

utility notes:

- FOLLOW ALL NATIONAL, STATE AND LOCAL CODES FOR UTILITY INSTALLATION. EXISTING UTILITY LOCATIONS ARE REPRESENTATIVE IN NATURE ONLY. THIS SHEET IS INTENDED TO ILLUSTRATE NEW WORK ONLY. EXISTING WORK IS SHOWN IN LIGHT LINEWEIGHT.
- MAINTAIN MINIMUM 10'-0" WORKING CLEARANCE FROM OVERHEAD POWER LINES TO ANY SIGNS OR STRUCTURES.
- MAINTAIN MINIMUM SEPARATION BETWEEN SEWER AND WATER LINES OF 5'-0". MAINTAIN MINIMUM SEPARATION BETWEEN GAS AND ELECTRIC LINES OF 3'-0". MAINTAIN REQUIRED CLEARANCES BETWEEN ALL OTHER UTILITIES.
- 4 ELECTRICAL METER IS EXISTING.
- INSTALL NEW ELECTRICAL SERVICE TO NEW CONCESSIONS #2 BLDG FROM EXISTING SWITCHBOARD "MSWB1". REFER TO SHEET EL-3 FOR WIRE SIZING.
- 6 CONTACT WITH CITY OF SAN ANGELO IS DAVID KNAPP, 325-657-4279.
- PROVIDE SUBMITTAL FOR PULLBOXES FOR APPROVAL. PULLBOXES SHALL BE 36"X36"X36" DEEP WITH RATED COVER FOR TRAFFIC WHERE INSTALLED. PULLBOX SHALL BE PERFECTLY
- FLUSH WITH SURROUNDING GRADE.

 8 ALL ELECTRICAL SECONDARY & FEEDERS TO BUILDINGS TO BE INSTALLED AT 36" DEEP
- MINIMUM.

 9 APPLICABLE CODES:
 2015 INTERNATIONAL BUILDING CODE
 2008 NATIONAL ELECTRICAL CODE
 2009 INTERNATIONAL PLUMBING CODE
 - 2009 INTERNATIONAL PLUMBING CODE
 2009 INTERNATIONAL MECHANICAL CODE
 2015 INTERNATIONAL FIRE CODE
 2009 INTERNATIONAL ENERGY CONSERVATION CODE
 CITY OF SAN ANGELO ORDINANCES
- STUB OUT (4) SPARE 2" CONDUITS FROM EACH CONCESSION BUILDING ELECTRICAL ROOM TO BEYOND WALK PATH OR CONCRETE.
- RUN ALL CONDUIT/LINES UNDERGROUND AS SHOWN ON PLANS. DO NOT CUT ACROSS FIELDS.
- CONNECT NEW 4" BUILDING SEWER TO EXISTING MANHOLE. MANHOLE RIM IS 1806.46; MANHOLE INVERT ELEVATION IS 1798.28.
- CONTACT JOE MANGREM WITH THE CITY OF SAN ANGELO, 325-657-4547, FOR CHARGES OR FEES FOR WATER MAIN TAPS & METER. PEAK DOMESTIC WATER DEMAND IS 49 GPM.

EXISTING WORK IS SHOWN IN LIGHT LINEWEIGHT. INFORMATION PROVIDED TO ASSIST WITH BIDDING AND EXECUTION OF PROJECT.

symbol legen	JD
EMPTY CONDUIT(S)	
UNDERGROUND ELEC. SECONDARY	—UES———
TELEPHONET	
BRANCH CIRCUITS TO FIXTURES	
FIELD LIGHT POLE	Φ
WALK PATH FIXTURE	\bigoplus_{WP}
STREET LIGHT	FA
PARKING LOT LIGHT (DOUBLE)	GB ←
PADMOUNT TRANSFORMER, SWITCHGEAR	\boxtimes
ELECTRICAL DISCONNECT SWITCH	
ELECTRICAL METER	
POWER POLE (SIZE)	40
CIRCUIT RUN TO PANEL	
CHAIN LINK FENCE	* * * *

Power Systems

P.O. Box 2863

San Angelo, Texas 76902

325-659-2235

FIRM NO. F-6257

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Project No. 250-02-0516

Date AUGUST 30, 2016

Sheet Number

	FIRE ALARM SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION	REMARKS
FACP	FIRE ALARM CONTROL PANEL	
FAP	FIRE ALARM PANEL	
FP	FIRE ALARM MANUAL PULL STATION, 46" AFF UON, SUBSCRIPT INDICATES ANNUNCIATION ZONE. NON—ADDRESSABLE	
S	SMOKE DETECTOR	
0	DUCT SMOKE DETECTOR WITH SAMPLING TUBE	
R	RELAY	
H	HEAT DETECTOR	
	AUDIBLE/VISUAL ALARM, 6'-8" AFF UON	
NA WP	WEATHERPROOF AUDIBLE ALARM	
	ELECTROMAGNETIC DOOR HOLDER	
	VISUAL ALARM, 6'-8" AFF UON	
HOOD	KITCHEN HOOD FIRE SUPPRESSION SYSTEM	
SS<	ADA/UL 1971 STROBE SIGNALING APPLIANCE MOUNT @ 80" AFF	
HSI<	HORN STROBE MOUNT @ 80"AFF ADA/UL 464/1971	

NOTE: ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS

	DISTRIBUTION SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION	REMARKS
A−1,3,5	HOMERUN-TO CIRCUIT NO. 1,3,5 ON PANEL "A"	
	BRANCH CIRCUIT WIRING IN CONDUIT (NEUTRAL, PHASE, SWITCHLEG, GROUND)	
-]	CKT ROUTED THRU CONTACTOR CONTROLLED BY TIME CLOCK AND/OR PHOTOCELL	
	CIRCUIT ROUTED THRU CONTACTOR	
	BRANCH CIRCUIT CONCEALED IN WALL OR CEILING	
	BRANCH CIRCUIT OR CONDUIT UNDER FLOOR	
	BRANCH CIRCUIT OR CONDUIT EXPOSED AND/OR SURFACE MOUNTED	
P	PHOTOCELL	
J	JUNCTION BOX	
J	JUNCTION BOX, FLOOR MOUNTED PEDESTAL	
J	JUNCTION BOX, FLOOR MOUNTED FLUSH	
\$м	MANUAL STARTER WITH THERMAL TRIP	
Ó	DISCONNECT SWITCH, AMP/POLE/NEUTRAL/FUSE/ENCLOSURE	
\boxtimes	STARTER	
Á	COMBINATION STARTER/DISC. SW., AMP/POLE/STARTER/FUSE/ENCLOSURE	
	POWER AND/OR LIGHTING PANELBOARD, REFER TO PANELBOARD SCHEDULE	
	SWITCHBOARD, REFER TO SWITCHBOARD SCHEDULE OR RISER	
0	RECESSED DOWNLIGHT	
\bigcirc	SURFACE MOUNTED DOWNLIGHT	
0	FLUORESCENT LIGHT FIXTURE (CROSS HATCH INDICATES 24 HOUR OPERATION)	

NOTE: ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS

	MISCELLANEOUS SYMBOL SCHEDULE			
SYMBOL	DESCRIPTION	REMARKS		
IC	INTERCOM UNIT			
CCTV 🗸	CLOSED CIRCUIT TV CAMERA			
DA	DOOR ALARM			
IC	INTERCOM EQUIPMENT RACK			
DCC	DOOR CONTROL SYSTEM CABINET			
TVM	CLOSED CIRCUIT TELEVISION MONITOR			
MCDS	DIGITAL DISPLAY MULTIFUNCTION TELEPHONE			
	NOTE: ALL SYMPOLS DO NOT NECESSARILY ARREAD ON THESE DRAWINGS			

NOTE: ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS.

	MISCELLANEOUS SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION	REMARKS
+	DUPLEX RECEPTACLE 20A/120V 18" AFF UON	
-	RECEPTACLE MOUNTED ABOVE COUNTERTOP	
⇒ IG	RECEPTACLE WITH ISOLATED INSULATED GROUND	
⊕	FOURPLEX RECEPTACLE 20A/120V 18" AFF UON	
- ← c	CLOCK RECEPTACLE 120V 96" AFF UON	
•	SPECIAL PURPOSE RECEPTACLE 18" AFF	
+	RECEPTACLE MOUNTED HORIZONTALLY	
	DUPLEX RECEPTACLE, FLOOR MTD. FLUSH	
	DUPLEX RECEPTACLE, FLOOR MTD. PEDESTAL	
₩P	WEATHER-PROOF RECEPTACLE 18" AFF UON	
⇒ SP	DUPLEX RECEPTACLE W/SURGE SUPPRESSION 20A/125V 18" AFF UON	
\$	SINGLE POLE SWITCH 20A, 48" AFF UON	
\$ ³	THREE-WAY SWITCH 20A, 48" AFF UON	
\$ _K	SINGLE POLE KEY OPERATED SWITCH 20A, 48" AFF UON	
\$ _D	DIMMER SWITCH, 48" AFF UON	
\$ _T	TIMNER SWITCH EQUAL TO INTERMATIC, 48" AFF UON	
⇒ GFI	RECEPTACLE WITH GROUND FAULT INTERRUPTER, 18" AFF UON	
	DUPLEX RECEPTACLE, LOWER HALF SWITCHED	
⊕ TP	TAMPER PROOF DUPLEX RECEPTACLE	
 	CEILING MOUNT DUPLEX RECEPTACLE	
V	INTERCOM SPEAKER VOLUME CONTROL	

NOTE: ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS

GENERAL ELECTRICAL NOTES

- A. ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE 2008 NATIONAL ELECTRICAL CODE AND LOCAL CODES.
- B. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO MINIMIZE CONFLICTS.
- C. ALL WIRE AND CABLE SIZES ARE FOR COPPER. ALUMINIUM WILL NOT BE ALLOWED. MINIMUM WIRE SIZE IS #12. TYPE AC AND TYPE MC CABLE ARE NOT ALLOWED. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT. TYPE EMT CONDUIT IS NOT ALLOWED.
- D. NO CONDUCTOR SHALL BE LOADED BEYOND ITS ALLOWABLE AMPACITY.
- E. CONFIRM WITH LOCAL CODES, MECHANICAL CONTRACTOR AND EQUIPMENT VENDORS ON THE LOCATION AND MOUNTING METHOD FOR DISCONNECT SWITCHES, MANUAL MOTOR STARTERS, COMBINATION STARTER/DISCONNECTS, ETC. PRIOR TO ELECTRICAL ROUGH-IN AND INSTALLATION.
- F. ELECTRICAL CONTRACTOR SHALL DOUBLE CHECK ALL FEEDER CONDUCTOR AND CONDUIT SIZES WITH NEC AND LOCAL CODES PRIOR TO BID, ORDERING OR CUTTING CONDUCTORS.
- G. ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES TO OWNER IMMEDIATELY.
- H. UNLESS OTHERWISE NOTED, BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER (THHN OR EQUAL) SIZED AS FOLLOWS:

BREAKER RATING	WIRE SIZE
20 AMP	#12 AV
30	#10
40	#8
50	#8
60	#6
70	#4
80	#4
90	#3
100	#2
110	#2
125	#1
150	#1/0
175	#2/0
200	#3/0

ALL BRANCH CIRCUITS WITH AN OVERALL LENGTH IN EXCESS OF 75 FEET SHALL BE INCREASED IN WIRE SIZE TO ACCOMMODATE VOLTAGE DROP.

- I. CONTRACTOR SHALL CONNECT MOTORIZED DAMPERS FROM ASSOCIATED UNITS & POWER SUPPLY FOR ALL PRV, PEF, RSF MISCELLANEOUS FANS, ETC. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- J. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OWNER PROVIDED EQUIPMENT.
- K. ALL J-BOXES SHALL BE ACCESSIBLE FOR FUTURE SERVICE PER NEC. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND POINTS OF ACCESS.
- L. LIGHT FIXTURES SHALL BE OPERATED BY SWITCH LOCATED IN SAME ROOM UNLESS OTHERWISE NOTED.
- M. CONDUITS SHALL NOT BE ROUTED EXPOSED IN FINISHED AREAS UNLESS NOTED.
- N. SEE MECHANICAL FLOOR PLANS FOR THERMOSTAT LOCATIONS.
- O. PROVIDE STAINLESS STEEL COVERPLATES FOR ALL OUTLET BOXES.
- P. SEAL AROUND ALL EXTERIOR WALL PENETRATIONS.
- Q. DRAWINGS ARE SCHEMATIC IN NATURE AND MAY NOT BE DRAWN EXACTLY TO SCALE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND ALL OTHER TRADES TO AVOID SPACING OR ROUTING PROBLEMS.
- R. ALL PENETRATIONS OF FIRE RATED PARTITIONS DUE TO THE INSTALLATION OF THE ELECTRICAL SYSTEMS SHALL BE SEALED TO MAINTAIN THE FIRE RATING OF THE WALL. SEAL ALL OUTLET BOXES WITH RATED CAULK OR SEALANT IN FIRE
- RATED ASSEMBLIES. S. INSTALL MARKING TAPE IN TRENCH FOR ALL UNDERGROUND UTILITIES.
- T. ALL DEVICES INSTALLED EXPOSED TO WEATHER SHALL BE WEATHERPROOF.

	COMMUNICATION AND DATA SYMBOL SCHEDULE				
SYMBOL	SYMBOL DESCRIPTION REMARKS				
	TELEPHONE OUTLET, 18" AFF UON	3/4" E.C. TO ABOVE CEILING, LEVITON MULTIPORT, (2) PORTS			
■w	TELEPHONE OUTLET, WALL MOUNTED 48" AFF UON	3/4" E.C. TO ABOVE CEILING			
■P	PUBLIC PAY TELEPHONE OUTLET, 48" AFF UON	3/4" E.C. TO ABOVE CEILING			
4	DATA OUTLET, 18" AFF UON	3/4" E.C. TO ABOVE CEILING, LEVITON MULTIPORT, (4) PORTS			
√TV	TELEVISION OUTLET, 18" AFF UON	3/4" E.C. TO ABOVE CEILING			

NOTE: ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS

	INTERIOR LIGHT FIXTURE SCHEDULE					
TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS	REMARKS		
E	NULITE	INT-4-50-L40-UNV-DIM	40W LED 4000°K	INDUSTRIAL VAPORTITE STRIP, HIGH IMPACT DR ACRYLIC, 277 VOLT		
K	METALUX	4SNLED-LD4-49SL-LN-UNV-L840 -CD1-U/WG/SNF-4FT	41W LED 4000°K	4' STRIP WITH WIRE GUARD, 277 VOLT		
М	MARKEL	P3P5103CA1N		CEILING MOUNT VERTICAL DISCHARGE ELECTRIC HEATER, BUILT IN THERMOSTAT, 3.3KW, 480V, 3Ø		
N	MARKEL	P3P5105CA1N		CEILING MOUNT VERTICAL DISCHARGE ELECTRIC HEATER, BUILT IN THERMOSTAT, 5.0KW, 480V, 3Ø		
	SURELITES	CX 7XSDR	INCLUDED	EXIT LIGHT W/ BATTERY PACK, 120V		
4	SURELITES	SEL25	INCLUDED	EMERGENCY LIGHT 2 HEAD, 120V		

	exterior light fixture schedule					
В	SPEC GRADE POLARIS	AFL-100W-60X60-90-305V-NW- BRONZE-TL	1-110W LED 4000°K	FLOODLIGHT, YOKE MOUNTED, DARK BRONZE, PLANE WASH, 277 V		
Р	PORTFOLIO	LD6A-30D010TE-ERW6A-30940- 6LW1-BB-WF	43.6W LED 4000°K	SHALLOW RECESSED DOWNLIGHT, FRESNEL LENS, BLACK BAFFLE, WHITE FLANGE, WET LOCATION LISTED		
\times	PROGRESS	P2502-33	NO LIGHT	AIR PRO 52" PATIO FAN, 5-BLADE VERIFY COLOR WITH ARCHITECT WET LOCATION LISTED		
Q	DECO LIGHTING	DVTL-LED-20-41-UNV-CM-GREEN LENS	20W LED 4100°K	POLE TOP MOUNTED DECORATIVE LIGHT, GREEN LENS, WET LOCATION LISTED. PROVIDE 9" DIAMETER DISC. BETWEEN FIXTURE AND POLE. FIXTURE MOUNTS WITH SLIPFITTER TO 3" DIAMETER POLE; NO GUARD SEE NOTE 4.		

- 1. NOT ALL FIXTURES LISTED ARE NECESSARILY USED ON THIS PROJECT.
- 2. OBTAIN APPROVAL FROM ENGINEER AT LEAST 5 DAYS BEFORE BID DATE FOR ANY SUBSTITUTIONS OF FIXTURES. ALL
- SUBSTITUTIONS MUST MEET THE EFFICIENCY AND PHOTOMETRICS OF SPECIFIED FIXTURES. 3. ALL INTERIOR LIGHTING FIXTURES SHALL BE PROVIDED WITH 4000°K LAMPS,
- TYPE AS NOTED. EXTERIOR FIXTURES SHALL BE 4000°K. 4. FIXTURE TYPE "Q" SHALL MATCH EXISTING FIXTURES INSTALLED IN PROJECT.

	ELECTRICAL A	BBREVIA"	TIONS
A A/C AFF AUX ATS AWG BLDG C	AMPERES AIR CONDITIONING ABOVE FINISHED FLOOR AUXILIARY AUTOMATIC TRANSFER SWITCH AMERICAN WIRE GAGE BUILDING CONDUIT	MAX MCB MCC MDP MECH MIN MISC MLO MSB MTD	MAXIMUM MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN DISTRIBUTION PANEL MECHANICAL MINIMUM MISCELLANEOUS MAIN LUG ONLY MAIN SWITCHBOARD MOUNTED
CB CCTV CKT CLG	CIRCUIT BREAKER CLOSED CIRCUIT TELEVISION CIRCUIT CEILING	NEC NEMA	NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
DWG EA EC EF ELEC	DRAWING EACH ELECTRICAL CONDUIT EXHAUST FAN ELECTRIC/ELECTRICAL ELECTRICAL METALLIC TUBING	NF NIC N.C. NO. NO. NTS	NON FUSED NOT IN CONTRACT NORMALLY CLOSED NORMALLY OPEN NUMBER NOT TO SCALE
EMT EPO EQUIP	EMERGENCY POWER OFF EQUIPMENT	OC	ON CENTER
EWC FA FACP	ELECTRIC WATER COOLER FIRE ALARM FIRE ALARM CONTROL PANEL	PF PH PNL PVC	POWER FACTOR PHASE PANEL POLYVINYL CHLORIDE
G GFI	GROUND GROUND FAULT INTERRUPT	RECPT RE: RGS	RECEPTACLE REFER TO RIGID GALVANIZED STEEL
HP HVAC	HORSEPOWER HEATING/VENTILATION/ AIR CONDITIONING	TYP	TYPICAL
IG	ISOLATED GROUND	UL	UNDERWRITER'S LABORATORIES
IMT	INTERMEDIATE METAL	UON	UNLESS OTHERWISE NOTED
J-BOX	JUNCTION BOX	V VA	VOLTS VOLT—AMPERES
KVA KW	KILOVOLT—AMPERES KILOWATTS	WP	WEATHERPROOF

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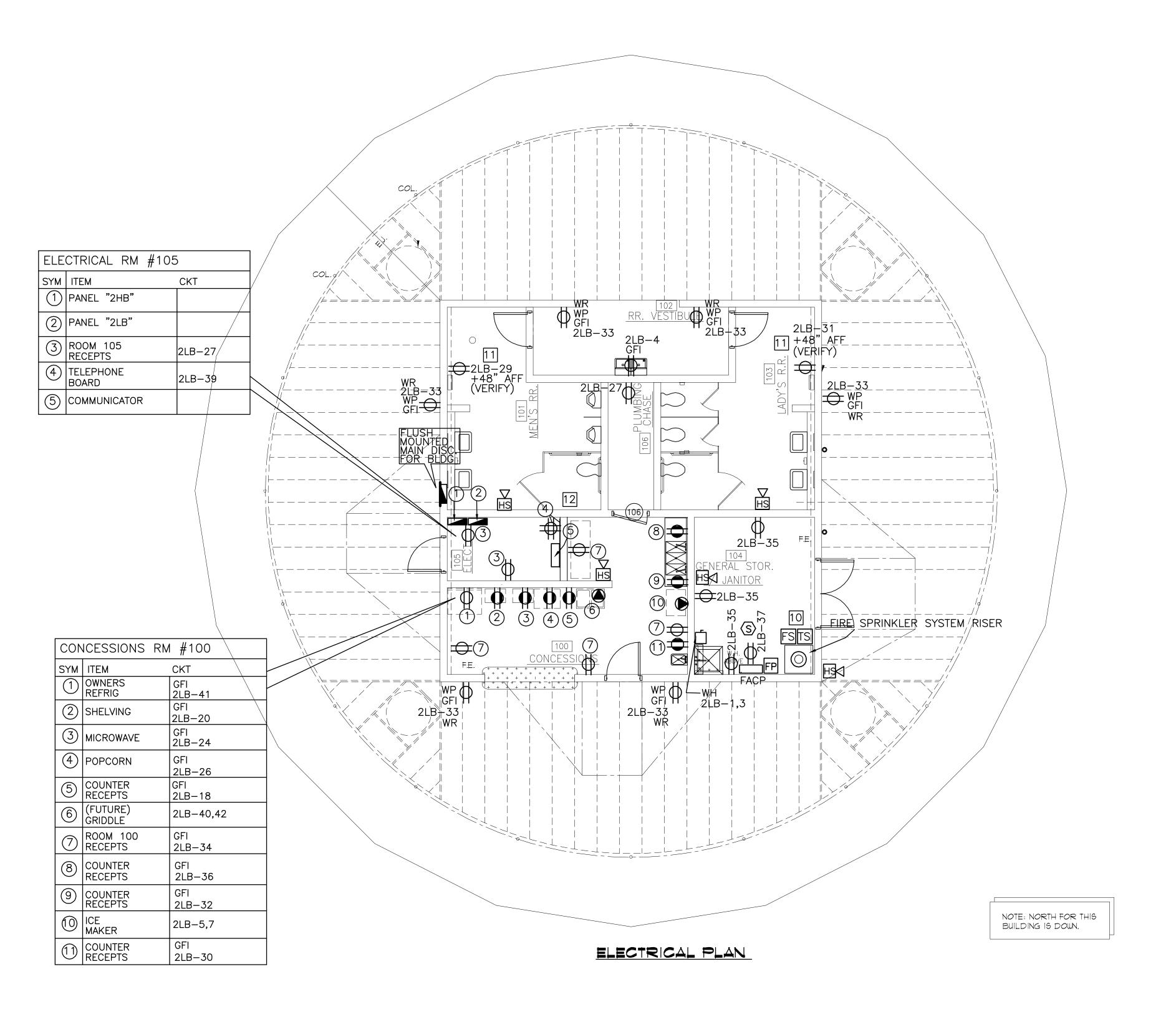
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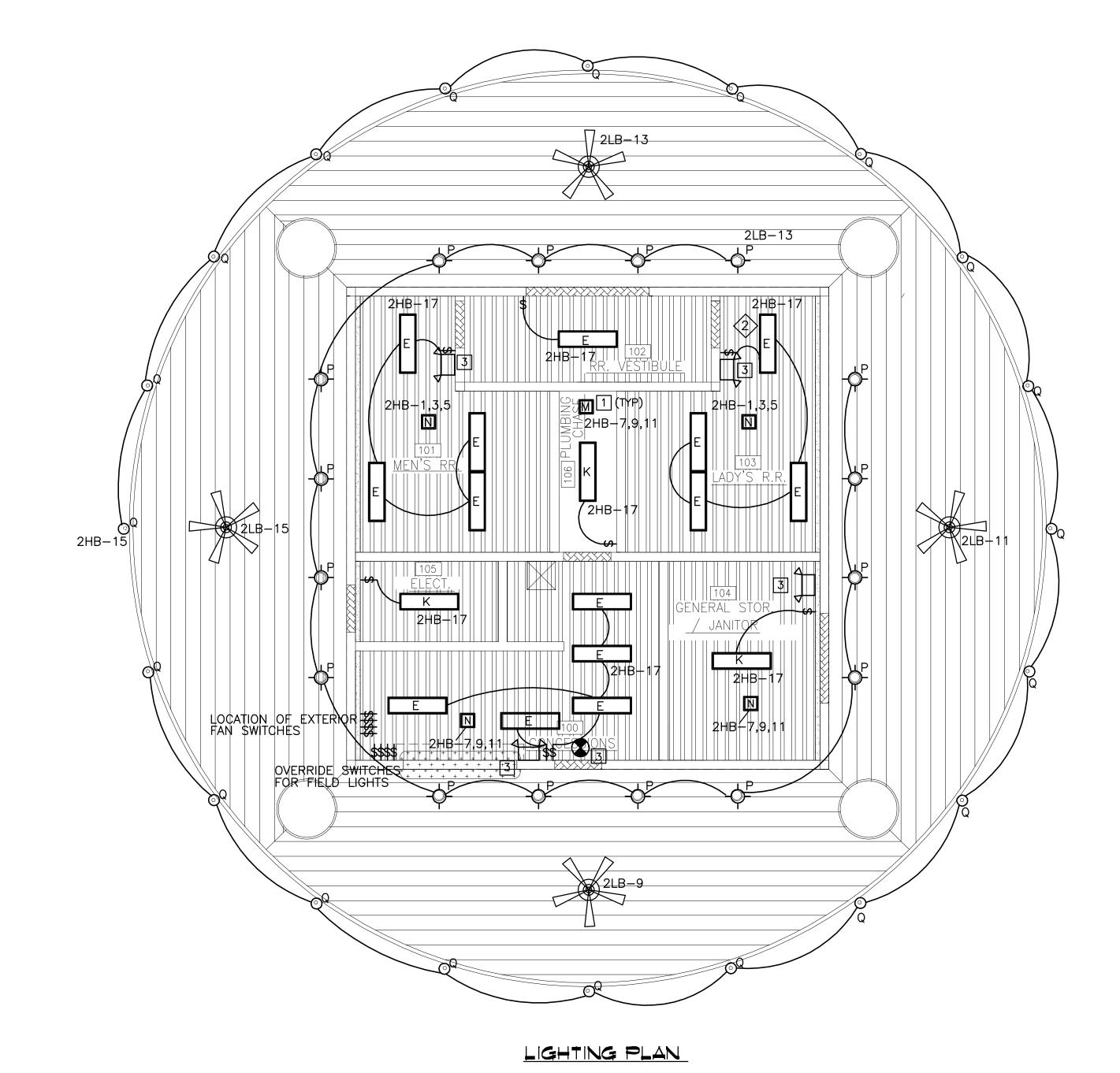
250-02-0516 AUGUST 30, 2016 Sheet Number EL-1

Project No.

ELECTRICAL/LIGHTING COVER SHEET Scale: None

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GENERAL ELECTRICAL NOTES:

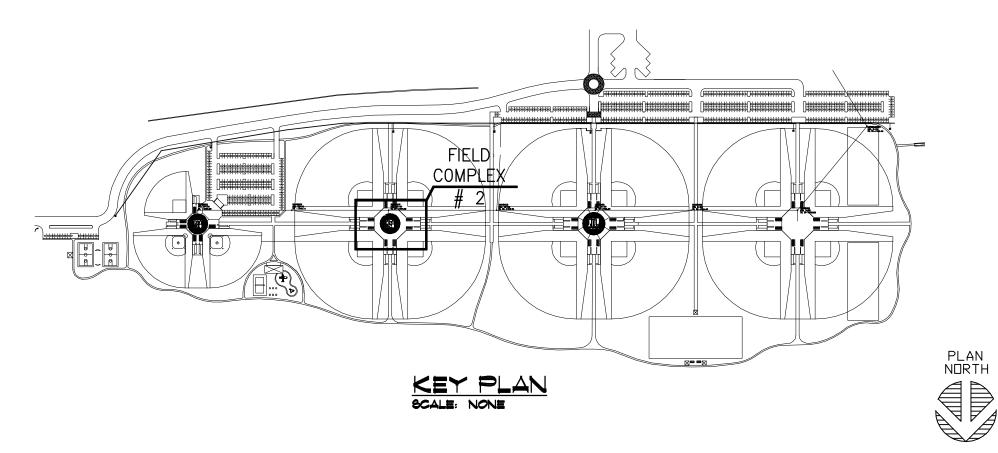
- 1 REFER TO SHEET EL-3 FOR SERVICE ENTRANCE AND RISER DIAGRAMS AND PANEL SCHEDULES.
- 2 VERIFY MOUNTING HEIGHT OF RECEPTACLES AND SWITCHES WITH OWNER. IN ALL CASES INSURE COMPLIANCE WITH ADA MOUNTING HEIGHT REQMTS OF 48" MAX FOR SWITCHES; 15" MIN FOR RECEPTACLES AND JACKS; 48" MAX FOR THERMOSTATS.
- 3 PROVIDE STAINLESS STEEL COVERPLATES FOR ALL DEVICES.
- 4 ALL EXTERIOR RECEPTACLES TO BE GFI, WEATHERPROOF.
- MAIN DISCONNECT SWITCHES ARE EXISTING. CONTRACTOR IS RESPONSIBLE FOR DITCHING & CONDUIT FOR ELECTRICAL SERVICE TO CONCESSIONS BUILDING #2. REFER TO SHEET MPE-1.
- 6 PROVIDE WORKING CLEARANCE FOR ALL ELECTRICAL EQUIPMENT PER CODE.
- 7 REFER TO SHEET MPE-1 FOR SITE NOTES AND DETAILS.
- 8 PROVIDE DISCONNECTS PER NEC FOR ANY PERMANENTLY CONNECTED EQUIPMENT WHICH DOES NOT HAVE INTEGRAL DISCONNECTS.
- 9 ALL CIRCUITS SHALL BE #12 THHN COPPER IN 3/4" CONDUIT MINIMUM UNLESS OTHERWISE NOTED.
- 10 COMPLEX #2 IS TO BE SPRINKLERED. PROVIDE FLOW & TAMPER SWITCH AT FIRE SYSTEM AT FIRE SYSTEM RISER. INTERFACE TAMPER & FLOW SWITCHES WITH CONTROL PANEL EQUAL TO EST FS 1004. PROVIDE COMMUNICATOR & COORDINATE WITH OWNER TO PROVIDE TWO TELEPHONE LINES TO NOTIFY APPROVED MONITORING SERVICE. OWNER IS RESPONSIBLE TO FURNISH PHONE LINES. INSTALL SMOKE DETECTOR AT CEILING ABOVE
- 11 PROVIDE SINGLE RECEPTACLE FOR HAND DRYERS OR HARDWIRE AS REQUIRED.
- 12 REFER TO ROOF PLANS FOR LOCATION OF STEP DOWN TRANSFORMER.

GENERAL LIGHTING NOTES:

- 1) LIGHT SWITCHES AND COVER PLATES TO BE STAINLESS STEEL.
- 2) PROVIDE SWITCHING TO MEET THE REQUIREMENTS OF THE 2009 IECC.
- 3) ALL FIXTURES SHALL BE 277 VOLT UNLESS OTHERWISE NOTED. SEE SHEET E-1 FOR RECOMMENDED MANUFACTURER AND CATALOG NUMBERS OF FIXTURES.
- 4) ALL FLUORESCENT LIGHTING FIXTURES SHALL BE PROVIDED WITH T8 LAMPS WHERE POSSIBLE UNLESS T5 NOTED OTHERWISE.
- 5) CONTRACTOR SHALL CHECK AND VERIFY FIXTURE QUANTITY AND MAKE PROPER ADJUSTMENTS FOR ANY CHANGES IN PLANS DUE TO ADDITIONAL REQUIREMENTS.
- 6) ALL LIGHTING TO BE INSTALLED AND OPERATED IN STRICT ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- 7) WHENEVER APPLICABLE ALL INCANDESCENT FIXTURES SHALL BE PROVIDED WITH ENERGY EFFICIENT INCANDESCENT LAMPS.
- 8) ALL CIRCUITS TO BE #12 THHN COPPER IN 3/4" CONDUIT MINIMUM UNLESS OTHERWISE NOTED. OTHERWISE NOTED.
- 9) BALLASTS FOR FLUORESCENT FIXTURES SHALL BE ELECTRONIC TYPE. BALLASTS TO HAVE IN-LINE FUSE HOLDER AND FUSES. BALLASTS SHALL BE EQUIVALENT TO ADVANCE ELECTRONIC BALLASTS, 10% THD. USE 3500 DEG K LAMPS IN ALL FIXTURES FOR INSIDE BUILDING; 4100° K FOR ALL FIXTURES ON EXTERIOR.

NOTES INDICATED BY " U"

- 1 HEATERS TO BE CONTROLLED WITH BUILT-IN THERMOSTATS, SET AT 40°.
- 2 CROSS AIM FIXTURES TYPE "B" ON ROOF TO PROVIDE A MORE UNIFORM LIGHTING. TILT & AIM EACH FIXTURE TO OPPOSITE ROOF SURFACE.
- 3 EXIT & EMERGENCY LIGHTS TO BE CONNECTED TO CKT 2LB-2.
- PROVIDE CURB FOR STEPDOWN XFMR ON ROOF. ALL PENETRATIONS THRU ROOF TO BE MADE THROUGH CURB.



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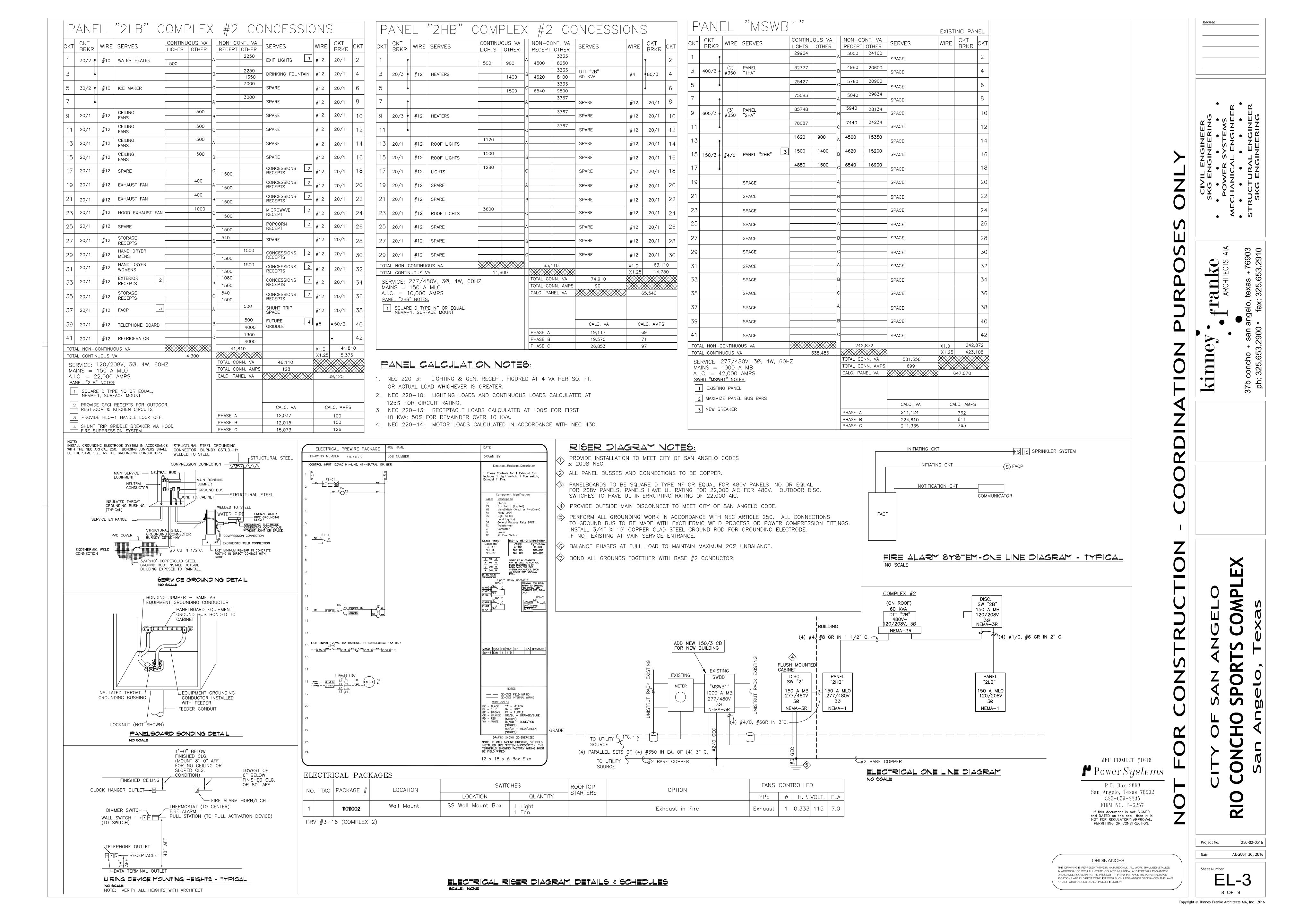
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Project No. 250-02-0516 AUGUST 30, 2016 Sheet Number

ELECTRICAL/LIGHTING PLAN - COMPLEX #2

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WATER CLOSET, FLOOR MOUNTED, HANDICAPPED: P-14

PROVIDE AND INSTALL ACORN DURA-WARE SIPHON JET TOILET MODEL NO. 2120-T-3-HS-HCT (16")-FV. FIXTURE SHALL BE FABRICATED FROM 16 GAGE, TYPE 304 STAINLESS STEEL. CONSTRUCTION SHALL BE SEAMLESS WELDED AND EXPOSED SURFACES SHALL HAVE A SATIN FINISH, EXCEPT THE INTEGRAL CONTOURED TOILET SEAT, WHICH SHALL HAVE A SANITARY HIGH POLISH FINISH. TOILET SHALL HAVE AN LONGATED BOWL AND A SELF-DRAINING FLUSHING RIM. TOILET TRAP SHALL PASS A 2-5/8" DIAMETER BALL AND BE FULLY ENCLOSED. TOILET WASTE OUTLET SHALL BE GASKETED WASTE. FIXTURE SHALL BE FURNISHED WITH NECESSARY FASTENERS FOR PROPER INSTALLATION. SUPPLY SHALL BE SLOAN "ROYAL" SERIES, 1.6 GALLONS PER FLUSH. FLUSH VALVE TO BE PROVIDED BY CONTRACTOR. FIXTURE SHALL BE OF A DESIGN THAT CONFORMS TO THE AMERICAN DISABILITIES ACT (ADA). ALSO PROVIDE FIXTURE 台 COMPLETE WITH 3" X 4" OUTLET ADAPTER WITH CLEANOUT. FIXTURE` HEÍGHT SHALL BE 16" TO TOP OF SEAT. REFER TO TABLE, THIS SHEET.

WASTE

ROUGH-IN: CW

PROVIDE AND INSTALL ACORN DURA-WARE STRADDLE TYPE WASHOUT URINAL MODEL NO. 2167-T-1-FV. URINAL SHALL BE BACK WALL WASHDOWN TYPE. FIXTURE SHALL BE FABRICATED FROM 16 GAGE, TYPE 304 STAINLESS STEEL AND SHALL HAVE COVED CORNERS TO FACILITATE CLEANING. ALL WELDS SHALL BE CONTINUOUS AND EXTERIOR SURFACES SHALL HAVE SATIN FINISH. P-TRAP SHALL BE FULLY ENCLOSED AND SHALL PASS A 1.9" BALL. WASTE OUTLET SHALL BE 2" NCT. FIXTURE SHALL BE FURNISHED WITH EXPOSED MOUNTING SCREWS. FIXTURE SHALL BE FURNISHED WITH NECESSARY FASTENERS FOR PROPER INSTALLATION. SUPPLY TO BE SLOAN "ROYAL" SERIES, I.O GALLONS PER FLUSH. FLUSH VALVE TO BE PROVIDED BY CONTRACTOR. FIXTURE SHALL BE OF A DESIGN THAT CONFORMS TO THE AMERICAN DISABILITIES ACT (ADA). MOUNT URINAL AT 24" TO TOP OF RIM. REFER TO TABLE, THIS SHEET. WASTE 2"

URINAL, HANDICAPPED: P-2A PROVIDE AND INSTALL ACORN DURA-WARE STRADDLE TYPE WASHOUT URINAL MODEL NO. 2167-T-1-FV. URINAL SHALL BE BACK WALL WASHDOWN TYPE. FIXTURE SHALL BE FABRICATED FROM 16 GAGE, TYPE 304 STAINLESS STEEL AND SHALL HAVE COVED CORNERS TO FACILITATE CLEANING. ALL WELDS SHALL BE CONTINUOUS AND EXTERIOR SURFACES SHALL HAVE SATIN FINISH. P-TRAP SHALL BE FULLY ENCLOSED AND SHALL PASS A 1.9" BALL. WASTE OUTLET SHALL BE 2" NCT. FIXTURE SHALL BE FURNISHED WITH EXPOSED MOUNTING SCREWS. FIXTURE SHALL BE FURNISHED WITH NECESSARY FASTENERS FOR PROPER INSTALLATION. SUPPLY TO BE SLOAN "ROYAL" SERIES, 1.0 GALLONS PER FLUSH. FLUSH VALVE TO BE PROVIDED BY CONTRACTOR. FIXTURE SHALL BE OF A DESIGN THAT CONFORMS TO THE AMERICAN DISABILITIES ACT (ADA). MOUNT URINAL AT 14" TO TOP OF RIM. REFER TO TABLE, THIS SHEET.

LAVATORY, HANDICAPPED: P-3A PROVIDE AND INSTALL ACORN DURA-WARE 18" WIDE HANDICAPPED LAVATORY MODEL NO. 1952-1-CSG-9-GE FIXTURE SHALL BE FABRICATED FROM 16 GAGE, TYPE 304 STAINLESS STEEL. CONSTRUCTION SHALL BE SEAMLESS WELDED. EXTERIOR SHALL HAVE A SATIN FINISH. LAVATORY DECK SHALL HAVE AN INTEGRAL AIR-CIRCULATING, SELF DRAINING SOAP DISH. LAVATORY ANGLE BRACES AND FASTENERS SHALL BE FURNISHED BY MANUFACTURER. INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND DETAILS, SUPPLY SHALL BE EQUAL TO T & S BRASS B-0805 SELF CLOSING FAUCET → 4" CENTERS, CENTERSET FAUCET WITH 2.0 GPM FLOW AERATOR. PROVIDE WATTS USG-B THERMOSTATIC MIXING VALVE WITH CHECKSTOPS, LIMIT SET AT 110° F, MOUNT LAV. AT 34" TO TOP OF RIM. PUSH BUTTON VALVE TO REQUIRE LESS THAN 5 POUNDS OF FORCE

> HAND SINK : P-5B FIXTURE: ELKAY BCR-15 W/2 HOLES, 15X15 SS SINK, 20 GA.

DELTA 27T3844 FAUCET, 12" HIGH GOOSENECK,

SANITARY-DASH R426 STRAINER SANITARY DASH R371 176A P-TRAP EASTMAN 5M12 SUPPLY; FLEXIBLE RISERS.

TRUEBRO 102W INSULATION GUARDS FOR SUPPLY & TRAP. TRUEBRO 105W INSULATION GUARD FOR DRAIN IF NOT COVERED.

ROUGH-IN: CW HW WASTE 1/2" 1/2" 2" 1 1/2" → NOTE: THIS IS A HANDICAPPED ACCESSIBLE FIXTURE AND MUST STRICTLY COMPLY WITH ALL A.D.A. REQUIREMENTS PERTAINING TO IT WHEN MOUNTED 34" A.F.F. TO LIP MAX.

DRINKING FOUNTAIN: P-6

PROVIDE AND INSTALL ACORN DURA-WARE HANDICAPPED FOUNTAIN MODEL NO. 2012-1-BC-3-GE. FIXTURE SHALL BE FABRICATED FROM 16 GAUGE, TYPE 304 STAINLESS STEEL. CONSTRUCTION SHALL BE SEAMLESS WELDED AND EXPOSED SURFACES SHALL HAVE A SATIN FINISH. FIXTURE SHALL BE FURNISHED WITH AN AIR-TROL SELF CLOSING VALVE, A BUBBLER WITH MOUTH GUARD, AND A MOUNTING BRACKET. PUSH BUTTON FOR VALVE SHALL REQUIRE LESS THAN 5 POUNDS FORCE TO ACTIVATE VALVE. INSTALLER SHALL FURNISH MOUNTING SCREWS AND ANCHOR SHIELDS. MOUNT FIXTURE AT 40" AFF TO BUBBLER OUTLET. PROVIDE CANE SHROUD

DRINKING FOUNTAIN: P-6A

PROVIDE AND INSTALL ACORN DURA-WARE HANDICAPPED FOUNTAIN MODEL NO. 2012-1-BC-3-GE. FIXTURE SHALL BE FABRICATED FROM 16 GAUGE, TYPE 304 STAINLESS STEEL. CONSTRUCTION SHALL BE SEAMLESS WELDED AND EXPOSED SURFACES SHALL HAVE A SATIN FINISH. FIXTURE SHALL BE FURNISHED WITH AN AIR-TROL SELF CLOSING VALVE, A BUBBLER WITH MOUTH GUARD, AND A MOUNTING BRACKET. PUSH BUTTON FOR VALVE SHALL REQUIRE LESS THAN 5 POUNDS FORCE TO ACTIVATE VALVE. INSTALLER SHALL FURNISH MOUNTING SCREWS AND ANCHOR SHIELDS. MOUNT FIXTURE AT 36" AFF MAX TO BUBBLER OUTLET. PROVIDE CANE SHROUD.

WATER HEATER: P-7

BRADFORD WHITE MODEL RE340S6, 2 ELEMENT, T & P VALVE, 40 GAL, 4.5 KW, 208 VOLT, SINGLE—PHASE, AS REQUIRED ENERGY FACTOR TO BE .95 MINIMUM.

NOTE: WATER HEATER SHALL COMPLY WITH DOE REGULATIONS EFFECTIVE 4/15/2015. ADJUST MODEL NUMBER AS REQUIRED.

 \bigcirc

MOP SINK: P-8

MUSTEE 63 24X24X12 BASIN. 3" DRAIN MUSTEE 63.600A MOP SINK FAUCET. MOUNT 36" A.F.F. FOR SUPPLY MUSTEE 65.700 MOP HANGER MUSTEE 65.600 HOSE AND BRACKET ROUGH-IN: CW HW WASTE VENT

1/2" 1/2"

THREE COMPARTMENT SINK: P-9

FIXTURE: ADVANCE TABCO DI-3-10, 38"X19", 10" DEEP, 4" O.C. FAUCETS (2), 18 GAUGE TYPE 304 STAINLESS STEEL SUPPLY: ADVANCE TABCO (2) K-50, 8" SWING SPOUT STRAINERS: K-6 BASKET DRAIN ANGLE STOPS WITH FLEXIBLE RISERS

1/2" 1/2" 3" 1 1/2" NOTE: PROVIDE FLOOR SINK & INDIRECT WASTE WITH 2" AIR GAP

HOSE BIBB P-10

ROUGH-IN: CW HW WASTE VENT

FIXTURE: WOODFORD B65 FROST PROOF, 3/4" FEMALE, WITH VACUUM BREAKER. ROUGH-IN: CW HW 3/4" —

HOSE BIBB: P-10A

ACORN HOSE VALVE, MODEL 8121 3/4" WITH VACUUM BREAKER, BRASS, CARTRIDGE OPERATED, ROUGH CHROME-PLATED. PROVIDE SECURE MOUNTING INSIDE CHASE. MOUNTED AT AFF. 18".

REFER TO MP-3 FOR SPECIFICATIONS AND DETAILS

EXTERIOR WALL CLEANOUT

FIXTURE: JOSAM 58890 STAINLESS STEEL COVER WITH SCREW AND BRASS CLEANOUT PLUG.

FLOOR DRAIN FD (3"):

JOSAM 30000-6A CAST IRON FLOOR DRAIN WITH FLANGE, CLAMPING COLLAR, NICKEL BRONZE STRAINER AND TRAP PRIMER CONNECTION, 6" TOP. PROVIDE 1/2' TRAP PRIMER FOR

JOSAM 56000 SERIES CAST IRON FLOOR CLEANOUT WITH ADJUSTABLE HOUSING, FLANGED FERRULE AND NICKEL BRONZE SCORIATED TOP.

WALL CLEANOUT: WCO

RESTROOM DRAINS.

JOSAM 58600 CLEANOUT TEE WITH BRASS PLUS AND ROUND STAINLESS STEEL ACCESS COVER.

RECISION PLUMBING PRODUCTS PR-500 TRAP PRIMER. INSTALL PER P.P.P. SPECIFICATIONS. PROVIDE DISTRIBUTION UNIT AS REQUIRED.

WATER HAMMER ARRESTORS:

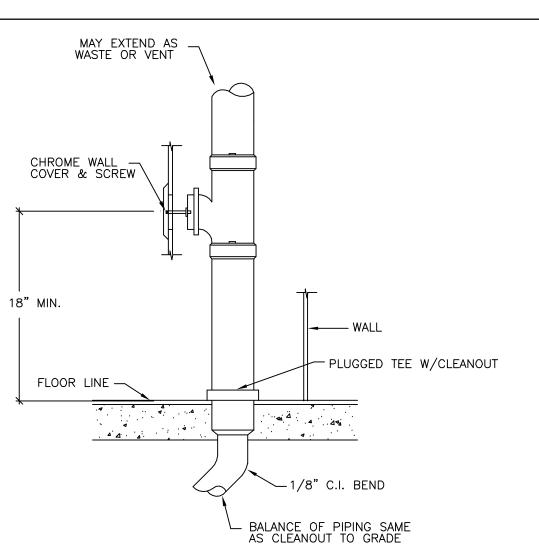
FIXTURE: SIOUX CHIEF HYDRA-RESTER

ISOLATION VALVE

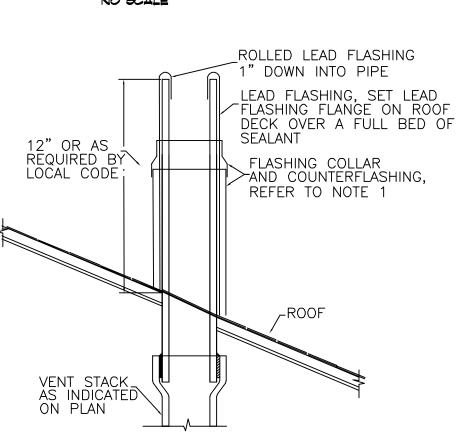
GRINNELL: 3810 BALL VALVE

GENERAL PLUMBING NOTES

- CONTRACTOR SHALL COMPLY WITH 2009 INTERNATIONAL PLUMBING CODE AND ALL APPLICABLE LOCAL CODES AND AMENDMENTS.
- CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO MINIMIZE CONFLICTS. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OWNER PROVIDED **EQUIPMENT**
- PLUMBING CONTRACTOR IS RESPONSIBLE FOR CONDENSATE DRAINS
- FROM AIR HANDLING UNITS. SLEEVE AND FIRE CAULK ALL PENETRATIONS OF RATED ASSEMBLIES.
- SLEEVE ALL PENETRATIONS OF SLAB.
- PROVIDE UNIONS AT WATER HEATERS. PROVIDE COUPLINGS TO ALL EQUIPMENT AS REQUIRED. PROVIDE PHYSICAL PROTECTION FOR METERS AND PIPING AROUND BUILDING.
- MAINTAIN 5' CLEARANCE BETWEEN WASTE AND WATER LINES.
- LOCATE WATER SHUT-OFF VALVE NEAR METER.
- PLUMBING CONTRACTOR TO COORDINATE VENT STACKS WITH OUTSIDE AIR INTAKES OF EQUIPMENT AND MAINTAIN AT LEAST 10'-0" CLEARANCE OR AS PER LOCAL CODE REQUIREMENTS.
- INSTALL GROUND CLEANOUTS FLUSH WITH GRADE. FURNISH WITH RECESSED COVERS SO AS TO NOT CREATE TRIPPING HAZARD.
- PROVIDE TRAP PRIMERS ON ALL DRAINS SUBJECT TO EVAPORATION AND IN REST ROOMS AND UTILITY ROOMS
- CONTRACTOR IS RESPONSIBLE TO INSURE ALL PLUMBING SYSTEMS AND EQUIPMENT ARE OPERATIONAL AT COMPLETION OF PROJECT.
- INSTALL DOUBLE CLEANOUTS AT EXTERIOR OF BUILDING AND AS REQUIRED BY LOCAL CODES. LOCATE ALL EXTERIOR CLEANOUTS AWAY FROM PEDESTRIAN TRAFFIC AREAS. INSTALL CLEANOUTS EVERY 80'.
- THE EQUIPMENT ROUGH-INS AS SHOWN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND PLACEMENT OF ROUGH-INS. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT INSTALLATION OF FIXTURES AND EQUIPMENT.
- INSTALLATION AND FIXTURES TO COMPLY WITH REQUIREMENTS OF THE ARCHITECHURAL BARRIERS ACT, ADA & TAS 9102.



WALL CLEANOUT DETAIL

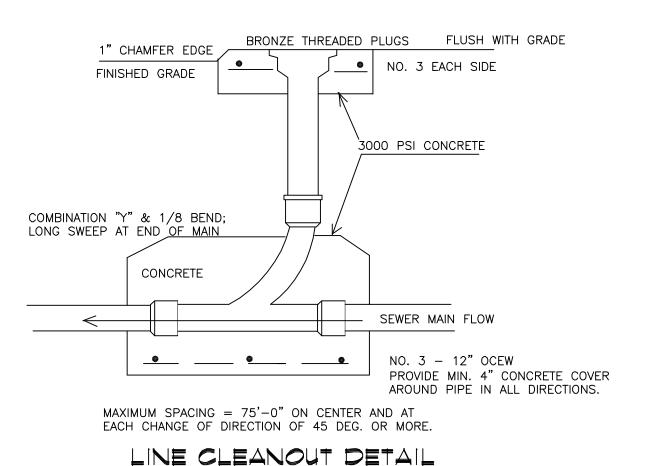


1. PLUMBING CONTRACTOR SHALL FURNISH A SUITABLE FLASHING AS RECOMMENDED BY THE ROOFING MANUFACTURER. FLASHING SHALL BE INSTALLED AND MADE WATERPROOF BY ROOFING CONTRACTOR IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS.

TYPICAL VENT THRU ROOF DETAIL

- 24" RADIUS MIN. 24", RADIUS MIN. -FLOOR

SECTION THRU TYPICAL FLOOR DRAIN



BRONZE THREADED PLUGS FLUSH WITH GRADE CHAMFER EDGE ____ NO. 3 EACH SIDE FINISHED GRADE 3000 PSI CONCRETE CONCRETE SEWER MAIN FLOW NO. 3 - 12" OCEW PROVIDE MIN. 4" CONCRETE COVER IN ALL DIRECTIONS AROUND PIPE.

> 2 WAY CLEANOUT DETAIL NO SCALE

INSTALL AT EXTERIOR OF BUILDING

NO SCALE

GENERAL HYAC NOTES

- A ALL DUCT DIMENSIONS SHOWN ARE INSIDE FREE AREA DIMENSIONS. R ALL DUCTWORK SHALL BE INSTALLED CONCEALED AS HIGH AS POSSIBLE UNLESS OTHERWISE SHOWN
- AIR DEVICES ARE SHOWN IN APPROXIMATE LOCATION ONLY. REFER TO ARCHITECT AND/OR ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- D PROVIDE FLEXIBLE DUCT CONNNECTIONS AT ALL EQUIPMENT CONNECTION POINTS. E CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON DRAWINS WITH
- ALL ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND PLUMBING DRAWINGS AND REPORT ANY DISCREPANCIES TO OWNER IMMEDIATELY. F FLEX DUCT TO BE CLASS I, R-6 INSULATION. MAX FLEX DUCT LENGTH IS 5 FEET.
- G HOUSEKEEPING PAD SIZE AND FLOOR DRAIN LOCATIONS SHALL BE COORDINATED WITH THE SIZE AND LOCATION OF THE EXACT EQUIPMENT BEING PROVIDED. EQUIPMENT SHOWN ON THE FLOOR PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL ARRANGEMENT AND SPACE ALLOCATIONS. THE CONTRACTOR SHALL VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTION IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE INSTALLED. DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ROUTING OF EQUIPMENT WITH ALL OTHER TRADES.
- K PROVIDE SCREEN FOR ALL FRESH AIR INTAKES.
- UPON COMPLETION, PROVIDE COMPLETE TEST AND BALANCE OF ALL EQUIPMENT TO MEET OWNER'S REQUIREMENTS.

PROVIDE FULL SIZE P-TRAP FOR ALL CONDENSATE DRAINS. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL CONDENSATE DRAINS.

APPLICABLE CODES ARE 2009 INTERNATIONAL MECHANICAL CODE AND CITY OF SAN ANGELO ORDINANCES.

FAN SCHEDULE			
UNIT NUMBER	PRV #1-16, #2-16		
AREA SERVED	COMPLEX #2		
MANUFACTURER	GREENHECK		
MODEL NUMBER	GB-081		
CFM	450		
SP (IN. WC)	.25		
FAN HP	1/4		
RPM	1200		
ELECTRICAL SVC	120/1/60		
DUCT SIZE	8" X 8"		
ROOF OPENING	14.5" SQ.		

NOTES: 1. FANS TYPE PRV TO BE FURNISHED WITH ROOF CURB, GRAVITY DAMPER & BIRDSCREEN.

- FANS MAY BE APPROVED EQUAL, PROVIDED ALL LOCAL, STATE AND FEDERAL CODES WHICH ARE APPLICABLE ARE MET R/R EXHAUST FANS TO OPERATE CONTINUOUSLY.
- 3. VERIFY ROOF OPENING DIMENSIONS WITH FAN MANUFACTURER. 4. REFER TO SHEET MP-4 FOR SPECIFICATION OF PRV #3-16 FOR THE VENT HOOD.

 \bowtie GATE VALVE \bowtie GLOBE VALVE DRINKING FOUNTAINS AND BALL VALVE WATER COOLERS: FRONTAL APPROACH SPOUT \mathbb{M} MOTORIZED VALVE \triangleright PRESSURE REDUCING VALVE KNEE CLEARANCE SIDE APPROACH SPOUT **|** PRESSURE RELIEF VALVE \bowtie BUTTERFLY VALVE WATER CLOSETS TOP OF SEAT THREE-WAY MOTORIZED VALVE GRAB BARS SOLENOID VALVE FLUSH CONTROLS FLOW REGULATOR BALANCE VALVE URINALS: \sim CHECK VALVE TOP OF RIM BALANCING VALVE FLUSH CONTROLS -++-GAUGE COCK LAVATORIES AND SINKS: A.S.M.E. TEMPERATURE & PRESSURE RELIEF VALVE TOP OF LAVATORY PLUG VALVE KNEE CLEARANCE CAP OR PLUG POINT OF CONNECTION, NEW TO EXISTING MIRRORS: TOP OF REFLECTIVE SURFACE GAS COCK BOTTOM OF REFLECTIVE SURFACE PRESSURE GAUGE THERMOMETER SHOWERS: TOP OF SEAT LOW, MEDIUM, HIGH PRESSURE GAS -G-MPG-HPG-SHOWER CONTROLS AUTOMATIC AIR VENT TOP OF GRAB BARS STRAINER WITH DRAIN VALVE $\overline{}$ CONTROLS/OPERATING MECHANISMS: FLEXIBLE PIPE CONNECTION FRONT **---**||----UNION SIDE PIPE ANCHOR TELEPHONE: → WH WALL HYDRANT HIGHEST OPERABLE PART, FRONT FLOW SWITCH HIGHEST OPERABLE PART, SIDE THERMOSTAT \bigcirc HUMIDISTAT SANITARY SEWER LINE — ss — ○ мн MANHOLE ——сw —— COLD WATER LINE HOT WATER LINE ——— HW ——— VENT HOOD —— HWR —— HOT WATER RECIRCULATING LINE 180 HOT WATER LINE ------180 ------HOT WATER SUPPLY LINE ——HWS-—— HYDRONIC SYSTEM SUPPLY LINE ——HSS —— -----HSR -----HYDRONIC SYSTEM RETURN LINE CHILLED WATER SUPPLY LINE -----cws-----FIRE PROTECTION RISER DIAGRAM -----CWR------CHILLED WATER RETURN LINE _____V ____ HOT WATER LINE--EXIST. TO BE REMOVED ----- HW -----HOT WATER RECIRCULATING LINE ------ HWR -----180 HOT WATER LINE ------ 180 -----____cw____ COLD WATER LINE--EXIST. TO BE REMOVED ---ss--SANITARY SEWER--EXIST. TO BE REMOVED VENT--EXIST TO BE REMOVED ____v __ _ LAVORATORY, SINK ELECTRIC WATER COOLER, DRINKING FOUNTAIN WATER CLOSET EXIST. LAV OR SINK TO BE REMOVED EXIST. EWC TO BE REMOVED EXIST. URINAL TO BE REMOVED EXIST. WATER CLOSET TO BE REMOVED \bigcirc C FLOOR DRAIN W/ TRAP AND GRATE \bigcirc C EXIST. FLOOR DRAIN TO BE REMOVED FREEZE PROOF HOSE BIBB D.C.O. - DOUBLE CLEAN OUT $\otimes\otimes$ \otimes C.O. — CLEAN OUT G.C.O. — GROUND CLEAN OUT --WCO-WALL CLEAN OUT — CD CONDENSATE DRAIN LINE WITH FLOW DIRECTION **—** FLOW DIRECTION — A —— AIR LINE $--\otimes--$ CUT-OFF VALVE STORM SEWER LINE —— STS—— 90 ELL UP \bigcirc +-- \ominus 90 ELL DOWN $+\bigcirc+$ TEE DROPPING DOWN $+\bigcirc+$ TEE RISING UP

PLUMBING LEGEND

DESCRIPTION

SYMBOL

NOTE: NOT ALL SYMBOLS ARE USED

Diffuser schedule					
-1	24 x 24	EXHAUST	WHITE	TITUS 50R	EGGCRATE, ALUMINUM FLANGED PANEL
9 –1					DOOR GRILLE

MEP PROJECT #1618 **Power Systems P.O. Box 2863 San Angelo, Texas 76902

325-659-2235 FIRM NO. F-6257 If this document is not SIGNED and DATED on the seal, then it is NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION



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Sheet Number MP-1 2 OF 9

MECHANICAL/PLUMBING COVER SHEET

250-02-0516 Project No. AUGUST 30, 2016

Revised

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) Xa 25

TDLR MOUNTING

ADULT

36" MAX

27" MIN.

36" MAX

17"-19"

33"-36"

44" MAX

17" MAX

44" MAX

34" MAX

27" MIN.

74" MIN.

40" MAX.

17"-19"

33"-36"

48" MAX

54" MAX

SIZE AS REQUIRED BY CODE

CO2 CANISTERS

EMERGENCY PULL TO ACTIVATE FIRE PROTECTION

SYSTEM AND SHUT OFF GAS TO APPLIANCES.

ANSUL FIRE PROTECTION SYSTEM DISCHARGE

38" MIN-48" MAX

15" MIN-48" MAX

9" MIN-54" MAX

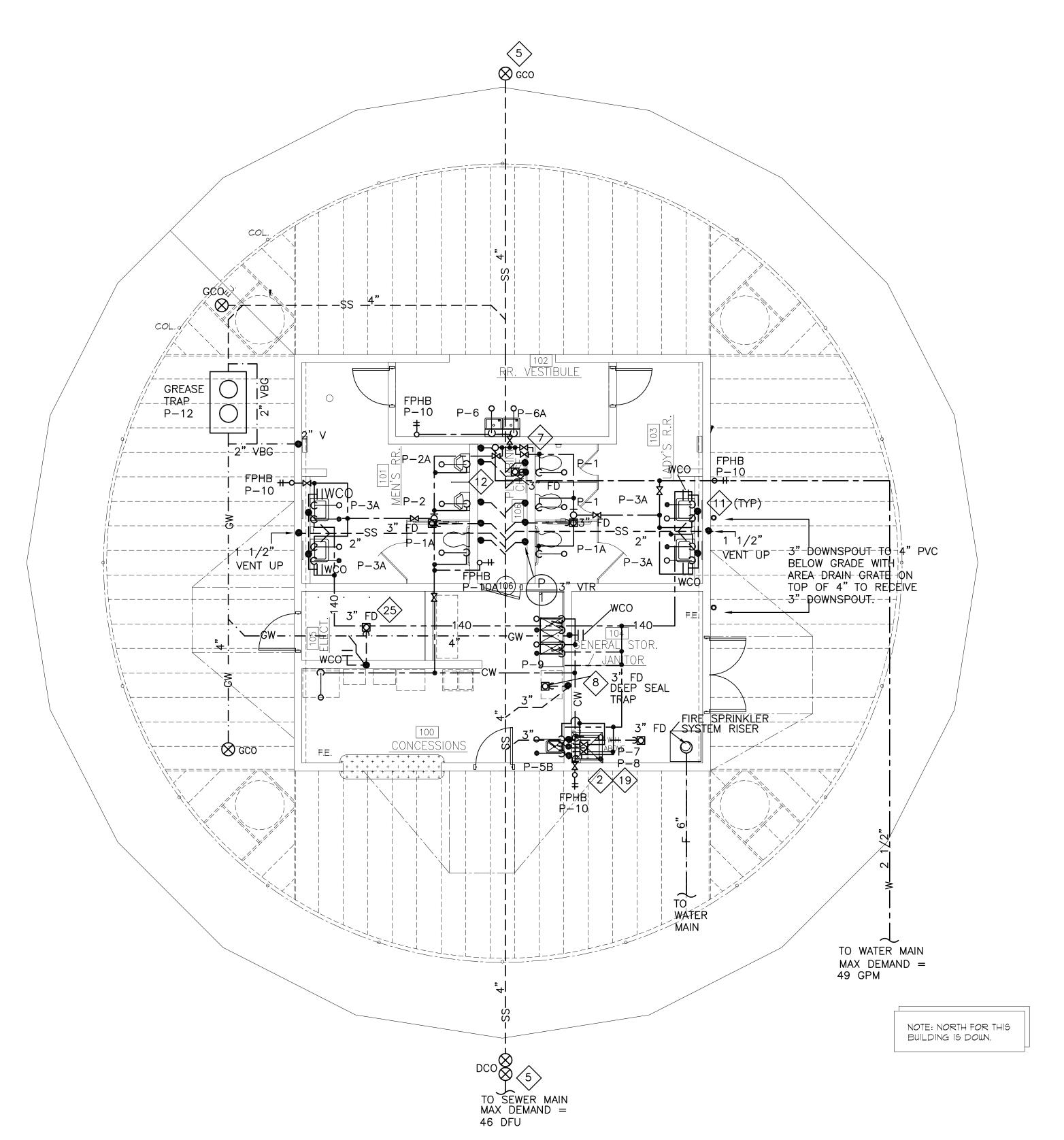
TABLE OF FIXTURE

REQUIREMENTS

HEIGHT (TO OUTLET)

HEIGHT (TO OUTLET)

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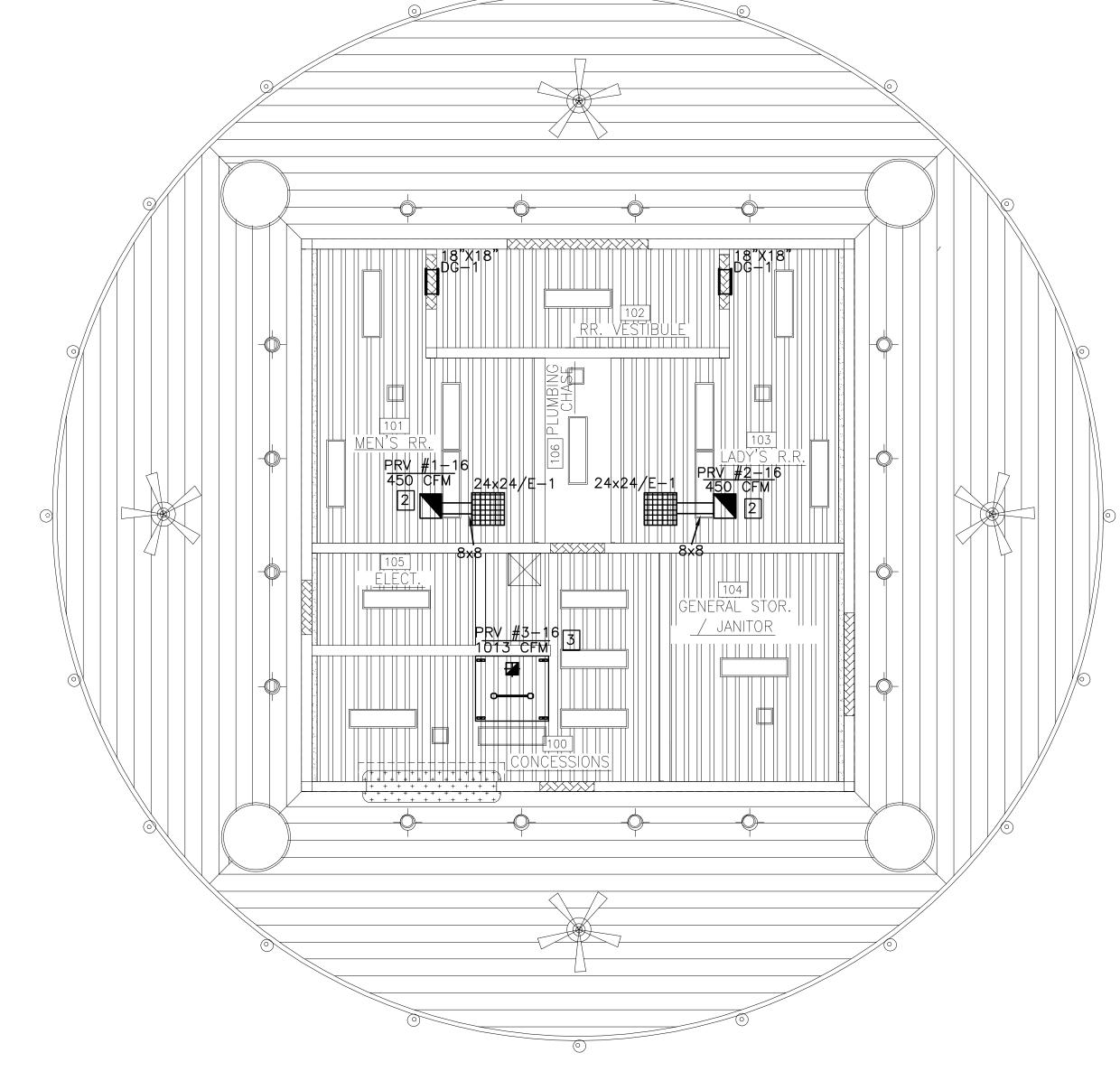


<u>Plumbing Plan</u>

PLUMBING NOTES INDICATED BY "V":

- (1.) PROVIDE PHYSICAL PROTECTION FOR EQUIPMENT OUTSIDE BUILDING.
- $\langle 2 \rangle$ SET WATER HEATER AT 140 DEG F. INSTALL ON FLOOR NEXT TO MOP SINK.
- (3) CONTRACTOR IS RESPONSIBLE TO INSURE ALL PLUMBING SYSTEMS AND EQUIPMENT ARE OPERATIONAL AT COMPLETION OF PROJECT.
- (4) DO NOT SCALE DRAWINGS. FIELD VERIFY FIXTURE AND UTILITY LINE LOCATIONS.
- (5) LOCATE CLEANOUTS BEYOND PEDESTRIAN WALK WAYS.
- (6) BACKFLOW PREVENTER REQUIRED ON HOSE BIBBS AND MOP SINKS.
- (7) PROVIDE MEANS TO DRAIN ALL SUPPLY LINES ON PROJECT.
- 8 FILL WITH VEGETABLE OIL.
- 9 PROVIDE SUPPLY STOPS AT EACH FIXTURE RISER. ALL EXPOSED LINES TO BE CHROME PLATED.
- GENERAL CONTRACTOR AND PLUMBING CONTRACTOR SHALL VERIFY ALL REQUIREMENTS OF THIS PROJECT BEFORE BIDDING AND PROCEEDING WITH WORK.
- PROVIDE WATTS MODEL USG-B THERMOSTATIC MIXING VALVE AT ALL HANDWASHING FIXTURES. PROVIDE CHECKSTOPS, LIMIT SET AT 110° F.
- ALL WATER SERVICES TO HAVE PRESSURE REDUCING VALVE SET AT 80 PSI. IF CITY WATER PRESSURE EXCEEDS 80 PSI.
- 13 REFER TO SHEET MP-1 FOR PLUMBING FIXTURE SPECIFICATIONS. (14) INSULATE WATER LINES PER SPECS.
- 15 INSTALL WATER HAMMER ARRESTORS PER ANSI A112.
- VERIFY WATER AND WASTE REQUIREMENTS WITH THE CITY OF SAN ANGELO. CONTACT JOE MANGREM AT 325-657-4547 FOR CHARGES AND FEES. THIS PROJECT WILL HAVE FEES FOR WATER AND SEWER SERVICES.
- (17) WATER HEATER TO BE STATE WITH 6 YEAR WARRANTY.

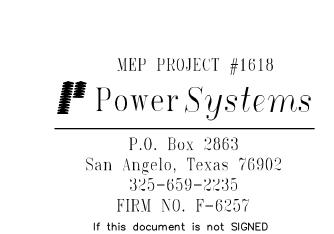
- (18) CONTACT LOCAL UTILITIES FOR APPLICABLE FEES, PERMITS AND CHARGES FOR THIS PROJECT.
- (19) INSTALL OATEY MODEL 34082 METAL DRAIN PAN UNDER WATER HEATER.
- ROUTE PRESSURE AND RELIEF VALVE DRAIN TO MOP SINK.
- SEAL ALL PENETRATIONS OF RATED WALLS ACCORDING TO CODE WITH APPROVED MATERIALS.
- 21> PROVIDE CLEANOUTS EVERY 50' INSIDE BUILDINGS; EVERY 100' OUTSIDE.
- (22) ALL FAUCETS TO BE SUPPLIED WITH BRASS STEMS.
- (23) INCREASE VTR'S PER LOCAL CODES AND FROST REQUIREMENTS.

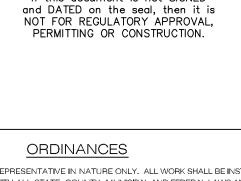


MECHANICAL PLAN

MECHANICAL NOTES INDICATED BY "...":

- 1 EXHAUST FANS ABOVE CEILING FOR BATHROOMS TO OPERATE CONTINUOUSLY. SWITCH WITH BREAKER. MEN'S RESTROOM EXHAUST BASED ON 2 CFM/SQ. OR 1 AIR CHANGE EVERY 5 MINUTES. WOMEN'S RESTROOM EXHAUST BASED ON 2 CFM/SQ. FT. OR 1 AIRCHANGE EVERY 5 MINUTES.
- 2 8"X8" EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN. PROVIDE OFFSET AND TRANSITION AS REQUIRED. BATH EXHAUST DUCTS & REGISTERS TO BE ALUMINUM.
- 3 FURNISH VENT HOOD AND EXHAUST FAN PRV #3-16 UNDER ALTERNATE #1. REFER TO SHEET MP-4 FOR DETAILS. KITCHEN HOOD EXHAUST DUCT SHALL BE WELDED, BLACK IRON. MAINTAIN 18" CLEARANCE TO COMBUSTIBLES OR PROVIDE 1-HOUR RATED ENCLOSURE FOR DUCT.





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PLAN NORTH

AUGUST 30, 2016 Sheet Number MP-2 3 OF 9

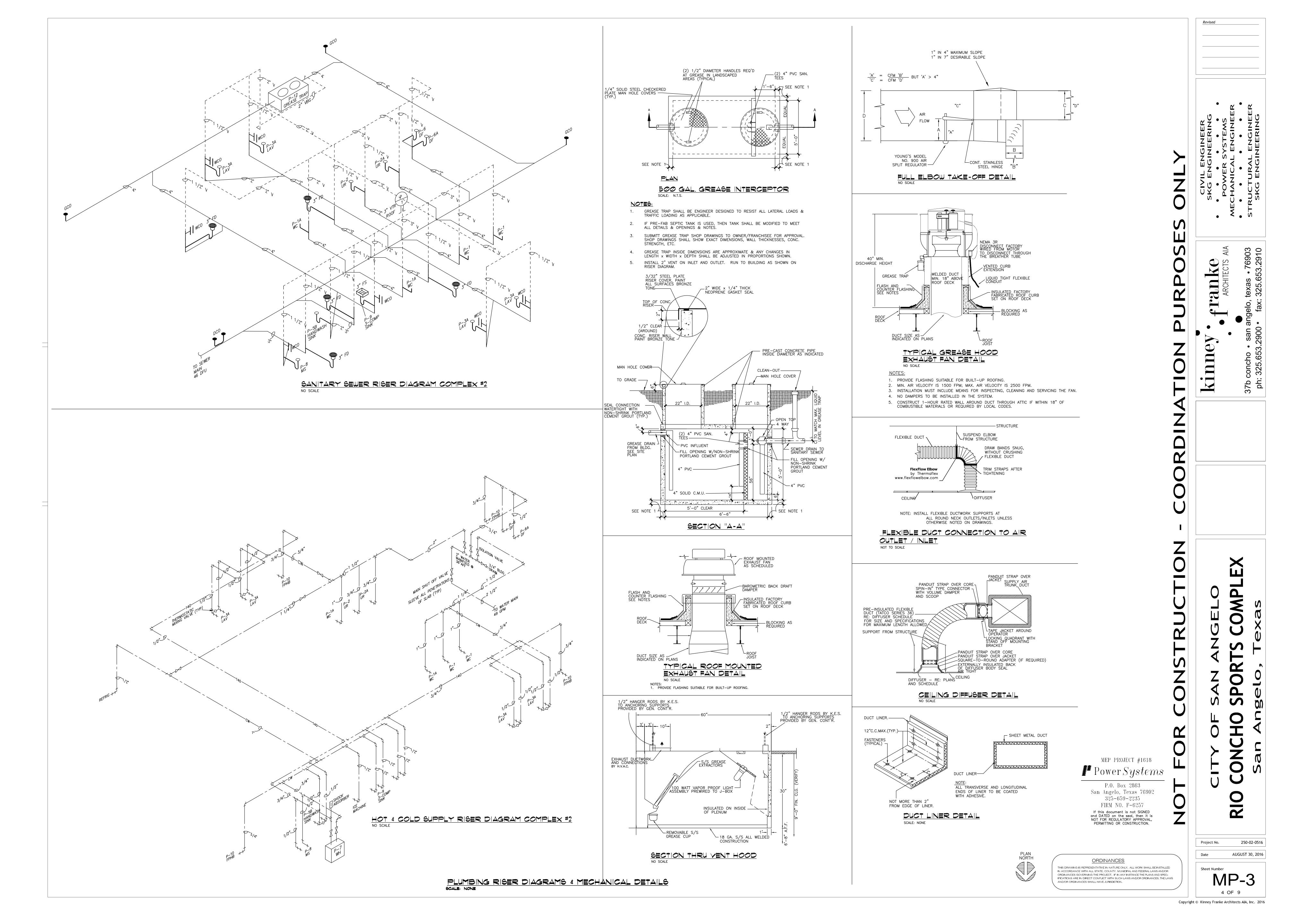
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MECHANICAL/PLUMBING PLAN - COMPLEX #2

IFICATIONS ARE IN DIRECT CONFLICT WITH SUCH LAWS AND/OR ORDINANCES, THE LAWS

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Project No.



FEATURES:

– UL762

- ROOF MOUNTED FANS - RESTAURANT MODEL

- AMCA SOUND AND AIR CERTIFIED

GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST

ABNORMAL FLARE-UP TEST

AN UNSAFE CONDITION.

OPTIONS:

195

410

470

- DUCTWORK BETWEEN EXHAUST RISER ON HOOD

AND FAN (BY OTHERS)

RO

16

GREASE BOX HINGED FAN

PITCHED CURB INSULATED CURB

HIGH HEAT OPERATION 300°F (149°C)

WOULD CAUSE UNSAFE OPERATION.

AT 600°F (316°C) FOR A PERIOD OF

15 MINUTES WITHOUT THE FAN BECOMING

WEATHERPROOF DISCONNECT

- WIRING FROM MOTOR TO DISCONNECT SWITCH

WHILE EXHAUSTING AIR AT 300°F (149°C)

UNTIL ALL FAN PARTS HAVE REACHED
THERMAL EQUILIBRIUM, AND WITHOUT ANY
DETERIORATING EFFECTS TO THE FAN WHICH

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS

DAMAGED TO ANY EXTENT THAT COULD CAUSE

EXHAUST FAN MUST OPERATE CONTINUOUSLY

TYPE

Incandescent Light

GREASE DRAIN

18 1/2 12 1/8

21 | 21 1/2 13 1/4

28 | 23 1/2 16 1/2

33 | 30 5/8 | 23 7/8 | 28

44 1/2 47 1/2 30 3/4 36

28 | 29 1/2 | 18

40 | 33 1/2 | 24

30 1/2 33 3/4 2 24 3/4 23 14 7/8 20

QTY. HEIGHT | LENGTH | QTY

G=R+3"

CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

25 1/4 27 1/4 2

33 3/4 39 3/8 2

33 3/8 38 7/8 2

52 3/4 2

37 1/2 43 3/8

49 1/2 66

NCA10FA | 27 1/4 | 30 1/4 | 2

 2
 16"
 16"

 1
 16"
 20"

ALUM. BAFFLE WITH

HANDLES AND HOOK

NCAFA SERIES UPBLAST EXHAUST FANS (UL762)

YES 258 LBS.

Hood #1

0

_____4' 6.00"Nom./4' 6.50"OD_____

<u>PLAN VIEW - 4' 6.00" LONG 4824ND-2</u>

NCAFA-UL762 REV.#5 08/20/2003

- VENTED

CURB

20 GAUGE

— 3" FLANGE

- ROOF OPENING

DIMENSIONS

STEEL CONSTRUCTION

EXHAUST RISER —100W VAPORPROOF INCANDESCENT LIGHT 3" STANDOFF -IT IS THE RESPONSIBILITY OF THE ARCHITECT/OWNER TO ENSURE THAT THE HOOD CLEARANCE -16" U.L. CLASSIFIED BAFFLE-TYPE FROM LIMITED-COMBUSTIBLE GREASE FILTERS AND COMBUSTIBLE MATERIALS IS IN COMPLIANCE WITH LOCAL CODE REQUIREMENTS L GREASE DRAIN WITH REMOVABLE CUP EQUIPMENT BY OTHERS

SECTION VIEW - MODEL 4224-ND-2

PLENUM PROTECTION DUCT PROTECTION DETECTORS -DETECTION LINE – APPLIANCE PROTECTION NOZZLE AGENT LINE SAMPLE OF A CAPTIVE AIRE PROVIDED FIRE SUPPRESSION SYSTEM WITH REMOTE MOUNTED AUTOMAN

WITH AGENT TANK ENCLOSED PULL STATION

REMOTE

MANUAL

SAN ANGELO NEW SPORTS COMPLEX [] LOCATION JOB # *DATE* 02/21/2007 DWG # SANANGELONEWSP DRAWN BY

MEP PROJECT #1618

P.O. Box 2863 325-659-2235 FIRM NO. F-6257 If this document is not SIGNED and DATED on the seal, then it is NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

Power Systems San Angelo, Texas 76902

PLAN NORTH <u>ORDINANCES</u> THIS DRAWING IS REPRESENTATIVE IN NATURE ONLY. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL STATE, COUNTY, MUNICIPAL AND FEDERAL LAWS AND/OR ORDINANCES GOVERNING THE PROJECT. IF IN ANY INSTANCE THE PLANS AND SPEC-IFICATIONS ARE IN DIRECT CONFLICT WITH SUCH LAWS AND/OR ORDINANCES, THE LAWS AND/OR ORDINANCES SHALL HAVE JURISDICTION.

AUGUST 30, 2016 Sheet Number

250-02-0516

Project No.

Revised

MECHANICAL HOOD DETAILS Scale: None

FAN MODEL NCA08FA NCA10FA | 19 1/2 | 20 NCA14FA NCA16FA | 26 1/2| NCA18FA 26 1/2 NCA24FA NCA30FA 43 NCA36B

CURB DIMENSIONAL DATA

PITCHED CURBS ARE AVAILABLE

EXAMPLE: 7/12 PITCH = 30° SLOPE

FOR PITCHED ROOFS.

SPECIFY PITCH:

FOR QUESTIONS, CALL THE SOUTH TEXAS REGIONAL OFFICE 6100 BANDERA ROAD #404"F" SAN ANTONIO, TX. 78238 PHONE: (210) 647-7244, (800) 948-1577 FAX: (210) 647-7166

SYSTEM CONTROL AUTOMAN

REV. 1.00 *SCALE* 8.5" × 11"

FAN INFORMATION - PRV #3-16

NCAFA BELT DRIVE

FAN MODEL

NCA08FA

NCA14FA

NCA16FA

NCA18FA

NCA30FA

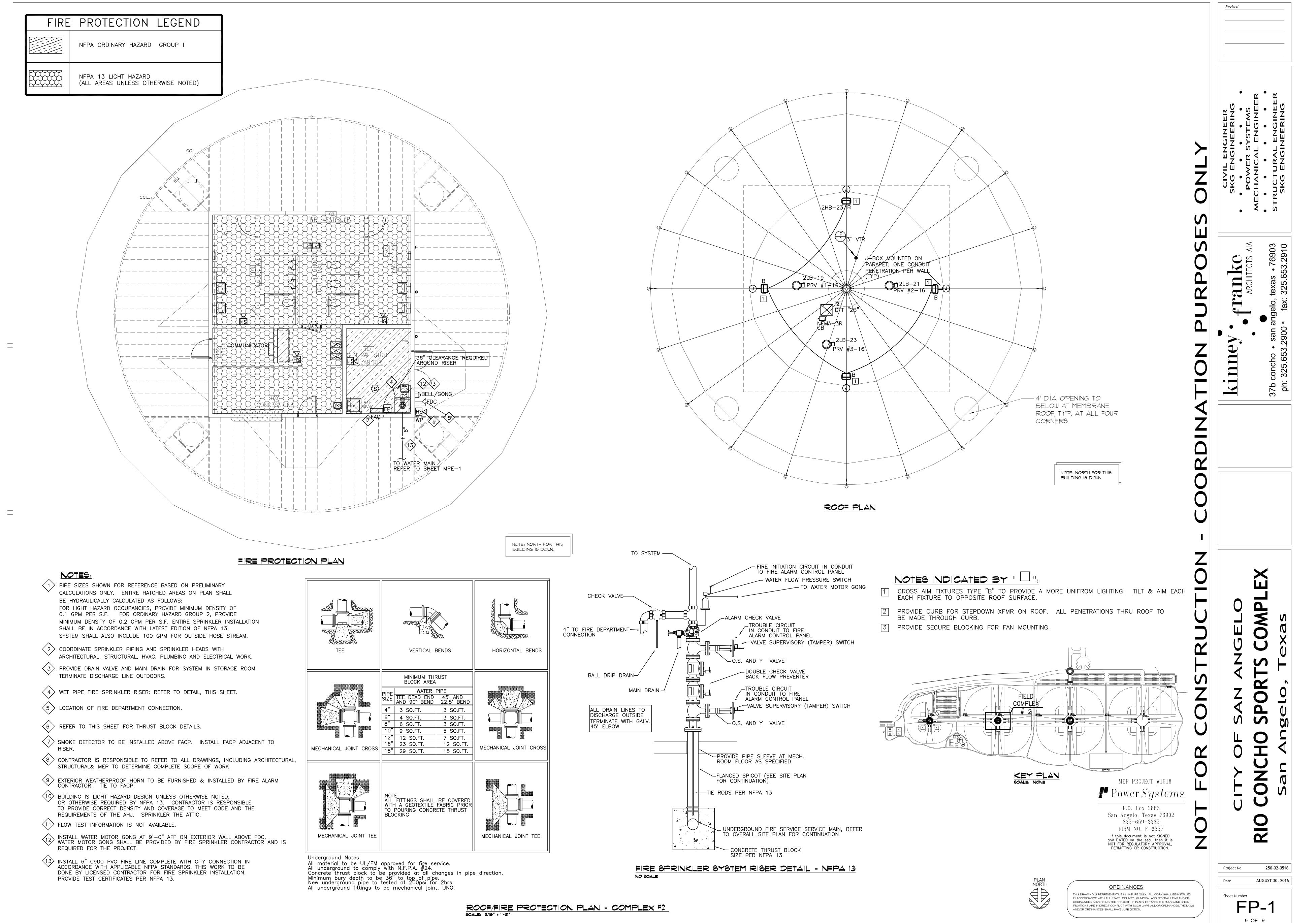
FAN	FAN UNIT MODEL #	EXHAUST FAN								SUPPLY FAN										
FAN UNIT NO.		MODEL	TAG	CFM	S.P.	RPM	H.P.	Ø	VOLT	FLA	BLOWER	HOUSING	TAG	CFM	S.P.	RPM	H.P.	Ø	VOLT	FLA
1	NCA10FA	NCA10FA		1013	-0.500"	967	0.333	1	115	7.0										

FAN OPTIONS

OPTION (Qty. - Descr.) 1 -Grease Box

CURB ASSEMBLIES NO FAN ITEM

SIZE 19.500"W x 19.500"L x 20.000"H Vented Hinged Curb



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