# RENOVATION AND ADDITION:

# MIDLAND COUNTY ESA

## MIDLAND, MICHIGAN

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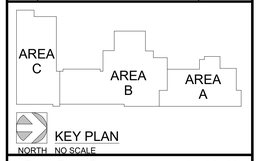
NOT FOR CONSTRUCTION
PRELIMINARY

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN

WTAARCH.COM

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
TITLE SHEET

PROJECT NUMBER
2022006.1

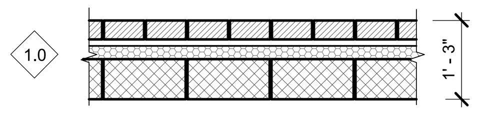
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

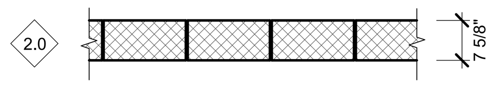
SHEET NUMBER
TS

Author:8/23/2023 10:02:30 AM C:\Users\mthomas\Documents\CENTRAL_2022006.MidlandCountyESA_V23_mthomas4.3.1V.rvt

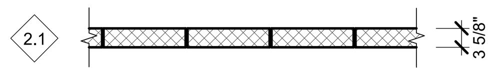
## WALL TYPES
1/2" = 1'-0"



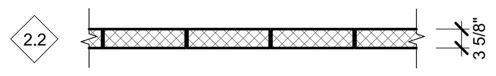

4" FACE BRICK (REFER TO EXTERIOR ELEVATIONS FOR COLOR AND COURSING) W/ MIN R11.4 SPRAY FOAM IN AIR SPACE ON 8" C.M.U. REFER TO SECTIONS AND ELEVATIONS FOR EXTENSION OF MATERIALS.



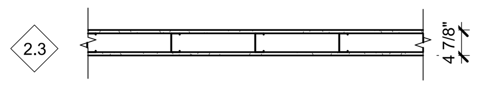

8" C.M.U. REFER TO SECTIONS AND ELEVATIONS FOR EXTENSION OF MATERIALS.



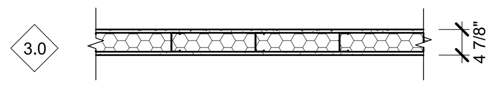

4" C.M.U. REFER TO SECTIONS AND ELEVATIONS FOR EXTENSION OF MATERIALS.




4" BRICK REFER TO WALL TYPE SECTIONS AND ELEVATIONS FOR EXTENTS OF MATERIALS.

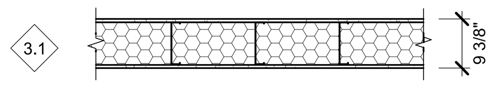



5/8" GYP. BOARD ON BOTH SIDES OF METAL STUDS MIN. 20 GA. @ 16" O.C.



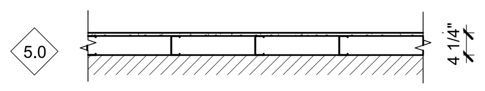

5/8" TYPE "X" GYPSUM BOARD ON BOTH SIDES OF 3 5/8" METAL STUDS MIN. 20 GA. @ 16" O.C. W/ SOUND ATTENUATION BLANKETS. EXTEND FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.

UL419 @ RATED WALL LOCATIONS (REFER TO SHEET LS-1).

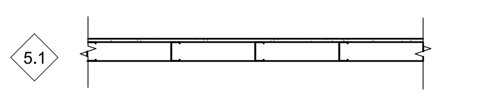



5/8" TYPE "X" GYPSUM BOARD ON BOTH SIDES OF 8" METAL STUDS MIN. 20 GA. @ 16" O.C. W/ SOUND ATTENUATION BLANKETS. EXTEND FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.

UL419 @ RATED WALL LOCATIONS (REFER TO SHEET LS-1).

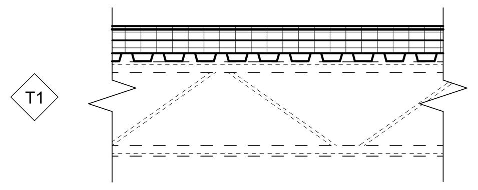



5/8" GYPSUM BOARD ON METAL STUDS MIN. 20 GA. @ 16" O.C. ATTACHED TO ADJACENT STRUCTURE

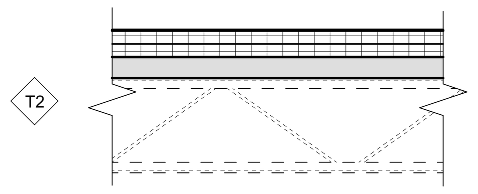



5/8" GYPSUM BOARD ON METAL STUDS MIN. 20 GA. @ 16" O.C.

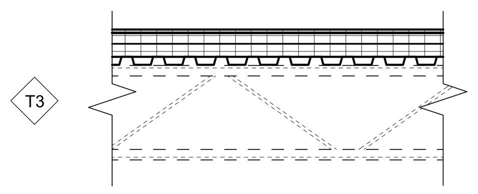
## ROOF TYPES
1/2" = 1'-0"



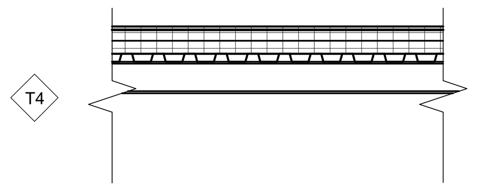

ROOFING MEMBRANE AND/OR FLASHING
ON RIGID INSULATION (MIN. R-30) STAGGER JOINTS
ON VAPOR BARRIER
ON METAL DECKING (SEE STRUCTURAL).




ROOFING MEMBRANE AND/OR FLASHING
ON RIGID INSULATION (MIN. R-30) STAGGER JOINTS
ON VAPOR BARRIER
ON EXISTING GYPSUM DECK.

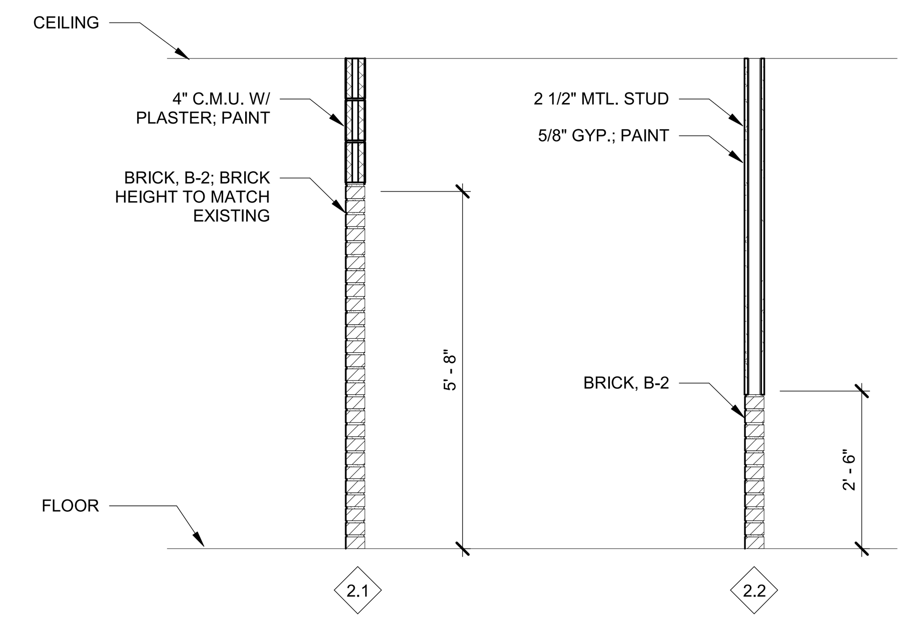


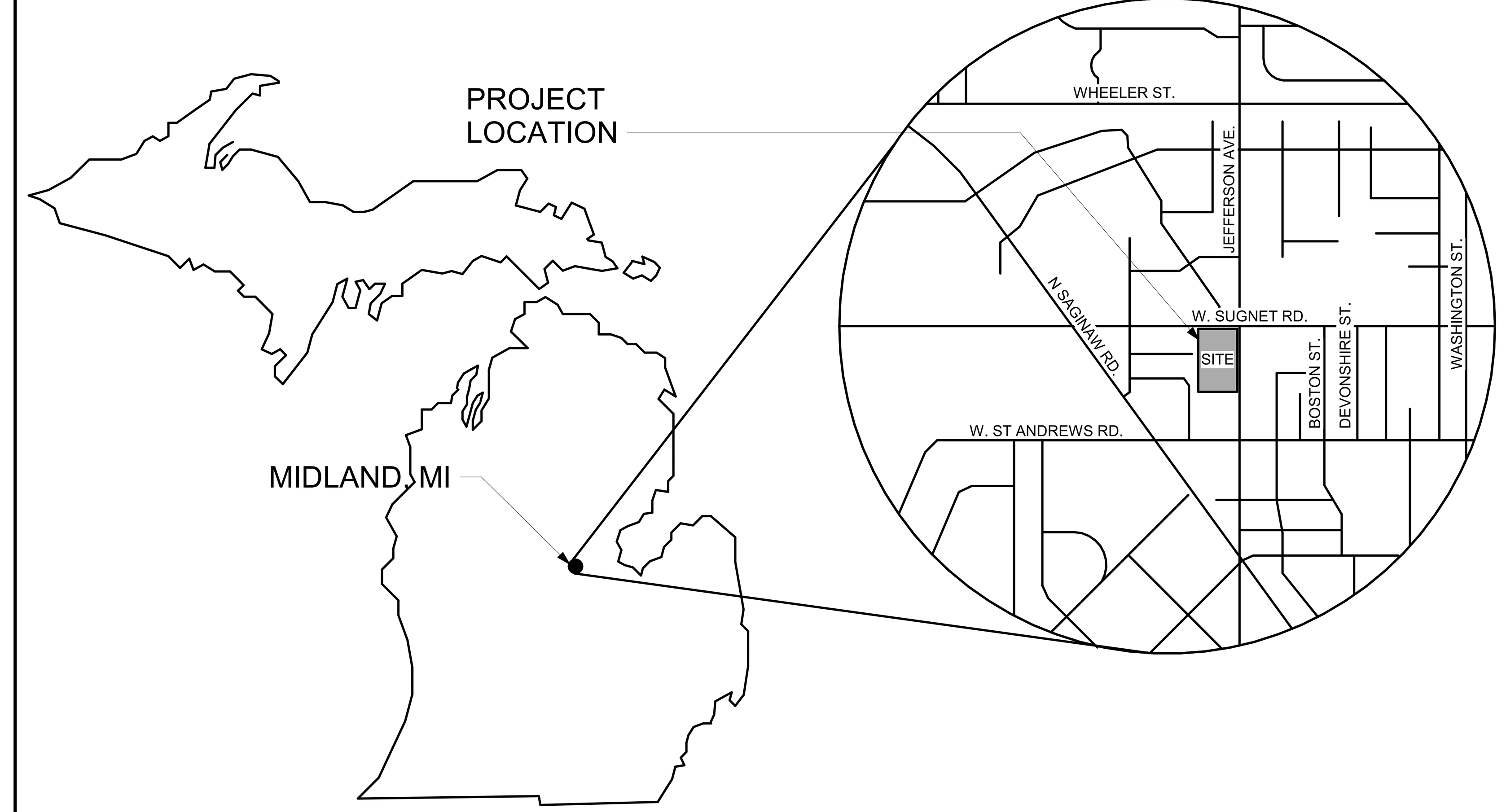

ROOFING MEMBRANE AND/OR FLASHING
ON RIGID INSULATION (MIN. R-30) STAGGER JOINTS
ON VAPOR BARRIER
ON METAL DECKING (SEE STRUCTURAL).




ROOFING MEMBRANE AND/OR FLASHING
ON RIGID INSULATION (MIN. R-30) STAGGER JOINTS
ON VAPOR BARRIER
ON METAL DECKING (SEE STRUCTURAL).

## WALL TYPE SECTIONS
1/2" = 1'-0"




REGIONAL MAP
NOT TO SCALE

LOCAL MAP
NOT TO SCALE

### PROJECT LOCATION

| | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 |

### LOCATION NUMBER GRID

| | |
|---|---|
| BRICK MASONRY | GROUT |
| CAST STONE | GYPSUM BOARD (CEILING/ELEVATION) |
| STUD WALL | GYPSUM BOARD (SECTION) |
| BATT INSULATION | BACKER BOARD |
| SOUND ATTENUATION BLANKETS/SPRAYED INSUL. | PARTICLE BOARD & PLYWOOD |
| RIGID INSULATION & RIGID INSULATION BOARD | SOLID SURFACE |
| DIMENSIONAL LUMBER | CONCRETE |
| FINISH LUMBER | CONCRETE WALK (PLAN) |
| STEEL | GRAVEL OR STONE AS INDICATED |
| SUSPENDED CEILING TILE | COMPACTED SAND FILL |
| TILE ON MORTAR BED | MORTAR NET |

### ARCHITECTURAL MATERIAL LEGEND

| | |
|---|---|
| ABBV. | ABBREVIATIONS |
| A.F.F. | ABOVE FINISHED FLOOR |
| AC. | ACOUSTIC(AL) |
| A.C.P. | ACOUSTIC CEILING PANEL |
| A.C.T. | ACOUSTIC CEILING TILE |
| A.R.P. | ACRYLIC RESIN PANEL |
| ADD'L | ADDITIONAL |
| ADJ. | ADJUSTABLE |
| ALT. | ALTERNATE |
| ALUM. | ALUMINUM |
| ANOD. | ANODIZED |
| APPROX. | APPROXIMITE |
| ARCH. | ARCHITECTURAL |
| BKR. BD. | BACKER BOARD |
| BR'G | BEARING |
| BIT. | BITUMINOUS |
| BLK('G) | BLOCKING |
| BD. | BOARD |
| BTM. | BOTTOM |
| B.O.C. | BOTTOM OF CURB |
| B.O.F. | BOTTOM OF FOOTING |
| BRK. | BRICK |
| BLDG. | BUILDING |
| CPT. | CARPET |
| C.B. | CATCH BASIN |
| CLG. | CEILING |
| C.M.TILE/CMT | CERAMIC MOSAIC TILE |
| CT | CERAMIC TILE |
| CHBD. | CHALKBOARD |
| CLR. | CLEAR |
| COL. | COLUMN |
| CONC. | CONCRETE |
| C.M.U./CMU | CONCRETE MASONRY UNIT |
| CONT. | CONTINUOUS |
| C.J. | CONTINUOUS JOINT |
| CTOP. | COUNTER TOP |
| COVR'G | COVERING |
| DEPT. | DEPARTMENT |
| DIA. | DIAMETER |
| D.O. | DOOR OPENING |
| DBL. | DOUBLE |
| DN. | DOWN |
| D.T. | DRAIN TILE |
| DWG. | DRAWING |
| D.F. | DRINKING FOUNTAIN |
| EA. | EACH |
| E.W. | EACH WAY |
| ELEC. | ELECTRIC(AL) |
| E.H.D. | ELECTRIC HAND DRYER |
| E.W.C. | ELECTRIC WATER COOLER |
| EL. | ELEVATION |
| ELEV. | ELEVATOR |
| EQ. | EQUAL |
| E.F. | EXHAUST FAN |
| EXIST./(E) | EXISTING |
| EXP. | EXPOSED |
| EXT. | EXTERIOR |
| FT. | FEET |
| F.F. | FINISHED FACE |
| FIN. | FINISHED |
| F.O. | FINISHED OPENING |
| F.E. | FIRE EXTINGUISHER |
| F.E.C. | FIRE EXTINGUISHER CABINET |
| F.R. | FIRE RATED |
| F.RT. | FIRE RETARDANT |
| F.R.L./FRL | FIBER REINFORCED LAMINATE |
| FIXT. | FIXTURE |
| F.S.F./FSF | FLOCKED SHEET FLOORING |
| F.T.F./FTF | FLOCKED TILE FLOORING |
| FLR. | FLOOR |
| F.D. | FLOOR DRAIN |
| FTG. | FOOTING |
| F.R.P./FRP | FIBER REINFORCED POLYESTER |
| GA. | GAUGE |
| G. TILE/GT | GLASS TILE |
| GL. | GLAZING |
| G.B. | GRAB BAR |
| GYP. BD. | GYPSUM BOARD |
| HWD. | HARDWOOD |
| H.P. | HIGH POINT |
| H.M./HM | HOLLOW METAL |
| HORIZ. | HORIZONTAL |
| H.B. | HOSE BIB |
| I.DIA./I.D. | INSIDE DIAMETER |
| I.F.BL. | INSIDE FACE OF BLOCK |
| I.F.BR. | INSIDE FACE OF BRICK |
| INSUL. | INSULATE(D) |
| INT. | INTERIOR |
| JT. | JOINT |
| LAM./LAM | LAMINATE(D) |
| LAV. | LAVATORY (SINK) |
| L.S.F./LSF | LINOLEUM SHEET FLOORING |
| L.T.F./LTF | LINOLEUM TILE FLOORING |
| L.P. | LOW POINT |
| L.V.T./LVT | LUXURY VINYL TILE |
| MFR. | MANUFACTURE(R) |
| M.B. | MARKERBOARD |
| MAS. | MASONRY |
| M.O. | MASONRY OPENING |
| MAT'L | MATERIAL |
| MAX. | MAXIMUM |
| MECH. | MECHANICAL |
| MTL. | METAL |
| M.P./MP | METAL PANEL |
| M.D.O.T. | MICHIGAN DEPARTMENT OF TRANPORTATION |
| MIN. | MINIMUM |
| MIR. | MIRROR |
| MISC. | MISCELLANEOUS |
| NOM. | NOMINAL |
| N.I.C. | NOT IN CONTRACT |
| N.T.S. | NOT TO SCALE |
| NO. | NUMBER |
| O.C. | ON CENTER |
| OPP. | OPPOSITE (HAND) |
| O.S.B. | ORIENTED STRAND BOARD |
| O.DIA./O.D. | OUTSIDE DIAMETER |
| O.F.BL. | OUTSIDE FACE OF BLOCK |
| O.F.BR. | OUTSIDE FACE OF BRICK |
| O.F.C. | OUTSIDE FACE OF CONCRETE |
| O.F.M. | OUTSIDE FACE OF MASONRY |
| O.F.S. | OUTSIDE FACE OF STUDS |
| PT./P | PAINT(ED) |
| PR. | PAIR |
| P.T.D. | PAPER TOWEL DISPENSER |
| PART. BD. | PARTICLE BOARD |
| PTN. | PARTITION |
| P.H. | PHYSICALLY HANDICAPPED |
| PLAS. | PLASTER |
| P.LAM./PL | PLASTIC LAMINATE |
| PLYWD. | PLYWOOD |
| P.O.N.C. | POINT OF NEW CONNECTION |
| P.TILE/PT | PORCELAIN TILE |
| PWR. | POWER |
| P.CONC. | PRECAST CONCRETE |
| P.C./PC | POLISHED CONCRETE |
| Q.TILE/QT | QUARRY TILE |
| QTZ./QTZ | QUARTZ |
| RAD. | RADIUS |
| REFRIG. | REFRIDGERATOR |
| REINF. | REINFORCE(MENT) |
| REQ'D | REQUIRED |
| R.W.B./RWB | RESILIENT WALL BASE |
| R.S.F./RSF | RESILIENT SHEET FLOORING |
| R.T.F./RTF | RESILIENT TILE FLOORING |
| R.O. | ROUGH OPENING |
| S.A.T. | SUSPENDED ACOUSTICAL TILE |
| SF.GL. | SAFETY GLAZING |
| S.N.DR. | SANITARY NAPKIN DISPENSER |
| S.N.DL. | SANITARY NAPKIN DISPOSAL |
| S.O. | SASH OPENING |
| SCHED. | SCHEDULE |
| SNT. | SEALANT |
| SHT. | SHEET |
| SIM. | SIMILAR |
| SM.F. | SMOOTH FACE |
| SPEC. | SPECIFICATION(S) |
| SP.F. | SPLIT FACE |
| SQ.FT. | SQUARE FEET |
| S.STL./SS | STAINLESS STEEL |
| STD. | STANDARD |
| STO./STOR. | STORAGE |
| STRT. | STRAIGHT |
| STRUC. | STRUCTURE |
| SUSP. | SUSPENDED |
| T.B. | TACKBOARD |
| TEL. | TELEPHONE |
| T.V. | TELEVISION |
| TEMP. | TEMPER(ED) |
| THK. | THICK |
| T.P.D. | TOILET PAPER DISPENSER |
| T.O.M. | TOP OF MASONRY |
| TYP. | TYPICAL |
| U.N.O. | UNLESS NOTED OTHERWISE |
| UR. | URINAL |
| V.B. | VAPOR BARRIER |
| V.I.F. | VERIFY IN FIELD |
| VERT. | VERTICAL |
| V.T.R. | VENT THROUGH ROOF |
| VNL./VNL | VINYL |
| V.C.T./VCT | VINYL COMPOSITION TILE |
| W.C. | WATER CLOSET |
| W.MAT/WOM | WALK-OFF MAT |
| W.W.F. | WELDED WIRE FABRIC |
| W.W.M. | WELDED WIRE MESH |
| W.O. | WINDOW OPENING |
| w/ | WITH |
| WD. | WOOD |

### LEGEND OF ABBREVIATIONS

**ROOM IDENTIFIER:**
ROOM NAME
A100A
- OPTIONAL LETTER
- ROOM NUMBER
- GRADE CLUSTER
- UNIT LETTER

**DOOR IDENTIFIER:**
A100.1
- DOOR NUMBER
- ROOM NUMBER
- GRADE CLUSTER
- UNIT LETTER

**KEYED NOTES:**
- 1 — MATERIAL KEYNOTE (HEXAGON w/ NUMBER)
- A — PLUMBING OR EQUIPMENT (HEXAGON w/ LETTER)
- 1 — PLAN KEYNOTE (SQUARE w/ NUMBER)
- A — SITE PLAN KEYNOTE (SQUARE w/ LETTER)
- R# — ROOF PLAN KEYNOTE (SQUARE w/ "R" AND NUMBER)
- 2 — PLAN DEMOLITION KEYNOTE (TRIANGLE w/ NUMBER)
- A — SITE DEMOLITION KEYNOTE (TRIANGLE w/ LETTER)
- TEXT-X — FLOORING/FINISH KEYNOTE (RECTANGLE w/ TEXT)

**DEMOLITION IDENTIFIER:**
ITEM TO BE REMOVED

**ALTERATION CLOUD:**
INDICATES A CHANGE TO THE CONSTRUCTION DOCUMENTS VIA ADDENDUM, BULLETIN, AND CHANGE ORDER

**MATCH LINE:**
MATCH LINE

**REFERENCE BUBBLES:**
- 1 / A1.01 — LOCATION NUMBER, SHEET NUMBER
- 7 / A7.07 — DETAIL MARK
- 5 / A5.05 — BUILDING SECTION
- 2 / A2.02 — ENLARGED DETAIL OR PLAN

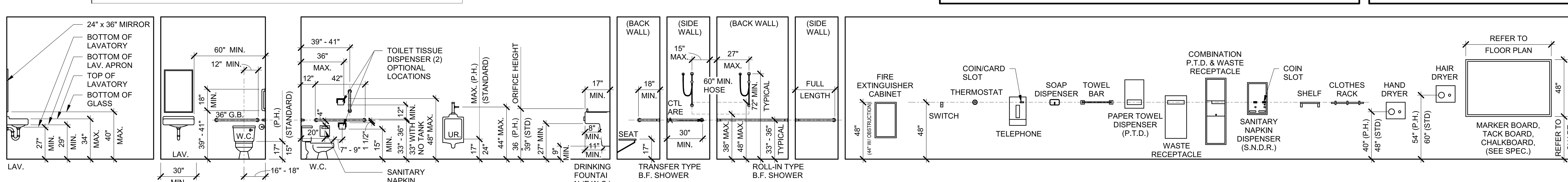
**ADDITIONAL IDENTIFIERS:**
- F2 — DOOR FRAME TYPE (OVAL w/ "F" AND NUMBER)
- D2 — DOOR TYPE (OVAL w/ "D" AND NUMBER)
- W2 — WINDOW TYPE (OVAL w/ "W" AND NUMBER)
- 2.1 — WALL TYPE (DIAMOND w/ NUMBER)
- # — ADDENDUM IDENTIFIER (RHOMBUS w/ NUMBER)
- # — BULLETIN IDENTIFIER (RHOMBUS w/ NUMBER)
- # — CHANGE ORDER IDENTIFIER (RHOMBUS w/ NUMBER)

**INTERIOR ELEVATION IDENTIFIER:**
8/A8.08
- SHEET NUMBER
- LOCATION NUMBER

**ALTERATION IDENTIFIER:**
ALTERNATE NO. 2

### ARCHITECTURAL SYMBOL LEGEND

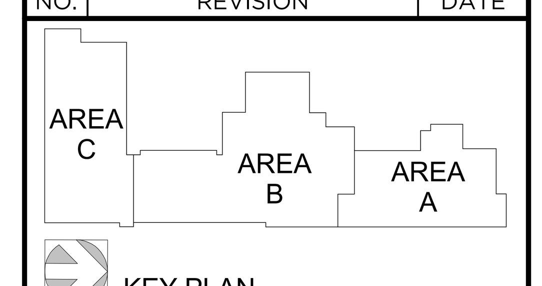
NOTE:
FIXTURES DEPICTED WITHIN THIS SCHEDULE ARE SCHEMATIC ONLY. FOR EXACT FIXTURE TYPES AND QUANTITIES, REFER TO MECHANICAL DRAWINGS AS WELL AS THE SPECIFICATION MANUAL.




| MOUNTING HEIGHT CHART | |
|---|---|
| MARKER BOARD, TACK BOARD, AND CHALKBOARD (CHALK RAIL TO FLOOR) | |
| NURSERY/PRESCHOOL | 20" |
| KINDERGARTEN | 24" |
| 1st - 3rd GRADE | 30" |
| 4th - 6th GRADE | 32" |
| MIDDLE SCHOOL | 36" |
| HIGH SCHOOL | 36" |

3/G0.01 MNT HEIGHT DETAIL
SCALE: 1/4" = 1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




NORTH
KEY PLAN
NO SCALE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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
PROJECT INFORMATION

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
G0.01

# BUILDING CODE NOTES:

APPLICABLE CODES:

STATE FIRE AND SAFETY BOARD NEW AND EXISTING SCHOOL, COLLEGE, AND UNIVERSITY FIRE SAFETY (2016)
NFPA 101 LIFE SAFETY CODE (2016)
MICHIGAN BUILDING CODE (2012)
MICHIGAN MECHANICAL CODE (2015)
MICHIGAN PLUMBING CODE (2015)
MICHIGAN ENERGY CODE (2015)
NATIONAL ELECTRIC CODE WITH PART 8 RULES (2017)

A. USE AND OCCUPANCY (CHAPTER 3)

OCCUPANCY GROUP "B"

OCCUPANCIES:
GROUP E (MAIN OCCUPANCY)
GROUP B ADMINISTRATION AREAS, POST-SECONDARY CLASSROOMS
GROUP A-2/4 CAFETERIA, GYMNASIUM (IBC SECTION 303 - ACCESSORY USE PER SECTION 508.3.1 EXCEPTION 2)

B. BUILDING HEIGHT (CHAPTER 5)

| | |
|---|---|
| ALLOWED STORIES: | 75 FEET 3 STORIES |
| ALLOWABLE HEIGHT: | 75 FEET (TABLE 504.3) |

C. BUILDING AREA

| | |
|---|---|
| ALLOWABLE AREA: | 43,500*(2) NUMBER OF STORIES = 87,000 SQUARE FEET (TABLE 506.2) |
| ALLOWABLE AREA ACTUAL: | 108,750 SQUARE FEET (AREA INCREASES PER EQUATIONS 5-1, 5-4, 5-5) |
| PROPOSED AREA: | 56,500 SQUARE FEET |

ALLOWABLE AREA INCREASES FOR FRONTAGE TO BE CALCULATED WHICH WILL INCREASE ACTUAL ALLOWABLE AREA.

EQUATION 5-1: ALLOWABLE AREA = AT + (NS*IF) [43,500 + (14500*0.75)]*2= 108,750

EQUATION 5-4: W=(L*W + L*W)/F (420*30) /420 =30

EQUATION 5-5: IF=[F/P-0.25] 30/30 [420/420-0.25] 30/30 = 0.75

508 MIXED USE AND OCCUPANCY
GROUP E AND GROUP B SEPERATION: 1 HOUR (PER TABLE 508.4)

D. CONSTRUCTION TYPE

CONSTRUCTION TYPE (PROPOSED): TYPE II-B

E. INCIDENTAL USES (TABLE 509 AND REV. 12.3.2.1.2)

| | |
|---|---|
| STORAGE OVER 100 SQUARE FOOTAGE | 1 HOUR |
| JANITOR CLOSET | 1 HOUR |

F. TYPES OF CONSTRUCTION (IBC TABLE 601)

| | |
|---|---|
| PRIMARY STRUCTURAL FRAME | 0 HOURS |
| BEARING WALLS | |
| EXTERIOR | 0 HOURS |
| INTERIOR | 0 HOURS |
| NON-BEARING WALLS | |
| EXTERIOR | 0 HOURS |
| (TABLE 602, FIRE SEPARATION DISTANCE GREATER THAN 10 LESS THAN 30) | |
| INTERIOR | 0 HOURS |
| FLOOR CONSTRUCTION | 0 HOURS |
| ROOF CONTRUCTION | 0 HOURS |

TYPE II-B CONSTRUCTION, NO RATING IS REQUIRED FOR STRUCTURAL FRAME, BEARING WALLS (INTERIOR OR EXTERIOR), NON-BEARING WALL AND PARTITIONS, FLOOR CONSTRUCTION, PER TABLE 601 AND TABLE 602.

G. FIRE PROTECTION SYSTEMS (IBC SECTION 903)

THE PROPOSED PK-5 BUILDING IS TO BE FULLY PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM. THIS SYSTEM WILL REQUIRE THE INSTALLATION OF A FIRE SPRINKLER RISER AND EXTERIOR FIRE DEPARTMENT CONNECTION.

H. MEANS OF EGRESS (CHAPTER 10)

OCCUPANT LOAD: PER TABLE 1004.1.2

| LEVEL 1: | | | |
|---|---|---|---|
| ACCESSORY | 1:300 (G) | 29 | OCCUPANTS |
| ASSEMBLY (CONC.) | 1:7 (N) | 505 | OCCUPANTS |
| BUSINESS | 1:100 (G) | 221 | OCCUPANTS |
| EDUCATION | 1:20 (N) | 359 | OCCUPANTS |
| TOTAL: | | 965 | OCCUPANTS |

EGRESS WIDTH: (SECTION 1005)

DOORS: 0.15 INCHES PER OCCUPANT
STAIRWAYS: 0.20 INCHES PER OCCUPANT

DOORS: 965 OCCUPANTS x 0.15 INCHES PER OCCUPANT = 145 INCHES
PROVIDED: 5940
STAIRWAYS: 965 OCCUPANTS x 0.2 INCHES PER OCCUPANT= 193 INCHES
PROVIDED: 216

SECTIONS 1009.2 AND 1009.6 AREAS OF REFUGE
SECTION 1009.2 CONTINUITY AND COMPONENTS, SEE SECTION REQUIREMENTS, IN SUMMARY AN AREA OF REFUGE IS REQUIRED MEANS OF EGRESS IS NOT ACCESSIBLE. REFER TO SECTION 1009.6 FOR SIZE AND SPACE REQUIREMENTS.

SECTION 1006: NUMBER OF EXITS AND EXIT ACCESS DOORWAYS
EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE, (2) EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR THE COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDES THE VALUES LISTED TABLE 1006.2.

SECTION 1017: EXIT ACCESS TRAVEL DISTANCE
TABLE 1017.2 GROUP A, E: 200 FEET MAX. UNPROTECTED, 250 FEET MAX. PROTECTED. GROUP B: 200 FEET MAX. UNPRODUCTED, 300 FEET MAX. PROTECTED.

SECTION 1020.4: DEAD ENDS
20 FEET MAXIMUM DEAD END IN CORRIDORS WHERE MORE THAN ONE EXIT OR EXIT ACCESS DOORWAY IS REQUIRED.

I. 2015 MICHIGAN PLUMBING CODE (CHAPTER 29 TABLE 2902.1)

PLUMBING FIXTURE - OCCUPANT LOAD
(EXCLUDES COMMON SPACES)

| | | |
|---|---|---|
| ACCESSORY | 1:300 (G) | 29 OCCUPANTS |
| BUSINESS | 1:100 (G) | 228 OCCUPANTS |
| EDUCATION | 1:20 (N) | 266 OCCUPANTS |
| EARLY CHILDHOOD EDUCATION | 1:20 (N) | 93 OCCUPANTS |
| A-2 SEATING | 1:15 (G) | 49 OCCUPANTS |
| A-4 ASSEMBLY | 1:15 (G) | 1070 OCCUPANTS |

TOTAL E OCCUPANT LOAD FOR PLUMBING FIXTURES: 359 OCCUPANTS
PLUMBING FIXTURE RATIOS:
WATER CLOSETS: 1:50
LAVATORIES: 1:50
DRINKING FOUNTAINS: 1:100
MOP SINK: 1

REQUIRED PLUMBING FIXTURES E (EXCLUDES ECE): 266 OCCUPANTS
WATER CLOSETS:
MEN: 3
WOMEN: 3
LAVATORIES: 5
DRINKING FOUNTAINS: 3

REQUIRED PLUMBING FIXTURES FOR E (ECE): 92 OCCUPANTS
WATER CLOSETS:
MEN: 1
WOMEN: 1
LAVATORIES: 2
DRINKING FOUNTAINS: 1

TOTAL A-2 OCCUPANT LOAD FOR PLUMBING FIXTURES: 49 OCCUPANTS
PLUMBING FIXTURE RATIOS:
WATER CLOSETS:
MEN: 1:125
WOMEN: 1:65
LAVATORIES: 1:200
DRINKING FOUNTAINS: 1:500

REQUIRED PLUMBING FIXTURES FOR A-4:
WATER CLOSETS:
MEN: 1
WOMEN: 1
LAVATORIES: 1
DRINKING FOUNTAINS: 1

TOTAL A-4 OCCUPANT LOAD FOR PLUMBING FIXTURES: 1070 OCCUPANTS
PLUMBING FIXTURE RATIOS:
WATER CLOSETS:
MEN: 1:125
WOMEN: 1:65
LAVATORIES: 1:200
DRINKING FOUNTAINS: 1:500

REQUIRED PLUMBING FIXTURES FOR A-4:
WATER CLOSETS:
MEN: 5
WOMEN: 9
LAVATORIES: 6
DRINKING FOUNTAINS: 3

TOTAL B OCCUPANT LOAD FOR PLUMBING FIXTURES: 221 OCCUPANTS
PLUMBING FIXTURE RATIOS:
WATER CLOSETS: 1:25 FOR FIRST 50 OCC. THEN 1:50
LAVATORIES: 1:50
DRINKING FOUNTAINS: 1:100

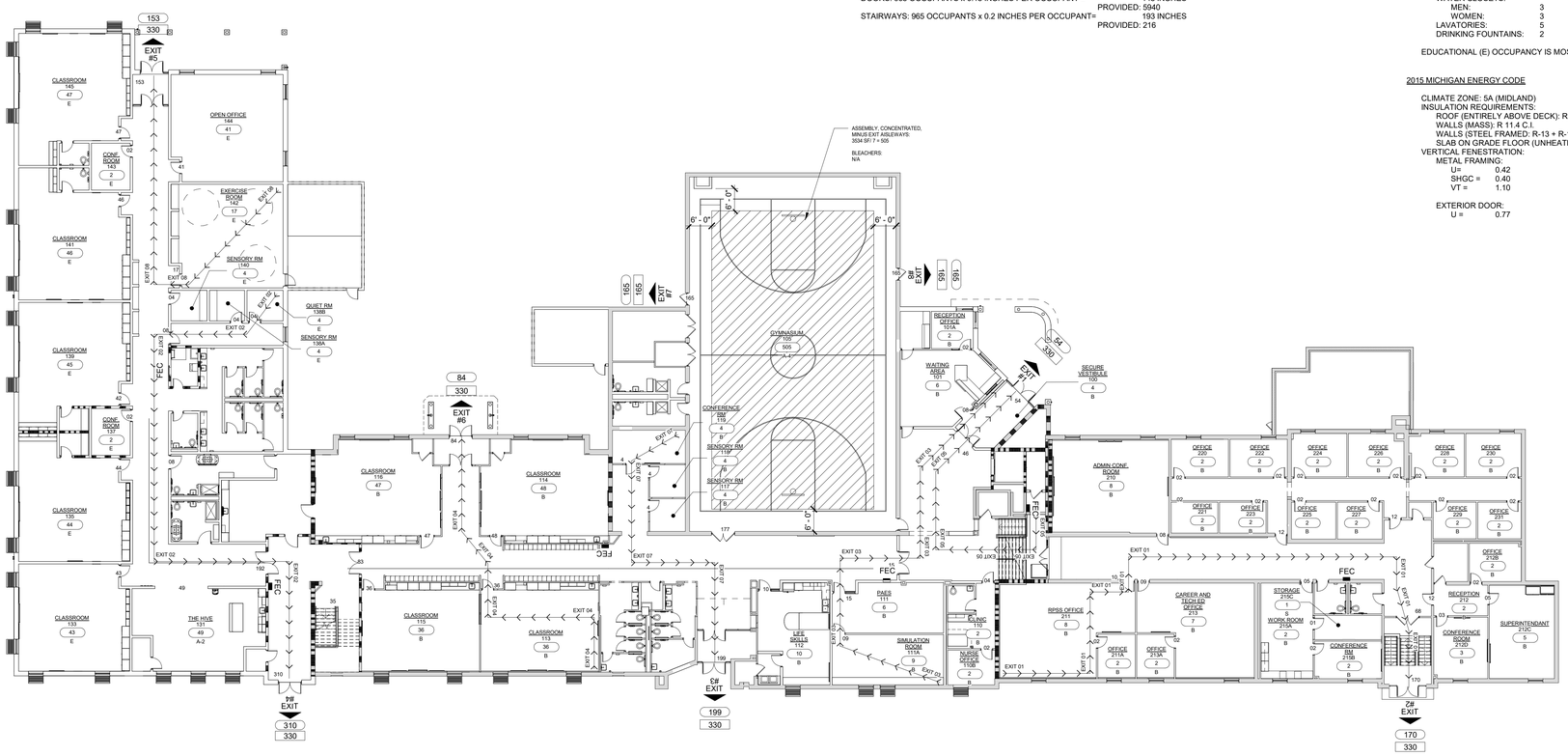
REQUIRED PLUMBING FIXTURES FOR B:
WATER CLOSETS:
MEN: 3
WOMEN: 3
LAVATORIES: 5
DRINKING FOUNTAINS: 2

EDUCATIONAL (E) OCCUPANCY IS MOST STRINGENT.

2015 MICHIGAN ENERGY CODE

CLIMATE ZONE: 5A (MIDLAND)
INSULATION REQUIREMENTS:
ROOF (ENTIRELY ABOVE DECK): R30 C.I.
WALLS (MASS): R 11.4 C.I.
WALLS (STEEL FRAMED: R-13 + R-10 C.I.
SLAB ON GRADE FLOOR (UNHEATED): R-15
VERTICAL FENESTRATION:
METAL FRAMING:
U= 0.42
SHGC = 0.40
VT = 1.10

EXTERIOR DOOR:
U = 0.77




2 G0.02 MAIN LEVEL AND UPPER LEVEL 2
SCALE: 1/16" = 1'-0"

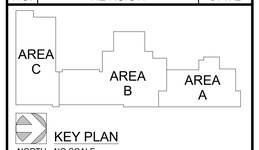
## CODE LEGEND

2 HOUR FIRE BARRIER
1 HOUR FIRE BARRIER
EXISTING BUILDING
EXIT #1 — EXIT - REQUIRED EGRESS FROM BUILDING
ROOM NAME 101 22 E — ROOM #; OCCUPANT LOAD; OCCUPANCY TYPE
##### — OCCUPANT LOAD - NUMBER OF OCCUPANTS LOADING EXIT
##### — EGRESS CAPACITY - MAXIMUM NUMBER OF OCCUPANTS ALLOWED TO EGRESS
FEC — FIRE EXTINGUISHER CABINET

**CODE PLAN EGRESS PATH LENGTH**

| PATH ID | LENGTH |
|---|---|
| EXIT 01 | 174' |
| EXIT 02 | 168' |
| EXIT 03 | 132' |
| EXIT 04 | 94' |
| EXIT 05 | 248' |
| EXIT 06 | 100' |
| EXIT 07 | 91' |
| EXIT 08 | 101' |
| EXIT 09 | 171' |

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE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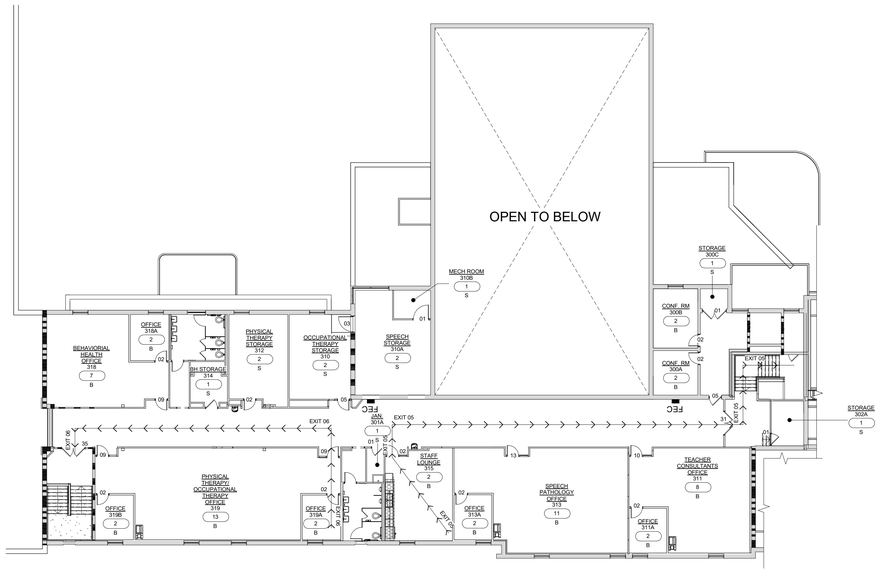
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

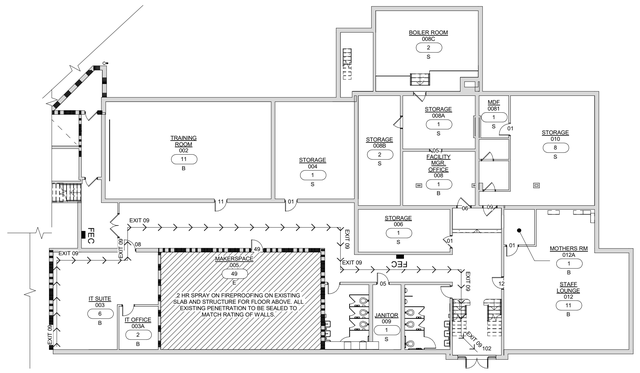
SHEET TITLE
LIFE SAFETY PLAN

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER G0.02




2 G0.03 UPPER LEVEL 3

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




1 G0.03 LOWER LEVEL

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

## CODE LEGEND

- 2 HOUR FIRE BARRIER
- 1 HOUR FIRE BARRIER
- EXISTING BUILDING
- EXIT #1 — EXIT - REQUIRED EGRESS FROM BUILDING
- ROOM NAME 101 / 22 / B — ROOM #; OCCUPANT LOAD; OCCUPANCY TYPE
- ##### — OCCUPANT LOAD - NUMBER OF OCCUPANTS LOADING EXIT
- ##### — EGRESS CAPACITY - MAXIMUM NUMBER OF OCCUPANTS ALLOWED TO EGRESS
- FEC — FIRE EXTINGUISHER CABINET

**CODE PLAN EGRESS PATH LENGTH**

| PATH ID | LENGTH |
|---|---|
| EXIT 01 | 174' |
| EXIT 02 | 168' |
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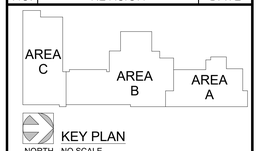


KEY PLAN

NO SCALE

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PROJECT TITLE

RENOVATION AND ADDITION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

LIFE SAFETY PLAN

PROJECT NUMBER 2022006.1

PROJECT DATE AUGUST 23, 2023

CHECKED BY JMJ

SHEET NUMBER G0.03

# GENERAL CONSTRUCTION NOTES

## EMERGENCY CONTACTS
BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

## UNDERGROUND UTILITY IDENTIFICATION AND LOCATION
THE CONTRACTOR SHALL CALL MISS DIG (1-800-482-7171 OR 811) A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

## PUBLIC UTILITIES
EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

## VERIFICATION OF UNDERGROUND UTILITIES
THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

## UTILITY SERVICE
UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

## MAINTAINING TRAFFIC
LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

WHEN EXCAVATION, FRESH CONCRETE, OR OTHER CONSTRUCTION WORK WILL RESULT IN THE CLOSURE OF A STREET OR DRIVEWAY FOR A PERIOD OF TIME, THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES IN ADVANCE.

THE CONTRACTOR SHALL NOTIFY EMERGENCY RESPONSE AGENCIES IN ADVANCE OF ROAD CLOSURES OR THE ESTABLISHMENT OF DETOURS.

## TRAFFIC SIGNS
TRAFFIC SIGNS WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED AND REPLACED BY THE AGENCY HAVING JURISDICTION OVER THE STREETS OR ROADS IN THE PROJECT AREA. THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE AGENCY TO ARRANGE FOR REMOVAL OF THE SIGN AND IS RESPONSIBLE TO PAY ANY FEES ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE SIGNS.

## SCHEDULE
THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

## LAYOUT
THE LAYOUT SHOWN ON THE DRAWINGS FOR MANHOLES IS TO THE CENTER OF THE STRUCTURE.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR MANHOLE CASTINGS, THE ELEVATION PROVIDED IS FOR THE TOP OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED FOR INLET TYPE CASTINGS, THE ELEVATIONS ARE PROVIDED AS FOLLOWS:
- CURB INLETS - THE ELEVATION OF THE TOP OF CURB
- ALL OTHER INLETS - THE ELEVATION OF THE FLOW LINE

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR INLETS OR MANHOLE CASTINGS, THE ELEVATIONS PROVIDED ARE CONSIDERED PRELIMINARY. THE CONTRACTOR SHALL MAKE THE FINAL ADJUSTMENT FOLLOWING THE ESTABLISHMENT OF ACTUAL GRADING AND PAVEMENT ELEVATIONS.

## SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS
THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

## PROTECTION OF TREES, SHRUBS, AND LANDSCAPING
ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

## CONSTRUCTION SIGNING AND BARRICADING
THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND OR AIR FLOW FROM VEHICLES.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, TRAFFIC REGULATORS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER STREETS OR ROADS IN THE PROJECT AREA, THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COVER OR REMOVE TEMPORARY SIGNS DURING PERIODS WHEN THEY ARE NOT APPROPRIATE.

## TURF ESTABLISHMENT
ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH FOUR INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS SUBSTANTIALLY FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

## ADA COMPLIANCE
ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE OWNER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

## EARTHWORK
THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF THE EARTHWORK QUANTITIES, AND BASE THEIR BID ON THEIR DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL, UNLESS A SPECIFIC BORROW AREA IS IDENTIFIED ON THE PLANS.

EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK SHALL BECOME THE CONTRACTOR'S PROPERTY AND DISPOSED OF PROPERLY, UNLESS AN AREA(S) HAS BEEN DESIGNATED FOR STOCKPILING OR "BLENDING IN" THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

## BACKFILL AND EMBANKMENT
BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS II AS DESCRIBED IN THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL, WHICH IS FREE OF ORGANIC MATTER, STONES AND ROCKS, ROOTS, BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE OWNER, AND PROVIDE THE OWNER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

## DENSITY TESTING
THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

## WORK HOURS
UNLESS PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS OR LIMITED BY LOCAL ORDINANCE, THE CONTRACTOR SHALL WORK WITHIN OF THE FOLLOWING TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER:

| | |
|---|---|
| MONDAY THROUGH FRIDAY | 7 A.M. TO 8 P.M. |
| SATURDAY | 8 A.M. TO 6 P.M. |

THE CONTRACTOR SHALL NOT WORK ON SUNDAYS OR HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE OWNER.

# DRAINAGE
THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE DISTURBED OR BLOCKED BY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY PROVISIONS FOR DRAINAGE.

WHERE CONSTRUCTION HAS DISTURBED EXISTING DITCHES, SWALES, OR OTHER DRAINAGE FACILITIES; THE CONTRACTOR SHALL RESTORE THEM TO THEIR GRADES AND DIMENSIONS WHICH EXISTED PRIOR TO THE BEGINNING OF CONSTRUCTION, UNLESS DIRECTED OTHERWISE.

DRAINAGE SHALL NOT BE REROUTED ONTO ADJACENT PROPERTIES NOR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES AT AN INCREASED RATE, AS A RESULT OF THE CONTRACTOR'S WORK.

# PAVING PROJECTS

## ADJUSTING STRUCTURES
WHERE CASTINGS FOR MANHOLES, CATCH BASINS, INLETS, VALVE BOXES, AND MONUMENT BOXES ARE TO BE ADJUSTED TO MEET A NEW PAVEMENT SURFACE ELEVATION, THE FINAL ADJUSTMENT SHALL NOT BE COMPLETED UNTIL ALL PAVEMENT COURSES HAVE BEEN PLACED EXCEPT THE FINAL COURSE. THE FINAL ADJUSTMENT SHALL BE COMPLETED JUST PRIOR TO PLACEMENT OF THE FINAL COURSE OF PAVEMENT.

THE MATERIALS AND PROCEDURES FOR ADJUSTING STRUCTURES SHALL MEET THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE ROAD AND UTILITIES.

## SUBGRADE PREPARATION
TOPSOIL, PEAT, AND ORGANIC MATERIAL SHALL BE EXCAVATED AND REMOVED.

SOFT AND YIELDING SOILS SHALL BE REMOVED OR DRIED IF THE RESULT OF EXCESSIVE MOISTURE CONTENT.

PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENT ON A SUBGRADE; THE SUBGRADE SHALL BE PROOF-ROLLED TO DETERMINE THE SUITABILITY OF THE SUBGRADE. THE CONTRACTOR SHALL DRIVE A HEAVY PIECE OF WHEELED CONSTRUCTION EQUIPMENT OVER THE SUBGRADE WHILE THE ENGINEER IS OBSERVING. THE CONSTRUCTION OF FILLS, SUBBASE, OR PAVEMENTS SHALL NOT PROCEED UNTIL THE SUBGRADE HAS BEEN DEMONSTRATED TO BE FREE OF SOFT AREAS.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE MOISTURE CONTENT OF SUBGRADE SOILS WITHIN A SUITABLE RANGE TO ALLOW FOR COMPACTION TO THE REQUIRED DENSITY. WHEN THE SOIL IS TOO DRY, THE CONTRACTOR SHALL ADD WATER. WHEN THE SOIL IS TOO WET, THE CONTRACTOR SHALL PROVIDE DRAINAGE OR AERATE THE SOIL.

THE SURFACE OF THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT, PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENTS.

## CURB AND GUTTERS
THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DIMENSIONS OF CURB OPENINGS FOR DRIVEWAYS, RAMPS, AND DRAINAGE STRUCTURES.

## HOT MIX ASPHALT (HMA) PAVING
PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE SHALL BE SWEPT TO REMOVE ALL DIRT AND DEBRIS.

A BITUMINOUS BOND COAT SHALL BE APPLIED TO PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE AND ALLOWED TO CURE PRIOR TO CONSTRUCTING THE NEW PAVEMENT COURSE.

HMA PAVEMENT SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

# SIDEWALK CONSTRUCTION
SIDEWALKS SHALL BE CONSTRUCTED TO PROVIDE POSITIVE DRAINAGE OF THE SIDEWALK AND ADJACENT SURFACES.

SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2%.

IN TURF AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACES, EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS, OR PAVEMENTS.

SIDEWALK SHALL BE CONSTRUCTED ON A SAND BASE, COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SIDEWALK FORMS HAVE BEEN SET AND THE SAND BASE PREPARED. CONCRETE SHALL NOT BE PLACED UNTIL THE ENGINEER HAS OBSERVED THE FORMS. CONCRETE DELIVERY SHALL BE SCHEDULED TO ALLOW SUFFICIENT TIME FOR ADJUSTMENT OF THE FORMS, IN THE EVENT THAT ADJUSTMENT IS NECESSARY.

THE CONTRACTOR SHALL PROTECT FRESH CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC, OR VANDALISM. DAMAGED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR'S EXPENSE.

# STORM SEWER CONSTRUCTION NOTES
DRAINAGE STRUCTURES SHALL BE CONSTRUCTED FROM PRECAST CONCRETE MANHOLE SECTIONS, MEETING ASTM C478.

SUMPS IN DRAINAGE STRUCTURES AND PIPELINES SHALL BE FREE OF SEDIMENT AND DEBRIS AT THE TIME OF ACCEPTANCE BY THE OWNER.

# SANITARY SEWER CONSTRUCTION NOTES
AT LEAST TEN FEET OF HORIZONTAL AND EIGHTEEN INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE SEWER AND EXISTING WATER MAINS.

THE CONTRACTOR SHALL CONDUCT A LOW PRESSURE AIR TEST ON ALL SANITARY SEWERS LESS THAN 24 INCHES IN DIAMETER. THE AIR TEST SHALL MEET THE REQUIREMENTS OF ASTM C 924 FOR CONCRETE PIPE AND ASTM F1471 FOR PLASTIC PIPE. IN AREAS WHERE GROUNDWATER IS OVER THE PIPE, THE TEST PRESSURE SHALL BE INCREASED EQUAL TO THE HYDRAULIC PRESSURE EXERTED BY THE WATER OVER THE PIPE, AS DETERMINED BY THE ENGINEER.

# WATER MAIN CONSTRUCTION NOTES
NEW WATER MAIN SHALL NOT BE CONNECTED TO THE EXISTING WATER MAIN WITHOUT THE APPROVAL OF THE OWNER.

AT LEAST TEN FEET OF HORIZONTAL AND EIGHTEEN INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND SEWERS (STORM OR SANITARY).

AS A MINIMUM, THE DEPTH OF BURY OVER THE TOP OF THE WATER MAIN PIPE TO THE FINISHED GROUND OR PAVEMENT SURFACE SHALL BE 5 FEET.

ALL BENDS, TEES, PLUGS, HYDRANTS, VALVES, AND OTHER FITTINGS WHERE THRUST MAY OCCUR SHALL BE RESTRAINED APPROPRIATELY BY THRUST BLOCKS OR JOINT RESTRAINT.

EXISTING WATER VALVES SHALL BE OPERATED ONLY BY THE WATER DEPARTMENT'S PERSONNEL.

THE SHUTTING DOWN OF EXISTING WATER MAINS TO ALLOW FOR COMPLETING THE CONTRACTOR'S WORK SHALL BE SCHEDULED IN ADVANCE BY THE CONTRACTOR WITH THE OWNER. THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO AFFECTED WATER CUSTOMERS IN AT LEAST A DAY IN ADVANCE OF ANY SCHEDULED SERVICE DISRUPTIONS.

THE CONTRACTOR SHALL EXPOSE EXISTING MAINS TO VERIFY THE SIZE, MATERIALS, AND ANY FITTINGS NECESSARY BEFORE SHUTTING DOWN EXISTING WATER MAINS FOR NEW CONNECTIONS. ALL FITTINGS, PARTS, AND EQUIPMENT NECESSARY TO COMPLETE THE PROPOSED CONNECTIONS TO THE EXISTING MAIN SHALL BE AVAILABLE AT THE SITE BEFORE THE EXISTING MAIN IS SHUT DOWN.

THE COMPLETED WATER MAIN SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE. THE TEST PRESSURE SHALL BE 150 PSI. THE TEST DURATION SHALL BE 2 HOURS. THE CONTRACTOR SHALL CONDUCT SUCH PRELIMINARY TESTING TO EXPEL AIR AND VERIFY THAT THERE ARE NO LEAKS IN THE PIPELINE. THE TEST SHALL BE WITNESSED BY THE ENGINEER OR OWNER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER AT LEAST 24 HOURS IN ADVANCE OF THE TIME FOR TESTING.

IF THE CONTRACTOR ELECTS TO PRESSURE TEST AGAINST AN EXISTING VALVE, THE OWNER DOES NOT GUARANTEE THAT EXISTING VALVES CAN RESIST THE TEST PRESSURE. IF THE CONTRACTOR BELIEVES THAT AN EXISTING VALVE IS THE CAUSE OF A FAILED PRESSURE TEST, THE CONTRACTOR SHALL EITHER REPAIR THE VALVE AND RETEST OR TEST AGAINST A PLUG, AT THEIR EXPENSE.

UNLESS SPECIFICALLY PROVIDED OTHERWISE, THE CONTRACTOR IS RESPONSIBLE TO FURNISH WATER FOR TESTING AND DISINFECTION.

WATER FROM THE CONTRACTOR'S FLUSHING AND DISINFECTION ACTIVITIES SHALL BE DISPOSED OF TO PREVENT EROSION OR FLOODING.

THE CONTRACTOR SHALL FURNISH AND INSTALL CORPORATIONS, TAPS, PIPING, AND FITTINGS AS NECESSARY TO COMPLETE THE REQUIRED FLUSHING AND TESTING FOR ACCEPTANCE. AFTER ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL CORPORATIONS, TAPS, PIPING, AND FITTINGS USED FOR FLUSHING AND TESTING. TAPS TO THE WATER MAIN SHALL BE PLUGGED WITH BRASS PLUGS.

TAPS FOR SERVICE CONNECTIONS SHALL BE COMPLETED UNDER PRESSURE. THE CORPORATION AND SERVICE LEAD SHALL BE VISUALLY CHECKED FOR LEAKAGE WHILE UNDER PRESSURE. ALL JOINTS SHALL REMAIN EXPOSED UNTIL THE ENGINEER HAS OBSERVED THEM.

CORPORATIONS SHALL BE LEFT IN THE "OPEN" POSITION. CURB STOPS FOR FUTURE CONNECTIONS SHALL BE LEFT "CLOSED"; CURB STOPS FOR CURRENT WATER CUSTOMERS SHALL BE LEFT "OPEN" ONCE CONNECTED.

# UTILITY CONTACT LIST
THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED FROM THEIR OWNERS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

| AGENCY | UTILITY |
|---|---|
| 1. CITY OF MIDLAND<br>ENGINEERING DEPARTMENT<br>CONTACT: MATT LEMON<br>333 W ELLSWORTH STREET<br>PHONE: (989) 837-3348<br>E-MAIL: MLEMON@MIDLAND-MI.ORG | SANITARY<br>WATER MAIN<br>ROADS<br>STORM |
| 2. CONSUMERS ENERGY<br>CONTACT: VIRGIE DOWNS<br>2400 WEISS STREET<br>SAGINAW, MI 48602<br>PHONE: (989) 791-5938<br>E-MAIL: VIRGIE.DOWNS@CMSENERGY.COM | ELECTRIC |
| 3. CONSUMERS ENERGY<br>CONTACT: EVAN HUIZENGA<br>2400 WEISS STREET<br>SAGINAW, MI 48602<br>PHONE: (810) 847-8227<br>E-MAIL: EVAN.HUIZENGA@CMSENERGY.COM | GAS |
| 4. CHARTER COMMUNICATIONS<br>CONTACT: JODY K LAMROUEX JR<br>7372 DAVISON ROAD<br>DAVISON, MI 48423<br>PHONE: (810) 459-0766<br>E-MAIL: JODY.LAMROUEX@CHARTER.COM | FIBER OPTICS<br>CABLE |
| 5. AT&T<br>CONTACT: JASON HARRIS<br>PHONE: (596) 381-9246<br>E-MAIL: JH147E@ATT.COM | TELEPHONE |
| 5. KEPS TECHNOLOGIES, INC.<br>CONTACT: JACOB LAPE<br>PHONE: (517) 999-3276<br>E-MAIL: OSP@ACD.NET | FIBER OPTICS |

| NO. | REVISION | DATE |
|---|---|---|
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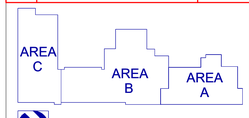
| | | |
| | ISSUED FOR BIDS | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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ROWE PROFESSIONAL SERVICES COMPANY

PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
CIVIL NOTES

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

SHEET NUMBER
C1.01

## STRUCTURE SYMBOLS

- EXISTING CATCH BASIN IN CURB LINE
- PROPOSED CATCH BASIN IN CURB LINE
- EXISTING CATCH BASIN IN GREEN SPACE
- PROPOSED CATCH BASIN IN GREEN SPACE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CULVERT END SECTION
- EXISTING HEADWALL
- PROPOSED HEADWALL
- EXISTING GATE VALVE AND BOX
- EXISTING WATER SHUT OFF (CURB BOX)
- PROPOSED GATE VALVE AND BOX
- EXISTING GATE VALVE AND WELL
- PROPOSED GATE VALVE AND WELL
- EXISTING SPRINKLER HEAD
- EXISTING WATER WELL
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER MAIN FITTINGS
- EXISTING CLEAN OUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING MONITORING WELL

## EXISTING TOPOGRAPHICAL SYMBOLS

- SIGN
- STREET SIGN
- END OF PIPE
- SWAMP OR WETLAND
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE STUMP
- MAIL BOX
- SOIL BORING
- ROCK
- METAL POST
- BUMPER BLOCK

## UTILITY SYMBOLS

- UTILITY POLE
- GUY ANCHOR CABLE
- LIGHT POLE / ORNAMENTAL LIGHT
- POWER LIGHT POLE
- TELEPHONE MANHOLE
- UNDERGROUND GAS LINE MARKER
- GAS RISER
- GAS VENT
- GAS VALVE
- RAILROAD SIGNAL
- METAL LIGHT POLE
- OUTLET
- CIRCUIT BREAKER PANEL
- ELECTRICAL TRANSFORMER PAD
- ELECTRICAL TRANSFORMER RISER
- ELECTRIC METER
- TELEPHONE PEDESTAL / RISER
- TRAFFIC SIGNAL ON POLE
- PHONE BOOTH / PAY PHONE

## SURVEY SYMBOLS

- MONUMENT
- BENCHMARK
- TRAVERSE POINT
- SECTION CORNER
- FOUND SURVEY MONUMENTATION

## MISCELLANEOUS SYMBOLS

- EX 1812 — EXISTING STORM SEWER STRUCTURE NUMBER
- EX 5236 — EXISTING SANITARY SEWER STRUCTURE NUMBER
- 1 — PROPOSED STORM SEWER STRUCTURE NUMBER
- A — PROPOSED SANITARY SEWER STRUCTURE NUMBER
- FLOW DIRECTION
- EXISTING RIP-RAP
- PROPOSED RIP-RAP

## CAUTION SYMBOLS

- ••CAUTION•• HAZARDOUS FLAMMABLE MATERIAL UNDERGROUND — USED WITH UNDERGROUND GAS & ELECTRICAL LINES
- ••CAUTION•• FIBER OPTIC — USED WITH FIBER OPTIC LINES
- ••CAUTION•• CRITICAL UNDERGROUND UTILITY — USED WITH CRITICAL UNDERGROUND LINES

## PLAN VIEW LINE TYPES

- 12" STM — EXISTING STORM SEWER
- 12" CONC — EXISTING CULVERT
- PROPOSED STORM SEWER LESS THAN 24"
- PROPOSED STORM SEWER 24" AND GREATER
- 12" SAN — EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- 12" WM — EXISTING WATER MAIN
- PROPOSED WATER MAIN
- SECTION LINE
- 60' ROW — EXISTING RIGHT OF WAY
- 60' ROW — PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING CENTER LINE DITCH
- PROPOSED DITCH CENTERLINE
- EXISTING CENTER LINE ROADWAY
- PARCEL LINE / LOT LINE
- O/H — EXISTING OVERHEAD UTILITIES
- U/G ELEC — UNDERGROUND ELECTRICAL LINE
- 6" S-MP GAS — GAS LINE OR PETROLEUM PIPELINE
- U/G TEL — UNDERGROUND TELEPHONE LINE
- U/G CATV — UNDERGROUND CABLE TV LINE
- U/G FIBER OPTIC — UNDERGROUND FIBER OPTIC
- 11+00 — PROJECT CONTROL LINE
- TREE LINE
- BRUSH LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED SLOPE STAKE LINE
- PROPOSED SILT FENCE

## TOPOGRAPHY

- 960 — EXISTING CONTOURS MAJOR
- 958 — EXISTING CONTOURS MINOR
- 960 — PROPOSED CONTOURS MAJOR
- 958 — PROPOSED CONTOURS MINOR

## PARCEL INFORMATION

- 401-069 — PARCEL/TAX IDENTIFICATION NUMBER
- #5324 — ADDRESS/BUSINESS NAME

## PAVEMENT IDENTIFICATION

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- REMOVE CURB AND GUTTER

## HATCHING LEGEND

- REMOVE PAVEMENT
- CRUSH AND SHAPE
- REMOVE CONCRETE SIDEWALK
- REMOVE HMA OVERLAID CONCRETE SIDEWALK
- PROPOSED 6" CONCRETE PAVEMENT
- PROPOSED 4" CONCRETE PAVEMENT (OR 8" WHERE CALLED OUT IN PLANS)
- PROPOSED HMA PAVEMENT

## PROPOSED CALLOUTS

| TOPO CALLOUTS | PLAN VIEW | |
|---|---|---|
| ADJ | ADJ | ADJUST STRUCTURE |
| ADJ-X | ADJ-X | ADJUST STRUCTURE W/ NEW COVER |
| ADJ-B/O | ADJ-B/O | ADJUST STRUCTURE BY OTHERS |
| REC | REC | RECONSTRUCT STRUCTURE |
| REL | REL | RELOCATE |
| REL-B/O | REL-B/O | RELOCATE BY OTHERS |
| REM | R | REMOVE |
| R&R | R&R | REMOVE AND REPLACE |
| SALV | SALV | SALVAGE |
| SAVE | S | SAVE |
| ABN | A | ABANDON |
| CLR | C | CLEARING |
| | B | BULKHEAD |
| | SR-F | SIDEWALK RAMP TYPE |
| | 6 | SOIL EROSION CONTROL MEASURE |

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BIDS | 08/23/23 |

AREA C
AREA B
AREA A
KEY PLAN
NORTH NO SCALE

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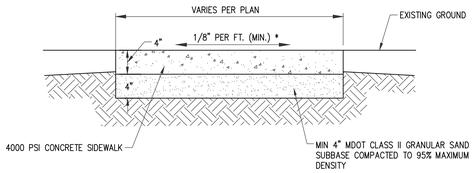
ROWE PROFESSIONAL SERVICES COMPANY

PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

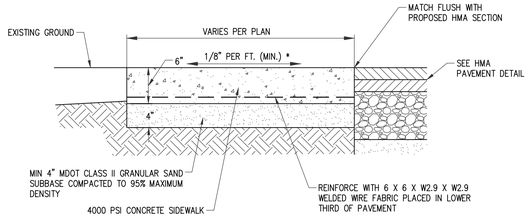
SHEET TITLE
CIVIL LEGEND

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 16, 2023
CHECKED BY DRS
SHEET NUMBER C1.02



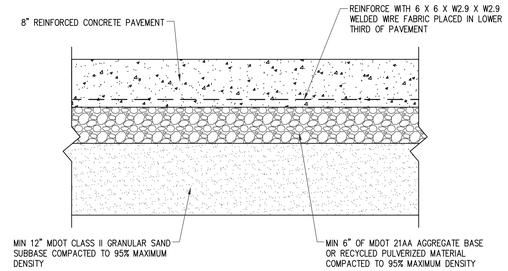

*NOTE:
1. SLOPE IN THE DIRECTION OF FLOW OR AS APPROVED BY THE OWNER TO MEET EXISTING CONDITIONS AT A MAXIMUM OF 2%
2. SIDEWALK FLAGS SHALL BE EQUAL TO THE WIDTH (5' LONG MAX).
3. CONCRETE TO HAVE 5.5–8.5% AIR ENTRAINMENT AND A MIN OF 4,000 PSI 28-DAY COMPRESSIVE STRENGTH.

## 4" CONCRETE SIDEWALK DETAIL
NOT TO SCALE



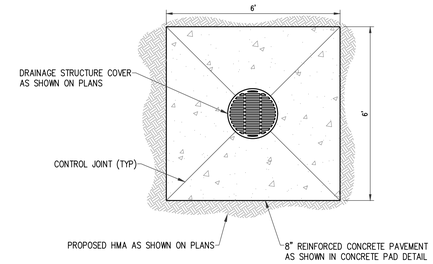

*NOTE:
1. SLOPE IN THE DIRECTION OF FLOW OR AS APPROVED BY THE OWNER TO MEET EXISTING CONDITIONS AT A MAXIMUM OF 2%
2. SIDEWALK FLAGS SHALL BE EQUAL TO THE WIDTH (5' LONG MAX).
3. CONCRETE TO HAVE 5.5–8.5% AIR ENTRAINMENT AND A MIN OF 4,000 PSI 28-DAY COMPRESSIVE STRENGTH.

## 6" CONCRETE SIDEWALK DETAIL
NOT TO SCALE

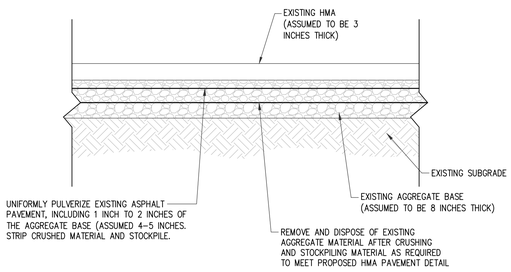



NOTES:
1. CONCRETE TO HAVE 5.5–8.5% AIR ENTRAINMENT AND A MIN OF 4,000 PSI 28-DAY COMPRESSIVE STRENGTH.

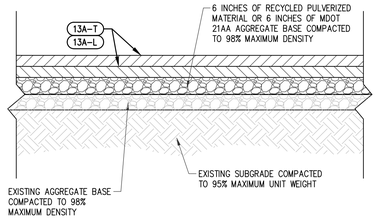
## CONCRETE PAD DETAIL
NOT TO SCALE




## PARKING LOT STRUCTURE CONCRETE COLLAR
NOT TO SCALE



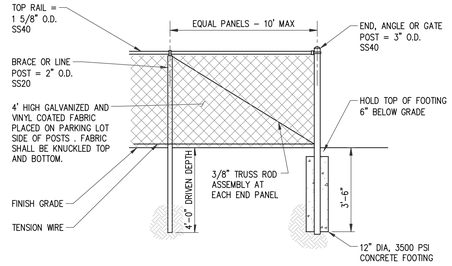

## EXISTING PAVEMENT AND CRUSH & SHAPE DETAIL
NOT TO SCALE



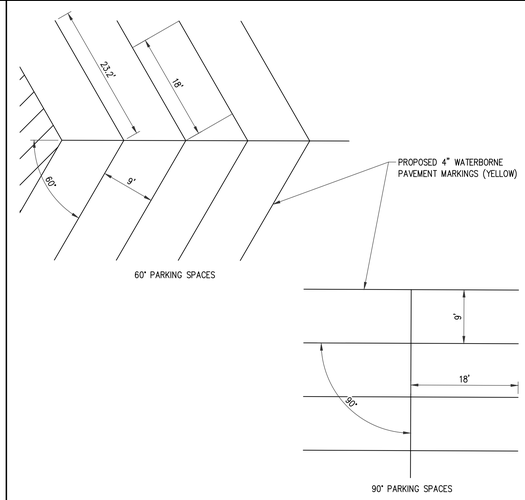

### HMA APPLICATION CHART

| IDENT NO | PAVEMENT TYPE | RATE OF APPLICATION | ESTIMATED THICKNESS | PERFORMANCE GRADE | COMMENTS |
|---|---|---|---|---|---|
| 13A–T | HMA, 13A | 220#/SYD | 2.0" | 58–28 | TOP COURSE (AWI=220 MINIMUM) |
| 13A–L | HMA, 13A | 220#/SYD | 2.0" | 58–28 | LEVELING COURSE |
| – | – | 0.05–0.15 GAL/SYD | – | – | NOT A PAY ITEM; FOR INFORMATION ONLY |

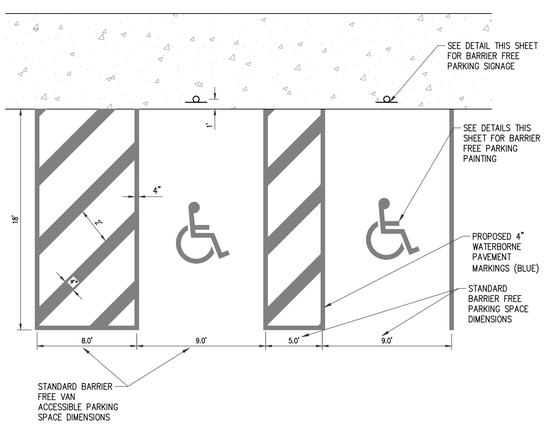
## HMA PAVEMENT DETAIL
NOT TO SCALE




## CHAIN LINK FENCE DETAIL
NOT TO SCALE




## STANDARD PARKING SPACE DETAIL
NOT TO SCALE



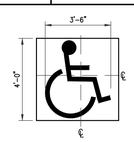

## STANDARD BARRIER-FREE PARKING SPACE LAYOUT
NOT TO SCALE

BARRIER FREE VAN ACCESSIBLE SIGN
R7–8 (12"X18")
R7–8P (18"X9")

BARRIER FREE SIGN
R7–8 (12"X18")

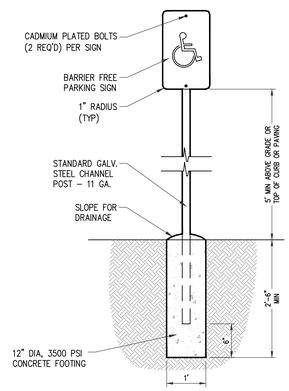
NOTES:
1. ALL SIGNS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE LATEST EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

## BARRIER FREE PARKING SIGNAGE
NOT TO SCALE




NOTES:
1. SYMBOL SHALL BE APPLIED AT A WIDTH OF 4" AND PAINTED WHITE ON BLUE BACKGROUND.
2. CENTERLINE OF SYMBOL SHALL BE PARALLEL TO PARKING STALL STRIPE AND IN CENTER OF STALL.

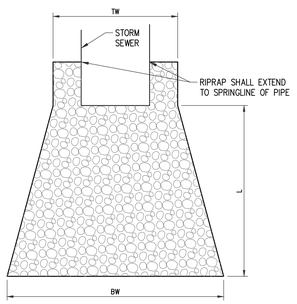
## BARRIER FREE PARKING PAINTING
NOT TO SCALE



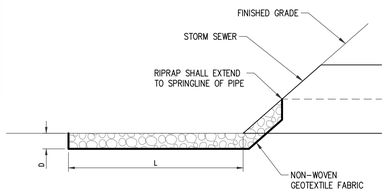

## BARRIER FREE SIGN DETAIL
NOT TO SCALE

### RIPRAP APRON DIMENSIONS

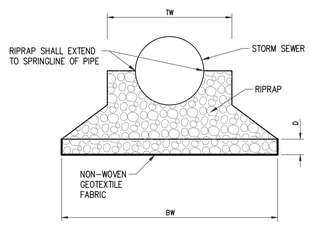
| PIPE DIAMETER | DEPTH (D) | LENGTH (L) | TOP WIDTH (TW) | BOTTOM WIDTH (BW) | MIN MEDIAN STONE THICKNESS |
|---|---|---|---|---|---|
| 15" | 8" | 11' | 4' | 5' | 8" |




TOP VIEW



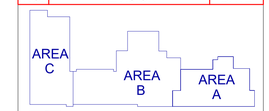

SIDE VIEW




FRONT VIEW

## RIPRAP OUTLET DETAIL
NOT TO SCALE

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BIDS | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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Saginaw, Michigan 48607
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ROWE PROFESSIONAL SERVICES COMPANY

PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

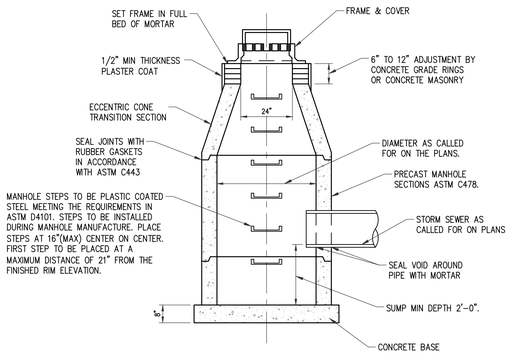
SHEET TITLE
CIVIL DETAIL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

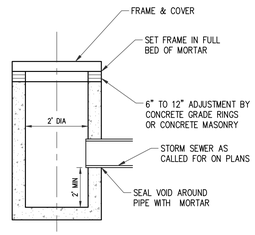
CHECKED BY
DRS

SHEET NUMBER
C1.03



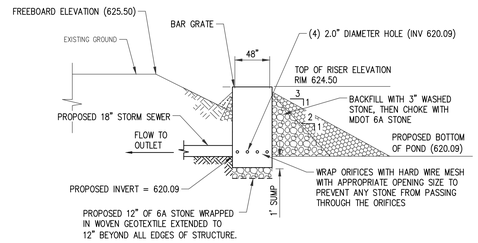

## STANDARD DRAINAGE STRUCTURE WITH 2' SUMP

NOT TO SCALE




## 2' DIA DRAINAGE STRUCTURE DETAIL

NOT TO SCALE

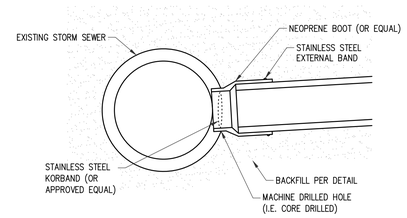



NOTES:

1. BAR GRATE SHALL CONSIST OF #4 BARS O.C. IN BOTH DIRECTIONS SECURED TO RCP W/ 1"X 1/8" BAND BOLTED AT 6 EQUALLY SPACED LOCATIONS.

## POND OUTLET CONTROL STRUCTURE

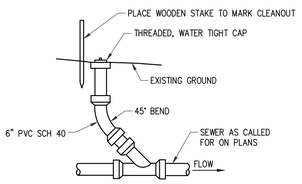
NOT TO SCALE



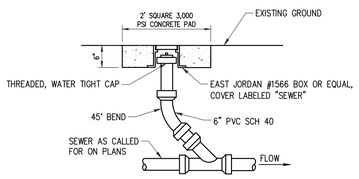

NOTES:
1. FOR NON-CONCRETE TO CONCRETE TAPS.
2. USE LINK-SEAL, A-LOCK OR APPROVED EQUAL FOR CONCRETE TO CONCRETE TAPS.

## STORM SEWER DIRECT TAPS TO PIPE WALL

NOT TO SCALE



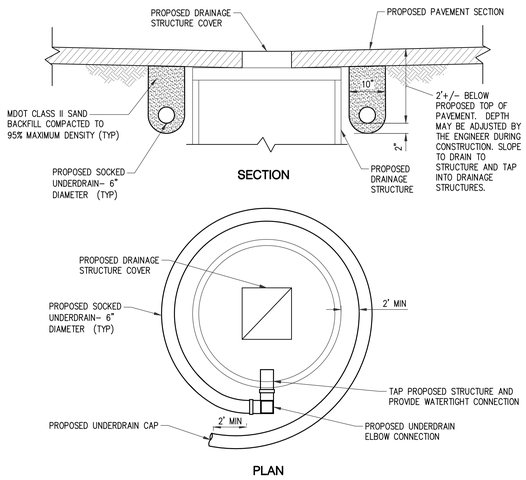

FOR GRASS AREAS




FOR PAVEMENT AREAS

## CLEANOUT RISER DETAIL

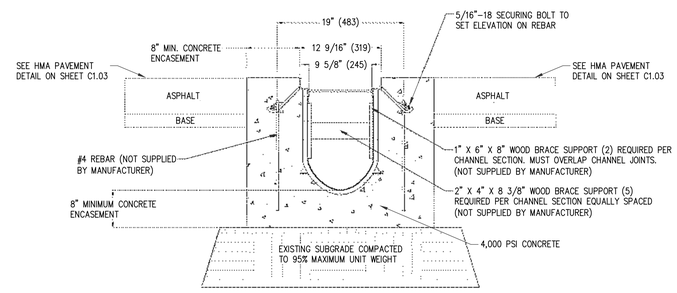
NOT TO SCALE

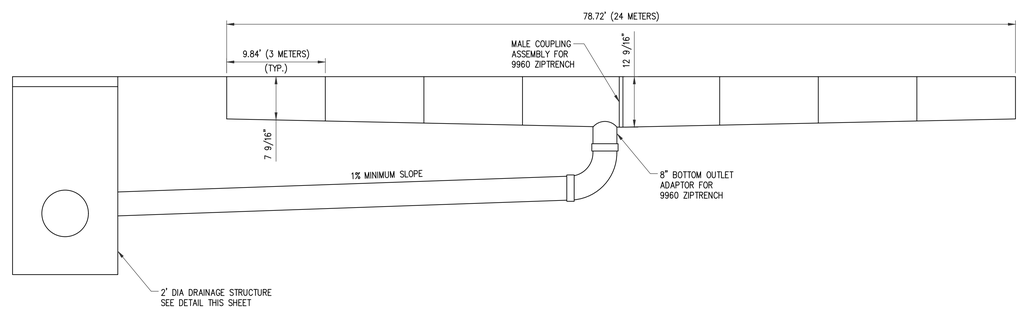



NOTES:
1. UNDERDRAINS TO BE INSTALLED SURROUNDING STRUCTURES 2 AND 3 ONLY

## MANHOLE UNDERDRAIN WRAPPING DETAIL

NOT TO SCALE

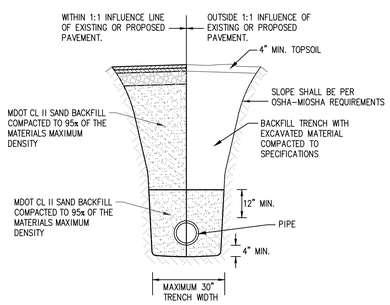



NOTES:
1. TRENCH DRAINS SHALL BE 9960 SERIES, 12-INCH WIDE TRENCH DRAIN SYSTEM, SUPPLIED BY JAR R. SMITH MFG. CO. (1-334-277-8520, WWW.JRSMITH.COM).
2. TRENCH DRAIN SHALL HAVE ONE 8-INCH NO-HUB VERTICAL OUTLET FITTING, ONE MALE COUPLING ASSEMBLY, AND TWO END FRAMES, ONE FOR EACH END. VERTICAL OUTLET TO CONNECT TO STM TRENCH DRAIN-1 PER MANUFACTURER'S INSTRUCTIONS.
3. GRATING SHALL BE 9960-GM, GALVANIZED STEEL MESH GRATE, SUPPLIED BY JAR R. SMITH MFG. CO. (1-334-277-8520, WWW.JRSMITH.COM).
4. TRENCH DRAIN LAYOUT INCLUDES THE FOLLOWING CHANNEL SEGMENTS:
   (2) 9960-1, (2) 9960-2, (2) 9960-3, (2) 9960-4

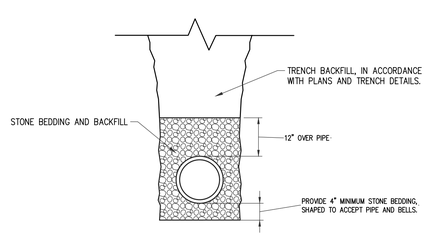
## TRENCH DRAIN DETAIL

NOT TO SCALE




## RIGID CONCRETE PIPE BEDDING DETAIL - SAND BEDDING

NOT TO SCALE



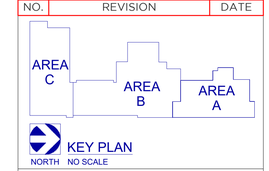

NOTES:

1. SAND SHALL BE MDOT GRANULAR MATERIAL CLASS II.
2. STONE SHALL BE MDOT, SERIES 6AA.
3. SAND SHALL BE COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

## PVC PIPE BEDDING DETAIL - AGGREGATE BEDDING

NOT TO SCALE

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BIDS | 08/23/23 |

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ROWE PROFESSIONAL SERVICES COMPANY

PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

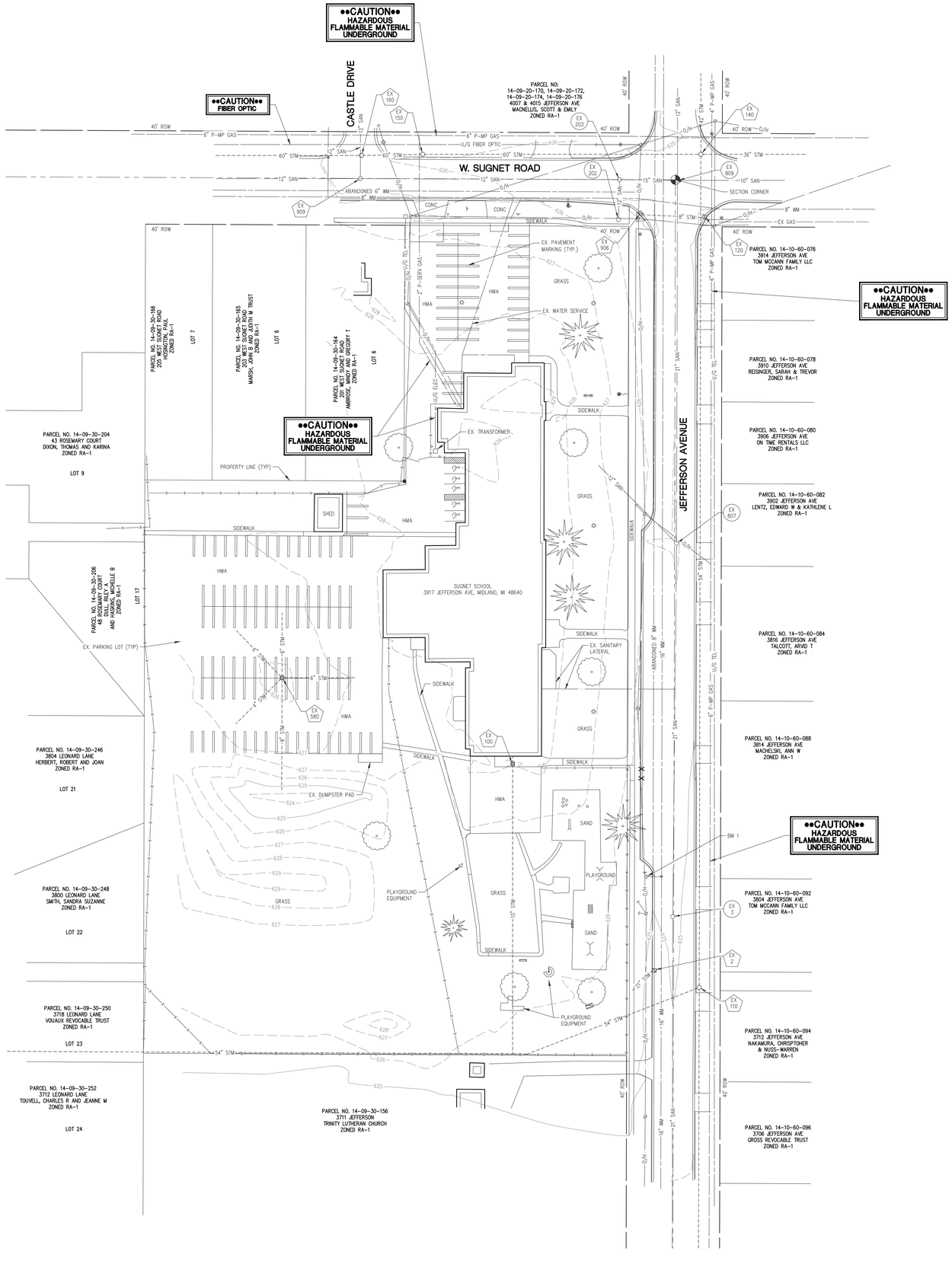
SHEET TITLE
CIVIL DETAIL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

SHEET NUMBER
C1.04




## SURVEY NOTES

1. EXISTING SURVEY PERFORMED BY D&M SITE, INC. EXISTING CONDITIONS INFORMATION IS FROM THE TOPOGRAPHIC SURVEY DATED 6/5/23.
2. SURVEY WAS PERFORMED ON A LOCAL HORIZONTAL COORDINATE SYSTEM
3. CONTRACTOR TO CONTACT D&M SITE, INC TO OBTAIN LOCAL HORIZONTAL COORDINATE SYSTEM INFORMATION:
(989) 752-6500;
401 BALSAM STREET PO BOX 159, CARROLLTON, MICHIGAN 48724

## BENCHMARK DATA TABLE

| NUMBER | ELEVATION | DESCRIPTION |
|---|---|---|
| BM 1 | 627.13 | PAINTED "X" ON WESTERLY UPPER FLANGE BOLT ON HYDRANT SOUTHEAST OF EXISTING SUGNET SCHOOL BUILDING |

## EXISTING STRUCTURE INVENTORY

MH# 2
TYPE: STORM
COVER: CURB INLET
RIM= 624.73
21" RCP SW INV.=620.61

MH# 3
TYPE: SANITARY
COVER: MANHOLE
RIM= 625.50
21" RCP N INV.=615.54
21" RCP S INV.=615.35

MH# 100
TYPE: STORM
COVER: FLAT GRATE
RIM= 627.99
10" N INV.=UNKNOWN
10" S INV.=UNKNOWN

MH# 110
TYPE: STORM
COVER: MANHOLE
RIM= 624.58
54" N INV.=UNKNOWN
54" S INV.=UNKNOWN
54" SW INV.=618.49

MH# 120
TYPE: STORM
COVER: CURB INLET
RIM= 625.15
8" W INV.=UNKNOWN

MH# 140
TYPE: STORM
COVER: FLAT GRATE
RIM= 625.36
42" N INV.=UNKNOWN
36" E INV.=UNKNOWN
54" S INV.=UNKNOWN
60" W INV.=UNKNOWN

MH# 150
TYPE: STORM
COVER: MANHOLE
RIM= 626.36
60" W INV.=UNKNOWN
60" E INV.=UNKNOWN

MH# 160
TYPE: STORM
COVER: MANHOLE
RIM= 626.41
60" W INV.=UNKNOWN
60" E INV.=UNKNOWN

MH# 202
TYPE: SANITARY
COVER: MANHOLE
RIM= 626.41
12" N INV.=UNKNOWN

MH# 203
TYPE: SANITARY
COVER: MANHOLE
RIM= 626.41
15" E INV.=UNKNOWN
8" S INV.=UNKNOWN
12" W INV.=UNKNOWN

MH# 580
TYPE: STORM
COVER: FLAT GRATE
RIM= 625.70
6" RCP N INV.=622.90
6" RCP W INV.=623.02
8" PVC S INV.=622.61
4" CPD SW INV.=623.13
6" RCP NW INV. =622.78

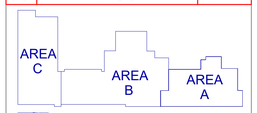
MH# 807
TYPE: SANITARY
COVER: SOLID
RIM= 626.09
21" RCP N INV.=615.73
21" RCP S INV.=615.71
12" RCP NW INV.=617.46

MH# 809
TYPE: SANITARY
COVER: SOLID
RIM= 625.75
12" RCP N INV.=616.70
10" VCP E INV.=616.75
21" RCP S INV.=616.30
24" RCP W INV.=616.30

MH# 906
TYPE: STORM
COVER: CURB INLET
RIM= 624.60
8" E INV.=621.80

MH# 909
TYPE: SANITARY
COVER: SOLID
RIM= 626.54
12" RCP N INV.=617.73
12" RCP E INV.=617.71
12" RCP W INV.=617.72

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BIDS | 08/23/23 |

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
EXISITING SITE CONDITIONS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

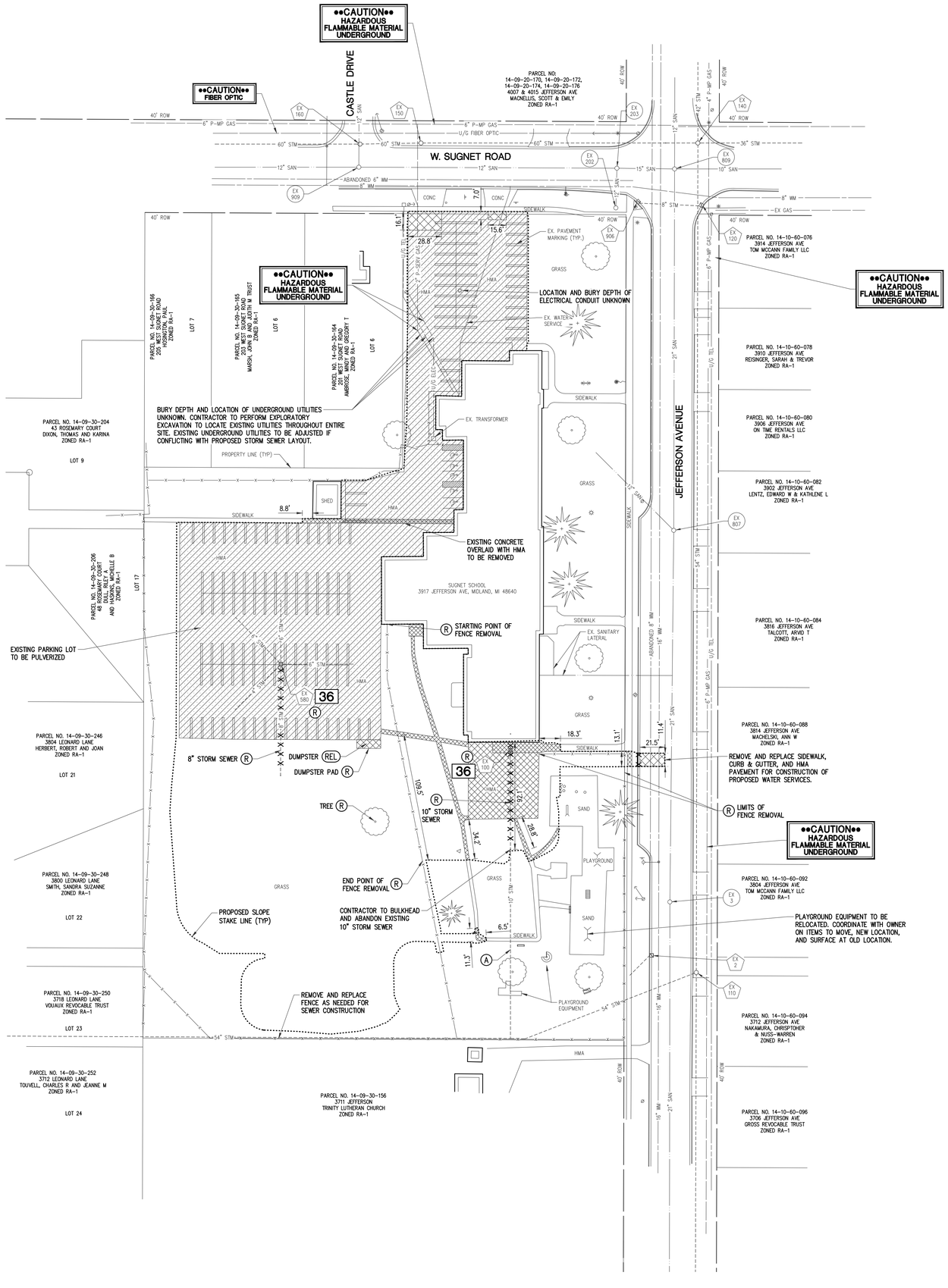
SHEET NUMBER
C2.01

## REMOVAL NOTES

1. CONTRACTOR TO REFER TO ARCHITECTURAL (PACKAGES/SECTIONS) FOR ADDITIONAL DEMOLITION/REMOVAL PLANS.
2. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR DAMAGE TO ITEMS NOT SCHEDULED FOR REMOVAL. REPAIRS SHALL BE MADE AT THE CONTRACTOR'S OWN EXPENSE.
3. REMOVAL ITEMS SHOWN ARE BASED ON BEST AVAILABLE INFORMATION AND ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO BE FULLY FAMILIAR WITH THE EXTENT OF REMOVAL ITEMS. QUESTIONS REGARDING ITEMS TO BE REMOVED SHALL BE DIRECTED TO THE OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.
4. CLEARING AND DEMOLITION SHALL INCLUDE COMPLETE REMOVAL OF ALL ITEMS NOTED AND SHALL INCLUDE BACKFILL OF VOIDS WITH CLEAN CLASS II SAND.
5. ALL MATERIALS REMOVED NOT DESIGNATED FOR RE-USE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS AND REGULATIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SIDEWALKS, PAVEMENTS AND CURB & GUTTER DESIGNATED TO REMAIN. ANY DAMAGE TO THESE ITEMS SHALL BE REPLACED AT NO COST TO THE OWNER.
7. SITE PREPARATION TO INCLUDE ALL ITEMS REQUIRED TO PREPARE FOR CONSTRUCTION OF ALL ITEMS SHOWN IN THE FOLLOWING PLANS.
8. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL REMOVALS WITH OWNER AND APPLICABLE AGENCIES.
9. ALL CLEARING AND TEMPORARY SESC IMPROVEMENTS TO BE INSTALLED PRIOR CONSTRUCTION.
10. CONTRACTOR TO VERIFY WITH OWNER THAT THERE ARE NO KNOWN ENVIRONMENTAL CONCERNS ON-SITE.
11. ALL PAVEMENT REMOVAL SHALL BE SAWCUT.
12. SUBSURFACE INVESTIGATION WAS NOT PERFORMED IN THE PARKING LOT AREAS. IT IS ANTICIPATED THAT THE HMA IS 3 INCHES THICK. AREAS OF KNOWN CONCRETE OVERLAID WITH HMA ARE NOTED ON THE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE STARTING CONSTRUCTION.

## PERMIT NOTES

1. CONTRACTOR SHALL COORDINATE WITH MIDLAND COUNTY TO OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT BEFORE CONSTRUCTION.
2. CONTRACTOR TO VERIFY THAT ALL PERMITS ARE OBTAINED BEFORE STARTING WORK.

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COVER: MANHOLE
RIM= 625.50
21" RCP N INV.=615.54
21" RCP S INV.=615.35

MH# 100
TYPE: STORM
COVER: FLAT GRATE
RIM= 627.99
10" N INV.=UNKNOWN
10" S INV.=UNKNOWN

MH# 110
TYPE: STORM
COVER: MANHOLE
RIM= 624.58
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MH# 120
TYPE: STORM
COVER: CURB INLET
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8" W INV.=UNKNOWN

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COVER: FLAT GRATE
RIM= 625.36
42" N INV.=UNKNOWN
36" E INV.=UNKNOWN
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COVER: MANHOLE
RIM= 626.41
12" N INV.=UNKNOWN

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TYPE: SANITARY
COVER: MANHOLE
RIM= 626.41
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MH# 809
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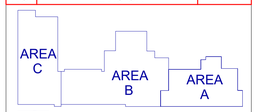
21" RCP S INV.=616.30
24" RCP W INV.=616.30

MH# 906
TYPE: STORM
COVER: CURB INLET
RIM= 624.60
8" E INV.=621.80

MH# 909
TYPE: SANITARY
COVER: SOLID
RIM= 626.54
12" RCP N INV.=617.73
12" RCP E INV.=617.71
12" RCP W INV.=617.72

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BIDS | 08/23/23 |

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ROWE PROFESSIONAL SERVICES COMPANY


PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION PLAN

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

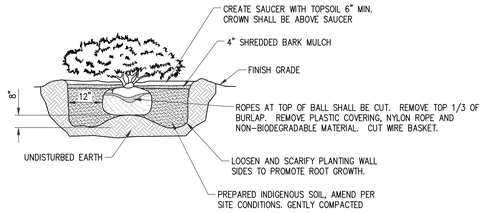
SHEET NUMBER
C2.02

## PERMIT NOTES

1. CONTRACTOR SHALL COORDINATE WITH MIDLAND COUNTY TO OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT BEFORE CONSTRUCTION.
2. CONTRACTOR TO VERIFY THAT ALL PERMITS ARE OBTAINED BEFORE STARTING WORK.

## LANDSCAPE NOTES

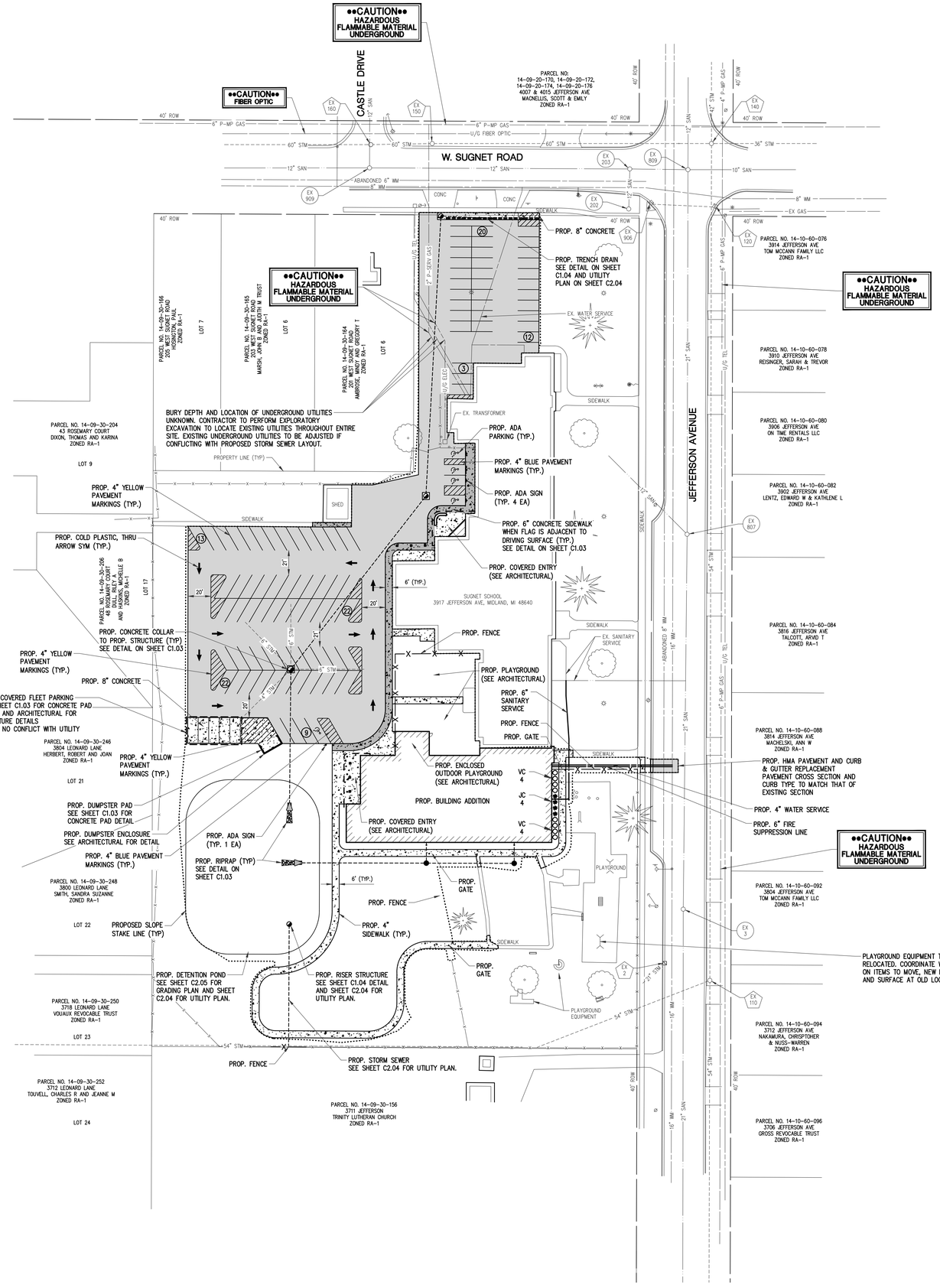
1. ALL LANDSCAPE MATERIALS SHALL BE HEALTHY AT THE TIME OF INSTALLATION.
2. CONTRACTOR SHALL SUPPLY FINISH GRADE AND EXCAVATE AS NECESSARY TO SUPPLY A MINIMUM 6" TOPSOIL DEPTH IN ALL PLANTING BEDS AND 4" TOPSOIL IN ALL LAWN AREAS UNLESS NOTED OTHERWISE.
3. ALL TOPSOIL SHALL BE IMPORTED AND SCREENED. EXISTING TOPSOIL MAY ONLY BE REUSED IF APPROVED BY THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS TO BE IN A HEALTHY CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE. CONTRACTOR SHALL REPLACE WITHOUT COST TO THE OWNER ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE OWNER'S REPRESENTATIVE DURING AND AT THE END OF THE GUARANTEE PERIOD.
5. ALL PLANTINGS SHALL CONFORM TO ANSI Z60.1 OR CURRENT EDITION.
6. AREAS SPECIFIED WITH PLANT MATERIAL SHALL BE FINE GRADED AND SEEDED FOR TURF ESTABLISHMENT.
7. ALL EXCESS EXCAVATED MATERIALS AND DEBRIS WHICH ARE NOT ACCEPTED FOR DISPOSAL ON SITE BY THE OWNER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF LEGALLY OFF SITE.
8. ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESS WATER FROM STANDING ON LAWN AREAS OR AROUND TREES & SHRUBS.
9. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY MATERIAL NOT MEETING SPECIFICATIONS.
10. THE CONTRACTOR SHALL PLACE 4" OF SHREDDED BARK MULCH IN LANDSCAPE BEDS PER SPECIFICATIONS.
11. ALL LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY ENVIRONMENT. THE OWNER SHALL MAINTAIN THE LANDSCAPING USING OWN STAFF OR CONTRACT WITH AN OUTSIDE LANDSCAPING SERVICE.




## SHRUB PLANTING DETAIL

NOT TO SCALE

| PLANT SCHEDULE | | | | | |
|---|---|---|---|---|---|
| SYM | KEY | BOTANICAL NAME | COMMON NAME | NOTES | QUANTITY |
| ○ | VC | VIBURNUM CARLESII | KOREAN SPICE VIBURNUM | NO. 5 CONT. | 8 @ 5' SPACING |
| ✱ | JC | JUNIPERUS CHINENSIS 'SEA GREEN' | SEA GREEN JUNIPER | NO. 5 CONT. | 4 @ 5' SPACING |




## PARKING LAYOUT NOTES:

| | |
|---|---|
| TOTAL MINIMUM REQUIRED NUMBER OF BARRIER-FREE SPACES: | 5 SPACES |
| EXISTING PARKING SPACE TOTALS | 128 REGULAR SPACES<br>5 ADA SPACES<br>133 TOTAL SPACES |
| PROPOSED PARKING SPACE TOTALS | 100 REGULAR SPACES<br>5 ADA SPACES<br>105 TOTAL SPACES |

(X) SYMBOL DENOTES PARKING SPACE GROUP TOTALS

## EXISTING STRUCTURE INVENTORY

MH# 2
TYPE: STORM
COVER: CURB INLET
RIM= 624.73
21" RCP SW INV.=620.61

MH# 3
TYPE: SANITARY
COVER: MANHOLE
RIM= 625.50
21" RCP N INV.=615.54
21" RCP S INV.=615.35

MH# 100
TYPE: STORM
COVER: FLAT GRATE
RIM= 627.99
10" N INV.=UNKNOWN
10" S INV.=UNKNOWN

MH# 110
TYPE: STORM
COVER: MANHOLE
RIM= 624.58
54" N INV.=UNKNOWN
54" S INV.=UNKNOWN
54" SW INV.=618.49

MH# 120
TYPE: STORM
COVER: CURB INLET
RIM= 625.15
8" W INV.=UNKNOWN

MH# 140
TYPE: STORM
COVER: FLAT GRATE
RIM= 625.36
42" N INV.=UNKNOWN
36" E INV.=UNKNOWN
54" S INV.=UNKNOWN
60" W INV.=UNKNOWN

MH# 150
TYPE: STORM
COVER: MANHOLE
RIM= 626.36
60" W INV.=UNKNOWN
60" E INV.=UNKNOWN

MH# 160
TYPE: STORM
COVER: MANHOLE
RIM= 626.41
60" W INV.=UNKNOWN
60" E INV.=UNKNOWN

MH# 202
TYPE: SANITARY
COVER: MANHOLE
RIM= 626.41
12" N INV.=UNKNOWN

MH# 203
TYPE: SANITARY
COVER: MANHOLE
RIM= 626.41
15" E INV.=UNKNOWN
8" S INV.=UNKNOWN
12" W INV.=UNKNOWN

MH# 580
TYPE: STORM
COVER: FLAT GRATE
RIM= 625.70
6" RCP N INV.=622.90
6" RCP W INV.=623.02
8" PVC S INV.=622.61
4" CPD SW INV.=623.13
6" RCP NW INV. =622.78

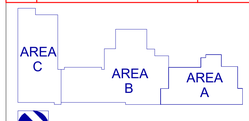
MH# 807
TYPE: SANITARY
COVER: SOLID
RIM= 626.09
21" RCP N INV.=615.73
21" RCP S INV.=615.71
12" RCP NW INV.=617.46

MH# 809
TYPE: SANITARY
COVER: SOLID
RIM= 625.75
12" RCP N INV.=616.70
10" VCP E INV.=616.75
21" RCP S INV.=616.30
24" RCP W INV.=616.30

MH# 906
TYPE: STORM
COVER: CURB INLET
RIM= 624.60
8" E INV.=621.80

MH# 909
TYPE: SANITARY
COVER: SOLID
RIM= 626.54
12" RCP N INV.=617.73
12" RCP E INV.=617.71
12" RCP W INV.=617.72

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | ISSUED FOR BIDS | 08/23/23 |




KEY PLAN
NORTH NO SCALE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ROWE PROFESSIONAL SERVICES COMPANY

PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

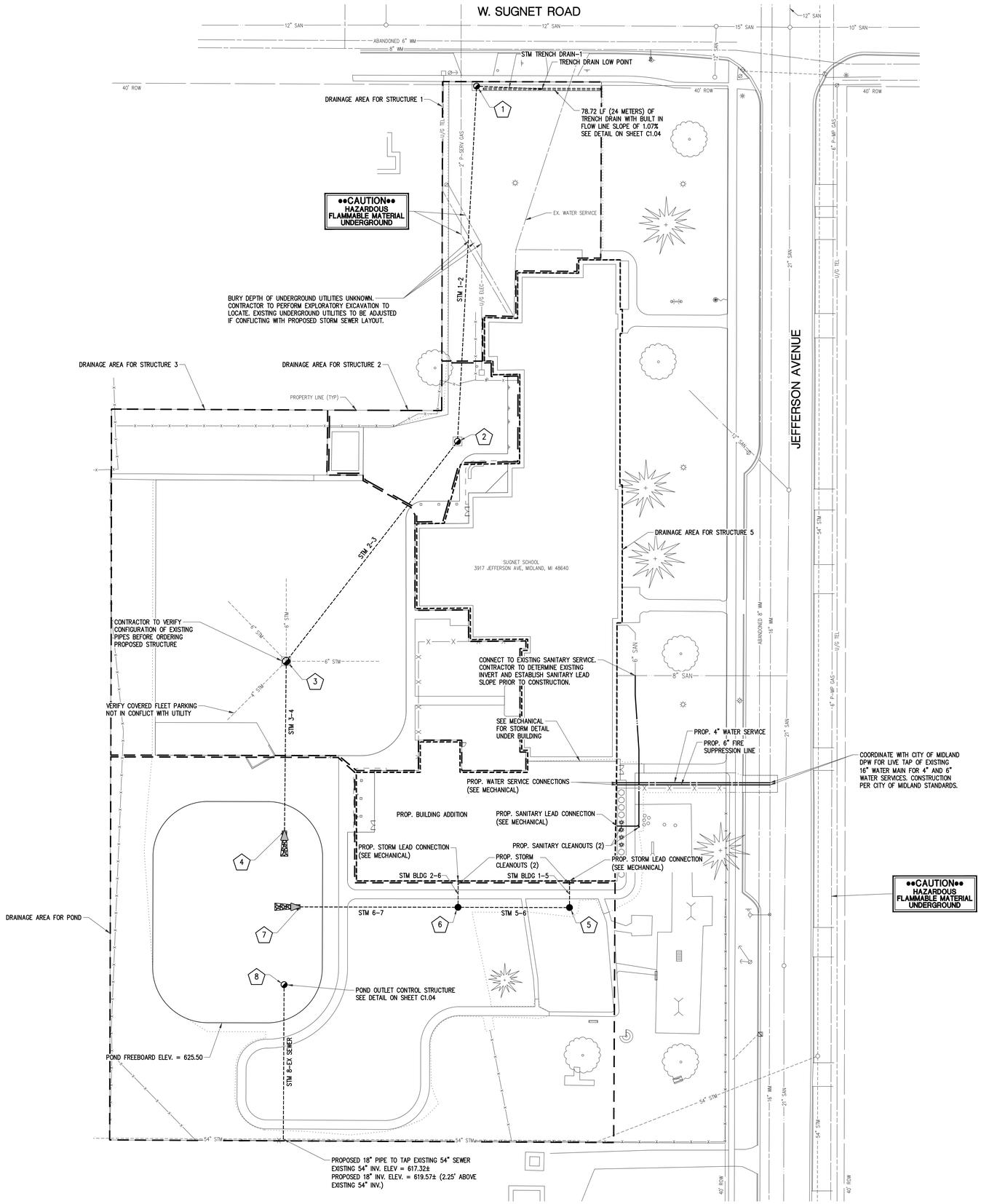
SHEET TITLE
CIVIL SITE PLAN

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

SHEET NUMBER
C2.03




| PROPOSED STORM SEWER STRUCTURE TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| STRUCT NO. | DIA. | COVER TYPE | RIM ELEVATION | INVERT | NORTHING | EASTING | SUMP DEPTH |
| 1 | 24" | EJ 1040 M1 | RIM=626.74 | 12" 623.78 S (PR)<br>8" 623.99 E (PR) | 9960.02 | 9791.05 | 2.0' |
| 2 | 48" | EJ 1040 M1 | RIM=627.67 | 12" 622.58 N (PR)<br>15" 622.33 SW (PR) | 9721.31 | 9778.22 | 2.0' |
| 3 | 60" | EJ 1040 M1 | RIM=625.70 | 15" 621.58 S (PR)<br>15" 621.58 NE (PR)<br>6" 622.90 N (EX)<br>6" 622.78 NW (EX)<br>4" 623.13 SW (EX)<br>6" 623.02 E (EX) | 9573.59 | 9663.09 | 2.0' |
| 5 | 48" | EJ 1040 A | RIM=626.51 | 15" 621.42 W (PR)<br>12" 621.85 N (PR) | 9408.09 | 9853.49 | 2.0' |
| 6 | 48" | EJ 1040 A | RIM=626.44 | 6" 621.87 N (PR)<br>15" 621.12 W (PR)<br>15" 621.12 E (PR) | 9408.27 | 9778.59 | 0.0' |
| 8 | 48" | *SPECIAL | RIM=624.57 | 18" 620.09 S (PR) | 9356.28 | 9661.65 | 1.0' |

*SEE DETAIL ON SHEET C1.04 FOR MORE INFORMATION RELATING TO STRUCTURE 8 COVER TYPE AND ORIFICE.

1. SURVEY WAS PERFORMED ON A LOCAL HORIZONTAL COORDINATE SYSTEM
2. CONTRACTOR TO CONTACT D&M SITE, INC TO OBTAIN LOCAL HORIZONTAL COORDINATE SYSTEM INFORMATION

| PROPOSED STORM SEWER PIPE TABLE | | | |
|---|---|---|---|
| PIPE NUMBER | DIAMETER | TOTAL LENGTH | SLOPE |
| STM 1-2 | 12" | 239' | 0.50% |
| STM 2-3 | 15" | 187' | 0.40% |
| STM 3-4 | 15" | 114' | 0.46% |
| STM 5-6 | 15" | 75' | 0.40% |
| STM 6-7 | 15" | 106' | 0.40% |
| STM 8-EX SEWER | 18" | 104' | 0.50% |
| STM BLDG 1-5 | 12" | 18' | 0.60% |
| STM BLDG 2-6 | 6" | 18' | 0.15% |
| STM TRENCH DRAIN-1 | 8" | 44' | 1.00% |

| PROPOSED STORM SEWER END SECTION TABLE | | | | |
|---|---|---|---|---|
| STRUCT NO. | DIA. | END OF PIPE INVERT | END OF PIPE NORTHING | END OF PIPE EASTING |
| 4 | 15" | 15" 621.06 | 9459.62 | 9661.95 |
| 7 | 15" | 15" 620.70 | 9408.53 | 9672.53 |

1. SURVEY WAS PERFORMED ON A LOCAL HORIZONTAL COORDINATE SYSTEM
2. CONTRACTOR TO CONTACT D&M SITE, INC TO OBTAIN LOCAL HORIZONTAL COORDINATE SYSTEM INFORMATION (SEE SHEET C2.01 FOR CONTACT INFORMATION)

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BIDS | 08/23/23 |

AREA C
AREA B
AREA A
KEY PLAN
NORTH NO SCALE

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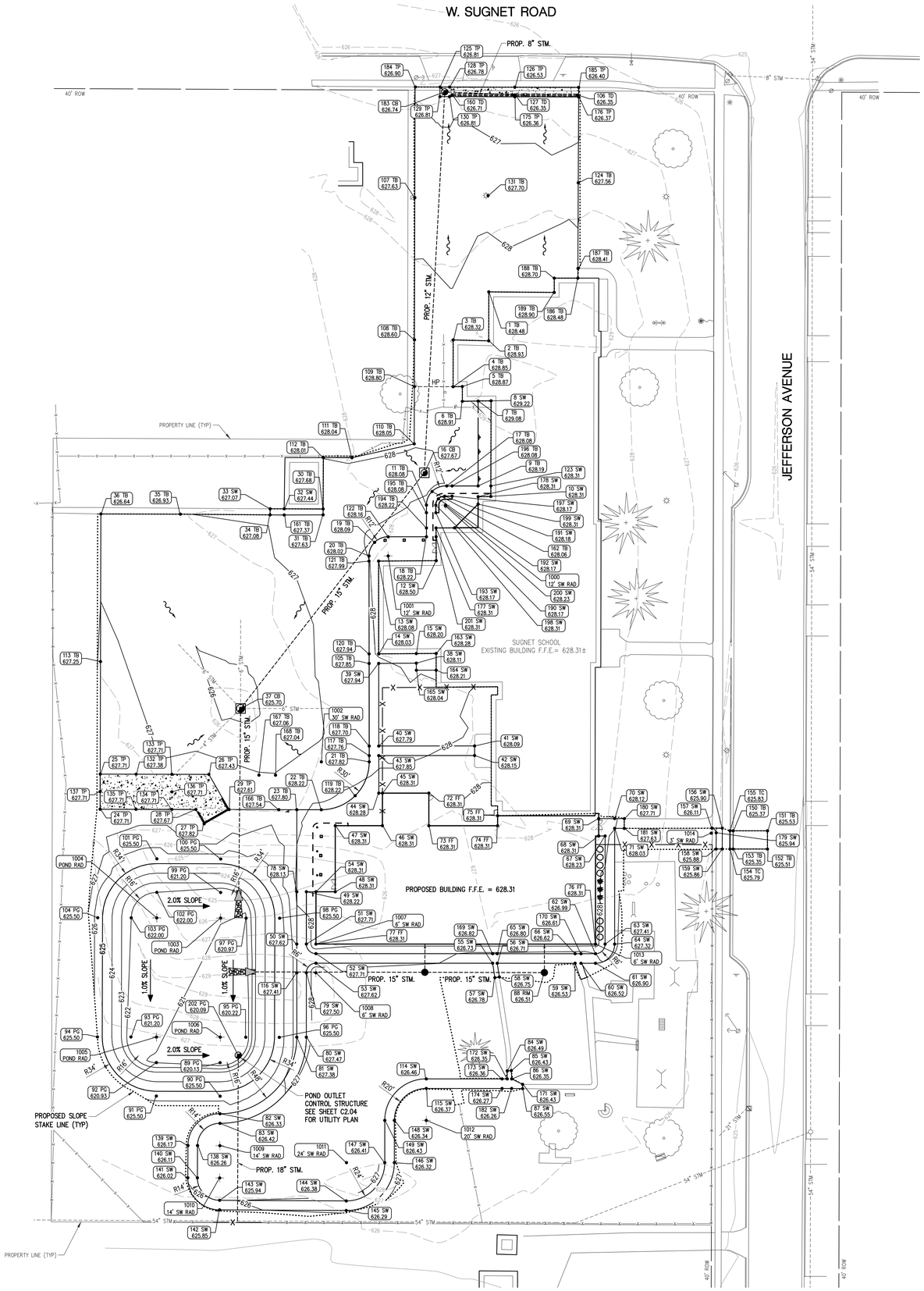


| GRADING TABLE | | | | |
|---|---|---|---|---|
| POINT | ELEVATION | DESCRIPTION | NORTHING | EASTING |
| 1 | TB=628.48 | EXISTING BUILDING | 9834.67 | 9818.66 |
| 2 | TB=628.93 | EXISTING BUILDING | 9803.97 | 9818.59 |
| 3 | TB=628.32 | EXISTING BUILDING | 9804.58 | 9796.34 |
| 4 | TB=628.85 | HP; EXISTING BUILDING | 9775.24 | 9796.27 |
| 5 | TB=628.87 | EXISTING BUILDING | 9775.38 | 9802.05 |
| 6 | TB=628.91 | EXISTING BUILDING | 9766.10 | 9802.07 |
| 7 | TB=629.08 | SW; EXISTING BUILDING | 9766.26 | 9811.95 |
| 8 | SW=629.22 | EXISTING BUILDING | 9766.39 | 9820.07 |
| 9 | TB=628.19 | SW | 9713.06 | 9811.95 |
| 10 | SW=628.31 | FINISHED FLOOR | 9706.46 | 9819.93 |
| 11 | TB=628.08 | SW; SPRING POINT | 9701.06 | 9779.58 |
| 12 | SW=628.50 | EXISTING BUILDING | 9666.23 | 9785.73 |
| 13 | SW=628.08 | EXISTING BUILDING | 9665.96 | 9749.58 |
| 14 | SW=628.03 | EXISTING BUILDING | 9607.81 | 9749.64 |
| 15 | SW=628.20 | EXISTING BUILDING | 9607.99 | 9773.21 |
| 16 | CB=627.67 | | 9721.31 | 9778.22 |
| 17 | TB=628.08 | SW; SPRING POINT | 9713.06 | 9792.25 |
| 18 | TB=628.22 | SW; SPRING POINT | 9681.20 | 9779.58 |
| 19 | TB=628.09 | SW | 9677.68 | 9747.09 |
| 20 | TB=628.02 | SW; SPRING POINT | 9669.19 | 9743.58 |
| 21 | TB=627.82 | SW; SPRING POINT | 9540.18 | 9743.70 |
| 22 | TB=628.22 | SW; SPRING POINT | 9510.15 | 9713.69 |
| 23 | TB=627.80 | SW; ADA PARKING | 9510.16 | 9698.33 |
| 24 | TP=627.71 | | 9510.46 | 9575.06 |
| 25 | TP=627.71 | TB | 9532.46 | 9575.11 |
| 26 | TP=627.43 | TB | 9532.29 | 9643.20 |
| 27 | TP=627.82 | | 9501.30 | 9640.23 |
| 28 | TP=627.67 | | 9510.31 | 9635.07 |
| 29 | TP=627.61 | TB | 9510.26 | 9655.85 |
| 30 | TB=627.68 | SW; EXISTING BUILDING | 9698.64 | 9714.80 |
| 31 | TB=627.63 | SW | 9694.94 | 9714.79 |
| 32 | SW=627.44 | EXISTING BUILDING | 9698.72 | 9690.41 |
| 33 | SW=627.07 | MATCH EXISTING | 9698.72 | 9681.59 |
| 34 | TB=627.08 | SW; MATCH EXISTING | 9694.92 | 9681.56 |
| 35 | TB=626.93 | SW; MATCH EXISTING | 9695.37 | 9625.35 |
| 36 | TB=626.64 | SW; MATCH EXISTING | 9695.50 | 9575.52 |
| 37 | CB=625.70 | | 9573.59 | 9663.09 |
| 38 | SW=628.11 | | 9601.99 | 9773.22 |
| 39 | SW=627.94 | | 9601.81 | 9749.64 |
| 40 | SW=627.79 | | 9550.07 | 9749.69 |
| 41 | SW=628.09 | MATCH EXISTING | 9550.12 | 9809.75 |
| 42 | SW=628.15 | MATCH EXISTING | 9544.12 | 9809.76 |
| 43 | SW=627.85 | | 9544.07 | 9749.69 |
| 44 | SW=628.28 | | 9520.56 | 9749.72 |
| 45 | SW=628.31 | FINISHED FLOOR | 9520.56 | 9751.99 |
| 46 | SW=628.31 | FINISHED FLOOR | 9500.14 | 9751.99 |
| 47 | SW=628.31 | FINISHED FLOOR | 9500.15 | 9722.42 |
| 48 | SW=628.31 | FINISHED FLOOR | 9458.75 | 9722.41 |
| 49 | SW=628.22 | | 9458.75 | 9704.32 |
| 50 | SW=627.62 | | 9425.98 | 9698.31 |
| 51 | SW=627.71 | SPRING POINT | 9425.98 | 9704.31 |
| 52 | SW=627.71 | SPRING POINT | 9419.98 | 9710.31 |
| 53 | SW=627.62 | SPRING POINT | 9413.98 | 9710.31 |
| 54 | SW=628.31 | FINISHED FLOOR | 9458.75 | 9710.32 |
| 55 | SW=626.73 | | 9413.95 | 9821.06 |
| 56 | SW=626.71 | | 9413.95 | 9823.94 |
| 57 | SW=626.78 | MATCH EXISTING | 9404.91 | 9822.45 |
| 58 | SW=626.75 | MATCH EXISTING | 9405.34 | 9825.27 |
| 59 | SW=626.53 | MATCH EXISTING | 9413.95 | 9872.75 |
| 60 | SW=626.52 | MATCH EXISTING | 9413.92 | 9876.43 |
| 61 | SW=626.90 | SPRING POINT | 9413.93 | 9885.52 |
| 62 | SW=626.99 | SPRING POINT | 9419.93 | 9885.52 |
| 63 | SW=627.41 | SPRING POINT | 9425.93 | 9891.52 |
| 64 | SW=627.32 | SPRING POINT | 9425.93 | 9897.52 |
| 65 | SW=626.80 | | 9419.95 | 9823.94 |
| 66 | SW=626.62 | | 9419.94 | 9872.75 |
| 67 | SW=628.23 | | 9493.70 | 9891.54 |
| 68 | SW=628.31 | FINISHED FLOOR | 9493.70 | 9887.54 |
| 69 | SW=628.31 | FINISHED FLOOR | 9504.60 | 9887.54 |
| 70 | SW=628.12 | | 9504.60 | 9897.54 |
| 71 | SW=628.03 | | 9498.44 | 9897.54 |
| 72 | FF=628.31 | | 9520.55 | 9781.07 |
| 73 | FF=628.31 | | 9500.14 | 9781.07 |
| 74 | FF=628.31 | | 9500.13 | 9824.18 |
| 75 | FF=628.31 | | 9506.39 | 9824.19 |
| 76 | FF=628.31 | | 9425.93 | 9885.52 |
| 77 | FF=628.31 | | 9425.98 | 9710.31 |
| 78 | SW=628.13 | | 9458.75 | 9698.32 |
| 79 | SW=627.50 | SPRING POINT | 9407.98 | 9704.31 |
| 80 | SW=627.47 | SPRING POINT | 9367.60 | 9704.30 |
| 81 | SW=627.38 | SPRING POINT | 9367.61 | 9698.30 |
| 82 | SW=626.33 | SPRING POINT | 9319.62 | 9650.18 |
| 83 | SW=626.42 | SPRING POINT | 9313.62 | 9650.16 |
| 84 | SW=626.49 | MATCH EXISTING | 9346.51 | 9830.23 |
| 85 | SW=626.43 | MATCH EXISTING | 9346.69 | 9832.76 |
| 86 | SW=626.35 | | 9341.45 | 9832.98 |
| 87 | SW=626.55 | MATCH EXISTING | 9335.39 | 9839.82 |
| 88 | RIM=626.51 | | 9408.09 | 9853.49 |
| 89 | PG=620.13 | | 9351.62 | 9650.26 |
| 90 | PG=625.50 | | 9330.62 | 9650.25 |
| 91 | PG=625.50 | | 9330.72 | 9610.27 |
| 92 | PG=620.93 | | 9351.72 | 9610.32 |
| 93 | PG=621.20 | | 9367.76 | 9594.36 |
| 94 | PG=625.50 | | 9367.81 | 9573.36 |
| 95 | PG=620.22 | | 9367.57 | 9666.34 |
| 96 | PG=625.50 | | 9367.52 | 9687.34 |
| 97 | PG=620.97 | | 9442.24 | 9666.54 |
| 98 | PG=625.50 | | 9442.18 | 9687.54 |
| 99 | PG=621.20 | | 9458.28 | 9650.58 |
| 100 | PG=625.50 | | 9479.28 | 9650.64 |
| 101 | PG=625.50 | | 9479.38 | 9610.64 |
| 102 | PG=622.00 | | 9458.38 | 9610.58 |

| GRADING TABLE | | | | |
|---|---|---|---|---|
| POINT | ELEVATION | DESCRIPTION | NORTHING | EASTING |
| 103 | PG=622.00 | | 9442.42 | 9594.54 |
| 104 | PG=625.50 | | 9442.47 | 9573.54 |
| 105 | TB=627.85 | SW | 9601.81 | 9743.64 |
| 106 | TD=626.35 | | 9957.98 | 9874.29 |
| 107 | TB=627.63 | | 9893.68 | 9772.29 |
| 108 | TB=628.60 | | 9804.64 | 9772.07 |
| 109 | TB=628.80 | HP | 9775.30 | 9771.99 |
| 110 | TB=628.05 | | 9739.43 | 9771.91 |
| 111 | TB=628.04 | | 9730.73 | 9732.89 |
| 112 | TB=628.01 | EXISTING BUILDING | 9730.81 | 9714.95 |
| 113 | TB=627.25 | | 9602.98 | 9575.29 |
| 114 | SW=626.46 | SPRING POINT | 9341.47 | 9779.47 |
| 115 | SW=626.37 | SPRING POINT | 9335.47 | 9779.47 |
| 116 | SW=627.41 | | 9407.98 | 9698.31 |
| 117 | TB=627.76 | SW | 9544.06 | 9743.69 |
| 118 | TB=627.70 | SW | 9550.06 | 9743.69 |
| 119 | TB=628.22 | SW | 9518.95 | 9734.92 |
| 120 | TB=627.94 | SW | 9607.81 | 9743.64 |
| 121 | TB=627.99 | SW | 9665.95 | 9743.58 |
| 122 | TB=628.16 | SW; SPRING POINT | 9681.20 | 9755.58 |
| 123 | SW=628.31 | EXISTING BUILDING | 9713.04 | 9819.95 |
| 124 | TB=627.56 | | 9903.05 | 9874.73 |
| 125 | TP=626.81 | SW; MATCH EXISTING | 9963.03 | 9788.05 |
| 126 | TP=626.53 | SW; MATCH EXISTING | 9962.91 | 9834.94 |
| 127 | TD=626.35 | | 9958.08 | 9834.93 |
| 128 | TP=626.78 | SW; MATCH EXISTING | 9963.01 | 9794.05 |
| 129 | TP=626.81 | TB | 9957.03 | 9788.04 |
| 130 | TP=626.81 | TB | 9957.01 | 9794.04 |
| 131 | TB=627.70 | EXISTING POLE | 9895.00 | 9818.20 |
| 132 | TP=627.38 | TB | 9532.41 | 9597.58 |
| 133 | TP=627.71 | TB | 9532.35 | 9620.05 |
| 134 | TP=627.71 | | 9510.35 | 9620.00 |
| 135 | TP=627.71 | | 9510.41 | 9597.53 |
| 136 | TP=627.71 | | 9521.35 | 9620.03 |
| 137 | TP=627.71 | | 9521.54 | 9575.09 |
| 138 | SW=626.26 | SPRING POINT | 9299.69 | 9636.11 |
| 139 | SW=626.17 | SPRING POINT | 9299.72 | 9630.11 |
| 140 | SW=626.11 | SPRING POINT | 9279.48 | 9636.00 |
| 141 | SW=626.02 | SPRING POINT | 9279.52 | 9630.00 |
| 142 | SW=625.85 | SPRING POINT | 9259.41 | 9649.90 |
| 143 | SW=625.94 | SPRING POINT | 9265.41 | 9649.93 |
| 144 | SW=626.38 | SPRING POINT | 9265.00 | 9729.33 |
| 145 | SW=626.29 | SPRING POINT | 9259.00 | 9729.30 |
| 146 | SW=626.32 | SPRING POINT | 9288.99 | 9759.46 |
| 147 | SW=626.41 | SPRING POINT | 9288.99 | 9753.46 |
| 148 | SW=626.34 | SPRING POINT | 9315.47 | 9759.46 |
| 149 | SW=626.43 | SPRING POINT | 9315.47 | 9753.46 |
| 150 | TB=625.37 | MATCH EXISTING | 9496.95 | 9971.82 |
| 151 | TB=625.53 | MATCH EXISTING | 9496.94 | 9993.30 |
| 152 | TB=625.51 | MATCH EXISTING | 9485.52 | 9993.30 |
| 153 | TB=625.35 | MATCH EXISTING | 9485.53 | 9971.78 |
| 154 | TC=625.79 | MATCH EXISTING | 9485.53 | 9969.78 |
| 155 | TC=625.83 | MATCH EXISTING | 9496.95 | 9969.82 |
| 156 | SW=625.90 | MATCH EXISTING | 9498.57 | 9964.98 |
| 157 | SW=626.11 | MATCH EXISTING | 9498.58 | 9958.54 |
| 158 | SW=625.88 | MATCH EXISTING | 9485.53 | 9961.12 |
| 159 | SW=625.86 | MATCH EXISTING | 9485.53 | 9964.98 |
| 160 | TD=626.71 | | 9958.18 | 9795.57 |
| 161 | TB=627.37 | SW | 9694.86 | 9690.42 |
| 162 | TB=628.06 | SW | 9709.55 | 9783.09 |
| 163 | SW=628.28 | EXISTING BUILDING | 9608.09 | 9785.65 |
| 164 | SW=628.21 | EXISTING BUILDING | 9597.59 | 9785.66 |
| 165 | SW=628.04 | | 9597.58 | 9773.26 |
| 166 | TB=627.54 | ADA PARKING | 9510.19 | 9687.02 |
| 167 | TB=627.06 | ADA PARKING | 9531.84 | 9674.59 |
| 168 | TB=627.04 | ADA PARKING | 9531.82 | 9684.98 |
| 169 | SW=626.82 | | 9419.95 | 9821.06 |
| 170 | SW=626.61 | | 9419.94 | 9876.44 |
| 171 | SW=626.43 | MATCH EXISTING | 9338.04 | 9839.85 |
| 172 | SW=626.35 | | 9341.45 | 9830.23 |
| 173 | SW=626.36 | | 9341.45 | 9826.98 |
| 174 | SW=626.27 | | 9335.45 | 9826.98 |
| 175 | TP=626.36 | | 9956.91 | 9834.93 |
| 176 | TP=626.37 | | 9956.81 | 9874.95 |
| 177 | SW=628.31 | FINISHED FLOOR | 9686.72 | 9785.57 |
| 178 | SW=628.31 | FINISHED FLOOR | 9706.33 | 9811.97 |
| 179 | SW=625.94 | SPRING POINT | 9495.73 | 9961.18 |
| 180 | SW=627.71 | MATCH EXISTING | 9504.57 | 9903.57 |
| 181 | SW=627.63 | MATCH EXISTING | 9498.46 | 9903.54 |
| 182 | SW=626.26 | | 9335.45 | 9832.98 |
| 183 | CB=626.74 | | 9960.02 | 9791.05 |
| 184 | TP=626.90 | SW; MATCH EXISTING | 9963.06 | 9772.64 |
| 185 | TP=626.40 | SW; MATCH EXISTING | 9962.81 | 9874.98 |
| 186 | TB=628.48 | SW; EXISTING BUILDING | 9843.28 | 9874.48 |
| 187 | TB=628.41 | SW; MATCH EXISTING | 9849.36 | 9874.57 |
| 188 | TB=628.70 | EXISTING BUILDING | 9843.27 | 9859.66 |
| 189 | TB=628.90 | EXISTING BUILDING | 9834.32 | 9859.67 |
| 190 | SW=628.17 | SPRING POINT | 9701.03 | 9785.43 |
| 191 | SW=628.18 | SPRING POINT | 9706.62 | 9791.00 |
| 192 | SW=628.17 | | 9704.98 | 9787.06 |
| 193 | SW=628.17 | | 9696.28 | 9785.44 |
| 194 | TB=628.22 | SW | 9686.72 | 9779.58 |
| 195 | TB=628.08 | SW | 9696.28 | 9779.58 |
| 196 | TB=628.08 | SW | 9713.06 | 9795.64 |
| 197 | SW=628.17 | | 9706.63 | 9795.64 |
| 198 | SW=628.31 | FINISHED FLOOR | 9686.81 | 9797.18 |
| 199 | SW=628.31 | FINISHED FLOOR | 9701.65 | 9811.96 |
| 200 | SW=628.23 | | 9700.49 | 9791.51 |
| 201 | SW=628.31 | FINISHED FLOOR | 9681.24 | 9785.62 |
| 202 | PG=620.09 | | 9356.28 | 9661.65 |

| RADIUS POINTS | | | |
|---|---|---|---|
| POINT | DESCRIPTION | NORTHING | EASTING |
| 1000 | 12' SIDEWALK RADIUS | 9701.06 | 9791.58 |
| 1001 | 12' SIDEWALK RADIUS | 9669.20 | 9755.58 |
| 1002 | 30' SIDEWALK RADIUS | 9540.15 | 9713.70 |
| 1003 | 16' & 34' POND RADII CENTER | 9442.28 | 9650.54 |
| 1004 | 16' & 34' POND RADII CENTER | 9442.38 | 9610.54 |
| 1005 | 16' & 34' POND RADII CENTER | 9367.72 | 9610.36 |
| 1006 | 16' & 34' POND RADII CENTER | 9367.62 | 9650.30 |
| 1007 | 6' SIDEWALK RADIUS | 9425.98 | 9710.31 |
| 1008 | 6' SIDEWALK RADIUS | 9407.98 | 9710.31 |
| 1009 | 14' SIDEWALK RADIUS | 9299.62 | 9650.11 |
| 1010 | 14' SIDEWALK RADIUS | 9279.41 | 9650.00 |
| 1011 | 24' SIDEWALK RADIUS | 9289.00 | 9729.46 |
| 1012 | 20' SIDEWALK RADIUS | 9315.47 | 9779.46 |
| 1013 | 6' SIDEWALK RADIUS | 9425.93 | 9885.52 |
| 1014 | 3' SIDEWALK RADIUS | 9495.48 | 9958.07 |

## MISCELLANEOUS NOTES

1. PROPOSED MATCH EXISTING ELEVATIONS SHALL MATCH EXISTING GRADE WHERE ABUTTING EXISTING MATERIALS TO REMAIN.
2. BARRIER FREE PARKING STALLS SHALL BE CONSTRUCTED USING THE LATEST ADA REQUIREMENTS.
3. SEE SHEETS C1.03 & C1.04 FOR DETAILS OF PROPOSED WORK.
4. SEE EXISTING CONDITIONS SHEET FOR BENCHMARK INFORMATION AND EXISTING STRUCTURE INVENTORIES.
5. SURVEY WAS PERFORMED ON A LOCAL HORIZONTAL COORDINATE SYSTEM
6. CONTRACTOR TO CONTACT D&M SITE, INC TO OBTAIN LOCAL HORIZONTAL COORDINATE SYSTEM INFORMATION.

## GRADING TABLE LEGEND

CB – CATCH BASIN
RIM – MANHOLE RIM
SW – TOP OF SIDEWALK
TC – TOP OF CURB
TP – TOP OF CONCRETE PAVEMENT
TB – TOP OF BITUMINOUS PAVEMENT
ES – END SECTION
PG – POND GRADE
TD – TRENCH DRAIN
HP – HIGH POINT
FF – FINISHED FLOOR

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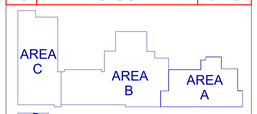


KEY PLAN
NORTH NO SCALE

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ROWE PROFESSIONAL SERVICES COMPANY

PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
CIVIL GRADING PLAN

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

SHEET NUMBER
C2.05

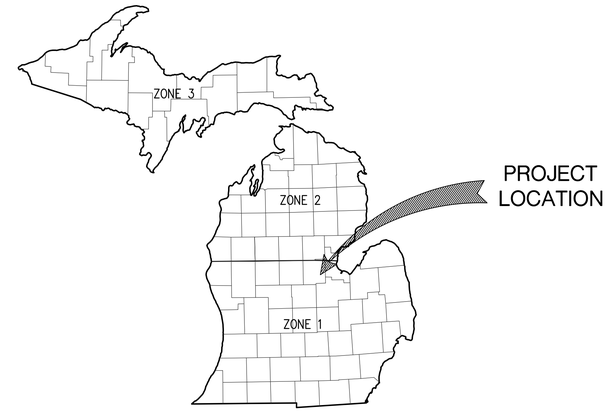
# MICHIGAN UNIFIED KEYING SYSTEM

## SOIL EROSION SEDIMENTATION CONTROL MEASURES

✱ INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

| KEY | DETAIL | CHARACTERISTICS | SLOPES A | STREAMS AND WATERWAYS B | SURFACE DRAINAGEWAYS C | ENCLOSED DRAINAGE (Inlet & Outfall Control) D | LARGE FLAT SURFACE AREAS E | BORROW AND STOCKPILE AREAS F | ADJACENT PROPERTIES G |
|---|---|---|---|---|---|---|---|---|---|
| 1 | STRIPPING & STOCKPILING TOPSOIL | TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION.<br>STOCKPILE SHOULD BE TEMPORARILY SEEDED. | ✱ | | | | ✱ | ✱ | |
| 2 | SELECTIVE GRADING & SHAPING | WATER CAN BE DIVERTED TO MINIMIZE EROSION.<br>FLATTER SLOPES EASE EROSION PROBLEMS. | ✱ | | | | ✱ | ✱ | ✱ |
| 3 | GRUBBING OMITTED | SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS, RETAINS<br>EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE<br>DISCOURAGES EQUIPMENT ENTRANCE | ✱ | | | | ✱ | | ✱ |
| 4 | VEGETATIVE STABILIZATION | MAY UTILIZE A VARIETY OF PLANT MATERIAL<br>STABILIZES SOIL<br>SLOWS RUNOFF VELOCITY<br>FILTERS SEDIMENT FROM RUNOFF | ✱ | ✱ | ✱ | | ✱ | ✱ | ✱ |
| 5 | SEEDING | INEXPENSIVE AND VERY EFFECTIVE<br>STABILIZES SOIL, THUS MINIMIZING EROSION<br>PERMITS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME<br>SHOULD INCLUDE PREPARED TOPSOIL BED | ✱ | | ✱ | | ✱ | ✱ | ✱ |
| 6 | SEEDING WITH MULCH AND/OR MATTING | FACILITATES ESTABLISHMENT OF VEGETATIVE COVER<br>EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY<br>EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL<br>SHOULD INCLUDE PREPARED TOPSOIL BED | ✱ | | ✱ | | | ✱ | ✱ |
| 7 | HYDRO-SEEDING | EFFECTIVE ON LARGE AREAS<br>MULCH TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION<br>UNTIL GRASS IS ROOTED<br>SHOULD INCLUDE PREPARED TOPSOIL BED | ✱ | | | | ✱ | ✱ | ✱ |
| 8 | SODDING | PROVIDES IMMEDIATE PROTECTION<br>CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH<br>EASY TO PLACE; MAY BE REPAIRED IF DAMAGED<br>SHOULD INCLUDE PREPARED TOPSOIL BED | ✱ | | ✱ | | ✱ | ✱ | ✱ |
| 9 | VEGETATIVE BUFFER STRIP | SLOWS RUNOFF VELOCITY<br>FILTERS SEDIMENT FROM RUNOFF<br>REDUCES VOLUME OF RUNOFF ON SLOPES | ✱ | ✱ | | | | | ✱ |
| 10 | MULCHING | USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS<br>PROTECTS SOIL FROM IMPACT OF FALLING RAIN<br>PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM<br>TEMPERATURE EXTREMES | ✱ | | | | ✱ | ✱ | |
| 11 | ROUGHENED SURFACE | REDUCES VELOCITY AND INCREASES INFILTRATION RATES<br>COLLECTS SEDIMENT<br>HOLDS WATER, SEED, AND MULCH BETTER THAN SMOOTH SURFACES | ✱ | | | | ✱ | | ✱ |
| 12 | COMPACTION | HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS<br>VULNERABLE TO EROSION | ✱ | | | | ✱ | | ✱ |
| 13 | RIPRAP, RUBBLE, GABIONS | USED WHERE VEGETATION IS NOT EASILY ESTABLISHED<br>EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS<br>PERMITS RUNOFF TO INFILTRATE SOIL<br>DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS | ✱ | ✱ | ✱ | | | | |
| 14 | AGGREGATE COVER | STABILIZES SOIL SURFACE, THUS MINIMIZING EROSION<br>PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER<br>MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS | | | | | ✱ | | |
| 15 | PAVING | PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT<br>INCREASES RUNOFF VOLUME AND VELOCITY<br>IRREGULAR SURFACE WILL HELP SLOW VELOCITY | ✱ | | | | ✱ | | |
| 16 | CURB & GUTTER | KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE<br>COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR<br>PREPARED DRAINAGEWAY | | | | | ✱ | | ✱ |
| 17 | BENCHES | REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH<br>COLLECTS SEDIMENT<br>PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE | ✱ | | | | | ✱ | |
| 18 | DIVERSION BERM | DIVERTS WATER FROM VULNERABLE AREAS<br>COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGEWAYS<br>MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION | ✱ | | | | | ✱ | ✱ |
| 19 | DIVERSION DITCH | COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL<br>MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS | ✱ | | | | | ✱ | ✱ |
| 20 | BERM & DITCH | DIVERTS WATER TO A PREPARED DRAINAGEWAY<br>MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE<br>SLOPE LENGTH | ✱ | | | | | ✱ | ✱ |
| 21 | FILTER BERM | CONSTRUCTED OF GRAVEL OR STONE<br>INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED<br>DRAINAGE SYSTEMS<br>SLOWS RUNOFF AND COLLECTS SEDIMENT | ✱ | ✱ | | | | | ✱ |
| 22 | BRUSH FILTER | USES SLASH AND LOGS FROM CLEARING OPERATIONS<br>CAN BE COVERED AND SEEDED RATHER THAN REMOVED<br>ELIMINATES NEED FOR BURNING OR REMOVAL OF MATERIAL FROM SITE | | | | | | | ✱ |
| 23 | BARE CHANNEL | LEAST EXPENSIVE FORM OF DRAINAGEWAY<br>MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF<br>MINIMUM EROSION POTENTIAL | | | ✱ | | | | |
| 24 | GRASSED WATERWAY | MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BARE CHANNEL<br>GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT<br>USED WHERE BARE CHANNEL WOULD BE ERODED | | | ✱ | | | | |
| 25 | SLOPE DRAIN (SURFACE PIPE) | PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO<br>EDGE OF SLOPE AREA<br>USUALLY PERMANENT<br>CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES | ✱ | | | | | | |
| 26 | SLOPE DRAIN (PIPE CHUTE) | PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO<br>EDGE OF SLOPE AREA<br>USUALLY PERMANENT<br>CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES | ✱ | | | | | | |
| 27 | SLOPE DRAIN (SUBSURFACE PIPE) | PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO<br>EDGE OF SLOPE AREA<br>USUALLY PERMANENT<br>CAN BE CONSTRUCTED AS GRADING PROGRESSES | ✱ | | | | | | |

| KEY | DETAIL | CHARACTERISTICS | SLOPES A | STREAMS AND WATERWAYS B | SURFACE DRAINAGEWAYS C | ENCLOSED DRAINAGE (Inlet & Outfall Control) D | LARGE FLAT SURFACE AREAS E | BORROW AND STOCKPILE AREAS F | ADJACENT PROPERTIES G |
|---|---|---|---|---|---|---|---|---|---|
| 28 | DROP SPILLWAY | SLOWS VELOCITY OF FLOW, REDUCING EROSIVE CAPACITY | | ✱ | ✱ | | | | |
| 29 | PIPE DROP | REDUCES RUNOFF VELOCITY<br>REMOVES SEDIMENT AND TURBIDITY<br>CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW | | | ✱ | | | | |
| 30 | PIPE SPILLWAY | REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF<br>MAY BE PART OF PERMANENT EROSION CONTROL PLAN | | | ✱ | | | | |
| 31 | ENERGY DISSIPATER | SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL<br>PERMITS SEDIMENT COLLECTION FROM RUNOFF | ✱ | | ✱ | ✱ | | | |
| 32 | LEVEL SPREADER | CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW<br>AVOIDS CHANNEL EASEMENTS AND CONSTRUCTION OFF PROJECT SITE<br>SIMPLE TO CONSTRUCT | | | ✱ | | | | |
| 33 | SEDIMENTATION TRAP | MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS<br>TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW<br>CAN BE CLEANED AND EXPANDED AS NEEDED | | ✱ | ✱ | | | | |
| 34 | SEDIMENT BASIN | TRAPS SEDIMENT<br>RELEASES RUNOFF AT NON-EROSIVE RATES<br>CONTROLS RUNOFF AT SYSTEM OUTLETS<br>CAN BE VISUAL AMENITIES | | ✱ | ✱ | ✱ | | | |
| 35 | STORM SEWER | SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS<br>CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF<br>CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION<br>USE CATCH BASINS TO COLLECT SEDIMENT | | | | | ✱ | | ✱ |
| 36 | CATCH BASIN, DRAIN INLET | COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF<br>MAY USE FILTER CLOTH OVER INLET | | | | | ✱ | | ✱ |
| 37 | SOD FILTER | INEXPENSIVE AND EASY TO CONSTRUCT<br>PROVIDES IMMEDIATE PROTECTION<br>PROTECTS AREAS AROUND INLETS FROM EROSION | | | | ✱ | | | |
| 38 | STRAW BALE FILTER | INEXPENSIVE AND EASY TO CONSTRUCT<br>CAN BE LOCATED AS NECESSARY TO COLLECT SEDIMENT<br>MAY BE USED IN CONJUNCTION WITH SNOW FENCE FOR ADDED STABILITY | | | | ✱ | | | ✱ |
| 39 | ROCK FILTER | CAN UTILIZE MATERIAL FOUND ON SITE<br>EASY TO CONSTRUCT<br>FILTERS SEDIMENT FROM RUNOFF | | | | ✱ | | | ✱ |
| 40 | INLET SEDIMENT TRAP | EASY TO SHAPE<br>COLLECTS SEDIMENT<br>MAY BE CLEANED AND EXPANDED AS NEEDED | | | | ✱ | | | |
| 41 | STONE AND ROCK CROSSING | MAY BE ROCK OR CLEAN RUBBLE<br>MINIMIZES STREAM TURBIDITY<br>INEXPENSIVE<br>MAY ALSO SERVE AS DITCH CHECK OR SEDIMENT TRAP | | ✱ | | | | | |
| 42 | TEMPORARY CULVERT | ELIMINATES STREAM TURBULENCE AND TURBIDITY<br>PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE<br>CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING<br>OVER ROADWAY | | ✱ | | | | | |
| 43 | CULVERT SEDIMENT TRAP | EASY TO INSTALL AT INLET<br>KEEPS CULVERT CLEAN AND FREE FLOWING<br>MAY BE CONSTRUCTED OF LUMBER OR LOGS | | ✱ | | | | | ✱ |
| 44 | CULVERT SEDIMENT TRAP | DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS | | ✱ | | | | | |
| 45 | TEMP. STREAM CHANNEL CHANGE | NEW CHANNEL KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION<br>REQUIRES STATE PERMIT | | ✱ | | | | | |
| 46 | SHEET PILINGS | PROTECTS ERODIBLE BANK AREAS FROM STREAM CURRENTS<br>DURING CONSTRUCTION<br>MINIMAL DISRUPTION WHEN REMOVED | | ✱ | | | | | |
| 47 | COFFERDAM | WORK CAN BE CONTINUED DURING MOST ANTICIPATED STREAM CONDITIONS<br>CLEAR WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM | | ✱ | | | | | |
| 48 | CONSTRUCTION DAM | PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES<br>CONTROLLED FLOODING CAN BE ACCOMPLISHED DURING PERIODS OF INACTIVITY | | ✱ | | | | | |
| 49 | CHECK DAMS | REDUCES FLOW VELOCITY<br>CATCHES SEDIMENT<br>CAN BE CONSTRUCTED OF LOGS, STRAW, HAY ROCK, LUMBER, MASONRY, OR<br>SAND BAGS | | ✱ | ✱ | | | | |
| 50 | WEIR | CONTROLS SEDIMENTATION IN LARGE STREAMS<br>CAUSES MINIMAL TURBIDITY | | ✱ | ✱ | | | | |
| 51 | RETAINING WALL | REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP<br>PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN<br>CRITICAL AREAS<br>MINIMIZES MAINTENANCE | ✱ | | | | | | ✱ |
| 52 | SEEPAGE CONTROL | PREVENTS PIPING AND SOIL SLIPPAGE ON CUT SLOPES | ✱ | | | | | | ✱ |
| 53 | WINDBREAK | MINIMIZES WIND EROSION<br>MAY BE SNOW FENCE | | | | | ✱ | | |
| 54 | SILT FENCE | USES GEOTEXTILE FABRIC AND POSTS OR POLES.<br>EASY TO CONSTRUCT AND LOCATE AS NECESSARY. | | | ✱ | | | | ✱ |




SEEDING ZONES

### PERMANENT SEEDING GUIDE

| | APR | MAY | JUN | JUL | AUG | SEP | OCT | |
|---|---|---|---|---|---|---|---|---|
| IRRIGATED AND/OR MULCH | | | | | | | | ZONE 1 |
| WITHOUT IRRIGATION OR MULCH | | | | | | | | |
| IRRIGATED AND/OR MULCHED | | | | | | | | ZONE 2 |
| WITHOUT IRRIGATION OR MULCH | | | | | | | | |
| IRRIGATED AND/OR MULCHED | | | | | | | | ZONE 3 |
| WITHOUT IRRIGATION OR MULCH | | | | | | | | |

### TEMPORARY SEEDING GUIDE

ZONE 1

| TYPE OF SEED | APR | MAY | JUN | JUL | AUG | SEP | OCT |
|---|---|---|---|---|---|---|---|
| SPRING OATS/BARLEY OR DOMESTIC RYEGRASS | | | | | 15TH | | |
| SUDANGRASS | | | | | | | |
| RYE OR PERENNIAL RYE | | | | | | | 15TH |
| WHEAT | | | | | | | 15TH |

ZONE 2

| TYPE OF SEED | APR | MAY | JUN | JUL | AUG | SEP | OCT |
|---|---|---|---|---|---|---|---|
| SPRING OATS/BARLEY OR DOMESTIC RYEGRASS | | | | | | | |
| SUDANGRASS | | | | | | | |
| RYE OR PERENNIAL RYE | | | | | | 10TH | 10TH |
| WHEAT | | | | | | 10TH | 10TH |

ZONE 3

| TYPE OF SEED | APR | MAY | JUN | JUL | AUG | SEP | OCT |
|---|---|---|---|---|---|---|---|
| SPRING OATS/BARLEY OR DOMESTIC RYEGRASS | | | | | | | |
| SUDANGRASS | | | | | | | |
| RYE OR PERENNIAL RYE | | | | | | | |
| WHEAT | | | | | | | |

### SOIL EROSION & SEDIMENTATION CONTROL

1. CONTRACTOR SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT PRIOR TO ANY EARTH CHANGES.
2. CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
3. BORROW AND FILL DISPOSAL AREAS WILL BE SELECTED AND APPROVED AT TIME OF PLAN REVIEW.
4. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
5. CLEANUP WILL BE DONE IN A MANNER TO ENSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
6. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENTATION CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE DEVELOPER WITHIN 24 HOURS.
7. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE DEVELOPER UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.
8. VEGETATION MUST BE ACCEPTABLY ESTABLISHED PRIOR TO FINAL RELEASE OF THE CONSTRUCTION GUARANTEE BY THE DESIGNATED SOIL EROSION SEDIMENTATION CONTROL AGENT.

### SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

| CONSTRUCTION SEQUENCE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STRIP & STOCKPILE TOPSOIL | | | | | | | | | | | | |
| ROUGH GRADE SEDIMENT CONTROL | | | | | | | | | | | | |
| TEMP. CONTROL MEASURES | | | | | | | | | | | | |
| STORM FACILITIES | | | | | | | | | | | | |
| TEMP. CONSTRUCTION ROADS | | | | | | | | | | | | |
| SITE CONSTRUCTION | | | | | | | | | | | | |
| PERM. CONTROL MEASURES | | | | | | | | | | | | |
| FINISH GRADING | | | | | | | | | | | | |

NOTE: TO BE FILLED OUT BY CONTRACTOR

### CONSTRUCTION SEQUENCE

1. IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES; SELECTIVE GRADING, DIVERSIONS AS REQUIRED IN FIELD, PROTECTION OF STORM SEWER FACILITIES.
2. EXCAVATION AND PULVERIZING OF PARKING LOT
3. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
4. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

| NO. | REVISION | DATE |
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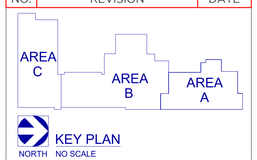
| | ISSUED FOR BIDS | 08/23/23 |





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ROWE PROFESSIONAL SERVICES COMPANY


PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

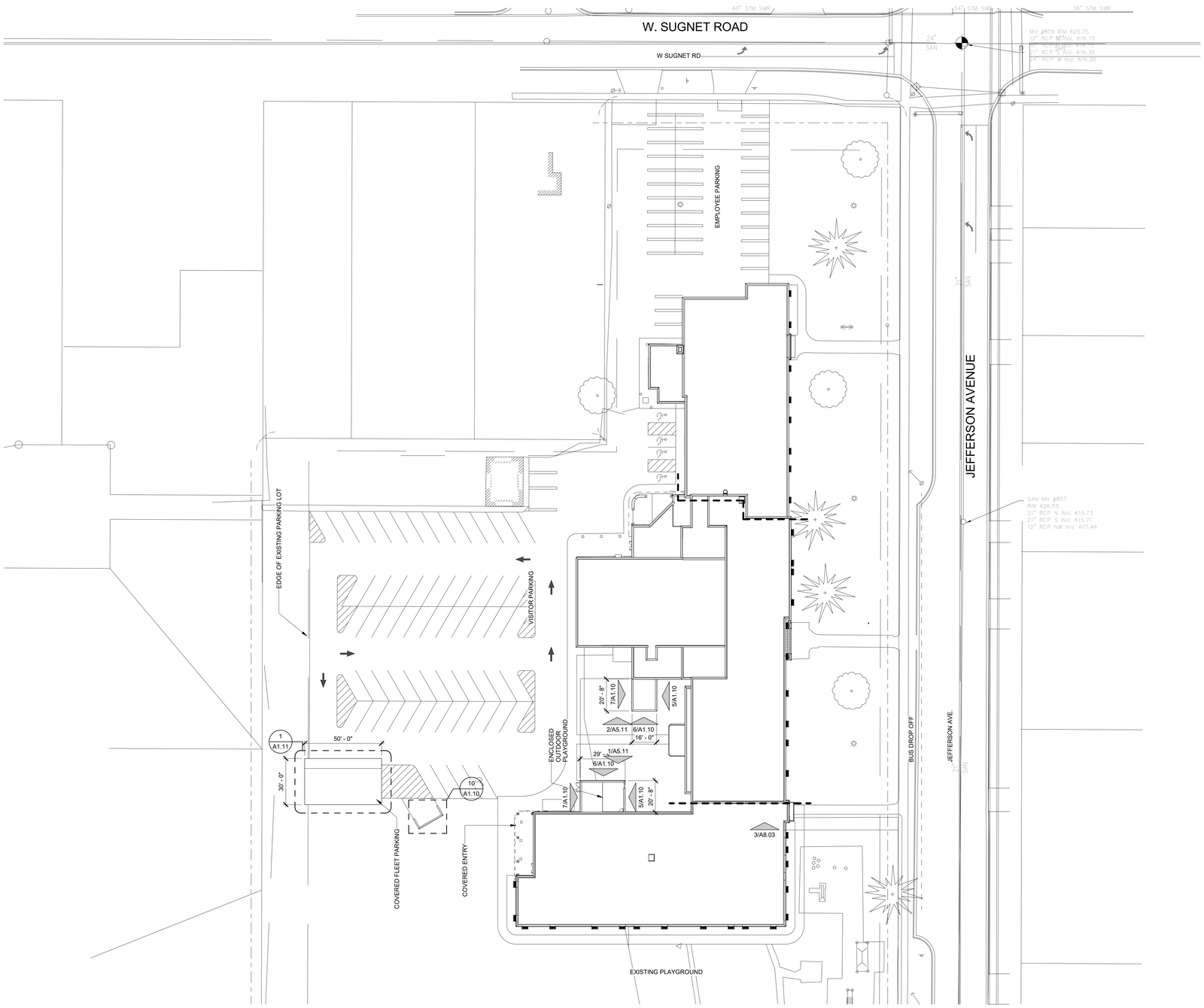
SHEET TITLE
SESC KEY SHEET

PROJECT NUMBER
2022006.1

SHEET NUMBER
C3.01

PROJECT DATE
AUGUST 16, 2023

CHECKED BY
DRS

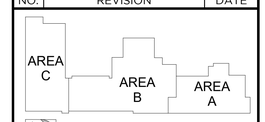



NORTH 1 A1.01 ARCHITECTRUAL SITE PLAN

SCALE: 1" = 30'-0"

GENERAL SITE NOTES:

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

RENOVATION AND ADDITION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

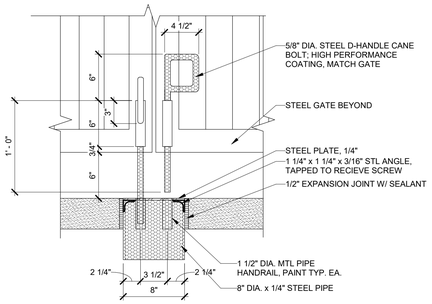
ARCHITECTURAL SITE PLAN

PROJECT NUMBER 2022006.1

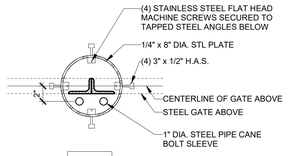
PROJECT DATE AUGUST 23, 2023

CHECKED BY JMJ

SHEET NUMBER A1.01

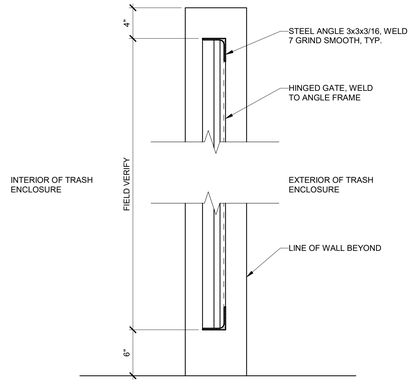



SECTION




PLAN

1 A1.10 SITE - GATE CANE BOLT DETAIL
SCALE: 1 1/2" = 1'-0"




2 A1.10 SITE - GATE SECTION
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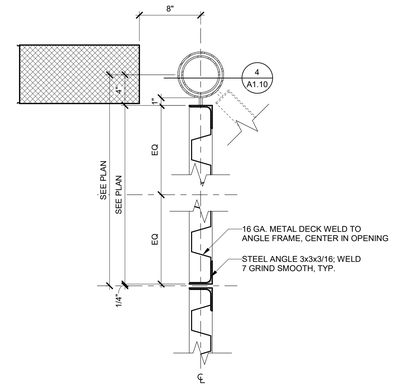
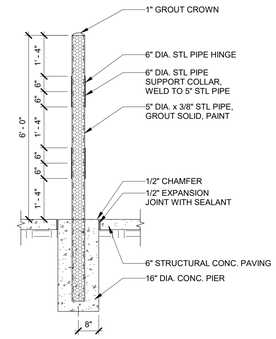
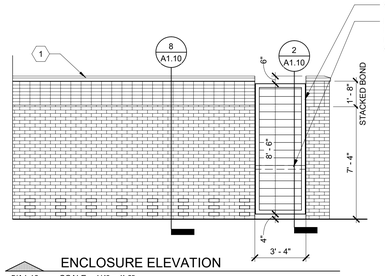


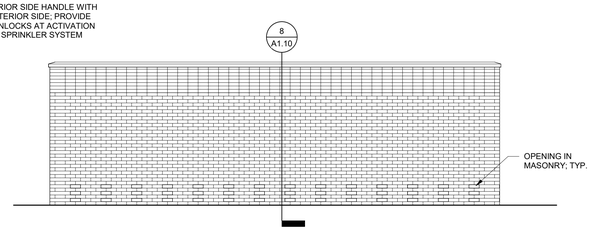

3 A1.10 SITE - GATE SUPPORT POST - PLAN
SCALE: 1 1/2" = 1'-0"



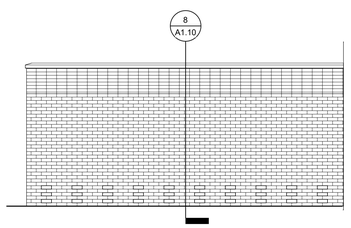

4 A1.10 SITE - GATE SUPPORT POST - SECTION
SCALE: 1/2" = 1'-0"



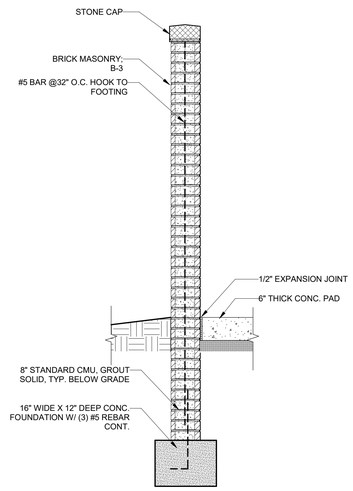

ENCLOSURE ELEVATION
5/A1.10 SCALE: 1/4" = 1'-0"



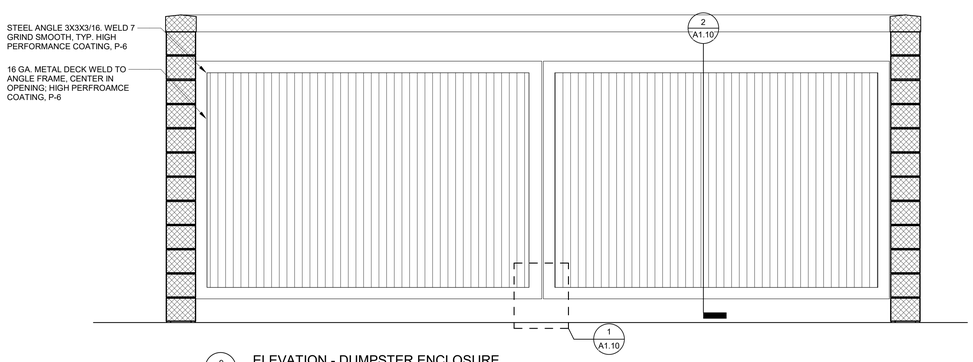

ENCLOSURE ELEVATION
6/A1.10 SCALE: 1/4" = 1'-0"



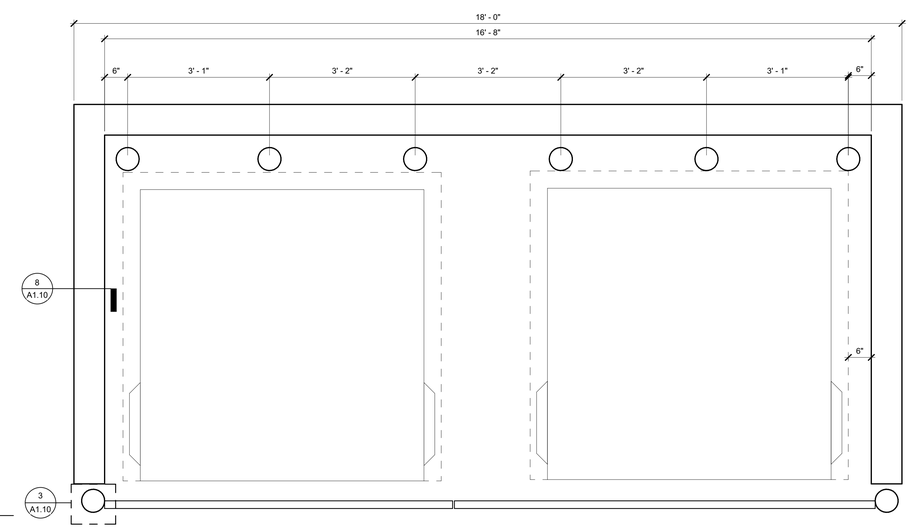

ENCLOSURE ELEVATION
7/A1.10 SCALE: 1/4" = 1'-0"




8 A1.10 SECTION - ENCLOSURE WALL
SCALE: 3/4" = 1'-0"




9 A1.10 ELEVATION - DUMPSTER ENCLOSURE
SCALE: 3/4" = 1'-0"




10 A1.10 ENLARGED PLAN - DUMPSTER ENCLOSURE
SCALE: 3/4" = 1'-0"

GENERAL SITE NOTES:

| NO. | REVISION | DATE |
|---|---|---|
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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

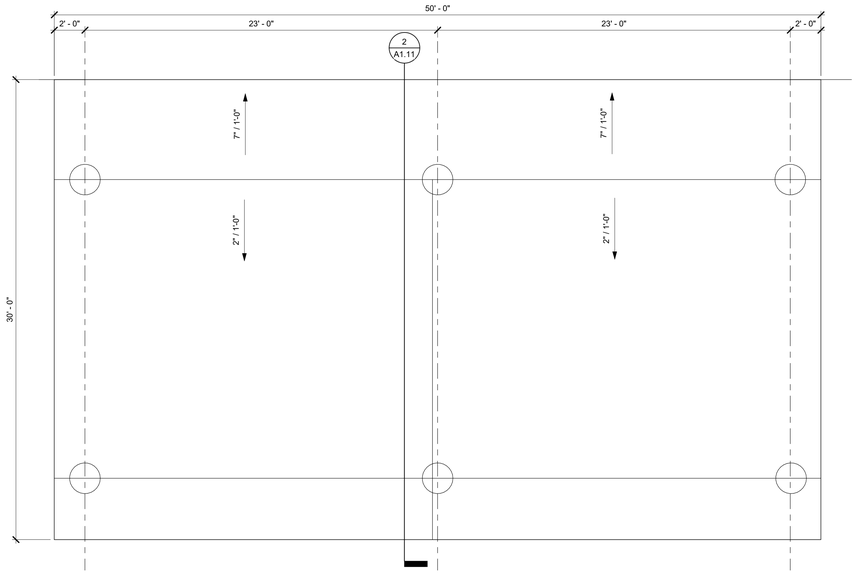
SHEET TITLE
ARCHITECTURAL SITE DETAILS

PROJECT NUMBER
2022006.1

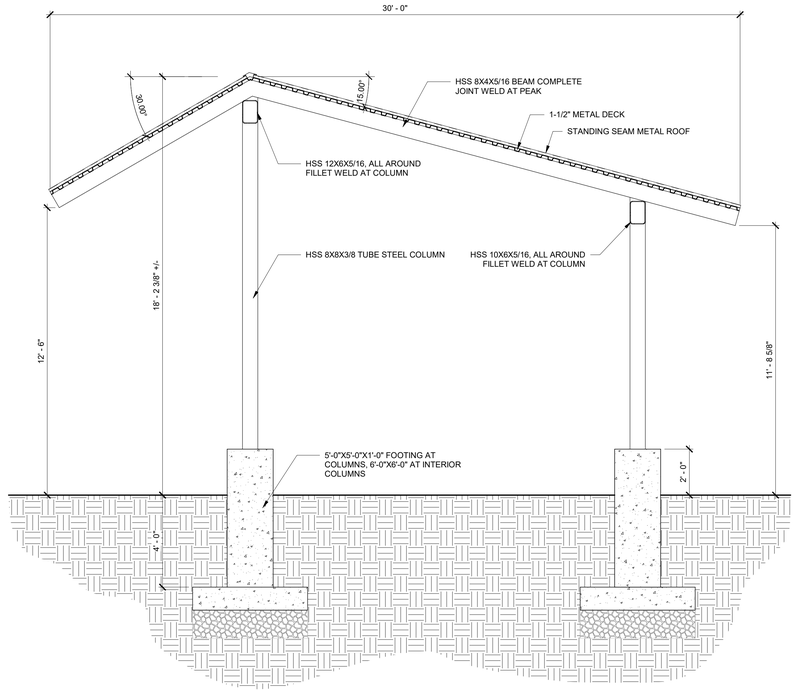
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A1.10




1 A1.11 PLAN @ FLEET CANOPY
SCALE: 1/4" = 1'-0"




2 A1.11 SECTION @ FLEET PARKING CANOPY
SCALE: 3/8" = 1'-0"

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|---|---|---|
| | | |
| | | |
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MIDLAND, MICHIGAN

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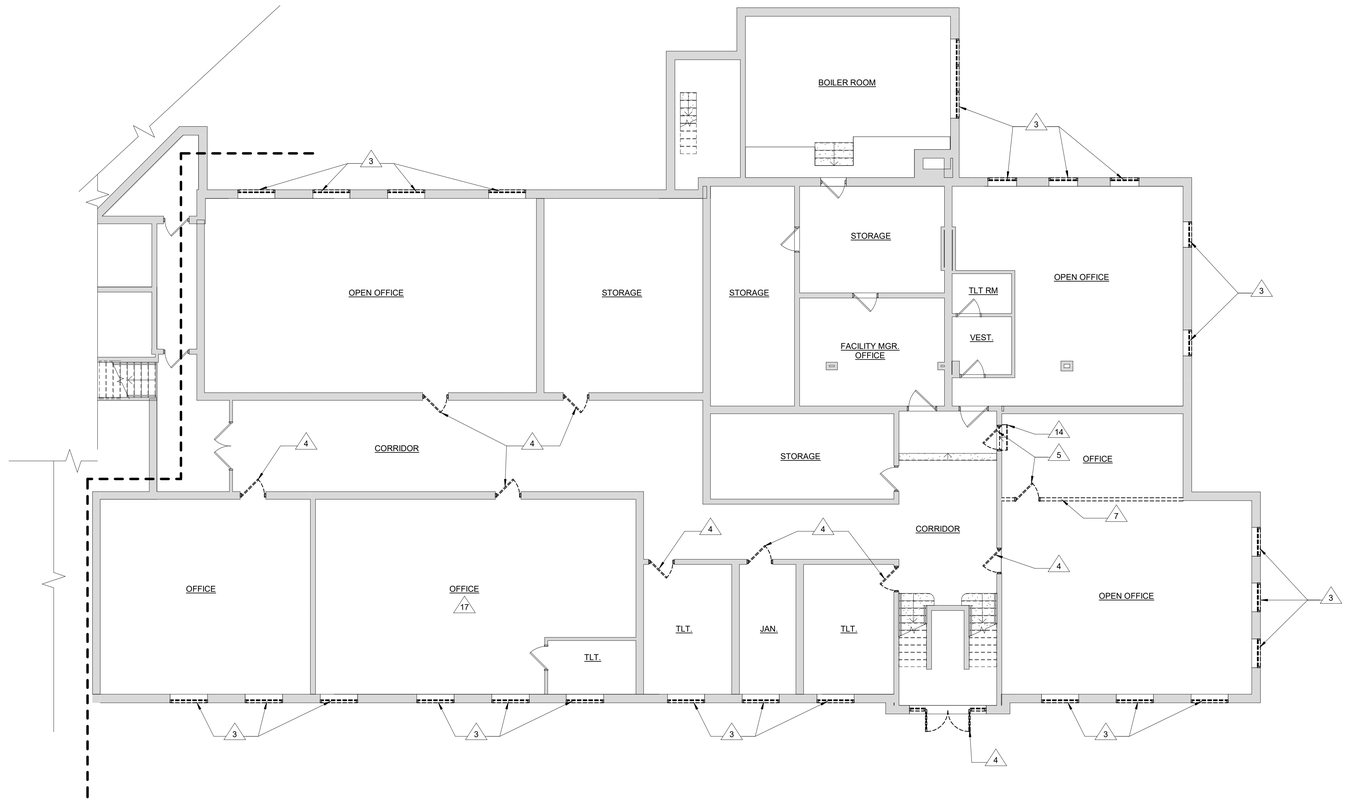
ARCHITECTURAL SITE DETAILS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A1.11




1 AD2.01 DEMOLITION PLAN LOWER LEVEL - AREA A

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

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
- PORTION OF SLAB AND FLOOR FRAMING TO BE REMOVED FOR NEW WORK - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

## DEMOLITION GENERAL NOTES:

1. ELEMENTS OR PORTIONS OF ELEMENTS TO BE REMOVED ARE SHOWN DASHED, REFER TO KEY NOTES FOR ADDITIONAL CLARIFICATION.
2. VERIFY EXISTING CONDITIONS OF SPACE PRIOR TO DEMOLITION WORK.
3. AREAS OF DEMOLITION ARE APPROXIMATE; GENERAL CONTRACTOR TO COORDINATE DEMOLITION WITH EXISTING CONDITIONS, NEW CONSTRUCTION, AND ADDITIONAL SCOPE OF WORK INCLUDED IN MECHANICAL PLUMBING, AND ELECTRICAL DOCUMENTS.
4. WALL DEMOLITION TO INCLUDE FRAMING, SHEATHING, FINISHES AND ALL ASSOCIATED COMPONENTS
5. ANY HIDDEN STRUCTURAL COLUMNS OR SUPPORT TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO REMOVAL. ANY BUILDING SUPPORT WHICH DEVIATES FROM THAT SHOWN OR IS IN QUESTION TO BE BROUGHT TO ARCHITECT'S ATTENTION IMMEDIATELY.
6. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DOCUMENTS FOR REMOVAL AND CAPPING OF SERVICES FOR ITEMS SHOWN TO BE REMOVED.

## # DEMOLITION KEYNOTES

1 REMOVE CEILING AND PREP FOR NEW CEILING
2 EXISTING SERVER TO BE RELOCATED, RE: ELECTRICAL
3 REMOVE WINDOW AND FRAME, PREPARE OPENING TO RECIEVE NEW WINDOW
4 REMOVE DOOR AND FRAME, PREPARE OPENING FOR NEW DOOR AND FRAME
5 REMOVE DOOR AND FRAME, PREPARE OPENING FOR BRICK INFILL
6 REMOVE PORTION OF EXISTING WALL FOR NEW OPENING OR DOOR AS SCHEDULED, RE: STRUCTURAL
7 REMOVE EXISTING WALL CONSTRUCTION FROM FINISH FLOOR TO BOTTOM OF STRUCTURE.
8 REMOVE DOOR AND FRAME.
9 REMOVE EXISTING GATE
10 REMOVE WINDOW AND FRAME, PREPARE OPENING FOR NEW BRICK INFILL TO MATCH ADJACENT BRICK
11 REMOVE FOLDING PANEL PARTITION
12 OPENING TO BE INFILLED
13 REMOVE VENT AND PREP FOR BRICK INFILL
14 REMOVE EXISTING STAIR STRUCTURE COMPLETE
15 REMOVE EXISTING PLUMBING FIXTURES
16 REMOVE EXISTING TOILET PARTITIONS AND ASSOCIATED HARDWARE
17 REMOVE ALL EXISTING BUILT-IN CASEWORK IN THE ROOM.

| NO. | REVISION | DATE |
|---|---|---|
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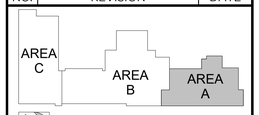
| | ISSUED FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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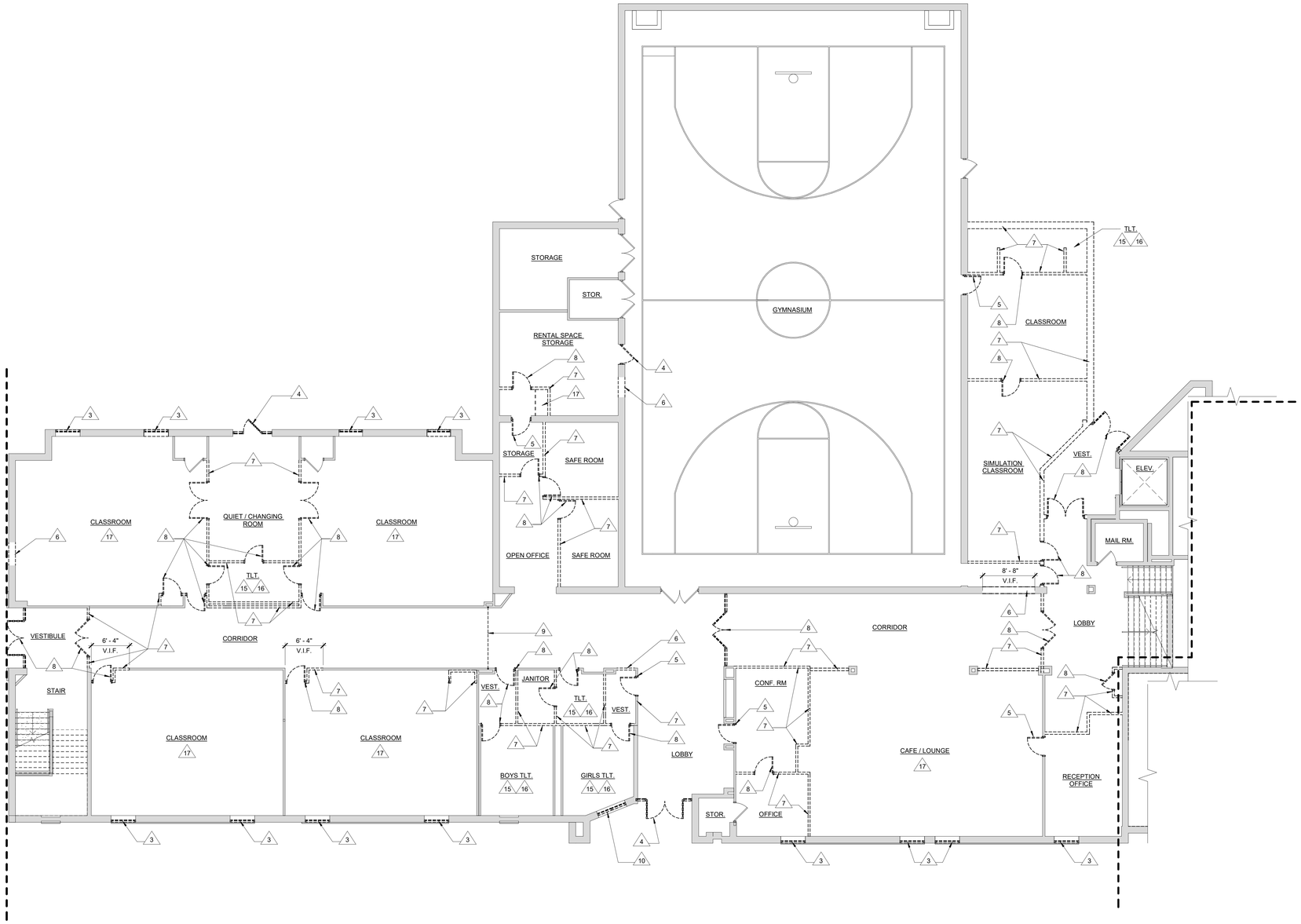
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION PLAN - AREA A - LOWER LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER AD2.01




1 AD2.02 DEMOLITION PLAN MAIN LEVEL - AREA B

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

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
- PORTION OF SLAB AND FLOOR FRAMING TO BE REMOVED FOR NEW WORK - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

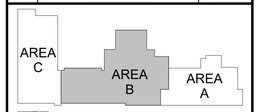
## DEMOLITION GENERAL NOTES:

1. ELEMENTS OR PORTIONS OF ELEMENTS TO BE REMOVED ARE SHOWN DASHED, REFER TO KEY NOTES FOR ADDITIONAL CLARIFICATION.
2. VERIFY EXISTING CONDITIONS OF SPACE PRIOR TO DEMOLITION WORK.
3. AREAS OF DEMOLITION ARE APPROXIMATE; GENERAL CONTRACTOR TO COORDINATE DEMOLITION WITH EXISTING CONDITIONS, NEW CONSTRUCTION, AND ADDITIONAL SCOPE OF WORK INCLUDED IN MECHANICAL PLUMBING, AND ELECTRICAL DOCUMENTS.
4. WALL DEMOLITION TO INCLUDE FRAMING, SHEATHING, FINISHES AND ALL ASSOCIATED COMPONENTS
5. ANY HIDDEN STRUCTURAL COLUMNS OR SUPPORT TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO REMOVAL. ANY BUILDING SUPPORT WHICH DEVIATES FROM THAT SHOWN OR IS IN QUESTION TO BE BROUGHT TO ARCHITECT'S ATTENTION IMMEDIATELY.
6. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DOCUMENTS FOR REMOVAL AND CAPPING OF SERVICES FOR ITEMS SHOWN TO BE REMOVED.

## # DEMOLITION KEYNOTES

1 REMOVE CEILING AND PREP FOR NEW CEILING
2 EXISTING SERVER TO BE RELOCATED, RE: ELECTRICAL
3 REMOVE WINDOW AND FRAME, PREPARE OPENING TO RECIEVE NEW WINDOW
4 REMOVE DOOR AND FRAME, PREPARE OPENING FOR NEW DOOR AND FRAME
5 REMOVE DOOR AND FRAME, PREPARE OPENING FOR BRICK INFILL
6 REMOVE PORTION OF EXISTING WALL FOR NEW OPENING OR DOOR AS SCHEDULED, RE: STRUCTURAL
7 REMOVE EXISTING WALL CONSTRUCTION FROM FINISH FLOOR TO BOTTOM OF STRUCTURE.
8 REMOVE DOOR AND FRAME.
9 REMOVE EXISTING GATE
10 REMOVE WINDOW AND FRAME, PREPARE OPENING FOR NEW BRICK INFILL TO MATCH ADJACENT BRICK
11 REMOVE FOLDING PANEL PARTITION
12 OPENING TO BE INFILLED
13 REMOVE VENT AND PREP FOR BRICK INFILL
14 REMOVE EXISTING STAIR STRUCTURE COMPLETE
15 REMOVE EXISTING PLUMBING FIXTURES
16 REMOVE EXISTING TOILET PARTITIONS AND ASSOCIATED HARDWARE
17 REMOVE ALL EXISTING BUILT-IN CASEWORK IN THE ROOM.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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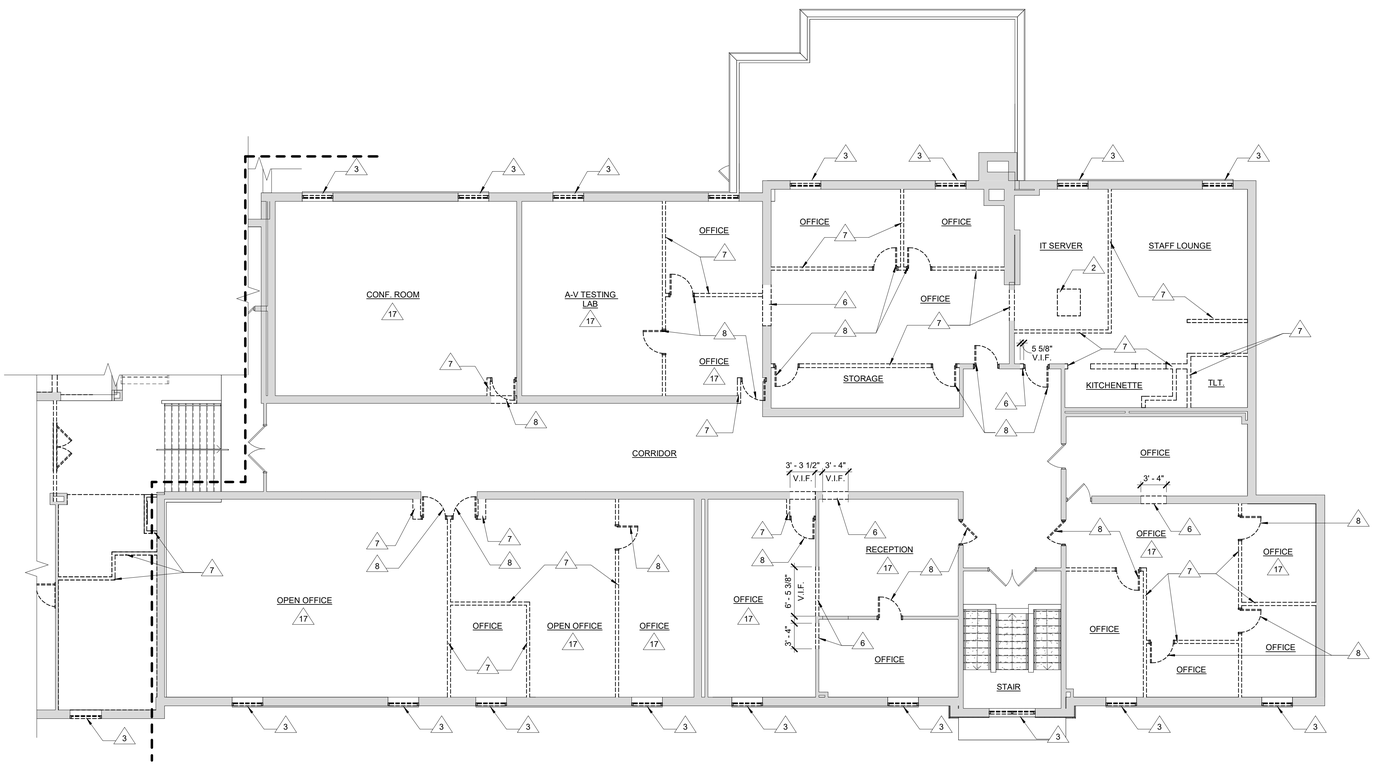
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION PLAN - AREA B - MAIN LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER AD2.02




1 AD2.03 DEMOLITION PLAN UPPER LEVEL - AREA A

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

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
- PORTION OF SLAB AND FLOOR FRAMING TO BE REMOVED FOR NEW WORK - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

## DEMOLITION GENERAL NOTES:

1. ELEMENTS OR PORTIONS OF ELEMENTS TO BE REMOVED ARE SHOWN DASHED, REFER TO KEY NOTES FOR ADDITIONAL CLARIFICATION.
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## # DEMOLITION KEYNOTES

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| NO. | REVISION | DATE |
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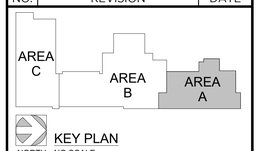


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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION PLAN - AREA A - UPPER LEVEL 2

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
AD2.03

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
- PORTION OF SLAB AND FLOOR FRAMING TO BE REMOVED FOR NEW WORK - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

## DEMOLITION GENERAL NOTES:

1. ELEMENTS OR PORTIONS OF ELEMENTS TO BE REMOVED ARE SHOWN DASHED, REFER TO KEY NOTES FOR ADDITIONAL CLARIFICATION.
2. VERIFY EXISTING CONDITIONS OF SPACE PRIOR TO DEMOLITION WORK.
3. AREAS OF DEMOLITION ARE APPROXIMATE; GENERAL CONTRACTOR TO COORDINATE DEMOLITION WITH EXISTING CONDITIONS, NEW CONSTRUCTION, AND ADDITIONAL SCOPE OF WORK INCLUDED IN MECHANICAL PLUMBING, AND ELECTRICAL DOCUMENTS.
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## DEMOLITION KEYNOTES

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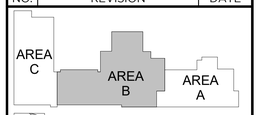
15 REMOVE EXISTING PLUMBING FIXTURES
16 REMOVE EXISTING TOILET PARTITIONS AND ASSOCIATED HARDWARE
17 REMOVE ALL EXISTING BUILT-IN CASEWORK IN THE ROOM.

1 AD2.04 DEMOLITION PLAN UPPER LEVEL - AREA B
SCALE: 1/8" = 1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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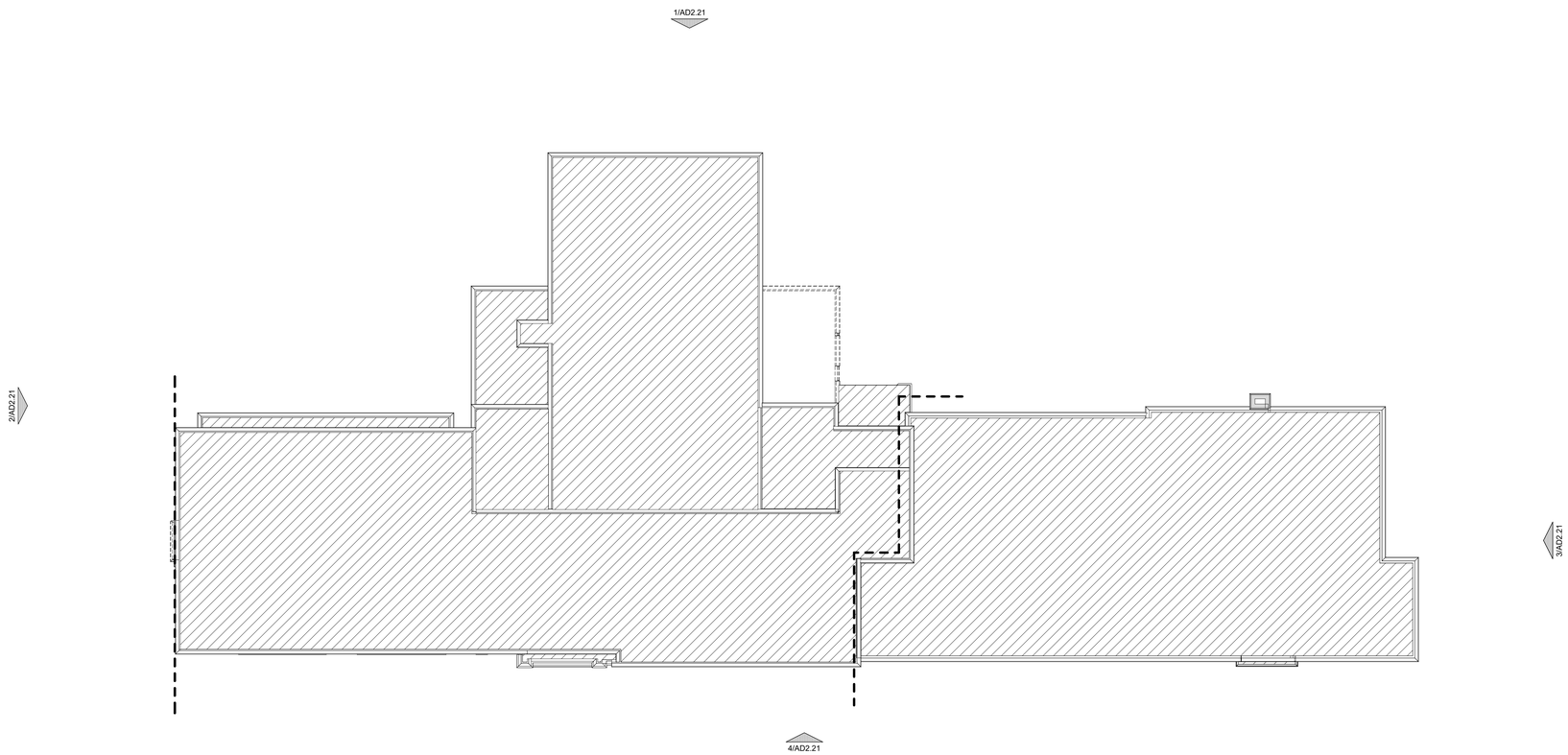
MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION PLAN - AREA B - UPPER LEVEL 3

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER AD2.04




1 AD2.05 ROOF DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

## ROOF DEMOLITION LEGEND:

DEMOLITION

EXISTING TO REMAIN

ROOFING MATERIAL INSULATION, AND ALL ASSOCIATED COMPONENTS TO BE REMOVED TO EXISTING SHEATHING/ ROOF DECK IN PREPERATION FOR NEW INSULATION AND ROOFING

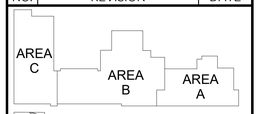
## DEMOLITION GENERAL NOTES:

1. ELEMENTS OR PORTIONS OF ELEMENTS TO BE REMOVED ARE SHOWN DASHED, REFER TO KEY NOTES FOR ADDITIONAL CLARIFICATION.
2. VERIFY EXISTING CONDITIONS OF SPACE PRIOR TO DEMOLITION WORK.
3. AREAS OF DEMOLITION ARE APPROXIMATE; GENERAL CONTRACTOR TO COORDINATE DEMOLITION WITH EXISTING CONDITIONS, NEW CONSTRUCTION, AND ADDITIONAL SCOPE OF WORK INCLUDED IN MECHANICAL PLUMBING, AND ELECTRICAL DOCUMENTS.
4. WALL DEMOLITION TO INCLUDE FRAMING, SHEATHING, FINISHES AND ALL ASSOCIATED COMPONENTS
5. ANY HIDDEN STRUCTURAL COLUMNS OR SUPPORT TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO REMOVAL. ANY BUILDING SUPPORT WHICH DEVIATES FROM THAT SHOWN OR IS IN QUESTION TO BE BROUGHT TO ARCHITECT'S ATTENTION IMMEDIATELY.
6. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DOCUMENTS FOR REMOVAL AND CAPPING OF SERVICES FOR ITEMS SHOWN TO BE REMOVED.

## # DEMOLITION KEYNOTES

1 REMOVE CEILING AND PREP FOR NEW CEILING
2 EXISTING SERVER TO BE RELOCATED, RE: ELECTRICAL
3 REMOVE WINDOW AND FRAME, PREPARE OPENING TO RECIEVE NEW WINDOW
4 REMOVE DOOR AND FRAME, PREPARE OPENING FOR NEW DOOR AND FRAME
5 REMOVE DOOR AND FRAME, PREPARE OPENING FOR BRICK INFILL
6 REMOVE PORTION OF EXISTING WALL FOR NEW OPENING OR DOOR AS SCHEDULED, RE: STRUCTURAL
7 REMOVE EXISTING WALL CONSTRUCTION FROM FINISH FLOOR TO BOTTOM OF STRUCTURE.
8 REMOVE DOOR AND FRAME.
9 REMOVE EXISTING GATE
10 REMOVE WINDOW AND FRAME, PREPARE OPENING FOR NEW BRICK INFILL TO MATCH ADJACENT BRICK
11 REMOVE FOLDING PANEL PARTITION
12 OPENING TO BE INFILLED
13 REMOVE VENT AND PREP FOR BRICK INFILL
14 REMOVE EXISTING STAIR STRUCTURE COMPLETE
15 REMOVE EXISTING PLUMBING FIXTURES
16 REMOVE EXISTING TOILET PARTITIONS AND ASSOCIATED HARDWARE
17 REMOVE ALL EXISTING BUILT-IN CASEWORK IN THE ROOM.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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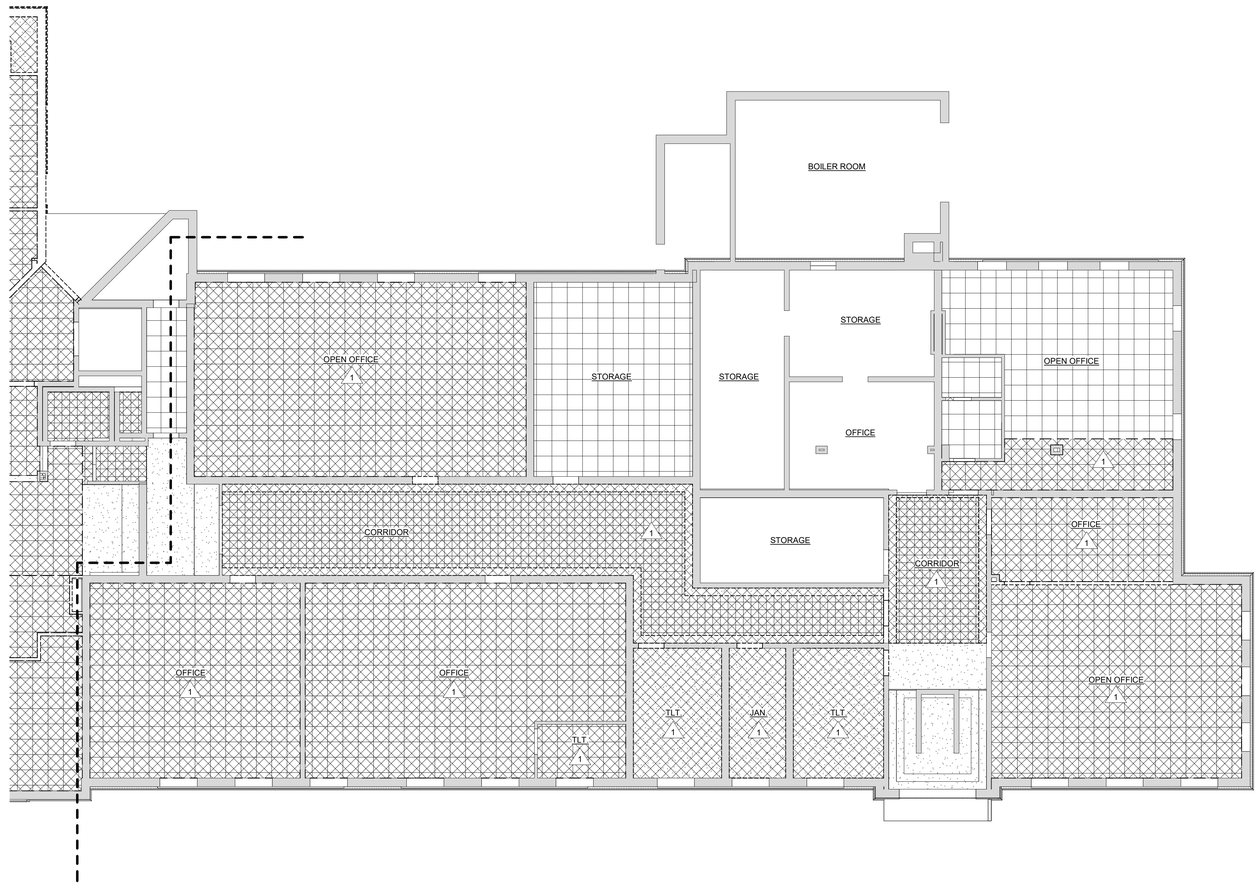
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION PLAN - ROOF

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER AD2.05




1 AD2.11 DEMOLITION REFLECTED CEILING PLAN LOWER LEVEL - AREA A

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

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
- PORTION OF SLAB AND FLOOR FRAMING TO BE REMOVED FOR NEW WORK - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

## CEILING DEMOLITION LEGEND:

- CEILING TILE AND GRID TO BE REMOVED
- GYP. BD. CEILING TO BE REMOVED
- EXISTING CEILING TILE AND GRID TO REMAIN
- EXISTING GYP. BD. CEILING TO REMAIN
- EXPOSED STRUCTURE

## DEMOLITION GENERAL NOTES:

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2. VERIFY EXISTING CONDITIONS OF SPACE PRIOR TO DEMOLITION WORK.
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5. ANY HIDDEN STRUCTURAL COLUMNS OR SUPPORT TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO REMOVAL. ANY BUILDING SUPPORT WHICH DEVIATES FROM THAT SHOWN OR IS IN QUESTION TO BE BROUGHT TO ARCHITECT'S ATTENTION IMMEDIATELY.
6. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DOCUMENTS FOR REMOVAL AND CAPPING OF SERVICES FOR ITEMS SHOWN TO BE REMOVED.

## # DEMOLITION KEYNOTES

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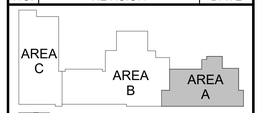
16 REMOVE EXISTING TOILET PARTITIONS AND ASSOCIATED HARDWARE
17 REMOVE ALL EXISTING BUILT-IN CASEWORK IN THE ROOM.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




NORTH NO SCALE KEY PLAN

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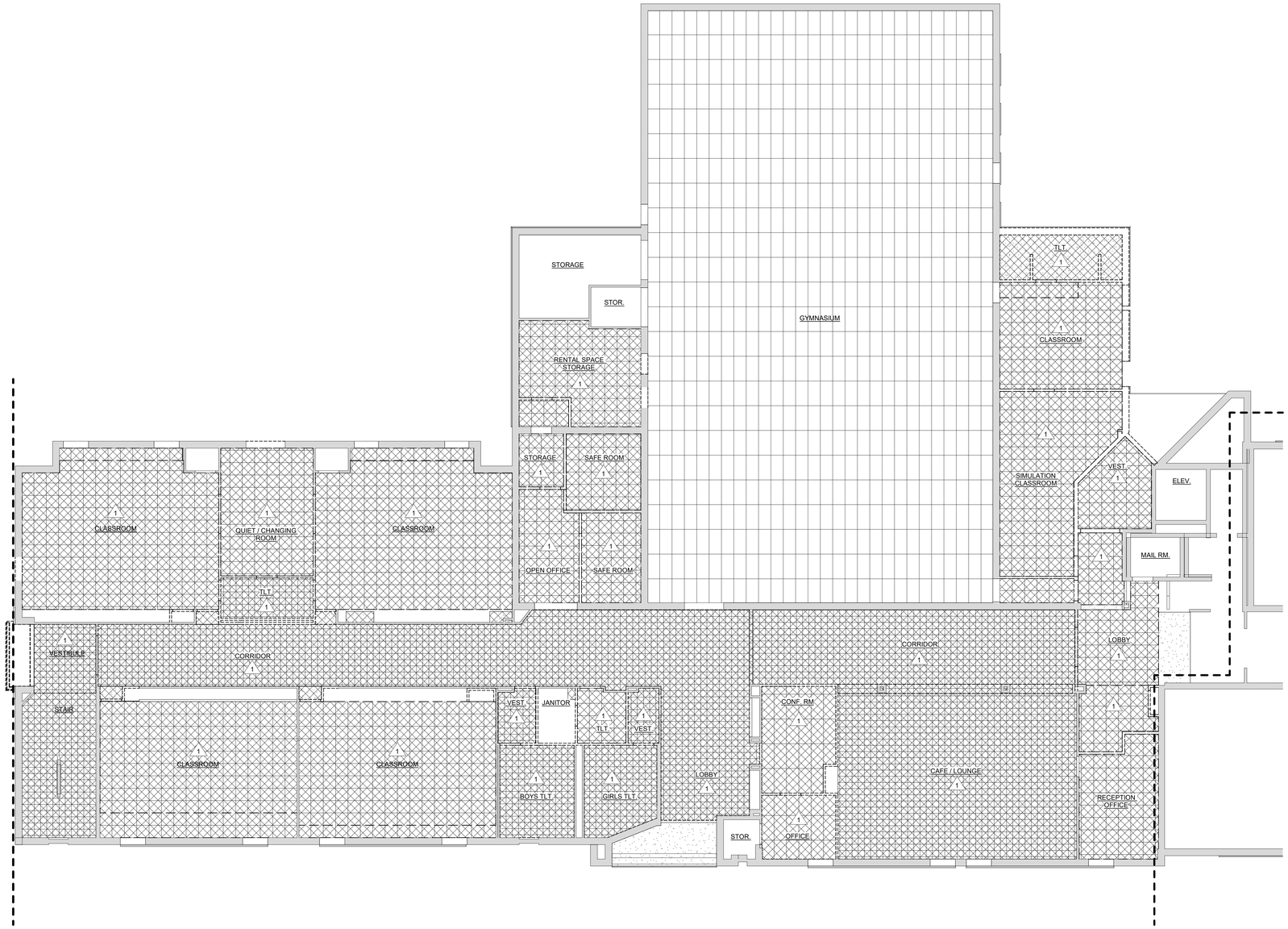
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION REFLECTED CEILING PLAN - AREA A - LOWER LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER AD2.11




1 AD2.12 DEMOLITION REFLECTED CEILING PLAN MAIN LEVEL - AREA B

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

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
- PORTION OF SLAB AND FLOOR FRAMING TO BE REMOVED FOR NEW WORK - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

## CEILING DEMOLITION LEGEND:

- CEILING TILE AND GRID TO BE REMOVED
- GYP. BD. CEILING TO BE REMOVED
- EXISTING CEILING TILE AND GRID TO REMAIN
- EXISTING GYP. BD. CEILING TO REMAIN
- EXPOSED STRUCTURE

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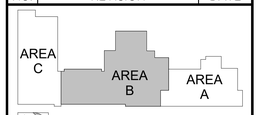
| | ISSUED FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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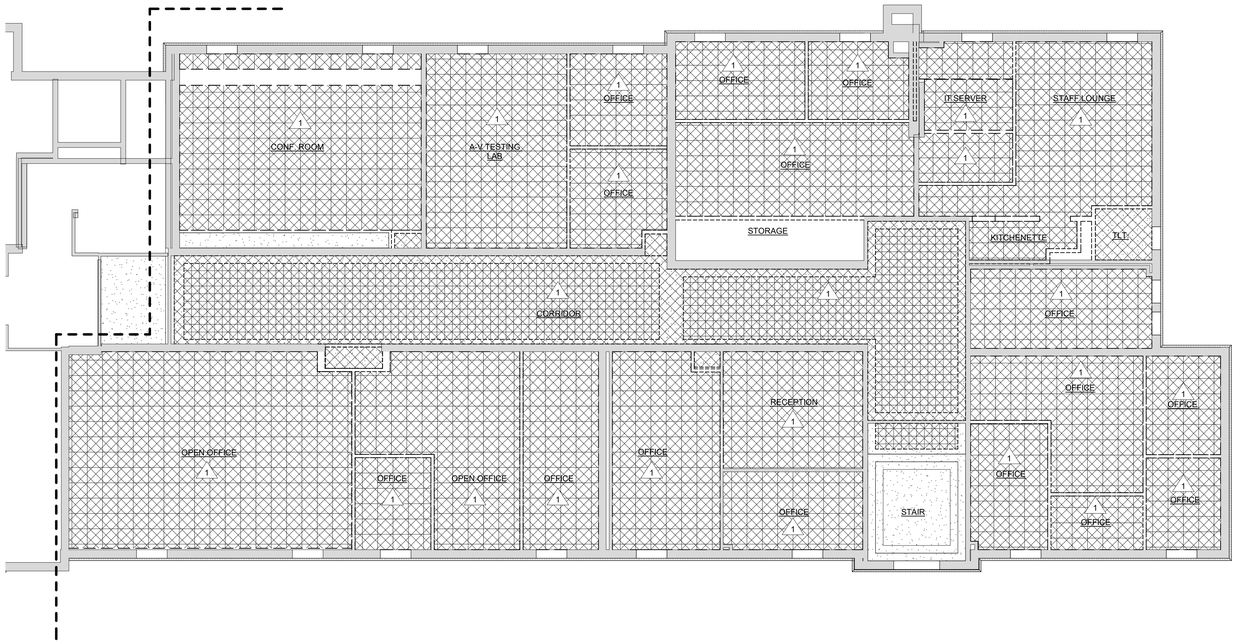
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DEMOLITION REFLECTED CEILING PLAN - AREA B - MAIN LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER AD2.12




1 AD2.13 DEMOLITION PLAN - UPPER LEVEL AREA A

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

## DEMOLITION LEGEND:

- DEMOLITION
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## CEILING DEMOLITION LEGEND:

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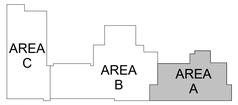


KEY PLAN
NORTH NO SCALE

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

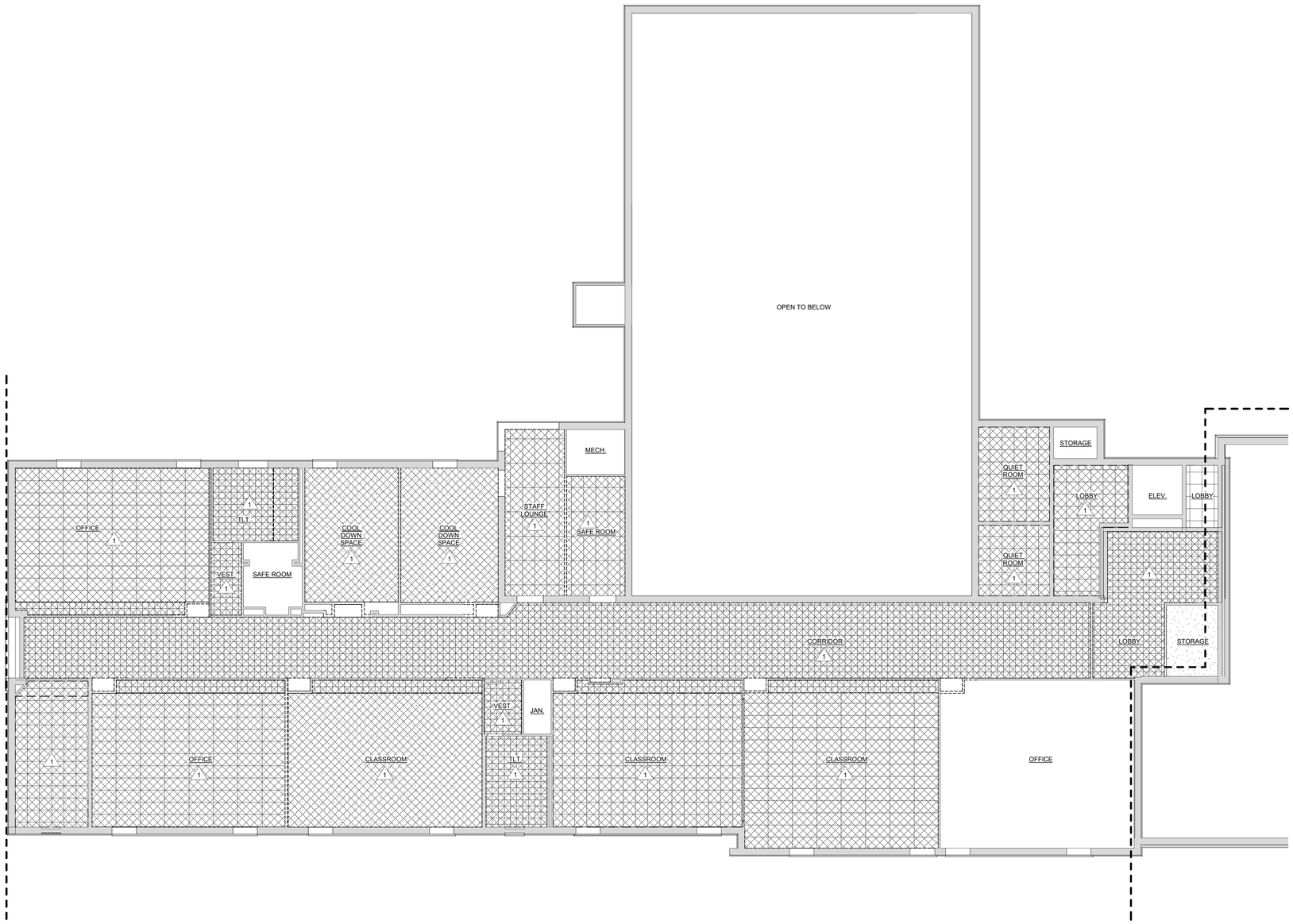
SHEET TITLE
DEMOLITION REFLECTED CEILING PLAN - AREA A - UPPER LEVEL 2

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
AD2.13




1 AD2.14 DEMOLITION REFLECTED CEILING PLAN UPPER LEVEL - AREA B

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

## DEMOLITION LEGEND:

- DEMOLITION
- EXISTING TO REMAIN
- PORTIONS OF EXISTING BUILDING TO BE DEMOLISHED - REFER TO PHASING PLAN FOR SCOPE OF DEMOLITION AT EACH PHASE
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## CEILING DEMOLITION LEGEND:

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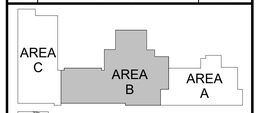


KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

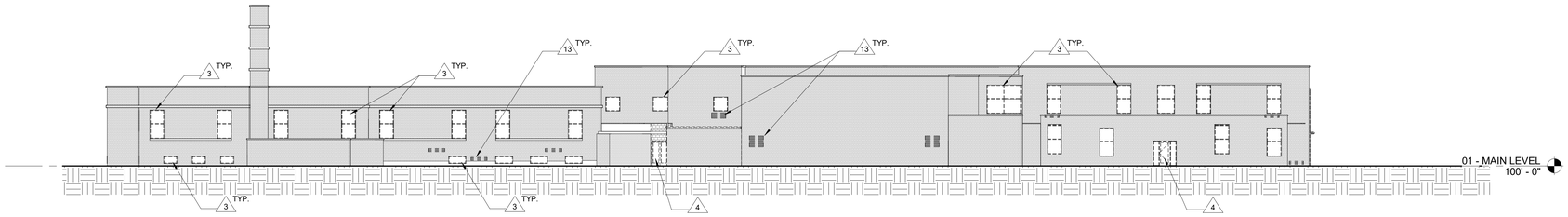
DEMOLITION REFLECTED CEILING PLAN - AREA B - UPPER LEVEL 3

PROJECT NUMBER 2022006.1

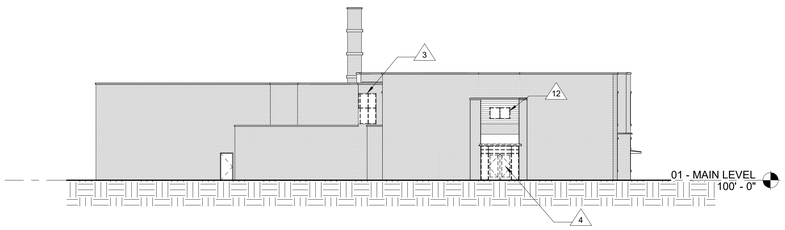
PROJECT DATE AUGUST 23, 2023

CHECKED BY JMJ

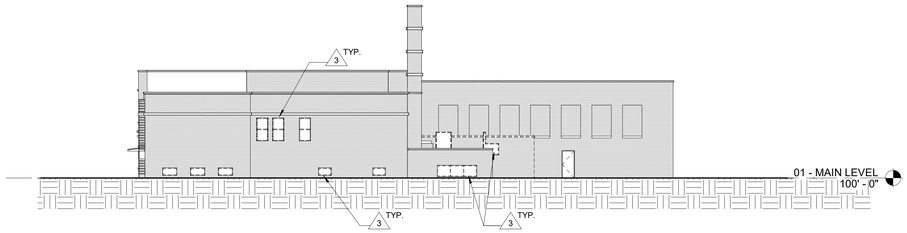
SHEET NUMBER AD2.14



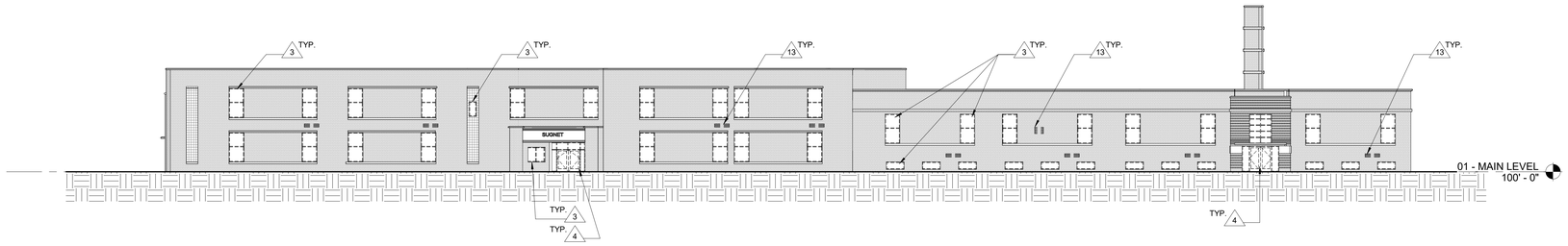

1 AD2.21 EXTERIOR ELEVATION - WEST
SCALE: 1/16" = 1'-0"




2 AD2.21 EXTERIOR ELEVATION - SOUTH
SCALE: 1/16" = 1'-0"




3 AD2.21 EXTERIOR ELEVATION - NORTH
SCALE: 1/16" = 1'-0"




4 AD2.21 EXTERIOR ELEVATION - EAST
SCALE: 1/16" = 1'-0"

## DEMOLITION KEYNOTES

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| NO. | REVISION | DATE |
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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

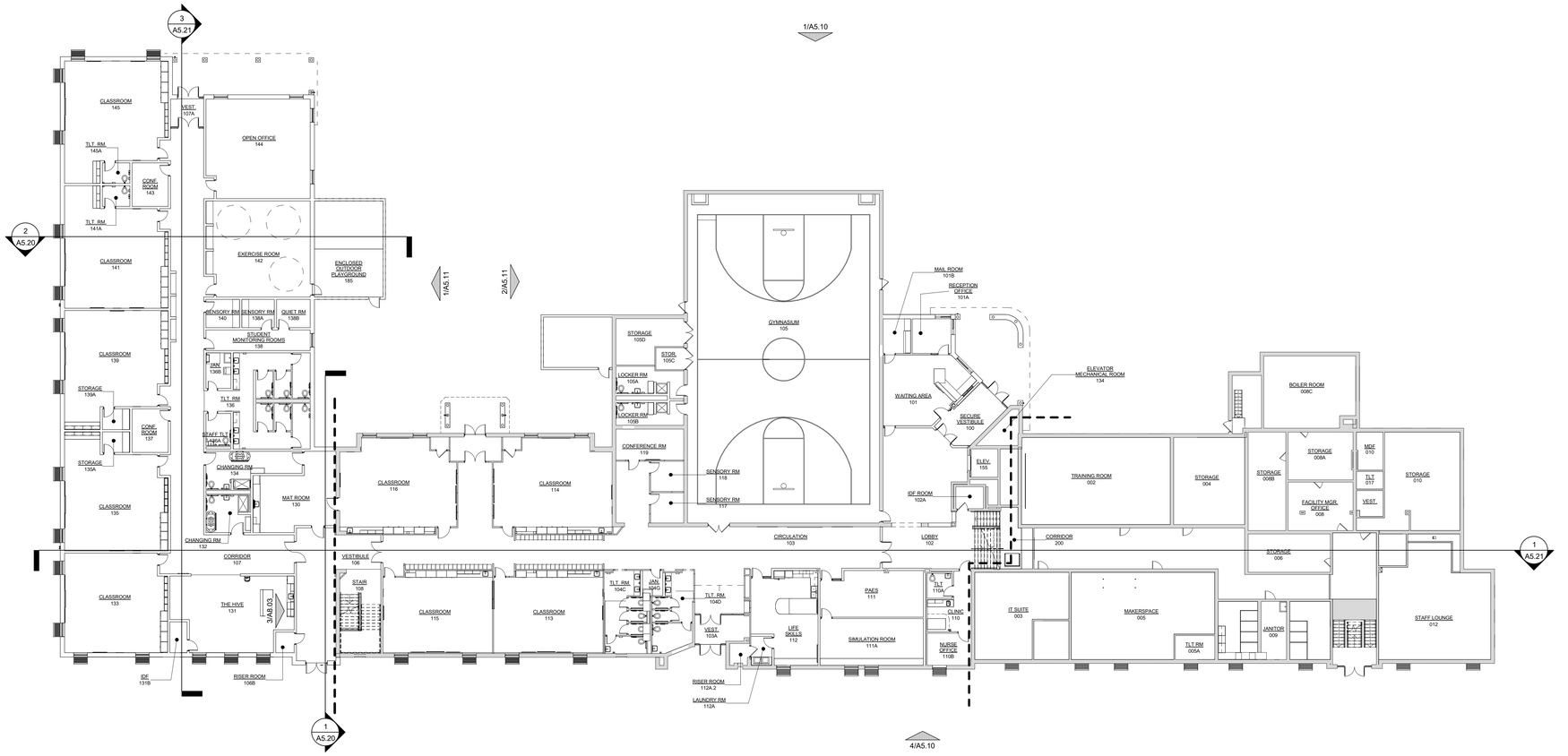
SHEET TITLE
EXTERIOR DEMOLITION ELEVATIONS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

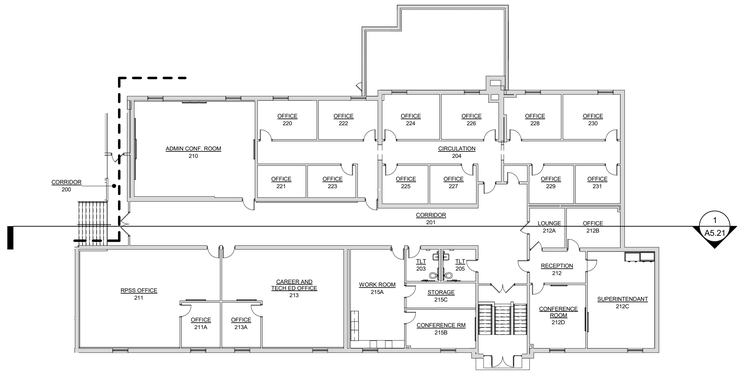
CHECKED BY
JMJ

SHEET NUMBER
AD2.21

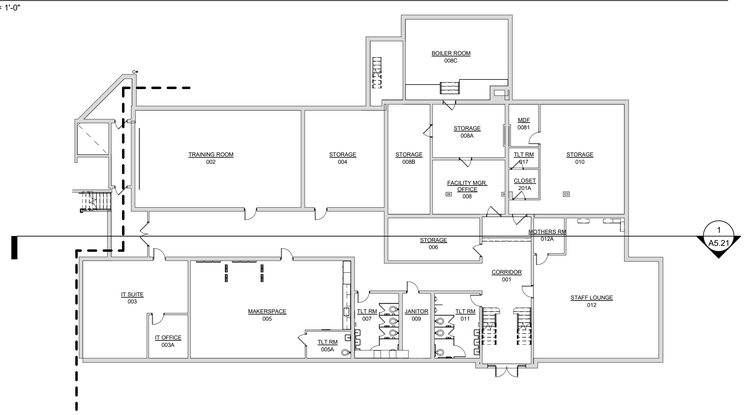



NORTH 1 A2.01 FIRST FLOOR MASTER PLAN
SCALE: 1/16" = 1'-0"

NORTH 4 A2.01 THIRD FLOOR MASTER PLAN
SCALE: 1/16" = 1'-0"




NORTH 3 A2.01 SECOND FLOOR MASTER PLAN
SCALE: 1/16" = 1'-0"




NORTH 2 A2.01 LOWER LEVEL MASTER PLAN
SCALE: 1/16" = 1'-0"

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

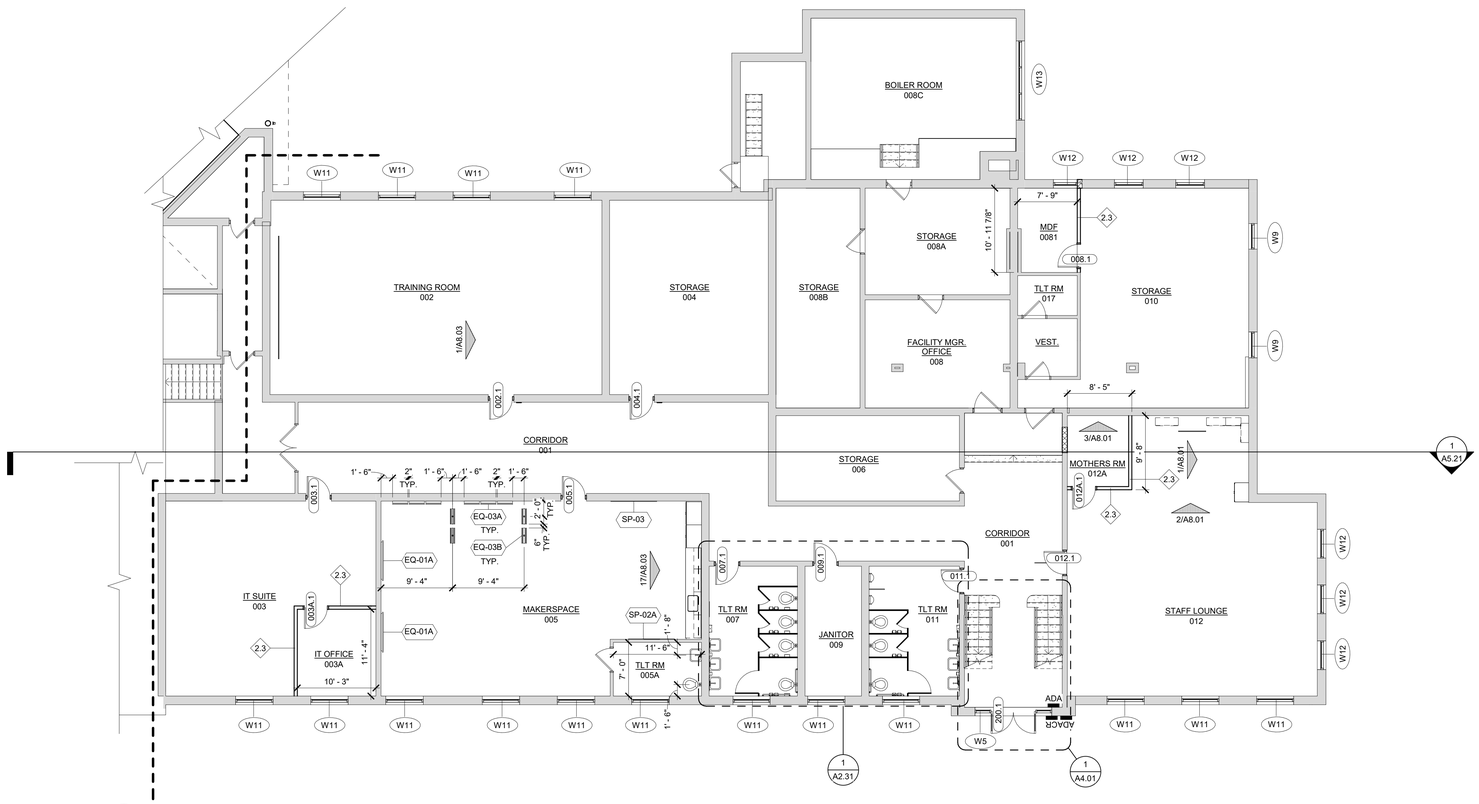
SHEET TITLE
MASTER PLAN

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A2.01




1 A2.11 FLOOR PLAN LOWER LEVEL - AREA A

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

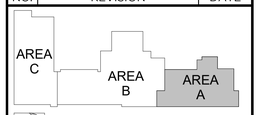
## GENERAL PLAN NOTES:

1. DIMENSIONS INDICATED ARE FROM THE FACE OF STUD AND FACE OF MASONRY UNLESS NOTED OTHERWISE. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS NOT INDICATED ON OVERALL PLANS.
2. REFER TO FLOOR FINISHPLANS FOR FLOOR MATERIALS & PATTERNS.
3. PLUMBING FIXTURES ARE SHOWN FOR REFERENCE & LOCATION ONLY, REFER TO MECHANICAL DRAWINGS FOR DETAILS & SPECIFICATIONS.
4. CONTRACTOR TO COORDINATE LOCATIONS OF ADDITIONAL PENETRATIONS THROUGH WALLS AND FLOORS NOT INDICATED ON ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL. REFER TO STRUCTURAL DRAWINGS FOR LINTEL OR FRAMING REQUIREMENTS.
5. ALL INTERIOR WALLS ARE 8" CMU (2.0) UNLESS OTHERWISE NOTED.

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
3 UTILITY SHELF W/ MOP HOLDER; RE: SPEC.
4 SENSORY SWING, RE: FURNISHED BY OWNER
5 COPY MACHINE BY OWNER, RE: ELECT.
6 SHOWER ROD
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM. CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BID | 08/23/23 |




NORTH NO SCALE KEY PLAN

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RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

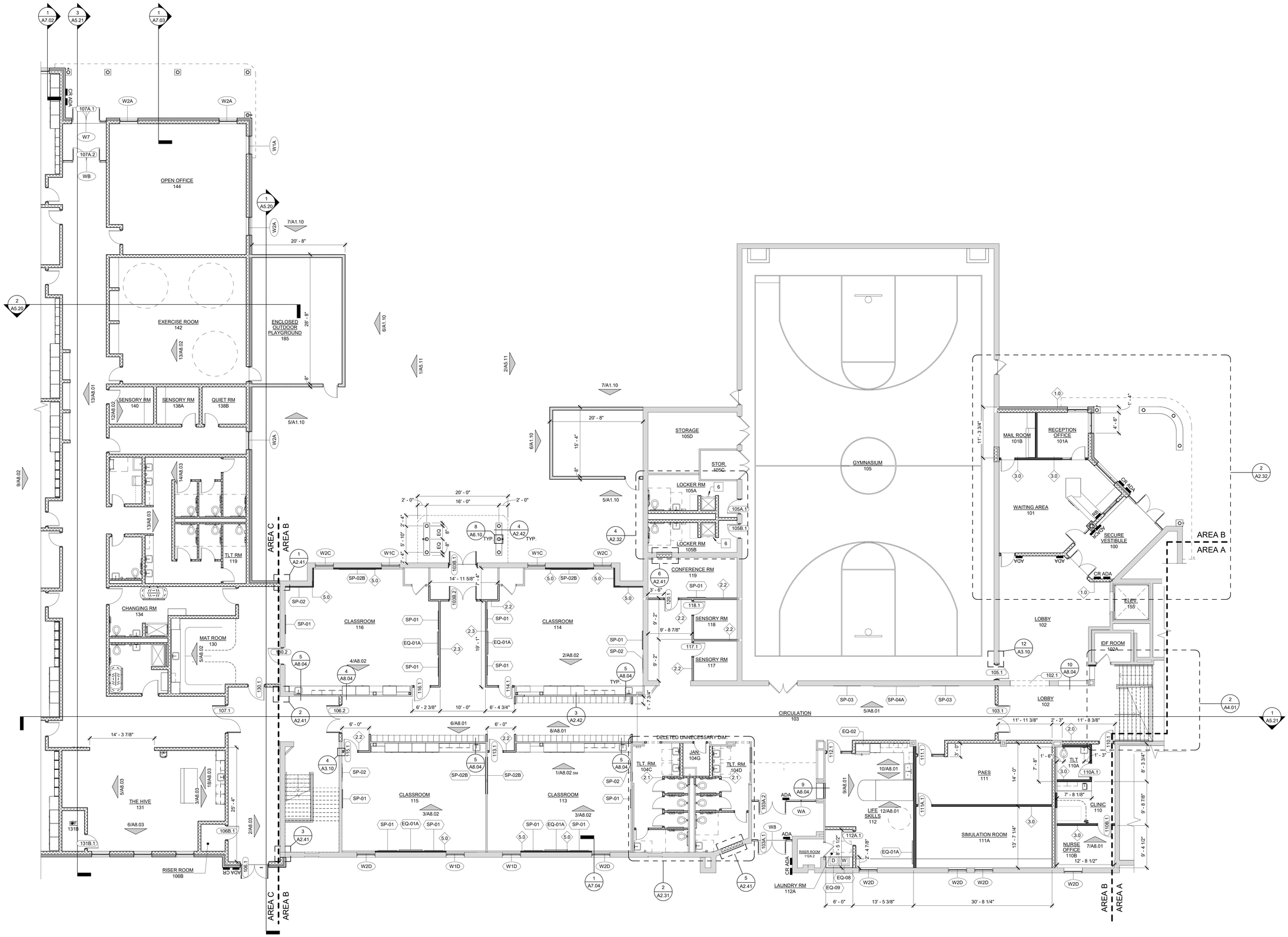
SHEET TITLE
FLOOR PLAN - AREA A - LOWER LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A2.11




1 A2.12 FLOOR PLAN MAIN LEVEL - AREA B

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

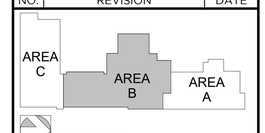
## GENERAL PLAN NOTES:

1. DIMENSIONS INDICATED ARE FROM THE FACE OF STUD AND FACE OF MASONRY UNLESS NOTED OTHERWISE. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS NOT INDICATED ON OVERALL PLANS.
2. REFER TO FLOOR FINISHPLANS FOR FLOOR MATERIALS & PATTERNS.
3. PLUMBING FIXTURES ARE SHOWN FOR REFERENCE & LOCATION ONLY. REFER TO MECHANICAL DRAWINGS FOR DETAILS & SPECIFICATIONS.
4. CONTRACTOR TO COORDINATE LOCATIONS OF ADDITIONAL PENETRATIONS THROUGH WALLS AND FLOORS NOT INDICATED ON ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL. REFER TO STRUCTURAL DRAWINGS FOR LINTEL OR FRAMING REQUIREMENTS.
5. ALL INTERIOR WALLS ARE 8" CMU (2.0) UNLESS OTHERWISE NOTED.

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
3 UTILITY SHELF W/ MOP HOLDER; RE: SPEC.
4 SENSORY SWING, RE: FURNISHED BY OWNER
5 COPY MACHINE BY OWNER, RE: ELECT.
6 SHOWER ROD
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM, CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

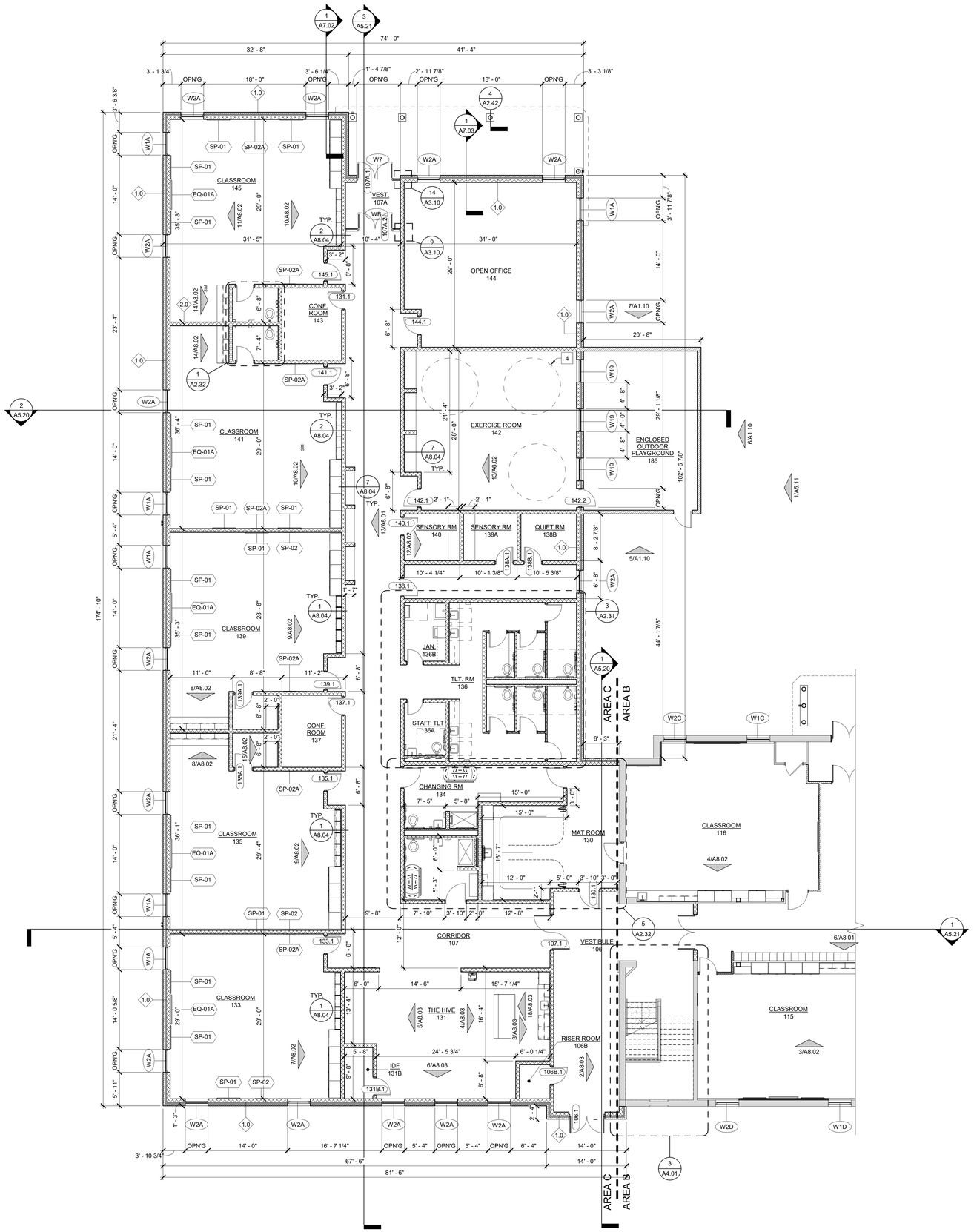
SHEET TITLE
FLOOR PLAN - AREA B - MAIN LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A2.12




1 A2.13 FLOOR PLAN MAIN LEVEL - AREA C

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

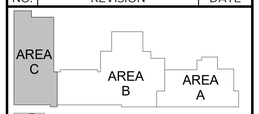
## GENERAL PLAN NOTES:

1. DIMENSIONS INDICATED ARE FROM THE FACE OF STUD AND FACE OF MASONRY UNLESS NOTED OTHERWISE. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS NOT INDICATED ON OVERALL PLANS.
2. REFER TO FLOOR FINISHPLANS FOR FLOOR MATERIALS & PATTERNS.
3. PLUMBING FIXTURES ARE SHOWN FOR REFERENCE & LOCATION ONLY. REFER TO MECHANICAL DRAWINGS FOR DETAILS & SPECIFICATIONS.
4. CONTRACTOR TO COORDINATE LOCATIONS OF ADDITIONAL PENETRATIONS THROUGH WALLS AND FLOORS NOT INDICATED ON ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL. REFER TO STRUCTURAL DRAWINGS FOR LINTEL OR FRAMING REQUIREMENTS.
5. ALL INTERIOR WALLS ARE 8" CMU (2.0) UNLESS OTHERWISE NOTED.

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
3 UTILITY SHELF W/ MOP HOLDER; RE: SPEC.
4 SENSORY SWING, RE: FURNISHED BY OWNER
5 COPY MACHINE BY OWNER, RE: ELECT.
6 SHOWER ROD
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM. CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
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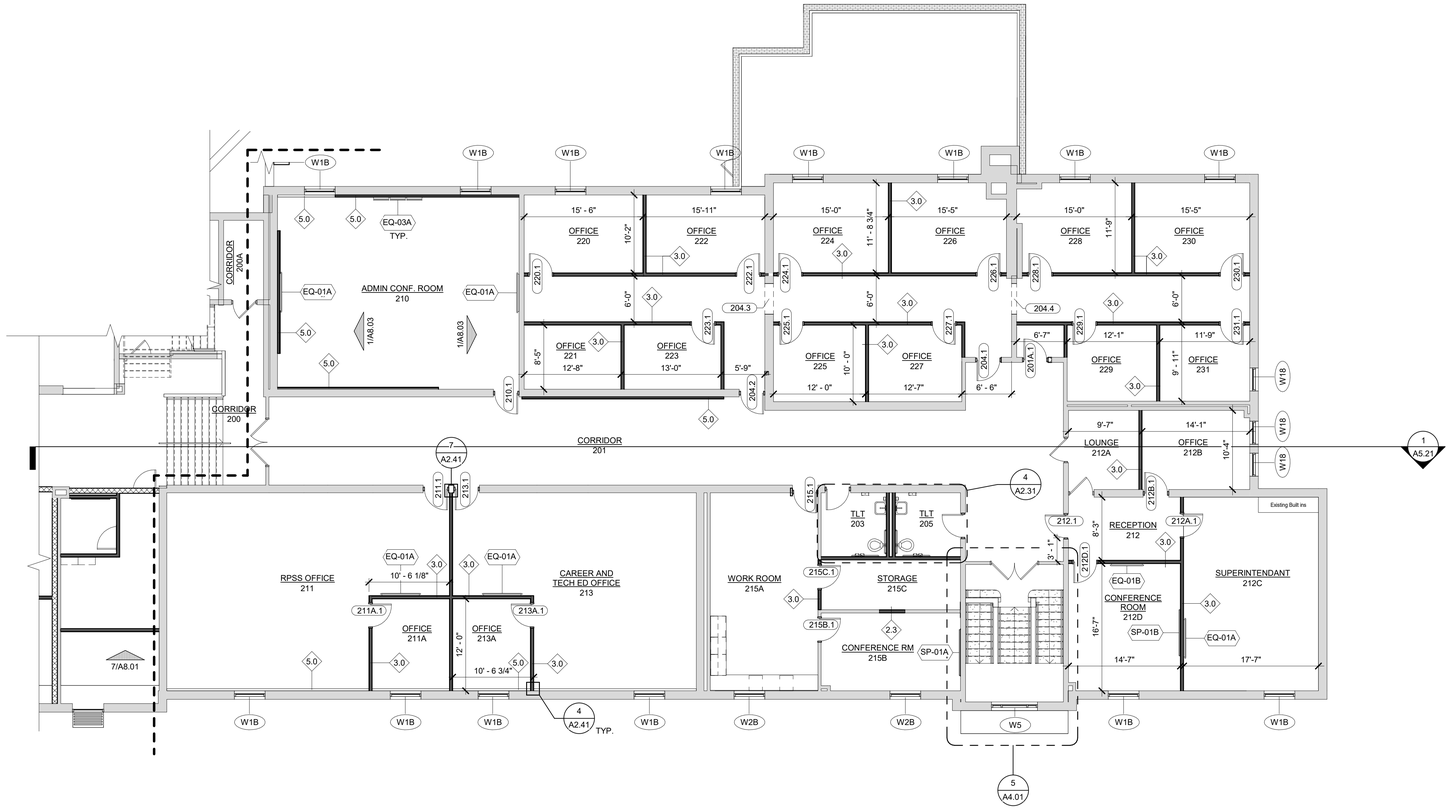
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
FLOOR PLAN - AREA C - MAIN LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JM,J
SHEET NUMBER A2.13




1 A2.14 FLOOR PLAN UPPER LEVEL - AREA A

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

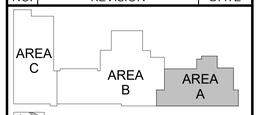
## GENERAL PLAN NOTES:

1. DIMENSIONS INDICATED ARE FROM THE FACE OF STUD AND FACE OF MASONRY UNLESS NOTED OTHERWISE. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS NOT INDICATED ON OVERALL PLANS.
2. REFER TO FLOOR FINISHPLANS FOR FLOOR MATERIALS & PATTERNS.
3. PLUMBING FIXTURES ARE SHOWN FOR REFERENCE & LOCATION ONLY, REFER TO MECHANICAL DRAWINGS FOR DETAILS & SPECIFICATIONS.
4. CONTRACTOR TO COORDINATE LOCATIONS OF ADDITIONAL PENETRATIONS THROUGH WALLS AND FLOORS NOT INDICATED ON ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL. REFER TO STRUCTURAL DRAWINGS FOR LINTEL OR FRAMING REQUIREMENTS.
5. ALL INTERIOR WALLS ARE 8" CMU (2.0) UNLESS OTHERWISE NOTED.

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
3 UTILITY SHELF W/ MOP HOLDER; RE: SPEC.
4 SENSORY SWING, RE: FURNISHED BY OWNER
5 COPY MACHINE BY OWNER, RE: ELECT.
6 SHOWER ROD
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM, CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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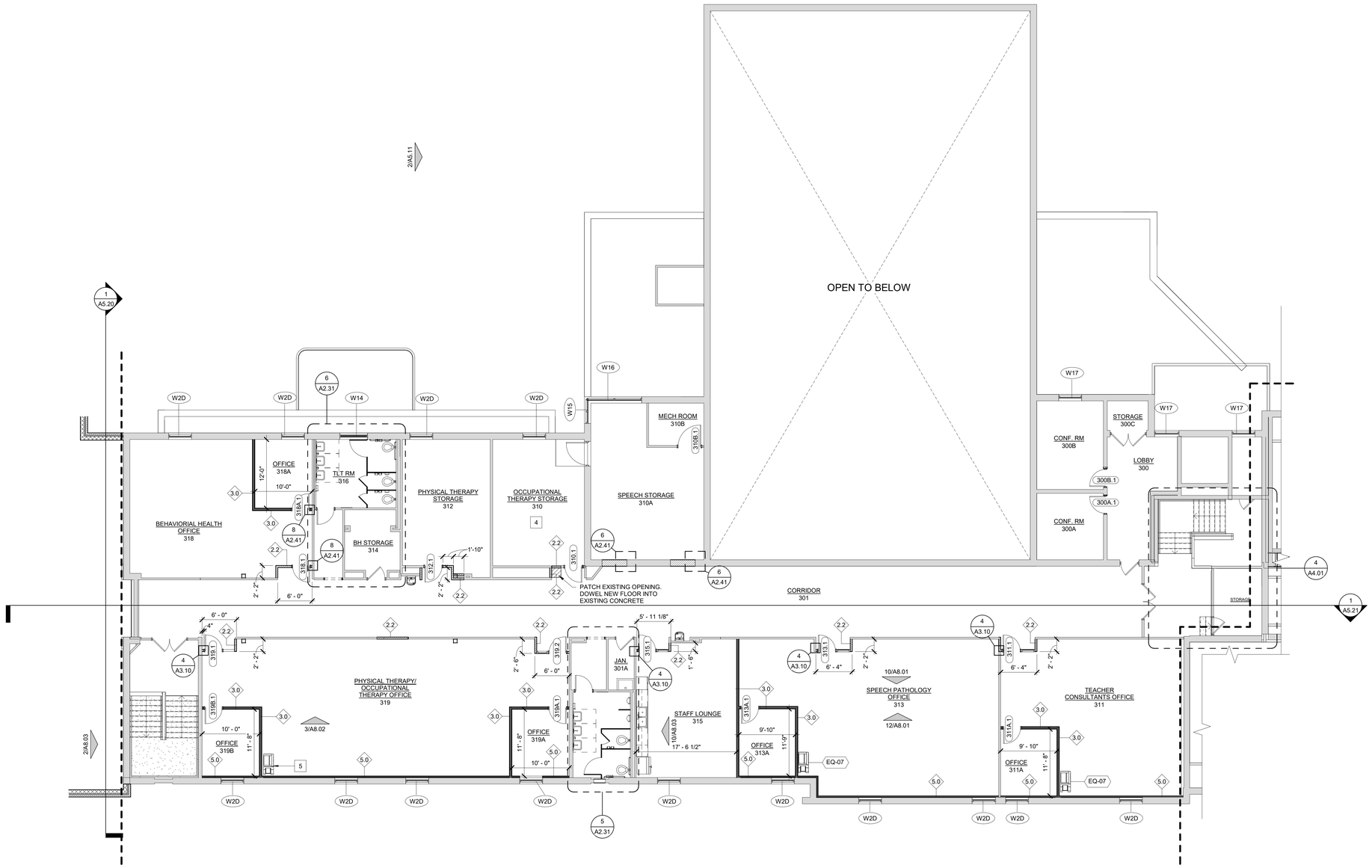
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
FLOOR PLAN - AREA A - UPPER LEVEL 2

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A2.14




1 A2.15 FLOOR PLAN UPPER LEVEL - AREA B
SCALE: 1/8" = 1'-0"

## GENERAL PLAN NOTES:

1. DIMENSIONS INDICATED ARE FROM THE FACE OF STUD AND FACE OF MASONRY UNLESS NOTED OTHERWISE. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS NOT INDICATED ON OVERALL PLANS.
2. REFER TO FLOOR FINISHPLANS FOR FLOOR MATERIALS & PATTERNS.
3. PLUMBING FIXTURES ARE SHOWN FOR REFERENCE & LOCATION ONLY, REFER TO MECHANICAL DRAWINGS FOR DETAILS & SPECIFICATIONS.
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5. ALL INTERIOR WALLS ARE 8" CMU (2.0) UNLESS OTHERWISE NOTED.

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
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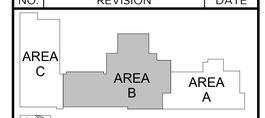
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM. CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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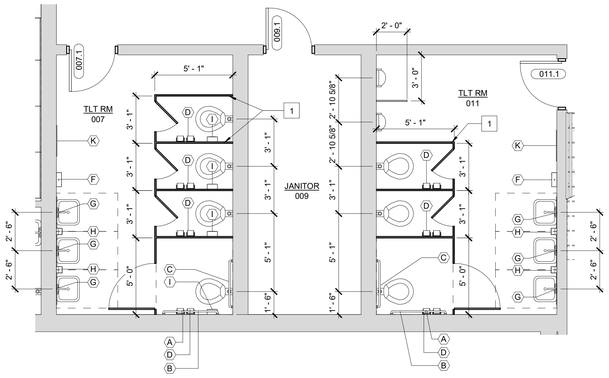
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

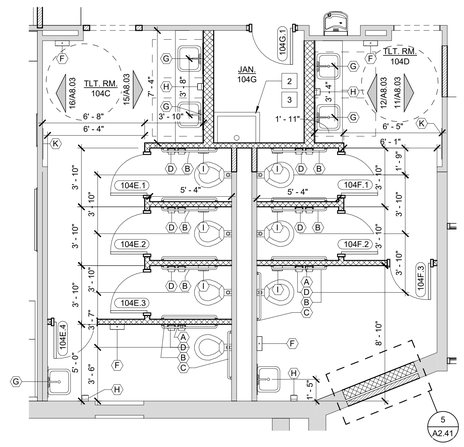
MIDLAND, MICHIGAN

SHEET TITLE
FLOOR PLAN - AREA B - UPPER LEVEL 3

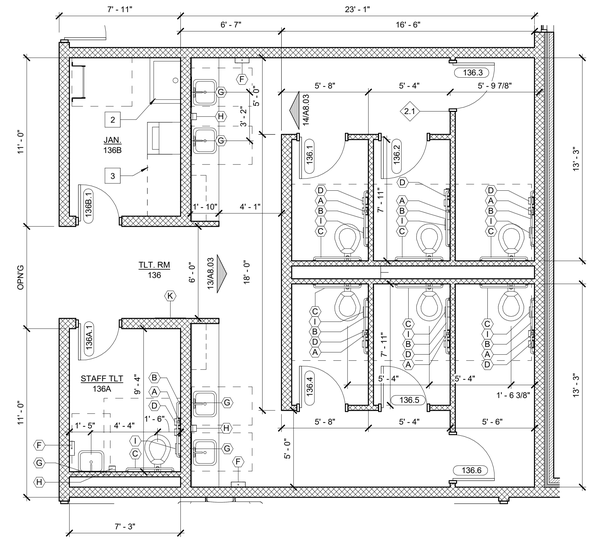
PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A2.15



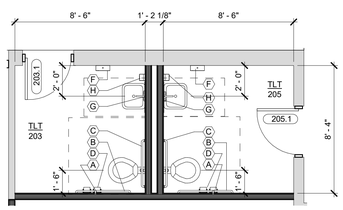

1 A2.31 ENLARGED PLAN - TOILET ROOMS 007 & 011
SCALE: 1/4" = 1'-0"



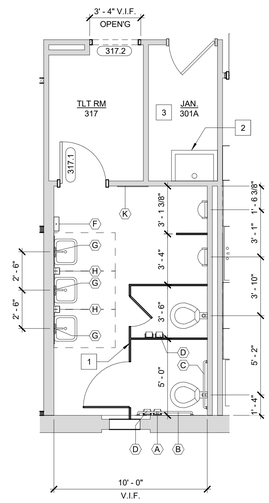

2 A2.31 ENLARGED PLAN - TOILET ROOM 104E
SCALE: 1/4" = 1'-0"



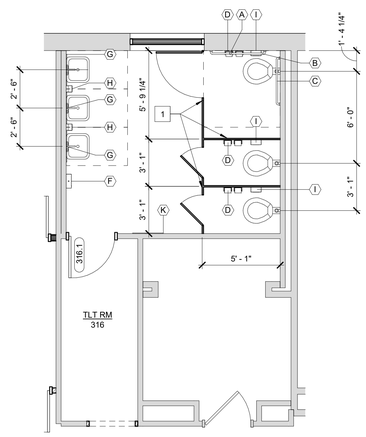

3 A2.31 ENLARGED PLAN - TOILET ROOM 136
SCALE: 1/4" = 1'-0"




4 A2.31 ENLARGED PLAN - TOILET ROOM 203 & 206
SCALE: 1/4" = 1'-0"




5 A2.31 ENLARGED PLAN - TOILET ROOM 317
SCALE: 1/4" = 1'-0"




6 A2.31 ENLARGED PLAN - TOILET ROOM 316
SCALE: 1/4" = 1'-0"

## TOILET ACCESSORIES SCHEDULE

| Type Mark | ITEM DESCRIPTION | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|
| A | 18" VERTICAL GRAB BAR | <varies> | <varies> | |
| B | 36" GRAB BAR | <varies> | <varies> | |
| C | 42" GRAB BAR | <varies> | <varies> | |
| D | TOILET PAPER DISPENSER | OWNER | G.C. | |
| F | PAPER TOWEL DISPENSER | <varies> | <varies> | |
| G | 24 X 36 MIRROR | <varies> | <varies> | <varies> |
| H | SOAP DISPENSER | <varies> | <varies> | |
| I | SANITARY DISPOSAL | <varies> | <varies> | |
| J | ADA SHOWER SEAT | G.C. | G.C. | WALL MOUNTED |
| K | 24 x 48 MIRROR | G.C. | G.C. | WALL MOUNTED |

## GENERAL PLB. / EQUIP. NOTES:

1. ALL TOILET PARTITIONS SHALL BE BLACK CORE PHENOLIC

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
3 UTILITY SHELF W/ MOP HOLDER; RE: SPEC.
4 SENSORY SWING, RE: FURNISHED BY OWNER
5 COPY MACHINE BY OWNER, RE: ELECT.
6 SHOWER ROD
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM, CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

| NO. | REVISION | DATE |
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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

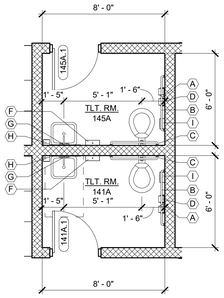
SHEET TITLE
ENLARGED PLANS

PROJECT NUMBER
2022006.1

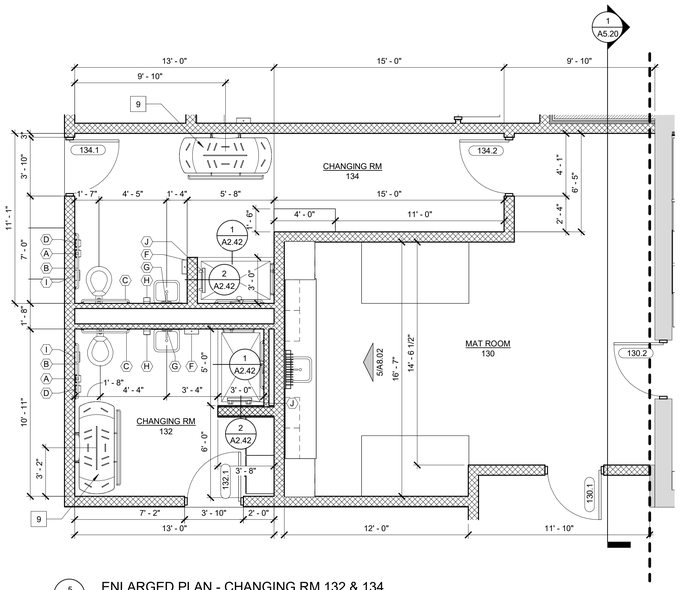
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

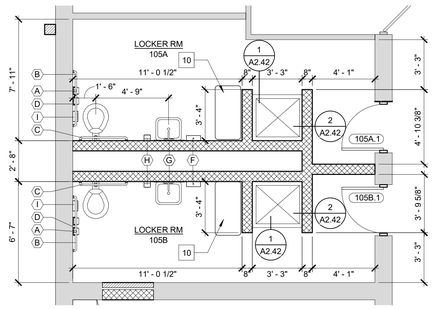
SHEET NUMBER
A2.31



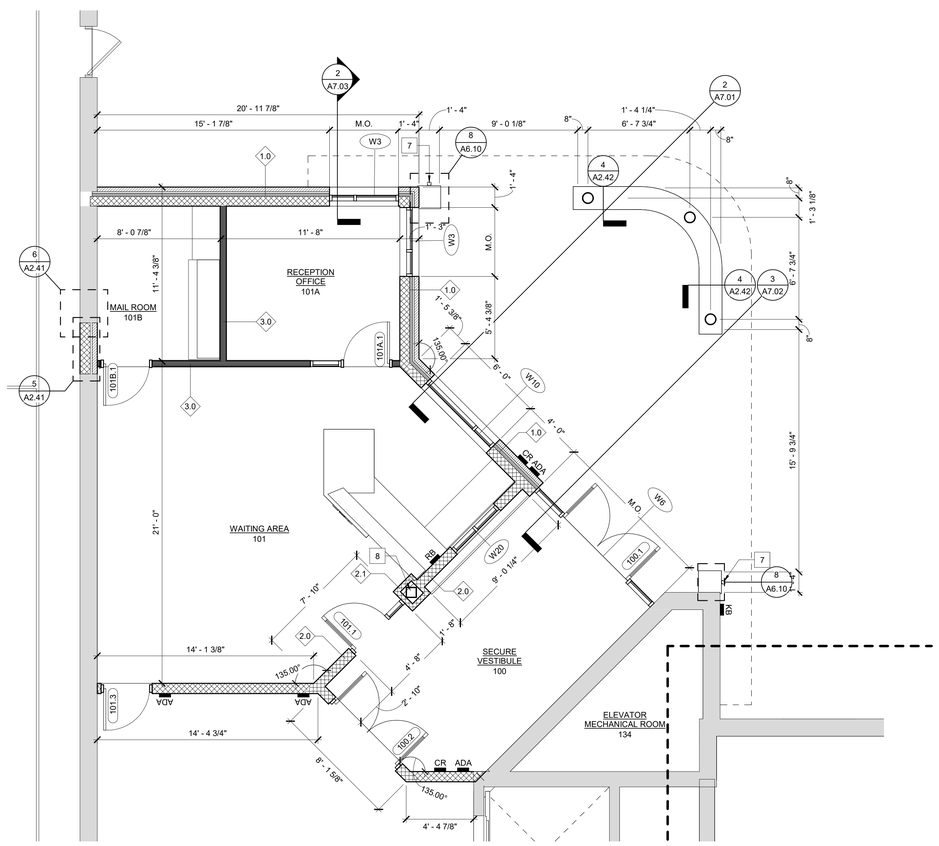

1 A2.32 ENLARGED PLAN - TOILET ROOM 141A & 145A
SCALE: 1/4" = 1'-0"




5 A2.32 ENLARGED PLAN - CHANGING RM 132 & 134
SCALE: 1/4" = 1'-0"




4 A2.32 ENLARGED PLAN - LOCKER RM 105A & 105B
SCALE: 1/4" = 1'-0"




2 A2.32 ENLARGED PLAN @ MAIN ENTRY
SCALE: 1/4" = 1'-0"

## TOILET ACCESSORIES SCHEDULE

| Type Mark | ITEM DESCRIPTION | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|
| A | 18" VERTICAL GRAB BAR | <varies> | <varies> | |
| B | 36" GRAB BAR | <varies> | <varies> | |
| C | 42" GRAB BAR | <varies> | <varies> | |
| D | TOILET PAPER DISPENSER | OWNER | G.C. | |
| F | PAPER TOWEL DISPENSER | <varies> | <varies> | |
| G | 24 X 36 MIRROR | <varies> | <varies> | <varies> |
| H | SOAP DISPENSER | <varies> | <varies> | |
| I | SANITARY DISPOSAL | <varies> | <varies> | |
| J | ADA SHOWER SEAT | G.C. | G.C. | WALL MOUNTED |
| K | 24 x 48 MIRROR | G.C. | G.C. | WALL MOUNTED |

## GENERAL PLB. / EQUIP. NOTES:

1. ALL TOILET PARTITIONS SHALL BE BLACK CORE PHENOLIC

## # PLAN KEYNOTES

1 TOILET PARTITION
2 MOP SINK (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
3 UTILITY SHELF W/ MOP HOLDER; RE: SPEC.
4 SENSORY SWING, RE: FURNISHED BY OWNER
5 COPY MACHINE BY OWNER, RE: ELECT.
6 SHOWER ROD
7 DOWNSPOUT NOZZEL
8 NEW COLUMN FOR EXISTING BEAM, CONTRACTOR TO CONDUCT ON SITE CONFERENCE WITH ARCHITECT AND ENGINEER TO VERIFY LOCATION AND DETERMINE IF WHAT IS SHOWN IS APPROPRIATE.
9 ADULT CHANGING TABLE
10 ADA BENCH

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
ENLARGED PLANS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

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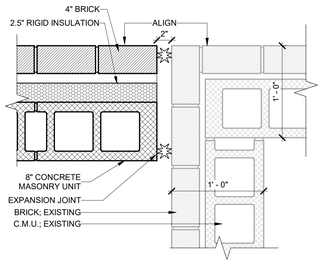
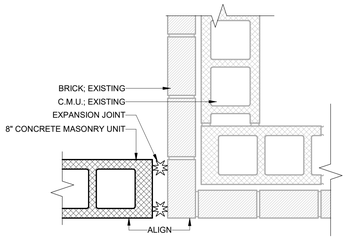
JMJ

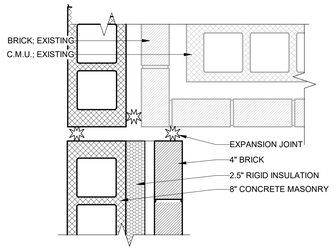
SHEET NUMBER
A2.32



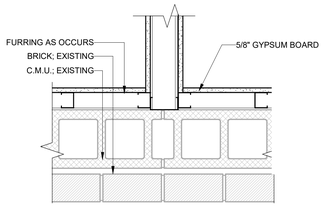

1 A2.41 PLAN DETAIL @ MAT ROOM 130 EXPANSION
SCALE: 1 1/2" = 1'-0"



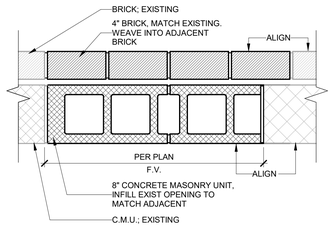

2 A2.41 PLAN DETAIL @ SOUTH ADDTION 130
SCALE: 1 1/2" = 1'-0"



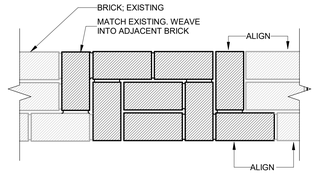

3 A2.41 PLAN DETAIL @ VESTIBULE 106 EXPANSION
SCALE: 1 1/2" = 1'-0"



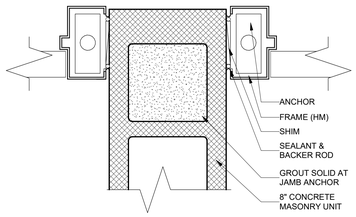

4 A2.41 TYP. PLAN DETAIL @ FURRING
SCALE: 1 1/2" = 1'-0"



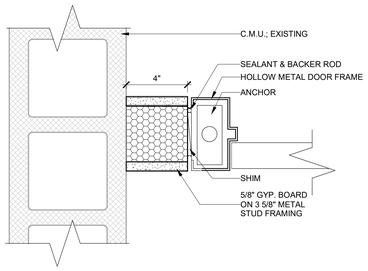

5 A2.41 TYP. PLAN DETAIL @ INFILL
SCALE: 1 1/2" = 1'-0"




6 A2.41 PLAN DETAIL @ OPENING INFILL GYM
SCALE: 1 1/2" = 1'-0"




7 A2.41 JAMB DETAIL @ DOOR 211.1/213.1
SCALE: 3" = 1'-0"




8 A2.41 TYP. JAMB DETAIL @ HM DOOR GYP.
SCALE: 3" = 1'-0"

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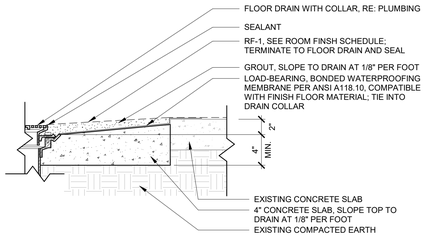
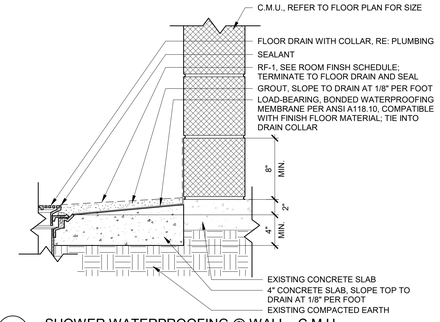
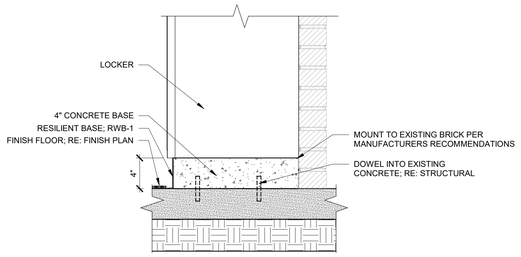


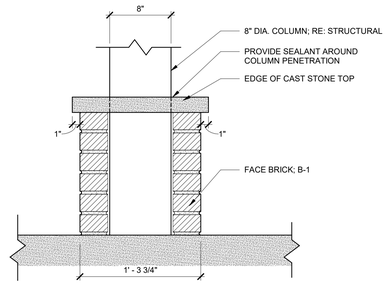

1 A2.42 SHOWER WATERPROOFING @ FLOOR
SCALE: 1 1/2" = 1'-0"




2 A2.42 SHOWER WATERPROOFING @ WALL - C.M.U.
SCALE: 1 1/2" = 1'-0"




3 A2.42 TYP. SECTION @ LOCKER BASE
SCALE: 1 1/2" = 1'-0"




4 A2.42 TYP. COLUMN BASE DETAIL @ CANOPY
SCALE: 1 1/2" = 1'-0"

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MIDLAND, MICHIGAN

SHEET TITLE
SECTION DETAILS

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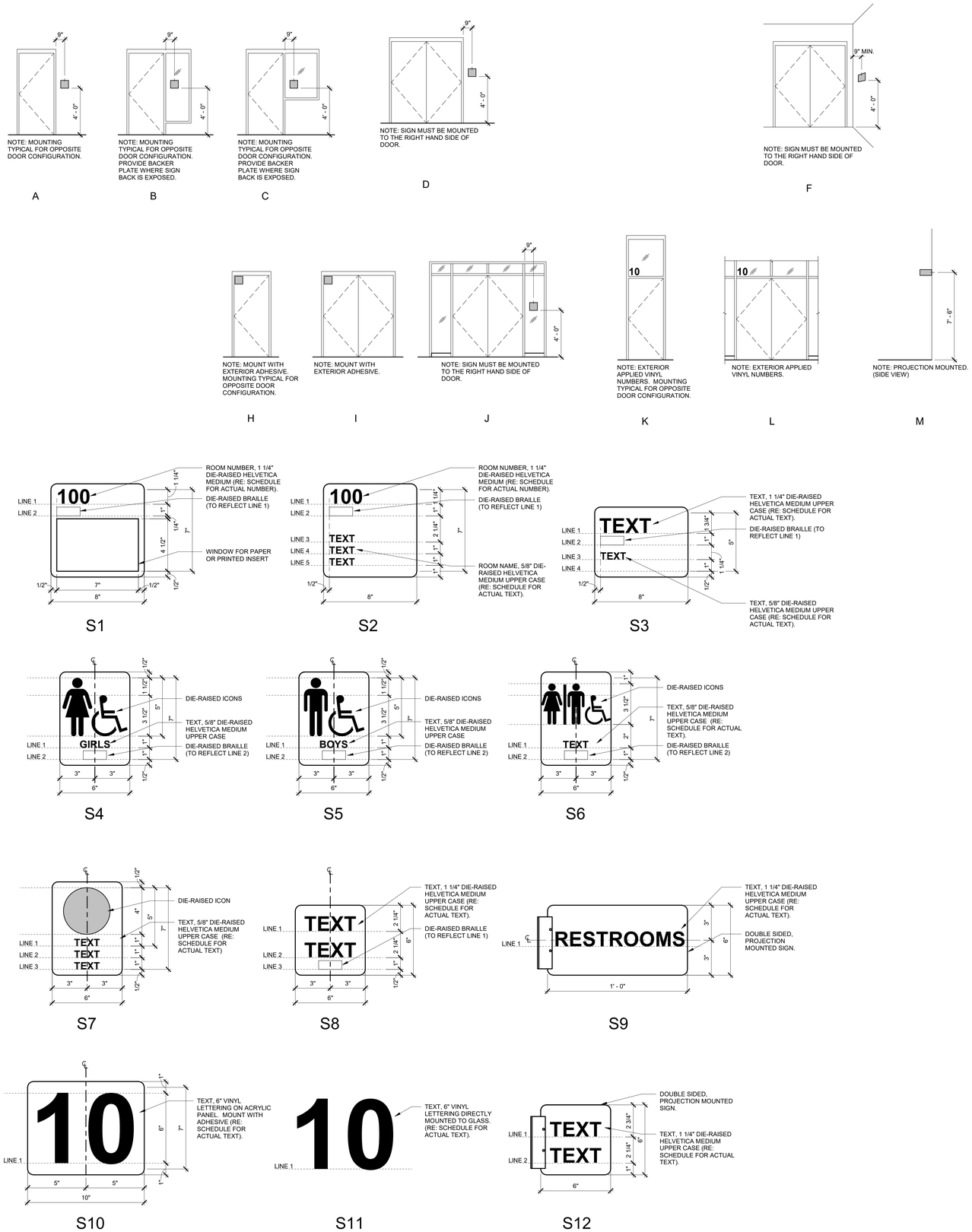
SHEET NUMBER
A2.42

## SIGNAGE SCHEDULE

| Room: Number | Room: Name | Sign Type | Door Number | Mounting Type | Backer Plate | Text Line 1 | Text Line 2 | Text Line 3 | Text Line 4 | Text Line 5 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | S11 | A106.1 | L | No | 106 | | | | | OUTDOOR |
| | | S6 | A104E.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 002 | TRAINING ROOM | S6 | A002.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 003 | IT SUITE | S1 | A003.1 | A | No | 212C | (BRAILLE) | | | | |
| 003A | IT OFFICE | S1 | A003A.1 | A | No | 212C | (BRAILLE) | | | | |
| 004 | STORAGE | S3 | A004.1 | A | No | 212 | (BRAILLE) | STORAGE | | | |
| 005 | MAKERSPACE | S6 | A005.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 007 | TLT RM | S6 | A007.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 009 | JANITOR | S3 | A009.1 | A | No | 212 | (BRAILLE) | CUSTODIAL | | | |
| 012 | STAFF LOUNGE | S3 | A012.1 | A | No | 212 | (BRAILLE) | MAIN OFFICE | | | |
| 101 | WAITING AREA | S3, S4 | A101.1 | A | No | 101 | (BRAILLE) | MAIN OFFICE | | | |
| 101A | RECEPTION OFFICE | S3 | A101A.1 | A | No | 101A | (BRAILLE) | MAIN OFFICE | | | |
| 101B | MAIL ROOM | S3 | A101B.1 | A | No | 101B | (BRAILLE) | MAIN OFFICE | | | |
| 102A | IDF ROOM | S3 | A102A | A | No | 102A | (BRAILLE) | MAIN OFFICE | | | |
| 103 | CIRCULATION | | | | | | | | | | |
| 103 | CIRCULATION | | | | | | | | | | |
| 103 | CIRCULATION | | | | | | | | | | |
| 103 | CIRCULATION | | | | | | | | | | |
| 105 | GYMNASIUM | S2 | A105.1 | A | No | 105 | (BRAILLE) | GYMNASIUM | COMMONS | | |
| 105A | LOCKER RM | S3 | A105A.1 | A | No | 105A | (BRAILLE) | MAIN OFFICE | | | |
| 105B | LOCKER RM | S3 | A105B.1 | A | No | 105B | (BRAILLE) | MAIN OFFICE | | | |
| 105C | STOR. | S3 | A105C | A | No | 105C | (BRAILLE) | MAIN OFFICE | | | |
| 105D | STORAGE | S3 | A105D | A | No | 102A | (BRAILLE) | STORAGE | | | |
| 106 | VESTIBULE | S11 | A106.1 | VERIFY W/ OWNER | Yes | NO SMOKING | ON SCHOOL | PROPERTY | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107 | CORRIDOR | | | | | | | | | | |
| 107A | VEST. | S3 | A107A.2 | F | No | EXIT | (BRAILLE) | | | | |
| 110 | CLINIC | S3 | A110.1 | A | No | 110 | (BRAILLE) | MAIN OFFICE | | | |
| 110A | TLT | S6 | A110A.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 110B | NURSE OFFICE | S3 | A110B.1 | A | No | 110B | (BRAILLE) | MAIN OFFICE | | | |
| 111 | PAES | S1 | A111.1 | A | No | 111 | (BRAILLE) | | | | |
| 111A | SIMULATION ROOM | S3 | A111A.1 | A | No | 111A | (BRAILLE) | | | | |
| 112 | LIFE SKILLS | S3 | A112.1 | B | Yes | 112 | (BRAILLE) | | | | |
| 112A | LAUNDRY RM | S3 | A112A.1 | A | No | 112A | (BRAILLE) | MAIN OFFICE | | | |
| 113 | CLASSROOM | S1 | A113.1 | A | No | 113 | (BRAILLE) | | | | |
| 115 | CLASSROOM | S1 | A115.1 | A | No | 115 | (BRAILLE) | | | | |
| 116 | CLASSROOM | S1 | A130.2 | B | Yes | 116 | (BRAILLE) | | | | |
| 117 | SENSORY RM | S3 | A117.1 | A | No | 104C | (BRAILLE) | | | | |
| 118 | SENSORY RM | S3 | A118.1 | B | Yes | 118 | (BRAILLE) | | | | |
| 119 | CONFERENCE RM | S3 | A120.1 | A | No | 120 | (BRAILLE) | MAIN OFFICE | | | |
| 119 | TLT RM | S6 | A136.6 | A | No | RESTROOM | (BRAILLE) | | | | |
| 120 | Room | S6 | A203.1 | A | No | RESTROOM | (BRAILLE) | | | | |
| 120 | Room | S6 | A205.1 | A | No | RESTROOM | (BRAILLE) | | | | |
| 120 | Room | S3 | A215A.1 | A | No | 215A | (BRAILLE) | MAIN OFFICE | | | |
| 130 | MAT ROOM | S3 | A134.2 | A | No | 130 | (BRAILLE) | MAIN OFFICE | | | |
| 131 | THE HIVE | S2 | A131 | A | No | 131 | (BRAILLE) | DINING | COMMONS | | |
| 131 | THE HIVE | S3 | A107B.1 | A | No | 107B | (BRAILLE) | MAIN OFFICE | | | |
| 132 | CHANGING RM | S3 | A132.1 | A | No | 132 | (BRAILLE) | MAIN OFFICE | | | |
| 133 | CLASSROOM | S1 | A133.1 | A | No | 133 | (BRAILLE) | | | | |
| 134 | CHANGING RM | S3 | A134.1 | A | No | 134 | (BRAILLE) | MAIN OFFICE | | | |
| 135 | CLASSROOM | S1 | A135.1 | A | No | 135 | (BRAILLE) | | | | |
| 136 | TLT. RM | S6 | | A | No | RESTROOM | (BRAILLE) | | | | |
| 136A | STAFF TLT | S6 | A136A.1 | A | No | STAFF RESTROOM | (BRAILLE) | | | | |
| 136B | JAN. | S3 | A136B.1 | A | No | 136B | (BRAILLE) | CUSTODIAL | | | |
| 137 | CONF. ROOM | S3 | A137.1 | A | No | 137 | (BRAILLE) | MAIN OFFICE | | | |
| 138 | STUDENT MONITORING ROOMS | S3 | A138.1 | A | No | 138 | (BRAILLE) | | | | |
| 138A | SENSORY RM | S3 | A138A.1 | A | No | 138A | (BRAILLE) | | | | |
| 138B | QUIET RM | S3 | A138B.1 | A | No | 138B | (BRAILLE) | | | | |
| 139 | CLASSROOM | S1 | A139.1 | A | No | 139 | (BRAILLE) | | | | |
| 141 | CLASSROOM | S1 | A141.1 | A | No | 141 | (BRAILLE) | | | | |
| 141A | TLT. RM. | S6 | A141A.1 | A | No | RESTROOM | (BRAILLE) | | | | |
| 142 | EXERCISE ROOM | S1 | A142.1 | A | No | 142 | (BRAILLE) | | | | |
| 143 | CONF. ROOM | S3 | A131.1 | A | No | 143 | (BRAILLE) | MAIN OFFICE | | | |
| 144 | OPEN OFFICE | S1 | A144.1 | A | No | 144 | (BRAILLE) | | | | |
| 145 | CLASSROOM | S1 | A145.1 | A | No | 145 | (BRAILLE) | | | | |
| 145A | TLT. RM. | S6 | A145A.1 | A | No | RESTROOM | (BRAILLE) | | | | |
| 177 | Room | S6 | A104E.4 | A | No | RESTOOM | (BRAILLE) | | | | |
| 195 | Room | S6 | A317.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 201C | Room | S6 | A104E.6 | A | No | RESTOOM | (BRAILLE) | | | | |
| 210 | ADMIN CONF. ROOM | S3 | A210.1 | A | No | 210 | (BRAILLE) | MAIN OFFICE | | | |
| 211 | RPSS OFFICE | S3 | A211.1 | A | No | 211 | (BRAILLE) | MAIN OFFICE | | | |
| 211A | OFFICE | S1 | A211A.1 | A | No | 211A | (BRAILLE) | | | | |
| 212 | RECEPTION | S3 | A212.1 | A | No | 212 | (BRAILLE) | MAIN OFFICE | | | |
| 212A | LOUNGE | S3 | A212.1 | A | No | 212 | (BRAILLE) | MAIN OFFICE | | | |
| 212B | OFFICE | S1 | A212B.1 | A | No | 212B | (BRAILLE) | | | | |
| 212C | SUPERINTENDANT | S1 | A212C.1 | A | No | 212C | (BRAILLE) | | | | |
| 212D | CONFERENCE ROOM | S3 | A212D.1 | A | No | 212D | (BRAILLE) | MAIN OFFICE | | | |
| 213 | CAREER AND TECH ED OFFICE | S3 | A213.1 | A | No | 213 | (BRAILLE) | MAIN OFFICE | | | |
| 213A | OFFICE | S1 | 213A.1 | A | No | 213A.1 | (BRAILLE) | | | | |
| 215B | CONFERENCE RM | S3 | A215B.1 | A | No | 215B | (BRAILLE) | MAIN OFFICE | | | |
| 215C | STORAGE | S3 | A215C.1 | A | No | 215C | (BRAILLE) | STORAGE | | | |
| 220 | OFFICE | S1 | A220.1 | A | No | 220 | (BRAILLE) | | | | |
| 221 | OFFICE | S1 | A221.1 | A | No | 221 | (BRAILLE) | | | | |
| 223 | OFFICE | S1 | A223.1 | A | No | 223 | (BRAILLE) | | | | |
| 224 | OFFICE | S1 | A224.1 | A | No | 224 | (BRAILLE) | | | | |
| 225 | OFFICE | S1 | A225.1 | A | No | 225 | (BRAILLE) | | | | |
| 226 | OFFICE | S1 | A226.1 | A | No | 226 | (BRAILLE) | | | | |
| 227 | OFFICE | S1 | A227.1 | A | No | 227 | (BRAILLE) | | | | |
| 228 | OFFICE | S1 | A228.1 | A | No | 228 | (BRAILLE) | | | | |
| 229 | OFFICE | S1 | A229.1 | A | No | 229 | (BRAILLE) | | | | |
| 230 | OFFICE | S1 | A230.1 | A | No | 230 | (BRAILLE) | | | | |
| 231 | OFFICE | S1 | A231.1 | A | No | 231 | (BRAILLE) | | | | |
| 236 | TLT RM | S6 | A136.4 | A | No | RESTROOM | (BRAILLE) | | | | |
| 241 | Room | S6 | A136.5 | A | No | RESTROOM | (BRAILLE) | | | | |
| 259 | Room | S6 | A136.2 | A | No | RESTROOM | (BRAILLE) | | | | |
| 261 | Room | S6 | A136.1 | A | No | RESTROOM | (BRAILLE) | | | | |
| 262 | Room | S6 | A136.3 | A | No | RESTROOM | (BRAILLE) | | | | |
| 296 | Room | S6 | A104E.3 | A | No | RESTOOM | (BRAILLE) | | | | |
| 300 | LOBBY | S3 | A300 | A | No | 300 | (BRAILLE) | MAIN OFFICE | | | |
| 300A | CONF. RM | S3 | A300A.1 | A | No | 300A | (BRAILLE) | MAIN OFFICE | | | |
| 300B | CONF. RM | S3 | A300B.1 | A | No | 300B | (BRAILLE) | MAIN OFFICE | | | |
| 301A | JAN. | S3 | A301.1 | A | No | 301A | (BRAILLE) | CUSTODIAL | | | |
| 310 | OCCUPATIONAL THERAPY STORAGE | S3 | A310.1 | A | No | 310 | (BRAILLE) | MAIN OFFICE | | | |
| 310A | SPEECH STORAGE | S3 | A310A | A | No | 310A | (BRAILLE) | MAIN OFFICE | | | |
| 310B | MECH ROOM | S3 | A310B | A | No | 310B | (BRAILLE) | MAIN OFFICE | | | |
| 311 | TEACHER CONSULTANTS OFFICE | S1 | A311.1 | B | Yes | 311 | (BRAILLE) | | | | |
| 311A | OFFICE | S1 | A311A.1 | A | No | 311A | (BRAILLE) | | | | |
| 312 | PHYSICAL THERAPY STORAGE | S3 | A312.1 | A | No | 312 | (BRAILLE) | MAIN OFFICE | | | |
| 313 | SPEECH PATHOLOGY OFFICE | S1 | A313.1 | B | Yes | 313 | (BRAILLE) | | | | |
| 313A | OFFICE | S1 | A313A.1 | A | No | 313A | (BRAILLE) | | | | |
| 314 | BH STORAGE | S3 | A314 | A | No | 314 | (BRAILLE) | MAIN OFFICE | | | |
| 315 | STAFF LOUNGE | S3 | A315.1 | A | No | 315 | (BRAILLE) | MAIN OFFICE | | | |
| 316 | TLT RM | S6 | A316.1 | A | No | RESTOOM | (BRAILLE) | | | | |
| 318 | BEHAVIORIAL HEALTH OFFICE | S1 | A318.1 | A | No | 318 | (BRAILLE) | | | | |
| 318A | OFFICE | S1 | A318A.1 | A | No | 318A | (BRAILLE) | | | | |
| 319 | PHYSICAL THERAPY/ OCCUPATIONAL THERAPY OFFICE | S1 | A319.1 | B | Yes | 319 | (BRAILLE) | | | | |
| 319 | PHYSICAL THERAPY/ OCCUPATIONAL THERAPY OFFICE | S1 | A319.2 | B | Yes | 319 | (BRAILLE) | | | | |
| 319A | OFFICE | S1 | A319A.1 | A | No | 319A | (BRAILLE) | | | | |
| 319B | OFFICE | S1 | A319B.1 | A | No | 319B | (BRAILLE) | | | | |

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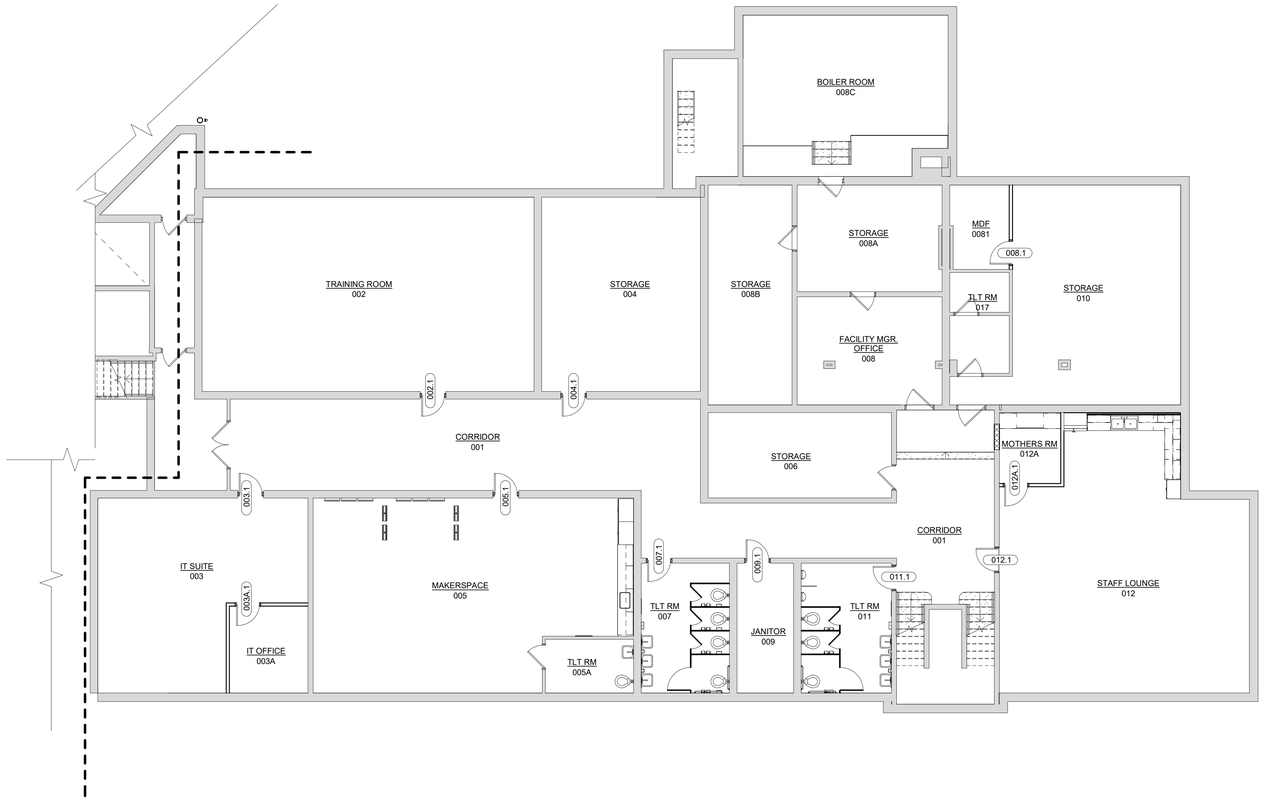


LOWER LEVEL - AREA A

1/8" = 1'-0"

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MIDLAND, MICHIGAN

SHEET TITLE

SIGNAGE PLANS - AREA A - LOWER LEVEL

PROJECT NUMBER
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PROJECT DATE
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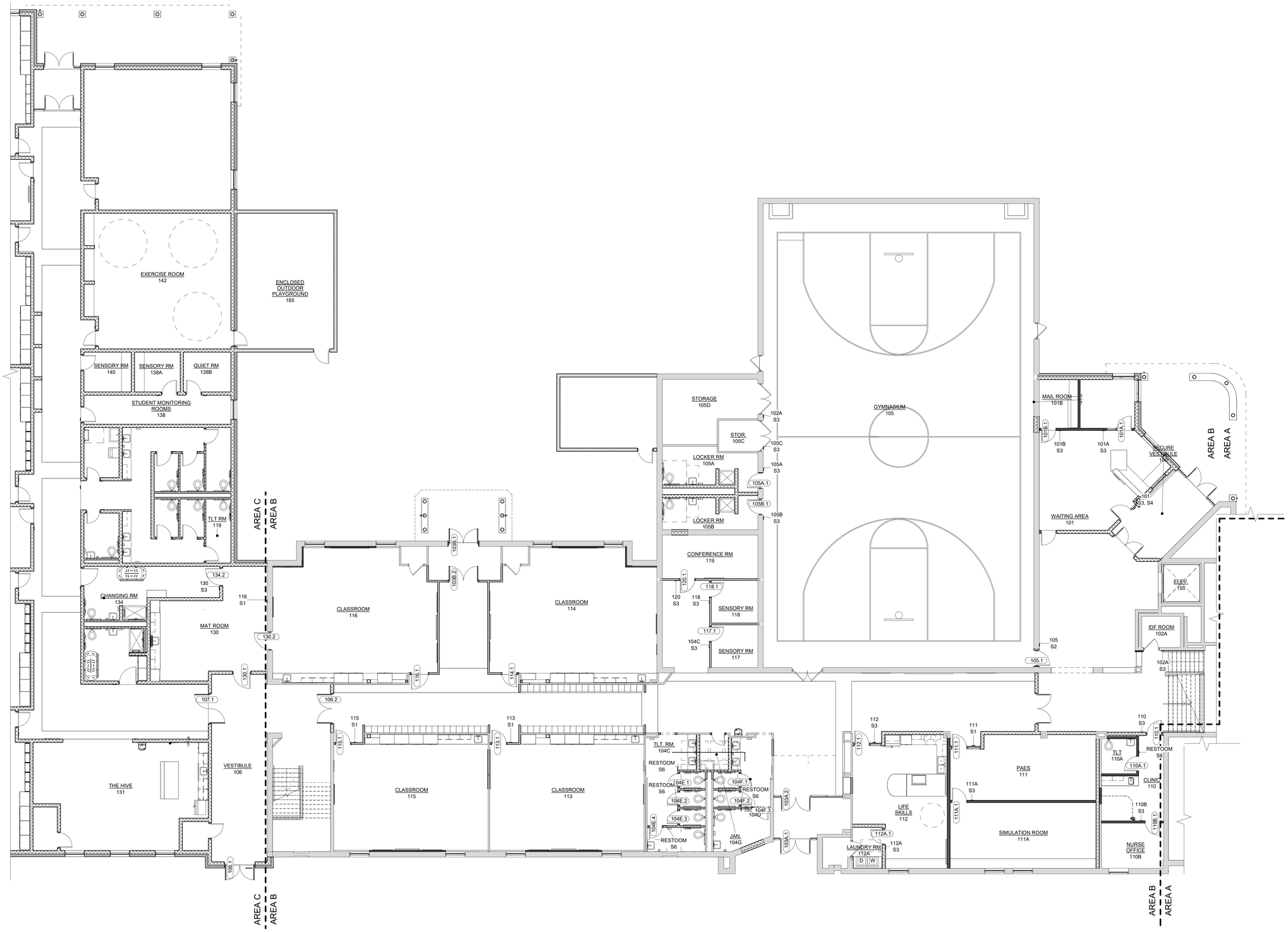
SHEET NUMBER
A2.51




MAIN LEVEL - AREA B

1/8" = 1'-0"

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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

SIGNAGE PLANS - AREA B - MAIN LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

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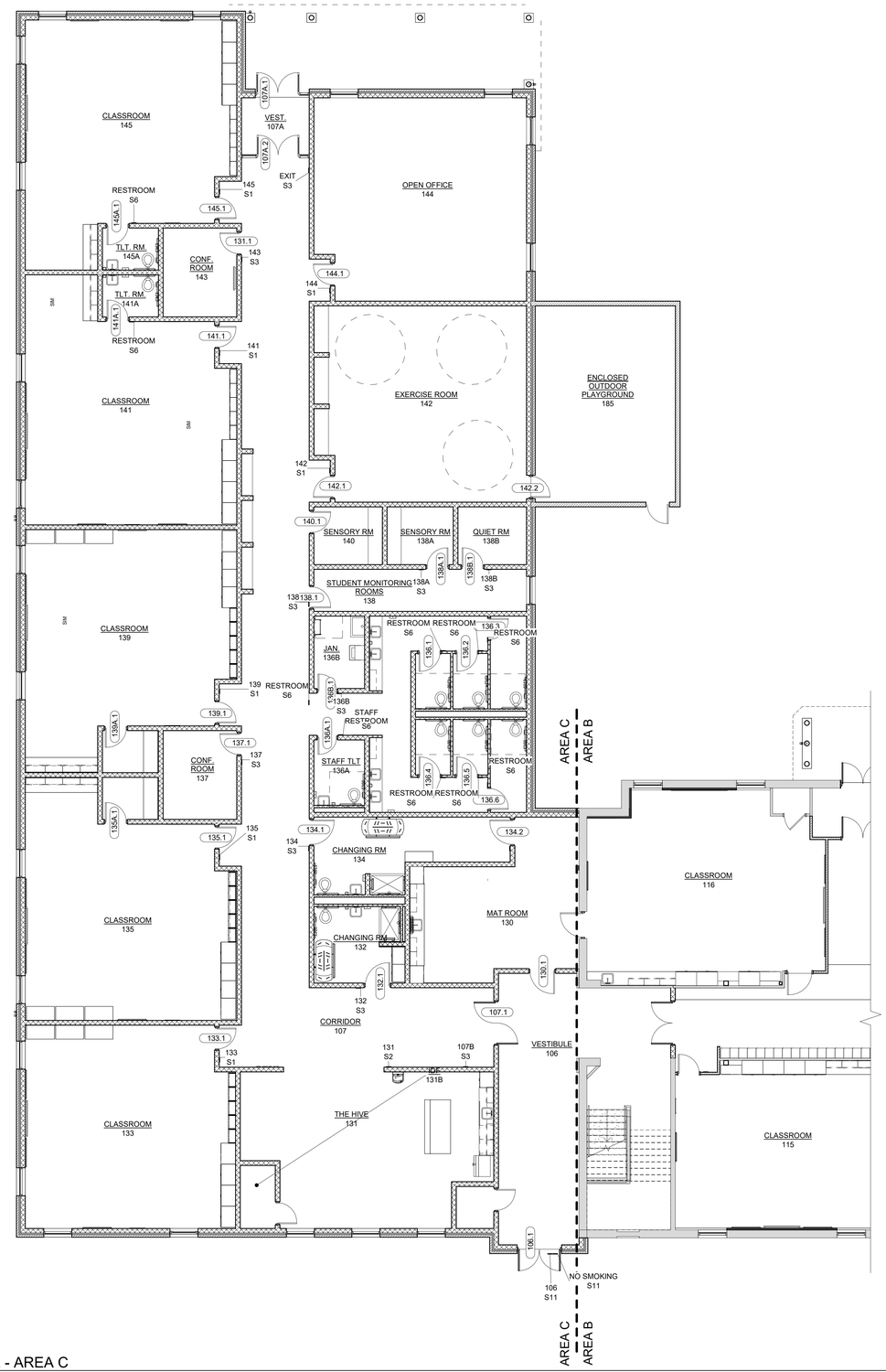
JMJ

SHEET NUMBER
A2.52




MAIN LEVEL - AREA C

1/8" = 1'-0"

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|---|---|---|
| | ISSUED FOR BID | 08/23/23 |

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MIDLAND, MICHIGAN

SHEET TITLE

SIGNAGE PLANS - AREA C - MAIN LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

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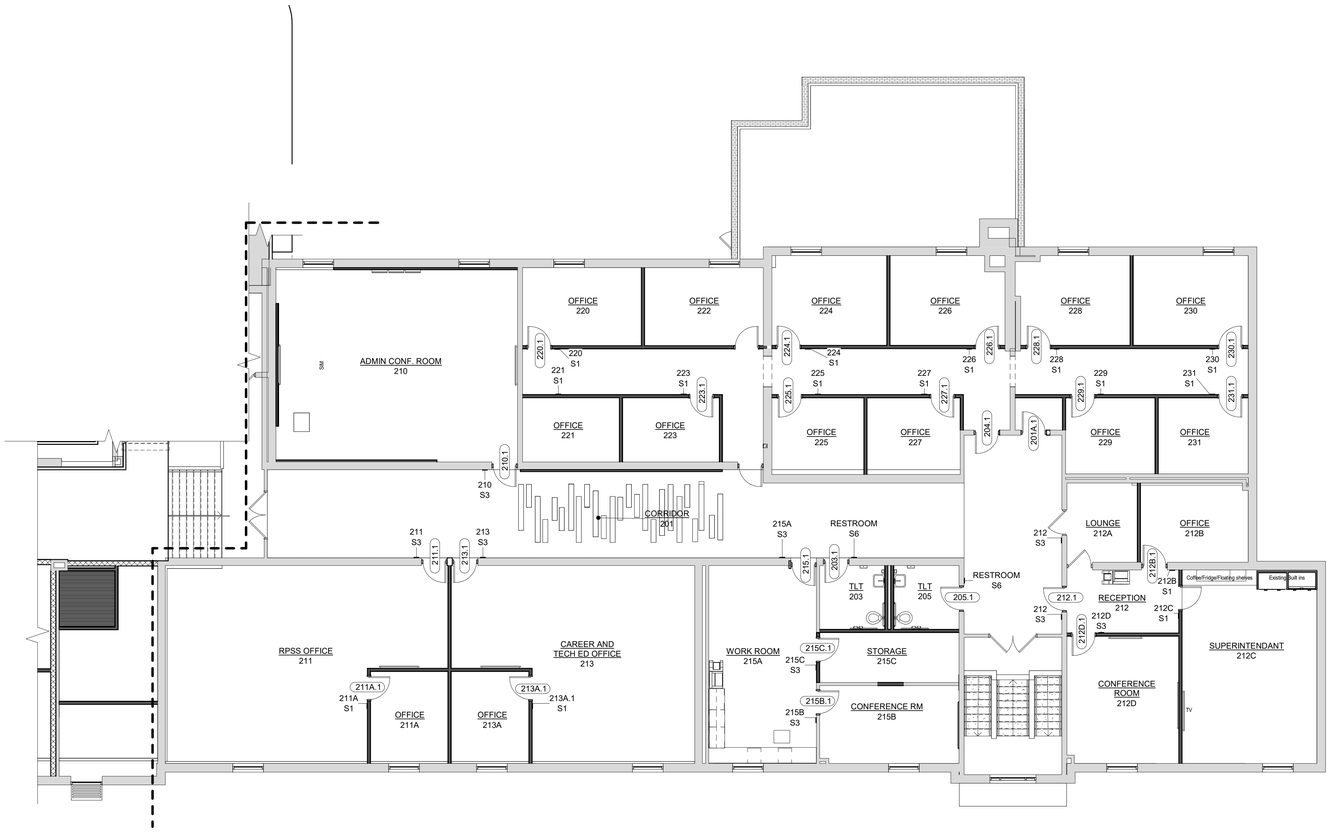
JMJ

SHEET NUMBER
A2.53




UPPER LEVEL 2 - AREA A

1/8" = 1'-0"

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SIGNAGE PLANS - AREA A - UPPER LEVEL 2

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

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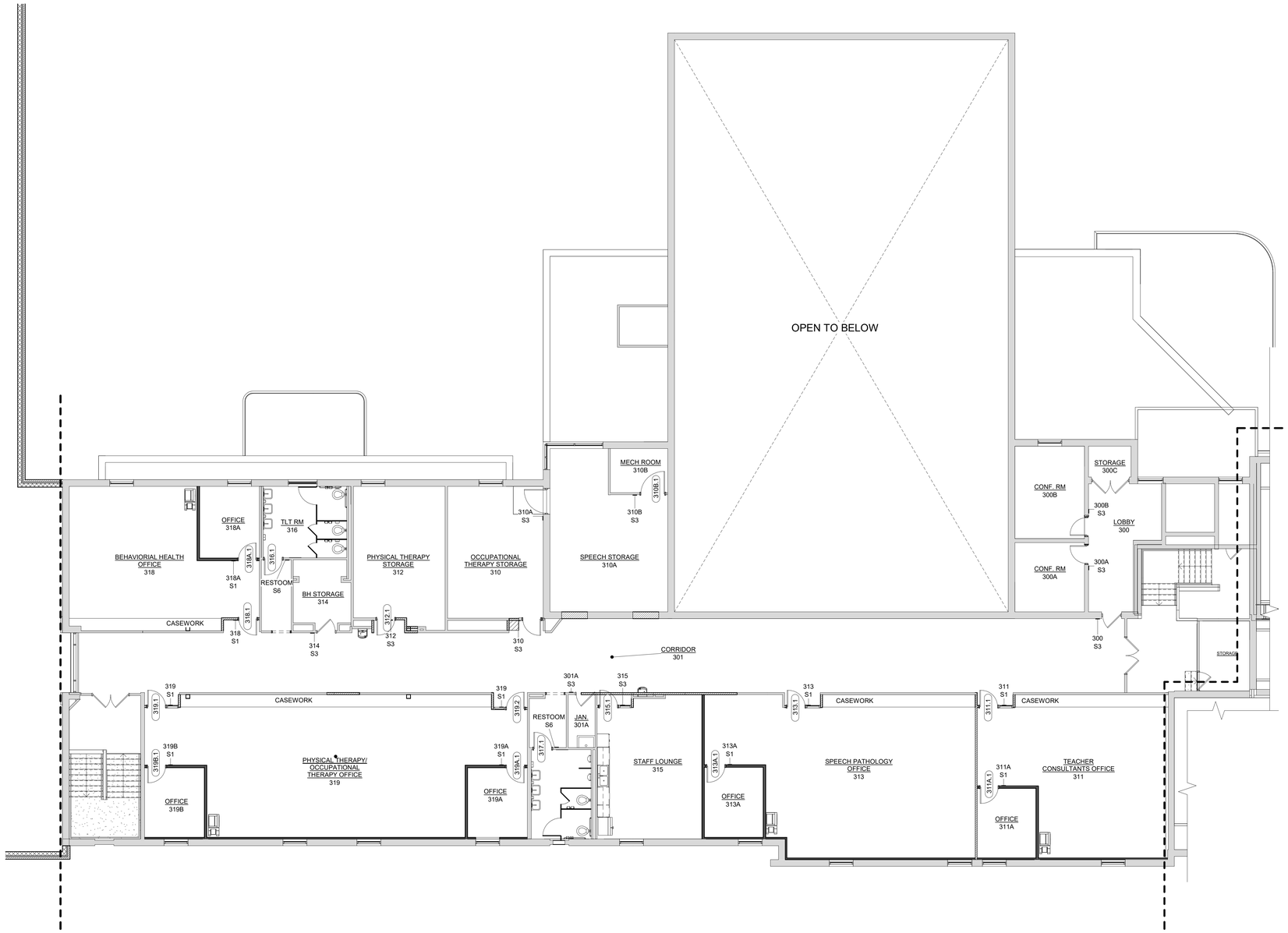
SHEET NUMBER
A2.54




UPPER LEVEL 3 - AREA B

1/8" = 1'-0"

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SHEET TITLE

SIGNAGE PLANS - AREA B - UPPER LEVEL 3

PROJECT NUMBER
2022006.1

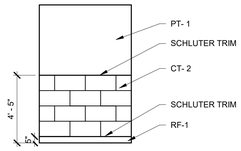
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A2.55

# FINISH MATERIAL LEGEND

| SN | MANUFACTURER | STYLE | COLOR | SIZE | REMARKS |
|---|---|---|---|---|---|
| ACOUSTIC CEILING TILE | | | | | |
| ACT-1 | USG | RADAR CLIMA PLUS HIGH NRC | WHITE | 24 X 24 | |
| ACT-2 | ARMSTRONG | METALWORKS SECURELOCK NO PERF. | WHITE | 24 X 24 | |
| ACOUSTIC PANEL | | | | | |
| AP-1 | ARMSTRONG | TECTUM SHAPES HEXAGON | FIELD PAINTED PT-5 | 46" X 40" X 2" | CEILING SUSPENDED IN HIVE |
| AP-2 | USG | COLORTEX - BARZ | WHITE OAK WOODGRAIN | 4" X 8" | CEILING BAFFLES CORRIDOR 201 |
| AP-3 | USG | COLORTEX - BARZ | WHITE OAK WOODRAIN | 2" x 10" | CEILING BAFFLES CORRIDOR 201 |
| AP-4 | ARMSTRONG | INVISACOUSTICS | FIELD PAINTED PT-10 | 24" X 48" X 3/4" | CEILING DECK IN HIVE |
| ARTIFICAL TURF | | | | | |
| TURF-1 | FIELDTURF | COMMAND PLAY | | 15'x50' | |
| BRICK | | | | | |
| B-1 | BELDEN BRICK | MODULAR 141-145 VERTICAL | 22-44 | 3-5/8" X 2-1/4" X 7-5/8" | EXTERIOR |
| B-2 | BELDEN BRICK | MODULAR 470-479 | LIGHT A | 3-5/8" X 2-1/4" X 7-5/8" | MATCH EXISTING INTERIOR |
| CARPET | | | | | |
| CPT-1 | INTERFACE | BITRATE | DARK TEAL | 10 X 40 | ASHLAR INSTALL- ADMIN CORRIDORS |
| CPT-2 | INTERFACE | SOURCE MATERIAL | GRAPHITE | 10 X 40 | ASHLAR INSTALL-OFFICES |
| CPT-3 | INTERFACE | UPLOAD | LIGHT TEAL | 10 X 40 | ACCENT |
| CPT-4 | MANNINGTON | EBB | STREAM 15844 | 18" x 36" | AHSLAR - SUPERINT. |
| CPT-5 | MANNINGTON | CURRENT | STREAM 15844 | 18" x 36" | ASHLAR - SUPERINT. |
| CPT-6 | SHAW | OBSERVE COLOR TILE | CALM OCEANS 05405 | 9 X 36 | ASHLAR - ADMIN CONF. |
| CPT-7 | PATCRAFT | CONNECTING | STROLL 00540 | 24 X 24 | MONOLITHIC |
| CPT-8 | FORBO | FLOTEX EXPLORE PLANKS | 065373 STEEL | 39.37" x 9.48" x .2" | ASHLAR |
| CPT-9 | FORBO | FLOTEX METRO TILE | 546028 JADE | 20" x 20" x .2" | MONOLITHIC |
| CPT-10 | FORBO | FLOTEX TRIAD PLANKS | 131007 STEEL | 39.37" x 9.48" x .2" | ASHLAR |
| CPT-11 | FORBO | FLOTEX MONTAGE PLANKS | 147001 BOREAL | 39.37" x 9.48" x .2" | ASHLAR |
| CERAMIC TILE | | | | | |
| CT-1 | CROSSVILLE | COLOR BLOX | CELESTIAL HORIZON | 12" x 12" | STAFF TOILET FLOOR |
| CT-2 | CROSSVILLE | READY TO WEAR | HAND IN GLOVE | 12" x 24" | FIELD WALL TILE |
| CT-3 | AMERICAN OLEAN | CREEKWOOD | MAPLE LAKE | 6" x 36" | |
| CT-4 | AMERICAN OLEAN | COLOR STORY | 84 PEACOCK BLUE(TEAL) | 4" x 12" | VIBRANT GLOSS |
| CT-5 | AMERICAN OLEAN | COLOR STORY | 68 GRACE (PURPLE) | 4" x 12" | VIBRANT GLOSS |
| CT-6 | AMERICAN OLEAN | COLOR STORY | 77 MANDARIN (ORANGE) | 4" x 12" | VIBRANT GLOSS |
| CT-7 | AMERICAN OLEAN | COLOR STORY | 76 GREEN APPLE (GREEN) | 4" x 12" | VIBRANT GLOSS |
| CT-8 | NOT USED | | | | |
| CT-9 | AMERICAN OLEAN | COLOR STORY | 84 PEACOCK BLUE HEXAGON | 1.5" HEXAGON | VIBRANT GLOSS |
| CT-10 | OLYMPIA TILE | OCEANI | AEQUA | 2 X 10 | LIFE SKILLS SUBWAY |
| CT-11 | ONIX | 2003509 RODAS | TESSERAE | 1" X 1" | STAFF LOUNGE |
| CT-12 | AMERICAN OLEAN | COLOR STORY | 77 MANDARIN | 4" x 4" | VIBRANT GLOSS |
| CT-13 | AMERICAN OLEAN | COLOR STORY | 76 GREEN APPLE | 4" x 4" | VIBRANT GLOSS |
| CT-14 | AMERICAN OLEAN | COLOR STORY | 68 GRACE | 4" x 4" | VIBRANT GLOSS |
| CT-15 | AMERICAN OLEAN | COLOR STORY | 84 PEACOCK BLUE(TEAL) | 4" x 4" | VIBRANT GLOSS |
| CONCRETE MASONRY | | | | | |
| CMU-1 | MFR | STANDARD | UNFINISHED (FIELD PAINTED) | VARIESx8"x16" | |
| DECORATIVE PANEL SYSTEM | | | | | |
| DPS-1 | MARLITE | SIEVA LARGE PANEL | HPL - WILSONART LANDMARK WOOD | 16'W X 8'H OA | |
| FIBERGLASS REINFORCED PLASTIC PANEL | | | | | |
| FRP-1 | MARLITE SYMMETRIX | SUBWAY HORIZONTAL | LOGGIA | 4' X 4' | TILE SIZE = 6" X 3" |
| GLASS BLOCK | | | | | |
| GB-1 | BELDEN BRICK | CROSS RIBBED | CLEAR | 8 X 8 X 4 | MATCH EXISTING |
| LOCKERS | | | | | |
| LKR-1 | ASI | BLACK CORE PHENOLIC | DESERT ZEPHYR 4583 | | |
| METAL PANEL | | | | | |
| MP-1 | PAC-CLAD | | CUSTOM COLOR | | EXTERIOR CANOPY |
| MP-2 | PAC-CLAD | | GRANITE | | EXTERIOR CANOPY CEILING |
| PAINT | | | | | |
| PT-1 | SHERWIN WILLIAMS | | LOGGIA SW7506 | | OVERALL PAINT |
| PT-2 | SHERWIN WILLIAMS | | REALLY TEAL SW6489 | | TEAL ACCENT |
| PT-3 | SHERWIN WILLIAMS | | RIVULET SW6760 | | LIGHT TEAL |
| PT-4 | SHERWIN WILLIAMS | | WOOD VIOLET SW6557 | | PURPLE ACCENT |
| PT-5 | SHERWIN WILLIAMS | | ADVENTURE ORANGE SW6655 | | ORANGE ACCENT |
| PT-6 | SHERWIN WILLIAMS | | PARAKEET SW6711 | | GREEN ACCENT |
| PT-7 | SHERWIN WILLIAMS | | OVERJOY SW6689 | | YELLOW ACCENT |
| PT-8 | SHERWIN WILLIAMS | | PAVESTONE SW7642 | | DOORS AND EXISTING TRIM |
| PT-9 | SHERWIN WILLIAMS | | GAUNTLET GRAY SW7019 | | EXISTING ENTRY ACCENT |
| PT-10 | SHERWIN WILLIAMS | | IRON ORE SW7069 | | HIVE EXPOSED CLNG |
| PT-11 | SHERWIN WILLIAMS | | HIGH REFLECTIVE WHITE SW7757 | | |
| PLASTIC LAMINATE | | | | | |
| PLAM-1 | WILSONART | LANDMARK WOOD 7981K-12 | | | SOFTGRAIN FINISH |
| POLISHED CONCRETE | | | | | |
| PC-1 | -- | POLISHED CONCRETE | NATURAL, UNCOLORED | -- | CLASS 3 GRIND |
| RESILIENT BASE | | | | | |
| RWB-1 | ROPPE | PINNACLE 4-1/2" COVE | 123 CHARCOAL | | |
| RWB-2 | ROPPE | PINNACLE 6" COVE | 123 CHARCOAL | | |
| RWB-2 | TARKETT | 4" VENTED RUBBER BASE | BLACK | | |
| RESILIENT STAIR TREAD | | | | | |
| RST-1 | ROPPE | MARBLE FIESTA WITH RUBBER STRIP | MARENGO M410 | | WITH RUBBER STRIP |
| RESILIENT TILE FLOORING | | | | | |
| RTF-1 | PATCRAFT | GRAPH | GRAVEL | 24 X 24 | STAFF LOUNGE FIELD |
| RTF-2 | PATCRAFT | PLANAR | TEAL PLANAR | 24 X 24 | STAFF LOUNGE ACCENT |
| RTF-3 | ROPPE | MARBLE FIESTA | MARENGO M410 | | |
| RESINOUS FLOORING | | | | | |
| RF-1 | SHERWIN WILLIAMS | 1/4" RESUFLOR DECO FLAKE | RIVER ROCK | | |
| SOLID SURFACE | | | | | |
| SS-1 | CORIAN | | LINEN | | |
| SS-2 | CORAN | | ARTISTA GRAY | | |
| STONE | | | | | |
| ST-1 | ARRISCRAFT | ADAIR LIMESTONE | SEPIA | 7-5/8" X 2-1/4" X 7-5/8" | EXTERIOR |

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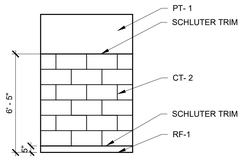


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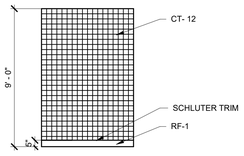


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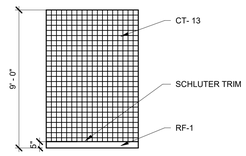


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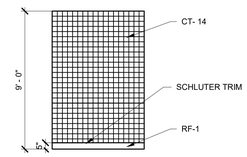


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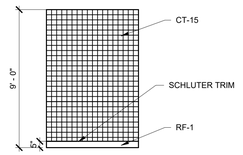


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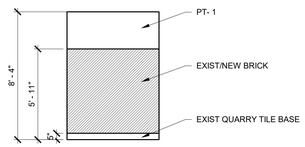


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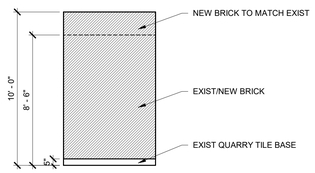


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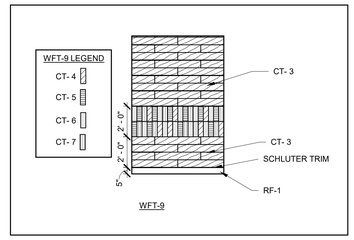


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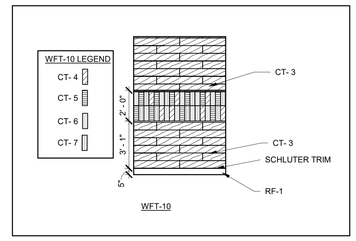


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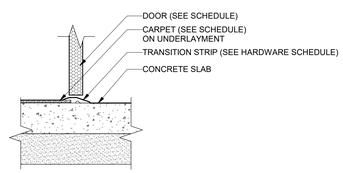
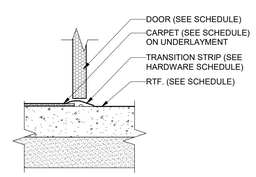
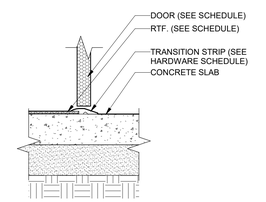


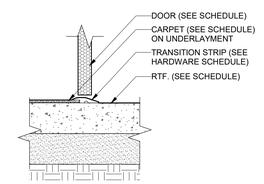

9 A3.00 DOOR TRANSITION - CONC. TO CPT.
SCALE: 1 1/2" = 1'-0"



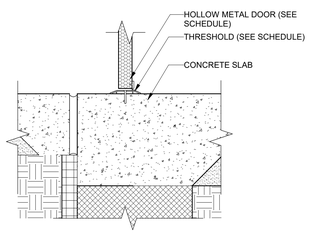

10 A3.00 DOOR TRANSITION - RTF. TO RF.
SCALE: 1 1/2" = 1'-0"



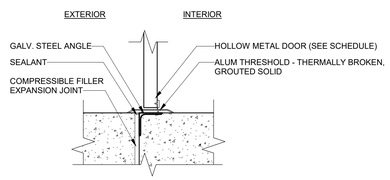

11 A3.00 DOOR TRANSITION - CONC. TO RTF.
SCALE: 1 1/2" = 1'-0"



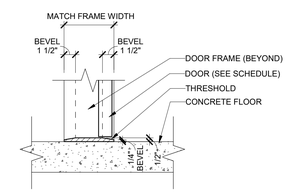

12 A3.00 DOOR TRANISTION - RTF. TO CPT.
SCALE: 1 1/2" = 1'-0"



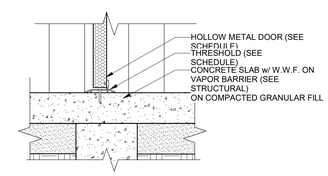

13 A3.00 H.M. DOOR EXT. SILL
SCALE: 1 1/2" = 1'-0"




14 A3.00 EXTERIOR DOOR THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



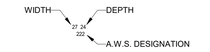

15 A3.00 DOOR THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"




16 A3.00 HM DOOR DETAIL @ 106
SCALE: 1 1/2" = 1'-0"

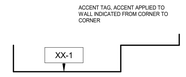
## INTERIOR GENERAL NOTES:

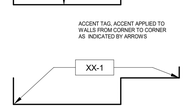
1. AT STUD WALL LOCATIONS PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO: GRAB BARS, MIRRORS, DISPENSERS, ETC. (REFER TO MFR. RECOMMENDATIONS.
2. ALL NEW CASEWORK TO HAVE HIGH PRESSURE LAMINATE EXTERIOR AND MELAMINE LAMINATE INTERIOR. UNLESS OTHERWISE NOTED.
3. ALL FURNITURE THAT IS NOT BUILT-IN IS NOT PART OF THE SCOPE OF THIS PROJECT.
4. REFER TO FINISH MATERIAL SCHEDULE FOR SPECIFIC MANUFACTURER, STYLE, COLOR & SIZE INFORMATION
5. REFER TO REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS AND FINISH INFORMATION
6. AT CERAMIC TILE LOCATIONS, INSTALLER TO USE APPROPRIATE TROWEL TO ACCOMMODATE DIFFERENT TILE THICKNESSES
7.
8. PROVIDE RESILIENT BASE AT TOE KICK OF ALL CASEWORK AND BEHIND ALL MOVABLE EQUIPMENT/APPLIANCES, WHEN SCHEDULED WITHIN A ROOM.
9. TYPICAL CASE WORK NOTATION EXAMPLE




10. ALL CASEWORK LOCKABLE UNLESS OTHERWISENOTED (DOORS AND DRAWERS).
11. ALL WALL MOUNTED MECHANICAL EQUIPMENT (DIFFUSERS, GRILLES, ETC) AND ELECTRICAL EQUIPMENT (PANELS, ETC) SHALL BE PAINTED TO MATCH THE ADJACENT WALL COLOR. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR QUANTITIES AND LOCATIONS.
12. WHERE REMOVAL OR MODIFICATION TO A FINISH MATERIAL IS SHOWN, BUT NEW FINISHES ARE NOT SCHEDULED, PATCH AND REPAIR TO MATCH EXISTING FINISH CONDITION AS REQUIRED.
13. PROVIDE APPROPRIATE TRANSITION STRIPS BETWEEN DISSIMILAR FLOORING MATERIALS AT VERTICAL AND/OR HORIZONTAL APPLICATIONS.
14. CARPET EDGES SHALL BE CAPTURED BY NOSING, NOSING SHALL BE MITERED AT ALL OUTSIDE AND INSIDE CORNER CONDITIONS. ALL EDGES OF CARPET SHALL BE SEALED WITH A SEAM SEALER.
15. FLOORING CONTRACTOR SHALL INSTALL INSERTS TO MATCH ADJACENT FLOORING MATERIAL AT ALL ELECTRICAL FLOOR BOX COVERS AS REQUIRED.

ROOM FINISH MATERIAL LEGEND




WINDOW TREATMENTS

WT

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |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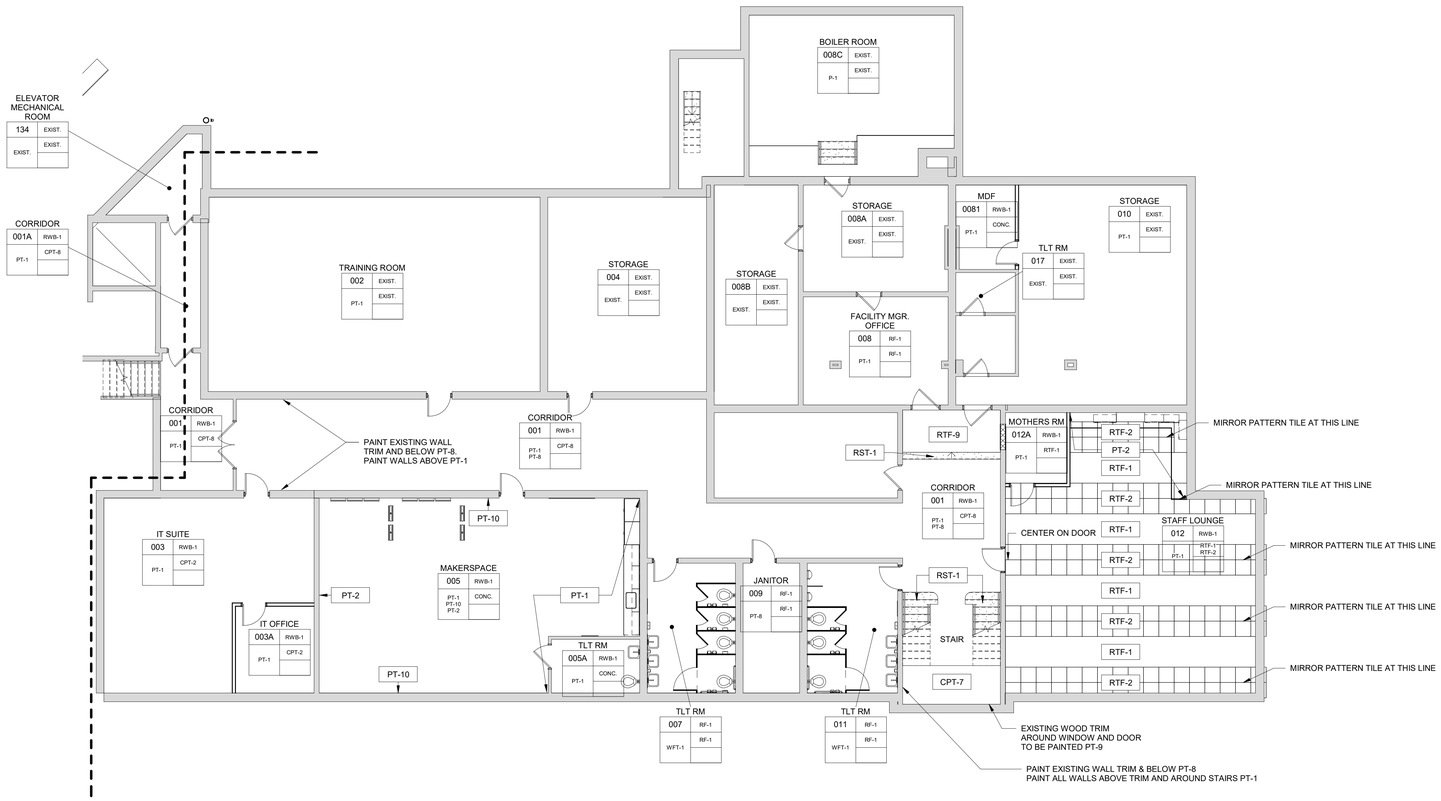
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
FINISH SCHEDULES AND LEGENDS

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A3.00




1 / A3.01 LOWER LEVEL - AREA A

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

## INTERIOR GENERAL NOTES:

1. AT STUD WALL LOCATIONS PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO: GRAB BARS, MIRRORS, DISPENSERS, ETC. (REFER TO MFR. RECOMMENDATIONS.
2. ALL NEW CASEWORK TO HAVE HIGH PRESSURE LAMINATE EXTERIOR AND MELAMINE LAMINATE INTERIOR. UNLESS OTHERWISE NOTED.
3. ALL FURNITURE THAT IS NOT BUILT-IN IS NOT PART OF THE SCOPE OF THIS PROJECT.
4. REFER TO FINISH MATERIAL SCHEDULE FOR SPECIFIC MANUFACTURER, STYLE, COLOR & SIZE INFORMATION
5. REFER TO REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS AND FINISH INFORMATION
6. AT CERAMIC TILE LOCATIONS, INSTALLER TO USE APPROPRIATE TROWEL TO ACCOMMODATE DIFFERENT TILE THICKNESSES
7.
8. PROVIDE RESILIENT BASE AT TOE KICK OF ALL CASEWORK AND BEHIND ALL MOVABLE EQUIPMENT/APPLIANCES, WHEN SCHEDULED WITHIN A ROOM.
9. TYPICAL CASE WORK NOTATION EXAMPLE

WIDTH — DEPTH

27 28 / 22D

A.W.S. DESIGNATION

10. ALL CASEWORK LOCKABLE UNLESS OTHERWISENOTED (DOORS AND DRAWERS).
11. ALL WALL MOUNTED MECHANICAL EQUIPMENT (DIFFUSERS, GRILLES, ETC) AND ELECTRICAL EQUIPMENT (PANELS, ETC) SHALL BE PAINTED TO MATCH THE ADJACENT WALL COLOR. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR QUANTITIES AND LOCATIONS.
12. WHERE REMOVAL OR MODIFICATION TO A FINISH MATERIAL IS SHOWN, BUT NEW FINISHES ARE NOT SCHEDULED, PATCH AND REPAIR TO MATCH EXISTING FINISH CONDITION AS REQUIRED.
13. PROVIDE APPROPRIATE TRANSITION STRIPS BETWEEN DISSIMILAR FLOORING MATERIALS AT VERTICAL AND/OR HORIZONTAL APPLICATIONS.
14. CARPET EDGES SHALL BE CAPTURED BY NOSING, NOSING SHALL BE MITERED AT ALL OUTSIDE AND INSIDE CORNER CONDITIONS. ALL EDGES OF CARPET SHALL BE SEALED WITH A SEAM SEALER.
15. FLOORING CONTRACTOR SHALL INSTALL INSERTS TO MATCH ADJACENT FLOORING MATERIAL AT ALL ELECTRICAL FLOOR BOX COVERS AS REQUIRED.

ROOM FINISH MATERIAL LEGEND

ACCENT TAG, ACCENT APPLIED TO WALL INDICATED FROM CORNER TO CORNER

XX-1

ACCENT TAG, ACCENT APPLIED TO WALLS FROM CORNER TO CORNER AS INDICATED BY ARROWS

XX-1

WINDOW TREATMENTS

WT

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |

AREA C | AREA B | AREA A

NORTH NO SCALE

KEY PLAN

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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

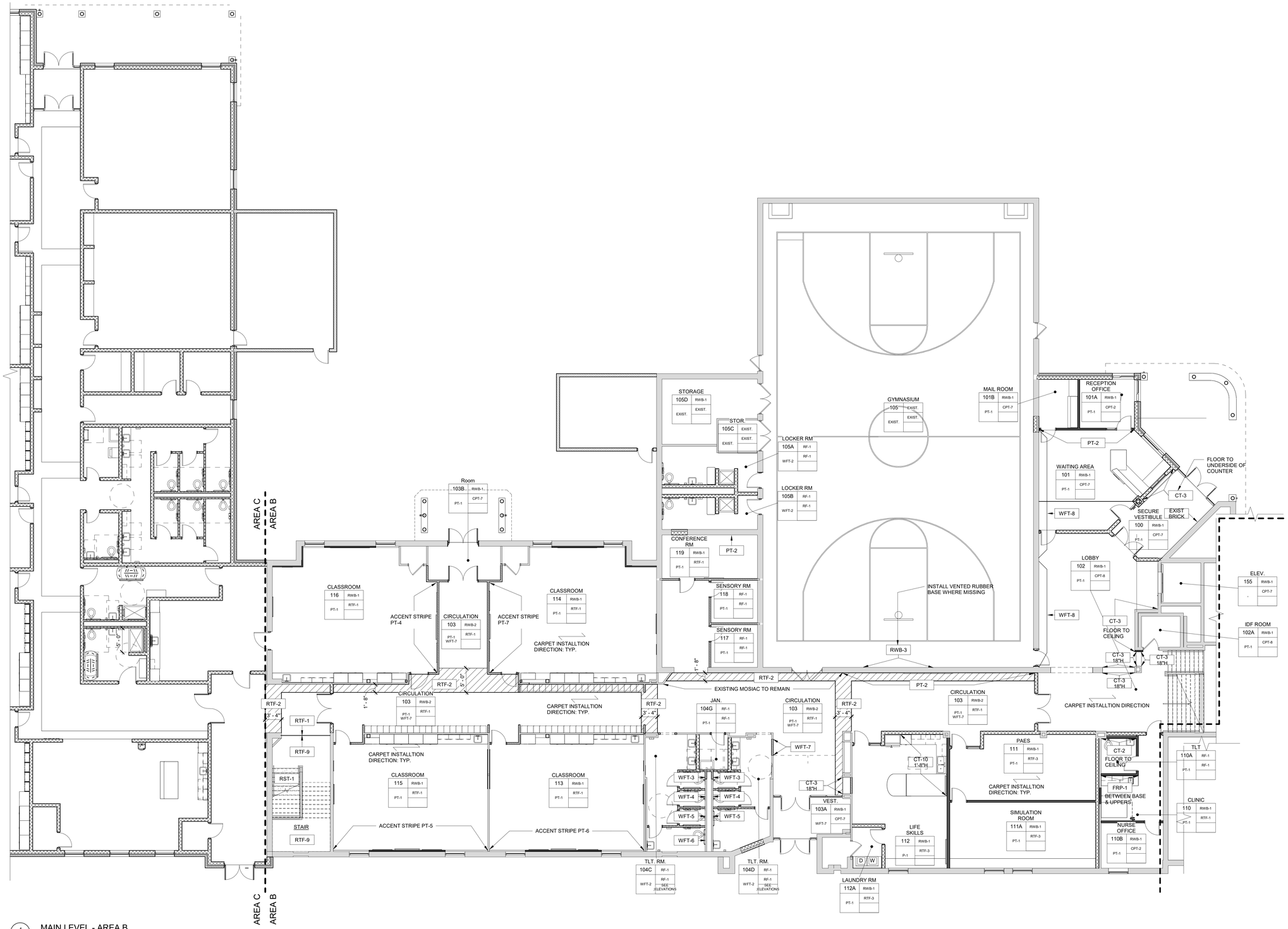
ROOM FINISH PLANS - AREA A - LOWER LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A3.01




1 A3.02 MAIN LEVEL - AREA B
SCALE: 1/8" = 1'-0"

## INTERIOR GENERAL NOTES:

1. AT STUD WALL LOCATIONS PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO: GRAB BARS, MIRRORS, DISPENSERS, ETC. (REFER TO MFR. RECOMMENDATIONS.
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5. REFER TO REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS AND FINISH INFORMATION
6. AT CERAMIC TILE LOCATIONS, INSTALLER TO USE APPROPRIATE TROWEL TO ACCOMMODATE DIFFERENT TILE THICKNESSES
7.
8. PROVIDE RESILIENT BASE AT TOE KICK OF ALL CASEWORK AND BEHIND ALL MOVABLE EQUIPMENT/APPLIANCES, WHEN SCHEDULED WITHIN A ROOM.
9. TYPICAL CASE WORK NOTATION EXAMPLE

WIDTH — DEPTH
27 24
222
A.W.S. DESIGNATION

10. ALL CASEWORK LOCKABLE UNLESS OTHERWISENOTED (DOORS AND DRAWERS).
11. ALL WALL MOUNTED MECHANICAL EQUIPMENT (DIFFUSERS, GRILLES, ETC) AND ELECTRICAL EQUIPMENT (PANELS, ETC) SHALL BE PAINTED TO MATCH THE ADJACENT WALL COLOR. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR QUANTITIES AND LOCATIONS.
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15. FLOORING CONTRACTOR SHALL INSTALL INSERTS TO MATCH ADJACENT FLOORING MATERIAL AT ALL ELECTRICAL FLOOR BOX COVERS AS REQUIRED.

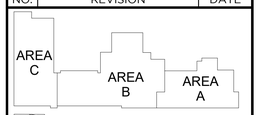
ROOM FINISH MATERIAL LEGEND

ACCENT TAG, ACCENT APPLIED TO WALL INDICATED FROM CORNER TO CORNER
XX-1

ACCENT TAG, ACCENT APPLIED TO WALLS FROM CORNER TO CORNER AS INDICATED BY ARROWS
XX-1

WINDOW TREATMENTS
WT

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

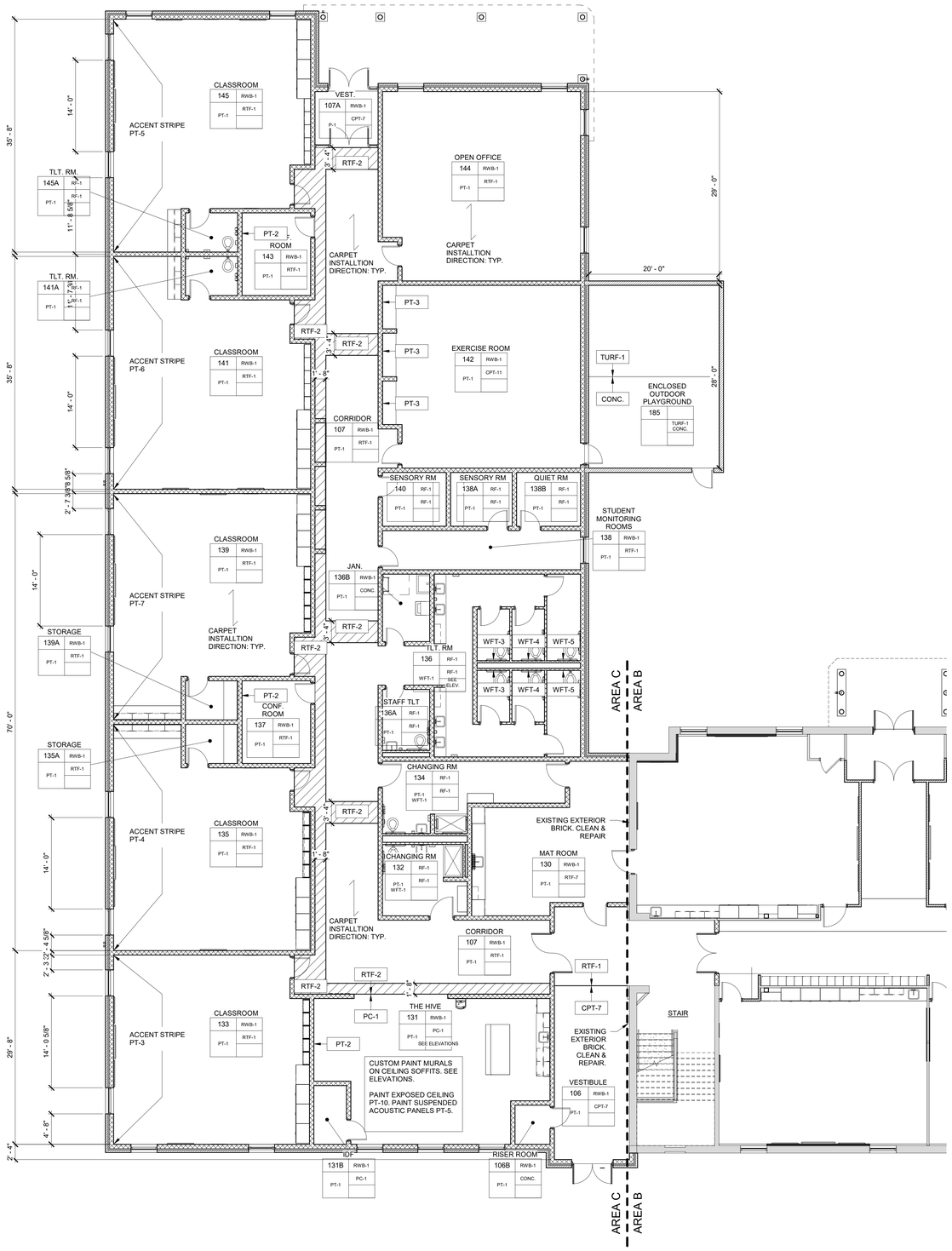
SHEET TITLE
ROOM FINISH PLANS - AREA B - MAIN LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A3.02




1 A3.03 MAIN LEVEL - SOUTH WING - AREA C

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

## INTERIOR GENERAL NOTES:

1. AT STUD WALL LOCATIONS PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO: GRAB BARS, MIRRORS, DISPENSERS, ETC. (REFER TO MFR. RECOMMENDATIONS.
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9. TYPICAL CASE WORK NOTATION EXAMPLE

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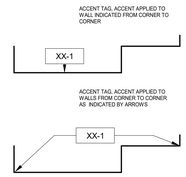
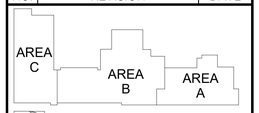
ROOM FINISH MATERIAL LEGEND




WINDOW TREATMENTS

WT

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




NORTH NO SCALE KEY PLAN

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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

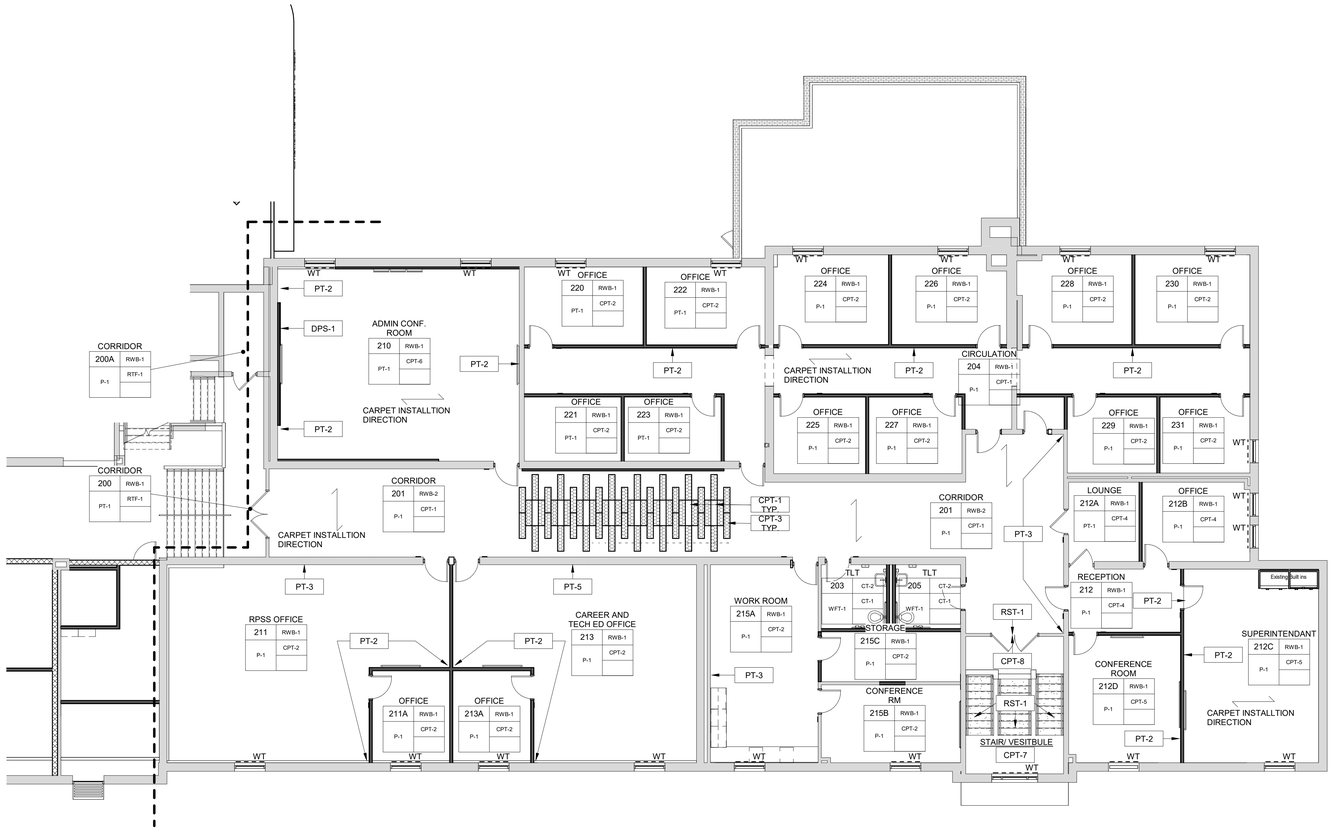
ROOM FINISH PLANS - AREA C - MAIN LEVEL

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A3.03




1 A3.04 UPPER LEVEL 2 - AREA A

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

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1. AT STUD WALL LOCATIONS PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO: GRAB BARS, MIRRORS, DISPENSERS, ETC. (REFER TO MFR. RECOMMENDATIONS.
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WIDTH — DEPTH
27 24
222
A.W.S. DESIGNATION

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XX-1

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XX-1

WINDOW TREATMENTS

WT

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |

AREA C
AREA B
AREA A

KEY PLAN
NORTH NO SCALE

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

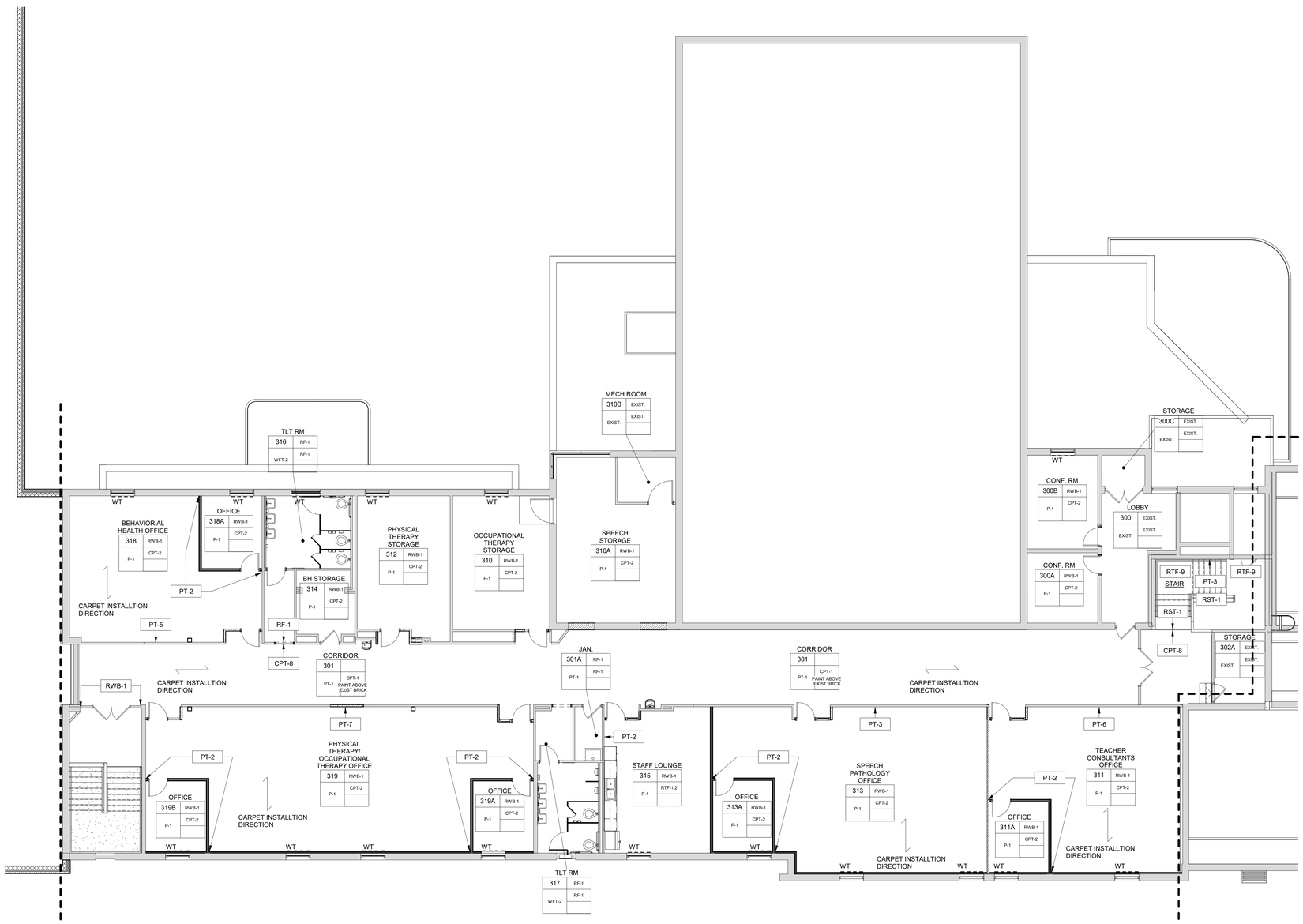
SHEET TITLE
ROOM FINISH PLANS - AREA A - UPPER LEVEL 2

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A3.04




1 A3.05 UPPER LEVEL 3 - AREA B

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

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1. AT STUD WALL LOCATIONS PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO: GRAB BARS, MIRRORS, DISPENSERS, ETC. (REFER TO MFR. RECOMMENDATIONS.
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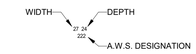


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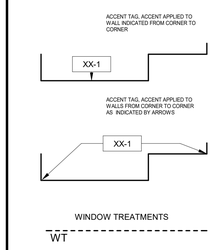
### ROOM FINISH MATERIAL LEGEND




| NO. | REVISION | DATE |
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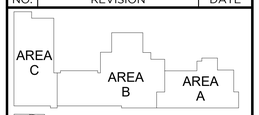


KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

ROOM FINISH PLANS - AREA B - UPPER LEVEL 3

PROJECT NUMBER
2022006.1

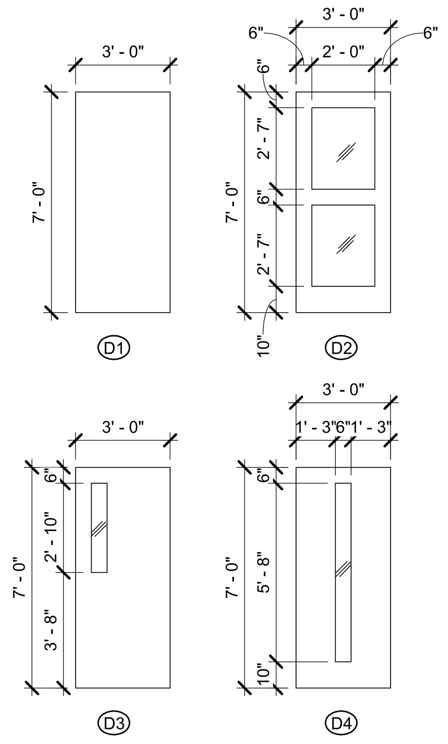
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

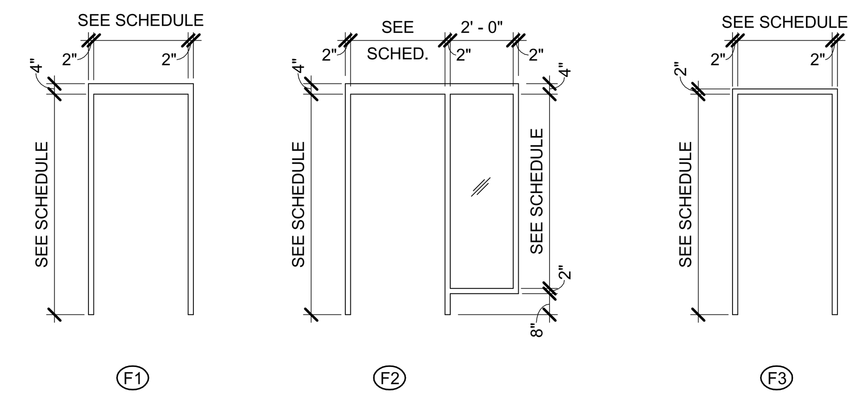
SHEET NUMBER
A3.05

## DOOR SCHEDULE

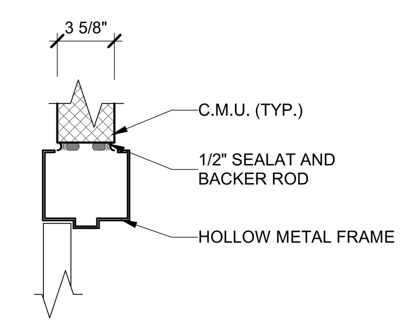
| | DOOR | | | | | | FRAME | | DETAILS | | | FIRE RATING | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NUMBER | PAIR | WIDTH | HEIGHT | THK. | MAT. | TYPE | MAT. | TYPE | HEAD | JAMB | SILL | LABEL | MIN. | REMARKS | HW SET |
| LOWER LEVEL | | | | | | | | | | | | | | | |
| 002.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | 12/A3.00 | | | | 35 |
| 003.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | 12/A3.00 | | | | 35 |
| 003A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F3 | 7/A3.10 | 7/A3.10 | - | | | | 04 |
| 004.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F3 | 5/A3.10 | 6/A3.10 | 11/A3.00 | | | | 29 |
| 005.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | 11/A3.00 | | 45 | | 01 |
| 007.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | 10/A3.00 | | | | 24 |
| 008.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 7/A3.10 | 7/A3.10 | 9/A3.00 | | | | 02 |
| 009.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | 12/A3.00 | | | | 29 |
| 011.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | 12/A3.00 | | | | 24 |
| 012.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D4 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | | | 35 |
| 012A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F3 | 7/A3.10 | 7/A3.10 | 12/A3.00 | | | | 31 |
| 200.1 | X | 5' - 10" | 6' - 10" | 2 1/4" | ALUM | D2 | ALUM | W5 | SEE FRAME | SEE FRAME | SEE FRAME | | | CARD READER, ADA OPERATOR | |
| MAIN LEVEL | | | | | | | | | | | | | | | |
| 100.1 | X | 6' - 0" | 7' - 1" | 2 1/4" | ALUM | D2 | ALUM | W6 | SEE FRAME | SEE FRAME | SEE FRAME | | | CARD READER, ADA OPERATOR | 18 |
| 100.2 | X | 5' - 10" | 7' - 0" | 2 1/4" | ALUM | D2 | ALUM | F1 | 5/A3.10 | 6/A3.10 | - | | | CARD READER, ADA OPERATOR | 20 |
| 101.1 | | 3' - 0" | 7' - 0" | 2 1/4" | ALUM | D2 | ALUM | F1 | 5/A3.10 | 6/A3.10 | - | | | CARD READER, ADA OPERATOR, RELEASE BUTTON | 22 |
| 101.3 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D2 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | | CARD READER, ADA OPERATOR, RELEASE BUTTON | 23 |
| 101A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | | 04 |
| 101B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | | 14 |
| 102.1 | | 8' - 8" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 103.1 | X | 6' - 0" | 7' - 0" | 2 1/4" | HM | D2 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 27 |
| 103A.1 | X | 6' - 2" | 7' - 10" | 2 1/4" | ALUM | D2 | ALUM | W8 | SEE FRAME | SEE FRAME | SEE FRAME | | | CARD READER, ADA OPERATOR | 18 |
| 103A.2 | X | 6' - 0" | 7' - 10" | 2 1/4" | ALUM | D2 | ALUM | WA | SEE FRAME | SEE FRAME | SEE FRAME | | | ADA OPERATOR | 21 |
| 103B.1 | X | 6' - 0" | 7' - 0" | 2 1/4" | ALUM | D2 | ALUM | F1 | 8/A3.10 | 8/A3.10 | 13/A3.00 | | | CARD READER, ADA OPERATOR | 18 |
| 103B.2 | X | 6' - 0" | 7' - 0" | 2 1/4" | ALUM | D2 | ALUM | F1 | 3/A3.10 | 4/A3.10 | 12/A3.00 | | | ADA OPERATOR | 21 |
| 104C.1 | | 3' - 0" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 104D.1 | | 3' - 0" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 104E.1 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 13 |
| 104E.2 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 13 |
| 104E.3 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 13 |
| 104E.4 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 104F.1 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 13 |
| 104F.2 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 13 |
| 104F.3 | | 2' - 8" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 104G.1 | | 2' - 8" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 02 |
| 105.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 11/A3.10 | 12/A3.10 | 9/A3.00 | | | | 28 |
| 105A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 11/A3.10 | 12/A3.10 | 9/A3.00 | | | | 12 |
| 105B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 11/A3.10 | 12/A3.10 | 9/A3.00 | | | | 12 |
| 106.1 | X | 6' - 0" | 7' - 0" | 2 1/4" | ALUM | D2 | ALUM | F1 | 13/A3.10 | 14/A3.10 | 13/A3.00 | | | CARD READER, ADA OPERATOR | 18 |
| 106.2 | X | 6' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | 90 | | 08 |
| 106B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | |
| 107.1 | X | 6' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | 90 | BI-SWING | 09 |
| 107A.1 | X | 6' - 1" | 7' - 0 3/8" | 2 1/4" | ALUM | D2 | ALUM | W7 | SEE FRAME | SEE FRAME | SEE FRAME | | | | 33 |
| 107A.2 | X | 6' - 0" | 7' - 11" | 2 1/4" | ALUM | D2 | ALUM | WB | SEE FRAME | SEE FRAME | SEE FRAME | | | | 34 |
| 110.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 16 |
| 110A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 38 |
| 110B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | 12/A3.00 | | | | 04 |
| 111.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 5/A3.10 | 6/A3.10 | - | | | | 35 |
| 111A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 14 |
| 112.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 5/A3.10 | 6/A3.10 | - | | | | 35 |
| 112A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | | | 05 |
| 113.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D2 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | BOOT SYSTEM | 35 |
| 114.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | BOOT SYSTEM | 35 |
| 115.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D2 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | BOOT SYSTEM | 35 |
| 116.1 | | 3' - 6" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | BOOT SYSTEM | 10 |
| 117.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | 11/A3.00 | | | LOCK UP HARDWARE | 06 |
| 118.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | 11/A3.00 | | | LOCK UP HARDWARE | 06 |
| 120.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 130.1 | | 3' - 6" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | 90 | | 32 |
| 130.2 | | 3' - 6" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 15/A3.10 | 16/A3.10 | - | | 90 | | 17 |
| 131.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 30 |
| 131B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | |
| 132.1 | | 3' - 6" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | 10/A3.00 | | | | 11 |
| 133.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 35 |
| 134.1 | | 3' - 6" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | 10/A3.00 | | | | 19 |
| 134.2 | | 3' - 6" | 7' - 0" | 1 3/4" | HM | D1 | HM | F3 | 5/A3.10 | 6/A3.10 | 10/A3.00 | | | | 12 |
| 135.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | 45 | BOOT SYSTEM | 01 |
| 135A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 05 |
| 136.1 | | 3' - 0" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 136.2 | | 3' - 0" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 136.3 | | 3' - 0" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 136.4 | | 3' - 0" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 136.5 | | 3' - 0" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 136.6 | | 3' - 0" | 7' - 0" | 1 3/4" | PHEN. | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | VISUAL OCCUPANCY INDICATOR | 15 |
| 136A.1 | | 2' - 8" | 7' - 0" | 1 3/4" | HM | D1 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | 45 | | 12 |
| 136B.1 | | 2' - 8" | 7' - 0" | 1 3/4" | HM | D1 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | | RF TO CONC | 02 |
| 137.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 30 |
| 138.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 30 |
| 138A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | 9/A3.00 | | | LOCK UP HARDWARE | 06 |
| 138B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | 9/A3.00 | | | LOCK UP HARDWARE | 06 |
| 139.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | 45 | BOOT SYSTEM, BOOT SYSTEM | 01 |
| 139A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 05 |
| 140.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | 9/A3.00 | | | LOCK UP HARDWARE | 06 |
| 141.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 35 |
| 141A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | -- | | | | 05 |
| 142.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 35 |
| 142.2 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 13/A3.10 | 14/A3.10 | 9/A3.00 | | | | 07 |
| 144.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 35 |
| 145.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 35 |
| 145A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 05 |
| UPPER LEVEL 2 | | | | | | | | | | | | | | | |
| 201A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 02 |
| 203.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 12 |
| 204.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 01 |
| 204.2 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 03 |
| 204.3 | | 4' - 0" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 204.4 | | 4' - 0" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 205.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 37 |
| 210.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 01 |
| 211.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 36 |
| 211A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 04 |
| 212.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 01 |
| 212A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 26 |
| 212B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 36 |
| 212D.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | | 04 |
| 213.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | BOOT SYSTEM | 36 |
| 213A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 04 |
| 215.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 5/A3.10 | 6/A3.10 | - | | | | 36 |
| 215B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 04 |
| 215C.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D1 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | | 05 |
| 220.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 222.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 223.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 224.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 225.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 226.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 227.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 228.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 229.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 230.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 231.1 | | 3' - 0" | 7' - 0" | 1 3/4" | SCW | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| UPPER LEVEL 3 | | | | | | | | | | | | | | | |
| 300A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | | | 04 |
| 300B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F3 | 5/A3.10 | 6/A3.10 | - | | | | 04 |
| 310.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 29 |
| 310B.1 | | 4' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F3 | 3/A3.10 | 4/A3.10 | - | | | | 02 |
| 311.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 311A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 312.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 29 |
| 313.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 313A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 315.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 316.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 25 |
| 316.2 | | 3' - 0" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 317.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D1 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 25 |
| 317.2 | | 3' - 0" | 7' - 0" | 0" | - | - | - | - | 2/A3.12 | 2/A3.12 | - | | | CASED OPENING | |
| 318.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 318A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 319.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 319.2 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F2 | 3/A3.10 | 4/A3.10 | - | | | | 35 |
| 319A.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |
| 319B.1 | | 3' - 0" | 7' - 0" | 1 3/4" | HM | D3 | HM | F1 | 7/A3.10 | 7/A3.10 | - | | | BOOT SYSTEM | 36 |



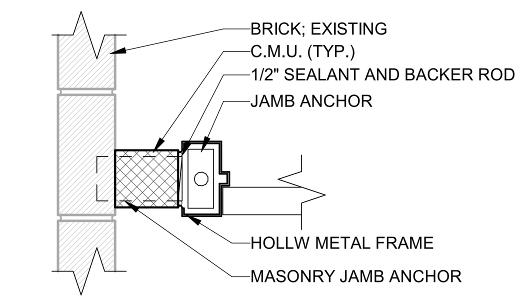

## DOOR TYPES
1/4" = 1'-0"



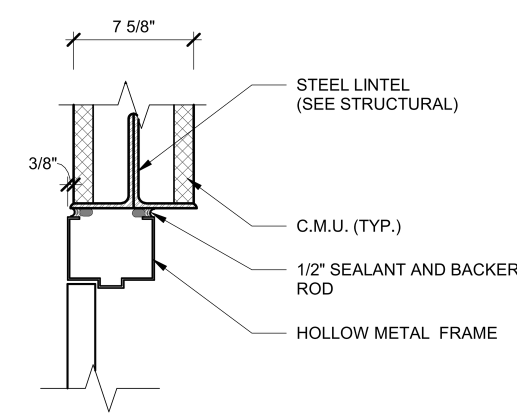

## FRAME TYPES
1/4" = 1'-0"



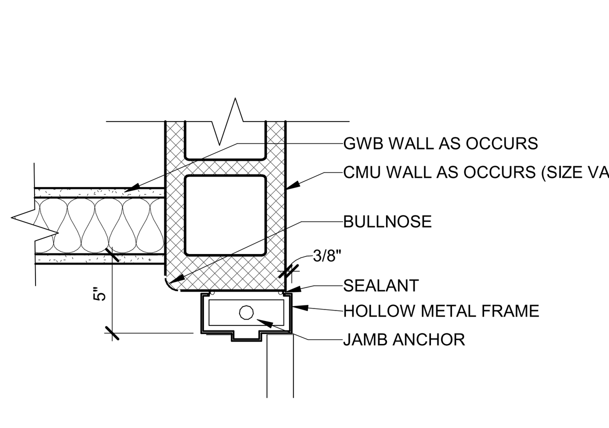

3 A3.10 H.M. DOOR HEAD @ 4" BLOCK/BRICK
SCALE: 1 1/2" = 1'-0"



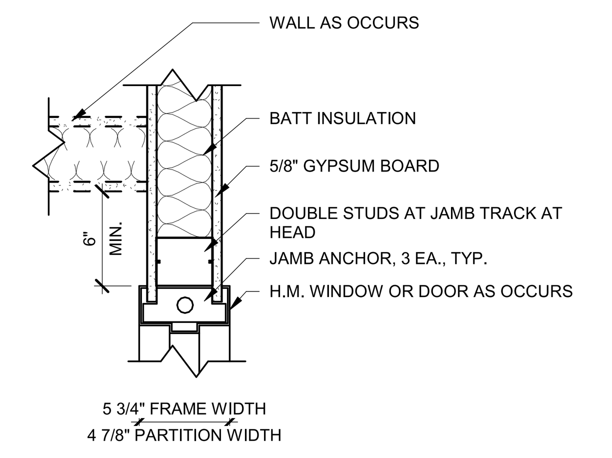

4 A3.10 H.M. DOOR JAMB @ 4" BLOCK/BRICK
SCALE: 1 1/2" = 1'-0"



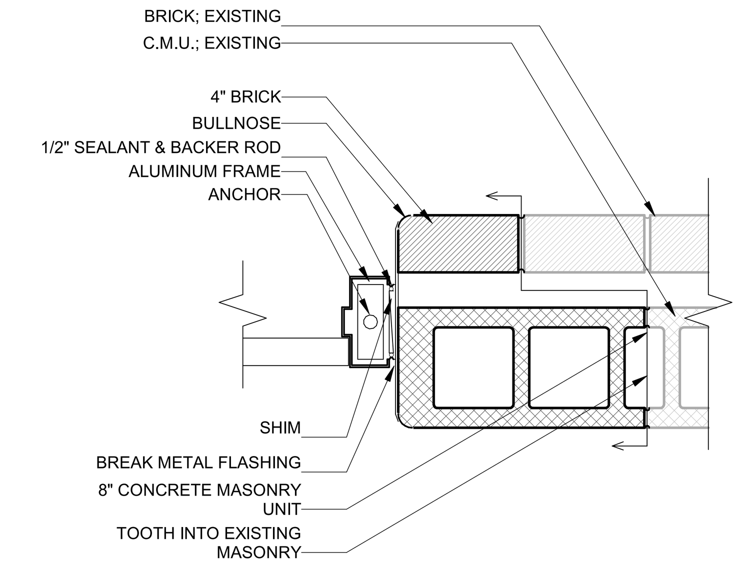

5 A3.10 H.M. DOOR HEAD @ C.M.U.
SCALE: 1 1/2" = 1'-0"



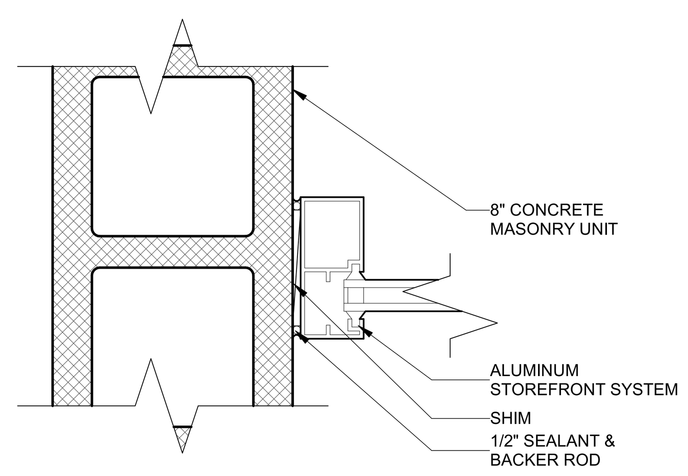

6 A3.10 H.M. DOOR JAMB @ CMU
SCALE: 1 1/2" = 1'-0"



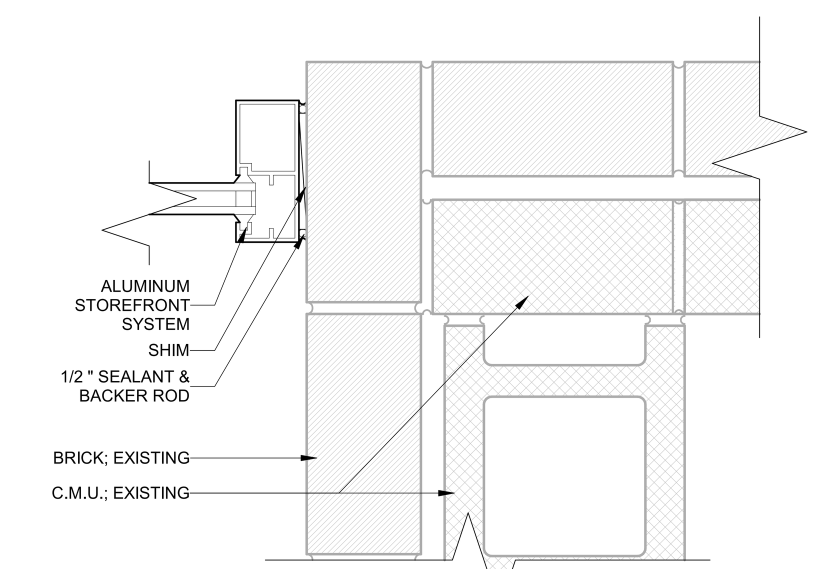

7 A3.10 H.M. DOOR JAMB/HEAD @ MTL. STUD WALL
SCALE: 1 1/2" = 1'-0"



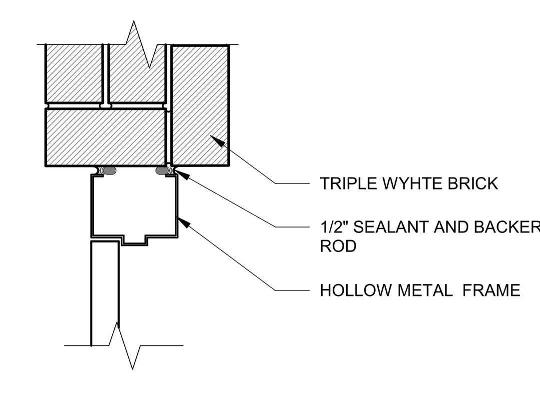

8 A3.10 JAMB DETAIL @ ALUMINUM DOOR 104
SCALE: 1 1/2" = 1'-0"



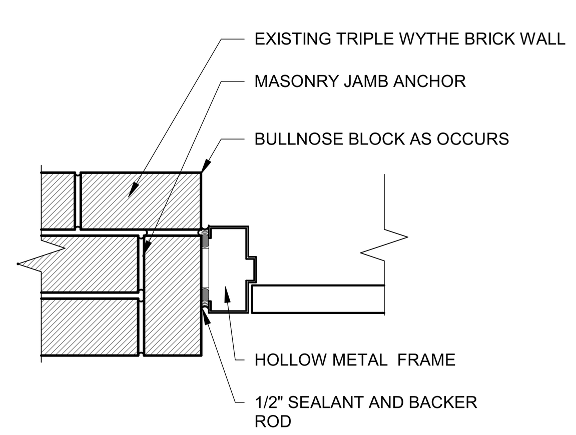

9 A3.10 DETAIL @ VESTIBULE 107A
SCALE: 3" = 1'-0"



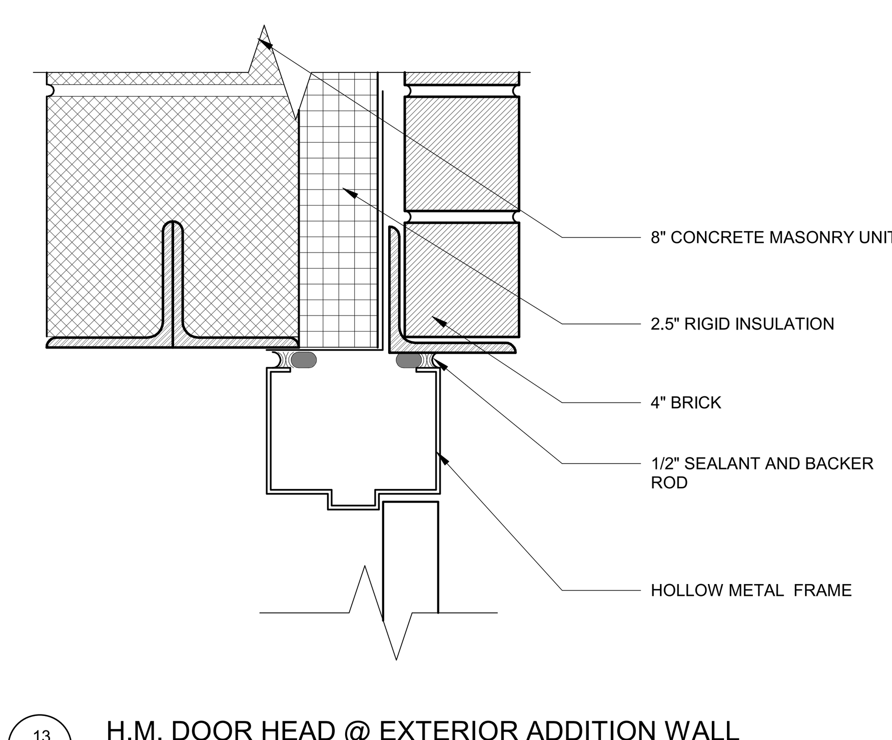

10 A3.10 PLAN DETAIL @ SUGNET ENTRANCE
SCALE: 3" = 1'-0"



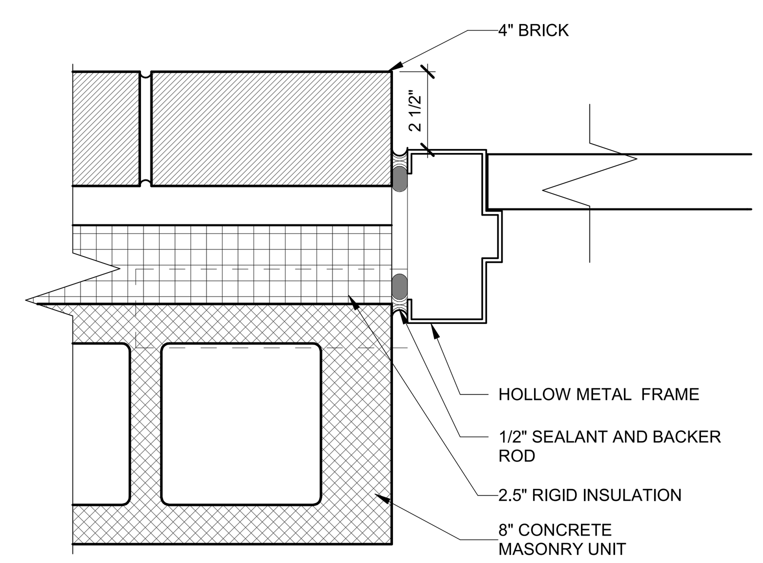

11 A3.10 H.M. DOOR HEAD @ TRIPLE WYTHE BRICK
SCALE: 1 1/2" = 1'-0"



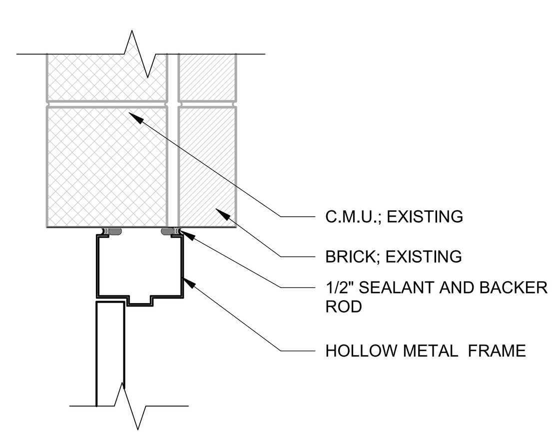

12 A3.10 H.M. DOOR JAMB @ TRIPLE WYTHE BRICK
SCALE: 1 1/2" = 1'-0"



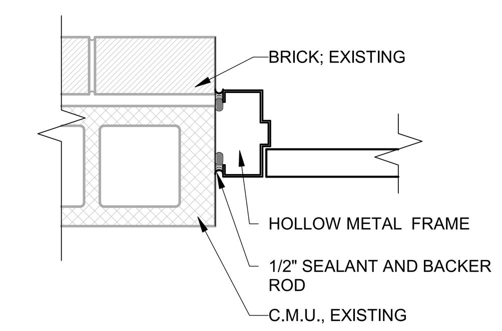

13 A3.10 H.M. DOOR HEAD @ EXTERIOR ADDITION WALL
SCALE: 3" = 1'-0"



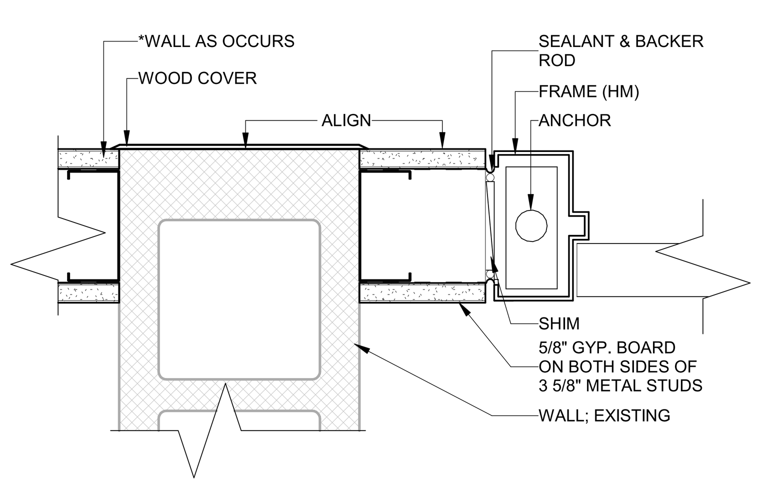

14 A3.10 H.M. DOOR JAMB @ EXTERIOR ADDITION WALL
SCALE: 3" = 1'-0"




15 A3.10 H.M. DOOR HEAD @ EXISTING EXTERIOR WALL
SCALE: 1 1/2" = 1'-0"




16 A3.10 H.M. DOOR JAMB @ EXISITING EXTERIOR WALL
SCALE: 1 1/2" = 1'-0"




17 A3.10 HM DOOR JAMB DETAIL @ EXISTING
SCALE: 3" = 1'-0"

## DOOR AND FRAME GENERAL NOTES:

1. GENERAL CONTRACTOR SHALL COORDINATE AND FIELD VERIFY ALL HOLLOW METAL FRAME DIMENSIONS PRIOR TO FABRICATION.
2. ALL DIMENSIONS INDICATE ROUGH OPENING DIMENSIONS.
3. REFER TO SPECIFICATIONS FOR GLASS TYPE DESCRIPTIONS.
4. ALL HOLLOW METAL FRAMES SHALL HAVE A 6" NOMINAL JAMB DEPTION UON. ALL FACE WIDTHS SHALL BE 2" UON.
5. SEE DETAILS 7/A3.10 FOR TYPICAL HEAD, JAMB, AND SILL DETAILS THAT OCCUR AT INTERIOR STUD PARTITIONS.
6. SEE DETAILS 5/3.10 AND 6/A3.10 FOR TYPICAL HEAD AND JAMB DETAILS THAT OCCUR AT INTERIOR MASONRY WALLS. LOCATE FRAMES AS FOLLOWS:
   A. CORRIDORS - JUSTIFY FRAMES 3/8" BEYOND THE SAME SIDE OF WALL AS DOOR.
   B. ROOM TO ROOM - JUSTIFY FRAMES 3/8" BEYOND THE SAME SIDE OF WALL AS DOOR.
7. INSTALL GLAZING ON THE CORRIDOR SIDE OF FRAMES AT CORRIDOR WINDOWS. INSTALL GLAZING ON THE SIDE OF THE LARGER ROOM AT GLAZING BETWEEN ROOMS. FOR ALL OTHER FRAMES VERIFY WITH ARCHITECT.
8. PROVIDE SEALANT AT JOINTS BETWEEN ALL DOOR AND WINDOW FRAMES AND ADJACENT MATERIALS (FIRE RATED SEALANT AT RATED FRAMES).
9. AT ALL DOORS AND FRAMES COORIDNATE SECURITY DEVICES SPECIFICATIONS AND ELECTRICAL DRAWINGS. PREP FRAMES FOR CONDUIT AND DEVICES AS REQUIRED.
10. PAINT ALL HOLLOW METAL DOORS & FRAMES PT-9

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |

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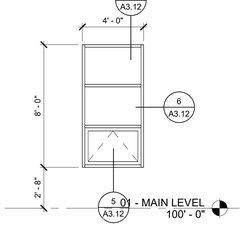
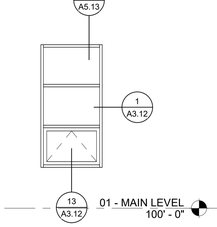
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
DOOR AND FRAME SCHEDULE, DOOR DETAILS

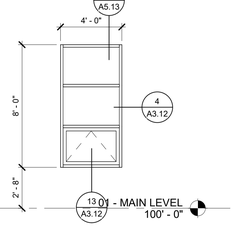
PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A3.10



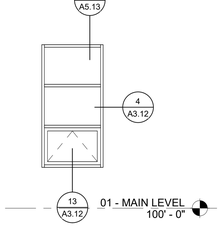

W1A
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



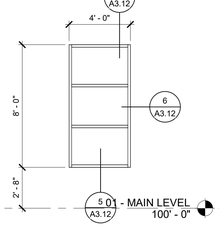

W1B
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLERA ANODIZED ALUMINUM



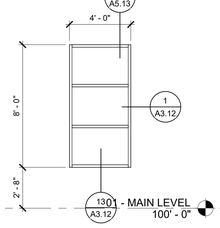

W1C
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLERA ANODIZED ALUMINUM



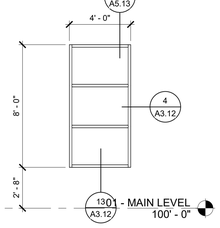

W1D
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLERA ANODIZED ALUMINUM



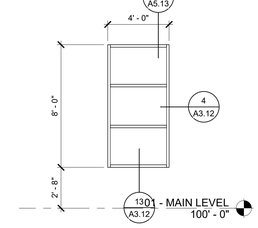

W2A
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W2B
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLERA ANODIZED ALUMINUM




W2C
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLERA ANODIZED ALUMINUM




W2D
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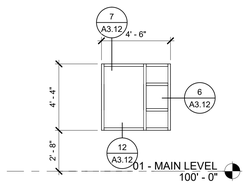
GLAZING:GL-A
FRAME:CLERA ANODIZED ALUMINUM

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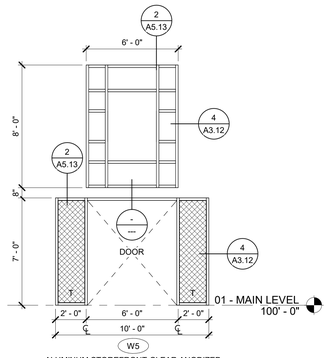
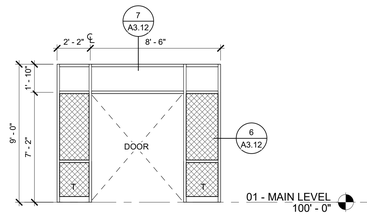
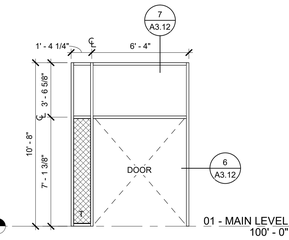
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



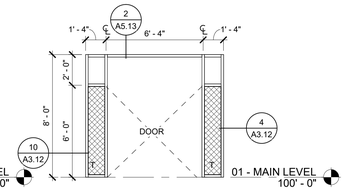

W5
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



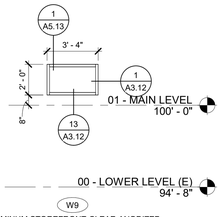

W6
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



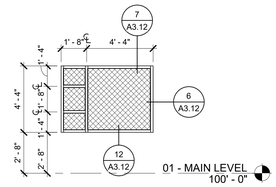

W7
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W8
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W9
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM

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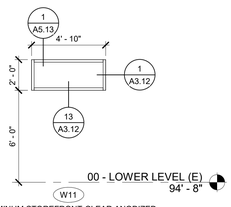
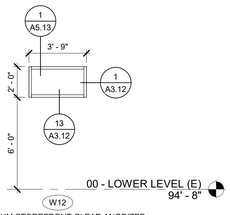
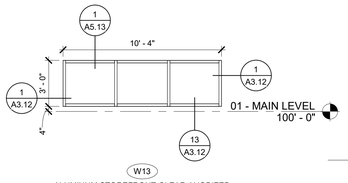
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



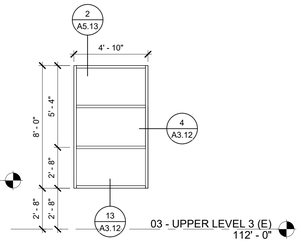

W11
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W12
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W13
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W14
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
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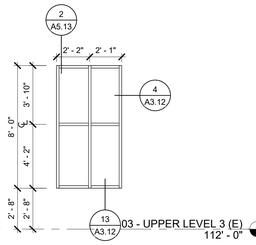


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ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
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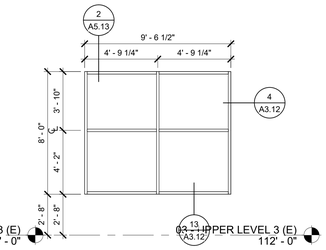
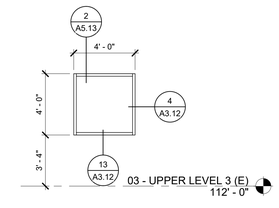
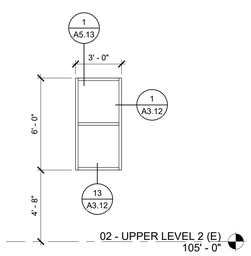


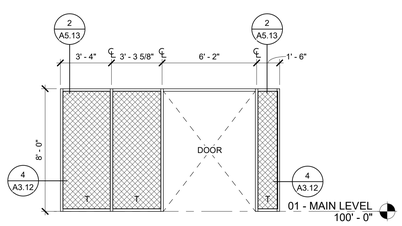

W16
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



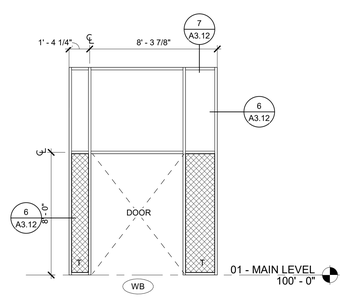

W17
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



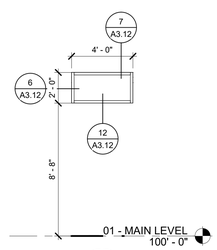

W18
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



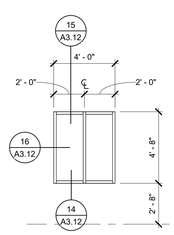

WA
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM



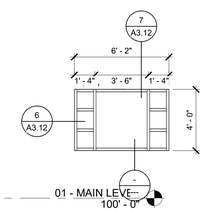

WB
HOLLOW METAL



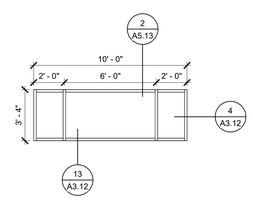

W19
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W20
ALUMINUM SLIDING TRANSACTION WINDOW
FRAME:CLEAR ANODIZED ALUMINUM




W21
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM




W22
ALUMINUM STOREFRONT-CLEAR ANODIZED
GLAZING:GL-A
FRAME:CLEAR ANODIZED ALUMINUM

REQUIRED BY CODE.

## FRAME TYPES

INDICATES IMPACT RESISTANT FILM LOCATIONS.

T INDICATES LOCATION OF TEMBERED GLASS

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

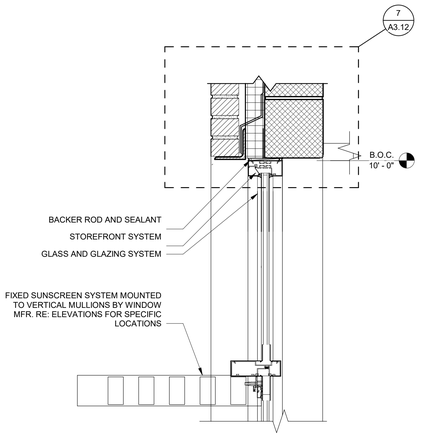
SHEET TITLE
FRAME ELEVATIONS

PROJECT NUMBER
2022006.1

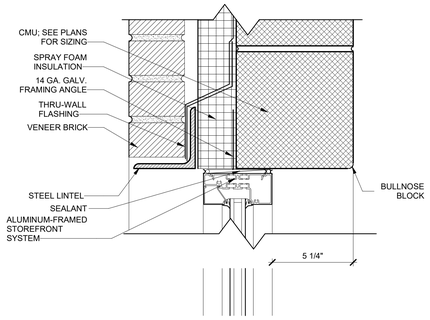
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

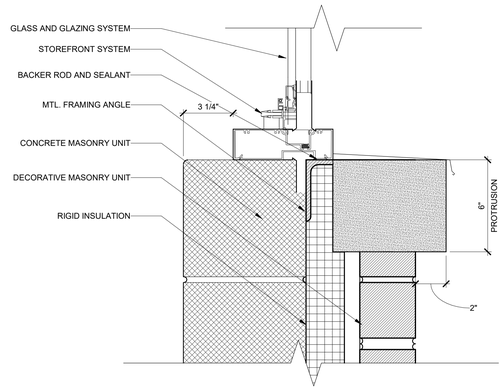
SHEET NUMBER
A3.11



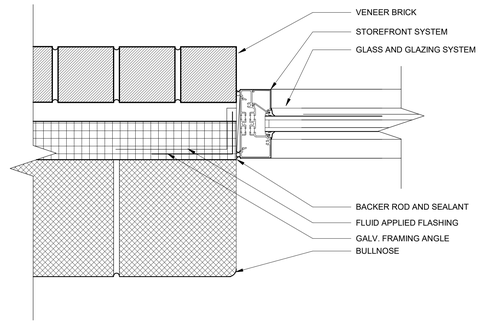

9 A3.12 TYP. HEAD DETAIL @ STOREFRONT HEAD
SCALE: 1 1/2" = 1'-0"




7 A3.12 TYP. HEAD DETAIL @ NEW CMU
SCALE: 3" = 1'-0"




5 A3.12 TYP. STONE SILL DETAIL @ NEW CMU
SCALE: 3" = 1'-0"




6 A3.12 TYP. JAMB DETAIL @ NEW CMU
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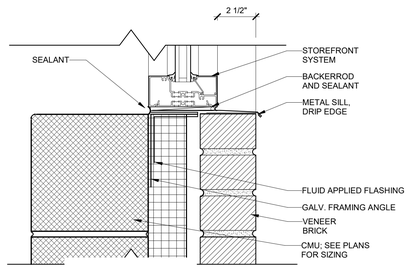


12 A3.12 TYP. SILL DETAIL @ NEW CMU
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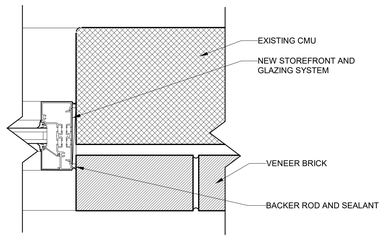
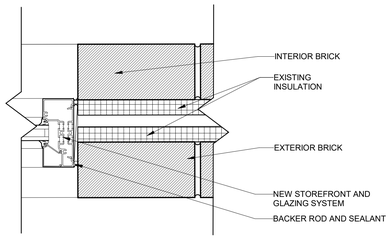



1 A3.12 TYP. JAMB DETAIL @ EXISTING BRICK-BLOCK
SCALE: 3" = 1'-0"




4 A3.12 TYP. JAMB DETAIL @ EXISTING BRICK
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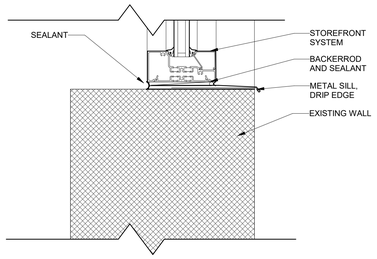
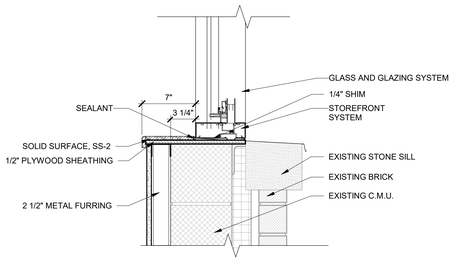
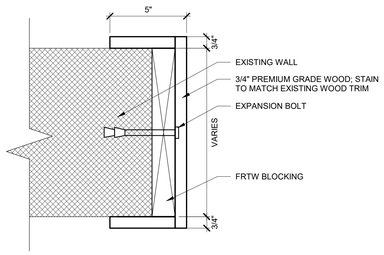


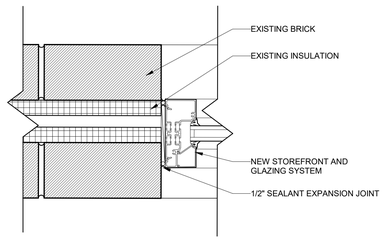

13 A3.12 TYP. SILL DETAIL @ EXISTING
SCALE: 3" = 1'-0"



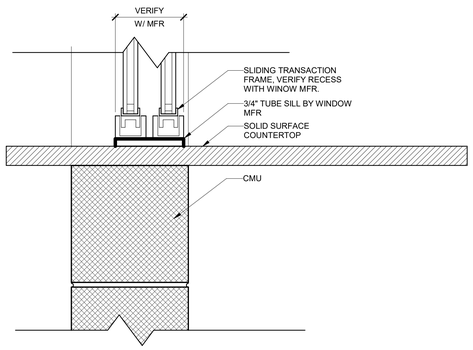

8 A3.12 SOLID SURFACE SILL DETAIL
SCALE: 1 1/2" = 1'-0"



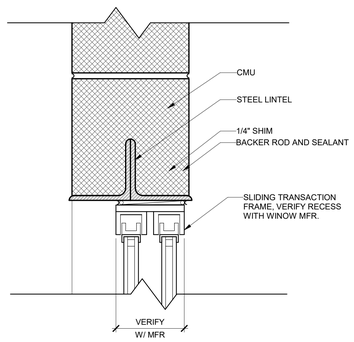

2 A3.12 JAMB DETAIL - WOOD CAP
SCALE: 3" = 1'-0"



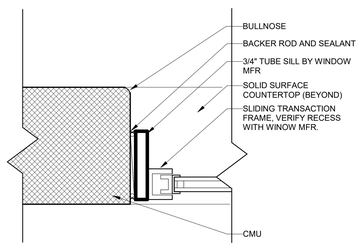

10 A3.12 JAMB @ W8 W/ 1/2" EXPANSION JOINT
SCALE: 3" = 1'-0"




14 A3.12 SLIDING WINDOW SILL @ LOBBY
SCALE: 3" = 1'-0"




15 A3.12 SLIDING WINDOW HEAD @ LOBBY
SCALE: 3" = 1'-0"




16 A3.12 SLIDING WINDOW JAMB @ LOBBY
SCALE: 3" = 1'-0"

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PROJECT TITLE
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MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
FRAME DETAILS

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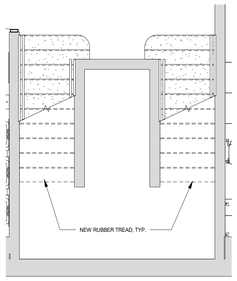
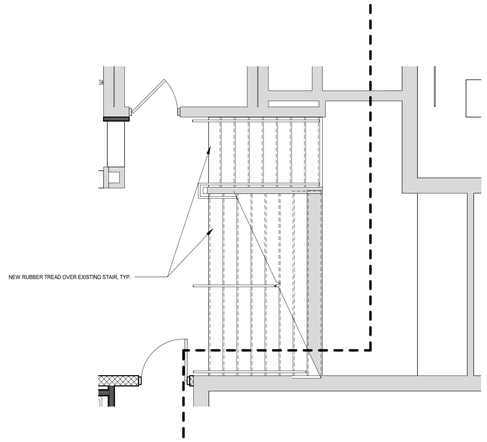



1 A4.01 00 - LOWER LEVEL (E) - Callout 1
SCALE: 1/4" = 1'-0"




2 A4.01 01 - MAIN LEVEL - SOUTH (E) - Callout 1
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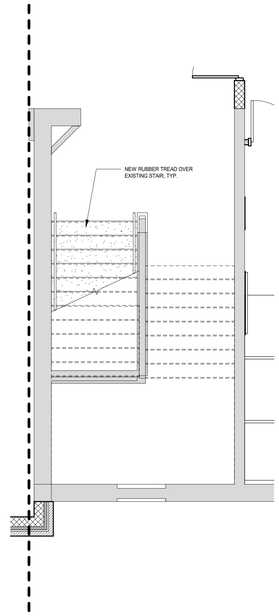


3 A4.01 01 - MAIN LEVEL - SOUTH ADDITION - Callout 1
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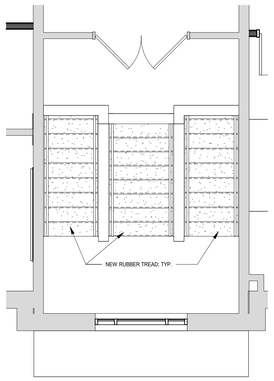
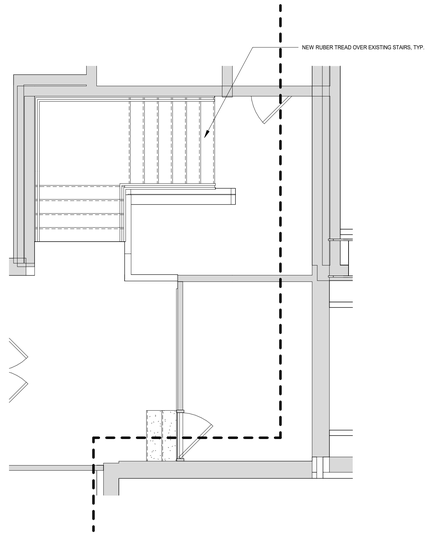



5 A4.01 02 - UPPER LEVEL 2 (E) - Callout 1
SCALE: 1/4" = 1'-0"




4 A4.01 03 - UPPER LEVEL 3 (E) - Callout 1
SCALE: 1/4" = 1'-0"

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MIDLAND, MICHIGAN

SHEET TITLE
STAIR 1 & STAIR 2 PLANS AND SECTIONS

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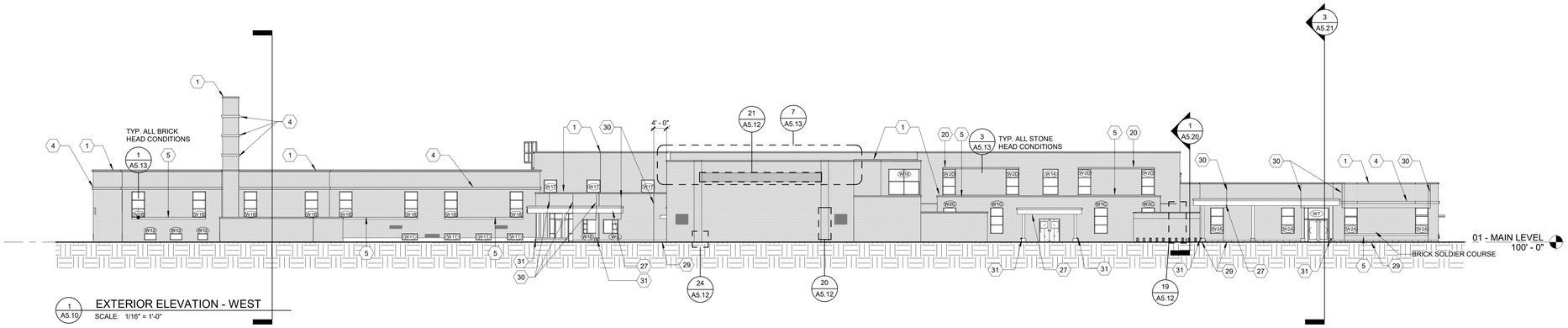
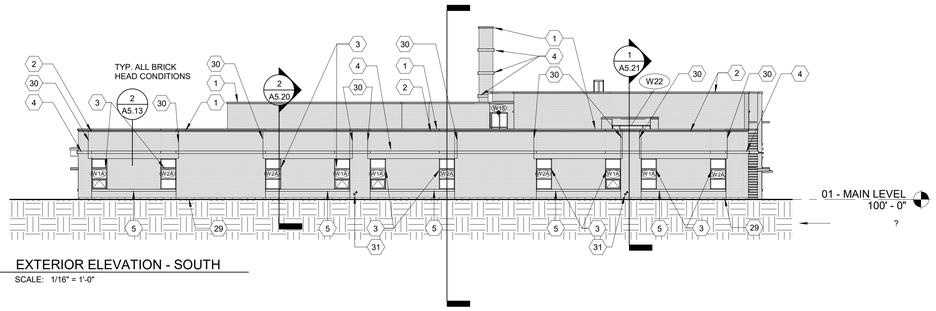



1 A5.10 EXTERIOR ELEVATION - WEST
SCALE: 1/16" = 1'-0"




2 A5.10 EXTERIOR ELEVATION - SOUTH
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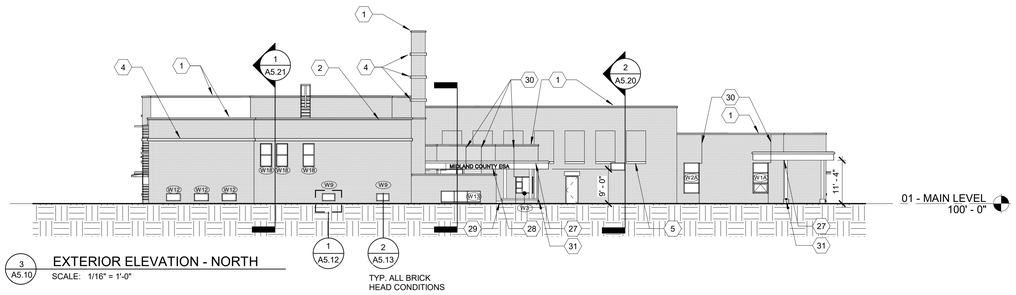


3 A5.10 EXTERIOR ELEVATION - NORTH
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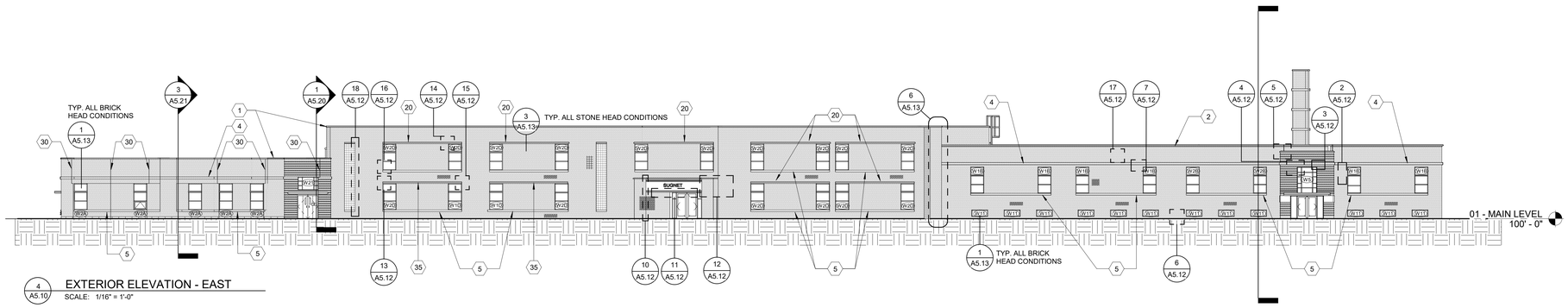


4 A5.10 EXTERIOR ELEVATION - EAST
SCALE: 1/16" = 1'-0"

## . MATERIAL KEYNOTES

1 STONE PARAPHET CAP
2 1.5" BRICK PROTRUSION
3 FIXED SUNSCREEN SYSTEM MOUNTED TO VERTICAL MULLIONSBY WINDOW MFR. RE: ELVATIONS FOR SPECIFIC LOCATIONS
4 1.5" BRICK PROTRUSION; SOLDIER COURSE
5 STONE SILL
6 FOOTING AND FOUNDATION (SEE STRUCTURAL)
7 CONCRETE SLAB (SEE STRUCTURAL)
8 COMPACTED GRAINULAR FILL
9 DOOR (SEE SCHEDULE)
10 GLASS AND GLAZING SYSTEM
11 ALUMINUM FRAMING SYSTEM
12 FIXTURE AS OCCUR; RE: ELECTRICAL
14 REMOVE AND REPLACE ALL CRACKED OR SPALLED BRICK WITHIN THIS AREA WITH NEW. SEE GENERAL NOTE 1 FOR ALLOWANCE.
15 EXISTING MORTAR JOINS WITHIN AREA ARE CRACKED, LOOSE, MISSING, OPEN, OR GENERALLY DETERIORATED. REMOVE ALL IDENTIFIED MORTAR TO MINIMUM DEPTH OF 1" AND REPOINT WITH NEW MORTAR. SEE GENERAL NOTE 3 FOR ALLOWANCE.
16 OPEN CRACK IN STONE. INJECT THE CRACK FULL WITH EPOXY AND PATCH/FINISH THE EXTERIOR SURFACE OF THE STONE WITH A COLORED CEMENTITIOUS COMPOUND IN ORDER TO BLEND THE REPAIR INTO THE ADJACENT SURFACES OF THE EXISTING STONE. SEE GENERAL NOTE 5 FOR ALLOWANCE.
17 REMOVED EXISTING SEALANT AND BACKER ROD (IF PRESENT) BETWEEN WINDOW OR FRAME, AND ADJACENT MASONRY. INSTALL NEW BACKER ROD AND SEALANT.
18 MASONRY CONTRACTOR SHALL OPEN AREAS INDICATED SIMILAR TO CONDITION [SEE DETAILS]. CONTRACTOR SHALL THEN PROVIDE ACCESS FOR ARCHITECT/ENGINEER TO REVIEW. ONCE REVIEW IS COMPLETE THEN CONTRACTOR SHALL INFILL WITH EXISTING KIND MATERIALS.
19 SALVAGE A MINIMUM OF THREE COURSES OF BRICK ABOVE TOP OF WINDOW TO EXPOSE EXISTING LINTEL. REMOVE EXISTING LINTEL AND FLASHING AND INSTALL NEW LINTEL AND THRU WALL FLASHING AND REPLACE BRICK. SEE GENERAL NOTE 1, 3, 4 FOR ALLOWNACES. SEE DETAIL 1/A5.12. 2/A5.12.
20 SALVAGE STONE HEADER AND ONE COURSE OF BRICK ABOVE HEADER TO EXPOSE EXISTING LINTEL. REMOVE EXISTING LINTEL AND FLASHING AND INSTALL NEW LINTEL AND THRU WALL FLASHING. REINSTALL HEADER AND BRICK. SEE GENERAL NOTE 1, 3, 4, FOR ALLOWANCES. SEE DETAIL 3/A5.12.
21 SAW CUT BRICK, INSTALL A NEW 1/2" VERTICAL EXPANSION JOINT FREE OF MASONRY AND MORTAR FULL DEPTH. FILL JOINT WITH NEW BACKER ROD AND SEALANT. SEE DETAIL 4/A5.12.
22 EXISTING LIMESTONE COPING PIECE TO BE REMOVED AND SALVAGED FOR REINSTALLATION. ALL EXPOSED SURFACES SHALL BE CHEMICALLY CLEANED TO REMOVE DIRT AND STAINS. ALL EXISTING MORTAR AND FLASHING SHALL BE REMOVED FROM HEAD AND BED JOINT SURFACES. INSTALL NEW COPING FLASHING ALONG THE ENTIRE LENGTH OF REPLACED COPING. SEE DETAIL 5/A5.12.
23 HATCHING INDICATES AREA OF BRICK WALL TO BE SALVAGED IN ORDER TO REPAIR AND FLASH EMBEDDED STEEL CONDITIONS.
24 REMOVE EXISTING ABANDONED ANCHOR. INFILL CAVITY WITH MORTAR AND RESEAL.
25 RESEAL GAP WITH SILICONE AROUND EXISTING PIPE.
26 INJECT CONCRETE CRACK FULL WITH EPOXY AND PATCH/FINISH THE EXTERIOR SURFACE WITH CEMENTITIOUS COMPOUND IN ORDER TO BLEND THE REPAIR INTO ADJACENT EXISTING SURFACE. SEE GENERAL NOTE 6 FOR ALLOWANCE.
27 CANOPY
28 CAST ALUMINUM LETTERING 18" HIGH CENTERED IN FACIA.
29 LIMESTONE BASE COURSE
30 MASONRY CONTROL JOINT
31 LIMESTONE BASE COURSE
35 TEMP

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MIDLAND, MICHIGAN

SHEET TITLE
EXTERIOR ELEVATIONS

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PROJECT DATE
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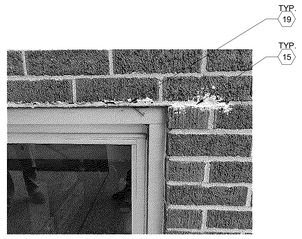
A5.10




1 A5.12 PHOTO DETAIL 1
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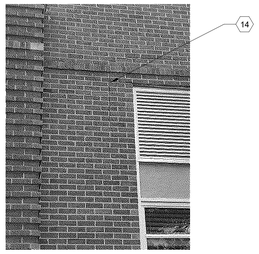


2 A5.12 PHOTO DETAIL 2
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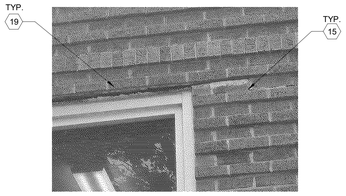


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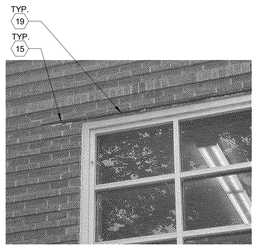


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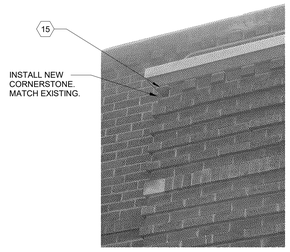


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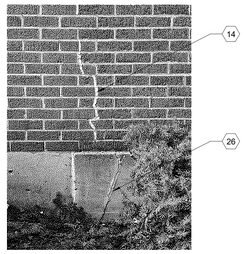


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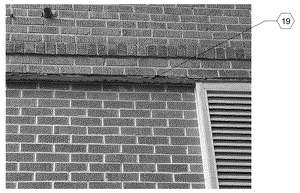


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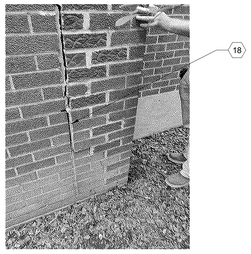


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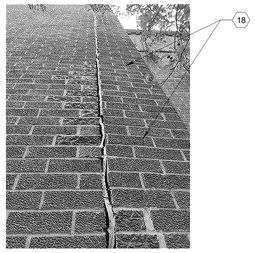


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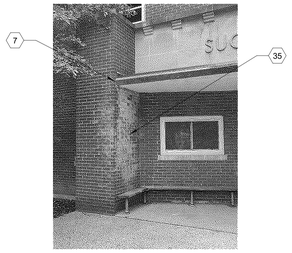


10 A5.12 PHOTO DETAIL 10
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11 A5.12 PHOTO DETAIL 11
SCALE: 12" = 1'-0"

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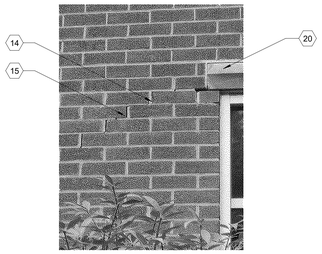


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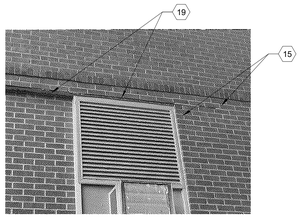


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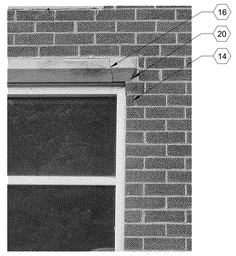


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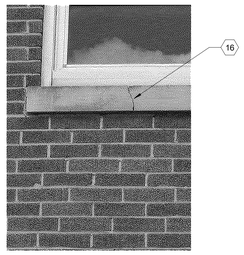


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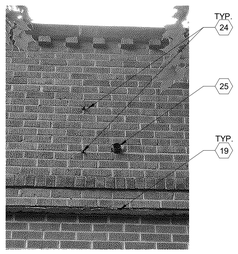


17 A5.12 PHOTO DETAIL 17
SCALE: 12" = 1'-0"

18 A5.12 PHOTO DETAIL 18
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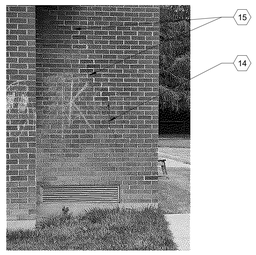


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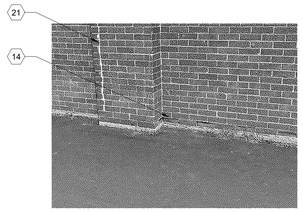
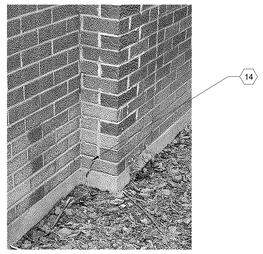



20 A5.12 PHOTO DETAIL 20
SCALE: 12" = 1'-0"

21 A5.12 PHOTO DETAIL 21
SCALE: 12" = 1'-0"

22 A5.12 PHOTO DETAIL 22
SCALE: 12" = 1'-0"

23 A5.12 PHOTO DETAIL 23
SCALE: 12" = 1'-0"




24 A5.12 PHOTO DETAIL 24
SCALE: 12" = 1'-0"

## EXTERIOR RESTORATION GENERAL NOTES:

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23 HATCHING INDICATES AREA OF BRICK WALL TO BE SALVAGED IN ORDER TO REPAIR AND FLASH EMBEDDED STEEL CONDITIONS.
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25 RESEAL GAP WITH SILICONE AROUND EXISTING PIPE.
26 INJECT CONCRETE CRACK FULL WITH EPOXY AND PATCH/FINISH THE EXTERIOR SURFACE WITH CEMENTITIOUS COMPOUND IN ORDER TO BLEND THE REPAIR INTO ADJACENT EXISTING SURFACE. SEE GENERAL NOTE 6 FOR ALLOWANCE.
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29 LIMESTONE BASE COURSE
30 MASONRY CONTROL JOINT
31 LIMESTONE BASE COURSE
35 TEMP

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

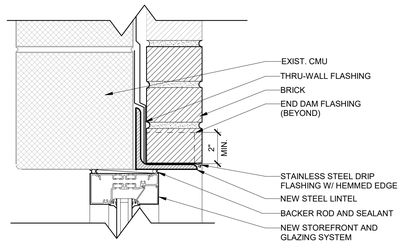
SHEET TITLE
EXTERIOR PHOTO DETAILS

PROJECT NUMBER
2022006.1

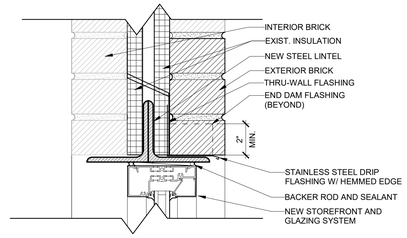
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A5.12




1 A5.13 TYP. LINTEL DETAIL @ BRICK-BLOCK RENOVATION
SCALE: 3" = 1'-0"

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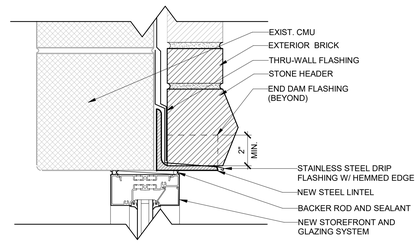


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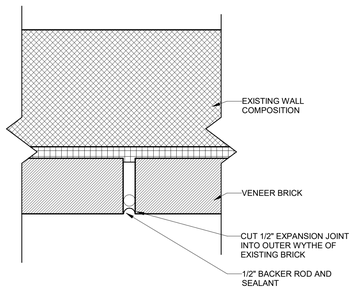


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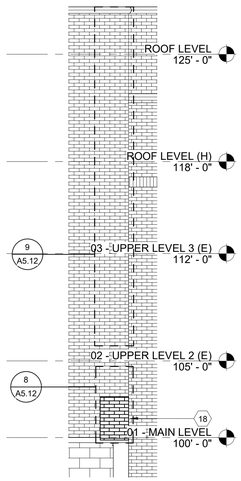


6 A5.13 EXPLORATORY DEMO DETAIL - EAST ELEVATION
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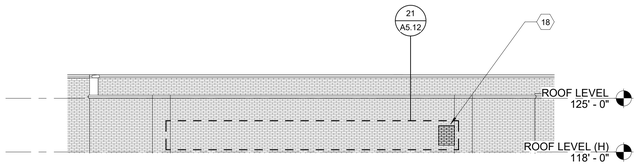


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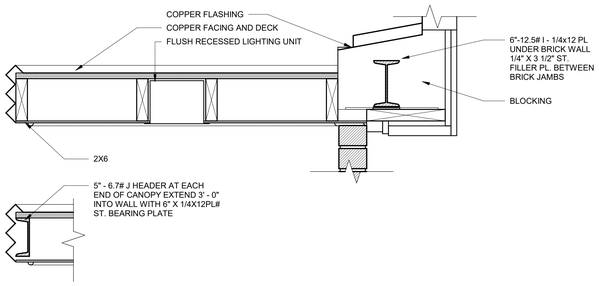


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| | ISSUED FOR BID | 08/23/23 |

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Saginaw, Michigan 48607
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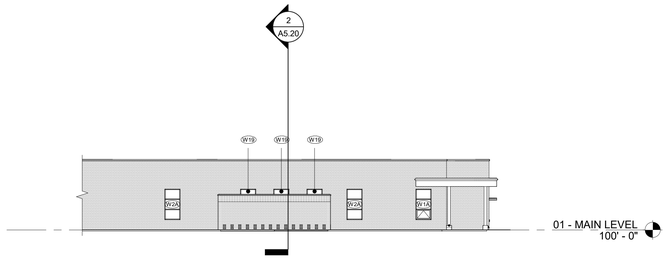
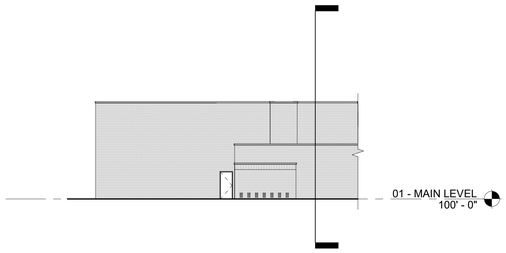
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
EXTERIOR DETAILS

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A5.13

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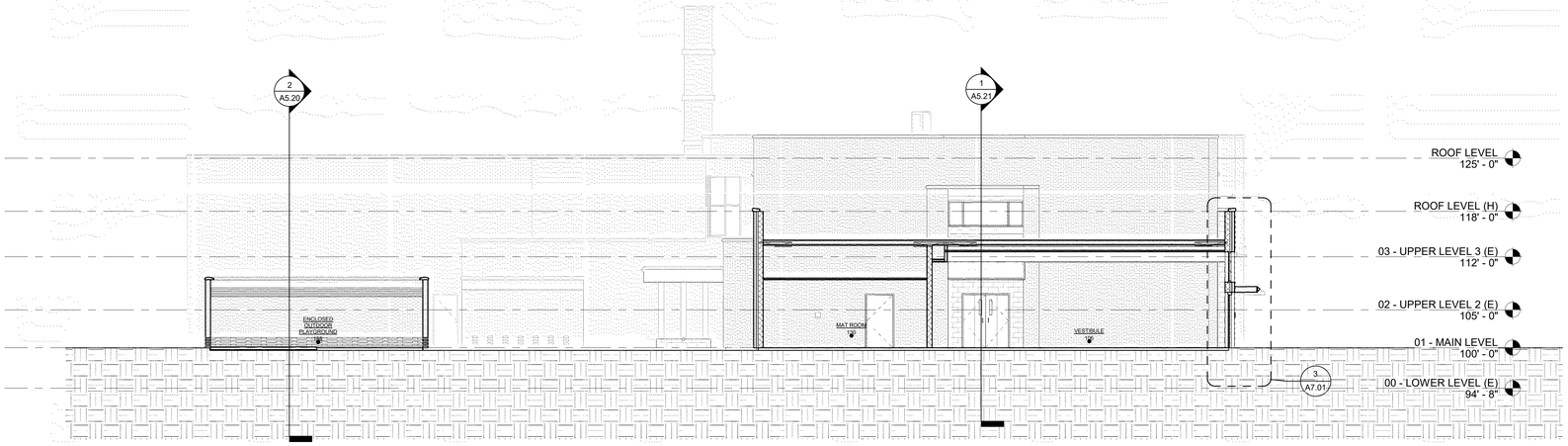
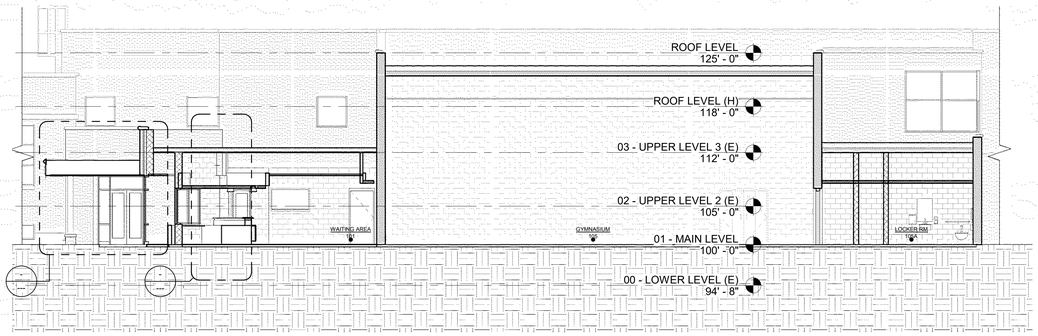



1 A5.20 Section 18
SCALE: 1/8" = 1'-0"




3 A5.20 Section 19 Copy 1
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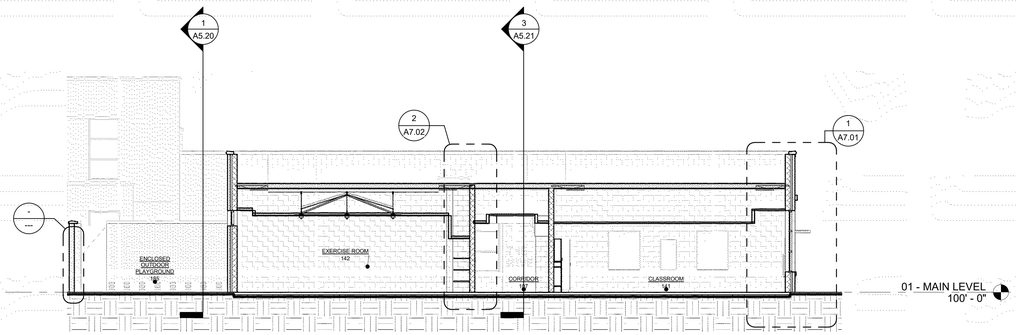


2 A5.20 Section 19
SCALE: 1/8" = 1'-0"

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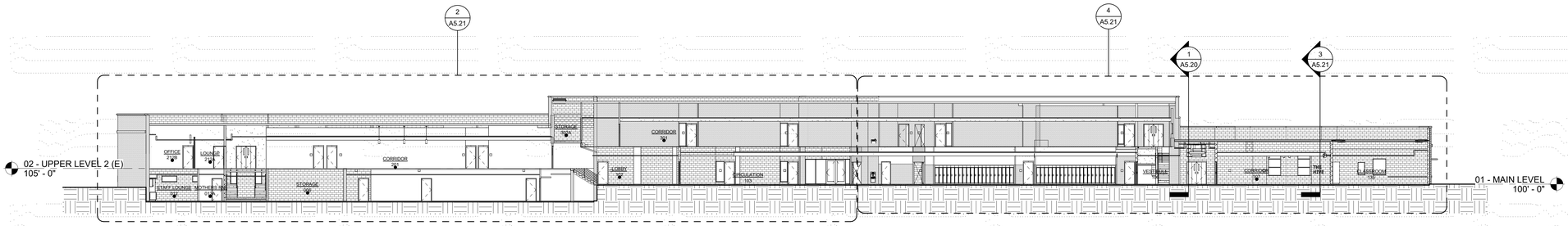
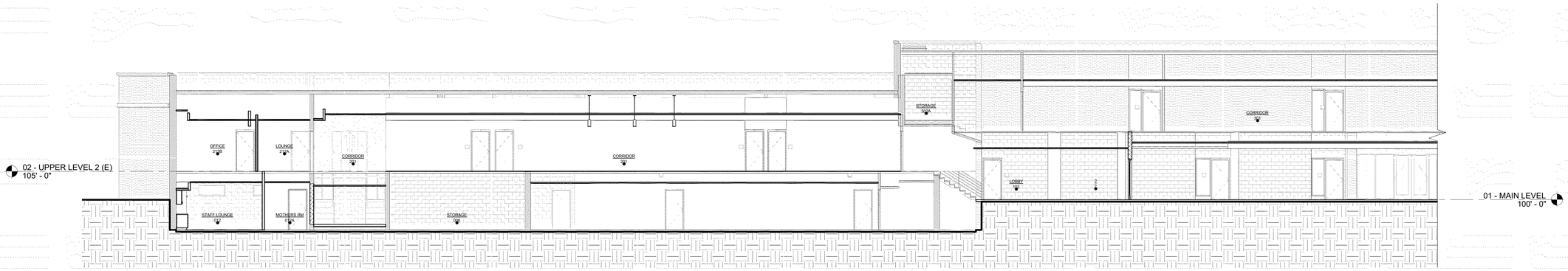



1 A5.21 Section 20
SCALE: 1/16" = 1'-0"




2 A5.21 Section 20 - Callout 1
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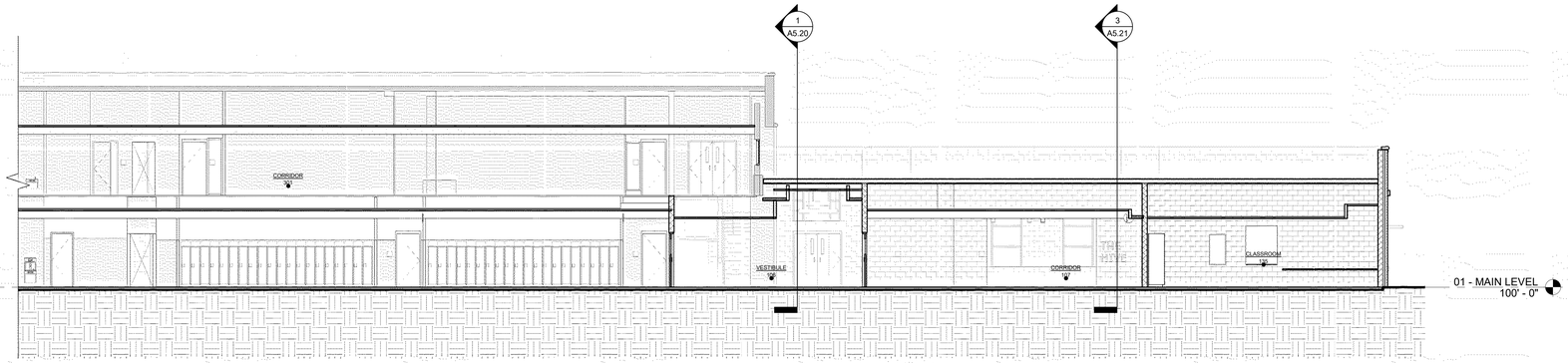


4 A5.21 Section 20 - Callout 2
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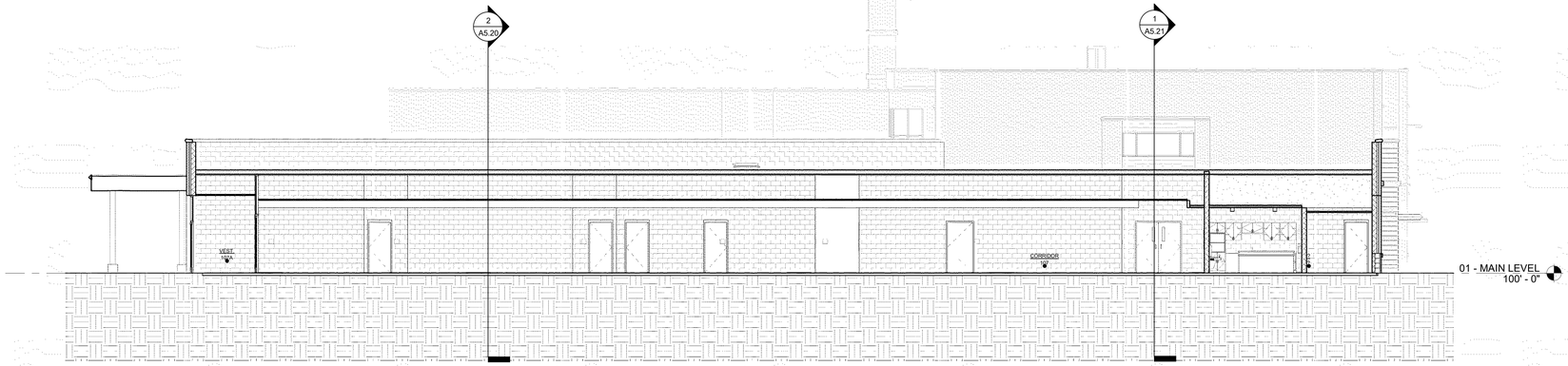


3 A5.21 Section 21
SCALE: 1/8" = 1'-0"

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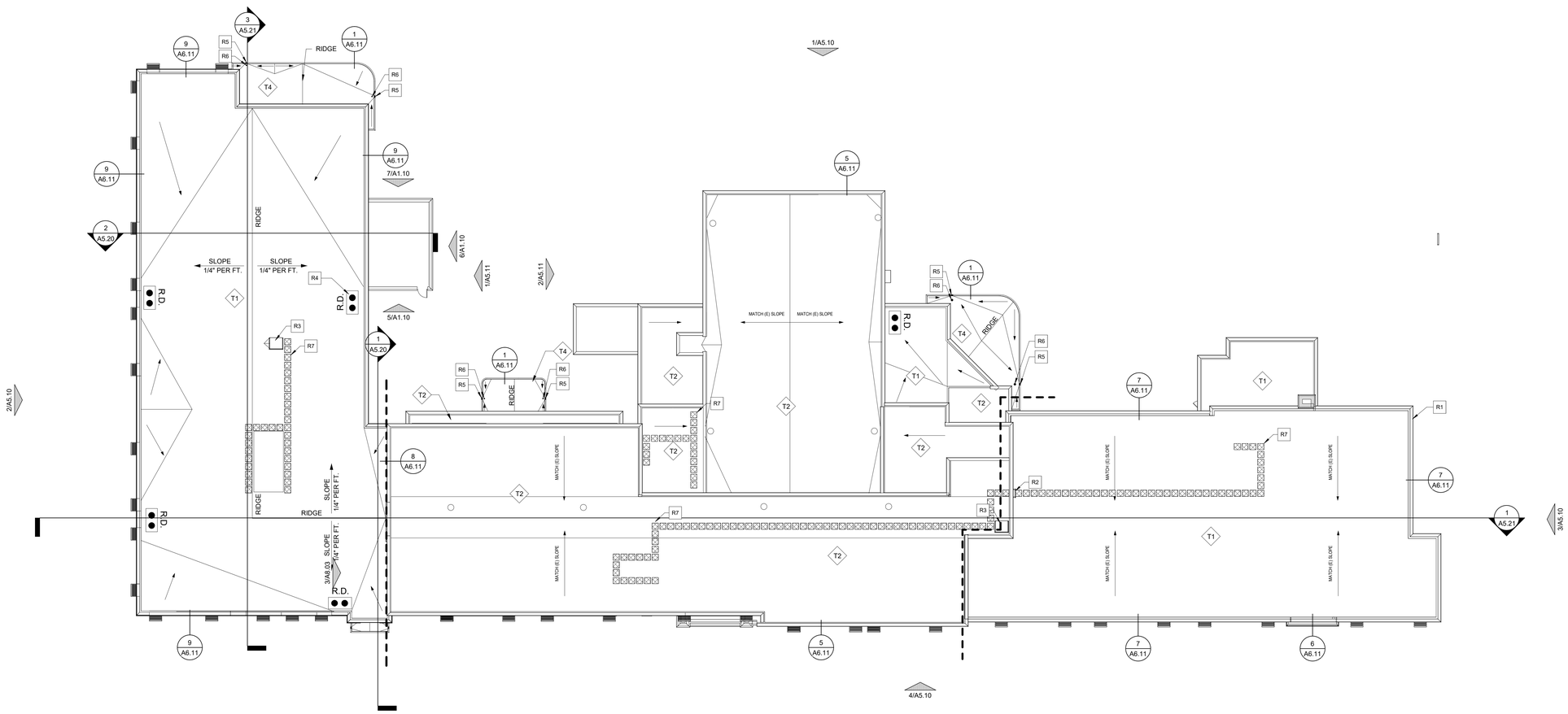


NORTH

1 A6.01 ROOF PLAN
SCALE: 1/16" = 1'-0"

## GENERAL ROOF PLAN NOTES:

1. PROVIDE ROOFING MANUFACTURER'S STANDARD FLASHING DETAILS FOR ALL ROOF PENETRATIONS. COORDINATE WITH ALL TRADES
2. REFER TO MECHANICAL AND PLUMBING PLANS FOR LOCATIONS AND EXTENTS OF EXPOSED PIPING ON ROOF
3. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR MOUNTED EQUIPMENT AND PENETRATIONS. ALL EQUIPMENT PENETRATIONS MAY NOT BE SHOWN ON THIS ROOF PLAN.
4. MAINTAIN ALL ROOF DRAINS CLEAN AND FREE-FLOWING DURING AND UPON COMPLETION OF CONSTRUCTION.

## R# ROOF PLAN KEYNOTE

1 REPAIR EXISTING STONE PARAPHET AS REQUIRED; RE-SEAL ALL JOINTS AS NEEDED
2 NEW HIGH ROOF ACCESS LADDER; MATCH EXISTING LOCATION
3 ROOF HATCH
4 ROOF DRAIN
5 OVERFLOW SCUPPER
6 CANOPY ROOF DRAIN ROUTE PER DETAIL 8/A6.10
7 ROOF WALKWAY PADS

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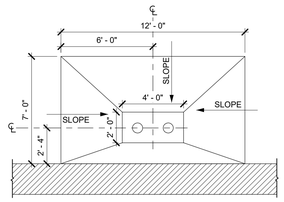
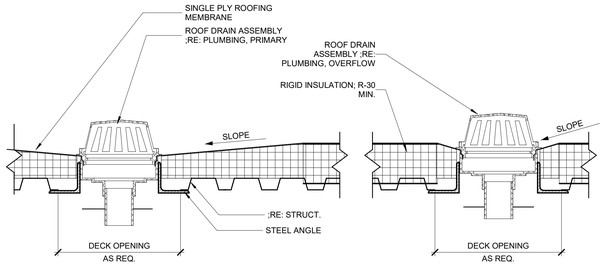
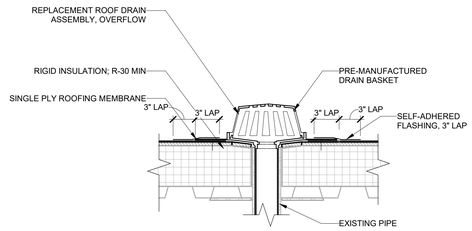


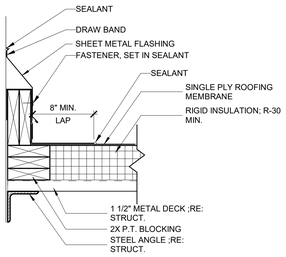

1 A6.10 PLAN-TYPICAL ROOF DRAIN SUMP
SCALE: 1/4" = 1'-0"



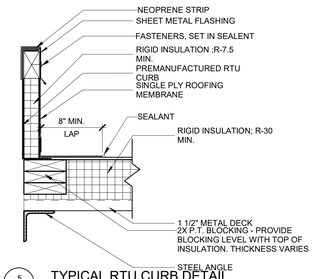

2 A6.10 TYPICAL ROOF DRAIN W/ OVERFLOW DETAIL
SCALE: 1 1/2" = 1'-0"



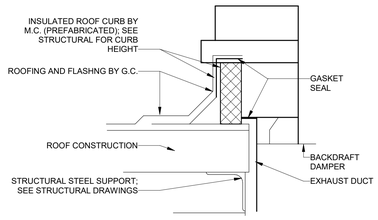

3 A6.10 TYPICAL ROOF SUMP SECTION
SCALE: 1 1/2" = 1'-0"



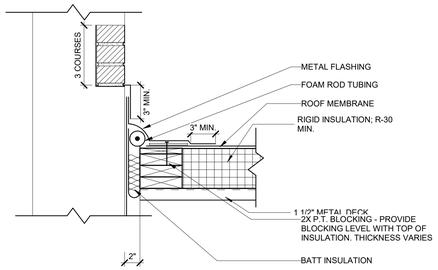

4 A6.10 TYPICAL DUCT THROUGH ROOF
SCALE: 1 1/2" = 1'-0"



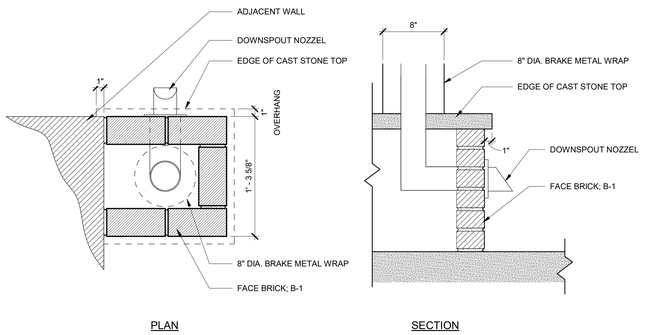

5 A6.10 TYPICAL RTU CURB DETAIL
SCALE: 1 1/2" = 1'-0"



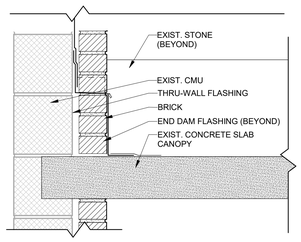

6 A6.10 ROOF PENETRATION DETAIL
SCALE: 3" = 1'-0"



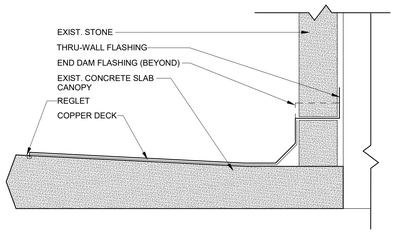

7 A6.10 TYP. EXPANSION JOINT @ AREA B-AREA C
SCALE: 1 1/2" = 1'-0"




8 A6.10 TYP. ROOF DRAIN DETAIL @ CANOPY
SCALE: 1 1/2" = 1'-0"




9 A6.10 BRICK CANOPY DETAIL @ MAIN ENTRANCE SUGNET
SCALE: 1 1/2" = 1'-0"




10 A6.10 STONE CANOPY DETAIL @ MAIN ENTRANCE SUGNET
SCALE: 1 1/2" = 1'-0"

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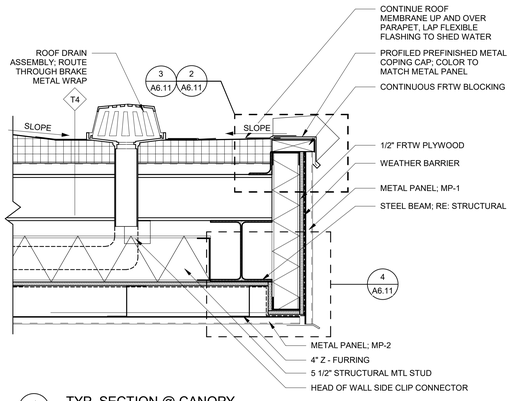
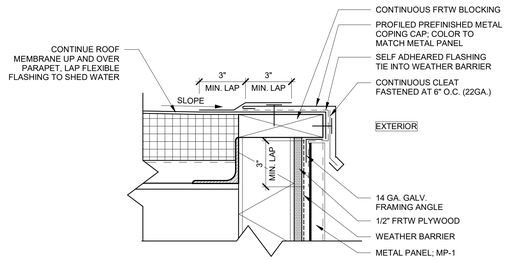
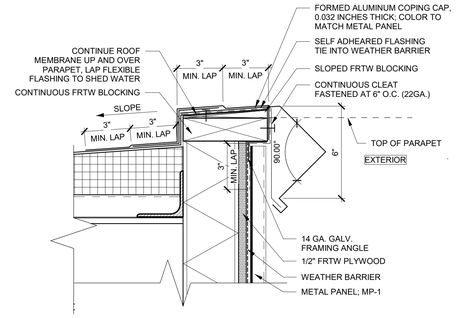


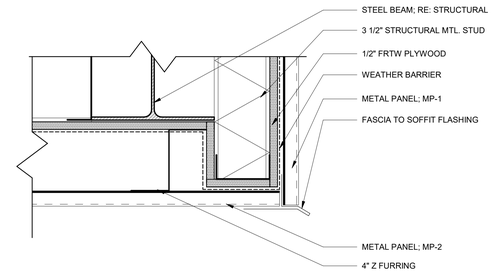

1 A6.11 TYP. SECTION @ CANOPY
SCALE: 1 1/2" = 1'-0"



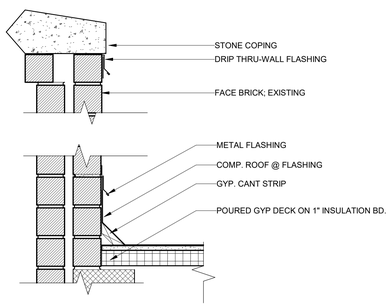

2 A6.11 OVERFLOW SCUPPER @ CANOPY
SCALE: 3" = 1'-0"



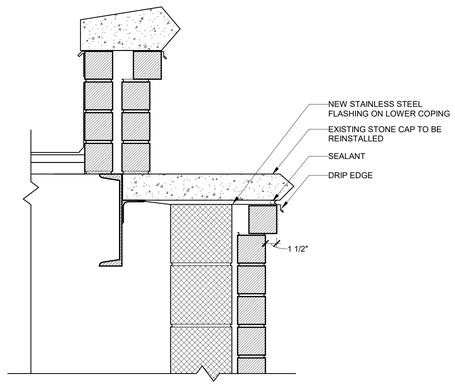

3 A6.11 PARAPET CAP DETAIL @ CANOPY
SCALE: 3" = 1'-0"



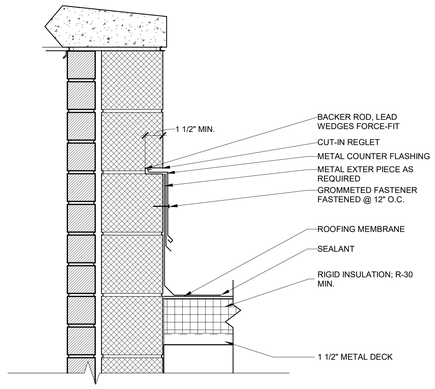

4 A6.11 FASCIA TO SOFFIT TRANSITION @ CANOPY
SCALE: 3" = 1'-0"



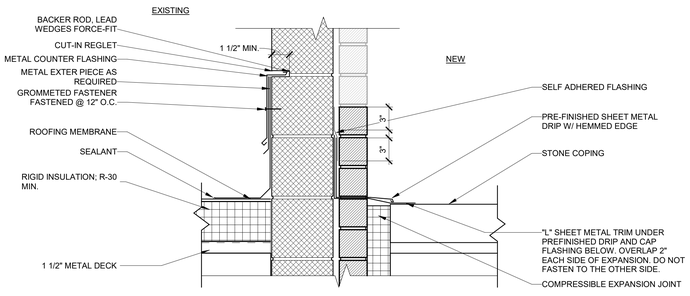

5 A6.11 PARAPET @ EXISTING
SCALE: 1 1/2" = 1'-0"



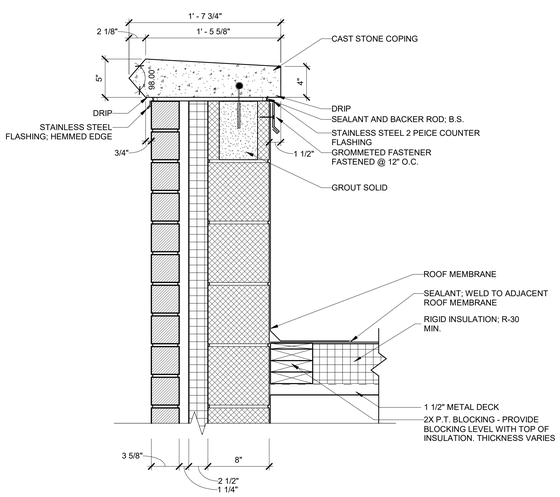

6 A6.11 PARAPET DETAIL @ JEFFERSON N. ENTRANCE
SCALE: 1 1/2" = 1'-0"



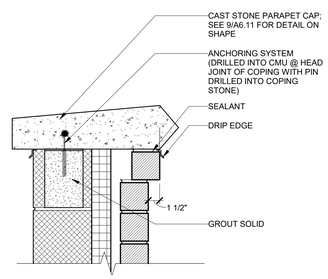

7 A6.11 TYP. PARAPET @ W/ CUT IN REGLET
SCALE: 1 1/2" = 1'-0"



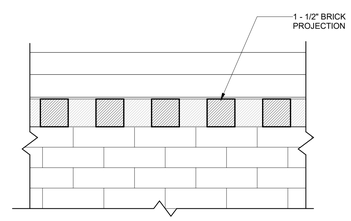

8 A6.11 NEW ROOF TO EXISTING PARAPET DETAIL
SCALE: 1 1/2" = 1'-0"




9 A6.11 TYP. PARAPET @ NEW ADDITION
SCALE: 1 1/2" = 1'-0"




SECTION




ELEVATION

10 A6.11 BRICK DETAIL @ STONE COPING
SCALE: 1 1/2" = 1'-0"

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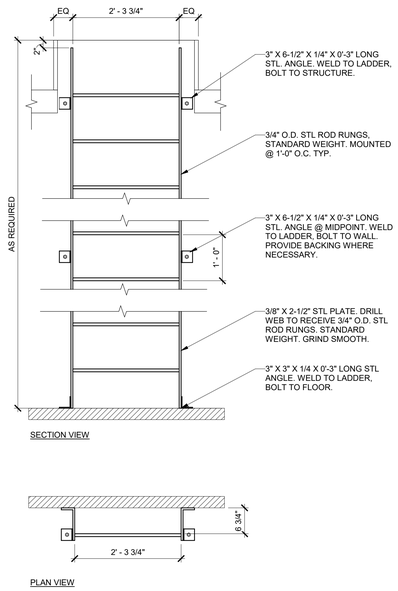
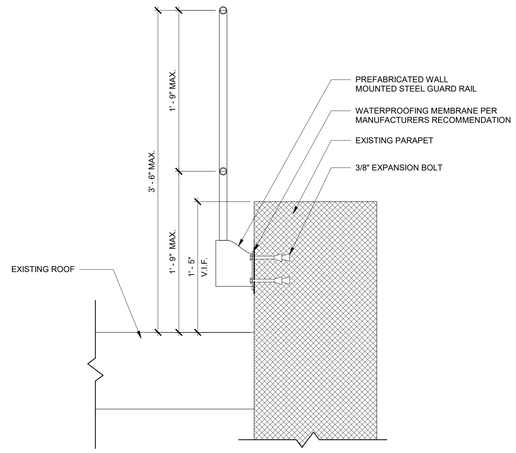
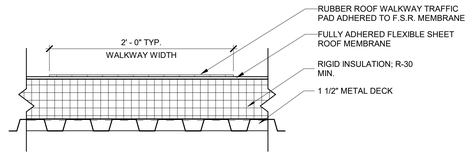


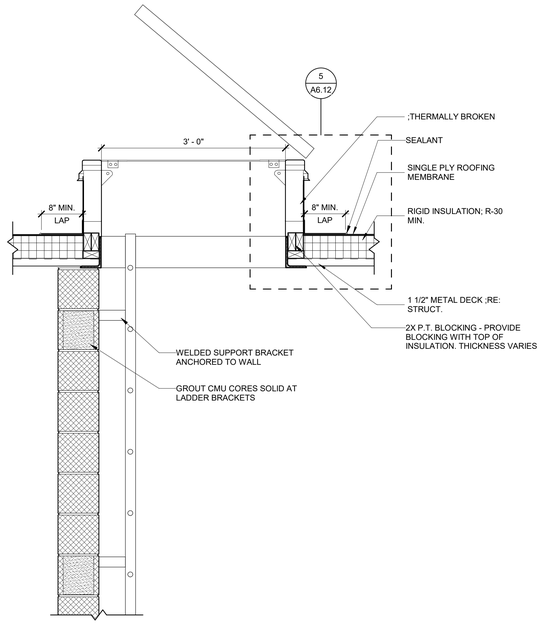

1 A6.12 ROOF LADDER DETAIL
SCALE: 3/4" = 1'-0"



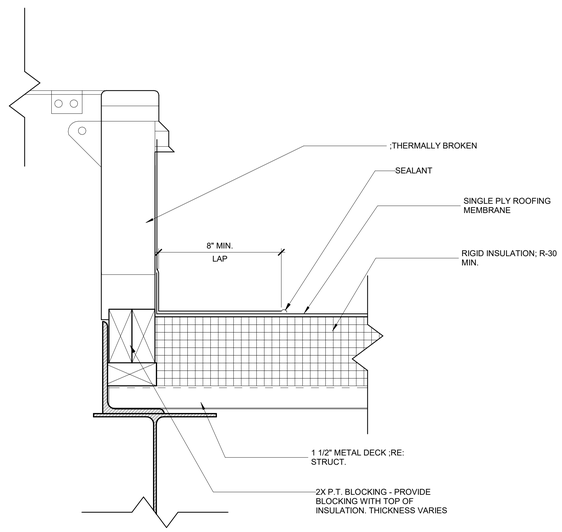

2 A6.12 WALL MOUNTED EXTERIOR GUARDRAIL
SCALE: 1 1/2" = 1'-0"




3 A6.12 TYP. ROOF WALKWAY PAD
SCALE: 1 1/2" = 1'-0"




4 A6.12 TYPICAL ROOF HATCH DETAIL
SCALE: 1" = 1'-0"




5 A6.12 ROOF HATCH @ ROOF
SCALE: 3" = 1'-0"

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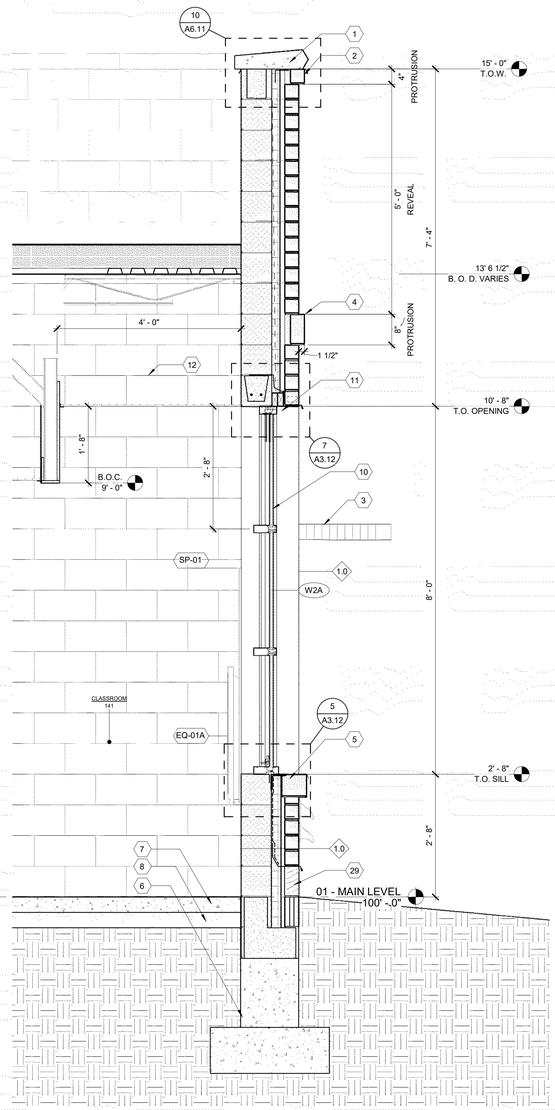
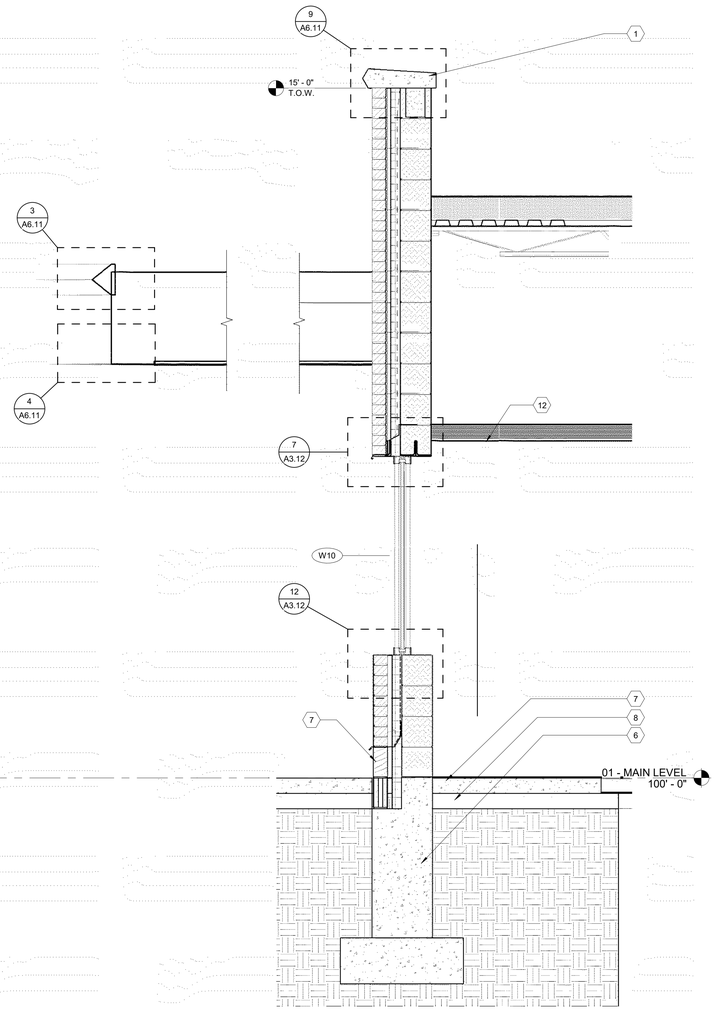
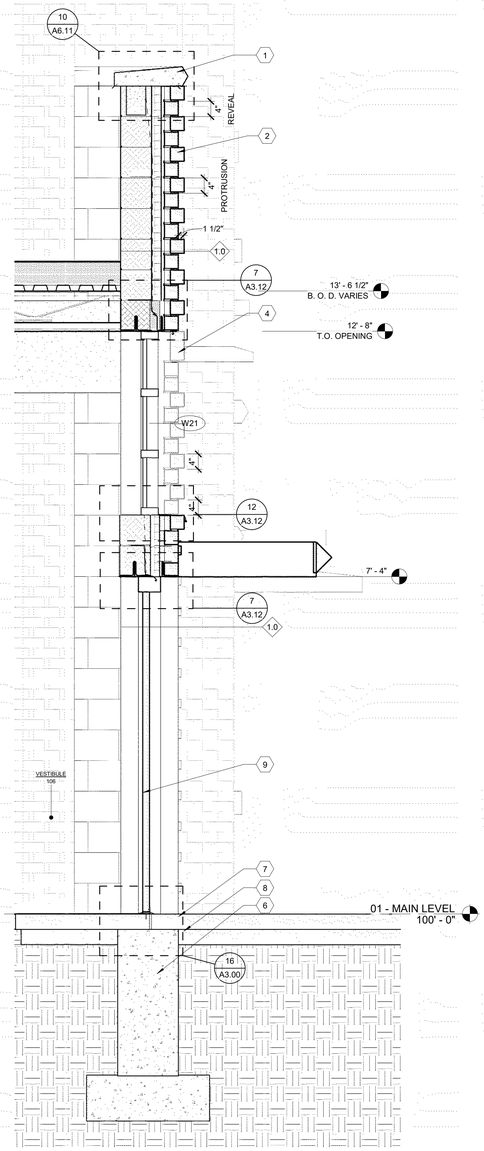



1 A7.01 SECTION @ CLASSROOM 141
SCALE: 3/4" = 1'-0"




2 A7.01 SECTION @ WAITING LOBBY
SCALE: 3/4" = 1'-0"




3 A7.01 SECTION @ MAIN ENTRY VESTIBULE 106
SCALE: 3/4" = 1'-0"

## # MATERIAL KEYNOTES

1 STONE PARAPHET CAP
2 1.5" BRICK PROTRUSION
3 FIXED SUNSCREEN SYSTEM MOUNTED TO VERTICAL MULLIONSBY WINDOW MFR. RE: ELVATIONS FOR SPECIFIC LOCATIONS
4 1.5" BRICK PROTRUSION; SOLDIER COURSE
5 STONE SILL
6 FOOTING AND FOUNDATION (SEE STRUCTURAL)
7 CONCRETE SLAB (SEE STRUCTURAL)
8 COMPACTED GRAINULAR FILL
9 DOOR (SEE SCHEDULE)
10 GLASS AND GLAZING SYSTEM
11 ALUMINUM FRAMING SYSTEM
12 FIXTURE AS OCCUR; RE: ELECTRICAL
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15 EXISTING MORTAR JOINS WITHIN AREA ARE CRACKED, LOOSE, MISSING, OPEN, OR GENERALLY DETERIORATED. REMOVE ALL IDENTIFIED MORTAR TO MINIMUM DEPTH OF 1" AND REPOINT WITH NEW MORTAR. SEE GENERAL NOTE 3 FOR ALLOWANCE.
16 OPEN CRACK IN STONE. INJECT THE CRACK FULL WITH EPOXY AND PATCH/FINISH THE EXTERIOR SURFACE OF THE STONE WITH A COLORED CEMENTITIOUS COMPOUND IN ORDER TO BLEND THE REPAIR INTO THE ADJACENT SURFACES OF THE EXISTING STONE. SEE GENERAL NOTE 5 FOR ALLOWANCE.
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27 CANOPY
28 CAST ALUMINUM LETTERING 18" HIGH CENTERED IN FACIA.
29 LIMESTONE BASE COURSE
30 MASONRY CONTROL JOINT
31 LIMESTONE BASE COURSE
35 TEMP

| NO. | REVISION | DATE |
|---|---|---|
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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

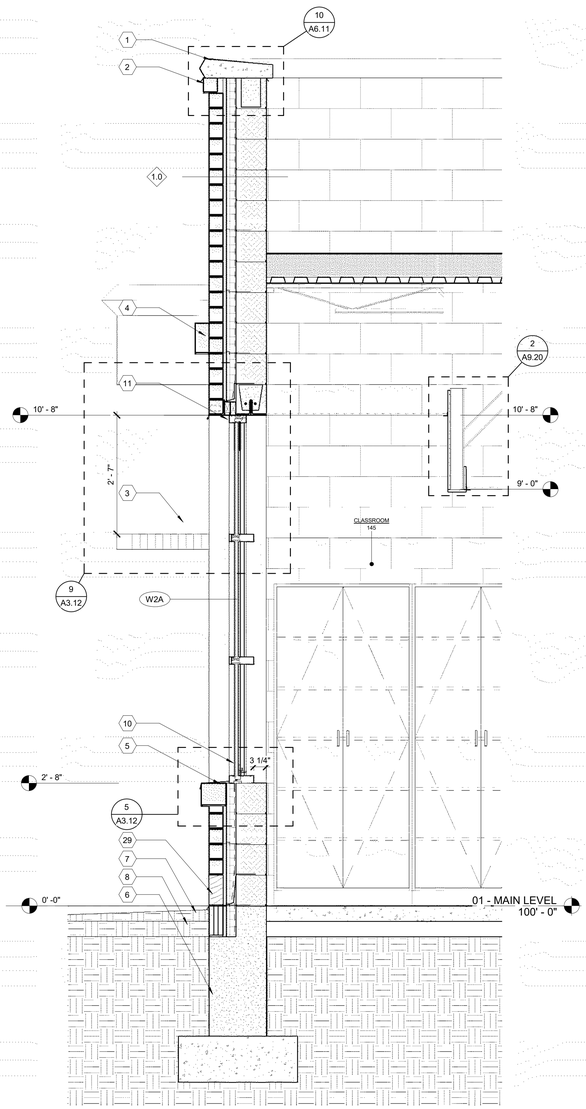
SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
2022006.1

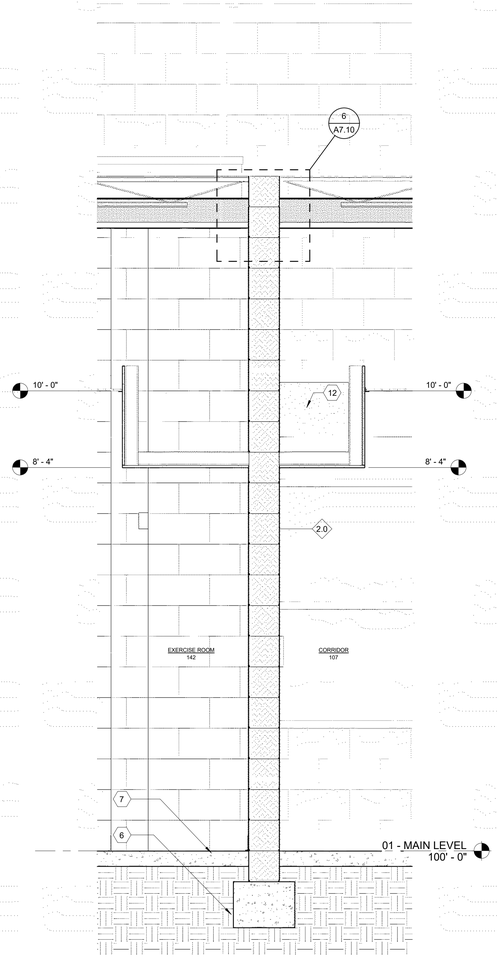
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
Checker

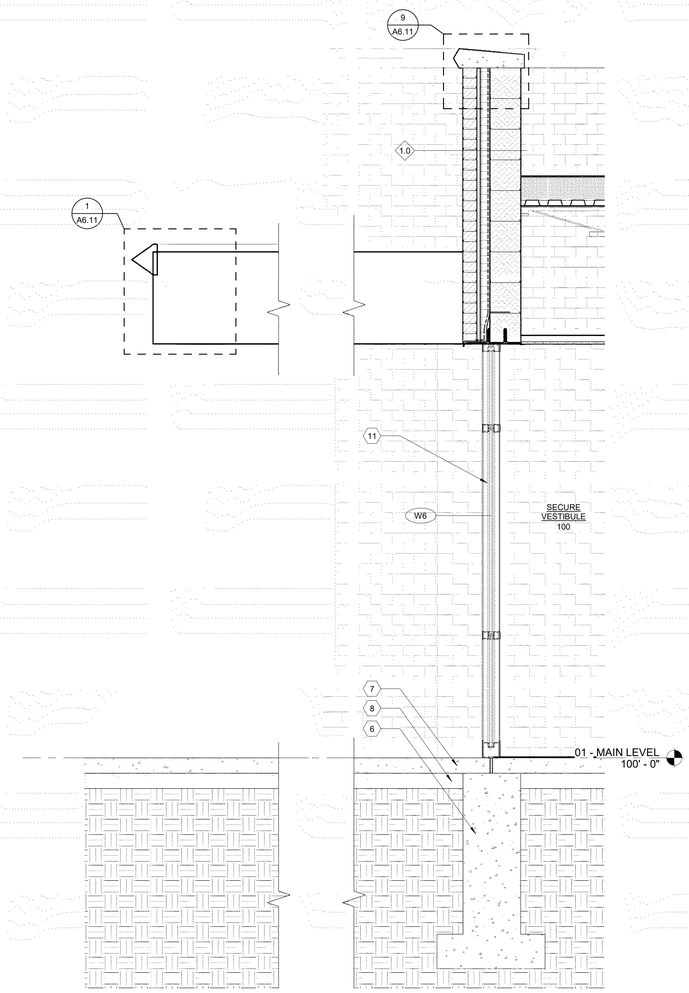
SHEET NUMBER
A7.01




1 A7.02 SECTION @ CLASSROOM 145
SCALE: 3/4" = 1'-0"




2 A7.02 SECTION @ CORRIDOR 107
SCALE: 3/4" = 1'-0"




3 A7.02 SECTION @ MAIN ENTRY VESTIBULE 100
SCALE: 3/4" = 1'-0"

## # MATERIAL KEYNOTES

1 STONE PARAPHET CAP
2 1.5" BRICK PROTRUSION
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35 TEMP

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

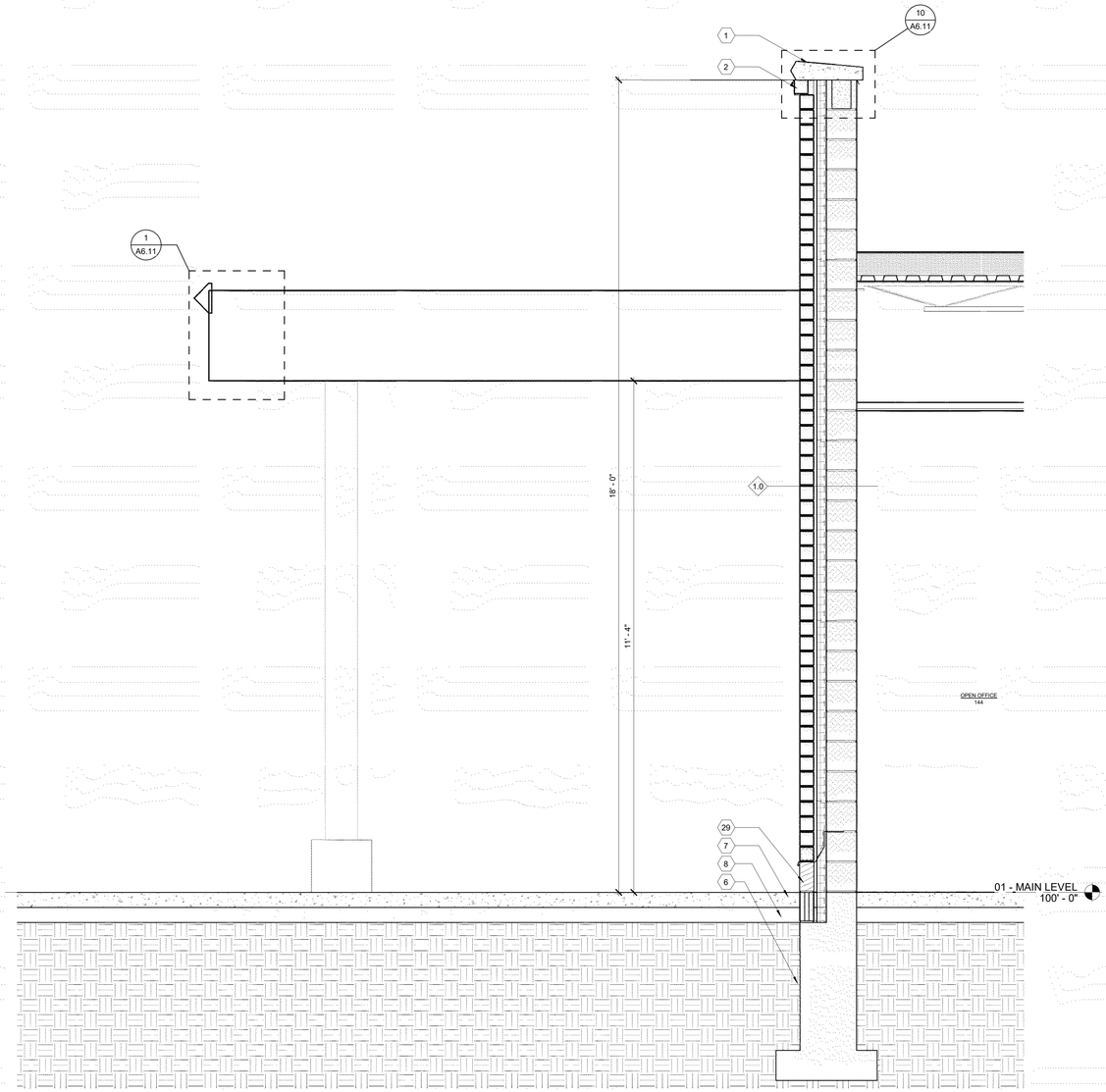
SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
2022006.1

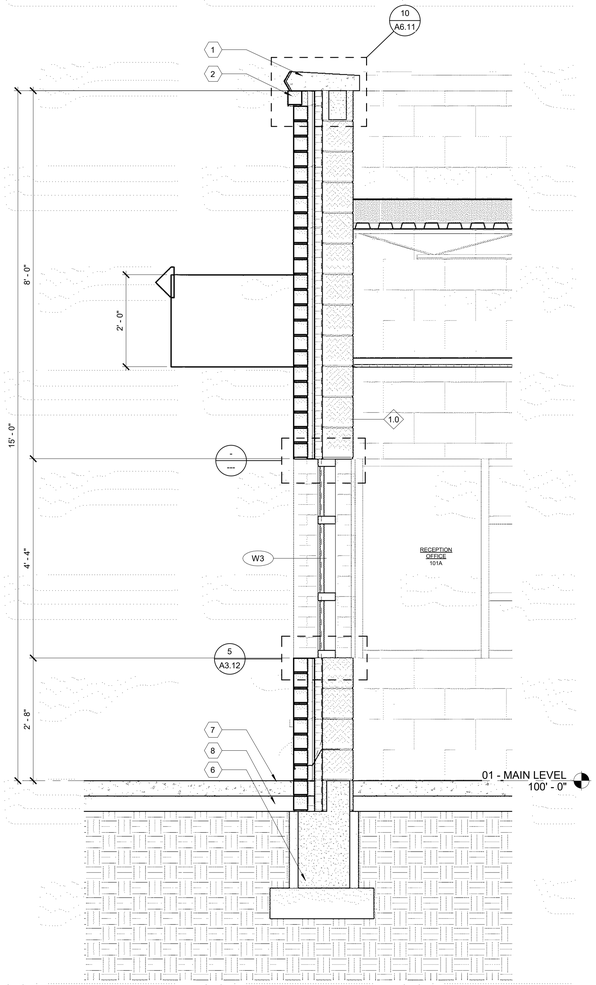
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
Checker

SHEET NUMBER
A7.02




1 A7.03 SECTION @ SOUTH ADDTION ENTRY CANOPY
SCALE: 3/4" = 1'-0"




2 A7.03 SECTION @ MAIN ENTRY CANOPY
SCALE: 3/4" = 1'-0"

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RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

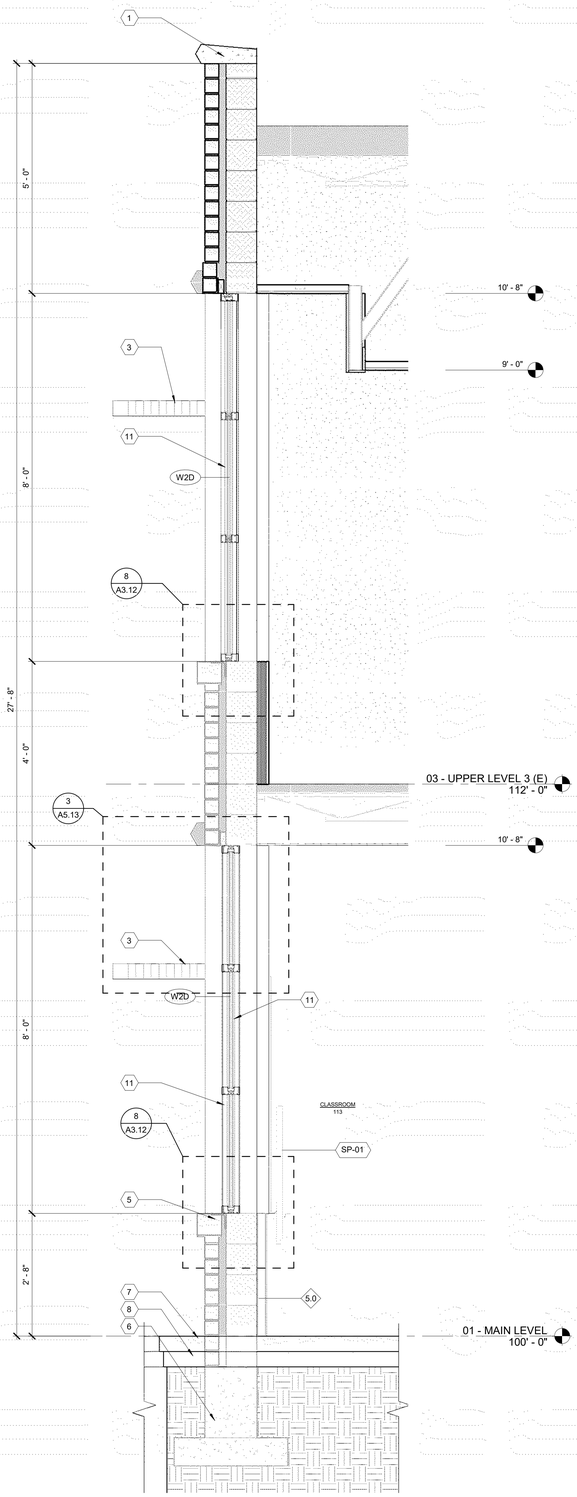
SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A7.03




1 A7.04 SECTION @ CLASSROOM 113 FURRING UP TO WINDOW SILL
SCALE: 3/4" = 1'-0"

## # MATERIAL KEYNOTES

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| NO. | REVISION | DATE |
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SHEET TITLE
WALL SECTIONS

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JMJ

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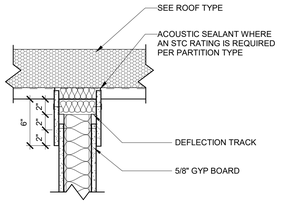
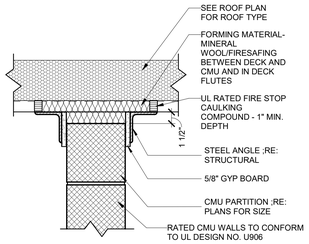



1 A7.10 TYP GB WALL HEAD PERPENDICULAR TO DECK
SCALE: 1 1/2" = 1'-0"




2 A7.10 TYP MASONRY RATED WALL HEAD
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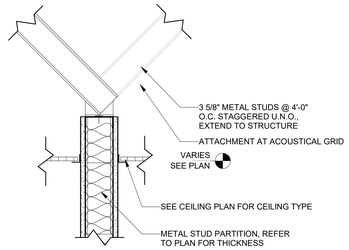
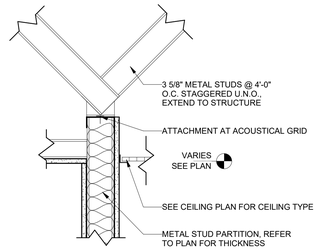
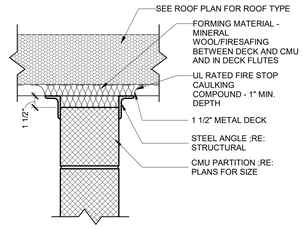


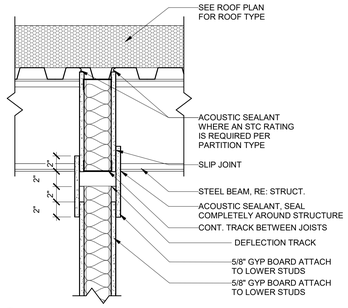

3 A7.10 TYP T.O.W. @ S.A.G. CEILING
SCALE: 1 1/2" = 1'-0"



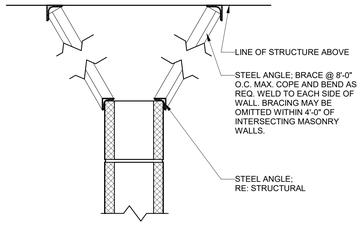

4 A7.10 TYP T.O.W. ABOVE FINISHED CEILING
SCALE: 1 1/2" = 1'-0"



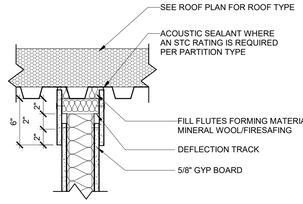

5 A7.10 TYP T.O.W. NON-RATED MASONRY TO DECK
SCALE: 1 1/2" = 1'-0"



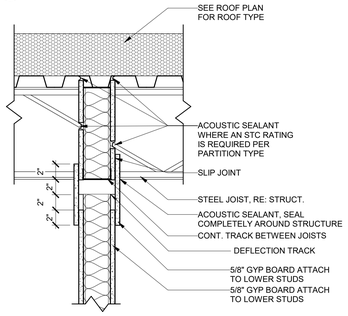

7 A7.10 TYP T.O.W. PERP. TO STRUCTURE
SCALE: 1 1/2" = 1'-0"



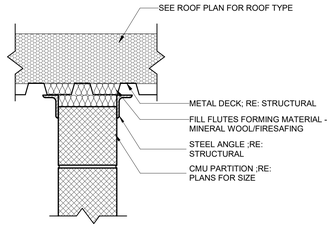

8 A7.10 TYP. T.O.W. BRACING @ NON-BEARING CMU
SCALE: 1 1/2" = 1'-0"




9 A7.10 TYP. T.O.W. PARRALLEL TO DECK
SCALE: 1 1/2" = 1'-0"




10 A7.10 TYP. T.O.W. PERP. TO STRUCTURE
SCALE: 1 1/2" = 1'-0"




6 A7.10 TYP T.O.W. NON-RATED MASONRY TO DECK PARALLEL
SCALE: 1 1/2" = 1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | ISSUED FOR BID | 08/23/23 |

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

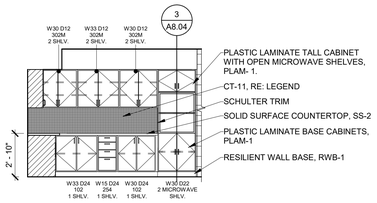
SHEET TITLE
DETAILS

PROJECT NUMBER
2022006.1

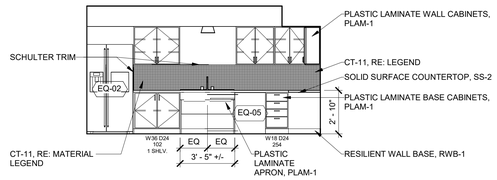
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

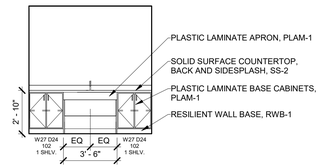
SHEET NUMBER
A7.10



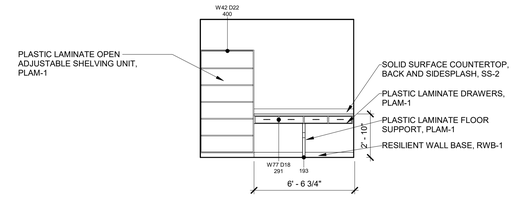

012 STAFF LOUNGE N
1/A8.01 SCALE: 1/4" = 1'-0"



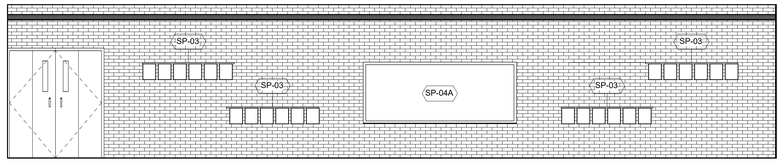

012 STAFF LOUNGE W
2/A8.01 SCALE: 1/4" = 1'-0"



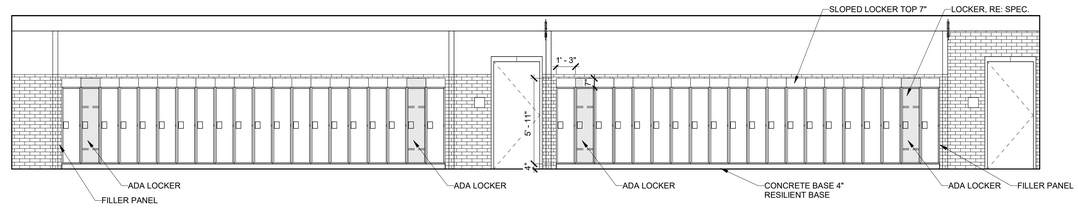

012A MOTHERS RM W
3/A8.01 SCALE: 1/4" = 1'-0"



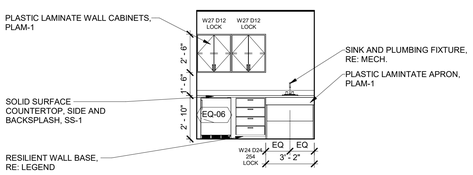

101B MAIL ROOM N
4/A8.01 SCALE: 1/4" = 1'-0"



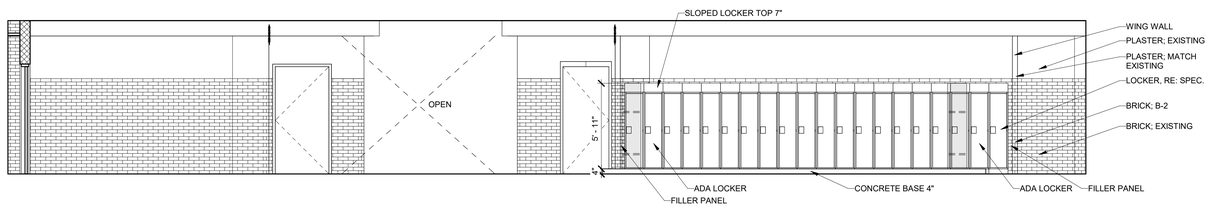

103 CIRCULATION W
5/A8.01 SCALE: 1/4" = 1'-0"



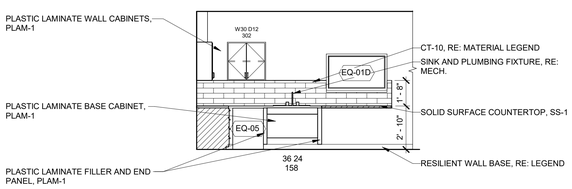

104 CIRCULATION E
6/A8.01 SCALE: 1/4" = 1'-0"



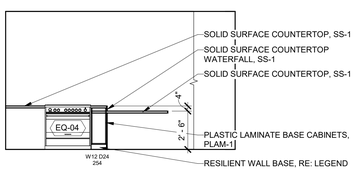

110 CLINIC W
7/A8.01 SCALE: 1/4" = 1'-0"



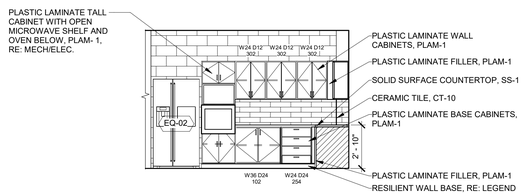

104 CIRCULTION W
8/A8.01 SCALE: 1/4" = 1'-0"



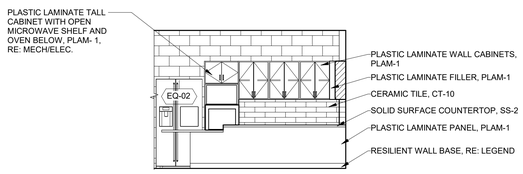

112 LIFE SKILLS N
9/A8.01 SCALE: 1/4" = 1'-0"



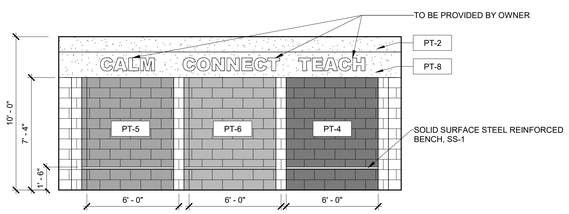

112 LIFE SKILLS E
10/A8.01 SCALE: 1/4" = 1'-0"




112 LIFE SKILLS W-2
11/A8.01 SCALE: 1/4" = 1'-0"




112 LIFE SKILLS W-1
12/A8.01 SCALE: 1/4" = 1'-0"




107 CIRCULATION
13/A8.01 SCALE: 1/4" = 1'-0"

## SPECIALTIES SCHEDULE

| ID# | ITEM DESCRIPTION | HEIGHT | WIDTH | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|---|---|
| SP-01 | MARKERBOARD | 4' - 0" | 4' - 0" | G.C. | G.C. | |
| SP-01A | MARKERBOARD | 4' - 0" | 6' - 0" | G.C. | G.C. | |
| SP-01B | GLASS MARKERBOARD | 4' - 0" | 8' - 0" | G.C. | G.C. | |
| SP-02 | TACKBOARD | 4' - 0" | 4' - 0" | G.C. | G.C. | |
| SP-02A | TACKBOARD | 4' - 0" | 6' - 0" | G.C. | G.C. | |
| SP-02B | TACKBOARD | 4' - 0" | 8' - 0" | G.C. | G.C. | |
| SP-03 | ART HANGING SYSTEM | | | G.C. | G.C. | |

## EQUIPMENT SCHEDULE

| ID# | ITEM DESCRIPTION | HEIGHT | WIDTH | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|---|---|
| EQ-01A | TELEVISION | | | OWNER | G.C. | |
| EQ-01B | TELEVISION | | | OWNER | G.C. | |
| EQ-01C | TELEVISION | | | OWNER | G.C. | |
| EQ-01D | TELEVISION | | | OWNER | G.C. | |
| EQ-02 | REFRIGERATOR | | | OWNER | G.C. | |
| EQ-03A | LIGHT DISPLAY BOARDS | | | G.C. | G.C. | WALL MOUNTED |
| EQ-03B | LIGHT DISPLAY BOARDS | | | G.C. | G.C. | CEILING/FLOOR MOUNTED |
| EQ-04 | STOVE | | | OWNER | G.C. | |
| EQ-05 | DISHWASHER | | | OWNER | G.C. | |
| EQ-06 | UNDERCOUNTER REFRIGERATOR | | | OWNER | G.C. | |
| EQ-07 | COPIER | | | OWNER | G.C. | |
| EQ-08 | WASHER | | | OWNER | G.C. | |
| EQ-09 | DRYER | | | OWNER | G.C. | |

## CASEWORK GENERAL NOTES:

1. 1 1/2" FILLR PANELS SHALL OCCUR AT THE WALL AT ALL CAINET LOCATIONS ABUTTING A WALL U.O.N.
2. WHEN FILLER PANELS ARE REQUIRED AT BOTH ENSS OF CASEWORK TERMINATION, BOTH FILLER PANELS SHALL BE EQUAL WIDTH.
3. PROVIDE 4" BACKSPLASH AND SIDE SPLASH AT ALL COUNTERTOPS WITH SINKS, UNLESS NOTED OTHERWISE.
4. COORDINATE ROUGH-IN FOR ELECTRICAL OUTLETS, SWITCHES AND UNDER CABINET LIGHTING WITH ELECTRICAL DRAWINGS.
5. CONTRACTOR TO VERIFY MEP AND DIMENSIONAL ROUGH-IN REQUIREMENTS OF ALL OWNER PROVIDED EQUIPMENT AND APPLIANCES.
6. PROVIDE 4" TOE-KICK, TYPICAL U.O.N.
7. PROVIDE GROMMETS IN COUNTERTOPD AS REQUIRED BY THE OWNER. FIELD VERIFY LOCATIONS.
8. PROVIDE 2" RADILUS AT THE END OF EXPOSED COUNTERTOPS U.O.N.
9. PROVIDE WALL BRACKET SUPPORTS 30" O.C. TO SUPPORT COUNTERTOP AT CONTINUOUS KNEE SPACE.
10. PROVIDE LOCKS ON ALL CASEWOK DOORS AND DRAWERS.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |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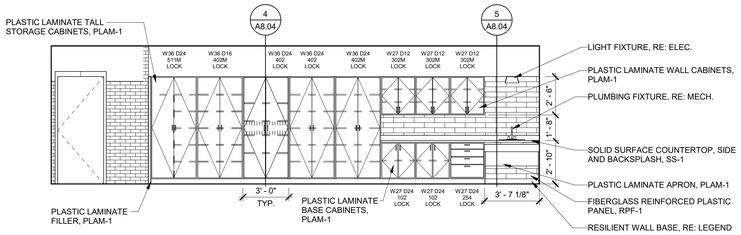
SHEET TITLE
INTERIOR ELEVATIONS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

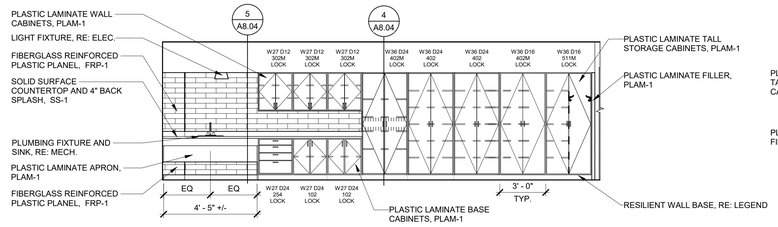
CHECKED BY
JMJ

SHEET NUMBER
A8.01



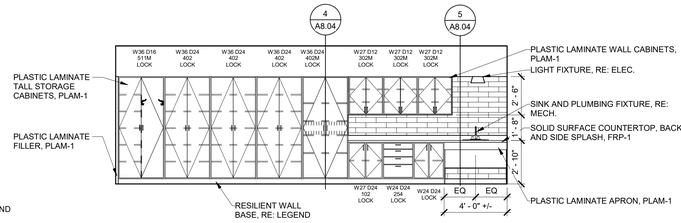

113 POST-SECONDARYCLASSROOM W

1/A8.02 SCALE: 1/4" = 1'-0"



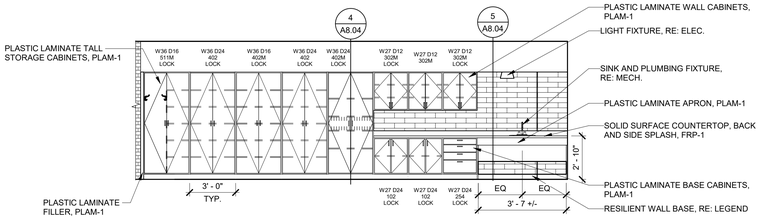

114 POST-SECONDARY CLASSROOM E

2/A8.02 SCALE: 1/4" = 1'-0"



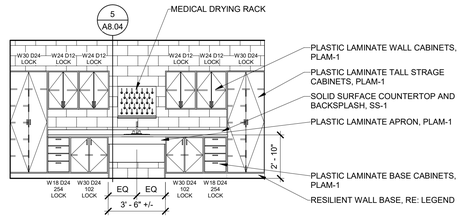

115 POST-SECONDARY CLASSROOM W

3/A8.02 SCALE: 1/4" = 1'-0"



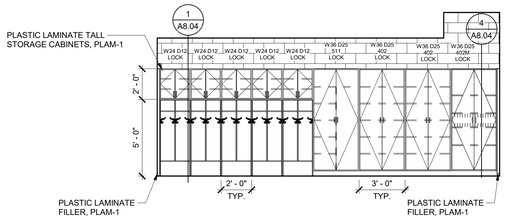

116 POST-SECONDARY CLASSROOM E

4/A8.02 SCALE: 1/4" = 1'-0"



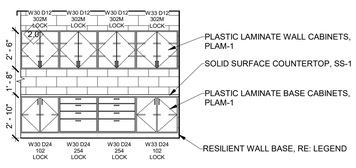

130 MAT ROOM S

5/A8.02 SCALE: 1/4" = 1'-0"



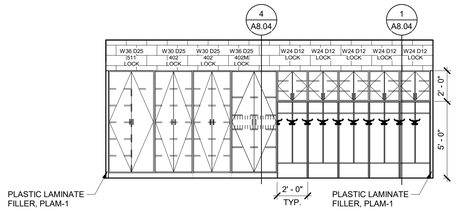

133 K12 CLASSROOM N

7/A8.02 SCALE: 1/4" = 1'-0"



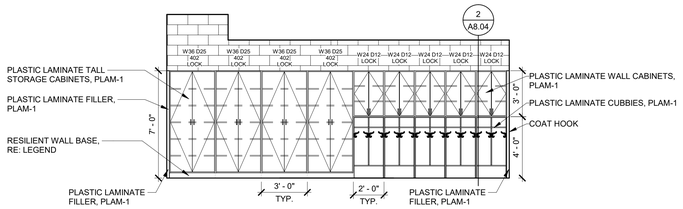

139 K12 CLASSROOM E

8/A8.02 SCALE: 1/4" = 1'-0"



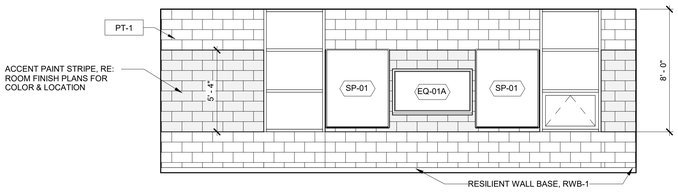

TYP. K12 CLASSROOM 135 139

9/A8.02 SCALE: 1/4" = 1'-0"



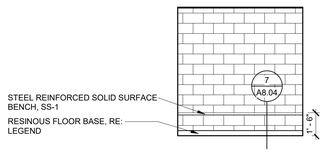

TYP. K12 CLASSROOM 141 145

10/A8.02 SCALE: 1/4" = 1'-0"



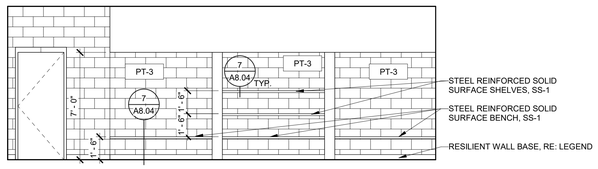

TEACHING WALL 113/115/121/123/127/129/133 K12 CLASSROOM

11/A8.02 SCALE: 1/4" = 1'-0"



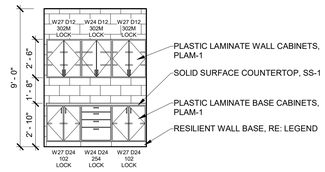

140 SENSORY ROOM N

12/A8.02 SCALE: 1/4" = 1'-0"



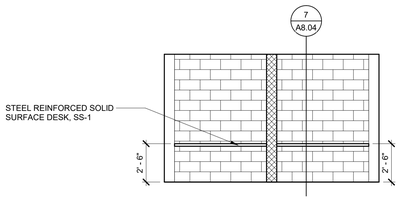

142 EXERCISE ROOM S

13/A8.02 SCALE: 1/4" = 1'-0"




145 K12 CLASSROOM N-2

14/A8.02 SCALE: 1/4" = 1'-0"




SK-12 CLASSROOM 135/139 PRIVATE DESK

15/A8.02 SCALE: 1/4" = 1'-0"

## SPECIALTIES SCHEDULE

| ID# | ITEM DESCRIPTION | HEIGHT | WIDTH | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|---|---|
| SP-01 | MARKERBOARD | 4' - 0" | 4' - 0" | G.C. | G.C. | |
| SP-01A | MARKERBOARD | 4' - 0" | 6' - 0" | G.C. | G.C. | |
| SP-01B | GLASS MARKERBOARD | 4' - 0" | 8' - 0" | G.C. | G.C. | |
| SP-02 | TACKBOARD | 4' - 0" | 4' - 0" | G.C. | G.C. | |
| SP-02A | TACKBOARD | 4' - 0" | 6' - 0" | G.C. | G.C. | |
| SP-02B | TACKBOARD | 4' - 0" | 8' - 0" | G.C. | G.C. | |
| SP-03 | ART HANGING SYSTEM | | | G.C. | G.C. | |

## EQUIPMENT SCHEDULE

| ID# | ITEM DESCRIPTION | HEIGHT | WIDTH | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|---|---|
| EQ-01A | TELEVISION | | | OWNER | G.C. | |
| EQ-01B | TELEVISION | | | OWNER | G.C. | |
| EQ-01C | TELEVISION | | | OWNER | G.C. | |
| EQ-01D | TELEVISION | | | OWNER | G.C. | |
| EQ-02 | REFRIGERATOR | | | OWNER | G.C. | |
| EQ-03A | LIGHT DISPLAY BOARDS | | | G.C. | G.C. | WALL MOUNTED |
| EQ-03B | LIGHT DISPLAY BOARDS | | | G.C. | G.C. | CEILING/FLOOR MOUNTED |
| EQ-04 | STOVE | | | OWNER | G.C. | |
| EQ-05 | DISHWASHER | | | OWNER | G.C. | |
| EQ-06 | UNDERCOUNTER REFRIGERATOR | | | OWNER | G.C. | |
| EQ-07 | COPIER | | | OWNER | G.C. | |
| EQ-08 | WASHER | | | OWNER | G.C. | |
| EQ-09 | DRYER | | | OWNER | G.C. | |

## CASEWORK GENERAL NOTES:

1. 1 1/2" FILLR PANELS SHALL OCCUR AT THE WALL AT ALL CAINET LOCATIONS ABUTTING A WALL U.O.N.
2. WHEN FILLER PANELS ARE REQUIRED AT BOTH ENSS OF CASEWORK TERMINATION, BOTH FILLER PANELS SHALL BE EQUAL WIDTH.
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6. PROVIDE 4" TOE-KICK, TYPICAL U.O.N.
7. PROVIDE GROMMETS IN COUNTERTOPD AS REQUIRED BY THE OWNER. FIELD VERIFY LOCATIONS.
8. PROVIDE 2" RADILUS AT THE END OF EXPOSED COUNTERTOPS U.O.N.
9. PROVIDE WALL BRACKET SUPPORTS 30" O.C. TO SUPPORT COUNTERTOP AT CONTINUOUS KNEE SPACE.
10. PROVIDE LOCKS ON ALL CASEWOK DOORS AND DRAWERS.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |


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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

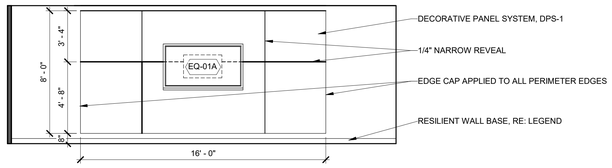
INTERIOR ELEVATIONS

PROJECT NUMBER 2022006.1

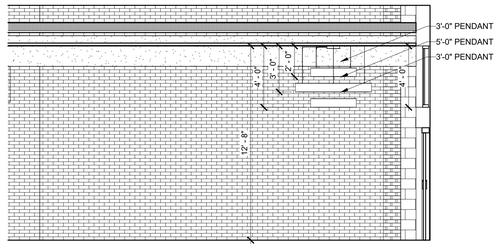
PROJECT DATE AUGUST 23, 2023

CHECKED BY JMJ

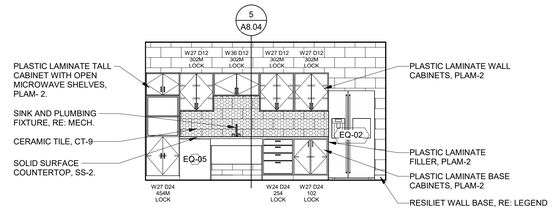
SHEET NUMBER A8.02



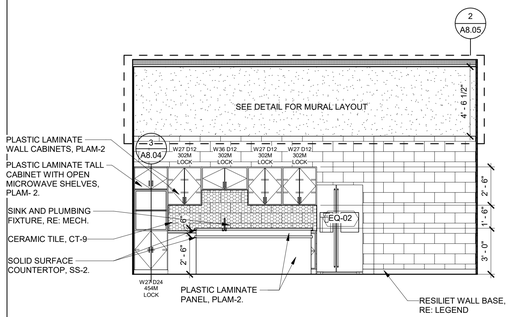

210 ADMIN CONFERENCE ROOM N
1/A8.03 SCALE: 1/4" = 1'-0"



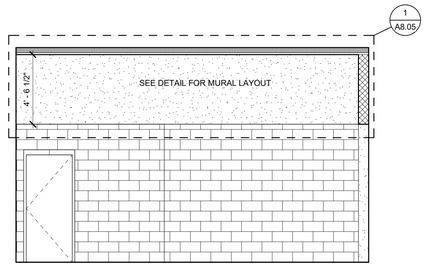

106 CIRCULATION N
2/A8.03 SCALE: 1/4" = 1'-0"



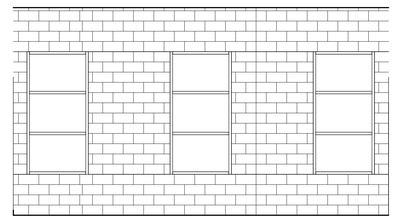

131 THE HIVE PT4
3/A8.03 SCALE: 1/4" = 1'-0"



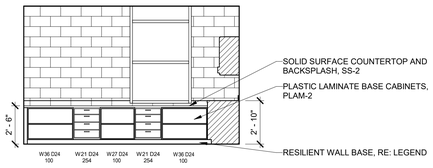

131 THE HIVE PT1
4/A8.03 SCALE: 1/4" = 1'-0"



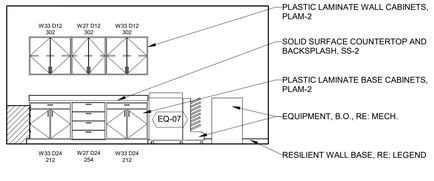

131 THE HIVE PT2
5/A8.03 SCALE: 1/4" = 1'-0"



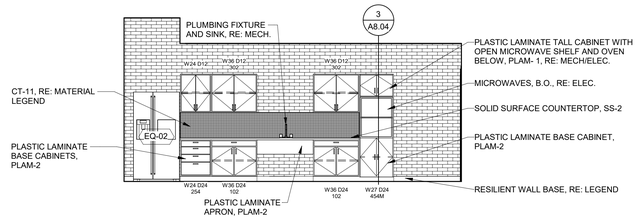
131 THE HIVE PT 3
6/A8.03 SCALE: 1/4" = 1'-0"



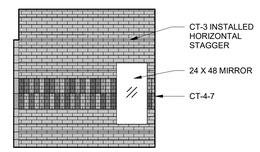

215A WORK ROOM E
8/A8.03 SCALE: 1/4" = 1'-0"



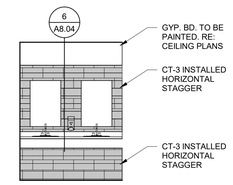

215A WORK ROOM S
9/A8.03 SCALE: 1/4" = 1'-0"



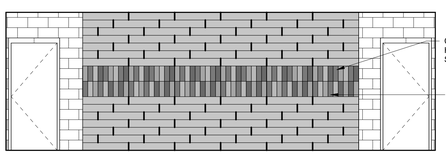

315 STAFF LOUNGE S
10/A8.03 SCALE: 1/4" = 1'-0"



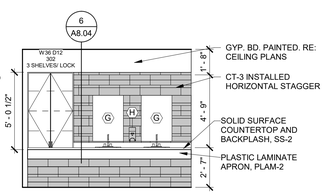

104 TOILET ROOM S
11/A8.03 SCALE: 1/4" = 1'-0"



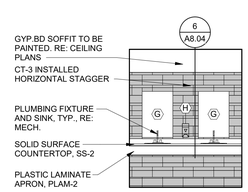

104S TOILET ROOM E
12/A8.03 SCALE: 1/4" = 1'-0"



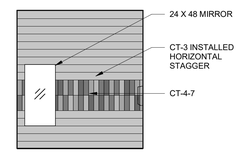

136 TOILET ROOM N
13/A8.03 SCALE: 1/4" = 1'-0"



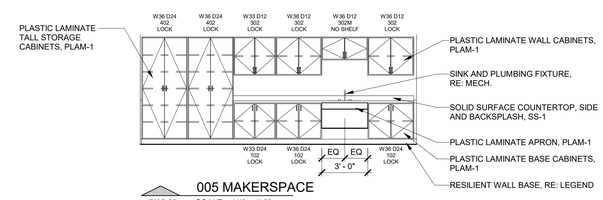

136 TOILET ROOM N (TYP.)
14/A8.03 SCALE: 1/4" = 1'-0"



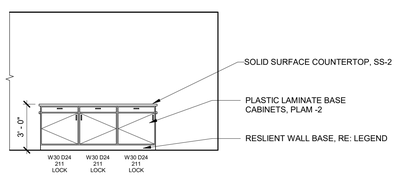

104N TOILET ROOM E
15/A8.03 SCALE: 1/4" = 1'-0"




104 TOILET ROOM W
16/A8.03 SCALE: 1/4" = 1'-0"




005 MAKERSPACE
17/A8.03 SCALE: 1/4" = 1'-0"




18
A8.03
THE HIVE 131 ISLAND
SCALE: 1/4" = 1'-0"

## SPECIALTIES SCHEDULE

| ID# | ITEM DESCRIPTION | HEIGHT | WIDTH | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|---|---|
| SP-01 | MARKERBOARD | 4' - 0" | 4' - 0" | G.C. | G.C. | |
| SP-01A | MARKERBOARD | 4' - 0" | 6' - 0" | G.C. | G.C. | |
| SP-01B | GLASS MARKERBOARD | 4' - 0" | 8' - 0" | G.C. | G.C. | |
| SP-02 | TACKBOARD | 4' - 0" | 4' - 0" | G.C. | G.C. | |
| SP-02A | TACKBOARD | 4' - 0" | 6' - 0" | G.C. | G.C. | |
| SP-02B | TACKBOARD | 4' - 0" | 8' - 0" | G.C. | G.C. | |
| SP-03 | ART HANGING SYSTEM | | | G.C. | G.C. | |

## EQUIPMENT SCHEDULE

| ID# | ITEM DESCRIPTION | HEIGHT | WIDTH | FURNISHED BY | INSTALLED BY | COMMENTS |
|---|---|---|---|---|---|---|
| EQ-01A | TELEVISION | | | OWNER | G.C. | |
| EQ-01B | TELEVISION | | | OWNER | G.C. | |
| EQ-01C | TELEVISION | | | OWNER | G.C. | |
| EQ-01D | TELEVISION | | | OWNER | G.C. | |
| EQ-02 | REFRIGERATOR | | | OWNER | G.C. | |
| EQ-03A | LIGHT DISPLAY BOARDS | | | G.C. | G.C. | WALL MOUNTED |
| EQ-03B | LIGHT DISPLAY BOARDS | | | G.C. | G.C. | CEILING/FLOOR MOUNTED |
| EQ-04 | STOVE | | | OWNER | G.C. | |
| EQ-05 | DISHWASHER | | | OWNER | G.C. | |
| EQ-06 | UNDERCOUNTER REFRIGERATOR | | | OWNER | G.C. | |
| EQ-07 | COPIER | | | OWNER | G.C. | |
| EQ-08 | WASHER | | | OWNER | G.C. | |
| EQ-09 | DRYER | | | OWNER | G.C. | |

## CASEWORK GENERAL NOTES:

1. 1 1/2" FILLR PANELS SHALL OCCUR AT THE WALL AT ALL CAINET LOCATIONS ABUTTING A WALL U.O.N.
2. WHEN FILLER PANELS ARE REQUIRED AT BOTH ENSS OF CASEWORK TERMINATION, BOTH FILLER PANELS SHALL BE EQUAL WIDTH.
3. PROVIDE 4" BACKSPLASH AND SIDE SPLASH AT ALL COUNTERTOPS WITH SINKS, UNLESS NOTED OTHERWISE.
4. COORDINATE ROUGH-IN FOR ELECTRICAL OUTLETS, SWITCHES AND UNDER CABINET LIGHTING WITH ELECTRICAL DRAWINGS.
5. CONTRACTOR TO VERIFY MEP AND DIMENSIONAL ROUGH-IN REQUIREMENTS OF ALL OWNER PROVIDED EQUIPMENT AND APPLIANCES.
6. PROVIDE 4" TOE-KICK, TYPICAL U.O.N.
7. PROVIDE GROMMETS IN COUNTERTOPD AS REQUIRED BY THE OWNER. FIELD VERIFY LOCATIONS.
8. PROVIDE 2" RADIUS AT THE END OF EXPOSED COUNTERTOPS U.O.N.
9. PROVIDE WALL BRACKET SUPPORTS 30" O.C. TO SUPPORT COUNTERTOP AT CONTINUOUS KNEE SPACE.
10. PROVIDE LOCKS ON ALL CASEWOK DOORS AND DRAWERS.

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

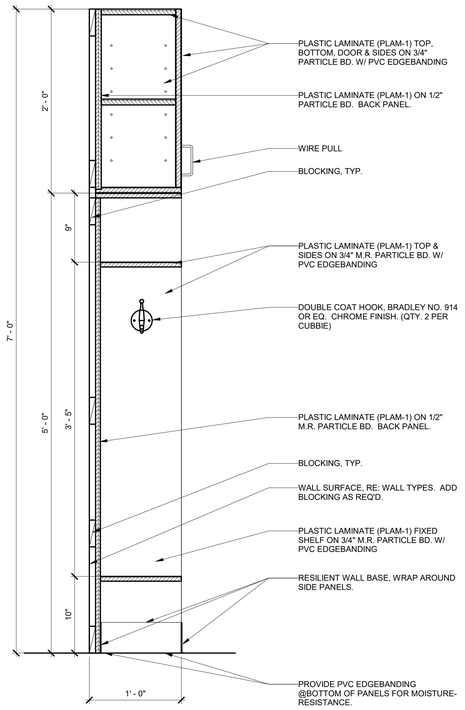
SHEET TITLE
INTERIOR ELEVATIONS

PROJECT NUMBER
2022006.1

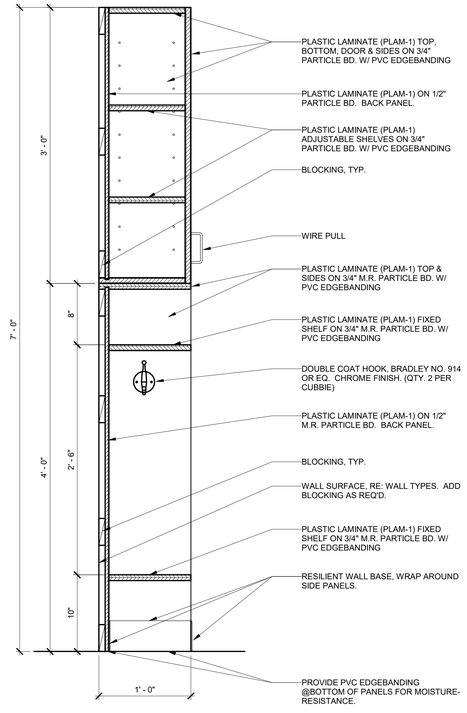
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

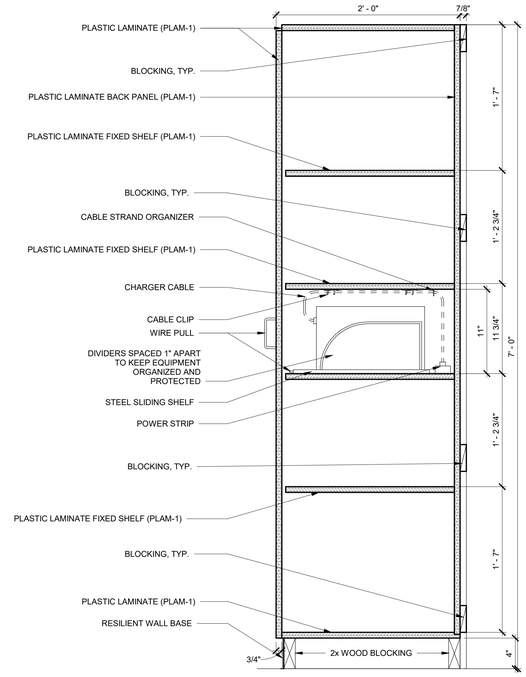
SHEET NUMBER
A8.03



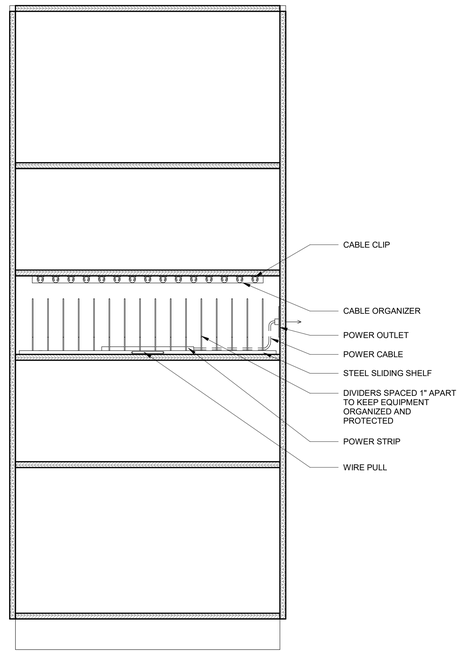

1 A8.04 TYP. 5'-0" CUBBIE SINGLE
SCALE: 1 1/2" = 1'-0"

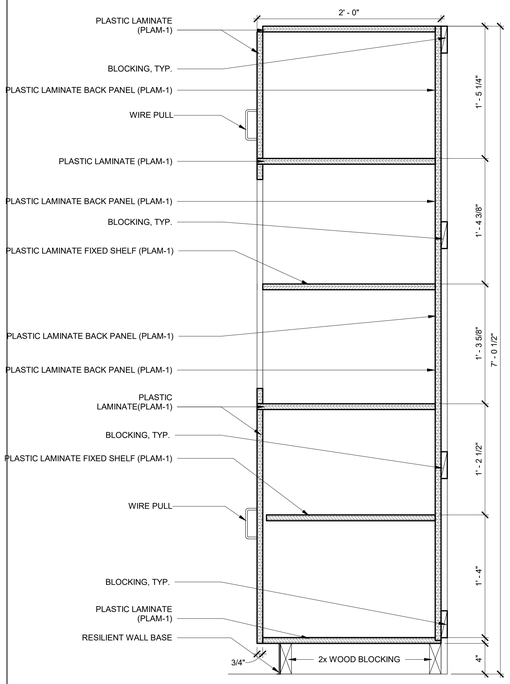



2 A8.04 TYP. 4'-0" CUBBIE SINGLE
SCALE: 1 1/2" = 1'-0"

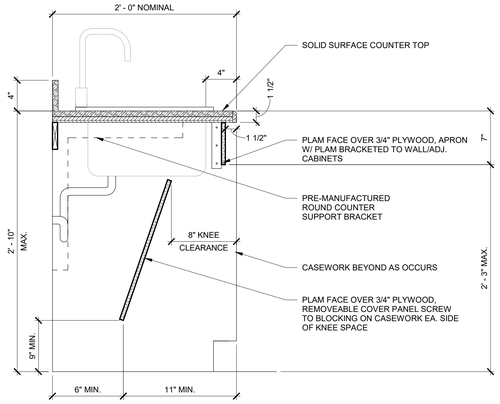



4 A8.04 TYP.SECTION @ CASEWORK CHARGING STATION
SCALE: 1 1/2" = 1'-0"



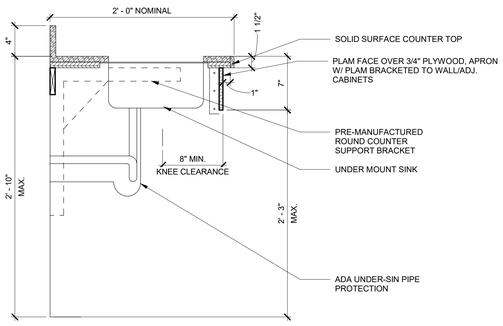




3 A8.04 SECTION @ CASE APPLIANCE MICROWAVE
SCALE: 1 1/2" = 1'-0"



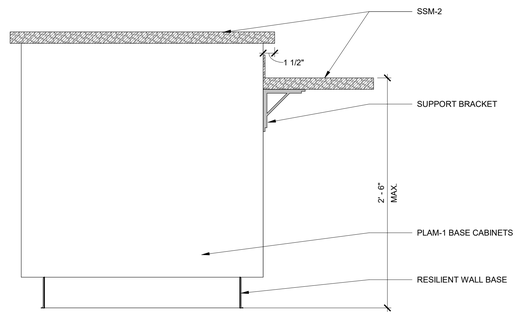

NOTE: CONTRACTOR VERIFY ALL CLEARANCES PRIOR TO FABRICATION

5 A8.04 CASEWORK-ADA SKIRT DETAIL
SCALE: 1 1/2" = 1'-0"

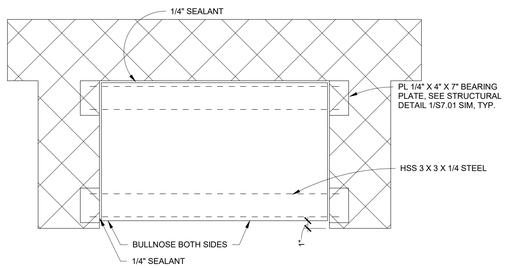



NOTE: CONTRACTOR VERIFY ALL CLEARANCES PRIOR TO FABRICATION

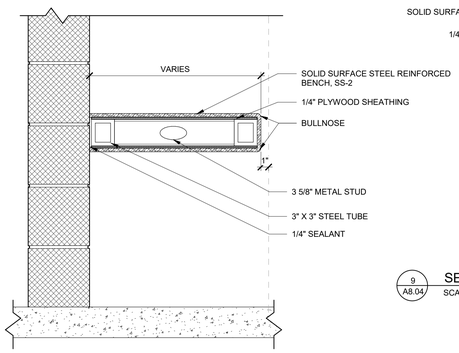
6 A8.04 CASEWORK-ADA COUNTER AT RESTROM SINK
SCALE: 1 1/2" = 1'-0"

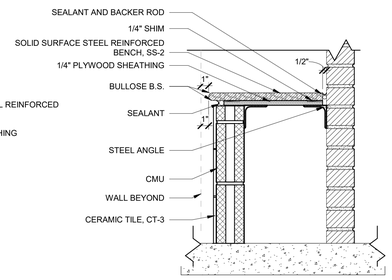



8 A8.04 SECTION @ THE HIVE 131 ISLAND
SCALE: 1 1/2" = 1'-0"

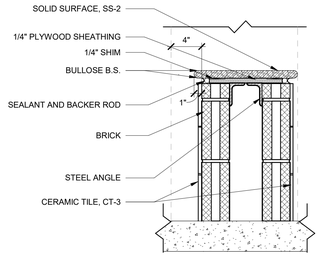



7 A8.04 TYP. DETAIL/SECTION @ SOLID SURFACE BENCH/DESK
SCALE: 1 1/2" = 1'-0"




9 A8.04 SECTION @ SOLID SURFACE BENCH SUGNET ENTRANCE
SCALE: 1 1/2" = 1'-0"




10 A8.04 SECTION @ SOLID SURFACE BENCH LOBBY 102
SCALE: 1 1/2" = 1'-0"

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RENOVATION AND ADDITION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
CASEWORK DETAILS

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A8.04

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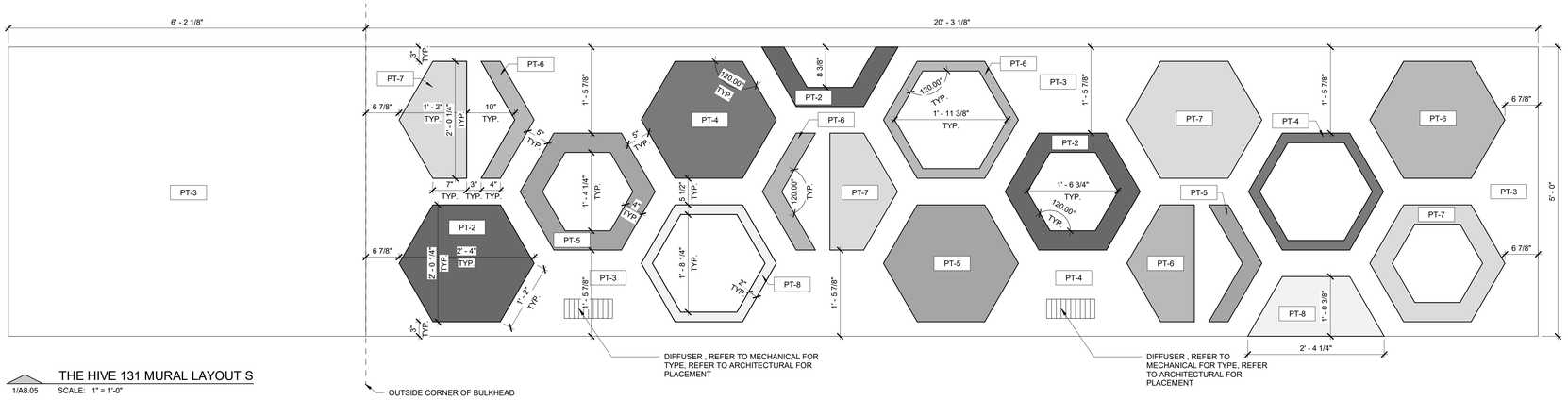
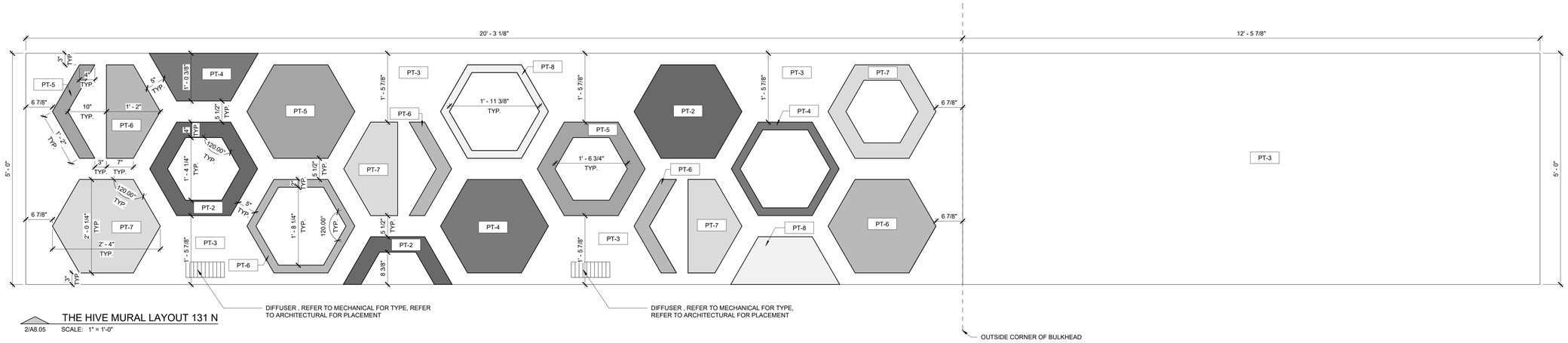



THE HIVE 131 MURAL LAYOUT S

1/A8.05 SCALE: 1" = 1'-0"




THE HIVE MURAL LAYOUT 131 N

2/A8.05 SCALE: 1" = 1'-0"

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ELEVATIONS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

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SHEET NUMBER
A8.05

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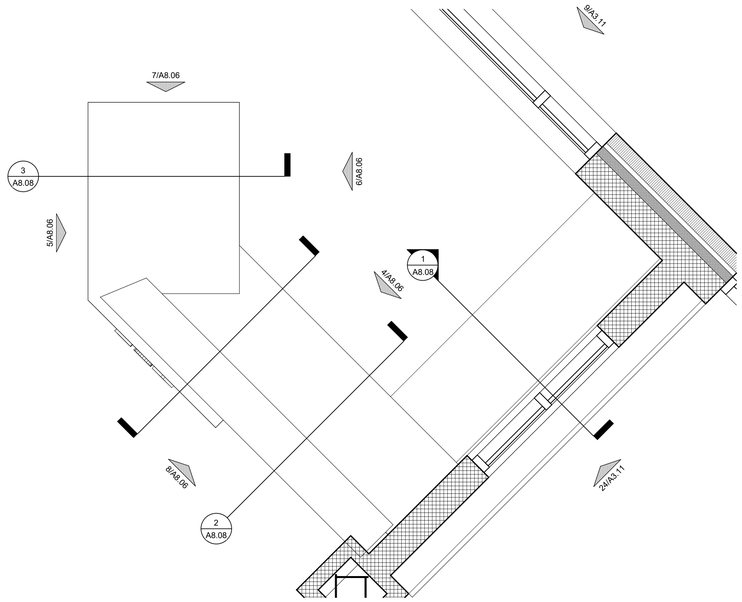
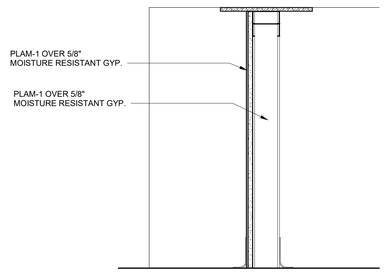
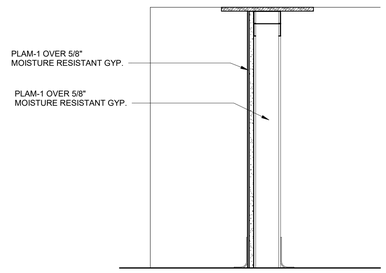


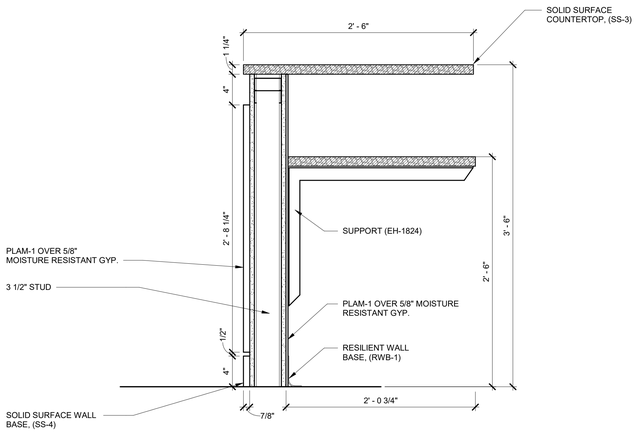

3 A8.06 ENLARGED RECEPTION PLAN
SCALE: 3/4" = 1'-0"



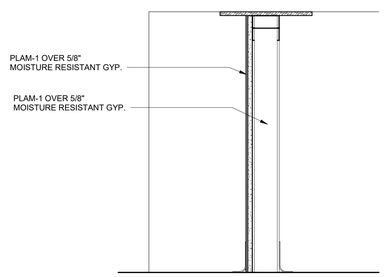

12 A8.06 DETAIL 1 RECEPTION COUNTER
SCALE: 1 1/2" = 1'-0"



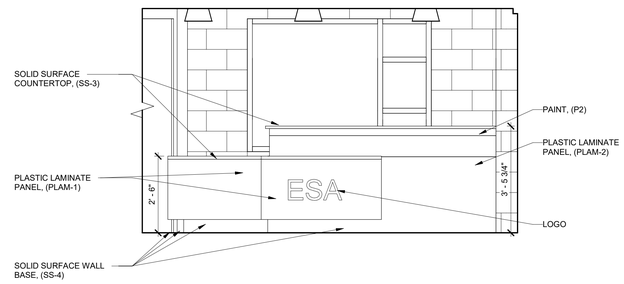

9 A8.06 DETAIL 2 RECEPTION COUNTER
SCALE: 1 1/2" = 1'-0"



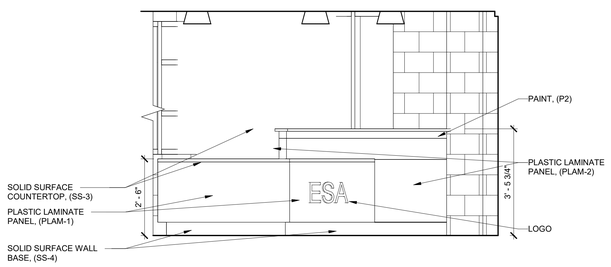

10 A8.06 DETAIL 3 RECEPTION COUNTER
SCALE: 1 1/2" = 1'-0"



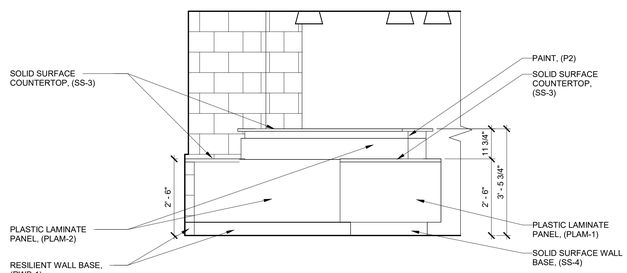

11 A8.06 DETAIL 4 RECEPTION COUNTER
SCALE: 1 1/2" = 1'-0"



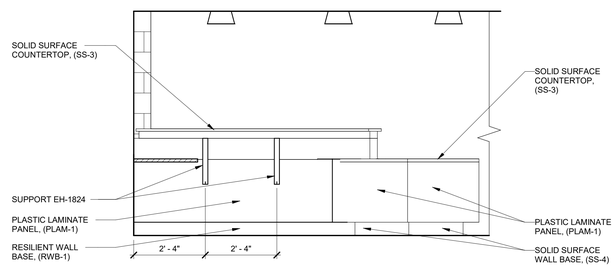

8/A8.06 RECEPTION DESK - OUTSIDE SOUTH EAST
SCALE: 1/2" = 1'-0"




5/A8.06 RECEPTION DESK - OUTSIDE WEST
SCALE: 1/2" = 1'-0"




7/A8.06 RECEPTION DESK - NORTH
SCALE: 1/2" = 1'-0"




4/A8.06 RECEPTION DESK - INTERIOR NORTH EAST
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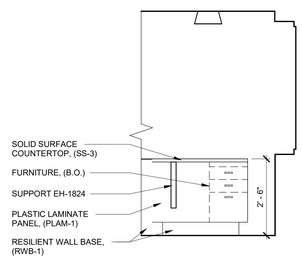


6/A8.06 RECEPTION DESK - INSIDE EAST
SCALE: 1/2" = 1'-0"

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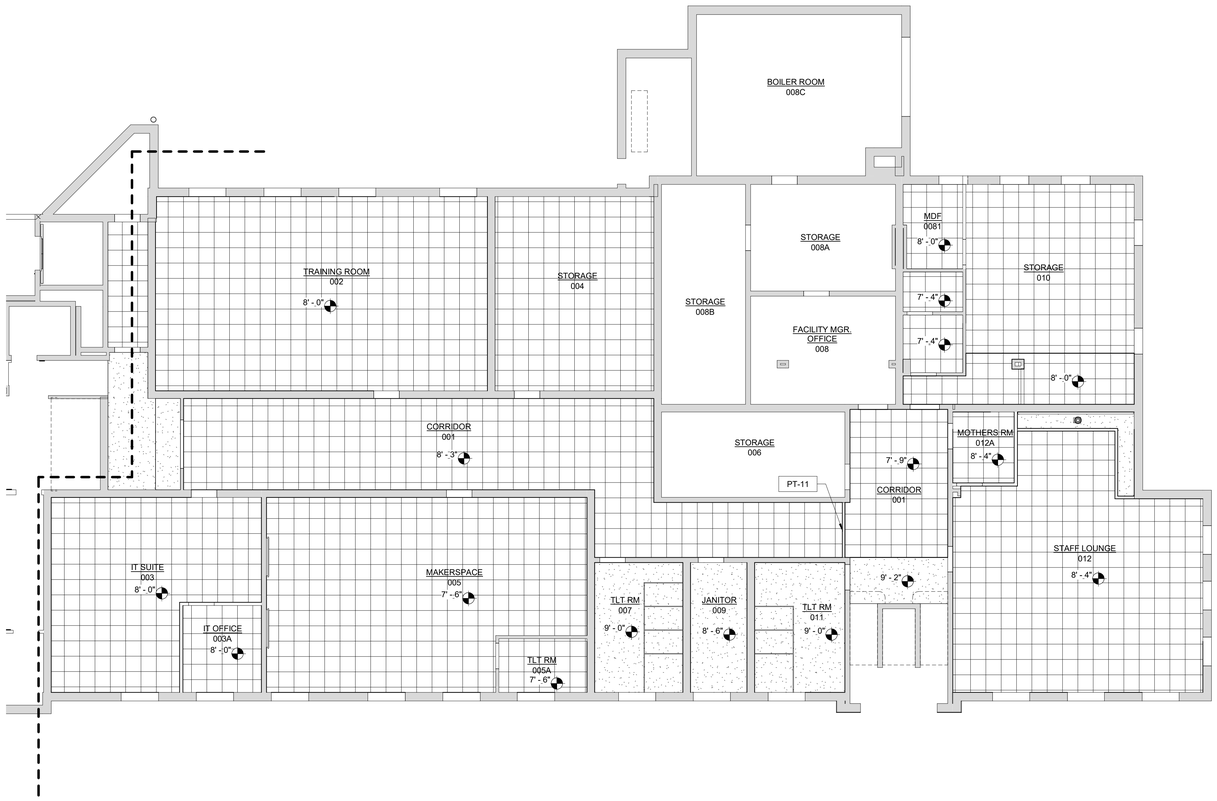
SHEET TITLE
CASEWORK DETAILS AND ELEVATIONS

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A8.06

Author 8/23/2023 10:06:43 AM C:\Users\thomas\Documents\CENTRAL-2022006-MidlandCountyESA_V23_mthomas4LTUV.rvt




1 A9.10 REFLECTED CEILING PLAN LOWER LEVEL - AREA A

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

## REFLECTED CEILING LEGEND:

- 2x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 2 X 2 LIGHT FIXTURE (REFER TO ELECTRICAL
- 1x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- CAN LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- WALL MOUNTED LIGHT FIXTURE (REFER TO ELECTRICAL)
- UNDER COUNTER LIGHT FIXTURE (REFER TO ELECTRICAL)
- SUPPLY AIR DIFFUSER (REFER TO MECHANICAL)
- RETURN AIR DIFFUSER (REFER TO MECHANICAL)
- MECHANICAL ITEM (REFER TO MECHANICAL)
- EXIT — EXIT LIGHT FIXTURE (REFER TO ELECTRICAL)

## CEILING TYPES

- (ACT-1) 2x2 CEILING (MIN. NRC .7)
- (ACT-2) SECURE LAY-IN CEILING SYSTEM
- (AP-1) TECTUM SHAPES HEXAGON; COLOR AS INDICATED IN FINISH SCHEDULE
- (AP-2) 4" X 8" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
- (AP-3) 2" X 10" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
- (AP-4) ACOUSTIC FIBERGLASS PANEL
- EXPOSED CEILING; PAINT STRUCTURE AND EXPOSED CEILING PT-10. ALL ADJACENT SURFACES TO BE CLEANED OF OVERSPRAY.
- EXPOSED CEILING; PAINT
- GYPSUM BOARD CEILING, PAINT.
- SUSPENDED 8'-0" X 8' - 0" UNISTRUT GRID AT 10' - 0" A.F.F.;PAINTED, FINISH PT-11

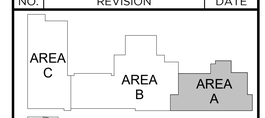
## CEILING PLAN GENERAL NOTES:

1. ALL NOTED CEILING HEIGHTS ARE RELATIVE TO THE FINISH FLOOR BELOW.
2. ALL DIMENSIONS ARE TO FINISH FACE OF SOFFIT OR PARTITION AND TO CENTERLINE OF LIGHT FIXTURES U.O.N.
3. CENTER CEILING GRID IN BOTH DIRECTIONS IN ROOM U.O.N.
4. CENTER RECESSED DOWN LIGHTS AND SPRINKLER HEADS IN CEILING SYSTEM U.O.N.
5. REFER TO MECHANICAL DRAWINGS FOR DIFFUSER TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT OF DEVICES. NOTIFY ARCHITECT OF ANY POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH WORK.
6. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT OF FIXTURES. NOTIFY ARCHITECT OF ANY POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH WORK.
7. SEE INTERIOR ELEVATIONS ON THE A8.0 SHEETS OR DEDICATED INTERIOR REFLECTED CEILING PLANS, AS OCCURS FOR ACCENT COLORS AND SPECIAL FINISHES.
8. UNDER CABINET LIGHTING (UCL) INDICATED ON INTERIOR ELEVATIONS.
9. ALL AREAS EXPOSED TO STRUCTURE WILL HAVE EXPOSED WIRING PLACED IN FLEXIBLE CONDUIT. COORDINATE WITH ELECTRICAL.
10. ACCENT PAINT NOTED ON CEILING SOFFITS TO COVER VERTICAL & HORIZONTAL FACES.
11. ALL GYP. BD. CEILINGS & BULKHEADS TO BE PAINTED PT-11 (WHITE) UNLESS NOTED OTHERWISE.
12. ALL WALLS ARE TO GO TO THE UNDERSIDE OF THE DECK U.O.N. PROVIDE ACOUSTICAL SEALANT BETWEEN ALL CLASSROOM, WORK ROOM, LOUNGES, SENSORY ROOMS, QUIET ROOMS, CONFERENCE, AND OFFICE SPACES

## C# CEILING KEYNOTES

1 UNISTRUT GRID; B.O.D. PART NO. UGR-B-2P-66-HD; SEE STRUCTURAL FOR FINAL DESIGN LOADS, FINAL DESIGN BY SUPPLIER
2 CEILING LIFT SYSTEM
3 PRIVACY CURTAIN TRACK

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
REFLECTED CEILING PLAN - AREA A - LOWER LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A9.10

1 A9.11 REFLECTED CEILING PLAN MAIN LEVEL - AREA B

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

## REFLECTED CEILING LEGEND:

- 2x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 2 X 2 LIGHT FIXTURE (REFER TO ELECTRICAL
- 1x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- CAN LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- WALL MOUNTED LIGHT FIXTURE (REFER TO ELECTRICAL)
- UNDER COUNTER LIGHT FIXTURE (REFER TO ELECTRICAL)
- SUPPLY AIR DIFFUSER (REFER TO MECHANICAL)
- RETURN AIR DIFFUSER (REFER TO MECHANICAL)
- MECHANICAL ITEM (REFER TO MECHANICAL)
- EXIT — EXIT LIGHT FIXTURE (REFER TO ELECTRICAL)

## CEILING TYPES

- (ACT-1) 2x2 CEILING (MIN. NRC .7)
- (ACT-2) SECURE LAY-IN CEILING SYSTEM
- (AP-1) TECTUM SHAPES HEXAGON; COLOR AS INDICATED IN FINISH SCHEDULE
- (AP-2) 4" X 8" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
- (AP-3) 2" X 10" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
- (AP-4) ACOUSTIC FIBERGLASS PANEL
- EXPOSED CEILING; PAINT STRUCTURE AND EXPOSED CEILING PT-10. ALL ADJACENT SURFACES TO BE CLEANED OF OVERSPRAY.
- EXPOSED CEILING; PAINT
- GYPSUM BOARD CEILING, PAINT.
- SUSPENDED 8'-0" X 8' - 0" UNISTRUT GRID AT 10' - 0" A.F.F.;PAINTED, FINISH PT-11

## CEILING PLAN GENERAL NOTES:

1. ALL NOTED CEILING HEIGHTS ARE RELATIVE TO THE FINISH FLOOR BELOW.
2. ALL DIMENSIONS ARE TO FINISH FACE OF SOFFIT OR PARTITION AND TO CENTERLINE OF LIGHT FIXTURES U.O.N.
3. CENTER CEILING GRID IN BOTH DIRECTIONS IN ROOM U.O.N.
4. CENTER RECESSED DOWN LIGHTS AND SPRINKLER HEADS IN CEILING SYSTEM U.O.N.
5. REFER TO MECHANICAL DRAWINGS FOR DIFFUSER TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT OF DEVICES. NOTIFY ARCHITECT OF ANY POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH WORK.
6. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT OF FIXTURES. NOTIFY ARCHITECT OF ANY POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH WORK.
7. SEE INTERIOR ELEVATIONS ON THE A8.0 SHEETS OR DEDICATED INTERIOR REFLECTED CEILING PLANS, AS OCCURS FOR ACCENT COLORS AND SPECIAL FINISHES.
8. UNDER CABINET LIGHTING (UCL) INDICATED ON INTERIOR ELEVATIONS.
9. ALL AREAS EXPOSED TO STRUCTURE WILL HAVE EXPOSED WIRING PLACED IN FLEXIBLE CONDUIT. COORDINATE WITH ELECTRICAL.
10. ACCENT PAINT NOTED ON CEILING SOFFITS TO COVER VERTICAL & HORIZONTAL FACES.
11. ALL GYP. BD. CEILINGS & BULKHEADS TO BE PAINTED PT-11 (WHITE) UNLESS NOTED OTHERWISE.
12. ALL WALLS ARE TO GO TO THE UNDERSIDE OF THE DECK U.O.N. PROVIDE ACOUSTICAL SEALANT BETWEEN ALL CLASSROOM, WORK ROOM, LOUNGES, SENSORY ROOMS, QUIET ROOMS, CONFERENCE, AND OFFICE SPACES

## C# CEILING KEYNOTES

1 UNISTRUT GRID; B.O.D. PART NO. UGR-B-2P-66-HD; SEE STRUCTURAL FOR FINAL DESIGN LOADS, FINAL DESIGN BY SUPPLIER
2 CEILING LIFT SYSTEM
3 PRIVACY CURTAIN TRACK

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |

AREA C | AREA B | AREA A

KEY PLAN
NORTH NO SCALE

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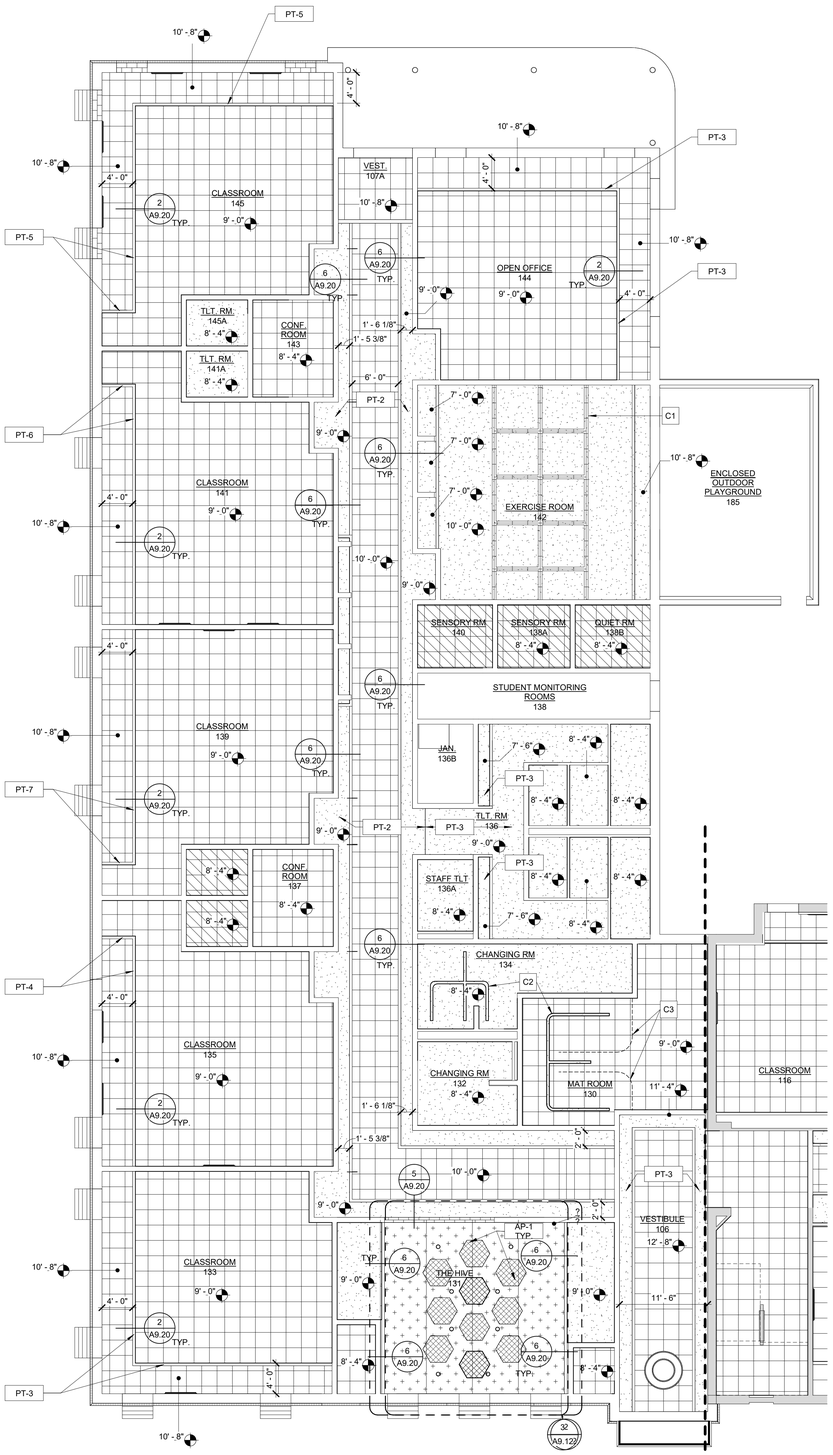
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

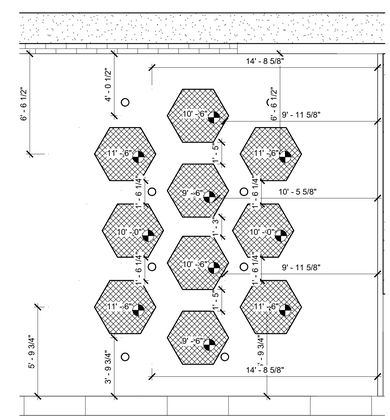
MIDLAND, MICHIGAN

SHEET TITLE
REFLECTED CEILING PLAN - AREA B - MAIN LEVEL

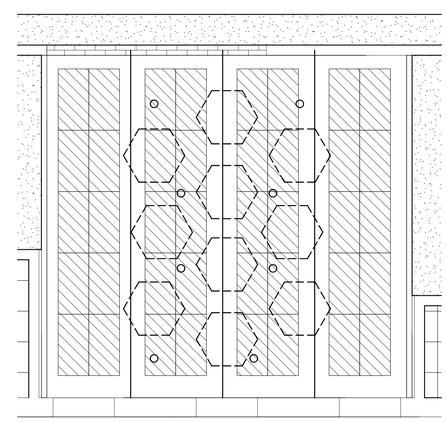
PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A9.11




1 A9.12 REFLECTED CEILING PLAN MAIN LEVEL - AREA C
SCALE: 1/8" = 1'-0"




2 A9.12 ENLARGED PLAN - THE HIVE ROOM 131A
SCALE: 1/4" = 1'-0"



3 A9.12 ENLARGED PLAN - THE HIVE ROOM 131A ABOVE
SCALE: 1/4" = 1'-0"

## REFLECTED CEILING LEGEND:

- 2x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 2 X 2 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 1x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- CAN LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- WALL MOUNTED LIGHT FIXTURE (REFER TO ELECTRICAL)
- UNDER COUNTER LIGHT FIXTURE (REFER TO ELECTRICAL)
- SUPPLY AIR DIFFUSER (REFER TO MECHANICAL)
- RETURN AIR DIFFUSER (REFER TO MECHANICAL)
- MECHANICAL ITEM (REFER TO MECHANICAL)
- EXIT — EXIT LIGHT FIXTURE (REFER TO ELECTRICAL)

## CEILING TYPES

- (ACT-1) 2x2 CEILING (MIN. NRC .7)
- (ACT-2) SECURE LAY-IN CEILING SYSTEM
- (AP-1) TECTUM SHAPES HEXAGON; COLOR AS INDICATED IN FINISH SCHEDULE
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- (AP-3) 2" X 10" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
- (AP-4) ACOUSTIC FIBERGLASS PANEL
- EXPOSED CEILING; PAINT STRUCTURE AND EXPOSED CEILING PT-10. ALL ADJACENT SURFACES TO BE CLEANED OF OVERSPRAY.
- EXPOSED CEILING; PAINT
- GYPSUM BOARD CEILING, PAINT.
- SUSPENDED 8'-0" X 8' - 0" UNISTRUT GRID AT 10' - 0" A.F.F.;PAINTED, FINISH PT-11

## CEILING PLAN GENERAL NOTES:

1. ALL NOTED CEILING HEIGHTS ARE RELATIVE TO THE FINISH FLOOR BELOW.
2. ALL DIMENSIONS ARE TO FINISH FACE OF SOFFIT OR PARTITION AND TO CENTERLINE OF LIGHT FIXTURES U.O.N.
3. CENTER CEILING GRID IN BOTH DIRECTIONS IN ROOM U.O.N.
4. CENTER RECESSED DOWN LIGHTS AND SPRINKLER HEADS IN CEILING SYSTEM U.O.N.
5. REFER TO MECHANICAL DRAWINGS FOR DIFFUSER TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT OF DEVICES. NOTIFY ARCHITECT OF ANY POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH WORK.
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## C# CEILING KEYNOTES

1. UNISTRUT GRID; B.O.D. PART NO. UGR-B-2P-66-HD; SEE STRUCTURAL FOR FINAL DESIGN LOADS, FINAL DESIGN BY SUPPLIER
2. CEILING LIFT SYSTEM
3. PRIVACY CURTAIN TRACK

| NO. | REVISION | DATE |
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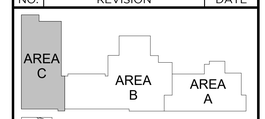
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE

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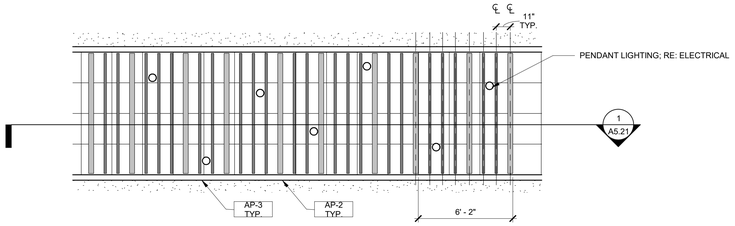
PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

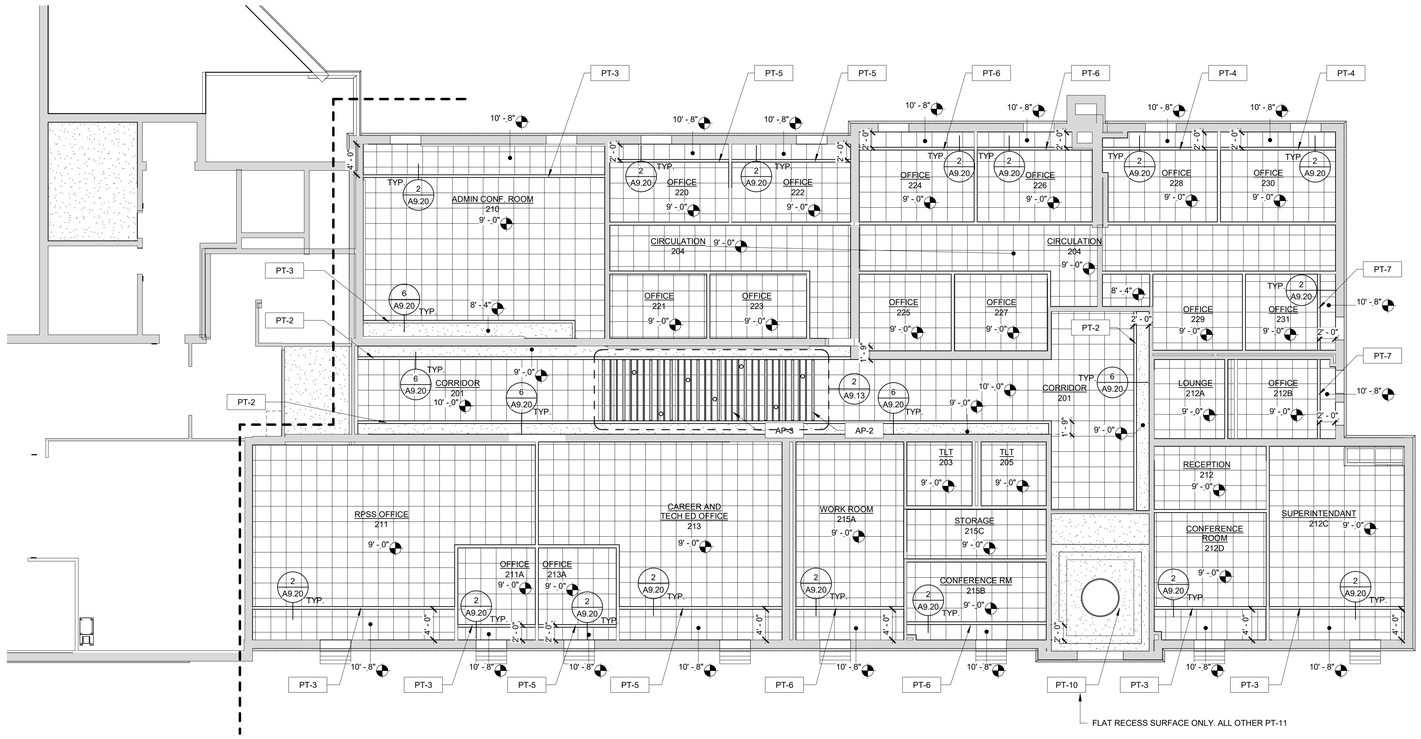
SHEET TITLE
REFLECTED CEILING PLAN - AREA C - MAIN LEVEL

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JMJ
SHEET NUMBER A9.12




## ENLARGED CEILING PLAN

1/4" = 1'-0"




1 A9.13 REFLECTED CEILING PLAN UPPER LEVEL - AREA A

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

## REFLECTED CEILING LEGEND:

- 2x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 2 X 2 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 1x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- CAN LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- WALL MOUNTED LIGHT FIXTURE (REFER TO ELECTRICAL)
- UNDER COUNTER LIGHT FIXTURE (REFER TO ELECTRICAL)
- SUPPLY AIR DIFFUSER (REFER TO MECHANICAL)
- RETURN AIR DIFFUSER (REFER TO MECHANICAL)
- MECHANICAL ITEM (REFER TO MECHANICAL)
- EXIT — EXIT LIGHT FIXTURE (REFER TO ELECTRICAL)

## CEILING TYPES

- (ACT-1) 2x2 CEILING (MIN. NRC .7)
- (ACT-2) SECURE LAY-IN CEILING SYSTEM
- (AP-1) TECTUM SHAPES HEXAGON; COLOR AS INDICATED IN FINISH SCHEDULE
- (AP-2) 4" X 8" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
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- EXPOSED CEILING; PAINT STRUCTURE AND EXPOSED CEILING PT-10. ALL ADJACENT SURFACES TO BE CLEANED OF OVERSPRAY.
- EXPOSED CEILING; PAINT
- GYPSUM BOARD CEILING, PAINT.
- SUSPENDED 8'-0" X 8' - 0" UNISTRUT GRID AT 10' - 0" A.F.F.;PAINTED, FINISH PT-11

## CEILING PLAN GENERAL NOTES:

1. ALL NOTED CEILING HEIGHTS ARE RELATIVE TO THE FINISH FLOOR BELOW.
2. ALL DIMENSIONS ARE TO FINISH FACE OF SOFFIT OR PARTITION AND TO CENTERLINE OF LIGHT FIXTURES U.O.N.
3. CENTER CEILING GRID IN BOTH DIRECTIONS IN ROOM U.O.N.
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## C# CEILING KEYNOTES

1 UNISTRUT GRID; B.O.D. PART NO. UGR-B-2P-66-HD; SEE STRUCTURAL FOR FINAL DESIGN LOADS, FINAL DESIGN BY SUPPLIER
2 CEILING LIFT SYSTEM
3 PRIVACY CURTAIN TRACK

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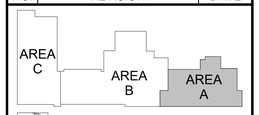


KEY PLAN

NORTH NO SCALE


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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

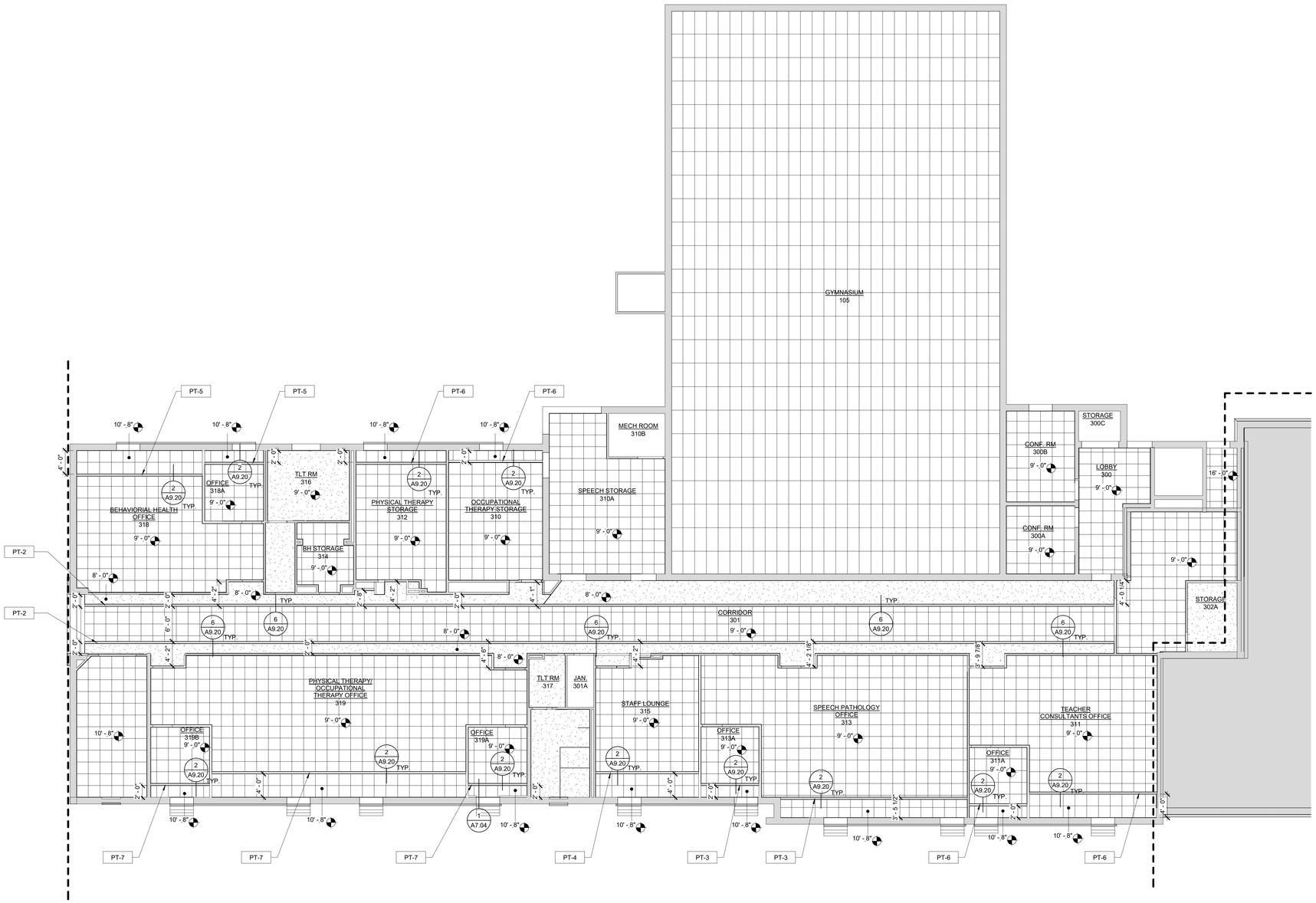
REFLECTED CEILING PLAN - AREA A - UPPER LEVEL 2

PROJECT NUMBER 2022006.1

PROJECT DATE AUGUST 23, 2023

CHECKED BY JMJ

SHEET NUMBER A9.13




1 A9.14 REFLECTED CEILING PLAN UPPER LEVEL - AREA B

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

## REFLECTED CEILING LEGEND:

- 2x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- 2 X 2 LIGHT FIXTURE (REFER TO ELECTRICAL
- 1x4 LIGHT FIXTURE (REFER TO ELECTRICAL)
- CAN LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- LIGHT FIXTURE (REFER TO ELECTRICAL)
- WALL MOUNTED LIGHT FIXTURE (REFER TO ELECTRICAL)
- UNDER COUNTER LIGHT FIXTURE (REFER TO ELECTRICAL)
- SUPPLY AIR DIFFUSER (REFER TO MECHANICAL)
- RETURN AIR DIFFUSER (REFER TO MECHANICAL)
- MECHANICAL ITEM (REFER TO MECHANICAL)
- EXIT — EXIT LIGHT FIXTURE (REFER TO ELECTRICAL)

## CEILING TYPES

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- (ACT-2) SECURE LAY-IN CEILING SYSTEM
- (AP-1) TECTUM SHAPES HEXAGON; COLOR AS INDICATED IN FINISH SCHEDULE
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- (AP-3) 2" X 10" ACOUSTIC PET BAFFLES; COLOR INDICATED IN FINISH SCHEDULE
- (AP-4) ACOUSTIC FIBERGLASS PANEL
- EXPOSED CEILING; PAINT STRUCTURE AND EXPOSED CEILING PT-10. ALL ADJACENT SURFACES TO BE CLEANED OF OVERSPRAY.
- EXPOSED CEILING; PAINT
- GYPSUM BOARD CEILING, PAINT.
- SUSPENDED 8'-0" X 8' - 0" UNISTRUT GRID AT 10' - 0" A.F.F.;PAINTED, FINISH PT-11

## CEILING PLAN GENERAL NOTES:

1. ALL NOTED CEILING HEIGHTS ARE RELATIVE TO THE FINISH FLOOR BELOW.
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3. CENTER CEILING GRID IN BOTH DIRECTIONS IN ROOM U.O.N.
4. CENTER RECESSED DOWN LIGHTS AND SPRINKLER HEADS IN CEILING SYSTEM U.O.N.
5. REFER TO MECHANICAL DRAWINGS FOR DIFFUSER TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT OF DEVICES. NOTIFY ARCHITECT OF ANY POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH WORK.
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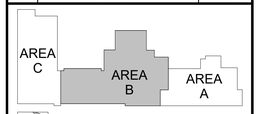
7. SEE INTERIOR ELEVATIONS ON THE A8.0 SHEETS OR DEDICATED INTERIOR REFLECTED CEILING PLANS, AS OCCURS FOR ACCENT COLORS AND SPECIAL FINISHES.
8. UNDER CABINET LIGHTING (UCL) INDICATED ON INTERIOR ELEVATIONS.
9. ALL AREAS EXPOSED TO STRUCTURE WILL HAVE EXPOSED WIRING PLACED IN FLEXIBLE CONDUIT. COORDINATE WITH ELECTRICAL.
10. ACCENT PAINT NOTED ON CEILING SOFFITS TO COVER VERTICAL & HORIZONTAL FACES.
11. ALL GYP. BD. CEILINGS & BULKHEADS TO BE PAINTED PT-11 (WHITE) UNLESS NOTED OTHERWISE.
12. ALL WALLS ARE TO GO TO THE UNDERSIDE OF THE DECK U.O.N. PROVIDE ACOUSTICAL SEALANT BETWEEN ALL CLASSROOM, WORK ROOM, LOUNGES, SENSORY ROOMS, QUIET ROOMS, CONFERENCE, AND OFFICE SPACES

## C# CEILING KEYNOTES

1 UNISTRUT GRID; B.O.D. PART NO. UGR-B-2P-66-HD; SEE STRUCTURAL FOR FINAL DESIGN LOADS, FINAL DESIGN BY SUPPLIER
2 CEILING LIFT SYSTEM
3 PRIVACY CURTAIN TRACK

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUED FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

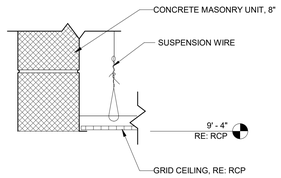
REFLECTED CEILING PLAN - AREA B - UPPER LEVEL 3

PROJECT NUMBER
2022006.1

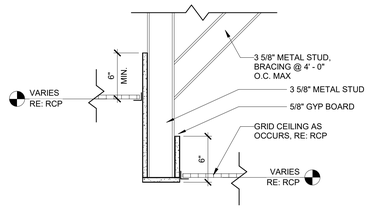
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

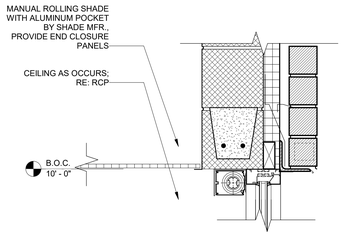
SHEET NUMBER
A9.14



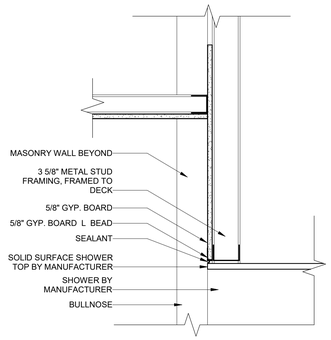

1 A9.20 CEILING @ MASONRY BULKHEAD
SCALE: 1 1/2" = 1'-0"



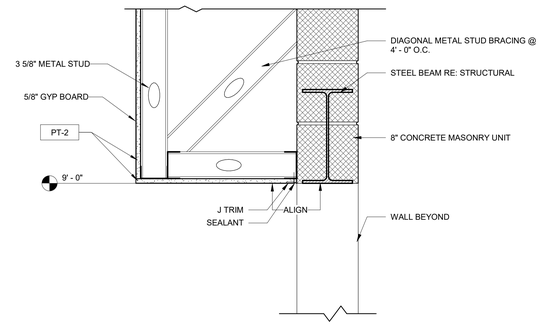

2 A9.20 SECTION @ VARIABLE HEIGHT CEILING TYP.
SCALE: 1 1/2" = 1'-0"



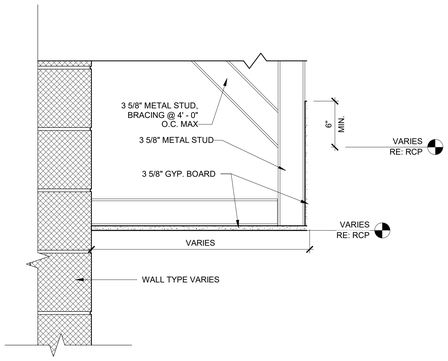

3 A9.20 ROLLER SHADE @ HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



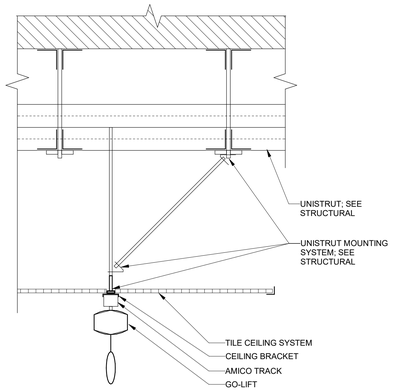

4 A9.20 TYP. TOP OF SHOWER
SCALE: 1 1/2" = 1'-0"




5 A9.20 SECTION @ THE HIVE 131 ENTRANCE
SCALE: 1 1/2" = 1'-0"




6 A9.20 SECTION @ BULKHEAD HEIGHT TYP.
SCALE: 1 1/2" = 1'-0"




7 A9.20 AMICO TRACK CEILING DETAIL
SCALE: 1 1/2" = 1'-0"

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PROJECT TITLE
RENOVATION AND ADDITION:
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

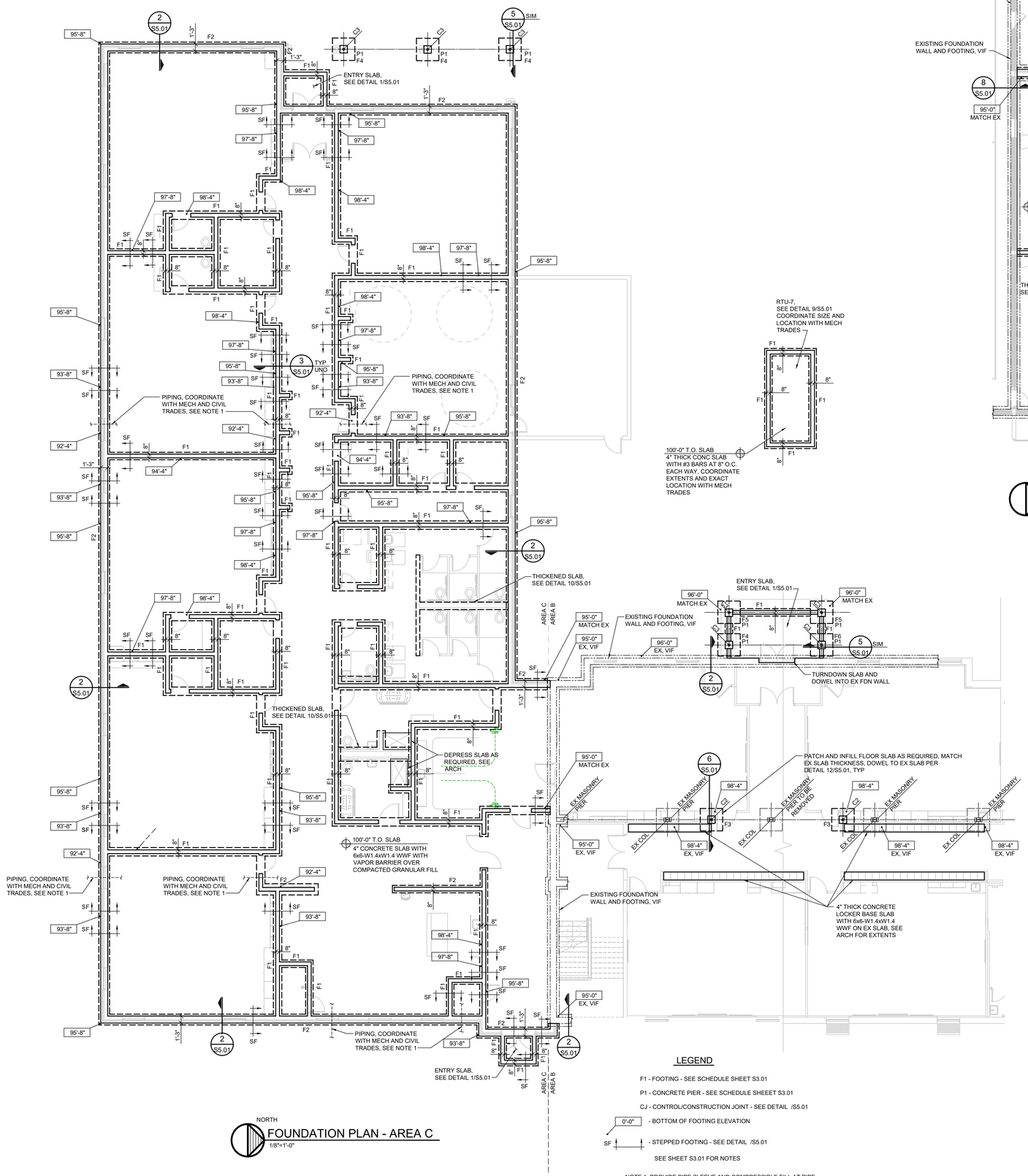
SHEET TITLE
CEILING DETAILS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JMJ

SHEET NUMBER
A9.20

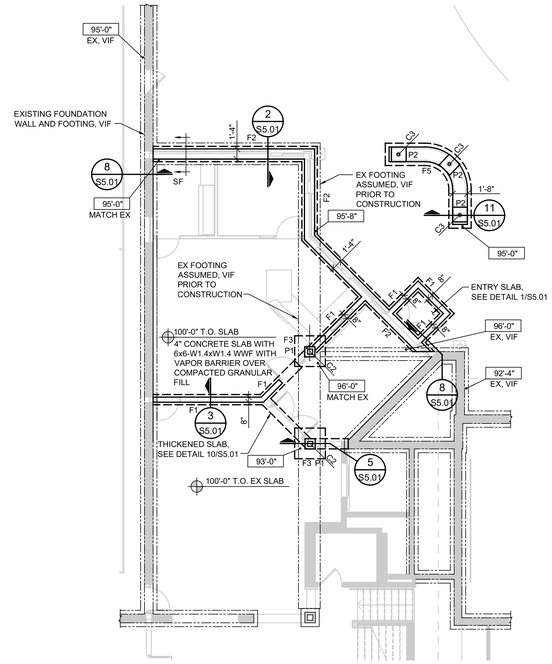



NORTH

## FOUNDATION PLAN - AREA C

1/8"=1'-0"




NORTH

## PARTIAL FOUNDATION PLAN - AREA B

1/8"=1'-0"




## LEGEND

F1 - FOOTING - SEE SCHEDULE SHEET S3.01

P1 - CONCRETE PIER - SEE SCHEDULE SHEEET S3.01

CJ - CONTROL/CONSTRUCTION JOINT - SEE DETAIL /S5.01

0'-0" - BOTTOM OF FOOTING ELEVATION

SF - STEPPED FOOTING - SEE DETAIL /S5.01

SEE SHEET S3.01 FOR NOTES

NOTE 1: PROVIDE PIPE SLEEVE AND COMPRESSIBLE FILL AT PIPE PENETRATIONS THROUGH FOUNDATION WALL. COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES, TYP

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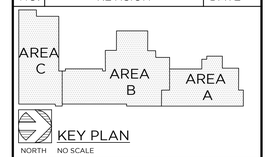


KEY PLAN

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

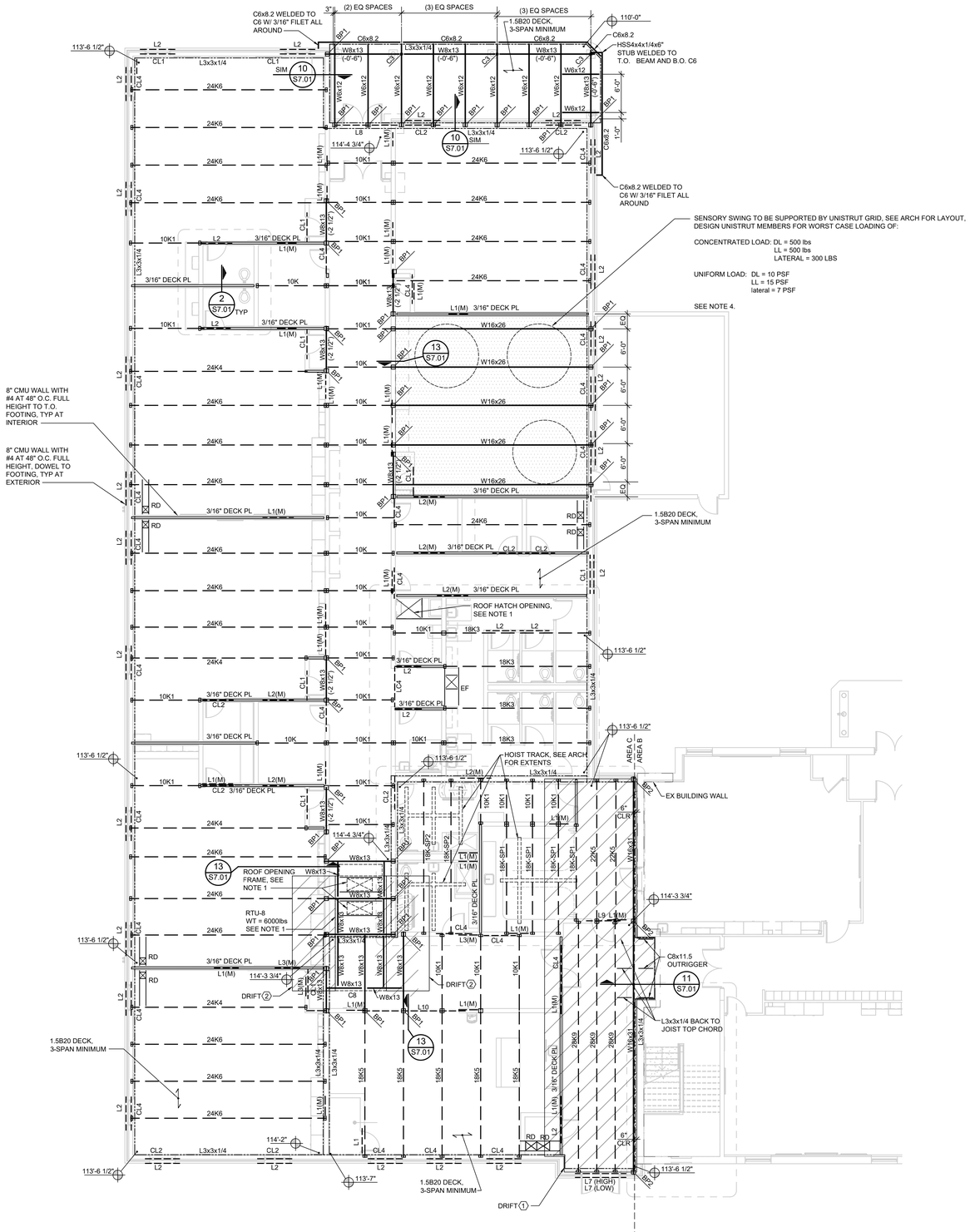
FOUNDATION PLAN - AREA C

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JAG

SHEET NUMBER: S2.01




NORTH

## ROOF FRAMING PLAN - AREA C

1/8"=1'-0" T.O. STEEL = B.O. DECK UNO (-0'-0")

## LEGEND

BP1 - BEAM BEARING PLATE - SEE DETAIL /S7.01

C1 - STEEL COLUMN, SEE SCHEDULE SHEET S3.01

L1 - STEEL LINTEL, SEE SCHEDULE SHEET S3.01

L1(M) - STEEL LINTEL AT MECHANICAL OPENING, COORDINATE SIZE AND LOCATION OF OPENING WITH MECHANICAL TRADES

RD - ROOF DRAIN, SEE DETAIL 7/S7.01, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

EF - EXHAUST FAN, PROVIDE ROOF FRAME AT OPENING, SEE DETAIL 7/S7.01, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

18K-SP1 - SPECIAL JOIST, SEE SHEET S3.01 FOR JOIST LOADING DIAGRAM

0'-0" - BOTTOM OF DECK ELEVATION

DRIFT 1 DRIFTED SNOW, SEE SHEET S3.01

SEE SHEET S3.01 FOR NOTES

**NOTES**

1. PROVIDE FRAME UNDER ALL RTU CURBS AND ROOF OPENINGS GREATER THAN 12" WIDE PER DETAIL 7/S7.01. COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES.
2. STRUCTURAL STEEL FRAMING TO BE SPACED AT EQUAL INTERVALS BETWEEN COLUMNS AND MASONRY BEARING WALLS UNO.
3. PROVIDE STEEL FRAME AT OPENINGS SIMILAR TO DETAIL 7/S7.01, ANCHOR TO EXISTING JOISTS WITH (2) 1/2" DIA HILTI HY-200 A ADHESIVE.
4. ALL LATERAL LOADS SHOWN ON PLAN ARE SERVICE LEVEL, UNFACTORED DESIGN LOADS. LOADS TO BE APPLIED WITH ALL APPLICABLE LOAD COMBINATIONS PER ASCE7-10. LOADS SHOWN FOR REFERENCE AND BIDDING PURPOSES ONLY. FINAL LOADS SHALL BE PROVIDED BY AND COORDINATED WITH EQUIPMENT SUPPLIER AND OWNER.

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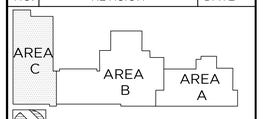


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

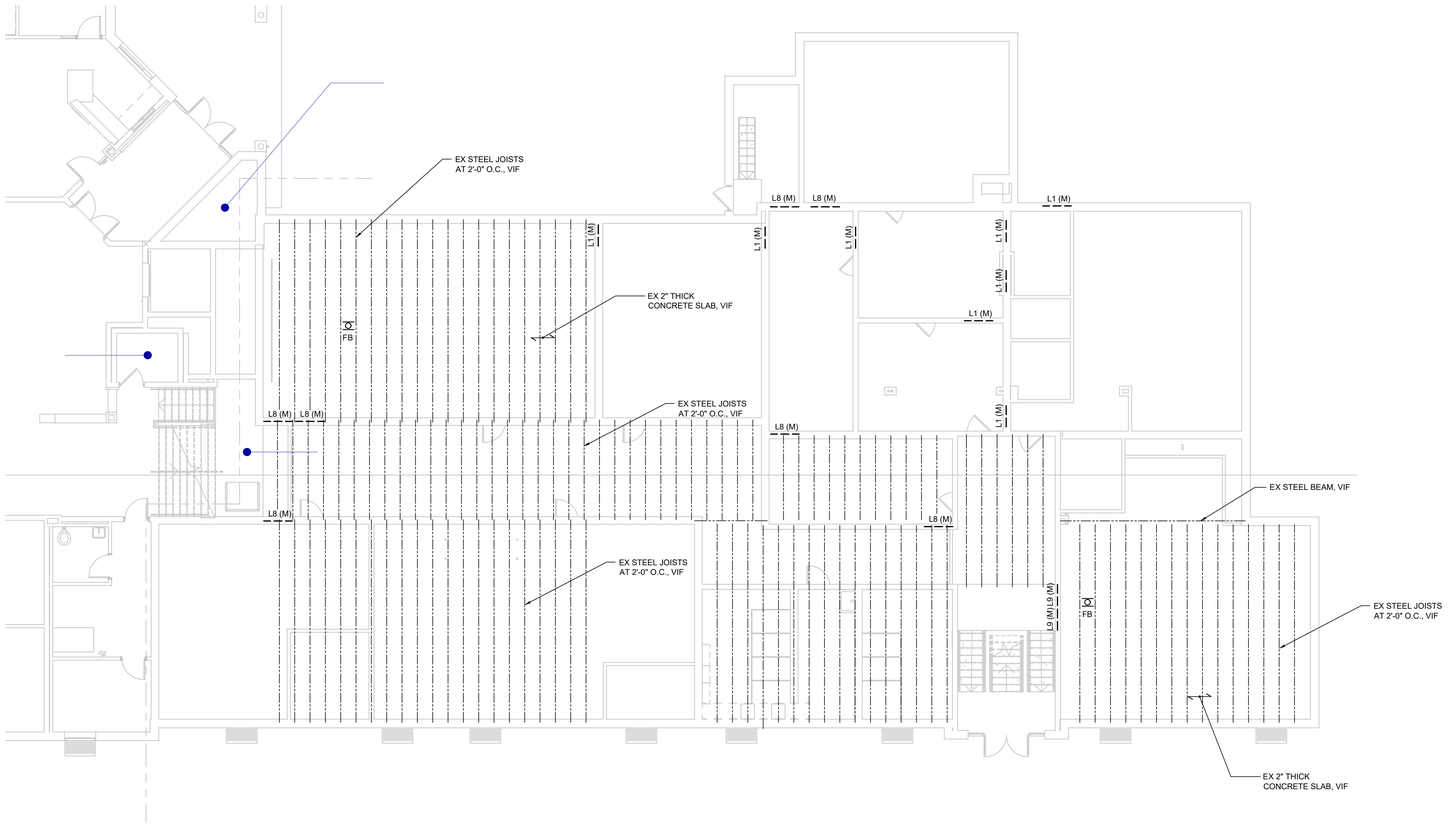
ROOF FRAMING PLAN - AREA C

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JAG

SHEET NUMBER: S2.02




NORTH

## MAIN LEVEL FRAMING PLAN - AREA A

1/8"=1'-0"

T.O. STEEL = B.O. EX SLAB, TYP UNO

## LEGEND

BP1 - BEAM BEARING PLATE - SEE DETAIL /S7.01

FB - ELECTRICAL FLOOR BOX, PROVIDE FRAME AROUND FLOOR BOX AROUND OPENING AS REQUIRED, COORDINATE SIZE AND LOCATION OF OPENING WITH ELECTRICAL TRADES

L1 - STEEL LINTEL, SEE SCHEDULE SHEET S3.01.

L1(M) - STEEL LINTEL AT MECH OPENING, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

SEE SHEET S3.01 FOR NOTES

1. PROVIDE FRAME UNDER ALL RTU CURBS AND ROOF TOP UNITS GREATER THAN 12" WIDE PER DETAIL 7/S7.01. COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES.

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|---|---|---|
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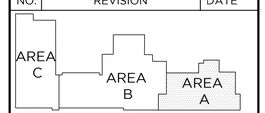


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

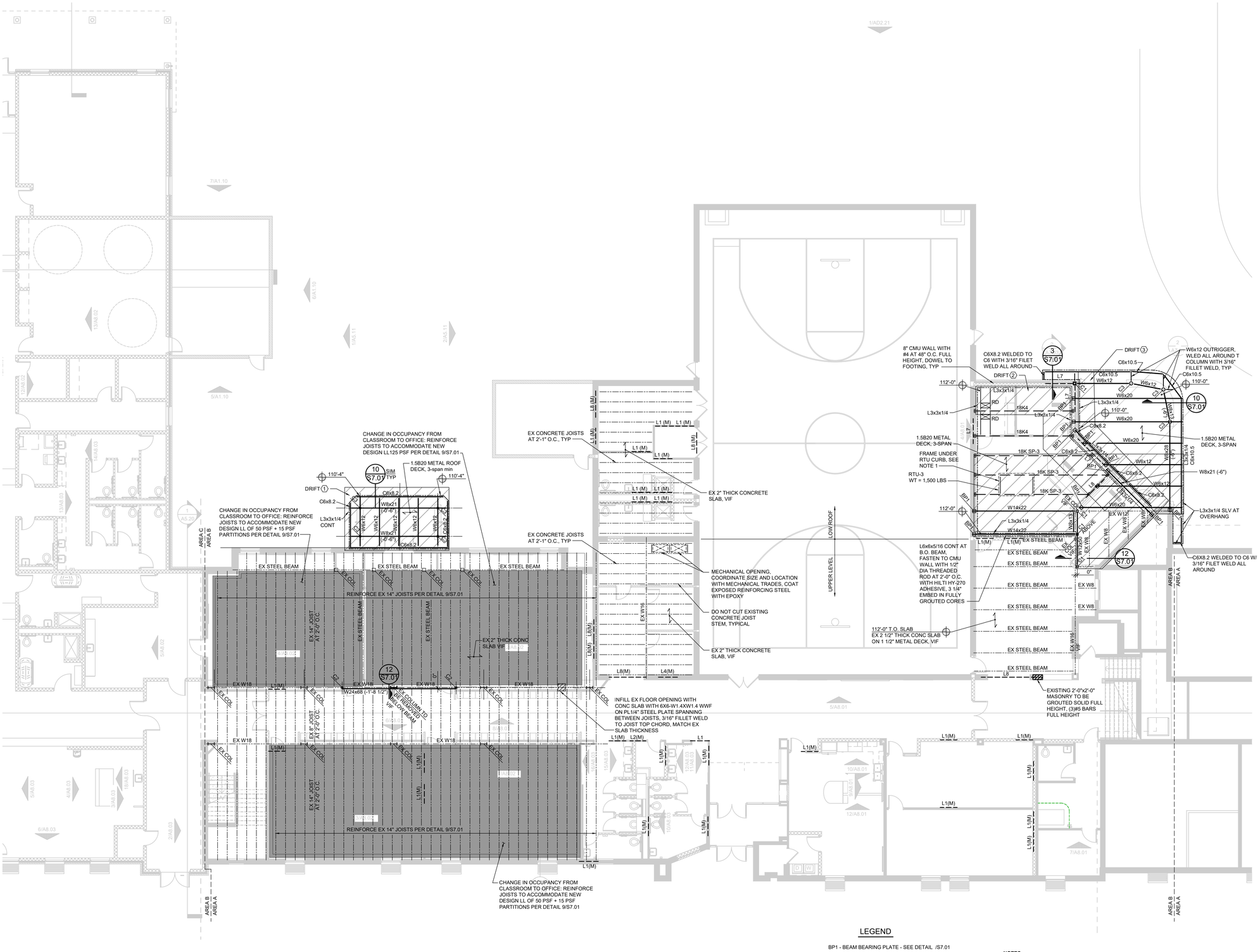
MAIN LEVEL
FRAMING PLAN NORTH
- AREA A

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JAG

SHEET NUMBER
S2.03




## UPPER LEVEL FLOOR AND LOW ROOF FRAMING PLAN - AREA B

NORTH
1/8"=1'-0"
T.O. STEEL = B.O. EX SLAB/DECK, TYP UNO

### LEGEND

BP1 - BEAM BEARING PLATE - SEE DETAIL /S7.01

C1 - STEEL COLUMN, SEE SCHEDULE SHEET S3.01

L1 - STEEL LINTEL, SEE SCHEDULE SHEET S3.01

L1(M) - STEEL LINTEL AT MECH OPENING, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

RD - ROOF DRAIN, SEE DETAIL 7/S7.01, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

EF - EXHAUST FAN, PROVIDE ROOF FRAME AT OPENING, SEE DETAIL 7/S7.01. COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

100'-0" - BOTTOM OF DECK ELEVATION

SEE SHEET S3.01 FOR NOTES

**NOTES**

1. PROVIDE FRAME UNDER ALL RTU CURBS AND ROOF OPENINGS GREATER THAN 12" WIDE PER DETAIL 7/S7.01. COORDINATE SIZE AND LOCATION WITH MECHANICAL TF
2. STRUCTURAL STEEL FRAMING TO BE SPACED AT EQUAL INTERVALS BETWEEN COLUMNS AND MASONRY BEARING WALLS UNO.
3. PROVIDE STEEL FRAME AT OPENINGS SIMILAR TO DETAIL 7/S7.01, ANCHOR TO EXISTING JOISTS WITH (2) 1/2" DIA HILTI HY-200 A ADHESIVE.

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AREA C
AREA B
AREA A

KEY PLAN
NORTH NO SCALE

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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

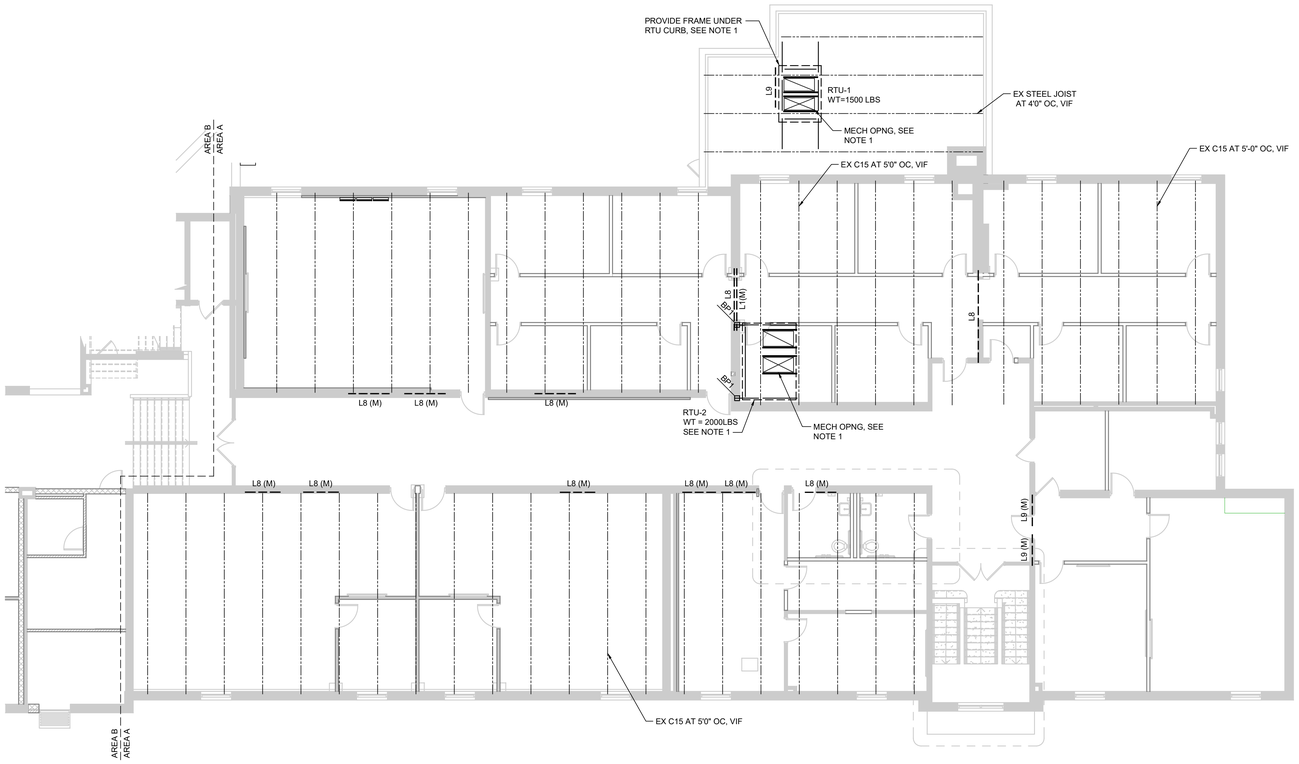
SHEET TITLE
UPPER LEVEL FLOOR AND LOW ROOF FRAMING PLAN - AREA B

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JAG

SHEET NUMBER
S2.04




NORTH

## ROOF FRAMING PLAN NORTH - AREA A

1/8"=1'-0"

### LEGEND

BP1 - BEAM BEARING PLATE - SEE DETAIL 1/S7.01

L1 - STEEL LINTEL, SEE SCHEDULE SHEET S3.01

L1(M) - STEEL LINTEL AT MECH OPENING, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

SEE SHEET S3.01 FOR NOTES

**NOTES:**

1. PROVIDE FRAME UNDER ALL RTU CURBS AND ROOF OPENINGS GREATER THAN 12" WIDE PER DETAIL 7/S7.01. COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES.
2. LOCATE LINTELS BETWEEN STRUCTURAL FRAMING BEARING LOCATIONS WHERE OPENING SIZE IS LESS THAN FRAMING SPACING.

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
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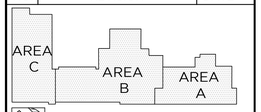


NORTH NO SCALE KEY PLAN

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

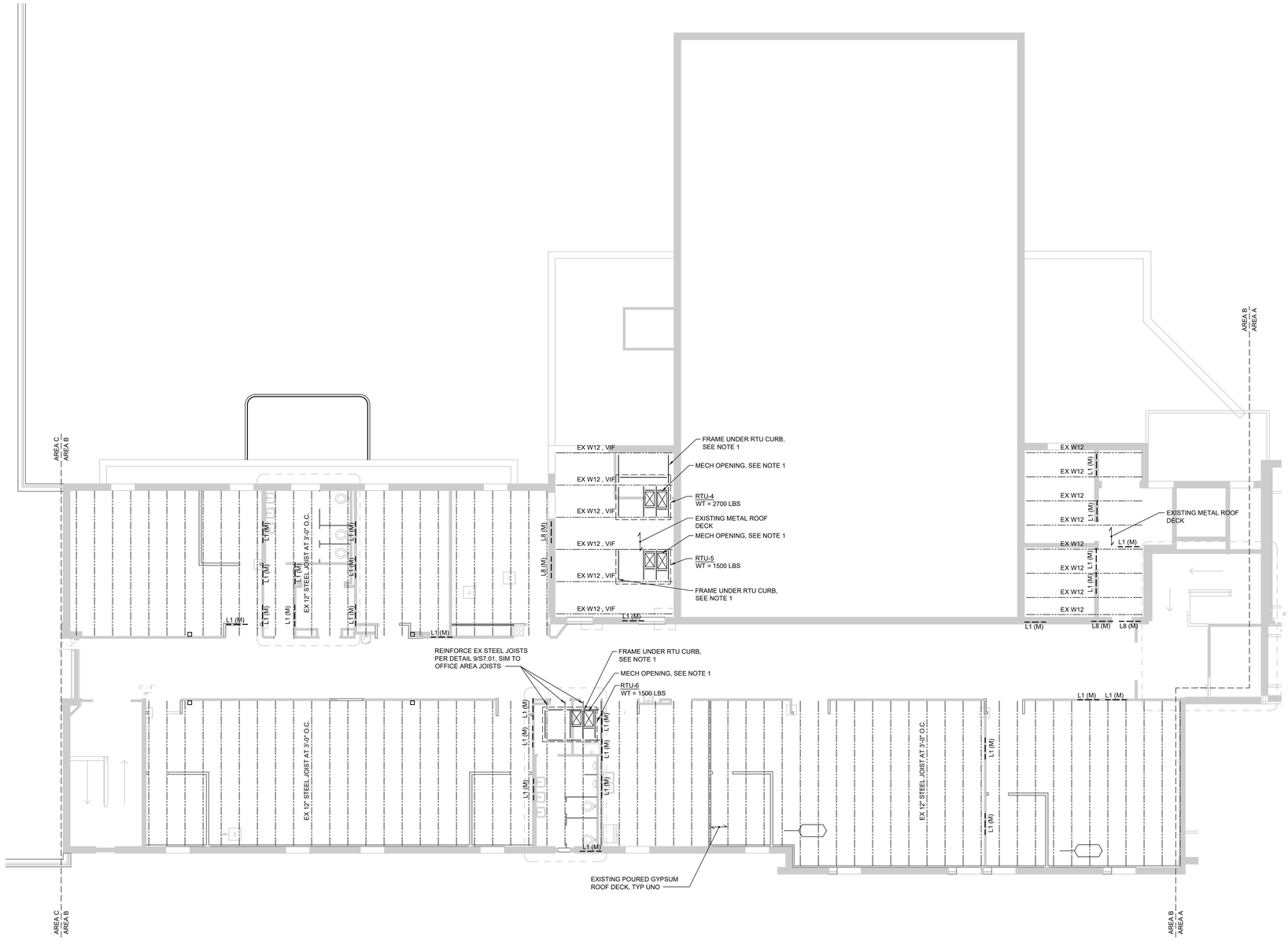
ROOF
FRAMING PLAN NORTH

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JAG

SHEET NUMBER
S2.05




NORTH

## UPPER LEVEL ROOF FRAMING PLAN - UNIT B

1/8"=1'-0"

## LEGEND

BP1 - BEAM BEARING PLATE - SEE DETAIL 1/S7.01

L1 - STEEL LINTEL, SEE SCHEDULE SHEET S3.01

L1(M) - STEEL LINTEL AT MECH OPENING, COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES

SEE SHEET S3.01 FOR NOTES

**NOTES:**

1. PROVIDE FRAME UNDER ALL RTU CURBS AND ROOF OPENINGS GREATER THAN 12" WIDE PER DETAIL 7/S7.01. COORDINATE SIZE AND LOCATION WITH MECHANICAL TRADES.
2. LOCATE LINTELS BETWEEN STRUCTURAL FRAMING BEARING LOCATIONS WHERE OPENING SIZE IS LESS THAN FRAMING SPACING.

| NO. | REVISION | DATE |
|---|---|---|
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AREA C
AREA B
AREA A

KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

UPPER LEVEL
ROOF FRAMING PLAN
UNIT B

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JAG

SHEET NUMBER: S2.06

**GENERAL**

1. VERIFY DIMENSIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT.
2. VERIFY OPENINGS IN THE FRAMING PLANS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
3. ALL WORK SHALL CONFORM TO MICHIGAN BUILDING CODE 2015.
4. DESIGN LOADS
   a. DESIGNED IN ACCORDANCE WITH MICHIGAN BUILDING CODE 2015.
   b. BUILDING RISK CATEGORY III
   c. ROOF SNOW LOAD: GROUND SNOW LOAD PG = 35 PSF
      FLAT ROOF SNOW LOAD, PF = 27 PSF
      SNOW EXPOSURE FACTOR, CE = 1.0
      SNOW LOAD IMPORTANCE FACTOR, I = 1.1
      THERMAL FACTOR, CT = 1.0, 1.2 AT CANOPIES
      FOR DRIFTED SNOW LOADS, SEE DIAGRAMS THIS SHEET
   d. WIND LOADS: BASIC WIND SPEED, VULT = 120 MPH
      VASD = 93 MPH
      WIND EXPOSURE B
      INTERNAL PRESSURE COEFFICIENT, GC PI = +/- 0.18
   WALL COMPONENTS & CLADDING:

| EFFECTIVE WIND AREA (FT2) | POSITIVE PRESSURE (PSF) | NEGATIVE PRESSURE (PSF) |
|---|---|---|
| -END ZONE | | |
| 10 | 23.7 | 31.6 |
| 20 | 22.7 | 29.5 |
| 50 | 21.3 | 26.7 |
| 100 | 20.2 | 24.6 |
| -INTERIOR ZONE | | |
| 10 | 23.7 | 25.7 |
| 20 | 22.7 | 24.6 |
| 50 | 21.3 | 23.3 |
| 100 | 20.2 | 22.2 |

   e. EARTHQUAKE DESIGN DATA:
      SEISMIC USE GROUP, III
      SEISMIC IMPORTANCE FACTOR, I = 1.25
      SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.08G, SD1 = 0.068G
      SITE CLASS D
      BASIC SEISMIC - FORCE - RESISTING SYSTEM: SHEAR WALL, MOMENT FRAME
      SEISMIC DESIGN CATEGORY, A
   f. MINIMUM ROOF LIVE LOAD: 30 PSF
   g. SECOND FLOOR LIVE LOADS: AS SHOWN ON FRAMING PLANS
5. SPECIAL INSPECTIONS:
   a. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE 2015 SECTION 1700.
   b. THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS: (REFER TO THE BUILDING CODE AND SPECIFICATIONS FOR DETAILED INSPECTION REQUIREMENTS).
      1. PREPARED FILL.
      2. CONCRETE CONSTRUCTION.
      3. STEEL CONSTRUCTION.
      4. MASONRY CONSTRUCTION.

**FOUNDATION NOTES**

1. FOUNDATIONS ARE DESIGNED BASED ON SOIL BEARING OF 2000 PSF. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATION NOTED, ENLARGE OR LOWER FOOTINGS AT THE DIRECTION OF THE ARCHITECT/ENGINEER.
2. CENTER FOOTINGS AND PIERS UNDER WALL LOCATION AND COLUMNS UNLESS NOTED.
3. EARTH FORMS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED.
4. FOLLOWING DEMOLITION OF STRUCTURES AND STRIPPING OF TOPSOIL, PREPARE SOILS IN ACCORDANCE WITH SOILS REPORT BY PSI DATED APRIL 14, 2023.
5. DISTURBANCE OF THE FOUNDATION BEARING SOILS SHALL BE AVOIDED.
6. EXISTING FOUNDATIONS OR FLOOR SLAB ENCOUNTERED DURING SITE GRADINGS AND EXCAVATION SHALL BE REMOVED TO A DEPTH OF TWO (2) FEET BELOW NEW CONSTRUCTION. REPLACE WITH STRUCTURAL BACKFILL.
7. EXTEND WALL FOOTING REINFORCEMENT THROUGH COLUMN FOOTINGS WHERE APPLICABLE. REDUCE THE COLUMN FOOTING REINFORCEMENT BY THE NUMBER OF WALL FOOTING BARS WHICH EXTEND THROUGH THE COLUMN FOOTING IN THE SAME DIRECTION.
8. PROVIDE BOND BREAK MATERIAL BETWEEN ALL GRADE SLABS AND VERTICAL SURFACES.
9. BACKFILL AND EXCAVATION PER SPECIFICATIONS.

**CONCRETE NOTES**

1. ACI BUILDING CODE 318; MANUAL OF STANDARD PRACTICE FOR DETAILING 315 FOR THE MIXING, FABRICATION AND PLACEMENT OF CONCRETE, REINFORCING STEEL, AND ACCESSORIES.
2. CONCRETE STRENGTH - STANDARD WEIGHT CONCRETE:
   FOOTINGS, WALLS, PIERS: F'C = 3000 MINIMUM PSI
   CONCRETE SLABS ON GRADE: F'C = 3500 MINIMUM PSI
   EXTERIOR CONCRETE SLABS EXPOSED TO DE-ICING: F'C = 4500 MINIMUM PSI
3. REINFORCING - BARS: ASTM A-615 GRADE 60
   WELDED WIRE FABRIC: ASTM A-1064
4. CONCRETE SLABS ON GRADE REINFORCING: 6X6 - W1.4XW1.4 WWF UNLESS NOTED. LOCATED IN THE UPPER 1/3 OF SLAB THICKNESS.
5. PROVIDE SAWCUT CONTROL JOINTS AT APPROXIMATELY 12' ON CENTER EACH WAY IN SLABS ON GRADE, SEE DETAILS. LOCATE JOINTS UNDER PARTITIONS WHENEVER POSSIBLE. CONSTRUCTION JOINTS ARE AT CONTRACTOR'S OPTION.
6. DEPRESS SLABS AS REQUIRED FOR FLOOR FINISHES, SEE ARCHITECT.
7. SLOPE FLOORS AS REQUIRED TO FLOOR DRAINS, SEE ARCHITECT.
8. FORM ALL CONCRETE.
9. PROVIDE 8" THICKENED FLOOR SLAB REINFORCED WITH (2) #4 UNDER ALL MASONRY WALLS AND MASONRY VENEERED STUD WALLS.
10. EXPOSED EDGES OF CONCRETE BEAMS, COLUMNS, ETC. SHALL BE CHAMFERED ¾".
11. PROVIDE CORNER BARS FOR ALL CONTIGUOUS CORNERS.
12. WATER/CEMENT RATIO LIMITS:
    F'C = 3000 PSI 0.68 NON-AIR ENTRAINED, 0.50 AIR ENTRAINED
    F'C = 3500 PSI 0.62 NON-AIR ENTRAINED, 0.50 AIR-ENTRAINED
    F'C = 4500 PSI 0.4 AIR-ENTRAINED
13. SLUMP LIMITS:
    3" FOR FOUNDATIONS, 4" FOR SLABS AND WALLS
14. PROVIDE AIR ENTRAINED CONCRETE FOR EXTERIOR EXPOSURES.
15. CONTRACTOR TO SUBMIT SIZE AND LAYOUT OF CONCRETE WALL SLEEVES, OPENINGS, ETC. FOR REVIEW PRIOR TO CONCRETE PLACEMENT.
10. REINFORCING LAP SPLICE LENGTHS: 45 BAR DIAMETERS FOR #6 BARS AND SMALLER, 60 BAR DIAMETERS FOR BARS LARGER THAN #6.

**MASONRY NOTES**

1. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530 SPECIFICATIONS.
2. MORTAR: ASTM C270, TYPE M BELOW GRADE, TYPE M OR S ABOVE GRADE, TYPE N FOR NON-LOAD BEARING ABOVE GRADE.
3. GROUT: ASTM C476, F'C=2000 PSI, TESTED PER ASTM C1019.
4. REINFORCING BARS SHALL BE ASTM A-615, GRADE 60, LAP MINIMUM 40 BAR DIAMETERS FOR #5 BARS AND SMALLER, LAP MINIMUM 52 BAR DIAMETERS FOR BARS LARGER THAN #5 UNLESS NOTED OTHERWISE.
5. HORIZONTAL WALL REINFORCING: PER ASTM A-82, 9 GA, HOT DIPPED GALVANIZED PER ASTM A-153 (1.5 OZ PER SF.), LADDER TYPE, EQUAL TO DUR-A-WAL. BED JOINTS AT 16" O.C. AND AT 1ST AND 2ND BED JOINTS AT BOTTOM OF WALL, TOP OF WALL, ABOVE LINTELS AND BELOW SILLS. REINFORCING CONTINUOUS EXCEPT AT VERTICAL CONTROL JOINTS. SIDE RODS LAPPED A MINIMUM OF 6" AT SPLICES. PROVIDE PREFABRICATED CORNERS AND TEES.
6. CONCRETE MASONRY UNITS: ASTM C-90, GRADE N, TWO CORE TYPE FOR REINFORCED MASONRY. DESIGN BASED ON F'M = 1900 PSI.
7. VERTICAL WALL REINFORCING: 1 - #5 EACH SIDE OF MASONRY OPENINGS UP TO 5'-0" WIDE, 1 - #6 EACH SIDE OF MASONRY OPENINGS WIDER THAN 5'-0", CONTROL JOINTS AND AS SHOWN, IN GROUT FILLED BLOCK CORES.
8. VERTICAL BAR REINFORCING: PLACE ACCURATELY AND MECHANICALLY HOLD IN POSITION WHILE GROUTING. GROUTING SHALL BE DONE IN LIFTS NOT EXCEEDING 4'-0" AND MECHANICALLY CONSOLIDATED IN PLACE; CONSOLIDATION BY RODDING NOT ACCEPTABLE.
9. PROVIDE COMPLETELY GROUTED UNITS:
   a. UNDER CAST-IN-PLACE CONCRETE FLOOR BEARING
   b. UNDER BRICK VENEER BEARING
   c. UNDER ANY CHANGE OF WALL THICKNESS, I.E.: 8" ON TOP OF 12"
   d. UNDER STEEL JOIST OR BEAM BEARING.
10. PROVIDE LINTELS FOR OPENINGS IN MASONRY WALLS OVER 8" WIDE. SEE SCHEDULES THIS SHEET.
11. RUNNING BOND MASONRY SHALL BE BUILT INTEGRALLY AT WALL CORNERS UNLESS INDICATED OTHERWISE.
12. BLOCK CONTROL JOINTS SHALL BE "MICHIGAN" TYPE UNLESS NOTED OTHERWISE. HORIZONTAL REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS. CMU CONTROL JOINTS TO BE SPACED NO GREATER THAN 1.5 TIMES THE HEIGHT OF THE MASONRY WALL O.C., AT OPENINGS, OR 24'-0" O.C. MAX. SEE ARCH FOR EXTERIOR CONTROL JOINT LOCATIONS.
13. TEMPORARY WALL BRACING IS THE CONTRACTORS RESPONSIBILITY. CONFORM TO APPLICABLE CODES AND STANDARDS.
14. CONTRACTOR SHALL KEEP THE AIR SPACE CAVITY BETWEEN THE CONCRETE MASONRY AND VENEER COMPLETELY CLEAR OF MORTAR AND DEBRIS.

**STRUCTURAL STEEL**

1. STRUCTURAL STEEL: FABRICATED AND ERECTED PER THE AISC MANUAL OF STEEL CONSTRUCTION.
   W-BEAMS: ASTM A-992 GR. 50.
   HSS: ASTM A-500 GRADE B.
   STEEL PIPE: ASTM A53, TYPE E, GRADE B.
   ALL OTHER SHAPES: ASTM A-36.
2. ANCHOR RODS: 36 KSI, ASTM F-1554.
3. WELDS: TO BE 70 KSI LOW HYDROGEN FILLER METAL PLACED BY WELDERS CERTIFIED IN WELD AND POSITION BY AWS D1.1, STRUCTURAL WELDING CODE. ALL WELDS SHALL BE APPLIED TO SURFACES FREE OF GREASE, PAINT, DIRT, OR OTHER HARMFUL MATERIAL.
4. BOLTED CONNECTIONS: 3/4" DIAMETER A-325 BOLTS WITH HEAVY HEX NUTS UNLESS NOTED. DESIGNED FOR BEARING CONNECTIONS, TIGHTENED TO SNUG TIGHT CRITERIA UNLESS NOTED OTHERWISE.
5. STEEL PRIMER: SEE SPECIFICATION.
6. BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY PER AISC. WHEREVER POSSIBLE, EXTEND CONNECTIONS FULL DEPTH OF BEAM.
7. SHEAR TAB CONNECTIONS TO STEEL BEAMS ARE NOT ACCEPTABLE UNLESS BEAMS OF EQUAL DEPTHS ARE FASTENED ON OPPOSITE SIDES OF THE STEEL BEAM.
8. BEAM BEARING PLATES ARE TO BE LOCATED ON CENTER OF WALL UNLESS NOTED OTHERWISE. BEAR BEAM FULL LENGTH OF BEARING PLATES.
9. PROVIDE FITTED STIFFENER PLATES EACH SIDE FOR ALL CONDITIONS WHERE BEAMS BEAR ON COLUMNS, BEAMS BEAR ON BEAMS, BEAMS HANG FROM BEAMS, OR COLUMNS BEAR ON BEAMS. STIFFENER PLATES MINIMUM 1/4" THICK.
10. ALL ARCHITECTURALLY EXPOSED STEEL MEMBERS TO CONFORM TO AESS 3 REQUIREMENTS.

**STEEL JOISTS**

1. OPEN WEB STEEL JOIST: DESIGN, FABRICATE AND ERECT PER STEEL JOIST INSTITUTE (SJI) SPECIFICATIONS.
2. ITEMS SUPPORTED BY JOISTS SHALL BE ATTACHED AT PANEL POINTS WHERE POSSIBLE. SEE JOIST REINFORCEMENT DETAIL 6/S7.01 FOR NON-PANEL POINT LOADING.
3. WELDING OF SUPPORTS TO JOISTS WILL NOT BE PERMITTED UNLESS SPECIFICALLY NOTED.
4. NO STRUCTURAL MEMBER INCLUDING OPEN WEB STEEL JOIST SHALL BE CUT OR MODIFIED WITHOUT PRIOR WRITTEN APPROVAL OF THE JOIST MANUFACTURER AND THE ARCHITECT/ENGINEER.
5. BRIDGING: HORIZONTAL AND "X" TYPE SIZED NOT LESS THAN MINIMUM REQUIREMENT OF SJI.
6. SPECIAL LOADING CONDITIONS ARE SHOWN ON THE DRAWINGS AND SHALL BE USED IN THE DESIGN OF THE STEEL JOIST AS INDICATED ON THE PLANS.
7. PROVIDE UPLIFT BRIDGING PER SJI. STEEL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT PRESSURE OF 9 PSF.

**METAL DECK**

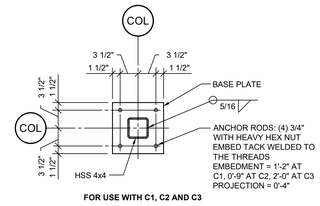
1. ROOF DECK: 1 1/2", 20 GAUGE, WIDE RIB, MINIMUM 3 SPANS, DESIGNED AND FABRICATED PER STEEL DECK INSTITUTE (SDI). WELD TO SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS 12" SPACING. FASTEN SIDE LAPS WITH #10 SCREWS AT 3'-0" MAXIMUM.
2. DECK FINISH: AS SPECIFIED.
3. ROOF DECK OPENINGS LARGER THAN 12" SHALL BE REINFORCED WITH A STEEL ROOF FRAME. SEE ROOF FRAME DETAIL ON DRAWINGS.

**LIGHT GAGE METAL FRAMING**

1. ALL STUDS SHALL BE FORMED FROM HOT-DIPPED GALVANIZED STEEL, G-60 COATING, CORRESPONDING TO THE REQUIREMENTS OF ASTM A653, STRUCTURAL QUALITY, GRADE 33, WITH A MINIMUM YIELD OF 33 KSI. MEMBERS DESIGNED PER AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS". MEMBER DESIGNATIONS IN ACCORDANCE WITH THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) I.E. 600-S-162-33.
2. ALL EXTERIOR STUDS SHALL BE MINIMUM 18 GAUGE.
3. SHOP DRAWINGS FOR LIGHT GAUGE METAL FRAMING SHALL BE PREPARED BY THE SUPPLIER AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL.

**PLYWOOD SHEATHING**

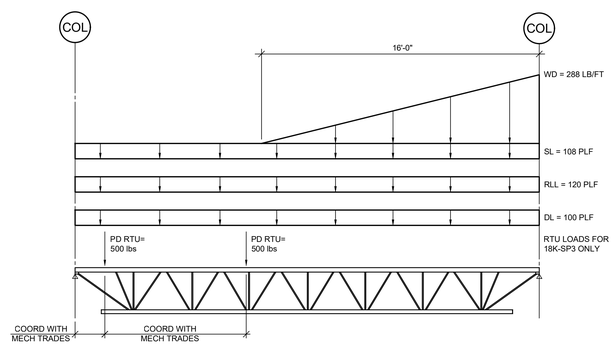
1. PLYWOOD FOR WALL STUDS SHALL BE 1/2" THICK APA RATED SHEATHING, (24/16).
2. ROOF SHEATHING FASTENED WITH #8 TEK SCREWS NAILS AT 6" O.C. AT PANEL EDGES AND INTERMEDIATE SUPPORTS UNLESS NOTES OTHERWISE.
3. PANELS SHALL BE LAID IN A STAGGERED PATTERN, CONTINUOUS OVER TWO SPANS.



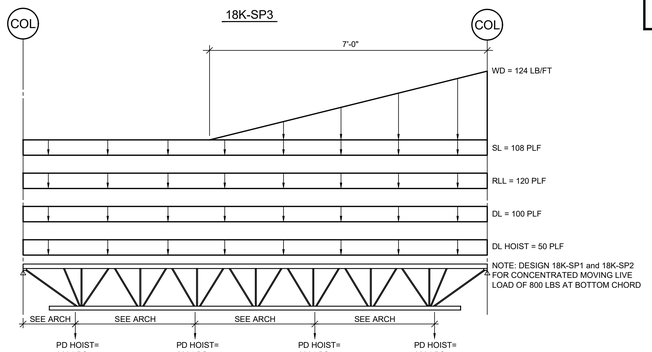

FOR USE WITH C1, C2 AND C3

ANCHOR ROD PLAN

1"=1'-0" 2022-1558-S-Anchor Rod Plan.dwg




18K-SP3




18K-SP1 AND 18K-SP2

SPECIAL JOIST DIAGRAMS

N.T.S.

NOTES:
1. ALL LOADS ARE UNFACTORED.
2. DESIGN JOIST FOR WORST CASE LOAD COMBINATIONS.
3. DEAD LOADS DO NOT INCLUDE JOIST SELF-WEIGHT.
4. VERIFY ALL DIMENSIONS.
5. COORDINATE SIZE AND LOCATION OF MECHANICAL RTU WITH MECHANICAL CONTRACTOR.
6. SL = SNOW LOAD
   DL = DEAD LOAD
   RLL = ROOF LIVE LOAD
   PDL = CONCENTRATED DEAD LOAD
   WD = DRIFTED SNOW LOAD

## FOOTING SCHEDULE

Fy=60 KSI
f'c=3000 PSI

| MARK | SIZE | DEPTH | REINFORCING | REMARKS |
|---|---|---|---|---|
| F1 | 1'-6" CONT | 1'-0" | (2) #5 CONT | ——— |
| F2 | 2'-0" CONT | 1'-0" | (3) #5 CONT | ——— |
| F3 | 4'-0"x4'-0" | 1'-0" | (3) #5 EW | ——— |
| F4 | 5'-0"x5'-0" | 1'-0" | (3) #5 EW, T&B | ——— |
| F5 | 3'-0" CONT | 1'-0" | (3) #5 CONT T&B, #5 AT 12" O.C. SHORT WAY T&B | ——— |
| F6 | 4'-0"x6'-0" | 1'-0" | (7) #4 SHORT WAY T&B (5) #4 LONG WAY T&B | ——— |
| | | | | |

2022-1558 S-Footing Schedule.dwg

## PIER SCHEDULE

f'c = 3000 psi
Fy = 60 ksi

| MARK | SIZE | VERT REINF | TIES | | REMARKS |
|---|---|---|---|---|---|
| P1 | 16"x16" | (4) #6 | #3 AT 12" O.C. | | ——— |
| P2 | 20"x20" | (8) #6 | #3 AT 12" O.C. | | ——— |
| P3 | 24" DIA | (8) #6 | #3 AT 12" O.C. | | ——— |

TOP OF PIER ELEVATION = 99'-4" (UNO)

2022-1558 S-Pier Schedule.dwg

## COLUMN SCHEDULE

HSS SECTIONS: Fy=46KSI

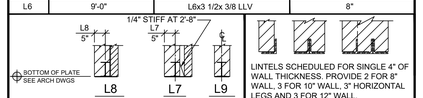
| MARK | SIZE | BASE PL | CAP PL | REMARKS |
|---|---|---|---|---|
| C1 | HSS4x4x1/4 | 3/4"x10"x10" | 1/2" | ——— |
| C2 | HSS5x5x1/4 | 3/4"x10"x10" | 1/2" | ——— |
| C3 | 6" DIA PIPE | 1"x10"x10" | 3/4"x8"x12" | BEAM TO COLUMN: (4)3/4 DIA BOLTS |
| | | | | |

2022-1558 S- Column Schedule.dwg

## STEEL LINTEL SCHEDULE

Fy=36 KSI

| MARK | CLEAR SPAN | SIZE | BEARING EACH END |
|---|---|---|---|
| L1 | 4'-0" | L3 1/2x2 1/2x1/4 SLV | 4" |
| L2 | 5'-0" | L3 1/2x3x1/4 SLV | 6" |
| L3 | 6'-0" | L3 1/2x3 1/2x1/4 | 6" |
| L4 | 7'-0" | L4x3 1/2x1/4 LLV | 6" |
| L5 | 8'-0" | L5x3 1/2x1/4 LLV | 8" |
| L6 | 9'-0" | L6x3 1/2x 3/8 LLV | 8" |




LINTELS SCHEDULED FOR SINGLE 4" OF WALL THICKNESS. PROVIDE 2 FOR 8" WALL, 3 FOR 10" WALL, 3" HORIZONTAL LEGS AND 3 FOR 12" WALL.

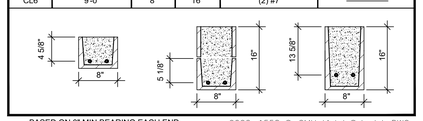
| | | |
|---|---|---|
| L7 | W8x18 + PL 1/4"x1'-3" | 8" |
| L8 | W8x18 + PL 1/4'x11 1/2" | 8" |
| L9 | W8x18 + PL 1/4"x7 1/2" | 8" |
| L10 | W16x26 + PL 1/4"x7 1/2" | 8" |
| L11 | W16x26 + PL 1/4x11 1/2 | 8" |

2022-1558 S-Steel Lintel Schedule.dwg

NOTE: 1. GROUT BELOW BEAM BEARING PER DETAIL 1/S7.01.
2. BEARING LENGTH IS OVER CMU OR COMPOSITE BRICK/BLOCK. DO NOT BEAR ON BRICK VENEER UNLESS SINGLE ANGLE LINTEL IS BEING UTILIZED.
3. ANCHOR MASONRY TO BEAMS WITH 9 GA WIRE TIES EACH SIDE AT 2'-8" O.C.
4. PROVIDE STEEL LINTELS AT ALL MASONRY WALL OPENINGS, INCLUDING MECHANICAL AND ELECTRICAL GREATER THAN 8" WIDE. SEE LINTEL SCHEDULE.
5. ALL EXTERIOR LINTELS TO BE HOT-DIP GALVANIZED.

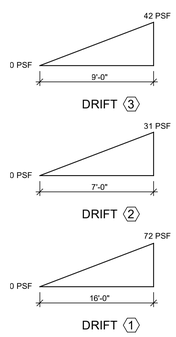
## CMU LINTEL SCHEDULE

| MARK | CLEAR SPAN | BLOCK SIZE | | BOTTOM REINFORCING | REMARKS |
|---|---|---|---|---|---|
| | | WIDTH | DEPTH | | |
| CL1 | 4'-0" | 8" | 8" | (2) #3 | ——— |
| CL2 | 5'-0" | 8" | 8" | (2) #4 | ——— |
| CL3 | 6'-0" | 8" | 8" | (2) #5 | ——— |
| CL4 | 7'-0" | 8" | 16" | (2) #5 | ——— |
| CL5 | 8'-0" | 8" | 16" | (2) #6 | ——— |
| CL6 | 9'-0" | 8" | 16" | (2) #7 | ——— |




BASED ON 8" MIN BEARING EACH END

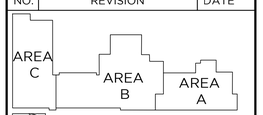
2022-1558 S-CMU Lintel Schedule.DWG




SNOW DRIFTING LOAD DIAGRAM

NOTE: STEEL JOIST DESIGNATIONS HAVE BEEN SELECTED TO ACCOUNT FOR DRIFTED SNOW LOADS, UNLESS NOTED OTHERWISE.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

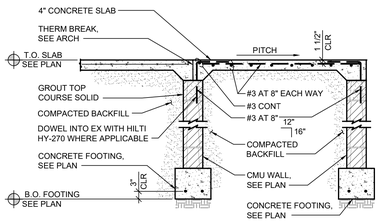
NOTES AND SCHEDULES

PROJECT NUMBER 2022006.1

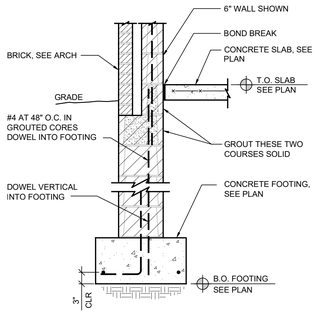
PROJECT DATE AUGUST 23, 2023

CHECKED BY JAG

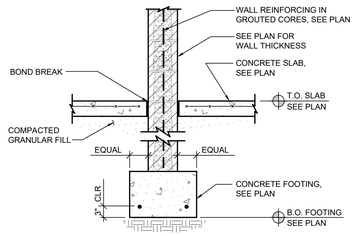
SHEET NUMBER S3.01



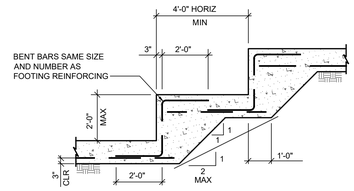

1 S5.01 ENTRY SLAB
1/2"=1'-0" 2022-1558 S- Entry Slab Masonry 8x8.dwg



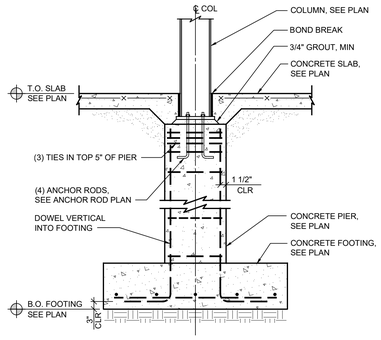

2 S5.01 EXTERIOR FOUNDATION WALL
3/4"=1'-0" 2022-1558 S-Exterior Wall Footing.dwg



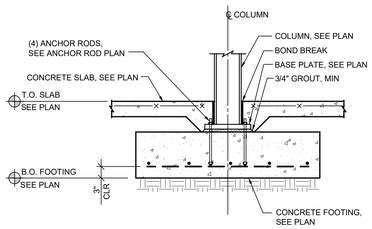

3 S5.01 INTERIOR WALL FOOTING
3/4"=1'-0" 04 FOUNDATION Interior Wall Footing.dwg



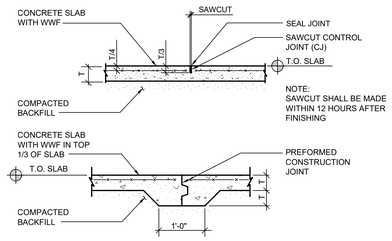

4 S5.01 STEP FOOTING
3/8"=1'-0" 2022-1558 S-Step Footing.dwg



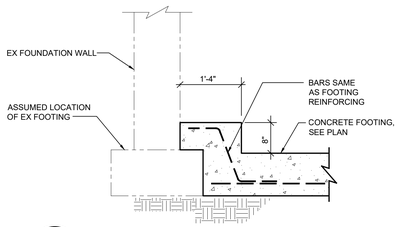

5 S5.01 COLUMN FOOTING WITH PIER
3/4"=1'-0" 2022-1558 S-Interior Column Footing With Pier.dwg



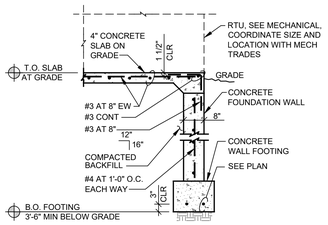

6 S5.01 INTERIOR COLUMN FOOTING
3/4"=1'-0" 2022-1558 S-Interior Column Footing.dwg



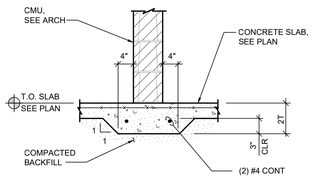

7 S5.01 CONTROL/CONSTRUCTION JOINTS
3/4"=1'-0" 2022-1558 S-Control Construction Joints.dwg



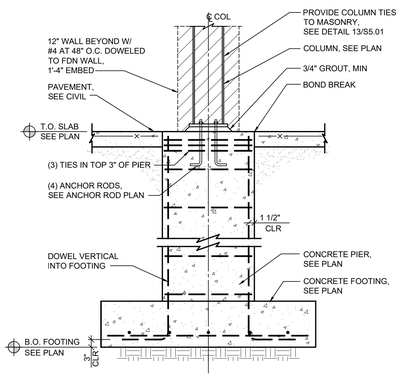

8 S5.01 NEW FOOTING AT EXISTING
3/4"=1'-0" 2022-1558 S-New Footing At Existing.dwg



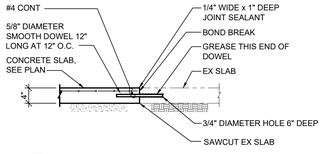

9 S5.01 RTU FOUNDATION
3/4"=1'-0" 2022-1558 S-RTU Foundation.dwg



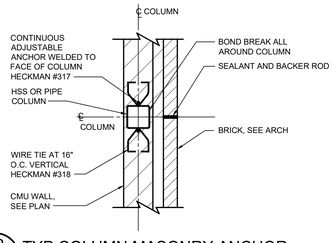

10 S5.01 THICKENED SLAB
3/4"=1'-0" 2022-1558 S-Thickened Slab.dwg




11 S5.01 EXTERIOR COLUMN FOOTING
3/4"=1'-0" 2022-1558 S-Exterior Column Footing.dwg

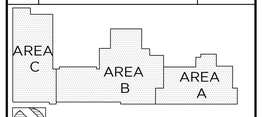



12 S5.01 NEW SLAB AT EXISTING
3/4"=1'-0"




13 S5.01 TYP COLUMN MASONRY ANCHOR
3/4"=1'-0" 04_WALL Typ Column Masonry Anchor TS.DWG

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

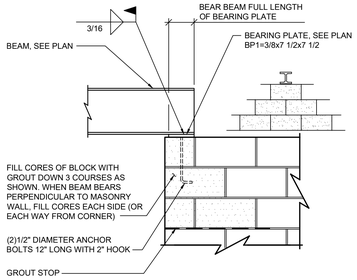
SHEET TITLE
FOUNDATION PLAN

PROJECT NUMBER
2022006.1

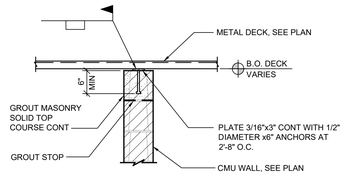
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JAG

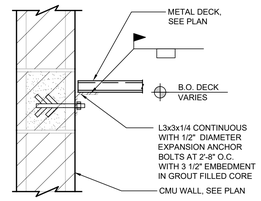
SHEET NUMBER
S5.01



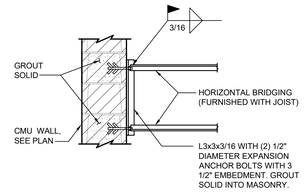

1 S7.01 BEAM BEARING
3/4"=1'-0" 2022-1558 S-BEAM Beam Bearing.dwg



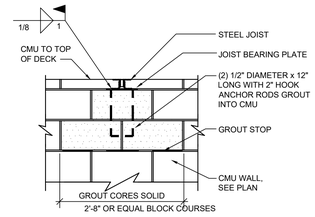

2 S7.01 DECK BEARING
3/4"=1'-0" 2022-1558 S-Deck Bearing.dwg




3 S7.01 DECK SUPPORT ANGLE
1 1/2"=1'-0" 2022-1558 S-Deck Support Angle.dwg




4 S7.01 "K" BRIDGING ANCHOR
3/4"=1'-0" 2022-1558 S-JOIST K Bridging Anchor.dwg

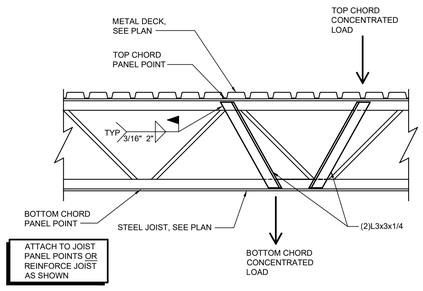



SET PLATE TO CORRECT RELATIONSHIP TO BOTTOM OF DECK ELEATION SHOWN

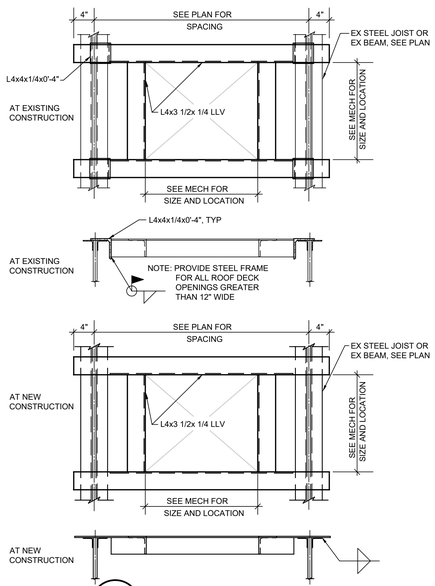
SINGLE JOIST BRG PL 3/8x4x6 UNO, 1/2" THICK AT SPANS GREATER THAN 23'-0"

DOUBLE JOIST BRG PL 3/8x7x8 UN0, 1/2" THICK AT DRIFTED SNOW LOAD LOCATIONS

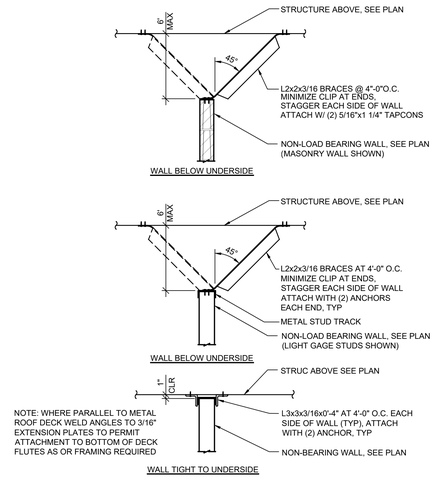
5 S7.01 "K" JOIST END BEARING
3/4"=1'-0" 2022-1558 S-K Joist End Bearing.dwg




6 S7.01 STEEL JOIST REINFORCEMENT AT NON-PANEL POINT CONCENTRATED LOADS
3/4"=1'-0" 2022-1558 S-Steel Joist Reinforcement At Nonpanel Point Concentrated Loads.dwg



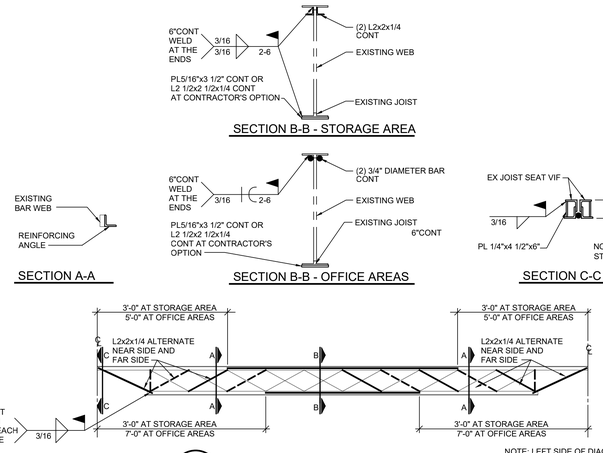

7 S7.01 ROOF OPENING FRAME
1"=1'-0" 2022-1558 S-Roof Opening Frame NEW EX.dwg




NOTE: WHERE PARALLEL TO METAL ROOF DECK WELD ANGLES TO 3/16" EXTENSION PLATES TO PERMIT ATTACHMENT TO BOTTOM OF DECK FLUTES AS OR FRAMING REQUIRED

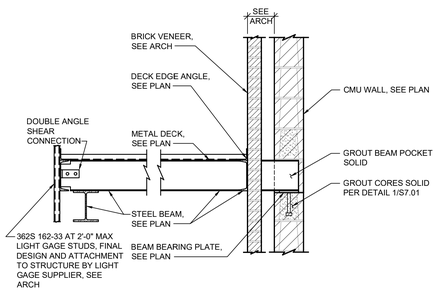
NOTES:
1. SEE ARCH FOR TOP OF WALL INFILL REQUIREMENTS.
2. BRACING NOT REQUIRED 4 FEET FROM INTEGRAL WALL INTERSECTIONS OR CORNERS.
3. ANCHORS SHALL BE #10 TEK SCREWS WHERE FASTENING TO METAL OR 3/16"x1 1/4" TAPCONS WHERE FASTENING TO CONCRETE OR MASONRY. PREDRILL ANGLE METAL.
4. EXTERIOR CLADDING SHALL HAVE FLEXIBLE CONNECTIONS TO ALLOW FOR 3/4" DEFLECTION.
5. LIGHT FRAMED ALTERNATES SHALL BE DESIGNED BY THE FABRICATOR AND APPROVED PRIOR TO FABRICATION.

8 S7.01 TYP NON-BEARING WALL BRACING
3/4"=1'-0" 2022-1558 S-Typ Non-Bearing Masonry Wall Bracing.dwg

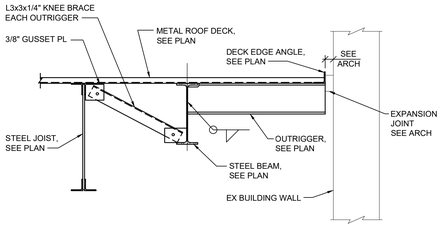



9 S7.01 JOIST CHORD REINFORCEMENT
N.T.S. 2022-1558-S-Joist Chord Reinforement.dwg

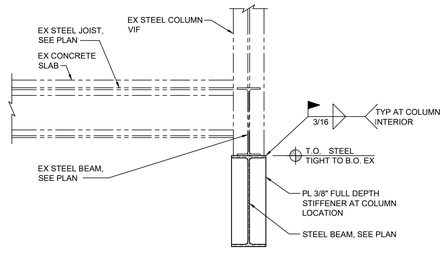
NOTE: LEFT SIDE OF DIAGRAM SHOWS WEB REINFORCEMENT FOR OFFICE AREAS, RIGHT SIDE SHOWS WEB REINFORCEMENT FOR STORAGE AREAS, ALL WEB REINFORCEMENT TO BE PROVIDED AT BOTH ENDS OF JOIST SPANS



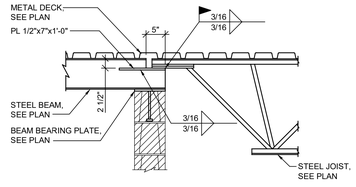

10 S7.01 CANOPY DECK EDGE
3/4"=1'-0" 2022-1558 S-Low Roof Deck Edge.dwg




11 S7.01 DECK EDGE AT EXISTING
3/4"=1'-0" 2022-1558 S-Canopy Deck Edge.dwg




12 S7.01 BEAM AT EXISTING COLUMN
3/4"=1'-0" 2022-1558 S-Beam At Existing Column.dwg




13 S7.01 COPED BEAM JOIST SEAT
3/4"=1'-0" 2022-1558 S-Column At Existing Beam.dwg

| NO. | REVISION | DATE |
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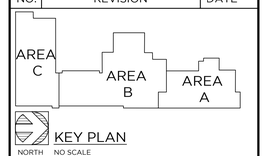


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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
ROOF FRAMING DETAILS

PROJECT NUMBER
2022006.1

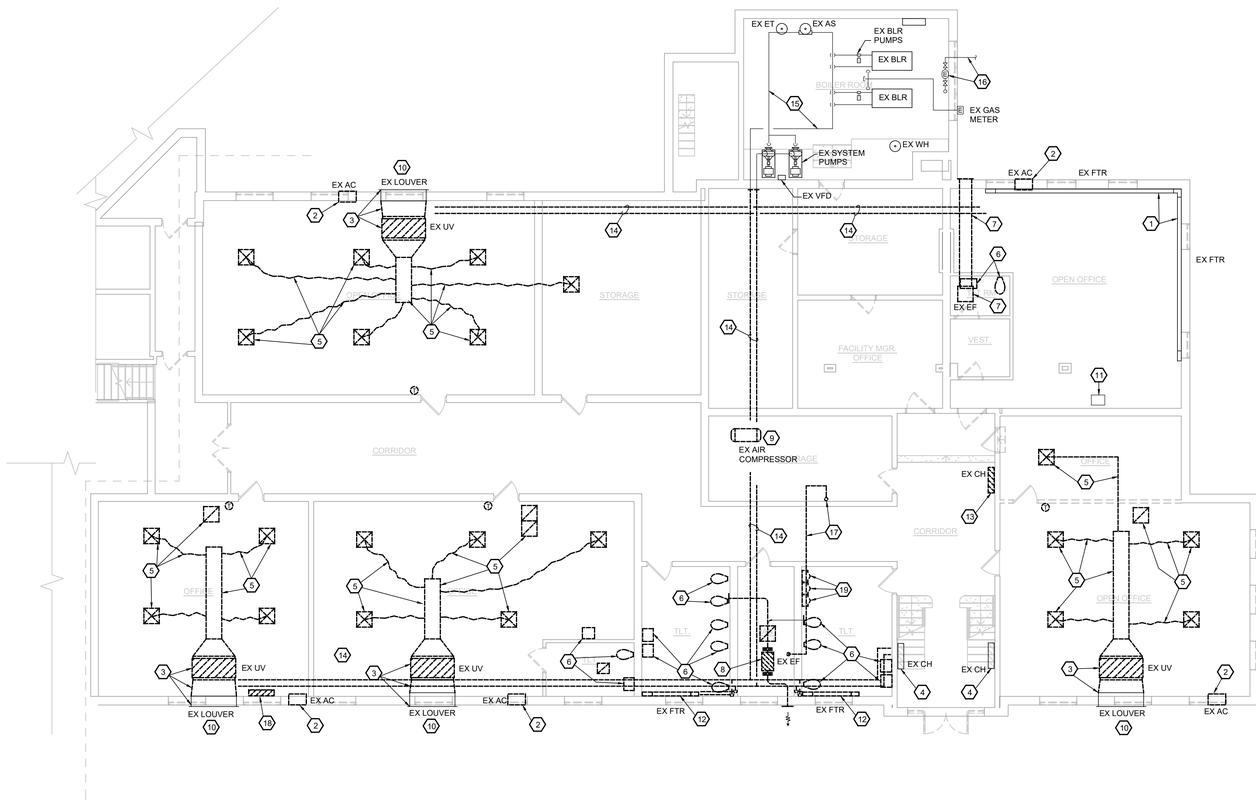
PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JAG

SHEET NUMBER
S7.01

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.




NORTH

PARTIAL LOWER LEVEL PLAN AREA "A" - MECHANICAL DEMOLITION

1/8"=1'-0"

**DEMOLITION KEYED NOTES**

1. EXISTING FINNED TUBE RADIATION TO REMAIN.
2. REMOVE EXISTING WINDOW A.C. UNIT.
3. REMOVE EXISTING HORIZONTAL CEILING UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, OUTSIDE AIR DUCT ETC.
4. EXISTING CABINET HEATERS TO REMAIN.
5. EXISTING DUCTWORK, DIFFUSERS, ETC., TO BE REMOVED.
6. REMOVE EXISTING PLUMBING FIXTURES, PIPING, VALVES, ETC.
7. CEILING EXHAUST FAN AND ASSOCIATED DUCTWORK TO BE REMOVED.
8. EXISTING EXHAUST FAN AND ASSOCIATED DUCTWORK TO BE REMOVED.
9. TEMPERATURE CONTROL AIR COMPRESSOR TO BE REMOVED.
10. EXISTING LOUVER TO BE REMOVED IN-FILL BRICK AND BLANK OFF ON INSIDE BY GENERAL CONTRACTOR.
11. REMOVE EXISTING SINK AND ALL CONNECTED PIPING, AND CAP AT CEILING AND WALL.
12. REMOVE EXISTING FINNED TUBE RADIATION AND HEATING PIPING.
13. REMOVE EXISTING CABINET HEATER AND CAP PIPING IN WALL.
14. REMOVE ALL EXISTING HEATING PIPING. FIELD VERIFY EXACT LOCATIONS.
15. EXISTING HEATING PIPING WITHIN BOILER ROOM IS TO REMAIN FOR CONNECTION TO NEW HEATING PIPING.
16. EXISTING 2" WATER SERVICE METER AND PIPING TO BE REMOVED AFTER NEW WATER SERVICE IS IN OPERATION.
17. REMOVE EXISTING OVER HEAD PVC STORM PIPING AS SHOWN.
18. REMOVE EXISTING DUCTLESS SPLIT SYSTEM.
19. EXISTING STALL TYPE URINALS TO BE REMOVED. FLOOR IS TO BE REPAIRED BY GENERAL CONTRACTOR.

**EXISTING HEATING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.

| NO. | REVISION | DATE |
|---|---|---|
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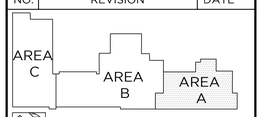
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL LOWER LEVEL PLAN MECHANICAL DEMOLITION

PROJECT NUMBER: 2022006.1

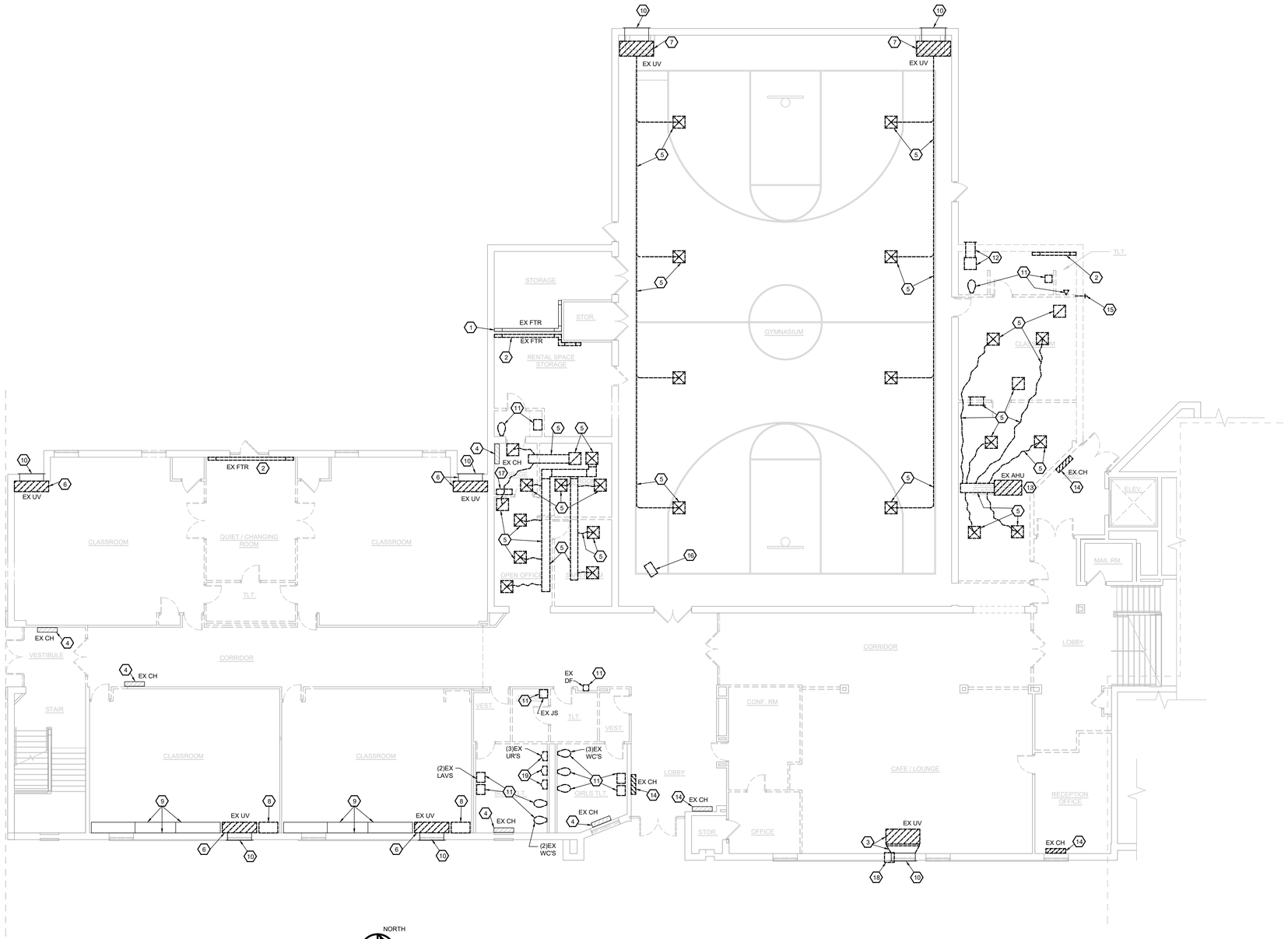
PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

SHEET NUMBER: M1.01

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.




NORTH

PARTIAL MAIN LEVEL SOUTH WING PLAN AREA "B" - MECHANICAL DEMOLITION

1/8"=1'-0"

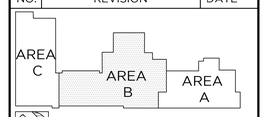
**DEMOLITION KEYED NOTES**

1. EXISTING FINNED TUBE RADIATION TO REMAIN.
2. EXISTING FINNED TUBE RADIATION TO BE REMOVED.
3. REMOVE EXISTING HORIZONTAL CEILING UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, OUTSIDE AIR DUCT ETC.
4. EXISTING CABINET HEATERS TO REMAIN.
5. EXISTING DUCTWORK, DIFFUSERS, ETC., TO BE REMOVED.
6. REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, ETC.
7. REMOVE EXISTING VERTICAL UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, ETC.
8. REMOVE EXISTING WALL SHELVING UNIT.
9. EXISTING SHELVING UNIT TO REMAIN.
10. EXISTING LOUVER TO BE REMOVED IN-FILL BRICK AND BLANK OFF ON INSIDE BY GENERAL CONTRACTOR.
11. REMOVE EXISTING PLUMBING FIXTURES, PIPING, VALVES, ETC., IN THE DEMOLITION AREA. CAP-OFF PIPING AT MAINS OUTSIDE OF DEMO AREA.
12. REMOVE EXISTING CEILING EXHAUST FAN AND ASSOCIATED DUCTWORK, EXHAUST GRILLE, ETC.
13. REMOVE EXISTING AIR HANDLING UNIT AND ASSOCIATED DUCTWORK, PIPING, VALVES, ETC. REMOVE PIPING BACK TO MAINS BEYOND DEMO AREA.
14. REMOVE ALL EXISTING CABINET HEATER AND ALL CONNECTED PIPING CONTROLS, ETC.
15. REMOVE WALL HYDRANT AND ALL CONNECTED PIPING BACK TO MAIN AND CAP.
16. REMOVE EXISTING UNIT HEATER.
17. REMOVE EXISTING CONTROL PANEL.
18. REMOVE EXISTING THRU WALL AIR CONDITIONING UNIT.
19. EXISTING STALL TYPE URINALS ARE TO BE REMOVED. FLOOR TO BE REPAIRED BY GENERAL CONTRACTOR.

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL MAIN LEVEL PLAN MECHANICAL DEMOLITION

PROJECT NUMBER: 2022006.1

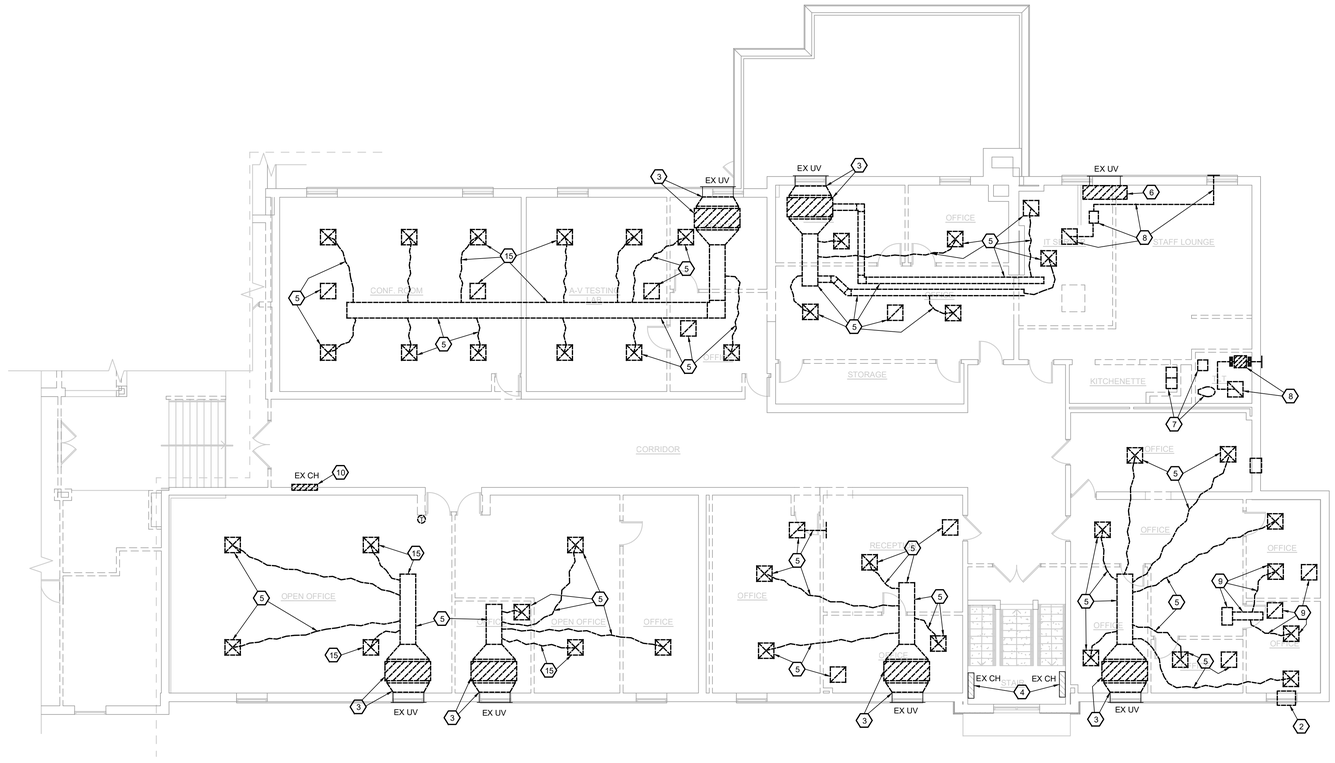
PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

SHEET NUMBER: M1.02

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.




NORTH

PARTIAL MAIN LEVEL NORTH WING PLAN AREA "A" - MECHANICAL DEMOLITION

1/8"=1'-0"

**DEMOLITION KEYED NOTES**

1. EXISTING FINNED TUBE RADIATION TO REMAIN.
2. REMOVE EXISTING WINDOW A.C. UNIT.
3. REMOVE EXISTING HORIZONTAL CEILING UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, OUTSIDE AIR DUCT ETC.
4. EXISTING CABINET HEATERS TO REMAIN.
5. EXISTING DUCTWORK, DIFFUSERS, ETC., TO BE REMOVED.
6. REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, ETC.
7. REMOVE EXISTING PLUMBING FIXTURES, PIPING, VALVES, ETC., IN THE DEMOLITION AREA. CAP-OFF PIPING AT MAINS OUTSIDE OF DEMO AREA.
8. CEILING EXHAUST FAN AND ASSOCIATED DUCTWORK TO BE REMOVED.
9. REMOVE EXISTING CEILING AIR HANDLING UNIT FAN AND ASSOCIATED DUCTWORK, GRILLES, ETC.
10. REMOVE EXISTING CABINET HEATER AND ALL CONNECTED PIPING CONTROLS, ETC.

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.

| NO. | REVISION | DATE |
|---|---|---|
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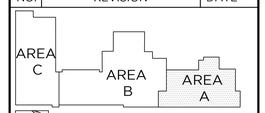
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL MAIN LEVEL NORTH WING PLAN MECHANICAL DEMOLITION

PROJECT NUMBER: 2022006.1

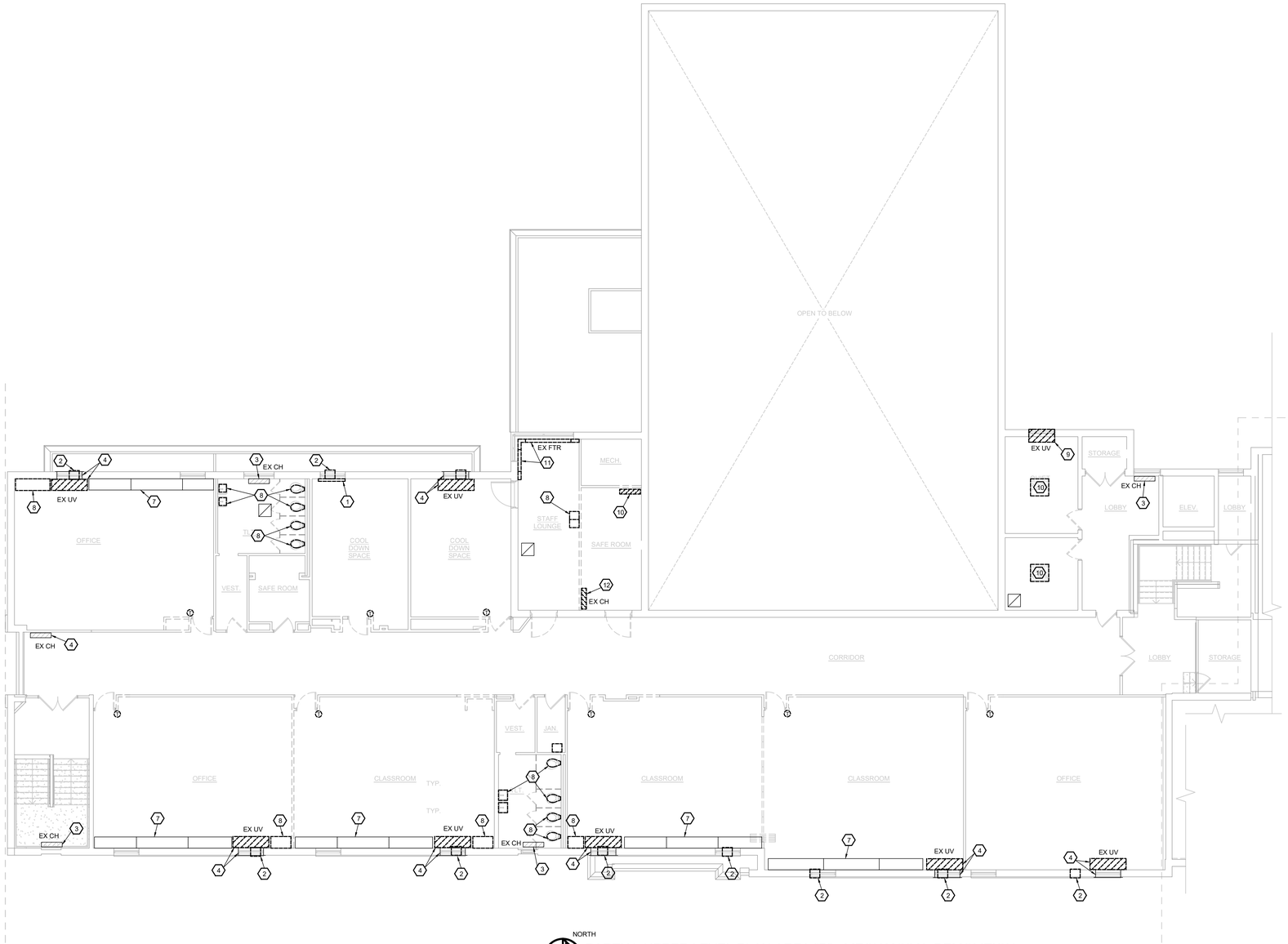
PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

SHEET NUMBER: M1.03

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.




NORTH

PARTIAL UPPER LEVEL PLAN AREA "B" - MECHANICAL DEMOLITION

1/8"=1'-0"

**DEMOLITION KEYED NOTES**

1. EXISTING FINNED TUBE RADIATION TO REMAIN.
2. REMOVE EXISTING WINDOW A.C. UNIT.
3. REMOVE CABINET HEATER AND ALL CONNECTED PIPING CONTROLS.
4. REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR AND ASSOCIATED PIPING, CONTROLS, ETC.
5. REMOVE EXISTING VERTICAL UNIT VENTILATOR. OUTSIDE AIR LOUVER IN FILL AND BLANK OFF BY GENERAL CONTRACTOR.
6. REMOVE EXISTING WALL SHELVING UNIT.
7. EXISTING SHELVING UNIT TO REMAIN.
8. REMOVE EXISTING PLUMBING FIXTURES, PIPING, VALVES, ETC., IN THE DEMOLITION AREA. CAP-OFF PIPING AT MAINS OUTSIDE OF DEMO AREA.
9. EXISTING THRU THE WALL TRANE PACKAGED TERMINAL UNIT TO BE REMOVED. (NOTE: UNIT HAS ALREADY BEEN REMOVED).
10. REMOVE EXISTING DUCTLESS SPLIT SYSTEM.
11. REMOVE EXISTING FIN TUBE RADIATION.

**EXISTING HEATING PIPING NOTE**

ALL EXISTING HEATING HOT WATER PIPING SHALL BE REMOVED AND REPLACED WITH NEW HEATING HOT WATER PIPING. REPIPE WITH NEW CONTROLS AND VALVES ALL EXISTING EQUIPMENT THAT REMAINS.

| NO. | REVISION | DATE |
|---|---|---|
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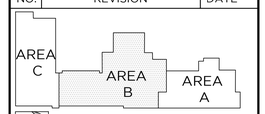
| | | |
| | ISSUE FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL UPPER LEVEL PLAN MECHANICAL DEMOLITION

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

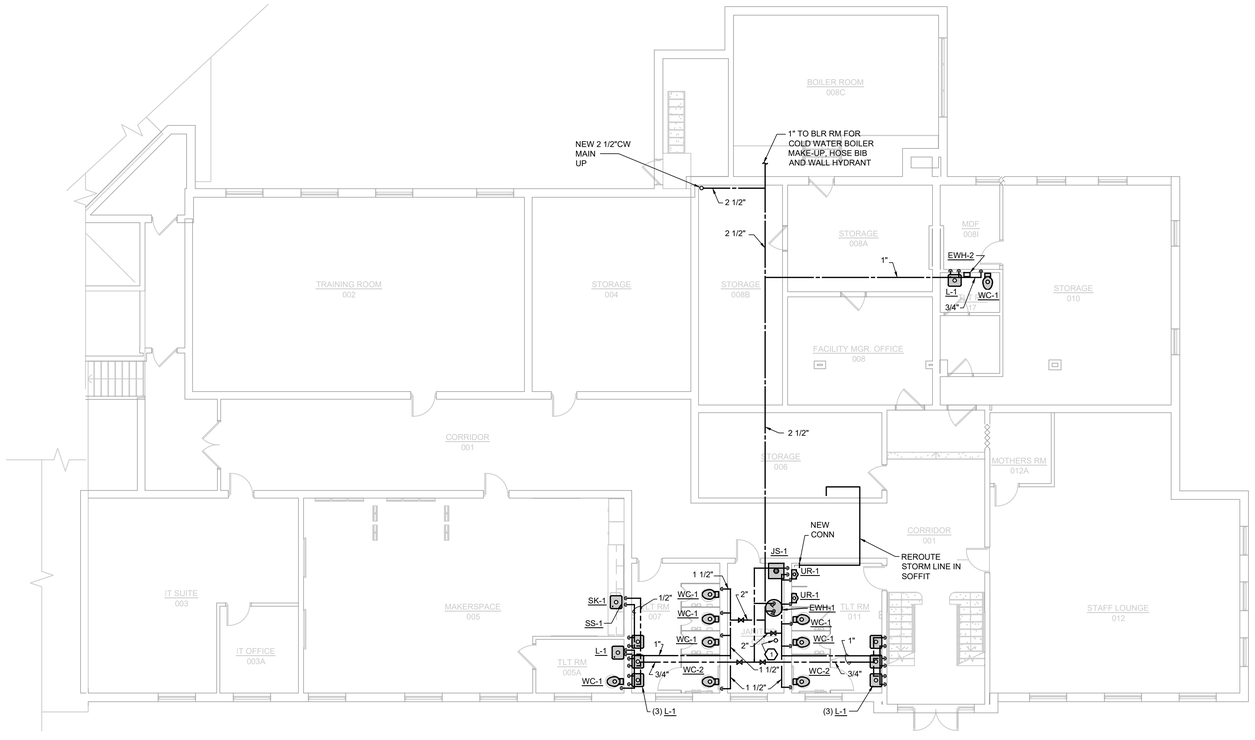
SHEET NUMBER: M1.04

**GENERAL NOTES**

1. ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE REPLACED WITH NEW.
2. RECONNECT NEW PLUMBING FIXTURES TO EXISTING SANITARY AND VENT PIPING.

**KEYED NOTE**

1. 4" SANITARY UP. CONNECT TO EXISTING UNDER FLOOR SANITARY. FIELD VERIFY EXACT LOCATION.




NORTH

PARTIAL LOWER LEVEL PLAN AREA "A"- MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
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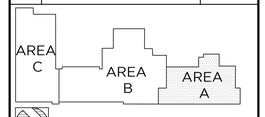
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL LOWER LEVEL PLAN MECHANICAL DEMOLITION

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

SHEET NUMBER: M2.01

**GENERAL NOTES**

1. ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE REPLACED WITH NEW.
2. RECONNECT NEW PLUMBING FIXTURES TO EXISTING SANITARY AND VENT PIPING. UNLESS SHOWN OTHERWISE.

**KEYED NOTES**

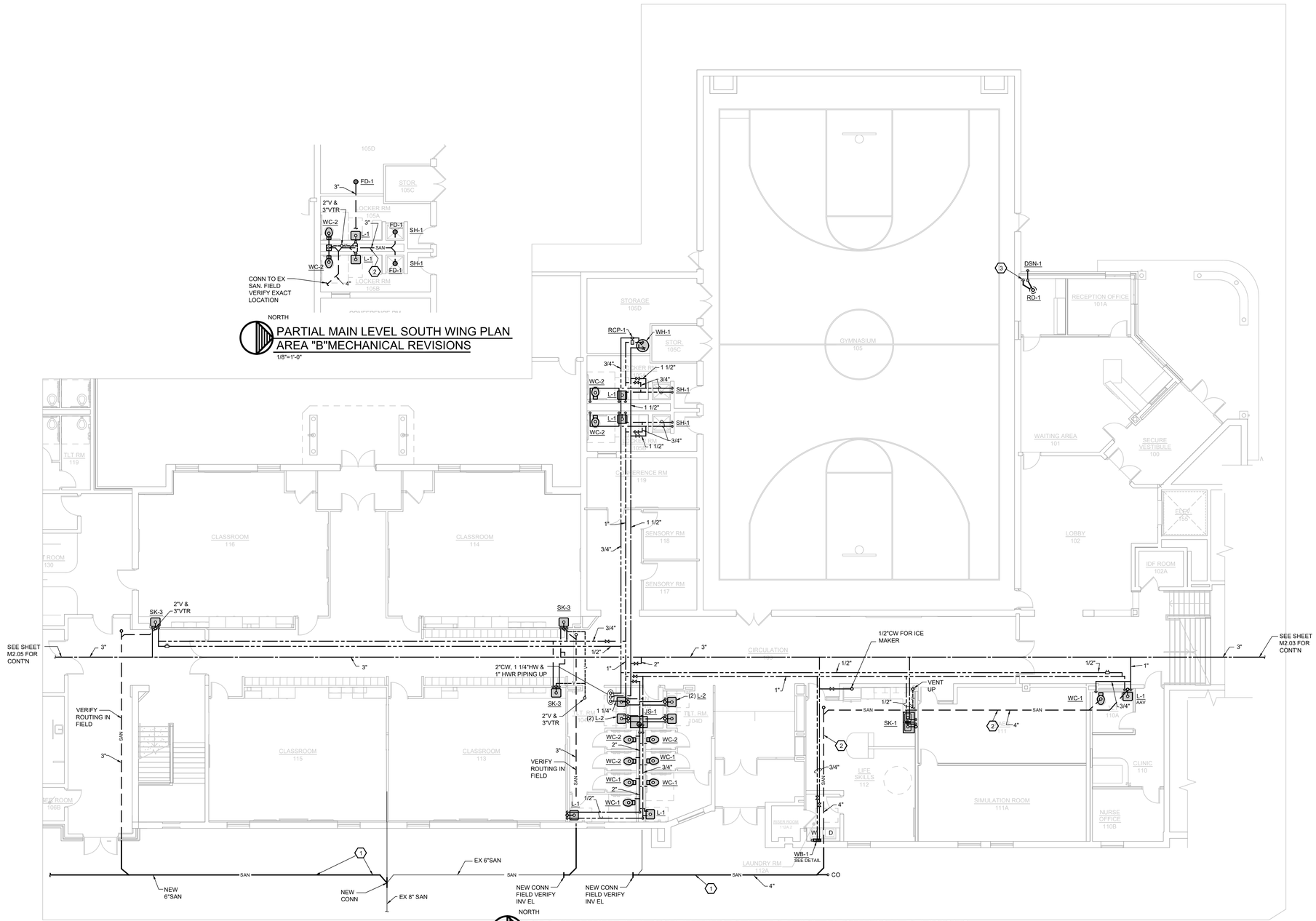
1. NEW SANITARY PIPING OUTSIDE BUILDING . THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING TO SANITARY SEWER OUTSIDE OF BUILDING. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH SITE CONTRACTOR.
2. SAW CUT AS REQUIRED FOR NEW SANITARY PIPING.
3. 3" RC DN AND EXTEND AND CONNECT TO EXISTING STORM FROM GYMNASIUM.




NORTH

## PARTIAL MAIN LEVEL SOUTH WING PLAN AREA "B"MECHANICAL REVISIONS

1/8"=1'-0"




NORTH

## PARTIAL MAIN LEVEL SOUTH WING PLAN AREA "B" - MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

AREA C AREA B AREA A

KEY PLAN

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL MAIN LEVEL SOUTH WING MECHANICAL REVISIONS

PROJECT NUMBER: 2022006.1

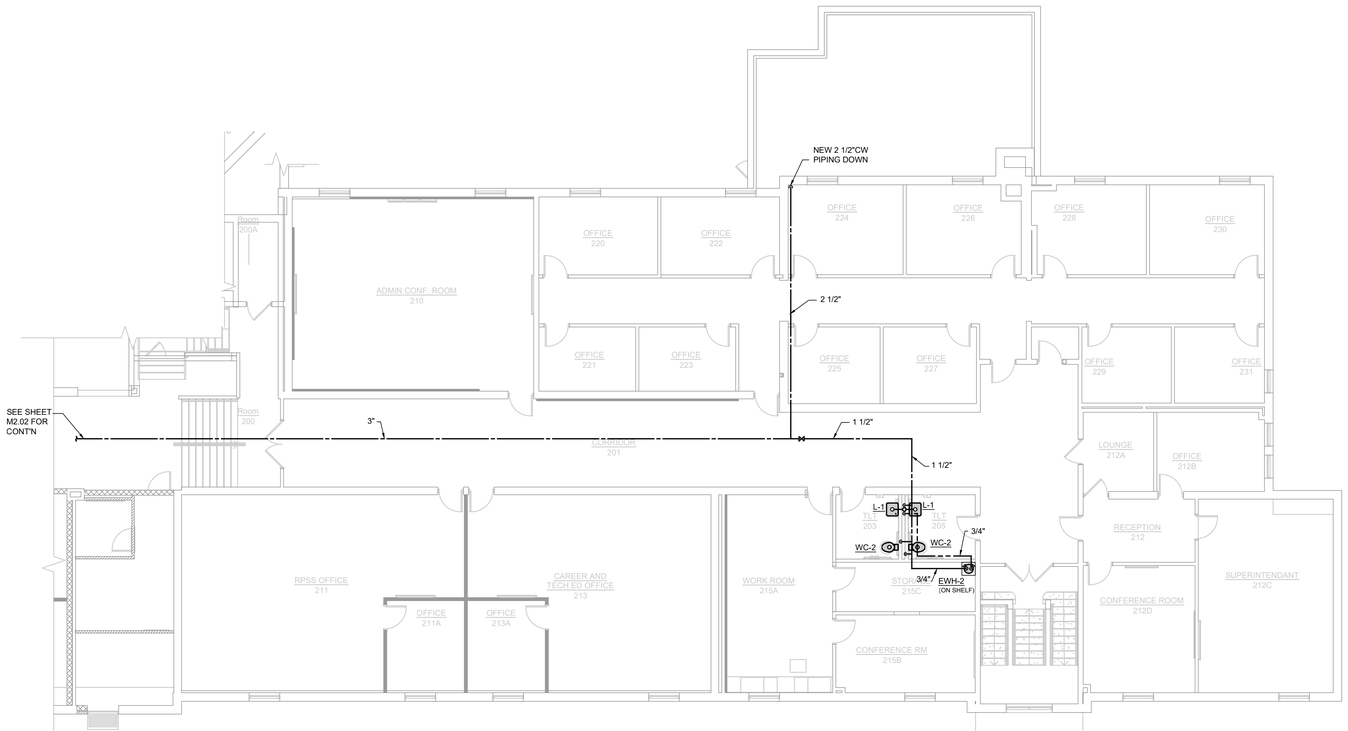
PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

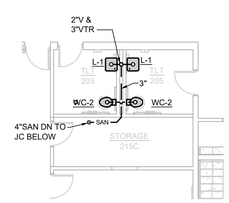
SHEET NUMBER: M2.02

**GENERAL NOTES**

1. ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE REPLACED WITH NEW.
2. RECONNECT NEW PLUMBING FIXTURES TO EXISTING SANITARY AND VENT PIPING. UNLESS SHOWN OTHERWISE.




NORTH
PARTIAL MAIN LEVEL NORTH WING PLAN AREA "A" - MECHANICAL REVISIONS
1/8"=1'-0"




NORTH
PARTIAL MAIN LEVEL NORTH WING PLAN AREA "A" MECHANICAL REVISIONS
1/8"=1'-0"

| NO. | REVISION | DATE |
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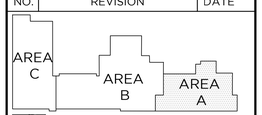
| | ISSUE FOR BID | 08/23/23 |

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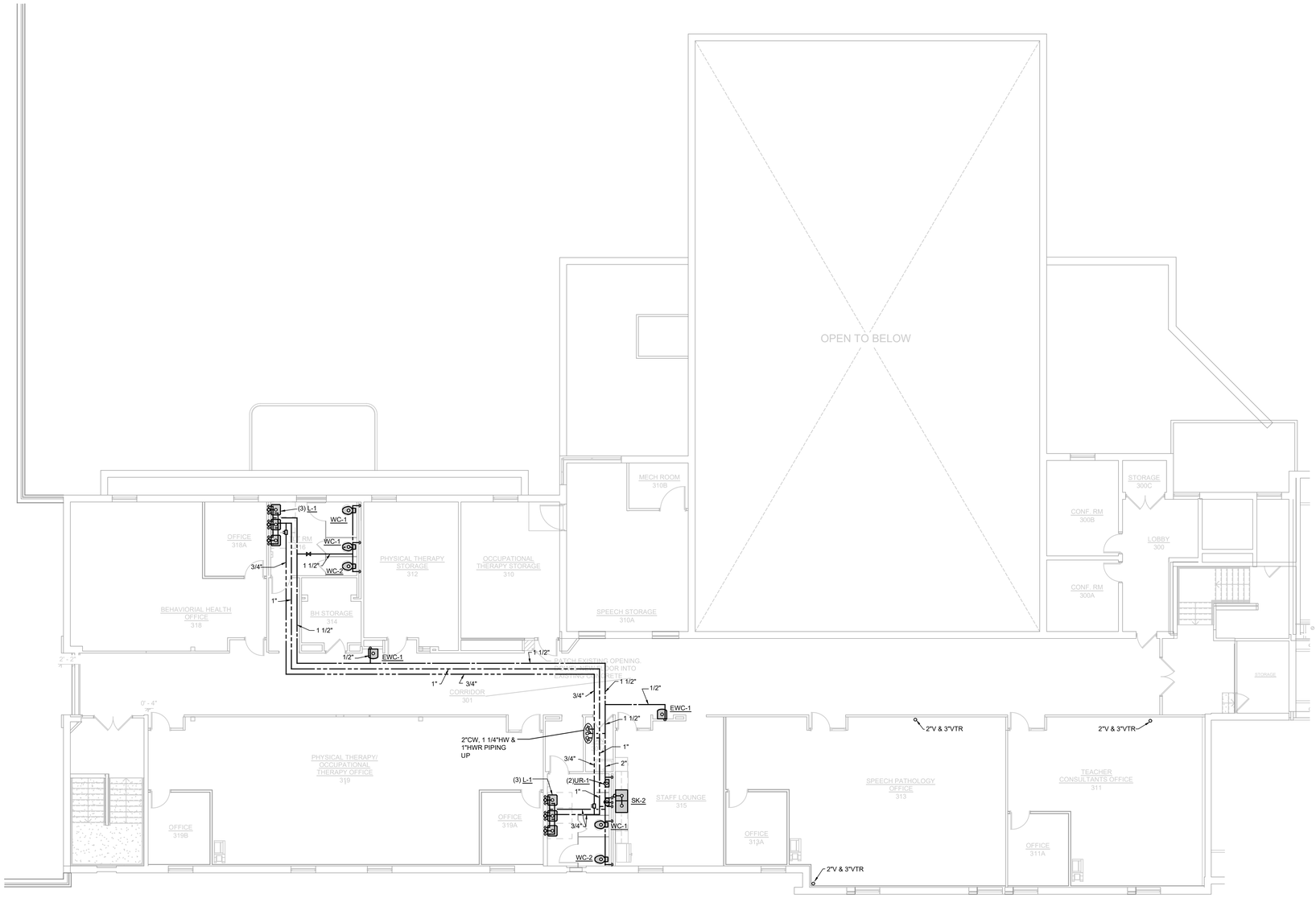
PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
PARTIAL MAIN LEVEL NORTH WING PLAN MECHANICAL REVISIONS

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY RAM
SHEET NUMBER M2.03

**GENERAL NOTES**

1. ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE REPLACED WITH NEW.
2. RECONNECT NEW PLUMBING FIXTURES TO EXISTING SANITARY AND VENT PIPING. UNLESS NOTED OTHERWISE.




NORTH

PARTIAL UPPER LEVEL PLAN AREA "B" - MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
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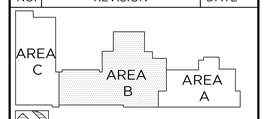
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL UPPER LEVEL PLAN MECHANICAL REVISIONS

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

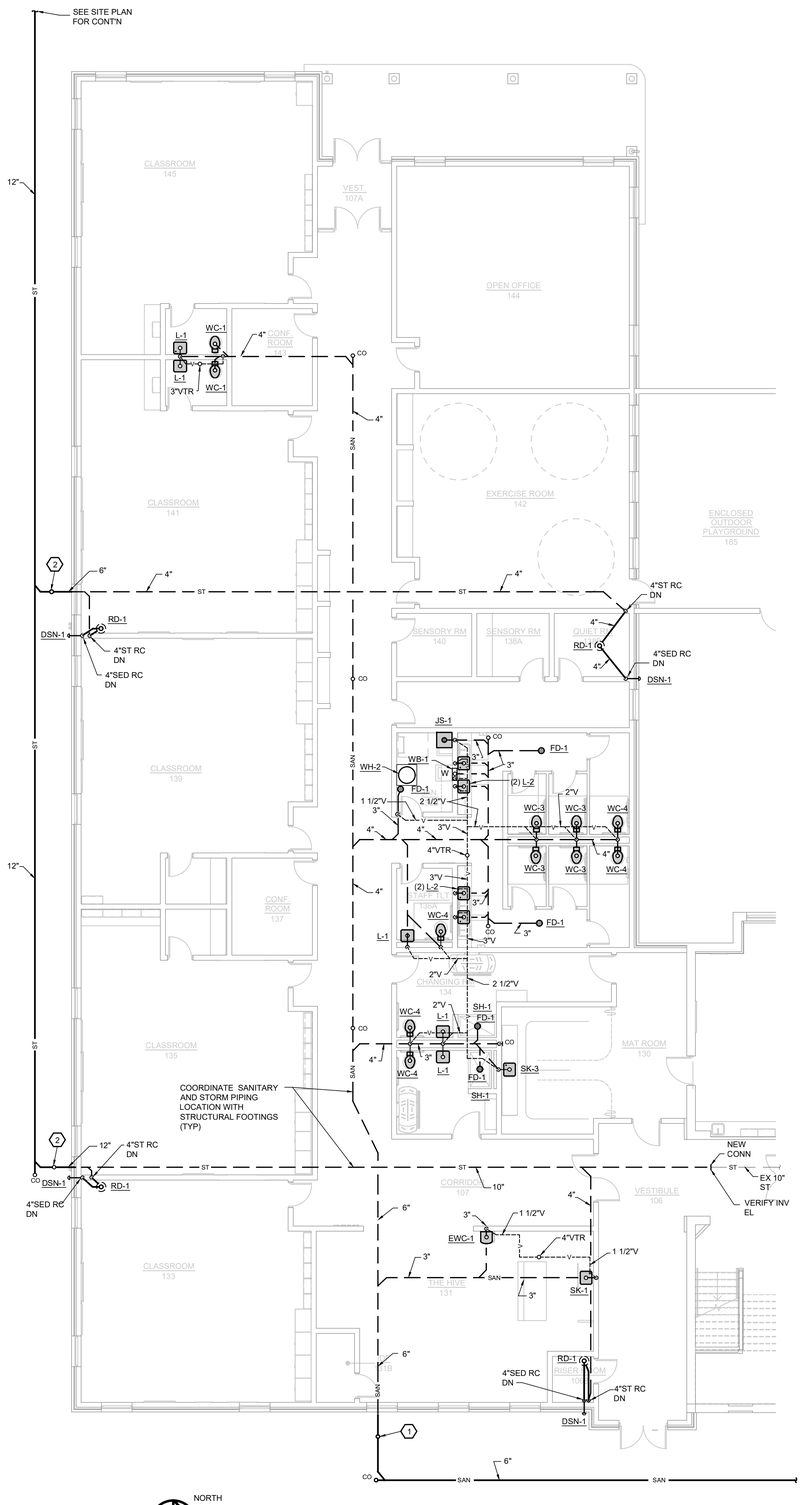
SHEET NUMBER: M2.04

**GENERAL NOTES**

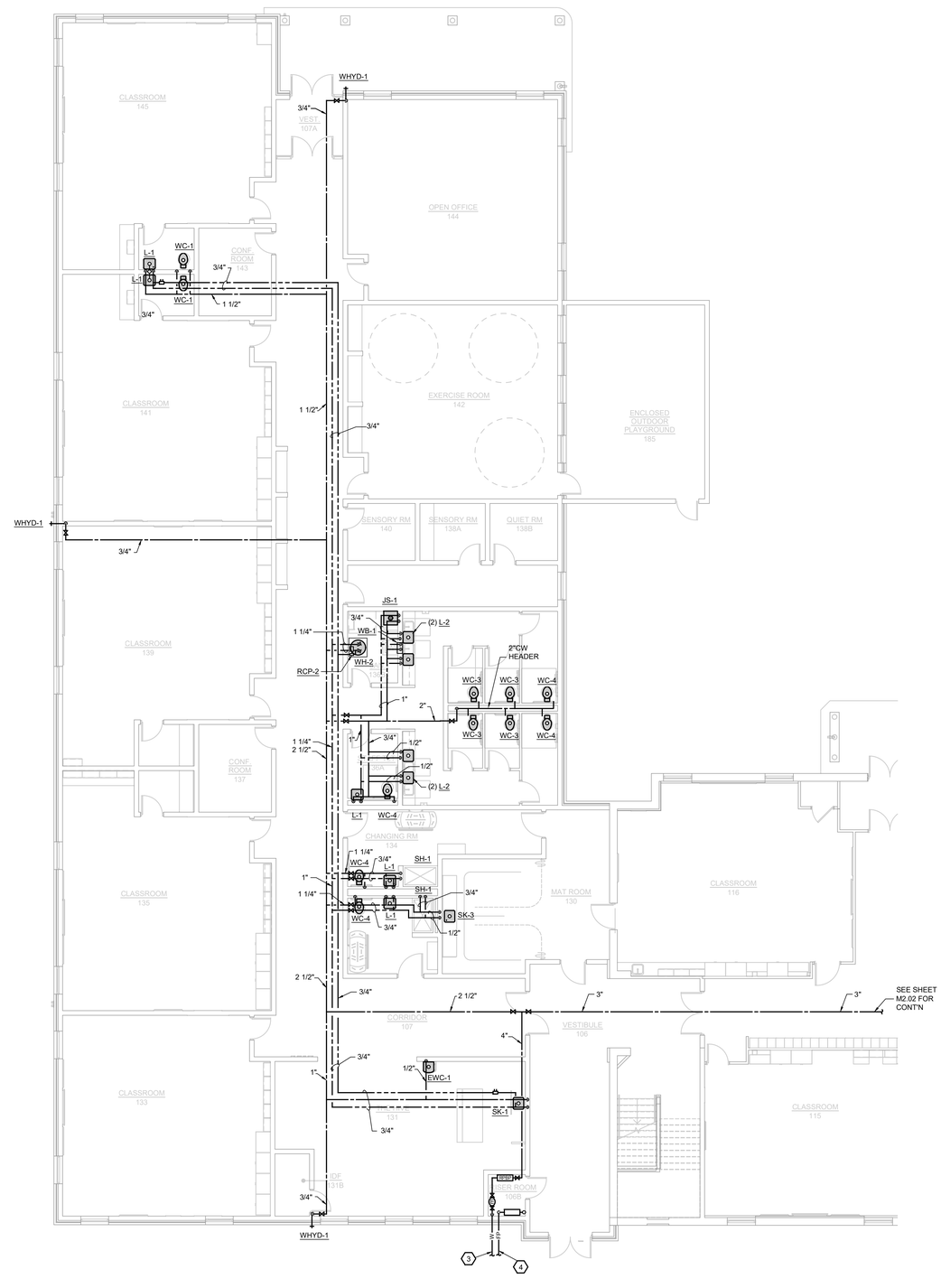
1. ALL PLUMBING, PIPING, VENTING, ETC. SHALL MEET CODE.

**KEYED NOTES**

1. 4" SANITARY PIPING STUBBED 5'-0" OUTSIDE BUILDING WITH CLEANOUT. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING TO SANITARY SEWER OUTSIDE OF BUILDING. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH SITE CONTRACTOR.
2. STORM PIPING STUBBED 5'-0" OUTSIDE BUILDING WITH CLEANOUT. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING TO STORM OUTSIDE OF BUILDING. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH SITE CONTRACTOR.
3. 4" COLD WATER SERVICE STUBBED 5'-0" OUTSIDE BUILDING. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING TO WATER SERVICE OUTSIDE OF BUILDING. COORDINATE EXACT LOCATION WITH SITE CONTRACTOR.
4. 6" FIRE PROTECTION SERVICE TO 5'-0" BEYOND BUILDING WALL. THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL DESIGN, LAYOUT, FURNISH AND INSTALL THE FIRE PROTECTION SPRINKLER SYSTEM FOR THE ENTIRE ADDITION AND EXISTING BUILDING.




NORTH
ADDITION FLOOR PLAN AREA "C" - SANITARY & VENT PIPING
1/8"=1'-0"




NORTH
ADDITION FLOOR PLAN AREA "C" - PLUMBING PIPING
1/8"=1'-0"

| NO. | REVISION | DATE |
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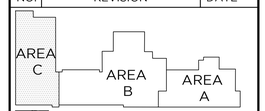
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
PARTIAL ADDITION PLAN MECHANICAL REVISIONS

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
M2.05

**GENERAL NOTES**

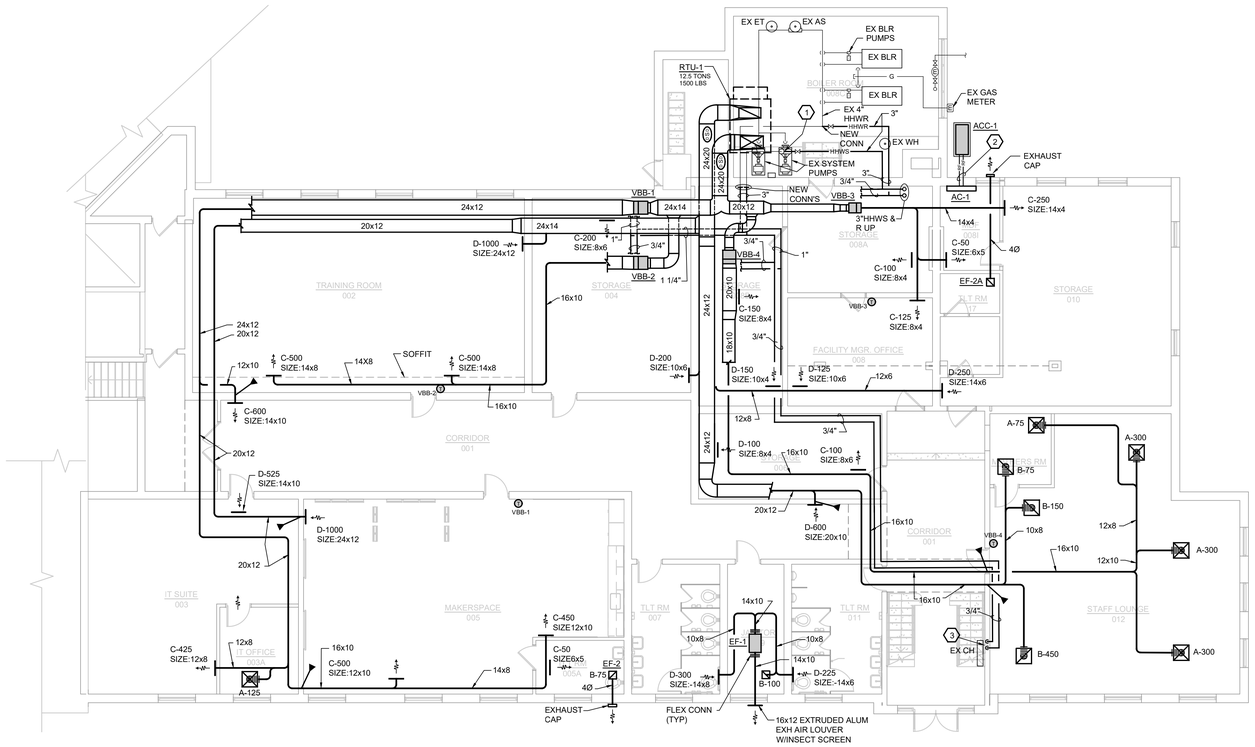
1. ALL NEW INDIVIDUAL BRANCH DUCTS SHALL BE SAME SIZE AS DIFFUSER, GRILLE OR VAV BOX INLET UNLESS NOTED OTHERWISE.
2. FIELD VERIFY EXACT LOCATION OF NEW TEMPERATURE CONTROL SENSORS.
3. TEST AND BALANCE CONTRACTOR SHALL BALANCE NEW DIFFUSERS AND GRILLES TO CFM'S SHOWN 1-10%.
4. NEW TEMPERATURE SENSORS SHALL BE TIED INTO NEW DDC TEMPERATURE CONTROL SYSTEM.

**KEYED NOTES**

1. NEW 3" CONNECTION AT PUMP.
2. REFRIGERANT PIPING WITH 3/4"ARMAFLEX INSULATION.
3. CONNECT NEW HEATING PIPING TO EXISTING CABINET HEATER.

**Total Gas Load**

| Equipment | Model # | Standing | Gas Load (MBTUH) |
|---|---|---|---|
| RTU-1 | Trane Prescedent YSJ150 | new | 250 |
| RTU-2 | Trane Prescedent YSJ240 | new | 400 |
| RTU-3 | Trane Prescedent YZCO60 | new | 130 |
| RTU-4 | Trane Prescedent YSJ240 | new | 400 |
| RTU-5 | Trane Prescedent YSJ090 | new | 200 |
| RTU-6 | Trane Prescedent YSJ150 | new | 250 |
| RTU-7 | Trane Prescedent YSJ240 | new | 400 |
| RTU-8 | Trane Voyager YCD420 | new | 600 |
| WH-1 | Lochinvar | new | 150 |
| WH-2 | Lochinvar | new | 150 |
| Boiler-1 | Raypak INC H9-1532 | existing | 1530 |
| Boiler-2 | Raypak INC H9-1532 | existing | 1530 |
| | | Sum: | 5990 |

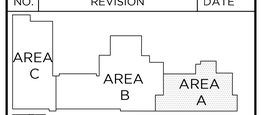



NORTH

PARTIAL LOWER LEVEL PLAN AREA "A"- MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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(989) 894-4300 T (989) 894-9930 WWW.MACMILLANASSOCIATES.COM

PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL LOWER LEVEL PLAN MECHANICAL REVISIONS

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

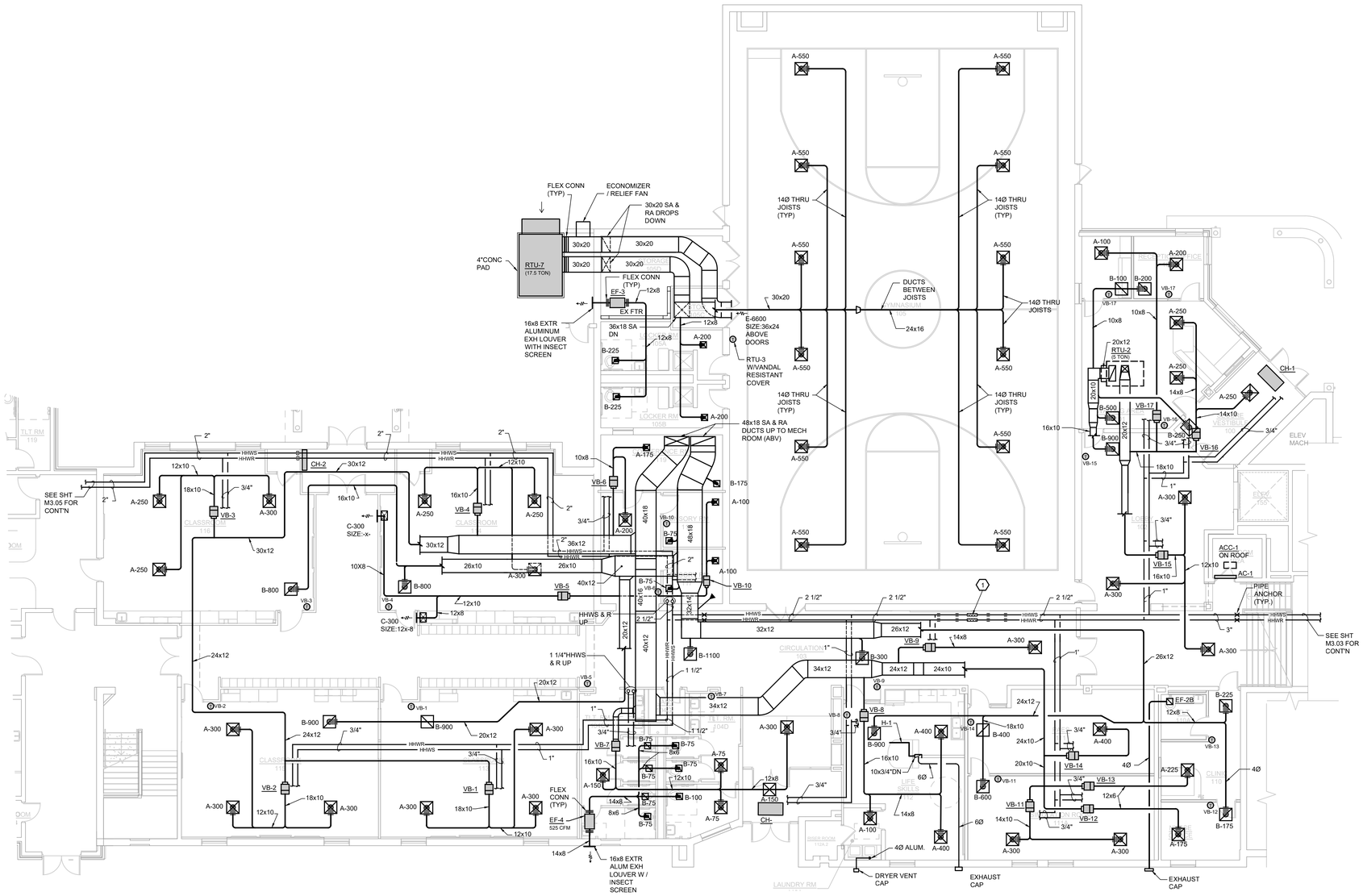
SHEET NUMBER: M3.01

**GENERAL NOTES**

1. ALL NEW INDIVIDUAL BRANCH DUCTS SHALL BE SAME SIZE AS DIFFUSER, GRILLE OR VAV BOX INLET UNLESS NOTED OTHERWISE.
2. FIELD VERIFY EXACT LOCATION OF NEW TEMPERATURE CONTROL SENSORS.
3. TEST AND BALANCE CONTRACTOR SHALL BALANCE NEW DIFFUSERS AND GRILLES TO CFM'S SHOWN ±10%.
4. NEW TEMPERATURE SENSORS SHALL BE TIED INTO EXISTING TEMPERATURE CONTROL SYSTEM.

**KEYED NOTES**

1. EXPANSION COMPENSATORS AND PIPE GUIDES (TYP)

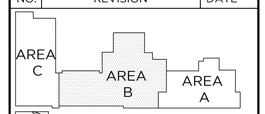



NORTH

PARTIAL MAIN LEVEL SOUTH WING PLAN AREA "B" - MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL MAIN LEVEL PLAN MECHANICAL REVISIONS

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: RAM

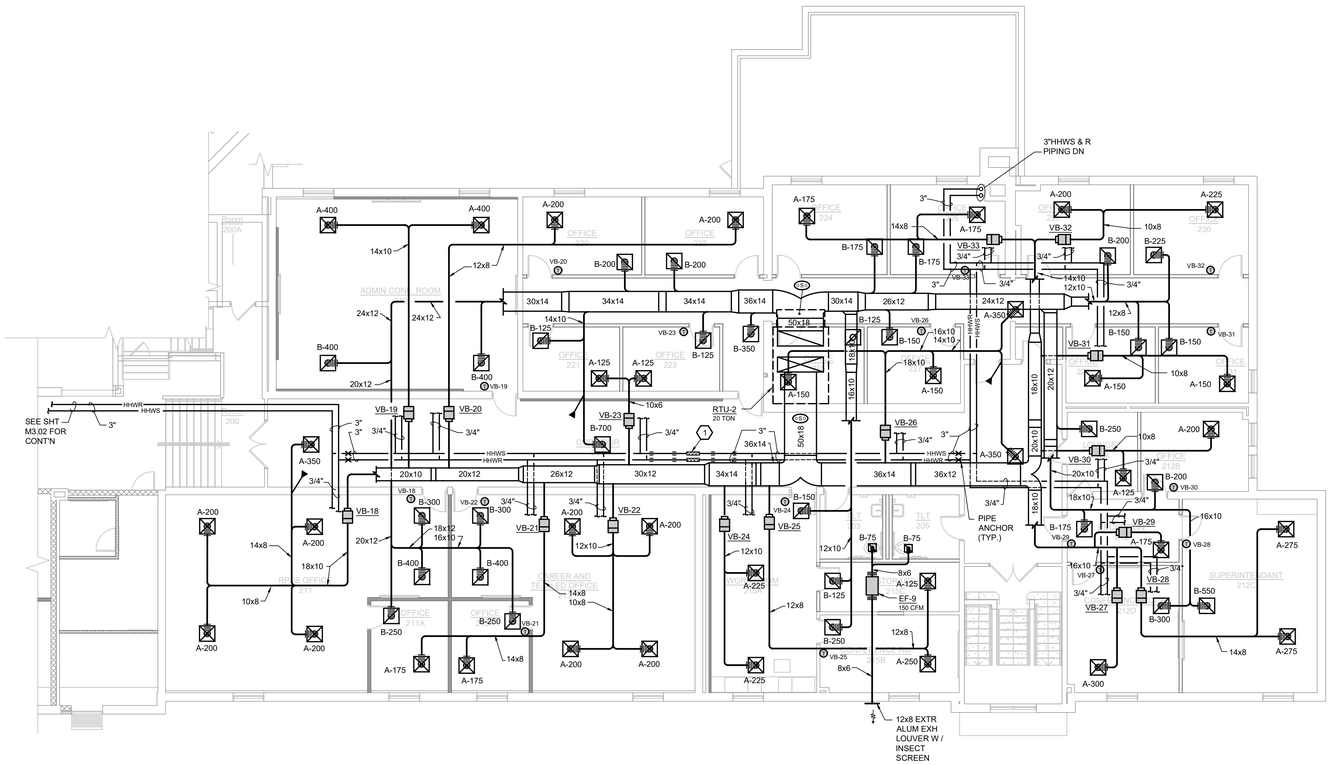
SHEET NUMBER: M3.02

**GENERAL NOTES**

1. ALL NEW INDIVIDUAL BRANCH DUCTS SHALL BE SAME SIZE AS DIFFUSER, GRILLE OR VAV BOX INLET UNLESS NOTED OTHERWISE.
2. FIELD VERIFY EXACT LOCATION OF NEW TEMPERATURE CONTROL SENSORS.
3. TEST AND BALANCE CONTRACTOR SHALL BALANCE NEW DIFFUSERS AND GRILLES TO CFM'S SHOWN 1-10%.
4. NEW TEMPERATURE SENSORS SHALL BE TIED INTO NEW DDC TEMPERATURE CONTROL SYSTEM.

**KEYED NOTES**

1. EXPANSION COMPENSATORS AND PIPE GUIDES (TYP)

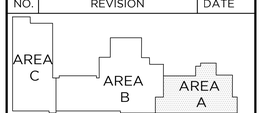



NORTH

PARTIAL MAIN LEVEL NORTH WING PLAN AREA "A" - MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL MAIN LEVEL NORTH WING PLAN MECHANICAL REVISIONS

PROJECT NUMBER 2022006.1

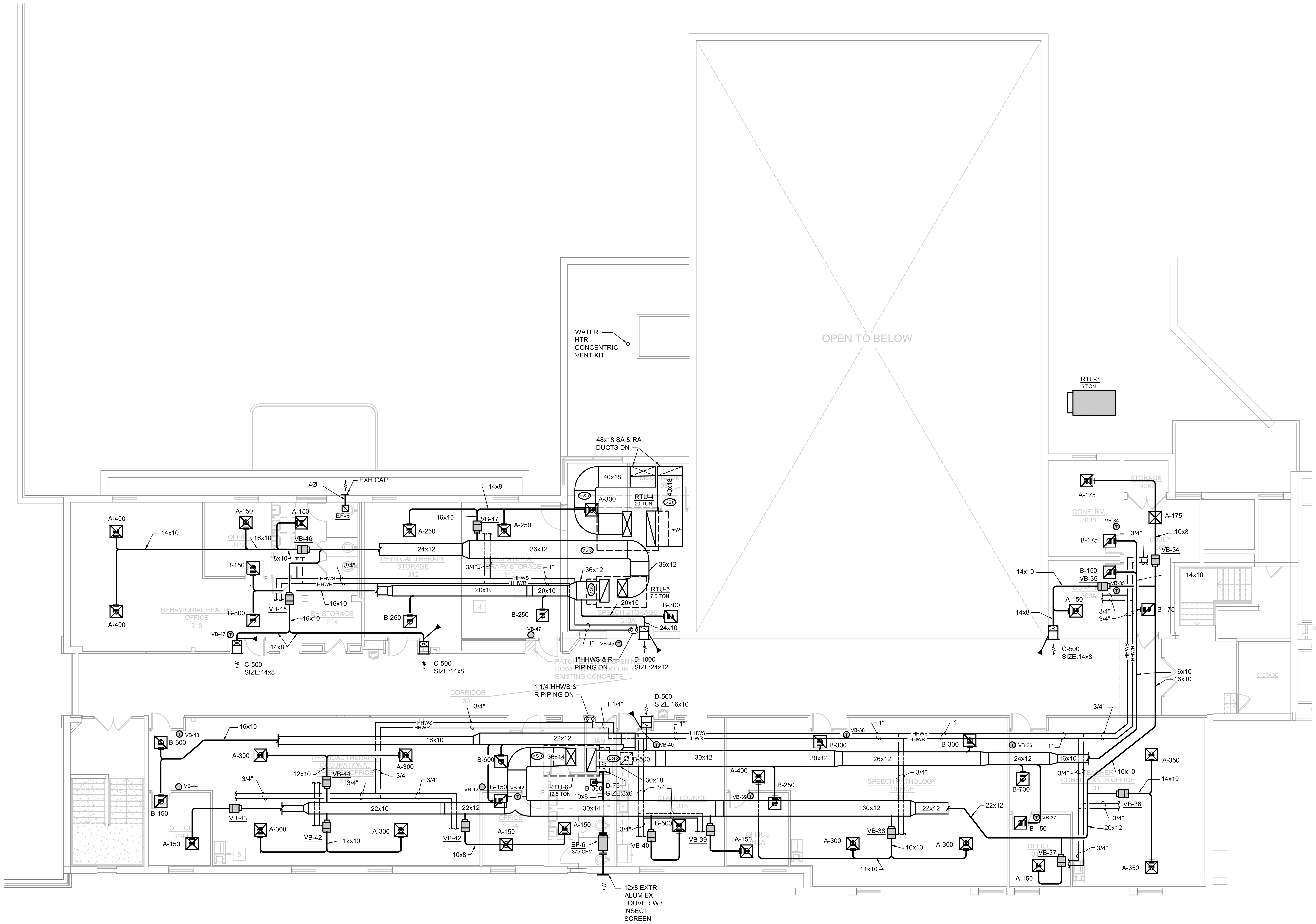
PROJECT DATE AUGUST 23, 2023

CHECKED BY RAM

SHEET NUMBER M3.03

**GENERAL NOTES**

1. ALL NEW INDIVIDUAL BRANCH DUCTS SHALL BE SAME SIZE AS DIFFUSER, GRILLE OR VAV BOX INLET UNLESS NOTED OTHERWISE.
2. FIELD VERIFY EXACT LOCATION OF NEW TEMPERATURE CONTROL SENSORS.
3. TEST AND BALANCE CONTRACTOR SHALL BALANCE NEW DIFFUSERS AND GRILLES TO CFM'S SHOWN 1-10%.
4. NEW TEMPERATURE SENSORS SHALL BE TIED INTO NEW DDC TEMPERATURE CONTROL SYSTEM.

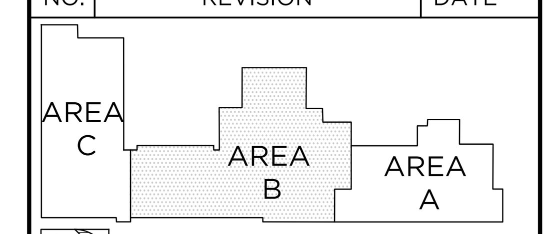



NORTH

## PARTIAL UPPER LEVEL PLAN AREA "B"- MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL UPPER LEVEL PLAN MECHANICAL REVISIONS

PROJECT NUMBER 2022006.1

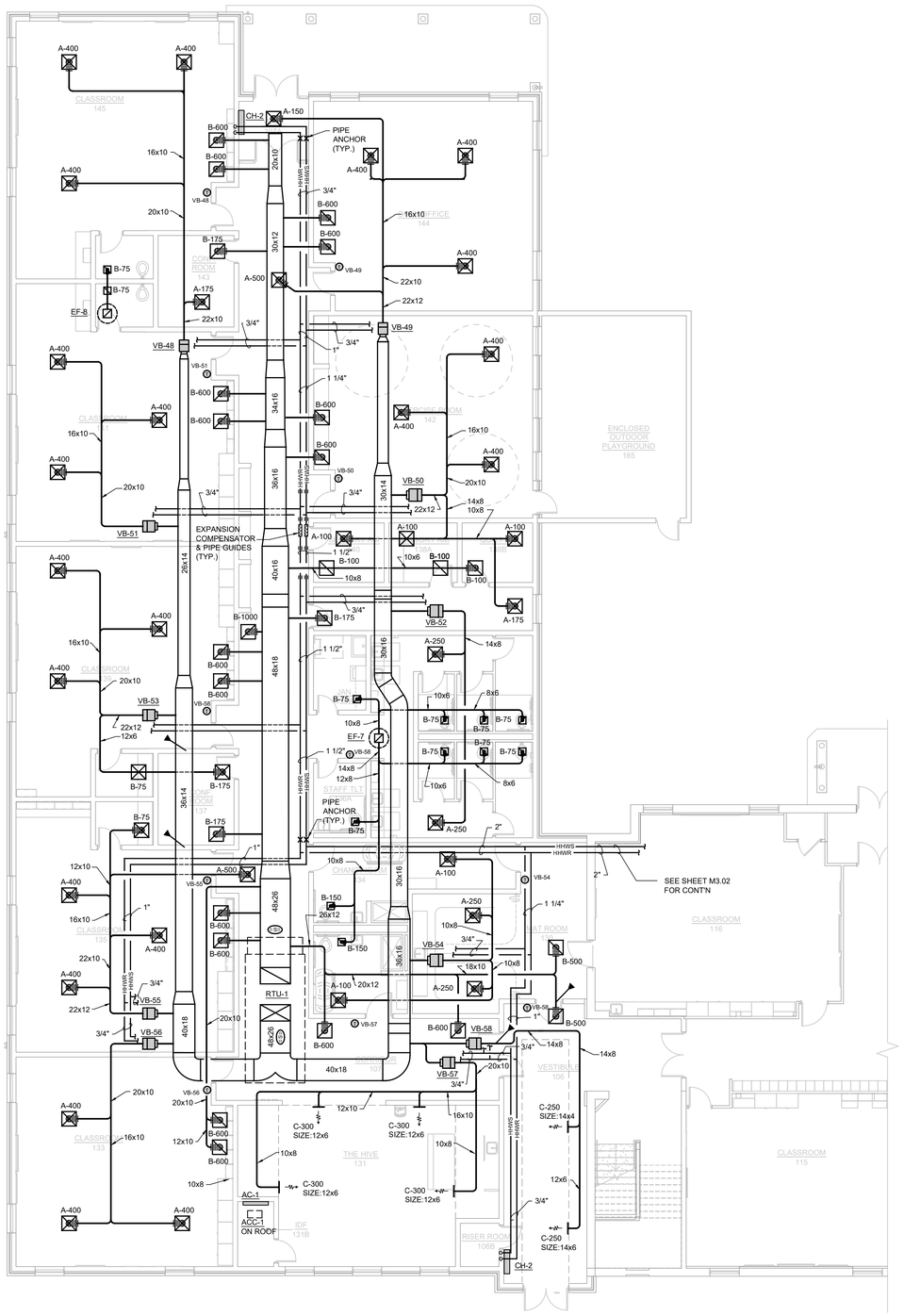
PROJECT DATE AUGUST 23, 2023

CHECKED BY RAM

SHEET NUMBER M3.04

**GENERAL NOTES**

1. ALL NEW INDIVIDUAL BRANCH DUCTS SHALL BE SAME SIZE AS DIFFUSER, GRILLE OR VAV BOX INLET UNLESS NOTED OTHERWISE.
2. FIELD VERIFY EXACT LOCATION OF NEW TEMPERATURE CONTROL SENSORS.
3. TEST AND BALANCE CONTRACTOR SHALL BALANCE NEW DIFFUSERS AND GRILLES TO CFM'S SHOWN 1-10%.
4. NEW TEMPERATURE SENSORS SHALL BE TIED INTO NEW DDC TEMPERATURE CONTROL SYSTEM.




NORTH

ADDITION FLOOR PLAN AREA "C" - MECHANICAL REVISIONS

1/8"=1'-0"

| NO. | REVISION | DATE |
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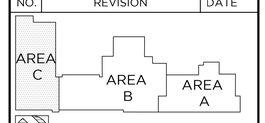
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PARTIAL ADDITION PLAN MECHANICAL REVISIONS

PROJECT NUMBER 2022006.1

PROJECT DATE AUGUST 23, 2023

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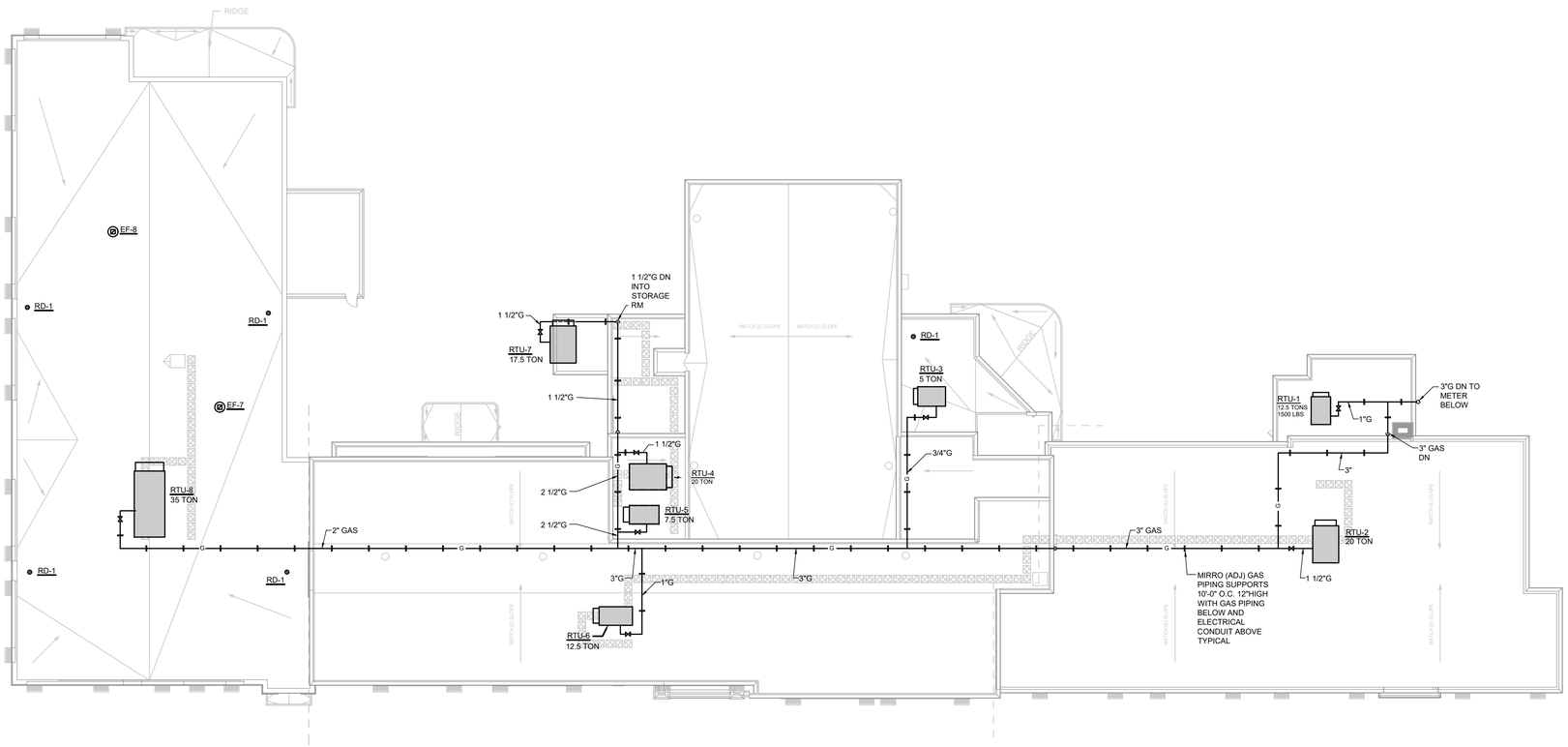


NORTH

## OVERALL ROOF PLAN - MECHANICAL REVISIONS

1/16"=1'-0"

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|---|---|---|
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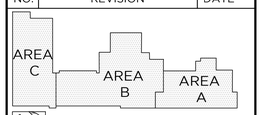
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

OVERALL ROOF PLAN
MECHANICAL REVISIONS

PROJECT NUMBER
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PROJECT DATE
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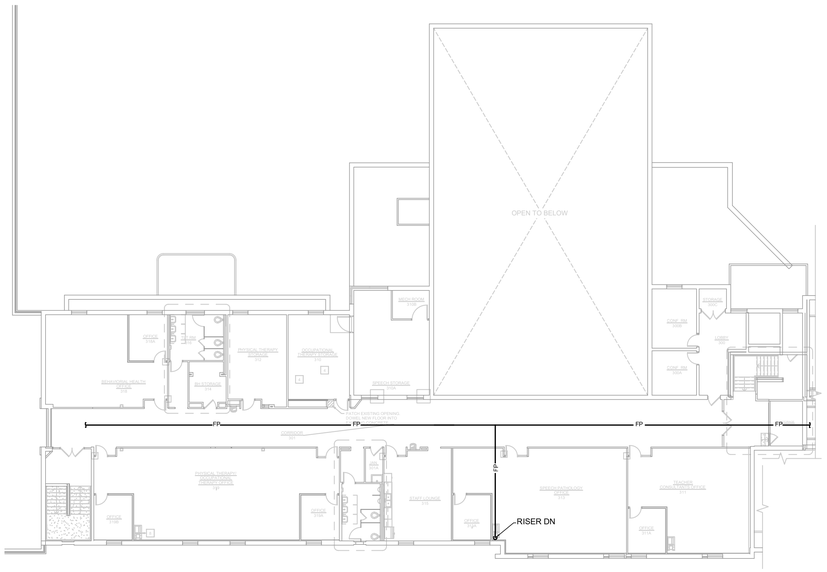
SHEET NUMBER
M3.06



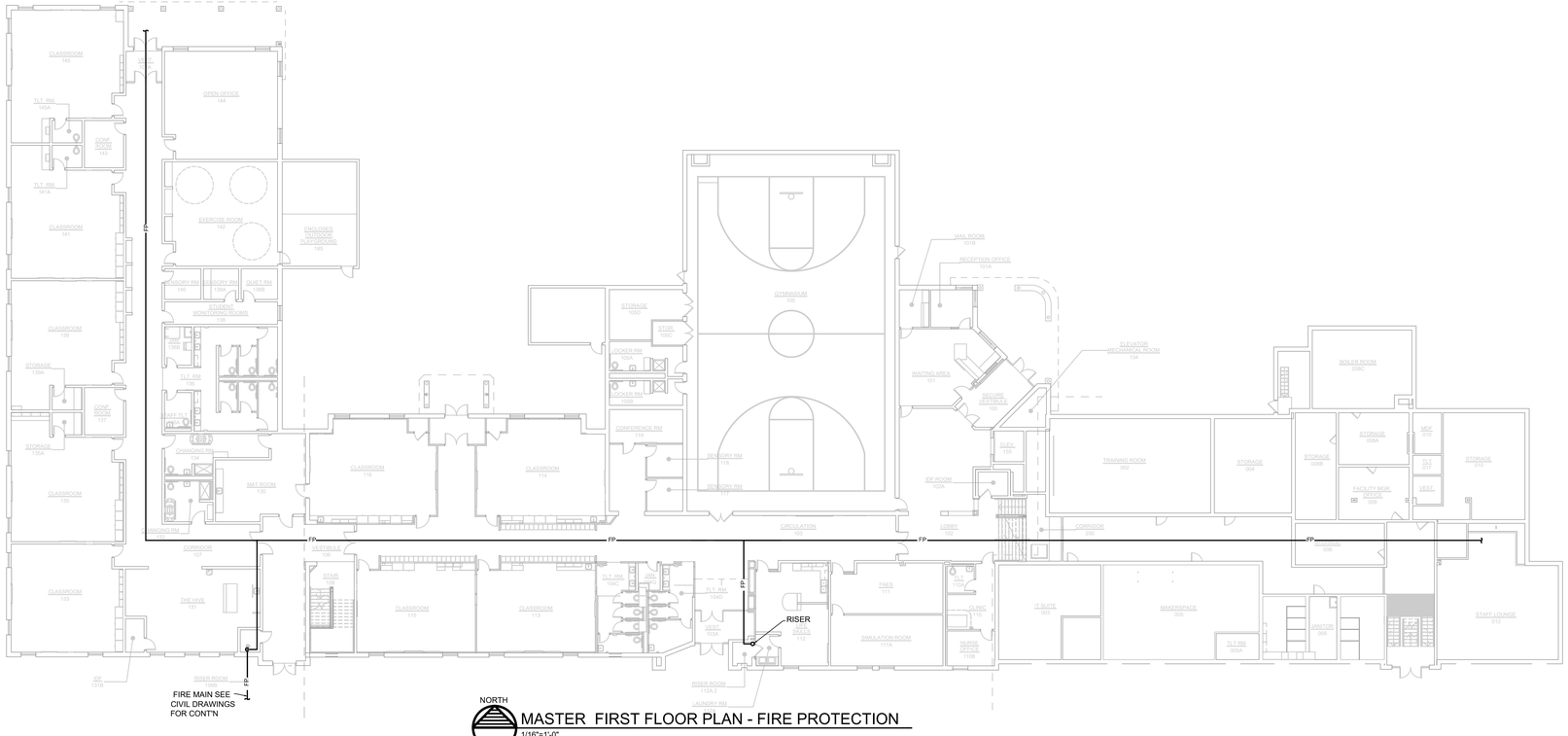

NORTH

## PARTIAL UPPER LEVEL FLOOR PLAN AREA "B" - FIRE PROTECTION

1/16"=1'-0"

NOTES

THE ENTIRE BUILDING WILL BE COVERED BY A NEW FIRE PROTECTION SPRINKLER SYSTEM DESIGNED, SUBMITTED FOR PLAN REVIEW AND APPROVAL, FURNISHED AND INSTALLED BY THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR.




NORTH

## MASTER FIRST FLOOR PLAN - FIRE PROTECTION

1/16"=1'-0"

NOTES

THE ENTIRE BUILDING WILL BE COVERED BY A NEW FIRE PROTECTION SPRINKLER SYSTEM DESIGNED, SUBMITTED FOR PLAN REVIEW AND APPROVAL, FURNISHED AND INSTALLED BY THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR.

**FIRE PROTECTION NOTES**

1. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING THE SERVICES OF A LICENSED FIRE PROTECTION CONTRACTOR TO DESIGN, DETAIL AND INSTALL A FIRE PROTECTION SPRINKLER SYSTEM TO COVER THE NEW AND/OR REMODELED AREAS.
2. THE ENTIRE FIRE PROTECTION SYSTEM DESIGN AND INSTALLATION SHALL BE STRICTLY IN ACCORDANCE WITH NFPA 13 SPRINKLER SYSTEMS AND SHALL MEET THE REQUIREMENTS OF THE LOCAL AND STATE FIRE MARSHAL AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
3. ALL PERMITS, LICENSES, FEES, INSPECTIONS AND ARRANGEMENT/COORDINATION OF SUCH SHALL BE OBTAINED AND PAID FOR BY THE FIRE PROTECTION CONTRACTOR.
4. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE A FLOW TEST AND FURNISH COMPLETE DETAILED COMPUTER AIDED DESIGN (CAD) WORKING DRAWINGS OF THE SYSTEM AND SHALL SUBMIT THEM TO THE FIRE MARSHAL, ARCHITECT/ENGINEER, AND ALL AGENCIES REQUIRED BY CODE FOR THEIR REVIEW AND APPROVAL. NO WORK OR FABRICATION SHALL COMMENCE BEFORE THE DETAILED WORKING DRAWINGS OF THE SYSTEM, WITH THE AGENCIES APPROVALS, ARE SUBMITTED TO AND ARE REVIEWED BY THE ARCHITECT/ENGINEER. SYSTEM SHALL BE COMPLETE WITH OUTSIDE ALARM BELL, FLOW SWITCH, SUPERVISORY SWITCH ON SYSTEM CONTROL VALVE, HYDRAULIC DESIGN PLATE AT MAIN RISER, SPARE HEADS AND WRENCH, DOCUMENTATION, ETC.
5. THE FIRE PROTECTION CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND VERIFY TIE-IN LOCATION, ROUTING OF PIPING, LOCATION OF SPRINKLER HEADS WITH RESPECT TO DUCTS, EQUIPMENT, LIGHT FIXTURES, ETC. SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILES AND HALF TILES.
6. LAYOUT AND DESIGN OF THE SYSTEM SHALL BE BASICALLY AS DESIGNED FOR REQUIRED OCCUPANCY HAZARD. SECURITY TYPE HEADS SHALL BE USED IN SECURE AREAS. SYSTEMS SHALL BE SIZED BY HYDRAULIC CALCULATIONS PER NFPA PAMPHLET NO. 13. EXTENDED COVERAGE SPRINKLER HEAD SYSTEM WILL NOT BE ACCEPTED WITHOUT WRITTEN APPROVAL FROM ENGINEER.
7. DRAWINGS SHOW POSSIBLE LOCATION AND SIZE FOR FIRE PROTECTION WATER SERVICE. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE FIRE PROTECTION WATER SERVICE SIZE BY VERIFICATION OF LOCAL WATER PRESSURE AND FLOW FROM THE LOCAL AUTHORITIES. THIS VERIFICATION SHALL BE PERFORMED DURING BIDDING AND NOTIFICATION TO THE ARCHITECT/ENGINEER OF ANY NECESSARY FIRE PROTECTION SERVICE CHANGES SHALL BE MADE 5 DAYS PRIOR TO BID DATE. THE COMPLETED SYSTEM SHALL BE IN ACCORDANCE WITH NFPA-13 REQUIREMENTS.
8. THE CONTRACTOR SHALL INCLUDE IN THEIR BID ANY COST FOR REQUESTING AUTOCAD BACKGROUNDS FOR THEIR USE FROM THE ARCHITECT OR ENGINEER. THE COST WILL BE $150.00 FOR THE FIRST PLAN, AND $50.00 FOR EACH ADDITIONAL PLAN THAT MAY BE REQUESTED FOR AUTOCAD USE. A WAIVER OF RESPONSIBILITY FOR THE ARCHITECT AND ENGINEER RELATED TO CONTRACTOR USE OF THE CAD FILES SHALL BE SIGNED BY THE CONTRACTOR.
9. SEE SPECIFICATION FOR FURTHER INFORMATION AND REQUIREMENTS.

| NO. | REVISION | DATE |
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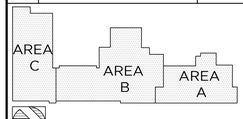
| | ISSUE FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

OVERALL FIRE PROTECTION PLAN MECHANICAL REVISIONS

| PROJECT NUMBER | SHEET NUMBER |
|---|---|
| 2022006.1 | M3.07 |
| PROJECT DATE: AUGUST 23, 2023 | |
| CHECKED BY: RAM | |

## ROOFTOP UNIT SCHEDULE

RTU-1 TRANE PRECEDENT #YSJ150 GAS/ELECTRIC 12.5 TON DOWNFLOW ROOFTOP UNIT. 5000 CFM AT 1.5" EXTERNAL STATIC PRESSURE, 4.6 H.P., 208V-3PH, 64 MCA, 90 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 154.28 MBH GROSS COOLING CAPACITY, 143.70 MBH NET COOLING CAPACITY. 80/67F EDB/EWB, 57.98 F LDB, 57.01 F LWB, 2 COMPRESSORS.

HEATING PERFORMANCE: 250 MBH NATURAL GAS INPUT, 202.50 MBH OUTPUT. 45 F EAT, 81.86 F LAT.

RTU-2 TRANE PRECEDENT #YSJ240 GAS/ELECTRIC 20 TON HORIZONTAL ROOFTOP UNIT. 8000 CFM AT 1.5" EXTERNAL STATIC PRESSURE, 6 H.P., 208V-3PH, 108 MCA, 125 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 247.20 MBH GROSS COOLING CAPACITY, 234.45 MBH ARI NET COOLING CAPACITY. 80/67F EDB/EWB, 58.24 F LDB, 56.98 F LWB, 2 COMPRESSORS.

HEATING PERFORMANCE: 400 MBH NATURAL GAS INPUT, 324 MBH OUTPUT. 45 F EAT, 82.20 F LAT.

RTU-3 TRANE PRECEDENT #YZC060 GAS/ELECTRIC 5 TON DOWNFLOW HORIZONTAL ROOFTOP UNIT. 2000 CFM AT .50" EXTERNAL STATIC PRESSURE, 3 H.P., 208V-3PH, 26 MCA, 40 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 60.77 MBH GROSS COOLING CAPACITY, 58.26 MBH ARI NET COOLING CAPACITY. 80/67F EDB/EWB, 57.97F LDB, 57.19F LWB, 1 COMPRESSORS.

HEATING PERFORMANCE: 130 MBH NATURAL GAS INPUT, 104 MBH OUTPUT. 45 F EAT, 93.4 F LAT.

RTU-4 TRANE PRECEDENT #YSJ240 GAS/ELECTRIC 20 TON DOWNFLOW ROOFTOP UNIT. 8000 CFM AT 1.5" EXTERNAL STATIC PRESSURE, 6 H.P., 208V-3PH, 108 MCA, 125 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 247.20 MBH GROSS COOLING CAPACITY, 234.45 MBH ARI NET COOLING CAPACITY. 80/67F EDB/EWB, 58.24 F LDB, 56.98 F LWB, 2 COMPRESSORS.

HEATING PERFORMANCE: 400 MBH NATURAL GAS INPUT, 324 MBH OUTPUT. 45 F EAT, 82.20 F LAT.

RTU-5 TRANE PRECEDENT #YSJ090 GAS/ELECTRIC 7.5 TON DOWNFLOW ROOFTOP UNIT. 3000 CFM AT 1.0" EXTERNAL STATIC PRESSURE, 3 H.P., 208V-3PH, 42 MCA, 50 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 94.42 MBH GROSS COOLING CAPACITY, 90.84 MBH ARI NET COOLING CAPACITY. 80/67F EDB/EWB, 57.45 F LDB, 56.79 F LWB, 2 COMPRESSORS.

HEATING PERFORMANCE: 200 MBH NATURAL GAS INPUT, 162 MBH OUTPUT. 45 F EAT, 94.54 F LAT.

RTU-6 TRANE PRECEDENT #YSJ150 GAS/ELECTRIC 12.5 TON DOWNFLOW ROOFTOP UNIT. 5000 CFM AT 1.5" EXTERNAL STATIC PRESSURE, 4.6 H.P., 208V-3PH, 64 MCA, 90 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 154.28 MBH GROSS COOLING CAPACITY, 143.70 MBH NET COOLING CAPACITY. 80/67F EDB/EWB, 57.98 F LDB, 57.01 F LWB, 2 COMPRESSORS.

HEATING PERFORMANCE: 250 MBH NATURAL GAS INPUT, 202.50 MBH OUTPUT. 45 F EAT, 81.86 F LAT.

RTU-7 TRANE PRECEDENT #YSJ240 GAS/ELECTRIC 17.5 TON DOWNFLOW ROOFTOP UNIT. 7000 CFM AT 1" EXTERNAL STATIC PRESSURE, 7.5 H.P., 208V-3PH, 77 MCA, 100 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 150.1 MBH GROSS COOLING CAPACITY, 116 MBH ARI NET COOLING CAPACITY. 80/67F EDB/EWB, 58.24 F LDB, 56.98 F LWB, 2 COMPRESSORS.

HEATING PERFORMANCE: 350 MBH NATURAL GAS INPUT, 280 MBH OUTPUT. 45 F EAT, 82.20 F LAT.

RTU-8 TRANE VOYAGER #YCD420 GAS/ELECTRIC 35 TON DOWNFLOW HORIZONTAL ROOFTOP UNIT. 14000 CFM AT 2.0" EXTERNAL STATIC PRESSURE, 20 H.P., 208V-3PH, 204 MCA, 250 AMP MAXIMUM CIRCUIT BREAKER.

COOLING PERFORMANCE: 402.13 MBH GROSS COOLING CAPACITY, 363.01 MBH ARI NET COOLING CAPACITY. 80/67F EDB/EWB, 60.84 F LDB, 58.92 F LWB, 3 COMPRESSORS.

HEATING PERFORMANCE: 600 MBH NATURAL GAS INPUT, 486 MBH OUTPUT. 45 F EAT, 77.40 F LAT.

### RTU NOTES:

1. THE MECHANICAL TRADE SHALL VERIFY UNIT CONFIGURATION (HORIZONTAL OR DOWNFLOW) WITH SCHEDULE LISTED ABOVE AND PROJECT DESIGN DRAWINGS.
2. UNITS SHALL HAVE REFERENCE ENTHALPY BASED ECONOMIZERS WITH POWER RELIEF EXHAUST FAN AND LOW AMBIENT CONTROL FOR OPERATION IN 0 DEGREES F AMBIENT CONDITION.
3. FURNISH PREFABRICATED ROOF CURB FOR EACH UNIT, WITH HEIGHT OF CURB TO GIVE MINIMUM 12" CLEAR FROM FINISHED ROOF TO CURB CAP. THE MECHANICAL TRADE SHALL FURNISH AND SET IN PLACE/LEVEL THE ROOF CURB. THE GENERAL TRADE SHALL PERFORM ALL ROOFING, FLASHING ETC.
4. MECHANICAL TRADES SHALL FILL ALL OPEN VOIDS IN CURB (BETWEEN DECK AND BOTTOM OF RTU) WITH SPRAY FOAM INSULATION FOR ACOUSTICAL PURPOSES.
5. ALL UNITS SHALL HAVE 4" THICK HIGH EFFICIENCY THROW AWAY FILTERS.
6. OUTSIDE AIR INTAKE DAMPERS SHALL BE ULTRA LOW-LEAK TYPE WITH BLADE AND JAMB SEALS.
7. MOTORS SHALL BE PREMIUM EFFICIENCY TYPE.
8. EACH RTU TO HAVE:
   - A. SERVICE VALVES ON LIQUID, SUCTION AND DISCHARGE LINES.
   - B. THRU-THE-BASE ELECTRICAL PROVISION.
   - C. NON-FUSED DISCONNECT SWITCH WITH EXTERNAL HANDLE.
   - D. TRANE COMMUNICATION INTERFACE WITH SUPPLY AIR SENSING AND CLOGGED FILTER SWITCH.
   - E. VENTILATION OVERRIDE.
   - F. HINGED SERVICE ACCESS.
   - G. CONDENSER COIL GUARDS.
   - H. SLOPED STAINLESS STEEL DRAIN PANS.
9. ALL UNITS SHALL HAVE DRY CONTACTS FOR DUCT SMOKE DETECTOR CIRCUIT FACTORY WIRED TO STOP UNIT UPON DETECTION OF SMOKE. TWO DUCT SMOKE DETECTORS FOR EACH RTU AND REMOTE WIRING FURNISHED BY ELECTRICAL TRADES. SENSING TUBES FOR DUCT SMOKE DETECTORS SHALL BE INSTALLED BY MECHANICAL TRADES. THE DUCT SMOKE DETECTORS SHALL BE POWERED FROM AN INDEPENDENT CIRCUIT AND NOT THROUGH THE RTU POWER CIRCUIT.
9. (WITH NO FIRE ALARM) ALL UNITS SHALL HAVE DRY CONTACTS FOR DUCT SMOKE DETECTOR CIRCUIT FACTORY WIRED TO STOP UNIT UPON DETECTION OF SMOKE. TWO DUCT SMOKE DETECTORS FOR EACH RTU AND REMOTE WIRING FURNISHED BY MECHANICAL TRADES. MECHANICAL TRADES SHALL BE RESPONSIBLE FOR POWER AND CONTROL WIRING TO DUCT SMOKE DETECTORS AND SHALL POWER THE DUCT SMOKE DETECTORS THROUGH AN INDEPENDENT CIRCUIT AND NOT THROUGH THE RTU POWER CIRCUIT. SENSING TUBES FOR DUCT SMOKE DETECTORS SHALL BE INSTALLED BY MECHANICAL TRADES.
10. THE MECHANICAL TRADES SHALL BE RESPONSIBLE FOR COMPLETING ALL LOW-VOLTAGE WIRING, CONDUIT, AND ASSOCIATED POWER SUPPLY NECESSARY FOR A COMPLETE AND OPERATIONAL TEMPERATURE CONTROL SYSTEM. REFER TO THE ELECTRICAL DRAWINGS FOR AVAILABLE 120 VOLT POWER LOCATIONS. THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR PROVIDING THE MAIN POWER FEED FOR ALL MECHANICAL EQUIPMENT. REFER TO THE ELECTRICAL DRAWINGS FOR CLARIFICATION OF ELECTRICAL TRADES FURNISHED POWER.
11. FURNISH 5 YEAR COMPRESSOR WARRANTY FOR ROOFTOP UNITS.
12. FURNISH ONE YEAR OF COMPLETE SERVICE AND MAINTENANCE OF ROOFTOP UNITS. INCLUDE CHECK TEST AND START-UP OF ROOFTOP UNITS AND CONTROL SYSTEM. PROVIDE FACTORY AND FIELD WIRING DIAGRAMS, AND PROVIDE TECHNICAL ASSISTANCE AS REQUIRED TO ASSURE FIRST CLASS OPERATING SYSTEMS.
13. PROVIDE INTERNALLY POWERED CONVENIENCE OUTLET FOR EACH UNIT.

## DIFFUSER AND GRILLE SCHEDULE

TYPE A: SUPPLY AIR DIFFUSER (4- WAY THROW): PRICE #SMDA-4 OR EQUAL CARNES OR T&B SQUARE CEILING SUPPLY DIFFUSER, ALL STEEL CONSTRUCTION, ADJUSTABLE HORIZONTAL TO VERTICAL AIRFLOW PATTERN, (OPPOSED BLADE DAMPER), BAKED-ON ENAMEL FINISH WITH COLOR SELECTED BY ARCHITECT. FRAME AS REQUIRED FOR CEILING TYPE WITH DIFFUSER PANEL TO MATCH GRID SIZE WHERE INSTALLED IN A LAY IN CEILING. MAXIMUM NECK VELOCITY SHALL BE 700 FPM AND MAXIMUM NC LEVEL SHALL BE 25.

| CFM | NECK SIZE | CFM | NECK SIZE |
|---|---|---|---|
| 0-125 | 6"X6" (6" DIA.) | 451-600 | 15"X15" (14" DIA.) |
| 126-250 | 9"X9" (8" DIA.) | 601-900 | 18"X18" (16" DIA.) |
| 251-350 | 12"X12" (10" DIA) | 901-1200 | 21"X21" |
| 351-450 | 12"X12" (12" DIA.) | | |

TYPE B: CEILING RETURN AIR OR EXHAUST AIR GRILLE: PRICE SMD-4 OR EQUAL CARNES OR T&B SQUARE CEILING SUPPLY DIFFUSER USED AS A RETURN OR EXHAUST GRILLE, ALL STEEL CONSTRUCTION, (OPPOSED BLADE DAMPER), BAKED-ON ENAMEL FINISH WITH COLOR SELECTED BY ARCHITECT. FRAME AS REQUIRED FOR CEILING TYPE, WITH DIFFUSER PANEL TO MATCH GRID SIZE FOR LAY-IN CEILINGS. MAXIMUM NECK VELOCITY SHALL BE 700 FPM AND MAXIMUM NC LEVEL SHALL BE 25.

| CFM | NECK SIZE | CFM | NECK SIZE |
|---|---|---|---|
| 0-125 | 6"X6" (6" DIA.) | 451-600 | 15"X15" (14" DIA.) |
| 126-250 | 9"X9" (8" DIA.) | 601-900 | 18"X18" (16" DIA.) |
| 251-350 | 12"X12" (10" DIA) | 901-1200 | 21"X21" |
| 351-450 | 12"X12" (12" DIA.) | | |

TYPE C: HEAVY DUTY SUPPLY AIR REGISTER: PRICE #152L DOUBLE DEFLECTION AIR FOIL BLADE SUPPLY AIR REGISTER, ALL EXTRUDED ALUMINUM CONSTRUCTION, INDIVIDUALLY ADJUSTABLE BLADES, FRONT BLADE, TO BE PARALLEL TO THE REGISTER LONG DIMENSION, BAKED-ON WHITE ENAMEL FINISH. FURNISH FRAME AND MOUNTING HARDWARE ARE AS NECESSARY FOR CEILING TYPE OR DIRECT DUCT MOUNT. SEE DRAWINGS FOR SIZES.

TYPE D: WALL RETURN OR EXHAUST GRILLE: PRICE 530DL (530DS) OR EQUAL CARNES OR T&B WALL RETURN OR EXHAUST GRILLE, ALL STEEL CONSTRUCTION, BAKED-ON ENAMEL FINISH WITH COLOR BY ARCHITECT. ONE SET OF HORIZONTAL BLADES SET AT 35 DEGREES. IF GRILLE SIZE REQUIRES 2 OR MORE SECTIONS, DECREASE WIDTH OF TRIM AT JOINT AS MUCH AS POSSIBLE. *[48" MAXIMUM DIMENSION FOR SINGLE SECTION]*

TYPE E: HEAVY DUTY WALL RETURN OR EXHAUST AIR GRILLE: PRICE 91DL(91DS) (96DL OR DS FOR CONCEALED SCREWS) OR EQUAL CARNES OR T&B WALL RETURN OR EXHAUST GRILLE, ALL STEEL CONSTRUCTION, BAKED-ON ENAMEL FINISH WITH COLOR BY ARCHITECT. ONE SET OF HORIZONTAL BLADES SET AT 35 DEGREES. FURNISH OPPOSED BLADE DAMPER WITH BLACK FINISH. IF GRILLE SIZE REQUIRES 2 OR MORE SECTIONS, DECREASE WIDTH OF TRIM AT JOINT AS MUCH AS POSSIBLE. *[48" MAXIMUM DIMENSION FOR SINGLE SECTION]*

## EXHAUST FAN SCHEDULE

EF-1: GREENHECK #SQ-120-VG CENTRIFUGAL INLINE DIRECT DRIVE EXHAUST FAN, 700 CFM AT .50"SP, 3.8 SONES, 1057 FAN RPM, .11 BHP, ½ HP, 115 VOLT MOTOR. FURNISH "X" GRAVITY (MOTORIZED) BACKDRAFT DAMPER TO BE INSTALLED IN DUCTWORK NEAR LOCATION OF EXHAUST AIR TO OUTDOORS. SPRING ISOLATORS FOR SUSPENDED INSTALLATION, INSULATED HOUSING INLET/DISCHARGE GUARD AND MANUAL STARTER WITH OVERLOAD PROTECTION. NEMA 1 DISCONNECT SWITCH, MOUNTED AND WIRED. FAN SHALL BE U.L.-705 LISTED. 700 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

EF-2: GREENHECK #SP-80-VG CEILING EXHAUST FAN, 90 CFM AT .25"SP, .60 SONES, 935 FAN RPM, .1 AMPS, 6.1 WATTS, 115 VOLT, WITH INTEGRAL BACKDRAFT, INLET GRILLE MODEL WC ROUND CONNECTION ALUMINUM WALL CAP WITH BUILT-IN DAMPER. FAN SHALL HAVE ISOLATION KIT AND DISCHARGE ACCESS. FAN TO BE UL-705 LISTED.

EF-3: GREENHECK #SQ-100-VG CENTRIFUGAL INLINE DIRECT DRIVE EXHAUST FAN, 450 CFM AT .25"SP, 2.9 SONES, 888 FAN RPM, .03 BHP, ¼ HP, 115 VOLT MOTOR. FURNISH "X" GRAVITY (MOTORIZED) BACKDRAFT DAMPER TO BE INSTALLED IN DUCTWORK NEAR LOCATION OF EXHAUST AIR TO OUTDOORS. SPRING ISOLATORS FOR SUSPENDED INSTALLATION, INSULATED HOUSING INLET/DISCHARGE GUARD AND MANUAL STARTER WITH OVERLOAD PROTECTION. NEMA 1 DISCONNECT SWITCH, MOUNTED AND WIRED. FAN SHALL BE U.L.-705 LISTED. 450 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

EF-4: GREENHECK #SQ-120-VG CENTRIFUGAL INLINE DIRECT DRIVE EXHAUST FAN, 600 CFM AT .5"SP, 3.5 SONES, 1023 FAN RPM, .09 BHP, 1/10 HP, 115 VOLT MOTOR. FURNISH "X" GRAVITY (MOTORIZED) BACKDRAFT DAMPER TO BE INSTALLED IN DUCTWORK NEAR LOCATION OF EXHAUST AIR TO OUTDOORS. FURNISH SPEED CONTROLLER TO BE MOUNTED ON FAN HOUSING TO ALLOW AIR BALANCING OF EXHAUST FAN, SPRING ISOLATORS FOR SUSPENDED INSTALLATION, INSULATED HOUSING INLET/DISCHARGE GUARD AND MANUAL STARTER WITH OVERLOAD PROTECTION. NEMA 1 DISCONNECT SWITCH, MOUNTED AND WIRED. FAN SHALL BE U.L.-705 LISTED. 600 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

EF-5: GREENHECK #SP-A390 CEILING EXHAUST FAN, 368 CFM AT .25"SP, 4.5 SONES, 1350 FAN RPM, 1.34 AMPS, 135 WATTS, 115 VOLT, WITH INTEGRAL BACKDRAFT DAMPER, INLET GRILLE, SPEED CONTROLLER FOR MOUNTING ON FAN HOUSING TO ALLOW AIR BALANCING OF EXHAUST FAN, AND MODEL WC ROUND CONNECTION ALUMINUM WALL CAP WITH BUILT-IN DAMPER. FAN SHALL HAVE ISOLATION KIT AND DISCHARGE ACCESS. FAN TO BE U.L -705 LISTED. 300 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

EF-6: GREENHECK #SQ-90-VG CENTRIFUGAL INLINE DIRECT DRIVE EXHAUST FAN, 375 CFM AT .25"SP, 4.5 SONES, 1277 FAN RPM, .04 BHP, 1/10 HP, 115 VOLT MOTOR. FURNISH "X" GRAVITY (MOTORIZED) BACKDRAFT DAMPER TO BE INSTALLED IN DUCTWORK NEAR LOCATION OF EXHAUST AIR TO OUTDOORS. FURNISH SPEED CONTROLLER TO BE MOUNTED ON FAN HOUSING TO ALLOW AIR BALANCING OF EXHAUST FAN, SPRING ISOLATORS FOR SUSPENDED INSTALLATION, INSULATED HOUSING INLET/DISCHARGE GUARD AND MANUAL STARTER WITH OVERLOAD PROTECTION. NEMA 1 DISCONNECT SWITCH, MOUNTED AND WIRED. FAN SHALL BE U.L.-705 LISTED. 375 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

EF-7: GREENHECK #G-120-VG1/4B-1/6 CENTRIFUGAL DIRECT DRIVE ROOF MOUNTED EXHAUST FAN, 993 CFM AT .50"SP, 2.9 SONES, 1140 FAN RPM, .14 HP, 115 VOLT MOTOR WITH MINIMUM 18" HIGH INSULATED PREFABRICATED ROOF CURB WITH CANT TO MATCH ROOF INSULATION, GALVANIZED BIRDSCREEN, GRAVITY BACKDRAFT DAMPER, FACTORY MOUNTED NEMA 1 DISCONNECT SWITCH MOUNTED AND WIRED, INTERNAL CONDUIT CHASE. FAN TO BE U.L.-705 LISTED. 950 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

EF-8: GREENHECK #G070-VG0-1/30 CENTRIFUGAL DIRECT DRIVE ROOF MOUNTED EXHAUST FAN, 171 CFM AT .250"SP, 2.6 SONES, 1300 FAN RPM, .02 BHP, 115 VOLT MOTOR WITH MIN 18" HIGH INSULATED PREFABRICATED ROOF CURB WITH CANT TO MATCH ROOF INSULATION, GALVANIZED BIRD SCREEN, GRAVITY BACKDRAFT DAMPER, FACTORY MOUNTED NEMA 1 DISCONNECT SWITCH MOUNTED AND WIRED, INTERNAL CONDUIT CHASE. FAN TO BE U.L -705 LISTED. 150 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES.

EF-9: GREENHECK #SQ-90-VG CENTRIFUGAL INLINE DIRECT DRIVE EXHAUST FAN, 200 CFM AT .20"SP 4.5 SONES, 1100 FAN RPM, .03 BHP, 1/12 HP, 115 VOLT MOTOR. FURNISH "X" GRAVITY (MOTORIZED) BACKDRAFT DAMPER TO BE INSTALLED IN DUCTWORK NEAR LOCATION OF EXHAUST AIR TO OUTDOORS. FURNISH SPEED CONTROLLER TO BE MOUNTED ON FAN HOUSING TO ALLOW AIR BALANCING OF EXHAUST FAN, SPRING ISOLATORS FOR SUSPENDED INSTALLATION, INSULATED HOUSING INLET/DISCHARGE GUARD AND MANUAL STARTER WITH OVERLOAD PROTECTION. NEMA 1 DISCONNECT SWITCH, MOUNTED AND WIRED. FAN SHALL BE U.L.-705 LISTED. 150 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS.

NOTES:
1. EXHAUST FANS SHALL BE RATED FOR CONTINUOUS OPERATION.
2. ALL EXHAUST FANS 120 VOLT SHALL BE FURNISHED WITH A FACTORY MOUNTED DISCONNECT SWITCH BY THE MECHANICAL TRADES. THE TEMPERATURE CONTROL CONTRACTOR SHALL TIE INTO THE POWER RELAY FOR CONTROL OF THE EXHAUST FANS.
3. ALL EXHAUST FANS SHALL HAVE THE ELECTRICAL TRADE FURNISH AND INSTALL A COMBINATION STARTER DISCONNECT. THE TEMPERATURE CONTROL CONTRACTOR SHALL TIE IN TO THE COMBINATION STARTER FOR CONTROL OF THE EXHAUST FAN.
4. FURNISH AN INSULATED ROOF CURB FOR EACH EXHAUST FAN TO GIVE MINIMUM 12" CLEAR FROM FINISHED ROOF MEMBRANE TO LOWEST EDGE OF ROOF CURB TOP. THE MECHANICAL TRADE SHALL FURNISH, SET IN PLACE, LEVEL AND FASTEN ROOF CURB TO ROOF DECK AND SUPPORT STEEL. THE GENERAL TRADE SHALL MAKE ALL FINAL ROOFING AND FLASHING INSTALLATION.

## HOT WATER CABINET HEATER SCHEDULE

CH-1: TRANE #FFMB-040-1 FORCE-FLO VERTICAL INVERTED WALL HUNG CABINET HEATER, 350 CFM ON MEDIUM SPEED, 31.6 MBH HOT WATER HEATING CAPACITY, 2.2 GPM HOT WATER, 1/12 HP. MOTOR, 120V-1-60HZ. UNIT SHALL HAVE UPPER FRONT STAMPED INLET AIR LOUVER, LOWER FRONT STAMPED AIR OUTLET LOUVER.

CH-2: TRANE #FFNB-040-1 FORCE-FLO VERTICAL INVERTED WALL RECESSED CABINET HEATER, 350 CFM ON MEDIUM SPEED, 31.6 MBH HOT WATER HEATING CAPACITY, 2.2 GPM HOT WATER, 1/12 HP. MOTOR, 120V-1-60HZ. UNIT SHALL HAVE UPPER FRONT STAMPED AIR INLET LOUVER, FRONT STAMPED AIR OUTLET LOUVER.

CH-3: TRANE #FFEB-040-1 FORCE-FLO HORIZONTAL CEILING RECESSED CABINET HEATER, 320 CFM ON HIGH SPEED, 33.53 MBH HOT WATER HEATING CAPACITY, 2.0 GPM HOT WATER, 1/16 HP MOTOR, 120V-1-60HZ. UNIT SHALL HAVE BOTTOM STAMPED INLET AND OUTLET LOUVERS.

NOTES:
1. HEATING CAPACITIES BASED ON 180$^{O}$ E.W.T., 150$^{O}$F L.W.T.
2. UNITS SHALL HAVE 1" THICK THROW-AWAY FILTERS, (2) SETS FURNISHED WITH EACH UNIT.
3. WALL MOUNTED RECESSED UNITS SHALL HAVE RECESS DEPTH AND PROJECTION PANEL AS ALLOWED BY WALL CONSTRUCTION. CONTRACTOR SHALL VERIFY THE AVAILABLE RECESS DEPTH FOR EACH UNIT.
4. BOTTOM OF WALL MOUNTED UNITS SHALL BE APPROXIMATELY 8" AF.
5. REMOTE WALL MOUNTED ROOM TEMPERATURE SENSOR AND STRAP-ON AQUASTAT TO PREVENT FAN FROM OPERATING WHEN HEATING SUPPLY PIPE IS COLD SHALL BE FURNISHED AND INSTALLED BY THE TEMPERATURE CONTROL CONTRACTOR.
6. FURNISH A TERMINAL UNIT CONTROLLER (TUC)
7. FURNISH UNIT MOUNTED AND WIRED MANUAL STARTER.
8. 2-WAY 2-POSITION CONTROL VALVE SHALL BE FURNISHED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR.
9. ELECTRICAL CONTRACTOR WILL PROVIDE A SEPARATE 115 VOLT CIRCUIT TO THE MANUAL STARTER. ALL OTHER WIRING WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

## GENERAL MECHANICAL NOTES

1. THE MECHANICAL TRADES SHALL FAMILIARIZE THEMSELVES WITH ALL EXISTING AND NEW CONDITIONS, THESE DRAWINGS, ADDENDA & RELATED SPECIFICATIONS. THEY SHALL COMPLETELY SATISFY THEMSELVES AS TO THE CONDITIONS TO WHICH THE WORK IS TO BE PERFORMED BEFORE SUBMITTING THEIR BID. NO ALLOWANCES OR CONSIDERATIONS WILL BE GIVEN AT A LATER DATE FOR ALLEGED MISUNDERSTANDINGS AS TO THE REQUIREMENTS OF THE WORK, MATERIALS TO BE FURNISHED, OR CONDITIONS REQUIRED BY THE NATURE OF THIS PROJECT SITE DUE TO NEGLECT ON THE BIDDERS PART TO MAKE SUCH AN EXAMINATION AND COORDINATION.
2. DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW APPROXIMATE LOCATION AND GENERAL ARRANGEMENT OF SYSTEMS AND EQUIPMENT. DRAWINGS SHALL NOT BE SCALED FOR LOCATION OF SYSTEMS, EQUIPMENT, ETC. ALL LOCATIONS OF SYSTEMS AND EQUIPMENT SHALL BE VERIFIED IN FIELD AND COORDINATED WITH ALL OTHER TRADES AND EXISTING FIELD CONDITIONS. SOME SYSTEMS (PIPING, DUCTWORK, ETC.) AND EQUIPMENT LOCATIONS MAY REQUIRE CHANGES IN LOCATION DUE TO FIELD CONDITIONS AND COORDINATION WITH OTHER TRADES. THESE CHANGES SHALL BE MADE WITH NO ADDITIONAL COST TO THE OWNER. FAILURE TO VERIFY AND COORDINATE WILL BE NO REASON FOR ADDITIONAL COMPENSATION.
3. THE INSTALLATION OF ALL SYSTEMS, EQUIPMENT, ETC., IS SUBJECT TO CLARIFICATION WITH SUBMITTED SHOP DRAWINGS AND FIELD COORDINATION REQUIREMENTS. EQUIPMENT OUTLINES SHOWN ON DRAWINGS OR DIMENSIONED ON DRAWINGS ARE LIMITING DIMENSIONS. ANY EQUIPMENT THAT REDUCES THE INDICATED CLEARANCES OR EXCEEDS SPECIFIED OR SCHEDULED EQUIPMENT DIMENSIONS SHALL NOT BE USED.
4. THE MECHANICAL CONTRACTOR SHALL COORDINATE FINAL LOCATION OF ALL EQUIPMENT WITH PIPING, DUCTWORK, ETC., AT THE TIME OF ROUGH-IN. ALL EQUIPMENT TO BE SERVICEABLE. ABOVE CEILING EQUIPMENT SHALL BE WITHIN 18" OF CEILING WITHOUT ANY OBSTRUCTIONS AND SHALL HAVE ALL SERVICE AND ACCESS SPACES KEPT CLEAR. PERFORM ABOVE CEILING COORDINATION WITH ALL TRADES.
5. THESE DRAWINGS AND THE ASSOCIATED SPECIFICATIONS ARE INTENDED TO PROVIDE COMPLETELY FURNISHED, INSTALLED AND OPERATIONAL MECHANICAL SYSTEM (HEATING, VENTILATING, AIR CONDITIONING, PLUMBING AND PIPING, ETC.). IF THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS HAVE INFORMATION OMITTED THAT WOULD NOT ALLOW A COMPLETELY OPERATIONAL SYSTEM AS IS THE INTENT OF THE ENGINEER, THE BIDDER SHALL NOTIFY THE ENGINEER A MINIMUM ONE WEEK PRIOR TO THE BID DATE TO ALLOW FOR ADDENDA. ONCE BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL, LABOR, ETC., TO FURNISH AND INSTALL A COMPLETELY OPERATIONAL MECHANICAL SYSTEM AS IS THE INTENT OF THESE DRAWINGS AND ASSOCIATED SPECIFICATION. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. IF ANY DISCREPANCIES ARE ON DRAWINGS, AS COMPARED TO MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND INSTALL EQUIPMENT AS REQUIRED AT NO ADDITIONAL COST TO THE PROJECT.
6. THE MECHANICAL TRADES SHALL TAKE OUT ALL PERMITS AND ARRANGE FOR NECESSARY INSPECTIONS AND SHALL PAY ALL FEES AND COSTS.
7. THE MECHANICAL TRADES SHALL VERIFY AMOUNT OF EXISTING PIPING, VALVES, DUCTWORK, ETC. TO BE REMOVED OR RELOCATED TO ALLOW FOR INSTALLATION OF NEW PIPING, DUCTWORK, VALVES, EQUIPMENT, WALLS, ETC. ALL ABANDONED PIPING, VALVES, ETC., SHALL BE REMOVED.
8. THE MECHANICAL TRADES SHALL COORDINATE ALL WORK WITH OTHER TRADES AND SHALL COORDINATE ANY SYSTEMS SHUT-DOWN WITH THE ARCHITECT/ENGINEER AND OWNER.

ALL EXISTING EQUIPMENT, PIPING, DUCTWORK, ETC. THAT IS TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL REMOVE AND LOCATE THIS MATERIAL THAT REMAINS THE PROPERTY OF THE OWNER TO A LOCATION DETERMINED BY THE OWNER SOMEWHERE ON SITE. IF THE OWNER DOES NOT WANT TO MAINTAIN POSSESSION OF THE REMOVED MATERIAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING MATERIAL FROM THE SITE AND DISPOSING OF THIS MATERIAL AS NECESSARY TO MEET ALL CODES AND REQUIREMENTS AND SHALL PAY ALL COSTS AS REQUIRED FOR ANY DISPOSAL FEES, INSPECTIONS, PERMITS, ETC.

ATTACHMENTS OF MECHANICAL OR ELECTRICAL EQUIPMENT TO STRUCTURAL MEMBERS ARE THE RESPONSIBILITY OF THE INSTALLING TRADE. STRUCTURAL MEMBERS SHALL NOT BE FIELD CUT, WELDED OR OTHERWISE MODIFIED WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. ATTACHMENT TO STEEL JOISTS SHALL BE MADE AT PANEL POINTS WHENEVER POSSIBLE. STEEL JOISTS SHALL BE REINFORCED FOR NON-PANEL POINT CONCENTRATED LOADS IN ACCORDANCE WITH THE STRUCTURAL DETAILS; THIS WORK SHALL BE PERFORMED BY CERTIFIED WELDERS AND IS THE RESPONSIBILITY OF THE TRADE INSTALLING THE SUBJECT LOAD. STRUCTURAL MEMBERS SHALL NOT BE OVERLOADED AS A RESULT OF ATTACHMENTS. ATTACHMENT/EQUIPMENT LOADING FOR ALL TRADES RESULTING IN TOTAL LOAD GREATER THAN AN EQUIVALENT UNIFORM 5 PSF FOR ANY MEMBER SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW.

THE MECHANICAL TRADES SHALL FURNISH AND LOCATE CEILING AND/OR WALL ACCESS DOORS AS REQUIRED TO GIVE ACCESS TO VALVES, EQUIPMENT, ETC. COORDINATE WALL OR CEILING FIRE RATINGS AND FURNISH ACCESS DOOR WITH RATING AS NECESSARY. THE GENERAL TRADES SHALL INSTALL ACCESS DOORS.

FURNISH PREFABRICATED ROOF CURB FOR EACH EXHAUST FAN, WITH HEIGHT OF CURB TO GIVE MINIMUM 12" CLEAR FROM FINISHED ROOF TO EXHAUST FAN CURB CAP. THE MECHANICAL TRADE SHALL FURNISH THE ROOF CURB TO THE GENERAL TRADE. THE GENERAL TRADE SHALL LEVEL CURB, PERFORM ALL ROOFING AND FLASHING ETC.

SEE SPECIFICATION FOR FURTHER INFORMATION.

## SPECIFIED AND SCHEDULED EQUIPMENT NOTE

EQUIPMENT MANUFACTURERS AND MATERIALS SPECIFIED OR SCHEDULED ON THESE PROJECT DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED UNDER THE BASE BID PRICE. SUBSTITUTE OR ALTERNATE EQUIPMENT SHALL BE PRICED AS AN ADD OR DEDUCT PRICE TO THE CONTRACTOR'S BASE BID PRICE. IF ONE OR MORE SUBSTITUTIONS ARE ACCEPTED WITH THE PROPOSAL AT THE CORRESPONDING ALTERNATE PRICE, IT SHALL BE UNDERSTOOD THAT APPROVAL OF SAID EQUIPMENT SHALL BE SUBJECT TO STRICT ADHERENCE TO THE PLANS AND SPECIFICATIONS. SHOULD ANY OF THE SUBSTITUTE EQUIPMENT FAIL TO MEET THE SPECIFICATIONS AFTER THE PROPOSAL HAS BEEN ACCEPTED, REGARDLESS IF EQUIPMENT HAS BEEN SHIPPED TO THE SITE AND INSTALLED, THE CONTRACTOR SHALL FURNISH AT NO EXTRA COST TO THE OWNER, THE SPECIFIED EQUIPMENT MEETING THE REQUIREMENTS AS STATED IN THESE SPECIFICATIONS AND COVER ALL COSTS NECESSARY FOR REMOVAL AND REINSTALLATION OF EQUIPMENT.

## PLUMBING FIXTURE SCHEDULE

WC-1: FLOOR MOUNTED FLUSH VALVE WATER CLOSET: AMERICAN STANDARD #2234.001 MADERA FLOWISE, 15" HIGH WITH SIPHON JET ACTION, ELONGATED BOWL, WHITE VITREOUS CHINA, 1 1/2" TOP SPUD, 1.6 GALLONS PER FLUSH. FITTINGS SHALL INCLUDE ZURN AQUASENSE EXPOSED #ZEMS-6000AV-1S-WS1 HARD WIRED SENSOR FLUSH VALVE WITH 6VDC POWER CONVERTER, MANUAL OVER-RIDE BUTTON AND VACUUM BREAKER, CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, CARRIER AND HARDWARE, BOLTS, ETC., CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, BOLT CAPS, ETC. CONTROL FOR FLUSH VALVE SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREA.

WC-2: FLOOR MOUNTED FLUSH VALVE WATER CLOSET (BARRIER FREE): AMERICAN STANDARD #3043.001 MADERA FLOWISEA.D.A. EL 1.6, 16 1/2" HIGH WATER SAVER TOILET WITH SIPHON JET ACTION, ELONGATED BOWL, WHITE VITREOUS CHINA, 1 1/2" TOP SPUD, 1.6 GALLONS PER FLUSH. FITTINGS SHALL INCLUDE ZURN AQUASENSE EXPOSED #ZEMS-6000AV-1S-WS1 HARD WIRED SENSOR FLUSH VALVE WITH 6VDC POWER CONVERTER, MANUAL OVER-RIDE BUTTON AND VACUUM BREAKER, CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, CARRIER AND HARDWARE, BOLTS, ETC., CENTOCO 1500 CC WHITE OPEN FRONT SEAT, LESS COVER, TO GIVE 17" HIGH TOP OF SEAT ABOVE FINISHED FLOOR FOR BARRIER FREE USE, BOLT CAPS, ETC. INSTALLATION SHALL MEET A.D.A. REQUIREMENTS. CONTROL FOR FLUSH VALVE SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREA.

WC-3: WALL HUNG SENSOR OPERATED FLUSH VALVE WATER CLOSET: AMERICAN STANDARD #3351.101 AFWALL MILLENNIUM WITH EVERCLEAN AND 1.6 WATERSAVER TOILET WITH SIPHON JET ACTION, ELONGATED BOWL, OFF-FLOOR MOUNTING, 1 1/2" TOP INLET SPUD, WHITE VITREOUS CHINA, 1.6 GALLONS PER FLUSH. FITTINGS SHALL INCLUDE ZURN AQUASENSE EXPOSED ZEMS-6000AV-1S-WS1, HARD WIRED SENSOR FLUSH VALVE WITH 6VDC POWER CONVERTER, MANUAL OVER-RIDE BUTTON AND VACUUM BREAKER, CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, CARRIER AND HARDWARE, BOLTS, ETC. NOTE: EACH POWER CONVERTOR CAN SERVE UP TO 8 FLUSH VALVES.

WC-4: WALL HUNG SENSOR OPERATED FLUSH VALVE WATER CLOSET (BARRIER FREE): AMERICAN STANDARD#3351.101 AFWALL MILLENNIUM WITH EVERCLEAN AND SIPHON JET ACTION, ELONGATED BOWL, OFF-FLOOR MOUNTING, 1 1/2" TOP INLET SPUD, WHITE VITREOUS CHINA, 1.6 GALLONS PER FLUSH. FITTINGS SHALL INCLUDE ZURN AQUASENSE EXPOSED #ZEMS-6000AV-1S-WS1 HARD WIRED SENSOR FLUSH VALVE WITH 6VDC POWER CONVERTER, MANUAL OVER-RIDE BUTTON AND VACUUM BREAKER, CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, CARRIER AND HARDWARE, BOLTS, ETC. WATER CLOSET SHALL BE MOUNTED AT HEIGHT TO MEET BARRIER FREE AND A.D.A. REQUIREMENTS OF 17" A.F.F TO TOP OF SEAT. INSTALLATION SHALL MEET A.D.A. REQUIREMENTS. CONTROL FOR FLUSH VALVE SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREA. NOTE: EACH POWER CONVERTOR CAN SERVE UP TO 8 FLUSH VALVES.

L-1: WALL HUNG LAVATORY: AMERICAN STANDARD #0356.421 LUCERNE, NOMINAL 20"X18" WHITE VITREOUS CHINA, FRONT OVERFLOW, FAUCET LEDGE, "D" SHAPED BOWL, SELF DRAINING DECK, ONE CENTER HOLE PUNCHING CONSTRUCTED FOR CONCEALED ARM CARRIER AND ADA COMPLIANT. FITTINGS SHALL INCLUDE ZURN Z-6913 ELECTRIC HARD WIRED WITH 120/24V DC TRANSFORMER SENSOR FAUCET WITH RIGID SPOUT, .5GPM FLOW DEVICE SOLEOID VALVE, GRID DRAIN, P-TRAP, WHEEL HANDLE STOPS AND TAILPIECE, ALL POLISHED CHROME FINISH, UNDERSINK PROTECTIVE PIPE COVERS, ZURN CONCEALED ARM CARRIER WITH FLOOR SUPPORT, ETC. INSTALL THERMOSTATIC MIXING VALVE THAT IS ASSE 1070 LISTED UNDER EACH LAVATORY, PIPE SOLENOID VALVE FOR SENSOR FAUCET, AND ADJUST TO 105 DEGREE HOT WATER MAXIMUM AT FAUCET. NOTE: ELECTRICAL TRADES SHALL INSTALL TRANSFORMER AND WIRING; MECHANICAL TRADES SHALL INSTALL SOLENOID VALVE.

L-2: COUNTERTOP LAVATORY: LAVATORY TO BE INTEGRAL SOLID SURFACE BASIN PROVIDED/INSTALLED BY GENERAL TRADES. FITTINGS SHALL INCLUDE ZURN Z6913 SENSOR FAUCET WITH RIGID SPOUT, 0.5 GPM FLOW DEVICE, SOLENOID VALVE AND 120 VAC/24VDC TRANSFORMER, UNDERSINK PIPE PROTECTIVE COVERS, GRID DRAIN, P-TRAP, LOOSE KEY STOPS, ALL POLISHED CHROME FINISH. INSTALL THERMOSTATIC MIXING VALVE THAT IS ASSE 1070 LISTED UNDER EACH LAVATORY, PIPE TO SOLENOID VALVE FOR SENSOR FAUCET AND ADJUST TO 105 DEGREE HOT WATER MAXIMUM AT FAUCET. NOTE: ELECTRICAL TRADES SHALL INSTALL TRANSFORMER AND WIRING; MECHANICAL TRADES SHALL INSTALL SOLENOID VALVE.

SK-1: SINGLE COMPARTMENT COUNTERTOP SINK: ELKAY LUSTERTONE #LRAD 1720, 14" X 14" X 6 1/2" DEEP INSIDE BOWL, SEAMLESS DRAWN #1 8 GAUGE TYPE 304 (18-8) NICKEL BEARING STAINLESS STEEL, 1 3/4" RADIUS COVED CORNERS, SELF RIM, SATIN FINISH, UNDERSIDE SHALL BE FULLY UNDERCOATED, THREE FAUCET HOLES. FITTINGS SHALL INCLUDE ZURN Z-831B4 FAUCET, ADJUSTABLE 8" CENTER INLETS, RIGID GOOSENECK WITH AERATOR, 0.5 GPM FLOW DEVICE, 4" BRASS WRIST BLADE HANDLES WITH COLOR INDEXES, CERAMIC DISC CARTRIDGES POLISHED CHROME FINISH. ALSO INCLUDE LK-35 STAINLESS STEEL CONICAL STRAINER BASKET WITH NEOPRENE STOPPER, TAILPIECE, P-TRAP, WHEEL HANDLE STOPS, ETC. FURNISH AND INSTALL THERMOSTATIC MIXING VALVE THAT IS ASSE 1070 LISTED UNDER EACH LAVATORY, PIPE TO HOT WATER SIDE OF FAUCET AND ADJUST TO 105 DEGREE HOT WATER MAXIMUM AT FAUCET.

SK-2: DOUBLE COMPARTMENT COUNTERTOP SINK: ELKAY LUSTERTONE #LRAD 3319, EACH COMPARTMENT 14" X 14" X 6 1/2" DEEP INSIDE BOWL, SEAMLESS DRAWN #18 GAUGE TYPE 304 (18-8) NICKEL BEARING STAINLESS STEEL, SELF RIM, SATIN FINISH, UNDERSIDE SHALL BE FULLY UNDERCOATED, THREE FAUCET HOLES. FITTINGS SHALL INCLUDE ELKAY LK-1000 WASHERLESS, SINGLE METAL HANDLE LEVER KITCHEN DECK FAUCET, SWING SPOUT, 0.5 GPM FLOW DEVICE, POLISHED CHROME FINISH WITH SWIVEL AERATOR. ALSO INCLUDE LK-35 STAINLESS STEEL CONICAL STRAINER BASKET WITH NEOPRENE STOPPER, TAILPIECE, P-TRAP, WHEEL HANDLE STOPS, ETC. INSTALL THERMOSTATIC MIXING VALVE THAT IS ASSE 1070 LISTED UNDER EACH SINK, PIPE TO HOT WATER SIDE OF FAUCET, AND ADJUST TO 105 DEGREE HOT WATER MAXIMUM AT FAUCET.

JS-1: JANITOR'S SINK: FLORESTONE #96 242412 OR EQUAL, TERRAZZO, 24"X24"X12" WITH DROPPED FRONT, STAINLESS STEEL THRESHOLD, TILING FLANGES AND STAINLESS STEEL SPLASH CATCHER PANELS. DRAIN BODY SHALL BE 3" STAINLESS STEEL CAST INTEGRAL WITH REMOVABLE FLAT TYPE 16 GAUGE #302 STAINLESS STEEL STRAINER. RECEPTOR SHALL BE COMPOSED OF MARBLE CHIPS AND WHITE PORTLAND CEMENT GROUND SMOOTH, GROUTED AND SEALED TO RESIST STAINS. FITTINGS SHALL BE MOP SERVICE SINK FAUCET WITH HOSE END OUTLET, INTEGRAL STOPS, VACUUM BREAKER, ADJUSTABLE TOP BRACE PAIL HOOK AND ROUGH CHROME FINISH. PROVIDE MOP HANGER, HOSE AND HOSE BRACKET, AND SILICONE SEALANT. REINFORCE WALL FOR FAUCET AS REQUIRED.

SH-1: STANDARD SHOWER FITTINGS: ZURN Z71 OR SIMILAR POWERS OR SYMMONS, SINGLE BLADE METAL HANDLE PRESSURE BALANCING MIXING SHOWER UNIT, WITH SINGLE BRONZE STEM, STAINLESS STEEL BALANCING PISTON INTEGRAL WITH STEM ASSEMBLY, AND BRASS ADJUSTMENT LIMIT STOP SCREW IN CAP. COMPLETE WITH DOUBLE SEAL PACKING, ADJUSTABLE BRASS PACKING NUT, AND REMOVABLE BRASS SEATS, ALL EXPOSED TRIM WITH POLISHED NICKEL CHROME PLATED SURFACE. PROVIDE CHECK-STOPS. VALVE SUPPLIED WITH Z7000-15 LARGE (2" DIA) BRASS CHROME PLATED SHOWER HEAD, WITH BRONZE BODY INSTITUTIONAL WALL MOUNT WITH HARD CHROME PLATED FINISH, 2.5 GPM @ 80 PSI, VARIABLE FLOW ORIFICE FEATURE TO MAINTAIN CONSTANT FLOW RATE, 1/2" NPT FEMALE THREADED INLET, ADJUSTABLE SPRAY, 4 VANDAL RESISTANT SCREWS, ANCHOR PLATE AND BASE PLATE. VALVE SHALL MEET A.S.S.E STANDARD 1016. VERIFY MOUNTING HEIGHTS AND LOCATIONS WITH ARCHITECTURAL DRAWINGS BEFORE STARTING WORK. ADJUST VALVE TO PROVIDE 105 DEGREE MAXIMUM WATER TEMPERATURE FROM SHOWER HEAD.

SH-2: BARRIER FREE/ADA SHOWER FITTINGS: ZURN Z7121-DV-HW-LH-MT-SS-VP OR SIMILAR POWERS OR SYMMONS, SINGLE BLADE METAL HANDLE PRESSURE BALANCING MIXING SHOWER UNIT, WITH VOLUME CONTROL, WITH SINGLE BRONZE STEM, STAINLESS STEEL BALANCING PISTON INTEGRAL WITH STEM ASSEMBLY, AND BRASS ADJUSTMENT LIMIT STOP SCREW IN CAP. COMPLETE WITH DOUBLE SEAL PACKING, ADJUSTABLE BRASS PACKING NUT, AND REMOVABLE BRASS SEATS, ALL EXPOSED TRIM WITH POLISHED NICKEL CHROME PLATED SURFACE. VALVE SUPPLIED WITH TWO-WAY BRASS DIVERTER VALVE, HAND-WALL SHOWER HEAD, 60" FLEXIBLE METAL HOSE, 24" MOUNTING SLIDE BAR WALL CONNECTION, STANDARD SHOWER HEAD, ARM AND WALL FLANGES, INTEGRAL SERVICE CHECK-STOPS. VALVE SHALL MEET A.S.S.E. STANDARD 1016. VERIFY MOUNTING HEIGHTS AND LOCATIONS WITH ADA REQUIREMENTS AND ARCHITECTURAL DRAWINGS BEFORE STARTING WORK. COORDINATE LOCATIONS WITH GRAB BAR AND FOLDING SEAT AS REQUIRED. ADJUST LIMIT STOP SCREW TO PROVIDE MAXIMUM OF 105 DEGREE WATER TEMPERATURE FROM SHOWER HEAD.

HB-1: INTERIOR HOSE BIBB: ZURN Z1341 INTERIOR HOSE BIB, VACUUM BREAKER BACKFLOW PROTECTOR, 3/4" MALE HOSE THREAD.

WHYD-1: EXTERIOR WALL HYDRANT: ZURN Z-1321-6, EXTERIOR RECESSED BRONZE WALL HYDRANT, AUTOMATIC DRAINING, VACUUM BREAKER BACKFLOW PROTECTOR, FREEZELESS FROST-PROOF WALL HYDRANT WITH LOOSE KEY AND 3/4" MALE HOSE THREAD.

DW-1: DISHWASHER: OWNER SHALL FURNISH RESIDENTIAL TYPE DISHWASHER. THE MECHANICAL TRADES SHALL FURNISH ALL PIPING AND PLUMBING ROUGH-INS AND MAKE ALL FINAL CONNECTIONS.

EWC-1: MANUFACTURER ELKAY MODEL #LZSTL8WS5P, FILTERED REFRIGERATED LIGHT GRAY. PROVIDE ZURN Z OR EQUAL WALL HANGER WITH FLOOR SUPPORT. HI-LO ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION, WALL MOUNTED BARRIER FREE, BI-LEVEL HIGH EFFICIENCY VANDAL RESISTANT COOLER, FILTERED 8 GPH STAINLESS, CHILLING CAPACITY OF 0.8 GPH. FEATURES SHALL INCLUDE HANDS FREE, VISUAL FILTER MONITOR, FILTERED HIGH EFFICIENCY, LAMINAR FLOW, ANTIMICROBIAL, REAL DRAIN, VANDAL RESISTANT. FURNISHED WITH VANDAL RESISTANT BUBBLER. ELECTRONIC BOTTLE FILLER SENSOR WITH MECHANICAL FRONT BUBBLER BUTTON ACTIVATION, CORD WITH 3 PRONG PLUG, 115 VOLT, 260 WATTS, 5.5 AMP. UNIT SHALL BE MOUNTED AT HEIGHT TO MEET BARRIER FREE AND ADA REQUIREMENTS. VERIFY MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

CO-__: CLEANOUTS: PROVIDE ZURN Z-1400 SERIES DURA-COATED CAST IRON CLEANOUTS WITH BRONZE PLUG AS FOLLOWS:
EXTERIOR: ZB-1400 POLISHED BRONZE ROUND TOP
FINISHED FLOORS: ZN-1400 NICKEL BRONZE ROUND TOP
CERAMIC TILE: ZN-1400-T NICKEL BRONZE SQUARE TOP
CARPETED FLOORS: ZN-1400-CM NICKEL BRONZE WITH CARPET MARKER ROUND TOP
WALL CLEANOUTS: ZS-1469 STAINLESS STEEL ACCESS AS REQUIRED BY PIPE SIZE
HEAVY DUTY CLEANOUTS: (AT LOCATIONS OF VEHICLE/FORKLIFT TRAFFIC) ZN-1400HD

FD-1: FLOOR DRAIN (LOCATED IN A FINISHED FLOOR): ZURN ZN-415-5B CAST IRON FLOOR DRAIN WITH FLANGE, INTEGRAL REVERSIBLE CLAMPING COLLAR 5" DIAMETER SATIN NICKEL BRONZE STRAINER AND TRAP PRIMER CONNECTION WHERE REQUIRED. FURNISH A DEEP SEAL TRAP FOR EACH FLOOR DRAIN.

FD-2: FLOOR DRAIN (LOCATED IN AN UNFINISHED FLOOR): SAME AS IN FINISHED FLOOR, EXCEPT WITH 7" STRAINER.

TP-__: TRAP SEALER: EACH FLOOR DRAIN SHALL HAVE A MEANS OF MAINTAINING THE WATER SEAL IN THE TRAP BY MEANS OF TRAP PRIMER OR TRAP SEALER.

TRAP SEAL OPTION: 2692 QUAD CLOSE TRAP SEAL DEVICE BY JAY R. SMITH MFG. CO. FOR FLOOR DRAIN. SIZE OF TRAP SEALER SHALL MATCH INTERNAL PIPE SIZE DIAMETER. FLOW RATES FOR TRAP SEAL ARE AS FOLLOWS: 2" - 8GPM. 3" - 24 GPM (LARGER FLOW DUE TO TRAP SEAL BEING LOWER IN DRAIN BODY). 3.5" - 14 GPM (TRAP SEAL INSTALLED IN STRAINER). 4" - 35 GPM.

RD-1: ROOF DRAIN: FROET 100C-OFS, OR EQUAL, BI-FUNCTIONAL ROOF DRAIN WITH CAST IRON BODY AND DOME, WITH FLASHING, WITH PRIMARY AND OVERFLOW DRAINS BUILT IN, CLAMP/GRAVEL GUARD, DECK MOUNTING PLATE, AND ROOF DRAIN RECEIVER.

DSN-1: DOWNSPOUT NOZZLE: ZURN ZARB-199 OR EQUAL WADE PLAIN BRONZE WITH THREADED INLET AND WALL FLANGE.

PPC-__: UNDER LAVATORY PROTECTIVE PIPE COVERS: ZURN OR EQUAL "INSUL-GARD" TRAP AND STOP/RISER INSULATED COVERS SHALL BE FURNISHED AND INSTALLED ON ALL EXPOSED PIPING AND VALVES BELOW LAVATORIES TO MEET ADA REQUIREMENTS. THIS SHALL INCLUDE DRAIN, CW & HW PIPING, VALVES, ETC.

GD-__: DISPOSAL: ISE LIGHT COMMERCIAL MODEL LC-50, 1/2 HP, 5.8 AMP, 120 VOLT WITH CORD AND PLUG, NEOPRENE STOPPER, FLEXIBLE DISCHARGE TUBE AND DISHWASHER CONNECTOR.

WB-1: WASHING MACHINE SUPPLY AND DRAIN BOX: ZURN WM 2961-34 WITH 1/2" MPT SUPPLY VALVES FROM ABOVE, 2" DRAIN FITTING AND 20 AMP DUPLEX RECEPTACLE.

BC: WATER HAMMER ARRESTORS: PROVIDE STAINLESS STEEL, BELLOWS TYPE, PRESSURE RATED FOR 250 PSI. SIMILAR TO ZURN Z-1 700 SERIES. AIR CHAMBERS ARE NOT ALLOWED.

S-I__: SOLIDS INTERCEPTOR: ZURN ZA-1180-SS WITH ACID RESISTING COATINGS, INTERNAL DEEP SEAL TRAP, CLEANOUT, REMOVABLE PERFORATED STAINLESS STEEL SEDIMENT BUCKET WITH LIFT HANDLE, AND GAS TIGHT COVER.

## KITCHEN HOOD SCHEDULE

H-1: BROAN NUTONE MODEL 2730 ECLIPSE DOWNDRAFT BLOWER SYSTEM, 120 VOLT, 4.0 AMPS, 500 CFM, 3 ¼"X10" DUCT, POWER CORD WITH 3-PRONGED PLUG.

## DUCTLESS SPLIT SYSTEM AIR CONDITIONER SCHEDULE

AC-1: TRANE MODEL NTXWPH18B112AA WALL MOUNTED INDOOR EVAPORATOR UNIT AS SHOWN ON THE DRAWING, NOMINAL 1.5 TON DX COOLING, WITH AUXILIARY ELECTRIC HEAT, CONDENSATE PUMP AND REMOTE THERMOSTAT AND CONTROL. APPROXIMATELY 1 MINIMUM CIRCUIT AMPS AT 208 VOLT, 1 PHASE.

ACC-1: MATCHING TRANE MODEL NTX5PH18B112AA MOUNTED OUTDOOR AIR COOLED CONDENSING UNIT WITH ANTI SHORT CYCLE PROTECTION, LOW AMBIENT CONTROL AND TUBE SET. APPROXIMATELY 20 AMP FUSE/BREAKER SIZE AT 208 VOLT, 1 PHASE.

## WATER HEATER SCHEDULE

WH-1& WH-2: LOCHINVAR SHIELD SWR15ON DIRECT VENT NATURAL GAS WATER HEATER, 90 GALLON CAPACITY, 150,000 BTUH NATURAL GAS INPUT, 175 GALLON PER HOUR RECOVERY AT 100 DEGREES F RISE, 120V-1-60HZ., 2.1 AMPS VENT WITH 3" PVC TO ABOVE ROOF AND TERMINATE WITH 3" CONCENTRIC VENT KIT, 96% THERMAL EFFICIENCY 5:1 TURNDOWN SMART CONTROL, STAINLESS STEEL HEAT EXCHANGER, GLASS LINED STEEL TANK. DUAL MAGNESIUM ANODE RODS, CONDENSATE NEUTRALIZATION KIT.

NOTES:
1. FURNISH ASME TEMPERATURE AND PRESSURE RELIEF VALVE FOR EACH WATER HEATER, EXTEND DRAIN PIPING TO FLOOR DRAIN OR JANITOR'S SINK.
2. WATER HEATER SHALL BE SET TO 140 DEGREES F HOT WATER TEMPERATURE.
3. FURNISH AND INSTALL CHECK VALVE IN INCOMING COLD WATER LINE AND AN EXPANSION TANK IN COLD WATER LINE BETWEEN HEATER AND CHECK VALVE.
4. FURNISH MANUAL RESET HIGH LIMIT, ALARM BELL, CONTACTS FOR FLAME FAILURE, LOW WATER CUT OFF WITH MANUAL RESET AND CONTACT FOR COMBUSTION DAMPER CONTROL.

EWH-1: LOCHINVAR #LDS-40 ELECTRIC WATER HEATER, 38 GALLON STORAGE CAPACITY, 4500 WATTS DUAL ELEMENT, NON-SIMULTANEOUS, 208 VOLT SINGLE PHASE.

EWH-2: EMAXX (OR EQUAL) 120V UNDERSINK ELECTRIC TANKLESS WATER HEATER, 3,000 WATT, 25 AMPS, MODEL NO. SPEX 3012T MIN FLOW ACTIVATION 0.2 GPM, TEMP. RANGE 70 DEG-140 DEG F, 3/8" COMPRESSION WATER CONNECTION. MAX FLOW RATE 3 GPM REPLACEABLE NICKEL CHROME CARTRIDGE INSERT ELEMENTS POWER MODULATING CONTROLS, DIGITAL DISPLAY, HIGH TEMPERATURE LIMIT SWITCH, MICROPROCESSOR TEMPERATURE CONTROL UL STANDARDS 12 AWG WIRE SIZE.

## MISCELLANEOUS PLUMBING EQUIPMENT SCHEDULES

EXPANSION TANK FOR DOMESTIC WATER HEATER: BELL & GOSSETT PT-12, 4.7 GALLONS, 3.2 GALLON ACCEPTANCE, DIAPHRAGM TANK WITH POLYPROPYLENE LINER, AIR CHARGING VALVE, AND PRECHARGED TO 40 PSI.

RCP-1& RCP-2: DOMESTIC HWR PUMP: BELL & GOSSETT SERIES 100 ALL BRONZE INLINE BOOSTER RATED 10 GPM @ 8' HD, MOTOR 1/12 HP @ 115 VOLT. INSTALL PUMP APPROXIMATELY 4'-0" AF IN VERTICAL PIPE. MECHANICAL CONTRACTOR SHALL FURNISH AND SET A HONEYWELL L6006C1018 STRAP-ON AQUASTAT AND ADJUST TO START PUMP WHEN PIPE TEMPERATURE FALLS BELOW 80 DEGREES AND STOP PUMP WHEN PIPE TEMPERATURE RISES ABOVE 100 DEGREES. ELECTRICAL TRADES WILL PROVIDE STARTER WITH THERMAL OVERLOAD ELEMENTS AND ALL WIRING.

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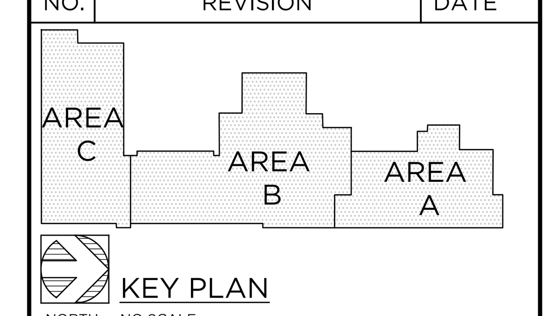


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## VOLUME BOX SCHEDULE WITH HOT WATER HEATING COIL

| MARK | MODEL NO. | AIR FLOW | | | HEATING COIL MBH | GPM | ROOM HEAT LOSS MBH | INLET SIZE |
|---|---|---|---|---|---|---|---|---|
| | | MAX CLG CFM | MIN CLG CFM | HTG CFM | | | | |
| VBB-01 | VCWF-24RT | 2400 | 800 | 1200 | 86.0 | 5.4 | 66.5 | 24"X16" |
| VBB-02 | VCWF-10 | 1000 | 300 | 500 | 32.7 | 2.2 | 24.5 | 10" DIA |
| VBB-03 | VCWF-08 | 500 | 150 | 250 | 15.9 | 1.1 | 11.8 | 8" DIA |
| VBB-04 | VCWF-12 | 1200 | 375 | 600 | 40.4 | 2.7 | 30.7 | 12" DIA |
| VB-01 | VCWF-10 | 900 | 275 | 450 | 30.5 | 2.0 | 23.2 | 10" DIA |
| VB-02 | VCWF-10 | 900 | 275 | 450 | 30.5 | 2.0 | 23.2 | 10" DIA |
| VB-03 | VCWF-10 | 800 | 250 | 400 | 28.3 | 1.9 | 21.8 | 10" DIA |
| VB-04 | VCWF-10 | 800 | 250 | 400 | 28.3 | 1.9 | 21.8 | 10" DIA |
| VB-05 | VCWF-08 | 500 | 150 | 250 | 15.9 | 1.1 | 11.8 | 8" DIA |
| VB-06 | VCWF-06 | 350 | 125 | 175 | 13.7 | 0.9 | 10.5 | 6" DIA |
| VB-07 | VCWF-10 | 750 | 225 | 375 | 27.2 | 1.8 | 21.0 | 10" DIA |
| VB-08 | VCWF-10 | 900 | 275 | 450 | 30.5 | 2.0 | 23.2 | 10" DIA |
| VB-09 | VCWF-06 | 300 | 100 | 150 | 11.5 | 0.8 | 9.1 | 6" DIA |
| VB-10 | VCWF-05 | 200 | 100 | 100 | 6.9 | 0.5 | 4.5 | 5" DIA |
| VB-11 | VCWF-08 | 600 | 200 | 300 | 17.7 | 1.2 | 12.8 | 8" DIA |
| VB-12 | VCWF-05 | 200 | 100 | 100 | 6.9 | 0.5 | 4.5 | 5" DIA |
| VB-13 | VCWF-05 | 250 | 100 | 125 | 6.9 | 0.5 | 4.5 | 5" DIA |
| VB-14 | VCWF-08 | 400 | 125 | 200 | 14.7 | 1.0 | 11.0 | 8" DIA |
| VB-15 | VCWF-10 | 900 | 275 | 450 | 30.5 | 2.0 | 23.2 | 10" DIA |
| VB-16 | VCWF-10 | 750 | 225 | 375 | 27.2 | 1.8 | 21.0 | 10" DIA |
| VB-17 | VCWF-06 | 300 | 100 | 150 | 11.5 | 0.8 | 9.1 | 6" DIA |
| VB-18 | VCWF-12 | 1200 | 375 | 600 | 40.4 | 2.7 | 30.7 | 12" DIA |
| VB-19 | VCWF-10 | 800 | 250 | 400 | 28.3 | 1.9 | 21.8 | 10" DIA |
| VB-20 | VCWF-08 | 400 | 125 | 200 | 14.7 | 1.0 | 11.0 | 8" DIA |
| VB-21 | VCWF-06 | 350 | 125 | 175 | 13.7 | 0.9 | 10.5 | 6" DIA |
| VB-22 | VCWF-10 | 800 | 250 | 400 | 28.3 | 1.9 | 21.8 | 10" DIA |
| VB-23 | VCWF-05 | 250 | 100 | 125 | 6.9 | 0.5 | 4.5 | 5" DIA |
| VB-24 | VCWF-08 | 450 | 150 | 225 | 15.4 | 1.0 | 11.3 | 8" DIA |
| VB-25 | VCWF-08 | 400 | 125 | 200 | 14.7 | 1.0 | 11.0 | 8" DIA |
| VB-26 | VCWF-10 | 950 | 300 | 475 | 31.6 | 2.1 | 23.8 | 10" DIA |
| VB-27 | VCWF-06 | 300 | 100 | 150 | 11.5 | 0.8 | 9.1 | 6" DIA |
| VB-28 | VCWF-08 | 550 | 175 | 275 | 16.6 | 1.1 | 12.1 | 8" DIA |
| VB-29 | VCWF-04 | 150 | 100 | 100 | 6.9 | 0.5 | 4.5 | 4" DIA |
| VB-30 | VCWF-06 | 350 | 125 | 175 | 13.7 | 0.9 | 10.5 | 6" DIA |
| VB-31 | VCWF-06 | 300 | 100 | 150 | 11.5 | 0.8 | 9.1 | 6" DIA |
| VB-32 | VCWF-08 | 450 | 150 | 225 | 15.4 | 1.0 | 11.3 | 8" DIA |
| VB-33 | VCWF-08 | 450 | 150 | 225 | 15.4 | 1.0 | 11.3 | 8" DIA |
| VB-34 | VCWF-06 | 350 | 125 | 175 | 13.7 | 0.9 | 10.5 | 6" DIA |
| VB-35 | VCWF-08 | 650 | 200 | 325 | 18.8 | 1.3 | 13.5 | 8" DIA |
| VB-36 | VCWF-10 | 700 | 225 | 350 | 25.8 | 1.7 | 20.1 | 10" DIA |
| VB-37 | VCWF-04 | 150 | 100 | 100 | 6.9 | 0.5 | 4.5 | 4" DIA |
| VB-38 | VCWF-10 | 1000 | 300 | 500 | 32.7 | 2.2 | 24.5 | 10" DIA |
| VB-39 | VCWF-04 | 150 | 100 | 100 | 6.9 | 0.5 | 4.5 | 4" DIA |
| VB-40 | VCWF-08 | 500 | 150 | 250 | 15.9 | 1.1 | 11.8 | 8" DIA |
| VB-41 | VCWF-06 | 300 | 100 | 150 | 11.5 | 0.8 | 9.1 | 6" DIA |
| VB-42 | VCWF-08 | 600 | 200 | 300 | 17.7 | 1.2 | 12.8 | 8" DIA |
| VB-43 | VCWF-04 | 150 | 100 | 100 | 6.9 | 0.5 | 4.5 | 4" DIA |
| VB-44 | VCWF-08 | 600 | 200 | 300 | 17.7 | 1.2 | 12.8 | 8" DIA |
| VB-45 | VCWF-10 | 1000 | 300 | 500 | 32.7 | 2.2 | 24.5 | 10" DIA |
| VB-46 | VCWF-12 | 1100 | 350 | 550 | 37.3 | 2.3 | 28.3 | 12" DIA |
| VB-47 | VCWF-10 | 800 | 250 | 400 | 28.3 | 1.9 | 21.8 | 10" DIA |
| VB-48 | VCWF-14 | 1400 | 425 | 700 | 50.0 | 3.0 | 38.6 | 14" DIA |
| VB-49 | VCWF-14 | 1900 | 575 | 950 | 62.9 | 4.2 | 47.5 | 14" DIA |
| VB-50 | VCWF-14 | 1700 | 525 | 850 | 58.6 | 3.9 | 44.8 | 14" DIA |
| VB-51 | VCWF-12 | 1200 | 375 | 600 | 40.4 | 2.7 | 30.7 | 12" DIA |
| VB-52 | VCWF-08 | 500 | 150 | 250 | 15.9 | 1.1 | 11.8 | 8" DIA |
| VB-53 | VCWF-14 | 1500 | 450 | 750 | 52.2 | 3.1 | 40.0 | 14" DIA |
| VB-54 | VCWF-10 | 700 | 225 | 350 | 25.8 | 1.7 | 20.1 | 10" DIA |
| VB-55 | VCWF-14 | 1800 | 550 | 900 | 60.6 | 4.0 | 46.0 | 14" DIA |
| VB-56 | VCWF-12 | 1200 | 375 | 600 | 40.4 | 2.7 | 30.7 | 12" DIA |
| VB-57 | VCWF-12 | 1200 | 375 | 600 | 40.4 | 2.7 | 30.7 | 12" DIA |
| VB-58 | VCWF-08 | 500 | 150 | 250 | 15.9 | 1.1 | 11.8 | 8" DIA |

NOTES:

1. VB (VARIABLE AIR VOLUME BOXES) TO BE INSULATED DOUBLE WALL CONSTRUCTION.
2. VB BOXES SHALL HAVE A FACTORY MOUNTED DISCONNECT SWITCH, FUSE, AND DAMPER ACTUATOR AND FLOW RING. ALL WIRED TO A TERMINAL STRIP. TEMPERATURE CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR 120 VAC WIRING FROM CIRCUIT BREAKERS IN ELECTRICAL DISTRIBUTION PANEL TO THE TRANSFORMER AND FOR THE 24 VAC WIRING FROM THE TRANSFORMER TO VB BOXES. TRANSFORMER TO BE FURNISHED AND INSTALLED BY THE TEMPERATURE CONTROL CONTRACTOR. NOT MORE THAN SIX (6) VB BOXES TO BE ON ONE 20 AMP CIRCUIT. IDENTIFY IN A PERMANENT MANNER EACH VB BOX AND THE PANEL AND CIRCUIT SERVING THE BOX.
3. SPACE TEMPERATURE SENSORS AND OTHER DIRECT DIGITAL CONTROLS SHALL BE FURNISHED AND INSTALLED BY THE TEMPERATURE CONTROL CONTRACTOR.
4. HEATING CAPACITY BASED ON 50% OF MAXIMUM AIRFLOW, 180° F E.W.T., 150° F L.W.T., A 33% ETHYLENE GLYCOL SOLUTION AND 0.4" MAX APD.
5. SUPPLY AIR BRANCH DUCT TO VOLUME BOX SHALL BE MINIMUM OF TWO SIZES LARGER THAN BOX INLET. PROVIDE TAPERED REDUCER FITTING AND MINIMUM OF 1 1/2 DIAMETERS OF STRAIGHT-RUN DUCTWORK BEFORE CONNECTION TO BOX INLET.
6. VB SHALL HAVE 3-WAY HOT WATER CONTROL VALVES AS INDICATED ON DRAWINGS. ALL OTHER VB BOXES SHALL HAVE 2-WAY HOT WATER CONTROL VALVES.
7. SEE SPECIFICATIONS FOR FURTHER INFORMATION.

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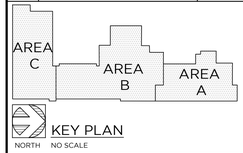


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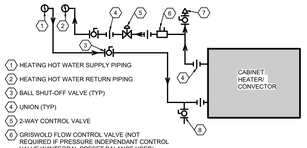
## MECHANICAL SYMBOL LIST

| | |
|---|---|
| SAN | SANITARY PIPING BELOW FLOOR OR GRADE |
| SAN | SANITARY PIPING ABOVE FLOOR |
| ST | STORM PIPING BELOW FLOOR OR GRADE |
| ST | STORM PIPING ABOVE FLOOR |
| SED | SECONDARY EMERGENCY DRAINAGE PIPING |
| AW | ACID WASTE PIPING BELOW FLOOR OR GRADE |
| AW | ACID WASTE PIPING ABOVE FLOOR |
| TP | TRAP PRIMER PIPING BELOW FLOOR |
| SN | CO ABOVE FLOOR |
| SN | CO UP TO GRADE |
| SN | CO UP TO FLOOR |
| HPS | HEAT PUMP SUPPLY PIPING |
| HPR | HEAT PUMP RETURN PIPING |
| HHWS | HEATING HOT WATER SUPPLY PIPING |
| HHWR | HEATING HOT WATER RETURN PIPING |
| CHWS | CHILLED WATER SUPPLY PIPING |
| CHWR | CHILLED WATER RETURN PIPING |
| CTWS | COOLING TOWER WATER SUPPLY PIPING |
| CTWR | COOLING TOWER WATER RETURN PIPING |
| CWR | CONDENSOR WATER RETURN PIPING |
| CWS | CONDENSOR WATER SUPPLY PIPING |
| W | WATER PIPING LOCATED OUTSIDE OF BUILDING |
| STM (#150) | STEAM SUPPLY PIPING |
| COND | STEAM CONDENSATE RETURN PIPING |
| PCR | PUMPED CONDENSATE RETURN PIPING |
| RF | REFRIGERANT LINE |
| CD | MISC. EQUIP. COND DRAIN PIPING |
| G | NATURAL GAS PIPING |
| V | VENT PIPING |
| AV | ACID VENT PIPING |
| | DOMESTIC COLD WATER PIPING |
| | DOMESTIC HOT WATER PIPING |
| | HOT WATER PIPE WITH ELECTRICAL HEAT TRACE |
| | DOMESTIC HOT WATER RETURN PIPING |
| FP | FIRE PROTECTION PIPING |
| CA | COMPRESSED AIR PIPING (INDUSTRIAL TYPE) |
| DI | DEIONIZED WATER PIPING |
| VAC | VACUUM PIPING |
| N | NITROGEN |
| NO2 | NITROUSOXIDE |
| A | AIR |
| O | OXYGEN PIPING |
| WAGD | WASTE ANESTHESIS |
| CO2 | CARBON DIOXIDE |
| | TRIPLE DUTY VALVE |
| | REDUCER |
| | CAP |
| | UNION |
| | CHECK VALVE |
| | TWO WAY CONTROL VALVE (PNEUMATIC) |
| | THREE WAY CONTROL VALVE (PNEUMATIC) |
| | TWO WAY CONTROL VALVE (ELECTRIC) |
| | THREE WAY CONTROL VALVE (ELECTRIC) |
| | ISOLATION GATE VALVE |
| | GLOBE VALVE N.C. |
| | GLOBE VALVE N.O. |
| | KITCHEN MASTER GAS VALVE |
| | GAS REGULATOR |
| | FLOW ARROW |
| | GRISWOLD AUTOMATIC FLOW LIMITING VALVE |
| PRV | PRESSURE REGULATING OR REDUCING VALVE |
| RPBP | REDUCED PRESURE BACKFLOW PREVENTER |
| | EXPANSION JOINT |
| | OS & Y GATE VALVE |
| | STRAINER |
| | BUTTERFLY VALVE |
| | BALL VALVE |
| | FLEXIBLE CONNECTION |
| | GAS COCK |
| | INTERIOR HOSE BIB |
| | EXTERIOR WALL HYDRANT |
| | VALVE IN RISER |
| | ELBOW RISING UP |
| | ELBOW DROPPING DOWN |
| | TEE WITH PIPE UP |
| | TEE WITH PIPE DOWN |
| | PRESSURE REGULATING VALVE |
| | TEMPERATURE & PRESSURE RELIEF VALVE |
| | INLINE PUMP |
| | PRESSURE SENSOR OR SWITCH |
| | FLOW SWITCH |
| | STEAM TRAP |
| | THERMOMETER |
| | PRESSURE GAUGE W/COCK |
| | MANUAL AIR VENT |
| | AUTOMATIC AIR VENT |
| | PIPE ANCHOR |
| | PIPE GUIDE |
| | SERVICE SINK |
| | FLUSH TANK WATER CLOSET |
| | FLUSH VALVE FLOOR MOUNTED |
| | FLUSH VALVE WALL MOUNTED |
| | URINAL |
| | LAVATORY OR SINK |
| | FLOOR SINK |
| | FLOOR DRAIN |
| CO2 | CARBON DIOXIDE SENSOR |
| | RHEOSTAT |
| | THERMOSTAT OR WALL SENSOR |
| | NIGHT STAT OR NIGHT WALL SENSOR |
| | HUMIDISTAT |
| | SENSOR |
| | ROOF DRAIN BELOW ROOF (FLOOR PLAN) |
| | ROOF DRAIN ON ROOF (ROOF PLAN) |
| | EXHAUST FAN WITH FAN ABOVE (FLOOR PLAN) |
| | EXHAUST FAN ON ROOF (ROOF PLAN) |

| | |
|---|---|
| | EX. VERTICAL FIRE DAMPER |
| | EX. HORIZONTAL FIRE DAMPER |
| | VERTICAL FIRE DAMPER |
| | HORIZONTAL FIRE DAMPER |
| | VERTICAL SMOKE DAMPER |
| | HORIZONTAL SMOKE DAMPER |
| | VERTICAL COMBINATION FIRE/SMOKE DAMPER |
| | HORIZONTAL COMBINATION FIRE/SMOKE DAMPER |
| [A-250'] | SUPPLY AIR DIFFUSER - TYPE "A", 250 CFM |
| [B-250'] | RETURN OR EXHAUST AIR GRILLE - TYPE "B", 250 CFM |
| | SLOT DIFFUSER |
| | MANUAL DAMPER |
| | MOTORIZED DAMPER |
| DSD | DUCT SMOKE DETECTOR |
| | DUCT PRESSURE SENSOR |
| ABV | ABOVE |
| ACCU | AIR COOLED CONDENSING UNIT |
| ACU | AIR CONDITIONING UNIT |
| AFF | ABOVE FINISHED FLOOR |
| AHU | AIR HANDLING UNIT |
| AIH | AIR INTAKE HOOD |
| BF | BARRIER FREE |
| BFG | BELOW FINISHED GRADE |
| CA | COMPRESSED AIR |
| CFM | CUBIC FEET PER MINUTE |
| CH | CABINET HEATER |
| CUH | CABINET UNIT HEATER |
| CI | CAST IRON |
| CO | CLEAN OUT |
| COND | CONDENSATE |
| CONV | CONVECTOR |
| CP | CIRCULATING PUMP |
| CT | COOLING TOWER |
| CW | COLD WATER |
| DF | DRINKING FOUNTAIN |
| DI | DEIONIZED WATER |
| DS | DRAINAGE STACK |
| DT | DRAIN TILE |
| DTC | DRAIN TILE CONNECTOR |
| EA | EXHAUST AIR |
| EAR | EXHAUST AIR REGISTER |
| EF | EXHAUST FAN |
| EL | ELEVATION |
| ERU | ENERGY RECOVERY UNIT |
| EVB | ELECTRIC VARIABLE AIR VOLUME BOX |
| EWC | ELECTRIC WATER COOLER |
| EX | EXISTING |
| FC | FLUID COOLER |
| FCU | FAN COIL UNIT |
| FCV | FLOW CONTROL VALVE |
| FD | FLOOR DRAIN |
| FS | FLOOR SINK |
| FTR | FIN TUBE RADIATION |
| FVB | FAN POWERED VARIABLE AIR VOLUME BOX |
| GI | GREASE INTERCEPTOR |
| GPM | GALLONS PER MINUTE |
| HB | INTERIOR HOSE BIB |
| HP | HEAT PUMP |
| HW | HOT WATER |
| HWR | HOT WATER RETURN |
| HWRP | HOT WATER RADIANT PANEL |
| HX | HEAT EXCHANGER |
| IE | INVERT ELEVATION |
| JS | JANITORS SINK |
| L | LAVATORY |
| MBD | MANUAL BALANCING DAMPER |
| MUA | MAKE UP AIR UNIT |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPENED |
| OA | OUTSIDE AIR |
| PRV | PRESSURE REGULATING OR REDUCING VALVE |
| PSI | POUNDS PER SQUARE INCH |
| PSIG | POUNDS PER SQUARE INCH GAUGE |
| RA | RETURN AIR |
| RADR | RADIANT RETURN PIPING |
| RADS | RADIANT SUPPLY PIPING |
| RAH | RELIEF AIR HOOD |
| RAR | RETURN AIR REGISTER |
| RC | RAIN WATER CONDUCTOR |
| RD | ROOF DRAIN |
| RF | RETURN AIR FAN |
| RTU | ROOF TOP UNIT |
| SA | SUPPLY AIR |
| SAR | SUPPLY AIR REGISTER |
| SED | SECONDARY EMERGENCY DRAINAGE |
| SERC | SECONDARY EMERGENCY RAIN WATER CONDUCTOR |
| SERD | SECONDARY EMERGENCY ROOF DRAIN |
| SH | SHOWER |
| SK | SINK |
| SP | STATIC PRESSURE |
| SS | SERVICE SINK |
| TP | TRAP PRIMER |
| UH | UNIT HEATER |
| UNO | UNLESS NOTED OTHERWISE |
| UR | URINAL |
| UV | UNIT VENTILATOR |
| V | VENT |
| VA | VALVE |
| VAV | VARIABLE AIR VOLUME BOX |
| VAVR | VARIABLE AIR VOLUME BOX W/ RE-HEAT COIL |
| VFD | VARIABLE FREQUENCY DRIVE |
| VT | VITRIFIED TILE |
| VS | VENT STACK |
| VTR | VENT THRU ROOF |
| WC | WATER CLOSET |
| WCO | WALL CLEAN OUT |
| WH | WATER HEATER |
| WHYD | EXTERIOR WALL HYDRANT |
| T | TRAP |
| | DIFFERENTIAL PRESSURE SENSOR |



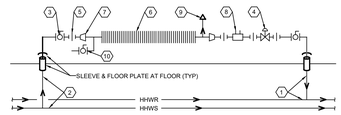

1. HEATING HOT WATER SUPPLY PIPING
2. HEATING HOT WATER RETURN PIPING
3. BALL SHUT-OFF VALVE (TYP)
4. UNION (TYP)
5. 2-WAY CONTROL VALVE
6. GRISWOLD FLOW CONTROL VALVE (NOT REQUIRED IF PRESSURE INDEPENDANT CONTROL VALVE W/INTEGRAL PRESET BALANCE USED)
7. MANUAL AIR VENT (ACCESSIBLE LOCATION)
8. DRAIN VALVE

### HEATING HOT WATER CABINET HEATER/CONVECTOR PIPING DETAIL

NO SCALE

1. HEATING HOT WATER RETURN PIPING
2. HEATING HOT WATER SUPPLY PIPING
3. BALL SHUT-OFF VALVE (TYP)
4. 2-WAY AUTOMATIC CONTROL VALVE
5. UNION (TYP)
6. FINNED TUBE RADIATION
7. ECCENTRIC PIPE REDUCER (TYP)
8. GRISWOLD FLOW CONTROL VALVE
9. MANUAL AIR VENT
10. DRAIN VALVE

NOTE:
FURNISH ALL MOUNTING HARDWARE AS REQUIRED TO INSTALL FINNED TUBE RADIATION AND PIPING INSIDE FINNED TUBE ENCLOSURE



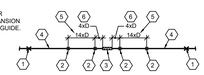

### ONE ROW FINNED TUBE RADIATION PIPING DETAIL

NO SCALE

1. PIPE ANCHOR
2. PIPE GUIDE, SPIDER TYPE MATCHED TO PIPE SIZE AND INSULATION THICKNESS.
3. EXPANSION COMPENSATOR
4. PIPE WITH DIAMETER SIZE "D".
5. 14 x DIAMETER OF PIPE FOR DISTANCE BETWEEN TWO PIPE GUIDES.
6. 4 x DIAMETER OF PIPE FOR DISTANCE BETWEEN EXPANSION COMPENSATOR AND PIPE GUIDE.

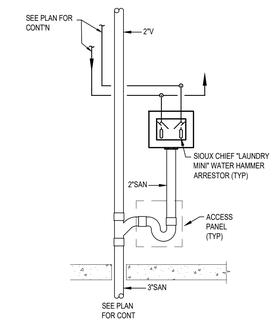
**NOTES:**

1. INSTALLATION OF ANCHORS, GUIDES AND COMPENSATORS SHALL BE PER THE SPECIFICATION, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CODES, REQUIREMENTS, ETC.
2. THE MECHANICAL TRADE SHALL BE RESPONIBLE FOR ALL STRUCTURAL COMPONENTS, DESIGN, INSTALLATION ETC. FOR THE ANCHORS: SUPPORT OF THE PIPE ANCHORS AND PIPE GUIDES.




### EXPANSION COMPENSATOR PIPING DETAIL

NO SCALE

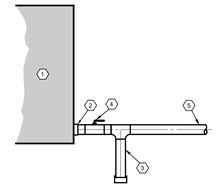



### WASHER SUPPLY & DRAIN PIPING DIAGRAM

NO SCALE

1. ROOF TOP AIR HANDLING UNIT
2. GAS PIPING CONNECTION
3. 6" LONG DIRT LEG WITH CAP
4. SHUT OFF VALVE
5. GAS PIPING (PROPERLY SUPPORTED ON ROOF)

NOTE: DIRT LEG SHALL BE INSTALLED AT ALL LOCATIONS IN NEW GAS PIPING WHERE ELEVATION CHANGES.

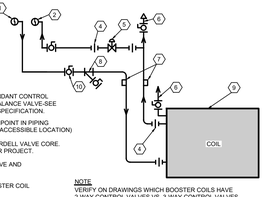


### ROOF TOP UNIT GAS PIPING DETAIL GAS PIPING ABOVE ROOF

NO SCALE

1. HEATING HOT WATER SUPPLY PIPING
2. HEATING HOT WATER RETURN PIPING
3. NOT USED
4. UNION (TYP)
5. 2-WAY PRESSURE INDEPENDANT CONTROL WITH/INTEGRAL PRESET BALANCE VALVE-SEE TEMPERATURE CONTROL SPECIFICATION.
6. MANUAL AIR VENT AT HIGH POINT IN PIPING. (1/4" BALL VALVE PIPED TO ACCESSIBLE LOCATION)
7. #110 PETES PLUG WITH NORDELL VALVE CORE. FURNISH ONE TEST KIT FOR PROJECT.
8. STRAINER WITH DRAIN VALVE AND PRESSURE PORTS.
9. HEATING HOT WATER BOOSTER COIL
10. BALL SHUT-OFF VALVE

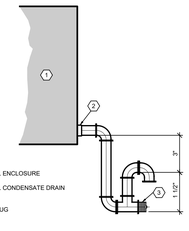
NOTE
VERIFY ON DRAWINGS WHICH BOOSTER COILS HAVE 2-WAY CONTROL VALVES VS. 3-WAY CONTROL VALVES.




### BOOSTER COIL PIPING DETAIL WITH 2-WAY CONTROL VALVE

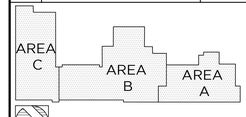
NO SCALE

1. COOLING COIL ENCLOSURE
2. COOLING COIL CONDENSATE DRAIN CONNECTION
3. CLEANOUT PLUG




### ROOF TOP UNIT COOLING COIL CONDENSATE DRAIN TRAP DETAIL

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

WTAARCH.COM

WTA ARCHITECTS

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

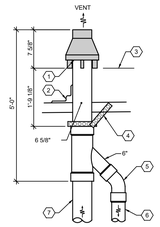
MECHANICAL DETAILS AND SYMBOL LIST

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

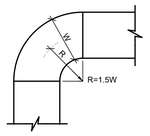
SHEET NUMBER
M4.03




1. COMBUSTION AIR
2. ROOF BOOT (FIELD SUPPLIED)
3. MAINTAIN 12" MINIMUM CLEARANCE ABOVE HIGHEST ANTICIPATED SNOW LEVEL MAXIMUM OF 24" ABOVE ROOF
4. SUPPORT (FIELD SUPPLIED)
5. ELBOW (FIELD SUPPLIED)
6. 4" COMBUSTION AIR
7. 4" VENT

## CONCENTRIC VENT THRU ROOF DETAIL

NO SCALE 285 MBH-600 MBH

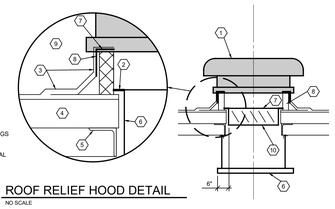



NOTE

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH A SQUARE VANE MITERED ELBOW.
3. NO MITERED ELBOWS WITHOUT VANES SHALL BE INSTALLED.

## DUCTWORK RADIUS ELBOW

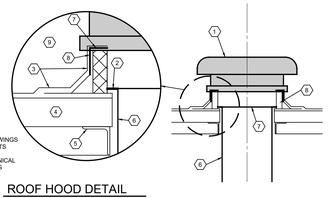
NO SCALE




1. ROOF HOOD
2. DUCT FLANGE W/ GASKET SEAL
3. ROOFING AND FLASHING BY G.C.
4. ROOF CONSTRUCTION
5. STRUCTURAL STEEL SUPPORT SEE STRUCTURAL DRAWINGS
6. DRIP PAN - ALL JOINTS SOLDERED WATERTIGHT. PAN MIN. DEPTH 2"
7. WOOD NAILER
8. INSULATED ROOF CURB BY M.C. (PREFABRICATED)-SEE DRAWINGS FOR CURB HEIGHT REQUIREMENTS
9. VERIFY ROOF PITCH-THE MECHANICAL TRADE SHALL FURNISH BLOCKING AS NECESSARY TO LEVEL CURB AND EXHAUST FAN
10. BACKDRAFT DAMPER

## ROOF RELIEF HOOD DETAIL

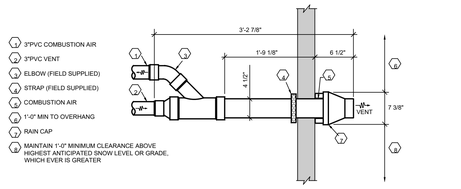
NO SCALE



1. ROOF HOOD
2. DUCT FLANGE W/ GASKET SEAL
3. ROOFING AND FLASHING BY G.C.
4. ROOF CONSTRUCTION
5. STRUCTURAL STEEL SUPPORT SEE STRUCTURAL DRAWINGS
6. EXHAUST DUCT
7. WOOD NAILER
8. INSULATED ROOF CURB BY M.C. (PREFABRICATED)-SEE DRAWINGS FOR CURB HEIGHT REQUIREMENTS
9. VERIFY ROOF PITCH-THE MECHANICAL TRADE SHALL FURNISH BLOCKING AS NECESSARY TO LEVEL CURB AND EXHAUST FAN

## ROOF HOOD DETAIL

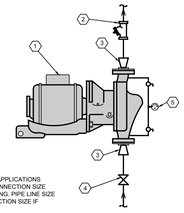
NO SCALE




1. 3"PVC COMBUSTION AIR
2. 3"PVC VENT
3. ELBOW (FIELD SUPPLIED)
4. STRAP (FIELD SUPPLIED)
5. COMBUSTION AIR
6. 1'-0" MIN TO OVERHANG
7. RAIN CAP
8. MAINTAIN 1'-0" MINIMUM CLEARANCE ABOVE HIGHEST ANTICIPATED SNOW LEVEL OR GRADE, WHICH EVER IS GREATER

## CONCENTRIC VENT THRU SIDE WALL DETAIL

NO SCALE 80 MBH-210 MBH

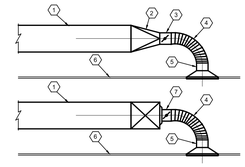


1. IN-LINE PUMP SUPPORTED BY PIPING AS RECOMMENDED BY MANUFACTURER
2. B&G TRIPLE DUTY VALVE ON DISCHARGE PIPE
3. CONCENTRIC REDUCER, IF REQUIRED, FROM PIPE LINE SIZE TO PUMP CONNECTION SIZE
4. SHUT-OFF VALVE ON INLET PIPE
5. LIQUID FILLED PRESSURE GAUGE WITH BALL SHUTOFF VALVES

NOTE: FOR BOILER CIRCULATING PUMP APPLICATIONS PIPE LINE SIZE SHALL MATCH BOILER CONNECTION SIZE AT A MINIMUM THE FULL LENGTH OF PIPING. PIPE LINE SIZE SHALL BE LARGER THAN BOILER CONNECTION SIZE IF NOTED SO ON DRAWINGS

## TYPICAL IN-LINE CIRCULATING PUMP

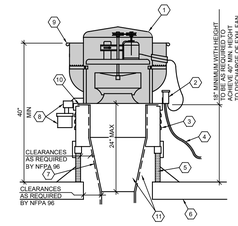
NO SCALE



1. BRANCH DUCT
2. TRANSITION
3. DAMPER WITH POSITIVE LOCKING WING NUT
4. FLEXIBLE INSULATED DUCT SIMILAR TO FLEXMASTER TYPE 3 OR APPROVED EQUAL MAXIMUM 5'-0" LENGTH
5. DIFFUSER OR GRILLE W/ ROUND NECK OR SQUARE TO ROUND NECK ADAPTER
6. LAY-IN CEILING
7. TAKE-OFF FITTING SIMILAR TO FLEXMASTER MODEL #CB-D CONICAL BELL MOUTH FITTING WITH DAMPER AND POSITIVE LOCKING WING NUT

## BRANCH DUCT CONNECTION TO DIFFUSER OR GRILLE DETAIL

NO SCALE

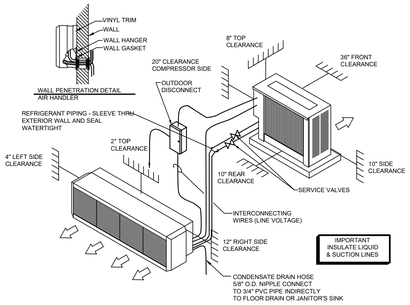



1. UPBLAST ROOF EXHAUST FAN UL LISTED FOR GREASE REMOVAL AND TESTED UNDER HIGH TEMPERATURE EXHAUST (300°F) AND ABNORMAL FLARE-UP (600°F) CONDITIONS.
2. NEMA 3R DISCONNECT SWITCH FURNISHED AND FIELD WIRED BY ELECTRICAL TRADES TO MOTOR TO DISCONNECT THROUGH BREATHER TUBE.
3. VENTED CURB EXTENSION.
4. LIQUID TIGHT FLEXIBLE CONDUIT BY ELECTRICAL TRADES.
5. MINIMUM 12" HIGH INSULATED ROOF CURB.
6. ROOF DECK.
7. MIN. 18 GA. WELDED LIQUID-TIGHT S.S. DUCTWORK INSTALLED TO MIN. 18" ABOVE ROOF DECK.
8. REMOVABLE GREASE TRAP TO DRAIN CONNECTION PIPE.
9. MINIMUM 40" HEIGHT ABOVE ROOF DECK TO DISCHARGE OF EXHAUST FAN.
10. HINGED CURB CAP TO ALLOW ENTIRE FAN TO SWING AWAY FOR ACCESS TO DUCT AND FAN WHEEL.
11. DUCT TRANSITION TO EXH. FAN THROAT TO BE MAX.24" FROM FAN OPENING. EXH. DUCTWORK SHALL HAVE A MINIMUM 2 HOUR RATED ENCLOSURE AS NOTED IN SPECIFICATION & TO MEET ALL STATE, LOCAL, & NFPA-96 REQUIREMENTS.

NOTE: FAN INSTALLATION, CONSTRUCTION, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 96 AND ALL LOCAL AND STATE CODES.

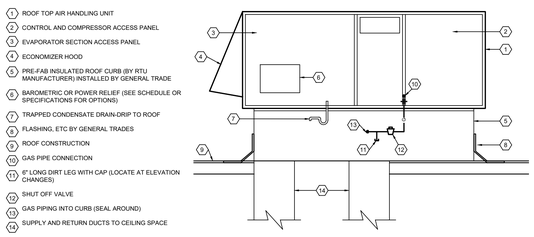
## KITCHEN HOOD EXHAUST FAN DETAIL

NO SCALE




## SERVER ROOM WALL MOUNTED AIR CONDITIONER INSTALLATION DETAIL

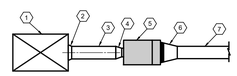
NO SCALE



1. ROOF TOP AIR HANDLING UNIT
2. CONTROL AND COMPRESSOR ACCESS PANEL
3. EVAPORATOR SECTION ACCESS PANEL
4. ECONOMIZER HOOD
5. PRE-FAB INSULATED ROOF CURB (BY RTU MANUFACTURER) INSTALLED BY GENERAL TRADE
6. BAROMETRIC OR POWER RELIEF (SEE SCHEDULE OR SPECIFICATIONS FOR OPTIONS)
7. TRAPPED CONDENSATE DRAIN-DRIP TO ROOF
8. FLASHING, ETC BY GENERAL TRADES
9. ROOF CONSTRUCTION
10. GAS PIPE CONNECTION
11. 6" LONG DIRT LEG WITH CAP (LOCATE AT ELEVATION CHANGES)
12. SHUT OFF VALVE
13. GAS PIPING INTO CURB (SEAL AROUND)
14. SUPPLY AND RETURN DUCTS TO CEILING SPACE

## ROOF TOP UNIT DETAIL

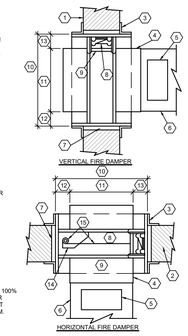
NO SCALE



1. SUPPLY AIR DUCT MAIN
2. BELLMOUTH SPIN-IN FITTING OR TAPERED TAKEOFF ADAPTER FITTING . SEAL TAKE-OFF CONNECTION W/ FIRE RETARDANT DUCT SEALER
3. DUCT TAKE-OFF SIZE TO VOLUME BOX. SHALL BE SAME SIZE AS VAV BOX INLET CONNECTION UNLESS DUCT RUN IS GREATER THAN 8 EQUIVALENT FEET OF DUCT. INCREASE DUCT SIZE 2" LARGER FOR DUCT RUNS GREATER THAN 8 EQUIVALENT FEET OF DUCT.
4. DUCT TRANSITION TO VOLUME BOX INLET
5. VOLUME BOX
6. DUCT TRANSITION
7. SUPPLY AIR DUCT TO DIFFUSERS

## VOLUME BOX DUCTING DETAIL

NO SCALE

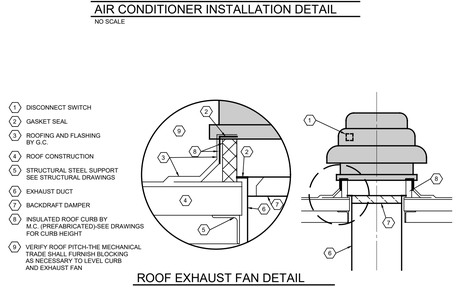



1. WALL CONSTRUCTION
2. FLOOR OR ROOF CONSTRUCTION
3. METAL ANGLE 1 1/2"x1 1/2"x14" GA MINIMUM FASTENED TO FIRE DAMPER SLEEVE. WELD OR RIVET TO ALL FOUR SIDES (TYP)
4. DUCT MOUNTING FLANGE
5. ACCESS DOOR IN DUCTWORK
6. DUCTWORK (VERIFY INTERNAL OR EXTERNAL INSULATION)
7. 1/2" MAXIMUM CLEARANCE
8. INTERLOCKING STEEL BLADES MINIMUM 22 GA
9. REPLACEABLE FUSIBLE LINK (165°F VERIFY TEMP)
10. OPENING HEIGHT/WIDTH (DAMPER SHALL BE 1/4" LESS)
11. DUCT HEIGHT/WIDTH PLUS 1/4"
12. 1" TYP THREE SIDES
13. VARIES WITH DAMPER SIZE
14. BLADE LOCK
15. NAGATOR STAINLESS STEEL CLOSURE SPRING

NOTE: FIRE DAMPER SHALL GIVE 100% FREE AREA OF DUCT SIZE FOR AIR FLOW. BLADES SHALL NOT HANG DOWN INTO AIR STREAM.

## FIRE DAMPER DETAIL

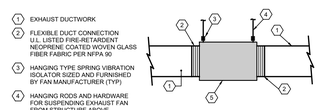
NO SCALE



1. DISCONNECT SWITCH
2. GASKET SEAL
3. ROOFING AND FLASHING BY G.C.
4. ROOF CONSTRUCTION
5. STRUCTURAL STEEL SUPPORT SEE STRUCTURAL DRAWINGS
6. EXHAUST DUCT
7. BACKDRAFT DAMPER
8. INSULATED ROOF CURB BY M.C. (PREFABRICATED)-SEE DRAWINGS FOR CURB HEIGHT
9. VERIFY ROOF PITCH-THE MECHANICAL TRADE SHALL FURNISH BLOCKING AS NECESSARY TO LEVEL CURB AND EXHAUST FAN

## ROOF EXHAUST FAN DETAIL

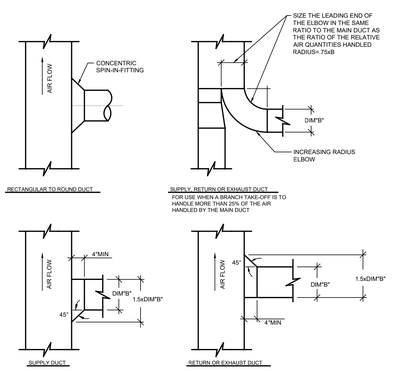
NO SCALE



1. EXHAUST DUCTWORK
2. FLEXIBLE DUCT CONNECTION U.L. LISTED FIRE-RETARDENT NEOPRENE COATED WOVEN GLASS FIBER FABRIC PER NFPA 90
3. HANGING TYPE SPRING VIBRATION ISOLATOR SIZED AND FURNISHED BY FAN MANUFACTURER (TYP)
4. HANGING RODS AND HARDWARE FOR SUSPENDING EXHAUST FAN FROM STRUCTURE ABOVE
5. INLINE EXHAUST FAN

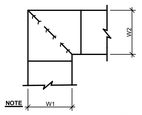
## INLINE EXHAUST FAN DETAIL

NO SCALE




## RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS

NO SCALE

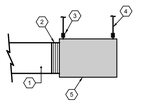



NOTE

1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20", VANES SHALL BE DOUBLE VANE TYPE.
5. NO MITERED ELBOW WITHOUT VANES SHALL BE INSTALLED.

## DUCTWORK SQUARE VANE MITERED ELBOWS

NO SCALE

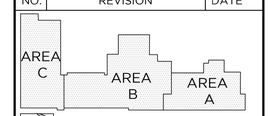


1. EXHAUST DUCTWORK
2. FLEXIBLE DUCT CONNECTION U.L. LISTED FIRE-RETARDENT NEOPRENE COATED WOVEN GLASS FIBER FABRIC PER NFPA 90
3. HANGING TYPE SPRING VIBRATION ISOLATOR SIZED AND FURNISHED BY FAN MANUFACTURER (TYP)
4. HANGING RODS AND HARDWARE FOR SUSPENDING EXHAUST FAN FROM STRUCTURE ABOVE
5. CEILING EXHAUST FAN INSTALLED IN CEILING OR TIGHT TO CEILING FOR MECHANICAL ROOMS

## CEILING EXHAUST FAN DETAIL

NO SCALE

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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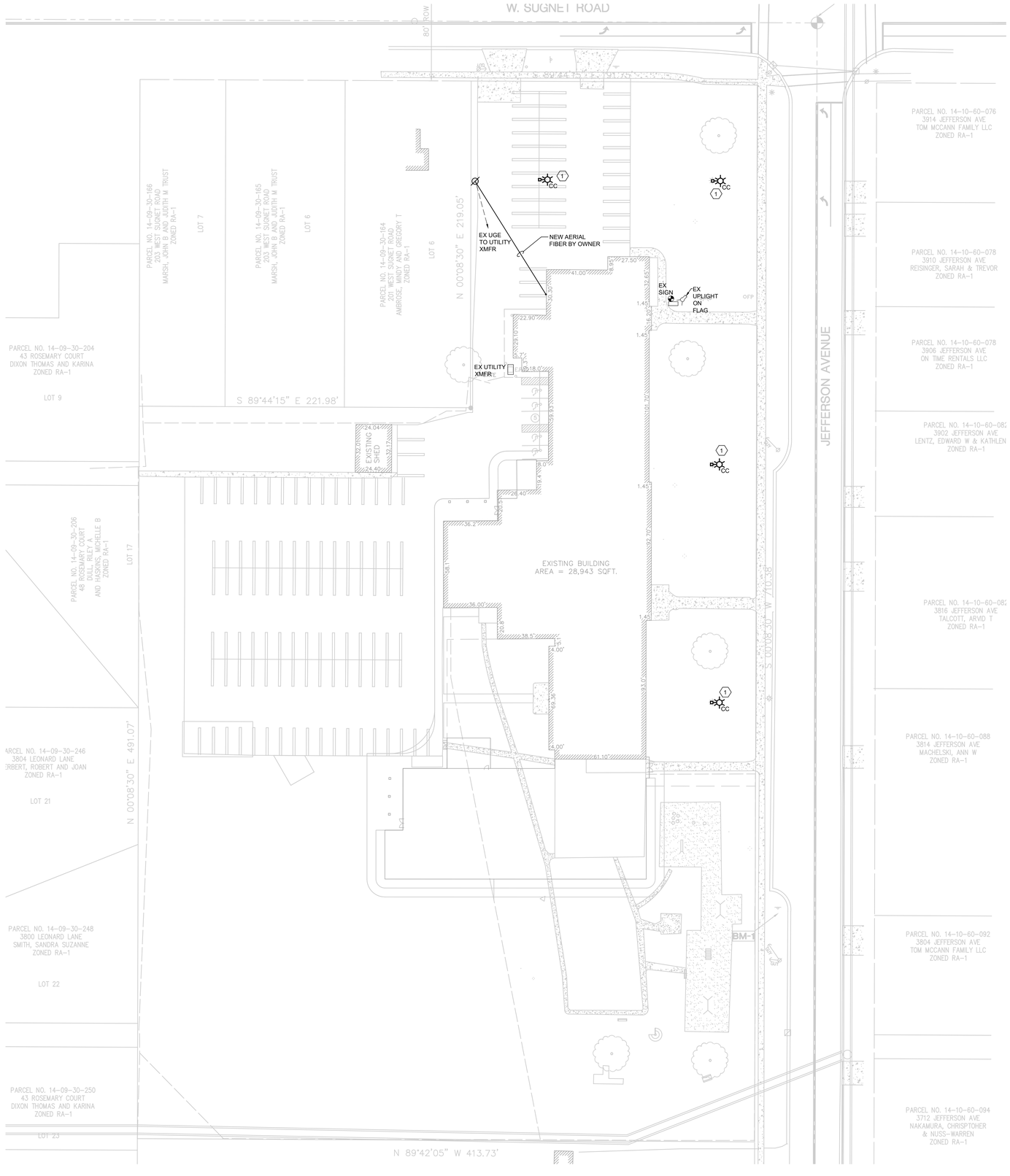
PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
MECHANICAL DETAILS

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY RAM
SHEET NUMBER M4.04




NORTH

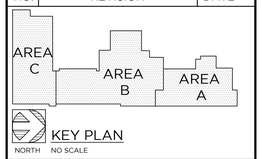
ELECTRICAL SITE PLAN

1"=30'-0"

**KEYED NOTES**

1. REMOVE EXISTING POST-TOP LUMINAIRE. CIRCUIT AND POLE SHALL BE REUSED WITH NEW TYPE CC LUMINAIRE.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

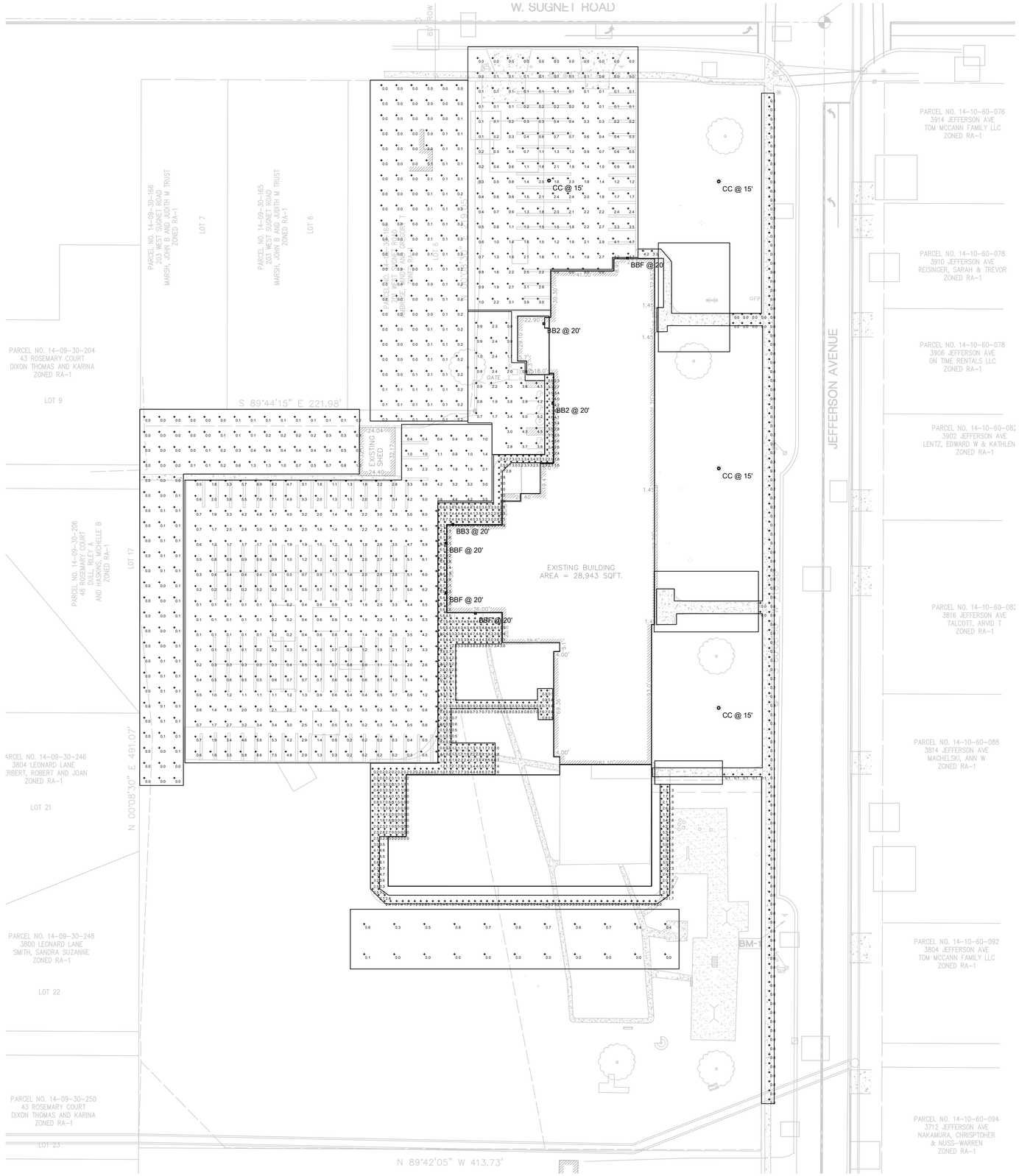
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

ELECTRICAL SITE PLAN

| PROJECT NUMBER | SHEET NUMBER |
|---|---|
| 2022006.1 | SE1.01 |
| PROJECT DATE: AUGUST 23, 2023 | |
| CHECKED BY: JWF | |




NORTH

## ELECTRICAL SITE LIGHTING POINT BY POINT CALCULATIONS PLAN

1"=30'-0"

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|---|---|---|
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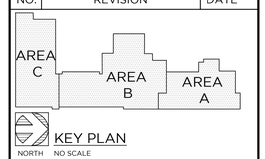
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

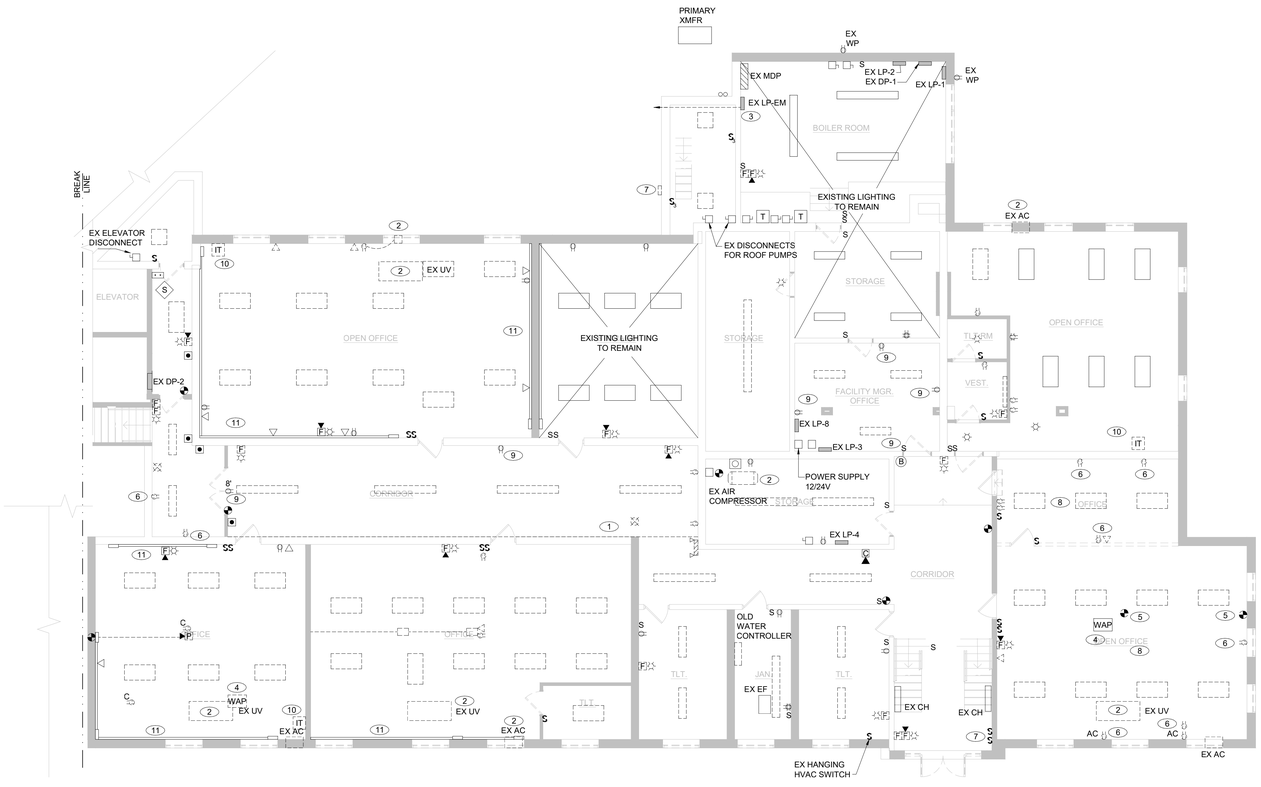
MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

ELECTRICAL SITE LIGHTING POINT BY POINT CALC. PLAN

| PROJECT NUMBER | SHEET NUMBER |
|---|---|
| 2022006.1 | SE1.02 |
| PROJECT DATE: AUGUST 23, 2023 | |
| CHECKED BY: JWF | |




NORTH

## DEMOLITION ELECTRICAL PLAN - LOWER LEVEL - AREA A

1/8"=1'-0"

**DEMOLITION SPECIAL NOTE**

1. DEMO ALL EXISTING FIRE ALARM AND SMOKE DETECTOR DEVICES INCLUDING ALL CONDUCTORS, RACEWAYS, HANGERS AND SUPPORTS. TO PREPARE FOR A NEW FIRE ALARM SYSTEM.

**GENERAL NOTES DEMOLITION**

1. ELECTRICAL PANELS SHOWN ON THE DEMO PLAN ARE SHOWN FOR REFERENCE. DO NOT REMOVE PANELS UNLESS NOTED OTHERWISE. REFER TO POWER DRAWINGS.
2. EC SHALL REMOVE AND PROPERLY DISPOSE OF ALL FIXTURES, LAMPS, BALLASTS AND WIRING SHOWN FOR DEMOLITION.
3. EC SHALL REMOVE ALL BLANK COVERS ON BOXES TO CONFIRM THE TYPE OF WIRING, POWER OR LOW VOLTAGE. REMOVE ALL WIRING, BOXES IF EMPTY SHALL BE REMOVED FOR WALL PATCHING.
4. ALL ITEMS SHOWN DASHED SHALL BE REMOVED UNLESS OTHERWISE NOTED.
5. REMOVE ALL CONDUIT AND WIRING BACK TO SOURCE FOR ALL DEVICES SHOWN TO BE REMOVED.
6. REMOVE ALL DATA CABLES BACK TO THE IDF RACK FOR ALL DATA OUTLETS. A COMPLETE NEW LOW VOLTAGE SYSTEM SHALL BE INSTALLED.
7. REMOVE ALL FIRE ALARM DEVICES. AS NOTES EXISTING MAIN FIRE ALARM CONTROL PANEL AND ASSOCIATED DEVICES IN AREA WITH LIMITED DEMOLITION SHALL REMAIN. IDENTIFY, PROTECT AND MARK EXISTING CABLING.
8. REMOVE ALL WIRELESS ACCESS POINTS AND RETURN TO OWNER. REMOVE CABLING BACK TO THE SOURCE.
9. REMOVE ALL HANGERS, SUPPORTS AND STRAPS ASSOCIATED WITH ITEMS BEING REMOVED.
10. REMOVE ALL ABANDONED CONDUIT AND BOXES TO PREPARE FOR PATCHING BY GENERAL TRADES.

**KEYED NOTES - DEMOLITION**

1. DEMO EXISTING MAKESHIFT "WIREMOLD" AND ALL POWER AND DATA CABLING WITHIN IT.
2. REMOVE ALL POWER, RACEWAY, CONDUIT AND SUPPORTS FOR DEMOED MECHANICAL EQUIPMENT.
3. DEMO FEED TO PANEL LP-EM. REMOVE ALL CONDUIT, WIRE, HANGARS ETC. PANEL TO BE REFED FROM LP-2. REFER TO POWER AND SYSTEMS AND ONE-LINE DRAWINGS.
4. REMOVE WIRELESS ACCESS POINT AND RETURN TO OWNER.
5. DEMO EXISTING POWER POLE THAT FEEDS CUBICLES.
6. REMOVE EXISTING DEVICES, DEMO WIRE AND CONDUIT BACK TO CEILING. RECEPTACLE CIRCUIT TO BE REUSED.
7. REMOVE EXISTING EXTERIOR WALL PACK LIGHT FIXTURE.
8. REMOVE EXISTING SURFACE RACEWAY. DEMO BACK TO CEILING.
9. EXISTING DEVICE TO REMAIN.
10. REMOVE IT EQUIPMENT AND RETURN TO OWNER.
11. EXISTING RACEWAY TO REMAIN.

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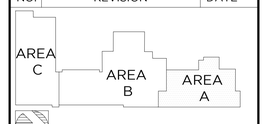
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

DEMOLITION ELECTRICAL PLAN - LOWER LEVEL AREA A

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E1.01

**DEMOLITION KEYED NOTES**

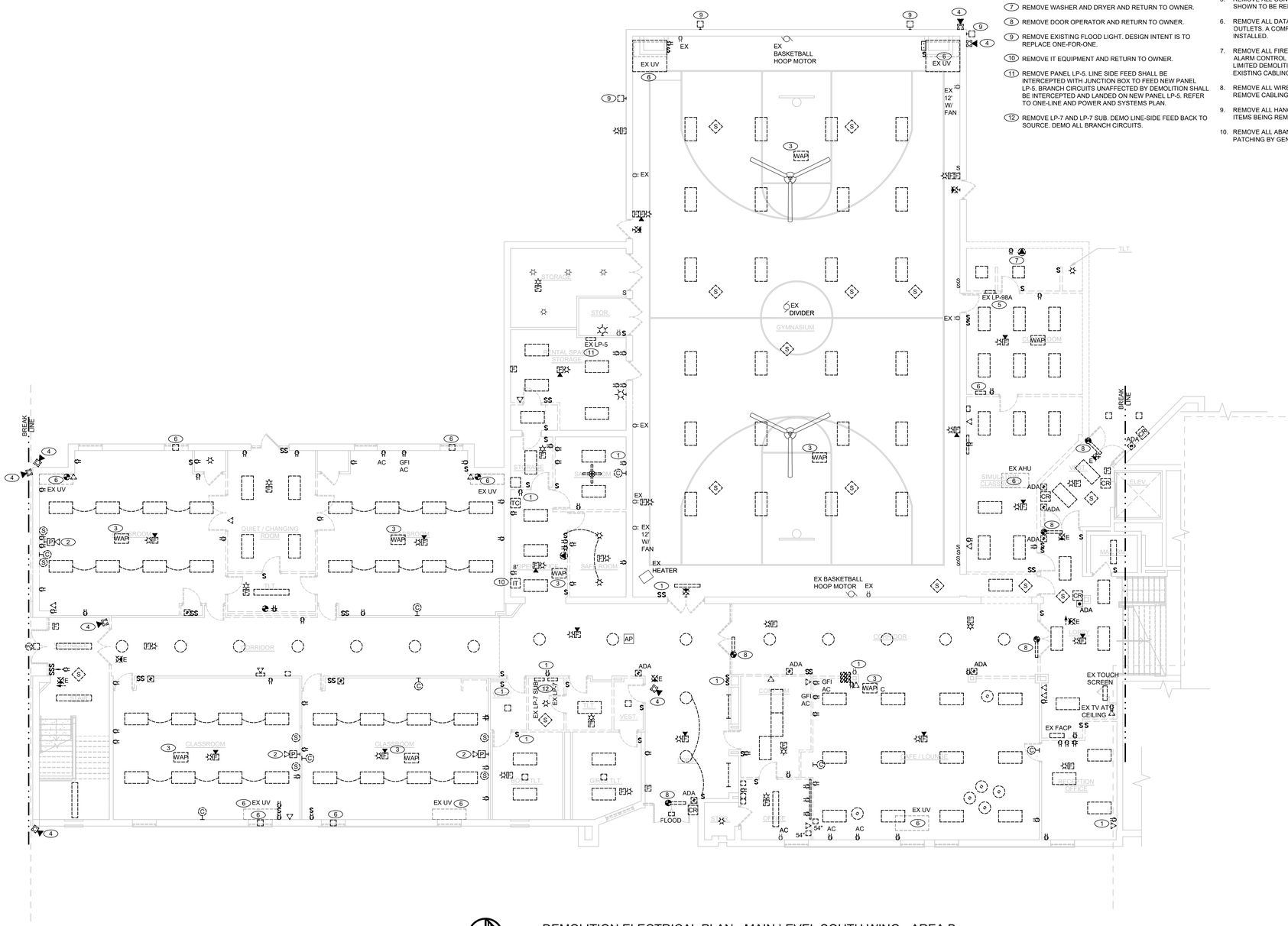
1. EXISTING ROUGH-IN TO BE REUSED. REMOVE OLD DEVICE AND REPLACE WITH NEW DEVICE ACCORDING TO ELECTRICAL PLANS.
2. REMOVE PROJECTOR AND SPEAKERS AND RETURN TO OWNER.
3. REMOVE WIRELESS ACCESS POINT AND RETURN TO OWNER.
4. REMOVE SECURITY CAMERA AND RETURN TO OWNER.
5. DEMO EXISTING ELECTRICAL PANEL. DEMO ALL BRANCH CIRCUITS. FIELD TRACE LINE-SIDE FEED. IF PANEL LP-98A IS FED FROM CEILING THEN DEMO LINE SIDE FEED TO ACCESSIBLE CEILING SPACE CLOSEST TO NEW PANEL RP1B. REFER TO POWER AND SYSTEMS PLAN. IF PANEL LP-98A IS FED UNDERGROUND THEN DEMO LINE-SIDE FEED BACK TO SOURCE.
6. REMOVE ALL POWER, RACEWAY, CONDUIT AND SUPPORTS FOR DEMOED MECHANICAL EQUIPMENT.
7. REMOVE WASHER AND DRYER AND RETURN TO OWNER.
8. REMOVE DOOR OPERATOR AND RETURN TO OWNER.
9. REMOVE EXISTING FLOOD LIGHT. DESIGN INTENT IS TO REPLACE ONE-FOR-ONE.
10. REMOVE IT EQUIPMENT AND RETURN TO OWNER.
11. REMOVE PANEL LP-5. LINE SIDE FEED SHALL BE INTERCEPTED WITH JUNCTION BOX TO FEED NEW PANEL LP-5. BRANCH CIRCUITS UNAFFECTED BY DEMOLITION SHALL BE INTERCEPTED AND LANDED ON NEW PANEL LP-5. REFER TO ONE-LINE AND POWER AND SYSTEMS PLAN.
12. REMOVE LP-7 AND LP-7 SUB. DEMO LINE-SIDE FEED BACK TO SOURCE. DEMO ALL BRANCH CIRCUITS.

**DEMOLITION SPECIAL NOTE**

1. DEMO ALL EXISTING FIRE ALARM AND SMOKE DETECTOR DEVICES INCLUDING ALL CONDUCTORS, RACEWAYS, HANGERS AND SUPPORTS. TO PREPARE FOR A NEW FIRE ALARM SYSTEM.

**GENERAL NOTES DEMOLITION**

1. ELECTRICAL PANELS SHOWN ON THE DEMO PLAN ARE SHOWN FOR REFERENCE. DO NOT REMOVE PANELS UNLESS NOTED OTHERWISE. REFER TO POWER DRAWINGS.
2. EC SHALL REMOVE AND PROPERLY DISPOSE OF ALL FIXTURES, LAMPS, BALLASTS AND WIRING SHOWN FOR DEMOLITION.
3. EC SHALL REMOVE ALL BLANK COVERS ON BOXES TO CONFIRM THE TYPE OF WIRING, POWER OR LOW VOLTAGE. REMOVE ALL WIRING, BOXES IF EMPTY SHALL BE REMOVED FOR WALL PATCHING.
4. ALL ITEMS SHOWN DASHED SHALL BE REMOVED UNLESS OTHERWISE NOTED.
5. REMOVE ALL CONDUIT AND WIRING BACK TO SOURCE FOR ALL DEVICES SHOWN TO BE REMOVED.
6. REMOVE ALL DATA CABLES BACK TO THE IDF RACK FOR ALL DATA OUTLETS. A COMPLETE NEW LOW VOLTAGE SYSTEM SHALL BE INSTALLED.
7. REMOVE ALL FIRE ALARM DEVICES. AS NOTES EXISTING MAIN FIRE ALARM CONTROL PANEL AND ASSOCIATED DEVICES IN AREA WITH LIMITED DEMOLITION SHALL REMAIN. IDENTIFY, PROTECT AND MARK EXISTING CABLING.
8. REMOVE ALL WIRELESS ACCESS POINTS AND RETURN TO OWNER. REMOVE CABLING BACK TO THE SOURCE.
9. REMOVE ALL HANGERS, SUPPORTS AND STRAPS ASSOCIATED WITH ITEMS BEING REMOVED.
10. REMOVE ALL ABANDONED CONDUIT AND BOXES TO PREPARE FOR PATCHING BY GENERAL TRADES.




NORTH

DEMOLITION ELECTRICAL PLAN - MAIN LEVEL SOUTH WING - AREA B

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

AREA C | AREA B | AREA A

KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

DEMOLITION ELECTRICAL PLAN - MAIN LEVEL SOUTH WING - AREA B

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E1.02

**DEMOLITION KEYED NOTES**

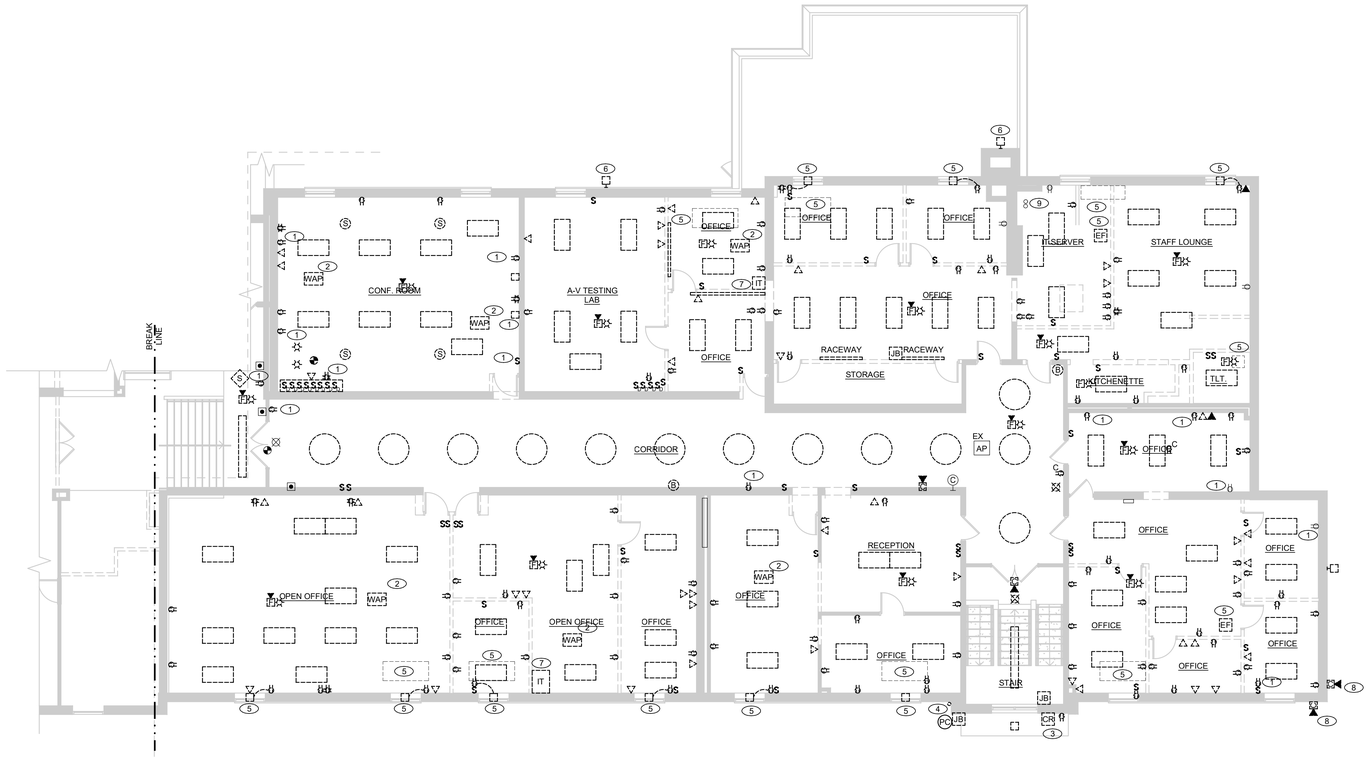
1. EXISTING ROUGH-IN TO BE REUSED. REMOVE OLD DEVICE AND REPLACE WITH NEW DEVICE ACCORDING TO ELECTRICAL PLANS.
2. REMOVE WIRELESS ACCESS POINT AND RETURN TO OWNER.
3. REMOVE AND REINSTALL CARD READER. JUNCTION BOX TO BE REPLACED.
4. DEMO EXISTING PHOTOCELL AND JUNCTION BOX. NEW JUNCTION BOX TO BE INSTALLED AT T-JUNCTION OF VERTICAL CONDUIT RUN.
5. REMOVE ALL POWER, RACEWAY, CONDUIT AND SUPPORTS FOR DEMOED MECHANICAL EQUIPMENT.
6. REMOVE EXISTING SITE LIGHT. DESIGN INTENT IS TO REPLACE ONE-FOR-ONE.
7. REMOVE EXISTING IT EQUIPMENT AND RETURN TO OWNER.
8. REMOVE CAMERA AND RETURN TO OWNER.
9. CONTRACTOR SHALL PROVIDE (2) 3" FLOOR CORES FOR TEMP DATA DURING CONSTRUCTION FROM EX UPPER LEVEL MDP TO NEW LOWER LEVEL MDL. PATCH HOLES AT THE END OF CONSTRUCTION.

**DEMOLITION SPECIAL NOTE**

1. DEMO ALL EXISTING FIRE ALARM AND SMOKE DETECTOR DEVICES INCLUDING ALL CONDUCTORS, RACEWAYS, HANGERS AND SUPPORTS. TO PREPARE FOR A NEW FIRE ALARM SYSTEM.

**GENERAL NOTES DEMOLITION**

1. ELECTRICAL PANELS SHOWN ON THE DEMO PLAN ARE SHOWN FOR REFERENCE. DO NOT REMOVE PANELS UNLESS NOTED OTHERWISE. REFER TO POWER DRAWINGS.
2. EC SHALL REMOVE AND PROPERLY DISPOSE OF ALL FIXTURES, LAMPS, BALLASTS AND WIRING SHOWN FOR DEMOLITION.
3. EC SHALL REMOVE ALL BLANK COVERS ON BOXES TO CONFIRM THE TYPE OF WIRING, POWER OR LOW VOLTAGE. REMOVE ALL WIRING, BOXES IF EMPTY SHALL BE REMOVED FOR WALL PATCHING.
4. ALL ITEMS SHOWN DASHED SHALL BE REMOVED UNLESS OTHERWISE NOTED.
5. REMOVE ALL CONDUIT AND WIRING BACK TO SOURCE FOR ALL DEVICES SHOWN TO BE REMOVED.
6. REMOVE ALL DATA CABLES BACK TO THE IDF RACK FOR ALL DATA OUTLETS. A COMPLETE NEW LOW VOLTAGE SYSTEM SHALL BE INSTALLED.
7. REMOVE ALL FIRE ALARM DEVICES. AS NOTES EXISTING MAIN FIRE ALARM CONTROL PANEL AND ASSOCIATED DEVICES IN AREA WITH LIMITED DEMOLITION SHALL REMAIN. IDENTIFY, PROTECT AND MARK EXISTING CABLING.
8. REMOVE ALL WIRELESS ACCESS POINTS AND RETURN TO OWNER. REMOVE CABLING BACK TO THE SOURCE.
9. REMOVE ALL HANGERS, SUPPORTS AND STRAPS ASSOCIATED WITH ITEMS BEING REMOVED.
10. REMOVE ALL ABANDONED CONDUIT AND BOXES TO PREPARE FOR PATCHING BY GENERAL TRADES.




NORTH

DEMOLITION ELECTRICAL PLAN - MAIN LEVEL NORTH WING - AREA A

1/8"=1'-0"

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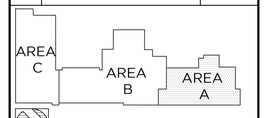
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

DEMOLITION ELECTRICAL PLAN - MAIN LEVEL NORTH WING - AREA A

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E1.03

**DEMOLITION SPECIAL NOTE**

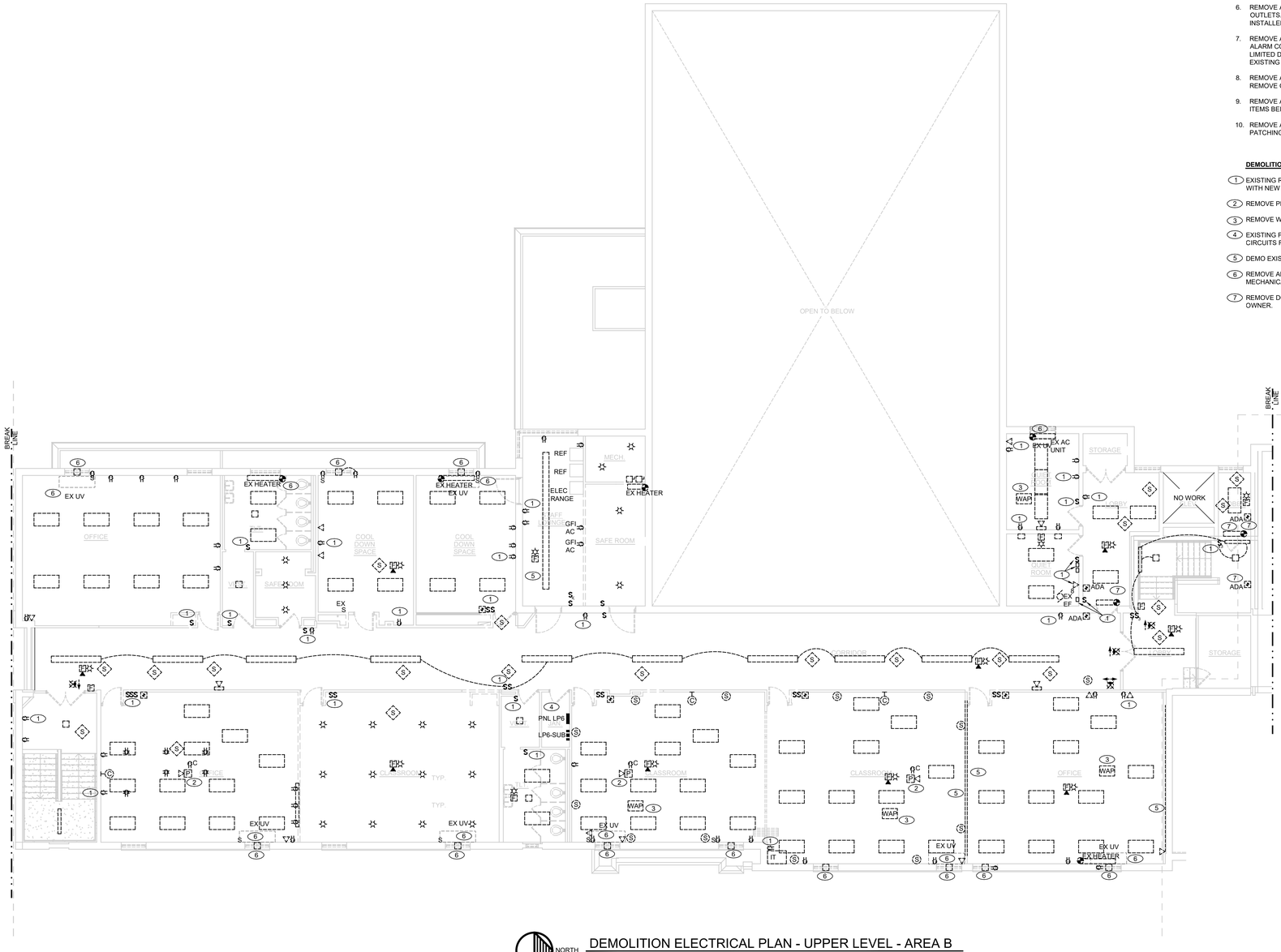
1. DEMO ALL EXISTING FIRE ALARM AND SMOKE DETECTOR DEVICES INCLUDING ALL CONDUCTORS, RACEWAYS, HANGERS AND SUPPORTS. TO PREPARE FOR A NEW FIRE ALARM SYSTEM.

**GENERAL NOTES DEMOLITION**

1. ELECTRICAL PANELS SHOWN ON THE DEMO PLAN ARE SHOWN FOR REFERENCE. DO NOT REMOVE PANELS UNLESS NOTED OTHERWISE. REFER TO POWER DRAWINGS.
2. EC SHALL REMOVE AND PROPERLY DISPOSE OF ALL FIXTURES, LAMPS, BALLASTS AND WIRING SHOWN FOR DEMOLITION.
3. EC SHALL REMOVE ALL BLANK COVERS ON BOXES TO CONFIRM THE TYPE OF WIRING, POWER OR LOW VOLTAGE. REMOVE ALL WIRING, BOXES IF EMPTY SHALL BE REMOVED FOR WALL PATCHING.
4. ALL ITEMS SHOWN DASHED SHALL BE REMOVED UNLESS OTHERWISE NOTED.
5. REMOVE ALL CONDUIT AND WIRING BACK TO SOURCE FOR ALL DEVICES SHOWN TO BE REMOVED.
6. REMOVE ALL DATA CABLES BACK TO THE IDF RACK FOR ALL DATA OUTLETS. A COMPLETE NEW LOW VOLTAGE SYSTEM SHALL BE INSTALLED.
7. REMOVE ALL FIRE ALARM DEVICES. AS NOTES EXISTING MAIN FIRE ALARM CONTROL PANEL AND ASSOCIATED DEVICES IN AREA WITH LIMITED DEMOLITION SHALL REMAIN. IDENTIFY, PROTECT AND MARK EXISTING CABLING.
8. REMOVE ALL WIRELESS ACCESS POINTS AND RETURN TO OWNER. REMOVE CABLING BACK TO THE SOURCE.
9. REMOVE ALL HANGERS, SUPPORTS AND STRAPS ASSOCIATED WITH ITEMS BEING REMOVED.
10. REMOVE ALL ABANDONED CONDUIT AND BOXES TO PREPARE FOR PATCHING BY GENERAL TRADES.

**DEMOLITION KEYED NOTES**

1. EXISTING ROUGH-IN TO BE REUSED. REMOVE OLD DEVICE AND REPLACE WITH NEW DEVICE ACCORDING TO ELECTRICAL PLANS.
2. REMOVE PROJECTOR AND SPEAKERS AND RETURN TO OWNER.
3. REMOVE WIRELESS ACCESS POINT AND RETURN TO OWNER.
4. EXISTING PANEL LP-6 TO REMAIN. DEMO LP-6 SUB. DEMO ALL BRANCH CIRCUITS FOR BOTH LP-6 AND LP-6 SUB. DEMO LP-6 SUB LINE SIDE FEED.
5. DEMO EXISTING WIREMOLD AND RACEWAY.
6. REMOVE ALL POWER, RACEWAY, CONDUIT AND SUPPORTS FOR DEMOED MECHANICAL EQUIPMENT.
7. REMOVE DOOR OPERATOR AND ASSOCIATED PUSHBUTTONS. RETURN TO OWNER.




NORTH

DEMOLITION ELECTRICAL PLAN - UPPER LEVEL - AREA B

1/8"=1'-0"

| NO. | REVISION | DATE |
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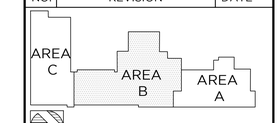
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

DEMOLITION ELECTRICAL PLAN - UPPER LEVEL AREA B

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

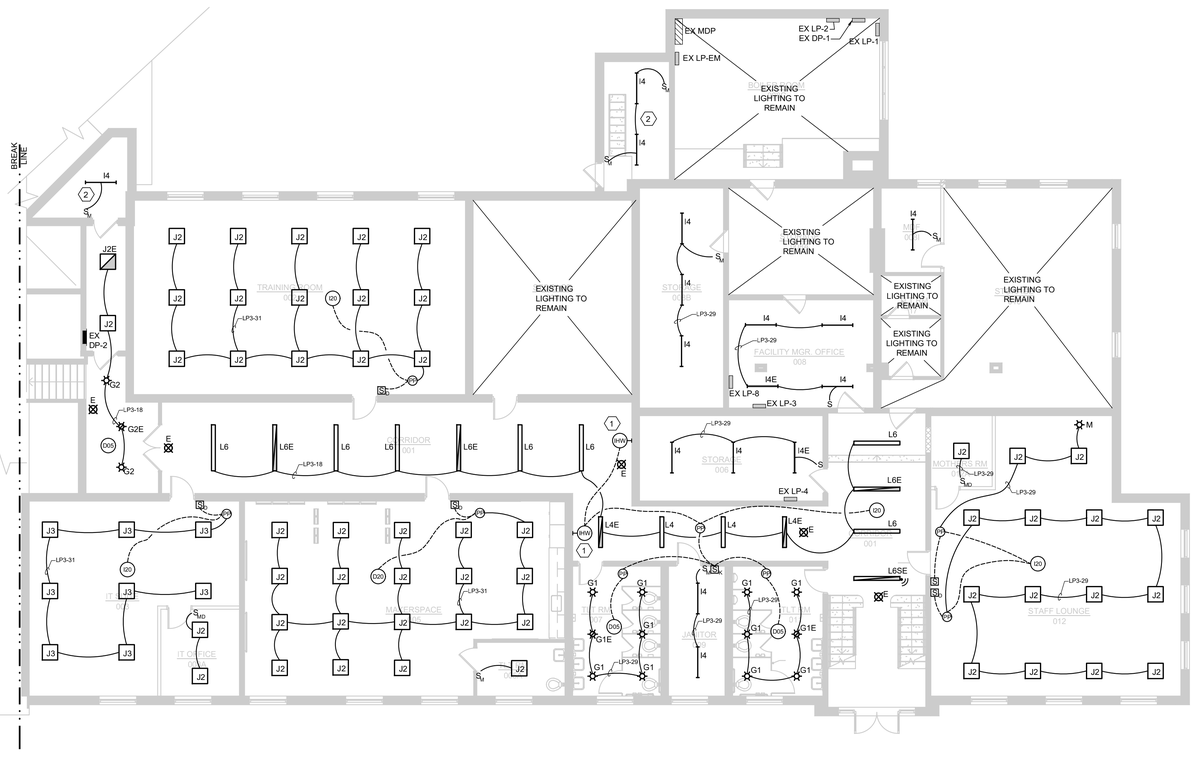
SHEET NUMBER: E1.04

KEYED NOTES

1. INSTALL HALLWAY OCCUPANCY SENSOR PER MANUFACTURER'S INSTRUCTIONS. MOUNT AT 7' AFF WITH CLEAR LINE-OF-SIGHT.
2. REUSE EXISTING LIGHTING CIRCUITING TO FEED NEW LIGHTS. MODIFY AND EXTEND CIRCUIT AS REQUIRED.

LIGHTING WIRING METHODS

1. EXIT LIGHTS SHALL OPERATE 24-7 AND ARE EQUIPPED WITH A BATTERY RATED FOR 90 MINUTES. WIRE THE EXIT LIGHT TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHING.
2. HALF-TONE SHADED FIXTURES REPRESENTS THE FIXTURE IS AN EMERGENCY LIGHT AND EQUIPPED WITH AN EMERGENCY BATTERY PACK.
3. CONFIRM LIGHT FIXTURE LAYOUT WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ARCHITECTURAL DETAILS FOR LOCATION AND MOUNTING DETAILS.
4. MC CABLE IS ONLY ACCEPTABLE AS A FINAL WIRING CONNECTION TO RECESSED LIGHTING INSTALLED IN ACCESSIBLE CEILINGS. MC CABLE LENGTH SHALL NOT EXCEED 6'-0".
5. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS. THE USE OF THE RACEWAY FOR A GROUNDING PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
6. SMALL ROOMS SUCH AS STORAGE ROOM, INDIVIDUAL TOILET ROOMS, JANITORS CLOSET, DATA CLOSET AND OFFICES SHALL HAVE WALL SWITCH TYPE OCCUPANCY SENSORS SWITCHES TO AUTOMATICALLY CONTROL THE LIGHTS AS NOTED AND SPECIFIED ON THE DRAWINGS.
7. OCCUPANCY SENSORS, POWER PACKS AND CONTROLS ARE SHOWN DIAGRAMMATICALLY. INFRARED SENSORS MUST REMAIN AT A MINIMUM OF 4'-0" AWAY FROM ANY MECHANICAL HEAT DIFFUSER TO ELIMINATE FALSE TRIPS. CIRCUIT LINES ARE SHOWN FROM SWITCHES TO LIGHT FIXTURES TO COMMUNICATE SWITCHING CONFIGURATION ONLY. ALL SENSORS, POWER PACKS AND WIRING MUST BE WIRED PER MANUFACTURER'S WIRING METHOD.
8. A SINGLE POWER PACK CAN HAVE MULTIPLE SWITCHES WIRED TO THE DEVICE PROVIDED THAT THE FIXTURES BEING CONTROLLED BY THESE SWITCHES ARE ON THE SAME CIRCUIT. TWO POWER PACKS ARE REQUIRED IF A SECOND CIRCUIT IS INTRODUCED. REFER TO MANUFACTURER'S WIRING METHODS. POWER PACKS AND OR OCCUPANCY SENSORS SHALL INCLUDE A HVAC RELAY AS SCHEDULED AND NOTED ON THE DRAWINGS FOR THE BUILDING AUTOMATION SYSTEM CONNECTION. BUILDING AUTOMATION WIRING SHALL BE COMPLETED AS PART OF THE TEMPERATURE CONTROL CONTRACTOR'S BID.
9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE STOPPING PENETRATIONS THRU FIRE RATED WALLS FOR THEIR WORK.
10. POWER PACKS SHOWN DIAGRAMMATICALLY. WHEN SHOWN IN GYP BOARD CEILING, LOCATE POWER PACK IN NEAREST LAY-IN CEILING OR CLOSET SPACE.




NORTH

LIGHTING PLAN - LOWER LEVEL - AREA A

1/8"=1'-0"

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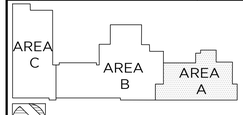
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

LIGHTING PLAN
LOWER LEVEL
AREA A

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.01

**KEYED NOTES**

1. EXISTING ROUGH IN TO BE REUSED. FURNISH AND INSTALL NEW DEVICE.
2. SWITCH ON EXTERIOR OF SENSORY ROOM TO OVERRIDE SWITCH ON THE INTERIOR.
3. INSTALL HALLWAY OCCUPANCY SENSOR PER MANUFACTURER'S INSTRUCTIONS. MOUNT AT 7' AFF WITH CLEAR LINE-OF-SIGHT.
4. REPLACE EXISTING GYM LIGHT FIXTURES ONE-FOR-ONE. REUSE EXISTING LP-5 CIRCUIT. MODIFY AND EXTEND AS NECESSARY.
5. KEYED SWITCH SHALL BE MANUAL OVERRIDE FOR LOBBY LIGHTING.
6. LOW VOLTAGE KEYED SWITCH SHALL BE MANUAL OVERRIDE FOR CORRIDOR LIGHTING.
7. INSTALL FIXTURE IN SAME LOCATION OF REMOVED FLOODLIGHT. MODIFY AND EXTEND EXISTING CIRCUITING TO FEED NEW FIXTURE AS REQUIRED. ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING CIRCUITING IS 208V, 1PH PRIOR TO ORDERING NEW LIGHT FIXTURES.

LIGHTING WIRING METHODS

1. EXIT LIGHTS SHALL OPERATE 24-7 AND ARE EQUIPPED WITH A BATTERY RATED FOR 90 MINUTES. WIRE THE EXIT LIGHT TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHING.
2. HALF-TONE SHADED FIXTURES REPRESENTS THE FIXTURE IS AN EMERGENCY LIGHT AND EQUIPPED WITH AN EMERGENCY BATTERY PACK.
3. CONFIRM LIGHT FIXTURE LAYOUT WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ARCHITECTURAL DETAILS FOR LOCATION AND MOUNTING DETAILS.
4. MC CABLE IS ONLY ACCEPTABLE AS A FINAL WIRING CONNECTION TO RECESSED LIGHTING INSTALLED IN ACCESSIBLE CEILINGS. MC CABLE LENGTH SHALL NOT EXCEED 6'-0".
5. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS. THE USE OF THE RACEWAY FOR A GROUNDING PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
6. SMALL ROOMS SUCH AS STORAGE ROOM, INDIVIDUAL TOILET ROOMS, JANITORS CLOSET, DATA CLOSET AND OFFICES SHALL HAVE WALL SWITCH TYPE OCCUPANCY SENSORS SWITCHES TO AUTOMATICALLY CONTROL THE LIGHTS AS NOTED AND SPECIFIED ON THE DRAWINGS.
7. OCCUPANCY SENSORS, POWER PACKS AND CONTROLS ARE SHOWN DIAGRAMMATICALLY. INFRARED SENSORS MUST REMAIN AT A MINIMUM OF 4'-0" AWAY FROM ANY MECHANICAL HEAT DIFFUSER TO ELIMINATE FALSE TRIPS. CIRCUIT LINES ARE SHOWN FROM SWITCHES TO LIGHT FIXTURES TO COMMUNICATE SWITCHING CONFIGURATION ONLY. ALL SENSORS, POWER PACKS AND WIRING MUST BE WIRED PER MANUFACTURER'S WIRING METHOD.
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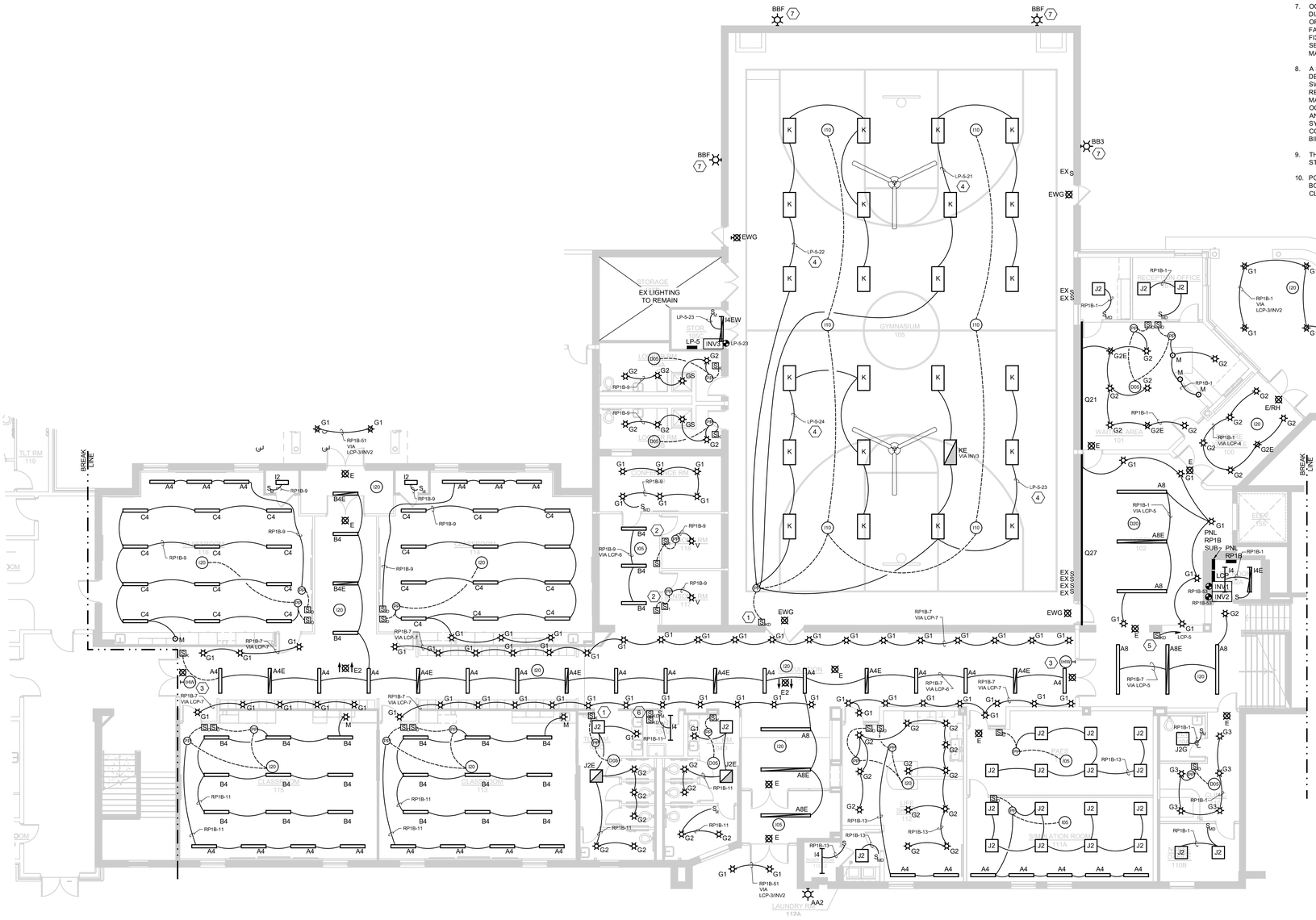
9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE STOPPING PENETRATIONS THRU FIRE RATED WALLS FOR THEIR WORK.
10. POWER PACKS SHOWN DIAGRAMMATICALLY. WHEN SHOWN IN GYP BOARD CEILING, LOCATE POWER PACK IN NEAREST LAY-IN CEILING OR CLOSET SPACE.

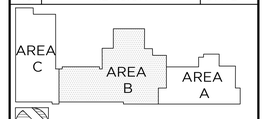



NORTH

LIGHTING PLAN - MAIN LEVEL SOUTH WING - AREA B

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

LIGHTING PLAN - MAIN LEVEL SOUTH WING - AREA B

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.02

**KEYED NOTES**

1. EXISTING ROUGH-IN TO BE REUSED. FURNISH AND INSTALL NEW DEVICE.
2. INSTALL HALLWAY OCCUPANCY SENSOR PER MANUFACTURER'S INSTRUCTIONS. MOUNT AT 7' AFF WITH CLEAR LINE-OF-SIGHT.
3. SWITCHES SHOWN DIAGRAMMATICALLY. ALL 3 SWITCHES SHALL BE ADJACENT.
4. CUSTOM PENDANT TO BE INSTALLED WITH 3', 5' AND 3' DIAMETER RINGS. SINGULAR POWER FEED WITH 3 POWER CORDS. COORDINATE MOUNTING DURING SUBMITTALS PHASE.
5. TYPE L6SE FIXTURE TO BE CONTROLLED WITH STAIRWELL FIXTURES.
6. INSTALL FIXTURE IN SAME LOCATION OF REMOVED FLOODLIGHT. MODIFY AND EXTEND EXISTING CIRCUITING TO FEED NEW FIXTURE AS REQUIRED. ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING CIRCUITING IS 208V, 1PH PRIOR TO ORDERING NEW LIGHT FIXTURES.

LIGHTING WIRING METHODS

1. EXIT LIGHTS SHALL OPERATE 24-7 AND ARE EQUIPPED WITH A BATTERY RATED FOR 90 MINUTES, WIRE THE EXIT LIGHT TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHING.
2. HALF-TONE SHADED FIXTURES REPRESENTS THE FIXTURE IS AN EMERGENCY LIGHT AND EQUIPPED WITH AN EMERGENCY BATTERY PACK.
3. CONFIRM LIGHT FIXTURE LAYOUT WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ARCHITECTURAL DETAILS FOR LOCATION AND MOUNTING DETAILS.
4. MC CABLE IS ONLY ACCEPTABLE AS A FINAL WIRING CONNECTION TO RECESSED LIGHTING INSTALLED IN ACCESSIBLE CEILINGS. MC CABLE LENGTH SHALL NOT EXCEED 6'-0".
5. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS. THE USE OF THE RACEWAY FOR A GROUNDING PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
6. SMALL ROOMS SUCH AS STORAGE ROOM, INDIVIDUAL TOILET ROOMS, JANITORS CLOSET, DATA CLOSET AND OFFICES SHALL HAVE WALL SWITCH TYPE OCCUPANCY SENSORS SWITCHES TO AUTOMATICALLY CONTROL THE LIGHTS AS NOTED AND SPECIFIED ON THE DRAWINGS.
7. OCCUPANCY SENSORS, POWER PACKS AND CONTROLS ARE SHOWN DIAGRAMMATICALLY. INFRARED SENSORS MUST REMAIN AT A MINIMUM OF 4'-0" AWAY FROM ANY MECHANICAL HEAT DIFFUSER TO ELIMINATE FALSE TRIPS. CIRCUIT LINES ARE SHOWN FROM SWITCHES TO LIGHT FIXTURES TO COMMUNICATE SWITCHING CONFIGURATION ONLY. ALL SENSORS, POWER PACKS AND WIRING MUST BE WIRED PER MANUFACTURER'S WIRING METHOD.
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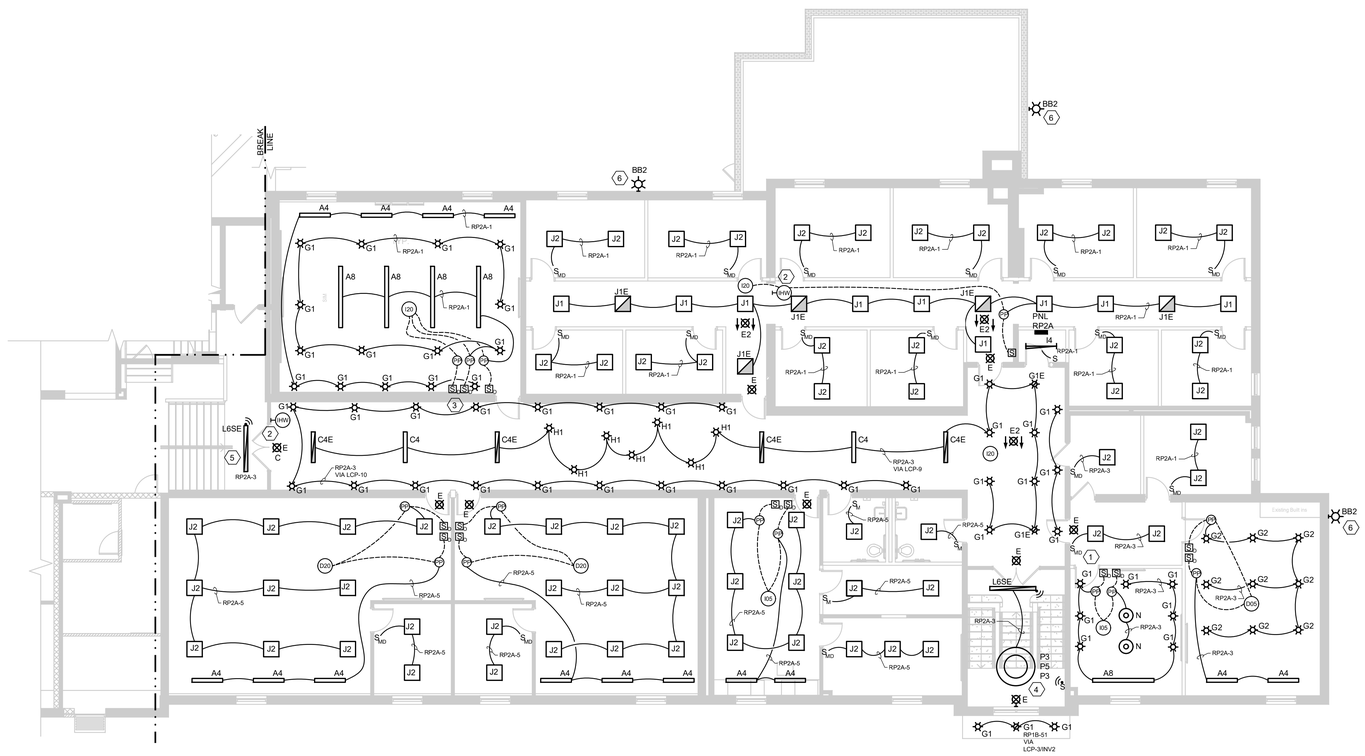
9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE STOPPING PENETRATIONS THRU FIRE RATED WALLS FOR THEIR WORK.
10. POWER PACKS SHOWN DIAGRAMMATICALLY. WHEN SHOWN IN GYP BOARD CEILING, LOCATE POWER PACK IN NEAREST LAY-IN CEILING OR CLOSET SPACE.




NORTH LIGHTING PLAN - MAIN LEVEL NORTH WING - AREA A

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

AREA C | AREA B | AREA A

KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

LIGHTING PLAN - MAIN LEVEL NORTH WING - AREA A

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.03

**KEYED NOTES**

1. EXISTING ROUGH-IN TO BE REUSED. FURNISH AND INSTALL NEW DEVICE.
2. KEYED SWITCH SHALL CONTROL RESTROOM LIGHTS. EC SHALL CLEARLY LABEL SWITCH.
3. INSTALL HALLWAY OCCUPANCY SENSOR PER MANUFACTURER'S INSTRUCTIONS. MOUNT AT 7' AFF WITH CLEAR LINE-OF-SIGHT. TIE IN TO LCP-1.

LIGHTING WIRING METHODS

1. EXIT LIGHTS SHALL OPERATE 24-7 AND ARE EQUIPPED WITH A BATTERY RATED FOR 90 MINUTES, WIRE THE EXIT LIGHT TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHING.
2. HALF-TONE SHADED FIXTURES REPRESENTS THE FIXTURE IS AN EMERGENCY LIGHT AND EQUIPPED WITH AN EMERGENCY BATTERY PACK.
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6. SMALL ROOMS SUCH AS STORAGE ROOM, INDIVIDUAL TOILET ROOMS, JANITORS CLOSET, DATA CLOSET AND OFFICES SHALL HAVE WALL SWITCH TYPE OCCUPANCY SENSORS SWITCHES TO AUTOMATICALLY CONTROL THE LIGHTS AS NOTED AND SPECIFIED ON THE DRAWINGS.
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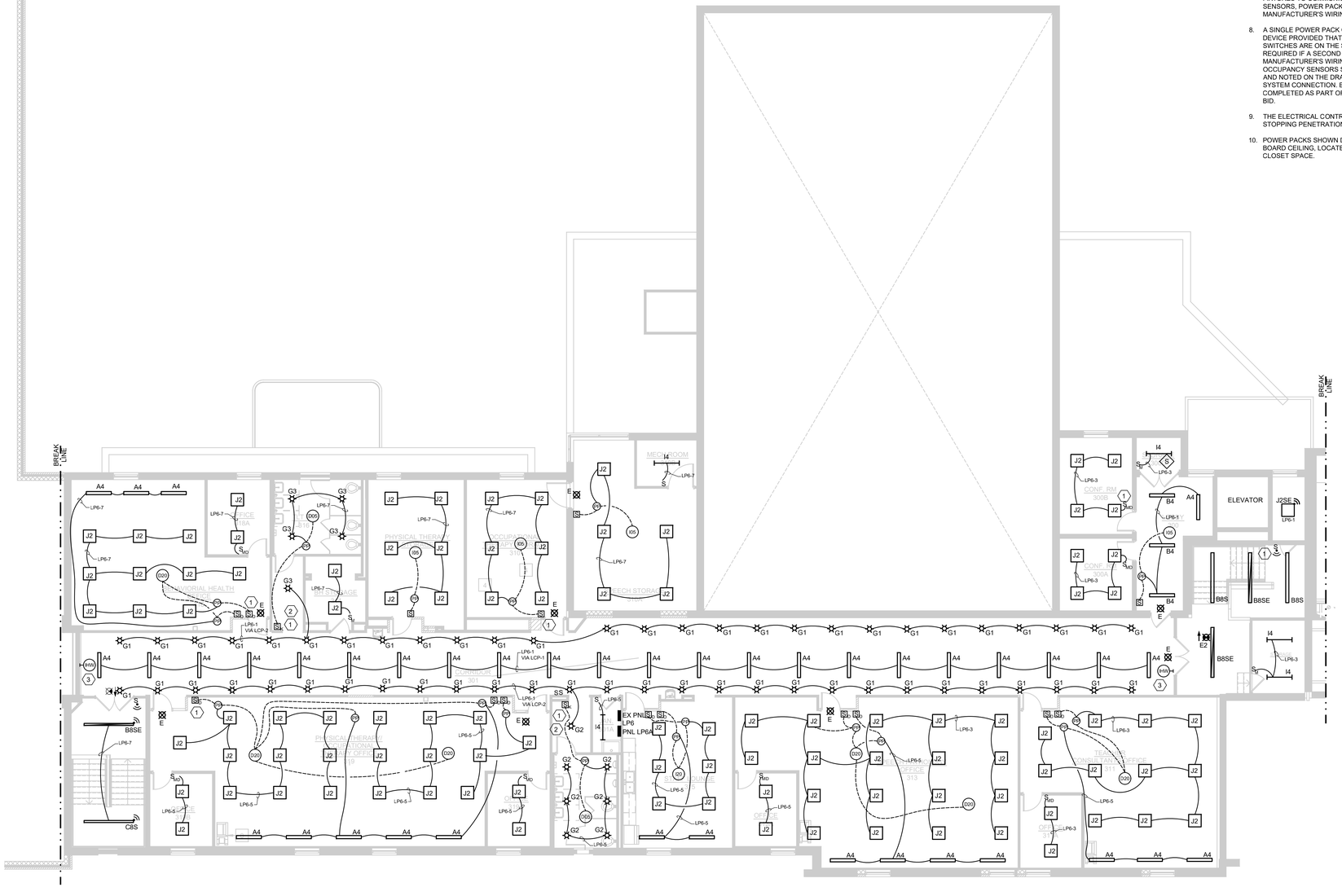
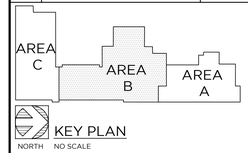



NORTH

LIGHTING PLAN - UPPER LEVEL - AREA B

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

LIGHTING PLAN - UPPER LEVEL AREA B

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.04

**KEYED NOTES**

1. INTERIOR LOW VOLTAGE SWITCH SHALL CONTROL ON/OFF, RAISE/LOWER, AND CCT IN SENSORS ROOM. EXTERIOR LOW VOLTAGE SWITCH SHALL BE MANUAL OVERRIDE.
2. INSTALL HALLWAY OCCUPANCY SENSOR PER MANUFACTURER'S INSTRUCTIONS. MOUNT AT 7' AFF WITH CLEAR LINE-OF-SIGHT. TIE IN TO LCP-1.
3. INSTALL HALLWAY OCCUPANCY SENSOR PER MANUFACTURER'S INSTRUCTIONS. MOUNT AT 7' AFF WITH CLEAR LINE-OF-SIGHT. TIE IN TO LCP-1.
4. CUSTOM PENDANT TO BE INSTALLED WITH 3', 5' AND 3' DIAMETER RINGS. SINGULAR POWER FEED WITH 3 POWER CORDS. COORDINATE MOUNTING DURING SUBMITTALS PHASE.

LIGHTING WIRING METHODS

1. EXIT LIGHTS SHALL OPERATE 24-7 AND ARE EQUIPPED WITH A BATTERY RATED FOR 90 MINUTES, WIRE THE EXIT LIGHT TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHING.
2. HALF-TONE SHADED FIXTURES REPRESENTS THE FIXTURE IS AN EMERGENCY LIGHT AND EQUIPPED WITH AN EMERGENCY BATTERY PACK.
3. CONFIRM LIGHT FIXTURE LAYOUT WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ARCHITECTURAL DETAILS FOR LOCATION AND MOUNTING DETAILS.
4. MC CABLE IS ONLY ACCEPTABLE AS A FINAL WIRING CONNECTION TO RECESSED LIGHTING INSTALLED IN ACCESSIBLE CEILINGS. MC CABLE LENGTH SHALL NOT EXCEED 6'-0".
5. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS. THE USE OF THE RACEWAY FOR A GROUNDING PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
6. SMALL ROOMS SUCH AS STORAGE ROOM, INDIVIDUAL TOILET ROOMS, JANITORS CLOSET, DATA CLOSET AND OFFICES SHALL HAVE WALL SWITCH TYPE OCCUPANCY SENSORS SWITCHES TO AUTOMATICALLY CONTROL THE LIGHTS AS NOTED AND SPECIFIED ON THE DRAWINGS.
7. OCCUPANCY SENSORS, POWER PACKS AND CONTROLS ARE SHOWN DIAGRAMMATICALLY. INFRARED SENSORS MUST REMAIN AT A MINIMUM OF 4'-0" AWAY FROM ANY MECHANICAL HEAT DIFFUSER TO ELIMINATE FALSE TRIPS. CIRCUIT LINES ARE SHOWN FROM SWITCHES TO LIGHT FIXTURES TO COMMUNICATE SWITCHING CONFIGURATION ONLY. ALL SENSORS, POWER PACKS AND WIRING MUST BE WIRED PER MANUFACTURER'S WIRING METHOD.
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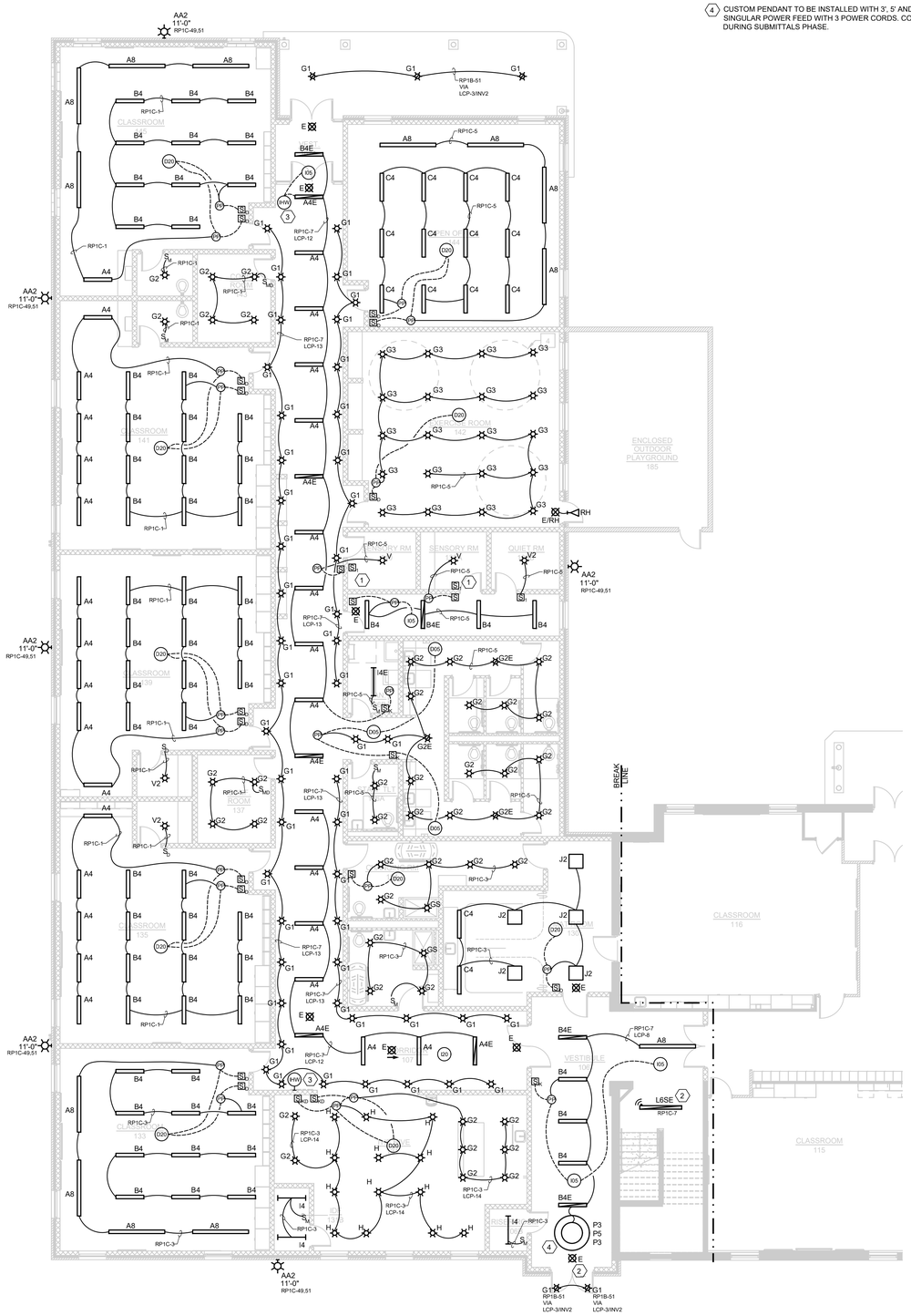


NORTH

LIGHTING PLAN - ADDITION - AREA C

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

AREA C | AREA B | AREA A

KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

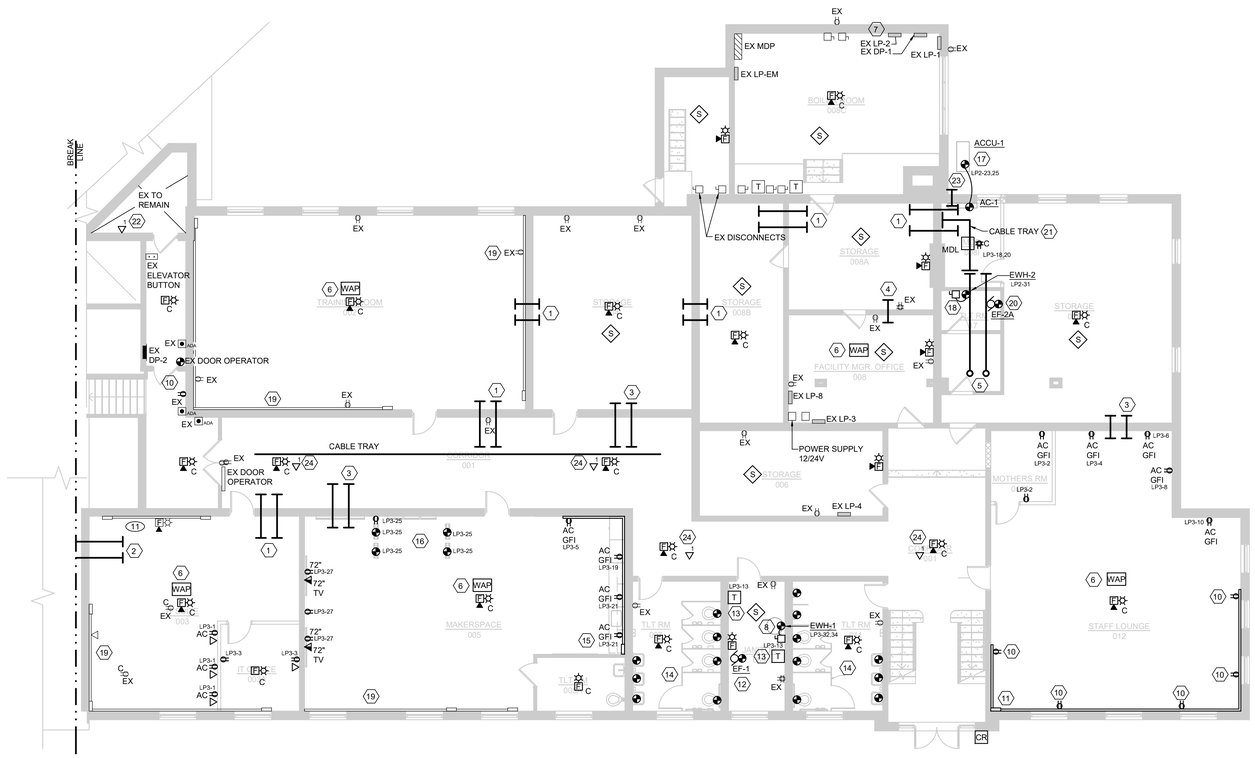
LIGHTING PLAN
ADDITION
AREA C

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.05




NORTH

## POWER AND SYSTEMS PLAN - LOWER LEVEL - AREA A

1/8"=1'-0"

**POWER & SYSTEMS WIRING METHODS**

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH RECEPTACLE CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR EACH RECEPTACLE. PROVIDE A #12 MINIMUM GROUNDING CONDUCTOR IN EACH RACEWAY. THE USE OF METAL CONDUIT OR RACEWAY FOR A BOND PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
3. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
4. ALL NEW RECEPTACLES AND VOICE/DATA OUTLETS SHALL BE MOUNTED AT A MINIMUM OF 16" TO THE BOTTOM OF BOX ABOVE THE FINISHED FLOOR, UNLESS NOTED OTHERWISE. 18" IS ONLY AN ACCEPTABLE MOUNTING HEIGHT PENDING FOR MASONRY COARSE LINE INSTALLATION. COORDINATE ALL DEVICE HEIGHTS WITH ARCHITECT.
5. ELECTRICAL TRADES SHALL CONFIRM VOICE/DATA AND RECEPTACLE LOCATION WITH THE OWNER'S FURNITURE LAYOUTS AND INSTALLATION.
6. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
7. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE WHITE, GRAY OR IVORY AS ADVISED BY THE ARCHITECT.
8. FIRE ALARM WIRING INSTALLED ABOVE THE FINISHED CEILING IS ACCEPTABLE TO USE THE FREE-AIR METHOD. USE "J" HOOKS OR "D" RINGS FOR SUPPORT METHODS. PROVIDE PLENUM RATED CABLE FOR THE ENTIRE PROJECT.
9. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 NATIONAL FIRE ALARM CODE, BUREAU OF FIRE SERVICES, 2003 MICHIGAN BARRIER FREE DESIGN MANUAL AND OTHER APPLICABLE CODES. MOUNTING HEIGHT REQUIREMENTS:

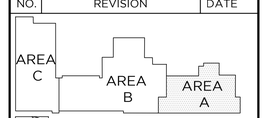
- WALL MOUNTED AUDIO/VISUAL UNITS SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR. CEILING MOUNTED DEVICES ARE ACCEPTABLE AND ARE NOTED ON THE DRAWINGS.
- MANUAL PULL STATIONS SHALL BE MOUNTED 48" MAXIMUM TO THE TOP OF BOX FROM THE FINISHED FLOOR.

9. ALL BRANCH DEVICES SHALL USE A 4" SQUARE STEEL BOX WITH A SINGLE GANG TRIM RING FOR INTERIOR GYPSUM BOARD WALLS. MASONRY BOXES ARE ACCEPTABLE FOR MASONRY WALL INSTALLATION. NON-METALLIC BOXES ARE NOT ACCEPTABLE FOR THIS PROJECT.
10. J-HOOKS AND CONDUIT OR CABLE TRAY SHALL BE USED FOR THE LOW-VOLTAGE SYSTEM WIRING INCLUDING BUT NOT LIMITED TO: FIRE ALARM, VOICE, DATA, PA, LIGHTING CONTROL, ETC.
11. USE MINIMUM 1" CONDUIT SIZE FOR VOICE/DATA OUTLET DROPS. EXTEND THE CONDUIT TO THE ADJACENT CORRIDOR ACCESSIBLE CEILING SPACE.
12. MC CABLE IS ONLY ACCEPTABLE FOR FINAL LIGHT FIXTURE CONNECTIONS ABOVE THE LAY-IN CEILING ON THIS PROJECT, UNLESS SPECIFICALLY NOTED.
13. RECEPTACLES, VOICE AND DATA OUTLET LOCATIONS SHOWN IN THE OFFICES, WORKROOM, CONFERENCE/LOUNGE AREA ARE BASED ON WORKSTATION, CASEWORK SHOWN AND THE ANTICIPATED OFFICE FURNITURE ARRANGEMENTS. CONFIRM THE FINAL LOCATIONS DURING THE ROUGH-IN PHASE.
14. VERIFY LOCATION AND ORIENTATION OF EXISTING STRUCTURAL FRAMING PRIOR TO CORING FLOOR FOR PENETRATION. EXISTING FRAMING SHALL NOT BE CUT, ADJUSTED, OR CHANGED IN ANY WAY WITHOUT APPROVAL OF STRUCTURAL ENGINEER AND ARCHITECT.
15. VERIFY ADA OPERATOR LOCATIONS WITH ARCHITECTURAL PLANS AND DOOR HARDWARE VENDOR PRIOR TO ROUGH-IN.

**KEYED NOTES**

1. FURNISH AND INSTALL (4) 2" CONDUIT STUBS INTO ACCESSIBLE CEILING SPACE FOR LOW VOLTAGE CABLING.
2. FURNISH AND INSTALL (4) 2" CONDUIT STUBS. DESIGN INTENT IS TO PROVIDE CONDUIT PATH FROM LOWER LEVEL AREA A MDF TO MAIN LEVEL AREA B IDF ROOM. COORDINATE LOCATION WITH CONDUIT STUBS FROM IDF ROOM.
3. FURNISH AND INSTALL (2) 2" CONDUIT STUBS INTO ACCESSIBLE CEILING SPACE. (1) CONDUIT SHALL BE AN EMPTY SPARE.
4. FURNISH AND INSTALL (1) 2" CONDUIT STUB THROUGH WALL INTO ACCESSIBLE CEILING SPACE.
5. FURNISH AND INSTALL (4) 2" CONDUIT FROM MDF ROOM TO ACCESSIBLE CEILING SPACE BENEATH PANEL RP2A ELECTRICAL ROOM. COORDINATE LOCATION WITH CONDUIT STUBS IN FLOOR ABOVE.
6. INSTALL FLUSH MOUNTED DATA JACK IN CEILING FOR WIRELESS ACCESS POINT.
7. EX PANEL LP-EM TO BE REFED FROM PANEL LP-2. FURNISH AND INSTALL 100A/2P BREAKER IN LP-2.
8. FURNISH AND INSTALL 30 AMP NEMA 1 DISCONNECT. PROVIDE 208V, 1PH POWER CONNECTION FROM DISCONNECT TO ELECTRIC WATER HEATER.
9. FURNISH AND INSTALL NEW DEVICE IN EXISTING ROUGH-IN. REUSE EXISTING CIRCUIT.
10. MODIFY AND EXTEND EXISTING CIRCUITING TO FEED NEW DEVICE.
11. FURNISH AND INSTALL NEW WIREMOLD 700 SERIES SURFACE RACEWAY. VERTICAL RUN IN CORNER, HORIZONTAL RUN AT RECEPTACLE STANDARD HEIGHT.
12. REUSE EXISTING EXHAUST FAN CIRCUIT TO FEED NEW EF-1 THROUGH FACTORY MOUNTED DISCONNECT. MODIFY AND EXTEND CIRCUIT AS REQUIRED.
13. INSTALL AND WIRE LOW VOLTAGE TRANSFORMER FURNISHED BY MECHANICAL TRADES. RUN LOW VOLTAGE WIRING TO BATHROOM SENSORS.
14. PROVIDE LOW VOLTAGE POWER CONNECTIONS TO BATHROOM SENSORS AS REQUIRED BY THE MECHANICAL SCHEDULE.
15. FURNISH AND INSTALL NEW WIREMOLD 700 SERIES SURFACE RACEWAY. VERTICAL RUN IN CORNER, HORIZONTAL RUN ABOVE COUNTER.
16. PROVIDE POWER CONNECTION FROM CEILING TO ILLUMINATED MARKER BOARDS THROUGH POST.
17. PROVIDE 208V, 1PH POWER CONNECTION TO ACC-1 THROUGH FACTORY MOUNTED AND WIRED DISCONNECT.
18. FURNISH AND INSTALL 30A NEMA 1 DISCONNECT UNDERNEATH SINK CABINET. PROVIDE 120V POWER CONNECTION FROM DISCONNECT TO EWH-2.
19. EXISTING WIREMOLD TO REMAIN.
20. USE EXISTING EXHAUST FAN CIRCUIT TO FEED NEW EXHAUST FAN THROUGH FACTORY MOUNTED.
21. FURNISH AND INSTALL 12 STRAND ARMORED FIBER OPTIC FROM MDL RACK TO EACH OF THE IDL RACKS. ROUTE THRU BUILDING. PROVIDE ALL TERMINATIONS.
22. ELECTRICAL CONTRACTOR SHALL PROVIDE CAT6 CABLE FROM ELEVATOR CONTROLLER TO MDL RACK.
23. ELECTRICAL CONTRACTOR SHALL PROVIDE NEW 1" RGS CONDUIT STUB 12" BELOW CEILING LINE TO EXTERIOR FOR USE BY OWNER FOR NEW BUILDING FIBER.
24. ELECTRICAL CONTRACTOR SHALL ADD DATA JACK IN CORRIDOR FOR FUTURE OWNER SPEAKERS/INTERCOM SYSTEM.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




NORTH KEY PLAN NO SCALE

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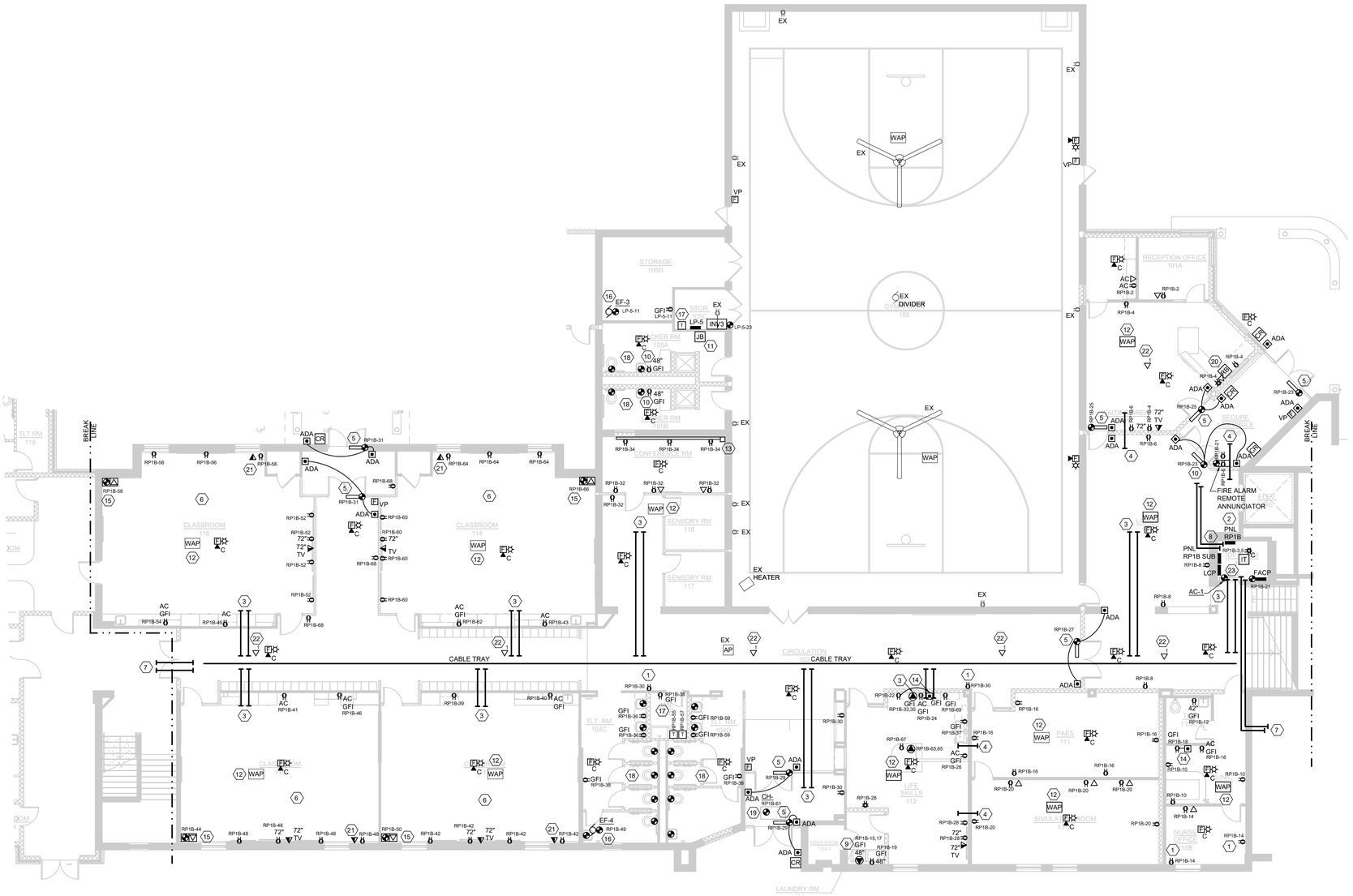
PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
POWER AND SYSTEMS PLAN
LOWER LEVEL
AREA A

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JWF
SHEET NUMBER E2.06




NORTH

## POWER AND SYSTEMS PLAN - MAIN LEVEL SOUTH WING - AREA B

1/8"=1'-0"

**POWER & SYSTEMS WIRING METHODS**

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH RECEPTACLE CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR EACH RECEPTACLE. PROVIDE A #12 MINIMUM GROUNDING CONDUCTOR IN EACH RACEWAY. THE USE OF METAL CONDUIT OR RACEWAY FOR A BOND PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
3. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
4. ALL NEW RECEPTACLES AND VOICE/DATA OUTLETS SHALL BE MOUNTED AT A MINIMUM OF 18" TO THE BOTTOM OF BOX ABOVE THE FINISHED FLOOR, UNLESS NOTED OTHERWISE. 18" IS ONLY AN ACCEPTABLE MOUNTING HEIGHT PENDING FOR MASONRY COARSE LINE INSTALLATION. COORDINATE ALL DEVICE HEIGHTS WITH ARCHITECT.
5. ELECTRICAL TRADES SHALL CONFIRM VOICE/DATA AND RECEPTACLE LOCATION WITH THE OWNER'S FURNITURE LAYOUTS AND INSTALLATION.
6. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
7. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE WHITE, GRAY OR IVORY AS ADVISED BY THE ARCHITECT.
8. FIRE ALARM WIRING INSTALLED ABOVE THE FINISHED CEILING IS ACCEPTABLE TO USE THE FREE-AIR METHOD. USE "J" HOOKS OR "D" RINGS FOR SUPPORT METHODS. PROVIDE PLENUM RATED CABLE FOR THE ENTIRE PROJECT.
9. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 NATIONAL FIRE ALARM CODE, BUREAU OF FIRE SERVICES, 2003 MICHIGAN BARRIER FREE DESIGN MANUAL AND OTHER APPLICABLE CODES. MOUNTING HEIGHT REQUIREMENTS:

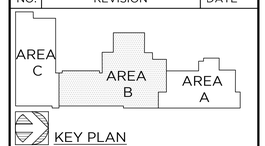
- WALL MOUNTED AUDIO/VISUAL UNITS SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR. CEILING MOUNTED DEVICES ARE ACCEPTABLE AND ARE NOTED ON THE DRAWINGS.
- MANUAL PULL STATIONS SHALL BE MOUNTED 48" MAXIMUM TO THE TOP OF BOX FROM THE FINISHED FLOOR.

9. ALL BRANCH DEVICES SHALL USE A 4" SQUARE STEEL BOX WITH A SINGLE GANG TRIM RING FOR INTERIOR GYPSUM BOARD WALLS. MASONRY BOXES ARE ACCEPTABLE FOR MASONRY WALL INSTALLATION. NON-METALLIC BOXES ARE NOT ACCEPTABLE FOR THIS PROJECT.
10. J-HOOKS AND CONDUIT OR CABLE TRAY SHALL BE USED FOR THE LOW-VOLTAGE SYSTEM WIRING INCLUDING BUT NOT LIMITED TO: FIRE ALARM, VOICE, DATA, PA, LIGHTING CONTROL, ETC.
11. USE MINIMUM 1" CONDUIT SIZE FOR VOICE/DATA OUTLET DROPS. EXTEND THE CONDUIT TO THE ADJACENT CORRIDOR ACCESSIBLE CEILING SPACE.
12. MC CABLE IS ONLY ACCEPTABLE FOR FINAL LIGHT FIXTURE CONNECTIONS ABOVE THE LAY-IN CEILING ON THIS PROJECT, UNLESS SPECIFICALLY NOTED.
13. RECEPTACLES, VOICE AND DATA OUTLET LOCATIONS SHOWN IN THE OFFICES, WORKROOM, CONFERENCE/LOUNGE AREA ARE BASED ON WORKSTATION, CASEWORK SHOWN AND THE ANTICIPATED OFFICE FURNITURE ARRANGEMENTS. CONFIRM THE FINAL LOCATIONS DURING THE ROUGH-IN PHASE.
14. VERIFY LOCATION AND ORIENTATION OF EXISTING STRUCTURAL FRAMING PRIOR TO CORING FLOOR FOR PENETRATION. EXISTING FRAMING SHALL NOT BE CUT, ADJUSTED, OR CHANGED IN ANY WAY WITHOUT APPROVAL OF STRUCTURAL ENGINEER AND ARCHITECT.
15. VERIFY ADA OPERATOR LOCATIONS WITH ARCHITECTURAL PLANS AND DOOR HARDWARE VENDOR PRIOR TO ROUGH-IN.

**KEYED NOTES**

1. EXISTING ROUGH-IN TO BE REUSED. FURNISH AND INSTALL NEW DEVICE AND CONDUCTORS.
2. FURNISH AND INSTALL NEW PANEL RP1B AND SUBPANEL.
3. FURNISH AND INSTALL (2) 2" CONDUIT STUBS FROM CABLE TRAY TO ACCESSIBLE CEILING SPACE. (1) CONDUIT SHALL BE AN EMPTY SPARE.
4. FURNISH AND INSTALL (1) 2" CONDUIT STUB THROUGH WALL INTO ACCESSIBLE CEILING SPACE.
5. PROVIDE ROUGH-IN AND POWER CONNECTION TO DOOR OPERATOR.
6. PROVIDE 10FT MAINTENANCE LOOP OF CAT6 IN ACCESSIBLE CEILING SPACE NEAR TEACHER'S DESK.
7. INSTALL (4) 2" CONDUIT STUBS THROUGH WALL FOR DATA ROUTING FROM MDF.
8. FURNISH AND INSTALL (4) 2" CONDUIT STUBS THROUGH WALL AND CEILING FOR DATA ROUTING TO UPPER LEVEL.
9. FURNISH AND INSTALL 30A, 208V RECEPTACLE FOR DRYER. SURFACE MOUNT WASHER AND DRYER RECEPTACLES.
10. PROVIDE DEDICATED CIRCUIT TO FEED BATHROOM GFI RECEPTACLE FROM NEW PANEL LP-5.
11. NEW PANEL LP-5 TO FEED OLD PANEL LP-5 REMAINING LOADS. MOUNT JUNCTION BOX IN LOCKER ROOM TO INTERCEPT EXISTING CIRCUITS AND REDIRECT TO NEW PANEL LP-5. MODIFY AND EXTEND CIRCUITS AS NECESSARY.
12. FURNISH AND INSTALL FLUSH MOUNTED DATA JACK IN CEILING FOR WIRELESS ACCESS POINT.
13. FURNISH AND INSTALL WIREMOLD FROM CEILING DOWN THE WALL IN CORNER. INSTALL HORIZONTAL RUN AT RECEPTACLE HEIGHT.
14. FURNISH AND INSTALL GFI PASS THROUGH DEVICE ABOVE COUNTER FOR FRIDGE RECEPTACLE.
15. PROVIDE POWER CONNECTION AND 3 CAT6 DATA CONNECTIONS TO FURNITURE BASE FEED. USE FURRING WALL TO ROUTE POWER AND DATA DOWN TO FURNITURE.
16. PROVIDE POWER CONNECTION TO EXHAUST FAN THROUGH FACTORY MOUNTED DISCONNECT.
17. INSTALL AND WIRE LOW VOLTAGE TRANSFORMER FURNISHED BY MECHANICAL TRADES. RUN LOW VOLTAGE WIRING TO BATHROOM SENSORS.
18. PROVIDE LOW VOLTAGE POWER CONNECTIONS TO BATHROOM SENSORS AS REQUIRED BY THE MECHANICAL SCHEDULE.
19. PROVIDE 120V POWER CONNECTION TO CABINET HEATER THROUGH FACTORY MOUNTED AND WIRED DISCONNECT.
20. ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN ABOVE RECEPTION COUNTER FOR DOOR HARDWARE RECEPTION BUTTON.
21. HDMI CONNECTION SHALL BE FROM TEACHER'S DESK LOCATION TO CLASSROOM MONITOR.
22. ELECTRICAL CONTRACTOR SHALL ADD DATA JACK IN CORRIDOR/OPEN OFFICE FOR FUTURE OWNER SPEAKERS/INTERCOM SYSTEM.
23. AC-1 SHALL BE POWERED FROM ACCU-1 ON ROOF.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

NORTH NO SCALE

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

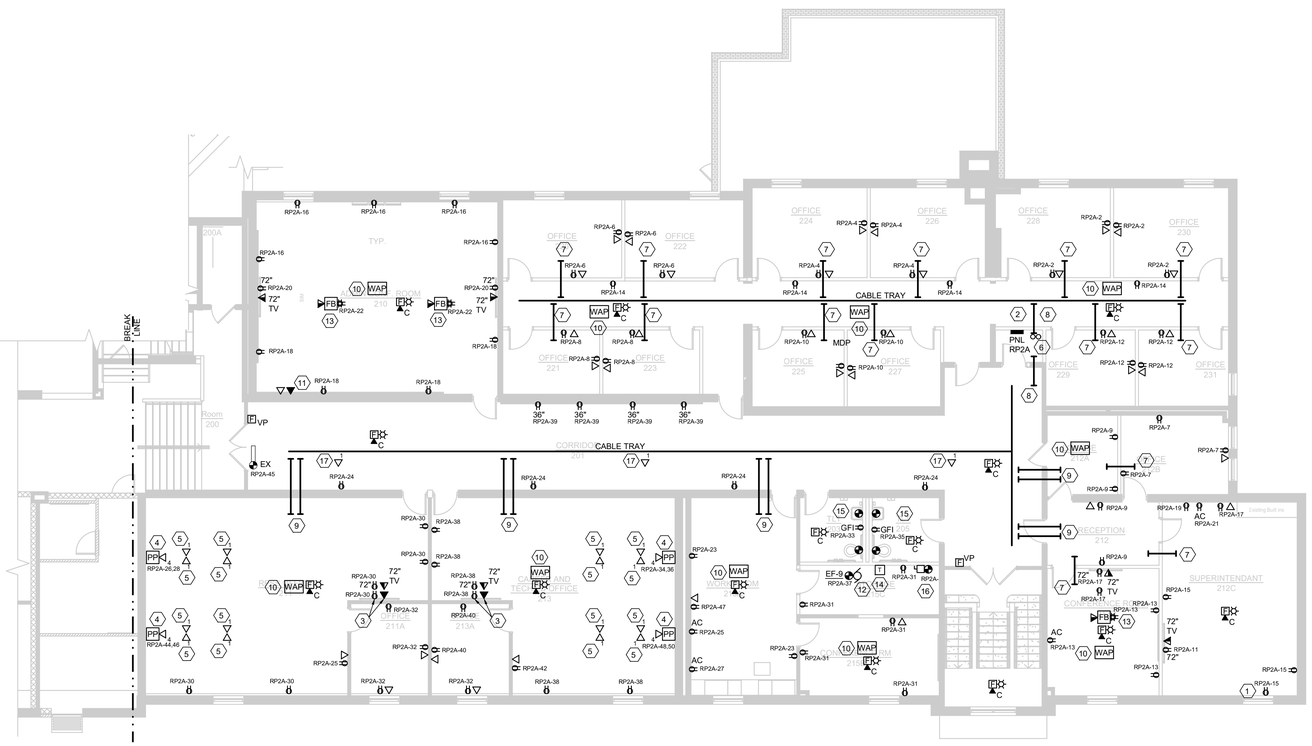
POWER AND SYSTEMS PLAN
MAIN LEVEL
SOUTH WING - AREA B

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.07




NORTH

## POWER AND SYSTEMS PLAN - MAIN LEVEL NORTH WING - AREA A

1/8"=1'-0"

**POWER & SYSTEMS WIRING METHODS**

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH RECEPTACLE CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR EACH RECEPTACLE. PROVIDE A #12 MINIMUM GROUNDING CONDUCTOR IN EACH RACEWAY. THE USE OF METAL CONDUIT OR RACEWAY FOR A BOND PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
3. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
4. ALL NEW RECEPTACLES AND VOICE/DATA OUTLETS SHALL BE MOUNTED AT A MINIMUM OF 16" TO THE BOTTOM OF BOX ABOVE THE FINISHED FLOOR, UNLESS NOTED OTHERWISE. 18" IS ONLY AN ACCEPTABLE MOUNTING HEIGHT PENDING FOR MASONRY COARSE LINE INSTALLATION. COORDINATE ALL DEVICE HEIGHTS WITH ARCHITECT.
5. ELECTRICAL TRADES SHALL CONFIRM VOICE/DATA AND RECEPTACLE LOCATION WITH THE OWNER'S FURNITURE LAYOUTS AND INSTALLATION.
6. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
7. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE WHITE, GRAY OR IVORY AS ADVISED BY THE ARCHITECT.
8. FIRE ALARM WIRING INSTALLED ABOVE THE FINISHED CEILING IS ACCEPTABLE TO USE THE FREE-AIR METHOD. USE "J" HOOKS OR "D" RINGS FOR SUPPORT METHODS. PROVIDE PLENUM RATED CABLE FOR THE ENTIRE PROJECT.
9. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 NATIONAL FIRE ALARM CODE, BUREAU OF FIRE SERVICES, 2003 MICHIGAN BARRIER FREE DESIGN MANUAL AND OTHER APPLICABLE CODES. MOUNTING HEIGHT REQUIREMENTS:

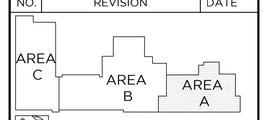
- WALL MOUNTED AUDIO/VISUAL UNITS SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR. CEILING MOUNTED DEVICES ARE ACCEPTABLE AND ARE NOTED ON THE DRAWINGS.
- MANUAL PULL STATIONS SHALL BE MOUNTED 48" MAXIMUM TO THE TOP OF BOX FROM THE FINISHED FLOOR.

9. ALL BRANCH DEVICES SHALL USE A 4" SQUARE STEEL BOX WITH A SINGLE GANG TRIM RING FOR INTERIOR GYPSUM BOARD WALLS. MASONRY BOXES ARE ACCEPTABLE FOR MASONRY WALL INSTALLATION. NON-METALLIC BOXES ARE NOT ACCEPTABLE FOR THIS PROJECT.
10. J-HOOKS AND CONDUIT OR CABLE TRAY SHALL BE USED FOR THE LOW-VOLTAGE SYSTEM WIRING INCLUDING BUT NOT LIMITED TO: FIRE ALARM, VOICE, DATA, PA, LIGHTING CONTROL, ETC.
11. USE MINIMUM 1" CONDUIT SIZE FOR VOICE/DATA OUTLET DROPS. EXTEND THE CONDUIT TO THE ADJACENT CORRIDOR ACCESSIBLE CEILING SPACE.
12. MC CABLE IS ONLY ACCEPTABLE FOR FINAL LIGHT FIXTURE CONNECTIONS ABOVE THE LAY-IN CEILING ON THIS PROJECT, UNLESS SPECIFICALLY NOTED.
13. RECEPTACLES, VOICE AND DATA OUTLET LOCATIONS SHOWN IN THE OFFICES, WORKROOM, CONFERENCE/LOUNGE AREA ARE BASED ON WORKSTATION, CASEWORK SHOWN AND THE ANTICIPATED OFFICE FURNITURE ARRANGEMENTS. CONFIRM THE FINAL LOCATIONS DURING THE ROUGH-IN PHASE.
14. VERIFY LOCATION AND ORIENTATION OF EXISTING STRUCTURAL FRAMING PRIOR TO CORING FLOOR FOR PENETRATION. EXISTING FRAMING SHALL NOT BE CUT, ADJUSTED, OR CHANGED IN ANY WAY WITHOUT APPROVAL OF STRUCTURAL ENGINEER AND ARCHITECT.
15. VERIFY ADA OPERATOR LOCATIONS WITH ARCHITECTURAL PLANS AND DOOR HARDWARE VENDOR PRIOR TO ROUGH-IN.

**KEYED NOTES**

1. EXISTING ROUGH-IN TO BE REUSED. FURNISH AND INSTALL NEW DEVICE AND CONDUCTORS.
2. FURNISH AND INSTALL NEW PANEL RP2A. REFER TO ONE LINE.
3. FURNISH AND INSTALL POWER AND HDMI TV PORT 6" ABOVE DESK TO CENTERLINE OF ROUGH-INS.
4. ROUTE POWER AND DATA THROUGH POWER POLE. EACH DESK SHALL HAVE ONE RECEPTACLE AND ONE DATA PORT.
5. UTILIZE POWER POLE FOR POWER AND RACEWAY FOR DATA TO DESK.
6. FURNISH AND INSTALL (2) 4" CONDUITS THROUGH FLOOR FOR DATA ROUTING.
7. FURNISH AND INSTALL (1) 2" CONDUIT INTO ACCESSIBLE CEILING SPACE.
8. FURNISH AND INSTALL (1) 4" CONDUIT FOR DATA ROUTING TO CABLE TRAY.
9. FURNISH AND INSTALL (2) 2" CONDUITS INTO ACCESSIBLE CEILING SPACE. (1) CONDUIT SHALL BE AN EMPTY SPARE.
10. INSTALL FLUSH MOUNTED DATA JACK IN CEILING FOR WIRELESS ACCESS POINT.
11. ROUTE 1" CONDUIT FROM HDMI OUTLET TO ACCESSIBLE CEILING SPACE AND TO ACCESSIBLE CEILING SPACE IN FLOOR BELOW. (1) HDMI WILL BE CONNECTED TO EACH FLOORBOX, AND (1) HDMI WILL BE CONNECTED TO EACH TV. (4) CONNECTIONS IN TOTAL WILL BE AVAILABLE AT HDMI OUTLET.
12. PROVIDE POWER CONNECTION TO EXHAUST FAN THROUGH FACTORY MOUNTED DISCONNECT.
13. FURNISH AND INSTALL FIRE RATED POKE-THRU FLOORBOX. REFER TO ELECTRICAL SCHEDULES.
14. INSTALL AND WIRE LOW VOLTAGE TRANSFORMER FURNISHED BY MECHANICAL TRADES. RUN LOW VOLTAGE WIRING TO BATHROOM SENSORS.
15. PROVIDE LOW VOLTAGE POWER CONNECTIONS TO BATHROOM SENSORS AS REQUIRED BY THE MECHANICAL SCHEDULE.
16. FURNISH AND INSTALL 30A NEMA 1 DISCONNECT UNDERNEATH SINK CABINET. PROVIDE 120V POWER CONNECTION FROM DISCONNECT TO EWH-2.
17. ELECTRICAL CONTRACTOR SHALL ADD DATA JACK IN CORRIDOR FOR FUTURE OWNER SPEAKERS/INTERCOM SYSTEM.

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

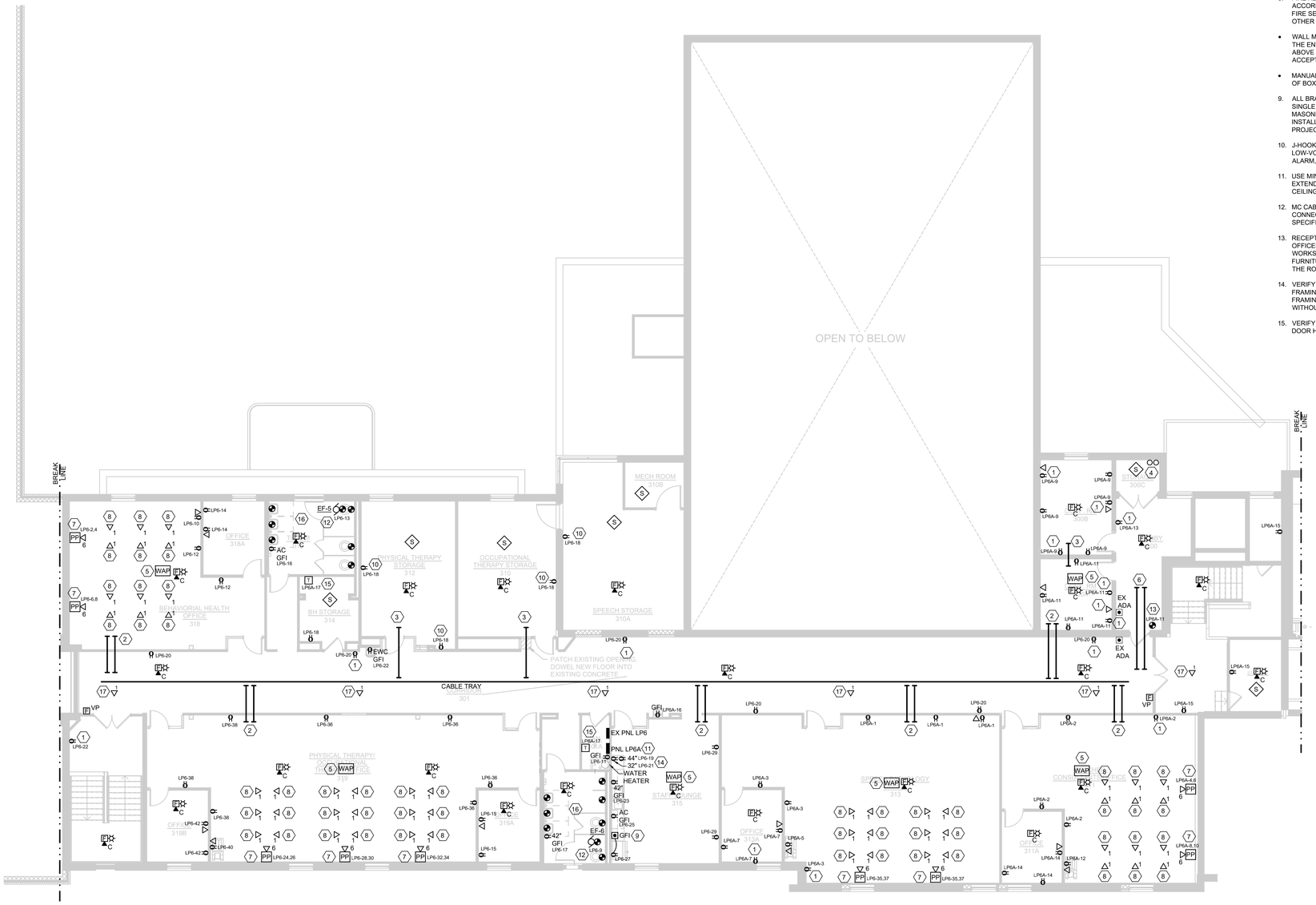
POWER AND SYSTEMS PLAN
MAIN LEVEL
NORTH WING - AREA A

PROJECT NUMBER: 2022006.1

PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.08




NORTH

## POWER AND SYSTEMS PLAN - UPPER LEVEL - AREA B

1/8"=1'-0"

**POWER & SYSTEMS WIRING METHODS**

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH RECEPTACLE CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR EACH RECEPTACLE. PROVIDE A #12 MINIMUM GROUNDING CONDUCTOR IN EACH RACEWAY. THE USE OF METAL CONDUIT OR RACEWAY FOR A BOND PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
3. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
4. ALL NEW RECEPTACLES AND VOICE/DATA OUTLETS SHALL BE MOUNTED AT A MINIMUM OF 16" TO THE BOTTOM OF BOX ABOVE THE FINISHED FLOOR, UNLESS NOTED OTHERWISE. 18" IS ONLY AN ACCEPTABLE MOUNTING HEIGHT PENDING FOR MASONRY COARSE LINE INSTALLATION. COORDINATE ALL DEVICE HEIGHTS WITH ARCHITECT.
5. ELECTRICAL TRADES SHALL CONFIRM VOICE/DATA AND RECEPTACLE LOCATION WITH THE OWNER'S FURNITURE LAYOUTS AND INSTALLATION.
6. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
7. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE WHITE, GRAY OR IVORY AS ADVISED BY THE ARCHITECT.
8. FIRE ALARM WIRING INSTALLED ABOVE THE FINISHED CEILING IS ACCEPTABLE TO USE THE FREE-AIR METHOD. USE "J" HOOKS OR "D" RINGS FOR SUPPORT METHODS. PROVIDE PLENUM RATED CABLE FOR THE ENTIRE PROJECT.
9. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 NATIONAL FIRE ALARM CODE, BUREAU OF FIRE SERVICES, 2003 MICHIGAN BARRIER FREE DESIGN MANUAL AND OTHER APPLICABLE CODES. MOUNTING HEIGHT REQUIREMENTS:

- WALL MOUNTED AUDIO/VISUAL UNITS SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR. CEILING MOUNTED DEVICES ARE ACCEPTABLE AND ARE NOTED ON THE DRAWINGS.
- MANUAL PULL STATIONS SHALL BE MOUNTED 48" MAXIMUM TO THE TOP OF BOX FROM THE FINISHED FLOOR.

9. ALL BRANCH DEVICES SHALL USE A 4" SQUARE STEEL BOX WITH A SINGLE GANG TRIM RING FOR INTERIOR GYPSUM BOARD WALLS. MASONRY BOXES ARE ACCEPTABLE FOR MASONRY WALL INSTALLATION. NON-METALLIC BOXES ARE NOT ACCEPTABLE FOR THIS PROJECT.
10. J-HOOKS AND CONDUIT OR CABLE TRAY SHALL BE USED FOR THE LOW-VOLTAGE SYSTEM WIRING INCLUDING BUT NOT LIMITED TO: FIRE ALARM, VOICE, DATA, PA, LIGHTING CONTROL, ETC.
11. USE MINIMUM 1" CONDUIT SIZE FOR VOICE/DATA OUTLET DROPS. EXTEND THE CONDUIT TO THE ADJACENT CORRIDOR ACCESSIBLE CEILING SPACE.
12. MC CABLE IS ONLY ACCEPTABLE FOR FINAL LIGHT FIXTURE CONNECTIONS ABOVE THE LAY-IN CEILING ON THIS PROJECT, UNLESS SPECIFICALLY NOTED.
13. RECEPTACLES, VOICE AND DATA OUTLET LOCATIONS SHOWN IN THE OFFICES, WORKROOM, CONFERENCE/LOUNGE AREA ARE BASED ON WORKSTATION, CASEWORK SHOWN AND THE ANTICIPATED OFFICE FURNITURE ARRANGEMENTS. CONFIRM THE FINAL LOCATIONS DURING THE ROUGH-IN PHASE.
14. VERIFY LOCATION AND ORIENTATION OF EXISTING STRUCTURAL FRAMING PRIOR TO CORING FLOOR FOR PENETRATION. EXISTING FRAMING SHALL NOT BE CUT, ADJUSTED, OR CHANGED IN ANY WAY WITHOUT APPROVAL OF STRUCTURAL ENGINEER AND ARCHITECT.
15. VERIFY ADA OPERATOR LOCATIONS WITH ARCHITECTURAL PLANS AND DOOR HARDWARE VENDOR PRIOR TO ROUGH-IN.

**KEYED NOTES**

1. EXISTING ROUGH-IN TO BE REUSED. FURNISH AND INSTALL NEW DEVICE.
2. FURNISH AND INSTALL (2) 2" CONDUITS INTO ACCESSIBLE CEILING SPACE. (1) CONDUIT SHALL BE AN EMPTY SPARE.
3. FURNISH AND INSTALL (1) 2" CONDUIT INTO ACCESSIBLE CEILING SPACE.
4. FURNISH AND INSTALL (2) 4" CONDUITS THROUGH FLOOR FOR DATA ROUTING. COORDINATE LOCATION WITH MAIN LEVEL - AREA B.
5. INSTALL FLUSH MOUNTED DATA JACK IN CEILING FOR WIRELESS ACCESS POINT.
6. FURNISH AND INSTALL (2) 4" CONDUITS IN CEILING.
7. ROUTE POWER AND DATA THROUGH POWER POLE. EACH DESK SHALL HAVE ONE RECEPTACLE AND ONE DATA PORT.
8. UTILIZE POWER POLE FOR POWER AND RACEWAY FOR DATA TO DESK.
9. FURNISH AND INSTALL GFI PASS THROUGH DEVICE ABOVE COUNTER TO FEED REFRIGERATOR RECEPTACLE.
10. REUSE EXISTING SURFACE CONDUIT AND BOX. INSTALL NEW DEVICE.
11. FURNISH AND INSTALL NEW PANEL LP6A. FEED FROM PANEL LP6. REFER TO PANEL SCHEDULES.
12. PROVIDE POWER CONNECTION TO EXHAUST FAN THROUGH FACTORY MOUNTED DISCONNECT.
13. PROVIDE POWER CONNECTION TO ADA DOOR OPERATOR.
14. FURNISH AND INSTALL (2) RECEPTACLES FOR DUAL MICROWAVE CABINET. COORDINATE DEVICE HEIGHTS WITH ARCHITECTURAL DETAIL PRIOR TO INSTALLATION.
15. INSTALL AND WIRE LOW VOLTAGE TRANSFORMER FURNISHED BY MECHANICAL TRADES. RUN LOW VOLTAGE WIRING TO BATHROOM SENSORS.
16. PROVIDE LOW VOLTAGE POWER CONNECTIONS TO BATHROOM SENSORS AS REQUIRED BY THE MECHANICAL SCHEDULE.
17. ELECTRICAL CONTRACTOR SHALL ADD DATA JACK IN CORRIDOR FOR FUTURE OWNER SPEAKERS/INTERCOM SYSTEM.

| NO. | REVISION | DATE |
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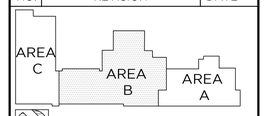


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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

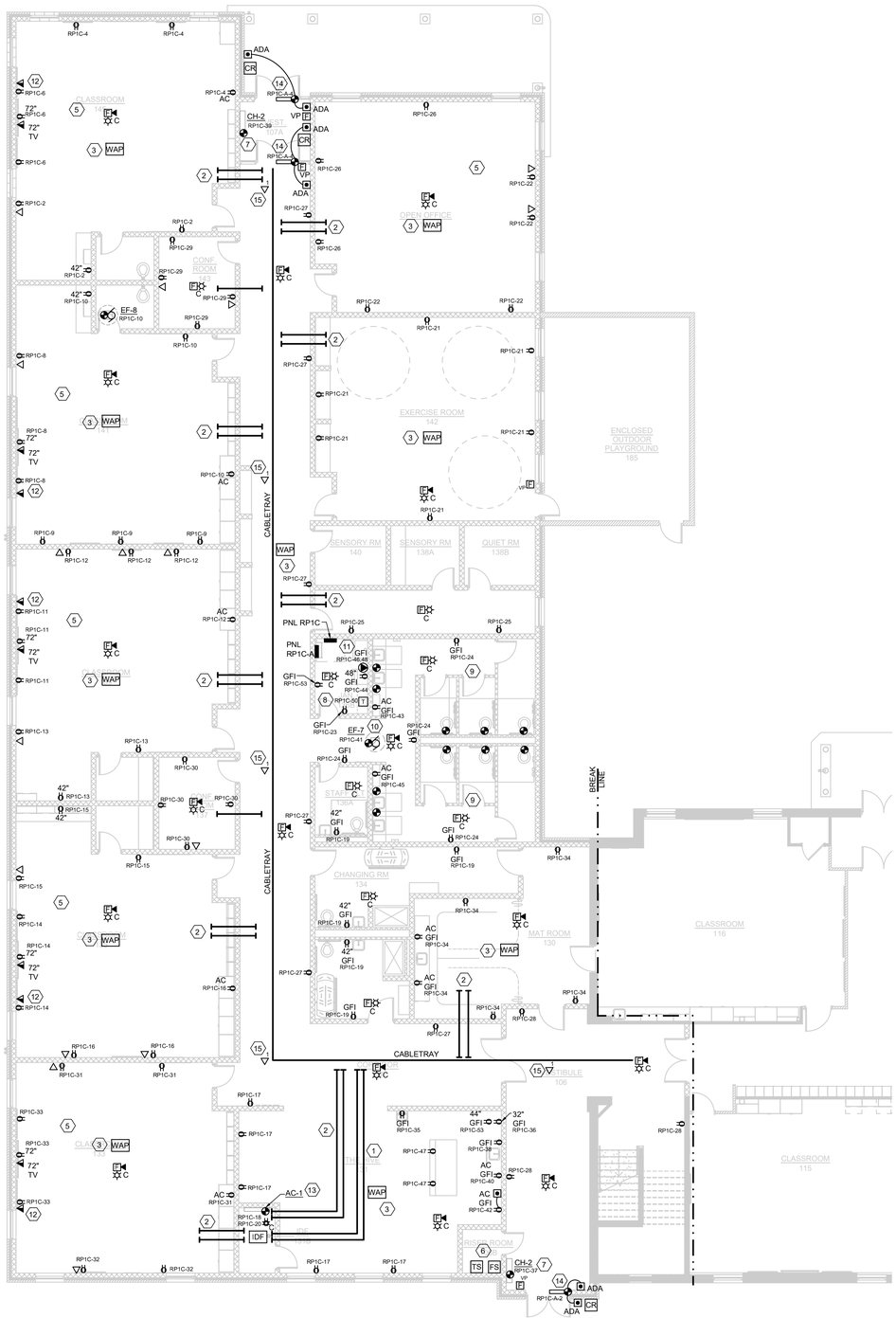
SHEET TITLE
POWER AND SYSTEMS PLAN
UPPER LEVEL
AREA B

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
E2.09




NORTH

POWER AND SYSTEMS PLAN - ADDITION - AREA C

1/8"=1'-0"

**POWER & SYSTEMS WIRING METHODS**

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH RECEPTACLE CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR EACH RECEPTACLE. PROVIDE A #12 MINIMUM GROUNDING CONDUCTOR IN EACH RACEWAY. THE USE OF METAL CONDUIT OR RACEWAY FOR A BOND PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
3. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
4. ALL NEW RECEPTACLES AND VOICE/DATA OUTLETS SHALL BE MOUNTED AT A MINIMUM OF 16" TO THE BOTTOM OF BOX ABOVE THE FINISHED FLOOR, UNLESS NOTED OTHERWISE. 18" IS ONLY AN ACCEPTABLE MOUNTING HEIGHT PENDING FOR MASONRY COARSE LINE INSTALLATION. COORDINATE ALL DEVICE HEIGHTS WITH ARCHITECT.
5. ELECTRICAL TRADES SHALL CONFIRM VOICE/DATA AND RECEPTACLE LOCATION WITH THE OWNER'S FURNITURE LAYOUTS AND INSTALLATION.
6. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
7. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE WHITE, GRAY OR IVORY AS ADVISED BY THE ARCHITECT.
8. FIRE ALARM WIRING INSTALLED ABOVE THE FINISHED CEILING IS ACCEPTABLE TO USE THE FREE-AIR METHOD. USE "J" HOOKS OR "D" RINGS FOR SUPPORT METHODS. PROVIDE PLENUM RATED CABLE FOR THE ENTIRE PROJECT.
9. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 NATIONAL FIRE ALARM CODE, BUREAU OF FIRE SERVICES, 2003 MICHIGAN BARRIER FREE DESIGN MANUAL AND OTHER APPLICABLE CODES. MOUNTING HEIGHT REQUIREMENTS:

- WALL MOUNTED AUDIO/VISUAL UNITS SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR. CEILING MOUNTED DEVICES ARE ACCEPTABLE AND ARE NOTED ON THE DRAWINGS.
- MANUAL PULL STATIONS SHALL BE MOUNTED 48" MAXIMUM TO THE TOP OF BOX FROM THE FINISHED FLOOR.

9. ALL BRANCH DEVICES SHALL USE A 4" SQUARE STEEL BOX WITH A SINGLE GANG TRIM RING FOR INTERIOR GYPSUM BOARD WALLS. MASONRY BOXES ARE ACCEPTABLE FOR MASONRY WALL INSTALLATION. NON-METALLIC BOXES ARE NOT ACCEPTABLE FOR THIS PROJECT.
10. J-HOOKS AND CONDUIT OR CABLE TRAY SHALL BE USED FOR THE LOW-VOLTAGE SYSTEM WIRING INCLUDING BUT NOT LIMITED TO: FIRE ALARM, VOICE, DATA, PA, LIGHTING CONTROL, ETC.
11. USE MINIMUM 1" CONDUIT SIZE FOR VOICE/DATA OUTLET DROPS. EXTEND THE CONDUIT TO THE ADJACENT CORRIDOR ACCESSIBLE CEILING SPACE.
12. MC CABLE IS ONLY ACCEPTABLE FOR FINAL LIGHT FIXTURE CONNECTIONS ABOVE THE LAY-IN CEILING ON THIS PROJECT, UNLESS SPECIFICALLY NOTED.
13. RECEPTACLES, VOICE AND DATA OUTLET LOCATIONS SHOWN IN THE OFFICES, WORKROOM, CONFERENCE/LOUNGE AREA ARE BASED ON WORKSTATION. CASEWORK SHOWN AND THE ANTICIPATED OFFICE FURNITURE ARRANGEMENTS. CONFIRM THE FINAL LOCATIONS DURING THE ROUGH-IN PHASE.
14. VERIFY LOCATION AND ORIENTATION OF EXISTING STRUCTURAL FRAMING PRIOR TO CORING FLOOR FOR PENETRATION. EXISTING FRAMING SHALL NOT BE CUT, ADJUSTED, OR CHANGED IN ANY WAY WITHOUT APPROVAL OF STRUCTURAL ENGINEER AND ARCHITECT.
15. VERIFY ADA OPERATOR LOCATIONS WITH ARCHITECTURAL PLANS AND DOOR HARDWARE VENDOR PRIOR TO ROUGH-IN.

**KEYED NOTES**

1. FURNISH AND INSTALL (4) 2" CONDUIT STUBS IN ACCESSIBLE CEILING SPACE. DESIGN INTENT IS TO PROVIDE CONDUIT PATH FROM MAIN LEVEL AREA B IDF ROOM TO AREA C ADDITION IDF ROOM.
2. FURNISH AND INSTALL (2) 2" CONDUIT STUBS FROM CABLE TRAY TO ACCESSIBLE CEILING SPACE. (1) CONDUIT SHALL BE AN EMPTY SPARE.
3. INSTALL FLUSH MOUNTED DATA JACK IN CEILING FOR WIRELESS ACCESS POINT.
4. FURNISH AND INSTALL (4) 2" CONDUIT STUBS FROM IDF ROOM CEILING SPACE TO CABLE TRAY FOR DATA ROUTING.
5. PROVIDE 10 FT MAINTENANCE LOOP OF CAT6 IN ACCESSIBLE CEILING SPACE NEAR TEACHER'S DESK.
6. FURNISH AND INSTALL A #3/0 BONDING CONDUCTOR TO NEW BUILDING STEEL AND NEW WATER SERVICE AND BOND TO THE EXISTING MDP GROUND BAR.
7. PROVIDE 120V POWER CONNECTION TO CABINET HEATER THROUGH FACTORY MOUNTED AND WIRED DISCONNECT.
8. INSTALL AND WIRE LOW VOLTAGE TRANSFORMER FURNISHED BY MECHANICAL TRADES. RUN LOW VOLTAGE WIRING TO BATHROOM SENSORS.
9. PROVIDE LOW VOLTAGE POWER CONNECTIONS TO BATHROOM SENSORS AS REQUIRED BY THE MECHANICAL SCHEDULE.
10. PROVIDE POWER CONNECTION TO EXHAUST FAN THROUGH FACTORY MOUNTED DISCONNECT.
11. FURNISH AND INSTALL 30A, 208V RECEPTACLE FOR DRYER. SURFACE MOUNT WASHER AND DRYER RECEPTACLES.
12. HDMI CONNECTION SHALL BE FROM TEACHER'S DESK LOCATION TO CLASSROOM MONITOR.
13. AC-1 SHALL BE POWERED FROM ACCU-1 ON ROOF.
14. PROVIDE ROUGH-IN AND POWER CONNECTION TO DOOR OPERATOR.
15. ELECTRICAL CONTRACTOR SHALL ADD DATA JACK IN CORRIDOR FOR OWNER FUTURE SPEAKERS/INTERCOM.

| NO. | REVISION | DATE |
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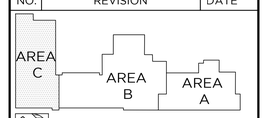


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

POWER AND SYSTEMS PLAN
ADDITION
AREA C

PROJECT NUMBER: 2022006.1

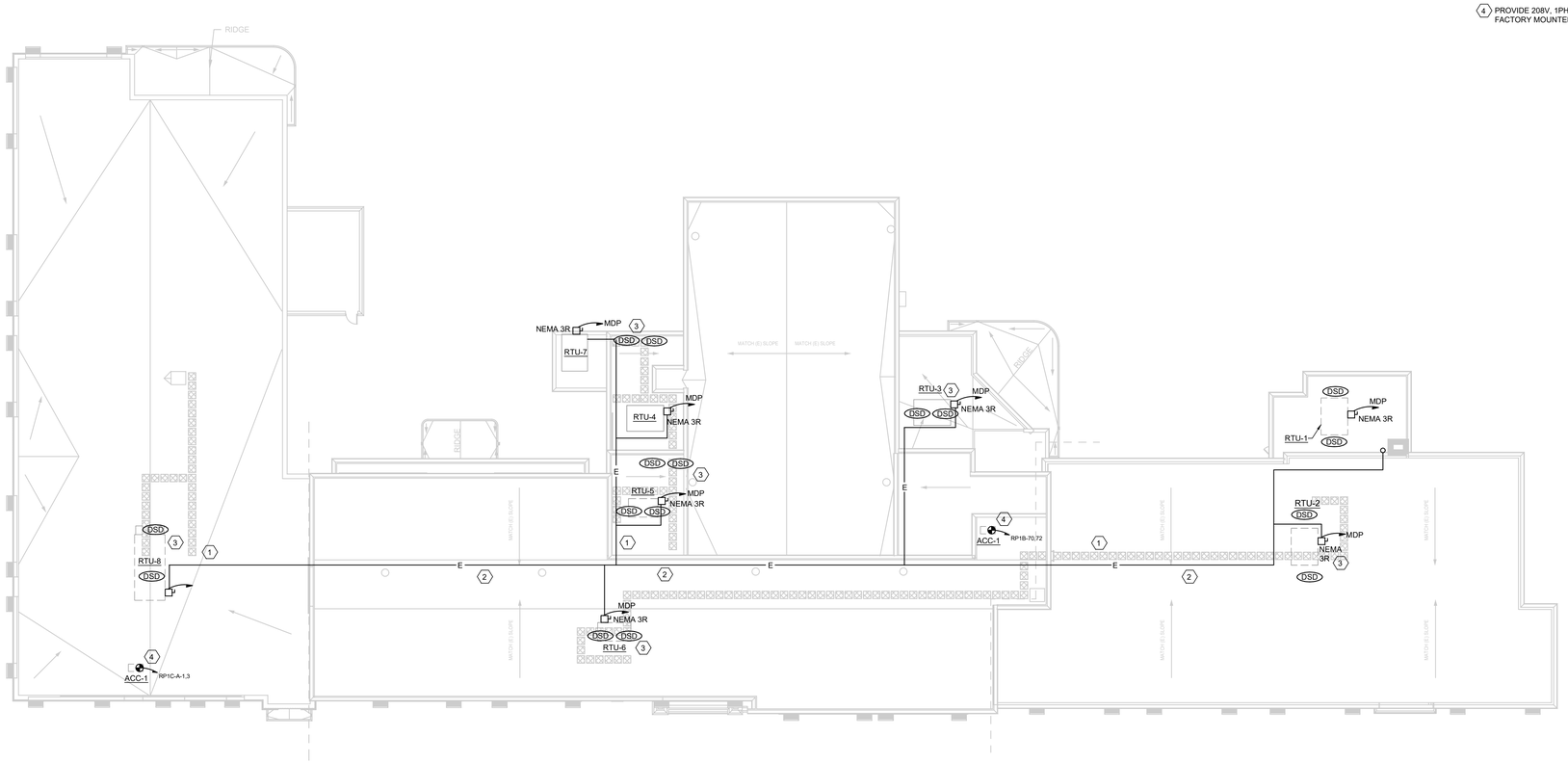
PROJECT DATE: AUGUST 23, 2023

CHECKED BY: JWF

SHEET NUMBER: E2.10

**KEYED NOTES**

1. FURNISH AND INSTALL CONDUIT RUNS ACROSS ROOF ON COMMON MIRRO SUPPORT SYSTEM WITH MECHANICAL GAS PIPING. MIRRO SUPPORT SHALL BE FURNISHED AND INSTALLED BY MECHANICAL TRADES. EXTEND FROM GAS ROUTE TO ELECTRICAL CONNECTION POINTS WITH ADDITION MIRRO SUPPORTS AS REQUIRED BY ELECTRICAL TRADES. ALL ELECTRICAL CONDUIT SHALL BE 12" ABOVE ROOF.
2. ROOF ELECTRICAL ROUTING SHOWN AS (1) LINE FOR CLARITY. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL DEDICATED CONDUIT FOR ALL ROOF TOP EQUIPMENT AND AREA C PANEL FEED.
3. DUCT SMOKE DETECTORS SHOWN ON ROOF PLAN FOR CLARITY INSTALL IN CEILING SPACE BELOW ROOF COORDINATE WITH MECHANICAL TRADES.
4. PROVIDE 208V, 1PH POWER CONNECTION TO ACC THROUGH FACTORY MOUNTED AND WIRED DISCONNECT.

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POWER AND SYSTEMS PLAN - OVERALL ROOF PLAN

1/16"=1'-0"

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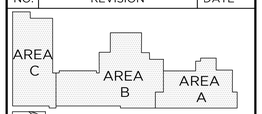


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

POWER AND SYSTEMS PLAN
ROOF PLAN

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

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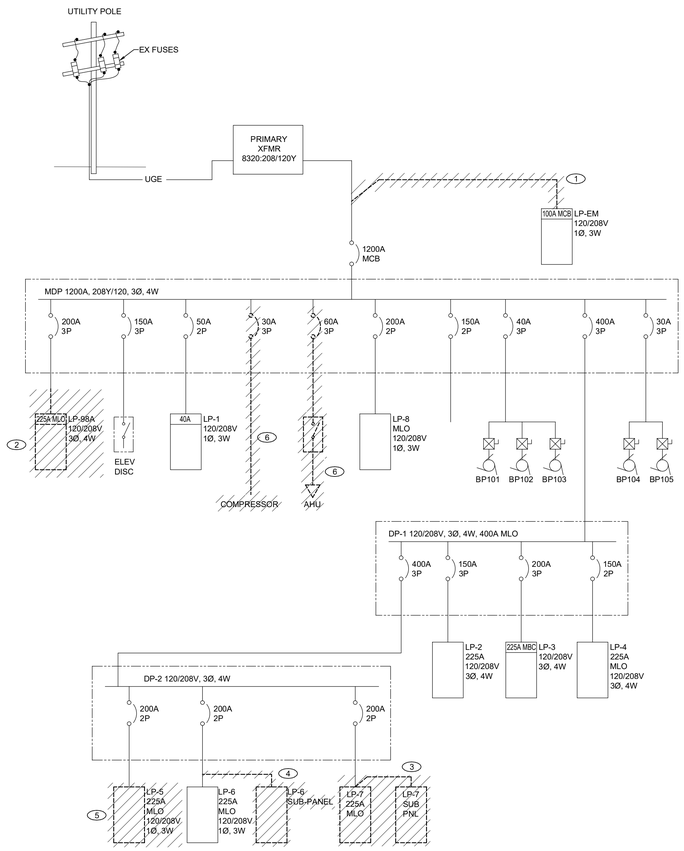
JWF

SHEET NUMBER
E2.11




EXISTING ONE-LINE DIAGRAM

**KEYED NOTES**

1. DEMO LINE SIDE CONDUIT AND WIRE OF PANEL LP-EM BACK TO SOURCE. LP-EM SHALL BE REFED PER REVISED ONE-LINE.
2. DEMO PANEL LP-98A. DEMO ALL LINE SIDE CONDUIT AND WIRE BACK TO ACCESSIBLE CEILING SPACE CLOSEST TO NEW PANEL RP1B LOCATION. IF LP-98A IS FED UNDERGROUND, DEMO BACK TO SOURCE. REFER TO POWER AND SYSTEMS PLAN. DEMO ALL BRANCH CIRCUITS.
3. DEMO PANEL LP-7 AND LP-7 SUB. DEMO ALL LINE SIDE CONDUIT AND WIRE BACK TO SOURCE. DEMO ALL BRANCH CIRCUITS.
4. DEMO PANEL LP-6 SUB. DEMO ALL LINE SIDE CONDUIT AND WIRE BACK TO SOURCE. DEMO ALL BRANCH CIRCUITS.
5. REMOVE PANEL LP-5 FOR RELOCATION. BRANCH CIRCUITS UNAFFECTED BY DEMOLITION WILL BE RELANDED ON THE RELOCATED PANEL LP-5. REFER TO POWER AND SYSTEMS DRAWINGS.
6. DEMO MECHANICAL EQUIPMENT POWER BACK TO SOURCE.

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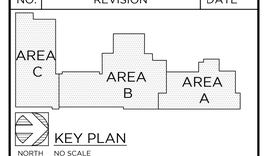


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

EXISTING ONE-LINE DIAGRAM

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
E3.01

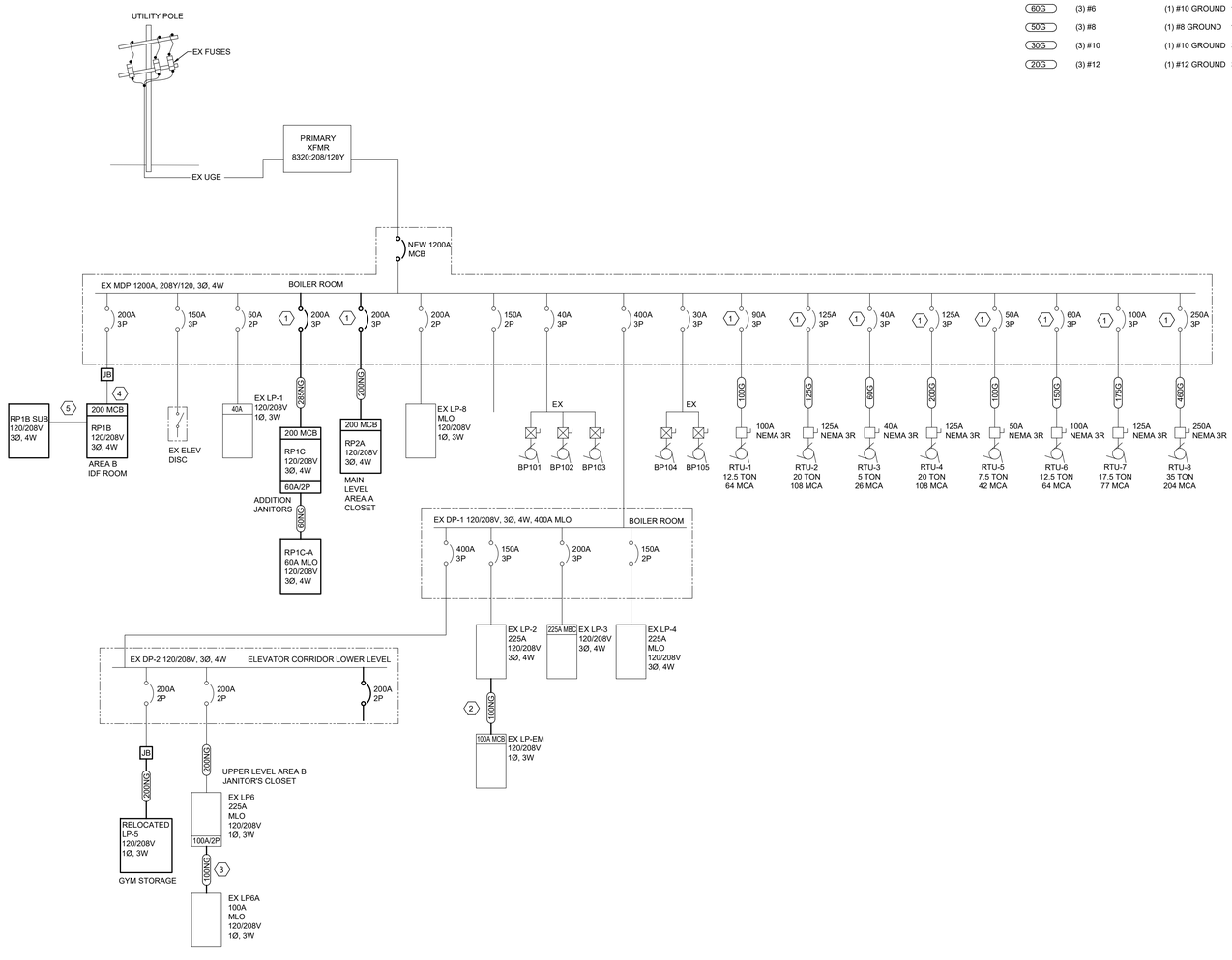
**KEYED NOTES**

1. FURNISH AND INSTALL NEW BREAKER.
2. FEED EX PANEL LP-EM FROM LP-2. REFER TO POWER AND SYSTEMS PLAN. REFER TO PANEL SCHEDULES.
3. FEED NEW PANEL LP6A FROM EX PANEL LP-6. REFER TO POWER AND SYSTEMS PLAN. REFER TO PANEL SCHEDULES.
4. INTERCEPT EXISTING LINE-SIDE CIRCUITING FOR DEMOED PANEL LP-98A TO FEED NEW PANEL RP1B. MODIFY AND EXTEND CIRCUIT AS REQUIRED.
5. USE FACTORY INSTALLED FEED-THRU LUG KIT TO PROVIDE POWER FROM PANEL RP1B TO RP1B SUB.
6. NEW PANEL LP-5 TO FEED OLD PANEL LP-5 REMAINING LOADS. MOUNT JUNCTION BOX IN LOCKER ROOM TO INTERCEPT EXISTING CIRCUITS AND REDIRECT TO NEW PANEL LP-5. MODIFY AND EXTEND CIRCUITS AS NECESSARY.

**CONDUIT AND WIRE SCHEDULE**

CONDUIT AND WIRE SIZING IS BASED ON 75° THHN/THWN COPPER

| | | | | |
|---|---|---|---|---|
| 460G | (3) #4/0 | (1) #2 GROUND | 2"C | (2 SETS EACH) |
| 285NG | (4) #300 | (1) #2 GROUND | 3"C | |
| 250NG | (4) #250 | (1) #2 GROUND | 2 1/2"C | |
| 225NG | (4) #4/0 | (1) #2 GROUND | 2 1/2"C | |
| 225G | (3) #4/0 | (1) #6 GROUND | 2 1/2"C | |
| 200G | (3) #3/0 | (1) #6 GROUND | 2" CONDUIT | |
| 175G | (3) #2/0 | (1) #6 GROUND | 2"C | |
| 150G* | (3) #1/0 | (1) #2 GROUND | 2" CONDUIT | |
| 150G | (3) #1/0 | (1) #6 GROUND | 2" CONDUIT | |
| 125G | (3) #1 | (1) #6 GROUND | 1 1/4" CONDUIT | |
| 115G | (3) #2 | (1) #6 GROUND | 11/4" CONDUIT | |
| 100G | (3) #3 | (1) #8 GROUND | 1 1/4" CONDUIT | |
| 100NG | (4) #3 | (1) #8 GROUND | 1 1/4" CONDUIT | |
| 70G | (3) #4 | (1) #8 GROUND | 1"C | |
| 60NG | (4) #6 | (1) #8 GROUND | 1"C | |
| 60G | (3) #6 | (1) #10 GROUND | 1"C | |
| 50G | (3) #8 | (1) #8 GROUND | 1" CONDUIT | |
| 30G | (3) #10 | (1) #10 GROUND | 3/4" CONDUIT | |
| 20G | (3) #12 | (1) #12 GROUND | 3/4" CONDUIT | |




REVISED ONE-LINE DIAGRAM

| NO. | REVISION | DATE |
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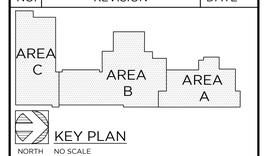


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

REVISED ONE-LINE DIAGRAM

PROJECT NUMBER 2022006.1

PROJECT DATE AUGUST 23, 2023

CHECKED BY JWF

SHEET NUMBER E3.02

## NEW

## LIGHTING CONTROL PANEL: LCP

| RELAY | ZONE CONTROLLED | CHANNEL | CIRCUIT | RELAY | ZONE CONTROLLED | CHANNEL | CIRCUIT |
|---|---|---|---|---|---|---|---|
| 1 | CORRIDOR 301 LINEARS | B | LP6-1 | 13 | ADDITION CORR. DOWNLIGHTS | B | RP1C-7 |
| 2 | CORRIDOR 301 DOWNLIGHTS | B | LP6-1 | 14 | HIVE LIGHTS | B | RP1C-3 |
| 3 | ALL CANOPY DOWNLIGHTS | A | VARIOUS | 15 | SPARE | | |
| 4 | SECURE VESTIBULE | | RP1B-1 | 16 | SPARE | | |
| 5 | LOBBY | B | RP1B-1,7 | 17 | | | |
| 6 | CORRIDOR 104 LINEARS | B | RP1B-7,9 | 18 | | | |
| 7 | CORRIDOR 104 DOWNLIGHTS | B | RP1B-7 | 19 | | | |
| 8 | ADDITION CORR. | B | RP1C-7 | 20 | | | |
| 9 | MAIN LEVEL N. WING CORRIDOR | B | RP2A-3 | 21 | | | |
| 10 | MAIN LEVEL N. WING CORR. DOWNLIGHTS | B | RP2A-3 | 22 | | | |
| 11 | SPARE | | | 23 | | | |
| 12 | ADDITION CORR. LINEARS | B | RP1C-7 | 24 | | | |

| | | |
|---|---|---|
| CHANNELS: | A | PHOTOCELL DUSK TILL 11PM. 4AM TO DAWN. |
| | B | KEYED SWITCH OVERRIDE. OCC SENSOR CONTROL. |
| | C | NOT USED |
| NOTES: | 1 | ACUITY #ARP |
| | 2 | |

**LIGHTING CONTROL EXECUTIVE SUMMARY**

**GYMNASIUM**
KEYED SWITCH MANUAL ON/OFF, RAISE/LOWER. MOTION AUTO ON TO 50%, AUTO OFF AFTER 20 MIN. NO ACTIVITY.

**CORRIDORS**
KEYED SWITCH MANUAL ON/OFF, RAISE/LOWER. SEPARATE CONTROL OF DOWNLIGHTS AND LINEARS. MOTION AUTO ON TO LAST SETTING. AUTO OFF AFTER 20 MIN. NO ACTIVITY.

**CLASSROOMS**
MANUAL ON/OFF, RAISE/LOWER. SEPARATE CONTROL OF MAIN CLASSROOM LIGHTS AND TEACHER BOARD LIGHTING.
AUTO ON TO 50%. AUTO OFF AFTER 20 MIN. NO ACTIVITY.

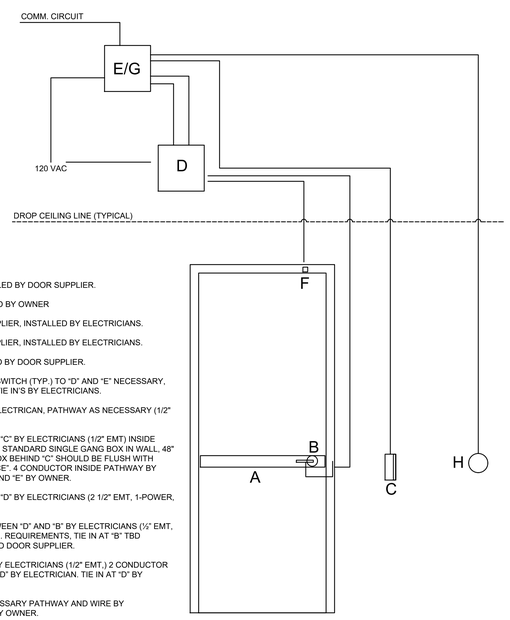
**OFFICES**
MANUAL ON/OFF, RAISE/LOWER. AUTO OFF AFTER 20 MIN. NO ACTIVITY.

**ADMIN CONFERENCE ROOM**
SEPARATE MANUAL ON/OFF, RAISE/LOWER CONTROL OF 3 LIGHTING ZONES. CONFERENCE TABLE LINEARS MOTION AUTO ON TO 50%. ALL LIGHTS AUTO OFF AFTER 20 MIN. NO ACTIVITY.

**EXTERIOR CANOPY DOWNLIGHTS**
DUSK TO 4PM. 4AM TO DAWN.

**EXTERIOR BUILDING MOUNT LIGHTING**
ALL LIGHTS TO BE INSTALLED WITH INTEGRATED PHOTOSENSORS. ALL FIXTURES SHALL WIRELESSLY COMMUNICATE TO TURN ON AND OFF SYNCHRONOUSLY. AUTO ON AT DUSK, OFF AT 11PM. AUTO ON AT 6AM, OFF AT DUSK.

A EXIT DEVICE
B POWER TRANSFER (ELECTRIC CRASH BAR, STRIKE, OR LATCH)
C CARDSLOT/SHROUD/MOUNTING PLATE
D POWER SUPPLY
(ONLY NEEDED WITH CRASH BARS AND/OR DOORS WITH HANDICAP OPENERS)
E ENCLOSURE AND POWER SUPPLY
F DOOR POSITION SWITCH
G MASTER/DOOR CONTROLLER
H HANDICAP PUSH BUTTON




- "A, B" SUPPLIED AND INSTALLED BY DOOR SUPPLIER.
- "C" SUPPLIED AND INSTALLED BY OWNER
- "D" SUPPLIED BY DOOR SUPPLIER, INSTALLED BY ELECTRICIANS.
- "E" SUPPLIED BY DOOR SUPPLIER, INSTALLED BY ELECTRICIANS.
- "F" SUPPLIED AND INSTALLED BY DOOR SUPPLIER.
- 120 VAC SUPPLY THROUGH SWITCH (TYP.) TO "D" AND "E" NECESSARY, CAN BE SAME CIRCUIT. ALL TIE IN'S BY ELECTRICIANS.
- "COMM CIRCUIT" TO "E" BY ELECTRICAN, PATHWAY AS NECESSARY (1/2" EMT) BY ELECTRICIANS.
- PATHWAY BETWEEN "E" AND "C" BY ELECTRICIANS (1/2" EMT) INSIDE WALL (TYP.) TERMINATES TO STANDARD SINGLE GANG BOX IN WALL, 48" ON CENTER, "BEHIND" "C". BOX BEHIND "C" SHOULD BE FLUSH WITH EXTERIOR BUILDING SURFACE'. 4 CONDUCTOR INSIDE PATHWAY BY ELECTRICIAN. TIE IN AT "C" AND "E" BY OWNER.
- PATHWAY BETWEEN "E" AND "D" BY ELECTRICIANS (2 1/2" EMT, 1-POWER, 1-COMM.)
- PATHWAY AND WIRING BETWEEN "D" AND "B" BY ELECTRICIANS (½" EMT, WIRE BASED ON DOOR SPEC. REQUIREMENTS, TIE IN AT "B" TBD BETWEEN ELECTRICIANS AND DOOR SUPPLIER.
- PATHWAY FROM "D" TO "F" BY ELECTRICIANS (1/2" EMT,) 2 CONDUCTOR WIRING FROM "E" TO "F" VIA "D" BY ELECTRICIAN. TIE IN AT "D" BY OWNER'.
- INPUT FROM "H" TO "G" NECESSARY PATHWAY AND WIRE BY ELECTRICIAN, TIE IN AT "E" BY OWNER.

CARD READER SCHEMATIC
NO SCALE

**LIGHTING SCHEDULE**

A4 4' LINEAR LED FLAT PANEL. 2000 LUMEN, 80 CRI, 4000K, FLAT FRAME, SATIN WHITE LENS, 1%MIN DIMMING, 120-277V, MATTE WHITE FINISH. 500LM/FT, 16.7 WATT.
LITHONIA #LSIX 4FT 2000LM 80CRI 40K FFR SWL MIN1 EZT MVOLT MW

A8 SAME AS TYPE A4 EXCEPT 8' LONG, 4000 LUMENS, 29.8 WATT.

B4 4' LINEAR LED FLAT PANEL. 3000 LUMEN, 80 CRI, 4000K, FLAT FRAME, SATIN WHITE LENS, 1%MIN DIMMING, 120-277V, MATTE WHITE FINISH. 750 LM/FT, 24.7 WATT.
LITHONIA #LSIX 4FT 3000LM 80CRI 40K FFR SWL MIN1 EZT MVOLT MW

B8 SAME AS TYPE B4 EXCEPT 8' LONG, 6000 LUMENS, 44.3 WATT.

B8E SAME AS TYPE B8 EXCEPT WITH 10 WATT EMERGENCY BATTERY PACK
#E10WLCP

B8S SAME AS TYPE B8 EXCEPT WITH INTEGRAL WIRELESS OCCUPANCY SENSOR.
#NLTAIR2 PIR

B8SE SAME AS TYPE B8 EXCEPT WITH 10 WATT EMERGENCY BATTERY AND INTEGRAL WIRELESS OCCUPANCY SENSOR.
#E10WLCP NLTAIR2 PIR

C4 4' LINEAR LED FLAT PANEL. 4000 LUMEN, 80 CRI, 4000K, FLAT FRAME, SATIN WHITE LENS, 1%MIN DIMMING, 120-277V, MATTE WHITE FINISH. 1000 LM/FT, 33.3 WATT.
LITHONIA #LSIX 4FT 4000LM 80CRI 40K FFR SWL MIN1 EZT MVOLT MW

C8 SAME AS TYPE C4 EXCEPT 8' LONG, 8000 LUMEN, 60.3 WATT.

C8E SAME AS TYPE B8 EXCEPT WITH 10 WATT EMERGENCY BATTERY PACK
#E10WLCP

C8S SAME AS TYPE C8 EXCEPT WITH INTEGRAL WIRELESS OCCUPANCY SENSOR.
#NLTAIR2 PIR

E LED SINGLE SIDED EXIT SIGN, RED LETTERS.
LITHONIA #LQM

E2 SAME AS TYPE E BUT DOUBLE SIDED

E/RH LED EXIT WITH HIGH OUTPUT BATTERY, RED LETTERS, WHITE.
LITHONIA #LHQM LED HO RO

RHW WET LOCATION EMERGENCY REMOTE HEAD LED, 320 LUMEN, 3.3 WATT, SINGLE HEAD, DARK BRONZE FINISH.
LITHONIA #ELMRW SP640L DDBTXD SGL

F NOT USED

G1 4" ROUND LED DOWNLIGHT, 3500K, 1000 LUMENS, 10.6 WATT, WHITE TRIM, MATTE DIFFUSE FINISH, WHITE FLANGE, 120-277V, 1%MIN DIMMING.
LITHONIA #LDN4 35/10 LO4 WR LD TRW MVOLT EZ1

G1E SAME AS TYPE G1 EXCEPT WITH 10 WATT EMERGENCY BATTERY PACK.

G2 SAME AS TYPE G1 EXCEPT 1500 LUMENS, 17.5 WATTS

G2E SAME AS TYPE G2 EXCEPT WITH A 10 WATT EMERGENCY BATTERY

G3 SAME AS TYPE G1 EXCEPT 2000 LUMENS, 22.5 WATTS

G3E SAME AS TYPE G3 EXCEPT WITH A 10 WATT EMERGENCY BATTERY

G5 4" ROUND SHOWER DOWNLIGHT. WET LOCATION LISTED. IP66 RATED. 1000 LUMEN, 9 WATT, FLUSH SMOOTH LENS, 120V, WHITE TRIM.
GOTHAM #EVO4SH 35/10 DFF SMO 120

H1 6" LED CYLINDER PENDANT DOWNLIGHT. 3500K, 2000 LUMEN, 10.4 WATT, BLACK.
LITHONIA #LDN6CYL 35/10 LO6BR LD 120 GZ10 PM DBL

H2 6" LED CYLINDER PENDANT DOWNLIGHT. 3500K, 2000 LUMEN, 22.5 WATT, BLACK.
LITHONIA #LDN6CYL 35/20 LO6BR LD 120 GZ10 PM DBL

I2 CLX LED LINEAR, 24", 2000 LUMENS, STANDARD EFFICIENCY, LESS LOUVER, FLAT DIFFUSE LENS,GENERAL DISTRIBUTION, 120-277V, GENERIC 0-10V DIMS TO 1%, 4000K, 80CRI, WHITE FINISH, 14.5 WATTS
LITHONIA #CLX L24 2000LM SEF FDL MVOLT GZ1 40K 80CRI WH

I3 SAME AS TYPE I2 EXCEPT 36", 3000 LUMENS, 20.8 WATTS

I4 SAME AS TYPE I2 EXCEPT 48", 4000 LUMENS, 25.5 WATTS

I4E SAME AS TYPE I4 EXCEPT WITH A 10 WATT EMERGENCY BATTERY

J1 2x2 LED FLAT PANEL. 2000 LUMENS, 16 WATT, 80CRI, 4000K, SATIN LENS, 1%MIN DIMMING, 120-277V.
LITHONIA #CPX 2X2 2000LM 80CRI 40K SWL MIN1 ZT MVOLT

J1E SAME AS TYPE J1 EXCEPT WITH 10 WATT EMERGENCY BATTERY

J2 SAME AS TYPE J1 EXCEPT 3200LM, 30 WATT.

J2E SAME AS TYPE J2 EXCEPT WITH 10 WATT EMERGENCY BATTERY

J2SE SAME AS TYPE J2E EXCEPT WITH INTEGRAL WIRELESS SENSOR.
ACUITY #NLTAIR2 PIR

K 2'X4' LED HIGHBAY RETROFIT. 16,600 LUMENS, 105 WATTS, 120-277V, 4000K, DIMS TO 1%, 0-10V DIMMING, FROSTED IMPACT RESISTANT POLYCARBONATE LENS, SOLID ALUMINUM CONSTRUCTION.
ESI #K 24LT D41X5HO 40 D FR-FL CUSTOM POLYCARBONATE LENS

L4 4' SURFACE MOUNT LED LINEAR. 800 LUMEN/FT, 3500K, 1%MIN DIMMING, 120-277V, FLUSH LENS, WHITE FINISH, 6.33 WATT/FT, 25.3 WATTS.
MARK #S4SD XXX 4_FT XXXX 80CRI 35K 800LMF SCT MIN1 FLL MVOLT WHTT

L4E SAME AS TYPE L4 EXCEPT WITH 10 WATT EMERGENCY BATTERY PACK.

L6 SAME AS TYPE L4 EXCEPT 6', 38 WATTS.

L6E SAME AS TYPE L6 EXCEPT WITH 10 WATT EMERGENCY BATTERY PACK.

L6SE SAME AS TYPE L6E EXCEPT WITH WIRELESS OCCUPANCY SENSOR.
#NLTAIR2 PDT

M SEMI-RECESSED GLASS CONE DOWNLIGHT. 2000 LUMENS, 3500K, 120V, 22 WATTS.
DELRAY #KLS31 2 W35 D 120

N LED DOME PENDANT. 2500 LUMEN, 3500K, 120-277V, 1%MIN DIMMING, CUSTOM FINISHES, 22 WATTS.
VISA #CP4410 L35K(L) 80CRI MVOLT

P3 3' DIAMETER LED RING PENDANT. SILVER FINISH, LOW OUTPUT, 3500K, SEPARATE MOUNT, DIMMING, REMOTE DRIVER, SILVER CANOPY, BLACK POWER CORD, 51 WATT, 3780 LUMEN. TO BE MOUNTED WITH (1) P5 AND (1) ADDITIONAL P3. COORDINATE MOUNTING WITH ARCHITECTURAL DETAILS DURING SHOP DRAWING PHASE.
DELRAY #6813 S W35 S D RR

P5 SAME AS TYPE P3 EXCEPT 5' DIAMETER, 85 WATT, 6300 LUMEN. TO BE MOUNTED WITH (1) P5 AND (1) ADDITIONAL P3. COORDINATE MOUNTING WITH ARCHITECTURAL DETAILS DURING SHOP DRAWING PHASE.

Q27 2" WIDE, 4" DEEP, PERIMETER SLOT LINEAR LED. 27FT LENGTH, FIELD MEASURE TOTAL LENGTH PRIOR TO ORDERING. STANDARD OUTPUT, 80 CRI, 3500K, LOW-GLOSS WHITE, 120V, SINGLE CIRCUIT, 0-10V 10%MIN DIMMING, END CAP, 3.5 WATT/FT.
FINELITE #HP 2 WS 4D XX S 835 96LG 120 SC FC-10%

Q21 SAME AS TYPE Q27 EXCEPT 21FT LENGTH. FIELD MEASURE TOTAL LENGTH PRIOR TO ORDERING.

V 4" VANDAL RESISTANT TUNABLE WHITE RECESSED DOWNLIGHT. IP66 AND IK10 RATED, TAMPER RESISTANT CEILING GRID MOUNTING, DIMMING TO <1%, 2000 LUMEN, 2700K-6500K TUNING RANGE, MEDIUM DISTRIBUTION, 28 WATT, 90CRI, 120 VOLT, CLEAR POLYCARBONATE LENS, WHITE ANTIMICROBIAL FINISH.
LUMINAIRE #VRDL4 GB DARK NLT 2000LM TUWH RHYR MD 90CRI 120 CPL AMF

V2 4" VANDAL RESISTANT DOWNLIGHT, 2000 LUMEN, 0-10V DIMMING, 120V LUMINAIRE #VRDL4 DARK ZT 2000LM WD 35K 80CRI 120 CPL AMF

AA2 WALL MOUNT LED LUMINARIE. TYPE 2 DISTRIBUTION, 4000K, 73 WATT, 208V, INTEGRATED MOTION/AMBIENT SENSOR. HOUSE-SIDE SHIELD. DARK BRONZE FINISH.
LITHONIA #DSXW1 LED 20C 1000 40K T2M PIR HS DDBXD

BBF WALL MOUNT LED SITE LUMINARIE. FORWARD THROW DISTRIBUTION, PERFORMANCE PACKAGE 7, 4000K, 70CRI, 120-277V, 188 WATT, INTEGRATED MOTION/AMBIENT SENSOR. HOUSE-SIDE SHIELD. DARK BRONZE FINISH.
LITHONIA #DSX1 LED P7 70CRI TFTM MVOLT WBA PIR HS DDBXD

BB2 SAME AS TYPE BBF EXCEPT TYPE 2 DISTRIBUTION.

BB3 SAME AS TYPE BBF EXCEPT TYPE 3M DISTRIBUTION.

CC POST-TOP LED RETROFIT WITH WIRELESS CONTROL.
LITHONIA #RADPT OR EQUAL

**ELECTRICAL SYMBOLS**

**LIGHTING**

A 2'x4' FIXTURE, TYPE INDICATED
HALF SHADED FIXTURES ARE EMERGENCY FIXTURES
A 2'X2' FIXTURE, TYPE INDICATED
A 1'x4' LED FIXTURE, TYPE INDICATED
A 4' LED STRIP, TYPE INDICATED
DOWNLIGHT OR SURFACE FIXTURE
WALL MOUNTED FIXTURE, TYPE INDICATED
A WALL MOUNTED FIXTURE, TYPE INDICATED
E EXIT LIGHT
E MOUNTED EXIT LIGHT
PENDANT MOUNTED FIXTURE, TYPE INDICATED
TRACK LIGHTING FIXTURE
EMERGENCY FIXTURE
REMOTE HEAD EMERGENCY FIXTURE

**LIGHTING CONTROLS**

S SINGLE POLE SWITCH
$S_3$ 3-WAY SWITCH
$S_f$ FUSED TOGGLE SWITCH
$S_{WP}$ WEATHERPROOF SWITCH
$S_M$ WALL MOTION SWITCH SENSOR
ACUITY #WSX SERIES OR EQUAL
$S_{MD}$ COMBINATION WALL MOTION, DIMMING SWITCH SENSOR
ACUITY #WSX D SERIES OR EQUAL
$S_D$ DIMMING SWITCH, 0-10 VOLT
ACUITY #SPODMRA D SERIES OR EQUAL
S LOW VOLTAGE ON/OFF BUTTON SWITCH
ACUITY #NPODMA SERIES OR EQUAL
$S_D$ LOW VOLTAGE ON/OFF, DIMMING.
ACUITY #NPODMA DX SERIES OR EQUAL
$S_M$ LOW VOLTAGE ON/OFF WITH INTEGRATED IR MOTION SENSOR
ACUITY #NWSX LV SERIES OR EQUAL
$S_{MD}$ LOW VOLTAGE ON/OFF, DIMMING WITH INTEGRATED IR MOTION SENSOR
ACUITY #NWSX LV DX SERIES OR EQUAL
$S_T$ LOW VOLTAGE SWITCH. ON/OFF, RAISE/LOWER, CCT ADJUST
ACUITY #NPODMA DX CCT WH
$S_K$ LOW VOLTAGE KEYED SWITCH. ON/OFF
ACUITY #NPOD KEY MNTN WH
$S_{KD}$ LOW VOLTAGE KEYED SWITCH. ON/OFF, RAISE/LOWER.
ACUITY #NPOD KEY WH
$S_X$ WIRELESS LINE VOLTAGE POWERED SWITCH, ON/OFF
ACUITY #RPODL MVOLT WH G2
RC ROOM CONTROLLER, 3-RELAYS, 0-10V DIMMING, PLENUM RATED
COOPER GREENGATE #RC3D-PL OR EQUAL
PR POWER RELAY
PR POWER RELAY PACK
ACUITY #NPP16 D SERIES OR EQUAL
OS PASSIVE INFRARED, CEILING MOUNTED. LARGE-MOTION DETECTION, 2000 SQFT RADIAL COVERAGE SENSOR
ACUITY #NCM 10 SERIES OR EQUAL
OS PASSIVE INFRARED, CEILING MOUNTED, SMALL-MOTION DETECTION, 500 SQFT RADIAL COVERAGE SENSOR
ACUITY #NCM 9 SERIES OR EQUAL
OS PASSIVE INFRARED, CEILING MOUNTED, LARGE-MOTION DETECTION, HIGH MOUNT, 1000 SQFT RADIAL COVERAGE SENSOR
ACUITY #NCM 6 SERIES OR EQUAL
DOS DUAL TECH, CEILING MOUNTED, LARGE-MOTION DETECTION, 2000 SQFT RADIAL COVERAGE SENSOR
ACUITY #NCM PDT 10 SERIES OR EQUAL
DOS DUAL TECH 360°, CEILING MOUNTED, SMALL-MOTION DETECTION, 500 SQFT RADIAL COVERAGE SENSOR
ACUITY #NCM PDT 9 SERIES OR EQUAL
HW PASSIVE INFRARED HALLWAY MOTION SENSOR, 130' RANGE.
ACUITY #HW13 SERIES OR EQUAL
XX WALL MOUNTED SENSOR
PS DAYLIGHT PHOTO SENSOR, CEILING MOUNTED, AUTO DIMMING
ACUITY #NCM ADCX SERIES OR EQUAL
PC LOW VOLTAGE PHOTOCELL FOR CONNECTION TO LCP. ACUITY #NIO PC

**POWER**

DUPLEX RECEPTACLE
QUADPLEX RECEPTACLE
SPECIAL RECEPTACLE
GFCI GFCI RECEPTACLE
GFI FEED THROUGH GFCI DEVICE
CIRCUIT BREAKER DISCONNECT
DEVICE CONNECTION
NON-FUSED DISCONNECT SWITCH
FUSED DISCONNECT
JB JUNCTION BOX
PP POWER POLE FOR CUBICLE DESKS. POWER AND DATA
FLUSH MOUNTED PANEL
PANELBOARD
SWITCHBOARD
T TRANSFORMER
SINGLE PHASE MOTOR
THREE PHASE MOTOR

PB PUSH BUTTON STATION
ADA ADA PUSH BUTTON OPERATOR

**ABBREVIATIONS**

| | |
|---|---|
| WP | DENOTES WEATHER PROOF |
| AFF | ABOVE FINISH FLOOR |
| AC | ABOVE COUNTER |
| EC | ELECTRICAL CONTRACTOR |
| EX | EXISTING |
| GFI | GROUND FAULT CIRCUIT INTERRUPTER |
| MDF | MAIN DATA FRAME |
| IDF | INTERMEDIATE DATA FRAME |
| WR | WEATHER RESISTANT |
| MDP | MAIN DISTRIBUTION PANEL |
| PP | POWER PANEL |
| LP | LIGHTING PANEL |
| RP | RECEPTACLE PANEL |
| UPS | UNINTERRUPTIBLE POWER SUPPLY |
| LCP | LIGHTING CONTROL PANEL |
| GND | GROUND |
| MCB | MAIN CIRCUIT BREAKER |
| MLO | MAIN LUGS ONLY |
| CU | COPPER |
| AL | ALUMINUM |
| ATS | AUTOMATIC TRANSFER SWITCH |
| FAA | FIRE ALARM ANNUNCIATOR PANEL |
| FACP | FIRE ALARM CONTROL PANEL |
| CP | CIRCULATION PUMP |
| ADA | AMERICANS WITH DISABILITIES ACT |
| VP | VANDAL PROOF |

**FIRE ALARM**

FACP FIRE ALARM CONTROL PANEL
TS FIRE ALARM TAMPER SWITCH
FS FIRE ALARM FLOW SWITCH
DSD DUCT SMOKE DETECTOR
F VP VANDAL PROOF FIRE ALARM PULL STATION
S SMOKE DETECTOR
F FIRE ALARM STROBE ONLY
F CEILING MOUNTED FIRE ALARM STROBE ONLY
F C CEILING MOUNTED FIRE ALARM VOICE EVAC/STROBE COMBO

**COMMUNICATIONS**

HDMI OUTLET, 1 1/2" CONDUIT ROUTED TO ACCESSIBLE CEILING, (4) HDMI JACKS.
(2) DATA PORT OUTLET ROUGH-IN, (2 CAT6), 1" CONDUIT ROUTED TO ACCESSIBLE CEILING
TV DATA/HDMI OUTLET (1 CAT6 / 1 HDMI). 1 1/4" CONDUIT ROUTED TO ACCESSIBLE CEILING
DATA/HDMI OUTLET (2 CAT6 / 1 HDMI). 1 1/4" CONDUIT ROUTED TO ACCESSIBLE CEILING
1,3,4... INDICATED NUMBER OF DATA PORTS OUTLET ROUGH-IN, (INDICATED NUMBER OF CAT6), 1" CONDUIT ROUTED TO ACCESSIBLE CEILING
CR CARD READER ROUGH-IN, 1" CONDUIT ROUTED TO ACCESSIBLE CEILING
CAM SECURITY CAMERA ROUGH-IN, 1" CONDUIT ROUTED TO ACCESSIBLE CEILING
WAP WIRELESS ACCESS POINT (1) CAT6 WITH QUICKPORT AND 10FT MAINTENANCE LOOP
S SPEAKER
C CLOCK

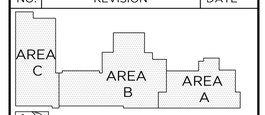
**ELECTRICAL SCHEDULES**

INV2 250 WATT MINI-INVERTER. 120/277V IN/OUT. 305 WATT INPUT RATED. SURFACE MOUNTED. DIMMING RELAY. UL 924 LISTED.
IOTA #IIS 250 HE DR

INV3 125 WATT MINI-INVERTER. 120V IN/OUT. 150 WATT INPUT RATED. SURFACE MOUNTED. DIMMING RELAY. UL 924 LISTED.
IOTA #IIS 125 SM DR

FB 6" ROUND POKE-THROUGH FLOOR BOX. (2) DUPLEX RECEPTACLES, (1) HDMI PORT, (2) DATA JACKS. 1 1/4" CONDUIT CONNECTION FOR HDMI/DATA.
LEGRAND #6ATC2PAA - 6MAAP2A-1125CHA, HDMI - #AV3000BK

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN
NORTH NO SCALE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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
SCHEDULES AMD SYMBOLS

PROJECT NUMBER
2022006.1
PROJECT DATE
AUGUST 23, 2023
CHECKED BY
JWF

SHEET NUMBER
E4.01

## EX PNL LP-1

| | |
|---|---|
| MAIN: SIZE & TYPE: 40 A MCB | PANEL LOCATION: BOILER RM |
| BUS RATING: 40 A | FEEDER SIZE: 50A |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: MDP |
| MOUNTING: SURFACE | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | UNKNOWN EXISTING LOAD | | | 20/1 | 1 | | 2 | 20/1 | | | UNKNOWN EXISTING LOAD | 2 |
| 3 | UNKNOWN EXISTING LOAD | | | 20/1 | 3 | | 4 | 20/1 | | | UNKNOWN EXISTING LOAD | 4 |
| 5 | UNKNOWN EXISTING LOAD | | | 20/1 | 5 | | 6 | 20/1 | | | UNKNOWN EXISTING LOAD | 6 |
| 7 | UNKNOWN EXISTING LOAD | | | 20/1 | 7 | | 8 | 20/1 | | | UNKNOWN EXISTING LOAD | 8 |
| 9 | UNKNOWN EXISTING LOAD | | | 20/1 | 9 | | 10 | 20/1 | | | UNKNOWN EXISTING LOAD | 10 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES: 1. FIELD TRACE AND VERIFY LOADS, EC SHALL PROVIDE UPDATED PANEL SCHEDULE

## EX PNL LP-2

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A | PANEL LOCATION: BOILER RM |
| BUS RATING: 225 A | FEEDER SIZE: 150A |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: DP-1 |
| MOUNTING: Surface | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SPARE | | | 20 | 1 | | 2 | 20/1 | | | SUMP PLUG | 2 |
| 3 | SPARE | | | / | 3 | | 4 | | | | BLANK | 4 |
| 5 | SPARE | | | 3 | 5 | | 6 | 20/1 | | | BOILER RM LIGHTS | 6 |
| 7 | SPARE | | | 20 | 7 | | 8 | 20/1 | | | BOILER #1 | 8 |
| 9 | SPARE | | | / | 9 | | 10 | 20 | | | SPARE | 10 |
| 11 | SPARE | | | 3 | 11 | | 12 | / | | | SPARE | 12 |
| 13 | PLUG UNDER PANEL 110V | | | 30/ | 13 | | 14 | 3 | | | SPARE | 14 |
| 15 | PLUG UNDER PANEL 110V | | | 2 | 15 | | 16 | | | | BLANK | 16 |
| 17 | 400W YARD LIGHT | | | 20/ | 17 | | 18 | 20/1 | | | SPARE | 18 |
| 19 | 400W YARD LIGHT | | | 2 | 19 | | 20 | 15/ | | | AC UNIT UP STAIRS OFFICES | 20 |
| 21 | | | | | 21 | | 22 | 2 | | | AC UNIT UP STAIRS OFFICES | 22 |
| 23 | ~~IT AC NW ROOFTOP AC~~ | | | 30/ | 23 | | 24 | 20/1 | | | ALT POWER | 24 |
| 25 | ~~IT AC NW ROOFTOP AC~~ | | | 2 | 25 | | 26 | ?/ | | | RANGE IN TEACHERS LOUNGE | 26 |
| 27 | BLANK | | | | 27 | | 28 | 2 | | | RANGE IN TEACHERS LOUNGE | 28 |
| 29 | ROOFTOP RECP | | | 20/1 | 29 | | 30 | ? | | | BOILER #1 | 30 |
| 31 | ~~NE ROOFTOP AC~~ | | | 25/ | 31 | | 32 | / | | | BOILER #1 | 32 |
| 33 | ~~NE ROOFTOP AC~~ | | | 2 | 33 | | 34 | 3 | | | BOILER #1 | 34 |
| 35 | BOILER #2 | | | 20/1 | 35 | | 36 | 50/ | | | WELDER PLUG | 36 |
| 37 | EXHAUST FAN TEACHERS LOUNGE | | | 20/1 | 37 | | 38 | 2 | | | WELDER PLUG | 38 |
| 39 | EXISTING LOAD | | | 20/1 | 39 | | 40 | | | | BLANK | 40 |
| 41 | BLANK | | | | 41 | | 42 | 20/1 | | | AC SERVICE OUTLET | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES: 1. DEMO EXISTING CIRCUIT AND REMOVE EXISTING BREAKER
2. FIELD TRACE AND VERIFY LOADS, EC SHALL PROVIDE UPDATED PANEL SCHEDULE

## EX PNL LP-3

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MCB | PANEL LOCATION: MAINTANCE RM |
| BUS RATING: 225 A | FEEDER SIZE: |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: DP-1 |
| MOUNTING: SURFACE | MIN RMS AMPS: |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 20/1 A | | | ~~NORTH AIR RECP RM #7~~ | 2A |
| 1 | ~~AIR RECP RM #8E~~ | | | 20/1 | 1 | | 2 | 20/1 B | | | ~~NORTH AIR RECP RM #7~~ | 2B |
| | | | | | | | | 20/1 A | | | ~~SOUTH AIR RECP RM #7~~ | 4A |
| 3 | ~~AIR RECP RM #8A~~ | | | 20/1 | 3 | | 4 | 20/1 B | | | ~~SOUTH AIR RECP RM #7~~ | 4B |
| | | | | | | | | 20/1 A | | | ~~AIR RECP RM #6, PHONE RECP~~ | 6A |
| 5 | ~~EXHAUST FAN RM #8A~~ | | | 20/1 | 5 | | 6 | 20/1 B | | | ~~AIR RECP RM #6, PHONE RECP~~ | 6B |
| 7 | COMPUTER | | | 20/1 | 7 | | 8 | 20/1 | | | ~~BOARD RM RECP~~ | 8 |
| 9 | COMPUTER | | | 20/1 | 9 | | 10 | 20/1 | | | ~~NORTH AIR RECP RM #5~~ | 10 |
| 11 | COMPUTER | | | 20/1 | 11 | | 12 | 20/1 | | | ~~SOUTH AIR RECP RM #5~~ | 12 |
| 13 | ~~UPSTAIRS KITCHEN RECP. RM 9~~ | | | 20/1 | 13 | | 14 | 20/1 | | | RECP FAN RM #6A&B | 14 |
| 15 | ~~UPSTAIRS BATH RECP~~ | | | 20/1 | 15 | | 16 | 20/1 | | | WIRE MOLD EAST WALL #7 | 16 |
| 17 | RECP & FAN 2A&B | | | 20/1 | 17 | | 18 | 20/1 | | | ~~RECPTIONIST RECP AIR~~ | 18 |
| 19 | ~~AIR RECP RM #2B~~ | | | 20/1 | 19 | | 20 | 20/1 | | | RECPTIONIST RECP EAST WALL #9 | 20 |
| 21 | ~~AIR RECP RM #2A~~ | | | 20/1 | 21 | | 22 | 20/1 | | | ~~SOUTH AIR RECP RM #1~~ | 22 |
| 23 | EAST WALL RECP RM #3 | | | 20/1 | 23 | | 24 | 20/1 | | | ~~NORTH AIR RECP RM #1~~ | 24 |
| 25 | ~~NORTH AIR RECP RM #3~~ | | | 20/1 | 25 | | 26 | 20/1 | | | RECP | 26 |
| 27 | ~~SOUTH AIR RECP RM #3~~ | | | 20/1 | 27 | | 28 | 20/1 | | | NORTH ROOM RECP | 28 |
| 29 | ~~NORTH AIR RECP RM #4~~ | | | 20/1 | 29 | | 30 | 20/1 | | | NORTH ROOM RECP | 30 |
| 31 | ~~SOUTH AIR RECP RM #4~~ | | | 20/1 | 31 | | 32 | 20/1 | | | ~~AIR COND. RM 12~~ | 32 |
| 33 | EAST&WEST WALL RECP #4 | | | 20/1 | 33 | | 34 | 20/1 | | | ~~STORAGE ROOM, AC RECP~~ | 34 |
| 35 | FANS IN HAPPY DAYS | | | 20/1 | 35 | | 36 | 20/1 | | | KITCHEN IN HAPPY DAYS | 36 |
| 37 | COMPUTER LAB4 SURGE SUPP | | | 20/1 | 37 | | 38 | 20/1 | | | COMPUTER LAB 2 SURGE | 38 |
| 39 | COMP LAB 3 RECP CIRCUIT | | | 20/1 | 39 | | 40 | 20/1 | | | COMPUTER LAB 1 LIGHTING | 40 |

## EX PNL LP-4

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MLO | PANEL LOCATION: BOILER RM |
| BUS RATING: 225 A | FEEDER SIZE: 150A |
| VOLTAGE: 120 / 208 V 3 Ø, 4 WIRE | FED FROM: DP-1 |
| MOUNTING: SURFACE | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (KVA) A | B | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1AB | NORTH UP HALL LIGHT | | | | 20/1AB | 1 | | 2AB | 20/1AB | | | | 208 | 2AB |
| 3 | EXISTING LOAD | | | | 20/1 | 3 | | 4AB | 20/1AB | | | | EXISTING LOAD | 4AB |
| 5AB | NORTH LOW HALL LIGHT | | | | 20/1AB | 5AB | | 6 | 20 | | | | LOW REST&HALL LIGHT | 6 |
| 7 | 206 | | | | 20/1 | 7 | | 8 | /2 | | | | LOW REST&HALL LIGHT | 8 |
| 9 | EXISTING LOAD | | | | 20/1 | 9 | | 10 | 20/1 | | | | LITE COMP RM | 10 |
| 11 | ART STORAGE | | | | 20/1 | 11 | | 12 | 20/1 | | | | SOUTH UP HALL | 12 |
| 13 | 207 ENTRY LIGHT AND BELL | | | | 20/1 | 13 | | 14 | 20/1 | | | | 205 | 14 |
| 15 | 12 | | | | 20/1 | 15 | | 16 | 20/1 | | | | TEACHERS LOUNGE | 16 |
| 17 | 203 | | | | 20/1 | 17 | | 18 | 20/1 | | | | TEACHERS REST RM | 18 |
| 19AB | 201 | | | | 20/1AB | 19AB | | 20 | 20/1 | | | | PLUGS LOUNGE | 20 |
| 21AB | 10 | | | | 20/1AB | 21AB | | 22 | 20/1 | | | | 204 | 22 |
| 23AB | 202 | | | | 20/1AB | 23AB | | 24 | 20/1 | | | | EXISTING LOAD | 24 |
| 25 | 11 | | | | 20/1 | 25 | | 26 | 20/1 | | | | ART&SCIENCE RM | 26 |
| 27 | KITCHEN | | | | 20/1 | 27 | | 28 | 20 | | | | AIR DRYER | 28 |
| 29 | CUSTODIAN RECP | | | | 20/1 | 29 | | 30 | /2 | | | | EXHAUST CUSTODIAN RM | 30 |
| 31 | JOHNSON PANEL | | | | 20/1 | 31 | | 32 | 20/1 | | | | H&V 202-10-ART | 32 |
| 33 | H&V 11-201-203 | | | | 20/1 | 33 | | 34 | 20/1 | | | | H&V 204-205-206 | 34 |
| 35 | H&V 12-207-208 | | | | 20/1 | 35 | | 36AB | 20/1AB | | | | RECP CAFÉ | 36AB |
| 37 | LIGHTS SOCAFE | | | | 20/1 | 37 | | 38 | 20 | | | | ~~COMPRESSOR (THIS RM)~~ | 38 |
| 39 | RECP SOFF CAFÉ | | | | 20/1 | 39 | | 40 | / | | | | ~~COMPRESSOR (THIS RM)~~ | 40 |
| 41AB | EXISTING LOAD | | | | 20/1AB | 41AB | | 42 | 3 | | | | ~~COMPRESSOR (THIS RM)~~ | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES: 1. FIELD TRACE AND VERIFY LOADS, EC SHALL PROVIDE UPDATED PANEL SCHEDULE

## EX PNL LP-5

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MLO | PANEL LOCATION: STORAGE ROOM |
| BUS RATING: 225 A | FEEDER SIZE: 200A |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: DP-2 |
| MOUNTING: Surface | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BATH LTS STORAGE RM | | | 20/1 | 1 | | 2 | 20/1 | | | LOCKER RM LTS. LOUNGE N RECPT. SE | 2 |
| 3 | RECPT | | | 20/1 | 3 | | 4 | 20/1 | | | E GYM RECPT | 4 |
| 5 | NORTH RECP. RM 103 | | | 20/1 | 5 | | 6 | 20/1 | | | GYM UNIT HEATER ELEVATED | 6 |
| 7 | DEPARTMENT PLUGS | | | 20/1 | 7 | | 8 | 20/1 | | | GYM STORAGE #1 | 8 |
| 9 | LEFT GYM HEATER | | | 20/1 | 9 | | 10 | 20/1 | | | RIGHT GYM HEATER | 10 |
| 11 | ~~LUNCH ROOM RECPT~~ | | | 20/1 | 11 | | 12 | 20/1 | | | ~~MICROWAVE~~ | 12 |
| 13 | ~~TEACHERS LOUNGE RECPT~~ | | | 20/1 | 13 | | 14 | 20/1 | | | ~~COFFEE MAKER~~ | 14 |
| 15 | GYM STORAGE RM. #2 | | | 20/1 | 15 | | 16 | 20/1 | | | DEMO | 16 |
| 17 | GYM WEST RECPT | | | 20/1 | 17 | | 18 | 20/1 | | | GYM N RECPT. W OUTSIDE LTS | 18 |
| 19 | RECPT | | | 20/1 | 19 | | 20 | 20/1 | | | GYM SW RECPT | 20 |
| 21 | GYM NW LIGHTS | | | 20/1 | 21 | | 22 | 20/1 | | | GYM SW LIGHTS | 22 |
| 23 | GYM NE LIGHTS | | | 20/1 | 23 | | 24 | 20/1 | | | GYM SE LIGHTS | 24 |
| 25 | CONFERENCE RM S RECPT | | | 20/1 | 25 | | 26 | 50 | | | EXISTING LOAD | 26 |
| 27 | ~~PAULA'S OFFICE/FIRST AID LTS~~ | | | 20/1 | 27 | | 28 | /2 | | | EXISTING LOAD | 28 |
| 29 | PAULA'S OFFICE/FIRST AIDS RECPT | | | 20/1 | 29 | | 30 | 20/1 | | | ~~COPIER IN TEACHERS LOUNGE~~ | 30 |
| 31 | ~~CONF RM RECEPTION LTS~~ | | | 20/1 | 31 | | 32 | 20/1 | | | ~~E OFFICE RECPT~~ | 32 |
| 33 | ~~N CONFERENCE RECPT~~ | | | 20/1 | 33 | | 34 | 20/1 | | | PULL DOWN CURTAIN? | 34 |
| 35 | JOHNSON CONTROL PANEL | | | 20/1 | 35 | | 36 | 20/1 | | | SPARE | 36 |
| 37 | BIG FANS | | | 20/1 | 37 | | 38 | 20/1 | | | SPARE | 38 |
| 39 | SPARE | | | 50 | 39 | | 40 | 20/1 | | | EXISTING LOAD | 40 |
| 41 | SPARE | | | /2 | 41 | | 42 | 20/1 | | | EXISTING LOAD | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES: 1. FIELD TRACE AND VERIFY ALL EXISTING LOADS. EXISTING LOADS NOT AFFECTED BY DEMOLITION SHALL BE TRANSFERRED TO NEW PANEL LP-5.
2. DEMO EXISTING CIRCUIT AND REMOVE EXISTING BREAKER (ASSUMED BASED ON NAMING, CONFIRM WITH FIELD TRACING)

## EX PNL LP-6

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MLO | PANEL LOCATION: JANITOR'S CLOSET |
| BUS RATING: 225 A | FEEDER SIZE: 200A |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: DP-2 |
| MOUNTING: SURFACE | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | B | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SOUTH HALLWAY LIGHTS | | | | 20/1 | 1 | | 2AB | 20/1AB | | | | N HALLWAY LIGHTS / KITCHEN G | 2AB |
| 3 | INST. SERV. 2ND ROW LIGHTS | | | | 20/1 | 3 | | 4AB | 20/1AB | | | | WATER HEATER | 4AB |
| 5 | INST. SERV. 1ST ROW LIGHTS | | | | 20/1 | 5 | | 6 | 20 | | | | ROOM C N. 1ST ROW LIGHTS | 6 |
| 7 | ROOM C N. 2ND ROW LIGHTS | | | | 20/1 | 7 | | 8 | /2 | | | | ---------- | 8 |
| 9 | ROOM C S. 2ND ROW LIGHTS | | | | 20/1 | 9 | | 10 | 20/1 | | | | RM C S. 1ST ROW LIGHTS | 10 |
| 11 | ---------- | | | | 20/1 | 11 | | 12 | 20/1 | | | | JANITOR CLOSET, BATHRM LIGH | 12 |
| 13 | RM 304 2ND ROW LIGHTS | | | | 20/1 | 13 | | 14 | 20/1 | | | | RM 304 AC UNIT | 14 |
| 15 | RM 302 LIGHTS | | | | 20/1 | 15 | | 16AB | 20/1AB | | | | RM 302 LIGHTS | 16AB |
| 17 | ---------- | | | | 20/1 | 17 | | 18AB | 20/1AB | | | | RM 301 LIGHTS | 18AB |
| 19 | RM 301 LIGHTS | | | | 20/1 | 19 | | 20AB | 20/1AB | | | | RM 303 LIGHTS | 20AB |
| 21 | | | | | 20/1 | 21 | | 22 | 20/1 | | | | FOOD WARMER RECP | 22 |
| 23 | NEW COPY MACHINE RECP | | | | 20/1 | 23 | | 24 | 20/1 | | | | HANDICAP/STUDENT RESTRM RE | 24 |
| 25 | | | | | 20/1 | 25 | | 26 | 20/1 | | | | RM 302 COMPUTER RECP | 26 |
| 27 | RM 302 RECP | | | | 20/1 | 27 | | 28 | 20/1 | | | | RM 301 AC UNIT | 28 |
| 29 | RM 304 RECP | | | | 20/1 | 29 | | 30 | 20/1 | | | | RM 302/RM 304 RECP | 30 |
| 31 | LIBRARY RECP STRIP | | | | 20/1 | 31 | | 32 | 20/1 | | | | | 32 |
| 33 | HALLWAY/HANDICAP/301 RECP | | | | 20/1 | 33 | | 34 | 20/1 | | | | RM 301 RECP | 34 |
| 35 | | | | | 20/1 | 35 | | 36 | 20/1 | | | | READING RECOVERY LIGHTS/RE | 36 |
| 37 | | | | | 20/1 | 37 | | 38 | 20/1 | | | | INST. SERVICES RECP STRIP | 38 |
| 39 | | | | | 20/1 | 39 | | 40 | 20/1 | | | | | 40 |
| 41 | DOOR CONTROLS | | | | 20/1 | 41 | | 42 | 20/1 | | | | RM 302 AC UNIT | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES:

## EX PNL LP-7

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MLO | PANEL LOCATION: 1ST FLOOR ACROSS FROM DEMO OFFICE |
| BUS RATING: 225 A | FEEDER SIZE: 200 |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: DP-2 |
| MOUNTING: Surface | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RM 104 1ST ROW OF LTS | | | 20/1 | 1 | | 2 | 20/1 | | | RM 104 2ND ROW OF LTS | 2 |
| 3 | RM 102 1ST ROW OF LTS | | | 20/1 | 3 | | 4 | 20/1 | | | RM 102 2ND ROW OF LTS | 4 |
| 5 | RM 101 1ST ROW OF LTS | | | 20/1 | 5 | | 6 | 20/1 | | | RM 101 2ND ROW OF LTS | 6 |
| 7 | RM 103 1ST ROW OF LTS | | | 20/1 | 7 | | 8 | 20/1 | | | RM 103 RECP BY WINDOW'S | 8 |
| 9 | CLOCK'S | | | 20/1 | 9 | | 10 | 20/1 | | | RM 103 2ND ROW OF LTS | 10 |
| 11 | SOUTH HALLWAY 4 LTS | | | 20/1 | 11 | | 12 | 20/1 | | | PSYCH OFFICE&ENTRY LTS/RECP | 12 |
| 13 | SOUTH HALL LTS 3 LTS | | | 20/1 | 13 | | 14 | 20/1 | | | N STAIRWELL&HALL LTS ADMIN AREA | 14 |
| 15AB | SPOT LIGHTS | | | 20/1AB | 15AB | | 16 | 20/1 | | | EXISTING LOAD | 16 |
| 17 | LIBRARY/PSYCH OFFICE RECP | | | 20/1 | 17 | | 18 | 20/1 | | | LIBRARY-STAGE LTS | 18 |
| 19 | RM 102 HEATER/104 HEATER | | | 20/1 | 19 | | 20 | 20/1 | | | LIBRARY 1ST ROW OF LTS | 20 |
| 21 | LIBRARY 3RD ROW LTS | | | 20/1 | 21 | | 22 | 20/1 | | | LIBRARY HEATER | 22 |
| 23 | LIBRARY 2ND ROW LTS | | | 20/1 | 23 | | 24 | 20/1 | | | EXISTING LOAD | 24 |
| 25 | RM 104 SOUTH RECP | | | 20/1 | 25 | | 26 | 20/1 | | | OUTSIDE SIGN LIGHT | 26 |
| 27 | RM 104 NORTH RECP | | | 20/1 | 27 | | 28 | 20/1 | | | RM 101 HEATER/RM 103 HEATER | 28 |
| 29 | TEACHER WORK RM N RECP | | | 20/1 | 29 | | 30 | 20/1 | | | S HALLWAY RECP W SIDE | 30 |
| 31 | N HALLWAY RECP E SIDE | | | 20/1 | 31 | | 32 | 20/1 | | | TEACHER WORK RM S RECP & 101 N | 32 |
| 33 | RM 101 SOUTH RECP | | | 20/1 | 33 | | 34 | 20/1 | | | EXISTING LOAD | 34 |
| 35 | PSYCH OFFICE E WALL RECP | | | 20/1 | 35 | | 36AB | 20/1AB | | | STAGE RECP | 36AB |
| 37 | RECP NEW RECEPTION AREA | | | 20/1 | 37 | | 38 | 20/1 | | | FIRE ALARM | 38 |
| 39 | EXISTING LOAD | | | 30/ | 39 | | 40 | 40/ | | | JANITOR CLOSET E WALL RECP | 40 |
| 41 | EXISTING LOAD | | | 2 | 41 | | 42 | 2 | | | JANITOR CLOSET E WALL RECP | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES:

## EX PNL LP-8

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MCB | PANEL LOCATION: MAINTANCE ROOM |
| BUS RATING: 225 A | FEEDER SIZE: |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: |
| MOUNTING: SURFACE | MIN RMS AMPS: |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SOUTH RECP | | | 20/1 | 1 | | 2 | 20/1 | | | SW RECP | 2 |
| 3 | HUB | | | 20/1 | 3 | | 4 | 20/1 | | | SW RECP | 4 |
| | | | | | | | 6A | 20/1A | | | AC-UNIT | 6A |
| 5 | E RECP | | | 20/1 | 5 | | 6B | 20/1B | | | AC-UNIT | 6B |
| 7 | E RECP | | | 20/1 | 7 | | 8 | 20/1 | | | N RECP | 8 |
| 9 | NE RECP | | | 20/1 | 9 | | 10 | 20/1 | | | N RECP | 10 |
| 11 | N RECP | | | 20/1 | 11 | | 12 | 20/1 | | | NW RECP | 12 |
| 13 | SECURITY | | | 20/1 | 13 | | 14 | 20/1 | | | 120V UPS | 14 |
| 15 | EXISTING LOAD | | | 20/1 | 15 | | 16 | 20/1 | | | COPIER | 16 |
| 17 | EXISTING LOAD | | | 20/1 | 17 | | 18 | 20/1 | | | COMPUTER OUTLETS | 18 |
| 19 | EXISTING LOAD | | | 20/1 | 19 | | 20 | 20/1 | | | RECP BELOW PANEL | 20 |
| 21 | UNKNOWN LOAD | | | 20/1 | 21 | | 22 | 20/1 | | | UNKNOWN LOAD | 22 |
| 23 | WIRE MOLD LOUNGE | | | 20/1 | 23 | | 24 | 20/1 | | | WIRE MOLD LOUNGE | 24 |
| 25 | WIRE MOLD LOUNGE | | | 20/1 | 25 | | 26 | 20/1 | | | WIRE MOLD LOUNGE | 26 |
| 27 | ACTUITY RM COUNTER PLUGS | | | 20/1 | 27 | | 28 | 30/1 | | | HUB RM | 28 |
| 29 | ACTUITY RM | | | 20/1 | 29 | | 30 | 50/2 | | | RANGE LOUNGE | 30 |
| 31 | ACTUITY RM AC PLUG | | | 20/1 | 31 | | 32 | | | | RANGE LOUNGE | 32 |
| 33 | ACTUITY RM STRIP | | | 20/1 | 33 | | 34 | 20/1 | | | BUSINESS OFFICE RECP | 34 |
| 35 | COMPUTER LAB PROJECTOR | | | 20/1 | 35 | | 36 | 20/1 | | | BUSINESS OFFICE PRINTER NW | 36 |
| 37 | COMPUTER LAB NE PLUGS | | | 20/1 | 37 | | 38 | 20/1 | | | COMPUTER LAB W PLUGS | 38 |
| 39 | COMPUTER LAB DATA PACK | | | 20/1 | 39 | | 40 | 20/1 | | | COMPUTER LAB SE PLUGS | 40 |

## EX PNL LP-6 SUB

| | |
|---|---|
| MAIN: SIZE & TYPE: ? A MLO | PANEL LOCATION: JANITOR'S CLOSET |
| BUS RATING: ? A | FEEDER SIZE: ? |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: DP-2 |
| MOUNTING: SURFACE | MIN RMS AMPS: 10KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | B | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | STOVE/FRIDGE LIB / LIB. N. REC | | | | 20/1AB | 1 | | 2AB | 20/1AB | | | | INST. SERV. N. RECP / E SIDE C | 2AB |
| 3 | LIB/COPY/MECH. LTS / COPY RM | | | | 20/1AB | 3 | | 4AB | 20/1AB | | | | RM C STRIP N WALL/E WALL CO | 4AB |
| 5 | INST. SERV. E. REC / W. WALL | | | | 20/1AB | 5 | | 6 | 20 | | | | AC UNIT CONF 2 / E WALL CONF | 6AB |
| 7 | COPY RM / OBS. RM S. WALLS | | | | 20/1AB | 7 | | 8 | /2 | | | | AC UNIT 3 / E WALL CONF 2 | 8AB |
| 9 | RANGE | | | | 20/1 | 9 | | 10 | 20/1 | | | | 303 AC | 10 |
| 11 | RANGE | | | | 20/1 | 11 | | 12 | 20/1 | | | | READING RECOVERY OFFICE AC | 12 |
| 13 | LIBRARY AC | | | | 20/1 | 13 | | 14 | 20/1 | | | | 302 KGTN READING AC / CONF 2 | 14AB |
| 15 | LIB. FRIDGE / CONF. RM E. WALL | | | | 20/1AB | 15 | | 16AB | 20/1AB | | | | AC UNIT CONF 2 / E WALL CONF | 16 |
| 17 | INST. SERV AC UNIT | | | | 20/1 | 17 | | 18AB | 20/1AB | | | | BLANK | 18 |
| 19 | INST. SERV AC UNIT | | | | 20/1 | 19 | | 20AB | 20/1AB | | | | BLANK | 20 |
| 21 | | | | | 20/1 | 21 | | 22 | 20/1 | | | | | 22 |
| 23 | | | | | 20/1 | 23 | | 24 | 20/1 | | | | | 24 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES:

## EX PANEL LP-7 SUB

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A | PANEL LOCATION: |
| BUS RATING: 225 A | FEEDER SIZE: |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: |
| MOUNTING: | MIN RMS AMPS: |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | JANITORS CLOSET LTS/BATHROOM | | | 20/1 | 1 | | 2 | 20/1 | | | LIBRARY HALLWAY LTS | 2 |
| 3 | RM 'C' S RECP 2ND FLOOR | | | 20/1 | 3 | | 4 | 20/1 | | | LIBRARY HALLWAY LTS | 4 |
| 5 | A.C. UNIT SE LIBRARY WINDOW | | | 20/1 | 5 | | 6 | 20/1 | | | LIBRARY RECP | 6 |
| 7 | LIBRARY A.C UNIT NE WINDOW | | | 20/1 | 7 | | 8 | 20/1 | | | EXISTING LOAD | 8 |
| 9 | DOOR SECURITY SYSTEM | | | 20/1 | 9 | | 10 | 20/1 | | | PSYCH OFFICE PLUG STRIP | 10 |
| 11 | SPARE | | | 40/ | 11 | | 12 | 20/1 | | | RM 102 S RECP | 12 |
| 13 | RM 103 WATER HEATER | | | 2 | 13 | | 14AB | 20/1AB | | | RM 101 WATER HEATER | 14AB |
| 15 | RM 103 AC UNIT | | | 20/1 | 15 | | 16 | 20/1 | | | RM 101 AC UNIT | 16 |
| 17 | RM 104 AC UNIT | | | 20/1 | 17 | | 18 | 20/1 | | | RM 102 N RECP | 18 |
| 19 | RM 102 AC | | | 20/1 | 19 | | 20AB | 20/1AB | | | EXISTING LOAD | 20AB |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES:

## EX PNL LP-98A

| | |
|---|---|
| MAIN: SIZE & TYPE: 225 A MLO | PANEL LOCATION: |
| BUS RATING: 225 A | FEEDER SIZE: 200A |
| VOLTAGE: 120 / 208 V 3 Ø, 4 WIRE | FED FROM: MDP |
| MOUNTING: | MIN RMS AMPS: 22KA |

| CKT # | CIRCUIT DESCRIPTION | LOAD (KVA) A | B | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3RD FLOOR LTS | | | | 20/1 | 1 | | 2 | 15/ | | | | AC-A 3RD FLOOR | 2 |
| 3 | W RECP OFFICE #1/ S&E OFFICE #2 | | | | 20/1 | 3 | | 4 | 2 | | | | AC-A 3RD FLOOR | 4 |
| 5 | N RECP OFFICE #1 & #2 3RD FL HALLWAY | | | | 20/1 | 5 | | 6 | 20/ | | | | HAC-A ON WALL OFFICE #2 3RD FL | 6 |
| 7 | COMP OUTLETS OFFICE #1 &#2 3RD FL | | | | 20/1 | 7 | | 8 | 2 | | | | HAC-A ON WALL OFFICE #2 3RD FL | 8 |
| 9 | EF-A ELEVATOR SHAFT | | | | 20/1 | 9 | | 10 | 15/ | | | | FCU-"A" OFFICE #1 3RD FL | 10 |
| 11 | THERAPY E&N S WALLS | | | | 20/1 | 11 | | 12 | 2 | | | | FCU-"A" OFFICE #1 3RD FL | 12 |
| 13 | THERAPY COMPUTER OUTLET | | | | 20/1 | 13 | | 14 | 20/1 | | | | THERAPY UV-"A" AND RF-"A" | 14 |
| 15 | ELEVATOR CAB LIGHTS | | | | 20/1 | 15 | | 16 | 20/1 | | | | THERAPY W END N&W RECP FAN-BATH | 16 |
| 17 | THERAPY E END LTS/BATHROOM/FOYER | | | | 20/1 | 17 | | 18 | 20/1 | | | | THERAPY WEST END LTS | 18 |
| 19 | WASHER & DRYER | | | | 30/ | 19 | | 20 | 40/ | | | | AC-"B" ON ROOF | 20 |
| 21 | WASHER & DRYER | | | | 2 | 21 | | 22 | 2 | | | | AC-"B" ON ROOF (OR C?) | 22 |
| 23 | FAX MACHINE POWERPOLE | | | | 20/1 | 23 | | 24 | 20/1 | | | | WASHER | 24 |
| 25 | INSTRUCTIONAL SERVICES S RECP | | | | 20/1 | 25 | | 26 | 20/1 | | | | PUSH BUTTONS DOOR OPENER | 26 |
| 27 | DIVIDER WALL RECP BOTH SIDES | | | | 20/1 | 27 | | 28 | 20/1 | | | | SPARE | 28 |
| 29 | SPARE | | | | 20/1 | 29 | | 30 | 20/1 | | | | SPARE | 30 |
| 31 | AIR HANDLER? | | | | 20/ | 31 | | 32 | 20/1 | | | | SPARE | 32 |
| 33 | AIR HANDLER? | | | | 2 | 33 | | 34 | | | | | BLANK | 34 |
| 35 | AC CONDENSOR | | | | 20/ | 35 | | 36 | | | | | BLANK | 36 |
| 37 | AC CONDENSOR | | | | 2 | 37 | | 38 | | | | | BLANK | 38 |
| 39 | RECEPTION AIR HANDLER | | | | 15/ | 39 | | 40 | | | | | BLANK | 40 |
| 41 | RECEPTION AIR HANDLER | | | | 2 | 41 | | 42 | | | | | BLANK | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES:

## EX PNL LP-EM

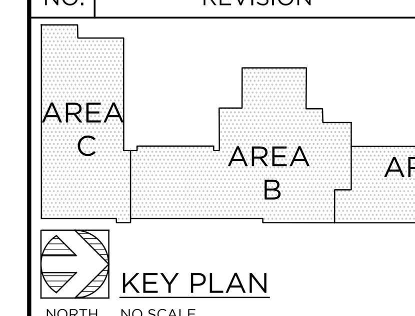
| | |
|---|---|
| MAIN: SIZE & TYPE: 100 A MCB | PANEL LOCATION: BOILER RM |
| BUS RATING: 100 A | FEEDER SIZE: |
| VOLTAGE: 120 / 208 V 1 Ø, 3 WIRE | FED FROM: MAIN XFMR |
| MOUNTING: SURFACE | MIN RMS AMPS: |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | C | AMPS / POLES | CKT # | LOAD TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EXIT LIGHTS | | | 20/1 | 1 | | 2 | 20/1 | | | FIRE ALARM | 2 |
| 3 | WALL PACKS | | | 20/1 | 3 | | 4 | 20/1 | | | FIRE ALARM | 4 |
| 5 | EXISTING LOAD | | | 20/1 | 5 | | 6 | 20/1 | | | SIMENS TEMP CONTROLS | 6 |
| 7 | GARAGE | | | 30/ | 7 | | 8 | 20/1 | | | SPARE | 8 |
| 9 | GARAGE | | | 2 | 9 | | 10 | 30/ | | | SPARE | 10 |
| 11 | BLANK | | | | 11 | | 12 | 2 | | | SPARE | 12 |

| LOAD SUMMARY | | KVA CONNECTED A | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.000 | 0.000 | 0.000 | 0.600 | 0.000 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 0.000 | 0.000 | 0.000 | | 0.000 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 0.000 | 0.000 | 0.000 | | 0.000 | AMPS |

NOTES: 1. FIELD TRACE AND VERIFY LOADS, EC SHALL PROVIDE UPDATED PANEL SCHEDULE

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
EXISTING PANEL SCHEDULES

PROJECT NUMBER: 2022006.1
PROJECT DATE: AUGUST 23, 2023
CHECKED BY: JWF
SHEET NUMBER: E4.02

## EX MDP

MAIN: SIZE & TYPE: 1200 A MCB
BUS RATING: 1200 A
VOLTAGE: 120 / 208 V 3 PH 4 W
MOUNTING: SURFACE
PANEL LOCATION: BOILER RM
FEEDER SIZE:
FED FROM: PRIMARY XMFR
MIN RMS AMPS: 100KA

| CKT # | CIRCUIT DESCRIPTION | AMPS / POLES | LOAD (KVA) A | B | C |
|---|---|---|---|---|---|
| 1 | LP-98A | 200/3 | | | |
| 2 | ELEVATOR DISCONNECT | 150/3 | | | |
| 3 | LP-1 | 50/2 | | | |
| 4 | CONDS | 30/3 | | | |
| 5 | AHU | 60/3 | | | |
| 6 | LP-8 | 200/2 | | | |
| 7 | EXISTING LOAD | 150/2 | | | |
| 8 | PUMP 101,102,103 | 40/3 | | | |
| 9 | DP-1 | 400/3 | | | |
| 10 | BOILER PUMPS 104,105 | 30/3 | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |

| LOAD SUMMARY | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | |
|---|---|---|---|---|---|---|
| TOTAL KVA | 0.000 | 0.000 | 0.000 | 0.000 | kVA | |
| VOLTS / PHASE | 120 | 120 | 120 | 208 | VOLTS | |
| AMPS / PHASE | 0.000 | 0.000 | 0.000 | 0.0 | AMPS | |

NOTES:

## EX DP-1

MAIN: SIZE & TYPE: 400 A MLO
BUS RATING: 600 A
VOLTAGE: 120 / 208 V 3 PH 4 W
MOUNTING: SURFACE
PANEL LOCATION: BOILER RM
FEEDER SIZE:
FED FROM: MDP
MIN RMS AMPS: 42KA

| CKT # | CIRCUIT DESCRIPTION | AMPS / POLES | LOAD (KVA) A | B | C |
|---|---|---|---|---|---|
| 1 | DP-2 | 400/3 | | | |
| 2 | LP-2 | 150/3 | | | |
| 3 | LP-4 | 200/3 | | | |
| 4 | LP-3 | 150/3 | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |

| LOAD SUMMARY | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | |
|---|---|---|---|---|---|---|
| TOTAL KVA | 0.000 | 0.000 | 0.000 | 0.000 | kVA | |
| VOLTS / PHASE | 120 | 120 | 120 | 208 | VOLTS | |
| AMPS / PHASE | 0.000 | 0.000 | 0.000 | 0.0 | AMPS | |

NOTES: DCT

## EX LOAD (LP-7?) DP-2

MAIN: SIZE & TYPE: 400 A MLO
BUS RATING: 400 A
VOLTAGE: 120 / 208 V 3 PH 4 W
MOUNTING: RECESSED
PANEL LOCATION:
FEEDER SIZE:
FED FROM: DP-1
MIN RMS AMPS: 25KA

| CKT # | CIRCUIT DESCRIPTION | AMPS / POLES | LOAD (KVA) A | B | C |
|---|---|---|---|---|---|
| 1 | LP-5 | 200/2 | | | |
| 2 | LP-6 | 200/2 | | | |
| 3 | LP-7 | 200/2 | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |

| LOAD SUMMARY | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | |
|---|---|---|---|---|---|---|
| TOTAL KVA | 0.000 | 0.000 | 0.000 | 0.000 | kVA | |
| VOLTS / PHASE | 120 | 120 | 120 | 208 | VOLTS | |
| AMPS / PHASE | 0.000 | 0.000 | 0.000 | 0.0 | AMPS | |

NOTES:

## REVISED MDP

MAIN: SIZE & TYPE: 1200 A MCB
BUS RATING: 1200 A
VOLTAGE: 120 / 208 V 3 PH 4 W
MOUNTING: SURFACE
PANEL LOCATION: BOILER RM
FEEDER SIZE: EX 1200A
FED FROM: PRIMARY XMFR
MIN RMS AMPS: 100KA

| | CKT # | CIRCUIT DESCRIPTION | AMPS / POLES | LOAD (KVA) A | B | C |
|---|---|---|---|---|---|---|
| R | 1 | RP1B & RP1B SUB | 200/3 | 10.497 | 14.612 | 14.056 |
| | 2 | ELEVATOR DISCONNECT | 150/3 | 2.200 | 2.200 | 2.200 |
| | 3 | LP-1 | 50/2 | 3.600 | 3.600 | 3.600 |
| | 4 | RP1C | 200/3 | 8.649 | 12.056 | 9.663 |
| | 5 | RP2A | 200/3 | 9.089 | 8.534 | 6.300 |
| | 6 | LP-8 | 200/2 | 12.000 | 12.000 | 12.000 |
| | 7 | *SPARE | 150/2 | 0.000 | 0.000 | 0.000 |
| | 8 | PUMP 101,102,103 | 40/3 | 2.600 | 2.600 | 2.600 |
| | 9 | DP-1 | 400/3 | 52.727 | 14.400 | 51.370 |
| | 10 | BOILER PUMPS 104,105 | 30/3 | 2.200 | 2.200 | 2.200 |
| | 11 | RTU-1 | 90/3 | 5.228 | 5.228 | 5.228 |
| | 12 | RTU-2 | 125/3 | 8.819 | 8.819 | 8.819 |
| | 13 | RTU-3 | 40/3 | 2.125 | 2.125 | 2.125 |
| | 14 | RTU-4 | 125/3 | 8.819 | 8.819 | 8.819 |
| | 15 | RTU-5 | 50/3 | 3.429 | 3.429 | 3.429 |
| | 16 | RTU-6 | 60/3 | 5.228 | 5.228 | 5.228 |
| | 17 | RTU-7 | 100/3 | 6.290 | 6.290 | 6.290 |
| | 18 | RTU-8 | 250/3 | 16.660 | 16.660 | 16.660 |
| | 19 | | | ---------> | ---------> | ---------> |
| | 20 | | | ---------> | ---------> | ---------> |
| | 21 | | | ---------> | ---------> | ---------> |

| LOAD SUMMARY | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND |
|---|---|---|---|---|---|---|
| TOTAL KVA | 160.158 | 128.798 | 160.585 | 449.542 | kVA | 396.667 |
| VOLTS / PHASE | 120 | 120 | 120 | 208 | VOLTS | 208 |
| AMPS / PHASE | 1334.653 | 1073.320 | 1338.211 | 1247.8 | AMPS | 1101.070 |

NOTES: *FIELD TRACE AND VERIFY EXISTING BREAKER IS UNUSED SPARE
SQUARE D I-LINE E1
1. FURNISH AND INSTALL 100% RATED 1200A MCB. SQUARE D #IR(A36120CU31A

## REVISED DP-1

MAIN: SIZE & TYPE: 400 A MCB
BUS RATING: 600 A
VOLTAGE: 120 / 208 V 3 PH 4 W
MOUNTING: SURFACE
PANEL LOCATION: BOILER RM
FEEDER SIZE:
FED FROM: MDP
MIN RMS AMPS: 42KA

| CKT # | CIRCUIT DESCRIPTION | AMPS / POLES | LOAD (KVA) A | B | C |
|---|---|---|---|---|---|
| 1 | DP-2 | 400/3 | 23.417 | 0.000 | 20.270 |
| 2 | LP2 | 150/3 | 7.110 | 0.000 | 8.920 |
| 3 | LP-4 | 200/3 | 14.400 | 14.400 | 14.400 |
| 4 | LP3 | 150/3 | 7.800 | 0.000 | 7.780 |
| 5 | | | ---------> | ---------> | ---------> |
| 6 | | | ---------> | ---------> | ---------> |

| LOAD SUMMARY | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | |
|---|---|---|---|---|---|---|
| TOTAL KVA | 52.727 | 14.400 | 51.370 | 118.498 | kVA | |
| VOLTS / PHASE | 120 | 120 | 120 | 208 | VOLTS | |
| AMPS / PHASE | 439.394 | 120.000 | 428.087 | 328.9 | AMPS | |

NOTES:

## REVISED DP-2

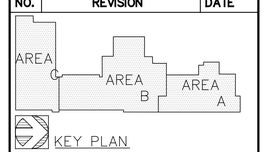
MAIN: SIZE & TYPE: 400 A MCB
BUS RATING: 400 A
VOLTAGE: 120 / 208 V 3 PH 4 W
MOUNTING: RECESSED
PANEL LOCATION:
FEEDER SIZE:
FED FROM: DP-1
MIN RMS AMPS: 25KA

| CKT # | CIRCUIT DESCRIPTION | AMPS / POLES | LOAD (KVA) A | B | C |
|---|---|---|---|---|---|
| 1 | LP5 | 200/2 | 8.580 | 0.000 | 5.540 |
| 2 | LP6 | 200/2 | 14.837 | 0.000 | 14.730 |
| 3 | SPARE | 200/2 | ---------> | ---------> | ---------> |
| 4 | | | ---------> | ---------> | ---------> |
| 5 | | | ---------> | ---------> | ---------> |
| 6 | | | ---------> | ---------> | ---------> |
| 7 | | | ---------> | ---------> | ---------> |
| 8 | | | ---------> | ---------> | ---------> |
| 9 | | | ---------> | ---------> | ---------> |
| 10 | | | ---------> | ---------> | ---------> |

| LOAD SUMMARY | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | |
|---|---|---|---|---|---|---|
| TOTAL KVA | 23.417 | 0.000 | 20.270 | 43.688 | kVA | |
| VOLTS / PHASE | 120 | 120 | 120 | 208 | VOLTS | |
| AMPS / PHASE | 195.144 | 0.000 | 168.920 | 121.3 | AMPS | |

NOTES:

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |





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PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
EXISTING PANEL SCHEDULES

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JWF
SHEET NUMBER E4.03

**REVISED**

# PNL LP2

| | |
|---|---|
| MAIN: SIZE & TYPE: **225 A** | PANEL LOCATION: **BOILER RM** |
| BUS RATING: **225 A** | FEEDER SIZE: **150A** |
| VOLTAGE: **120 / 208 V 1 Ø, 3 WIRE** | FED FROM: **DP-1** |
| MOUNTING: Surface | MIN RMS AMPS: **10KA** |

| | CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 1 | PNL LP-EM | 1.500 | | | 100/ | 1 | O | O | 2 | 20/1 | 0.180 | | | SUMP PLUG | 2 |
| 2 | 3 | PNL LP-EM | | | 0.800 | 2P | 3 | O | | 4 | | | | | BLANK | 4 |
| | 5 | SPARE | | | | | 5 | | L | 6 | 20/1 | 0.300 | | | BOILER RM LIGHTS | 6 |
| | 7 | SPARE | | | | 20 | 7 | | O | 8 | 20/1 | | | 0.500 | BOILER #1 | 8 |
| | 9 | SPARE | | | | / | 9 | | | 10 | 20 | | | | SPARE | 10 |
| | 11 | SPARE | | | | 3 | 11 | | | 12 | / | | | | SPARE | 12 |
| | 13 | PLUG UNDER PANEL 110V | 0.180 | | | 30/ | 13 | R | | 14 | 3 | | | | SPARE | 14 |
| | 15 | PLUG UNDER PANEL 110V | | | 0.180 | 2 | 15 | R | | 16 | | | | | BLANK | 16 |
| 1 | 17 | EXT. SITE LIGHTING | | | | 20/ | 17 | L | | 18 | 20/1 | | | | SPARE | 18 |
| 1 | 19 | EXT. SITE LIGHTING | | | | 2 | 19 | L | | 20 | 20/1 | | | | SPARE | 20 |
| | 21 | | | | | | 21 | | | 22 | 20/1 | | | | SPARE | 22 |
| 1 | 23 | ACC-1 MDF ROOM | | | 1.000 | 20/ | 23 | H | R | 24 | 20/1 | | | 0.180 | ALT POWER | 24 |
| 1 | 25 | ACC-1 MDF ROOM | 1.000 | | | 2 | 25 | H | O | 26 | ?/ | 2.000 | | | RANGE IN TEACHERS LOUNGE | 26 |
| | 27 | BLANK | | | | | 27 | | O | 28 | 2 | | | 2.000 | RANGE IN TEACHERS LOUNGE | 28 |
| | 29 | ROOFTOP RECP | 0.540 | | | 20/1 | 29 | R | H | 30 | ? | 0.500 | | | BOILER #1 | 30 |
| | 31 | UNDERSINK EWH-2 | | | 3.000 | 40/1 | 31 | O | H | 32 | / | | | 0.500 | BOILER #1 | 32 |
| | 33 | SPARE | | | | 20/1 | 33 | | H | 34 | 3 | 0.500 | | | BOILER #1 | 34 |
| | 35 | BOILER #2 | | | 0.400 | 20/1 | 35 | O | R | 36 | 50/ | | | 0.180 | UNKNOWN LOAD | 36 |
| | 37 | EXHAUST FAN TEACHERS LOUNGE | 0.050 | | | 20/1 | 37 | O | R | 38 | 2 | 0.180 | | | UNKNOWN LOAD | 38 |
| | 39 | EXISTING LOAD | | | 0.180 | 20/1 | 39 | O | | 40 | | | | | BLANK | 40 |
| | 41 | BLANK | | | | | 41 | | R | 42 | 20/1 | 0.180 | | | AC SERVICE OUTLET | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 1.080 | 0.000 | 0.540 | 1.620 | | 1.620 | |
| LIGHTING | L | 0.300 | 0.000 | 0.000 | 0.300 | 1.000 | 0.300 | |
| HVAC | H | 2.000 | 0.000 | 1.500 | 3.500 | 0.900 | 3.150 | |
| OTHER | O | 3.730 | 0.000 | 6.880 | 10.610 | 1.000 | 10.610 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 7.110 | 0.000 | 8.920 | 16.030 | | 15.680 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 59.250 | 0.000 | 74.333 | 44.496 | | 43.525 | AMPS |

NOTES:
1. MODIFY AND EXTEND EXISTING CIRCUIT TO FEED NEW SITE LIGHTS. FURNISH AND INSTALL NEW 20A/2P BREAKER.
2. FURNISH AND INSTALL 100A/2P BREAKER TO FEED PANEL LP-EM
3. FURNISH AND INSTALL NEW CIRCUIT BREAKERS TO FEED NEW LOADS AS REQUIRED.

**REVISED**

# PNL LP3

| | |
|---|---|
| MAIN: SIZE & TYPE: **225 A MCB** | PANEL LOCATION: **MAINTENANCE RM** |
| BUS RATING: **225 A** | FEEDER SIZE: |
| VOLTAGE: **120 / 208 V 1 Ø, 3 WIRE** | FED FROM: **DP-1** |
| MOUNTING: SURFACE | MIN RMS AMPS: **10KAIC** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | IT SUITE ABOVE COUNTER REC | 0.540 | | | 20/1 | 1 | R | R | 2 | 20/1 | 0.360 | | | MOTHER'S RM REC | 2 |
| 3 | IT SUITE OFFICE 3A REC | | | 0.360 | 20/1 | 3 | R | R | 4 | 20/1 | | | 0.180 | LOUNGE ABOVE COUNTER REC | 4 |
| 5 | MAKERSPACE ABOVE COUNTER REC | 0.180 | | | 20/1 | 5 | R | R | 6 | 20/1 | 0.180 | | | LOUNGE ABOVE COUNTER REC | 6 |
| 7 | COMPUTER | | | 0.180 | 20/1 | 7 | R | R | 8 | 20/1 | | | 0.180 | LOUNGE ABOVE COUNTER REC | 8 |
| 9 | COMPUTER | 0.180 | | | 20/1 | 9 | R | R | 10 | 20/1 | 0.180 | | | LOUNGE REC | 10 |
| 11 | COMPUTER | | | 0.180 | 20/1 | 11 | R | R | 12 | 20/1 | | | 0.180 | MDF ROOM WALL REC | 12 |
| 13 | TLT RM 007 LV XMFR (JANITOR'S | 0.050 | | | 20/1 | 13 | O | R | 14 | 20/1 | | | | RECP FAN RM #6A&B | 14 |
| 15 | TLT RM 011 LV XMFR (JANITOR'S | | | 0.050 | 20/1 | 15 | O | R | 16 | 20/1 | | | 0.540 | WIRE MOLD EAST WALL #7 | 16 |
| 17 | RECP & FAN 2A&B | 0.200 | | | 20/1 | 17 | R | L | 18 | 20/1 | 0.600 | | | CORRIDOR LIGHTING | 18 |
| 19 | MAKERSPACE ABOVE COUNTER REC | | | 0.180 | 20/1 | 19 | R | R | 20 | 20/1 | | | 0.180 | RECPTIONIST RECP EAST WALL | 20 |
| 21 | MAKERSPACE ABOVE COUNTER REC | 0.360 | | | 20/1 | 21 | R | R | 22 | 20/1 | 0.360 | | | MDF ROOM CEILING REC | 22 |
| 23 | EAST WALL RECP RM #3 | | | 0.180 | 20/1 | 23 | R | R | 24 | 20/1 | | | 0.360 | MDF ROOM CEILING REC | 24 |
| 25 | MAKERSPACE MARKERBOARDS | 0.360 | | | 20/1 | 25 | R | R | 26 | 20/1 | 0.180 | | | RECP | 26 |
| 27 | MAKERSPACE TV REC | | | 0.360 | 20/1 | 27 | R | R | 28 | 20/1 | | | 0.180 | NORTH ROOM RECP | 28 |
| 29 | NORTH SIDE LIGHTING | 1.200 | | | 20/1 | 29 | L | R | 30 | 20/1 | 0.180 | | | NORTH ROOM RECP | 30 |
| 31 | SOUTH SIDE LIGHTING | | | 1.200 | 20/1 | 31 | L | O | 32 | 30/ | | | 2.250 | JANITOR RM EWH-1 | 32 |
| 33 | EAST&WEST WALL RECP #4 | 0.180 | | | 20/1 | 33 | R | O | 34 | 2P | 2.250 | | | JANITOR RM EWH-1 | 34 |
| 35 | FANS IN HAPPY DAYS | | | 0.180 | 20/1 | 35 | R | R | 36 | 20/1 | | | 0.500 | KITCHEN IN HAPPY DAYS | 36 |
| 37 | COMPUTER LAB4 SURGE SUPP | 0.180 | | | 20/1 | 37 | R | R | 38 | 20/1 | 0.180 | | | COMPUTER LAB 2 SURGE | 38 |
| 39 | COMP LAB 3 RECP CIRCUIT | | | 0.180 | 20/1 | 39 | R | R | 40 | 20/1 | | | 0.180 | COMPUTER LAB 1 LIGHTING | 40 |
| 41 | | | | | | 41 | | R | 42 | | | | | | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 3.800 | 0.000 | 4.280 | 8.080 | | 8.080 | |
| LIGHTING | L | 1.700 | 0.000 | 1.200 | 2.900 | 1.000 | 2.900 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.000 | |
| OTHER | O | 2.300 | 0.000 | 2.300 | 4.600 | 1.000 | 4.600 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 7.800 | 0.000 | 7.780 | 15.580 | | 15.580 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 65.000 | 0.000 | 64.833 | 43.247 | | 43.247 | AMPS |

NOTES: 1. FURNISH AND INSTALL NEW CIRCUIT BREAKERS TO FEED NEW LOADS AS REQUIRED.

**REVISED**

# PNL LP5

| | |
|---|---|
| MAIN: SIZE & TYPE: **225 A MLO** | PANEL LOCATION: **STORAGE ROOM** |
| BUS RATING: **225 A** | FEEDER SIZE: **200A** |
| VOLTAGE: **120 / 208 V 1 Ø, 3 WIRE** | FED FROM: **DP-2** |
| MOUNTING: Surface | MIN RMS AMPS: **10KA** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BATH LTS STORAGE RM | 0.300 | | | 20/1 | 1 | L | L | 2 | 20/1 | 0.540 | | | LOCKER RM LTS, LOUNGE N RECPT, SE | 2 |
| 3 | RECPT | | | 0.540 | 20/1 | 3 | R | R | 4 | 20/1 | | | 0.540 | E GYM RECPT | 4 |
| 5 | NORTH RECP. RM 103 | 0.540 | | | 20/1 | 5 | R | H | 6 | 20/1 | 1.000 | | | GYM UNIT HEATER ELEVATED | 6 |
| 7 | DEPARTMENT PLUGS | | | 0.540 | 20/1 | 7 | R | R | 8 | 20/1 | | | 0.200 | GYM STORAGE #1 | 8 |
| 9 | LEFT GYM HEATER | 1.000 | | | 20/1 | 9 | H | H | 10 | 20/1 | 1.000 | | | RIGHT GYM HEATER | 10 |
| 11 | EF-3 & WATER HEATER REC | | | 0.200 | 20/1 | 11 | R | | 12 | 20/1 | | | | SPARE | 12 |
| 13 | SPARE | | | | 20/1 | 13 | | | 14 | 20/1 | | | | SPARE | 14 |
| 15 | GYM STORAGE RM. #2 | | | 0.360 | 20/1 | 15 | R | | 16 | 20/1 | | | | DEMO | 16 |
| 17 | GYM WEST RECPT | 0.540 | | | 20/1 | 17 | R | R | 18 | 20/1 | 0.900 | | | GYM N RECPT. W OUTSIDE LTS | 18 |
| 19 | RECPT | | | 0.540 | 20/1 | 19 | R | R | 20 | 20/1 | | | 0.900 | GYM SW RECPT | 20 |
| 21 | GYM NW LIGHTS | 0.630 | | | 20/1 | 21 | L | L | 22 | 20/1 | 0.630 | | | GYM SW LIGHTS | 22 |
| 23 | GYM NE LIGHTS | | | 0.630 | 20/1 | 23 | L | L | 24 | 20/1 | | | 0.630 | GYM SE LIGHTS | 24 |
| 25 | CONFERENCE RM S RECPT | 0.540 | | | 20/1 | 25 | R | O | 26 | 50 | 0.180 | | | EXISTING LOAD | 26 |
| 27 | SPARE | | | | 20/1 | 27 | | O | 28 | /2 | | | 0.180 | EXISTING LOAD | 28 |
| 29 | SPARE | | | | 20/1 | 29 | | | 30 | 20/1 | | | | SPARE | 30 |
| 31 | SPARE | | | | 20/1 | 31 | | | 32 | 20/1 | | | | SPARE | 32 |
| 33 | SPARE | | | | 20/1 | 33 | | O | 34 | 20/1 | 0.100 | | | PULL DOWN CURTAIN? | 34 |
| 35 | JOHNSON CONTROL PANEL | | | 0.100 | 20/1 | 35 | O | | 36 | 20/1 | | | | SPARE | 36 |
| 37 | BIG FANS | 0.500 | | | 20/1 | 37 | H | | 38 | 20/1 | | | | SPARE | 38 |
| 39 | SPARE | | | | 50 | 39 | | O | 40 | 20/1 | | | 0.180 | EXISTING LOAD | 40 |
| 41 | SPARE | | | | /2 | 41 | | O | 42 | 20/1 | 0.180 | | | EXISTING LOAD | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 2.520 | | 3.820 | 6.340 | | 6.340 | |
| LIGHTING | L | 2.100 | | 1.260 | 3.360 | 1.000 | 3.360 | |
| HVAC | H | 3.500 | | 0.000 | 3.500 | 0.900 | 3.150 | |
| OTHER | O | 0.460 | | 0.460 | 0.920 | 1.000 | 0.920 | |
| EXISTING | E | 0.000 | | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 8.580 | | 5.540 | 14.120 | | 13.770 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 71.500 | | 46.167 | 67.885 | | 66.202 | AMPS |

NOTES:
1. THIS PANEL SCHEDULE IS BASED ON THE EXISTING PANEL SCHEDULE. FIELD TRACE AND VERIFY ALL EXISTING LOADS. AFTER FIELD TRACING, ACCURATELY LABEL EXISTING LOADS UNAFFECTED BY DEMOLITION ON NEW PANEL SCHEDULE.
2. FURNISH AND INSTALL NEW CIRCUIT BREAKERS TO FEED NEW LOADS AS REQUIRED.

**REVISED**

# PNL LP6

| | |
|---|---|
| MAIN: SIZE & TYPE: **225 A MLO** | PANEL LOCATION: **JANITOR'S CLOSET** |
| BUS RATING: **225 A** | FEEDER SIZE: **200A** |
| VOLTAGE: **120 / 208 V 1 Ø, 3 WIRE** | FED FROM: **DP-2** |
| MOUNTING: SURFACE | MIN RMS AMPS: **10KA** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (KVA) A | B | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CORRIDOR LIGHTING | 1.343 | | | 20/1 | 1 | L | R | 2 | 20/1 | 0.540 | | | BEHAVIOR OFFICE POWER POLE 1 | 2 |
| 3 | CONF/STG/OFFICE LIGHTING | | | 1.232 | 20/1 | 3 | L | R | 4 | 20/1 | | | 0.540 | BEHAVIOR OFFICE POWER POLE 1 | 4 |
| 5 | PHYS THERAPY, TLT, LOUNGE, PERIM LT | 1.324 | | | 20/1 | 5 | L | R | 6 | 20/1 | 0.540 | | | BEHAVIOR OFFICE POWER POLE 2 | 6 |
| 7 | BH OFFICE, STORAGE, TLT, STAIR LTS | | | 1.218 | 20/1 | 7 | L | R | 8 | 20/1 | | | 0.540 | BEHAVIOR OFFICE POWER POLE 2 | 8 |
| 9 | EXHAUST FAN 4 | 0.075 | | | 20/1 | 9 | H | R | 10 | 20/1 | 0.500 | | | BEHAVIOR OFFICE COPIER REC | 10 |
| 11 | WATER HEATER REC. | | | 0.180 | 20/1 | 11 | R | R | 12 | 20/1 | | | 0.360 | BEHAVIOR OFFICE CONV. REC | 12 |
| 13 | EXHAUST FAN 5 | 0.135 | | | 20/1 | 13 | H | R | 14 | 20/1 | 0.360 | | | BEHAVIOR OFFICE 318A REC | 14 |
| 15 | PT/OT OFFICE 319A REC | | | 0.360 | 20/1 | 15 | R | R | 16 | 20/1 | | | 0.180 | TLT RM 316 REC | 16 |
| 17 | MENS TLT RM REC | 0.180 | | | 20/1 | 17 | R | R | 18 | 20/1 | 0.900 | | | STORAGE ROOMS REC. | 18 |
| 19 | STAFF LOUNGE MICROWAVE REC | | | 0.180 | 20/1 | 19 | R | R | 20 | 20/1 | | | 1.080 | CORRIDOR REC. | 20 |
| 21 | STAFF LOUNGE MICROWAVE REC | 0.180 | | | 20/1 | 21 | R | R | 22 | 20/1 | 0.360 | | | S. STAIRWELL REC. / WC REC | 22 |
| 23 | STAFF LOUNGE ABOVE COUNTER REC | | | 0.180 | 20/1 | 23 | R | R | 24 | 20/1 | | | 0.540 | PT/OT OFFICE POWER POLE 1 | 24 |
| 25 | STAFF LOUNGE ABOVE COUNTER REC | 0.180 | | | 20/1 | 25 | R | R | 26 | 20/1 | 0.540 | | | PT/OT OFFICE POWER POLE 1 | 26 |
| 27 | STAFF LOUNGE FRIDGE REC | | | 0.500 | 20/1 | 27 | R | R | 28 | 20/1 | | | 0.540 | PT/OT OFFICE POWER POLE 2 | 28 |
| 29 | STAFF LOUNGE CONV. REC | 0.360 | | | 20/1 | 29 | R | R | 30 | 20/1 | 0.540 | | | PT/OT OFFICE POWER POLE 2 | 30 |
| 31 | SPEECH PATH. POWER POLE 1 | | | 0.540 | 20/1 | 31 | R | R | 32 | 20/1 | | | 0.540 | PT/OT OFFICE POWER POLE 3 | 32 |
| 33 | SPEECH PATH. POWER POLE 1 | 0.540 | | | 20/1 | 33 | R | R | 34 | 20/1 | 0.540 | | | PT/OT OFFICE POWER POLE 3 | 34 |
| 35 | SPEECH PATH. POWER POLE 2 | | | 0.540 | 20/1 | 35 | R | R | 36 | 20/1 | | | 0.720 | PT/OT OFFICE CONV. REC. | 36 |
| 37 | SPEECH PATH. POWER POLE 2 | 0.540 | | | 20/1 | 37 | R | R | 38 | 20/1 | 0.540 | | | PT/OT OFFICE CONV. REC. | 38 |
| 39 | LP-6A | | | 4.260 | 100/ | 39 | R | R | 40 | 20/1 | | | 0.500 | PT/OT OFFICE COPIER REC. | 40 |
| 41 | LP-6A | 4.260 | | | 2P | 41 | R | R | 42 | 20/1 | 0.360 | | | PT/OT OFFICE 319B REC | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 11.960 | | 12.280 | 24.240 | | 17.120 | |
| LIGHTING | L | 2.667 | | 2.450 | 5.118 | 1.000 | 5.118 | |
| HVAC | H | 0.210 | | 0.000 | 0.210 | 0.900 | 0.189 | |
| OTHER | O | 0.000 | | 0.000 | 0.000 | 1.000 | 0.000 | |
| EXISTING | E | 0.000 | | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 14.837 | | 14.730 | 29.568 | | 22.427 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 123.644 | | 122.753 | 142.152 | | 107.821 | AMPS |

NOTES:

**NEW**

# PNL LP6A

| | |
|---|---|
| MAIN: SIZE & TYPE: **100 A MLO** | PANEL LOCATION: **JANITOR'S CLOSET** |
| BUS RATING: **100 A** | FEEDER SIZE: **100A** |
| VOLTAGE: **120 / 208 V 1 Ø, 3 WIRE** | FED FROM: **LP-6** |
| MOUNTING: SURFACE | MIN RMS AMPS: **10KA** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (KVA) A | B | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SPEECH PATH. W. WALL REC | 0.540 | | | 20/1 | 1 | R | R | 2 | 20/1 | 0.720 | | | TEACHER CONSULTANT CONV REC | 2 |
| 3 | SPEECH PATH. CONV. REC | | | 0.540 | 20/1 | 3 | R | R | 4 | 20/1 | | | 0.540 | TEACHER CONSULTANT POWER POLE 1 | 4 |
| 5 | SPEECH PATH. COPIER REC | 0.500 | | | 20/1 | 5 | R | R | 6 | 20/1 | 0.540 | | | TEACHER CONSULTANT POWER POLE 1 | 6 |
| 7 | SPPECH PATH. OFFICE 313A REC | | | 0.540 | 20/1 | 7 | R | R | 8 | 20/1 | | | 0.540 | TEACHER CONSULTANT POWER POLE 2 | 8 |
| 9 | CONF RM 300B REC | 1.080 | | | 20/1 | 9 | R | R | 10 | 20/1 | 0.540 | | | TEACHER CONSULTANT POWER POLE 2 | 10 |
| 11 | CONF RM 300A REC | | | 0.900 | 20/1 | 11 | R | R | 12 | 20/1 | | | 0.180 | TEACHER CONSULTANT COPIER REC | 12 |
| 13 | LOBBY 300 DOOR OP & REC | 0.100 | | | 20/1 | 13 | O | R | 14 | 20/1 | 0.540 | | | TEACHER CONSULTANT 311A REC | 14 |
| 15 | ELEV. HALL, STORAGE, STAIR REC | | | 0.540 | 20/1 | 15 | R | R | 16 | 20/1 | | | 0.180 | WATER COOLER REC | 16 |
| 17 | TLT RM XMFRS | 0.100 | | | 20/1 | 17 | | | 18 | 20/1 | | | | | 18 |
| 19 | | | | | 20/1 | 19 | | | 20 | 20/1 | | | | | 20 |
| 21 | | | | | 20/1 | 21 | | | 22 | 20/1 | | | | | 22 |
| 23 | | | | | 20/1 | 23 | | | 24 | 20/1 | | | | | 24 |
| 25 | | | | | 20/1 | 25 | | | 26 | 20/1 | | | | | 26 |
| 27 | | | | | 20/1 | 27 | | | 28 | 20/1 | | | | | 28 |
| 29 | | | | | 20/1 | 29 | | | 30 | 20/1 | | | | | 30 |
| 31 | | | | | 20/1 | 31 | | | 32 | 20/1 | | | | | 32 |
| 33 | | | | | 20/1 | 33 | | | 34 | 20/1 | | | | | 34 |
| 35 | | | | | 20/1 | 35 | | | 36 | 20/1 | | | | | 36 |
| 37 | | | | | 20/1 | 37 | | | 38 | 20/1 | | | | | 38 |
| 39 | | | | | 20/1 | 39 | | | 40 | 20/1 | | | | | 40 |
| 41 | | | | | 20/1 | 41 | | | 42 | 20/1 | | | | | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 4.460 | | 3.960 | 8.420 | | 8.420 | |
| LIGHTING | L | 0.000 | | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 0.000 | | 0.000 | 0.000 | 0.900 | 0.000 | |
| OTHER | O | 0.100 | | 0.000 | 0.100 | 1.000 | 0.100 | |
| EXISTING | E | 0.000 | | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 4.560 | | 3.960 | 8.520 | | 8.520 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 38.000 | | 33.000 | 40.962 | | 40.962 | AMPS |

NOTES:

**REVISED**

# PNL LP-EM

| | |
|---|---|
| MAIN: SIZE & TYPE: **100 A** MCB | PANEL LOCATION: BOILER RM |
| BUS RATING: **100 A** | FEEDER SIZE: |
| VOLTAGE: **120 / 208** V 1 Ø, 3 WIRE | FED FROM: LP-2 |
| MOUNTING: SURFACE | MIN RMS AMPS: |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EXIT LIGHTS | 0.300 | | | 20/1 | 1 | L | O | 2 | 20/1 | 0.100 | | | FIRE ALARM | 2 |
| 3 | WALL PACKS | | | 0.200 | 20/1 | 3 | L | O | 4 | 20/1 | | | 0.100 | FIRE ALARM | 4 |
| 5 | EXISTING LOAD | 0.500 | | | 20/1 | 5 | O | O | 6 | 20/1 | 0.100 | | | SIMENS TEMP CONTROLS | 6 |
| 7 | GARAGE | | | 0.500 | 30/ | 7 | O | | 8 | 20/1 | | | | SPARE | 8 |
| 9 | GARAGE | 0.500 | | | 2 | 9 | O | | 10 | 30/ | | | | SPARE | 10 |
| 11 | BLANK | | | | | 11 | | | 12 | 2 | | | | SPARE | 12 |

| LOAD SUMMARY | | KVA CONNECTED A | | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.300 | | 0.200 | 0.500 | 1.000 | 0.500 | |
| HVAC | H | 0.000 | | 0.000 | 0.000 | 0.900 | 0.000 | |
| OTHER | O | 1.200 | | 0.600 | 1.800 | 1.000 | 1.800 | |
| EXISTING | E | 0.000 | | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 1.500 | | 0.800 | 2.300 | | 2.300 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 12.500 | | 6.667 | 11.058 | | 11.058 | AMPS |

NOTES:

**NEW**

# PNL RP1B

| | |
|---|---|
| MAIN: SIZE & TYPE: **200 A MCB** | PANEL LOCATION: |
| BUS RATING: **225 A** | FEEDER SIZE: **200A** |
| VOLTAGE: **120 / 208** V 3 Ø, 4 WIRE | FED FROM: **MDP** |
| MOUNTING: | MIN RMS AMPS: **14KAIC** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (KVA) A | B | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SECURE ENTRANCE LIGHTS | 1.152 | | | 20/1 | 1 | L | R | 2 | 20/1 | 0.360 | | | RECEPTION OFFICE REC | 2 |
| 3 | IDF | | 0.250 | | 20/1 | 3 | R | R | 4 | 20/1 | | 0.900 | | WAITING AREA REC | 4 |
| 5 | IDF | | | 0.250 | 20/1 | 5 | R | R | 6 | 20/1 | | | 0.540 | SECURE VEST. & LOBBY REC | 6 |
| 7 | CORRIDOR 104 LIGHTS | 1.036 | | | 20/1 | 7 | L | R | 8 | 20/1 | 0.540 | | | LOBBY REC | 8 |
| 9 | CLSRM 114,116, SENSORY, LOCKER LTS | | 1.387 | | 20/1 | 9 | L | R | 10 | 20/1 | | 0.540 | | CLINIC REC | 10 |
| 11 | CLSRM 115, 113, TLT LTS | | | 0.946 | 20/1 | 11 | L | R | 12 | 20/1 | | | 0.180 | CLINIC TLT REC | 12 |
| 13 | LIFE SKILLS, SIM, PAES LTS | 0.738 | | | 20/1 | 13 | L | R | 14 | 20/1 | 0.540 | | | NURSE OFFICE REC | 14 |
| 15 | LIFE SKILLS DRYER | | 1.400 | | 30/ | 15 | R | R | 16 | 20/1 | | 0.900 | | PAES ROOM REC. | 16 |
| 17 | LIFE SKILLS DRYER | | | 1.400 | 2P | 17 | R | R | 18 | 20/1 | | | 0.360 | CLINIC FRIDGE & COUNTER REC | 18 |
| 19 | LIFE SKILLS WASHER | 0.500 | | | 20/1 | 19 | R | R | 20 | 20/1 | 0.900 | | | SIMULATION RM REC | 20 |
| 21 | FIRE ALARM CP AND ANNUNCIATOR | | 0.050 | | 20/1 | 21 | O | R | 22 | 20/1 | | 0.180 | | LIFE SKILLS FRIDGE | 22 |
| 23 | SECURE VESTIBULE DOOR OP. | | | 0.250 | 20/1 | 23 | O | R | 24 | 20/1 | | | 0.180 | LIFE SKILLS ABOVE COUNTER REC | 24 |
| 25 | WAITING AREA DOOR OP. | 0.100 | | | 20/1 | 25 | O | R | 26 | 20/1 | 0.180 | | | LIFE SKILLS ABOVE COUNTER REC | 26 |
| 27 | CIRCULATION 103 DOOR OP. | | 0.050 | | 20/1 | 27 | O | R | 28 | 20/1 | | 0.540 | | LIFE SKILLS TV, CONV. REC | 28 |
| 29 | EAST ENTRANCE DOOR OP. | | | 0.100 | 20/1 | 29 | O | R | 30 | 20/1 | | | 0.720 | CIRCULATION 103 REC | 30 |
| 31 | COURTYARD ENTRANCE DOOR OP | 0.100 | | | 20/1 | 31 | O | R | 32 | 20/1 | 0.720 | | | SENSORY HALL & CONF. RM RE | 32 |
| 33 | LIFE SKILLS STOVE REC | | 2.750 | | 30/ | 33 | R | R | 34 | 20/1 | | 0.540 | | CONFERENCE 119 REC | 34 |
| 35 | LIFE SKILLS STOVE REC | | | 2.750 | 2P | 35 | R | R | 36 | 20/1 | | | 0.360 | TOILET RM 104C ABOVE COUNTER REC | 36 |
| 37 | LIFE SKILLS COUNTER REC | 0.180 | | | 20/1 | 37 | R | R | 38 | 20/1 | 0.540 | | | JANITOR 104G & TLT CONV. REC | 38 |
| 39 | CLSRM 113 CHARGE STATION REC | | 0.180 | | 20/1 | 39 | R | R | 40 | 20/1 | | 0.180 | | CLASSROOM 113 ABOVE COUNTER REC | 40 |
| 41 | CLSRM 115 CHARGE STATION REC | | | 0.180 | 20/1 | 41 | R | R | 42 | 20/1 | | | 0.720 | CLSRM 113 TEACHING WALL REC | 42 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 4.460 | 8.360 | 7.640 | 20.460 | | 15.230 | |
| LIGHTING | L | 2.926 | 1.387 | 0.946 | 5.259 | 1.000 | 5.259 | |
| HVAC | H | 0.000 | 0.000 | 0.000 | 0.000 | 0.950 | 0.000 | |
| OTHER | O | 0.200 | 0.100 | 0.350 | 0.650 | 1.000 | 0.650 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 7.586 | 9.847 | 8.936 | 26.369 | | 21.139 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 63.214 | 82.056 | 74.470 | 73.195 | | 58.677 | AMPS |

NOTES: 1. PANEL SHALL HAVE FACTORY INSTALLED FEED-THRU LUG KIT

**NEW**

# PNL RP1B SUB

| | |
|---|---|
| MAIN: SIZE & TYPE: **200 A MLO** | PANEL LOCATION: |
| BUS RATING: **225 A** | FEEDER SIZE: **200A** |
| VOLTAGE: **120 / 208** V 3 Ø, 4 WIRE | FED FROM: **RP1B FEED-THRU I** |
| MOUNTING: | MIN RMS AMPS: **14KAIC** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (KVA) A | B | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (KVA) A | B | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 43 | CLSRM 114 CHARGE STATION RE | 0.180 | | | 20/1 | 43 | R | R | 44 | 20/1 | 0.540 | | | CLSRM 113 FURNITURE BASE FEED | 44 |
| 45 | CLSRM 116 CHARGE STATION RE | | 0.180 | | 20/1 | 45 | R | R | 46 | 20/1 | | 0.180 | | CLSRM 115 ABOVE COUNTER REC | 46 |
| 47 | SPARE | | | | 20/1 | 47 | | R | 48 | 20/1 | | | 0.720 | CLSRM 115 TEACHING WALL RE | 48 |
| 49 | EXHAUST FAN 2 | 0.061 | | | 20/1 | 49 | H | R | 50 | 20/1 | 0.540 | | | CLSRM 115 FURNITURE BASE FEED | 50 |
| 51 | OTHER ENTRANCES CANOPY LTS | | 0.075 | | 20/1 | 51 | L | R | 52 | 20/1 | | 0.720 | | CLSRM 116 TEACHING WALL RE | 52 |
| 53 | INVERTERS IN IDF RM | | | 0.300 | 20/1 | 53 | L | R | 54 | 20/1 | | | 0.180 | CLSRM 116 COUNTER REC | 54 |
| 55 | TLT RM 104C XMFR (JANITOR'S CLOSET) | 0.100 | | | 20/1 | 55 | O | R | 56 | 20/1 | 0.540 | | | CLSRM 116 EXT. WALL REC | 56 |
| 57 | TLT RM 104D XMFR (JANITOR'S CLOSET) | | 0.100 | | 20/1 | 57 | O | R | 58 | 20/1 | | 0.540 | | CLSRM 116 FURNITURE BASE FEED | 58 |
| 59 | TOILET RM 104D ABOVE COUNTER REC | | | 0.360 | 20/1 | 59 | R | R | 60 | 20/1 | | | 0.720 | CLSRM 114 TEACHING WALL RE | 60 |
| 61 | CABINET HEATER AT MAIN ENTRANCE | 0.050 | | | 20/1 | 61 | H | R | 62 | 20/1 | 0.180 | | | CLSRM 114 COUNTER REC | 62 |
| 63 | LIFE SKILLS ISLAND STOVETOP | | 2.250 | | 20/1 | 63 | R | R | 64 | 20/1 | | 0.540 | | CLSRM 114 EXT. WALL REC | 64 |
| 65 | LIFE SKILLS ISLAND STOVETOP | | | 2.250 | 20/1 | 65 | R | R | 66 | 20/1 | | | 0.540 | CLSRM 114 FURNITURE BASE FEED REC | 66 |
| 67 | LIFE SKILLS DOWNDRAFT | 0.180 | | | 20/1 | 67 | R | R | 68 | 20/1 | 0.540 | | | WEST CORRIDOR/VEST. REC | 68 |
| 69 | LIFE SKILLS KITCHEN EQUIP | | 0.180 | | 20/1 | 69 | R | H | 70 | 20A | | 1.000 | | ACC-1 | 70 |
| 71 | SPARE | | | | 20/1 | 71 | | H | 72 | 2P | | | 1.000 | ACC-1 | 72 |
| 73 | SPARE | | | | 20/1 | 73 | | | 74 | 20/1 | | | | SPARE | 74 |
| 75 | SPARE | | | | 20/1 | 75 | | | 76 | 20/1 | | | | SPARE | 76 |
| 77 | SPARE | | | | 20/1 | 77 | | | 78 | 20/1 | | | | SPARE | 78 |
| 79 | SPARE | | | | 20/1 | 79 | | | 80 | 20/1 | | | | SPARE | 80 |
| 81 | SPARE | | | | 20/1 | 81 | | | 82 | 20/1 | | | | SPARE | 82 |
| 83 | SPARE | | | | 20/1 | 83 | | | 84 | 20/1 | | | | SPARE | 84 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 2.700 | 4.590 | 4.770 | 12.060 | | 11.030 | |
| LIGHTING | L | 0.000 | 0.075 | 0.300 | 0.375 | 1.000 | 0.375 | |
| HVAC | H | 0.111 | 1.000 | 1.000 | 2.111 | 0.950 | 2.005 | |
| OTHER | O | 0.100 | 0.100 | 0.000 | 0.200 | 1.000 | 0.200 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 2.911 | 5.765 | 6.070 | 14.746 | | 13.610 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 24.258 | 48.042 | 50.583 | 40.932 | | 37.780 | AMPS |

NOTES:

**NEW**

# PNL RP1C

| | |
|---|---|
| MAIN: SIZE & TYPE: **200 A** | PANEL LOCATION: **ADDITION AREA C JANITORS** |
| BUS RATING: **225 A** | FEEDER SIZE: **SEE ONELINE** |
| VOLTAGE: **120 / 208** V 3 Ø, 4 WIRE | FED FROM: **MDP** |
| MOUNTING: **SURFACE** | MIN RMS AMPS: **14KAIC** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CLASS RM 145,141,139,135 LTS | 1.683 | | | 20/1 | 1 | L | R | 2 | 20/1 | 0.540 | | | CLASSRM 145 SW WALL REC | 2 |
| 3 | CLASS 133, HIVE, MAT RM LTS | | 1.500 | | 20/1 | 3 | L | R | 4 | 20/1 | | 0.540 | | CLASSRM 145 NE WALL REC | 4 |
| 5 | BATH, EXER & QUIET RM LTS | | | 1.500 | 20/1 | 5 | L | R | 6 | 20/1 | | | 0.540 | CLASSRM 145 TV & W REC | 6 |
| 7 | CORRIDOR LTS | 0.850 | | | 20/1 | 7 | L | R | 8 | 20/1 | 0.540 | | | CLASSRM 141 TV & W REC | 8 |
| 9 | CLASSRM 141 S WALL REC | | 0.540 | | 20/1 | 9 | R | R | 10 | 20/1 | | 0.540 | | CLASSRM 141 NE WALL REC | 10 |
| 11 | CLASSRM 139 TV & W REC | | | 0.540 | 20/1 | 11 | R | R | 12 | 20/1 | | | 0.540 | CLASSRM 139 NE WALL REC | 12 |
| 13 | CLASSRM 139 E&S WALL REC | 0.540 | | | 20/1 | 13 | R | R | 14 | 20/1 | 0.540 | | | CLASSRM 135 TV & W REC | 14 |
| 15 | CLASSRM N WALL REC | | 0.540 | | 20/1 | 15 | R | R | 16 | 20/1 | | 0.540 | | CLASSRM 135 SE WALL REC | 16 |
| 17 | HIVE GENERAL RECPTS | | | 1.080 | 20/1 | 17 | R | R | 18 | 20/1 | | | 0.180 | IDF | 18 |
| 19 | CHANGE RMS & STAFF TLT REC | 0.900 | | | 20/1 | 19 | R | R | 20 | 20/1 | 0.180 | | | IDF | 20 |
| 21 | EXERCISE RM RECPTS | | 1.080 | | 20/1 | 21 | R | R | 22 | 20/1 | | 0.720 | | NE CLASSRM RECPTS | 22 |
| 23 | JANITORS CLOSET RECPT | | | 0.180 | 20/1 | 23 | R | R | 24 | 20/1 | | | 0.720 | BATHROOM RECPTS | 24 |
| 25 | QUIET RM CORRIDOR REC | 0.360 | | | 20/1 | 25 | R | R | 26 | 20/1 | 0.720 | | | NE CLASSRM RECPTS | 26 |
| 27 | MAIN CORRIDOR REC | | 1.080 | | 20/1 | 27 | R | R | 28 | 20/1 | | 0.540 | | VESTIBULE 106 & STAIR REC | 28 |
| 29 | CONF. RM 143 REC | | | 0.360 | 20/1 | 29 | R | R | 30 | 20/1 | | | 0.720 | CONF. RM 137 RECPTS | 30 |
| 31 | CLASSRM 133 N&E REC | 0.540 | | | 20/1 | 31 | R | R | 32 | 20/1 | 0.360 | | | CLASSRM 133 S. REC | 32 |
| 33 | CLASSRM 133 TV & W REC | | 0.540 | | 20/1 | 33 | R | R | 34 | 20/1 | | 1.080 | | MAT ROOM 130 REC | 34 |
| 35 | WATER FOUNTAIN | | | 0.180 | 20/1 | 35 | R | R | 36 | 20/1 | | | 0.180 | KITCHEN EQUIP | 36 |
| 37 | CH-1 | 0.050 | | | 20/1 | 37 | H | R | 38 | 20/1 | 0.180 | | | KITCHEN EQUIP | 38 |
| 39 | CH-2 | | 0.050 | | 20/1 | 39 | H | R | 40 | 20/1 | | 0.180 | | KITCHEN EQUIP | 40 |
| 41 | EF-6 | | | 0.073 | 20/1 | 41 | H | R | 42 | 20/1 | | | 0.180 | KITCHEN EQUIP | 42 |
| 43 | TLT RM ABOVE COUNTER REC | 0.180 | | | 20/1 | 43 | R | R | 44 | 20/1 | 0.180 | | | WASHER | 44 |
| 45 | TLT RM ABOVE COUNTER REC | | 0.180 | | 20/1 | 45 | R | R | 46 | 30/ | | 2.150 | | DRYER | 46 |
| 47 | KITCHEN ISLAND REC | | | 0.360 | 20/1 | 47 | R | R | 48 | 2 | | | 2.150 | DRYER | 48 |
| 49 | EXTERIOR LIGHTS | 0.256 | | | 20/ | 49 | L | O | 50 | 20/1 | 0.050 | | | TLT RM LOW VOLTAGE XMFR | 50 |
| 51 | EXTERIOR LIGHTS | | 0.256 | | 2P | 51 | L | O | 52 | 60/ | | 0.000 | | RP1C-A SUBPANEL | 52 |
| 53 | KITCHEN EQUIP | | | 0.180 | 20/1 | 53 | R | O | 54 | 2P | | | 0.000 | RP1C-A SUBPANEL | 54 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 5.760 | 10.250 | 8.090 | 24.100 | | 17.050 | |
| LIGHTING | L | 2.789 | 1.756 | 1.500 | 6.045 | 1.000 | 6.045 | |
| HVAC | H | 0.050 | 0.050 | 0.073 | 0.173 | 0.950 | 0.164 | |
| OTHER | O | 0.050 | 0.000 | 0.000 | 0.050 | 1.000 | 0.050 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 8.649 | 12.056 | 9.663 | 30.367 | | 23.309 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 72.073 | 100.467 | 80.521 | 84.293 | | 64.700 | AMPS |

NOTES:

**NEW**

# PNL RP1C-A

| | |
|---|---|
| MAIN: SIZE & TYPE: **60 A MLO** | PANEL LOCATION: |
| BUS RATING: **100 A** | FEEDER SIZE: **60A** |
| VOLTAGE: **120 / 208 V 1 Ø, 3 WIRE** | FED FROM: **RP1C** |
| MOUNTING: | MIN RMS AMPS: **10KAIC** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACC-1 | 1.000 | | | 20A | 1 | H | O | 2 | 20/1 | 0.100 | | | DOOR OPERATOR | 2 |
| 3 | ACC-1 | | 1.000 | | 2P | 3 | H | O | 4 | 20/1 | | 0.100 | | DOOR OPERATOR | 4 |
| 5 | SPARE | | | | 20/1 | 5 | | | 6 | 20/1 | | | | SPARE | 6 |
| 7 | SPARE | | | | 20/1 | 7 | | | 8 | 20/1 | | | | SPARE | 8 |
| 9 | SPARE | | | | 20/1 | 9 | | | 10 | 20/1 | | | | SPARE | 10 |
| 11 | SPARE | | | | 20/1 | 11 | | | 12 | 20/1 | | | | SPARE | 12 |
| 13 | SPARE | | | | 20/1 | 13 | | | 14 | 20/1 | | | | SPARE | 14 |
| 15 | SPARE | | | | 20/1 | 15 | | | 16 | 20/1 | | | | SPARE | 16 |
| 17 | SPARE | | | | 20/1 | 17 | | | 18 | 20/1 | | | | SPARE | 18 |
| 19 | | | | | 20/1 | 19 | | | 20 | 20/1 | | | | | 20 |
| 21 | | | | | 20/1 | 21 | | | 22 | 20/1 | | | | | 22 |
| 23 | | | | | 20/1 | 23 | | | 24 | 20/1 | | | | | 24 |
| 25 | | | | | 20/1 | 25 | | | 26 | 20/1 | | | | | 26 |
| 27 | | | | | 20/1 | 27 | | | 28 | 20/1 | | | | | 28 |
| 29 | | | | | 20/1 | 29 | | | 30 | 20/1 | | | | | 30 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | |
| LIGHTING | L | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| HVAC | H | 1.000 | 1.000 | 0.000 | 2.000 | 0.950 | 1.900 | |
| OTHER | O | 0.100 | 0.100 | 0.000 | 0.200 | 1.000 | 0.200 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 1.100 | 1.100 | 0.000 | 2.200 | | 2.100 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 9.167 | 9.167 | 0.000 | 6.107 | | 5.829 | AMPS |

NOTES:

**NEW**

# PNL RP2A

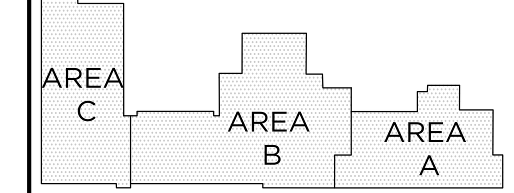
| | |
|---|---|
| MAIN: SIZE & TYPE: **200 A MCB** | PANEL LOCATION: **MAIN LEVEL N.WING AREA A CLOSET** |
| BUS RATING: **200 A** | FEEDER SIZE: **200A** |
| VOLTAGE: **120 / 208 V 3 Ø, 4 WIRE** | FED FROM: **MDP** |
| MOUNTING: | MIN RMS AMPS: **10KAIC** |

| CKT # | CIRCUIT DESCRIPTION | LOAD (kVA) A | | C | AMPS / POLES | CKT # | LOAD | TYPE | CKT # | AMPS / POLES | LOAD (kVA) A | | C | CIRCUIT DESCRIPTION | CKT # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | NORTH OFFICES, CONF. LTS | 1.289 | | | 20/1 | 1 | L | R | 2 | 20/1 | 0.720 | | | OFFICE 228,230 REC | 2 |
| 3 | N. CORR., SUPER, CONF, STAIR LTS | | 1.284 | | 20/1 | 3 | L | R | 4 | 20/1 | | 0.720 | | OFFICE 224,226 REC | 4 |
| 5 | SPARE | | | | 20/1 | 5 | | R | 6 | 20/1 | | | 0.720 | OFFICE 220,222 REC | 6 |
| 7 | OFFICE 212B REC | 0.540 | | | 20/1 | 7 | R | R | 8 | 20/1 | 0.720 | | | OFFICE 221, 223 REC | 8 |
| 9 | RECEPTION & LOUNGE 212 REC | | 0.720 | | 20/1 | 9 | R | R | 10 | 20/1 | | 0.720 | | OFFICE 225,227 REC | 10 |
| 11 | CONF. 212, SUPER TV REC | | | 0.360 | 20/1 | 11 | R | R | 12 | 20/1 | | | 0.720 | OFFICE 229,231 REC | 12 |
| 13 | CONF. 212 WALL/FB REC | 0.900 | | | 20/1 | 13 | R | R | 14 | 20/1 | 0.720 | | | OFFICES CORRIDOR REC | 14 |
| 15 | SUPERINTENDANT CONV. REC | | 0.540 | | 20/1 | 15 | R | R | 16 | 20/1 | | 0.900 | | ADMIN CONF. RM WEST REC | 16 |
| 17 | SUPERINTENDANT DESK REC | | | 0.180 | 20/1 | 17 | R | R | 18 | 20/1 | | | 0.720 | ADMIN CONF. RM EAST REC | 18 |
| 19 | SUPERINTENDANT FRIDGE REC | 0.180 | | | 20/1 | 19 | R | R | 20 | 20/1 | 0.360 | | | ADMIN CONF. RM TV REC | 20 |
| 21 | SUPERINTENDANT COFFEE REC | | 0.180 | | 20/1 | 21 | R | R | 22 | 20/1 | | 0.720 | | ADMIN CONF. RM FB REC | 22 |
| 23 | WORK ROOM CONV. REC | | | 0.360 | 20/1 | 23 | R | R | 24 | 20/1 | | | 0.720 | CORRIDOR 201 REC. | 24 |
| 25 | RPSS OFFICE PRINTER REC | 0.180 | | | 20/1 | 25 | R | R | 26 | 20/1 | 0.360 | | | RPSS OFFICE POWER POLE 1 | 26 |
| 27 | WORK ROOM ABOVE COUNTER | | 0.180 | | 20/1 | 27 | R | R | 28 | 20/1 | | 0.360 | | RPSS OFFICE POWER POLE 1 | 28 |
| 29 | WORK ROOM ABOVE COUNTER | | | 0.180 | 20/1 | 29 | R | R | 30 | 20/1 | | | 1.080 | RPSS OFFICE TV/CONV. REC | 30 |
| 31 | CONFERENCE RM / TLT RM REC | 0.540 | | | 20/1 | 31 | R | R | 32 | 20/1 | 0.540 | | | RPSS PRIVATE OFFICE REC | 32 |
| 33 | TOILET 203 REC | | 0.180 | | 20/1 | 33 | R | R | 34 | 20/1 | | 0.360 | | CAREER OFFICE POWER POLE 1 | 34 |
| 35 | TOILET 205 REC | | | 0.180 | 20/1 | 35 | R | R | 36 | 20/1 | | | 0.360 | CAREER OFFICE POWER POLE 1 | 36 |
| 37 | EXHAUST FAN 3 | 0.190 | | | 20/1 | 37 | H | R | 38 | 20/1 | 1.080 | | | CAREER OFFICE TV/CONV. REC | 38 |
| 39 | CORRIDOR TABLE REC | | 0.720 | | 20/1 | 39 | H | R | 40 | 20/1 | | 0.540 | | CAREER PRIVATE OFFICE REC | 40 |
| 41 | ACC-1 | | | | 20/ | 41 | H | R | 42 | 20/1 | | | 0.180 | CAREER OFFICE PRINTER REC | 42 |
| 43 | ACC-1 | | | | 2P | 43 | H | R | 44 | 20/1 | 0.360 | | | RPSS OFFICE POWER POLE 2 | 44 |
| 45 | DOOR OPERATOR | | 0.050 | | 20/1 | 45 | O | R | 46 | 20/1 | | 0.360 | | RPSS OFFICE POWER POLE 2 | 46 |
| 47 | WORK ROOM COPIER REC | | | 0.180 | 20/1 | 47 | R | R | 48 | 20/1 | | | 0.360 | CAREER OFFICE POWER POLE 2 | 48 |
| 49 | TLT RM XMFR (STORAGE) | 0.050 | | | 20/1 | 49 | O | R | 50 | 20/1 | 0.360 | | | CAREER OFFICE POWER POLE 2 | 50 |
| 51 | SPARE | | | | 20/1 | 51 | | | 52 | 20/1 | | | | SPARE | 52 |
| 53 | SPARE | | | | 20/1 | 53 | | | 54 | 20/1 | | | | SPARE | 54 |

| LOAD SUMMARY | | KVA CONNECTED A | B | C | KVA SUMMARY TOTAL | | DEMAND | |
|---|---|---|---|---|---|---|---|---|
| RECEPTACLES | R | 7.560 | 7.200 | 6.300 | 21.060 | | 15.530 | |
| LIGHTING | L | 1.289 | 1.284 | 0.000 | 2.573 | 1.000 | 2.573 | |
| HVAC | H | 0.190 | 0.000 | 0.000 | 0.190 | 0.950 | 0.181 | |
| OTHER | O | 0.050 | 0.050 | 0.000 | 0.100 | 1.000 | 0.100 | |
| EXISTING | E | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | |
| TOTAL KVA | | 9.089 | 8.534 | 6.300 | 23.923 | | 18.384 | TOTAL ESTIMATE KVA |
| VOLTS / PHASE | | 120 | 120 | 120 | 208 | | 208 | SYSTEM VOLTAGE |
| AMPS / PHASE | | 75.742 | 71.117 | 52.500 | 66.406 | | 51.029 | AMPS |

NOTES:

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |




KEY PLAN
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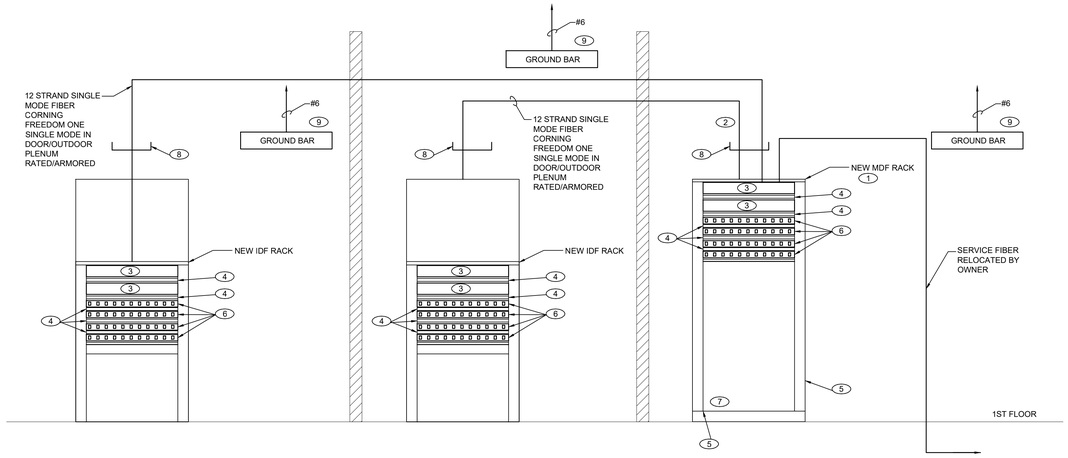
PROJECT TITLE
ADDITION AND RENOVATION:
MIDLAND COUNTY ESA
MIDLAND, MICHIGAN

SHEET TITLE
NEW PANEL SCHEDULES

PROJECT NUMBER 2022006.1
PROJECT DATE AUGUST 23, 2023
CHECKED BY JWF
SHEET NUMBER E4.04




## DATA RISER DIAGRAM

NO SCALE

**DIVISION 27000 REQUIREMENTS**
(PRODUCTS SHALL BE COMMSCOPE or equal)

| | |
|---|---|
| ▼ | HDMI OUTLET, 1" CONDUIT ROUTED TO ACCESSIBLE CEILING, (4) HDMI JACKS. |
| ▽ | (2) DATA PORT OUTLET ROUGH-IN, (2 CAT6), 1" CONDUIT ROUTED TO ACCESSIBLE CEILING |
| TV ▼ | DATA/HDMI OUTLET (1 CAT6 / 1 HDMI). 1 1/4" CONDUIT ROUTED TO ACCESSIBLE CEILING |
| 2 ▼ | DATA/HDMI OUTLET (2 CAT6 / 1 HDMI). 1 1/4" CONDUIT ROUTED TO ACCESSIBLE CEILING |
| 1,3,4,.. ▽ | INDICATED NUMBER OF DATA PORTS OUTLET ROUGH-IN, (INDICATED NUMBER OF CAT6), 1" CONDUIT ROUTED TO ACCESSIBLE CEILING |
| CR | CARD READER ROUGH-IN, 1" CONDUIT ROUTED TO ACCESSIBLE CEILING |
| CAM | SECURITY CAMERA ROUGH-IN, 1" CONDUIT ROUTED TO ACCESSIBLE CEILING |
| WAP | WIRELESS ACCESS POINT (1 CAT6) |
| S | SPEAKER |
| C | CLOCK |

**DATA RACK SCHEDULE**

84"x20"x15" TWO POST RACK. RACK SHALL BE CONSTRUCTED OF ALUMINUM AND BLACK FINISH. RACK SHALL ALSO INCLUDE GROUND BAR, GROUND CONNECTION KIT W/ 1/0 LUG, AND 48 PORT ALL METAL MODULAR PATCH PANELS. 48 PORT PATCH PANEL SHALL INCLUDE TYPE RJ45 TYPE MODULAR JACKS.
ORTRONICS HOMACO OR-19-84-TSD OR EQUAL BY HUBBELL OR COMMSCOPE

**FIBER**

FURNISH AND INSTALL ALL FIBER SPLICE KITS, FIBER TRAY, BULKHEADS, PIGTAILS, ETC FOR A COMPLETE INSTALLATION .

**GENERAL NOTES**

1. FURNISH ALL PATCH PATCH PANELS FOR ALL DATA AND SECURITY CABLES. ALL DATA AND SECURITY PATCH CABLES SHALL BE FURNISHED AND INSTALLED BY THE OWNER.CABLES SHALL BE TERMINATED TO SEPARATE PATCH PANELS.

   GENERAL - BLUE - MDF/TO

   IP SECURITY CAMERA - PURPLE - MDF/ TO IP SECURITY CAMERAS

   AUDIO/VISUAL - GREEN - MDF/TO

   WIRELESS ACCESS POINT - YELLOW - MDF/WHITE 15' PLENUM RATED FOR USE

   CARD READER - BLACK - MDF

2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TERMINATIONS AND TESTING.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LABELING AT RACK AND JACK LOCATIONS. COORDINATE WITH OWNER.
4. REFER TO THE SPECIFICATION FOR FURTHER DETAIL.
5. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT IN EXPOSED FINISHED CEILING AREAS OR ABOVE NON ACCESSIBLE CEILINGS. CONDUIT SHALL BE PAINTED WITH THE STRUCTURE. WHEN EXPOSED IN FINISHED SPACES. UTILIZE CABLE TRAY WHENEVER POSSIBLE.

**KEYED NOTES**

1. EC TO FURNISH AND INSTALL A NEW 24" DEEP X 84" TALL FLOOR MOUNTED DATA RACK.
2. EC SHALL FURNISH, INSTALL AND TERMINATE A NEW SINGLE MODE FIBER CABLE ROUTED FROM THE MDF TO THE IDF AND FROM THE MDF TO THE BEHAVIOR HEALTH. UTILIZE LC-LC CONNECTORS.
3. CONTRACTOR SHALL FURNISH AND INSTALL OPTICAL FIBER CLOSET CONNECTOR HOUSING AND PANEL. CORNING CCH-02U OR EQUAL / CORNING CCH-CP-12-91-RH.
4. FURNISH AND INSTALL HORIZONTAL CABLE MANAGEMENT.
5. FURNISH AND INSTALL VERTICAL CABLE MANAGEMENT.
6. FURNISH AND INSTALL 24 PORT PATCH PANEL(S). PROVIDE QUANTITY AS REQUIRED TO MEET DRAWING DATA CABLING REQUIRED QUANTITIES.
7. NETWORK SWITCH AND UPS FURNISHED AND INSTALLED BY OWNER.
8. FURNISH AND INSTALL LADDER TRAY "WALL TO WALL" APPROXIMATELY 12" ABOVE RACK WITH WATERFALL DOWN TO RACK.
9. FURNISH AND INSTALL COPPER GROUND BAR ON INSULATED STAND OFFS AT APPROXIMATELY 8'-0" ON WALL OF ROOM. BOND TO EACH RACK AND CABLE TRAY WITH #6 THHN GREEN JACKETED CONDUCTOR, REFER TO GROUNDING DETAIL.

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|---|---|---|
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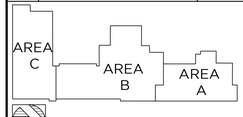


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PROJECT TITLE
ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE
DATA RISER DIAGRAM AND SCHEDULES

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
E4.05

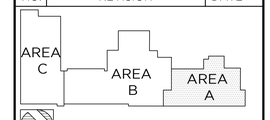
NORTH

## POINT BY POINT LIGHTING PLAN - LOWER LEVEL - AREA A

1/8"=1'-0"

| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| Calc Zone #11 | + | 4.8 fc | 8.3 fc | 1.4 fc | 5.9:1 | 3.4:1 |
| Calc Zone #14 | + | 5.1 fc | 10.1 fc | 0.4 fc | 25.3:1 | 12.8:1 |
| Corridor | + | 3.2 fc | 8.3 fc | 0.7 fc | 11.9:1 | 4.6:1 |
| ELEV HALL | + | 3.8 fc | 5.9 fc | 1.4 fc | 4.2:1 | 2.7:1 |
| facility mgr office EM | + | 3.2 fc | 9.4 fc | 0.6 fc | 15.7:1 | 5.3:1 |
| Men's TLT Rm | + | 4.4 fc | 11.8 fc | 0.3 fc | 39.3:1 | 14.7:1 |
| N STAIRS | + | 3.5 fc | 4.9 fc | 2.3 fc | 2.1:1 | 1.5:1 |
| N STAIRS | + | 3.6 fc | 5.0 fc | 2.4 fc | 2.1:1 | 1.5:1 |
| Storage 006 EM | + | 3.4 fc | 9.4 fc | 0.5 fc | 18.8:1 | 6.8:1 |
| Women's TLT Rm | + | 4.3 fc | 11.9 fc | 0.3 fc | 39.7:1 | 14.3:1 |

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PT BY PT LIGHTING PLAN
LOWER LEVEL
AREA A

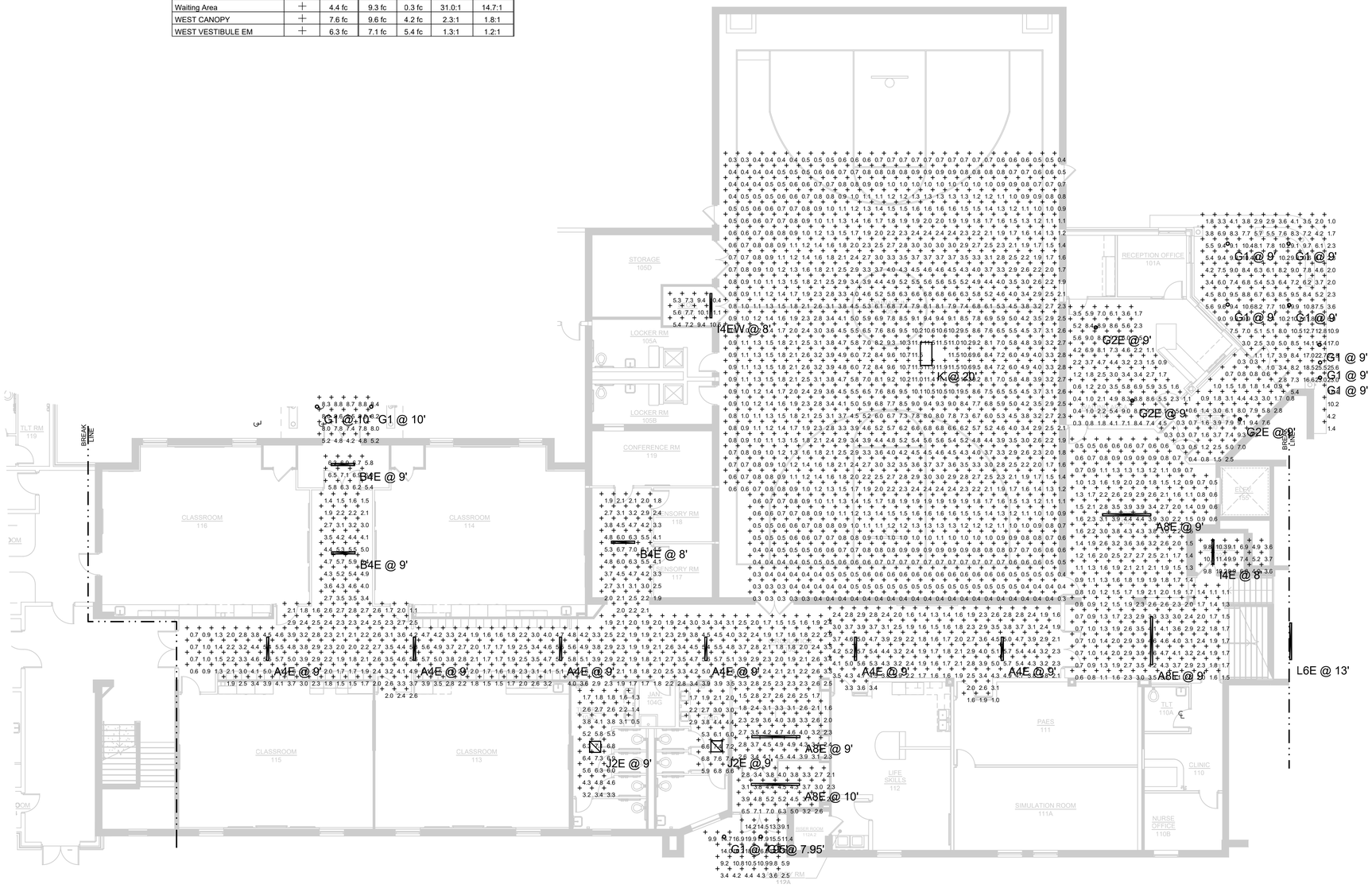
PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
E5.01

| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| Corridor | + | 3.1 fc | 5.7 fc | 1.0 fc | 5.7:1 | 3.1:1 |
| Corridor | + | 3.1 fc | 7.0 fc | 0.6 fc | 11.7:1 | 5.2:1 |
| ELECTRICAL RM | + | 7.6 fc | 11.4 fc | 3.6 fc | 3.2:1 | 2.1:1 |
| ENTRANCE TO AREA A | + | 5.1 fc | 6.7 fc | 3.6 fc | 1.9:1 | 1.4:1 |
| GYM EM | + | 2.6 fc | 11.9 fc | 0.3 fc | 39.7:1 | 8.7:1 |
| Lobby 102 | + | 2.0 fc | 4.7 fc | 0.5 fc | 9.4:1 | 4.0:1 |
| Secure Entrance Canopy | + | 7.9 fc | 25.6 fc | 1.0 fc | 25.6:1 | 7.9:1 |
| Secure Vestibule | + | 3.0 fc | 9.4 fc | 0.3 fc | 31.3:1 | 10.0:1 |
| STAIRS TO UPPER AREA A | + | 1.7 fc | 3.1 fc | 1.1 fc | 2.8:1 | 1.5:1 |
| STORAGE 105C | + | 8.3 fc | 11.1 fc | 5.3 fc | 2.1:1 | 1.6:1 |
| SUGNET ENTRANCE CANOPY | + | 11.3 fc | 19.9 fc | 2.5 fc | 8.0:1 | 4.5:1 |
| SUGNET VESTIBULE EM | + | 4.0 fc | 7.1 fc | 2.1 fc | 3.4:1 | 1.9:1 |
| TLT RM 104C EM | + | 4.1 fc | 7.3 fc | 0.5 fc | 14.6:1 | 8.2:1 |
| TLT RM 104D EM | + | 4.7 fc | 7.6 fc | 1.7 fc | 4.5:1 | 2.8:1 |
| Waiting Area | + | 4.4 fc | 9.3 fc | 0.3 fc | 31.0:1 | 14.7:1 |
| WEST CANOPY | + | 7.6 fc | 9.6 fc | 4.2 fc | 2.3:1 | 1.8:1 |
| WEST VESTIBULE EM | + | 6.3 fc | 7.1 fc | 5.4 fc | 1.3:1 | 1.2:1 |

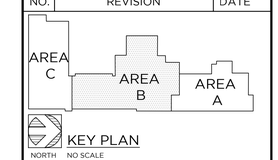



NORTH

POINT BY POINT LIGHTING PLAN - MAIN LEVEL SOUTH WING - AREA B

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PT BY PT LIGHTING PLAN
MAIN LEVEL
SOUTH WING - AREA B

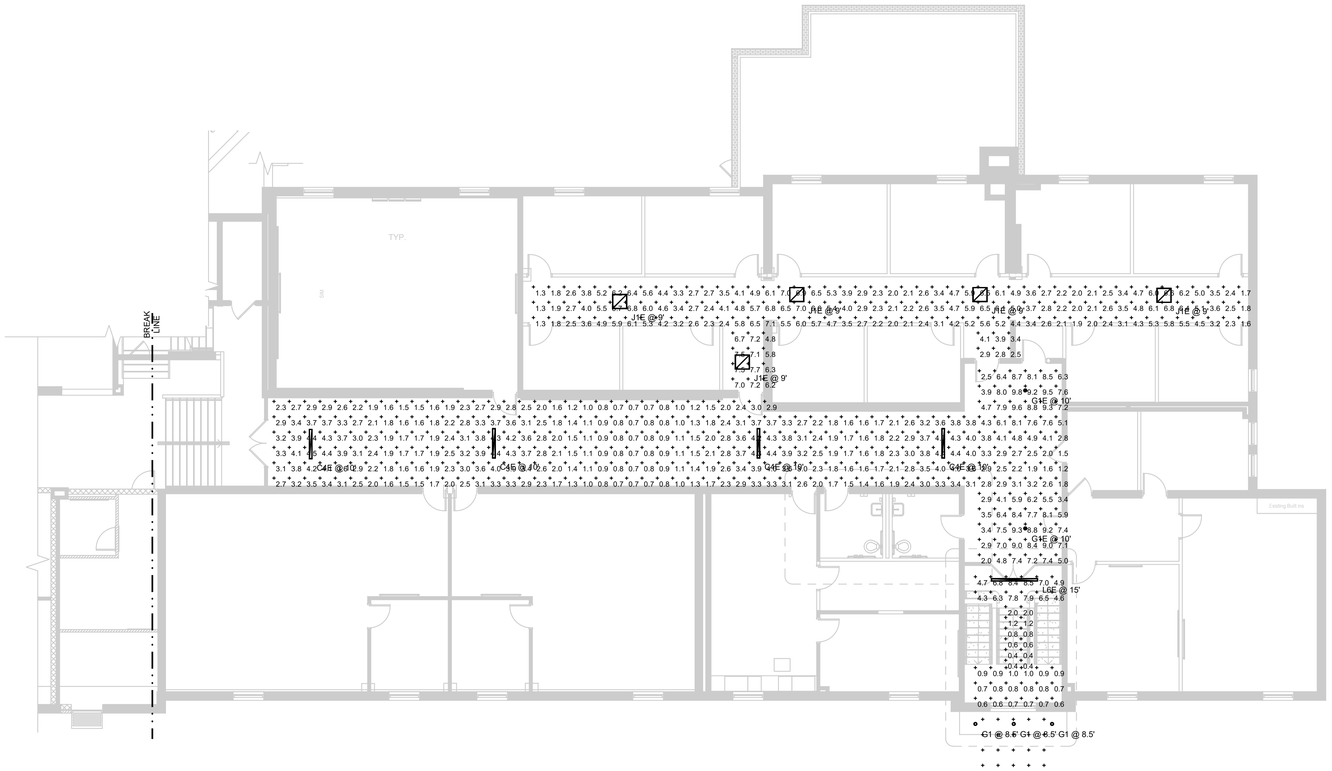
PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
E5.02

| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| CIRCULATION 204 | + | 4.2 fc | 7.7 fc | 1.3 fc | 5.9:1 | 3.2:1 |
| Combined STAIRS EM | | 3.8 fc | 11.9 fc | 0.4 fc | 29.8:1 | 9.4:1 |
| CORRIDOR 201 EM | + | 3.1 fc | 9.8 fc | 0.7 fc | 14.0:1 | 4.4:1 |
| STAIRWELL EXT. | + | N/A | 0.0 fc | N/A | N/A | N/A |

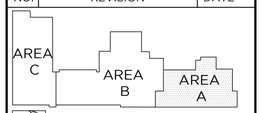



NORTH

POINT BY POINT LIGHTING PLAN - MAIN LEVEL NORTH WING - AREA A

1/8"=1'-0"

| NO. | REVISION | DATE |
|---|---|---|
| | ISSUE FOR BID | 08/23/23 |

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

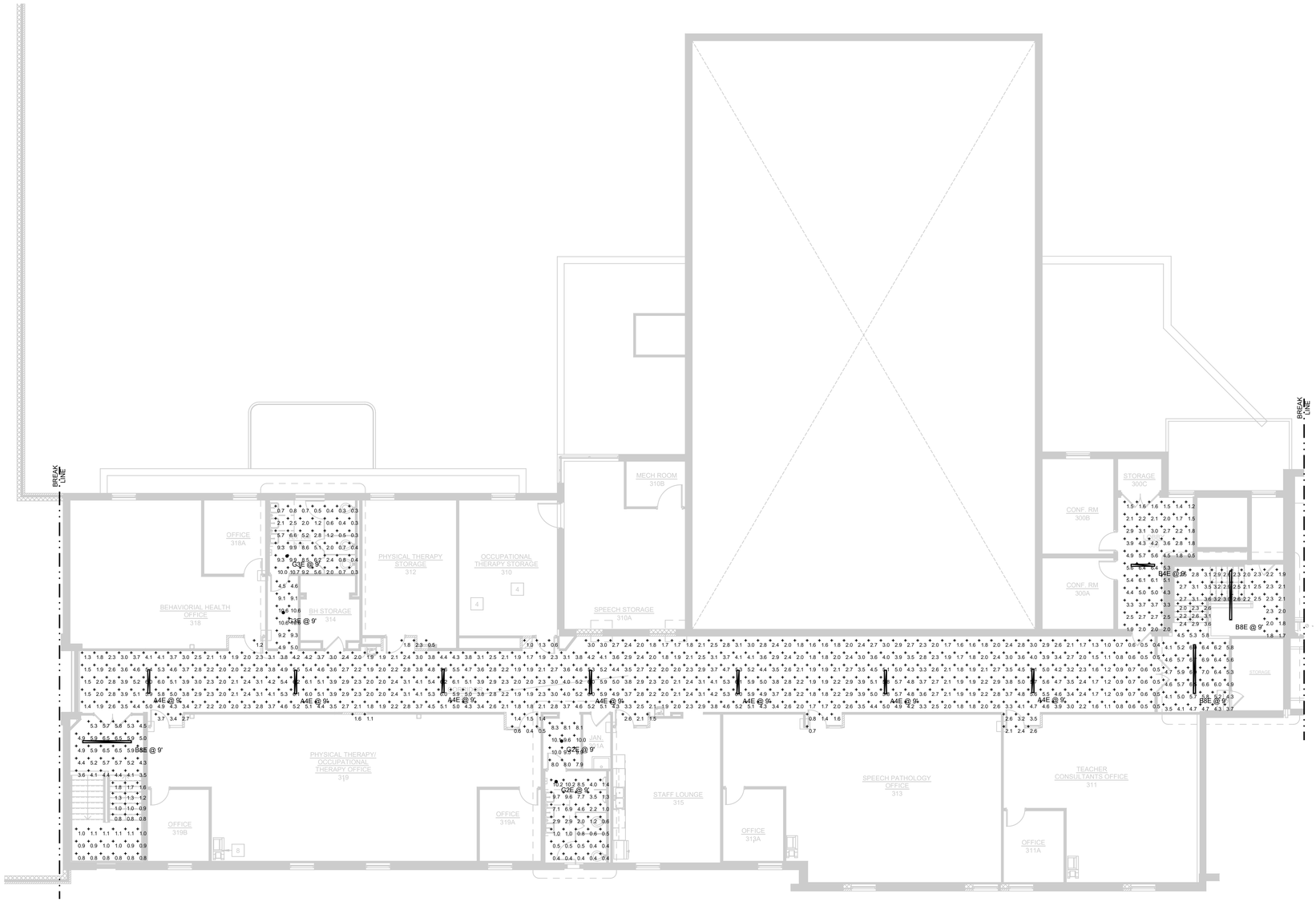
PT BY PT LIGHTING PLAN
MAIN LEVEL
NORTH WING - AREA A

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
JWF

SHEET NUMBER
E5.03




NORTH

POINT BY POINT LIGHTING PLAN - UPPER LEVEL - AREA B

1/8"=1'-0"

| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| CORRIDOR EM | + | 3.0 fc | 6.2 fc | 0.4 fc | 15.5:1 | 7.5:1 |
| ELEVATOR LOBBY EM | + | 3.3 fc | 6.4 fc | 0.5 fc | 12.8:1 | 6.6:1 |
| N. STAIRWELL COMBINED EM | | 3.5 fc | 7.0 fc | 0.8 fc | 8.8:1 | 4.4:1 |
| S. STAIRWELL COMBINED EM | | 3.1 fc | 6.5 fc | 0.8 fc | 8.1:1 | 3.8:1 |
| TLT 125 ENTRY EM | + | 9.0 fc | 10.1 fc | 7.9 fc | 1.3:1 | 1.1:1 |
| TLT 195 EM | + | 3.0 fc | 10.2 fc | 0.4 fc | 25.5:1 | 7.5:1 |
| TLT 316 EM | + | 3.5 fc | 10.7 fc | 0.3 fc | 35.7:1 | 11.7:1 |
| TLT 316 ENTRY EM | + | 8.2 fc | 10.6 fc | 4.5 fc | 2.4:1 | 1.8:1 |

| NO. | REVISION | DATE |
|---|---|---|
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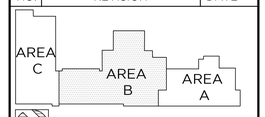


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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

PT BY PT LIGHTING PLAN
UPPER LEVEL
AREA B

PROJECT NUMBER

2022006.1

PROJECT DATE

AUGUST 23, 2023

CHECKED BY

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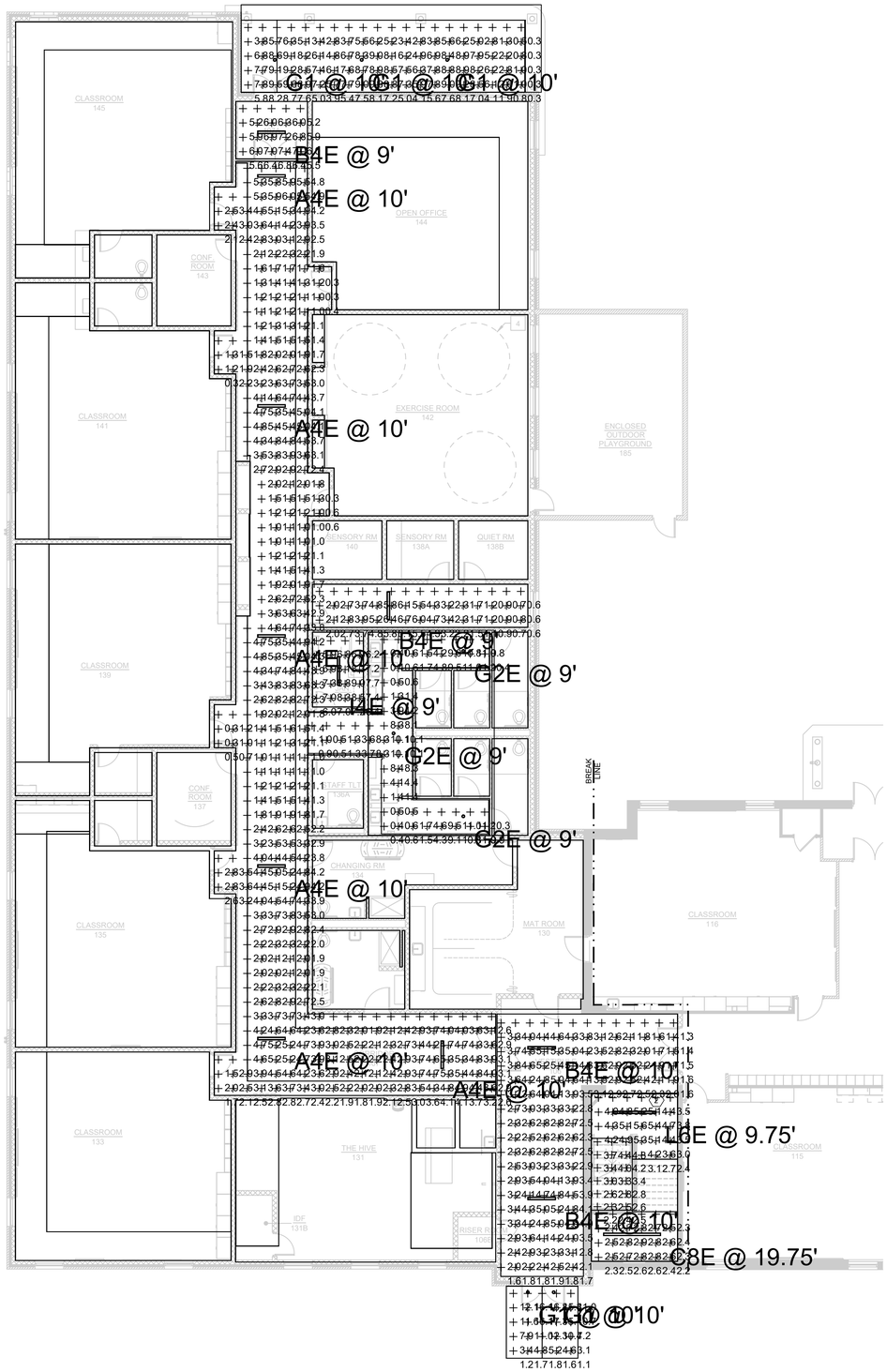
SHEET NUMBER

E5.04




NORTH

POINT BY POINT LIGHTING PLAN - ADDITION - AREA C

1/8"=1'-0"

Statistics

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| HALLWAY 138 | + | 3.1 fc | 6.7 fc | 0.6 fc | 11.2:1 | 5.2:1 |
| JANITORS CLOSET 136B | + | 7.3 fc | 9.0 fc | 5.9 fc | 1.5:1 | 1.2:1 |
| MAIN CORRDIOR | + | 2.9 fc | 6.0 fc | 0.3 fc | 20.0:1 | 9.7:1 |
| NORTH EXIT | + | 6.0 fc | 9.6 fc | 0.3 fc | 32.0:1 | 20.0:1 |
| NORTH VESTIBULE 107A | + | 6.3 fc | 7.4 fc | 5.2 fc | 1.4:1 | 1.2:1 |
| SOUTH EXIT | + | 8.8 fc | 17.3 fc | 1.1 fc | 15.7:1 | 8.0:1 |
| SOUTH STAIRS | | 3.4 fc | 5.6 fc | 2.2 fc | 2.5:1 | 1.5:1 |
| SOUTH VESTIBULE 106 | + | 3.2 fc | 5.4 fc | 1.3 fc | 4.2:1 | 2.5:1 |
| BATHROOM | + | 5.2 fc | 11.2 fc | 0.4 fc | 28.0:1 | 13.0:1 |

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|---|---|---|
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AREA C
AREA B
AREA A

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PROJECT TITLE

ADDITION AND RENOVATION:

MIDLAND COUNTY ESA

MIDLAND, MICHIGAN

SHEET TITLE

POINT BY POINT LIGHTING PLAN ADDITION AREA C

PROJECT NUMBER
2022006.1

PROJECT DATE
AUGUST 23, 2023

CHECKED BY
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SHEET NUMBER
E5.05