

KEY NOTES:

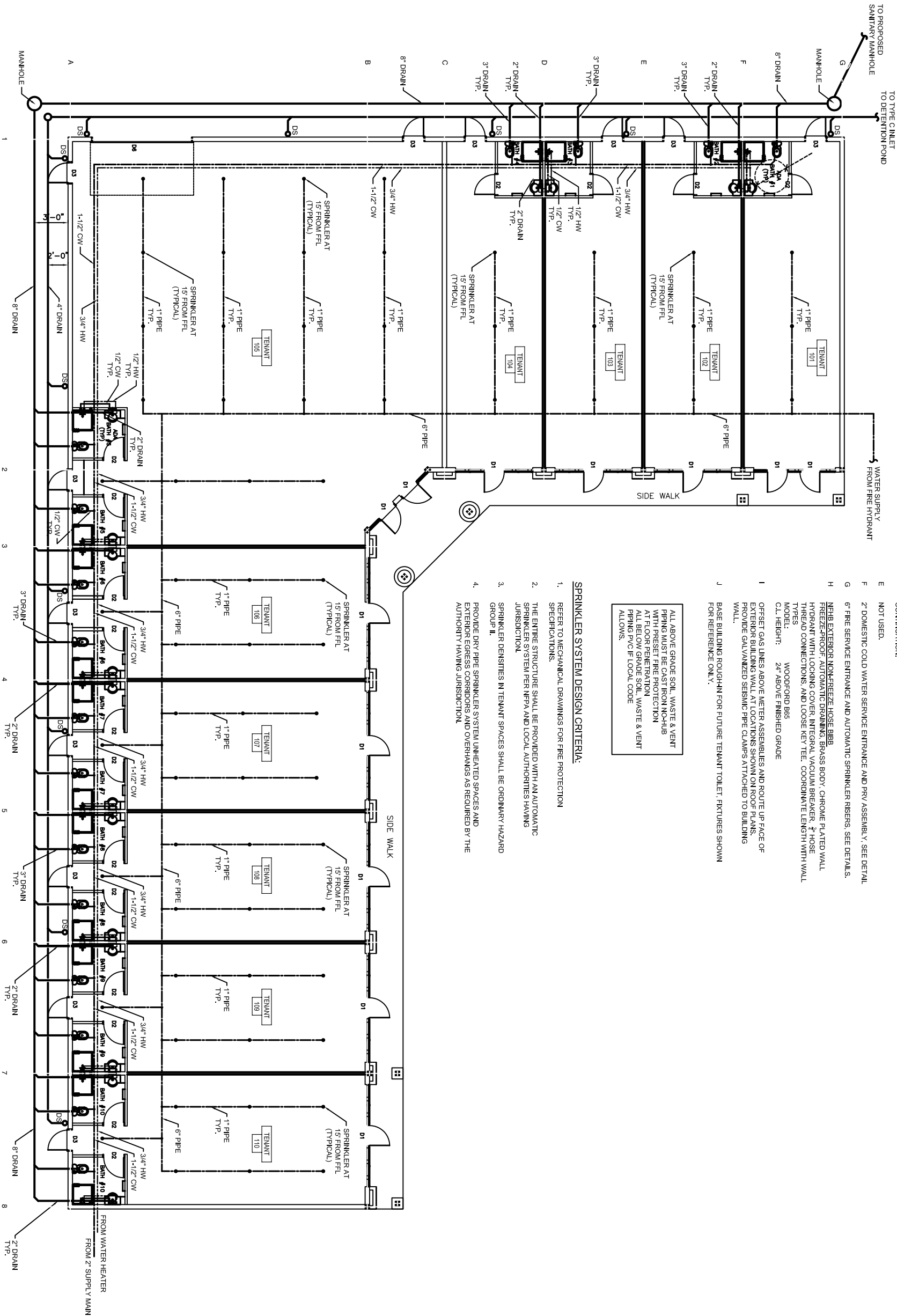
APPLY TO THIS SHEET ONLY

- A REFER TO MECHANICAL DRAWINGS FOR PLUMBING AND FIRE PROTECTION SPECIFICATIONS.
- B 2" DOMESTIC COLD WATER SERVICE. SEE CIVIL DRAWINGS FOR CONTINUATION, WATER METER AND CONTAINMENT BACKFLOW PREVENTER BY CIVIL.
- C 6" FIRE SERVICE. SEE CIVIL DRAWINGS FOR CONTINUATION, BACKFLOW PREVENTER AND SITE SAMESE FIRE DEPARTMENT CONNECTION BY CIVIL.
- D 8" SANITARY SEWER AT $\frac{1}{4}$ " / FT. MINIMUM SLOPE. SEE CIVIL DRAWINGS FOR CONTINUATION.
- E NOT USED.
- F 2" DOMESTIC COLD WATER SERVICE ENTRANCE AND PRIV ASSEMBLY. SEE DETAIL.
- G 6" FIRE SERVICE ENTRANCE AND AUTOMATIC SPRINKLER RISERS. SEE DETAILS.
- H NEHB EXTERIOR NON-FREEZE HOSE BIBB, FREEZE-PROOF, AUTOMATIC DRAINING, BRASS BODY, CHROME PLATED WALL HYDRANT WITH LOCKING COVER, INTEGRAL VACUUM BREAKER, $\frac{1}{2}$ " HOSE THREAD CONNECTIONS, AND LOOSE KEY TEE. COORDINATE LENGTH WITH WALL TYPES.
MODEL: WOODFORD B65
C.L. HEIGHT: 24" ABOVE FINISHED GRADE
- I OFFSET GAS LINES ABOVE METER ASSEMBLIES AND ROUTE UP FACE OF EXTERIOR BUILDING WALL AT LOCATIONS SHOWN ON ROOF PLANS. PROVIDE GALVANIZED SEISMIC PIPE CLAMPS ATTACHED TO BUILDING WALL.
- J BASE BUILDING ROUGH-IN FOR FUTURE TENANT TOILET, FIXTURES SHOWN FOR REFERENCE ONLY.

ALL ABOVE GRADE SOIL, WASTE & VENT PIPING SHALL BE INSTALLED IN CHIMBES WITH PRESET FIRE PROTECTION AT FLOOR PENETRATION. ALL BELOW GRADE SOIL, WASTE & VENT PIPING PVC IF LOCAL CODE ALLOWS.

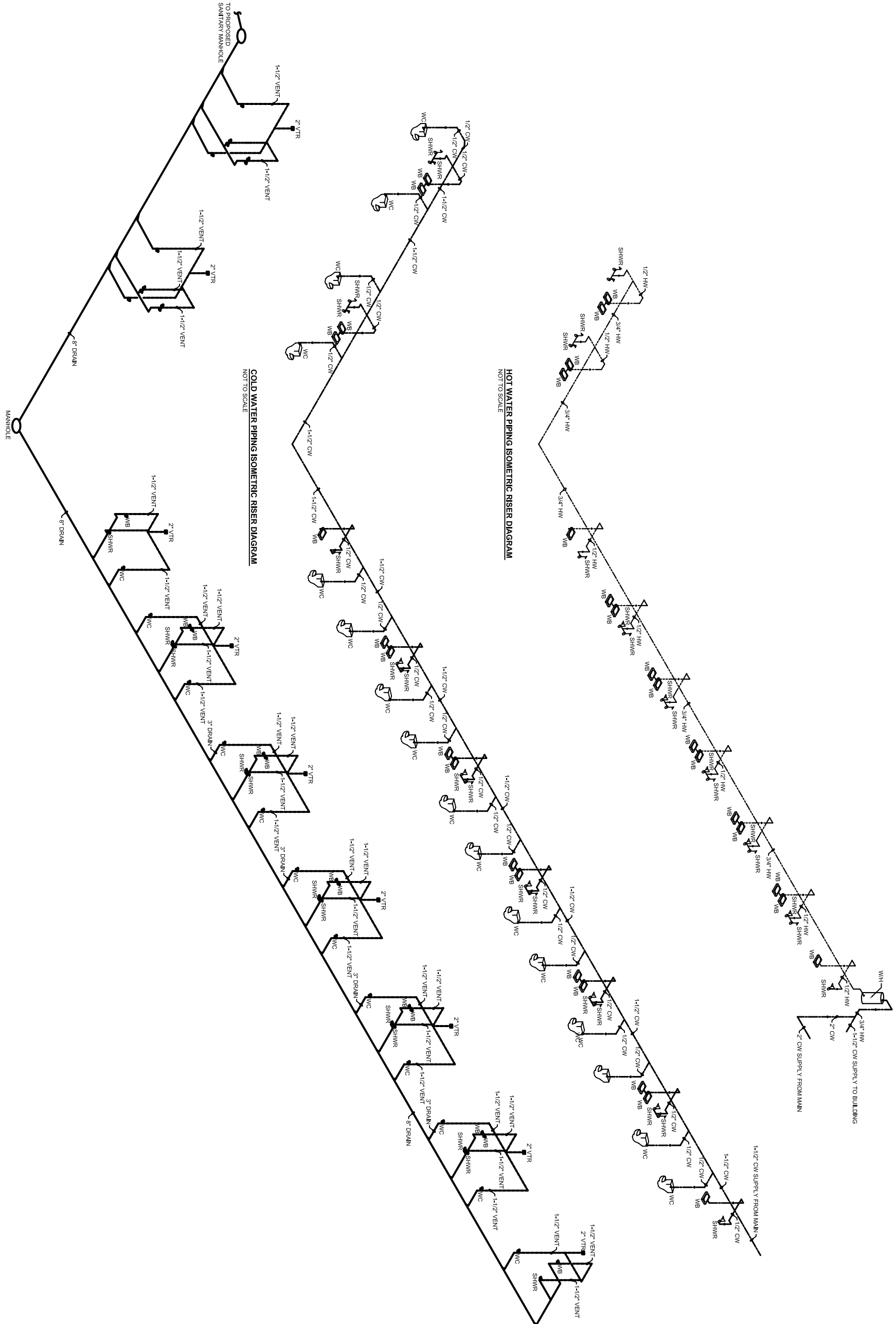
SPRINKLER SYSTEM DESIGN CRITERIA:

- 1. REFER TO MECHANICAL DRAWINGS FOR FIRE PROTECTION SPECIFICATIONS.
- 2. THE ENTIRE STRUCTURE SHALL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM PER NFPA AND LOCAL AUTHORITIES HAVING JURISDICTION.
- 3. SPRINKLER DENSITIES IN TENANT SPACES SHALL BE ORDINARY HAZARD GROUP II.
- 4. PROVIDE DRY PIPE SPRINKLER SYSTEM UNHEATED SPACES AND EXTERIOR EGRESS CORRIDORS AND OVERHANGS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.



FLOOR PLAN - PLUMBING & SPRINKLER LAYOUT

SCALE 1/8" = 1'-0"



DRAINAGE ISOMETRIC RISER DIAGRAM

NOT TO SCALE

PLUMBING GENERAL NOTES: APPLY TO ALL PLUMBING DRAWINGS

1. THE FOLLOWING CODE APPLIES TO THIS PROJECT:
INTERNATIONAL BUILDING CODE - 2006 EDITION WITH LATEST AMENDMENTS.
STANDARD GAS CODE - 2006 EDITION WITH LATEST AMENDMENTS.
NATURAL GAS CODE - 2006 EDITION WITH LATEST AMENDMENTS.
INTERNATIONAL MECHANICAL CODE - 2006 EDITION WITH LATEST AMENDMENTS.
INTERNATIONAL PLUMBING CODE - 2006 EDITION WITH LATEST AMENDMENTS.
INTERNATIONAL ELECTRIC CODE - 2006 EDITION WITH LATEST AMENDMENTS.
INTERNATIONAL FIRE PREVENTION CODE - 2006 EDITION WITH LATEST AMENDMENTS.
MODEL ENERGY CODE - 2006 EDITION WITH LATEST AMENDMENTS.
LOCAL COUNTY AND CITY CODES AS APPLICABLE LATEST EDITIONS.
NATURAL GAS CODE - 2006 EDITION WITH LATEST AMENDMENTS.
LATEST EDITIONS OF STATE OF GEORGIA CODES, APPLICABLE SECTIONS.

THESE PLUMBING DRAWINGS ARE ACCOMPANIED BY DRAWING SPECIFICATIONS. SEE MECHANICAL SHEETS. NO TAKE-OFFS, BIDS OR WORK SHALL PROCEED WITHOUT ADHERENCE TO THE MECHANICAL SPECIFICATIONS.

THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND REMAIN THE PROPERTY OF ENGINEER. NO PART MAY BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION OF THE ENGINEER.

THE CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY FEES, PERMITS AND INSPECTION FOR APPLICABLE PORTIONS OF THE WORK.

LAYOUT SHOWN IS DIAGRAMMATIC. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE ARCHITECTURAL, CIVIL, STRUCTURAL, AND MECHANICAL DRAWINGS TO ENSURE ALL PLUMBING WORK IS PROVIDED TO FACILITATE THE INSTALLATION OF THE PLUMBING SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING TO BEHOLD. PROVIDE NECESSARY OFFSETS, RISERS, AND PIPING TO COORDINATE WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER TRADES.

PLUMBING FIXTURES SHOWN ON FLOOR PLANS ARE ARCHITECTURAL. THE CONTRACTOR SHALL OBTAIN EXACT WALL, FLOOR, AND LAYOUT DIMENSIONS FROM THE ARCHITECTURAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ROUGH-IN AND INSTALLATION DRAWINGS FOR ALL PLUMBING FIXTURES, KITCHEN EQUIPMENT, AND INSTALLATION DRAWINGS FOR EXISTING EQUIPMENT TO REMAIN. AND SHALL COORDINATE THE PLUMBING INSTALLATION PRIOR TO COMMENCING THE WORK. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, ESCUTCHEONS, WATER HAMMER ARRESTORS, VACUUM BREAKERS, RELIEF VALVES, PIPE INSULATION AND EQUIPMENT SPECIALTY DEVICES AS REQUIRED TO FACILITATE COMPLETE AND OPERATIONAL CONDITIONS WHICH ARE IN STRICT COMPLIANCE WITH THE FUTURE OR EQUIPMENT. MANUFACTURERS INSTALLATION INSTRUCTIONS.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CIVIL DRAWINGS AND ACTUAL SITE CONDITIONS TO ENSURE SANITARY INVERTS AVAILABLE ON SITE WILL ACCOMMODATE THE PLANNED BUILDING SANITARY PIPING. REPORT ANY DISCREPANCIES PRIOR TO COMMENCING WITH THE WORK.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CIVIL DRAWINGS, ACTUAL SITE CONDITIONS AND THE LOCAL AUTHORITY HAVING JURISDICTION - THE REQUIREMENTS FOR THE TYPE AND LOCATION OF THE DOMESTIC WATER AND FIRE WATER BACK FLOW PREVENTION DEVICES AND PRIOR TO COMMENCING WITH THE WORK.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL UNDERSLAB FOUNDATION DRAWINGS, GRADE BEAMS, THICKENED SLABS, AND ALL FOUNDATIONS. PROVIDE NECESSARY PERMITS, ESCUTCHEONS, WATER HAMMER ARRESTORS, VACUUM BREAKERS, RELIEF VALVES, PIPE INSULATION AND EQUIPMENT SPECIALTY DEVICES AS REQUIRED TO FACILITATE COMPLETE AND OPERATIONAL CONDITIONS WHICH ARE IN STRICT COMPLIANCE WITH THE FUTURE OR EQUIPMENT. MANUFACTURERS INSTALLATION INSTRUCTIONS.

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COORDINATE THE ELECTRICAL REQUIREMENTS AND CHARACTERISTICS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO PURCHASE INDICATE VOLTAGE, PHASE, MINIMUM CIRCUIT AMPACITY, AND MAXIMUM OVERCURRENT PROTECTION ON ALL SHOP DRAWINGS.

THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE ARCHITECTURAL DRAWINGS FOR ADEQUATE WALL THICKNESS TO ENSURE ALL SANITARY PIPING, VENT PIPING, WATER PIPING, WALL CLEANOUTS, HOSE BIBBS, NON FREEZE HOSE BIBBS, AND RECESSED ACCESS PANELS WILL FIT IN WALL SPACE. PROVIDE NECESSARY PERMITS, ESCUTCHEONS, WATER HAMMER ARRESTORS, VACUUM BREAKERS, RELIEF VALVES, PIPE INSULATION AND EQUIPMENT SPECIALTY DEVICES AS REQUIRED TO FACILITATE COMPLETE AND OPERATIONAL CONDITIONS WHICH ARE IN STRICT COMPLIANCE WITH THE FUTURE OR EQUIPMENT. MANUFACTURERS INSTALLATION INSTRUCTIONS.
11. NO PLUMBING WATER PIPING IS ALLOWED IN AN EXTERIOR WALL. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF CHASE SPACE IS INADEQUATE OR IF FIXTURES ARE LOCATED ON OUTSIDE WALLS. ROUTE ALL PIPING ON WARM SIDE OF BUILDING INSULATION.














































NO WORK SHALL BE INSTALLED WITHOUT APPROVED SHOP DRAWINGS FOR THE MATERIALS AND EQUIPMENT INVOLVED.

PRESSURE TESTS SHALL BE PERFORMED TO PROVE PIPING SYSTEMS INSTALLED TO BE TIGHT UNDER PRESSURE AND DURABLE AS FOLLOWS:
1. PRESSURE TEST WITH WATER FROM SYSTEM BEFORE PLACING IN SERVICE. TEST TO 1.5 TIMES DESIGN PRESSURE. MAINTAIN WATER LEVEL DURING INSPECTION OF ALL JOINTS.
2. PRESSURE PIPING MAINTAIN 150 PSI HYDROSTATIC PRESSURE FOR 1 HOUR. NATURAL GAS PIPING PER LOCAL CODE AUTHORITY AND NFPA 54 REQUIREMENTS. TEST BY SECTION OR BY ENTIRE SYSTEM. CLOSE OFF OPENINGS WITH PLUGS OR SECTIONALIZING VALVES. PROVE TIGHTNESS OF SYSTEM WITHOUT LOSS OF TEST LEVEL OR PRESSURE. CORRECT ANY LEAKS AND RETEST.

AFTER POTABLE WATER SYSTEM HAS BEEN PROVEN TO BE TIGHT UNDER PRESSURE, DISCONNECT THE PIPING SYSTEM IN ACCORDANCE WITH FEDERAL SPECIFICATION B6C-20 AND THE FOLLOWINGS:
DRAIN AND REFILL PIPING SYSTEM WITH WATER CONTAINING 50 PARTS PER MILLION AVAILABLE CHLORINE. LET STAND FOR 6 HOURS. DRAIN AND FLUSH CHLORINATED WATER FROM SYSTEM BEFORE PLACING IN SERVICE. SUBSEQUENT TO THE DISCONNECTING OF THE POTABLE WATER PIPING SYSTEM, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, ESCUTCHEONS, WATER HAMMER ARRESTORS, VACUUM BREAKERS, RELIEF VALVES, PIPE INSULATION AND EQUIPMENT SPECIALTY DEVICES AS REQUIRED TO FACILITATE COMPLETE AND OPERATIONAL CONDITIONS WHICH ARE IN STRICT COMPLIANCE WITH THE FUTURE OR EQUIPMENT. MANUFACTURERS INSTALLATION INSTRUCTIONS.

PRIOR TO BID, CONTRACTOR SHALL CONFIRM IF THIS PROJECT UTILIZES A RETURN AIR PLenum. IF A RETURN AIR PLenum IS USED, ALL MATERIALS AND EQUIPMENT SHALL BE CERTIFIED TO COMPLY WITH NFPA 90A AND LOCAL CODE REQUIREMENTS.

PLUMBING LEGEND: NOT ALL USED

	PIPE TURNED UP	<	GREATER THAN
	PIPE TURNED DOWN	>	LESS THAN
	TEE IN HORIZONTAL	UP	UPPER
	FLOOR DRAIN WITH 1/2" TRAP PRIMER, UNDO	AC	ABOVE CEILING
	HUB DRAIN WITH 1/2" TRAP PRIMER, UNDO	AFG	ABOVE FINISH GRADE
	FLOOR CLEAN OUT / YARD CLEANOUT	AV	ACID VENT
	WALL CLEAN OUT TEE AT BASE OF STACK IN P WALL	AVR	ACID VENT THROUGH ROOF
	HOSE BIBB, EXTERIOR TO BE NON-FREEZE TYPE 1/2" ABOVE FINISHED GRADE. WOODFORD B-645G UNLESS OTHERWISE NOTED	AW	ACID WASTE
	SPRINKLER RISER, SEE DETAIL	AWR	ACID WASTE THROUGH ROOF
	WATER RISER, SEE WATER ENTRANCE DETAILS	BF	BELOW FLOOR
	GAS METER, SEE DETAIL	BF	BELOW FLOOR
	ROOF DRAIN	BFP	BACKFLOW PREVENTER
	EMERGENCY OVERFLOW DRAIN	BTUH	BRITISH THERMAL UNITS PER HOUR
	COLD WATER SUPPLY LINE	CO	CLEAN OUT
	EMERGENCY OVERFLOW DRAIN	CO	CLEAN OUT
	FIRE PROTECTION SUPPLY LINE	DA	DRAIN
	GREASE TRAP WASTE LINE	DN	DOWN
	HOT WATER SUPPLY LINE	DS	DOWNSPOUT
	HOT WATER RECIRCULATING LINE	EOD	EMERGENCY OVERFLOW DRAIN
	NATURAL GAS SUPPLY LINE	EX	EXISTING
	RAIN LEADER	EX	EXISTING
	WASTE LINE BELOW FLOOR UNDO	EX	EXISTING
	VENT LINE	FE	FINISHED FLOOR ELEVATION
	BALL VALVE	FE	FINISHED FLOOR ELEVATION
	BALL VALVE INVERTICAL	FEL	FIRE MARSHAL
	CHECK VALVE	FD	FLOOR DRAIN
	GATE VALVE	FT	FEET
	PRESSURE GAGE	FT	FEET
	ACME PRESSURE RELIEF VALVE	FT	FEET
	THERMOMETER	FT	FEET
	UNION	FT	FEET
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PLUMBING NOTES

HVAC NOTES:
APPLY TO THIS SHEET ONLY

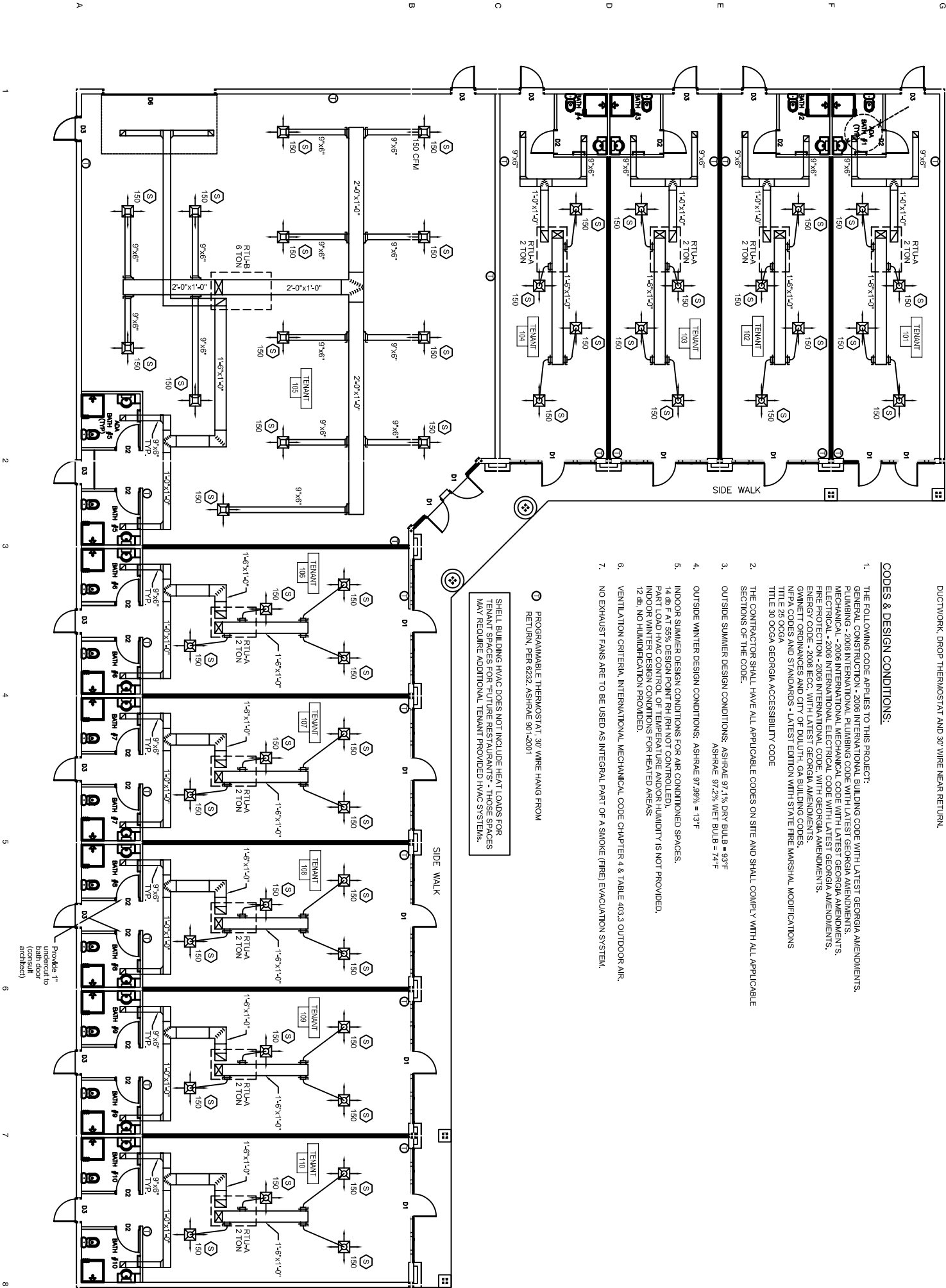
REFER TO MECHANICAL SPECIFICATIONS, COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS. FIELD VERIFY ALL CONDITIONS PRIOR TO BEGINNING THE WORK.

- A COORDINATE EXACT LOCATION OF EACH AIR DISTRIBUTION DEVICE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, LIGHTS AND SPRINKLER HEADS.
- B SHELL BUILDING EXHAUST LOUVER, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND ELEVATION, 4" DEEP SHEETMETAL DUCT BEHIND FOR FUTURE EXHAUST CONNECTION.
- C SHELL BUILDING EXHAUST DUCT, PROVIDE #10 EXHAUST DUCT UP THRU ROOF, PROVIDE EXHAUST TERMINATION REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- D THERMOSTAT, BY BASE BUILDING, PER LOCAL ENERGY CODE, MOUNT NEAR RETURN GRILLE, CO-ORDINATE WITH INTERIORS, FOR RTUs WITH NO DUCTWORK, DROP THERMOSTAT AND 30' WIRE NEAR RETURN.

CODES & DESIGN CONDITIONS:

1. THE FOLLOWING CODE APPLIES TO THIS PROJECT:
GENERAL CONSTRUCTION - 2006 INTERNATIONAL BUILDING CODE WITH LATEST GEORGIA AMENDMENTS.
PLUMBING - 2006 INTERNATIONAL PLUMBING CODE WITH LATEST GEORGIA AMENDMENTS.
MECHANICAL - 2006 INTERNATIONAL MECHANICAL CODE WITH LATEST GEORGIA AMENDMENTS.
ELECTRICAL - 2006 INTERNATIONAL ELECTRICAL CODE WITH LATEST GEORGIA AMENDMENTS.
FIRE PROTECTION - 2006 INTERNATIONAL CODE WITH LATEST GEORGIA AMENDMENTS.
ENERGY CODE - 2006 IECC, WITH LATEST GEORGIA AMENDMENTS.
GINETI ORDINANCES AND CITY OF DULUTH, GA BUILDING CODES.
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS.
TITLE 25 OCCGA
TITLE 30 OCCGA GEORGIA ACCESSIBILITY CODE
2. THE CONTRACTOR SHALL HAVE ALL APPLICABLE CODES ON SITE AND SHALL COMPLY WITH ALL APPLICABLE SECTIONS OF THE CODE.
3. OUTSIDE SUMMER DESIGN CONDITIONS, ASHRAE 97.1% DRY BULB = 89°F
ASHRAE 97.2% WET BULB = 74°F
4. OUTSIDE WINTER DESIGN CONDITIONS: ASHRAE 97.98% = 13°F
5. INDOOR SUMMER DESIGN CONDITIONS FOR AIR CONDITIONED SPACES,
14 db F AT 55% DESIGN POINT RH (RH NOT CONTROLLED).
PART LOAD HVAC CONTROL OF TEMPERATURE AND/OR HUMIDITY IS NOT PROVIDED.
INDOOR WINTER DESIGN CONDITIONS FOR HEATED AREAS:
12 db, NO HUMIDIFICATION PROVIDED.
6. VENTILATION CRITERIA, INTERNATIONAL MECHANICAL CODE CHAPTER 4 & TABLE 403.3 OUTDOOR AIR, NO EXHAUST FANS ARE TO BE USED AS INTEGRAL PART OF A SMOKE (FIRE) EVACUATION SYSTEM.
7. PROGRAMMABLE THERMOSTAT, 30' WIRE HANG FROM RETURN, PER 6232, ASHRAE 90.2-2001

SHELL BUILDING HVAC DOES NOT INCLUDE HEAT LOADS FOR TENANT SPACES FOR FUTURE RESTAURANTS - THOSE SPACES MAY REQUIRE ADDITIONAL TENANT PROVIDED HVAC SYSTEMS.




HVAC GENERAL NOTES:


APPLY TO ALL MECHANICAL DRAWINGS

- ALL WORK SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF CITY OF DULUTH AND GA STATE CODES, APPLICABLE SECTIONS. THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF DORSEY ENGINEERING, INC. AND SHALL NOT BE REUSED IN WHOLE OR IN PART. REFER TO DRAWING SPECIFICATIONS MB1 AND MB2.
- HVAC CONTRACTOR SHALL PAY FOR OBTAIN ALL NECESSARY FEES, PERMITS AND INSPECTION FOR APPLICABLE PORTIONS OF THE WORK.
- COORDINATE THE EXACT LOCATION AND CONFIGURATION OF ALL EQUIPMENT WITH THE ARCHITECTURAL ROOF PLAN, ROOF FRAMING DRAWINGS, ROOF DRAINAGE, GROUND SURFACE, AND EXISTING BUILDING FOUNDATION. DETAILED SHOP DRAWINGS OF ALL PROPOSED ROOF AND WALL MOUNTED EQUIPMENT TO THE STRUCTURAL ENGINEER FOR APPROVAL. INDICATE UNIT LOCATION OPERATING WEIGHTS, MOUNTING METHODS AND DETAILS, ROOF OPENINGS FOR DUCTWORK, ETC, AS REQUIRED FOR COMPLETE COORDINATION. NO EQUIPMENT SHALL BE PURCHASED NOR INSTALLED UNTIL THESE SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
- COORDINATE THE LOCATION OF ALL HVAC EQUIPMENT WITH STRUCTURAL PLANS, REFLECTIVE CEILING PLANS AND WORK OF OTHER TRADES BEFORE ORDERING OR INSTALLATION. PROVIDE DETAILED EQUIPMENT INSTALLATION DETAILS FOR ALL HVAC EQUIPMENT LOCATED IN THE ATTIC. SHOP DRAWINGS SHALL INCLUDE UNIT MOUNTING, ORIENTATION, SUPPLY AND RETURN DUCTWORK ROUTING, CONDENSATE DRAIN PIPING, ETC. NO DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
- COORDINATE THE ELECTRICAL REQUIREMENTS AND CHARACTERISTICS OF ALL HVAC EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO PURCHASE INDICATE VOLTAGE, PHASE, MINIMUM CIRCUIT AMPACITY, AND MAXIMUM OVERCURRENT PROTECTION ON ALL SHOP DRAWINGS.
- DRAWING SARE DIAGRAMATIC AND INDICAE GENERAL ARRANGMENT OF THE HVAC SYSTEMS, PIPING AND DUCTWORK. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DETAILS AND EXACT LOCATION OF BUILDING STRUCTURAL MEMBERS, LIGHTS AND OBJECTS WHICH MAY INTERFERE WITH THE INSTALLATIO OF THE HVAC SYSTEM. WHERE CONFLICTS ARE IDENTIFIED, NOTIFY THE ARCHITECT IN WRITING PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL MAINTAIN THE SPACE EXISTS FOR THE PROPOSED DUCTWORK SIZING AND ROUTING.
- ALL ROOF MOUNTED EQUIPMENT SHALL BE PROVIDED WITH INSULATED CURB OR RAIL, AS APPROVED BY EQUIPMENT MANUFACTURER. CURBS/RAILS SHALL BE SET LEVEL AND BE A MINIMUM OF 10 INCHES IN HEIGHT. CURBS ARE TO BE PROVIDED TO THE GENERAL CONTRACTOR FOR INSTALLATION.
- FIBERGLASS NOR FIBERBOARD DUCTWORK IS NOT ALLOWED. ALL SHEET METAL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH THE LATEST PUBLISHED EDITION OF SMACNA STANDARDS. ALL DUCTWORK SHALL BE SEALED WITH TWO (2) COATS OF MASTIC. TAPING OF JOINTS WILL NOT BE ALLOWED.
- PRIOR TO FINAL INSPECTION ALL HVAC SYSTEMS SHALL BE TESTED, ADJUSTED AND BALANCED TO WITHIN 10% OF DESIGN. TEST AND BALANCE REPORTS SHALL BE SEALED BY A REGISTERED ENGINEER AND SUBMITTED FOR APPROVAL. ALL EQUIPMENT SHALL BE INSTALLED LEVEL AND FREE OF VIBRATION.
- PROVIDE TOUCHUP PAINT ON ALL SURFACED MARKED DURING CONSTRUCTION. PAINTS FLAT BLACK ALL PORTIONS OF DUCTWORK OR INSULATION VISIBLE THROUGH FACE OF AIR DISTRIBUTION DEVICES.
- COORDINATE THE LOCATION OF ALL CEILING MOUNTED AIR DEVICES AND EXHAUST FANS WITH ARCHITECT AND REFLECTED CEILING PLAN.
- ALL EXHAUST DISCHARGE LOUVERS AND DUCTS SHALL BE AT LEAST 10 FEET FROM ANY EQUIPEMENT OUTSIDE AIR INTAKE, RTWP OR WINDOW.
- SHEET METAL DUCT SIZES GIVEN ARE INSIDE CLEAR DIMENSIONS.
- MAINTAIN BUILDING FIRE INTEGRITY WITH MECHANICAL PENETRATIONS. PROVIDE FIRE DAMPERS WITH DUCTWORK ACCESS DOORS PER ALL FIRE RATED PARTITIONS. PROVIDE FIRE DAMPERS WITH MECHANICAL PENETRATIONS IN EXTERIOR WALLS AND PROVIDE FIRE DAMPERS AT ALL RATED WALLS. WHETHER INDICATED ON THE MECHANICAL DRAWINGS OR NOT.
- SEAL WALL SLEEVES AND FLOOR PENETRATIONS WITH UL APPROVED FIRE PROOF SLAGS, SEAL WATERIGHT AND OVERLAP WITH COLORED GALVANIZING. PROVIDE FIRE DAMPERS WITH MECHANICAL PENETRATIONS IN EXTERIOR WALLS FULLY COMPLY WITH MANUFACTURERS INSTALLATION INSTRUCTIONS TO ACHIEVE UL LISTED CONDITIONS.
- PROVIDE WEATHER PROOF FLASHINGS AND SEALANT FOR ALL ROOF AND EXTERIOR WALL PENETRATIONS.
- PROVIDE DUCT CLOSURE COLLARS IN STRICT ACCORDANCE WITH THE STANDARD MECHANICAL CODE (SMC) LATEST EDITION AND WITH THE LOCAL AUTHORITY HAVING JURISDICTION. DUCT CLOSURE COLLARS SHALL BE CONSTRUCTED OF SHEET METAL, MINIMUM 0.0271 INCHES THICK. USE FOR SHEET METAL DUCTS PENETRATING ONE HOUR FIRE RATED PARTITIONS - AS THE CODE ALLOWS. PROVIDED FLANGED DUCT CLOSURE COLLAR. CONTINUOUS AROUND THE DUCT AND FILL WITH FIRE SLAGING. REFER TO SMC 610.
- DO NOT USE MANUAL DAMPERS IN DUCTWORK WHICH IS ABOVE GYP BOARD CEILINGS UNLESS DAMPER ACCESSIBLE IN THE ATTIC. IF MANUAL DAMPER IS INACCESSIBLE USE SPHINX COLLAR WITH EXTRACTOR NO MANUAL DAMPER AND USE AN OPPOSED BLADE DAMPER AT DIFFUSER.
- PROVIDE SENSUP SUPPORTS FOR DUCTWORK AND EQUIPMENT PER THE LOCAL AUTHORITY HAVING JURISDICTION AND IN STRICT ACCORDANCE WITH THE DETAILS AND PROCEDURES IN SMACNA SEISMIC RESTRAIN MANUAL, LATEST EDITION.
- ALL DUCTWORK AND PIPING INSULATION SHALL BE IN STRICT ACCORDANCE WITH THE STATE OF GEORGIA ENERGY CODE AND LOCAL AUTHORITY HAVING JURISDICTION. INSULATION SHALL BE MINIMUM 1" THICK. PROVIDE VENTILATION SCHEDULE FOR SPECIFIC SPACE O.A. COMPANY WITH THE MINIMUM REQUIREMENTS OF THE STATE OF GEORGIA ENERGY CODE AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- ALL AIR FLOWS (CFM/s) MUST ADD UP. THE CONTRACTOR SHALL VERIFY ALL AIR FLOWS AND SELECTED AIR HANDLING (FAN) EQUIPMENT PROVIDE FOR THE OUTLET/INLET TOTALS, TERMINAL TOTALS OR MOST STRINGENT REQUIREMENTS. PROVIDE SENSUP SUPPORTS FOR DUCTWORK AND EQUIPMENT FOR PROPOSED DEVICES AND PROPOSED ROUTING OR DUCTWORK.
- FLEX DUCT IS NOT ALLOWED FOR EXHAUST SERVICE.


HVAC LEGEND: NOT ALL USED




SHEET METAL DUCT WITH T* DUCT LINER




SQUARE ELBOW WITH TURNING VANES




SPHINX FITTING WITH LOCKING DAMPER, INSULATED RIGID ROUND DUCT, ROUNDOUT, INSULATED FLEXIBLE DUCT (MAX LENGTH 6') TO SUPPLY DIFFUSER




45 DEGREE DUCT LATERAL




RECTANGULAR TO RIGID ROUND TRANSITION




RETURN OR EXHAUST AIR CEILING GRILLE OR REGISTER




SUPPLY AIR CEILING DIFFUSER




SUPPLY AIR CEILING DIFFUSER SHADED AREAS INDICATE QUADRANTS TO BE BLANKED OFF




AIR FLOW DIRECTION




THERMOSTAT AND SUBBASE WITH LOCKING COVER



FIRE DAMPER WITH ACCESS DOOR IN DUCTWORK



VOLUME CONTROL DAMPER



Y-Y SUPPLY OR RETURN TYPE. YYY - CFM OR LENGTH OF SLOT DIFFUSER, SEE AIR DISTRIBUTION SCHEDULE

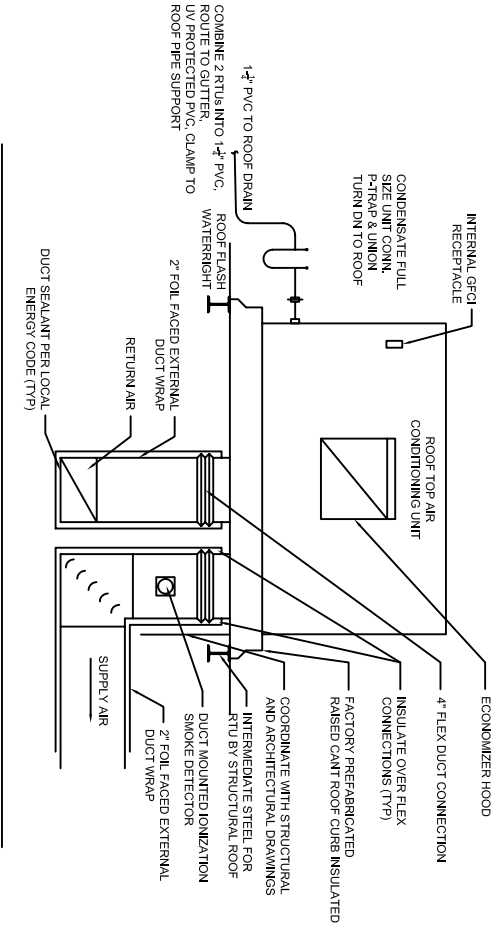
LEGEND NOTE: LETTER A, LETTER INDICATES NOTE IS USED MULTIPLE TIMES ON THE SHEET INDICATED.

LEGEND NOTE: LETTER 1, LETTER INDICATES NOTE IS USED ONLY ONCE ON THE SHEET INDICATED.











ROOF TOP UNIT SCHEDULE					
TAG		RTU-A	RTU-B		
TOTAL CAPACITY	BTUH	24,000	69,000		
SUPPLY AIR CFM	CFM	800	2400		
OUTDOOR AIR CFM	CFM	150	450		
ENTERING AIR DBWB	F/F	78/65	78/65		
LEAVING AIR TEMP DBWB	F/F	57/53	57/53		
HEATING MBH - INPUT	1000 BTUH	96	151		
HEATING MBH - OUTPUT	1000 BTUH				
E.A. SILE	IN, H2O	0.5	0.5		
Motor	H.P.	1/2	1/2		
Electrical	VOLT/PH	240/208/1 ph	240/208/1 ph		
Electrical Heat	KW	10	10		
MOCP	AMPS	60	60		
SEER		14.0	-		
EER		11.4	12.0		
Filtr Type		Throwaway	Throwaway		
Manufacturer		CARRIER	CARRIER		
Model#		48PG03	48PG07		
Notes	#				

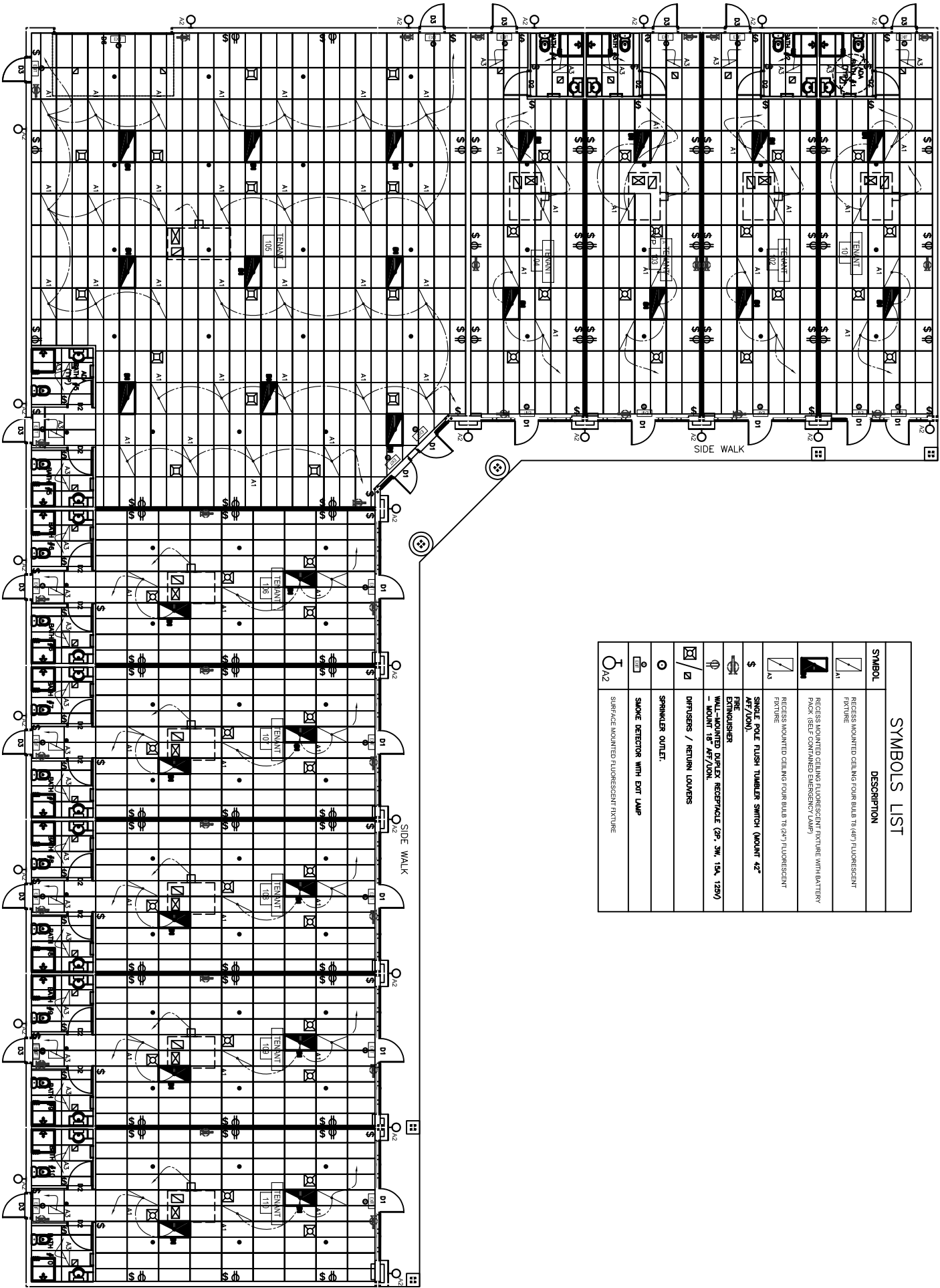
- NOTES:
- REFER TO DIVISION 16, ELECTRICAL FOR EQUIPMENT ELECTRICAL CHARACTERISTICS. DISCONNECT BY ELECTRICAL. DISCONNECT BY ELECTRICAL. 15 AMP. WP. GFCI RECEPTABLE IN EACH UNIT.
 - CONTRACTOR SHALL VERIFY MINIMUM SEER AND EER REQUIREMENTS WITH LOCAL CODE AUTHORITY.
 - CONTRACTOR SHALL VERIFY MINIMUM SEER AND EER REQUIREMENTS WITH LOCAL CODE AUTHORITY.
 - AND INSTALLED BY THE MECHANICAL CONTRACTOR WHERE THERE IS NOT A FIRE ALARM SYSTEMS PRESENT. AMPOVIDED AUTHORITY HAVING JURISDICTION. BY THE MECHANICAL CONTRACTOR REFER TO SECTION 16720, EXACT SMOKE DETECTOR LOCATIONS PER LOCAL CODE MANUAL.
 - PROVIDE ECONOMIZER AND BAROMETRIC RELIEF FOR UNITS GREATER THAN 7 TONS. MINIMUM OUTSIDE AIR REFER TO IMC 4033 VENTILATION SCHEDULE FOR SPECIFIC SPACE O.A.

<	GREATER THAN
>	LESS THAN
AC	AIR CONDITIONING
AD	ABOVE FINISHED FLOOR
AFF	ABOVE FINISHED FLOOR
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CEILING DIFFUSER
CD	CUBIT FEET PER MINUTE
CRAG	CEILING RETURN AIR GRILLE
DB	DRY BULB
DN	DOWN
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXT	EXTERNAL
FD	FIRE DAMPER
FP	FOOT FEET
HP	HORSEPOWER
IN	INCH
MAX	MAXIMUM
MBH	1000 BTUH
MIN	MINIMUM
MIN	MINIMUM
OA	OUTDOOR AIR
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RTU	ROOFTOP HVAC UNIT
SA	SUPPLY AIR
SA	SUPPLY AIR
SMACNA	SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC.
SP	STATIC PRESSURE
T	THERMOSTAT
UC 1"	UNDERCUT DOOR 1", COORDINATE WITH ARCHITECT

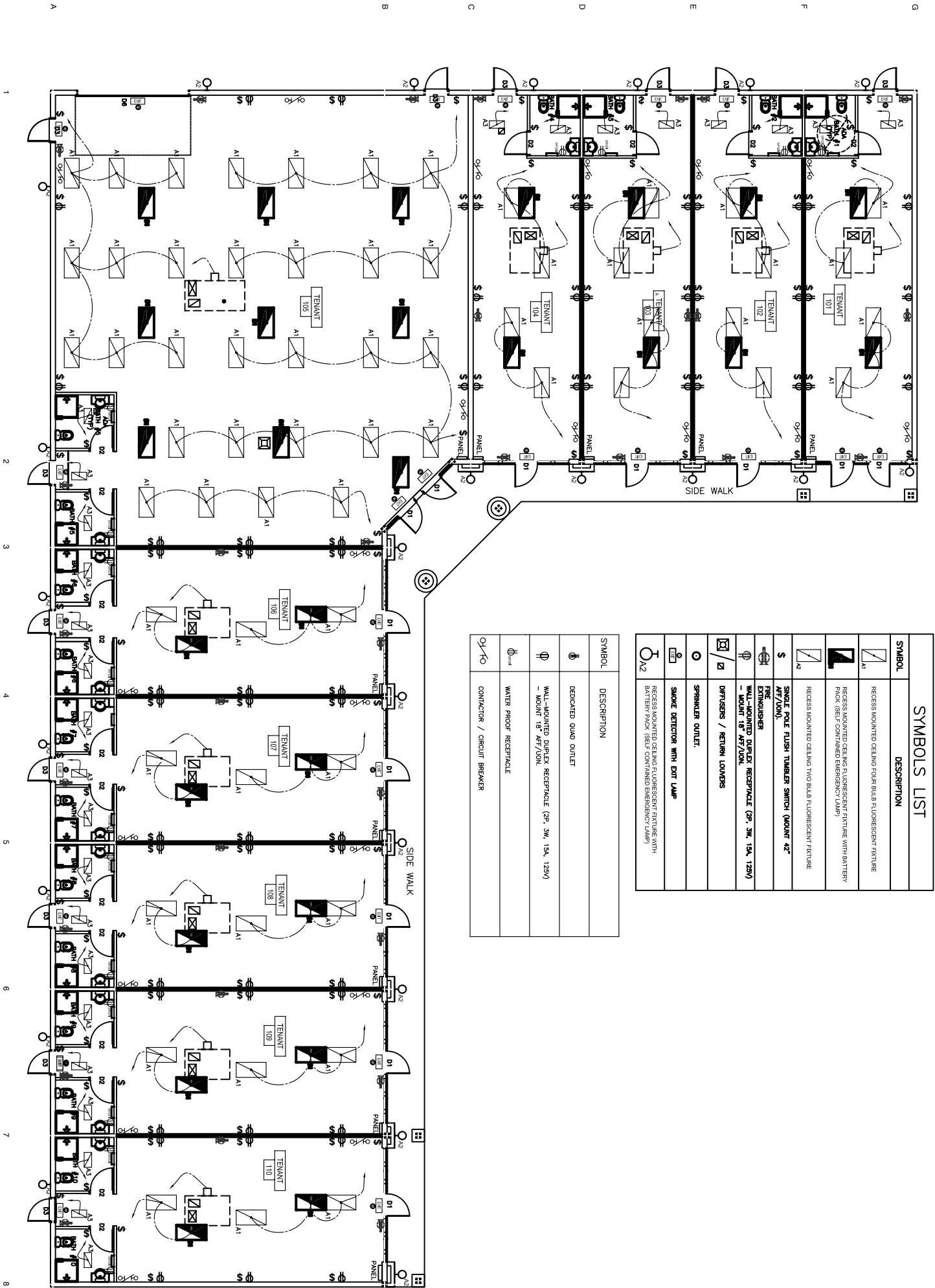


GINNETT DETAIL - RTU INSTALLATION
NOT TO SCALE

SYMBOLS LIST	
SYMBOL	DESCRIPTION
	RECESS MOUNTED CEILING FOUR BULB T8 (48") FLUORESCENT FIXTURE
	RECESS MOUNTED CEILING FLUORESCENT FIXTURE WITH BATTERY PACK (SELF CONTAINED EMERGENCY LAMP)
	RECESS MOUNTED CEILING FOUR BULB T8 (24") FLUORESCENT FIXTURE
	SINGLE POLE FLUSH TOGGLE SWITCH (MOUNT 42" AFF/LOU)
	EXTINGUISHER
	WALL-MOUNTED DUPLEX RECEPTACLE (2P, 3W, 15A, 125V) - MOUNT 18" AFF/LOU
	DIFFUSERS / RETURN LOUVERS
	SPRINKLER OUTLET.
	SMOKE DETECTOR WITH EXIT LAMP
	SURFACE MOUNTED FLUORESCENT FIXTURE



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



SYMBOLS LIST	
SYMBOL	DESCRIPTION
	RECESS MOUNTED CEILING FOUR BULB FLUORESCENT FIXTURE
	RECESS MOUNTED CEILING FLUORESCENT FIXTURE WITH BATTERY PACK (SELF CONTAINED EMERGENCY LAMP)
	RECESS MOUNTED CEILING TWO BULB FLUORESCENT FIXTURE
	SINGLE POLE FLUSH TUMBLER SWITCH (MOUNT 42\"/>
	FIRE EXTINGUISHER
	WALL-MOUNTED DUPLEX RECEPTACLE (2P, 3W, 15A, 125V) - MOUNT 18\"/>
	DIFFUSERS / RETURN LOUVERS
	SPRINKLER OUTLET
	SMOKE DETECTOR WITH EXIT LAMP
	RECESS MOUNTED CEILING FLUORESCENT FIXTURE WITH BATTERY PACK (SELF CONTAINED EMERGENCY LAMP)

SYMBOL	DESCRIPTION
	DEDICATED QUAD OUTLET
	WALL-MOUNTED DUPLEX RECEPTACLE (2P, 3W, 15A, 125V) - MOUNT 18\"/>
	WATER PROOF RECEPTACLE
	CONTACTOR / CIRCUIT BREAKER

FLOOR PLAN - POWER LAYOUT
SCALE 1/8" = 1'-0"

DIVISION--16

16.01 GENERAL INFORMATION

A. ELECTRICAL INSTALLATION SHALL CONFORM WITH SPECIFICATION AND LOCAL CODES AND ORDINANCES,THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE,NFPA LIFE SAFETY CODE AND LOCAL BUILDING CODE.

B. INCLUDE ALL LABOUR,MATERIALS,EQUIPMENT AND SERVICE REQUIRED TO FURNISH AND INSTALL. A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWING AND AS SPECIFIED HEREIN.

C. THE ELECTRICAL LAYOUT INDICATED ON THE DRAWINGS ARE DIAGRAMATIC. THEY ARE NOT INTENDED TO INDICATE ABSOLUTE OR UNCONDITIONAL KNOWLEDGE OF ACTUAL CONDITIONS,EXACT LOCATION,DISTANCES,LEVELS, AND OTHER CIRCUMSTANCES SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS.

D. THE WORK SHALL ALSO INCLUDE THOSE ITEMS NOT SPECIFICALLY MENTIONED, DESCRIBED,BUT WHICH ARE OBVIOUSLY NECESSARY TO CONFORM TO THE DESIGN INTENT,THE APPLICABLE CODES,AND TO PRODUCE A COMPLETE ELECTRICAL SYSTEM.

E. FOR THE ACTUAL FABRICATION,INSTALLATION AND TESTING OF THE WORK,USE ONLY THOROUGHLY TRAINED AND EXPERIENCED WORKMEN COMPLETELY FAMILIAR WITH THE ITEMS REQUIRED AND WITH THE MANUFACTURE'S ROOMENDED METHODS OF INSTALLATION,IN ACCEPTING OR REJECTION OF THE INSTALLED WORK,NO ALLOWANCE WILL BE MADE FOR LACK OF SKILL ON THE PART OF THE WORKMEN.

F. EQUIPMENT SHALL HAVE THE UL LABEL WHERE SUCH LABEL IS AVAILABLE.

G. OBTAIN PERMITS AND CERTIFICATES OF APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION.

H. CONTRACTOR SHALL INSTRUCT OWNER ON PROPER USAGE,CARE AND MAINTAINENCE OF THE ELECTRICAL SYSTEM,INCLUDING ALL SPECIAL SYSTEMS,OR APPARATUS.

I. REQUESTS FOR APPROVAL OF PRODUCTS AND MATERIALS COMPETITIVE WITH AND SIMILAR TO THOSE SPECIFIED BY PROPRIETARY NAME MAY BE SUBMITTED FOR APPROVAL,SEE DIVISION 1--SUBSTITUTIONS AND PRODUCTS OPTIONS FOR REQUIREMENTS.

16.02 DESCRIPTION OF WORK-- INCLUDING,BUT NOT LIMITED TO,THE FOLLOWING.

A. A COMPLETE DESCRIPTION SYSTEM FOR LIGHTING AND POWER INCLUDING NECESSARY FEEDERS, PANEL BOARDS,BRANCH CIRCUITS,LIGHTING FIXTURES,CONTROL SWITCHES AND RECEPTACLES.

B. EMPTY RACEWAYS DOR TELEPHONE SYSTEM.

C. GROUNDING.

D. EXCAVATION,TRENCHING AND BACK FILLING.

E. CONNECTION OF ALL EQUIPMENT REQUIRING ELECTRICAL SERVICES AS INDICATED ON THE DRAWINGS AND AS SPECIFIED UNDER OTHER SECTIONS OF THE SPECIFICATIONS.

16.03 RELATED WORK-- ITEMS THAT SHALL BE FURNISHED UNDER DIVITION 15 BUT WIRED AND CONNECTED UNDER DIVISION 16 SHALL INCLUDE,BUT NOT BE LIMITED TO,THE FOLLOWING.

A. CABINET HEATERS.

B. ROOF TOP HVAC UNITS.

16.04 CODES--IN ADDITION TO COMPLYING WITH ALL APPLICABLE CODES AND REGULATIONS, COMPLY WITH.

A. NATIONAL ELECTRICAL CODE,LATEST EDITION.

B. NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS.

C. LOCAL BUILDING CODE.

D. AMERICANS WITH DISABILITIES ACT.

16.05 SUBMITTALS--PRIOR TO MANUFACTURE,ORDER OR INSTALLATION OF MATERIALS, SUBMIT TO THE ARCHITECT FOR APPROVAL THE FOLLOWING.

A. SHOP DRAWING SHOWING DIMENTIONS,AND DETAILED DATA FOR ALL ITEMS OF EQUIPMENT, PANEL,FIGTURES AND OTHERS ELECTRICAL PRODUCTS.

B. SUBMIT SEPARATE FULLY DESCRIPTIVE MANUFACTURER'S LITERATURE FOR ALL MAJOR EQUIPMENT ITEMS INCLUDING,BUT NOT BE LIMITED TO,THE FOLLOWING:

1. LIGHTING FIXTURES.
2. PANEL BOARDS AND DISCONNECT SWITCHES. .

C. ALL DATA SUBMITTED SHALL BEAR THE INITIAL STAMP OF APPROVAL THE CONTRACTOR RESPONSIBLE FOR THE WORK, RESPONSIBLE FOR THE WORK,SUBMITTAL NOT BEARING THIS STAMP SHALL BE RETURNED TO THE CONTRACTOR WITHOUT HAVING BEEN REVIEWED BY THE ARCHITECT.

D. DELIVER TO THE OWNER AND THE ARCHITECT ONE (1) COPY EACH OF A MANUAL WHICH INCLUDES A COPY OF THE RECORD DOCUMENTS RELATING TO THE ELECTRICAL SYSTEM,THIS SHALL ALSO INCLUDE,BUT NOT BE LIMITED TO,EQUIPMENT CATALOG SHEETS,MANUFACTURERS SPECIFICATIONS.

16.06 PROTECTION OF WORK.

A. USE ALL MEANS NECESSARY TO PROTECT THE WORK AND MATERIAL OF THIS DIVISION BEFORE,DURING AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.

B. IN THE EVENT OF DAMAGE,IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO MEET THE APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST OF THE OWNER.

16.07 CONDUIT.

A. USE RIGID OR INTERMEDIATE GRADE GALVANIZED CONDUIT,EXCEPT WHERE EMT OR PVC SCHEDULE 40 IS PERMITTED BY THIS SPECIFICATIONS.CONDUIT BELOW GRADE OR IN GROUND FLOOR SLAB SHALL BE RIGID GALVANIZED OR PVC SCHEDULE 40.

B. EMT MAY BE USED OVERHEAD OR CONCEALED IN WALLS AND SHALL BE GENERAL ELECTRIC,YOUNGSTOWN COMPANY OR APPROVED EQUAL.COUPPLINGS AND CONNECTIONS SHALL BE COMPRESSION TYPE STEEL(NO POINTWEL) WITH THROATED INSULATED BUSHING 1&. B COMPANT OR APPROVED EQUAL.

C. PVC MAY BE USED WHERE ALLOWED BY LOCAL CODES.

D. FITTINGS (I.E. CONNECTORS,COUPLINGS,TEES,BOXES,BALL ALIGNERS AND SIMILAR ITEMS) IN EXPOSED CONDUIT; GROUSE -- HINDS CONDULETS OR APPROVED EQUAL.

16.08 FIRE STOP MATERIAL.

A. FIRE STOP MATERIAL SHALL BE IN COMPLIANS WITH UL STANDARD 1479 AND SHALL BE CLASSIFIED FOR USE IN 1/2 OR 3 HOUR FIRE RATED SYSTEMS.

B. FIRE-- STOPPING MATERIAL SHALL MAINTAIN ITS IMENITION AND INTEGRITY WHILE PREVENTING THE PASSAGE OF FLAME,SMOKE AND GASES INDER CONDITIONS OF INSTALLATION AND USE WHEN EXPOSED TO THE ASTM E119 TIME-- TEMPERATURE CURVE FOR A TIME PERIOD EQUIVALENT TO THE RATING OF THE ASSEMBLY PENETRATED.

C. FIRE-STOP MATERIAL SHALL BE FIRE STOP SEALANT OR FIRE STOP FOAM AS REQUIRED BY THE EXPOSED TO THE ASTM E119 TIME-- TEMPERATURE CURVE FOR A TIME PERIOD EQUIVALENT TO THE RATING OF THE ASSEMBLY PENETRATED.

D. FIRE--STOP MATERIAL SHALL BE FIRE STOP SYSTEMS AND MATERIAL BY 3-M OR APPROVED EQUAL.

16.09 PULL AND JUNCTION BOXES.

A. FABRICATE FROM CODE GAUGE SHEET STEEL WITH SCREW COVERS HELD IN PLACE BY CORROSION-- RESISTANT MACHINE SCREWS,INSTALL WHERE INDICATED AND WHERE NECESSARY TO FACILITATE CABLE PULLING AND SPlicing BOX SIZES AS REQUIRED BY THE NEC FOR NUMBER OF CONDUITS AND CONDUCTORS ENTERING AND LEAVING.

16.10 WIREWAYS.

A. WHERE INDICATED ON THE DRAWINGS,APPROVED WIREWAYS SHALL BE PROVIDED COMPLETE WITH NECESSARY COMPLEMENTS OF FITTINGS,CONNECTORS AND PARTS,WIREWAYS SHALL BE SQUARE D,GENERAL ELECTRIC,WESTINGHOUSE OR APPROVED EQUAL.

16.11 WIRE AND CABLE.

A. CONDUCTORS: SOFT DRAWN COPPER BY AMCONDA,GENERAL ELECTRIC OR APPROVED EQUAL. NO.8 GAUGE AND LARGER SHALL BE STRANDED,CONSTRUCTION,NO.10 AND SMALLER SHALL BE SOLID,FACTORY COLOR CODED,WITH A SEPARATE COLOR FOR EACH PHASE AND NEUTRAL,USED CONSISTENTLY THROUGHOUT THE SYSTEM(NOTE:GREEN COING REQUIRED BY THE NEC FOR CONDUCTORS IS INTENDED SOLELY FOR GROUNDING PURPOSES). USE COLOR CODED WIRE FOR CONTROL CIRCUITS,APPROVED COLOR TAPE IS ACCEPTABLE FOR FEEDERS.

B. IN GENERAL WIRE AND CABLE SHALL MEET THE FOLLOWING RELEVANT REQUIREMENTS:

1. CONDUCTORS FOR FEEDERS,600 VOL,TYPE THW OR XHHW.
2. CONDUCTORS FOR LIGHTING AND RECEPTACLE BRANCH CIRCUITS,600 VOLTS,TYPE THW OR THHN/THWN MINIMUM SIZE NO.12 AWG,WHERE BRANCH CIRCUIT HOME RUNS EXCEED 70'-0" IN LENGTH,NO.10 SHALL BE USED TO THE FIRST OUTLET.
3. USE NO.12,TYPE THHN,CONDUCTORS FROM OUTLET BOXES TO FLUORESCENT FIXTURES AND THROUGH CHANNELS.
4. USE NO.14,TYPE THHN/THWN FOR CONTROL WIRING,UNLESS ANOTHER TYPE IS DESIGNATED, OR AS SPECIFIED BY MANUFACTURER OF EQUIPMENT.
5. ALL SIZES OF WIRE AND CABLE FEEDERS SHALL BE FACTORY--COLOR--CODED AS FOLLOWS:

120/208 VOLT
LINE 1 -- BLACK
LINE 2 -- RED
LINE 3 -- BLUE
NEUTRAL-- WHITE
GROUND-- GREEN

16.12 OUTLET BOXES

A. OUTLET BOXES SHALL BE FABRICATED OF GALVANIZED STEEL,AT LEAST 1-1/2" DEEP AND OF SUFFICIENT SIZE TO ACCOMODATE DEVICES NOTED,WITH MOUNTING LUGS OR EARS FOR COVERS, KNOCKOUTS FOR CONDUIT TERMINATIONS, PROVIDE BOXES FOR FIXTURES WITH FIXTURE STUDS IN CENTER.

B. STANDARD DEEP TYPE OUTLET BOXES (CONCRETE RINGS WITH APPROPRIATE COVERS) SHALL BE USED IN FLOOR SLAB CONSTRUCTION SO THAT CONCEALED CONDUITS ENTERING SIDES OF BOXES CAN CLEAR STEEL REINFORCING RODS.

C. OUTLET BOXES FOR WIRING DEVICES IN FINISHED WALL,STONE PIECE STANDARD GANG TYPE OF SIZE TO ACCOMMODATE NUMBER OF DIVICES NOTED. WITH PLASTER COVERS TO BRING BOX OPENINGS FLUSH WITH FINISHED WALL,OR NOT MORE THAN 1/4" BACK OF SAME. THE USE OF SLEEVES AND LONG SCREWS TO BRING DEVICE FLUSH WITH WALL PLATE WILL NOT BE PERMITTED.

16.13 WIRING DEVICES

A. LIGHTING SWITCHES FOR ALL AREAS SHALL BE 20 AMPERE,GE-5961-2 (3-WAY) AND GE--5964-2 (4-WAY)

B. DUPLEX RECEPTACLES FOR ALL AREAS SHALL BE 20 AMPERE,GE-5342-2 AMPERE, GE-5342-2.

C. SPECIAL PURPOSE OUTLETS REQUIRED BUT NOT SPECIFIED ABOVE SHALL BE SIMILAR IN CONSTRUCTION TO THOSE LISTED ABOVE.

D. GROUND FAULT CIRCUIT INTERRUPTER (GFC) DUPLEX RECEPTACLE SHALL BE GENERAL ELECTRIC GE--5342--2.

E. COLOR OF DIVICES SHALL BE WORK.

F. DEVICES SHALL BE GENERAL ELECTRIC,HUBBELL,LEVENTON,SLATER OR APPROVED EQUAL.

16.14 PLATES

A. PROVIDE SMOOTH WORKY PLASTIC WALL PLATES OF APPROPRIATE TYPE AND SIZE FOR WIRING AND CONTROL DEVICES.

B. PROVIDE PROPERLY DESIGNED PLATES AND COVERS WHEN DEVICES ARE INSTALLED IN EXPOSED CONDUIT,FITTINGS OR OUTLET BOXES.

C. WALL PLATES TO BE SIERRA,HUBBELL,LEVENTON,SLATER OR APPROVED EQUAL.

D. WEATHERPROOF OUTLET PLATES FOR DUPLEX RECEPTACLES SHALL BE TAY-MAC 60310 OR APPROVED EQUAL.

16.15 SAFETY SWITCHES

A. SQUARE D,GENERAL ELECTRIC WESTINGHOUSE OR APPROVED EQUAL HEAVY DUTY TYPE, QUICK-MAKE,BREAK-IN MEKA TYPE 3R GENERAL PURPOSE ENCLOSURE WITH INTERLOCKING COVER,UNLESS OTHERWISE INDICATED.

16.17 BRANCH CIRCUIT PANELBOARDS

A. BOLT-IN CIRCUIT BREAKER TYPE WITH SOLDERLESS LUGS AND ARRANGED FOR SERVICE ON A 208Y/120 VOL,3 PHASE,4 WIRE SYSTEM,SQUARE D,GENERAL ELECTRIC,WESTINGHOUSE OR APPROVED EQUAL WITH EQUIPMENT GROUND AND COPPER BUS.

B. CABINETS FOR PANELBOARDS--CODE GAUGE STEEL WITH AMPLE WIRING GUTTERS, FOR WIRE AND CONNECTIONS. C. DOOR--SINGLE TYPE WITH SPRING LATCH LOCK,PANEL MOUNTING RIM AS INDICATED ON THE SHEULE KEY PANEL. LOOKS ALIKE.

D. CIRCUIT DIRECTORY WITH COMPLETE TYPED CIRCUIT DESCRIPTIONS AND CLEAR PLASTIC COVER

16.18 OTHER MATERIAL.

A. ALL OTHER MATERIALS NOT SPECIFICALLY DESCRIBED ON THE DRAWINGS OR IN THESE SPECIFICATIONS,BUT THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT.

16.19 LIGHT FIXTURES AND LAMPS

A. LIGHT FIXTURES SHALL BE AS SPECIFIED IN THE FIXTURE SHEULE SUBSTITUTED LIGHTING FIXTURES SHALL BE SUBMITTED FOR REVIEW AND APPROVAL OBTAINED PRIOR TO PLACEMENT OF ANY MATERIAL ORDERS.

B. BALLASTS SHALL BE ELECTRONIC.

C. FURNISH PLASTER FRAMES,TRIM RINGS AND BACK BOXES TO OTHER TRADES FOR INSTALLATION IN PLASTER,PLASTERBOARD,CEMENT PLASTER OR CONCRETE.

D. COORDINATE WITH DIVISION 15 TO AVOID CONFLICTS BETWEEN FIXTURES,SUPPORTS,FITTINGS AND MECHANICAL EQUIPMENT.

E. FLUORESCENT LAMPS SHALL BE T8,3500K,AS MANUFACTURED BY SYLVANIA,PHILIPS,GENERAL ELECTRIC OR APPROVED EQUAL.

16.20 INSTALLATION

A. VERIFY ALL MEASUREMENTS AT THE SITE. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF DIFFERENCES BETWEEN LOCATIONS SHOWN ON THE DRAWINGS AND MEASUREMENTS AT THE BUILDING.

B. PROVIDE, MAINTAIN AND REMOVE AFTER CONSTRUCTION IS COMPLETED, TEMPORARY LIGHTING FOR ALL TRADES. IS COMPLETED

C. PROVIDE AND MAINTAIN BARRICADE LIGHTING WHERE REQUIRED TO ADEQUATELY PROTECT THE OWNER AGAINST LIABILITY FOR DAMAGE TO THE PUBLIC OR PERSONNEL. ALL LAMPS USED ON BARRICADE SHALL BE 60 WATT RED INSTALLED IN WEATHERPROOF SOCKET WITH WIRE GUARD. ALL WIRING SHALL BE APPROVED FOR WEATHERPROOF INSTALLATION.

D. GROUNDING--ACCOMPLISH IN ACCORDANCE WITH ARTICLE 250 OF THE NEC.

E. CONDUIT INSTALLATION

1. IN GENERAL CONDUIT INSTALLATION SHALL FOLLOW LAYOUT INDICATED ON DRAWINGS; HOWEVER THIS LAYOUT IS DIAGRAMATIC ONLY AND WHERE CHANGES ARE NECESSARY DUE TO STRUCTURAL CONDITIONS,OTHER APPARATUS OR OTHER CAUSES,MAKE THEM,OFFSETS INCONDUITS ARE NOT INDICATED,FURNISH AS REQUIRED.

2. COAT METAL CONDUIT PLACED IN FILL BELOW CONCRETE OR UNDERGROUND WITH TWO HEAVY COATS OF ASPHALTUM,RECOAT ANY DAMAGE TO ASPHALTUM COATING BEFORE BACKFILLING.

3. CONDUIT SHALL BE ELECTRICALLY CONTINUOUS FOR SERVICE EQUIPMENT TO OUTLETS AND CABINETS,SECURE TO BOXES OF SHEET METAL CONSTRUCTION WITH ONE LOCKNUT OUTSIDE AND ONE INSIDE BOX WITH REINFORCED BAKELITE BUSHING .0.2,TYPE 1/4, THROUGH 2" AND TYPE "B" FOR 2 1/2" LARGER.

4. USE FLEXIBLE CONDUIT(GREENFIELD) WITH PROPER FITTINGS WHERE CONNECTIONS ARE MADE BETWEEN CONDUIT TERMINATIONS AND MOTORS EQUIPMENT,AND OTHER APPARATUS,USE(SEATITE) FLEXIBLE CONDUIT ON MOTORS AND EQUIPMENT OUTSIDE OR WHERE SUBJECT TO WATER SPRAY.

5. IN CONCRETE SLABS,4" MINIMUM IN THICKNESS,CONDUIT SHALL BE INSTALLED UNDER REINFORCED STEEL. IN SLABS ARE GRADE HAVING WIRE MESH REINFORCING AND NO STEEL BARS,CONDUIT SHALL BE SUPPORTED TO PROVIDE MINIMUM OF 2" COVERAGE OF CONCRETE ON ALL DIRECTIONS,SLAB MUST BE DEPRESSED TO OBTAIN 2" MINIMUM COVERAGE FOR CONDUITS 1-1/4" AND LARGER.

6. ALL CONDUITS IN GROUND FLOOR SLAB SHALL BE PLACED ABOVE WATERPROOFING,PUNCTURING WATERPROOFING MATERIAL WILL NOT BE PERMITTED,WHERE NO WATERPROOFING MATERIAL IS PROVIDED, CONDUIT LARGER THAN 1-1/4" MAY BE PLACED IN CRUSHED STONE FILL WHEN PROPERLY COATED WITH ASPHALTUM.

7. DO NOT USE PERFORATED IRON OR BAILING WIRE FOR SUPPORTING CONDUITS.

8. WHERE INSTALLED EXPOSED,RAIN CONDUITS PARALLEL WITH OR AT RIGHT ANGLES TO BUILDING LINES,WHERE MORE THAN ONE CONDUIT IS FOLLOWING A GIVEN PATH,INSTALL WITH UNIFORM DISTANCES BETWEEN EACH OTHER AND WITH NEAT BENDS,OFFSETS,PLEATS AND SADDLES.

9. WHERE CONDUIT PASSES THROUGH BUILDING EXPANSION JOINTS,PROVIDE 0.2,TYPE 1/4X' OR EQUAL EXPANSION FITTINGS.

10. PULL NUMBER 14 GAUGE GALVANIZED PULL WIRE INTO CONDUITS LEFT EMPTY.

11. LAYOUT AND INSTALL ELECTRICAL WORK IN COOPERATION WITH OTHER CRAFTS,PROVIDE SLEEVES OR OPENINGS THROUGH FLOORS OR WALLS REQUIRED FOR PASSAGE OF CONDUITS,PIPES AND DUCTS.

12. AS FAR AS PRACTICAL,ALL FEEDER CABLES SHALL BE CONTINUOUS FROM ORIGIN TO TERMINATIONS TO MAKE PROPER CONNECTIONS.

13. UNLESS OTHERWISE NOTED,EACH CONDUIT RACEWAY SHALL CONTAIN ONLY THOSE CONDUCTORS CONSTITUTING A SINGLE FEEDER CIRCUIT.

14. WHERE FEEDERS CONSISTING OF MULTIPLE CONDUCTORS PER PHASE PASS THROUGH PULL BOXES OR PANELS, A CONDUCTOR OF EACH PHASE SHALL BE GROUPED TOGETHER TO PREVENT HEATING THE SURROUNDING METAL BY INDUCTION.

15. ENTIRE INSTALLATION SHALL BE FREE FROM IMPROPER GROUNDS AND FROM SHORTED AND OPEN CIRCUITS. MAKE TEST TO INSURE THAT ENTIRE SYSTEM IS IN PROPER OPERATING CONDITION,THAT LIGHT BURN WHEN ON AND ARE CONTROLLED BY PROPER SWITCHES,AND THAT ADJUSTMENTS AND

ELECTRICAL NOTES