		PLUMBING SYMBOLS
		NOT ALL SYMBOLS MAY APPLY
		EXISTING COLD WATER PIPING
		EXISTING HOT WATER PIPING
		EXISTING HOT WATER RETURN PIPING EXISTING UNDERGROUND SEWER
		EXISTING SUSPENDED SEWER
		EXISTING VENT PIPING
		COLD WATER PIPING (INSULATED)
		HOT WATER PIPING (INSULATED)
	· ———	HOT WATER RETURN PIPING (INSULATED)
——т	N	TEMPERED WATER PIPING (INSULATED)
——тw	/R	TEMPERED WATER RETURN PIPING (INSULATED)
		UNDERGROUND SEWER
		SUSPENDED SEWER
		VENT PIPING
—— <u> </u>		DRAIN TILE
		
⊩	СО	CLEAN-OUT PLUG
	NOTE:	
I⊢ 200 3	WCO	WALL CLEAN-OUT ("SMITH" #4422, MIFAB C1450-RD)
₩	FCO-2	FLOOR CO ("SMITH" #4040, MIFAB C1220-S-3) FF
₩	FCO-2 FCO-3	FLOOR CO ("SMITH" #4020) FINISHED AREAS FLOOR CO ("SMITH" #4220, MIFAB C1220-XR-4) UNFF
₩	FCO-4	FLOOR CLEAN-OUT ("SMITH" #4250) NO-LOAD AREAS
*	FD-1	FLOOR DRAIN ("SMITH" #2010A-NB, MIFAB F1100-C-5-
	FD-2	FLOOR DRAIN ("SMITH" #2210, MIFAB F1320—TFB)
	FD-3	FLOOR FUNNEL DRN ("SMITH" #3510, MIFAB F1100-C-EF
	FD-4	FLOOR DRAIN ("SMITH"#2230)
0	HD	HUB DRAIN
	AD	AREA DRAIN ("SMITH" #2675)
	FS	FLOOR SINK ("SMITH #3101-12)
(6)	RD	ROOF DRAIN ("SMITH" #1010-C-CID)
(6)	OD	OVERFLOW ROOF DRAIN ("SMITH" #1070-C-CID)
\triangleright	DSN	DOWNSPOUT NOZZLE ("SMITH" #1770-BS)
\bowtie	GV	GATE VALVE ("NIBCO" #S-134 OR T-134)
	BV	BALL VALVE ("NIBCO" #S-585-70 OR T-585-70)
	BV	BALANCING VALVE ("NIBCO" #S-1710 OR T-1710)
\bowtie	CV	CHECK VALVE ("NIBCO" #S-433 OR T-433)
H	STR	STRAINER ("NIBCO" #S-221/222-A OR T-221/222-A)
N	BFP	DUAL CHECK WITH VENT AND STRAINER ("WATTS" #SD-
N	DCAV	DUAL CHECK WITH ATMOSPHERIC VENT ("WATTS" #9D)
N	DCV	DUAL CHECK VALVE ("WATTS" SERIES 7)
₹	PVB	PRESSURE VACUUM BREAKER ("WATTS" #008PCQT)
라	VB BSC	ATMOSPHERIC VACUUM BREAKER ("WATTS" #288A) BOXED WALL HYDRANT ("SMITH" #5509-QT)
	BSC SC	WALL HYDRANT ("SMITH" #5609-QT)
+ +	HB	HOSE BIB ("WOODFORD #24P)
	YH	YARD HYDRANT ("SMITH" #5810-05B)
	TD	TRENCH DRAIN (SEE SPECS)
P		STACK OR RISER DESIGNATION
1		NEW CONNECTION BETWEEN NEW AND EXISTING
	cw - co	LD WATER
	DFU - DI	RAINAGE FIXTURE UNIT
	DN - DO	WN
	DS - DO	WNSPOUT
	GPM - G	ALLONS PER MINUTE
	HW - HO	T WATER
	HWR - H	OT WATER RETURN
	ISO - ISO	DLATION
		NON POTABLE COLD WATER
	SAN - S	
		CHEN GREASE WASTE
	OW - OIL	
	ST - STO	
	V - VEN	
		ENT THROUGH ROOF RIFY IN FIELD
		RIFY IN FIELD /ASTE & VENT
		WATER SERVICE FIXTURE UNIT
	,,,,,,,,,,	WILL SERVICE INTORE UNIT

PLUMBING NOTES

- 1) SAW CUT EXISTING FLOOR AND WALL CONSTRUCTION AS REQUIRED IN ORDER TO ACCOMMODATE NEW WASTE, VENT AND WATER SUPPLY PIPING. PATCH ALL NEW WORK TO MATCH EXISTING CONSTRUCTION. DEMOLITION OF ALL PLUMBING WASTE LINES SHALL NOT RESULT IN DEAD ENDS GREATER THAN 10'-0" IN LENGTH AND ALL WATER SUPPLY PIPING DEAD ENDS SHALL NOT EXCEED 2'-0" IN LENGTH.
- 2) ALL CLEAN-OUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE.
 THE CONTRACTOR SHALL COORDINATE ALL CLEAN-OUT LOCATIONS,
 WITH EQUIPMENT CABINETS, ETC. PROVIDE FULL SIZED CLEANOUTS ON
 STRAIGHT RUN INTERVALS NOT TO EXCEED FIFTY (50') AS WELL AS AT
 EACH CHANGE OF DIRECTION GREATER THAN (60 DEGREES). FIXTURE
 TRAPS (I.E. FLOOR DRAINS) SHALL NOT CONSTITUTE CLEAN-OUT ACCESS
 POINTS IF A CABLE MUST MAKE TWO (2) OR MORE RIGHT ANGLE TURNS IN
 ORDER TO ENTER THE MAIN DRAIN OR STACK.
- 3) ALL PLUMBING FIXTURE VENTS SHALL TERMINATE A MINIMUM OF 12" FROM ANY VERTICAL SURFACE AND 12'-0" HORIZONTALLY FROM ANY OUTSIDE FRESH AIR INTAKE OR A MINIMUM OF 24" ABOVE FRESH AIR IN-TAKES IF THE 12'-0" HORIZONTAL SEPARATION IS NOT POSSIBLE.
- 4) INSTALL SHUT-OFF VALVES ON ALL HOT & COLD WATER LINES TO FIXTURE OR APPLIANCE.
- 5) PROVIDE 12" (MINIMUM) LONG AIR CHAMBERS ON ALL WATER SUPPLY LINES TO FIXTURES AND EQUIPMENT. PROVIDE WATER HAMMER
- ARRESTORS AT ALL FIXTURES WITH QUICK-CLOSING VALVES/FAUCETS.

 6) PROVIDE AIR GAPS FOR INDIRECT DRAINS AS REQUIRED BY CODE. AIR GAP
- SHALL BE TWO (2) TIMES THE DIAMETER OF THE INDIRECT DRAIN.

 7) PROVIDE DI-ELECTRIC UNIONS, COUPLINGS, ADAPTORS OR FLANGES AT ALL
- TRANSITIONS OF FERROUS PIPING TO NON-FERROUS PIPING.

 8) COORDINATE ROUTING OF ALL PIPING SYSTEMS TO AVOID DUCTWORK,

ELECTRICAL CONDUIT, BEAMS AND OTHER STRUCTURAL MEMBERS.

- 9) PROVIDE APPROVED BACK-FLOW PREVENTION DEVICE ON ALL SODA DISPENSERS, COFFEE MAKERS, CAPPUCCINO MAKERS, CARBONATORS, ICE MACHINES, ETC. PER LOCAL CODE REQUIREMENTS AND EQUIPMENT/FIXTURE MANUFACTURER'S REQUIREMENTS. LOCATE IN AN
- 10) PROVIDE VALVE STEM EXTENSIONS AS REQUIRED FOR ALL INSULATED
- 11) PROVIDE GROUTING/CAULKING WHERE FIXTURES MEET WALLS, FLOORS, COUNTERTOPS, ETC.

ACCESSIBLE AREA.

WATER SUPPLY PIPING.

- 12) PROVIDE APPROVED AIR GAP FITTING PROTECTION AT DISHWASHER DISCHARGE INTO SANITARY SYSTEM.
- EF-3) 13) PROVIDE ADA-COMPLIANT FLUSH VALVE HANDLES THAT ACTIVATE
 WITH FIVE FOOT POUNDS OF PRESSURE OR LESS FORCE. LOCATE ALL
 - WATER CLOSET FLUSH VALVE HANDLES ON WIDE SIDE OF STALLS.

 14) ROUTE CIRCULATING HOT WATER DISTRIBUTION MAINS WITHIN 25 FEET (MINIMUM) OF EACH FIXTURE. PROVIDE AUTOMATIC PRESSURE COMPENSATING FLOW CONTROL VALVES FOR BALANCING CONTROL IN ACCESSIBLE LOCATIONS (PROVIDE ACCESS PANEL AS REQUIRED).

INSULATE ALL RE-CIRCULATION PIPING.

- 15) ALL ROOF DRAIN PENETRATIONS SHALL BE SQUARE, WATERTIGHT OPENINGS WITH 18-24 INCH METAL FLASHING. ALL ROOF DRAINS SHALL BE LOCATED A MINIMUM OF 12-18 INCHES FROM ANY PARAPET WALL OR OTHER OBSTRUCTION.
- 16) ALL EXPOSED WASTE PIPING LOCATED IN TOILET ROOMS SHALL BE CHROME PLATED BRASS WITH MATCHING STOPS AND ESCUTCHEONS.
 PROVIDE LOOSE KEY TYPE STOPS IN ALL PUBLIC AREAS OR WHERE VANDAL RESISTANT INSTALLATIONS ARE REQUIRED. ALL RISER TUBES SHALL BE RIGID AND CHROME PLATED.
- 17) PROVIDE PROTECTIVE INSULATED PIPE COVERS ON P-TRAPS, ANGLE STOPS, OFFSET TAILPIECES, RISER SUPPLY TUBES, ETC. FOR ALL ADA ACCESSIBLE FIXTURES.
- 18) PROVIDE A.S.S.E. 1070 APPROVED POINT—OF—USE THERMOSTATIC MIXING VALVE TO SUPPLY 110 DEGREES (MAXIMUM) HOT WATER TO ALL PUBLIC AND ADA ACCESSIBLE LAVATORIES. PROVIDE 115 DEGREE F (MAXIMUM) HOT WATER TO ALL SHOWERS. PROVIDE 140 F DEGREE HOT WATER TO ALL FIXTURES WHERE HOT WATER IS REQUIRED FOR SANITIZING OR CLEANING.
- 19) PROVIDE A VACUUM RELIEF VALVE ON ALL ELEVATED OR BOTTOM FED WATER HEATERS IN ADDITION TO A TEMPERATURE & PRESSURE RELIEF VALVE.
- 20) OUTLET TEMPERATURE ON ALL WATER HEATERS SHALL BE SET AT 140 DEGREES F (MINIMUM) AND THERMOSTATICALLY MIXED DOWN AT POINTS INDICATED ON PLANS.
- 21) ALL BACK-FLOW PREVENTION DEVICES SHALL BE TESTED IN-LINE AND APPROVED BY A CROSS-CONNECTION CONTROL DEVICE INSPECTOR BEFORE BEING PLACED INTO SERVICE. BACK-FLOW PREVENTION DEVICES SHALL BE TESTED AND MAINTAINED AT LEAST ANNUALLY BY A CROSS-CONNECTION CONTROL DEVICE INSPECTOR AND RECORDS TO VERIFY TESTING AND MAINTENANCE SHALL BE AVAILABLE AT THE SITE OF
- THE INSTALLATION OF THE DEVICE. BACK—FLOW PREVENTION

 DEVICES SHALL NOT BE INSTALLED MORE THAN 5'-0" ABOVE THE
 FLOOR. PROVIDE A PROTECTIVE STRAINER UPSTREAM OF ALL
 BACK—FLOW PREVENTION DEVICES UNLESS THE DEVICE CONTAINS A
 BUILT—IN STRAINER.
- 22) PROVIDE LEAD ROOF FLASHING ON ALL VENT STACKS PENETRATING THROUGH THE ROOF (EXCEPT RUBBER ROOFS). PROVIDE INCREASER FITTINGS
- 23) PLUMBING CONTRACTOR TO COORDINATE EXACT SIZE AND LOCATION OF EACH FLUE/VENT FOR EACH GAS—FIRED WATER HEATER.

 COORDINATE WITH MECHANICAL CONTRACTOR AND VERIFY ADEQUATE CHASE/CHIMNEY SPACE WITH ARCHITECT PRIOR TO START OF CONSTRUCTION.
- 24) PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL PVC INTAKE AND EXHAUST EACH GAS-FIRED WATER HEATER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 25) FURNISH FIRE RATED PIPE SLEEVE OR FIRE CAULKING ON ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS/FLOORS.
- 26) PLUMBING CONTRACTOR TO VERIFY ALL EXISTING WASTE, VENT AND WATER SUPPLY PIPING WHERE NEW CONNECTIONS ARE TO BE MADE PRIOR TO BID. VERIFY EXACT SIZE, LOCATION, INVERT, CONDITION AND REQUIREMENTS IN FIELD. REPORT ANY MAJOR DISCREPANCIES TO ARCHITECT/ENGINEER IMMEDIATELY.

PLUMBING SPECIFICATIONS

THE GENERAL CONDITIONS AND SUPPLEMENTAL GENERAL CONDITIONS ISSUED BY THE ARCHITECT SHALL GOVERN WHERE APPLICABLE.

THIS CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL VERIFY EXISTING SITE CONDITIONS AT THE JOB SITE BEFORE SUBMITTING BID. FAILURE TO RECOGNIZE WORK REQUIRED SHALL BE AT THE EXPENSE OF THIS CONTRACTOR. NO CONSIDERATION SHALL BE GIVEN FOR ADDITIONAL COMPENSATION AFTER THE LETTING OF BIDS.

ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL; ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES, PRESERVE MAXIMUM HEADROOM, AND AVOID OMISSIONS.

CONTRACTOR TO MAKE ALL NECESSARY TAPS, AS CALLED FOR ON THE DRAWNGS.

THIS CONTRACTOR SHALL REMOVE ALL DEBRIS ON A REGULAR BASIS AND UPON COMPLETION OF THE JOB AND CLEAN ALL FIXTURES.

COVER ALL HOT, HOT WATER RETURN AND COLD LINES, ROOF DRAINS AND HORIZONTAL DOWNSPOUT PIPING. PIPE COVERING TO BE SHALL BE 3-1/2 LB. DENSITY FIBERGLASS WITH MOLDED FITTINGS AND BUTT JOINTS AND VAPOR BARRIER. WATER PIPING INSULATION SHALL BE INSTALLED PER 2015 IECC SEC. C404.

IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO START UP, ADJUST AND CHECK FOR PROPER OPERATION ALL EQUIPMENT INSTALLED UNDER HIS

THIS CONTRACTOR SHALL ALLOW IN HIS INITIAL BID THE COST OF SERVICE ON ALL EQUIPMENT INSTALLED UNDER HIS CONTRACT FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK.

ALL WATER PIPING SHALL BE TESTED WITH WATER UNDER PRESSURE OF 100 PSI HS FOR 10 MINUTES, AND MADE TIGHT AT THIS PRESSURE.

ALL SOIL, WASTE AND VENT PIPING SHALL BE SUBJECTED TO A HYDROSTATIC

TEST OF NOT LESS THAN 10 FEET OF WATER COLUMN FOR 15 MINUTES BEFORE

INSPECTION STARTS AND PROVEN TIGHT.

BEFORE TURNING PLUMBING SYSTEM OVER TO THE OWNER, CHLORINATE ALL DOMESTIC WATER PIPING FOR A PERIOD OF 24 HOURS. AFTER CHLORINATION HAS BEEN COMPLETED, FLUSH ALL PIPING UNTIL WATER RUNS CLEAR AND IS

ALL BELOW GROUND WASTE & VENT PIPING SHALL BE SERVICE WEIGHT CAST IRON. SCHEDULE 40 PVC IS ACCEPTABLE IF PERMITTED BY LOCAL CODE. THE MINIMUM DIAMETER FOR ALL UNDERGROUND WASTE PIPING IS FOUR (4) INCHES. THE MINIMUM DIAMETER FOR ALL UNDERGROUND VENT PIPING IS TWO (2) INCHES. ALL BELOW GROUND WATER PIPING SHALL BE TYPE "K" COPPER. ALL ABOVE GROUND WATER PIPING SHALL BE TYPE "L" COPPER. ALL ABOVE GROUND WASTE AND VENT PIPING 2" AND SMALLER SHALL BE TYPE "M" COPPER. ALL ABOVE GROUND WASTE AND VENT PIPING 3" AND LARGER SHALL BE SERVICE WEIGHT CAST IRON. SCHEDULE 40 PVC IS ACCEPTABLE FOR ABOVE GROUND D.W.V. SYSTEMS IN NON-PLENUM CEILINGS IF PERMITTED BY LOCAL CODE.

RESIDUAL CHLORINE FREE.

THE PLUMBING SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH THE STATE OF ILLINOIS PLUMBING CODE AND ALL LOCAL CODES, AMENDMENTS AND ORDINANCES.

EQUIPMENT SCHEDULE

- "AO SMITH" MODEL# BTH-250 NATURAL GAS ASME WATER HEATER. HEATER HAS A CAPACITY OF 100 GALLONS. EACH HEATER HAS A NATURAL GAS INPUT OF 250,000 MBH. HEATERS (2) SHALL RECOVER 576 (288 ed) GALLONS PER HOUR AT A 100 DEGREE TEMPERATURE RISE. ASME RATED WATER HEATERS
- RP-1 "TACO" MODEL 007-BF5 BRONZE 3/4" CARTRIDGE CIRCULATOR.
 PUMP SHALL BE RATED FOR 15 GPM AT 5 FT TDH. COORDINATE
 INSTALLATION WITH ELECTRICAL CONTRACTOR. 1/25 HP. HONEYWELL
 AQUASTAT.
- TWV-1 "SYMMONS" MODEL #7-210-CK POINT-OF-USE THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECKS. (SET TEMPERATURE (SHALL NOT EXCEED 110 DEGREES F)
- ET-1 (2x)"WATTS" MODEL#ST-20V-C ASME THERMAL EXPANSION TANK

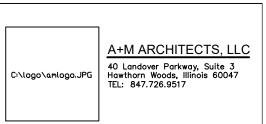
FIXTURE SCHEDULE

- WC-1 "AMERICAN STANDARD" MODEL# 3351.128 AFWALL FLOWISE TOILET.
 WALL-MOUNTED FLUSH VALVE TOILET, VITREOUS CHINA,
 HIGH-EFFICIENCY (1.28 GPF), EVERCLEAN SURFACE INHIBITS THE
 GROWTH OF BACTERIA, MOLD AND MILDEW, CONDENSATION CHANNEL,
 ELONGATED BOWL, POWERFUL DIRECT-FED SIPHON JET ACTION, 1-1/2"
 TOP SPUD, FULLY-GLAZED 2-1/8" TRAPWAY.
- "SPEAKMAN" MODEL #S-9510 CHROME PLATED, 4" CENTER-SET FAUCET LESS DRAIN ASSEMBLY. FURNISH AND INSTALL WALL MOUNTED HARD WIRED MATCHING TRANSFORMER.

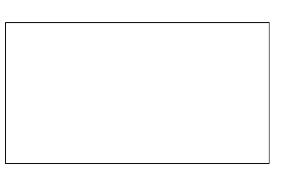
 "SYMMONS" MODEL #7-210-CK POINT-OF-USE THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECKS. (SET TEMPERATURE SHALL NOT EXCEED 110 DEGREES F)
 - "MCGUIRE" MODEL #PW2125WCPRO SEAMLESS PRE-WRAPPED ADJUSTABLE CAST BRASS P-TRAP KIT WITH PRE-WRAPPED PRO-DRAIN OFFSET GRID STRAINER. KIT ALSO INCLUDES SUPPLY
 - PROVIDE CHROME-PLATED ANGLES STOPS, ESCUTCHEONS AND RISER TUBES.
- MB-1 "STERN WILLIAMS" #MTB-2424-SS TERRAZZO BASIN WITH INTEGRAL DRAIN BODY. SS CAP ON 3 SIDES.
- "AMERICAN STANDARD" 8354.112 SERVICE FAUCET FITTING WITH VACUUM BREAKER, HOSE THREAD SPOUT AND INTEGRAL STOPS. PROVIDE CHECK VALVES ON CW AND HW WATER PIPING UPSTREAM OF FAUCET

 ADVANCE TABCO 7-PS-68 HAND SINK WITH SPLASH MOUNT FAUCET AND WRIST HANDLES 17 1/4" X 15 1/4", 20 GAUGE STAINLESS STEEL, 14"WX10"LX5" DEEP DRAWN BOWL WITH STAMPED RIM TO PREVENT SPILLAGE, 4" CENTER WALL MOUNT FAUCET, STAINLESS STEEL DRAIN,

- "GUY GRAY" #B200 GALVANIZED CENTER DRAIN WASHING MACHINE OUTLET BOX.
- DF-1 "ELKAY" MODEL #LZSTL8WSLK BI-LEVEL FILTERED COOLER WITH BOTTLE FILLING
 - PROVIDE CHROME-PLATED ANGLES STOPS, ESCUTCHEONS AND RISER TUBES.
- GT-1 "J.R. SMITH" MODEL# 8220 GREASE INTERCEPTOR WITH 20 GPM RATING AND 40 POUND CAPACITY. INSTALL FLUSH WITH FINISHED FLOOR. FURNISH WITH FOUR (3) INCH INLETS AND OUTLETS.

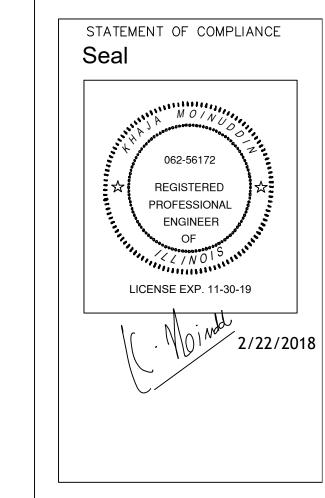








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REVIEW	10/16/17
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REVIEW	11/14/17
REVIEW	11/20/17
REVIEW	11/29/17
PERMIT REVIEW	1/29/18
PERMIT REVISIONS-02	2/22/18

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SHEET DESCRIPTION PLUMBING SCHEDULES

