

GALLONS PER MINUTE WATERLINE SIZING CALCULATIONS

REFERENCE 2006 UPC APPENDIX (A)
 BRANCH # 1 25.0 FIXTURE UNITS (16 GPM)
 BRANCH # 2 15.5 FIXTURE UNITS (13 GPM)
 HOSE BIBB 2.50 FIXTURE UNITS
 43.5 FIXTURE UNITS (25 GPM)

AVAILABLE PRESSURE 65 PSI (TUCSON WATER)
 REQUIRED RESIDUAL PRESSURE 15 PSI
 LOSS THRU 2" WATER METER 0.5 PSI
 LOSS THRU 2" RPA 13 PSI WATTS 009 M20T
 LOSS IN ELEVATION (0.43x10) 4.3 PSI
 32.5 PSI

DEVELOPEMENT L = 280'
 DESIGN L = 280' x 1.25 = 350'
 AVAILABLE PRESSURE FOR F.L. $32.5 \times 100 = 9.28$ PSI

SERVICE TO BUILDING (25 GALLONS PER MINUTE) (E)2" @ MIN.
 BRANCH #1 (16 GALLONS PER MINUTE) 1 1/2" MIN.
 BRANCH #2 (13 GALLONS PER MINUTE) 1 1/2" MIN.
 BRANCH SIZES 1/2" @ MAXIMUM 3 FIXTURE UNITS
 3/4" @ MAXIMUM 12 FIXTURE UNITS

NEW FIXTURE UNIT SCHEDULE BRANCH #1 (PUBLIC)

SYMBOL	FIXTURE	W	V	CW	HW	QTY	WASTE		WATER		
							F.U.	TOT.	F.U.	TOT.	
FD	FLOOR DRAIN	2"	1-1/2"	—	—	2	2.0	4.0	—	—	
LAV	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	5	1.0	5.0	1.0	5.0	
WC	WATER CLOSET	3"	2"	1/2"	—	5	4.0	20.0	2.5	12.5	
DF	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1/2"	—	4	0.5	2.0	0.5	1.5	
MS	MOP SINK	2"	1-1/2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
S-1	SINK	2"	1-1/2"	1/2"	1/2"	2	2.0	4.0	1.5	3.0	
WASTE TOTAL								38.0			
WATER TOTAL										25.0	

NEW FIXTURE UNIT SCHEDULE BRANCH #2 (PUBLIC) - KITCHEN

SYMBOL	FIXTURE	W	V	CW	HW	QTY	WASTE		WATER		
							F.U.	TOT.	F.U.	TOT.	
HS	HAND SINK	2"	2"	1/2"	1/2"	2	1.0	2.0	1.0	2.0	
DTS	DW TRAY SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
2CS	2 COMP SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
JCS	3 COMP SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
FD	FLOOR DRAIN	2"	2"	1/2"	1/2"	2	2.0	4.0	—	—	
FS	FLOOR SINK	2"	2"	1/2"	1/2"	5	3.0	15.0	—	—	
MS	MOP SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
DW	DISHWASHER	2"	2"	1/2"	1/2"	1	3.0	3.0	1.5	1.5	
WASTE TOTAL								36.0			
WATER TOTAL										15.5	

KEYNOTES

- 3 COMPARTMENT SINK
DIRECT LINE TO SEWER
INDIRECT LINE TO FLOOR SINK
SEE DETAIL 2 SHEET MP-04
- WALL CLEAN-OUT DETAIL
SEE DETAIL 4 SHEET MP-04
- FLOOR SINK DETAIL
SEE DETAIL 5 SHEET MP-04
- N/A
- FLOOR CLEAN-OUT IN FINISH ROOM
SEE DETAIL 7 SHEET MP-04
- STEAM TABLE
INDIRECT DRAIN INTO FLOOR SINK
- TRAP PRIMER DETAIL
SEE DETAIL 9 SHEET MP-04
- WATER HEATER
GAS (WH-1)
SEE DETAIL 10 SHEET MP-04
SEE DETAIL MP-03 FOR PLUMBING FIXTURE SCHEDULE
ELECTRIC (WH-2)
SEE DETAIL 11 SHEET MP-04
SEE DETAIL MP-03 FOR PLUMBING FIXTURE SCHEDULE
- N/A
- WATER HAMMER ARRESTORS TYPICAL - DISHWASHER
SEE DETAIL 1 SHEET MP-05
- KITCHEN AND HAND SINK THERMOSTATS MIXING VALVE
SEE DETAIL 2 SHEET MP-05
- WATER HAMMER ARRESTORS WATER CLOSET (TOILET)
SEE DETAIL 3 SHEET MP-05

PLUMBING PLAN

SEWER PLAN WATER PLAN

SEE ARCHITECTURE PLANS FOR MORE INFORMATION
THIS PROJECT WILL COMPLY WITH UPC-2006 & LOCAL ADMENDMENTS

APPROVED
 This set of plans and specifications MUST be at job site during construction. It is unlawful to alter or change same, or to deviate therefrom, without written approval from the Development Services Department.
 The stamping of this set of plans & specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of City Ordinance or State Law.

Structural: _____ Date: _____
 Electrical: _____ Date: _____
 Mechanical: _____ Date: 1/26/10
 Plumbing: _____ Date: _____
 DEVELOPMENT SERVICES DEPARTMENT, CITY OF TUCSON

SEE MP-03 FOR SEWER ISOMETRIC 1 THRU 4
 SEE MP-03 FOR WATER ISOMETRIC 5 THRU 7
 SEE MP-03 FOR WATER CONSERVATION NOTES
 SEE MP-03 FOR PLUMBING FIXTURE SCHEDULE
 SEE MP-05 FOR PLUMBING GENERAL NOTES

REVISIONS	BY
10/22/09	JACA
1-25-10	DL

NEW BUILDING
GOSPEL RESCUE MISSION
 707 W. MIRACLE MILE
 TUCSON, AZ 85705
T09-CM02572
 SEE D09-0022

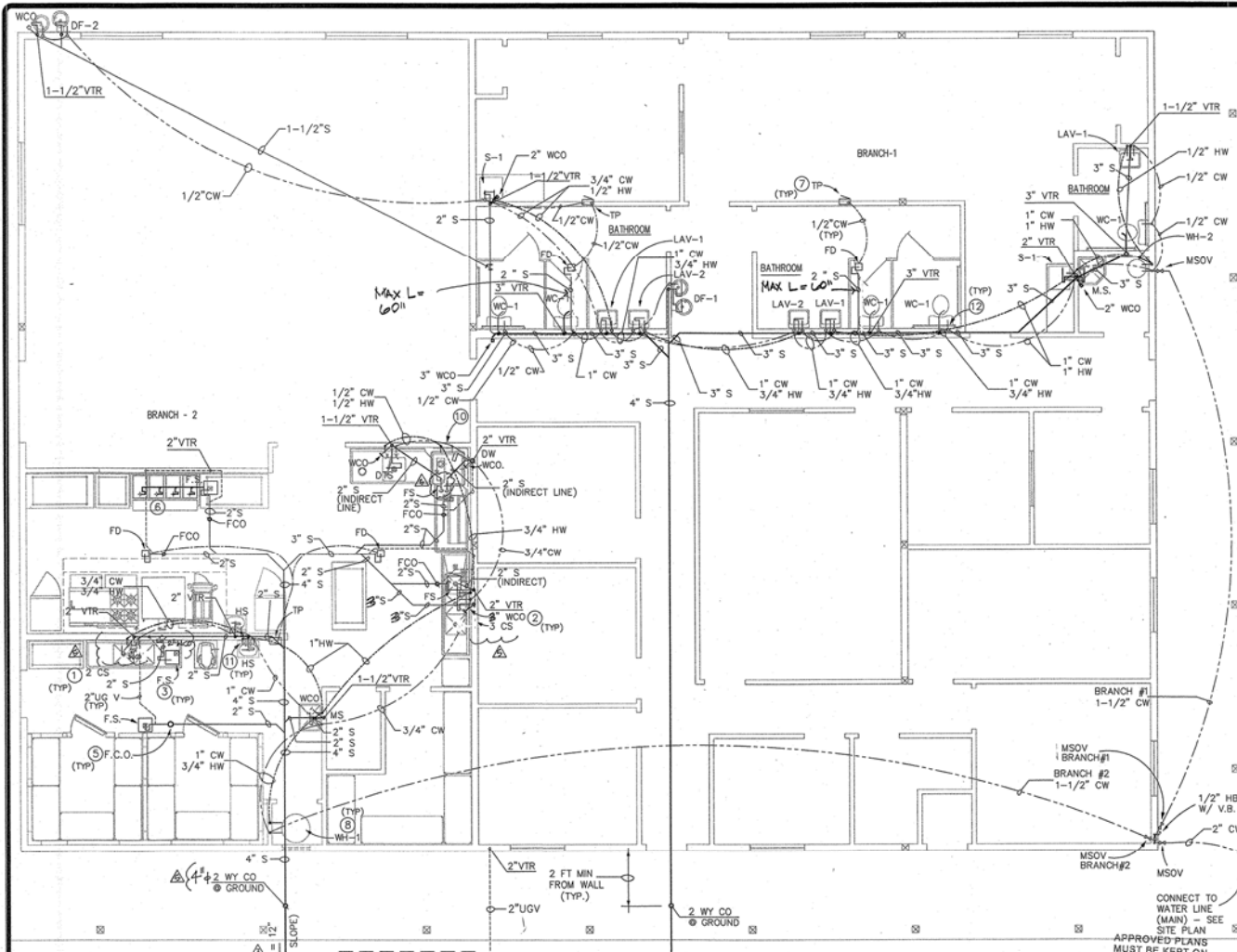
DAN CHILTON P.E.
 PLUMBING / MECHANICAL ENGINEER
 10,401 E FLINTLOCK TRAIL
 TUCSON, AZ 85748
 BUS (520) 370-9669
 e-mail: dan@chiltonpe.com

JACA DESIGN LLC - DRAMA
 10401 E FLINTLOCK TRAIL
 TUCSON, AZ 85748
 (520) 610-0200



DRAWN: JACA DESIGN LLC
 CHECKED: DANIEL CHILTON P.E.
 DATE: 13 AUG 2009
 SCALE: SEE PLANS
 JOB NO: JACA-198-2K8/17-2K9
 SHEET

MP-01
 17 of 42 SHEETS



GALLONS PER MINUTE WATERLINE SIZING CALCULATIONS

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 BRANCH #1 (16 GALLONS PER MINUTE) 1 1/2" MIN.
 BRANCH #2 (13 GALLONS PER MINUTE) 1 1/2" MIN.
 BRANCH SIZES 1/2" # MAXIMUM 3 FIXTURE UNITS
 3/4" # MAXIMUM 12 FIXTURE UNITS

NEW FIXTURE UNIT SCHEDULE BRANCH #1 (PUBLIC)

SYMBOL	FIXTURE	W	V	CW	HW	QTY	WASTE		WATER		
							F.U.	TOT.	F.U.	TOT.	
FD	FLOOR DRAIN	2"	1-1/2"	—	—	2	2.0	4.0	—	—	
LAV	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	5	1.0	5.0	1.0	5.0	
WC	WATER CLOSET	3"	2"	1/2"	—	5	4.0	20.0	2.5	12.5	
DF	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1/2"	—	4	0.5	2.0	0.5	1.5	
MS	MOP SINK	2"	1-1/2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
S-1	SINK	2"	1-1/2"	1/2"	1/2"	2	2.0	4.0	1.5	3.0	
WASTE TOTAL								38.0			
WATER TOTAL										25.0	

NEW FIXTURE UNIT SCHEDULE BRANCH #2 (PUBLIC) - KITCHEN

SYMBOL	FIXTURE	W	V	CW	HW	QTY	WASTE		WATER		
							F.U.	TOT.	F.U.	TOT.	
HS	HAND SINK	2"	2"	1/2"	1/2"	2	1.0	2.0	1.0	2.0	
DTS	DW TRAY SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
2CS	2 COMP SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
JCS	J COMP SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
FD	FLOOR DRAIN	2"	2"	1/2"	1/2"	2	2.0	4.0	—	—	
FS	FLOOR SINK	2"	2"	1/2"	1/2"	5	3.0	15.0	—	—	
MS	MOP SINK	2"	2"	1/2"	1/2"	1	3.0	3.0	3.0	3.0	
DW	DISHWASHER	2"	2"	1/2"	1/2"	1	3.0	3.0	1.5	1.5	
WASTE TOTAL								36.0			
WATER TOTAL										15.5	

- KEYNOTES**
- 3 COMPARTMENT SINK
2 COMPARTMENT SINK
DIRECT LINE TO SEWER
INDIRECT LINE TO FLOOR SINK
SEE DETAIL 2 SHEET MP-04
 - WALL CLEAN-OUT DETAIL
SEE DETAIL 4 SHEET MP-04
 - FLOOR SINK DETAIL
SEE DETAIL 5 SHEET MP-04
 - N/A
 - FLOOR CLEAN-OUT IN FINISH ROOM
SEE DETAIL 7 SHEET MP-04
 - STEAM TABLE
INDIRECT DRAIN INTO FLOOR SINK
 - TRAP PRIMER DETAIL
SEE DETAIL 9 SHEET MP-04
 - WATER HEATER
GAS (WH-1)
SEE DETAIL 10 SHEET MP-04
SEE DETAIL MP-03 FOR PLUMBING FIXTURE SCHEDULE
ELECTRIC (WH-2)
SEE DETAIL 11 SHEET MP-04
SEE DETAIL MP-03 FOR PLUMBING FIXTURE SCHEDULE
 - N/A
 - WATER HAMMER ARRESTORS TYPICAL - DISHWASHER
SEE DETAIL 1 SHEET MP-05
 - KITCHEN AND HAND SINK THERMOSTATS MIXING VALVE
SEE DETAIL 2 SHEET MP-05
 - WATER HAMMER ARRESTORS WATER CLOSET (TOILET)
SEE DETAIL 3 SHEET MP-05

PLUMBING PLAN

SEWER PLAN WATER PLAN

SEE ARCHITECTURE PLANS FOR MORE INFORMATION
THIS PROJECT WILL COMPLY WITH UPC-2006 & LOCAL ADMENDMENTS

NOTE:
COORDINATE LINE LOCATION WITH COLUMN FOOTING DEPTH SETBACK REQUIREMENT

- ABBREVIATIONS**
- UGV UNDERGROUND VENT
 - VTR VENT THRU ROOF
 - S SEWER
 - HB HOSE BIBB
 - VB VACUUM BREAKER
 - CW COLD WATER
 - HW HOT WATER
 - MSOV MAIN SHUT OFF VALVE
 - TP TRAP PRIMER
 - ST STEAM TABLE
 - 1/2" CW (TP)
 - 2" UG VENTS

1,500 GALLONS
 GREASE INTERCEPTOR
 INSTALL PER MANUF. SPES
 CERTIFICATE OF LISTING FILE 3310
 TAMPO RESEARCH AND TESTING INC

WATER METER (2" MM) SEE UTILITY SITE PLAN FOR LOCATION

APPROVED
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Structural: _____ Date: _____
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DEVELOPMENT SERVICES DEPARTMENT,
 CITY OF TUCSON

SEE MP-03 FOR SEWER ISOMETRIC 1 THRU 4
 SEE MP-03 FOR WATER ISOMETRIC 5 THRU 7
 SEE MP-03 FOR WATER CONSERVATION NOTES
 SEE MP-03 FOR PLUMBING FIXTURE SCHEDULE
 SEE MP-05 FOR PLUMBING GENERAL NOTES

REVISIONS BY

10/22/09	JACA
1-25-10	DLG

**NEW BUILDING
 GOSPEL RESCUE MISSION
 707 W. MIRACLE MILE
 TUCSON, AZ 85705**

SEE D09-0022
 T09-CM02572

DAN CHILTON P.E.
 PLUMBING / MECHANICAL ENGINEER
 10,401 E FLINTLOCK TRAIL
 TUCSON, AZ 85748
 BUS (520) 370-9669 FAX (520) 749-0198
 e-mail: dan@chiltonpe.com

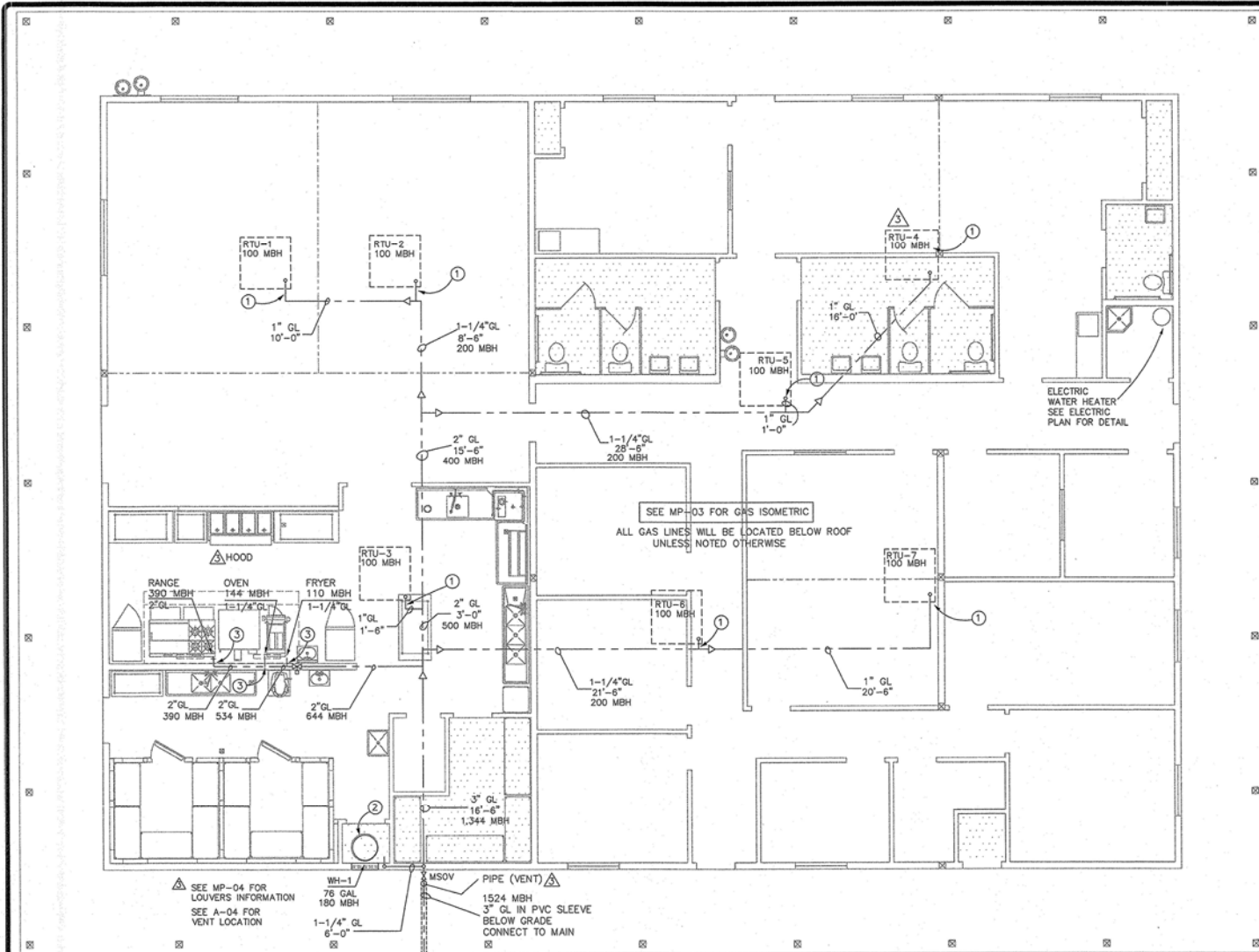
JACA DESIGN LLC - DRIVING SERVICES
 10401 E FLINTLOCK TRAIL - SUITE 100
 TUCSON, AZ 85748
 (520) 610-0200 e-mail: jaca@jacadesign.com



DRAWN BY JACA DESIGN LLC
 CHECKED BY DANIEL CHILTON P.E.
 DATE 13 AUG 2009
 SCALE SEE PLANS
 JOB NO. JACA-198-2K8/17-2K9
 SHEET

MP-01

17 of 42 SHEETS



GAS PIPING NOTES:

1. MINIMUM DEPTH OF GAS PIPING TO BE 18" BELOW GRADE.
2. GAS PIPE SHALL NOT BE INSTALLED UNDER ANY BUILDING.
3. GAS PIPING SHALL NOT RUN IN HOLLOW CORE OF BLOCK.
4. PROVIDE SHUT-OFF COCK, UNION AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
5. ALL GAS USING EQUIPMENT TO BE NATURAL FUEL.
6. ALL GAS PIPING UNDER ASPHALT OR CONCRETE PAVING ADJOINING BUILDING MUST BE SLEEVED IN GAS TIGHT VENTED PIPE.
7. ALL GAS PIPING, MATERIALS VALVES, FITTING, INSTALLATION AND TESTING SHALL COMPLY WITH CHAPTER 12, 2006 U.P.C. OR LATEST EDITION.
8. VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.
9. PROVIDED SHUT-OFF VALVE AND FLEXIBLE CONNECTION AT EACH PIECE OF EQUIPMENT, CONNECTION SIZE TO BE DETERMINED BY GAS INLET SIZE OF EQUIPMENT - TYPICAL.

KITCHEN NOTES

1. COORDINATE EXACT LOCATIONS OF ALL KITCHEN EQUIPMENT REQUIRING PLUMBING CONNECTIONS WITH KITCHEN EQUIPMENT CONTRACTOR AND OWNER.
2. COORDINATE EXACT LOCATIONS OF FLOOR SINK WITH OWNER AND KITCHEN EQUIPMENT CONTRACTOR.
3. ALL FLOOR SINKS HAVE HALF GRATE UNLESS NOTED OTHERWISE.
4. PROVIDE CHROME PLATED STOP VALVES AT EACH REQUIRED EQUIPMENT WATER CONNECTION. PROVIDE BUTTERFLY VALVE AT EACH REQUIRED EQUIPMENT GAS CONNECTION. PROVIDE CHROME PLATED P TRAP, TAILPIECE AND ESCUTCHEON AT EACH REQUIRED EQUIPMENT DIRECT WASTE CONNECTION. FOR EACH REQUIRED EQUIP. INDIRECT WASTE PIPING CONNECTION, ROUTE INDIRECT WASTE PIPING FROM EQUIPMENT TO NEAREST FLOOR SINK. INDIRECT WASTE PIPING: COPPER TYP "DWV" WITH SOLDERED END DRAINAGE FITTINGS.

HOOD

- PROVIDE AN AUTOMATIC SHUT-OFF VALVE FOR THE GAS-FIRE APPLIANCES UNDER HOOD TYPE I CONTRACTOR. SEE DETAIL 6 SHEET MP-09 COORDINATE WITH FIRE DEPARTMENT FOR SECTION 904.3.3. IFC-2006

- UNDERGROUND PIPING SECTION 1209.5 UPC - 2006 NON-METALLIC PIPE OR EQUAL APPROVED LISTING REQUIRED COORDINATE WITH PLUMBING CONTRACTOR INSTALLED PER UPC-2006 AND LOCAL AMENDMENTS

- SEE DETAIL 6 SHEET MP-4 FOR GAS PIPE VENT

GAS PIPE SIZING SCHEDULE			
APPLIANCE	MBH DEMAND	DIST. TO GAS METER	PIPE SIZE
RTU-1	100	180	1"
RTU-2	100	170	1"
RTU-3	100	140	1"
RTU-4	100	205	1"
RTU-5	100	188	1"
RTU-6	100	160	1"
RTU-7	100	182	1"
FRYER	110	133	1-1/4"
OVEN	144	135	1-1/4"
RANGE	390	139	2"
WH	180	104	1-1/4"
TOTAL	1,524		3"

KEYNOTES

- ① GAS CONNECTION DETAIL SEE DETAIL 1 SHEET MP-04
- ② GAS WATER HEATER SEE DETAIL 10 SHEET MP-04 SEE DETAIL 4 SHEET MP-09
- ③ GAS CONNECTION AT KITCHEN EQUIPMENT SEE DETAIL 3 SHEET MP-04
- △ RELOCATED UNIT SEE MECH. PLAN

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Structural: _____ Date: _____
 Electrical: _____ Date: _____
 Mechanical: _____ Date: _____
 Plumbing: POS Date: 1/22/10

DEVELOPMENT SERVICES DEPARTMENT,
CITY OF TUGSON

THIS PROJECT WILL COMPLY WITH REFERENCE C.O.T. GAS PIPE INSTALLATION STANDARDS - AMENDMENTS

PLUMBING PLAN
GAS PLAN
SCALE 1/4"=1'-0"

SEE ARCHITECTURE PLANS FOR MORE INFORMATION
THIS PROJECT WILL COMPLY WITH UPC-2006 & LOCAL ADMMENDMENTS

REVISIONS	BY
△ 10 / 22 / 09	JACA

**NEW BUILDING
GOSPEL RESCUE MISSION
707 W. MIRACLE MILE
TUGSON, AZ 85795**

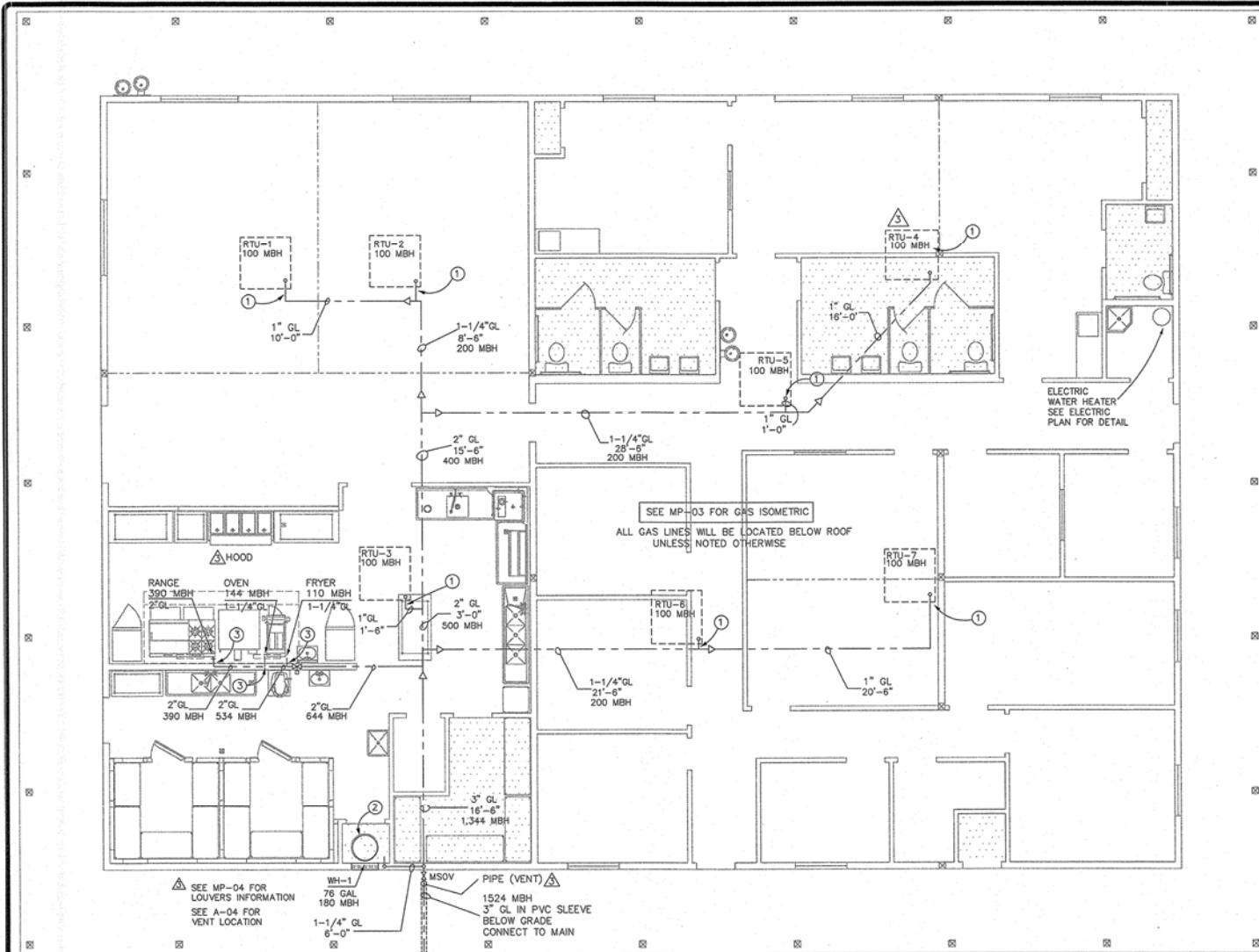
T09-CM02572 SEE D09-0022

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e-mail: dchilton@cox.net
JACA DESIGN LLC - DRAFTING SERVICES
10508 BECKOND - mobile info@jacadesignllc.com



DRAWN
JACA DESIGN LLC
CHECKED
DANIEL CHILTON, P.E.
DATE
13 AUG 2009
SCALE
SEE PLANS
JOB NO
JACA-198-209-07-2K9
SHEET

THESE DOCUMENTS ARE TO BE USED ONLY FOR THE ADDRESSED SITE PER CONTRACT BETWEEN JACA AND CLIENT. THE REPRODUCIBLE DRAWINGS, TAGLINES, SERIALS, ETC. ARE THE PROPERTY OF JACA.



GAS PIPE SIZING SCHEDULE			
APPLIANCE	MBH DEMAND	DIST. TO GAS METER	PIPE SIZE
RTU-1	100	180	1"
RTU-2	100	170	1"
RTU-3	100	140	1"
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REVISIONS	BY
1 to /22/09	JACA

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 - △ RELOCATED UNIT SEE MECH. PLAN

**NEW BUILDING
GOSPEL RESCUE MISSION
707 W. MIRACLE MILE
TUGSON, AL 35705**

T09-CM02572 SEE D09-0022

- GAS PIPING NOTES:**
- MINIMUM DEPTH OF GAS PIPING TO BE 18" BELOW GRADE.
 - GAS PIPE SHALL NOT BE INSTALLED UNDER ANY BUILDING.
 - GAS PIPING SHALL NOT RUN IN HOLLOW CORE OF BLOCK.
 - PROVIDE SHUT-OFF COCK, UNION AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
 - ALL GAS USING EQUIPMENT TO BE NATURAL FUEL.
 - ALL GAS PIPING UNDER ASPHALT OR CONCRETE PAVING ADJOINING BUILDING MUST BE SLEEVED IN GAS TIGHT VENTED PIPE.
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- HOOD**
- PROVIDE AN AUTOMATIC SHUT-OFF VALVE FOR THE GAS-FIRE APPLIANCES UNDER HOOD TYPE I COORDINATE WITH HOOD CONTRACTOR. SEE DETAIL 6 SHEET MP-09 COORDINATE WITH FIRE DEPARTMENT FOR SECTION 904.3.3. IFC-2006
 - UNDERGROUND PIPING SECTION 1209.5 UPC - 2006 NON-METALLIC PIPE OR EQUAL APPROVED LISTING REQUIRED COORDINATE WITH PLUMBING CONTRACTOR INSTALLED PER UPC-2006 AND LOCAL AMENDMENTS.
 - SEE DETAIL 6 SHEET MP-4 FOR GAS PIPE VENT

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 Plumbing: POS Date: 1/22/10

DEVELOPMENT SERVICES DEPARTMENT,
CITY OF TUGSON

APPROVED PLANS
MUST BE KEPT ON JOB AT ALL TIMES
Development Services Department

THIS PROJECT WILL COMPLY WITH REFERENCE C.O.T. GAS PIPE INSTALLATION STANDARDS - AMENDMENTS

PLUMBING PLAN
GAS PLAN SCALE 1/4"=1'-0"

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DAN CHILTON, P.E.
PLUMBING / MECHANICAL ENGINEER
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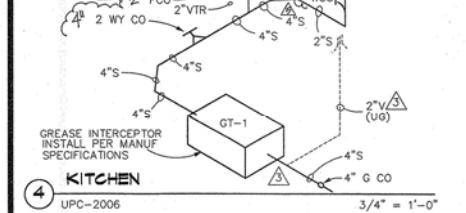
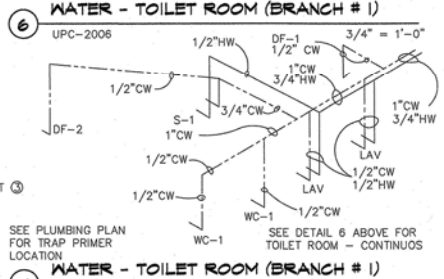
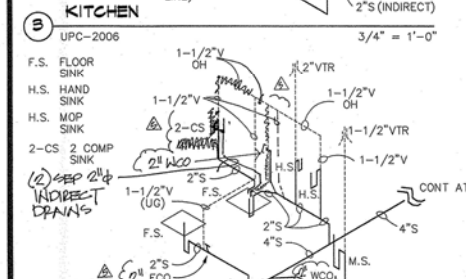
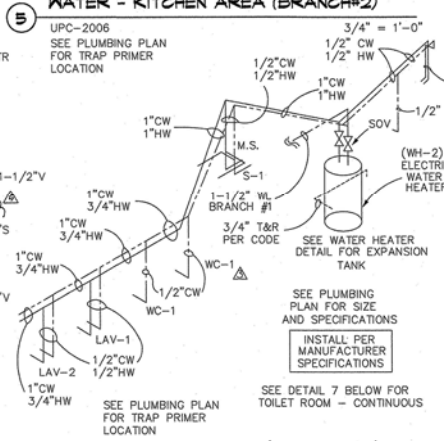
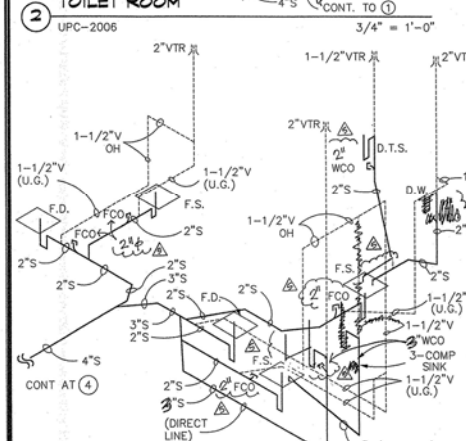
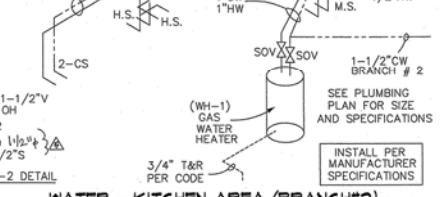
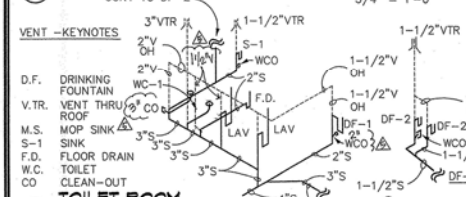
JACA DESIGN LLC - DRAFTING SERVICES
10508 BEACON - mobile, info@jacadesignllc.com



DRAWN
JACA DESIGN LLC
CHECKED
DANIEL CHILTON, P.E.
DATE
13 AUG 2009
SCALE
SEE PLANS
JOB NO
JACA-198-260/17-2K9
SHEET
MP-02

27 of 42 SHEETS

THESE DOCUMENTS ARE TO BE USED ONLY FOR THE ADDRESSED SITE PER CONTRACT BETWEEN JACA AND CLIENT. THE REPRODUCIBLE DRAWINGS, TITLINGS, SEALS, ETC. ARE THE PROPERTY OF JACA.



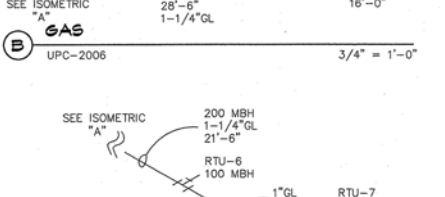
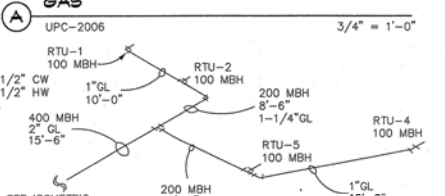
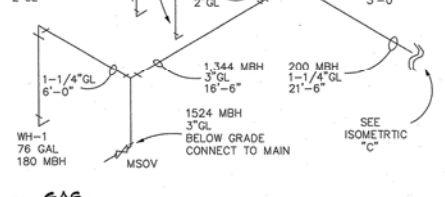
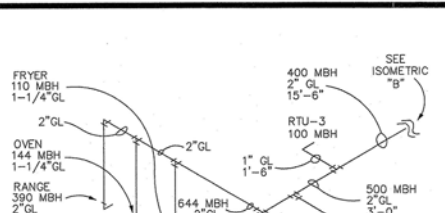
7 WATER - TOILET ROOM (BRANCH # 1)
UPC-2006

FIXTURE SCHEDULE

QT	FIXTURE NAME	SIZE	TYPE
1	3 COMP SINK	2"	DIRECT/INDIRECT LINE
1	2 COMP SINK	2"	DIRECT/INDIRECT LINE
2	HAND SINK	2"	DIRECT LINE
2	PREP SINK	2"	INDIRECT LINE
5	FLOOR SINK	2"	INDIRECT LINE
4	FLOOR DRAIN	2"	DIRECT LINE

TOTAL FIXTURE 36 F.D.U.'S 1,250 GALLONS REQUIRED INTERCEPTOR VOLUME SEE GT-1 FOR PROVIDE SIZE

TABLE 10-3 GRAVITY GREASE INTERCEPTOR SIZING



APPROVED

This set of plans and specifications MUST be at job site during construction. It is unlawful to alter or to deviate therefrom, without written change same, or to deviate therefrom, without written approval from the Development Services Department.

The stamping of this set of plans & specifications SHALL NOT be held to permit any provisions of the violation of any or provisions of City Ordinance or State Law.

DATE: _____
 MECHANICAL: _____
 PLUMBING: _____

DEVELOPMENT SERVICES DEPARTMENT, CITY OF TUCSON

DISHWASHER (D.W.)
PROVIDE BY OWNER, INSTALLED BY PLUMBER CONTRACTOR PLUMBER WILL PROVIDE ALL ITEMS, INDIRECT DRAINS, SUPPLY, ETC. TO RENDER A COMPLETE INSTALLATION. FURNISH BY KITCHEN EQUIPMENT CONTRACTOR

GREASE INTERCEPTOR (GT-1)
1500 GALLON GREASE INTERCEPTOR, MODEL #P1500EE-C BY JENSEN PRECAST, 4" INLET/OUTLET, 24" CAST IRON RING & COVER, 10'-8" LONG X 5'-7" WIDE X 6'-0" HT. WEIGHT 15,580 LBS IAPMO LAB FILE 3310, ISSUED 2009

WATER CONSERVATION NOTES
FAUCETS - SHALL DELIVER A MAX. OF TWO AND ONE-HALF (2.5) GALLONS PER MIN
WATER COOLERS - SHALL USE A MAX OF ONE AND SIX-TENTHS (1.6) GALLONS PER FLUSH
LAVS OF THE METERING OR SELF-CLOSING TYPE SHALL HAVE A MAX FLOW RATE AT .25 GALLONS PER CYCLE & SHALL REMAIN OPEN FOR A PERIOD OF NOT LESS THAN 10 SECONDS.

PLUMBING FIXTURES SCHEDULE

LAVATORY (LAV-1) & (LAV-2)
AMERICAN STANDARD MODEL # 0355.012 "LUCERNE" WALL HUNG (CONCEALED ARM SUPPORT) VITREOUS CHINA LAVATORY PUNCHED FOR CENTER SET FITTING - FAUCET DELTA/CAMBRIDGE BRASS MODEL #861153 VANDAL RESISTANT SELF-CLOSING METERING TWO HANDLE FAUCET, HEAVY DUTY CAST BRASS CONSTRUCTION CHROME FINISH & METAL GRID STRAINER. (OR EQUAL)

WATER CLOSET (WC-1)
PROFLO, MODEL PF 1200 SERIES, TWO-PIECES VITREOUS CHINA ADA, 1.6 GPF, 8" X 9" WATER SURFACE, 17" ELONGATED HIGH BOWL (OR EQUAL)

HOSE BIBB (H.B.)
WOODFORD # 24C W/ LOOSE KEY HANDLE AND VACUUM BREAKER (OR EQUAL)

GAS WATER HEATER (WH-1)
RHEEM - MODEL G 76-180, 76 GALLONS, 180 MBH INCLUDE HEAT TRAP FITTINGS ON UNIT SUPPLY & DISCHARGE PROVIDE INSULATION FOR FIRST 8' OF SUPPLY & DISCHARGE PIPING OF THE WATER HEATER PER SEC 504.5 IECC 2006 (OR EQUAL)

ELECTRIC WATER HEATER (WH-2)
RHEEM, 40 GALS, POWERPACK ASME, MODEL E40A-3-G 4,500 WATTS, 208 V/1/8, 5 YEARS, WARRANTY TANK, 2 YEARS PARTS WARRANTY, PROVIDE "BUILT-IN HEAT TRAP. (OR EQUAL)

FLOOR DRAIN (F.D.)
ZURN MODEL Z-415-5B-P FLOOR DRAIN WITH DURACOATED CAST IRON BODY WITH 2" BOTTOM OUTLET, 1/2" TRAP PRIMER CONNECTION, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH "TYPE B" NICKEL BRONZE STRAINER (OR EQUAL)

FLOOR SINK WITH THREE QUARTER GRATE (F.S.)
ZURN, Z-1900-3, 12"X12", SANI-FLOOR RECEPTOR WITH 6" SUMP DEPTH, PIPE OUTLET SIZE SHALL MATCH PIPE SIZE PER PLAN, 1/2" TRAP PRIMER CONNECTION. INSTALL THREE QUARTER GRATE PER MANUFACTURER SPECIFICATIONS (OR EQUAL)

3 COMPARTMENT SINK (3-CS)
NSF 3 COMPARTMENT SINK, 18"X18" TUB SIZE WITH 2 EA 18" DRAINBOARDS, STAINLESS STEEL WITH FAUCET 8" CENTER WALL MOUNT - FAUCET DELTA 27T 2944 SERIES TWO WRISTBLADE WIDESPREAD, HANDLES, CHROMES, DEACTOR (OR EQUAL) FURNISH BY KITCHEN EQUIPMENT CONTRACTOR

2 COMPARTMENT SINK (2-CS)
NSF 2 COMPARTMENT SINK, 18"X18" TUB SIZE WITH (1)- 18" DRAIN, STAINLESS STEEL WITH FAUCET 8" CENTER WALL MOUNT - FAUCET DELTA 27T 2944 SERIES TWO WRISTBLADE WIDESPREAD, HANDLES, CHROMES, DEACTOR (OR EQUAL) FURNISH BY KITCHEN EQUIPMENT CONTRACTOR

HAND SINK (H.S.)
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SINK (S-1)
ELKAY MODEL# LR-1918, SINGLE COMPARTMENT SINK, 18 go STAINLESS STEEL, 16"X11-1/2"X7-1/2" DEEP COMPARTMENT THREE HOLES PUNCHED, MODEL#LK-99 STRAINER -FAUCET DELTA MODEL#3579, WHDF FAUCET, GOOSNECK SPOUT, 4" WRIST BLADE HANDLES, CHROME PLATED, AERATOR (OR EQUAL)

MOP SINK (M.S.)
FIAT MODEL # MSB-2424 MOLDED STONE "MOP SERVICE BASIN" 24"X24"X10", 1" WIDE SHOULDER, INTEGRAL DRAIN, STRAINER, VINYL BUMPER GUARD - FAUCET TYPE CHICAGO MODEL#897-CP WALL MOUNTED SERVICE SINK FAUCET WITH VACUUM BREAKER SPOUT, PAIL HOOK, WALL BRACE, 3/4" MALE HOSE THREAD OULET, "QUARTURN" OPERATING CARTRIDGE ADJUSTABLE SUPPLY ARMS AND CHROME FINISH - HOSE AND BRACKET TYPE "FIAT" (OR EQUAL)

DRINKING FOUNTAIN (DF-1)
ELECTRIC WATER COOLER (ADA TWO STATIONS)
ELKAY TWO LEVEL WHEELCHAIR ACCESS MODEL # EZLBC WALL MOUNT, NO LEAD, BARRIER-FREE ELECTRIC WATER COOLER, STAINLESS STEEL "FLEX-GUARD" SAFETY BUBBLERS FRONT PRESS BAR AT EACH UNIT, PROVIDE MODEL # LKAPREZL APRON 1/5 HP, 325 WATTS, 3.7 FLA, 120V/1/60, INSTALL PER ADA REQUIREMENTS (OR EQUAL)

DRINKING FOUNTAIN (DF-2)
ELECTRIC WATER COOLER (ADA TWO STATIONS)
ELKAY BI-LEVEL WALL MOUNTED WHEELCHAIR ACCESS MODEL # ED217C OR EQUAL, LEAD FREE, BARRIER FREE, STAINLESS STEEL, WALL MOUNTED FULLY-EXPOSED WITH WALL PLATE INSTALL PER ADA REQUIREMENTS (OR EQUAL)

DISHWASHER TRAY SINK (D.T.S.)
ELKAY MODEL# LR-1918, SINGLE COMPARTMENT SINK, 18 go STAINLESS STEEL, 16"X11-1/2"X7-1/2" DEEP COMPARTMENT THREE HOLES PUNCHED, MODEL#LK-99 STRAINER -FAUCET DELTA MODEL#3579, WHDF FAUCET, GOOSNECK SPOUT, 4" WRIST BLADE HANDLES, CHROME PLATED, AERATOR (OR EQUAL) FURNISH BY KITCHEN EQUIPMENT CONTRACTOR

REVISIONS	BY
10/15/09	JACA
1-25-10	DLG

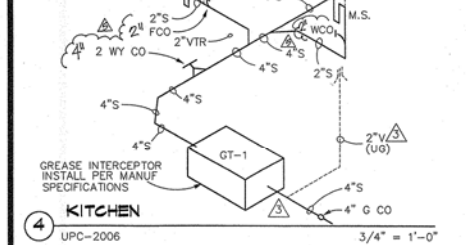
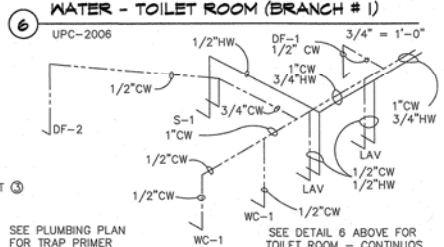
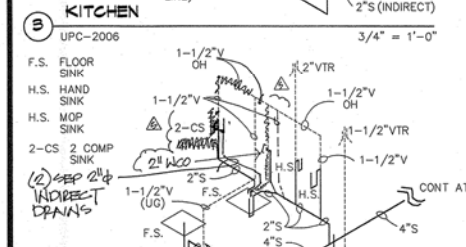
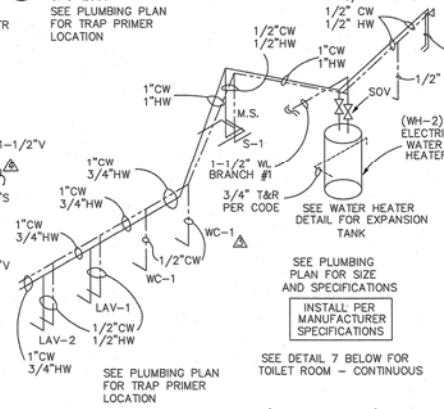
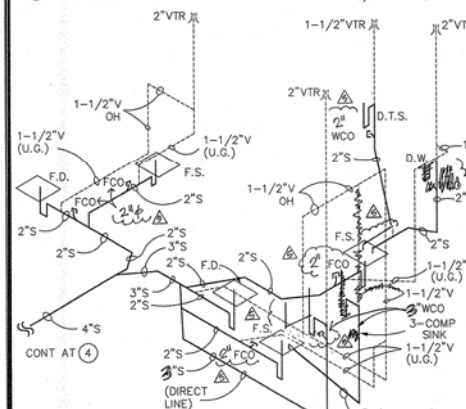
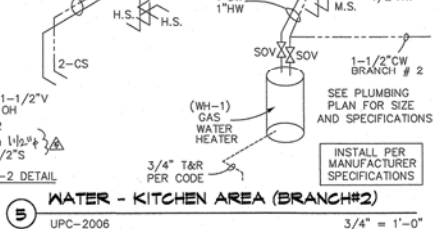
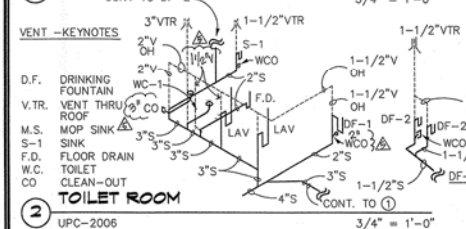
NEW BUILDING
GOSPEL RESCUE MISSION
707 W. MIRACLE MILE
TUCSON, AZ 85705
T09-CMO2572
SEE D09-0022

DAN CHILTON P.E.
FLUORIDE MECHANICAL ENGINEER
10,401 E FLUORIDE TRAIL
TUCSON, ARIZONA 85749
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e-mail: dchilton@florideme.com

JACA DESIGN LLC - DRAFTING SERVICES
P.O. BOX 113 - MARIANA, ARIZONA 85508-0113
(520) 916-2200 - e-mail: info@jacadesign.com



DRAWN: JACA DESIGN LLC
CHECKED: DANIEL CHILTON P.E.
DATE: 13 AUG 2009
SCALE: AS SHOWN
JOB NO.: JACA-196-268/17-269
SHEET



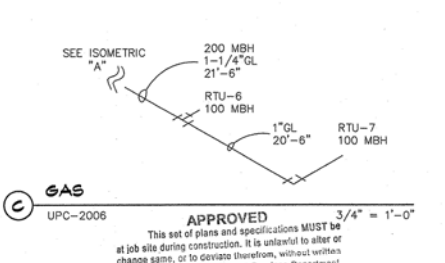
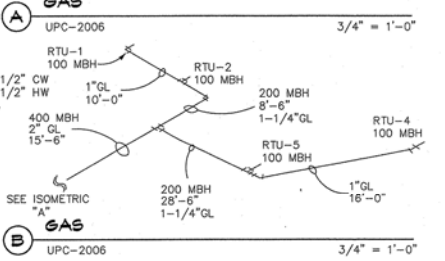
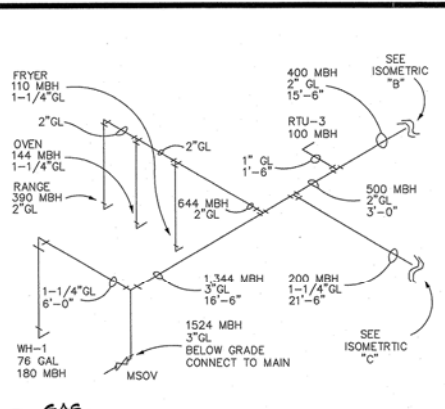
7 WATER - TOILET ROOM (BRANCH # 1)
UPC-2006

FIXTURE SCHEDULE

QT	FIXTURE NAME	SIZE	TYPE
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TOTAL FIXTURE 36 F.D.U.'S 1,250 GALLONS REQUIRED INTERCEPTOR VOLUME SEE GT-1 FOR PROVIDE SIZE

TABLE 10-3 GRAVITY GREASE INTERCEPTOR SIZING



PLUMBING FIXTURES SCHEDULE
LAVATORY (LAV-1) & (LAV-2)

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RHEEM, 40 GALS, POWERPACK ASME, MODEL E40A-3-G 4,500 WATTS, 208 V/1/8, 5 YEARS, WARRANTY TANK, 2 YEARS PARTS WARRANTY, PROVIDE "BUILT-IN HEAT TRAP. (OR EQUAL) FLOOR DRAIN (F.D.)

ZURN MODEL Z-415-5B-P FLOOR DRAIN WITH DURACOATED CAST IRON BODY WITH 2" BOTTOM OUTLET, 1/2" TRAP PRIMER CONNECTION, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH "TYPE B" NICKEL BRONZE STRAINER (OR EQUAL)

FLOOR SINK WITH THREE QUARTER GRATE (F.S.)
ZURN, Z-1900-3, 12"X12", SANI-FLOOR RECEPTOR WITH 6" SUMP DEPTH, PIPE OUTLET SIZE SHALL MATCH PIPE SIZE PER PLAN, 1/2" TRAP PRIMER CONNECTION. INSTALL THREE QUARTER GRATE PER MANUFACTURER SPECIFICATIONS (OR EQUAL)

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ELKAY MODEL# LR-1918, SINGLE COMPARTMENT SINK, 18 go STAINLESS STEEL, 16"X11-1/2"X7-1/2" DEEP COMPARTMENT THREE HOLES PUNCHED, MODEL#LK-99 STRAINER -FAUCET DELTA MODEL#3579, WHDF FAUCET, GOOSNECK SPOUT, 4" WRIST BLADE HANDLES, CHROME PLATED, AERATOR (OR EQUAL)

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DRINKING FOUNTAIN (DF-1)
ELECTRIC WATER COOLER (ADA TWO STATIONS) ELKAY TWO LEVEL WHEELCHAIR ACCESS MODEL # EZLBC WALL MOUNT, NO LEAD, BARRIER-FREE ELECTRIC WATER COOLER, STAINLESS STEEL "FLEX-GUARD" SAFETY BUBBLERS FRONT PRESS BAR AT EACH UNIT, PROVIDE MODEL # LKAPREZL APRON 1/5 HP, 325 WATTS, 3.7 FLA, 120V/1/60, INSTALL PER ADA REQUIREMENTS (OR EQUAL)

DRINKING FOUNTAIN (DF-2)
ELECTRIC WATER COOLER (ADA TWO STATIONS) ELKAY BI-LEVEL WALL MOUNTED WHEELCHAIR ACCESS MODEL # EDP217C OR EQUAL, LEAD FREE, BARRIER FREE, STAINLESS STEEL, WALL MOUNTED FULLY-EXPOSED WITH WALL PLATE (OR EQUAL) INSTALL PER

ADA REQUIREMENTS (OR EQUAL)
DISHWASHER TRAY SINK (D.T.S.)
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WATER CONSERVATION NOTES
GALLONS PER MIN WATER CLOSETS - SHALL USE A MAX OF ONE AND SIX-TENTHS (1.6) GALLONS PER FLUSH LAYS OF THE METERING OR SELF-CLOSING TYPE SHALL HAVE A MAX FLOW RATE AT .25 GALLONS PER CYCLE & SHALL REMAIN OPEN FOR A PERIOD OF NOT LESS THAN 10 SECONDS.

REVISIONS BY

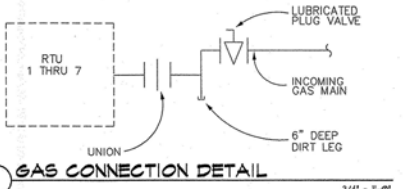
10/08/09	JACA
1-25-10	DLG

NEW BUILDING
GOSPEL RESCUE MISSION
707 W. MIRACLE MILE
TUCSON, AZ 85705
T09-CM02572
SEE D09-0022

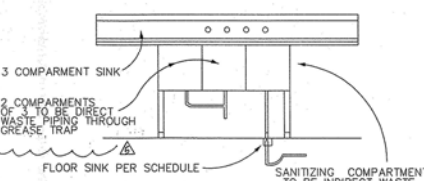
DAN CHILTON P.E.
MECHANICAL ENGINEER
FLUORINTEGRITY
10,401 E FLUORINTEGRITY TRAIL
TUCSON, ARIZONA 85749
BUS (520) 749-0198
P.O. BOX 117 - MARIANA, ARIZONA 85508-0117
e-mail: dan@pcosystems.org
JACA DESIGN LLC - DRAFTING SERVICES
16250 N 16250 E
(480) 916-2200



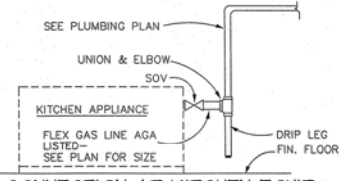
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CHECKED BY DANIEL CHILTON P.E.
DATE 13 AUG 2009
SCALE
JOB NO. JACA-196-208/17-209
SHEET



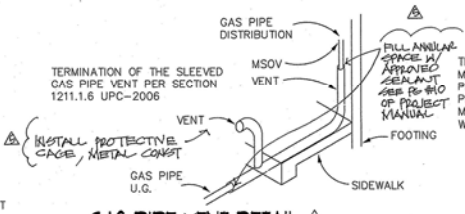
1 GAS CONNECTION DETAIL 3/4" x 1'-0"



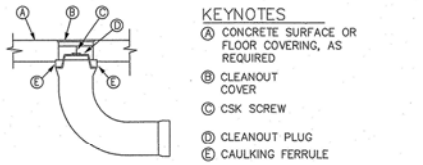
2 3 COMP. SINK DETAIL 3/4" x 1'-0"



3 GAS CONNECTION AT KITCHEN EQUIP. 3/4" x 1'-0"



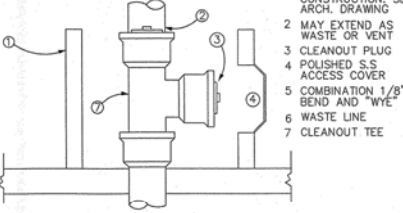
6 GAS PIPE VENT DETAIL 3/4" x 1'-0"



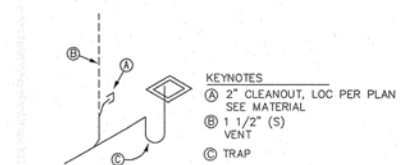
7 FLOOR CLEANOUT IN FINISHED ROOMS 3/4" x 1'-0"

KEYNOTE

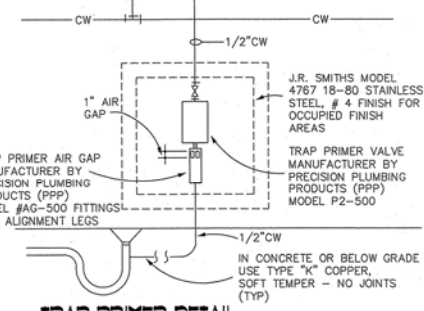
- FOR WALL CONSTRUCTION, SEE ARCH. DRAWING
- MAY EXTEND AS WASTE OR VENT
- CLEANOUT PLUG POLISHED S.S. ACCESS COVER
- COMBINATION 1/8" BEND AND "WYE"
- WASTE LINE
- CLEANOUT TEE



4 WALL CLEANOUT TYPICAL 3/4" x 1'-0"



5 FLOOR SINK DETAIL 3/4" x 1'-0"

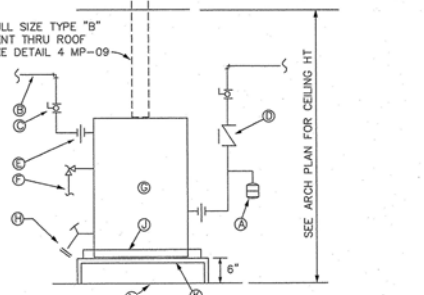


9 TRAP PRIMER DETAIL 3/4" x 1'-0"

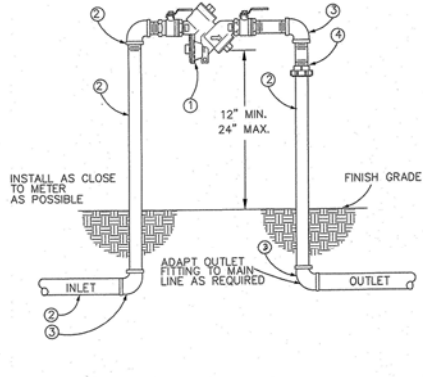
APPROVED
This set of plans and specifications may be at job site during construction. It is unlawful to alter or change same, or to deviate therefrom, without written approval from the Development Services Department.
The stamping of this set of plans & specifications SHALL NOT be held to permit or be an approval of the violation of any provisions of City Ordinance or State Law.
Structural: _____ Date: _____
Electrical: _____ Date: _____
Mechanical: _____ Date: _____
Plumbing: RWS Date: 1/26/10
DEVELOPMENT SERVICES DEPARTMENT, CITY OF TUCSON

WATER HEATER WILL COMPLY WITH CHAPTER 5 UPC-2006 WATER HEATERS - INSTALL PER MANUFACTURER SPECIFICATIONS PER UPC-2006 AMENDMENTS - SEE CHAPTER 12 FUEL PIPING FOR ADDITIONAL REQUIREMENT

- KEYNOTES:
- EXPANSION TANK - AMTROL THERM-X-TROL MODEL ST-12 INSTALL PER MANUFACTURER'S RECOMMENDATION
 - HOT WATER
 - BALL VALVE (TYPICAL)
 - CHECK VALVE (TYPICAL)
 - DIELECTRIC UNION (TYPICAL)
 - A.S.M.E., T & P RELIEF VALVE WITH FULL SIZE DRAIN, TERMINATE AS SHOWN ON PLANS
 - WATER HEATER SEE SCHEDULE
 - DRAIN VALVE WITH HOSE END
 - 2" DEEP GALVANIZED STEEL DRAIN PAN - IF APPLY
 - PLATFORM FURNISH BY GENERAL CONTRACTOR
 - FINISH FLOOR



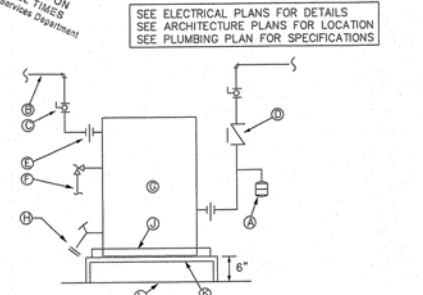
10 WATER HEATER (GAS) 3/4" x 1'-0"
NOTE: HOT WATER DELIVERED TO LAVATORIES IN RESTROOMS SHALL BE LIMITED TO MAX 110° F. OUTLET TEMPERATURE VIA MIXING VALVE OR OTHER APPROVED MEANS
COORDINATE WITH PLUMBING CONTRACTOR



11 R.P.A. DETAIL 3/4" x 1'-0"

- LIST OF MATERIALS
- APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY, BALL VALVES INCLUDED.
 - TYP "L" COPPER PIPE 3/4" THRU 2"
 - 3" 90° ELL, COPPER 3/4" THRU 2"
 - PIPE UNION, BRASS OR COPPER.

GENERAL NOTES FOR R.P.A.
1. CONTACT CITY OF TUCSON, WATER QUALITY SERVICES FOR LATEST LIST OF APPROVED BACK FLOW PREVENTERS OR CERTIFIED TESTERS.
2. THE REQUIRED BACK FLOW PREVENTION ASSEMBLY SHALL BE A MANUFACTURER AND MODEL NUMBER DESIGNATED IN THE CURRENT CITY OF TUCSON LIST OF APPROVED BACK FLOW PREVENTION ASSEMBLIES.
3. THE BACK FLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY A CERTIFIED TECHNICIAN DESIGNATED IN THE CURRENT CITY OF TUCSON LIST OF APPROVED INSPECTORS PRIOR TO THE REQUEST FOR FINAL INSPECTION.
4. ALL COPPER PIPE JOINTS SHALL BE SOLDERED. THE SOLDERED ALLOY SHALL COMPLY W/ ASTM B 32 HAVING A SILVER CONTENT OF NOT LESS THAN 3.4% INTENDED FOR JOINING COPPER PIPES FOR POTABLE WATER SYSTEMS (GRADES SN 94, SN 95, OR SN 96). THE FLUX SHALL BE TYP OA FOR GENERAL SOLDERING ON COPPER.
5. INSTALL A BRASS PIPE PLUG IN EACH TEST COCK ON THE ASSEMBLY.
6. FINISHED GRADE UNDER THE BACK FLOW PREVENTER SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
7. PROVIDE 12-INCH MINIMUM CLEARANCE BETWEEN BACK FLOW PREVENTION ASSEMBLY AND PERMANENT STRUCTURES OR LANDSCAPE VEGETATION.



11 WATER HEATER (ELECTRIC) 3/4" x 1'-0"
NOTE: HOT WATER DELIVERED TO LAVATORIES IN RESTROOMS SHALL BE LIMITED TO MAX 110° F. OUTLET TEMPERATURE VIA MIXING VALVE OR OTHER APPROVED MEANS
COORDINATE WITH ELECT. CONTRACTOR

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10 / EE / 09	JACA
1-25-10	DLC

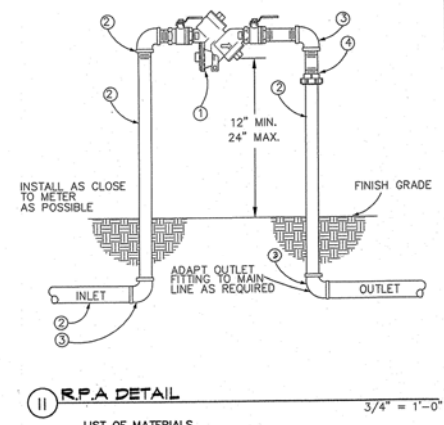
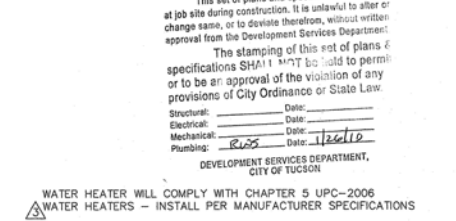
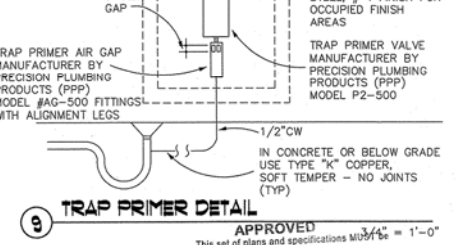
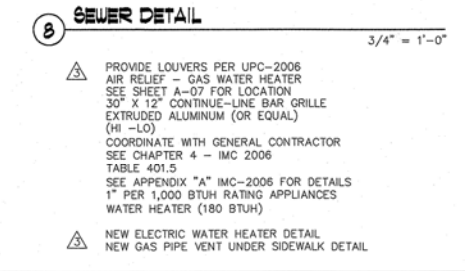
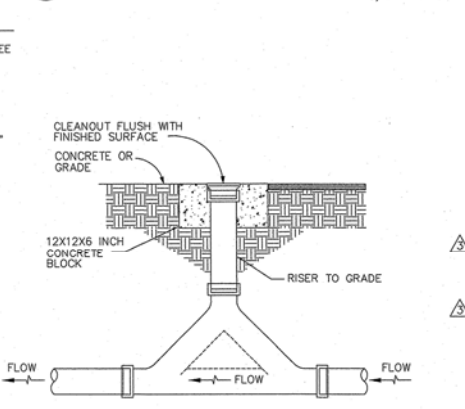
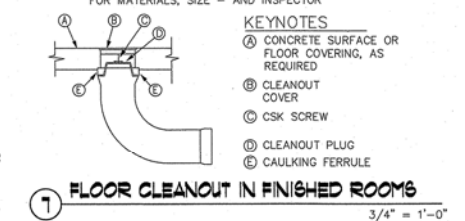
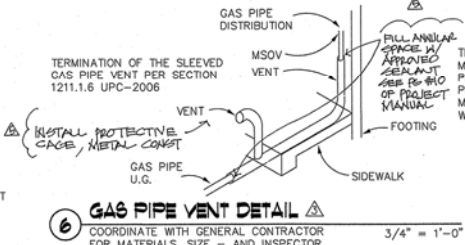
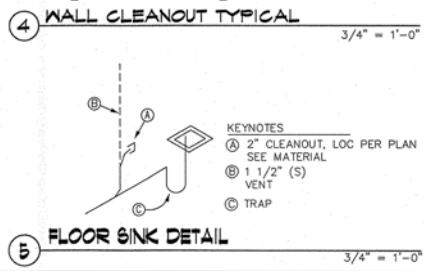
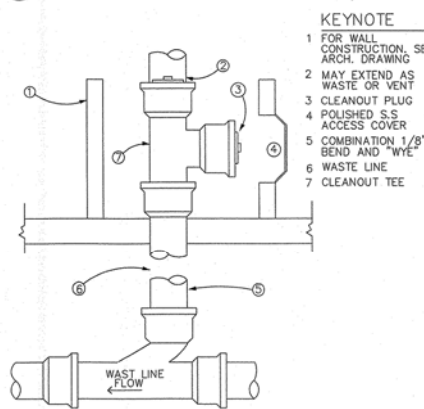
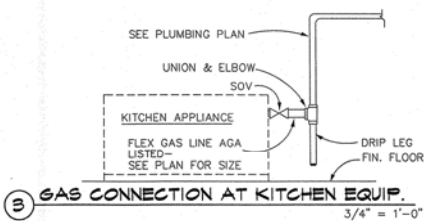
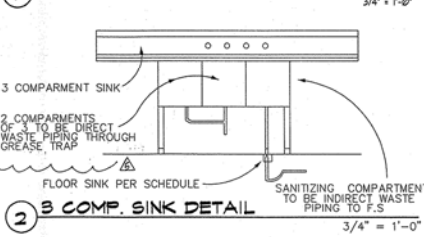
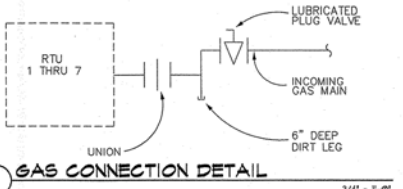
NEW BUILDING
GOSPEL RESCUE MISSION
707 W. MIRACLE MILE
TUCSON, AZ 85705
109-CM02572
SEE D09-0022

DAN CHILTON P.E.
PLUMBING ENGINEER
10401 E FLINTLOCK TRAIL
TUCSON, ARIZONA 85749
BUS (520) 370-9638 FAX (520) 749-0198
JACADREN LLC - DRAFTING SERVICES
P.O. BOX 113 - MARANA, ARIZONA 85548-0113
(520) 8160200 e-mail: info@jacadren.com



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DANIEL CHILTON P.E.
DATE
13 AUG 2009
SCALE
SEE PLANS
JOB NO.
JACA-198-248/17-269
SHEET

MP-04
27 of 42 SHEETS



APPROVED
 This set of plans and specifications may be used at job site during construction. It is unlawful to alter or change same, or to deviate therefrom, without written approval from the Development Services Department.

The stamping of this set of plans & specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of City Ordinance or State Law.

Structural: _____ Date: _____
 Electrical: _____ Date: _____
 Mechanical: _____ Date: _____
 Plumbing: RWS Date: 1/26/10

DEVELOPMENT SERVICES DEPARTMENT,
 CITY OF TUCSON

LIST OF MATERIALS

- APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY, BALL VALVES INCLUDED.
- TYP "L" COPPER PIPE 3/4" THRU 2"
- 3" 90° ELL, COPPER 3/4" THRU 2"
- PIPE UNION, BRASS OR COPPER.

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- PROVIDE 12-INCH MINIMUM CLEARANCE BETWEEN BACK FLOW PREVENTION ASSEMBLY AND PERMANENT STRUCTURES OR LANDSCAPE VEGETATION.

SEE DET 4 MP-09 FOR NOTES & DISTANCE

FULL SIZE TYPE "B" VENT THRU ROOF SEE DETAIL 4 MP-09

SEE ARCH PLAN FOR CEILING HT

NOTE: HOT WATER DELIVERED TO LAVATORIES IN RESTROOMS SHALL BE LIMITED TO MAX 110° F. OUTLET TEMPERATURE VIA MIXING VALVE OR OTHER APPROVED MEANS

NOTE: HOT WATER DELIVERED TO LAVATORIES IN RESTROOMS SHALL BE LIMITED TO MAX 110° F. OUTLET TEMPERATURE VIA MIXING VALVE OR OTHER APPROVED MEANS

SEE ELECTRICAL PLANS FOR DETAILS
 SEE ARCHITECTURE PLANS FOR LOCATION
 SEE PLUMBING PLAN FOR SPECIFICATIONS

REVISIONS	BY
10 / EE / 09	JACA
1-25-10	DLC

NEW BUILDING
GOSPEL RESCUE MISSION
 707 W. MIRACLE MILE
 TUCSON, AZ 85705

109-CM02572
 SEE D09-0022

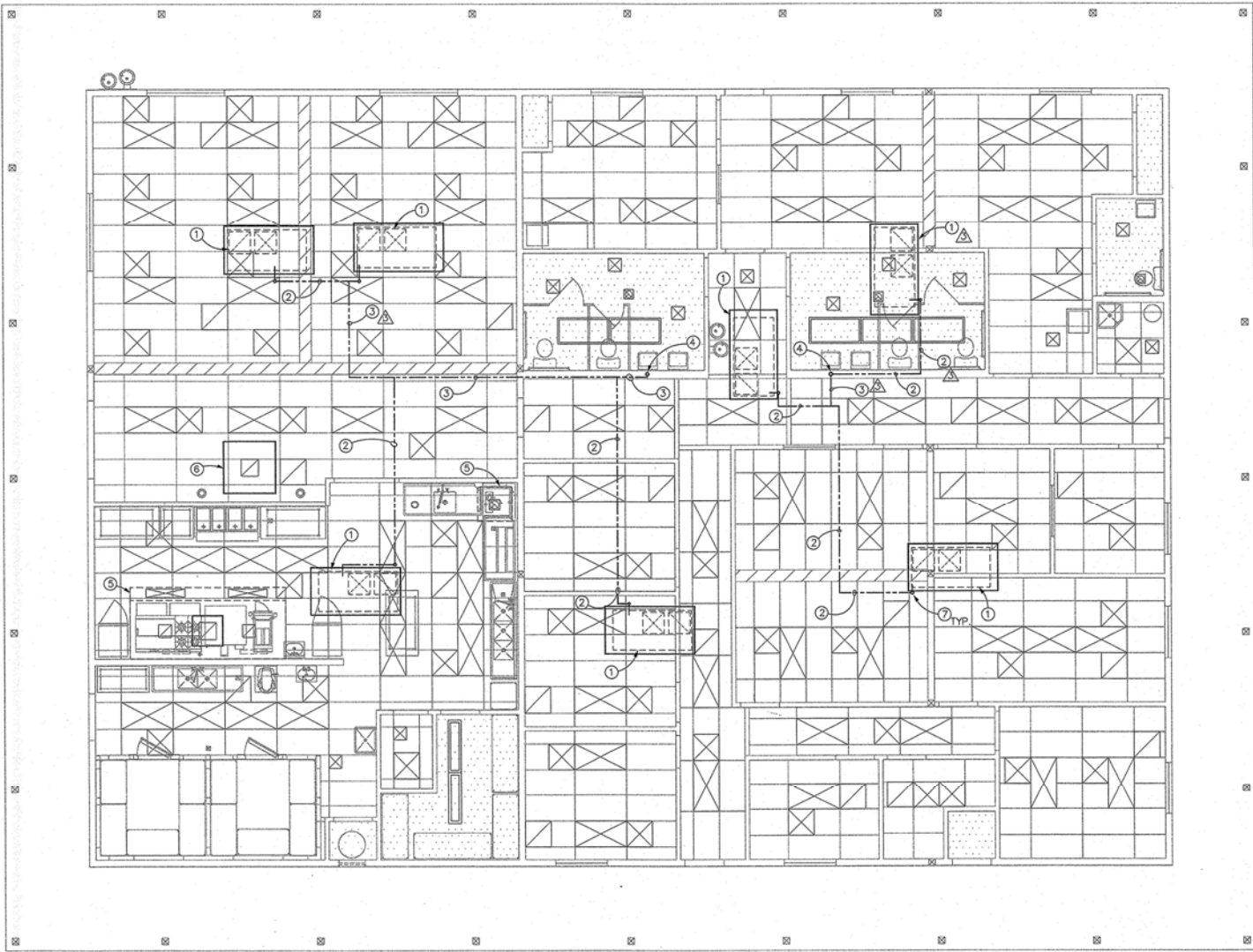
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JACARSEN LLC - DRAFTING SERVICES
 630 BOX 113 - MARANA, ARIZONA 85554-0113
 (520) 816-0200 e-mail: info@jacarsendrafting.com



DRAWN BY: JACA DESIGN LLC
 CHECKED BY: DANIEL CHILTON P.E.
 DATE: 13 AUG 2009
 SCALE: SEE PLANS
 JOB NO: JACA-198-2K8/17-2K9
 SHEET

MP-04
 27 OF 42 SHEETS



KEYNOTE

- EF EXHAUST FAN
SEE SCHEDULE
 - SAG SUPPLY AIR GRILLE
SEE MECH PLAN
 - RAG RETURN AIR GRILLE
SEE MECH PLAN
 - THERMOSTATS
 - GYPSUM BOARD
CEILING (STORAGE &
BATHROOM AREA
SEE ARCH. PLANS
 - CEILING
SEE ARCH. PLANS
 - LITE
SEE ARCH. PLANS
SEE ELECT. PLANS
 - ① AC-1 THRU AC-7, 5 TONS TYP
 - ② 3/4" CONDENSATE DRAIN
BELOW ROOF
 - ③ 1" CONDENSATE DRAIN
BELOW ROOF
 - ④ DRAIN TO NEAREST LAVATORY
PIPE TAILPIECE
 - ⑤ HOOD
 - ⑥ MAKE UP UNIT
 - ⑦ STUB UP CONDENSATE
DRAIN THRU ROOF AT EACH
AC UNIT CONDENSATE
CONNECTION
- SEE DETAIL 1 SHEET MP-08
FOR CONDENSATE DRAIN
DETAIL
- RELOCATE AC-X UNIT TO 10 FT
FROM PARAPET
 - 1" GAS LINE - PER PLAN

APPROVED PLANS
FOR ALL OTHERS
Development Services Department

APPROVED
This set of plans and specifications MUST be
at job site during construction. It is unlawful to alter or
change same, or to deviate therefrom, unless you obtain
approval from the Development Services Department.

The stamping of this set of plans &
specifications SHALL NOT be held to general
provisions of City Ordinance or State Law.

Structural: _____ Date: _____
Electrical: _____ Date: _____
Mechanical: EST Date: 1/21/10
Plumbing: _____ Date: _____

DEVELOPMENT SERVICES DEPARTMENT,
CITY OF TUCSON

SEE ARCHITECTURAL PLANS FOR LOCATION
OF "ROOF ACCESS" - PER IMC-2006 &
LOCAL AMENDMENTS

CONDENSATE PIPING
REFLECTIVE CEILING SCALE 1/4"=1'-0"
SEE ARCHITECTURE PLAN FOR MORE DETAIL
SEE ARCHITECTURE PLAN (REFLECTIVE CEILING)
**THIS PROJECT WILL COMPLY
WITH IMC-2006 & LOCAL
ADMMENDMENTS**

REVISIONS	BY
10 / 02 / 09	JACA

**NEW BUILDING
GOSPEL RESCUE MISSION**
707 W. MIRACLE MILE
TUCSON, AZ 85705

T09-CM02572 SEE D09-0022

DAN CHILTON P.E.
PLUMBING / MECHANICAL ENGINEER
10,401 E FLINTLOCK TRAIL
TUCSON, ARIZONA 85749 (520) 749-0198
BUS (520) 749-0198; dchilton@cox.net

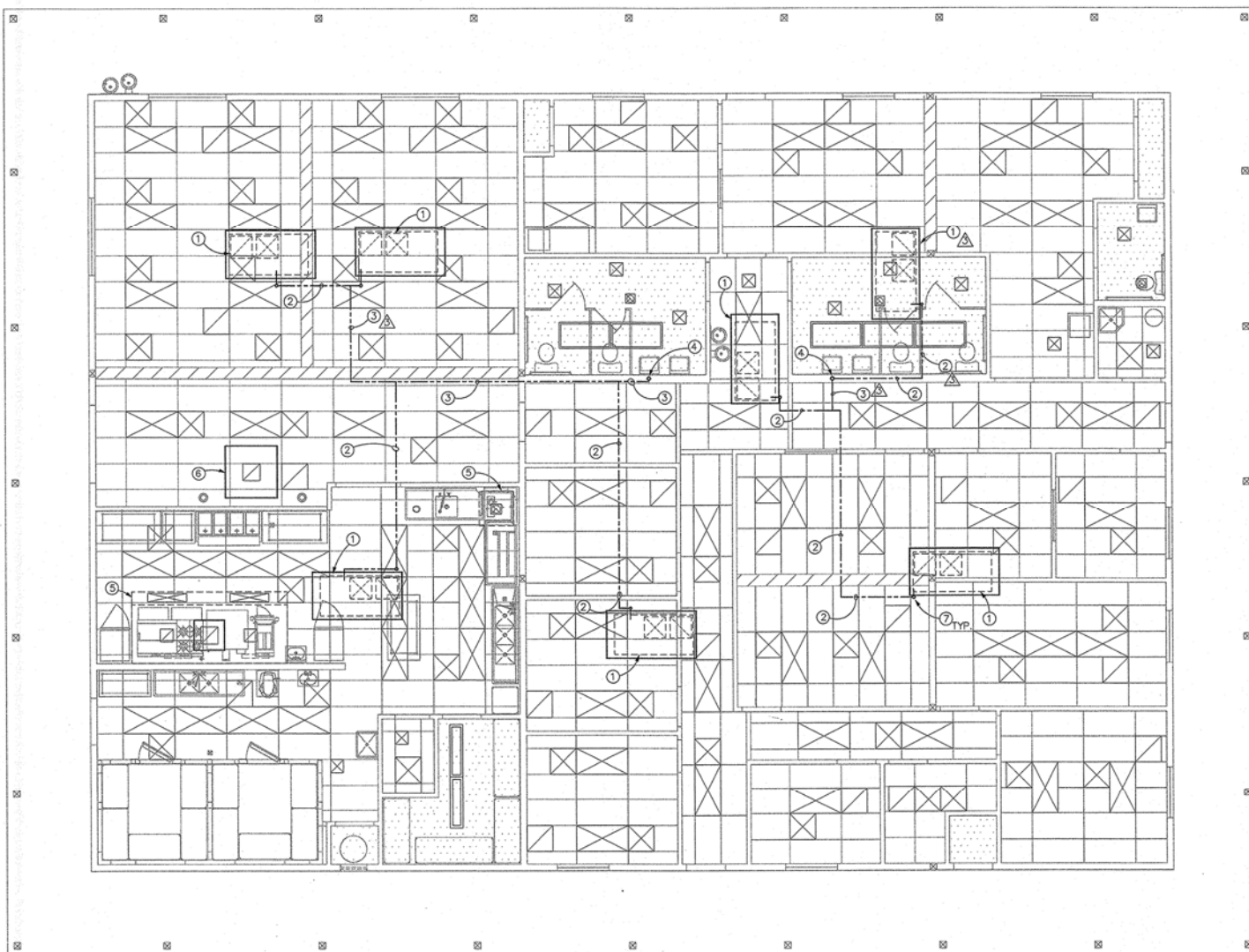
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P.O. BOX 113 - MARANA - ARIZONA 85659-9999
(520) 516-0200 e-mail: info@jacadesignanddrafting.com



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DANIEL CHILTON P.E.
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SHEET

MP-06
21 of 42 SHEETS

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KEYNOTE

- EF EXHAUST FAN
SEE SCHEDULE
- SAG SUPPLY AIR GRILLE
SEE MECH PLAN
- RAG RETURN AIR GRILLE
SEE MECH PLAN
- THERMOSTATS
- GYPSUM BOARD
CEILING (STORAGE &
BATHROOM AREA
SEE ARCH. PLANS
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- ① AC-1 THRU AC-7, 5 TONS TYP
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BELOW ROOF
- ④ DRAIN TO NEAREST LAVATORY
PIPE TAILPIECE
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- ⑦ STUB UP CONDENSATE
DRAIN THRU ROOF AT EACH
AC UNIT CONDENSATE
CONNECTION

SEE DETAIL 1 SHEET MP-08
FOR CONDENSATE DRAIN
DETAIL

- RELOCATE AC-X UNIT TO 10 FT
FROM PARAPET
- 1" GAS LINE - PER PLAN

APPROVED PLANS
FOR ALL OTHERS
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Structural: _____ Date: _____
Electrical: _____ Date: _____
Mechanical: EST Date: 1/2/12
Plumbing: _____ Date: _____

DEVELOPMENT SERVICES DEPARTMENT,
CITY OF TUCSON

SEE ARCHITECTURAL PLANS FOR LOCATION
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LOCAL AMENDMENTS

CONDENSATE PIPING

REFLECTIVE CEILING SCALE 1/4"=1'-0"
SEE ARCHITECTURE PLAN FOR MORE DETAIL
SEE ARCHITECTURE PLAN (REFLECTIVE CEILING)

**THIS PROJECT WILL COMPLY
WITH IMC-2006 & LOCAL
ADMMENDMENTS**



REVISIONS	BY
	JACA

**NEW BUILDING
GOSPEL RESCUE MISSION
707 W. MIRACLE MILE
TUCSON, AZ 85705**

T09-CM02572 **SEE D09-0022**

DAN CHILTON P.E.
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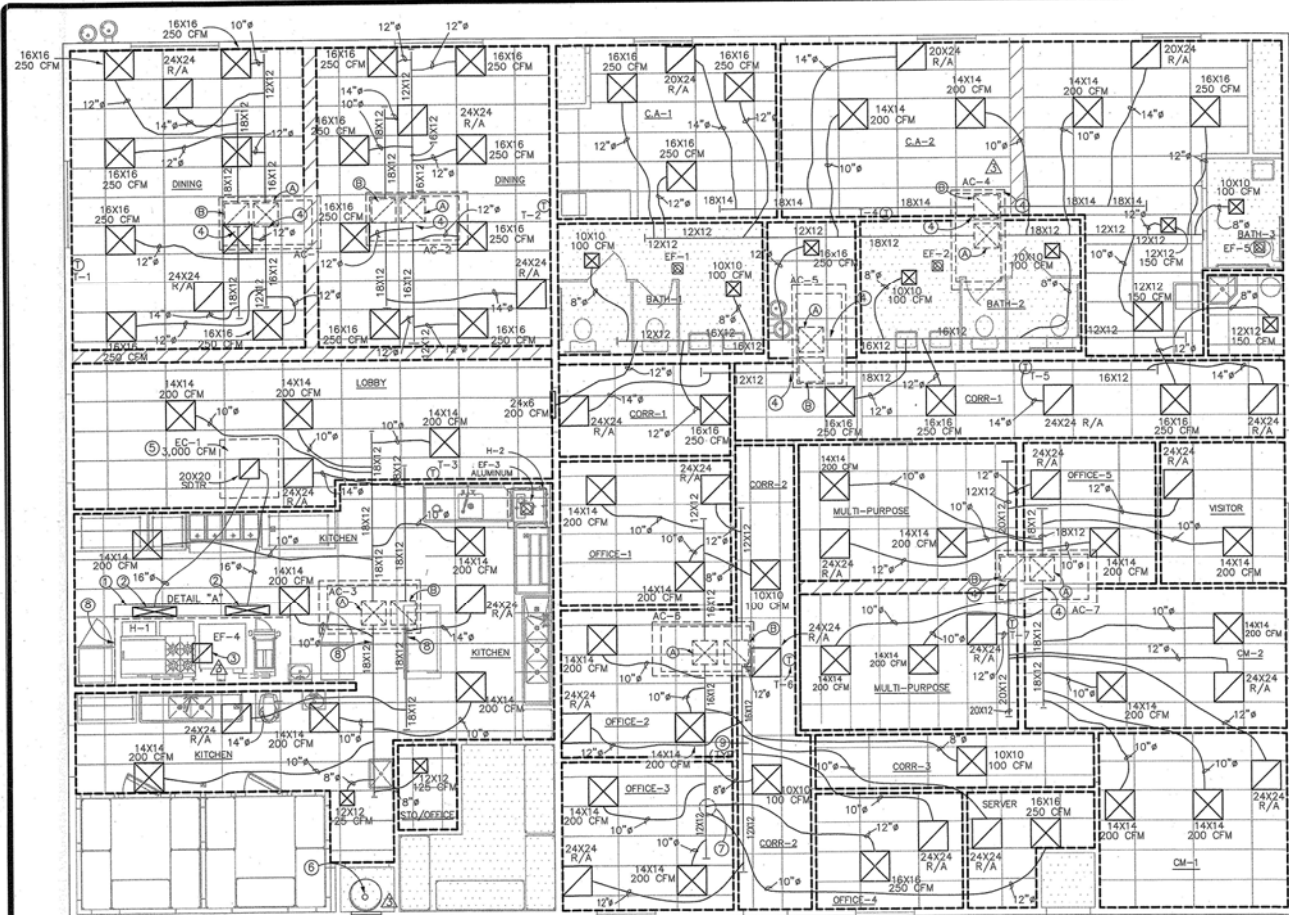


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JACA DESIGN LLC
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DANIEL CHILTON P.E.
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13 AUG 2009
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SHEET

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21 of 42 SHEETS

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MECHANICAL LEGEND

- ☒ SAG SUPPLY AIR GRILLE
- ☒ RAG RETURN AIR GRILLE (AIR FILTER LOCATION)
- EF-X EXHAUST FAN
- CD CEILING DIFFUSER - KRUEGER MODEL 6200 W/OBD (ALUMINUM)
- RG RETURN GRILLE - KRUEGER MODEL EOC-5 (ALUMINUM)
- BD BALANCE DAMPER (BUTTERFLY)
- TSTAT THERMOSTAT (1-1 THRU 1-7)
- CD CONDENSATE DRAIN (COPPER MATERIAL/CONNECTED & CLIPS PER CODE)
- OH OVERHEAD
- DN DOWN
- C.G. CEILING
- ABV. ABOVE
- BLW. BELOW
- DTR DUCT THROUGH ROOF
- AFV ABOVE FINISHED FLOOR
- TV TURNING VANES
- FLEX FLEXIBLE DUCT ATCO SERIES 30 W/MYLAR REFLECTIVE JACKET W/INSULATION OR EQUAL

EXHAUST FAN SCHEDULE

MARK	SERVING	MFR.	MODEL	TYPE	CFM	E.S.P.	WATTS	ELECT.	OPER. WEIGHT	REMARKS
EF-1	TOILET ROOM	BROAN	L-250	CEILING MOUNTED	250	0.25	166	115-1/2 2.1 AMPS	20 LBS.	SEE NOTES
EF-2	TOILET ROOM	BROAN	L-250	CEILING MOUNTED	250	0.25	166	115-1/2 2.1 AMPS	20 LBS.	SEE NOTES
EF-3	DISH WASHER	CAPTIVE AIR	DU-30	CUBE ON ROOF	625	0.50	1/4HP	115-1/2	50 LBS.	SEE NOTES
EF-4	TOILET ROOM	CAPTIVE AIR	NCA-16	CUBE ON ROOF	3,000	1.5	2 HP	230/36 208/3 3F	190 LBS.	SEE NOTES
EF-5	TYPE R	BROAN	L-100	CEILING MOUNTED	100	0.25	120	115-1/2 1.8 AMPS	20 LBS.	SEE NOTES

PROVIDE MANUF'S ROOF CAPS, DISCONNECT & BACKDRAFT DAMPER. PROVIDE A SEPARATE WALL SWITCH - COORD. W/ ELECTRICAL.
 EF-3 EF-4 - REMARKS
 OPEN ENCLOSURE 1. UL-762 GREASE FAN COMPLETE W/DISCONNECT, BIRDSCREEN, AND FACTORY CURB.
 OPEN ENCLOSURE 2. INTERLOCK WITH EF-1 - COORDINATE WITH ELECTRICAL.
 FLA 9.2 3. EQUAL TO GREENHECK OR PENN.
 RPM 1,188

REQUIRED OUTDOOR AIR SCHEDULE Δ IMC 2008 - TABLE 403.3

ROOM	SQ FT OCCUPIED	PEOPLE	TOTAL OA REQ'D (CFM)	TOTAL OA REQ'D (CFM)	SOURCE
DINING	720	70	50	20	1000 AC-1,2
KITCHEN	640	20	13	15	195 AC-3
LOBBY	360	30	10	20	150 AC-3
OFFICE	11	7	1	20	20 AC-3
(c) CHILD AREA 1	150	50	8	15	120 AC-4
(c) CHILD AREA 2	400	50	20	15	300 AC-4
COMMON TOILET					150 AC-4
MEN TOILET (BATH-1)					150 AC-5
WOMEN TOILET (BATH-2)					150 AC-5
BATHROOM (BATH-3)					60 AC-5
CORRIDOR 1	260				13 AC-5
OFFICE 1	46	7	1	20	20 AC-6
OFFICE 2	46	7	1	20	20 AC-6
OFFICE 3	46	7	1	20	20 AC-6
OFFICE 4	43	7	1	20	20 AC-6
SERVER	48				3 AC-6
CORRIDOR 2	160				8 AC-6
CORRIDOR 3	80				4 AC-6
C.M. 1	180	7	2	40	20 AC-7
C.M. 2	128	7	1	20	20 AC-7
VISITOR	76	50	4	20	80 AC-7
OFFICE'S	88	7	20	20	20 AC-7
MULTI-PURPOSE	300	50	15	20	300 AC-7

TOTAL OUTSIDE AIR REQUIRED
 (*) 0.05 CFM PER SQ FT (2)
 (**) 75 CFM PER WC
 (c) EDUCATIONAL - CLASSROOM

PROVIDED OUTDOOR AIR SCHEDULE

UNIT	OA PROVIDED (CFM)
AC-1	500
AC-2	500
AC-3	365
AC-4	570
AC-5	95
AC-6	440
AC-7	440
TOTAL	2,863

OUTDOOR AIR CALCULATION

MECHANICAL PLAN

MECHANICAL SCALE 1/4"=1'-0"
 THIS PROJECT WILL COMPLY WITH IMC-2006 & LOCAL ADMENDMENTS (IECC-2006)

REVISIONS	BY
11/04/09	JACA
12/29/09	JACA

NEW BUILDING
GOSPEL RESCUE MISSION
 707 W. MIRACLE MILE
 TUCSON, AZ 85705
T09-CM02572
 SEE D09-0022

DAN CHILTON P.E.
 LICENSED MECHANICAL ENGINEER
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 (520) 6160200 e-mail: info@jacadesignllc.com



DRAWN BY JACA DESIGN LLC
 CHECKED BY DANIEL CHILTON P.E.
 DATE: 13 AUG 2009
 SCALE: SEE PLANS
 JOB NO: JACA-198-268/17-269
 SHEET

MP-07
 OF SHEETS

KEYNOTES

- HOOD CONNECTION (H-1) DETAIL "A"
- ① MUA PLENUM, DESIGN FURNISH BY HOOD MANUFACTURER
- ② 10X28 MUA CONNECTION TO MUA PLENUM
- ③ 16" X 18" DTR INSTALL PER MANUFACT. SPECIFICATIONS - SEE SHOP DRAWINGS CAPTIVE AIRE OR EQ
- SEE MP-08 FOR KITCHEN MECHANICAL EQUIPMENT & NOTES
- AC-X CONNECTION TYPICAL OF 7 RTU
- ④ TYPICAL TURN IN RECTANGULAR DUCT SEE DETAIL 1 SHEET MP-09
- ⑤ EVAPORATIVE COOLER (EC-1) SEE DETAIL 3 SHEET MP-09
- ⑥ TYPE "B" FLUE COORDINATE WITH GAS PLUMBING SEE WATER HEATER SEE DETAIL 4 SHEET MP-09
- ⑦ TYPICAL FLEX DUCT DIFFUSER TYP OF ALL SEE DETAIL 5 SHEET MP-09
- ⑧ EXHAUST HOOD (H-1) DETAIL SEE DETAIL 6 SHEET MP-09
- DUCTWORK SUPPORT TYP OF ALL SEE DETAIL 3 SHEET MP-09
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- Δ RELOCATED AC-4
- Δ GRILLE SIZE
- Δ DUCT SIZE (HOOD)

APPROVED PLANS MUST BE KEPT ON JOB AT ALL TIMES Development Services Department

TEST AND BALANCE SYSTEM PER AABC STANDARDS SUBMIT REPORT TO ENGINEER WITHIN 10 DAYS OF COMPLETING TEST AND BALANCE

ROOFTOP AC UNIT - GAS & ELECTRIC

MARK	MANUFACT.	MODEL	TONS	CFM	OUTSIDE AIR CFM	ESP	NET (B1UH) CAPACITY	ELECTRIC	FLA/MCA	SEER/EER	WEIGHT (LBS)	REMARKS
AC-1 THRU AC-7	YORK	DJ060802NA	5	2000	SEE O.A. NOTES	0.50	NET 100,000 OUTPUT 80,000	208 3 φ	24.8 / 29.1	13.00/ 11.20	828	WITH ECONOMIZER POWER EXHAUST

PROVIDE MANUFACTURER'S 8" ROOF CURB, DISCONNECT, OUTSIDE MANUAL AIR DAMPER AND PROGRAMM. THERMOSTAT MODEL FLASAT1 220 OR EQUAL.

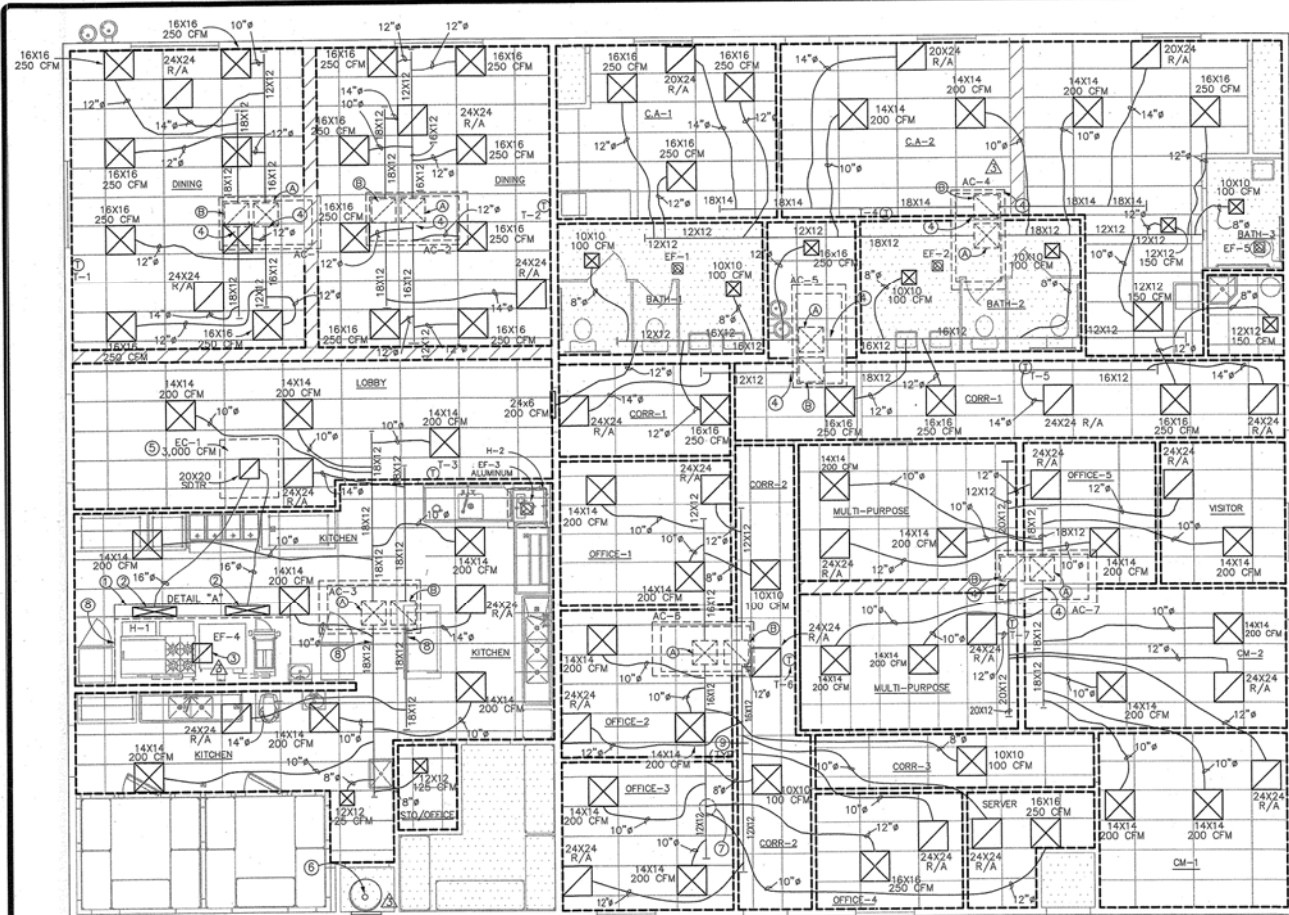
EVAPORATIVE COOLER SCHEDULE (MUA)

MARK	MANUFACT.	MODEL	CFM	ESP	ELECTRIC	HORSE POWER	WEIGHT	REMARKS
EC-1 (MAU-1)	PHOENIX	FD-450	3,000	(0.5)	115/1/60	1/2	140	WITH COUNTER BALANCE DAMPER, ELECT. INTERLOCK WITH EF-3 & EF-4

HOOD SCHEDULE

MARK	MFR.	MODEL	TYPE	CFM	SIZE	ELECTRICAL LIGHT	WEIGHT (LBS)	REMARKS
H-1	CAPTIVE AIR OR EQUAL	5424-PSF-P	CANOPY	3,000	12'-0" 4'-6"	115-1-60	805	18 GA S/S UL-LISTED, COMPLETE W/ GREASE EXTRACTORS GREASE CUP, COLLARS, LIGHTS CONTROL PANEL AND FIRE SUPPRESSION SYSTEM. MUA, PLENUM - SPECS, DIMS, ETC.
H-2	CAPTIVE AIR OR EQUAL	4224-WB-G	CANOPY	625	3'-0" 2'-6"	115-1-60	162	INTER-LOCK WITH EF-3 (DISH WASHER)

SEE HOOD'S DETAIL FOR ADDITIONAL REQUIREMENTS.



MECHANICAL LEGEND

- ☒ SAG SUPPLY AIR GRILLE
- ☒ RAC RETURN AIR GRILLE (AIR FILTER LOCATION)
- EF-X EXHAUST FAN
- CD CEILING DIFFUSER - KRUEGER MODEL 6200 W/OBD (ALUMINUM)
- RG RETURN GRILLE - KRUEGER MODEL EGC-5 (ALUMINUM)
- BD BALANCE DAMPER (BUTTERFLY)
- TSTAT THERMOSTAT (1-1 THRU 1-7)
- CD CONDENSATE DRAIN (COPPER MATERIAL/CONNECTED & CLIPS PER CODE)
- OH OVERHEAD
- DN DOWN
- CLG. CEILING
- ABV. ABOVE
- BLW. BELOW
- DTR DUCT THROUGH ROOF
- AFV ABOVE FINISHED FLOOR
- TV TURNING VANES
- FLEX FLEXIBLE DUCT ATCO SERIES 30 W/MYLAR REFLECTIVE JACKET W/INSULATION OR EQUAL

EXHAUST FAN SCHEDULE

MARK	SERVING	MFR.	MODEL	TYPE	CFM	E.S.P.	WATTS	ELECT.	OPER. WEIGHT	REMARKS
EF-1	TOILET ROOM	BROAN	L-250	CEILING MOUNTED	250	0.25	166	115-1/2.1 AMPS	20 LBS.	SEE NOTES
EF-2	TOILET ROOM	BROAN	L-250	CEILING MOUNTED	250	0.25	166	115-1/2.1 AMPS	20 LBS.	SEE NOTES
EF-3	DISH WASHER	CAPTIVE AIR	DU-30	CUBE ON ROOF	625	0.50	1/4HP	115-1/1.5	50 LBS.	SEE NOTES
EF-4	TOILET ROOM	CAPTIVE AIR	NCA-16	CUBE ON ROOF	3,000	1.5	2 HP	230/36 208/3 3Φ	190 LBS.	SEE NOTES
EF-5	TYPE R	BROAN	100	CEILING MOUNTED	100	0.25	120	115-1/1.8 AMPS	20 LBS.	SEE NOTES

PROVIDE MANUF.'S ROOF CAPS, DISCONNECT & BACKDRAFT DAMPER. PROVIDE A SEPARATE WALL SWITCH - COORD. W/ ELECTRICAL.
 EF-3 EF-4 - REMARKS
 1. UL-762 GREASE FAN COMPLETE W/DISCONNECT, BIRDSCREEN, AND FACTORY CURB.
 2. INTERLOCK WITH EF-1 - COORDINATE WITH ELECTRICAL.
 3. EQUAL TO GREENHECK OR PENN.
 RPM 1,188

REQUIRED OUTDOOR AIR SCHEDULE IMC 2008 - TABLE 403.3

ROOM	SQ FT OCCUPIED	PEOPLE	TOTAL OA REQ'D (CFM)	TOTAL OA SOURCE
DINING	720	70	50	20
KITCHEN	640	20	13	15
LOBBY	360	30	10	20
OFFICE	11	7	1	20
(c) CHILD AREA 1	150	50	8	15
(c) CHILD AREA 2	400	50	20	15
MEN TOILET (BATH-1)				150
WOMEN TOILET (BATH-2)				150
BATHROOM (BATH-3)				60
CORRIDOR 1	260			13
OFFICE 1	46	7	1	20
OFFICE 2	46	7	1	20
OFFICE 3	46	7	1	20
OFFICE 4	43	7	1	20
SERVER	48			3
CORRIDOR 2	160			8
CORRIDOR 3	80			4
C.M. 1	180	7	2	40
C.M. 2	128	7	1	20
C.M. 3	76	50	4	20
OFFICE'S	88	7	1	20
MULTI-PURPOSE	300	50	15	20

TOTAL OUTDOOR AIR REQUIRED
 (*) 0.05 CFM PER SQ FT (2)
 (**) 75 CFM PER WC
 (c) EDUCATIONAL - CLASSROOM

PROVIDED OUTDOOR AIR SCHEDULE

UNIT	OA PROVIDED (CFM)
AC-1	500
AC-2	500
AC-3	365
AC-4	570
AC-5	95
AC-6	440
AC-7	440
TOTAL	2,863

OUTDOOR AIR CALCULATION

MECHANICAL PLAN

MECHANICAL SCALE 1/4"=1'-0"
 THIS PROJECT WILL COMPLY WITH IMC-2006 & LOCAL ADMENDMENTS (IECC-2006)

KEYNOTES

- HOOD CONNECTION (H-1) DETAIL "A"
- AC-X CONNECTION TYPICAL OF 7 RTU
- ① MUA PLENUM, DESIGN FURNISH BY HOOD MANUFACTURER
- ② 10X28 MUA CONNECTION TO MUA PLENUM
- ③ 16" X 18" DTR INSTALL PER MANUFACT. SPECIFICATIONS - SEE SHOP DRAWINGS CAPTIVE AIRE OR EQ
- ④ TYPICAL TURN IN RECTANGULAR DUCT SEE DETAIL 1 SHEET MP-09
- ⑤ EVAPORATIVE COOLER (EC-1) SEE DETAIL 3 SHEET MP-09
- ⑥ TYPE "B" FLUE COORDINATE WITH GAS PLUMBING SEE WATER HEATER SEE DETAIL 4 SHEET MP-09
- ⑦ TYPICAL FLEX DUCT DIFFUSER TYP OF ALL SEE DETAIL 5 SHEET MP-09
- ⑧ EXHAUST HOOD (H-1) DETAIL SEE DETAIL 6 SHEET MP-09
- DUCTWORK SUPPORT TYP OF ALL SEE DETAIL 3 SHEET MP-09
- RELOCATED AC-4
- GRILLE SIZE
- DUCT SIZE (HOOD)

HOOD SCHEDULE

MARK	MFR.	MODEL	TYPE	CFM	SIZE	ELECTRICAL LIGHT	WEIGHT (LBS)	REMARKS
H-1	CAPTIVE AIR OR EQUAL	5424-PSF-P	CANOPY	3,000	12'-0" 4'-6"	115-1-60	805	18 GA S/S UL-LISTED, COMPLETE W/ GREASE EXTRACTORS GREASE CUP, COLLARS, LIGHTS CONTROL PANEL AND FIRE SUPPRESSION SYSTEM. MUA, PLENUM - SPECS, DIMS, ETC.
H-2	CAPTIVE AIR OR EQUAL	4224-WB-G	CANOPY	625	3'-0" 2'-6"	115-1-60	162	INTER-LOCK WITH EF-3 (DISH WASHER)

SEE HOOD'S DETAIL FOR ADDITIONAL REQUIREMENTS.

ROOFTOP AC UNIT - GAS & ELECTRIC

MARK	MANUFACT.	MODEL	TONS	CFM	OUTSIDE AIR CFM	ESP	NET (B1UH) CAPACITY	ELECTRIC	FLA/MCA	SEER/EER	WEIGHT (LBS)	REMARKS
AC-1 THRU AC-7	YORK	DJ060N2NA	5	2000	SEE QA NOTES	0.50	NET 100,000 OUTPUT 80,000	208 3 Φ	24.8 / 29.1	13.00 / 11.20	828	WITH ECONOMIZER POWER EXHAUST

PROVIDE MANUFACTURER'S 8" ROOF CURB, DISCONNECT, OUTSIDE MANUAL AIR DAMPER AND PROGRAMM. THERMOSTAT MODEL FLASITAT 220 OR EQUAL.

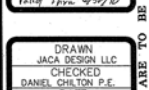
EVAPORATIVE COOLER SCHEDULE (MUA)

MARK	MANUFACT.	MODEL	CFM	ESP	ELECTRIC HORSE POWER	WEIGHT	REMARKS
EC-1 (MAU-1)	PHOENIX	FD-450	3,000	(0.5)	115/1/60	1/2	140 WITH COUNTER BALANCE DAMPER, ELECT. INTERLOCK WITH EF-3 & EF-4

REVISIONS	BY
11/04/09	JACA
12/29/09	JACA

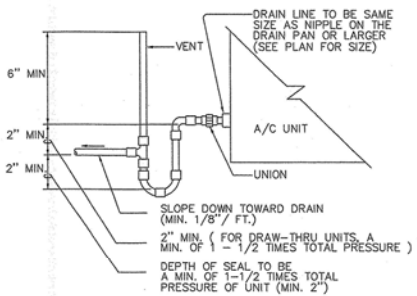
NEW BUILDING GOSPEL RESCUE MISSION
 707 W. MIRACLE MILE
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 T09-CM02572
 SEE D09-0022

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DRAWN BY JACA DESIGN LLC
 CHECKED BY DANIEL CHILTON P.E.
 DATE: 13 AUG 2009
 SCALE: SEE PLANS
 JOB NO. JACA-198-208/17-269
 SHEET
MP-07
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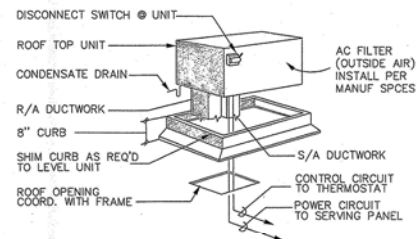


UNLESS OTHERWISE SPECIFIED:

UP TO 10 TONS	3/4" Ø
11 TO 20 TONS	1" Ø
21 TO 40 TONS	1-1/4" Ø
41 TO 100 TONS	1-1/2" Ø
101 TO 250 TONS	2" Ø

1 CONDENSATE DRAIN

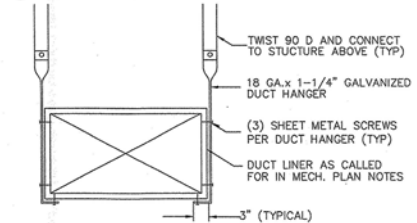
N.T.S.



- NOTES:
1. SIZE OF OPENING IN ROOF DECK TO BE AS SMALL AS POSSIBLE.
 2. INSTALL PER MANUFACTURER'S RECOMMENDATION AND INSTALLATION MANUAL.
 3. ALL WIRING BY ELECTRICAL CONTRACTOR.

2 ROOF UNIT (AC-1 THRU AC-1)

COORDINATE W/ROOF FRAMING PLAN - BY OTHERS N.T.S.



3 DUCT HANGER SUPPORT

N.T.S.

SEE ARCHITECTURE PLAN FOR COMCHECK - COORDINATE WITH SHEET A-09

MECHANICAL NOTES

PART I - GENERAL:

- 1.01 ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH IMC-2006 ALL CODES, LAWS, RULES, AND REGULATIONS OF ALL NATIONAL, STATE, COUNTY AND LOCAL AUTHORITIES HAVING JURISDICTION OVER THE PREMISES. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE INTERNATIONAL MECHANICAL CODE, INTERNATIONAL BUILDING CODE, UPC AND THE NATIONAL FIRE PROTECTION ASSOCIATION. IN CASE OF DIFFERENCES, THE MOST RESTRICTIVE OF SAID REGULATIONS SHALL GOVERN. HOWEVER, THIS SHALL NOT BE CONSTRUED TO RELIEVE THIS CONTRACTOR FROM COMPLYING WITH REQUIREMENTS OF THE PLANS AND SPECIFICATIONS WHICH MAY BE IN EXCESS OF CODE REQUIREMENTS. CONTRACTOR TO SECURE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
- 1.02 HVAC DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE APPROXIMATE APPROXIMATE LOCATION OF DUCTWORK, OUTLETS, EQUIPMENT AND PIPING. DIMENSIONS GIVEN IN FIGURES ON THE PLANS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS, AND ALL DIMENSIONS, WHETHER GIVEN IN FIGURES OR SCALED, SHALL BE FIELD VERIFIED. NO DUCTWORK SHALL BE FABRICATED UNTIL DUCT CLEARANCES ARE FIELD VERIFIED.
- 1.03 BEFORE SUBMITTING A BID CAREFULLY STUDY ALL THE CONSTRUCTION DOCUMENTS. CAREFULLY EXAMINE THE PREMISES AND ANY EXISTING WORK. DETERMINE, IN ADVANCE, THE METHODS OF INSTALLING AND CONNECTING THE EQUIPMENT AND BECOME THOROUGHLY FAMILIAR WITH ALL OF THE REQUIREMENTS OF THE CONTRACT.
- 1.04 MAKE ARRANGEMENTS FOR INSPECTIONS AND PERFORM TESTS REQUIRED FOR HVAC WORK.
- 1.05 FURNISH ANY MISCELLANEOUS ITEMS NORMALLY USED, SPECIFICALLY MENTIONED OR NOT, TO RENDER A COMPLETE INSTALLATION.
- 1.06 ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- 1.07 SUBMIT ARCHITECT (4) COPIES OF SHOP DRAWINGS OR LITERATURE IN AN INDEXED THREE-RING BINDER ON THE FOLLOWING ITEMS:
AIR CONDITIONING UNITS, EXHAUST FAN, REGISTERS, GRILLES, AND DUCT INSULATION.

PART II - PRODUCTS:

- 2.01 CONDENSATE PIPING:
 - a. CONDENSATE PIPING BELOW THE ROOF AND ABOVE THE CEILING SHALL BE INSULATED WITH 1/2" ARMAFLEX WITH ALL JOINTS SEALED.
 - b. PIPING SHALL BE TYPE "M" COPPER PLUGGED TEES FOR CLEANOUTS.
 - c. JOINTS IN CONDENSATE PIPING MAY BE MADE WITH 50-50 SOLDER.
 - d. ALL CONDENSATE LINES SHALL HAVE P-TRAPS.
- 2.02 DUCTWORK:
SIZES SHOWN ARE ACTUAL SHEET METAL SIZES. GAUGES AND INSTALLATION SHALL BE ACCORDING TO THE LATEST SMACNA DUCT CONSTRUCTION MANUAL. ALL ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES PER SMACNA STANDARDS. DUCTWORK SHALL BE HUNG WITH 20 GAUGE 1-1/8" STRAPHANGERS FASTENED TO THE STRUCTURE ABOVE.
- 2.03 DUCTWORK INSULATION/LINER:
ALL AIR CONDITIONING SUPPLY AND RETURN DUCTWORK LOCATED IN UNCONDITIONED SPACE SHALL BE A MIN. R-5 LINER AND A MIN. R-8 INSULATION WHEN INSTALLED OUTSIDE THE BUILDING ENVELOPE. REF. 503.2.7 - 2006 IECC.

PART III - EXECUTION:

- 3.01 PROVIDE ALL OPENINGS REQUIRED THROUGH THE ROOF OR WALLS.
- 3.02 ALL ELECTRICAL HIGH VOLTAGE WIRING, FUSES, CONDUIT AND DISCONNECT SWITCHES SHALL BE BY THE ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING SHALL BE BY THE HVAC CONTRACTOR.
- 3.03 ALL DUCT JOINTS SHALL BE SEALED WITH HARDCAST OR EQUIVALENT GAC DUCT SEALER.
- 3.04 ROUND BRANCH DUCT CONNECTIONS SHALL BE MADE WITH A ROUND HOLE CUTTER AND A SPIR-IN COLLAR SEALED WITH HARDCAST. NO DOVE TAIL FITTINGS AND NO DUCT TAPE ALLOWED.
- 3.05 BRANCH DUCT CONNECTIONS MANUFACTURED BY "AIR-TITE INC.(1)-501-835-8483" MAY BE USED IN LIEU OF SPIR-IN COLLARS BUT MUST STILL BE SEALED WITH HARDCAST.
- 3.06 PAINT ALL VISIBLE SHEET METAL DUCTWORK BEHIND GRILLES AND REGISTERS FLAT BLACK. JOINT ALL EXPOSED TO THE WEATHER. DUCTWORK WITH 2 COATS OF ALL WEATHER PAINT. PAINT ALL EXPOSED DUCTWORK IN THE BUILDING COORDINATE COLOR W/R/ASH.
- 3.07 SUPPORT ALL CEILING DIFFUSERS AND RETURN GRILLES CONNECTED TO FLEXIBLE DUCT IN A T-BAR CEILING FROM THE STRUCTURE ABOVE.
- 3.08 PROVIDE ACCESS PANELS FOR ANY EQUIPMENT REQUIRING ACCESS LOCATED ABOVE SOLID CEILINGS.
- 3.09 BALANCE ALL AIR QUANTITIES AS INDICATED ON THE DRAWINGS (+) OR (-) 10% IN ACCORDANCE WITH BALANCING PROCEDURES OR SMACNA, OR AABC. SUBMIT BALANCING REPORTS IN TRIPLICATE, INCLUDING EQUIPMENT VOLTAGE AND AMP READINGS. AGENCY INDEPENDENT OF CONTRACTOR SHALL DO BALANCING.
- 3.10 FURNISH (4) SETS OF OPERATION, MAINTENANCE, WIRING AND WARRANTY INFORMATION ON ALL EQUIPMENT TO THE ARCHITECT IN AN INDEXED THREE-RING BINDER.
- 3.11 MAKE NOTE OF ANY CHANGES MADE IN LAYOUT AND INCORPORATE IN "RECORD" DRAWINGS SUBMITTED TO THE ARCHITECT AT COMPLETION OF PROJECT.
- 3.12 GUARANTEE ALL PARTS AND LABOR FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND PROVIDE AN ADDITIONAL FOUR-YEAR WARRANTY FOR ALL A/C COMPRESSORS.

KITCHEN MECHANICAL EQUIPMENT & NOTES

- 1- ALL WORK SHALL COMPLY WITH 2006 IMC AS LOCALLY ADOPTED.
- 2- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDED EXPENSE RESULTING FROM SUBSTITUTION OF EQUIPMENT.
- 3- THE GENERAL CONTRACTOR SHALL PROVIDE ALL NEW OPENINGS IF REQUIRED THROUGH THE ROOF OR WALLS. ALL SUCH OPENINGS SHALL BE WATERTIGHT.
- 4- ALL NEW ELECTRICAL HIGH VOLTAGE WIRING, FUSES, CONDUIT AND DISCONNECT SWITCHES, IF REQUIRED, BY ELECTRICAL CONTRACTOR. FINAL HIGH VOLTAGE WIRING WITHIN FIVE FEET OF UNIT AND LOW VOLTAGE WIRING BY HVAC MECHANICAL CONTRACTOR. CONDUIT FOR LOW VOLTAGE WIRING BY ELECTRICAL CONTRACTOR. CONTRACTOR TO USE EXISTING ELECTRICAL EQUIPMENT AND CIRCUITS. UPGRADE DEVICES OR RELOCATE EXISTING DEVICES IF REQUIRED FOR NEW EQUIPMENTS PHYSICAL CONDITIONS.
- 5- TYPE 1 KITCHEN HOOD SHALL BE SINGLE WALL STAINLESS STEEL, AS NOTED IN "NEW EXHAUST HOOD SPECIFICATIONS" WITH CHROME APPLIANCE DROPS, & CONTROL PANEL. CONTRACTOR SHALL PROVIDE MAKE-UP AIR PLENUM AS REQUIRED TO COMPLY WITH 2006 IMC 508.1.1 EXCEPTION #2. HOOD SHALL BE PROVIDED WITH ANSUL R-102 WET CHEMICAL FIRE PROTECTION SYSTEM COMPLIANT WITH UL 300 REQUIREMENTS. CONNECTION WITH ANSUL SYSTEM SHALL BE BY FIRE PROTECTION CONTRACTOR.
- 6- HOOD GREASE DUCT SHALL BE MIN 16 GA WELDED BLACK IRON, OR MIN 18 GA WELDED STAINLESS STEEL, OR LISTED AND LABELED FACTORY-BUILT COMMERCIAL KITCHEN GREASE DUCT. GREASE DUCT SHALL BE RATED FOR MIN 1500 FPM VELOCITY. GREASE DUCT CONNECTION IS TO BE A CONTINUOUS LIQUID-TIGHT SMOOTH WELD TO HOOD WITHOUT GREASE TRAPS AND SHALL BE ACCESSIBLE FOR INSPECTION.
- 7- THE EXHAUST FOR THE TYPE 1 HOOD SHALL AUTOMATICALLY START WHENEVER COOKING OPERATIONS COMMENCE VIA HEAT SENSORS OR BY MEANS OF OTHER APPROVED METHODS. PROVIDE FACTORY INSTALLED DUCT STAT ON THE EXHAUST RISER THAT SENSES WHEN EQUIPMENT IS TURNED ON. WHEN THE SENSOR DETECTS HEAT IT WILL SEND A SIGNAL TO ACTIVATE THE EXHAUST FAN EVEN IF THE FAN SWITCH IS IN THE OFF POSITION.
- 8- NEW HOODS MAKE-UP AIR TO BE FURNISHED VIA NEW MAKE-UP AIR PLENUM & NEW MAKE-UP AIR FAN UNIT.
- 9- GREASE DUCT SHALL BE WRAPPED WITH "FRYWRAP MAX 2.0", AS MFG BY UNIFRAX CORP OR EQUAL. DUCT INSULATION CONTINUOUS FROM THE POINT WHERE THE DUCT PENETRATES A CEILING TO THE OUTLET TERMINATION. INSTALL DUCT INSULATION PER MFG'S SPECS AND ICC REPORT ER-5899. GREASE DUCT FIREWRAP MATERIAL AND INSTALLATION SHALL BE CLASSIFIED PER ASTM E2336-04.

- 10- GREASE DUCT TERMINATION ABOVE ROOF SHALL BE MIN 40" ABOVE THE ROOF SURFACE OR MIN 24" ABOVE ANY MAKE-UP AIR INTAKE, WHICHEVER IS GREATER.
- 11- PROVIDE GREASE DUCT TESTING PER 2006 IMC 506.3.3.1.
- 12- GREASE DUCT BLOWER SHALL HAVE VENTED CURB, ACCESS HINGE KIT, DRAIN CONNECTION, AND UP-BLAST DISCHARGE. DISCHARGE OPENING SHALL BE INSTALLED EQUAL TO OR HIGHER THAN ADJACENT PARAPET.
- 13- MAKEUP AIR SHALL BE PROVIDED DURING OPERATION OF EITHER HOOD EXHAUST SYSTEM AND SHALL BE ELECTRICALLY INTERLOCKED TO INSURE THAT MAKEUP AIR IS PROVIDED WHENEVER THE EXHAUST SYSTEM IS IN OPERATION. MAKEUP AIR SHALL COMPLY WITH 2006 IMC 508.1.1. FLEXIBLE DUCT FOR MUA UNIT SHALL BE THERMAFLEX TYPE "MKE", 1" THICK INSULATION WITH A MYLAR LINING. EXTERIOR AND INTERIOR COVERINGS SHALL MEET FS-25 RATING. INSULATION SHALL HAVE A MINIMUM R-5 RATING.
- 14- ELECTRICAL CONNECTION OF HOOD TO BUILDING ALARM, COOKING EQUIPMENT SHUTDOWN, AND FAN SHUT DOWN SHALL BE BY FIRE PROTECTION CONTRACTOR.
- 15- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS BEFORE FABRICATING OR INSTALLING ANY NEW WORK. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER BUILDING TRADES. MAKE MINOR CHANGES (AFTER APPROVAL) AS REQUIRED.
- 16- SYSTEM SHALL BE BALANCED TO APPROXIMATE CFMS NOTED AND TO OWNER'S SATISFACTION. PER 2006 IMC 403.3.4, THE VENTILATION SYSTEM SHALL BE BALANCED BY AN APPROVED METHOD. SUCH BALANCING SHALL VERIFY THAT THE VENTILATION SYSTEM IS CAPABLE OF SUPPLYING THE AIRFLOW RATES REQUIRED BY SECTION 403 AND TABLE 403.3. BALANCE REPORT MAY BE REQUIRED FOR SUBMITTAL TO INSPECTOR UPON FINAL INSP.
- 17- CONTRACTOR SHALL FURNISH ANY MISCELLANEOUS ITEMS NORMALLY USED, SPECIFICALLY MENTIONED OR NOT, TO RENDER A COMPLETE INSTALLATION.

EXTERIOR DESIGN CONDITIONS

UNDER 4,000 FT ELEVATION		4,000 FT ELEVATION AND ABOVE	
EXTERIOR DESIGN CONDITIONS		EXTERIOR DESIGN CONDITIONS	
WINTER DESIGN DRY BULB TEMP.	32 °F	WINTER DESIGN DRY BULB TEMP.	4 °F
SUMMER DESIGN DRY BULB TEMP.	104 °F	SUMMER DESIGN DRY BULB TEMP.	90 °F
DESIGN WET BULB TEMP.	66 °F	DESIGN WET BULB TEMP.	61 °F
DEGREE DAYS HEATING	2,100	DEGREE DAYS HEATING	7,000
DEGREE DAYS COOLING	2,814	DEGREE DAYS COOLING	140

APPROVED
This set of plans and specifications MUST be at job site during construction. It is unlawful to alter or change same, or to deviate therefrom, without written approval from the Development Services Department.

The stamping of this set of plans & specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of City Ordinance or State Law.

Structural: _____ Date: _____
 Electrical: _____ Date: _____
 Mechanical: Ruf Date: 11/16/09
 Plumbing: _____ Date: _____

DEVELOPMENT SERVICES DEPARTMENT.
CITY OF TUCSON

REVISIONS	BY
10/22/09	JACA

**NEW BUILDING
GOSPEL RESCUE MISSION**
707 W. MIRACLE MILE
TUCSON, AZ 85705

T09-CM02572 SEE D09-0022

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SCOTTSDALE, AZ 85258 (602) 748-0198
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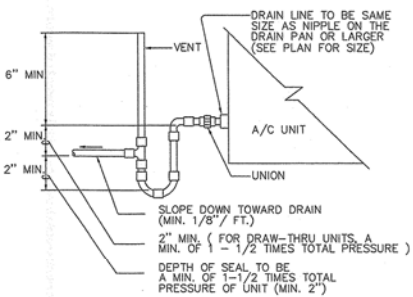


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JACA DESIGN LLC
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DANIEL CHILTON P.E.
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13 AUG 2009
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MP-08

27 of 42 SHEETS

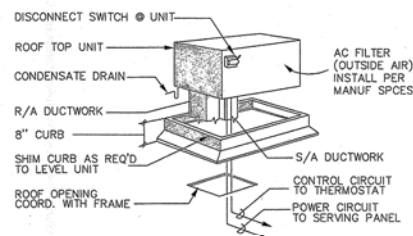
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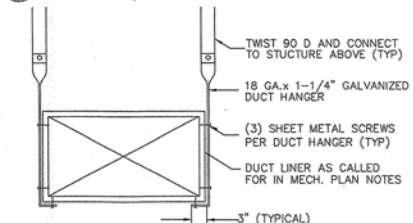
UP TO 10 TONS	3/4" Ø
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1 CONDENSATE DRAIN N.T.S.



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2 ROOF UNIT (AC-1 THRU AC-1) N.T.S.



3 DUCT HANGER SUPPORT N.T.S.

SEE ARCHITECTURE PLAN FOR COMCHECK - COORDINATE WITH SHEET A-09

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- 1.06 ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- 1.07 SUBMIT ARCHITECT (4) COPIES OF SHOP DRAWINGS OR LITERATURE IN AN INDEXED THREE-RING BINDER ON THE FOLLOWING ITEMS:
AIR CONDITIONING UNITS, EXHAUST FAN, REGISTERS, GRILLES, AND DUCT INSULATION.

PART II - PRODUCTS:

- 2.01 CONDENSATE PIPING:
a. CONDENSATE PIPING BELOW THE ROOF AND ABOVE THE CEILING SHALL BE INSULATED WITH 1/2" ARMAFLEX WITH ALL JOINTS SEALED.
b. PIPING SHALL BE TYPE "M" COPPER PLUGGED TEES FOR CLEANOUTS.
c. JOINTS IN CONDENSATE PIPING MAY BE MADE WITH 50-50 SOLDER.
d. ALL CONDENSATE LINES SHALL HAVE P-TRAPS.
- 2.02 DUCTWORK:
SIZES SHOWN ARE ACTUAL SHEET METAL SIZES. GAUGES AND INSTALLATION SHALL BE ACCORDING TO THE LATEST SMACNA DUCT CONSTRUCTION MANUAL. ALL ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES PER SMACNA STANDARDS. DUCTWORK SHALL BE HUNG WITH 20 GAUGE 1-1/8" STRAPHANGERS FASTENED TO THE STRUCTURE ABOVE.
ALL AIR CONDITIONING SUPPLY AND RETURN DUCTWORK LOCATED IN UNCONDITIONED SPACE SHALL BE A MIN. R-5 LINER AND A MIN. R-8 INSULATION WHEN INSTALLED OUTSIDE THE BUILDING ENVELOPE. REF. 503.2.7 - 2006 IECC.

PART III - EXECUTION:

- 3.01 PROVIDE ALL OPENINGS REQUIRED THROUGH THE ROOF OR WALLS.
- 3.02 ALL ELECTRICAL HIGH VOLTAGE WIRING, FUSES, CONDUIT AND DISCONNECT SWITCHES SHALL BE BY THE ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING SHALL BE BY THE HVAC CONTRACTOR.
- 3.03 ALL DUCT JOINTS SHALL BE SEALED WITH HARDCAST OR EQUIVALENT GAC DUCT SEALER.
- 3.04 ROUND BRANCH DUCT CONNECTIONS SHALL BE MADE WITH A ROUND HOLE CUTTER AND A SPIR-IN COLLAR SEALED WITH HARDCAST. NO DOVE TAIL FITTINGS AND NO DUCT TAPE ALLOWED.
- 3.05 BRANCH DUCT CONNECTIONS MANUFACTURED BY "AIR-TITE INC.(1)-501-935-8483) MAY BE USED IN LIEU OF SPIR-IN COLLARS BUT MUST STILL BE SEALED WITH HARDCAST.
- 3.06 PAINT ALL VISIBLE SHEET METAL DUCTWORK BEHIND GRILLES AND REGISTERS FLAT BLACK. PAINT ALL EXPOSED TO THE WEATHER DUCTWORK WITH 2 COATS OF ALL WEATHER PAINT. PAINT ALL EXPOSED DUCTWORK IN THE BUILDING COORDINATE COLOR W/ARCH.
- 3.07 SUPPORT ALL CEILING DIFFUSERS AND RETURN GRILLES CONNECTED TO FLEXIBLE DUCT IN A T-BAR CEILING FROM THE STRUCTURE ABOVE.
- 3.08 PROVIDE ACCESS PANELS FOR ANY EQUIPMENT REQUIRING ACCESS LOCATED ABOVE SOLID CEILINGS.
- 3.09 BALANCE ALL AIR QUANTITIES AS INDICATED ON THE DRAWINGS (+) OR (-) 10%, IN ACCORDANCE WITH BALANCING PROCEDURES OR SMACNA, OR AABC. SUBMIT BALANCING REPORTS IN TRIPLICATE, INCLUDING EQUIPMENT VOLTAGE AND AMP READINGS. AGENCY INDEPENDENT OF CONTRACTOR SHALL DO BALANCING.
- 3.10 FURNISH (4) SETS OF OPERATION, MAINTENANCE, WIRING AND WARRANTY INFORMATION ON ALL EQUIPMENT TO THE ARCHITECT IN AN INDEXED THREE-RING BINDER.
- 3.11 MAKE NOTE OF ANY CHANGES MADE IN LAYOUT AND INCORPORATE IN "RECORD" DRAWINGS SUBMITTED TO THE ARCHITECT AT COMPLETION OF PROJECT.
- 3.12 GUARANTEE ALL PARTS AND LABOR FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND PROVIDE AN ADDITIONAL FOUR-YEAR WARRANTY FOR ALL A/C COMPRESSORS.

KITCHEN MECHANICAL EQUIPMENT & NOTES

- 1- ALL WORK SHALL COMPLY WITH 2006 IMC AS LOCALLY ADOPTED.
- 2- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDED EXPENSE RESULTING FROM SUBSTITUTION OF EQUIPMENT.
- 3- THE GENERAL CONTRACTOR SHALL PROVIDE ALL NEW OPENINGS IF REQUIRED THROUGH THE ROOF OR WALLS. ALL SUCH OPENINGS SHALL BE WATERTIGHT.
- 4- ALL NEW ELECTRICAL HIGH VOLTAGE WIRING, FUSES, CONDUIT AND DISCONNECT SWITCHES, IF REQUIRED, BY ELECTRICAL CONTRACTOR. FINAL HIGH VOLTAGE WIRING WITHIN FIVE FEET OF UNIT AND LOW VOLTAGE WIRING BY HVAC MECHANICAL CONTRACTOR. CONDUIT FOR LOW VOLTAGE WIRING BY ELECTRICAL CONTRACTOR. CONTRACTOR TO USE EXISTING ELECTRICAL EQUIPMENT AND CIRCUITS. UPGRADE DEVICES OR RELOCATE EXISTING DEVICES IF REQUIRED FOR NEW EQUIPMENTS PHYSICAL CONDITIONS.
- 5- TYPE 1 KITCHEN HOOD SHALL BE SINGLE WALL STAINLESS STEEL, AS NOTED IN "NEW EXHAUST HOOD SPECIFICATIONS" WITH CHROME APPLIANCE DROPS, & CONTROL PANEL. CONTRACTOR SHALL PROVIDE MAKE-UP AIR PLENUM AS REQUIRED TO COMPLY WITH 2006 IMC 508.1.1 EXCEPTION #2. HOOD SHALL BE PROVIDED WITH ANSUL R-102 WET CHEMICAL FIRE PROTECTION SYSTEM COMPLIANT WITH UL 300 REQUIREMENTS. CONNECTION WITH ANSUL SYSTEM SHALL BE BY FIRE PROTECTION CONTRACTOR.
- 6- HOOD GREASE DUCT SHALL BE MIN 16 GA WELDED BLACK IRON, OR MIN 18 GA WELDED STAINLESS STEEL, OR LISTED AND LABELED FACTORY-BUILT COMMERCIAL KITCHEN GREASE DUCT. GREASE DUCT SHALL BE RATED FOR MIN 1500 FPM VELOCITY. GREASE DUCT CONNECTION IS TO BE A CONTINUOUS LIQUID-TIGHT SMOOTH WELD TO HOOD WITHOUT GREASE TRAPS AND SHALL BE ACCESSIBLE FOR INSPECTION.
- 7- THE EXHAUST FOR THE TYPE 1 HOOD SHALL AUTOMATICALLY START WHENEVER COOKING OPERATIONS COMMENCE VIA HEAT SENSORS OR BY MEANS OF OTHER APPROVED METHODS. PROVIDE FACTORY INSTALLED DUCT STAY ON THE EXHAUST RISER THAT SENSES WHEN EQUIPMENT IS TURNED ON. WHEN THE SENSOR DETECTS HEAT IT WILL SEND A SIGNAL TO ACTIVATE THE EXHAUST FAN EVEN IF THE FAN SWITCH IS IN THE OFF POSITION.
- 8- NEW HOODS MAKE-UP AIR TO BE FURNISHED VIA NEW MAKE-UP AIR PLENUM & NEW MAKE-UP AIR FAN UNIT.
- 9- GREASE DUCT SHALL BE WRAPPED WITH "FRYWRAP MAX 2.0", AS MFG BY UNIFRAX CORP OR EQUAL, DUCT INSULATION CONTINUOUS FROM THE POINT WHERE THE DUCT PENETRATES A CEILING TO THE OUTLET TERMINATION. INSTALL DUCT INSULATION PER MFG'S SPECS AND ICC REPORT ER-5899. GREASE DUCT FIREWRAP MATERIAL AND INSTALLATION SHALL BE CLASSIFIED PER ASTM E2336-04.

- 10- GREASE DUCT TERMINATION ABOVE ROOF SHALL BE MIN 40" ABOVE THE ROOF SURFACE OR MIN 24" ABOVE ANY MAKE-UP AIR INTAKE, WHICHEVER IS GREATER.
- 11- PROVIDE GREASE DUCT TESTING PER 2006 IMC 506.3.3.1.
- 12- GREASE DUCT BLOWER SHALL HAVE VENTED CURB, ACCESS HINGE KIT, DRAIN CONNECTION, AND UP-BLAST DISCHARGE. DISCHARGE OPENING SHALL BE INSTALLED EQUAL TO OR HIGHER THAN ADJACENT PARAPET.
- 13- MAKEUP AIR SHALL BE PROVIDED DURING OPERATION OF EITHER HOOD EXHAUST SYSTEM AND SHALL BE ELECTRICALLY INTERLOCKED TO INSURE THAT MAKEUP AIR IS PROVIDED WHENEVER THE EXHAUST SYSTEM IS IN OPERATION. MAKEUP AIR SHALL COMPLY WITH 2006 IMC 508.1.1. FLEXIBLE DUCT FOR MUA UNIT SHALL BE THERMAFLEX TYPE "MKE", 1" THICK INSULATION WITH A MYLAR LINING. EXTERIOR AND INTERIOR COVERINGS SHALL MEET FS-25 RATING. INSULATION SHALL HAVE A MINIMUM R-5 RATING.
- 14- ELECTRICAL CONNECTION OF HOOD TO BUILDING ALARM, COOKING EQUIPMENT SHUTDOWN, AND FAN SHUT DOWN SHALL BE BY FIRE PROTECTION CONTRACTOR.
- 15- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS BEFORE FABRICATING OR INSTALLING ANY NEW WORK. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER BUILDING TRADES. MAKE MINOR CHANGES (AFTER APPROVAL) AS REQUIRED.
- 16- SYSTEM SHALL BE BALANCED TO APPROXIMATE CFMs NOTED AND TO OWNER'S SATISFACTION. PER 2006 IMC 403.3.4, THE VENTILATION SYSTEM SHALL BE BALANCED BY AN APPROVED METHOD. SUCH BALANCING SHALL VERIFY THAT THE VENTILATION SYSTEM IS CAPABLE OF SUPPLYING THE AIRFLOW RATES REQUIRED BY SECTION 403 AND TABLE 403.3. BALANCE REPORT MAY BE REQUIRED FOR SUBMITTAL TO INSPECTOR UPON FINAL INSP.
- 17- CONTRACTOR SHALL FURNISH ANY MISCELLANEOUS ITEMS NORMALLY USED, SPECIFICALLY MENTIONED OR NOT, TO RENDER A COMPLETE INSTALLATION.

REVISIONS	BY
Δ 10/22/09	JACA

**NEW BUILDING
GOSPEL RESCUE MISSION**
707 W. MIRACLE MILE
TUCSON, AZ 85705

T09-CM02572 **SEE D09-0022**

DAN CHILTON P.E.
PLUMBING / MECHANICAL ENGINEER
10,401 E. FLINTLOCK TRAIL
SCOTTSDALE, AZ 85258 (480) 748-0198
BUS (602) 370-4669 FAX (602) 748-0198
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5000 N. 182ND AVE - MARIETTA, GA 30067
(508) 882-0300 (508) 882-0300



APPROVED

This set of plans and specifications MUST be at job site during construction. It is unlawful to alter or change same, or to deviate therefrom, without written approval from the Development Services Department.

The stamping of this set of plans & specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of City Ordinance or State Law.

Structural: _____ Date: _____
Electrical: Ray Date: 11/16/10
Mechanical: _____ Date: _____
Plumbing: _____ Date: _____

DEVELOPMENT SERVICES DEPARTMENT.
CITY OF TUCSON

EXTERIOR DESIGN CONDITIONS TABLE 302.1

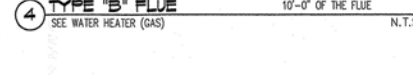
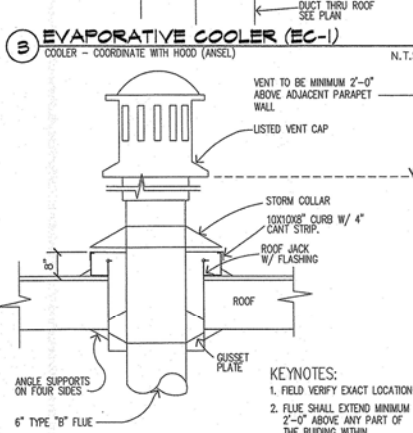
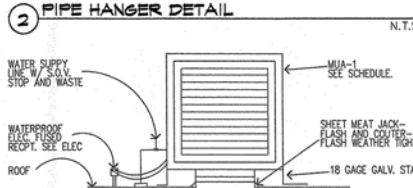
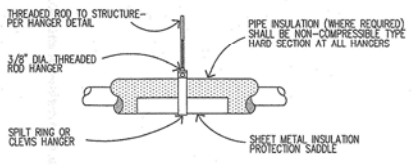
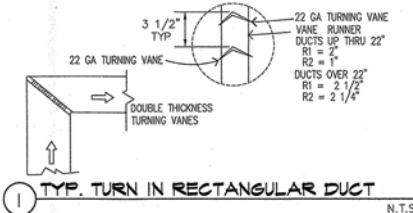
UNDER 4,000 FT ELEVATION		4,000 FT ELEVATION AND ABOVE	
EXTERIOR DESIGN CONDITIONS		EXTERIOR DESIGN CONDITIONS	
WINTER DESIGN DRY BULB TEMP.	32 ° F	WINTER DESIGN DRY BULB TEMP.	4 ° F
SUMMER DESIGN DRY BULB TEMP.	104 ° F	SUMMER DESIGN DRY BULB TEMP.	90 ° F
DESIGN WET BULB TEMP.	66 ° F	DESIGN WET BULB TEMP.	61 ° F
DEGREE DAYS HEATING	2,100	DEGREE DAYS HEATING	7,000
DEGREE DAYS COOLING	2,814	DEGREE DAYS COOLING	140

DRAWN: JACA DESIGN LLC
CHECKED: DANIEL CHILTON P.E.
DATE: 13 AUG 2009
SCALE: SEE PLANS
JOB NO.: JACA-192-203/17-2KB
SHEET

MP-08

27 of 42 SHEETS

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- KEYNOTES**
- SUPPORT FLEX DUCTS WITH 26GA. X 1 1/2" SHEET METAL STRAP AT MAXIMUM 4'-0" O.C. SPACING. 12 GA. HANGER WIRES WITH STRAP GRADUALS MAY BE USED.
 - FLEX DUCT "SPIN-ON" COLLOR WITH MANUAL BALANCING DAMPER, TYP.
 - LINE METAL SUPPLY DUCT-WRAP AS PER MECH. NOTES
 - AIR SCOOP, TYP.
 - FLEX DUCT AS PER PLAN
 - CEILING DIFFUSER PER SCHEDULE.
 - SUSPENDED "T-BAR" CEILING OR HARD CEILING SEE ARCHITECTURAL
 - SHT. MTL CRADLE 1/2" DUCT DIAMETER
 - MAXIMUM FLEX DUCT SAG TO BE 1/2" PER FOOT OF SUPPORT SPACING

- KEYNOTES**
- 1/2" MESH BIRD SCREEN
 - 1" VENTILATION AIR GAP ALL AROUND
 - 10 GA EXTENSION BASE
 - 1-1/2"x1-1/2"x1/8"x1/2" HIGH ANGLE STAND ALL WELDED PLATES
 - 4"x4"x1/8" BEARING PLATES
 - PROVIDE NEOPRENE PAD BETWEEN COOLER & STAND FOR VIBRATION

- EXHAUST HOOD NOTES**
- GENERAL CONTRACTOR TO PROVIDE AN APPROVED GREASE EXHAUST SYSTEM. SEE GREASE DUCT NOTES AND DETAILS.
 - EXHAUST HOOD FURNISHED AND INSTALLED BY THE KITCHEN EQUIPMENT SUPPLIER. MECHANICAL CONTRACTOR TO COORDINATE SIZE AND LOCATION OF EXHAUST OUTLETS.
 - MECHANICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO HOOD.
 - HOOD SHALL BE PROVIDED W/ UL LISTED 762 WITH PRE-ENGINEERED FIRE SUPPRESSION SYSTEM.
 - TYPE I HOOD SHALL BE CONSTRUCTED OF STEEL NOT LESS THAN 0.055" (No. 18 GA.) IN THICKNESS OR STAINLESS STEEL NOT LESS THAN 0.044 (No. 18 GA.) IN THICKNESS.

APPROVED

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Structural: _____ Date: _____
 Electrical: EST Date: 1/11/10
 Plumbing: _____ Date: _____

DEVELOPMENT SERVICES DEPARTMENT
CITY OF TUCSON

REVISIONS	BY
1	10/24/09 JACA

NEW BUILDING
GOSPEL RESCUE MISSION
 707 W. MIRACLE MILE
 TUCSON, AZ 85705

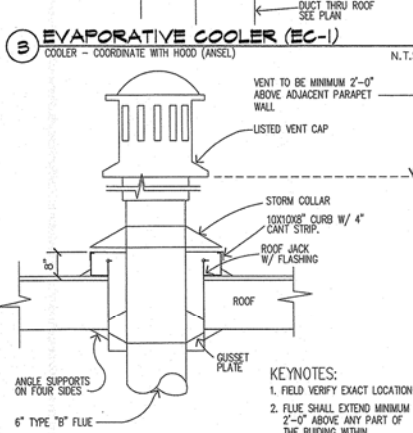
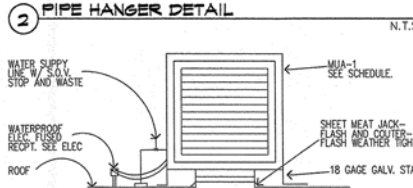
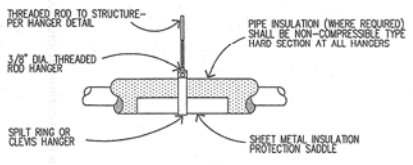
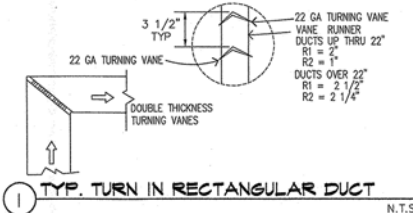
T09-CM02572
 SEE D09-0022

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 JACA DESIGN LLC - DRAFTING SERVICES
 P.O. BOX 1117 - MARANA, ARIZONA 85658-0899
 (520) 481-6220 e-mail: dan@jacadesignllc.com

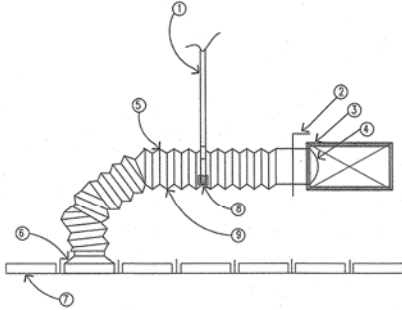


DRAWN: JACA DESIGN LLC
 CHECKED: DANIEL CHILTON, P.E.
 DATE: 13 AUG 2009
 SCALE: SEE PLANS
 707 W. MIRACLE MILE
 JACA-100-269/17-269
 SHEET

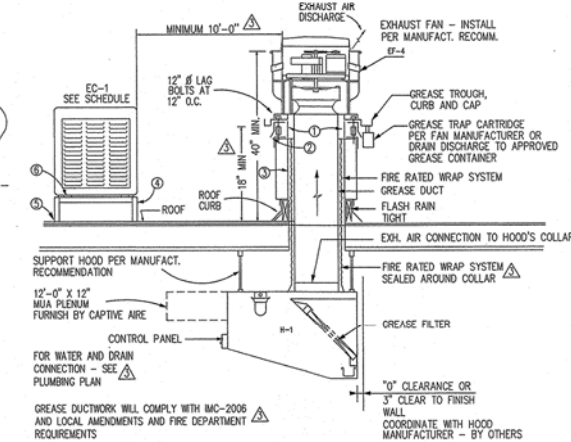
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4 TYPE "B" FLUE
SEE WATER HEATER (GAS)
N.T.S.



5 TYPICAL FLEX DUCT DIFFUSER
FLEXIBLE DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH 2006 IMC STANDARDS
N.T.S.



6 EXHAUST HOOD-I DETAIL
HOOD WILL COMPLY WITH ALL CLEARANCES (HOOD INSTALLATION) PER IMC 2006 SECT. 507.9 COORDINATE WITH HOOD CONTRACTOR
PROVIDE FIRE - RESISTANT WRAP FOR GREASE DUCT AND ITS INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF SECT 506.110 (1) IMC 2006
N.T.S.

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- SEE STRUCTURAL PLAN FOR HOOD CONNECTION**
SEE ARCHITECTURE PLAN FOR WALL CONSTRUCTION - 1 HOUR RATED WALL
SEE FIRE DEPARTMENT INSPECTOR - FOR ANSEL SYSTEM CONNECTION
SEE ELECTRICAL PLAN FOR INTERLOCK DIAGRAM
N.T.S.

APPROVED PLANS
MUST BE SET ON
JOB AT ALL TIMES
Development Services Department

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DEVELOPMENT SERVICES DEPARTMENT
CITY OF TUCSON

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