEMOLITION, IN THE SPECIFICATION FOR FURTHER INFORMATION PRIOR TO THE START OF DEMOLITION.

NOTE:

1. SAND, CLEAN, & PREP ALL EXIST. EXPOSED
METAL WALL CAPS AND EXPOSED PIPING/

2. SAND, CLEAN, & PREP ALL EXIST. EXPOSED STEEL TRUSSES AND ROOF PURLINS TO RECEIVE GALV. PRIMER AND PAINT.

CONDUIT TO RECEIVE GALV. PRIMER & PAINT.

- SAND, CLEAN & PREP ALL EXIST. EXPOSED STEEL GIRTS/FRAMING WHERE CORROSION IS PRESENT, TO RECEIVE GALV. PRIMER & PAINT.
- 4. SAND, CLEAN, & PREP ALL EXIST. OH DOOR JAMBS TO RECEIVE GALV. PRIMER & PAINT. REMOVE EXIST. WEATHERSTRIP/SEAL TO ALLOW ENTIRE JAMB TO BE PREPPED/PAINTED & REINSTALL AFTER PAINTING
- 5. PRESSURE WASH/CLEAN ENTIRE EXTERIOR.
- 6. PATCH AND REPAIR EXIST. INSULATION LINER WHERE DAMAGED IN VARIOUS LOCATIONS AT THE WALLS AND CEILING, V.I.F.



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Client:
GLADWIN CITY
COUNTY TRANSIT

Project:
GLADWIN
TRANSPORTATION
MAINTENANCE
EXPANSION

621 WEAVER CT

GLADWIN, MI
Seal:

Date	Issued Fo
8.08.23	OWNER REVIE
2.12.24	BIDDIN

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DEMOLITION FLOOR PLAN

Project Number:

Sheet Number: AD-101

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- 4. SAND, CLEAN, & PREP ALL EXIST. OH DOOR JAMBS TO RECEIVE GALV. PRIMER & PAINT. REMOVE EXIST.WEATHERSTRIP/SEAL TO ALLOW ENTIRE JAMB TO BE PREPPED/PAINTED.
- PRESSURE WASH/CLEAN ENTIRE EXTERIOR.
- PATCH AND REPAIR EXIST. INSULATION LINER WHERE DAMAGED IN VARIOUS LOCATIONS AT THE WALLS AND CEILING, V.I.F.

GENERAL FLOOR

PLAN NOTES

- ALL DIMENSIONS ARE TO FACE OF STUDS/ SHEATHING/ MASONRY/CONCRETE, CENTERLINE OF OPENINGS FOR DOORS AND WINDOWS IN STUD CONSTRUCTION (FACE OF OPENING WHEN LOCATED IN MASONRY/CONCRETE). DO NOT SCALE DRAWINGS.
- PROVIDE AND INSTALL SEALANT AT INTERSECTION OF ALL GYPSUM BOARD PARTITIONS AND DIFFERING MATERIALS. (BOTH SIDES OF PARTITIONS).
- VERIFY SIZE AND LOCATION OF MECHANICAL AND ELECTRICAL EQUIPMENT, PADS, PENETRATIONS AND SUPPORTS WITH MECHANICAL AND ELECTRICAL DRAWINGS.
- SLOPE FLOORS TO DRAINS AT 1/8" PER FOOT MINIMUM WHILE KEEPING FLOOR LEVEL AT WALL BASE
- CONDITION. (DO NOT EXCEED 2% SLOPE IN ANY DIRECTION). REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION.
- PLANS INDICATE MINIMUM REQUIREMENTS FOR FIRE EXTINGUISHERS, PROVIDE ADDITIONAL EXTINGUISHERS IF REQUIRED BY AUTHORITY HAVING JURISDICTION. FIRE EXTINGUISHERS TO COMPLY WITH
- COORDINATE ALL UTILITY LOCATIONS WITH CIVIL, PLUMBING AND ELECTRICAL DRAWINGS.
- TO THE MAXIMUM EXTENT POSSIBLE, CLEAN-OUTS ARE TO BE LOCATED IN INCONSPICUOUS LOCATIONS ALL FLOOR CLEAN-OUTS LOCATED IN AREAS WITH FINISH FLOORING ARE TO BE FITTED WITH FINISH FLOORING INSERTS. ALL CLEAN-OUTS ARE TO BE
- FLUSH WITH FLOORS/WALLS.
- 8. PATCH AND REPAIR ALL EXISTING CONSTRUCTION DAMAGED AS A RESULT OF NEW WORK TO MATCH EXISTING CONDITIONS, U.N.O.

WALL LEGEND:

EXISTING WALL AND/OR

CONSTRUCTION TO REMAIN

EXISTING DOOR AND FRAME

PEMB STUD EXTERIOR WALL

STOREFRONT/ BORROWED

PROPOSED DOOR AND FRAME

NOTE: 2 HR RATED FIRE BARRIER. EXTEND FIRE RATED ASSEMBLY TO

FIRE STOP ALL JOINTS AND

PENETRATIONS.

INFORMATION.

LITE (EXACT TYPE MAY VARY)

THE UNDERSIDE OF THE STRUCT.

**NOTE: WALL LEGEND SHOWN FOR GRAPHICAL REFERENCE ONLY. REFER TO WALL TYPES AND SECTIONS FOR ADDITIONAL DETAILS AND

ASSEMBLY TO REMAIN

CMU INTERIOR WALL

EXISTING WINDOW,

TO REMAIN

ASSEMBLY

9. REFER TO SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION.



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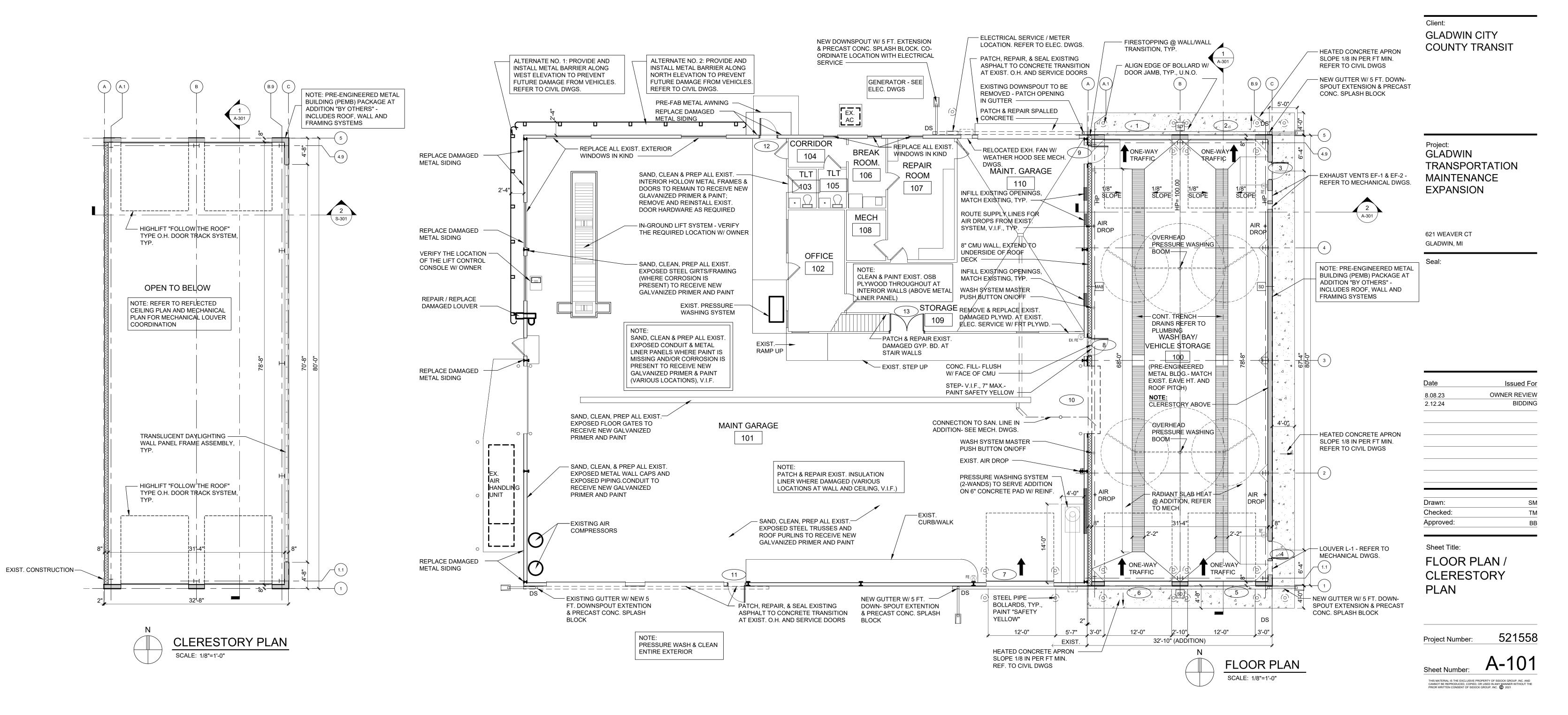
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DECK U.N.O. (REFER TO SECTIONS),





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ROOF NOTES

DRAWINGS.

MANUFACTURER.

CONTRACTOR TO COORDINATE LOCATION

OF ALL EXHAUST AND INTAKE LOUVERS INCLUDING BATHROOM/ TOILET ROOM EXHAUST FANS, ETC. W/ MECHANICAL

NO MEP PENETRATIONS OF THE ROOF

SYSTEM. ALL MEP PENETRATIONS TO TERMINATE THROUGH THE PEMB EXTERIOR

ALL EXTERIOR METAL TO BE GALVANIZED,

FACTORY PRIMED AND PAINTED PER THE PAINTING SCHEDULE.

SNOW/ ICE RETENTION AT METAL ROOF AREAS INDICATED FOR GENERAL DESIGN INTENT. CONTRACTOR RESPONSIBLE FOR

COORDINATION AND VERIFICATION OF LOCATION AND QUANTITY W/ ROOFING

Key Plan:

GLADWIN CITY COUNTY TRANSIT

Project:
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TRANSPORTATION
MAINTENANCE
EXPANSION

621 WEAVER CT

GLADWIN, MI

Seal:

2.12.24

Date Issued For 8.08.23 OWNER REVIEW

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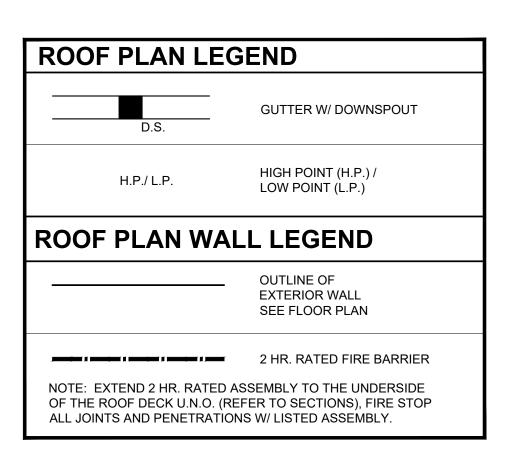
ROOF PLAN

Project Number:

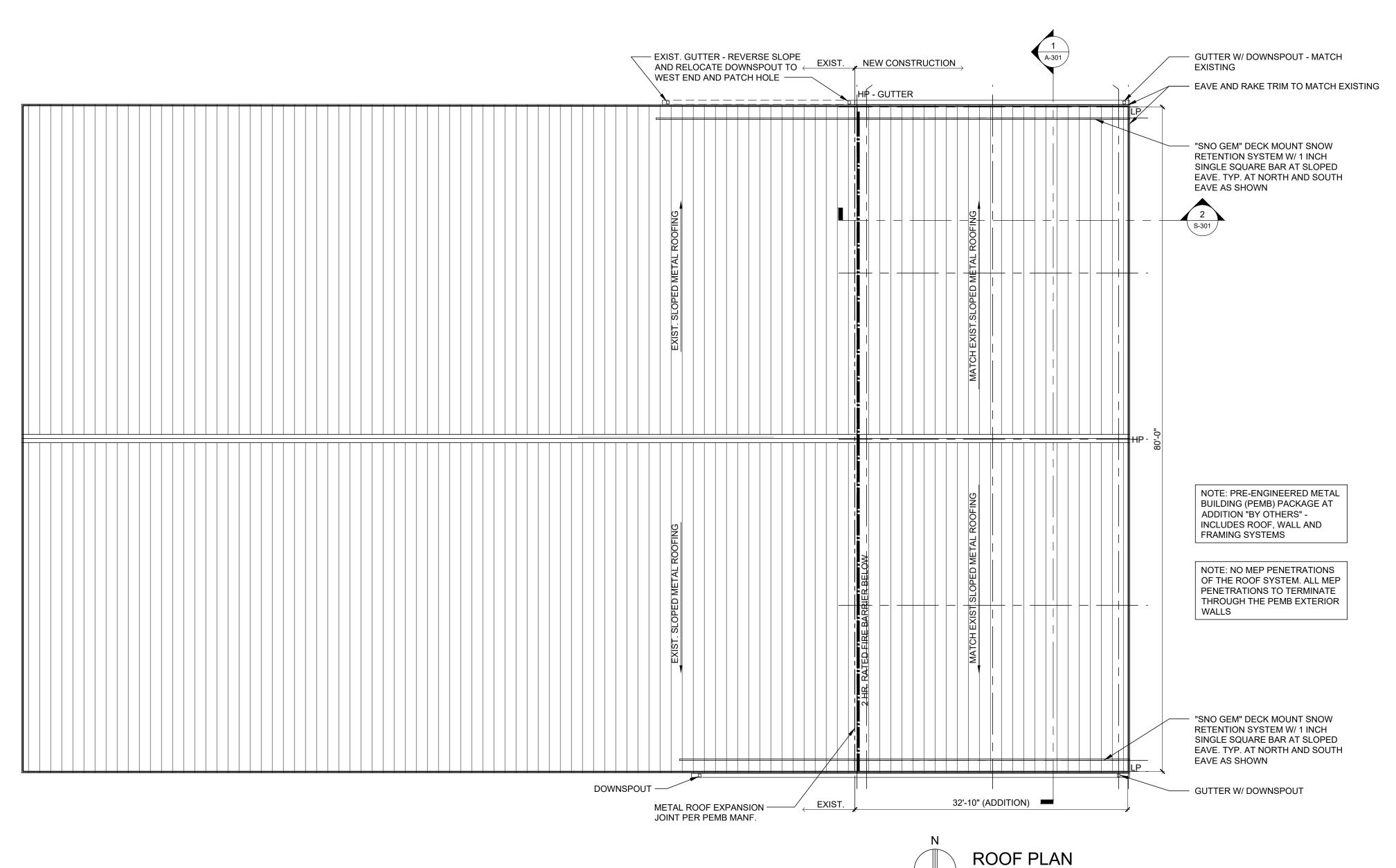
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521558



SCALE: 1/8"=1'-0"



GENERAL ELEVATION NOTES FOR EXISTING BUILDING

- 1. THE ENTIRE EXTERIOR OF THE BUILDING, INCLUDING ALL EXISTING EXTERIOR MATERIALS, METAL, CONCRETE, ETC. WILL BE CLEANED USING A NON-IONIC DETERGENT, NATURAL OR SYNTHETIC BRISTLE BRUSHES, AND A LOW PRESSURE (UNDER 100 PSI) WATER WASH.
- 2. REMOVE AND REPLACE EXISTING DOORS AND WINDOWS AS INDICATED ON THE DRAWINGS. GENERAL CONTRACTOR TO FIELD VERIFY ALL EXISTING DOOR AND WINDOW OPENINGS.
- 3. REMOVE AND REPLACE ALL EXISTING DAMAGED OR DETERIORATED METAL SIDING AS DETERMINED BY OWNER AND ARCHITECT.
- 4. ALL EXISTING DAMAGED METAL-WORK TO BE REPAIRED AND/OR REPLACED TO MATCH EXISTING.
- 5. REMOVE AND REPLACE EXISTING BACKER ROD AND SEALANT FROM ALL VERTICAL CONTROL JOINTS, EXPANSION JOINTS, WINDOWS, DOORS, COPINGS, ETC.

GENERAL ELEVATION NOTES

- REFER TO DOOR & WINDOW SCHEDULES FOR ADDITIONAL INFORMATION.
- 2. PAINT ALL ROOFTOP MOUNTED/ WALL MOUNTED DEVICES AND PENETRATIONS TO MATCH ADJACENT ROOF MATERIAL. IF ITEMS ARE PREFINISHED, COORDINATE COLOR SELECTION W/ ARCHITECT PRIOR TO FABRICATION/ ORDERING.
- 3. ALL EXPOSED EXTERIOR METAL, INCLUDING LINTELS, TO BE GALVANIZED AND PAINTED PER PAINTING SCHEDULE.
- ALL EXTERIOR SEALANT COLORS TO MATCH MATERIAL BEING SEALED, CONTROL/ EXPANSION JOINT SEALANT TO MATCH MORTAR COLOR, U.N.O.
- CONTRACTOR TO COORDINATE LOCATION OF ALL EXHAUST AND INTAKE LOUVERS W/ MECHANICAL DRAWINGS- ALL FRESH AIR INTAKES TO BE 4'-0" ABOVE FINISH GRADE MINIMUM AND 10'-0" MIN. FROM EXHAUST OPENINGS.
- REFER TO MECH. DRAWINGS FOR ALL LOUVER, DUCT, AND VENT LOCATIONS.
- REFER TO ELECTRICAL DRAWINGS FOR ALL EXTERIOR LIGHTING LOCATIONS.
- 8. SEAL ALL PENETRATIONS, GAPS, SPACES, JOINTS, ETC. AT ENTIRE EXTERIOR OF BUILDING.
- 9. ALL PREFINISHED ITEMS TO BE SELECTED BY ARCHITECT FROM MANUF. STANDARD RANGE

Sidock Group

ENGINEERS-ARCHITECTS-CONSULTANTS

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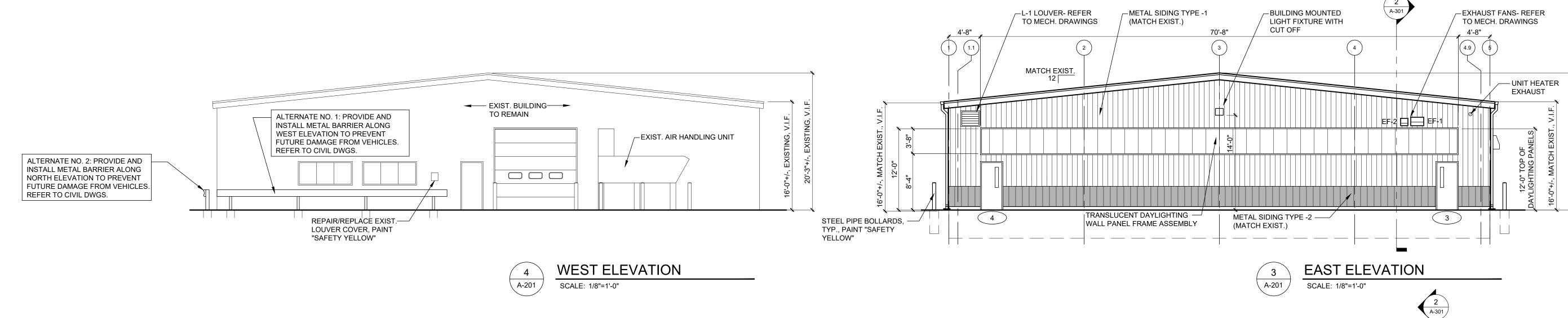
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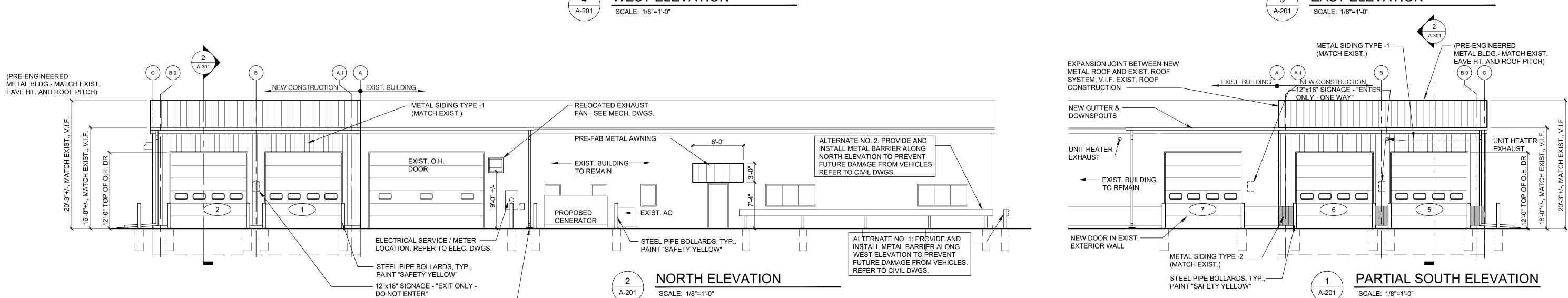
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Client:
GLADWIN CITY
COUNTY TRANSIT





NEW DOWNSPOUT W/ 5 FT. EXTENSION - & PRECAST CONC. SPLASH BLOCK. CO-ORDINATE LOCATION WITH ELECTRICAL

Project:
GLADWIN
TRANSPORTATION
MAINTENANCE
EXPANSION

621 WEAVER CT

GLADWIN, MI

Date Issued For 8.08.23 OWNER REVIEW BIDDING

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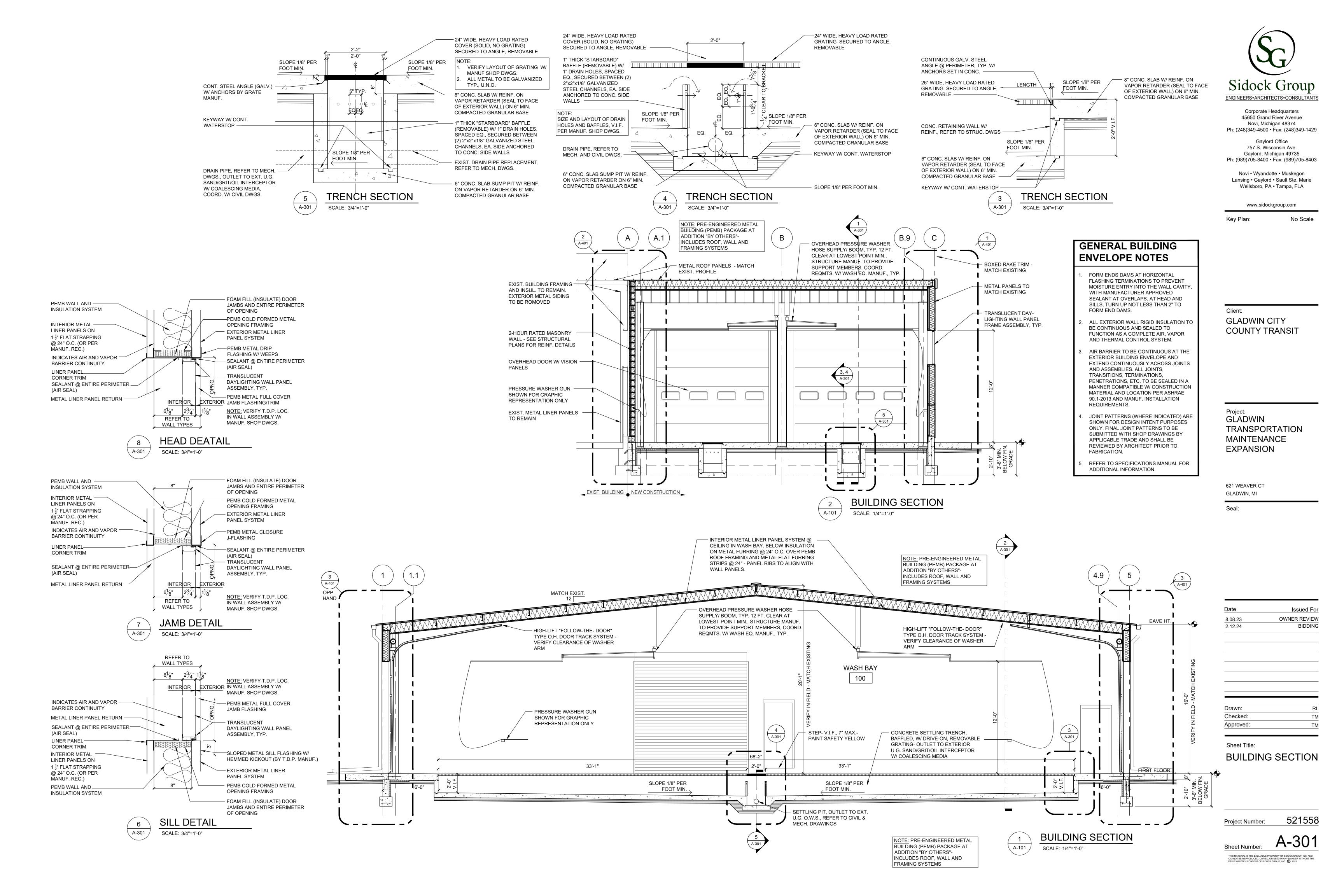
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No Scale

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Key Plan:

GLADWIN CITY COUNTY TRANSIT

Project: GLADWIN TRANSPORTATION MAINTENANCE **EXPANSION**

621 WEAVER CT

Issued For OWNER REVIEW 8.08.23 2.12.24 BIDDING

Checked:

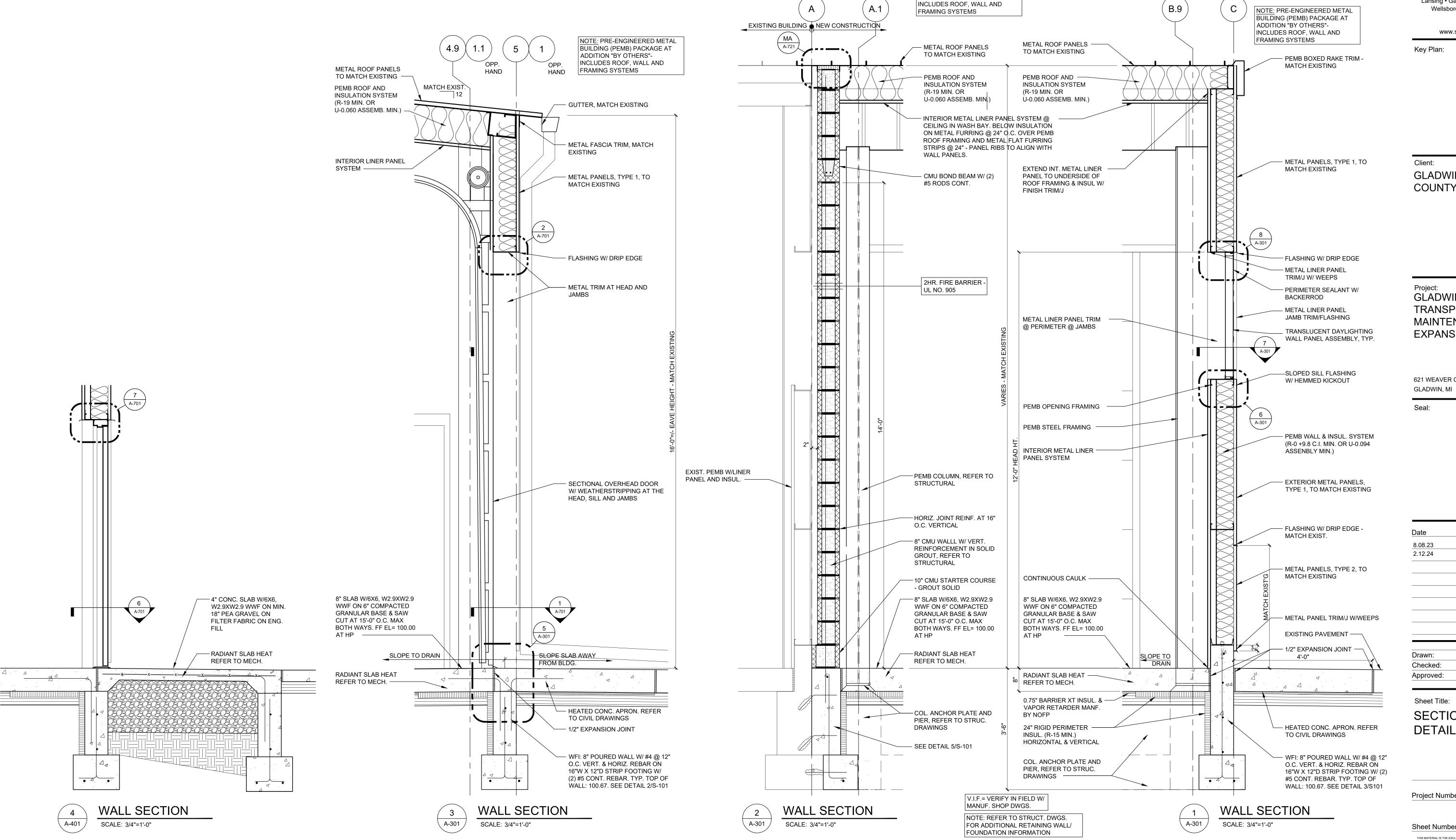
Approved:

Sheet Title: **SECTIONS AND**

DETAILS

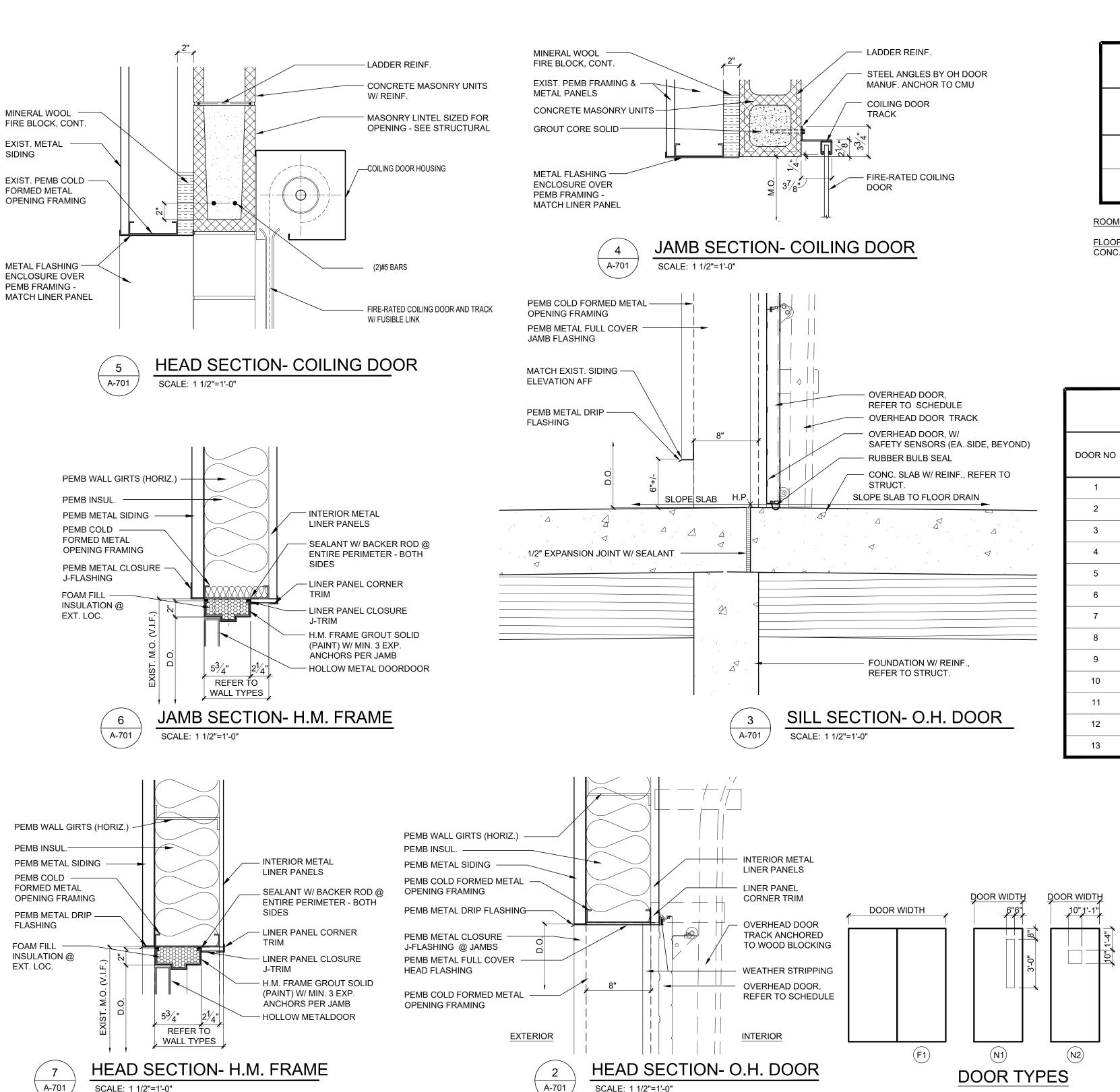
Project Number:

521558



NOTE: PRE-ENGINEERED METAL BUILDING (PEMB) PACKAGE AT

ADDITION "BY OTHERS"-



CONCRETE

- LADDER REINF.

MASONRY LINTEL

SIZED FOR OPENING

- SEE STRUCTURAL

SEALANT W/ BACKER

ROD @ ENTIRE

SOLID (PAINT)

5³/₄"

SCALE: 1 1/2"=1'-0"

HEAD SECTION- H.M. FRAME

PERIMETER - BOTH

- H.M. FRAME - GROUT

\ A-701

SCALE: 1 1/2"=1'-0"

REINF.

MASONRY UNITS W/

MINERAL WOOL

EXIST. METAL

PEMB COLD -

FORMED METAL

OPENING FRAMING

METAL FLASHING -

ENCLOSURE OVER

A-701

PEMB FRAMING -

H.M. FRAME GROUT SOLID MATCH LINER PANEL

SIDING

CONCRETE MASONRY

GROUT CORE SOLID

(FOAM INJECT INSUL @

ALL OTHER LOCATIONS)

BULLNOSED JAMB BLOCK

SEALANT W/ BACKER ROD

@ ENTIRE PERIMETER -

(PAINT) W/ MIN. 3 EXP.

ANCHORS PER JAMB

UNITS W/ REINF.

LADDER REINF.

BOTH SIDES

JAMB SECTION- H.M. FRAME

MINERAL WOOL

EXIST. METAL

PEMB COLD

FORMED METAL

OPENING FRAMING

METAL FLASHING -

PEMB FRAMING -

ENCLOSURE OVER

MATCH LINER PANEL

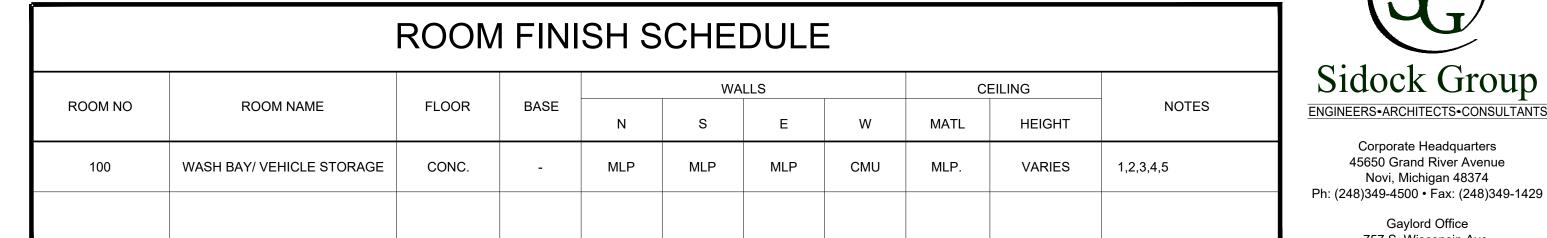
A-701

SCALE: 1 1/2"=1'-0"

SIDING

FIRE BLOCK, CONT.

FIRE BLOCK, CONT.



DOOR SCHEDULE

IHM

IHM

IHM

IHM

1A

1A

DOOR

IOD

IOD

N1

IOD

IOD

IOD

N2

CD

N1

F1

TYPE MATERIAL

FRAME

MATERIAL

IHM

IHM

IHM

IHM

IHM

IHM

ROOM FINISH LEGEND

TEXTURED CONCRETE/ QUARTZ BROADCAST FINISH

ROOM NAME

WASH BAY/VEHICLE STORAGE

EX. MAINT. GARAGE/STORAGE

13

EXISTING MAINTENANCE GARAGE 3'-0" X 7'-0"

EXISTING MAINTENANCE GARAGE 3'-0" X 7'-0"

CMU

SIZE

12'-0" X 12'-0"

12'-0" X 12'-0"

3'-0" X 7'-0"

3'-0" X 7'-0"

12'-0" X 12'-0"

12'-0" X 12'-0"

12'-0" X 12'-0"

3'-0" X 7'-0"

3'-0" X 7'-0"

12'-0" X 12'-0"

(2)3'-0" X 7'-0"

METAL LINEAR PANEL EXPOSED CMU, SEALED

EXPOSED CEILING, PAINT ALL

THICKNESS

1 ³"

 $1\frac{3}{4}$ "

1 ³⁄₄"

1 ³⁄₄"

EXPOSED STRUCTURE ("RED IRON")

KEY NOTES

- SEE REFLECTED CEILING PLAN, FLOOR PLAN AND SECTIONS FOR ADDITIONAL INFORMATION EXPOSED CONC. W/ SEALER/DENSIFIER (N/A IF WVRA ADDED TO CONC.) W/ QUARTZ BROADCAST IN
- C.M.U. & MORTAR TO HAVE INTEGRAL WATER REPELLANT ADMIXTURE (REFER TO SPEC) PLUS (1) FIEL APPLIED COAT OF WATER REPELLANT (REFER TO SPEC)
- APPLICABLE

•	`-	•		•	_	•		_	
\circ	OR F	ПΑ	N	14	VD:	SF	СТ	101	JS

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METAL LINER PANELS TO UNDERSIDE OF ROOF PURLINS. TIE IN W/ CEILING PANELS WHERE

PRIMARY STEEL FRAME TO RECEIVE PRIMER/PAINT FINISH TYP., COLOR TBD BY OWNER

DOOR DETAIL

JAMB

SILL	FIRE RATING	HARDWARE SET	REMARKS	
-	-	-	4, 6	Client
-	-	-	4, 6	GLA COl
ALUM. T-HOLD	-	1	1, 2, 3	
ALUM. T-HOLD	-	1	1, 2, 3	
3	-	-	4, 6	
3	-	-	4, 6	
3	-	-	4, 6	
-	90	2	2, 3	
-	90	2	2, 3	Projec
-	90	-	5, 6, 7	GLA TRA
ALUM. T-HOLD	-	1	2, 3	MAI
ALUM. T-HOLD	-	1	3	EXF

3

3

ADWIN CITY **UNTY TRANSIT**

ENGINEERS*ARCHITECTS*CONSULTANTS

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Key Plan:

No Scale

ADWIN RANSPORTATION INTENANCE **(PANSION**

621 WEAVER CT

GLADWIN, MI

Seal:

8.08.23

2.12.24

DOOR NOTES ELECTRONIC ACCESS CONTROL HARDWARE (EXACT TYPE T.B.D. BY OWNER); HARDWARE SHALL COMPLY W MBC SEC. 1010.1.9.9 AND SHALL BE CONNECTED TO BUILDING FIRE ALARM SYS.

PERIMETER GASKET AND SWEEP.

- DOOR AND FRAME TO BE GALVANIZED.
- DOOR MOTOR W/ PUSH BUTTON OPERATOR AND
- DOOR MOTOR W/ PUSH BUTTON OPERATION.
- HARDWARE BY DOOR MANUFACTURER.
- PROVIDE W/ FUSIBLE LINK CONNECTED TO FIRE ALARM.

GENERAL DOOR NOTES

- ALL DOOR SIZES SPECIFIED ARE "NOMINAL"
- ALL EXTERIOR HOLLOW METAL DOOR/ FRAME ASSEMBLIES TO BE GALVANIZED AND INSULATED ALL HOLLOW METAL DOOR/FRAME ASSEMBLIES IN WET LOCATIONS TO BE GALVANIZED.
- ALL EXTERIOR DOORS TO HAVE PERIMETER WEATHER STRIPPING.
- ALL DOOR, LITE, AND WINDOW FRAMES TO HAVE CONTINUOUS BACKREROD AND SEALANT AT ENTIRE
- REFER TO PROJECT SPECIFICATION SEC. 08710 FOR HARDWARE SETS.
- CONTRACTOR TO PROVIDE AND INSTALL (1) DATA DROP AT EA. ACCESS CONTROL LOCATION (REFER TO ELECTRICAL DRAWINGS).
- ALUMINUM THRESHOLD AT ALL EXTERIOR SWING DOORS, U.N.O.
- SAND, CLEAN, & PREP ALL EXIST. OH DOOR JAMBS TO RECEIVE GALVANIZED PRIMER AND PAINT. REMOVE EXIST. WEATHERSTRIP/SEAL TO ALLOW FOR PREP/PAINT AND REPLACE WITH NEW SEALS.

SENERAL GLAZING NOTES:

- GLAZING AT ALL EXTERIOR DOORS, SIDELITES AND FIXED LITES MUST BE INSULATED, SAFETY GLAZING. INTERIOR GLAZING AT FIRE RATED DOORS, SIDELITES AND FIXED LITES MUST BE FIRE RATED SAFETY GLAZING DO NOT USE WIRED GLASS.
- INTERIOR GLAZING AT NON RATED FIRE DOORS, SIDELITES AND FIXED LITES MUST BE SAFETY GLAZING (FULLY TEMPERED, U.N.O.), DO NOT USE WIRED GLASS.
- REFER TO DOOR DETAILS FOR AIR SEALING AND FLASHING INFORMATION.

COILING DOOR **INSULATED HOLLOW** Sheet Title:

Drawn:

Checked:

Approved:

ROOM FINISH SCHEDULE, DOOR **SCHEDULE & DETAILS**

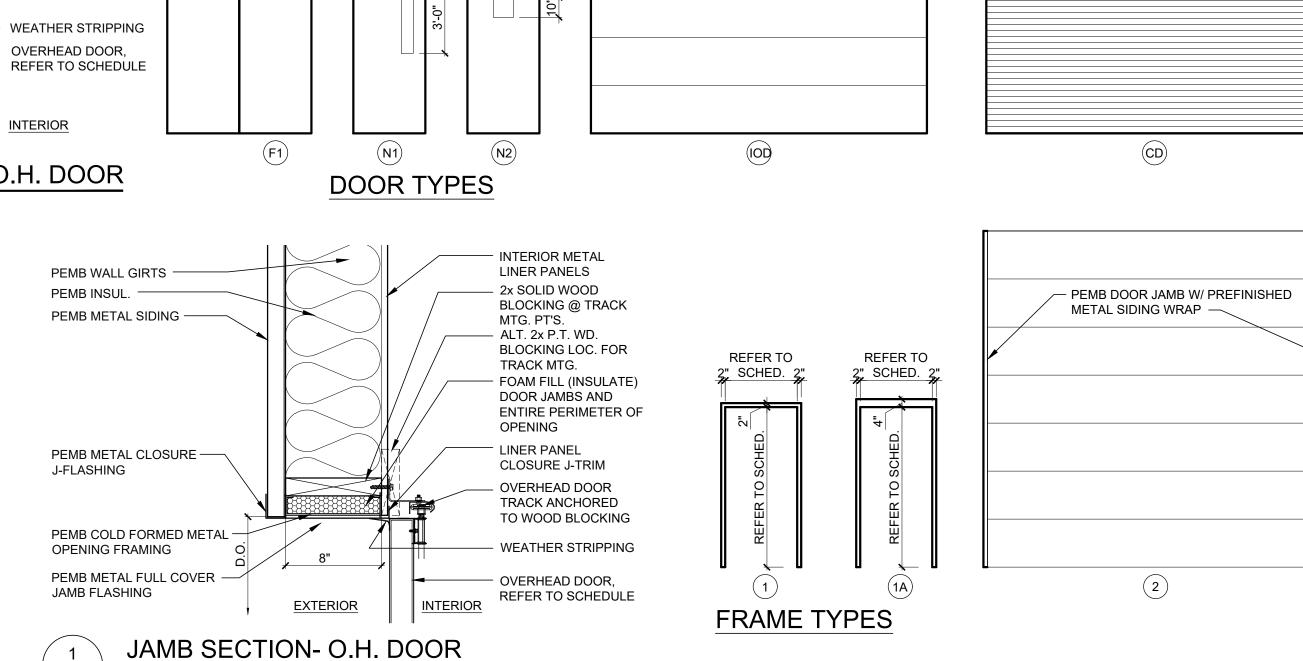
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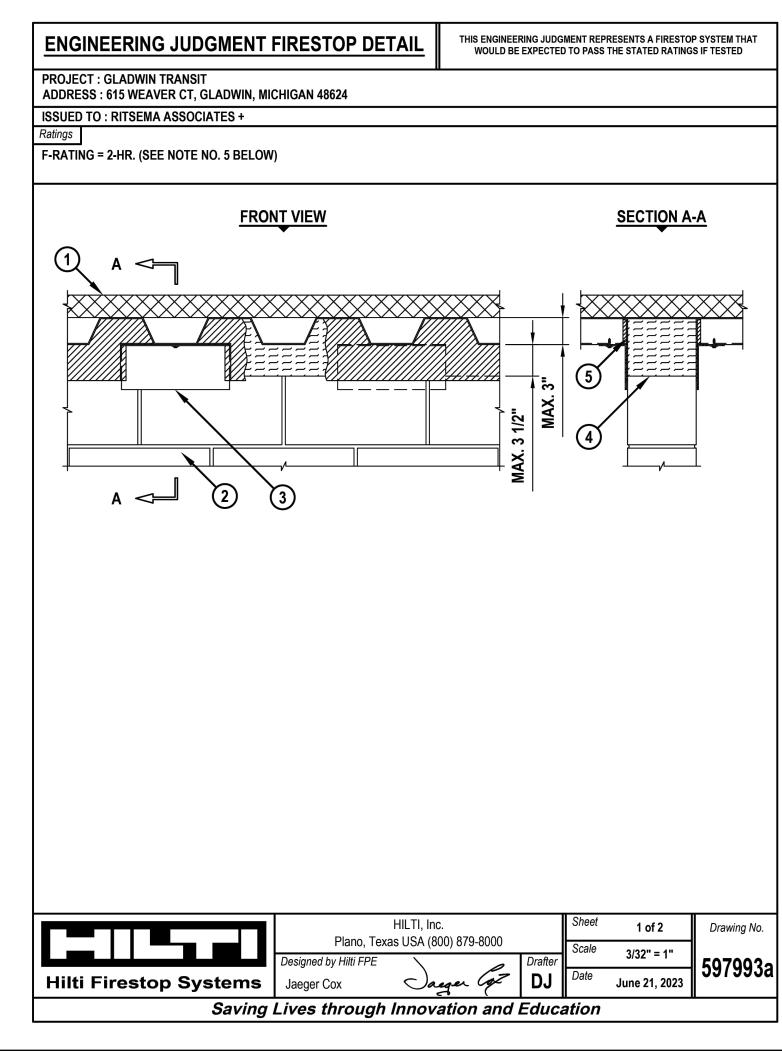
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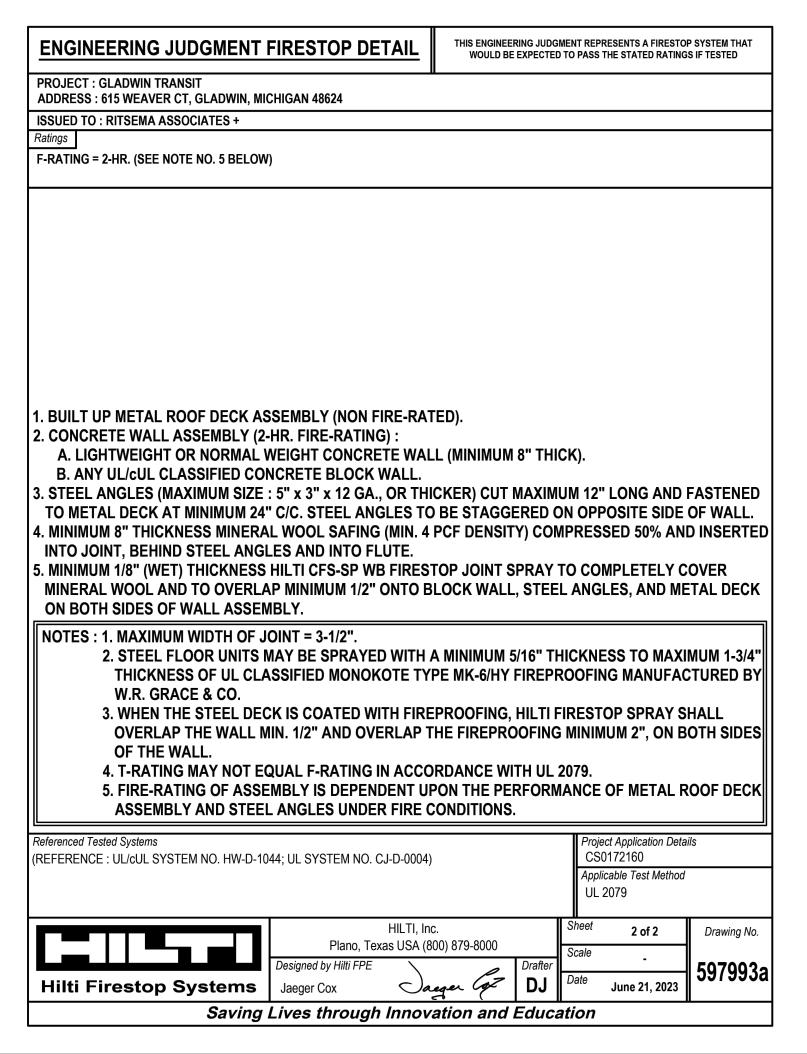
CLIENT REVIEW

521558 Project Number:

NARROW LITE DOOR TYPE 1 NARROW LITE DOOR TYPE 2 INSULATED OVERHEAD DOOR







PARTITION AND RATED ASSEMBLY NOTES

- WALLS ARE DISTINGUISHED ON FLOOR PLANS BY SYMBOL DESIGNATION, GRAPHIC DESIGNATION OR A 14. WALLS ARE INDICATED WITH CONVENTIONAL GYPSUM WALLBOARD; UPGRADE TO PREMIUM TYPES OF COMBINATION OF BOTH DESIGNATIONS.
- THERE ARE TWO TYPES OF SYMBOL DESIGNATIONS, ONE FOR WALLS NOT REQUIRING SOUND ATTENUATION AND ANOTHER FOR WALLS WHICH REQUIRE SOUND ATTENUATIONS. REFER TO PARTITION 14.1. MATRICES FOR SOUND ATTENUATION BLANKET (SAB) MINIMUM THICKNESS FOR STC INDICATED.

SYMBOL DESIGNATION SYMBOL DESIGNATION |XX#| (NO SOUND ATTENUATION BATTS) (WITH SOUND ATTENUATION BATTS)

3. THE SYMBOL DESIGNATION HAS THREE CHARACTERS: -FIRST CHARACTER IS A LETTER INDICATING THE STRUCTURAL BACKUP SYSTEM. -SECOND CHARACTER IS A LETTER INDICATING THE PARTITION TYPE. -THIRD CHARACTER IS A NUMERIC INDICATING THE STRUCTURE WIDTH.

REFER TO LEGEND BELOW

INCI EIN TO LEGEND L	DLLOW.			
STRUCTURAL BACKUP	NUMERIC CHARACTER	STUD WIDTH	CMU WIDTH	CONCRET WIDTH
W= WOOD STUD S= COLD FORMED STEEL STUD M= C.M.U. C= CONCRETE	1 ————————————————————————————————————	- 1 1/2" - 2 1/2" - 3 5/8" - 4" - 6" - 8" 10"	3 5/8" 5 5/8" 7 5/8" 9 5/8"	- 8" - 10" - 12"

- WHERE PARTITION WALL TYPES ARE INDICATED, THE PARTITION SYSTEM IS CONTINUOUS UNTIL THE PARTITION CHANGES DIRECTION OR A DIFFERENT PARTITION SYSTEM IS INDICATED.
- ALL INTERIOR STUD FRAMING/ C.M.U. TO EXTEND TO UNDERSIDE OF ROOF DECK, U.N.O.
- NOT INDICATE EXACT CONSTRUCTION CONDITIONS OR GEOMETRY.
- FULLY CONSTRUCT ALL FIRE RESISTANCE RATED ASSEMBLIES PRIOR TO CONSTRUCTION OF ADJACENT 22. AT ALL FIRE RESISTANCE RATED CONSTRUCTION, RECESSED FIXTURES SHALL BE INSTALLED SUCH NON RATED CONSTRUCTION.
- APPROPRIATE FRAMING AND GYPSUM BOARD SHALL BE INSTALLED TO OFFSET AROUND STRUCTURAL MEMBERS OR OTHER OBSTRUCTIONS SUCH AS PIPING OR DUCTWORK TO MAINTAIN THE FIRE
- a. FIRE RESISTANCE RATED WALLS SHALL BE INSTALLED WITH LISTED FIRE RATED SEALANT UNLESS

GYPSUM BOARD TO TERMINATE 1/2" BELOW LINE OF STRUCTURE AND BE SEALED AS FOLLOWS,

- SMOKE RESISTANCE RATED WALLS SHALL BE INSTALLED WITH LISTED SEALANT TO "LIMIT THE PASSAGE OF SMOKE" UNLESS NOTED OTHERWISE.
- NON-FIRE RESISTANCE RATED WALLS SHALL BE INSTALLED WITH ACOUSTICAL SEALANT U.N.O., AT THE TOP AND BOTTOM STUDS/ TRACKS.
- INSULATION AT HEAD CONDITIONS AT FLOOR/ROOF DECK

THROUGH SOFFITS AND CONCEALED SPACES.

ROOF DECK (U.N.O.)

PEMB GIRT

PEMB COLUMN

WALL COVERING

BY PEMB MANF.

- DRIP EDGE

NON-FIRE RATED WALL (PEMB ONLY)

1 1/2" = 1'-0"

INTERIOR METAL LINER PANEL

EXTERIOR METAL PANEL WALL

FIBERGLASS INSUL. W/FABRIC

LINER FACING/VAPOR BARRIER

- CONC. FOUNDATION WALL

FLOOR LINE, REFER TO SECTIONS

a. FIRE RESISTANCE RATED WALLS SHALL USE MINERAL WOOL INSULATION. b. NON-FIRE RESISTANCE RATED WALLS REQUIRING SOUND ATTENUATION SHALL USE SOUND

THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

- ATTENUATION BLANKETS (SAB).). FOR WALLS INDICATED TO RECEIVE SOUND ATTENUATION BLANKETS, EXTEND SOUND ATTENUATION
- SET IN A CONTINUOUS BED OF ACOUSTICAL SEALANT. . FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS AND SMOKE BARRIERS SHALL EXTEND AND SEAL TO THE

BLANKETS TO FULL HEIGHT OF PARTITION UNLESS NOTED OTHERWISE. FLOOR STUD/ TRACKS TO BE

- LISTED FIRE-STOP OR MEMBRANE PENETRATION SYSTEM. THE GENERAL CONTRACTOR WILL SUBMIT ALL 00 / FIRESTOPPING. FIRE-STOP ASSEMBLIES, TO INCLUDE TYPE OF PRODUCT, ASSEMBLY AND INSTALLATION DETAILS, TO
- 13. PROVIDE AND INSTALL LISTED FIRE RATED AND/OR SMOKE DAMPERS AT MECHANICAL PENETRATIONS 31. FIRE RESISTANCE RATING SIGNAGE: REFER TO SIGNAGE AND CONTROL NOTES, SHEET CS-003. OF FIRE RESISTANCE RATED ASSEMBLIES PER THE 2015 MMC, U.N.O.

- WALLBOARD (I.E. MOISTURE-RESISTANT, TILE-BACKER, ETC) BASED ON THEIR LOCATION AND ACCORDING TO REQUIREMENTS OF SECTION 09 29 00/ GYPSUM BOARD.
- FOR ALL WALL TYPES: WHERE WALL TILE IS THE SCHEDULED FINISH, PROVIDE AND INSTALL 5/8" REINFORCED FIBERGLASS CEMENTITIOUS TILE BACKER BOARD IN LIEU OF GYPSUM BOARD.
- 14.2. PROVIDE AND INSTALL MOLD AND MOISTURE RESISTANT GYPSUM BOARD (FIRE RATED WHERE APPLICABLE) FOR ALL WALL AND ASSEMBLY TYPES LOCATED IN MOISTURE PRONE LOCATIONS; I.E. BATHROOMS/ TOILET ROOMS/ SHOWER ROOMS/ RESTROOMS, LAUNDRY AREAS, POOL AREAS, TYP.
- 14.3. WHERE WALLS AND OTHER ASSEMBLIES ARE TO BE CONSTRUCTED WHILE EXPOSED TO WEATHER, GLASS-MAT FACED GYPSUM BOARD SHALL BE SUBSTITUTED FOR THE SCHEDULED GYPSUM BOARD.
- 15. GYPSUM BOARD REQUIREMENTS
- a. ALL FIRE RESISTANCE RATED WALLS TO USE TYPE 'X'
- b. ALL FIRE RESISTANCE RATED CEILINGS TO USE TYPE 'C' c. WHERE MOISTURE RESISTANT GYPSUM BOARD OCCURS ON FIRE RATED ASSEMBLIES, USE COMBINATION FIRE RESISTANCE RATED/ MOLD AND MOISTURE RESISTANCE RATED GYPSUM BOARD
- FOR THE APPROPRIATE APPLICATION (I.E. TYPE 'X' OR 'C')
- d. AT OCCUPIED AREAS OR AT GYP. BD. SCHEDULED TO RECEIVE FINISHES, GYP. BD. SHALL RECEIVE LVL. 4 FINISH, ALL OTHER AREAS TO RECEIVE LVL. 2 FINISH.
- e. ALL CURVED SURFACES TO RECEIVE LEVEL 5 FINISH.
- 20. CONTINUE WALL FINISH MATERIAL TO MINIMUM 4" ABOVE SUSPENDED CEILINGS, U.N.O. WHERE NO CEILING IS INDICATED CONTINUE FINISH TO UNDERSIDE OF ROOF DECK, U.N.O.
- 20.1. ALL WALLS SCHEDULED TO RECEIVE SOUND INSULATION TO SHALL HAVE GYP. BD. AND INSULATION EXTEND TO UNDERSIDE OF ROOF DECK.
- 20.2. ALL WALLS WHERE SOUND INSULATION IS NOT SCHEDULED ARE PERMITTED TO HAVE GYP. BD. TERMINATE 4" MIN. ABOVE THE FINISH CEILING, U.N.O.

"LINE OF STRUCTURE/ ROOF DECK" INDICATED FOR EACH PARTITION IS DIAGRAMMATIC ONLY AND DOES 21. OFFSET ELECTRICAL BOXES AND OTHER PENETRATIONS MINIMUM 2'-0", TYP., ON OPPOSITE SIDES OF THE WALL.

- THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED PER MBC SECTION 713.3.2, I.E. FIRE RESISTANCE RATED NICHE, HOUSING, ETC.
- 23. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION OF ALL SHEAR WALL LOCATIONS, CONTRACTOR TO CONFIRM ADDITIONAL BLOCKING AND/OR FASTENING REQUIREMENTS WITH STRUCTURAL DRAWINGS.
- 24. "METAL STUDS" INDICATED ON THIS SHEET FOR INTERIOR PARTITIONS REFER TO THOSE SPECIFIED IN SECTION 09 22 16 / NON-STRUCTURAL METAL FRAMING. REFER TO SPECIFICATIONS FOR ADDITIONAL

CRITERIA SUCH AS STUD SPACING, MINIMUM GAUGE OF METAL AND PERMISSIBLE DEFLECTION LIMITS.

- . WALL TYPES ARE TITLED TO GENERALLY DESCRIBE AN ASSEMBLY'S FIRE-RESISTIVE "CAPABILITY". IN SOME CASES, ARCHITECT MAY HAVE EMPLOYED A GIVEN WALL TYPE FOR ITS SOUND CONTROL OR OTHER PROPERTIES. THUS IT IS POSSIBLE THAT WALL TYPES CHOSEN MAY PROVIDE GREATER F.R.R. CAPABILITY THAN ACTUALLY REQUIRED BY BUILDING CODE. UTILIZE WALL TYPES INDICATED BY FLOOR PLAN CALL-OUTS.
- 26. CONTACT ARCHITECT WHERE WALLS/PARTITIONS LACK A WALL TYPE CALL-OUT.
- 27. "STC" REFERS TO SOUND TRANSMISSION CLASS; A RATING SYSTEM THAT DESCRIBES THE ABILITY OF AN ASSEMBLY TO REDUCE THE TRANSMISSION OF SOUND. CONFIGURE SOUND-RATED WALL ASSEMBLIES ACCORDING TO THE MINIMUM REQUIREMENTS STIPULATED IN THE STC TESTS LISTED.
- INSIDE FACE OF THE EXTERIOR WALL AND ROOF/ FLOOR SHEATHING OR DECK, INCLUDING EXTENSIONS 28. "SAB" REFERS TO SOUND ATTENUATION BATTS SPECIFIED IN SECTION 07 21 00/ 09 29 00 WHERE SAB ARE INDICATED, THEY SHALL EXTEND CONTINUOUSLY FROM FLOOR TO STRUCTURE ABOVE, U.N.O..
- 2. ALL PENETRATIONS INTO AND/OR THROUGH A FIRE RATED ASSEMBLY MUST BE PROTECTED WITH A 29. HEAD-OF-WALL FIRESTOPPING AND SEALING OF THRU-WALL PENETRATIONS: REFER TO SECTION 07 84
 - 30. ACOUSTICAL SEALANTS: SPECIFIED IN SECTION 07 92 00/ 09 29 00.

 - 32. STANDARD AND BARRIER FREE MOUNTING HEIGHTS: REFER TO SHEET CS-003 FOR COORDINATION OF

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No Scale Key Plan:

GLADWIN CITY

COUNTY TRANSIT

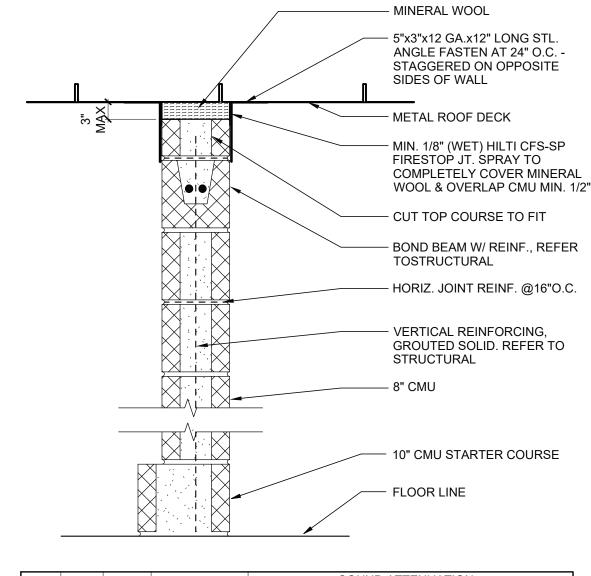
GĹADWIN **TRANSPORTATION** MAINTENANC **EXPANSION**

621 WEAVER CT

GLADWIN, MI

MINERAL WOOL MIN. 1/8" (WET) HILTI CFS-SP FIRESTOP JT. SPRAY TO COMPLETELY COVER MINERAL WOOL & OVERLAP CMU MIN. 1/2" 5"x3"x12 GA.x12" LONG STL. EXISTING CONSTRUCTION | NEW CONSTRUCTION ANGLE FASTEN AT 24" O.C. STAGGERED ON OPPOSITE SIDES OF WALL EXTERIOR METAL PANEL WALL -- EXTERIOR METAL PANEL WALL COVERING COVERING PEMB GIRT PEMB GIRT FIBERGLASS INSUL. W/FABRIC LINER FACING/VAPOR BARRIER FIBERGLASS INSUL. W/FABRIC LINER FACING/VAPOR BARRIER BY PEMB MANF. BY PEMB MANF. INTERIOR METAL LINER PANEL INTERIOR METAL LINER PANEL WALL COVERING WALL COVERING PEMB COLUMN $\times \times \times \times \times$ PEMB COLUMN - 2HR. RATED 8" CMU





SOUND ATTENUATION C.M.U FIRE FIRE TEST ARK SIZE RATING STC W/O SAB | SAB | STC W/ SAB | MA8 | 7 5/8" | 2 HR | U905 NCMA TEK 13-10 46-56 - NCMA TEK 13-10 MA10 9 5/8" 2 HR U905

> CMU WALL- 2 HR. FIRE RATED (FULL HEIGHT) 1 1/2" = 1'-0" REFER TO HILTI EJ: 597993a

Issued For 8.08.23 CLIENT REVIEW **BIDDING** 2.12.24 Drawn:

Approved:

Sheet Title: **WALL TYPES**

Checked:

SG
Sidock Group ENGINEERS-ARCHITECTS-CONSULTANTS

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Key Plan:

ALL CEILING HEIGHTS ARE FINISH DIMENSIONS. COORDINATE SIZE AND LOCATION OF ALL ACCESS PANELS WITH MECHANICAL AND ELECTRICAL DRAWINGS. ARCHITECT TO FIELD VERIFY LOCATIONS. TAKE ALL MEP AS CLOSE TO ROOF DECK AS POSSIBLE

STRUCTURAL, PLUMBING, MECHANICAL & ELECTRICAL

GENERAL CEILING NOTES

THIS PLAN IS INTENDED TO SHOW GENERAL COORDINATION OF OVERHEAD WORK. REFER TO

DRAWINGS FOR FURTHER INFORMATION.

REFER TO SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION

> Client: **GLADWIN CITY COUNTY TRANSIT**

> > Project: GLADWIN

TRANSPORTATION

MAINTENANCE

EXPANSION

621 WEAVER CT

(A) (A.1) (B.9) (C PREFAB METAL AWNING - FURNISH AND INSTALL WALL CAP/WEATHER HOOD AT RELOCATED EXH. FAN AIR DROP AÏR DROP VEHICLE STORAGE 100 MLP VARIES **EXISTING** OVERHEAD PRESSURE WASHER HOSE SUPPLY/ BOOM, TYP. 12 FT. CLEAR AT LOWEST POINT MIN., STRUCTURE MANUF. MAINT. GARAGE TO PROVIDE SUPPORT MEMBERS, COORD. REQMTS. W/ WASH EQ. MANUF., TYP. REFER TO ELECTRICAL DRAWINGS REFER TO MECHANICAL DRAWINGS FOR EXISTING FANS AND LIGHTING FOR NEW VENTS THRU THE NEW AND TO BE REPLACED EXISTING ROOFS AND OVERHEAD GAS AND COMPRESSED AIR PIPING AIR DROP - UNIT HEATER r-----COORDINATE W/ OVERHEAD DOORS - LOUVER L-1: SEE MECH. DWGS. COORDINATE Approved: INSTALL WITH PEMB FRAMING FURNISH AND INSTALL WALL

CAP/WEATHER HOOD AT — VERIFY CLEARANCE BETWEEN THE

CEILING SCHEDULE

DESCRIPTION

METAL LINER PANEL

REMARKS

REFLECTED CEILING PLAN LEGEND

 \bigcirc

U.H.

XXX #'-##"

WALL MOUNTED STRIP FIXTURE

WALL MOUNTED LIGHT FIXTURE

EXIT SIGN LIGHT FIXTURE (DIRECTIONAL)

FINISHED CEILING MATERIAL/ ELEVATION

MECHANICAL UNIT HEATER W/ THRU WALL FLUE

GLADWIN, MI

Issued For 8.08.23 CLIENT REVIEW 2.12.24 BIDDING

Sheet Title:

REFLECTED **CEILING PLAN**

REFLECTED CEILING PLAN SCALE: 1/8"=1'-0"

EXHAUST VENT

BOOMS AND OH DOORS AND TRACKS

GENERAL STRUCTURAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY FULLY WITH THE APPLICABLE PROVISIONS OF MIOSHA, THE MICHIGAN BUILDING CODE, LATEST EDITION, AND THE LOCAL GOVERNING CODE, LATEST EDITIONS, AND ALL REQUIREMENTS SPECIFIED IN THE CODES SHALL BE ADHERED TO AS IF THEY WERE CALLED FOR OR SHOWN ON THE DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH ON THE DRAWING MAY BE MODIFIED BECAUSE THEY ARE MORE STRINGENT THAN THE CODE REQUIREMENTS OR BECAUSE THEY ARE NOT SPECIFICALLY REQUIRED BY CODE.

OFFICE DESIGN LOADS:

LIVE LOADS:
ROOFS - UNIFORM SNOW LOAD

(ADDITIONAL LOADING DUE TO DRIFTING, UNBALANCED, AND SLIDING SNOW)

WIND DESIGN DATA:
BASIC WIND SPEED (3-SECOND GUST):

WIND EXPOSURE
EAST-WEST DIRECTION:
NORTH-SOUTH DIRECTION:
B
INTERNAL PRESSURE COEFFICIENT:

+/- 0.18

EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR (Ie): 1.0 (RISK CATEGORY II)
MAPPED SPECTRAL RESPONSE ACCELERATIONS

 SHORT PERIOD (Ss):
 0.051 g

 1-SECOND PERIOD (S1):
 0.032 g

 SITE CLASS:
 D

 DESIGN SPECTRAL RESPONSE ACCELERATIONS
 SHORT PERIOD (SDS):
 0.054 g

 1-SECOND PERIOD (SD1):
 0.052 g

 SEISMIC DESIGN CATEGORY:
 A

BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)

EAST-WEST DIRECTION:

NORTH-SOUTH DIRECTION:

BUILDING FRAME SYSTEM

BUILDING FRAME SYSTEM

RESPONSE MODIFICATION FACTOR(S)
EAST-WEST DIRECTION (R):
NORTH-SOUTH DIRECTION (R):

ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

PRIOR TO SUBMITTING PROPOSAL, VERIFY ALL CONDITIONS GOVERNING OR AFFECTING THE STRUCTURAL WORK. OBTAIN AND VERIFY ALL DIMENSIONS TO ENSURE THE PROPER FIT AND LOCATION OF THE STRUCTURAL WORK, TAKE ADDITIONAL DIMENSIONS AS REQUIRED, REPORT TO THE ENGINEER ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK, FAMILIARIZE YOURSELF WITH THE ACTUAL CONDITIONS OF THE STRUCTURAL WORK, ACCESS TO THE SITE, AVAILABLE STORAGE SPACE, FACILITIES AND OBSTRUCTIONS THAT MAY BE ENCOUNTERED DURING THE PROGRESS OF WORK.

- 3. CONTRACTOR TO FURNISH ALL NECESSARY LABOR, MATERIAL, EQUIPMENT AND FACILITIES TO FURNISH, FABRICATE AND PERFORM THE REQUIRED STRUCTURAL WORK.
- 4. ALL WORK SHOWN ON THESE DRAWINGS MAY BE CHECKED BY AN INDEPENDENT TESTING AGENCY RETAINED BY OWNER TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ACCESS AS REQUIRED FOR TESTING PURPOSES.
- 5. CONTRACTOR SHALL MAKE ALL NECESSARY FIELD VISITS FOR INSPECTION, MEASUREMENTS AND VERIFICATION OF EXISTING CONDITION OF BUILDING.
- 6. THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATION, AND/OR THE GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION AS DETERMINED BY THE ENGINEER SHALL GOVERN.
- 7. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF TEMPORARY BRACING, GUYS AND/OR TIE-DOWNS AS NECESSARY. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER COMPLETION OF THE PROJECT.
- 8. WORK THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, SITE AND ELECTRICAL DRAWINGS.
- 9. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED.

SITE PREPARATION

- AT THE START OF EARTHWORK OPERATIONS, ALL SURFACE VEGETATION SHALL BE CLEARED AND THE
 EXISTING TOPSOIL AND ANY OTHER ORGANIC SOILS SHALL BE REMOVED IN THEIR ENTIRETY FROM BELOW
 THE PROPOSED BUILDING AND PAVEMENT AREAS. EXISTING RANDOM CONCRETE AND OTHER DEBRIS SHALL
 BE REMOVED FROM WITHIN THE BUILDING AREA.
- 2. THE SUB-GRADE SHOULD BE THOROUGHLY PROOF-ROLLED WITH A HEAVY RUBBER-TIRED VEHICLE SUCH AS A LOADED SCRAPER OR LOADED DUMP TRUCK. ANY AREAS THAT EXHIBIT EXCESSIVE PUMPING AND YIELDING DURING PROOF-ROLLING SHOULD BE STABILIZED BY AERATION, DRYING AND COMPACTION IF WEATHER CONDITIONS ARE FAVORABLE, OR REMOVAL AND REPLACEMENT WITH ENGINEERED FILL.
- 3. ALL EXCAVATIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE, WHO SHALL BE CONSULTED WHEN POOR SOIL, WATER, OBSTRUCTIONS, PIPING, EXISTING FOOTINGS, EXCAVATIONS, ETC., ARE ENCOUNTERED.

FOOTINGS & FOUNDATIONS

- 1. CONTRACTOR SHALL VERIFY ALL CONDITIONS, INCLUDING UNDERGROUND UTILITIES, AND FIELD MEASUREMENTS AT JOB SITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- PROVIDE ALL NECESSARY SHEETING, SHORING, BRACING, ETC. AS REQUIRED FOR EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS AND ADJACENT STRUCTURES.
- 3. CONTRACTOR SHALL COMPLY FULLY WITH THE REQUIREMENTS OF MIOSHA, OTHER REGULATORY AGENCIES AND THE OWNER'S SITE-SPECIFIC SAFETY PLAN AND REGULATIONS FOR SAFETY PROVISIONS.
- 4. BOTTOM OF FOOTING ELEVATIONS NOTED ON PLAN ARE MINIMUM ELEVATIONS. IN ALL CASES, FOOTINGS ARE TO BEAR ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 2500 PSF.
- FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND WALLS UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE DRAWINGS.
- 6. NO FOOTINGS OR SLABS SHALL BE PLACED ON OR AGAINST SUB-GRADE CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER OR FROST, HOWEVER SLIGHT, ENTER A FOOTING EXCAVATION AFTER SUB-GRADE APPROVAL, THE SUB-GRADE SHALL BE RE-INSPECTED BY THE TESTING LABORATORY AFTER REMOVAL OF WATER OR FROST.
- 7. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUB-GRADE BEFORE AND AFTER PLACING OF CONCRETE UNTIL THE CONCRETE HAS REACHED ITS' DESIGN STRENGTH.
- 8. ALL FOUNDATION BEARING SOILS SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER. THE TESTING SHALL INCLUDE, BUT NOT BE LIMITED TO, IDENTIFICATION OF SOILS AT AND BELOW THE FOUNDATION BEARING LEVEL, AND THE ALLOWABLE BEARING CAPACITY.
- 9. CONTRACTOR SHALL FURNISH ALL REQUIRED DEWATERING EQUIPMENT TO MAINTAIN A DRY EXCAVATION UNTIL BACKFILL IS COMPLETE.
- 10. THE FOUNDATION DESIGN IS BASED ON THE SOILS INVESTIGATION REPORT PREPARED BY PREIN & NEWHOF, DATED NOVEMBER 24, 2021.

BACKFILLING

- 1. MATERIAL FOR BACKFILL OR ENGINEERED FILL REQUIRED TO ACHIEVE DESIGN GRADES SHOULD CONSIST OF NON-ORGANIC SOILS. THE ON-SITE SOILS THAT ARE FREE OF ORGANIC MATTER AND DEBRIS MAY BE USED FOR ENGINEERED FILL WITH ENGINEER'S APPROVAL.
- 2. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF ITS' MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHODS (ASTM D1557), IN LIFTS NOT EXCEEDING 12-INCHES IN LOOSE THICKNESS.
- 3. FROZEN MATERIAL SHALL NOT BE USED AS FILL, NOR SHALL FILL BE PLACED ON FROZEN SUB-GRADE.
- 4. DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNTIL BASEMENT FLOOR LEVEL AND FIRST FLOOR LEVEL SLABS ARE IN PLACE AND HAVE REACHED 75% OF THEIR SPECIFIED DESIGN STRENGTH. SHORE AND BRACE WALLS AS REQUIRED IF BACKFILLING OPERATIONS ARE TO BE CARRIED OUT PRIOR TO PLACEMENT OF FLOOR SLABS.
- 5. PLACE BACKFILL AGAINST BOTH SIDES OF GRADE BEAMS AND FOUNDATIONS AT EQUAL ELEVATIONS OF FILL, EXCEPT AS SHOWN ON THE DRAWINGS.
- 6. CRUSHED SLAG USED AS BACKFILL SHALL BE AGED, ENVIRONMENTALLY-SAFE PROCESSED BLAST FURNACE SLAG

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301- LATEST REVISION,
 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING", EXCEPT AS MODIFIED BY STRUCTURAL
 REQUIREMENTS NOTED ON THE DRAWINGS.
- 2. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH (f 'c) AS NOTED BELOW:
- A. INTERIOR FOOTINGS AND FOUNDATIONS: 4000 psi
 B. INTERIOR SLAB ON GRADE: 4000 psi
- C. INTERIOR SUPPORTED SLABS: 4000 psi
- D. EXTERIOR CONCRETE EXPOSED TO WEATHER: 4500 psi
 E. EXTERIOR FOLINDATIONS NOT EXPOSED TO WEATHER: 4000 psi
- E. EXTERIOR FOUNDATIONS NOT EXPOSED TO WEATHER: 4000 psi F. GRADE WALLS: 4000 psi
- 3. ALL EXTERIOR CONCRETE INCLUDING WALLS SHALL BE AIR-ENTRAINED 5% +/- 1%.
- 4. ALL EXTERIOR CONCRETE EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF (W/C)
- 5. UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER SHALL BE:
 CONCRETE CAST AGAINST EARTH 3-INCHES
 CONCRETE EXPOSED TO EARTH OR WEATHER 2-INCHES
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER 3/4-INCHES
- 6. ALL REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 (fy = 60,000 psi)
- 7. WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185 (FY = 75 KSI) AND HAVE A MINIMUM SIDE AND END LAP OF 8 INCHES.
- 8. THE CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGN(S) TO THE ENGINEER FOR REVIEW. PROPORTION MIX DESIGNS AS DEFINED IN ACI 301 SECTION 4. THE SUBMITTAL SHALL INCLUDE AS A MINIMUM CEMENT TYPE AND SOURCE, CEMENT CUBE STRENGTH, AGGREGATE GRADATIONS, WATER TESTS, AD-MIXTURE CATALOG INFORMATION AND CYLINDER STRENGTH TEST RESULTS FOR THE CONCRETE. THE MIX DESIGN HISTORICAL RESULTS SHALL ALSO BE SUBMITTED IF APPROPRIATE.
- ALL REINFORCEMENT TO BE DETAILED, FABRICATED AND ERECTED ACCORDING TO THE ACI STANDARDS: "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI 315 - LATEST REVISION AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES", ACI 315R - LATEST EDITION.
- 10. THE CONTRACTOR SHALL PREPARE AND SUBMIT REINFORCEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL CLEARLY SHOW ALL REINFORCEMENT LENGTHS AND BENDS, LOCATIONS OF ALL BARS, VIBRATION AND CONSTRUCTION JOINTS. THE DRAWINGS SHALL ALSO INDICATE ALL OPENINGS, SLEEVES, CURBS AND CONCRETE DIMENSIONS IN ACCORDANCE WITH ACI 315.
- 11. LAPS, ANCHORAGES AND SPLICES SHALL COMPLY WITH THE REQUIREMENTS OF ACI 318-LATEST EDITION, CHAPTER 25. LOCATIONS AND SPLICES SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION JOINT LOCATIONS, DETAILS AND AS SHOWN ON THE REINFORCING STEEL SHOP DRAWINGS.
- 12. PROVIDE DOWELS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS.
- 13. UNLESS OTHERWISE SHOWN OR NOTED, AS A MINIMUM, PROVIDE TWO #5 BARS (ONE EACH FACE) AROUND UNFRAMED OPENINGS IN SLABS AND WALLS. PLACE BARS PARALLEL TO SIDES OF OPENINGS AND EXTEND THEM 24 INCHES BEYOND CORNERS.
- 14. HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS WITH LAPS COMPLYING WITH THE REQUIREMENTS OF ACI 318-LATEST EDITION CHAPTER 25. UNLESS DETAILED OTHERWISE. CORNER BARS SHALL BE PROVIDED AT ALL CHANGE IN WALL DIRECTIONS AND SHALL BE OF THE SAME SIZE AND SPACING AS THE HORIZONTAL STEEL. EACH CORNER BAR LEG TO PROVIDE A LAP COMPLYING WITH THE REQUIREMENTS OF ACI 318-LATEST EDITION CHAPTER 25. SPLICE UNLESS DETAILED OTHERWISE. EXTEND ALL HORIZONTAL WALLS REINFORCING THROUGH PIERS
- 15. ALL CONSTRUCTION JOINTS SHALL BE FURNISHED WITH KEYWAY CENTERED ON MEMBERS. WHERE THE SIZE OF KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY DEPTH SHALL BE 10% OF THE CROSS SECTION DIMENSION OF THE MEMBER MINIMUM 3/4".

CAST-IN-PLACE CONCRETE (CONT.)

- 15. ALL CONSTRUCTION JOINTS SHALL BE FURNISHED WITH KEYWAY CENTERED ON MEMBERS. WHERE THE SIZE OF KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY DEPTH SHALL BE 10% OF THE CROSS SECTION DIMENSION OF THE MEMBER MINIMUM 3/4".
- 16. ANCHOR BOLTS (FURNISHED BY STRUCTURAL STEEL CONTRACTOR) SHALL BE SET USING A TEMPLATE TO WITHIN 1/8" TOLERANCE IN ANY PLAN DIRECTION IN PIERS, FOOTINGS AND FOUNDATION WALLS, WITH THE MINIMUM PROJECTION AND EMBEDMENT LENGTHS AS INDICATED ON THE DRAWINGS.
- 17. PROVIDE 3/4" CHAMFER STRIP AT ALL EXPOSED CORNERS OF CONCRETE WALLS AND PIERS.
- 18. LOCATE ALL SLEEVES, OPENINGS, EMBEDDED ITEMS, ETC., AS INDICATED ON THE DRAWINGS. THE CONCRETE CONTRACTOR SHALL CHECK WITH ALL OTHER TRADES TO MAKE SURE THE SLEEVES, OPENINGS AND EMBEDDED ITEMS THAT ARE TO BE PROVIDED AND SET BY THEM ARE IN PLACE PRIOR TO PLACING OF CONCRETE IN THE AREA INVOLVED.
- 19. ALL INTERIOR SLABS ON GRADE SHALL BE PLACED ON A VAPOR BARRIER WITH A MINIMUM OF 4-INCHES CLEAN SAND. MINIMUM REINFORCEMENT SHALL BE IN ACCORDANCE WITH ENGINEERING DATA REPORT CRSI NUMBER 37, "REINFORCING STEEL IN SLAB ON GRADE" OR AS DETAILED. ALL EXTERIOR SLABS ON GRADE SHALL BE PLACED ON A MINIMUM OF 4-INCHES CLEAN SAND. MINIMUM REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 318 SECTION 24.4 SHRINKAGE AND TEMPERATURE REINFORCEMENT, OR AS DETAILED.
- 20. CONTRACTORS SHALL OBTAIN APPROVAL FROM THE ENGINEER, PRIOR TO PLACING OPENINGS OR SLEEVES, NOT SHOWN ON THE DRAWINGS, THROUGH ANY STRUCTURAL MEMBERS, ROOF, WALLS OR FOUNDATIONS. REVIEW ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR BASES, OPENINGS, SLEEVES, ANCHORS, INSERTS, CONDUITS, RECESSES AND OTHER DEVICES IN CONCRETE WORK BEFORE CASTING CONCRETE.
- 21. PROVIDE POCKETS OR RECESSES IN CONCRETE WORK FOR STEEL COLUMNS AND BEAMS AS REQUIRED AND / OR AS CALLED FOR IN THE SPECIFICATIONS EVEN IF NOT SHOWN ON THE DRAWINGS. PROVIDE CONCRETE FILL AFTER STEEL ERECTION TO SEAL OPENINGS.
- 22. REFER TO ARCHITECTURAL DRAWINGS FOR SLAB RECESSES AND/OR FLOOR FINISH MATERIALS.
- 23. WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS SPECIFICALLY DETAILED. WELDING SHALL CONFORM TO AWS D1.4 SPECIFICATION, LATEST EDITION.
- 24. CONCRETE CONTRACTOR SHALL INCLUDE IN HIS ESTIMATE ADDITIONAL CONCRETE QUANTITY AS REQUIRED TO COMPENSATE FOR DEFLECTIONS OF METAL DECK AND TO PROVIDE A LEVEL CONCRETE SURFACE. REFER TO STRUCTURAL STEEL AND METAL DECK NOTES FOR ADDITIONAL CONSIDERATIONS.
- 25. THE CONCRETE SHALL BE THOROUGHLY COMPACTED BY VIBRATION SUPPLEMENTED BY SPADING, PUDDLING OR AGITATION, TO PREVENT HONEYCOMBING AND TO ENSURE THE ELIMINATION OF VOIDS. VIBRATION MUST BE DIRECT ACTION IN THE CONCRETE AND NOT AGAINST FORMS OR REINFORCEMENT. HONEYCOMBING, VOIDS AND LARGE AIR POCKETS WILL NOT BE ACCEPTABLE.
- 26. LOCATIONS OF CONTRACTION JOINTS ARE SHOWN ON THE PLAN DRAWING. THE JOINTS SHOWN MAY SERVE AS CONSTRUCTION JOINTS IF CONVENIENT FOR THE CONSTRUCTION SEQUENCE. THE LOCATION OF ANY ADDITIONAL CONSTRUCTION JOINTS PROPOSED BY THE CONTRACTOR SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. ALL CONCRETE SLABS AND WALLS WITH CONSTRUCTION JOINTS SHALL BE PLACED PER ACI 302 1R
- 27. THE USE OF WATER-SOLUBLE CHLORIDE ION SHALL NOT BE USED UNLESS APPROVED BY THE ENGINEER. AS AN ALTERNATIVE TO THE ABOVE, THE CONTRACTOR MAY SUBMIT A CONCRETE MIX DESIGN FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE ALTERNATE MIX DESIGN SHALL BE REVIEWED FOR CONFORMANCE TO '02 UBC.

STRUCTURAL STEEL

- 1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATION:
 - * WIDE FLANGE AND WT SHAPES A992 * HSS RECT. - A500 GRADE C (fy = 46 KSI)
 - * HSS ROUND A500 GRADE C (fy = 42 KSI)
 - * PIPE A53 GRADE B (fy = 35 KSI) * HP SHAPES - A572 GR. 50
- * ALL OTHER SHAPES AND PLATES A36
- 2. THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL.
- 3. BEAM CONNECTIONS SHALL BE STANDARD TWO ANGLE WEB CONNECTIONS CAPABLE OF SUPPORTING 50% OF THE ALLOWABLE UNIFORM LOAD FROM THE ALLOWABLE LOADS ON BEAM TABLES IN THE AISC CODE, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
- 4. ALL CONNECTIONS NOT SPECIFICALLY DETAILED, SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED.
- 5. ALL CONNECTIONS SHALL BE SHOP WELDED IN ACCORDANCE WITH LATEST AWS SPECIFICATION USING E7OXX ELECTRODES AND FIELD BOLTED WITH ASTM A325 OR A490 BOLTS. ALL A325 AND A490 BOLTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS."
- 6. EXCEPT AS NOTED ON THE DRAWINGS, STRUCTURAL STEEL BOLTS SHALL BE ASTM A325, 3/4" DIAMETER. ALL VERTICAL BOLTS ARE TO BE INSTALLED "HEAD UP" UNLESS SPECIFICALLY NOTED. IF A BOLT CANNOT BE INSTALLED "HEAD UP", THE THREAD IS TO BE "SPOILED" AFTER THE BOLT HAS BEEN PROPERLY TIGHTENED AND THEN INSPECTED BY THE TESTING AGENCY.
- 7. HIGH STRENGTH BOLT INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF AISC AND THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS." PROVIDE FULLY PRETENSIONED JOINTS AT CONNECTIONS OF BRACING, WHERE BOLTS ARE IN TENSION, ARE SUBJECT TO LOAD REVERSALS OR FATIGUE, AND AT MOMENT CONNECTIONS. PROVIDE SLIP-CRITICAL JOINTS AT CONNECTIONS SUBJECT TO FATIGUE AND LOAD REVERSALS, OVERSIZED HOLES, SLOTTED HOLES AND WHERE SLIP AT THE FAYING SURFACES WOULD BE DETRIMENTAL TO THE PERFORMANCE OF THE STRUCTURE. ALL OTHER CONNECTIONS MAY HAVE SNUG-TIGHTENED CONNECTIONS UNLESS OTHERWISE NOTED.
- 8. ALL SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER THE REQUIREMENTS OF THE AISC 360 SECTION J1.2.
- 9. ALL ANCHOR RODS SHALL CONFORM TO MINIMUM ASTM F1554 GR. 36.
- 10. CONTRACTOR SHALL REFERENCE ARCHITECTURAL DRAWINGS FOR MISC. SHAPES AND PLATES WHICH SHALL BE SHOP-WELDED TO THE STRUCTURAL FRAMING SECTIONS TO MINIMIZE FIELD WELDING.
- 11. ALL FLOOR AND ROOF OPENINGS, UNLESS OTHERWISE NOTED, ARE TO BE FRAMED WITH L5X3X1/4 (LLV). VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH THE TRADE INVOLVED.
- 12. PROVIDE L4X4X1/4 SEATS AT COLUMN WEBS, WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS.
- 13. ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP. PROVIDE CAMBERS AS INDICATED ON THE DRAWINGS.
- 14. ALL STIFFENER PLATES AND BEARING STIFFENERS ARE TO BE PROVIDED IN PAIRS.

STRUCTURAL STEEL FRAMING INTO CONCRETE WALLS, BEAMS OR COLUMNS.

15. SHEAR CONNECTORS SHALL BE MANUFACTURED BY NELSON STUD WELDING, DIV. OR ENGINEER APPROVED SUBSTITUTE, AND WELDED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.16. ALL STEEL TO RECEIVE ONE SHOP COAT OF PAINT. OMIT PAINT AT HOLES FOR SLIP CRITICAL-TYPE

CONNECTIONS, AT STRUCTURAL STEEL TO BE FIREPROOFED, ENCASED OR IN CONTACT WITH CONCRETE.

AND ON TOP FLANGE OF BEAMS RECEIVING SHEAR CONNECTORS.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND

SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS, ESPECIALLY WITH RESPECT TO

18. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY OF THE STRUCTURE UNDER FULL DESIGN LOADS UNTIL THE PERMANENT BRACING IS IN PLACE. CONTRACTOR SHALL PROVIDE NECESSARY SHORING WHERE REQUIRED DURING CONSTRUCTION.

STRUCTURAL STEEL (CONT.)

19. SHOP AND FIELD TESTING OF WELDS AND OR BOLTS SHALL BE AS FOLLOWS:

ABOVE TESTING REQUIREMENTS TO BE COMPLETED.

- A. ALL WELDS SHALL BE VISUALLY INSPECTED. 5% AT RANDOM SHALL BE MEASURED.
 B. FILLET WELDS FOR BEAM AND GIRDER SHEAR CONNECTION PLATES (10% AT RANDOM) SHALL BE
- CHECKED BY MAGNETIC PARTICLE IN ACCORDANCE WITH ASTM E709 FOR FINAL PASS ONLY.

 C. ULTRASONICALLY TEST 100% OF ALL FULL-PENETRATION WELDS IN ACCORDANCE WITH AWS D1.1 -
- SECTION, PART 'F', "ULTRASONIC TESTING (UT) OF GROOVE WELDS".

 D. CHECK BY CALIBRATED TORQUE WRENCH, 25% OF BOLTS IN EACH FULLY PRETENSIONED CONNECTION
- JOINT OR SLIP-CRITICAL CONNECTION JOINT, BUT NOT LESS THAN TWO (2) BOLTS PER CONNECTION.
- E. ULTRASONICALLY TEST 100 % OF ALL PARTIAL-PENETRATION COLUMN SPLICE WELDS IN ACCORDANCE
- WITH AWS D1.1 SECTION, PART 'F', "ULTRASONIC TESTING (UT) OF GROOVE WELDS".

 F. CHECK 100% OF CONTINUITY PLATE FILLET WELDS BY MAGNETIC PARTICLE ON LAST LAYERS IN
- ACCORDANCE WITH ASTM E709.

 G. THE OWNER'S TESTING AGENCY SHALL PERFORM ALL SHOP AND FIELD INSPECTION AND TESTING AS
- OUTLINED ABOVE.
 H. THE STRUCTURAL STEEL FABRICATOR AND ERECTOR SHALL SCHEDULE ALL WORK TO ALLOW THE
- 20. STRUCTURAL STEEL SHALL NOT BE ALTERED IN THE FIELD FROM THAT SHOWN ON THE DESIGN DRAWINGS. MISMATCHED HOLES SHALL BE REAMED TO LARGER DIAMETER AND PROPERLY SIZED BOLTS AND WASHERS USED FOR FINAL HOLE SIZE. CUTTING, BURNING OR WELDING NOT SHOWN ON DESIGN DRAWINGS SHALL NOT BE PERFORMED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- 21. ALL STRUCTURAL STEEL SHALL BE DETAILED, SHOP PRIME PAINTED OR HOT-DIPPED GALVANIZED, PIECE MARKED, FURNISHED, FABRICATED AND ERECTED ACCORDING TO THE AISC "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS", LATEST EDITION AND TO THE AISC "CODE OF STANDARD PRACTICE". HOT DIP GALVANIZED FINISH FOR ALL STEEL MEMBERS EXPOSED TO THE WEATHER.
- 22. NON-SHRINK GROUT SHALL CONFORM TO "CORPS OF ENGINEERS SPECIFICATION FOR NON-SHRINK GROUT", CRD-C 621-LATEST EDITION. GROUT SHALL BE PREMIXED, NON-SHRINK, NON-CATALYZED NATURAL AGGREGATE GROUT FOR: (1) COLUMN LEVELING PLATES, WHICH ARE NOT BOLTED DOWN BEFORE COLUMN ERECTION, (2) ITEMS SET INTO CONCRETE BLOCKOUTS, DEPRESSIONS, OR TOPPINGS, AND (3) OTHER STRUCTURAL LOAD BEARING APPLICATIONS. THE SEVEN-DAY COMPRESSIVE FOR THE SPECIFIED CONSISTENCY SHALL BE AT LEAST, 7,000 PSI PLASTIC, 6,000 PSI FLOWABLE, AND 5,000 PSI FLUID

FABRICATION AND ERECTION

- 1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
- 2. ALL HOLES SHALL BE DRILLED OR PUNCHED. NO BURNING OF HOLES WILL BE PERMITTED. SLOTTED HOLES MUST HAVE STRAIGHT AND SMOOTH SIDES.
- 3. HOLES SHALL BE SIZED SUCH THAT THEY ARE $\frac{1}{16}$ "LARGER IN DIAMETER THAN THE SPECIFIED FASTENER.
- 4. ALL STRUCTURAL MATERIAL INCLUDING BEAMS, ANGLES AND PLATES TO BE FIELD MEASURED AND FIELD FABRICATED.
- 5. IN PLANNING THE METHOD OF ERECTION AND DISTRIBUTION OF MATERIAL BEFORE AND DURING ERECTION, THE CONTRACTOR SHALL MAKE FULL ALLOWANCE FOR ANY OBSTRUCTIONS ENCOUNTERED WHICH MAY RESULT FROM WORK PERFORMED BY OTHER TRADES, AS WELL AS THE OPERATIONS OF THE OWNER.
- 6. IT SHALL BE UNDERSTOOD THAT THERE WILL BE NO EXTRA CHARGE BY THE CONTRACTOR ON ACCOUNT OF ANY OBSTRUCTIONS NOW ON THE SITE OF THE BUILDING.
- FURNISH AND INSTALL ANY AND ALL NECESSARY TEMPORARY BRACING TO SQUARE AND PLUMB UP ALL WORK. AS REQUIRED, BEFORE BOLTING OR WELDING.
- 8. IN CASES WHERE MEMBERS DO NOT FIT OR HOLES DO NOT MATCH, THE HOLES SHALL BE REAMED OUT AND THE NEXT LARGER SIZE BOLT INSERTED. IF THE CONNECTION REQUIRES NEW HOLES, THEN NEW HOLES SHALL BE DRILLED. NO SUCH CORRECTIONS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER'S RESIDENT ENGINEER. BURNING OF HOLES IS STRICTLY PROHIBITED.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED BY THE ERECTION OF STRUCTURAL STEEL AS HEREIN SPECIFIED. THE CONTRACTOR SHALL REIMBURSE THE OWNER ACTUAL COST OF REPAIR AND OR REPLACEMENT.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE/DEMOLISH AND PROPERLY DISPOSE OF EXISTING STEEL, AS REQUIRED FOR THE INSTALLATION OF NEW STEEL.
- 11. CONTRACTOR IS RESPONSIBLE TO DESIGN, PROVIDE AND INSTALL NECESSARY SHORING DURING DEMOLITION AND REPLACEMENT OF STRUCTURAL STEEL. THE SHORING PLAN SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.
- 12. TEMPORARILY SUPPORT ALL EXISTING UTILITIES IN WORK AREA AS REQUIRED TO COMPLETE SCOPE-OF-WORK
- 13. PRIOR TO THE COMPLETION OF THE SCOPE OF WORK, INSTALL PERMANENT SUPPORTS TO ALL EXISTING UTILITIES AFFECTED BY WORK AREA AS REQUIRED TO THE SATISFACTION OF THE OWNER.

HANDLING OF STEEL

- 1. WHEN THE STRUCTURAL STEEL IS DELIVERED, IT SHALL BE STACKED OFF THE GROUND. CARE SHALL BE TAKEN IN HANDLING AND STACKING THE MEMBERS TO PREVENT BUCKLING, KINKING OR DISTORTION. RAIL AND CARRIER SHIPMENTS SHALL HAVE SUFFICIENT AND SATISFACTORY DUNNAGE TO PREVENT DAMAGE IN TRANSIT.
- 2. MEMBERS WHICH ARE BENT IN FABRICATION OR IN HANDLING SHALL BE STRAIGHTENED OR REPLACED BEFORE

3. ALL DIRT, MUD AND DEBRIS SHALL BE CLEANED FROM STEEL BEFORE ERECTION.

HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM DESIGNATION A325 AND SHALL BE
 USED IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" LATEST

REVISION, BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.

THE DEFECTIVE GROUP SHALL BE CHECKED AT THE CONTRACTOR'S EXPENSE.

- 2. ALL BOLTED CONNECTIONS SHALL USE ONLY STANDARD HOLES; EXCEPT SHORT SLOTS, OVERSIZED HOLES AND LONG SLOTS SHALL BE USED WHERE SPECIFICALLY SHOWN OR CALLED OUT ON THE DESIGN DRAWINGS OR MENTIONED HEREIN. OVERSIZED HOLES, AND SHORT AND LONG SLOTS MUST BE TREATED AS SLIP-CRITICAL TYPE CONNECTIONS. HARDENED WASHERS SHALL BE INSTALLED OVER ALL OVERSIZED HOLES AND SHORT SLOTS IN AN OUTER PLY. A PLATE WASHER OR A CONTINUOUS BAR IS REQUIRED FOR ALL LONG SLOTTED
- HOLES USED IN AN OUTER PLY.

 3. THE TIGHTENING MECHANISM USED SHALL BE THE TURN-OF-THE-NUT METHOD. CONTACT SURFACE SHALL NOT BE PAINTED. IN EACH JOINT OR GROUP OF BOLTS 10% (BUT NOT LESS THAN TWO (2) BOLTS) SELECTED AT RANDOM AND NOT IN UNIFORM PATTERN SHALL BE CHECKED. THIS SHALL BE DONE IN THE PRESENCE OF THE OWNER'S DESIGNATED REPRESENTATIVE. IF BOLTING IS FOUND TO BE INADEQUATE UNDER TEST, ALL BOLTS IN



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STRUCTURAL SPECIFICATIONS

oject Number:

Sheet Number: S-0



MASONRY

- 1. CONCRETE MASONRY UNITS (CMU) SHALL BE LAID WITH TYPE S OR N MORTAR AND ALL MORTAR SHALL CONFORM TO ASTM C270. MORTAR MAY BE EITHER TYPE M OR S U.N.O. - USE PORTLAND CEMENT/LIME FOR MORTAR.
- 2. CONCRETE MASONRY UNIT (CMU) PANELS SHALL HAVE HORIZONTAL JOINT REINFORCEMENT SPACED NOT MORE THAN 16 INCHES ON CENTER, LOCATED IN THE MORTAR BED JOINT, AND EXTENDING THE ENTIRE LENGTH OF THE PANEL, BUT NOT ACROSS EXPANSION JOINTS. LONGITUDINAL WIRES SHALL BE LAPPED A MINIMUM OF 6 IN. AT SPLICES. JOINT REINFORCEMENT SHALL BE PLACED IN THE PANEL. THE REINFORCEMENT SHALL BE PLACED IN THE BED JOINT IMMEDIATELY BELOW AND ABOVE OPENINGS IN THE PANEL. THE REINFORCEMENT SHALL HAVE NOT LESS THAN TWO PARALLEL LONGITUDINAL WIRES OF SIZE W1.7, AND HAVE WELDED CROSS WIRES OF SIZE W1.7.
- 3. CONCRETE MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE TMS 402/ACI 530/ASCE 5 BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES AND TMS 602/ACI 530/ASCE 6 SPECIFICATION FOR MASONRY
- 4. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C-90 GRADE N-1. CONCRETE MASONRY TO HAVE 28-DAY COMPRESSIVE STRENGTH FOR AN AVERAGE OF 3 UNITS OF f'm=1900 psi.
- 5. SPECIAL INSPECTION OF MASONRY CONSTRUCTION IS REQUIRED. REFER TO ACI 530, PART 3 AND MICHIGAN BUILDING CODE 2015, TABLE 1705.3 FOR MINIMUM QUALITY ASSURANCE REQUIREMENTS.
- 6. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO THE FOLLOWING STANDARDS: HOLLOW LOAD-BEARING UNITS:

TYPE I, GRADE N SOLID LOAD-BEARING UNITS: ASTM C145 MEDIUM WEIGHT UNITS: 110 TO 125 PCF REGULAR WEIGHT UNITS: 135 PCF

- 7. POURABLE CONSISTENCY GROUT SHALL BE USED TO FILL CAVITIES AT BEAM, JOIST AND METAL DECK BEARING, AT VERTICAL FILL OF HOLLOW CORES, AND IN BOND BEAMS AND REINFORCED MASONRY BEAMS, PIERS OR COLUMNS. GROUT SHALL CONFORM TO ASTM C476 WITH MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI.
- 8. STEEL BAR REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60. HORIZONTAL JOINT REINFORCEMENT SHALL BE LADDER OR TRUSS TYPE.
- 9. VERTICAL CELLS CONTAINING REINFORCING AND GROUT SHALL FORM A CONTINUOUS CAVITY, FREE OF MORTAR
- 10. VERTICAL REINFORCING SHALL BE FULLY GROUTED IN THE CORES OF THE CONCRETE MASONRY UNITS AND SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS BUT NOT LESS THAN 24 INCHES. THE VERTICAL REINFORCEMENT SHALL BE LAPPED WITH DOWELS OF SAME SIZE AND SPACING WHICH HAVE BEEN PREVIOUSLY INSTALLED IN THE FOUNDATIONS. EMBEDMENT OF DOWELS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318.
- 11. VERTICAL REINFORCING SHALL BE PLACED IN THE CENTER OF THE CELL, UNLESS SPECIFICALLY SHOWN OTHERWISE. ALLOWABLE SPACING TOLERANCE IS $\pm \frac{1}{2}$ ". THE USE OF REINFORCEMENT BAR POSITIONERS IS REQUIRED.
- 12. GROUTING OF MASONRY WALLS SHALL CONFORM TO THE RECOMMENDED PROCEDURE FOR "LOW LIFT GROUTING" OR "HIGH LIFT GROUTING" AS OUTLINED IN THE NCMA - TEK NOTE #23A - GROUTING FOR CONCRETE MASONRY WALLS.
- 13. LIFTS OF GROUT SHALL BE KEYED 4 INCHES INTO THE PREVIOUS COURSE OF MASONRY BELOW.
- 14. SAMPLING AND TESTING OF MORTAR AND GROUT SHALL BE IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE NCMA - TEK NOTE #107 LABORATORY AND FIELD TESTING OF MORTAR AND GROUT.
- 15. TESTING OF MASONRY PRISMS SHALL BE IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE NCMA-TEK NOTE #22A - PRISM TESTING FOR ENGINEERED CONCRETE MASONRY.
- 16. GRANULAR FILL INSULATION TO BE PERLITE OR OWNER APPROVED EQUIVALENT.
- 17. PROVIDE CONTROL JOINTS IN ABOVE GRADE EXPOSED MASONRY WALLS FOR THE FOLLOWING CONDITIONS: A. AT THE PERPENDICULAR WALLS; ONE-HALF CONTROL JOINT SPACING FROM THE CORNERS. B. AT CHANGE IN WALL HEIGHT.
- C. AT CHANGE IN WALL THICKNESS.
- D. AT 25'-0" O.C. IN LONG CONTINUOUS WALLS.

SPECIAL INSPECTIONS & TESTS

SPECIAL INSPECTION SHALL MEET THE REQUIREMENTS OF IBC SECTION 1704. SPECIAL INSPECTOR(S) SHALL BE HIRED BY THE OWNER TO PERFORM THE REQUIRED SPECIAL INSPECTIONS. THE NAMES OF PERSONS OR FIRMS WHO ARE TO PERFORM THE SPECIAL INSPECTIONS SHALL BE FORWARDED TO THE BUILDING OFFICIAL FOR APPROVAL. THE SPECIAL INSPECTOR(S) SHALL COMPLETE AND SUBMIT ALL FORMS REQUIRED BUILDING OFFICIAL. THE SPECIAL INSPECTOR(S) SHALL:

B. FURNISH INSPECTION REPORTS TO THE ENGINEER OF RECORD AND BUILDING DEPARTMENT. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF NOT CORRECTED, TO THE ENGINEER AND THE BUILDING DEPARTMENT. C. SUBMIT TO THE ENGINEER OF RECORD AND THE BUILDING DEPARTMENT A SIGNED FINAL REPORT STATING

A. OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED DRAWING AND SPECIFICATIONS.

THAT THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

2. SPECIAL INSPECTION NOTES:

- A. CONTINUOUS SPECIAL INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS SPECIFICALLY NOTED BELOW.
- B. WHERE FABRICATION OF THE STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING THE PERFORMANCE OF THE WORK EXCEPT AS ALLOWED IN IBC SECTION 1704.2.5 AND UNLESS SPECIFICALLY
- C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE SPECIAL INSPECTOR(S) WITH ADVANCE NOTICE, NO LESS THAN ONE WORKING DAY, OF THE INITIATION OF ANY WORK REQUIRED TO HAVE SPECIAL INSPECTIONS. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION WILL BE SUBJECT TO

3. TYPES OF WORK REQUIRING SPECIAL INSPECTIONS ARE:

- A. STRUCTURAL STEEL ELEMENTS OF BUILDINGS AND STRUCTURES AS REQUIRED BY IBC SECTION 1705.2.1 AND AISC 360 SECTION 'N'.
- B. COLD-FORMED STEEL DECK AS REQUIRED BY IBC SECTION 1705.2.2 AND SDI QA/QC.
- C. OPEN-WEB STEEL JOISTS AND JOIST GIRDERS AS REQUIRED BY IBC SECTION 1705.2.3 AND TABLE 1705.2.3, AS FOLLOWS: PERIODIC SPECIAL INSPECTION IN COMPLIANCE WITH SJI SPECIFICATIONS, SECTION 2207.1 FOR INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS REQUIRED FOR:
- a. END CONNECTIONS WELDING OR BOLTED. BRIDGING - HORIZONTAL OR DIAGONAL. APPLIES TO BOTH STANDARD BRIDGING AND BRIDGING THAT
- DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1 D. **CONCRETE CONSTRUCTION** AS REQUIRED BY IBC SECTION 1705.3 AND TABLE 1705.3, AS FOLLOWS:
- WELDING OF REINFORCING BARS AS REQUIRED BY IBC SECTION 1705.3.1 AND IN COMPLIANCE WITH
- AWS D1.4 FOR SPECIAL INSPECTION AND AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION.
 - MATERIAL TESTS AS REQUIRED BY IBC SECTION 1705.3.2 AND ACI 318, CHAPTERS 19 AND 20.

	INSPECTION TYPE	CONTINUOUS INSPECTION	
1.	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.		X
2.	REINFORCING BAR WELDING:		
a.			Х
	INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND		X
C.	INSPECT ALL OTHER WELDS		X
3.	INSPECT ANCHORS CAST IN CONCRETE.		X
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.		
a.	ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	Х	
b.	MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.		Х
5.	VERIFY USE OF REQUIRED DESIGN MIX.		X
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	x	
7.	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	х	
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		х
9.	INSPECT PRESTRESSED CONCRETE FOR:		
a.	APPLICATION OF PRESTRESSING FORCES; AND	Х	
b.	GROUTING OF BONDED PRESTRESSING TENDONS.	X	
10.	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		х
11.	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		х
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		х

MASONRY CONSTRUCTION AS REQUIRED BY IBC SECTION 1705.4 AND LEVEL B SPECIAL INSPECTIONS OF TMS 402/ACI 530/ASCE 5 AS FOLLOWS:

	INSPECTION TASK	MINIMUM INSPECTION	
1.	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		Х
2.	AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN		
	COMPLIANCE:		
а.	PROPORTIONS OF SITE-PREPARED MORTAR		Х
b.	CONSTRUCTION OF MORTAR JOINTS		X
C.	GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES		X
d.	LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES		X
e.	PRESTRESSING TECHNIQUE		Х
f.	PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	Х	Х
3.	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
<u>а.</u>	GROUT SPACE		Х
b.	GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND		X
	PRESTRESSING TENDONS AND ANCHORAGES		Х
C.			
	TENDONS AND ANCHORAGES		Х
d.			
	FOR BONDED TENDONS		Х
e.	CONSTRUCTION OF MORTAR JOINTS		
4.	VERIFY DURING CONSTRUCTION:		
<u></u> а.	SIZE AND LOCATION OF STRUCTURAL ELEMENTS		Х
b.	TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF		X
	ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR		
	OTHER CONSTRUCTION		
C.	WELDING OF REINFORCEMENT	Х	
d.	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING		
	COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER		Х
	(TEMPERATURE ABOVE 90°F (32°))		
e.	APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	Х	
f.	PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED	Х	
	TENDONS IS IN COMPLIANCE		
g.	PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED		
ū	MORTAR JOINTS	X	Х
5.	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		

F. **SOILS** AS REQUIRED BY IBC 1705.6 AND TABLE 1705.6 AS FOLLOWS:

- 1. PERIODIC SPECIAL INSPECTION REQUIRED TO: a. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN
- VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.
- PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED.
- 2. CONTINUOUS SPECIAL INSPECTION REQUIRED TO: VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND
- COMPACTION OF COMPACTED FILL.
- COMPACTED SOIL BACKFILL IN COMPLIANCE WITH SECTION 1803 SHALL REQUIRE SPECIAL INSPECTIONS IN ACCORDANCE WITH ASTM D1557.
- G. FABRICATED ITEMS AS REQUIRED BY IBC SECTION 1705.10 AND SECTION 1704.2.5.

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GLADWIN, MI

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Sheet Title: STRUCTURAL **SPECIFICATIONS**

	MASONRY LINTEL SCHEDULE												
MARK	SIZE	REINFORCING	BEARING PLATE	BEARING									
L1 *	8"Wx8"H CMU	(2) #5	-	8"									
L2	8"Wx16"H CMU	(2) #5	-	8"									

* TYP. AT ALL CMU OPENINGS FOR MAN DOORS, U.N.O.

- FOUNDATION NOTES
- REMOVE AND REPLACE EXISTING FILL AND TOPSOIL W/ ENGINEERED FIL AT SLAB-ON-GRADE AND COLUMN
- LOOSE NATIVE BEARING SOILS SHALL BE COMPACTED W/ VIBRATORY ROLLER TO IMPROVE CAPACITY AND PROVIDE UNIFORM SUBGRADE CONDITIONS.
- CONTRACTOR TO ADHERE TO SITE PREPARATION RECOMMENDATIONS BY GEOTECH REPORT.

- TOP OF WALL FTG. & PEMB COL. PIERS ELEVATION = 99'-4" (TYP. U.N.O.).
- FOOTINGS TO BEAR ON COMPACTED NATIVE SOILS.
- ALL COLUMN FOOTINGS/PIERS ARE CENTERED ON PEMB ANCHOR BOLT PATTERN CENTERS LOCATE FOOTING/PIERS WITH APPROVED PEMB SUBMITTAL.
- COORDINATE THE LOCATION OF THE IN-GROUND LIFT FOUNDATION WITH THE OWNER.

	MARK	SIZE	REBAR									
	F1	8'-0" x 5'-6"" x 1'-0"	#5 @ 12" O.C. TOP B/W #4 @ 10" O.C. BOT. B/W									
	F2	2'-8" x 2'-6" x 1'-0"	#5 @ 12" O.C.TOP & BOT. B/W #5 @ 12" O.C.TOP & BOT. B/W									
	F3	4'-0" x 4'-0" x 1'-0"										
	WF1	8" POURED WALL W/ #4 @ 12" O.C. VERT. & HORIZ. REBAR ON 1'-6" x 12" STRIP FTG. W/ (2) #5 CONT. BARS TYP.										
	NOTE: SEE FOOTING DETAILS FOR ADDITIONAL INFORMATION											

FOOTING SCHEDULE

PIER SCHEDULE										
MARK SIZE REINFORCING REMARK										
P1	16" x 14"	(8) #5 VERT. REBAR W/ #3 TIES @ 10" OC								
P2	14" x 16"	(8) #5 VERT. REBAR W/ #3 TIES @ 10" OC								
P3	16" x 14"	(8) #5 VERT. REBAR W/ #3 TIES @ 10" OC								
P4	14" x 14"	(6) #5 VERT. REBAR W/ #3 TIES @ 10" OC								
	NOTE: SEE PIER DETAILS	FOR ADDITIONAL INFORMATION								



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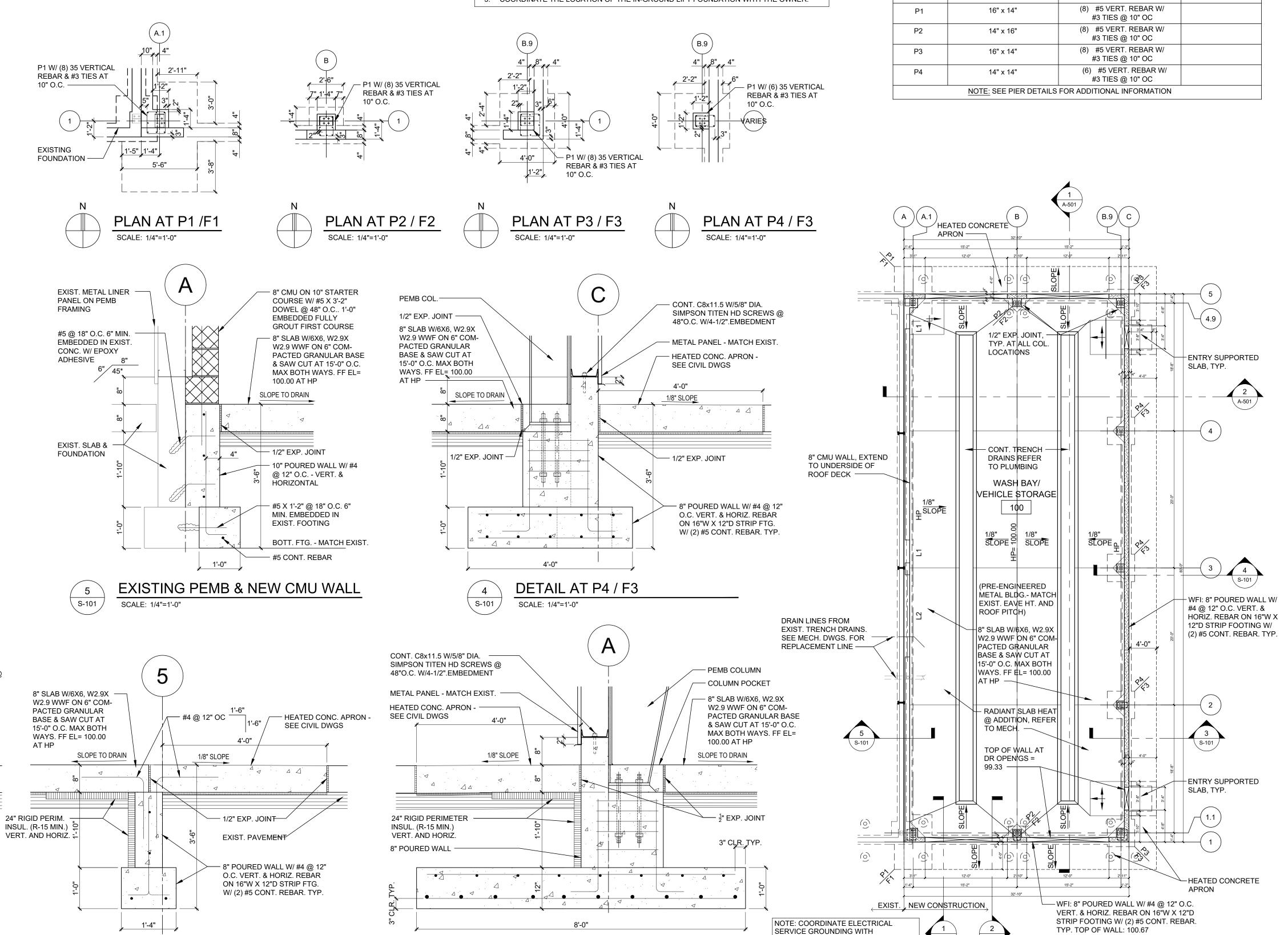
FOUNDATION PLAN

SCALE: 1/8"=1'-0" FIN FLR AT HP: 100.00

FOUNDATION PLAN

521558





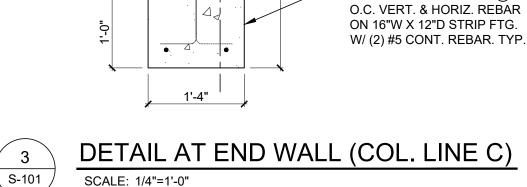
DETAIL AT P1 / F1

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

S-101

STRUCTURAL STEEL AND FOOTING

REBAR INSTALLATION.



1/2" EXP. JOINT —

8" SLAB W/6X6, W2.9X

W2.9 WWF ON 6" COM-

PACTED GRANULAR

BASE & SAW CUT AT

15'-0" O.C. MAX BOTH

WAYS. FF EL= 100.00

24" RIGID PERIMETER

INSUL. (R-15 MIN.)

VERT. AND HORIZ.

SLOPE TO DRAIN

AT HP

- CONT. C8x11.5 W/5/8" DIA.

SIMPSON TITEN HD SCREWS @

48"O.C. W/4-1/2".EMBEDMENT

- METAL PANEL - MATCH EXIST.

· 8" POURED WALL W/ #4 @ 12"

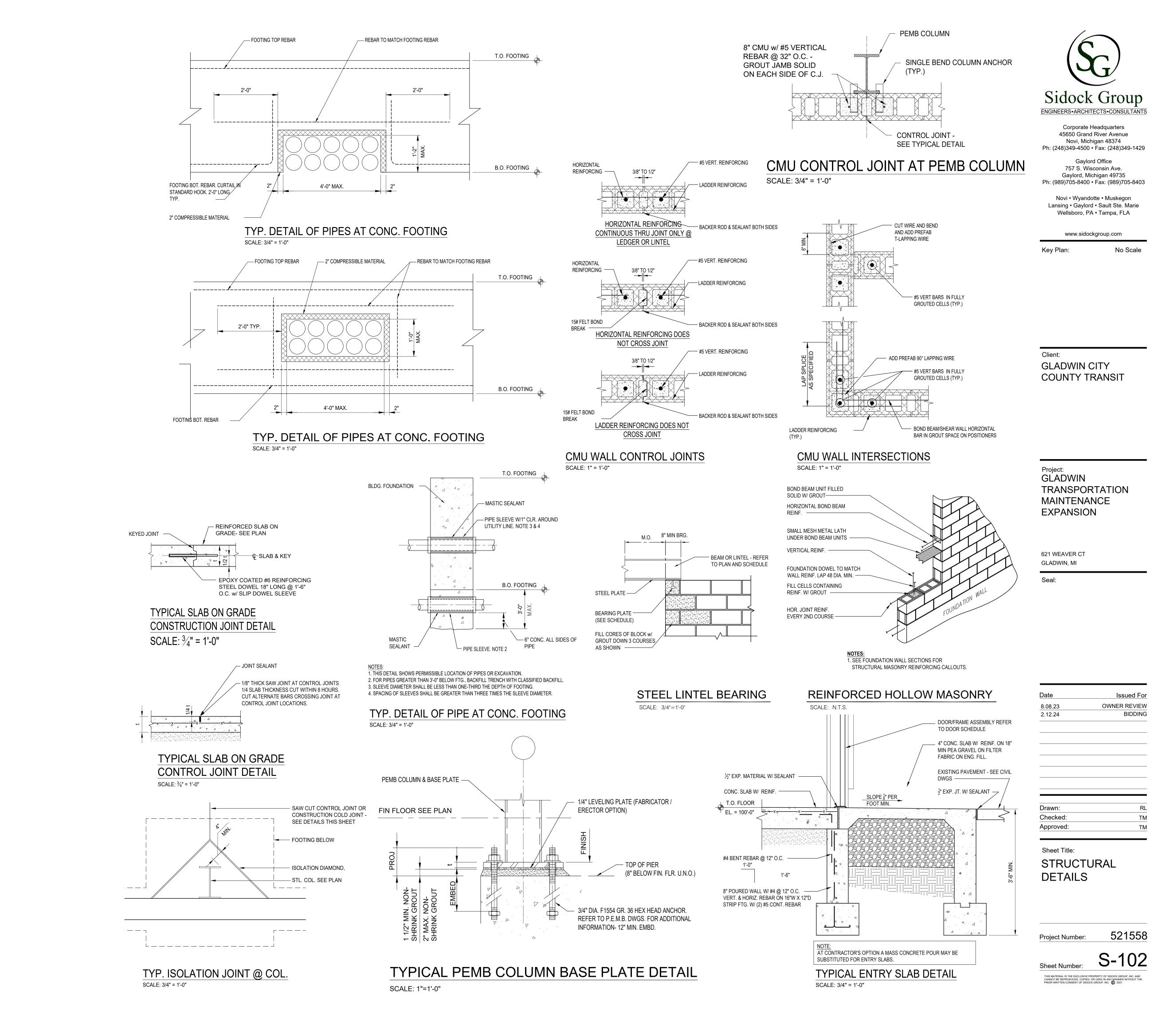
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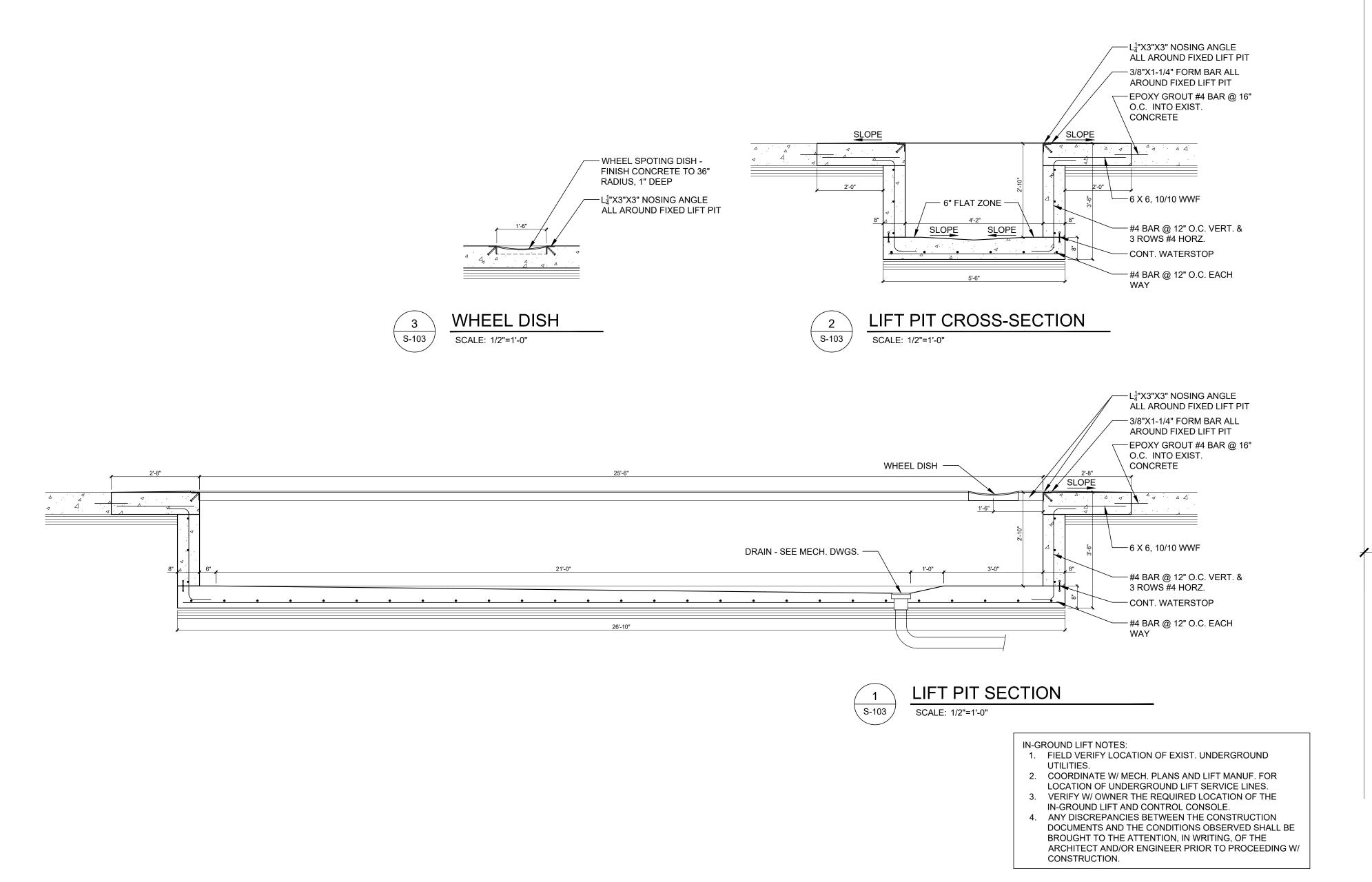
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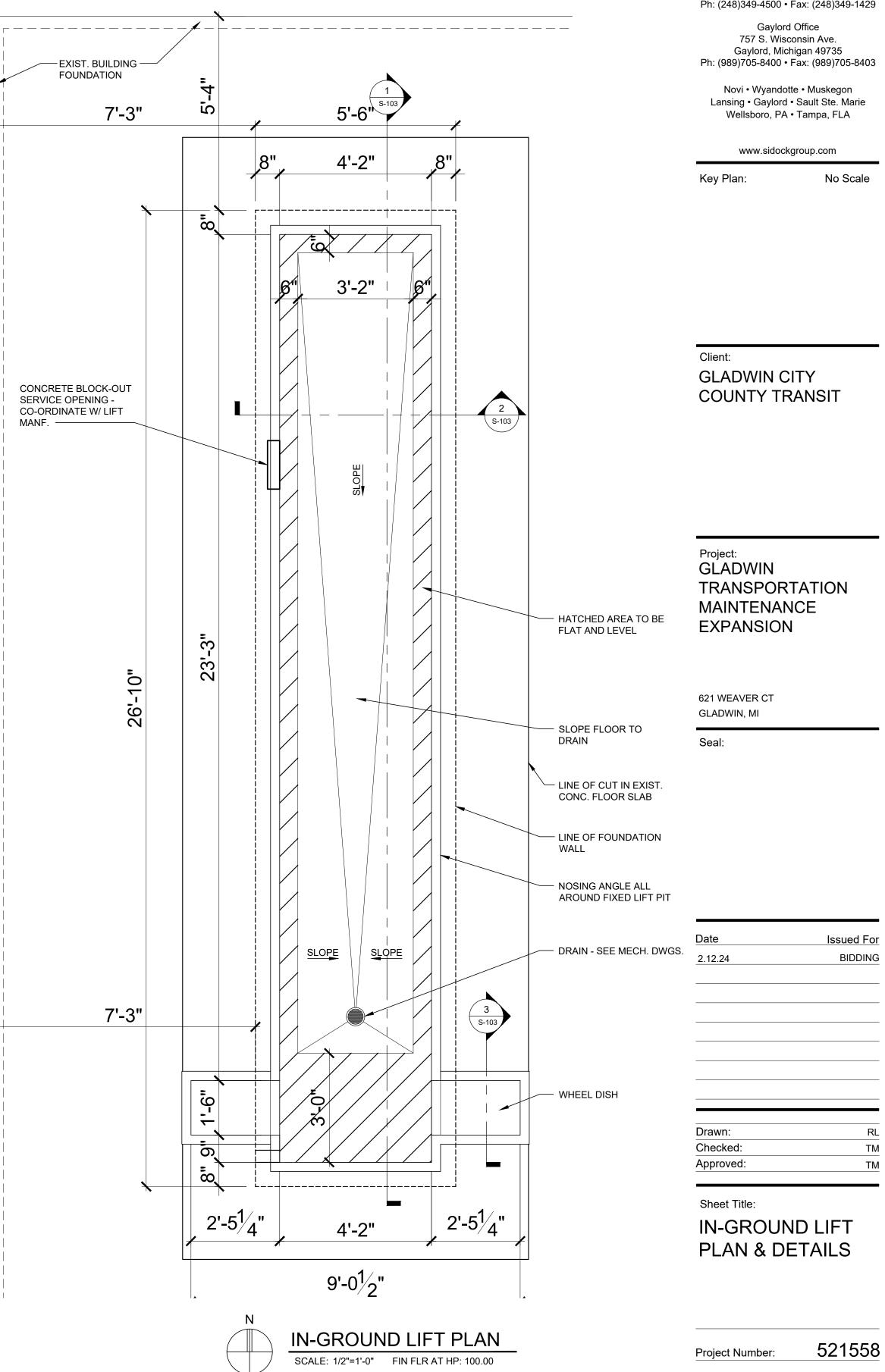
— 1/2" EXP. JOINT

1/8" SLOPE









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SPECIAL NOTICE TO CONTRACTORS

- 1. IT IS RECOMMENDED THAT ALL CONTRACTORS BIDDING THIS PROJECT VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.
- PRIOR TO CONSTRUCTION, CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF THE FOLLOWING:
- A. ALL POINTS OF CONNECTION TO BUILDING UTILITIES AND/OR SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, MECHANICAL SYSTEMS, DUCTWORK, AND EXHAUST/OUTSIDE AIR,.
- B. ALL REQUIRED CONNECTIONS TO THE BUILDING STRUCTURE.
- C. ALL REQUIRED BUILDING PENETRATIONS.
- 3. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 4. REFER TO THE CONSTRUCTION DOCUMENTS FOR ALL CONTACT INFORMATION.

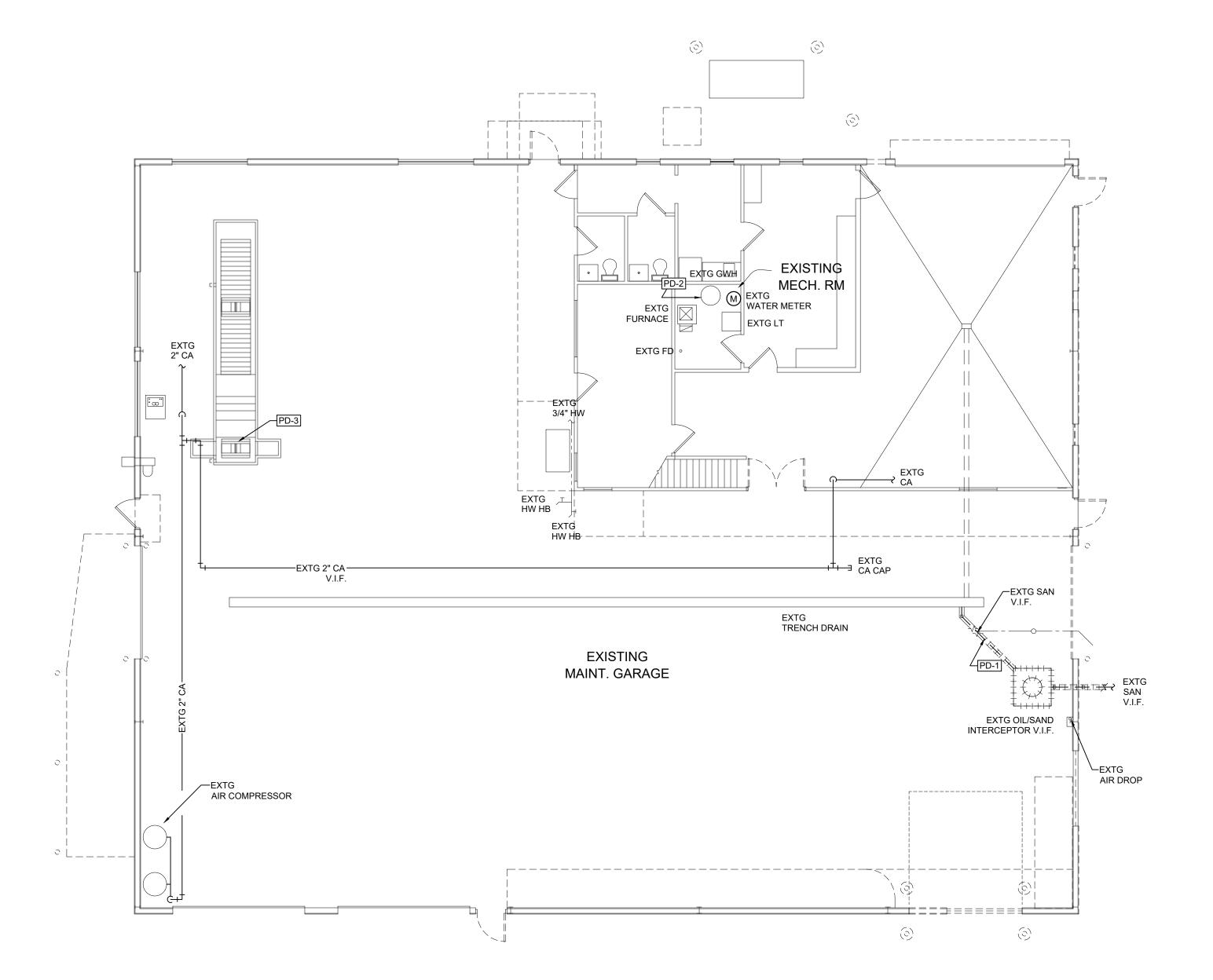
PLUMBING DEMOLITION NOTES

- 1. EQUIPMENT, PIPING, DUCTWORK, ETC., TAGGED WITH A PRECEDING "EX." OR "x" ARE EXISTING.
- 2. THE PLUMBING CONTRACTOR SHALL REMOVE ALL ITEMS INDICATED AND SHALL BE RESPONSIBLE FOR THEIR DISPOSAL PER LOCAL, STATE AND FEDERAL REGULATIONS AND PAY FOR ALL ASSOCIATED COSTS OF DISPOSAL.
- 3. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER'S REPRESENTATIVE TO DETERMINE IF ANY PARTS OR EQUIPMENT ARE DESIRED TO BE KEPT BY THE OWNER. THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL. ANY ITEM NOT WISHED TO BE RETAINED, SHALL BE DISPOSED OF AT THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- 4. ITEMS HATCHED SHALL BE PERMANENTLY REMOVED.
- 5. ITEMS CLOUDED SHALL BE TEMPORARILY REMOVED AND REUSED.

DEMOLITION KEYED NOTES

- PD-1

 DEMO AND REMOVE EXISTING SANITARY DOWNSTREAM FROM THIS POINT. DEMO AND REMOVE EXISTING OIL/SAND INTERCEPTOR AND PREPARE TO TIE IN NEW SANITARY LINE. COORDINATE SAW-CUTTING, IN FILL, AND PATCHING WITH GENERAL CONTRACTOR AND/OR ARCHITECT
- PD-2 PREPARE TO TIE IN NEW 3/4" HOT WATER RETURN LINE AND RECIRC. PUMP. SEE SHEET P100 FOR GAS WATER HEATER DETAIL.
- VERIFY LOCATION AND SIZE OF EXISTING SANITARY LINE FROM EXISTING LIFT. DEMO AND DISCONNECT EXISTING SANITARY LINE FROM THIS POINT DOWN, AS REQUIRED. PREPARE TO TIE IN NEW SANITARY LINE FROM NEW LIFT.







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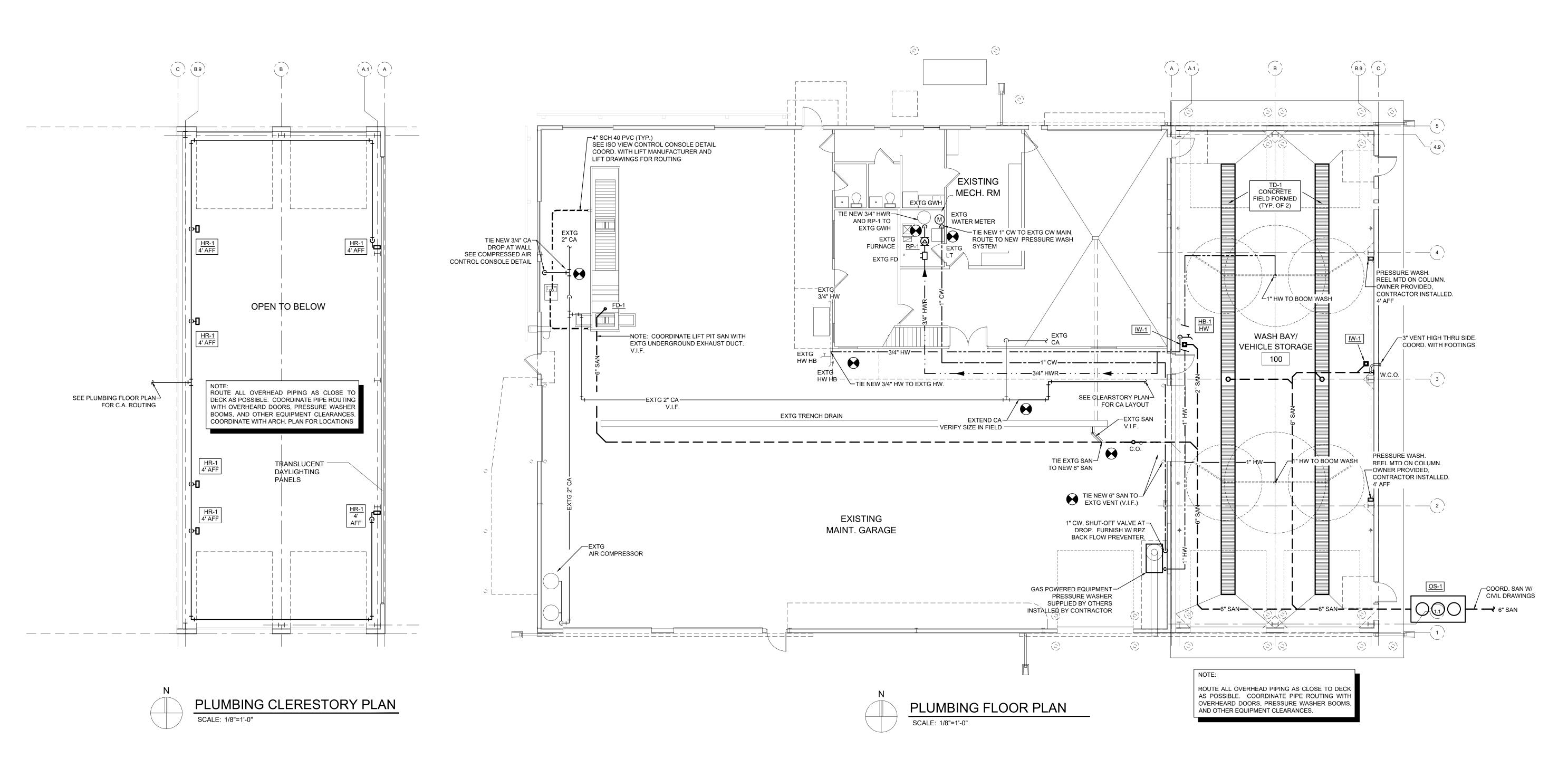
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PLUMBING
DEMOLITION
FLOOR PLAN

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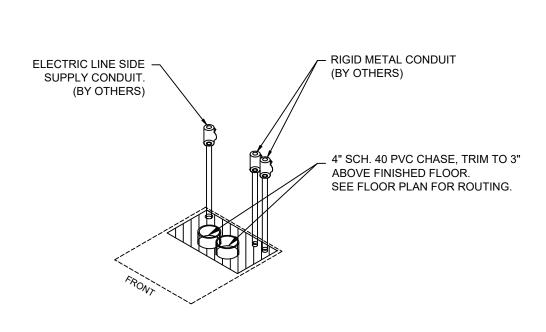
Sheet Title:
PLUMBING
FLOOR PLAN

roject Number: 521558

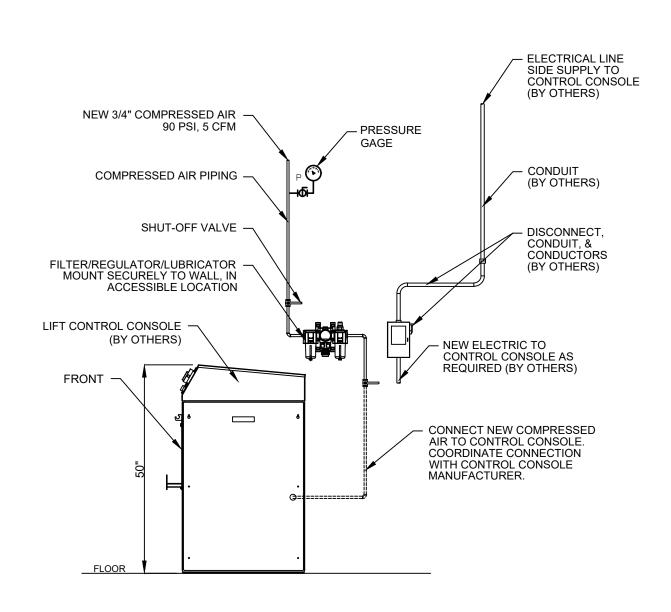
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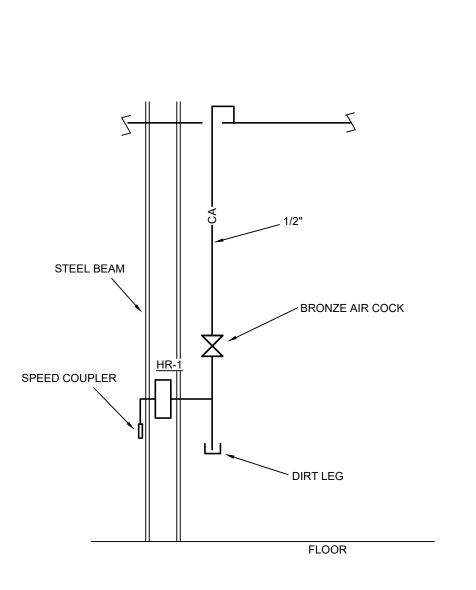
PLUMBING FIXTURE SCHEDULE											
TAG	DESCRIPTION	MANUFACTURER	MODEL			H-IN SIZE CHES)		TRIM	REMARKS		
				CW	HW	WASTE	VENT				
RP-1	RECIRC. PUMP WITH FLANGE CONNECTION	NBF-12F/LW	-	3/4"	-	-	BRONZE CONSTRUCTION	115V / 1-PH, PROVIDE AQUASTAT W/ TIMER			
HB-1	HOSE BIBB, 3/4" MALE HOSE THREAD NOZZLE	MODEL 101	3/4"	-	-	-	VACUUM BREAKER REMOVABLE TEE HANDLE	FURNISH TEE TO OWNER			
HR-1	HOSE REEL - WALL MOUNTED RETRACTABLE COMPRESSED AIR HOSE REEL	TABLE COMPRESSED AIR REELCRAFT 83050 OLP FITTING; SPRING RETURN, SWIVEL DESIGN MOUNTING		· · · · · · · · · · · · · · · · · · ·	FURNISH WITH SPEED COUPLER/QUICK DISCONNECT COUPLER						
OS-1	6" PLAIN END INLET/OUTLET, OIL/SAND SEPARATOR	The state of the s		-	314 GPM MAX FLOW RATE, 285 GAL OIL CAPACITY, 162 GAL SOLIDS CAPACITY	24" RISER OPTION					
TD-1	CAST IN PLACE CONCRETE TRENCH; 26" x 24" HEAVY DUTY GRATE	ERIC'SONS	26AF24GSD; 26B24DGF	-	-	4"	SEE PLANS	FRAME: HDSPGS15ZSA, HEAVY DUTY GALVANIZED STEEL; GRATE LOCKING: GL4B, FOUR CORNER BOLT DOWN	FLOOR DRAIN TRAP SEALER WITH RUBBER DIAPHRAGM ASSE 1072 LISTED, EQUAL TO SURE SEAL		
IW-1	INDIRECT WASTE DRAIN, 8" SQUARE, 6" SUMP DEPTH	ZURN	Z1910	2"			SEE PLANS	1/2 GRATE W/ DOME STRAINER	FLOOR DRAIN TRAP SEALER WITH RUBBER DIAPHRAGM ASSE 1072 LISTED, EQUAL TO SURE SEAL		
FD-1	FLOOR DRAIN, 8" ROUND	ZURN	Z415B	-	-	6"	SEE PLANS		FLOOR DRAIN TRAP SEALER WITH RUBBER DIAPHRAGM ASSE 1072 LISTED, EQUAL TO SURE SEAL		



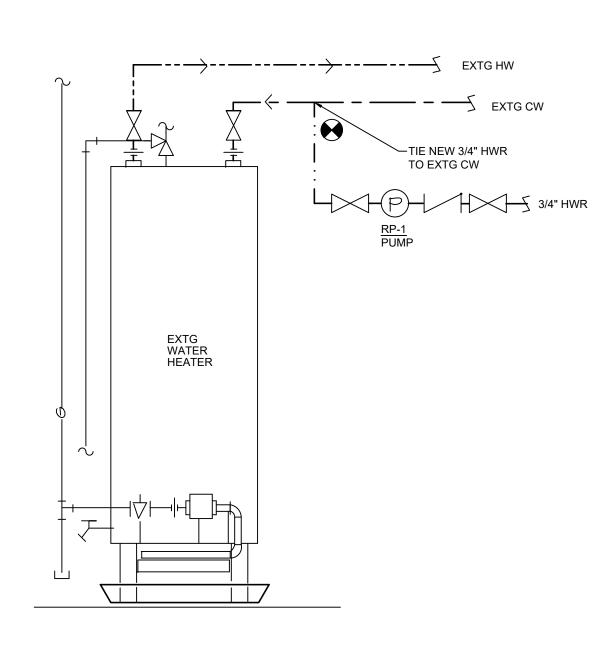
ISOMETRIC VIEW CONTROL CONSOLE DETAIL Scale: None



COMPRESSED AIR CONTROL CONSOLE DETAIL



HOSE REEL DETAIL Scale: None



EXISTING GAS WATER HEATER DETAIL Scale: None

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Key Plan:



P 231.933.0510 F 231.933.3215 w www.nealisengineering.com Client: **GLADWIN CITY**

COUNTY TRANSIT

Project: GLADWIN TRANSPORTATION MAINTENANCE

621 WEAVER CT GLADWIN, MI

EXPANSION

Checked: Approved:

Sheet Title: PLUMBING **DETAILS**

521558

P200

SPECIAL NOTICE TO CONTRACTORS

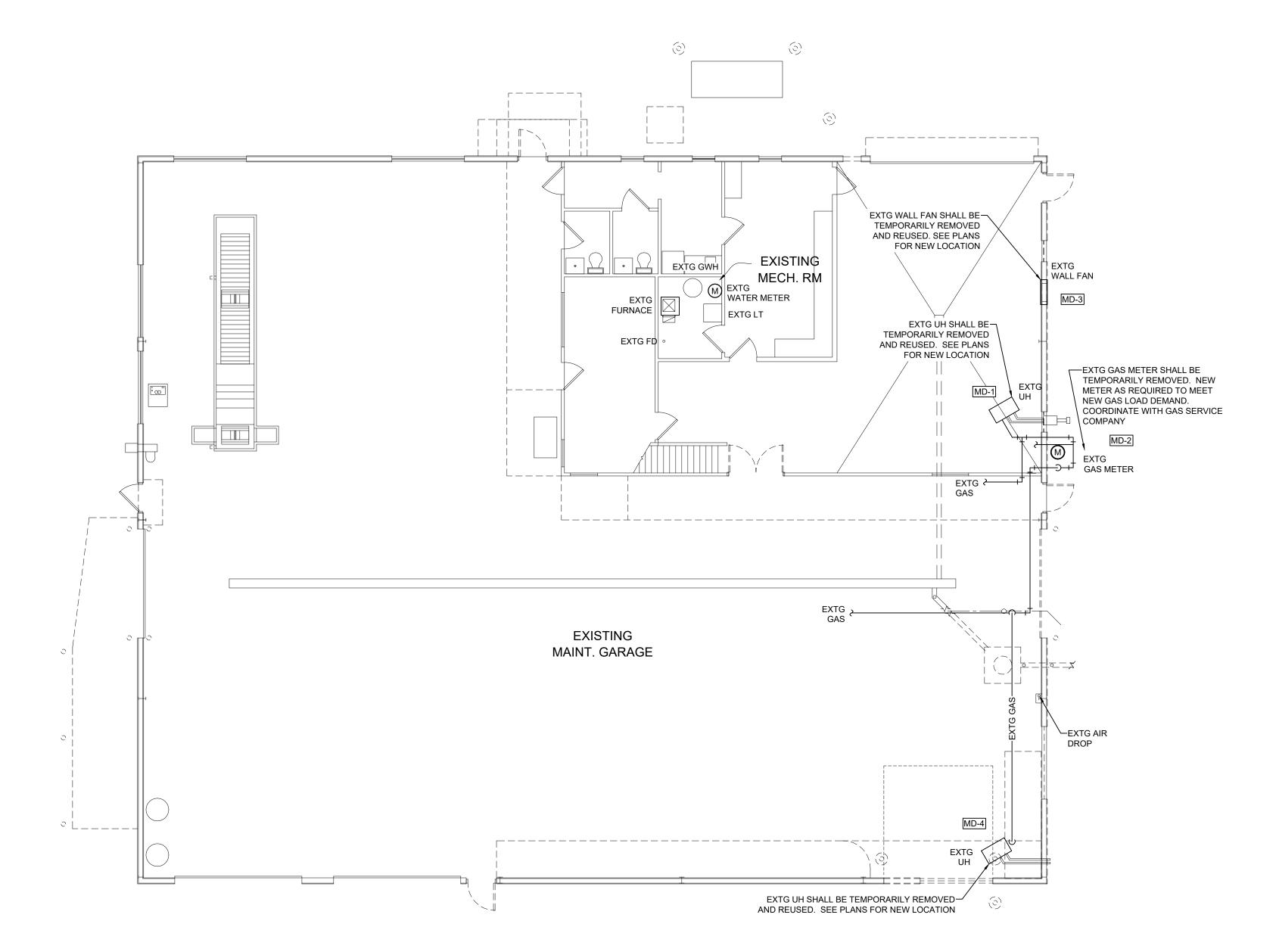
- . IT IS RECOMMENDED THAT ALL CONTRACTORS BIDDING THIS PROJECT VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.
- 2. PRIOR TO CONSTRUCTION, CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF THE FOLLOWING:
- A. ALL POINTS OF CONNECTION TO BUILDING UTILITIES AND/OR SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, MECHANICAL SYSTEMS, DUCTWORK, AND EXHAUST/OUTSIDE AIR,.
- B. ALL REQUIRED CONNECTIONS TO THE BUILDING STRUCTURE.
- C. ALL REQUIRED BUILDING PENETRATIONS.
- 3. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

MECHANICAL DEMOLITION NOTES

- 1. EQUIPMENT, PIPING, DUCTWORK, ETC., TAGGED WITH A PRECEDING "EX." OR "x" ARE EXISTING.
- 2. THE MECHANICAL CONTRACTOR SHALL REMOVE ALL ITEMS INDICATED AND SHALL BE RESPONSIBLE FOR THEIR DISPOSAL PER LOCAL, STATE AND FEDERAL REGULATIONS AND PAY FOR ALL ASSOCIATED COSTS OF DISPOSAL.
- 3. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S REPRESENTATIVE TO DETERMINE IF ANY PARTS OR EQUIPMENT ARE DESIRED TO BE KEPT BY THE OWNER. THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL. ANY ITEM NOT WISHED TO BE RETAINED, SHALL BE DISPOSED OF AT THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- 4. ITEMS HATCHED SHALL BE PERMANENTLY REMOVED.

DEMOLITION KEYED NOTES

- REMOVE EXISTING OUTDOOR AIR AND COMBUSTION AIR VENTING. COORDINATE OPENING INFILL WITH THE GENERAL CONTRACTOR. PREPARE TO RE-ROUTE VENTING UP THROUGH ROOF. PREPARE TO TIE IN NEW GAS PIPE FROM NEW GAS METER LOCATION AS
- REMOVE EXISTING GAS METER AND GAS PIPING. PREPARE TO RELOCATE GAS MATER TO NEW LOCATION. COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS FOR NEW LOCATION. PREPARE TO EXTEND EXISTING GAS LINES FROM NEW GAS METER LOCATION TO EXISTING UNIT HEATER. VERIFY GAS PIPE SIZE IN FIELD.
- MD-3 REMOVE EXISTING WALL FAN AND RELOCATE TO NEW LOCATION. COORDINATE WITH ELECTRICAL WIRING, CONTROLS, FRAMING, ETC. COORDINATE WALL OPENING INFILL WITH THE GENERAL CONTRACTOR.
- MD-4 REMOVE EXISTING UNIT HEATER AND ASSOCIATE VENTING, CONTROLS, SUPPORTS, ETC. PREPARE TO RELOCATE TO NEW LOCATION. EXTEND EXISTING GAS LINE AS REQUIRED TO NEW UNIT HEATER LOCATION.







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GLADWIN CITY COUNTY TRANSIT

Project: GLADWIN TRANSPORTATION MAINTENANCE **EXPANSION**

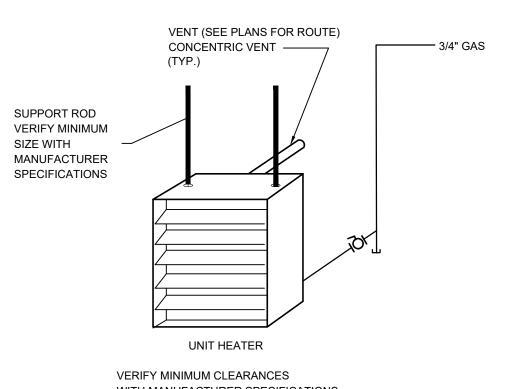
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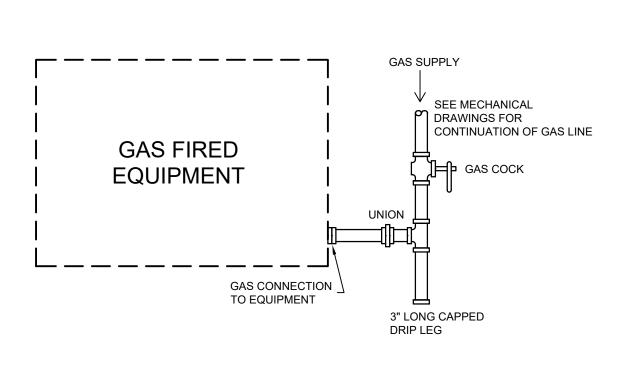
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Sheet Title: MECHANICAL **DEMOLITION** FLOOR PLAN

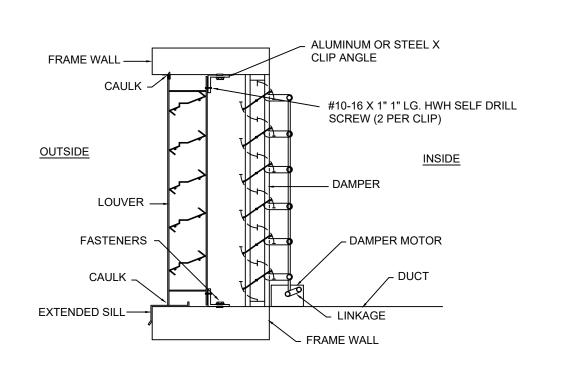




GAS UNIT HEATER DETAIL

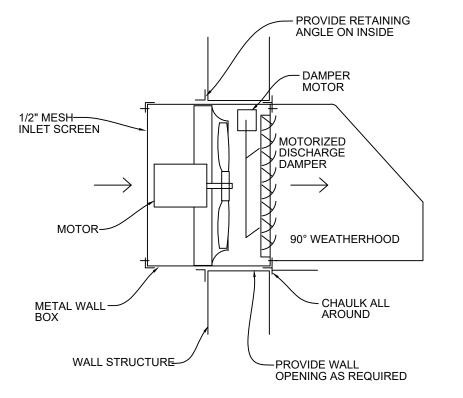


GAS-TO-APPLIANCE CONNECTION DETAIL

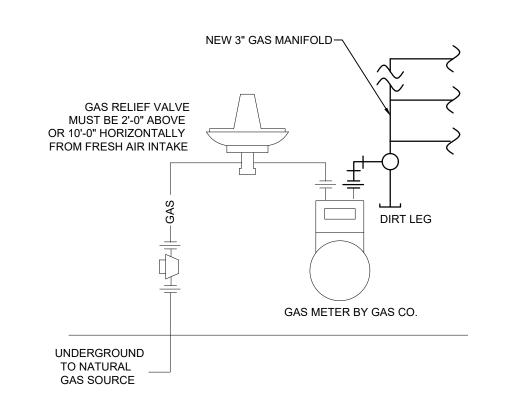


FRESH AIR LOUVER
& DAMPER DETAIL

Scale: None



EXHAUST FAN DETAIL



NATURAL GAS METER DETAIL

Scale: None



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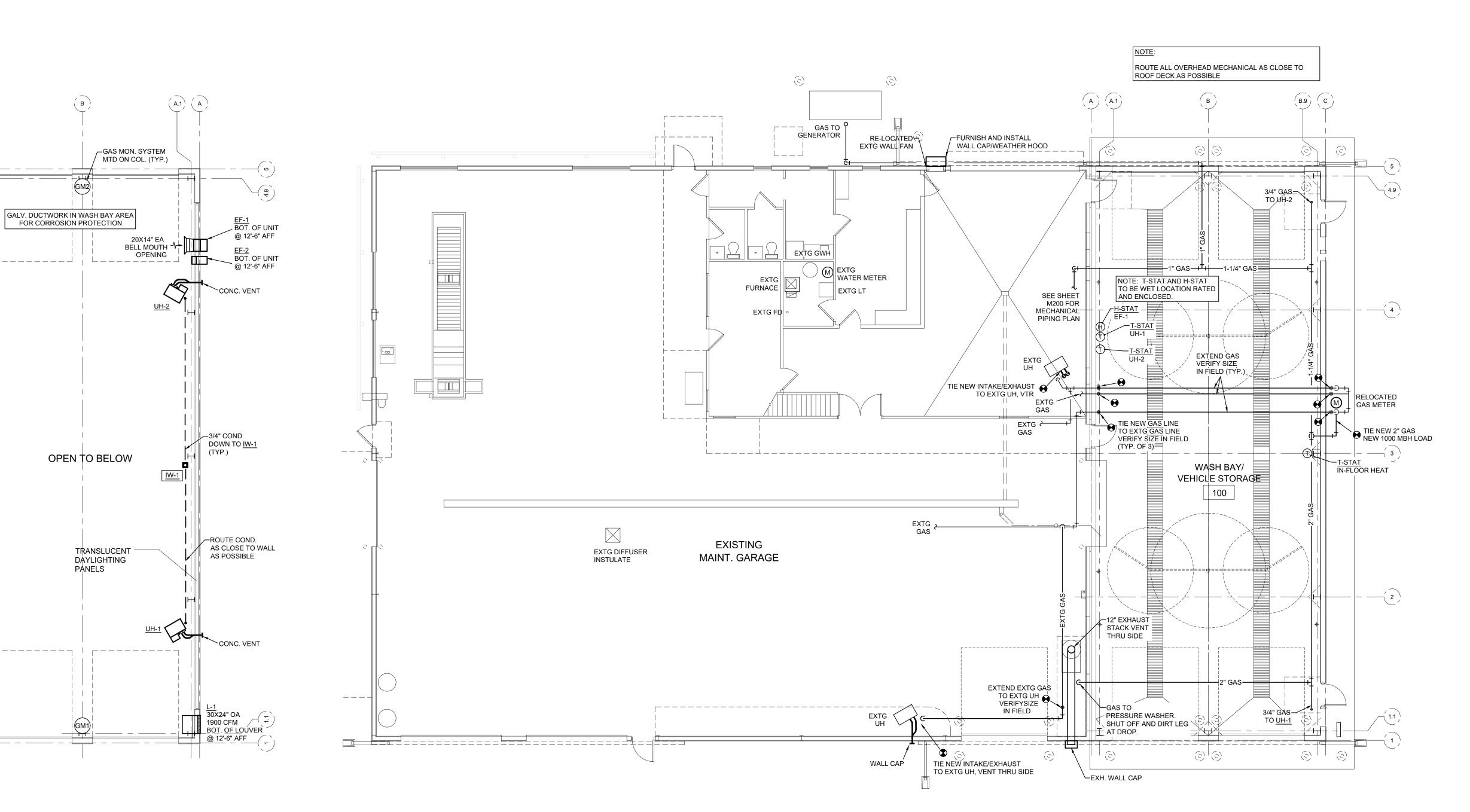
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Sheet Title:
MECHANICAL
FLOOR PLAN

Project Number: 521558

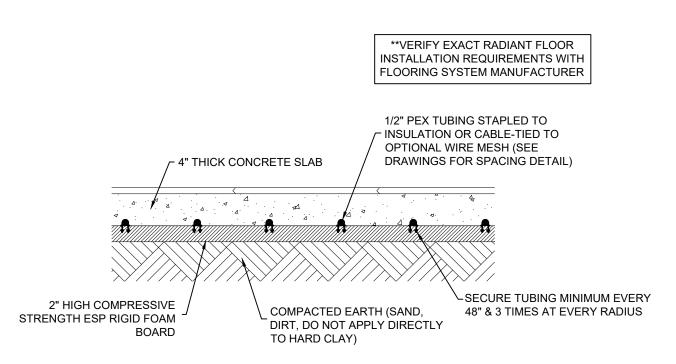
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RADIANT FLOOR DETAIL

Scale: None

15 GPM NEW CONSECUTIVE TEES (4) PIPE DIAMTERS, OR 12" MAXIMUM HIGH CAPACITY
AIR VENT TEMPERATURE GAGE (RETURN SIDE) TEMPERATURE GAGE (SUPPLY SIDE) 15 GPM 🔁 DRAIN VALVE <u>AS-1</u> AIR SEPARATOR **ZONE PUMPS** ☐—— CIRCUIT SETTER BP-1 VAR. —— TEMPERATURE GAGE (RETURN SIDE) SPEED -CHECK VALVE (TYP.) PRESSURE GAGE (TYP.) BALL VALVE (TYP.)——↓ FS - SLOW SWITCH 1-1/2" HWR — GAS-APPLIANCE CONNECTION W/ ~ SHUT-OFF, UNION & DIRT LEG (TYP) 3/4" BOILER DRAIN (TYP.) <u>GF-1</u> 30% PROPYLENE GLYCOL <u>ET-1</u> EXPANSION TANK MAN-2 5-LOOP MANIFOLD @ 1 GPM/LOOP W/ RETURN-SIDE MAN-1 4-LOOP MANIFOLD @ 2.5 GPM/LOOP CONDENSATE NEUTRALIZATION KIT PUMP 3/4" COND. TO INDIRECT WASTE W/ RETURN-SIDE

SNOW MELT SYSTEM PIPING SCHEMATIC

HEATING BOILER

BALANCE VALVES

SLEEVE ALL TUBING CONCRETE ENTRIES AND EXITS

BALANCE VALVES

N
MECHANICAL PIPING FLOOR PLAN

SCALE: 1/8"=1'-0"



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Sheet Title:
MECHANICAL
PIPING

FLOOR PLAN

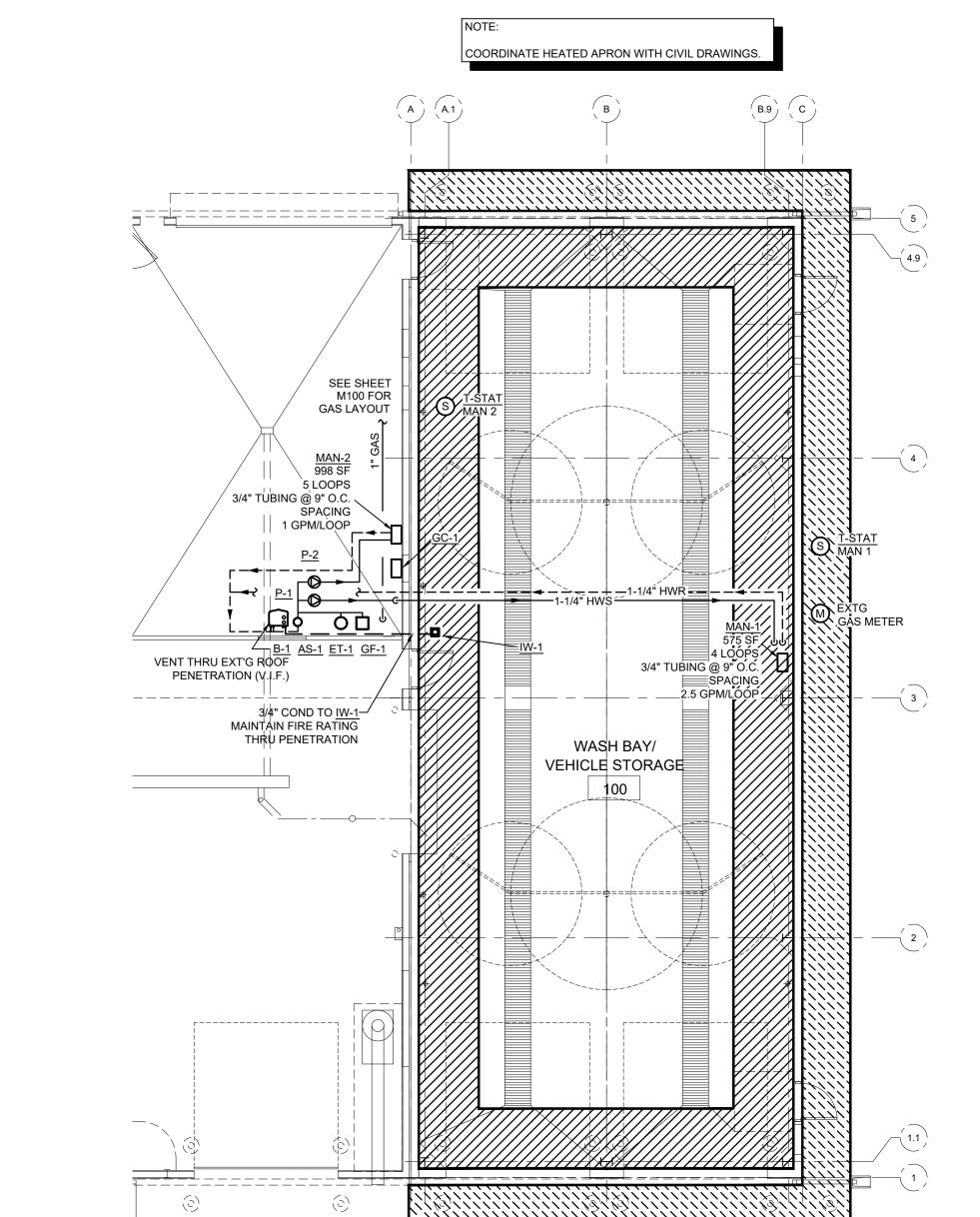
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2021

2021



NOTE:

ROUTE ALL OVERHEAD PIPING AS CLOSE TO DECK

AS POSSIBLE. COORDINATE PIPE ROUTING WITH

OVERHEARD DOORS, PRESSURE WASHER BOOMS,

AND OTHER EQUIPMENT CLEARANCES.

GAS MONITORING SYSTEM												
TAC	DESCRIPTION			MOUNTING	G ELECTRICAL		No.					
TAG	DESCRIPTION	MANUFACTURER AND MODEL #	ACTIVATION	HEIGHT	VOLTAGE	M.F.S.	NOTES:					
GC-1	GAS DETECTION SYSTEM CONTROLLER	ARMSTRONG GAS DETECTION MONITOR MODEL AMC-1AD MULTI-DROP GAS MONITOR	RELAYS (1) CONTROL DAMPERS AND (1) EXHAUST FANS AND PROVIDES VISUAL ALARM	48" AFF	120/60/1Ø	15	GAS MONITORING SYSTEM COMPRISED OF (1) GAS MONITOR CONTROLLER AND (2) WIRELESS GAS MONITORS.					
GM-1,2 ZONE 1	CARBON MONOXIDE AND NITROGEN DIOXIDE GAS SENSOR	AMSTRONG MULTI-DROP GAS SENSOR MODULE MODEL AMC-1222 CARBON MONOXIDE AND NITROGEN DIOXIDE	ALL NO2 AND CO DETECTION CO SENSOR RELAYS: GC-1 WHEN CO EXCEEDS 25.0 PPM NO2 SENSOR RELAYS GC-1 WHEN NO2 LEVELS EXCEED 3.0 PPM	60" AFF	-	-	CONTRACTOR SHALL INCLUDE ALL NECESSARY EQUIPMENT, WIRING, ETC., FOR COMPLETE INSTALLATION AND OPERATION.					

	GAS-FIRED UNIT HEAT SCHEDULE																		
TAG		MANUFACTURER -	FAN DATA				CAPACITY		BURNER DATA					ELECTRICAL					
	LOCATION	AND MODEL	AIRFLOW (CFM)	TYPE	HP	INPUT (MBH)	OUTPUT (MBH)	EFF.	FUEL	FUEL CONN.	MANIFOLD / GAS TRAIN	VENT Ø"	WEIGHT	VOLTAGE	TOTAL AMPS	CONTROLS	TROLS STANDARD FEATURES	OPTIONS / ACCESSSORIES	NOTES:
UH-1	WASH BAY/ VEHICLE STORAGE 100	MODINE MODEL PTC55	1097	PROP.	1/8	55	51.15	93	N.G.	1/2"	SINGLE STAGE	3"	93 LBS.	115V/60/1Ø	4.35	WALL THERMOSTAT	1. DIRECT SPARK-IGNITED 2. HIGH LIMIT SWITCHES 3. FAN INLET GUARD		CONTRACTOR TO PROVIDE ALL NECESSARY MOUNTING HARDWARE, STRUT, HANGERS, ETC.
UH-2	WASH BAY/ VEHICLE STORAGE 100	MODINE MODEL PTC85	1650	PROP.	1/8	85	79.05	93	N.G.	1/2"	SINGLE STAGE	3"	125 LBS	115V/60/1Ø	4.35	WALL THERMOSTAT	4. WIRING PACKAGE 5. CONTROL STEP DOWN TRANSFORMER 6. CONTRACTOR CONVENIENCE PACKAGE	4. PECO TH-115; 24V 5. CONDENSATE PUMP	

	BOILER SCHEDULE												
TAG	LOCATION & SERVICE	MANUFACTURER & MODEL NO.	INPUT (MBH)	OUTPUT (MBH)	DESIGN EWT (°F)	DESIGN LWT (°F)	GAS CONN.	INLET WATER CONN.	OUTLET WATER CONN.	AIR INLET	VENT SIZE	CONTROLS	REMARKS
B-1	EXISTING STORAGE/ IN-FLOOR HEAT & SNOWMELT SYSTEM	LOCHINVAR WHB155N	155	144	100	120	1/2"	1"	1"	3"	3"	SMART SYSTEM CONTROL ACCESSIBLE VIA WIFI OR MOBILE APP	1234

② - CONCENTRIC VENT KIT
③ - ECM BOILER CIRCULATOR; BP-1
④ - DIRECT VENT VERTICAL OPTION

	MECHANICA	L EQUIPMENT SO	CHEDULE
TAG	LOCATION/ SERVICE	DESCRIPTION	NOTES/ ACCESSORIES
AS-1	EXISTING STORAGE/ IN-FLOOR HEAT & SNOWMELT SYSTEM	CALEFFI MODEL 5460: AIR & DIRT SEPARATOR; 15 GPM, 1-1/4" NPT	COALESCING MEDIUM
ET-1	EXISTING STORAGE/ IN-FLOOR HEAT & SNOWMELT SYSTEM	BELL & GOSSETT # HFT-15: PRE-CHARGED, NON-ASME EXPANSION TANK	HEAVY DUTY BUTYL RUBBER DIAPHRAGM
FIL-1	EXISTING STORAGE/ IN-FLOOR HEAT & SNOWMELT SYSTEM	SHELCO FOS; 1/2" PIPE SIZE NPT, STAINLESS STEEL,	TEE HANDLE, BRACKET KIT
GF-1	EXISTING STORAGE/ IN-FLOOR HEAT & SNOWMELT SYSTEM	WESSELS GLYMATIC GLYCOL MAKE-UP PACKAGE MODEL GMP-6, 6 GALLON, 1/2" NPT CONN.	110V PUMP
BP-1	EXISTING STORAGE/ IN-FLOOR HEAT & SNOWMELT SYSTEM	LOCHINVAR ECM BOILER PUMP; 1-1/2" FLANGE	115 V, 1 PHASE, MAX LOAD: 7.0 A

	PUMP SCHEDULE							
TAG	DESCRIPTION	MANUFACTURER &	FLOW (GPM)	HEAD (FT. H2O)	ELECTRICAL			CONTROL DATA
IAG	DESCRIPTION	MODEL NO.			VOLTAGE	HP	RPM	CONTROL DATA
P-1	SNOWMELT PUMP 30% PROP. GLYCOL	BELL & GOSSETT ECOCIRC XL 55-45	10	30	208-230 V	0.244	3480	SNOWMELT ZONE CONTROL & TEMP./MOISTURE SENSOR
P-2	IN-FLOOR PUMP 30% PROP. GLYCOL	BELL & GOSSETT MODEL PL-36	5	29	115 V	1/6	3300	SLAB-SENSOR

			EXH	-AUS	T FAN	SCHE	DULE	-		
TAG	MANUFACTURER	LOCATION	AIRFLOW	E.S.P.	SOUND LEVEL	ELE	CTRICAL		CONTROL DATA	OPTIONS
TAG	& MODEL NO.	LOCATION	(CFM)	(IN W.G.)	(SONES)	VOLTAGE	HP	FLA	- CONTROL DATA	OPTIONS
EF-1	GREENHECK SE1-14-432-VG	WASH BAY	1,900	0.2	9.6	115 V	1/4	3.8	GAS MONITORING SYSTEM + HUMIDITY + MANUAL OVERIDE	1, 2, 3
EF-2	GREENHECK SE1-8-440-D	WASH BAY	132	0.28	5.1	115 V	1/30	NA	CONTINUOUS	2, 3
1. BACKD 2. 90° WE	FAN OPTIONS: 1. BACKDRAFT DAMPER (MOTORIZED) 2. 90° WEATHERHOOD 3. WALL HOUSING & BIRD SCREEN									

	LOUVER SCHEDULE										
TAG	TAG MANUFACTURER LOCATION AND SERVI		THICKNESS SIZE		MATERIAL	COLOR &	AIRFLOW	VELOCITY	APD (IN	REMARKS	
	& MODEL	TYPE/SERVICE	FLANGED	(IN)	(IN)		FINISH	(CFM)	(FPM)	ŴG)	
L-1	GREENHECK ESD-635	STATIONAY EXTRUDED LOUVER WITH DRAINABLE BLADES AND 1/4" BIRD SCREEN	YES 1-1/2"	6"	30x24	ALUMINUM	COLOR BY ARCH	1,900	837	0.15"	INCLUDE LOW-LEAKAGE MOTORIZED DAMPER (VCD-33) W/ TRANSFORMER, INTERLOCKED WITH EF-1



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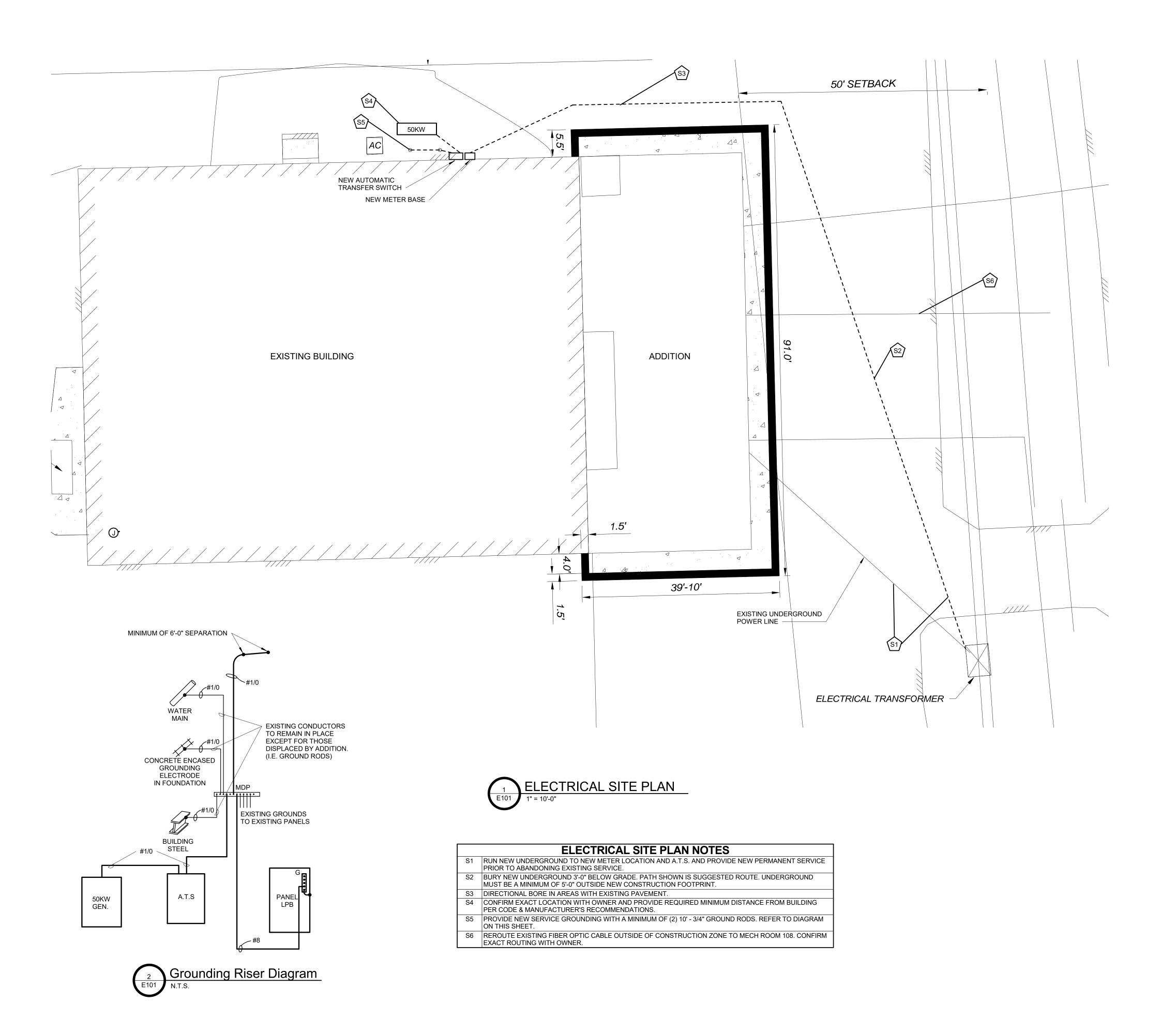
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Project: GLADWIN TRANSPORTATION MAINTENANCE **EXPANSION**

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Sheet Title: MECHANICAL SCHEDULES





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Project: Project: GLADWIN TRANSPORTATION **MAINTENANCE EXPANSION**

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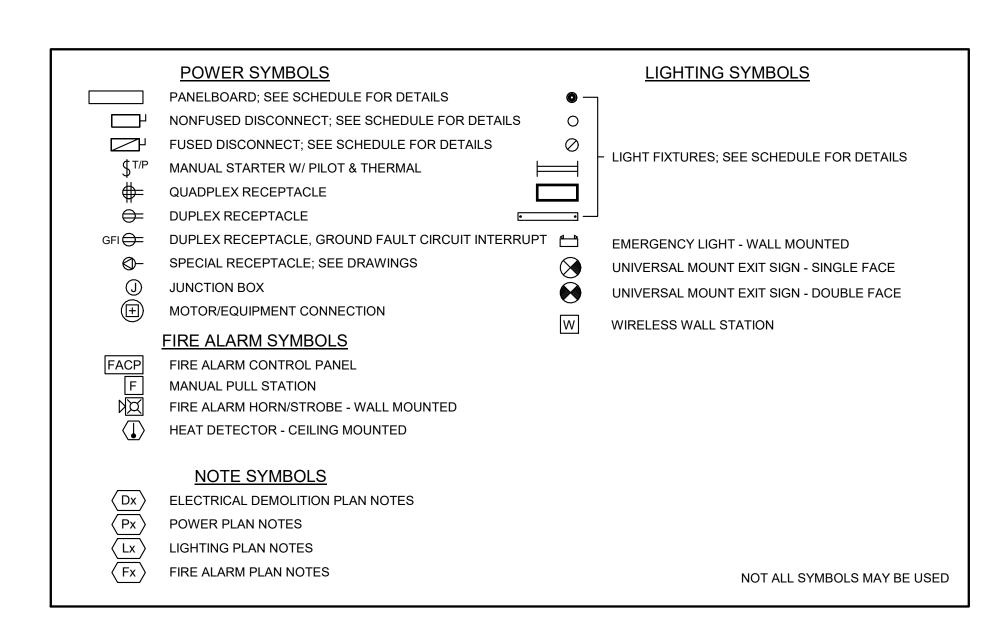
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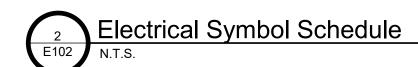
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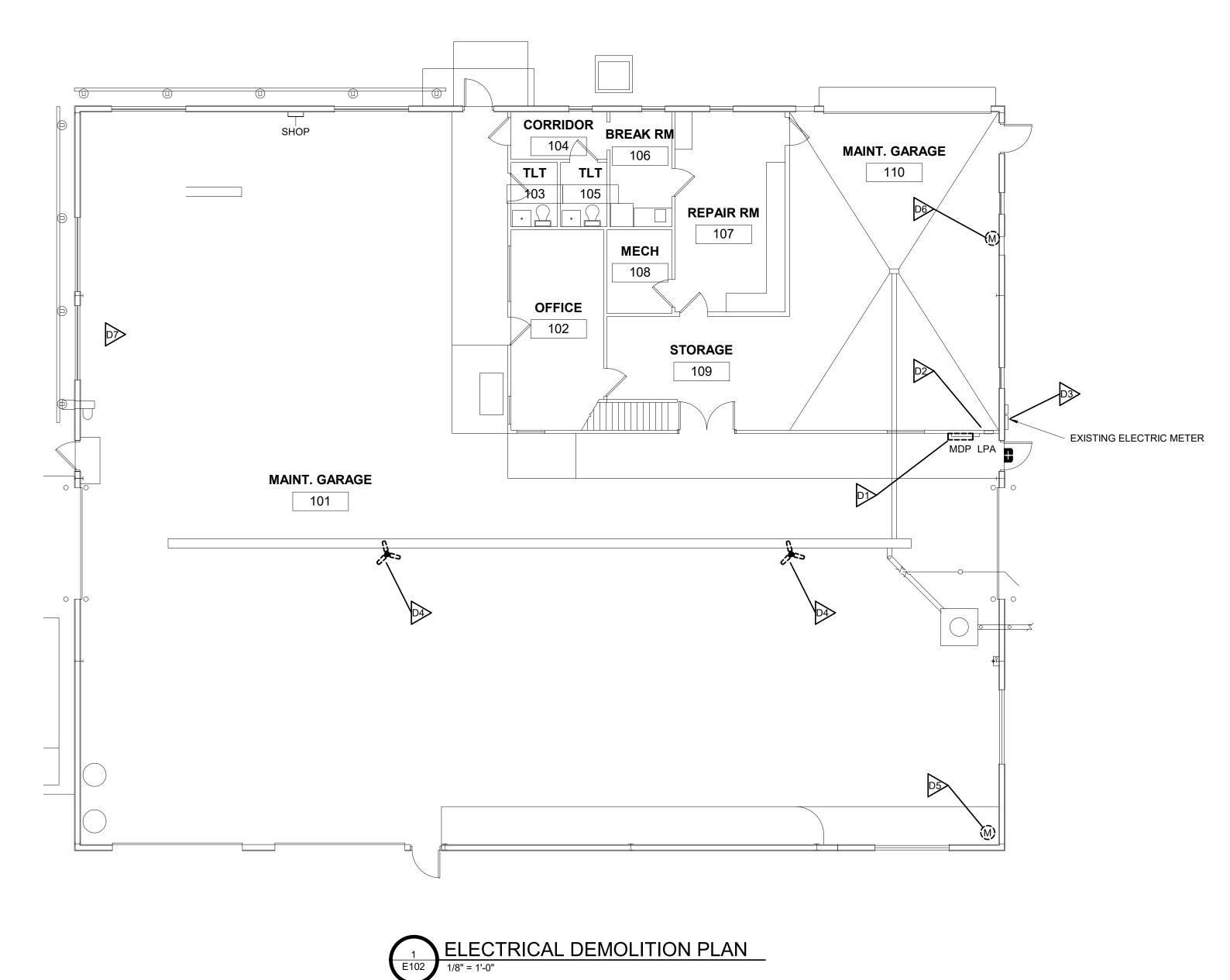
Sheet Title: ELECTRICAL SITE PLAN





ABBREVIATIONS GRC GALVANIZED RIGID CONDUIT IG ISOLATED GROUND N/L NIGHT LIGHT A AMPERE AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AHU AIR HANDLING UNIT PVC CONDUIT PHOTO-ELECTRIC DETECTOR BSI BUILDING SYSTEM INTEGRATION REMOVE C CONDUIT RL LOW VOLTAGE RELAY RTU ROOF TOP UNIT CUH CABINET UNIT HEATER EMT ELECTRICAL METALLIC TUBING EF EXHAUST FAN TEL TELEPHONE EWC ELECTRIC WATER COOLER TV TELEVISION EWH ELECTRIC WATER HEATER WC WATER COOLER WG WIRE GUARD FA FIRE ALARM FMC FLEXIBLE METALLIC TUBING WP WEATHERPROOF GFCI GROUND FAULT CIRCUIT INTERRUPTER





	ELECTRICAL DEMOLITION PLAN NOTES
D1	REPLACE EXISTING MDP PANEL WITH NEW IN THE SAME LOCATION. PROVIDE NEW FEEDER FROM NEW ATS AND NEW SERVICE ENTRANCE METER LOCATION. ALTERNATE #E1.
D2	REPLACE EXISTING PANEL LPA INTERIOR AND COVER AT THIS LOCATION. CONFIRM ACTUAL ACTIVE CIRCUITS AND RECONNECT WITH NEW BREAKERS. PROVIDE ACCURATE PANEL SCHEDULE. ALTERNATE #E1.
D3	REMOVE EXISTING ELECTRIC METER FROM EXTERIOR WALL ONCE PERMANENT POWER HAS BEEN RE-ESTABLISHED TO BUILDING.
D4	REMOVE EXISTING CEILING FAN. RETAIN POWER WIRING FOR NEW FAN AT THE SAME LOCATION.
D5	DISCONNECT POWER AND CONTROL WIRING FROM UNIT HEATER IN THIS AREA. RETAIN CONDUIT BACK TO PANEL. UNIT HEATER TO BE RE-INSTALLED. REFER TO DRAWING E103.
D6	DISCONNECT POWER AND CONTROL WIRING FROM THRU WALL FAN IN THIS AREA. RETAIN CONDUIT BACK TO PANEL. THRU WALL FAN TO BE RE-INSTALLED. REFER TO DRAWING E103.
D7	DISCONNECT POWER AND CONTROL WIRING FROM IN FLOOR LIFT IN THIS AREA. POWER CIRCUIT TO BE RE-USED FOR NEW REPLACEMENT LIFT.



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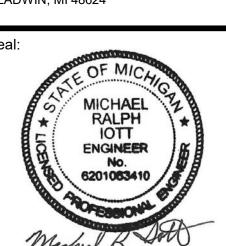
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Sheet Title:
ELECTRICAL
DEMOLITION PLAN,
SYMBOL SCHEDULE
& ABBREVIATIONS

Project Number:

Sheet Number: E102

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ELECTRICAL POWER & SYSTEMS PLAN NOTES

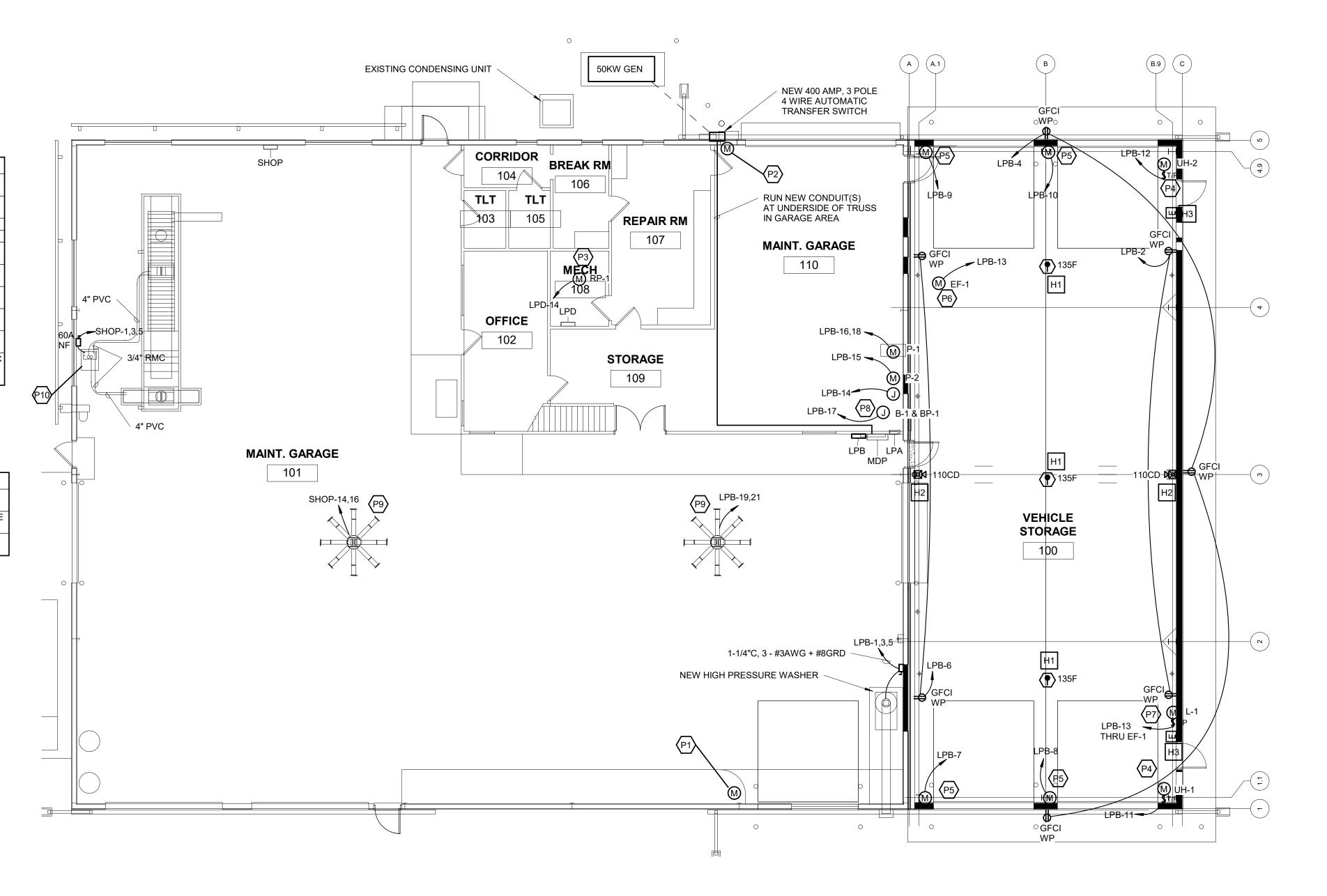
- P1 EXTEND CONDUIT FROM PANEL TO THIS RE-LOCATED UNIT HEATER LOCATION. PULL NEW CONDUCTORS FROM PANEL AND RECONNECT CONTROL DEVICE.
- P2 EXTEND CONDUIT FROM PANEL TO THIS RE-LOCATED THRU WALL FAN LOCATION. PULL NEW CONDUCTORS FROM PANEL AND RECONNECT CONTROL DEVICE.
- P3 PROVIDE POWER TO 1/40 HP RECIRCULATING PUMP WITH AQUASTAT PROVIDED BY M.C.
- P4 PROVIDE AND INSTALL MANUAL MOTOR STARTER AND POWER TO NEW UNIT HEATER. CONFIRM EXACT LOCATION WITH M.C.
- P5 PROVIDE POWER TO OVERHEAD DOOR OPERATOR AND INTERCONNECTION WIRING BETWEEN DOOR CONTROLS AND ACCESSORIES. CONFIRM EXACT OPERATOR LOCATION WITH SUPPLIER.
- P6 PROVIDE POWER TO ROOFTOP EXAUST FAN AND INTERCONNECT WITH MOTORIZED LOUVER L-1. CONFIRM LOCATIONS OF BOTH
- WITH M.C.

 P7 PROVIDE AND INSTALL MANUAL MOTOR STARTER (DISCONNECT) AND POWER TO MOTORIZED LOUVER FROM ROOFTOP EXAUST FAN. CONFIRM EXACT LOCATION WITH M.C.
- P8 PROVIDE POWER TO BOILER B-1 AND INTERCONNECTION WIRING WITH BOILER PUMP BP-1. COORDINATE WITH EXACT
- REQUIREMENTS WITH M.C.

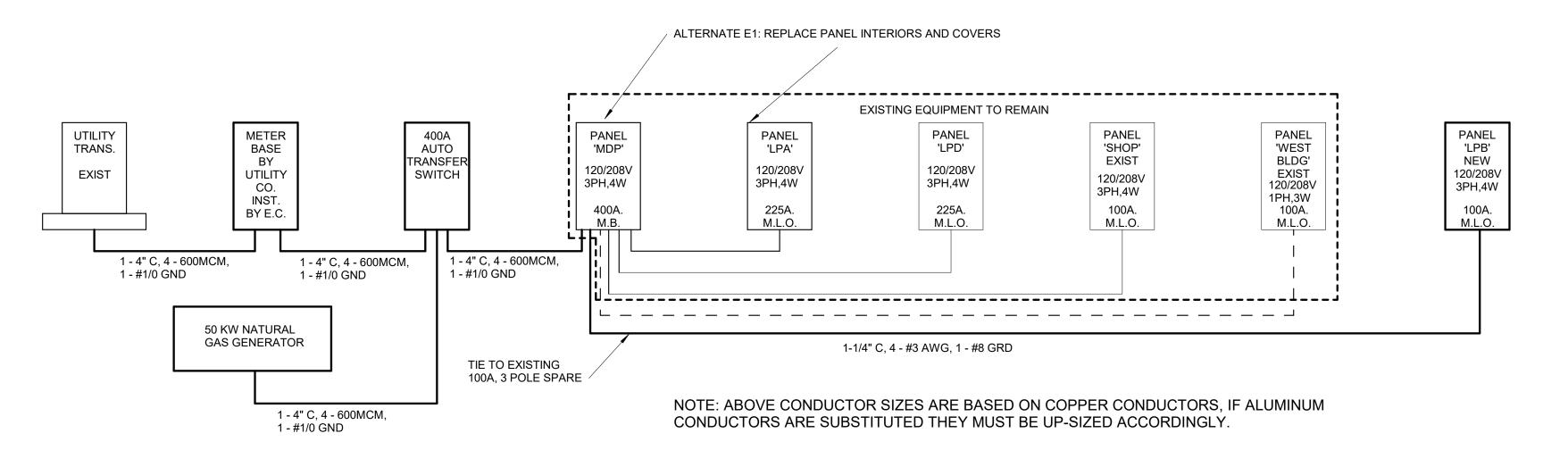
 P9 PROVIDE AND INSTALL BIG ASS FAN MODEL BASIC 6 (14FT) WITH STANDARD CONTROLLER. MOUNT CONTROLLER IN LOCATION DIRECTED BY OWNER.
- P10 PROVIDE POWER FOR NEW INFLOOR LIFT. (DEMO POWER TO EXISTING PIT EQUIPMENT) PROVIDE BOTH (2) 3/4" RMC AMD (2) 4" PVC CONDUIT FOR UTILITIES TO INFLOOR UNITS. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH EQUIPMENT SUPPLIER AND OWNER.

FIRE ALARM NOTES

- H1 PROVIDE AND INSTALL HEAT DETECTOR OF THE SAME MANUFACTURER AND COMPATIBLE WITH THE EXISTING SYSTEM AND INTEGRATE IT INTO EXISTING DETECTOR CIRCUIT.
- H2 PROVIDE AND INSTALL HORN/STROBE OF THE SAME MANUFACTURER AND COMPATIBLE WITH THE EXISTING SYSTEM AND INTEGRATE IT INTO EXISTING NOTIFICATION CIRCUIT.
- PROVIDE AND INSTALL MANUAL PULL STATION OF THE SAME MANUFACTURER AND COMPATIBLE WITH THE EXISTING SYSTEM AND INTEGRATE IT INTO PULL STATION CIRCUIT.











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Key Plan: No Scale

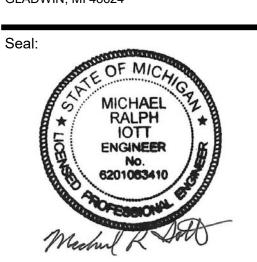
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Client:
GLADWIN CITY COUNTY

TRANSIT

Project:
Project: GLADWIN
TRANSPORTATION
MAINTENANCE
EXPANSION

621 WEAVER COURT GLADWIN, MI 48624



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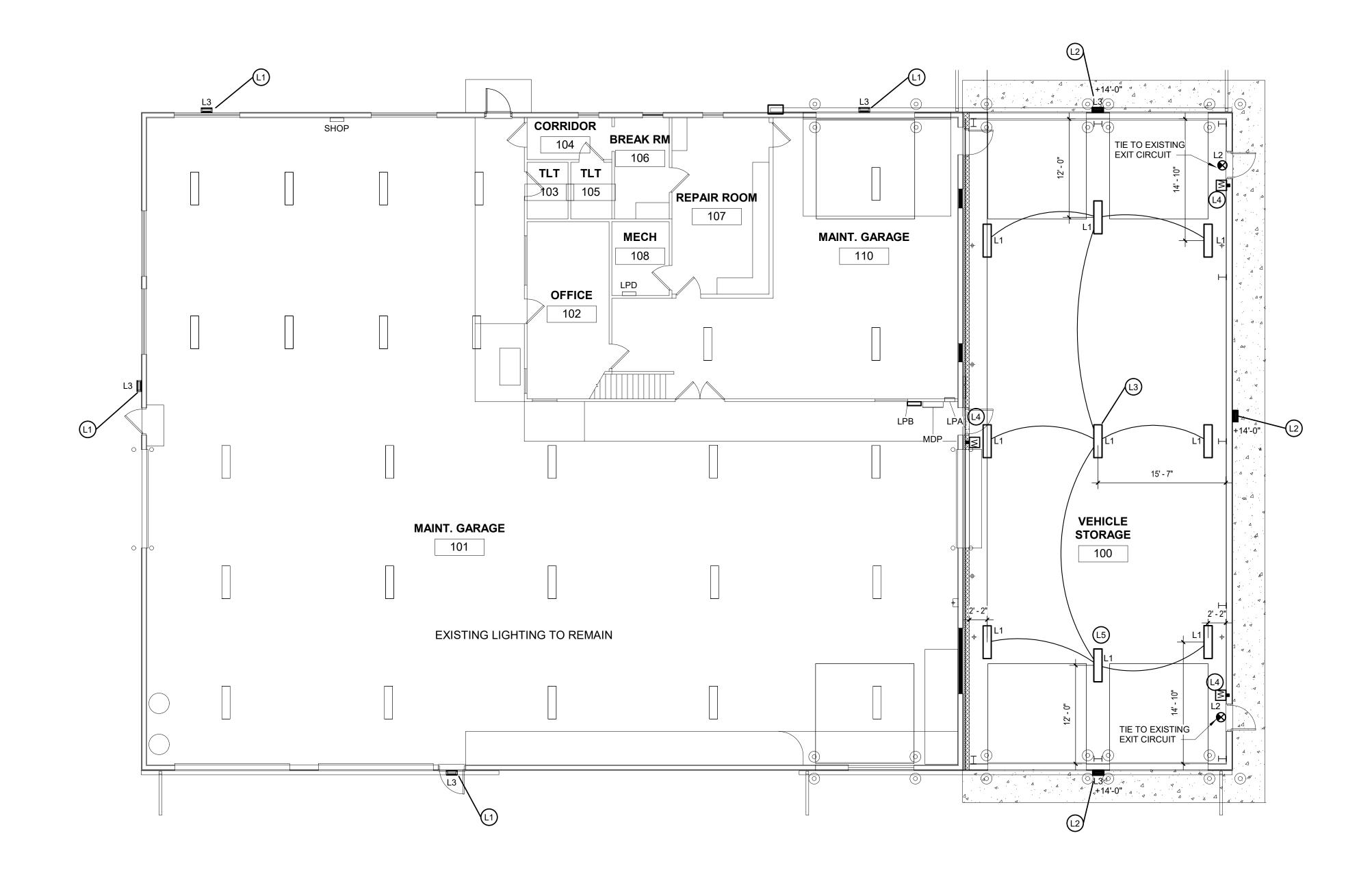
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POWER & SYSTEMS
PLAN

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Project Number:

Sheet Number: E103

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	LIGHTING PLAN NOTES
Ī	L1 REPLACE EXTERIOR LIGHT FIXTURE WITH NEW LED FIXTURE AT THIS LOCATION AND CONNECT TO EXISTING EXTERIOR LIGHT CIRCUIT. 1ST FIXTURE IN CIRCUIT TO BE EQUIPED WITH PHOTOCELL TO CONTROL ALL EXTERIOR FIXTURES.
	L2 PROVIDE NEW FIXTURE AND CONNECT TO EXISTING EXTERIOR LIGHT CIRCUIT

L3 MOUNT FIXTURE AT BOTTOM OF TRUSS. FIXTURES ARRANGED TO AVOID INTERFERENCE WITH OVERHEAD DOORS AND WASH EQUIPMENT. (TYPICAL FOR ALL L1)

L4 PROVIDE WAVELINX LITE WIRELESS WALLSTATION AND PAIR WITH INTEGRAL SENSORS ON FIXTURES. PROVIDE WEATHERPROOF COVER. (TYPICAL)

L5 PROGRAM LIGHTING IN THIS AREA SUCH THAT UPON ANY SENSOR DETECTING OCCUPANCY, LIGHTING IS ENERGIZED TO 30% FOR WALKTHRU LIGHTING. LIGHTING CAN THEN BE RAISED TO 100% AT ANY WALLSTATION.

	LUMINAIRE SCHEDULE														
Type	Mount	Fixture Description	Lamp Description	Input Wattage	Basis of Design	Approved Manufacturer 1	Approved Manufacturer 2								
L1		4' HIGH OUTPUT VAPORTITE INDUSTRIAL, SEALED & GASKETED,IP65 & IP67 RATED WITH INTEGRAL OCCUPANCY AND DAYLIGHT SENSOR.	LED; 23455 LUMENS; 4000°K; 80CR	179 VA	METALUX VT4LED-LD5-24-DRF-UNV-L840-WLS4	LITHONIA FHE L48 24000LM ACL MD MVOLT GZ10 40K 80CRI	COLUMBIA LXEW4-40HV-CAW-EDU								
L2	SURFACE	EXIT LIGHT; WHITE THERMOPLASTIC WITH RED LETTERS; UNIVERSAL VOLTAGE; AC ONLY.	LED (INCL)	5 VA	LITHONIA LV S W 1 R 120/2774X	DUAL-LITE EVE 4X R A	SURE-LITES LPXW 6 1R WH								
L3	WALL	DIE-CAST ALUMINUM HOUSING, SQUARE LUMINAIRE. TYPE III OPTICS; NIGHTTIME FRIENDLY. PROVIDE 1ST FIXTURE IN CIRCUIT WITH INTEGRAL PHOTOCELL.	LED; 10,054 LUMENS NOMINAL; 4000°K; 70CRI.	71 VA	LITHONIA WDGE3 LED P3 40K 70CRI R3 MVOLT SRM	ELITE OWP-FC-311-LED-10000L	LUMARK AXCL8A								



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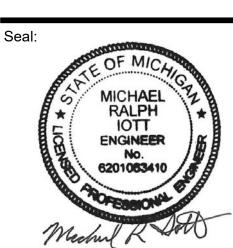
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GLADWIN CITY COUNTY
TRANSIT

Project:
Project: GLADWIN
TRANSPORTATION
MAINTENANCE
EXPANSION

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Date 02/12/24

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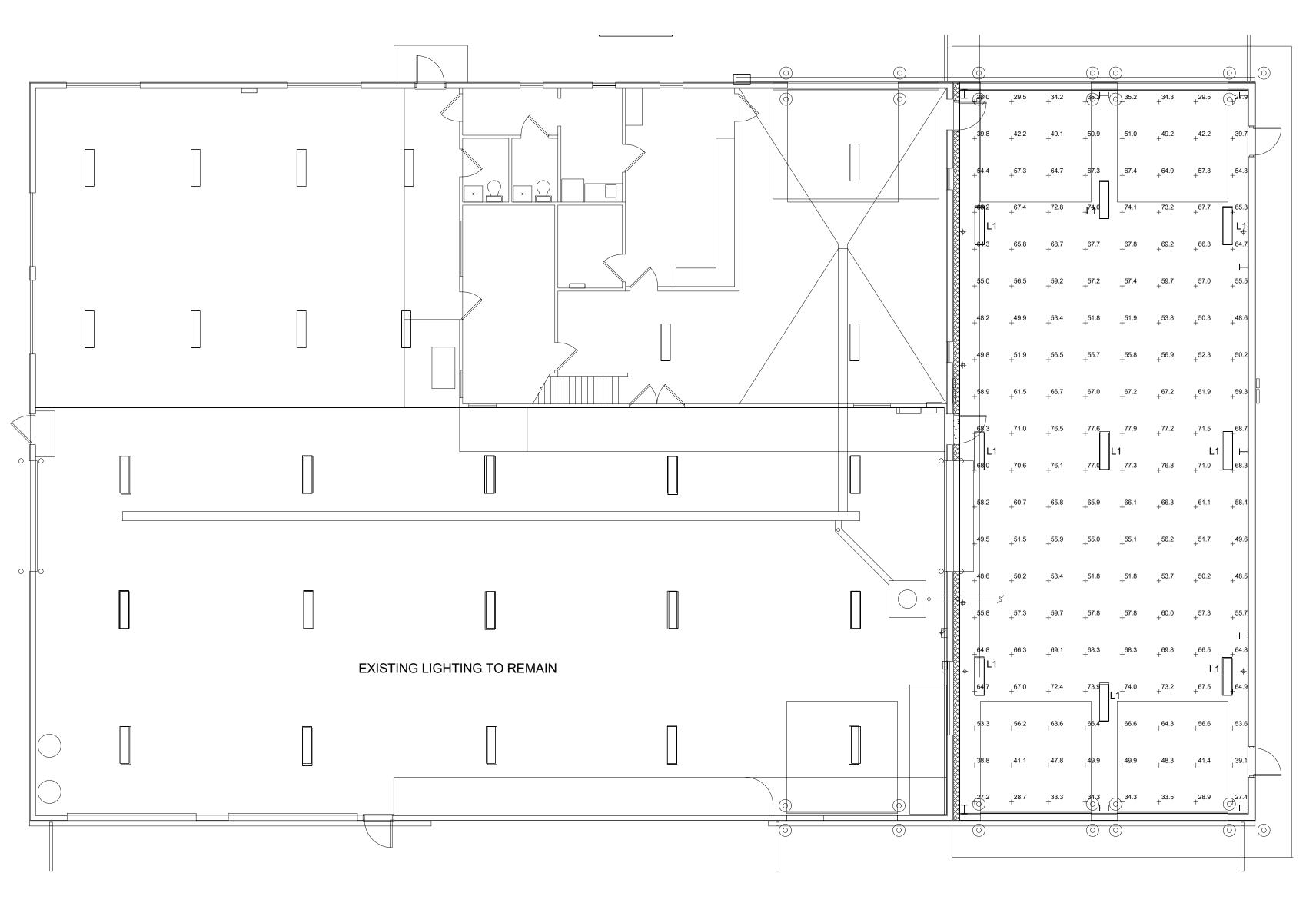
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Sheet Title:
LIGHTING PLAN

Project Number: 21

Sheet Number: E104

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Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Addition Photometric	+	57.2 fc	77.9 fc	27.2 fc	2.9:1	2.1:1



Description	# Luminaires	Total Watts	Area	Density
Addition Power Density	9	1613.7 W	2560.0 ft2	0.6 W/ft2





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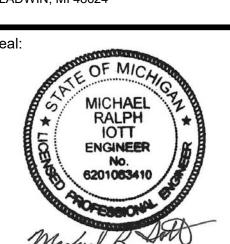
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GLADWIN CITY COUNTY

Project:
Project: GLADWIN
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LIGHTING
PHOTOMETRICS
AND POWER
DENSITY

Project Number: 21558

Sheet Number: E105

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EXISTING PANELS

	Distribution Board: N	MDP										
	Location:				/208 Wye		A.I.C. Rating:					
	Supply From:			ses: 3			Mains Type: Lugs Only					
	Mounting: S		Wi	ires: 4			Mains Rating: 400 A					
	Enclosure: 7	• •					MCB R	ating: 400 A				
	Manufacturer: S	Square D	Mo	odel: I-Lir	ne HCM		1	1				
СКТ	Circ	cuit Description		# of	Frame	Trip	Load	Remarks				
1	LPB			3	100 A	100 A	34649					
2					200 A	200 A	72056					
3	LPA			3	200 A	200 A	22355					
4					200 A	125 A	4375					
5	WEST BUILDING			3	100 A	100 A	7200					
6												
7												
8												
9												
10												
11												
12												
					Total Co							
					lot	al Amps	: 389 A					
oad (Classification	Connected Load	Demand Fact	or Est	timated De	mand		Panel Totals)			
ower		51120 VA	100.00%		51120 V	Α						
ghtin	g	5549 VA	100.00%		5549 VA		T	otal Conn. Load:	140242 VA			
IVAC		14400 VA	100.00%		14400 V	4	То	tal Est. Demand:	139426 VA			
ther		58107 VA	100.00%		58107 V	4	Tota	l Conn. Current:	389 A			
ecep	acle	9000 VA	100.00%		9000 VA	١	Total Est. D	Demand Current:	387 A			
itcher	itchen Equipment 2000 VA				2000 VA	١						
ntermi	ttent	1656 VA	50.00%		828 VA							

ALTERNATE E1: REPLACE EXISTING INTERIORS, BREAKERS AND COVERS FOR PANELS MDP AND LPA.

EXISTING PANELS

	Branch Panel: LPA Location: Supply From: MDP Mounting: Surface Enclosure: Type 1 Manufacturer: Square			Volts: Phases: Wires: Model:	4	8 Wye		A.I.C. Rating: Mains Type: Breaker Mains Rating: 225 A MCB Rating: 200 A					
СКТ	Circuit Description Trip Poles		E	В С			Poles	Trip	Circuit Description	ск			
1	SPARE	20 A	1	0	180					1	20 A	S. WALL CNTR RECEPTACLE	2
3	N WASH BAY RECEPTACLE	20 A	1	1		180	537			1	20 A	NE BAY LIGHTING	4
5	E WASH BAY LIGHTING	20 A	1					1074	1074	1	20 A	HIGH BAY MTE LIGHTING	6
7	PARTS WASH, FANS,	20 A	1	1500	500					1	20 A	EXHAUST FAN NE BAY	8
9	S. WALL RECEPTACLES	20 A	1			360	500			1	20 A	FURNACE RM LTS & RECPT	10
11	OUTDOOR LIGHTS	20 A	1					200	1000	1	20 A	REFRIGERATOR	12
13	SPARE	20 A	1	0	1000					1	20 A	MICROWAVE	14
15	UNIT HEATER	20 A	1			200	200			1	20 A	UNIT HEATER	16
17	LIGHT OVER BENCH	20 A	1					100					18
19	EMERGENCY LIGHTING	20 A	1	100	360					1	20 A	E WALL NE BAY RECEPTS	20
21	E & W OVERHEAD DOORS	20 A	1			1920	360			1	20 A	S WALL NE BAY RECEPTS	22
23	LIGHTING OVER BALANCER	20 A	1					537	1611	1	20 A	ADDITION LIGHTING	24
25	LIGHTING STORAGE & LUNCH	20 A	1	716									26
27	W & S STORAGE RECEPTS	20 A	1			360	750			2	20 A	NEW TIRE MACHINE	28
29	DEDICATED RECEPTACLE	20 A	1					180	750				30
31	TIRE CHANGER	30 A	3	1000	1000					3	30 A	TIRE CHANGER	32
33						1000	1000						34
35								1000	1000				36
37	S WALL HEATER RECEPT	20 A	1	180	0					2	20 A	SPARE	38
39	RECEPTACLE	20 A	1			180	0						40
		Tota	l Load:	645	6 VA	746	6 VA	846	5 VA				•
		Total	Amps:	54	ΙA	64	1 A	72	2 A	•			

NEW PANEL

	Location: Supply From: Mounting: Enclosure: Manufacturer:	Surface Type 1	Surface Type 1					8 Wye		A.I.C. Rating: Mains Type: Lugs Only Mains Rating: 100 A			
скт	Circuit Description	Trip	Poles	,	4	E	3	(C	Poles	Trip	Circuit Description	скт
1	PRESSURE WASHER	100 A	3	6600	360					1	20 A	EAST WALL RECEPTACLES	2
3						6600	540			1	20 A	EXTERIOR RECEPTACLES	4
5								6600	360	1	20 A	WEST WALL RECEPTACLES	6
7	SW OVERHEAD DOOR	30 A	1	1656	1656					1	20 A	SE OVERHEAD DOOR	8
9	NW OVERHEAD DOOR	30 A	1			1656	1656			1	20 A	NE OVERHEAD DOOR	10
11	UH-1	20 A	1					500	500	1	20 A	UH-2	12
13	EF-1	20 A	1	992	500					1	15 A	GC-1	14
15	P-2	20 A	1			528	564			2	20 A	P-1	16
17	B-1 & BP-1	20 A	1					1080	564				18
19	CEILING FAN	25 A	2	1040						1		SPACE	20
21			-			1040				1		SPACE	22
23	SPARE	20 A	1					0	-	1		SPACE	24
25	SPARE	20 A	1	0						1	-	SPACE	26
27	SPARE	20 A	1			0				1		SPACE	28
29	SPARE	20 A	1					0		1		SPACE	30
			I Load: Amps:		9 A	l	0 VA 7 A		7 VA) A				

	Branch Panel: SHOI	P													
1	Location:					Volts:	120/20	8 Wye		A.I.C. Rating:					
1	Supply From: MDP				F	hases:	3			Mains Type: Lugs Only					
	Mounting: Surfac	е				Wires:	4			Mains Rating: 225 A					
1	Enclosure: Type 1									MCB Rating: 225 A					
1	Manufacturer: Square			Model:	NQ										
					A	E	3	(2						
СКТ	Circuit Description	Trip	Poles								Trip	Circuit Description	CKT		
1	NEW LIFT	20 A	3	4080	2400					3	30 A	EXISTING POWER WASHER	2		
3						4080	2400						4		
5								4080	2400				6		
7	MAKE-UP AIR	20 A	3	2400	2400					3	30 A	ABOVE GROUND HOIST	8		
9						2400	2400						10		
11								2400	2400				12		
13	IN FLOOR EXHAUST	20 A	2	1456	1040					2	25 A	CEILING FAN	14		
15						1456	1040						16		
17	WELDER	50 A	2					3640	180	1	20 A	DRILL PRESS RECEPTACLE	18		
19				3640									20		
21	WEST WORK BENCH RECEPT	20 A	1			180	180			1	20 A	NE BENCH RECEPTACLE	22		
23	WEST PANEL RECEPTACLE	20 A	1					180	0	1	20 A	SPARE	24		
25	BASEBOARD HEAT DISPATCH	20 A	1	1500	0					1	20 A	SPARE	26		
27	BASEBOARD HEAT DISPATCH	20 A	1			1500	1656			1	20 A	SOUTH OVERHEAD DOOR	28		
29	TOP SOUTH OUTSIDE	20 A	1					180	2400	3	30 A	HVAC	30		
31	BOTTOM SOUTH OUTSIDE	20 A	1	180	2400								32		
33	AIR COMPRESSOR	50 A	3			3600	2400						34		
35		-						3600	500	2	20 A	HIGH BAY LIGHTS CENTER	36		
37		-		3600	500								38		
39	HIGH BAY LTS SOUTH END	20 A	2			500	500			2	20 A	WORK BENCH AREA LTS	40		
41								500	500				42		
		Tota	I Load:	2533	34 VA	2400	00 VA	2273	34 VA						
		Total	Amps:	21	3 A	20:	2 A	18	9 A						
Pane	Modifications:									•		-			
													1		
1															

	Supply From: MDP Mounting: Surface Enclosure: Type 1 Manufacturer: Square		Phases: 3 Wires: 4 Model: NQ							Mains Type: Lugs Only Mains Rating: 225 A MCB Rating: 225 A					
скт	Circuit Description	Trip	Poles	,	4	i	3	(C	Poles	Trip	Circuit Description	скт		
1	NEW LIFT	20 A	3	4080	2400					3	30 A	EXISTING POWER WASHER	2		
3						4080	2400				-		4		
5								4080	2400				6		
7	MAKE-UP AIR	20 A	3	2400	2400					3	30 A	ABOVE GROUND HOIST	8		
9						2400	2400						10		
11								2400	2400				12		
13	IN FLOOR EXHAUST	20 A	2	1456	1040					2	25 A	CEILING FAN	14		
15						1456	1040						16		
17	WELDER	50 A	2					3640	180	1	20 A	DRILL PRESS RECEPTACLE	18		
19				3640									20		
21	WEST WORK BENCH RECEPT	20 A	1			180	180			1	20 A	NE BENCH RECEPTACLE	22		
23	WEST PANEL RECEPTACLE	20 A	1					180	0	1	20 A	SPARE	24		
25	BASEBOARD HEAT DISPATCH	20 A	1	1500	0					1	20 A	SPARE	26		
27	BASEBOARD HEAT DISPATCH	20 A	1			1500	1656			1	20 A	SOUTH OVERHEAD DOOR	28		
29	TOP SOUTH OUTSIDE	20 A	1					180	2400	3	30 A	HVAC	30		
31	BOTTOM SOUTH OUTSIDE	20 A	1	180	2400								32		
33	AIR COMPRESSOR	50 A	3			3600	2400						34		
35								3600	500	2	20 A	HIGH BAY LIGHTS CENTER	36		
37				3600	500								38		
39	HIGH BAY LTS SOUTH END	20 A	2			500	500			2	20 A	WORK BENCH AREA LTS	40		
41								500	500				42		
		Tota	l Load:	2533	34 VA	2400	00 VA	2273	34 VA						
		Total	Amps:	21	3 A	20	2 A	18	9 A	-					
ane	Modifications:														

Branch Panel: LPD A.I.C. Rating:
Mains Type: Lugs Only
Mains Rating: 125 A Volts: 120/208 Wye Location: Supply From: MDP Phases: 3 Mounting: Surface Wires: 4 Enclosure: Type 1 Manufacturer: Square D Model: NQ
 Trip
 Poles
 Poles
 Trip
 Circuit Desc

 20 A
 1
 360
 360
 1
 20 A
 RECEPTACLE

 20 A
 1
 360
 360
 1
 20 A
 RECEPTACLE

 20 A
 1
 360
 360
 1
 20 A
 RECEPTACLE

 20 A
 1
 360
 360
 1
 20 A
 RECEPTACLE

 20 A
 1
 360
 360
 1
 20 A
 RECEPTACLE

 20 A
 1
 360
 360
 1
 20 A
 RECEPTACLE

 20 A
 1
 20 A
 RECEPTACLE
 RECEPTACLE
 1
 20 A
 RECEPTACLE

 20 A
 1
 20 A
 RECEPTACLE
 1
 20 A
 RECEPTACLE

 20 A
 1
 20 A
 RECEPTACLE
 1
 20 A
 RECEPTACLE

 50 A
 3
 0
 58
 1
 20 A
 RECEPTACLE

 -- -- 0
 -- 1
 -- SPA CKT Circuit Description Circuit Description 1 RECEPTACLE
3 RECEPTACLE 5 RECEPTACLE
7 RECEPTACLE 9 RECEPTACLE
11 FIRE ALARM
13 SPARE 19 SPACE 21 SPACE23 SPACE25 SPACE27 SPACE29 SPACE -- 1 -- SPACE
-- 1 -- -- 1 -- SPACE Panel Modifications:



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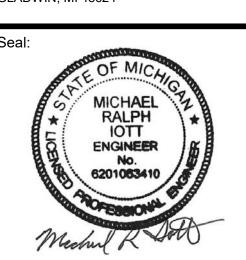
Key Plan:

GLADWIN CITY COUNTY TRANSIT

Project: Project: GLADWIN TRANSPORTATION **MAINTENANCE EXPANSION**

621 WEAVER COURT GLADWIN, MI 48624

Date 02/12/24



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PANEL SCHEDULES