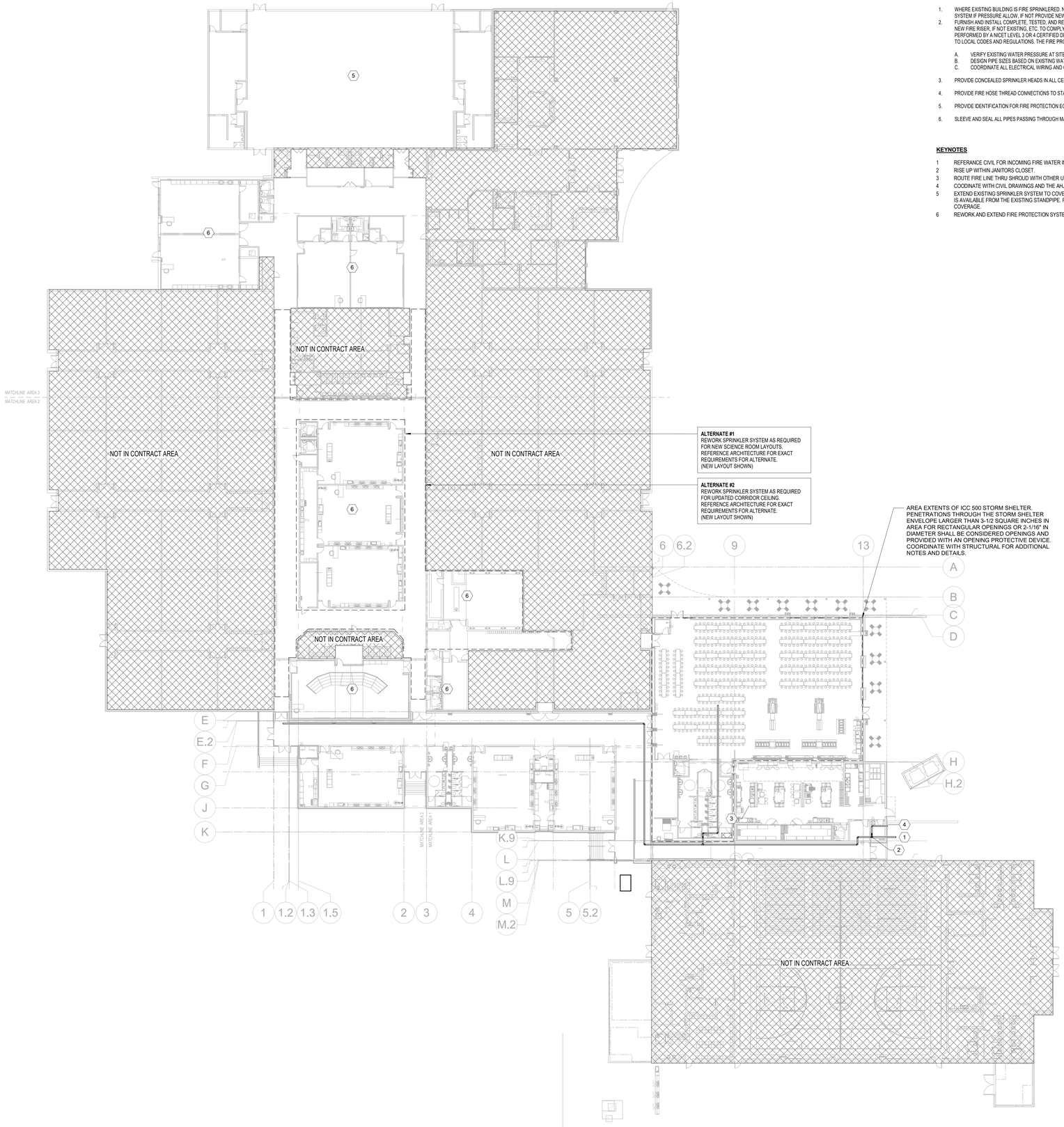


1 OVERALL FIRE PLAN
3/64" = 1'-0"

FIRE SUPPRESSION GENERAL NOTES:

1. WHERE EXISTING BUILDING IS FIRE SPRINKLERED. NORTH GYM SHALL BE FIRE SPRINKLERED BY CONNECTING TO EXISTING FIRE SPRINKLER SYSTEM IF PRESSURE ALLOW. IF NOT PROVIDE NEW FIRE RISER IN SCHOOL APPROVED LOCATION.
2. FURNISH AND INSTALL COMPLETE, TESTED, AND READY FOR USE. WET PIPE AUTOMATIC SPRINKLER SYSTEM INSIDE NEW BUILDING. PROVIDE NEW FIRE RISER, IF NOT EXISTING, ETC. TO COMPLY WITH NFPA 13 AND ALL APPLICABLE LOCAL CODES. THE DESIGN OF THE SYSTEM SHALL BE PERFORMED BY A NICET LEVEL 3 OR 4 CERTIFIED DESIGNER. THE FIRE PROTECTION CONTRACTOR SHALL ENSURE THAT ALL WORK CONFORMS TO LOCAL CODES AND REGULATIONS. THE FIRE PROTECTION CONTRACTOR SHALL:
   A. VERIFY EXISTING WATER PRESSURE AT SITE PRIOR TO BIDDING.
   B. DESIGN PIPE SIZES BASED ON EXISTING WATER PRESSURE.
   C. COORDINATE ALL ELECTRICAL WIRING AND CONNECTIONS TO PUMPS, VALVES, TAMPER SWITCHES, FLOW SWITCHES, ALARMS, ETC.
3. PROVIDE CONCEALED SPRINKLER HEADS IN ALL CEILINGS.
4. PROVIDE FIRE HOSE THREAD CONNECTIONS TO STANDPIPE APPROVED AND COMPATIBLE WITH AHJ FIRE DEPARTMENT.
5. PROVIDE IDENTIFICATION FOR FIRE PROTECTION EQUIPMENT AND ROOMS PER IFC 509.1.
6. SLEEVE AND SEAL ALL PIPES PASSING THROUGH MASONRY WALLS , FOOTINGS, OR FOUNDATIONS. TYPICAL THROUGHOUT.

KEYNOTES

1 REFERANCE CIVIL FOR INCOMING FIRE WATER INCOMING LINE.
2 RISE UP WITHIN JANITORS CLOSET.
3 ROUTE FIRE LINE THRU SHROUD WITH OTHER UTILITIES WHEN ENTERING STORM SHELTER, REFERENCE STRUCTURAL DRAWINGS.
4 COODINATE WITH CIVIL DRAWINGS AND THE AHJ FOR EXACT REQUIRED LOCATION OF FDC.
5 EXTEND EXISTING SPRINKLER SYSTEM TO COVER THE NORTH GYM. VERIFY IN FIELD EXACT CONNECTION POINT, AND WATER DEMAND IS AVAILABLE FROM THE EXISTING STANDPIPE. PROVIDE ANY CHANGES TO THE EXISTING SYSTEM REQUIRED IN ORDER TO PROVIDE COVERAGE.
6 REWORK AND EXTEND FIRE PROTECTION SYSTEM FOR NEW CEILINGS AS REQUIRED. (TYP.)

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

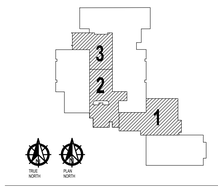
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

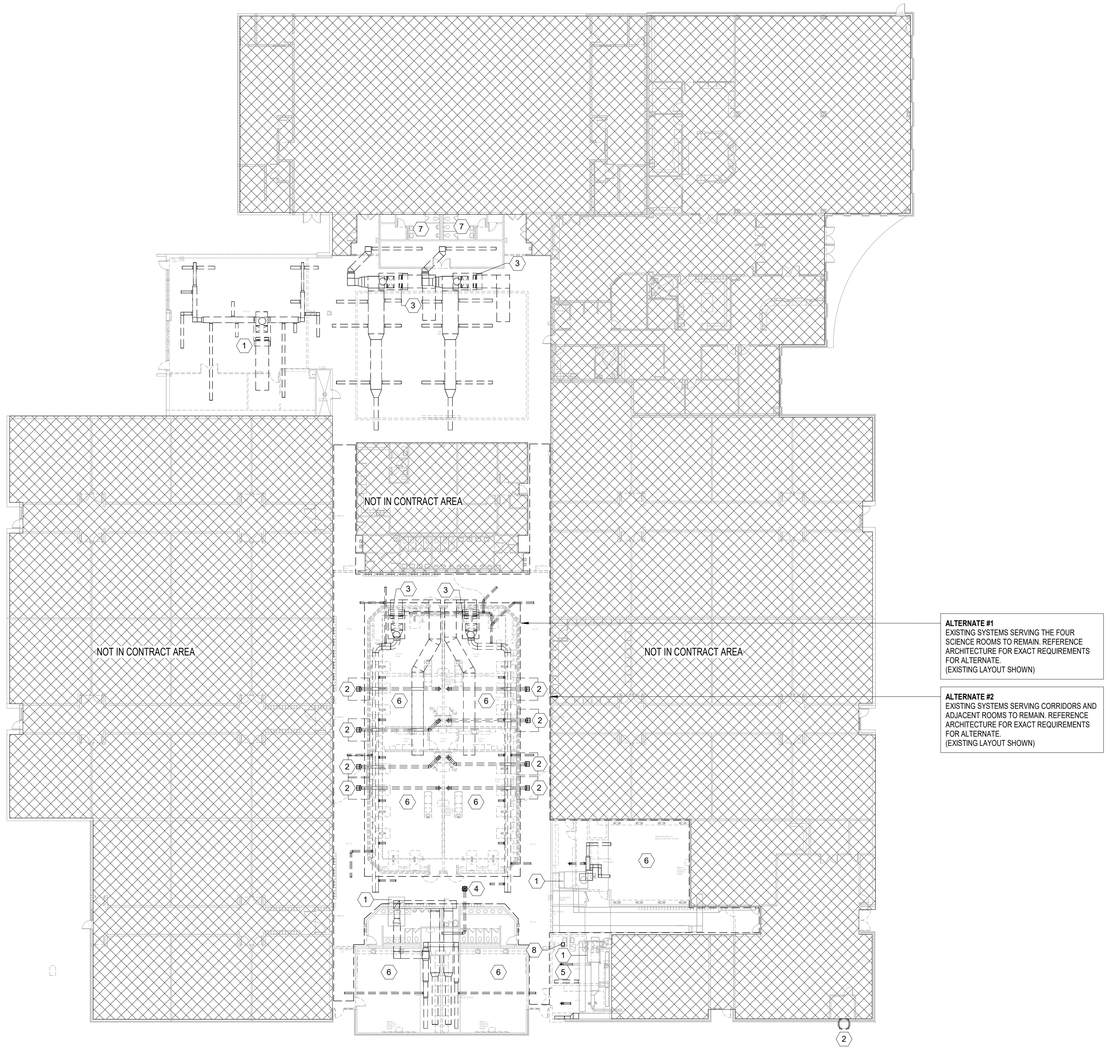
REVISIONS

11/25/2025
ISSUE DATE

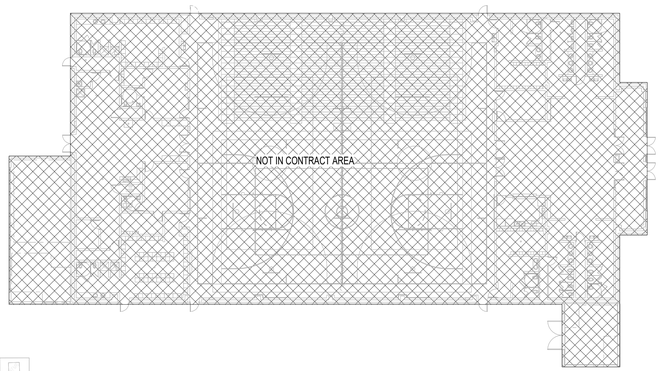
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

FIRE PROTECTION PLAN

FP100
SHEET TITLE



1 OVERALL DEMO
3/64" = 1'-0"



KEYNOTES

1 EXISTING RTU TO REMAIN. EXISTING DUCTWORK AND DIFFUSERS ARE TO BE REMOVED AND REPLACED WITH NEW AS INDICATED, REF M102 & M103.
2 EXISTING SIDE DISCHARGE FAN SYSTEM TO BE REMOVED.
3 EXISTING RTU TO BE REMOVED. PRIOR TO ANY WORK, COORDINATE WITH THE OWNER TO SEE IF UNIT IS TO BE SALVAGED AND RETURNED TO THE OWNER IN CURRENT CONDITION, OR TO BE DEMO'D AND REMOVED FROM THE SITE.
4 EXISTING EXHAUST FAN SYSTEM SERVING KILN ROOM TO BE REMOVED.
5 EXISTING TOILET ROOMS TO BE REMOVED AND REWORKED IN NEW LOCATION.
6 EXISTING PLUMBING IN ROOM TO BE REMOVED.
7 EXISTING PLUMBING IN ROOM TO REMAIN.
8 EXISTING EXHAUST THRU ROOF TO BE REUSED IF EXHAUST IS GREATER THAN 10' FROM INTAKE OF NEARBY RTU. IF WITHIN 10', REMOVE AND REPLACE WITH NEW MINIMUM 10' AWAY.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

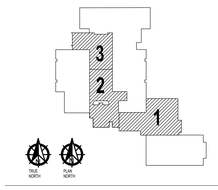
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHK'D BY

DEMO - MECHANICAL AND PLUMBING

DMP-100
SHEET TITLE

General Plan Symbols

Plumbing Symbols

X"	Nominal Pipe Size
	Above Ground Piping
	Below Ground Piping
1/8" / 12" SLOPE	Pipe Slope (When Applicable)
	Existing Pipe To Remain
	Pipe To Be Demolished
CW	Domestic Cold-Water
NPW	Non-Potable Water
S-CW	Soft Cold-Water
F-CW	Filtered Cold-Water
RO	Reverse Osmosis Water
HW	Domestic Hot-Water
HW 140°	Domestic Hot-Water 140°
HW-R	Hot-Water Recirculation
HW-R 140°	Hot-Water Recirculation 140°
SS	Sanitary Drain
V	Sanitary Vent
CWV	Combination DWV
CD	Condensate Drain
ID	Indirect Drain
GW	Grease Waste
OW	Oil Waste
PD	Pump Discharge
SD	Storm Drain
OSD	Storm Overflow
CA	Compressed Air
G	Natural Gas
LP	Liquid Propane
	Pipe Rise / Drop

Pipe Accessory Notes

X" FCO	Cleanout
X" BACKWATER	Swing Check
X" CHECK	Check Valve
X" CHECK	Alternate Check Valve
X" BALANCE	Balancing Valve
X" CIRC	Circuit Setter
X" GATE	Gate Valve
X" QUICK	Quick Opening Valve
X" S/O	Ball Valve
X" STRAIN	Fluid Strainer
S X" GAS-CNTRL	Emergency Gas Shutoff
X" PLUG	Plug Valve
X" GAS COCK	Gas Shutoff Cock
X" REG	Gas Regulator
T/P X" T/V	Thermostatic Valve
TP PRIMER	Trap Primer
M X" M-CNTRL	Elec. Control Valve
T/P TMV-T/P	Mixing Valve
EM TMV-EM	Emergency Mixer
X" PRV	Pressure Reducing Valve
W X" METER	Water Meter
IR X" METER	Irrigation Meter
	Double Check Valve
	Reduced Pressure Zone

Plumbing Fixture Notes

Floor Drain

	Design Size
FD-1	Identity Type
2 DFU	Drainage Fixture Units
FD-3	Floor Drain w/ Deep Seal Trap
FD-3P	Floor Drain w/ Trap Primer "P" Indicates Primer Connection
FD-7	Floor Drain w/ Integral Cleanout
X" AD-1	Area Drain (No Trap)
X" DD-1	Deck Drain
X" HD-1	Hub Drain (Funnel Type)
FS-4	Floor Sink
X" SD-12	Roof Drain
6" SD-1	Combination Drain
2000 SF	Rainfall Surface Area

Abbreviations

Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
AD	AREA DRAIN
ADD	ADDENDUM
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
CW	COLD WATER
D	DEGREE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DISTILLED WATER
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
E/A	EXHAUST AIR
EXIST	EXISTING
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOOR
FO	FUEL OIL
FOV	FUEL OIL VENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
GAL	GALLON
GF	GAS-FIRED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIB
HP	HORSE POWER
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HYD	HYDRANT
ID	INDIRECT
IN	INCH
INV	INVERT
LB	POUND
LB/HR	POUNDS PER HOUR
LAT	LEAVING AIR TEMPERATURE
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M/A	MIXED AIR
MAX	MAXIMUM
MBH	ONE THOUSAND BTU PER HOUR
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MU/A	MAKE-UP/AIR
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
ORD	OVERFLOW ROOF DRAIN
PD	PRESSURE DROP
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PWR	POWER
R	DUCT RISER
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REC	RECESSED
RED	REDUCER
RH	RELATIVE HUMIDITY
RL/A	RELIEF AIR
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RW	RAIN WATER
SF	SQUARE FOOT
S/A	SUPPLY AIR
SAN	SANITARY
SF	SQUARE FOOT
SD	SMOKE DAMPER
SM	SURFACE MOUNT
SP	STANDPIPE
SP	STATIC PRESSURE
STM	STEAM
T	THERMOSTAT
TD	TEMPERATURE DROP
TDR	TRENCH DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
UG	UNDERGROUND
VAC	VACUUM
V	VENT
VAV	VARIABLE AIR VOLUME
VENT	VENTILATION
VTR	VENT THROUGH ROOF
W	WASTE
WB	WET BULB
WCO	WALL CLEAN OUT
WH	WALL HYDRANT

Equipment Abbreviations

AC	AIR CONDITIONING UNIT
ACCU	AIR COOLING CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
CH	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CHWP	CHILLED WATER PUMP
DBP	DOMESTIC WATER BOOSTER PUMP
DC	DUCT MOUNTED COIL
DCP	DOMESTIC WATER CIRCULATING PUMP
EF	EXHAUST FAN
EDC	ELECTRIC DUCT COIL
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
FCU	FAN COIL UNIT
FP	FIRE PUMP
GI	GREASE INTERCEPTOR
GRV	GRAVITY ROOF VENTILATOR
HWP	HEATING WATER PUMP
HRU	HEAT RECOVERY UNIT
PRV	POWER ROOF VENTILATOR
RE	RETURN/EXHAUST FAN
RTU	ROOFTOP UNIT
SP	SUMP PUMP
UH	UNIT HEATER
WH	WATER HEATER

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

PLUMBING GENERAL REQUIREMENTS

1. WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE ADOPTED EDITIONS OF THE INTERNATIONAL BUILDING (IBC), MECHANICAL (IMC), PLUMBING (IPC), FUEL GAS (IFGC), ELECTRICAL (NEC) AND FIRE (IFC) CODES, NFPA 13, 70, 72, 90A, 101 AND ALL LOCAL AMENDMENTS AND REGULATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (A.D.A.). ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE DRAWINGS AND SHALL BE PERFORMED WITH THE LATEST INDUSTRY ACCEPTED STANDARDS. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND APPLICABLE CODES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE MORE STRINGENT OF THE TWO SHALL BE FOLLOWED, ALL WORK SHALL BE CONDUCTED IN A SAFE MANNER WITH ADEQUATE PROTECTION FOR THE NEW WORK, EXISTING PROPERTY, AND THE GENERAL PUBLIC.

2. CONTRACTORS SHALL VISIT THE SITE TO DETERMINE THE EXTENT OF EXISTING CONDITIONS, NEW WORK, PATCHING, ETC., REQUIRED BY THE PROJECT, AND TO BECOME FAMILIAR WITH THE WORK CONDITIONS PRIOR TO FINAL BID. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK INDICATED OR REQUIRED; FOR WORK PROVIDED DURING NON-STANDARD HOURS; FOR WORK REQUIRED TO MAINTAIN BUILDING SAFETY AND FUNCTION; FOR WORK TO PATCH/REPAIR BUILDING SYSTEMS AND FINISHES; OR ANY OTHER WORK RESULTING FROM REQUIRED NEW WORK, RECONNECTION, AND/OR DEMOLITION OPERATIONS.

3. THE WORK REQUIRED IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS. IT IS IMPRACTICAL TO INDICATE ALL REQUIRED WORK, SPECIFIC MODIFICATIONS, FLASHING, AND PATCHING IN EVERY DETAIL. IT IS THE INTENT OF THIS PROJECT TO EXTEND EXISTING SYSTEMS AND/OR PROVIDE NEW SYSTEMS AS INDICATED, COMPLETE IN EVERY RESPECT WHETHER OR NOT SPECIFICALLY DETAILED. INFORMATION ON EXISTING UTILITIES, BUILDINGS, AND SITE LAYOUT MAY HAVE BEEN TAKEN FROM OWNERS' RECORDS, CIVIL ENGINEERS' DRAWINGS, AND/OR LIMITED SITE SURVEYS. ANY LOCATIONS, SIZES, QUANTITIES, ETC., SHOWN ON PLANS MAY BE APPROXIMATE AND ARE INDICATED TO ASSIST IN OUTLINING THE SCOPE OF WORK AND SUBJECT TO MINOR ADJUSTMENTS IN FIELD. PROVIDE NECESSARY OFFSETS, REROUTING, DUCT/PIPE FITTINGS, ETC.. COORDINATE WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN FIELD. CONTRACTOR ACKNOWLEDGES THAT EXISTING CONDITIONS HAVE BEEN VERIFIED AND ARE ACCEPTABLE. VARIATIONS IN ACTUAL SITE CONDITIONS, CONCEALED CONSTRUCTION, OR NEW WORK REQUIREMENTS SHALL BE BROUGHT TO OWNER'S ATTENTION FOR RESOLUTION PRIOR TO COMMENCING APPLICABLE WORK.

4. PROTECT ALL EXISTING CONSTRUCTION AND ANY COMPONENTS WHICH ARE TO REMAIN . THE CONTRACTOR SHALL MODIFY, REMOVE, AND/OR RELOCATE ALL MATERIALS AND ITEMS INDICATED ON THE DRAWINGS OR REQUIRED BY THE INSTALLATION OF NEW SYSTEMS / EQUIPMENT. REMOVE ANY PIPING, DUCTWORK, AND ACCESSORIES THAT ARE NOT USED FOR NEW SYSTEM OPERATIONS. REMOVE ANY ACCESSIBLE DEAD LEGS BACK TO MAIN AND CAP AND ABANDON ANY UNUSED PIPING BELOW SLAB. ALL REMOVALS AND/OR DISMANTLING SHALL BE CONDUCTED IN A MANNER TO PRODUCE MAXIMUM SALVAGE. SALVAGE MATERIALS SHALL BE DISPOSED OF OFF-SITE, EXCEPT THAT THE OWNER RESERVES THE RIGHT TO SELECT AND RETAIN ANY DESIRED SALVAGE ITEMS. CONTRACTOR SHALL VERIFY WITH OWNER PRIOR TO REMOVING SALVAGED MATERIALS FROM SITE. MATERIALS AND/OR ITEMS SCHEDULED FOR RELOCATION AND WHICH ARE DAMAGED DURING DISMANTLING OR REASSEMBLING OPERATIONS SHALL BE REPAIRED AND RESTORED TO PRE-DISTURBED CONDITION TO OWNER'S SATISFACTION. WITH WRITTEN PRIOR APPROVAL, THE CONTRACTOR MAY SUBSTITUTE NEW MATERIALS AND/OR ITEMS OF LIKE DESIGN AND EQUAL QUALITY IN LIEU OF MATERIALS AND/OR ITEMS TO BE RELOCATED.

5. PROTECT EXISTING CONSTRUCTION AND COMPONENTS WHICH ARE TO REMAIN OR ARE IN PROGRESS. REPAIR, TO PRE-DISTURBED CONDITION, ANY DAMAGE RESULTING FROM DEMOLITION OR NEW CONSTRUCTION OPERATIONS. EXISTING UTILITIES DAMAGED BY CONTRACTOR DURING NEW PIPING, CONDUIT OR EQUIPMENT INSTALLATION SHALL BE REPAIRED TO OWNER'S SATISFACTION.

6. CONDITIONS MAY EXIST OR OCCUR THROUGHOUT CONSTRUCTION, CONCEALED OR OTHERWISE, THAT WILL REQUIRE MINOR REVISIONS IN THE ARRANGEMENT OF DUCTWORK, PIPING, VALVES, ATTACHMENTS, CONDUIT, ETC., ON VARIOUS SYSTEMS. SUCH MODIFICATIONS ARE DEEMED A PART OF THIS CONTRACT AND SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.

7. THE CONTRACTOR SHALL PROVIDE A MINIMUM ONE YEAR WARRANTY ON ALL MATERIALS AND LABOR UNLESS NOTED OTHERWISE.

8. ALL NECESSARY PERMITS, LICENSES, CERTIFICATES, TESTS, INSPECTIONS, ETC., SHALL BE OBTAINED BY THE CONTRACTOR AND INCLUDED IN THE PROJECT COST, WITHOUT ADDITIONAL COST TO THE OWNER OR ENGINEER AFTER ORIGINAL BID IS ACCEPTED.

9. THE CONTRACTOR SHALL UPDATE RECORD DRAWINGS DAILY. ANNOTATE "AS INSTALLED" CONDITIONS IN RED INK IN ONE FORMAT FOR ALL TRADES, EITHER HARD COPIES OR IN DIGITAL FORM, INDICATING ALL CHANGES FROM THE ORIGINAL DRAWINGS MADE DURING THE INSTALLATION OF THE WORK. AT COMPLETION OF THE PROJECT, THE RECORD DRAWINGS SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE.

10. REFER TO ALL PROJECT DRAWINGS FOR ANY ADDITIONAL REQUIREMENTS. SEE SEPARATE PROJECT MANUAL FOR GENERAL CONDITIONS AND SPECIFICATIONS, IF APPLICABLE. WHERE DISCREPANCIES OCCUR BETWEEN THESE DRAWINGS AND THE PROJECT MANUAL, THE LATTER SHALL BE FOLLOWED. COORDINATE WITH ENGINEER IF UNCERTAINTIES ARISE.

11. CONTRACTOR SHALL SEQUENCE WORK TO MINIMIZE DOWNTIME AND OUTAGES. COORDINATE INTERRUPTIONS OF EACH UTILITY WITH THE OWNER AND ALL OTHER CONTRACTORS.

12. ALL PATCHING AND PAINTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE PATCHING AND PAINTING AS A RESULT OF ALTERATIONS, CHANGES, AND ADDITIONS. COORDINATE WITH ARCHITECT FOR FINISHING REQUIREMENTS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AND BEAM PENETRATIONS. ALL CUTS INTO NEW OR EXISTING CONCRETE WALKS, CURBS, AND PAVED AREAS SHALL BE NEATLY SAW CUT OR CORE DRILLED AND PATCHED TO MATCH EXISTING TO SATISFACTION OF OWNER. CUTTING/DRILLING OF EXISTING BEAM FRAMING, JOISTS, HEADERS, PLATES, ETC. IS NOT ACCEPTABLE. PRIOR WRITTEN APPROVAL IS REQUIRED FROM OWNER AND STRUCTURAL ENGINEER PRIOR TO ALTERING BUILDING STRUCTURE AS IT RELATES TO THIS SCOPE OF WORK.

14. COORDINATE ALL EXTERIOR AND ROOF PENETRATIONS WITH OTHER TRADES AND GENERAL CONTRACTOR TO PROVIDE A COMPLETE AND FULLY WEATHER-PROOF INSTALLATION.

15. PENETRATIONS THROUGH NEW AND EXISTING FIRE RATED ASSEMBLIES SHALL BE FILLED WITH FIRE RESISTANT MATERIAL AND SEALED WITH FIRE BARRIER CAULK. FILLER MATERIAL AND CAULK SHALL BE UL LISTED FOR THE APPLICATION, INSTALLED PER MANUFACTURER INSTRUCTIONS, AND BE EQUAL TO OR BETTER THAN RESPECTIVE ASSEMBLY BEING PENETRATED. PENETRATION OF ANY FIRE RATED CONSTRUCTION SHALL NOT IMPAIR THE INTEGRITY OF THE INTENDED RATING. ALL OPENINGS SHALL BE SEALED, SLEEVED, OR DAMPERED IN SUCH A MANNER THAT MAINTAINS THE FIRE RESISTANCE. CONTRACTOR SHALL FIELD VERIFY ALL WALL TYPES AND COORDINATE THIS EFFORT WITH LOCAL CODE AUTHORITY.

16. CONCEAL ALL SYSTEM COMPONENTS OUT OF VIEW OF FINISHED AREAS UNLESS OTHERWISE NOTED. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS UNLESS APPEARANCES OR ACCESS REQUIRE AN ALTERNATE HEIGHT.

17. ALL PIPING, DEVICES, APPARATUS, EQUIPMENT, ETC., SHALL BE PROPERLY SUPPORTED AND BRACED VERTICALLY AND HORIZONTALLY IN ACCORDANCE WITH CODES AND AS REQUIRED TO PREVENT EXCESSIVE MOVEMENT. MAKE PROVISIONS FOR MOVEMENT DUE TO EXPANSION AND CONTRACTION.

18. ALL ABOVE FLOOR PIPING AND ALL EQUIPMENT SHALL BE PROVIDED WITH PERMANENT LABELS.

19. ACCESS DOORS SHALL BE INSTALLED SUCH THAT EQUIPMENT, VALVES, MOVING PARTS, ETC., ARE ACCESSIBLE FOR MAINTENANCE, ADJUSTMENTS, AND REPLACEMENT. COORDINATE INSTALLATION OF SYSTEMS WITH OTHER TRADES. FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER AND BE NEATLY SAW-CUT OR CORE-DRILLED, DEPENDING ON THE SYSTEM INSTALLED. CUTTING/DRILLING OF EXISTING BEAMS, JOISTS, ETC., IS NOT ACCEPTABLE. WHERE ACCESS IS THROUGH A RATED ASSEMBLY, ACCESS DOOR SHALL MATCH THE RATING OF ADJACENT CONSTRUCTION.

20. INSTALL NO DRAIN/WASTE LINES UNDERFLOOR/UNDERGROUND SMALLER THAN 2".

21. ONLY PLENUM RATED MATERIAL (PIPING, DUCTWORK, INSULATION, JACKETING, ETC.) SHALL BE ALLOWED IN A RETURN AIR PLENUM. PLENUM RATED MATERIALS SHALL PASS TESTING IN ACCORDANCE WITH ASTM E84 AND/OR UL 723 TO MAINTAIN A FLAME SPREAD AND SMOKE DEVELOPMENT MEASUREMENTS OF 25/50 OR LESS. WHERE NON-PLENUM RATED MATERIAL IS ALLOWED ON A PROJECT BUT PORTIONS OF THE RESPECTIVE SYSTEM PASSES THROUGH RETURN AIR PLENUM AREAS, THE CONTRACTOR SHALL TRANSITION TO PLENUM RATED MATERIALS WHILE IN THE RETURN AIR PLENUM.

22. PIPING AND OTHER MATERIALS THAT MAY BE SUBJECT TO DEGRADATION WHEN EXPOSED TO UV RADIATION SHALL NOT TO BE STORED OR INSTALLED WHERE EXPOSED TO DIRECT SUNLIGHT.

23. CONTRACTOR SHALL PROVIDE ALL SPECIAL AND/OR APPROPRIATE FITTINGS, ADAPTERS, ETC., AS REQUIRED TO CONNECT NEW PIPING AND FITTINGS TO EXISTING PIPING/UTILITIES.

24. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH A DIELECTRIC UNION.

25. ALL MATERIALS, FIXTURES, AND EQUIPMENT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL MEET CURRENT INDUSTRY STANDARDS. WHERE APPLICABLE, EQUIPMENT SHALL BEAR TESTING LABORATORY LABELS. TEST ALL EQUIPMENT FOR PROPER OPERATION.

26. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH SPECIFICATIONS AND WITH MINIMUM CLEARANCES AS DEFINED BY LOCAL AUTHORITY HAVING JURISDICTION (AHJ).

27. CLOSE COORDINATION IS NECESSARY WHERE SPACE IS LIMITED IN PORTIONS OF THIS PROJECT. LOCATE DUCTWORK, PIPING AND EQUIPMENT AWAY FROM SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS, AND OTHER ELECTRICAL EQUIPMENT. CONTRACTOR SHALL MAINTAIN ALL PROPER CODE AND MAINTENANCE REQUIRED CLEARANCES AND COORDINATE TRADES INVOLVED DURING INSTALLATION OF NEW EQUIPMENT, PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY STRUCTURE, LIGHTING, AND DEVICES TO PREVENT CONFLICTS BOTH AT AND ABOVE CEILING. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.

28. ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO EQUIPMENT. PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN. FOR EQUIPMENT CONNECTIONS AND PIPE OR DUCT SIZES NOT SHOWN ON PLANS, REFER TO DETAILS, SCHEDULES, SPECIFICATIONS, AND MANUFACTURER INSTALLATION GUIDELINES.

29. COORDINATE EXACT LOCATION OF ALL EQUIPMENT WITH ARCHITECTURAL DRAWINGS, OTHER TRADES, AND ACTUAL SITE CONDITIONS.

30. CONTRACTOR SHALL COORDINATE ALL CONNECTION REQUIREMENTS OF OWNER-FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED BY OTHERS. PROVIDE NECESSARY MATERIAL AND LABOR FOR A COMPLETE INSTALLATION.

31. INSTALL AND SUPPORT ALL PIPING, DUCTWORK, AND EQUIPMENT TO FACILITATE PROPER ACCESS AND MAINTENANCE. LOCATE EQUIPMENT AND ACCESSORIES REQUIRING ACCESS 2'-0" MAXIMUM ABOVE RESPECTIVE CEILING. PROVIDE LOCKING ACCESS PANEL MATCHING ANY APPLICABLE FIRE ASSEMBLY RATING FOR ANY EQUIPMENT, APPLIANCES, HEAT EXCHANGERS, OR CONTROL DEVICES LOCATED BEHIND OR ABOVE INACCESSIBLE SURFACES SIZED ADEQUATELY FOR INSPECTING, SERVICING, AND REPAIR, OR REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION COORDINATE FINISH WITH ARCHITECT. PROVIDE SERVICE PLATFORMS FOR ROOF MOUNTED EQUIPMENT TO ALLOW PROPER ACCESS WHERE REQUIRED PER CODE.

32. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.

33. ROOF MOUNTED EQUIPMENT SHALL BE 10'-0" MIN FROM ROOF EDGE. PROVIDE GUARDRAILS PER LOCAL CODE AT ANY EQUIPMENT WITHIN 10'-0" OF ROOF EDGE.

34. ANY LINE VOLTAGE WIRING RUN BY CONTRACTORS SHALL BE INSTALLED IN ACCORDANCE WITH ELECTRICAL PLANS, NOTES, AND SPECIFICATIONS.

35. PROVIDE 4" HOUSEKEEPING PAD FOR EACH PIECE OF GROUND OR FLOOR-MOUNTED EQUIPMENT. COORDINATE SIZES WITH AWARDED EQUIPMENT.

36. SUBMIT PRODUCT DATA OF ALL PROPOSED MATERIALS AND EQUIPMENT FOR APPROVAL IN ONE (1) SUBSTITUTE SUBMITTAL PACKAGE. IF SUBSTITUTES DO NOT MEET OR EXCEED SPECIFIED PACKAGE IN QUALITY AND/OR PERFORMANCE, SPECIFIED PACKAGE SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER. PRIOR APPROVAL SUBMITTALS ARE NOT REQUIRED FOR BIDDING PURPOSES. SUBMITTAL PACKAGES SHALL ONLY BE PROVIDED BY SUPPLIERS WITHIN STATE IN WHICH PROJECT IS CONSTRUCTED.

37. IN CASES OF EQUIPMENT SUBSTITUTION, CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SYSTEMS AND COMPONENTS WILL FIT PROPERLY PRIOR TO FABRICATION OR ORDERING. PIPING MAY BE RESIZED BY CONTRACTOR TO FIT FIELD CONDITIONS AS LONG AS INSTALLED PIPING HAS EQUAL FRICTION LOSS TO THOSE SHOWN. PROVIDE COMPLETE SHOP DRAWINGS TO ENGINEER SHOWING ACTUAL PIPE SIZES, ARRANGEMENTS, AND UNIT LOCATIONS TO BE INSTALLED PRIOR TO FABRICATION OR INSTALLATION.

38. CONTRACTOR TO REFERENCE MECHANICAL DOCUMENTS FOR ADDITIONAL INFORMATION ON OTHER PIPING SYSTEMS SUCH AS NATURAL GAS DELIVERY, CONDENSATE / WASTE, REFRIGERANT (RS/RL), AND HYDRONIC FLUID SYSTEMS.

39. WATER HAMMER ARRESTORS SHALL BE INSTALLED AS CLOSE AS POSSIBLE AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AT DISHWASHERS, WASHING MACHINES, SUPPLY BOXES, AND OTHER QUICK CLOSING VALVES AS DEFINED BY THE CODE. INSTALL PER MANUFACTURER REQUIREMENTS, INCLUDING ACCESS PANEL, IF NOT LABELED FOR CONCEALED USE. ISOLATION AND BALANCING VALVES SHALL ALSO BE INSTALLED ON INDEPENDENT FIXTURE GROUPS.

40. UNLESS NOTED OTHERWISE, EACH PLUMBING FIXTURE SHALL BE NEW, FIRST QUALITY, AND FREE OF MARS AND CHIPS, AND ADEQUATELY SUPPORTED, ANCHORED, AND COLOR MATCHING CAULK APPLIED TO ADJACENT SURFACES. EACH FIXTURE SHALL MEET ALL REQUIREMENTS NOTED AS WELL AS ANY WATER FLOW RESTRICTIONS PER THE APPLICABLE LOCAL PLUMBING CODE. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING.

41. WHERE FLOOR DRAINS OCCUR WITHIN LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL AND POLISH DRAINS TO LIKE NEW CONDITION AT COMPLETION OF CONSTRUCTION. ENSURE SCREW HEADS ARE NOT FILLED WITH GROUT/CONCRETE AND ARE NOT STRIPPED.

42. PLUMBING CONTRACTOR SHALL INSPECT EXISTING CONDITIONS PRIOR TO BEGINNING WORK. FIELD VERIFY SIZE AND LOCATION OF ALL EXISTING SERVICES TO BE TIED INTO. THE EXISTING PIPING IF INDICATED ON PLANS SHALL BE VERIFIED IN THE FIELD FOR EXACT LOCATIONS, QUANTITY, AND PIPE SIZES. IT IS THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND CONFIRM THAT THE INVERTS AND LOCATIONS OF THE BUILDING UTILITIES ARE COMPATABLE WITH THE SITE UTILITIES PRIOR TO BEGINNING WORK.

43. DOMESTIC WATER AND SEWER LOCATED OUTSIDE OF FOOTING SHALL MAINTAIN A MINIMUM OF 10' SEPARATION UNLESS PROPER CONTAMINATION PROVISIONS PER LOCAL CODE HAVE BEEN MET AND WRITTEN PERMISSION IS OBTAINED FROM LOCAL AUTHORITIES.

44. WHERE CONCEALED CONDITIONS EXIST THAT MAY IMPACT NEW WORK, CAMERA SURVEY ALL EXISTING SANITARY SEWER LOCATIONS AND INVERTS BELOW SLAB OR GRADE. NOTIFY GENERAL CONTRACTOR OF ANY POTENTIAL CONFLICTS WITH WORK PRIOR TO BEGINNING CONSTRUCTION.

45. CONTRACTOR SHALL PROVIDE A PRESSURE REDUCING VALVE SHOULD THE WATER PRESSURE EXCEED 75 PSI. CONTRACTOR SHALL CONFIRM WITH ON SITE CONDITIONS AND LOCAL UTILITY.

46. ALL PRESSURIZED PIPING SYSTEMS SHALL BE INSTALLED ABOVE CEILING AND WITHIN WALLS UNLESS OTHERWISE NOTED. SUPPLY PIPING BELOW GRADE OR UNDER SLAB SHALL BE INSTALLED SUCH THAT NO JOINTS ARE LOCATED BENEATH THE SLAB. WHERE NECESSARY, PROVIDE OFFSET UP IN FINISHED WALL OR SIMILAR TO ACCOMMODATE JOINTS.

47. ALL GRAVITY WASTE PIPING SHOWN IS BELOW FLOOR, SLAB, OR WITHIN WALLS, AND ALL SANITARY VENT PIPING ABOVE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED.

48. PITCH UNDERFLOOR SANITARY WASTE AND STORM PIPING 3" AND GREATER AT 1/8" PER FOOT AND ALL OTHER WASTE PIPING AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.

49. PROVIDE CLEANOUTS IN ACCESSIBLE LOCATIONS AT BASES OF ALL DRAIN RISERS, PER CODE REQUIREMENTS, AND AT ANY ADDITIONAL LOCATIONS SHOWN ON THE DRAWINGS.

50. FLOOR DRAIN PIPING SHALL BE THE SAME SIZE AS DRAIN IT CONNECTS TO UNLESS NOTED OTHERWISE. REFER TO PLUMBING ROUGH-IN SCHEDULE FOR PROPER SIZE IF SIZE IS NOT INDICATED ON DRAWINGS.

51. FREEZEPROOF HOSE BIBBS AND SUPPLY PIPING SHALL BE INSTALLED WITH ACCESSIBLE SHUT-OFF VALVE ON THE HEATED SIDE OF THE INSULATION. SEAL SHEATHING PENETRATION TO PREVENT EXTERIOR AIR FROM REACHING THE VALVE/PIPING.

52. ANY GAS REGULATORS INSTALLED ON THE INTERIOR OF THE BUILDING SHALL BE VENTED TO THE EXTERIOR PER LOCAL AND STATE CODES UNLESS AHJ APPROVED VENTLESS REGULATORS ARE INSTALLED.

53. FLUSHING CONTROLS FOR HANDICAPPED WATER CLOSETS ARE TO BE MOUNTED TO THE OPEN SIDE OF THE TOILET AREAS.

54. ALL VENT THRU ROOF (VTR'S) PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKE OPENINGS.

55. ANY PVC PIPE PENETRATING A FIRE RATED ASSEMBLY SHALL BE EXTERNALLY SLEEVED WITH STEEL, FERROUS, OR COPPER MATERIALS, SECURELY FASTENED TO THE FIRE RATED ASSEMBLY. ANY SPACE BETWEEN THE SLEEVE AND THE FIRE RATED ASSEMBLY PENETRATED SHALL BE PROTECTED USING MATERIAL THAT CONFORMS TO ASTM E 814 OR UL 1479, SUCH AS FIRE STOP FS-1900 OR FLAME STOPPER 5000.

56. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH A DIELECTRIC UNION.

57. CONTRACTOR SHALL COORDINATE ALL CONNECTION REQUIREMENTS OF OWNER-FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED BY OTHERS. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS FOR DISHWASHER, WASHING MACHINE, REFRIGERATOR, ETC. PROVIDE NECESSARY MATERIAL, SHUTOFF VALVES, BACKFLOW PROTECTION, AND LABOR FOR A COMPLETE INSTALLATION.

58. VALVES SHALL BE LOCATED 6" ABOVE ACCESSIBLE CEILING WHEN AT ALL POSSIBLE AND SHALL BE CLEAR OF ANY OBSTRUCTIONS FROM OTHER TRADES. MAINTENANCE SHALL BE ABLE TO ACCESS VALVES WITH STANDARD LADDER. SHOULD THE LOCATION NOT BE FEASIBLE, CONTRACTOR SHALL PROVIDE A CONTROL CHAIN AND/OR ARM.

59. PROVIDE SHUT-OFF VALVES FOR PROPER OPERATION AND SERVICING OF DOMESTIC WATER DISTRIBUTION SYSTEMS. LOCATION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: AT EACH FIXTURE GROUP, AT EACH BRANCH TAKE-OFF FROM MAINS AND AT THE BASE OF EACH RISER. INCLUDE ABILITY TO DRAIN THE LOWEST POINTS OF MAIN RISERS. COORDINATE WITH ARCHITECTURAL PLAN FOR ACCESS DOOR LOCATIONS.

60. PROVIDE BALANCING VALVES FOR PROPER OPERATION AND PRESSURE OF DOMESTIC HOT WATER DISTRIBUTION SYSTEM. LOCATION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: AT END OF EACH DISTRIBUTION BRANCH AND AT EACH FLOOR. INSTALL PER MANUFACTURE'S REQUIREMENTS. COORDINATE WITH ARCHITECTURAL PLAN FOR ACCESS DOOR LOCATIONS.

61. TEMPERED WATER SHALL BE DELIVERED TO PUBLIC HANDWASHING FACILITIES THROUGH AN APPROVED WATER TEMPERATURE LIMITING DEVICE THAT CONFORMS TO APPLICABLE ASSE STANDARD 1016, 1017, 1069, 1070, OR 1071.

62. ALL PIPE SHALL BE REAMED AFTER CUTTING OR THREADING AND SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATTER PRIOR TO INSTALLATION. THE DOMESTIC WATER SYSTEMS SHALL BE FLUSHED COMPLETELY AND STERILIZED IN ACCORDANCE WITH DEPARTMENT OF HEALTH REQUIREMENTS.

63. PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED BY LOCAL CODE OR BY THE REQUIREMENTS OF LOCAL PLUMBING INSPECTOR.

64. TEST, ADJUST AND BALANCE ALL PUMPING SYSTEMS IN ACCORDANCE WITH PLAN REQUIREMENTS AND TESTING STANDARDS. TESTING, ADJUSTMENT, AND BALANCING TO BE PERFORMED AFTER ALL BUILDING SYSTEMS ARE ACTIVE. PROVIDE BOUND REPORT TO ENGINEER FOR REVIEW FOLLOWING COMPLETION.

65. WATER HEATER OVERFLOW DRAINS SHALL BE RUN FULL SIZE AND SHALL DRIP INTO THE NEAREST PLUMBING FIXTURE. TRIM WALL/CEILING PENETRATION NEATLY AND PROVIDE A CHROME ESCUTCHEON PLATE. WATER HEATERS SHALL BE PROVIDED WITH T&P VALVES. T&P DRAIN LINES SHALL BE OF APPROVED MATERIAL AND ROUTED IN ACCORDANCE WITH LOCAL CODES.

the.stacy.group
architecture. interiors

8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

MATTHEW MALONE
2/13/2026
35205

CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA#: 32 EXP.: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC
SCHOOLS

OWASSO, OK
2025

PROJECT

KEY PLAN

REVISIONS

11/25/2025

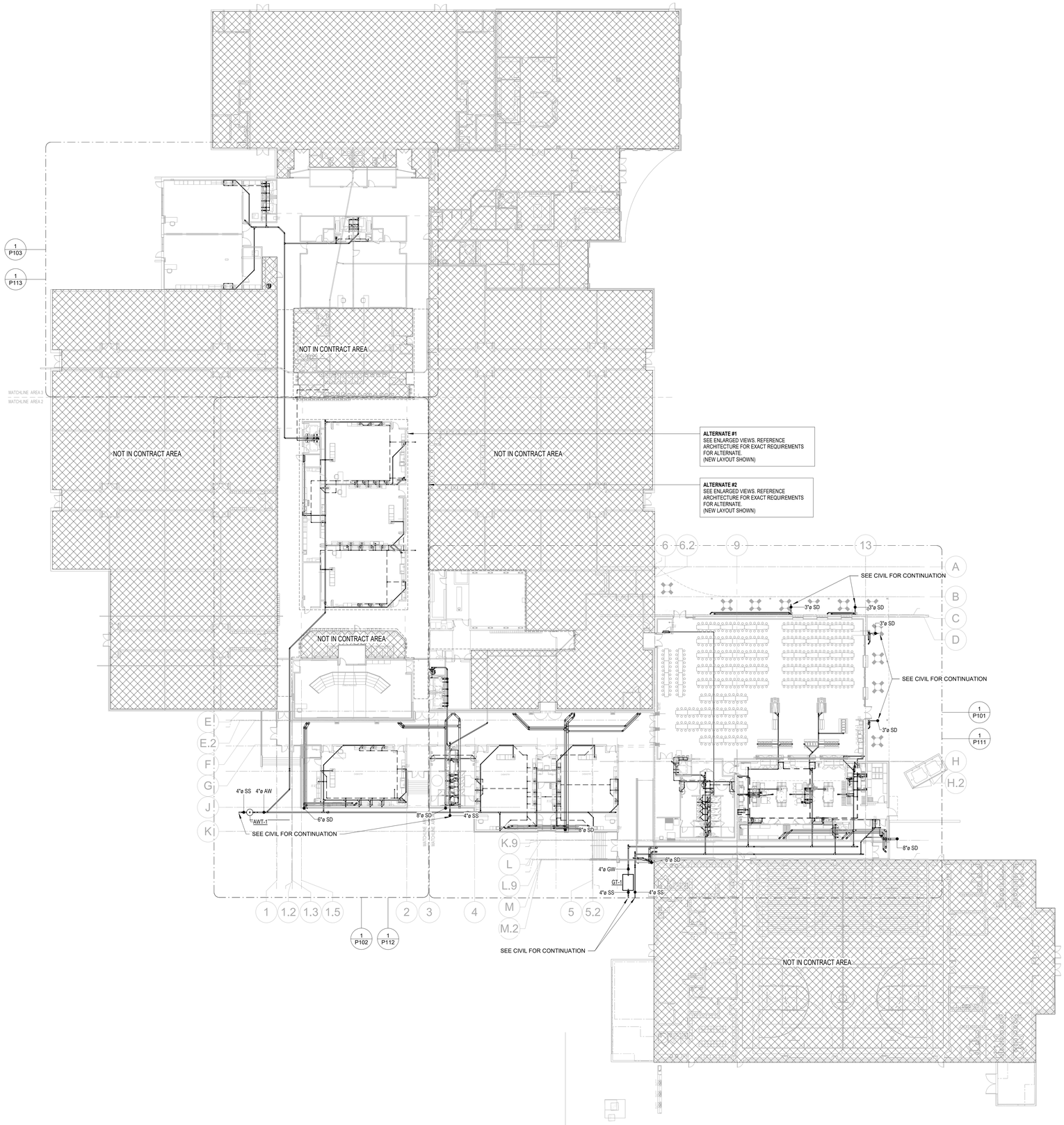
ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHK'D BY

PLUMBING LEGEND
& NOTES

P001

SHEET TITLE



1 OVERALL PLUMBING PLAN
3/64" = 1'-0"

the.stacy.group
architecture. interiors

8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

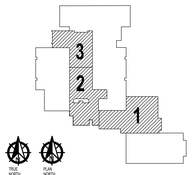
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

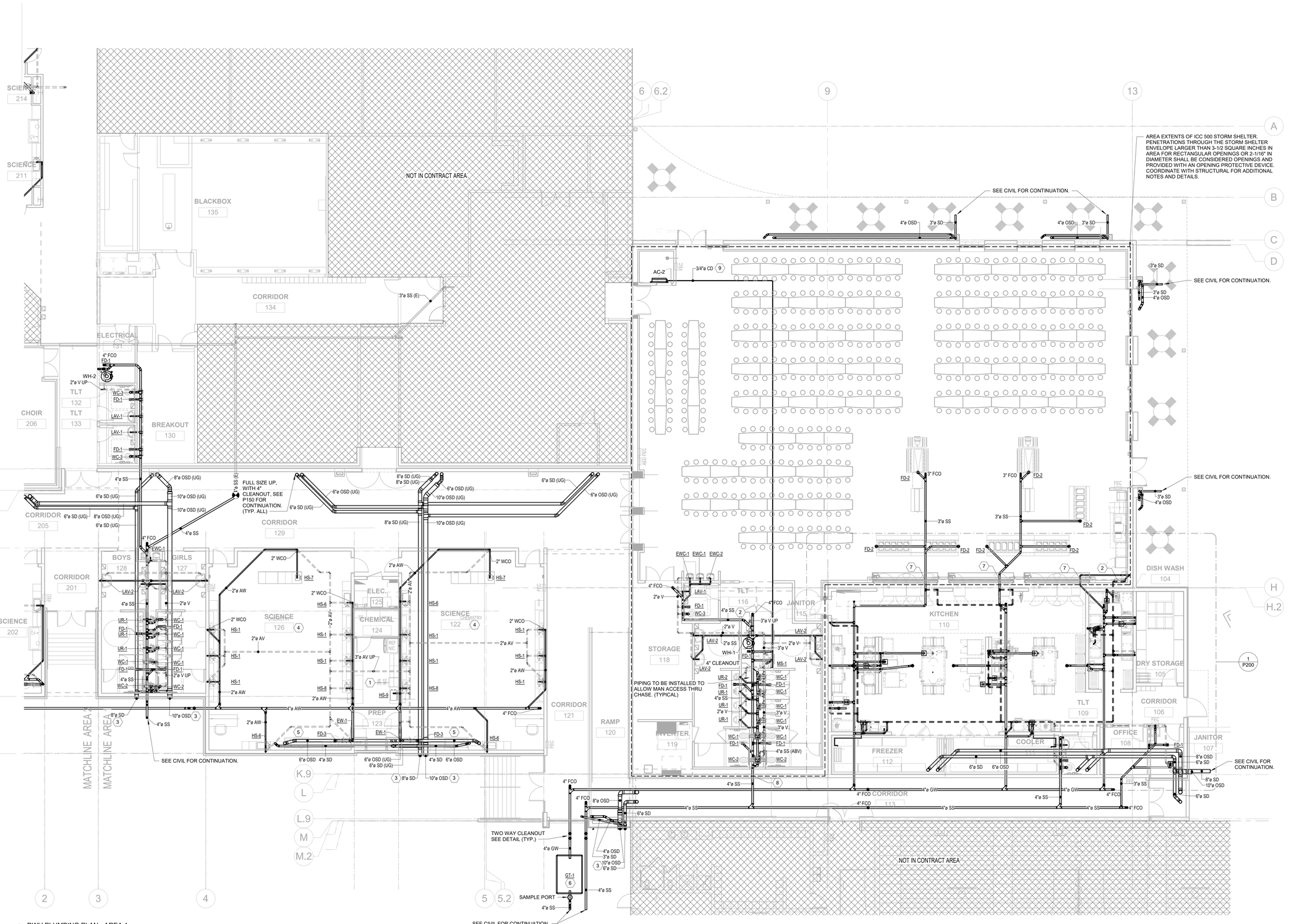
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

OVERALL PLUMBING PLAN

P100
SHEET TITLE

KEYNOTES

1. ROUTE FULL SIZED DISHWASHER WASTE TO TAILPIECE OF SINK.
2. ROUTE THRU STRUCTURAL SHROUD. REFERENCE STRUCTURAL DRAWINGS FOR EXACT REQUIREMENTS.
3. DISCHARGE THRU DOWNSPOUT NOZZLE TO SPLASH BLOCK AT GRADE. REFERENCE DETAIL.
4. PROVIDE ORION ACID WASTE & VENT PIPING - BLUELINE FRPP SERVING ALL FIXTURES IN SCIENCE CLASSROOMS AND LABS (TYPICAL).
5. COORDINATE WITH SCIENCE LAB EQUIPMENT VENDOR FOR HOOD REQUIREMENTS AND PROVIDE ANY ACID WASTE, ACID VENT, NATURAL GAS CONNECTION, OR DOMESTIC WATER CONNECTIONS REQUIRED.
6. PROVIDE VENT BY ROUTING INTO BUILDING WALLS AND UP TO ROOF IF MANUFACTURE OR AHJ REQUIRES.
7. ROUTE PLUMBING LINE THRU OPENING AND NOT THRU GRADE BEAMS.
8. ROUTE PLUMBING WASTE UNDER GRADE BEAM.
9. ROUTE FULL SIZE, MINIMUM 3/4" CONDENSATE TO MOP SINK, OR NEAR DRAIN IF APPROVED BY AHJ AND SCHOOL. ROUTE DOWN WALL AT NEW MOP SINK AND STUB OUT 2" ABOVE RIM.



1 DWV PLUMBING PLAN - AREA 1
1/8" = 1'-0"

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

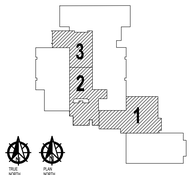
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

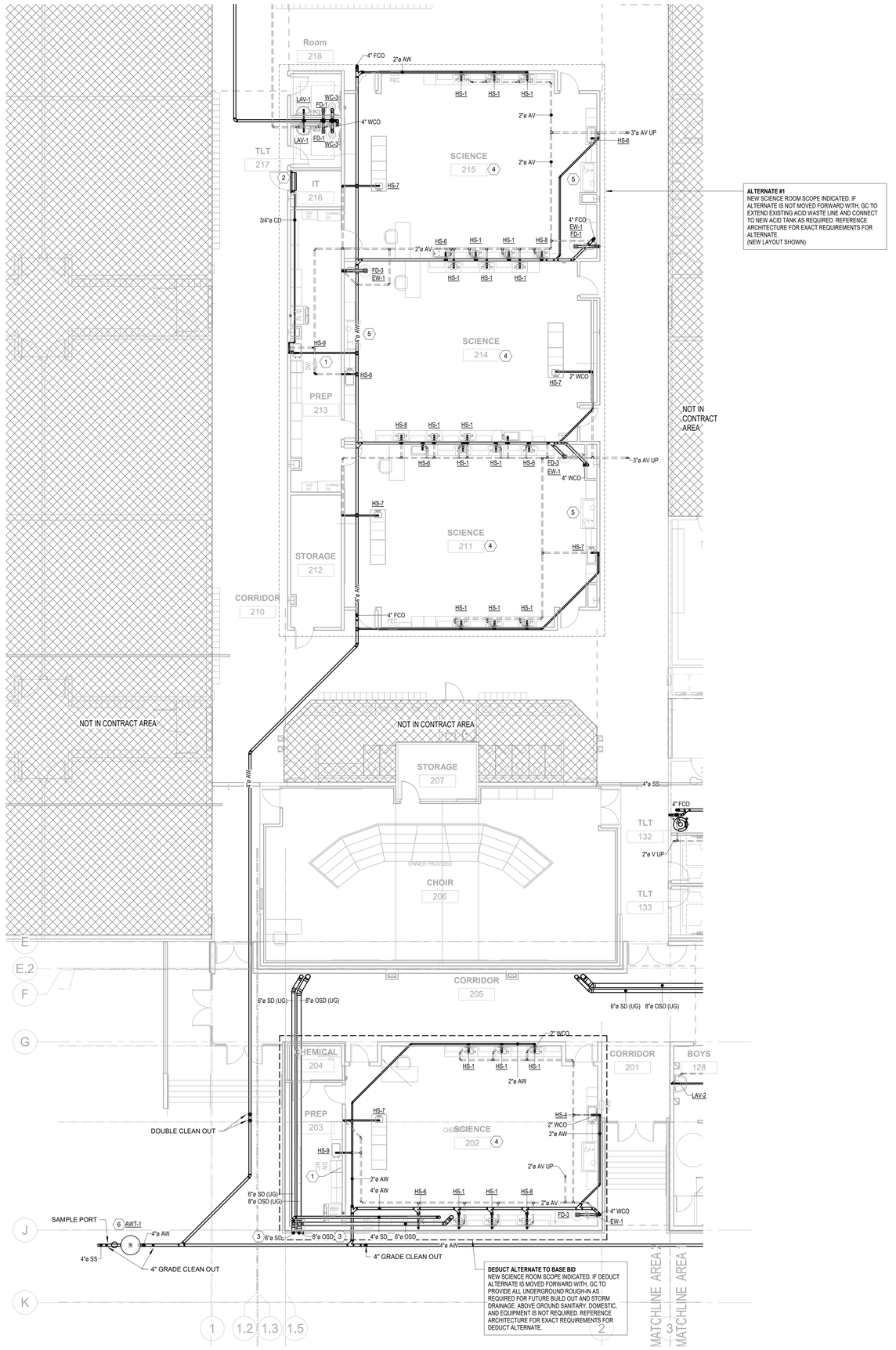
REVISIONS

11/25/2025
ISSUE DATE

2407
MDM
EZ
PROJECT NO
DRAWN BY
CHKD BY

DWV PLUMBING PLAN - AREA 1

P101
SHEET TITLE



ALTERNATE #1
NEW SCIENCE ROOM SCOPE INDICATED. IF ALTERNATE IS NOT MOVED FORWARD WITH, GC TO EXTEND EXISTING ACID WASTE LINE AND CONNECT TO NEW ACID TANK AS REQUIRED. REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR ALTERNATE.
(NEW LAYOUT SHOWN)

NOT IN CONTRACT AREA

DEDUCT ALTERNATE TO BASE BID
NEW SCIENCE ROOM SCOPE INDICATED. IF DEDUCT ALTERNATE IS MOVED FORWARD WITH, GC TO PROVIDE ALL UNDERGROUND ROUGH-IN AS REQUIRED FOR FUTURE BUILD OUT AND STORM DRAINAGE. ABOVE GROUND SANITARY, DOMESTIC, AND EQUIPMENT IS NOT REQUIRED. REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR DEDUCT ALTERNATE.

1 DWV PLUMBING PLAN - AREA 2
1/8" = 1'-0"

KEYNOTES

1 ROUTE FULL SIZED DISHWASHER WASTE TO TAILPIECE OF SINK.
2 ROUTE FULL SIZE, MINIMUM 3/4", CONDENSATE TO TAILPIECE OF SINK. PROVIDE CONDENSATE PUMP IN ORDER TO CONCEAL THE PIPING ABOVE DROP CEILING. ROUTE DOWN WALL AND STUB OUT UNDER SINK.
3 DISCHARGE THRU DOWNSPOUT NOZZLE TO SPLASH BLOCK AT GRADE. REFERENCE DETAIL.
4 PROVIDE ORION ACID WASTE & VENT PIPING - BLUELINE FRPP SERVING ALL FIXTURES IN SCIENCE CLASSROOMS AND LABS (TYPICAL).
5 COORDINATE WITH SCIENCE LAB EQUIPMENT VENDOR FOR HOOD REQUIREMENTS AND PROVIDE ANY ACID WASTE, ACID VENT, NATURAL GAS CONNECTION, OR DOMESTIC WATER CONNECTIONS REQUIRED.
6 PROVIDE VENT BY ROUTING INTO BUILDING WALLS AND UP TO ROOF IF MANUFACTURE OR AHJ REQUIRES.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

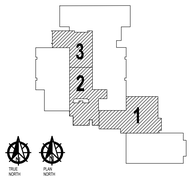
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

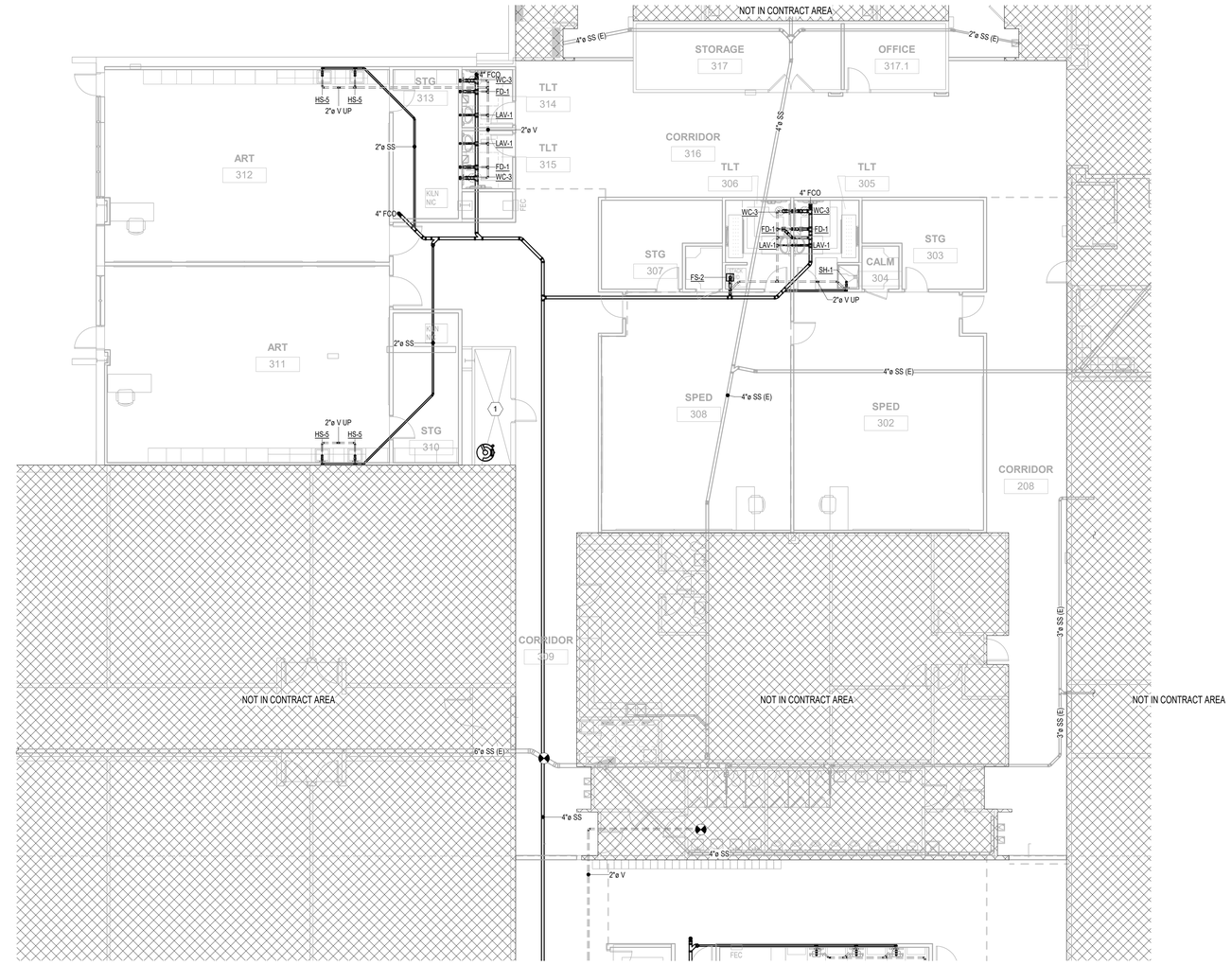
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

DWV PLUMBING PLAN - AREA 2

P102
SHEET TITLE

KEYNOTES

1 GC TO VERIFY EXISTING SANITARY DRAIN IS PRESENT WITHIN CLOSET. IF NOT, PROVIDE NEW FD-1 AND CONNECT TO EXISTING 4" ADJACENT SANITARY LINE. CONNECT VENT TO COMMON VENT LINE SERVING ART 311.



1 DWV PLUMBING PLAN - AREA 3
1/8" = 1'-0"

the.stacy.group
architecture. interiors

8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

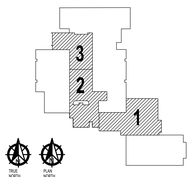
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

DWV PLUMBING PLAN - AREA 3

P103
SHEET TITLE

KEYNOTES

1. ROUTE THRU STRUCTURAL SHROUD. REFERENCE STRUCTURAL DRAWINGS FOR EXACT REQUIREMENTS.
2. COORDINATE WITH SCIENCE LAB EQUIPMENT VENDOR FOR HOOD REQUIREMENTS AND PROVIDE ANY ACID WASTE, ACID VENT, NATURAL GAS CONNECTION, OR DOMESTIC WATER CONNECTIONS REQUIRED.
3. WATER PIPE ROUTED UNDER SLAB TO SCIENCE LAB EQUIPMENT. LOCATE ROUGH-IN AT 9" AFF. PROVIDE BELOW SLAB PIPING TYPE K COPPER OR PEX. NO JOINTS BELOW SLAB. SLEEVE AND SEAL ALL SLAB PENETRATIONS.
4. PROVIDE VENTLESS REGULATOR SET TO PRESSURE REQUIRED BY SCIENCE FIXTURE VENDOR. COORDINATE WITH SCIENCE FIXTURE VENDOR FOR REQUIRED GAS & DOMESTIC CONTROLS. COORDINATE WITH ELECTRICAL FOR ANY ADDITIONAL POWER REQUIREMENTS.
5. PROVIDE 1/2" CW AND 1/2" HOT WATER FOR WASHING MACHINE CONNECTION, PROVIDE WITH WATER HAMMERS.

AREA EXTENTS OF ICC 500 STORM SHELTER. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS OR 2-1/16" IN DIAMETER SHALL BE CONSIDERED OPENINGS AND PROVIDED WITH AN OPENING PROTECTIVE DEVICE. COORDINATE WITH STRUCTURAL FOR ADDITIONAL NOTES AND DETAILS.

BRANCH OFF WITH 2-1/2" CW, PROVIDE ACCESS PANEL AND SHUT OFF VALVES. CONTINUE UNDERGROUND BELOW FROST LINE TO RISE LOCATION. PIPING UNDERGROUND SHALL BE SLEEVED IN CONDUIT, INSULATED, WITH NO JOINTS/FITTINGS UNDERGROUND.

NOT IN CONTRACT AREA

NOT IN CONTRACT AREA

1 DOMESTIC PLUMBING PLAN - AREA 1
1/8" = 1'-0"

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025

PROJECT

KEY PLAN

REVISIONS

11/25/2025

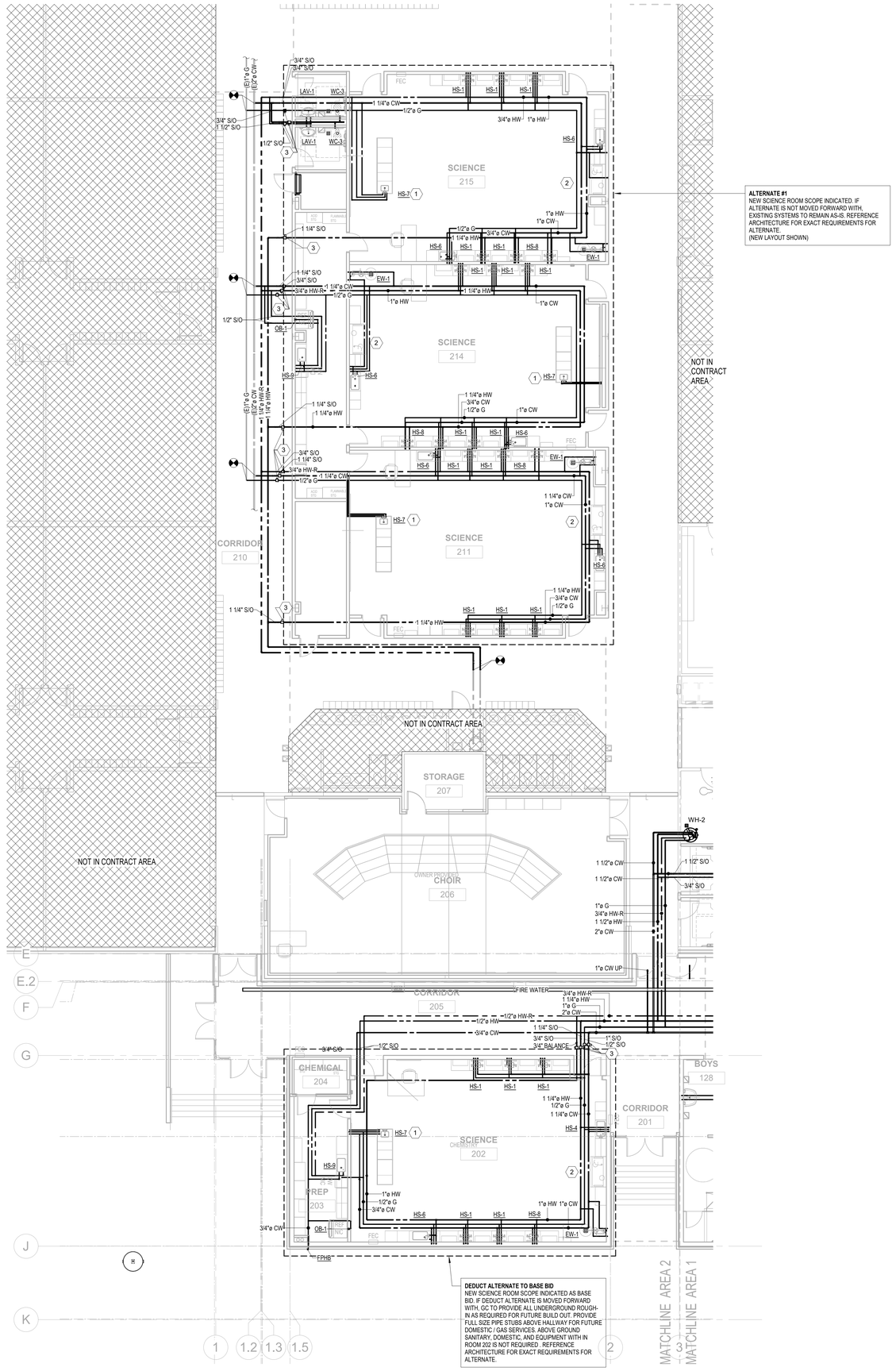
ISSUE DATE

24027 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

DOMESTIC PLUMBING PLAN - AREA 1

P111

SHEET TITLE



① DOMESTIC PLUMBING PLAN - AREA 2
1/8" = 1'-0"

DEDUCT ALTERNATE TO BASE BID
NEW SCIENCE ROOM SCOPE INDICATED AS BASE BID. IF DEDUCT ALTERNATE IS MOVED FORWARD WITH, GC TO PROVIDE ALL UNDERGROUND ROUGH-IN AS REQUIRED FOR FUTURE BUILD OUT. PROVIDE FULL SIZE PIPE STUBS ABOVE HALLWAY FOR FUTURE DOMESTIC / GAS SERVICES. ABOVE GROUND SANITARY, DOMESTIC, AND EQUIPMENT WITH IN ROOM 202 IS NOT REQUIRED . REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR ALTERNATE.

ALTERNATE #1
NEW SCIENCE ROOM SCOPE INDICATED. IF ALTERNATE IS NOT MOVED FORWARD WITH, EXISTING SYSTEMS TO REMAIN AS-IS. REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR ALTERNATE.
(NEW LAYOUT SHOWN)

KEYNOTES

1 WATER PIPE ROUTED UNDER SLAB TO SCIENCE LAB EQUIPMENT. LOCATE ROUGH-IN AT 9" AFF. PROVIDE BELOW SLAB PIPING TYPE K COPPER OR PEX. NO JOINTS BELOW SLAB. SLEEVE AND SEAL ALL SLAB PENETRATIONS.
2 COORDINATE WITH SCIENCE LAB EQUIPMENT VENDOR FOR HOOD REQUIREMENTS AND PROVIDE ANY ACID WASTE, ACID VENT, NATURAL GAS CONNECTION, OR DOMESTIC WATER CONNECTIONS REQUIRED.
3 PROVIDE VENTLESS REGULATOR SET TO PRESSURE REQUIRED BY SCIENCE FIXTURE VENDOR. COORDINATE WITH SCIENCE FIXTURE VENDOR FOR REQUIRED GAS & DOMESTIC CONTROLS. COORDINATE WITH ELECTRICAL FOR ANY ADDITIONAL POWER REQUIREMENTS.

the.**stacy**.group
architecture. interiors

8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW
MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA#: 32 EXP.: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC
SCHOOLS
OWASSO, OK
2025
PROJECT

KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHK'D BY

DOMESTIC PLUMBING PLAN - AREA 2

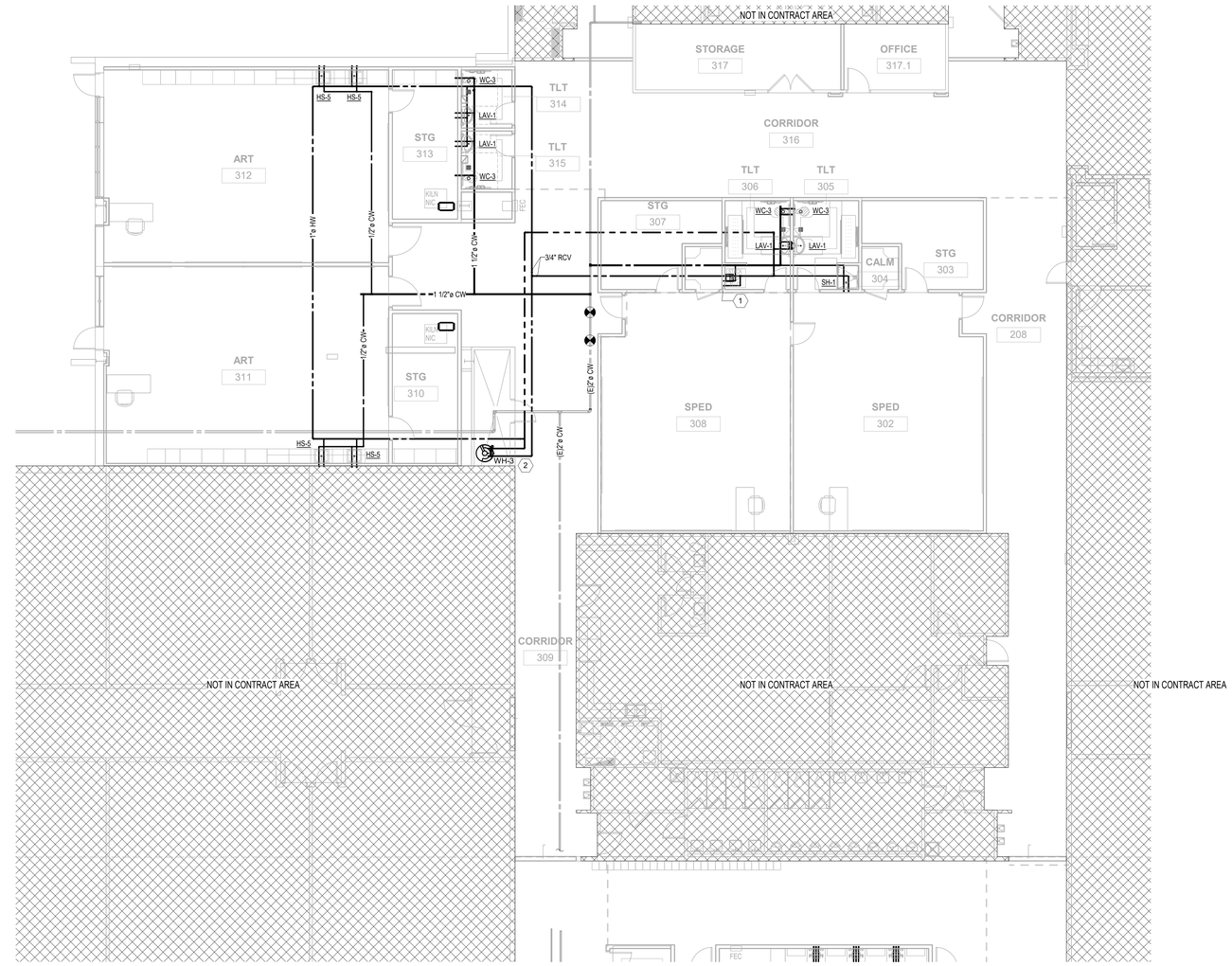
P112

SHEET TITLE

KEYNOTES

1 PROVIDE 1/2" CW AND 1/2" HOT WATER FOR WASHING MACHINE CONNECTION, PROVIDE WITH WATER HAMMERS.

2 EXTEND AND CONNECT 1" COLD WATER TO 3" COLD WATER RISER WITHIN CLOSET. IF RISER IS NOT IN SERVICEABLE CONDITION / NO LONGER EXISTING, EXTEND TO ADJACENT 2" CW IN CORRIDOR.



1 DOMESTIC PLUMBING PLAN - AREA 3
1/8" = 1'-0"

the.stacy.group
architecture. interiors

8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

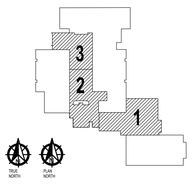
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

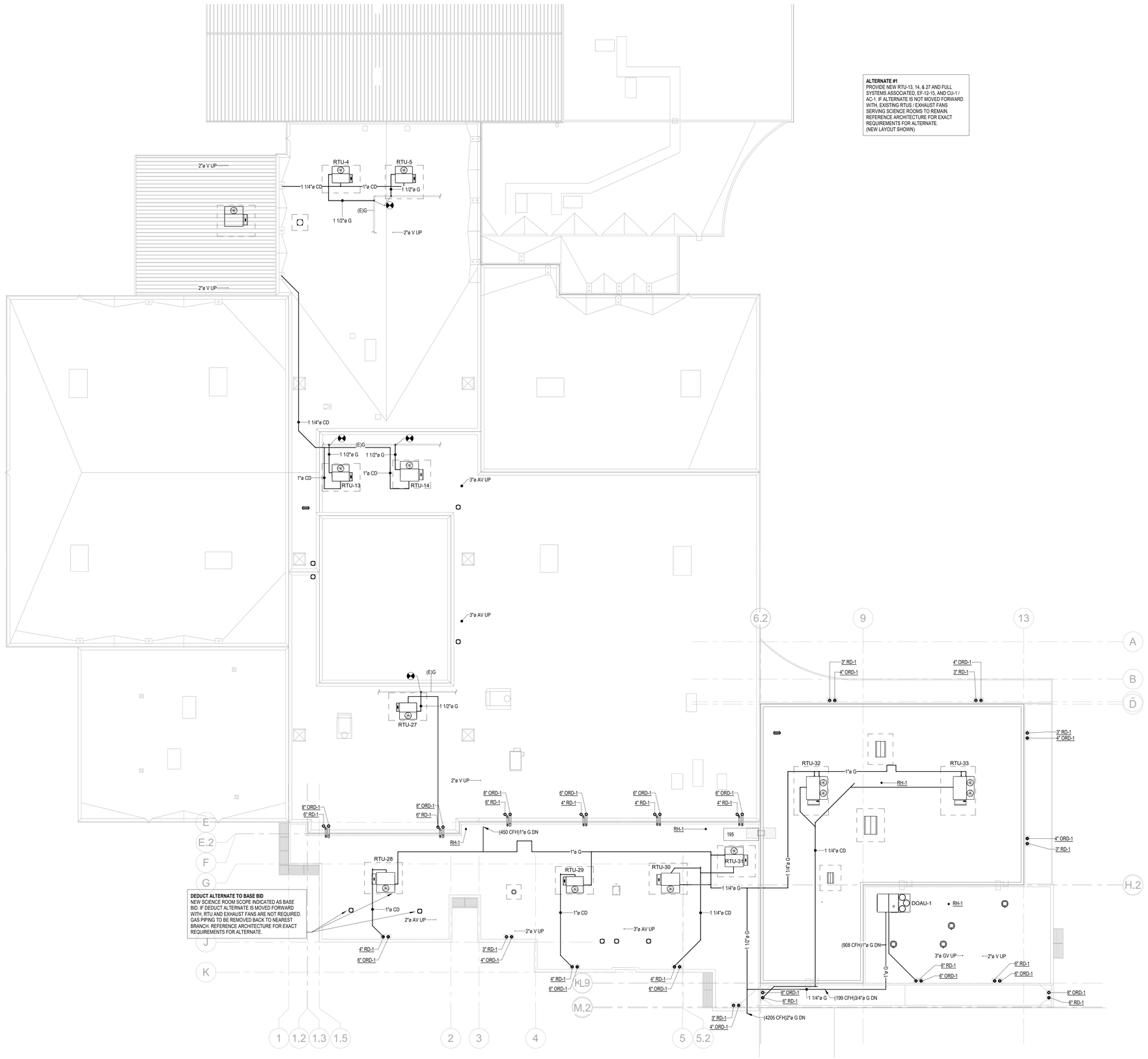
REVISIONS

11/25/2025 ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHKD BY

DOMESTIC PLUMBING PLAN - AREA 3

P113 SHEET TITLE



ALTERNATE #1
PROVIDE NEW RTU-13, 14, & 27 AND FULL SYSTEMS ASSOCIATED, EF-12-15, AND CU-1 / AC-1. IF ALTERNATE IS NOT MOVED FORWARD WITH, EXISTING RTUS / EXHAUST FANS SERVING SCIENCE ROOMS TO REMAIN. REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR ALTERNATE. (NEW LAYOUT SHOWN)

DEDUCT ALTERNATE TO BASE BID
NEW SCIENCE ROOM SCOPE INDICATED AS BASE BID. IF DEDUCT ALTERNATE IS MOVED FORWARD WITH, RTU AND EXHAUST FANS ARE NOT REQUIRED. GAS PIPING TO BE REMOVED BACK TO NEAREST BRANCH. REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR ALTERNATE.

1 PLUMBING ROOF PLAN
1/16" = 1'-0"

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

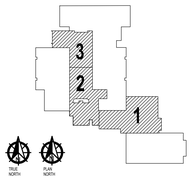
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

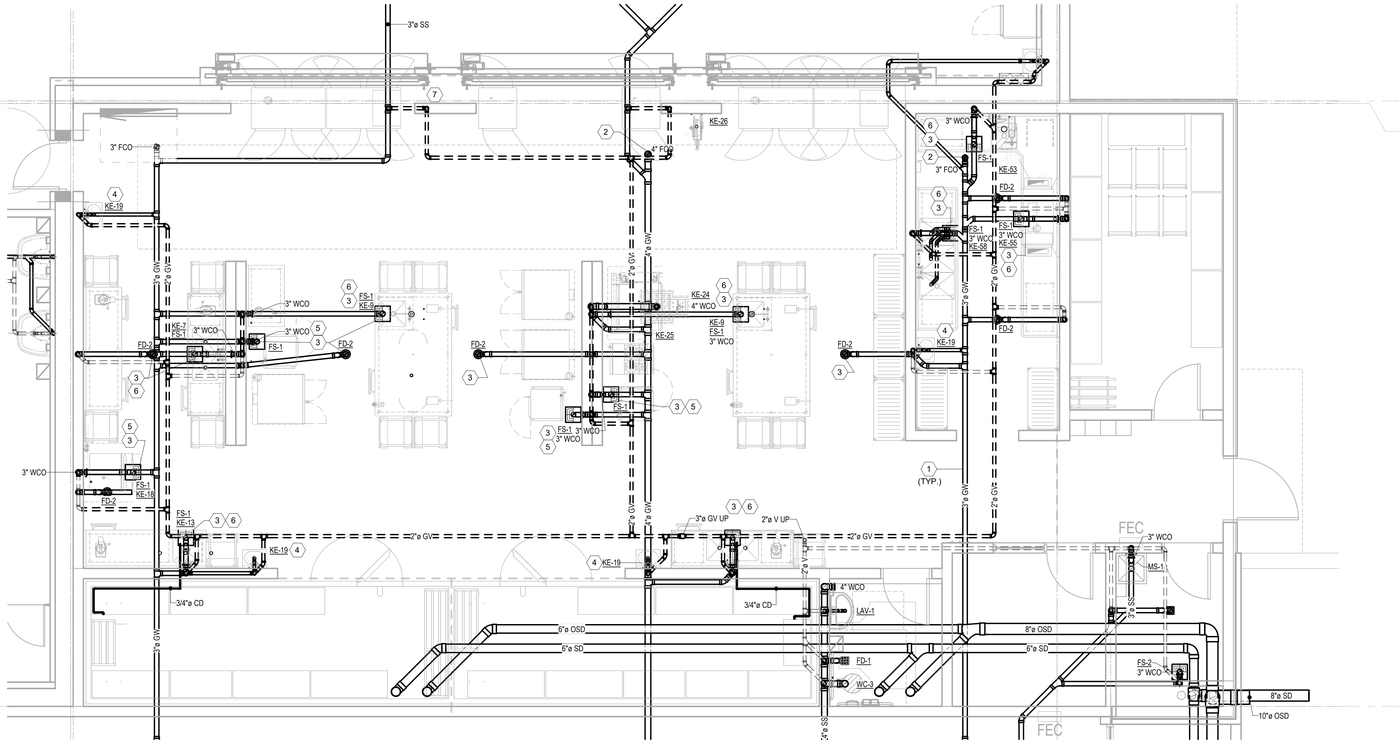
REVISIONS

11/25/2025
ISSUE DATE

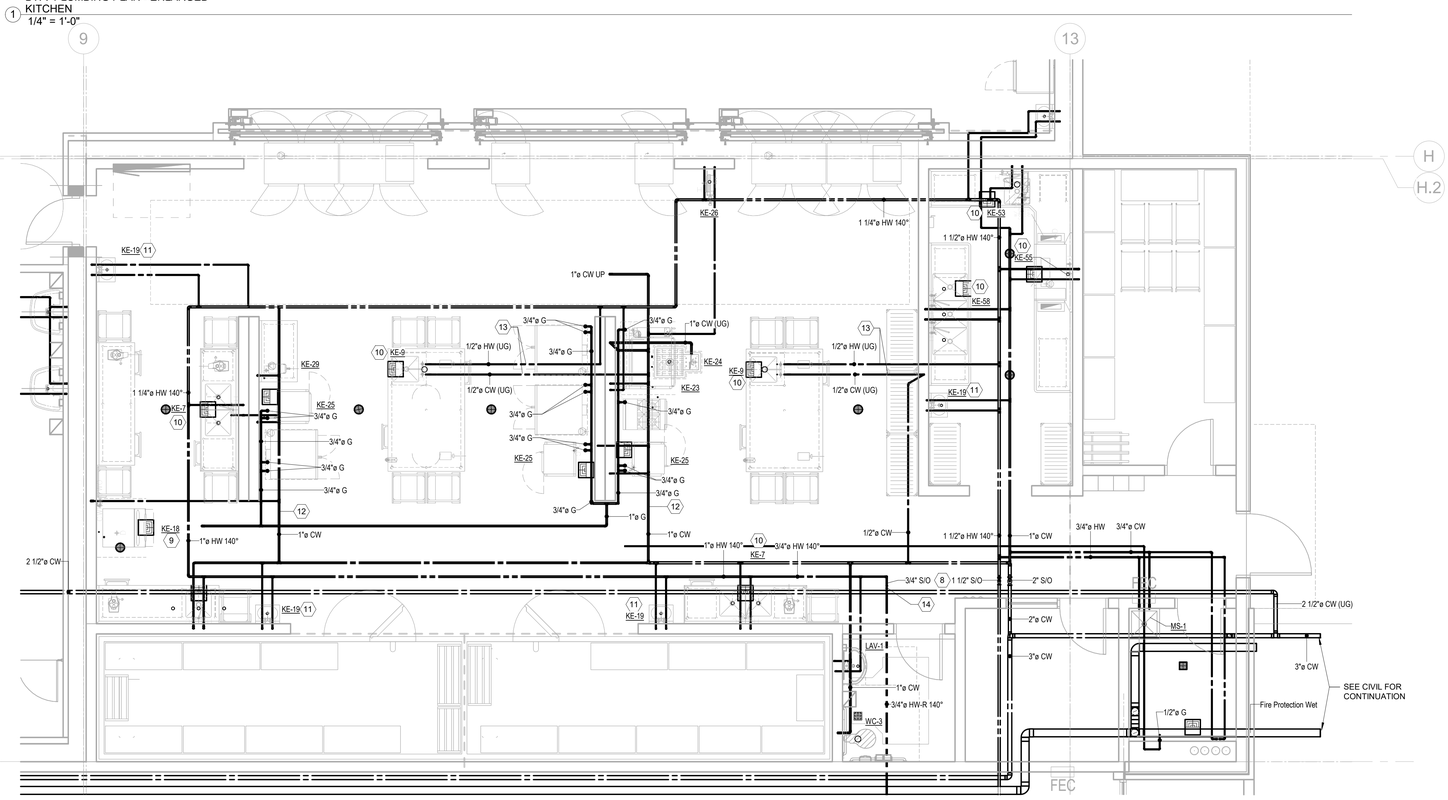
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHK'D BY

PLUMBING ROOF PLAN

P150
SHEET TITLE



1 DWV PLUMBING PLAN - ENLARGED KITCHEN
1/4" = 1'-0"



2 DOMESTIC PLUMBING PLAN - ENLARGED KITCHEN
1/4" = 1'-0"

KEYNOTES

1 PROVIDE ALL WASTE PIPE CAST IRON TO GREASE TRAP.
2 PROVIDE FLOOR CLEANOUTS FLUSH WITH FLOOR. LOCATE NO CLOSER THAN 18" TO WALLS OR MILLWORK. COORDINATE FINAL FINISH OF CLEANOUT WITH ARCHITECT AND FLOOR TYPE. TYPICAL THROUGHOUT.
3 COORDINATE FINAL LOCATION OF DRAIN RECEPTORS WITH FOOD SERVICE EQUIPMENT PROVIDER. COORDINATE WITH KITCHEN CONSULTANT DRAWINGS. TYPICAL THROUGHOUT.
4 HAND SINK PROVIDED BY FOOD SERVICE AND INSTALL BY PLUMBING. PROVIDE DRAIN TO GREASE WASTE SYSTEM.
5 PROVIDE WASTE PIPING FROM KITCHEN EQUIPMENT TO DRAIN RECEPTOR. COORDINATE WITH FOOD SERVICE FOR PIPE MATERIAL AND SIZE. DO NOT COMBINE WASTE PIPING. PROVIDE INSTALLATION AS TO NOT VOID WARRANTY.
6 SINK PROVIDED AND INSTALLED BY FOOD SERVICE CONTRACTOR. STRAINER PROVIDED BY FOOD SERVICE CONTRACTOR. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL WASTE PIPING FROM DRAIN CONNECTION TO FLOOR SINK TERMINATION. PROVIDE 2" AIR GAP.
7 NO EXPOSED VENTING AS POSSIBLE. IF EXPOSED, ALL VENT PIPING SHALL BE CAST IRON. PAINT PER ARCHITECT.
8 LOCATE SHUT-OFF VALVES FOR COMPLETE ACCESSIBILITY. PROVIDE 1/2" BLUE DOT IN CEILING GRID FOR VALVES LOCATED ABOVE CEILING. TYPICAL THROUGHOUT.
9 ICE MACHINE AND WATER FILTER BY FOOD SERVICE. PROVIDE SHUT-OFF VALVE AND RUNOUT PIPING AT 48"AFF TO FILTER AND FIXTURE. INSTALL VALE AND FILTER FOR COMPLETE ACCESS. VERIFY EXACT CONNECTION REQUIREMENTS AND LOCATION WITH FOOD SERVICE CONTRACTOR. INSTALL PIPING WITH IN-LINE BACKFLOW PREVENTER WHERE NOT INTEGRAL TO ICE MAKER.
10 FOOD SERVICE EQUIPMENT AND FAUCETS PROVIDED AND INSTALLED BY FOOD SERVICE CONSULTANT. PLUMBING CONTRACTOR SHALL PROVIDE SHUT-OFF VALVES AND RUN OUT PIPING TO FOOD SERVICE FAUCETS. INSTALL PIPING WITH IN-LINE BACKFLOW PREVENTER WHERE NOT INTEGRAL TO FOOD SERVICE EQUIPMENT.
11 HAND SINK PROVIDED BY FOOD SERVICE CONTRACTOR TO BE INSTALLED BY PLUMBING CONTRACTOR. PROVIDE THERMOSTATIC MIXING VALVE EQUIVALENT TO WATTS LFUSG-B. PROVIDE RUN-OUT PIPING AND SHUT-OFF VALVES. INSULATE ALL WATER PIPES. LOCATE ROUGH-IN AT 24" AFF.
12 DROP WATER COLD WATER IN WALL. ROUTE HORIZONTALLY AT 12" AFF TO SERVE FIXTURES. VERIFY FIXTURE LOCATIONS AND TYPES WITH FOOD SERVICE. ROUTE HORIZONTAL WATER BELOW ANY ELECTRICAL RECEPTACLES OR CONDUITS. INSTALL PIPING WITH IN-LINE BACKFLOW PREVENTER WHERE NOT INTEGRAL TO FOOD SERVICE EQUIPMENT.
13 WATER PIPE ROUTED UNDER SLAB TO FOOD SERVICE EQUIPMENT. LOCATE ROUGH-IN AT 9" AFF. PROVIDE BELOW SLAB PIPING TYPE K COPPER OR PEX. NO JOINTS BELOW SLAB. SLEEVE AND SEAL ALL SLAB PENETRATIONS. INSTALL PIPING WITH IN-LINE BACKFLOW PREVENTER WHERE NOT INTEGRAL TO FOOD SERVICE EQUIPMENT.
14 PROVIDE CIRCUIT SETTING BALANCE VALVE IN HOT WATER RECIRCULATION PIPE.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

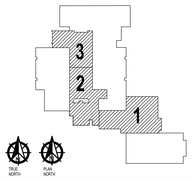
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

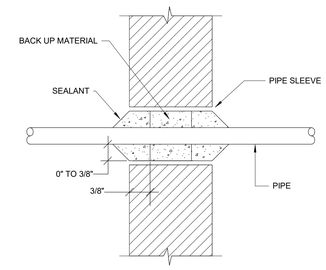
REVISIONS

11/25/2025
ISSUE DATE

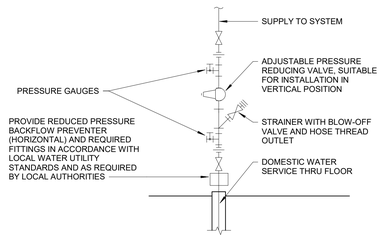
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHK'D BY

PLUMBING PLAN - ENLARGED KITCHEN

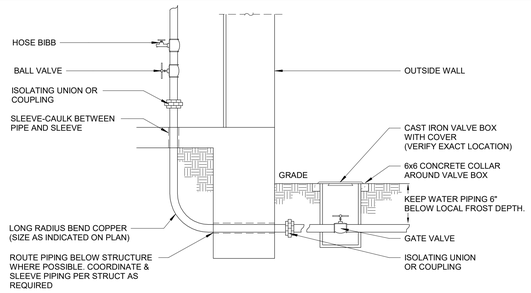
P200
SHEET TITLE



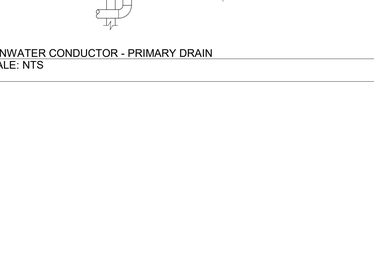
14 P300 TYPICAL PIPE THROUGH WALL DETAIL
SCALE: NTS



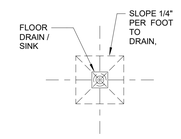
9 P300 MAIN WATER RISER
SCALE: NTS



1 P300 WATER PIPE ENTRANCE INTO BUILDING
SCALE: NTS



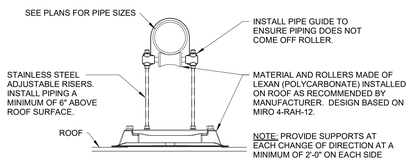
15 P300 PIPE HANGER DETAILS
SCALE: NTS



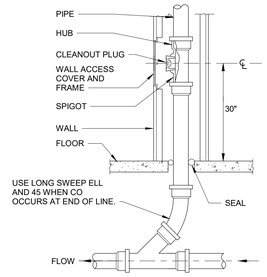
NOTES:

A. TOP RIM OF FLOOR DRAIN/SINK TO BE SET 1/2" BELOW THE FINISHED FLOOR. FLOOR IS TO BE PITCHED TOWARDS THE FLOOR DRAIN ON ALL 4-SIDES.
B. FINAL FLOOR SLOPE TO DRAIN PER ARCHITECT'S DIRECTION.
C. PROVIDIFLOOR DRAINS/SINKS WITH DEEP SEAL TRAPS.

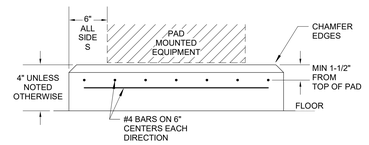
10 P300 PLAN VIEW FLOOR DRAIN/SINK DETAIL
SCALE: NTS



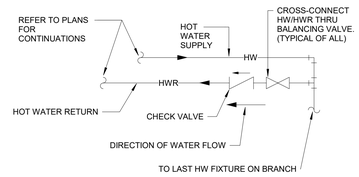
6 P300 GAS PIPE & CONDENSATE DRAIN SUPPORT
SCALE: NTS



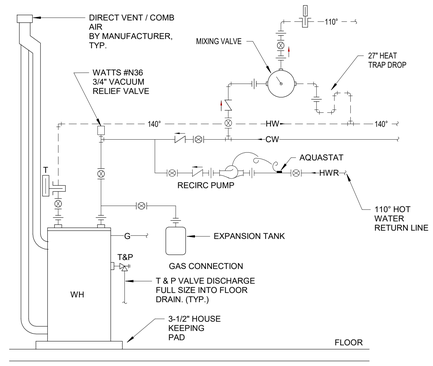
2 P300 WALL CLEAN OUT DETAIL
SCALE: NTS



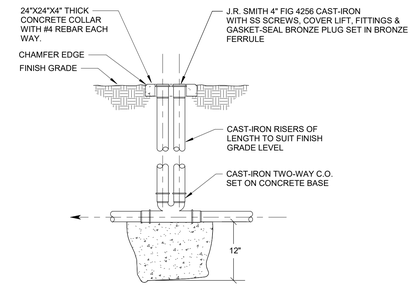
16 P300 EQUIPMENT PAD DETAIL
SCALE: NTS



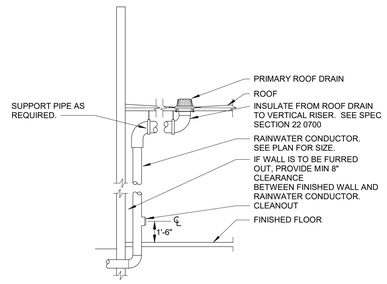
11 P300 TYPICAL HOT WATER RETURN LINE CONNECTION DETAIL
SCALE: NTS



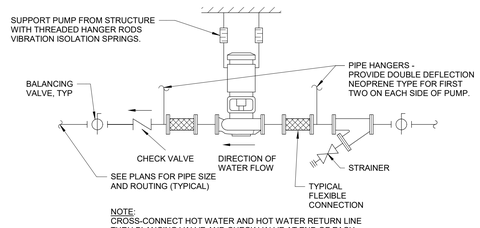
7 P300 GAS WATER HEATER PIPING DETAIL
SCALE: NTS



3 P300 2-WAY CLEANOUT
SCALE: NTS

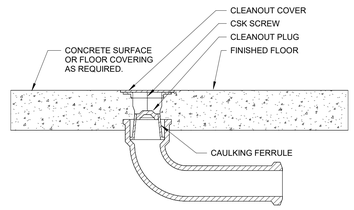


20 P300 RAINWATER CONDUCTOR - PRIMARY DRAIN
SCALE: NTS

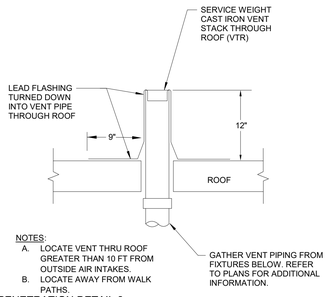


NOTE:
CROSS-CONNECT HOT WATER AND HOT WATER RETURN LINE THRU BLANCING VALVE AND CHECK VALVE AT END OF EACH MAIN HOT WATER LINE. (SEE PLANS)

12 P300 TYPICAL IN-LINE HOT WATER RECIRC PUMP DETAIL
SCALE: NTS



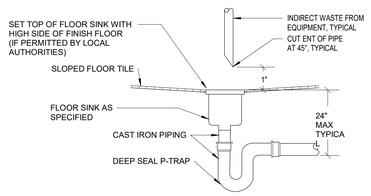
4 P300 FLOOR CLEANOUT DETAIL
SCALE: NTS



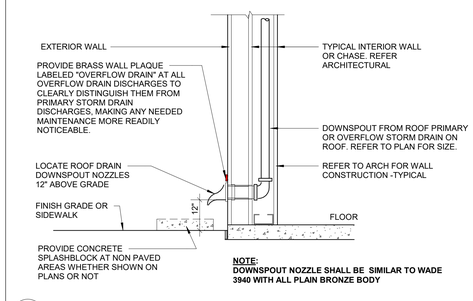
NOTES:

A. LOCATE VENT THRU ROOF GREATER THAN 10 FT FROM OUTSIDE AIR INTAKES.
B. LOCATE AWAY FROM WALK PATHS.

13 P300 VENT PIPE PENETRATION DETAIL 2
SCALE: NTS



8 P300 FLOOR SINK INSTALLATION
SCALE: NTS



NOTE:
DOWNSPOUT NOZZLE SHALL BE SIMILAR TO WADE 3940 WITH ALL PLAIN BRONZE BODY

5 P300 TYPICAL OVERFLOW STORM DRAIN DOWNSPOUT NOZZLE
SCALE: NTS

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

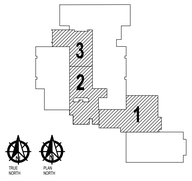
CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025

PROJECT



KEY PLAN

REVISIONS

11/25/2025

ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

PLUMBING DETAILS

P300

SHEET TITLE

WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	RECOVERY @ 100/60 F RISE (GPH)	STORAGE (GAL)	FUEL	COMBUSTION VENT SIZE	ELECTRICAL		INSTALLATION LOCATION	RECIRC. PUMP	Comments
								MOCP	VOLTAGE / PHASE			
WH-1	A.O. Smith	BTHL-199A	Commercial Gas Water Heaters	230 / 384	250	Natural Gas	4"	15A	120V / 1PH	PAD	Yes	1-3
WH-2	A.O. Smith	BTHL-199A	Commercial Gas Water Heaters	230 / 384	250	Natural Gas	4"	15A	120V / 1PH	PAD	Yes	1-3
WH-3	A.O. Smith	BTHL-150A	Commercial Gas Water Heaters	175 / 291	250	Natural Gas	4"	15A	120V / 1PH	PAD	Yes	1,2,4

NOTES:

1. DIRECT VENT GAS WATER HEATER, INSTALL COMBUSTION AIR PIPES THRU ROOF WITH MFR. FURNISHED COMBUSTION AIR PIPE KIT. INCREASE COMBUSTION AIR PIPES SIZE AS REQ'D PER MFR. REQUIREMENTS. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
2. STORE HOT WATER TEMPERATURE AT 140F. IN WATER HEATER, SUPPLY TEMPERATURE OF 110F. WITH ASSE 1017 MIXING VALVE. PROVIDE HIGH-LOW 2-STAGE MIXING VALVE MODEL W.H. UNITS.
3. PROVIDE WITH 16.5 GALLON EXPANSION TANK (AMTROL ST-30C-DD OR EQAUL), RECIRCULATION PUMP (B&G MODEL ECORCIRC 20-18 (7.2-122 WATTS) MOUNT PUMP LESS THAN 5 FEET AFF). AQUASTAT, SHUT OFF VALVES, CHECK VALVE, HEAT TRAPS, AND DRAIN PAN. PIPING DRAIN AND T&P SHALL BE ROUTED FULL SIZE TO NEAREST ACCEPTABLE DRAIN RECEPTOR. PROVIDE WITH MINIMUM 4" HOUSEKEEPING PAD.
4. PROVIDE WITH 8.6 GALLON EXPANSION TANK (AMTROL ST-20C-DD OR EQAUL), RECIRCULATION PUMP (B&G MODEL ECORCIRC 20-18 (7.2-122 WATTS) MOUNT PUMP LESS THAN 5 FEET AFF). AQUASTAT, SHUT OFF VALVES, CHECK VALVE, HEAT TRAPS, AND DRAIN PAN. PIPING DRAIN AND T&P SHALL BE ROUTED FULL SIZE TO NEAREST ACCEPTABLE DRAIN RECEPTOR. PROVIDE WITH MINIMUM 4" HOUSEKEEPING PAD.

Plumbing Fixture Schedule

Type Mark	Type	Manufacturer	Model	Domestic		Waste (IN.)	Vent (IN.)	Description
				Cold Water (IN.)	Hot Water (IN.)			
AWT-1	Acid Neutralization Tank	Orion	53"x36" Tank	0"	0"	4"	3"	Acid Neutralization Tank, Coordinate Final Elevations /Installation Of Inlet/Outlet And Vent. Inlet To Be Provided W/ Dip Tube. Tank To Be Provided With Extension As Required To Mount At Grade. Installation To Meet Manufacturer's Recommendations For Below Grade Mounting.
EW-1	Emergency Shower and Eye / Face Wash	Haws	8309	3/4"	3/4"	0"	0"	Indirect Waste, Pedestal Eye Wash/ Shower Station. Provide Thermostatic Mixing Valve Model 9201E AXION Emergency Tempering Valve. Extend 1-1/4" Tepid water line to fixture, 20 gpm @ 70F.
EWC-1	Electric Water Cooler - Dual Height	Elkay	EZOOTL8WSLK	1/2"		2"	2"	Water Cooler - Bottle Filling Station with Bi-Level ADA Cooler, Non Filtered Refrigerated
EWC-2	Electric Water Cooler - Dual Height	Elkay	EZS8WSSK	1/2"		2"	2"	Water Cooler - Bottle Filling Station, Non Filtered Refrigerated
FD-1	Square Strainer - Nickel Bronze	Watts	FD-100-M			3"	2"	Epoxy Coated Cast Iron Floor Drain With Anchor Flange, Reversible Clamping Collar With Primary And Secondary Weepholes, Adjustable Square Heel Proof Nickle Bronze Strainer, And No Hub Outlet. Provide with Proset trap guard.
FD-2	Round Strainer - Nickel Bronze	Watts	FD-100-A			3"	2"	Epoxy Coated Cast Iron Floor Drain With Anchor Flange, Reversible Clamping Collar With Primary And Secondary Weepholes, Adjustable Round Heel Proof Nickle Bronze Strainer, And No Hub Outlet. Provide with Proset trap guard.
FD-3	Square Strainer - Nickel Bronze	Watts	FD-100-M			4"	2"	Epoxy Coated Cast Iron Floor Drain With Anchor Flange, Reversible Clamping Collar With Primary And Secondary Weepholes, Adjustable Square Heel Proof Nickle Bronze Strainer, And No Hub Outlet. Provide with Proset trap guard.
FPHB	Hose Bibb, Non Frreze	Woodford	67	3/4"	3/4"			Non-Freeze Type Wall Hydrant, With Double Check Backflow Preventer, Valve On The Inside Of The Wall, Spout With Backflow Preventer, And Loose Key Socket On The Outside Of The Wall. Make Arrangements With The General Contractor To Provide The Necessary Recess In The Wall. Where A Riser To A Wall Hydrant Occurs In An Outside Wall The Contractor Shall Insulate The Chase With 2" Styrofoam Insulation On All Sides Of The Chase, Except The Inside Wall Of The Chase. Provide Shutoff Valve In Accessible Location.
FS-1	12" Square x 8" Deep - Stainless Grate	Watts	FS-790			3"	2"	12" Square X 8" Deep 14 Gauge Type 304 Stainless Steel Sanitary Floor Sink With Loose Set Cast Stainless Steel 3/4 Grate, Dome Bottom Strainer, And No Hub Outlet. Provide with Proset trap guard
FS-2	12" Square x 8" Deep - Stainless Grate	Watts	FS-790			3"	2"	12" Square X 8" Deep 14 Gauge Type 304 Stainless Steel Sanitary Floor Sink With Loose Set Cast Stainless Steel 3/4 Grate, Dome Bottom Strainer, And No Hub Outlet. Provide with Proset trap guard. Provide with Sediment Bucket.
GT-1	Grease Trap	Hausner	1,000			4"	3"	Gravity Grease Interceptor, Install per Manufacturer. Provide Traffic Rated Cover and Extension as Required.
HS-1	Lab Sink	(by others)	(by others)	1/2"	1/2"	2"	2"	Lab Sink Provided By Science Equipment Vendor.
HS-4	Lab Sink	(by others)	(by others)	1/2"	1/2"	2"	2"	Lab Sink Provided By Science Equipment Vendor.
HS-5	Art Sink	Elkay	LRAD221955	1/2"	1/2"	2"	2"	Single Compartment, Ada Compliant, Self-Rimming, 18 Gauge. Elkay LKF413945RS Singlel Lever 45 deg. Swivel Faucet With High Arc Spout. One Elkay Model No. Lk35 Basket Strainer, P-Trap, Tailpieces, Supplies And Stops. Insulate Water And Waste To Meet Ada Requirements. Provide plaster trap at Mud Room 1212, Art Rooms 3101 & 3105. Coordinate plaster trap installation with bottom of cabinet to accommodate height of unit as req'd.
HS-6	Lab Sink	(by others)	(by others)	1/2"	1/2"	2"	2"	Lab Sink Provided By Science Equipment Vendor.
HS-7	Lab Sink	(by others)	(by others)	1/2"	1/2"	2"	2"	Lab Sink Provided By Science Equipment Vendor.
HS-8	Lab Sink	(by others)	(by others)	1/2"	1/2"	2"	2"	Lab Sink Provided By Science Equipment Vendor.
HS-9	Lab Sink	(by others)	(by others)	1/2"	1/2"	2"	2"	Lab Sink Provided By Science Equipment Vendor.
LAV-1	Wall Hung Lavatory - ADA	Acorn	Ellipse ELPS1	1/2"	1/2"	2"	2"	Ellipse Stainless Steel, Wall-Mounted Trough Sink, With Accessory SW000-F70 Push Button Metering Faucet, One Station Provide Quarter Turn Water Supply Shut-Off Valves, Asse 1070 Mixing Valve, Hangers and Mounting Accessories, Truebro 2 Lav Guards, And P-Trap. Install According to Ada Standards.
LAV-2	Wall Hung Lavatory - ADA - Sharable	Acorn	Ellipse ELPS2	1/2"	1/2"	2"	2"	Ellipse Stainless Steel, Wall-Mounted Trough Sink, Two Station, With Accessory SW000-F70 Push Button Metering Faucet, One Station Provide Quarter Turn Water Supply Shut-Off Valves, Asse 1070 Mixing Valve, Hangers and Mounting Accessories, Truebro 2 Lav Guards, And P-Trap. Install According to Ada Standards.
MS-1	Janitor Sink	Fiat	MSB-2424	3/4"	3/4"	3"	2"	Service Basin With Cap On Two Sides, With Chrome Plated 3" Drain And Cast Iron Trap. T&S Model B-0665-BSTR Faucet, Pail Hook And Atmospheric Vacuum Breaker Spout. Furnish 5'-0" Length Of 5-Ply Garden Hose And Fittings.
OB-1	Ice Maker Box	Sioux Chief	696-Rg1010Mf	1/2"				Outlet Box
ORD-1	Overflow, With External 2" High Water Dam	Wade	3000					Painted cast iron secondary roof drain with flange, combination membrane flashing clamp / gravel guard, medium insulated sump body, cast iron dome and bottom outlet. Provide with 2" dam
RD-1	Roof Drain	Wade	3000					Painted cast iron primary roof drain with flange, combination membrane flashing clamp / gravel guard, medium insulated sump body, cast iron dome and bottom outlet
RH-1	Roof Hydrant - Non-Freeze	Woodford	SRH-MS	1"				Freezeless Roof Hydrant, With ASSE 1052 Double Check Backflow Preventer, Valve On The Inside Of The Roof, Hose Connection With Backflow Preventer, And Lever Handle. All Exposed Parts Shall Be Painted. Make Arrangements With The General Contractor To Provide The Necessary Support On Roof. Provide Shutoff Valve In Accessible Location.
SH-1	Shower - ADA	(by others)	By Others	1/2"	1/2"	2"	2"	Shower Stall – ADA. – Coordinate with architectural for requirements. Provide ADA compliant Zurn model Z7500-DV-HW - Two Way Diverter with ASSE 1016 Compliant Thermostatic / Pressure Balancing Combination Mixing Valve including 2 GPM flow control, Hand Shower System 24" mounting bar and 60" Flexible Metal Hose, and shower pan with drain.
UR-1	Urinal - Standard	American Standard	Washbrook	3/4"		2"	2"	Wall Hung Urinal With Washout Action, Top Spud, Size 18" With Integral Extended Shields Supported By Through Going Bolts And C.P. Nuts. Manual Activated Flushometer.
UR-2	Urinal - ADA	American Standard	Washbrook	3/4"		2"	2"	Wall Hung Urinal With Washout Action, Top Spud, Size 18" With Integral Extended Shields Supported By Through Going Bolts And C.P. Nuts. Manual Activated Flushometer. Install At Ada Compliant Height.
WC-1	Water Closet - Flush Valve	American Standard	Afwall	1"		4"	2"	Elongated Wall Hung Water Closet, 1-1/2" Top Spud, With Church 295Ct 047 (Black) Elongated Open Front Seat. Sloan Manual Activated Flushometer.
WC-2	Water Closet - Flush Valve - ADA	American Standard	Afwall	1"		4"	2"	Elongated Wall Hung Water Closet, 1-1/2" Top Spud, With Church 295Ct 047 (Black) Elongated Open Front Seat. Sloan Manual Activated Flushometer.
WC-3	Water Closet - Flush Valve - ADA	American Standard	Madera	1"		4"	2"	Elongated Floor Mounted Water Closet, 1-1/2" Top Spud, With Church 295Ct 047 (Black) Elongated Open Front Seat. Sloan Manual Activated Flushometer.

NOTES:

1. EQUIPMENT DESIRED BY THE CONTRACTOR THAT DEVIATES FROM THIS SCHEDULE SHALL BE SUBJECTED TO ARCHITECT AND ENGINEER APPROVAL OF CONTRACTOR SUBMITTALS.
2. CONTRACTOR TO VERIFY MOUNTING HEIGHT OF ALL FIXTURES W/ ARCHITECT PRIOR TO INSTALLATION.
3. COORDINATE FINAL COLOR SELECTION WITH ARCHITECT PRIOR TO RELEASING ORDER.
4. INSTALL S.O. VALVE IN ACCESSIBLE LOCATION. COORD. INSTALLATION OF ACCESS PANEL WITH G.C. AS REQ'D.
5. INSTALL ASSE 1070 MIXING VALVE FOR ALL LAVATORIES AND HAND SINKS, SET SUPPLY TEMPERATURE TO 105 F.
6. INSTALL ASSE 1016 MIXING VALVE TO SHOWER, SET SUPPLY TEMPERATURE TO 105 F.

Kitchen Fixture Schedule

Type Mark	Manufacturer	Model	CW	HW	FW	WASTE	VENT	INDIRECT WASTE	Description
KE-7	By Others	By Others	1/2"	1/2"		(2) 2"		YES	Commercial Prep Sink provided by kitchen vendor, installed by plumbing contractor.
KE-9	By Others	By Others	1/2"	1/2"		2"		YES	Commercial Prep Sink provided by kitchen vendor, installed by plumbing contractor.
KE-13	By Others	By Others			1/2"	1/2" & 3/4"		YES	Provided by kitchen vendor, installed by plumbing contractor.
KE-18	By Others	By Others			1/2"	1/2" & 3/4"		YES	Ice Maker provided by kitchen vendor, installed by plumbing contractor.
KE-19	By Others	By Others	1/2"	1/2"		2"	1-1/2"	NO	Hand Sink - Provide with thermostatic mixing valve equivalent to Watts LFUSG-B. Provide run-out piping and shut-off valves. Insulate all water pipes, locate rough-in at 24" AFF.
KE-23	By Others	By Others	1/2"	1/2"					Braising Pan - provided by kitchen vendor, connections by plumbing contractor.
KE-24	Eagle Group	Cool Trough - WTFT-2424-SG	1"			4"	2"	NO	Cool Trough - Locate per kitchen vendors drawings, install per manufacturer's recommendations.
KE-25	By Others	By Others	1/2"		0"	1"		YES	Steamers - provided by kitchen vendor, connections by plumbing contractor.
KE-26	By Others	By Others	1/2"	1/2"		2"	1-1/2"		Provided by kitchen vendor, installed by plumbing contractor.
KE-29	By Others	By Others			1/2"				Hot Water Dispenser - provided by kitchen vendor, connections by plumbing contractor.
KE-53	By Others	By Others	3/4"	3/4"		2"		YES	Commercial Drain Sink - provided by kitchen vendor, installed by plumbing contractor.
KE-55	By Others	By Others	1/2"	1/2"		2"		YES	Dishwashing Machine - provided by kitchen vendor, installed by plumbing contractor.
KE-58	By Others	By Others	3/4"	3/4"		(3) 2"		YES	Provided by kitchen vendor, installed by plumbing contractor.

NOTES:

1. REFERANCE KITCHEN VENDOR DRAWINGS FOR EXACT LOCATIONS OF INSTALLED EQUIPMENT.
2. EQUIPMENT DESIRED BY THE CONTRACTOR THAT DEVIATES FROM THIS SCHEDULE SHALL BE SUBJECT TO A&E SUBMITTAL REVIEW PROCESS.
3. INSTALL S.O. VALVE IN ACCESSIBLE LOCATION. COORD. INSTALLATION OF ACCESS PANEL WITH G.C. AS REQ'D.
4. INSTALL ASSE 1070 MIXING VALVE FOR ALL LAVATORIES AND HAND SINKS, SET SUPPLY TEMPERATURE TO 105 F.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

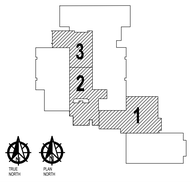
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

PLUMBING SCHEDULES

P400 SHEET TITLE

General Plan Symbols

Symbol	Description
X	Plan Revision Number
X / X-XX	Detail Number on Sheet / Sheet Number Where Detail is Placed
X	Keynote Symbol
	Continuation Symbol
●	Point Where New Connects To Existing
Room 1	Room Name / Number
▨	Area Being Demolished
▩	Area Not In Contract

Abbreviations

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FDC	FIRE DEPARTMENT CONNECTION	RH	RELATIVE HUMIDITY
FL	FLOOR	RL/A	RELIEF AIR
FO	FUEL OIL	RM	ROOM
FOV	FUEL OIL VENT	RPM	REVOLUTIONS PER MINUTE
FOR	FUEL OIL RETURN	RW	RAIN WATER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPM	FEET PER MINUTE	S/A	SUPPLY AIR
FS	FLOOR SINK	SAN	SANITARY
FT	FOOT/FEET	SF	SQUARE FOOT
FTR	FIN TUBE RADIATION	SD	SMOKE DAMPER
GAL	GALLON	SM	SURFACE MOUNT
GF	GAS-FIRED	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

Equipment Abbreviations

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

HVAC Symbols

Symbol	Description
X" x X"	Sq. Duct Size (Width x Height)
X" / X"	Oval Duct Size (Width / Height)
X"Ø	Round Duct Size (Diameter)
(E)	Existing Duct To Remain
▨	Duct To Be Demolished
S/A	Supply Air
GE/A	Grease Exhaust Air
O/A	Outdoor Air
R/A	Return Air
T/A	Transfer Air
E/A	General Exhaust Air
LH	Laboratory Hood
FLUE	Flue Gas Vent
C/A	Combustion Air
☒	Rect. Supply Duct Rise / Drop
⊗	Round Supply Duct Rise / Drop
◪	Rect. Return Duct Rise / Drop
⊘	Round Return Duct Rise / Drop
☒	Rect. Exhaust Duct Rise / Drop
⊘	Round Exhaust Duct Rise / Drop

Grille, Register, Diffusers Tag

Ceiling Register
- X – Type (See Schedule)
- XXX – Airflow
- X"Ø / XxX – Neck Size / Module Size
- X / X / X – Throw Pattern
- XX – Max NC Rating

Round Register
- X – Type (See Schedule)
- XXX – Airflow
- X"Ø – Nominal Duct Size
- TYP. X – Type Count for Space

Sidewall Register
- X – Type (See Schedule)
- XXX – Airflow
- X"xX" – Nominal Duct Size
- AFF: X'X" – Mounting Elevation (Centerline)

Linear Register
- X – Type (See Schedule)
- XXX – Airflow
- X"Ø / XxX – Neck Size/ Slot(s)/ Active Length

Sidewall Grille
- X – Type (See Schedule)
- XXX – Airflow
- X"Ø / XxX – Nominal Duct Size
- AFF: X'X" – Mounting Elevation (Centerline)

Ceiling Return
- X – Type (See Schedule)
- XXX – Airflow
- 22"x22"/24x24 – Neck Size / Module Size
- XX – Max NC Rating

Mechanical Equipment

- RTU-X – Unit Identity
- X ton – Nominal Cooling Capacity
- RTU-X
- XXX Btu/h – Heating Capacity
- X CFH – Gas Supply Input Rate
- ET-1
- X lb – Operating Weight
- EF-1
- XXX CFM – Design Airflow Rate
- VAV-X
- X GPM – Design Water Flow
- AC-1
- AFF:7'-0" – Bottom of Equipment Height
- (E)AHU-X – Existing to Remain Equipment
- (R)AHU-X – Existing Relocated Equipment
- Equipment By Others (Refer To Other Disciplines)

Damper Types

Symbol	Description
B	Manual Damper
M	Motorized Damper
D	Backdraft Damper
S	Smoke Damper
●	Fire Damper
● S	Comb. Fire/ Smoke Damper

Mechanical Piping Symbols

Symbol	Description
X"Ø	Nominal Pipe Size
	Above Ground Piping
1/8" / 12" SLOPE	Below Ground Piping Pipe Slope (When Applicable)
(E)	Existing Pipe To Remain
	Pipe To Be Demolished
CHWR	Chilled-Water Return
CHWS	Chilled-Water Supply
CD	Condensate Drain
CWR	Condenser-Water Return
CWS	Condenser-Water Supply
GWR	Geothermal-Water Return
GWS	Geothermal-Water Supply
HWR	Hot-Water Return
HWS	Hot-Water Supply
G	Natural Gas
LP	Liquid Propane
RL	Refrigerant Liquid
RS	Refrigerant Gas
RD	Refrigerant Discharge
STM	Steam Supply
CDR	Steam Condensate Return
	Pipe Rise / Drop

Valve Types

Tag	Description
SHUTOFF	Ball Valve
BAL	Balancing Valve
BFV	Butterfly Valve
CHECK	Check Valve
CHECK	Alternate Check Valve
CIRC	Circuit Setter
GATE	Gate Valve
GLOBE	Globe Valve
LOCK	Locked Shield Valve
PRV	Pressure Reducing Valve
QUICK	Quick Opening Valve
STRAIN	Fluid Strainer
M-CNTRL	Elec. Control Valve
3-WAY CNTRL	3-Way Elec. Valve
GAS-CNTRL	Emergency Gas Shutoff
PLUG	Plug Valve
GAS COCK	Gas Shutoff Cock
REG	Gas Regulator

Mechanical Devices

AHU-1 – Unit Identity

Tag	Description
TS	Temperature Sensor
TH	Temp/ Humidity Sensor
TC	Temp/ CO2 Sensor
T	Thermostat
H	Humidistat
HS	Humidity Sensor
CO2	Carbon Dioxide Detector
CO	Carbon Monoxide Detector
H2	Hydrogen Gas Detector
HZG	Hazardous Gas Detector
NO2	Nitrogen Dioxide Detector
O2	Oxygen Gas Detector

HVAC GENERAL NOTES

1. WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE ADOPTED EDITIONS OF THE INTERNATIONAL BUILDING (IBC), MECHANICAL (IMC), PLUMBING (IPC), FUEL GAS (IFGC), ELECTRICAL (NEC) AND FIRE (IFC) CODES, NFPA 13, 70, 72, 90A, 101 AND ALL LOCAL AMENDMENTS AND REGULATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (A.D.A.). ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE DRAWINGS AND SHALL BE PERFORMED WITH THE LATEST INDUSTRY ACCEPTED STANDARDS. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND APPLICABLE CODES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE MORE STRINGENT OF THE TWO SHALL BE FOLLOWED, ALL WORK SHALL BE CONDUCTED IN A SAFE MANNER WITH ADEQUATE PROTECTION FOR THE NEW WORK, EXISTING PROPERTY, AND THE GENERAL PUBLIC.

2. CONTRACTORS SHALL VISIT THE SITE TO DETERMINE THE EXTENT OF EXISTING CONDITIONS, NEW WORK, PATCHING, ETC., REQUIRED BY THE PROJECT, AND TO BECOME FAMILIAR WITH THE WORK CONDITIONS PRIOR TO FINAL BID. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK INDICATED OR REQUIRED; FOR WORK PROVIDED DURING NON-STANDARD HOURS; FOR WORK REQUIRED TO MAINTAIN BUILDING SAFETY AND FUNCTION; FOR WORK TO PATCH/REPAIR BUILDING SYSTEMS AND FINISHES; OR ANY OTHER WORK RESULTING FROM REQUIRED NEW WORK, RECONNECTION, AND/OR DEMOLITION OPERATIONS.

3. THE WORK REQUIRED IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS. IT IS IMPRACTICAL TO INDICATE ALL REQUIRED WORK, SPECIFIC MODIFICATIONS, FLASHING, AND PATCHING IN EVERY DETAIL. IT IS THE INTENT OF THIS PROJECT TO EXTEND EXISTING SYSTEMS AND/OR PROVIDE NEW SYSTEMS AS INDICATED, COMPLETE IN EVERY RESPECT WHETHER OR NOT SPECIFICALLY DETAILED. INFORMATION ON EXISTING UTILITIES, BUILDINGS, AND SITE LAYOUT MAY HAVE BEEN TAKEN FROM OWNERS' RECORDS, CIVIL ENGINEERS' DRAWINGS, AND/OR LIMITED SITE SURVEYS. ANY LOCATIONS, SIZES, QUANTITIES, ETC., SHOWN ON PLANS MAY BE APPROXIMATE AND ARE INDICATED TO ASSIST IN OUTLINING THE SCOPE OF WORK AND SUBJECT TO MINOR ADJUSTMENTS IN FIELD. PROVIDE NECESSARY OFFSETS, REROUTING, DUCT/PIPE FITTINGS, ETC.. COORDINATE WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN FIELD. CONTRACTOR ACKNOWLEDGES THAT EXISTING CONDITIONS HAVE BEEN VERIFIED AND ARE ACCEPTABLE. VARIATIONS IN ACTUAL SITE CONDITIONS, CONCEALED CONSTRUCTION, OR NEW WORK REQUIREMENTS SHALL BE BROUGHT TO OWNER'S ATTENTION FOR RESOLUTION PRIOR TO COMMENCING APPLICABLE WORK.

4. PROTECT ALL EXISTING CONSTRUCTION AND ANY COMPONENTS WHICH ARE TO REMAIN . THE CONTRACTOR SHALL MODIFY, REMOVE, AND/OR RELOCATE ALL MATERIALS AND ITEMS INDICATED ON THE DRAWINGS OR REQUIRED BY THE INSTALLATION OF NEW SYSTEMS / EQUIPMENT. REMOVE ANY PIPING, DUCTWORK, AND ACCESSORIES THAT ARE NOT USED FOR NEW SYSTEM OPERATIONS. REMOVE ANY ACCESSIBLE DEAD LEGS BACK TO MAIN AND CAP AND ABANDON ANY UNUSED PIPING BELOW SLAB. ALL REMOVALS AND/OR DISMANTLING SHALL BE CONDUCTED IN A MANNER TO PRODUCE MAXIMUM SALVAGE. SALVAGE MATERIALS SHALL BE DISPOSED OF OFF-SITE, EXCEPT THAT THE OWNER RESERVES THE RIGHT TO SELECT AND RETAIN ANY DESIRED SALVAGE ITEMS. CONTRACTOR SHALL VERIFY WITH OWNER PRIOR TO REMOVING SALVAGED MATERIALS FROM SITE. MATERIALS AND/OR ITEMS SCHEDULED FOR RELOCATION AND WHICH ARE DAMAGED DURING DISMANTLING OR REASSEMBLING OPERATIONS SHALL BE REPAIRED AND RESTORED TO PRE-DISTURBED CONDITION TO OWNER'S SATISFACTION. WITH WRITTEN PRIOR APPROVAL, THE CONTRACTOR MAY SUBSTITUTE NEW MATERIALS AND/OR ITEMS OF LIKE DESIGN AND EQUAL QUALITY IN LIEU OF MATERIALS AND/OR ITEMS TO BE RELOCATED.

5. PROTECT EXISTING CONSTRUCTION AND COMPONENTS WHICH ARE TO REMAIN OR ARE IN PROGRESS. REPAIR, TO PRE-DISTURBED CONDITION, ANY DAMAGE RESULTING FROM DEMOLITION OR NEW CONSTRUCTION OPERATIONS. EXISTING UTILITIES DAMAGED BY CONTRACTOR DURING NEW PIPING, CONDUIT OR EQUIPMENT INSTALLATION SHALL BE REPAIRED TO OWNER'S SATISFACTION.

6. CONDITIONS MAY EXIST OR OCCUR THROUGHOUT CONSTRUCTION, CONCEALED OR OTHERWISE, THAT WILL REQUIRE MINOR REVISIONS IN THE ARRANGEMENT OF DUCTWORK, PIPING, VALVES, ATTACHMENTS, CONDUIT, ETC., ON VARIOUS SYSTEMS. SUCH MODIFICATIONS ARE DEEMED A PART OF THIS CONTRACT AND SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.

7. THE CONTRACTOR SHALL PROVIDE A MINIMUM ONE YEAR WARRANTY ON ALL MATERIALS AND LABOR UNLESS NOTED OTHERWISE.

8. ALL NECESSARY PERMITS, LICENSES, CERTIFICATES, TESTS, INSPECTIONS, ETC., SHALL BE OBTAINED BY THE CONTRACTOR AND INCLUDED IN THE PROJECT COST, WITHOUT ADDITIONAL COST TO THE OWNER OR ENGINEER AFTER ORIGINAL BID IS ACCEPTED.

9. THE CONTRACTOR SHALL UPDATE RECORD DRAWINGS DAILY. ANNOTATE "AS INSTALLED" CONDITIONS IN RED INK IN ONE FORMAT FOR ALL TRADES, EITHER HARD COPIES OR IN DIGITAL FORM, INDICATING ALL CHANGES FROM THE ORIGINAL DRAWINGS MADE DURING THE INSTALLATION OF THE WORK. AT COMPLETION OF THE PROJECT, THE RECORD DRAWINGS SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE.

10. REFER TO ALL PROJECT DRAWINGS FOR ANY ADDITIONAL REQUIREMENTS. SEE SEPARATE PROJECT MANUAL FOR GENERAL CONDITIONS AND SPECIFICATIONS, IF APPLICABLE. WHERE DISCREPANCIES OCCUR BETWEEN THESE DRAWINGS AND THE PROJECT MANUAL, THE LATTER SHALL BE FOLLOWED. COORDINATE WITH ENGINEER IF UNCERTAINTIES ARISE.

11. CONTRACTOR SHALL SEQUENCE WORK TO MINIMIZE DOWNTIME AND OUTAGES. COORDINATE INTERRUPTIONS OF EACH UTILITY WITH THE OWNER AND ALL OTHER CONTRACTORS.

12. ALL PATCHING AND PAINTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE PATCHING AND PAINTING AS A RESULT OF ALTERATIONS, CHANGES, AND ADDITIONS. COORDINATE WITH ARCHITECT FOR FINISHING REQUIREMENTS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AND BEAM PENETRATIONS. ALL CUTS INTO NEW OR EXISTING CONCRETE WALKS, CURBS, AND PAVED AREAS SHALL BE NEATLY SAW CUT OR CORE DRILLED AND PATCHED TO MATCH EXISTING TO SATISFACTION OF OWNER. CUTTING/DRILLING OF EXISTING BEAM FRAMING, JOISTS, HEADERS, PLATES, ETC. IS NOT ACCEPTABLE. PRIOR WRITTEN APPROVAL IS REQUIRED FROM OWNER AND STRUCTURAL ENGINEER PRIOR TO ALTERING BUILDING STRUCTURE AS IT RELATES TO THIS SCOPE OF WORK.

14. COORDINATE ALL EXTERIOR AND ROOF PENETRATIONS WITH OTHER TRADES AND GENERAL CONTRACTOR TO PROVIDE A COMPLETE AND FULLY WEATHER-PROOF INSTALLATION.

15. PENETRATIONS THROUGH NEW AND EXISTING FIRE RATED ASSEMBLIES SHALL BE FILLED WITH FIRE RESISTANT MATERIAL AND SEALED WITH FIRE BARRIER CAULK. FILLER MATERIAL AND CAULK SHALL BE UL LISTED FOR THE APPLICATION, INSTALLED PER MANUFACTURER INSTRUCTIONS, AND BE EQUAL TO OR BETTER THAN RESPECTIVE ASSEMBLY BEING PENETRATED. PENETRATION OF ANY FIRE RATED CONSTRUCTION SHALL NOT IMPAIR THE INTEGRITY OF THE INTENDED RATING. ALL OPENINGS SHALL BE SEALED, SLEEVED, OR DAMPERED IN SUCH A MANNER THAT MAINTAINS THE FIRE RESISTANCE. CONTRACTOR SHALL FIELD VERIFY ALL WALL TYPES AND COORDINATE THIS EFFORT WITH LOCAL CODE AUTHORITY.

16. CONCEAL ALL SYSTEM COMPONENTS OUT OF VIEW OF FINISHED AREAS UNLESS OTHERWISE NOTED. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS UNLESS APPEARANCES OR ACCESS REQUIRE AN ALTERNATE HEIGHT.

17. ALL PIPING, DEVICES, APPARATUS, EQUIPMENT, ETC., SHALL BE PROPERLY SUPPORTED AND BRACED VERTICALLY AND HORIZONTALLY IN ACCORDANCE WITH CODES AND AS REQUIRED TO PREVENT EXCESSIVE MOVEMENT. MAKE PROVISIONS FOR MOVEMENT DUE TO EXPANSION AND CONTRACTION.

18. ALL ABOVE FLOOR PIPING AND ALL EQUIPMENT SHALL BE PROVIDED WITH PERMANENT LABELS.

19. ACCESS DOORS SHALL BE INSTALLED SUCH THAT EQUIPMENT, VALVES, MOVING PARTS, ETC., ARE ACCESSIBLE FOR MAINTENANCE, ADJUSTMENTS, AND REPLACEMENT. COORDINATE INSTALLATION OF SYSTEMS WITH OTHER TRADES. FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER AND BE NEATLY SAW-CUT OR CORE-DRILLED, DEPENDING ON THE SYSTEM INSTALLED. CUTTING/DRILLING OF EXISTING BEAMS, JOISTS, ETC., IS NOT ACCEPTABLE. WHERE ACCESS IS THROUGH A RATED ASSEMBLY, ACCESS DOOR SHALL MATCH THE RATING OF ADJACENT CONSTRUCTION.

20. INSTALL NO DRAIN/WASTE LINES UNDERFLOOR/UNDERGROUND SMALLER THAN 2".

21. ONLY PLENUM RATED MATERIAL (PIPING, DUCTWORK, INSULATION, JACKETING, ETC.) SHALL BE ALLOWED IN A RETURN AIR PLENUM. PLENUM RATED MATERIALS SHALL PASS TESTING IN ACCORDANCE WITH ASTM E84 AND/OR UL 723 TO MAINTAIN A FLAME SPREAD AND SMOKE DEVELOPMENT MEASUREMENTS OF 25/50 OR LESS. WHERE NON-PLENUM RATED MATERIAL IS ALLOWED ON A PROJECT BUT PORTIONS OF THE RESPECTIVE SYSTEM PASSES THROUGH RETURN AIR PLENUM AREAS, THE CONTRACTOR SHALL TRANSITION TO PLENUM RATED MATERIALS WHILE IN THE RETURN AIR PLENUM.

22. PIPING AND OTHER MATERIALS THAT MAY BE SUBJECT TO DEGRADATION WHEN EXPOSED TO UV RADIATION SHALL NOT TO BE STORED OR INSTALLED WHERE EXPOSED TO DIRECT SUNLIGHT.

23. CONTRACTOR SHALL PROVIDE ALL SPECIAL AND/OR APPROPRIATE FITTINGS, ADAPTERS, ETC., AS REQUIRED TO CONNECT NEW PIPING AND FITTINGS TO EXISTING PIPING/UTILITIES.

24. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH A DIELECTRIC UNION.

25. ALL MATERIALS, FIXTURES, AND EQUIPMENT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL MEET CURRENT INDUSTRY STANDARDS. WHERE APPLICABLE, EQUIPMENT SHALL BEAR TESTING LABORATORY LABELS. TEST ALL EQUIPMENT FOR PROPER OPERATION.

26. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH SPECIFICATIONS AND WITH MINIMUM CLEARANCES AS DEFINED BY LOCAL AUTHORITY HAVING JURISDICTION (AHJ).

27. CLOSE COORDINATION IS NECESSARY WHERE SPACE IS LIMITED IN PORTIONS OF THIS PROJECT. LOCATE DUCTWORK, PIPING AND EQUIPMENT AWAY FROM SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS, AND OTHER ELECTRICAL EQUIPMENT. CONTRACTOR SHALL MAINTAIN ALL PROPER CODE AND MAINTENANCE REQUIRED CLEARANCES AND COORDINATE TRADES INVOLVED DURING INSTALLATION OF NEW EQUIPMENT, PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY STRUCTURE, LIGHTING, AND DEVICES TO PREVENT CONFLICTS BOTH AT AND ABOVE CEILING. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.

28. ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO EQUIPMENT. PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN. FOR EQUIPMENT CONNECTIONS AND PIPE OR DUCT SIZES NOT SHOWN ON PLANS, REFER TO DETAILS, SCHEDULES, SPECIFICATIONS, AND MANUFACTURER INSTALLATION GUIDELINES.

29. COORDINATE EXACT LOCATION OF ALL EQUIPMENT WITH ARCHITECTURAL DRAWINGS, OTHER TRADES, AND ACTUAL SITE CONDITIONS.

30. CONTRACTOR SHALL COORDINATE ALL CONNECTION REQUIREMENTS OF OWNER-FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED BY OTHERS. PROVIDE NECESSARY MATERIAL AND LABOR FOR A COMPLETE INSTALLATION.

31. INSTALL AND SUPPORT ALL PIPING, DUCTWORK, AND EQUIPMENT TO FACILITATE PROPER ACCESS AND MAINTENANCE. LOCATE EQUIPMENT AND ACCESSORIES REQUIRING ACCESS 2'-0" MAXIMUM ABOVE RESPECTIVE CEILING. PROVIDE LOCKING ACCESS PANEL MATCHING ANY APPLICABLE FIRE ASSEMBLY RATING FOR ANY EQUIPMENT, APPLIANCES, HEAT EXCHANGERS, OR CONTROL DEVICES LOCATED BEHIND OR ABOVE INACCESSIBLE SURFACES SIZED ADEQUATELY FOR INSPECTING, SERVICING, AND REPAIR, OR REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION COORDINATE FINISH WITH ARCHITECT. PROVIDE SERVICE PLATFORMS FOR ROOF MOUNTED EQUIPMENT TO ALLOW PROPER ACCESS WHERE REQUIRED PER CODE.

32. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.

33. ROOF MOUNTED EQUIPMENT SHALL BE 10'-0" MIN FROM ROOF EDGE. PROVIDE GUARDRAILS PER LOCAL CODE AT ANY EQUIPMENT WITHIN 10'-0" OF ROOF EDGE.

34. ANY LINE VOLTAGE WIRING RUN BY CONTRACTORS SHALL BE INSTALLED IN ACCORDANCE WITH ELECTRICAL PLANS, NOTES, AND SPECIFICATIONS.

35. PROVIDE 4" HOUSEKEEPING PAD FOR EACH PIECE OF GROUND OR FLOOR-MOUNTED EQUIPMENT. COORDINATE SIZES WITH AWARDED EQUIPMENT.

36. SUBMIT PRODUCT DATA OF ALL PROPOSED MATERIALS AND EQUIPMENT FOR APPROVAL IN ONE (1) SUBSTITUTE SUBMITTAL PACKAGE. IF SUBSTITUTES DO NOT MEET OR EXCEED SPECIFIED PACKAGE IN QUALITY AND/OR PERFORMANCE, SPECIFIED PACKAGE SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER. PRIOR APPROVAL SUBMITTALS ARE NOT REQUIRED FOR BIDDING PURPOSES. SUBMITTAL PACKAGES SHALL ONLY BE PROVIDED BY SUPPLIERS WITHIN STATE IN WHICH PROJECT IS CONSTRUCTED.

37. IN CASES OF EQUIPMENT SUBSTITUTION, CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SYSTEMS AND COMPONENTS WILL FIT PROPERLY PRIOR TO FABRICATION OR ORDERING. DUCTS MAY BE RESIZED BY CONTRACTOR TO FIT FIELD CONDITIONS AS LONG AS INSTALLED DUCTS HAVE EQUAL FRICTION LOSS TO THOSE SHOWN. PROVIDE COMPLETE SHEET METAL SHOP DRAWINGS TO ENGINEER SHOWING ACTUAL DUCT SIZES, ARRANGEMENTS, AND UNIT LOCATIONS TO BE INSTALLED PRIOR TO FABRICATION OR INSTALLATION.

38. MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE ECONOMIZERS, DRIVES AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. CONTRACTOR SHALL ALSO VISIT SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING UNITS TO FULL COMPLIANCE OF OWNER'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.

39. CONTRACTOR TO REFERENCE PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION ON OTHER SYSTEMS SUCH AS NATURAL GAS DELIVERY, CONDENSATE / WASTE, AND DOMESTIC WATER SYSTEMS.

40. PROVIDE ALL DUCTWORK, CONNECTIONS TO EQUIPMENT, ROOF OR WALL CAP, AND ETC. AS REQUIRED FOR A COMPLETE, OPERATIONAL SYSTEM. TRANSITION TO SIZES INDICATED AND EXTEND ALL DUCTWORK FROM EQUIPMENT THROUGH ROOF OR EXTERIOR WHERE APPLICABLE.

41. MECHANICAL SYSTEM SHALL OPERATE WITH NOISE AND VIBRATION CONTROLS AS DESCRIBED IN ASHRAE HVAC APPLICATIONS HANDBOOK. PROVIDE CORRECTIVE ACTION TO REDUCE OBJECTIONABLE NOISE OR VIBRATION AS REQUIRED.

42. AHEAD OF ALL VAV BOX INLETS, INSTALL STRAIGHT DUCT EQUIVALENT TO AT LEAST 4 DUCT DIAMETERS IN LENGTH UNLESS MANUFACTURER INSTALLATION INSTRUCTIONS SUPPORTS A SHORTER DISTANCE.

43. ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM SOURCES OF CONTAMINATED AIR (EXHAUST, PLUMBING VENTS, FLUES, ETC.). INCREASED SEPARATION MAY BE REQUIRED FOR HAZARDOUS EXHAUST AND/OR SPECIFIC APPLICATION.

44. INSTALL, SUPPORT, AND BRACE NEW DUCTWORK, FITTINGS, AND ACCESSORIES PER SMACNA GUIDELINES WITH MINIMUM QUANTITY OF BENDS. AVOID PASSING ANY EXPOSED DUCTWORK UNDER LIGHT FIXTURES. INCLUDE ACOUSTIC TURNING VANES IN MITERED ELBOWS IN RECTANGULAR DUCTS 20" AND LARGER AND USE RADIUS ELBOWS IN RECTANGULAR DUCTS SMALLER THAN 20".

45. ALL DUCT JOINTS AND CONNECTIONS SHALL BE SEALED AND CAULKED AIRTIGHT IN AN APPROVED MANNER FOR THE APPLICATION. TAPE AND SEAL ALL EXHAUST AND SUPPLY DUCTWORK JOINTS. DUCTWORK GAUGE SHALL BE AS PER SMACNA STANDARDS.

46. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE. REFER TO SCHEDULES FOR EXTERNAL STATIC PRESSURES.

47. USE 45 DEGREE TAKE-OFF FITTINGS AT ALL ROUND SUPPLY BRANCH TAKEOFFS. PROVIDE BALANCE DAMPERS AT ALL SUPPLY DUCT RUNOUTS TO GRILLES. LOCATE AS FAR AS POSSIBLE FROM GRILLES IN AN ACCESSIBLE LOCATION. PROVIDE ACCESS PANELS IN SOLID WALLS AND CEILINGS FOR BALANCING DAMPERS.

48. DUCT DIMENSIONS ON DRAWINGS INDICATE INSIDE CLEAR DIMENSIONS AND AIRFLOW FREE AREAS. WHERE APPLICABLE, INCLUDE ALLOWANCES FOR ANY INTERIOR DUCT LINER INSULATION OR DUAL WALL DIMENSIONS. DUCTS SHALL BE CONSTRUCTED TO INCLUDE INSULATION REQUIREMENTS AND MAINTAIN AIRFLOW DIMENSIONS INDICATED ON PLANS. NO RECTANGULAR DUCT SHALL BE INSTALLED SMALLER THAN 10"X10" UNLESS NOTED OTHERWISE.

49. RUN-OUT DUCT SIZES TO INDIVIDUAL AIR DISTRIBUTION DEVICES SHALL MATCH NECK SIZE NOTED IN AIR DISTRIBUTION DEVICE SCHEDULE.

50. USE FLEX DUCTS LIMITED TO 5'-0" MAX LENGTHS AT FINAL CONNECTION TO ALL CONCEALED CEILING DIFFUSERS AND SIDEWALL DIFFUSERS WHERE NECESSARY. SECURE FLEX DUCT TAKEOFFS WITH NYLON STRAP ON LINER AND TAPE ON OUTSIDE COVER. FLEX DUCT ONLY ALLOWED IN CONCEALED CEILING AREAS.

51. REFER TO ARCH. PLANS AND DETAILS FOR EXACT LOCATION OF ALL WALL AND CEILING MOUNTED DEVICES. ADJUST LOCATION OF SIDEWALL DEVICES AS NECESSARY TO AVOID INTERFERENCE WITH MOLDING OR OTHER ELECTRICAL DEVICES.

52. MAINTAIN MINIMUM CLEARANCE PER CODE BETWEEN DUCTWORK AND COMBUSTIBLE CONSTRUCTION.

53. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL DAMPERS WITH MOTORIZED ACTUATORS AND INSTALL SMOKE DETECTORS AND PROVIDE WIRING FOR FAN SHUTDOWN CONTROLS WHERE EQUIPMENT DISTRIBUTES 2,000 CFM OR GREATER TO MULTIPLE AREAS. COORDINATE WITH ELECTRICAL CONTRACTOR AND PROVIDE DAMPER ACTUATOR COMPATIBLE WITH ELECTRICAL WIRING PROVIDED, WHERE NOT INTEGRAL TO MECHANICAL EQUIPMENT. PROVIDE ANY WIRING OR COMPONENTS NOT PROVIDED BY THE ELECTRICAL CONTRACTOR THAT ARE REQUIRED TO PROVIDE A COMPLETE, OPERATIONAL SYSTEM. IF A CENTRAL FIRE ALARM SYSTEM IS REQUIRED FOR THIS PROJECT, MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL DUCT MOUNTED SMOKE DETECTORS AND COORDINATE WITH FIRE ALARM CONTRACTOR. REFER TO ELECTRICAL NOTES FOR EXACT REQUIREMENTS. MECHANICAL CONTRACTOR SHALL IDENTIFY A SET OF TERMINALS FOR EQUIPMENT SHUTDOWN ON ALL FAN POWERED EQUIPMENT REQUIRING SHUTDOWN CONTROLS. FIRE ALARM CONTRACTOR SHALL WIRE FROM DUCT MOUNTED SMOKE DETECTOR TO SHUT DOWN FAN OPERATION WHEN SMOKE IS DETECTED.

54. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED CONSTRUCTION. PROVIDE FIRE DAMPERS AT ALL FIRE-RATED WALLS AND FLOOR PENETRATIONS, UNLESS EXPLICIT EXCLUSION IS ACCEPTED BY IMC AND AHJ. WHERE DUCTS PASS THROUGH FIRE RATED WALLS AND NO FIRE DAMPER IS REQUIRED, PROVIDE A STEEL SLEEVE (MIN. 12" LONG BY 0.60" THICK) IN EACH DUCT OPENING PER IBC 714.

55. AT PENETRATIONS WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE- RATED FLOORS OR WALLS, ANY NON-METALLIC PIPE OR DUCT SHOULD BE EXTERNALLY SLEEVED WITH STEEL, FERROUS, OR COPPER MATERIALS, SECURELY FASTENED TO THE FIRE RATED ASSEMBLY, AND ANY SPACE BETWEEN THE SLEEVE AND PENETRATED ASSEMBLY SHALL BE PROTECTED USING MATERIAL THAT CONFORMS TO ASTM E 814 OR UL 1479 AND ACCEPTED BY LOCAL AUTHORITIES HAVING JURISDICTION (AHJ) AS BEING SUITABLE FOR THIS SERVICE, SUCH AS FIRE STOP FS-1900 OR FLAME STOPPER 5000, TO MAINTAIN FIRE RATING OF THE WALL, FLOOR, AND/OR CEILING.

56. ANY DUCTWORK AND PIPING IN AREAS OPEN TO VIEW SHALL BE PAINTED AS DIRECTED BY ARCHITECT/OWNER.

57. FURNISH THERMOSTATS AND TEMPERATURE SENSORS AT 48" AFF TO TOP OF BOX AND A MINIMUM OF 8" FROM LIGHT SWITCH. PROVIDE AN INSULATED BACK ON ALL THERMOSTATS AND TEMPERATURE SENSORS MOUNTED ON CMU OR HOLLOW WALLS AND INCLUDE SHALLOW DEVICE EXTENSION BOX BEHIND THERMOSTATS AND SENSORS MOUNTED ON EXTERIOR WALLS.

58. REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

59. THIRD-PARTY NOT AFFILIATED WITH MECHANICAL OR CONTROLS CONTRACTOR SHALL TEST, ADJUST, AND BALANCE ALL DIFFUSERS, REGISTERS, AIR GRILLES, AND HYDRONIC SYSTEMS IN ACCORDANCE WITH AABC OR NEBB STANDARDS ONCE BUILDING HEAT SOURCES SUCH AS OVENS, ICE MAKERS, REFRIGERATED CABINETS, ETC. ARE RUNNING UNDER TYPICAL OPERATION. PROVIDE BOUND REPORT TO ENGINEER FOR REVIEW FOLLOWING COMPLETION.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

MATTHEW MALONE
2/13/2026
35205

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA#: 32 EXP.: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC
SCHOOLS
OWASSO, OK
2025

PROJECT

KEY PLAN

REVISIONS

11/25/2025

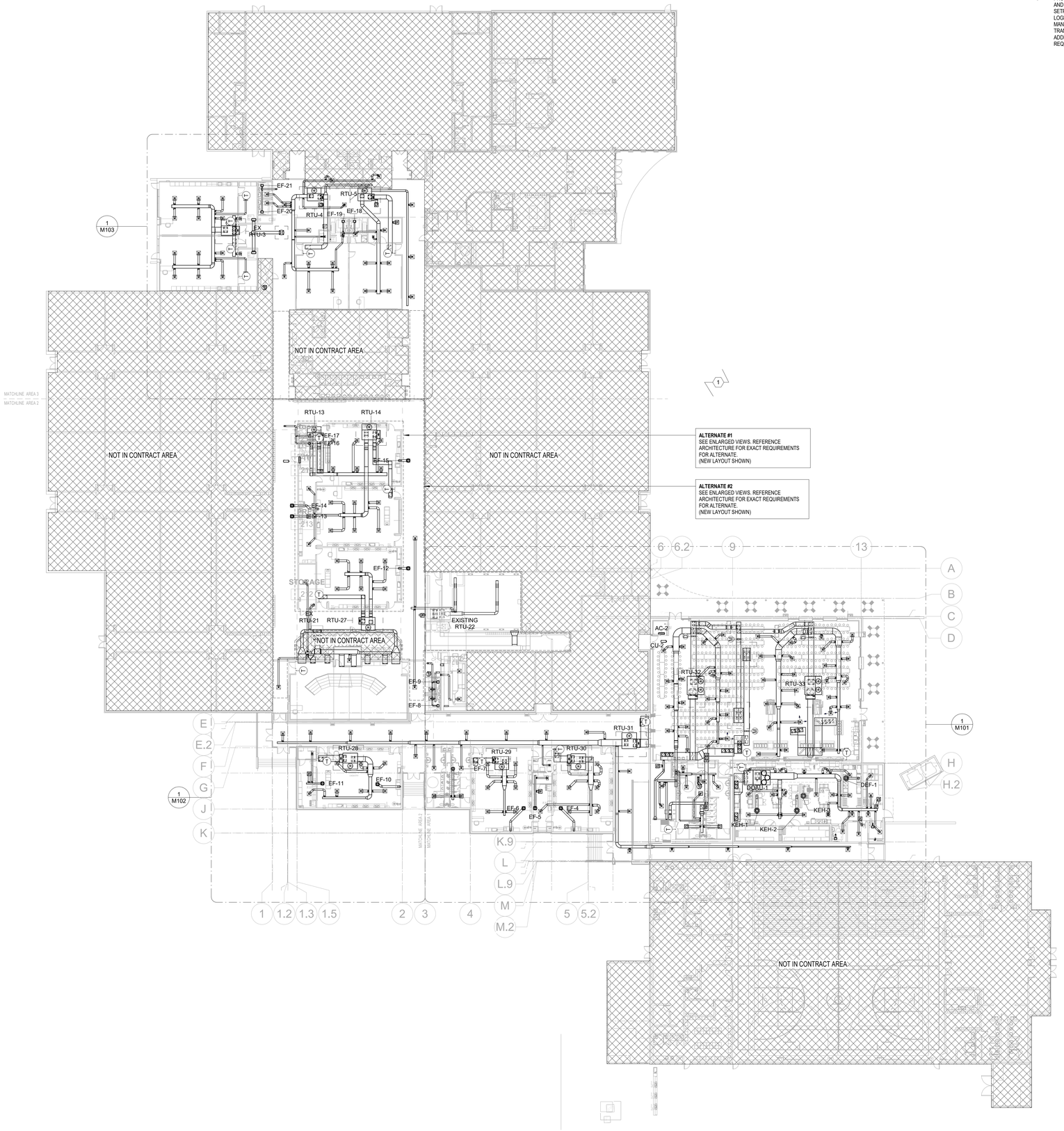
ISSUE DATE

2407	PROJECT NO
MDM	DRAWN BY
EZ	CHK'D BY

MECHANICAL
LEGEND & NOTES

M001

SHEET TITLE



1 OVERALL MECHANICAL PLAN
3/64" = 1'-0"

KEYNOTES

1 PROVIDE ALL NEW BUILDING HVAC CONTROLS SYSTEM TO MONITOR AND ADJUST EXISTING AND NEW RTU TEMPERATURE/HUMIDITY SETPOINTS AND SCHEDULES, AND EXHAUST FANS OPERATION. RTU LOGIC FOR EQUIPMENT OPERATION TO BE MAINTAINED PER ORIGINAL MANUFACTURER CONTROL BOARD WITHIN EACH INDIVIDUAL RTU. TRANE / HONEYWELL TO BE PROVIDED. UNLESS OWNER APPROVAL OF ADDITIONAL BRAND, COORDINATE WITH OWNER FOR EXACT REQUIREMENTS.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

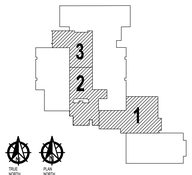
CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025

PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 | PROJECT NO
MOM | DRAWN BY
EZ | CHKD BY

MECHANICAL OVERALL PLAN

M100

SHEET TITLE

EMERGENCY VENTILATION ACTIVATION PROCEDURE:

ACTIVATION SWITCH WITH COVER AND SIGNAGE FOR EMERGENCY VENTILATION. SEQUENCE OF ACTIVATIONS EVENTS IF BUTTON IS PUSHED:
1. RTU-32 AND RTU-33 TO DEENERGIZE.
2. MOTORIZED DAMPERS IN SUPPLY AND RELIEF HOOD TO FULLY OPEN.
3. SVF-1 & SVF-2 TO ENERGIZE.

SEQUENCE OF ACTIVATIONS EVENTS IF BUTTON IS TWISTED TO RESET:
1. SVF-1 & SVF-2 TO DEENERGIZE.
2. MOTORIZED DAMPERS IN SUPPLY AND RELIEF HOOD TO FULLY CLOSE.
3. RTU-32 AND RTU-33 TO ENERGIZE PER THEIR SET POINTS

PROVIDE TIME DELAY BETWEEN ACTIONS TO ENSURE EACH ACTION IS FULLY EXECUTED PRIOR TO THE NEXT STARTING. REFERENCE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE WITH ARCHITECTURAL FOR EXACT MOUNTING LOCATION, COLOR, AND LETTERINGS OPTIONS.

KEYNOTES

1 ROUTE THRU STRUCTURAL SHROUD. REFERENCE STRUCTURAL DRAWINGS FOR EXACT REQUIREMENTS.
2 PROVIDE TEMPERATURE / HUMIDITY THERMOSTAT.
3 MOTORIZED DAMPER (NORMAL CLOSED, POWER CLOSED, FAIL OPEN) AT DUCTWORK SERVING RELIEF AND SUPPLY O/A HOOD TO OPEN WHEN STORM SHELTER VENTILATION FAN IS IN OPERATION. COORDINATE FINAL LOCATION AND ROUTING WITH STRUCTURAL SHROUD TO ALLOW MAINTENANCE ACCESS.
4 FOR EMERGENCY STORM SHELTER SUPPLY AIR DUCT RUNOUTS, PROVIDE BALANCING DAMPER AND MOTORIZED DAMPER (NORMALLY CLOSED, POWER CLOSED, FAIL OPEN). CFM AS INDICATED.
5 FOR EMERGENCY STORM SHELTER NORMAL OPERATION SUPPLY AIR DUCT, PROVIDE BACKDRAFT DAMPER TO PREVENT VENTILATION AIR FROM ENTERING RTU DURING EMERGENCY OPERATION.
6 PROVIDE DRYER VENT ADAPTER BOX IN WALL WITH 6" SMOOTH INTERNALLY FINISHED ALUM. DRYER VENT DUCT W/ DRYER VENT DISCHARGE CAP.
7 PROVIDE NEW HVAC SUPPLY AND RETURN DIFFUSERS IN EXISTING HALLWAY ANYWHERE NEW ACT TILES ARE TO REPLACE EXISTING. REFERENCE ARCHITECTURE. PROVIDE EQUAL NECT SIZE AS EXISTING AND PROVIDE SUPPLY TYPE MATCHING TYPE A AND RETURN MATCHING TYPE R DIFFUSERS.
8 EMERGENCY VENTILATION ACTIVATION SWITCH (SEE NOTE FOR ADDITIONAL INFORMATION.)
9 PROVIDE 18"X18" RUSKIN PRD18 (OR EQUAL) POSITIVE PRESSURE RELIEF DOOR UPDTREAM OF THE MOTORIZED DAMPER.
10

AREA EXTENTS OF ICC 500 STORM SHELTER. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS OR 2-1/16" IN DIAMETER SHALL BE CONSIDERED OPENINGS AND PROVIDED WITH AN OPENING PROTECTIVE DEVICE. COORDINATE WITH STRUCTURAL FOR ADDITIONAL NOTES AND DETAILS.

NOT IN CONTRACT AREA

NOT IN CONTRACT AREA

1 MECHANICAL PLAN - AREA 1
1/8" = 1'-0"

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA#: 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT

KEY PLAN

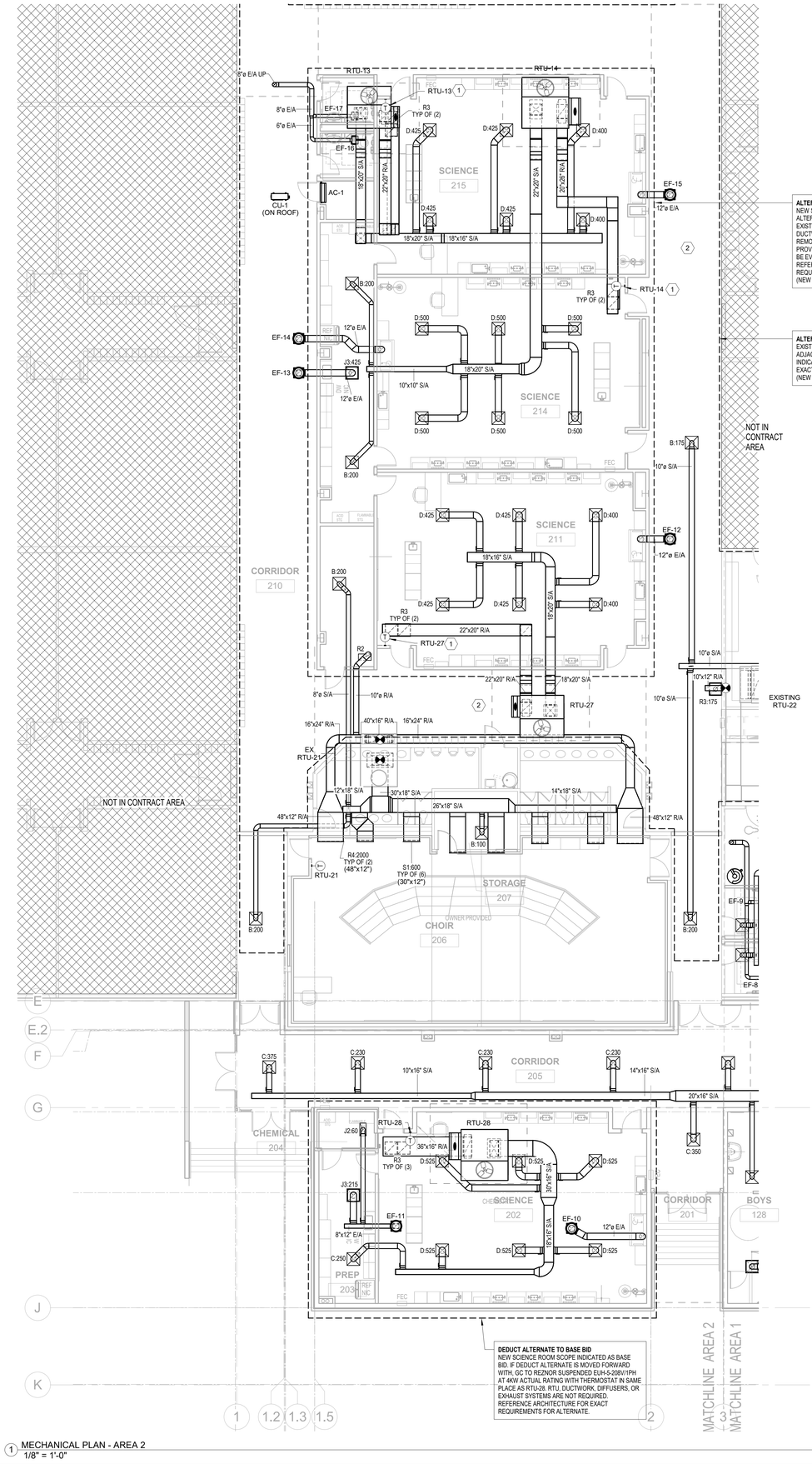
REVISIONS

11/25/2025
ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL PLAN - AREA 1

M101
SHEET TITLE



1 MECHANICAL PLAN - AREA 2
1/8" = 1'-0"

KEYNOTES

1 PROVIDE TEMPERATURE / HUMIDITY THERMOSTAT.

2 PROVIDE NEW HVAC SUPPLY AND RETURN DIFFUSERS IN EXISTING HALLWAY ANYWHERE NEW ACT TILES ARE TO REPLACE EXISTING. REFERENCE ARCHITECTURE. PROVIDE EQUAL NECT SIZE AS EXISTING AND PROVIDE SUPPLY TYPE MATCHING TYPE A AND RETURN MATCHING TYPE R DIFFUSERS.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

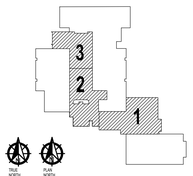
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

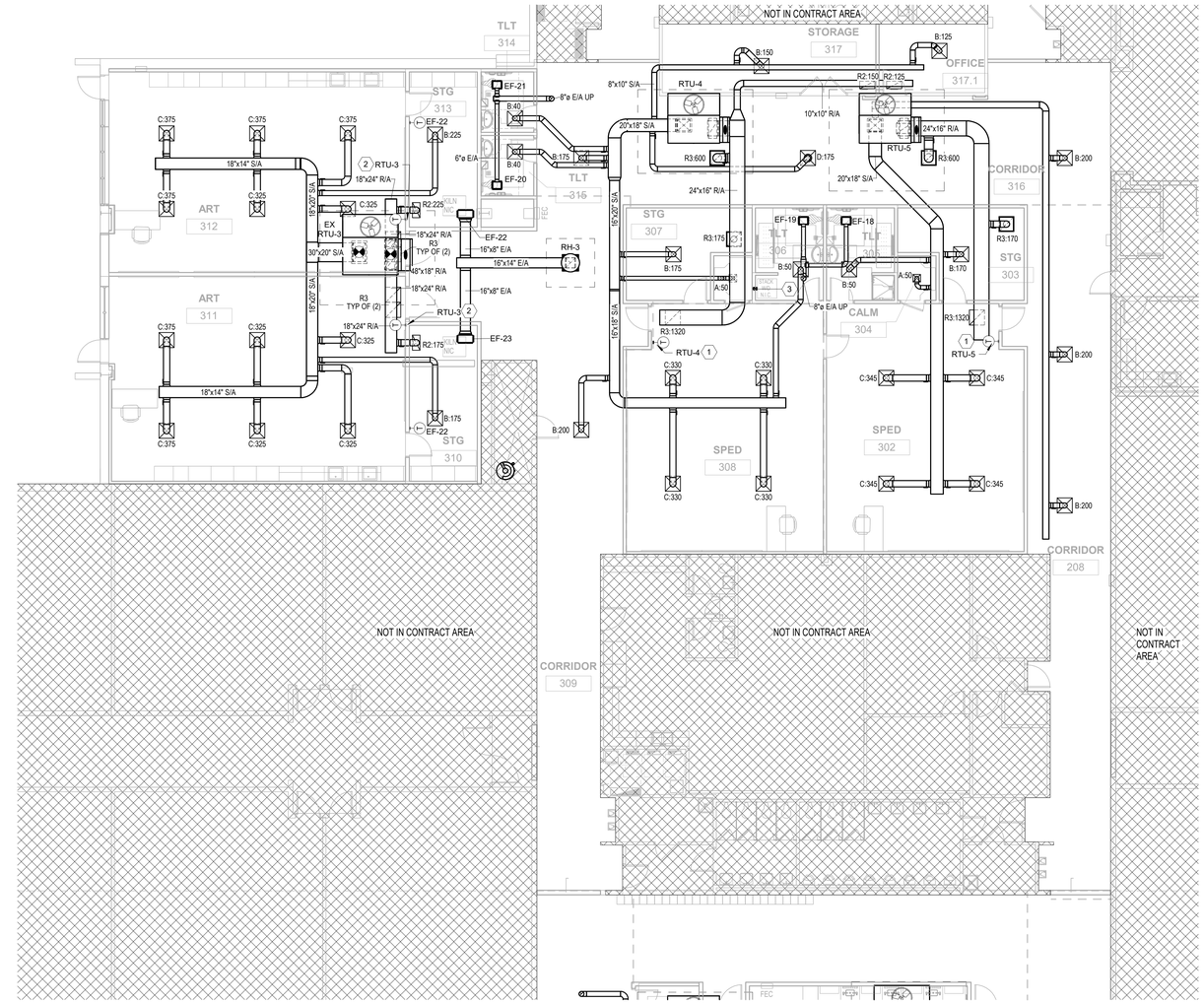
2407 PROJECT NO
MDM DRAWN BY
EZ CHKD BY

MECHANICAL PLAN - AREA 2

M102 SHEET TITLE

KEYNOTES

1 PROVIDE TEMPERATURE / HUMIDITY THERMOSTAT.
2 PROVIDE AVERAGING TEMPERATURE / HUMIDITY THERMOSTATS IN THE TWO ART ROOMS.
3 PROVIDE DRYER VENT ADAPTER BOX IN WALL WITH 4" SMOOTH INTERNALLY FINISHED ALUM. DRYER VENT DUCT W/ DRYER VENT DISCHARGE CAP.



1 MECHANICAL PLAN - AREA 3
1/8" = 1'-0"

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

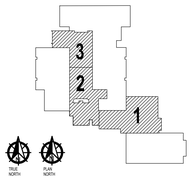
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHK'D BY

MECHANICAL PLAN - AREA 3

M103 SHEET TITLE

1 MECHANICAL ROOF PLAN
1/16" = 1'-0"

KEYNOTES

1. ALL EXHAUT AIR POINTS TO BE 10'-0" MINIMUM FROM AIR INTAKES. PROVIDE WITH ROOF CAP (TYP.)
2. PROVIDE WITH CURB ADAPTER AS REQUIRED FOR NEW UNIT, FEILD VERIFY EXISTING CURB INFORMATION PRIOR TO ORDERING.
3. PROVIDE WITH SIDE DISCHARGE CURB ADAPTER AS REQUIRED FOR NEW UNIT, FEILD VERIFY EXISTING CURB INFORMATION PRIOR TO ORDERING.
4. PROVIDE WITH SIDE DISCHARGE CURB FOR NEW UNIT. REFERANCE STRUCTURAL DRAWINGS FOR REQUIRED LOCATIONS AND ANY ADDITIONAL BRACING REQUIRED.
5. COORDINATE WITH OWNER FOR A REQUIRED ROOF CONTRACTOR / CONSULTANT FOR ALL REQUIRED ROOF REWORK GIVEN SCOPE OF WORK.

ALTERNATE #1
PROVIDE NEW RTU-13, 14, & 27 AND FULL SYSTEMS ASSOCIATED, EF-12-15, AND CU-1 / AC-1. IF ALTERNATE IS NOT MOVED FORWARD WITH, EXISTING RTUS / EXHAUST FANS SERVING SCIENCE ROOMS TO REMAIN. REFERENCE ARCHITECTURE FOR EXACT REQUIREMENTS FOR ALTERNATE.
(NEW LAYOUT SHOWN)

the.stacy.group
architecture. interiors

8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

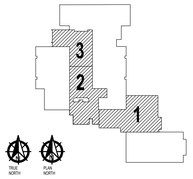
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

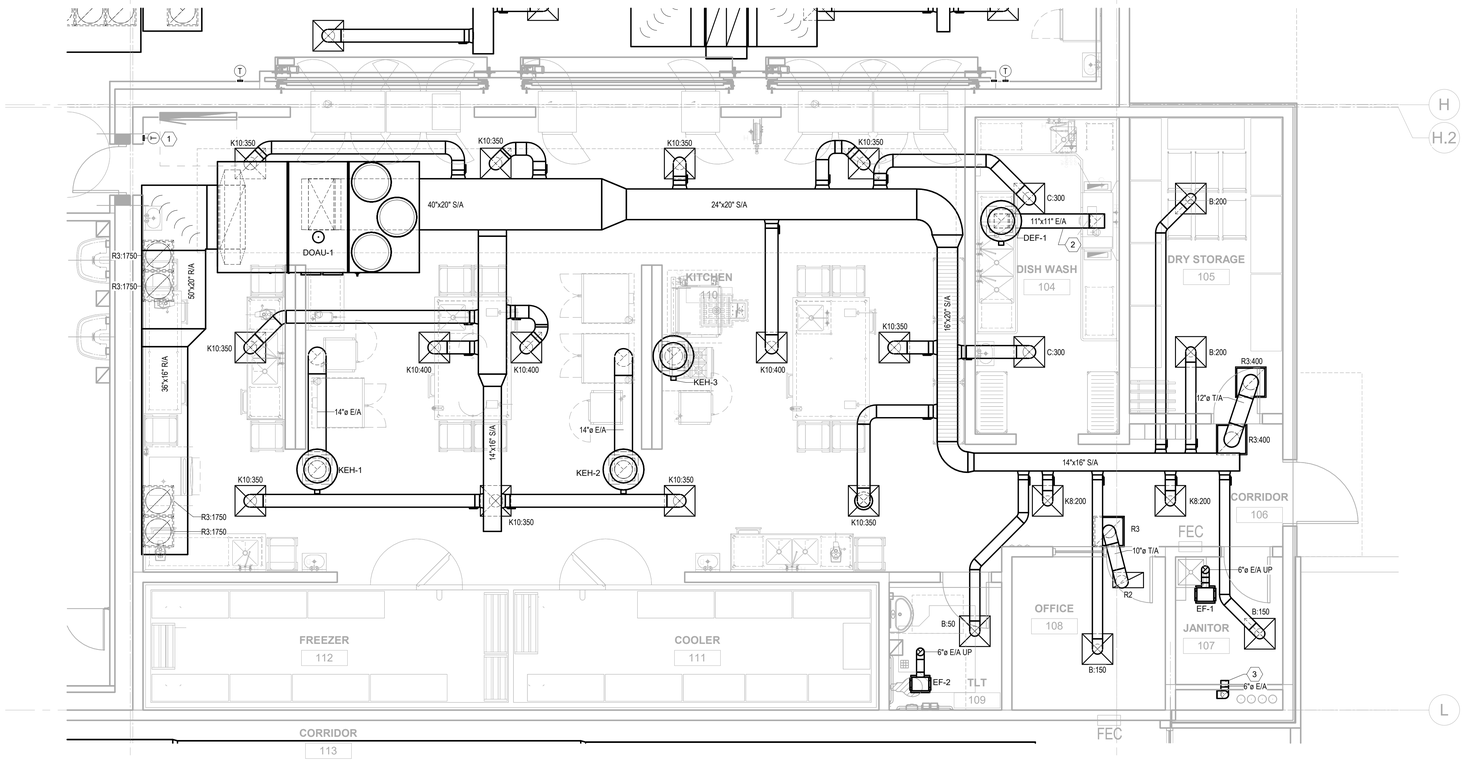
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL ROOF PLAN

M150
SHEET TITLE

KEYNOTES

1 PROVIDE TEMPERATURE / HUMIDITY THERMOSTAT.
2 PROVIDE FULL STAINLESS DUCTWORK FOR DISHWASHER EXHUAST SYSTEM.
3 PROVIDE DRYER VENT ADAPTER BOX IN WALL WITH 6" SMOOTH INTERNALLY FINISHED ALUM. DRYER VENT DUCT W/ DRYER VENT DISCHARGE CAP.



1 MECHANICAL PLAN - KITCHEN
1/4" = 1'-0"

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

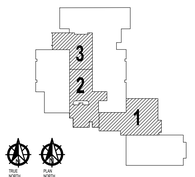
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

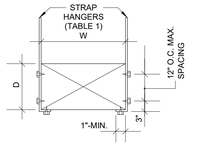
REVISIONS

11/25/2025
ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL PLAN - ENLARGED KITCHEN

M200
SHEET TITLE



NOTES:

A. TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

B. PROVIDE HIGH DENSITY INSERT AT TRAPEZE FOR INSULATED DUCTS.

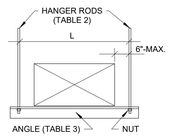


TABLE 1 STRAP HANGERS (PAIR) SPACED

W + D MAX.	10' - 0" MAX.	8' - 0" MAX.	5' - 0" MAX
72"	1" X 22 GA.	1" X 22 GA.	1" X 22 GA.
96"		1" X 20 GA.	1" X 22 GA.
120"		1" X 18 GA.	1" X 22 GA.
168"			1" X 18 GA.
192"			1" X 16 GA.

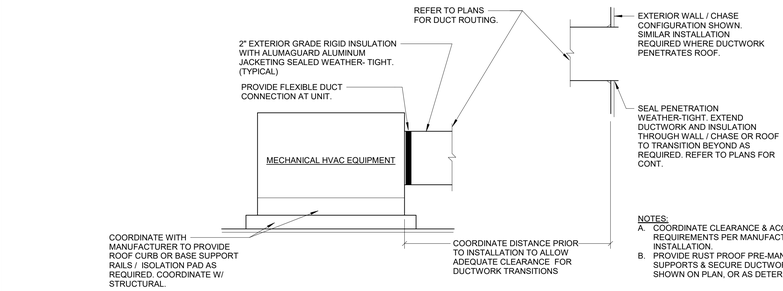
TABLE 2 ALLOWABLE HANGER LOAD, MAX.

STRAPS	LBS.	RODS	LBS.
2 - 1" X 22 GA.	520	2 - 1/4" DIA.	540
2 - 1" X 20 GA.	640	2 - 3/8" DIA.	1360
2 - 1" X 18 GA.	840	2 - 1/2" DIA.	2500
2 - 1" X 16 GA.	1400	2 - 5/8" DIA.	4000
		2 - 3/4" DIA.	6000

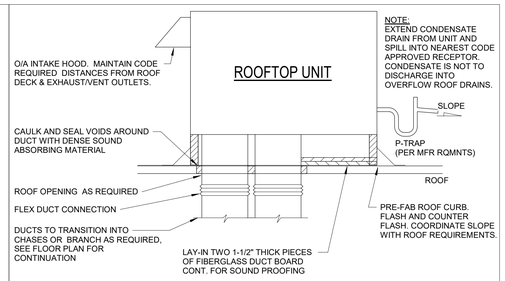
TABLE 3 TRAPEZE ANGLE LOAD, MAX.

L	2"x2"x1/4"	2 1/2"x2 1/2"x1/4"
36"	1200 LBS	1940 LBS
48"	1160 LBS	1900 LBS
60"	1060 LBS	1800 LBS
72"	900 LBS	1640 LBS
84"	660 LBS	1400 LBS

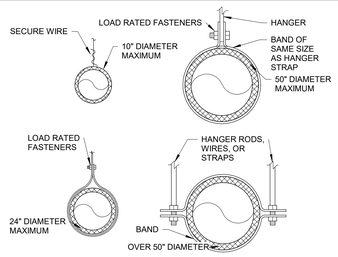
16 M300 RECTANGULAR DUCT HANGERS
SCALE: NTS



7 M300 TYPICAL HVAC EQUIPMENT WITH EXTERIOR DUCTWORK
SCALE: NTS



1 M300 TYPICAL ROOFTOP UNIT DIAGRAM
SCALE: NTS

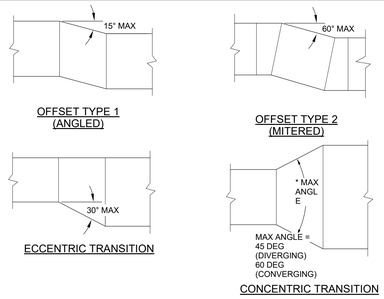


MINIMUM HANGER SIZES FOR ROUND DUCT

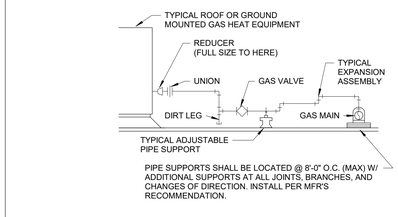
DIAMETER	MAXIMUM SPACING	WIRE DIAMETER	ROD	STRAP
10" DN	12'	(1) 12 GA.	1/4"	1"x22 GA.
11-18"	12'	(2) 12 GA. OR (1) 8 GA.	1/4"	1"x22 GA.
19-24"	12'	(2) 10 GA.	1/4"	1"x22 GA.
25-36"	12'	(2) 8 GA.	3/8"	1"x20 GA.
37-50"	12'	---	(2)3/8"	(2)1"x20 GA.
51-60"	12'	---	(2)3/8"	(2)1"x18 GA.
61-84"	12'	---	(2)3/8"	(2)1"x16 GA.

NOTES:
1. STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL; ALL ARE ALTERNATES.
2. TABLULATED DATE FROM 1985 SMACNA STANDARDS ALLOWS FORDUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.
3. HANGERS MUST NOT DEFORM DUCT SHAPE.

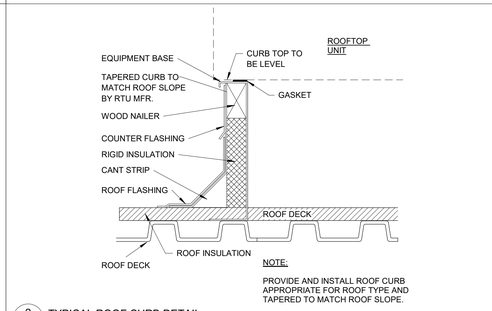
17 M300 ROUND DUCT HANGERS
SCALE: NTS



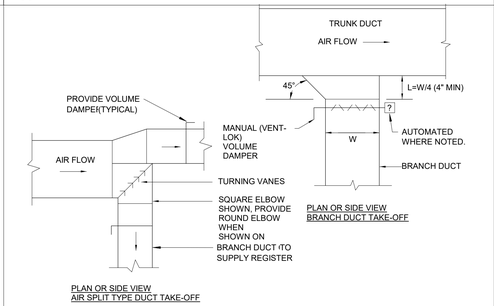
12 M300 MISCELLANEOUS DUCTWORK TRANSITION DETAILS
SCALE: NTS



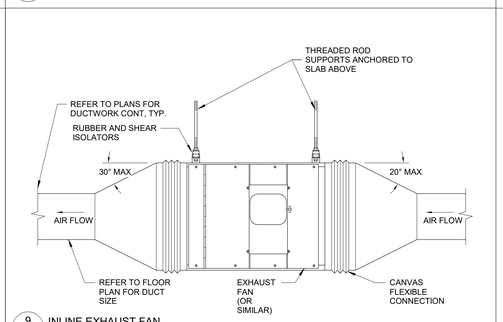
8 M300 TYPICAL GAS PIPING CONNECTION DIAGRAM
SCALE: NTS



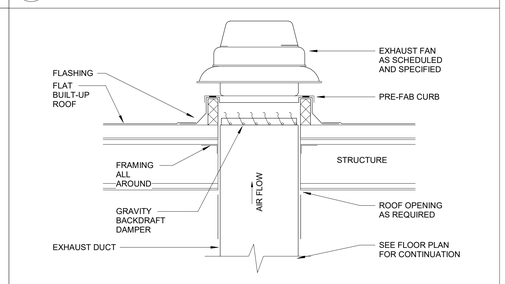
2 M300 TYPICAL ROOF CURB DETAIL
SCALE: NTS



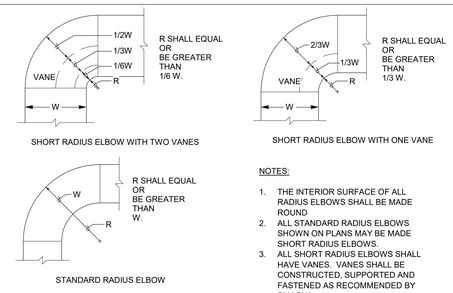
13 M300 SUPPLY DUCT TAKE-OFFS
SCALE: NTS



9 M300 INLINE EXHAUST FAN
SCALE: NTS



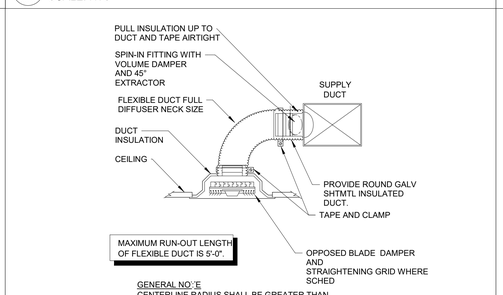
3 M300 ROOF MOUNTED EXHAUST FAN
SCALE: NTS



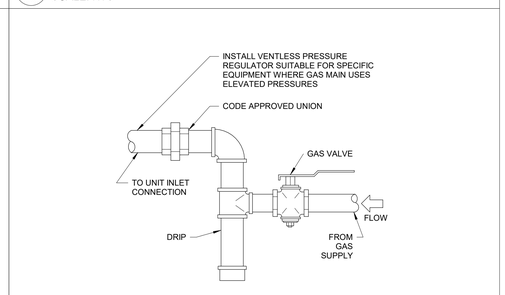
NOTES:

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND
2. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS.
3. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

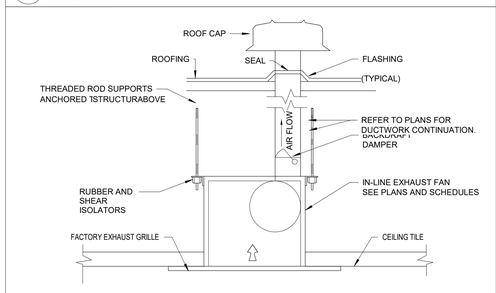
14 M300 TYPICAL RADIUS ELBOWS DETAIL
SCALE: NTS



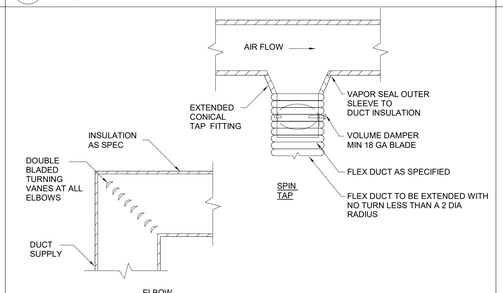
10 M300 CEILING DIFFUSER AND FLEXIBLE DUCT
SCALE: NTS



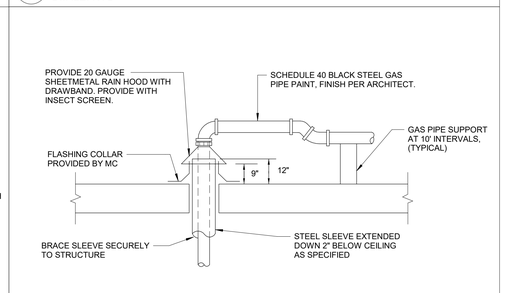
5 M300 GAS CONNECTION
SCALE: NTS



15 M300 INLINE EXHAUST FAN W/ ROOF CAP DETAIL
SCALE: NTS



11 M300 MISCELLANEOUS DUCT DETAIL
SCALE: NTS



6 M300 GAS PIPING THRU ROOF
SCALE: NTS

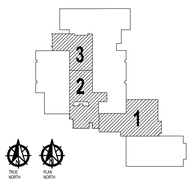
the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 PROJECT NO
MOM DRAWN BY
EZ CHKD BY

MECHANICAL DETAILS

M300 SHEET TITLE

Split System Schedule

Identity	Manufacturer	Model	Installation Type	Nominal Capacity	Min Cooling Capacity	Minimum Efficiency	Refrigerant Type	Electrical		MCA	MOCP	Product Weight
								Voltage	Phase			
AC-1	LG	KNUAB181A	WALL	18000.0 Btu/h	3000.0 Btu/h	23 SEER2 / 13 EER2	R32	208 V	1			26.00 lbf
AC-2	LG	KNUAB181A	WALL	18000.0 Btu/h	3000.0 Btu/h	23 SEER2 / 13 EER2	R32	208 V	1			26.00 lbf
CU-1	LG	KUSAB181A	ROOF	18000.0 Btu/h	3000.0 Btu/h	23 SEER2 / 13 EER2	R32	208 V	1	19 A	30 A	128.00 lbf
CU-2	LG	KUSAB181A	ROOF	18000.0 Btu/h	3000.0 Btu/h	23 SEER2 / 13 EER2	R32	208 V	1	19 A	30 A	128.00 lbf

NOTES:

1. PROVIDE CONDENSING UNIT WITH 12" TALL SUPPORT FEET.
2. LOCATE UNIT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR SERVICE AND AIRFLOW.
3. EXTERIOR UNIT TO PROVIDE POWER TO INTERIOR AHU.
4. PROVIDE CONDENSING UNIT WITH LOW AMBIENT WIND BAFFLES FOR LOW AMBIENT COOLING DOWN TO 0 F DEGREES.
5. PROVIDE CONDENSING UNIT WITH HAIL GUARDS.
6. PROVIDE WALL-MOUNTED CONTROLLER.
7. PROVIDE WITH CONDENSATE PUMP.
8. PROVIDE WITH BAS CONTROLS TO MONITOR EQUIPMENT. COORDINATE EXACT REQUIREMENT WITH AWARDED CONTROLS.
9. CONDENSING UNIT TO HAVE VARIABLE SPEED COMPRESSOR W/ AUTO RESTART.

HOOD SCHEDULE

MARK	MANUFACTURER	MODEL	SUPPLY			THROAT AREA (SQ. FT)	DAMPER	UNIT WEIGHT	Comments
			AIRFLOW (CFM)	ESP (IN WG)	NECK SIZE (IN)				
IH-1	Greenheck	FGI-32-50	5,100	0.05	32" x 50"	11	Backdraft	237	ALL
RH-1	Greenheck	FGI-32X50	5,100	0.051	32" x 50"	11	Backdraft	189	ALL
RH-2	Greenheck	FGI-16X32	1,550	0.049	16" X 32"	4	Backdraft	95	ALL
RH-3	Greenheck	GRSR-16	900	0.043	16"X16"	1	Backdraft	38	ALL

NOTES:

1. PROVIDE UNIT WITH CUSTOM HEIGHT ROOF CURB AS REQ'D. AT STORM SHELTER ROOF AREA TO ACCOUNT FOR TAPER INSULATION HEIGHT. FIELD COORD. FINAL INSTALLATION WITH CONTRACTOR & FIELD CONDITION. MAINTAIN CURB HEIGHT MINIMUM OF 8" ABOVE FINISHED ROOF.
2. PROVIDE UNIT WITH BIRD SCREEN & BACKDRAFT DAMPER.

RTU SCHEDULE

MARK	MANUFACTURER	MODEL	NOMINAL TONS	SUPPLY			OUTSIDE AIR (CFM)	EXHAUST (CFM)	EXHAUST	COOLING		HEATING		ELECTRICAL			UNIT WEIGHT	Comments
				AIRFLOW (CFM)	ESP (IN WG)	FAN SIZE (BHP)			FAN SIZE (BHP)	TOTAL CAPACITY (MBH)	SENSIBLE (MBH)	GAS INPUT (MBH)	CAPACITY (MBH)	MCA	MOCP	VOLTAGE/ PHASE		
RTU-4	Aaon, Inc.	RNA-007-A-A-3	7	2,500	1	1.05	425	0	0	73	59.3	150	121.5	17 A	25 A	480 V/3	1,500	1-12
RTU-5	Aaon, Inc.	RNA-006-A-A-3	6	2,250	1	1	425	0	0	65.1	53.4	90	72.9	16 A	25 A	480 V/3	1,400	1-12
RTU-13	Aaon, Inc.	RNA-010-A-A-3	10	2,500	1.2	1.42	1,300	1,300	0.2	110.9	78.0	210	170.1	26 A	35 A	480 V/3	1,900	ALL
RTU-14	Aaon, Inc.	RNA-013-B-A-3	13	3,200	1.2	1.65	1,725	1,300	0.2	156.3	106.9	292.5	236.9	37 A	45 A	480 V/3	2,600	ALL
RTU-27	Aaon, Inc.	RNA-010-A-A-3	10	2,500	1.2	1.42	1,300	1,300	0.18	110.9	78.0	210	170.1	26 A	35 A	480 V/3	1,900	ALL
RTU-28	Aaon, Inc.	RNA-013-B-A-3	13	3,400	1.2	1.85	1,450	1,225	0.14	153.8	107.4	292.5	236.9	37 A	45 A	480 V/3	2,400	1-12, 14
RTU-29	Aaon, Inc.	RNA-010-A-A-3	10	2,500	1.2	1.42	1,225	1,225	0.16	110.1	77.5	210	170.1	26 A	35 A	480 V/3	1,700	1-12, 14
RTU-30	Aaon, Inc.	RNA-013-B-A-3	13	3,200	1.2	1.66	1,500	1,225	0.16	158.3	105.3	292.5	236.9	37 A	45 A	480 V/3	2,400	1-12, 14
RTU-31	Aaon, Inc.	RNA-011-B-A-3	11	4,600	1.75	3.11	550	-	-	112.1	97.1	195	158	27 A	30 A	480 V/3	2,000	1-12
RTU-32	Aaon, Inc.	RNA-030-C-A-3	30	9,000	2	9.12	2,700	-	-	295.6	223.6	540	437.4	71 A	90 A	480 V/3	3,300	1-12
RTU-33	Aaon, Inc.	RNA-030-C-A-3	30	9,000	2	9.17	2,400	-	-	292.7	221.7	540	437.4	71 A	90 A	480 V/3	3,300	1-12

NOTES:

1. AAON TO BE PROVIDED AS SPECIFIED UNLESS PRIOR APPROVAL FROM SCHOOL.
2. PROVIDE WITH 18" ROOF CURB TO MATCH ROOF SLOPE. SEE DETAIL FOR ADDITIONAL INFORMATION.
3. PROVIDE UNIT WITH FACTORY MOUNTED CONTROLS AS REQUIRED TO INTERLOCK SPACE TEMPERATURE AND HUMIDITY SENSORS WITH AUTOMATIC BUILDING CONTROLS SYSTEM.
4. PROVIDE LOW LEAK COMPARATIVE ENTHALPY ECONOMIZER WITH FULLY MODULATING ACTUATOR.
5. PROVIDE POWERED EXHAUST FOR SPACE PRESSURE CONTROL AS SCHEDULED ABOVE.
6. PROVIDE FACTORY POWERED CONVENIENCE OUTLET, DISCONNECT, AND SCCR RATING OF 10 KAIC.
7. PROVIDE SINGLE POINT CONNECTION. PROVIDE UNIT AUTO SHUT-DOWN FUNCTION (INCLUDING RELAYS) FOR FIELD INTERLOCK OF DUCT MOUNTED SMOKE DETECTORS AT RETURN.
8. PROVIDE 2" FILTER RACK AND MERV 8 FILTERS AND CLOGGED FILTER SWITCH. DO NOT RUN EQUIPMENT WITHOUT FILTERS IN PLACE. REPLACE FILTERS WITH NEW AT THE END OF CONSTRUCTION.
9. PROVIDE STAINLESS STEEL HEAT EXCHANGER WITH TURN DOWN.
10. PROVIDE UNIT WITH HAIL GUARDS AND HINGED ACCESS PANELS.
11. PROVIDE WITH 6& 7 TON UNITS WITH TWO STAGES OF COOLING, 10 & 13 TON UNITS WITH VARIABLE CAPACITY COOLING, 11 TON UNIT WITH 5 STAGES OF COOLING, AND 30 TON UNITS VARIABLE CAPACITY COOLING.
12. PROVIDE WITH FIELD WIRED 115V CONVENIENCE OUTLET.
13. PROVIDE WITH SIDE DISCHARGE CURB ADAPTER TO CONVERT DOWNFLOW RTU.
14. INTERLOCK OUTSIDE AIR CONTROL TO INCREASE PROPORTIONAL TO THE LAB HOOD EXHAUST FAN TO MAINTAIN NEUTRAL PRESSURE WITHIN THE CLASSROOM.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	AIR FLOW (CFM)	SP (in)	ELECTRICAL		MCA	MOCP	VOLTAGE / PHASE	WEIGHT (LBS)	Comments
					MOTOR HP	FLA					
EF-1	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-2	GREENHECK	SP-A90	70	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-3	GREENHECK	CSP-A1050-VG	750	0.5	0.15	4.8 A	5.9 A	15 A	120V / 1PH	50	2-5,7
EF-4	GREENHECK	CUE-090-VG	450	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-5
EF-5	GREENHECK	CUE-090-VG	275	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-5
EF-6	GREENHECK	CUE-090-VG	450	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-5
EF-7	GREENHECK	G-095-VG	500	0.5	1/6	2.8 A	3.5 A	15 A	120V / 1PH	50	1-5
EF-8	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-9	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-10	GREENHECK	CUE-090-VG	275	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-5
EF-11	GREENHECK	CUE-090-VG	450	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-5
EF-12	GREENHECK	CUE-090-VG	450	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-6
EF-13	GREENHECK	CUE-090-VG	425	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-5
EF-14	GREENHECK	CUE-090-VG	450	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-6
EF-15	GREENHECK	CUE-090-VG	450	0.5	1/10	1.5 A	1.9 A	15 A	120V / 1PH	50	1-6
EF-16	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-17	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-18	GREENHECK	SP-A90	70	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-19	GREENHECK	SP-A90	70	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-20	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-21	GREENHECK	SP-A90	50	0.25	-	0.2 A	0.2 A	15 A	120V / 1PH	12	2-5,7
EF-22	GREENHECK	CSP-A700-VG	450	0.25	0.07	4.1 A	5.1 A	15 A	120V / 1PH	39	2-4, 8
EF-23	GREENHECK	CSP-A700-VG	450	0.25	0.07	4.1 A	5.1 A	15 A	120V / 1PH	39	2-4, 8

NOTES:

1. PROVIDE UNIT WITH 14" TALL ROOF CURB AND MATCH ROOF SLOPE. MAINTAIN CURB HEIGHT MINIMUM OF 8" ABOVE FINISHED ROOF.
2. FAN SHALL BE INSTALLED WITH STANDARD MOTOR STARTER OR UNIT MOUNTED FAN SPEED CONTROLLER (FOR INITIAL BALANCING) AS REQUIRED.
3. PROVIDE UNIT WITH BACKDRAFT DAMPER AND BIRD SCREEN.
4. EXHAUST OUTLETS TO BE GREATER THAN 10'-0" HORIZONTAL OR 3'-0" VERTICAL ABOVE FROM OUTSIDE AIR INTAKES.
5. FAN OPERATION TO BE INTERLOCKED WITH BUILDING AUTOMATION CONTROLS SYSTEM AND PROVIDE CONTINUOUS VENTILATION WHEN THE BUILDING IS OCCUPIED.
6. FAN OPERATION TO BE TIED TO HOOD CONTORLS
7. PROVIDE WITH CEILING MOUNTED GRILLE AND ROOF HOOD TERMINATION.
8. PROVIDE WITH THERMOSTAT CONTROL TO ENERGIZE FAN WHEN ROOM EXCEEDS SET POINT. COORDINATE WITH SCHOOL FOR NIGHT SET BACK TEMPERATURES TO NOT FALSELY TRIGGER FAN.

SUPPLY VENTILATION FAN SCHEDULE

MARK	MANUFACTURER	MODEL	AIR FLOW (CFM)	SP (IN.)	ELECTRICAL		MCA	MOCP	VOLTAGE / PHASE	WEIGHT (LBS)	Comments
					MOTOR HP	FLA					
SVF-1	GREENHECK	SQ-160-VG	2,600	1.0	1.0	13.0 A	16.3 A	25 A	120V / 1PH	146	1-9
SVF-2	GREENHECK	SQ-160-VG	2,600	1.0	1.0	13.0 A	16.3 A	25 A	120V / 1PH	146	1-9
SVF-3	GREENHECK	SQ-100-VG	800	0.5	0.25	3.8 A	4.8 A	15 A	120V / 1PH	56	1-2, 4-8, 10

NOTES:

1. FAN SHALL BE INSTALLED WITH STANDARD FAN SPEED CONTROLLER (FOR INITIAL BALANCING) AS REQUIRED.
2. PROVIDE UNIT WITH BACKDRAFT DAMPER AND BIRD SCREEN.
3. FAN TO BE OFF DURING NORMAL OPERATION. CONNECT TO EMERGENCY POWER SYSTEM. PROVIDE MANUAL OVERRIDE ON/OFF WALL MOUNT BUTTON/SWITCH TO ACTIVATE FANS AND LOCATE IN AN OWNER APPROVED LOCATION. PROVIDE PERMANENT SIGNAGE ABOVE BUTTON/ SWITCH THAT READS, "FOR EMERGENCY VENTILATION FAN ACTIVATION ONLY". SWITCH SHALL BE ENCLOSED IN A CLEAR BOX WITH A KEY TO DETER TEMPERING. CONNECT TO BAS FOR MONITORING. COORDINATE WITH ELECTRICAL.
4. INSTALL INLINE FAN IN ABOVE CEILING, SUSPEND UNIT FROM STRUCTURE PER MFR'S INSTALLATION MANUAL. LOCATE UNIT IN ACCESSIBLE LOCATION, PROVIDE ACCESS PANEL AS REQ'D.
5. PROVIDE INDEPENDENT B.A.S. AT STORM SHELTER. EMERGENCY VENTILATION SYSTEM FANS AND MOTORIZED DAMPERS SHALL BE TIED TO B.A.S. INSIDE OF RESPECTIVE STORM SHELTER. CONNECT EACH SYSTEM TO MAIN B.A.S. ALARM SHALL BE SENT TO RESPECTIVE SCHOOL PERSONNEL WHEN ANY PART OF THIS SYSTEM IS ACTIVATED.
6. EMERGENCY VENTILATION SYSTEM INCLUDING B.A.S. SHALL BE POWERED BY RESPECTIVE EMERGENCY POWER SYSTEM, COORDINATE WITH ELECTRICAL.
7. B.A.S. TO MONITOR RTUs AND ACTIVATE EMERGENCY VENTILATION SYSTEM ONLY WHEN RTUs ARE DOWN. PROVIDE ACTIVATION DELAY TO ACCOUNT FOR POWER FLUCTUATION AS REQ'D.
8. EMERGENCY VENTILATION SWITCH SHALL BE LOCATED INSIDE OF RESPECTIVE STORM SHELTER AREA BEING SERVED SERVED.
9. DAMPERS SHALL BE OPEN/ CLOSE ACCORDINGLY:
   A. DAMPERS NORMALLY CLOSED (OPEN ON ACTIVATION OF EMERGENCY VENTILATION SYSTEM)(FAIL OPEN).
      a. MOTORIZED DAMPER SERVING VENTILATION FAN/ INTAKE AND RELIEF HOOD, RELIEF AIR OPENING FROM R/A DUCT.
   B. DAMPERS NORMALLY OPENED (CLOSE ON ACTIVATION OF EMERGENCY VENTILATION SYSTEM)(FAIL CLOSE).
      a. MOTORIZED DAMPERS DOWNSTREAM OF SINGLE ZONE RTUs.
10. PROVIDE WITH THERMOSTAT CONTROL TO ENERGIZE FAN WHEN ROOM EXCEEDS SET POINT. COORDINATE WITH SCHOOL FOR NIGHT SET BACK TEMPERATURES TO NOT FALSELY TRIGGER FAN.

AIR TERMINAL SCHEDULE

MARK	MANUFACTURER	MODEL NO.	MOUNTING	FACE SIZE	NECK SIZE	FINISH	NOTES
A	TITUS	TMS	LAY-IN / SURF.	12" X 12"	6" Ø	WHITE	1-9
B	TITUS	TMS	LAY-IN / SURF.	24" X 24"	8" Ø	WHITE	1-9
C	TITUS	TMS	LAY-IN / SURF.	24" X 24"	10" Ø	WHITE	1-9
D	TITUS	TMS	LAY-IN / SURF.	24" X 24"	12" Ø	WHITE	1-9
J2	TITUS	50F	LAY-IN / SURF.	12" X 24"	(SEE PLANS)	WHITE	1-8
J3	TITUS	50F	LAY-IN / SURF.	24" X 24"	(SEE PLANS)	WHITE	1-8
K8	CAPTIVE AIRE	DI-PSP-08-24X24	LAY-IN	24" X 24"	8" Ø	STAINLESS STEEL	1,2,3,5,6,8,9
K10	CAPTIVE AIRE	DI-PSP-10-24X24	LAY-IN	24" X 24"	10" Ø	STAINLESS STEEL	1,2,3,5,6,8,9
R2	TITUS	350FL	SURF.	(SEE PLANS)	(SEE PLANS)	WHITE	1-8
R3	TITUS	350FL	SURF.	(SEE PLANS)	(SEE PLANS)	WHITE	1-8
R4	TITUS	350FL	SURF.	(SEE PLANS)	(SEE PLANS)	WHITE	1-8
S1	TITUS	300RL	SURF.	(SEE PLANS)	(SEE PLANS)	WHITE	1-8
T	TITUS	S300FS	SURF.	16" X 4"	16" X 4"	PER ARCH	1-5

NOTES:

1. CFM FLOW RATE IS SHOWN ADJACENT TO AIR DEVICE MARK.
2. PROVIDE BALANCING DAMPER FOR EACH DEVICE. PROVIDE AT BRANCH DUCT CONNECTION WHERE POSSIBLE. PROVIDE AIR DEVICES WITH BALANCING DAMPERS ACCESSED AT FRONT FACE OF AIR DEVICE WHERE LOCATED ABOVE INACCESSIBLE CEILINGS. ALL RETURN AND EXHAUST AIR DEVICES SHALL BE PROVIDED WITH INTEGRAL BALANCING DAMPERS.
3. ALL AIR DEVICES SHALL BE ALUMINUM CONSTRUCTED.
4. COORDINATE AND CONFIRM ALL AIR DEVICE FINISHES AND COLORS WITH ARCHITECT. PROVIDE PAINTABLE FINISH WHERE REQUIRED. COORDINATE WITH ARCHITECT PRIOR TO ORDERING.
5. INSTALLATION TO BE COORDINATED WITH SITE CONDITIONS PRIOR TO ORDERING.
6. COORDINATE MOUNTING HEIGHT WITH ALL OTHER TRADES. REFER TO PLANS FOR ADDITIONAL INFORMATION. COORDINATE MOUNTING, BORDERS, FRAMING WITH ARCHITECTURAL CONDITIONS PRIOR TO ORDERING.
7. PROVIDE FACTORY DEVICE MOUNTING FRAMES AT ALL PLASTER, GP WB, AND MASONRY SURFACES TO RECEIVE FINISHED AIR DEVICE PRIOR TO ORDERING.
8. PROVIDE SQUARE-TO-ROUND ADAPTER AS REQUIRED TO ACCOMMODATE ROUND DUCT CONNECTION.
9. PROVIDE INSULATION BACKING TO ALL SUPPLY AIR DEVICES IN CEILINGS.

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

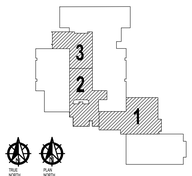
OKLAHOMA PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL SCHEDULES

M400 SHEET TITLE

FOR QUESTIONS, CALL THE
Tulsa Office
REGION 80
PHONE: (918) 258 - 0291
EMAIL: reg80@captiveaire.com

PATENT NUMBERS

EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2520435 C.

HOOD INFORMATION - JOB#8197441

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)							HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP		END TO END	ROW
1	KEH-1 (OVEN/PROOF)	6624 ND-2	CAPTIVEAIRE	10' 11"	600 DEG	I	HEAVY	175	1910			4"	14"	1910	1787	-0.974"	430 SS WHERE EXPOSED	ALONE	ALONE
2	KEH-2 (OVENS)	6624 ND-2	CAPTIVEAIRE	10' 11"	600 DEG	I	HEAVY	175	1910			4"	14"	1910	1787	-0.974"	430 SS WHERE EXPOSED	ALONE	ALONE
3	KEH-3 (RANGE/P-PAN)	6624 ND-2	CAPTIVEAIRE	10' 11"	600 DEG	I	HEAVY	195	2125			4"	14"	2125	1988	-1.204"	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)				UTILITY CABINET(S)						FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	AVERAGE FOOT CANDLES @ 36" AFF	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL	SWITCHES		
													TYPE	SIZE	MODEL #	QUANTITY		
1	KEH-1 (OVEN/PROOF)	CAPTRATE SOLO FILTER	8	16"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	57	LEFT	12"x66"x24"	TANK FS	4.0/4.0	DCV-3111	1 LIGHT 1 FAN	YES	1174 LBS
2	KEH-2 (OVENS)	CAPTRATE SOLO FILTER	8	16"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	57	RIGHT	12"x66"x24"	TANK FS	4.0/4.0/4.0			YES	1228 LBS
3	KEH-3 (RANGE/P-PAN)	CAPTRATE SOLO FILTER	8	16"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	57	LEFT	12"x66"x24"					YES	928 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	KEH-1 (OVEN/PROOF)	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 122.00" HIGH X 144.00" LONG 430 SS VERTICAL.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 66" LONG INSULATED.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
2	KEH-2 (OVENS)	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 122.00" HIGH X 144.00" LONG 430 SS VERTICAL.
		LEFT END STANDOFF (FINISHED) 1" WIDE 66" LONG INSULATED.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
3	KEH-3 (RANGE/P-PAN)	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 122.00" HIGH X 144.00" LONG 430 SS VERTICAL.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 66" LONG INSULATED.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.

CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1,2,3	TOP	0"
	FRONT	0"
	BACK	0"
	LEFT	0"
	RIGHT	0"

- "0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

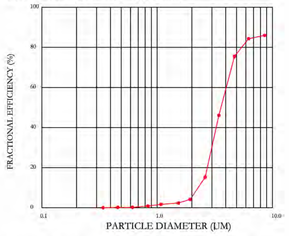
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

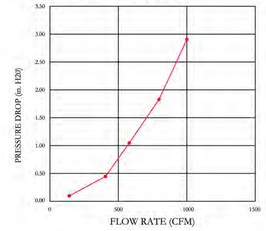
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:.
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

BUILT IN ACCORDANCE WITH NFPA No. 96

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVEAIRE
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: reg80@captiveaire.com
www.captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 1

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

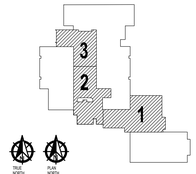
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

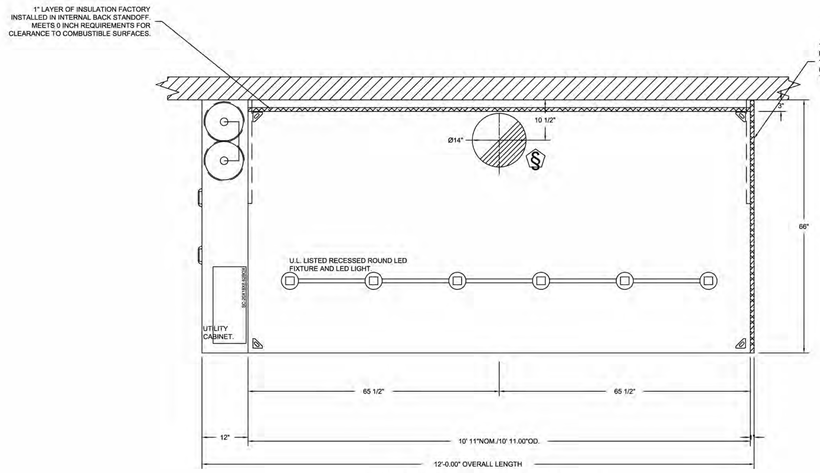
11/25/2025 ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHK'D BY

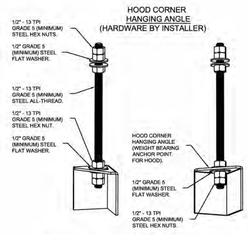
MECHANICAL SCHEDULES

M401

SHEET TITLE



PLAN VIEW - HOOD #1 (KEH-1 (OVEN/PROOF))
10' 11.00" LONG 6624ND-2



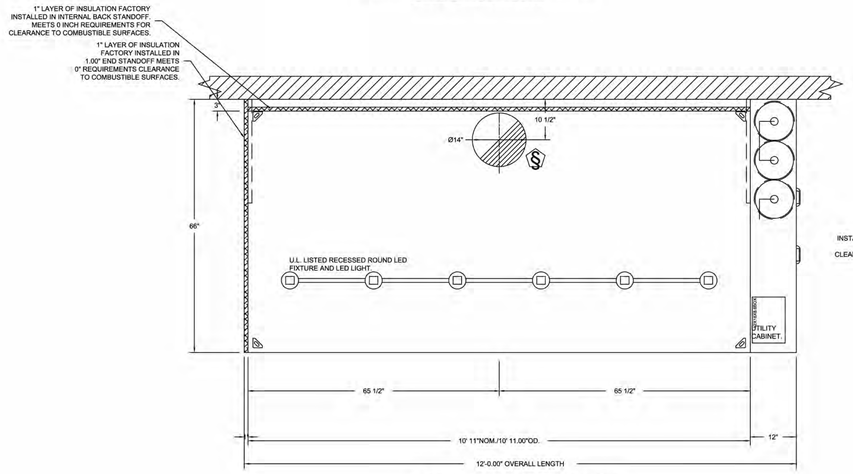
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

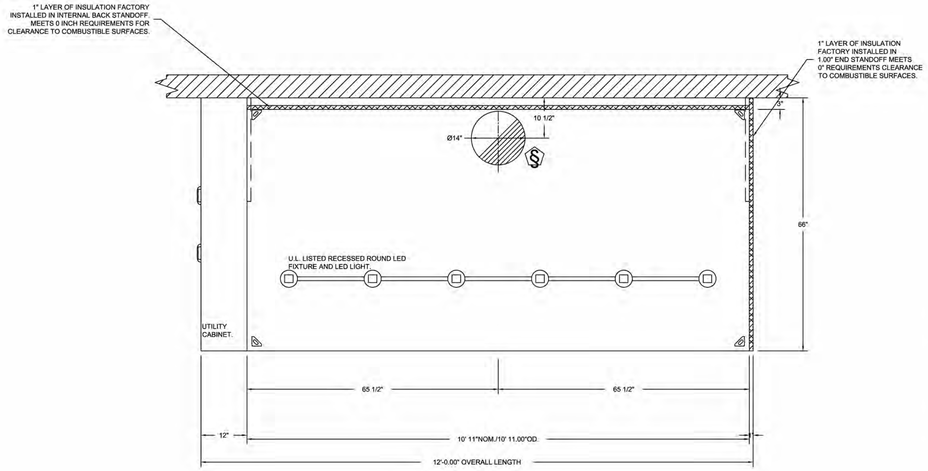
VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS



PLAN VIEW - HOOD #2 (KEH-2 (OVENS))
10' 11.00" LONG 6624ND-2



PLAN VIEW - HOOD #3 (KEH-3 (RANGE/P-PAN))
10' 11.00" LONG 6624ND-2

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		

CAPTIVEAIRE
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9189227594? EMAIL: rep80@captiveaire.com
www.captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 2

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

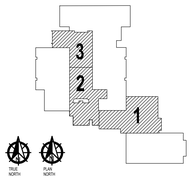
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

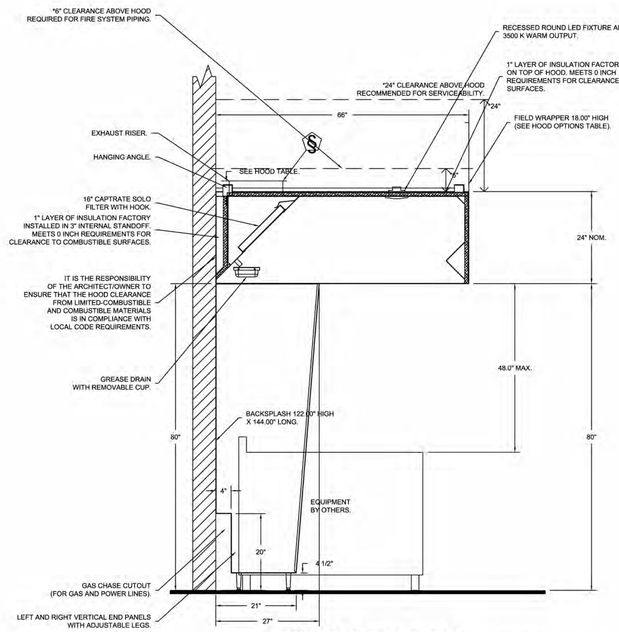
REVISIONS

11/25/2025
ISSUE DATE

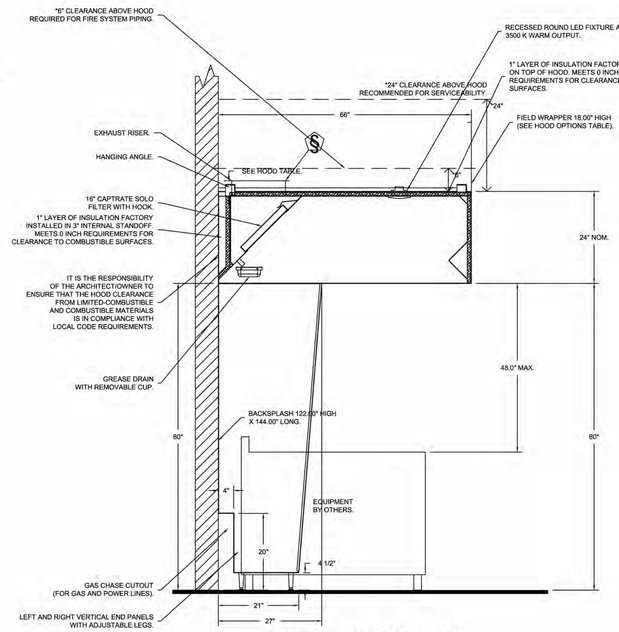
2407 | PROJECT NO
MOM | DRAWN BY
EZ | CHK'D BY

MECHANICAL SCHEDULES

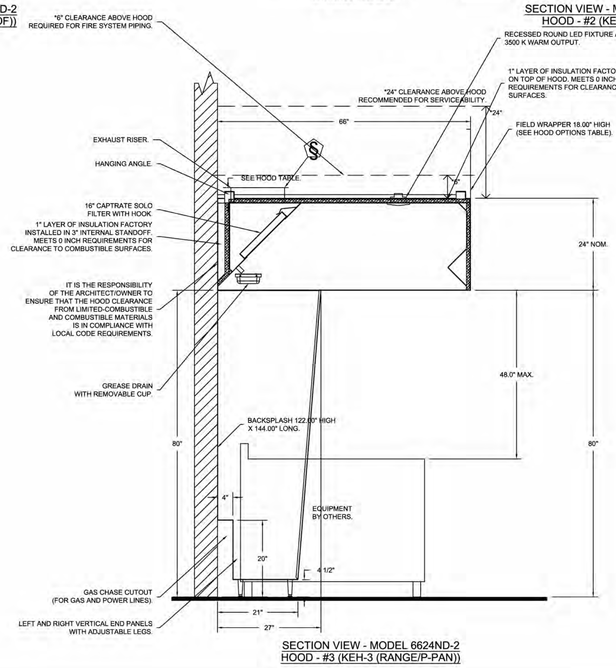
M402
SHEET TITLE



SECTION VIEW - MODEL 6624ND-2
HOOD - #1 (KEH-1 (OVEN/PROOF))



SECTION VIEW - MODEL 6624ND-2
HOOD - #2 (KEH-2 (OVENS))



SECTION VIEW - MODEL 6624ND-2
HOOD - #3 (KEH-3 (RANGE/P-PAN))

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: regbd@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 3

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

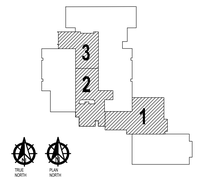
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

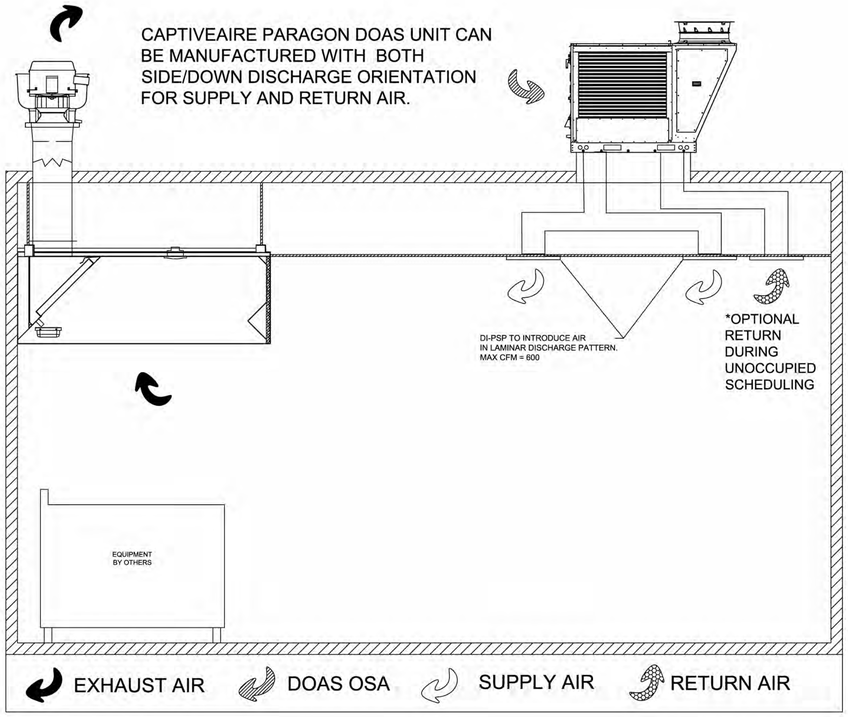
REVISIONS

11/25/2025
ISSUE DATE

2457	PROJECT NO
MDM	DRAWN BY
EZ	CHKD BY

MECHANICAL SCHEDULES

M403
SHEET TITLE



SEQUENCE OF OPERATIONS:

OCCUPIED SCHEDULING:

1. HOOD TURNS ON VIA BUTTON OR TEMPERATURE.
2. DOAS, IF NOT ALREADY ON, WILL TURN ON AND MODULATE TO PROPER OSA CFM.
3. DOAS TEMPERATURE AND HUMIDITY WILL MODULATE UNTIL WITHIN THRESHOLD.
4. SYSTEM WILL STAY ON UNTIL TURNED OFF OR HEAT UNDER HOOD DISSIPATES.

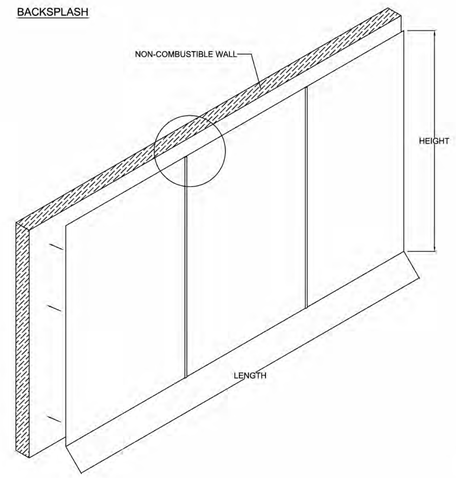
UNOCCUPIED SCHEDULING *IF OPTIONAL RETURN IS INCLUDED*:

1. EXHAUST FAN IS TURNED OFF VIA BUTTON OR TEMPERATURE.
2. OSA DAMPER ON PARAGON DOAS WILL MODULATE PROPER POSITION (IF OPTIONAL RETURN INCLUDED).
3. DOAS WILL ADJUST HEATING/COOLING REQUIRED TO PROPERLY TREAT OSA.
4. DOAS RUNS IN RE-CIRCULATION MODE UNTIL HOOD IS ACTIVATED.

HVAC DISTRIBUTION NOTE

Diffuser throw/velocity guidance:

- Withing 0'-2' of hood - NO Diffusers
- Between 2'-5' from hood - 50 FPM at 80" AFF
- Between 5'-10' from hood - 75 FPM at 80" AFF
- Between 10'-15' from hood - up to 150 FPM at 80" AFF



- BACKSPLASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

DESCRIPTION	DATE

CAPTIVEAIRE
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK, 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: regi0@captiveaire.com
www.captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 4

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

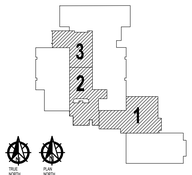
MATTHEW MALONE 2/13/2026 35205 OKLAHOMA LICENSED PROFESSIONAL ENGINEER

CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025 PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHKD BY

MECHANICAL SCHEDULES

M404 SHEET TITLE

FIRE SYSTEM INFORMATION - JOB#8197441

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1	KEH-1/FS-1	TANK FS	4.0/4.0	40	37	WALL UTILITY CABINET LEFT	N/A
2	KEH-2/KEH-3/FS-2	TANK FS	4.0/4.0/4.0	60	54	WALL UTILITY CABINET LEFT	N/A

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1	KEH-1/FS-1	SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS
2	KEH-2/KEH-3/FS-2	SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

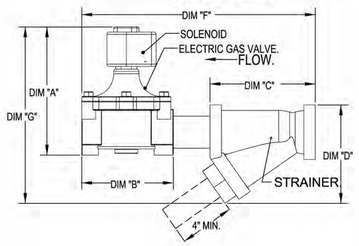
GAS VALVES AND STRAINERS

	GAS VALVE SIZING						GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS			
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	PIPE ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1, FS#2	ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	8 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/VERTICAL	8214280	4417K68	(SC)EGVA2

ELECTRIC GAS VALVES ONLY-SOLENOID ORIENTATION
3/4"-2" 120VAC GAS VALVES CAN BE MOUNTED WITH THE SOLENOID IN ANY POSITION AT OR ABOVE HORIZONTAL. 2 1/2"-3" 120VAC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.
24VDC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$.



FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1	KEH-1/FS-1	0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	1	0
		0 - 0 - 361091 3/8" BRASS PLUG.	3	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROPRESS ADAPTER.	3	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2 " NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2 " NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300033-001 DIN CONNECTOR, CANFIELD PART #5J560-201-EU0A, TANK FIRE SUPPRESSION, SUBMINATURE SOLENOID CONNECTION (CED VENDOR 30377).	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	5	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	8	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - BI145 3/8" BLACK IRON 90 ELL.	3	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - SLPCON-40FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 39' GAP. KIT CONTAINS 42 FEET OF BLACK MG WIRE, 42 FEET OF TAN MG WIRE, 40 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	8	0
		16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	8	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	8	0
		34 - 34 - A0034331 RED COLOR - 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0
2	KEH-2/KEH-3/FS-2	0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. (A0034310).	2	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	2	0
		0 - 0 - 361091 3/8" BRASS PLUG.	7	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	3	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	2	0
		0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROPRESS ADAPTER.	7	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2 " NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2 " NPT FEMALE CONNECTION, VIEGA.	3	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	3	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300033-001 DIN CONNECTOR, CANFIELD PART #5J560-201-EU0A, TANK FIRE SUPPRESSION, SUBMINATURE SOLENOID CONNECTION (CED VENDOR 30377).	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	12	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	11	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	11	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	6	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	2	0
		0 - 0 - BI145 3/8" BLACK IRON 90 ELL.	6	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
		0 - 0 - SLPCON-40FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 39' GAP. KIT CONTAINS 42 FEET OF BLACK MG WIRE, 42 FEET OF TAN MG WIRE, 40 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	3	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	9	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	3	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	12	0
		16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	12	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	12	0
		34 - 34 - A0034331 RED COLOR - 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE
△		
△		
△		
△		

CAPTIVEAIRE
www.captivaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 259 - 0291 FAX: 9192275947 EMAIL: rep80@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025
DWG.#: 8197441
DRAWN BY: RJH-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 5

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

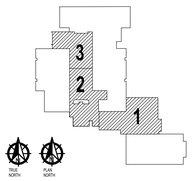
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

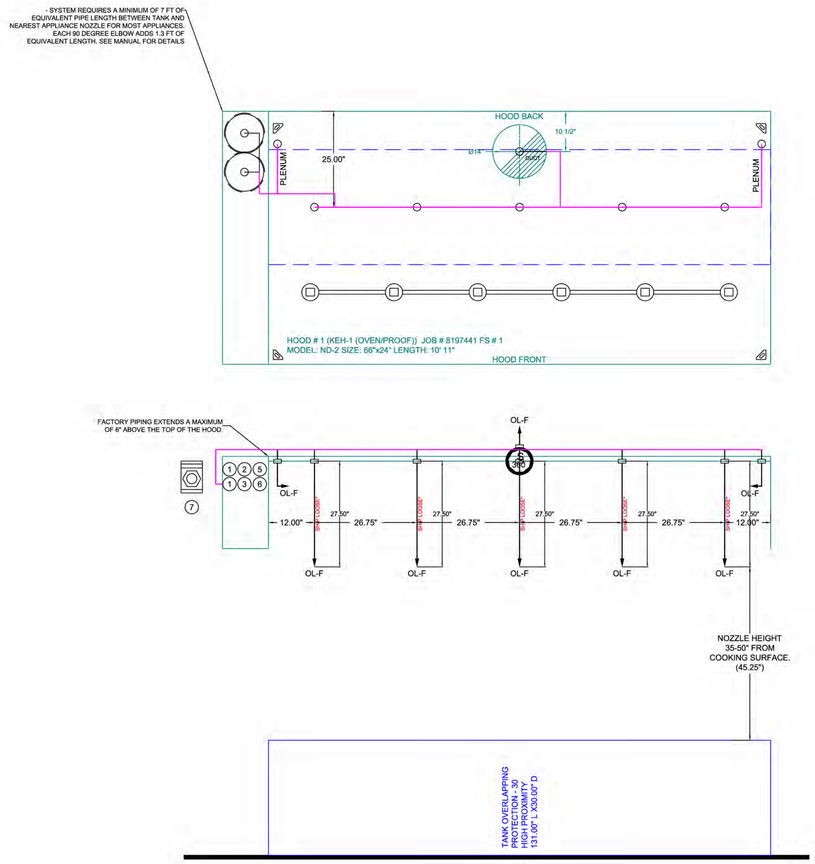
REVISIONS

11/25/2025
ISSUE DATE

2407	PROJECT NO
MDM	DRAWN BY
EZ	CHKD BY

MECHANICAL SCHEDULES

M405
SHEET TITLE



NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 8197441.
JOB NAME: OWASSO 8TH GRADE CENTER.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 37. MAXIMUM FP: 40.
HOOD # 1 10' 11.00" LONG x 66" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

LEGEND - FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVEAIRE
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: reg8k@captiveaire.com
www.captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 6

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

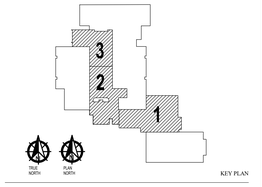
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

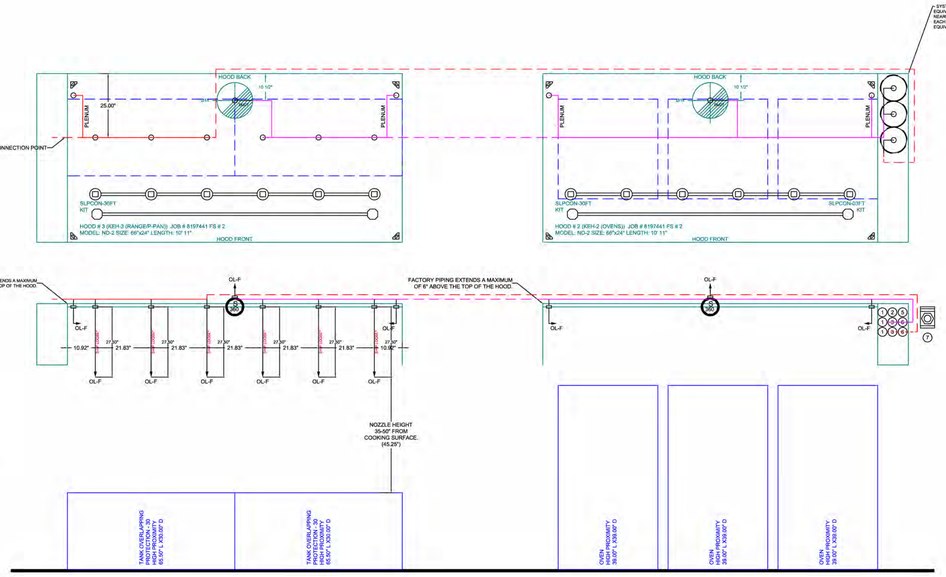
REVISIONS

11/25/2025
ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHK'D BY

MECHANICAL SCHEDULES

M406
SHEET TITLE



NOTES
- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

- JOB #: 8197441.
JOB NAME: OWASSO 8TH GRADE CENTER.

SYSTEM SIZE: TANK-SP-3 DESIGN FP: 54. MAXIMUM FP: 60.
HOOD # 2 10' 11.00" LONG x 66" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.
HOOD # 3 10' 11.00" LONG x 66" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 3 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

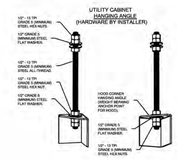
LEGEND - FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

WALL-MOUNT UTILITY CABINET
ASSEMBLY INSTRUCTIONS

CABINET TO BE HUNG BY OTHERS. SEE UTILITY CABINET SCHEDULE FOR CABINET SIZE.

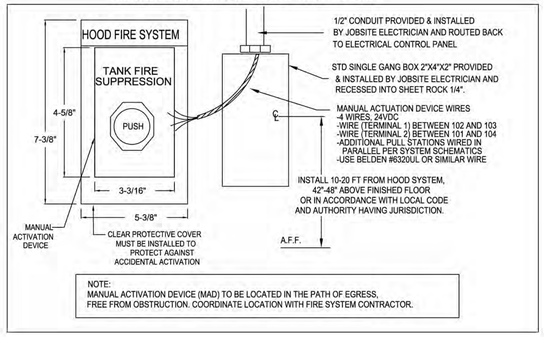
HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH UTILITY CABINET HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



WALL-MOUNT UTILITY CABINET

UTILITY CABINET(S)							
HOOD NO	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL	SWITCHES	WEIGHT
			TYPE	SIZE	MODEL #	QUANTITY	
1	WALL MNT	12"x48"x24"	TANK FS	4.0/4.0	DCV-3111	1 LIGHT 1 FAN	340.00 LBS
2	WALL MNT	12"x48"x24"	TANK FS	4.0/4.0/4.0			400.00 LBS

TANK MANUAL ACTIVATION DEVICE DETAIL



NOTE:
MANUAL ACTIVATION DEVICE (MAD) TO BE LOCATED IN THE PATH OF EGRESS, FREE FROM OBSTRUCTION. COORDINATE LOCATION WITH FIRE SYSTEM CONTRACTOR.

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		
5		

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9182275947 EMAIL: rsg90@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025
DWG.#: 8197441
DRAWN BY: RJH-80
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 7

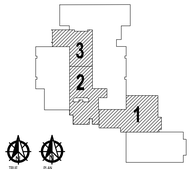
the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS
OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL SCHEDULES

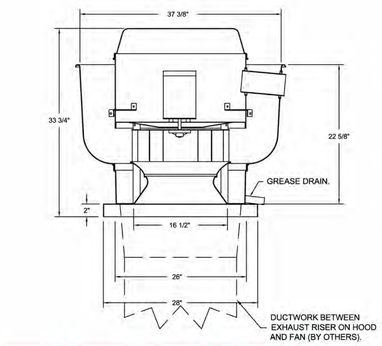
M407

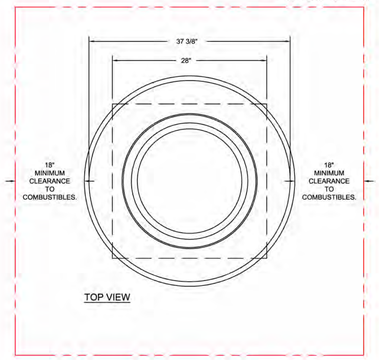
SHEET TITLE

EXHAUST FAN INFORMATION - JOB#8197441

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL.	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	DU180HFA	CAPTIVEAIRE	1910	1.500	1176	TEAO-ECM	3.000	1.0350	3	460	6.0	441 FPM	144	14.4
2	KEF-2	1	DU180HFA	CAPTIVEAIRE	1910	1.500	1176	TEAO-ECM	3.000	1.0350	3	460	6.0	441 FPM	144	14.4
3	KEF-3	1	DU180HFA	CAPTIVEAIRE	2125	1.750	1275	TEAO-ECM	3.000	1.3320	3	460	6.0	491 FPM	144	17.1
4	DEF-1	1	DU33HFA	CAPTIVEAIRE	600	0.500	1342	TEAO-ECM	0.333	0.1470	1	115	4.3	297 FPM	68	11.9

FANS #1 (KEF-1), #3 (KEF-3) - DU180HFA EXHAUST FAN





FEATURES:

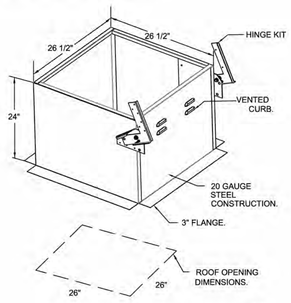
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

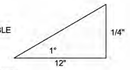
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.

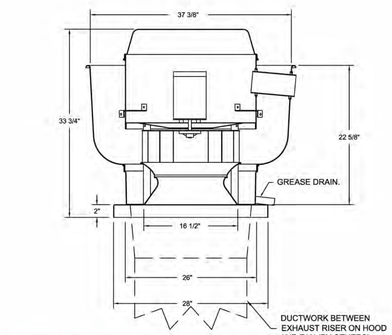


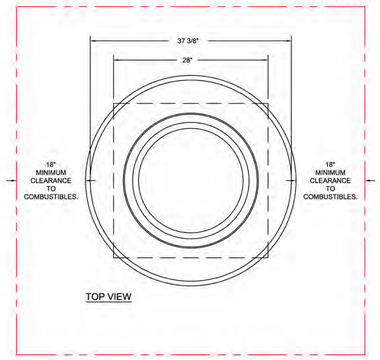
PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.



SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.

FAN #2 DU180HFA - EXHAUST FAN (KEF-2)





FEATURES:

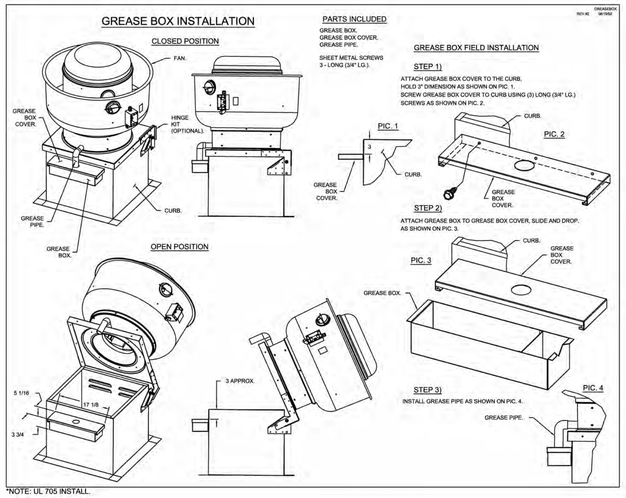
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

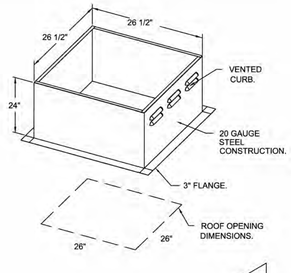
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

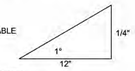
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



*NOTE: UL 705 INSTALL.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.



SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE
△		
△		
△		
△		

CAPTIVEAIRE

Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: rep80@captiveaire.com
www.captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025
DWG.#: 8197441
DRAWN BY: RJH-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 8

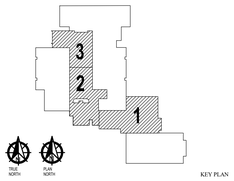
the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS
OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHK'D BY

MECHANICAL SCHEDULES

M408

SHEET TITLE

DOAS/RTU FAN SCHEDULE - JOB#8197441

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	ELECTRICAL INFORMATION					COOLING INFORMATION											COOLING AT 0.4% ENTHALPY CONDITIONS								REHEAT INFORMATION					GAS HEAT INFORMATION					A2L MINIMUM ROOM VOLUME			NOTES
											HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR		CAPACITY			IEER	ISMRE2	OUTSIDE AIR		LEAVING AIR		CAPACITY			DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ROOM AREA (FT2)	AIRFLOW (CFM)	HEIGHT (FT)	
																DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.			DB	WB	DB	WB	DP	TOTAL	SENS.	DB	WB	DESIRED	MAX									
5	DOAU-1	1	CAS-HVAC4-L700-2B-50T-2	CAPTIVEAIRE	28Z-4	0	6450	6450	6062	0.500	4.70	3	460	105A	110A	92.7°F	79.6°F	92.7°F	79.6°F	55.4°F	50.2°F	45.9°F	619.6 MBH	249.2 MBH	16.6	7.2	70.0°F	56.3°F	55.4°F	50.2°F	45.9°F	619.8 MBH	249.2 MBH	70.0°F	56.3°F	103 MBH	260 MBH	334.0 LBS/HR	NATURAL	577128	457474	62°F	7 IN. W.C.–14 IN. W.C.	910.5	1639	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 12:1 TURNDOWN WITH NG AND 10:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. HAIL GUARD FOR CONDENSING COIL
15. DOWN DISCHARGE/DOWN RETURN
16. DIRECT DRIVE ECM PLENUM BLOWER. BELT DRIVEN AND NON-ECM BLOWERS ARE NOT ACCEPTABLE
17. MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60335-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.
18. SCCR RATING OF 65kAMP

Unoccupied Settings

Unoccupied Blower Mode:	Auto		Occ. Space Heat Temp:	69	°F	Unocc. Space Heat Temp: 65 °F
Unoccupied Supply CFM:	6,450	CFM	Occ. Space Cool Temp:	74	°F	Unocc. Space Cool Temp: 76 °F
Unoccupied Outside Air CFM:	0	CFM	Occ. Space Dew Point Temp:	52	°F	Unocc. Space Dew Point Temp: 52 °F

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	KEF-2	YES						
3	KEF-3	YES						
4	DEF-1		YES					

CURB ASSEMBLIES

NO	ON FAN	TAG	R-VALUE	WEIGHT	ITEM	SIZE
1	# 1	KEF-1		52 LBS	CURB	26.500"W X 26.500"L X 24.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT VENTED HINGED.
2	# 2	KEF-2		48 LBS	CURB	26.500"W X 26.500"L X 24.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT VENTED.
3	# 3	KEF-3		52 LBS	CURB	26.500"W X 26.500"L X 24.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT VENTED HINGED.
4	# 4	DEF-1		27 LBS	CURB	19.500"W X 19.500"L X 20.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT VENTED.
5	# 5	DOAU-1	4.3	264 LBS	CURB	80.000"W X 111.000"L X 20.000"H 0.250:12.000 PITCH ALONG WIDTH, RIGHT INSULATED 16 GAUGE.

1* R4.3 FOIL FACED FIBERGLASS INSULATION. COMPLIES WITH UL/ULC,ASTM, & ASHRAE STANDARDS.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA								
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1	KEF-1	EXHAUST	78	14.442372899737254	66.5	5	73.8	77.3	84.7	73.2	67.3	65.3	59.7	54.4
2	KEF-2	EXHAUST	78	14.442372899737254	66.5	5	73.8	77.3	84.7	73.2	67.3	65.3	59.7	54.4
3	KEF-3	EXHAUST	80.4	17.057984319224296	68.9	5	75.2	78.3	87	76.6	69.6	67.3	61.8	56.5
4	DEF-1	EXHAUST	75.2	11.893257987397136	63.7	5	66	73.4	77.4	72.8	69.6	66.5	59	51.2

UNIT SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA								
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
5	DOAU-1	SUPPLY	84	20.3	72.4	5	82.9	84.9	81	80.8	78.8	76.9	73.3	68.1

Note: Sound data across operational range. Tested in accordance to AHRI Standard 270/370.

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DUIDR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2	KEF-2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DUIDR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
3	KEF-3	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DUIDR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
4	DEF-1	1	I 15-BDD DAMPER
		1	ECM WIRING PACKAGE - EXHAUST - MANUAL POTENTIOMETER SPEED CONTROL -MSC
		1	2 YEAR PARTS WARRANTY
5	DOAU-1	1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 2 FURNACES
		1	COOLING OVERRIDE
		1	SHIP LOOSE GAS STRAINER 1 1/4"
		1	RTU BLOWER DOOR SWITCH
		1	RTU4 DOWN DISCHARGE
		1	2" MERV 13 FILTERS FOR RTU4 (QTY. 12)
		1	2" MERV 8 FILTERS FOR RTU4 (QTY. 12)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	RTU4 CURB DUCT HANGER
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTU4 HAIL GUARD
		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
		1	RTU4 DOWN RETURN
		1	2" METAL MESH FILTERS FOR RTU4 OUTDOOR INTAKE
		1	RTU SIZE 4 INTAKE HOOD, SHIPPED LOOSE
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTU4 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	24VAC FIRE INPUT
		1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
		1	50 TON MODULATING COOLING OPTION, 460/480V. 4CFS. R454B REFRIGERANT, 30 TON VARIABLE SPEED COMPRESSOR/20 TON VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	ECM FAN DOAS - 3 PHASE
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT - 2 CIRCUIT
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	50 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R454B
		1	ECM 0-10V SUPPLY FAN CONTROL - RTU MUA BOARD (ZIEHL MOTOR)
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #5	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #5	HMI #2 - SPACE	SPACE	AVERAGED	56

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

DESCRIPTION	DATE

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: regb0@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025
DWG.#: 8197441
DRAWN BY: RJH-80
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 9

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

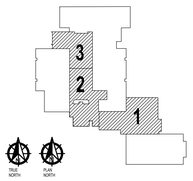
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK 2025
PROJECT



KEY PLAN

REVISIONS

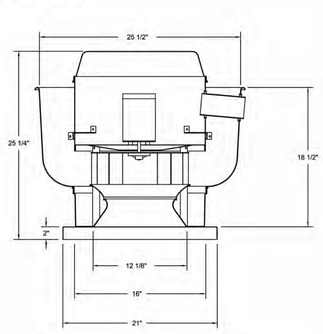
11/25/2025
ISSUE DATE

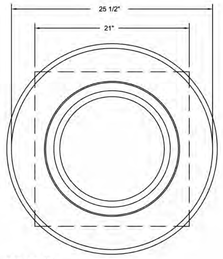
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL SCHEDULES

M409
SHEET TITLE

FAN #4 DU33HFA - EXHAUST FAN (DEF-1)





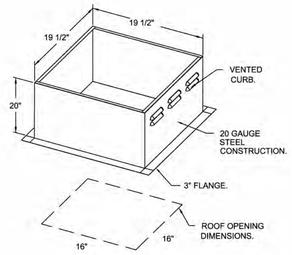
TOP VIEW

FEATURES:

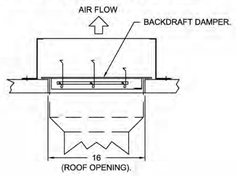
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- NEMA 3R SAFETY DISCONNECT SWITCH.

OPTIONS

- I 15-BDD DAMPER.
- ECM WIRING PACKAGE - EXHAUST -
MANUAL POTENTIOMETER SPEED CONTROL
-MSC.
- 2 YEAR PARTS WARRANTY.



BACKDRAFT DAMPER INSTALLATION



NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK, 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: reg80@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 10

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

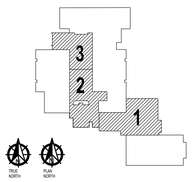
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

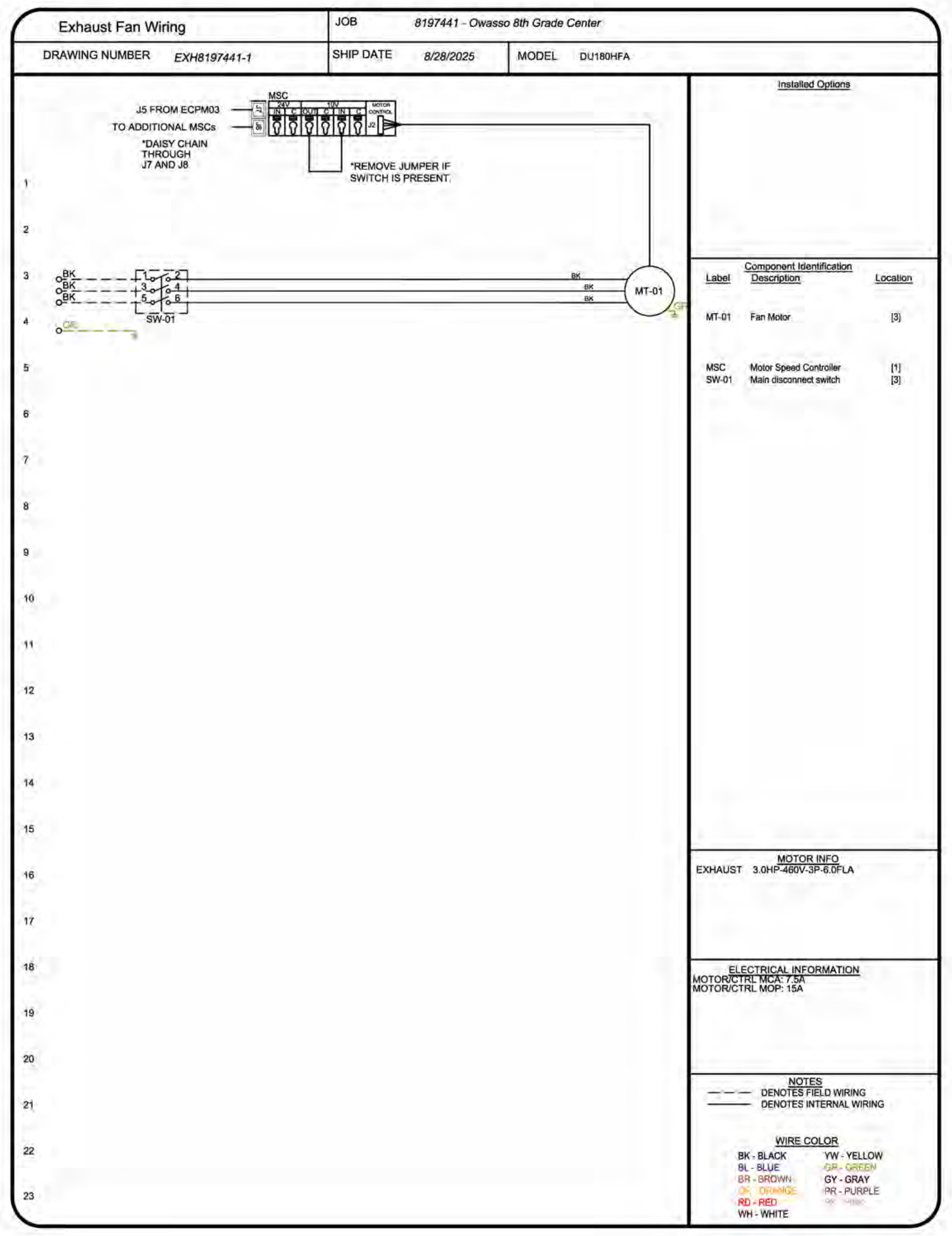
REVISIONS

11/25/2025
ISSUE DATE

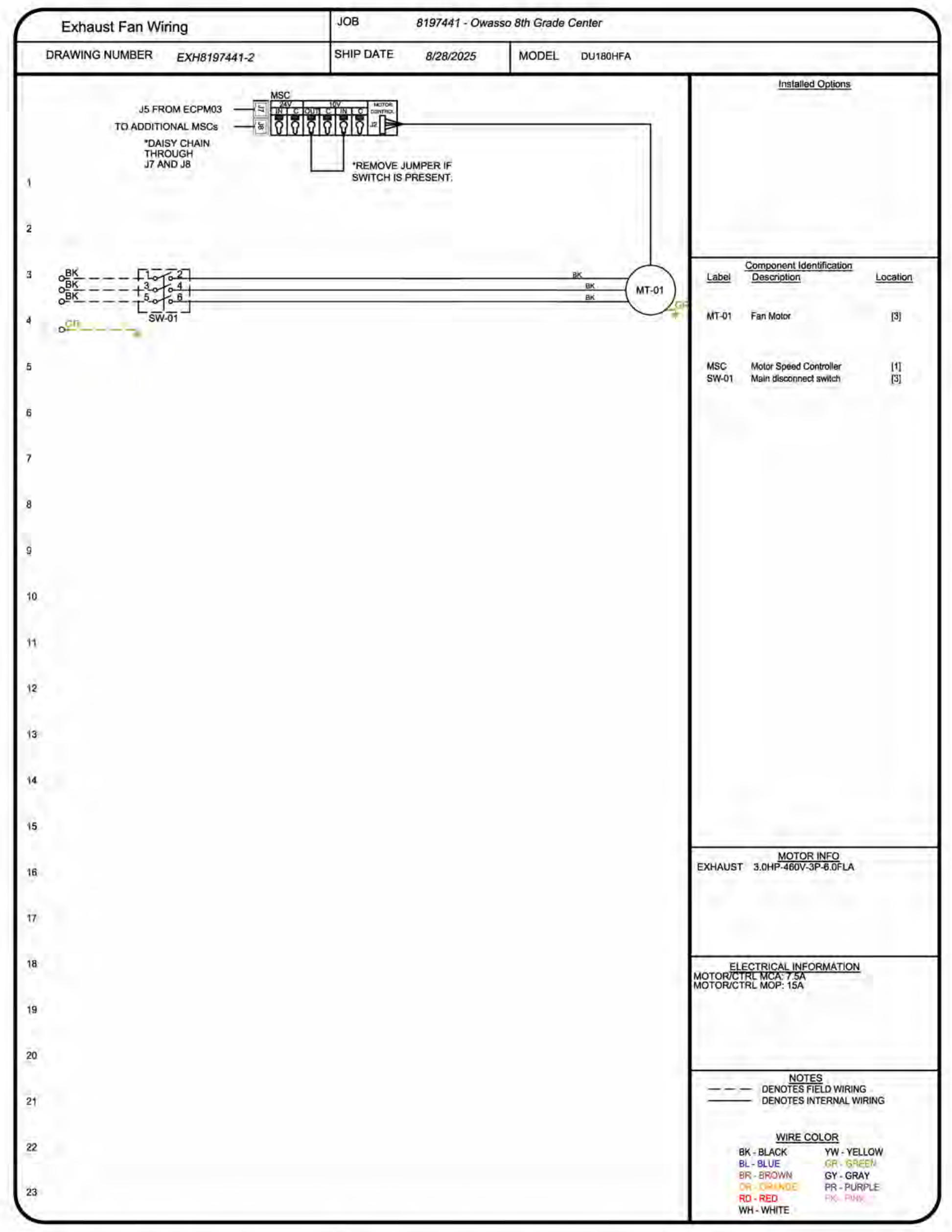
2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL SCHEDULES

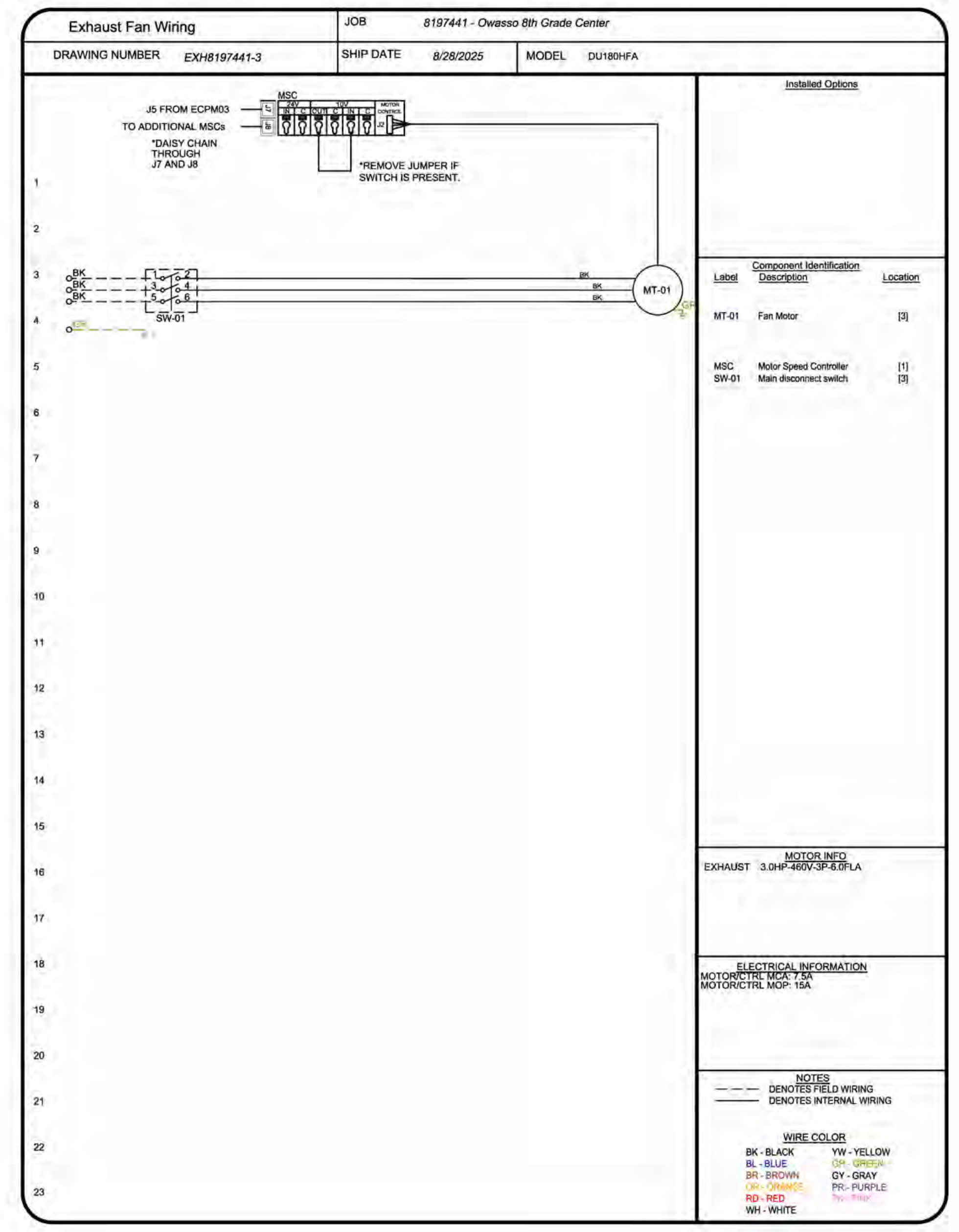
M410
SHEET TITLE



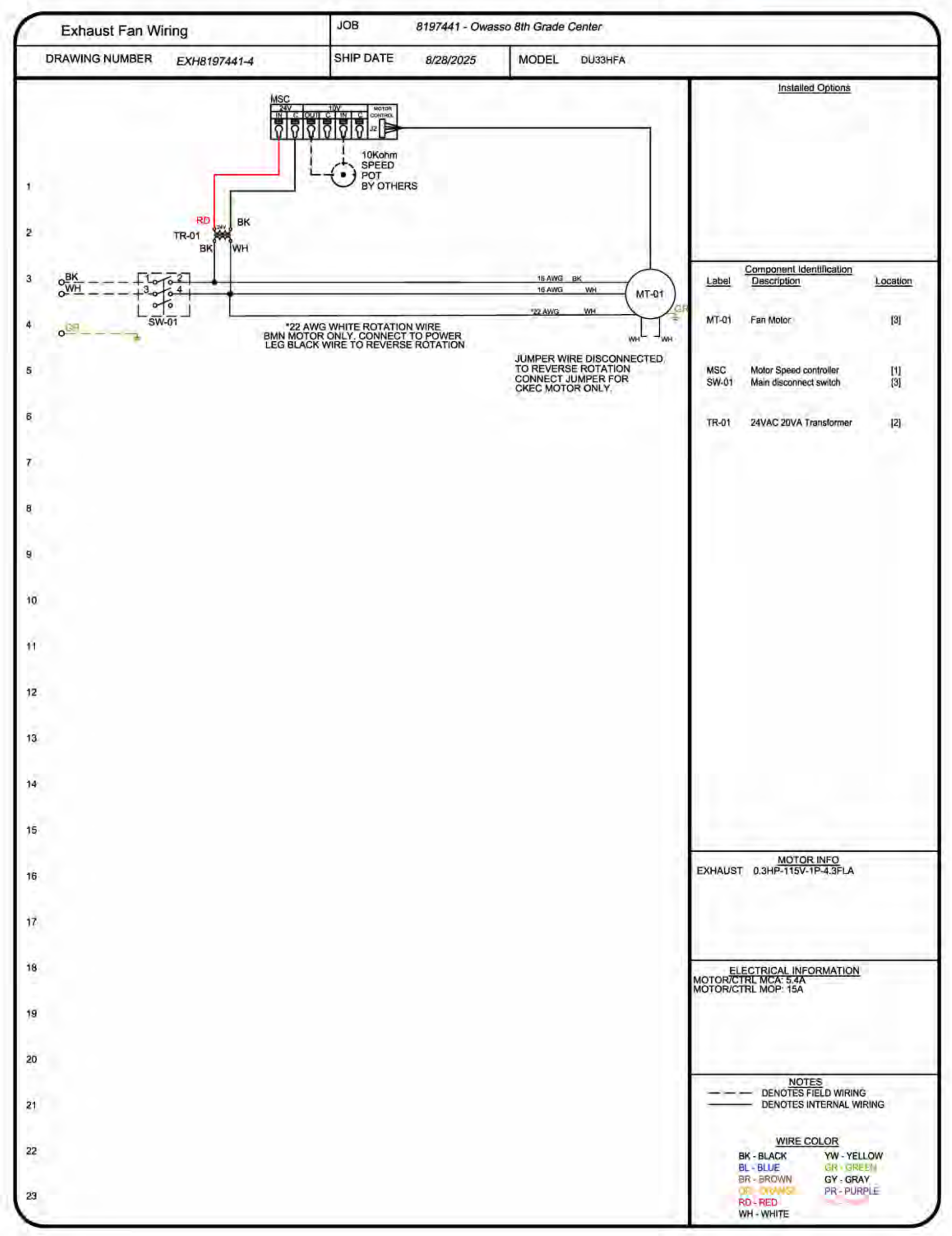
Exhaust Fan Wiring
JOB 8197441 - Owasso 8th Grade Center
DRAWING NUMBER EXH8197441-1
SHIP DATE 8/28/2025
MODEL DU180HFA
MSC
J5 FROM ECPM03
TO ADDITIONAL MSCs
*DAISY CHAIN THROUGH J7 AND J8
*REMOVE JUMPER IF SWITCH IS PRESENT.
BK
SW-01
MT-01
GR
Installed Options
Component Identification
Label Description Location
MT-01 Fan Motor [3]
MSC Motor Speed Controller [1]
SW-01 Main disconnect switch [3]
MOTOR INFO
EXHAUST 3.0HP-460V-3P-6.0FLA
ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 7.5A
MOTOR/CTRL MOP: 15A
NOTES
DENOTES FIELD WIRING
DENOTES INTERNAL WIRING
WIRE COLOR
BK - BLACK
BL - BLUE
BR - BROWN
RD - RED
WH - WHITE
YW - YELLOW
GR - GREEN
GY - GRAY
PR - PURPLE



Exhaust Fan Wiring
JOB 8197441 - Owasso 8th Grade Center
DRAWING NUMBER EXH8197441-2
SHIP DATE 8/28/2025
MODEL DU180HFA
MSC
J5 FROM ECPM03
TO ADDITIONAL MSCs
*DAISY CHAIN THROUGH J7 AND J8
*REMOVE JUMPER IF SWITCH IS PRESENT.
Installed Options
MOTOR INFO
EXHAUST 3.0HP-460V-3P-6.0FLA
ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 7.5A
MOTOR/CTRL MOP: 15A
NOTES
DENOTES FIELD WIRING
DENOTES INTERNAL WIRING
WIRE COLOR
BK - BLACK
BL - BLUE
YW - YELLOW
GR - GREEN



Exhaust Fan Wiring
JOB 8197441 - Owasso 8th Grade Center
DRAWING NUMBER EXH8197441-3
SHIP DATE 8/28/2025
MODEL DU180HFA
MSC
J5 FROM ECPM03
TO ADDITIONAL MSCs
*DAISY CHAIN THROUGH J7 AND J8
*REMOVE JUMPER IF SWITCH IS PRESENT.
Installed Options
MOTOR INFO
EXHAUST 3.0HP-460V-3P-6.0FLA
ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 7.5A
MOTOR/CTRL MOP: 15A
NOTES
DENOTES FIELD WIRING
DENOTES INTERNAL WIRING
WIRE COLOR
BK - BLACK
BL - BLUE
YW - YELLOW
GR - GREEN



Exhaust Fan Wiring
JOB 8197441 - Owasso 8th Grade Center
DRAWING NUMBER EXH8197441-4
SHIP DATE 8/28/2025
MODEL DU33HFA
MSC
10Kohm SPEED POT BY OTHERS
RD
BK
TR-01
WH
SW-01
16 AWG
*22 AWG
MT-01
*22 AWG WHITE ROTATION WIRE BMN MOTOR ONLY. CONNECT TO POWER LEG BLACK WIRE TO REVERSE ROTATION
JUMPER WIRE DISCONNECTED TO REVERSE ROTATION CONNECT JUMPER FOR CKEC MOTOR ONLY.
Installed Options
Component Identification
Label Description Location
MT-01 Fan Motor [3]
MSC Motor Speed controller [1]
SW-01 Main disconnect switch [3]
TR-01 24VAC 20VA Transformer [2]
MOTOR INFO
EXHAUST 0.3HP-115V-1P-4.3FLA
ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 5.4A
MOTOR/CTRL MOP: 15A
NOTES
DENOTES FIELD WIRING
DENOTES INTERNAL WIRING
WIRE COLOR
BK - BLACK
BL - BLUE
BR - BROWN
OR - ORANGE
RD - RED
WH - WHITE
YW - YELLOW
GR - GREEN
GY - GRAY
PR - PURPLE
PK - PINK

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS	
DESCRIPTION	DATE:
△	
△	
△	
△	

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK, 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: reg80@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025
DWG.#: 8197441
DRAWN BY: RJH-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 11

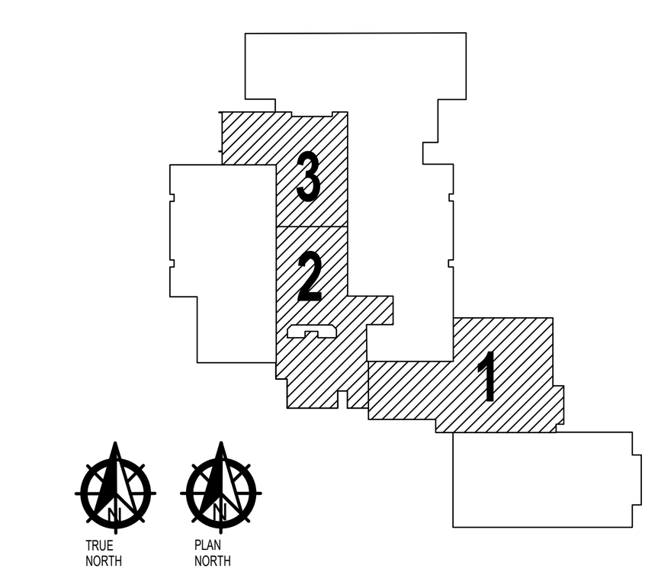
the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA#: 32 EXP.: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS
OWASSO, OK
2025
PROJECT



KEY PLAN

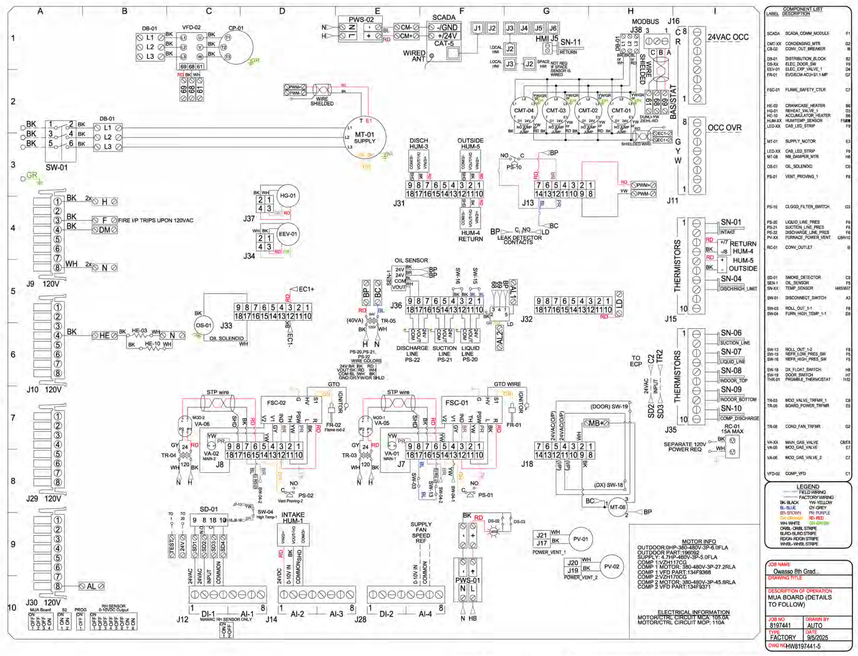
REVISIONS

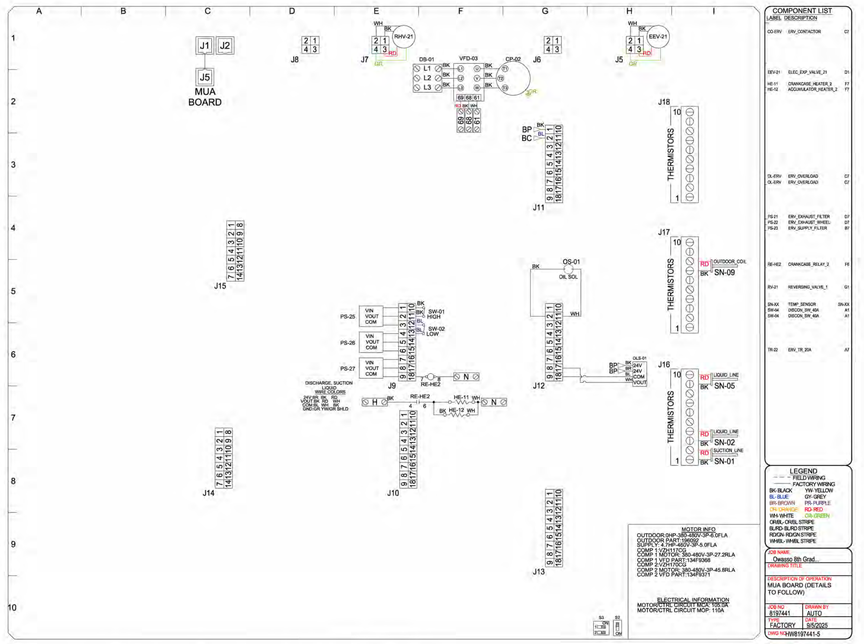
11/25/2025
ISSUE DATE

24037 PROJECT NO
MDM DRAWN BY
EZ CHKD BY

MECHANICAL SCHEDULES

M411
SHEET TITLE





SMV VFD PARAMETER SETTINGS

P100	(START SOURCE) = 01
P150	(TB-30 OUTPUT) = 1
P194	PASSWORD = 225
P410	MODBUS ADDRESS = 21

ADJUST MANUALLY ON ALL DRIVES	
P103	VFD MAX FREQUENCY
P107	08 (IF 120 OR 208 VAC) 01 (IF230, 460 OR 575VAC)
P108	(MOTOR FLA X 100) / DRIVE OUTPUT RATING
P167	REFERENCE BUILD SHEET
P171	P158 - 1

*NOTE: THE DEFAULT FOR THE DRIVE IS "225".

All external control wires to motor speed control should be 16-20 AWG shielded multi-conductor cables and must not be run in the same conduit or raceway with any high power wiring. Ground Shielded Cable at the drive chassis ONLY.

PG. 11, 18, 33 OF THE DRIVE MANUAL DESCRIBES THE PROPER HANDLING OF THE VARIABLE FREQUENCY DRIVE.

IT MAY BE REQUIRED TO FULLY POWER DOWN THE DRIVE AND TURN BACK ON IN ORDER TO INITIATE NEW PARAMETER SETTINGS.

**Min. and Max. Frequency Settings override all other Preset speeds/Parameters. Do not adjust these on the VFD. Min. and Max. Frequency should be adjust on the RTU HMI.

*Note: Not Suitable for Corner Grounded 3 Phase Input power

COMPRESSOR DRIVE PARAMETER SETTINGS MUST BE CONFIGURED BEFORE STARTUP

COMPRESSOR VFD 1

0-02	(1)VFD POWER KW
0-40	(0) PASSWORD
0-60	225
0-61	(1) LCP READ ONLY
0-66	(1) LCP READ ONLY
3-15	(0) NO FUNCTION
3-16	(0) NO FUNCTION
3-41	200.0Hz
3-42	200.0Hz
3-51	30.0Hz
3-52	30.0Hz
8-01	(2) CTRL WORD ONLY
8-03	20 SECONDS
8-04	(2) STOP
8-30	(2) MODBUS RTU
8-31	1
8-32	19200
8-33	(0) EVEN PARITY, 1 STOP BIT
8-43-2	1610
8-43-3	1610
8-43-4	1613
8-43-5	1613
8-43-6	1614
8-43-7	1614
8-43-8	1690
8-43-9	1690
8-43-10	1634
8-43-12	1684
8-43-13	1684
28-00	DISABLE
28-11	1440hr
28-12	24h

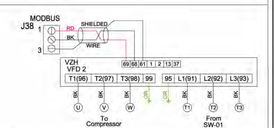
*Must be programmed using software

*Changing 8-30 will reset 8-01 and 8-03 if programmed after 8-01 and 8-03 are set.

COMPRESSOR VFD 2

0-02	(1)VFD POWER KW
0-40	(0) PASSWORD
0-60	225
0-61	(1) LCP READ ONLY
0-66	(1) LCP READ ONLY
3-15	(0) NO FUNCTION
3-16	(0) NO FUNCTION
3-41	200.0Hz
3-42	200.0Hz
3-51	30.0Hz
3-52	30.0Hz
8-01	(2) CTRL WORD ONLY
8-03	20 SECONDS
8-04	(2) STOP
8-30	(2) MODBUS RTU
8-31	2
8-32	19200
8-33	(0) EVEN PARITY, 1 STOP BIT
8-43-2	1610
8-43-3	1610
8-43-4	1613
8-43-5	1613
8-43-6	1614
8-43-7	1614
8-43-8	1690
8-43-9	1690
8-43-10	1634
8-43-12	1684
8-43-13	1684
28-00	DISABLE
28-12	24h

*Must be programmed using software



VZH SERIES COMPRESSOR VFD

TERMINAL	FUNCTION
13	24+
37	Pressure Switch In
1	Relay 1 to oil solenoid
2	Relay 1 to oil solenoid
61	COM RS-485
68	N RS-485
69	P RS-485
95	INPUT Ground
L1 (91)	3 Phase Input or Single Phase Input
L2 (92)	3 Phase Input or Single Phase Input
L3 (93)	3 Phase Input
T1 (96)	Compressor
T2 (97)	Compressor
T3 (98)	Compressor
99	Compressor Ground

RTU VFD SCHEMATIC

COMPONENT LIST

LABEL	DESCRIPTION
PWS-01	24VDC Power Supply
SW-01	Main Disconnect Sw
VFD-2	Compressor VFD

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		
5		

CAPTIVEAIRE

Tulsa Office
12101 East 51st Street, Suites 101A, Tulsa, OK 74146 PHONE: (918) 258 - 0291 FAX: 9192275947 EMAIL: rep80@captiveaire.com
www.captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 12

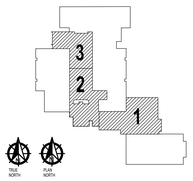
the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

MATTHEW MALONE 2/13/2026 35205 OKLAHOMA

CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS
OWASSO, OK 2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025 ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHKD BY

MECHANICAL SCHEDULES

M412

SHEET TITLE

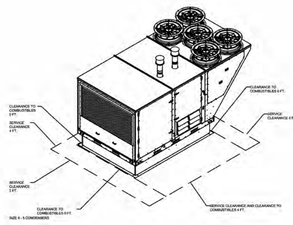
FAN #5 CAS-HVAC4-I.700-28Z-50T-2 - HEATER (DOAU-1)

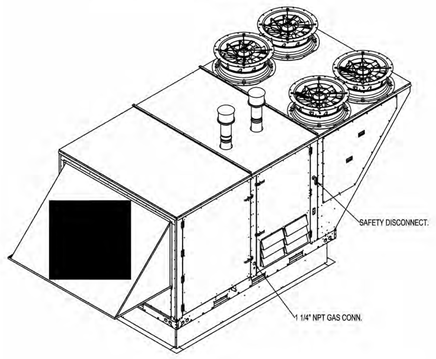
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. [ ] DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
5. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

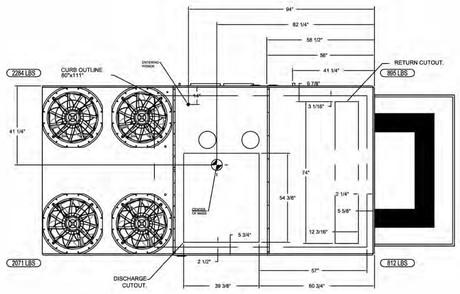
*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

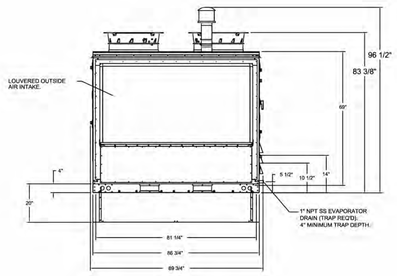
NOTE: THIS UNIT IS INTENDED TO SERVE IN PLACE OF THE KITCHEN HVAC ROOF TOP UNIT (RTU) IN ADDITION TO PROVIDING APPROPRIATE MAKE-UP AIR FOR THE KITCHEN HOOD(S). RTU AND ASSOCIATED DUCTWORK SHALL BE REMOVED FROM SCOPE UNLESS REQUIRED FOR INTERNAL LOAD ESTIMATES. FINAL DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD.

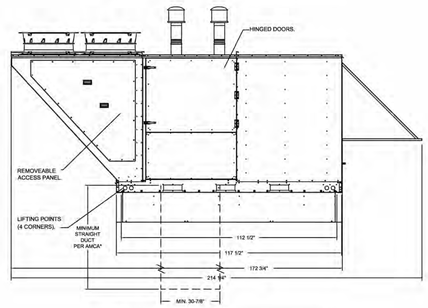
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED SUPPLY STRAIGHT DUCT SIZE IS 30-7/8" x 39-3/4".
SUGGESTED RETURN STRAIGHT DUCT SIZE IS 74" x 12-1/4".

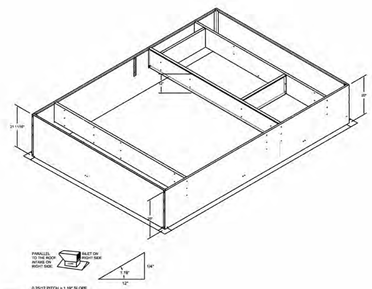


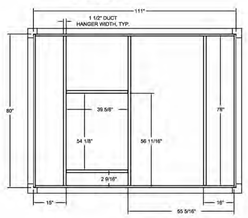


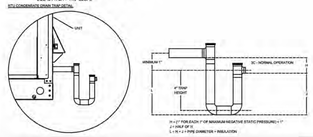










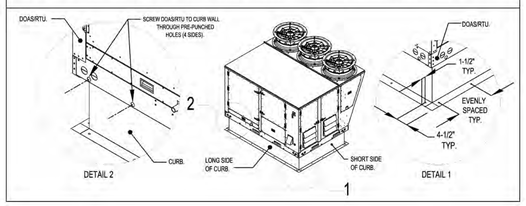


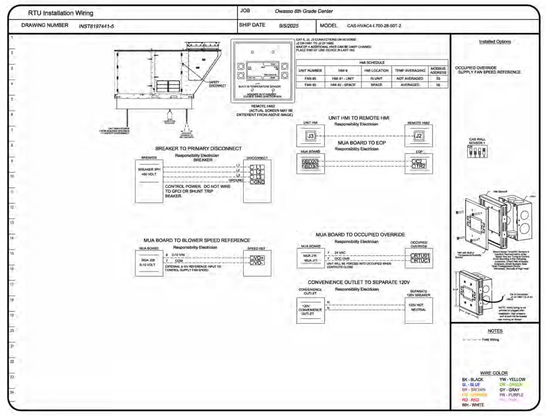
H = 2" FOR EACH 1" OF MAXIMUM NEGATIVE STATIC PRESSURE(-) 1"
2" ONLY OF 3"
L = H + 1 PIPE DIAMETER + INSULATION

TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 19" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.

2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.





NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK. 74146 PHONE: (918) 258 - 0291 FAX: 9192279947 EMAIL: regRo@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025

DWG.#: 8197441

DRAWN BY: RJH-80

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

MASTER DRAWING

SHEET NO. 13

the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2022
web: stacy-group.com

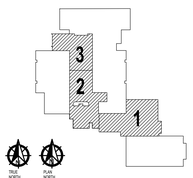
LICENSED PROFESSIONAL ENGINEER
MATTHEW MALONE
2/13/2026
35205
OKLAHOMA

CEC
CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP: 2026-06-30
CEC PROJECT 250412

OWASSO
8th GRADE
ADDITION

OWASSO PUBLIC SCHOOLS

OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

2407 | PROJECT NO
MDM | DRAWN BY
EZ | CHK'D BY

MECHANICAL SCHEDULES

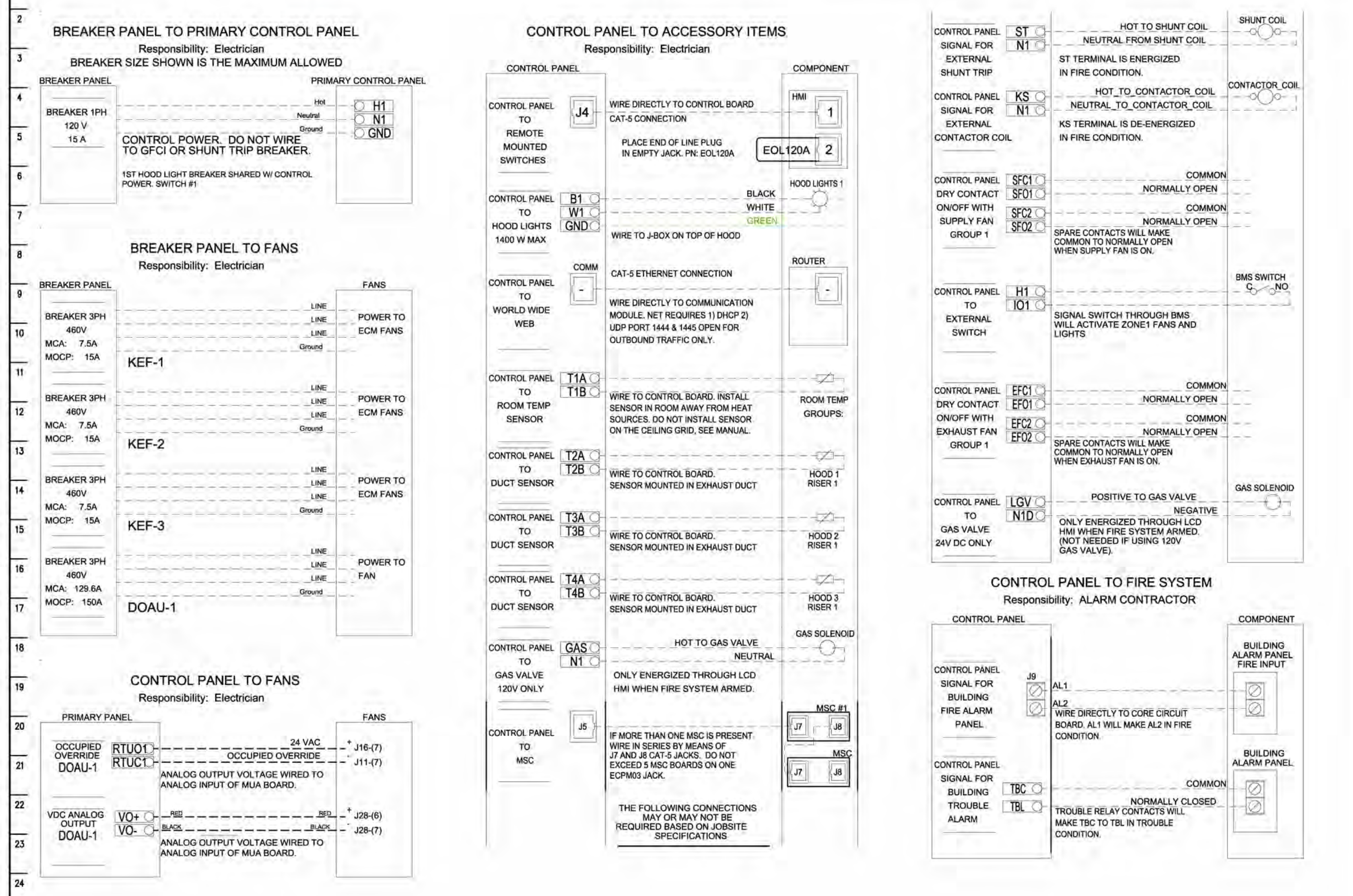
M413
SHEET TITLE

ELECTRICAL PACKAGE - JOB#8197441

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	ϕ	HP	VOLT	FLA
1		DCV-3111	WALL UTILITY CABINET LEFT	SHIP LOOSE W/ PREWIRE	1 LIGHT 1 FAN	SMART CONTROLS DCV	KEF-1	EXHAUST	3	3.000	460	6.0
							KEF-2	EXHAUST	3	3.000	460	6.0
							KEF-3	EXHAUST	3	3.000	460	6.0
							DOAU-1	SUPPLY	3	4.700	460	5.0

JOB NO 8197441 | MODEL NUMBER DCV-3111 | JOB NAME Owasso 8th Grade Center | DRAWN BY | DATE 8/28/2025 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-1

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 3 Exhaust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for field installation.Verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.



JOB NO 8197441 | MODEL NUMBER DCV-3111 | JOB NAME Owasso 8th Grade Center | DRAWN BY | DATE 8/28/2025 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 4.0/4.0 (KEH-1/FS-1).

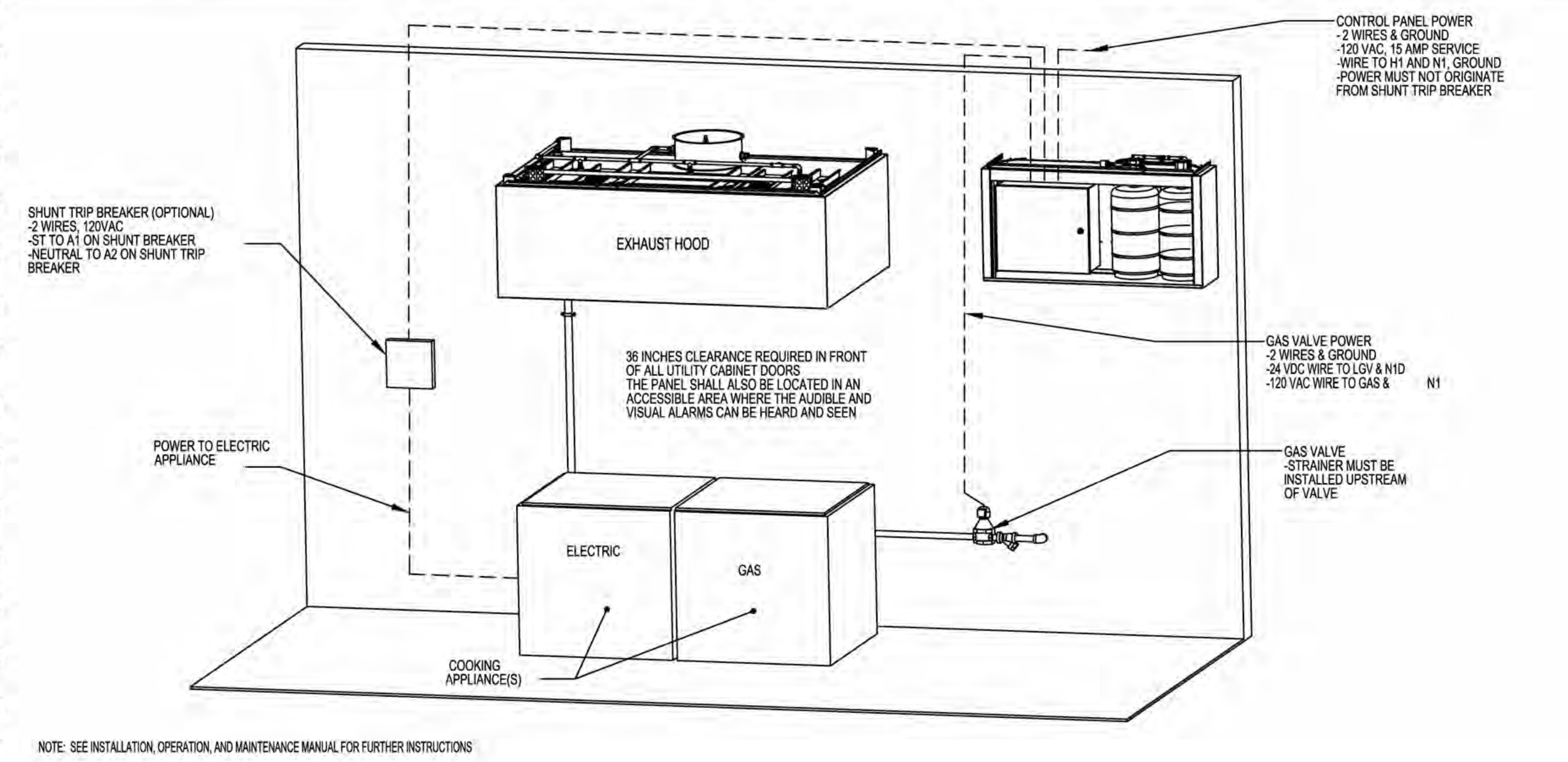
WALL MOUNT UTILITY CABINET TANK PROTECTION ELECTRICAL DETAIL

10/01/2023 Rev. 03

FS-1: MASTER

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1D TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

REVISIONS

CAPTIVEAIRE
www.captiveaire.com
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK, 74146 PHONE: (918) 258 - 0291 FAX: 9182275947 EMAIL: reg80@captiveaire.com

Owasso 8th Grade Center
13901 East 86th Street North,
Owasso, OK, 74055

DATE: 8/28/2025
DWG.#: 8197441
DRAWN BY: RJH-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 14

NOTE: THIS SHEET PROVIDED AND DESIGNED BY CAPTIVEAIRE AND IS TO BE USED AS THE BASIS OF DESIGN ON THIS PROJECT. MECHANICAL CONTRACTOR TO INCLUDE BID TO PROVIDE & INSTALL COMPLETE AND OPERATIONAL HOOD VENTILATION SYSTEMS. REFER TO FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION ON KITCHEN VENTILATION HOODS. FINAL LAYOUT AND EQUIPMENT TO BE COORDINATED PER ARCHITECTURAL PLANS AND SPECIFICATIONS. NO WORK IS TO BE PERFORMED PRIOR TO COORDINATION WITH OWNER PROVIDED EQUIPMENT. ALTERNATE "EQUAL" MANUFACTURERS TO BE APPROVED BY OWNER, ARCHITECT, AND ENGINEER. VERIFY VOLTAGE PROVIDED FOR PARTICULAR SITE.

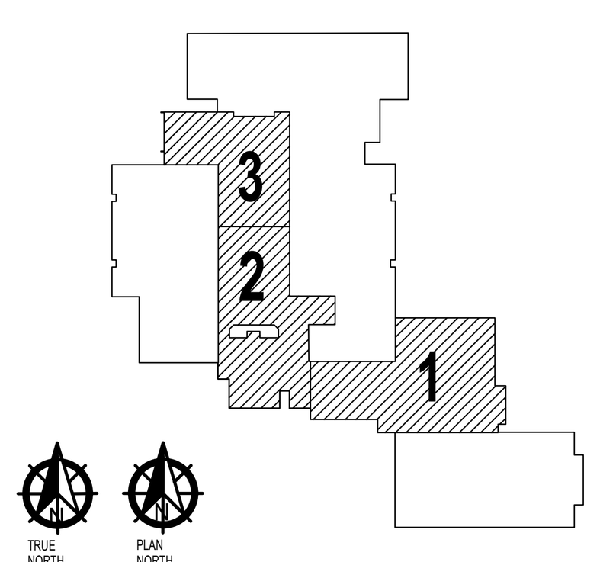
the.stacy.group
architecture. interiors
8091 N. Owasso Expressway
Owasso, Oklahoma 74055
phone: 918.272.2622
web: stacy-group.com

MATTHEW MALONE 2/13/2026 35205 OKLAHOMA

CEC CORPORATION
WWW.CONNECTCEC.COM
OK CA# 32 EXP. 2026-06-30
CEC PROJECT 250412

OWASSO 8th GRADE ADDITION

OWASSO PUBLIC SCHOOLS
OWASSO, OK
2025
PROJECT



KEY PLAN

REVISIONS

11/25/2025
ISSUE DATE

2407 PROJECT NO
MDM DRAWN BY
EZ CHK'D BY

MECHANICAL SCHEDULES

M414
SHEET TITLE