CARDEN CITY PUBLIC SCHOOLS

High School Tolet Renovations

GARDEN CITY, MI PROJECT NO. 2019-069

JANUARY 21, 2020 BIDS



architects planners interiors

LIST OF DRAWINGS

|ARCHITECTURAL

- AO.01 ARCHITECTURAL REFERENCE SHEET
- .2.01 HIGH SCHOOL COMPOSITE FLOOR PLANS
 .2.10 HIGH SCHOOL TOILET ROOM RENOVATIONS DEMOLITION, NEW WORK
- A3.01 DOOR SCHEDULE, EQUIPMENT SCHEDULE, ROOM FINISH SCHEDULE, MATERIAL AND COLOR SCHEDULE, DEMOLITION NOTES
- A6.01 INTERIOR ELEVATIONS

IMECHANICAL

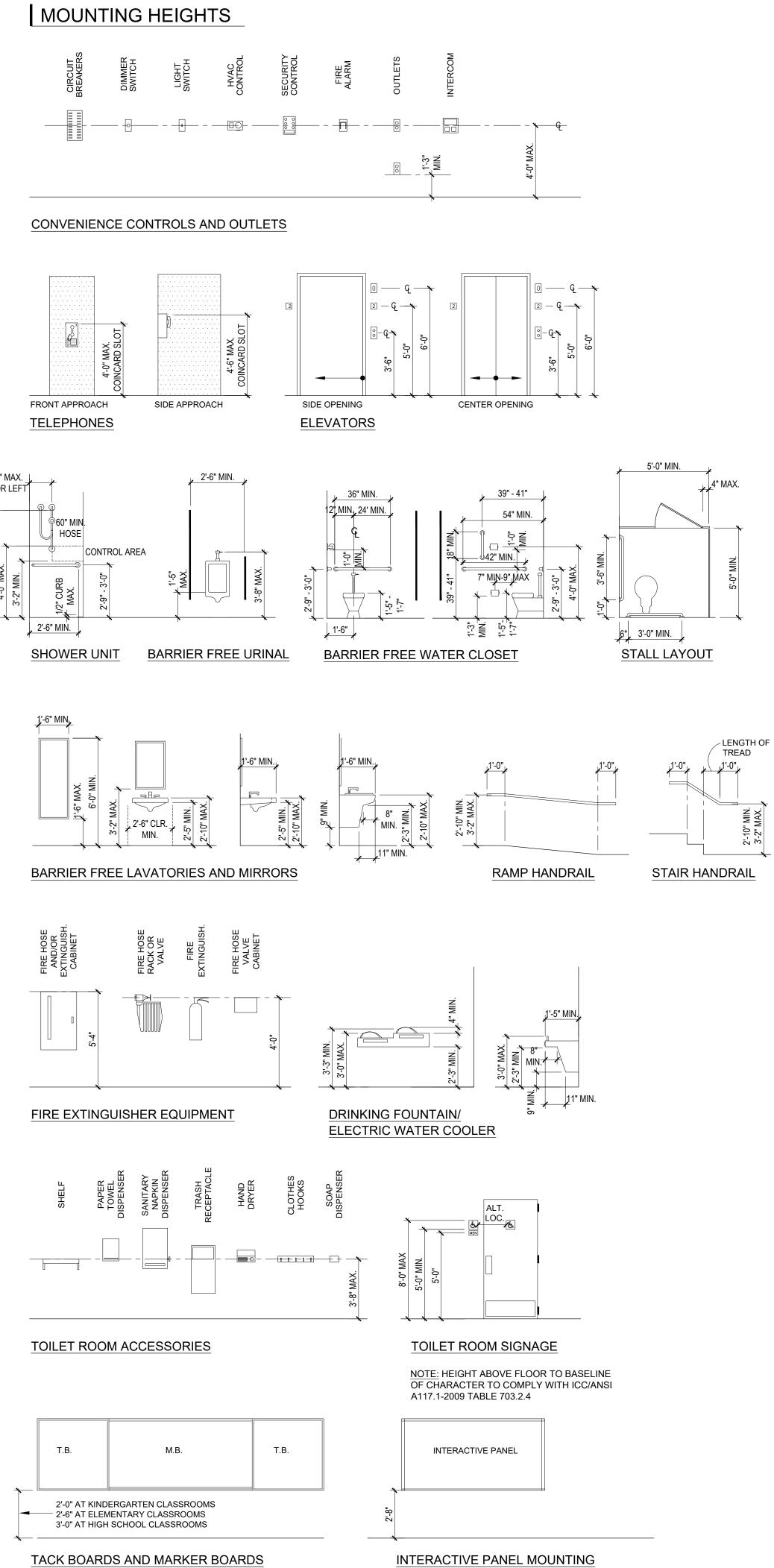
- MO.01 MECHANICAL STANDARDS AND DRAWING INDEX
- MD2.10 HIGH SCHOOL TOILET ROOM MECHANICAL DEMOLITION PLANS
- M2.10 HIGH SCHOOL TOILET ROOM MECHANICAL NEW WORK PLA
- M6.01 MECHANICAL DETAILS
- M7.01 MECHANICAL SCHEDULES

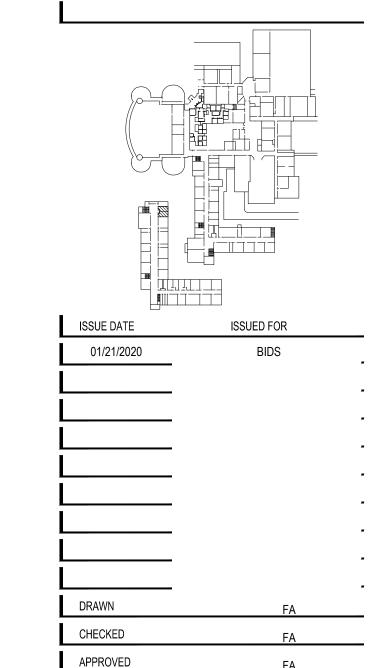
|ELECTRICAL

- 0.01 ELECTRICAL STANDARDS AND DRAWING INDEX
- E0.02 ELECTRICAL STANDARD SCHEDULES AND DETAIL
 - HIGH SCHOOL TOILET ROOM ELECTRICAL DEMOLITION PLANS
- E2.10 HIGH SCHOOL TOILET ROOM ELECTRICAL NEW WORK PLANS

MATER	RIAL LEGEND	ABE	BREVIATIONS			SYMBOL LEGEND
		AC	AIR CONDITIONING	KIT	KITCHEN	DETAIL IDENTIFICATION
	SOIL	ACOUST ADA	ACOUSTICAL AMERICANS WITH DISABILITIES ACT			
		ADJ	ADJUSTABLE	JST JT	JOIST JOINT	A DETAIL TITLE
	ASPHALT	AFF	ABOVE FINISHED FLOOR			A2.20 SCALE: 1" = 1'-0"
	AGGREGATE	AGG ALT	AGGREGATE ALTERNATE	L	LENGTH	
		AL/ALUM		LAM LAV	LAMINATE(D) LAVATORY	FOR CROSS-REFERENCING: SHEETS WHERE DETAIL IS CUT
		APPROX ARCH	APPROXIMATE ARCHITECT(URAL)	LB/#	POUND	DRAWING SYMBOL
	GRANULAR FILL	ASPH	ASPHALT	LKR LLH	LOCKER LONG LEG HORIZONTAL	
		AV	AUDIOVISUAL ANGLE	LLV	LONG LEG VERTICAL	
	STONE/GRAVEL	L	ANGLE	LOC LP	LOCATION(S) LOW POINT	DETAIL IDENTIFICATION
		BIT	BITUMINOUS	Li	EGWT GINT	
		BD BF	BOARD BARRIER FREE	MANUF	MANUFACTURER	$\frac{1}{xx_1}$
A Company of the Comp	CONCRETE	BLDG	BUILDING	MAR MB	MARBLE THRESHOLD MARKER BOARD	SHEET WHERE DETAIL IS
		BLK BLKG	BLOCK BLOCKING	MAS	MASONRY	DETAIL LOCATOR
	CONCRETE MASONRY UNIT	BM	BENCH MARK/BEAM	MAT MAU	MATERIAL MAKE UP AIR UNIT	<u>BETTALE EGOTATOR</u>
	WASONNT UNIT	BOT BRG	BOTTOM	MAX	MAXIMUM	
		BUR	BEARING BUILT-UP ROOF	MECH MEZZ	MECHANICAL MEZZANINE	INTERIOR ELEVATION IDENTIFICATION
	BRICK			MIN	MINIMUM / MINUTE	EXTERIOR ELEVATION IDENTIFICATION
		CAB CUH	CABINET CABINET UNIT HEATER	MISC	MISCELLANEOUS	$D = A5.10 B = \frac{x}{x.x.x}$
		СВ	CHALKBOARD/CATCH BASIN	MO MET/MTL	MASONRY OPENING METAL	C SHEET WHERE ELEVATION IS DRAWN
	GLAZED HOLLOW CMU	CER	CERAMIC	MT	METAL THRESHOLD	SHEET WHERE ELEVATION IS DRAWN
		CFM CEM	CUBIC FEET PER MINUTE CEMENT	NIO	NOT IN CONTRACT	ELEVATION SYMBOL
	STRUCTURAL GLAZED TILE	CJ	CONTROL JOINT	NIC NO/#	NOT IN CONTRACT NUMBER	<u>EEEV/(HOIV OTMBOE</u>
V V V V V V	OTHOGRADIE GENEED TIEE	CL CLR	CENTERLINE CLEAR	NOM	NOMINAL	
Francisco de Alberta		CLR	CEILING	NTS	NOT TO SCALE	
<u> 242035 000000443</u>	LIMESTONE	CMU	CONCRETE MASONRY UNIT	ОС	ON CENTER	BUILDING SECTION IDENTIFICATION ———
		COL COMP	COLUMN COMPACTED	OD	OUTSIDE DIAMETER	
		CONC	CONCRETE	OHD OPNG	OVERHEAD DOOR OPENING	X X X X X X X X X X X X X X X X X X X
	MARBLE	CONST	CONSTRUCTION	OPP	OPPOSITE	
		CONT CONTR	CONTINUOUS/CONTINUE CONTRACTOR			SHEET WHERE BUILDING
	FINISH WOOD	CORR	CORRUGATED	PART PL	PARTICLE PLATE/PROPERITY LINE	SECTION IS DRAWN BUILDING SECTION LOCATOR
	THIST WOOD	CPT CT	CARPET CERAMIC TILE	PLAS	PLASTER	
		CU	CONDENSING UNIT	PLAM	PLASTIC LAM	
	COMPOSITION/PLYWOOD	CUSP	CUSPIDOR	PLYWD PREFAB	PLYWOOD PREFABRICATED	
		D	DEPTH/DEEP	PSF	POUNDS PER SQUARE FOOT	PLAN OR DETAIL
	CONTINUOUS WOOD	0	DEGREE	PSI PTD	POUNDS PER SQUARE INCH PAINTED	IDENTIFICATION
	BLOCKING	DC	DISPLAY CASE	PVC	POLYVINYL CHLORIDE	X
		DEMO DTL	DEMOLISH/DEMOLITION DETAIL	_	DIOTE (DADILIO	xx
	INTERRUPTED WOOD BLOCKING OR SHIMS	DF	DRINKING FOUNTAIN	R RC	RISER/RADIUS RAIN CONDUCTOR	
		DIA/ φ DIM	DIAMETER DIMENSION	RES	RESILIENT	└── SHEET WHERE DETAIL IS DRAWN
$\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc$		DIV	DIVISION	RS REF	ROOF SUMP REFERENCE	PLAN OR DETAIL BLOW-UP
	BATT INSULATION	DMB	DRY MARKER BOARD	REFR	REFRIGERATOR	
		DWG DS	DRAWING DOWNSPOUT	REINF	REINFORCING	
	DIOID INCLUATION			REQ'D REV	REQUIRED REVISION(S)	x
	RIGID INSULATION	EA EJ	EACH EXPANSION JOINT	RF	ROOF EXHAUST FAN	
	PREMOLDED EXPANSION	EL	ELEVATION SOINT	RM RO	REMOVABLE MULLION/ROOM ROUGH OPENING	EXISTING
	JOINT OR COMPRESSIBLE FILLER STRIP	ELEC	ELECTRIC(AL)	ROW	RIGHT OF WAY	(V)
		ELEV EP	ELEVATOR ELECTRICAL PANELBOARD	RTU RV	ROOF TOP UNIT ROOF VENT	(X)
	PLASTER OR GYPSUM	EQ	EQUAL			NEW
	BOARD	EQUIP EWC	EQUIPMENT ELECTRIC WATER COOLER	S	SINK	COLUMN GRID
		EIFS	EXTERIOR INSULATION	SCHED SEC	SCHEDULE SECTION	
	CERAMIC OR QUARRY TILE	EXH	AND FINISH SYSTEM EXHAUST	SHT	SHEET	
	5_15 c., 20, <u></u>	EX/EXIST	EXISTING	SIM SPEC(S)	SIMILAR SPECIFICATION(S)	NAME A101
		EXP	EXPANSION	SPKR	SPEAKER	A101 ROOM
X	TERRAZZO	EXT	EXTERIOR	SQ SS	SQUARE SERVICE SINK/STAINLESS STEEL	FLOOR
		FD	FLOOR DRAIN	SS	SERVICE SINK/STAINLESS STEEL STANDARD	BUILDING/UNIT
$\overline{\top}$	ACOUSTICAL PANEL OR	FF FHC	FORCED FLOW CABINET HEATER	STL	STEEL	ROOM NAME AND NUMBER
	ACOUSTICAL TILE	FIN	FIRE HOSE CABINET FINISH	STRUCT SUSP	STRUCTURAL SUSPENDED	
		FIN FL	FINISH FLOOR	SCHED	SCHEDULE	
	EXISTING MATERIAL (IN SECTION)	FLR FOUND	FLOOR FOUNDATION	т.	TDEAD	BUILDING/UNIT FLOOR
	· · · · ·	FT/'	FEET	T T&B	TREAD TOP AND BOTTOM	ROOM
	EXISTING MATERIAL	FTG	FOOTING FIRE EXTINGUISHER CABINET	ТВ	TACK BOARD	A101A
	(IN PLAN)	FEC	THE EXTINGUISHER CADINET	TC TEMP	TOP OF CURB TEMPERED	
		GA	GAUGE	TER	TERRAZZO	DOOR IF MORE THAN ONE DOOR
	DEMOLITION -	GALV GB	GALVANIZE(D) GRAB BARS	TOC TOF	TOP OF CONCRETE TOP OF FOOTING	NEW DOOR PER ROOM EXISTING DOOR
	TO BE REMOVED	GHT	GLAZED HOLLOW TILE	TOM	TOP OF MASONRY	DOOR NUMBER AND SYMBOLS
		GL GLZD	GLASS GLAZED	TOS TV	TOP OF STEEL TELEVISION	
		GYP	GYPSUM	TYP	TYPICAL	^
						X-X12 2 2
		H/HGT HB	HEIGHT HOSE BIB	UNO UV	UNLESS NOTED OTHERWISE UNIT VENTILATOR	PARTITION EQUIPMENT CONSTRUCTION / DEMO
		НМ	HOLLOW METAL	Jv		TYPE TYPE NOTE
		HORIZ	HORIZONTAL	VCT	VINYL COMPOSITION TILE	ADDENDUM (ADD), CONSTRUCTION CHANGE DIRECTLY (ACC), CD
		HP HR	HIGH POINT HOUR	VCG VERT	VINYL COVERED GYPSUM BOARD VERTICAL	ADDENDUM (ADD), CONSTRUCTION CHANGE DIRECTIVE (CCD), OR ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS (ASI)
		HVAC	HEATING/VENTILATING/	VIF	VERIFY IN FIELD	$\langle \frac{\dot{x}}{x} \rangle$
			AIR CONDITIONING	1577	MUTH	ITEM NUMBER
		ID	INSIDE DIAMETER	W/ W/O	WITH WITHOUT	TEN NOIVIDEN
		IN/"	INCH	WC	WATER CLOSET	
		INCL INSUL	INCLUDE(D),(ING) INSULATION/INSULATE	WD WH	WOOD WATER HEATER	AREA OF CURRENT CHANGE AREA OF PREVIOUS CHANGE
		INT	INTERIOR	WP	WORKING POINT	
				WWF	WELDED WIRE FABRIC	MISCELLANEOUS SYMBOLS

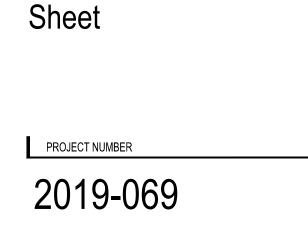
MISCELLANEOUS SYMBOLS





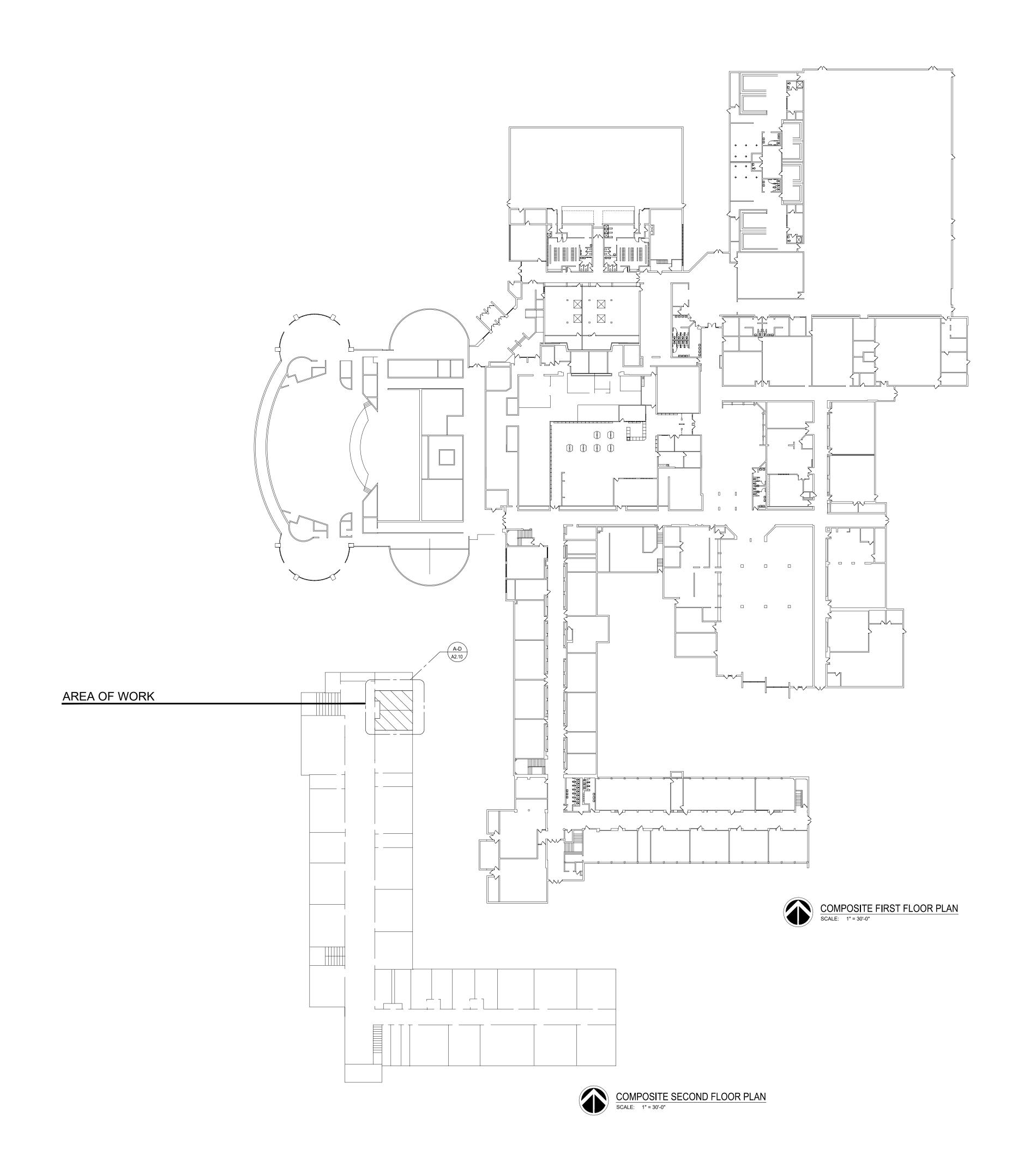


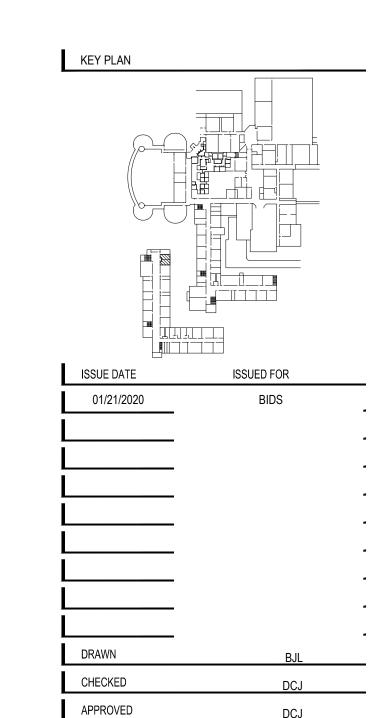




Reference

AO.01







PROJECT

Garden City
Public Schools
High School
Toilet Room Renovations

Garden City, Michigan

SHEET

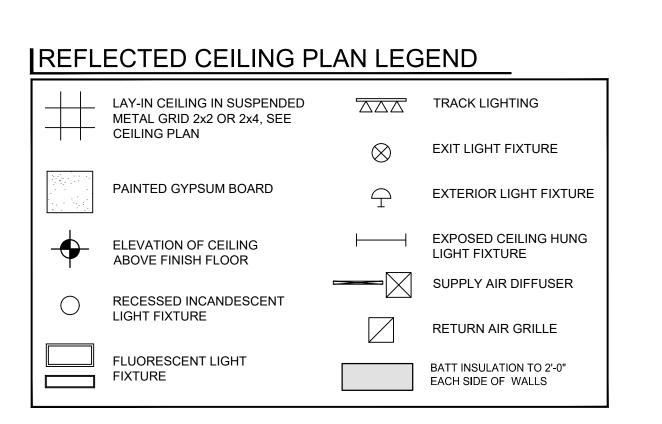
High School Composite Floor Plans

PROJECT NUMBER

2019-069

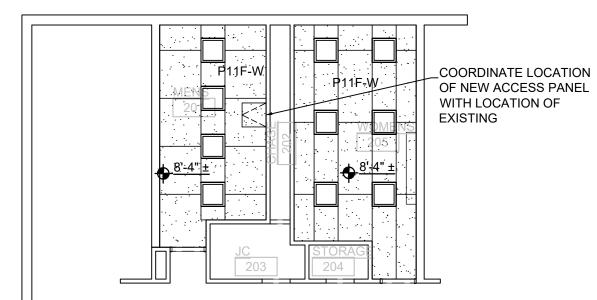
SHEET NUMBER

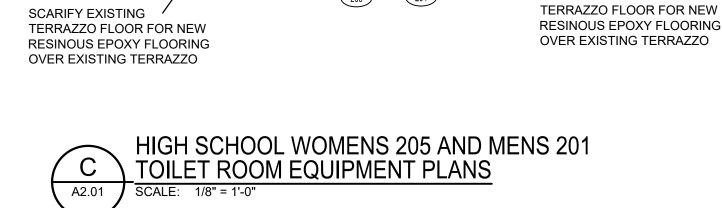
A2.01



| REFLECTED CEILING PLAN NOTES

THE ELEVATION OF NEW CEILING HEIGHTS OF EXISTING ROOMS ARE GIVEN FROM EXISTING FINISH FLOOR.





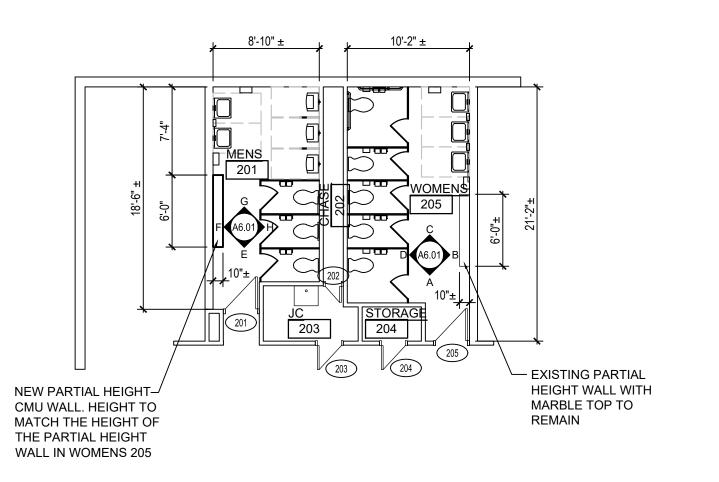
203

STORAC 204 ➤ EXISTING MARBLE TOP TO

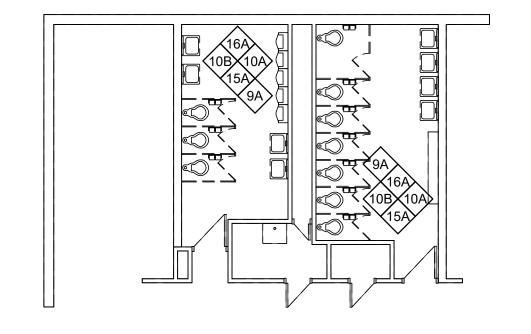
SCARIFY EXISTING

REMAIN

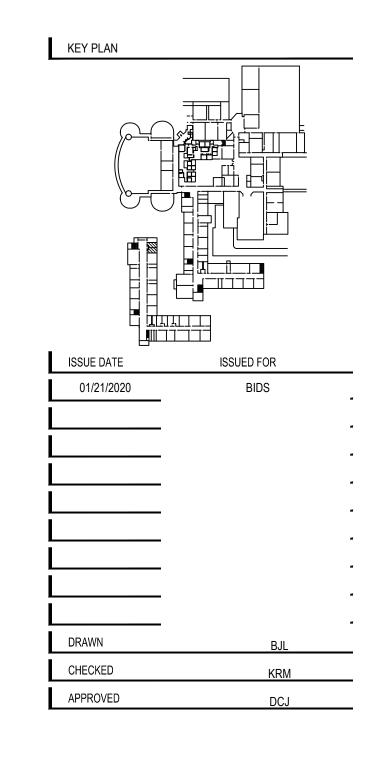
NEW SOLID — SURFACE TOP

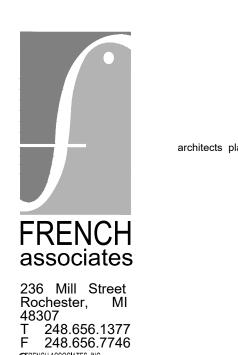












PROJECT

TRENCH ASSOCIATES, INC.

Garden City
Public Schools
High School
Toilet Room Renovations

Garden City, Michigan

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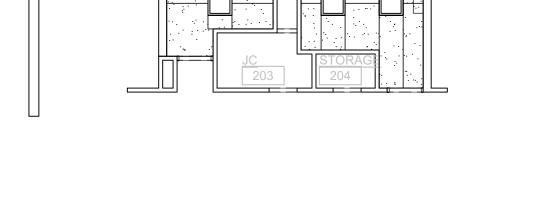
High SchoolToilet
Room Renovations
Demolition, New Work,
Equipment Plans and
Reflected Ceiling Plans

PROJECT NUMBER

2019-069

SHEET NUMBER

12.10





LINE OF CEILING. EXTEND CHASE ABOVE CEILING AS REQUIRED. - LINE OF CHASE AS REQUIRED. SEE MECHANICAL DRAWINGS REMOVE EXISTING AND TOOTH IN NEW TO MATCH EXISTING TO ALLOW PIPE AND ELECTRICAL INSTALLATION TO FIXTURE - EXISTING CMU, BRICK, BURNISHED CMU, OR GCMU WALL PLUMBING FIXTURE TYPICAL FOR SINKS, TOILETS, URINALS, DRINKING FOUNTAINS, EWC, AND SHOWERS

TYPICAL PLUMBING FIXTURE INSTALLATION IN EXISTING WALL SCALE: 1/2" = 1'-0"

ROOM FINISH SCHEDULE

			OOR	D.	\SE				WA	LLS						CEILING		NAIL LANG	ORK/ CASEW(
RM.	ROOM NAME	FLC	JUK	DA	NOE.	NO	RTH	E	AST	so	UTH	W	EST	DOOR		CEILING		IVIILLVV		EMARKS
NO.		MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	FRAME	MAT.	FINISH	HGT.	M/C	FINISH	
201	MENS	EPOXY	CUSTOM	-	-	PT	PT1	PT	PT1	PT	PT1	PT	PT1	PTD	GYP	P11F-W	EXIST	-	-	-
202	CHASE	EX	-	EX	-	EX	-	EX	-	EX	-	EX	-	EX	EX	-	-	-	-	-
203	JC	EX	-	EX	-	EX	-	EX	-	EX	-	EX	-	EX	EX	-	-	-	-	-
204	STORAGE	EX	-	EX	-	EX	-	EX	-	EX	-	EX	-	EX	EX	-	-	-	-	-
205	WOMENS	EPOXY	CUSTOM	-	-	PT	PT1	PT	PT1	PT	PT1	PT	PT1	PTD	GYP	P11F-W	EXIST	-	-	-

ROOM FINISH SCHEDULE ABBREVIATIONS

ACT ANOD B CMU BRICK CMU CONC CPL CPT CT	ACOUSTICAL CEILING TILE ANODIZED BURNISHED CMU BRICK CONCRETE MASONRY UNIT CONCRETE CEMENT PLASTER CARPET CERAMIC TILE	PLAM PLAS PT PTD QT RBF RB SAAC SEAL	PLASTIC LAMINATE VENEER PLASTER PORCELAIN TILE PAINTED QUARRY TILE RUBBER TILE RESILIENT WALL BASE SPRAY-APPLIED ACOUSTICAL COATING CONCRETE SEALER	EXIST EXPO GL GCMU GYP LMC MP NSF PART'N	EXISTING EXPOSED GLASS GLAZED CMU GYPSUM BOARD LINEAR METAL CEILING METAL PANEL NON-SLIP FINISH MOVEABLE PARTITION	SS SSM SP CMU SPI SV TER VCT WP	STAINLESS STEEL SOLID SURFACE MATERIAL SPLIT FACE CMU SPORTS IMPACT SHEET VINYL TERRAZZO VINYL COMPOSITION TILE WATERPROOF
--	--	--	---	--	--	--	--

MATERIAL AND COLOR SCHEDULE

IVIAIL	.NIA	L AND COLOR	3CHEDULE			
	KEY	MANUFACTURER	STYLE	COLOR	SPECS	NOTES
BASE						
	CP1	COLOR FLAKES	FLECK CHIP	C992 NAVY BLUE	30%	1/4" FLAKE SIZE
EPOXY CHIPS	CP2	COLOR FLAKES	FLECK CHIP	C9965 WHITE	30%	1/4" FLAKE SIZE
S E	CP3	COLOR FLAKES	FLECK CHIP	C6606 LIGHT GRAY	30%	1/8" FLAKE SZE
ШΟ	CP4	COLOR FLAKES	FLECK CHIP	C2160 MEDIUM ORANGE	10%	1/16" FLAKE SIZE
CLG						
-LS	PT1	AMERICAN OLEAN	RAPPORT	CORDIAL GRAY	12" X 24" X 3/8" RECTIFIED	
WALLS						
	P1E-A	SHERWIN WILLIAMS	SEMI-GLOSS	WORDLY GRAY	SW 7043	FIELD
PAINT	P1SG-A	SHERWIN WILLIAMS	SEMI-GLOSS	URBANE BRONZE	SW 7048	DOOR FRAMES
РА						
	P11F-W	SHERWIN WILLIAMS	FLAT	PRO MAR 200		CEILINGS
SOLID SURFACE	SS1	CORIAN	SOLD SURFACE	SILVER GRAY	1/2" THICK	TOP



- 1. REFER TO PROJECT SPECIFICATION MANUAL FOR DEMOLITION CRITERIA BEFORE REMOVING ANY ITEMS.
- 2. REMOVE AND REPLACE EXISTING CONSTRUCTION AS REQUIRED FOR THE EXECUTION OF NEW WORK.
- 3. PROTECT EXISTING CONSTRUCTION TO REMAIN AS REQUIRED DURING DEMOLITION.
- 4. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS AND FOR COORDINATION OF WORK.
- 5. DISCONNECT ALL MISCELLANEOUS FEATURES (I.E. ELECTRICAL, MECHANICAL, PLUMBING, ETC.) ASSOCIATED WITH ITEMS TO BE DEMOLISHED (I.E. PARTITIONS, WALLS, CEILINGS, CABINETS ETC.).
- 6. REMOVAL OF ANY MECHANICAL, ELECTRICAL AND MISCELLANEOUS ITEMS WILL REQUIRE PATCH AND REPAIR OF ADJACENT MATERIALS TO REMAIN.
- 7. REMOVE EXISTING UNUSED NAILS, SCREWS AND OTHER WALL PROTRUSIONS FROM EXISTING SURFACES TO REMAIN. PATCH AND REPAIR TO MATCH EXISTING ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISHES.
- 8. PATCH AND REPAIR ALL SURFACES TO REMAIN TO MATCH EXISTING ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISHES SEE ROOM FINISH SCHEDULE.
- 9. CONTRACTOR SHALL PLACE ANY ITEMS OR MATERIALS TO BE RETAINED AS DIRECTED BY OWNER.

| DEMOLITION PLAN KEY NOTES

- REMOVE EXISTING HARD CEILING AND ACCESS PANEL. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE NEW FINISHES.
- REMOVE MISCELLANEOUS BATHROOM ACCESSORIES. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE NEW FINISHES.
- REMOVE EXISTING TOILET PARTITIONS. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE NEW FINISHES.
- COORDINATE REMOVAL OF EXISTING PLUMBING AND FIXTURES WITH MECHANICAL. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE NEW FINISHES.
- COORDINATE REMOVAL OF EXISTING LIGHT FIXTURES AND MISCELLANEOUS ELECTRICAL POWER, ETC. WITH ELECTRICAL DRAWINGS. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE

DOOR FINISH SCHEDULE

DOOR			DOOR				FRA	AME		H.W.	MIN./	LINTEL	
NO.	DOOR SIZE	TYPE	MAT.	FIN.	TYPE	MAT.	FIN.	JAMB *	HEAD *	NO.	LABEL	MAT.	REMARKS
201	2'-8" x 7'-0"	EX	EX	EX	EX	EX	PTD	EX	EX	EX	EX	EX	1
202	1'-4" x 7'-0"	EX	EX	EX	EX	EX	-						
203	2'-0" x 7'-0"	EX	EX	EX	EX	EX	PTD	EX	EX	EX	EX	EX	1
204	2'-0" x 7'-0"	EX	EX	EX	EX	EX	PTD	EX	EX	EX	EX	EX	1
205	2'-8" x 7'-0"	EX	EX	EX	EX	EX	PTD	EX	EX	EX	EX	EX	1

DOOR SCHEDULE ABBREVIATIONS

AL	ALUMINUM	LGF	LIGHT GAUGE FRAMING	PTD	PAINTED
ANOD	ANODIZED	ML	MASONRY LINTEL	SIM	SIMILAR
EXIST	EXISTING	MSF	METAL STUD FRAMING	SS	STAINLESS STEEL
GL	GLASS	PC	PRECAST CONCRETE	STL	STEEL
HM	HOLLOW METAL	PLAM	PLASTIC LAMINATE	TS	TUBE STEEL
LGF	LIGHT GAUGE FRAMING	PREF	PREFINISHED	WD	WOOD

DOOR SCHEDULE REMARKS

1. PAINTING TO INCLUDE BOTH SIDES OF FRAME.

EQUIPMENT SCHEDULE

	ITEM NO.	ITEM DESCRIPTION	DESIGN NO.	SIZE W x H x D	REMARKS
	T10	PAPER TOWEL DISPENSER		-	1
	T21	SOAP DISPENSER - LIQUID	B-2112	-	1
	T30	FRAMED MIRROR	B-165	20"W X 32"H	-
<u> </u> Ш					
	T40	GRAB BAR	SEE SPEC	42"	-
TOIL	T41	GRAB BAR	SEE SPEC	36"	-
'	T43	GRAB BAR-VERTICAL	SEE SPEC	18"	-
	T50	TOILET TISSUE DISPENSER	B-2888	-	1
	T60	TOILET PARITITONS			SEE SPECS
	T61	URINAL PARITITONS			SEE SPECS
	T81	SANITARY NAPKIN DISPOSAL UNIT			1

EQUIPMENT SCHEDULE GENERAL NOTES

A. TOILET ROOM EQUIPMENT MODEL NUMBERS BOBRICK AS A BASIS OF DESIGN

EQUIPMENT SCHEDULE REMARKS

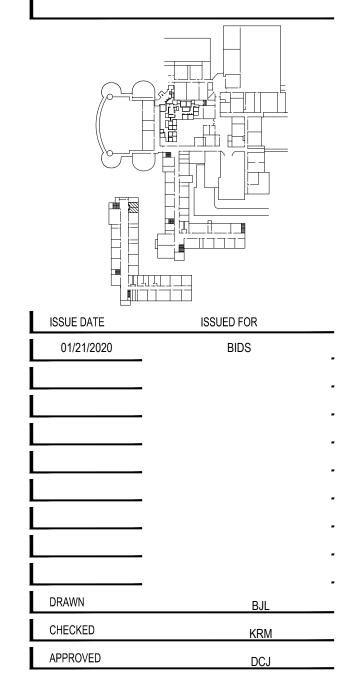
DOOR TYPES

PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR. COORDINATE FINAL LOCATION IN

THE FIELD MUTILITY ON THE CONTRACTOR.

THE FIELD MUTILITY OF THE CONTRACTOR.

THE FIELD MUTI





PROJECT

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Garden City
Public Schools
High School
Toilet Room Renovations

Garden City, Michigan

SHEE

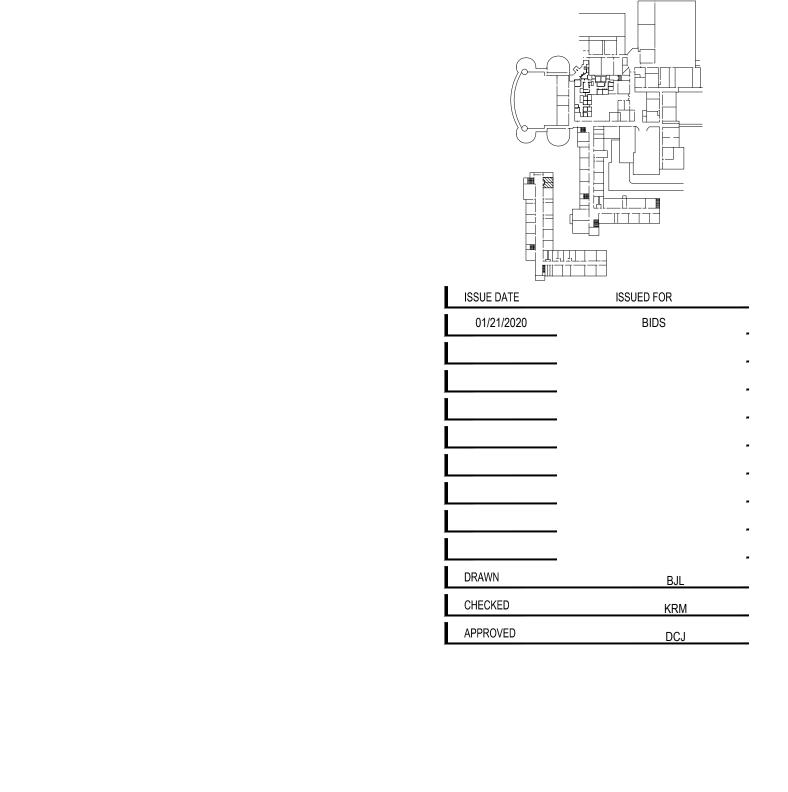
Door Schedule,
Equipment Schedule,
Room Finish Schedule,
Material & Color Schedule
Demoiliton Notes

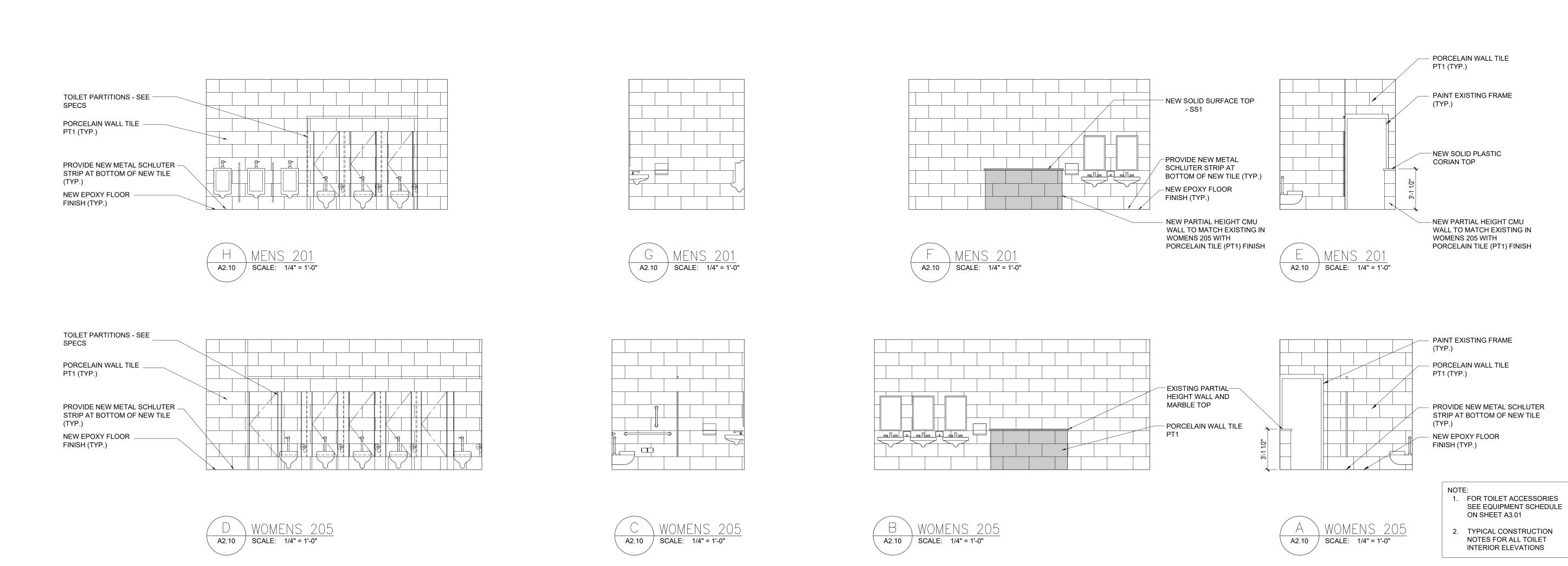
PROJECT NUMBER

2019-069

SHEET NUMBER

3 01







Garden City
Public Schools
High School
Toilet Room Renovations

Garden City, Michigan

Interior Elevations

PROJECT NUMBER

2019-069

SHEET NUMBER

A6.01

ISSUE DATE

01/21/2020

ISSUED FOR

<u>DESCRIPTION</u>	LIST ABBREVIATIO	ON DESCRIPTION	ABBREVIATION	<u>DESCRIPTION</u>	PIPING SYMBO	NICAL SYMBOL LIST L8	DUCTWORK S	SYMBOLS_		ANICAL DRAWING INDEX
COMPRESSED AIR	FD	FLOOR DRAIN	PACU	PACKAGED AIR CONDITIONING UNIT	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SHEET NO.	SHEET TITLE
COMPRESSED AIR (SPECIFIC PSIG) AUTOMATIC AIR VENT	FFD FH	FUNNEL FLOOR DRAIN FIRE HYDRANT	PBD PC	PARALLEL BLADE DAMPER PUMPED CONDENSATE	AN AN T	AIR VENT - AUTOMATIC	├── <u>1∪−101</u>	AIR TERMINAL UNIT	M0.01	MECHANICAL STANDARDS AND DRAWING INDEX
AIR COOLED CONDENSER AIR COOLED CONDENSING UNIT	FHC FHR	FIRE HOSE CABINET FIRE HOSE RACK	PCW PCWR	PROCESS COOLING WATER PROCESS COOLING WATER RETURN	<u></u> ,	AIR VENT - MANUAL	<u>TU-101</u>	AIR TERMINAL UNIT WITH HEATING COIL	MD2.10	HIGH SCHOOL TOILET ROOM MECHANICAL DEMOLIT
ACCESS DOOR	FHV	FIRE HOSE VALVE	PCWS	PROCESS COOLING WATER SUPPLY	BFP	BACKFLOW PREVENTER	<u> </u>	AIR TERMINAL ONLY WITH HEATING COLL	M2.10	HIGH SCHOOL TOILET ROOM MECHANICAL NEW WO
AREA DRAIN AIR EXTRACTOR	FLA FI R	FULL LOAD AMPS FLOOR	PD PH	PRESSURE DROP (FEET OF WATER) PERIMETER HEAT	——IIII——	CATCH BASIN	∫ 	VENTURI AIR TERMINAL UNIT	M6.01	MECHANICAL DETAILS
ABOVE FINISHED FLOOR	FM	FLOW METER	PHR	PERIMETER HEAT RETURN		CIRCULATING PUMP		VENTURI AIR TERMINAL UNIT WITH HEATING COIL	M7.01	MECHANICAL SCHEDULES
AIR HANDLING UNIT ALTERNATE	FMS FPM	FLOW MEASURING STATION FEET PER MINUTE	PHS PNL	PERIMETER HEAT SUPPLY PANEL	o ^{co}	CLEAN OUT — IN FLOOR	→ → → → → → → → → →	VENTORI AIR TERMINAL ONLY WITH HEATING COLE		
AMPERE AIR PRESSURE DROP	FP FPTU	Fire Pump Fan Powered (Air) Terminal Unit	PPM PRESS	PARTS PER MILLION PRESSURE	——II [∞]	CLEAN OUT — FLANGE		DAMPER - HORIZONTAL FIRE (EXISTING, NEW)		
ARGON	FS	FLOOR SINK ` ´	PRV	PRESSURE REDUCING VALVE		DIRECTION OF FLOW	_\$' _ #	, ,		
AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR—CONDITIONING ENGINEERS	FSEC FT	FOOD SERVICE EQUIPMENT CONTRACTOR FEET	PSAN PST	PUMPED SANITARY PUMPED STORM		DIRECTION OF PITCH - DOWN		DAMPER - HORIZONTAL FIRE / SMOKE (EXISTING, NEW)		
AUTOMATIC SPRINKLER RISER	FTR	FINNED TUBE RADIATION	PSI	POUNDS PER SQUARE INCH	***************************************	FINNED TUBE RADIATION	_^ _ •	DAMPER - SMOKE (EXISTING, NEW)		
AUXILIARY ACID VENT	FV	FACE VELOCITY	PSIA PSIG	POUNDS PER SQUARE INCH — ABSOLUTE POUNDS PER SQUARE INCH — GAUGE	ď	FIRE PROTECTION - SIAMESE CONNECTION - FREE STANDING	_^ _^	DAMPER VERTICAL FIRE (EVICTIVE NEW)		
ACID VENT THROUGH ROOF ACID WASTE	G GA	NATURAL GAS GAUGE	PW PWR	PURIFIED WATER PURIFIED WATER RETURN		FIRE PROTECTION - SIAMESE CONNECTION - WALL MOUNTED		DAMPER - VERTICAL FIRE (EXISTING, NEW)		
	GAL	GALLON	PWS	PURIFIED WATER SUPPLY		FIRE PROTECTION - SPRINKLER HEAD, CONCEALED	_& _ ^	DAMPER - VERTICAL FIRE / SMOKE (EXISTING, NEW)		
BUILDING AUTOMATION SYSTEM BLOWER COIL UNIT	GRH GPH	GRAVITY RELIEF HOOD GALLONS PER HOUR	(R)	RELOCATED		FIRE PROTECTION - SPRINKLER HEAD, PENDANT	BDD	DAMPER - BACK DRAFT		
BACKDRAFT DAMPER	GPM	GALLONS PER MINUTE	Ř	RETURN GRILLE OR REGISTER	 o	FIRE PROTECTION - SPRINKLER HEAD, UPRIGHT	I M	A LUIDED LUIDED		
BELOW FINISHED FLOOR BACKFLOW PREVENTER	GSAN	GREASE SANITARY WASTE	RA RAT	return air Return air temperature	─	FIRE PROTECTION - SPRINKLER HEAD, SIDEWALL	Ť	DAMPER — MOTORIZED		
BRAKE HORSEPOWER BOTTOM OF DUCT	H HR	Hydrogen Hose Bibb	RC RCP	RAIN CONDUCTOR RADIANT CEILING PANEL	─ ── ○	FLOOR DRAIN		DAMPER - VOLUME (MANUALLY ADJUSTABLE)		
BOTTOM OF PIPE	HC	HEATING COIL	RD	ROOF DRAIN	Y	FLOOR DRAIN — ELEVATION		DIFFLICED DI ANIZ OFF		
British Thermal Unit British Thermal Unit Per Hour	HD HEPA	HOT DECK HIGH EFFICIENCY PARTICULATE ARRESTANCE	reqd ref	REQUIRED ROOF EXHAUST FAN	—— •	FLOOR DRAIN — FUNNEL		DIFFUSER — BLANK OFF		
BEVERAGE CONDUIT	HL HOA	HIGH LIMIT	RF	RETURN FAN	, , ₹	FLOOR DRAIN — FUNNEL, ELEVATION		DIFFUSER - LINEAR SLOT		
BACKWATER VALVE	HOA HP	HAND/OFF/AUTO HEAT PUMP	KH RL	RELATIVE HUMIDITY REFRIGERANT LIQUID		FLOW MEASURING DEVICE (FOR TEST AND BALANCING)	₩.			
COMMON CAPACITY	HP HPCW	HORSEPOWER HIGH PRESSURE DOMESTIC COLD WATER	RLFA RPM	RELIEF AIR REVOLUTIONS PER MINUTE		FLOW SWITCH	M	DIFFUSER - SQUARE OR RECTANGULAR		
CONSTANT AIR VOLUME	HPHW	HIGH PRESSURE DOMESTIC HOT WATER	RPDA	REDUCED PRESSURE BACKFLOW PREVENTION DETECTION		FLOW METER	\boxtimes	DUCT CROSS SECTION - SUPPLY		
CATCH BASIN COOLING COIL	HPHWR HPL	HIGH PRESSURE DOMESTIC HOT WATER RETURN HEAT PUMP LOOP	RPZA RS	REDUCED PRESSURE BACKFLOW PREVENTION ZONE ASS REFRIGERANT SUCTION	HB	HOSE BIBB				
COLD DECK	HPLR	HEAT PUMP LOOP RETURN	RTU	ROOFTOP UNIT		MANHOLE		DUCT CROSS SECTION — RETURN		
CONDENSATE DRAIN CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	HPLS HR	HEAT PUMP LOOP SUPPLY HOUR	S	SUPPLY AIR DIFFUSER OR GRILLE	⊚	OPEN SITE DRAIN		DUCT CROSS SECTION — EXHAUST		
CUBIC FEET PER HOUR	HTG	HEATING	SA SA	SOUND ATTENUATOR	•	PIPE - ANCHOR				
CUBIC FEET PER MINUTE CHILLER	HV HVAC	HEATING VENTILATING HEATING, VENTILATING, AIR CONDITIONING	SA SAN	SUPPLY AIR SANITARY WASTE	<u>=</u>	PIPE - CAP OR PLUG	+	DUCT - FLEXIBLE CONNECTION		
CHILLED WATER	HWH HWHR	HOT WATER HEATING HOT WATER HEATING RETURN	SAT	SUPPLY AIR TEMPERATURE	 ə	PIPE - ELBOW DOWN		DUCT — FLEXIBLE DUCT		
CHILLED WATER RETURN CHILLED WATER SUPPLY	HWHK HWHS	HOT WATER HEATING RETURN HOT WATER HEATING SUPPLY	SECT SF	SECTION SUPPLY FAN	o	PIPE - ELBOW UP		DOO! ILLABEL DOO!	STANI	DARD METHODS OF NOTAT
COOLING CONDENSATE	HW \	DOMESTIC HOT WATER DOMESTIC HOT WATER (SPECIFIC TEMP *F)	SH SH	SHOWER SINK			\ \ \ \	DUCT TAKE-OFF - ROUND CONICAL		
CONDENSATE (SPECIFIC PSIG)	HWR	DOMESTIC HOT WATER RETURN	SMR	SNOW MELT RETURN		PIPE - FLANGE		DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP	109 35	10" DIAMETER NECK SIZE 1-4 350 CFM TYPICAL FOR 4
CLEAN OUT CARBON DIOXIDE	HX H7	HEAT EXCHANGER HERTZ	SMS SP	SNOW MELT SUPPLY STATIC PRESSURE			ſŢ ′	DOUT TAKE OF RESTANDOLAN WITH STILL TAI		•
CONTINUATION OR CONTINUED			SPEC	SPECIFICATION	—— <u>KXXI</u>		, — , — , — , — , — , — , — , — , — , —	ELBOW - RECTANGULAR WITH TURNING VANES	R 22	RETURN REGISTER WITH SCHEDULE TAG "1", 22 22"x 22" NECK SIZE
CONTRACTOR CONVECTOR	IAQ ID	INDOOR AIR QUALITY INSIDE DIAMETER	SPKLR SQFT	Sprinkler Square foot/square feet			$\stackrel{\smile}{\smile}$	ELBOW - RECTANGULAR/ ROUND SMOOTH RADIUS		D-2 640 CFM TYPICAL FOR 2 EXHAUST REGISTER E DESIGNATION SIMILAR.
COEFFICIENT OF PERFORMACE CIRCULATING PUMP	IE III	INVERT ELEVATION INTAKE HOOD	s/s	START/STOP SERVICE SINK		PIPE - TEE DOWN	7	LEDOW REGIANOGERRY ROUND SMIGGIN RADIOS		
CONDENSATE RETURN UNIT	IN IN	INCHES	ST ST	STORM			├ ──────────────────────────	ELBOW DOWN - RECTANGULAR	ŗ	TIV-101 AIR TERMINAL UNIT WITH HEATING COIL NO. 101
CLINICAL SERVICE SINK COOLING TOWER	IR IW	INFRARED HEATER INDIRECT WASTE	STD STK	STANDARD STACK		DIDE INVOL	\leftarrow	ELBOW DOWN - ROUND	 	WITH SERVICE CLEARANCE SHOWN
CABINET UNIT HEATER			STM	STEAM	'l' _ =P/T		,	LLDOW DOWN - NOOND	L	_
DOMESTIC COLD WATER DOMESTIC COLD WATER — FILTERED	JC JP	JANITOR'S CLOSET JOCKEY PUMP	STM(#) S/W	STEAM (SPECIFIC PSIG) SUMMER/WINTER	о О —	PRESSURE AND TEMPERATURE TEST PLUG	├	ELBOW UP - RECTANGULAR	F	VENTURI AIR TERMINAL WITH HEATING COIL NO.
CONDENSER WATER RETURN			SW	SWITCH	<u> Ť</u>	PRESSURE GAUGE AND COCK	\smile	ELBOW UP - ROUND	, in the second	VIU-101 WITH SERVICE CLEARANCE SHOWN
CONDENSER WATER SUPPLY	KW KWH	KILOWATT KILOWATT-HOUR	T	TRANSFER GRILLE	$\overline{}$	REDUCER - CONCENTRIC	,)	LLBOW OF - NOOND	' 	
DRIP AND TRAP DISCHARGE AIR	LAT	LEAVING AIR TEMPERATURE	TC TC	TEMPERATURE CONTROL TEMPERING COIL		REDUCER — ECCENTRIC		FAN - AXIAL	·	
DISCHARGE AIR TEMPERATURE	LAB	LABORATORY	TCP	TEMPERATURE CONTROL PANEL	——⊚	ROOF/OVERFLOW DRAIN		FAN - CENTRIFUGAL (ELEVATION)	 8	PIPE DIAMETER NOTATION ALL SIZES IN INCHES
DRY BULB DIRECT DIGITAL CONTROL	LAV IBS	LAVATORY POUNDS	TD TEMP	Trench drain Temperature		STEAM TRAP - FLOAT AND THERMOSTATIC		PAN - CENTRIFUGAL (ELEVATION)		m.)
DEGREE	LDB	LEAVING DRY BULB	TEMP	TEMPORARY		— STEAM TRAP — BUCKET	├	HEATING COIL	8ø - (*****	DUAT CITE NOTATION
DRAINAGE FIXTURE UNITS DIAMETER	LPC	LOW LIMIT LOW PRESSURE CONDENSATE	THA	TERMINAL HEATING TOTAL HEAT ABSORBED		STRAINER	, <u>D</u>	INCLINED DROP IN DIRECTION OF AIRFLOW	22x10	DUCT SIZE NOTATION ALL SIZES IN INCHES
DAMPER Day/Night	LPS	LOW PRESSURE STEAM LOCKED ROTOR AMPS	THR	TERMINAL HEATING RETURN TOTAL HEAT REJECTED	П 💆	STRAINER WITH VALVE AND BLOW-OFF	\ 	INCLINED DROP IN DIRECTION OF AIRFLOW		
DOWN	LWB	LEAVING WET BULB	THS	TERMINAL HEATING SUPPLY		THERMOMETER	\ 	INCLINED RISE IN DIRECTION OF AIRFLOW		OVAL DUCT RECTANGULAR DUCT
DOWNSPOUT NOZZLE DUCT SILENCER	LWT	LEAVING WATER TEMPERATURE	TSP Til	TOTAL STATIC PRESSURE (AIR) TERMINAL UNIT		TRAP	: = 1	INTAKE OD DELIES HOOD		RESTANGUEAR DOCT
DRAIN TILE	MA	MIXED AIR	ΤV	TURNING VANES	——————————————————————————————————————	IRAP		INTAKE OR RELIEF HOOD	•	CONSTRUCTION KEY NOTE (NUMBER) OR DEMOLITION KEY NOTE (LETTER)
DRAIN TILE CONNECTION DOMESTIC WATER HEATER	MAT MAU	MIXED AIR TEMPERATURE MAKF-UP AIR UNIT	TYP	TYPICAL	<u> </u>	VALVE - ANGLE	├	REGISTER - RETURN OR EXHAUST		DEMOLITION RET NOTE (LETTER)
DRAWING	MAX	MAXIMUM TIPELLA INTERPOLATION	UH	UNIT HEATER	—-б-	VALVE - BALL				EF EQUIPMENT DESIGNATION, (i.e. EXHAUST FAN NUMBER 1)
EXISTING	MBH MCA	THOUSAND BRITISH THERMAL UNITS PER HOUR MEDICAL COMPRESSED AIR	UL UON	underwriter's laboratory Unless otherwise noted		VALVE — BUTTERFLY	[/]	REGISTER — RETURN WITH BOOT	•	(i.e. EXHAUST FAN NUMBER 1)
EXHAUST GRILLE OR REGISTER EACH	MCA MCC	MINIMUM CIRCUIT AMPACITY MOTOR CONTROL CENTER	UR UV	URINAL UNIT VENTILATOR	——————————————————————————————————————	VALVE - BALANCE (i.e. BALANCE VALVE TO 0.5 GPM)		REGISTER - TRANSFER GRILLE		PIPING RISER DESIGNATION (i.e. HOT WATER RISER NUMBER 1)
EXHAUST AIR	MECH	MECHANICAL	UV		——————————————————————————————————————	VALVE — COMBINATION BALANCE & FLOW MEASURING (i.e. BALANCE VALVE TO 0.5 GPM)	(A)			(i.e. HOT WATER RISER NUMBER 1)
ENTERING AIR TEMPERATURE EXPANSION COMPENSATOR	MEZZ MFR	MEZZANINE MANUFACTURER	V	VALVE VENT	0.5		(☑)	ROOF EXHAUST FAN		NEW SYSTEM COMPONENT
ELECTRIC CABINET UNIT HEATER	MH	MANHOLE	VAC	VACUUM		***************************************	├─	TRANSITION - CONCENTRIC		
ENTERING DRY BULB ENERGY EFFICIENCY RATIO	MIL MIN	1/1000th INCH MINIMUM	VAV VR	VARIABLE AIR VOLUME VACUUM BREAKER	— ▶ ₹%	VALVE - SPRING CHECK				EXISTING SYSTEM COMPONENT TO REMAIN
EMERGENCY EYE WASH / SHOWER	MISC	MISCELLANEOUS	VD.	VOLUME DAMPER (MANUALLY ADJUSTABLE)		VALVE - GAS (MANUAL)	\leftarrow	TRANSITION — ECCENTRIC	,	POINT OF NEW CONNECTION SYMBOL
EMERGENCY EYE WASH ' EXHAUST FAN	MMBH M/S	MILLION BRITISH THERMAL UNITS PER HOUR MOTOR STARTER	VOL VFC	VOLUME VARIABLE FREQUENCY CONTROLLER	——————————————————————————————————————	VALVE - GLOBE	П→	UNIT HEATER - HORIZONTAL THROW		TOWN OF HEW CONNECTION CHARGE
EFFICIENCY	MTD	MOUNTED MOTOR	VTR	VENT THROUGH ROOF	─	VALVE - ISOLATION	-			SECTION OR PLAN NUMBER
ELECTRIC HEATING COIL EXPANSION JOINT	MTR MV	MANUAL AIR VENT	VTU VUV	VENTURI TERMINAL UNIT VERTICAL UNIT VENTILATOR	—— 	VALVE - NEEDLE		UNIT HEATER - VERTICAL THROW		SHEET WHERE SECTION IS DRAWN
ELEVATION ELECTRICAL	MVAC	MEDICAL VACUUM	w	WASTE	——ቚ——	VALVE - OS&Y	DOUBLE LINE	DUCTWORK SYMBOLS	,	M5.1
ENERGY MANAGEMENT SYSTEM	N	NITROGEN	₩ &∨	WASTE AND VENT	——√—	VALVE - PLUG	<u>SYMBOL</u>	DESCRIPTION		AREA OF ENLARGEMENT
ENERGY RECOVERY LOOP ENERGY RECOVERY LOOP RETURN	N2O NC	NITROUS OXIDE NOISE CRITERIA	WAGD WB	WASTE ANESTHETIC GAS DISPOSAL WET BULB		VALVE - PRESSURE REGULATING	 	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP	ĺ	— PLAN NUMBER
ENERGY RECOVERY LOOP SUPPLY	NC	NORMALLY CLOSED	WC	WATER CLOSET WATER COLUMN	Q	VALVE - PRESSURE REDUCING	بظر		<u> </u>	_ /
ENERGY RECOVERY UNIT EMERGENCY SHOWER	NCTC NCTO	NORMALLY CLOSED TIMED CLOSED NORMALLY CLOSED TIMED OPEN	WC WG	WATER GAUGE	Z		<u> </u>	DUCT TAKE-OFF - ROUND CONICAL		SHEET WHERE ENLARGED PLAN IS DRAWN
EXTERNAL STATIC PRESSURE ELECTRIC UNIT HEATER	NFPA NOTC	NATIONAL FIRE PROTECTION ASSOCIATION NORMALLY OPEN TIMED CLOSED	WH WMSD	WALL HYDRANT WASHING MACHINE SUPPLY AND DRAIN BOX	<u>수</u> =	VALVE - PRESSURE RELIEF) 	DOUT TAKE OF THE MOONE CONTONE		M5.1
ENTERING WET BULB	NOTO	NORMALLY OPEN TIMED OPEN	WPD	WATER PRESSURE DROP	<i>\</i>	VALVE - PRESSURE & TEMPERATURE RELIEF	<u>ы</u>			SECTION OR PLAN NUMBER
ELECTRIC WATER COOLER ENTERING WATER TEMPERATURE	NIC NO	NOT IN CONTRACT NORMALLY OPEN	WT	WEIGHT		VENT THROUGH ROOF	₹	ELBOW - RECTANGULAR WITH TURNING VANES	_	SECTION ON PERM NOMBER
EXHAUST	NOM	NOMINAL	XFMR	TRANSFORMER	WH	WALL HYDRANT	F		1	SECTION OF ENLARGED
FIRE PROTECTION	NPCW	NON POTABLE COLD WATER	ZVB	ZONE VALVE BOX	'	WALL ITTOKAN		ELBOW - RECTANGULAR SHORT RADIUS WITH SPLITTER VANES	()	SECTION OR ENLARGED SCALE: 1/8" - 1" - 0"
DEGREES FAHRENHEIT	0	Oxygen Outside air				<u>PIPING SYMBOLS</u>		FLDOW DOLLND	M5.1	SOALE VO - 1 - U
FACE AND BYPASS FLOAT AND THERMOSTATIC	OAT	OUTSIDE AIR OUTSIDE AIR TEMPERATURE			SYMBOL	DESCRIPTION		ELBOW - ROUND	•	SHEET WHERE SECTION IS CUT OR
FACE AREA FAN COIL UNIT	OB OBD	OUTLET BOX OPPOSED BLADE DAMPER				FLANGE	₩ T	ELBOW - RECTANGULAR SMOOTH RADIUS		ENLARGED PLAN IS REFERENCED
532 5111	OC C	ON CENTER/CENTER TO CENTER				FLEX CONNECTION	<u></u>		SHEE	MATCH LINE
	OD OED	OUTSIDE DIÂMETER OPEN ENDED DUCT			9	Strainer – Basket		ELDOW DOWN DECTANOULAD	SHEE	™1.1 ™
	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED				STRAINER - Y TYPE	† <u> </u>	ELBOW DOWN - RECTANGULAR		HEAVY LINE WEIGHT INDICATES NEW WORK
	OFOI OL	OWNER FURNISHED, OWNER INSTALLED OVERLOAD				SIKAINEK - I ITE		ELBOW DOWN - ROUND		
	ORC	OVERFLOW RAIN CONDUCTOR				VALVE - 2 WAY CONTROL	——————————————————————————————————————			LIGHT LINE WEIGHT INDICATES EXISTING EQUIPMENT OR REFERENCED INFORMATION
	ORD OS&Y	OVERFLOW ROOF DRAIN OUTSIDE SCREW AND YOKE				VALVE - 3 WAY CONTROL		ELBOW UP - RECTANGULAR		
	0٧	OUTLET VELOCITY				TALTE O HAT CONTINUE		ELBOW UP - ROUND		GRAY LINE INDICATES BACKGROUND INFORMATIO
	ows	OPERATOR WORKSTATION				VALVE — BUTTERFLY				D. 10.125 2.1126 111.0101 11.1110
								HEATING COIL	.,,,,,,,,	ROUTED BELOW SLAB OR GRADE
						VALVE - CHECK	<u> </u>	INCLINED DROP IN DIRECTION OF AIRFLOW	'///////	HATCH MARKS INDICATE EQUIPMENT OR MATERIA TO BE DISCONNECTED AND REMOVED.
						VALVE - DETECTOR CHECK	: :	AND THE DAY IN DIRECTION OF MINI LOW		IO DE DISCONNECIED AND REMOYED.
					+		 R	INCLINED RISE IN DIRECTION OF AIRFLOW		
					/			TRANSITION - CONCENTRIC	NOTF	SOME SYMBOLS AND ABBREVIA
	ADTIA	OVAROLO LICT				VALVE - OS&Y HORIZONTAL STEM	<u> </u>	TO RECEIVED. CONSERTING		N MAY NOT APPLY TO THIS PRO
RATURE CONTROL - PA										

DESCRIPTION
OCCUPANCY SENSOR

PRESSURE TRANSMITTER

STATIC PRESSURE SENSOR OR PROBE

THERMOSTAT OR TEMPERATURE SENSOR (AS DEFINED ON TC DRAWINGS)

VALVE - 2 WAY CONTROL VALVE

VALVE - 3 WAY CONTROL VALVE

CARBON DIOXIDE SENSOR CARBON MONOXIDE SENSOR

DIFFERENTIAL PRESSURE TRANSMITTER

GUARD FOR STAT OR SENSOR

HUMIDISTAT OR HUMIDITY SENSOR (AS DEFINED ON TC DRAWINGS)

NOTE: LIST OF ADDITIONAL SYMBOLS & ABBREVIATIONS ASSOCIATED WITH TEMPERATURE CONTROLS ARE IDENTIFIED ON TC DRAWINGS.

DRAWN CHECKED SVM APPROVED Peter Basso Associates Inc CONSULTING ENGINEERS 5145 Livernois, Suite 100 Troy, Michigan 48098-3276 Tel: 248-879-5666 Fax: 248-879-0007 www.PeterBassoAssociates.com PBA Project No.: 2019.0439 architects planners interiors FRENCH associates 236 Mill Street Rochester, MI 48307 T 248.656.1377 F 248.656.7746 © FRENCH ASSOCIATES, INC. Garden City
Public Schools High School Toilet Room Renovations Garden City, Michigan SHEET MECHANICAL

STANDARDS AND

DRAWING INDEX

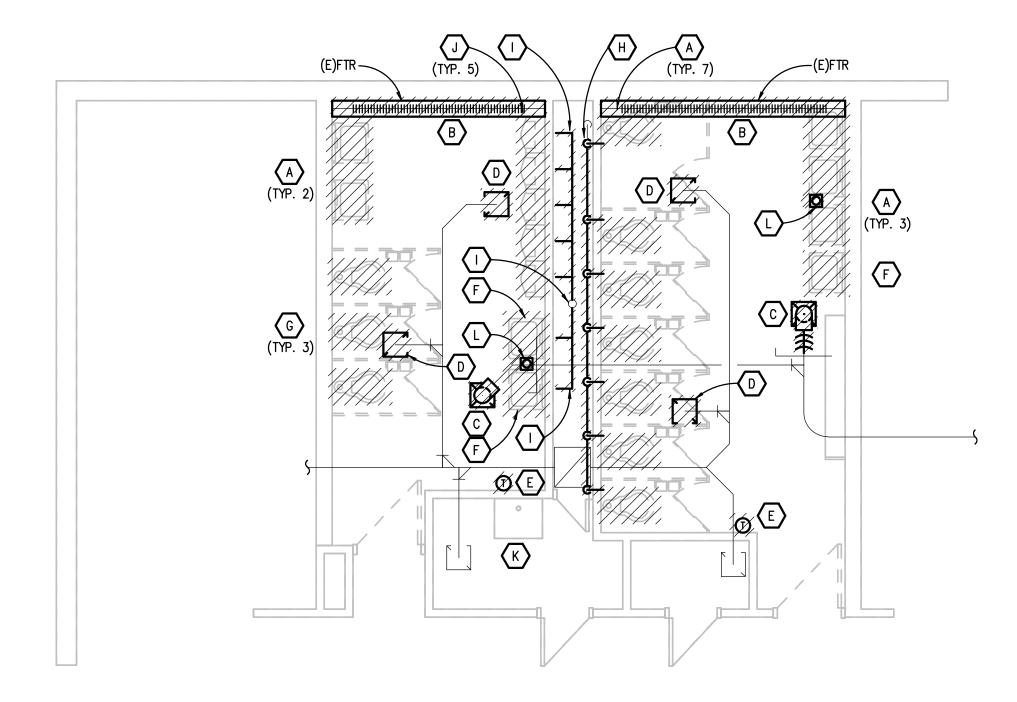
PROJECT NUMBER

SHEET NUMBER

2019-069

MO.01

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.





HIGH SCHOOL WOMENS 205 AND MENS 201 TOILET ROOM MECHANICAL DEMOLITION PLAN
SCALE: 1/4" - 1" - 0"

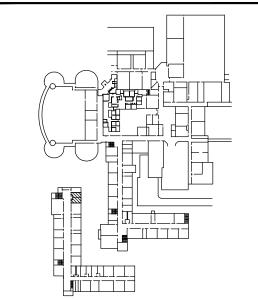
MECHANICAL GENERAL DEMOLITION NOTES:

- 1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
- 2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MIGHT DIFFER TO A LIMITED EXTENT FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
- 3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
- 4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

DEMOLITION KEY NOTES:

- A. REMOVE EXISTING PLUMBING FIXTURE(S) COMPLETE, INCLUDING FLUSH VALVE(S) AND/OR FAUCET(S). REMOVE SUPPLIÈS AND STOPS, AND PREPARE PIPING FOR NEW
- B. REMOVE FINNED TUBE RADIANT (FTR) HEATER COVER ONLY AND ASSOCIATED COVER
- C. REMOVE SUPPLY DIFFUSER AND CORRESPONDING FLEX DUCTWORK, IF APPLICABLE. PREPARE DUCTWORK FOR NEW WORK. PRIOR TO DEMOLITION PROVIDE ENGINEER WITH AIR FLOW READINGS. RECORD READINGS FOR POST CONSTRUCTION BALANCING.
- D. REMOVE EXHAUST GRILLE. PREPARE DUCTWORK FOR NEW WORK. PRIOR TO DEMOLITION PROVIDE ENGINEER WITH AIR FLOW READINGS. RECORD READINGS FOR POST CONSTRUCTION BALANCING
- E. TEMPORARILY REMOVE/PROTECT EXISTING PNEUMATIC THERMOSTAT SERVING FINNED TUBE RADIANT (FTR) HEATER DURING DEMOLITION. THERMOSTATS TO BE RE-USED/RELOCATED DURING NEW CONSTRUCTION.
- F. REMOVE EXISTING LAVATORY INCLUDING FAUCET COMPLETE. REMOVE CW, HW, SAN, AND VENT PIPING BACK TO SOURCE AND CAP.
- G. REMOVE EXISTING WATER CLOSET COMPLETE INCLUDING FLUSH VALVE. REMOVE SAN PIPING BELOW FLOOR AND CAP FLUSH WITH FLOOR. REMOVE CW PIPING BACK TO SOURCE AND CAP.
- H. REMOVE CW PIPING BACK AS INDICATED AND PREPARE FOR NEW WORK.
- I. REMOVE SAN PIPING BACK TO 4 INCH RISER AND PREPARE FOR NEW WORK.
- J. REMOVE URINAL AND SUPPORTS INCLUDING FLUSH VALVE COMPLETE. REMOVE CW AND SAN PIPING BACK TO SOURCE AND PREPARE FOR NEW WORK.
- K. MAINTAIN CW, HW, SAN, AND V PIPING TO EXISTING SERVICE SINK IN JANITORS CLOSET.
- L. SAW CUT FLOOR AND REMOVE EXISTING FLOOR DRAIN AND PREPARE FOR NEW





KEY PLAN

ISSUE DATE	ISSUED FOR
01/21/2020	BIDS
DRAWN	JRM
CHECKED	SVM



5145 Livernois, Suite 100 Troy, Michigan 48098-3276 Tel: 248-879-5666 Fax: 248-879-0007 www.PeterBassoAssociates.com PBA Project No.: 2019.0439



architects planners interiors

FRENCH associates 236 Mill Street Rochester, MI 48307 T 248.656.1377 F 248.656.7746 © FRENCH ASSOCIATES, INC.

PROJECT

Garden City Public Schools High School Toilet Room Renovations

Garden City, Michigan

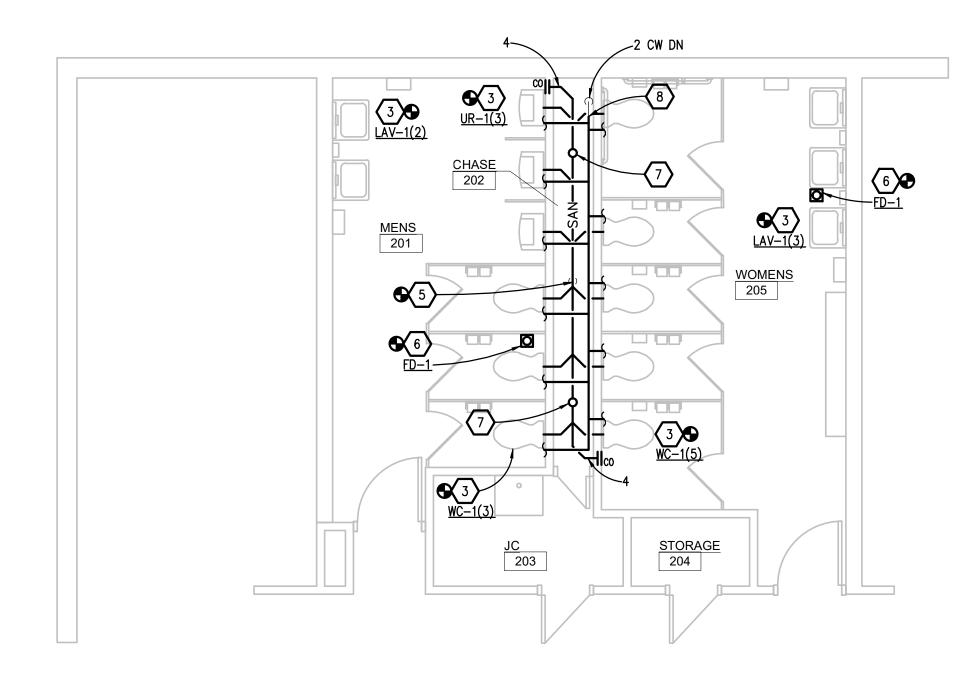
HIGH SCHOOL TOILET ROOM MECHANICAL DEMOLITION PLAN

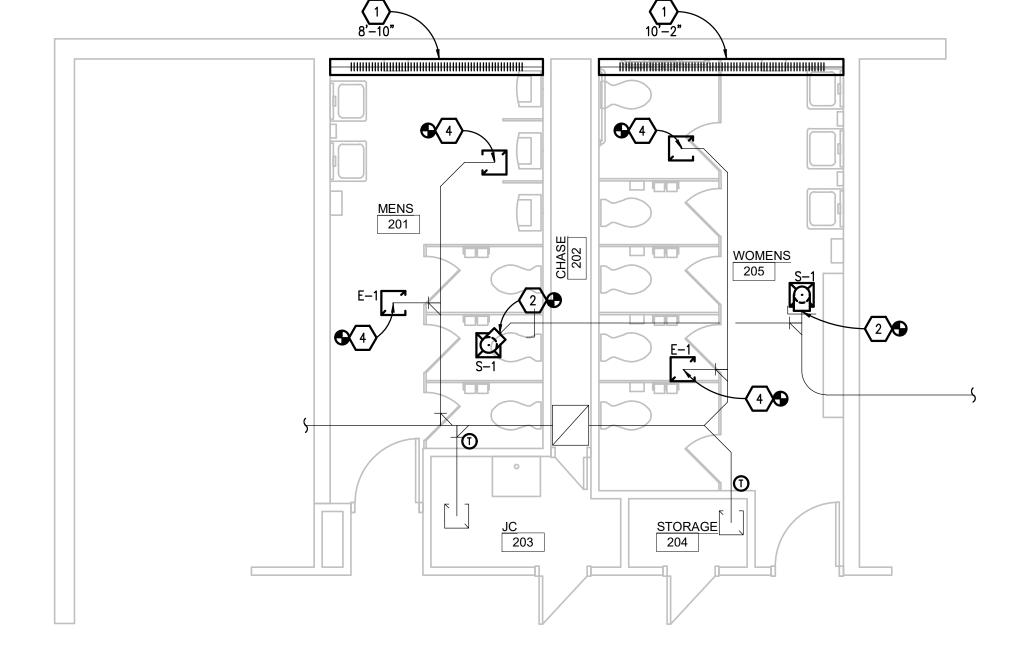
PROJECT NUMBER

2019-069

SHEET NUMBER

MD2.10







HIGH SCHOOL WOMENS 205 AND MENS 201 TOILET ROOM PLUMBING NEW WORK PLAN SCALE: 1/4" = 1' - 0"



HIGH SCHOOL WOMENS 205 AND MENS 201 TOILET ROOM SHEET METAL NEW WORK PLAN SCALE: 1/4" = 1' - 0"

PLUMBING GENERAL NOTES:

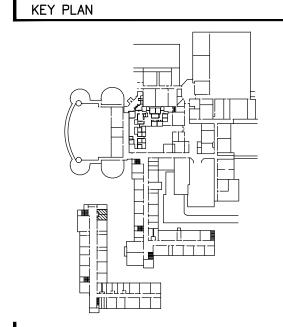
- 1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
- 2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- 3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
- 4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- 5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL
- 6. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING
- 7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
- 8. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
- 9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
- 10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
- 11. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 72", OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

SHEET METAL GENERAL NOTES:

- 1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
- 2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- 3. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
- 4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- 5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL
- 6. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONED LOCATION OF GRILLES, REGISTERS, AND DIFFUSERS.

EXAMPLE 2 CONSTRUCTION KEY NOTES:

- PROVIDE NEW RADIANT FINNED TUBE COVER AND BRACKETS FOR EXISTING FINNED TUBE. FIELD VERIFY EXACT LENGTH IN THE FIELD.
- 2. CONNECT NEW SUPPLY DIFFUSER TO EXISTING DUCTWORK. PROVIDE NEW FLEXIBLE DUCT CONNECTION. BALANCE NEW DIFFUSER TO AIR FLOW FROM PRE-DEMO
- 3. EXTEND/MODIFY EXISTING CW, HW, SAN, AND V PIPING TO FACILITATE THE INSTALLATION OF NEW PLUMBING FIXTURES. REFER TO PLUMBING CONNECTION SCHEDULE.
- 4. CONNECT NEW EXHAUST GRILLE TO EXISTING DUCTWORK. BALANCE NEW GRILLE TO AIR FLOW FROM PRE-DEMO READINGS.
- 5. CONNECT NEW SAN PIPING TO EXISTING 4 INCH VERTICAL SAN PIPING.
- 6. EXTEND/MODIFY EXISTING SAN PIPING TO FACILITATE THE INSTALLATION OF NEW FLOOR DRAIN IN NEW FLOOR SURFACE. REFER TO SPECIFICATIONS FOR ADDITIONAL
- 7. 2 V PIPE UP TO 3 VENT THROUGH ROOF.
- 8. EXTEND EXISTING 2 CW PIPE UNDIMINISHED TO LAST PLUMBING FIXTURE.



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Peter Basso Associates Inc CONSULTING ENGINEERS

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PROJECT

Garden City Public Schools High School Toilet Room Renovations

Garden City, Michigan

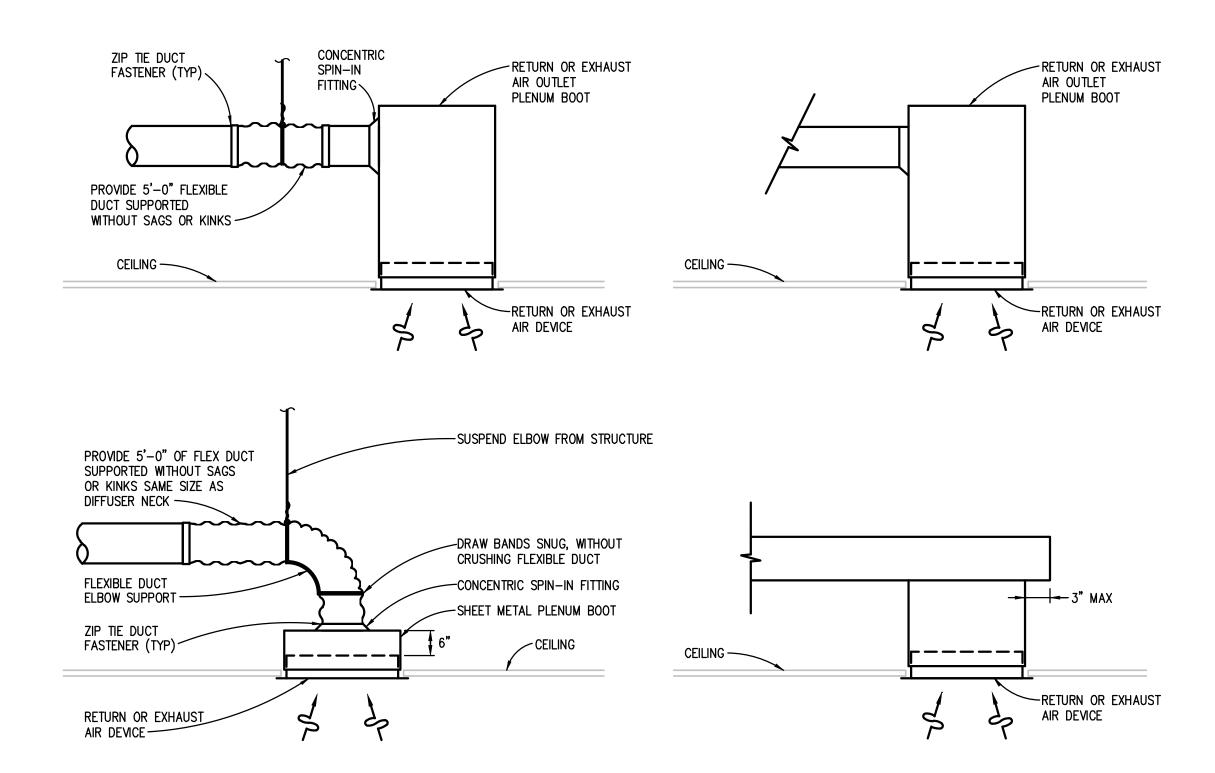
SHEET

HIGH SCHOOL TOILET ROOM MECHANICAL NEW WORK PLANS

PROJECT NUMBER

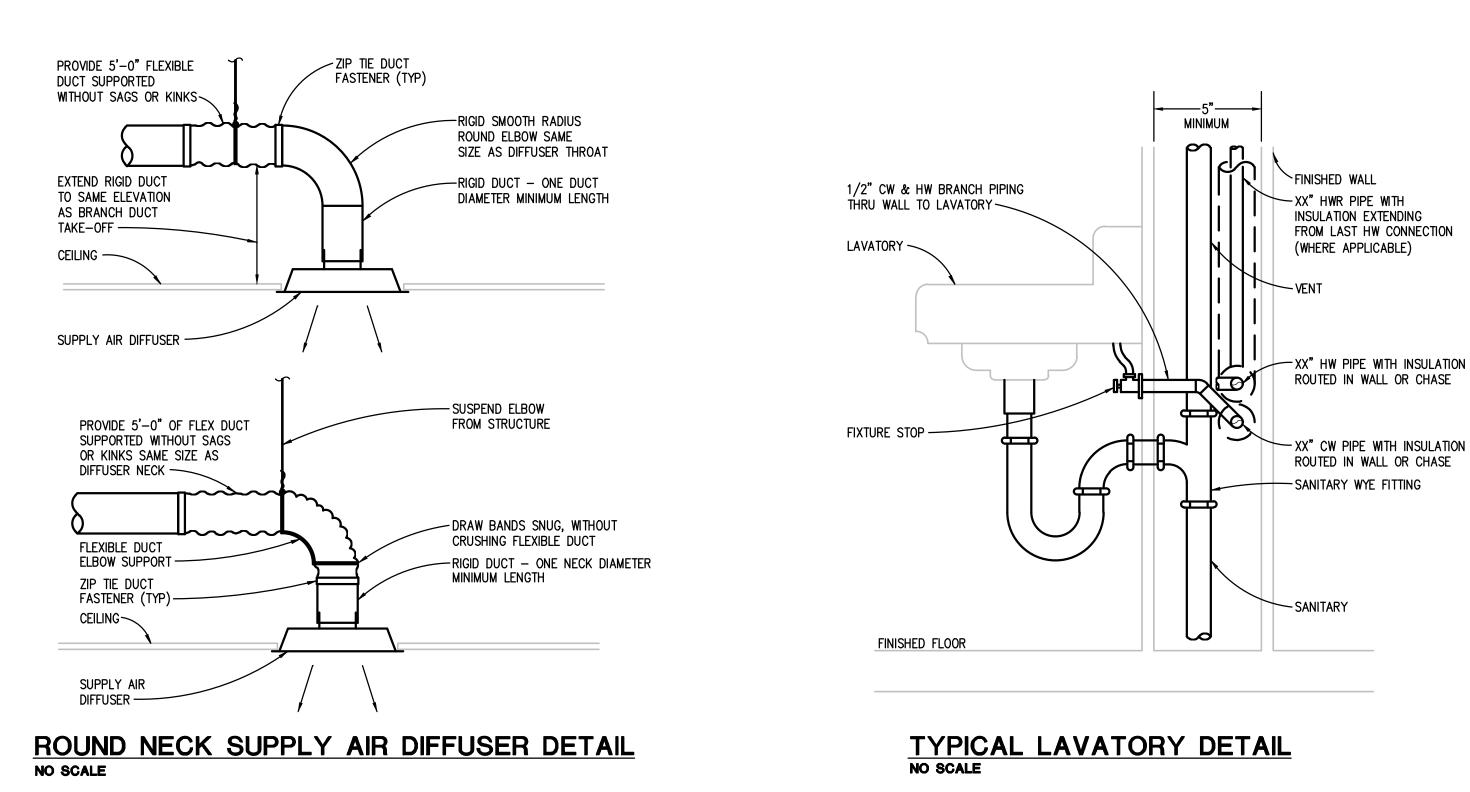
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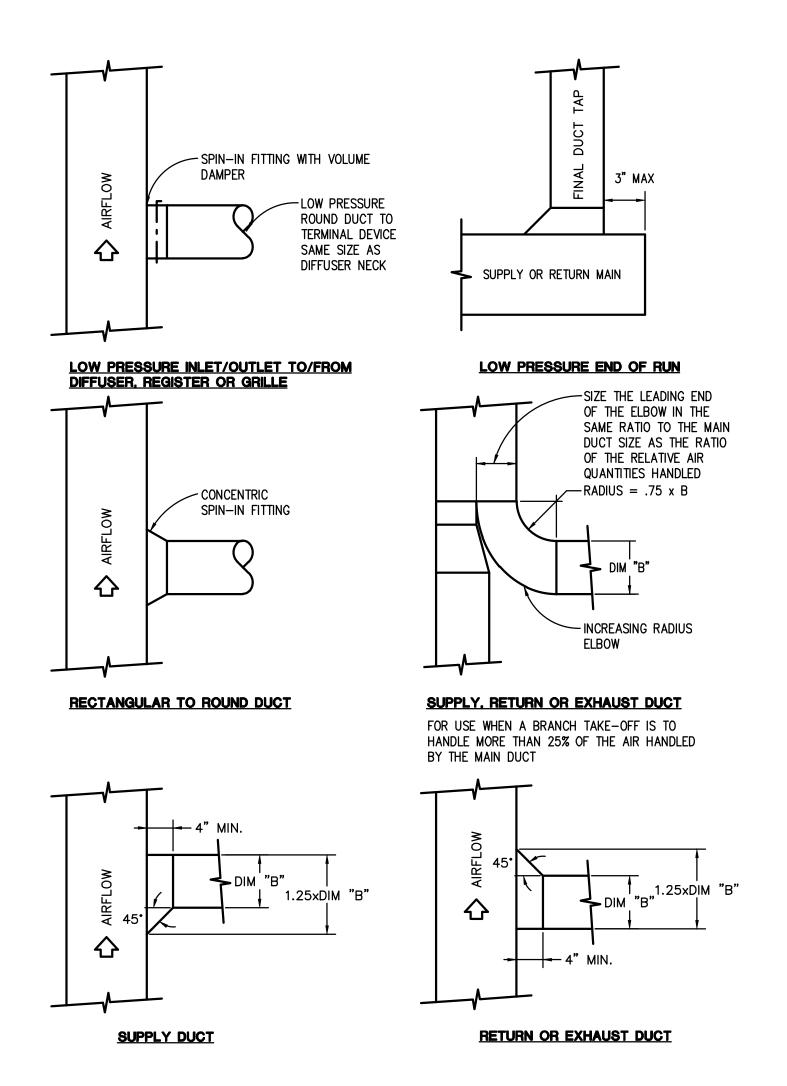
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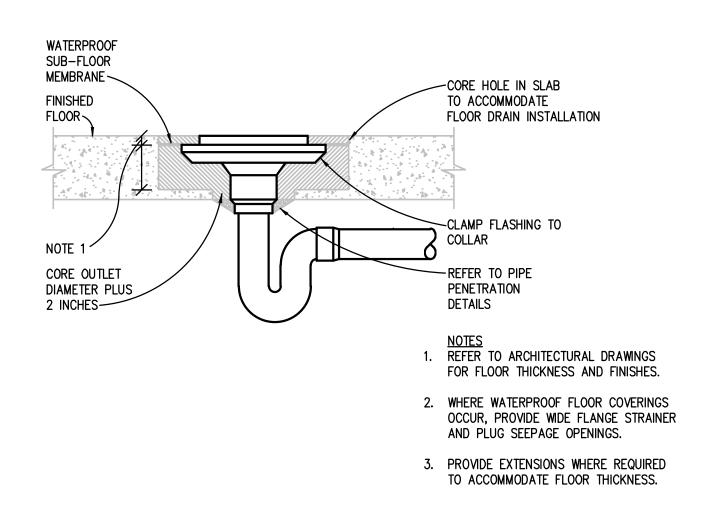
RETURN OR EXHAUST AIR DEVICE INSTALLATION DETAIL
NO SCALE

NOTE: PAINT INTERIOR SURFACE OF PLENUM BOX FLAT BLACK.





RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS



FLOOR DRAIN DETAIL (EXISTING FLOORS)
NO SCALE

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PROJECT

Garden City
Public Schools
High School
Toilet Room Renovations

Garden City, Michigan

SHEET

MECHANICAL DETAILS

PROJECT NUMBER 2019-069

SHEET NUMBER

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							N	/ATERI/	AL.											PRES	SURE (CONNEC	CTIONS							AVITY I INECTI				ISOLA	TION V	ALVES		
PIPE SIZE (INCHES)	SOFT COPPER TYPE K	HARD COPPER TYPE L	HARD COPPER TYPE M	CARBON STEEL (SCHED. 40)	CARBON STEEL (STD.)	GALV. STEEL (SCHED. 40)	PEX	3dla 3d	PE SHEATHED CARBON STEEL PIPE	CSST	NO-HUB CISP	PVC TYPE DWV	PP DRAINAGE PIPE	COPPER TYPE DWV	DUCTILE IRON PIPE	SOLDERED	BRAZED	WELDED	THREADED	FLANGED	GROOVED	INSERT & CRIMP	FUSION	PRESSURE-SEAL	MECHANICALLY-FORMED TEE	MECHANICAL JOINT	PUSH-ON-JOINT	SOLVENT WELDED	SOLDERED	FUSION	CISP HUBLESS	HEAVY-DUTY HUBLESS	BALL	AGA BALL	GENERAL SERVICE BUTTERFLY	LUBRICATED PLUG	GATE	KEYED NOTES
ABOVEGROUND DOME	STIC	WATE	R (PC	OTAB	LE AI	ND NO	ON-PO	TABL	E) ON	DIST	RIBU	TION :		OF MI	ETER	- MIN	. wo	RKING	PRE	88. &	TEM	P.: 126	PSK	G AT	200 [DEG F												
UP TO 4		Х														Х	Х			Х	Х			Х	Х								Х		Χ			Α
ABOVEGROUND SANIT	ARY	WAST	E&	VENT	- MIN	N. WC	RKING	3 PRE	SS. _' 1	0-F00	OT HE	EAD C	F W/	ATER																								
1-1/2 TO 15											Х																				Х							
UNDERGROUND SANITA	ARY \	WAST	E & \	/ENT	- MIN	ı. WO	RKING	PRE	SS.· 10	0-FOC)T HE	AD O	F WA	TER																								
3 TO 12											Х																					Х						
3 TO 12												Х																Х										

GENERAL NOTES

- 1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A PIPING SYSTEM, CONTRACTOR MAY
- SELECT FROM THOSE INDICATED SELECTIONS.
- 2. DISSIMILAR-METAL PIPING JOINTS: CONSTRUCT JOINTS USING DIELECTRIC FITTINGS COMPATIBLE WITH BOTH PIPING MATERIALS.
 - a. NPS 2 AND SMALLER: USE DIELECTRIC NIPPLE/WATERWAY.
- b. NPS 2-1/2 AND LARGER: USE DIELECTRIC FLANGE KITS.
- 3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS.
- 4. PLUMBING EQUIPMENT DRAINS, VENTS, SAFETY VALVE PIPING, BLOWDOWN PIPING AND THE LIKE SHALL BE SAME PIPING MATERIAL AS ASSOCIATED
- PIPING SYSTEM.
- 5. GROOVED END VALVES MAY BE USED WITH GROOVED PIPING.

<u>KEYED NOTES</u>

- A. GROOVED AND FLANGED FITTINGS, JOINTS, AND COUPLINGS, IF INDICATED AS AN ACCEPTABLE SELECTION, MAY BE USED IN ACCESSIBLE LOCATIONS
- ONLY FOR THIS PIPING SYSTEM. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS.
- B. JOINTS ARE NOT PERMITTED ON UNDERGROUND WATER PIPING. C. USE CAST IRON DRAINAGE PATTERN (DURHAM) FITTINGS.
- D. INSTALL IN CONTAINMENT JACKET, REFER TO SPECIFICATIONS.
- E. VALVES, UNIONS, AND FLANGED JOINTS MAY BE USED IN ACCESSIBLE LOCATIONS ONLY, EXCLUDING CEILINGS USED AS AIR PLENUMS. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS. USE ONLY STEEL WELDED FITTINGS AND WELDED JOINTS IN CEILING USED AS AIR PLENUMS.
- F. NO JOINTS ALLOWED UNDERGROUND.

ABOVEGROUND PLUMBING PIPE & ACCESSORY INSULATION APPLICATION SCHEDULE									N					
	IN	ISULAT	TION MA	ATERIAI INCHES		HICKNE	SS	FIEL	D-APF	PLIED .	JACKET	MATE	RIAL	
	FLEXIBLE ELASTOMERIC	FIBERGLASS	MINERAL WOOL	POLYISOCYANURATE	PHENOLIC	CELLULAR GLASS	CALCIUM SILICATE	ALUMINUM	STAINLESS STEEL	PVC	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	PVDC (INDOOR)	PVDC (OUTDOOR)	KEYED NOTE
INDOOR PIPE SYSTEM AND SIZE (INCHES)														
DOMESTIC COLD WATER	1	1						х		х				A
DOMESTIC HOT WATER SUPPLY & RETURN 140 DEG F AND LESS:														
NPS 1-1/4 AND SMALLER	1	1						Х		Х				A
NPS 1-1/2 AND LARGER	1.5	1.5						Х		Х				Α

UNLESS OTHERWISE INDICATED OR SCHEDULED, DO NOT INSULATE THE FOLLOWING:

FIRE SUPPRESSION PIPING UNDERGROUND PIPING

LABORATORY GAS AND VACUUM PIPING

MEDICAL GAS AND VACUUM PIPING

FUEL GAS PIPING FUEL OIL PIPING

GENERAL NOTES

- 1. 'X' OR THICKNESS IN INCHES INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
- 2. INSULATE PIPING WITHIN AIR HANDLING EQUIPMENT THE SAME AS INDOOR PIPING. PROVIDE ALUMINUM OR STAINLESS STEEL JACKET.

KEYED NOTES

A. PROVIDE FIELD APPLIED JACKET FOR PIPING EXPOSED IN EQUIPMENT ROOMS, STORAGE ROOMS, JANITORS CLOSETS, RECEIVING ROOMS, TEST AREAS, CIRCULATION AREAS AND SUCH AREAS SUBJECT TO DAMAGE, WITHIN 10 FEET (3 METERS) OF FINISHED FLOOR. B. PROVIDE MANUFACTURER'S RECOMMENDED PROTECTIVE COATING FOR FLEXIBLE ELASTOMERIC THERMAL INSULATION.

C. ALL WELDED	CONSTRUCTION.			

A. SCREWS, DAMPERS, OR PROJECTIONS OF ANY TYPE ON INTERIOR OF DUCT SURFACE ARE PROHIBITED

	GRILLE, REGISTER, AND DIFFUSER SCHEDULE									
UNIT IDENTIFICATION	TYPE	FACE SIZE	NECK SIZE	FRAME TYPE	ACCESSORY	CONSTRUCTION	FINISH	MODEL NUMBER	KEYED NOTES	
S–1	DIFFUSER	24x24	8ø	SURFACE	OBD	STEEL	WHITE	SCD		
E-1	GRILLE	NECK+2"	12"x12"	SURFACE	OBD	STEEL	WHITE	530		

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A DUCT SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.

2. 4 X 1 PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON EXTERIOR SHEET METAL SURFACES OF

SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND MINIMUM 1 MIL (0.025 MM) THICK ON EXTERIOR SURFACES.

4. 4 X 4 PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON SHEET METAL SURFACES OF DUCTS

3. 1 X 4 (4 X 1 REVERSE COATED) PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON INTERIOR

DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND MINIMUM 1 MIL (0.025 MM) THICK ON INTERIOR SURFACES.

AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND 4 MILS (0.10 MM) THICK ON OPPOSITE SURFACES.

DUCT SYSTEM APPLICATION SCHEDULE

DUCT MATERIAL

GENERAL NOTES: 1. MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED.

AIR SYSTEMS

GENERAL NOTES

KEYED NOTES

SUPPLY AIR WITHOUT TERMINAL UNITS

EXHAUST AIR WITHOUT TERMINAL UNITS

SCHEDULES GENERAL NOTES:

TYPICAL FOR ALL SCHEDULE SHEETS:

- REFER TO ELECTRICAL STANDARD SCHEDULES, ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL ELECTRICAL INFORMATION
- 2. PROVIDE THE FOLLOWING FACTORY-WIRED ELECTRICAL OPTIONS/ACCESSORIES WHERE INDICATED IN SCHEDULE:
- A NON-FUSED DISCONNECT SWITCH
- B UNIT SHALL BE SINGLE POINT ELECTRICAL CONNECTION WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS
- C SERVICE RECEPTACLE
- D FUSED DISCONNECT SWITCH
- E COMBINATION STARTER F - UNIT SHALL HAVE (2) SINGLE POINT CONNECTIONS WITH FACTORY INSTALLED DISCONNECTING MEAN'S AND ALL REQUIRED STARTERS AND CONTROLS. (1) CONNECTION SHALL BE FOR CONDENSING SECTION AND (1) CONNECTION SHALL BE FOR THE REMAINDER OF THE UNIT.
- 3. FOR MODULATION/CONTROL TYPE COLUMN, "VFC" INDICATES VARIABLE FREQUENCY CONTROLLERS. "AUTO" INDICATES AUTOMATIC OPERATION (CONTROLLED BY TEMPERATURE CONTROLS OR SELF CONTAINED CONTROLS), "MANUAL" INDICATES HAND OPERATION.
- 4. IF VARIABLE FREQUENCY CONTROLLERS ARE INDICATED TO BE PROVIDED AND ARE NOT INSTALLED INTEGRAL TO THE UNIT, VARIABLE FREQUENCY CONTROLLERS SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR (UNLESS OTHERWISE NOTED) AND INSTALLED BY THE ELECTRICAL CONTRACTOR INCLUDING THE LINE SIDE AND LOAD SIDE WIRING TO THE MOTOR AND INCLUDING MISCELLANEOUS STEEL REQUIRED FOR THE SUPPORT AND MOUNTING OF THE VFC. REFER TO FLOOR PLANS FOR LOCATION.
- WHERE EQUIPMENT IS INDICATED TO HAVE A SINGLE POINT ELECTRICAL CONNECTION, THAT EQUIPMENT SHALL COME COMPLETE WITH FACTORY INSTALLED STARTERS, MOTOR OVERLOAD PROTECTION, CONTACTORS, FUSING AND ALL NECESSARY INTERNAL WIRING AND CONTROLS. PROVIDE A FACTORY MOUNTED UNIT DISCONNECTING MEANS WHERE THE ELECTRICAL CONTRACTOR SHALL MAKE SINGLE POINT CONNECTION. INSTALL PACKAGED EQUIPMENT SUCH THAT THE ELECTRICAL CONNECTION AND CONTROLS ARE ACCESSIBLE AND HAVE CLEARANCES MEETING THE NATIONAL ELECTRICAL CODE.
- WHERE PACKAGED EQUIPMENT IS PROVIDED, NAMEPLATE MUST INDICATE MAXIMUM OVERCURRENT PROTECTION BY HACR RATED CIRCUIT BREAKERS OR FUSES. IF FUSE PROTECTION ONLY IS INDICATED, PROVIDE A FUSIBLE DISCONNECT AND FUSES WITH THE UNIT.
- WHERE EQUIPMENT IS DESIGNATED BY MANUFACTURER AND MODEL NUMBER, THIS IS THE BASIS OF DESIGN. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT BY OTHER SPECIFIED MANUFACTURERS OR PROPOSED ALTERNATE EQUIPMENT BY THE BASIS OF DESIGN MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS TO ELECTRICAL REQUIREMENTS, STRUCTURAL LOADING, OR ARCHITECTURAL APPURTENANCES AND SHALL INCLUDE THE COST OF SUCH REVISIONS IN HIS BID.
- WHERE EQUIPMENT IS SCHEDULED TO INCLUDE A SERVICE RECEPTACLE, PROVIDE A FACTORY MOUNTED SERVICE RECEPTACLE WITH APPROPRIATE FUSES AND TRANSFORMERS CONNECTED ON THE LINE SIDE OF THE UNIT DISCONNECT. PROVIDE A NAMEPLATE ON THE DISCONNECT SWITCH INDICATING THE PRESENCE OF LIVE POWER TO THE SERVICE RECEPTACLE WHEN THE UNIT DISCONNECT IS IN THE OFF
- 9. SIZE ALL EQUIPMENT FEEDERS BASED ON THE LISTED MOP (MAXIMUM OVERCURRENT PROTECTION). REFER TO THE FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE ON THE ELECTRICAL STANDARD SCHEDULES SHEET.

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KEY PLAN



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PLUMBING CONNECTION SCHEDULE										
UNIT IDENTIFICATION	CW INCHES	HW INCHES	SAN INCHES	VENT INCHES	KEYED NOTES					
UR-1	3/4	-	2	1 1/2						
WC-1	1 1/2	-	4	2						
LAV-1	1/2	1/2	1 1/2	1 1/2						
FD-1	-	-	3	_						

1. INDIVIDUAL WATER LINE BRANCHES, WASTE LINES, VENTS, AND TRAPS FOR CONNECTION TO INDIVIDUAL FIXTURES, FIXTURE FITTINGS, AND SPECIALTIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE OR AS INDICATED ON DRAWINGS, WHICHEVER IS GREATER.

KEYED NOTES:

1. PROVIDE MIXING VALVE.

PROJECT

Garden City Public Schools High School Toilet Room Renovations

Garden City, Michigan

SHEET

MECHANICAL SCHEDULES

PROJECT NUMBER

2019-069

SHEET NUMBER

M7.01

BEHIND FURNITURE

PARTITION SYSTEM

∮6" A.F.F. HORIZONTALLY TO TOP OF BOX, U.O.N. $-\sqrt{x}-\sqrt{y}$

18" A.F.F. TO

CENTER OF BOX,

ELECTRICAL DRAWING INDEX

SHEET NO. SHEET TITLE E0.01 ELECTRICAL STANDARDS AND DRAWING INDEX E0.02 ELECTRICAL STANDARD SCHEDULES AND DETAILS ED2.10 HIGH SCHOOL TOILET ROOM ELECTRICAL DEMOLITION PLAN E2.10 HIGH SCHOOL TOILET ROOM ELECTRICAL NEW WORK PLANS

> ISSUE DATE ISSUED FOR 01/21/2020 **BIDS** DRAWN LLJ GJZ CHECKED

KEY PLAN

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GJZ

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PROJECT

Garden City

High School

Garden City,

Michigan

SHEET

Public Schools

Toilet Room Renovations

STANDARD METHODS OF NOTATION

<u>ABBREVIATION</u>

PDP

RDP

RSC

SCHED

SWGR

TELECOM

TTB

U.O.N.

RECEPT

<u>DESCRIPTION</u>

RECEPTACLE

SCHEDULE

SWITCHBOARD

SWITCHGEAR

TERMINAL BOX

TELECOMMUNICATIONS

UNLESS OTHERWISE NOTED

TAMPER RESISTANT

SWITCH

TYPICAL

UPSTAGE

WIRE OR WATTS

WEATHERPROOF

TRANSFORMER

EXISTING

RELOCATED

EXPLOSION PROOF

WIRE GUARD

VOLTS

PHASE

PUSHBUTTON STATION

RECEPTACLE PANEL

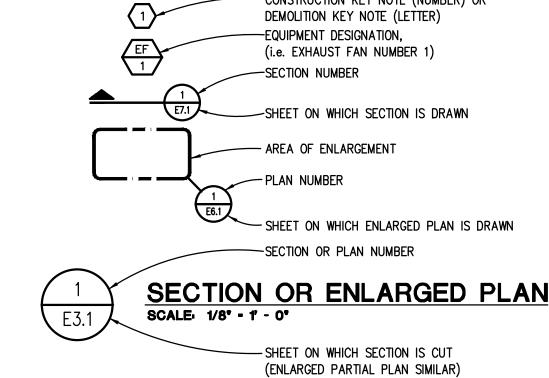
RIGID STEEL CONDUIT

POTENTIAL TRANSFORMER

POWER DISTRIBUTION PANEL

RECEPTACLE DISTRIBUTION PANEL

TELEPHONE TERMINAL BACKBOARD



HEAVY LINE WEIGHT INDICATES NEW WORK LIGHT LINE WEIGHT INDICATES EXISTING EQUIPMENT OR REFERENCED INFORMATION GRAY LINE INDICATES BACKGROUND INFORMATION THIN GRAY LINE INDICATES CEILING GRID _____ DASHED LINES INDICATE CONDUIT ROUTED IN OR BELOW SLAB OR GRADE HATCH MARKS INDICATE EQUIPMENT OR MATERIALS TO BE DISCONNECTED AND REMOVED.

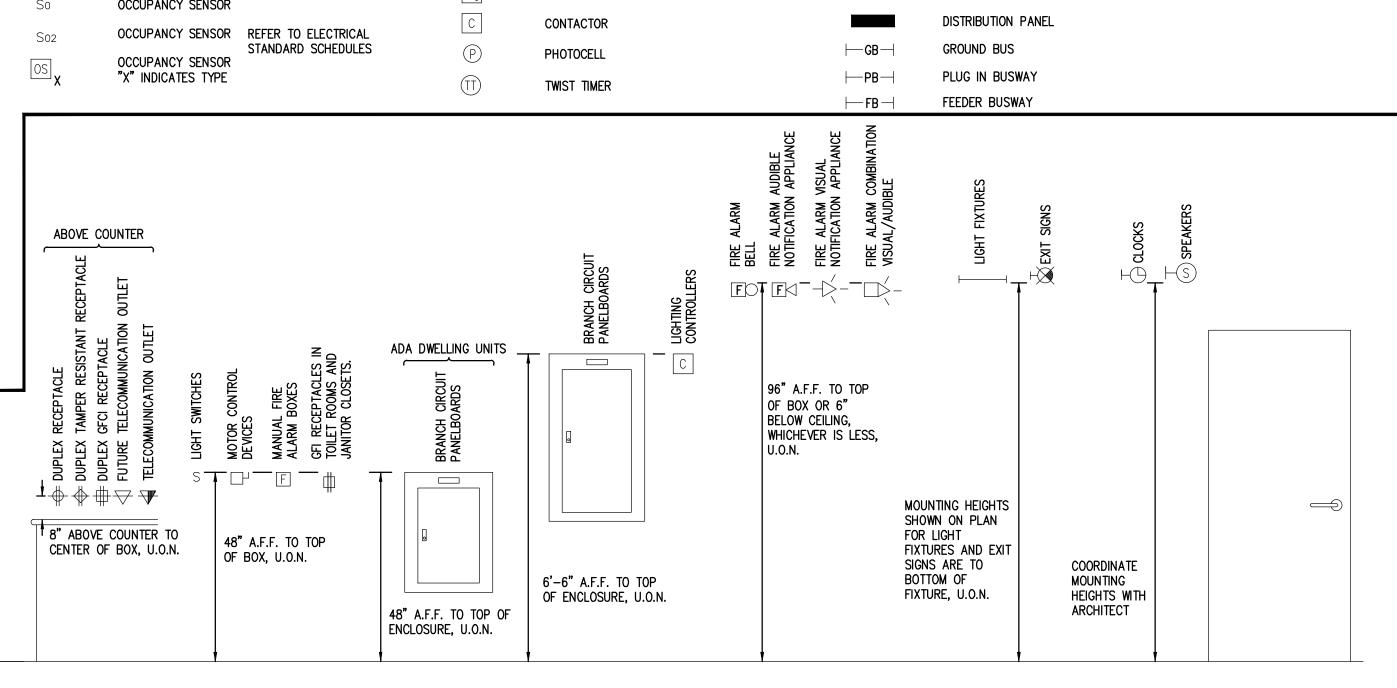
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ELECTRICAL STANDARDS AND DRAWING INDEX

PROJECT NUMBER 2019-069

SHEET NUMBER

E0.01



G/GRD/EG

DIMENSION DISCONNECT DISC DISTRIBUTION PANEL DOWNSTAGE DWG DRAWING **EMERGENCY BATTERY UNIT** ELECTRICAL CONTRACTOR ELECTRICAL EMERGENCY OFCI ELECTRICAL METALLIC TUBING ELECTRICALLY OPERATED EMERGENCY POWER OFF ELECTRIC WATER COOLER

ELECTRICAL ABBREVIATION LIST

AMPERES FRAME (BREAKER RATING)

AMPERES TRIP (BREAKER SETTING)

ARC FAULT CIRCUIT INTERRUPTER

AMPS INTERRUPTING CAPACITY

AUTOMATIC TRANSFER SWITCH

BOLTED PRESSURE SWITCH

CONTRACTOR FURNISHED.

CONTRACTOR INSTALLED

CURRENT TRANSFORMER

ABOVE FINISH FLOOR

AUDIENCE LEFT

AUXILIARY

BREAKER

CONDUIT

DEMOLITION

AUDIENCE RIGHT

CIRCUIT BREAKER

ABBREVIATION DESCRIPTION

AFCI

A.F.F.

ATS

AUX

BPS

CFCI

DEMO

EBU

AMPFRFS.

EWC **EXIST** EXISTING FIRE ALARM FULL LOAD AMPS FLR FLOOR FOH FRONT OF HOUSE

FOOD SERVICE EQUIPMENT CONTRACTOR FSEC FUSE GROUND GROUND FAULT CIRCUIT INTERRUPTER

GROUND FAULT PROTECTION HAND-OFF-AUTO HORSEPOWER HIGH VOLTAGE HERTZ ISOLATED GROUND

JUNCTION BOX

CONSTRUCTION KEY NOTE (NUMBER) OR

<u>DESCRIPTION</u>

KILOVOLT - AMPERES

KILOWATT - HOURS

LIGHTNING ARRESTOR

LIGHTING DISTRIBUTION PANEL

MAIN CIRCUIT BREAKER

MOTOR CONTROL CENTER

MAIN DISTRIBUTION PANEL

LIGHTING PANEL

KILOVOLT

KILOWATT

MAXIMUM

MECHANICAL

MISCELLANEOUS

MAIN LUGS ONLY

NORMALLY CLOSED

Non-fusible

NIGHT LIGHT

ON CENTER

NOT IN CONTRACT

NORMALLY OPEN

OWNER FURNISHED,

OWNER FURNISHED,

OWNER INSTALLED

CONTRACTOR INSTALLED

NOT TO SCALE

NATIONAL ELECTRICAL CODE

MINIMUM

MOUNTED

MOUNTING

NEUTRAL

MOTOR

<u>ABBREVIATION</u>

LDP

MDP

MECH

MISC.

MLO

MTD

MTG

CIRCUIT HOMERUN

DUCT BANK - CONCRETE ENCASED / DIRECT BURIE

	RACEWAY / CONDUCTOR / CABLE AP	PLIC	ATI	ON	I S	СН	ED	UL	E				
		WIRE				RACI	EWAY	′			CA	BLE/C	ORD
		COPPER, TYPE THHN/THWN-2	ELECTRICAL METALLIC TUBING (EMT)	RIGID STEEL CONDUIT (RSC)	PVC COATED RIGID STEEL CONDUIT	RIGID NON-METALLIC CONDUIT (RNC) TYPE EPC-40	FLEXIBLE METAL CONDUIT (FMC)	LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC)	SURFACE RACEWAY	CABLE TRAY	METAL CLAD TYPE CABLE WITH INSULATED GROUND WIRE (TYPE MC)	TRAY CABLE FOR EXPOSED RUNS (TYPE TC-ER)	POWER LIMITED CABLE
	CONCEALED, ACCESSIBLE CEILINGS	Х	X				_		0,		X		
TS –	CONCEALED, INACCESSIBLE CEILINGS	Х	Х										
BRANCH CIRCUITS . INTERIOR	CONCEALED IN GYPSUM BOARD PARTITION WALLS	Х	Х				Х				Х		
유 지 교	CONCEALED IN CMU WALLS	Х	Х										
3RAN	EXPOSED, FINISHED SPACES	Х							Х				
ш	DAMP AND WET LOCATIONS	Х		Х	Х	Х		Х					
L ONS	CLASS 1 CONTROL CIRCUITS	Х	Х									Х	
PECIA ICATI	CLASS 2 CONTROL CIRCUITS	Х	Х							Х		х	Х
SPECIAL APPLICATIONS	CLASS 3 CONTROL CIRCUITS	Х	х							х		Х	х
	GENERAL NOTES:	•	-					-		•	•	•	

1. TRANSITION FROM PVC/HDPE AND PROVIDE RIGID STEEL SWEEPS WHERE CONDUITS PENETRATE WALLS, CONCRETE SLABS, CONCRETE BASES, AND ASPHALT.

<u>KEYED NOTES:</u>

1. CONDUIT AND BUILDING WIRE ALLOWED WHEN ENCASED IN MINIMUM 2" CONCRETE.

2. REFER TO SPECIFICATIONS FOR RESTRICTIONS ON MC/AC CABLE INSTALLATION.

2. SHALL NOT BE USED FOR LIFE SAFETY OR CRITICAL CIRCUITS EXCEPT WHERE PERMITTED BY NEC 517.

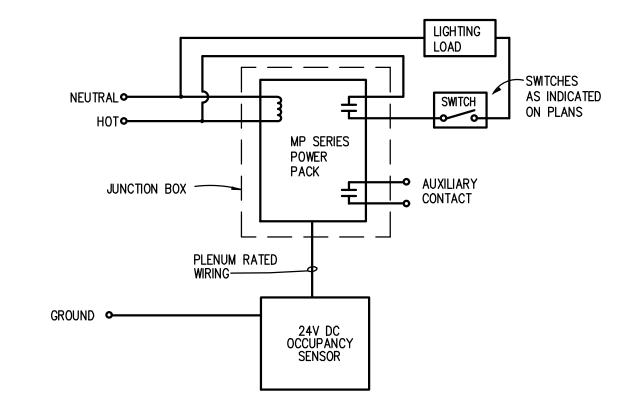
3. SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS BASED ON UL TESTING AND RATING. 4. EMERGENCY FEEDERS IN OCCUPANCIES THAT ARE UNDER 700.10(D) SHALL HAVE A TWO HOUR RATING. RATING SHALL BE

OBTAINED BY ROUTING CONDUIT AND BUILDING WIRE IN SPRINKLERED SPACE,

IN A TWO HOUR SHAFT, OUTSIDE OF THE BUILDING, IN A LISTED TWO HOUR RATED RACEWAY, OR UNDER A MINIMUM OF 2" OF CONCRETE; OR BY USING A LISTED TWO-HOUR RATED CABLE ASSEMBLY. 5. PULLING LUBRICANT SHALL NOT BE USED.

-CEILING GRID TEE SUPPORT WIRE SECURED TO STRUCTURE ABOVE-—FIXTURE SUPPORT WIRE SECURED TO STRUCTURE (PROVIDE SUPPORTS AT DIAGONAL CÒRNERS OF EACH FIXTURE INSTALLED. REFER TO SPECIFICATIONS) LIGHTING FIXTURE ENCLOSURE — CEILING GRID TEE (TYP) CEILING TILE (TYP)

RECESSED LIGHTING FIXTURE **INSTALLATION DETAIL** NO SCALE



CEILING MOUNTED OCCUPANCY SENSOR

WIRING DIAGRAM

NO SCALE

NOTES:

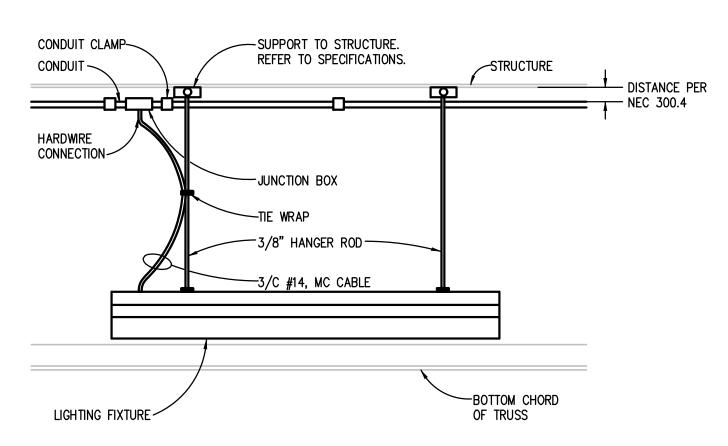
1. OCCUPANCY SENSOR SHALL LEVITON (OWNER STANDARD).

2. PROVIDE POWER PACKS AND SLAVE PACKS AS REQUIRED FOR SWITCHING AS INDICATED ON PLAN. REVISE DETAIL AS REQUIRED BY MANUFACTURER.

3. MOUNTING LOCATION PER MANUFACTURER'S RECOMMENDATION.

4. ADJUST SENSITIVITY LEVELS PER THE OWNER.

5. PROVIDE FACTORY SUPPORT FOR AIMING/ADJUSTING OF SENSORS.



DETAIL OF PENDANT MOUNTED LINEAR LIGHTING FIXTURE NO SCALE

	LIGHTING FIXTURE SCHEDULE								
TYPE	DESCRIPTION	VOLTAGE	(QTY.) LAMPS	MANUFACTURERS					
L1	LED 2'X2' RECESSED FLAT PANEL LIGHT FIXTURE: ALUMINUM BEZEL, STEEL BACKING AND WHITE FROST ACRYLIC DIFFUSER. PROVIDE WITH 0-10V DIMMING TO 10% FOR FIXTURES INDICATED AS EMERGENCY PROVIDE 1,400 LUMENS OUTPUT BATTERY PACK.	MULTI	2,000 LUMENS 4000K 80CRI	1. LITHONIA EPANL SERIES 2. METALUX 22FP SERIES 3. COLUMBIA CFP SERIES					
L2	CHAIN HUNG 4'-0" LED FIXTURE: FROSTED LENS WITH WIREGUARD, CHAIN HUNG. FIXTURE SHALL BE MOUNTED AT 9'-0"AFF TO BOTTOM OF FIXTURE (U.O.N). LOCATE FIXTURES TO AVOID MECHANICAL EQUIPMENT.	MULTI	5,000 LUMENS 4000K 80CRI	1. LITHONIA ZL1D SERIES 2. METALUX SNLED SERIES 3. COLUMBIA MPS SERIES					
L3	CHAIN HUNG 2'-0" LED FIXTURE: FROSTED LENS WITH WIREGUARD, CHAIN HUNG. FIXTURE SHALL BE MOUNTED AT 9'-0"AFF TO BOTTOM OF FIXTURE (U.O.N). LOCATE FIXTURES TO AVOID MECHANICAL EQUIPMENT.	MULTI	3,500 LUMENS 4000K 80CRI	1. LITHONIA ZL1D SERIES 2. METALUX SNLED SERIES 3. COLUMBIA MPS SERIES					

COORDINATE WITH ARCHITECTURAL PLANS FOR CEILING TYPES.

ALL LED FIXTURES SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
MULTI-VOLT ELECTRONIC DRIVER, MINIMUM OF 50,000 HOURS OPERATION WITH GREATER THAN 70% DELIVERED LUMEN OUTPUT.

LUMENS SHALL BE DELIVERED LUMENS. INDOOR DRIVERS SHALL BE RATED FOR A MINIMUM 65°C.

OUTDOOR DIRVERS SHALL BE RATED FOR MINIMUM -20°C. DRIVER SHALL BE LABELED TO COMPLY WITH NEMA SSL1, AND THD OF LESS THAN 20%.

DRIVER SHALL BE SERVICEABLE FROM BELOW CEILING. LUMINAIRE SHALL COMPLY WITH IES STANDARDS LM-79 AND LM-80.

В	BRANCH CIRCUIT VOLTAGE DROP WIRING SCHEDULE FOR SINGLE PHASE CIRCUITS												
BRANCH	WIRE SIZE	M	MAXIMUM BRANCH CIRCUIT LENGTH (IN FEET)										
CKT RATING (A)	(AWG)	120V	208V	240V	277V	480V							
20A	12	83	143	165	191	331							
	10	128	222	256	295	511							
•	8	201	348	402	464	804							
•	6	313	542	625	721	1250							
30A	10	85	148	170	197	341							

GENERAL NOTES:

1. THE ABOVE TABLE VALUES ARE BASED ON COPPER CONDUCTORS, IN STEEL CONDUIT, WITH A LOAD POWER FACTOR

417

721 1250

OF 0.85 PER NEC CHAPTER 9, TABLE 9. 2. PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHERE BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS APPROPRIATELY

SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%. 3. CONDUCTOR SIZES ARE BASED ON MAXIMUM OF 9 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT. 4. LIMITS FOR CONDUCTOR LENGTHS SHOWN ARE BASED ON A MAXIMUM BRANCH CIRCUIT LOADING OF 64% OF THE BRANCH BREAKER RATING AND A MAXIMUM OF 3 PERCENT VOLTAGE DROP TO COMPLY WITH ASHRAE 90.1 AND THE NEC. FOR CIRCUITS LOADED GREATER THAN 64% OF BRANCH BREAKER RATING, THE CONTRACTOR SHALL PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

4 313 542 625

	OCCUPANCY SENSOR LEGEND								
TYPE	DESCRIPTION								
os _A	360° CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR								
os _B	90° CEILING/WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR								
os _c	360° CEILING MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR								
os _D	360° CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR								
os _E	360° CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR — CORRIDOR OPTIMIZED								
So	WALL SWITCH OCCUPANCY SENSOR								
S02	WALL SWITCH OCCUPANCY SENSOR - DUAL LEVEL SWITCHING								
Do	WALL DIMMER SWITCH OCCUPANCY SENSOR								

ISSUE DATE ISSUED FOR 01/21/2020

KEY PLAN

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PROJECT

Garden City Public Schools High School Toilet Room Renovations

Garden City, Michigan

SHEET

ELECTRICAL STANDARD SCHEDULES AND DETAILS

PROJECT NUMBER

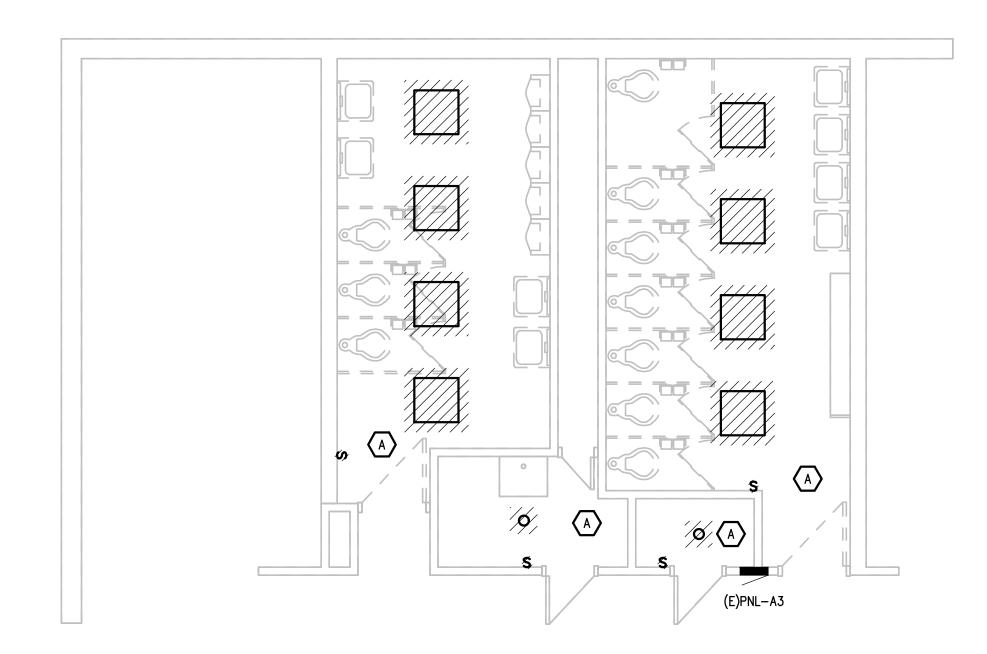
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NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

THE FOLLOWING DIMENSION EQUALS
ONE INCH WHEN PRINTED TO SCALE.





HIGH SCHOOL WOMENS 205 AND MENS 201
TOILET ROOM ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" - 1' - 0"

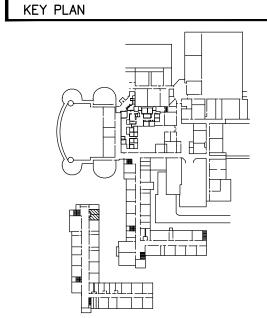
ELECTRICAL DEMOLITION GENERAL NOTES:

- 1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
- 2. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.
- 3. REMOVE EQUIPMENT OR MATERIALS AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE COMPONENTS SHOWN.
- 4. COORDINATE WITH NEW WORK PLANS, ONE LINE DIAGRAMS AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
- 5. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE EXISTING SUPPORT IS TO BE REMOVED. RE—ROUTE BRANCH CIRCUIT CONDUITS AND RELOCATE JUNCTION BOXES AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
- 6. REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
- 7. MAINTAIN ELECTRICAL SERVICE TO ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT THAT ARE TO REMAIN. EXTEND CONDUIT AND WIRE AS REQUIRED WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM LOADS THAT ARE TO REMAIN.
- 8. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, INCLUDING TCLP TESTING, PROPER DISPOSAL AND/OR RECYCLING OF FLUORESCENT LAMPS.
- 9. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED BUT EXISTING WALLS REMAIN INTACT.
- 10. RING OUT AND TAG ALL CIRCUITS AFFECTED BY THIS ALTERATION AT BOTH ENDS. MARK ALL UNUSED CIRCUIT BREAKERS "SPARE".
- 11. PROVIDE UPDATED TYPED—IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
- 12. VERIFY ALL UNDERGROUND AND IN SLAB UTILITY LOCATIONS PRIOR TO SAW-CUTTING OR PENETRATING ANY FLOOR SLAB.
- 13. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE REMAINING IN USE WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR PERIODS LONGER THAN THESE HOURS. COORDINATE ELECTRICAL SHUT DOWNS WITH THE OWNER 72 HOURS PRIOR TO SHUT DOWN.

DEMOLITION KEY NOTES:

A. REMOVE LIGHTING WITHIN SPACE, MAINTAIN BRANCH CIRCUIT FOR RECONNECTION TO NEW LIGHTING. REFER TO NEW WORK PLAN FOR EXTENT OF WORK.





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PROJECT

Garden City
Public Schools
High School
Toilet Room Renovations

Garden City, Michigan

SHE

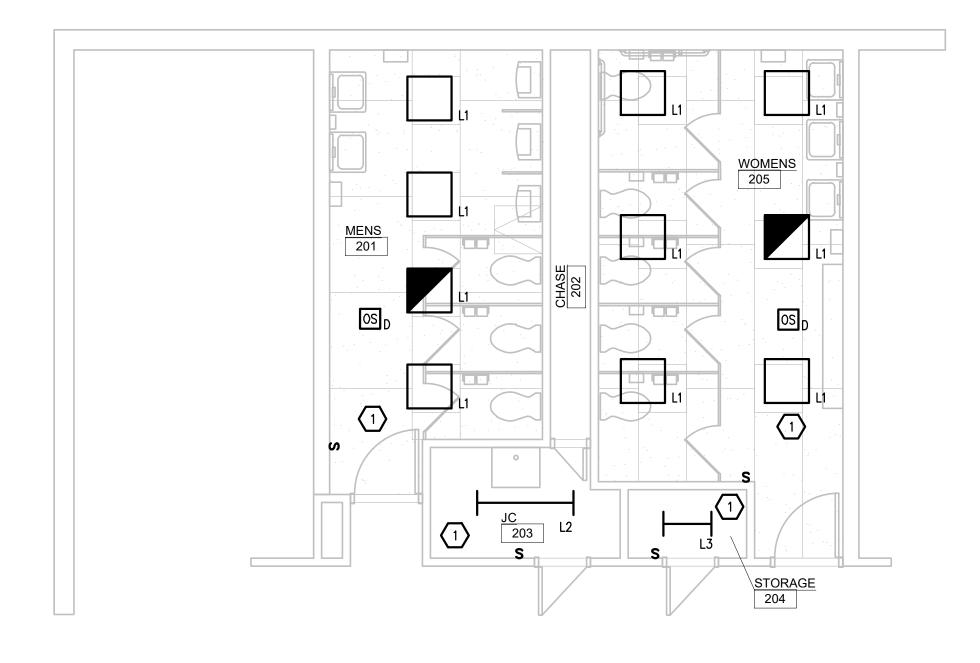
HIGH SCHOOL TOILET ROOM ELECTRICAL DEMOLITION PLAN

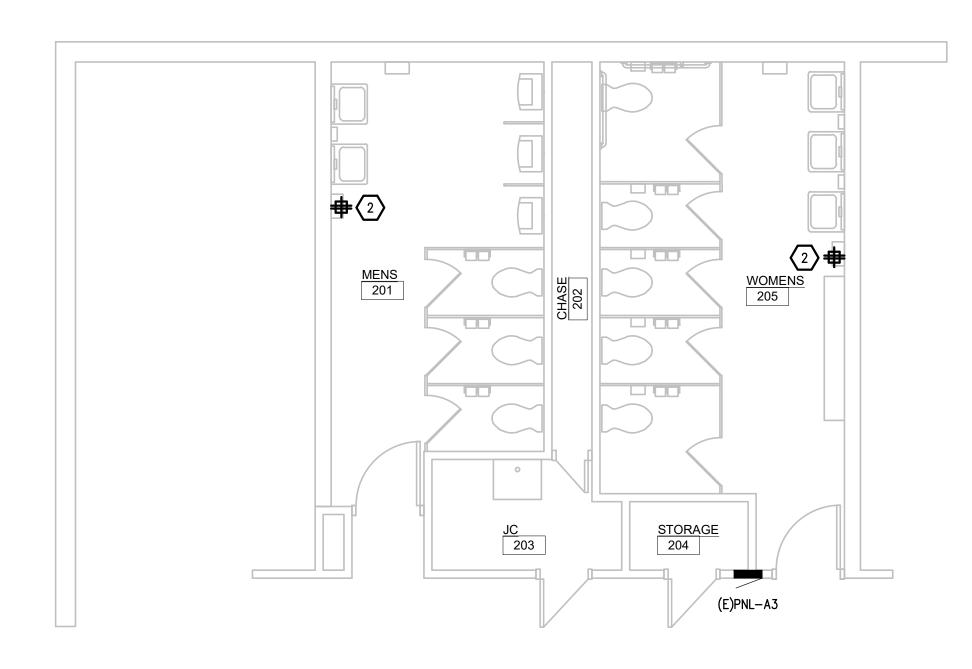
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HIGH SCHOOL WOMENS 205 AND MENS 201
TOILET ROOM LIGHTING NEW WORK PLAN
SCALE: 1/4' - 1' - 0'



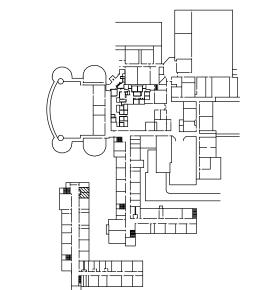
HIGH SCHOOL WOMENS 205 AND MENS 201
TOILET ROOM POWER NEW WORK PLAN
SCALE: 1/4' - 1' - 0'

ELECTRICAL GENERAL NOTES:

- 1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. COORDINATE WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND OFFSETS.
- 2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- 3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- 4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL
- 5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
- 6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
- 7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
- 8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE—THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
- 9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
- 10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
- 11. PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON—SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
- 12. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.

CONSTRUCTION KEY NOTES:

- CIRCUIT LIGHTING TO MAINTAINED BRANCH CIRCUIT. MODIFY SWITCH LEG AS REQUIRED FOR WORK INDICATED.
- 2. CIRCUIT TO NEAREST AVAILABLE 120V CIRCUIT. ELECTRICAL CONTRACTOR TO FIELD



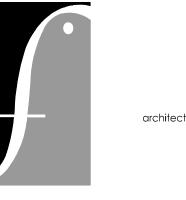
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HIGH SCHOOL TOILET ROOM ELECTRICAL NEW WORK PLANS

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