4. MATERIALS SHALL BE ALL NEW AND AS FOLLOWS:

A. USE PVC FOR DRAINAGE WASTE AND VENT PIPING
B. WATER PIPING: COPPER TYPE "L" ASTM B-88 ABOVE GROUND AND
COPPER TYPE "K" ASTM B-88 UNDERGROUND. (CPVC WILL BE ACCEPTABLE) INSOLATE COLD AND HOT WATER LINES

C. CONDENSATE DRAIN PIPING:

PROVIDE 1/2" ARMAFLEX PIPE INSULATION ON ALL CONDENSATE DRAIN D. FLOOR DRAINS (IF REQUIRED): JOSAM SERIES 30,000 OR EQUAL EXCEPT AT TRANSFORMER VAULT WHICH SHALL BE JOSAM SERIES 32,000 OR EQUAL. KITCHEN FLOOR DRAIN: JOSAM 35420-50, 12" SQUARE NIKALOY TOP, SATIN FINISH, 1/2" PRIMER CONNECTION, BRONZE SEDIMENT BUCKET.

E. FLOOR CLEANOUTS: JOSAM SERIES 56020 OR EQUAL.

F. WALL CLEANOUTS: JOSAM SERIES 58750 WITH ACCESS COVER OR EQUAL.

G. VALVES: 125 PSI NIBCO SCOTT, STOCKHAM OR EQUAL.

H. HOSE BIBBS: CHICAGO 837 OR EQUAL WITH VACUUM BREAKER. ELECTRIC WATER HEATER: GLASS-LINED, P & T RELIEF VALVE, 5 YEAR WARRANTY MINIMUM.

5. PERFORM THE FOLLOWING TEST:

A. WATER PIPING SHALL BE SUBJECTED TO HYDROSTATIC PRESSURE TEST OF 100 PSIG FOR A PERIOD OF TIME SUFFICIENT TO EXAMINE ENTIRE SYSTEM BUT NOT LESS THAN ONE HOUR.

DRAINAGE SYSTEM: BEFORE INSTALLATION OF ANY DRAINS, THE END OF THE SYSTEM SHALL BE CAPPED & ALL LINES FILLED WITH WATER TO HIGHEST POINT & ALLOWED TO STAND UNTIL INSPECTION IS MADE AND WATER LEVELS REMAIN CONSTANT. USE SCN-40 IN ALL LINES DRAIN LINES

C. CORRECT ALL DEFECTS DISCLOSED BY ABOVE TESTS.

D. COMPLETE SYSTEM WITH FIXTURES & EQUIPMENT SHALL BE GIVEN AN IN-SERVICE TEST AFTER INSTALLED.

E. STERILIZE ALL WATER LINES WITH A MIXTURE OF (2) POUNDS OF CHLORINATED LIME TO EACH 1000 gal. OF WATER (50 PPM OF AVAILABLE CHLORINE.) RETAIN MIXTURE IN PIPES FOR 24 HOURS AND FLUSH THROUGHLY WITH POTABLE WATER

6. PLUMBING CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE THAT ALL PLUMBING WORK SHALL BE FREE FROM DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE, AND THAT HE WILL, AT HIS EXPENSE, REPAIR AND REPLACE ALL WORK WHICH BECOMES DEFECTIVE DURING GUARANTEE PERIOD.

7. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION BEFORE COMMENCING ANY WORK.

8. PLUMBING CONTRACTOR SHALL PAY ALL FEES, INSPECTION AND CONNECTION CHARGES REQUIRED.

MATERIALS AND LAYOUTS PRIOR INSTALLATION.

10.OFFSET PIPING AS REQUIRED TO CLEAR BUILDING STRUCTURE, DUCTWORK, ETC. AS SHOWN ON DRAWINGS AND AS REQUIRED BY FIELD CONDITIONS.

11. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL A/C CONDESATE DRAIN AND TRAP. SEE MECHANICAL PLANS FOR LOCATION OF UNITS AND DARINS.

12.PLUMBING CONTRACTOR SHALL VERIFY ALL SPACE CONDITIONS AND DIMENSIONS AT JOB SITE PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS AND EQUIPMENT.

14. FURNISH AND INSTALL FIXTURES AS SPECIFIED IN SCHEDULE IF PROVIDED, OTHERWISE PROVIDE SHOP DRAWINGS. 15.EACH BATHROOM GROUP AND KITCHEN SHALL BE PROVIDE WITH WATER HAMMER ARRESTOR OR SHOCK ABSORBER AS PER F.B.C.

16.PROVIDE SHUT-OFF VALVE FOR EACH FIXTURE, JUST BEFORE CONNECTING TO FIXTURE.

7. WHEREVER DISSIMILAR METALS ARE TO BE JOINED, A DIELECTRIC FITTING SHALL BE PROVIDED TO CONNECT BOTH TYPES OF PIPES.

NICAL CONTRACTOR SHALL COORDINATE AND VERIFY HEIGHT AND LOCATION OF

19.REFER TO SUPPLIER DRAWING AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND COORDINATION OF EQUIPMENT TERMINATION DETAILS.

21. PROVIDE ANTI SCALD AT ALL TUB AND SHOWERS. 22. PROVIDE CLEAN OUT IN EVERY WASTE STACK.

## **LEGEND**

. THE FOLLOWING IS AN ITEMIZATION OF MATERIALS SPECIFICALLY DETAILED FOR A 3" METER. FOR A 4", 6" OR 8" METER, ELIMINATE ITEM "E" AND CHANGE THE REMAINING ITEMS TO THE METER SIZE TO BE SET. 2. ALL MECHANICAL JOINT FITTINGS TO USE MEGALUG SERIES 1100 RESTRAINED JOINT ADAPTERS.

3. LOCATION OF METER MAY BE ROTATED TO FIT AVAILABLE PARKWAY/EASEMENT/ SIDEWALK WIDTH.

4. ALL PIPE SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE. A. TWO 4" RESILIENT WEDGE (RW) VALVES, WITH LOCKING VALVE BOXES & LIDS EACH SIDE OF THE METER. VALVES TO BE INSTALLED IN LINE WITH OR AS CLOSE AS POSSIBLE TO THE METER (REFER TO C.1 AND C.2).

B. TWO SERIES 2100 3" MEGALUG, LOCKING STYLE FLANGE ADAPTERS, ONE ON EACH SIDE OF THE METER, STRAINER AND TEST TEE.

C. ONE 3" FLANGED METER TO BE SUPPLIED BY THE CITY OF WEST PALM BEACH PUBLIC UTILITIES DEPARTMENT. CALL FOR LENGTH OF METER. C.1. A METER REQUIRES LENGTH OF STRAIGHT PIPE BEFORE THE METER TO BE EQUAL TO 5 TIMES THE PIPE DIAMETER.

C.2. A METER REQUIRES LENGTH OF STRAIGHT PIPE BEFORE THE METER TO BE EQUAL TO 3 TIMES THE PIPE DIAMETER. D. ONE STRAINER, SAME SIZE AS METER, FLANGED, BRONZE CASE WITH STRAINER TO BE SUPPLIED BY THE CITY OF WEST PALM BEACH PUBLIC UTILITIES DEPARTMENT. CALL 659-8005 FOR LENGTH.

E. 4" x 3" MECHANICAL JOINT REDUCERS BEFORE AND AFTER THE METER. THESE CANNOT BE USED IN LIEU OF THE STRAIGHT PIPE (SEE C.1 & C.2). F. BROOKS (MODEL #744) VAULT WITH A LOCK DOWN HEAVY DUTY STEEL TRAFFIC LID (2 PIECES) WITH A HINGED METER READING LID. VAULT & LID IS TO BE POSITIONED SO

METER DIAL IS CENTERED UNDER METER READER'S LID. G. SERVICE IS TO BE OFFSET HIGHER THAN THE DEPTH OF THE ROAD CROSSING TO THE PROPER HEIGHT USING ONE GROUPING OF THE FOLLOWING:

G.1. ONE 4" MECHANICAL JOINT OFFSET G.2. TWO 4" MECHANICAL JOINT 90° BENDS

G.3. TWO 4" MECHANICAL JOINT 45° BENDS H. INSTALL BYPASS PIPING AROUND METER TO ALLOW METER TO BE TESTED, REPAIRED OR REPLACED. BYPASS PIPING SHALL BE THE SAME SIZE AS THE METER SIZE (4",6" OR 8"). H.1. TWO-4" F.J. RESILIENT WEDGE VALVES W/ WHEEL HANDLES & 4" MEGALUG FLANGE ADAPTERS SERIES 2100.

H.2. TWO-4" M.J. THES ONE 4" FLANGED TEE, ONE 4" FLANGE PLATE, TAPPED FOR 2" N.P.T., ONE 2" X 6" BRASS NIPPLE, ONE LOCKING STYLE 2" CURB STOP W/ 2" BRASS PLUG. H.4. TWO 4" M.J. 90 DEGREE ELBOWS.

I. FLUSH POINT TO TEST METERS AND TO FLUSH SYSTEM.

I.1. 3" FLANGED TEE TAPPED FOR 2", ATTACHED TO METER.

I.2. 2"X3" BRASS NIPPLE

I.3. 2" LOCKING STYLE CURB STOP I.4. 2" BRASS PLUG

## PLUMBING SYMBOLS

COLD WATER PIPE HOT WATER PIPE

WATER HAMMER ARRESTOR

HOSE BIBB W / VACUUM BREAKER AND SHUT-OFF VALVE

CONDENSATE LINE

EXPANSION BY

AMTROL MODEL

----- CW -

(TYPICAL)—

WATER HEATER 120 GALS. WITH

DRAIN PAN -FLOOR -

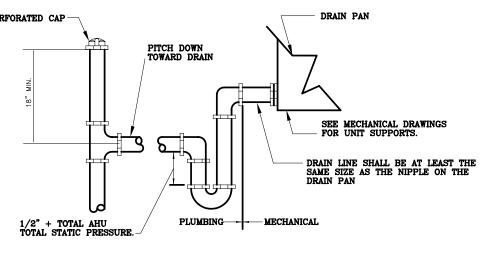
3/4" EMERGENCY DRAIN—

6.0 KW HEATING ELEMENT

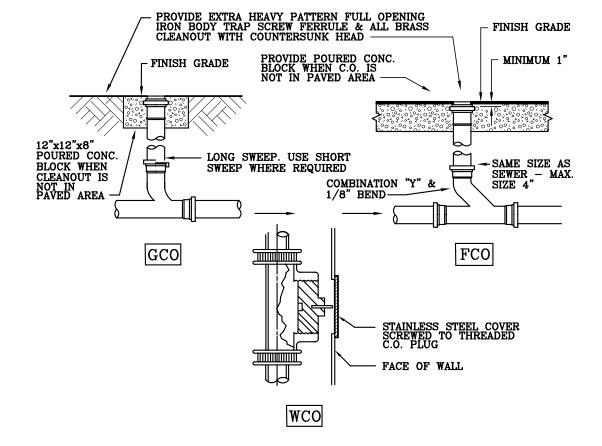
(1800 - 736 - 1149)

WALL CLEANOUT

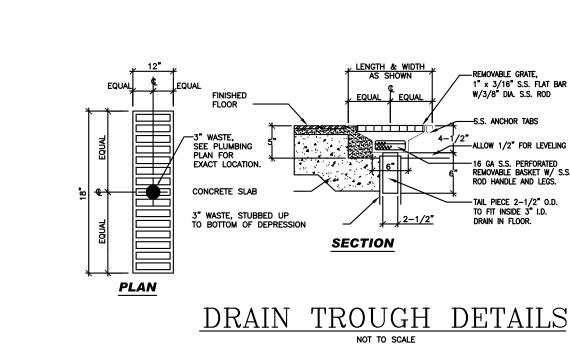
FLOOR CLEANOUT GATE VALVE ( SHUT-OFF



TYPICAL CONDENSATE DRAIN TRAP



TYPICAL CLEANOUT DETAIL



## WATER HEATER DIAGRAM

PRESSURE RELIEF & DRAIN PAN LINES TO BLDG. EXTERIOR, 6" ABOVE GRADE AND TURNED DOWN

CATE VALVE (TYP.)

HEAT TRAP

NO FLAMABLE METERIAL

SUCH AS PVC PERMITTED

AT W/H CLOSET (CPVC IS

\* THE TANK OR WATER HEATER SHALL BE INSTALLED IN A GALVANIZED STEEL OR OTHER METAL PAN OF EQUAL COROSION RESISTANCE HAVING A MINIMUM THICKNESS OF 24 GAGE, 0.0276 INCH (0.70 mm). ELECTRIC WATER HEATHERS SHALL BE ISNTALLED IN A METAL PAN AS HERE IN REQUIRED OR IN A HIGH-IMPACT PLASTIC PAN OF AT LEAST 0.0625 INCH (1.59 mm) THICKNESS.

THE RAN SHALL NOT BE LESS THAN 1 ½
INCHES (38 mm) DEEP AND SHALL BE OF
SUFFICIENT SIZE AND SHAPE TO RECEIVE
ALL DRIPPING OR CONDENSATE FROM THE
TANK OR WATER HEATHER. THE PAN SHALL
BE DRAINED BY AN INDIRECT WASTE PIPE

HAVING A MINIMUM DIAMETER OF \$ INCH.

2 1/2" PIPE & LESS @ 1/4" SLOPE 3" PIPE & MORE @ 1/8" SLOPE

PLUMBING FIXTURE CONNECTION SCHEDULE (SEE NOTE)							
MARK	DESCRIPTION	FU'S	WASTE	C.W.	H.W.	REMARKS/SPECS	FLOW RATE
P-1	WATER CLOSET	3	3"	1/2"		FLOOR MOUNTED, FLUSH TANK	1.6 gallon /flushing cycle
P-1A	WATER CLOSET	4	3"	1"		FLUSH VALVE	25 gpm
P-2	URINAL	4	2"	1"			
P-3	LAVATORY	1	1 1/2"	1/2"	1/2"	COUNTER TOP	0.25 gls. per metering cycle
P-4	HAND SINK	2	1 1/2"	1/2"	1/2"		
P-5	MOP SINK	2	2"	1/2"	1/2"	PRESS. BALANCING FAUCET.	2.5 gpm at 60 psi
P-6	THREE COMP'T SINK	2	2"	3/4"	3/4"		NOT USED
P-7	FLOOR DRAIN	3	3"			PROVIDE RESEAL FROM HAND SINK OR TOILET	N/A
P-8	UNDERCOUNTER DISHWASHER(DW)	1	2" IW		3/4"	RESEAL FLOOR DRAIN WITH IW FROM DW	N/A
P-9	ICE MACHINE/BIN (IM)	1	2" IW	3/4"		RESEAL FLOOR SINK WITH IW FROM DW	N/A
P-10	DRAIN TROUGH	3	3"			PROVIDE RESEAL FROM ICE MACHINE/ICE BIN	N/A

TO COLD WATER-

 $\longrightarrow$  HW -

TEMPERATURE & PRESSURE RELIEF VALVE

(GAP@2xØ OF DRAIN PIPE)

AIR GAP FITTING

NOTE: CONTRACTOR TO COORDINATION PLUMBING FIXTURE SELECTION, WITH OWNER/ ARCHITECT FOR FIXTURE AND FAUCET STYLE & COLOR NOT TO EXCEED THE MAXIMUN RATES PERMITTED ON THIS SCHEDULE (FBC TABLE 604.4). PROVIDE FIXTURE COMPLIANCE WITH REFERENCED STANDARDS AS PER FBC Plb 406 through 421.

(M) X (GM) X (LF) = EFFECTIVE CAPACITY IN GALLONS

M = MEALS PREPARE PER DAY

USE 250 GAL GREASE INTERCEPTOR.

GM = GALLON OF WASTE WATER PER MEAL USE 5 GALLONS.

LF = LOADING FACTOR. USE .75 (WITH DISHWASHER MACHINE)

100 X 5 X 1.0 = EFFECTIVE CAPACITY IN GALLONS 100 X 5 X .75 = 375 GAL

GREASE INTERCEPTOR CALCULATIONS

308 SOUTH

FIRST HAITIAN

FREE CHURCH

OF NAZARENE

// 4*NDO* /

SMA

ORANGE BLOSSOM TRAIL ORLANDO, FLORIDA

**REVISIONS:** 

1 BLDG DEPT COMM

COMM. NO. 08-103

DATE: DRAWN BY:

CHECKED BY:

7 OF 7

FAX: (305)667-5262 CELL: 786-499-4167

MIAMI FL 33143

DESIGN - INSPECTIONS

*PH: (786)499–4167* 

7328 SW 82 St B-214

DANIEL F. GUTIERREZ, P.E.

LIC. #049086