

- NOTES:
1. PROVIDE WOOD BLOCKING IN WALLS FOR ALL RESTROOM GRAB BARS & ACCESSORIES
 2. PROVIDE INSULATION WRAPS / COVERS FOR ALL EXPOSED LAVATORY WATER & DRAIN LINES
- TOILET ACCESSORIES (BOBRICK)
1. CHANNEL-FRAME MIRRORS
 2. GRAB BARS: 1.5" DIA 18 GA TYPE 304 STAINLESS STEEL
 3. PAPER TOWEL DISPENSERS (1) B-2620 & (1) B-2860
 4. SOAP DISPENSERS (1) B-2111 & B-5050 (1)

PLAN NOTES

Gray Screen SW 7071

COLOR: SW 7071 GRAY SCREEN

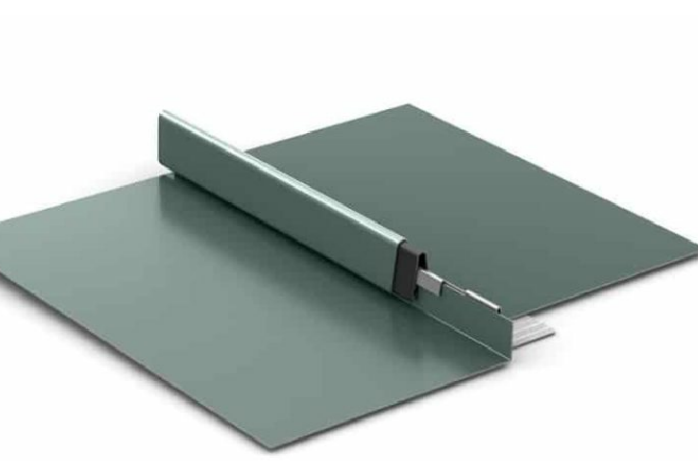


KNOCK DOWN TROWEL FINISH

STUCCO WALL ONE COAT SYSTEM



UTILITY FACE BRICK
GLEN GERRY BRICK COMPANY
EBONITE SMOOTH
UTILITY SIZE



BERRIDGE TEE PANEL
STANDING SEAM ROOF PANELS
COLOR CHARCOAL GREY

WALL TYPES

- A 5/8" GYP BD ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO STRUCTURE ABOVE W/SOUND BATT INSULATION
- B 5/8" GYP BD ON 6" 20 GA. METAL STUDS @ 16" O.C. TO STRUCTURE ABOVE W/SOUND BATT INSULATION

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Christopher R. Bell

STATE OF MISSOURI
CHRISTOPHER R. BELL
NUMBER
A-6275
REGISTERED ARCHITECT
06-14-22
CHRISTOPHER R. BELL - ARCHITECT
A-6275

ROSE
DESIGN GROUP INC

ARCHITECTS ■ PLANNERS

A Division of Rose Design Build

913-782-0777 FAX: 913-782-0998

P.O. BOX 100 OLATHE, KS 66051

KANSAS STATE CERTIFICATE OF AUTHORITY # A-63 www.BuiltWithRose.com

CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR:

CRASH CHAMPIONS

451 SE OLDHAM PARKWAY UNIT C

LEE'S SUMMIT, MISSOURI

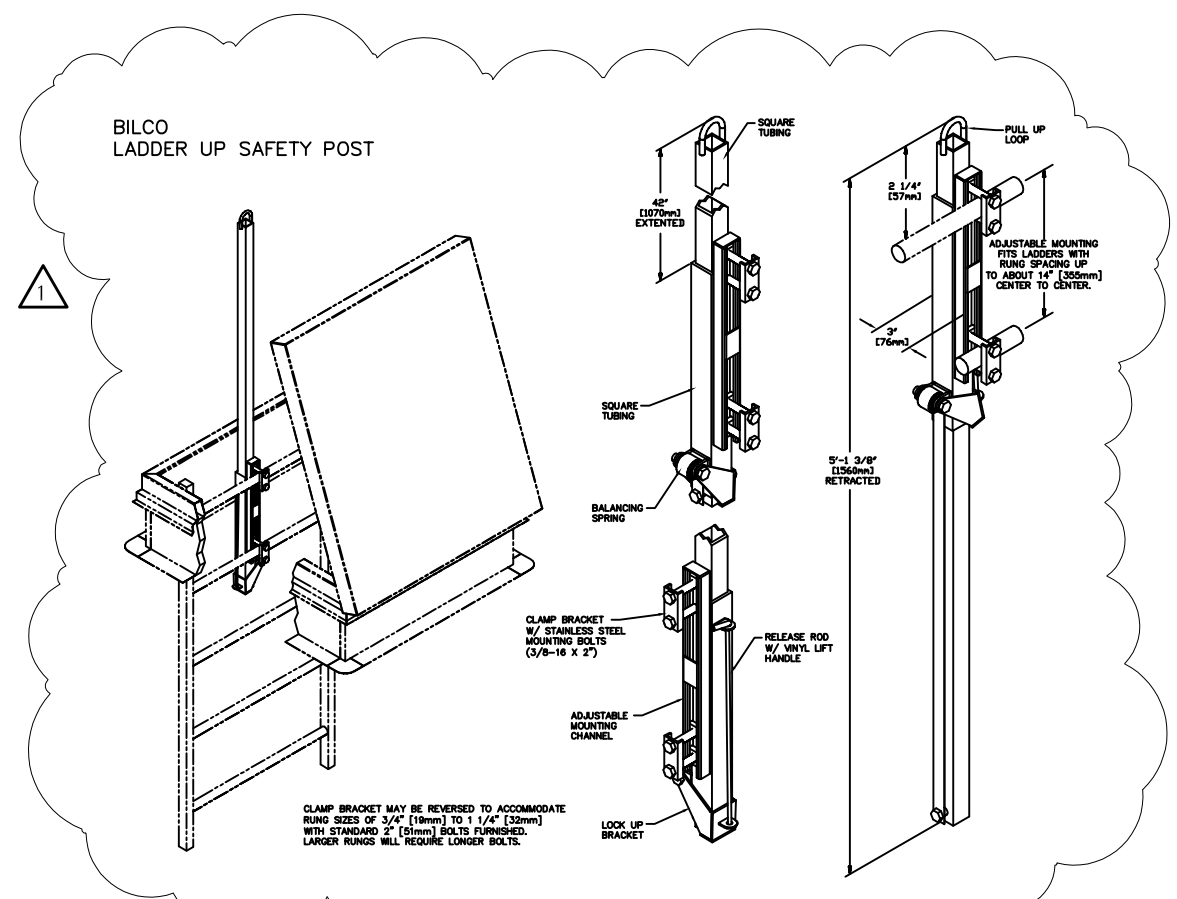
NO.	DESCRIPTION	DATE
1	CITY REVIEW COMMENTS	07-07-22
2	CITY REVIEW COMMENTS	07-13-22
3	ADD A/C	09-15-22

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 22

SHEET NUMBER

A2.0

PHASE I
FLOOR PLAN



RIGID FOAM INSULATION BOARD SPEC:
GAF
ENERGYGUARD, 25 PSI
POLYISO INSULATION
GLASS FIBER-REINFORCED CELLULSIC
FELT FACERS
OR APPROVED EQUAL

RIGID FOAM INSULATION BOARD SPEC:
GAF
ENERGYGUARD, 25 PSI
POLYISO INSULATION
GLASS FIBER-REINFORCED CELLULSIC
FELT FACERS
OR APPROVED EQUAL

STATE OF MISSOURI
CHRISTOPHER R. B. AIA
REGISTERED ARCHITECT
NUMBER A-6275

The logo for Rose Design Group, Inc. features the word "ROSE" in large, bold, red capital letters with a white outline. Below it, the words "DESIGN GROUP" are written in white capital letters inside a grey rectangular box, followed by "INC" in smaller white capital letters to the right of the box.

**PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI**

NO.	DESCRIPTION	DATE
1	CITY REVIEW COMMENTS	11-10-21
2	ADDED RTU'S FOR SHOP	09-19-22

PROJECT NUMBER	21009
DATE ISSUED:	10 / 04 / 21
SHEET NUMBER	

A2.2

ROOF PLAN

Sep 18, 2022 -- 3:06pm -- USER: ScottGroshans
C:\Users\ScottGroshans\OneDrive\Engineering\Dropbox\5BY5\ACTIVE PROJECTS\202200038\Crash Champions Lees Summit -- Rose\Bases-CAO\202200038.MECH.dwg
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LINE TYPES LEGEND:

- NEW
--- NEW — ON ROOF
- - - EXISTING
- - - EXISTING — ON ROOF
- - - DEMOLITION

DUCTWORK LEGEND:

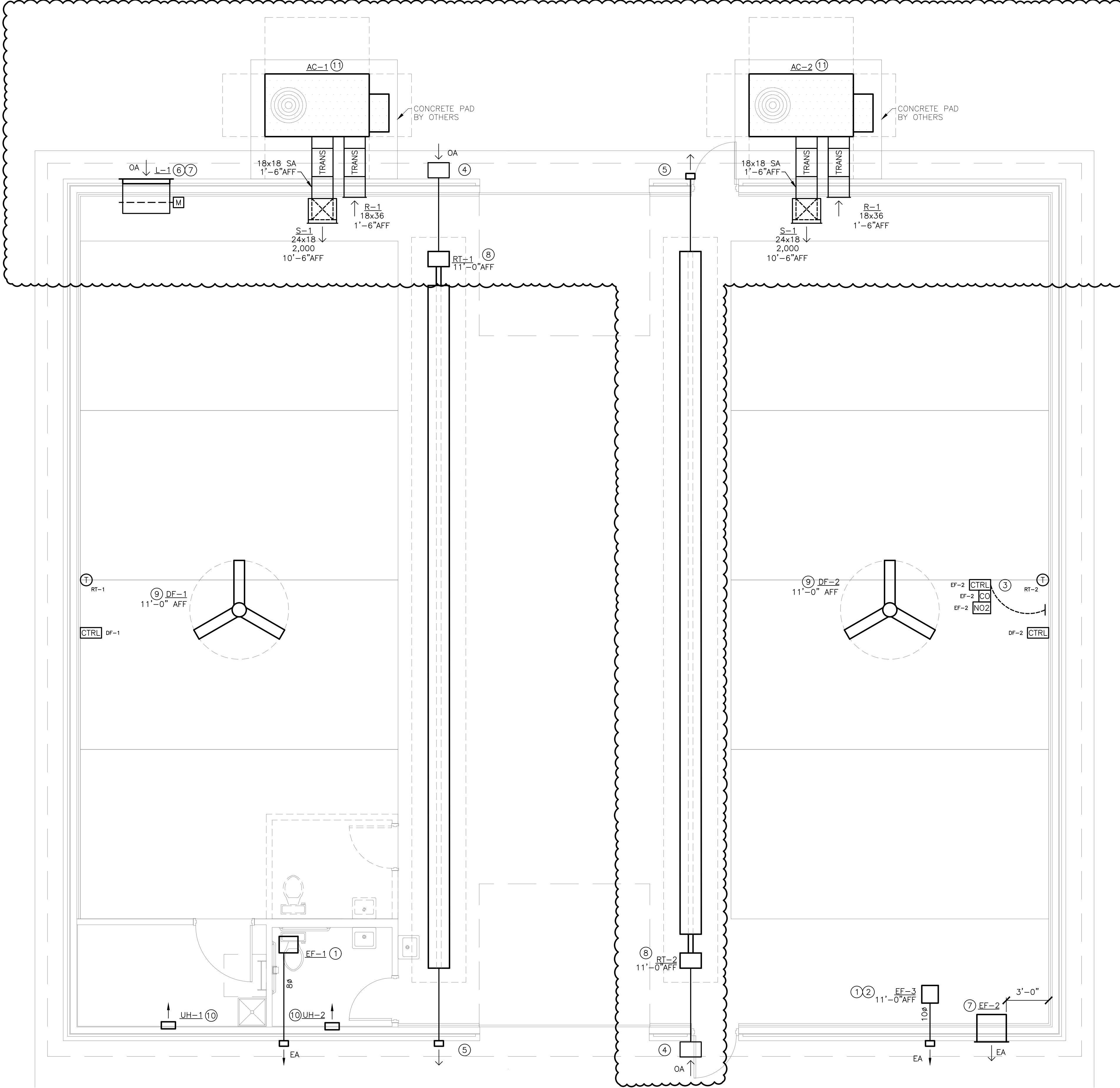
- DUCT (SINGLE LINE)
= DUCT (DOUBLE LINE)
○ → ROUND O/A OR S/A DOWN
⊗ → ROUND O/A OR S/A UP
○ → ROUND E/A OR R/A DOWN
⊗ → ROUND E/A OR R/A UP
▭ → RECTANGULAR O/A OR S/A DOWN
▭ → RECTANGULAR O/A OR S/A UP
▭ → RECTANGULAR E/A OR R/A DOWN
▭ → RECTANGULAR E/A OR R/A UP
⊗ O/A OR S/A DIFFUSER
▭ E/A OR R/A GRILLE
⊗ → AIR DEVICE WITH FLEX DUCT CONNECTION
⊗ → AIR DEVICE WITH HARD DUCT CONNECTION
⊗ FLEXIBLE CONNECTION TO EQUIPMENT
↓ DUCT BREAK/CONTINUATION
= MANUAL BALANCING DAMPER
M MOTOR-OPERATED DAMPER
⊗ BACKDRAFT DAMPER
F FIRE DAMPER
S FIRE/SMOKE DAMPER
S SMOKE DAMPER
T THERMOSTAT
CO CARBON MONOXIDE SENSOR
CTRL CONTROLLER
NO2 NITROGEN DIOXIDE SENSOR

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG
○ PLAN NOTE
⊗ CONNECT TO EXISTING
→ AIR FLOW DIRECTION
S-1 G/R/D TAG
80 NECK SIZE
300 AIR FLOW (CFM)

ABBREVIATIONS LEGEND:

- AFF ABOVE FINISHED FLOOR
APD AIR PRESSURE DROP
CFM CUBIC FEET PER MINUTE
EA EXHAUST AIR
EF EXHAUST FAN
ESP EXTERNAL STATIC PRESSURE
FPM FEET PER MINUTE
HC HEATING CAPACITY
HP HORSEPOWER
IN.WG INCHES WATER GAUGE
MAX MAXIMUM
MBH 1,000 BTUH
MIN MINIMUM
NC NOISE CRITERIA
OA OUTDOOR AIR
QTY QUANTITY
TSP TOTAL STATIC PRESSURE
VEL VELOCITY



1 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

MECHANICAL PLAN NOTES:

- ROUTE EXHAUST DUCT OF SIZE INDICATED ON PLAN FROM EXHAUST FAN THROUGH WALL AS SHOWN. PROVIDE WALL PENETRATION AND VENT CAP PER MANUFACTURER'S RECOMMENDATIONS. LOCATE DISCHARGE AT MINIMUM OF 10'-0" FROM ANY BUILDING OPENINGS OR OUTDOOR AIR INTAKES.
- SUSPEND INLINE EXHAUST FAN FROM STRUCTURE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE CARBON MONOXIDE / NITROGEN DIOXIDE DETECTION SYSTEM, MONOXIVENT MODEL # FDS-SA-CO-NO OR EQUAL, WITH CONTROLLER AND QUANTITY OR SENSORS AS RECOMMENDED BY THE MANUFACTURER. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- PROVIDE 4" COMBUSTION AIR INTAKE THROUGH WALL. TERMINATE WITH KIT FURNISHED WITH TUBE HEATER. REFER TO TUBE HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR INTAKE MATERIAL REQUIREMENTS.
- PROVIDE 4" COMBUSTION AIR EXHAUST THROUGH WALL. TERMINATE WITH KIT FURNISHED WITH TUBE HEATER. REFER TO TUBE HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR COMBUSTION EXHAUST MATERIAL REQUIREMENTS.
- PROVIDE MOTOR OPERATED DAMPER IN LOUVER AS SHOWN. MATCH DAMPER SIZE TO LOUVER FACE DIMENSIONS. ACTUATOR TO BE 120 VOLT, SPRING CLOSED. INTERLOCK DAMPER WITH GAS DETECTION SYSTEM.
- INSTALL INDICATED EQUIPMENT AS HIGH AS POSSIBLE ON EXTERIOR WALL.
- INSTALL RADIANT TUBE HEATER WITH DEFLECTOR SHIELD DIRECTED AT 30° ANGLE TOWARDS EXTERIOR WALL.
- COORDINATE INSTALLATION OF HVLS FAN WITH OTHER TRADES. MAINTAIN OPERATIONAL AND MAINTENANCE CLEARANCES AS REQUIRED BY MANUFACTURER.
- LOCATE UNIT HEATER ON WALL WHERE SHOWN, MIN 1'-0" AFF. INSTALL PER MANUFACTURER'S REQUIREMENTS.
- INSTALL PACKAGED UNITARY AIR CONDITIONING UNIT ON EQUIPMENT PAD WITH CURB. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. INSTALL PER MANUFACTURER'S REQUIREMENTS.



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MO LICENSE # PE-2019012798



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KANSAS STATE CERTIFICATE OF AUTHORITY # A-83 www.BuildWithRose.com



PROPOSED BODY SHOP BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	06 / 14 / 2022
1	CITY COMMENTS	07 / 07 / 2022
2	CITY COMMENTS	07 / 13 / 2022
3	SHOP AC REVISION	09 / 19 / 2022

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 2022
SHEET NUMBER

M1.0

MECHANICAL PLAN

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C:\Users\ScottGroshans\OneDrive\Documents\Projects\202200038 - Crash Champions Lees Summit - Rose\Bose-CAD\202200038 PLUM.dwg
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LINETYPES LEGEND:

- NEW — ABOVE SLAB
- - - NEW — BELOW SLAB
- EXISTING — ABOVE SLAB
- - - EXISTING — BELOW SLAB
- - - - - DEMOLITION

PIPING LEGEND:

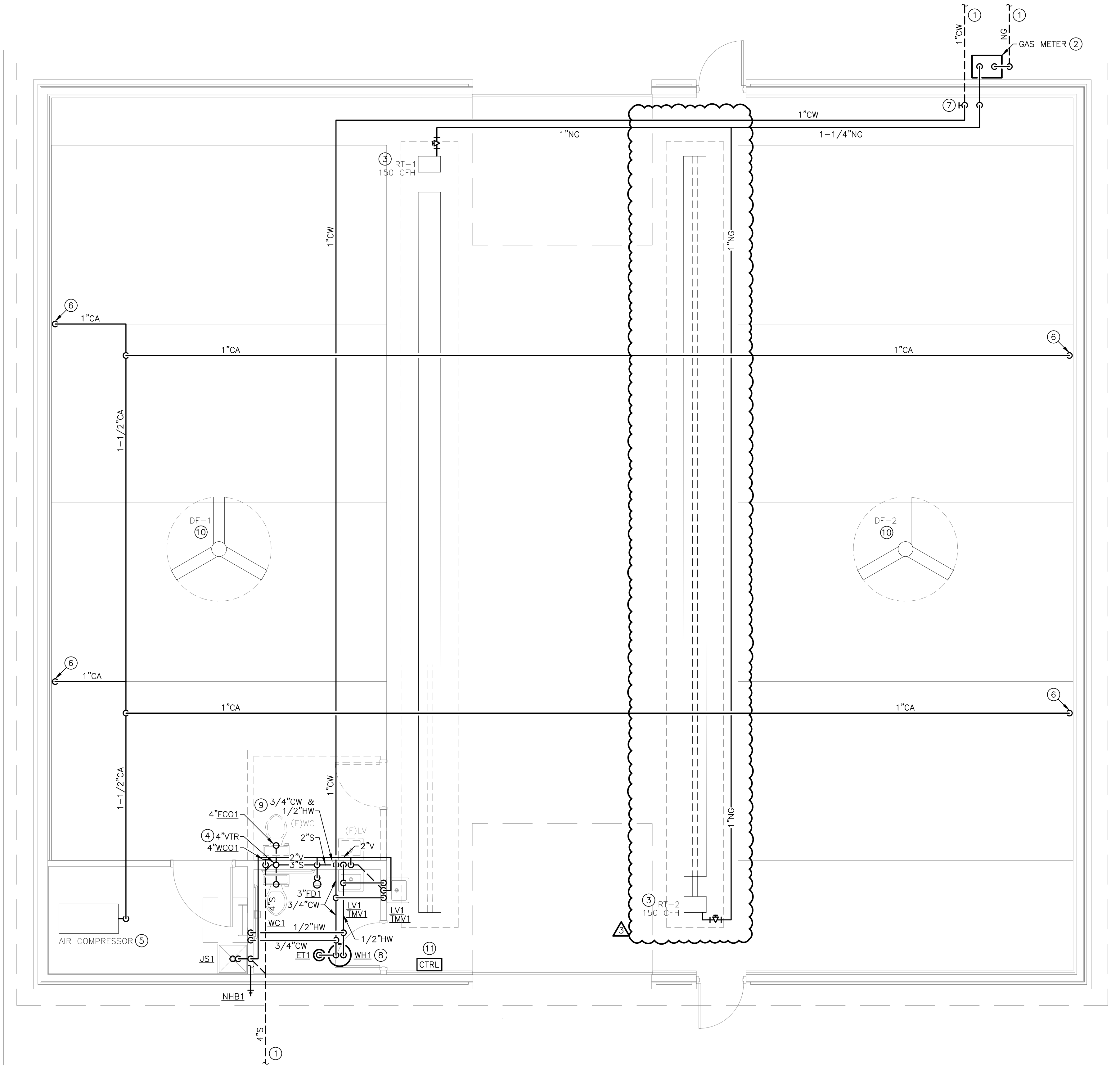
- ↘ ELBOW DOWN
- ↗ ELBOW UP
- ⊗ P-TRAP
- ⊕ TEE DOWN
- ⊖ ELBOW UP
- ⌵ SHUT-OFF VALVE (GENERIC)
- ⌵ BALL VALVE
- ⌵ GLOBE VALVE
- ⌵ BUTTERFLY VALVE
- ⌵ GATE VALVE
- ⌵ CHECK VALVE
- ⌵ BALANCING VALVE
- ⌵ PRESSURE REDUCING VALVE
- ⌵ GAS COCK
- ⌵ WYE-STRAINER
- ⌵ UNION
- ⌵ FLANGE
- ⌵ RELIEF VALVE
- ⌵ AIR VENT (MANUAL / AUTOMATIC)
- ➔ FLOW DIRECTION
- PIPE BREAK / CONTINUATION
- FLOOR DRAIN
- FLOOR SINK
- FLOOR CLEANOUT
- + HOSE BIBB

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG
- PLAN NOTE
- ⊕ CONNECT TO EXISTING

ABBREVIATIONS LEGEND:

- AFF ABOVE FINISHED FLOOR
- BOP BOTTOM OF PIPE
- CFH CUBIC FEET PER HOUR
- CO CLEANOUT
- CW DOMESTIC COLD WATER
- ET EXPANSION TANK
- (F) FUTURE
- FCO FLOOR CLEANOUT
- FD FLOOR DRAIN
- GPM GALLONS PER MINUTE
- HB HOSE BIBB
- IE INVERT ELEVATION
- IN.WG INCHES WATER GAUGE
- LV LAVATORY
- MAX MAXIMUM
- MBH 1,000 BTUH
- MIN MINIMUM
- NG NATURAL GAS
- NHB NON-FREEZE HOSE BIBB
- QTY QUANTITY
- S SANITARY WASTE
- TMV THERMOSTATIC MIXING VALVE
- TRA TO ROOF ABOVE
- V VENT
- WC WATER CLOSET
- WH WATER HEATER
- WCO WALL CLEANOUT



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

PLUMBING GENERAL NOTES:

- REFER TO P2.0 FOR PLUMBING GENERAL NOTES.

PLUMBING PLAN NOTES:

- REFER TO CIVIL UTILITY PLAN FOR CONTINUATION OF PIPING OUTSIDE OF BUILDING FOOTPRINT.
- PROVIDE NEW NATURAL GAS SERVICE ENTRANCE AND METER WHERE SHOWN ON PLAN. REFER TO NATURAL GAS LOAD SCHEDULE FOR LOAD, TOTAL DEVELOPED LENGTH, AND SIZING DETAILS.
- CONNECT NATURAL GAS TO MECHANICAL EQUIPMENT AS SHOWN. PROVIDE DIRT LEG, GAS COCK, AND REGULATOR. REFER TO MECHANICAL EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH MECHANICAL CONTRACTOR.
- ROUTE 4" VENT UP THROUGH ROOF (VTR). DISCHARGE AT MINIMUM 1'-6" ABOVE FINISHED ROOF. INSTALL AT MINIMUM OF 10'-0" FROM ALL MECHANICAL OUTDOOR AIR INTAKES.
- AIR COMPRESSOR PROVIDED BY OTHERS. PROVIDE COMPRESSED AIR PIPING CONNECTION WITH VALVES AND SPECIALS PER AIR COMPRESSOR MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE 1"CA DROP DOWN WALL. TERMINATE WITH SHUTOFF VALVE. COORDINATE CONNECTION TO OWNER EQUIPMENT WITH OTHER TRADES.
- 1" DOMESTIC WATER SERVICE ENTRANCE, FED BY ADJACENT BUILDING. PROVIDE SHUTOFF VALVE AT 4'-0" AFF.
- INSTALL WATER ABOVE CEILING WHERE SHOWN ON PLAN. CONNECT WATER PIPING, VALVES, AND EXPANSION TANK TO WATER HEATER SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DETAIL 1/P2.0.
- PROVIDE COLD WATER AND HOT WATER PIPING OF SIZES INDICATED ON PLAN DOWN IN WALL. ROUTE PIPING IN WALL CAVITY AND CONNECT TO PLUMBING FIXTURES ALONG WET WALL PER FIXTURE CONNECTION SCHEDULE ON P2.0.
- COORDINATE ALL PIPE ROUTING WITH CLEARANCE REQUIREMENTS OF DESTRATIFICATION FAN.
- PROVIDE HIGH LEVEL ALARM SYSTEM WITH MECHANICAL ALARM FLOAT FOR SANITARY HOLDING TANK, SEPTIC PRODUCTS INC "OBSERVER 200" OR EQUAL. INSTALL CONTROLLER WHERE INDICATED ON PLAN. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

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KANSAS STATE CERTIFICATE OF AUTHORITY # A-83 www.BuildWithRose.com



PROPOSED BODY SHOP BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	06 / 14 / 2022
1	CITY COMMENTS	07 / 07 / 2022
2	CITY COMMENTS	07 / 13 / 2022
3	SHOP AC REVISION	09 / 19 / 2022

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 2022

SHEET NUMBER

P1.0

PLUMBING PLAN

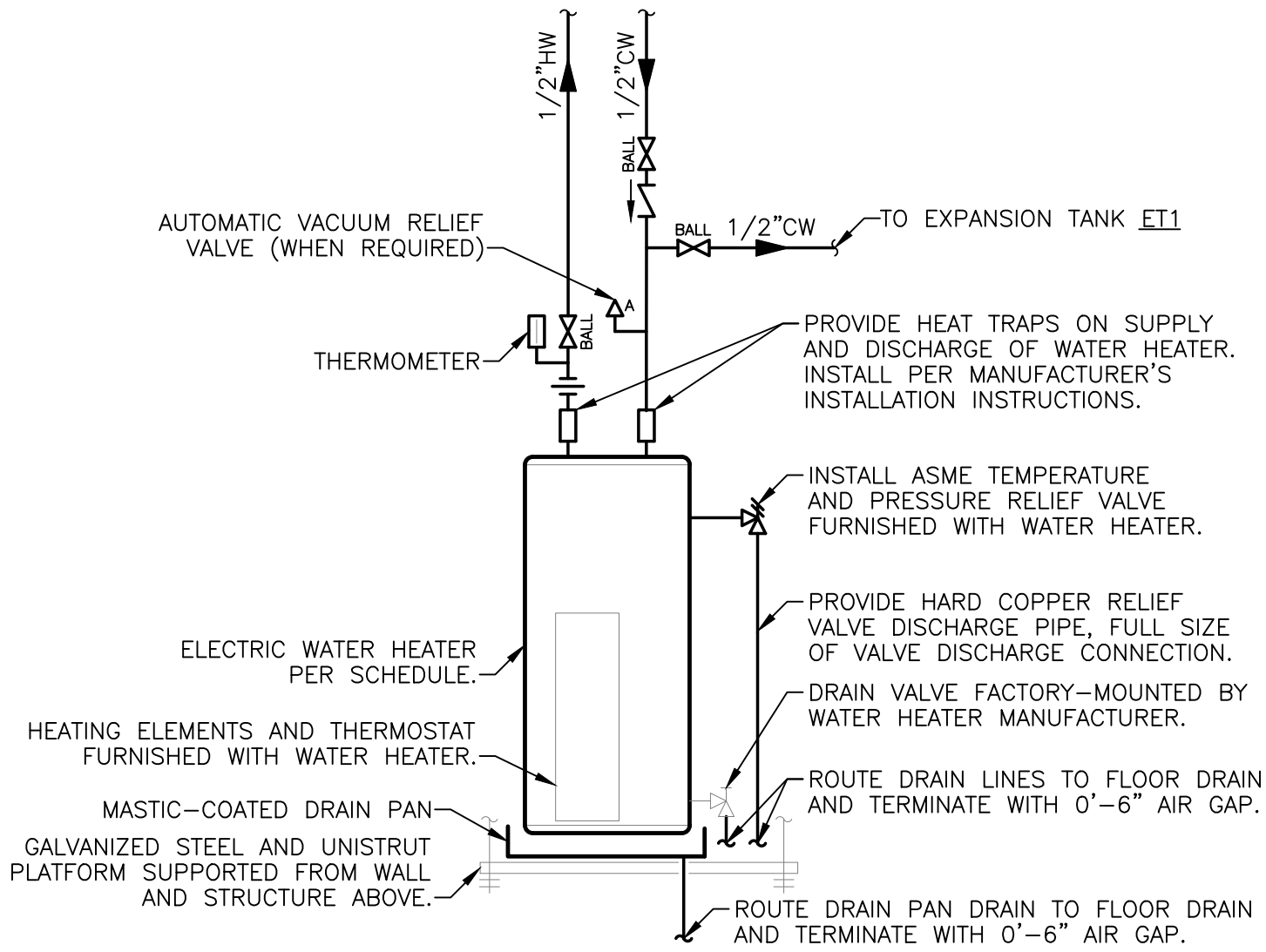
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FIXTURE CONNECTION SCHEDULE					
FIXTURE	WASTE	VENT	COLD	HOT	NOTES
FLOOR DRAIN	SEE PLAN	2"	---	---	---
HOSE BIBBS	---	---	3/4"	---	VB
JANITOR'S SINK	2"	1-1/2"	1/2"	1/2"	VB
LAVATORY - PUBLIC	2"	1-1/2"	1/2"	1/2"	TMV
WATER CLOSET (TANK TYPE)	4"	2"	1/2"	---	---

NOTES:
TMV: POINT OF USE TYPE THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1070.
VB: ATMOSPHERIC TYPE VACUUM BREAKER CONFORMING TO ASSE 1020.

NATURAL GAS LOAD SCHEDULE				
EQUIPMENT TAG	QTY	DESCRIPTION	CFH INPUT (EACH)	TOTAL CFH
RT-1	1	RADIANT TUBE HEATER	150	150
RT-2	1	RADIANT TUBE HEATER	150	150

NOTES:
A. METER DISCHARGE PRESSURE: 11 IN. WG.
B. TOTAL DEVELOPED LENGTH: 125 FT.
C. DESIGN NATURAL GAS PIPING SYSTEM PRESSURE DROP: 0.5 IN. WG.
D. INLET PRESSURE FOR ALL GAS-FIRED EQUIPMENT: 7 TO 11 IN. WG.



NOTES:
• STRUCTURE AND PLATFORM SHALL BE DESIGNED TO HOLD THE MAXIMUM WEIGHT OF THE WATER HEATER. CONFIRM CAPACITY OF SHELF WITH MANUFACTURER PRIOR TO INSTALLATION.

1 WATER HEATER DETAIL

SCALE: NTS

PLUMBING FIXTURE SCHEDULE:

INFORMATION BELOW IS FOR GENERAL FIXTURE REQUIREMENTS ONLY. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR EXACT FIXTURE REQUIRED FOR THE PROJECT. COORDINATE WITH OWNER FOR INFORMATION ON PROCURING FIXTURES AND ASSOCIATED COSTS. CONTRACTOR SHALL BE CLEAR AS TO WHAT FIXTURES ARE INCLUDED IN THEIR PROPOSED COSTS.

FIXTURES IN THIS SCHEDULE, OR THE APPROVED EQUIVALENT, SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.

ET1
• EXPANSION TANK: 150 PSIG MAXIMUM WORKING PRESSURE, 2.0-GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, AND 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.

FCO1
• HEAVY DUTY FLOOR CLEANOUT: CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE ROUND SECURED HEAVY-DUTY SCORRIATED NICKEL BRONZE TOP.

FD1
• PVC FLOOR DRAIN: FLOOR DRAIN WITH ADJUSTABLE 6" ROUND MEDIUM-DUTY CAST NICKEL STRAINER, WITH FLANGED PVC ADAPTER, CLEAN AND POLISH STRAINER AFTER INSTALLATION. PROVIDE A DEEP SEAL TRAP, FLANGED PVC ADAPTER, AND TRAP GUARD.

HR1
• HOSE BIBB: ROUGH CHROME-PLATED BRASS, 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, QUARTER-TURN WHEEL HANDLE, AND INTEGRAL VACUUM BREAKER.

JS1
• JANITOR'S SINK: 24"W x 24"L x 10"H MOLDED FIBER BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY.
• FAUCET: FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD.
• TRIM: TYPE 304 20-GAUGE STAINLESS STEEL WALL SURROUNDS, 3'-0" LONG REINFORCED HOSE WITH 3/4" CHROME COUPLING AND WALL HOOK, EXTRUDED VINYL BUMPER GUARD, AND 2'-0" STAINLESS STEEL MOP HANGER.

LV1
• WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): RECTANGULAR WALL-MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
• FAUCET: 4" CENTERSET, VANDAL-RESISTANT FAUCET WITH LEVER HANDLES AND 0.5 GPM AERATOR.
• TRIM: GRID DRAIN WITH TAILPIECE, QUARTER-TURN BALL TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, 1-1/4"x17-GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND INSULATION KIT FOR WATER AND WASTE PIPES.

TMV1
• THERMOSTATIC MIXING VALVE: SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. MAXIMUM TEMPERATURE STOP SET FOR 110°F. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.

WC1
• FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIPHON FLUSH ACTION, AND CLOSE-COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
• TRIM: WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY-DUTY, SEAT-LESS-COVER WITH SELF-SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER-TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.

WCO1
• WALL CLEANOUT: CAST IRON CLEANOUT TEE, COUNTER-SUNK CAST IRON PLUG WITH GASKET SEAL, AND STAINLESS STEEL ROUND COVER WITH SCREW.

WH1
• WATER HEATER: ELECTRIC, 10 GALLON, 1.5 kW INPUT, 8 GALLON PER HOUR RECOVERY AT 80°F TEMPERATURE RISE AND 120°F OPERATING TEMPERATURE. PROVIDE ALL WATER CONNECTIONS, VALVES, AND SPECIALS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
• ELECTRICAL REQUIREMENTS: 120-VOLT, SINGLE PHASE, 13 FULL LOAD AMPS.
• BASIS OF DESIGN: A.O. SMITH MODEL # DEL-10.

PLUMBING GENERAL NOTES:

• DRAWINGS ARE SCHEMATIC IN NATURE. COORDINATE ALL PLUMBING WORK WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES PRIOR TO BID OR START OF WORK.

• PLUMBING WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

• EXACT LOCATION AND ELEVATIONS OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OF CONNECTIONS THEREOF. ALL CONNECTIONS TO UTILITIES (E.G. DOMESTIC WATER, SEWER, AND NATURAL GAS) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANIES.

• SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH SOLVENT-WELDED JOINTS.

• SANITARY WASTE AND VENT PIPING ABOVE GRADE SHALL BE NO-HUB CAST IRON IN RETURN AIR PLENUM APPLICATIONS. SCHEDULE 40 PVC PIPING WITH SOLVENT WELDED JOINTS CAN BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.

• SLOPE SANITARY PIPING AS FOLLOWS: 1/4" PER FOOT FOR PIPE SIZES 2-1/2" AND SMALLER, AND 1/8" PER FOOT FOR PIPE SIZES 3" AND LARGER.

• PROVIDE WATER SUPPLY SHUT-OFF VALVES ON EACH TOILET ROOM GROUP AND TO MISCELLANEOUS EQUIPMENT.

• PROVIDE SIZE "A" WATER HAMMER ARRESTORS ON SUPPLY TO ALL PLUMBING FIXTURES.

• PROVIDE STOP VALVES ON ALL INDIVIDUAL PLUMBING FIXTURE SUPPLIES.

• COORDINATE SELECTION OF ALL PLUMBING FIXTURES WITH ARCHITECT AND OWNER. ALL HANDICAPPED FIXTURES (WHERE REQUIRED) SHALL COMPLY WITH A.D.A. REQUIREMENTS.

• DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER WITH FLARED FITTINGS OR TYPE K HARD COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.

• DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.

• INSULATE NEW DOMESTIC COLD WATER AND HOT WATER PIPING WITH MINIMUM 1" FIBERGLASS INSULATION (MINIMUM R-4.0) WITH PAPER COVERING.

• NATURAL GAS AND COMPRESSED AIR PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH THREADED FITTINGS.

• PROVIDE RUST-INHIBITOR ON PAINT ALL NATURAL GAS PIPING LOCATED EXTERIOR TO THE BUILDING.

• PROVIDE A.G.A. APPROVED GAS COCKS AND DIRT LEGS AT CONNECTIONS TO ALL GAS-FIRED EQUIPMENT.

• INSTALL ALL PLUMBING EQUIPMENT, FIXTURES, VALVES, ETC. PER MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ADDITIONAL APPURTENANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

• INSTALL CLEANOUTS AT EVERY END OF SANITARY PIPING RUNS, AT MINIMUM OF EVERY 100'-0" OF SANITARY PIPING, AND AT EVERY CHANGE IN DIRECTION GREATER THAN 45'. REFER TO SECTION 708 OF THE INTERNATIONAL PLUMBING CODE FOR ADDITIONAL REQUIREMENTS.



SCOTT D. GROSHANS
MO LICENSE # PE-2019012798

9/19/2022



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KANSAS STATE CERTIFICATE OF AUTHORITY # A-83 www.BuildWithRose.com



PROPOSED BODY SHOP BUILDING FOR:

CRASH CHAMPIONS

451 SE OLDHAM PARKWAY

LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	06 / 14 / 2022
1	CITY COMMENTS	07 / 07 / 2022
2	CITY COMMENTS	07 / 13 / 2022
3	SHOP AC REVISION	09 / 19 / 2022

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 2022

SHEET NUMBER

P2.0

PLUMBING DETAILS
& SCHEDULES

5BY5
ENGINEERS

1100 Main Street, 4th Floor
Kansas City, MO 64105
Kansas COA: E-2361
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NEW UTILITY POLE MOUNT—
TRANSFORMERS (3) 37.5kva
ESTIMATED AVAILABLE
FCA ~ 13,139A

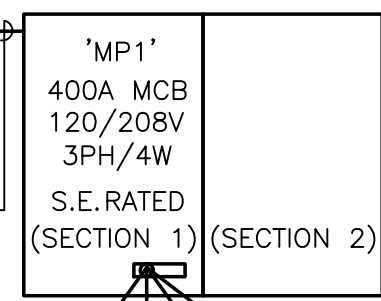
NOTE: FINAL AVAILABLE FAULT
CURRENT SHALL BE DETERMINED BY
EVERGY.

ALL SERVICE ENTRANCE AND
DISTRIBUTION EQUIPMENT SHALL BE
RATED TO ACCOMMODATE AND SAFELY
INTERRUPT AVAILABLE FAULT CURRENT.
SERIES RATED EQUIPMENT PER NEC,
UL AND MANUFACTURERS
REQUIREMENTS IS ACCEPTABLE.

ELECTRICAL CONTRACTOR SHALL
PROVIDE ENOUGH CONDUCTOR AND
PVC CONDUIT TO EXTEND UP THE
POLE. ALL WORK SHALL BE PER
EVERGY STANDARDS.

METER PER EVERGY
STANDARDS.

(2) 2" CONDUITS, EACH
WITH (4) 250kcmil AL.



#1/0 CU (OR #3/0 AL) GROUND IN 3/4" C. TO
BOND TO BUILDING STEEL, BUILDING WATER SERVICE, AND
CONCRETE ENCASED ELECTRODE (FOOTING REBAR). ALSO
PROVIDE (1) #6 CU CONNECTION TO DRIVEN GROUND ROD.

1 ELECTRICAL POWER PLAN

SCALE: 1/4" = 1'-0"



2 ELECTRICAL RISER PLAN

NO SCALE.

ELECTRICAL GENERAL NOTES:

- REFER TO SHEET E3.0 FOR ELECTRICAL GENERAL NOTES.

ELECTRICAL PLAN NOTES:

- PROVIDE 120V CONNECTION TO OVERHEAD DOOR OPERATOR. MOUNT CONTROL STATION PROVIDED WITH DOOR IN LOCATION APPROVED BY OWNER ADJACENT TO OVERHEAD DOOR FOR PUSH-BUTTON CONTROLS. PROVIDE CONDUIT AND WIRING BETWEEN CONTROLLER AND OPERATOR. COORDINATE WITH DOOR INSTALLER FOR SPECIFIC ELECTRICAL REQUIREMENTS.
- PROVIDE DISCONNECT AND FLEX CONNECTION TO BODY SHOP EQUIPMENT. VERIFY EXACT LOCATION AND SPECIFIC REQUIREMENTS PRIOR TO ROUGH IN. COORDINATE WITH OWNER LOCATION AND PHASING TO RELOCATE EQUIPMENT.
- PROVIDE DISCONNECT AND FLEXIBLE CONNECTION TO SHOP WELDING EQUIPMENT. CONFIRM ACTUAL REQUIREMENTS WITH SHOP OWNER PRIOR TO ROUGH-IN.
- MOUNT 'CO' CONTROL PANEL ON WALL, AND ROUTE POWER WIRING TO EXHAUST FAN 'EF-2' AND MOTORIZED LOUVER 'L-1'. COORDINATE INSTALL WITH MECHANICAL CONTRACTOR. ALL FANS, LOUVERS & CONTROL DEVICES SHALL BE FURNISHED BY MECHANICAL. MOUNTING OF CONTROL PANEL AND ALL WIRING SHALL BE BY ELECTRICAL CONTRACTOR.
- PROVIDE JUNCTION BOX FOR POWER TO CIRCULATION FAN, AND INSTALL FAN CONTROL DEVICE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR. ALL FANS & CONTROL DEVICES SHALL BE FURNISHED BY MECHANICAL. MOUNTING OF CONTROL PANEL AND ALL WIRING SHALL BE BY ELECTRICAL CONTRACTOR.
- PROVIDE CONNECTION TO 1500 WATT 120V ELECTRIC WATER HEATER MOUNTED ABOVE THE CEILING. PROVIDE TOGGLE SWITCH DISCONNECT SWITCH.
- PROVIDE DISCONNECT AND FLEXIBLE CONNECTION TO AIR COMPRESSOR. COORDINATE HOOK-UP AND EXACT REQUIREMENTS WITH OWNER.
- CONNECT BATHROOM EXHAUST FAN ON TO SWITCHED BATHROOM LIGHTS.
- DUPLEX RECEPTACLE FOR SEPTIC TANK LEVEL MONITORING PANEL. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR.
- PROVIDE CONNECTION AND DISCONNECT ON MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR. REFER TO SHEET M2.0 FOR ADDITIONAL INFORMATION.



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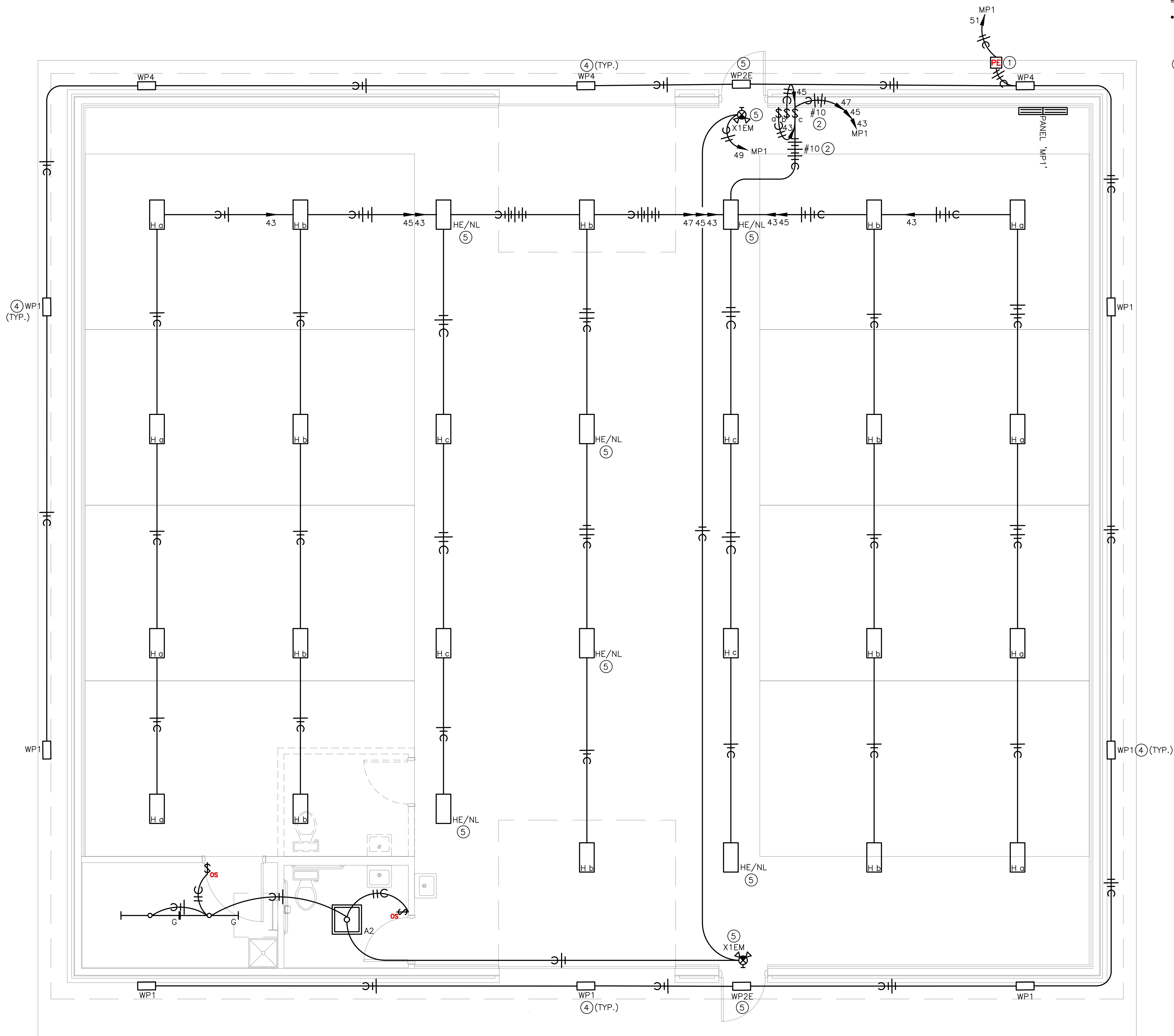
E1.0

ELECTRICAL POWER PLAN

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1 ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

- ELECTRICAL GENERAL NOTES:**
- REFER TO E3.0 FOR ELECTRICAL GENERAL NOTES.
- ELECTRICAL LIGHTING PLAN NOTES:**
- PROVIDE BOX MOUNTED LINE VOLTAGE PHOTO-CELL FOR CONTROL OF EXTERIOR LIGHTING. ADJUST TO BRING LIGHTING ON AT DUSK AND OFF AT DAWN.
 - WALL SWITCHES FOR CONTROL OF SHOP LIGHTING. LIGHT FIXTURES SHALL BE ALTERNATELY SWITCHED TO PROVIDE BI-LEVEL LIGHTING. LOWER CASE LETTER INDICATES SWITCHING CONFIGURATION. UPSIZE HOME-RUN PORTION OF CIRCUIT TO MINIMIZE VOLTAGE DROP.
 - MOUNT SHOP HI-BAY FIXTURES AS HIGH AS POSSIBLE TO STRUCTURE.
 - CONFIRM ALL MOUNTING HEIGHTS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
 - CONNECT EXIT AND EMERGENCY FIXTURES TO CONTINUOUS HOT UN-SWITCHED LIGHTING CIRCUIT. HIGH-BAY SHOP NIGHT/EMERGENCY LIGHTING SHALL BE ON CIRCUIT 'HP1-47'.

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ELECTRICAL LIGHTING PLAN

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LINETYPES LEGEND:

- NEW
— EXISTING OR BY OTHERS
— DEMOLITION

LIGHTING LEGEND:

- • CEILING MOUNTED LIGHT FIXTURE, 2'x2' OR 2'x4'
• • CEILING MOUNTED LIGHT FIXTURE, 2'x2' OR 2'x4' (NIGHT LIGHT OR EMERGENCY CIRCUIT)
— STRIP LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE FOR LENGTH.
○ WALL-MOUNT SCONCE OR WALL BRACKET LIGHT FIXTURE.
○ ○ RECESSED WALL WASH CAN LIGHT FIXTURE.
○ RECESSED, SURFACE, OR STEM HUNG LIGHT FIXTURE.
— SINGLE FACE EXIT LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.
— DOUBLE FACE EXIT LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.
— COMBINATION SINGLE FACE EXIT/EMERGENCY LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.

NOTE: REFER TO LIGHT FIXTURE SCHEDULE AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND MOUNTING HEIGHTS.

POWER LEGEND:

- INDICATES ABOVE COUNTER (TYP)
• • DUPLEX RECEPTACLE MOUNTED AT +18" AFF TO CENTER OF RECEPTACLE (UNO). ABOVE COUNTER RECEPTACLES SHALL BE +48" AFF (UNO).
• • DUPLEX ISOLATED GROUND RECEPTACLE MOUNTED AT +18" AFF TO CENTER OF RECEPTACLE (UNO). ABOVE COUNTER RECEPTACLES SHALL BE +48" AFF (UNO).
• • DUPLEX RECEPTACLE ON STAND-BY GENERATOR POWER, MOUNTED AT +18" AFF TO CENTER OF RECEPTACLE (UNO). RECEPTACLES SHOWN ABOVE COUNTER SHALL BE +48" AFF (UNO).
• • FLOOR-MOUNTED DUPLEX OR FOURPLEX RECEPTACLE MOUNTED IN PVC FLOORBOX, OR POKE-THRU
• SPECIAL RECEPTACLE, NUMBER REFERS TO "NEMA" CONFIGURATION. MOUNT AT +18" AFF TO CENTER OF RECEPTACLE (UNO).
• • FOURPLEX RECEPTACLE MOUNTED AT +18" AFF TO CENTER OF RECEPTACLE (UNO). RECEPTACLES SHOWN TO BE ABOVE COUNTER SHALL BE +48" AFF (UNO)
• • FLUSH MOUNT COMBINATION POWER AND VOICE/DATA FLOORBOX.
\$ SINGLE POLE WALL MOUNT TOGGLE SWITCH. MOUNT AT +48" AFF TO CENTER OF SWITCH.
\$ WALL MOUNTED OCCUPANCY SENSOR SWITCH. MOUNT AT +48" AFF TO CENTER OF SWITCH.
\$ WALL MOUNTED OCCUPANCY SENSOR SWITCH WITH 0-10V DIMMING CONTROL. MOUNT AT +48" AFF TO CENTER OF SWITCH.
\$ WALL MOUNTED LOW VOLTAGE SWITCH WITH 0-10V DIMMING CONTROL. MOUNT AT +48" AFF TO CENTER OF SWITCH.
Ⓢ CEILING MOUNTED OCCUPANCY SENSOR.
[DRC] ROOM CONTROLLER/POWER PACK FOR LIGHT FIXTURE CONTROL. DEVICE SHALL BE CONCEALED IN CEILING.
▲▲ VOICE OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48" AFF (UNO).
▲▲ DATA OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48" AFF (UNO).
▲▲ COMBINATION VOICE/DATA OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48" AFF (UNO).
• FLUSH FLOOR MOUNT VOICE/DATA OUTLET MOUNTED IN PVC FLOORBOX.
☐ ☒ DISCONNECT SWITCH, STARTER, & COMBINATION STARTER/DISCONNECT SWITCH. SIZE AS INDICATED ON DRAWINGS.
☐ ELECTRICAL PANEL BOARD, FLUSH OR SURFACE MOUNT
☐ JUNCTION BOX
NOTE: LINE THROUGH DEVICE INDICATES TO BE MOUNTED ABOVE COUNTERTOP OR CABINET. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS IF NOT INDICATED ON POWER PLAN.

REFER TO LIGHTING CONTROL DEVICE SCHEDULE AND ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.

WIRING LEGEND:

- HOMERUN TO PANELBOARD WITH NUMBER AND SIZE OF CONDUCTORS INDICATED ON PLANS.
— GROUNDING CONDUCTOR.
— CONDUIT OR CIRCUIT BREAK/CONTINUATION.
— CONDUIT WITH ENDCAP FOR FUTURE USE.
— GROUNDING SOURCE.

ABBREVIATIONS LEGEND:

- AFF ABOVE FINISHED FLOOR
ED EXISTING TO BE DEMOLISHED
EM EMERGENCY
ER EXISTING TO BE RELOCATED
ETR EXISTING TO REMAIN
GFCI GROUND FAULT CURRENT INTERRUPTER
NL NIGHT LIGHT
TR TAMPER RESISTANT
UNO UNLESS NOTED OTHERWISE
WP WEATHER PROTECTED COVER / GFCI

LIGHT FIXTURE SCHEDULE													
TYPE	MANUFACTURER AND MODEL #	LIGHT SOURCE	WATT S	MINIMUM LUMENS	VOLTAGE	CRI	COLOR TEMP	DIMMABLE	FINISH	DESCRIPTION			NOTES
A2	METALUX 22FR-LD4-32-UNV-L835-CD1	INTEGRAL LED	30	3300	UNV	80	3500	0-10V / 10%	WHITE	2'X2' LED LIGHT TROFFER WITH CENTER BASKET, 3500K COLOR TEMPERATURE DIMMABLE UNIVERSAL VOLTAGE DRIVER.			1-5
EM	SURE LITES XR-6/9-C	INTEGRAL LED	6	1100	UNV	80	-	0-10V / 10%	WHITE	EMERGENCY WALL MOUNTED FIXTURE. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.			1-5
H	BUILDERS PACK TR08-165W-2FT-40K-PDN	INTEGRAL LED	165	20900	UNV	80	4000	0-10V / 10%	WHITE	LED HIGHBAY CABLE MOUNTED, 20,900 LUMEN PACKAGE. 4000K PROVIDE WITH WIREGUARD. PROVIDE WITH POWER CORD AND AIRCRAFT CABLE. CONFIRM LENGTHS NEEDED PRIOR TO ORDERING.			1-5
HE	BUILDERS PACK TR08-165W-2FT-40K-PDN -EM	INTEGRAL LED	165	20900	UNV	80	4000	0-10V / 10%	WHITE	LED HIGHBAY CABLE MOUNTED, 20,900 LUMEN PACKAGE. 4000K PROVIDE WITH WIREGUARD. PROVIDE WITH POWER CORD AND AIRCRAFT CABLE. CONFIRM LENGTHS NEEDED PRIOR TO ORDERING.FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.			1-5
G	HE WILLIAMS - 75S-4-L6S-8-40-DMA-DIM-UNV	INTEGRAL LED	43	6500	UNV	80	4000	0-10V / 10%	WHITE	LED LINEAR RIGID CHAIN OR AIRCRAFT CABLE SUSPENDED TO 10'-0" AFF.			1-5
WP1	MCGRAW EDISON - GLEON-SA3D-740-U-SL4	INTEGRAL LED	95	22,500	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. MOUNT AT 18'-0" A.G.			1-5
WP2E	MCGRAW EDISON - IST-SA1-E-740-U-T4FT-XX-CBP	INTEGRAL LED	25	2200	UNV	80	4000	NA	DARK BRONZE	EXTERIOR LED WALL PACK. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.			1-5
WP4	MCGRAW EDISON - GLEON-SA3D-740-U-SL2-HSS	INTEGRAL LED	95	19,600	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. PROVIDE WITH HOUSE SHIELD.			1-5
X1EM	SURELITE SLX70RWH	INTEGRAL LED	10.3	-	UNV	NA	NA	NA	WHITE	COMBINATION EMERGENCY EGRESS /SINGLE FACE LED EXIT LIGHT FIXTURE WITH BATTERY PACK, RED LETTERS AND FIELD CONFIGURED ARROWS.			1-5
NOTES: 1. COORDINATE ALL LIGHT FIXTURE SELECTIONS AND/OR SUBSTITUTIONS WITH ARCHITECT, OWNER AND/OR ENGINEER PRIOR TO ORDER. 2. PROVIDE LIGHTING CONTROLS THAT ARE COMPATIBLE WITH FIXTURES PROVIDED. 3. COORDINATE WITH ARCHITECT, OWNER AND/OR ENGINEER FOR DIMMING REQUIREMENTS PRIOR TO INSTALLATION. 4. PROVIDE ALL COMPONENTS AND ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION. 5. EQUIVALENTS MUST BE SUBMITTED AND APPROVED PRIOR TO BID.													

PANELBOARD MP1															
		BUS AMPS: MAIN SIZE / TYPE: VOLTS/PHASE: MOUNTING:			400A MCB 208Y/120V, 3PH, 4W SURFACE		LOCATION: NEMA RATING: AFC VALUE: AIC RATING:		ELECTRICAL ROOM NEMA 1 22K		GROUND BUS: ISOL. GROUND BUS: FEED THRU LUGS: SECTIONS:		YES NO YES 1 OF 2		
CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA)			LOAD (VA)	WIRE SIZE	BREAKER P	AMPS	CIRCUIT DESCRIPTION	CKT #	
1	RECEPTACLES - SERVICE BAY	20	1		360	2,160			1,800		1	20	UNIT HEATER 'UH-1'	2	
3	RECEPTACLES - SERVICE BAY	20	1		360		2,160		1,800		1	20	UNIT HEATER 'UH-2'	4	
5	RECEPTACLES - SERVICE BAY	20	1		360			1,860	1,500		1	20	WATER HEATER 'WH-1'	6	
7	RECEPTACLES - SERVICE BAY	20	1		360	1,360			1,000		1	20	OVERHEAD DOOR	8	
9	RECEPTACLES - SERVICE BAY	20	1		360		1,360		1,000		1	20	OVERHEAD DOOR	10	
11	RECEPTACLES - SERVICE BAY	20	1		360			1,110	750		1	20	EXHAUST FAN 'EF-2'	12	
13	RECEPTACLES - SERVICE BAY	20	1		360	610			250		1	20	EXHAUST FAN 'EF-3'	14	
15	RECEPTACLES - SERVICE BAY	20	1		360		1,460		1,100		1	20	RADIANT HEATERS	16	
17	RECEPTACLES	20	1		360			1,110	750		1	20	CEILING FAN 'DF-1'	18	
19					5,000	5,750			750		1	20	CEILING FAN 'DF-2'	20	
21	SPOT WELDER	60	3	#4	5,000		5,000		0		1	20	SPARE	22	
23					5,000			9,000	4,000		-	-		24	
25					5,000	9,000			4,000	#6	3	60	FRAME MACHINE	26	
27	SPOT WELDER	60	3	#4	5,000		9,000		4,000		-	-		28	
29					5,000			9,000	4,000		-	-		30	
31					7,000	11,000			4,000	#6	3	60	VEHICLE LIFT	32	
33	AIR COMPRESSOR	100	3	#4	7,000		11,000		4,000		-	-		34	
35					7,000			9,600	2,600	#6	2	30	MIG/MAG WELDER	36	
37	SPARE	20	1		0	2,600			2,600					38	
39	SPARE	20	1		0		2,600		2,600	#6	2	30	MIG/MAG WELDER	40	
41	SPARE	20	1		0			2,600	2,600					42	
PER PHASE SUB-TOTALS						32,480	32,580	34,280	LEGEND:						
TOTAL CONNECTED PANELBOARD (VA)						99,340			TS - VIA TIME SWITCH				ST - SHUNT TRIP		
TOTAL CONNECTED PANELBOARD (AMPS)						276			GF - GROUND FAULT INTERRUPTER				LCK - LOCKING TAB		
TOTAL PANELBOARD DEMAND (VA)						104,840			FA - FIRE ALARM / RED / LOCKING TAB				IG - ISOLATED GROUND		
TOTAL PANELBOARD DEMAND (AMPS)						291			EM - EMERGENCY LTG. / LOCKING TAB				OL - RE. ONE-LINE DIAGRAM		

PANELBOARD MP1														
BUS AMPS:		400A		LOCATION:		ELECTRICAL ROOM		GROUND BUS:		YES				
MAIN SIZE / TYPE:		MLO		NEMA RATING:		NEMA 1		ISOL. GROUND BUS:		NO				
VOLTS/PHASE:		208Y/120V, 3PH, 4W		AFC VALUE:				FEED THRU LUGS:		NO				
MOUNTING:		SURFACE		AIC RATING:		22K		SECTIONS:		2 OF 2				
CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA)			LOAD (VA)	WIRE SIZE	BREAKER P	AMPS	CIRCUIT DESCRIPTION	CKT #
						A	B	C						
43	LIGHTING - SHOP AREA	20	1		1,320	4,803			3,483		-	-		44
45	LIGHTING - SHOP AREA	20	1		1,650		5,133		3,483	#10	3	40	AC-1	46
47	LIGHTING - SHOP AREA	20	1		1,650			5,133	3,483		-	-		48
49	LIGHTING - RR. EXITS & COMP. RM.	20	1		950	4,433			3,483		-	-		50
51	LIGHTING - EXTERIOR	20	1		0		3,483		3,483	#10	3	40	AC-2	52
53	SPARE	20	1		0			3,483	3,483		-	-		54
55	SPARE	20	1		0	0			0		1	20	SPARE	56
57	SPARE	20	1		0		0		0		1	20	SPARE	58
59	SPARE	20	1		0			0	0		1	20	SPARE	60
61	SPARE	20	1		0	0			0		1	20	SPARE	62
63	SPARE	20	1		0		0		0		1	20	SPARE	64
65	SPARE	20	1		0			0	0		1	20	SPARE	66
67	SPACE ONLY				0	0			0				SPACE ONLY	68
69	SPACE ONLY				0		0		0				SPACE ONLY	70
71	SPACE ONLY				0			0	0				SPACE ONLY	72
73	SPACE ONLY				0	0			0				SPACE ONLY	74
75	SPACE ONLY				0		0		0				SPACE ONLY	76
77	SPACE ONLY				0			0	0				SPACE ONLY	78
79	SPACE ONLY				0	0			0				SPACE ONLY	80
81	SPACE ONLY				0		0		0				SPACE ONLY	82
83	SPACE ONLY				0			0	0				SPACE ONLY	84
PER PHASE SUB-TOTALS						9,235	8,615	8,615	LEGEND:					
TOTAL CONNECTED PANELBOARD (VA)						26,465		TS - VIA TIME SWITCH		ST - SHUNT TRIP				
TOTAL CONNECTED PANELBOARD (AMPS)						73		GF - GROUND FAULT INTERRUPTER		LCK - LOCKING TAB				
TOTAL PANELBOARD DEMAND (VA)						27,858		FA - FIRE ALARM / RED / LOCKING TAB		IG - ISOLATED GROUND				
TOTAL PANELBOARD DEMAND (AMPS)						77		EM - EMERGENCY LTG. / LOCKING TAB		OL - RE: ONE-LINE DIAGRAM				

COMMERCIAL LOAD SUMMARY							
BUILDING AREA:		4,200 SQ. FT		VOLTAGE:		208Y/120V, 3PH, 4W	
LOAD DESCRIPTION		CONNECTED LOAD (VA)		DEMAND FACTOR		DEMAND LOAD (VA)	
LIGHTING							
INTERIOR LIGHTING		4,620	x	125%	=	0	
EXTERIOR LIGHTING		950	x	125%	=	1,188	
SIGNAGE		0	x	125%	=	0	
MINIMUM GENERAL LIGHTING PER NEC-220 x 125%							7,875
MINIMUM TRACK LIGHTING/SHOW WINDOW PER NEC-220 x 125%							0
POWER & HVAC							
EXISTING		0	x	100%	=	0	
RECEPTACLES		3,240	x	100%/50%	=	3,240	
MISCELLANEOUS EQUIPMENT		64,400	x	100%	=	64,400	
REFRIGERATION EQUIPMENT		0	x	100%	=	0	
KITCHEN		0	x	100%	=	0	
HVAC - SUMMER		20,895	x	100%	=	20,895	
HVAC - WINTER		0	x	100%	=	0	
SUPP. ELECTRIC HEAT		5,100	x	100%	=	5,100	
MOTORS		26,600	x	100%	=	26,600	
LARGEST MOTOR		0	x	75%	=	0	
SUB-TOTAL (VA)		125,805	SUB-TOTAL (VA)			129,298	
SUB-TOTAL (AMPS)		349	SUB-TOTAL (AMPS)			359	
		SERVICE SIZE (AMPS)			400		
		SPARE CAPACITY (AMPS)			41		