HVAC - SYMBOLS

NOTE: NOT ALL SYMBOLS INDICATED MAY APPEAR ON PROJECT DRAWING

- AIR DEVICE (SUPPLY AIR TERMINAL)
- AIR DEVICE (RETURN, TRANSFER, OR OUTSIDE AIR TERMINAL)
- AIR DEVICE (EXHAUST AIR)
- M — MOTORIZED DAMPER
- BD — BACKDRAFT DAMPER
- VOLUME DAMPER
- D D — DUCT SMOKE DETECTOR
- T — THERMOSTAT
- T_S — THERMOSTAT/SENSOR
- T_R — THERMOSTAT/REVERSE ACTING
- H — HUMIDISTAT/HUMIDITY SENSOR
- SV — WALL SWITCH–VARIABLE SPEED
- S — WALL SWITCH
- U — UNDERCUT DOOR
- DL (AREA) — DOOR LOUVER/FREE AREA
- AP — ACCESS PANEL
- AIR FLOW DIRECTION
- AIR FLOW DIRECTION HEAD
- CONTINUATION BREAK
- A — SECTION NUMBER; DRAWING NUMBER; A — SECTION SYMBOL
- UNIT SERVED; DRAWING NUMBER — ENLARGED FLOOR PLAN SYMBOL

TYPICAL DOUBLE LINE DUCT LEGEND

NO SCALE

- RISE — RISE IN DUCT IN DIRECTION OF AIR FLOW
- DROP — DROP IN DUCT IN DIRECTION OF AIR FLOW
- MITERED ELBOW W/TURNING VANE
- LONG RADIUS ELBOW CENTER LINE RADIUS EQUAL TO 1.5 x DIA. (OR DUCT WIDTH)
- TRANSITION 1:4 SLOPE MINIMUM
- RECTANGULAR TO ROUND TRANSITION
- 1" ACOUSTIC LINED DUCT
- 45 DEGREE TRANSITION BRANCH TAKE–OFF (WITH VOLUME DAMPER)
- LOUVER
- A — A"ø — DIMENSIONING OF ROUND DUCT
- A; B — A" x B" — DIMENSIONING OF RECTANGULAR DUCT

HVAC - ABBREVIATIONS

AV	AUTOMATIC AIR VENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
AMB	AMBIENT
APD	AIR PRESSURE DROP
ACC	AUTOMATIC CONTROL CONTRACT
BMS	BUILDING MANAGEMENT SYSTEM
BJ	BETWEEN JOIST
BOD	BOTTOM OF DUCT
BOF	BOTTOM OF FOOTING
BOG	BOTTOM OF GRILL
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BOW	BOTTOM OF WALL
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BTWN	BETWEEN
CAP	CAPACITY
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT
COP	COEFFICIENT OF PERFORMANCE
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CVR	CONVECTOR
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DEMO	DEMOLISH. DEMOLITION
DIA	DIAMETER
DN	DOWN
DP	DEW POINT
DX	DIRECT EXPANSION
EA	EXHAUST AIR, EACH
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EFF	EFFICIENCY
ET	EXPANSION TANK
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
F	FAN
FD	FIRE DAMPER
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
LAT	LEAVING AIR TEMPERATURE
LF	LINEAR FOOT
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M	MOTORIZED DAMPER
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	BTU (1000's)
MC	MECHANICAL CONTRACTOR
MD	MANUAL DAMPER
MFR	MANUFACTURER
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OA	OUTSIDE AIR
PC	PLUMBING CONTRACTOR
PP	PUMP PRESS PRESSURE
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RF	RETURN FAN
RH	REHEAT
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
S	SMOKE DAMPER
SA	SUPPLY AIR
F	SUPPLY FAN
SHT	SHEET
SP	STATIC PRESSURE
ST	SOUND TRAP
TEMP	TEMPERATURE
TH	TOTAL HEAT
TC	TOTAL COOLING
TJ	THRU JOIST
TYP	TYPICAL
UH	UNIT HEATER
UV	UNIT VENTILATOR
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
WAC	WINDOW AIR CONDITIONER
WB	WET BULB
WC	WATER COLUMN
WHP	WATER SOURCE HEAT PUMP
WPD	WATER PRESSURE DROP
WTR	WATER

NOTE: THE ABOVE LIST OF ABBREVIATIONS IS STANDARD. ALL ABBREVIATIONS DO NOT NECESSARILY APPEAR ON THE DRAWINGS

HVAC - GENERAL NOTES

1. COORDINATE HVAC AND PLUMBING WORK WITH ALL OTHER TRADES.
2. ALL DIMENSIONS AND PIPE SIZES ARE IN INCHES, UNLESS OTHERWISE NOTED.
3. INSTALL DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS. PRESSURE CLASSIFICATION OF DUCTWORK IS TO BE AS FOLLOWS:
   a. SUPPLY 2"
   b. RETURN 2"
   c. EXHAUST 2"
   PROVIDE TURNING VANES IN ALL MITERED ELBOWS, OR PROVIDE ELBOWS WITH CENTER LINE RADIUS EQUAL TO 1.5 TIMES DUCT WIDTH.
4. INSTALL ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
5. REFLECTED CEILING PLANS FOR ANY AND ALL AREAS PREPARED BY THE ARCHITECT SHOWING THE LOCATION OF AIR INTAKES AND OUTLETS SHALL TAKE PRECEDENCE OVER THE LOCATION OF THOSE SHOWN ON THE HVAC DRAWINGS OF THIS CONTRACT SET OF DRAWINGS. THIS SUBCONTRACTOR SHALL INSTALL THE AIR INTAKES AND OUTLETS IN ANY GIVEN AREA TO AGREE WITH THE ARCHITECT'S REFLECTED CEILING PLANS.
6. ALL SCHEDULED MOTOR DATA AND ELECTRICAL CHARACTERISTICS ARE MAXIMUM. WHERE EQUIPMENT IS SUPPLIED WITH TARGET MOTORS OR ELECTRICAL CHARACTERISTICS THE HC TO COORDINATE WITH THE EC AND PAY FOR ALL CHANGES AS A RESULT INCREASED CAPACITY.
7. INSTALL ALL EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. ALL CASEWORK AND ALL EQUIPMENT – MECHANICAL CONTRACTOR MUST REVIEW THE EQUIPMENT SCHEDULES, SPECIFICATIONS, AND DRAWINGS IN ALL CONTRACT DOCUMENTS AND SUBSEQUENT SHOP DRAWINGS. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM AS PART OF THE CONTRACT. FAILURE TO REVIEW DOES NOT RELIEVE THE CONTRACTOR OF FULFILLING THE CONTRACTUAL OBLIGATIONS.
9. REFER TO ARCHITECTURAL DRAWINGS AND SHOP DRAWINGS FOR FINAL EXACT LOCATIONS CONNECTIONS AND FOR ALL WORK REQUIRED FOR EQUIPMENT NOT FURNISHED UNDER THIS CONTRACT.
10. MECHANICAL CONTRACTOR TO FIELD MEASURE AND/OR REVIEW ALL PERTINENT DOCUMENTS TO ASSURE LAYOUTS SHOWN ON HVAC DRAWINGS ARE COMPATIBLE WITH AVAILABLE SPACE AND WORK OF OTHER TRADES, AND ARE IN DRAWINGS. ACCORDANCE WITH LAYOUTS SHOWN ON GENERAL CONTRACT ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION PRIOR TO SUBMITTING EQUIPMENT SHOP DRAWINGS.
11. MECHANICAL CONTRACTOR IS CAUTIONED THAT LIMITED SPACE IS AVAILABLE IN WITH AND CROSS IN CEILING CAVITY. ALL DUCTWORK MUST BE COORDINATED WITH SPACE AND EQUIPMENT. PROVIDE ALL OFFSETS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES.
12. PROVIDE FLEXIBLE CONNECTIONS AT UNIT SUPPLY AND RETURN CONNECTIONS. OFFSET AND TRANSITION SUPPLY AND RETURN DUCTWORK AS REQUIRED TO AVOID STRUCTURE. PROVIDE MITERED ELBOWS WITH TURNING VANES AT BOTTOM OF SUPPLY AND RETURN DUCT DROPS.
13. 4" HIGH CONCRETE HOUSEKEEPING PAD BY MECHANICAL CONTRACTOR.
14. DO NOT INSTALL ANYTHING WITHIN THE EQUIPMENT TROUBLESHOOTING SPACE. COORDINATE WITH OTHER TRADES TO KEEP THIS SPACE CLEAR. COORDINATE WITH TRUSSES IN SUCH A MANNER THAT EQUIPMENT SHALL CLEAR TRUSS WORK.
15. DUCTWORK TO BE INSULATED WITH FIBERGLASS FLEXIBLE BLANKET INSULATION UNLESS OTHERWISE NOTED ON DRAWING OR DETAILS. JACKETS SHALL BE NOTED ON THE DRAWINGS.
16. FOR ALL BRANCH DUCT CONNECTIONS TO MAIN TRUNK, PROVIDE 45 DEGREE TRANSITION FITTING OR CONICAL TAP FOR ROUND DUCT. BUTT FITTINGS ARE NOT PERMITTED. PROVIDE MANUAL VOLUME DAMPER WITH LOCKING QUADRANT IN ALL BRANCH RUN OUTS TO GRILLES AND DIFFUSER.
17. PROVIDE TURNING VANES IN ALL MITERED ELBOWS, OR PROVIDE ELBOWS WITH CENTERLINE RADIUS EQUAL TO 1.5 TIMES DUCT WIDTH.
18. SLEEVE AND SEAL ALL PIPE, OR DUCT PENETRATIONS OF WALLS AND FLOORS. PACK VOID BETWEEN PIPE, OR DUCT AND SLEEVE WITH INSULATION IN NON–RATED WALLS AND FLOORS. PACK VOID BETWEEN PIPE, OR DUCT AND SLEEVE WITH INSULATION IN FIRE–RATED WALLS AND FLOORS, APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATION, MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR, BE GROUTED INTO PLACE AND WATERPROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT.
19. AS APPLICABLE AND AS INDICATED, PIPE DROPS ARE TO BE ON WALL, IN WALL, OR IN ENCLOSED SPACE PROVIDED BY THE GENERAL CONTRACTOR.
20. CONCEALED PIPING DROPS IN WALLS OR ENCLOSED SPACES SHALL BE INSULATED WITH 1/2" THICK UN–SLIT FLEXIBLE UNICELLULAR INSULATION.
21. IF, FOR ANY REASON, IT IS NECESSARY TO RUN PIPING THROUGH FINISHED AREAS IN A MANNER THAT PIPING WOULD BE VISIBLE, THE CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE AN APPROVED TYPE OF ENCLOSURE FOR CONCEALMENT, AT NO ADDITIONAL COST. CONTACT ARCHITECT IF THIS SITUATION OCCURS.
22. PROVIDE OPENINGS THROUGH WALLS 1" DIAMETER LARGER THAN PIPE. SET SLEEVE AND PACK OPENING WITH FIBERGLASS TO PREVENT RUBBING OR NOISE TRANSFER.
23. PROVIDE SHUT–OFF VALVE IN ALL HOT WATER SUPPLY BRANCHES AND COMBINATION SHUT–OFF AND BALANCE VALVE IN ALL HOT WATER RETURN BRANCHES. LOCATE IN ACCESSIBLE CEILING SPACE OR IF INSIDE EQUIPMENT ENCLOSURES, PROVIDE ACCESS DOOR.

ROOFTOP UNIT SCHEDULE

SYMBOL	UNIT DATA		FAN				COOLING			GAS HEAT			ELECTRICAL			PHYSICAL PROPERTIES		REMARKS
	MANUFACTURER	MODEL	CFM (TOTAL)	CFM (O/A)	ESP ("WC)	HP	TOTAL MBH	EER	IEER	INPUT MBH	OUTPUT MBH	EFFICIENCY (%)	VOLTS/ PHASE	MCA	MOP	WEIGHT (LBS)	DIMENSIONS (INCHES) HGTxLENxWTH	
RTU–1	AMERICAN STANDARD	YSJ102A3S0L**	3200	425	0.6	3	103.9	11.0	14.6	120	97.2	81	208/3	48.0	60	1250	47x53½x88½	–

NOTES:
1. ALL ROOFTOP UNITS SHALL BE AS SCHEDULED.
2. FACTORY FABRICATED ROOF CURB.
3. FACTORY INSTALLED INPUT CIRCUIT BREAKER DISCONNECT.
4. FACTORY INSTALLED LOW LEAK ECONOMIZER WITH FAULT DETECTION & DIAGNOSTICS SINGLE ENTHALPY CONTROL AND BAROMETRIC RELIEF.
5. PROGRAMMABLE THERMOSTAT WITH OPTIMUM START CONTROL.
6. PROVIDE UNIT WITH FACTORY INSTALLED RETURN AIR SMOKE DETECTOR.
7. MULTI–SPEED SUPPLY FAN.
8. PROVIDE LP CONVERSION KIT FOR FIELD CONVERSION OF GAS UNITS FROM NATURAL GAS TO PROPANE.

EXHAUST FAN SCHEDULE

SYMBOL	UNIT DATA		CFM	SP (IN WG)	FAN TYPE	DRIVE	HP	RPM	VOLTS/PHASE	ROOF OPENING (IN INCHES)	CONTROLS	LOCATION
	MANUFACTURER	MODEL										
EF–1	FLO AIRE	DR10H	225	0.375	ROOF CENTRIFUGAL	DIRECT	1/6	1374	120V/1	13 X 13	INTERLOCK W/ LIGHTS	RESTROOMS
EF–2	FLO AIRE	DR85H	2500	0.25	ROOF CENTRIFUGAL	DIRECT	3/4	1297	120V/1	20 X 20	ON/OFF	REPAIR BAY
EF–3	FLO AIRE	DR10H	100	0.125	ROOF CENTRIFUGAL	DIRECT	1/6	735	120V/1	13 X 13	INTERLOCK W/ LIGHTS	MECHANICAL ROOM 2

NOTES
1. PROVIDE ROOF CURB, BACKDRAFT DAMPER AND BIRDSCREEN.
2. FOR EF–2: PROVIDE STARTER WITH H–O–A, PILOT LIGHT, AUXILIARY CONTACT (RATED NEMA 3R).

GAS UNIT HEATER SCHEDULE

SYMBOL	MANUFACTURER	MODEL	TYPE	CFM	FAN HP	MBH INPUT	MBH OUTPUT	STAGES	MIN GAS PRESSURE (IN W.G.)	VENT SIZE	VOLTS/ PHASE	FLA (AMP.)	MCA (AMP.)	CONTROLS	REMARKS
GUH–1	STERLING	XF 175	PROP GAS	2850	1/3	175	145.25	1	7"	5"	120V/1	8	9.5	24V– CONNECTED TO THERMOSTAT	WALL MOUNT BRACKET
GUH–2	STERLING	XF 175	PROP GAS	2850	1/3	175	145.25	1	7"	5"	120V/1	8	9.5	24V– CONNECTED TO THERMOSTAT	WALL MOUNT BRACKET

NOTES:
1. PROVIDE UNIT STANDARD COLOR AS SELECTED BY OWNER.

ELECTRIC HEATER SCHEDULE

SYMBOL	MANUFACTURER	MODEL	WATTS	VOLTS/ PHASE	CONTROLS	REMARKS
EH	MARKEL	E4375TW	750	120V/1	INTEGRAL THERMOSTAT	MOUNT 4' A.F.F.

VENTILATION CALCULATIONS

PUBLIC AREAS (RTU–1)

ROOM	AREA (NET SF)	NUMBER OF PEOPLE	MIN OA (CFM/PER)	MIN OA (CFM/SF)	BREATHING ZONE MIN OA (CFM)	ZONE OA (CFM)	AIR EFFECTIVENESS
SHOWROOM	1,355 SF	21	7.5	0.12	323 CFM	404 CFM	0.8
STAFF ROOM	82 SF	2	5	0.06	15 CFM	19 CFM	0.8
MEN'S RR	47 SF	0	0	0	0	0	0.8
WOMEN'S RR	49 SF	0	0	0	0	0	0.8
STAFF RR	51 SF	0	0	0	0	0	0.8
TOTALS					338 CFM	423 CFM	–

SHOP AND STORAGE AREAS

NATURAL VENTILATION				MECHANICAL EXHAUST			
SF OF SHOP/STORAGE AREAS	OF MINIMUM OPENABLE AREA (CONSTANT)	MINIMUM SF OF OPENABLE AREA REQUIRED	OPENABLE AREA PROVIDED	SF OF SHOP AREA	EXHAUST RATE (CONSTANT)	MINIMUM CFM OF MECHANICAL EXHAUST REQ.	CFM OF EF–2 PROVIDED
5,154 SF	0.04*	207 SF	1,680 SF	3,124 SF	0.75 CFM/SF	2,343 CFM	2,500 CFM

NOTES:
1.THE SERVICE AREA & TIRE STORAGE AREA SHALL BE NATURALLY VENTILATED PER IMC SECTION 402, AS WELL AS A 2,500 CFM EXHAUST FAN TO PROVIDE MECHANICAL VENTILATION PER IMC 403.
*NATURAL VENTILATION AREA REQUIREMENT: THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING NATURALLY VENTILATED PER IMC 402.2.

AIR BALANCE

UNIT	AREA SERVED	SUPPLY AIR CFM	OUTSIDE AIR CFM	RETURN AIR CFM	EXHAUST AIR CFM
RTU–1	SEE PLAN	3200 CFM	425 CFM	2775 CFM	0 CFM
EF–1	SEE PLAN	-	-	-	225 CFM 2
EF–3	SEE PLAN	-	-	-	100 CFM 2
	TOTAL:	3200 CFM	425 CFM	2275 CFM	325 CFM 2
	BUILDING PRESSURE:	----------		100 CFM 2	POSITIVE

1. CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON RTU TO MATCH VALUES MENTIONED IN ABOVE TABLE.

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
4	08/06/2025	IFC SET
3	07/14/2025	BID SET
2	06/27/2025	PERMIT REVISION #1
1	03/06/2025	PERMIT SET

MAVIS TIRES. BRAKES & DISCOUNT PRICES

HVAC LEGEND, SCHEDULES AND NOTES

Project No.: 23296

Sheet No.: M-001

C403.2.4.1 THERMOSTATIC CONTROLS
THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.
EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:

1. THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.

C403.2.4.1.2 DEADBAND
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.
EXCEPTIONS:

1. THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.
2. OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE CODE OFFICIAL.

C403.2.4.1.3 SETPOINT OVERLAP RESTRICTION
WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.2.4.1.2.

C403.2.4.2 OFF-HOUR CONTROLS
EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.
EXCEPTIONS:

1. ZONES THAT WILL BE OPERATED CONTINUOUSLY.
2. ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A MANUAL SHUTOFF SWITCH LOCATED WITH READY ACCESS.

C403.2.4.2.1 THERMOSTATIC SETBACK
THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

C403.2.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN
AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

C403.2.4.2.3 AUTOMATIC START & STOP
AUTOMATIC START AND STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE AUTOMATIC START CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY. AUTOMATIC STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM WITH DIRECT DIGITAL CONTROL OF INDIVIDUAL ZONES. THE AUTOMATIC STOP CONTROLS SHALL BE CONFIGURED TO REDUCE THE HVAC SYSTEM'S HEATING TEMPERATURE SETPOINT AND INCREASE THE COOLING TEMPERATURE SETPOINT BY NOT LESS THAN 2°F (−16.6°C) BEFORE SCHEDULED UNOCCUPIED PERIODS BASED ON THE THERMAL LAG AND ACCEPTABLE DRIFT IN SPACE TEMPERATURE THAT IS WITHIN COMFORT LIMITS.

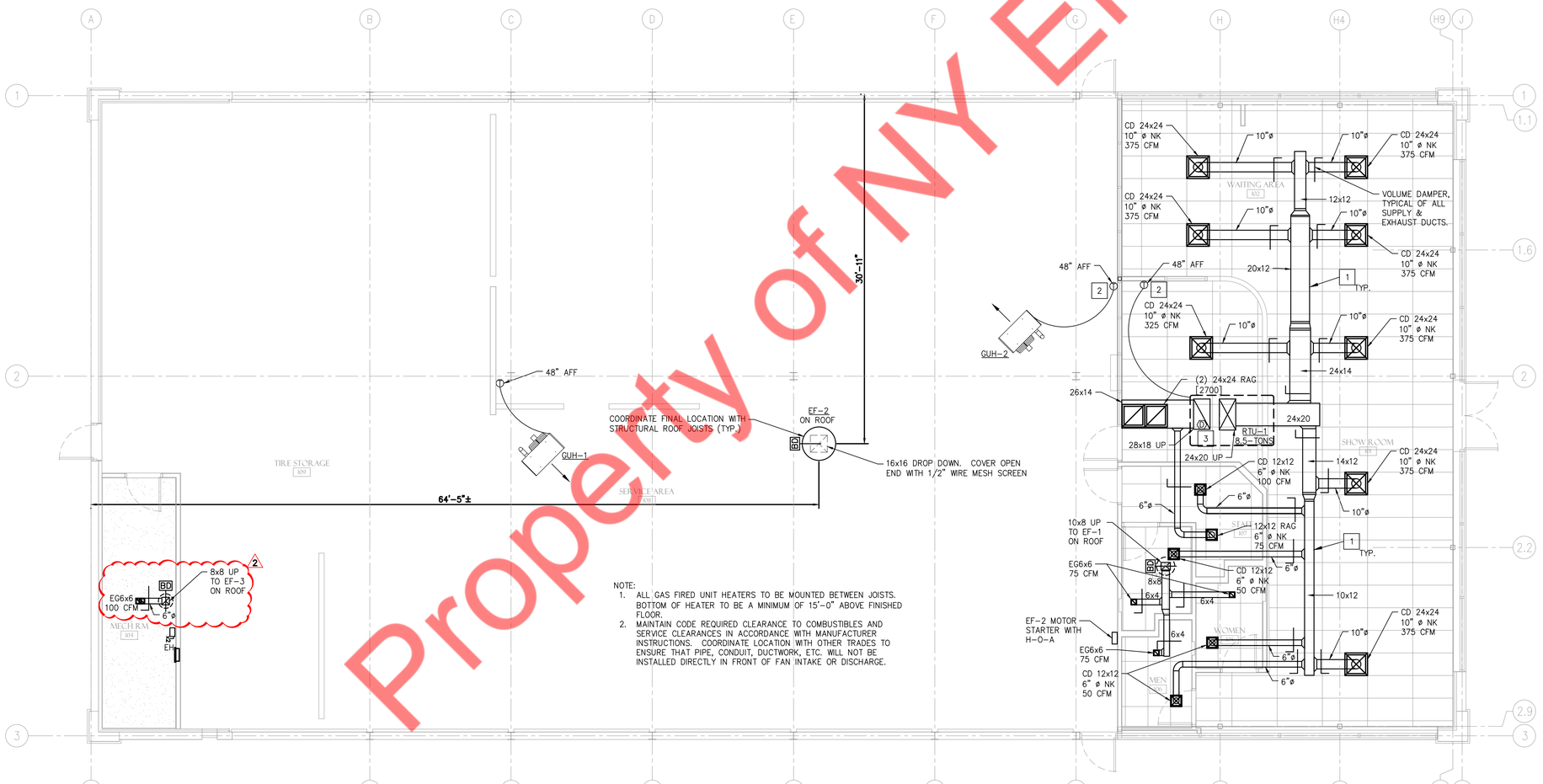
NOTE:
ALL DUCTWORK AND PLENUMS ABOVE GYP AND ACT CEILING TO BE WRAPPED W/ MIN. 2" FIBERGLASS BLANKET INSULATION.

NOTE:
FLEXIBLE ELASTOMERIC, MINERAL-FIBER BLANKET, MINERAL-FIBER BOARD OR POLYOLEFIN WITH MINIMUM INSTALLED THERMAL RESISTANCE AS FOLLOWS:

UNCONDITIONED SPACES WITHIN BUILDING:	R-6
WITHIN BUILDING ENVELOPE ASSEMBLY:	R-8
OUTSIDE OF BUILDING:	R-8

HVAC - KEYED NOTES

1. ALL SUPPLY AIR DUCTWORK IN PLENUMS ABOVE GYP AND ACT CEILING TO BE WRAPPED WITH MINIMUM 2" FIBERGLASS BLANKET INSULATION.
2. INSTALL AND WIRE NEW 7-DAY PROGRAMMABLE THERMOSTAT. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
3. DUCT MOUNTED SMOKE DETECTOR SHALL BE FURNISHED/INSTALLED IN RETURN AIR DUCT BY MECHANICAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR TO SHUT DOWN CORRESPONDING RTU UNDER ALARM CONDITIONS. ALL WIRING SHALL BE IN CONDUIT PER N E C SMOKE DETECTOR SHALL BE SYSTEM SENSOR MODEL DH100ACDCLP OR EQUAL.



NOTE:
1. ALL GAS FIRED UNIT HEATERS TO BE MOUNTED BETWEEN JOISTS. BOTTOM OF HEATER TO BE A MINIMUM OF 15'-0" ABOVE FINISHED FLOOR.
2. MAINTAIN CODE REQUIRED CLEARANCE TO COMBUSTIBLES AND SERVICE CLEARANCES IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. COORDINATE LOCATION WITH OTHER TRADES TO ENSURE THAT PIPE, CONDUIT, DUCTWORK, ETC. WILL NOT BE INSTALLED DIRECTLY IN FRONT OF FAN INTAKE OR DISCHARGE.

NORTH

1 / M-100 HVAC FLOOR PLAN
SCALE: 3/16" = 1'-0"

CLIENT

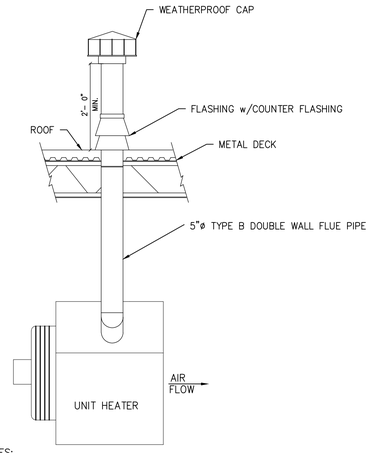
MARK	DATE	COMMENTS
	03/06/2025	PERMIT SET
1	06/27/2025	PERMIT REVISION #1
	07/14/2025	BID SET
2	08/06/2025	IFC SET
3	09/12/2025	PERMIT RESUBMITTALS

MAVIS TIRES & BRAKES — DISCOUNT PRICES

HVAC FLOOR PLAN

Project No.: 23296

Sheet No.: M-100

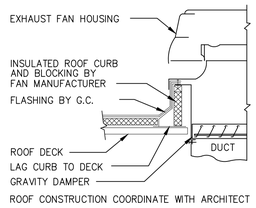


NOTES:

1. ALL GAS VENT PIPING SHALL BE TYPE B DOUBLE WALL FLUE PIPE
2. INSTALL PER MANUFACTURER REQUIREMENTS

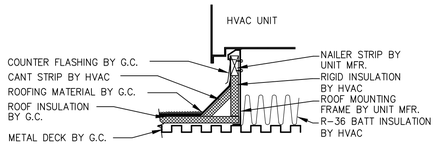
2 / M-101 UNIT HEATER VENT PIPING DETAIL

NO SCALE



4 / M-101 ROOF EXHAUST FAN CURB DETAIL

NO SCALE

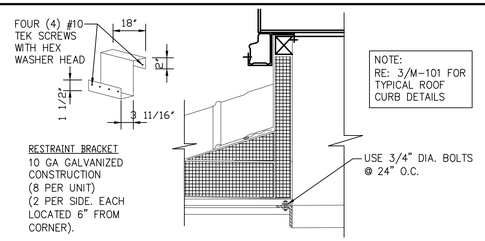


ROOF CONSTRUCTION COORDINATE WITH ARCHITECT

NOTE: ONLY OPENINGS IN METAL DECKING WHERE DUCT PENETRATIONS OCCUR.

3 / M-101 ROOF CURB DETAIL FOR HVAC UNIT

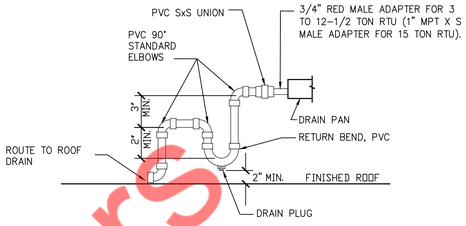
NO SCALE



5 / M-101 MECHANICAL UNIT TIE DOWN

NO SCALE

NOTE:
A SUBSTITUTE UNIT TIE-DOWN SYSTEM UTILIZING 1 1/2"x6" GALVANIZED LAG SCREWS THROUGH UNIT FRAMING, WOOD NAILER AND CURB FRAME INSERTED AT 6" FROM EACH CORNER ON ALL (4) SIDES AND SPACED AT A MAXIMUM OF 24" ON CENTER FOR THE ENTIRE LENGTH OF EACH SIDE MAY BE USED IN LIEU OF THE ABOVE SPECIFIED TIE-DOWN SYSTEM.



6 / M-101 RTU CONDENSATE TRAP DETAIL

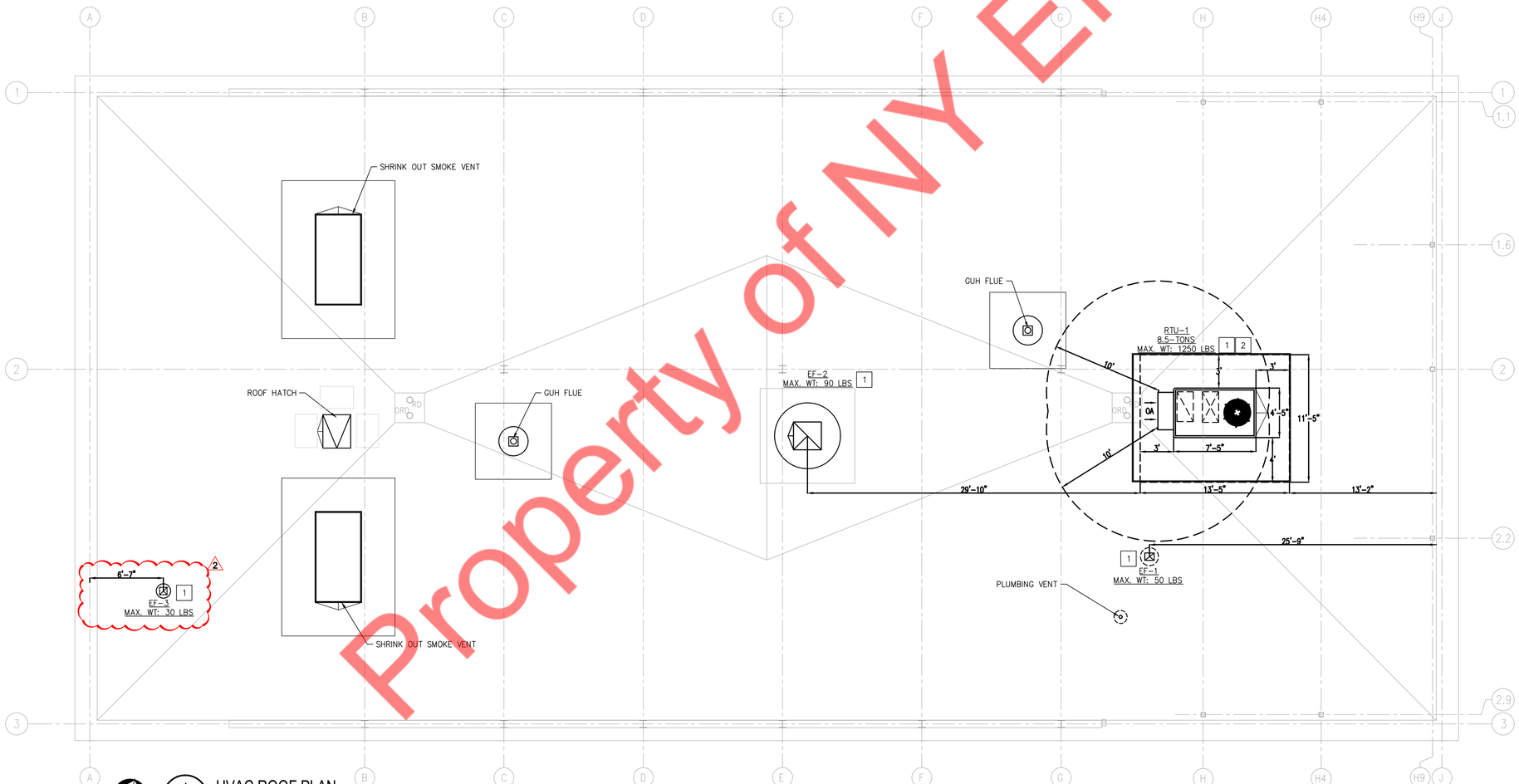
NO SCALE

LEGEND

⌀RD	ROOF DRAIN
⌀ORD	OVERFLOW ROOF DRAIN
	CRICKET (SLOPE EACH SIDE 1/2" PER FT)
	WALL BELOW

HVAC - KEYED NOTES

1. COORDINATE FINAL LOCATION OF EQUIPMENT WITH STRUCTURAL DRAWINGS/ENGINEER OR OWNER/TENANT.
2. CONTRACTOR TO FIELD VERIFY THAT LOCATION OF ANY EXHAUST SOURCE SHOULD BE AT LEAST 10'-0" AWAY FROM RTU-1.



1 / M-101 HVAC ROOF PLAN

SCALE: 3/16" = 1'-0"

NORTH

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
2	08/06/2025	IFC SET
	07/14/2025	BID SET
1	06/27/2025	PERMIT REVISION #1
	03/06/2025	PERMIT SET

MAVIS TIRES & BRAKES — DISCOUNT PRICES

HVAC ROOF PLAN AND DETAILS

Project No.: 23296

Sheet No.: M-101

PLUMBING - SYMBOLS

SANITARY LINE
UNDERFLOOR PIPING
STRM — STORM WATER LINE
VENT — VENT LINE
COLD WATER LINE
HOT WATER LINE
HOT WATER RETURN LINE
GAS LINE
DIRECTION OF FLOW
FLOOR DRAIN
ELBOW DOWN
ELBOW UP
WALL HYDRANT/NFWH
CONTINUATION
CLEANOUT FLUSH IN FLOOR
CLEANOUT IN HORIZONTAL RUN OR WALL CLEANOUT
BACKFLOW PREVENTER
BALL VALVE
UNION

PLUMBING - ABBREVIATIONS

ABV	ABOVE
AB CL	ABOVE CEILING
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
BLW	BELOW
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BOS	BOTTOM OF STEEL
BTUH	BRITISH THERMAL UNITS PER HOUR
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CO	CLEANOUT
CONC	CONCRETE
CW	COLD WATER
DIP	DUCTILE IRON PIPE
DF	DRINKING FOUNTAIN
DN	DOWN
EC	ELECTRICAL CONTRACTOR
EES	EMERGENCY EYE WASH AND SHOWER
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FD	FLOOR DRAIN
FD/T	FLOOR DRAIN WITH TRAP PRIMER
FFE	FINISH FLOOR ELEVATION
FCO	FLOOR CLEANOUT
FLR	FLOOR
FS	FLOOR SINK
GC	GENERAL CONTRACTOR
GH	GROUND HYDRANT
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HC	HVAC CONTRACTOR
HP	HORSE POWER
HW	HOT WATER
HWR	HOT WATER RETURN
INV	INVERT
KW	KILOWATT
LAV	LAVATORY
MB	MOP BASIN
MC	MECHANICAL CONTRACTOR
N/C	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NFWH	NON-FREEZE WALL HYDRANT
N/O	NORMALLY OPENED
NTS	NOT TO SCALE
ORD	OVERFLOW DRAIN
OS&Y	OUTSIDE STEM & YOKE
P	PRESSURE GAUGE
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLY VINYL CHLORIDE
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RWC	RAINWATER CONDUCTOR
SAN	SANITARY
SH	SHOWER
SS	SERVICE SINK
TA	TEMPERATURE DIFFERENCE
T	THERMOMETER
TMV	THERMOSTATIC MIXING VALVE
TYP	TYPICAL
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR

PLUMBING - GENERAL NOTES

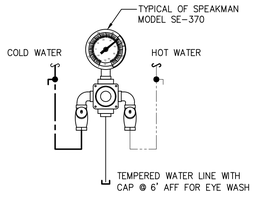
1. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN FIELD BEFORE ORDERING EQUIPMENT OR FABRICATING COMPONENTS.
2. UNLESS NOTED OTHERWISE, CONSTRUCTION MATERIAL AND EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF THE SITE.
3. COORDINATE WORK WITH EXISTING STRUCTURAL AND ARCHITECTURAL FEATURES AND PROVIDE OFFSETS AND FITTINGS AS REQUIRED.
4. COORDINATE WORK WITH ALL OTHER TRADES. CEILING HEIGHTS ON ARCHITECTURAL PLANS ARE FINAL.
5. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES AND PIPING BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT OCCUR BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES.
6. INSTALL ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
7. CONTRACTOR IS REQUIRED TO NOTIFY FACILITY OWNERS NOT LESS THAN 3 AND NOT MORE THAN 10 WORKING DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK WHEN USING POWERED EQUIPMENT.
8. COORDINATE LOCATION OF ALL PIPING AND DEVICES BEFORE INSTALLATION WITH THE WORK OF OTHER TRADES. WHERE A CONFLICT IN AVAILABLE CLEARANCES OCCURS, OBTAIN CLARIFICATION FROM OTHER TRADES. WHERE A CONFLICT IN AVAILABLE CLEARANCES OCCURS, OBTAIN CLARIFICATION FROM THE ARCHITECT, AND PROVIDE WHATEVER ADDITIONAL PIPING, FITTINGS, ETC., ARE REQUIRED TO INSTALL PLUMBING SYSTEM WITHOUT ANY ADDITIONAL COST TO THE CONTRACT.
9. VERIFY MOUNTING HEIGHTS OF EQUIPMENT FIXTURES W/ARCHITECT DRAWING BEFORE ROUGH-IN.
10. BUILDING STORM WATER, DOMESTIC WATER, SANITARY, & GAS PIPING SHALL BE EXTENDED TO LIMIT DELINEATION OF CONTRACT LINE AS INDICATED ON DRAWINGS.
11. THE PLUMBING CONTRACTOR SHALL MAKE A COMPLETE WASTE, VENT, HOT & COLD WATER CONNECTION TO ALL OWNER FURNISHED EQUIPMENT.
12. INSTALL ALL PLUMBING EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS.
13. DIMENSIONS AND PIPE SIZES ARE IN INCHES UNLESS NOTED OTHERWISE.
14. RUN PIPING CONCEALED EXCEPT IN MECHANICAL ROOMS OR WHERE NOTED OTHERWISE.
15. RUN CONCEALED PIPING ON ROOM SIDE OF BUILDING INSULATION UNLESS NOTED OTHERWISE.
16. ALL EXPOSED PIPING SHALL BE CLEANED AND HAVE THE SURFACE PREPARED TO RECEIVE PAINTED FINISH. PRIME AND PAINT THE EXPOSED PIPING IN COLOR AS SELECTED BY THE ARCHITECT.
17. RUN 2" MINIMUM SIZE WASTE PIPING BELOW GROUND INSIDE BUILDING REGARDLESS OF SIZE NOTED ON FIXTURE SCHEDULE. SLOPE ALL SOIL, WASTE AND STORM WATER LINES PER CODE.
18. CONNECT WATER, WASTE, AND VENT PIPING TO FIXTURES IN ACCORDANCE WITH SIZES INDICATED ON FIXTURE SCHEDULE.
19. SEAL ALL FLOOR AND WALL PENETRATIONS IN FIRE RATED CEILINGS AND PARTITIONS TO MAINTAIN FIRE RATING. COORDINATE LOCATIONS WITH ARCHITECTURAL DRAWINGS.
20. COORDINATE EXACT LOCATION OF DOWNSPOUT NOZZLES WITH THE ROOF DRAIN TO DOWNSPOUT NOZZLE.
21. COORDINATE ACCESS PANELS AND DOORS WITH ARCHITECT FEATURES.
22. CONTRACTOR SHALL PROVIDE PIPE SLEEVES IN ALL FOUNDATION WALLS FOR PIPING PENETRATIONS.
23. ALL DOMESTIC WATER PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE, UNLESS OTHERWISE INDICATED.
24. MAKE ALL FINAL CONNECTIONS TO THE EQUIPMENT AS SHOWN ON THE DRAWINGS. PROVIDE SHUT-OFF VALVES IN ALL INDIVIDUAL WATER CONNECTIONS. IF APPLICABLE, PROVIDE SHUT-OFF VALVES IN ALL INDIVIDUAL GAS CONNECTIONS.
25. INSTALL VACUUM BREAKER ON ALL DRAIN VALVES, WALL HYDRANTS, AND ALL HOSE CONNECTIONS.
26. RUN ALL PIPING ABOVE CEILING UNDER BUILDING INSULATION OR CONCEALED IN WALLS, UNLESS NOTED OTHERWISE. ALL WASTE LINES AS SHOWN SHALL BE BELOW FLOOR, UNLESS NOTED OTHERWISE.
27. FURNISH AND INSTALL ACCESS PANELS (FIRE-RATED) WHERE REQUIRED, WHERE SHOWN, OR REQUIRED FOR ACCESS TO ALL CONCEALED VALVES, TRAPS OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS PROVIDED.
28. INSTALL UNIONS ON PIPING TO PERMIT EASY DISCONNECTING.
29. CONCEAL ALL PIPING, VALVES AND FITTINGS ABOVE CEILINGS AND IN CHASES WHERE THEY OCCUR, UNLESS NOTED OTHERWISE.
30. THE CONTRACTOR SHALL RIGIDLY SUPPORT ALL EQUIPMENT.
31. ALL SANITARY AND STORM SEWER PIPING SHALL BE RUN AT 1/8" PER FOOT SLOPE UNLESS OTHERWISE NOTED. ALL SANITARY SEWER PIPING 2" AND SMALLER SHALL BE RUN AT 1/4" PER FOOT SLOPE.
32. PROVIDE AND INSTALL ANGLE SHUTOFF VALVES AT EACH FIXTURE REQUIRING WATER. VALVES FOR WALL MOUNTED FIXTURES SHALL BE CHROME PLATED, THREADED, HEAVY DUTY TYPE AND HAVE LOOSE KEY STOPS. VALVES FOR COUNTERTOP FIXTURES SHALL BE 1/4 TURN BALL VALVES. PROVIDE SHUT-OFF VALVE IN ALL HOT WATER SUPPLY BRANCHES AND COMBINATION SHUT-OFF AND BALANCE VALVE IN ALL HOT WATER RETURN BRANCHES. LOCATE IN ACCESSIBLE CEILING SPACE OR IF INSIDE EQUIPMENT ENCLOSURES, PROVIDE ACCESS DOOR.

PLUMBING FIXTURE SCHEDULE

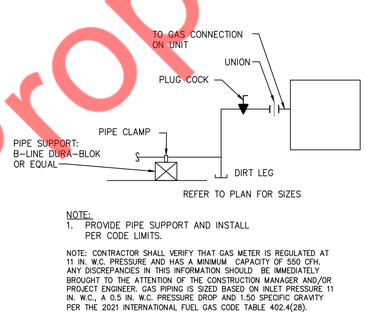
SYMBOL	DESCRIPTION	PIPE SIZE					MOUNTING HEIGHT AFF (INCHES)	REMARKS
		CW	HW	VENT	WASTE	TEP		
WC	WATER CLOSET, ADA COMPLIANT	1/2"	–	2"	4"	–	REFER TO A-300	KOHLER "HIGHLINE" MODEL K-3519, FLOOR MOUNTED 1.0 GPF FLUSH, VITREOUS CHINA. FLUSHING SYSTEM: SLOAN FLUSHMATE7, FINISH COLOR TO BE WHITE. SEAT: MODEL K-4731-C OPEN FRONT SEAT WITHOUT COVER. ADA COMPLIANT.
LAV	LAVATORY, ADA COMPLIANT	1/2"	1/2"	1-1/4"	1-1/2"	–	REFER TO A-300	KOHLER "CHESAPEAKE" MODEL K-1728 VITREOUS CHINA, 19 1/4"L X 17 1/4"W BASIN, 4 7/8" DEEP WALL HUNG TYPE, WITH METAL GRID DRAIN, WITH 1-1/4" TAILPIECE "P" TRAP, KOHLER "TRITON" FAUCET MODEL K-7404-5N WITH WRISTBLADE HANDLES. FINISH TO BE POLISHED CHROME. 0.5 GPM. INSULATE "P" TRAP AND SUPPLIES AND STOPS W/ TRUEBRO INC. "HANDILAV-GUARD" OR EQUAL INSULATION KITS. PROVIDE LAVATORY CONCEALED ARM CARRIER SMITH FIGURE 700. ADA COMPLIANT. INSTALL ASSE 1070 LISTED THERMOSTATIC MIXING VALVE WATTS LFMMV, SET FOR 110°F.
DF	DRINKING FOUNTAIN, ADA COMPLIANT	1/2"	–	1-1/4"	2"	–	REFER TO A-300	ELKAY HI/LO WALL MOUNT WATER COOLER, BARRIER FREE ACCESS, NSF/ANSI 61 COMPLIANT, MODEL EMABFTL8C, CAPACITY OF 8.0 GPH OF 50 DEGREE DRINKING WATER BASED UPON 80 DEGREE INLET WATER AND 90 DEGREE AMBIENT AIR. PROVIDE FOUNTAIN ACCESSORY APRON BY ELKAY TO MEET THE ADA REQUIREMENT FOR PROTRUDING OBJECTS- 307.2. COORDINATE ACCESSORY MODEL NUMBER WITH DRINKING FOUNTAIN MODEL NUMBER. ADA COMPLIANT.; COLOR: GREY ELEC.: 120V 1-PHASE SUPPORT: MOUNTING FRAME FOR ATTACHING TO SUBSTRATE.
DS-1	DOWNSPOUT NOZZLE	–	–	–	–	–	PER MANUF. RECOMMENDATION	J.R. SMITH 1770 OR APPROVED SIMILAR. DOWNSPOUT NOZZLE WITH BIRDSCREEN-BS, NICKLE BRONZE-NB AND WALL FLANGE.
SS	SERVICE SINK	1/2"	1/2"	1-1/4"	2"	–	–	KOHLER "BANNON" CAST IRON SERVICE SINK, MODEL K-6714 WITH K-6692, ADJUSTABLE TRAP STANDARD FOR 2" C.I. PIPE WITH CLEANOUT PLUG AND STRAINER. FAUCET: KOHLER MODEL K-830T60-4A "TRITON BOWE" SERVICE SINK FAUCET.
NFWH	NON FREEZE WALL HYDRANT	3/4"	–	–	–	–	REFER TO A-300	ZURN MODEL Z-1320 ENCASED ECOLOTROL "ANTI-SIPHON" AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION. COMPLETE WITH NON-FREEZE INTEGRAL BACKFLOW PREVENTER, COPPER CASING, ALL BRONZE INTERIOR PARTS WITH 1/2 TURN CERAMIC DISC CARTRIDGE AND COMBINATION 3/4" FEMALE SOLDER AND 3/4" MALE PIPE THREADED INLET. STAINLESS STEEL BOX AND HINGED COVER WITH OPERATING KEY LOCK AND "WATER" STAMPED ON COVER (ALL SOLDER CONNECTIONS ARE LEAD FREE.)
FCO	CLEAN OUTS	–	–	–	–	–	–	ZURN MODEL ZN1400
EW	EYE WASH, ADA COMPLIANT	1/2"	1/2"	–	–	–	–	GUARDIAN WALL MOUNT COMBINATION EYE WASH/DRENCH HOSE UNIT MODEL G5026 WITH FLIP TOP DUST COVERS, INTERNAL FLOW CONTROL AND FILTER. POWDER COATED MOUNTING BRACKET WITH SPRING CLIPS AND STAINLESS STEEL SQUEEZE HANDLE WITH PLASTIC COVER. PROVIDE THERMOSTATIC MIXING VALVE. MOUNTING HEIGHT: TOP OF CONTROLS NOT TO EXCEED 48" AFF. ADA COMPLIANT.
FD	FLOOR DRAIN	–	–	–	2"	–	–	ZURN MN# Z415B WITH CAST IRON BODY AND TRAP, AND LIGHT DUTY 5" DIAMETER CAST IRON GRATE. PROVIDE TRAP PRIMER IF INDICATED ON PLANS OTHERWISE PROVIDE TRAP GUARD FOR ALL FLOOR DRAINS.
RD-1	COMBINATION-PRIMARY-OVERFLOW ROOF DRAIN	-	–	–	4"	–	–	ZURN Z163 OR APPROVED SIMILAR COMBINATION MAIN ROOF AND OVERFLOW DRAIN WITH LOW SILHOUETTE DOMES TO SUPPORT 4" PIPE SIZE.
RCP	RECIRC PUMP							BELL & GOSSETT MODEL NBF-25, 2 GPM, 13 FT HD, 120V/1-PH, 1.1 AMPS, 125 WATTS, FURNISH WITH AQUASTAT

ELECTRIC WATER HEATER SCHEDULE

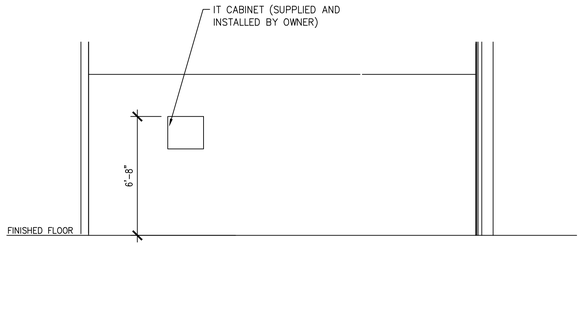
SYMBOL	MFR.	TYPE	MODEL	TANK CAPACITY GALS.	NUMBER OF ELEMENTS	VOLTS/ PHASE	ELEMENT WATTAGE	RECOVERY CAP GPH @ TEMP RISE OF 80°F	WEIGHT (LBS.)
WH	A.O. SMITH	ELECTRIC	DEL-15	15	1	208/1	2000	10	58



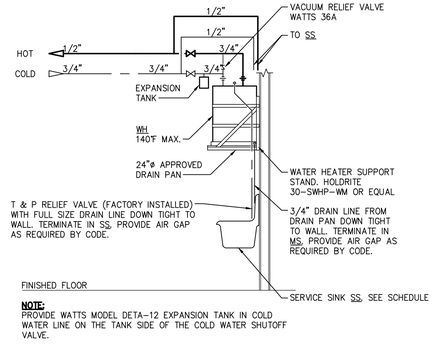
1 P-001 THERMOSTATIC MIXING VALVE DETAIL
SCALE: NTS



2 P-001 GAS CONNECTION DETAIL
SCALE: NTS



3 P-001 IT CABINET DETAIL
SCALE: NTS



4 P-001 WATER HEATER DETAIL
SCALE: NTS

CLIENT

MARK	DATE	COMMENTS
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	08/06/2025	IFC SET
	07/14/2025	BID SET
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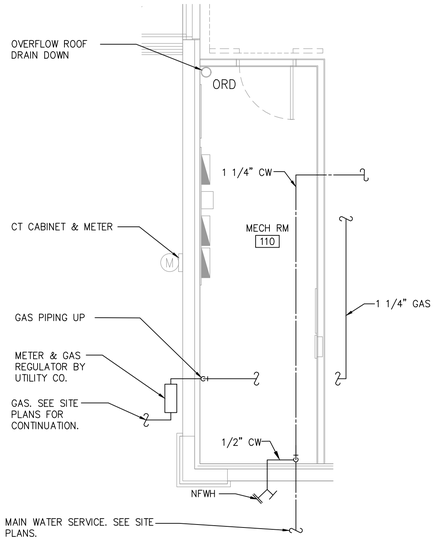
	03/06/2025	PERMIT SET

MAVIS TIRES & BRAKES #1 DISCOUNT PRICES

PLUMBING LEGEND, SCHEDULES AND NOTES

Project No.: 23296

Sheet No.: P-001



2 P-100 MECH RM PIPING
SCALE: 1/4" = 1'-0"

NOTE: CONTRACTOR SHALL VERIFY THAT GAS METER IS REGULATED AT 11 IN. W.C. PRESSURE AND HAS A MINIMUM CAPACITY OF 470 CFH. ANY DISCREPANCIES IN THIS INFORMATION SHOULD BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND/OR PROJECT ENGINEER. GAS PIPING IS SIZED BASED ON INLET PRESSURE 11 IN. W.C., A 0.5 IN. W.C. PRESSURE DROP AND 1.50 SPECIFIC GRAVITY PER THE 2021 INTERNATIONAL FUEL GAS CODE TABLE 402.4(28).

COORDINATE ALL PLUMBING WITH FINAL RACKING LOCATIONS

1-1/4" GAS
470 MBH ±78'-0" TO METER
175 MBH ±86'-0" TO METER
1" GAS
GUH-1
1 1/4" GAS
GUH-2
1" GAS
175 MBH ±128'-0" TO METER
295 MBH ±120'-0" TO METER
1" GAS TO RTU-1
RISER THROUGH ROOFTO RTU-1, SEAL WEATHERTIGHT.
120 MBH ±150'-0" TO METER
RTU-1 ON ROOF
RD
1-1/4" CW
2 P-100
ORD
MECH RM 110
GAS PIPING UP
470 TOTAL MBH TO BUILDING
1/2" CW
NFWH
UNDERGROUND DW SERVICE FROM WATER METER AND BFP. SEE CIVIL FOR CONTINUATION.
1 P-101 2 P-101
4" SAN
SEE SITE PLANS FOR CONTINUATION

NORTH

1 P-100 PLUMBING PLAN
SCALE: 3/16" = 1'-0"

CLIENT

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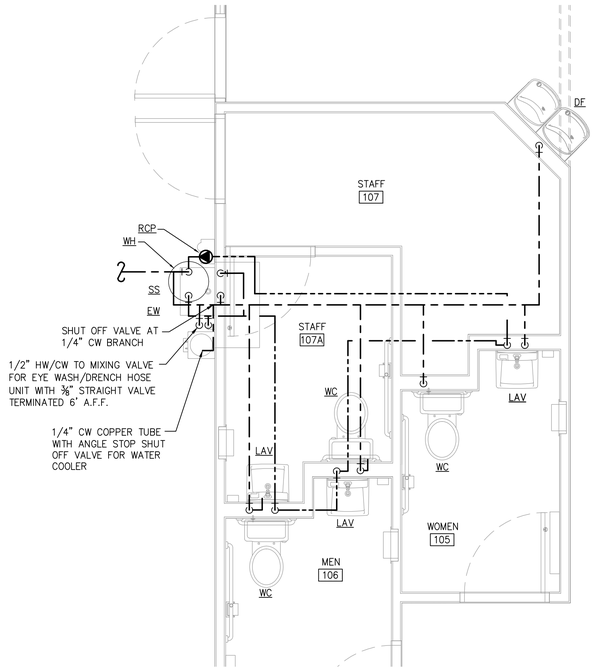
MAVIS TIRES & BRAKES — DISCOUNT PRICES

PLUMBING PLAN

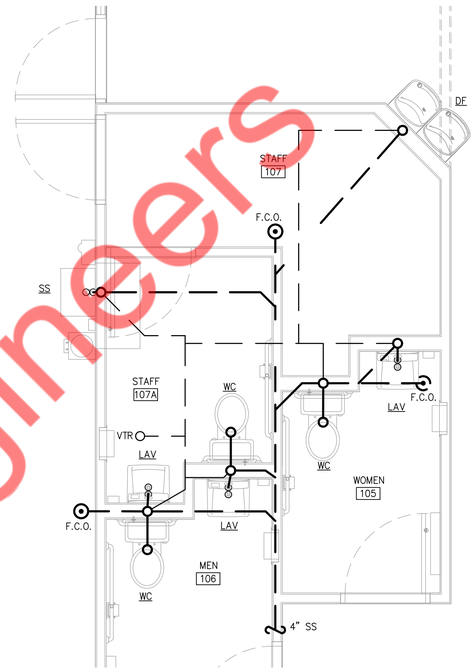
Project No.: 23296

Sheet No.: P-100



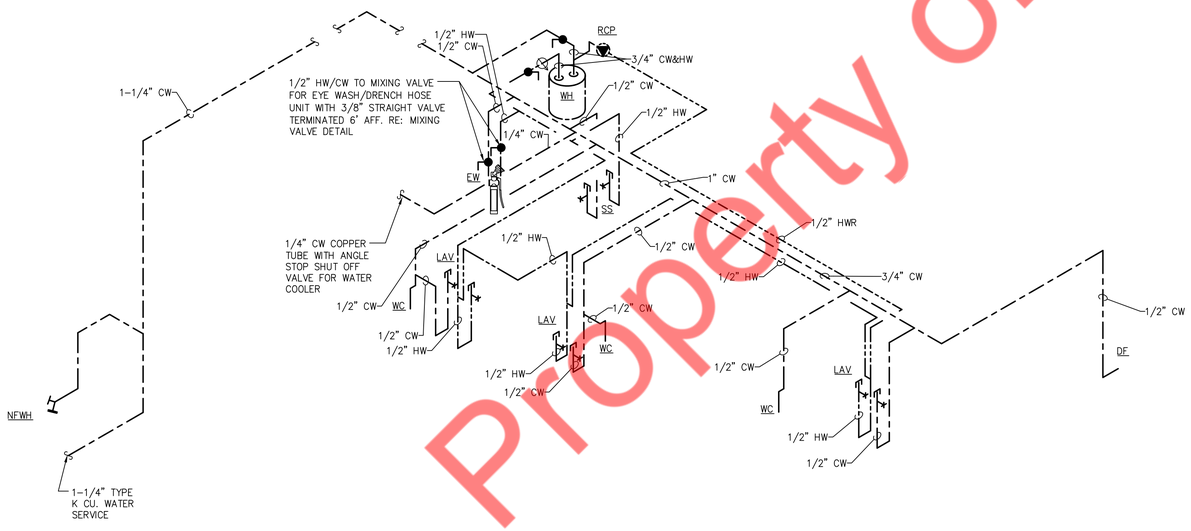
1 P-101 RESTROOM DOMESTIC PIPING PLAN

SCALE: 3/8" = 1'-0"



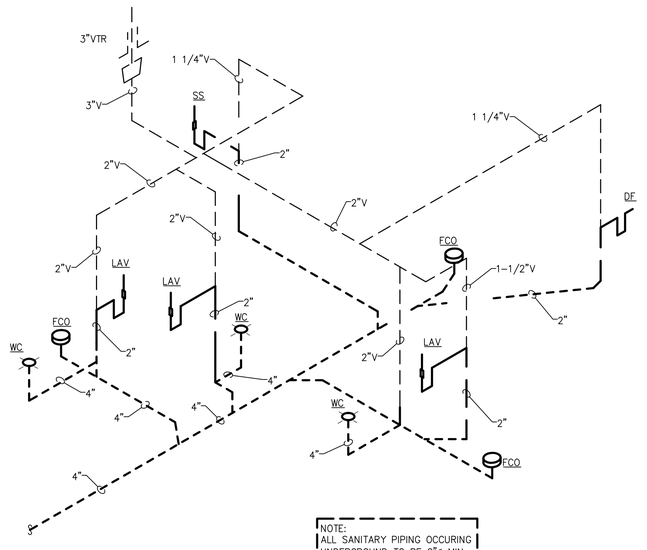
2 P-101 RESTROOM SANITARY PIPING PLAN

SCALE: 3/8" = 1'-0"



3 P-101 DOMESTIC WATER RISER

SCALE: NTS



4 P-101 SANITARY RISER

SCALE: NTS

CLIENT

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	08/06/2025	IFC SET
	07/14/2025	BID SET
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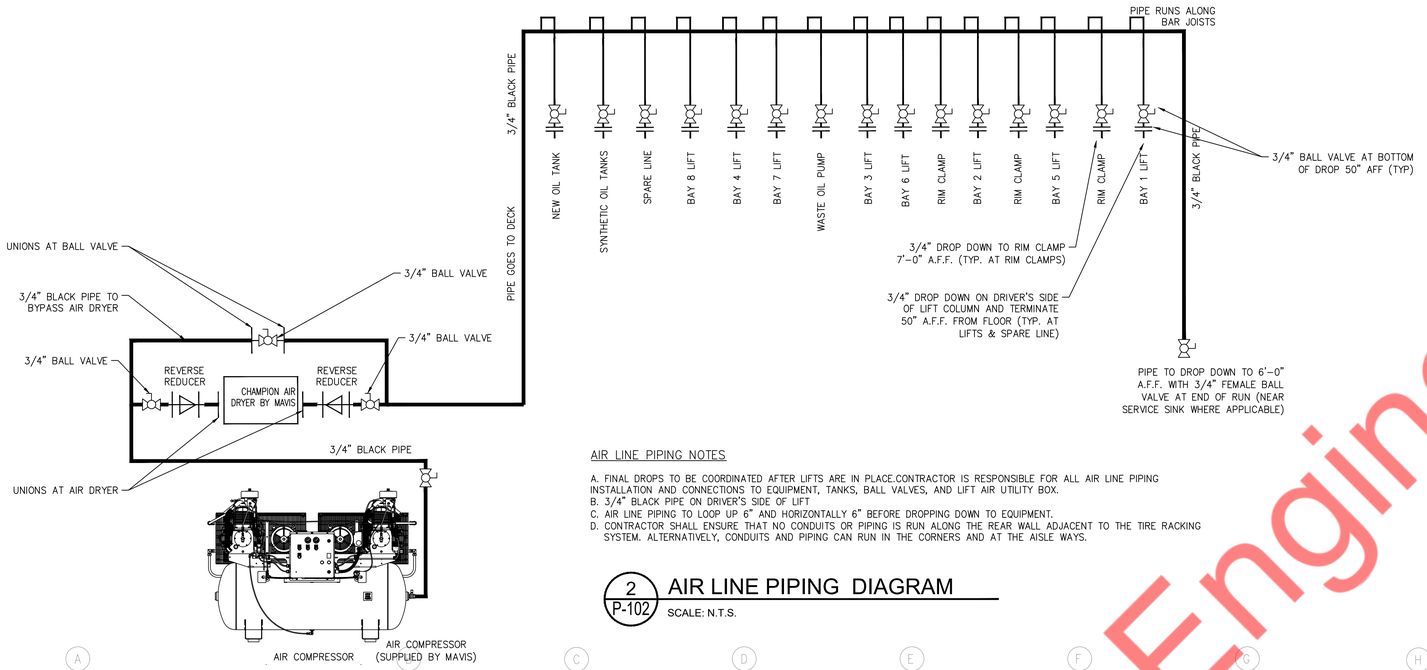
	03/06/2025	PERMIT SET

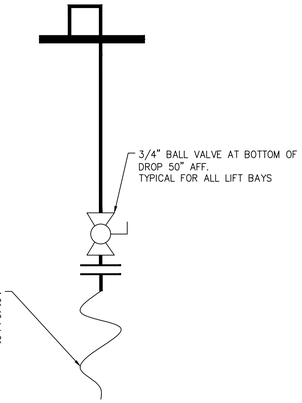
MAVIS TIRES. BRAKES & DISCOUNT PRICES

PLUMBING PLANS AND RISERS

Project No.: 23296

Sheet No.: P-101



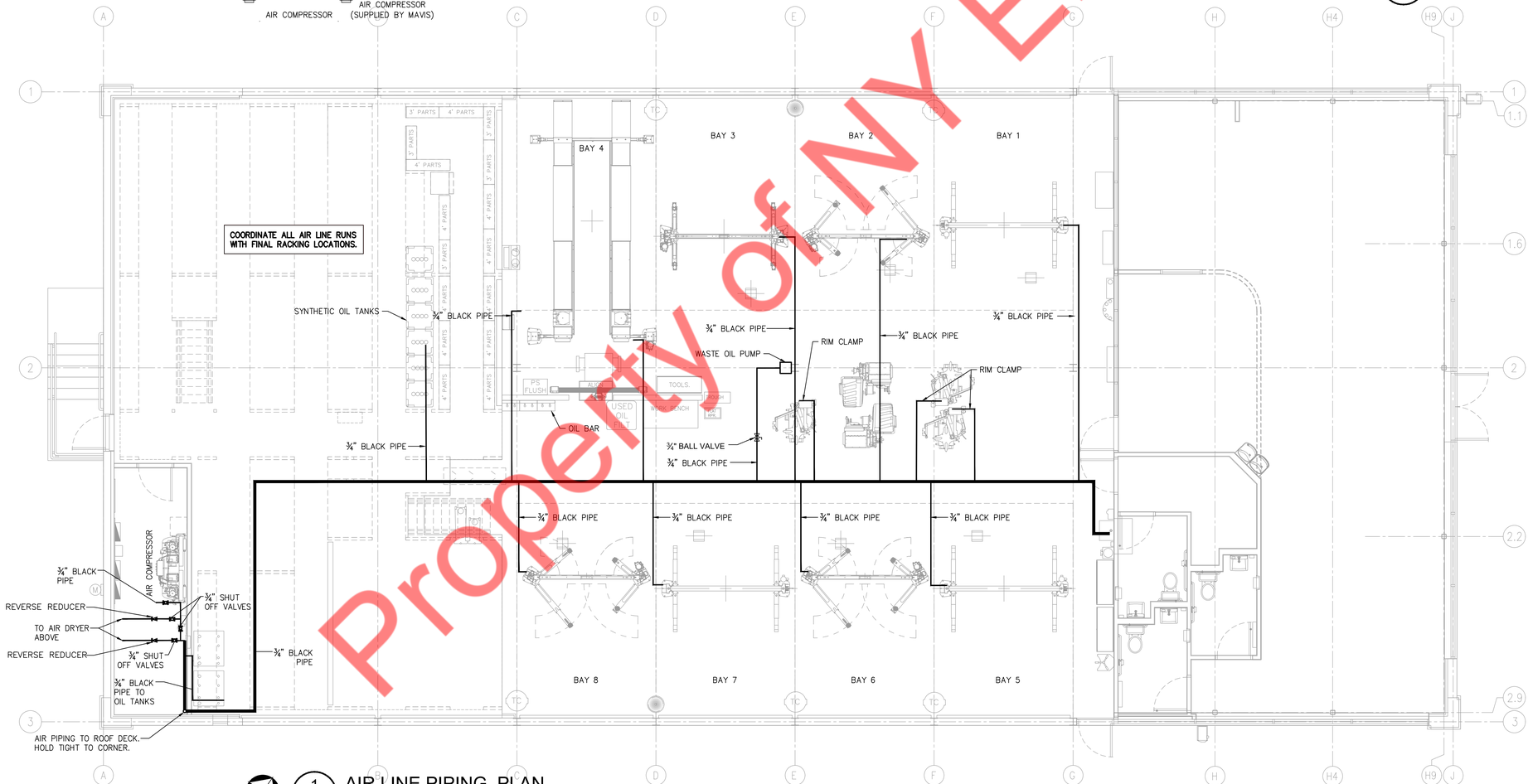


AIR LINE PIPING NOTES

A. FINAL DROPS TO BE COORDINATED AFTER LIFTS ARE IN PLACE.CONTRACTOR IS RESPONSIBLE FOR ALL AIR LINE PIPING INSTALLATION AND CONNECTIONS TO EQUIPMENT, TANKS, BALL VALVES, AND LIFT AIR UTILITY BOX.
B. 3/4" BLACK PIPE ON DRIVER'S SIDE OF LIFT.
C. AIR LINE PIPING TO LOOP UP 6" AND HORIZONTALLY 6" BEFORE DROPPING DOWN TO EQUIPMENT.
D. CONTRACTOR SHALL ENSURE THAT NO CONDUITS OR PIPING IS RUN ALONG THE REAR WALL ADJACENT TO THE TIRE RACKING SYSTEM. ALTERNATIVELY, CONDUITS AND PIPING CAN RUN IN THE CORNERS AND AT THE AISLE WAYS.

2 / P-102 AIR LINE PIPING DIAGRAM
SCALE: N.T.S.

3 / P-102 AIR LINE PIPING DETAIL
SCALE: N.T.S.



1 / P-102 AIR LINE PIPING PLAN
SCALE: 3/16" = 1'-0"

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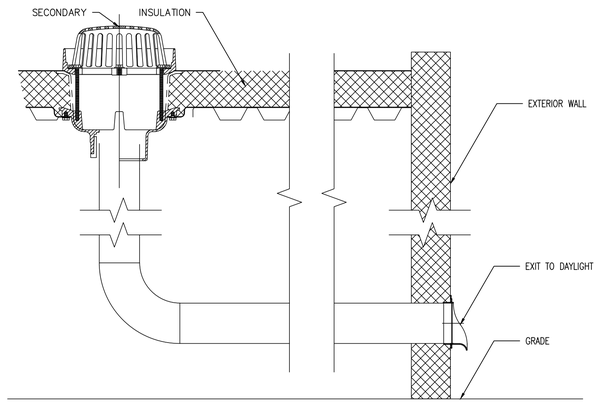
1		

MAVIS TIRES & BRAKES DISCOUNT PRICES

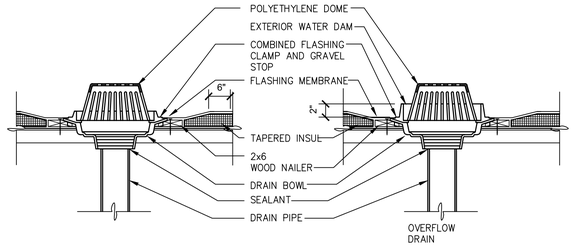
AIR LINE PIPING PLAN

Project No.: 23296

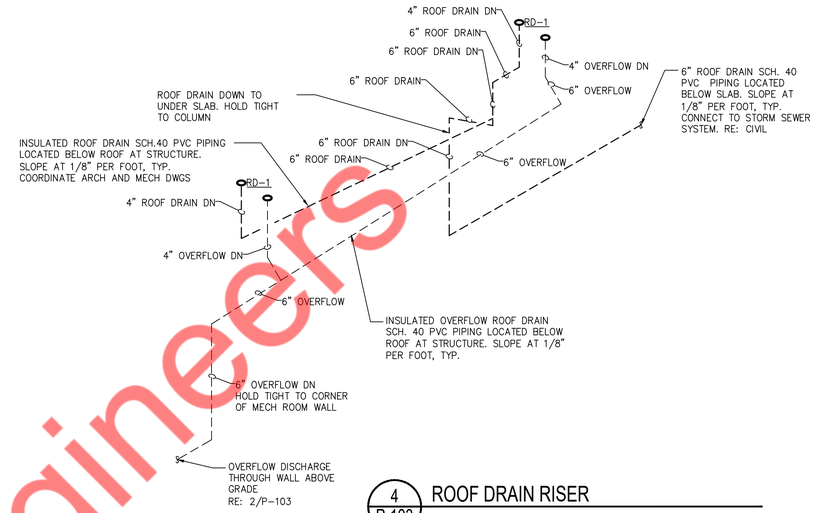
Sheet No.: P-102



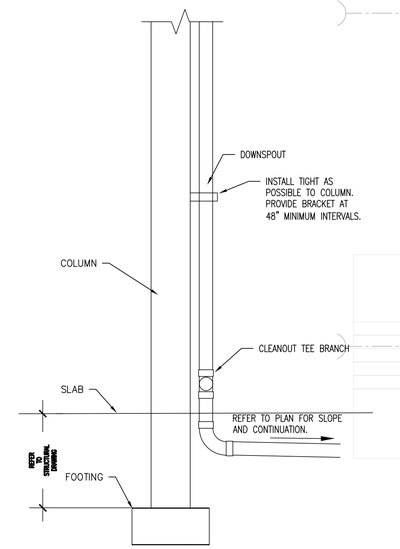
2 P-103 OVERFLOW ROOF DRAIN TO DAYLIGHT
SCALE: NTS



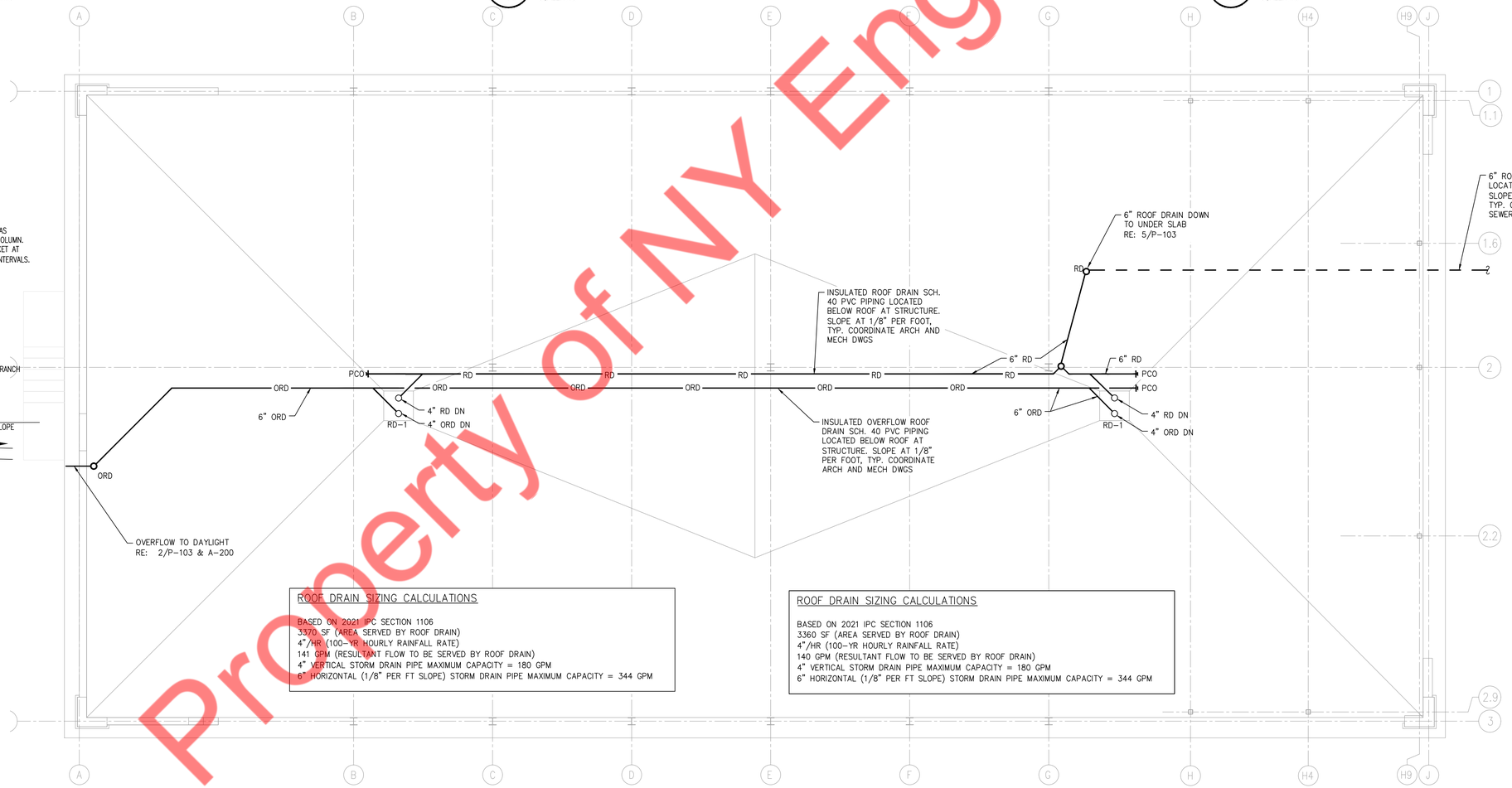
3 P-103 TYP ROOF DRAIN/OVERFLOW DETAIL
SCALE: NTS



4 P-103 ROOF DRAIN RISER
SCALE: NTS



5 P-103 ROOF DRAIN DETAIL
SCALE: NTS



ROOF DRAIN SIZING CALCULATIONS

BASED ON 2021 IPC SECTION 1106
3370 SF (AREA SERVED BY ROOF DRAIN)
4"/HR (100-YR HOURLY RAINFALL RATE)
141 GPM (RESULTANT FLOW TO BE SERVED BY ROOF DRAIN)
4" VERTICAL STORM DRAIN PIPE MAXIMUM CAPACITY = 180 GPM
6" HORIZONTAL (1/8" PER FT SLOPE) STORM DRAIN PIPE MAXIMUM CAPACITY = 344 GPM

ROOF DRAIN SIZING CALCULATIONS

BASED ON 2021 IPC SECTION 1106
3360 SF (AREA SERVED BY ROOF DRAIN)
4"/HR (100-YR HOURLY RAINFALL RATE)
140 GPM (RESULTANT FLOW TO BE SERVED BY ROOF DRAIN)
4" VERTICAL STORM DRAIN PIPE MAXIMUM CAPACITY = 180 GPM
6" HORIZONTAL (1/8" PER FT SLOPE) STORM DRAIN PIPE MAXIMUM CAPACITY = 344 GPM

NORTH

1 P-103 ROOF DRAIN PLAN
SCALE: 3/16" = 1'-0"

CLIENT

PERMIT RESUBMITTALS
IFC SET
BID SET
PERMIT REVISION #1
PERMIT SET
COMMENTS

MARK	DATE
4	09/12/2025
3	08/06/2025
2	07/14/2025
1	06/27/2025
	03/06/2025

MAVIS TIRES & BRAKES DISCOUNT PRICES

ROOF PLAN AND CALCULATIONS

Project No.: 23296

Sheet No.:

P-103

ELECTRICAL GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH **NFPA 70–2014**, NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE STATE AND LOCAL CODES AND AMENDMENTS.
2. SERVICE PERFORMED ON VEHICLES AT THIS FACILITY COMPLIES WITH NEC ARTICLE 511.2 – **MINOR REPAIR GARAGE**. PER ARTICLE 511.3(D)(1) AND (2) THE SPACE IS **UNCLASSIFIED**.
3. BUILDING PERMIT AND INSPECTION FEES WILL BE PAID BY THE OWNER. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ANY/ALL LOCAL ELECTRICAL TRADE LICENSING FEES.
4. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.
5. IT IS THE INTENT AND PURPOSE OF THESE DRAWINGS AND SPECIFICATIONS TO INCLUDE AND PROVIDE FOR ALL MATERIALS, APPLIANCES AND LABOR TO PROPERLY COMPLETE AND LEAVE IN PERFECT WORKING CONDITION THE ENTIRE SYSTEM HEREINAFTER SPECIFIED. ANY MATERIAL, LABOR OR APPLIANCE NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS, BUT NECESSARY FOR A COMPLETE INSTALLATION MUST BE FURNISHED BY THIS CONTRACTOR.
6. IT IS THE INTENT AND PURPOSE OF THESE DRAWINGS AND SPECIFICATIONS SHALL PROVIDE FOR THE FURNISHING AND INSTALLING OF THE ELECTRICAL SYSTEMS COMPLETE AS SPECIFIED AND SHOWN. ANY WORK SHOWN ON THE DRAWINGS AND NOT PARTICULARLY DESCRIBED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY WORK CHANGES WHICH MAY BE EVIDENTLY NECESSARY TO COMPLETE THE INSTALLATION SHALL BE FURNISHED BY THIS CONTRACTOR.
7. THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
8. ALL EQUIPMENT DEVICES, WIRING, ETC. SHOWN ON THE DRAWINGS IS NEW UNLESS OTHERWISE NOTED.
9. THE ELECTRICAL CONTRACTOR SHALL BECOME FAMILIAR AND COMPLY WITH OWNERS BUILDING STANDARDS FOR CONSTRUCTION.
10. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAILS SHEETS, PLANS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.
11. THE ELECTRICAL CONTRACTOR SHALL NOT ENDANGER THE STABILITY OF THE STRUCTURE OR ANY PART THEREOF BY CUTTING, DRILLING OR OTHERWISE MODIFYING, AND SHALL NOT IN ANY WAY CUT OR ALTER THE WORK OF ANY OTHER CONTRACTOR, EXCEPT WITH THE PRIOR WRITTEN CONSENT OF AND UNDER THE DIRECTION OF THE ARCHITECT AND/OR GENERAL CONTRACTOR.
12. THE MINIMUM CONDUIT SIZE SHALL BE 3/4", UNLESS NOTED OTHERWISE.
13. ALL CONDUITS ARE SHOWN DIAGRAMMATICALLY, EXACT RUNS SHALL BE DETERMINED IN FIELD EXCEPT WHERE SPECIFICALLY DIMENSIONED ON CONDUIT LAYOUTS. CONTRACTOR SHALL FOLLOW MINIMUM SPACING REQUIREMENTS TO REDUCE ELECTROMAGNETIC INTERFERENCE. COORDINATE CONDUIT ROUTING WITH ALL OTHER TRADES.
14. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL TO BUILDING WALLS AND BEAMS EXCEPT WHERE OTHERWISE SHOWN. CONTRACTOR SHALL INSTALL CONDUIT IN SUCH A MANNER TO AVOID ALL INTERFERENCES.
15. DEFLECTION/EXPANSION FITTINGS SHALL BE PROVIDED WHERE RIGID METAL CONDUIT CROSSES STRUCTURAL EXPANSION JOINTS.
16. EXPOSED CONDUIT SHALL BE SUPPORTED ON WALLS OR CEILINGS BY APPROVED HANGERS OF ANGLE OR CHANNEL CONSTRUCTION. CONDUITS SHALL BE SUPPORTED AT LEAST EVERY EIGHT (8) FEET.
17. ALL SPARE CONDUITS SHALL BE TERMINATED AS SHOWN ON THE DRAWINGS AND SHALL BE CAPPED 3" ABOVE FINISHED FLOOR.
18. EXACT CONDUIT STUB–UP LOCATIONS ARE TO BE DETERMINED BY THE ELECTRICAL CONTRACTOR BASED ON CERTIFIED MANUFACTURER'S DRAWINGS OF THE RESPECTIVE EQUIPMENT. CONDUIT SHALL BE INSTALLED TO AGREE WITH EQUIPMENT FURNISHED.
19. CONDUITS PASSING THROUGH BUILDING FLOORS OR WALLS BELOW GRADE ARE TO BE INSTALLED WITH WATERTIGHT THRU WALL CONDUIT SEAL FITTINGS.
20. ONLY CONDUITS HAVING OUTSIDE DIAMETERS NO LARGER THAN ONE–THIRD OF THE THICKNESS OF SLAB MAY BE INSTALLED WITHIN THE CONCRETE SLABS.
21. CONDUITS IN STRUCTURAL SLABS ARE TO BE SPACED SO AS TO PROVIDE NO LESS THAN THREE CONDUIT DIAMETERS, CENTER TO CENTER, WHEREVER POSSIBLE. LARGER SPACING IS PREFERRED.
22. CONTINUOUS ROWS OF CONDUITS ARE NOT TO BE PLACED IMMEDIATELY ALONG BEARING ENDS OF SLABS.
23. ALL CONDUITS SHALL BE SUPPORTED FROM STRUCTURAL STEEL ONLY.
24. ELECTRICAL CONTRACTOR SHALL PROVIDE SLEEVES/ OPENINGS FOR ALL CONDUIT RISERS PENETRATING WALLS, ROOF & FLOOR SLABS. ALL ROOF AND MECH. ROOMS SLAB PENETRATIONS SHALL BE WATERPROOF.
25. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
26. JUNCTION & PULL BOXES: DO NOT LOCATE EXPOSED IN FINISH SPACES UNLESS REQUIRED BY NEC. WHERE NECESSARY, REROUTE CONDUIT OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. PROVIDE PULL BOXES AS INDICATED AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATE LOCATIONS WITH OTHER TRADES. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE. FOR EMPTY CONDUITS, INSTALL PULL BOXES EVERY 100 FEET AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES.
27. PROVIDE BARRIERS IN ALL PULL BOXES FOR CONDUIT SETS.
28. ALL FINAL CONNECTIONS TO VIBRATING EQUIPMENT (MOTORS, GENERATORS ETC.) SHALL BE THROUGH A LIQUID TIGHT FLEXIBLE METAL CONDUIT.
29. FLEXIBLE CONNECTIONS IN EXPOSED AREAS SHALL NOT EXCEED 18" MAXIMUM.
30. PAINT AND RUST PROOF ALL HARDWARE & CONDUITS ON ROOF AND IN EXPOSED AREAS.
31. SUPPORT PANEL, JUNCTION & PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON CONDUIT.
32. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. INSTALL SWITCH ON LATCH SIDE, VERIFY FINAL DOOR HINGE LOCATION IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
33. VERIFY LOCATIONS OF OUTLETS AND EQUIPMENT IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILING AND THE LIKE, AND CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
34. FOR RECEPTACLE & OUTLETS MOUNTING HEIGHTS AND POSITION (HORIZONTAL, VERTICAL), COORDINATE WITH OWNER'S PROJECT MANAGER.
35. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY THE OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
36. CONDUCTORS SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID, UNLESS OTHERWISE NOTED.
37. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE THHN OR THWN AS REQUIRED AND RATED AT 75 DEGREES CELSIUS. UNLESS NOTED OTHERWISE.
38. DO NOT PULL THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F (0 DEG C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
39. THE NUMBER OF WIRES SHOWN ON THE DRAWINGS IS NOT NECESSARILY THE CORRECT NUMBER REQUIRED. THE CONTRACTOR SHALL INSTALL AS MANY AS ARE NECESSARY FOR PROVIDING A COMPLETE ELECTRICAL SYSTEM IN EACH CASE.
40. USE OF ISOLATED TYPE GROUNDING CONDUCTOR FOR IG TYPE RECEPTACLES, PLUG MOLDS & EQUIPMENT DOES NOT RELIEVE REQUIREMENT FOR GROUNDING CONDUIT SYSTEM, DEVICES AND EQUIPMENT AS REQUIRED BY ALL APPLICABLE CODES. PROVIDE AND INSTALL GROUNDING FITTING, EQUIPMENT GROUND WIRING ETC. AS REQUIRED.
41. LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS. CONDUIT OVER 10 FEET IN WHICH WIRING IS NOT INSTALLED–FURNISH PULL STRING.
42. ALL GROUND CONNECTIONS TO THE BUILDING STEEL SHALL BE EXOTHERMIC WELDED.
43. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER'S PROJECT MANAGER; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION
'A'	RECESSED 2' x 4' LED CENTER BASKET FIXTURE IC RATED FOR DIRECT CONTACT WITH INSULATION LAMPS: LED, 4,000K, 80CRI, 4,535 LUMENS MANUFACTURER: MOBERN CATALOG NO.: RDISE–24–LED–35–DMV–FR–40 INPUT POWER: 35 WATTS
'AE'	RECESSED 2' x 4' LED CENTER BASKET FIXTURE WITH EMERGENCY BATTERY SUPPLY LAMPS: LED, 4,000K, 80CRI, 4,535 LUMENS MANUFACTURER: MOBERN CATALOG NO.: RDISE–24–LED–35–DMV–FR–40–EM INPUT POWER: 35 WATTS
'B'	SURFACE MOUNTED LED STRIP LIGHT, 24" LONG WITH WIRE GUARD AND EMERGENCY BATTERY SUPPLY LAMPS: LED, 4,000K, 82CRI, 3,355 LUMENS MANUFACTURER: MOBERN CATALOG NO.: 42 24–LED–24–DMV–FR–40–EM–A69/2FT INPUT POWER: 24 WATTS
'B1'	SURFACE MOUNTED LED STRIP LIGHT, 24" LONG WITH WIRE GUARD LAMPS: LED, 4,000K, 82CRI, 3,355 LUMENS MANUFACTURER: MOBERN CATALOG NO.: 42 24–LED–24–DMV–FR–40–A69/2FT INPUT POWER: 24 WATTS
'C'	LENSED PENDANT MOUNTED LED STRIP LIGHT, 48" LONG WITH WIRE GUARD AND EMERGENCY BATTERY SUPPLY LAMPS: LED 4,000K, 80CRI, 4,028 LUMENS MANUFACTURER: LITHONIA CATALOG NO.: ZL1D L48 3000LM FST MVOLT 40K 80CRI E10WLCP WH WGZ48 INPUT POWER: 30 WATTS
'C1'	LENSED PENDANT MOUNTED LED STRIP LIGHT, 48" LONG WITH WIRE GUARD LAMPS: LED 4,000K, 80CRI, 4,028 LUMENS MANUFACTURER: LITHONIA CATALOG NO.: ZL1D L48 3000LM FST MVOLT 40K 80CRI WH WGZ48 INPUT POWER: 30 WATTS
'D'	RECESSED 1' x 4' LED BACKLIT FLAT PANEL FIXTURE INCLUDE DRYWALL FRAME KIT LAMPS: LED, 4,000K, 80CRI, 4,400 LUMENS MANUFACTURER: SATCO CATALOG NO.: NUVO 65–573 INPUT POWER: 40 WATTS
'E'	STEM MOUNTED LED HIGHBAY LIGHT WITH EMERGENCY BATTERY SUPPLY LAMPS: LED, 4,000K, 70CRI, 15,343 LUMENS MANUFACTURER: LITHONIA CATALOG NO.: CPHB 15000LM SEF GCL WD MVOLT GZ10 40K 70CRI E10WCP DWH INPUT POWER: 105 WATTS
'E1'	STEM MOUNTED LED HIGHBAY LIGHT LAMPS: LED, 4,000K, 70CRI, 15,343 LUMENS MANUFACTURER: LITHONIA CATALOG NO.: CPHB 15000LM SEF GCL WD MVOLT GZ10 40K 70CRI E10WCP DWH INPUT POWER: 105 WATTS
'H'	ROUND SHADE PENDANT MOUNTED 1 LAMP FIXTURE, 16" DIAMETER WITH WIRE GUARD, NO SUBSTITUTION THIS FIXTURE LAMP: A19 LED, 2,700K, 80CRI, 800 LUMENS MANUFACTURER: TROY RLM LIGHTING CATALOG NO.: RS16 M TTL WG W INPUT POWER: 9 WATTS
'OS1'	OCCUPANT SENSOR LUMINAIRE MOUNTED NO SUBSTITUTION THIS FIXTURE MANUFACTURER: ETLIN–DANIELS CATALOG NO.: SENPIR–HB–O1
'OS2'	OCCUPANT SENSOR CEILING MOUNTED NO SUBSTITUTION THIS FIXTURE MANUFACTURER: ETLIN–DANIELS CATALOG NO.: SENPIR–CM–O1
'DS'	DAYLIGHT SENSOR CEILING MOUNTED MANUFACTURER: LUTRON CATALOG NO.: LRF2–DCRB–WH
'X'	EXIT SIGN WITH 6" RED LETTERS, LED INTERNAL ILLUMINATION, DUAL LAMPHEADS, WHITE FINISH, ARROWS AS INDICATED ON THE PLANS LAMPS: LED MANUFACTURER: BARRON–EXITRONIX CATALOG NO.: VLEDC–S1 WH R4 INPUT POWER: 4 WATTS
'EB'	SELF CONTAINED EMERGENCY LIGHTING BATTERY UNIT WITH DUAL ADJUSTABLE LAMPHEADS, THERMOPLASTIC HOUSING LAMPS: LED MANUFACTURER: BARRON–EXITRONIX CATALOG NO.: LED–95 WH INPUT POWER: 1 WATT

EXTERIOR LIGHTING FIXTURE SCHEDULE

NOTE: COORDINATE WITH SHEET A–200 FOR EXTERIOR LIGHTING FIXTURE LOCATIONS AND ELEVATIONS

TYPE	DESCRIPTION
'SLA'	WALL MOUNTED EXTERIOR FULL CUTOFF WALL PACK, GLASS DIFFUSER NO SUBSTITUTION THIS FIXTURE LAMPS: LED, 3,000K, 73CRI, 2,748 LUMENS MANUFACTURER: LITHONIA CATALOG NO.: WPX1 LED P2 30K MVOLT DWHXD INPUT POWER: 24 WATTS
'EL'	DUAL HEAD REMOTE EMERGENCY LIGHTING FIXTURE MOUNT ±12'–6" AFF ABOVE DOOR, POWER FROM EXIT SIGN 'X'. LAMPS: MANUFACTURER: BARRON–EXITRONIX CATALOG NO.: 2RL1–WP GR

NOTE:
MAVIS DISCOUNT TIRE HAS A NATIONAL ELECTRICAL AGREEMENT WITH CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC. (CED). THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THE LED LIGHTING EQUIPMENT. QUESTIONS CONCERNING QUOTES, PRICING, AND TECHNICAL SPECIFICATIONS SHALL BE DIRECTED TO RYAN DENNEY, CED NATIONAL ACCOUNTS, VIA EMAIL ryan.denney@ced.com OR BY TELEPHONE (817) 252–4014.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	GFI	GROUND FAULT CIRCUIT INTERRUPTER
AL	ALUMINUM	kCMIL	1000 CIRCULAR MILS
AWG	AMERICAN WIRE GAUGE	LED	LIGHT EMITTING DIODE
EC	ELECTRICAL CONTRACTOR	MCB	MAIN CIRCUIT BREAKER
EF	EXHAUST FAN	MLO	MAIN LUGS ONLY
EH	ELECTRIC HEATER	RMC	RIGID METALLIC CONDUIT
EM	EMERGENCY	RTU	ROOFTOP UNIT
EMT	ELECTRIC METALLIC TUBING	UH	UNIT HEATER
EWC	ELECTRIC WATER COOLER	VA	VOLT–AMPERES
EWH	ELECTRIC WATER HEATER	WP	WEATHERPROOF

WIRE AND CONDUIT CHART

ALL WIRING AND CABLE SHALL BE INSTALLED PER CHART, UNLESS NOTED OTHERWISE

CONDUCTOR SIZES SHOWN IN THESE PLANS ARE THE MINIMUM SIZE REQUIRED TO COMPLY WITH CODE. CONDUCTOR SIZES SHALL BE INCREASED AS REQUIRED TO MAINTAIN A MAXIMUM OF 5% VOLTAGE DROP AT THE END OF ALL BRANCH CIRCUITS.

IF THERE IS A AMPACITY AND POLE NOT LISTED THE CONTRACTOR IS RESPONSIBLE TO CONTACT ENGINEER DURING BIDDING FOR INFORMATION

RACEWAY APPLICATION

ALL WIRING MUST BE INSTALLED PER SPECIFICATION SECTION 26 0533 SECTION 3.1

CIRCUIT	WIRE AND CONDUIT
1P 20A	2–#12 THHN CU, 1–#12 THHN CU GND 3/4" CONDUIT
1P 30A	2–#10 THHN CU, 1–#10 THHN CU GND 3/4" CONDUIT
2P 20A	3–#12 THHN CU, 1–#12 THHN CU GND 3/4" CONDUIT
2P 30A	3–#10 THHN CU, 1–#10 THHN CU GND 3/4" CONDUIT
2P 40A	3–#8 THHN CU, 1–#10 THHN CU GND 3/4" CONDUIT
2P 50A	3–#8 THHN CU, 1–#10 THHN CU GND 3/4" CONDUIT
3P 20A	4–#12 THHN CU, 1–#12 THHN CU GND 3/4" CONDUIT
3P 30A	4–#10 THHN CU, 1–#10 THHN CU GND 3/4" CONDUIT
3P 40A	4–#8 THHN CU, 1–#10 THHN CU GND 1" CONDUIT
3P 50A	4–#8 THHN CU, 1–#10 THHN CU GND 1" CONDUIT
3P 60A	4–#6 THHN CU, 1–#10 THHN CU GND 1" CONDUIT
3P 80A	4–#3 THHN CU, 1–#8 THHN CU GND 1" 1/4" CONDUIT
3P 100A	4–#3 THHN CU, 1–#8 THHN CU GND 1" 1/2" CONDUIT
3P 200A	4–3/0 THHN CU, 1–#6 THHN CU GND 2–1/2" CONDUIT
3P 225A	4–4/0 THHN CU, 1–#4 THHN CU GND 2–1/2" CONDUIT

NOTE : WHERE NOT NECESSARY, AVOID USE OF NEUTRAL WIRE IN 2 POLE AND 3 POLE BREAKERS.

ELECTRICAL SYMBOL LEGEND

- HOMERUN
- LINE VOLTAGE WIRING, EXPOSED
- LINE VOLTAGE WIRING, CONCEALED
- LINE VOLTAGE WIRING, UNDER SLAB OR ONDERGROUND
- LOW VOLTAGE, OR CONTROL WIRING
- UE — UNDERGROUND ELECTRICAL SERVICE, PRIMARY OR SECONDARY
- E — OVERHEAD ELECTRICAL SERVICE, PRIMARY OR SECONDARY
- UT — UNDERGROUND TELEPHONE SERVICE
- T — OVERHEAD TELEPHONE SERVICE
- DUPLEX RECEPTACLE 20A, 125V, GROUNDING TYPE
- DOUBLE DUPLEX RECEPTACLE 20A, 125V, GROUNDING TYPE
- SPECIAL PURPOSE RECEPTACLE
- GFI INDICATES GROUND FAULT CIRCUIT INTERRUPTER PROTECTED
- TR INDICATES TAMPER RESISTANT
- USB RoHS USB CHARGER W/ TAMPER–RESISTANT 20A DUPLEX RECEPTACLES
- $ SINGLE POLE, SINGLE THROW SWITCH, 120V 20A COMMERCIAL GRADE
- $2 DOUBLE POLE, SINGLE THROW SWITCH, 120V 20A COMMERCIAL GRADE
- $3 THREE–WAY SWITCH, 120V 20A COMMERCIAL GRADE
- $4 FOUR–WAY SWITCH, 120V 20A COMMERCIAL GRADE
- $M A.C. MOTOR STARTING SWITCH (MMS)
- PC PHOTOCELL
- DISCONNECT SWITCH
- JB JUNCTION BOX
- PANELBOARD
- MOTOR
- INDUSTRIAL OSCILLATING FAN MODEL NO. H–1457 30" BY ULINE.
- TELEPHONE JACK
- DATA OUTLET
- TELEPHONE / DATA OUTLET
- TV RECESSED STEEL TELEVISION BOX, ARLINGTON TVBS505

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
4	08/06/2025	IFC SET
3	07/14/2025	BID SET
2	06/27/2025	PERMIT REVISION #1
1	03/06/2025	PERMIT SET

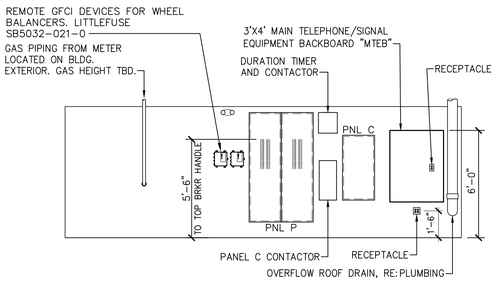
MAVIS TIRES & BRAKES — DISCOUNT PRICES

GENERAL NOTES, FIXTURE SCHEDULE AND SYMBOL LEGEND

Project No.: 23296

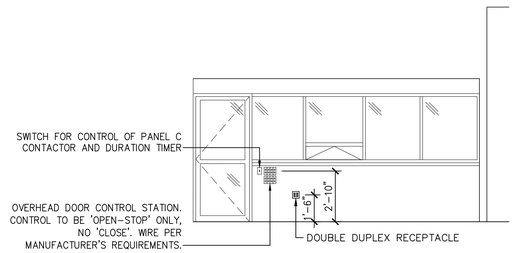
Sheet No.:

E-001



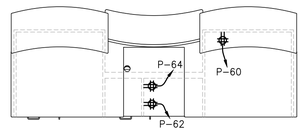
2 / E-100 MECHANICAL ROOM ELEVATION

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



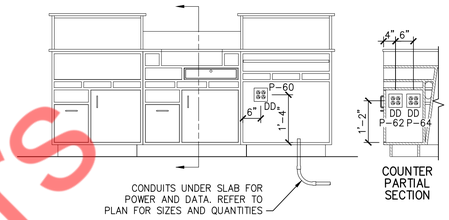
3 / E-100 SALES DESK WALL ELEVATION

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



4 / E-100 SALES COUNTER PLAN

NOT TO SCALE



5 / E-100 SALES COUNTER ELEVATION

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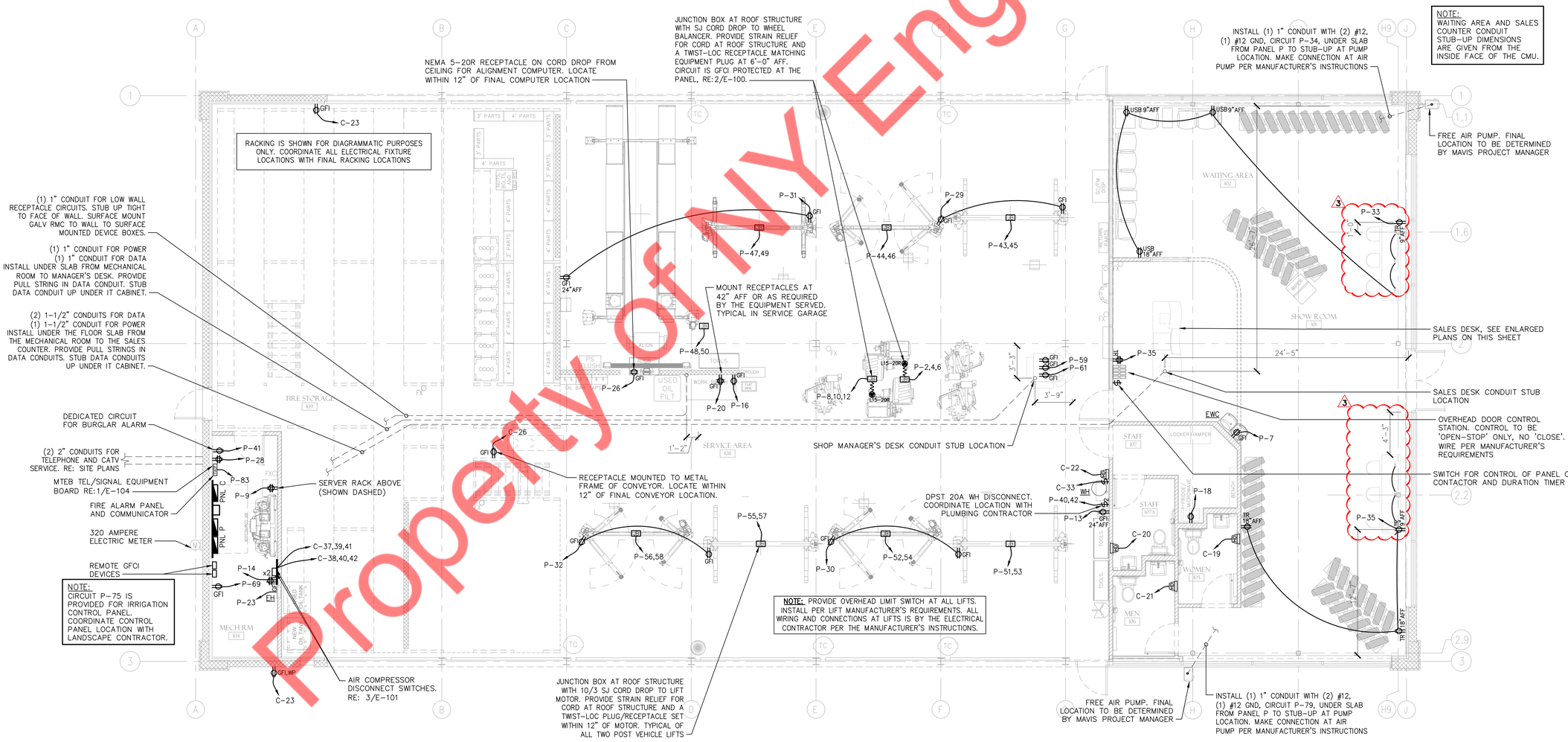


1 / E-100 LOWER LEVEL POWER PLAN

SCALE: 3/16" = 1'-0"

NORTH

CLIENT

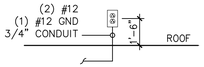
MARK	DATE	COMMENTS
	03/06/2025	PERMIT SET
2	06/27/2025	PERMIT REVISION #1
	07/14/2025	BID SET
1	08/06/2025	IFC SET
	09/12/2025	PERMIT RESUBMITTALS

MAVIS TIRES. BRAKES DISCOUNT PRICES

LOWER LEVEL POWER PLAN

Project No.: 23296

Sheet No.: E-100

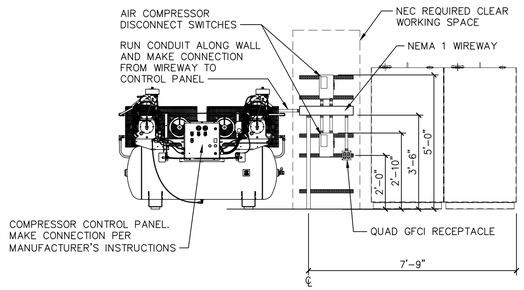


NOTES:

1. RECEPTACLE BOX AND COVER PLATE SHALL BE WEATHERPROOF IN NEMA 3R ENCLOSURE.
2. RECEPTACLE TO BE GFCI.

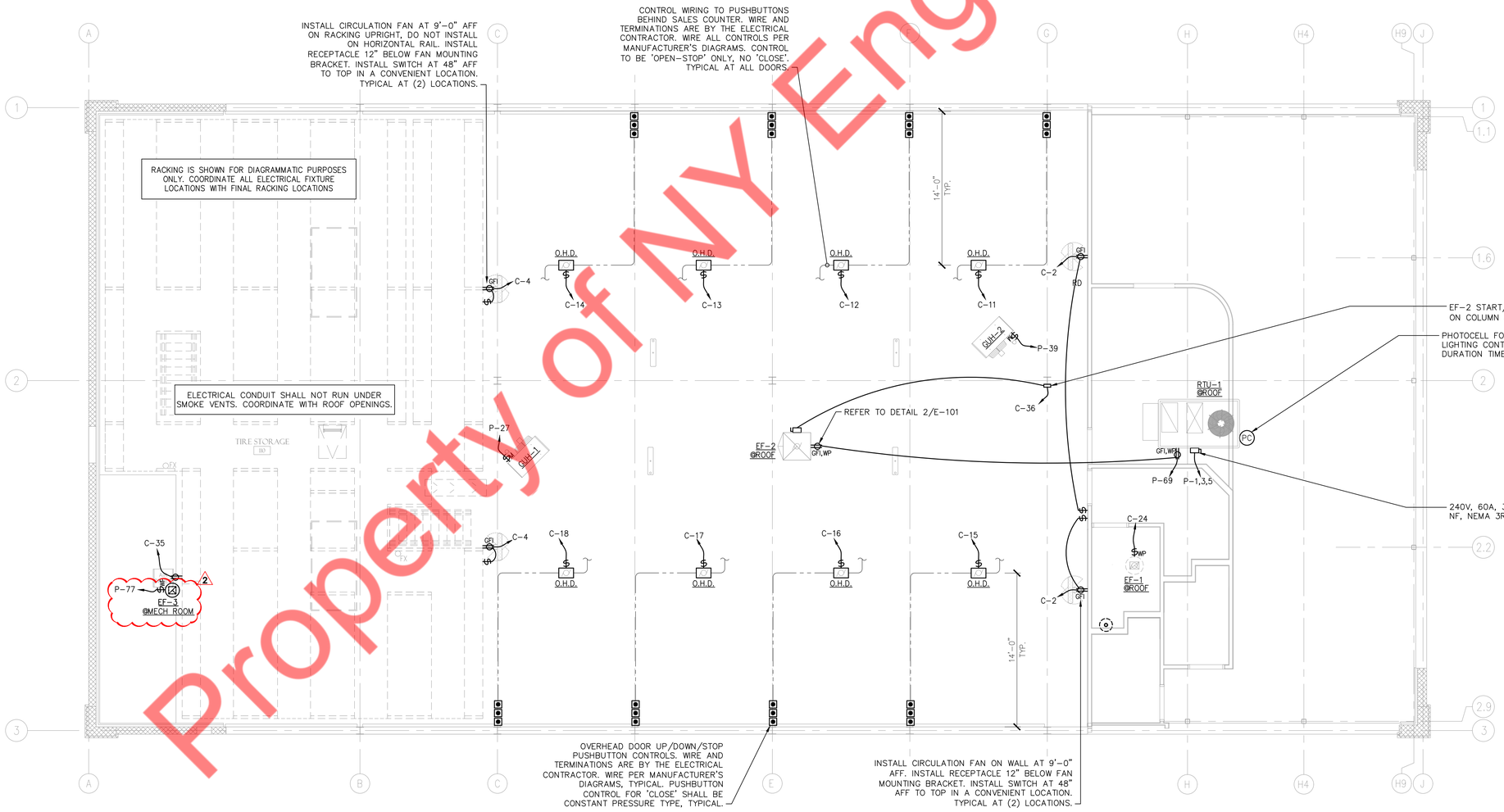
2 E-101 ROOF RECEPTACLE DETAIL

NOT TO SCALE



3 E-101 AIR COMPRESSOR ELEVATION

NOT TO SCALE



NORTH

1 E-101 UPPER LEVEL POWER PLAN

SCALE: 3/16" = 1'-0"

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
A	08/06/2025	IFC SET
A	07/14/2025	BID SET
1	06/27/2025	PERMIT REVISION #1
	03/06/2025	PERMIT SET

MAVIS TIRES. BRAKES & DISCOUNT PRICES

UPPER LEVEL POWER PLAN

Project No.: 23296

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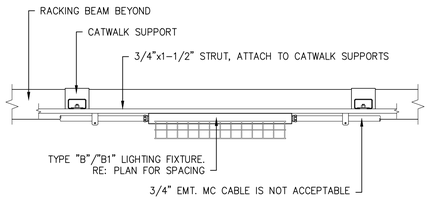

2 / E-102 LOWER LEVEL LIGHTING DETAIL

SCALE: 1" = 1'-0"

LEGEND

A	2x4 LED LAY-IN TROFFER
AE	2x4 LED LAY-IN TROFFER WITH EMERGENCY BATTERY PACK
B	3"x24" LED LENSED STRIP LIGHT WITH EMERGENCY BATTERY PACK
B1	3"x24" LED LENSED STRIP LIGHT
C	3"x48" LED LENSED STRIP LIGHT WITH EMERGENCY BATTERY PACK SUSPEND AT 9'-0" AFF TO TOP, UON
C1	3"x48" LED LENSED STRIP LIGHT SUSPEND AT 9'-0" AFF TO TOP, UON
D	1x4 LED BACK LIT FLAT PANEL LIGHT FLUSH MOUNTED IN GWB CEILING
E	LED HIGHBAY LIGHT WITH EMERGENCY BATTERY PACK STEM MOUNT AT 14'-0" AFF, UON
E1	LED HIGHBAY LIGHT STEM MOUNT AT 14'-0" AFF, UON
SLA	EXTERIOR WALL PACK LIGHT
EB	SELF CONTAINED EMERGENCY LIGHTING BATTERY UNIT WITH DUAL LED LIGHTING HEADS
EL	REMOTE EMERGENCY LIGHTING UNIT WITH DUAL LED LIGHTING HEADS
X	COMBINATION EXIT SIGN EMERGENCY LIGHTING UNIT WITH DUAL LED LIGHTING HEADS
H	PENDANT LIGHTING FIXTURE, 7'-0" AFF TO BOTTOM OF SHADE
OS#	OCCUPANCY SENSOR
DS	DAYLIGHT SENSOR

LIGHTING PLAN GENERAL NOTES

A. REFER TO SHEET E-001 FOR LIGHTING FIXTURE SCHEDULE.

B. EXTERIOR FIXTURES TO BE CENTERED VERTICALLY ON THE EIFS BAND AT THE LOCATIONS INDICATED ON THE EXTERIOR ELEVATIONS.

C. UPPER LEVEL 'B' AND 'B1' FIXTURES TO BE MOUNTED TIGHT TO UNDERSIDE OF JOISTS, U.O.N.

D. PROVIDE STRUT CHANNEL FASTENED TO TIRE RACKING SYSTEM TO SUPPORT 4" OCTAGONAL BOXES FOR LOWER LEVEL OCCUPANCY SENSORS AT THE LOCATIONS INDICATED ON THE PLAN.

E. PROVIDE PENDANT MOUNTED 4" OCTAGONAL BOXES FOR UPPER LEVEL OCCUPANCY SENSORS, INSTALL A SAME HEIGHT AS LIGHT FIXTURES.

F. DO NOT SUSPEND ANY LIGHTS FROM OH DOOR TRACKS.

G. THERE SHALL BE NO EXPOSED WIRING/ CONDUIT BETWEEN EXTERIOR SIGN BOXES.

I. EMERGENCY LIGHT FIXTURES SHALL TURN ON DURING POWER FAILURE WHEREAS ALL EXIT SIGNS SHALL BE PERMANENTLY ON. E.C. TO WIRE THE EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS ACCORDINGLY.

J. THE EMERGENCY POWER SYSTEM (BATTERY) SHALL PROVIDE POWER FOR NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT, OR AN ON-SITE GENERATOR (IBC 1008.3.4).

SITE LIGHTING NOTE:
THE INTENT OF THE SITE LIGHTING DESIGN PROVIDES TWO (2) 120V, 20 AMPERE CIRCUITS IN PANEL "P". THE ELECTRICAL CONTRACTOR IS REQUIRED TO INSTALL UNDERGROUND CONDUITS FROM THE BUILDING TO THE SITE LIGHTING POLES AND WIRE THEM COMPLETE. THE CONTRACTOR SHALL DETERMINE ROUTING IN THE MOST EFFICIENT MANNER AND CALCULATE THE WIRE SIZE TO MAINTAIN A MAXIMUM OF 3% VOLTAGE DROP AT THE LAST FIXTURE. MINIMUM WIRE SIZE SHALL BE #10 AWG.

NORTH

1 / E-102 LOWER LEVEL LIGHTING PLAN

SCALE: 3/16" = 1'-0"

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
2	08/06/2025	IFC SET
1	07/14/2025	BID SET
	06/27/2025	PERMIT REVISION #1
3	03/06/2025	PERMIT SET

MAVIS TIRES. DRAKES DISCOUNT PRICES

LOWER LEVEL LIGHTING PLAN

Project No.: 23296

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LEGEND

A	2x4 LED LAY-IN TROFFER	F	LED HIGHBAY LIGHT WITH EMERGENCY BATTERY PACK STEM MOUNT AT 14'-0" AFF, UON
AE	2x4 LED LAY-IN TROFFER WITH EMERGENCY BATTERY PACK	F1	LED HIGHBAY LIGHT STEM MOUNT AT 14'-0" AFF, UON
B	3"x24" LED LENSED STRIP LIGHT WITH EMERGENCY BATTERY PACK	SLA	EXTERIOR WALL PACK LIGHT
B1	3"x24" LED LENSED STRIP LIGHT	EB	SELF CONTAINED EMERGENCY LIGHTING BATTERY UNIT WITH DUAL LED LIGHTING HEADS
C	3"x48" LED LENSED STRIP LIGHT WITH EMERGENCY BATTERY PACK SUSPEND AT 9'-0" AFF TO TOP, UON	EL	REMOTE EMERGENCY LIGHTING UNIT WITH DUAL LED LIGHTING HEADS
C1	3"x48" LED LENSED STRIP LIGHT SUSPEND AT 9'-0" AFF TO TOP, UON	X	COMBINATION EXIT SIGN EMERGENCY LIGHTING UNIT WITH DUAL LED LIGHTING HEADS
D	1x4 LED BACK LIT FLAT PANEL LIGHT FLUSH MOUNTED IN GWB CEILING	H	PENDANT LIGHTING FIXTURE, 7'-0" AFF TO BOTTOM OF SHADE
		OS#	OCCUPANCY SENSOR
		DS	DAYLIGHT SENSOR

LIGHTING PLAN GENERAL NOTES

A. REFER TO SHEET E-001 FOR LIGHTING FIXTURE SCHEDULE.

B. EXTERIOR FIXTURES TO BE CENTERED VERTICALLY ON THE EIFS BAND AT THE LOCATIONS INDICATED ON THE EXTERIOR ELEVATIONS.

C. UPPER LEVEL 'B' AND 'B1' FIXTURES TO BE MOUNTED TIGHT TO UNDERSIDE OF JOISTS, U.O.N.

D. PROVIDE STRUT CHANNEL FASTENED TO TIRE RACKING SYSTEM TO SUPPORT 4" OCTAGONAL BOXES FOR LOWER LEVEL OCCUPANCY SENSORS AT THE LOCATIONS INDICATED ON THE PLAN.

E. PROVIDE PENDANT MOUNTED 4" OCTAGONAL BOXES FOR UPPER LEVEL OCCUPANCY SENSORS, INSTALL A SAME HEIGHT AS LIGHT FIXTURES.

F. DO NOT SUSPEND ANY LIGHTS FROM OH DOOR TRACKS.

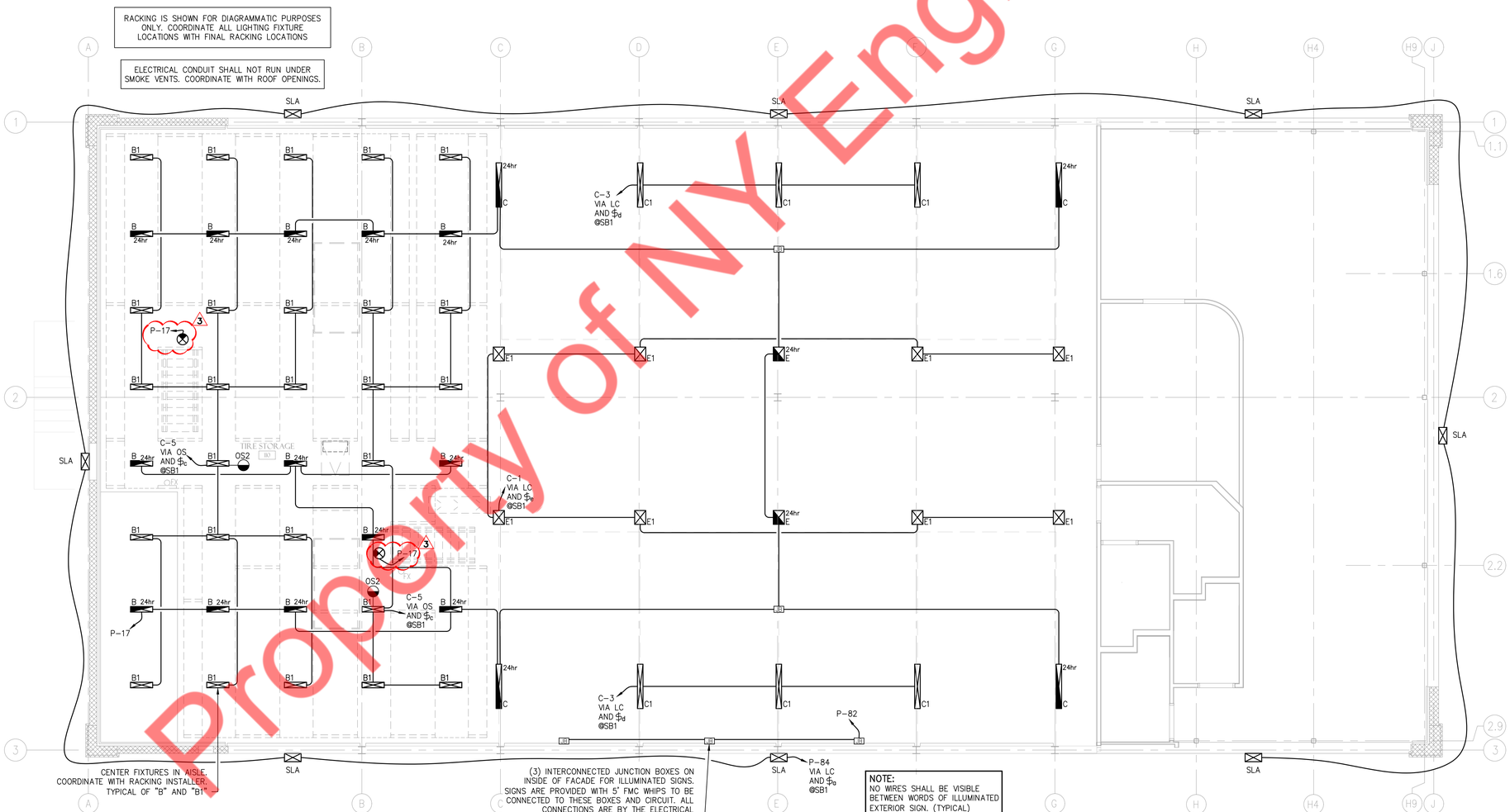
G. THERE SHALL BE NO EXPOSED WIRING/ CONDUIT BETWEEN EXTERIOR SIGN BOXES.

I. EMERGENCY LIGHT FIXTURES SHALL TURN ON DURING POWER FAILURE WHEREAS ALL EXIT SIGNS SHALL BE PERMANENTLY ON. E.C. TO WIRE THE EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS ACCORDINGLY.

J. THE EMERGENCY POWER SYSTEM (BATTERY) SHALL PROVIDE POWER FOR NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT, OR AN ON-SITE GENERATOR (IBC 1008.3.4).

RACKING IS SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. COORDINATE ALL LIGHTING FIXTURE LOCATIONS WITH FINAL RACKING LOCATIONS

ELECTRICAL CONDUIT SHALL NOT RUN UNDER SMOKE VENTS. COORDINATE WITH ROOF OPENINGS.



NORTH

1 / E-103 UPPER LEVEL LIGHTING PLAN

SCALE: 3/16" = 1'-0"

CLIENT

MARK	DATE	COMMENTS
4	09/12/2025	PERMIT RESUBMITTALS
3	08/06/2025	IFC SET
2	07/14/2025	BID SET
1	06/27/2025	PERMIT REVISION #1
	03/06/2025	PERMIT SET

MAVIS TIRES & BRAKES DISCOUNT PRICES

UPPER LEVEL LIGHTING PLAN

Project No.: 23296

Sheet No.: E-103

PANEL:	P	(NEW)	SECTION 1 (SERVICE RATED ELECTRICAL PANEL)				MOUNTING:	SURFACE
FAULT DUTY : NOTE (6)								
208Y/120	VOLTS	PHASE	3		DEMAND LOAD	108.09	PANEL LOCATION:	MECH RM 104
400A	MCB	WIRE	4		DEMAND CURRENT	300.39	FED FROM:	ELECTRICAL METER

NOTE: L: LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E : KITCHEN EQUIPMENT, O : OTHER/MISC.(TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	PER PHASE (KVA) A	B	C	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	60/3P	RTU-1	H	5.76	6.56			0.80	M	TIRE BALANCING MACHINE NO 1	20/3P	2
3			H	5.76		6.56		0.80	M			4
5			H	5.76			6.56	0.80	M			6
7	20	DRINKING FOUNTAIN	R	0.50	1.30			0.80	M	TIRE BALANCING MACHINE NO 2	20/3P	8
9	20	IT RACK(1)	O	0.10		0.90		0.80	M			10
11	20	SPARE					0.80	0.80	M			12
13	20	WATER COOLER	R	0.50	0.90			0.40	R	COMPRESSOR OUTLET	20	14
15	20	LIGHTING CONTROL CIRCUIT (1)	O	0.70		0.90		0.20	R	FLAT REPAIR RECEPT	20	16
17	20	24 HR / EMERGENCY LIGHTING	L	1.10			2.90	1.80	R	MINI FRIDGE/MICROWAVE	20	18
19	20	LIGHTS BREAKROOM & MECH. RM	L	0.20	0.60			0.40	R	WORK BENCH RECEPTACLE	20	20
21	20	SPARE				0.00				SPARE	20	22
23	20	MECHANICAL ROOM HEATER	H	0.75			0.75			SPARE	20	24
25	20	SPARE			0.40			0.40	R	WHEEL ALIGNMENT COMP RECEPT	20	26
27	20	GAS FIRED UNIT HEATER 1	O	1.14		1.34		0.20	R	MTEB RECEPTACLE	20	28
29	20	RECEPTACLES BAYS 1,2	R	0.40			0.80	0.40	R	RECEPTACLES BAYS 5,6	20	30
31	20	RECEPTACLES BAYS 3,4	R	0.40	0.80			0.40	R	RECEPTACLES BAYS 7,8	20	32
33	20	WAITING AREA RECEPTACLES	R	0.40		1.80		1.40	M	EXTERIOR TIRE INFLATOR (7)	20	34
35	20	SHOWROOM RECEPTACLES	R	0.90			0.90			SPARE	20	36
37	20	SPARE			0.00					SPARE	20	38
39	20	GAS FIRED UNIT HEATER 2	O	1.14		2.14		1.00	O	ELECTRIC WATER HEATER (WH)	20/2P	40
41	20	BURGLAR ALARM (1)	O	0.10			1.10	1.00	O			42
					10.56	13.64	13.81					

PANEL:	P	(NEW)	SECTION 2				MOUNTING:	SURFACE
FAULT DUTY : NOTE (6)								
208Y/120	VOLTS	PHASE	3	-			PANEL LOCATION:	MECH RM 104
400A	MLO	WIRE	4	-			FED FROM:	ELECTRICAL METER

NOTE: L: LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E : KITCHEN EQUIPMENT, O : OTHER/MISC.(TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	PER PHASE (KVA) A	B	C	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
43	20/2P	VEHICLE LIFT- BAY 1	M	1.65	3.30			1.65	M	VEHICLE LIFT- BAY 2	20/2P	44
45			M	1.65		3.30		1.65	M			46
47	20/2P	VEHICLE LIFT- BAY 3	M	1.65			3.30	1.65	M	VEHICLE LIFT- BAY 4	20/2P	48
49			M	1.65	3.30			1.65	M			50
51	20/2P	VEHICLE LIFT- BAY 5	M	1.65		3.30		1.65	M	VEHICLE LIFT- BAY 6	20/2P	52
53			M	1.65			3.30	1.65	M			54
55	20/2P	VEHICLE LIFT- BAY 7	M	1.65	3.30			1.65	M	VEHICLE LIFT- BAY 8	20/2P	56
57			M	1.65		3.30		1.65	M			58
59	20	SERVICE MANAGER DESK RECEPTACLES	R	0.40			0.80	0.40	R	SALES COUNTER RECEPTACLES	20	60
61	20	MANAGER DESK TECH COMPUTER	R	0.20	0.60			0.40	R	SALES COUNTER RECEPTACLES	20	62
63	20	SPARE				0.40		0.40	R	SALES COUNTER RECEPTACLES	20	64
65	20	SPARE					0.00			SPARE	20	66
67	20	SPARE			0.50			0.50	L	SITE LIGHTS (3)	20	68
69	20	SERVICE / RTU RECEPTACLES	R	0.54		1.04		0.50	L	SITE LIGHTS (3)	20	70
71	20	SPARE					0.00			SPARE	20	72
73	20	SPARE			0.00					SPARE	20	74
75	20	IRRIGATION CONTROL	O	0.10		0.10				SPARE	20	76
77	20	EXHAUST FAN EF-3	M	0.10			0.10			SPARE	20	78
79	20	EXTERIOR TIRE INFLATOR (7)	M	1.40	1.40					SPARE	20	80
81	20	MAVIS SITE MONUMENT SIGN (3)	L	0.50		0.80		0.30	L	MAVIS SIGN ON BUILDING SIDE (3)	20	82
83	20	FIRE ALARM CIRCUIT (1)	O	0.10			0.43	0.33	L	EXTERIOR WALL PACK & DOWN LIGHTS (4)	20	84
					24.48			24.48	X	PANEL-C	100/3P	SUB FEED BREAKER
						24.48		24.48	X			
							24.48	24.48	X			
					36.88	36.72	32.42					

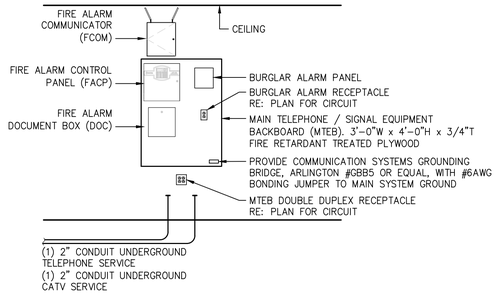
PANEL:	C	(NEW)	-				MOUNTING:	SURFACE
FAULT DUTY : NOTE (6)								
208Y/120	VOLTS	PHASE	3		DEMAND LOAD	73.45	PANEL LOCATION:	MECH RM 104
125A	MLO	WIRE	4		DEMAND CURRENT	204.12	FED FROM:	PANEL-P

NOTE: L: LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E : KITCHEN EQUIPMENT, O : OTHER/MISC.(TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	PER PHASE (KVA) A	B	C	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	WORK BAY LIGHTING	L	0.80	1.60			0.80	M	WALL MOUNTED FANS	20	2
3	20	LIFT AREA LIGHTING	L	0.20		1.00		0.80	M	WALL MOUNTED FANS	20	4
5	20	UPPER LEVEL TIRE RACK LIGHTING	L	0.70			1.12	0.42	L	SHOWROOM LIGHTING	20	6
7	20	LOWER LEVEL TIRE RACK LIGHTING	L	0.56	0.83			0.27	L	WAITING AREA LIGHTING	20	8
9	20	SPARE				0.11		0.11	L	TOILET/STAFF LIGHTING	20	10
11	20	OVERHEAD DOOR BAY 1	M	1.10			2.20	1.10	M	OVERHEAD DOOR BAY 2	20	12
13	20	OVERHEAD DOOR BAY 3	M	1.10	2.20			1.10	M	OVERHEAD DOOR BAY 4	20	14
15	20	OVERHEAD DOOR BAY 5	M	1.10		2.20		1.10	M	OVERHEAD DOOR BAY 6	20	16
17	20	OVERHEAD DOOR BAY 7	M	1.10			2.20	1.10	M	OVERHEAD DOOR BAY 8	20	18
19	20	ELECTRICAL HAND DRYER RESTROOM (2)	M	0.70	1.40			0.70	M	ELECTRICAL HAND DRYER EMPLOYEE (2)	20	20
21	20	ELECTRICAL HAND DRYER RESTROOM (2)	M	0.70		1.40		0.70	M	ELECTRICAL HAND DRYER SHOP (2)	20	22
23	20	EXTERIOR & GENERAL RECEPTACLE	R	0.36			0.46	0.10	M	EXHAUST FAN EF-1	20	24
25	20	SPARE			1.50			1.50	M	CONVEYOR POWER	20	26
27	20	SPARE				0.00				SPARE	20	28
29	20	SPARE					0.00			SPARE	20	30
31	20	SPARE			0.00					SPARE	20	32
33	20	HOT WATER RECIRC PUMP (RCP)	M	0.20		0.20				SPARE	20	34
35	20	COMPRESSED AIR DRYER	O	0.50			1.60	1.10	M	EXHAUST FAN EF-2	20	36
37	30/3P	AIR COMPRESSOR (5)	M	2.70	5.40			2.70	M	AIR COMPRESSOR (5)	30/3P	38
39			M	2.70		5.40		2.70	M			40
41			M	2.70			5.40	2.70	M			42
					12.93	10.31	12.98					

NOTE:
MAVIS DISCOUNT TIRE HAS A NATIONAL ELECTRICAL EQUIPMENT AGREEMENT WITH CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC. (CED). THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THE PANELBOARDS AND SWITCHGEAR EQUIPMENT. QUESTIONS CONCERNING QUOTES, PRICING, AND TECHNICAL SPECIFICATIONS SHALL BE DIRECTED TO RYAN DENNEY, CED NATIONAL ACCOUNTS, VIA EMAIL ryan.denney@ced.com OR BY TELEPHONE (817) 252-4014.

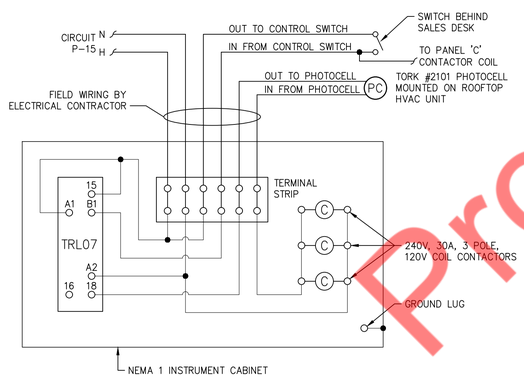
NOTE:
CREATE A DIRECTORY IN EACH PANELBOARD TO INDICATE INSTALLED CIRCUIT LOADS. INCORPORATE OWNER'S FINAL ROOM DESIGNATIONS. OBTAIN APPROVAL FROM THE OWNER'S PROJECT MANAGER BEFORE INSTALLING. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY; HANDWRITTEN DIRECTORIES ARE NOT ACCEPTABLE.



1 E-104 TEL / SIGNAL SYSTEM DETAIL
NOT TO SCALE

PANELBOARD NOTES (#):

1. PROVIDE WITH HANDLE LOCK-ON DEVICE.
2. PROVIDE CIRCUIT BREAKER WITH PADLOCKING HANDLE LOCK.
3. DENOTES CIRCUIT CONTROLLED VIA 8-POLE CONTACTOR.
4. EXTERIOR WALL PACK LIGHTS ARE TO BE DUSK-DAWN OPERATION VIA SEPARATE TORK PHOTOCELL FROM DURATION TIMER.
5. AIR COMPRESSORS DO NOT OPERATE CONCURRENTLY.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE LOCAL ELECTRICAL UTILITY AND OBTAIN AN AVAILABLE FAULT CURRENT LETTER AND THEN ORDER PANELBOARDS WITH THE APPROPRIATE FAULT DUTY. PROVIDE A COPY OF THE LETTER TO THE AHJ AND THE EEOR WITH THE PANELBOARD SHOP DRAWINGS. SHOP DRAWINGS WILL NOT BE REVIEWED WITHOUT THE UTILITY LETTER.
7. PROVIDE GFCI FOR PERSONNEL PROTECTION TYPE CIRCUIT BREAKER.
8. PROVIDE EXTERNAL INLINE GFCI DEVICE (SHOCK BLOCK OR EQ) WHEREVER REQUIRED.

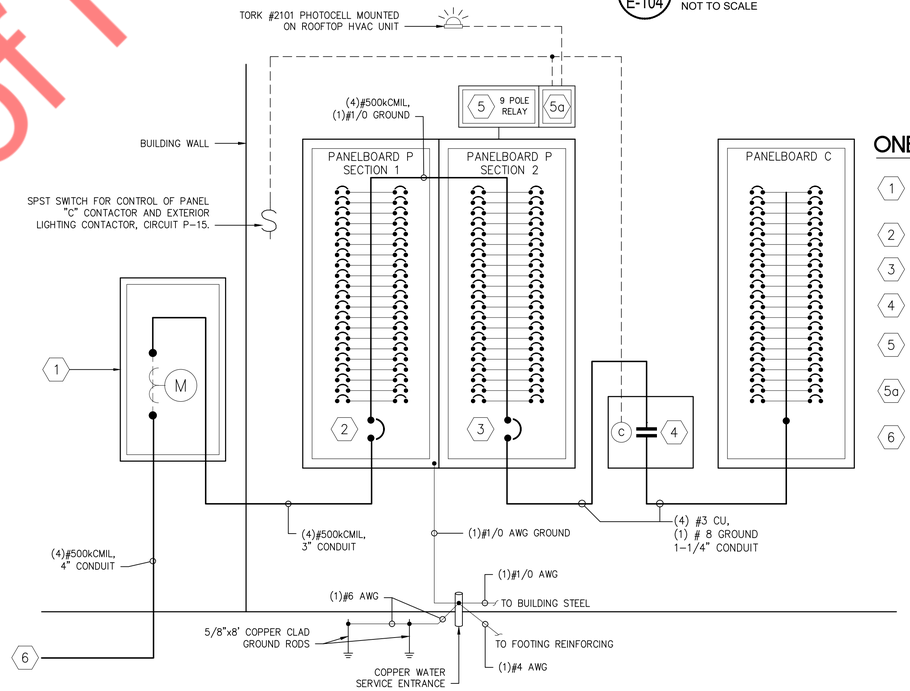


EATON ECL03C1A9A-C37-T25
ENCLOSED CONTROL

3 E-104 DURATION TIMER DIAGRAM
NOT TO SCALE

SEQUENCE OF OPERATION

1. CONTROL SWITCH TURNS ON:
   A. DURATION TIMER OUTPUT RELAY CLOSES AND SENDS 120V TO PHOTOCELL.
   B. IF PHOTOCELL IS OPEN (DAYLIGHT PRESENT) CONTACTOR REMAINS OFF.
   C. IF PHOTOCELL IS CLOSED (NO DAYLIGHT PRESENT) CONTACTOR IS ENERGIZED AND TURNS ON.
2. CONTROL SWITCH TURNS OFF:
   A. DURATION TIMER INTERVAL TIMER STARTS, OUTPUT RELAY REMAINS CLOSED AND SENDS 120V TO THE PHOTOCELL.
   B. IF PHOTOCELL IS OPEN (DAYLIGHT PRESENT) CONTACTOR REMAINS OFF.
   C. IF PHOTOCELL IS CLOSED (NO DAYLIGHT PRESENT) CONTACTOR IS ENERGIZED AND REMAINS ON.
   D. AT CONCLUSION OF SET TIME INTERVAL, THE OUTPUT RELAY OPENS AND SWITCHES OFF PHOTOCELL/CONTACTOR.



2 E-104 ONE LINE RISER DIAGRAM
NOT TO SCALE

ONE-LINE RISER LEGEND

1. 320 AMPERE METER & SOCKET, PER UTILITY REQUIREMENTS. SUITABLE FOR EXTERIOR APPLICATIONS. SERVICE SIZE: 400A, 120V/208Y, 3ø, 4W
2. MAIN CIRCUIT BREAKER, 400 AMPERE, 3 POLE, SERVICE RATED
3. 100A, 3 POLE SUB-FEED CIRCUIT BREAKER
4. GENERAL PURPOSE CONTACTOR, 3 POLE, 240V, 100 AMPERE, ELECTRICALLY HELD. 120V COIL.
5. 9 POLE RELAY FOR CONTROL OF EXTERIOR LIGHTING AND SIGN CIRCUITS, CONTROLLED BY PHOTOCELL AND DURATION TIMER
5a. DURATION TIMER, EATON TRL07. SET FOR FIVE HOUR DELAY OFF PER MANUFACTURER'S INSTRUCTIONS. SEE DIAGRAM ON THIS SHEET
6. INCOMING UNDERGROUND SECONDARY ELECTRIC SERVICE 208Y/120V 3ø 4W. FROM UTILITY COMPANY TRANSFORMER

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
A	08/06/2025	IFC SET
A	07/14/2025	BID SET
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	03/06/2025	PERMIT SET

MAVIS TIRES & BRAKES a DISCOUNT PRICES

RISER DIARGAM AND PANEL SCHEDULES

Project No.: 23296

Sheet No.: E-104

FIRE ALARM PLAN SYMBOL LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	OUTLET BOX
	STROBE NOTIFICATION DEVICE, WALL MOUNTED	SYSTEM SENSOR	BK-SRL	4x4x2⅛ W/SINGLE DEVICE MUD RING
	HORN / STROBE COMBINATION NOTIFICATION DEVICE, WALL MOUNTED	SYSTEM SENSOR	BK-P2RL	4x4x2⅛ W/SINGLE DEVICE MUD RING
	STROBE NOTIFICATION DEVICE, CEILING MOUNTED	SYSTEM SENSOR	BK-SCRL	4x2⅛ OCTAGONAL
	HORN / STROBE COMBINATION NOTIFICATION DEVICE, CEILING MOUNTED	SYSTEM SENSOR	BK-PC2RL	4x2⅛ OCTAGONAL
F	MANUAL PULL STATION INITIATION DEVICE	HONEYWELL	5140MPS-1	4x4x2⅛ W/SINGLE DEVICE MUD RING
D	DUCT SMOKE DETECTOR INITIATION DEVICE	FACTORY INSTALLED IN HVAC UNIT		
	DUCT SMOKE DETECTOR REMOTE ALARM / TEST SWITCH	SYSTEM SENSOR	RTS151KEY	4x4x2⅛
	PHOTOELECTRIC SMOKE DETECTOR INITIATION DEVICE	HONEYWELL	5193SD	4x2⅛ OCTAGONAL
	HEAT DETECTOR INITIATION DEVICE	SYSTEM SENSOR	5601P	4x2⅛ OCTAGONAL
	CARBON MONOXIDE DETECTOR INITIATION DEVICE	SYSTEM SENSOR	CO1224TR	4x2⅛ OCTAGONAL
	SERIALIZED INTERFACE MODULE	HONEYWELL	ADEMCO 4193SN	
FACP	FIRE ALARM CONTROL PANEL *NOTE 15*	HONEYWELL	VISTA-128FBPT	SURFACE MOUNTED
NAC PS	FIRE ALARM POWER SUPPLY	HONEYWELL	FCPS-24FS8	SURFACE MOUNTED
FCOM	FIRE ALARM COMMUNICATOR *NOTE 15*	HONEYWELL	VISTA 4G LTE-CFV	SURFACE MOUNTED
ANN	GRAPHIC ANNUNCIATOR	HONEYWELL	6160CR-2	4x4x2⅛ W/SINGLE DEVICE MUD RING
	DEDICATED TELEPHONE LINE			

FIRE ALARM SEQUENCE OF OPERATION

	ACTIVATE ALARM SIGNAL AT FACP	ACTIVATE AUDIO / VISUAL DEVICES	TRANSMIT ALARM TO CENTRAL STATION	DISPLAY CONDITION AT ANNUNCIATOR	ACTIVATE SUPERVISORY SIGNAL AT FACP	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	ACTIVATE TROUBLE SIGNAL AT FACP	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	GLOBAL SHUT DOWN HVAC UNITS	START EXHAUST FAN EF-2
PULL STATION	X	X	X	X						
SMOKE DETECTOR	X	X	X	X					X	X
HEAT DETECTOR	X	X	X	X						
DUCT SMOKE DETECTOR				X	X	X			X	
CARBON MONOXIDE DETECTOR			X	X						X
AC POWER FAILURE				X			X	X		
SYSTEM LOW BATTERY				X			X	X		
OPEN CIRCUIT				X			X	X		
GROUND FAULT				X			X	X		

FIRE ALARM PLAN GENERAL NOTES:

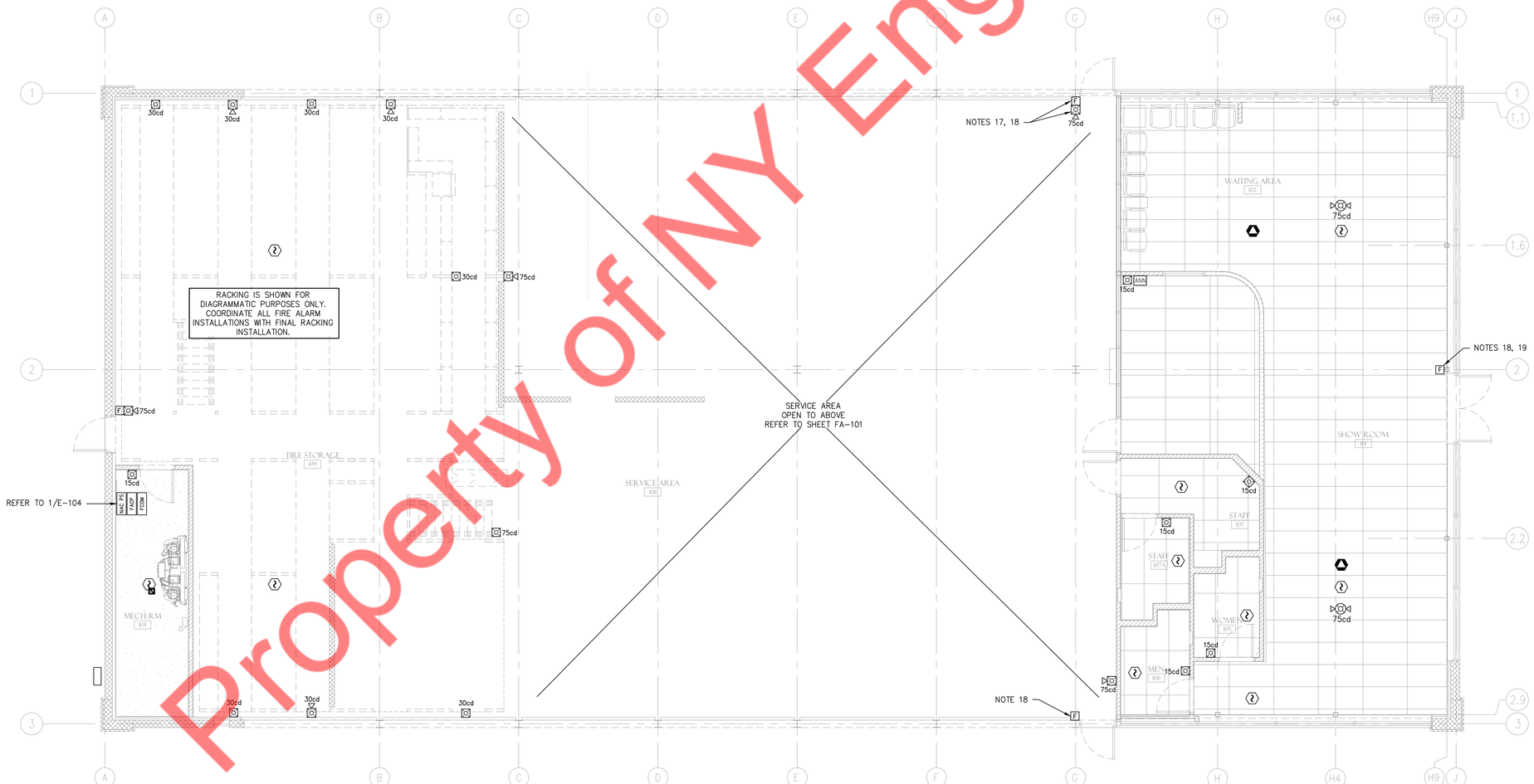
1. THIS SYSTEM WILL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA 72 AND ALL WIRING WILL CONFORM TO NFPA 70 ARTICLE 760.
2. INSTALL WIRING IN 3/4" EMT WHERE INSTALLED EXPOSED OR ABOVE NON-ACCESSIBLE CEILING SYSTEMS.
3. ALL CABLE SHALL BE FIRE PROTECTIVE FPLP TYPE.
4. MOUNT FIRE ALARM CONTROL PANEL 70" AFF TO TOP.
5. MOUNT KEYPAD / ANNUNCIATOR 4'-6" AFF TO CENTER. REFER TO DETAIL 3/E-100 FOR LOCATION.
6. MOUNT MANUAL PULL STATIONS AT 48" AFF TO TOP OF BOX.
7. MOUNT ELECTRONIC HORNS / STROBES AT 80" AFF TO THE BOTTOM.
8. MOUNT CONTROL RELAYS WITHIN 3'-0" OF THE CONTROLLER.
9. ALL INITIATION AND NOTIFICATION CIRCUITS SHALL BE SUPERVISED.
10. OBSERVE ALL DEVICE POLARITIES.
11. THE PANEL SHALL NOT BE USED TO POWER ANY UNAUTHORIZED EXTERNAL DEVICE.
12. VERIFY ALL DEVICE LOCATIONS PRIOR TO ROUGH-IN.
13. COORDINATE DEVICE BOX SIZES AND CONDUIT LOCATIONS PRIOR TO ROUGH IN. THE ELECTRICAL CONTRACTOR WILL SUPPLY AND INSTALL ALL BOXES AND CONDUITS FROM THE OUTLET BOX TO ABOVE FINISH CEILING, WITH PULL STRING AND ANTI-SHORT BUSHING, FOR THE FIRE ALARM SYSTEM.
14. PROVIDE WIRE GUARDS FOR ANY DETECTORS INSTALLED UNDER THE RACKING SYSTEM.
15. SUBSTITUTION OF THE FIRE ALARM CONTROL PANEL AND/OR COMMUNICATOR IS NOT PERMITTED.
16. PROVIDE (2) CAT5e CABLES IN 3/4" EMT FROM FIRE ALARM COMMUNICATOR TO NETWORK SWITCH IN MECHANICAL ROOM.
17. FOR SURFACE MOUNTED HORN/STROBES, PROVIDE SURFACE MOUNT BACK BOX, SBBRL.
18. FOR SURFACE MOUNTED PULL STATIONS, PROVIDE SURFACE MOUNTED BACK BOX, 5140MPS-BB.
19. DO NOT SURFACE MOUNT CONDUIT TO STRUCTURAL COLUMN(S) IN SHOWROOM. DRILL COLUMN AT PULL STATION LOCATION AND ABOVE FINISHED CEILING. ROUTE CABLE THROUGH STRUCTURAL COLUMN.
20. THE INSTALLING CONTRACTOR WILL BE REQUIRED TO REGISTER AND ACTIVATE BOTH THE CELLULAR CONNECTION AND THE ALARM SYSTEM ITSELF. FE MORAN SECURITY SOLUTIONS LLC DOES NOT COME ON SITE BUT WILL PROVIDE SUPPORT. THE INSTALLING CONTRACTOR MUST TEST AND CONFIRM ALL DEVICES HAVE BEEN RECEIVED AT THE MONITORING STATION TO COMPLETE THE ACTIVATION PROCESS.
21. NOTIFICATION DEVICES SHALL NOT BE INSTALLED ON THE WALL IN THE WAITING ROOM WHERE GRAPHICS ARE DISPLAYED. ONLY CEILING DEVICES SHALL BE USED.

SYSTEM MONITORING NOTE:

MAVIS DISCOUNT TIRE HAS A NATIONAL CONTRACT FOR 24-HOUR FIRE ALARM MONITORING.

VECTOR SECURITY, 13555 WELLINGTON CENTER CIRCLE, SUITE 123, GAINSVILLE VA, 20155

SERVICE PROJECT TEAM FOR MONITORING
(703) 468-6100, EXT 64251
nadconversion@vectorsecurity.com



NORTH

1 FA-100 LOWER LEVEL FIRE ALARM PLAN
SCALE: 3/16" = 1'-0"

CLIENT

MARK	DATE	COMMENTS
	09/12/2025	PERMIT RESUBMITTALS
	08/06/2025	IFC SET
	07/14/2025	BID SET
	06/27/2025	PERMIT REVISION #1
	03/06/2025	PERMIT SET

MAVIS TIRES & BRAKES #1 DISCOUNT PRICES

LOWER LEVEL FIRE ALARM PLAN

Project No.: 23296

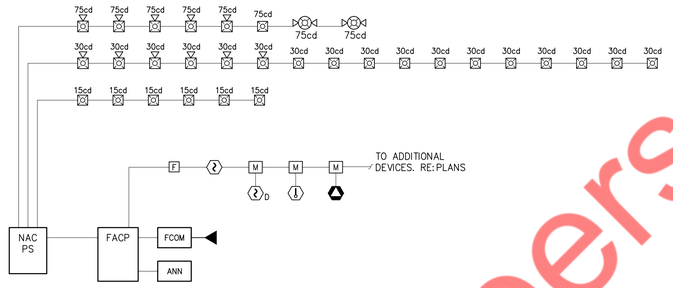
Sheet No.: FA-100

FIRE ALARM PLAN SYMBOL LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	OUTLET BOX
	STROBE NOTIFICATION DEVICE, WALL MOUNTED	SYSTEM SENSOR	BK-SRL	4x4x2⅛ W/SINGLE DEVICE MUD RING
	HORN / STROBE COMBINATION NOTIFICATION DEVICE, WALL MOUNTED	SYSTEM SENSOR	BK-P2RL	4x4x2⅛ W/SINGLE DEVICE MUD RING
	STROBE NOTIFICATION DEVICE, CEILING MOUNTED	SYSTEM SENSOR	BK-SCRL	4x2⅛ OCTAGONAL
	HORN / STROBE COMBINATION NOTIFICATION DEVICE, CEILING MOUNTED	SYSTEM SENSOR	BK-PC2RL	4x2⅛ OCTAGONAL
F	MANUAL PULL STATION INITIATION DEVICE	HONEYWELL	5140MPS-1	4x4x2⅛ W/SINGLE DEVICE MUD RING
D	DUCT SMOKE DETECTOR INITIATION DEVICE	FACTORY INSTALLED IN HVAC UNIT		
	DUCT SMOKE DETECTOR REMOTE ALARM / TEST SWITCH	SYSTEM SENSOR	RTS151KEY	4x4x2⅛
	PHOTOELECTRIC SMOKE DETECTOR INITIATION DEVICE	HONEYWELL	5193SD	4x2⅛ OCTAGONAL
	HEAT DETECTOR INITIATION DEVICE	SYSTEM SENSOR	5601P	4x2⅛ OCTAGONAL
	CARBON MONOXIDE DETECTOR INITIATION DEVICE	SYSTEM SENSOR	CO1224TR	4x2⅛ OCTAGONAL
	SERIALIZED INTERFACE MODULE	HONEYWELL	ADEMCO 4193SN	
FACP	FIRE ALARM CONTROL PANEL *NOTE 15*	HONEYWELL	VISTA-128FBPT	SURFACE MOUNTED
NAC PS	FIRE ALARM POWER SUPPLY	HONEYWELL	FCPS-24FS8	SURFACE MOUNTED
FCOM	FIRE ALARM COMMUNICATOR *NOTE 15*	HONEYWELL	VISTA 4G LTE-CFV	SURFACE MOUNTED
ANN	GRAPHIC ANNUNCIATOR	HONEYWELL	6160CR-2	4x4x2⅛ W/SINGLE DEVICE MUD RING
	DEDICATED TELEPHONE LINE			

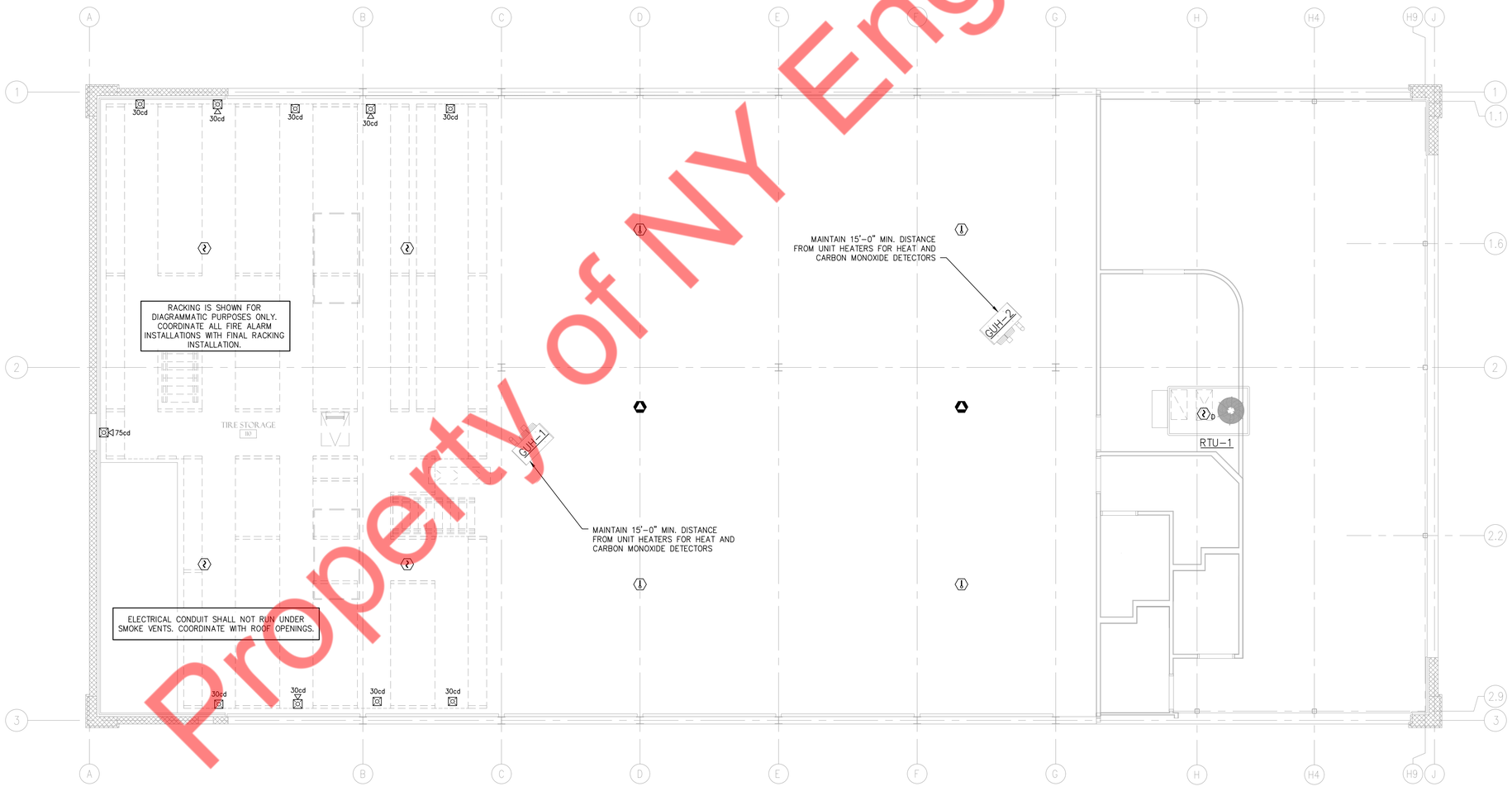
CEILING HEIGHT SCHEDULE

ROOM NO.	DESCRIPTION	CEILING HEIGHT CEILING CONSTRUCTION
101	SHOWROOM	12'-0" AFF ACOUSTICAL TILE
102	WAITING AREA	12'-0" AFF ACOUSTICAL TILE
104	MECHANICAL ROOM	8'-0" AFF GYPSUM WALL BOARD
105	WOMEN'S RESTROOM	8'-0" AFF ACOUSTICAL TILE
106	MEN'S RESTROOM	8'-0" AFF ACOUSTICAL TILE
107	STAFF	12'-0" AFF ACOUSTICAL TILE
107A	STAFF RESTROOM	8'-0" AFF ACOUSTICAL TILE
108	SERVICE AREA	20'-9" AFF OPEN TO ROOF STRUCTURE
109	TIRE STORAGE	20'-9" AFF OPEN TO ROOF STRUCTURE



2 FA-101 FIRE ALARM RISER DIAGRAM

NOT TO SCALE



NORTH

1 FA-101 UPPER LEVEL FIRE ALARM PLAN

SCALE: 3/16" = 1'-0"

CLIENT

PERMIT RESUBMITTALS
IFC SET
BID SET
PERMIT REVISION #1
PERMIT SET
COMMENTS

MARK	DATE
4	09/12/2025
3	08/06/2025
	07/14/2025
2	06/27/2025
1	03/06/2025

MAVIS TIRES. BRAKES. DISCOUNT PRICES

UPPER LEVEL FIRE ALARM PLAN

Project No.: 23296

Sheet No.:

FA-101