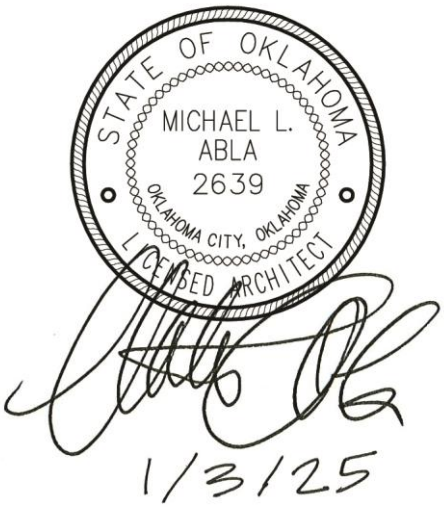
MOORE PUBLIC SCHOOLS -
CHILD CARE CENTER
Moore Public Schools - Moore, Oklahoma
AGP - Moore, Oklahoma

ADDENDUM NO. 6
January 3, 2025



This addendum applicable to work designated herein, shall be understood to be an Addendum, and as such shall be included in the Contract Agreement.

Receipt of this Addendum shall be acknowledged by the Construction Management Firm notifying this office in writing, and by any applicable subcontractor to the CM.

This addendum consists of two (2) pages with attachments of twenty-four (24) 8.5″x11″ pages and sixteen (16) 24″x36″ sheets.

A. Drawings:

Civil

1. Sheet C300, Detail 1, Site Plan – Parking Requirements: the new concrete sidewalk identified / located at the north, east, and south perimeters of the New Playground (to be addressed by a separate bid package) shall be included with the playground work and included in the separate / future bid package referenced. All other new concrete work noted on this sheet as per Addendum No.3, shall be provided in this current bid package.

Architectural Demolition

No changes.

Structural

Refer to attachments.

Architectural

1. Sheet A401, Detail 16, Typical Diaper Counter: omit reference to "rounded corners" as indicated and only provide at open end of changing area.

2. Sheet A601, Detail 2, Color Schedule: solid surface color #18 at countertops and backsplashes to be Corian Deep Night Sky or approved equal.

3. Sheet A701, Cabinet Sections and Details: added note referring to Frameless/European millwork construction being acceptable. Refer to attachment.

Mechanical, Electrical, and Plumbing

Refer to attachments.

Food Service Documents

Refer to attachment.

B. Specifications:

1. Section 05400-1.05-A Cold-Formed Metal Framing - Quality Assurance: clarification - engineered shop drawings and calculations are only required for load-bearing applications.

2. Section 06410 Custom Casework: replace section with attached section in its entirety.

3. Section 06410-2.05 Custom Casework – Architectural Cabinet Solid Surface Tops (Countertops): all countertops are to be solid surface as detailed and noted in the attached revised specifications.

4. Section 06410 Custom Casework: the use of Ives 581 Single Coat Hooks in lieu of hooks specified is acceptable. Refer to Sheet A403 as supplied by Addendum No. 4 for quantity and locations.

5. Section 06420 Custom Laminate Casework (Contractor Option): replace section with attached section in its entirety.

6. Section 09250-2.02 Gypsum Wallboard – Impact Resistant, Fire-rated: clarification – Impact Resistant, Fire-rated gypsum wall board is to be provided only at the Indoor Play Area, Room #417.

END OF ADDENDUM NO. 6

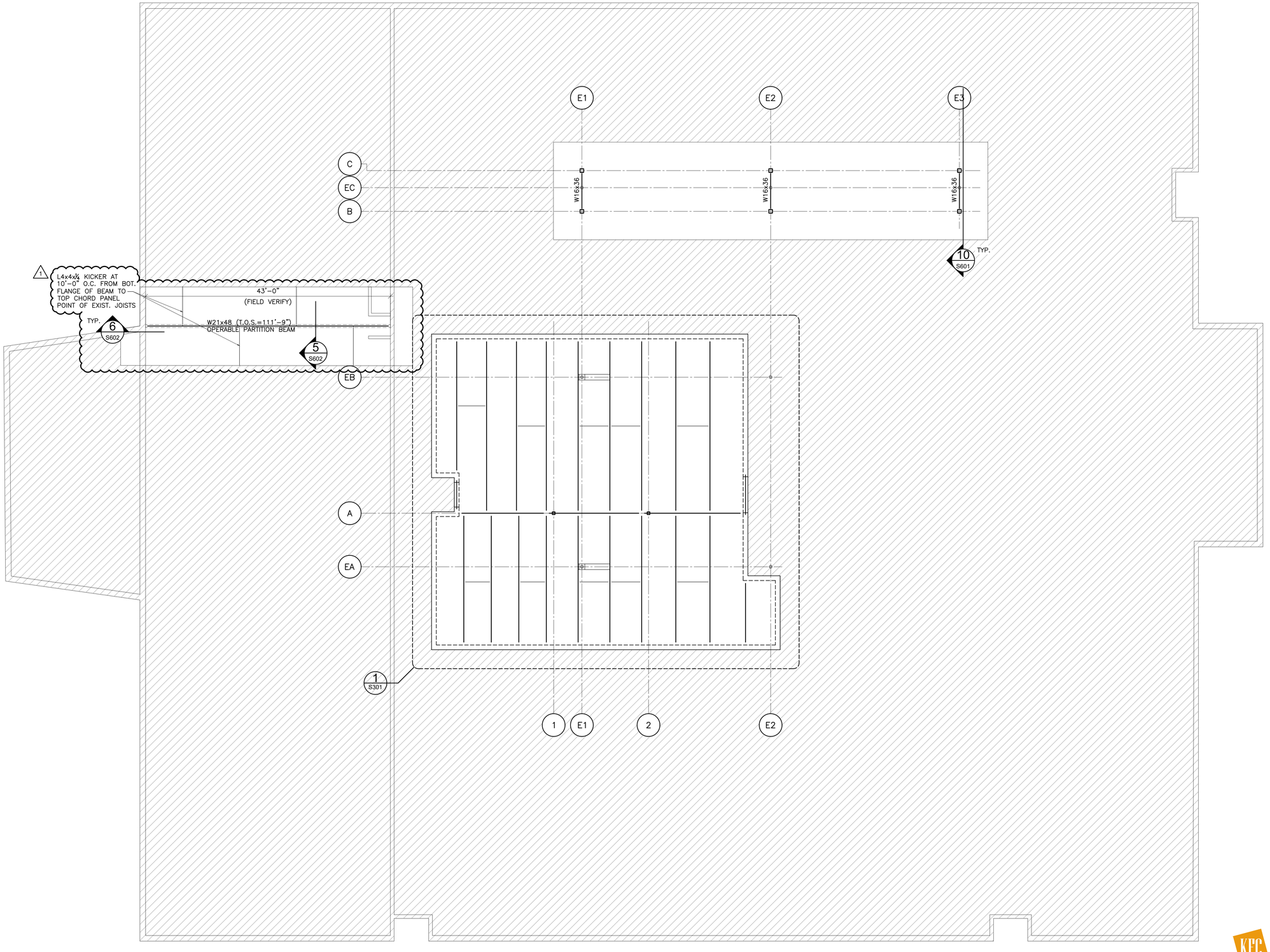
OMNI CONSTRUCTION

P. O. Box 892245 • OKC, OK 73189
OFFICE: 405-735-3992 • CELL: 405-570-7881

Addendum #6 (ADD6)
MPS Child Care Center
01/03/2025

1.) Bid package #9A Operable Partitions - Installation of operable partition wall will need to be included in this bid package. Furnish all labor, materials, & equipment necessary per the plans & specifications to complete this scope of work.

2.) Bid Package #14 Plumbing – The propane tank for the generator room and the installation is to be included in the plumbing bid package #14.



NORTH

1 S300 OVERALL FRAMING PLAN

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

AGP
the Abla Griffin Partnership L.L.C.

201 N. BROADWAY
SUITE 210
MOORE, OK. 73160
405.735.3477
AGP@theAGP.net
www.theAGP.net

CIVIL

KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL

PROFESSIONAL STRUCTURAL ENGINEER
BRANDON W. BIRCH
26145
OKLAHOMA
12/23/2024

CJC
drawn by

BWB
checked by

OCTOBER 2024
date

revisions
1 ADDENDUM 6 12/23/2024

MOORE PUBLIC SCHOOLS
BOARD OF EDUCATION
MOORE, OKLAHOMA

MOORE Public Schools
LEARNING FOR LIFE

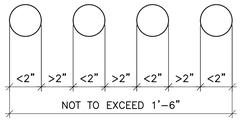
CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

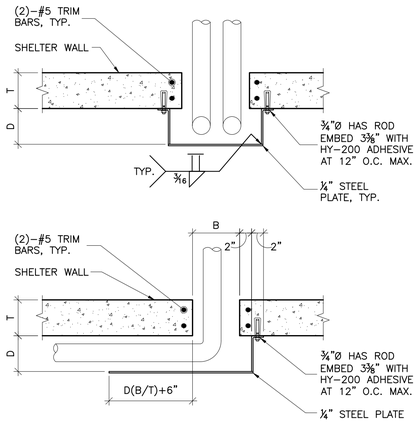
S300

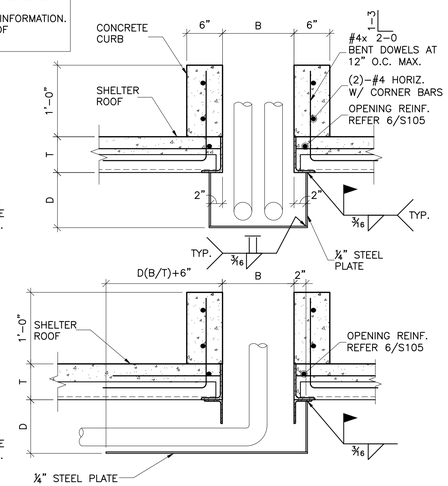
KFC engineering
Kirkpatrick Forest Curtis PC
Structural Engineering
OK CA #3888, EXP. 06/30/25
525 Central Park Drive, Suite 202
Oklahoma City, OK 73105
405.528.4596 | kfcengr.com

NOTE:
OPENINGS 2" OR LESS MAY BE MADE IN THE SHELTER WALLS OR ROOF WITHOUT PROTECTION OR REGARD TO THE TYPICAL REINFORCING (SPECIAL REINFORCING AROUND OPENINGS SHALL NOT BE CUT). GROUPS OF UP TO 4 OPENINGS 2" OR LESS MAY BE MADE PROVIDED THE CLEAR SPACE BETWEEN OPENINGS EXCEEDS 2" AND THE TOTAL LENGTH OF THE GROUP DOES NOT EXCEED 18". OPENINGS CAN BE HORIZONTAL (AS SHOWN) OR VERTICAL

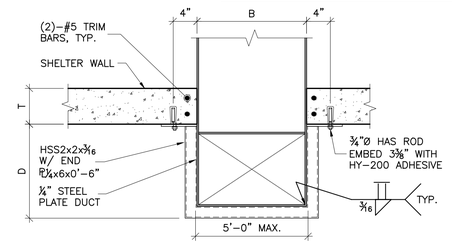


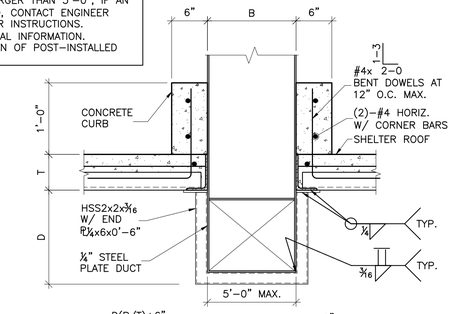
NOTES:
1. OPENINGS 18" OR LESS MAY BE MADE IN THE SHELTER WALLS OR ROOF AS SHOWN.
2. REFER 6/S105 AND 7/S105 FOR ADDITIONAL INFORMATION.
3. DO NOT CUT WALL REINF. FOR INSTALLATION OF POST–INSTALLED ANCHORS.

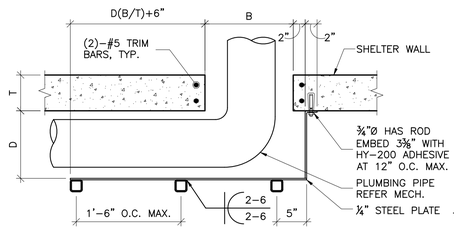


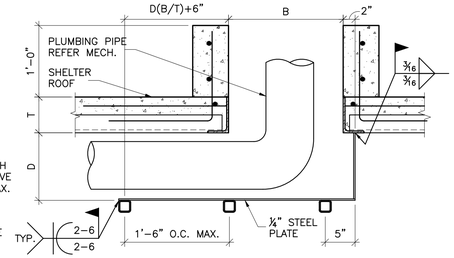


NOTES:
1. WE ARE NOT AWARE OF ANY OPENINGS LARGER THAN 5'–0", IF AN OPENING LARGER THAN 5'–0" IS REQUIRED, CONTACT ENGINEER IMMEDIATELY FOR EVALUATION AND FURTHER INSTRUCTIONS.
2. REFER 6/S105 AND 7/S105 FOR ADDITIONAL INFORMATION.
3. DO NOT CUT WALL REINF. FOR INSTALLATION OF POST–INSTALLED ANCHORS.







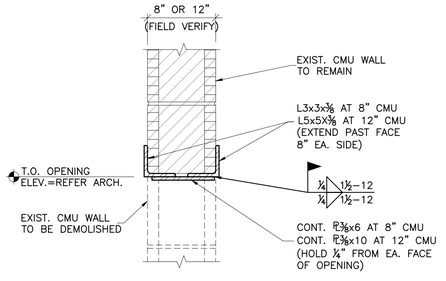


1 OPENINGS IN SHELTER 2" OR LESS
S602 — SCALE: 1"=1'-0"

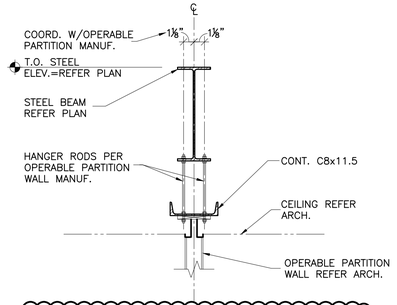
2 OPENINGS IN SHELTER 2" TO 1'-6"
S602 — SCALE: 1"=1'-0"

3 OPENINGS IN SHELTER TO 1'-6" TO 5'-0"
S602 — SCALE: 1"=1'-0"

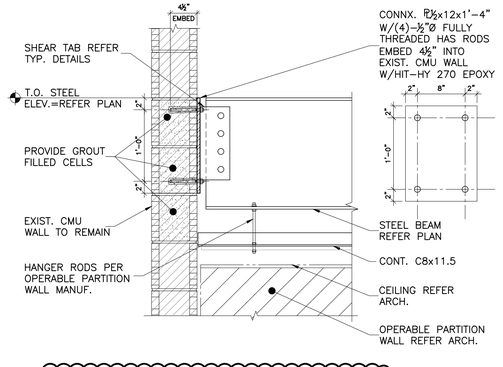
SEQUENCING NOTES:
1. IDENTIFY 8" OR 12" CMU WALL AND USE PROPER ANGLE AND PLATE WIDTH ACCORDING TO EXIST. WALL WIDTH.
2. SAW–CUT HORIZONTAL SLOT INTO ONE SIDE OF EXISTING WALL FOR PLACEMENT OF NEW ANGLE. SAW–CUT SHALL EXTEND A MINIMUM OF 8" BEYOND NEW OPENING.
3. INSTALL NEW ANGLE TIGHT INTO SLOT. ANGLES SHALL EXTEND A MINIMUM OF 8" BEYOND OPENING.
4. REPEAT STEPS 1 AND 2 ON OPPOSITE SIDE OF WALL.
5. DEMOLISH MASONRY TO EXTENTS SPECIFIED BY ARCH., FOR NEW OPENING.
6. INSTALL BOTTOM PL TO WITHIN ¼" OF EACH JAMB OF NEW OPENING.
7. PAINT ANY EXPOSED PORTIONS OF LINTEL, REFER ARCH FOR COLOR.



4 SECTION
S602 — SCALE: 1 1/2"=1'-0"



5 SECTION AT OPERABLE PARTITION
S602 — SCALE: 1"=1'-0"



6 ELEVATION AT OPERABLE PARTITION
S602 — SCALE: 1"=1'-0"

AGP
the Abla Griffin Partnership L.L.C.
201 N. BROADWAY
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MOORE, OK. 73160
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PROFESSIONAL STRUCTURAL ENGINEER
BRANDON W. BIRCH
26145
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12/23/2024

CJC
drawn by
BWB
checked by
OCTOBER 2024
date

revisions
1 ADDENDUM 2 11/22/2024
2 ADDENDUM 6 12/23/2024

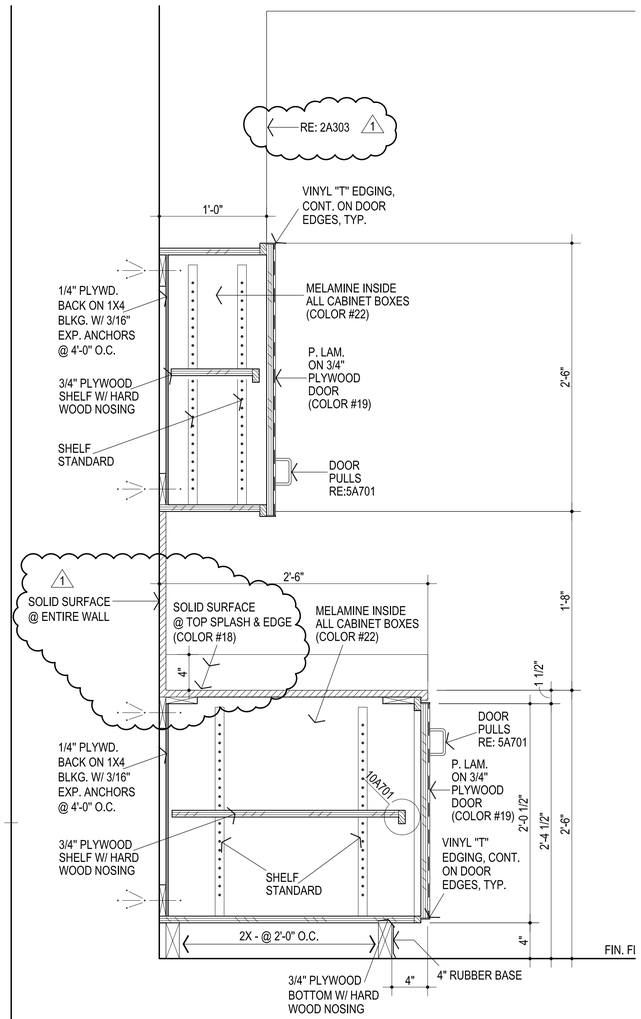
MOORE PUBLIC SCHOOLS
BOARD OF EDUCATION
MOORE, OKLAHOMA

MOORE Public Schools
LEARNING FOR LIFE

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:
S602

KFC engineering
Kirkpatrick Forest Curtis PC
Structural Engineering
OK CA #3888, EXP. 06/30/25
525 Central Park Drive, Suite 202
Oklahoma City, OK. 73105
405.528.4596 | kfcengr.com

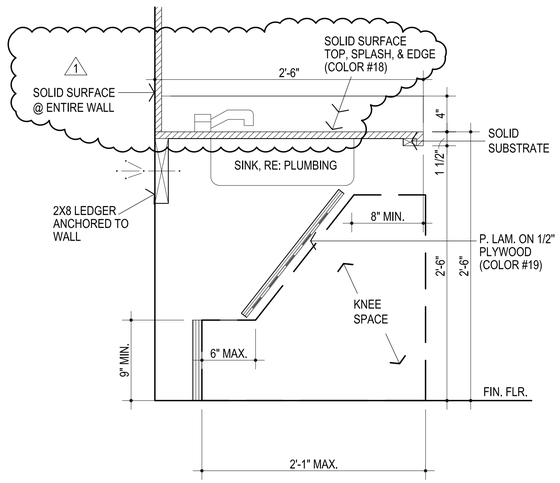


1 BASE & WALL CABINET

1 1/2" = 1'-0"

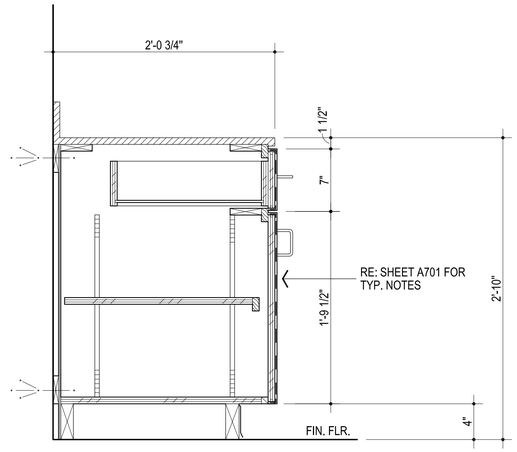
2

FRAMELESS CABINET / EUROPEAN CONSTRUCTION IS ACCEPTABLE - PROVIDE PARTICLE BOARD IN LIEU OF PLYWOOD



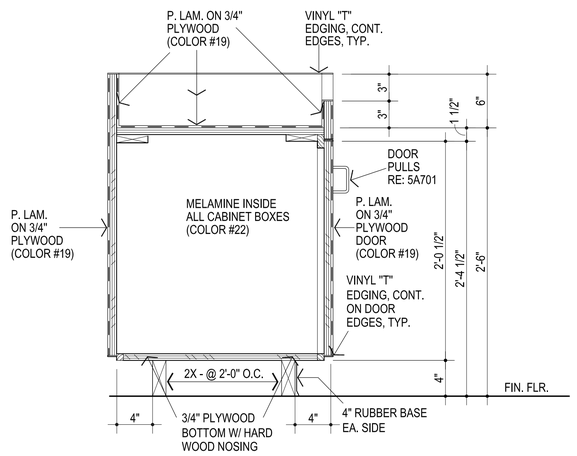
2 SINK SECTION

1 1/2" = 1'-0"



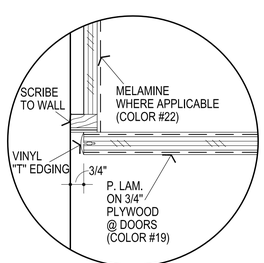
3 BASE CABINET

1 1/2" = 1'-0"

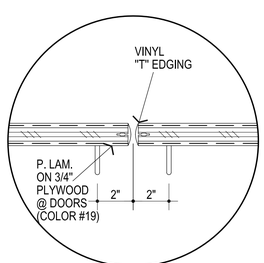


11 DIAPER CABINET

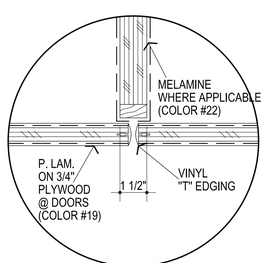
1 1/2" = 1'-0"



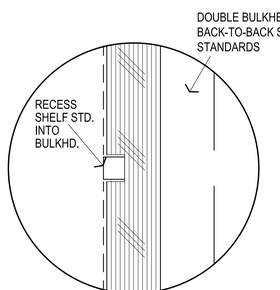
4 DOOR @ WALL



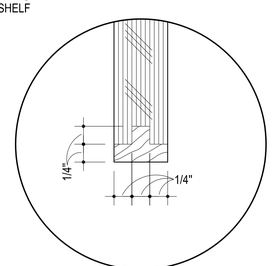
5 PULLS



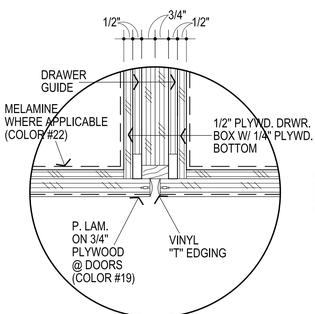
6 DOORS @ STILE



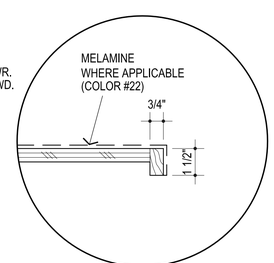
7 RECESSED STANDARDS



8 HARDWOOD EDGE



9 DRWR. TO DRWR.



10 SHELF EDGE

AGP
the Abla Griffin Partnership L.L.C.

313 S. E. 5th Street
MOORE, OK. 73160
405.735.3477
AGP@theAGP.net
www.theAGP.net

CEDAR CREEK
CIVIL

KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL

STATE OF OKLAHOMA
MICHAEL L. ABLA
2639
REGISTERED ARCHITECT

10/22/24

CG
drawn by

MA
checked by

OCTOBER 2024
date

revisions
1 ADDENDUM #1
2 ADDENDUM #6

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

A701

ADDENDUM 06

Issue Date: January 3, 2025

Project Information

Client: Abla Griffin Partnership
Project Name: MPS Daycare
Project Location: Moore, OK
Owner: Moore Public Schools
Engineer: Salas O'Brien, LLC

Project No. 2450-70304-00

To Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated November 12, 2024, (and previous addenda), with amendments and additions noted below.

This Addendum consists of (3) pages and (14) attachments.

- Index of Attachments
  - Earthsmart Controls Proposal
  - M000 E401 T403
  - M102 E601
  - E000 E602
  - E101 T000
  - E201 T201
  - E204 T401

Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may disqualify Bidder.

CHANGES TO BIDDING REQUIREMENTS

The attached Earthsmart Temperature Control proposal shall be included as part of the mechanical bid for this project.

CHANGES TO THE DRAWINGS

Revisions have been made to the following drawings and are issued in the form of full-size plans. Edits are indicated by a revision delta and a cloud surrounding the affected portion of the drawing.

M000 – MECHANICAL LEGENDS AND NOTES

- Refer to clouds and deltas on plan.

M102 – MECHANICAL MEZZANINE PLAN

- Refer to clouds and deltas on plan.

E000 – ELECTRICAL TITLE SHEET

- Refer to clouds and deltas on plan.

E101 – ELECTRICAL LIGHTING PLAN

- Refer to clouds and deltas on plan.

E201 – ELECTRICAL POWER PLAN

- Refer to clouds and deltas on plan.

E204 – ELECTRICAL MEZZANINE PLAN

- Refer to clouds and deltas on plan.

E401 – ELECTRICAL ONE-LINE DIAGRAM

- Refer to clouds and deltas on plan.

E601 – ELECTRICAL SCHEDULES

- Refer to clouds and deltas on plan.

E602 – ELECTRICAL SCHEDULES

- Refer to clouds and deltas on plan.

T000 – TECHNOLOGY NOTES AND LEGENDS

- Refer to clouds and deltas on plan.

T201 – TECHNOLOGY FLOOR PLAN

- Refer to clouds and deltas on plan.

T401 – TECHNOLOGY SHEET SPECIFICATIONS

- Refer to clouds and deltas on plan.

T403 – TECHNOLOGY SHEET SPECIFICATIONS

- Refer to clouds and deltas on plan.

END OF ADDENDUM [06]

EARTHSMART CONTROLS

5305 N Santa Fe Avenue
Oklahoma City, OK 73118
www.earthsmartcontrols.com
Phone: (405) 778-8008
Fax: (866) 676-5602

To: Moore Public Schools Childcare Facility Bidders **November 26, 2024**
Attn: Estimator

This is a proposal to provide controls for the Moore Public Schools Childcare Facility project.

RTUS (16)

- Provide and install Honeywell controls.
- Install communication, controller, supply air sensor, fan status, compressor statuses and digital space temperature/humidity/CO2 sensor to control outside air damper (damper actuator by others).
- Commission the units to ensure proper operation.

GPS Ionizers (16)

- Provide and install 16 new GPS-FC48-AC ionizers.
- Commission the unit to ensure proper operation.

Honeywell WEBS N4 Frontend

- Tie to existing WEB-8000 onsite and integrate N4 supervisor station (graphical user interface).
- Provide a 25 Device JACE to allow for future expansion.
- Provide 4 hours of user training.
- ***Provide 1-year parts and labor warranty.***
- Provide graphical representations of equipment listed above.
- Provide custom trending and alarming.
- Provide scheduling capabilities and remote access.

We thank you for the opportunity to bid and look forward to working with you soon.

If you have any questions, please feel free to contact us at (405) 778-8008.

5305 N Santa Fe Avenue
Oklahoma City, OK 73118
www.earthsmartcontrols.com
Phone: (405) 778-8008
Fax: (866) 676-5602

Exclusions for total job: Any wiring above 24V, EF Controls, Kitchen equipment control, carbon monoxide sensors, smoke detectors, RTU damper actuators and anything not mentioned in this proposal.

The total price for the control work above is: $72,710.00
Seventy-Two Thousand Seven Hundred and Ten Dollars

Erin Bevill
Controls Manager
EarthSmart Controls, LLC

Company:_____ Signature: _____

Date:_____ Printed Name: _____

Title:_____ PO #: _____

GENERAL MECHANICAL NOTES

1. ALL WORK SHALL BE IN COMPLIANCE WITH STATE AND LOCAL CODES.
2. THE CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, LICENSES, ETC., NECESSARY FOR PROPER COMPLETION OF THE WORK.
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. VERIFY ALL EXISTING CONDITIONS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN CONTRACT DRAWINGS AND ACTUAL CONDITIONS.
5. EXISTING UTILITIES TO BE ABANDONED SHALL BE PROPERLY DISCONNECTED AND CAPPED AS REQUIRED BY CODE OR LOCAL ORDINANCE.
6. THESE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. ADDITIONAL DATA SHALL BE FROM THE ENGINEER THROUGH WRITTEN CLARIFICATION ONLY. VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS BEFORE PROCEEDING WITH ANY PORTION OF ANY WORK. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND TRANSITIONS REQUIRED TO MEET EXISTING CONDITIONS.
7. THE CONTRACTOR SHALL PERFORM WORK IN A SKILLED AND PROFESSIONAL MANNER.
8. ALL CONTRACTORS ARE RESPONSIBLE TO FIELD COORDINATE WORK SCHEDULE WITH OWNER REPRESENTATIVE.
9. THE CONTRACTOR SHALL WORK AND COORDINATE WITH THE OTHER TRADES.
10. ALL EQUIPMENT SHALL BE NEW AND IN UNDAMAGED CONDITION. ANY EQUIPMENT FOUND DEFECTIVE SHALL BE IMMEDIATELY REMOVED FROM THE PROJECT.
11. PROVIDE 3 COPIES OF AN OPERATION AND MAINTENANCE MANUAL FOR ALL MAJOR EQUIPMENT REQUIRING SERVICE. MAJOR EQUIPMENT INCLUDES BUT IS NOT LIMITED TO COILS, FANS, AND CONTROL WIRING DIAGRAMS. EACH PIECE OF EQUIPMENT SHALL STATE THE CONTRACT DATE AND THE NAME, ADDRESS AND PHONE NUMBER FOR THE PRIME CONTRACTOR, SUBCONTRACTOR PERFORMING THE INSTALLATION, AND THE LOCAL VENDOR FOR SPARE PARTS. THE MANUALS SHALL CONTAIN MAINTENANCE INSTRUCTIONS REQUIRED FOR THE INSTALLED EQUIPMENT. MANUALS SHALL BE BOUND IN A THREE RING HARD COVER BINDER. O & M MANUALS SHALL BE SUBMITTED TO THE OWNER PRIOR TO FINAL WALK THROUGH OF THE PROJECT.
12. PROVIDE 8 HOURS OF OWNER TRAINING FOR THE INSTALLED EQUIPMENT. TRAINING SHALL BE HELD ONLY AFTER ALL OF THE EQUIPMENT IS INSTALLED AND PROPER OPERATION IS VERIFIED.
13. CONTRACTOR SHALL SUBMIT A CERTIFIED REPORT INDICATING SYSTEM PERFORMANCE INCLUDING, BUT NOT LIMITED TO, VOLTAGE AND AMPERAGE MEASUREMENTS OF ALL EQUIPMENT GREATER THAN 1/3 H.P. AIR BALANCE MEASUREMENTS OF OUTSIDE AIR DELIVERY, AIR HANDLING UNIT SUPPLY, SUPPLY DIFFUSERS, EXHAUST AND RETURN GRILLES. AIR BALANCE SHALL BE WITHIN 10% OF DESIGN CONDITIONS. THE REPORT CERTIFICATION SHALL BE AS FOLLOWS:

    I (name) of (company) CERTIFY THAT ALL MEASUREMENTS, FIGURES AND STATEMENTS INDICATED IN THIS REPORT WERE TAKEN BY ME OR UNDER MY SUPERVISION AND ARE ACCURATE AS OF (date). DESIGN FLOWS WERE BASED UPON PLANS DATED (xx/xx/xx).

14. DUCT MATERIAL SHALL BE GALVANIZED OR ALUMINUM CONSTRUCTION IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD 2005 FOR THE PRESSURE AND SEAL CLASS LISTED IN DUCTWORK/INSULATION SCHEDULE.
15. DUCT SIZES LISTED ON PLANS ARE THE REQUIRED CLEAR INTERIOR DIMENSIONS.
16. SUPPLY AND RETURN BRANCH DUCTS MAY BE INSULATED FLEX DUCT IF THE RUN IS LESS THAN 5 FEET IN LENGTH. ANY LENGTHS OVER 5 FEET SHALL BE RIGID DUCTWORK, DUCT SHALL BE THE SAME SIZE AS THE LISTED DIFFUSER THROAT UNLESS NOTED OTHERWISE.
17. PROVIDE VOLUME CONTROL DAMPERS WHERE INDICATED AND AT ALL TAKEOFFS, BOTH SUPPLY AND RETURN SYSTEMS, AND MAJOR DUCT RUNS. DAMPERS SHALL BE FACTORY-FABRICATED WITH ZINC-PLATED, DIE-CAST CONTROL HARDWARE. CONTROL HARDWARE SHALL INCLUDE HEAVY GAUGE DIAL AND HANDLE WITH ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING.
18. PROVIDE TURNING VANES IN ALL RECTANGULAR ELBOWS CONFORMING TO SMACNA DUCT CONSTRUCTION STANDARD 2005 FIG. 4-2 TYPE RE-3 WITH STANDARD RADIUS. WHERE SPACE PERMITS, PROVIDE RADIUSED ELBOWS IN ACCORDANCE WITH FIGURES 4-2, TYPE RE-1.
19. ALL RECTANGULAR MAIN TO RECTANGULAR BRANCH CONNECTIONS, BOTH CONVERGING AND DIVERGING CONFIGURATIONS, SHALL HAVE A 45 DEG. ENTRY TAP CONSTRUCTED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD 2005 FIG. 4-6.
20. DIFFUSER PATTERN 4-WAY UNLESS OTHERWISE INDICATED. PROVIDE FIBERGLASS DUCT INSULATION WITH VAPOR BARRIER AS SCHEDULED UNLESS NOTED OTHERWISE.
21. MECHANICAL CONTRACTOR TO REPAIR ANY DAMAGE DONE TO THE FIRE PROOFING WHILE INSTALLING THE MECHANICAL TRADES. SEAL ALL PENETRATIONS THROUGH RATED STRUCTURES WITH UL LISTED FIRE SEAL DESIGNED FOR THE SPECIFIED APPLICATION.
22. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION.
23. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OR AS OTHERWISE REQUIRED IN THE SPECIFICATIONS.
24. MECHANICAL CONTRACTOR TO INCLUDE THE TEST AND BALANCE, AND ANY PERMIT FEES IN THEIR BID.
25. MECHANICAL CONTRACTOR SHALL VERIFY ALL ROOFTOP EQUIPMENT WEIGHTS, SIZES, LOCATIONS AND OPENINGS REQUIRED AND SHALL COORDINATE ANY CHANGES WITH THE ARCHITECT.
26. UPON PROJECT COMPLETION, RECORD (AS-BUILT) DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE BUILDING OWNER. ALL CHANGES MADE TO EQUIPMENT, DUCTWORK, AND GENERAL DESIGN SHALL BE NOTED ON THE DRAWINGS. PROVIDE IN PDF FORMAT OR PRINTED SET AT THE OWNER'S REQUEST.

ABBREVIATIONS

A	AMP
ADD	ADDENDUM
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLER UNIT
AI	ANALOG INPUT
ALT	ALTERNATE
AO	ANALOG OUTPUT
APPRX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
BDD	BACK DRAFT DAMPER
BLDG	BUILDING
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CENTER
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT
COND	CONDENSATE
CONT	CONTINUOUS
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DET	DETAIL
DG	DOOR GRILLE
DI	DIGITAL INPUT
DIA OR ø	DIAMETER
DIM	DIMENSION
DN	DOWN
DO	DIGITAL OUTPUT
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ELEC	ELECTRICAL
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
FA	FRESH AIR
FPM	FEET PER MINUTE
FT	FOOT (FEET)
GA	GAUGE/GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GYP	GYPSUM
HORIZ	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
I/O	INPUT/OUTPUT
IN	INCH
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MIN	MINIMUM
MFR	MANUFACTURER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
P	PUMP
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
PSI	POUNDS PER SQUARE INCH
QTY	QUANTITY
RA	RETURN AIR
REQD	REQUIRED
REV	REVERSE OR REVISION
RG	RETURN AIR GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SQFT	SQUARE FEET
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SS	STAINLESS STEEL
T&B	TEST AND BALANCE
TEMP	TEMPERATURE OR TEMPORARY
TG	TRANSFER GRILLE
TYP	TYPICAL
V	VOLT
VAR	VARIABLE OR VARIES
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W/	WITH
W/IN	WITHIN
W/O	WITH OUT
WB	WET BULB
WC	WATER COLUMN (INCHES OF)
WT	WEIGHT

MECHANICAL HVAC LEGEND

EXHAUST AIR DUCT (DOWN)			EXHAUST AIR DUCT (UP)
RETURN AIR DUCT (DOWN)			RETURN AIR DUCT (UP)
OUTSIDE OR SUPPLY AIR DUCT (DOWN)			OUTSIDE OR SUPPLY AIR DUCT (UP)
DUCT SIZE	24x12		NEW DUCTWORK
FLEX DUCT			EXISTING DUCTWORK
DEMOLITION LINETYPE			SUPPLY AIR CEILING DIFFUSER
RETURN AIR GRILLE			EXHAUST AIR GRILLE
DIFFUSER, GRILLE, AND REGISTER CALL-OUTS	CALL-OUT CFM		SCHEDULED EQUIPMENT TAG
MANUAL BALANCING DAMPER			PIPE PENETRATION THROUGH FIRE RATED WALL
FIRE DAMPER			SMOKE DAMPER
MOTORIZED DAMPER	M		FIRE/SMOKE DAMPER
THERMOSTAT	T	H	HUMIDISTAT
REMOTE SENSOR	S	C	CARBON DIOXIDE SENSOR
DUCT SMOKE DETECTOR		X	CARBON MONOXIDE SENSOR

MECHANICAL SHEET INDEX

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KFC ENGINEERING
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SALAS O'BRIEN
MECHANICAL / ELECTRICAL

KF
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OCTOBER 2024
date

revisions
1 11/22/2024 AD 02
2 01/03/2025 AD 06

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

M000

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

GENERAL NOTES

1. COORDINATE INSTALLATION OF EQUIPMENT AND DUCTWORK WITH ALL TRADES.
2. COORDINATE WORK WITH ALL OTHER TRADES ON SITE.

KEYED NOTES

1. DEMOLISH EXHAUST FAN, LOUVER AND ASSOCIATED DUCTWORK. FILL PENETRATION TO MATCH EXISTING. COORDINATE WITH GC.
2. DEMOLISH INTAKE HOOD AND ASSOCIATED DUCTWORK. FILL PENETRATION TO MATCH EXISTING. COORDINATE WITH GC.

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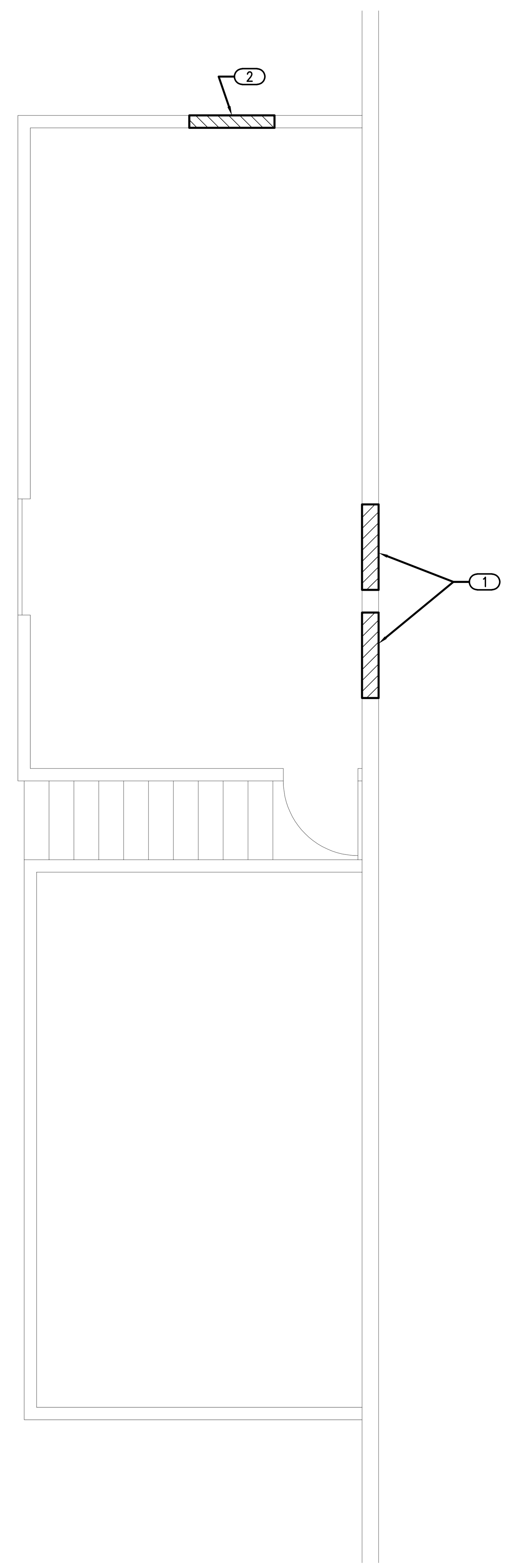

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MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
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sheet no:
M102

FULL SHEET

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

NORTH

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Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
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LIGHT FIXTURE SCHEDULE

TYPE	SYMBOL	DESCRIPTION	MANUFACTURER	REFERENCE CATALOG #
A1		2X4 LED FLAT PANEL. 26W, 4000 LUMENS, 3500K CCT. 0-10V DIMMING.	LITHONIA	CPX 2X4 ALO8 80CRI SWW7 SWL MVOLT
A1E		2X4 LED FLAT PANEL. 26W, 4000 LUMENS, 3500K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE	LITHONIA	CPX 2X4 ALO8 80CRI SWW7 SWL MVOLT
A2		2X4 LED FLAT PANEL. 36W, 5000 LUMENS, 3500K CCT. 0-10V DIMMING.	LITHONIA	CPX 2X4 ALO8 80CRI SWW7 SWL MVOLT
A2E		2X4 LED FLAT PANEL. 36W, 5000 LUMENS, 3500K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE.	LITHONIA	CPX 2X4 ALO8 80CRI SWW7 SWL MVOLT
A3		2X4 LED FLAT PANEL. 45W, 6000 LUMENS, 3500K CCT. 0-10V DIMMING.	LITHONIA	CPX 2X4 ALO8 80CRI SWW7 SWL MVOLT
A3E		2X4 LED FLAT PANEL. 45W, 6000 LUMENS, 3500K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE.	LITHONIA	CPX 2X4 ALO8 80CRI SWW7 SWL MVOLT
A4		2X2 LED FLAT PANEL. 35W, 4000 LUMENS, 3500K CCT. 0-10V DIMMING.	LITHONIA	CPX 2X2 ALO7 80CRI SWW7 SWL MVOLT
C		6" LED RECESSED LED DOWNLIGHT. 13W, 1000 LUMEN, 3500K CCT. 0-10V DIMMING.	LITHONIA	LBR6 NCH ALO2 SWW1 AR LSS WD MVOLT UGZ
CE		6" LED RECESSED LED DOWNLIGHT. 13W, 1000 LUMEN, 3500K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE.	LITON	LBR6 NCH ALO2 SWW1 AR LSS WD MVOLT UGZ
EX		LED EXIT SIGN, STAINLESS STEEL FACE WITH RED LETTERS, UNIVERSAL FACE AND MOUNTING, PROVIDE WITH UL924 DEVICE.	LIFE SAFETY LIGHTING	LSXDC 3 R A A EM SDT
L		2" X 4' LED EXTERIOR FIXTURE 1028 LUMENS/FT, 4000K CCT. SURFACE MOUNT	A-LIGHT	LIN 3 SP M4 LH 40 U HE F X D
LE		2" X 4' LED EXTERIOR FIXTURE 1028 LUMENS/FT, 4000K CCT. SURFACE MOUNT PROVIDE WITH UL924 DEVICE.	A-LIGHT	LIN 3 SP M4 LH 40 U HE F X D EC
P2		6' CIRCULAR LED PENDANT. 156W, 13,000 LUMENS, 3500K CCT. 0-10V DIMMING.	DELRAY	UCDC6 W35 SR D
P2E		6' CIRCULAR LED PENDANT. 156W, 13,000 LUMENS, 3500K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE.	DELRAY	UCDC6 W35 SR D
R1		SINGLE HEAD PARKING LOT FIXTURE, 7-PIN RECEPTACLE CONTROL 187W, 25,000 LUMENS, 4000K CCT.	LITHONIA	RSX2-LED-P4-40K-R3-208V-RPA-PER7-DDBXD-DLL127F 1.5JU
R2		DOUBLE HEAD PARKING LOT FIXTURE, 7-PIN RECEPTACLE CONTROL (2) 187W, 25,000 LUMENS, 4000K CCT.	LITHONIA	RSX2-LED-P4-40K-R3-208V-RPA-PER7-DDBXD-DLL127F 1.5JU
R2-P		PARKING LOT POLE	LITHONIA	RTS-25'-7-0F-DM28AS-DDBXD
S		4" LED LENSED STRIP FIXTURE. 35W, 5000 LUMENS, 4000K CCT. 0-10V DIMMING.	LITHONIA	CSS L48 ALO3 MVOLT SWW3 80CRI
SE		4" LED LENSED STRIP FIXTURE. 35W, 5000 LUMENS, 4000K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE.	LITHONIA	CSS L48 ALO3 MVOLT SWW3 80CRI
T		4" LED VAPOR TIGHT STRIP FIXTURE. 42W, 5000 LUMENS, 4000K CCT. 0-10V DIMMING.	LITHONIA	CSVT L48 ALO3 MVOLT SWW3 80CRI
TE		4" LED VAPOR TIGHT STRIP FIXTURE. 42W, 5000 LUMENS, 4000K CCT. 0-10V DIMMING. PROVIDE WITH UL924 DEVICE.	LITHONIA	CSVT L48 ALO3 MVOLT SWW3 80CRI
V		2' LED VANITY FIXTURE. 9W, 300 LUMENS/FT DIRECT AND INDIRECT, 3500K CCT. 0-10V DIMMING.	MARK LIGHTING	S2WID LLP 2FT MSL2 80CRI 35K 300LMF I80 L35K I300LMF AS SCT MIN10 FL MVOLT WHTT ZT
W1E		2400 LUMEN, 4000K CT, LED WALL PACK PROVIDE WITH UL924 DEVICE.	LITHONIA	WPX1 LED P2 40K MVOLT DBLXD

GENERAL NOTES:
EQUIVALENT ALTERNATE LIGHT FIXTURES MAY BE PROVIDED FOR BIDDING PURPOSES. THE ENGINEER DOES NOT TAKE RESPONSIBILITY FOR ENSURING ALTERNATE LIGHT FIXTURES USED FOR BIDDING ARE EQUAL; THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALTERNATE FIXTURES ARE EQUIVALENT TO THOSE SPECIFIED PRIOR TO BID. THE WINNING BID PACKAGE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW IN ACCORDANCE WITH THE SPECIFICATIONS.

ELECTRICAL ABBREVIATIONS

AC	ABOVE COUNTERTOP	MC	MECHANICAL CONTRACTOR
AFF	ABOVE FINISH FLOOR	MCA	MINIMUM CIRCUIT AMPS
AFG	ABOVE FINISH GRADE	MCB	MAIN CIRCUIT BREAKER
ANNC	ANNUNICIATOR	MDP	MAIN DISTRIBUTION PANEL
CC	CONTROLS CONTRACTOR	MLO	MAIN LUG ONLY
DF	DRINKING FOUNTAIN	MTD	MOUNTED
EC	ELECTRICAL CONTRACTOR	NIC	NOT IN CONTRACT
EF	EXHAUST FAN	OCC	OCCUPANCY
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH	PC	PLUMBING CONTRACTOR
		PNL	PANEL
EX	EXISTING	SPST	SINGLE POLE SINGLE THROW
EXR	EXISTING RELOCATED	TTB	TELEPHONE TERMINAL BOARD
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GFI	GROUND FAULT INTERRUPT	WG	WIRE GUARD
HP	HORSEPOWER	WP	WEATHER PROOF
IBC	INTERNATIONAL BUILDING CODE	20A	20 AMP
IG	ISOLATED GROUND	ø	PHASE
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, AND GROUND	3W	3 WIRE
		1P20A	SINGLE POLE 20 AMP
LV	LOW VOLTAGE		
LVRP	LV RELAY PANEL		

SWITCH LEGEND	
SYMBOL	DESCRIPTION
$	20A, SPST SWITCH
$a	20A, LETTER INDICATES GROUP
$3	20A, 3-WAY
$4	20A, 4-WAY
$D	DIMMER SWITCH
$K	KEY OPERATED SWITCH
$OC	OCCUPANCY SENSOR SWITCH

GENERAL NOTE:
SEE SPECIFICATIONS FOR MANUFACTURERS

RECEPTACLE SCHEDULE	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE
	20A, 120V, 2P, 3W GROUNDING DUPLEX RECEPTACLE RECEPTACLE MTD. 6" ABOVE COUNTER OR HGT SHOWN
	GFCI RECEPTACLE
	GFCI RECEPTACLE, MTD. 6" ABOVE COUNTER OR HGT SHOWN
	20A, 120V, 2P, 3W GROUNDING DUPLEX GFCI RECEPTACLE - WEATHER PROOF (IN USE COVER)
J	JUNCTION BOX, AS NOTED
	QUADPLEX RECEPTACLE

GENERAL NOTE:
SEE SPECIFICATIONS FOR MANUFACTURERS

GENERAL ELECTRICAL NOTES

1. CONTRACTOR TO VERIFY EXISTING ELECTRICAL CONDITIONS AND NOTIFY ARCHITECT/ENGINEER OF ANY ELECTRICAL OR CODE ISSUES PRIOR TO BID. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL CODE COMPLIANT SYSTEM.
2. ALL WORK SHALL BE IN CONFORMANCE WITH NATIONAL, STATE, AND LOCAL CODES AND/OR ORDINANCES.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER CONTRACTORS & LOCAL UTILITY. E.C. SHALL CONTACT LOCAL UTILITY FOR EXACT SERVICE REQUIREMENTS TO INCLUDE BUT NOT LIMITED TO TRANSFORMER, METERING AND CABLING. LOCAL UTILITY REQUIREMENTS SUPERSEDE DRAWINGS AND SPECIFICATIONS.
4. SEE ARCHITECTURAL, MECHANICAL, & PLUMBING DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. THEY ARE INTENDED TO GIVE APPROXIMATE LOCATIONS AND OVERALL DESIGN INTENT. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCTS, MATERIALS, AND ELECTRICAL METHODS WHICH HAVE NOT BEEN SHOWN OR INDICATED BUT ARE REQUIRED FOR A COMPLETE SYSTEM TO THE STANDARDS OF THE INDUSTRY.
6. INSTALL LIGHTING FIXTURES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTING DEVICES FOR ADEQUATE SUPPORT OF FIXTURES FROM STRUCTURE.
7. UPON COMPLETION OF THE ELECTRICAL WORK, THE INSTALLATION SHALL BE TESTED FOR CONTINUITY, GROUNDS, AND SHORT CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL DEMONSTRATE PROPER PERFORMANCE OF ALL SYSTEMS. ALL DEFECTIVE WORK OR MATERIALS SHALL BE REPLACED OR REPAIRED AS NECESSARY AND RETESTED.
8. ELECTRICAL RACEWAYS THAT PENETRATE FIRE RATED ASSEMBLIES SHALL BE SLEEVED AND SEALED AS PER THE LOCAL BUILDING CODE.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY ELECTRICAL SYSTEM FOR THE PROJECT. AT LEAST ONE 120 VOLT SINGLE PHASE RECEPTACLE SHALL BE PROVIDED FOR EACH 500 SQUARE FEET OF FLOOR SPACE. SUFFICIENT TEMPORARY LIGHTING SHALL BE PROVIDED TO ALLOW ALL CONTRACTORS TO COMPLETE THEIR WORK. TEMPORARY ELECTRICAL CIRCUITS SHALL BE EQUIPPED WITH COMBINATION GROUND FAULT INTERRUPTER AND CIRCUIT BREAKER PER NEC. TEMPORARY ELECTRICAL SYSTEM SHALL BE INCLUDED IN THIS BID. USAGE CHARGES SHALL BE PAID FOR BY THE GENERAL CONTRACTOR.

ELECTRICAL LEGEND

	PANEL BOARD
	DISTRIBUTION PANEL BOARD
T	TRANSFORMER
	UTILITY METER
CB	SEPARATE CIRCUIT BREAKER
	DISCONNECT
	FUSED DISCONNECT SWITCH
	EMERGENCY FUSED DISCONNECT SWITCH
	MOTOR STARTER/CONTRACTOR
	COMBINATION MOTOR STARTER
	PUSH BUTTON STATION AS NOTED
P	PULL BOX, SIZE AS REQUIRED BY CODE
	ELECTRICAL CONNECTION
	MOTOR CONNECTION
	HOME RUN TO PANEL BOARD

ELECTRICAL SHEET INDEX

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MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

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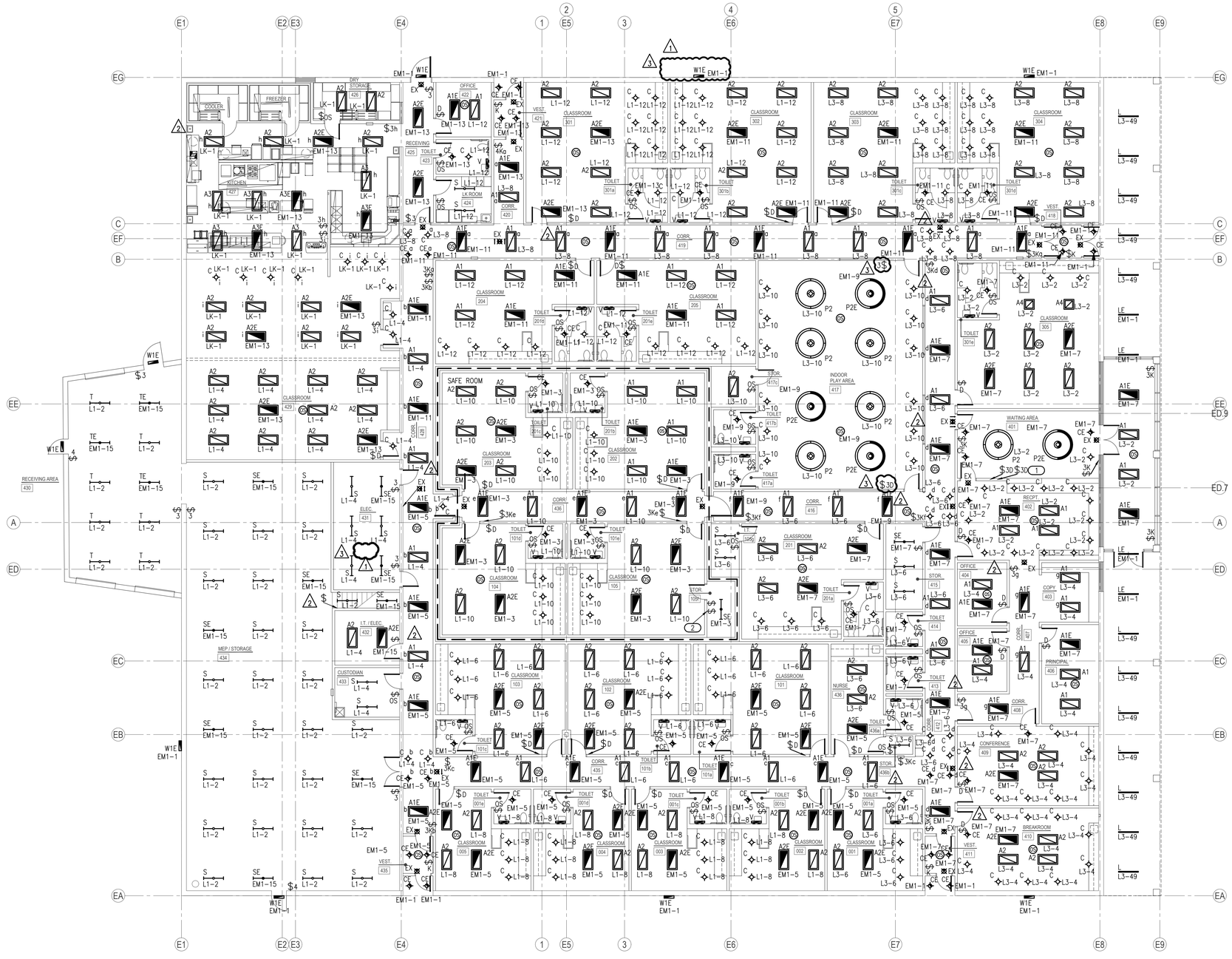

1 ELECTRICAL LIGHTING PLAN

SCALE: 3/32" = 1'-0"

NORTH

GENERAL NOTES

1. OCCUPANCY SENSOR LOCATIONS SHOWN ARE FOR DESIGN INTENT ONLY. LOCATE OCCUPANCY SENSORS PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. CONNECT BATTERY PACKS TO UNSWITCHED HOT OF LOCAL LIGHTING CIRCUIT.
3. COORDINATE WITH ALL ASSOCIATED TRADES FOR THE EXACT LOCATIONS OF LIGHT FIXTURES WITH HVAC EQUIPMENT AND OTHER DEVICES/EQUIPMENT.
4. COORDINATE WITH THE ARCHITECT, OWNER, AND ASSOCIATED TRADES FOR THE EXACT HEIGHT/LOCATION OF EXTERIOR MOUNTED LIGHTING FIXTURES PRIOR TO ROUGH-IN.
5. LABEL SWITCH PLATES AND J-BOXES WITH CIRCUIT PER SPECS.
6. COORDINATE LIGHT SWITCHES WITH THERMOSTATS AND OTHER WALL MOUNT DEVICES.

△2

SAFEROOM GENERAL NOTES

PER ICC 500-2014, 309.1:

PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE THAT ARE LARGER THAN:
1. 3.5" SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS, OR
2. 2 1/16" IN DIAMETER

SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE (SHROUD). REFERENCE STRUCTURAL DRAWINGS FOR A SAMPLE SHROUD DETAIL. THIS INCLUDES PENETRATIONS FOR BUNDLES OF CONDUIT.

KEYED NOTES

1. LIGHT SWITCH FOR 'WAITING AREA 401' LIGHT FIXTURES.
2. SUPPLY VENTILATION FAN SWITCH. COORDINATE WITH MECHANICAL CONTRACTOR.
3. △1 △3

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sheet no:

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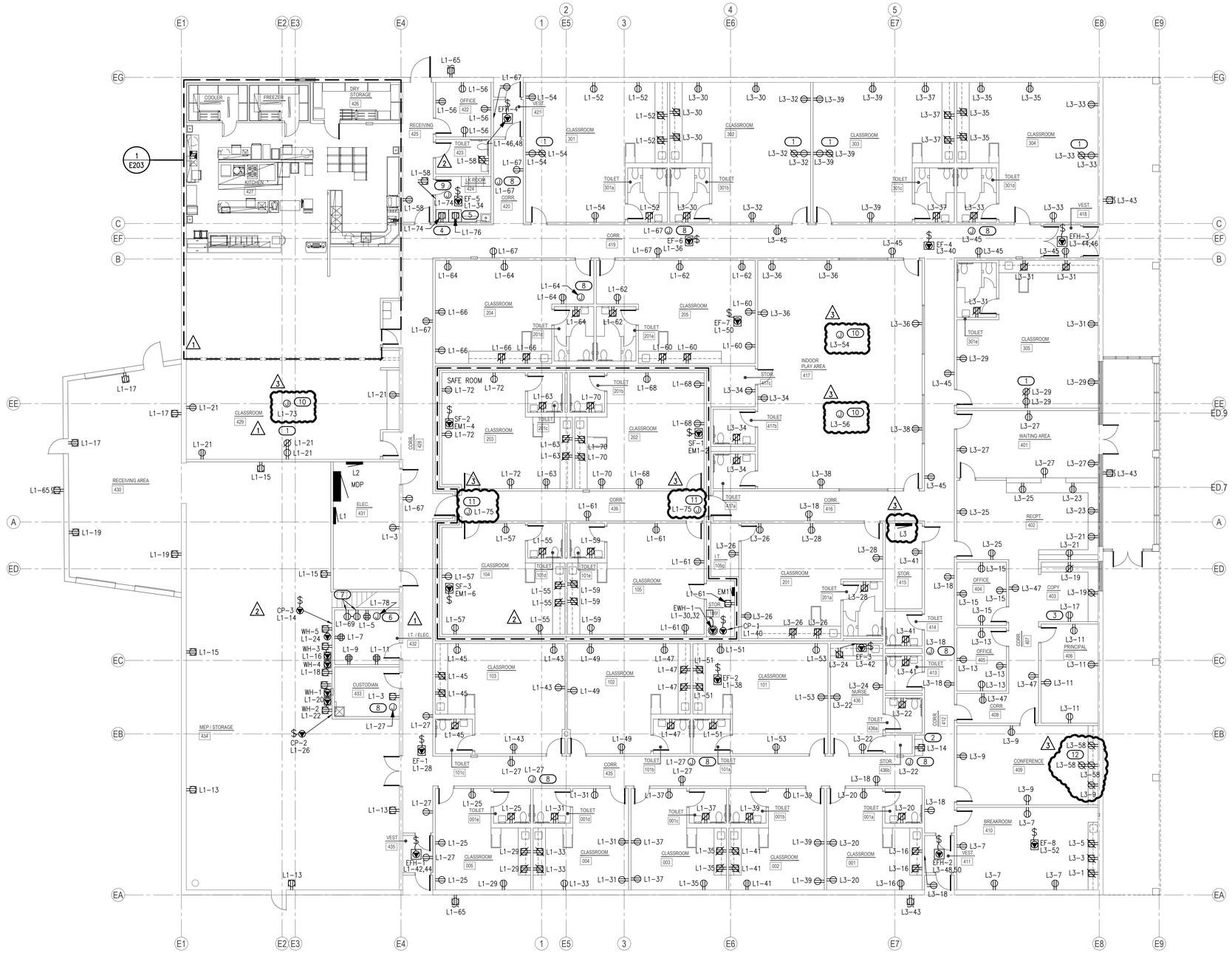

1 ELECTRICAL POWER PLAN

SCALE: 3/32" = 1'-0"

NORTH

GENERAL NOTES

1. COORDINATE EXACT LOCATIONS OF DEVICES SHOWN WITH OTHER EQUIPMENT. COORDINATE EXACT LOCATION OF CEILING MOUNTED DEVICES WITH LIGHTS, HVAC EQUIPMENT, AND OTHER DEVICES.
2. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ALL RELAYS, CONNECTIONS, AND ALL DEVICES NECESSARY TO INTERLOCK EXHAUST FANS, DAMPERS, ETC WITH PROPER CONTROL DEVICES.
3. COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL PLANS AND MANUFACTURER FOR ADDITIONAL INFORMATION.
4. COORDINATE EXACT LOCATION OF PLUMBING EQUIPMENT WITH PLUMBING CONTRACTOR. REFER TO PLUMBING PLANS AND MANUFACTURER FOR ADDITIONAL INFORMATION.
5. ALL RECEPTACLES LOCATED AT COUNTERTOP HEIGHT SHALL BE ORIENTED HORIZONTALLY.
6. FIRE STOP ALL PENETRATIONS IN FIRE AND SMOKE RATED WALLS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND ADDITIONAL INFORMATION

SAFEROOM GENERAL NOTES

PER ICC 500–2014, 309.1:

PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE THAT ARE LARGER THAN:
1. 3.5" SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS, OR
2. 2 1/16" IN DIAMETER

SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE (SHROUD). REFERENCE STRUCTURAL DRAWINGS FOR A SAMPLE SHROUD DETAIL. THIS INCLUDES PENETRATIONS FOR BUNDLES OF CONDUIT.

KEYED NOTES

1. PROVIDE 120V CONNECTION FOR SMARTBOARD. COORDINATE FINAL LOCATION AND REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ROUGH IN. REFER TO DETAIL '1/E502' FOR ADDITIONAL INFORMATION.
2. PROVIDE 120V WATER COOLER DEDICATED CONNECTION. COORDINATE WITH THE ARCHITECT, PLUMBING CONTRACTOR, AND MANUFACTURER FOR THE EXACT LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH–IN.
3. PROVIDE 120V COPY MACHINE DEDICATED CONNECTION. COORDINATE WITH THE ARCHITECT, OWNER, AND MANUFACTURER FOR THE EXACT LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH–IN.
4. PROVIDE 120V GAS DRYER DEDICATED CONNECTION. COORDINATE WITH THE ARCHITECT, OWNER AND MANUFACTURER FOR THE EXACT LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH IN.
5. PROVIDE 120V WASHER DEDICATED CONNECTION. COORDINATE WITH THE ARCHITECT, OWNER AND MANUFACTURER FOR THE EXACT LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH IN.
6. PROVIDE 120V FIRE ALARM CONTROL PANEL DEDICATED CONNECTION. COORDINATE RECEPTACLE TYPE AND LOCATION WITH FIRE ALARM CONTRACTOR.
7. PROVIDE 120V TELECOM EQUIPMENT CONNECTION. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
8. PROVIDE 120V CONNECTION FOR TRAP PRIMER. COORDINATE FINAL LOCATION AND REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH–IN.
9. PROVIDE 120V CONNECTION FOR DRYER BOOSTER FAN. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR ON SITE.
10. PROVIDE 120V CONNECTION FOR CEILING–MOUNTED PROJECTOR. COORDINATE EXACT LOCATION WITH LOW VOLTAGE CONTRACTOR.
11. PROVIDE 120V CONNECTION FOR DOOR HOLD–OPEN SYSTEM. COORDINATE EXACT LOCATION WITH LOW VOLTAGE CONTRACTOR.
12. PROVIDE 120V CONNECTION FOR TV. COORDINATE MOUNTING HEIGHT WITH ARCHITECT/OWNER.

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KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY V. OSTRAN
27659
01/03/25
OKLAHOMA

DWG
drawn by
TVO
checked by
OCTOBER 2024
date

revisions
1 11/22/2024 AD 02
2 12/12/2024 AD 03
3 1/3/2025 AD 06

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

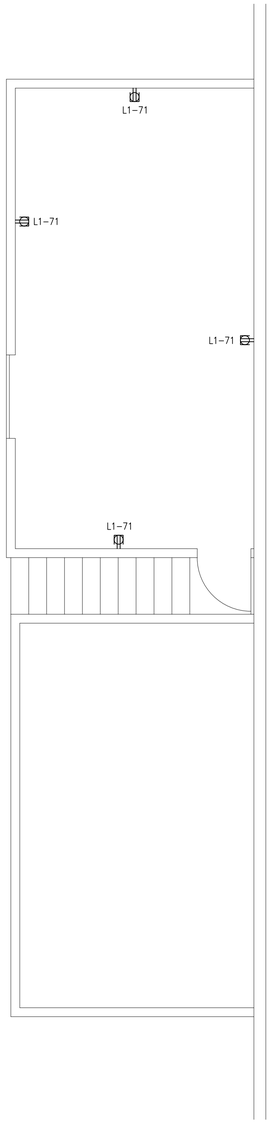
sheet no:

E201

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

GENERAL NOTES

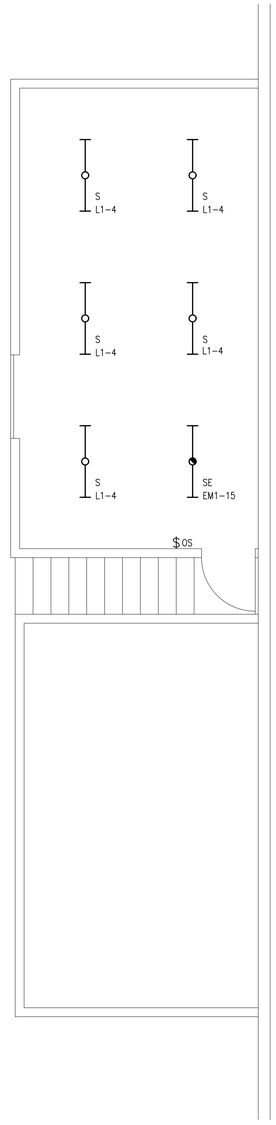
1. COORDINATE EXACT LOCATIONS OF DEVICES SHOWN WITH OTHER EQUIPMENT. COORDINATE EXACT LOCATION OF CEILING MOUNTED DEVICES WITH LIGHTS, HVAC EQUIPMENT, AND OTHER DEVICES.
2. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ALL RELAYS, CONNECTIONS, AND ALL DEVICES NECESSARY TO INTERLOCK EXHAUST FANS, DAMPERS, ETC WITH PROPER CONTROL DEVICES.
3. COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL PLANS AND MANUFACTURER FOR ADDITIONAL INFORMATION.
4. COORDINATE EXACT LOCATION OF PLUMBING EQUIPMENT WITH PLUMBING CONTRACTOR. REFER TO PLUMBING PLANS AND MANUFACTURER FOR ADDITIONAL INFORMATION.
5. FIRE STOP ALL PENETRATIONS IN FIRE AND SMOKE RATED WALLS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND ADDITIONAL INFORMATION.
6. OCCUPANCY SENSOR LOCATIONS SHOWN ARE FOR DESIGN INTENT ONLY. LOCATE OCCUPANCY SENSORS PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
7. COORDINATE WITH ALL ASSOCIATED TRADES FOR THE EXACT LOCATIONS OF LIGHT FIXTURES WITH HVAC EQUIPMENT AND OTHER DEVICES/EQUIPMENT.
8. LABEL SWITCH PLATES AND J-BOXES WITH CIRCUIT PER SPECS.
9. COORDINATE LIGHT SWITCHES WITH THERMOSTATS AND OTHER WALL MOUNT DEVICES.



2 ELECTRICAL MEZZANINE PLAN - POWER

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

NORTH



1 ELECTRICAL MEZZANINE PLAN - LIGHTING

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

NORTH

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DWG
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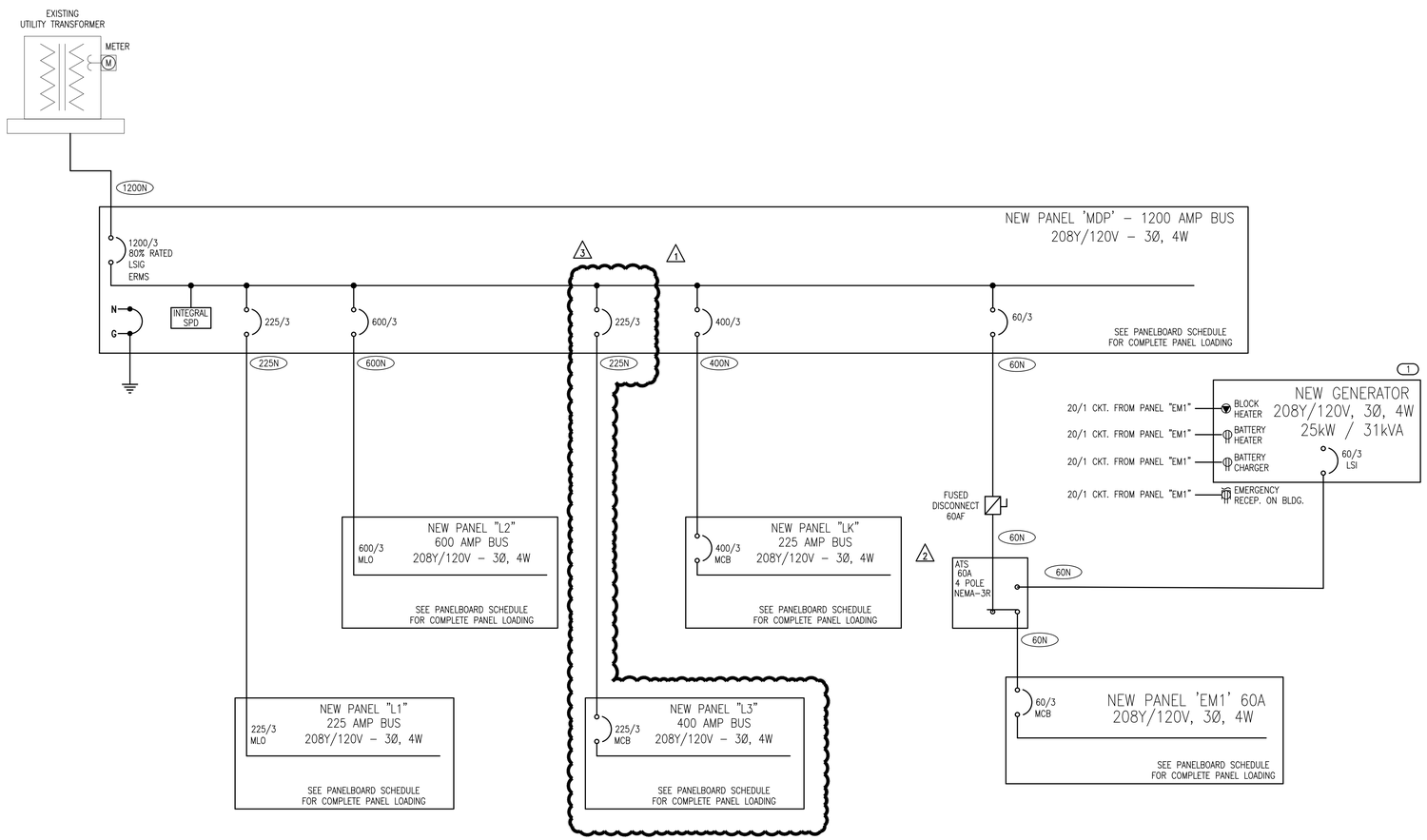
revisions
1 1/3/2025 AD 06

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:
1 E204

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00



1 ONE-LINE DIAGRAM

NO SCALE

FEEDER SCHEDULE

AMPS	CONDUIT SIZE 4W	CONDUIT SIZE 3W	PHASE CONDUCTORS	EQUIPMENT GROUND CONDUCTOR
20	3/4"	3/4"	#12	#12
25	3/4"	3/4"	#10	#10
30	3/4"	3/4"	#10	#10
35	1"	3/4"	#8	#10
40	1"	3/4"	#8	#10
45	1"	1"	#6	#10
50	1"	1"	#6	#10
60	1 1/4"	1 1/4"	#4	#10
70	1 1/4"	1 1/4"	#4	#8
80	1 1/4"	1 1/4"	#3	#8
90	1 1/2"	1 1/4"	#2	#8
100	1 1/2"	1 1/4"	#2	#8
110	2"	1 1/2"	#1	#6
125	2"	1 1/2"	#1	#6
150	2"	1 1/2"	#1/0	#6
175	2"	2"	#2/0	#6
200	2"	2"	#3/0	#6
225	2 1/2"	2"	#4/0	#4
250	3"	2 1/2"	250 kcmil	#4
300	3"	3"	350 kcmil	#4
350	3 1/2"	3"	500 kcmil	#3
400	(2) 2"	(2) 2"	2 SETS OF #3/0	#3
450	(2) 2 1/2"	(2) 2"	2 SETS OF #4/0	#2
500	(2) 2 1/2"	(2) 2 1/2"	2 SETS OF 250 kcmil	#2
600	(2) 3"	(2) 3"	2 SETS OF 350 kcmil	#1
700	(2) 3 1/2"	(2) 3"	2 SETS OF 500 kcmil	#1/0
800	(3) 3"	(3) 2 1/2"	3 SETS OF 300 kcmil	#1/0
900	(3) 3 1/2"	(3) 3"	3 SETS OF 400 kcmil	#2/0
1000	(3) 3 1/2"	(3) 3"	3 SETS OF 500 kcmil	#2/0
1200	(4) 3"	(4) 3"	4 SETS OF 350 kcmil	#3/0
1600	(5) 3 1/2"	(5) 3"	5 SETS OF 500 kcmil	#4/0
1800	(6) 3 1/2"	(6) 3"	6 SETS OF 400 kcmil	250 kcmil
2000	(6) 3 1/2"	(6) 3"	6 SETS OF 500 kcmil	250 kcmil
2500	(7) 3 1/2"	(7) 3"	7 SETS OF 500 kcmil	350 kcmil

NOTES:

1. FEEDER SIZES ARE ON THE PLAN WHERE 60 REFERS TO A 60A FEEDER WITHOUT NEUTRAL AND 60N REFERS TO A 60A FEEDER WITH NEUTRAL.
2. SOME FEEDER SIZES DO NOT MATCH BREAKER SIZE DUE TO UP-SIZING OF THE FEEDER FOR VOLTAGE DROP.
3. CONDUITS ARE SIZED PER NEC TABLES FOR THHN/THWN AND MAY BE UPSIZED FOR EASE OF PULLING OR DOWNSIZED AS ALLOWED PER NEC FOR CONDUIT TYPE(S) BEING INSTALLED.
4. ALL CONDUCTORS 100A AND LESS ARE SIZED PER 60 DEGREE LUGS. EC MAY SIZE CONDUCTORS FOR ACTUAL RATING OF LUGS PER NEC.

GENERAL NOTES

1. AIC RATINGS ARE ESTIMATED BASED ON AVAILABLE DATA DURING DESIGN. CONTRACTOR TO VERIFY AVAILABLE FAULT CURRENT WITH UTILITY.

KEYED NOTES

(1) GENERATOR SHALL BE DUAL FUEL – NATURAL GAS AND PROPANE. GENERATOR SHALL HAVE FUEL TYPE AUTOMATIC SWITCHOVER CAPABILITY. BASIS OF DESIGN – KOHLER MODEL 25CCL 25/31 KW/KVA.

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MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

E401

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

Panel L3

ROOM
MOUNTING SURFACE
FED FROM MDP
NOTE [DOUBLE TUB 6"]

VOLTS 208Y/120V 3P 4W
BUS AMPS 225
NEUTRAL 100%

AIC 65,000
MAIN BKR 225
LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.18	RM 410 RECEPTACLE	a	2	20/1	0.73	LIGHTING
3	20/1	0.18	RM 410 RECEPTACLE	b	4	20/1	0.619	LIGHTING
5	20/1	0.18	RM 410 RECEPTACLE	c	6	20/1	0.838	LIGHTING
7	20/1	0.72	RM 410 RECEPTACLE	a	8	20/1	0.918	LIGHTING
9	20/1	0.72	RM 409 RECEPTACLE	b	10	20/1	0.99	LIGHTING
11	20/1	0.72	RM 406 RECEPTACLE	c	12	20/1	0.72	ROOFTOP RECEPTACLE
13	20/1	0.72	RM 405 RECEPTACLE	a	14	20/1	0.37	WATER COOLER RECEPTACLE
15	20/1	0.72	RM 404 RECEPTACLE	b	16	20/1	0.54	RM 1 RECEPTACLE
17	20/1	1.2	COPY MACHINE	c	18	20/1	1.09	CORRIDOR 412 RECEPTACLE, CORRIDOR 416 RECEPTACLE, CORRIDOR 435 RECEPTACLE, RM 411 RECEPTACLE, TRAP PRIMER
19	20/1	0.36	RM 403 RECEPTACLE	a	20	20/1	0.72	RM 1A RECEPTACLE, RM 1 RECEPTACLE
21	20/1	0.36	RM 402 RECEPTACLE	b	22	20/1	0.55	RM 436A RECEPTACLE, RM 436 RECEPTACLE, TRAP PRIMER
23	20/1	0.36	RM 402 RECEPTACLE	c	24	20/1	0.36	RM 436 RECEPTACLE
25	20/1	0.54	RM 402 RECEPTACLE	a	26	20/1	0.9	RM 105G RECEPTACLE, RM 201 RECEPTACLE
27	20/1	0.72	RM 401 RECEPTACLE	b	28	20/1	0.54	RM 201A RECEPTACLE, RM 201 RECEPTACLE
29	20/1	0.72	RM 305 RECEPTACLE, SMARTBOARD	c	30	20/1	0.9	RM 301B RECEPTACLE, RM 302 RECEPTACLE
31	20/1	0.72	RM 301E RECEPTACLE, RM 305 RECEPTACLE	a	32	20/1	0.72	RM 302 RECEPTACLE, SMARTBOARD
33	20/1	0.9	RM 301D RECEPTACLE, RM 304 RECEPTACLE, SMARTBOARD	b	34	20/1	0.72	RM 417A RECEPTACLE, RM 417B RECEPTACLE, RM 417C RECEPTACLE, RM 417 RECEPTACLE
35	20/1	0.72	RM 304 RECEPTACLE	c	36	20/1	0.72	RM 417 RECEPTACLE
37	20/1	0.72	RM 301C RECEPTACLE, RM 303 RECEPTACLE	a	38	20/1	0.36	RM 417 RECEPTACLE
39	20/1	0.9	RM 303 RECEPTACLE, SMARTBOARD	b	40	15/1	0.696	EF-4
41	20/1	0.54	RM 413 RECEPTACLE, RM 414 RECEPTACLE, RM 415 RECEPTACLE	c	42	15/1	0.696	EF-3
43	20/1	0.54	EXTERIOR RECEPTACLE, RECEPTACLE	a	44	20/2	2	EFH-3
45	20/1	1.09	CORRIDOR 412 RECEPTACLE, CORRIDOR 419 RECEPTACLE, RM 418 RECEPTACLE, TRAP PRIMER	b	46	|		
47	20/1	0.54	CORRIDOR 407 RECEPTACLE, CORRIDOR 408 RECEPTACLE	c	48	20/2	2	EFH-2
49	20/1	0.48	LIGHTING	a	50	|		
51	20/2	1.12	LIGHTING	b	52	15/1	0.696	EF-8
53	|			c	54	20/1	0.5	RM 417 PROJECTOR
55	20/1	0	SPACE	a	56	20/1	0.5	RM 417 PROJECTOR
57	20/1	0	SPACE	b	58	20/1	0.54	RM 409 RECEPTACLE
59	20/1	0	SPACE	c	60	20/1	0	SPACE
61	20/1	0	SPACE	a	62	20/1	0	SPACE
63	20/1	0	SPACE	b	64	20/1	0	SPACE
65	20/1	0	SPACE	c	66	20/1	0	SPACE
67	20/1	0	SPACE	a	68	20/1	0	SPACE
69	20/1	0	SPACE	b	70	20/1	0	SPACE
71	20/1	0	SPACE	c	72	20/1	0	SPACE
73	20/1	0	SPACE	a	74	20/1	0	SPACE
75	20/1	0	SPACE	b	76	20/1	0	SPACE
77	20/1	0	SPACE	c	78	20/1	0	SPACE
79	20/1	0	SPACE	a	80	20/1	0	SPACE
81	20/1	0	SPACE	b	82	20/1	0	SPACE
83	20/1	0	SPACE	c	84	20/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	5.7	7.12	(125%)	MOTORS	2.09	2.09	(100%)
LARGEST MOTOR	0.696	0.174	(25%)	RECEPTACLES	25.8	17.9	(50%>10)
				HEATING	4	4	(100%)
				TOTAL LOAD		31.3	
				BALANCED 3-PHASE LOAD		86.9 A	
				PHASE A		97.3%	
				PHASE B		104%	
				PHASE C		98.7%	

Panel L1

ROOM
MOUNTING SURFACE
FED FROM MDP
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 225
NEUTRAL 100%

AIC 65,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.9	ROOFTOP RECEPTACLE	a	2	20/1	1.28	LIGHTING
3	20/1	0.36	RM 431 RECEPTACLE, RM 433 RECEPTACLE	b	4	20/1	0.996	LIGHTING
5	20/1	0.36	I.T. RECEPTACLE	c	6	20/1	0.706	LIGHTING
7	20/1	0.36	I.T. RECEPTACLE	a	8	20/1	0.48	LIGHTING
9	20/1	0.36	I.T. RECEPTACLE	b	10	20/1	0.636	LIGHTING
11	20/1	0.36	I.T. RECEPTACLE	c	12	20/1	1.06	LIGHTING
13	20/1	0.54	RM 434 RECEPTACLE	a	14	20/1	0.528	CP-3
15	20/1	0.54	RM 434 RECEPTACLE	b	16	20/1	0.1	WH-3
17	20/1	0.54	RM 430 RECEPTACLE	c	18	20/1	0.1	WH-4
19	20/1	0.36	RM 430 RECEPTACLE	a	20	20/1	0.1	WH-1
21	20/1	0.9	RM 429 RECEPTACLE, SMARTBOARD	b	22	20/1	0.1	WH-2
23	20/1	0	SPACE	c	24	20/1	0.1	WH-5
25	20/1	0.72	RM 1E RECEPTACLE, RM 5 RECEPTACLE	a	26	20/1	0.528	CP-2
27	20/1	0.93	CORRIDOR 428 RECEPTACLE, CORRIDOR 435 RECEPTACLE, RM 435 RECEPTACLE, TRAP PRIMER	b	28	15/1	0.696	EF-1
29	20/1	0.54	RM 5 RECEPTACLE	c	30	30/2	4.5	EWH-1
31	20/1	0.72	RM 1D RECEPTACLE, RM 4 RECEPTACLE	a	32	|		
33	20/1	0.54	RM 4 RECEPTACLE	b	34	15/1	0.696	EF-5
35	20/1	0.54	RM 3 RECEPTACLE	c	36	15/1	0.696	EF-6
37	20/1	0.72	RM 1C RECEPTACLE, RM 3 RECEPTACLE	a	38	15/1	0.696	EF-2
39	20/1	0.72	RM 1B RECEPTACLE, RM 2 RECEPTACLE	b	40	20/1	0.528	CP-1
41	20/1	0.54	RM 2 RECEPTACLE	c	42	20/2	2	EFH-1
43	20/1	0.54	RM 103 RECEPTACLE	a	44	|		
45	20/1	0.72	RM 101C RECEPTACLE, RM 103 RECEPTACLE	b	46	20/2	2	EFH-4
47	20/1	0.72	RM 101B RECEPTACLE, RM 102 RECEPTACLE	c	48	|		
49	20/1	0.54	RM 102 RECEPTACLE	a	50	15/1	0.696	EF-7
51	20/1	0.72	RM 101A RECEPTACLE, RM 101 RECEPTACLE	b	52	20/1	0.9	RM 301A RECEPTACLE, RM 301 RECEPTACLE, RM 303 RECEPTACLE
53	20/1	0.54	RM 101 RECEPTACLE	c	54	20/1	0.72	RM 301 RECEPTACLE, SMARTBOARD
55	20/1	0.72	RM 101D RECEPTACLE, RM 104 RECEPTACLE	a	56	20/1	0.72	RM 422 RECEPTACLE
57	20/1	0.54	RM 104 RECEPTACLE	b	58	20/1	0.54	RM 423 RECEPTACLE, RM 424 RECEPTACLE, RM 425 RECEPTACLE
59	20/1	0.72	RM 101E RECEPTACLE, RM 105 RECEPTACLE	c	60	20/1	0.72	RM 205 RECEPTACLE
61	20/1	0.9	CORRIDOR 436 RECEPTACLE, RM 105F RECEPTACLE, RM 105 RECEPTACLE	a	62	20/1	0.72	RM 201E RECEPTACLE, RM 205 RECEPTACLE
63	20/1	0.72	RM 201C RECEPTACLE, RM 203 RECEPTACLE	b	64	20/1	0.73	RM 201D RECEPTACLE, RM 204 RECEPTACLE, TRAP PRIMER
65	20/1	0.54	EXTERIOR RECEPTACLE	c	66	20/1	0.72	RM 204 RECEPTACLE
67	20/1	1.1	CORRIDOR 419 RECEPTACLE, CORRIDOR 420 RECEPTACLE, CORRIDOR 428 RECEPTACLE, RM 421 RECEPTACLE, TRAP PRIMER	a	68	20/1	0.72	RM 202 RECEPTACLE
69	20/1	0.36	TELECOM EQ	b	70	20/1	0.72	RM 201B RECEPTACLE, RM 202 RECEPTACLE
71	20/1	0.72	MEZZANINE RECEPTACLE	c	72	20/1	0.72	RM 203 RECEPTACLE
73	20/1	0.5	RM 429 PROJECTOR	a	74	20/1	0.415	DRYER, DRYER BOOSTER FAN
75	20/1	0.02	DOOR HOLD-OPEN SYSTEM, DOOR SPEAKER SYSTEM	b	76	20/1	0.84	WASHER
77	20/1	0	SPACE	c	78	20/1	0.18	FACP
79	20/1	0	SPACE	a	80	20/1	0	SPACE
81	20/1	0	SPACE	b	82	20/1	0	SPACE
83	20/1	0	SPACE	c	84	20/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	5.16	6.45	(125%)	MOTORS	5.56	5.56	(100%)
LARGEST MOTOR	0.696	0.174	(25%)	RECEPTACLES	31.5	20.8	(50%>10)
				HEATING	8.5	8.5	(100%)
				TOTAL LOAD		41.5	
				BALANCED 3-PHASE LOAD		115 A	
				PHASE A		111%	
				PHASE B		93.8%	
				PHASE C		95.1%	

Panel MDP

ROOM
MOUNTING SURFACE
FED FROM UTILITY
NOTE PROVIDE INTEGRAL SPD

VOLTS 208Y/120V 3P 4W
BUS AMPS 1200
NEUTRAL 100%

AIC 65,000
MAIN BKR 1200
LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	225/3	50.8	PANEL L1	a	2	600/3	138	PANEL L2
3	|			b	4	|		
5	|			c	6	|		
7	225/3	37.6	PANEL L3	a	8	400/3	93.3	PANEL LK
9	|			b	10	|		
11	|			c	12	|		
13	20/1	0	SPACE	a	14	60/3	9.38	TRANSFER SWITCH ATS
15	20/1	0	SPACE	b	16	|		
17	20/1	0	SPACE	c	18	|		
19	20/1	0	SPACE	a	20	20/1	0	SPACE
21	20/1	0	SPACE	b	22	20/1	0	SPACE
23	20/1	0	SPACE	c	24	20/1	0	SPACE
25	20/1	0	SPACE	a	26	20/1	0	SPACE
27	20/1	0	SPACE	b	28	20/1	0	SPACE
29	20/1	0	SPACE	c	30	20/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	16.7	20.9	(125%)	MOTORS	236	236	(100%)
LARGEST MOTOR	18	4.5	(25%)	RECEPTACLES	61.8	35.9	(50%>10)
				HEATING	15.3	15.3	(100%)
				TOTAL LOAD		312	
				BALANCED 3-PHASE LOAD		866 A	
				PHASE A		104%	
				PHASE B		100%	
				PHASE C		96%	

Panel L2

ROOM
MOUNTING SURFACE
FED FROM MDP
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 600
NEUTRAL 100%

AIC 65,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	25/3	5.48	RTU-1	a	2	35/3	7.21	RTU-9
3	|			b	4	|		
5	|			c	6	|		
7	40/3	7.49	RTU-2	a	8	40/3	7.49	RTU-10
9	|			b	10	|		
11	|			c	12	|		
13	25/3	5.48	RTU-3	a	14	50/3	13.3	RTU-11
15	|			b	16	|		
17	|			c	18	|		
19	40/3	7.49	RTU-4	a	20	35/3	7.21	RTU-12
21	|			b	22	|		
23	|			c	24	|		
25	50/3	13.3	RTU-5	a	26	50/3	13.3	RTU-13
27	|			b	28	|		
29	|			c	30	|		
31	25/3	5.48	RTU-6	a	32	25/3	7.21	RTU-14
33	|			b	34	|		
35	|			c	36	|		
37	50/3	13.3	RTU-7	a	38	25/3	5.48	RTU-15
39	|			b	40	|		
41	|			c	42	|		
43	50/3	13.8	RTU-8	a	44	25/3	5.48	RTU-16
45	|			b	46	|		
47	|			c	48	|		
49	20/1	0	SPACE	a	50	20/1	0	SPACE
51	20/1	0	SPACE	b	52	20/1	0	SPACE
53	20/1	0	SPACE	c	54	20/1	0	SPACE
55	20/1	0	SPACE	a	56	20/1	0	SPACE
57	20/1	0	SPACE	b	58	20/1	0	SPACE
59	20/1	0	SPACE	c	60	20/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
LARGEST MOTOR	13.8	3.46	(25%)	TOTAL LOAD	142
MOTORS	138	138	(100%)	BALANCED 3-PHASE LOAD	394 A
				PHASE A	100%
				PHASE B	100%
				PHASE C	100%

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KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL

DWG
drawn by

TVO
checked by

OCTOBER 2024
date

revisions
1 11/22/2024 AD 02
2 12/12/2024 AD 03
3 1/3/2025 AD 06

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

E601

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

MECHANICAL EQUIPMENT SCHEDULE

CALLOUT	DESCRIPTION	VOLTS	HP	KVA	MCA	MOCP	CIRCUIT	WIRE CALLOUT	DISCONNECT	DISC PROV BY	DISC INST BY
CP-1	CIRCULATION PUMP	120V 1P 2W	1/6 HP	0.53			L1-40	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
CP-2	CIRCULATION PUMP	120V 1P 2W	1/6 HP	0.53			L1-26	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
CP-3	CIRCULATION PUMP	120V 1P 2W	1/6 HP	0.53			L1-14	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
EF-1	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L1-28	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
EF-2	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L1-38	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
EF-3	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L3-42	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
EF-4	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L3-40	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
EF-5	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L1-34	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
EF-6	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L1-36	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
EF-7	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L1-50	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
EF-8	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	4	15	L3-52	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
EFH-1	ELECTRIC FAN FORCED HEATER	208V 2P 2W		2			L1-42,44	3/4"C,2#10,#10G,#10IG	TOGGLE SWITCH	MFR	EC
EFH-2	ELECTRIC FAN FORCED HEATER	208V 2P 2W		2			L3-48,50	3/4"C,2#10,#10G,#10IG	TOGGLE SWITCH	MFR	EC
EFH-3	ELECTRIC FAN FORCED HEATER	208V 2P 2W		2			L3-44,46	3/4"C,2#10,#10G,#10IG	TOGGLE SWITCH	MFR	EC
EFH-4	ELECTRIC FAN FORCED HEATER	208V 2P 2W		2			L1-46,48	3/4"C,2#10,#10G,#10IG	TOGGLE SWITCH	MFR	EC
EWH-1	ELECTRIC WATER HEATER	208V 2P 2W		4.5			L1-30,32	3/4"C,2#10,#10G	NON-FUSED	EC	EC
RTU-1	ROOF TOP UNIT	208V 3P 3W		5.48	19	25	L2-1,3,5	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-2	ROOF TOP UNIT	208V 3P 3W		7.49	26	40	L2-7,9,11	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-3	ROOF TOP UNIT	208V 3P 3W		5.48	19	25	L2-13,15,17	3/4"C,3#8,#10G	NON-FUSED	MFR	EC
RTU-4	ROOF TOP UNIT	208V 3P 3W		7.49	26	40	L2-19,21,23	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-5	ROOF TOP UNIT	208V 3P 3W		13.26	46	50	L2-25,27,29	3/4"C,3#6,#10G	NON-FUSED	MFR	EC
RTU-6	ROOF TOP UNIT	208V 3P 3W		5.48	19	25	L2-31,33,35	3/4"C,3#8,#10G	NON-FUSED	MFR	EC
RTU-7	ROOF TOP UNIT	208V 3P 3W		13.26	46	50	L2-37,39,41	1"C,3#4,#10G	NON-FUSED	MFR	EC
RTU-8	ROOF TOP UNIT	208V 3P 3W		13.83	48	50	L2-43,45,47	1"C,3#4,#10G	NON-FUSED	MFR	EC
RTU-9	ROOF TOP UNIT	208V 3P 3W		7.21	25	35	L2-2,4,6	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-10	ROOF TOP UNIT	208V 3P 3W		7.49	26	40	L2-8,10,12	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-11	ROOF TOP UNIT	208V 3P 3W		13.26	46	50	L2-14,16,18	3/4"C,3#6,#10G	NON-FUSED	MFR	EC
RTU-12	ROOF TOP UNIT	208V 3P 3W		7.21	25	35	L2-20,22,24	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-13	ROOF TOP UNIT	208V 3P 3W		13.26	46	50	L2-26,28,30	1"C,3#4,#10G	NON-FUSED	MFR	EC
RTU-14	ROOF TOP UNIT	208V 3P 3W		5.48	19	25	L2-32,34,36	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-15	ROOF TOP UNIT	208V 3P 3W		5.48	19	25	L2-38,40,42	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
RTU-16	ROOF TOP UNIT	208V 3P 3W		5.48	19	25	L2-44,46,48	3/4"C,3#10,#10G	NON-FUSED	MFR	EC
SF-1	EXHAUST FAN	120V 1P 2W	1/2 HP	1.18	2	15	EM1-2	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
SF-2	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	2	15	EM1-4	3/4"C,1#10,#10N,#10G	TOGGLE SWITCH	EC	EC
SF-3	EXHAUST FAN	120V 1P 2W	1/4 HP	0.7	2	15	EM1-6	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
WH-1	WATER HEATER	120V 1P 2W	F HP	0.1			L1-20	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC
WH-2	WATER HEATER	120V 1P 2W	F HP	0.1			L1-22	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC
WH-3	WATER HEATER	120V 1P 2W	F HP	0.1			L1-16	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC
WH-4	WATER HEATER	120V 1P 2W	F HP	0.1			L1-18	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC
WH-5	WATER HEATER	120V 1P 2W	F HP	0.1			L1-24	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC

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KITCHEN EQUIPMENT SCHEDULE

CALLOUT	DESCRIPTION	VOLTS	HP	KVA	MCA	MOCP	CIRCUIT	WIRE CALLOUT	DISCONNECT	DISC PROV BY	DISC INST BY
AC	AIR CURTAIN	120V 1P 2W	1 HP	1.92					TOGGLE SWITCH	EC	EC
CLR	COOLER LIGHTING	120V 1P 2W		0.3			LK-15	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
CO-1	CONVECTION OVEN	120V 1P 2W	1/2 HP	1.18			LK-30	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI 2	EC	EC
CO-2	CONVECTION OVEN	120V 1P 2W	1/2 HP	1.18			LK-26	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC
CS-1	CONVECTION STEAMER	208V 2P 2W		6			LK-8,10	3/4"C,2#8,#10G	NON-FUSED	EC	EC
CS-2	CONVECTION STEAMER	208V 2P 2W		8			LK-2,4	3/4"C,2#6,#10G	NON-FUSED	EC	EC
DOAS-1	ROOF TOP UNIT	208V 3P 3W		16.43	57.1	60	LK-71,73,75	1"C,3#4,#10G	NON-FUSED	MFR	EC
DTK	DRAIN WATER TEMPERING KIT	120V 1P 2W		0.6			LK-57	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
DW	DISHWASHER	208V 3P 3W		18			LK-51,53,55	1"C,3#4,#8G	NON-FUSED	EC	EC
EK	ELECTRIC KETTLE	208V 3P 3W		10.8			LK-14,16,18	3/4"C,3#8,#10G	NON-FUSED	EC	EC
EVAP	EVAPORATOR	208V 2P 2W		0.21			LK-17,19	3/4"C,2#12,#12G	JUNCTION BOX	EC	EC
EVAP	EVAPORATOR	208V 2P 2W		0.21			LK-21,23	3/4"C,2#12,#12G	JUNCTION BOX	EC	EC
FRZ	FREEZER LIGHTING	120V 1P 2W		0.3			LK-15	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
FSS	FIRE SUPPRESSION SYSTEM	120V 1P 2W		0.12			LK-38	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
HC	HOT CABINET	120V 1P 2W		1.92			LK-34	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI 2	EC	EC
HFW	HOT FOOD WELL	208V 2P 2W		2.81			LK-39,41	3/4"C,2#12,#12G	NON-FUSED	EC	EC
HT	HEAT TAPE	120V 1P 2W		1.92			LK-25	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
IM	ICE MAKER	120V 1P 2W		1.62			LK-47	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC
KEF-1	KITCHEN EXHAUST FAN	208V 3P 3W		2.63			LK-65,67,69	3/4"C,3#10,#10G	NON-FUSED	EC	EC
MC	MILK COOLER	120V 1P 2W		0.33			LK-35	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI 2	EC	EC
MW	MICROWAVE	120V 1P 2W		1.5			LK-29	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI	EC	EC
POS	POINT OF SALE SYSTEM	120V 1P 2W		0.12			LK-43	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
RFW	REFRIGERATED FOOD WELL	120V 1P 2W		0.84			LK-37	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI 2	EC	EC
RS-1	REFRIGERATION SYSTEM	208V 3P 3W		9.73	29	40	LK-59,61,63	3/4"C,3#10,#10G	NON-FUSED	EC	EC
SM	STAND MIXER	120V 1P 2W	1/2 HP	1.18			LK-31	3/4"C,1#12,#12N,#12G	DUPLEX RECEPTACLE GFI 2	EC	EC
VCP	VENTILATOR CONTROL PANEL	120V 1P 2W		0.12			LK-45	3/4"C,1#12,#12N,#12G	JUNCTION BOX	EC	EC
VEN	VENTILATOR	120V 1P 2W		1.8			LK-42	3/4"C,1#12,#12N,#12G	TOGGLE SWITCH	EC	EC

1

Panel LK — ROOM — MOUNTING RECESSED — FED FROM MDP — NOTE [DOUBLE TUB] — VOLTS 208Y/120V 3P 4W — BUS AMPS 400 — NEUTRAL 100% — AIC 65,000 — MAIN BKR 400 — LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.726	LIGHTING	a	2	50/2	8	CS-2
3	20/1	0.36	RECEPTACLE	b	4	|		
5	20/1	0.36	RECEPTACLE	c	6	-/1	0	SHUNT TRIP
7	20/1	0.36	RECEPTACLE	a	8	40/2	6	CS-1
9	20/1	0.36	RECEPTACLE	b	10	|		
11	20/1	0.36	RECEPTACLE	c	12	-/1	0	SHUNT TRIP
13	20/1	0.54	RECEPTACLE	a	14	40/3	10.8	EK
15	20/1	0.6	CLR, FRZ	b	16	|		
17	20/2	0.208	EVAP	c	18	|		
19	|			a	20	-/1	0	SHUNT TRIP
21	20/2	0.208	EVAP	b	22	20/1	0.18	RECEPTACLE
23	|			c	24	-/1	0	SHUNT TRIP
25	20/1	1.92	HT	a	26	20/1	1.18	CO-2
27	20/1	0.01	TRAP PRIMER	b	28	-/1	0	SHUNT TRIP
29	20/1	1.5	MW	c	30	20/1	1.18	CO-1
31	20/1	1.18	SM	a	32	-/1	0	SHUNT TRIP
33	20/1	0.01	TRAP PRIMER	b	34	20/1	1.92	HC
35	20/1	0.325	MC	c	36	-/1	0	SHUNT TRIP
37	20/1	0.84	RFW	a	38	20/1	0.12	FSS
39	20/2	2.81	HFW	b	40	-/1	0	SHUNT TRIP
41	|			c	42	20/1	1.8	VEN
43	20/1	0.12	POS	a	44	-/1	0	SHUNT TRIP
45	20/1	0.12	VCP	b	46	20/1	0.18	GAS VALVE
47	20/1	1.62	IM	c	48	-/1	0	SHUNT TRIP
49	20/1	0.01	TRAP PRIMER	a	50	20/1	0	SPACE
51	70/3	18	DW	b	52	20/1	0	SPACE
53	|			c	54	20/1	0	SPACE
55	|			a	56	20/1	0	SPACE
57	20/1	0.6	DTK	b	58	20/1	0	SPACE
59	40/3	9.73	RS-1	c	60	20/1	0	SPACE
61	|			a	62	20/1	0	SPACE
63	|			b	64	20/1	0	SPACE
65	20/3	2.63	KEF-1	c	66	20/1	0	SPACE
67	|			a	68	20/1	0	SPACE
69	|			b	70	20/1	0	SPACE
71	60/3	16.4	DOAS-1	c	72	20/1	0	SPACE
73	|			a	74	20/1	0	SPACE
75	|			b	76	20/1	0	SPACE
77	20/1	0	SPACE	c	78	20/1	0	SPACE
79	20/1	0	SPACE	a	80	20/1	0	SPACE
81	20/1	0	SPACE	b	82	20/1	0	SPACE
83	20/1	0	SPACE	c	84	20/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.726	0.907	(125%)	MOTORS	87	87	(100%)
LARGEST MOTOR	18	4.5	(25%)	RECEPTACLES	2.73	2.73	(50%>10)
				HEATING	2.81	2.81	(100%)
				TOTAL LOAD		98	
				BALANCED 3-PHASE LOAD		272 A	
				PHASE A		107%	
				PHASE B		103%	
				PHASE C		89.5%	

3

Panel EM1 — ROOM — MOUNTING SURFACE — FED FROM ATS — NOTE — VOLTS 208Y/120V 3P 4W — BUS AMPS 60 — NEUTRAL 100% — AIC 65,000 — MAIN BKR 60 — LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.432	LIGHTING	a	2	15/1	1.18	SF-1
3	20/1	0.441	LIGHTING	b	4	15/1	0.696	SF-2
5	20/1	1	LIGHTING	c	6	15/1	0.696	SF-3
7	20/1	0.981	LIGHTING	a	8	20/1	0.5	BLOCK HEATER
9	20/1	0.55	LIGHTING	b	10	20/1	0.5	BATTERY HEATER
11	20/1	0.643	LIGHTING	c	12	20/1	0.5	BATTERY CHARGER
13	20/1	0.568	LIGHTING	a	14	20/1	0.18	RECEPTACLE
15	20/1	0.512	LIGHTING	b	16	20/1	0	SPACE
17	20/1	0	SPACE	c	18	20/1	0	SPACE
19	20/1	0	SPACE	a	20	20/1	0	SPACE
21	20/1	0	SPACE	b	22	20/1	0	SPACE
23	20/1	0	SPACE	c	24	20/1	0	SPACE
25	20/1	0	SPACE	a	26	20/1	0	SPACE
27	20/1	0	SPACE	b	28	20/1	0	SPACE
29	20/1	0	SPACE	c	30	20/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	5.13	6.41	(125%)	MOTORS	2.57	2.57	(100%)
LARGEST MOTOR	1.18	0.294	(25%)	RECEPTACLES	1.68	1.68	(50%>10)
				TOTAL LOAD		11	
				BALANCED 3-PHASE LOAD		30.4 A	
				PHASE A		123%	
				PHASE B		86.4%	
				PHASE C		90.9%	

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KFC ENGINEERING
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SALAS O'BRIEN
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1 11/22/2024 AD 02
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MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:
E602

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

STRUCTURED CABLING LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
*# ▼	WALL MOUNTED NETWORK OUTLET D#: NUMBER OF DATA DROPS IN OUTLET AP: WIRELESS ACCESS POINT	+18" AFF, UNLESS OTHERWISE NOTED	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
V# ▽	COMMUNICATIONS OUTLET	FIELD COORDINATE	FIELD COORDINATE	
W ▼	WALL MOUNTED NETWORK OUTLET	+44" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
B	WALL MOUNTED BOX FOR FUTURE USE.	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
D# ▼	FLOOR MOUNTED NETWORK OUTLET	N/A	COORDINATE WITH ELECTRICAL CONTRACTOR	FINISHED HARDWARE PROVIDED BY DIV 27
D#	CEILING MOUNTED NETWORK OUTLET D#': NETWORK OUTLET	ABOVE CEILING	CEILING BRACKET WITH BISCUIT BLOCK	
AP D#	CEILING MOUNTED NETWORK OUTLET FOR ACCESS POINT D#: NETWORK DROP QUANTITIY	ABOVE CEILING	CEILING BRACKET WITH BISCUIT BLOCK	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. CONDUIT STUB UP AND SLEEVES SHALL HAVE A SOLID UNCUT PLASTIC PROTECTIVE BUSHING.
5. NO CONDUITS SHALL EXCEED FOR 40% MAXIMUM FILL RATIO. CONTRACTOR TO PROVIDE ADDITIONAL CONDUITS REQUIRED.

AUDIO/VIDEO LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
WMP	WALL MOUNTED PROJECTOR AUDIO/VISUAL OUTPUT OUTLET	REFERENCE FLOOR PLANS.	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
CMP	CEILING MOUNTED PROJECTOR AUDIO/VISUAL OUTPUT OUTLET	CEILING MOUNTED	N/A	NOTE #5
AV-1	WALL MOUNTED AUDIO/VIDEO INPUT OUTLET	+18" AFF UNO	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	
FSD-1	WALL MOUNTED FLAT SCREEN DISPLAY AUDIO/VISUAL OUTPUT OUTLET	REFERENCE FLOOR PLAN	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5
FSD-2	WALL MOUNTED FLAT SCREEN DISPLAY AUDIO/VISUAL OUTPUT OUTLET ASSOCIATED WITH AV-1 INPUT OUTLET	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
IVD	INTERACTIVE VIDEO DISPLAY AUDIO/VISUAL OUTPUT OUTLET	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
CP	AV CONTROL PANEL	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
PS	LOCAL INSTRUCTIONAL SPACE PRESENTATION SPEAKER	CEILING	CONTRACTOR PROVIDED CEILING BOX	COORDINATE POWER WITH EC
	STREAMING CAMERA	CEILING UNO	N/A	NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

INTERCOM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ICS	INTERCOM COMMUNICATIONS SYSTEM HEAD END UNIT.	FLOOR MOUNTED	COORDINATE WITH EC	COORDINATE POWER WITH EC
S	CEILING MOUNT INTERCOM SPEAKER, LAY-IN CEILING	CEILING	CONTRACTOR PROVIDED	
S2	CEILING MOUNT INTERCOM SPEAKER, HARD CEILING.	CEILING	CONTRACTOR PROVIDED	
S3	WALL MOUNT INTERIOR INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S4	WALL MOUNT EXTERIOR INTERCOM SPEAKER	+10' AFF UNO	CONTRACTOR PROVIDED	
S5	PENDANT MOUNT INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S6	SURFACE MOUNT INTERCOM SPEAKER, MOUNT TO STRUCTURE	CEILING	CONTRACTOR PROVIDED	
S7	CEILING MOUNTED EXTERIOR INTERCOM SPEAKER.	CEILING	CONTRACTOR PROVIDED	
# IP	IP BASED SPEAKER. '#' TO BE REPLACED WITH S, S2, S3, S4 INDICATING THE SPECIFIC TYPE OF SPEAKER.	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	NOTE #5
# IP AMP	SPEAKER CONNECTED TO IP MODULE AND AMPLIFIER. '#' TO BE REPLACED WITH S, S2, S3, S4 INDICATING THE SPECIFIC TYPE OF SPEAKER.	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
VC	WALL MOUNTED VOLUME CONTROL	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
CB	INTERCOM CALL BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C	SINGLE FACE CLOCK	90" AFF UNO.	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C2	DOUBLE FACE CLOCK	90" AFF UNO.	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RPS	REMOTE PROGRAM SOURCE	DESK TOP	COORDINATE WITH EC	NOTE #5
ACS	ADMINISTRATIVE CALL STATION.	DESK TOP	N/A	NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

ACCESS CONTROL LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ACP	ACCESS CONTROL SYSTEM, CONTROL PANEL.	+60" AFF TO CENTER	AS REQUIRED	COORDINATE POWER. NOTE #4.
CR #'	ACCESS CONTROL PROXIMITY CARD READER. DEFAULT SYMBOL INDICATES WALL MOUNTED 'M - INDICATES MULLION MOUNTED READER	+42" A.F.F.	1-G, 3/4" C	
CR	DOOR MOUNTED ACCESS CONTROL PROXIMITY CARD READER THAT IS INTEGRATED INTO THE DOOR HARDWARE.	+42" AFF	N/A	
DS #'	2-WAY AUDIO/VIDEO INTERCOM DOOR STATION. *DEFAULT INDICATES WALL MOUNTED *M - INDICATES MULLION MOUNTED DEVICE	+42" AFF	*W: 1-G, 3/4" C *M: 3/4"C	COORDINATE POWER. NOTE #4 & #5.
DS	DOOR MOUNTED, 2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.	+42" AFF, FIELD COORDINATE		COORDINATE POWER. NOTE #4 & #5
MS	2-WAY AUDIO/VIDEO INTERCOM MASTER STATION.	DESK MOUNTED UNO		COORDINATE POWER. NOTE #4
DR	DOOR RELEASE BUTTON	COORDINATE WITH GC	1-G, 3/4" C	
DH	PIR MOTION REQUEST TO EXIT DEVICE, DOOR CONTACT AND ELECTRIC STRIKE.			ACCESS CONTROL ONLY DOOR SHALL BE SPST. DOOR WITH BOTH ACCESS CONTROL AND INTRUSION SHALL BE DPDT. ONLY 1 DOOR CONTACT PER DOOR IF DH AND DC SYMBOL ARE SHOWN

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK
5. AVIGILON PART # 3.0C-H4VI-RO1-IR.

VIDEO SURVEILLANCE LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
	WALL/CORNER MOUNT 3-SENSOR CAMERA 3	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5 AND 6
	CEILING MOUNTED 4-SENSOR CAMERA	CEILING		NOTE #5
	3-SENSOR CAMERA	CEILING UNO		NOTE #5 AND 6
	2-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5
	1-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
	SYMBOL ADDED TO CAMERA TO INDICATE WALL MOUNT.	+9' AFF UNO		NOTE #6
VRS	VIDEO RECORDING SERVER			
#MU	VIDEO SURVEILLANCE MAIN UNIT	ABOVE CEILING		NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK
6. EXTERIOR WALL MOUNT SPEAKERS SHALL BE MOUNTED +10'AFF.

INTRUSION LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
IDP	INTRUSION DETECTION SYSTEM CONTROL PANEL	+60" AFF	TWO(2) - 1"C TO CONTRACTOR PROVIDED BACK BOX	COORDINATE POWER WITH EC. NOTE #5
KP	INTRUSION DETECTION SYSTEM KEYPAD 1	+60" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
M *#	WALL MOUNTED MOTION DETECTOR '# = LR IF LONG RANGE	REFERENCE FLOOR PLAN	N/A	
GB	CEILING MOUNTED GLASS BREAK DETECTOR	CEILING	N/A	
DC	DOOR CONTACT	FLUSH MOUNTED IN DOOR FRAME	N/A 1	INTRUSION ONLY DOOR SHALL BE DPDT. DOOR WITH BOTH ACCESS CONTROL AND INTRUSION SHALL BE (1) DPDT FOR INTRUSION AND (1) SPST FOR ACCESS CONTROL. SPACE CONTACTS AT LEAST 2" APART.
ODC	OVERHEAD DOOR MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
HU	DMP WIRELESS HOLDUP BUTTON	UNDER DESK UNO	N/A	
SS	SECURITY SIREN	+9' AFF	SINGLE GANG BACKBOX	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. REFERENCE DIVISION 28 SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

FIRE ALARM

*PROJECT SCOPE INCLUDES REPLACING EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY WITH NEW VOICE EVACUATION FIRE ALARM SYSTEM. FIRE ALARM SYSTEM SHALL BE FULLY OPERATIONAL THROUGHOUT ALL PHASES OF CONSTRUCTION. DEMOLISH EXISTING SYSTEM ONCE NEW SYSTEM IS INSTALLED, TESTED, AND ACCEPTED BY THE AHJ.

LEGEND

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL. PROVIDE AND INSTALL 1 CATEGORY CABLE TO CONNECT PANEL TO NETWORK.
FAA	FIRE ALARM ANNUNCIATOR PANEL
NAC	NOTIFICATION APPLIANCE

NOTES:

1. REFERENCE SHEET SPECIFICATIONS

2. A LICENSED FIRE ALARM PLANNING SUPERINTENDENT CERTIFIED TO A MINIMUM LEVEL 3, IN THE SUBFIELD OF FIRE ALARM SYSTEMS THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), SHALL PROVIDE PLANS AND CALCULATIONS FOR A MANUAL AND AUTOMATIC FIRE DETECTION AND ALARM SYSTEM TO COMPLY WITH THE BUILDING SPACE LAYOUT, BUILDING OCCUPANCY, CURRENT NFPA 72, LOCAL AND STATE CODE REQUIREMENTS, AND THE FIRE ALARM AND DETECTION SYSTEM SPECIFICATIONS.

SUBSCRIPTS AND ABBREVIATIONS

TEXT	DESCRIPTION
'WP'	DEVICE SHALL BE WEATHER PROOF AND RATED FOR EXTERIOR CONDITIONS
●	FIELD COORDINATE ELEVATION.
AFF	ABOVE FINISHED FLOOR
'UC'	DEVICE IS TO BE MOUNTED ON THE UNDERSIDE OF THE ELEVATED CANOPY.
'WM'	DEVICE IS TO BE WALL MOUNTED.
'WG'	WIRE GUARD TO BE PROVIDED AND INSTALLED TO PROTECT ASSOCIATED DEVICE.

SUBSCRIPTS LEGEND - EXISTING DEVICES

TEXT	DESCRIPTION
'E'	EXISTING TO REMAIN.
'D'	DEVICE IS EXISTING AND IS TO BE REMOVED. CONTRACTOR TO REMOVE THE DEVICE AND RETURN TO OWNER.
'R'	REMOVE EXISTING DEVICE AND RELOCATE TO A LOCATION INDICATED ON THE DRAWINGS.

NOTES TO CONTRACTOR

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. SYSTEM INSTALLERS SHALL COORDINATE LOCATIONS AND CONNECTIONS WITH THE PROJECT'S ELECTRICAL CONTRACTOR.
3. CONTRACTOR TO PROVIDE PROPERLY GROUNDED LIGHTING PROTECTION ON ALL CABLING ENTERING AND EXITING THE BUILDING.

RESPONSIBILITY MATRIX

SCOPE ITEM	RESPONSIBILITY			NOTES
COMMUNICATIONS - DIVISION 27	OFOI	CFCI	OFCI	
CATEGORY 6 STRUCTURED CABLING SYSTEM		X		
PROJECTOR AND PROJECTOR MOUNT	X			
BUILDING INTERCOMPA, BELL, AND CLOCK SYSTEM		X		
NETWORK EQUIPMENT			X 3	
→ MDF/IDF NETWORK EQUIPMENT	X			
→ VOIP TELEPHONES	X			
→ WIRELESS ACCESS POINTS	X			
→ UNITERRUPTABLE POWER SUPPLIES (UPS)			X	
RACEWAY: CONDUIT, BACK BOXES, SLEEVES, ETC.		X		SEE NOTE 1.
ELECTRICAL POWER		X		SEE NOTE 1.
LIFE SAFETY AND SECURITY - DIVISION 28	OFOI	CFCI	OFCI	
ACCESS CONTROL SYSTEM(ACS)		X		
INTRUSION DETECTION SYSTEM		X		
VIDEO SURVEILLANCE SYSTEM (VSS)				
→ VSS SERVERS		X		
→ VSS CAMERAS		X		
→ VSS PROGRAMMING		X		
→ VSS CABLING		X		SEE NOTE 2. 3
FIRE ALARM SMOKE DETECTION WITH VOICE EVACUATION		X		SEE NOTE 1.
RACEWAY: CONDUIT, BACK BOXES, SLEEVES, ETC.		X		SEE NOTE 1.
ELECTRICAL POWER		X		SEE NOTE 1.

OFOI - OWNER FURNISHED AND OWNER INSTALLED
CFCI - CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED
OFCI - OWNER FURNISHED AND CONTRACTOR INSTALLED

REPONSIBILITY MATRIX NOTES:
1. BY DIVISION 26.
2. BY DIVISION 27.

1 TECHNOLOGY NOTES AND LEGENDS
N.T.S.

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NY
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OCTOBER 2024
date

revisions
3 01/03/2025 AD 06
1 11/22/2024 AD 02

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

T000

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

SAFEROOM NOTE

PER ICC 500-2014, 309.1:

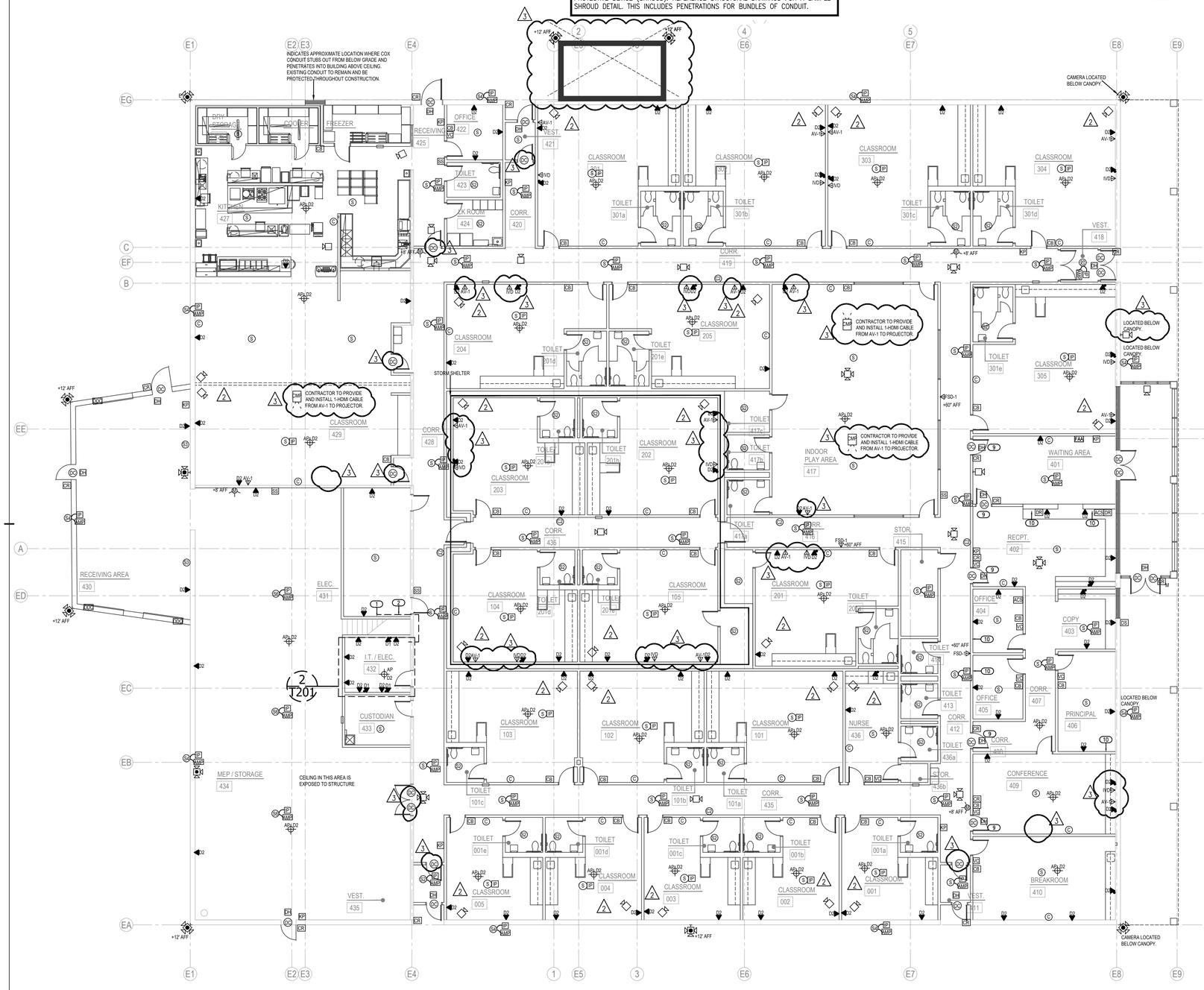
PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE THAT ARE LARGER THAN:
1. 3.5" SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS, OR
2. 2 1/16" IN DIAMETER

SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE (SHROUD). REFERENCE STRUCTURAL DRAWINGS FOR A SAMPLE SHROUD DETAIL. THIS INCLUDES PENETRATIONS FOR BUNDLES OF CONDUIT.

ACTIVE DAS HYBRID SYSTEM NOTE

CONTRACTOR TO PROVIDE AND INSTALL A COMPLETE AND FUNCTIONING DAS SYSTEM IN THE STORM SHELTER PORTION OF THE BUILDING.

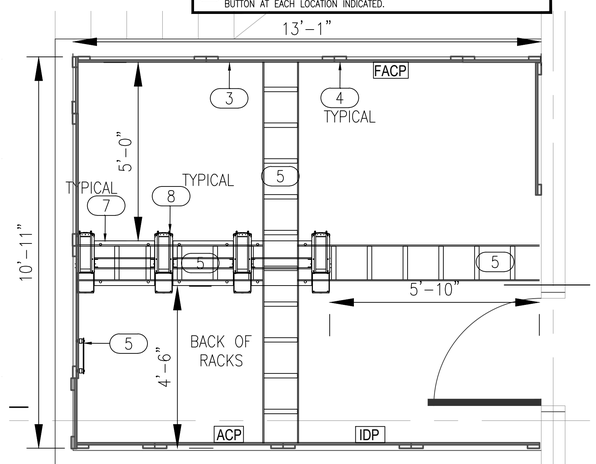
CONTRACTOR SHALL PROVIDE AND INSTALL A CEL-FI QUATRA 4000c SYSTEM BY NEXTIVITY.



1 TECHNOLOGY FLOOR PLANS

SCALE: 3/32" = 1'-0"

NORTH



2 TECHNOLOGY ENLARGED PLAN - I.T./ELEC. 432

SCALE: 1/2" = 1'-0"

GENERAL NOTES

A. FIRE ALARM: CONNECT NEW FIRE ALARM DEVICES TO NEW SILENT KNIGHT 6820XL SUPPLY 6820XL PANEL AND ALL NAC PANELS, POWER SUPPLIES, ETC. NEEDED TO MAKE A COMPLETE AN CODE COMPLIANT SYSTEM. SYSTEM SHALL USE SK PROTOCOL DEVICES ONLY. SEE SPECIFICATIONS FOR APPROVED PART NUMBERS.

B. SECURITY ALARM: CONNECT ALL NEW SECURITY ALARM DEVICES TO NEW DMP SECURITY ALARM PANEL. SUPPLY DMP PANEL AND ALL ZONE EXPANDERS, POWER SUPPLIES, ETC. NEEDED TO MAKE A COMPLETE SYSTEM. SYSTEM SHALL BE WIRED WITH 2 ZONES PER SINGLE DOOR OR DOUBLE DOOR. ONE ZONE FOR SECURITY ALARM AND ONE ZONE FOR DOOR HOLD OPEN ALERTS. SEE SPECIFICATIONS FOR APPROVED PART NUMBERS.

C. INTERCOM: INTERCOM DEVICES SHALL BE RAULAND. CONNECT ALL NEW INTERCOM DEVICES TO EXISTING RAULAND TELECENTER U IP. SUPPLY ALL MASTER CONSOLES, AMPLIFIERS, POWER SUPPLIES, MODULES, CALL BUTTONS, ETC. NEEDED TO MAKE A COMPLETE SYSTEM. ROOM SPEAKERS AND RESTROOM SPEAKERS SHALL BE TIED TOGETHER ON ONE TALK ZONE PER ROOM CALL BUTTON. EACH ROOM WITH A CALL BUTTON SHALL HAVE A STATUS LIGHT INSTALLED ABOVE ROOM DOOR ON HALLWAY SIDES. SEE SPECIFICATIONS FOR APPROVED PART NUMBERS.

D. CLOCKS: CLOCKS SHALL BE RAULAND. SEE SHEET SPECIFICATIONS FOR APPROVED PART NUMBERS.

E. ACCESS CONTROL: CONNECT ALL NEW ACCESS CONTROL DEVICES TO NEW KEYSCAN CONTROLLERS. SUPPLY KEYSCAN CONTROLLERS AND ALL POWER SUPPLIES, READERS, STRIKES, ETC. NEEDED TO FURNISH A COMPLETE SYSTEM. SEE SPECIFICATIONS FOR APPROVED PART NUMBERS.

F. CAMERA: CONNECT ALL NEW CAMERAS TO NEW MDF. CAMERA SYSTEM IS AVIGILON. CONTRACTOR TO PROVIDE DELL AVIGILON SERVER IN MDF ROOM LOCATED ON 2 POST RACK. CONTACT JACK PHILLIPS WITH MOORE PUBLIC SCHOOLS @ 405-473-5225 FOR EXACT CAMERA MOUNTING LOCATIONS AND SPECIFICATIONS. SEE SPECIFICATIONS FOR APPROVED PART NUMBERS.

G. DATA: CONNECT NEW DATA, WIFI AND CAMERA NETWORK DROPS TO NEW MDF. CONNECT NEW DAYCARE MDF TO EXISTING IDF LOCATED IN MOORE HIGH SCHOOL CCC VIA FIBER AND CAT 6 CABLE. SEE SPECIFICATIONS FOR APPROVED PART NUMBERS.

KEYED NOTES

1. CONTRACTOR TO EXTEND ENTRNCE CONDUIT ABOVE CEILING. CONTRACTOR TO MATCH NEW CONDUIT SIZE WITH EXISTING CONDUIT SIZE.
2. CONTRACTOR TO PROVIDE AND INSTALL INNERDUCT ABOVE CEILING AT THE INDICATED ROUTE TO THE NEW IT ROOM. PENETRATE AND SEAL WALLS AS NEEDED.
3. INDICATES NEW DEMARC LOCATION. PLYWOOD IS RESERVED FOR SERVICE PROVIDER EQUIPMENT.
4. INDICATES THE LOCATION OF A 8" TALL, 3/4" FIRE RATED PLYWOOD CONTRACTOR TO PROVIDE AND INSTALL PLYWOOD AND ALL REQUIRED MOUNTING HARDWARE. PLYWOOD SHALL BE PAINTED WHITE WITH FIRE RATED PAINT. TYPICAL FOR ALL SHOWN ON DRAWING.
5. INDICATES THE LOCATION OF A NEW WALL MOUNTED TELECOMMUNICATION GROUND BUS BAR (TGBB). CABLING CONTRACTOR TO PROVIDE BUS BAR AND ALL REQUIRED MATERIAL TO MOUNT AT THE LOCATION SHOWN. TGBB TO BE MOUNTED AT +93" A.F.F.
6. PROVIDE AND INSTALL A 12" WIDE, UNIVERSAL LADDER TRAY AND ALL REQUIRED MOUNTING HARDWARE. LADDER TRAY SHALL BE BLACK IN COLOR. TYPICAL FOR ALL SHOWN ON ENTIRE PROJECT.
7. PROVIDE AND INSTALL ONE (1) 2-POST, FLOOR MOUNTED, 7' RELAY RACK (BLACK IN COLOR). PROVIDE BONDING WASHERS, BOLTS, AND NUTS AT ALL MECHANICALLY CONNECTED LOCATIONS OF THE RACK TO ENSURE THAT ALL PIECES OF THE RACK ARE COMPLETELY BONDED. SCRAPING PAINT FROM RACKS TO MAKE A BOND WILL NOT BE ACCEPTED. ALL RACK MOUNTED COMPONENTS SHALL BE MOUNTED WITH BONDING SCREWS AND THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (50) ADDITIONAL BONDING SCREWS FOR THE INSTALLATION OF OWNER EQUIPMENT. NO DAISY CHAINING GROUNDS FROM RACK TO CABLE TRAY OR TO OTHER RACKS WILL BE ACCEPTED. ALL GROUNDS SHALL BE HOME RUN TO THE TELECOMMUNICATIONS GROUND BUS BAR (TGBB). TYPICAL FOR ALL SHOWN ON THE ENTIRE PROJECT.
8. PROVIDE AND INSTALL ONE (1) 7'X6", FRONT AND REAR MANAGED, VERTICAL CABLE MANAGER (BLACK IN COLOR). CABLE MANAGERS SHALL BE INSTALLED ON EACH END OF THE RACK SYSTEMS AND BETWEEN EACH RACK. CABLE MANAGERS SHALL HAVE A SINGLE, SOLID, FULL HEIGHT HINGED DOOR IN THE FRONT AND WIDE SPACED CABLE RINGS WITH SPIN-OPEN LATCHES IN THE REAR. TYPICAL FOR ALL SHOWN IN THE ENTIRE PROJECT.
9. DOOR HARDWARE SPECIFIED FOR INDICATED DOORS SHOULD HAVE KEY ACCESS FROM BOTH SIDES ALLOWING EACH SIDE TO BE LOCKED AND UNLOCKED INDEPENDENTLY.
10. CONTRACTOR TO PROVIDE AND INSTALL A DMP WIRELESS HOLD UP BUTTON AT EACH LOCATION INDICATED.

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2 12/12/2024 AD 03
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Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

STRUCTURED CABLING

Horizontal Cabling

Requirements

- Copper cable shall be Category 6 plenum rated cable (blue in Color) for all work station drops.
- Copper cable shall be Category 6 plenum rated cable (White in Color) for all Security camera drops.
- Copper cable shall be Category 6 plenum rated cable (Yellow in Color) for all Wifi drops.
- Approved Category 6 cables are as follows.

Superior Essex Cat6 Plenum Part #'s	77-240-2B blue 77-240-4B white 77-240-6B yellow 77-240-5B green
Mohawk Cat6 Plenum Part #'s	M58281B Blue M58280B white M58283B yellow M58286B green
Berk-Tech Cat6 Plenum Part #'s	10136226 blue 10136230 white 10136749 yellow 10136748 green
General Cat6 Plenum Part #'s	7131800 blue 7131841 white 7131802 yellow 7131806 green

- Connector shall be Leviton part # 61110-RO6 eXtreme 6 connector for all workstation drops.
- Connector shall be Leviton part # 61110-RW6 eXtreme 6 connector for all Security camera drops.
- Connector shall be Leviton part # 61110-RY6 eXtreme 6 connector for all Wifi drops.
- Contractor shall provide Moore Public Schools, Technology Department, one 5' category 6 patch cord, (blue in color) for each category 6 work station cable installed. To be installed by contractor at the network cabinet.
- Contractor shall provide Moore Public Schools, Technology Department, one 10' category 6 patch cord, (blue in color) for each category 6 work station cable installed. Leave in box at network cabinet. To be installed by MPS Technology Dept.
- Contractor shall provide Moore Public Schools, Technology Department, one 5' category 6 patch cord, (White in color) for each category 6 Security Camera cable installed. To be installed by contractor at the network cabinet.
- Contractor shall provide Moore Public Schools, Technology Department, one 10' category 6 patch cord, (White in color) for each category 6 Security Camera cable installed. Leave in box at network cabinet. To be installed by MPS Technology Dept.
- Contractor shall provide Moore Public Schools, Technology Department, one 5' category 6 patch cord, (Yellow in color) for each category 6 Wifi cable installed. To be installed by contractor at the network cabinet.
- Contractor shall provide Moore Public Schools, Technology Department, one 10' category 6 patch cord, (Yellow in color) for each category 6 Wifi cable installed. Leave in box at network cabinet. To be installed by MPS Technology Dept.
- Each cable shall be terminated on the patch panel in data closets.
- All Category 6 connectors shall be placed into QuickPort faceplates at the workstation end.
- Faceplate shall be Leviton part # 41080-6wp
- No substitutions.

Communications Backbone Cabling

Requirements - Optical fiber

- 1 Optical fiber cable shall be run from the MDF to each IDF.
- Fiber shall be terminated with LC connectors.
- Optical fiber cable shall be plenum rated Laser Optimized 50 micron Multi Mode distribution fiber.
- Optical fiber cable shall be an OM3 rated cable guaranteed to support 10 Gigabit Ethernet for 300 meters using 850 nm wavelength.
- Optical fiber cable shall have 24 strands using industry standard color coding.
- Optical fiber cable shall have a flame retardant and low smoke FEP jacket.
- Optical fiber cable shall support 10GBase-SX applications for the life of the system.
- Optical fiber cable shall be armor jacketed or protected inside plenum rated plastic inner duct orange or aqua in color.

  MIC Tight-buffered 024T88-33180-A3
- No substitutions.

Requirements - Copper backbone

- 6 Cat 6 cables shall be run from the MDF to each IDF.
- 3 Cat 6 cables shall be run from the phone Dmark to the MDF.
- Copper cable shall be Category 6 cable. Green in color
- Connector shall be Leviton part # 61110-RV6 eXtreme 6 connector.
- Each cable shall be terminated on the patch panel in data closets.
- Each cable end shall be terminated using the T568B pin/pair assignment.
- No substitutions.

Cable Installation

- Properly support horizontal cables in ceiling every 4'-5' using J-Hooks or cable tray only. (no slings, pouches, or D rings.)
- Place horizontal cables in pathways and spaces dedicated for communications cables. No pathways shall be in or above the red iron. Data cable will be run in separate pathways from all other cables.
- Provide 30' of slack at station end in ceiling and not inside wall.
- Slack shall be rolled neatly in a 2' loop and hanging from a j-hook in ceiling above drop location.
- Cat 6 data cables are to be terminated using the T568B standard.
- Leviton face plates that support 6 snap in jacks will be used with Leviton snap in blanks in unused slots.
- Ensure terminations are at 180 degrees to the jack with no more than ¼" un-twisting and no more than ½" un-jacketing and are in accordance with manufacturer's recommendations.
- Ensure terminations have no un-twisting and that tower separators are utilized to separate pairs.
- Ensure pulling tensions of cables are not exceeded.
- Maintain proper cable bend radius of 4 times the cable's outer diameter during placement.
- No splices are permitted.
- No link shall exceed 90 meters. Contractor is responsible for verifying proper footages.
- Pull one additional "Mule Tape" or ¼" Nylon rope when pulling cables through any conduit utilizing existing pull string.
- Mule Tape or Nylon rope is to be pulled into conduit separately and after all other cables have been installed.
- Install sleeves when puncturing walls.
- Cable shall not be installed between cinder block walls and roof decking.
- Cable shall not be installed between red iron and roof decking.
- Firestop all sleeves and conduit openings after cable installation.
- Terminate all pairs and conductors at all ends according to manufacturer's instructions following color code sequence.
- No splices are permitted in any fiber optic cable except when terminating connectors
- Terminate all Fiber pairs.
- All optical fiber cable shall be installed in the fiber panels in accordance with the manufacturer's instructions.
- Optical fiber Back bone cable length shall not exceed 300 meters.
- Copper backbone cable length shall not exceed 90 meters.
- All back bone cables (Fiber and Copper) shall have 20' of slack at both ends.
- Corning rack mount fiber patch panels are to be used where applicable.
- Outdoor rated fiber will be used for all outdoor fiber runs.
- Stress relief cable and the appropriate building fastener will be used on all aerial runs.
- All aerial cables will be fastened to the stress relief cables.
- 3" conduit is to be used for all buried runs, accessible at each end, with a pull string inside.
- A trace wire and warning tape will be buried with all buried runs
- All bends in conduit will be made with sweeps.
- Back bone cabling shall utilize a star topology with no more than 2 levels of backbone.
- Utilize Velcro ONLY in all closets.
- Install all components in a neat and workmanlike manner.
- Install all horizontal cables and termination frames in accordance with manufacturer's recommendations.

Labeling

- Label shall be a rap type with number printed multiple times enabling print to be legible from any angle.
- Machine label all termination panels and face plates with cabinet and cable number.
- Termination panels shall be labeled in numerical order.
- A single drop will be labeled a total of four times. The labels will be located on the patch panel in the rack, on both ends of the cable, and on the face plate at the work station end. The labels are to read exactly the same in all four locations.
- All 5' patch cables will be labeled at both ends. 5' cables will be installed at the cabinet.
- Numbering scheme will be 00-000 where the first two digits are the cabinet number and the last three are the drop number. Example, drop number 75 in cabinet 2 will read, 02-075.
- Camera drop labels numerically start at 500 in each cabinet. If camera drops already exist in said cabinet the next available consecutive number will be used.
- WiFi drop labels numerically start at 800 in each cabinet. If WiFi drops already exist in said cabinet the next available consecutive number will be used.

  Example for cabinet 1:
  Data (blue cable orange jacks) 01-001 to 01-499
  Camera (white cable white jacks) 01-500 to 01-799
  WiFi (yellow cable yellow jacks) 01-800 to 01-999
- Label all fiber optic cables at both ends on the cable and in the break out box

Test

- Test results for all Category 6 copper and fiber optic cables shall be provided to Moore Public Schools, Technology department.

End of Section

Communications Equipment Room Fittings

Equipment rack

- Free standing equipment rack shall be Chatsworth #55053-703.
- Free standing racks shall be sized to accept 19" spaced equipment and handle a total weight load of 1, 000 pounds.
- Free standing racks shall have 3" side rails tapped on both sides with universal hole patterns for threaded 12-24 screws.
- No substitutions.

Copper Patch panels

- Patch panel shall be a Leviton #49255-H24 Quick Port 110 panel with cable management bar.
- Patch panel shall have 24 ports taking up 1 rack mount unit.
- No substitutions.

Horizontal cable management

- Horizontal cable manager shall be a 2 RU Chatsworth part #30130-719.
- No substitutions.

Vertical cable management

- Vertical cable manager shall be Chatsworth part #30095-703.
- No substitutions.

Optical fiber patch panel / enclosure

- Optical fiber enclosure shall be Corning LC loaded rack mount panel.

  CCH-04U
  CCH-01U
  CCH-CP24-E4
  SOC-LC-900-OM4
- No substitutions.

Ladder racking

- Ladder racking shall be Chatsworth #10250-718.
- The appropriate Chatsworth mounting hardware shall be used.
- No substitutions.

Power protection power strips

- PDU's are to be placed in all data racks.
- PDU shall have overload protection and easy to reset circuit breaker.
- PDU shall be rack mountable.
- PDU shall be constructed from 18 AWG steel.
- PDU shall have light emitting diodes to indicate "Power On" and "Ground/Polarity OK" feature.
- PDU shall be rated for 20 Amps and have a 12' L5-20P plug and ten 5-20R receptacles.
- No substitutions.

Uninterruptible Power Supply (UPS)

- Contractor shall furnish and install a Cyber Power UPS in each new MDF/IDF.
- UPS manufacturer shall be Cyber Power. Model OL1500RTXL2UN

Installation

Free standing racks

- Assemble free standing racks according to manufacturer's instructions. Verify that equipment mounting rails are sized properly for rack-mount equipment before attaching the rack to the floor.
- All racks must be attached to the floor in four places using appropriate floor mounting anchors. When placed over a raised floor, threaded rods should pass through the raised floor tile and be secured in the structural floor below.
- All rack must be secured to the adjacent wall using ladder rack to stabilize the top of the rack and provide a cable pathway from the ceiling to the rack.
- Racks shall be grounded to the telecommunications bus bar using #6 AWG green insulated solid copper wire and any necessary attachment hardware provided by the Communications Contractor.
- Mount rack mount power strips on rack where active equipment will be placed.

Ladder rack

- Ladder rack shall be attached to the top of the rack to deliver cables to the rack. The rack should not be drilled to attach ladder rack. Use appropriate hardware from the ladder rack manufacturer.
- Ladder racking shall be supported every 5' with 3/8" threaded rod anchored and secured to permanent ceiling structure.
- Loading of cable rack shall not exceed 6" depth and should have retainers every 12" to prevent cables from spilling over the sides.
- Where ladder racking butts up against wall the appropriately sized wall mount bracket shall be utilized.
- Ladder rack shall extend vertically up wall and through drop ceiling to gain access to cavity above drop ceiling.
- Ladder racking shall utilize all appropriate radius drop stringers, corner bends and other devices to maintain cable bend radius when entering and exiting racks, cabinets and drop ceilings
- Mating pieces of ladder racking together shall utilize appropriate butt splice and junction splice kits.
- All cut and exposed sharp ends shall utilize a plastic end cap to prevent injury.

Cable management

- Vertical cable manager shall be installed on every rack vertical rail. Where two rack rails will be butted together there shall be two vertical wire managers between the racks.
- Horizontal wire managers shall be utilized above and below every copper and fiber patch panel.
- All cables shall sweep in and out of any cable management product without a deformation of cable jacket.
- Ensure cables are properly supported when using cable management to ensure cables do not sag.
- Utilize Velcro ONLY for securing of cables on cable management.

Copper and Fiber patching panels

- Route all cables to backside of termination panels in an asymmetrical orientation to ensure cable bundles are split evenly.
- Utilize rear wire management bars for supporting cables into point of termination.
- Secure all cables on all panels using Velcro ONLY to prevent cables from pulling away.

End of Section

Quality Assurance

- Install all components as directed by Manufacturer's installation guidelines.
- All products shall bear the mark of UL or ETL for performance level.
- System installation shall meet all applicable Local/State codes and safety requirements where project is located.
- All products shall be new and un-used in original packaging.
- Follow and adhere to installation practices specified by the applicable Telecommunications Industry Association standards.
- Follow and adhere to installation practices specified by BICSI Information Transport System Installation.
- Follow and adhere to installation practices specified by BICSI Telecommunications Distribution Methods.
- Follow and adhere to installation practices specified by NFPA-70 National Electric Code.
- Follow and adhere to installation practices specified by the Manufacturers.
- Contractor shall make available all ceiling and termination work for inspection by Manufacturer's representative or owner's representative.
- Contractor shall replace all defective components.

Bidder/Installer Qualifications

- Bidding Contractor shall be a licensed to install telecommunications systems in the state where work will be performed.
- Bidding Contractor shall be Leviton certified for at least one year
- Bidding Contractor shall have a minimum of 5 years experience installing structured cabling for telecommunications.
- Bidding Contractor shall have the capability to bond project in its entirety.
- Bidding Contractor shall be able to provide insurance at the request of the owner.
- Installer shall have an onsite supervisor and one technician who are certified by the Manufacturer to install the Manufacturer's telecommunications products.
- Communications Contractor shall have an RCDD on staff for at least one year, to certify that the Communications System can support the required applications on the various cabling media.
- Installer shall have obtained Leviton certification from the Manufacturer within 1 year prior to performing the Work.

Delivery, Storage, and Protection

- Communications Contractor shall ensure that materials delivery to work area shall be coordinated with construction site manager responsible for materials distribution to all trades.
- Communications Contractor is responsible for all materials, tools and vehicles left on the job site.
- Communications Contractor shall coordinate a disposal bin for the removal of all trash produced by the Communications Contractor personnel during the project.
- Communications Contractor shall ensure materials are stored in an environmental area where:

  Temperature does not exceed 120 degrees Fahrenheit nor below 32 degrees Fahrenheit.
  Humidity does not exceed 80 %.
  No direct exposure to sunlight.
- Follow Manufacturer's recommendations for handling of materials.

Warranty

- Communications Contractor shall provide a 1 year parts and labor warranty against defective workmanship and/or system component failure.
- Communications Contractor shall execute a Lifetime Applications Assurance Warranty for parts and labor to support stated applications from the connectivity Manufacturer.

End of Section

Moore Public Schools Intercom System Specifications

Part 1 - Equipment

1.01System Manufacture

- Intercom System Manufacturer shall be Telecor or Rauland Telecenter U IP. (Match existing system)
- Cable Manufacturer shall be Belden or Equivalent

  Locations where Telecor equipment is required. It may be purchased from the following authorized Telecor dealers
  Advanced Cabling, Inc - 405-418-4322
  High-Tech Tronics, Inc - 405-495-0215

  Locations where TelecenterU equipment is required. It may be purchased from the following authorized TelecenterU dealer
  Endex of Oklahoma Inc - 405-602-0001

1.02 Intercom Systems Equipment

1.02.a Telecor Intercom Equipment

- Intercom call in button shall be momentary close and compatible with existing intercom system
- Intercom ceiling speakers shall be Manufacture Clarity Model # S-522. (Or equivalent approved by MPS must have volume control accessible from the floor)
- Intercom outside paging horn shall be Manufacture Rauland Borg 3601. (Or equivalent approved by MPS)
- Locations where Telecor equipment is required. It may be purchased from the following authorized Telecor dealers

  Advanced Cabling, Inc - 405-418-4322
  High-Tech Tronics, Inc - 405-495-0215

1.02.b Rauland Telecenter U IP Intercom Systems Equipment

- Classroom Intercom Equipment
  - Call button shall be Part # 603302 Dual Level call switch.
  - Ceiling speakers shall be Part # BAFKIT2X2L8RJ - 8 Ohm ceiling tile replacement speaker with RJ45 connector.
  - IP Classroom Module shall be TCC2011 IP Module (*Module required for each classroom, *Requires POE network drop)
- Hallway/Commons/Outside Intercom Equipment
  - TCC2022-IP Zone page module (*Requires POE network drop)
  - Appropriate size amp for quantity of speakers.
  - BAFKIT2X2L- 25 volt ceiling tile replacement paging speaker (For all classroom & hallway locations)
  - Rauland Borg 3601 - Loud paging horn (For all outside & large area locations such as gymnasiums, etc.)
  - Rauland status light shall be part # TCC2088
  - Rauland status light trim ring shall be part # TCC2986

  Locations where TelecenterU equipment is required. It may be purchased from the following authorized TelecenterU dealer
  Endex of Oklahoma Inc - 405-602-0001

End of Section

Part 2 - Installation

2.01 Systems Installation

- All non-IP cabling shall be **shielded** and have a minimum of 5 conductors.
- All network IP cabling shall be Cat6 & Purple in color (See Structured Cabling System Specifications for cabling information)
- Each room with a call button shall have a status light mounted above the room door on the hallway side. (Rauland Telecenter U IP sites only)
- All circuits and cabling shall be labeled at all terminating ends.
- All Ceiling mounted devices shall be mounted on non-stainable ceiling tiles
- All devices shall be mounted according to the manufacture's specifications.
- All devices shall be properly adjusted and tested prior to job completion.
- All non-IP room circuits shall run from the intercom system to the call button then to the room speaker.
- All extra speaker wire taps shall be insulated.
- All rooms shall be individually wired and terminated at the intercom system on individual points. (No Doubling)
- All rooms shall be tested to verify proper room number programming and operation.
- All call buttons shall be labeled with their corresponding system point number.
- Protective grommets shall be installed on all conduits to protect wire.
- All wire shall be run in J hooks above ceiling with a minimum space of 4" from ceiling deck. All wire shall be in separate pathways 6" from other system wiring. No wire ties allowed. No wire shall be run between the red iron and roof deck.
- All wire ran between building shall be in conduit and shall be direct burial cable. It shall be a minimum of 5 conductor 18 AWG copper. Lighting suppression shall be installed at entry points.
- Installer shall supply the electrical and or masonry contractors with specialty back boxes and coordinate with them to ensure that all necessary conduits, back boxes, etc. are installed in the proper locations.
- Follow and adhere to installation practices specified by NFPA-70 National Electric Code, Edition 2008.
- Follow and adhere to installation practices specified by the Manufacturers.

2.02 Quality Assurance

- Install all components as directed by Manufacturer's installation guidelines.
- All products shall bear the mark of UL or ETL for performance level.
- System installation shall meet all applicable Local/State codes and safety requirements where project is located.
- All products shall be new and un-used in original packaging.

2.03 Bidder/Installer Qualifications

- Bidding contractor shall have a minimum of 5 years experience installing school intercom systems.
- Bidding contractor shall be able to provide insurance at the request of the owner.

2.04 Delivery, Storage, and Protection

- Contractor shall ensure that materials delivery to work area shall be coordinated with construction site manager responsible for materials distribution to all trades.
- Contractor is responsible for all materials, tools and vehicles left on the job site.
- Follow Manufacturer's recommendations for handling of materials.

2.05 Scheduling

- Contractor shall provide a detailed construction schedule with hard dates for completion of roughing in cables, terminations and testing once scheduling sequence has been determined to the Owner's Project Manager.

2.06 Warranty

- Contractor shall provide a 1 year parts and labor warranty against defective workmanship and/or system component failure.

End of Section

Part 3 - Execution

3.01 Field Quality Control

- Contractor shall make available all ceiling and termination work for inspection by Manufacturer's representative or owner's representative.
- Contractor shall replace all defective components.

3.02 Adjusting

- No additional work outside of the contract scope of work shall be completed without the approval of the Owner or Owner's representative.

3.03 Protection

- It is the responsibility of the Contractor to ensure equipment is protected from dust and water during the project with appropriate materials.
- Remove all protective covers and protective materials from equipment prior to turnover to Owner.

3.04 Schedules

- Coordinate work with Owner's project manager and follow scheduling sequence as established by Owner's project manager.
- It is recommended that the Contractor schedule closely with any other systems contractor to ensure turnover date is met.
- Contractor bidding will supply the electrical and or masonry contractors with any specialty back boxes such as clock recessed back boxes etc. and coordinate with them to ensure that all necessary conduits, back boxes, etc. are installed in the proper locations.

3.05 Submittals

1.03.01 Prior to installation

- Show compete map of system design for approval by Owner.

3.06 System Requirements

Intercom system shall be capable of communicating to all rooms and shall have adequate number of room points as to not double up on any given point.

End of Section

Intercom System Installation Completion Check List

Part 4 - Check List

4.01 Section Includes

- Intercom System Completion Check List

4.02 Completion Check List

- Main control panel has a map of the entire system inside and a copy has been given to Jack Phillips with MPS.
- All intercom programming such as bell times, tornado drill alert, etc has been checked and is correct.
- Intercom has been tested for proper operation.
- All rooms have been tested to verify proper description at console.
- All speakers have been tested to verify proper operation and volume.
- All extra speaker wires have been tapped or insulated
- All call buttons are labeled and have been tested for proper operation.

End of Section

Moore Public Schools Clock System Specifications

Part 1 - General

1.01System Manufacture

- Clock Equipment shall be Telecor, Rauland, Sapling or Primex. See plans for the specific manufacturer required. (No Substitutions)

  Locations where Telecor equipment is required. It may be purchased from the following authorized Telecor dealers

  Advanced Cabling, Inc - 405-418-4322
  High-Tech Tronics, Inc - 405-495-0215

1.03Intercom Clock Systems Equipment Description

- If building has existing clock system, clocks shall be compatible with existing system.
- Telecor Digital Clocks shall be hard wired 24v and may not use battery power for its primary power source. Clocks shall be 4 inch.
- Telecor Analog Clocks shall be hard wired 24v and may not use battery power for its primary power source. Clocks shall be 12 inch.
- Rauland Clock/Msg Board shall be part # TCC3011S
- Rauland hallway dual face clock/msg board bracket shall be part # TCC TCC30DFM
- Sapling clock part number shall be as follows:

SMA-3R0-1004-1	Transmitter
SBL-31S-25R-4R	Digital Clocks
SAB-1BD-00S-0	Metal Pole for Double Clocks
SAL-4BS-12R-14	12" Analog Clock 24v
35-MO15	Power Transformer

- If a clock system is not specified and the site does not have an existing working clock system, stand-alone battery powered clocks shall be used.
  Stand-alone wall clock shall be
  American Time E56BAQD304BP
  Stand-alone dual face hallway clock shall be
  American Time E93BAQD204BP
  An 110v electric clock receptacle shall be installed at each clock location for future devices.

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

AGP
the Abla Griffin Partnership L.L.C.
201 N. BROADWAY
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MOORE, OK. 73160
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KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL

NY
drawn by

NY
checked by

OCTOBER 2024
date

revisions
3 01/03/2025 AD 06

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

T401

4.03 Products Installed but not Supplied Under This Section

- All conduit and EMT required for Fire cabling pathway in/out of closets and in/out of wall cavities at the work area. EMT or Conduit for pathways shall have no more than two 90 degree sweeps and no continuous section over 100'.
- All core holes and poke through devices in the floor for the installation of cabling.
- All core holes and EMT sleeves between floors for the routing of cabling.
- Back boxes for the mounting of Devices.
- Drag line or pull string at the back boxes fished through EMT or conduit to the other end for installing Cabling.

4.04 References

- NFPA-70 National Electrical Code 2008 edition
- NFPA-72 National Fire Alarm Code
- UL 1666 - Standard for Safety of Flame Propagation Height
- NFPA 262 - Flame Travel and Smoke of Wires and Cables
- Local Authority Having Jurisdiction

4.05 Definitions

AWG - American Wire Gauge

BICSI - Building Industry Consulting Service International

EIA - Electronics Industry Alliance

FCC - Federal Communications Commission

NECA - National Electrical Contractors Association

NFPA - National Fire Protection Agency

UL - Underwriters Laboratory

4.06 Delivery, Storage, and Protection

- Contractor shall ensure that materials delivery to work area shall be coordinated with construction site manager responsible for materials distribution to all trades.
- Contractor is responsible for all materials, tools and vehicles left on the job site.
- Follow Manufacturer's recommendations for handling of materials.

4.07 Project Conditions

4.07.1 Environmental Requirements

- Contractor shall ensure that any pollutants produced during the Work are disposed off according to local, state or national regulations. Follow the most stringent guidelines.
- It is preferred that the Contractor recycle any used or un-used components during the course of the construction project.

4.07.2 Field Measurements

- Contractor shall coordinate with electrical engineer on project that the main electrical service ground has a resistance to earth of less than 5 ohms.
- Contractor shall ensure that all field testers have been calibrated from the Manufacturer within 1 year.
- All field test results will be documented and submitted to Moore Public Schools, Technology Department.

4.08 Sequencing

- Contractor shall coordinate with Owner's project manager on sequencing of various trades and construction teams for the lifecycle of the project.

4.09 Scheduling

- Contractor shall provide a detailed construction schedule with hard dates for completion of roughing in cables, terminations and testing once scheduling sequence has been determined to the Owner's Project Manager.

4.10 Warranty

- Contractor shall provide a 1 year parts and labor warranty against defective workmanship and/or system component failure. (1 year warranty shall begin at job completion)

4.11 Source Quality Control

- Materials shall be purchased from Distributors authorized by system Manufacturers to sell new and unused components.

Part 5 -

5.01 Field Quality Control

- Contractor shall make available all ceiling and termination work for inspection by Manufacturer's representative or owner's representative.
- Contractor shall replace all defective components.

5.02 Adjusting

- No additional work outside of the contract scope of work shall be completed without the approval of the Owner or Owner's representative.

5.03 Cleaning

- Contractor shall sweep and mop the floors of all equipment rooms or connection point closets prior to turnover to the Owner.

5.04 Protection

- It is the responsibility of the Contractor to ensure equipment is protected from dust and water during the project with appropriate materials.
- Remove all protective covers and protective materials from equipment prior to turnover to Owner.

5.05 Schedules

- Coordinate work with Owner's project manager and follow scheduling sequence as established by Owner's project manager.
- It is recommended that the Contractor schedule closely with any other systems contractor to ensure turnover date is met.
- Contractor bidding will work closely with the electrical and or masonry contractors to ensure conduit, back boxes, door frame access conduit, etc. are in the proper locations and accessible.

End of Section

Moore Public Schools Fire System Specifications SK & SD Protocol

Part 1 - General

2.01 Manufacturers

- Fire System Manufacturer shall be Silent Knight. (No Substitutions)
- Notification appliance Manufacturer shall be System Sensor. (No Substitutions)
- Device Manufacture shall be as specified in equipment description. (No Substitutions)
- Cable Manufacturer shall be Genesis. (Or Equivalent)

1.03Fire Systems Equipment Description

- **NOTE:** Contractor shall use SK Protocol devices on all new installations except when the existing system has SD protocol devices connected. In these instances, SD protocol devices shall be used. Contractor shall not combine SD & SK protocol devices to one system.
- Fire alarm control shall be Silent Knight Model # 5820 or 6820. (No Substitutions)
- Fire alarm distributed power module NAC Expansion shall be Silent Knight SK-PS6 / SK-PS10 or Fire-Lite Model #'s FL-PS6 / FL-PS10. (No Substitutions)
- Fire alarm intelligent power supply shall be Silent Knight Model # 5895XL. (No Substitutions)
  NOTE: The 5895XL NAC circuits will not sync with the main control panels NAC circuits. If new NAC circuit synchronization is required with existing NAC circuits, use the SK-PS6/FL-PS6 or SK-PS10/FL-PS10
- Fire alarm remote Annunciator shall be Silent Knight Model # 5860 (Grey) and surface mount trim ring 5860TG (Grey) shall be used if surface mounted. (No Substitutions)
- Fire Alarm signaling line circuit expander shall be Silent Knight Model # 5815XL for SD protocol devices & 6815 for SK protocol devices. (No Substitutions)

SK Protocol Devices Shall Be

- Fire alarm addressable manual pull station shall be Silent Knight Model # SK-PULL-DA. (No Substitutions)
- Fire alarm addressable photoelectric smoke detector shall be Silent Knight Model # SK-PHOTO-W. (No Substitutions)
- Fire alarm addressable heat detector shall be Silent Knight Model # SK-HEAT-W. (No Substitutions)
- Fire alarm base shall be Silent Knight Model # B300-6. (No Substitutions)
- Smoke Detectors in areas that require a CO Detector shall be SK-FIRE-CO-W. (No Substitutions)
- Fire alarm addressable input module shall be Silent Knight Model # SK-MONITOR or SK-MONITOR-2. (No Substitutions)
- Fire alarm addressable relay module shall be a Silent Knight Model # SK-RELAY. (No Substitutions)
- Fire alarm SLC line isolator shall be Silent Knight Model # SK-ISO. (No Substitutions)
- Fire alarm Duct detectors and Duct Detector Remote Test Stations shall be Silent Knight Model #'s SK-DUCT and RTS151KEY. If a Form-C relay is required, please add an SK-RELAY. (No Substitutions)

SD Protocol Devices Shall Be

- Fire alarm addressable manual pull station shall be Silent Knight Model # SD500-PSDA. (No Substitutions)
- Fire alarm addressable photoelectric smoke detector shall be Silent Knight Model # SD505-PHOTO. (No Substitutions)
- Fire alarm addressable heat detector shall be Silent Knight Model # SD505-HEAT. (No Substitutions)
- Fire alarm base for Silent Knight Model #'s SD505-PHOTO and SD505-HEAT shall be Silent Knight Model # SD505-6AB. (No Substitutions)
- CO Detector shall be System Sensor Model # CO1224T. (No Substitutions) An SD500-AIM shall be installed on each CO1224T and shall be accessible and visible from the finished floor.
- Fire alarm addressable input module shall be Silent Knight Model # SD500-AIM. (No Substitutions)
- Fire alarm addressable relay module shall be a Silent Knight Model # SD500-ARM. (No Substitutions)
- Fire alarm SLC line isolator shall be Silent Knight Model # SD500-LIM. (No Substitutions)
- Fire alarm Duct detectors and Duct Detector Remote Test Stations shall be Silent Knight Model #'s SD505-DUCTR and SD505-DTS-K. (No Substitutions) Remote test station shall be accessible and visible from the finished floor.
- Fire alarm Horn / Strobe signaling device shall be System Sensor Model # P2WL. (Model PC2WL can be substituted if mounted on non-stainable ceiling tile. No other Substitutions)
- Fire alarm Strobe signaling device shall be System Sensor Model # SWL. (Model SCWL can be substituted if mounted on non-stainable ceiling tile. No other Substitutions)
- Fire alarm strobe synch module shall be System Sensor Model # MDL3. (Not needed on version 9 panels or newer) (No Substitutions)
- Fire alarm Outdoor strobe signaling device shall be System Sensor Model # P2RK. (No Substitutions)
- Fire alarm Speaker / Strobe signaling device shall be System Sensor Model # SPSWL. (Model SPSCWL can be substituted if mounted on non-stainable ceiling tile. No other Substitutions)
- Fire alarm Speaker signaling device shall be System Sensor Model # SPWL. (No Substitutions)
- Fire alarm 50-watt Voice Evac system shall be as needed Silent Knight SKE-450 (Single Zone), SKE-450-ZN4 (4 Zone) or SKE-450-ZN6 (6 Zone). (No Substitutions)

1.01Systems Installation

- All fire alarm junctions and or splices shall be soldered and insulated.
- All Ceiling mounted devices shall be mounted on non-stainable ceiling tiles.
- All circuits and wiring shall be labeled at all terminating ends.
- All fire system wiring shall be RED in color and non-shielded.
- All devices shall be mounted according to the manufacture's specifications.
- All devices shall be properly adjusted and tested prior to job completion.
- All fire pulls shall be dual action.
- All Initiating Devices shall be labeled with their corresponding module and point number. Smoke detector label shall be on smoke detector and smoke detector base and be clearly visible from the finished floor.
- Each Initiating Device Circuits (IDC) shall have Line Isolator Modules installed at the SLC Head End.
- All Initiating Device Circuits (IDC) shall be wired Class B (NFPA Style B).
- All Initiating Device Circuits (IDC) shall be wired with minimum 18 AWG gauge red **NON-Shielded cable**.
- All duct detectors shall be connected to fire system and shall have remote test stations installed accessible and visible from the finished floor. They shall be labeled with their corresponding module and point number.
- All duct detector ARM / AIM shall be installed adjacent to the remote test stations and shall be accessible and visible from the finished floor. They shall be labeled with their corresponding module and point number. (ARM/AIM should not be needed when using SD505-DUCTR duct det.)
- Each CO 1224T detectors shall have an SD500 AIM installed (No doubling). All CO1224T & SD500 AIM shall be labeled with their corresponding module and point number and shall be accessible and visible from the finished floor.
- All modules shall have their corresponding module number.
- All notification devices shall be wall mounted where possible. Where wire is exposed decorative wire molding shall be installed from the ceiling to the device. If ceiling mount devices are used, they shall be mounted on a non-stainable ceiling tile.
- All notification devices shall be labeled with their corresponding module, circuit number and device number. Label shall be on the base and be clearly visible from the finished floor. EOL Device shall be labeled as such.
- All horn / strobes and strobes shall be synchronized.
- All Notification Appliance Circuits (NAC) shall be wired Class B (NFPA Style Y).
- All Notification Appliance Circuits (NAC) shall be wired with minimum 16 AWG gauge red **NON-Shielded** cable.
- Protective grommets shall be installed on all conduits to protect wire.
- All SBUS and SLC circuits shall be wired with red **NON-shielded cable.**
- All wire shall be run in J hooks above ceiling with a minimum space of 6" from ceiling deck. All wire shall be in separate pathways 6" from other system wiring. No wire ties allowed. No wire shall be run between the red iron and roof deck.
- Main control panel shall have a CAT 6 cable ran between the main control and the phone company DMARC for monitoring purposes.
- All wire ran between building shall be in conduit and shall be **Non-shielded** direct burial cable. It shall be a minimum of 4 conductor 16 AWG copper.
- Installer shall have a commercial fire technician on the job site at all times during the installation.
- Installer shall supply the electrical and or masonry contractors with specialty back boxes such as remote annunciator recessed back boxes etc. and coordinate with them to ensure that all necessary conduits, back boxes, etc. are installed in the proper locations.
- Follow and adhere to installation practices specified by the applicable NFPA 72 standards.
- Follow and adhere to installation practices specified by NFPA-70 National Electric Code, Edition 2008.
- Follow and adhere to installation practices specified by the Manufacturers.

1.02 Products Installed but not Supplied Under This Section

- All conduit and EMT required for Fire cabling pathway in/out of closets and in/out of wall cavities at the work area. EMT or Conduit for pathways shall have no more than two 90-degree sweeps and no continuous section over 100'.
- All core holes and poke through devices in the floor for the installation of Fire cabling.
- All core holes and EMT sleeves between floors for the routing of Fire cabling.
- Back boxes for the mounting of Fire Devices.
- Drag line or pull string at the back boxes fished through EMT or conduit to the other end for installing Fire Cabling.

1.03Quality Assurance

1.03.01 Qualifications

- Install all components as directed by Manufacturer's installation guidelines.
- All products shall bear the mark of UL or ETL for performance level.
- System installation shall meet all applicable Local/State codes and safety requirements where project is located.
- All products shall be new and un-used in original packaging.

1.03.02 Bidder/Installer Qualifications

- Bidding contractor shall be a local licensed Commercial Fire Alarm Company with licensed Commercial Fire Alarm technician(s) on staff.
- Bidding contractor shall have a minimum of one year experience installing Silent Knight Addressable fire panels.
- Bidding contractor shall have a minimum of 5 years experience installing commercial fire alarms.
- Bidding contractor shall be able to provide insurance at the request of the owner.
- Bidding contractor shall have a commercial fire technician on the job site at all times during the installation.

1.04Sequencing

- Contractor shall coordinate with Owner's project manager on sequencing of various trades and construction teams for the lifecycle of the project.

1.05 Scheduling

- Contractor shall provide a detailed construction schedule with hard dates for completion of roughing in cables, terminations and testing once scheduling sequence has been determined to the Owner's Project Manager.

1.06 Warranty

- Contractor shall provide a 1-year parts and labor warranty against defective workmanship and/or system component failure. (1-year warranty shall begin at job completion)

Part 2 - Products

2.02 Source Quality Control

- Materials shall be purchased from Distributors authorized by system Manufacturers to sell new and unused components.

Part 3 -

3.01 Field Quality Control

- Contractor shall make available all ceiling and termination work for inspection by Manufacturer's representative or owner's representative.
- Contractor shall replace all defective components.

3.02 Adjusting

- No additional work outside of the contract scope of work shall be completed without the approval of the Owner or Owner's representative.

3.03 Protection

- It is the responsibility of the Contractor to ensure equipment is protected from dust and water during the project with appropriate materials.
- Remove all protective covers and protective materials from equipment prior to turnover to Owner.

End of Section

1.04 Submittals

1.04.01 Prior to installation

- Show compete map of system design for approval by Owner.

1.04.02 Prior to final acceptance

- Provide a soft CAD copy As-Built showing layout of panel, initiating devices, notification devices and all mounted equipment upon Substantial Completion.
- Ensure all warranties specify that the Owner is entitled to all rights guaranteed by the warranty for various components.

Fire System Installation Completion Check List

Part 1 - General

1.01 Section Includes

- Fire System Completion Check List

1.02 Completion Check List

- A map of the entire system showing device numbers and wire routes has been left inside the main control panel and a copy has been given to Jack Phillips with MPS.
- All panel programming has been checked and is correct.
- Panel(s) has been tested for proper operation.
- All zones have been tested to verify proper description at keypad.
- All zones have been tested to verify proper reporting to the monitoring station.
- All points have been tested to verify proper description at the keypad.
- All horn/strobes and strobes have been tested for proper operation.
- All smoke detectors have been tested and dust covers removed.
- All devices have been tested for proper operation.
- All cabinets are labeled on the outside with module numbers and point numbers.
- All cabinets are labeled on the inside with module numbers by the corresponding module and point descriptions.
- The monitoring station has the correct account information such as call list, zone descriptions, etc.

End of Section

Moore Public Schools - IP camera Specifications
IP CAMERA MANUFACTURE is AVIGILON (NO SUBSTITUTIONS).

AVIGILON EQUIPMENT
INDOOR DOME SINGLE HEAD CAMERA REQUIRED EQUIPMENT LIST (3)
4.0C-H6A-D1-IR
ACC7-ENT LICENSE - 1 per camera
INDOOR MULTI-HEAD 2 HEAD CAMERA REQUIRED EQUIPMENT LIST
10.0C-H5DH-DO1-IR
ACC7-ENT LICENSE - 1 per camera
INDOOR MULTI-HEAD 3 HEAD CAMERA REQUIRED EQUIPMENT LIST
9C-H5A-3MH (3x3MP)
POE-INJ2-PLUS-NA Power Injector
ACC7-ENT LICENSE - 1 per camera
H5AMH-AD-CEIL1
H5AMH-DC-COVR1
CLPNL-1001
ACC7-ENT LICENSE - 1 per camera
INDOOR MULTI-HEAD 4 HEAD CAMERA REQUIRED EQUIPMENT LIST
12C-H5A-3MH (4x3MP)
POE-INJ2-PLUS-NA Power Injector
ACC7-ENT LICENSE - 1 per camera
H5AMH-AD-CEIL1
H5AMH-DC-COVR1
CLPNL-1001
OUTDOOR DOME **SINGLE HEAD CAMERA REQUIRED EQUIPMENT LIST**
6.0C-H6A-DO1-IR
ACC7-ENT LICENSE - 1 per camera
OUTDOOR MULTI-HEAD 3 HEAD CAMERA CORNER MOUNT REQUIRED EQUIPMENT LIST
15C-H5A-3MH (3x5MP)
POE60U-1BTE Power Injector
ACC7-ENT LICENSE - 1 per camera
H5AMH-AD-PEND1
H5AMH-DO-COVR1
H5AMH-AD-IRIL1
WLMT-1001
CRNMT-1001
OUTDOOR MULTI-HEAD 3 HEAD CAMERA WALL MOUNT REQUIRED EQUIPMENT LIST
15C-H5A-3MH (3x5MP)
POE60U-1BTE Power Injector
ACC7-ENT LICENSE - 1 per camera (2)
H5AMH-AD-PEND1
H5AMH-DO-COVR1
H5AMH-AD-IRIL1
WLMT-1001
INDOOR **CAMERA LOCATED IN CLASSROOMS REQUIRED EQUIPMENT LIST**
3.0C-H6SL-D1-IR
ACC7-ENT LICENSE - 1 per camera

CAMERA SERVER INFORMATION, CONTRACTOR TO PROVIDE THE FOLLOWING:
1 - Dell Server part# NVR6-PRM-FORM-D-72TB-S22
1 - SFP fiber connector, part# NVR6-AINVR2-FORM-D-SFPPLUS-SR

INSTALLATION

- Install cameras on adjacent walls were possible. If it must be mounted on ceiling, it shall be on a water-resistant non-stainable ceiling tile. **MPS to have final determination of camera location and field of view) (Call Jack Phillips for final location and view phone 473-5225)**
- Any cameras installed on ceiling shall be mounted on a water-resistant non-stainable ceiling tile. (BIDDING CONTRACTOR SHALL PROVIDE NON-STAINABLE TILE)
- Each installed camera needs a camera license.
- All network drops shall be connected with patch cords to a switch at each rack location.
- No Substitutions.

Horizontal Cabling

Requirements

- See MPS Structured Cabling Specifications for camera network cabling installation, labelling and testing requirements.

Warranty

- Communications Contractor shall provide a 1 year parts and labor warranty against defective workmanship and/or system component failure.
- Communications Contractor shall execute a Lifetime Applications Assurance Warranty for parts and labor to support stated applications from the connectivity Manufacturer.

End of Section

Audio Visual Systems for Instructional Spaces Specifications
Part 1 - General

1.01 Instructional Spaces

- Reference technology drawings and detail sheet T504 for classroom configuration and part numbers.

1.02 Special Spaces

- Reference technology drawings and one line diagrams.

1.03 Flat Panel Displays

- All non interactive Flat Panel displays shall be 43" Samsung BE Series.
- Bio Lab 37 displays shall be ceiling mounted.
- Career Tech 12 and Career Tech 15 displays shall be wall mounted 55" AFF to center of display.

End of Section

AGP
the Abla Griffin Partnership L.L.C.
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KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL

NY
drawn by

NY
checked by

OCTOBER 2024
date

revisions
3 01/03/2025 AD 06
2 12/12/2024 AD 03

MOORE PUBLIC SCHOOLS

CHILD CARE FACILITY
201 N. EASTERN AVE.

sheet no:

T403

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date : 6/30/2025
Salas O'Brien Project Number: 2450-70304-00

26 December 2024

Mike Abla, AIA NCARB
AGP - the Abla Griffin Partnership LLC
313 SE 5th Street
Moore, Oklahoma 73160

Re: Moore Public Schools Child Care Center

Dear Mike,

The following are items for Addendum #6.

The following are clarifications to the items specified:

ITEM NO. 16 - MEAL TRANSPORT CARTS (10 REQUIRED)

Renfro Industries Inc. model SUCER1827-3 with all the standard features.

The following are changes to the drawings:

There are no revisions at this time.

The following items are acceptable as substitutions to the items specified:

There none submitted or approved. The bid will be as specified.

Sincerely,

Rocky Sturm, CFSP

DIVISION 6 - WOOD & PLASTICS

SECTION 06410 - CUSTOM CASEWORK

Part 1 - General

1.01 Section Includes:
- A. Special fabricated cabinet units as indicated on drawings.
- B. Countertops.
- C. Hardware
- D. Preparation for site finishing.
- E. Preparation for installing utilities.
- F. Related Documents: The Contract Documents apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.
- **G. NOTE: FRAMELESS CABINETS / EUROPEAN CONSTRUCTION STYLE CABINETS ARE ACCEPTABLE. Provide proposed details, etc. during shop drawing submittal phase for approval by Architect.**

1.02 Related Sections:
- A. Section 06200-Finish Carpentry: Related trim not specified in this section.
- B. Section 09900- Paints and Coatings: Finishing cabinet exterior and interior where applicable.

1.03 References:
- A. ANSI/BHMA A156.9-Cabinet Hardware.
- B. AWI-Quality Standards
- C. FS L-F 508-Plastic Sheet, Laminated, Decorative and non-Decorative.
- D. FS MM-L-736-Lumber, Hardware.
- E. FS MMM-A- 130-Adhesive, Contact.
- F. NEMA LD-3-High Pressure Decorative laminates.
- G. PS 1-Construction and Industrial Plywood.
- H. PS 20-American Softwood Lumber Standard.
- I. PS 51-Hardwood and Decorative Ply.

1.04 Submittals:
- A. Shop Drawings: Indicated materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location, and schedule of finishes.

1.05 Quality Assurance: Perform work in accordance with AWI Custom quality.

1.06 Qualifications: Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years of experience.

1.07 Delivery, Storage, and Handling:
- A. Protect units from moisture damage.
- B. Store materials in ventilated, interior locations under

constant, minimum temperatures of 60 degrees F. And maximum relative humidity of 55 percent.

1.08 Field Measurements: Verify that field measurements are as indicated on shop drawings.

1.09 Coordination: coordinate work with plumbing and electrical rough-in.

Part 2 - Products

2.01 Wood Materials:

A. Softwood Lumber:PS20; graded in accordance with AWI Custom; average moisture content of 6 percent; species and grades as follows:

Item	Species	Cut
Cabinet Frame	Douglas Fir	Economy
Internal Construction	Douglas Fir	Economy
Miscellaneous framing	Douglas Fir	Economy
Sub-Tops	Douglas Fir	Economy

B. Hardwood Lumber FS MM-L-736; graded in accordance with AWI Custom; average moisture content of 6 percent; species and grade as follows:

Item	Species	Cut
Exposed Stiles and Rails	Red Oak	Economy
Miscellaneous Trim	Red Oak	Economy

2.02 Sheet Materials:

A. Softwood Plywood: PS 1; graded in accordance with; core material of veneer or lumber, species and cut as follows:

Item	Face	Cut
Drawer Construction	Douglas Fir	Economy
Gables and Backs	Douglas Fir	Custom
Sub-tops	Douglas Fir	Economy
Non-sight exposed shelving	Douglas Fir	Custom
Miscellaneous	Douglas Fir	Custom

B. Hardwood Plywood: PS 51; AM graded in accordance with AWI; core material for veneer or lumber; type of glue recommended for application; face veneer and cuts as follows:

SECTION 06410 - CUSTOM CASEWORK

Item	Face Species	Cut
Door and Drawer Fronts	Red Oak	Economy
Drawer Construction	Red Oak	Economy
Gable and Backs	Red Oak	Economy

C. Wood Particles-PS 1;AM standard, composed of wood= chips, medium density, made with high waterproof resin binders; of grade to suit application; sanded faces, located as follows:

Item
Drawer Construction

D. Hardboard: Pressed wood fiber with resin binder, tempered grade, 1/4 inch thick, smooth one side, located as follows:

Item
Drawer Bottoms

2.03 Laminated Materials: Plastic Laminated: NEW LD-T; 00550 inch General Purpose Grade; suede surface finish, color and pattern as selected by Architect. All sight exposed surfaces (excluding countertops and backsplash) for cabinets to be laminate finished.

2.04 Accessories:

A. Adhesive: FS MMM-A-130 contact adhesive, water base type, recommended by laminate manufacturer to suit application.

B. Fasteners: Size and type to suit application.

C. Bolts, Nuts, Washers, Lags, Pins and Screws: Of size and type to suit application; galvanized finish in concealed locations and cadmium plated finish in exposed locations.

D. Concealed Joint Fasteners: Threaded steel.

E. Lumber for Shimming, Blocking, and Miscellaneous Applications: Softwood lumber of Douglas Fir species.

F. Primer. Alkyd primer sealer type.

G. Wood filler: Solvent base, tinted to match surface finish color.

H. Plastic Grommets: provide at openings in countertop as indicated on the Drawings. Color to be “black”.

2.05 Architectural Cabinet Solid Surface Tops (Countertops):

A. Design Load: deflection limited to 1/360.

B. Type of Top: homogeneous solid sheets of filled plastic resin complying with the following:

1. Colors and Patterns: as selected by Architect from manufacturer’s full range.
2. Special Features: eased edge treatment.
3. Accessories:

a. Adhesives: for seams and drop edges, Formica Solid Surfacing Seaming Cartridges, 9 ounce, color to blend with sheet material.

4. Fabrication: assemble work at shop and deliver to job ready for installation. Manufacture in largest practical pieces for handling and shipping without seams.
   a. Fabricate work square and to required lines.
   b. Recess and conceal fasteners connections and reinforcing.
   c. Design, construction, and installation: details to allow for expansion and contraction of materials. Properly install material with hairline joints held rigidly in place.
   d. Fabricate countertops and vanities with back splash and side splash pieces to profiles and sizes indicated.
   e. Fabricate items to profiles shown with connections and supports as indicated or as required for complete installation in accordance with manufacturer's written instruction sand approved submittals.
   f. Provide cut-outs for plumbing fixtures and trim, washroom accessories, appliances, and related items: confirm layout with manufacturer's cut-out templates before beginning work. Round corners of cut-outs and sand edges smooth.
   g. Do not exceed manufacturer's recommended unsupported overhang distances.
   h. Finish exposed surfaces smooth and polish to low sheen.
   i. Radius corners and edges.
   j. Tolerances: variations in size or openings shall not exceed +/-1/4".
5. Acceptable manufacturer: Formica Solid Surfacing as manufactured by Formica Group / Fabrications, Cincinnati, Ohio **or approved equal**.

2.06 Factory Finishing of Interior Architectural Woodwork:

A. Quality Standard: Comply with AWI Section 1500 unless otherwise indicated.

B. The finish of custom casework is included under this Section, regardless of whether factory applied or applied after installation.

C. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces and similar preparations for finishing of

custom casework, as applicable to each unit of work.

D. Factory Finishing: The extent to which the final finish is applied to architectural woodwork a factory is Contractor's option, except factor apply at least prime/base coat to the greatest extent possible before delivery.

E. Transparent finish for Open-Grain Woods: Comply with requirements indicated below for grade Finish system, staining, effect, and sheen, with sheen measured on 60 degree gloss meter per ASTM D 523.
   1. Grade: Custom
   2. AWI Finish System No. 5: Catalyzed polyurethane.
   3. Staining: Match Architect=s sample.
   4. Effect: Closed grain (filled finish).
   5. Sheen: Medium-gross ribbed effect 35-45 deg.

F. Transparent Finish for Closed-grain Woods: Comply with requirements indicated below for grade, finish system staining, effect, and sheen.
   1. Grade: Custom
   2. AWI Finish System No. 5: Catalyzed polyurethane.
   3. Staining: Match Architect's sample.
   4. Effect: Closed grain.
   5. Sheen: Medium-gloss rubbed effect 35-45 deg.

2.07 Fabrication:

A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.

B. Fit shelves, doors and exposed edges with 3/8 inch matching hardwood edging. Use full length pieces only.

C. Cap exposed plastic laminate finish edges with material of same finish and pattern.

D. Door and Drawer Fronts: 3/4 inch thick; overlay style.

E. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

F. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

G. Mechanically fasten back splash to countertops with sleet brackets at 16 inches on center.

H. Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes; and fixtures and fitting. Verify locations of cutouts from on-site dimensions. Prime paint contact surfaces of cut edgy.

2.08 Finishing:

A. Sand work smooth and set exposed nails and screw.
B. Apply wood filler in exposed nail (and screw) indentations.
C. On items to receive transparent finishes, use wood filler which matches surrounding surfaces and of types recommended for applied finishes.
D. Seal, stain and varnish exposed to view surfaces. Brush apply only.
E. Seal and varnish internal exposed to view and semi-concealed surfaces. Brush apply only.
F. Seat internal surfaces of cabinets with one coat of shellac. Brush apply only.
G. Seal surfaces in contact with cementitious materials.

2.09 Hardware:

A. Shelf Standard and Supports: KV-256 and KV-255.
B. Drawer and Door Pulls: Chrome, U-shaped wire pulls.
C. Cabinet Locks: Keyed cylinder, two keys per lock, master keyed.
D. Catches: Magnetic, Stanley SF-45 and SP-46. Provide other types required for special conditions.
E. Drawer Slides: Knape and Vogt: KV1284 typical withKV1485 full extension ball bearing tracks.
F. Hinges: Blum Model 170-concealed hinges with 170 degree opening or Grass System 1200 (176 degree opening) self-closing with 1000-80 base plate. Two hinges per door up to 36" and 3 hinges per door up to 48" and 4 per door up to 60" high.
G. Grommets: Provide plastic grommets at all penetrations through countertop for cabling, power cords, etc. as indicated on the Drawings.

Part 3 - Execution

3.01 Examination: Verify adequacy of backing and support framing.

3.02 Installation:

A. Install woodwork to comply with AWI Section 1700 for same grade specified above for type of casework involved.
B. Set and secure casework in place; rigid, plumb, and level.
C. Use fixture attachments in concealed locations for waif mounted components.
D. Use concealed joint fasteners to align and secure adjoining cabinet units and counter tops.
E. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
F. Secure cabinet and counter bases to floor using appropriate

angles and anchorages.

G. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

H. Install without distortion so that doors and drawers fit openings properly and are accurately aligned.

I. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the finishing work specified in this section to whatever extent not completed at shop or before installation of woodwork.

J. Complete the finishing work specified in this section to whatever extent not completed at shop or before installation of woodwork,

3.03 Adjusting:

A. Adjust moving or operating parts to function smoothly and correctly.

3.04 Cleaning:

A. Clean casework, counters, shelves, hardware, fittings and fixtures.

3.05 Schedules:

A. Furnish and install all items listed in this schedule at location indicated on the Drawings, complete as to function intended.

B. Casework indicated on the Drawings; custom grade construction.

1. Counter Tops.
2. Base Cabinets.
3. Overhead Cabinets.
4. Shelving-adjustable and fixed.
5. Other items such as shims and fillers as indicated on the Drawings or as required for a complete cabinetwork installation.

END OF SECTION

SECTION 06420 - CUSTOM LAMINATE CASEWORK (CONTRACTOR OPTION)

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Fixed modular laminate clad casework and components.
B. Flexible rail mounted laminate clad casework and components.
C. Solid Surface countertops and backsplash.

1.02 RELATED SECTIONS

A. Blocking within walls where indicated: Section 06100 Rough Carpentry.
B. Millwork, trim, etc.: Section 06200 Finish Carpentry.
C. Hardware: Section 06410 Custom Casework.
D. Glass: not applicable.
E. Base molding: Division 9.
F. Appliances: Division 11 and drawings.
G. Sinks and service fixtures, service waste lines, connections, and vents: Division 15.
H. Electrical service fixtures: Division 16.

1.03 DEFINITIONS

A. Identification of casework components and related products by surface visibility.
    1. Open Interiors: Any open storage unit without solid door or drawer fronts, units with full glass insert doors and/or acrylic doors, and units with sliding solid doors.
    2. Closed Interiors: Any closed storage unit behind solid door or drawer fronts.
    3. Exposed Ends: Any storage unit exterior side surface that is visible after installation.
    4. Other Exposed Surfaces: Faces of doors and drawers when closed, and tops of cabinets less than 72 inches above furnished floor.
    5. Semi-Exposed Surfaces: Interior surfaces which are exposed to view when doors or drawers are opened, bottoms of wall cabinets and tops of cabinets 72 inches or more above finished floor.
    6. Concealed Surfaces: Any surface not visible after installation.

1.04 QUALITY ASSURANCE

A. Manufacturer: Minimum of 5 years experience in providing manufactured casework systems for similar types of projects, produce evidence of financial

stability (if requested), bonding capacity, and adequate facilities and personnel required to perform on this project.

B. Manufacturer: Provide products certified as meeting or exceeding ANSI-A 161.1-2000 testing standards.

C. Single Source Manufacturer: Casework, countertops and architectural millwork products must all be engineered and built by a single source manufacturer in order to ensure consistency and quality for these related products. Splitting casework, countertops and/or architectural millwork between multiple manufacturers will not be permitted.

D. Quality Standard: Unless otherwise indicated, comply with AWI's Architectural Woodwork Quality Standards for grades of interior architectural woodwork, construction, finishes and other requirements.

1.05 SUBMITTALS

A. Comply with Special Conditions, unless otherwise indicated.

B. Product Data: Manufacturer's catalog with specifications and construction details.

C. Shop Drawings: Indicate dimensions, description of materials and finishes, general construction, specific modifications, component connections, anchorage methods, hardware, and installation procedures, plus the following specific requirements.
   1. Include section drawings of typical and special casework, work surfaces and accessories.
   2. Indicate locations of plumbing and electrical service field connection by others.
   3. Provide one set of shop drawings which includes all products within this section, engineered and built by a single source manufacturer, with seamless coordination amongst all products.

D. Casework Samples (To be available upon request):
   1. Base cabinet: Cabinet conforming to specifications, with drawer and door.
   2. Wall cabinet: Cabinet conforming to specifications, with door.
   3. Cabinet samples shall be complete with specified hardware for doors, drawers and shelves.
   4. Component samples: Two sets of samples for each of the following:

a. Decorative laminate color charts / PVC and ABS edgings.

1.06 PRODUCT HANDLING

A. Deliver completed laminate clad casework, countertops, and related products only after wet operations in building are completed, store in ventilated place, protected from the weather, with relative humidity range of 25 percent to 55 percent.

B. Protect finished surfaces from soiling and damage during handling and installation with a protective covering.

1.07 JOB CONDITIONS

A. Environmental Requirements: Do not install casework until permanent HVAC systems are operating and temperature and humidity have been stabilized for at least 1 week.

1. Manufacturer/Supplier shall advise Contractor of temperature and humidity requirements for architectural casework installation areas.
2. After installation, control temperature and humidity to maintain relative humidity between 25 percent and 55 percent.

B. Conditions: Do not install casework until interior concrete work, masonry, plastering and other wet operations are complete.

1.08 WARRANTY

A. All materials and workmanship covered by this section will carry a five (5) year warranty from date of acceptance.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

A. Manufacturer – Basis for Design:

1. TMI Systems Corporation.
   a. Specifications are based on manufacturer’s literature from TMI SYSTEMS CORPORATION, 50 South Third Avenue West, Dickinson, North Dakota, 58601, Phone: 800-456-6716, fixed modular, flexible rail mounted, and mobile casework and accessories.

b. Other manufacturers shall comply with the minimum levels of material and detailing indicated on the drawings or as specified.

2.02 MATERIALS

A. Core Materials:
   1. Particleboard up to 7/8 inch thick: Industrial Grade average 45-pound density particleboard, ANSI A 208.1-2009, M-2 requirements.
   2. Particleboard 1 inch thick and thicker: Industrial Grade average 45-pound density particle-board, ANSI A 208.1-2009, M-2 requirements.
   3. Medium Density Fiberboard 1/4 inch thick: Minimum average density 45-50 lbs., ANSI A208.2-2009 requirements.
   4. MR Moisture Resistant Particleboard: Average 45-pound density particleboard, ANSI A208.1 1-2009, M-2 requirements.
   5. Toe Base Plywood: 3/4 inch thickness, CC/CD/CDC grades, of western softwood veneers, with NAUF exterior fully water resistant phenolic glues.

B. Decorative Laminates: GREENGUARD Indoor Air Quality Certified
   1. High-pressure decorative laminate VGS (.028), NEMA Test LD 3-2005.
   2. High-pressure decorative laminate HGS (.048), NEMA Test LD 3-2005.
   3. High-pressure decorative laminate HGP (.039), NEMA Test LD 3-2005.
   4. High-pressure cabinet liner CLS (.020), NEMA Test LD 3-2005.
   5. High-pressure backer BKH (.048), (.039), (.028), NEMA Test LD3-2005.
   6. Thermally fused melamine TFM laminate, NEMA Test LD 3-2005. (TFM allowed on casework interiors only, as specified below. Utilization of TFM on any exterior casework surfaces, including door and drawer faces and finished ends, will not be permitted.)

C. Laminate Color Selection: Maximum 1 color per unit face and 5 colors per project. (See Color Selection in section 3.05).

D. Edging Materials:
   1. 1mm PVC banding, machine applied.

2. 3mm PVC banding, machine applied and machine profiled to 1/8 inch radius.

E. Glass:
Not applicable.

2.03 SPECIALTY ITEMS

A. Support Members:
1. Countertop support brackets: Epoxy powder coated, 11 gauge steel with integral cleat mount opening and wire management opening.
2. Undercounter support frames: Epoxy powder coated.
3. Legs: Epoxy powder coated.

2.04 CABINET HARDWARE

F. Refer to Section 06410 Custom Casework for cabinet hardware.

2.05 FABRICATION:

A. Fabricate casework, countertops and related products to dimensions, profiles, and details shown.

B. All casework panel components must go through a supplemental sizing process after cutting, producing a panel precisely finished in size and square to within 0.010 inches, ensuring strict dimensional quality and structural integrity in the final fabricated product.

C. Cabinet Body Construction:
1. Tops and bottoms are glued and doweled to cabinet sides and internal cabinet components such as fixed horizontals, rails and verticals. Minimum 6 dowels each joint for 24 inch deep cabinets and a minimum of 4 dowels each joint for 12 inch deep cabinets. (Mechanical or metal hardware fasteners joining cabinet top and bottom panels to the sides will not be accepted.)
a. Tops, bottoms and sides of all cabinets are particleboard core.
2. Cabinet backs: 1/4 inch thick medium density fiberboard panel fully captured by the cabinet top, bottom and side panels. Finish to match cabinet interior. 3/4 inch x 4 inch particleboard rails will be placed behind the back panel at the top and bottom, and doweled to the sides utilizing 10mm hardwood fluted dowels. A third intermediate rail will be included on all cabinets taller than 56 inches. Utilize hot melt

glue to further secure back and increase overall strength.

a. Exposed back on fixed or movable cabinets: 3/4 inch thick particleboard with the exterior surface finished in VGS laminate as selected.

3. Fixed base and tall units have an individual factory-applied base, constructed of 3/4 inch thick plywood. Base is 102mm (nominal 4 inch) high unless otherwise indicated on the drawings.
4. Base units, except sink base units: Full sub-top glued and doweled to cabinet sides. (Mechanical or metal hardware fasteners joining cabinet sub-top panel to the sides will not be accepted.)
   a. Sink base units are provided with open top and a stretcher at the front, attached to the sides. Back to be split removable access panel.
5. Side panels and vertical dividers shall receive adjustable shelf hardware at 32mm line boring centers. Mount door hinges, drawer slides and pull-out shelves in the line boring for consistent alignment.
6. Exposed and semi exposed edges.
   a. Edging: 1mm PVC machine applied.
7. Adjustable Shelves in Cabinets
   a. Core: Particleboard.
   b. Core Thickness: 3/4 inch up to 30 inches wide, 1 inch over 30 inches wide.
   c. Edge: 1mm PVC on Front Edge Only.
8. Interior finish, units with open Interiors:
   a. Top, bottom, back, sides, horizontal and vertical members, and adjustable shelving faces with TFM Thermally Fused Melamine laminate.
9. Interior finish, units with closed Interiors:
   a. Top, bottom, back, sides, horizontal and vertical members, and adjustable shelving faces with TFM Thermally Fused Melamine laminate.
10. Exposed ends:
    a. Faced with high-pressure decorative VGS laminate. Use of TFM on exposed ends will not be permitted.
11. Wall unit bottom:

a. Faced with thermally fused melamine laminate.

12. Balanced construction of all laminated panels is mandatory. Unfinished core stock surfaces, even on concealed surfaces (excluding edges), are not permitted.

D. Drawers:
1. Sides, back and sub front: Minimum 1/2 inch thick particleboard, laminated with TFM Thermally Fused Melamine doweled and glued into sides. Top edge banded with 1mm PVC.
2. Drawer bottom: Minimum 1/2 inch thick particleboard laminated with TFM Thermally Fused Melamine, screwed directly to the bottom edges of drawer box.
3. Paper storage drawers: Minimum 3/4 inch thick particleboard sides, back, and sub front laminated with TFM Thermally Fused Melamine. Minimum 1/2 inch thick particleboard drawer bottoms screwed directly to the bottom edges of the drawer box. Provide PVC angle retaining bar at the rear of the drawer.

E. Door/Drawer Fronts:
1. Core: 3/4 inch thick particleboard.
2. High-pressure decorative VGS laminate exterior, balanced with high-pressure cabinet liner CLS. Use of TFM on exterior or interior surfaces of door/drawer fronts will not be permitted.
3. Edges: 3mm PVC, machine applied, external edges and outside corners machine profiled to 1/8 inch radius.
4. Provide double doors in opening in excess of 24 inches wide.

F. Door Fronts with Glass Insert captured by Retainer Clips (CUSTOM GRADE):
1. Core: 3/4 inch thick particleboard.
2. High-pressure decorative VGS laminate exterior, balanced with high-pressure VGS laminate. Use of TFM on exterior or interior surfaces of door fronts will not be permitted.
3. Edges: 3mm PVC, machine applied, external edges and outside corners machine profiled to 1/8 inch radius.

4. Provide cutout in door panel resulting in 3-3/8 inch frame. Exposed cutout edge to be finished with 1mm PVC edgebanding.
5. Notch cutout 3/8 inch x 1/4 inch for glass panel to set into, mounting flush with the back side (interior side) of the door panel. Interior cutout edge to be painted a compatible color to the interior surface.
6. Glass panel to be captured and held in place utilizing glass retainer clips, screwed in place. Minimum eight clips per glass panel located in the four corners of the cutout.

G. Miscellaneous Shelving (not in Cabinets):
1. Core material: 1 inch thick particleboard.
2. High-pressure decorative VGS laminate on both faces.
3. Edges: 3mm PVC, external edges and outside corners machine profiled to 1/8 inch radius.

2.06 ARCHITECTURAL CABINET SOLID SURFACE TOPS (Countertops):

A. Design Load: deflection limited to 1/360.

B. Type of Top: homogeneous solid sheets of filled plastic resin complying with the following:

1. Colors and Patterns: as selected by Architect from manufacturer’s full range.

2. Special Features: eased edge treatment.

3. Accessories:

a. Adhesives: for seams and drop edges, Formica Solid Surfacing Seaming Cartridges, 9 ounce, color to blend with sheet material.

4. Fabrication: assemble work at shop and deliver to job ready for installation. Manufacture in largest practical pieces for handling and shipping without seams.

a. Fabricate work square and to required lines.

b. Recess and conceal fasteners connections and reinforcing.

c. Design, construction, and installation: details to allow for expansion and contraction of materials. Properly install material with hairline joints held rigidly in place.

d. Fabricate countertops and vanities with back splash and side splash pieces to profiles and sizes indicated.

e. Fabricate items to profiles shown with connections and supports as indicated or as required for complete installation in accordance with manufacturer's written instruction sand approved submittals.

f. Provide cut-outs for plumbing fixtures and trim, washroom accessories, appliances, and related items: confirm layout with manufacturer's cut-out templates before beginning work. Round corners of cut-outs and sand edges smooth.

g. Do not exceed manufacturer's recommended unsupported overhang distances.

h. Finish exposed surfaces smooth and polish to low sheen.

i. Radius corners and edges.

j. Tolerances: variations in size or openings shall not exceed +/-1/4".

5. Acceptable manufacturer: Formica Solid Surfacing as manufactured by Formica Group / Fabrications, Cincinnati, Ohio **or approved equal**.

PART 3- EXECUTION

3.01 INSPECTION:

A. The casework contractor must examine the job site and the conditions under which the work under this section is to be performed and notify the building owner in writing of unsatisfactory conditions. Do not proceed with work under this Section until satisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 PREPARATION:

A. Condition casework to average prevailing humidity conditions in installation areas prior to installing.

3.03 INSTALLATION:

A. Erect casework, plumb, level, true and straight with no distortions. Shim as required. Where laminate clad casework abuts other finished work, scribe and cut to accurate fit.

B. Adjust casework and hardware so that doors and drawers operate smoothly without warp or bind.

C. Repair minor damage per plastic laminate manufacturer's recommendations.

3.04 CLEANING:

A. Remove and dispose of all packing materials and related construction debris.

B. Clean cabinets inside and out. Wipe off fingerprints, pencil marks, and surface soil etc., in preparation for final cleaning by the building owner.

3.05 COLOR SELECTION:

A. Laminate Color Selection:

1. Select from the full range of standard Wilsonart® and Formica® stock color charts.
2. Thermally fused melamine laminate matched to White color.

B. Hardware Color Selection:

1. Hinge: Select from your choice of epoxy powder coating stock colors matched to White, Beige, Gray, Black and Chrome.
2. Pulls: Select from design specific finish options available in the TMI Vendor Stock Pull Program.
3. Miscellaneous Hardware (support brackets, metal components, etc.): Select from your choice of epoxy powder coating stock colors matched to White, Beige, Gray, Black and Chrome.

C. PVC Edge Banding Color Selection:

1. 3mm PVC: Select from the TMI Vendor Stock PVC Program, including over 200 pattern, woodgrain and solid colors matched to Wilsonart® and Formica® laminates.
2. 1mm PVC: Select from the TMI Vendor Stock PVC Program, including over 200 pattern, woodgrain

and solid colors matched to Wilsonart® and Formica® laminates.

End of Section