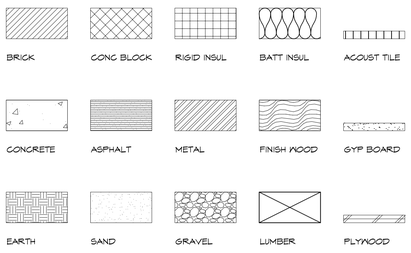
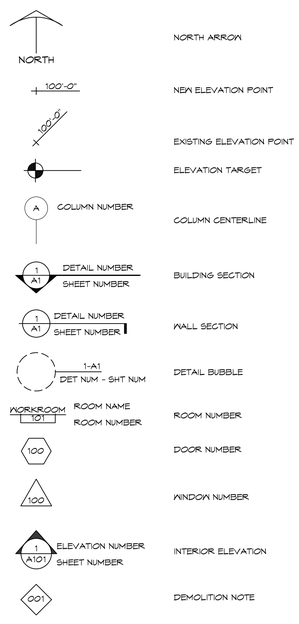
STANDARD ABBREVIATIONS

@	at
A/C	air conditioning
ACOUST	acoustical
AD	adjustable
AFF	above finish floor
ALT	alternate
ALUM	aluminum
ANCH	anchor, anchorage
ARCH	architect/architectural
BD	board
BIT	bituminous
BLDG	building
BLK	block
BLKG	blocking
BM	bench mark
BOTT	bottom
BRG	bearing
BSMT	basement
C/C	center to center
CAB	cabinet
CB	chalkboard/catch basin
CEM	cement
CER	ceramic
CF	cubic foot
CHWR	chilled water return
CHWS	chilled water supply
CI	cast iron
CJ	control joint
CLG	ceiling
CMU	concrete masonry unit
CO	clean out
COL	column
CONC	concrete
CONST	construction
CONT	continuous/continuing
CONTR	contract/contractor
CONV	convector
CRS	course(s)
CT	ceramic tile
CUH	cabinet unit ventilator
CW	domestic cold water
CY	cubic yard
°	degree
DET	detail
DF	drinking fountain
DIAG	diagonal
DIA or Ø	diameter
DIM	dimension
DIV	division
DP	dampproofing
DS	downspout
DWG	drawing
EA	each
EIFS	exterior insulation finish system (synthetic plaster)
ELEC	electric/electrical
EQ	equal
EQUIP	equipment
EWC	electric water cooler
EXIST	existing
EXH	exhaust
EXT	exterior
FA	fire alarm
FAI	fresh air intake
FD	floor drain
FE	fire extinguisher
FEC	fire extinguisher cabinet
FIN	finish(ed)
FL	floor(ing)
FOUND	foundation
FTR	fin tube radiation
FTG	footing
G	gas
GA	gage/gauge
GC	general contractor
GI	galvanized iron
GL	glass/glazing
GST	glazed structural tile
GALV	galvanized
HB	hose bibb
HDW	hardware
HM	hollow metal
HORIZ	horizontal
HGT	height
HTG	heating
HVAC	heating/ventilating/air conditioning
HW	domestic hot water
HWHR	hot water heating return
HWHS	hot water heating supply
HWR	domestic hot water return
ID	inside dimension
INT	interior
INV	invert
KO	knockout
LAM	laminate
LAV	lavatory
LH	left hand
LL	live load
LLH	long leg horizontal
LLV	long leg vertical
LTWT	light weight
MB	markerboard
MAS	masonry
MAX	maximum
MECH	mechanic/mechanical
MET	metal
MH	manhole
MIN	minimum
MISC	miscellaneous
MO	masonry opening
MCJ	masonry control joint
MT	metal threshold
MULL	mullion
NIC	not in contract
NO	number
NOM	nominal
NRC	noise reduction coefficient
NTS	not to scale
O/O	out to out
OA	overall
OC	on center
OD	outside diameter
OPG	opening
OPP	opposite
PCF	pounds per cubic foot
PLAS	plaster
±	plus or minus
PLF	pounds per lineal foot
PSF	pounds per square foot
PSI	pounds per square inch
PART	partition
PVC	polyvinyl chloride
PMT	pavement
R	riser/radius
RA	return air
RD	roof drain
REF.	reference
REF	refrigerator
REINF	reinforce(d)/reinforcing
RES	resilient
REV	revision(s)/revised
RH	right hand
RM	room
RO	rough opening
ROW	right of way
RS	roof sump
RWC	rainwater conductor
SAN	sanitary
SD	storm drain
SECT	section
SHT	sheet
SIM	similar
SPEC	specification(s)
SQ	square
SS	service sink
SST	stainless steel
STL	steel
STD	standard
SUSP	suspended
SYM	symetry/symmetrical
T&G	tongue/groove
T	tread
TB	tackboard
TEL	telephone
TERR	terrazzo
THR	threshold
TV	television
TYP	typical
UH	unit heater
UR	urinal
UV	unit ventilator
V	vent
VERT	vertical
W	width/wide
W/	with
WC	water closet
WD	wood
WH	water heater
WI	wrought iron
W/O	wall to wall
WWR	welded wire reinforcement

HATCHING PATTERN KEY



SYMBOLS KEY



BULLOCK CREEK SCHOOL DISTRICT
2023 BOND SERIES 2 2027 IMPROVEMENTS
THA PROJECT #26-210

1420 SOUTH BADOUR ROAD MIDLAND MI 48640

BULLOCK CREEK SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO:

INDEX OF PROJECTS

PROJECT A
BULLOCK CREEK HIGH SCHOOL
1420 SOUTH BADOUR ROAD
MIDLAND, MI 48640

PROJECT B
BULLOCK CREEK MIDDLE SCHOOL
664 SOUTH BADOUR ROAD
MIDLAND, MI 48640

PROJECT C
BULLOCK CREEK ELEMENTARY SCHOOL
1037 SOUTH POSEYVILLE ROAD
MIDLAND, MI 48640

PROJECT D
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI 48640

PROJECT E
PINE RIVER ELEMENTARY SCHOOL
1894 PINE RIVER ROAD
MIDLAND, MI 48640

LIST OF ALTERNATES:

MS:

1. ADD ALTERNATE TO INCLUDE LIGHTING REPLACEMENT IN STORAGE ROOMS ADJACENT TO CLASSROOMS AND LIGHTING REPLACEMENT IN THE OFFICE AREA.
2. ADD ALTERNATE TO REMOVE AND REPLACE EXISTING LOCKERS IN LIEU OF PAINTING EXISTING LOCKERS.

FLOYD:

1. ADD ALTERNATE TO SAND AND REPAINT EXISTING LOCKERS IN EAST CLASSROOM WING.

ARCHITECT / MECHANICAL ENGINEERING:
THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

THA ARCHITECTS ENGINEERS
817 E. KEARSLEY ST.
FLINT, MICHIGAN
(810) 767-5600

STRUCTURAL ENGINEERING:
robert darvas associates
consulting structural engineers

ROBERT DARVAS ASSOCIATES
440 S. MAIN ST.
ANN ARBOR, MICHIGAN
(734) 761-8713

ELECTRICAL ENGINEERING:
MATRIX CONSULTING ENGINEERS, INC.

MATRIX CONSULTING ENGINEERS, INC
544 CHERBOURG DRIVE
LANSING, MICHIGAN
(517) 487-2511

CONSTRUCTION MANAGEMENT:
Wolgast CORPORATION

WALGAST CORPORATION
4835 TOWNE CENTER RD STE 203
SAGINAW, MICHIGAN
(989) 790-9120

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

BULLOCK CREEK SCHOOL DISTRICT
1420 SOUTH BADOUR ROAD MIDLAND, MI 48640
BULLOCK CREEK SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS

NO.	REVISIONS / SUBMISSIONS	DATE

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. G001
	REVIEWED MLB	DRAWING NO. G001
	DATE OCT 14, 2026	SHEET NO. 1 OF 1
	SCALE 1'-0" = 1'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\G001 MASTER TITLE SHE
Plot date: 10/19/2026 8:35 AM

STANDARD ABBREVIATIONS

@	at	KO	knockout
A/C	air conditioning		
ACOUST	acoustical	LAM	laminate
AD	adjustable	LAV	lavatory
AFF	above finish floor	LH	left hand
ALT	alternate	LL	live load
ALUM	aluminum	LLH	long leg horizontal
ANCH	anchor, anchorage	LLV	long leg vertical
ARCH	architect/architectural	LTWT	light weight
BD	board		
BIT	bituminous	MB	markerboard
BLDG	building	MAS	masonry
BLK	block	MAX	maximum
BLKG	blocking	MECH	mechanic/mechanical
BM	bench mark	MET	metal
BOTT	bottom	MH	manhole
BRG	bearing	MIN	minimum
BSMT	basement	MISC	miscellaneous
		MO	masonry opening
C/C	center to center	MCJ	masonry control joint
CAB	cabinet	MT	metal threshold
CB	chalkboard/catch basin	MULL	mullion
CEM	cement	NIC	not in contract
CER	ceramic	NO	number
CF	cubic foot	NOM	nominal
CHWR	chilled water return	NRC	noise reduction coefficient
CHWS	chilled water supply	NTS	not to scale
CI	cast iron		
CJ	control joint	O/O	out to out
CLG	ceiling	OA	overall
CMU	concrete masonry unit	OC	on center
CO	clean out	OD	outside diameter
COL	column	OPG	opening
CONC	concrete	OPP	opposite
CONST	construction		
CONT	continuous/continuing	PCF	pounds per cubic foot
CONTR	contract/contractor	PLAS	plaster
CONV	convector	±	plus or minus
CRS	course(s)	PLF	pounds per lineal foot
CT	ceramic tile	PSF	pounds per square foot
CUH	cabinet unit ventilator	PSI	pounds per square inch
CW	domestic cold water	PART	partition
CY	cubic yard	PVC	polyvinyl chloride
		PMT	pavement
°	degree		
DET	detail		
DF	drinking fountain	R	riser/radius
DIAG	diagonal	RA	return air
DIA or Ø	diameter	RD	roof drain
DIM	dimension	REF.	reference
DIV	division	REF	refrigerator
DP	dampproofing	REINF	reinforce(d)/reinforcing
DS	downspout	RES	resilient
DWG	drawing	REV	revision(s)/revised
		RH	right hand
		RM	room
EA	each	RO	rough opening
EIFS	exterior insulation finish system (synthetic plaster)	ROW	right of way
		RS	roof sump
ELEC	electric/electrical	RWC	rainwater conductor
EQ	equal		
EQUIP	equipment	SAN	sanitary
EWC	electric water cooler	SD	storm drain
EXIST	existing	SECT	section
EXH	exhaust	SHT	sheet
EXT	exterior	SIM	similar
		SPEC	specification(s)
FA	fire alarm	SQ	square
FAI	fresh air intake	SS	service sink
FD	floor drain	SST	stainless steel
FE	fire extinguisher	STL	steel
FEC	fire extinguisher cabinet	STD	standard
FIN	finish(ed)	SUSP	suspended
FL	floor(ing)	SYM	symmetry/symmetrical
FOUND	foundation		
FTR	fin tube radiation	T&G	tongue/groove
FTG	footing	T	tread
		TB	tackboard
G	gas	TEL	telephone
GA	gage/gauge	TERR	terrazzo
GC	general contractor	THR	threshold
GI	galvanized iron	TV	television
GL	glass/glazing	TYP	typical
GST	glazed structural tile		
GALV	galvanized	UH	unit heater
		UR	urinal
HB	hose bibb	UV	unit ventilator
HDW	hardware		
HM	hollow metal	V	vent
HORIZ	horizontal	VERT	vertical
HGT	height		
HTG	heating	W	width/wide
HVAC	heating/ventilating/air conditioning	W/	with
HW	domestic hot water	WC	water closet
HWHR	hot water heating return	WD	wood
HWHS	hot water heating supply	WH	water heater
HWR	domestic hot water return	WI	wrought iron
		W/W	wall to wall
ID	inside dimension	WWR	welded wire reinforcement
INT	interior		
INV	invert		

HATCHING PATTERN KEY

BRICK · CONC BLOCK · RIGID INSUL · BATT INSUL · ACOUST TILE

CONCRETE · ASPHALT · METAL · FINISH WOOD · GYP BOARD

EARTH · SAND · GRAVEL · LUMBER · PLYWOOD

GENERAL NOTES

ANY PENETRATIONS OF CORRIDOR WALLS MUST MAINTAIN 1-HOUR FIRE RATING AND RESIST THE PASSAGE OF SMOKE

SYMBOLS KEY

NORTH — NORTH ARROW

100'-0" — EXISTING ELEVATION POINT

100'-0" — NEW ELEVATION POINT

ELEVATION TARGET

A — COLUMN NUMBER — COLUMN CENTERLINE

1 / A1 — DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION

1 / A1 — DETAIL NUMBER / SHEET NUMBER — WALL SECTION

1-A1 — DET NUM - SHT NUM — DETAIL BUBBLE

WORKROOM 101 — ROOM NAME / ROOM NUMBER — ROOM NUMBER

100 — DOOR NUMBER

100 — WINDOW NUMBER

1 / A101 — ELEVATION NUMBER / SHEET NUMBER — INTERIOR ELEVATION

001 — DEMOLITION NOTE

DEVELOPMENT DATA

APPLICABLE CODES & ORDINANCES
- 2021 MICHIGAN REHABILITATION CODE
  - ALTERATIONS LEVEL 2
- 2021 MICHIGAN BUILDING CODE
- 2021 MICHIGAN MECHANICAL CODE
- 2021 MICHIGAN PLUMBING CODE
- 2023 MICHIGAN ELECTRICAL CODE
- NFPA 101 LIFE SAFETY CODE 1997 AS ADOPTED BY MICHIGAN BUREAU OF FIRE SAFETY

BUILDING USE
EXISTING: E, EDUCATION

BUILDING CONSTRUCTION TYPE
TYPE II-B (0,0,0)

BUILDING AREA
EXISTING GROSS AREA = 146,800 SF

BUILDING OCCUPANCY
TOTAL DESIGN OCCUPANT LOAD: 1615
WEIGHT ROOM, GYM & AUDITORIUM ARE NON-SIMULTANEOUS USE

TOTAL FIXTURE COUNT REQUIRED:

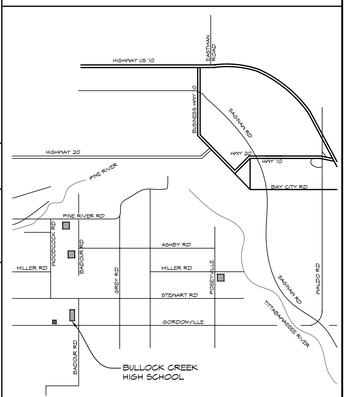
	UNI-SEX	MEN'S	WOMEN'S
TOILETS:	-	17	17
LAVATORIES:	-	17	17

TOTAL FIXTURE COUNT EXISTING:

	UNI-SEX	MEN'S	WOMEN'S
TOILETS (URINALS)	9	22 (29)	44
LAVATORIES:	9	25	26

TOTAL FIXTURE COUNT PROPOSED:

	UNI-SEX	MEN'S	WOMEN'S
TOILETS (URINALS):	9	19 (25)	39
LAVATORIES:	9	25	26



NORTH — NO SCALE — LOCATION MAP

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT #26-210

1420 SOUTH BADOUR ROAD MIDLAND MI 48640

PROJECT 'A'
RENOVATIONS TO:
BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD MIDLAND MI 48640

INDEX OF DRAWINGS

A-G001 TITLE SHEET

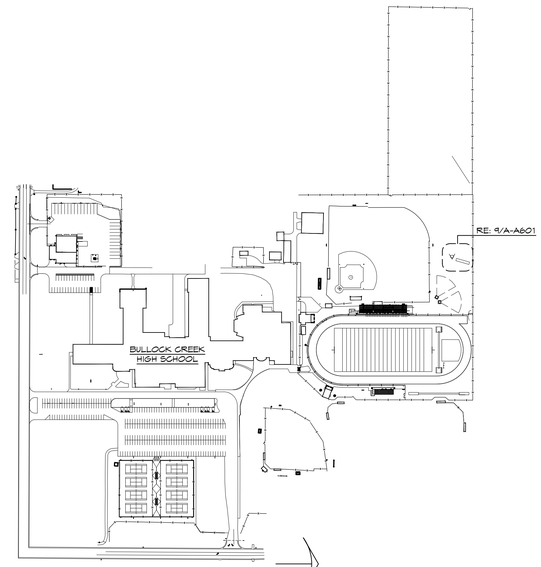
A-A100 COMPOSITE FLOOR PLAN
A-A101 TOILET ROOM DEMOLITION PLANS
A-A102 TOILET ROOM ENLARGED PLANS
A-A103 TOILET ROOM REFLECTED CEILING PLANS
A-A104 ENLARGED PLANS

A-A601 DOOR SCHEDULE, ROOM FINISH SCHEDULE, & DETAILS

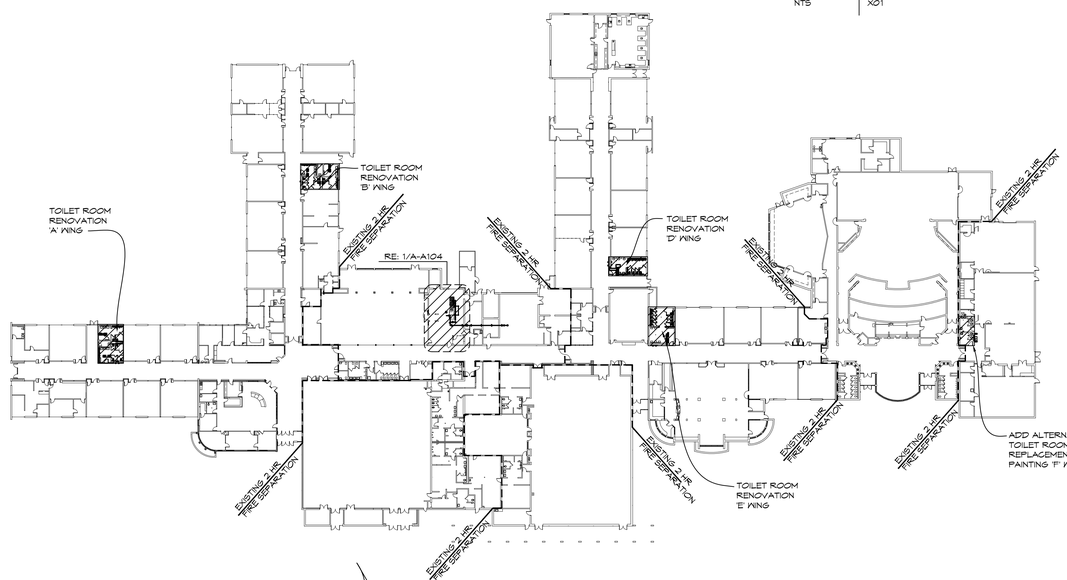
A-M001 MECHANICAL SCHEDULES
A-M101 MECHANICAL TOILET ROOM ENLARGED PLUMBING PLANS
A-M102 MECHANICAL ENLARGED FLOOR PLANS

A-P101 'A' WING ENLARGED TOILET ROOM PLUMBING PLANS
A-P102 'B' WING ENLARGED TOILET ROOM PLUMBING PLANS
A-P103 'D' WING ENLARGED TOILET ROOM PLUMBING PLANS
A-P104 'E' WING ENLARGED TOILET ROOM PLUMBING PLANS
A-P105 'F' WING ENLARGED TOILET ROOM PLUMBING PLANS

A-E000 ELECTRICAL COVER SHEET
A-E101 TOILET ROOM ELECTRICAL DEMOLITION PLANS
A-E102 TOILET ROOM ELECTRICAL PLANS
A-E103 KITCHEN ELECTRICAL PLANS
A-E601 ELECTRICAL DETAILS AND SCHEDULES



NORTH — NTS — SITE PLAN — X01



NORTH — NTS — COMPOSITE PLAN — X01

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

Wolgast Corporation
Executive Offices
Executive One Building
4835 Towne Centre Road
Suite 203
Saginaw, MI 48604
Phone : (989) 790-9120
Fax : (989) 790-9063
www.wolgastconstruction.com

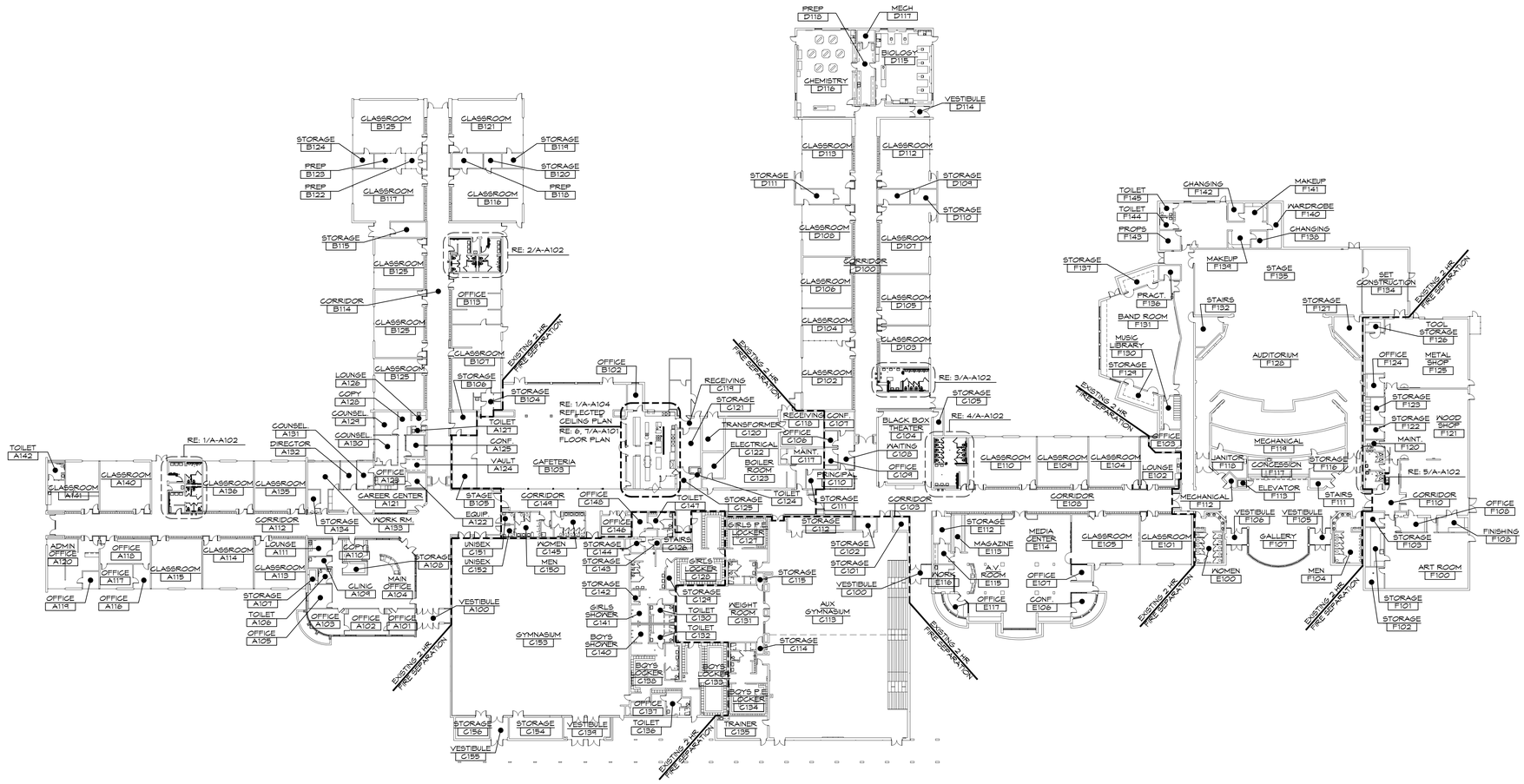
PROJECT 'A'

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT# 26-210
1420 SOUTH BADOUR ROAD MIDLAND MI 48640

PROJECT 'A'
RENOVATIONS TO:
BULLOCK CREEK HIGH SCHOOL
1420 SOUTH BADOUR ROAD MIDLAND MI 48640

NO.	REVISIONS / SUBMISSIONS	DATE

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-G001
	REVIEWED MLB	DRAWING NO. A-G001
	DATE OCT 19, 2026	SHEET NO. 1 OF 20
	SCALE N.T.S.	



NORTH

30" = 1'-0"

COMPOSITE FLOOR PLAN

X01

PROJECT 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers

817 E. Kearsley St. | Flint, MI 48503

Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

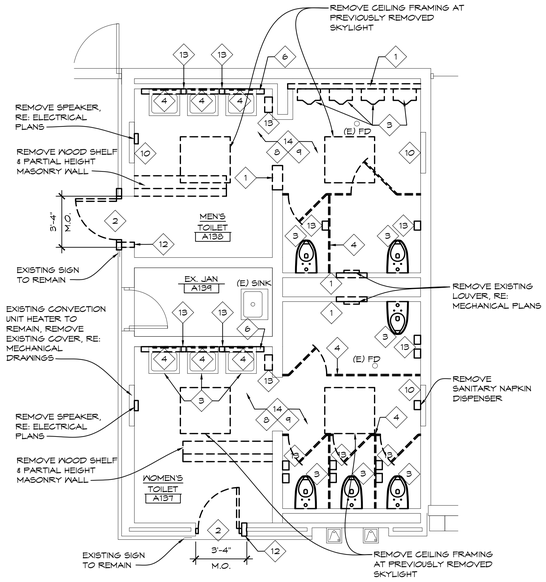
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE FLOOR PLAN

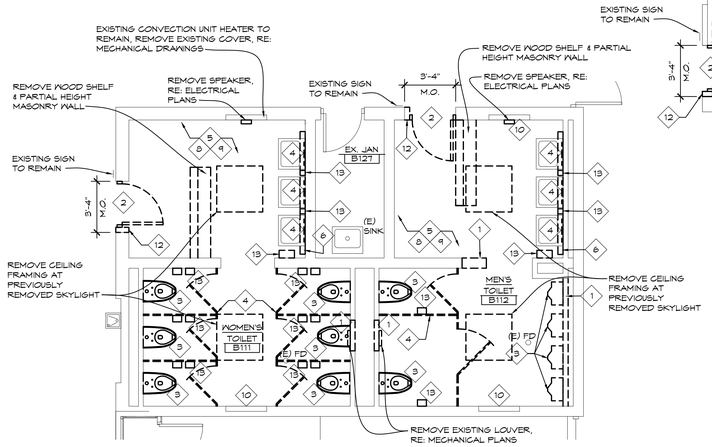
SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-A100
	REVIEWED MLB	DRAWING NO. A-A100
	DATE OCT 19, 2026	SHEET NO. 2 OF 20
	SCALE 1" = 30'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS\A-A100 COMP P
Plot date: 10/19/2026 11:08 AM



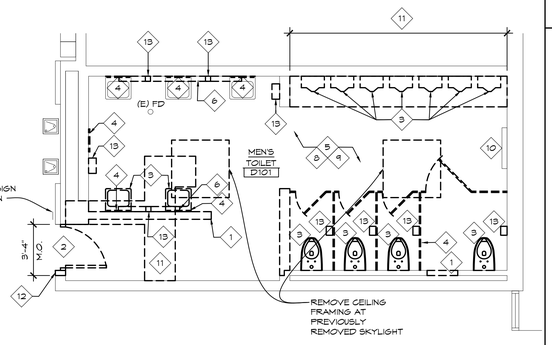
1 'A' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | X01



2 'B' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | X01



3 'D' WING TOILET ROOM ENLARGED PLAN

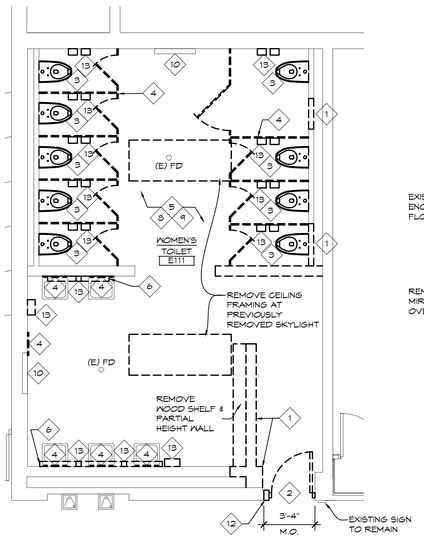
1/4" = 1'-0" | X01

DEMOLITION NOTES

1. REMOVE PORTION OF EXISTING MASONRY WALL ASSEMBLY
2. REMOVE WOOD DOOR AND H.M. FRAME ASSEMBLY. REMOVE SECURITY BOOT, STORAGE CASE AND IN-FLOOR SLEEVE AND TURN OVER TO OWNER.
3. REMOVE EXISTING PLUMBING FIXTURES, SALVAGE FOR REINSTALLATION
4. REMOVE TOILET PARTITIONS, GRAB BARS, MIRRORS, SALVAGE MIRRORS.
5. REMOVE EXISTING PLYWOOD OR LAY-IN CEILING ASSEMBLY INCLUDING ALL FRAMING, GRID CEILING MOUNTED LIGHTING, STROBES, SENSORS, ETC.
6. REMOVE WALL MOUNTED LIGHT FIXTURE
7. REMOVE EXISTING PLUMBING FIXTURE, EXISTING WALL BRACKET TO REMAIN
8. EXISTING TERRAZZO FLOORING TO REMAIN
9. EXISTING COVED QUARRY TILE WALL BASE TO REMAIN
10. EXISTING CONVECTION UNIT HEATER TO REMAIN. REMOVE UNIT COVER, PREP FOR PAINT, RE: MECHANICAL PLANS
11. SAW CUT AND REMOVE PORTION OF EXISTING TERRAZZO FLOORING AND CONCRETE SUBFLOOR AS REQUIRED FOR NEW UNDER FLOOR PLUMBING, RE: PLUMBING DRAWINGS
12. SAW CUT AND REMOVE PORTION OF EXISTING MASONRY WALL AS REQUIRED FOR NEW DOOR FRAME ASSEMBLY. EXISTING MASONRY LINTEL ABOVE TO REMAIN. REMOVE & REINSTALL EXISTING WOOD TRIM ABOVE DOOR HEAD AS REQUIRED (PAINT TO MATCH EXISTING)
13. REMOVE EXISTING TOILET PAPER DISPENSERS, SOAP DISPENSERS, AND PAPER TOWER DISPENSERS. SALVAGE FOR REINSTALLATION, TURN OVER EXTRAS TO OWNER.
14. EXISTING CEILING ASSEMBLY INCLUDING ALL CEILING MOUNTED LIGHTING, STROBES, SENSORS, ETC. TO BE REMOVED BY OTHERS
15. REMOVE EXISTING FLOOR TILE

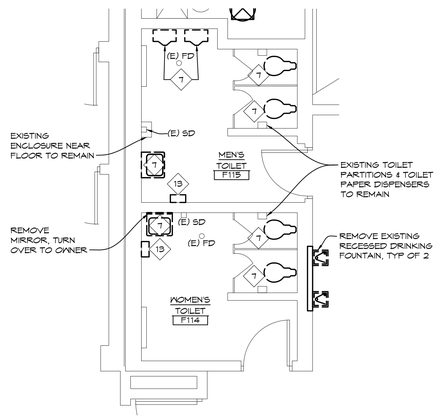
DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.



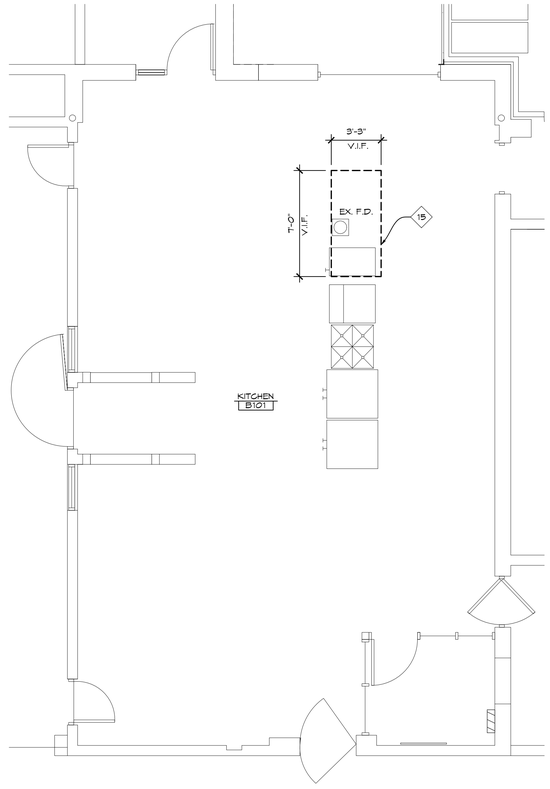
4 'E' WING TOILET ROOM ENLARGED PLAN

1/4" = 1'-0" | X01



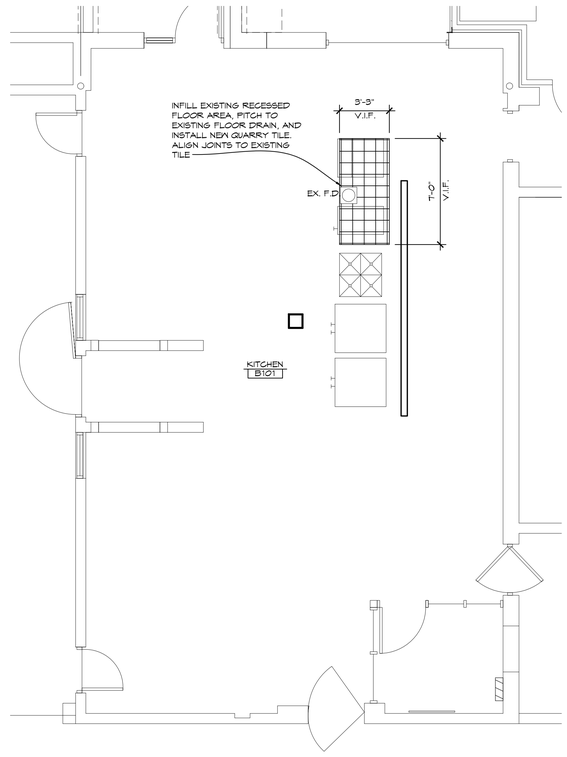
5 'F' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | X01



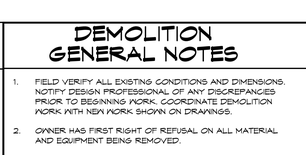
6 KITCHEN DEMOLITION PLAN

1/4" = 1'-0" | X01



7 KITCHEN PROPOSED PLAN

1/4" = 1'-0" | X01



NORTH

KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

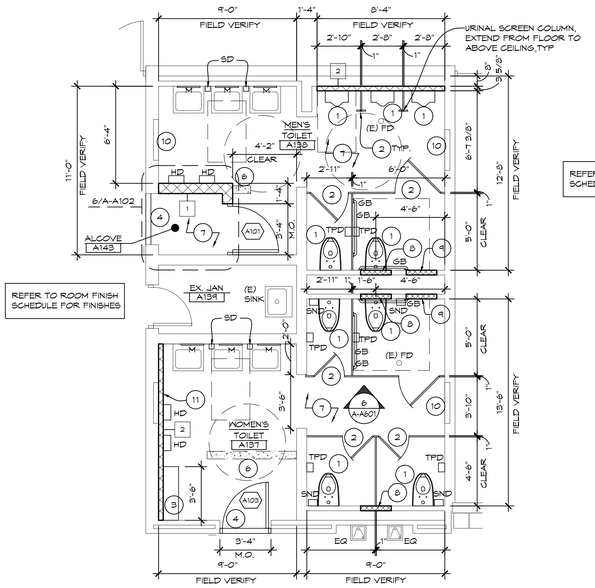
DRAWING TITLE

TOILET ROOM DEMOLITION PLANS

SEAL		
	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-A101
	REVIEWED MLB	DRAWING NO. A-A101
	DATE OCT 19, 2026	
	SCALE AS NOTED	SHEET NO. 3 OF 20

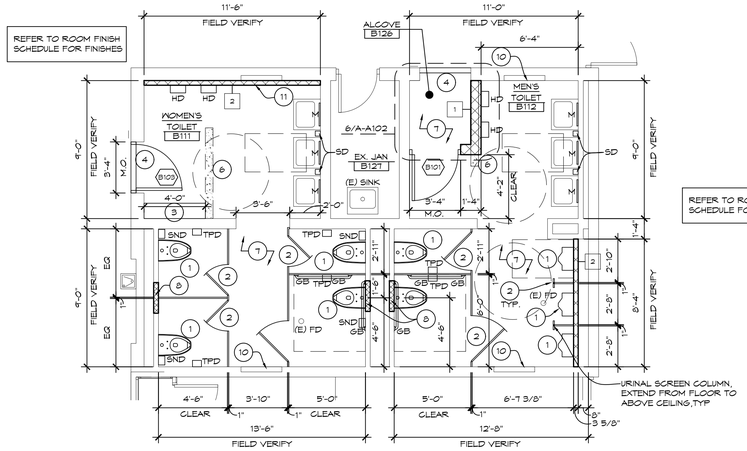
PROJECT 'A'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC THA-A-A101 DEMOL
Plot date: 10/19/2026 11:08 AM



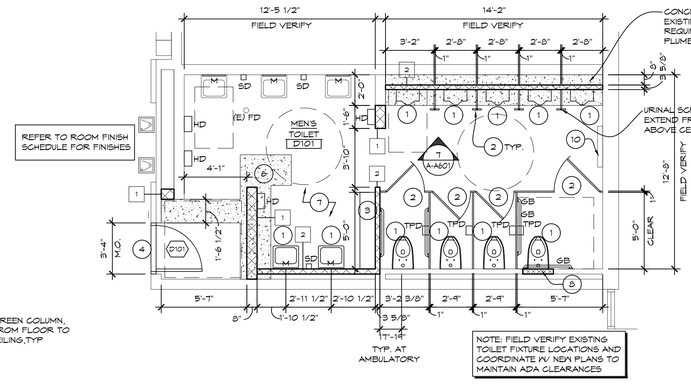
1 'A' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | XO1



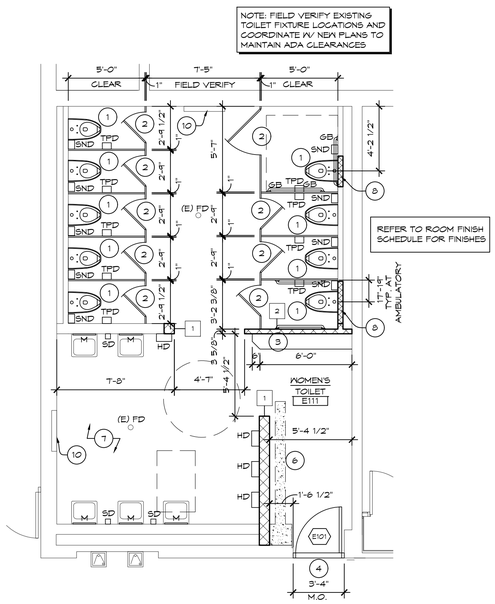
2 'B' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | XO1



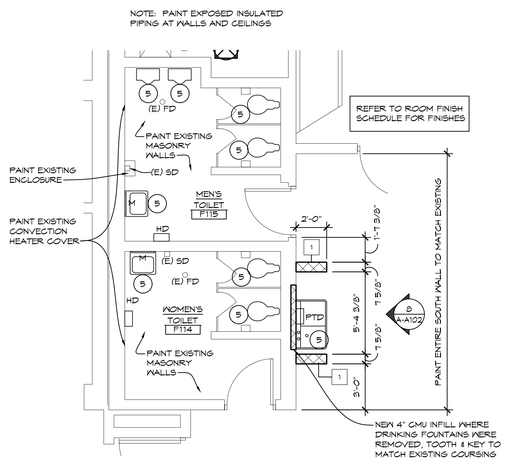
3 'D' WING TOILET ROOM ENLARGED PLAN

1/4" = 1'-0" | XO1



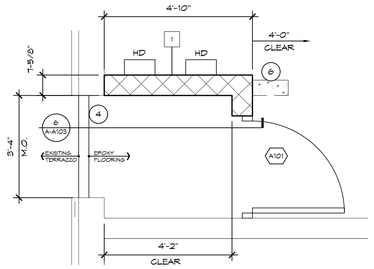
4 'E' WING TOILET ROOM ENLARGED PLAN

1/4" = 1'-0" | XO1



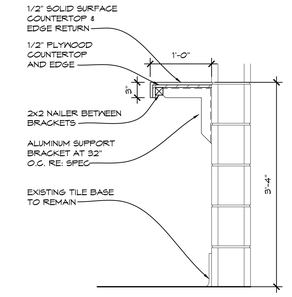
ADD ALTERNATE #1 'F' WING TOILET ROOMS 5 ENLARGED PLAN

1/4" = 1'-0" | XO1



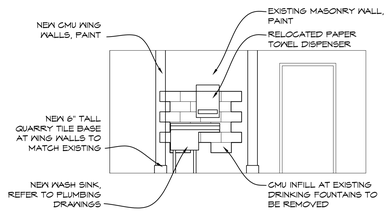
6 ENLARGED PLAN

1/2" = 1'-0" | XO1



7 SHELF DETAIL

1" = 1'-0" | DETLO1



8 ADD ALTERNATE #1 INTERIOR ELEVATION

1/4" = 1'-0" | ELEVO1

ACCESSORY LEGEND

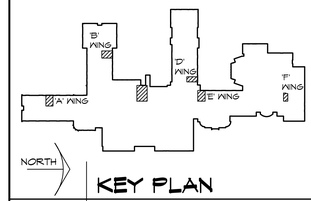
HD	HAND DRYER, RE: SPEC
M	RE-INSTALL EXISTING MIRROR, RE: SPEC
SND	SANITARY NAPKIN DISPOSAL, RE: SPEC
GB	GRAB BAR, RE: SPEC
TPD	REINSTALL EXISTING TOILET PAPER DISPENSER
SD	REINSTALL EXISTING SOAP DISPENSER

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES

1. REINSTALL EXISTING PLUMBING FIXTURE, RE: PLUMBING DRAWINGS
2. TOILET PARTITION/URINAL SCREEN, RE: SPEC
3. SHELVING, RE: DETAIL 7/A-A102
4. MARBLE THRESHOLD
5. NEW PLUMBING FIXTURE, RE: PLUMBING DRAWINGS
6. PATCH EXISTING TERRAZZO FLOOR WITH CONCRETE, DOWEL INTO EXISTING CONCRETE SUBFLOOR 8" W/ #4 BARS AT 12" O.C.
7. NEW EPOXY FLOOR COATING AND WALL BASE OVER EXISTING TERRAZZO AND UP WALL OVER EXISTING QUARRY TILE OR MASONRY WALL.
8. REMOVE PORTION OF EXISTING GLAZED BLOCK WALL AS REQUIRED FOR NEW PLUMBING WORK. SALVAGE BLOCK AND RE-INSTALL UPON COMPLETION. COORDINATE WITH PLUMBING TRADES.
9. PATCH EXISTING MASONRY WALL. TOOTH AND KEY NEW MASONRY INFILL.
10. REMOVE, SAND, PAINT, AND RE-INSTALL EXISTING CONVECTOR COVERS WITH H.P. PAINT.
11. PAINT NEW CONVECTOR COVER WITH H.P. PAINT.



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

WALL TYPES

1. 8" CMU WALL, EXTEND TO ROOF DECK, SEAL TIGHT FOR 1 - HOUR RATING
2. 4" CMU WALL, EXTEND TO ROOF DECK
3. 3 5/8" METAL STUD FRAMING AT 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE, EXTEND TO ROOF DECK

NOTE: REFER TO SHEET A-A101 FOR ADDITIONAL GENERAL CONSTRUCTION NOTES

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

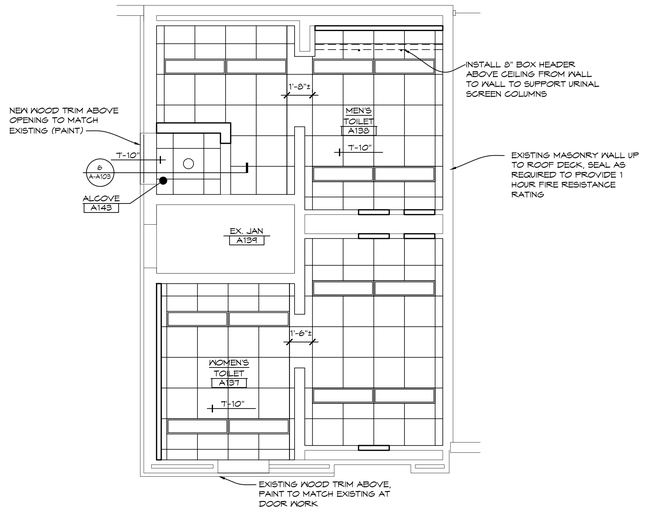
DRAWING TITLE

TOILET ROOM ENLARGED PLANS

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-A102
	REVIEWED MLB	DRAWING NO. A-A102
	DATE OCT 19, 2026	SHEET NO. 4 OF 20
	SCALE AS NOTED	

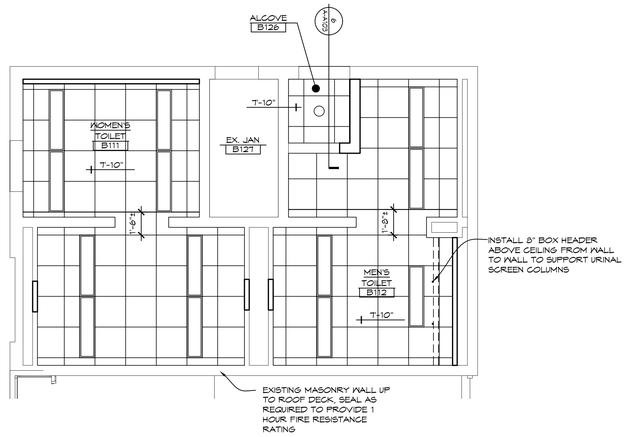
THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS\A-A102 ENLARG
Plot date: 10/19/2026 11:08 AM

PROJECT 'A'



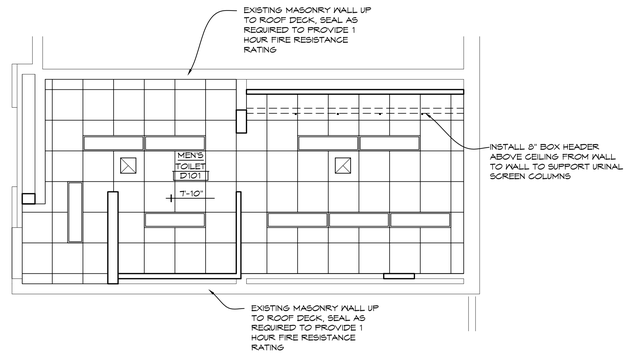
1 | 'A' WING TOILET ROOMS
REFLECTED CEILING PLAN

1/4" = 1'-0" | X01



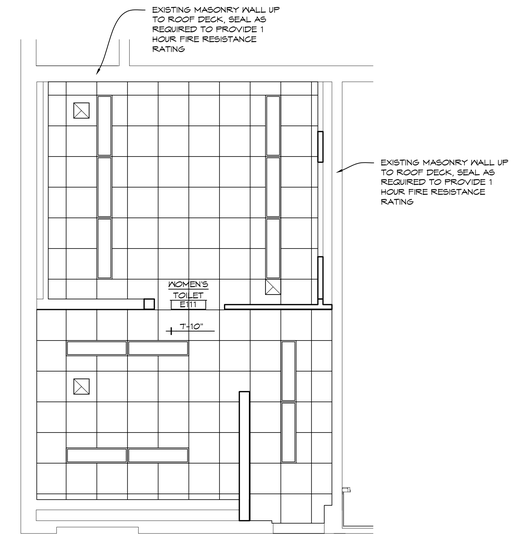
2 | 'B' WING TOILET ROOMS
REFLECTED CEILING PLAN

1/4" = 1'-0" | X01



3 | 'D' WING TOILET ROOM
REFLECTED CEILING PLAN

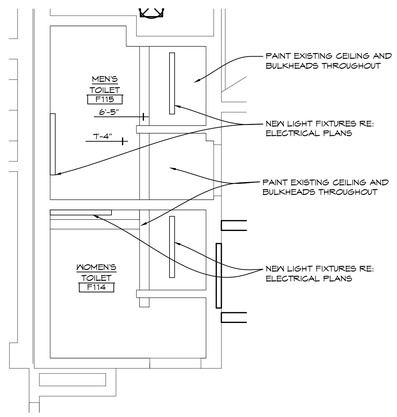
1/4" = 1'-0" | X01



4 | 'E' WING TOILET ROOM
REFLECTED CEILING PLAN

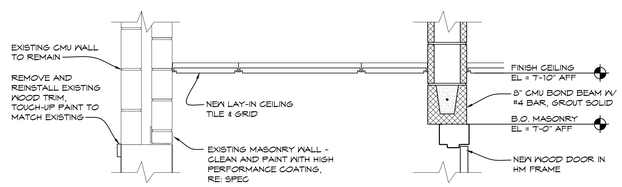
1/4" = 1'-0" | X01

ADD ALTERNATE #1



5 | 'F' WING TOILET ROOMS
REFLECTED CEILING PLAN

1/4" = 1'-0" | X01



6 | **BULKHEAD DETAIL**

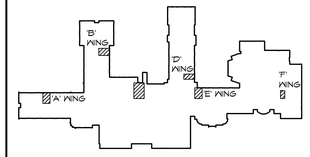
1" = 1'-0" | DETL02

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

CEILING LEGEND

- 2x2 SUSPENDED LAY-IN CEILING W/ HOLD DOWN CLIPS TYPE 'A'
- SCRUBBABLE 2x4 SUSPENDED LAY-IN CEILING ASSEMBLY- TYPE 'B'
- NEW 1x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW 2x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW DOWNLIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW SURFACE MOUNTED LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW EXHAUST GRILLE RE: MECHANICAL PLANS



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

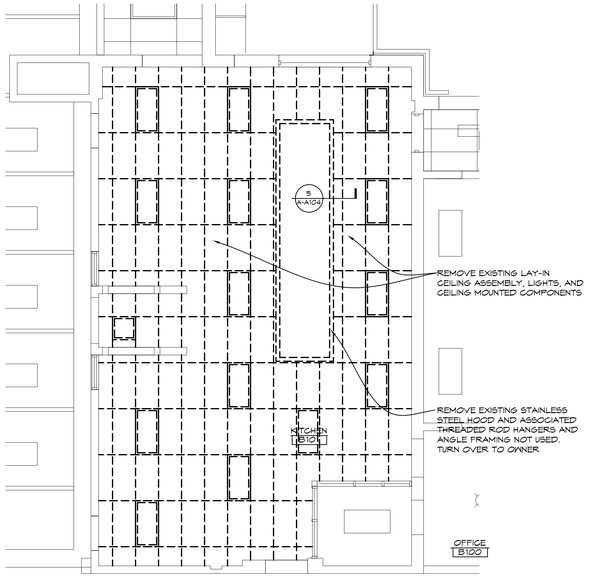
DRAWING TITLE

TOILET ROOM REFLECTED CEILING PLANS

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-A103
	REVIEWED MLB	DRAWING NO. A-A103
	DATE OCT 19, 2026	SHEET NO. 5 OF 20
	SCALE AS NOTED	

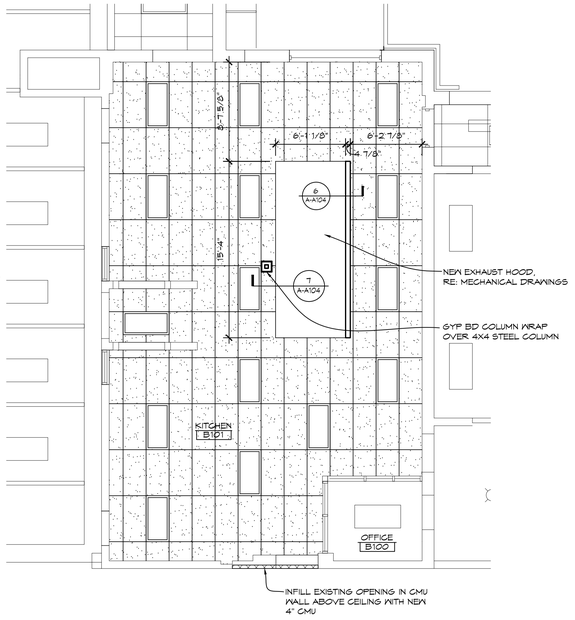
THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS\A-A103 REFLEC
Plot date: 10/19/2026 11:08 AM

PROJECT 'A'



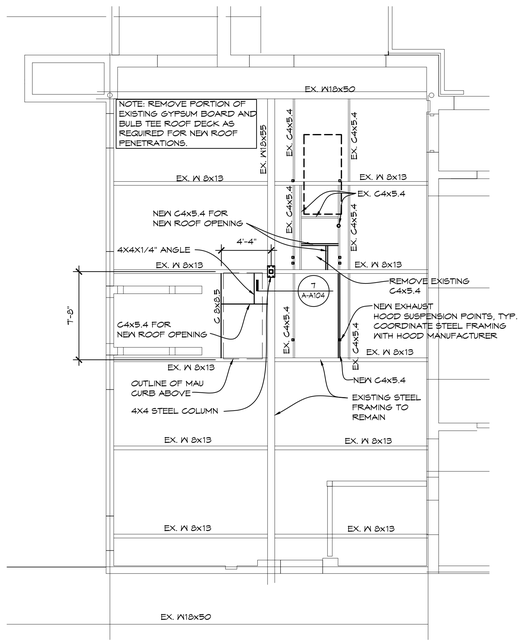
1 ENLARGED DEMOLITION REFLECTED CEILING PLAN

3/16" = 1'-0" | X01



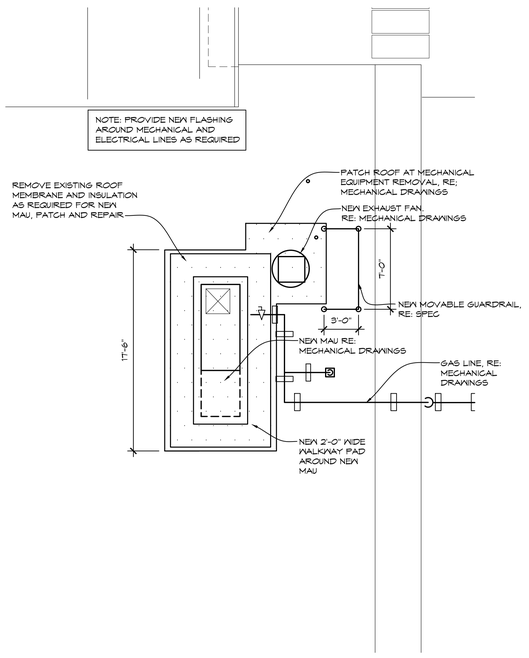
2 ENLARGED REFLECTED CEILING PLAN

3/16" = 1'-0" | X01



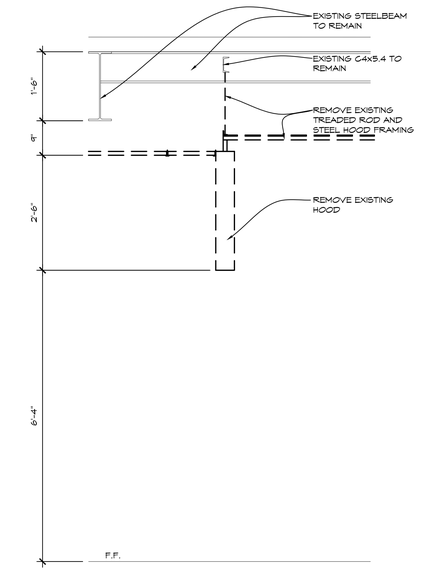
3 ROOF FRAMING PLAN

3/16" = 1'-0" | X01



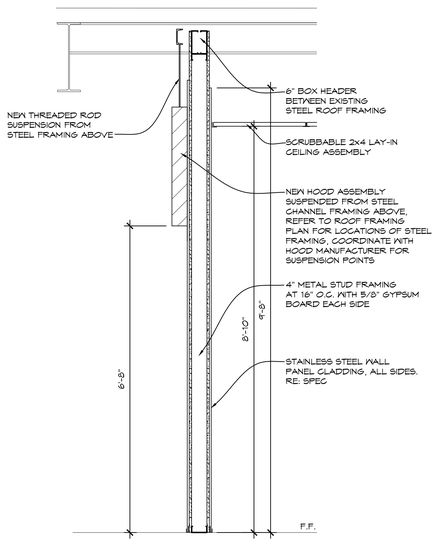
4 KITCHEN ROOF PLAN

3/16" = 1'-0" | X01



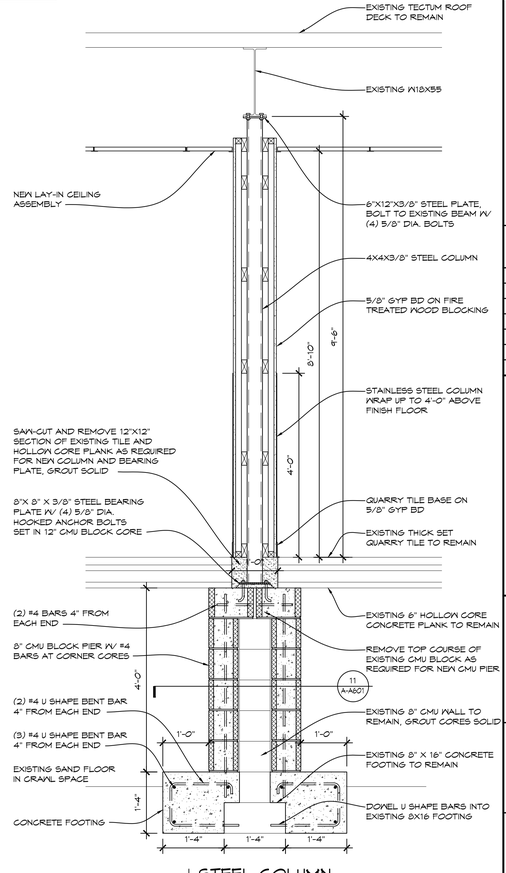
5 DEMOLITION SECTION

3/4" = 1'-0" | X8EC01



6 HOOD/ WALL SECTION

3/4" = 1'-0" | X8EC01



7 STEEL COLUMN SECTION

3/4" = 1'-0" | X8EC01

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

CEILING LEGEND

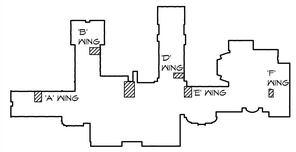
- 2x2 SUSPENDED LAY-IN CEILING W/ HOLD DOWN CLIPS -TYPE 'A'
- SCRUBBABLE 2x4 SUSPENDED LAY-IN CEILING ASSEMBLY- TYPE 'B'
- NEW 1x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW 2x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW DOWNLIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW SURFACE MOUNTED LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW EXHAUST GRILLE RE: MECHAGNICAL PLANS

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES.
5. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
7. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWING TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES ASA REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
10. REFER TO SHEET A602 FOR GENERAL NOTES REGARDING DEMOLITION AND NEW CONSTRUCTION
11. CONTRACTOR TO FIELD VERIFY ALL EXISTING MOUNTING BRACKETS TO BE REUSED AND NOTIFY DESIGN PROFESSIONAL OF ANY DEFICIENCY

WALL TYPES

1. 8" CMU WALL, EXTEND TO ROOF DECK, SEAL TIGHT FOR 1 - HOUR RATING
2. 4" CMU WALL, EXTEND TO ROOF DECK
3. 3 5/8" METAL STUD FRAMING AT 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE, EXTEND TO ROOF DECK



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED PLANS

SEAL		
	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-A104
	REVIEWED MLB	DRAWING NO. A-A104
	DATE OCT 19, 2026	SHEET NO. 6 OF 20
	SCALE AS NOTED	

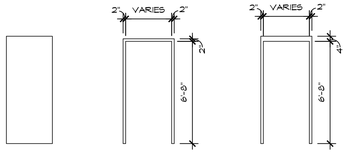
PROJECT 'A'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS\A-A104 ENLARG
Plot date: 10/19/2026 11:08 AM

DOOR & FRAME SCHEDULE

DOOR NO.	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	FIRE RATING (IN MINUTES)	HARDWARE	NOTES
A101	3'-0" x 6'-8"	A	WD	2	HM	3/A-A601	4 & 5/A-A601	0	02	1
A103	3'-0" x 6'-8"	A	WD	1	HM	1/A-A601	2/A-A601	0	05	1
B101	3'-0" x 6'-8"	A	WD	2	HM	3/A-A601	4 & 5/A-A601	0	02	1
B103	3'-0" x 6'-8"	A	WD	1	HM	1/A-A601	2/A-A601	0	05	1
D101	3'-0" x 6'-8"	A	WD	1	HM	1/A-A601	2/A-A601	0	02	1
E101	3'-0" x 6'-8"	A	WD	1	HM	1/A-A601	2/A-A601	0	05	1

NOTES:
1. UNDER CUT DOOR 1"



DOOR AND FRAME ELEVATIONS

1/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM NO.	ROOM TITLE	FLOOR MATERIAL	BASE MATERIAL	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CEILING HEIGHT	ACCESSORIES	NOTES
A137	WOMEN'S TOILET	F01	B01	W01	W01	W01	W01	C01	T-10"	A01, A02	N01, N02
A138	MEN'S TOILET	F01	B01	W01	W01	W01	W01	C01	T-10"	A01	N01, N02
A139	EX. JANITOR	F02	B02	W02	W02	W02	W02	C03	---		
A143	ALCOVE	F01	B01	W01	W01	W01	W01	C01	T-10"		N04
B101	KITCHEN	F02	B02	W02	W02	W02	W02	C02	8'-10"		
B111	WOMEN'S TOILET	F01	B01	W01	W01	W01	W01	C01	T-10"	A01, A02	N01, N02
B112	MEN'S TOILET	F01	B01	W01	W01	W01	W01	C01	T-10"	A01	N01, N02
B126	ALCOVE	F01	B01	W01	W01	W01	W01	C01	T-10"		N04
B127	EX. JANITOR	F02	B02	W02	W02	W02	W02	C03	---		
D101	MEN'S TOILET	F01	B01	W01	W01	W01	W01	C01	T-10"	A01, A02	N01, N02
E111	WOMEN'S TOILET	F01	B01	W01	W01	W01	W01	C01	T-10"	A01, A02	N01, N02
F114	WOMEN'S TOILET	F03	B01	W01	W01	W01	W01	C04	---	A01	N03
F115	MEN'S TOILET	F03	B01	W01	W01	W01	W01	C04	---	A01	N03

ROOM FINISH LEGEND

FLOOR
- F01 EXISTING TERRAZZO - CLEAN AND COAT WITH EPOXY COATING
- F02 EXISTING TO REMAIN
- F03 EXISTING CONCRETE - CLEAN AND COAT WITH EPOXY COATING

BASE
- B01 EXISTING QUARRY TILE OR MASONRY -CLEAN AND PAINT WITH EPOXY COATING
- B02 EXISTING TO REMAIN

WALLS
- W01 EXISTING MASONRY - DEGLAZE, SCARIFY, CLEAN, AND PAINT WITH HIGH PERFORMANCE COATING, RE: SPEC
- W02 EXISTING TO REMAIN

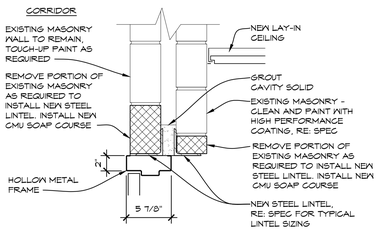
CEILING
- C01 2x2 LAY-IN CEILING TILE WITH HOLD DOWN CLIPS
- C02 2x4 LAY-IN CEILING TILE, SCRUBBABLE
- C03 EXISTING TO REMAIN
- C04 EXISTING GSNC. DECK PLANKS - PAINT

ACCESSORIES
- A01 TOILET ROOM ACCESSORIES, RE: SPEC
- A02 SHELF, RE: 1/A-A102

NOTES
- N01 REMOVE EXISTING CONVECTION HEATER UNIT COVERS AND INSTALL NEW, RE: MECHANICAL PLANS
- N02 REINSTALL EXISTING FIRE ALARM NOTIFICATION DEVICES
- N03 PAINT EXISTING CONVECTION HEATER UNIT COVERS
- N04 PAINT HEADER WHERE EXISTING DOOR WAS REMOVED

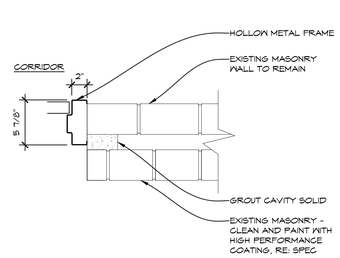
GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.



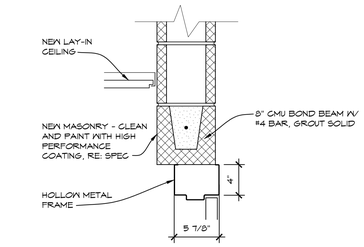
1 HEAD DETAIL

1 1/2" = 1'-0" | JAMB01



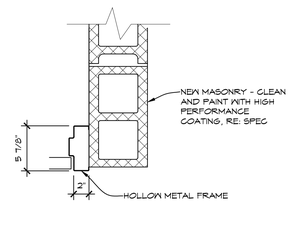
2 JAMB DETAIL

1 1/2" = 1'-0" | JAMB01



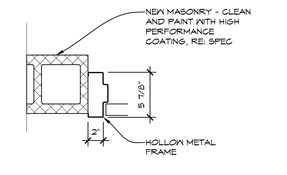
3 HEAD DETAIL

1 1/2" = 1'-0" | JAMB01



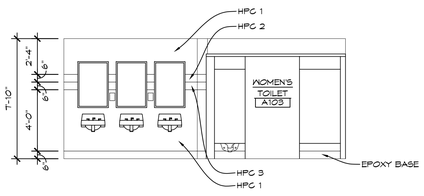
4 JAMB DETAIL

1 1/2" = 1'-0" | JAMB01



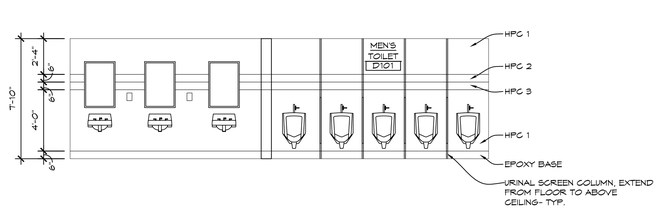
5 JAMB DETAIL

1 1/2" = 1'-0" | JAMB01



6 TOILET ROOM ELEVATION

1/4" = 1'-0" | ELEV01

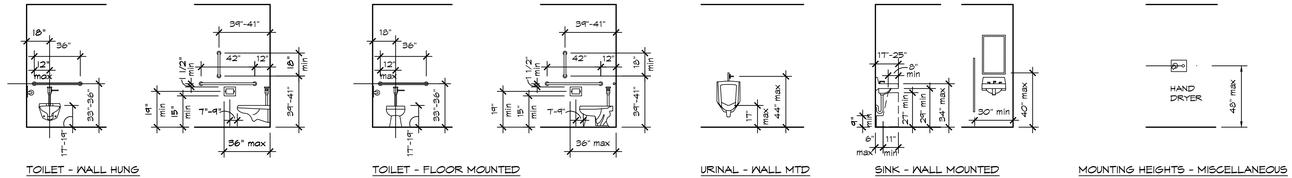


7 TOILET ROOM ELEVATION

1/4" = 1'-0" | ELEV01

NOTE:
HPC - HIGH PERFORMANCE COATING

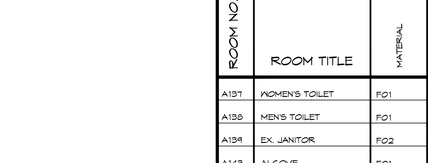
NOTE:
RESTROOM ELEVATIONS ARE TYPICAL AND APPLY TO ENTIRE ROOM RESPECTIVELY - PAINT LINES TO ALIGN W/ MASONRY COURSING, TYP.



TOILET - WALL HUNG | TOILET - FLOOR MOUNTED | URINAL - WALL MTD | SINK - WALL MOUNTED | MOUNTING HEIGHTS - MISCELLANEOUS

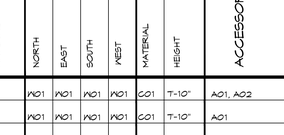
8 TYPICAL BARRIER FREE MOUNTING HEIGHTS

1/4" = 1'-0"



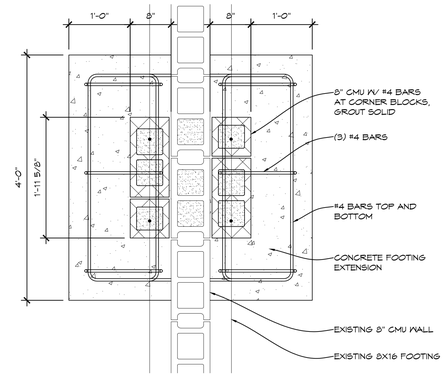
9 DISCUS CAGE PLAN

1/8" = 1'-0" | X01



10 DISCUS CAGE ELEVATION

1/8" = 1'-0" | X01



11 PIER FOUNDATION PLAN

1/8" = 1'-0" | X01

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
DOOR SCHEDULE, ROOM FINISH SCHEDULE, & DETAILS

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. A-A601
	REVIEWED MLB	DRAWING NO. A-A601
	DATE OCT 19, 2026	SHEET NO. 7 OF 20
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DIDBC TOS\A-A601 SCHEDULES.dwg
Plot date: 10/19/2026 11:08 AM

SYMBOLS & ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BFF	BELOW FINISH FLOOR
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDENSATE
CB	COMBINATION UNIT
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
COND	CONDENSATE
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
°F	DEGREE FAHRENHEIT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FPM	FEET PER MINUTE
FT	FEET
G	GAS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HW	HOT WATER
HW (140)	HOT WATER (140 °F)
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HWR	HOT WATER RETURN
HWR (140)	HOT WATER RETURN (140 °F)
KVA	KILOVAITT
L OR LAV	LAVATORY
MBH	ONE THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MTD	MOUNTED
PH	PHASE
PSI	POUND PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RE	REFER TO DRAWING
RG	RETURN GRILLE
RH	RELIEF HOOD
RTU	ROOFTOP UNIT
S	SINK
SA	SUPPLY AIR
SAN	SANITARY
SG	SUPPLY GRILLLE
SP	STATIC PRESSURE
SS	SERVICE SINK
ST	STORM
UH	UNIT HEATER
UR	URINAL
UV	UNIT VENTILATOR
V	VENT OR VOLT
VA	VALVE
VTR	VENT THRU ROOF
W	WASTE OR WATT
WC	WATER CLOSET
WH	WATER HEATER
WV	WASTE & VENT

CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HW (140)	DOMESTIC HOT WATER 140F DEG
HWR	DOMESTIC HOT WATER RETURN
HWR (140)	DOMESTIC HOT WATER RETURN 140F DEG
C	CONDENSATE
G	GAS
SAN	SANITARY
V	VENT
STM	STORM
HWHS	HOT WATER HEATING SUPPLY
HWHR	HOT WATER HEATING RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
	PIPE DROP
	PIPE RISE
	ARROW INDICATES DIRECTION OF FLOW
	BALL VALVE
	GATE VALVE
	UNION
	PRESSURE GAUGE W/ SHUTOFF
	STRAINER
	CHECK VALVE
	THERMOMETER W/ SHUTOFF
	THREE WAY CONTROL VALVE
	PETE'S PLUG (TEMPERATURE-PRESSURE TEST FITTING)
MV	MANUAL AIR VENT
AV	AUTOMATIC AIR VENT
	FLOW CONTROL
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	NON FREEZE WALL HYDRANT
	FLOOR CLEANOUT
T	THERMOSTAT
CO2	CARBON DIOXIDE SENSOR

10x8	DUCT SIZE(CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
10Ø	ROUND DUCT DIAMETER SIZE
	VOLUME DAMPER IN DUCT
	DUCT DOWN
	SLOT DIFFUSER
	CEILING SUPPLY DIFFUSER
	CEILING RETURN DIFFUSER
	CEILING EXHAUST DIFFUSER
T	THERMOSTAT
	HORIZONTAL FIRE DAMPER W/ACCESS DOOR
	VERTICAL FIRE DAMPER W/ACCESS DOOR
SD	HORIZONTAL SMOKE DAMPER W/ACCESS DOOR
SD	VERTICAL SMOKE DAMPER W/ACCESS DOOR
	DIRECTION OF AIR FLOW
	HOOD EXHAUST DUCT
	HOOD SUPPLY AIR DUCT
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR SUPPLY DUCT DN
	RECTANGULAR RETURN DUCT DN
	RECTANGULAR EXHAUST DUCT DN
	ELBOW WITH TURNING VANES

KITCHEN EQUIPMENT SCHEDULE

KITCHEN HOOD
GREENHECK MODEL GHBX TYPE 1 BAFFLE FILTER WALL CANOPY HOOD, 172" LONG, 54" WIDE, 24" TALL WITH EXHAUST VOLUME OF 2,824 CFM AT 0.416" SP, 430 STAINLESS STEEL, UL-710 RATED WITHOUT FIRE DAMPER, 3" INTEGRAL AIR SPACE ON BACK, 54" LONG, 12" WIDE, 24" HIGH UTILITY CABINET MOUNTED ON LEFT END, (6) 16" X 20" & (2) 20" X 20" ALUMINUM BAFFLE FILTERS, 4 INCANDESCENT FLOOD LIGHTS, (2) EXTERNAL SUPPLY PLENUMS AT FRONT ON HOOD, (AIR CURTAIN SUPPLY) ONE SUPPLY PLENUM AT 1,203 CFM, 0.01" SP WITH 2 SUPPLY COLLAR CONNECTIONS (FACTORY MOUNTED) & ONE SUPPLY PLENUM AT 1,056 CFM, 0.01" SP WITH 2 SUPPLY COLLAR CONNECTIONS (FACTORY MOUNTED). BACK SPLASH PANEL. PROVIDE HOOD COMPLETE WITH SWITCHES, ANSUL SYSTEM & DROPS, CONTACTS FOR INTERLOCKING, FIRE ALARM, EMERGENCY GAS SHUT OFF VALVE, SHUNT TRIP BREAKER CONTACTS, TEMPER SENSOR FOR SYSTEM OVERRIDE, CONTACTS FOR INTERLOCKING WITH MAKE-UP AIR UNIT INCLUDING START AND SHUT DOWN. UNIT MOUNTED SWITCHES FOR HOOD AND LIGHTING CONTROL.

HOOD CONTROL SEQUENCE
START-UP OF THE KITCHEN EXHAUST CONTROLS SHALL BE DONE BY THE SWITCH ON THE HOOD OR HEAT SENSOR IN HOOD. PROVIDE HOOD WITH CONTACTS FOR CONNECTING TO MAU. HOOD CONTROLS SHALL HAVE EXHAUST FAN AND SAFETIES FOR FIRE SHUT DOWN. THE HOOD FIRE PROTECTION SYSTEM SHALL BE TIED INTO BUILDING FIRE ALARM SYSTEM TO ACTIVATE THE BUILDING FIRE ALARM ON RELEASE OF SYSTEM AND SHUT DOWN HOOD EXHAUST, MAKE-UP AIR UNIT AND COOKING EQUIPMENT AND GAS VALVE, THE MAKE-UP AIR UNIT AND SHALL BE INTERLOCKED TO SHUT DOWN AND THE EXISTING HOODS IN ACCENT KITCHEN. THE HOODS CONTROLS SHALL SHUT DOWN UPON THE BUILDING FIRE ALARM ACTIVATION. PROVIDE RELAYS FOR FIRE ALARM AND SHUNT TRIP BREAKER FOR GAS COOKING EQUIPMENT.

GRILLE AND DIFFUSER SCHEDULE

"A" TITUS EXHAUST GRILLE MODEL 4FL, 45° FIXED DEFLECTION, SURFACE MOUNTED, WITH OPPOSED BLADE DAMPERS, WHITE FINISH, 12x16 GRILLE, (FIELD VERIFY GRILLES OPENING PRIOR TO ORDERING)

"B" TITUS EXHAUST/RETURN GRILLE MODEL 50F, 1/2x1/2x1/2 ALUMINUM EGG CRATE, 20x20 NECK, PANEL MOUNTED FOR LAY-IN CEILING, WHITE FINISH, PROVIDE WITH 20x20x10 PLENUM PAINTED FLAT BLACK ON INSIDE

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	GREENHECK MODEL NO.	ELEC.	CFM	"SP	FAN HP	FAN RPM	SONES	NOTES
EF-F1	TOILET ROOMS	G-095-VG	120V/1Ø	450	0.375	1/6	1278	6.24	1,2,3,4
EF-K1	KITCHEN HOOD	GUE-160-VG	230V/1Ø	2,824	1.166	2	1725	18.0	4,5,6

NOTES:
1. PROVIDE WITH BACK DRAFT DAMPER, DISCONNECT.
2. PROVIDE WITH CURB ADAPTER TO FIT EXISTING CURB (FIELD VERIFY SIZE)
3. CONNECT EXHAUST FAN TO EXISTING CIRCUIT/SWITCH
4. PROVIDE SPEED CONTROLLER IN FAN
5. PROVIDE WITH ROOF CURB, CURB EXTENSION, HINGE KIT, GREESE TRAP. (DETAIL FOR ADDTIONAL REQUIREMENS)
6. INTERLOCK FAN WITH HOOD CONTROLS

MAKE-UP AIR UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	ELEC.	CFM	OA	ESP	TSP	FAN HP	MCA	MOP	WEIGHT (lb)	HEATING (MBH) INPUT	HEATING (MBH) OUTPUT	NOTES
MAU-K1	GREENHECK	16X-P116-H22	230V/3Ø	2,682	2,682	0.5	0.647	3/4	10.4	15	1,344	300	243	ALL

NOTES:
1. PROVIDE UNIT WITH DISCONNECT SWITCH, STARTER FOR CONNECTION TO HOOD CONTROL PANEL
2. UNIT SHALL PROVIDE 100% OUTSIDE AIR AND MOTORIZED INLET DAMPER
3. PROVIDE WITH INTAKE HOOD AND FILTER RACK WITH 2" DISPOSABLE FILTERS
4. PROVIDE WITH ROOF CURB
5. PROVIDE WITH ALUMINUM MESH WEATHER HOOD
6. PROVIDE WITH DISCHARGE THERMOSTAT AND AND MODULATING STAINLESS STEEL HEAT EXCHANGER.
7. PROVIDE WITH FREEZE PROTECTION, DISCHARGE CONTROL WITH ROOM OVERRIDE
8. PROVIDE REMOTE CONTROL PANEL FOR CONTROL AND INTERLOCK TO COOKING HOOD
9. PROVIDE WITH GFI RECEPTACLE TO BE WIRED BY OTHERS

PLUMBING FIXTURE SCHEDULE

WC-1 (PH) (SEE GENERAL NOTES)
EXISTING WATER CLOSET, 3-BOLT WALL MOUNTED, REINSTALL WATER CLOSET & FLUSH VALVE AT PH HEIGHT, REWORK CARRIER, BOLTS, HEIGHT (WHERE REQUIRED FOR PH), REINSTALL EXISTING FLUSH VALVE

WC-2
EXISTING WATER CLOSET, 3-BOLT WALL MOUNTED, REINSTALL WATER CLOSET & FLUSH VALVE AT PH HEIGHT, REWORK CARRIER, BOLTS, REINSTALL EXISTING FLUSH VALVE

WC-3
NEW WATER CLOSET - AMERICAN STANDARD MODEL "MADERA" - 2234.001, 15" HIGH, SIPHON JET VITREOUS CHINA, ELONGATED BOWL. PROVIDE MANUAL FLUSH VALVE ZURN MODEL Z6000AV, ALL METAL, DUAL SEAL DIAPHRAGM, BEMIS SEAT MODEL 1955SSCT, WHITE OPEN FRONT, SELF-SUSTAINING HINGE.

UR-1
NEW URINAL AMERICAN STANDARD MODEL "WASHBROOK" 6590.001, WALL HUNG, VITREOUS CHINA, 3/4" TOP SPUD, WHITE, WASH OUT URINAL, INTEGRAL TRAP. PROVIDE WITH MANUAL FLUSH VALVE ZURN MODEL Z6003-WS1, ALL METAL, DUAL SEAL DIAPHRAGM, 1.0 GALLON FLUSH, STOP, VACUUM BREAKER, ETC. PROVIDE CARRIER & HANGERS FOR SUPPORT.

UR-2
NEW URINAL AMERICAN STANDARD MODEL "WASHBROOK" 6590.001, WALL HUNG, VITREOUS CHINA, 3/4" TOP SPUD, WHITE, WASH OUT URINAL, INTEGRAL TRAP. PROVIDE WITH MANUAL FLUSH VALVE ZURN MODEL Z6003-WS1, ALL METAL, DUAL SEAL DIAPHRAGM, 1.0 GALLON FLUSH, STOP, VACUUM BREAKER, ETC. REWORK EXISTING WALL SUPPORTS & SANITARY CONNECTION.

L-1
EXISTING LAVATORY AMERICAN STANDARD "LUCERNE" MODEL 0355.012, WALL MOUNTED, VITREOUS CHINA, 4" CENTERS. PROVIDE NEW AMERICAN STANDARD FAUCET MODEL 6114.116.002

L-2
EXISTING LAVATORY AMERICAN STANDARD "LUCERNE" MODEL 0355.012, WALL MOUNTED, VITREOUS CHINA, 4" CENTERS. EXISTING AMERICAN STANDARD FAUCET MODEL 6114.116.002. REINSTALL & PROVIDE WITH NEW STOPS, RISERES, TRAP, ETC. REWORK

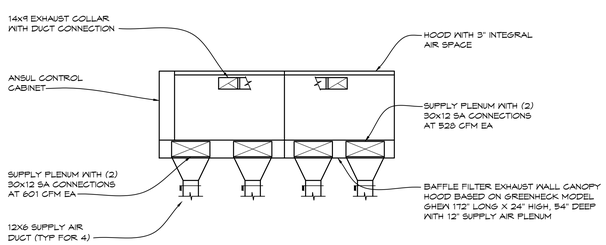
L-3
NEW LAVATORY AMERICAN STANDARD "LUCERNE" MODEL 0355.012, WALL MOUNTED, VITREOUS CHINA, 4" CENTERS. PROVIDE AMERICAN STANDARD FAUCET MODEL 6114.116.002, CHROME PLATED BRASS, CERAMIC DISC VALVE CARTRIDGE, LEAD FREE, HOT HIGH LIMIT, VANDAL-RESISTANT AERATOR, ASSE 1070 MIXING VALVE, OFFSET GRID STRAINER, CHROME PLATED P-TRAP, STOPS, ETC. REWORK SUPPORTS FOR NEW LAVATORY SUPPORTS

S-1
NEW SINGLE COMPARTMENT WALL MOUNTED SINK BY ADVANCE TABCO (OR EQUAL) MODEL FE-1-1812-18R, 18x18x12 BOWL, 18" DRAIN BOARD, 18 GAUGE 304 STAINLESS STEEL WITH BACK SPLASH, ROLLED EDGE, LEGS, ETC. PROVIDE WITH WRIST BLADE CHROME PLATED BRASS FAUCET, FOR MOUNTING AT 8" CNETERS ON BACK SPLASH AND JAY R SMITH PLASTER TRAP MODEL 811-T0150 (MOUNTED WITH ACCESS ABOVE TRAP).

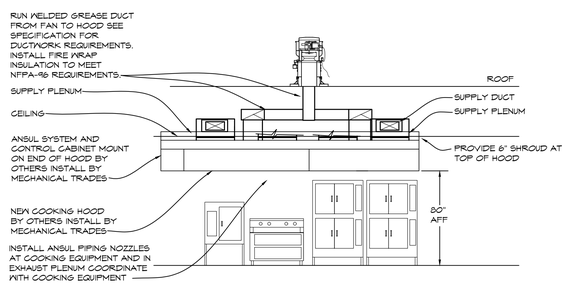
SEE PLUMBING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LISTED EQUIVALENT MANUFACTURES. PROVIDE NEW TRAPS, STOPS, RISERS, TAIL PIECES, ETC. FOR NEW AND EXISTING FIXTURES FOR COMPLETE PROJECT.

GENERAL MECHANICAL NOTES

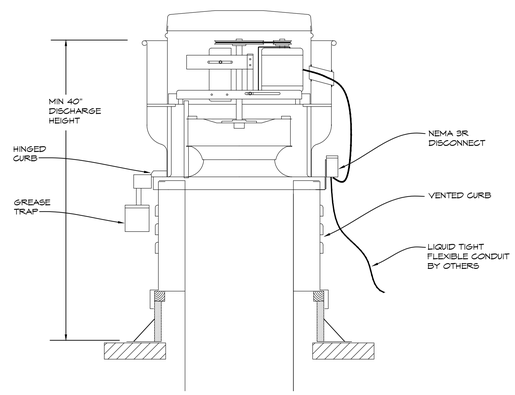
1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT



COOKING HOOD DETAIL
NO SCALE



COOKING HOOD ELEVATION
NO SCALE



COOKING HOOD EXHAUST FAN DETAIL
NO SCALE

PROJECT 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

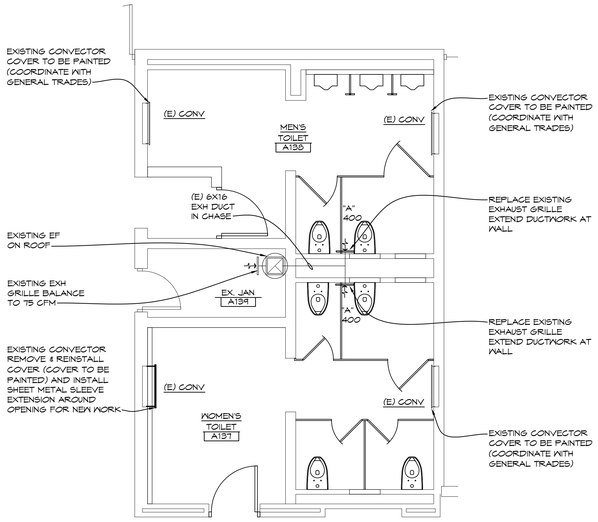
THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:
BULLOCK CREEK HIGH SCHOOL
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
MECHANICAL SCHEDULES

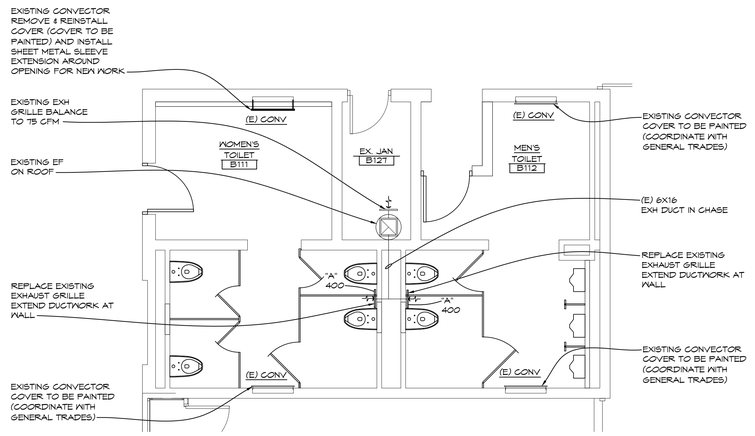
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. A-M001
	REVIEWED MLB	DRAWING NO. A-M001
	DATE OCT 19, 2026	SHEET NO. 8 OF 20
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC TIS A-M001 MECH 5
Plot date: 10/19/2026 11:09 AM



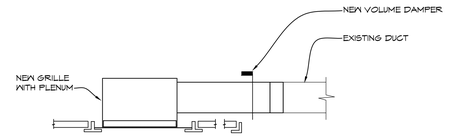
'A' WING TOILET ROOMS
ENLARGED MECHANICAL PLAN

1/4" = 1'-0" | X01



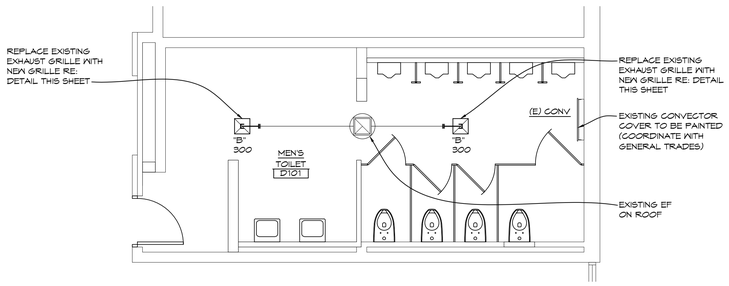
'B' WING TOILET ROOMS
ENLARGED MECHANICAL PLAN

1/4" = 1'-0" | X01



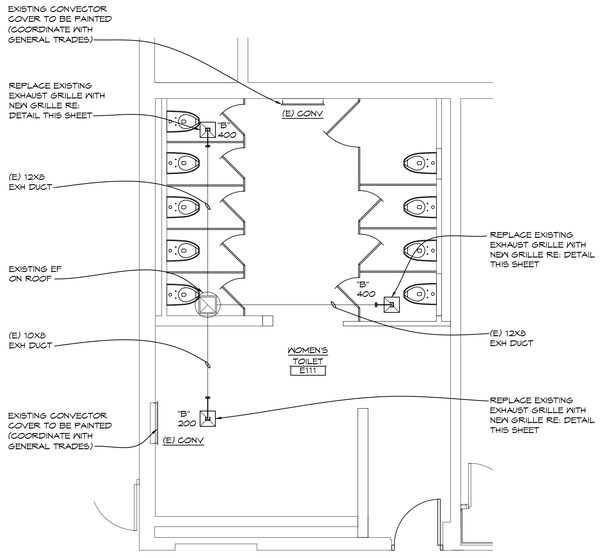
EXHAUST GRILLE
DETAIL

NO SCALE



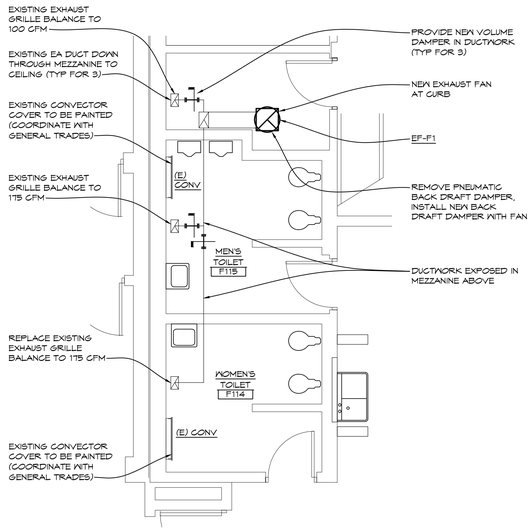
'D' WING TOILET ROOMS
ENLARGED MECHANICAL PLAN

1/4" = 1'-0" | X01



'E' WING TOILET ROOMS
ENLARGED MECHANICAL PLAN

1/4" = 1'-0" | X01



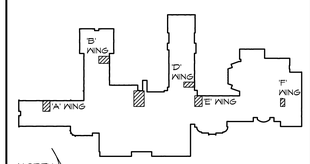
'F' WING TOILET ROOMS
ENLARGED MECHANICAL PLAN

1/4" = 1'-0" | X01

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT

PROJECT 'A'



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

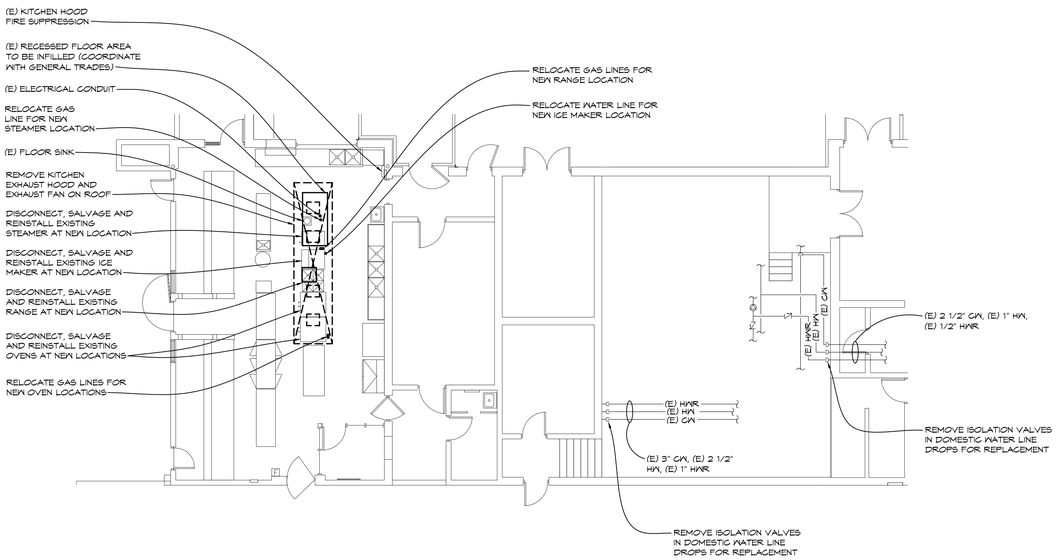
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

MECHANICAL TOILET ROOM ENLARGED PLUMBING PLANS

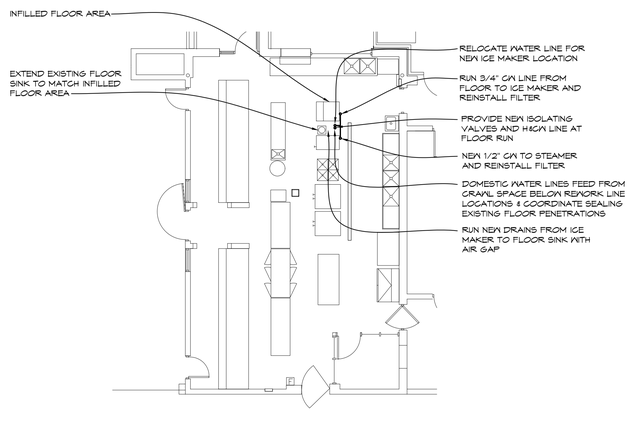
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. A-M101
	REVIEWED MLB	DRAWING NO. A-M101
	DATE OCT 19, 2026	SHEET NO. 9 OF 20
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD-BC'S\A-M101 ENLARG
Plot date: 10/19/2026 11:09 AM



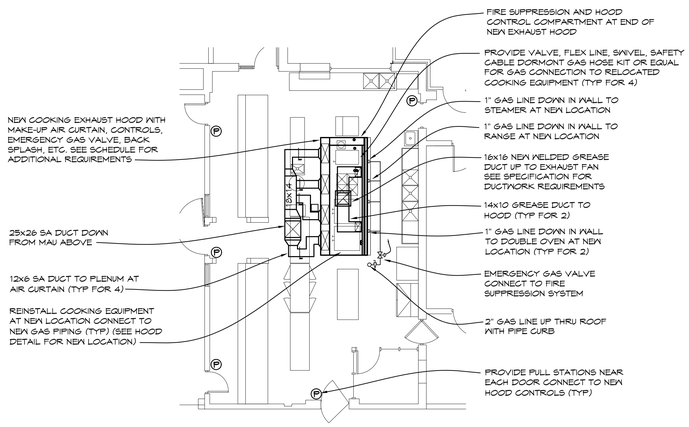
'C' WING PARTIAL DEMOLITION
MECHANICAL FLOOR PLAN

1/8" = 1'-0" | X01



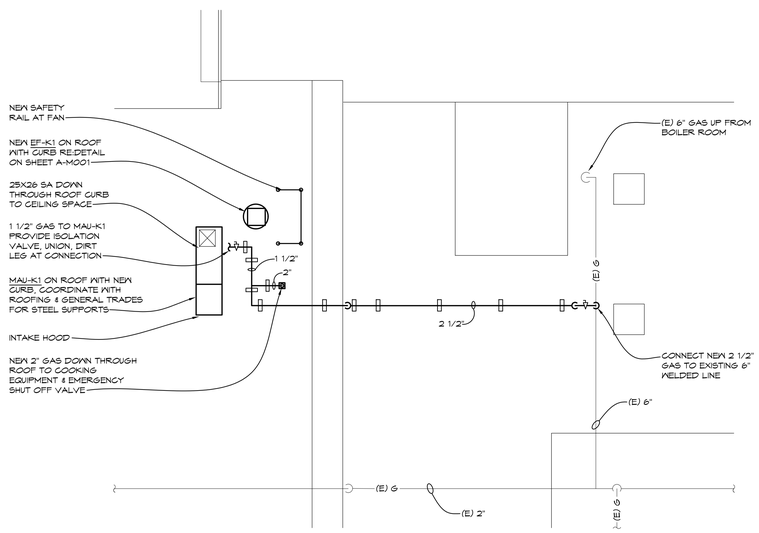
'C' WING PARTIAL
PLUMBING FLOOR PLAN

1/8" = 1'-0" | X01



'C' WING PARTIAL
MECHANICAL FLOOR PLAN

1/8" = 1'-0" | X01



'C' WING PARTIAL
MECHANICAL ROOF PLAN

1/8" = 1'-0" | X01

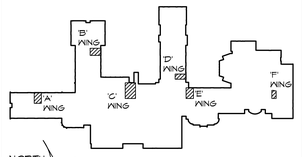
PLUMBING GENERAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING COLD WATER, HOT WATER AND SANITARY CONNECTIONS PRIOR TO ORDERING PLUMBING FIXTURES.
4. FIELD VERIFY ALL EXISTING PIPING AND ADJUST PIPING AS REQUIRED FOR NEW WORK.
5. ALL WORK SHALL BE SCHEDULE WITH SCHOOL ANY INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEK PRIOR TO REQUIRED WORK.
6. COORDINATE ALL WORK WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
9. CONTRACTOR FIELD VERIFY EXISTING PLUMBING AND REWORK CONNECTIONS FOR NEW WALLS. EXTEND PIPING AND WALL SUPPORTS FOR NEW CONNECTIONS
10. CONTRACTOR TO PROVIDE NEW STOPS, TRAP, RISERS, ETC, FOR NEW PLUMBING WORK.
11. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
12. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT

PROJECT 'A'



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

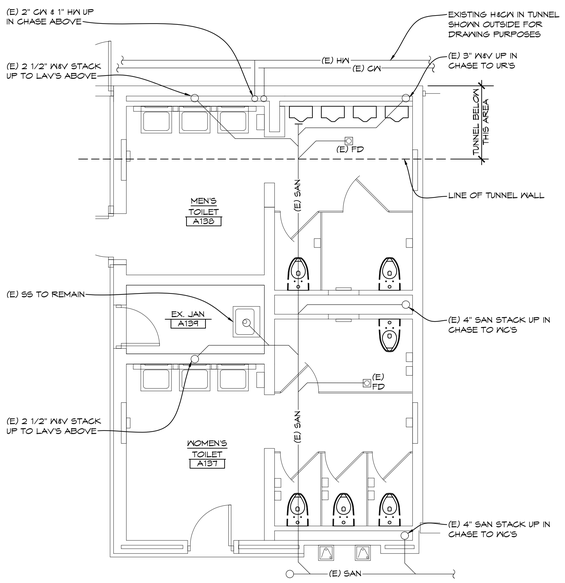
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

MECHANICAL ENLARGED FLOOR PLANS

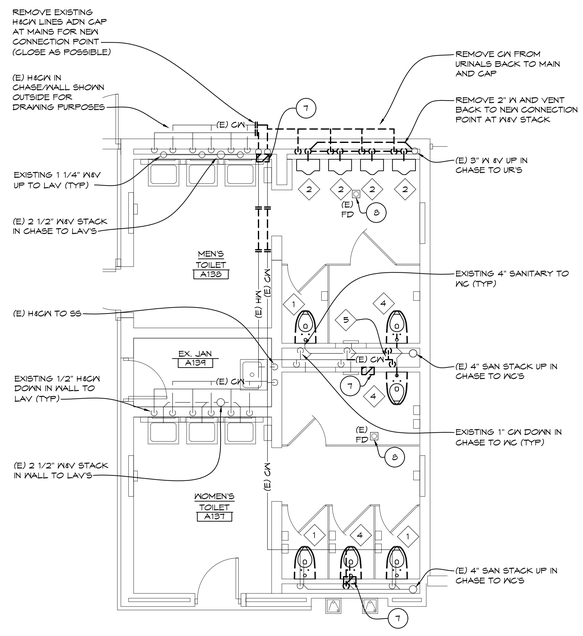
SEAL		
	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. A-ME102
	REVIEWED MLB	DRAWING NO. A-M102
	DATE OCT 19, 2026	SHEET NO. 10 OF 20
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS A-M102 ENLARGED FLOOR PLANS.dwg
Plot date: 10/19/2026 11:09 AM



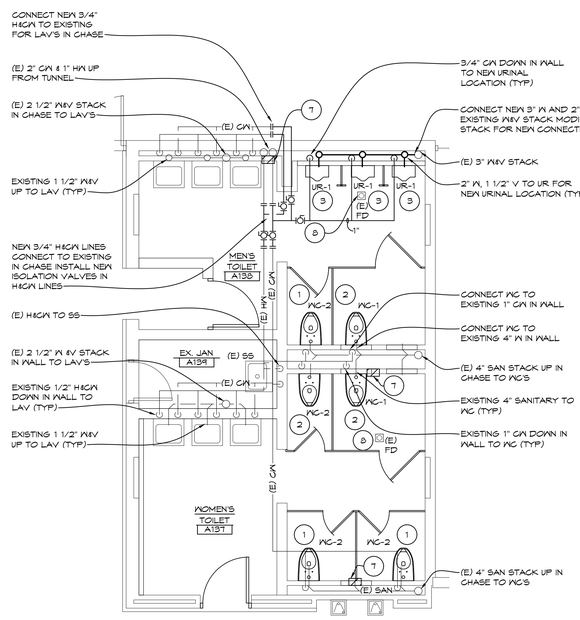
'A' WING TOILET ROOMS UNDER FLOOR PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



'A' WING TOILET ROOMS ABOVE FLOOR PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



'A' WING TOILET ROOMS ABOVE FLOOR ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01

KEYED PLUMBING DEMOLITION NOTES

1. REMOVE EXISTING WATER CLOSET & FLUSH VALVE FOR NEW WORK. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
2. REMOVE URINAL & FLUSH VALVE
3. REMOVE EXISTING LAVATORY, FAUCET, TRAP, ETC. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
4. REMOVE EXISTING WATER CLOSET & FLUSH VALVE. FIXTURE TO BE REINSTALLED AT NEW LOCATION. SEAL SANITARY & COLD WATER IN WALL. REMOVE ANY SUPPORTS, BOLTS, ETC. THAT PENETRATE OUT WALL & INTERFERE WITH NEW WORK.
5. REMOVE SECTION OF COLD WATER PIPING IN CHASE, CAP & PROVIDE NEW AIR CHAMBER. REMOVE BLOCK FOR WORK REQUIRED, COORDINATE WITH GENERAL TRADES.
6. REMOVE LAVATORY HW, GW, VENT, SANITARY, STOPS, ETC. LAVATORY TO BE REINSTALLED AT A NEW LOCATION
7. REMOVE EXISTING URINAL, FLUSH VALVE BACK TO NEW CONNECTION POINT FOR NEW URINAL
8. REMOVE EXISTING FLOOR MOUNTED WATER CLOSET & FLUSH VALVE FOR NEW WATER CLOSET
9. REMOVE EXISTING LAVATORY, FAUCET, RISER, TRAP, ETC. FOR NEW LAVATORY
10. REMOVE DRINKING FOUNTAIN & PIPING BACK TO NEW CONNECTION POINT AT NEW SINK

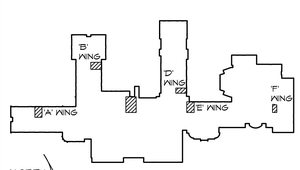
(E) KEYED PLUMBING NOTES

1. REINSTALL EXISTING WATER CLOSET AT EXISTING WATER CLOSET LOCATION (REMOVE & REINSTALL FOR NEW WORK) EXTEND BOLTS & SANITARY COUPLING. PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
2. INSTALL EXISTING WATER CLOSET AT ABANDONED WC LOCATION REMOVE CAP AND EXTEND BOLTS & SANITARY COUPLING AND PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
3. INSTALL NEW URINAL AT NEW LOCATION. PROVIDE NEW CARRIER, SUPPORTS, GW, WASTE & VENT CONNECTIONS. COORDINATE WITH NEW WALL.
4. INSTALL EXISTING LAVATORY AT EXISTING LAVATORY LOCATION, REMOVE & REINSTALL FOR NEW WORK. EXTEND SUPPORTS, HW, GW, WASTE & VENT CONNECTIONS, PROVIDE NEW STOPS, RISERS, TRAP & PIPING.
5. INSTALL EXISTING LAVATORY AT NEW LAVATORY LOCATION, CONNECT TO NEW H&CW, WBV, PROVIDE NEW CARRIER, SUPPORTS, STOPS, RISERS, TRAP & PIPING.
6. INSTALL NEW URINAL AT EXISTING LOCATION, PROVIDE NEW SUPPORT AND SANITARY CONNECTION RECONNECT EXISTING FLUSH VALVE TO EXISTING GW AT WALL.
7. OPEN EXISTING WALL FOR NEW PIPING WORK. COORDINATE WITH GENERAL TRADES FOR INFILL BELOW NEW WORK.
8. ADJUST/REPLACE STRAINER AT FLOOR DRAIN TO MATCH NEW FLOOR HEIGHT

PLUMBING GENERAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING COLD WATER, HOT WATER AND SANITARY CONNECTIONS PRIOR TO ORDERING PLUMBING FIXTURES.
4. FIELD VERIFY ALL EXISTING PIPING AND ADJUST PIPING AS REQUIRED FOR NEW WORK.
5. ALL WORK SHALL BE SCHEDULE WITH SCHOOL ANY INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEK PRIOR TO REQUIRED WORK.
6. COORDINATE ALL WORK WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
9. CONTRACTOR FIELD VERIFY EXISTING PLUMBING AND REWORK CONNECTIONS FOR NEW WALLS. EXTEND PIPING AND WALL SUPPORTS FOR NEW CONNECTIONS
10. CONTRACTOR TO PROVIDE NEW STOPS, TRAP, RISERS, ETC, FOR NEW PLUMBING WORK.
11. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
12. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH, CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'A'



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

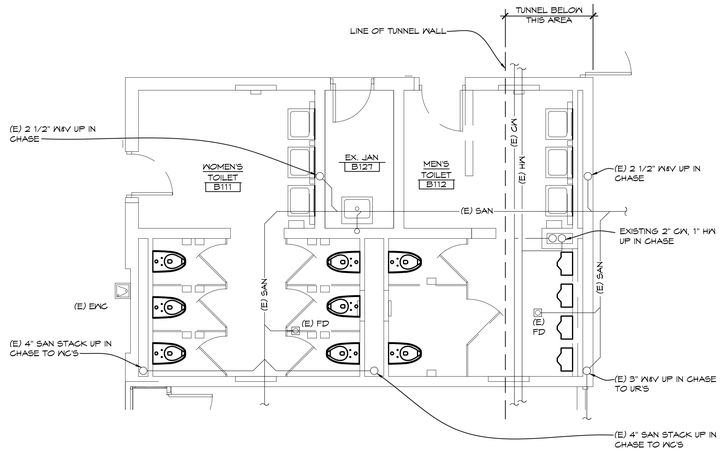
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

'A' WING ENLARGED TOILET ROOM PLUMBING PLANS

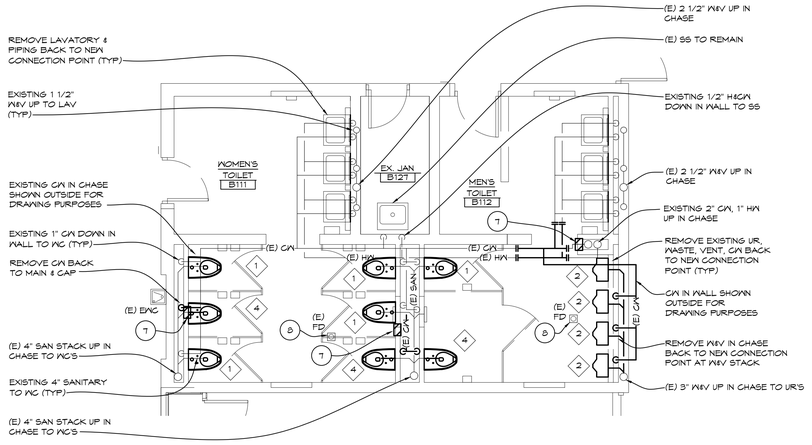
SEAL	DRAWN	PROJECT NO.
	CJV/KLS	26-210
	CHECKED KLS	CAD FILE NO. A-P101
	REVIEWED MLB	DRAWING NO. A-P101
	DATE OCT 19, 2026	SHEET NO. 11 OF 20
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS A-P101 'A' WING.dwg
Plot date: 10/19/2026 11:09 AM



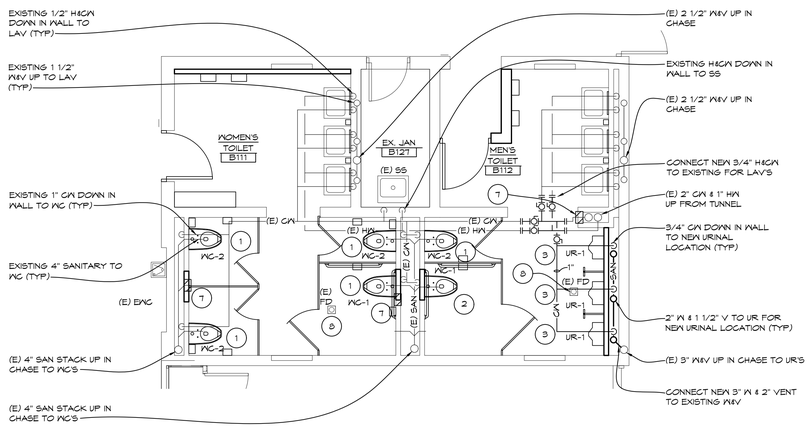
'B' WING TOILET ROOMS UNDER FLOOR
PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



'B' WING TOILET ROOMS ABOVE FLOOR
PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



'B' WING TOILET ROOMS ABOVE FLOOR
ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01

PLUMBING GENERAL NOTES

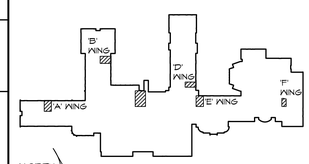
1. SEE ALL PLANS FOR REQUIRED WORK
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING COLD WATER, HOT WATER AND SANITARY CONNECTIONS PRIOR TO ORDERING PLUMBING FIXTURES.
4. FIELD VERIFY ALL EXISTING PIPING AND ADJUST PIPING AS REQUIRED FOR NEW WORK.
5. ALL WORK SHALL BE SCHEDULE WITH SCHOOL ANY INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEK PRIOR TO REQUIRED WORK.
6. COORDINATE ALL WORK WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
9. CONTRACTOR FIELD VERIFY EXISTING PLUMBING AND REWORK CONNECTIONS FOR NEW WALLS. EXTEND PIPING AND WALL SUPPORTS FOR NEW CONNECTIONS
10. CONTRACTOR TO PROVIDE NEW STOPS, TRAP, RISERS, ETC, FOR NEW PLUMBING WORK.
11. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
12. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH, CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

KEYED PLUMBING DEMOLITION NOTES

1. REMOVE EXISTING WATER CLOSET & FLUSH VALVE FOR NEW WORK, FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
2. REMOVE URINAL & FLUSH VALVE
3. REMOVE EXISTING LAVATORY, FAUCET, TRAP, ETC. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
4. REMOVE EXISTING WATER CLOSET & FLUSH VALVE. FIXTURE TO BE REINSTALLED AT NEW LOCATION, SEAL SANITARY & COLD WATER IN WALL. REMOVE ANY SUPPORTS, BOLTS, ETC. THAT PENETRATE OUT WALL & INTERFERE WITH NEW WORK.
5. REMOVE SECTION OF COLD WATER PIPING IN CHASE, CAP & PROVIDE NEW AIR CHAMBER. REMOVE BLOCK FOR WORK REQUIRED, COORDINATE WITH GENERAL TRADES.
6. REMOVE LAVATORY HW, CW, VENT, SANITARY, STOPS, ETC. LAVATORY TO BE REINSTALLED AT A NEW LOCATION
7. REMOVE EXISTING URINAL, FLUSH VALVE BACK TO NEW CONNECTION POINT FOR NEW URINAL
8. REMOVE EXISTING FLOOR MOUNTED WATER CLOSET & FLUSH VALVE FOR NEW WATER CLOSET
9. REMOVE EXISTING LAVATORY, FAUCET, RISER, TRAP, ETC. FOR NEW LAVATORY
10. REMOVE DRINKING FOUNTAIN & PIPING BACK TO NEW CONNECTION POINT AT NEW SINK

⑧ KEYED PLUMBING NOTES

1. REINSTALL EXISTING WATER CLOSET AT EXISTING WATER CLOSET LOCATION (REMOVE & REINSTALL FOR NEW WORK) EXTEND BOLTS & SANITARY COUPLING. PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
2. INSTALL EXISTING WATER CLOSET AT ABANDONED WC LOCATION REMOVE CAP AND EXTEND BOLTS & SANITARY COUPLING AND PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
3. INSTALL NEW URINAL AT NEW LOCATION. PROVIDE NEW CARRIER, SUPPORTS, CW, WASTE & VENT CONNECTIONS. COORDINATE WITH NEW WALL.
4. INSTALL EXISTING LAVATORY AT EXISTING LAVATORY LOCATION, REMOVE & REINSTALL FOR NEW WORK. EXTEND SUPPORTS, HW, CW, WASTE & VENT CONNECTIONS, PROVIDE NEW STOPS, RISERS, TRAP & PIPING.
5. INSTALL EXISTING LAVATORY AT NEW LAVATORY LOCATION. CONNECT TO NEW HCW, HW, PROVIDE NEW CARRIER, SUPPORTS, STOPS, RISERS, TRAP & PIPING.
6. INSTALL NEW URINAL AT EXISTING LOCATION. PROVIDE NEW SUPPORT AND SANITARY CONNECTION RECONNECT EXISTING FLUSH VALVE TO EXISTING CW AT WALL.
7. OPEN EXISTING WALL FOR NEW PIPING WORK. COORDINATE WITH GENERAL TRADES FOR INFILL BELOW NEW WORK.
8. ADJUST/REPLACE STRAINER AT FLOOR DRAIN TO MATCH NEW FLOOR HEIGHT



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

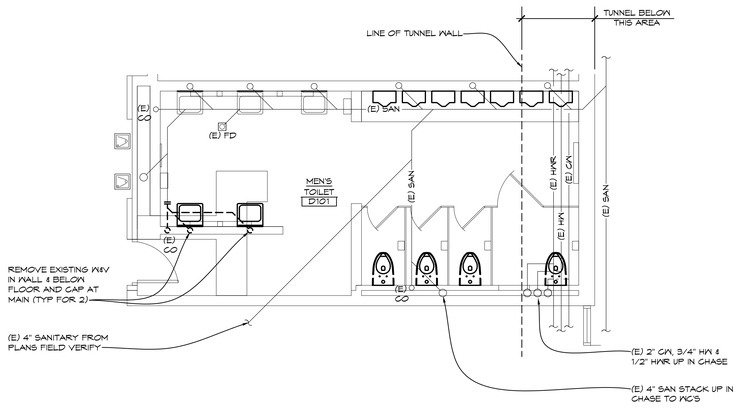
DRAWING TITLE

'B' WING ENLARGED TOILET ROOM PLUMBING PLANS

SEAL		
	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. A-P102
	REVIEWED MLB	DRAWING NO. A-P102
	DATE OCT 19, 2026	SHEET NO. 12 OF 20
	SCALE AS NOTED	

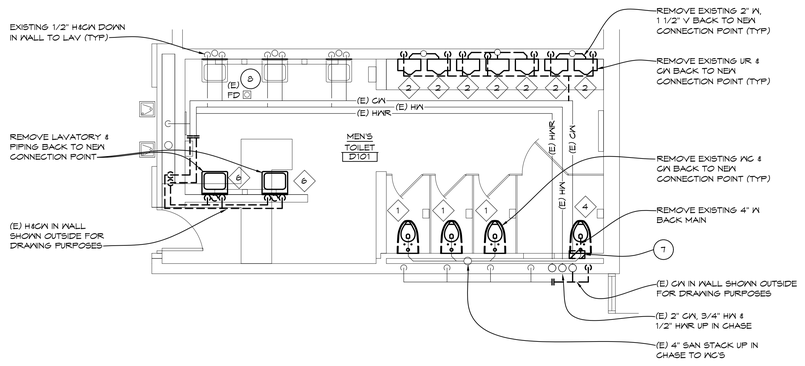
PROJECT 'A'

THA Architects Engineers - P:\Bullock Creek\26-210\2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-BD\BC 'BD'A-P102 'B' WING
Plot date: 10/19/2026 11:09 AM



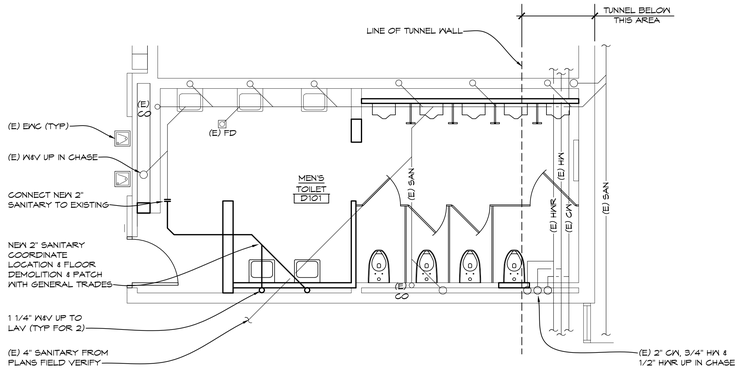
'D' WING TOILET ROOM UNDER FLOOR PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



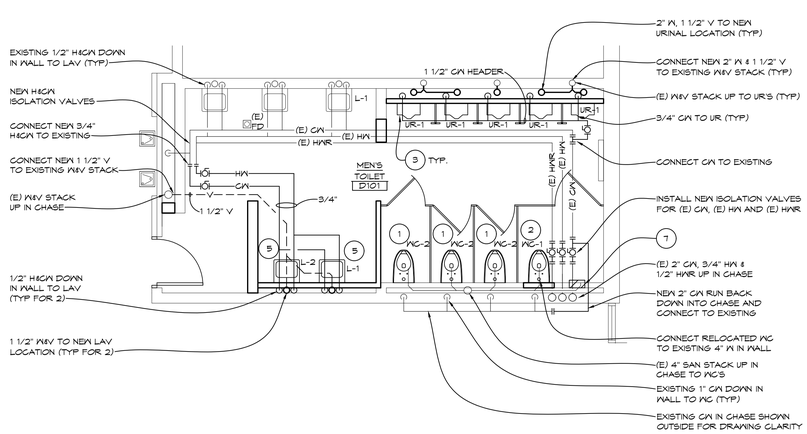
'D' WING TOILET ROOM ABOVE FLOOR PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



'D' WING TOILET ROOM UNDER FLOOR ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01



'D' WING TOILET ROOM ABOVE FLOOR ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01

KEYED PLUMBING DEMOLITION NOTES

1. REMOVE EXISTING WATER CLOSET & FLUSH VALVE FOR NEW WORK. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
2. REMOVE URINAL & FLUSH VALVE
3. REMOVE EXISTING LAVATORY, FAUCET, TRAP, ETC. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
4. REMOVE EXISTING WATER CLOSET & FLUSH VALVE. FIXTURE TO BE REINSTALLED AT NEW LOCATION. SEAL SANITARY & COLD WATER IN WALL. REMOVE ANY SUPPORTS, BOLTS, ETC. THAT PENETRATE OUT WALL & INTERFERE WITH NEW WORK.
5. REMOVE SECTION OF COLD WATER PIPING IN CHASE, CAP & PROVIDE NEW AIR CHAMBER. REMOVE BLOCK FOR WORK REQUIRED, COORDINATE WITH GENERAL TRADES.
6. REMOVE LAVATORY HW, CW, VENT, SANITARY, STOPS, ETC. LAVATORY TO BE REINSTALLED AT A NEW LOCATION
7. REMOVE EXISTING URINAL, FLUSH VALVE BACK TO NEW CONNECTION POINT FOR NEW URINAL
8. REMOVE EXISTING FLOOR MOUNTED WATER CLOSET & FLUSH VALVE FOR NEW WATER CLOSET
9. REMOVE EXISTING LAVATORY, FAUCET, RISER, TRAP, ETC. FOR NEW LAVATORY
10. REMOVE DRINKING FOUNTAIN & PIPING BACK TO NEW CONNECTION POINT AT NEW SINK

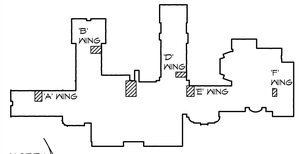
(E) KEYED PLUMBING NOTES

1. REINSTALL EXISTING WATER CLOSET AT EXISTING WATER CLOSET LOCATION (REMOVE & REINSTALL FOR NEW WORK) EXTEND BOLTS & SANITARY COUPLING. PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
2. INSTALL EXISTING WATER CLOSET AT ABANDONED WC LOCATION REMOVE CAP AND EXTEND BOLTS & SANITARY COUPLING AND PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
3. INSTALL NEW URINAL AT NEW LOCATION. PROVIDE NEW CARRIER, SUPPORTS, CW, WASTE & VENT CONNECTIONS. COORDINATE WITH NEW WALL.
4. INSTALL EXISTING LAVATORY AT EXISTING LAVATORY LOCATION, REMOVE & REINSTALL FOR NEW WORK. EXTEND SUPPORTS, HW, CW, WASTE & VENT CONNECTIONS, PROVIDE NEW STOPS, RISERS, TRAP & PIPING.
5. INSTALL EXISTING LAVATORY AT NEW LAVATORY LOCATION, CONNECT TO NEW HSCW, WSV, PROVIDE NEW CARRIER, SUPPORTS, STOPS, RISERS, TRAP & PIPING.
6. INSTALL NEW URINAL AT EXISTING LOCATION, PROVIDE NEW SUPPORT AND SANITARY CONNECTION RECONNECT EXISTING FLUSH VALVE TO EXISTING CW AT WALL.
7. OPEN EXISTING WALL FOR NEW PIPING WORK. COORDINATE WITH GENERAL TRADES FOR INFILL BELOW NEW WORK.
8. ADJUST/REPLACE STRAINER AT FLOOR DRAIN TO MATCH NEW FLOOR HEIGHT

PLUMBING GENERAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING COLD WATER, HOT WATER AND SANITARY CONNECTIONS PRIOR TO ORDERING PLUMBING FIXTURES.
4. FIELD VERIFY ALL EXISTING PIPING AND ADJUST PIPING AS REQUIRED FOR NEW WORK.
5. ALL WORK SHALL BE SCHEDULE WITH SCHOOL ANY INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEK PRIOR TO REQUIRED WORK.
6. COORDINATE ALL WORK WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
9. CONTRACTOR FIELD VERIFY EXISTING PLUMBING AND REWORK CONNECTIONS FOR NEW WALLS. EXTEND PIPING AND WALL SUPPORTS FOR NEW CONNECTIONS
10. CONTRACTOR TO PROVIDE NEW STOPS, TRAP, RISERS, ETC, FOR NEW PLUMBING WORK.
11. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
12. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'A'



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

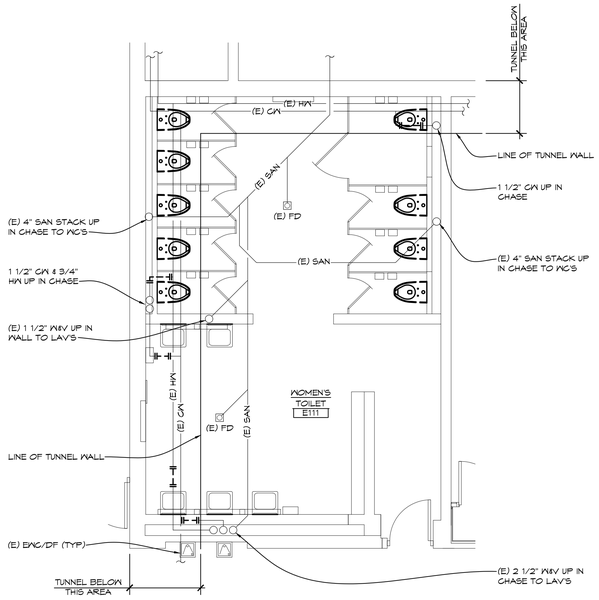
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

'D' WING ENLARGED TOILET ROOM PLUMBING PLANS

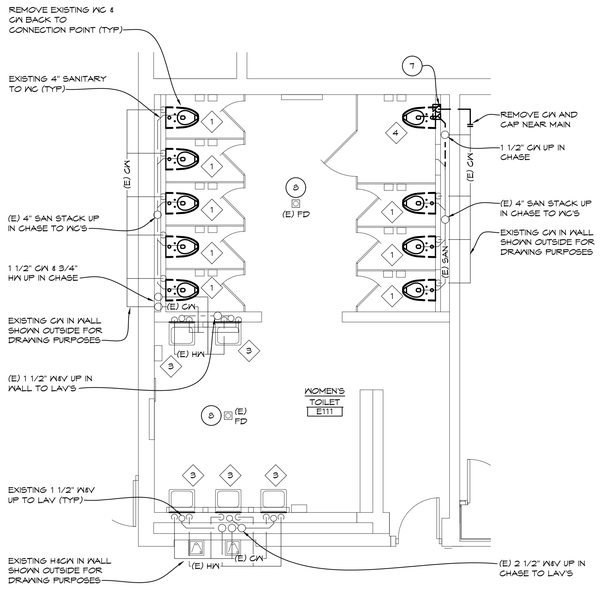
SEAL	DRAWN	PROJECT NO.
	CJV/KLS	26-210
	CHECKED KLS	CAD FILE NO. A-P103
	REVIEWED MLB	DRAWING NO. A-P103
	DATE OCT 19, 2026	SHEET NO. 13 OF 20
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS A-P103 'D' WING
Plot date: 10/19/2026 11:09 AM



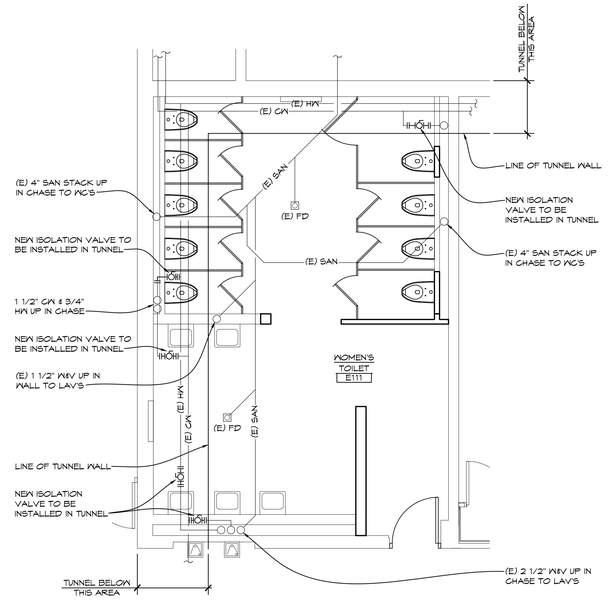
'E' WING TOILET ROOM UNDER FLOOR
PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



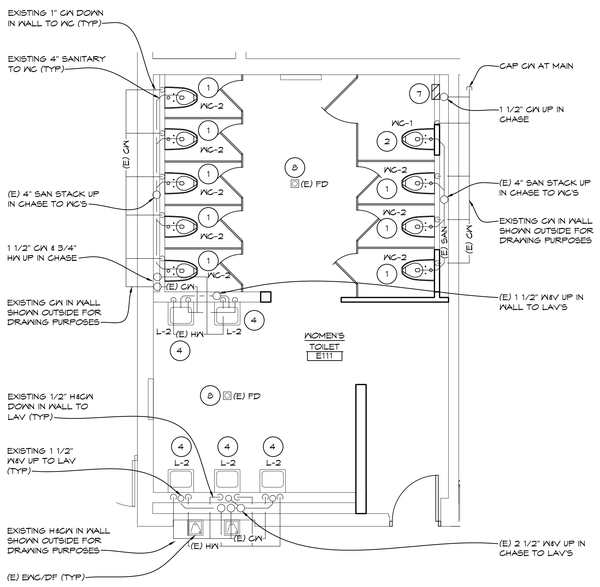
'E' WING TOILET ROOM ABOVE FLOOR
PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



'E' WING TOILET ROOM UNDER FLOOR
ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01



'E' WING TOILET ROOM ABOVE FLOOR
ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01

PLUMBING GENERAL NOTES

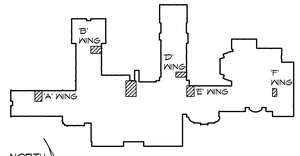
1. SEE ALL PLANS FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING COLD WATER, HOT WATER AND SANITARY CONNECTIONS PRIOR TO ORDERING PLUMBING FIXTURES.
4. FIELD VERIFY ALL EXISTING PIPING AND ADJUST PIPING AS REQUIRED FOR NEW WORK.
5. ALL WORK SHALL BE SCHEDULE WITH SCHOOL ANY INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEK PRIOR TO REQUIRED WORK.
6. COORDINATE ALL WORK WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. CONTRACTOR FIELD VERIFY EXISTING PLUMBING AND REWORK CONNECTIONS FOR NEW WALLS. EXTEND PIPING AND WALL SUPPORTS FOR NEW CONNECTIONS.
10. CONTRACTOR TO PROVIDE NEW STOPS, TRAP, RISERS, ETC, FOR NEW PLUMBING WORK.
11. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
12. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH, CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

KEYED PLUMBING DEMOLITION NOTES

1. REMOVE EXISTING WATER CLOSET & FLUSH VALVE FOR NEW WORK. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
2. REMOVE URINAL & FLUSH VALVE
3. REMOVE EXISTING LAVATORY, FAUCET, TRAP, ETC. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
4. REMOVE EXISTING WATER CLOSET & FLUSH VALVE. FIXTURE TO BE REINSTALLED AT NEW LOCATION. SEAL SANITARY & COLD WATER IN WALL. REMOVE ANY SUPPORTS, BOLTS, ETC. THAT PENETRATE OUT WALL & INTERFERE WITH NEW WORK.
5. REMOVE SECTION OF COLD WATER PIPING IN CHASE, CAP & PROVIDE NEW AIR CHAMBER. REMOVE BLOCK FOR WORK REQUIRED, COORDINATE WITH GENERAL TRADES.
6. REMOVE LAVATORY H/A, C/V, VENT, SANITARY, STOPS, ETC. LAVATORY TO BE REINSTALLED AT A NEW LOCATION
7. REMOVE EXISTING URINAL, FLUSH VALVE BACK TO NEW CONNECTION POINT FOR NEW URINAL
8. REMOVE EXISTING FLOOR MOUNTED WATER CLOSET & FLUSH VALVE FOR NEW WATER CLOSET
9. REMOVE EXISTING LAVATORY, FAUCET, RISER, TRAP, ETC. FOR NEW LAVATORY
10. REMOVE DRINKING FOUNTAIN & PIPING BACK TO NEW CONNECTION POINT AT NEW SINK

(E) KEYED PLUMBING NOTES

1. REINSTALL EXISTING WATER CLOSET AT EXISTING WATER CLOSET LOCATION (REMOVE & REINSTALL FOR NEW WORK) EXTEND BOLTS & SANITARY COUPLING. PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
2. INSTALL EXISTING WATER CLOSET AT ABANDONED WC LOCATION REMOVE CAP AND EXTEND BOLTS & SANITARY COUPLING AND PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
3. INSTALL NEW URINAL AT NEW LOCATION. PROVIDE NEW CARRIER, SUPPORTS, C/V, WASTE & VENT CONNECTIONS. COORDINATE WITH NEW WALL.
4. INSTALL EXISTING LAVATORY AT EXISTING LAVATORY LOCATION, REMOVE & REINSTALL FOR NEW WORK. EXTEND SUPPORTS, H/A, C/V, WASTE & VENT CONNECTIONS, PROVIDE NEW STOPS, RISERS, TRAP & PIPING.
5. INSTALL EXISTING LAVATORY AT NEW LAVATORY LOCATION, CONNECT TO NEW H&C/V, WV, PROVIDE NEW CARRIER, SUPPORTS, STOPS, RISERS, TRAP & PIPING.
6. INSTALL NEW URINAL AT EXISTING LOCATION, PROVIDE NEW SUPPORT AND SANITARY CONNECTION RECONNECT EXISTING FLUSH VALVE TO EXISTING C/V AT WALL.
7. OPEN EXISTING WALL FOR NEW PIPING WORK. COORDINATE WITH GENERAL TRADES FOR INFILL BELOW NEW WORK.
8. ADJUST/REPLACE STRAINER AT FLOOR DRAIN TO MATCH NEW FLOOR HEIGHT



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

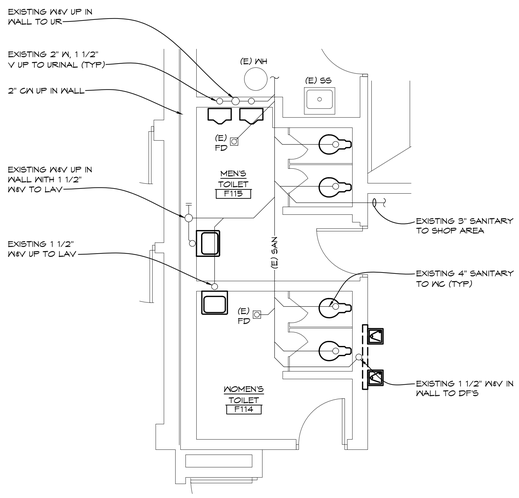
DRAWING TITLE

'E' WING ENLARGED TOILET ROOM PLUMBING PLANS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. A-P104
	REVIEWED MLB	DRAWING NO. A-P104
	DATE OCT 19, 2026	SHEET NO. 14 OF 20
	SCALE AS NOTED	

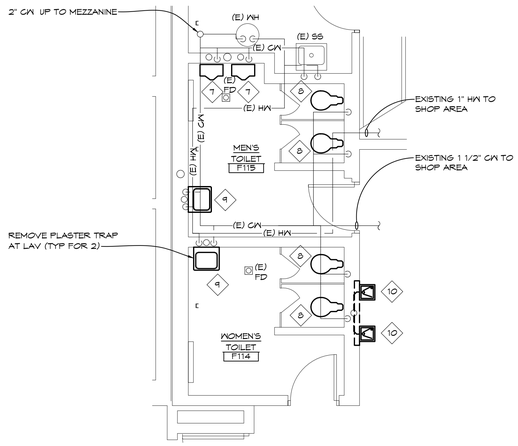
PROJECT 'A'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS A-P104 'E' WING.dwg
Plot date: 10/19/2026 11:09 AM



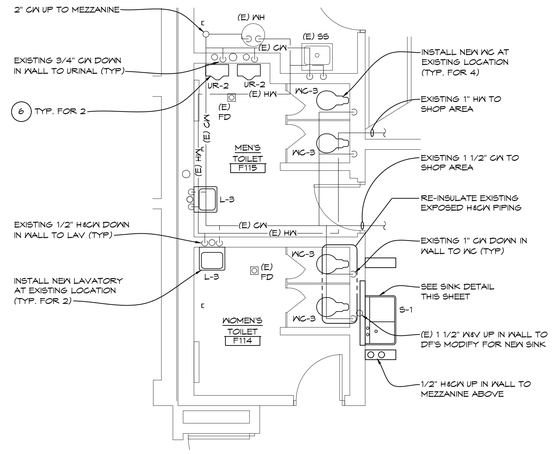
'F' WING TOILET ROOMS UNDER FLOOR
PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



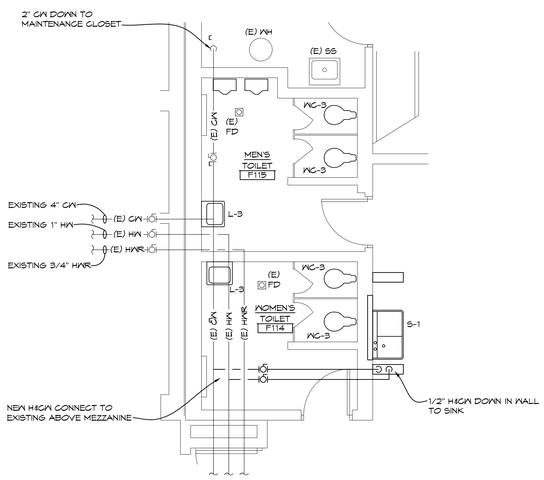
'F' WING TOILET ROOMS ABOVE FLOOR
PLUMBING DEMOLITION PLAN

1/4" = 1'-0" | X01



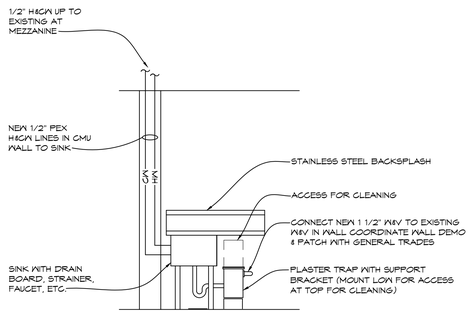
'F' WING TOILET ROOMS ABOVE FLOOR
ENLARGED PLUMBING PLAN

1/4" = 1'-0" | X01



'F' WING TOILET ROOMS ABOVE MEZZANINE
PLUMBING PLAN

1/4" = 1'-0" | X01



SINK DETAIL

NO SCALE

PLUMBING GENERAL NOTES

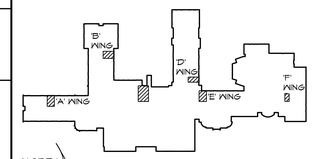
1. SEE ALL PLANS FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING COLD WATER, HOT WATER AND SANITARY CONNECTIONS PRIOR TO ORDERING PLUMBING FIXTURES.
4. FIELD VERIFY ALL EXISTING PIPING AND ADJUST PIPING AS REQUIRED FOR NEW WORK.
5. ALL WORK SHALL BE SCHEDULE WITH SCHOOL ANY INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEK PRIOR TO REQUIRED WORK.
6. COORDINATE ALL WORK WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. CONTRACTOR FIELD VERIFY EXISTING PLUMBING AND REWORK CONNECTIONS FOR NEW WALLS. EXTEND PIPING AND WALL SUPPORTS FOR NEW CONNECTIONS.
10. CONTRACTOR TO PROVIDE NEW STOPS, TRAP, RISERS, ETC, FOR NEW PLUMBING WORK.
11. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
12. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH, CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

KEYED PLUMBING DEMOLITION NOTES

1. REMOVE EXISTING WATER CLOSET & FLUSH VALVE FOR NEW WORK. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
2. REMOVE URINAL & FLUSH VALVE
3. REMOVE EXISTING LAVATORY, FAUCET, TRAP, ETC. FIXTURE TO BE REINSTALLED AT CURRENT LOCATION.
4. REMOVE EXISTING WATER CLOSET & FLUSH VALVE. FIXTURE TO BE REINSTALLED AT NEW LOCATION. SEAL SANITARY & COLD WATER IN WALL. REMOVE ANY SUPPORTS, BOLTS, ETC. THAT PENETRATE OUT WALL & INTERFERE WITH NEW WORK.
5. REMOVE SECTION OF COLD WATER PIPING IN CHASE, CAP & PROVIDE NEW AIR CHAMBER. REMOVE BLOCK FOR WORK REQUIRED, COORDINATE WITH GENERAL TRADES.
6. REMOVE LAVATORY H/W, C/W, VENT, SANITARY, STOPS, ETC. LAVATORY TO BE REINSTALLED AT A NEW LOCATION
7. REMOVE EXISTING URINAL, FLUSH VALVE BACK TO NEW CONNECTION POINT FOR NEW URINAL
8. REMOVE EXISTING FLOOR MOUNTED WATER CLOSET & FLUSH VALVE FOR NEW WATER CLOSET
9. REMOVE EXISTING LAVATORY, FAUCET, RISER, TRAP, ETC. FOR NEW LAVATORY
10. REMOVE DRINKING FOUNTAIN & PIPING BACK TO NEW CONNECTION POINT AT NEW SINK

(E) KEYED PLUMBING NOTES

1. REINSTALL EXISTING WATER CLOSET AT EXISTING WATER CLOSET LOCATION (REMOVE & REINSTALL FOR NEW WORK) EXTEND BOLTS & SANITARY COUPLING. PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
2. INSTALL EXISTING WATER CLOSET AT ABANDONED WC LOCATION REMOVE CAP AND EXTEND BOLTS & SANITARY COUPLING AND PROVIDE NEW GASKET, EXTEND WATER CONNECTION REINSTALL EXISTING FLUSH VALVE AND STOP AT WALL.
3. INSTALL NEW URINAL AT NEW LOCATION. PROVIDE NEW CARRIER, SUPPORTS, C/W, WASTE & VENT CONNECTIONS. COORDINATE WITH NEW WALL.
4. INSTALL EXISTING LAVATORY AT EXISTING LAVATORY LOCATION, REMOVE & REINSTALL FOR NEW WORK. EXTEND SUPPORTS, H/W, C/W, WASTE & VENT CONNECTIONS, PROVIDE NEW STOPS, RISERS, TRAP & PIPING.
5. INSTALL EXISTING LAVATORY AT NEW LAVATORY LOCATION, CONNECT TO NEW H&CW, WSV, PROVIDE NEW CARRIER, SUPPORTS, STOPS, RISERS, TRAP & PIPING.
6. INSTALL NEW URINAL AT EXISTING LOCATION, PROVIDE NEW SUPPORT AND SANITARY CONNECTION RECONNECT EXISTING FLUSH VALVE TO EXISTING C/W AT WALL.
7. OPEN EXISTING WALL FOR NEW PIPING WORK. COORDINATE WITH GENERAL TRADES FOR INFILL BELOW NEW WORK.
8. ADJUST/REPLACE STRAINER AT FLOOR DRAIN TO MATCH NEW FLOOR HEIGHT



KEY PLAN

NTS | KEYPLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

'F' WING ENLARGED TOILET ROOM PLUMBING PLANS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. A-P105
	REVIEWED MLB	DRAWING NO. A-P105
	DATE OCT 19, 2026	SHEET NO. 15 OF 20
	SCALE AS NOTED	

PROJECT 'A'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC HS A-P105 'F' WING.dwg
Plot date: 10/19/2026 11:09 AM

GENERAL NOTES:

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE, NEC AND ALL LOCAL CODES.
2. COORDINATE THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND CONNECTIONS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND EQUIPMENT DRAWINGS.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER, CONDUIT, CABLETRAY, AND OTHER COMPONENTS AS SHOWN ON THE EQUIPMENT PROVIDER DRAWINGS FOR INSTALLATION OF SYSTEM.
4. "BACK TO BACK" OR THROUGH THE WALL BOXES SHALL NOT BE USED.
5. INSTALL HANDLE LOCK-ON, ON ALL CIRCUIT BREAKERS CONTROLLING NIGHT LIGHT, EMERGENCY LIGHT AND EXIT LIGHT CIRCUITS.
6. ALL RECEPTACLES SHALL BE HARD USE, SPECIFICATION GRADE.
7. PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY APPLICABLE CODES.
8. RECEPTACLES INDICATED AS GROUND FAULT CIRCUIT INTERRUPTER TYPE SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, PER CODE OR PROVIDED WITH A GFCI BREAKER.
9. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM WIRES SHALL NOT BE USED.
10. MINIMUM CONDUIT SIZE SHALL BE 3/4" FOR POWER FEEDS AND 1" FOR DATA FEEDS.
11. FINAL CONNECTION TO ITEMS SUBJECT TO VIBRATION SHALL BE MADE WITH LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
12. 120/208V AC CIRCUIT WIRING FOR ANY ROOM OR AREA MAY BE GROUPED INTO RACEWAYS UNLESS SEPARATE RACEWAYS ARE REQUIRED BY THE NEC. COMPLY WITH NEC REQUIREMENTS FOR CONDUCTOR DERATING.
13. PROVIDE EQUIPMENT GROUNDING CONDUCTORS FOR ALL POWER AND LIGHTING CIRCUITS.
14. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM. ALL CONTROL CONDUCTORS SHALL BE 14 AWG MINIMUM OR AS SPECIFIED BY MANUFACTURER.
15. DEDICATED NEUTRAL SHALL BE PROVIDED FOR ALL CIRCUITS. SHARED NEUTRALS ARE NOT ALLOWED.
16. BASIS OF DESIGN IS FOR A COMPLETE ELECTRICAL SYSTEM, INSTALLED PER CODE REQUIREMENTS.
17. PROVIDE AN UNSWITCHED HOT TO ALL EMERGENCY BATTERY PACKS, LIGHTING INVERTERS AND EMERGENCY LIGHTING UNITS AHEAD OF AN LIGHTING CONTROLS FROM THE BRANCH CIRCUIT SERVING LIGHTING IN THE SURROUNDING AREA.

GENERAL DEMOLITION NOTES:

1. DEMOLITION NOTES ARE BASED UPON FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY EXACT CONDITIONS AT SITE AND REPORT DISCREPANCIES TO THE ARCHITECT/ENGINEER BEFORE DISTURBING THE INSTALLATION.
2. THE SCOPE OF REQUIRED DEMOLITION IS NOT LIMITED TO ITEMS OR WORK INDICATED ON THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR ACCEPTS EXISTING SITE CONDITIONS AT THE START OF DEMOLITION.
3. WHERE ELECTRICAL COMPONENT ARE SHOWN TO BE REMOVED, THE ELECTRICAL CONTRACTOR SHALL RECONNECT REMAINING COMPONENTS TO EXISTING CIRCUIT(S).
4. WHERE THE DRAWINGS SHOW DEVICES OR EQUIPMENT TO BE PERMANENTLY REMOVED, THE ELECTRICAL CONTRACTOR SHALL REMOVE CONDUCTORS BACK TO SOURCE. TURN BREAKER "OFF" AND LABEL THE BREAKER AS SPARE ON NEWLY PRINTED PANEL DIRECTORY.
5. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED CONDUIT. THE ELECTRICAL CONTRACTOR SHALL CUT CONDUIT FLUSH WITH WALLS AND FLOORS, UON. PATCH ALL SURFACES AND PROVIDE FIRESTOP WHERE REQUIRED.
6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF DAMAGE TO ALL ADJACENT CONSTRUCTION AND FINISHES. REPAIRS SHALL BE MADE TO RETURN SPACE TO ORIGINAL CONDITION PRIOR TO COMPLETION OF PROJECT.
7. EQUIPMENT AND DEVICES SHOWN AS DASHED ON THE DRAWING ARE TO BE REMOVED.
8. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ALL ELECTRICAL SYSTEMS IN WALLS, FLOORS AND CEILINGS SCHEDULED FOR REMOVAL, INCLUDING SPECIAL SYSTEMS.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN OPERATION OF EXISTING SYSTEMS DURING CONSTRUCTION. CONDITIONS SHALL BE RETURNED TO NORMAL AT THE CLOSE OF THE PROJECT.
10. CONTRACTOR SHALL MAINTAIN ALL POWER AND DATA CONDUIT AND WIRING SERVING AREAS NOT INCLUDED IN THE SCOPE OF WORK, UON. NOTIFY ARCHITECT/ENGINEER IF THESE DEVICES WILL IMPEDE UPON SCOPE OF WORK DURING RENOVATION TO RECEIVED DIRECTION ON RESOLUTION.
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE BLACK COVERS ON ALL JUNCTION BOXES WHERE DEVICE HAS BEEN REMOVED AND THE JUNCTION BOX IS TO REMAIN FOR FUTURE USE.
12. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL LAMPS AS REQUIRED AND DIRECTED IN THE LATEST STATE LAWS.
13. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL EQUIPMENT AND DEVICES REMOVED.
14. ALL DISRUPTIONS OF SERVICE SHALL BE COORDINATED AND APPROVED BY OWNER.

ABBREVIATIONS

A, AMP	AMPERES
AF	AMP FUSE OR AMP FRAME
AFC	AVAILABLE FAULT CURRENT (SYMMETRICAL)
A.F.F.	ABOVE FINISHED FLOOR
AIC.	AMPERE INTERRUPTING CAPACITY
AM.	AMMETER
ASYM.	ASYMMETRICAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CAP.	CAPACITY OR CAPACITOR
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT ,CCT	CIRCUIT
C.O.	CONDUIT ONLY
CONN.	CONNECT OR CONNECTION
CU	COPPER
DA	DURESS ALARM
DB	DOOR BELL
DISC.	DISCONNECT
DPST	DOUBLE POLE SINGLE THROW
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATOR OR ELEVATOR
EMERG, EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EMT	ELECTRICAL METAL TUBING
FIXT.	FIXTURE
FLA	FULL LOAD AMPERES
FLUOR.	FLUORESCENT
GRC,GCR	GALVANIZED RIGID CONDUIT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRD,GND,G	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ.	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
I.G.	ISOLATED GROUND
INCAND.	INCANDESCENT
JB	JUNCTION BOX
KAC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE, METAL HALIDE OR MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
N.C.	NORMALLY CLOSED
N.E.C.	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
NF	NON FUSIBLE
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OL	OVERLOADS
P	POLE
PB	PULLBOX
PH OR ø	PHASE
PNL	PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE
PWR.	POWER
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
SOL	SOLENOID
SPDT	SINGLE POLE DOUBLE THROW
SPKR	SPEAKER
SPST	SINGLE POLE SINGLE THROW
SW.	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TEL	TELEPHONE
XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BACKBOARD
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT AMPERES
VD	VOLTAGE DROP
VM	VOLT METER
W	WATTS OR WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XP	EXPLOSION PROOF

GENERAL

MOUNTING HEIGHTS TO BE AS INDICATED UON. MOUNTING HEIGHTS ARE TO CENTER OF DEVICE FROM FINISHED FLOOR OR GRADE UON. SEE SPECIFICATION 16010 FOR ADDITIONAL REQUIREMENTS

DEMO NOTE REFERENCE SYMBOL. DENOTES "SEE DEMO NOTE NO. #"

CONSTRUCTION NOTE REFERENCE SYMBOL. DENOTES "SEE CONSTRUCTION NOTE NO. #"

FOOT ON DEVICE INDICATES WALL MOUNTED

DEMOLITION AND REMODEL

EXISTING ELECTRICAL ITEM TO BE REMOVED

EXISTING ELECTRICAL ITEM TO BE REMOVED AND RELOCATED

EXISTING ELECTRICAL ITEM RELOCATED. NEW LOCATION

EXISTING ELECTRICAL ITEM TO REMAIN

EXISTING ELECTRICAL ITEM TO BE REMOVED AND PROVIDED WITH A BLANK COVERPLATE

EXISTING ELECTRICAL OR SYSTEMS CIRCUIT TO REMAIN

EXISTING ELECTRICAL CIRCUIT TO BE REMOVED SHOWN ONLY WHERE CLARIFICATION BETWEEN EXISTING TO REMAIN AND REMOVED ITEMS IS REQUIRED

CIRCUIT DESIGNATIONS

1LN1-1 — PANEL NAME / POLE NUMBERS

BRANCH CIRCUIT HOMERUN. PROVIDE PHASE, NEUTRAL AND GROUND CONDUCTORS FOR EACH INDICATED CIRCUIT OR MULTI WIRE BRANCH AS REQUIRED. PROVIDE SWITCH LEGS FOR SWITCH CIRCUITING AS REQUIRED. PROVIDE EQUIPMENT GROUND WIRE IN ALL BRANCH CIRCUIT RACEWAYS/CIRCUITS. PROVIDE SEPARATE ISOLATED GROUND WIRE TO ALL ISOLATED GROUND DEVICES.

CONDUIT SIZE	MAX QUANTITY OF CONDUCTORS PER CONDUIT		
	CONDUCTOR SIZE		
	12	10	8
3/4 INCH	5 TO 8	5 TO 6	1 TO 3
1 INCH	9 TO 13	7 TO 11	4 TO 5
SEE SPECIFICATIONS FOR LIMITATIONS ON QUANTITY OF CURRENT CARRYING CONDUCTORS PER CONDUIT			

CONDUIT RISER UP

CONDUIT RISER DOWN

INDICATES CIRCUIT CONTINUATION

STUB INTO ACCESSIBLE CORRIDOR CEILING SPACE UNLESS OTHERWISE NOTED

CONDUIT SEAL FITTING FOR HAZARDOUS AREAS

CONDUIT SLEEVE

CAP END OF CONDUIT

CABLE OR CORD CONNECTED

LIGHTING

NOTE A: UPPER CASE ALPHANUMERIC SUBSCRIPT DENOTES FIXTURE TYPE. SEE SCHEDULE(S)

NOTE B: LOWER CASE LETTER SUBSCRIPT PROVIDED ADJACENT TO SWITCHING DEVICE AND ASSOCIATED LIGHT FIXTURE(S) WHERE REQUIRED FOR CLARIFICATION.

CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE

DIRECTIONAL AIMED FIXTURE AIM IN DIRECTION OF ARROW

WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE

LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE

WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE

UNDER CABINET/COUNTER LIGHT OUTLET OR STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE

LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO NORMAL SOURCE

EXIT LIGHT OUTLET WITH FIXTURE - SHADING INDICATES LOCATION OF FACE(S). ARROWS INDICATE DIRECTIONAL ARROWS WHERE REQUIRED. WALL MOUNTED SIGNS AT +90" CENTERED ABOVE DOOR WHERE APPLICABLE

EMERGENCY LIGHT FIXTURE WITH INTEGRAL BATTERY SOURCE AND ADJUSTABLE HEADS

TRACK LIGHT OUTLET WITH FIXTURE. TYPE INDICATED, QUANTITY AND LENGTH AS SHOWN OR SCHEDULED

PENDANT LIGHT FIXTURE CONNECTED TO NORMAL SOURCE

LIGHTING STANDARD POLE FIXTURE, PROVIDE QUANTITY OF HEADS AND ORIENTATION AS INDICATED

LIGHTING STANDARD WITH POST-TOP FIXTURE

BOLLARD FIXTURE

CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

PENDANT LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)

S — SWITCH AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE VARIOUS TYPES OF SWITCHES.

NO SUBSCRIPT - SINGLE POLE
2 — DOUBLE POLE
3 — THREE WAY
4 — FOUR WAY
D — LIGHTING DIMMER
P — PILOT LIGHT
L — LIGHTED HANDLE
K — KEY OPERATED
TE — MANUAL STARTER WITH THERMAL ELEMENT
XP — EXPLOSION PROOF
M — MOTOR RATED

LV — LOW VOLTAGE SWITCH

PC — PHOTOCELL

TC — TIME CLOCK AT +48"

OS — OCCUPANCY SENSOR WITH INTEGRAL SWITCH-WALL MOUNTED AT +48"

OS — OCCUPANCY SENSOR - CEILING MOUNTED

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPES OF OCCUPANCY SENSORS

NO SUBSCRIPT - COMBINATION INFRARED/ULTRASONIC SENSOR
I — INFRARED SENSOR
U — ULTRASONIC SENSOR

POWER AND DIAGRAMS

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" U.O.N.

NOTE B: RECEPTACLES LOCATED AT COUNTERS SHALL BE LOCATED 18" AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED U.O.N.

NOTE C: WHERE (AC) IS INDICATED NEXT TO RECPTACLES AT WORK COUNTER, RECEPTACLES SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

NOTE D: RECEPTACLES IN MECHANICAL AND ELECTRICAL SPACES SHALL BE MOUNTED AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE DIFFERENT TYPES OF RECEPTACLES

GF — GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE AT +42" IN TOILETS
ST — SAFETY TYPE RECEPTACLE
XP — EXPLOSION PROOF RECEPTACLE
IG — ISOLATED GROUND RECEPTACLE
WP — WEATHERPROOF
SW — TOP HALF OF DUPLEX RECEPTACLE SWITCHED
CL — CLOCK RECEPTACLE AT +84"
H — HORIZONTAL MOUNTING
U — RECEPTACLE SERVED BY UPS

20A, 125V, 2 POLE, 3 WIRE GROUNDING DUPLEX RECEPTACLE, NEMA 5-20R

20A, 125V, 2 POLE, 3 WIRE GROUNDING SINGLE RECEPTACLE, NEMA 5-20R

20A, 125V, 2 POLE, 3 WIRE GROUNDING DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R

PEDESTAL TYPE, FLOOR OR COUNTER MOUNTED RECEPTACLE RECEPTACLE TYPE AS INDICATED ABOVE

CEILING MOUNTED RECEPTACLE, TYPE AS INDICATED ABOVE

FB — FLUSH FLOOR BOX WITH RECEPTACLE, TYPE AS INDICATED ABOVE

COMBINATION POWER/COMMUNICATIONS FLOOR BOX, SEE COMMUNICATIONS PLAN FOR SYSTEMS DEVICE

PIGTAIL DENOTES CONNECTION TO LIGHT SWITCH, LIGHT FIXTURE OR FIXED EQUIPMENT

SPECIAL PURPOSE RECEPTACLE SUBSCRIPT DENOTES NEMA TYPE, REFER TO SPECIFICATIONS

JUNCTION BOX, 4 INCH SQUARE UNLESS OTHERWISE NOTED

PLUG-IN RECEPTACLE STRIP (LENGTH AS INDICATED)

TELECOMMUNICATIONS/POWER POLE

208 VOLT PANELBOARD AT +72" TO TOP

480 VOLT PANELBOARD AT +72" TO TOP

CABLE TRAY OR WIREWAY

SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/POLES.

FUSED SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSESIZE/POLES.

MAGNETIC MOTOR STARTER AT +54". CHARACTERISTICS AS INDICATED BY FRAME SIZE/POLES/NEMA SIZE.

COMBINATION MAGNETIC MOTOR STARTER WITH DISCONNECT AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSE/POLES/NEMA SIZE

AFD — ADJUSTABLE FREQUENCY DRIVE

MAGNETIC CONTACTOR AT +54". AMPS/POLES/CONTACT VOLTS/ COIL VOLTS AS INDICATED.

SEPARATELY MOUNTED, ENCLOSED MOLDED CASE CIRCUIT BREAKER AT +48". FLUSH MOUNTED IN FINISHED AREAS. AMP/POLES AS INDICATED.

CIRCUIT BREAKER. AMP/POLES AS INDICATED

FUSE. SIZE AS INDICATED

FUSIBLE SWITCH. AMP/POLES/FUSE SIZE AS INDICATED

AUTOMATIC TRANSFER SWITCH +72" TO TOP OR FLOOR MOUNTED.

DISCONNECT STABS FOR DRAWOUT TYPE EQUIPMENT

TRANSFORMER

GROUND CONNECTION

MOTOR CONNECTION, HP AS INDICATED

G — GENERATOR

START-STOP PUSHBUTTON STATION AT +48"

GROUNDING SYSTEM TEST WELL

GROUNDING CONNECTION

GROUND BUS ON STANDOFFS

CONTROL PANEL: INTEGRAL PART OF, OR FURNISHED BY OTHER THAN DIVISION 16

EQUIPMENT OR TERMINAL CABINET AT +72" TO TOP

PS — POWER SUPPLY

PUSHBUTTON STATION AT +48"

FIRE DETECTION AND ALARM

FACP — CONTROL PANEL AT +72" TO TOP

FAA — FIRE ALARM ANNUNCIATOR PANEL AT +72" TO TOP

FIRE SUPPRESSION SYSTEM ABORT SWITCH STATION AT +48"

F — MANUAL STATION AT +48"

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF MANUAL STATIONS, FIRE SUPPRESSION SYSTEM CONTROL PANELS AND/OR ABORT SWITCHES

NO SUBSCRIPT - STANDARD FIRE ALARM PULL STATION

S — SMOKE DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF SMOKE DETECTORS

NO SUBSCRIPT - PHOTO ELECTRIC AREA BEAM

DUCT SMOKE DETECTOR

H — AUTOMATIC HEAT DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF HEAT DETECTORS

NO SUBSCRIPT - FIXED TEMPERATURE (155 DEGREE U.O.N.)

R/F — COMBINATION RATE OF RISE FIXED TEMPERATURE (135 DEGREE U.O.N.)

XP — EXPLOSION PROOF, FIXED TEMPERATURE (135 DEGREE U.O.N.) CLASS 1, GROUP C

NOTE: WALL MOUNT VISUAL AND COMBINATION AUDIO/VISUAL NOTIFICATION APPLIANCES AT +80" AFF TO BOTTOM OF FACE PLATE U.O.N.

VISUAL NOTIFICATION APPLICANCE

WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE

WALL MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE

CEILING MOUNTED VISUAL NOTIFICATION APPLIANCE

CEILING MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE

MAGNETIC DOOR HOLDER/RELEASE. COORDINATE MOUNTING HEIGHT WITH DOOR MANUFACTURER.

PS — SPRINKLER OR STANDPIPE FLOW ALARM SWITCH CONNECTION

TS — VALVE TAMPER SWITCH

SV — SOLENOID VALVE FOR PREACTION SPRINKLER SYSTEM

AP — AIR PRESSURE MONITOR SWITCH FOR PRE-ACTION OR DRY PIPE SPRINKLER SYSTEM

FR — CEILING MOUNTED REMOTE ALARM INDICATOR

RFS — WALL MOUNTED REMOTE ALARM INDICATOR AND TEST STATION AT +48"

FIRE FIGHTERS TELEPHONE JACK AT +48"

FIRE FIGHTERS TELEPHONE HANDSET AT +48"

TELECOMMUNICATION

GENERAL NOTES

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" UON.

NOTE B: OUTLETS LOCATED AT COUNTERS SHALL BE LOCATED 18"AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED UON.

NOTE C: WHERE ASTERISK (*) IS INDICATED NEXT TO OUTLET AT WORK COUNTER, OUTLET SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

STANDARD TELECOMMUNICATIONS OUTLET - PROVIDE EXTRA DEEP DOUBLE GANG BOX WITH SINGLE GANG MUD RING AND 1-1/4" CONDUITS TO ABOVE FINISHED CEILING. PROVIDE PLASTIC BUSHING AT THE ENDS OF THE CONDUITS. DATA DEVICES AND WIRING PROVIDED BY OTHERS U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS (NON-STANDARD) TYPES OF OUTLETS

— 1ST NUMBER INDICATES QUANTITY OF DATA CABLES
2ND NUMBER INDICATES QUANTITY OF VOICE CABLES

B — BLANK (ROUGH-IN TO ACCESSABLE CEILING SPACE)
F — FIBER
W — WALL PHONE OUTLET AT +48"
C — CEILING PHONE OUTLET
P — PUBLIC TELEPHONE AT +44"
FL — PEDESTAL FLOOR FITTING

SECURITY

FIXED VIDEO SURVEILANCE CAMERA

PTZ — PAN/TILT/ZOOM VIDEO SURVEILANCE CAMERA

DOOR POSITION SWITCH

CONNECTION TO ELECTRIC OR PNEUMATIC DOOR LOCK

CR — CARD READER AT +48"

NOTE:
SYMBOLS SHOWN ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE A CHECK LIST OF DEVICES REQUIRED BY THE CONTRACT

PROJECT 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

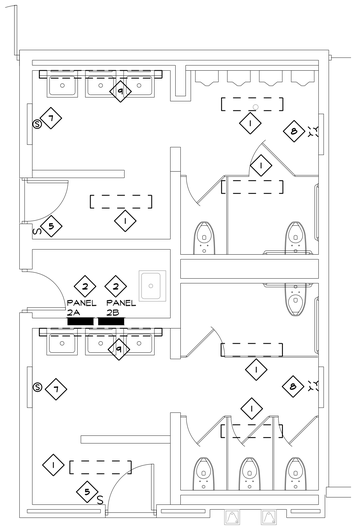
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

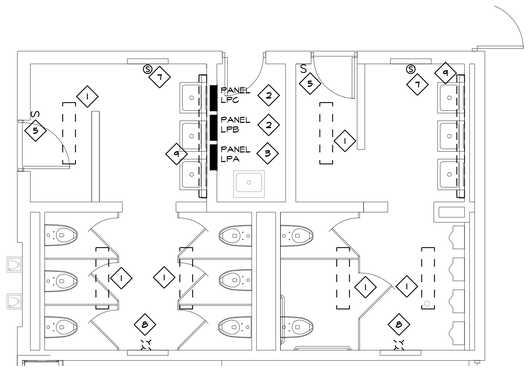
ELECTRICAL COVER SHEET

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RGH	CAD FILE NO. A-E000
	REVIEWED RGH	DRAWING NO. A-E000
	DATE OCT 19, 2026	SHEET NO. 16 OF 20
	SCALE AS NOTED	

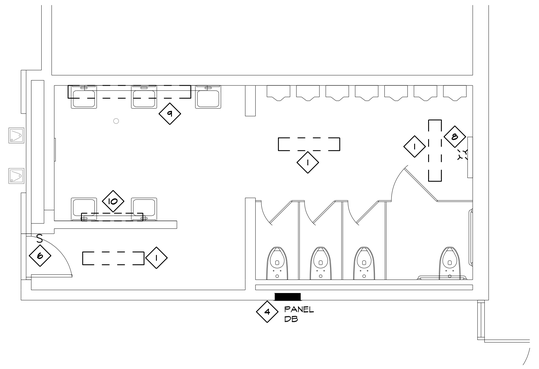
THA Architects Engineers - - - -
Plot date: 10/14/2026 3:27 PM



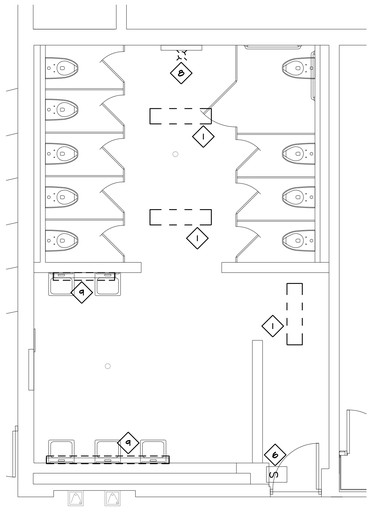
1 'A' WING TOILET ROOMS ENLARGED PLAN
1/4" = 1'-0" | X01



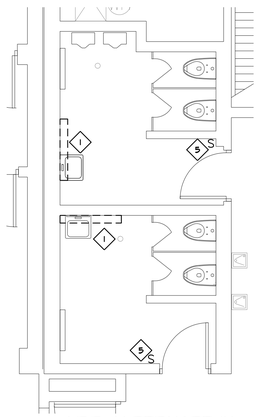
2 'B' WING TOILET ROOMS ENLARGED PLAN
1/4" = 1'-0" | X01



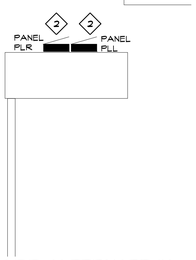
3 'D' WING TOILET ROOM ENLARGED PLAN
1/4" = 1'-0" | X01



4 'E' WING TOILET ROOM ENLARGED PLAN
1/4" = 1'-0" | X01



5 ADD ALTERNATE #1 'F' WING TOILET ROOMS ENLARGED PLAN
1/4" = 1'-0" | X01



6 ADD ALTERNATE #1 'F' WING SHOP ROOM ENLARGED PLAN
1/4" = 1'-0" | X01



NORTH KEY PLAN
1/64" = 1'-0" | X01

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURE . REMOVE ALL WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT FOR NEW LIGHT FIXTURES.
2. EXISTING PANEL TO REMAIN.
3. EXISTING PANEL TO REMAIN. DISCONNECT BRANCH CIRCUIT FROM POLE POSITION LPA-3 AND RETERMINATE TO POSITION LPA-1. DISCONNECT BRANCH CIRCUIT FROM POLE POSITION LPA-4 AND RETERMINATE TO POSITION LPA-2. BREAKERS IN LPA-3 AND LPA-4 TO REMAIN FOR FUTURE HAND DRYERS. SEE NEW PLANS.
4. EXISTING PANEL TO REMAIN. DISCONNECT BRANCH CIRCUIT FROM POLE POSITION DB-3 AND DB-5 AND RETERMINATE TO POSITION DB-1. DISCONNECT BRANCH CIRCUIT FROM POLE POSITION DB-4 AND DB-6 AND RETERMINATE TO POSITION DB-2. BREAKERS IN DB-3, DB-5, DB-4, AND DB-6 TO REMAIN FOR FUTURE HAND DRYERS. SEE NEW PLANS.
5. REMOVE SWITCH. MAINTAIN BOX FOR NEW SWITCH.
6. REMOVE SWITCH. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
7. REMOVE EXISTING SPEAKER AND TURN OVER TO OWNER.
8. REMOVE EXISTING WALL MOUNTED FIRE ALARM AS REQUIRED FOR NEW WALL TILE WORK. VERIFY LOCATION OF FIXTURE IN SPACE. FIXTURE TO BE REINSTALLED ON NEW TILE. REWORK WIRE MOLD AS REQUIRED FOR NEW INSTALLATION.
9. WALL MOUNTED FIXTURE TO BE REMOVED AND SALVAGED. FIXTURES TO BE REINSTALLED. SEE NEW PLANS FOR MORE INFORMATION.
10. WALL MOUNTED FIXTURE TO BE REMOVE AND SALVAGED. FIXTURE TO BE RELOCATED. SEE NEW PLANS FOR MORE INFORMATION.

PROJECT 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

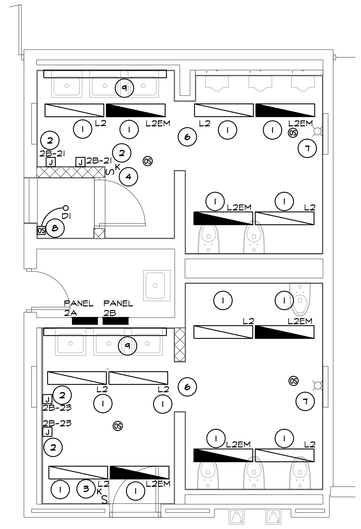
THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:
BULLOCK CREEK HIGH SCHOOL
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
TOILET ROOM ELECTRICAL DEMOLITION PLANS

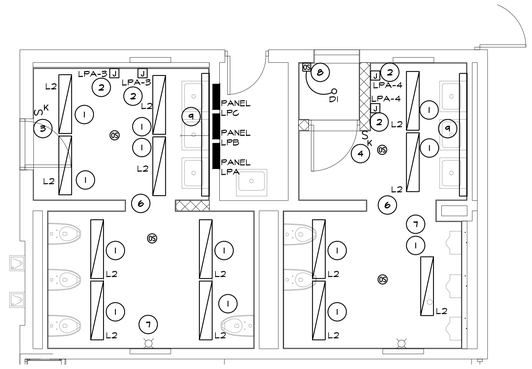
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. A-E101
	REVIEWED RCH	DRAWING NO. A-E101
	DATE OCT 19, 2026	SHEET NO. 17 OF 20
	SCALE AS NOTED	

THA Architects Engineers - ---
Plot date: 10/14/2026 3:27 PM



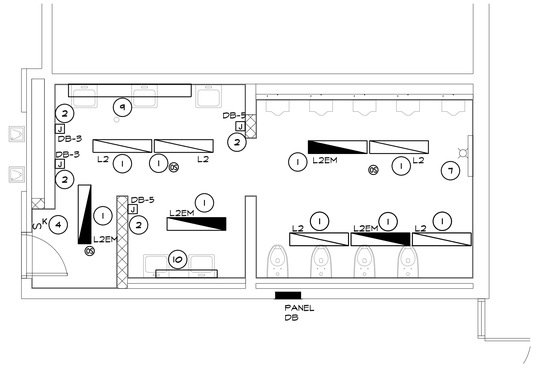
1 'A' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | X01



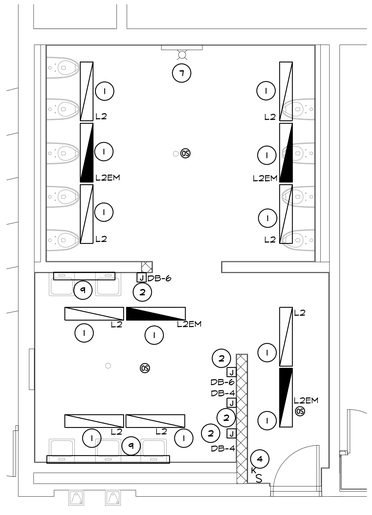
2 'B' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | X01



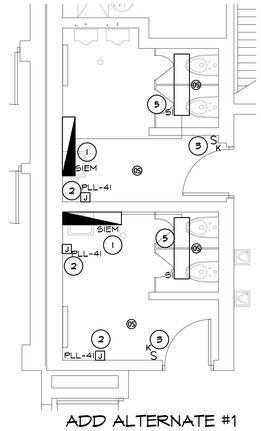
3 'D' WING TOILET ROOM ENLARGED PLAN

1/4" = 1'-0" | X01



4 'E' WING TOILET ROOM ENLARGED PLAN

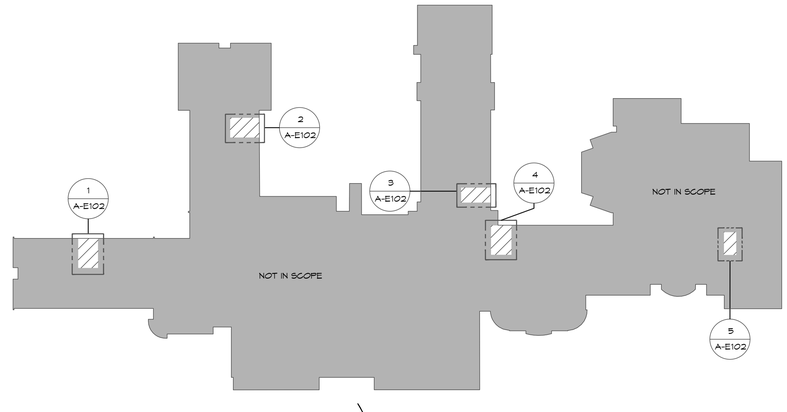
1/4" = 1'-0" | X01



ADD ALTERNATE #1

5 'F' WING TOILET ROOMS ENLARGED PLAN

1/4" = 1'-0" | X01



NORTH

KEY PLAN

1/64" = 1'-0" | X01

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHT FIXTURES FROM EXISTING CIRCUIT. EXTEND BRANCH CIRCUIT FROM JUNCTION BOX TO NEW LIGHT FIXTURES.
2. PROVIDE CONNECTION TO NEW HAND DRYER FROM CIRCUIT BREAKER AS SHOWN.
3. PROVIDE NEW KEYED SWITCH IN EXISTING BOX.
4. PROVIDE NEW SWITCH FOR CONTROLS TO SPACE.
5. EXTEND LIGHTING CIRCUIT AND CONTROLS TO NEW FIXTURE. SURFACE MOUNTED CONDUIT IS ACCEPTABLE FOR EXTENSION TO NEW FIXTURES.
6. NEW CEILING MOUNTED SPEAKER. EXTEND EXISTING SPEAKER WIRE AS NEED FOR NEW SPEAKER.
7. RE-INSTALL EXISTING FIRE ALARM. REWORK WIRE MOLD AS REQUIRED FOR NEW DEVICE.
8. PROVIDE NEW WALL OCCUPANCY SENSOR/SWITCH IN EXISTING BOX.
9. REINSTALL WALL MOUNTED FIXTURE IN SAME LOCATION AFTER OTHER WORK BY OTHER TRADES IS FINISHED. EXTEND WIRE, CONDUIT, AND NEW CONTROLS TO FIXTURE.
10. RELOCATED WALL MOUNTED FIXTURE. INSTALL AFTER OTHER WORK BY OTHER TRADES IS FINISHED. EXTEND WIRE, CONDUIT, AND CONTROLS TO NEW LOCATION.

PROJECT 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

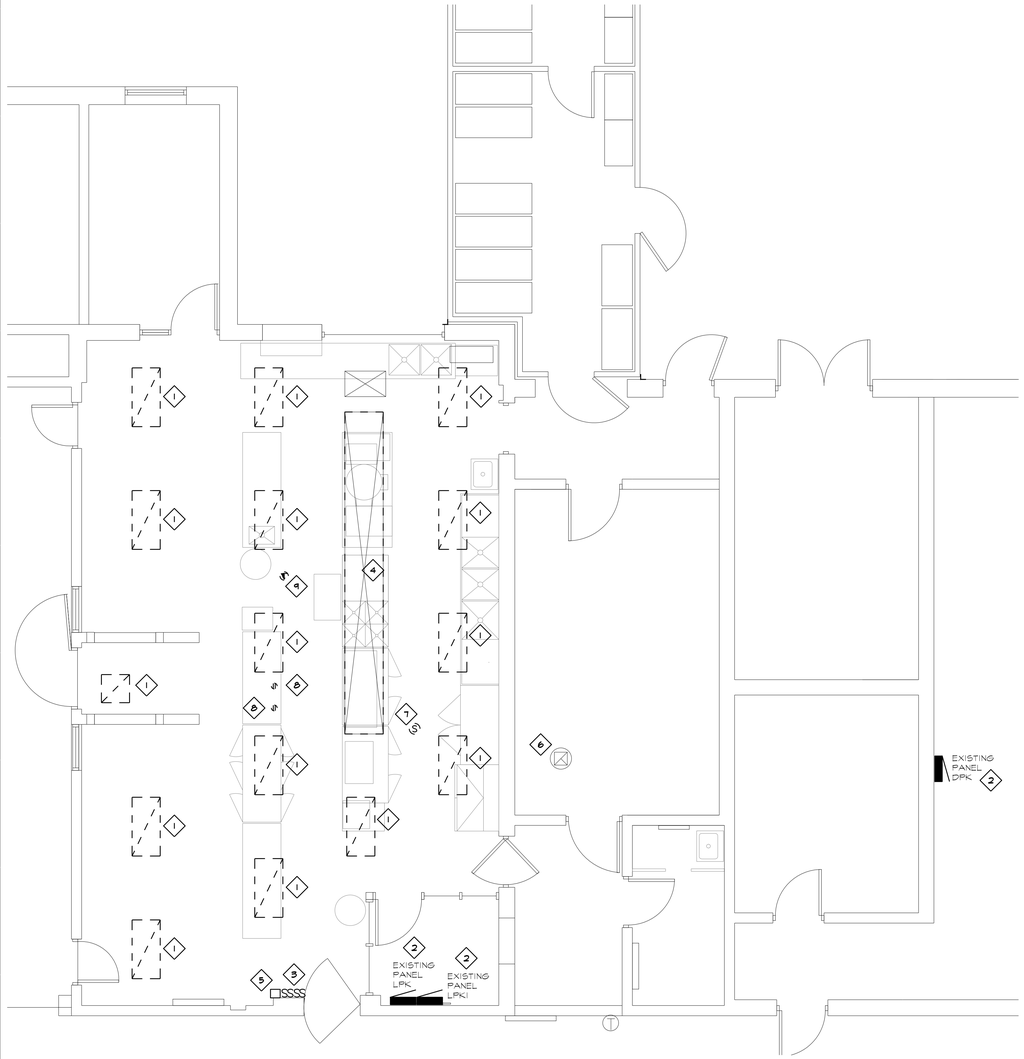
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

TOILET ROOM ELECTRICAL PLANS

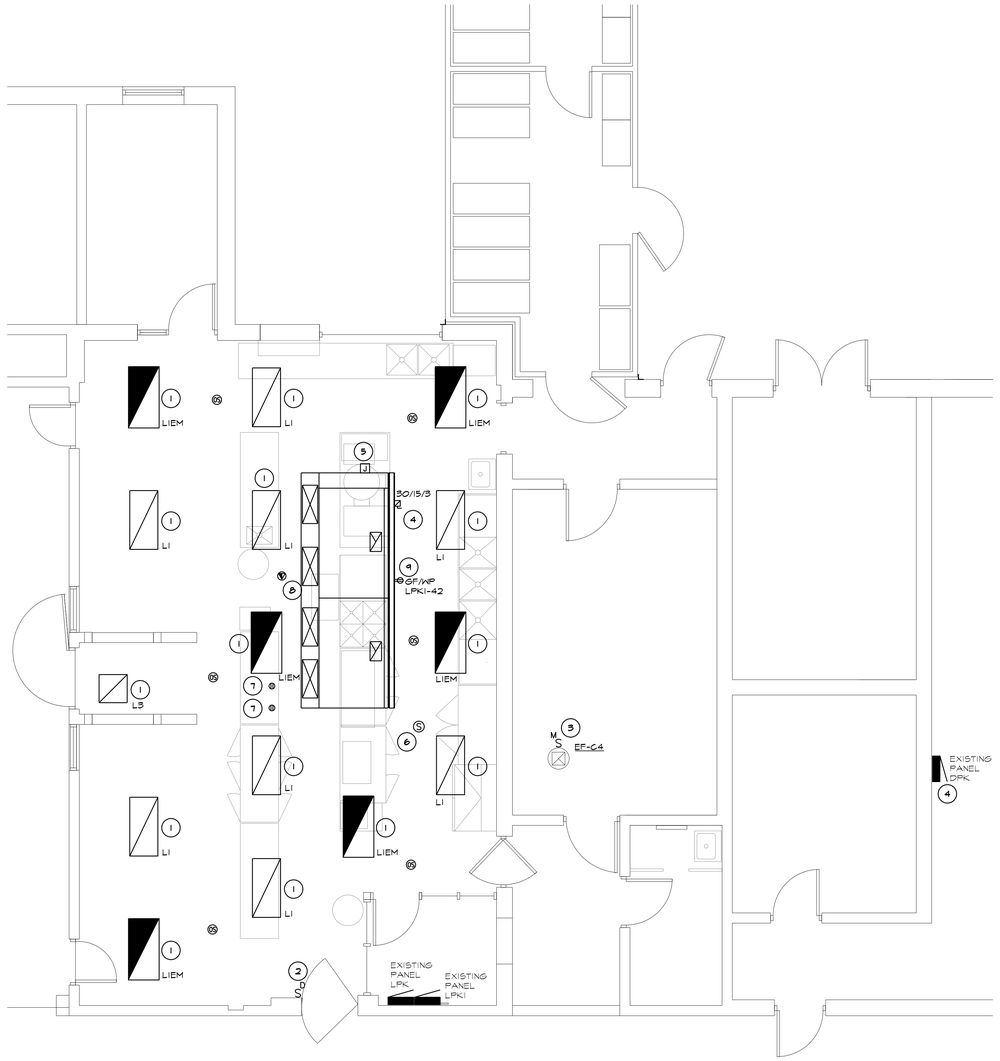
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. A-E102
	REVIEWED RCH	DRAWING NO. A-E102
	DATE OCT 19, 2026	SHEET NO. 18 OF 20
	SCALE AS NOTED	

THA Architects Engineers - ----
Plot date: 10/14/2026 3:27 PM



1 KITCHEN DEMOLITION ENLARGED PLAN

1/4" = 1'-0" | X01



2 KITCHEN ELECTRICAL ENLARGED PLAN

1/4" = 1'-0" | X01

DEMOLITION NOTES

1. REMOVE ALL LIGHTING IN SPACE. REMOVE ALL WIRE AND CONDUIT TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT FOR NEW LIGHT FIXTURES.
2. EXISTING PANEL TO REMAIN.
3. REMOVE SWITCHES. MAINTAIN EXISTING BOX IN WALL FOR NEW SWITCH. REMOVE WIRE FROM SWITCH TO NEAREST JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN CONDUIT FOR NEW WIRING TO EXISTING BOX.
4. HOOD SYSTEM TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
5. REMOVE HOOD SYSTEM LOCAL DISCONNECT. REMOVE WIRE AND CONDUIT BACK TO SOURCE. PROVIDE BLANK COVER PLATE.
6. EXHAUST FAN TO BE REPLACED ONE FOR ONE. PULL BACK EXISTING WIRE AND CONDUIT FOR INSTALLATION OF NEW EXHAUST FAN.
7. REMOVE FIRE ALARM DEVICE FOR REINSTALLATION. REMOVE ALL WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING WIRE AND CONDUIT FOR REINSTALLATION.
8. REMOVE CEILING MOUNTED RECEPTACLE FOR REINSTALLATION. REMOVE ALL WIRE AND CONDUIT TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT FOR REINSTALLATION.
9. REMOVE WIRELESS ACCESS POINT FOR REINSTALLATION. REMOVE ALL WIRE AND CONDUIT TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT FOR REINSTALLATION.

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHT FIXTURES FROM EXISTING CIRCUIT. EXTEND BRANCH CIRCUIT FROM JUNCTION BOX TO NEW LIGHT FIXTURES.
2. PROVIDE COVER PLATE FOR 1-GANG BOX WITH A SINGLE GANG SWITCH CENTERED IN EXISTING BOX FOR NEW SWITCH.
3. PROVIDE CONNECTION TO NEW EXHAUST FAN. EXTEND WIRE AND CONDUIT AS NEEDED FOR CONNECTION TO NEW EXHAUST FAN.
4. PROVIDE CONNECTION TO NEW HOOD/MUA. PROVIDE CONNECTION FROM EXISTING CIRCUIT BREAKER IN PANEL DPK. PROVIDE NEW 15 AMP FUSES FOR SWITCH.
5. PROVIDE CONNECTION TO HOOD CONTROLLER FROM EXISTING CIRCUIT FOR HOOD LIGHTS. EXTEND WIRE AND CONDUIT AS NEED FOR A COMPLETE INSTALLATION.
6. PROVIDE CONNECTION TO REINSTALLED FIRE ALARM DEVICE FROM EXISTING CIRCUIT. EXTEND BRANCH CIRCUIT FROM JUNCTION BOX TO REINSTALLED DEVICE.
7. PROVIDE CONNECTION TO REINSTALLED ELECTRICAL DEVICE FROM EXISTING CIRCUIT. EXTEND BRANCH CIRCUIT FROM JUNCTION BOX TO REINSTALLED DEVICE.
8. PROVIDE CONNECTION TO REINSTALLED WIRELESS ACCESS POINT. EXTEND WIRE AND CONDUIT FROM JUNCTION BOX TO REINSTALLED WIRELESS ACCESS POINT.
9. PROVIDE CONNECTION TO RECEPTACLE FROM BREAKER AS SHOWN. RECEPTACLE TO BE MOUNTED ON MECHANICAL UNIT LOCATED ON ROOF.
10. PROVIDE CONNECTION TO HOOD CONTROLLER FROM EXISTING CIRCUIT FOR HOOD LIGHTS. EXTEND WIRE AND CONDUIT AS NEED FOR A COMPLETE INSTALLATION.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:

BULLOCK CREEK HIGH SCHOOL

1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

KITCHEN ELECTRICAL PLANS

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. A-E103
	REVIEWED RCH	DRAWING NO. A-E103
	DATE OCT 19, 2026	SHEET NO. 19 OF 20
	SCALE AS NOTED	

THA Architects Engineers - ---
Plot date: 10/14/2026 3:27 PM

PANEL NAME: PLL
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** B WING JAN **MOUNTING:** RECESSED
BUS: 100A **MAIN:** MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 24570.00 **FED FROM:** MDP
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	EXISTING						20	1	1	A	2	1	20						EXISTING	2
3	EXISTING						20	1	3	B	4	1	20						EXISTING	4
5	EXISTING						20	1	5	C	6	1	20						EXISTING	6
7	EXISTING						20	1	7	A	8	1	20						EXISTING	8
9	EXISTING						20	1	9	B	10	1	20						EXISTING	10
11	EXISTING						20	1	11	C	12	1	20						EXISTING	12
13	EXISTING						20	1	13	A	14	1	20						EXISTING	14
15	EXISTING						20	1	15	B	16	1	20						EXISTING	16
17	EXISTING						20	1	17	C	18	1	20						EXISTING	18
19	EXISTING						20	1	19	A	20	1	20						EXISTING	20
21	EXISTING						20	1	21	B	22	1	20						EXISTING	22
23	EXISTING						20	1	23	C	24	1	20						EXISTING	24
25	EXISTING						20	1	25	A	26	1	20						EXISTING	26
27	EXISTING						20	1	27	B	28	1	20						EXISTING	28
29	EXISTING						20	1	29	C	30	1	20						EXISTING	30
31	EXISTING						20	1	31	A	32	1	20						EXISTING	32
33	EXISTING						20	1	33	B	34	1	20						EXISTING	34
35	EXISTING						20	1	35	C	36	1	20						EXISTING	36
37	EXISTING						20	1	37	A	38	1	20						EXISTING	38
39	EXISTING						20	1	39	B	40	1	20						EXISTING	40
41	NEW F WING HAND DRY ERS				1590		20	1	41	C	42	1	20						EXISTING	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	0.0	0.0	0.0	0.0
PHASE B CONNECTED KVA	0.0	0.0	0.0	0.0	0.0	0.0
PHASE C CONNECTED KVA	0.0	0.0	0.0	1.6	0.0	1.6
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	0.0	1.6	0.0	1.6	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	0.0	1.6	0.0	1.6	0.0	1.6	DEMAND KVA
							4.4	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							4.4	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: DB
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** D WING HALLWAY **MOUNTING:** RECESSED
BUS: 100A **MAIN:** MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 24570.00 **FED FROM:** MDP
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	EX. CIRC 1, 3, & 5 LOAD						20	1	1	A	2	1	20						EX. CIRC 2, 4, & 6 LOAD	2
3	BOY S NEW HAND DRY ERS				1080		20	1	3	B	4	1	20				1,080		GIRLS NEW HAND DRY ERS	4
5	BOY S NEW HAND DRY ERS				1080		20	1	5	C	6	1	20				1,080		GIRLS NEW HAND DRY ERS	6
7	EXISTING						20	1	7	A	8	1	20						EXISTING	8
9	EXISTING						20	1	9	B	10	1	20						EXISTING	10
11	EXISTING						20	1	11	C	12	1	20						EXISTING	12
13	EXISTING						20	1	13	A	14	1	20						EXISTING	14
15	EXISTING						20	1	15	B	16	1	20						EXISTING	16
17	EXISTING						20	1	17	C	18	1	20						EXISTING	18
19	EXISTING						20	1	19	A	20	1	20						EXISTING	20
21	EXISTING						20	1	21	B	22	1	20						EXISTING	22
23	EXISTING						20	1	23	C	24	1	20						EXISTING	24
25	EXISTING						20	1	25	A	26	1	20						EXISTING	26
27	EXISTING						20	1	27	B	28	1	20						EXISTING	28
29	EXISTING						20	1	29	C	30	1	20						EXISTING	30
31	EXISTING						20	1	31	A	32	1	20						EXISTING	32
33	EXISTING						20	1	33	B	34	1	20						EXISTING	34
35	EXISTING						20	1	35	C	36	1	20						EXISTING	36
37	EXISTING						20	1	37	A	38	1	20						EXISTING	38
39	EXISTING						20	1	39	B	40	1	20						EXISTING	40
41	EXISTING						20	1	41	C	42	1	20						EXISTING	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	0.0	0.0	0.0	0.0
PHASE B CONNECTED KVA	0.0	0.0	0.0	2.2	0.0	2.2
PHASE C CONNECTED KVA	0.0	0.0	0.0	2.2	0.0	2.2
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	0.0	4.3	0.0	4.3	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	0.0	4.3	0.0	4.3	0.0	4.3	DEMAND KVA
							12.0	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							12.0	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: LPA
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** B WING JAN **MOUNTING:** RECESSED
BUS: 100A **MAIN:** MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 24570.00 **FED FROM:** MDP
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	EX. CIRC 1 & 3 LOAD						20	1	1	A	2	1	20						EX. CIRC 2 & 4 LOAD	2
3	GIRLS NEW HAND DRY ERS				1080		20	1	3	B	4	1	20				1,080		BOY S NEW HAND DRY ERS	4
5	EXISTING						20	1	5	C	6	1	20						EXISTING	6
7	EXISTING						20	1	7	A	8	1	20						EXISTING	8
9	EXISTING						20	1	9	B	10	1	20						EXISTING	10
11	EXISTING						20	1	11	C	12	1	20						EXISTING	12
13	EXISTING						20	1	13	A	14	1	20						EXISTING	14
15	EXISTING						20	1	15	B	16	1	20						EXISTING	16
17	EXISTING						20	1	17	C	18	1	20						EXISTING	18
19	EXISTING						20	1	19	A	20	1	20						EXISTING	20
21	EXISTING						20	1	21	B	22	1	20						EXISTING	22
23	EXISTING						20	1	23	C	24	1	20						EXISTING	24
25	EXISTING						20	1	25	A	26	1	20						EXISTING	26
27	EXISTING						20	1	27	B	28	1	20						EXISTING	28
29	EXISTING						20	1	29	C	30	1	20						EXISTING	30
31	EXISTING						20	1	31	A	32	1	20						EXISTING	32
33	EXISTING						20	1	33	B	34	1	20						EXISTING	34
35	EXISTING						20	1	35	C	36	1	20						EXISTING	36
37	EXISTING						20	1	37	A	38	1	20						EXISTING	38
39	EXISTING						20	1	39	B	40	1	20						EXISTING	40
41	EXISTING						20	1	41	C	42	1	20						EXISTING	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	0.0	2.2	0.0	2.2
PHASE B CONNECTED KVA	0.0	0.0	0.0	2.2	0.0	2.2
PHASE C CONNECTED KVA	0.0	0.0	0.0	2.2	0.0	2.2
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	0.0	2.2	0.0	2.2	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	0.0	2.2	0.0	2.2	0.0	2.2	DEMAND KVA
							6.0	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							6.0	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: 2B
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** A WING JANITOR **MOUNTING:** RECESSED
BUS: 100A **MAIN:** MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 24570.00 **FED FROM:** MDP
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	EXISTING						20	1	1	A	2	1	20						EXISTING	2
3	EXISTING						20	1	3	B	4	1	20						EXISTING	4
5	EXISTING						20	1	5	C	6	1	20						EXISTING	6
7	EXISTING						20	1	7	A	8	1	20						EXISTING	8
9	EXISTING						20	1	9	B	10	1	20						EXISTING	10
11	EXISTING						20	1	11	C	12	1	20						EXISTING	12
13	EXISTING						20	1	13	A	14	1	20						EXISTING	14
15	EXISTING						20	1	15	B	16	1	20						EXISTING	16
17	EXISTING						20	1	17	C	18	1	20						EXISTING	18
19	EXISTING						20	1	19	A	20	1	20						EXISTING	20
21	BOY S NEW HAND DRY ERS				1080		20	1	21	B	22	1	20						EXISTING	22
23	GIRLS NEW HAND DRY ERS				1080		20	1	23	C	24	1	20						EXISTING	24
25	EXISTING						20	1	25	A	26	1	20						EXISTING	26
27	EXISTING						20	1	27	B	28	1	20						EXISTING	28
29	EXISTING						20	1	29	C	30	1	20						EXISTING	30
31	EXISTING						20	1	31	A	32	1	20						EXISTING	32
33	EXISTING						20	1	33	B	34	1	20						EXISTING	34
35	EXISTING						20	1	35	C	36	1	20						EXISTING	36
37	EXISTING						20	1	37	A	38	1	20						EXISTING	38
39	EXISTING						20	1	39	B	40	1	20						EXISTING	40
41	EXISTING						20	1	41	C	42	1	20						EXISTING	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	0.0	0.0	0.0	0.0
PHASE B CONNECTED KVA	0.0	0.0	0.0	1.1	0.0	1.1
PHASE C CONNECTED KVA	0.0	0.0	0.0	1.1	0.0	1.1
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

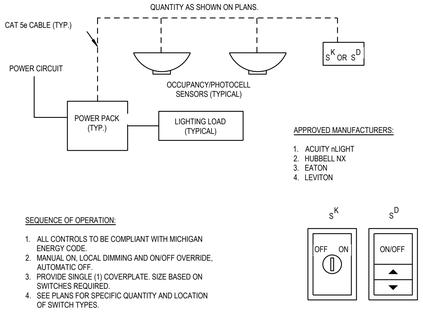
LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	0.0	2.2	0.0	2.2	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	0.0	2.2	0.0	2.2	0.0	2.2	DEMAND KVA
							6.0	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							6.0	MIN. OVERCURRENT DEVICE AMPS

LIGHTING FIXTURE SCHEDULE

General: Lighting fixtures as hereinafter specified are identified by type as noted on drawings. Fixture specifications are based on construction and performance. Manufacturer's catalogue numbers are of general nature and indicate level of quality required, but do not necessarily reflect complete options as specified. Approval shall be based on description and specification of fixture as well as catalogue number indicated. Provide appropriate trim for fixture based on ceiling

	DESCRIPTION	MANUFACTURER & CATALOG NO.	LAMPS QUANTITY AND WATTS FLUOR	LED	INC	BALLAST	MOUNTING	NOTES
D1	6" LED DOWN LIGHT. 1000 LUMENS, 4000K COLOR TEMPERATURE.	GOTHAM: EVO6-40/10-AR-LSS-MWD-MVOLT-GZ1		10W		DRIVER	RECESSED	
L1	2'X4' LED FLAT PANEL. 4000 LUMEN, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP. IP65 RATED.	LITHONIA: CPX-IP-2X4-4000LM-80CRI-40K-SWL-MIN10-MVOLT		37W		DRIVER	RECESSED	
L2	1'X4' LED FLAT PANEL. 3200 LUMEN, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CPX-1X4-3200LM-80CRI-40K-SWL-MIN10-MVOLT		30W		DRIVER	RECESSED	
L3	2'X2' LED FLAT PANEL. 3200 LUMEN, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP. IP65 RATED.	LITHONIA: CPX-IP-2X2-3200LM-80CRI-40K-SWL-MIN10-MVOLT		31W		DRIVER	RECESSED	
S1	SURFACE MOUNT 4' LED FIXTURE. 4000LUMEN, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: BLWP4-40L-SDPT-GZ1-LP840		35W		DRIVER	SURFACE	



APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
4. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.

2 TYPICAL LIGHTING CONTROLS
N.T.S XO1



BASIS OF DESIGN:
1. PROVIDE ACUITY #WSX-PDT

APPROVED ALTERNATES:
1. EATON
2. LEVITON
3. HUBBELL

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. MANUAL ON, ON/OFF OVERRIDE, AUTOMATIC OFF.
3. TOILETS AND STORAGE CLOSETS SHALL BE AUTOMATIC ON/OFF.

1 WALL OCC SENSOR SWITCH
N.T.S XO1

PROJECT 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'A' RENOVATIONS TO:
BULLOCK CREEK HIGH SCHOOL
1420 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
ELECTRICAL DETAILS AND SCHEDULES

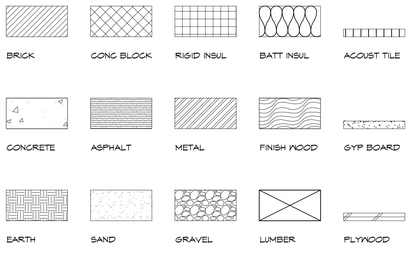
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. A-E601
	REVIEWED RCH	DRAWING NO. A-E601
	DATE OCT 19, 2026	SHEET NO. 20 OF 20
	SCALE AS NOTED	

THA Architects Engineers - ---
Plot date: 10/14/2026 3:24 PM

STANDARD ABBREVIATIONS

@	at
A/C	air conditioning
ACOUST	acoustical
AD	adjustable
AFF	above finish floor
ALT	alternate
ALUM	aluminum
ANCH	anchor, anchorage
ARCH	architect/architectural
BD	board
BIT	bituminous
BLDG	building
BLK	block
BLKG	blocking
BM	bench mark
BOTT	bottom
BRG	bearing
BSMT	basement
C/C	center to center
CAB	cabinet
CB	chalkboard/catch basin
CEM	cement
CER	ceramic
CF	cubic foot
CHWR	chilled water return
CHWS	chilled water supply
CI	cast iron
CJ	control joint
CLG	ceiling
CMU	concrete masonry unit
CO	clean out
COL	column
CONC	concrete
CONST	construction
CONT	continuous/continuing
CONTR	contract/contractor
CONV	convector
CRS	course(s)
CT	ceramic tile
CUH	cabinet unit ventilator
CW	domestic cold water
CY	cubic yard
°	degree
DET	detail
DF	drinking fountain
DIAG	diagonal
DIA or Ø	diameter
DIM	dimension
DIV	division
DP	dampproofing
DS	downspout
DWG	drawing
EA	each
EIFS	exterior insulation finish system (synthetic plaster)
ELEC	electric/electrical
EQ	equal
EQUIP	equipment
EWC	electric water cooler
EXIST	existing
EXH	exhaust
EXT	exterior
FA	fire alarm
FAI	fresh air intake
FD	floor drain
FE	fire extinguisher
FEC	fire extinguisher cabinet
FIN	finish(ed)
FL	floor(ing)
FOUND	foundation
FTR	fin tube radiation
FTG	footing
G	gas
GA	gage/gauge
GC	general contractor
GI	galvanized iron
GL	glass/glazing
GST	glazed structural tile
GALV	galvanized
HB	hose bibb
HDW	hardware
HM	hollow metal
HORIZ	horizontal
HGT	height
HTG	heating
HVAC	heating/ventilating/air conditioning
HW	domestic hot water
HWR	hot water heating return
HWS	hot water heating supply
HWR	domestic hot water return
ID	inside dimension
INT	interior
INV	invert
KO	knockout
LAM	laminate
LAV	lavatory
LH	left hand
LL	live load
LLH	long leg horizontal
LLV	long leg vertical
LTW	light weight
MB	markerboard
MAS	masonry
MAX	maximum
MECH	mechanic/mechanical
MET	metal
MH	manhole
MIN	minimum
MISC	miscellaneous
MO	masonry opening
MCJ	masonry control joint
MT	metal threshold
MULL	mullion
NIC	not in contract
NO	number
NOM	nominal
NRC	noise reduction coefficient
NTS	not to scale
O/O	out to out
OA	overall
OC	on center
OD	outside diameter
OPG	opening
OPP	opposite
PCF	pounds per cubic foot
PLAS	plaster
±	plus or minus
PLF	pounds per lineal foot
PSF	pounds per square foot
PSI	pounds per square inch
PART	partition
PVC	polyvinyl chloride
PMT	pavement
R	riser/radius
RA	return air
RD	roof drain
REF.	reference
REF	refrigerator
REINF	reinforce(d)/reinforcing
RES	resilient
REV	revision(s)/revised
RH	right hand
RM	room
RO	rough opening
ROW	right of way
RS	roof sump
RWC	rainwater conductor
SAN	sanitary
SD	storm drain
SECT	section
SHT	sheet
SIM	similar
SPEC	specification(s)
SQ	square
SS	service sink
SST	stainless steel
STL	steel
STD	standard
SUSP	suspended
SYM	symmetry/symmetrical
T&G	tongue/groove
T	tread
TB	tackboard
TEL	telephone
TERR	terrazzo
THR	threshold
TV	television
TYP	typical
UH	unit heater
UR	urinal
UV	unit ventilator
V	vent
VERT	vertical
W	width/wide
W/	with
WC	water closet
WD	wood
WH	water heater
WI	wrought iron
W/W	wall to wall
WWR	welded wire reinforcement

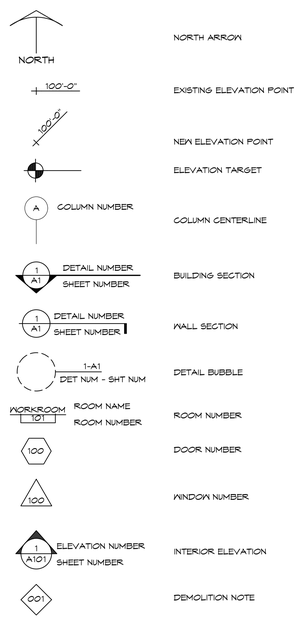
HATCHING PATTERN KEY



GENERAL NOTES

1. ANY PENETRATIONS OF CORRIDOR WALLS MUST MAINTAIN 1-HOUR FIRE RATING AND RESIST THE PASSAGE OF SMOKE

SYMBOLS KEY



DEVELOPMENT DATA

APPLICABLE CODES & ORDINANCES
- 2021 MICHIGAN REHABILITATION CODE
- 2021 MICHIGAN BUILDING CODE
- 2021 MICHIGAN MECHANICAL CODE
- 2021 MICHIGAN ENERGY CODE
- 2023 NATIONAL ELECTRICAL CODE (NEC)
- NFPA 101 LIFE SAFETY CODE 2012 AS ADOPTED BY MICHIGAN BUREAU OF FIRE SAFETY
- ICC A117.1 - 2009

BUILDING USE
- EXISTING: E, EDUCATION

BUILDING CONSTRUCTION TYPE
- EXISTING BUILDING TYPE II-B (0,0,0) NON-COMBUSTIBLE

BUILDING AREA
- EXISTING GROSS AREA = 74,085 SF

BUILDING OCCUPANCY
OCCUPANT LOAD: 840

TOTAL FIXTURE COUNT REQUIRED:

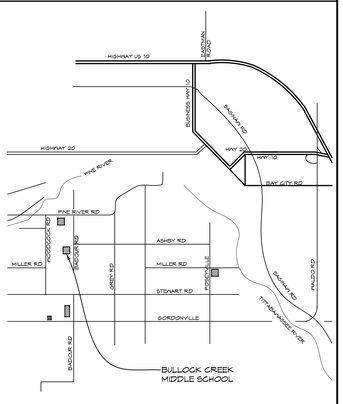
	UNI-SEX	MEN'S	WOMEN'S
TOILETS:	-	9	9
LAVATORIES:	-	9	9

TOTAL FIXTURE COUNT EXISTING:

	UNI-SEX	MEN'S	WOMEN'S
TOILETS (URINALS)	2	11(11)	18
LAVATORIES:	2	14	14

TOTAL FIXTURE COUNT PROPOSED:

	UNI-SEX	MEN'S	WOMEN'S
TOILETS (URINALS):	3	10(10)	18
LAVATORIES:	3	13	13



BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT #26-210

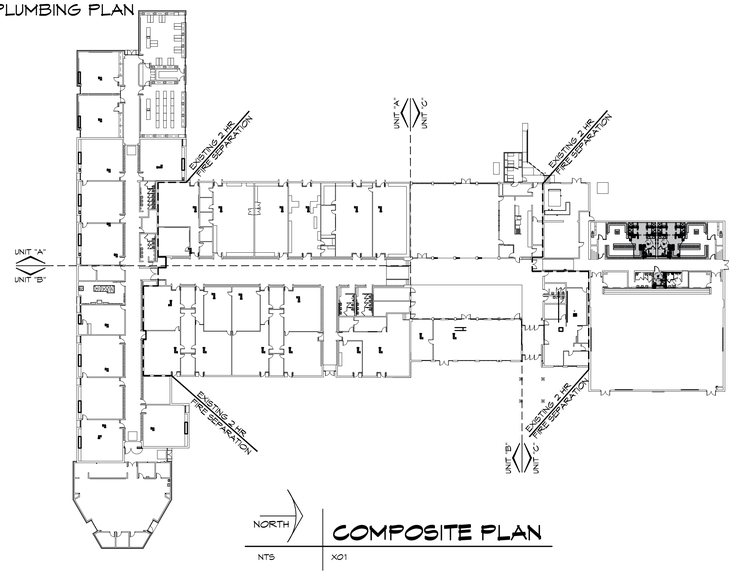
1420 SOUTH BADOUR ROAD MIDLAND MI 48640

PROJECT 'B'
RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL

664 SOUTH BADOUR ROAD MIDLAND MI 48640

INDEX OF DRAWINGS

B-G001	TITLE SHEET
B-A101	COMPOSITE DEMOLITION PLAN
B-A102	COMPOSITE DEMOLITION REFLECTED CEILING PLAN
B-A103	ENLARGED DEMOLITION PLANS
B-A104	COMPOSITE FLOOR PLAN
B-A105	COMPOSITE REFLECTED CEILING PLAN
B-A106	ROOF PLAN
B-A107	ENLARGED FLOOR PLANS
B-A401	INTERIOR ELEVATIONS
B-A601	ROOM FINISH SCHEDULE & DETAILS
B-M001	MECHANICAL SCHEDULES
B-M002	MECHANICAL SCHEDULES
B-M101	COMPOSITE MECHANICAL DEMOLITION PLAN
B-M102	COMPOSITE MECHANICAL ROOF DEMOLITION PLAN
B-M103	UNIT 'A' MECHANICAL FLOOR PLAN
B-M104	UNIT 'B' MECHANICAL FLOOR PLAN
B-M105	UNIT 'C' MECHANICAL FLOOR PLAN
B-M106	COMPOSITE MECHANICAL ROOF PLAN
B-M107	ENLARGED MECHANICAL PLANS
B-M108	ENLARGED GYMNASIUM & MEZZANINE MECHANICAL DEMOLITION PLAN
B-M109	ENLARGED GYMNASIUM & MEZZANINE MECHANICAL PLAN
B-M501	MECHANICAL DETAILS
B-P101	ENLARGED UNDER FLOOR PLUMBING DEMOLITION PLANS
B-P102	ENLARGED ABOVE FLOOR PLUMBING DEMOLITION PLANS
B-P103	ENLARGED LOCKER ROOM UNDER FLOOR PLUMBING PLAN
B-P104	ENLARGED LOCKER ROOM ABOVE FLOOR PLUMBING PLAN
B-E000	ELECTRICAL COVER SHEET
B-E101	UNIT 'A' ELECTRICAL DEMOLITION PLAN
B-E102	UNIT 'B' ELECTRICAL DEMOLITION PLAN
B-E103	UNIT 'C' ELECTRICAL DEMOLITION PLAN
B-E104	ELECTRICAL ENLARGED DEMOLITION PLANS
B-E105	ELECTRICAL ROOF DEMOLITION PLAN
B-E106	UNIT 'A' ELECTRICAL NEW PLAN
B-E107	UNIT 'B' ELECTRICAL NEW PLAN
B-E108	UNIT 'C' ELECTRICAL NEW PLAN
B-E109	ELECTRICAL ENLARGED NEW PLANS
B-E110	ELECTRICAL ROOF PLAN
B-E601	ELECTRICAL DETAILS AND SCHEDULES



THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

Wolgast CORPORATION
Executive Offices
Executive One Building
4835 Towne Centre Road
Suite 203
Saginaw, MI 48604
Phone : (989) 790-9120
Fax : (989) 790-9063
www.wolgastconstruction.com

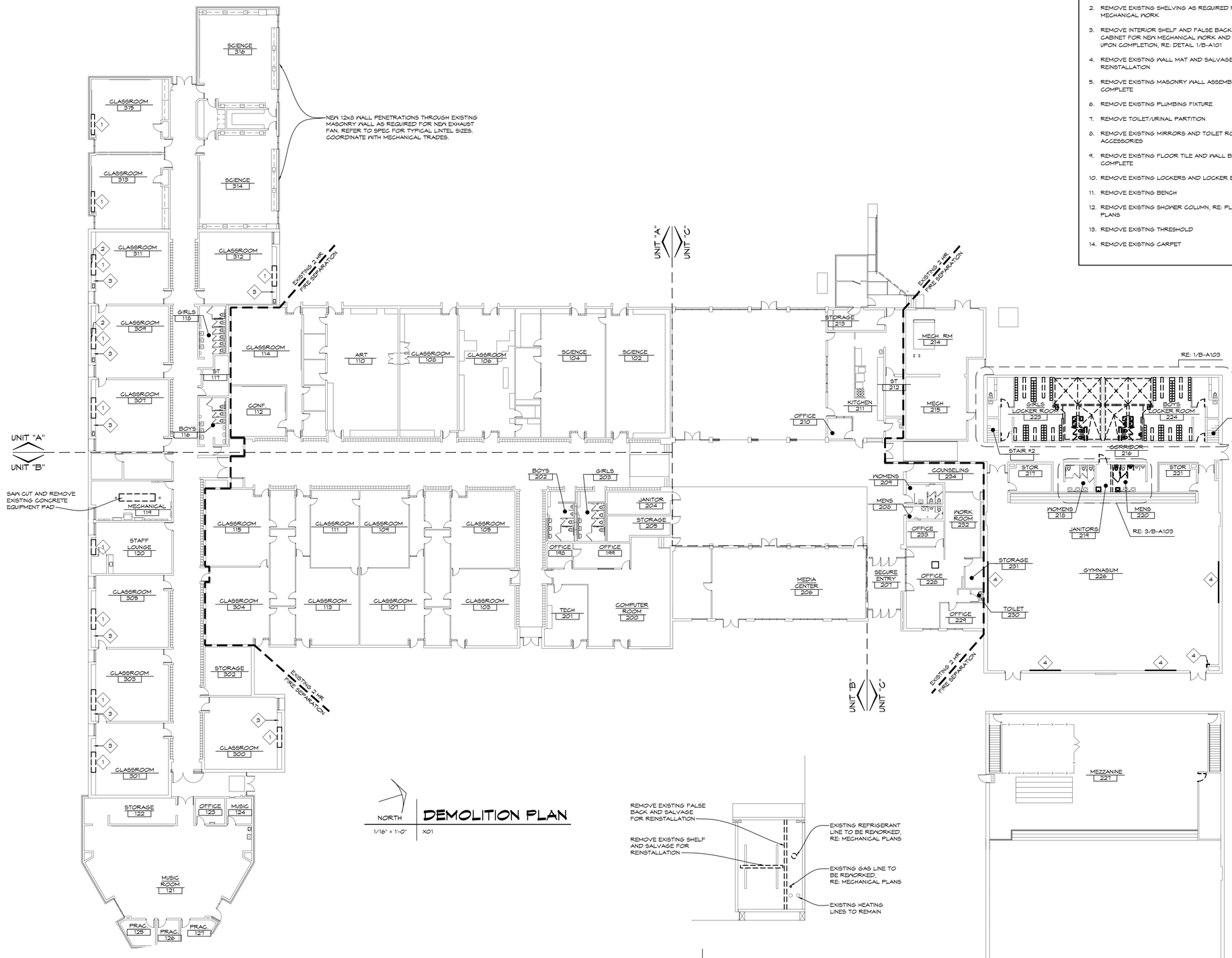
PROJECT 'B'

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT# 26-210
1420 SOUTH BADOUR ROAD MIDLAND MI 48640

PROJECT 'B'
RENOVATIONS TO
BULLOCK CREEK MIDDLE SCHOOL
664 SOUTH BADOUR ROAD MIDLAND MI 48640

NO. REVISIONS / SUBMISSIONS	DATE

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-G001
	REVIEWED MLB	DRAWING NO. B-G001
	DATE OCT 19, 2026	SHEET NO. 1 OF 38
	SCALE N.T.S.	



NORTH | 1/16" = 1'-0" | **DEMOLITION PLAN** | X01

1 | 1" = 1'-0" | **DEMOLITION DETAIL** | DETL01

NORTH | 1/16" = 1'-0" | MEZZANINE **DEMOLITION PLAN** | X01

DEMOLITION NOTES

1. REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATORS, REFER TO MECHANICAL DRAWINGS
2. REMOVE EXISTING SHELVING AS REQUIRED FOR NEW MECHANICAL WORK
3. REMOVE INTERIOR SHELF AND FALSE BACK FROM CABINET FOR NEW MECHANICAL WORK AND REINSTALL UPON COMPLETION, RE: DETAIL 1/B-A101
4. REMOVE EXISTING WALL MAT AND SALVAGE FOR REINSTALLATION
5. REMOVE EXISTING MASONRY WALL ASSEMBLY COMPLETE
6. REMOVE EXISTING PLUMBING FIXTURE
7. REMOVE TOILET/URINAL PARTITION
8. REMOVE EXISTING MIRRORS AND TOILET ROOM ACCESSORIES
9. REMOVE EXISTING FLOOR TILE AND WALL BASE COMPLETE
10. REMOVE EXISTING LOCKERS AND LOCKER BASE
11. REMOVE EXISTING BENCH
12. REMOVE EXISTING SHOWER COLUMN, RE: PLUMBING PLANS
13. REMOVE EXISTING THRESHOLD
14. REMOVE EXISTING CARPET

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

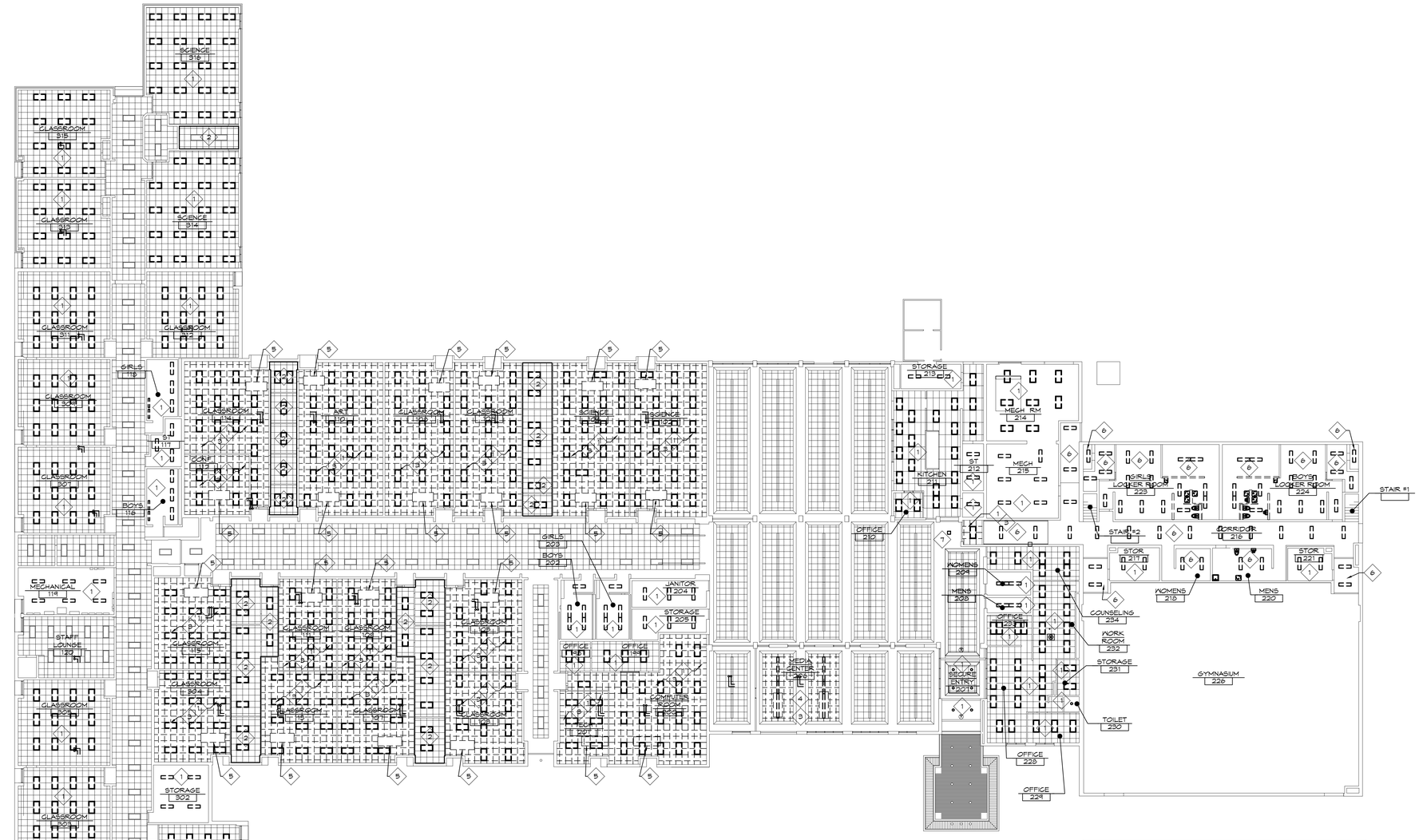
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE DEMOLITION PLAN

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A101
	REVIEWED MLB	DRAWING NO. B-A101
	DATE OCT 19, 2026	SHEET NO. 2 OF 38
	SCALE AS NOTED	

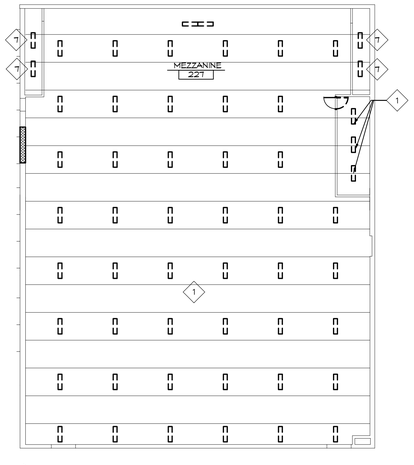
THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-A101 DEMOL.dwg
Plot date: 10/19/2026 11:12 AM



NORTH | 1/16" = 1'-0"

DEMOLITION REFLECTED CEILING PLAN

X01



NORTH | 1/16" = 1'-0"

MEZZANINE DEMOLITION REFLECTED CEILING PLAN

X01

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.

◇ DEMOLITION NOTES

1. REMOVE EXISTING LIGHTING, REFER TO ELECTRICAL PLANS
2. ADD ALTERNATE #1: REMOVE EXISTING LIGHTING, REFER TO ELECTRICAL PLANS
3. REMOVE EXISTING LAY-IN CEILING ASSEMBLY COMPLETE, ALL CEILING MOUNTED COMPONENTS TO REMAIN SHALL BE REMOVED, SALVAGED, AND REINSTALLED ON NEW CEILING
4. REMOVE EXISTING LIGHTING AS REQUIRED FOR UNIT VENT WORK AND SALVAGE FOR REINSTALLATION
5. REMOVE EXISTING CEILING MOUNTED UNIT VENTILATOR, RE: MECHANICAL DRAWINGS
6. EXISTING PLASTER CEILING ASSEMBLY AND LIGHTING TO BE REMOVED BY OTHERS
7. EXISTING LIGHT FIXTURE TO BE REMOVED BY OTHERS

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

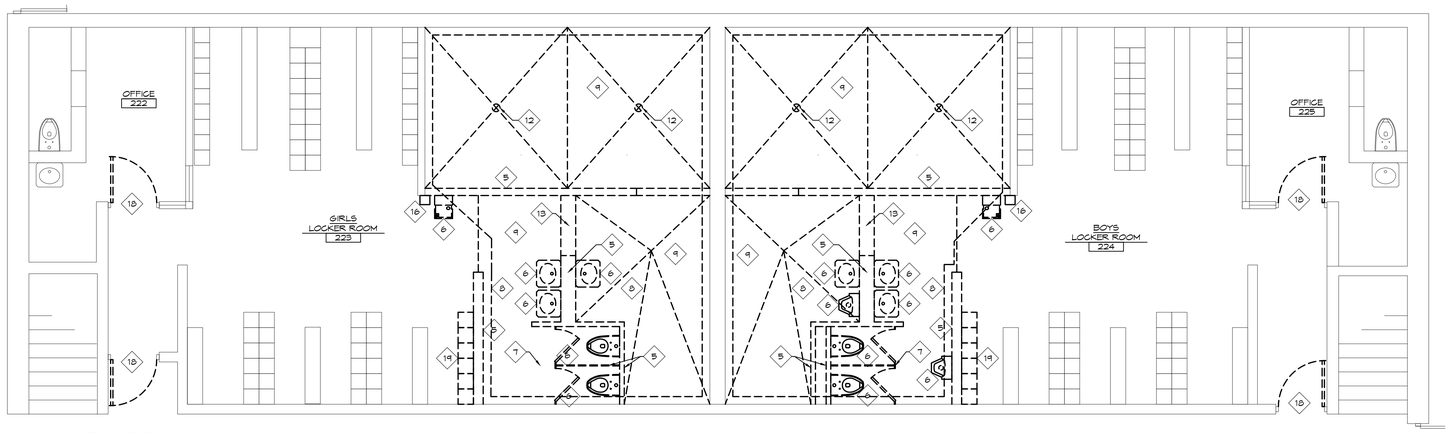
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

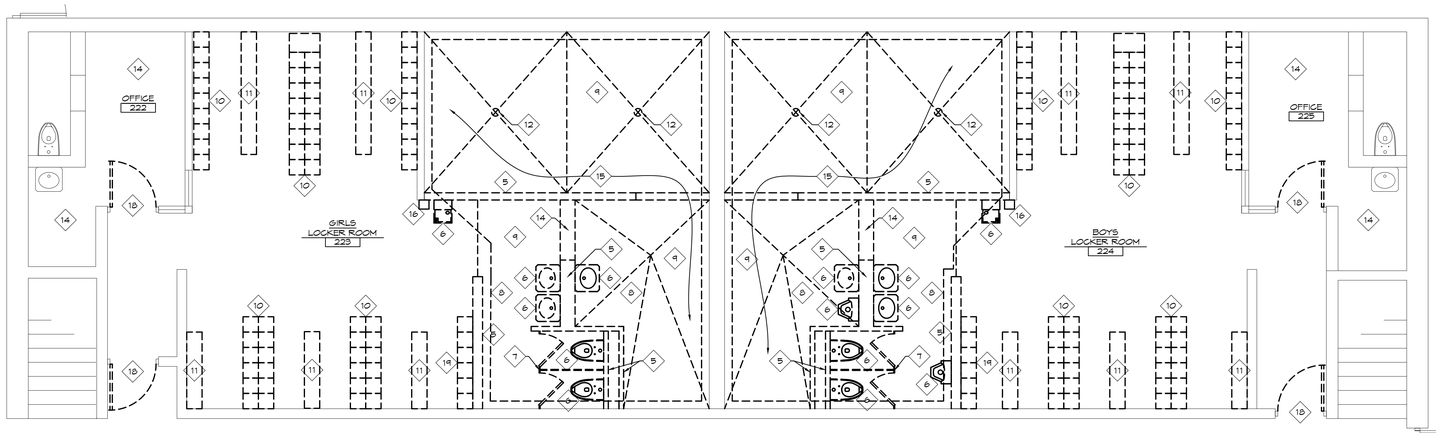
COMPOSITE DEMOLITION REFLECTED CEILING PLAN

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A102
	REVIEWED MLB	DRAWING NO. B-A102
	DATE OCT 19, 2026	SHEET NO. 3 OF 38
	SCALE AS NOTED	

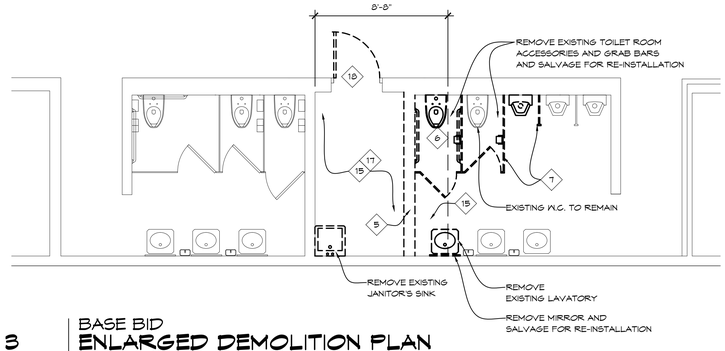
THA Architects Engineers - P:\Bullock Creek\26-210 2025 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS B-A102 DEMO F
Plot date: 10/19/2026 11:12 AM



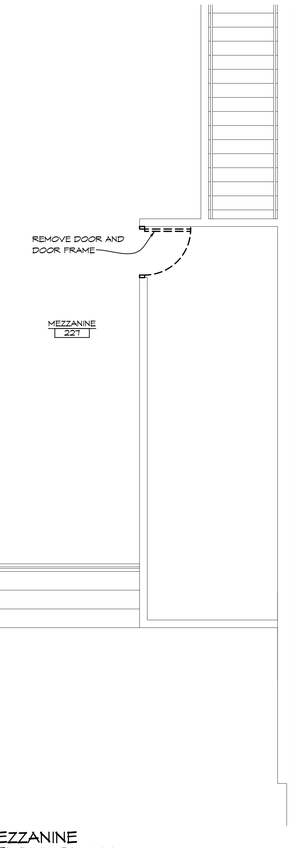
1 BASE BID
ENLARGED DEMOLITION PLAN
1/4" = 1'-0" | X01



2 ADD ALTERNATE #2
ENLARGED DEMOLITION PLAN
1/4" = 1'-0" | X01



3 BASE BID
ENLARGED DEMOLITION PLAN
1/4" = 1'-0" | X01



4 BASE BID
PARTIAL MEZZANINE
DEMOLITION PLAN
1/4" = 1'-0" | X01

◇ DEMOLITION NOTES

1. REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATORS, REFER TO MECHANICAL DRAWINGS
2. REMOVE EXISTING SHELVING AS REQUIRED FOR NEW MECHANICAL WORK.
3. REMOVE INTERIOR SHELF AND FALSE BACK FROM CABINET FOR NEW MECHANICAL WORK AND REINSTALL UPON COMPLETION, RE: 1/B-A101
4. REMOVE EXISTING WALL MAT AND SALVAGE FOR REINSTALLATION
5. REMOVE EXISTING MASONRY WALL ASSEMBLY COMPLETE
6. REMOVE EXISTING PLUMBING FIXTURE
7. REMOVE TOILET/URINAL PARTITION
8. REMOVE EXISTING MIRRORS AND TOILET ROOM ACCESSORIES
9. REMOVE EXISTING FLOOR TILE AND WALL BASE COMPLETE
10. REMOVE EXISTING LOCKERS AND LOCKER BASE (ADD ALTERNATE #2 ONLY)
11. REMOVE EXISTING BENCH (ADD ALTERNATE #2 ONLY)
12. REMOVE EXISTING SHOWER COLUMN, RE: PLUMBING PLANS
13. REMOVE EXISTING THRESHOLD
14. REMOVE EXISTING CARPET
15. SAW-CUT AND REMOVE EXISTING CONCRETE AND/OR TERRAZZO FLOOR AS REQUIRED FOR NEW WORK.
16. REMOVE PA SPEAKER, SALVAGE FOR REINSTALLATION.
17. PLASTER CEILING TO BE REMOVED BY OTHERS.
18. REMOVE EXISTING DOOR. DOOR FRAME TO REMAIN.
19. REMOVE EXISTING LOCKERS AND LOCKER BASE. (BASE BID AND ADD ALTERNATE #2)

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

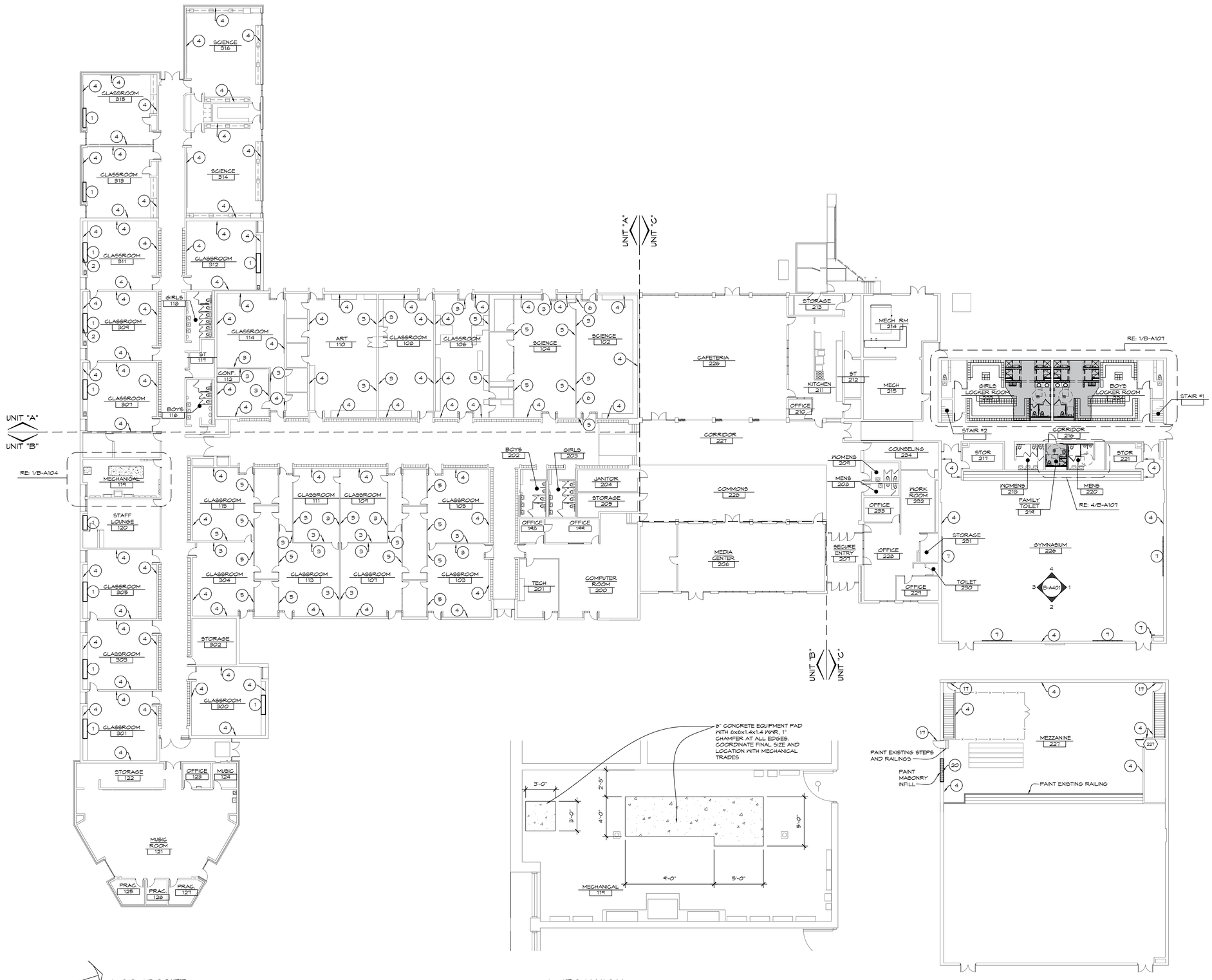
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
ENLARGED DEMOLITION PLANS

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A103
	REVIEWED MLB	DRAWING NO. B-A103
	DATE OCT 19, 2026	SHEET NO. 4 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-A103 ENLARG
Plot date: 10/19/2026 11:12 AM



NORTH
1/16" = 1'-0"
X01

COMPOSITE
FLOOR PLAN

1
1/4" = 1'-0"
X01

MECHANICAL
FLOOR PLAN

NORTH
1/16" = 1'-0"
X01

MEZZANINE
FLOOR PLAN

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

PROJECT 'B'

CONSTRUCTION NOTES

1. UNIT VENTILATOR, RE: MECHANICAL
2. REINSTALL SHELVING
3. PAINT EXISTING GYPSUM BOARD WALL
4. PAINT EXISTING CMU WALL
5. PAINT EXISTING WALL COVERING
6. REPAIR EXISTING GYPSUM BOARD WALL
7. REINSTALL SALVAGED WALL MAT
8. NEW PLUMBING FIXTURE, RE: PLUMBING DRAWINGS
9. TOILET PARTITION, RE: SPEC
10. LOCKERS, RE: SPEC
11. SOLID SURFACE VANITY, RE: 4/B-A601
12. FIXED SHOWER BENCH, RE: 2/B-A601
13. FOLDING PH SHOWER BENCH, RE: SPEC
14. CLOTHES HOOK RE: SPEC - TYPICAL AT EACH SHOWER
15. TOWEL PIN RE: SPEC - TYPICAL AT EACH SHOWER
16. SHOWER CURTAIN AND ROD, RE: SPEC
17. PAINT EXISTING DOOR AND DOOR FRAME
18. NEW VCT FLOORING AND WALL BASE
19. CONCRETE LOCKER BASE, RE: 1/B-A601
20. INFILL EXISTING MASONRY WALL. TOOTH AND KEY NEW MASONRY INTO EXISTING.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

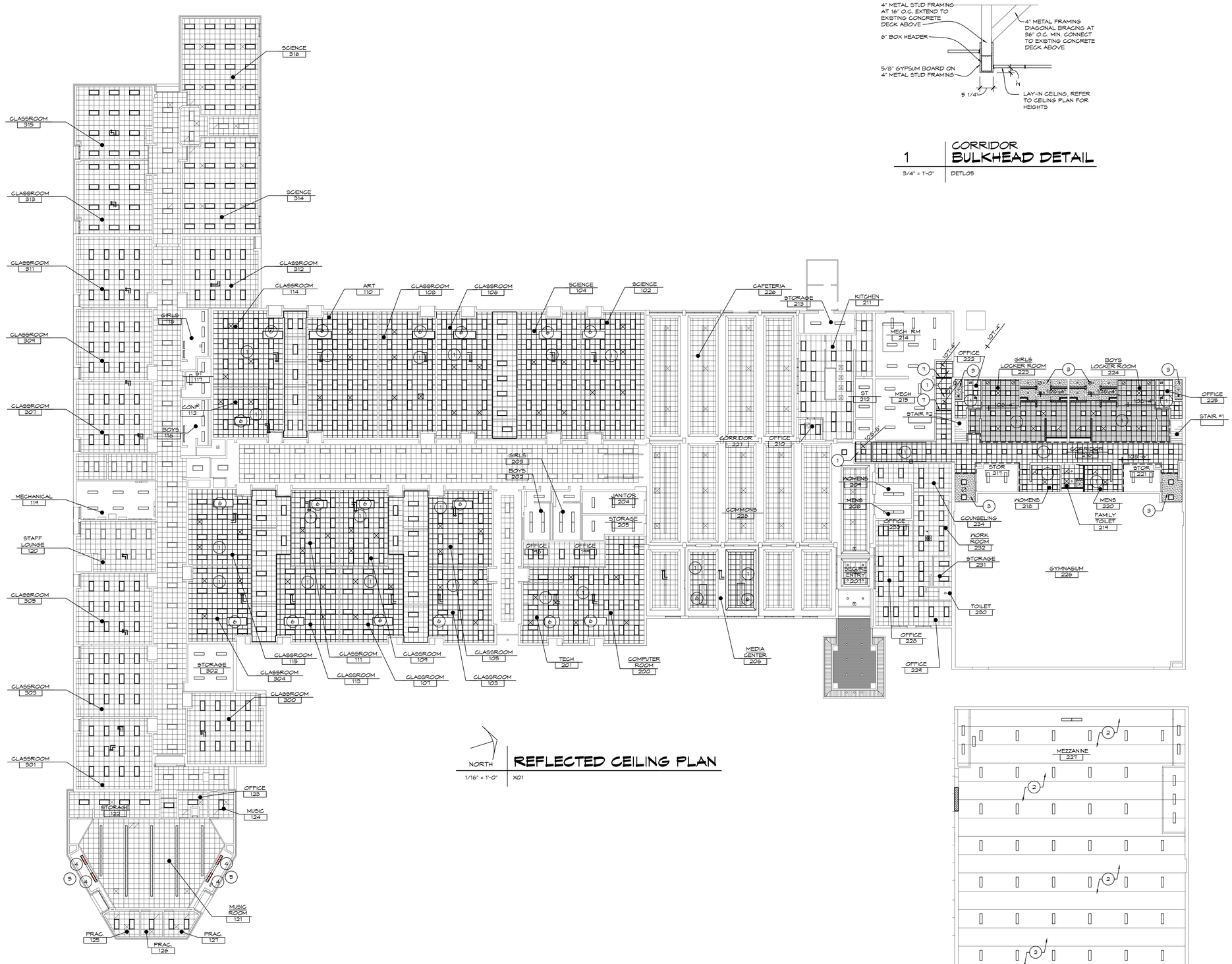
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE
FLOOR PLAN

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A104
	REVIEWED MLB	DRAWING NO. B-A104
	DATE OCT 19, 2026	SHEET NO. 5 OF 30
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-A104 COMPO
Plot date: 10/19/2026 11:12 AM



NORTH | 1/16" = 1'-0" | XO1

REFLECTED CEILING PLAN

1 | 3/4" = 1'-0" | CORRIDOR BULKHEAD DETAIL | DETL05

NORTH | 1/16" = 1'-0" | XO1

MEZZANINE REFLECTED CEILING PLAN

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

CEILING NOTES

1. NEW LAY-IN CEILING ASSEMBLY, REINSTALL ALL SALVAGED CEILING MOUNTED COMPONENTS
2. PAINT EXISTING EXPOSED STRUCTURE COMPLETE INCLUDING ALL EXISTING AND NEW DUCTWORK
3. 5/8" GYPSUM BOARD CEILING ON 3 5/8" METAL STUD FRAMING AT 16" O.C., PAINT (PROVIDE M.R. PAINT IN SHOWER AREAS).
4. INFILL GYPSUM BOARD WHERE RECESSED LIGHT FIXTURE WAS REMOVED.
5. PAINT EXISTING GYPSUM BOARD BULKHEAD TO MATCH EXISTING.
6. NEW UNIT VENTILATOR, REFER TO MECHANICAL PLANS.
7. 5/8" GYPSUM BOARD BULKHEAD ON 4" METAL STUD FRAMING, RE: 1/B-A105.

CEILING LEGEND

- NEW 2x2 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW 2x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW CAN LED FIXTURE, RE: ELECTRICAL PLANS
- 2x2 SUSPENDED ACOUSTIC CEILING - TYPE 'A'
- NEW ACOUSTICAL METAL PANEL CEILING ASSEMBLY. RE: SPEC
- IMPACT RESISTANT GYPSUM BOARD CEILING/BULKHEAD ON 3 5/8" METAL STUD FRAMING AT 16" O.C., PAINT
- PROVIDE 60 MIN. FIRE RATING ABOVE NEW LAY-IN CEILING

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

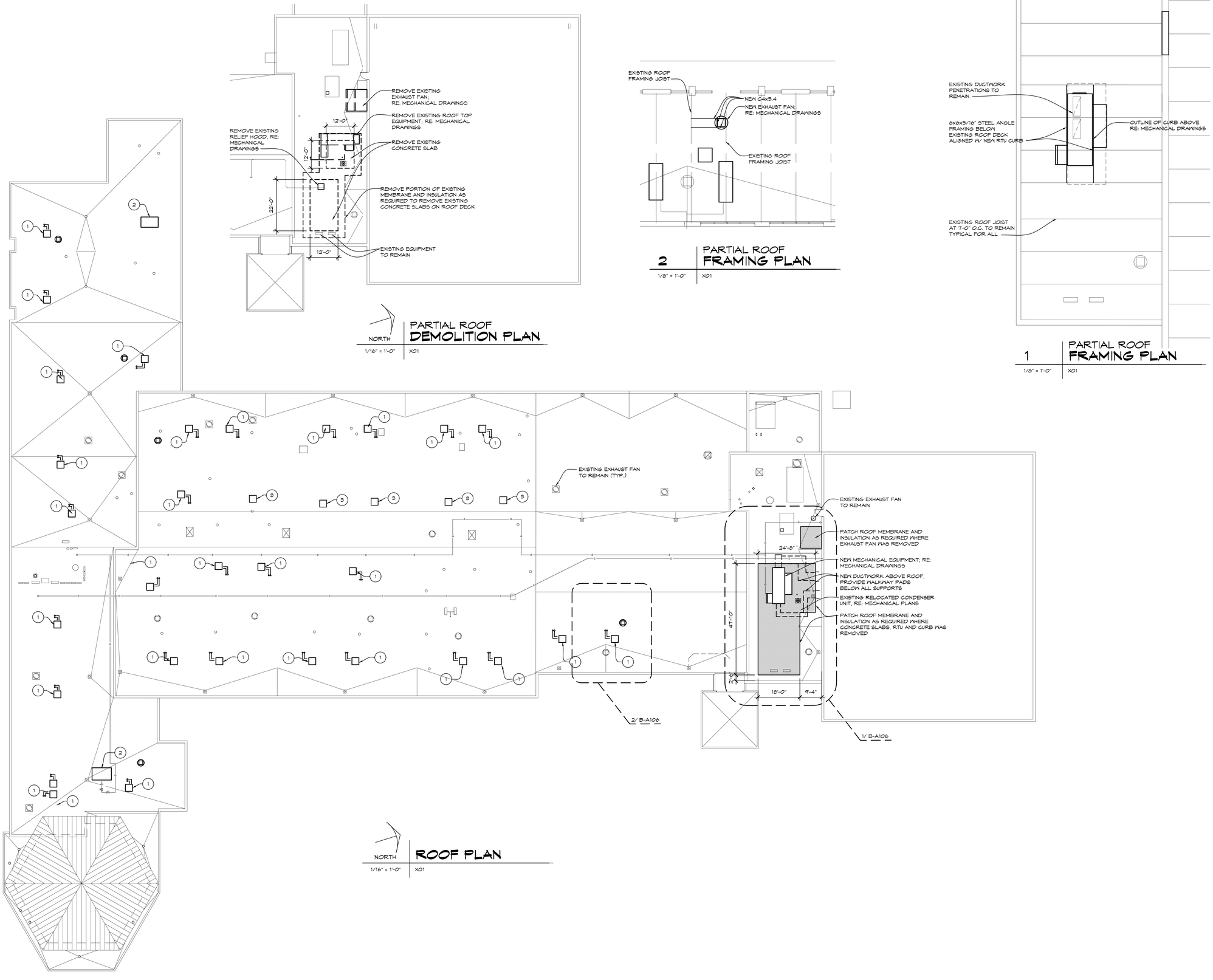
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
COMPOSITE REFLECTED CEILING PLAN

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A105
	REVIEWED MLB	DRAWING NO. B-A105
	DATE OCT 19, 2026	SHEET NO. 6 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS B-A105 REFLEC
Plot date: 10/19/2026 11:12 AM



NORTH

1/16" = 1'-0" | X01

PARTIAL ROOF DEMOLITION PLAN

2 | PARTIAL ROOF FRAMING PLAN

1/8" = 1'-0" | X01

1 | PARTIAL ROOF FRAMING PLAN

1/8" = 1'-0" | X01

NORTH

1/16" = 1'-0" | X01

ROOF PLAN

ROOFING GENERAL NOTES

1. DIMENSIONS SHOWN ON PLAN ARE SHOWN TO THE EXTENT KNOWN AND SHOULD BE USED AS A GUIDE ONLY. BIDDER/CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING AND WILL BE RESPONSIBLE FOR ANY VARIATION FROM THE DRAWINGS.
2. ROOFING SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ROOF MANUFACTURER'S DETAILS AND SPECIFICATIONS.
3. INSTALL INSULATION CRICKETS AS REQUIRED TO PROVIDE DRAINAGE AROUND EQUIPMENT AND ALL MAJOR ROOF PENETRATIONS.
4. EXHAUST FANS, VENTS AND OTHER ROOF PENETRATIONS ARE SHOWN TO THE EXTENT KNOWN AND SHOULD BE USED AS A GUIDE ONLY. ALL BIDDERS SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.
5. REMOVE ALL METAL ROOF EDGE, CAPPING AND MEMBRANE FLASHINGS.
6. INSTALL FLASHINGS AND FASCIAS WITH NECESSARY NAILERS, TERMINATION BARS OR COUNTER FLASHINGS.
7. REMOVE ROOF SUMP GRATES, CLEAN AND ROD SUMP LINES AND REINSTALL GRATES.
8. ADJUST HEIGHT OF EXISTING ROOF TOP EQUIPMENT TO PROVIDE MINIMUM 8" FLASHING HEIGHT.
9. COORDINATE ALL WORK WITH GENERAL, MECHANICAL, AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
10. REMOVE EXISTING PIPE SUPPORTS, PROVIDE NEW SUPPORTS, REFER TO SPEC. PROVIDE WALKWAY PADS BELOW EACH SUPPORT INCLUDING METAL SUPPORTS THAT REMAIN.

CONSTRUCTION NOTES

1. NEW CONDENSER UNIT, RE: MECHANICAL. PROVIDE NEW FLASHING AROUND MECHANICAL AND ELECTRICAL LINES AS REQUIRED.
2. NEW ROOFTOP UNIT, RE: MECHANICAL. PROVIDE NEW FLASHING AROUND MECHANICAL AND ELECTRICAL LINES AS REQUIRED.
3. REPAIR EXISTING ROOF PENETRATIONS WHERE CONDENSATE AND ELECTRICAL LINES WERE REMOVED

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

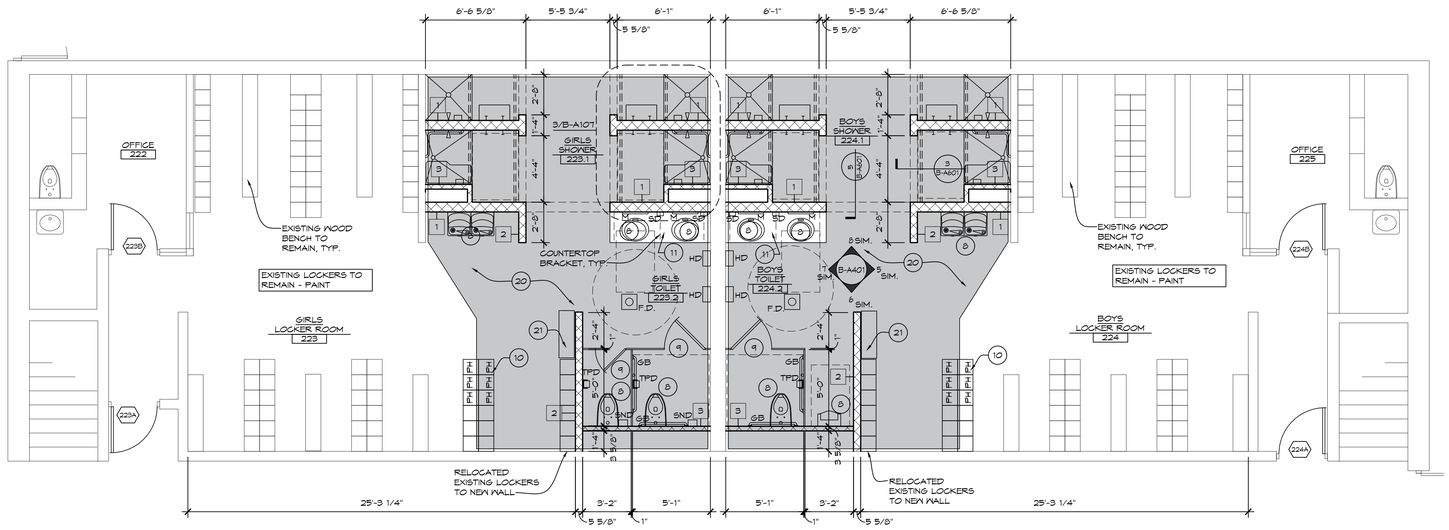
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ROOF PLAN

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A106
	REVIEWED MLB	DRAWING NO. B-A106
	DATE OCT 19, 2026	SHEET NO. 7 OF 38
	SCALE AS NOTED	

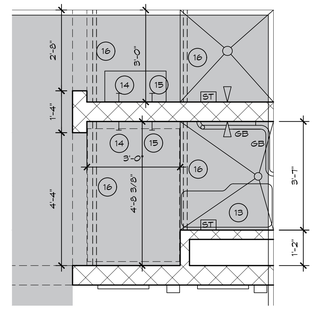
THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS B-A106 ROOF P
Plot date: 10/19/2026 11:13 AM



2 BASE BID ENLARGED FLOOR PLAN

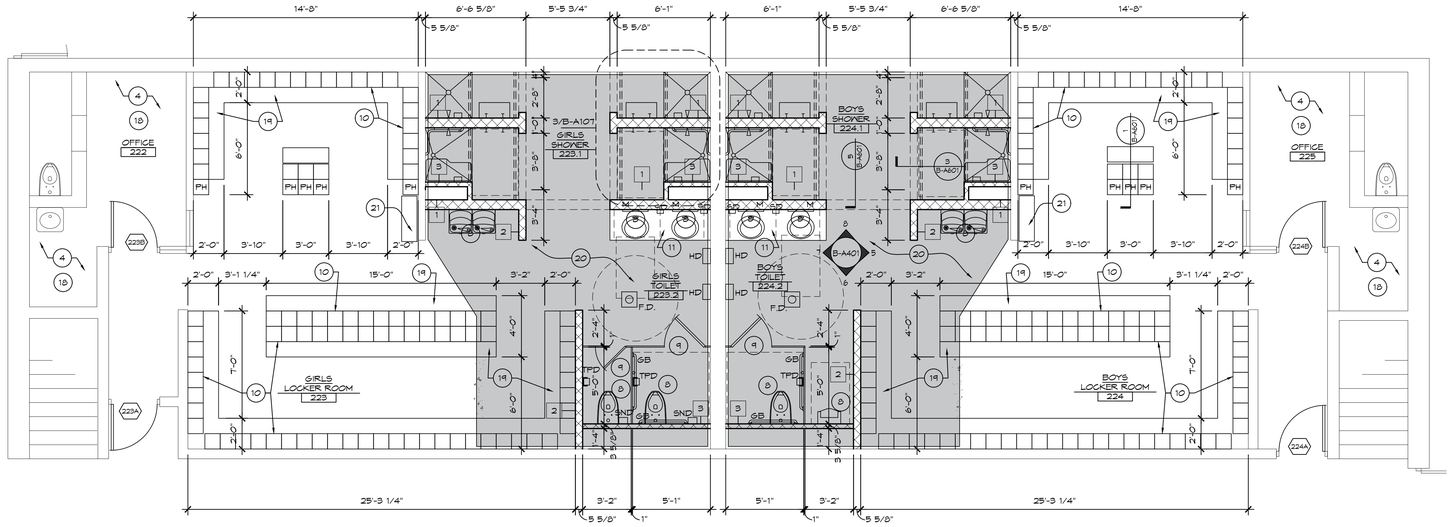
1/4" = 1'-0" | X01

NOTE: LOCKER ROOM EPOXY FLOORING AND PAINTING TO BE INCLUDED IN BASE BID AND ALTERNATE



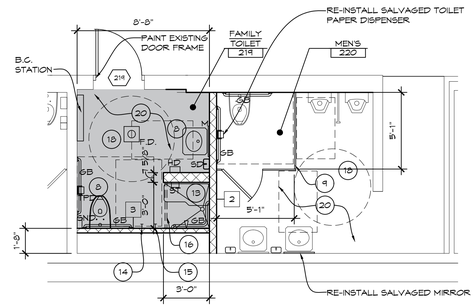
3 TYPICAL SHOWER PLAN

1/2" = 1'-0" | X01



1 ADD ALTERNATE #2 ENLARGED FLOOR PLAN

1/4" = 1'-0" | X01



4 FAMILY TOILET ENLARGED FLOOR PLAN

1/4" = 1'-0" | X01

ACCESSORY LEGEND

HD	HAND DRYER, RE: SPEC
M	MIRROR, RE: SPEC
SND	SANITARY NAPKIN DISPOSAL, RE: SPEC
GB	GRAB BAR, RE: SPEC
TPD	TOILET PAPER DISPENSER
SD	SOAP DISPENSER
ST	SOAP TRAY
BC	BABY CHANGING STATION

WALL TYPES

1. 8" CMU WALL, EXTEND TO FLOOR DECK ABOVE, PROVIDE ANGLE BRACKET, SIM. TO DETAIL 5/B-A601
2. 6" CMU WALL, EXTEND TO FLOOR DECK ABOVE, PROVIDE ANGLE BRACKET, SIM. TO DETAIL 5/B-A601
3. 4" CMU WALL, EXTEND TO FLOOR DECK ABOVE, PROVIDE ANGLE BRACKET, SIM. TO DETAIL 5/B-A601

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES

1. UNIT VENTILATOR, RE: MECHANICAL
2. REINSTALL SHELVING
3. PAINT EXISTING GYPSUM BOARD WALL
4. PAINT EXISTING CMU WALL
5. PAINT EXISTING WALL COVERING
6. REPAIR EXISTING GYPSUM BOARD WALL
7. REINSTALL SALVAGED WALL MAT
8. NEW PLUMBING FIXTURE, RE: PLUMBING DRAWINGS
9. TOILET PARTITION, RE: SPEC
10. LOCKERS, RE: SPEC
11. SOLID SURFACE VANITY, RE: 4/B-A601
12. FIXED SHOWER BENCH, RE: 2/B-A601
13. FOLDING PH SHOWER BENCH, RE: SPEC
14. CLOTHES HOOK RE: SPEC - TYPICAL AT EACH SHOWER
15. TOWEL PIN RE: SPEC - TYPICAL AT EACH SHOWER
16. SHOWER CURTAIN AND ROD, RE: SPEC
17. PAINT EXISTING DOOR AND DOOR FRAME
18. NEW VCT FLOORING AND WALL BASE
19. CONCRETE LOCKER BASE, RE: 1/B-A601
20. 4" CONCRETE SLAB WITH 6x6x1.4x1.4 WWR OVER VAPOR BARRIER ON EXISTING SAND BASE DOWEL INTO EXISTING SLAB WITH 12" LONG #3 BARS AT 12" O.C.- TYP
21. PH BENCH, RE: SPEC

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

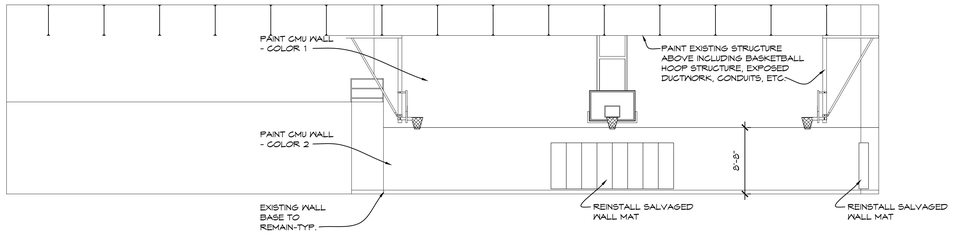
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED FLOOR PLANS

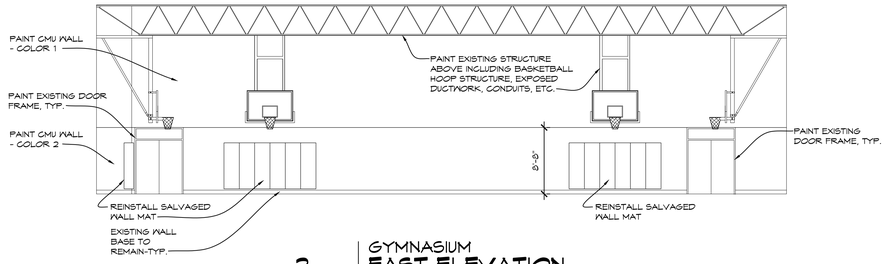
SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A107
	REVIEWED MLB	DRAWING NO. B-A107
	DATE OCT 19, 2026	SHEET NO. 8 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-A107 ENLARG
Plot date: 10/19/2026 11:13 AM



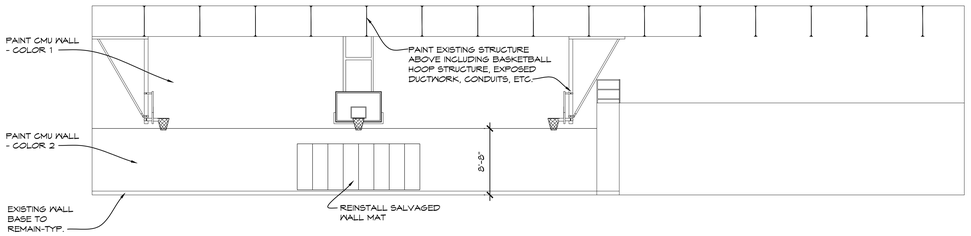
1 GYMNASIUM NORTH ELEVATION

1/8" = 1'-0" | ELEV01



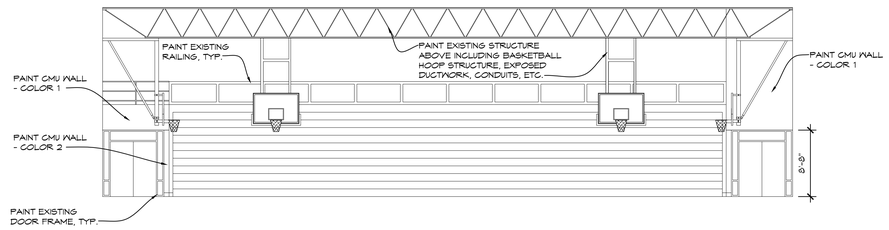
2 GYMNASIUM EAST ELEVATION

1/8" = 1'-0" | ELEV01



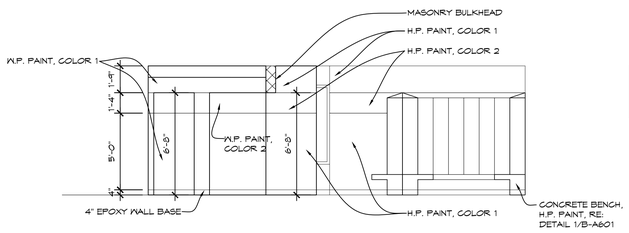
3 GYMNASIUM SOUTH ELEVATION

1/8" = 1'-0" | ELEV01



4 GYMNASIUM WEST ELEVATION

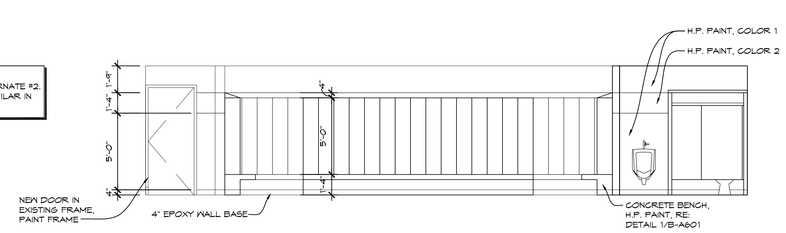
1/8" = 1'-0" | ELEV01



5 LOCKER ROOM NORTH ELEVATION

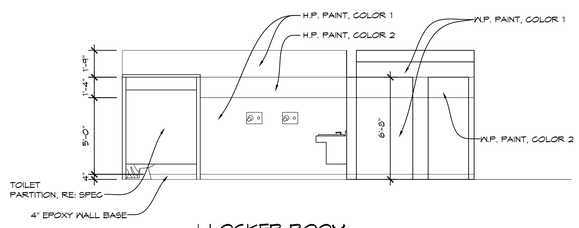
1/4" = 1'-0" | ELEV01

NOTE: LOCKER ROOM ELEVATIONS SHOW ALTERNATE #2. PAINT SCHEME TO BE SIMILAR IN BOTH OPTIONS.



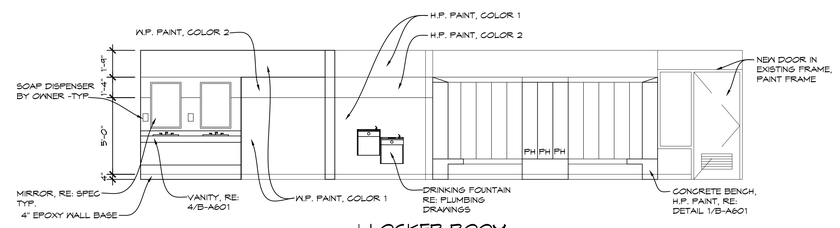
6 LOCKER ROOM EAST ELEVATION

1/4" = 1'-0" | ELEV01



7 LOCKER ROOM SOUTH ELEVATION

1/4" = 1'-0" | ELEV01



8 LOCKER ROOM WEST ELEVATION

1/4" = 1'-0" | ELEV01

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

INTERIOR ELEVATIONS

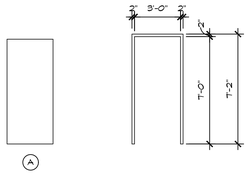
SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A401
	REVIEWED MLB	DRAWING NO. B-A401
	DATE OCT 19, 2026	SHEET NO. 9 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2025 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC MS B-A401 INTERIOR ELEVATIONS.dwg
Plot date: 10/19/2026 11:13 AM

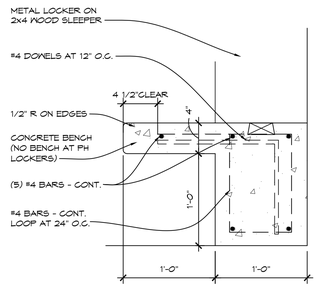
DOOR & FRAME SCHEDULE

DOOR NO.	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	FIRE RATING (IN MINUTES)	HARDWARE	NOTES
219	3'-0"X 6'-10"	A	WD	EX	HM	NA	NA		01	
223A	3'-0"X 6'-10"	A	WD	EX	HM	NA	NA		07	
223B	3'-0"X 6'-10"	A	WD	EX	HM	NA	NA		09	
224A	3'-0"X 6'-10"	A	WD	EX	HM	NA	NA		05	
224B	3'-0"X 6'-10"	A	WD	EX	HM	NA	NA		09	
227	3'-0"X 7'-0"	A	WD	1	HM	NA	NA	45	25	NO1

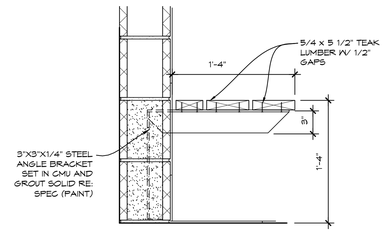
NOTES:
NO1- NEW DOOR AND DOOR FRAME IN EXISTING OPENING



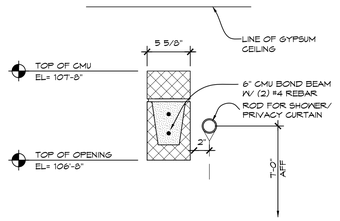
DOOR AND FRAME TYPE
1/4" = 1'-0"



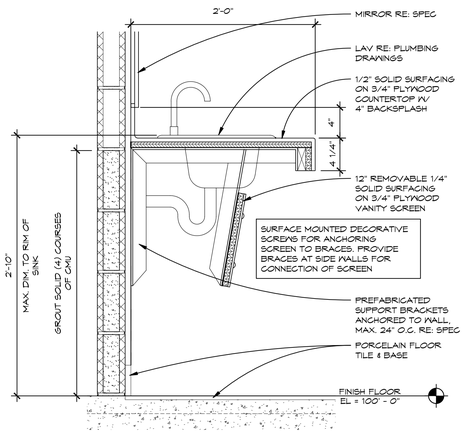
1 TYPICAL LOCKER BENCH DETAIL
1 1/2" = 1'-0" | LKR BENCH



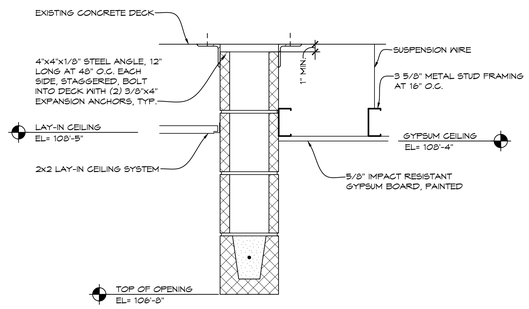
2 SHOWER BENCH DETAIL
1 1/2" = 1'-0" | SHWR BENCH



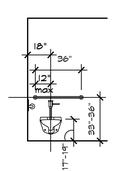
3 SHOWER HEAD DETAIL
1 1/2" = 1'-0" | SHWR HEAD



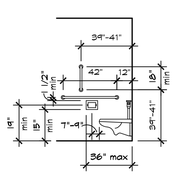
4 LOCKER ROOM VANITY DETAIL
1 1/2" = 1'-0" | VANDETL01

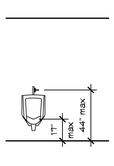


5 BULKHEAD DETAIL
1 1/2" = 1'-0" | SHWR HEAD

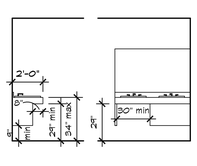


TOILET - WALL HUNG

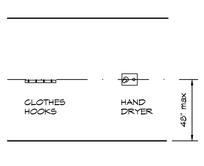




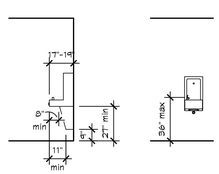
URINAL - WALL MTD



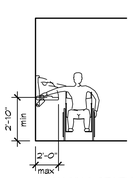
VANITY / MULTIPLE



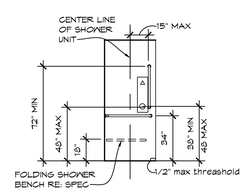
MOUNTING HEIGHTS - MISCELLANEOUS



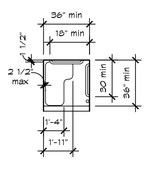
DRINKING FOUNTAIN / WATER COOLER



CHANGING STATION



SHOWER



8 TYPICAL BARRIER FREE MOUNTING HEIGHTS
1/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM NO.	ROOM TITLE	FLOOR MATERIAL	BASE MATERIAL	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CEILING HEIGHT	ACCESSORIES	NOTES
102	SCIENCE	F01	B01	N03	N03 N05	N02	N03	G02	8'-8"		NO1, NO2
103	CLASSROOM	F01	B01	N03	N03	N05	N02 N03	G02	8'-8"		NO1, NO2
104	SCIENCE	F01	B01	N02	N03	N05	N02 N03	G02	8'-8"		NO1, NO2
105	CLASSROOM	F01	B01	N03	N02	N05	N03	G02	8'-8"		NO1, NO2
106	CLASSROOM	F01	B01	N05	N03	N03	N02 N03	G02	8'-8"		NO1, NO2
107	CLASSROOM	F01	B01	N05	N03	N02	N02	G02	8'-8"		NO1, NO2
108	CLASSROOM	F01	B01	N03	N03	N02	N03	G02	8'-8"		NO2
109	CLASSROOM	F01	B01	N02	N02	N02	N03	G02	8'-8"		NO2
110	ART	F01	B01	N02	N03	N03	N03	G02	8'-8"		NO2
111	CLASSROOM	F01	B01	N02	N02	N02	N03	G02	8'-8"		NO2
112	CONFERENCE	F01	B01	N02	N03	N03	N02	G02	8'-8"		NO2
113	CLASSROOM	F01	B01	N02	N03	N05	N02	G02	8'-8"		NO1, NO2
114	CLASSROOM	F01	B01	N03	N02	N02 N03	N03	G02	8'-8"		NO2
115	CLASSROOM	F01	B01	N05	N02	N03	N03	G02	8'-8"		NO1, NO2
121	MUSIC ROOM	F01	B01	N01	N01	N01	N01	G01	---		NO3
200	COMPUTER ROOM	F01	B01	N01	N01	N01	N01	G02			
201	TECH	F01	B01	N01	N01	N01	N01	G02			
215	MECHANICAL	F01	B01	N01	N01	N01	N01	G01	---		
216	CORRIDOR	F01	B01	N01	N01	N01	N01	G02	8'-6"		
218	WOMENS	F01	B01	N01	N01	N01	N01	G02	8'-6"		
219	FAMILY TOILET	F02	B02	N03	N04	N04	N03	G02	8'-6"	A03, A06	
220	MENS	F01	B01	N03	N03	N03	N04	G02	8'-6"	A02,	
222	OFFICE	F03	B03	N06 N07	N06 N07	N06 N07	N06 N07	G02 G04	T-6"		
223	GIRLS LOCKER ROOM	F02	B01	N03 N04	N03 N04	N03 N04	N03 N04	G05 G04	8'-4"	A01, A02, A03, A04, A05	
224	BOYS LOCKER ROOM	F02	B01	N03 N04	N03 N04	N03 N04	N03 N04	G05 G04	8'-4"	A01, A02, A03, A04, A05	
225	OFFICE	F03	B03	N06 N07	N06 N07	N06 N07	N06 N07	G02 G04	T-6"		
226	GYMNASIUM	F01	B01	N03	N03	N03	N03	G03	---		
227	MEZZANINE	F01	B01	N03	N03	N03	N03	G03	---		
300	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
301	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
303	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
304	CLASSROOM	F01	B01	N05	N03	N03	N02	G02	8'-8"		NO1, NO2
305	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
307	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
309	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
311	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
312	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
313	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
314	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
315	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		
316	CLASSROOM	F01	B01	N03	N03	N03	N03	G01	---		

ROOM FINISH LEGEND

FLOOR
- F01 EXISTING TO REMAIN
- F02 EPOXY FLOORING
- F03 VCT

BASE
- B01 EXISTING TO REMAIN
- B02 EPOXY BASE
- B03 4" VINYL

WALLS
- N01 EXISTING TO REMAIN
- N02 PAINT EXISTING GYPSUM BOARD WALL
- N03 PAINT EXISTING CMU WALL
- N04 PAINT NEW CMU WALL
- N05 PAINT EXISTING WALL COVERING
- N06 PAINT EXISTING CMU W/ HIGH PERFORMANCE COATING, RE: SPEC
- N07 PAINT NEW CMU W/ HIGH PERFORMANCE COATING, RE: SPEC
- N08 PAINT NEW CMU W/ WATER PROOF PAINT

CEILING
- G01 EXISTING TO REMAIN
- G02 2X2 SUSPENDED ACOUSTIC CEILING - TYPE 'A'
- G03 EXISTING EXPOSED STRUCTURE - PAINT
- G04 GYPSUM BOARD CEILING/BULKHEAD - PAINT
- G05 2X2 SUSPENDED ACOUSTIC METAL PANELS

ACCESSORIES
- A01 TOILET ROOM ACCESSORIES
- A02 TOILET PARTITIONS
- A03 ELECTRIC HAND DRYER
- A04 LOCKERS
- A05 VANITY
- A06 BABY CHANGING STATION

NOTES
- NO1 REPAIR EXISTING DAMAGED WALL COVERING, ASSUME 3 LOCATIONS.
- NO2 REPAIR EXISTING DAMAGED GYPSUM BOARD, ASSUME 3 LOCATIONS.
- NO2 PAINT EXISTING BULKHEAD TO MATCH EXISTING.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ROOM FINISH SCHEDULE & DETAILS

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. B-A601
	REVIEWED MLB	DRAWING NO. B-A601
	DATE OCT 19, 2026	SHEET NO. 10 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC MS B-A601 SCHEDULES.dwg
Plot date: 10/19/2026 11:13 AM

SYMBOLS & ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BFF	BELOW FINISH FLOOR
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDENSATE
CB	COMBINATION UNIT
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
COND	CONDENSATE
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
°F	DEGREE FAHRENHEIT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FPM	FEET PER MINUTE
FT	FEET
G	GAS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HW	HOT WATER
HW (140)	HOT WATER (140 °F)
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HWR	HOT WATER RETURN
HWR (140)	HOT WATER RETURN (140 °F)
KA	KILOVAIT
L OR LAV	LAVATORY
MBH	ONE THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MTD	MOUNTED
PH	PHASE
PSI	POUND PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RE:	REFER TO DRAWING
RG	RETURN GRILLE
RH	RELIEF HOOD
RTU	ROOFTOP UNIT
S	SINK
SA	SUPPLY AIR
SAN	SANITARY
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SS	SERVICE SINK
ST	STORM
UH	UNIT HEATER
UR	URINAL
UV	UNIT VENTILATOR
V	VENT OR VOLT
VA	VALVE
VTR	VENT THRU ROOF
W	WASTE OR MATT
WC	WATER CLOSET
WH	WATER HEATER
WW	WASTE & VENT

CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HW (140)	DOMESTIC HOT WATER 140F DEG
HWR	DOMESTIC HOT WATER RETURN
HWR (140)	DOMESTIC HOT WATER RETURN 140F DEG
C	CONDENSATE
G	GAS
SAN	SANITARY
V	VENT
STM	STORM
HWHS	HOT WATER HEATING SUPPLY
HWHR	HOT WATER HEATING RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
	PIPE DROP
	PIPE RISE
	ARROW INDICATES DIRECTION OF FLOW
	BALL VALVE
	GATE VALVE
	UNION
	PRESSURE GAUGE W/ SHUTOFF
	STRAINER
	CHECK VALVE
	THERMOMETER W/ SHUTOFF
	THREE WAY CONTROL VALVE
	PETES PLUG (TEMPERATURE-PRESSURE TEST FITTING)
W	MANUAL AIR VENT
AAV	AUTOMATIC AIR VENT
	FLOW CONTROL
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	NON FREEZE WALL HYDRANT
	FLOOR CLEANOUT
T	THERMOSTAT
CO2	CARBON DIOXIDE SENSOR

10x8	DUCT SIZE/CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
100	ROUND DUCT DIAMETER SIZE
	VOLUME DAMPER IN DUCT
	DUCT DOWN
	SLOT DIFFUSER
	CEILING SUPPLY DIFFUSER
	CEILING RETURN DIFFUSER
	CEILING EXHAUST DIFFUSER
T	THERMOSTAT
	HORIZONTAL FIRE DAMPER W/ACCESS DOOR
	VERTICAL FIRE DAMPER W/ACCESS DOOR
SD	HORIZONTAL SMOKE DAMPER W/ACCESS DOOR
SD	VERTICAL SMOKE DAMPER W/ACCESS DOOR
	DIRECTION OF AIR FLOW
	HOOD EXHAUST DUCT
	HOOD SUPPLY AIR DUCT
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR SUPPLY DUCT DN
	RECTANGULAR RETURN DUCT DN
	RECTANGULAR EXHAUST DUCT DN
	ELBOW WITH TURNING VANES

CONDENSING UNIT SCHEDULE

TAG	TRANE MODEL #	ASSOCIATED UNIT	NOMINAL COOL	VOLTAGE	MCA	MOP	NOTES:
C-1	5TTA4036	UV-1	36 MBH	460V-3P	6.8	15	1,2,3,4
C-2	5TTA4036	UV-2	36 MBH	460V-3P	6.8	15	1,2,3,4
C-3	5TTA4036	UV-3	36 MBH	460V-3P	6.8	15	1,2,3,4
C-4	5TTA4036	UV-4	36 MBH	460V-3P	6.8	15	1,2,3,4
C-5	5TTR4024	UV-5	24 MBH	208V-1P	14	20	1,2,3,4
C-6	5TTA4036	UV-6	36 MBH	460V-3P	6.8	15	1,2,3,4
C-7	5TTA4036	UV-7	36 MBH	460V-3P	6.8	15	1,2,3,4
C-8	5TTA4036	UV-8	36 MBH	460V-3P	6.8	15	1,2,3,4
C-9	5TTA4036	UV-9	36 MBH	460V-3P	6.8	15	1,2,3,4
C-10	5TTA4036	UV-10	36 MBH	460V-3P	6.8	15	1,2,3,4
C-11	5TTA4036	UV-11	36 MBH	460V-3P	6.8	15	1,2,3,4
C-12	5TTA4036	UV-12	36 MBH	460V-3P	6.8	15	1,2,3,4
C-13	5TTR4024	UV-13	24 MBH	208V-1P	14	20	1,2,3,4
C-14	5TTA4048	UV-14	48 MBH	460V-3P	8.6	15	1,2,3,4
C-15	5TTA4048	UV-15	48 MBH	460V-3P	8.6	15	1,2,3,4
C-16	5TTA4048	UV-16	48 MBH	460V-3P	8.6	15	1,2,3,4
C-17	5TTA4048	UV-17	48 MBH	460V-3P	8.6	15	1,2,3,4
C-18	5TTA4048	UV-18	48 MBH	460V-3P	8.6	15	1,2,3,4
C-19	5TTA4036	UV-19	36 MBH	460V-3P	6.8	15	1,2,3,4
C-20	5TTA4036	UV-20	36 MBH	460V-3P	6.8	15	1,2,3,4
C-21	5TTR4030	UV-21	30 MBH	208V-1P	16	25	1,2,3,4
C-22	5TTA4036	UV-22	36 MBH	460V-3P	6.8	15	1,2,3,4
C-23	5TTR4030	UV-23	30 MBH	208V-1P	16	25	1,2,3,4
C-24	5TTA4036	UV-24	36 MBH	460V-3P	6.8	15	1,2,3,4
C-25	5TTA4036	UV-25	36 MBH	460V-3P	6.8	15	1,2,3,4
C-26	5TTA4036	UV-26	36 MBH	460V-3P	6.8	15	1,2,3,4
C-27	5TTR4024	UV-27	24 MBH	208V-1P	14	20	1,2,3,4
C-28	5TTA4048	UV-28	48 MBH	460V-3P	8.6	15	1,2,3,4
C-29	5TTA4036	UV-29	36 MBH	460V-3P	6.8	15	1,2,3,4
C-30	5TTA4048	UV-30	48 MBH	460V-3P	8.6	15	1,2,3,4
C-31	RAUKC254B	AHU-1	25 TONS	460V-3P	62	80	1,2,3,4,5,6

NOTES:
1. COOLING CAPACITY IS BASED ON 80°F DB/67°F WB & 95°F AMBIENT.
2. PROVIDE W/ EQUIPMENT SUPPORT (SEE DETAIL).
3. ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL GFI RECEPTACLE & DISCONNECT SWITCH.
4. PIPE SIZE BASED ON MANUFACTURER RECOMMENDATIONS.
5. PROVIDE UNIT WITH LOW AMBIENT DAMPERS FOR HEAD PRESSURE CONTROL.
6. PROVIDE UNIT WITH HOT GAS BYPASS VALVES SHIPPED WITH UNIT FLIED INSTALLED.

PLUMBING FIXTURE SCHEDULE

WC-1
NEW WATER CLOSET - AMERICAN STANDARD MODEL "AFWALL" - 2257.101, WALL MOUNTED, SIPHON JET VITREOUS CHINA, ELONGATED BOWL. PROVIDE MANUAL FLUSH VALVE ZURN MODEL Z6000AV, ALL METAL, DUAL SEAL DIAPHRAGM, BEMIS SEAT MODEL 1955SSCT, WHITE OPEN FRONT, SELF-SUSTAINING HINGE.

WC-2 (PH)
NEW WATER CLOSET - AMERICAN STANDARD MODEL "AFWALL" - 2257.101, WALL MOUNTED AT 16-1/2" HIGH, SIPHON JET VITREOUS CHINA, ELONGATED BOWL. PROVIDE MANUAL FLUSH VALVE ZURN MODEL Z6000AV, ALL METAL, DUAL SEAL DIAPHRAGM, BEMIS SEAT MODEL 1955SSCT, WHITE OPEN FRONT, SELF-SUSTAINING HINGE.

UR-1
NEW URINAL AMERICAN STANDARD MODEL "WASHBROOK" 6590.011EG, WALL HUNG, VITREOUS CHINA, 3/4" TOP SPUD, WHITE, WASH OUT URINAL, INTEGRAL TRAP. PROVIDE WITH MANUAL FLUSH VALVE ZURN MODEL Z6003-XL1, ALL METAL, DUAL SEAL DIAPHRAGM, 1.0 GALLON FLUSH, STOP, VACUUM BREAKER, ETC. PROVIDE HANGERS FOR SUPPORT.

L-1
NEW LAVATORY AMERICAN STANDARD MODEL "AQUALYN" 0476.028, COUNTER MOUNTED, VITREOUS CHINA, 4" CENTERS. PROVIDE AMERICAN STANDARD FAUCET MODEL 6114.116.002, CHROME PLATED BRASS, CERAMIC DISC VALVE CARTRIDGE, LEAD FREE, HOT HIGH LIMIT, VANDAL-RESISTANT AERATOR, ASSE 1070 MIXING VALVE, GRID STRAINER, CHROME PLATED P-TRAP, STOPS, ETC.

L-2
NEW LAVATORY AMERICAN STANDARD "LUCERNE" MODEL 0355.012, WALL MOUNTED, VITREOUS CHINA, 4" CENTERS. PROVIDE W/ CARRIER. PROVIDE AMERICAN STANDARD FAUCET MODEL 6114.116.002, CHROME PLATED BRASS, CERAMIC DISC VALVE CARTRIDGE, LEAD FREE, HOT HIGH LIMIT, VANDAL-RESISTANT AERATOR, ASSE 1070 MIXING VALVE, GRID STRAINER, CHROME PLATED P-TRAP, STOPS, ETC. PROVIDE CARRIER AND CONCEAL ARMS FOR SUPPORT. PROVIDE WITH LAV SHIELD GOVER BELOW LAVATORY

SH-1
SYMMONS HYDAPIPE MODEL 1-8025, DOUBLE OUTLET, VANDAL RESISTANT HEAD AND SOAP TRAY. PROVIDE WITH ASSE 1016 APPROVED MIXING VALVE.

SH-2 (PH)
SYMMONS HYDAPIPE MODEL 1-8025-FS, DOUBLE OUTLET, VANDAL RESISTANT HEAD, 4-45G DOUBLE OUTLET DIVERTED WITH VOLUME CONTROL, 5'-0" HAND HELD SHOWER WITH SLIDE BAR HOSE. VACUUM BREAKER AND SOAP TRAY. PROVIDE WITH ASSE 1016 APPROVED MIXING VALVE.

EWC
ELKAY TWO LEVEL ELECTRIC WATER COOLER MODEL LZSTL8WS, ADA, DUAL HEIGHT, FRONT PUSH BUTTONS, 8 GPH, QUICK FILTER CHANGE, WATER FILTER CERTIFIED WITH NSF/ANSI 61 & 372 FOR STATE LOW LEAD REQUIREMENT, 120V-1P.

SEE PLUMBING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LISTED EQUIVALENT MANUFACTURES. PROVIDE NEW TRAPS, STOPS, RISERS, TAIL PIECES, ETC. FOR NEW AND EXISTING FIXTURES FOR COMPLETE PROJECT.

GRILLE AND DIFFUSER SCHEDULE

"A" TITUS SUPPLY DIFFUSER MODEL TWSA, ADJUSTABLE AIR PATTERN, 24x24, MOUNTING TYPE 3 (LAY-IN), WHITE FINISH
(*) 12x12 FACE PANEL MOUNTED IN 24x24 PANEL

CFM	NECK SIZE
25-99	6"Ø *
100-225	8"Ø
226-300	10"Ø
301-400	12"Ø

"B" TITUS EXHAUST/RETURN GRILLE MODEL 50F, 1/2x1/2x1/2 ALUMINUM EGG CRATE, 20x20 NECK, PANEL MOUNTED FOR LAY-IN CEILING, WHITE FINISH, PROVIDE WITH 20x20x12 PLENUM PAINTED FLAT BLACK ON INSIDE

"C" TITUS RETURN/EXHAUST GRILLE MODEL 4FL, 45° FIXED DEFLECTION, SURFACE MOUNTED, WITH OPPOSED BLADE DAMPERS, WHITE FINISH

CFM	NECK SIZE
76-150	10x6
310-450	12X10

"D" TITUS RETURN/EXHAUST GRILLE MODEL 4FL, 45° FIXED DEFLECTION, SURFACE MOUNTED, WHITE FINISH, 18X18 NECK SIZE

"E" TITUS SUPPLY GRILLE MODEL 272 RL, SURFACE MOUNTED, WHITE FINISH

CFM	NECK SIZE
76-150	10x6
175-300	10x10

MECHANICAL EQUIPMENT SCHEDULE

CONDENSATE PUMP CP-1,2,3,4
FRANKLIN ELECTRIC CONDENSATE PUMP MODEL VCMA-15ULS, 1.08 GPM MAX FLOW RATE, 0.5 GAL TANK CAPACITY, 1/30HP, 115V-1P, PROVIDED WITH CHECK VALVE

RELIEF AIR HOOD SCHEDULE

TAG	MANUFACTURER	MODEL #	CFM	TOTAL PRESSURE	THROAT SIZE	FREE AREA	THROAT VELOCITY	NOTES
RH-1	GREENHECK	GRSR-20	2750	0.184	20X20	2.25 SF	1222 FPM	1
RH-2	GREENHECK	GRSR-24	3750	0.159	24X24	3.24 SF	1157 FPM	1
RH-3	GREENHECK	GRSR-15	1250	0.142	15X15	1.12 SF	1116 FPM	1,2
RH-4	GREENHECK	GRSR-15	1250	0.142	15X15	1.12 SF	1116 FPM	1,2
RH-5	GREENHECK	GRSR-18	2000	0.15	18X18	1.83 SF	1092 FPM	1

NOTES:
1. PROVIDE WITH INSULATED ROOF CURB AND HOOD, INSECT SCREEN.
2. PROVIDE WITH RELIEF DAMPER.

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	UNIT LOCATION	GREENHECK MODEL NO.	ELEC.	CFM	"SP	FAN HP	FAN RPM	NOTES
EF-1	SCIENCE 316	CEILING MOUNTED	SP-A510-VG	115V-1P	500	.375	1/15	1268	1,2
EF-2	SCIENCE 314	CEILING MOUNTED	SP-A510-VG	115V-1P	500	.375	1/15	1268	1,2

NOTES:
1. PROVIDE WITH BACK DRAFT DAMPER, DISCONNECT AND WALL SWITCH
2. PROVIDE WITH WALL DISCHARGE HOOD

PUMP SCHEDULE

TAG	B&G MODEL	TYPE	GPM	HEAD (FT)	IMP. DIA.	HP	RPM	ELEC. V/PH	NOTES
P-1	E-1510 2.5BB	BASE MOUNTED	190	65	8.25	7.5	1800	208/3	1,3
P-2	E-1510 2.5BB	BASE MOUNTED	190	65	8.25	7.5	1800	208/3	1,3
P-B1	E-90 3AAB	VERTICAL IN-LINE	100	15	4.5	3/4	1725	120/1	1,2
P-B2	E-90 3AAB	VERTICAL IN-LINE	100	15	4.5	3/4	1725	120/1	1,2

NOTES:
1. HIGH EFFICIENCY NON-OVERLOADING MOTORS
2. PUMPS P-B1 AND P-B2 SHALL RUN WITH BOILER CONTROLS
3. PROVIDE WITH TRIPLE DUTY VALVE, FLEX CONNECTIONS & SUCTION DIFFUSERS

UNIT VENTILATOR SCHEDULE

TAG	TRANE MODEL #	CFM	MIN OA	MOTOR HP	HOT WATER HEAT CAPACITY MBH	HW GPM	HW DEL-T	HW EAT	HW LAT	COOLING MBH TOTAL	COOLING MBH SENSIBLE	COOLING EAT	COOLING LAT	VOLTAGE	MCA	MOP	NOTES
UV-1	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-2	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-3	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-4	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-5	VUVE0750	750	200	0.24 HP	40.11	4	19.76	55	111.83	24.59	16.61	80	56.65	115V-1P	4.18	15	1,3
UV-6	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-7	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-8	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-9	VUVE1250	1250	400	0.24 HP	98.11	5.5	35.34	55	140.84	95.04	24.65	80	58.62	115V-1P	8.38	15	1,3
UV-10	VUVE1250	1250	400	0.24 HP	98.11	5.5	35.34	55	140.84	95.04	24.65	80	58.62	115V-1P	8.38	15	1,3
UV-11	VUVE1250	1250	400	0.24 HP	72.18	7	20.65	55	112.27	95.13	25.83	80	59.7	115V-1P	8.38	15	1,3
UV-12	HUVG12510	1250	300	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-13	HUVG07510	750	200	1 HP	60.90	4	30	60	134.09	19.92	15.06	80	--	120V-1P	15	--	2,3
UV-14	HUVG15010	1500	500	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3
UV-15	HUVG15010	1500	500	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3
UV-16	HUVG15010	1500	500	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3
UV-17	HUVG15010	1500	550	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3
UV-18	HUVG15010	1500	550	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3
UV-19	HUVG12510	1250	400	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-20	HUVG12510	1250	350	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-21	HUVG10010	1000	300	1 HP	77.55	5	30.99	60	135.01	26.12	19.95	80	--	120V-1P	15	--	2,3
UV-22	HUVG12510	1250	350	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-23	HUVG10010	1000	300	1 HP	77.55	5	30.99	60	135.01	26.12	19.95	80	--	120V-1P	15	--	2,3
UV-24	HUVG12510	1250	375	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-25	HUVG12510	1250	350	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-26	HUVG12510	1250	350	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-27	HUVG07510	750	200	1 HP	60.90	4	30	60	134.09	19.92	15.06	80	--	120V-1P	15	--	2,3
UV-28	HUVG15010	1500	450	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3
UV-29	HUVG12510	1250	350	1 HP	98.83	7	28.62	60	135.96	31.90	24.72	80	--	120V-1P	15	--	2,3
UV-30	HUVG15010	1500	450	1 HP	102.98	7	51.5	60	127.62	38.64	29.96	80	--	120V-1P	15	--	2,3

NOTES:
1. FLOOR MOUNTED UNIT VENTILATOR, WITH HOT WATER HEATING COIL, FACE AND BYPASS, 3-WAY VALVE, WITH ADAPTOR BACK TO MATCH EXISTING UNITS, PROVIDE WITH END PANELS TO MATCH EXISTING OPENING BETWEEN CABINETRY (FIELD VERIFY) CABINET COLORS TO BE SELECTED DURING SHOP DRAWINGS. USE EXISTING OUTSIDE AIR LOUVERS.
2. CEILING HUNG HORIZONTAL UNIT VENTILATOR, WITH HOT WATER HEATING COIL, FACE AND BYPASS, 3-WAY VALVE, FRONT DISCHARGE DOUBLE DEFLECTION SUPPLY GRILLE, BOTTOM RETURN GRILLE AND BACK OUTSIDE AIR CONNECTION ARRANGEMENT (FIELD VERIFY WITH EXISTING UNIT) END PANELS AND CABINET COLORS TO BE SELECTED DURING SHOP DRAWINGS.
3. UNIT TO BE PROVIDED WITH ULTRA LOW LEAKAGE OUTSIDE AIR DAMPERS, FACTORY INSTALL AND WIRED FREEZE STAT, DAMPERS, DISCHARGE AIR STAT, WIRING STRIP, FOR CONTROLLER CONNECTIONS FOR NEW HONEYWELL CONTROLLER, CONTROLS TO HAVE CAPACITY FOR CO2 DETECTOR FOR ON DEMAND VENTILATION CONTROL AND CONNECTION TO EXISTING HONEYWELL CONTROLS CONTROL SYSTEM.

BOILER SCHEDULE

TAG	MODEL NO.	GAS INPUT (MBH)	GROSS OUTPUT (MBH)	THERMAL EFFICIENCY	TURNDOWN RATIO	WORKING PRESSURE	FLOW @30 TD GPM	FD FT HD	VENT SIZE	ELECT.	AMPS FLA	MIN/MAX GAS PRESSURE	NOTES
B-1	BMK-1500	1,500	1440	95%	20:1	30 PSI	100	3.0	6"	120/1P	16	4"/14" W.C.	1,2,3,4,5,6
B-2	BMK-1500	1,500	1440	95%	20:1	30 PSI	100	3.0	6"	120/1P	16	4"/14" W.C.	1,2,3,4,5,6

NOTES:
1. FACTORY PIPED AND WIRED FULLY MODULATING BURNER AND GAS TRAIN MEETING GSD-1 REQUIREMENTS
2. BOILER CONTROLS WITH BACNET CAPACITY FOR CONNECTION TO ENERGY MANAGEMENT SYSTEM (EMS) INTERFACE
3. PROVIDE WITH HIGH LIMIT CONTROL, LOW WATER CUT OFF, CONDENSATE TRAP (SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS).
4. PROVIDE NETURAZATION TANK, TRAP AND PIPE BOILER DRAIN(S) TO FLOOR DRAIN
5. PROVIDE AL29-4C, POLYPRO PIPING FOR FLUE AND PVC COMBUSTION AIR
6. BOILER DESIGN BASIS - AERCO

ROOF TOP UNIT SCHEDULE

TAG	MANUFACTURE MODEL #	AREA SERVED	CFM	MIN OA	ESP	FAN HP	FAN RPM	GAS HEAT (MBH) INPUT	GAS HEAT (MBH) OUTPUT	COOLING (MBH) TOTAL	COOLING (MBH) SENSIBLE	VOLTAGE	MCA	MOP	WEIGHT (LBS)	NOTES
RTU-1	TRANE T5K120A4S00	SCIENCE CLASSROOMS	3700	400/ 1050	1.5	2.38 HP	1530	--	--	126	64	460V-3P	30	40	1058	2,3,4,5
RTU-2	TRANE Y5K150A4SBH	MUSIC/ BAND	5000	500/ 1000	1.5	3.27 HP	1697	250	202.5	150	114	460V-3P	33	45	1423	1,3,4,5
RTU-3	AAON RNA-030	GYMNASIUM/ MEZZANINE	11,000	1350	1.5	15 HP	800	540	438	334	280	460V-3P	94	110	4134	6,7,8,9,10,11,12,13

NOTES:
1. PROVIDE ROOF CURB ADAPTOR AT EXISTING ROOF CURB, OUTSIDE ENTHALPY CONTROL, HIGH PERFORMANCE ECONOMIZER AND BAROMETRIC RELIEF FACTORY INSTALLED
2. INSTALL AT EXISTING ROOF CURB, OUTSIDE ENTHALPY CONTROL, HIGH PERFORMANCE ECONOMIZER AND BAROMETRIC RELIEF FACTORY INSTALLED
3. PROVIDE WITH 2" MERV 13 FILTERS, FACTORY INSTALLED DISCONNECT AND GFI OUTLET (FIELD WIRE BY ELECTRICAL) AND PHASE MONITOR
4. PROVIDE UNIT WITH HAIL GUARDS AND MULTI SPEED AIR VOLUME FAN.
5. PROVIDE CO2 CONTROL MINIMUM TO MAXIMUM OUTSIDE AIR FLOW AND WALL MOUNTED CO2 SENSOR.
6. PROVIDE UNIT WITH 26" TALL DOUBLE WALL INSULATED (MIN R VALUE OF 8) PLENUM CURB WITH SOLID BOTTOM FOR FIELD CONNECTION TO RETURN AIR DUCTS.
7. PROVIDE UNIT WITH HORIZONTAL SUPPLY AND RETURN AIR CONNECTIONS, AND BOTTOM RETURN AIR CONNECTION THROUGH ROOF CURB.
8. STAINLESS STEEL HEAT EXCHANGER, WITH 10:1 TURN DOWN MODULATING GAS HEAT, (2) 2-STEP SCROLL COMPRESSORS AND 5 STAGE COOLING
9. PROVIDE WITH 2" DOUBLE WALL CONSTRUCTION AND STAINLESS STEEL DRAIN PAN, SINGLE ZONE VAV SEQUENCE OF OPERATION
10. MODULATING POWER EXHAUST WITH BUILDING PRESSURE CONTROL , FULLY MODULATING ECONOMIZER WITH ENTHALPY CONTROLS AND RA CO2 FOR ON DEMAND VENTILATION
11. SMOKE DETECTORS IN SUPPLY AND RETURN, CONNECT TO CONTROLS TO SHUT DOWN UNITS. COORDINATE WITH ELECTRICAL TRADES FOR FIRE ALARM CONNECTION
12. PROVIDE WITH ATMOSAIR 505FC BI-POLAR IONIZATION INSTALLED IN AIR STREAM
13.FACORY MOUNTED AND WIRED NON-FUSED DISCONNECT AND UNIT POWERED 115V GFI OUTLET.

AIR HANDLING UNIT SCHEDULE

TAG	TRANE MODEL	UNIT LOCATION AREA SERVED	CFM	MIN/NORM OA	ESP	HOT WATER HEAT CAPACITY MBH	HW GPM	HW DEL-T	HW EAT	HW LAT	DX COOLING MBH TOTAL	DX SENSIBLE	DX EAT	DX LAT	MCA	MOP	FAN HP	VOLTAGE	NOTES
AHU-1	CSAA025	CAFETERIA	12000	3000	1.0	535	50.5	20	50	95	300	221.05	78.75	65.71	23.02	30	10.73 PER FAN (2 FANS)	460V-3P	ALL

NOTES:
1. PROVIDE UNIT WITH FACTORY MOUNTED AND WIRED VFD AND COMPATIBLE WITH BMS SYSTEM REQUIREMENTS
2. PROVIDE UNIT WITH FACTORY MOUNTED FUSED DISCONNECT
3. PROVIDE UNIT DIGITAL CONTROLS READY WITH WIRING STRIP FOR FIELD MOUNTED CONTROL, DAMPERS, ACTUATORS, SAFETIES, ETC.
4. PROVIDE UNIT WITH BASE RAILS FOR PIPING, INSTALL UNIT ON RUBBER ISOLATION PADS.
5. PROVIDE UNIT WITH FILTER MIXING BOX AND SUPPLY FAN.
6. SEE AIR HANDLING UNIT DIAGRAMS ON SHEET B-M501 FOR MORE DETAIL ON UNITS

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS

OUTDOOR AIR VENTILATION SCHEDULE

HVAC SYSTEM	OCCUPANCY CLASSIFICATION	AREA (SQ. FT.)	MAXIMUM OCCUPANCY PER 1000 S.F.	OCCUPANT LOAD	OUTDOOR AIR REQUIRED PER PERSON (CFM)	OUTDOOR AIR FLOW RATE BREATHING ZONE (CFM)	OUTDOOR AIR RATE BREATHING ZONE (CFM)	OUTDOOR AIR RATE FOR PEOPLE ZONE (CFM)	OUTDOOR AIR REQUIRED FOR EACH SPACE (CFM)	TOTAL OUTDOOR AIR REQUIRED (CFM)	TOTAL OUTDOOR AIR PROVIDED (CFM)
UV-1 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 300	817	35	29	10	0.12	98	290	388	388	400
UV-2 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 301	817	35	29	10	0.12	98	290	388	388	400
UV-3 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 303	817	35	29	10	0.12	98	290	388	388	400
UV-4 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 305	817	35	29	10	0.12	98	290	388	388	400
UV-5 S.A.: 1250 CFM 16% OA 200 OA	STAFF LOUNGE 120	566	50	28	5	0.06	68	140	34	174	200
UV-6 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 307	817	35	29	10	0.12	98	290	388	388	400
UV-7 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 309	817	35	29	10	0.12	98	290	388	388	400
UV-8 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 311	817	35	29	10	0.12	98	290	388	388	400
UV-9 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 313	823	35	29	10	0.12	99	290	389	389	400
UV-10 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 315	809	35	29	10	0.12	97	290	387	387	400
UV-11 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 312	817	35	29	10	0.12	98	290	388	388	400
UV-12 S.A.: 1250 CFM 24% OA 300 OA	COMPUTER ROOM 114	812	25	20	10	0.12	98	200	298	298	300
UV-13 S.A.: 750 CFM 26% OA 200 OA	VIDEO LAB	412	25	10	10	0.12	50	100	150	150	200
UV-14 S.A.: 1500 CFM 33% OA 500 OA	ART 110	1284	20	26	10	0.18	232	260	492	492	500
UV-15 S.A.: 1500 CFM 33% OA 500 OA	CLASSROOM 108	1048	35	37	10	0.12	126	370	496	496	500
UV-16 S.A.: 1500 CFM 33% OA 500 OA	CLASSROOM 106	1048	35	37	10	0.12	126	370	496	496	500
UV-17 S.A.: 1500 CFM 36% OA 550 OA	SCIENCE 104	1208	25	30	10	0.18	217	300	528	517	550
UV-18 S.A.: 1500 CFM 36% OA 550 OA	SCIENCE 102	1215	25	31	10	0.18	219	310	529	529	550
UV-19 S.A.: 1250 CFM 32% OA 400 OA	CLASSROOM 115	716	35	26	10	0.12	86	260	346	346	400
UV-20 S.A.: 1250 CFM 28% OA 350 OA	CLASSROOM 304	712	35	25	10	0.12	86	250	336	336	350
UV-21 S.A.: 1000 CFM 30% OA 300 OA	CLASSROOM 111	550	35	20	10	0.12	67	200	267	267	300
UV-22 S.A.: 1250 CFM 28% OA 350 OA	CLASSROOM 113	734	35	26	10	0.12	89	260	349	349	350
UV-23 S.A.: 1000 CFM 30% OA 300 OA	CLASSROOM 109	561	35	20	10	0.12	67	200	267	267	300
UV-24 S.A.: 1250 CFM 30% OA 375 OA	CLASSROOM 107	753	35	27	10	0.12	90	270	360	360	375
UV-25 S.A.: 1250 CFM 28% OA 350 OA	CLASSROOM 105	728	35	26	10	0.12	87	260	347	347	350
UV-26 S.A.: 1250 CFM 28% OA 350 OA	CLASSROOM 103	719	35	26	10	0.12	86	260	346	346	350
UV-27 S.A.: 750 CFM 26% OA 200 OA	TECH 201	364	35	13	10	0.12	44	130	174	174	200
UV-28 S.A.: 1500 CFM 30% OA 450 OA	COMPUTER ROOM 200	1205	25	30	10	0.12	145	300	445	445	450
UV-29,30 S.A.: 2750 CFM 29% OA 800 OA	MEDIA CENTER 206	1652	25	42	10	0.12	198	420	618	658	800
	MEDIA CENTER OFFICE	412	5	3	5	0.06	25	15	40		
RTU-1 S.A.: 3700 CFM 28% OA 1050 OA	SCIENCE 314	1114	25	28	10	0.18	200	280	480	1029	1050
	SCIENCE 316	1114	25	28	10	0.18	200	280	480		
	OFFICE	132	5	1	5	0.06	8	5	13		
	STORAGE	144	--	--	--	0.12	18	--	18		
	CORRIDOR	632	--	--	--	0.06	38	--	38		
RTU-2 S.A.: 5000 CFM 20% OA 1000 OA	MUSIC ROOM 121	2028	35	71	10	0.06	122	710	832	933	1000
	INSTRUMENT STORAGE	357	--	--	--	0.12	43	--	43		
	OFFICE	114	5	1	5	0.06	7	5	12		
	PRACTICE ROOM	98	5	1	5	0.06	6	5	11		
	PRACTICE ROOM	115	5	1	5	0.06	7	5	12		
	PRACTICE ROOM	86	5	1	5	0.06	6	5	11		
	PRACTICE ROOM	115	5	1	5	0.06	7	5	12		
RTU-3 S.A.: 11000 CFM 12% OA 1350 OA	GYMNASIUM (PLAY AREA)	4845	7	34	20	0.18	872	680	1552	3864	1350*
	GYMNASIUM (SEATING AREA)	950	150	147	7.5	0.06	54	1103	1162		
	MEZZANINE	3603	7	25	20	0.18	650	500	1150		
AHU-1 S.A.: 12000 CFM 25% OA 3000 OA	CAFETERIA	2901	70	204	7.5	0.18	523	1530	2053	2285	3000
	CORRIDOR	3571	--	--	--	0.06	--	--	232		
	OFFICE 210	76	5	1	5	0.06	5	5	10		

NOTES: 1. TOTAL OUTDOOR AIR PROVIDED IS IN COMPLIANCE W/THE REQUIRED OUTDOOR VENTILATION AIR PER TABLE 403.3.1.1 OF THE 2021 MMC.

* IAQP OUTSIDE AIR 1316 CFM (REQUIRED). OUTSIDE AIR FLOW USING ASHRAE 62-1 2022 IAQP CALCULATION AND USING ATMOSAIR 500FG BI-POLARIZATION IONIZATION SYSTEM

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

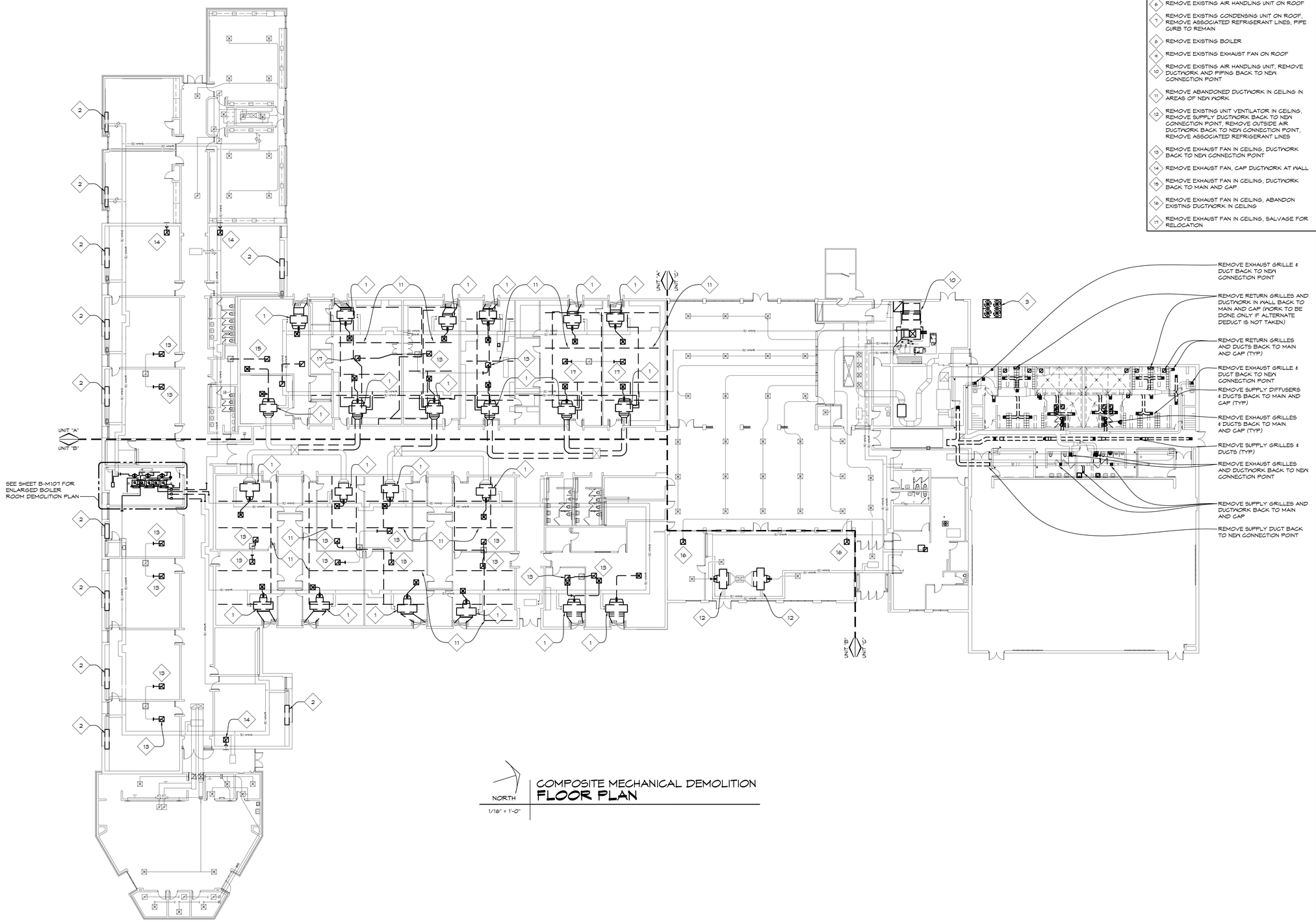
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

MECHANICAL SCHEDULES

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M002
	REVIEWED MLB	DRAWING NO. B-M002
	DATE OCT 19, 2026	
	SCALE AS NOTED	SHEET NO. 12 OF 38



NORTH
1/16" = 1'-0"

COMPOSITE MECHANICAL DEMOLITION
FLOOR PLAN

KEYED MECHANICAL DEMOLITION NOTES

1. REMOVE EXISTING UNIT VENTILATOR IN CEILING, REMOVE ALL SUPPLY DUCTWORK AND DIFFUSERS, REMOVE OUTSIDE AIR DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE ASSOCIATED REFRIGERANT LINES
2. REMOVE EXISTING UNIT VENTILATOR, REMOVE ASSOCIATED REFRIGERANT LINES
3. REMOVE EXISTING CONDENSING UNIT ON GRADE, REMOVE ASSOCIATED REFRIGERANT LINES
4. REMOVE EXISTING CONDENSING UNIT ON ROOF, REMOVE ASSOCIATED REFRIGERANT LINES, SEAL EXISTING PIPE CURB OPENING
5. REMOVE EXISTING ROOF TOP UNIT
6. REMOVE EXISTING AIR HANDLING UNIT ON ROOF
7. REMOVE EXISTING CONDENSING UNIT ON ROOF, REMOVE ASSOCIATED REFRIGERANT LINES, PIPE CURB TO REMAIN
8. REMOVE EXISTING BOILER
9. REMOVE EXISTING EXHAUST FAN ON ROOF
10. REMOVE EXISTING AIR HANDLING UNIT, REMOVE DUCTWORK AND PIPING BACK TO NEW CONNECTION POINT
11. REMOVE ABANDONED DUCTWORK IN CEILING IN AREAS OF NEW WORK
12. REMOVE EXISTING UNIT VENTILATOR IN CEILING, REMOVE SUPPLY DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE OUTSIDE AIR DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE ASSOCIATED REFRIGERANT LINES
13. REMOVE EXHAUST FAN IN CEILING, DUCTWORK BACK TO NEW CONNECTION POINT
14. REMOVE EXHAUST FAN, CAP DUCTWORK AT WALL
15. REMOVE EXHAUST FAN IN CEILING, DUCTWORK BACK TO MAIN AND CAP
16. REMOVE EXHAUST FAN IN CEILING, ABANDON EXISTING DUCTWORK IN CEILING
17. REMOVE EXHAUST FAN IN CEILING, SALVAGE FOR RELOCATION

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

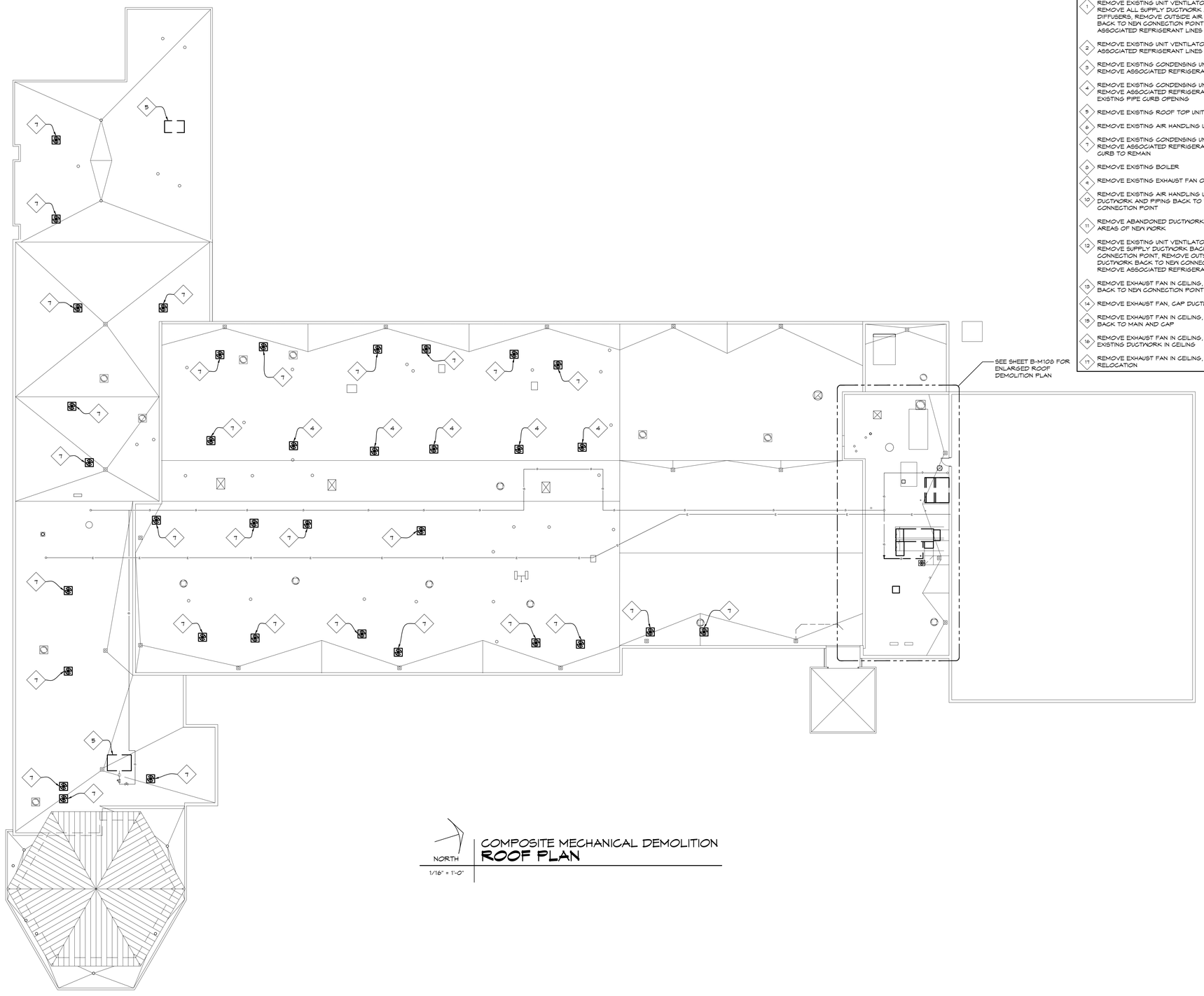
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
COMPOSITE MECHANICAL DEMOLITION PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M101
	REVIEWED MLB	DRAWING NO. B-M101
	DATE OCT 19, 2026	SHEET NO. 13 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210\2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-M101.ME(CH(
Plot date: 10/19/2026 11:13 AM



NORTH
1/16" = 1'-0"

COMPOSITE MECHANICAL DEMOLITION
ROOF PLAN

KEYED MECHANICAL DEMOLITION NOTES

1. REMOVE EXISTING UNIT VENTILATOR IN CEILING, REMOVE ALL SUPPLY DUCTWORK AND DIFFUSERS, REMOVE OUTSIDE AIR DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE ASSOCIATED REFRIGERANT LINES
2. REMOVE EXISTING UNIT VENTILATOR, REMOVE ASSOCIATED REFRIGERANT LINES
3. REMOVE EXISTING CONDENSING UNIT ON GRADE, REMOVE ASSOCIATED REFRIGERANT LINES
4. REMOVE EXISTING CONDENSING UNIT ON ROOF, REMOVE ASSOCIATED REFRIGERANT LINES, SEAL EXISTING PIPE CURB OPENING
5. REMOVE EXISTING ROOF TOP UNIT
6. REMOVE EXISTING AIR HANDLING UNIT ON ROOF
7. REMOVE EXISTING CONDENSING UNIT ON ROOF, REMOVE ASSOCIATED REFRIGERANT LINES, PIPE CURB TO REMAIN
8. REMOVE EXISTING BOILER
9. REMOVE EXISTING EXHAUST FAN ON ROOF
10. REMOVE EXISTING AIR HANDLING UNIT, REMOVE DUCTWORK AND PIPING BACK TO NEW CONNECTION POINT
11. REMOVE ABANDONED DUCTWORK IN CEILING IN AREAS OF NEW WORK
12. REMOVE EXISTING UNIT VENTILATOR IN CEILING, REMOVE SUPPLY DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE OUTSIDE AIR DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE ASSOCIATED REFRIGERANT LINES
13. REMOVE EXHAUST FAN IN CEILING, DUCTWORK BACK TO NEW CONNECTION POINT
14. REMOVE EXHAUST FAN, CAP DUCTWORK AT WALL
15. REMOVE EXHAUST FAN IN CEILING, DUCTWORK BACK TO MAIN AND CAP
16. REMOVE EXHAUST FAN IN CEILING, ABANDON EXISTING DUCTWORK IN CEILING
17. REMOVE EXHAUST FAN IN CEILING, SALVAGE FOR RELOCATION

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

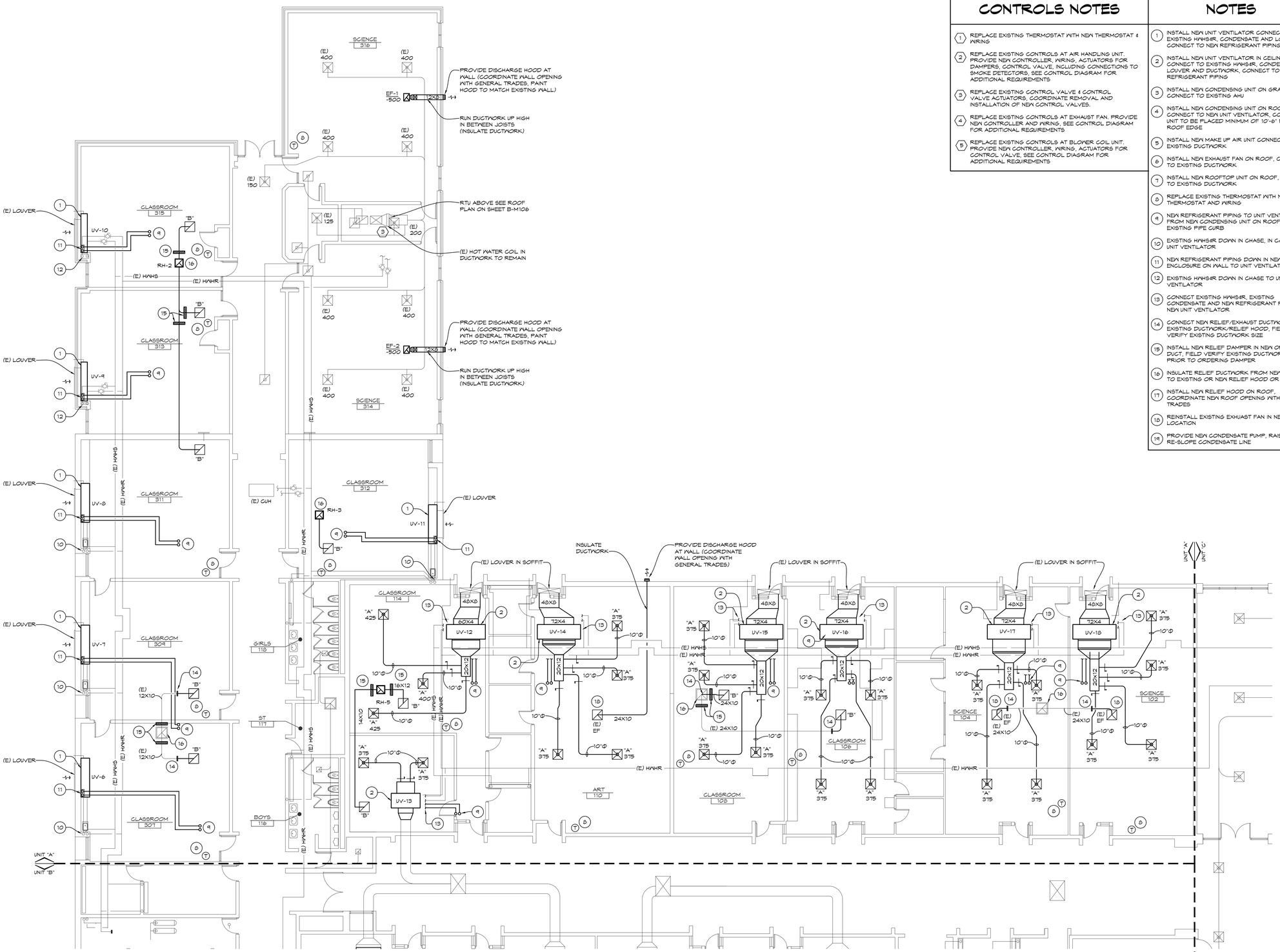
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
COMPOSITE MECHANICAL ROOF DEMOLITION PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M102
	REVIEWED MLB	DRAWING NO. B-M102
	DATE OCT 19, 2026	SHEET NO. 14 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS B-M102 MECH1
Plot date: 10/19/2026 11:13 AM



NORTH

1/8" = 1'-0"

UNIT 'A' MECHANICAL FLOOR PLAN

KEYED CONTROLS NOTES

1. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT & WIRING
2. REPLACE EXISTING CONTROLS AT AIR HANDLING UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR DAMPERS, CONTROL VALVE, INCLUDING CONNECTIONS TO SMOKE DETECTORS, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
3. REPLACE EXISTING CONTROL VALVE & CONTROL VALVE ACTUATORS, COORDINATE REMOVAL AND INSTALLATION OF NEW CONTROL VALVES.
4. REPLACE EXISTING CONTROLS AT EXHAUST FAN. PROVIDE NEW CONTROLLER AND WIRING, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
5. REPLACE EXISTING CONTROLS AT BLOWER COIL UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR CONTROL VALVE, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS

KEYED MECHANICAL NOTES

1. INSTALL NEW UNIT VENTILATOR CONNECT TO EXISTING HWHS&R, CONDENSATE AND LOUVER, CONNECT TO NEW REFRIGERANT PIPING
2. INSTALL NEW UNIT VENTILATOR IN CEILING CONNECT TO EXISTING HWHS&R, CONDENSATE, LOUVER AND DUCTWORK, CONNECT TO NEW REFRIGERANT PIPING
3. INSTALL NEW CONDENSING UNIT ON GRADE CONNECT TO EXISTING AHU
4. INSTALL NEW CONDENSING UNIT ON ROOF CONNECT TO NEW UNIT VENTILATOR, CONDENSING UNIT TO BE PLACED MINIMUM OF 10'-6" FROM ROOF EDGE
5. INSTALL NEW MAKE UP AIR UNIT CONNECT TO EXISTING DUCTWORK
6. INSTALL NEW EXHAUST FAN ON ROOF, CONNECT TO EXISTING DUCTWORK
7. INSTALL NEW ROOFTOP UNIT ON ROOF, CONNECT TO EXISTING DUCTWORK
8. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT AND WIRING
9. NEW REFRIGERANT PIPING TO UNIT VENTILATOR FROM NEW CONDENSING UNIT ON ROOF, REUSE EXISTING PIPE CURB
10. EXISTING HWHS&R DOWN IN CHASE, IN CABINET TO UNIT VENTILATOR
11. NEW REFRIGERANT PIPING DOWN IN NEW PIPE ENCLOSURE ON WALL TO UNIT VENTILATOR
12. EXISTING HWHS&R DOWN IN CHASE TO UNIT VENTILATOR
13. CONNECT EXISTING HWHS&R, EXISTING CONDENSATE AND NEW REFRIGERANT PIPING TO NEW UNIT VENTILATOR
14. CONNECT NEW RELIEF/EXHAUST DUCTWORK TO EXISTING DUCTWORK/RELIEF HOOD, FIELD VERIFY EXISTING DUCTWORK SIZE
15. INSTALL NEW RELIEF DAMPER IN NEW OR EXISTING DUCT, FIELD VERIFY EXISTING DUCTWORK SIZE PRIOR TO ORDERING DAMPER
16. INSULATE RELIEF DUCTWORK FROM NEW DAMPER TO EXISTING OR NEW RELIEF HOOD OR LOUVER
17. INSTALL NEW RELIEF HOOD ON ROOF, COORDINATE NEW ROOF OPENING WITH GENERAL TRADES
18. REINSTALL EXISTING EXHAUST FAN IN NEW LOCATION
19. PROVIDE NEW CONDENSATE PUMP, RAISE AND RE-SLOPE CONDENSATE LINE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

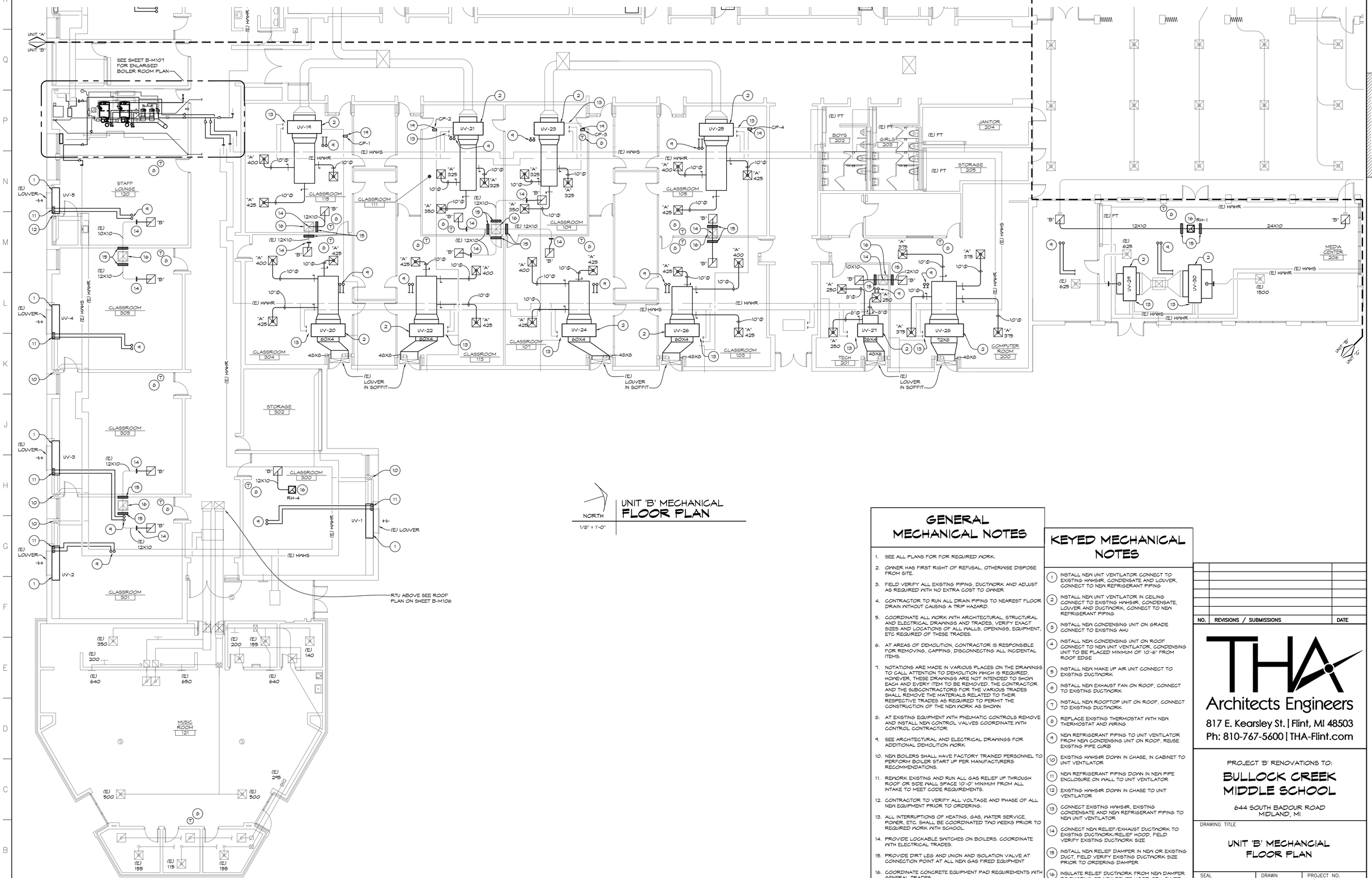
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'A' MECHANICAL FLOOR PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M103
	REVIEWED MLB	DRAWING NO. B-M103
	DATE OCT 19, 2026	SHEET NO. 15 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Saves Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC'MS\B-M103 UNIT'A
Plot date: 10/19/2026 11:13 AM



NORTH
1/8" = 1'-0"

UNIT 'B' MECHANICAL FLOOR PLAN

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

KEYED MECHANICAL NOTES

1. INSTALL NEW UNIT VENTILATOR CONNECT TO EXISTING HVAHSR, CONDENSATE AND LOUVER, CONNECT TO NEW REFRIGERANT PIPING
2. INSTALL NEW UNIT VENTILATOR IN CEILING CONNECT TO EXISTING HVAHSR, CONDENSATE, LOUVER AND DUCTWORK, CONNECT TO NEW REFRIGERANT PIPING
3. INSTALL NEW CONDENSING UNIT ON GRADE CONNECT TO EXISTING AHU
4. INSTALL NEW CONDENSING UNIT ON ROOF CONNECT TO NEW UNIT VENTILATOR, CONDENSING UNIT TO BE PLACED MINIMUM OF 10'-6" FROM ROOF EDGE
5. INSTALL NEW MAKE UP AIR UNIT CONNECT TO EXISTING DUCTWORK
6. INSTALL NEW EXHAUST FAN ON ROOF, CONNECT TO EXISTING DUCTWORK
7. INSTALL NEW ROOFTOP UNIT ON ROOF, CONNECT TO EXISTING DUCTWORK
8. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT AND WIRING
9. NEW REFRIGERANT PIPING TO UNIT VENTILATOR FROM NEW CONDENSING UNIT ON ROOF, REUSE EXISTING PIPE CURB
10. EXISTING HVAHSR DOWN IN CHASE, IN CABINET TO UNIT VENTILATOR
11. NEW REFRIGERANT PIPING DOWN IN NEW PIPE ENCLOSURE ON WALL TO UNIT VENTILATOR
12. EXISTING HVAHSR DOWN IN CHASE TO UNIT VENTILATOR
13. CONNECT EXISTING HVHSIR, EXISTING CONDENSATE AND NEW REFRIGERANT PIPING TO NEW UNIT VENTILATOR
14. CONNECT NEW RELIEF/EXHAUST DUCTWORK TO EXISTING DUCTWORK/RELIEF HOOD, FIELD VERIFY EXISTING DUCTWORK SIZE
15. INSTALL NEW RELIEF DAMPER IN NEW OR EXISTING DUCT, FIELD VERIFY EXISTING DUCTWORK SIZE PRIOR TO ORDERING DAMPER
16. INSULATE RELIEF DUCTWORK FROM NEW DAMPER TO EXISTING OR NEW RELIEF HOOD OR LOUVER
17. INSTALL NEW RELIEF HOOD ON ROOF, COORDINATE NEW ROOF OPENING WITH GENERAL TRADES
18. REINSTALL EXISTING EXHUAST FAN IN NEW LOCATION
19. PROVIDE NEW CONDENSATE PUMP, RAISE AND RE-SLOPE CONDENSATE LINE

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

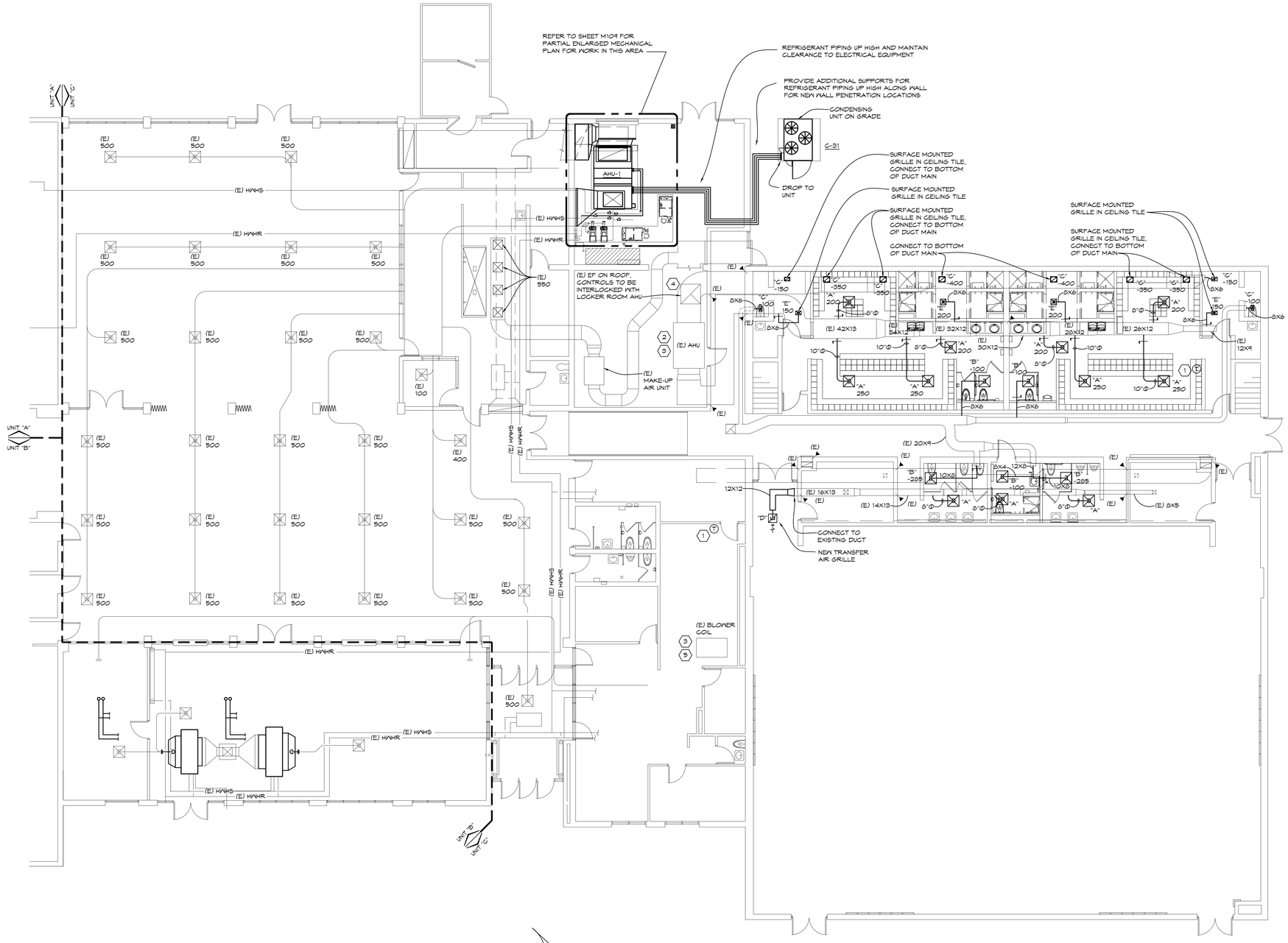
DRAWING TITLE

UNIT 'B' MECHANICAL FLOOR PLAN

SEAL

DRAWN CJV/KLS	PROJECT NO. 26-210
CHECKED KLS	CAD FILE NO. B-M104
REVIEWED MLB	DRAWING NO. B-M104
DATE OCT 19, 2026	SHEET NO. 16 OF 38
SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC MS\B-M104 UNIT 'B'.dwg
Plot date: 10/19/2026 11:13 AM



KEYED CONTROLS NOTES

1. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT & WIRING
2. REPLACE EXISTING CONTROLS AT AIR HANDLING UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR DAMPERS, CONTROL VALVE, INCLUDING CONNECTIONS TO SMOKE DETECTORS. SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
3. REPLACE EXISTING CONTROL VALVE & CONTROL VALVE ACTUATORS, COORDINATE REMOVAL AND INSTALLATION OF NEW CONTROL VALVES.
4. REPLACE EXISTING CONTROLS AT EXHAUST FAN. PROVIDE NEW CONTROLLER AND WIRING, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
5. REPLACE EXISTING CONTROLS AT BLOWER COIL UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR CONTROL VALVE. SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS

KEYED MECHANICAL NOTES

1. INSTALL NEW UNIT VENTILATOR CONNECT TO EXISTING HWHS&R, CONDENSATE AND LOUVER, CONNECT TO NEW REFRIGERANT PIPING
2. INSTALL NEW UNIT VENTILATOR IN CEILING CONNECT TO EXISTING HWHS&R, CONDENSATE, LOUVER AND DUCTWORK, CONNECT TO NEW REFRIGERANT PIPING
3. INSTALL NEW CONDENSING UNIT ON GRADE CONNECT TO EXISTING AHU
4. INSTALL NEW CONDENSING UNIT ON ROOF CONNECT TO NEW UNIT VENTILATOR, CONDENSING UNIT TO BE PLACED MINIMUM OF 10'-6" FROM ROOF EDGE
5. INSTALL NEW MAKE UP AIR UNIT CONNECT TO EXISTING DUCTWORK
6. INSTALL NEW EXHAUST FAN ON ROOF, CONNECT TO EXISTING DUCTWORK
7. INSTALL NEW ROOFTOP UNIT ON ROOF, CONNECT TO EXISTING DUCTWORK
8. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT AND WIRING
9. NEW REFRIGERANT PIPING TO UNIT VENTILATOR FROM NEW CONDENSING UNIT ON ROOF, REUSE EXISTING PIPE CURB
10. EXISTING HWHS&R DOWN IN CHASE, IN CABINET TO UNIT VENTILATOR
11. NEW REFRIGERANT PIPING DOWN IN NEW PIPE ENCLOSURE ON WALL TO UNIT VENTILATOR
12. EXISTING HWHS&R DOWN IN CHASE TO UNIT VENTILATOR
13. CONNECT EXISTING HWHS&R, EXISTING CONDENSATE AND NEW REFRIGERANT PIPING TO NEW UNIT VENTILATOR
14. CONNECT NEW RELIEF/EXHAUST DUCTWORK TO EXISTING DUCTWORK/RELIEF HOOD, FIELD VERIFY EXISTING DUCTWORK SIZE
15. INSTALL NEW RELIEF DAMPER IN NEW OR EXISTING DUCT, FIELD VERIFY EXISTING DUCTWORK SIZE PRIOR TO ORDERING DAMPER
16. INSULATE RELIEF DUCTWORK FROM NEW DAMPER TO EXISTING OR NEW RELIEF HOOD OR LOUVER
17. INSTALL NEW RELIEF HOOD ON ROOF, COORDINATE NEW ROOF OPENING WITH GENERAL TRADES
18. REINSTALL EXISTING EXHAUST FAN IN NEW LOCATION
19. PROVIDE NEW CONDENSATE PUMP, RAISE AND RE-SLOPE CONDENSATE LINE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

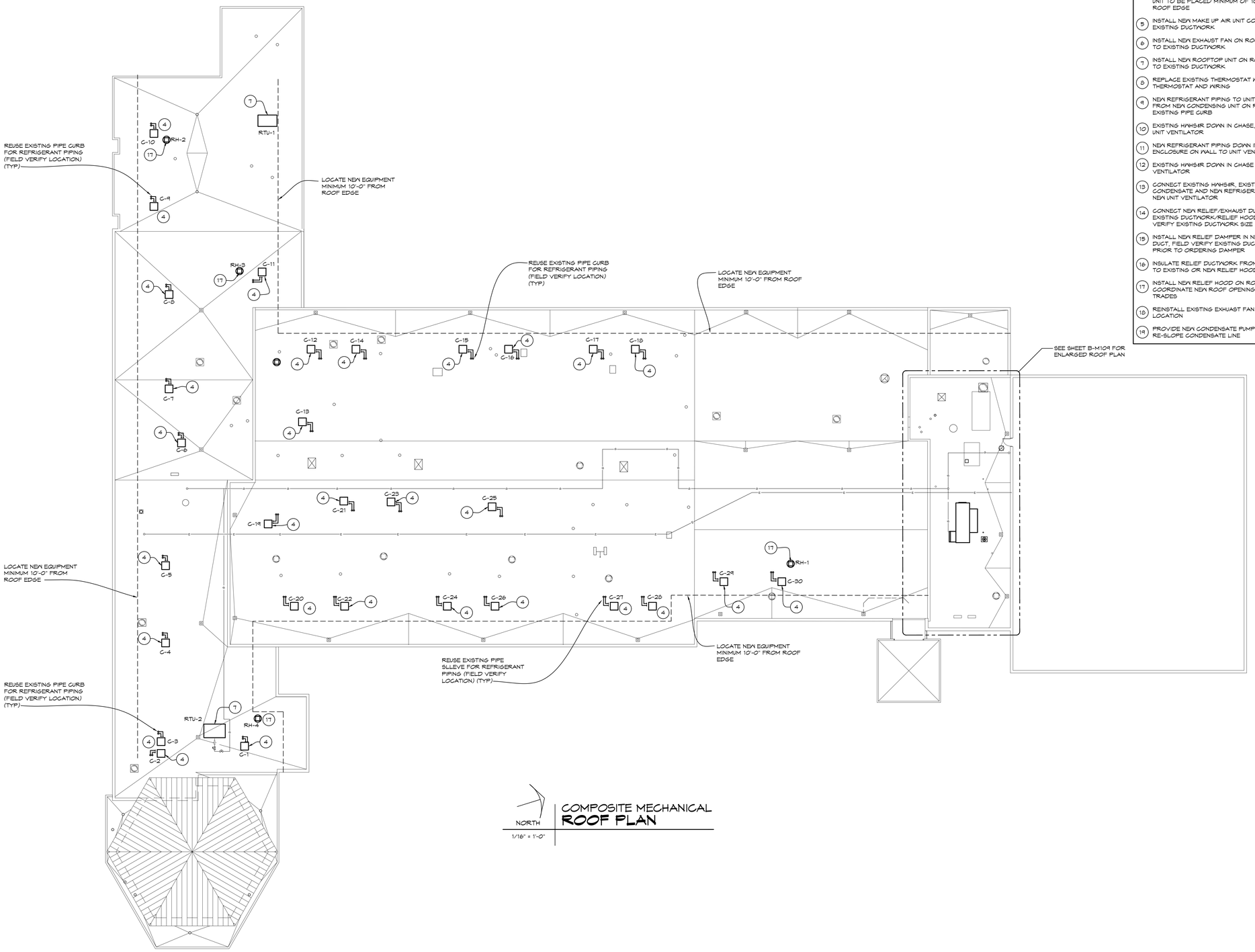
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'C' MECHANICAL FLOOR PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M105
	REVIEWED MLB	DRAWING NO. B-M105
	DATE OCT 19, 2026	SHEET NO. 17 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC MS B-M105 UNIT 'C'.dwg
Plot date: 10/19/2026 11:14 AM



NORTH

1/16" = 1'-0"

COMPOSITE MECHANICAL ROOF PLAN

KEYED MECHANICAL NOTES

1. INSTALL NEW UNIT VENTILATOR CONNECT TO EXISTING HWHSIR, CONDENSATE AND LOUVER, CONNECT TO NEW REFRIGERANT PIPING
2. INSTALL NEW UNIT VENTILATOR IN CEILING CONNECT TO EXISTING HWHSIR, CONDENSATE, LOUVER AND DUCTWORK, CONNECT TO NEW REFRIGERANT PIPING
3. INSTALL NEW CONDENSING UNIT ON GRADE CONNECT TO EXISTING AHU
4. INSTALL NEW CONDENSING UNIT ON ROOF CONNECT TO NEW UNIT VENTILATOR, CONDENSING UNIT TO BE PLACED MINIMUM OF 10'-6" FROM ROOF EDGE
5. INSTALL NEW MAKE UP AIR UNIT CONNECT TO EXISTING DUCTWORK
6. INSTALL NEW EXHAUST FAN ON ROOF, CONNECT TO EXISTING DUCTWORK
7. INSTALL NEW ROOFTOP UNIT ON ROOF, CONNECT TO EXISTING DUCTWORK
8. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT AND WIRING
9. NEW REFRIGERANT PIPING TO UNIT VENTILATOR FROM NEW CONDENSING UNIT ON ROOF, REUSE EXISTING PIPE CURB
10. EXISTING HWHSIR DOWN IN CHASE, IN CABINET TO UNIT VENTILATOR
11. NEW REFRIGERANT PIPING DOWN IN NEW PIPE ENCLOSURE ON WALL TO UNIT VENTILATOR
12. EXISTING HWHSIR DOWN IN CHASE TO UNIT VENTILATOR
13. CONNECT EXISTING HWHSIR, EXISTING CONDENSATE AND NEW REFRIGERANT PIPING TO NEW UNIT VENTILATOR
14. CONNECT NEW RELIEF/EXHAUST DUCTWORK TO EXISTING DUCTWORK/RELIEF HOOD, FIELD VERIFY EXISTING DUCTWORK SIZE
15. INSTALL NEW RELIEF DAMPER IN NEW OR EXISTING DUCT, FIELD VERIFY EXISTING DUCTWORK SIZE PRIOR TO ORDERING DAMPER
16. INSULATE RELIEF DUCTWORK FROM NEW DAMPER TO EXISTING OR NEW RELIEF HOOD OR LOUVER
17. INSTALL NEW RELIEF HOOD ON ROOF, COORDINATE NEW ROOF OPENING WITH GENERAL TRADES
18. REINSTALL EXISTING EXHAUST FAN IN NEW LOCATION
19. PROVIDE NEW CONDENSATE PUMP, RAISE AND RE-SLOPE CONDENSATE LINE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

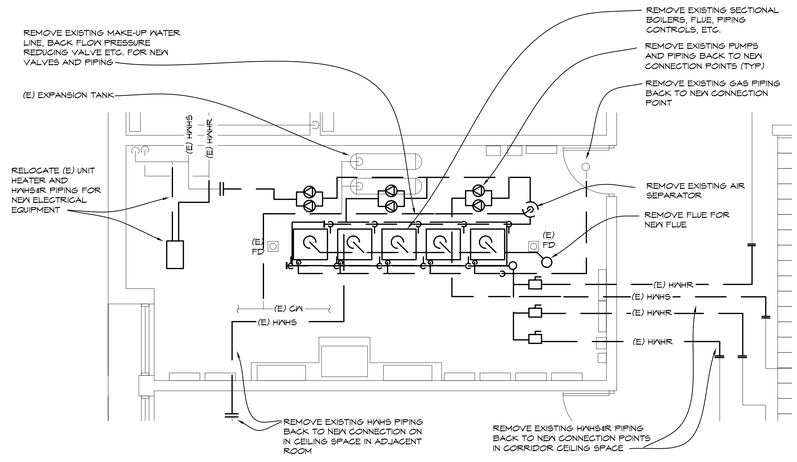
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE MECHANICAL ROOF PLAN

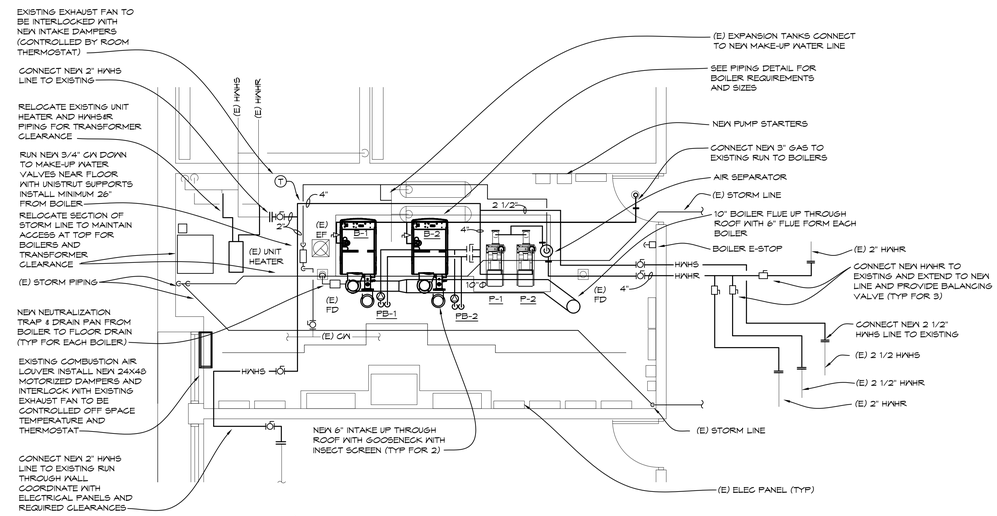
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M106
	REVIEWED MLB	DRAWING NO. B-M106
	DATE OCT 19, 2026	SHEET NO. 10 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC MS\B-M106 MECH.1
Plot date: 10/19/2026 11:14 AM



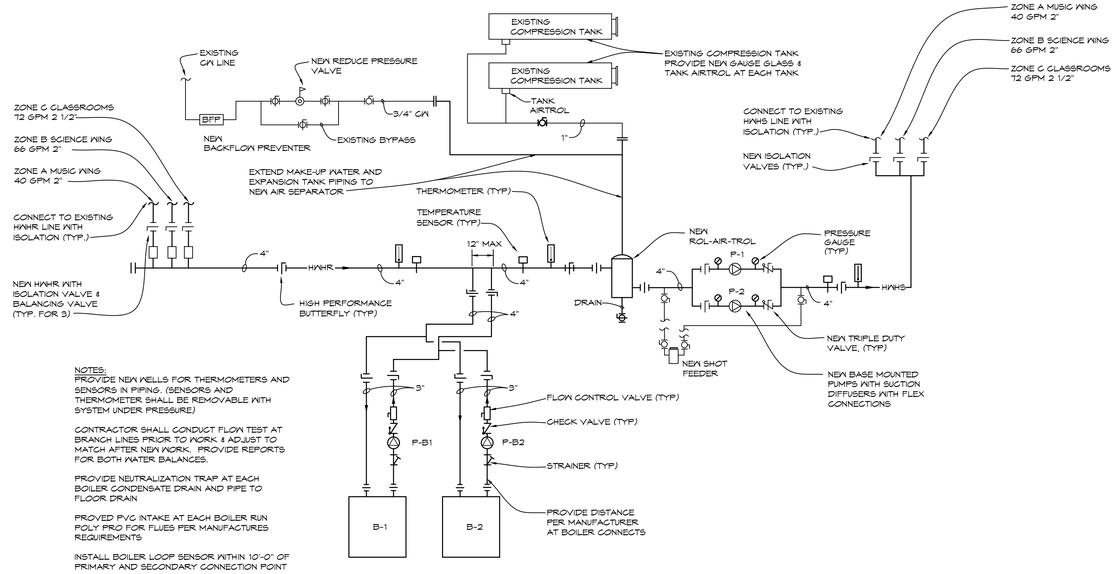
NORTH
1/4" = 1'-0"

ENLARGED MECHANICAL BOILER ROOM DEMOLITION PLAN



NORTH
1/4" = 1'-0"

ENLARGED BOILER ROOM MECHANICAL PLAN



NOTES:
PROVIDE NEW WELLS FOR THERMOMETERS AND SENSORS IN PIPING. (SENSORS AND THERMOMETER SHALL BE REMOVABLE WITH SYSTEM UNDER PRESSURE)

CONTRACTOR SHALL CONDUCT FLOW TEST AT BRANCH LINES PRIOR TO WORK & ADJUST TO MATCH AFTER NEW WORK. PROVIDE REPORTS FOR BOTH WATER BALANCES.

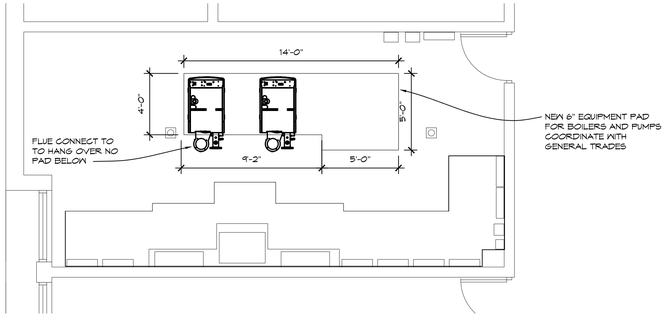
PROVIDE NEUTRALIZATION TRAP AT EACH BOILER CONDENSATE DRAIN AND PIPE TO FLOOR DRAIN

PROVED PVC INTAKE AT EACH BOILER RUN POLY PRO FOR FLUES PER MANUFACTURES REQUIREMENTS

INSTALL BOILER LOOP SENSOR WITHIN 10'-0" OF PRIMARY AND SECONDARY CONNECTION POINT

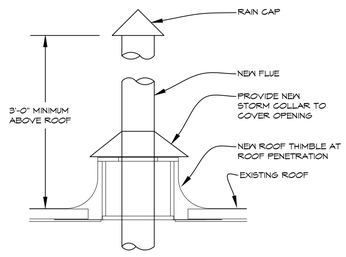
BOILER PIPING DIAGRAM

NO SCALE



NORTH
1/4" = 1'-0"

BOILER ROOM FLOOR PLAN



BOILER FLUE DETAIL

NO SCALE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

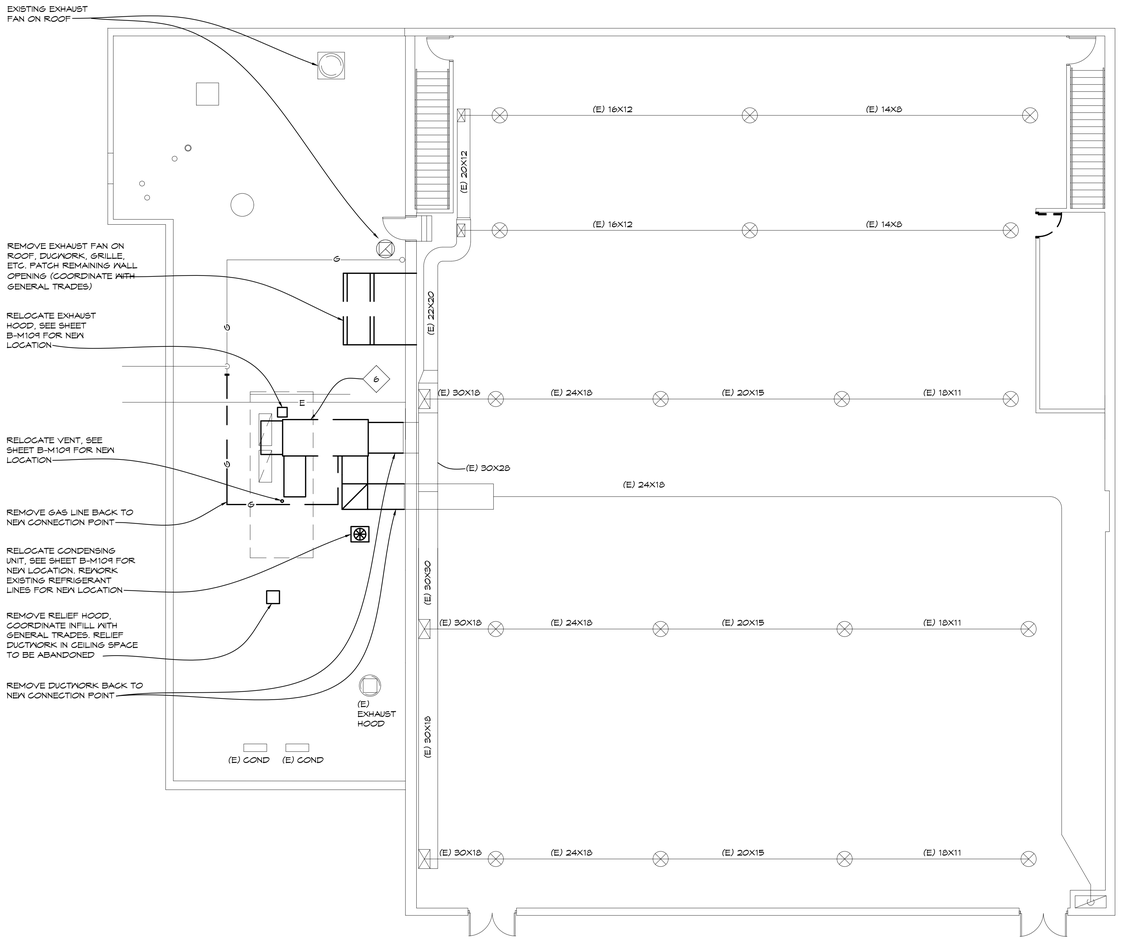
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED MECHANICAL PLANS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M107
	REVIEWED MLB	DRAWING NO. B-M107
	DATE OCT 19, 2026	SHEET NO. 19 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS B-M107 ENLAR
Plot date: 10/19/2026 11:14 AM



NORTH
1/8" = 1'-0"

ENLARGED GYMNASIUM & MEZZANINE
MECHANICAL DEMOLITION PLAN

KEYED MECHANICAL DEMOLITION NOTES

1. REMOVE EXISTING UNIT VENTILATOR IN CEILING, REMOVE ALL SUPPLY DUCTWORK AND DIFFUSERS, REMOVE OUTSIDE AIR DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE ASSOCIATED REFRIGERANT LINES
2. REMOVE EXISTING UNIT VENTILATOR, REMOVE ASSOCIATED REFRIGERANT LINES
3. REMOVE EXISTING CONDENSING UNIT ON GRADE, REMOVE ASSOCIATED REFRIGERANT LINES
4. REMOVE EXISTING CONDENSING UNIT ON ROOF, REMOVE ASSOCIATED REFRIGERANT LINES, SEAL EXISTING PIPE CURB OPENING
5. REMOVE EXISTING ROOF TOP UNIT
6. REMOVE EXISTING AIR HANDLING UNIT ON ROOF
7. REMOVE EXISTING CONDENSING UNIT ON ROOF, REMOVE ASSOCIATED REFRIGERANT LINES, PIPE CURB TO REMAIN
8. REMOVE EXISTING BOILER
9. REMOVE EXISTING EXHAUST FAN ON ROOF
10. REMOVE EXISTING AIR HANDLING UNIT, REMOVE DUCTWORK AND PIPING BACK TO NEW CONNECTION POINT
11. REMOVE ABANDONED DUCTWORK IN CEILING IN AREAS OF NEW WORK
12. REMOVE EXISTING UNIT VENTILATOR IN CEILING, REMOVE SUPPLY DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE OUTSIDE AIR DUCTWORK BACK TO NEW CONNECTION POINT, REMOVE ASSOCIATED REFRIGERANT LINES
13. REMOVE EXHAUST FAN IN CEILING, DUCTWORK BACK TO NEW CONNECTION POINT
14. REMOVE EXHAUST FAN, CAP DUCTWORK AT WALL
15. REMOVE EXHAUST FAN IN CEILING, DUCTWORK BACK TO MAIN AND CAP
16. REMOVE EXHAUST FAN IN CEILING, ABANDON EXISTING DUCTWORK IN CEILING
17. REMOVE EXHAUST FAN IN CEILING, SALVAGE FOR RELOCATION

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

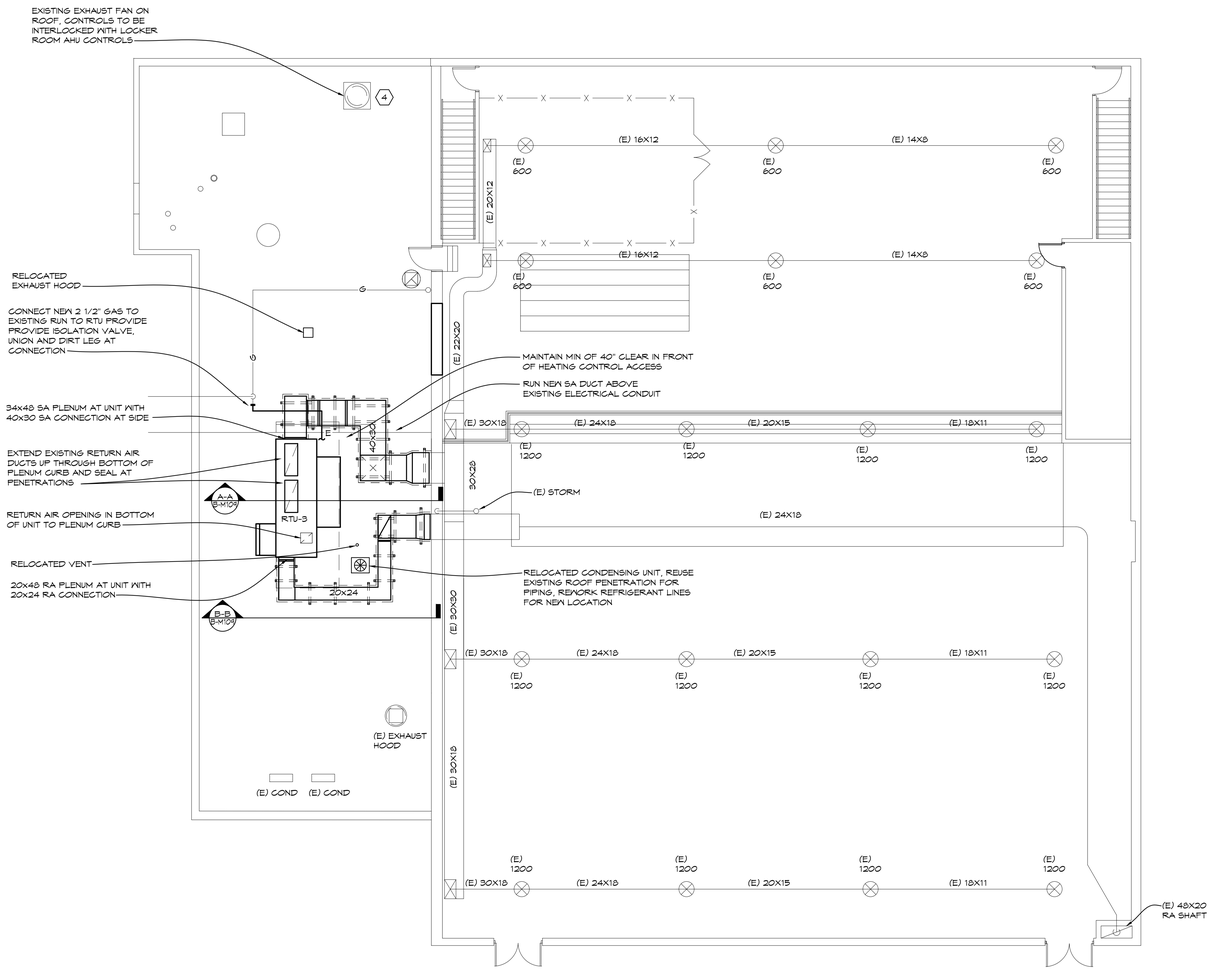
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
ENLARGED GYMNASIUM & MEZZANINE MECHANICAL DEMOLITION PLAN

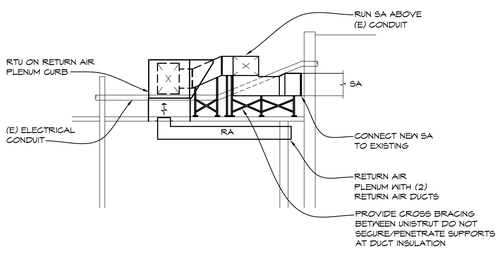
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M108
	REVIEWED MLB	DRAWING NO. B-M108
	DATE OCT 19, 2026	SHEET NO. 20 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MN\B-M108 ENLAR
Plot date: 10/19/2026 11:14 AM



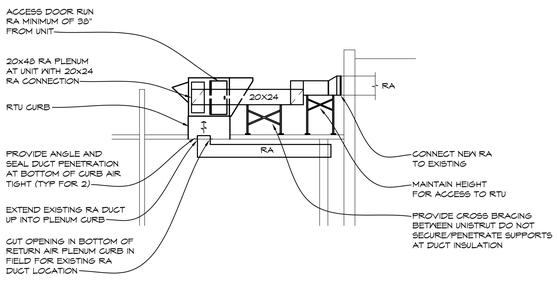
NORTH
1/8" = 1'-0"

ENLARGED GYMNASIUM & MEZZANINE MECHANICAL PLAN



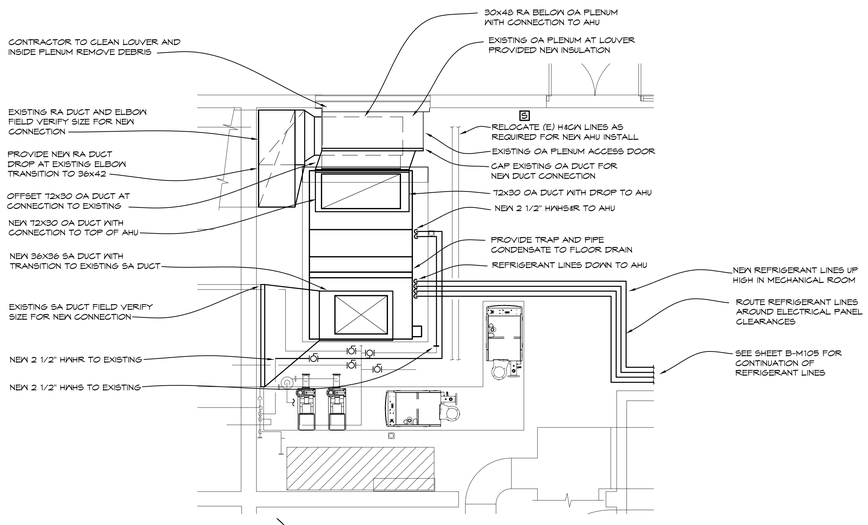
NO SCALE

MECHANICAL SECTION A-A



NO SCALE

MECHANICAL SECTION B-B



NORTH
1/4" = 1'-0"

PARTIAL ENLARGED MECHANICAL ROOM MECHANICAL PLAN

KEYED CONTROLS NOTES

1. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT & WIRING
2. REPLACE EXISTING CONTROLS AT AIR HANDLING UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR DAMPERS, CONTROL VALVE, INCLUDING CONNECTIONS TO SMOKE DETECTORS, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
3. REPLACE EXISTING CONTROL VALVE & CONTROL VALVE ACTUATORS, COORDINATE REMOVAL AND INSTALLATION OF NEW CONTROL VALVES.
4. REPLACE EXISTING CONTROLS AT EXHAUST FAN. PROVIDE NEW CONTROLLER AND WIRING, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
5. REPLACE EXISTING CONTROLS AT BLOWER COIL UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR CONTROL VALVE, SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS

KEYED MECHANICAL NOTES

1. INSTALL NEW UNIT VENTILATOR CONNECT TO EXISTING HWHSHR, CONDENSATE AND LOUVER, CONNECT TO NEW REFRIGERANT PIPING
2. INSTALL NEW UNIT VENTILATOR IN CEILING CONNECT TO EXISTING HWHSHR, CONDENSATE, LOUVER AND DUCTWORK, CONNECT TO NEW REFRIGERANT PIPING
3. INSTALL NEW CONDENSING UNIT ON GRADE CONNECT TO EXISTING AHU
4. INSTALL NEW CONDENSING UNIT ON ROOF CONNECT TO NEW UNIT VENTILATOR, CONDENSING UNIT TO BE PLACED MINIMUM OF 10'-6" FROM ROOF EDGE
5. INSTALL NEW MAKE UP AIR UNIT CONNECT TO EXISTING DUCTWORK
6. INSTALL NEW EXHAUST FAN ON ROOF, CONNECT TO EXISTING DUCTWORK
7. INSTALL NEW ROOFTOP UNIT ON ROOF, CONNECT TO EXISTING DUCTWORK
8. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT AND WIRING
9. NEW REFRIGERANT PIPING TO UNIT VENTILATOR FROM NEW CONDENSING UNIT ON ROOF, REUSE EXISTING PIPE CURB
10. EXISTING HWHSHR DOWN IN CHASE, IN CABINET TO UNIT VENTILATOR
11. NEW REFRIGERANT PIPING DOWN IN NEW PIPE ENCLOSURE ON WALL TO UNIT VENTILATOR
12. EXISTING HWHSHR DOWN IN CHASE TO UNIT VENTILATOR
13. CONNECT EXISTING HWHSHR, EXISTING CONDENSATE AND NEW REFRIGERANT PIPING TO NEW UNIT VENTILATOR
14. CONNECT NEW RELIEF/EXHAUST DUCTWORK TO EXISTING DUCTWORK/RELIEF HOOD, FIELD VERIFY EXISTING DUCTWORK SIZE
15. INSTALL NEW RELIEF DAMPER IN NEW OR EXISTING DUCT, FIELD VERIFY EXISTING DUCTWORK SIZE PRIOR TO ORDERING DAMPER
16. INSULATE RELIEF DUCTWORK FROM NEW DAMPER TO EXISTING OR NEW RELIEF HOOD OR LOUVER
17. INSTALL NEW RELIEF HOOD ON ROOF, COORDINATE NEW ROOF OPENING WITH GENERAL TRADES
18. REINSTALL EXISTING EXHAUST FAN IN NEW LOCATION
19. PROVIDE NEW CONDENSATE PUMP, RAISE AND RE-SLOPE CONDENSATE LINE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

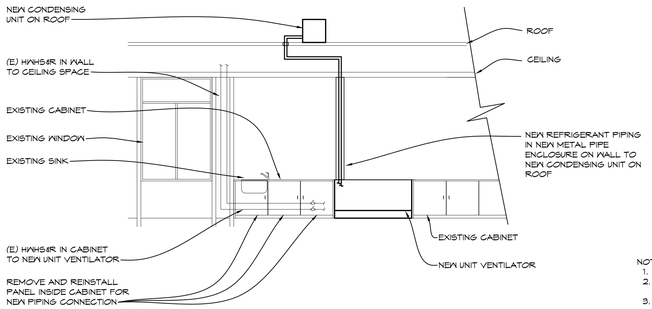
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED GYMNASIUM & MEZZANINE MECHANICAL PLAN

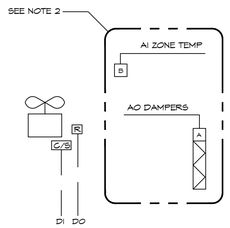
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M109
	REVIEWED MLB	DRAWING NO. B-M109
	DATE OCT 19, 2026	SHEET NO. 21 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2025 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC M01 B-M109 ENLAR
Plot date: 10/19/2026 11:14 AM



TYPICAL FLOOR UNIT VENTILATOR CABINET ELEVATION

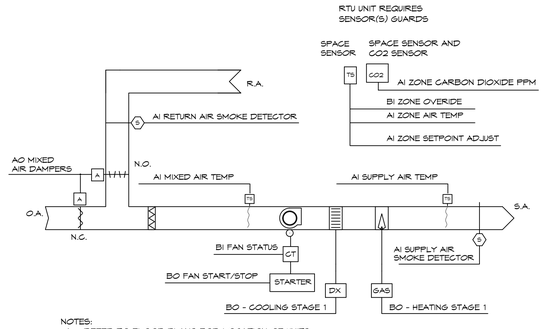
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. TC TO PROVIDE CONTROLLER, DAMPERS, ACTUATOR, THERMOSTAT & INTERLOCK WITH EXISTING EXHAUST AT BOILER ROOM
3. TC TO CONTROL EXISTING UH WITH EXHAUST FAN IN BOILER ROOM

EXHAUST FAN CONTROL DIAGRAM

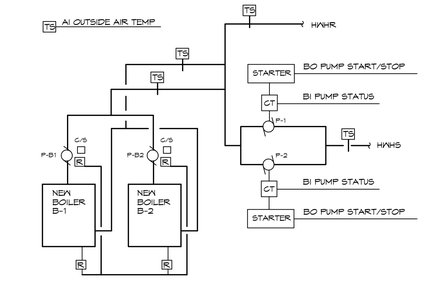
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. TC CONTRACTOR INTEGRATE CONTROLS TO UNIT SUPPLIED BAGNET CONTROLLER
3. USE FIRE ALARM SYSTEM CUT-OUT TO MOTOR STARTER CONTROL CIRCUIT
4. DDC TO INSTALL SPACE AND CO2 SENSORS REMOVE PNEUMATIC FROM PREVIOUS UNITS

RTU - GAS FIRED CONTROL DIAGRAM

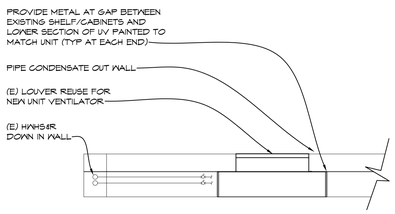
NO SCALE



NOTES:
1. TC CONTRACTOR SHALL PROVIDE BOILER EMERGENCY SHUTDOWN COMPONENTS AND WIRING
2. TC CONTRACTOR SHALL INSTALL LOW-VOLTAGE CONTROL DEVICES FURNISHED BY BOILER MANUFACTURER
3. BOILER CIRCULATION PUMP INTERLOCK WIRING TO BOILER CONTROLS BY EC

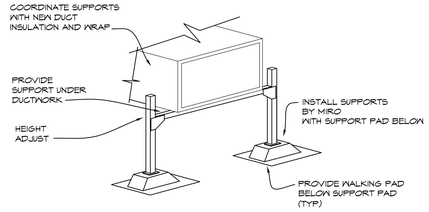
BOILER AND PUMP CONTROL DIAGRAM

NO SCALE



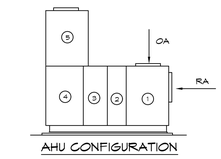
TYPICAL FLOOR UNIT VENTILATOR DETAIL

NO SCALE



DUCT SUPPORT DETAIL

NO SCALE

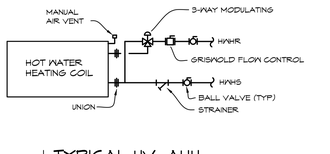


AHU CONFIGURATION

1. FILTER MIXING BOX SECTION:
MIXING BOX SECTION WITH 80.5X28.5 OUTSIDE AIR PARALLEL BLADE DAMPERS (FRONT INTAKE), 80.5X28.5 RETURN AIR DAMPERS (TOP INTAKE), DOUBLE WALL WITH ACCESS DOOR
2. HEATING WATER COIL SECTION:
HEATING HOT WATER COIL SECTION, DOUBLE WALL WITH ACCESS DOOR, STAINLESS STEEL DRAIN PAN, SEE SCHEDULE FOR CAPACITY WITH CONDENSATE DRAIN CONNECTION.
3. ACCESS SECTION:
DOUBLE WALL WITH ACCESS DOOR
4. DX COOLING COIL SECTION:
COOLING COIL SECTION, DOUBLE WALL WITH ACCESS DOOR, STAINLESS STEEL DRAIN PAN, SEE SCHEDULE FOR CAPACITY WITH CONDENSATE DRAIN CONNECTION.
5. SUPPLY FAN SECTION:
SUPPLY PLENUM FAN SECTION, VFD ON OUTSIDE OF UNIT, DOUBLE WALL WITH ACCESS DOOR, SEE SCHEDULE FOR FAN CAPACITY.

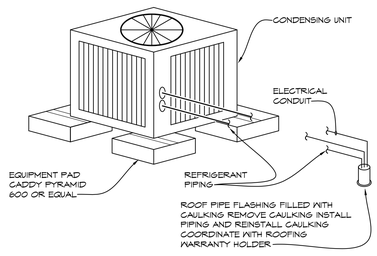
AIR HANDLING UNIT AHU-1 DETAIL

NO SCALE



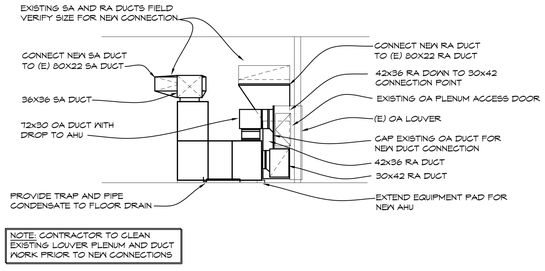
TYPICAL UV, AHU COIL PIPING DETAIL

NO SCALE



CONDENSING UNIT PIPING DETAIL

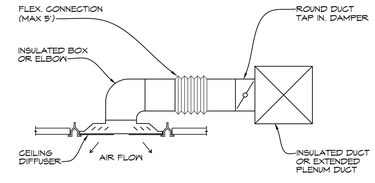
NO SCALE



NOTE: CONTRACTOR TO CLEAN EXISTING LOUVER PLENUM AND DUCT WORK PRIOR TO NEW CONNECTIONS

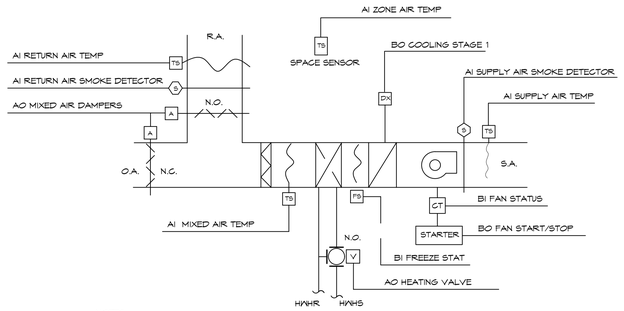
AIR HANDLING UNIT AHU-1 ELEVATION

NO SCALE



SUPPLY AIR DIFFUSER DETAIL

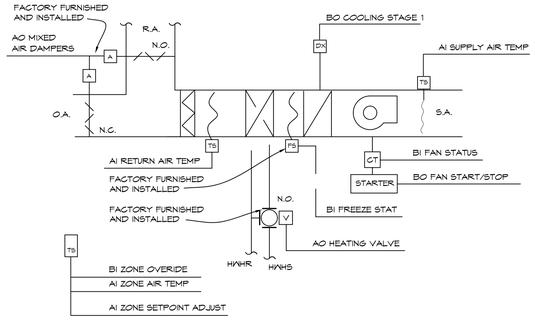
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNIT
3. TC CONTRACTOR SHALL PROVIDE ALL NEW CONTROLLER AND TEMPERATURE CONTROL DEVICES AND SAFETIES.
4. TC CONTRACTOR SHALL PROVIDE NEW 3-WAY CONTROL VALVE FOR INSTALLATION BY MECHANICAL CONTRACTOR
5. CONNECT CONTROLS TO FIRE ALARM SYSTEM CUT-OUT TO MOTOR STARTER CONTROL CIRCUIT
6. INSTALL DDC SPACE SENSOR

AHU CONTROL DIAGRAM

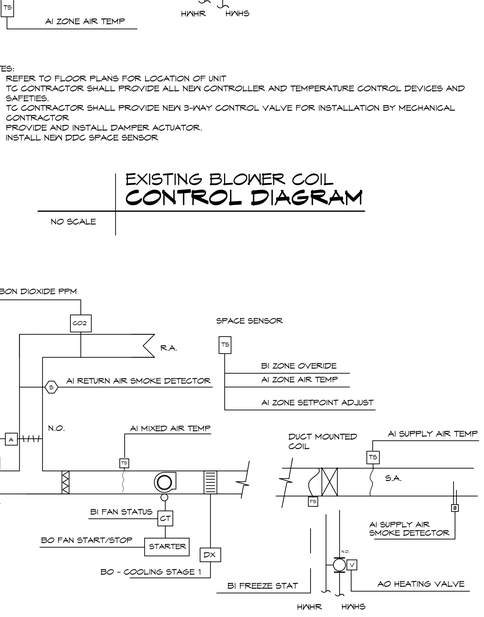
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. CONTROL VALVE, FREEZESTAT AND MIXED AIR DAMPER OPERATOR(S) FURNISHED AND INSTALLED BY UNIT MANUFACTURER.
3. TC CONTRACTOR SHALL PROVIDE CONTROLLER AND TEMPERATURE CONTROL DEVICES
4. TC CONTRACTOR SHALL PROVIDE INTERLOCK WIRING BETWEEN INDOOR AND OUTDOOR UNITS

UNIT VENTILATOR DX COOLING CONTROL DIAGRAM

NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNIT
3. TC CONTRACTOR SHALL PROVIDE ALL NEW CONTROLLER AND TEMPERATURE CONTROL DEVICES AND SAFETIES.
4. TC CONTRACTOR SHALL PROVIDE NEW 3-WAY CONTROL VALVE FOR INSTALLATION BY MECHANICAL CONTRACTOR
5. PROVIDE AND INSTALL DAMPER ACTUATOR.
6. INSTALL NEW DDC SPACE SENSOR

EXISTING BLOWER COIL CONTROL DIAGRAM

NO SCALE

NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. TC CONTRACTOR TO PROVIDE BAGNET CONTROLLER FOR UNIT
3. USE FIRE ALARM SYSTEM CUT-OUT TO MOTOR STARTER CONTROL CIRCUIT
4. DDC TO INSTALL SPACE AND CO2 SENSORS

RTU - HOT WATER CONTROL DIAGRAM

NO SCALE

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. NEW BOILERS SHALL HAVE FACTORY TRAINED PERSONNEL TO PERFORM BOILER START UP PER MANUFACTURERS RECOMMENDATIONS.
11. REWORK EXISTING AND RUN ALL GAS RELIEF UP THROUGH ROOF OR SIDE WALL SPACE 10'-0" MINIMUM FROM ALL INTAKE TO MEET CODE REQUIREMENTS.
12. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
13. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
14. PROVIDE LOCKABLE SWITCHES ON BOILERS. COORDINATE WITH ELECTRICAL TRADES.
15. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL NEW GAS FIRED EQUIPMENT
16. COORDINATE CONCRETE EQUIPMENT PAD REQUIREMENTS WITH GENERAL TRADES
17. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
18. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
19. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER

NO.	REVISIONS / SUBMISSIONS	DATE

PROJECT 'B'

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

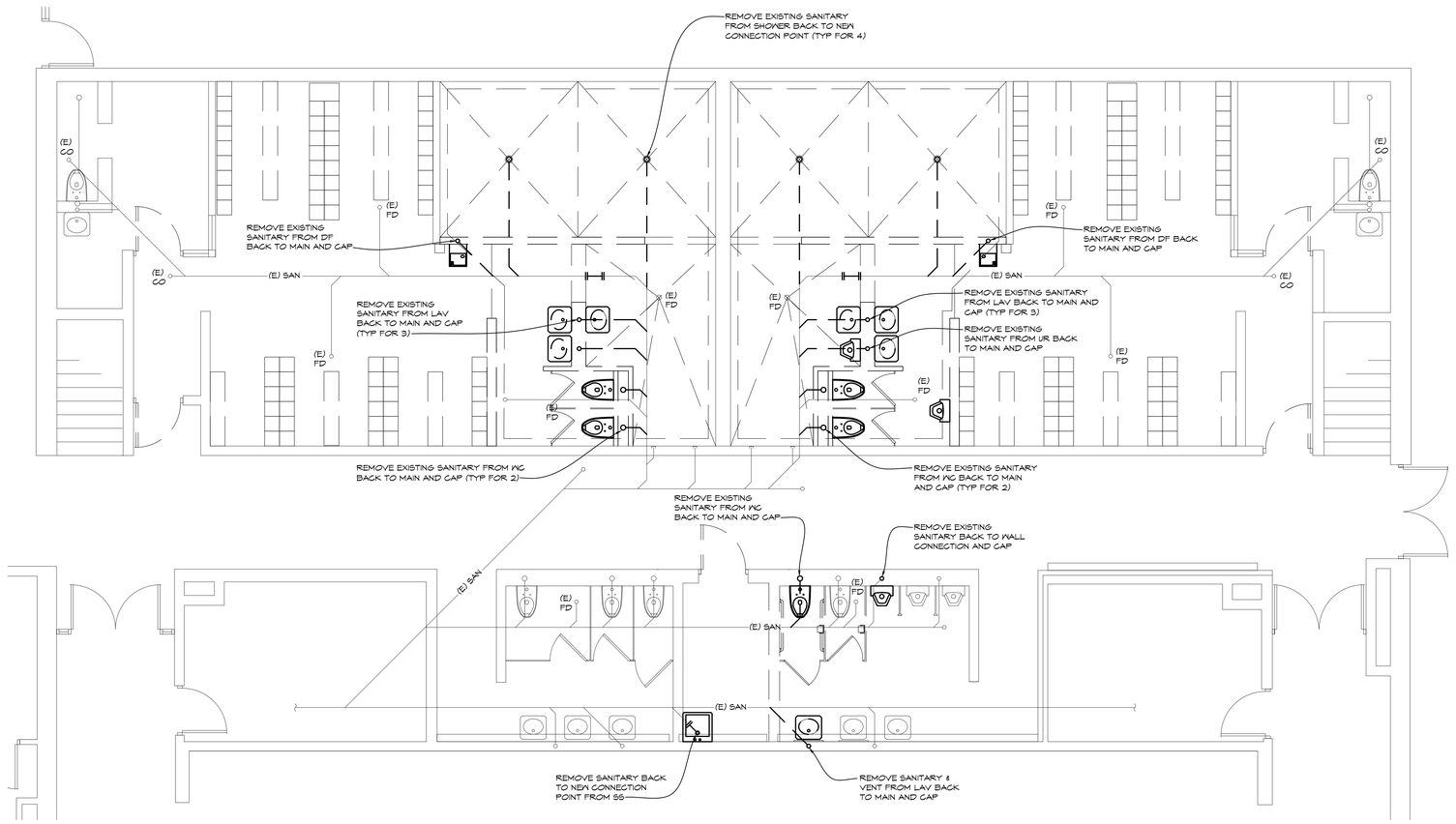
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

MECHANICAL DETAILS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-M501
	REVIEWED MLB	DRAWING NO. B-M501
	DATE OCT 19, 2026	SHEET NO. 22 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC M01 B-M501 MECH 1
Plot date: 10/19/2026 11:14 AM



NORTH

1/4" = 1'-0"

ENLARGED LOCKER ROOM UNDER FLOOR PLUMBING DEMOLITION PLAN

PLUMBING GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. CONTRACTOR TO PROVIDE NEW ISOLATION VALVES AT HOT & COLD WATER LINES FEEDING TOILET ROOM, DRAIN & FILL DOMESTIC WATER TO BUILDING AS REQUIRED OR USE FREEZE MACHINE TO ISOLATE AREA.
8. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
9. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

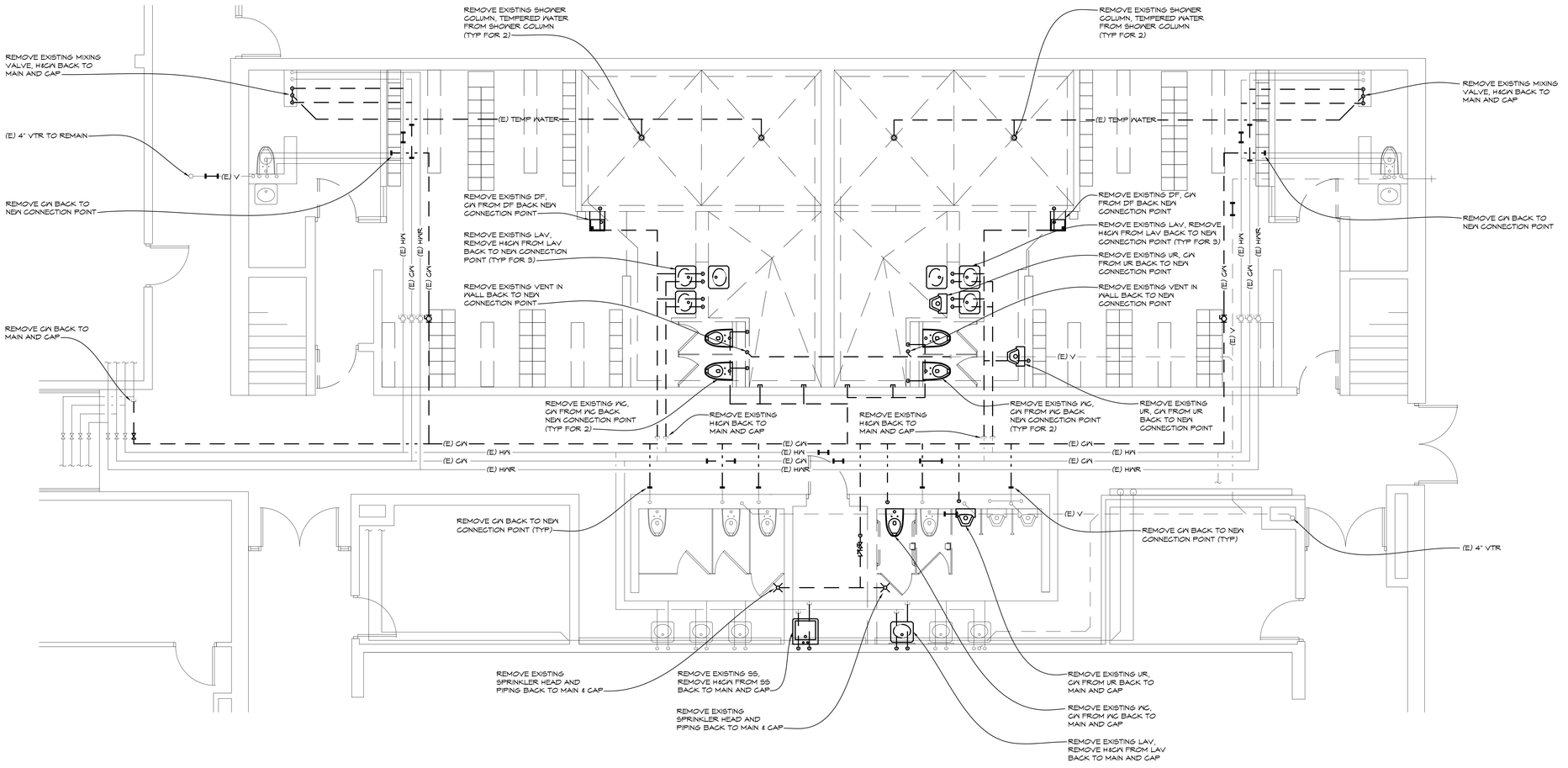
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED UNDER FLOOR PLUMBING DEMOLITION PLANS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-P101
	REVIEWED MLB	DRAWING NO. B-P101
	DATE OCT 19, 2026	SHEET NO. 23 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-P101 ENLARG
Plot date: 10/19/2026 11:14 AM



NORTH
1/4" = 1'-0"

ENLARGED LOCKER ROOM ABOVE FLOOR PLUMBING DEMOLITION PLAN

PLUMBING GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. CONTRACTOR TO PROVIDE NEW ISOLATION VALVES AT HOT & COLD WATER LINES FEEDING TOILET ROOM, DRAIN & FILL DOMESTIC WATER TO BUILDING AS REQUIRED OR USE FREEZE MACHINE TO ISOLATE AREA.
8. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
9. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

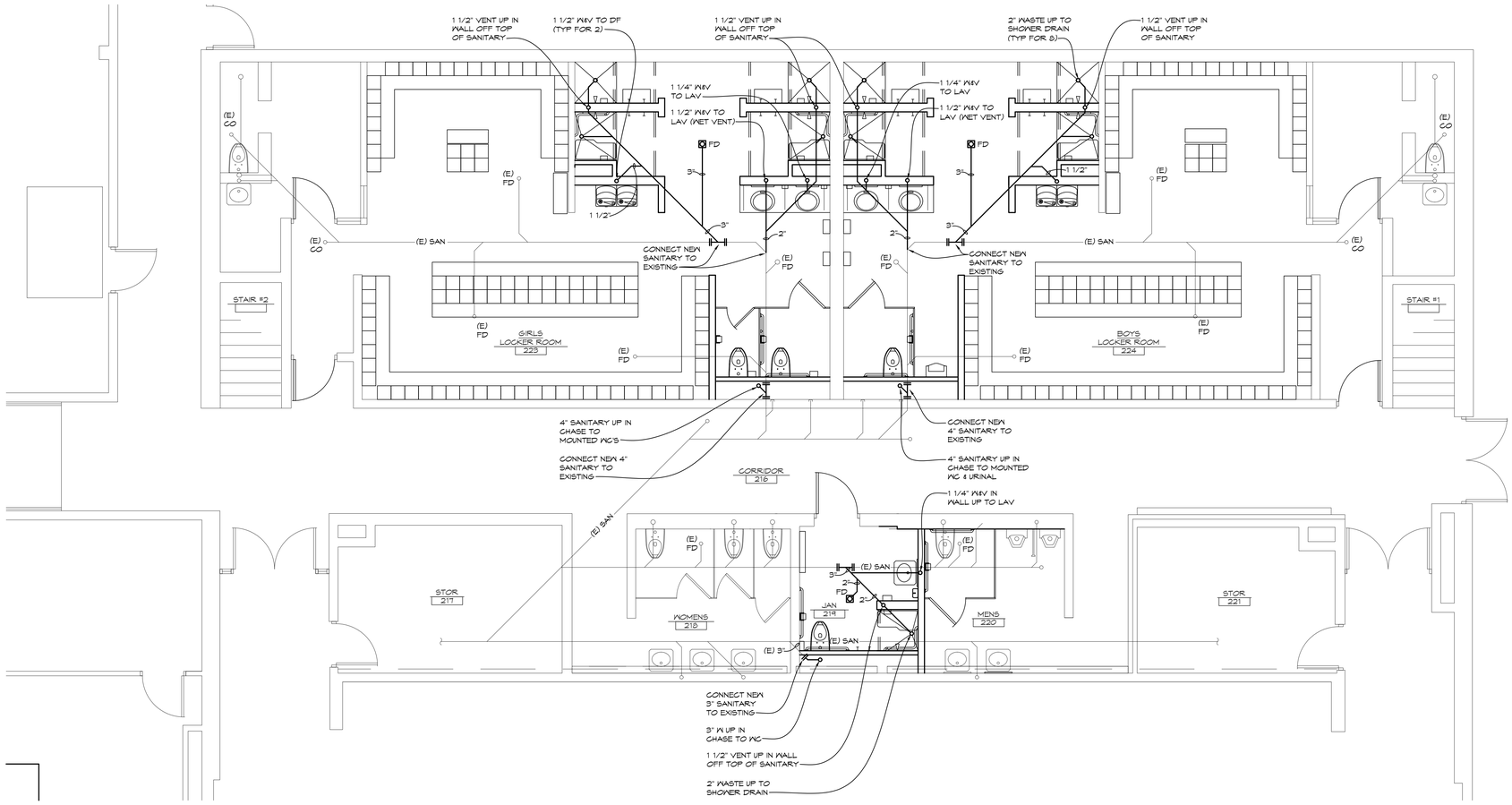
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED ABOVE FLOOR PLUMBING DEMOLITION PLANS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-P102
	REVIEWED MLB	DRAWING NO. B-P102
	DATE OCT 19, 2026	SHEET NO. 24 OF 38
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS\B-P102 ENLARG
Plot date: 10/19/2026 11:14 AM



NORTH

1/4" = 1'-0"

ENLARGED LOCKER ROOM UNDER FLOOR PLUMBING PLAN

PLUMBING GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. CONTRACTOR TO PROVIDE NEW ISOLATION VALVES AT HOT & COLD WATER LINES FEEDING TOILET ROOM, DRAIN & FILL DOMESTIC WATER TO BUILDING AS REQUIRED OR USE FREEZE MACHINE TO ISOLATE AREA.
8. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
9. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

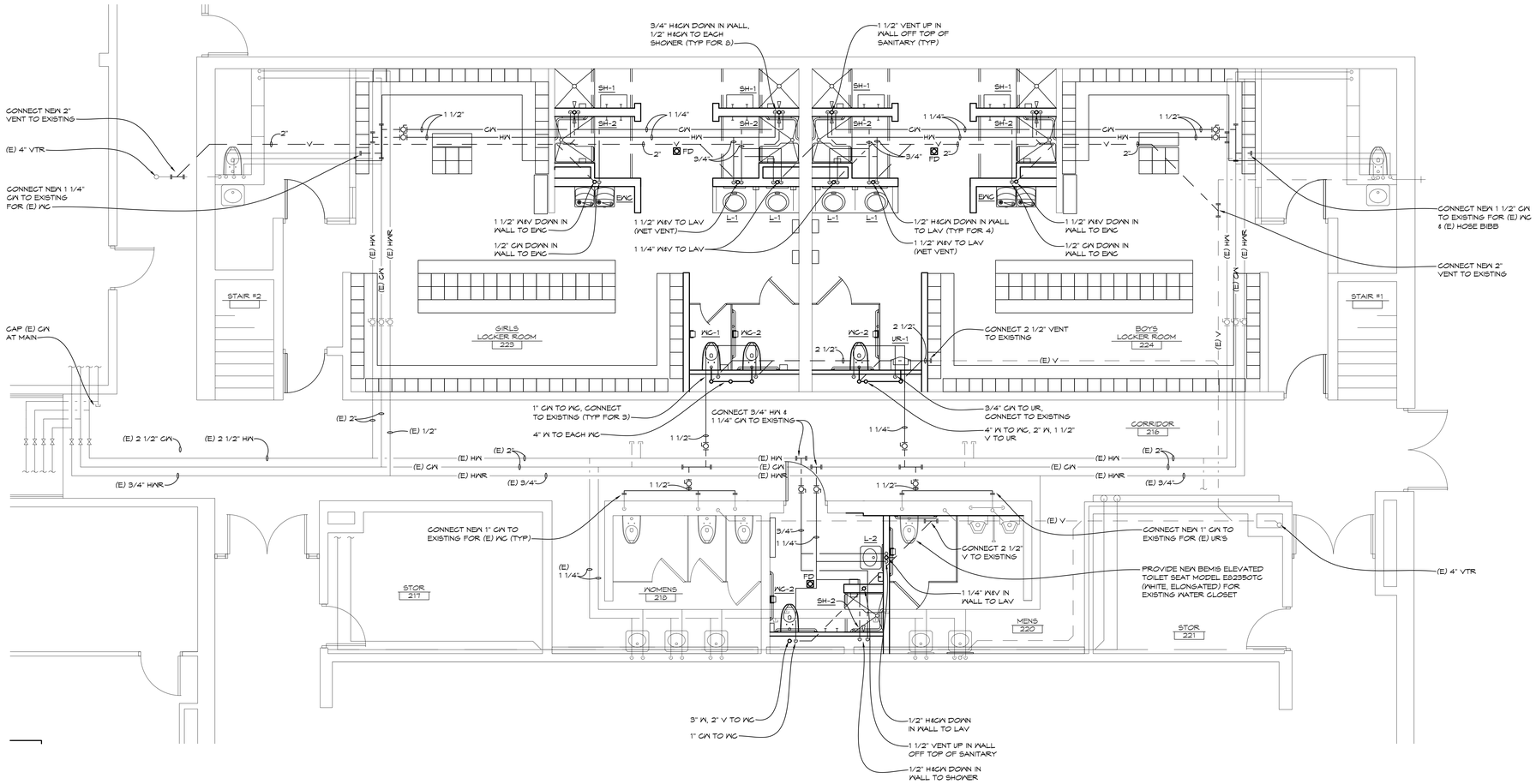
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED LOCKER ROOM UNDER FLOOR PLUMBING PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-P103
	REVIEWED MLB	DRAWING NO. B-P103
	DATE OCT 19, 2026	
	SCALE AS NOTED	SHEET NO. 25 OF 36

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC'MS\B-P103 ENLARG
Plot date: 10/19/2026 11:14 AM



NORTH

1/4" = 1'-0"

ENLARGED LOCKER ROOM ABOVE FLOOR PLUMBING PLAN

PLUMBING GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. CONTRACTOR TO PROVIDE NEW ISOLATION VALVES AT HOT & COLD WATER LINES FEEDING TOILET ROOM, DRAIN & FILL DOMESTIC WATER TO BUILDING AS REQUIRED OR USE FREEZE MACHINE TO ISOLATE AREA.
8. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
9. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED LOCKER ROOM ABOVE FLOOR PLUMBING PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. B-P104
	REVIEWED MLB	DRAWING NO. B-P104
	DATE OCT 19, 2026	
	SCALE AS NOTED	SHEET NO. 26 OF 38

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC MS B-P104 ENLARG
Plot date: 10/19/2026 11:15 AM

GENERAL NOTES:

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE, NEC AND ALL LOCAL CODES.
2. COORDINATE THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND CONNECTIONS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND EQUIPMENT DRAWINGS.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER, CONDUIT, CABLETRAY, AND OTHER COMPONENTS AS SHOWN ON THE EQUIPMENT PROVIDER DRAWINGS FOR INSTALLATION OF SYSTEM.
4. "BACK TO BACK" OR THROUGH THE WALL BOXES SHALL NOT BE USED.
5. INSTALL HANDLE LOCK-ON, ON ALL CIRCUIT BREAKERS CONTROLLING NIGHT LIGHT, EMERGENCY LIGHT AND EXIT LIGHT CIRCUITS.
6. ALL RECEPTACLES SHALL BE HARD USE, SPECIFICATION GRADE.
7. PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY APPLICABLE CODES.
8. RECEPTACLES INDICATED AS GROUND FAULT CIRCUIT INTERRUPTER TYPE SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, PER CODE OR PROVIDED WITH A GFCI BREAKER.
9. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM WIRES SHALL NOT BE USED.
10. MINIMUM CONDUIT SIZE SHALL BE 3/4" FOR POWER FEEDS AND 1" FOR DATA FEEDS.
11. FINAL CONNECTION TO ITEMS SUBJECT TO VIBRATION SHALL BE MADE WITH LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
12. 120/208V AC CIRCUIT WIRING FOR ANY ROOM OR AREA MAY BE GROUPED INTO RACEWAYS UNLESS SEPARATE RACEWAYS ARE REQUIRED BY THE NEC. COMPLY WITH NEC REQUIREMENTS FOR CONDUCTOR DERATING.
13. PROVIDE EQUIPMENT GROUNDING CONDUCTORS FOR ALL POWER AND LIGHTING CIRCUITS.
14. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM. ALL CONTROL CONDUCTORS SHALL BE 14 AWG MINIMUM OR AS SPECIFIED BY MANUFACTURER.
15. DEDICATED NEUTRAL SHALL BE PROVIDED FOR ALL CIRCUITS. SHARED NEUTRALS ARE NOT ALLOWED.
16. BASIS OF DESIGN IS FOR A COMPLETE ELECTRICAL SYSTEM, INSTALLED PER CODE REQUIREMENTS.
17. PROVIDE AN UNSWITCHED HOT TO ALL EMERGENCY BATTERY PACKS, LIGHTING INVERTERS AND EMERGENCY LIGHTING UNITS AHEAD OF AN LIGHTING CONTROLS FROM THE BRANCH CIRCUIT SERVING LIGHTING IN THE SURROUNDING AREA.

GENERAL DEMOLITION NOTES:

1. DEMOLITION NOTES ARE BASED UPON FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY EXACT CONDITIONS AT SITE AND REPORT DISCREPANCIES TO THE ARCHITECT/ENGINEER BEFORE DISTURBING THE INSTALLATION.
2. THE SCOPE OF REQUIRED DEMOLITION IS NOT LIMITED TO ITEMS OR WORK INDICATED ON THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR ACCEPTS EXISTING SITE CONDITIONS AT THE START OF DEMOLITION.
3. WHERE ELECTRICAL COMPONENT ARE SHOWN TO BE REMOVED, THE ELECTRICAL CONTRACTOR SHALL RECONNECT REMAINING COMPONENTS TO EXISTING CIRCUIT(S).
4. WHERE THE DRAWINGS SHOW DEVICES OR EQUIPMENT TO BE PERMANENTLY REMOVED, THE ELECTRICAL CONTRACTOR SHALL REMOVE CONDUCTORS BACK TO SOURCE. TURN BREAKER "OFF" AND LABEL THE BREAKER AS SPARE ON NEWLY PRINTED PANEL DIRECTORY.
5. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED CONDUIT. THE ELECTRICAL CONTRACTOR SHALL CUT CONDUIT FLUSH WITH WALLS AND FLOORS, UON. PATCH ALL SURFACES AND PROVIDE FIRESTOP WHERE REQUIRED.
6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF DAMAGE TO ALL ADJACENT CONSTRUCTION AND FINISHES. REPAIRS SHALL BE MADE TO RETURN SPACE TO ORIGINAL CONDITION PRIOR TO COMPLETION OF PROJECT.
7. EQUIPMENT AND DEVICES SHOWN AS DASHED ON THE DRAWING ARE TO BE REMOVED.
8. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ALL ELECTRICAL SYSTEMS IN WALLS, FLOORS AND CEILINGS SCHEDULED FOR REMOVAL, INCLUDING SPECIAL SYSTEMS.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN OPERATION OF EXISTING SYSTEMS DURING CONSTRUCTION. CONDITIONS SHALL BE RETURNED TO NORMAL AT THE CLOSE OF THE PROJECT.
10. CONTRACTOR SHALL MAINTAIN ALL POWER AND DATA CONDUIT AND WIRING SERVING AREAS NOT INCLUDED IN THE SCOPE OF WORK, UON. NOTIFY ARCHITECT/ENGINEER IF THESE DEVICES WILL IMPEDE UPON SCOPE OF WORK DURING RENOVATION TO RECEIVED DIRECTION ON RESOLUTION.
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE BLACK COVERS ON ALL JUNCTION BOXES WHERE DEVICE HAS BEEN REMOVED AND THE JUNCTION BOX IS TO REMAIN FOR FUTURE USE.
12. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL LAMPS AS REQUIRED AND DIRECTED IN THE LATEST STATE LAWS.
13. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL EQUIPMENT AND DEVICES REMOVED.
14. ALL DISRUPTIONS OF SERVICE SHALL BE COORDINATED AND APPROVED BY OWNER.

ABBREVIATIONS

A, AMP	AMPERES
AF	AMP FUSE OR AMP FRAME
AFC	AVAILABLE FAULT CURRENT (SYMMETRICAL)
A.F.F.	ABOVE FINISHED FLOOR
AIC.	AMPERE INTERRUPTING CAPACITY
AM.	AMMETER
ASYM.	ASYMMETRICAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CAP.	CAPACITY OR CAPACITOR
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT ,CCT	CIRCUIT
C.O.	CONDUIT ONLY
CONN.	CONNECT OR CONNECTION
CU	COPPER
DA	DURESS ALARM
DB	DOOR BELL
DISC.	DISCONNECT
DPST	DOUBLE POLE SINGLE THROW
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATION OR ELEVATOR
EMERG, EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EMT	ELECTRICAL METAL TUBING
FIXT.	FIXTURE
FLA	FULL LOAD AMPERES
FLUOR.	FLUORESCENT
GRC,GCR	GALVANIZED RIGID CONDUIT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRD,GND,G	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ.	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
I.G.	ISOLATED GROUND
INCAND.	INCANDESCENT
JB	JUNCTION BOX
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE, METAL HALIDE OR MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
N.C.	NORMALLY CLOSED
N.E.C.	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
NF	NON FUSIBLE
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OL	OVERLOADS
P	POLE
PB	PULLBOX
PH OR ø	PHASE
PNL	PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE
PWR.	POWER
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
SOL	SOLENOID
SPDT	SINGLE POLE DOUBLE THROW
SPKR	SPEAKER
SPST	SINGLE POLE SINGLE THROW
SW.	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TEL	TELEPHONE
XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BACKBOARD
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT AMPERES
VD	VOLTAGE DROP
VM	VOLT METER
W	WATTS OR WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XP	EXPLOSION PROOF

GENERAL

MOUNTING HEIGHTS TO BE AS INDICATED UON. MOUNTING HEIGHTS ARE TO CENTER OF DEVICE FROM FINISHED FLOOR OR GRADE UON. SEE SPECIFICATION 16010 FOR ADDITIONAL REQUIREMENTS

- DEMO NOTE REFERENCE SYMBOL. DENOTES "SEE DEMO NOTE NO. #"
- CONSTRUCTION NOTE REFERENCE SYMBOL. DENOTES "SEE CONSTRUCTION NOTE NO. #"
- FOOT ON DEVICE INDICATES WALL MOUNTED

DEMOLITION AND REMODEL

- EXISTING ELECTRICAL ITEM TO BE REMOVED
- EXISTING ELECTRICAL ITEM TO BE REMOVED AND RELOCATED
- EXISTING ELECTRICAL ITEM RELOCATED. NEW LOCATION
- EXISTING ELECTRICAL ITEM TO REMAIN
- EXISTING ELECTRICAL ITEM TO BE REMOVED AND PROVIDED WITH A BLANK COVERPLATE
- EXISTING ELECTRICAL OR SYSTEMS CIRCUIT TO REMAIN
- EXISTING ELECTRICAL CIRCUIT TO BE REMOVED SHOWN ONLY WHERE CLARIFICATION BETWEEN EXISTING TO REMAIN AND REMOVED ITEMS IS REQUIRED

CIRCUIT DESIGNATIONS

1LN1-1 — PANEL NAME / POLE NUMBERS

BRANCH CIRCUIT HOMERUN. PROVIDE PHASE, NEUTRAL AND GROUND CONDUCTORS FOR EACH INDICATED CIRCUIT OR MULTI WIRE BRANCH AS REQUIRED. PROVIDE SWITCH LEGS FOR SWITCH CIRCUITING AS REQUIRED. PROVIDE EQUIPMENT GROUND WIRE IN ALL BRANCH CIRCUIT RACEWAYS/CIRCUITS. PROVIDE SEPARATE ISOLATED GROUND WIRE TO ALL ISOLATED GROUND DEVICES.

CONDUIT SIZE	MAX QUANTITY OF CONDUCTORS PER CONDUIT		
	CONDUCTOR SIZE		
	12	10	8
3/4 INCH	5 TO 8	5 TO 6	1 TO 3
1 INCH	9 TO 13	7 TO 11	4 TO 5

SEE SPECIFICATIONS FOR LIMITATIONS ON QUANTITY OF CURRENT CARRYING CONDUCTORS PER CONDUIT

- CONDUIT RISER UP
- CONDUIT RISER DOWN
- INDICATES CIRCUIT CONTINUATION
- STUB INTO ACCESSIBLE CORRIDOR CEILING SPACE UNLESS OTHERWISE NOTED
- CONDUIT SEAL FITTING FOR HAZARDOUS AREAS
- CONDUIT SLEEVE
- CAP END OF CONDUIT
- CABLE OR CORD CONNECTED

LIGHTING

NOTE A: UPPER CASE ALPHANUMERIC SUBSCRIPT DENOTES FIXTURE TYPE. SEE SCHEDULE(S)

NOTE B: LOWER CASE LETTER SUBSCRIPT PROVIDED ADJACENT TO SWITCHING DEVICE AND ASSOCIATED LIGHT FIXTURE(S) WHERE REQUIRED FOR CLARIFICATION.

- CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- DIRECTIONAL AIMED FIXTURE AIM IN DIRECTION OF ARROW
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- UNDER CABINET/COUNTER LIGHT OUTLET OR STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO NORMAL SOURCE
- EXIT LIGHT OUTLET WITH FIXTURE – SHADING INDICATES LOCATION OF FACE(S). ARROWS INDICATE DIRECTIONAL ARROWS WHERE REQUIRED. WALL MOUNTED SIGNS AT +90" CENTERED ABOVE DOOR WHERE APPLICABLE
- EMERGENCY LIGHT FIXTURE WITH INTEGRAL BATTERY SOURCE AND ADJUSTABLE HEADS
- TRACK LIGHT OUTLET WITH FIXTURE. TYPE INDICATED, QUANTITY AND LENGTH AS SHOWN OR SCHEDULED
- PENDANT LIGHT FIXTURE CONNECTED TO NORMAL SOURCE
- LIGHTING STANDARD POLE FIXTURE, PROVIDE QUANTITY OF HEADS AND ORIENTATION AS INDICATED
- LIGHTING STANDARD WITH POST-TOP FIXTURE
- BOLLARD FIXTURE
- CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- PENDANT LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- S — SWITCH AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE VARIOUS TYPES OF SWITCHES.

NO SUBSCRIPT – SINGLE POLE
2 — DOUBLE POLE
3 — THREE WAY
4 — FOUR WAY
D — LIGHTING DIMMER
P — PILOT LIGHT
L — LIGHTED HANDLE
K — KEY OPERATED
TE — MANUAL STARTER WITH THERMAL ELEMENT
XP — EXPLOSION PROOF
M — MOTOR RATED

- LV — LOW VOLTAGE SWITCH
- PC — PHOTOCELL
- TM — TIME CLOCK AT +48"
- OS — OCCUPANCY SENSOR WITH INTEGRAL SWITCH-WALL MOUNTED AT +48"
- OS — OCCUPANCY SENSOR – CEILING MOUNTED

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPES OF OCCUPANCY SENSORS

NO SUBSCRIPT – COMBINATION INFRARED/ULTRASONIC SENSOR
I — INFRARED SENSOR
U — ULTRASONIC SENSOR

POWER AND DIAGRAMS

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" U.O.N.

NOTE B: RECEPTACLES LOCATED AT COUNTERS SHALL BE LOCATED 18" AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED U.O.N.

NOTE C: WHERE (AC) IS INDICATED NEXT TO RECPTACLES AT WORK COUNTER, RECEPTACLES SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

NOTE D: RECEPTACLES IN MECHANICAL AND ELECTRICAL SPACES SHALL BE MOUNTED AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE DIFFERENT TYPES OF RECEPTACLES

GF — GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE AT +42" IN TOILETS
ST — SAFETY TYPE RECEPTACLE
XP — EXPLOSION PROOF RECEPTACLE
IG — ISOLATED GROUND RECEPTACLE
WP — WEATHERPROOF
SW — TOP HALF OF DUPLEX RECEPTACLE SWITCHED
CL — CLOCK RECEPTACLE AT +84"
H — HORIZONTAL MOUNTING
U — RECEPTACLE SERVED BY UPS

- 20A, 125V, 2 POLE, 3 WIRE GROUNDING DUPLEX RECEPTACLE, NEMA 5-20R
- 20A, 125V, 2 POLE, 3 WIRE GROUNDING SINGLE RECEPTACLE, NEMA 5-20R
- 20A, 125V, 2 POLE, 3 WIRE GROUNDING DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R
- PEDESTAL TYPE, FLOOR OR COUNTER MOUNTED RECEPTACLE RECEPTACLE TYPE AS INDICATED ABOVE
- CEILING MOUNTED RECEPTACLE, TYPE AS INDICATED ABOVE
- FLUSH FLOOR BOX WITH RECEPTACLE, TYPE AS INDICATED ABOVE
- COMBINATION POWER/COMMUNICATIONS FLOOR BOX, SEE COMMUNICATIONS PLAN FOR SYSTEMS DEVICE
- PIGTAIL DENOTES CONNECTION TO LIGHT SWITCH, LIGHT FIXTURE OR FIXED EQUIPMENT
- SPECIAL PURPOSE RECEPTACLE SUBSCRIPT DENOTES NEMA TYPE, REFER TO SPECIFICATIONS
- JUNCTION BOX, 4 INCH SQUARE UNLESS OTHERWISE NOTED
- PLUG-IN RECEPTACLE STRIP (LENGTH AS INDICATED)
- TELECOMMUNICATIONS/POWER POLE
- 208 VOLT PANELBOARD AT +72" TO TOP
- 480 VOLT PANELBOARD AT +72" TO TOP
- CABLE TRAY OR WIREWAY
- SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/POLES.
- FUSED SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSESIZE/POLES.
- MAGNETIC MOTOR STARTER AT +54". CHARACTERISTICS AS INDICATED BY FRAME SIZE/POLES/NEMA SIZE.
- COMBINATION MAGNETIC MOTOR STARTER WITH DISCONNECT AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSE/POLES/NEMA SIZE
- AFD — ADJUSTABLE FREQUENCY DRIVE
- MAGNETIC CONTACTOR AT +54". AMPS/POLES/CONTACT VOLTS/ COIL VOLTS AS INDICATED.
- SEPARATELY MOUNTED, ENCLOSED MOLDED CASE CIRCUIT BREAKER AT +48". FLUSH MOUNTED IN FINISHED AREAS. AMP/POLES AS INDICATED.
- CIRCUIT BREAKER. AMP/POLES AS INDICATED
- FUSE. SIZE AS INDICATED
- FUSIBLE SWITCH. AMP/POLES/FUSE SIZE AS INDICATED
- AUTOMATIC TRANSFER SWITCH +72" TO TOP OR FLOOR MOUNTED.
- DISCONNECT STABS FOR DRAWOUT TYPE EQUIPMENT
- TRANSFORMER
- GROUND CONNECTION
- MOTOR CONNECTION, HP AS INDICATED
- G — GENERATOR
- START-STOP PUSHBUTTON STATION AT +48"
- GROUNDING SYSTEM TEST WELL
- GROUNDING CONNECTION
- GROUND BUS ON STANDOFFS
- CONTROL PANEL: INTEGRAL PART OF, OR FURNISHED BY OTHER THAN DIVISION 16
- EQUIPMENT OR TERMINAL CABINET AT +72" TO TOP
- PS — POWER SUPPLY
- PUSHBUTTON STATION AT +48"

FIRE DETECTION AND ALARM

- FACP — CONTROL PANEL AT +72" TO TOP
- FAA — FIRE ALARM ANNUNCIATOR PANEL AT +72" TO TOP
- FIRE SUPPRESSION SYSTEM ABORT SWITCH STATION AT +48"
- F — MANUAL STATION AT +48"

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF MANUAL STATIONS, FIRE SUPPRESSION SYSTEM CONTROL PANELS AND/OR ABORT SWITCHES

NO SUBSCRIPT – STANDARD FIRE ALARM PULL STATION

- S — SMOKE DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF SMOKE DETECTORS

NO SUBSCRIPT – PHOTO ELECTRIC AREA BEAM

- DUCT SMOKE DETECTOR
- AUTOMATIC HEAT DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF HEAT DETECTORS

NO SUBSCRIPT – FIXED TEMPERATURE (155 DEGREE U.O.N.)
R/T —COMBINATION RATE OF RISE FIXED TEMPERATURE (135 DEGREE U.O.N.)
XP —EXPLOSION PROOF, FIXED TEMPERATURE (135 DEGREE U.O.N.) CLASS 1, GROUP C

NOTE: WALL MOUNT VISUAL AND COMBINATION AUDIO/VISUAL NOTIFICATION APPLIANCES AT +80" AFF TO BOTTOM OF FACE PLATE U.O.N.

- VISUAL NOTIFICATION APPLICANCE
- WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE
- WALL MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE
- CEILING MOUNTED VISUAL NOTIFICATION APPLIANCE
- CEILING MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE
- MAGNETIC DOOR HOLDER/RELEASE. COORDINATE MOUNTING HEIGHT WITH DOOR MANUFACTURER.
- FS — SPRINKLER OR STANDPIPE FLOW ALARM SWITCH CONNECTION
- TS — VALVE TAMPER SWITCH
- SV F — SOLENOID VALVE FOR PREACTION SPRINKLER SYSTEM
- AP F — AIR PRESSURE MONITOR SWITCH FOR PRE-ACTION OR DRY PIPE SPRINKLER SYSTEM
- FR — CEILING MOUNTED REMOTE ALARM INDICATOR
- WALL MOUNTED REMOTE ALARM INDICATOR AND TEST STATION AT +48"
- FIRE FIGHTERS TELEPHONE JACK AT +48"
- FIRE FIGHTERS TELEPHONE HANDSET AT +48"

TELECOMMUNICATION

GENERAL NOTES

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" UON.

NOTE B: OUTLETS LOCATED AT COUNTERS SHALL BE LOCATED 18"AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED UON.

NOTE C: WHERE ASTERISK (*) IS INDICATED NEXT TO OUTLET AT WORK COUNTER, OUTLET SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

- STANDARD TELECOMMUNICATIONS OUTLET – PROVIDE EXTRA DEEP DOUBLE GANG BOX WITH SINGLE GANG MUD RING AND 1-1/4" CONDUITS TO ABOVE FINISHED CEILING. PROVIDE PLASTIC BUSHING AT THE ENDS OF THE CONDUITS. DATA DEVICES AND WIRING PROVIDED BY OTHERS U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS (NON-STANDARD) TYPES OF OUTLETS

// — 1ST NUMBER INDICATES QUANTITY OF DATA CABLES
2ND NUMBER INDICATES QUANTITY OF VOICE CABLES
B — BLANK (ROUGH-IN TO ACCESSABLE CEILING SPACE)
F — FIBER
W — WALL PHONE OUTLET AT +48"
C — CEILING PHONE OUTLET
P — PUBLIC TELEPHONE AT +44"
FL — PEDESTAL FLOOR FITTING

SECURITY

- FIXED VIDEO SURVEILANCE CAMERA
- PTZ — PAN/TILT/ZOOM VIDEO SURVEILANCE CAMERA
- DOOR POSITION SWITCH
- CONNECTION TO ELECTRIC OR PNEUMATIC DOOR LOCK
- CR — CARD READER AT +48"

NOTE:
SYMBOLS SHOWN ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE A CHECK LIST OF DEVICES REQUIRED BY THE CONTRACT

PROJECT B

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

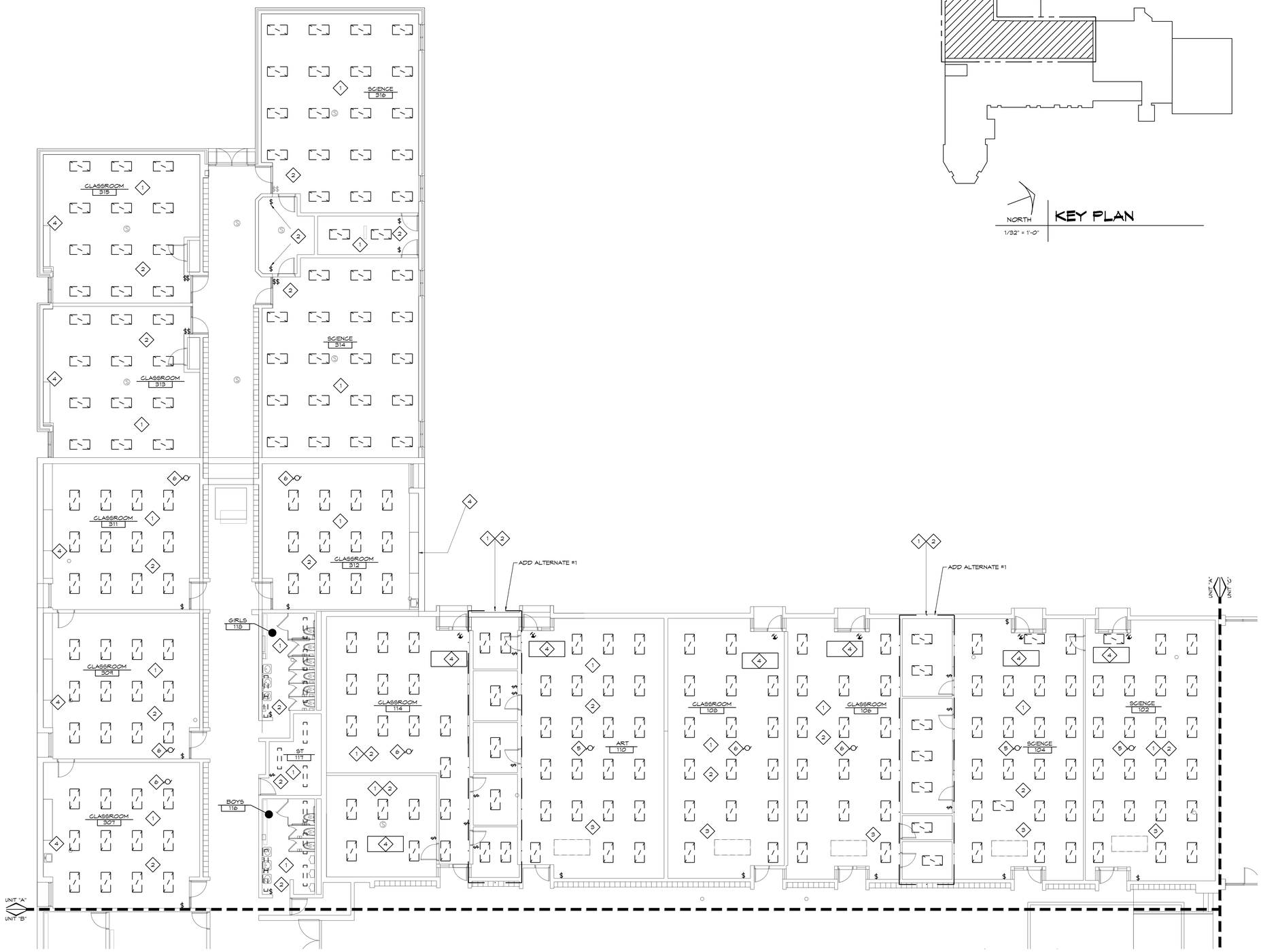
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ELECTRICAL COVER SHEET

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. B-E000
	REVIEWED RCH	DRAWING NO. B-E000
	DATE OCT 19, 2026	SHEET NO. 27 OF 38
	SCALE AS NOTED	



1 UNIT 'A' ELECTRICAL DEMOLITION PLAN
1/8" = 1'-0"

KEY PLAN
1/32" = 1'-0"

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES IN SPACE. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT TO SPACE FOR NEW LIGHT FIXTURES.
2. REMOVE EXISTING SWITCH(ES) IN SPACE. REMOVE WIRE BACK TO JUNCTION BOX ABOVE CEILING. MAINTAIN CONDUIT DOWN TO EXISTING SWITCH JUNCTION BOX FOR NEW WIRING.
3. MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO SOURCE.
4. MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE WIRING TO DISCONNECT. PULL BACK WIRING AND CONDUIT TO WHERE NEEDED FOR REMOVAL OF UNIT. MAINTAIN BRANCH CIRCUIT.
5. EXHAUST FAN TO BE RELOCATED. PULL BACK WIRE AND CONDUIT AS NEEDED FOR RELOCATION OF EXHAUST FAN. MAINTAIN BRANCH CIRCUIT FOR RELOCATION OF EXHAUST FAN.
6. EXHAUST FAN TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.

PROJECT B

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

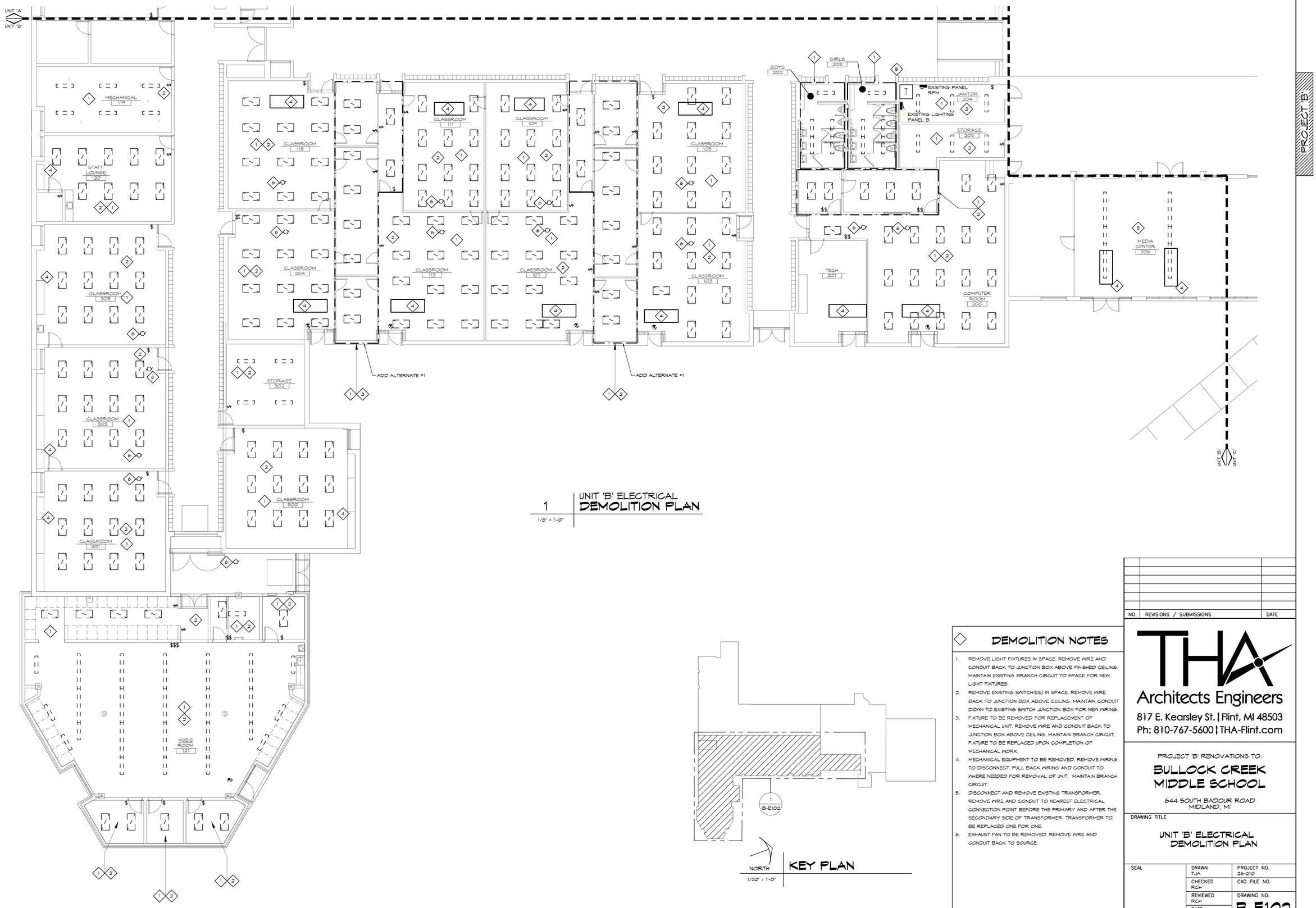
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'A' ELECTRICAL DEMOLITION PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. B-E000
	REVIEWED RCH	DRAWING NO. B-E101
	DATE OCT 19, 2026	SHEET NO. 28 OF 38
	SCALE AS NOTED	



1 UNIT 'B' ELECTRICAL DEMOLITION PLAN

1/8" = 1'-0"

NORTH KEY PLAN

1/32" = 1'-0"

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES IN SPACE. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT TO SPACE FOR NEW LIGHT FIXTURES.
2. REMOVE EXISTING SWITCH(ES) IN SPACE. REMOVE WIRE BACK TO JUNCTION BOX ABOVE CEILING. MAINTAIN CONDUIT DOWN TO EXISTING SWITCH JUNCTION BOX FOR NEW WIRING.
3. FIXTURE TO BE REMOVED FOR REPLACEMENT OF MECHANICAL UNIT. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE CEILING. MAINTAIN BRANCH CIRCUIT. FIXTURE TO BE REPLACED UPON COMPLETION OF MECHANICAL WORK.
4. MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE WIRING TO DISCONNECT. PULL BACK WIRING AND CONDUIT TO WHERE NEEDED FOR REMOVAL OF UNIT. MAINTAIN BRANCH CIRCUIT.
5. DISCONNECT AND REMOVE EXISTING TRANSFORMER. REMOVE WIRE AND CONDUIT TO NEAREST ELECTRICAL CONNECTION POINT BEFORE THE PRIMARY AND AFTER THE SECONDARY SIDE OF TRANSFORMER. TRANSFORMER TO BE REPLACED ONE FOR ONE.
6. EXHAUST FAN TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

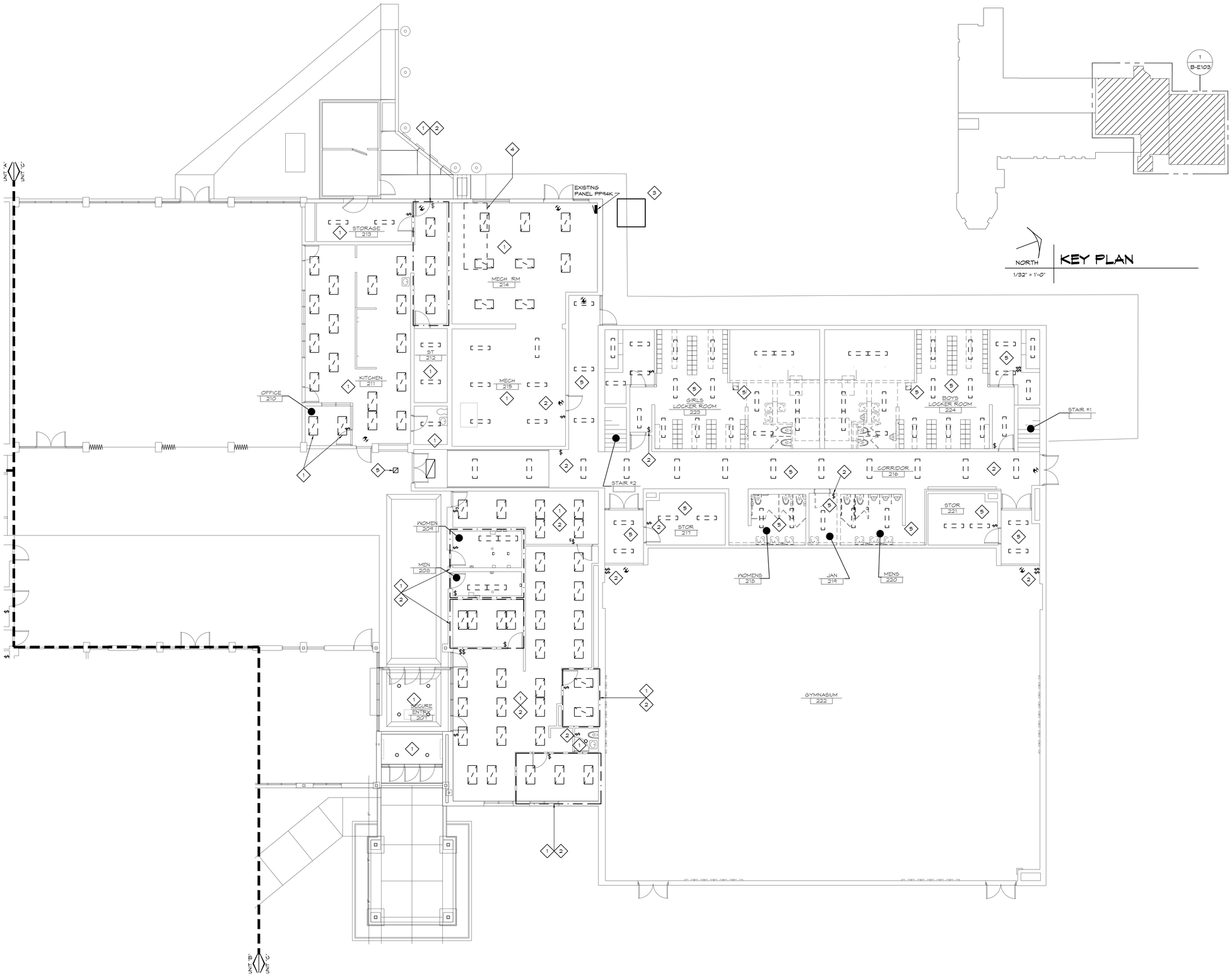
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'B' ELECTRICAL DEMOLITION PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RGH	CAD FILE NO.
	REVIEWED RGH	DRAWING NO. B-E102
	DATE OCT 19, 2026	SHEET NO. 29 OF 38
	SCALE	



1 UNIT 'C' ELECTRICAL DEMOLITION PLAN
1/8" = 1'-0"

NORTH KEY PLAN
1/32" = 1'-0"

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES IN SPACE. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT TO SPACE FOR NEW LIGHT FIXTURES.
2. REMOVE EXISTING SWITCH(ES) IN SPACE. REMOVE WIRE BACK TO JUNCTION BOX ABOVE CEILING. MAINTAIN CONDUIT DOWN TO EXISTING SWITCH JUNCTION BOX FOR NEW WIRING.
3. MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO SOURCE.
4. MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO DISCONNECT. PULL BACK WIRING AND CONDUIT TO WHERE NEEDED FOR REMOVAL OF UNIT. MAINTAIN BRANCH CIRCUIT FOR NEW UNIT.
5. LIGHT FIXTURES IN SPACE TO BE REMOVED BY OTHERS. COORDINATE WITH ARCHITECTURAL PLANS.
6. DRINKING FOUNTAIN TO BE REMOVED BY OTHERS. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

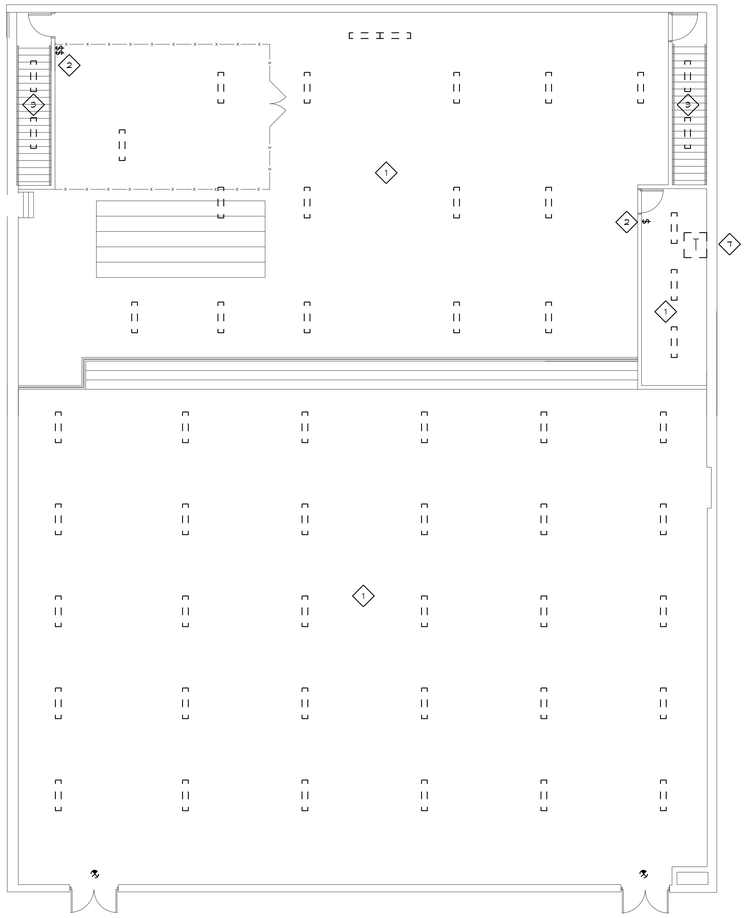
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

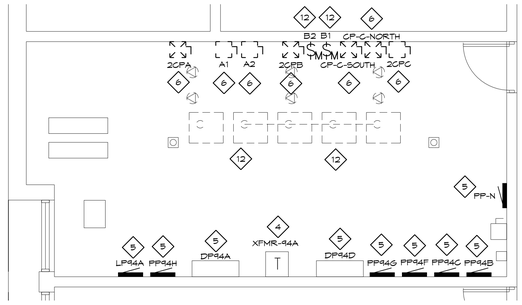
UNIT 'C' ELECTRICAL DEMOLITION PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E103
	DATE OCT 19, 2026	SHEET NO. 30 OF 38
	SCALE	



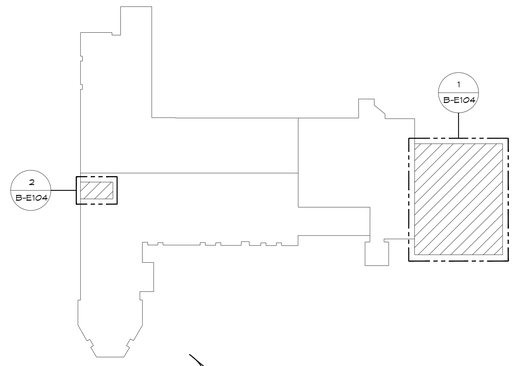
1 ELECTRICAL MEZZANINE DEMOLITION PLAN

1/8" = 1'-0"



2 ELECTRICAL ENLARGED DEMOLITION PLAN

1/4" = 1'-0"



KEY PLAN

1/32" = 1'-0"

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES IN SPACE. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT TO SPACE FOR NEW LIGHT FIXTURES.
2. REMOVE EXISTING SWITCH(ES) IN SPACE. REMOVE WIRE BACK TO JUNCTION BOX ABOVE CEILING. MAINTAIN CONDUIT DOWN TO EXISTING SWITCH JUNCTION BOX FOR NEW WIRING.
3. LIGHT FIXTURES IN SPACE TO BE REMOVED BY OTHERS. COORDINATE WITH ARCHITECTURAL PLANS.
4. EXISTING TRANSFORMER TO REMAIN.
5. EXISTING PANEL TO REMAIN.
6. PUMP TO BE REMOVED. REMOVE ASSOCIATED WIRE, CONDUIT, AND DISCONNECT. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
7. DISCONNECT AND REMOVE EXISTING TRANSFORMER. REMOVE WIRE AND CONDUIT TO NEAREST ELECTRICAL CONNECTION POINT BEFORE THE PRIMARY AND AFTER THE SECONDARY SIDE OF TRANSFORMER. TRANSFORMER TO BE REPLACED ONE FOR ONE.
8. PUMP TO BE REMOVED. REMOVE ASSOCIATED WIRE, CONDUIT, AND DISCONNECT. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
9. MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO SOURCE.
10. EXISTING PANEL TO REMAIN.
11. EXISTING TRANSFORMER TO REMAIN.
12. BOILER TO BE REMOVED. REMOVE DISCONNECTS, WIRES, AND CONDUITS BACK TO SOURCE.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

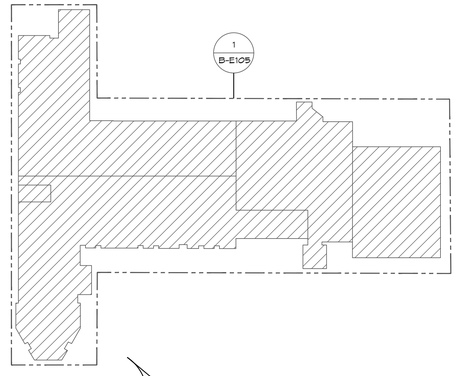
ELECTRICAL ENLARGED DEMOLITION PLANS

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E104
	DATE OCT 19, 2026	
	SCALE	SHEET NO. 31 OF 38

THA Architects Engineers - B-104 ENLARGED ELECTRICAL DEMOLITION PLANS
Plot date: 10/15/2026 3:39 PM



1 ELECTRICAL ROOF DEMOLITION PLAN
1/16" = 1'-0"



NORTH
KEY PLAN
1/32" = 1'-0"

DEMOLITION NOTES

1. CONDENSING UNIT TO BE REMOVED. REMOVE WIRING TO DISCONNECT. REMOVE DISCONNECT. PULL BACK WIRING AND CONDUIT AS NEEDED FOR REMOVAL OF UNIT. MAINTAIN BRANCH CIRCUIT FOR NEW CONDENSING UNIT.
2. ROOF TOP UNIT TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
3. AIR HANDLING UNIT TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
4. EXHAUST FAN TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
5. CONDENSING UNIT TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
ELECTRICAL ROOF DEMOLITION PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E105
	DATE OCT 19, 2026	SHEET NO. 32 OF 38
	SCALE	



1 UNIT 'A' ELECTRICAL NEW PLAN
1/8" = 1'-0"

KEY PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURES FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH.
3. REINSTALL EXISTING LIGHT FIXTURE THE EXACT LOCATION WHERE REMOVED. PULL EXISTING WIRE TO FIXTURE. CONNECT WIRING.
4. EXTEND EXISTING WIRING PULLED BACK FROM FEED TO NEW UNIT VENTILATOR. INSTALL NEW 20A FUSIBLE SWITCH ONTO EACH NEW UNIT VENTILATOR.
5. EXTEND EXISTING WIRING PULLED BACK FROM FEED TO NEW UNIT VENTILATOR. INSTALL NEW 15A FUSIBLE SWITCH ONTO EACH NEW UNIT VENTILATOR.
6. PROVIDE CONNECTION TO NEW PUMP. COORDINATE FINAL LOCATION OF PUMP WITH PLUMBING PLANS.
7. PROVIDE CONNECTION TO NEW CONDENSING UNIT. PROVIDE WIRE, CONDUIT, AND BREAKER AS NEEDED FOR NEW CONNECTION. NEW CONDENSING UNIT SHALL BE INSTALLED IN SAME LOCATION AS PREVIOUS UNIT. INSTALL 110/3P DISCONNECT ONTO NEW CONDENSING UNIT.
8. RELOCATED EXHAUST FAN. EXTEND WIRE, CONDUIT, AND CONTROLS TO NEW EXHAUST FAN LOCATION. COORDINATE FINAL LOCATION WITH MECHANICAL TRADES.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

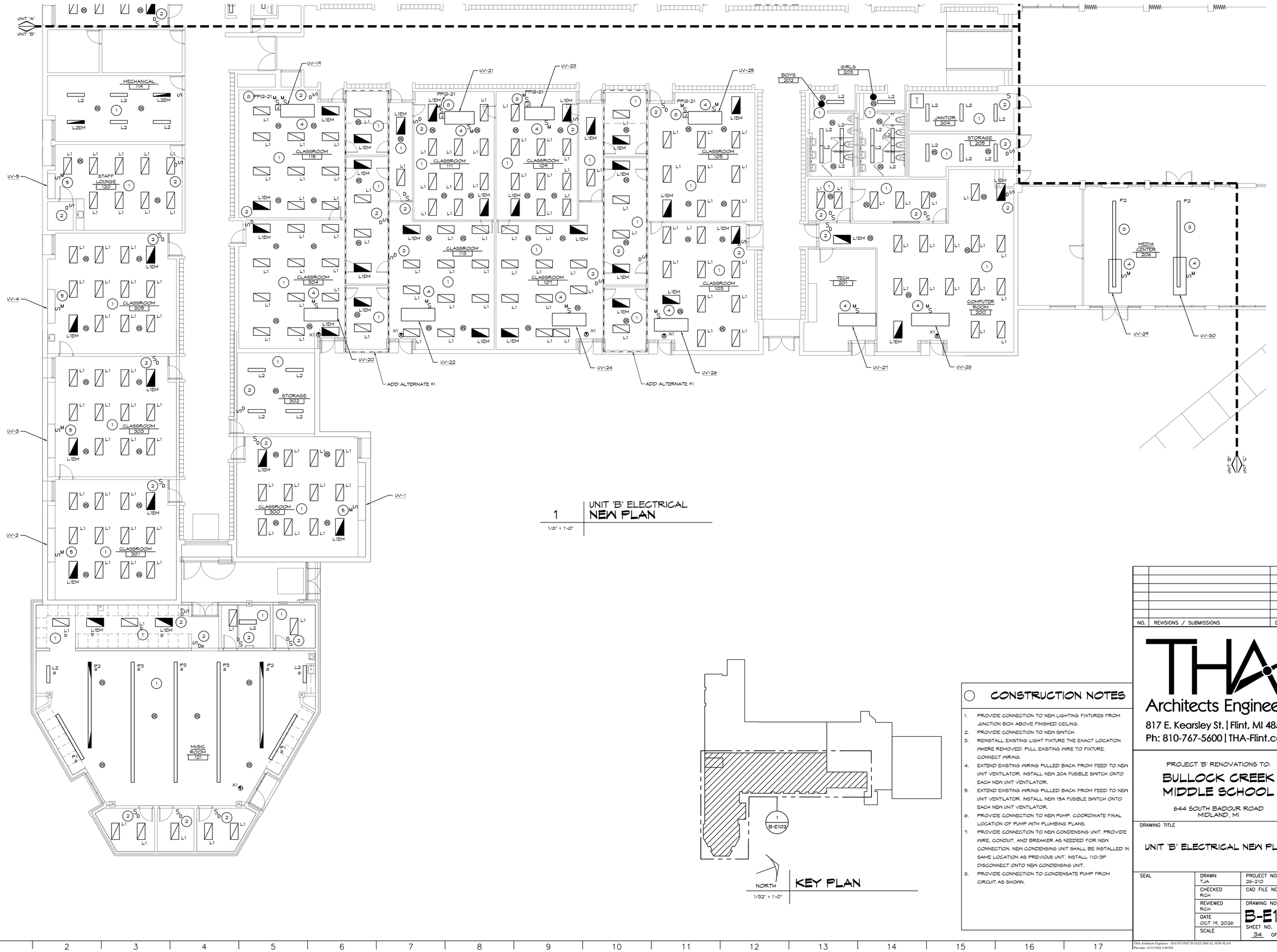
BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'A' ELECTRICAL NEW PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E106
	DATE OCT 19, 2026	SHEET NO. 33 OF 38
	SCALE	



1 UNIT 'B' ELECTRICAL NEW PLAN
1/8" = 1'-0"

KEY PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURES FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH.
3. REINSTALL EXISTING LIGHT FIXTURE THE EXACT LOCATION WHERE REMOVED. PULL EXISTING WIRE TO FIXTURE. CONNECT WIRING.
4. EXTEND EXISTING WIRING PULLED BACK FROM FEED TO NEW UNIT VENTILATOR. INSTALL NEW 20A FUSIBLE SWITCH ONTO EACH NEW UNIT VENTILATOR.
5. EXTEND EXISTING WIRING PULLED BACK FROM FEED TO NEW UNIT VENTILATOR. INSTALL NEW 15A FUSIBLE SWITCH ONTO EACH NEW UNIT VENTILATOR.
6. PROVIDE CONNECTION TO NEW PUMP. COORDINATE FINAL LOCATION OF PUMP WITH PLUMBING PLANS.
7. PROVIDE CONNECTION TO NEW CONDENSING UNIT. PROVIDE WIRE, CONDUIT, AND BREAKER AS NEEDED FOR NEW CONNECTION. NEW CONDENSING UNIT SHALL BE INSTALLED IN SAME LOCATION AS PREVIOUS UNIT. INSTALL 110/3P DISCONNECT ONTO NEW CONDENSING UNIT.
8. PROVIDE CONNECTION TO CONDENSATE PUMP FROM CIRCUIT AS SHOWN.

NO.	REVISIONS / SUBMISSIONS	DATE

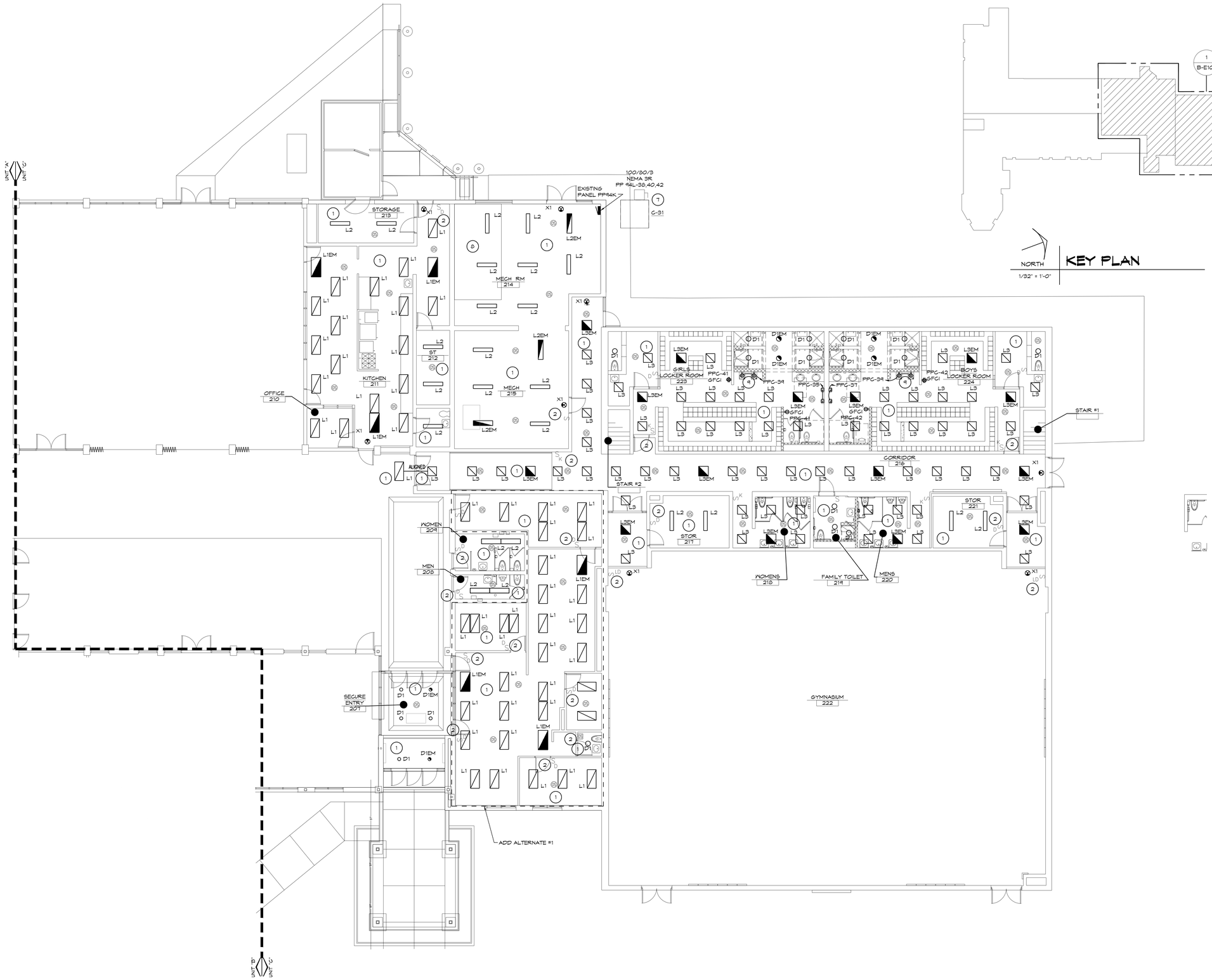
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
UNIT 'B' ELECTRICAL NEW PLAN

SEAL

DRAWN TJA	PROJECT NO. 26-210
CHECKED RCH	CAD FILE NO.
REVIEWED RCH	DRAWING NO. B-E107
DATE OCT 19, 2026	SHEET NO. 34 OF 38
SCALE	



1 UNIT 'C' ELECTRICAL NEW PLAN
1/8" = 1'-0"

KEY PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURES FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH.
3. REINSTALL EXISTING LIGHT FIXTURE THE EXACT LOCATION WHERE REMOVED. PULL EXISTING WIRE TO FIXTURE. CONNECT WIRING.
4. EXTEND EXISTING WIRING PULLED BACK FROM FEED TO NEW UNIT VENTILATOR. INSTALL NEW 20A FUSIBLE SWITCH ONTO EACH NEW UNIT VENTILATOR.
5. EXTEND EXISTING WIRING PULLED BACK FROM FEED TO NEW UNIT VENTILATOR. INSTALL NEW 15A FUSIBLE SWITCH ONTO EACH NEW UNIT VENTILATOR.
6. PROVIDE CONNECTION TO NEW PUMP. COORDINATE FINAL LOCATION OF PUMP WITH PLUMBING PLANS.
7. PROVIDE CONNECTION TO NEW CONDENSING UNIT. PROVIDE WIRE, CONDUIT, AND BREAKER AS NEEDED FOR NEW CONNECTION. NEW CONDENSING UNIT SHALL BE INSTALLED IN SAME LOCATION AS PREVIOUS UNIT. REPLACE BREAKER IN PANEL PP 94L WITH NEW 80 AMP BREAKER. PROVIDE NEW WIRE AND CONDUIT TO NEW CONDENSING UNIT.
8. EXTEND WIRE AND CONDUIT TO NEW AHU AS REQUIRED.
9. RECEPTACLE TO BE LOCATED BEHIND DRINK FOUNTAIN SHROUD. COORDINATE FINAL LOCATION WITH PLUMBING EQUIPMENT.

PROJECT 'B'

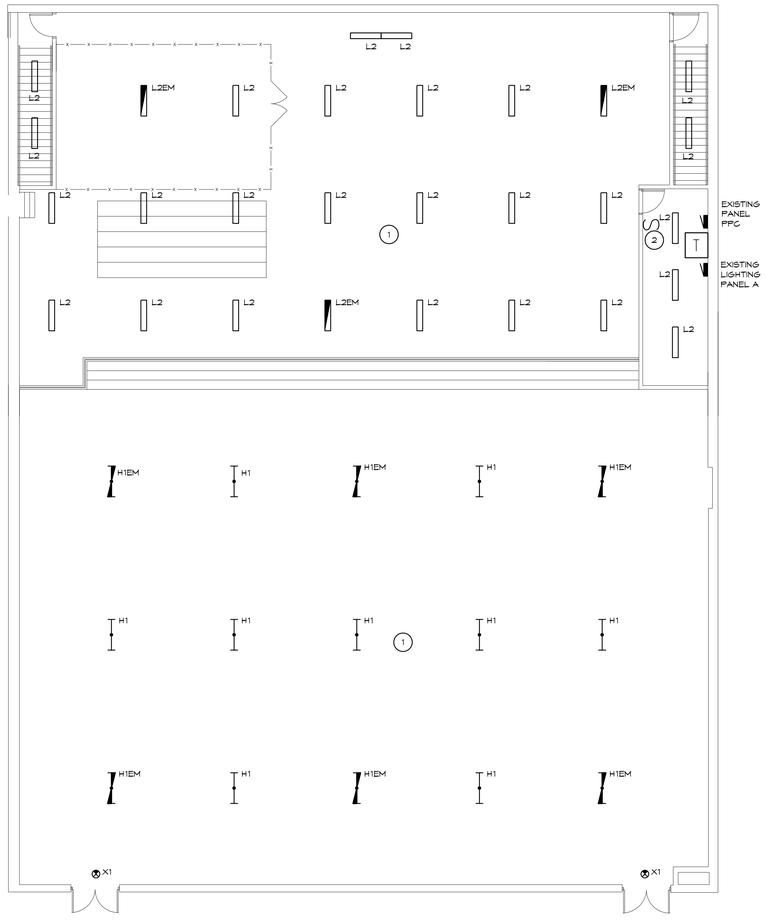
NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

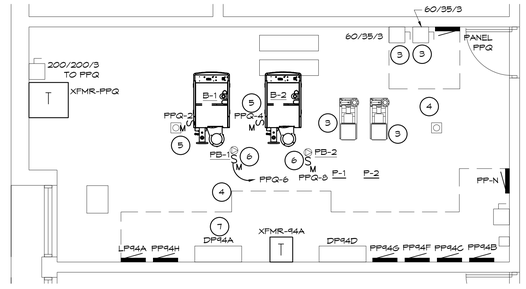
PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
UNIT 'C' ELECTRICAL NEW PLAN

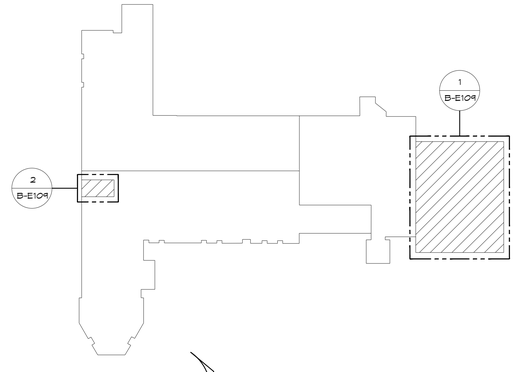
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RGH	CAD FILE NO.
	REVIEWED RGH	DRAWING NO. B-E108
	DATE OCT 19, 2026	SHEET NO. 35 OF 38
	SCALE	



1 ELECTRICAL MEZZANINE NEW PLAN
1/8" = 1'-0"



2 ELECTRICAL ENLARGED BOILER ROOM PLAN
1/4" = 1'-0"



NORTH KEY PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURE FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH.
3. PROVIDE CONNECTION TO NEW PUMP FROM CIRCUIT BREAKER AS SHOWN.
4. DASHED LINES INDICATED AROUND ELECTRICAL EQUIPMENT DENOTE REQUIRED WORKING CLEARANCE AND DEDICATED EQUIPMENT SPACE. NO PIPING, DUCTWORK, OR FOREIGN SYSTEM SHALL PENETRATE THIS SPACE IN ACCORDANCE WITH NEC 110.26. CONTRACTOR SHALL MAINTAIN CLEARANCE AREA FREE OF DEBRIS AND OBSTRUCTIONS DURING CONSTRUCTION.
5. PROVIDE CONNECTION TO BOILER FROM CIRCUIT BREAKER AS SHOWN.
6. PROVIDE CONNECTION TO BOILER PUMP FROM CIRCUIT AS SHOWN.
7. REPLACE SPARE BREAKER IN PANEL DP94A WITH 90 AMP BREAKER FOR CONNECTION TO NEW TRANSFORMER.

PROJECT 'B'

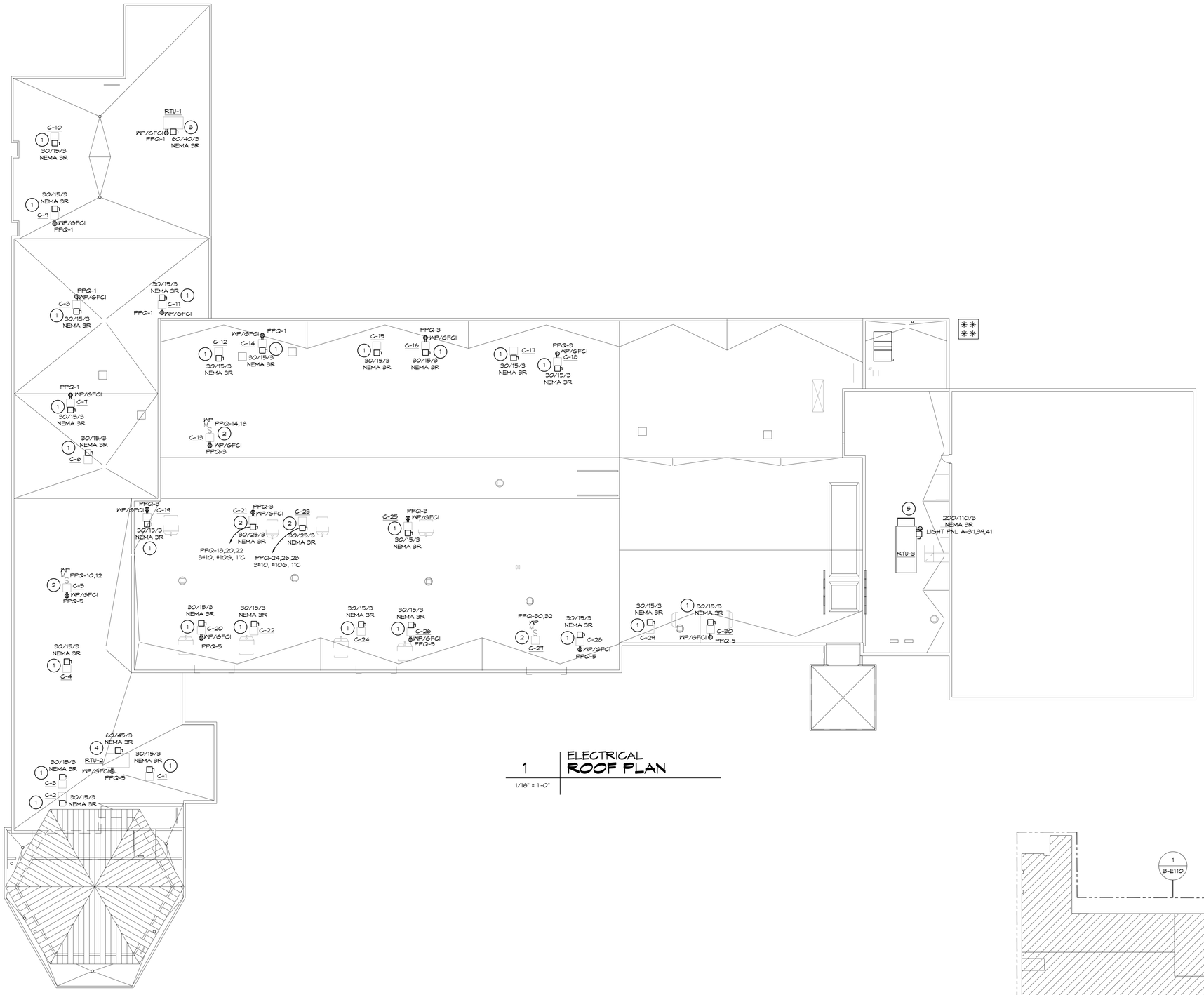
NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

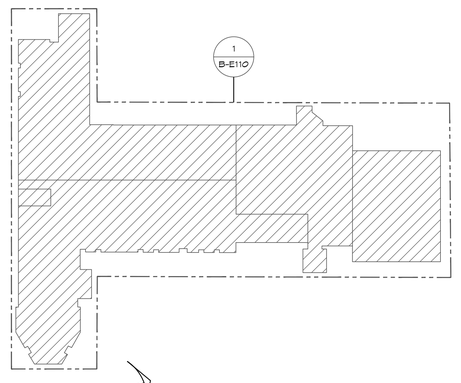
DRAWING TITLE
ELECTRICAL ENLARGED NEW PLANS

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E109
	DATE OCT 19, 2026	SHEET NO. 36 OF 38
	SCALE	



1 ELECTRICAL ROOF PLAN

1/16" = 1'-0"



NORTH

KEY PLAN

1/32" = 1'-0"

CONSTRUCTION NOTES

1. PULL EXISTING WIRING FROM FEED TO NEW CONDENSING UNIT. NEW CONDENSING UNITS ARE TO BE INSTALLED IN SAME LOCATION AS PREVIOUS UNITS. INSTALL 15A/3P DISCONNECT ONTO EACH NEW CONDENSING UNIT.
2. PROVIDE CONNECTION TO NEW CONDENSING UNIT FROM CIRCUIT BREAKER AS SHOWN.
3. PROVIDE CONNECTION TO NEW ROOF TOP UNIT. PROVIDE WIRE AND CONDUIT AS SHOWN. PROVIDE 40A BREAKER IN SAME POSITION AS PREVIOUS UNIT.
4. PROVIDE CONNECTION TO NEW ROOF TOP UNIT. PROVIDE WIRE AND CONDUIT AS SHOWN. PROVIDE 45A BREAKER IN SAME AS PREVIOUS UNIT.
5. PROVIDE CONNECTION TO NEW ROOF TOP UNIT. PROVIDE WIRE AND CONDUIT AS SHOWN. PROVIDE 110A BREAKER IN LIGHT PANEL A AS SHOWN.

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:

BULLOCK CREEK MIDDLE SCHOOL

644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE

ELECTRICAL ROOF PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E110
	DATE OCT 19, 2026	SHEET NO. 37 OF 38
	SCALE	

PANEL NAME: LIGHT PANEL A
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** MEZZ ELEC RM **MOUNTING:** SURFACE
BUS: 400A **MAIN:** 400A MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 480 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** MSB1
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	EXISTING LOAD						20	1	1	A	2	1	20						EXISTING LOAD	2
3	EXISTING LOAD						20	1	3	B	4	1	20						EXISTING LOAD	4
5	EXISTING LOAD						20	1	5	C	6	1	20						EXISTING LOAD	6
7	EXISTING LOAD						20	1	7	A	8	1	20						EXISTING LOAD	8
9	EXISTING LOAD						20	1	9	B	10	1	20						EXISTING LOAD	10
11	EXISTING LOAD						20	1	11	C	12	1	20						EXISTING LOAD	12
13	EXISTING LOAD						20	1	13	A	14	1	20						EXISTING LOAD	14
15	EXISTING LOAD						20	1	15	B	16	1	20						EXISTING LOAD	16
17	EXISTING LOAD						20	1	17	C	18	1	20						EXISTING LOAD	18
19	SPACE								19	A	20								SPACE	20
21	SPACE								21	B	22								SPACE	22
23	SPACE								23	C	24								SPACE	24
25	"						30	3	25	A	26	3	20						SPARE	26
27	"						"	"	27	B	28	"	"						"	28
29	"						"	"	29	C	30	"	"						"	30
31	TRANSFORMER						100	3	31	A	32	3	20						SPARE	32
33	"						"	"	33	B	34	"	"						"	34
35	"						"	"	35	C	36	"	"						"	36
37	NEW RTU-3				26020		110	3	37	A	38	3	20						SPARE	38
39	"				26020		"	"	39	B	40	"	"						"	40
41	"				26020		"	"	41	C	42	"	"						"	42

SUBTOTAL CONNECTED KVA	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	0.0	26.0	0.0	26.0
PHASE B CONNECTED KVA	0.0	0.0	0.0	26.0	0.0	26.0
PHASE C CONNECTED KVA	0.0	0.0	0.0	26.0	0.0	26.0
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	0.0	78.1	0.0	78.1	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	0.0	78.1	0.0	78.1	0.0	78.1	DEMAND KVA
							93.9	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							93.9	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: PANEL PP 94L
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** KITCHEN ELEC RM **MOUNTING:** SURFACE
BUS: 225A **MAIN:** 225A MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 480 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** MSB1
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	A C F WRK RM						15	3	1	A	2	3	15						SPARE	2
3	"						"	"	3	B	4	"	"						"	4
5	"						"	"	5	C	6	"	"						"	6
7	A C F LIBRARY						15	3	7	A	8	3	15						SPARE	8
9	"						"	"	9	B	10	"	"						"	10
11	"						"	"	11	C	12	"	"						"	12
13	A C A TECH PRO						15	3	13	A	14	3	15						EF A KIT HOOD	14
15	"						"	"	15	B	16	"	"						"	16
17	"						"	"	17	C	18	"	"						"	18
19	EF H N CAFE						15	3	19	A	20	3	15						SPARE	20
21	"						"	"	21	B	22	"	"						"	22
23	"						"	"	23	C	24	"	"						"	24
25	EXISTING LOAD						15	3	25	A	26	3	15						EF H2 S CAFE	26
27	"						"	"	27	B	28	"	"						"	28
29	"						"	"	29	C	30	"	"						"	30
31	SPARE						20	3	31	A	32	3	50						SPARE	32
33	"						"	"	33	B	34	"	"						"	34
35	"						"	"	35	C	36	"	"						"	36
37	SPARE						50	3	37	A	38	3	80				17162		NEW G-31	38
39	"						"	"	39	B	40	"	"				17162		"	40
41	"						"	"	41	C	42	"	"				17162		"	42

SUBTOTAL CONNECTED KVA	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	17.2	0.0	0.0	17.2
PHASE B CONNECTED KVA	0.0	0.0	17.2	0.0	0.0	17.2
PHASE C CONNECTED KVA	0.0	0.0	17.2	0.0	0.0	17.2
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	51.5	0.0	0.0	51.5	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	51.5	0.0	0.0	51.5	0.0	51.5	DEMAND KVA
							61.9	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							61.9	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: PPC
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** MEZZ ELEC RM **MOUNTING:** SURFACE
BUS: 225A **MAIN:** 225A MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** LPA VIA XFMR
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE
BOLD DENOTES NEW BREAKERS IN EXISTING PANEL

CKT	LOAD DESCRIPTION	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	SPACE						-	1	1	A	2	3	100						EXISTING LOAD	2
3	SPACE						-	1	3	B	4	-	-						EXISTING LOAD	4
5	SPACE						-	1	5	C	6	-	-						EXISTING LOAD	6
7	EXISTING LOAD						20	1	7	A	8	2	40						EXISTING LOAD	8
9	EXISTING LOAD						20	1	9	B	10	-	-						EXISTING LOAD	10
11	EXISTING LOAD						20	1	11	C	12	1	-						EXISTING LOAD	12
13	EXISTING LOAD						20	1	13	A	14	1	20						EXISTING LOAD	14
15	EXISTING LOAD						20	1	15	B	16	1	20						EXISTING LOAD	16
17	EXISTING LOAD						20	1	17	C	18	1	20						EXISTING LOAD	18
19	EXISTING LOAD						20	1	19	A	20	1	20						EXISTING LOAD	20
21	EXISTING LOAD						20	1	21	B	22	1	20						EXISTING LOAD	22
23	EXISTING LOAD						20	1	23	C	24	1	20						EXISTING LOAD	24
25	EXISTING LOAD						20	1	25	A	26	1	20						EXISTING LOAD	26
27	EXISTING LOAD						20	1	27	B	28	1	20						EXISTING LOAD	28
29	EXISTING LOAD						20	1	29	C	30	1	20						EXISTING LOAD	30
31	EXISTING LOAD						20	2	31	A	32	1	20						EXISTING LOAD	32
33	EXISTING LOAD						-	-	33	B	34	1	20						EXISTING LOAD	34
35	**GIRLS HAND DRYERS**			**1060**			**20***	**1**	**35**	C	36	3	20						EXISTING LOAD	36
37	**BOYS HAND DRYERS**			**1060**			**20***	**1**	**37**	A	38	-	-						EXISTING LOAD	38
39	**LOCKER ROOM WATER COOLERS**			**1200**			**20***	**1**	**39**	B	40	-	-						EXISTING LOAD	40
41	**GIRLS LOCKER ROOM RECP**		**540**				**20**	**1**	**41**	C	**42**	**1**	**20**			**540**			**BOYS LOCKER ROOM RECP**	**42**

SUBTOTAL CONNECTED KVA	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	1.1	0.0	0.0	1.1
PHASE B CONNECTED KVA	0.0	0.0	1.2	0.0	0.0	1.2
PHASE C CONNECTED KVA	0.0	1.1	1.1	0.0	0.0	2.1
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	1.1	3.3	0.0	0.0	4.4	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	1.1	3.3	0.0	0.0	4.4	0.0	4.4	DEMAND KVA
							12.2	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							12.2	MIN. OVERCURRENT DEVICE AMPS

EXISTING BUILDING DEMAND LOAD: 281.6 KW 339.1137 AMPS
ADDED LOAD: 142.8 KW 171.97 AMPS

PANEL NAME: PPQ
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** BOILER ROOM **MOUNTING:** SURFACE
BUS: 200A **MAIN:** MLO **MIN KAIC:** 42 **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** DP94A
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE
BOLD DENOTES NEW BREAKERS IN EXISTING PANEL

CKT	LOAD DESCRIPTION	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	ROOF RECP		1080				20	1	1	A	2	1	20			1920			BOILER 1	2
3	ROOF RECP		1080				20	1	3	B	4	1	20			1920			BOILER 2	4
5	ROOF RECP		900				20	1	5	C	6	1	20			768			BOILER PUMP 1	6
7	P-1			2903			35	3	7	A	8	1	20			768			BOILER PUMP 2	8
9	"			2903			-	-	9	B	10	2	20			1456			C-5	10
11	"			2903			-	-	11	C	12	-	-			1456			"	12
13	P-2			2903			35	3	13	A	14	2	20			1456			C-13	14
15	"			2903			-	-	15	B	16	-	-			1456			"	16
17	"			2903			-	-	17	C	18	3	25			1919			C-21	18
19	SCIENCE ROOMS EXHAUST			200			20	1	19	A	20	-	-			1919			"	20
21	CONDENSATE PUMPS			480			20	1	21	B	22	-	-			1919			"	22
23	SPARE						20	1	23	C	24	3	25			1919			C-23	24
25	SPARE						20	1	25	A	26	-	-			1919			"	26
27	SPARE						20	1	27	B	28	-	-			1919			"	28
29	SPARE						20	1	29	C	30	2	20			1456			C-27	30
31	SPARE						20	1	31	A	32	-	-			1456			"	32
33	SPARE						20	1	33	B	34	1	20						SPARE	34
35	SPARE						20	1	35	C	36	1	20						SPARE	36
37	SPARE						20	1	37	A	38	1	20						SPARE	38
39	SPARE						-	1	39	B	40	1	20						SPARE	40
41	SPARE						-	1	41	C	42	1	20						SPARE	42

SUBTOTAL CONNECTED KVA	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	1.1	15.4	0.0	0.0	16.5
PHASE B CONNECTED KVA	0.0	1.1	15.0	0.0	0.0	16.0
PHASE C CONNECTED KVA	0.0	0.9	13.3	0.0	0.0	14.2
25% OF LARGEST MOTOR			0.0			

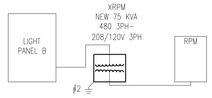
RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	3.1	43.7	0.0	0.0	46.8	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	3.1	43.7	0.0	0.0	46.8	0.0	46.8	DEMAND KVA
							129.9	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							129.9	MIN. OVERCURRENT DEVICE AMPS

LIGHTING FIXTURE SCHEDULE

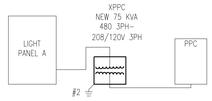
General: Lighting fixtures as hereinafter specified are identified by type as noted on drawings. Fixture specifications are based on construction and performance. Manufacturer's catalogue numbers are of general nature and indicate level of quality required, but do not necessarily reflect complete options as specified. Approval shall be based on description and specification of fixture as well as catalogue number indicated. Provide appropriate trim for fixture based on ceiling

	DESCRIPTION	MANUFACTURER & CATALOG NO.	LAMPS QUANTITY AND WATTS FLUOR	LED	INC	BALLAST	MOUNTING	NOTES
D1	6" LED DOWN LIGHT. 1500 LUMENS, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E10WR. 10 WATT EMERGENCY BATTERY BACK UP.	GOTHAM: EVO6SH-40/15-AR-LSS-MWD-MVOLT-GZ1-E10WR		15W		DRIVER	RECESSED	
H1	LED HIGH BAY FIXTURE. 24000 LUMEN, 4000K COLOR TEMPERATURE. NLIGHT AIR ENABLED. PROVIDE TYPE 'EM' WITH OPTION E10WLCP 20 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: IBG-24000LM-SEF-PCL-WD-MVOLT-GZ10-40K-80CRI=NLTAIR2-APDT		144W		DRIVER	PENDANT	
L1	2'X4' LED FLAT PANEL. 4000 LUMEN, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CPX-2X4-4000LM-80CRI-40K-SWL-MIN10-MVOLT		37W		DRIVER	RECESSED	
L2	SURFACE MOUNT 4' LED FIXTURE. 4000LUMEN, 4000K COLOR TEMPERATURE.	LITHONIA: CLX-L48-4000LM-SEF-WD		32W		DRIVER	SURFACE	
L3	2'X2' LED FLAT PANEL. 3200 LUMEN, 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CPX-2X2-3200LM-80CRI-40K-SWL-MIN10-MVOLT		31W		DRIVER	RECESSED	
P1	INDIRECT DIRECT LINEAR PENDANT, 2000 LUMEN/FT, 4000K COLOR TEMP, 12	FINELITE: HP-X-P-ID-X-V-V-840		17W/FT		DRIVER	PENDANT	
P2	INDIRECT DIRECT LINEAR PENDANT, 2000 LUMEN/FT, 4000K COLOR TEMP, 20FT. SHADED REGIONS INDICATE 4' 10W EMERGENCY BATTERY BACK UP SECTION.	FINELITE: HP-X-P-ID-X-V-V-840-LGD10W		17W/FT		DRIVER	PENDANT	
P3	INDIRECT DIRECT LINEAR PENDANT, 2000 LUMEN/FT, 4000K COLOR TEMP, 28	FINELITE: HP-X-P-ID-X-V-V-840		17W/FT		DRIVER	PENDANT	
X1	ARCHITECTURAL EDGE LIT LED EXIT SIGN WITH BATTERY OPERATION. PROVIDE CEILING/WALL/END MOUNT AS SHOWN ON PLANS WITH SINGLE/DOUBLE FACE AND DIRECTIONAL SIGNS AS SHOWN ON PLANS.	LITHONIA: EDG-X-RMR-EL-SD		LED		DRIVER	WALL	



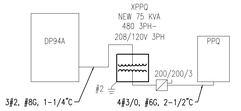
1 MAIN LEVEL TRANSFORMER REPLACEMENT

N.T.S XO1



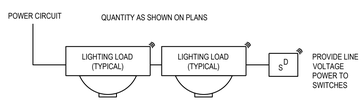
2 UPPER GYM TRANSFORMER REPLACEMENT

N.T.S XO1



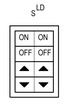
3 BOILER ROOM NEW TRANSFORMER

N.T.S XO1



APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON

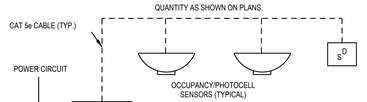
SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. SWITCHES AND SENSORS ARE WIRELESS CONNECTIONS. SWITCH TO RECEIVE 277V AND NOT BATTERY POWERED.
3. BATHROOMS, STORAGES, AND CLOSETS TO BE NON DIMMING.
4. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
5. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
6. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.



TYPICAL DIMMING LAYOUTS

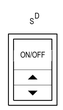
4 GYM LIGHTING CONTROLS

N.T.S XO1



APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
4. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.



5 TYPICAL LIGHTING CONTROLS

N.T.S XO1

PROJECT 'B'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'B' RENOVATIONS TO:
BULLOCK CREEK MIDDLE SCHOOL
644 SOUTH BADOUR ROAD
MIDLAND, MI

DRAWING TITLE
ELECTRICAL DETAILS AND SCHEDULES

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. B-E601
	DATE OCT 19, 2026	SHEET NO. 38 OF 38
	SCALE	

STANDARD ABBREVIATIONS

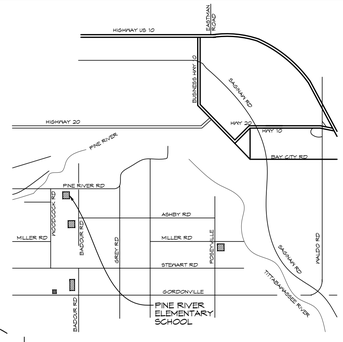
@	at	KO	knockout
A/C	air conditioning		
ACOUST	acoustical	LAM	laminate
AD	adjustable	LAV	lavatory
AFF	above finish floor	LH	left hand
ALT	alternate	LL	live load
ALUM	aluminum	LLH	long leg horizontal
ANCH	anchor, anchorage	LLV	long leg vertical
ARCH	architect/architectural	LTWT	light weight
BD	board		
BIT	bituminous	MB	markerboard
BLDG	building	MAS	masonry
BLK	block	MAX	maximum
BLKG	blocking	MECH	mechanic/mechanical
BM	bench mark	MET	metal
BOTT	bottom	MH	manhole
BRG	bearing	MIN	minimum
BSMT	basement	MISC	miscellaneous
		MO	masonry opening
C/C	center to center	MCJ	masonry control joint
CAB	cabinet	MT	metal threshold
CB	chalkboard/catch basin	MULL	mullion
CEM	cement		
CER	ceramic	NIC	not in contract
CF	cubic foot	NO	number
CHWR	chilled water return	NOM	nominal
CHWS	chilled water supply	NRC	noise reduction coefficient
CI	cast iron	NTS	not to scale
CJ	control joint		
CLG	ceiling	O/O	out to out
CMU	concrete masonry unit	OA	overall
CO	clean out	OC	on center
COL	column	OD	outside diameter
CONC	concrete	OPG	opening
CONST	construction	OPP	opposite
CONT	continuous/continuing	PCF	pounds per cubic foot
CONTR	contract/contractor	PLAS	plaster
CONV	convector	±	plus or minus
CRS	course(s)	PLF	pounds per lineal foot
CT	ceramic tile	PSF	pounds per square foot
CUH	cabinet unit ventilator	PSI	pounds per square inch
CW	domestic cold water	PART	partition
CY	cubic yard	PVC	polyvinyl chloride
		PMT	pavement
°	degree		
DET	detail		
DF	drinking fountain	R	riser/radius
DIAG	diagonal	RA	return air
DIA or Ø	diameter	RD	roof drain
DIM	dimension	REF.	reference
DIV	division	REF	refrigerator
DP	dampproofing	REINF	reinforce(d)/reinforcing
DS	downspout	RES	resilient
DWG	drawing	REV	revision(s)/revised
		RH	right hand
		RM	room
EA	each	RO	rough opening
EIFS	exterior insulation finish system (synthetic plaster)	ROW	right of way
		RS	roof sump
ELEC	electric/electrical	RWC	rainwater conductor
EQ	equal		
EQUIP	equipment	SAN	sanitary
EWC	electric water cooler	SD	storm drain
EXIST	existing	SECT	section
EXH	exhaust	SHT	sheet
EXT	exterior	SIM	similar
		SPEC	specification(s)
FA	fire alarm	SQ	square
FAI	fresh air intake	SS	service sink
FD	floor drain	SST	stainless steel
FE	fire extinguisher	STL	steel
FEC	fire extinguisher cabinet	STD	standard
FIN	finish(ed)	SUSP	suspended
FL	floor(ing)	SYM	symmetry/symmetrical
FOUND	foundation		
FTR	fin tube radiation	T&G	tongue/groove
FTG	footing	T	tread
		TB	tackboard
G	gas	TEL	telephone
GA	gage/gauge	TERR	terrazzo
GC	general contractor	THR	threshold
GI	galvanized iron	TV	television
GL	glass/glazing	TYP	typical
GST	glazed structural tile		
GALV	galvanized	UH	unit heater
		UR	urinal
HB	hose bibb	UV	unit ventilator
HDWR	hardware		
HM	hollow metal	V	vent
HORIZ	horizontal	VERT	vertical
HGT	height		
HTG	heating	W	width/wide
HVAC	heating/ventilating/air conditioning	W/	with
HW	domestic hot water	WC	water closet
HWR	hot water heating return	WD	wood
HWS	hot water heating supply	WH	water heater
HWR	domestic hot water return	WI	wrought iron
		W/W	wall to wall
ID	inside dimension	WWR	welded wire reinforcement
INT	interior		
INV	invert		

HATCHING PATTERN KEY

BRICK · CONC BLOCK · RIGID INSUL · BATT INSUL · ACOUST TILE

CONCRETE · ASPHALT · METAL · FINISH WOOD · GYP BOARD

EARTH · SAND · GRAVEL · LUMBER · PLYWOOD



NORTH

NO SCALE

LOCATION MAP

SYMBOLS KEY

NORTH — NORTH ARROW

100'-0" — EXISTING ELEVATION POINT

100'-0" — NEW ELEVATION POINT

ELEVATION TARGET

A — COLUMN NUMBER — COLUMN CENTERLINE

1 / A1 — DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION

1 / A1 — DETAIL NUMBER / SHEET NUMBER — WALL SECTION

1-A1 — DET NUM - SHT NUM — DETAIL BUBBLE

WORKROOM 101 — ROOM NAME / ROOM NUMBER — ROOM NUMBER

100 — DOOR NUMBER

100 — WINDOW NUMBER

1 / A101 — ELEVATION NUMBER / SHEET NUMBER — INTERIOR ELEVATION

001 — DEMOLITION NOTE

DEVELOPMENT DATA

APPLICABLE CODES & ORDINANCES
- 2021 MICHIGAN BUILDING CODE
- 2021 MICHIGAN REHABILITATION CODE - LEVEL 2
- 2021 MICHIGAN MECHANICAL CODE
- 2021 MICHIGAN ENERGY CODE
- 2023 NATIONAL ELECTRICAL CODE (NEC)
- NFPA 101 LIFE SAFETY CODE 2012 AS ADOPTED BY MICHIGAN BUREAU OF FIRE SAFETY
- ICC A117.1-2009

BUILDING USE
- EXISTING: E, EDUCATION

BUILDING CONSTRUCTION TYPE
- EXISTING BUILDING TYPE II-B (0,0,0) NON-COMBUSTIBLE
- EXISTING CANOPY TYPE III-B (0,0,0) COMBUSTIBLE

BUILDING AREA

AREA 'A' ALLOWABLE:

A= 14,500 + (14,500 x.75)(NON SPRIKLERED) = 25,375 SF

EXISTING AREA 'A' = 19,231 SF

AREA 'B' ALLOWABLE :

A= 14,500 + (14,500 x.75)(NON SRINKLERED) = 25,375 SF

EXISTING AREA 'B' = 8,907 SF

AREA 'C' ALOWABLE:

A= 14,500 + (14,500 x.75)(NON SRINKLERED) = 25,375 SF

TOTAL AREA 'C' = 2,193 SF

OCCUPANCY COUNT

EXISTING STUDENTS = 493
EXISTING STAFF = 20
NEW STUDENTS (TABLE 1004.5 MBC) = 74
NEW STAFF = 2

TOTAL OCCUPANCY = 589

PLUMBING FIXTURE COUNT

MALE PLUMBING FIXTURES REQUIRED:
(295/50) = 6 WC AND 6 LAVS
FEMALE PLUMBING FIXTURES REQUIRED:
(295/50) = 6 WC AND 6 LAVS

MALE EXISTING PLUMBING FIXTURES:
11WC AND 5 LAVS

FEMALE EXISTING PLUMBING FIXTURES:
9 WC AND 5 LAVS

UNISEX PLUMBING FIXTURES:
2 WC AND 2 LAVS

DRINKING FOUNTAIN REQUIRED (589/100) = 6 D.F.

EXISTING DRINKING FOUNTAINS = 5 D.F.

DRINKING FOUNTAIN REMOVAL = 1

NEW DRINKING FOUNTAIN INSTALLATION = 2

NEW DRINKING FOUNTAIN TOTAL = 6

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT #26-210

1420 SOUTH BADOUR ROAD MIDLAND MI 48640

PROJECT 'E'
ADDITION AND RENOVATIONS TO:
PINE RIVER ELEMENTARY SCHOOL

1894 PINE RIVER ROAD MIDLAND MI 48640

INDEX OF DRAWINGS

E-G001 TITLE SHEET

E-C100 SITE SURVEY
E-C101 DEMOLITION SITE PLAN
E-C102 SITE DEVELOPMENT PLAN
E-C103 SITE GRADING AND UTILITIES PLAN
E-C104 SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E-C105 SOIL MAP INFORMATION
E-C106 TAX MAP INFORMATION

E-S001 STRUCTURAL NOTES
E-S002 SPECIAL INSPECTIONS
E-S003 TYPICAL DETAILS
E-S100 PLANS AND SECTIONS
E-S300 SECTION DETAILS

E-A100 COMPOSITE DEMOLITION PLAN AND COMPOSITE FLOOR PLAN
E-A101 DEMOLITION PLANS, FLOOR PLAN, AND REFLECTED CEILING PLAN
E-A102 DEMOLITION PLANS, SECTIONS, AND DETAILS
E-A103 FOUNDATION PLAN, FLOOR PLAN, RCP, ROOF PLAN

E-A201 ELEVATIONS AND BUILDING SECTIONS

E-A301 WALL SECTIONS
E-A302 WALL SECTIONS

E-A501 DETAILS

E-A601 SCHEDULES

E-M001 MECHANICAL SCHEDULES
E-M101 MECHANICAL COMPOSITE FLOOR PLANS
E-M102 ENLARGED MECHANICAL FLOOR PLAN
E-M103 ENLARGED KITCHEN MECHANICAL PLANS AND ROOF PLANS

E-P101 ENLARGED PLUMBING FLOOR PLANS

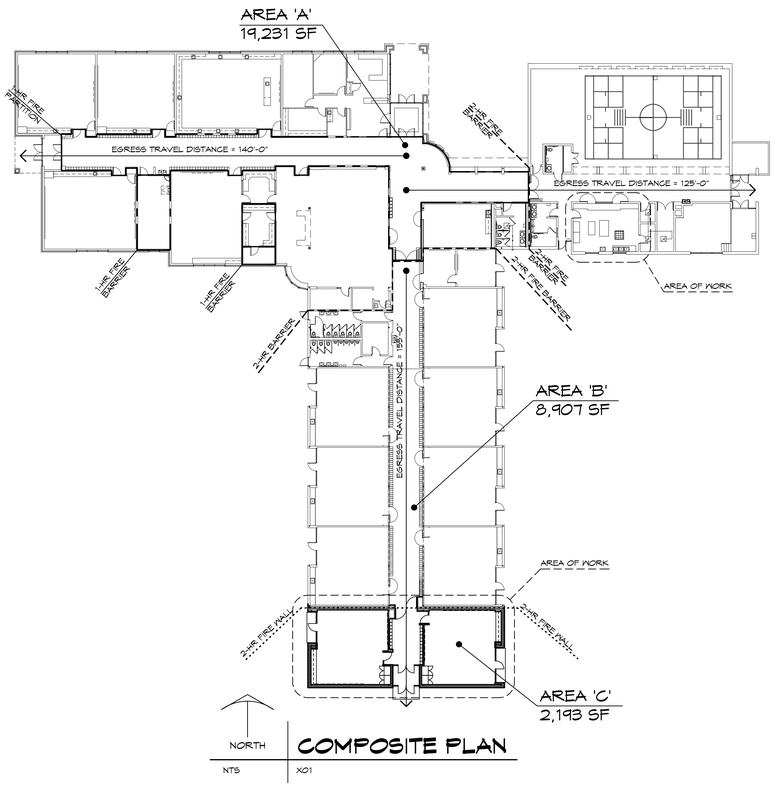
E-E000 ELECTRICAL COVER SHEET
E-E101 ELECTRICAL DEMOLITION PLANS
E-E102 ELECTRICAL NEW PLANS
E-E601 ELECTRICAL SCHEDULES AND DETAILS

FIRE SEPARATION LEGEND

- 1-HR FIRE PARTITION
- 1-HR FIRE BARRIER
- 2-HR FIRE BARRIER
- 2-HR FIRE WALL

FIRE SEPARATION NOTES

1. ALL PENETRATIONS THROUGH EXISTING 1 HR RATED FIRE SEPARATIONS ARE TO MAINTAIN 1-HOUR RATING.
2. ALL NEW PENETRATIONS OF EXISTING JANITORS' CLOSETS, EXISTING STORAGE ROOMS, AND EXISTING MECHANICAL ROOMS MUST PROVIDE 1-HOUR RATING.
3. ALL NEW PENETRATIONS OF EXISTING 2-HOUR FIRE SEPARATION MUST PROVIDE FOR 2-HOUR RATING.



NORTH

NTS

X01

COMPOSITE PLAN

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

Wolgast Corporation
Executive Offices
Executive One Building
4835 Towne Centre Road
Suite 203
Saginaw, MI 48604
Phone : (989) 790-9120
Fax : (989) 790-9063
www.wolgastconstruction.com

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT# 26-210
1420 SOUTH BADOUR ROAD MIDLAND MI 48640

PROJECT 'E'
ADDITION AND RENOVATIONS TO:
PINE RIVER ELEMENTARY SCHOOL
1894 PINE RIVER ROAD MIDLAND MI 48640

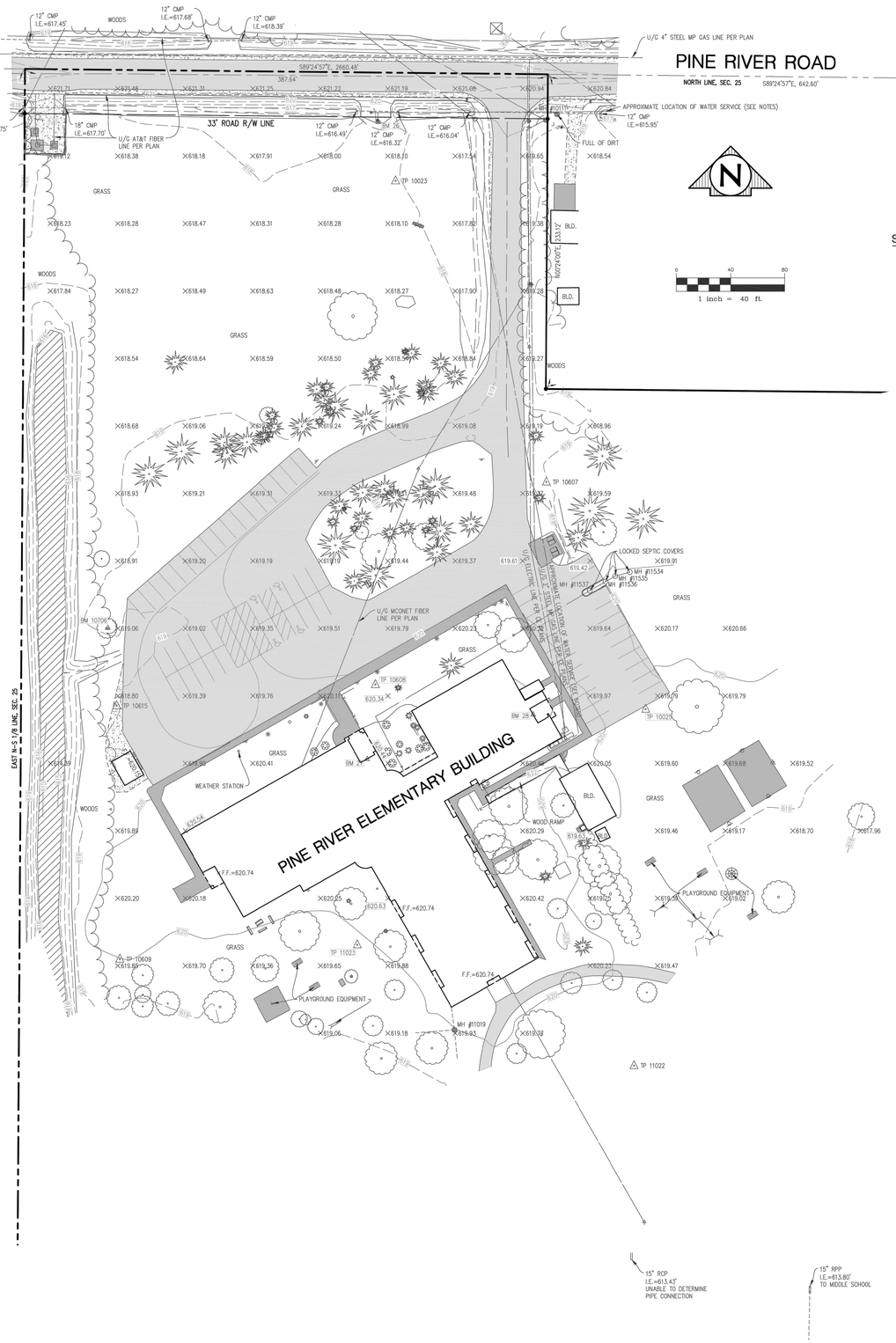
PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

SEAL

DRAWN KRS	PROJECT NO. 26-210
CHECKED JESS	CAD FILE NO. E-G001
REVIEWED MLB	DRAWING NO. E-G001
DATE OCT 19, 2026	SHEET NO. 1 OF 31
SCALE N.T.S.	

T:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD-BC PH\E-G001 TITLE SHEET.dwg
Plot date: 10/19/2026 11:24 AM



N

0 40 80
1 inch = 40 ft.

811 Know what's **below.** **Call** before you dig.

STRUCTURE INVENTORY

MH# 10111
TYPE: STORM
COVER: FLAT GRATE
RIM= 619.14

MH# 11019
TYPE: STORM
COVER: FLAT GRATE
RIM= 620.11
8" PVC S INV.=614.71
8" PVC W INV.=615.11
8" PVC NW INV.=614.76

LEGAL DESCRIPTIONS PER DEED:
WARRANTY DEED-LIBER 314, PAGE 318
THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION TWENTY FIVE TOWNSHIP 14 NORTH, RANGE 1 EAST, MICHGAN; EXCEPTING THEREFROM THE FOLLOWING PARCELS OF LAND: PARCEL "A": LOTS ONE THROUGH TEN, INCLUSIVE, OF THE PLAT OF BURGOON'S SUBDIVISION, ACCORDING TO THE RECORDED PLAT THEREOF. PARCEL "B": THE SOUTH 165 FEET OF THE NORTH 798 FEET OF THE EAST 264 FEET OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 25.

SURVEY NOTES:
1. HORIZONTAL DATUM: NAD83/96 MCS SOUTH ZONE, PER PREVIOUS ROWE PROJECT JOB NO. 09M0073
2. VERTICAL DATUM: NAVD88, PER PREVIOUS ROWE PROJECT JOB NO. 09M0073
3. AREA OF MIDDLE SCHOOL/PINE RIVER ELEMENTARY PROPERTY, 54.50 ACRES
4. DISTANCES SHOWN ON BOUNDARY LINES ARE MCS SOUTH ZONE GRID DISTANCES. COMBINED SCALE FACTOR: 0.99995689
5. SUBJECT PROPERTY AND ALL ADJACENT PARCELS ARE ZONED: SINGLE FAMILY RESIDENTIAL MED.
6. PER FEMA PANEL 26111C0258E EFF. 5/4/2009 THIS PROPERTY IS NOT IN THE FLOOD PLAIN.
7. UTILITIES: WE DO NOT WARRANT THE LOCATION OF ALL TOPOGRAPHICAL SITE FEATURES. THE TOPOGRAPHIC FEATURES, AS SHOWN HEREON, ARE BASED UPON VISIBLE EVIDENCE OBSERVED IN THE FIELD AND FIELD LOCATED SURFACE UTILITY STRUCTURES. WE DO NOT WARRANT THE LOCATION OF THE UNDERGROUND PORTION OF THE UTILITIES. THE UNDERGROUND IMPROVEMENTS, AS SHOWN HEREON, ARE APPROXIMATE SINCE THEY ARE NOT VISIBLE FROM THE SURFACE AND COMPLETELY ACCURATE RECORDS OF ALL UTILITIES ARE NOT AVAILABLE. RECORDS FOR THIS SURVEY WERE OBTAINED FROM UTILITY DRAWINGS PROVIDED BY THE CLIENT AND PRIVATE UTILITY COMPANY RESPONSES TO MISS DIG TICKET #A062880170. AS OF 11/10/2016 NOT ALL RESPONSES HAVE BEEN RECEIVED FROM SUBJECT UTILITY COMPANIES. MISS DIG SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.
7. WATER SERVICE LOCATION SHOWN PER CONVERSATION WITH BULLOCK CREEK SCHOOL DIRECTOR OF OPERATIONS. COUNTY RECORDS INDICATE PINE RIVER SCHOOL WATER SERVICE WAS PREVIOUSLY FROM THE MIDDLE SCHOOL AND A DEAD LINE MAY BE FOUND TO THE SOUTH. WATER DISTRICT #1 OF MIDLAND COUNTY RESPONDED THAT THEY HAVE NO FACILITIES IN THIS AREA.

STRUCTURE SYMBOLS

- EXISTING ROUND CATCH BASIN IN GREEN SPACE
- EXISTING DOWNSPOUT
- EXISTING WATER SHUTOFF (SERVICE VALVE)
- EXISTING FIRE HYDRANT

EXISTING TOPOGRAPHICAL SYMBOLS

- STREET SIGN
- ADVERTISING SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE STUMP
- CONIFEROUS SHRUB
- DECIDUOUS SHRUB
- MAIL BOX
- DUMPSTER
- ROCK
- METAL POST
- BASKETBALL HOOP
- BENCH
- PICNIC TABLE

UTILITY SYMBOLS

- UTILITY POLE
- GUY ANCHOR CABLE
- LIGHT POLE / ORNAMENTAL LIGHT
- LIGHT POLE
- TRANS TOWER
- UTILITY MANHOLE
- UTILITY HANDHOLE
- ELECTRICAL RISER
- ELECTRICAL BREAKER PANEL
- ELECTRICAL TRANS PAD
- UTILITY METER
- UTILITY PIN FLAG

SURVEY SYMBOLS

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

PLAN VIEW LINE TYPES

- EXISTING STORM SEWER
- EXISTING CULVERT
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- SECTION LINE
- EXISTING RIGHT OF WAY
- EXISTING CURB AND GUTTER
- EXISTING CENTER LINE ROADWAY
- PROPERTY LINE
- EXISTING OVERHEAD UTILITIES
- UNDERGROUND ELECTRICAL LINE
- GAS LINE OR PETROLEUM PIPELINE
- UNDERGROUND FIBER OPTIC
- TREE LINE
- EXISTING FENCE

SURFACE IDENTIFICATION

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING GRAVEL
- EXISTING WATER SURFACE

TOPOGRAPHY

- EXISTING CONTOURS MAJOR (960)
- EXISTING CONTOURS MINOR (958)

BENCHMARK DATA TABLE

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 26	764387	13142456	621.03	TOP SE FLANGE BOLT HYD. IN FRONT OF PINE RIVER ELEMENTARY SCHOOL
BM 27	763915	13142448	620.77	FINISHED FLOOR AT FRONT MAIN ENTRANCE
BM 28	763948	13142571	620.83	FINISHED FLOOR AT EAST ENTRANCE DOUBLE DOORS
BM 10706	764012	13142256	620.58	SET VERTICAL SPIKE IN E. SIDE TWIN 15" OAK, NEAR NW COR. OF PARKING LOT

TRAVERSE POINT DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 10023	764343.4500	13142468.9670	FND. IRON WITH "ROWE TRAV" CAP IN OPEN GRASS AREA 75'± W. OF W. EDGE DRIVE TO SCHOOL, 48'± SSE OF HYDRANT
TP 10025	763951.9620	13142654.4160	FND. IRON WITH "ROWE TRAV" CAP 4'± SE OF SE'LY COR. BIT P-LOT ON E. SIDE ELEMENTARY SCHOOL
TP 10609	763766.7380	13142264.6500	SET IRON WITH "ROWE TRAV" CAP 87'± SW OF W. ENTRANCE TO SCHOOL, 50'± E. OF C/L DITCH

SECTION CORNER DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
QCOR 2	761762.4140	13143506.0390	EAST 1/4 CORNER, SECTION 25, T14N-R1E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
SCOR 3	764412.8240	13143524.5710	NORTHEAST CORNER, SEC. 25, T14N-R1E, MIDLAND COUNTY, FND. 3/4" PIPE IN MON. BOX
QCOR 4	764439.9320	13140864.1930	NORTH 1/4 CORNER, SECTION 25, T14N-R1E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
CCOR 5	761799.9860	13140849.8850	INTERIOR 1/4 CORNER, SECTION 25, T14N-R1E, MIDLAND COUNTY, FND. 1/2" PIPE IN MON. BOX

GUY A. STICKLER — STATE OF MICHIGAN — PROFESSIONAL SURVEYOR — No. 61225 — LICENSED

PLAN DATE: NOVEMBER 10, 2016
PROJECT MGR: JR
REVIEWER: JR
SCALE: 1" = 40'

ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

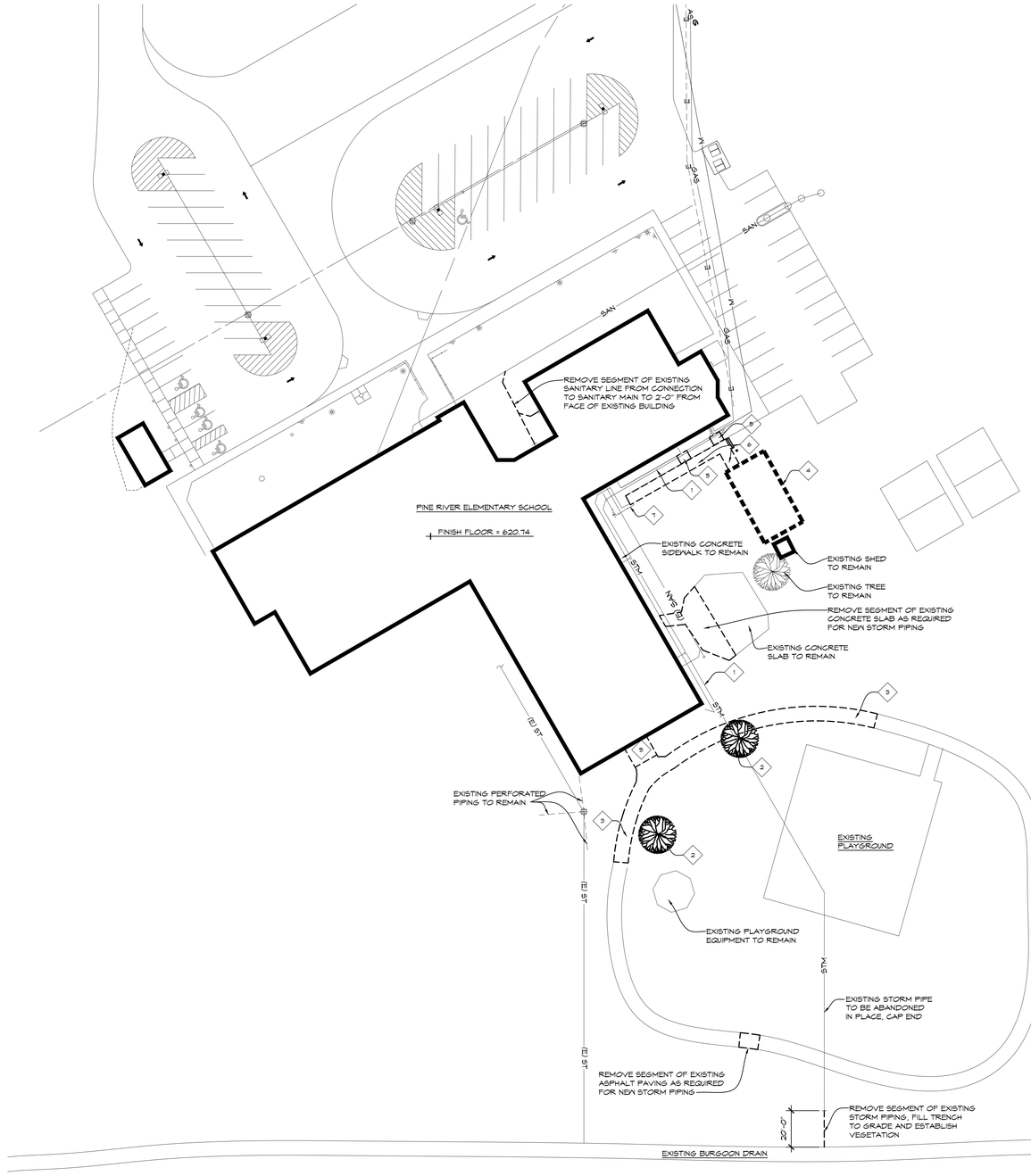
PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

SITE SURVEY

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. E-C102
	REVIEWED MLB	DRAWING NO. E-C100
	DATE OCT 19, 2026	SHEET NO. 2 OF 31
	SCALE 1"= 30'-0"	



NORTH

1" = 30'-0"

DEMOLITION SITE PLAN

XC01

GENERAL NOTES

1. UTILITIES AND UTILITY SERVICE INFORMATION SHOWN ON THE PLANS, ARE BASED ON EXISTING DRAWINGS AND SITE SURVEY AND IS FOR INFORMATION ONLY, AS ACTUAL LOCATIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL PUBLIC AND PRIVATE UTILITY LOCATIONS BEFORE PROCEEDING WITH WORK.
2. FOR THE PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR IS REQUIRED TO CONTACT "MISS DIG" BY PHONE AT 811-482-7171 OR VIA THE WEB AT EITHER ELOCATE.MISSDIG.ORG FOR SINGLE ADDRESS OR RTE.MISSDIG.ORG, A MINIMUM OF 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) IN ADVANCE OF ANY EXCAVATION.
3. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ALL OF THEIR WORK WITH UTILITY COMPANIES WORK, IF ANY, AT NO ADDITIONAL COST TO THE PROJECT.
4. DAMAGE TO EXISTING PUBLIC AND /OR PRIVATE UTILITIES, OUTSIDE THE SCOPE OF WORK SHOWN ON THE PLANS, IS THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIR, AS SUCH, SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.
5. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
6. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND IT'S ELEMENTS.
9. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING AND SITE DURING CONSTRUCTION TO PREVENT DAMAGE.
10. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWING TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AND REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.

◇ SITE DEMOLITION NOTES

1. DISCONNECT EXISTING LEADS AND ABANDON EXISTING 8" STORM LINE IN PLACE. REMOVE SEGMENTS OF EXISTING LINE AS REQUIRED FOR EXTENSION OF EXISTING LEADS TO NEW STORM PIPE.
2. REMOVE EXISTING TREE.
3. REMOVE PORTION OF EXISTING ASPHALT WALKWAY.
4. REMOVE EXISTING 24'x40' PORTABLE BUILDING COMPLETE INCLUDING EXISTING CONCRETE SLAB BELOW, DISCONNECT EXISTING POWER SUPPLY BACK TO PANEL.
5. REMOVE EXISTING CONCRETE WALKWAY.
6. REMOVE EXISTING COVERED RAMP, POSTS, FOOTINGS, ETC.
7. REMOVE PORTION OF EXISTING FENCE AS REQUIRED FOR NEW STORM PIPING.

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

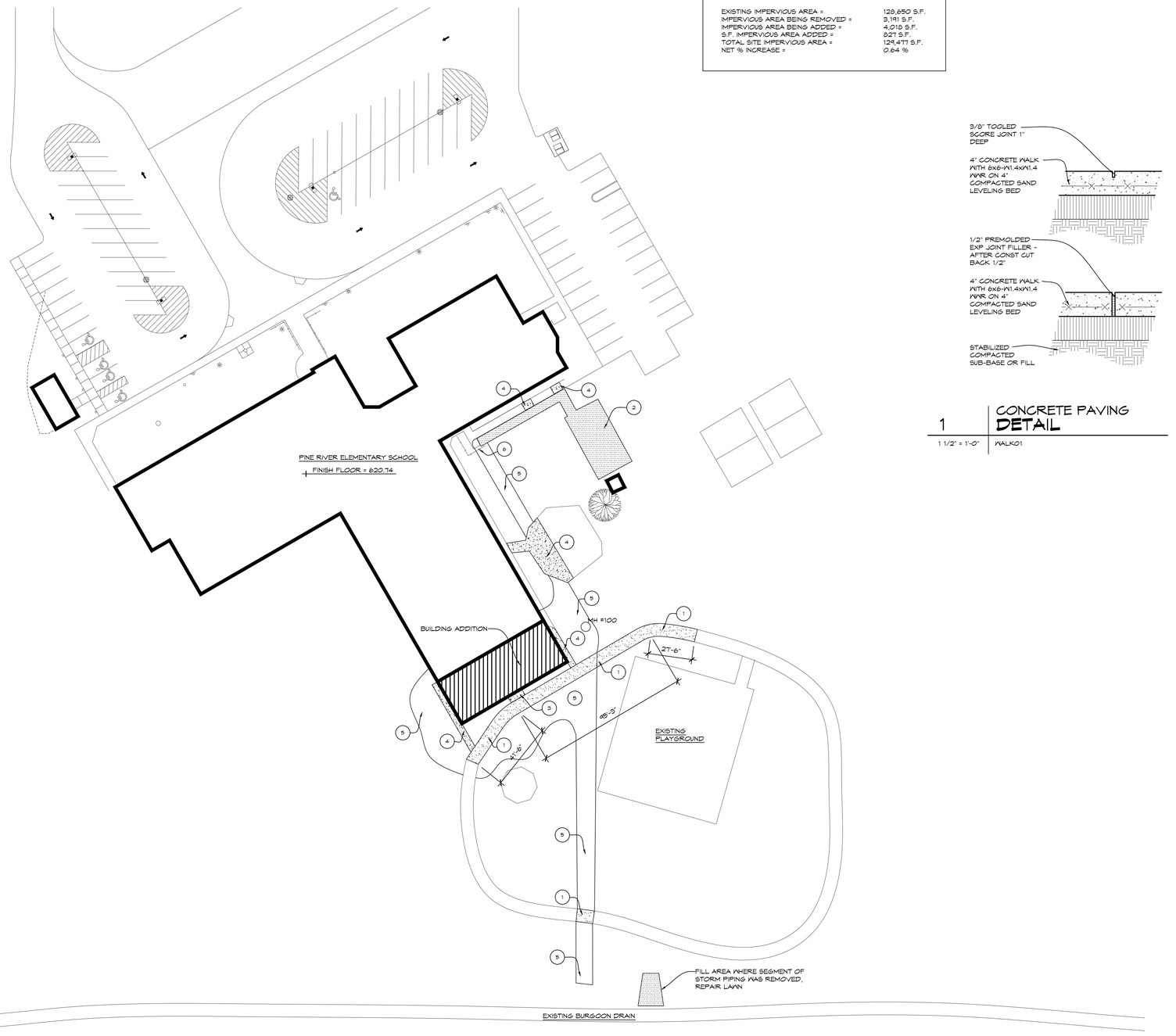
DRAWING TITLE

DEMOLITION SITE PLAN

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. E-C101
	REVIEWED MLB	DRAWING NO. E-C101
	DATE OCT 19, 2026	SHEET NO. 3 OF 31
	SCALE 1"= 30'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC PRE-C101 DEMO SI
Plot date: 10/19/2026 11:24 AM

EXISTING IMPERVIOUS AREA =	128,650 S.F.
IMPERVIOUS AREA BEING REMOVED =	3,191 S.F.
IMPERVIOUS AREA BEING ADDED =	4,018 S.F.
S.F. IMPERVIOUS AREA ADDED =	827 S.F.
TOTAL SITE IMPERVIOUS AREA =	128,477.1 S.F.
NET % INCREASE =	0.64 %



NORTH

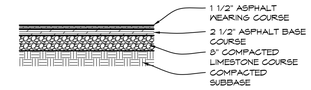
1" = 30'-0"

SITE DEVELOPMENT PLAN

XG01

1 CONCRETE PAVING DETAIL

1 1/2" = 1'-0" | WALK01



2 ASPHALT PAVING DETAIL

1/2" = 1'-0" | PAVING DETAIL

GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
2. UTILITIES AND UTILITY SERVICE INFORMATION SHOWN ON THE PLANS, ARE BASED ON UTILITY STAKING AND IS FOR INFORMATION ONLY, AS ACTUAL LOCATIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY LOCATIONS BEFORE PROCEEDING WITH WORK.
3. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ALL OF THEIR WORK WITH UTILITY COMPANIES WORK, IF ANY, AT NO ADDITIONAL COST TO THE PROJECT.
4. DAMAGE TO EXISTING UTILITIES, OUTSIDE THE SCOPE OF WORK SHOWN ON THE PLANS, IS THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIR, AS SUCH, SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.
5. DIMENSIONS SHOWN ON PLAN ARE SHOWN TO THE EXTENT KNOWN AND SHOULD BE USED AS A GUIDE ONLY. BIDDER/CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING AND WILL BE RESPONSIBLE FOR ANY VARIATION FROM THE DRAWINGS.
6. SEE ELECTRICAL PLANS FOR EXACT CONNECTIONS TO PROPOSED BUILDING UTILITIES
7. THE CONTRACTOR IS REQUIRED TO RESTORE ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THROUGHOUT THE PROJECT. TURF AREAS SHALL BE RE-GRADED, AS REQUIRED, TO MATCH ADJACENT GRADES AND PROVIDE POSITIVE DRAINAGE.
8. CONTACT "MISS DIG" AT 1-800-482-7171, PRIOR TO ANY EXCAVATION OR DEMOLITION.
9. COORDINATE NEW WORK WITH EXISTING CONDITIONS.
10. SITE PLAN IS SUBJECT TO ANY FACTS AND/OR EASEMENTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
11. ALL PLANT MATERIAL SHALL BE HARDY TO MIDLAND COUNTY, BE FREE OF DISEASE AND INSECTS, AND SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOC. OF NURSERIES.
12. LANDSCAPED AREAS AND PLANT MATERIALS SHALL BE KEPT FREE FROM REFUSE AND DEBRIS. PLANT MATERIALS, INCLUDING LAWN, SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION, NEAT AND ORDERLY IN APPEARANCE IN ACCORDANCE WITH THE APPROVED SITE PLAN. IF ANY PLANT MATERIAL DIES OR BECOMES DISEASED, IT SHALL BE REPLACED WITHIN THIRTY (30) DAYS WRITTEN NOTICE FROM THE COUNTY OR WITHIN AND EXTENDED TIME PERIOD AS SPECIFIED IN SAID NOTICE.
13. ALL SITE DIMENSIONS AND ANGLES ARE PARALLEL OR PERPENDICULAR TO EXISTING BUILDINGS.

CONSTRUCTION NOTES

1. PROVIDE NEW ASPHALT WALKWAY, MEET AND MATCH EXISTING SURFACES.
2. PROVIDE NEW TOPSOIL AND HYDROSEED IN AREA WHERE CONCRETE SLAB AND RAMP WAS REMOVED.
3. NEW CONCRETE STOOP, RE: STRUCTURAL AND ARCHITECTURAL PLANS.
4. PROVIDE NEW CONCRETE SIDEWALK.
5. PROVIDE NEW TOPSOIL AND FINAL GRADING, AND HYDROSEED IN AREA, RESTORE LAWN TO ORIGINAL CONDITION, RE-WORK GRADE FOR POSITIVE DRAINAGE.
6. REPAIR EXISTING FENCE AS REQUIRED.

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

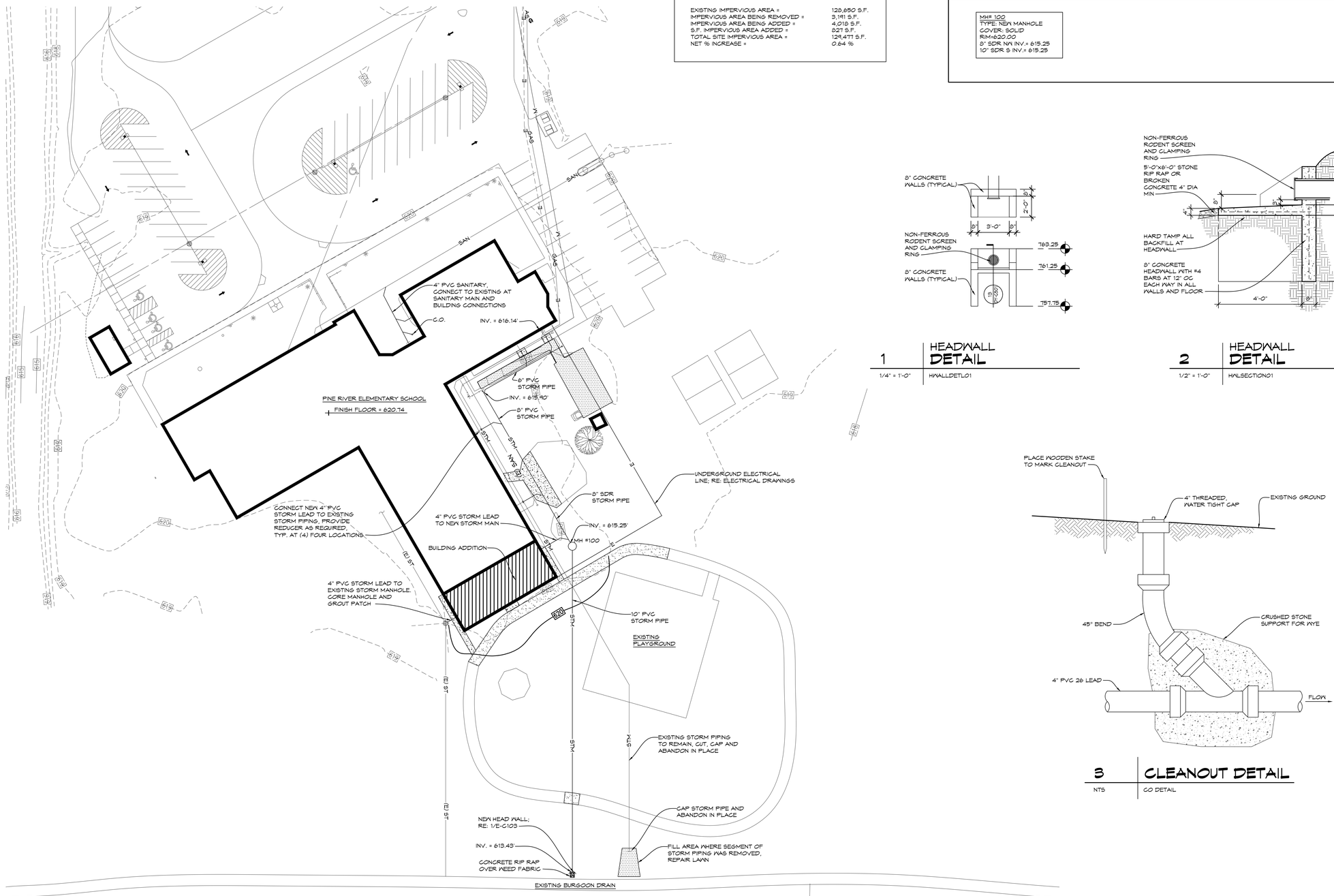
SITE DEVELOPMENT PLAN

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. E-C102
	REVIEWED MLB	DRAWING NO. E-C102
	DATE OCT 19, 2026	
	SCALE 1"= 30'-0"	SHEET NO. 4 OF 31

PROJECT 'E'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Saves Series 2 2027 Improvements\Drafting\01-CAD\02-DD\RC Pkt\E-C102 SITE PLAN.dwg
Plot date: 10/19/2026 11:24 AM

EXISTING IMPERVIOUS AREA =	128,650 S.F.
IMPERVIOUS AREA BEING REMOVED =	3,191 S.F.
IMPERVIOUS AREA BEING ADDED =	4,018 S.F.
S.F. IMPERVIOUS AREA ADDED =	827 S.F.
TOTAL SITE IMPERVIOUS AREA =	128,477 S.F.
NET % INCREASE =	0.64 %



NORTH
1" = 30'-0"

SITE
DEVELOPMENT PLAN
XG01

MANHOLE INVENTORY SCHEDULE

MH# 100
TYPE: NEW MANHOLE
COVER: SOLID
RIM=622.00
8" SDR NW INV.= 615.25
10" SDR S INV.= 615.25

1 HEADWALL DETAIL
1/4" = 1'-0" HWALLDETL01

2 HEADWALL DETAIL
1/2" = 1'-0" HWLSECTION01

3 CLEANOUT DETAIL
NTS CO DETAIL

GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
2. UTILITIES AND UTILITY SERVICE INFORMATION SHOWN ON THE PLANS, ARE BASED ON UTILITY STAKING AND IS FOR INFORMATION ONLY, AS ACTUAL LOCATIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY LOCATIONS BEFORE PROCEEDING WITH WORK.
3. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ALL OF THEIR WORK WITH UTILITY COMPANIES WORK, IF ANY, AT NO ADDITIONAL COST TO THE PROJECT.
4. DAMAGE TO EXISTING UTILITIES, OUTSIDE THE SCOPE OF WORK SHOWN ON THE PLANS, IS THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIR, AS SUCH, SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.
5. DIMENSIONS SHOWN ON PLAN ARE SHOWN TO THE EXTENT KNOWN AND SHOULD BE USED AS A GUIDE ONLY. BIDDER/CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING AND WILL BE RESPONSIBLE FOR ANY VARIATION FROM THE DRAWINGS.
6. SEE ELECTRICAL PLANS FOR EXACT CONNECTIONS TO PROPOSED BUILDING UTILITIES
7. THE CONTRACTOR IS REQUIRED TO RESTORE ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THROUGHOUT THE PROJECT. TURF AREAS SHALL BE RE-GRADED, AS REQUIRED, TO MATCH ADJACENT GRADES AND PROVIDE POSITIVE DRAINAGE.
8. CONTACT "MISS DIG" AT 1-800-482-7171, PRIOR TO ANY EXCAVATION OR DEMOLITION.
9. COORDINATE NEW WORK WITH EXISTING CONDITIONS.
10. SITE PLAN IS SUBJECT TO ANY FACTS AND/OR EASEMENTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
11. ALL PLANT MATERIAL SHALL BE HARDY TO MIDLAND COUNTY, BE FREE OF DISEASE AND INSECTS, AND SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOC. OF NURSERIES.
12. LANDSCAPED AREAS AND PLANT MATERIALS SHALL BE KEPT FREE FROM REFUSE AND DEBRIS. PLANT MATERIALS, INCLUDING LAWN, SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION, NEAT AND ORDERLY IN APPEARANCE IN ACCORDANCE WITH THE APPROVED SITE PLAN. IF ANY PLANT MATERIAL DIES OR BECOMES DISEASED, IT SHALL BE REPLACED WITHIN THIRTY (30) DAYS WRITTEN NOTICE FROM THE COUNTY OR WITHIN AND EXTENDED TIME PERIOD AS SPECIFIED IN SAID NOTICE.
13. ALL SITE DIMENSIONS AND ANGLES ARE PARALLEL OR PERPENDICULAR TO EXISTING BUILDINGS.

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

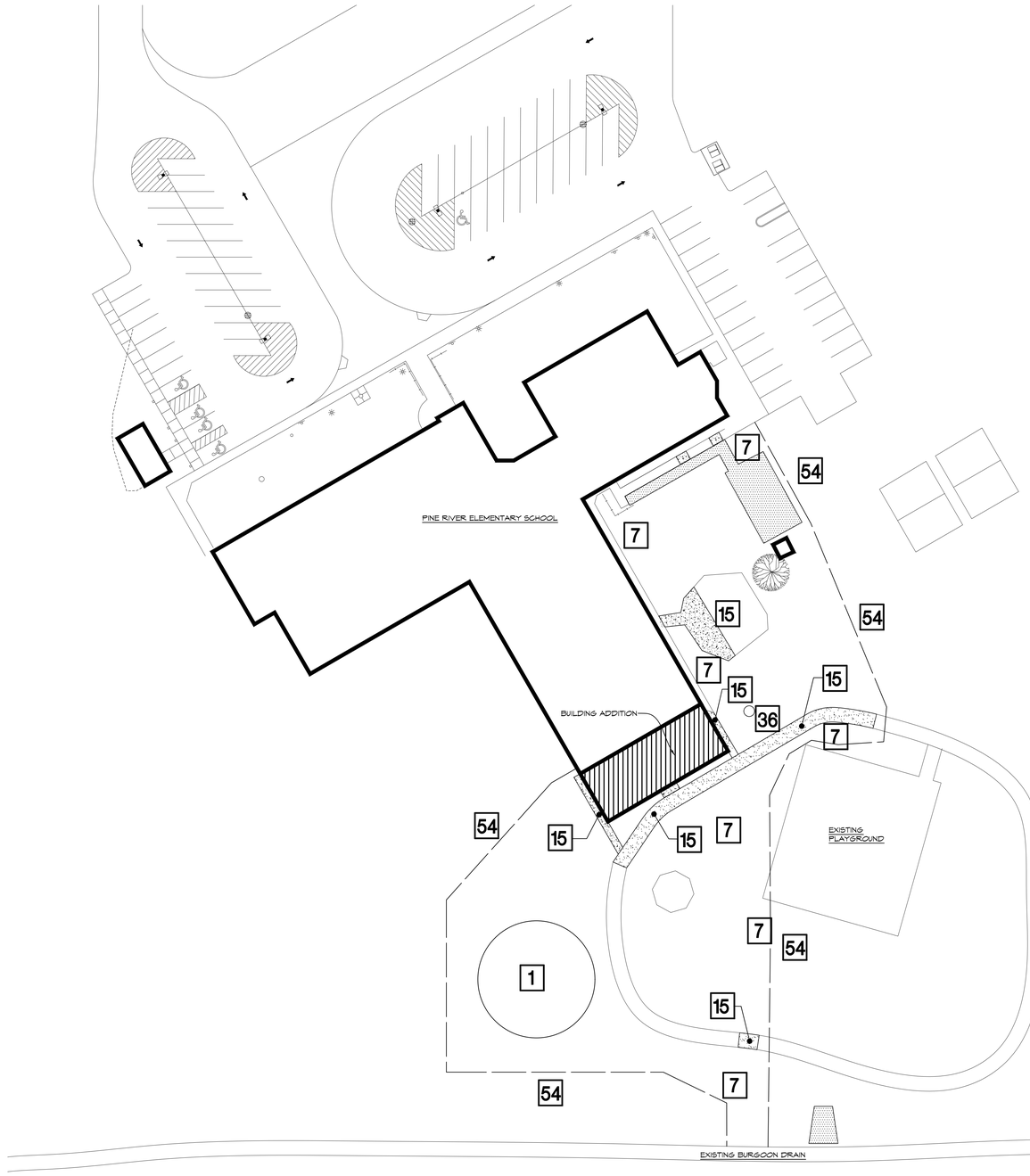
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:
PINE RIVER ELEMENTARY SCHOOL
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
SITE GRADING AND UTILITIES PLAN

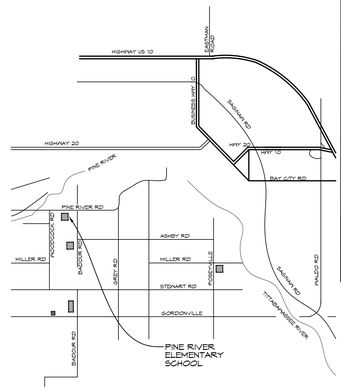
SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. E-C103
	REVIEWED MLB	DRAWING NO. E-C103
	DATE OCT 19, 2026	SHEET NO. 5 OF 31
	SCALE 1"= 30'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC PH E-C103 UTILITY
Plot date: 10/19/2026 11:24 AM



NORTH
1" = 30'-0"

SITE
DEVELOPMENT PLAN
XC01



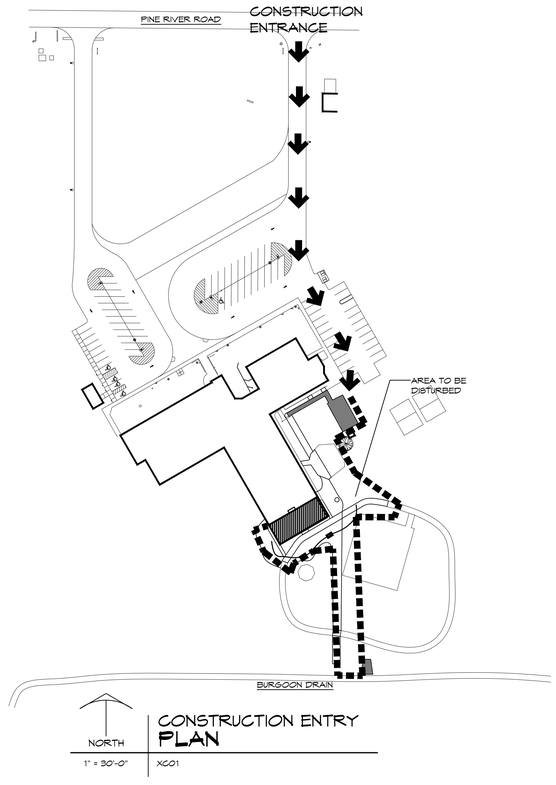
NORTH
NO SCALE

LOCATION MAP

SOIL EROSION / SEDIMENTATION CONTROL KEY NOTES

1	STRIPPING AND STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS. MULCH TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRASS IS RUCTED. SHOULD INCLUDE PREPARED TOPSOIL BED
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VOLUME AND VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES EASY TO CONSTRUCT AND LOCATE AS NECESSARY.

t = TEMPORARY MEASURE
p = PERMANENT MEASURE



NORTH
1" = 30'-0"

CONSTRUCTION ENTRY
PLAN
XC01

PARCEL NO. 040-025-100-201-00

LEGAL DESCRIPTIONS PER DEED:
WARRANTY DEED–LIBER 314, PAGE 318
THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION TWENTY FIVE TOWNSHIP 14 NORTH, RANGE 1 EAST, MICHGAN; EXCEPTING THEREFROM THE FOLLOWING PARCELS OF LAND: PARCEL "A": LOTS ONE THROUGH TEN, INCLUSIVE, OF THE PLAT OF BURGOON'S SUBDIVISION, ACCORDING TO THE RECORDED PLAT THEREOF. PARCEL "B": THE SOUTH 165 FEET OF THE NORTH 798 FEET OF THE EAST 264 FEET OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 25.

SOIL EROSION AND SEDIMENT CONTROL

1. DEVELOPER / PROPERTY OWNER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION AND 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 INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
6. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT 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 EASTABLISHMENT OF PERMANENT CONTROL MEASURES.

CONSTRUCTION SEQUENCE

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

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:
PINE RIVER ELEMENTARY SCHOOL
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
SOIL EROSION AND SEDIMENTATION CONTROL PLAN

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. E-C104
	REVIEWED MLB	DRAWING NO. E-C104
	DATE OCT 19, 2026	SHEET NO. 6 OF 31
	SCALE 1"= 30'-0"	

PROJECT 'E'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Saves Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC\PRE-C104 SESC PL
Plot date: 10/19/2026 11:24 AM





Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Be	Belleville loamy sand	17.6	72.2%
PtB	Pipestone sand, loamy substratum, 0 to 3 percent slopes	6.8	27.8%
Totals for Area of Interest		**24.4**	**100.0%**

NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

SOIL MAP INFORMATION

SEAL	DRAWN: EVA	PROJECT NO.: 26-210
	CHECKED: JESS	CAD FILE NO.: E-C105
	REVIEWED: MLB	DRAWING NO.: E-C105
	DATE: OCT 19, 2026	SHEET NO.: 7 OF 31
	SCALE: 1" = 30'-0"	

PROJECT 'E'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC PH E-C105 SOIL MA
Plot date: 10/19/2026 11:24 AM



NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

TAX MAP INFORMATION

SEAL	DRAWN	PROJECT NO.
	EVA	26-210
	CHECKED	CAD FILE NO.
	JESS	E-C106
	REVIEWED	DRAWING NO.
	MLB	E-C106
	DATE	SHEET NO.
	OCT 19, 2026	8 OF 31
	SCALE	
	1"= 30'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210\2023 Bond Saves Saves 2 2027 Improvements\Drafting\01-CAD\02-DD\EC\E-C106 TAX MA
Plot date: 10/19/2026 11:24 AM

STRUCTURAL NOTES

GENERAL

1. THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE DRAWINGS AND THE WRITTEN SPECIFICATIONS. IN THE EVENT OF CONFLICT BETWEEN THE INFORMATION ON THE WRITTEN SPECIFICATIONS, THE DRAWINGS, AND THESE NOTES, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION TO ACCOUNT FOR ALL FORCES, INCLUDING BUT NOT LIMITED TO: GRAVITY, WIND, EARTH PRESSURE, AND UNBALANCED FORCES DUE TO CONSTRUCTION SEQUENCE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES, AND JOB SAFETY.
3. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION METHODS WILL NOT CAUSE DAMAGE TO ADJACENT BUILDINGS, UTILITIES, OR OTHER PROPERTIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING WORK, AS WELL AS ANY OTHER APPLICABLE TRADES. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES AND/OR INTERFERENCES IMMEDIATELY.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK. CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND BE RESPONSIBLE FOR SAME.
6. IN CASES OF CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND/OR PROCEEDING WITH THE WORK.
7. THE CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH OTHER DISCIPLINES. THE DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS, AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES. OPENINGS REQUIRED BUT NOT SHOWN ON STRUCTURAL DRAWINGS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
8. APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE, OR NOTE.
9. DO NOT SCALE DRAWINGS. ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS.
10. ISOMETRIC VIEWS, IF INCLUDED, ARE TO GIVE A GENERAL SENSE OF THE STRUCTURE AND MASSING. THEY DO NOT SUPERSEDE THE STRUCTURAL DRAWINGS AND ARE PROVIDED AS SUPPLEMENTAL INFORMATION ONLY. THE STRUCTURE SHALL BE PROVIDED PER THE STRUCTURAL DRAWINGS, DETAILS, NOTES, AND SPECIFICATIONS.
11. CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
12. CENTERLINES OF FOUNDATIONS COINCIDE WITH COLUMN LOCATIONS, UNLESS NOTED OTHERWISE.
13. THE CONTRACTOR SHALL OBTAIN COPIES OF THE LATEST CONTRACT DOCUMENTS INCLUDING ALL BULLETINS AND ADDENDA, AND SHALL PROVIDE THE RELEVANT PORTIONS TO ALL SUBCONTRACTORS AND SUPPLIERS PRIOR TO SUBMITTAL OF SHOP DRAWINGS, FABRICATION, AND ERECTION OF STRUCTURAL MEMBERS.
14. STRUCTURAL ENGINEER OF RECORD'S ACCEPTANCE MUST BE SECURED FOR ALL STRUCTURAL SUBSTITUTIONS.
15. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, OR OTHERWISE REDUCED IN STRENGTH UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
16. THE GENERAL CONTRACTOR IS TO PROVIDE AN APPROPRIATE NUMBER OF COPIES OF ONE COMPLETE COORDINATED DRAWING SET SHOWING ALL SLEEVES, CONDUITS, BOXOUTS, DUCT OPENINGS, ETC. AS REQUIRED FOR ALL TRADES FOR THE STRUCTURAL ENGINEER OF RECORD'S APPROVAL. THIS SHALL BE DONE A MINIMUM OF TWO WEEKS PRIOR TO CONSTRUCTING AFFECTED SLABS, BEAMS, WALLS, COLUMNS, OR FOOTINGS.
17. SUPPORT DETAILS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT IS BASED UPON AVAILABLE INFORMATION OF MANUFACTURER. CONTRACTOR SHALL COORDINATE REQUIREMENTS OF ACTUAL EQUIPMENT SUPPLIED WITH DETAILS AND SHALL PROVIDE ANY ADDITIONAL FRAMING REQUIRED.
18. PERIODIC SITE OBSERVATION VISITS MAY BE PROVIDED BY THE ARCHITECT/ENGINEER. THE SOLE PURPOSE OF THESE OBSERVATIONS IS TO REVIEW THE GENERAL CONFORMANCE OF THE CONSTRUCTION WITH THE CONTRACT DOCUMENTS. THESE LIMITED OBSERVATIONS SHOULD NOT BE CONSIDERED AS CONTINUOUS OR EXHAUSTIVE INVESTIGATIONS TO VERIFY THAT ALL CONSTRUCTION IS IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

REFERENCED CODES AND STANDARDS

1. PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE LATEST EDITIONS OF THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE CONTRACT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, LATEST EDITIONS AS REFERENCED IN THE CURRENT BUILDING CODE IN THE STATE OF THE PROJECT, UNLESS NOTED OTHERWISE:
   - 2021 MICHIGAN BUILDING CODE
   - ASCE 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   - ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
   - ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   - AISC 303, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
   - AISC 360, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
   - ANSI/SDI RD, STANDARD FOR STEEL ROOF DECK
   - SJI, STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS AND JOIST GIRDERS
   - AISI S100, NORTH AMERICAN SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL MEMBERS
   - NDS, NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

DESIGN CRITERIA

1. GENERAL
   - CONCRETE DESIGN — LRFD
   - STEEL DESIGN — ASD
   - MASONRY DESIGN — ASD
   - RISK CATEGORY — II
2. DEAD LOADS (SUPERIMPOSED)
   - ROOF — 20 PSF
   - MECHANICAL UNIT & CURB EACH — 1000 LB
3. LIVE LOADS
   - SLAB ON GRADE — 40 PSF
4. SNOW LOADS
   - GROUND SNOW LOAD (P_G) — 35 PSF
   - SNOW EXPOSURE FACTOR (C_E) — 1
   - SNOW IMPORTANCE FACTOR (I_S) — 1
   - THERMAL FACTOR (C_T) — 1
   - FLAT ROOF SNOW LOAD (P_F) — 24.5 PSF
5. WIND LOADS
   - BASIC WIND SPEED (V) — 115 MPH
   - EXPOSURE CATEGORY — 6
   - (SEE WIND LOAD DIAGRAMS)
6. EARTHQUAKE LOADS
   - SEISMIC SITE CLASS — D
   - DESIGN SPECTRAL ACCELERATION (S_{DS}) — 0.04
   - DESIGN SPECTRAL ACCELERATION (S_{D1}) — 0.032
   - SEISMIC DESIGN CATEGORY — B
   - SEISMIC IMPORTANCE FACTOR (I_E) — 1
   - ORDINARY STEEL CONCENTRICALLY BRACED FRAMES (R) — 3
   - SEISMIC RESPONSE COEFFICIENT (C_S) — 0.0133
7. FLOOD LOADS
   - LOCATED WITHIN AREA PRONE TO FLOODING? — N

SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT FOR ARCHITECT/ENGINEER REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SUBMITTALS, AND THE DATE THEY WILL BE RECEIVED, AT LEAST TWENTY (20) WORKING DAYS PRIOR TO THE FIRST SUBMITTAL. THE SCHEDULE SHOULD ACCOUNT FOR AT LEAST TEN (10) WORKING DAYS OF REVIEW TIME BY THE ARCHITECT/ENGINEER FOR EACH SUBMITTAL.
2. SHOP DRAWINGS AND/OR DETAILS THAT ARE PREPARED FROM REPRODUCTIONS OF THE STRUCTURAL ENGINEER OF RECORD'S DESIGN DOCUMENTS, IN WHOLE OR IN PART, SHALL NOT BE USED AND WILL BE REJECTED.
3. THE ARCHITECT/ENGINEER MAY RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE PROJECT REQUIREMENTS.
4. THE CONSTRUCTION, MANUFACTURE, AND/OR FABRICATION OF ANY ITEMS PRIOR TO THE ARCHITECT/ENGINEER REVIEW WILL BE ENTIRELY AT THE RISK OF THE CONTRACTOR.
5. ARCHITECT'S/ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE AND COMPLIANCE WITH THE DESIGN CONCEPT AND CONTRACT DOCUMENTS. ANY ACTION NOTED DOES NOT WAIVE ANY REQUIREMENT OF CONTRACT DOCUMENTS, COORDINATION OF TRADES, AND SATISFACTORY PERFORMANCE OF THEIR WORK WHICH ARE THE CONTRACTOR'S COMPLETE RESPONSIBILITY.
6. FOR COMPONENTS THAT REQUIRE A SPECIALTY ENGINEER, THE SUBMITTAL SHALL BE SEALED BY THE ENGINEER RESPONSIBLE FOR THE DESIGN. 'SPECIALTY ENGINEER' IS DEFINED AS THE STRUCTURAL ENGINEER EMPLOYED BY THE SUPPLIER TO DESIGN PRODUCTS TO MEET THE SPECIFIC CRITERIA OUTLINED IN THE CONTRACT DOCUMENTS. SEALING OF THE SUBMITTAL IMPLIES THAT THE SPECIALTY ENGINEER HAS REVIEWED THE CONTRACT DOCUMENTS AND HAS, TO THE BEST OF THEIR KNOWLEDGE, INCORPORATED ALL OF THE SPECIAL DESIGN CRITERIA CONTAINED THEREIN.
7. ITEMS THAT REQUIRE SUBMITTAL FOR STRUCTURAL REVIEW ARE:
   - CONCRETE MIX DESIGNS
   - CONCRETE REINFORCING LAYOUT
   - METAL DECK
   - METAL JOISTS AND GIRDERS
   - ANCHOR RODS
   - STRUCTURAL STEEL
   - COLD-FORMED METAL FRAMING

FOUNDATIONS

1. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL, HAVING A MINIMUM SAFE BEARING CAPACITY OF 3,000 PSF.
2. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER WHEN EXCAVATIONS ARE COMPLETED SO THAT CONDITIONS MAY BE INSPECTED PRIOR TO PLACEMENT OF ANY FILL, REINFORCING, OR CONCRETE. NOTIFY ARCHITECT/ENGINEER OF ANY VARIATION FROM THE ANTICIPATED BEARING CAPACITY FOR APPROPRIATE REDESIGN OR LOWERING OF FOOTING.
3. THE BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE MINIMUM 3'-6" BELOW FINISHED GRADE. IF THE BUILDING WILL BE UNDER CONSTRUCTION DURING FREEZING WEATHER, THE BOTTOMS OF ALL INTERIOR FOUNDATIONS SHALL BE DEPRESSED 3'-6" BELOW CONSTRUCTION GRADE FOR FROST PROTECTION. IF SUCH ADDITIONAL FOOTING DEPTH WILL CAUSE UNDERMINING OF ADJACENT EXISTING FOOTINGS OR STRUCTURES, PROVIDE SHORING, BRACING, OR UNDERPINNING AS REQUIRED, OR LEAVE FOOTING ELEVATION AS DESIGNED AND PROVIDE CONTINUED PROTECTION AND HEAT TO PREVENT FORMATION OF FROST BELOW FOOTING AND ADJACENT TO FOOTING.
4. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A GREATER THAN 1 VERTICAL TO 2 HORIZONTAL SLOPE WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION, UNLESS UNDERPINNING OR SHORING AND BRACING OF EXISTING FOOTING OR EXCAVATION IS PROVIDED. UNDERPINNING SHALL BE DONE SO AS NOT TO CAUSE SETTLEMENTS OF EXISTING STRUCTURE AND SHALL BE SUCH THAT COMPLETE CONTACT IS ACHIEVED BETWEEN NEW UNDERPINNING AND EXISTING CONCRETE..
5. BACKFILL FOUNDATION WALLS WITH EARTH ON BOTH SIDES OF THE WALL BY ALTERNATELY PLACING BACKFILL ON EACH SIDE SUCH THAT HEIGHT OF BACKFILL DOES NOT DIFFER BY MORE THAN 1'-0" FROM EITHER SIDE.
6. NO FOUNDATIONS OR SLABS SHALL BE PLACED ON OR AGAINST SUB-GRADE CONTAINING WATER, FROST, OR ICE. CONTRACTOR SHALL FURNISH ALL REQUIRED DE-WATERING EQUIPMENT TO MAINTAIN A DRY EXCAVATION UNTIL BACKFILL IS COMPLETE.
7. CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT EXCAVATIONS AND SUB-GRADES OF COMPLETED NON-FROST PROTECTED FOUNDATIONS AND SLABS FROM DAMAGE DUE TO FREEZING CONDITIONS UNTIL THE FULL BUILDING ENCLOSURE IS COMPLETED AND HEATED.
8. SLABS ON GRADE SHALL REST ON CLEAN GRANULAR FILL. ALL BACKFILL WITHIN BUILDING LINES SHALL BE ENGINEERED GRANULAR FILL PLACED UNDER THE FULL-TIME SUPERVISION OF A SOIL ENGINEER AND SHALL BE COMPACTED TO ACHIEVE 95% MODIFIED PROCTOR DENSITY (AS DEFINED BY ASTM D1557 MODIFIED PROCTOR TEST). FILL SHALL BE PLACED IN 9" MAXIMUM LIFTS.
9. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS, ADJACENT STRUCTURES, PAVEMENTS, AND UTILITIES. DO NOT REMOVE SHORING, SUCH AS SHEET PILING, IF IT WILL CAUSE SETTLEMENT OR DAMAGE TO EXISTING OR NEW STRUCTURES, PAVEMENT, AND/OR UTILITIES.
10. MAXIMUM LENGTH OF FOUNDATION WALL PLACED IN ONE OPERATION SHALL NOT EXCEED 60 FEET.
11. THE FOUNDATION CONTRACTOR SHALL REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS.

CONCRETE

1. ALL CONCRETE SHALL BE MADE WITH PORTLAND CEMENT AND STONE AGGREGATE, WITH MIXES DESIGNED TO MEET 28-DAY MINIMUM COMPRESSIVE STRENGTHS IN VARIOUS ELEMENTS OF THE STRUCTURE AS FOLLOWS, UNLESS NOTED OTHERWISE:

ELEMENT	F'C	TYPE	MAX. AGG.	MAX. W/C	MAX. SLUMP
FOOTINGS	4,000	I/II	1 1/2"	0.49	4" (+/- 1")
WALLS AND PIERS	4,500	I/II	3/4"	0.46	4" (+/- 1")
INT. SLAB ON GRADE	4,000	I/II	3/4"	0.46	4" (+/- 1")

2. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE ACI 301, 318, AND SP-66 (315 INCLUDED AS A CHAPTER), LATEST EDITIONS.
3. PROVIDE NORMAL WEIGHT CONCRETE WITH CURED DENSITY OF 145 PCF AND AGGREGATE CONFORMING TO ASTM C33, UNLESS NOTED OTHERWISE.
4. CONCRETE EXPOSED TO MOISTURE AND FREEZING-AND-THAWING CYCLES (WITH OR WITHOUT EXPOSURE TO DE-ICING CHEMICALS) SHALL BE AIR-ENTRAINED.
5. THE USE OF CALCIUM CHLORIDE AND/OR OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS AND CONCRETE IS PROHIBITED.
6. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES AND PREVIOUS TESTS HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. CONCRETE PROPORTIONS SHALL BE BASED UPON FIELD EXPERIENCE AND/OR TRIAL BATCHES PER ACI 301 AND ACI 318. THE CONTROLLED CONCRETE TO BE USED SHALL CONFORM TO THE APPROVED DESIGN MIX. THE USE OF ANY ADDITIVES NOT PRESENT IN THE DESIGN MIX IS PROHIBITED. REPRESENTATIVE TEST CYLINDERS WILL BE TAKEN FROM THE CONCRETE PLACED EACH DAY IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DRAWINGS FOR REVIEW OF ALL JOINTS IN THE CONCRETE WORK INCLUDING CONSTRUCTION, EXPANSION, CONTRACTION, AND MOVEMENT JOINTS. DRAWINGS SHALL BE SUBMITTED AT LEAST TWO WEEKS PRIOR TO EXPECTED START OF WORK. JOINT LOCATIONS SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS DESCRIBED IN ACI 224, LATEST EDITION.
8. ALL CONCRETE STRUCTURAL MEMBERS SHALL BE PLACED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS, SUCH AS DAY'S END PLACEMENT JOINTS, SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN AND BE ROUGHENED. REINFORCING TO RUN THROUGH THE JOINT, BULKHEAD, AND/OR KEY JOINTS. REMOVE LAITANCE PRIOR TO NEXT POUR.
9. CONTRACTOR SHALL DEPOSIT ALL CONCRETE DURING PLACING IN SUCH A MANNER AS TO NOT OVERLOAD THE FORMWORK.
10. ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS, VERIFY WITH THE STRUCTURAL ENGINEER OF RECORD.
11. CONCRETE SHALL NOT BE PLACED UNTIL PREPARATIONS HAVE BEEN APPROVED BY THE TESTING AND INSPECTION AGENCY INCLUDING FORMWORK, REINFORCEMENT, EMBEDMENTS, AND ACCESSORIES.

CONCRETE REINFORCEMENT

1. REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES.
   - DEFORMED BARS — ASTM A615, GRADE 60
   - WELDED WIRE REINFORCEMENT — ASTM A1064
2. UNLESS NOTED OTHERWISE, THE CONCRETE COVER FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL NOT BE LESS THAN THE FOLLOWING:
   - CAST AGAINST EARTH — 3"
   - EXPOSED TO EARTH/WEATHER — 2"
   - SLABS, WALLS, AND JOISTS
     - NO.11 BAR AND SMALLER — 3/4"
   - BEAMS AND COLUMNS
     - TIES, STIRRUPS, SPIRALS — 1 1/2"
3. DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI 318, ACI 315R, AND THE ACI DETAILING MANUAL SP-066, LATEST EDITIONS.
4. WHERE A 90-DEGREE, 135-DEGREE, OR 180-DEGREE HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE.
5. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS NOTED OTHERWISE.
6. UNLESS NOTED OTHERWISE, ALL LAP SPLICES ARE TO BE CLASS B TENSION LAP SPLICES EXCEPT THE MINIMUM LAP LENGTH SHALL BE 24".
7. PROVIDE TENSILE, PRE-QUALIFIED, WELDED, OR THREADED MECHANICAL SPLICES FOR BARS LARGER THAN NO.11 OR WHERE INDICATED ON THE DRAWINGS.
8. LAP WELDED WIRE REINFORCEMENT TWO PANEL SPACES. WIRE MESH SHALL BE SUPPORTED ON CHAIRS SO THAT PROPER COVER IS MAINTAINED. DO NOT USE THE METHOD OF PULLING UP WITH A HOOK DURING CONCRETE POURING TO POSITION THE REINFORCING.
9. UNLESS NOTED OTHERWISE, TERMINATE BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.

BRICK MASONRY

1. BRICK MASONRY CONSTRUCTION SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING STANDARDS:
   - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES, TMS 402/602.
   - TECHNICAL NOTES ON BRICK CONSTRUCTION, TECHNICAL NOTES 1-4B, BIA.
   - GUIDE SPECIFICATION FOR BRICK MASONRY, TECHNICAL NOTES 11A-E, BIA.
   - HOT AND COLD WEATHER MASONRY CONSTRUCTION BY THE MASONRY INDUSTRY COUNCIL.
2. BRICK UNITS FOR EXTERIOR USE AS A VENEER SHALL CONFORM TO ASTM C216 GRADE SW, WITH THE FOLLOWING EXCEPTIONS:
   - THE SATURATION COEFFICIENT (C/B) REQUIREMENT SHALL NOT BE WAIVED AS ALLOWED IN SECTIONS 5.1 AND 5.2 UNLESS ENGINEERING DATA AND FIELD RECORDS CAN BE PROVIDED WHICH DEMONSTRATES THE UNITS TO BE SUFFICIENTLY DURABLE AND RESISTANT TO FREEZE-THAW DETERIORATION.
   - INITIAL RATE OF ABSORPTION (IRA) SHALL NOT EXCEED 20 GRAMS PER MINUTE PER 30 SQUARE INCHES OF FACE AREA. FOR COLD WEATHER CONSTRUCTION, THE BRICKS SHALL HAVE A MINIMUM IRA OF 6 GRAMS PER MINUTE PER 30 SQUARE INCHES OF FACE AREA.
3. BRICK MANUFACTURER OR DISTRIBUTOR SHALL PROVIDE THE ARCHITECT WITH BRICK TEST DATA, CERTIFICATE OF COMPLIANCE WITH ASTM C216 GRADE SW, AND THE ABOVE NOTED EXCEPTIONS. BRICK UNITS SHALL NOT BE SHIPPED TO THE SITE UNTIL APPROVAL HAS BEEN RECEIVED FROM THE ARCHITECT.
4. MORTAR FOR BRICK MASONRY SHALL CONFORM TO ASTM C270. MORTAR SHALL BE TYPE S FOR ALL BELOW GRADE UNITS AND TYPE N ABOVE GRADE.
5. AT METAL STUD WALLS WITH BRICK VENEER, PROVIDE ADJUSTABLE MASONRY DOVETAIL SLOT ANCHORS AT 16" O.C. HORIZONTAL SPACING WITH TRIANGULAR WIRE TIES INTO THE VENEER AT 16" O.C. VERTICAL SPACING.

SAW CUTTING EXISTING CONCRETE AND/OR MASONRY

1. SAW CUTTING OF NEW OPENINGS IN EXISTING CONCRETE AND/OR MASONRY WALLS SHALL BE DONE WITHOUT OVERCUTTING BEYOND THE BOUNDARIES OF THE INTENDED OPENING. ANY STRUCTURAL REPAIRS REQUIRED BY THE STRUCTURAL ENGINEER OF RECORD AS A RESULT OF OVERCUTTING BEYOND THE BOUNDARIES OF AN OPENING SHALL BE PAID FOR BY THE SAW CUTTING CONTRACTOR. SEE DRAWINGS FOR ADDITIONAL INFORMATION.

STRUCTURAL STEEL

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE:
   - W-SHAPES, C-SHAPES, MC-SHAPES — ASTM A992, MIN 50 KSI
   - ANGLES, M-SHAPES, S-SHAPES, HP-SHAPES — ASTM A572, MIN 50 KSI
   - HSS-SHAPES — ASTM A500, GRADE C, MIN 50 KSI
   - ALL OTHER — ASTM A36, MIN 36 KSI
2. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:
   - ANGLES, PLATES & BARS (MAX 4" THICKNESS) — ASTM A572, MIN 50 KSI
   - PLATES & BARS (OVER 4" THICKNESS) — ASTM A36, MIN 36 KSI
   - WT-SHAPES — ASTM A992, MIN 50 KSI
   - BOLTS — ASTM F3125
   - NUTS — ASTM A563
   - WASHERS — ASTM F436
   - ANCHOR RODS — ASTM F1554 WELDABLE, GRADE 55
   - WELD ELECTRODES — E70XX
3. ALL BOLTED CONNECTIONS ARE BEARING TYPE CONNECTIONS MADE WITH 3/4" DIAMETER HIGH-STRENGTH BOLTS IN 13/16" DIAMETER OPEN HOLES INSTALLED TO THE SNUG TIGHT CONDITION, UNLESS NOTED OTHERWISE.
4. ALL CONNECTIONS NOT SPECIFICALLY DETAILED, SHALL BE BEARING TYPE CONNECTIONS DESIGNED AND DETAILED BY THE FABRICATOR. SHEAR TAB CONNECTIONS ARE PERMISSIBLE FOR SECONDARY BEAMS, PRIMARY GIRDERS REQUIRE DOUBLE CLIP ANGLES, TYP.
5. SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER OF RECORD.
6. DO NOT USE OVERSIZED OR SLOTTED HOLES FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. PROVIDE L4X4X1/4" SEATS AT COLUMN WEBS WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS.
8. STEEL THAT MAY ACCUMULATE WATER SHALL HAVE DRAIN HOLES. ALL DRAIN PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1-INCH IN DIAMETER AND SHALL BE GROUND SMOOTH. THESE DRAINS MUST BE KEPT CLEAN AND OPEN.
9. SHOW ALL COPES, HOLES, OPENINGS, AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS.
10. ALL WELDING SHALL BE DONE BY CERTIFIED, LICENSED WELDERS AND SHALL BE IN CONFORMANCE WITH THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1, LATEST EDITION.
11. NO PENETRATIONS ARE PERMITTED THROUGH STRUCTURAL STEEL MEMBERS UNLESS INDICATED ON STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
12. APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD SHALL BE MANDATORY FOR THE USE OF CUTTING TORCH IN THE FIELD.
13. ALL GROUT UNDER STEEL PLATES SHALL BE NON-SHRINK "PRE-MIX" TYPE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI, TESTED IN ACCORDANCE WITH CONCRETE SPECIFICATIONS. USE NON-STAINING GROUT AT EXPOSED LOCATIONS. GROUT BENEATH COLUMN BASE PLATES SHALL BE INSTALLED AS NOTED IN "THE AISC CODE OF STANDARD PRACTICE" AFTER THE STEEL FRAMING ABOVE THE BASE PLATE IS PLUMB AND HELD IN PLACE WITH TEMPORARY GUYING, IF NECESSARY, AND PRIOR TO POURING ANY SUPPORTED SLABS ON METAL DECK THAT ARE SUPPORTED BY THE FRAME OR CONSTRUCTING ANY ENGAGED WALLS THAT WOULD PREVENT PROPER PLUMB OF THE FRAME FROM BEING ACHIEVED.
14. THE STEEL FABRICATOR MAY SUBSTITUTE HEAVIER SECTIONS IN PLACE OF THE SECTIONS SHOWN ON THE DRAWINGS TO ACHIEVE ECONOMY OF REPETITION, FOR AVAILABILITY, OR TO TAKE ADVANTAGE OF ROLLING MILL PRODUCTION SCHEDULES SO LONG AS THE CHANGES ARE MADE KNOWN TO THE ARCHITECT AND STRUCTURAL ENGINEER, AND ARE ACCEPTABLE TO BOTH.
15. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP-APPLIED COAT OF RUST INHIBITING PRIMER AFTER SURFACE PREPARATION BY THE SOCIETY FOR PROTECTIVE COATINGS (SSPC) SP3 "POWER TOOL CLEANING", UNLESS NOTED OTHERWISE. DO NOT PAINT PORTIONS OF STEEL MEMBERS THAT ARE TO RECEIVE SPRAY-ON FIREPROOFING, NOR SURFACES TO RECEIVE WELDED SHEAR STUDS. STEEL STRUCTURE THAT IS PERMANENTLY EXPOSED TO THE EXTERIOR SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A123.
16. FOR MISCELLANEOUS STEEL CONSTRUCTION NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

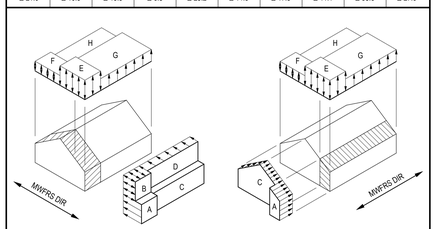
NEW METAL DECKING

1. ROOF DECK SHALL HAVE A PROTECTIVE ZINC COATING CONFORMING TO ASTM A653, GRADE 90. GAUGE AND DEPTH OF DECKING IS INDICATED ON THE FRAMING PLANS.
2. UNLESS OTHERWISE NOTED, ALL METAL DECK HAS BEEN DESIGNED TO BE CONTINUOUS OVER 3 SPANS MINIMUM, AND SHALL BEAR AT LEAST 2 INCHES ON STEEL SUPPORTS AND 4 INCHES ON OTHER SUPPORTS. FOR ONE OR TWO SPAN CONDITIONS, THE CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED, OR FURNISH HIGHER GAGE DECK AS REQUIRED TO SUPPORT ALL THE APPLICABLE LOADS. CONTRACTOR SHALL SUBMIT ALTERNATE FOR APPROVAL.
3. DECK SHALL BE WELDED TO SUPPORTING STEEL AT ENDS OF UNITS AND AT ALL INTERMEDIATE SUPPORTS IN ACCORDANCE WITH "FACTORY MUTUAL" REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDATIONS. ANCHOR DECK UNITS TO STEEL SUPPORTING MEMBER BY ARC SPOT PUDDLE WELDS OR APPROVED MECHANICAL FASTENERS.
   - ROOF DECK SHALL BE ATTACHED TO SUPPORT STEEL WITH 3/4" Ø PUDDLE WELDS, HILTI X-HSN 24 (STEEL THICKNESS 1/8" TO 3/8"), OR HILTI X-ENP 19 (STEEL THICKNESS 1/4" OR GREATER) AT 12" OC. AT ROOF EDGES INCLUDING BUT NOT LIMITED TO ROOF PERIMETER, OPENINGS, RIDGES, & VALLEYS, THE ROOF DECK IS TO BE ATTACHED AT 6" OC.
   - ROOF DECK SIDE LAPS SHALL BE SCREWED WITH #10 SELF-DRILLING SCREWS AT 12" OC MAXIMUM.
   -
4. ISOLATED UNFRAMED OPENINGS SHALL BE SUITABLY REINFORCED BY METAL DECK CONTRACTOR. FOLLOW RECOMMENDATIONS GIVEN IN "DECK DAMAGE AND PENETRATIONS" BY RICHARD B. HEAGLER, PUBLISHED BY THE STEEL DECK INSTITUTE.
5. PROVIDE ALL ACCESSORIES INCLUDING, BUT NOT LIMITED TO: REINFORCING CHANNELS, STANDARD CLOSURES, CANT STRIPS, SUMP PANS, FINISH STRIPS, POUR STOPS, AND OTHER ACCESSORIES AS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER.
6. SHOP DRAWINGS SHALL INDICATE ALL INFORMATION NECESSARY FOR THE COMPLETE FABRICATION AND ERECTION OF METAL DECK.

STEEL JOISTS & JOIST GIRDERS

1. STEEL JOISTS AND/OR JOIST GIRDERS SHALL BE THE TYPE AND SIZE SHOWN ON THE DRAWINGS. SPECIAL JOISTS (SP) HAVE SPECIAL DESIGN REQUIREMENTS; REFER TO PLANS AND DETAILS FOR LOCATIONS AND LOADING DIAGRAMS.
2. PROVIDE SPECIAL SLOPED AND/OR SKEWED SEATS AS REQUIRED BY THE BUILDING DESIGN.
3. THE ENDS OF STEEL JOISTS SHALL EXTEND A MINIMUM DISTANCE OF 2 1/2 INCHES OVER STEEL SUPPORTS AND 4 INCHES OVER ALL OTHER SUPPORTS. THE ENDS SHALL BE FASTENED BY BOLTING OR WELDING.
4. NO CONSTRUCTION LOADS SHALL BE PLACED ON THE JOISTS BEFORE TH

MAIN WIND FORCE RESISTING SYSTEM (psf)										
HORIZONTAL PRESSURES				VERTICAL PRESSURES				OVERHANG PRESSURES	
A	B	C	D	E	F	G	H	Eoh	Goh
± 21.0	± 10.9	± 13.9	± 6.5	± 25.2	± 14.3	± 17.5	± 11.1	± 35.3	± 27.6



COMPONENTS AND CLADDING								
LOAD (psf)								
ZONE	10 SF		20 SF		50 SF		100 SF	
1	9.7	-23.8	9.1	-23.2	8.3	-22.4	7.7	-21.8
2	9.7	-39.9	9.1	-35.7	8.3	-30.1	7.7	-25.8
3	9.7	-60.1	9.1	-49.8	8.3	-36.1	7.7	-25.8
4	23.8	-25.8	22.7	-24.7	21.3	-23.3	20.2	-22.2
5	23.8	-31.9	22.7	-29.7	21.3	-26.9	20.2	-24.7
2 ROH	-	-34.3	-	-33.7	-	-32.9	-	-32.3
3 ROH	-	-56.5	-	-44.3	-	-28.3	-	-16.1

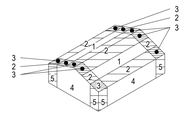


TABLE 1705.6 - REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS	PERIODIC
Verify materials below shallow foundations are adequate to achieve the design bearing capacity	--	X
Verify excavations are extended to proper depth and have reached proper material	--	X
Perform classification and testing of compacted fill materials	--	X
During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	X	--
Prior to placement of compacted fill, inspect subgrade and verify that the site has been prepared properly	--	X

TABLE 1705.3 - REQUIRED SPECIAL INSPECTION AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS	PERIODIC
Inspect reinforcement, including prestressing tendons, and verify placement.	--	X
Inspect anchors post-installed in hardened concrete members:		
Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	--
Mechanical anchors and adhesive anchors not defined above	--	X
Verify use of required design mix	--	X
Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	X	--
Inspect concrete placement for proper application techniques	X	--
Verify maintenance of specified curing temperature and techniques	--	X
Inspect formwork for shape, location, and dimensions of the concrete member being formed	--	X

MICHIGAN BUILDING CODE 2021

TABLE 1705.2.3 - SPECIAL INSPECTIONS OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS

TYPE	CONTINUOUS	PERIODIC
Installation of open-web steel joists and joist girders		
a. End connections - welding or bolted	--	X
b. Bridging - horizontal or diagonal	--	--
1. Standard bridging	--	X
2. Bridging that differs from the SJI specifications listed in Section 2207.1	--	X

STRUCTURAL STEEL REQUIREMENTS PER:
STEEL DECK INSTITUTE QUALITY CONTROL AND QUALITY ASSURANCE

TABLE 1.1 - INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT

TASK	QC	QA
Verify compliance of materials (deck and all accessories) with construction documents, including profiles, material properties, and base metal thickness	Perform	Perform
Document acceptance or rejection of deck and deck accessories	Perform	Perform

TABLE 1.2 - INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
Verify compliance of deck and all accessories installation with const. docs	Perform	Perform
Verify deck materials are represented by the mill certifications that comply with the construction documents	N/A	Perform
Document acceptance or rejection of installation of deck and accessories	Perform	Perform

TABLE 1.3 - INSPECTION OR EXECUTION TASKS PRIOR TO DECK WELDING

TASK	QC	QA
Welding procedure specifications (WSP) available	Observe	Observe
Manufacturer certifications for welding consumables available	Observe	Observe
Material identification (type/grade)	Observe	Observe
Check welding equipment	Observe	Observe

TABLE 1.4 - INSPECTION OR EXECUTION TASKS DURING DECK WELDING

TASK	QC	QA
Use of qualified welders	Observe	Observe
Control and handling of welding consumables	Observe	Observe
Environmental conditions (wind speed, moisture, temperature)	Observe	Observe
WSP followed	Observe	Observe

TABLE 1.5 - INSPECTION OR EXECUTION TASKS AFTER DECK WELDING

TASK	QC	QA
Verify size and location of welds, including support, sidelap, perimeter welds	Perform	Perform
Welds meet visual appearance criteria	Perform	Perform
Verify repair activities	Perform	Perform
Document acceptance or rejection of welds	Perform	Perform

TABLE 1.6 - INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING

TASK	QC	QA
Manufacturer installation instructions available for mechanical fasteners	Observe	Observe
Proper tools available for fastener installation	Observe	Observe
Proper storage for mechanical fasteners	Observe	Observe

TABLE 1.7 - INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING

TASK	QC	QA
Fasteners are positioned as required	Observe	Observe
Fasteners are installed in accordance with manufacturer's instructions	Observe	Observe

TABLE 1.8 - INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING

TASK	QC	QA
Check spacing, type, and installation of support fasteners	Perform	Perform
Check spacing, type, and installation of sidelap fasteners	Perform	Perform
Check spacing, type, and installation of perimeter fasteners	Perform	Perform
Verify repair activities	Perform	Perform
Document acceptance or rejection of mechanical fasteners	Perform	Perform

STRUCTURAL STEEL REQUIREMENTS PER:
AISC 360 - CHAPTER N - QUALITY CONTROL AND QUALITY ASSURANCE

MINIMUM REQUIREMENTS

PER IBC 2021 1705.2.1 STRUCTURAL STEEL:
SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES, AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360

QC	QUALITY CONTROL	O	THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
QA	QUALITY ASSURANCE	P	THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT (OR BOLTED CONNECTION)

TABLE N5.4-1 - INSPECTION TASKS PRIOR TO WELDING

TASK	QC	QA
Welding qualification records and continuity records	P	O
Welding procedure specifications (WPS) available	P	P
Manufacturer certifications for welding consumables available	P	P
Material identification (type/grade)	O	O
Material identification system	O	O
Fit-up of groove welds (including joint geometry): • Joint penetrations • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location) • Backing type and fit (if applicable)	O	O
Fit-up of CJP groove welds of HSS T-, Y-, and K-joints w/o backing (including joint geometry): • Joint preparations • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	P	O
Configuration and finish of access holes	O	O
Fit-up of fillet welds: • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	O	O
Check welding equipment	O	--

TABLE N5.4-2 - INSPECTION TASKS DURING WELDING

TASK	QC	QA
Control and handling of welding consumables: • Packaging • Exposure Control	O	O
No welding over cracked tack welds	O	O
Environmental conditions • Wind speed within limits • Precipitation and temperature	O	O
WPS followed: • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flow rate • Preheat applied • Interpass temperature maintained (min/max) • Proper position (F, V, H, OH)	O	O
Welding techniques: • Interpass and final cleaning • Each pass within profile limitation • Each pass meets quality requirements	O	O
Placement and installation of steel headed stud anchors	P	P

TABLE N5.4-3 - INSPECTION TASKS AFTER WELDING

TASK	QC	QA
Welds cleaned	O	O
Size, length, and location of welds	P	P
Welds meet visual acceptance criteria: • Crack prohibition, weld/base-metal fusion, crater cross section • Weld profiles, weld size, undercut, porosity	P	P
Arc strikes	P	P
k-area	P	P
Weld access holes in rolled heavy shapes and built-up heavy shapes	P	P
Backing removed and weld tabs removed (if required)	P	P
Repair activities	P	P
Document acceptance or rejection of welded joint or member	P	P
No prohibited welds have been added without the approval of the EOR	O	O

TABLE N5.6-1 - INSPECTION TASKS PRIOR TO BOLTING

TASK	QC	QA
Manufacturer's certifications available for fastener materials	O	P
Fasteners marked in accordance with ASTM requirements	O	O
Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O
Correct bolting procedure selected for joint detail	O	O
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	P	O
Proper storage provided for bolts, nuts, washers, and other fastener components	O	O

TABLE N5.6-2 - INSPECTION TASKS DURING BOLTING

Fastener assemblies placed in all holes and washers and nuts are positioned as required	O	O
Joint brought to the snug-tight condition prior to pretensioning operation	O	O
Fastener component not turned by the wrench prevented from rotating	O	O
Fasteners are pretensioned in accordance with RSCS Specification, progressing systematically from the rigid point toward the free edges	O	O

TABLE N5.6-3 - INSPECTION TASKS AFTER BOLTING

Document acceptance or rejection of bolted connections	P	P

robert darvas associates
consulting structural engineers
440 south main street
ann arbor, mi 48104
RDA NO. 26013

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITIONS AND RENOVATIONS TO:

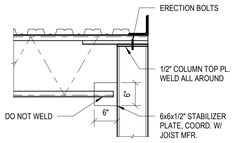
PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD
MIDLAND, MI 48640

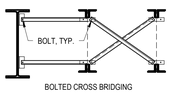
DRAWING TITLE

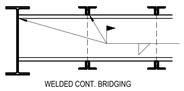
SPECIAL INSPECTIONS

SEAL	DRAWN: NM	PROJECT NO.: 26-210
	CHECKED: SMR	DRAWING NO.: E-S002
	REVIEWED: SMR	
	DATE: OCT 19, 2026	
	SCALE: 12" = 1'-0"	SHEET NO.: 10 OF 31

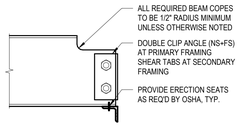


25 E-S003 JOIST BEARING ONTO COLUMN Not to Scale

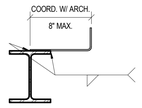




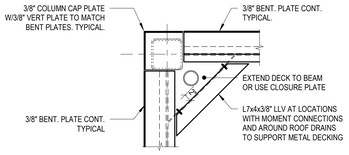
26 E-S003 JOIST BRIDING DETAILS Not to Scale



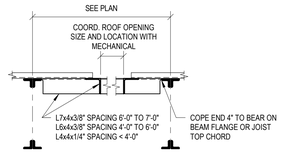
17 E-S003 TYPICAL BEAM COPES Not to Scale



18 E-S003 TYPICAL BENT PLATE EDGE Not to Scale



19 E-S003 METAL DECK SUPPORT AT COLUMN Not to Scale

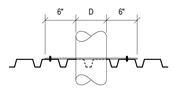


20 E-S003 ANGLE FRAME FOR MECHANICAL ROOF OPENINGS Not to Scale

ROOF DECK ATTACHMENT PATTERN:
FASTEN USING 36/4 PATTERN AT END LAPS & INT. SUPPORTS @ 12" OC
FASTEN AT EDGES, PERIMETER, AND OPENINGS @ 6" OC
USE 3/4"Ø PUDDLE WELD, HILTI X-ENP 19, OR HILTI X-HSN 24
FASTEN SIDE LAPS AT 12" OC WITH #10 SELF-DRILLING SCREWS
END LAPS OCCUR AT SUPPORTS ONLY
MINIMUM LAP = 3"

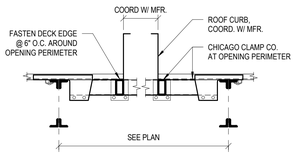
NOTE:
HILTI X-ENP 19 FASTENERS FOR STEEL THICKNESSES 1/8" TO 3/8"
HILTI X-HSN 24 FASTENERS FOR STEEL THICKNESSES 1/4" & GREATER

21 E-S003 STEEL DECK FASTENING Scale: 3/4" = 1'-0"

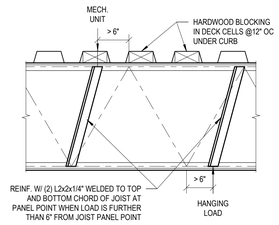


D≤ 6"Ø (ONE RIB REMOVED) NO REINFORCING REQ'D
6"Ø< D≤ 8"Ø PROVIDE 0.045" MIN. PLATE, EXTEND 6" BEYOND OPENING ALL SIDES,SCREW @12" OC ALL AROUND
D> 8"Ø PROVIDE TYPICAL ANGLE FRAME

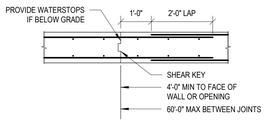
22 E-S003 REINFORCING OR STEEL ROOF DECKING Not to Scale



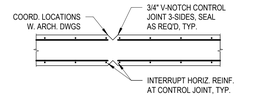
23 E-S003 DECK EDGE AND RTU SUPPORT AT EXISTING ROOF Not to Scale



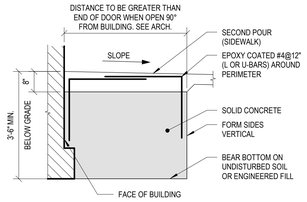
24 E-S003 TYPICAL JOIST REINFORCING Not to Scale



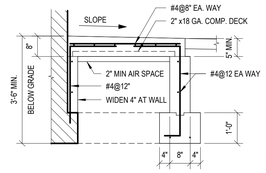
13 E-S003 FOOTING CONSTRUCTION JOINT Not to Scale



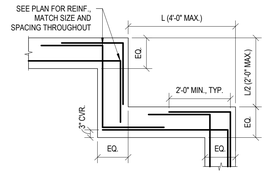
14 E-S003 FOOTING CONTROL JOINT Not to Scale



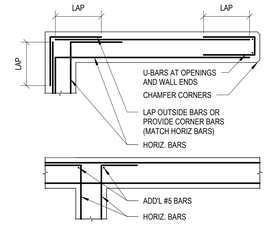
15 E-S003 FROST-PROOF ENTRY SLAB Not to Scale



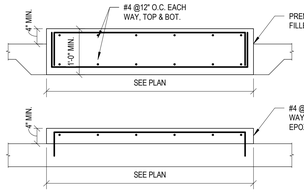
16 E-S003 ALTERNATE FROST-PROOF ENTRY SLAB Not to Scale



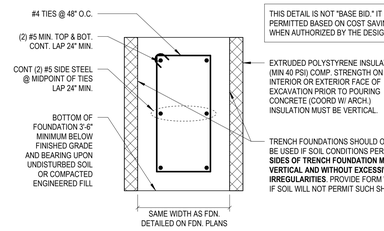
7 E-S003 STEPPED FOUNDATION DETAIL Not to Scale



8 E-S003 TYPICAL WALL AND CORNER REINFORCING Not to Scale

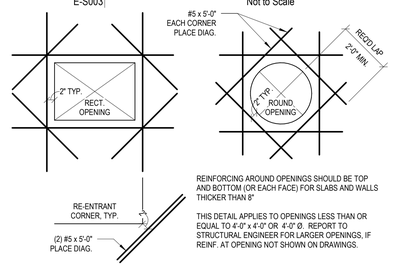


9 E-S003 CONCRETE MECHANICAL PAD Not to Scale



THIS DETAIL IS NOT "BASE BID." IT IS ONLY PERMITTED BASED ON COST SAVINGS AND WHEN AUTHORIZED BY THE DESIGN TEAM.

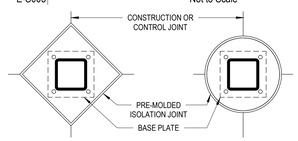
10 E-S003 ALTERNATE TRENCH FOUNDATION Not to Scale



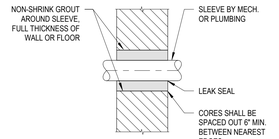
REINFORCING AROUND OPENINGS SHOULD BE TOP AND BOTTOM (OR EACH FACE) FOR SLABS AND WALLS THICKER THAN 8"

THIS DETAIL APPLIES TO OPENINGS LESS THAN OR EQUAL TO 4'-0" x 4'-0" OR 4'-0" Ø. REPORT TO STRUCTURAL ENGINEER FOR LARGER OPENINGS, IF REINF. AT OPENING NOT SHOWN ON DRAWINGS.

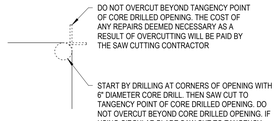
11 E-S003 REINFORCING AT CONCRETE OPENINGS Not to Scale



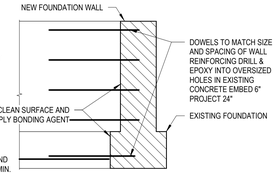
12 E-S003 COLUMN ISOLATION JOINTS Not to Scale



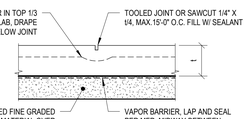
1 E-S003 CORING AND SLEEVING IN EXISTING CONCRETE Not to Scale



2 E-S003 NEW OPENINGS IN EXISTING CONCRETE Not to Scale

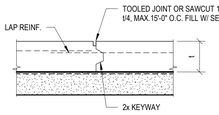


3 E-S003 NEW TO EXISTING FOUNDATION REINFORCEMENT Not to Scale



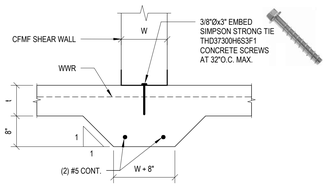
CONTROL JOINT

- PURPOSE OF SLAB ON GRADE JOINTING IS TO BREAK THE SLAB POURS INTO SIZES THAT ARE MANAGEABLE FOR FINISHING AND TO LIMIT TOTAL SHRINKAGE.
- PLACE CONSTRUCTION JOINTS SUCH THAT THE MAXIMUM SLAB POUR SIZE IS LIMITED TO 60'-0" x 60'-0". THIS POUR LIMITATION MAY BE EXPANDED BASED ON CONTRACTOR'S METHOD OF PLACEMENT, CURING TECHNIQUE. AND EXPERIENCE IN CONTROLLING CRACKING IN SIMILAR POUR SIZES. A POUR PLAN SHALL BE SUBMITTED AND REVIEWED BY RDA. ANY COMMENTS MADE BY RDA ARE ONLY RECOMMENDATIONS AS THE CONTRACTOR IS ULTIAMTELY RESPONSIBLE FOR CONCRETE PLACEMENT AND ASSOCIATED RESULTS.
- SLAB POURS SHALL BE SQUARE IF POSSIBLE, BUT IN NO CASE SHALL THEY BE GREATER THAN TWICE AS LONG AS THEY ARE WIDE.
- CONTROL JOINTS SHALL SUBDIVIDE A SLAB POUR INTO APPROX. 15'-0" x 15'-0" OR SMALLER AREAS.
- JOINTS SHALL BE PLACED WHERE POSSIBLE TO ALIGN WITH MAIN COLUMN LINES AND TO ELIMINATE RE-ENTRANT CORNERS IN THE SLAB.
- PROVIDE SLAB JOINT PATTERN AS SHOWN ON THE DRAWINGS, OR IF NOT SHOWN, CONTRACTOR SHALL SUPPLY A PROPOSED JOINT LAYOUT PATTER TO THE ARCHITECT FOR APPROVAL.

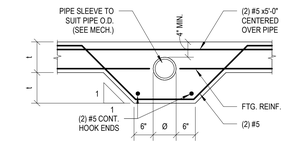


CONSTRUCTION JOINT

4 E-S003 TYPICAL SLAB ON GRADE JOINTS Not to Scale



5 E-S003 THICKENED SLAB UNDER CFMF SHEAR WALL Not to Scale



6 E-S003 PIPE THROUGH FOUNDATION Not to Scale

robert darvas associates
consulting structural engineers
440 south main street
ann arbor, mi 48104
RDA No. 25013

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITIONS AND RENOVATIONS TO:

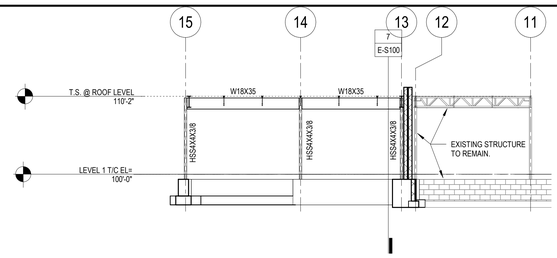
PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD
MIDLAND, MI 48640

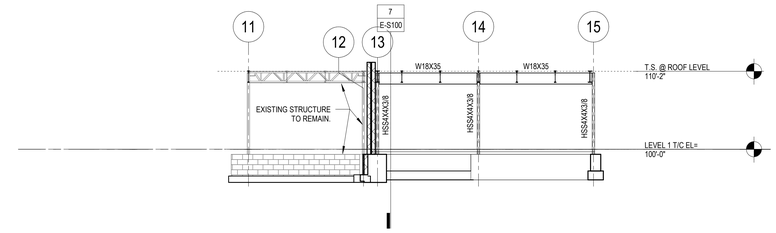
DRAWING TITLE

TYPICAL DETAILS

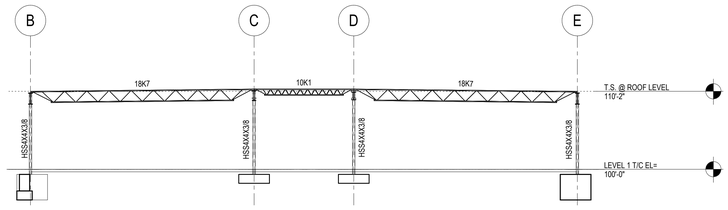
SEAL	DRAWN NM	PROJECT NO. 26-210
	CHECKED SMR	DRAWING NO. E-S003
	REVIEWED SMR	
	DATE OCT 19, 2026	SHEET NO. 11 OF 31
	SCALE As Indicated	



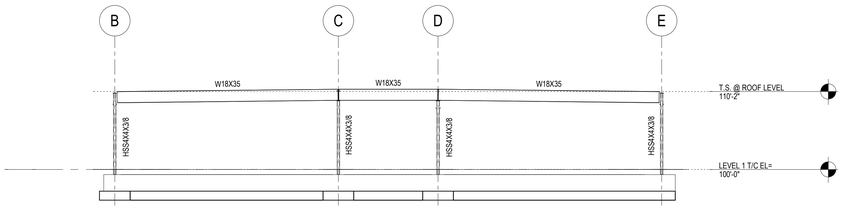
6 E-S100 FRAMING ELEVATION ON LINE B
Scale: 1/8" = 1'-0"



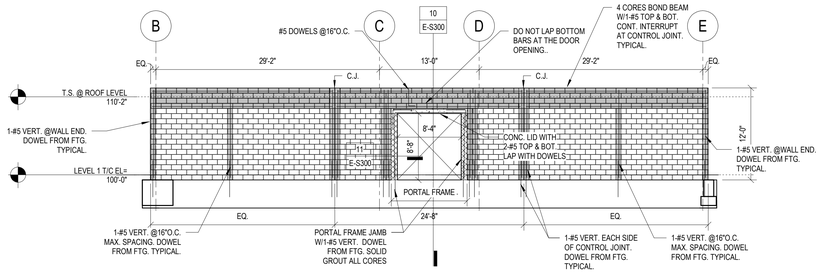
5 E-S100 FRAMING ELEVATION ON LINE E
Scale: 1/8" = 1'-0"



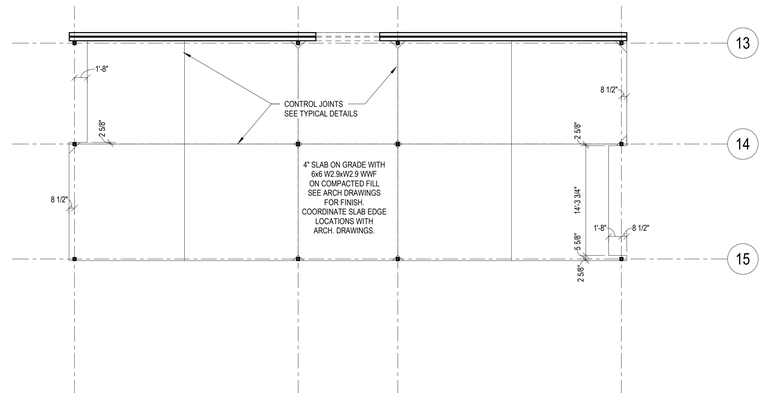
4 E-S100 FRAMING ELEVATION ON LINE 14
Scale: 1/8" = 1'-0"

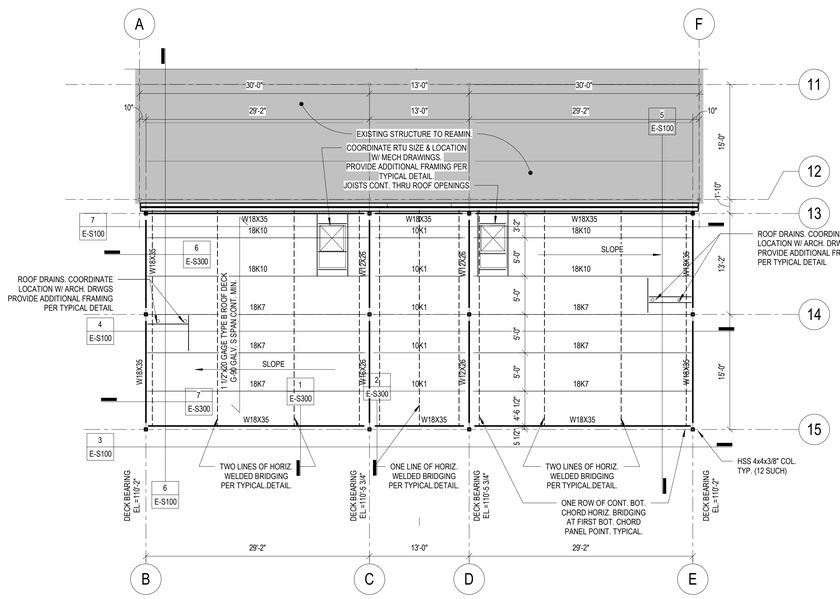


3 E-S100 FRAMING ELEVATION ON LINE 15
Scale: 1/8" = 1'-0"

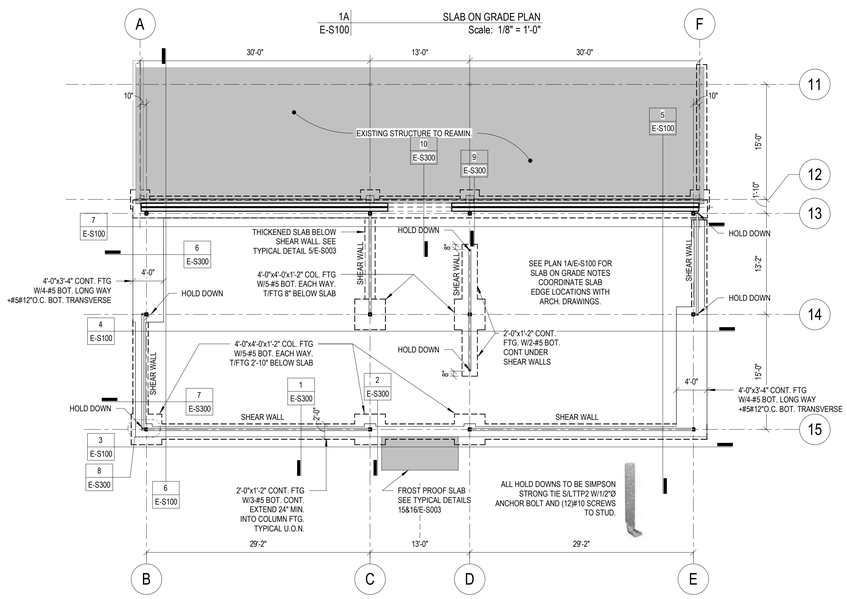


7 E-S100 MASONRY WALL ELEVATION.
Scale: 1/8" = 1'-0"





2 E-S100 ROOF FRAMING PLAN
Scale: 1/8" = 1'-0"



1 E-S100 FOUNDATION PLAN
Scale: 1/8" = 1'-0"

robert darvas associates
consulting structural engineers
440 south main street
ann arbor, mi 48104
RDA No. 26019

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITIONS AND RENOVATIONS TO:

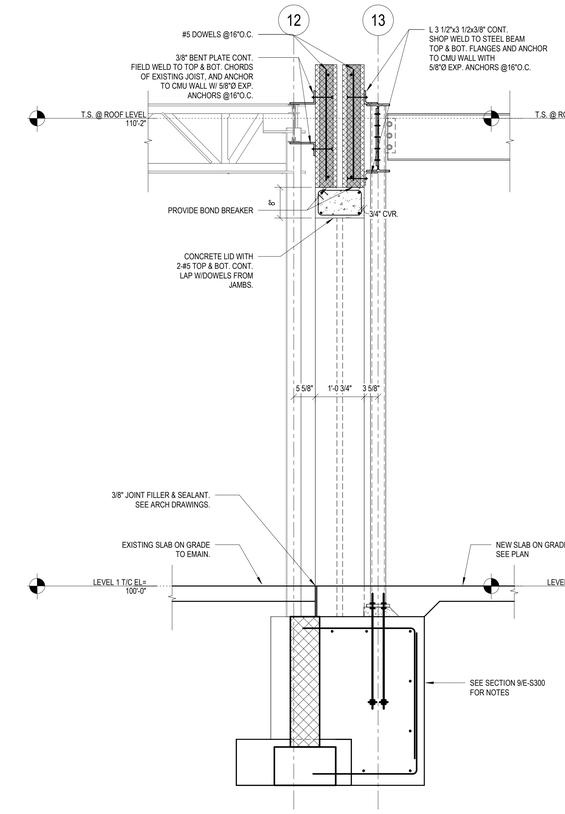
PINE RIVER ELEMENTARY SCHOOL

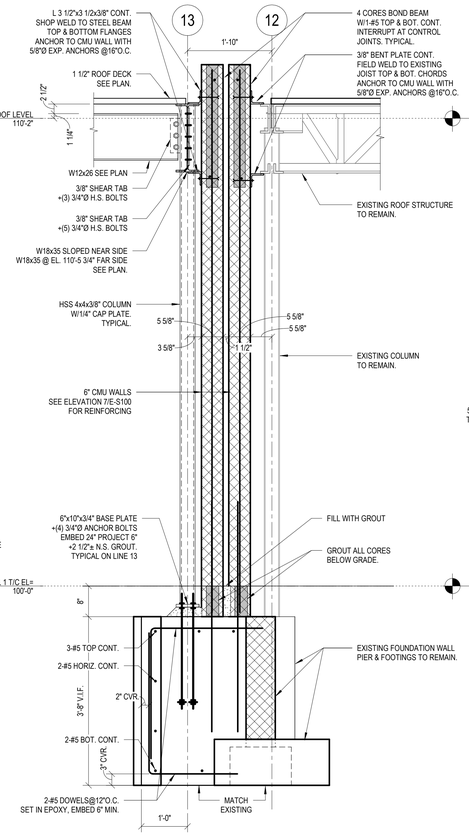
1894 E PINE RIVER RD
MIDLAND, MI 48640

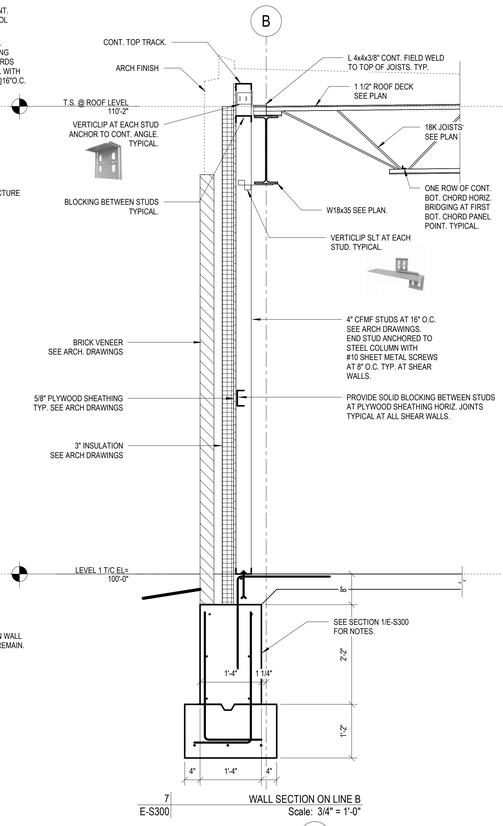
DRAWING TITLE

PLANS AND SECTIONS

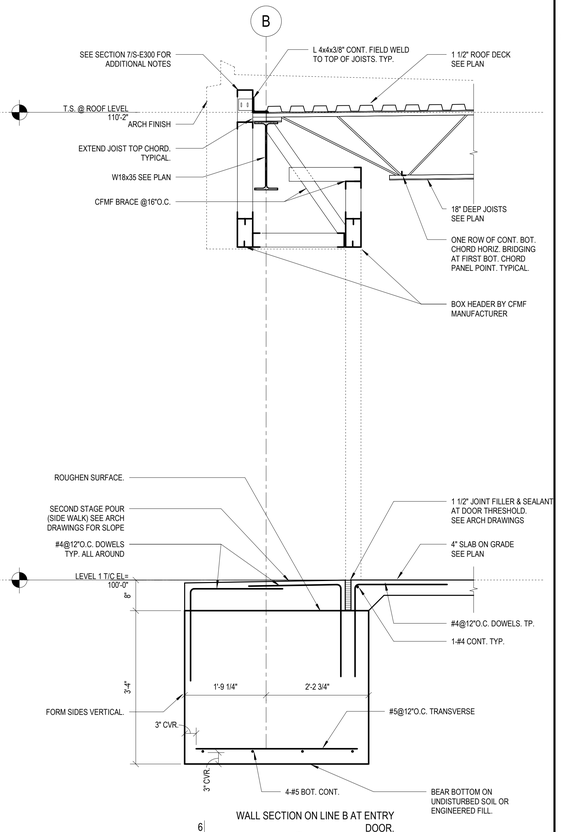
SEAL		
	DRAWN: NM	PROJECT NO.: 26-210
	CHECKED: SMR	DRAWING NO.: E-S100
	REVIEWED: SMR	
	DATE: OCT 19, 2026	SHEET NO.: 12 OF 31
	SCALE: 1/8" = 1'-0"	





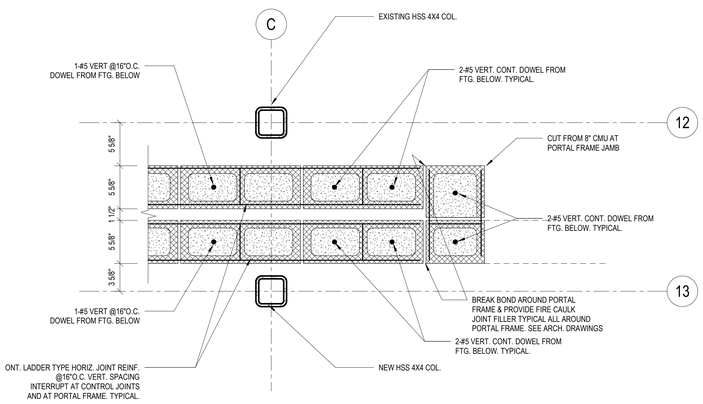


7 E-S300 WALL SECTION ON LINE B
Scale: 3/4" = 1'-0"



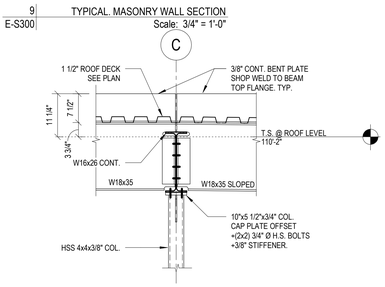
6 E-S300 WALL SECTION ON LINE B AT ENTRY DOOR.
Scale: 3/4" = 1'-0"

10 E-S300 MASONRY WALL SECTION AT DOOR
Scale: 3/4" = 1'-0"



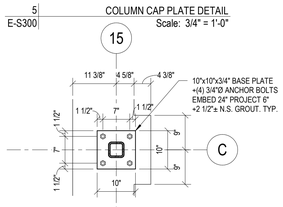
11 E-S300 PORTAL FRAME JAMB DETAIL
Scale: 1 1/2" = 1'-0"

9 E-S300 TYPICAL MASONRY WALL SECTION
Scale: 3/4" = 1'-0"



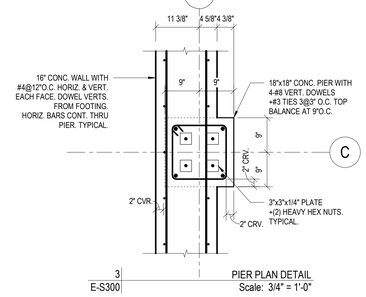
5 E-S300 COLUMN CAP PLATE DETAIL
Scale: 3/4" = 1'-0"

15

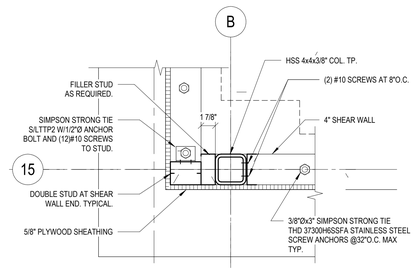


4 E-S300 BASE PLATE PLAN DETAIL
Scale: 3/4" = 1'-0"

15

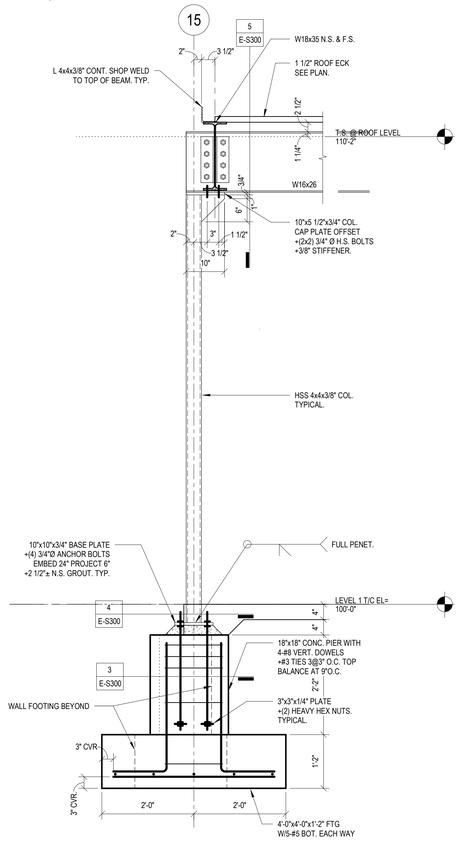


3 E-S300 PIER PLAN DETAIL
Scale: 3/4" = 1'-0"



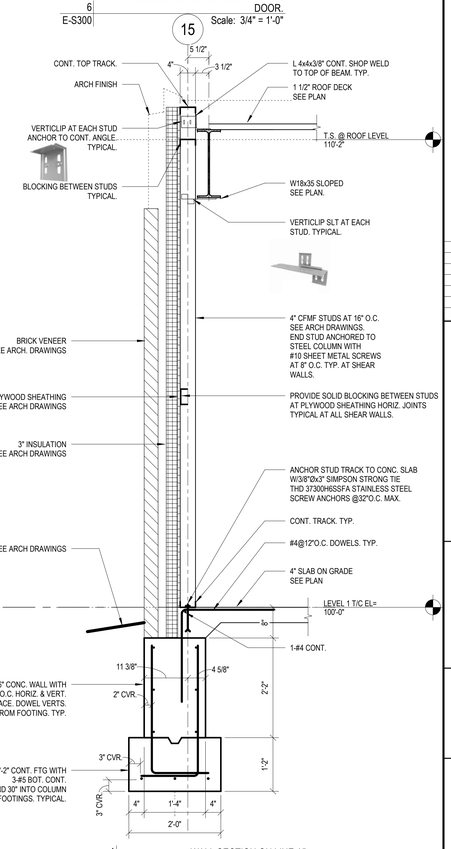
8 E-S300 SHEAR WALL PLAN DETAIL AT B-15
Scale: 1 1/2" = 1'-0"

15



2 E-S300 COLUMN DETAIL ON LINE 15
Scale: 3/4" = 1'-0"

15



1 E-S300 WALL SECTION ON LINE 15
Scale: 3/4" = 1'-0"

robert darvas associates
consulting structural engineers
440 south main street
ann arbor, mi 48104
RDA No. 26013

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITIONS AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

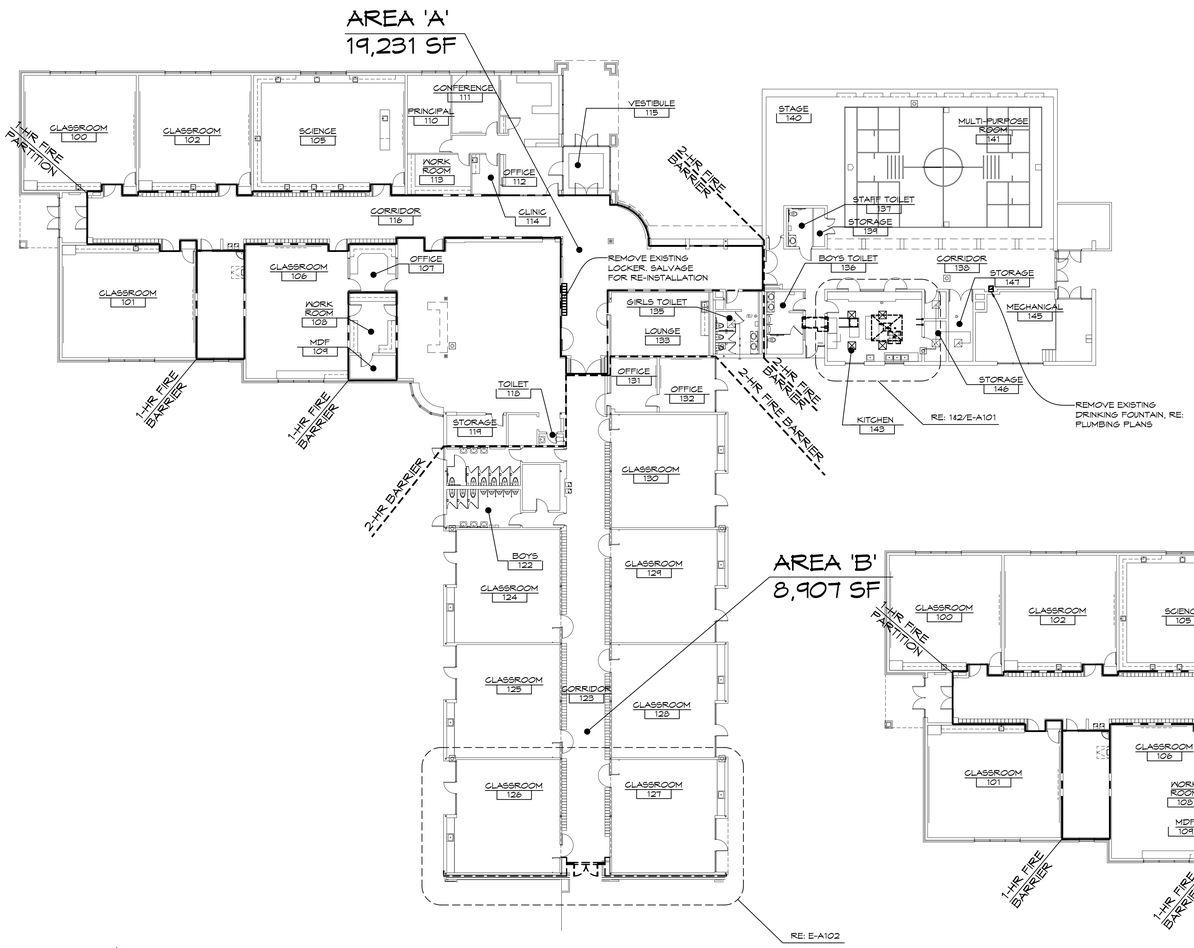
1894 E PINE RIVER RD
MIDLAND, MI 48640

DRAWING TITLE

SECTION DETAILS

SEAL

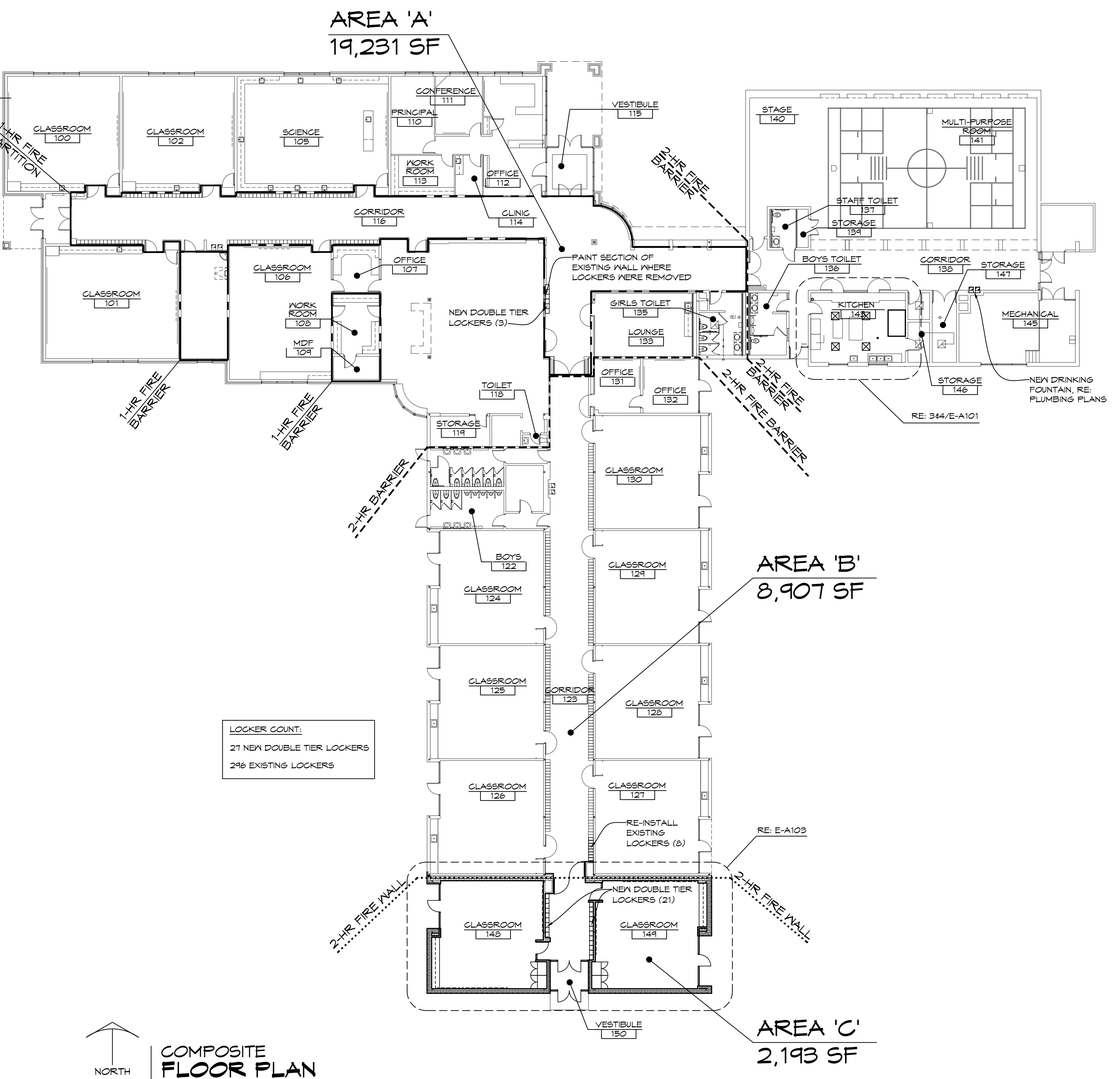
DRAWN	NM
CHECKED	SMR
REVIEWED	SMR
DATE	OCT 19, 2026
SCALE	As Indicated
PROJECT NO.	26-210
DRAWING NO.	E-S300
SHEET NO.	13 OF 31



NORTH
1/16" = 1'-0"

COMPOSITE DEMOLITION PLAN

X01



LOCKER COUNT:
27 NEW DOUBLE TIER LOCKERS
296 EXISTING LOCKERS

NORTH
1/16" = 1'-0"

COMPOSITE FLOOR PLAN

X01

FIRE SEPARATION LEGEND

- 1-HR FIRE PARTITION
- 1-HR FIRE BARRIER
- 2-HR FIRE BARRIER
- 2-HR FIRE WALL

DEMOLITION GENERAL NOTES

1. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
2. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
3. UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. NO GUARANTEE IS MADE EITHER TO COMPLETENESS OR ACCURACY.
4. CONTACT "MISS DIG" AT 1-800-482-7171 PRIOR TO EXCAVATION OR DEMOLITION.
5. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL ADDITIONAL DEMOLITION WORK.
6. NOTATIONS ARE MADE IN VARIOUS PLACES OF THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
7. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.

CONSTRUCTION GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION = 100'-0"
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING OF WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATIONS OF ALL WALL, AND FLOOR OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE NEW AND EXISTING BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK.
8. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUDS, OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
9. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
10. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
11. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

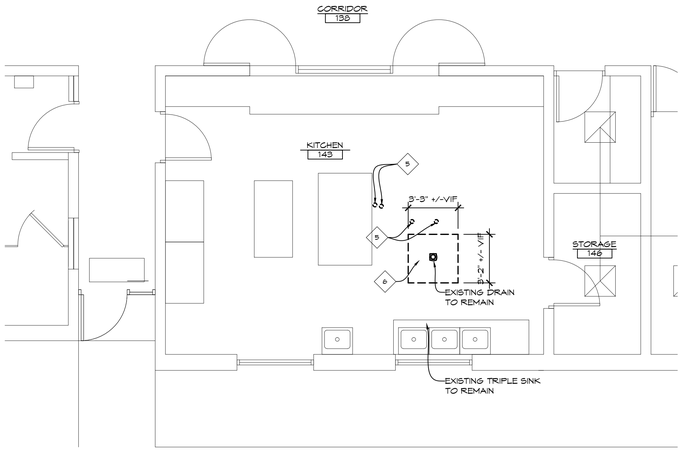
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
COMPOSITE DEMOLITION PLAN AND COMPOSITE FLOOR PLAN

SEAL	DRAWN	PROJECT NO.
	EVA	26-210
	CHECKED JESS	CAD FILE NO. E-A100
	REVIEWED MLB	DRAWING NO. E-A100
	DATE OCT 19, 2026	SHEET NO. 14 OF 31
	SCALE 1/16"= 1'-0"	

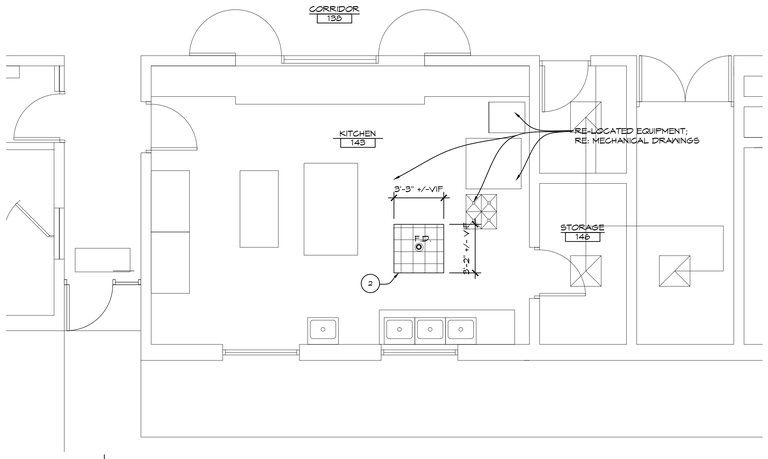
PROJECT

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC PH E-A100 COMP PLAN.dwg
Plot date: 10/19/2026 11:24 AM



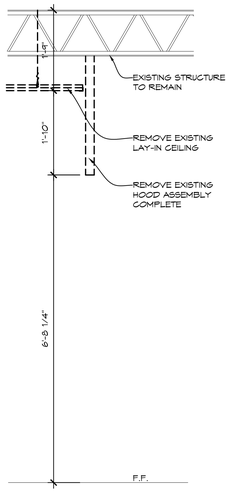
1 DEMOLITION FLOOR PLAN

1/4" = 1'-0" | X01



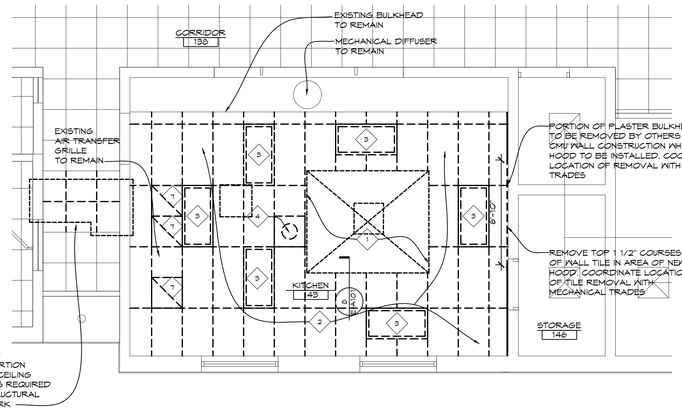
3 FLOOR PLAN

1/4" = 1'-0" | X01



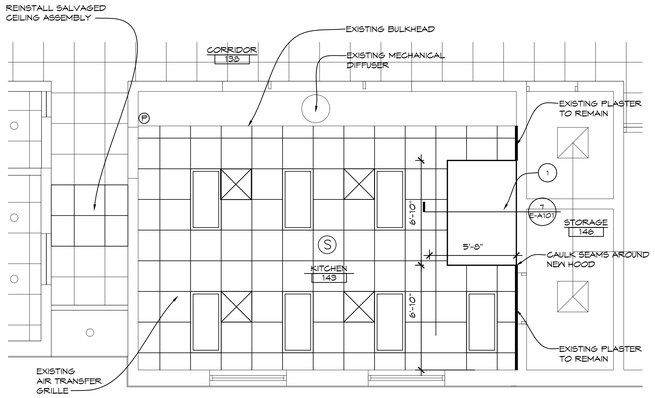
8 HOOD DETAIL

3/4" = 1'-0" | X01



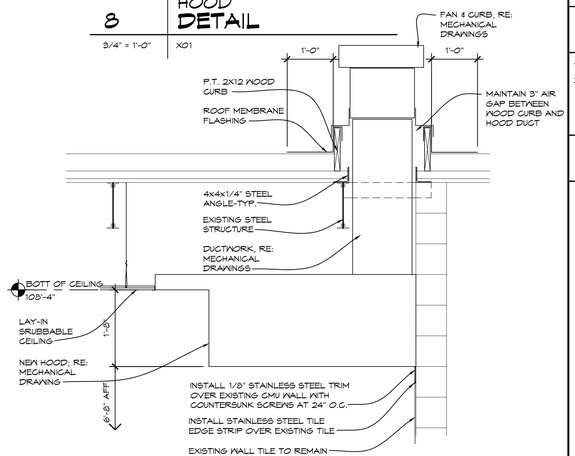
2 DEMOLITION REFLECTED CEILING PLAN

1/4" = 1'-0" | X01



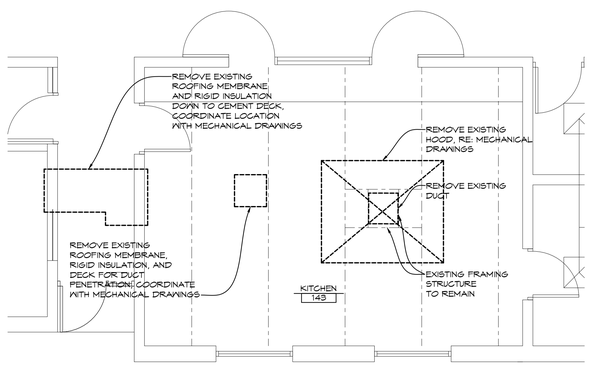
4 PROPOSED REFLECTED CEILING PLAN

1/4" = 1'-0" | X01



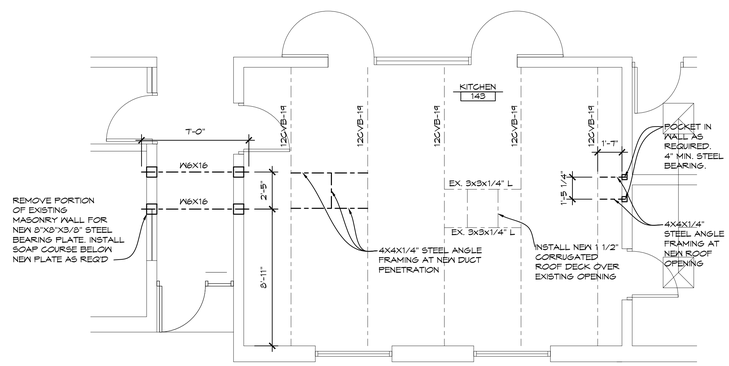
7 HOOD DETAIL

3/4" = 1'-0" | X01



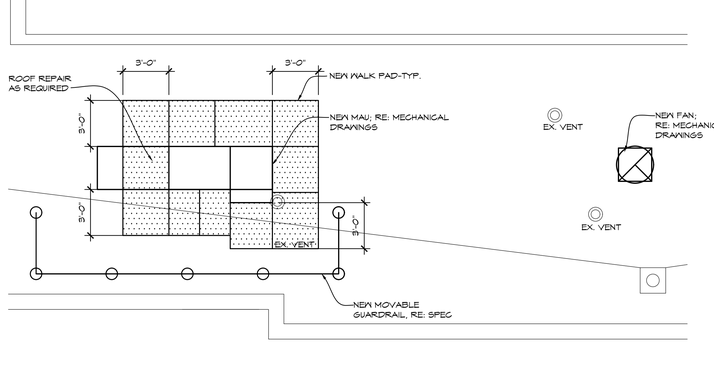
5 DEMOLITION ROOF PLAN

1/4" = 1'-0" | X01



6 PROPOSED STRUCTURAL FRAMING PLAN

1/4" = 1'-0" | X01



9 PARTIAL ROOF PLAN

1/4" = 1'-0" | X01

GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.

◇ DEMOLITION NOTES

1. REMOVE EXISTING EXHAUST HOOD AND TURN OVER TO OWNER, RE: MECHANICAL DRAWINGS.
2. REMOVE EXISTING LAY-IN CEILING TILES AND GRID.
3. REMOVE EXISTING LIGHT FIXTURE.
4. REMOVE EXISTING SPEAKER.
5. REMOVE EXISTING PIPES. CAP AND PATCH AT FLOOR, RE: MECHANICAL DRAWINGS
6. REMOVE EXISTING RECESSED FLOOR TILE.
7. REMOVE EXISTING AIR TRANSFER GRILLE, RE: MECHANICAL DRAWINGS.

○ CONSTRUCTION NOTES

1. EXHAUST HOOD, RE: MECHANICAL DRAWINGS.
2. INFILL EXISTING RECESSED FLOOR AREA, PITCH TO EXISTING FLOOR DRAIN , AND INSTALL NEW QUARRY TILE. ALIGN JOINTS TO EXISTING TILE.

CEILING LEGEND

- 2X2 LAY-IN CEILING GRID TYPE 'B' (SCRUBBABLE)
- 2X4 LIGHT FIXTURE
- (S) SPEAKER (CONNECT TO EXISTING FA SYSTEM)
- EXISTING AIR TRANSFER GRILLE

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

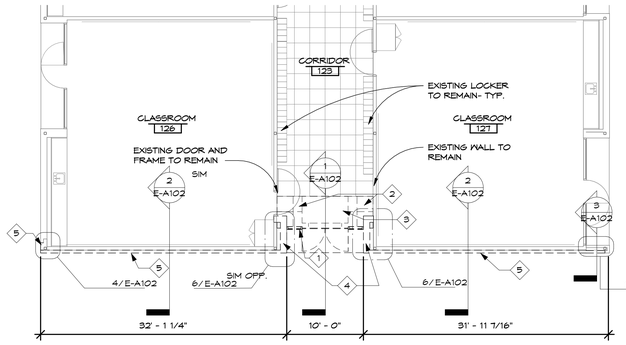
PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
DEMOLITION PLANS, FLOOR PLAN, AND REFLECTED CEILING PLAN

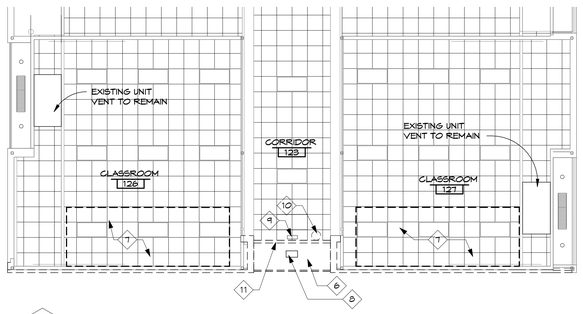
SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. E-A101
	REVIEWED MLB	DRAWING NO. E-A101
	DATE OCT 16, 2026	SHEET NO. 15 OF 31
	SCALE 1/4" = 1'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\RC PR\E-A101 ENL.PLN
Plot date: 10/19/2026 11:24 AM



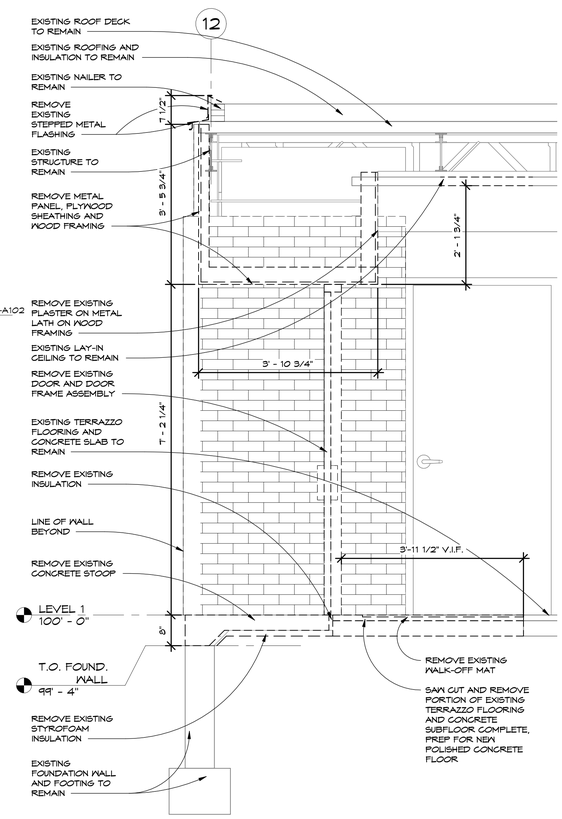
NORTH
1/8" = 1'-0"

DEMOLITION PLAN



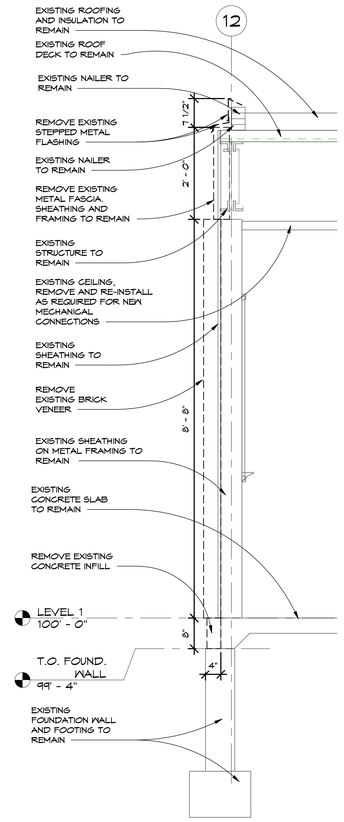
NORTH
1/8" = 1'-0"

DEMOLITION REFLECTED CEILING PLAN



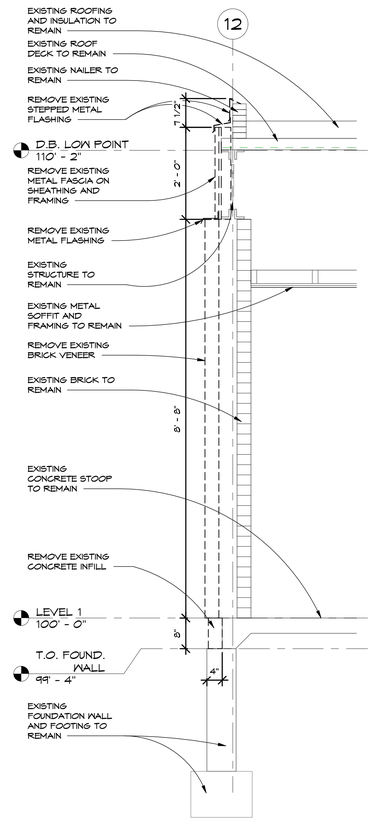
1 DEMOLITION SECTION

3/4" = 1'-0" | 15



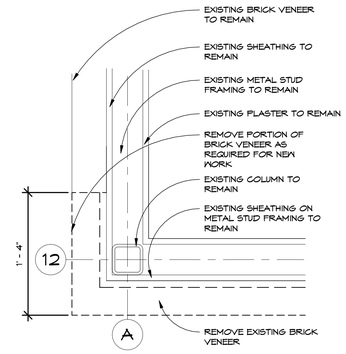
2 DEMOLITION SECTION

3/4" = 1'-0" | 15



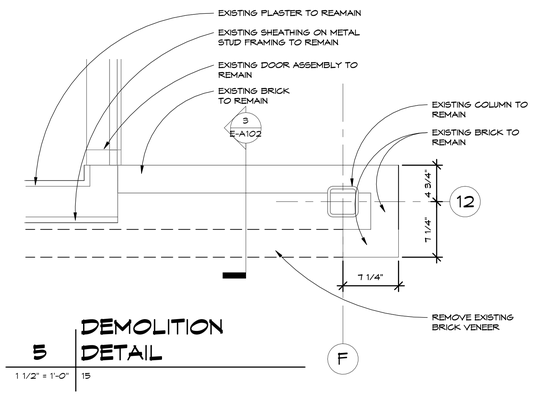
3 DEMOLITION SECTION

3/4" = 1'-0" | 5



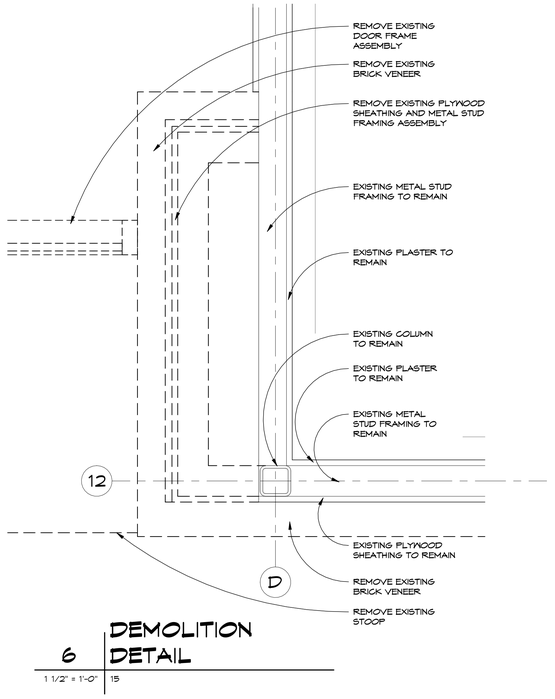
4 DEMOLITION DETAIL

1 1/2" = 1'-0" | 15



5 DEMOLITION DETAIL

1 1/2" = 1'-0" | 15



6 DEMOLITION DETAIL

1 1/2" = 1'-0" | 15

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
5. UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. NO GUARANTEE IS MADE EITHER TO COMPLETENESS OR ACCURACY.
6. CONTACT "MISS DIG" AT 1-800-482-7171 PRIOR TO EXCAVATION OR DEMOLITION.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES OF THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED, THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES.
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.
12. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.

◇ DEMOLITION NOTES

1 REMOVE EXISTING DOOR AND DOOR FRAME ASSEMBLY. SALVAGE EXISTING CARD READER AND DOOR ALARM COMPONENTS FOR INSTALLATION ON NEW DOOR ASSEMBLY
2 REMOVE PORTION OF TERRAZZO AND SUBFLOOR CONCRETE BACK TO METAL JOINT
3 REMOVE WALK-OFF MAT
4 REMOVE EXISTING BRICK VENEER AND METAL STUD FRAMING ASSEMBLY
5 REMOVE EXISTING BRICK VENEER, EXISTING PLYWOOD SHEATHING AND FRAMING TO REMAIN
6 REMOVE EXISTING METAL SOFFIT PANEL, SHEATHING AND WOOD FRAMING ASSEMBLY
7 REMOVE, SALVAGE, AND REINSTALL PORTION OF EXISTING CEILING AS REQUIRED FOR NEW MECHANICAL WORK. COORDINATE WITH MECHANICAL TRADES.
8 REMOVE EXISITNG LIGHT FIXTURE, RE: ELECTRICAL
9 REMOVE EXISTING EXIT SIGN
10 REMOVE EXISTING CAMERA. TURN OVER TO OWNER
11 REMOVE EXISTING BULKHEAD AND FRAMING COMPLETE

NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

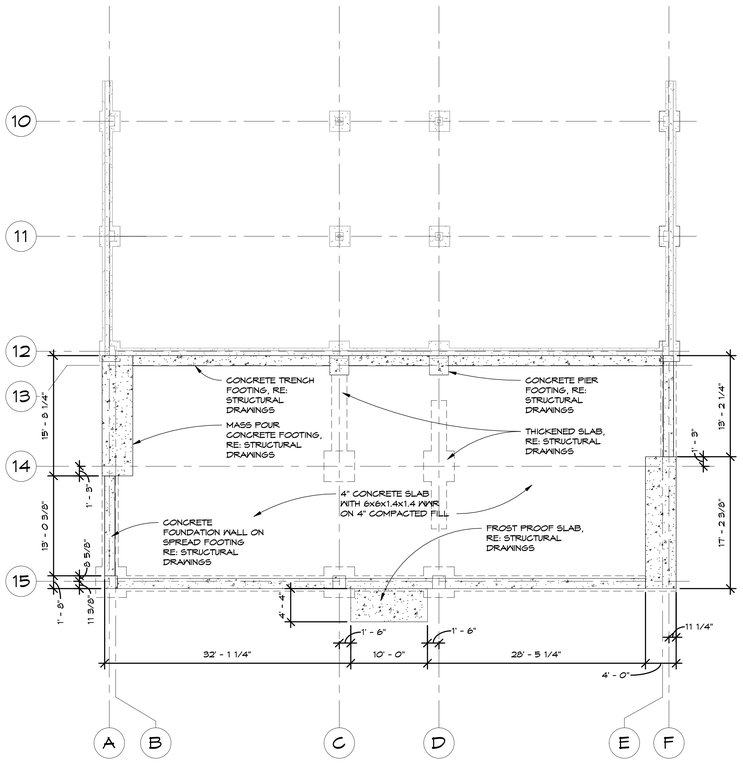
DRAWING TITLE

DEMOLITION PLANS, SECTIONS, AND DETAILS

SEAL	DRAWN: EVA	PROJECT NO.: 26-210
	CHECKED: ~~JESS~~	DRAWING NO.: E-A102
	REVIEWED: MLB	
	DATE: OCT 19, 2026	
	SCALE: As Indicated	SHEET NO.: 16 OF 31

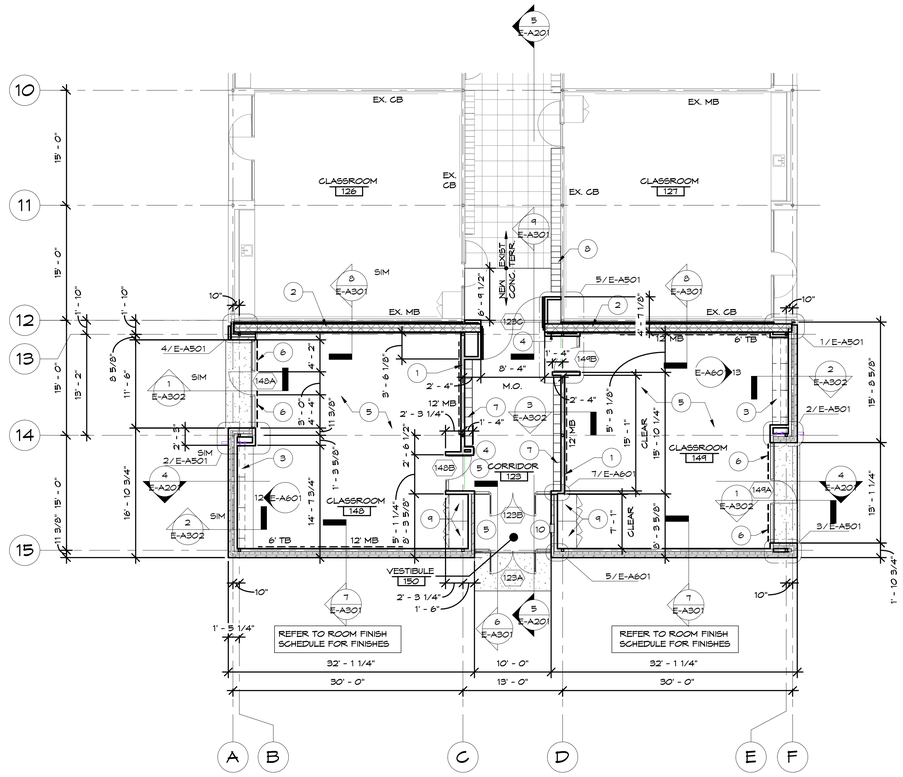
PROJECT 'E'

C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Hall_eakkerman@tha-Flint.com.rvt
10/19/2026 8:31:48 AM



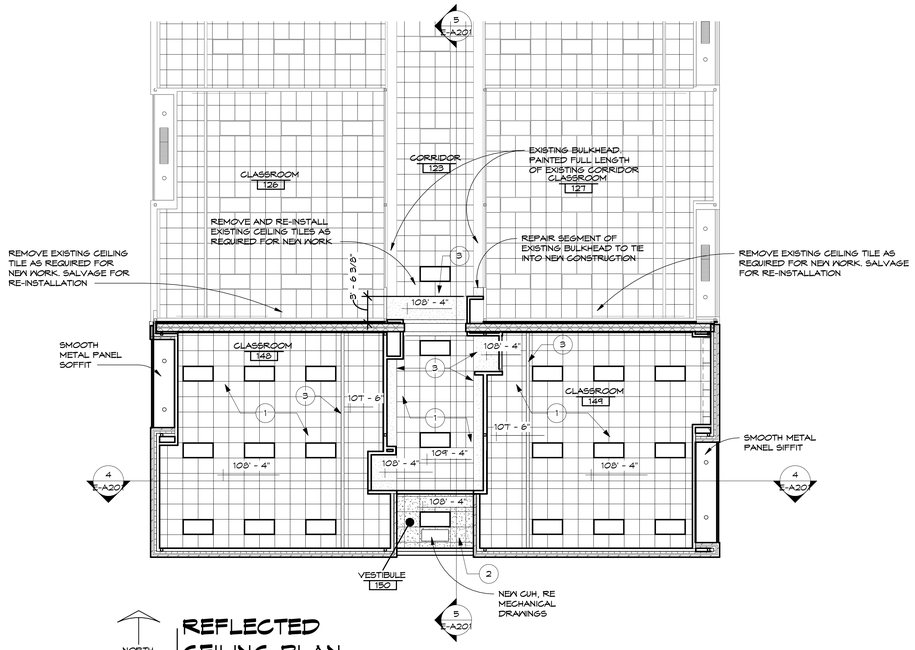
NORTH
1/8" = 1'-0"

FOUNDATION PLAN



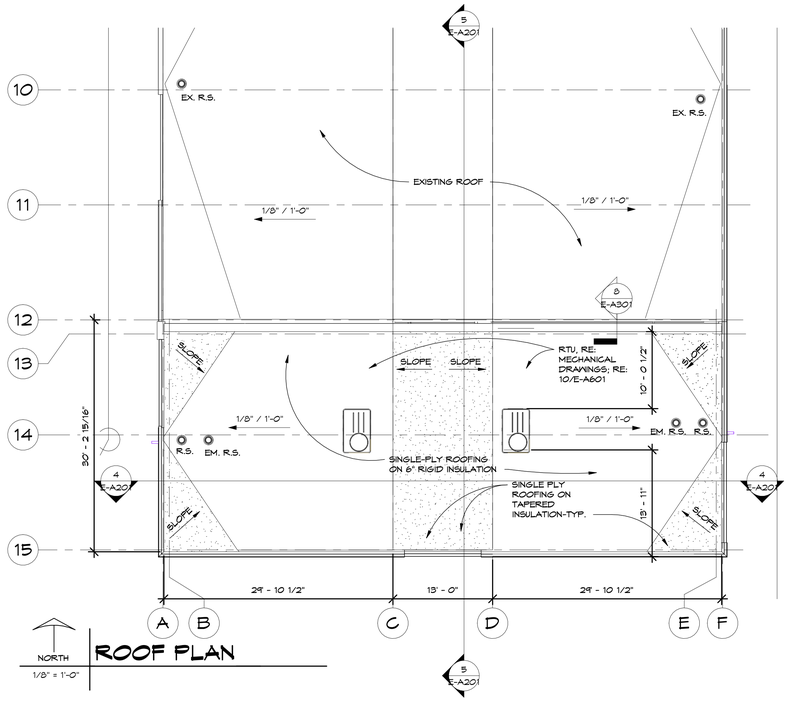
NORTH
1/8" = 1'-0"

FLOOR PLAN



NORTH
1/8" = 1'-0"

REFLECTED CEILING PLAN



NORTH
1/8" = 1'-0"

ROOF PLAN

CONSTRUCTION GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION = 100'-0"
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING OF WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, AND FLOOR OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE NEW AND EXISTING BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK.
8. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUDS, OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE.
9. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
10. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
11. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES

1 4" METAL STUD FRAMING WALL WITH 5/8" PLYWOOD SHEATHING (CLASSROOM SIDE ONLY) AND 5/8" GYPSUM BOARD EACH SIDE
2 12" CMU WALL W/ 2-HR FIRE RATING
3 PROVIDE NEW BASE AND WALL CABINETS, AND COUNTERTOP; RE: DETAIL 1/E-A601
4 PROVIDE ROOM SIGNAGE; RE DETAIL 6/E-A201
5 PROVIDE COLORED POLISHED CONCRETE FLOOR
6 PROVIDE ROLLER SHADES
7 PROVIDE NEW 15"Wx12D LOCKER ON BASE; RE: SPEC
8 RE-INSTALL SALVAGED LOCKERS
9 PROVIDE TALL CABINET; RE: DETAIL 2/E-A601
10 PROVIDE NEW FIRE EXTINGUISHER AND CABINET

CEILING CONSTRUCTION NOTES

1 NEW 2x2 LAY-IN TYPE 'A' CEILING
2 NEW 2x2 LAY-IN TYPE 'A' CEILING WITH HOLD-DOWN CLIPS
3 NEW GYPSUM BOARD BULKHEAD ON METAL STUD FRAMING AT 16" O.C. - PAINT

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

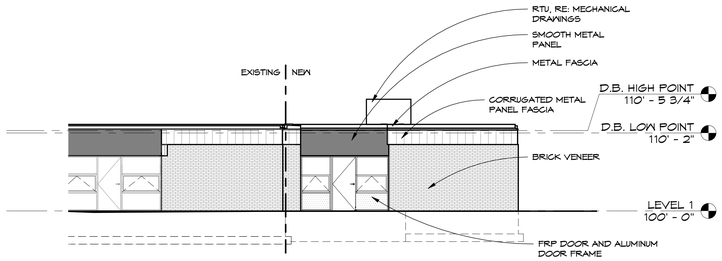
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
FOUNDATION PLAN, FLOOR PLAN, RCP, AND ROOF PLAN

SEAL	
DRAWN: EVA	PROJECT NO.: 26-210
CHECKED: JES8	DRAWING NO.: E-A103
REVIEWED: MLB	
DATE: OCT 19, 2026	SHEET NO.: 17 OF 31
SCALE: 1/8" = 1'-0"	

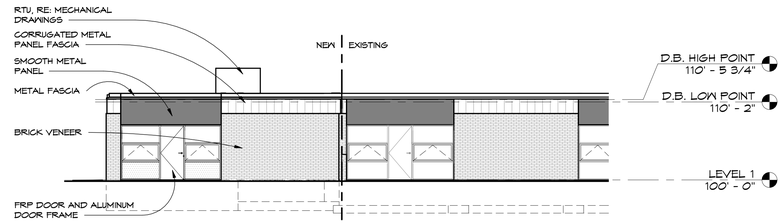
PROJECT 'E'

C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Wall_eakkermanetha-flint.com.rvt
10/19/2026 8:31:49 AM



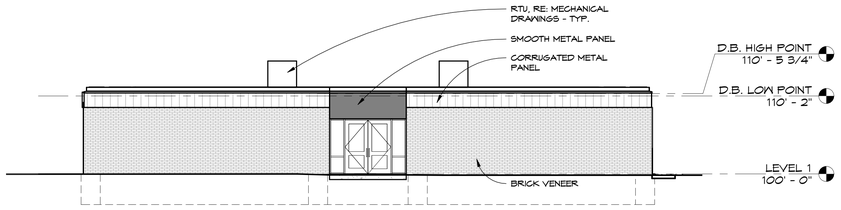
1 WEST ELEVATION

1/8" = 1'-0"



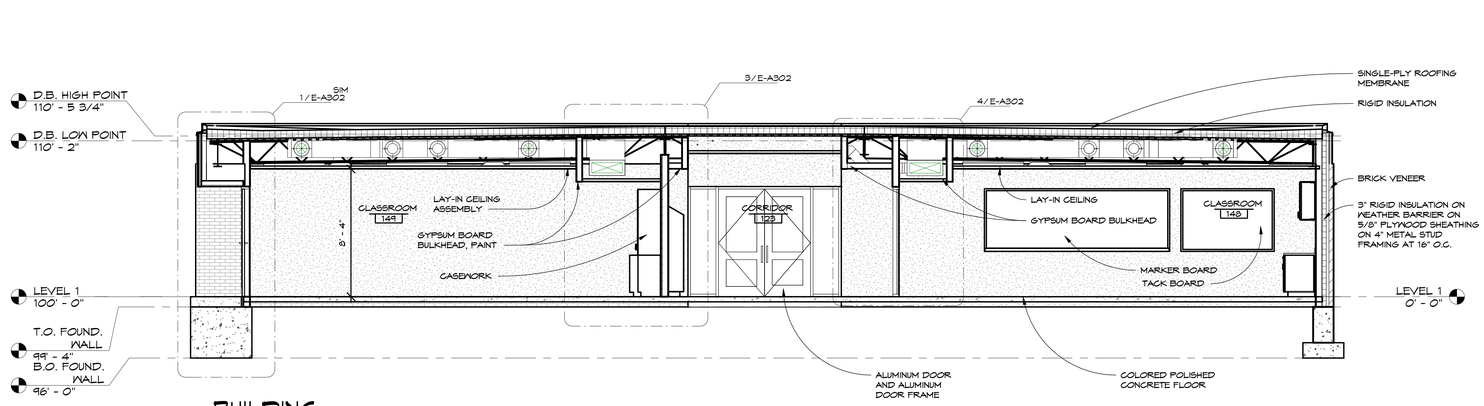
3 EAST ELEVATION

1/8" = 1'-0"



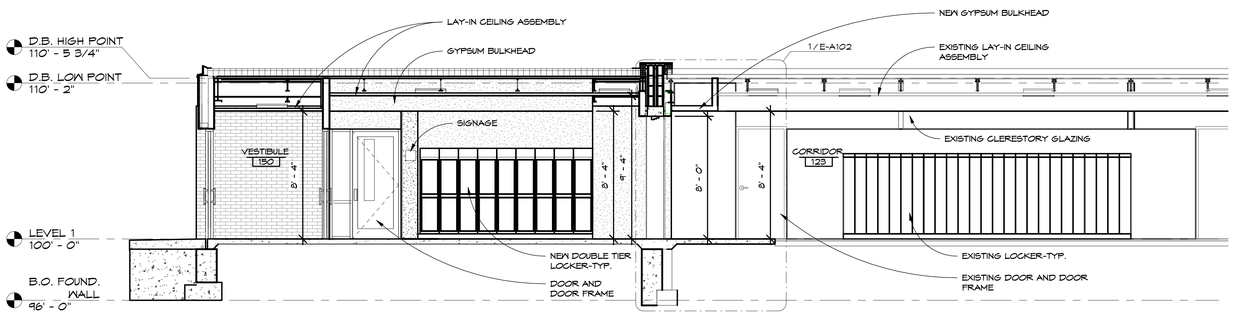
2 SOUTH ELEVATION

1/8" = 1'-0"



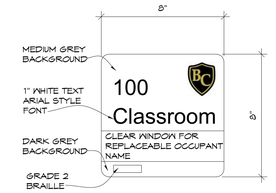
4 BUILDING SECTION

1/4" = 1'-0" 2



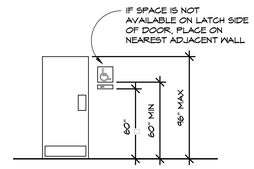
5 BUILDING SECTION

1/4" = 1'-0" 2



6 ROOM SIGNAGE DETAIL

3" = 1'-0"



ROOM SIGNAGE MOUNTING HEIGHT

1/4" = 1'-0"

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

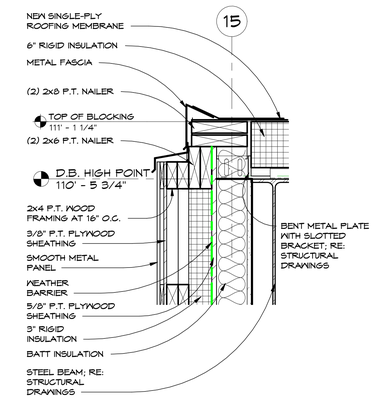
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE:

ELEVATIONS AND BUILDING SECTIONS

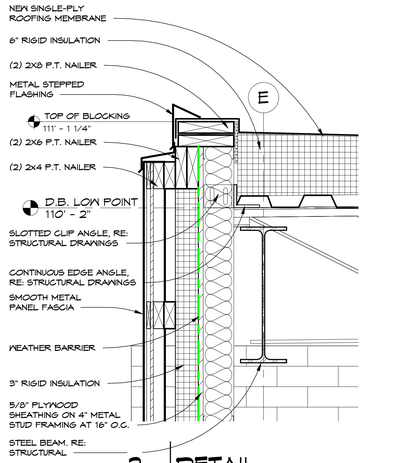
SEAL	DRAWN: EVA	PROJECT NO.: 26-210
	CHECKED: JESS	DRAWING NO.: E-A201
	REVIEWED: MLB	
	DATE: OCT 19, 2026	SHEET NO.: 18 OF 31
	SCALE: As indicated	

C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Wall_eakkerman@tha-Flint.com.rvt
10/19/2026 8:31:54 AM



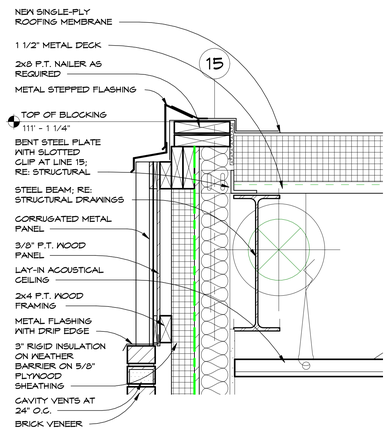
1 DETAIL

1 1/2" = 1'-0" 6



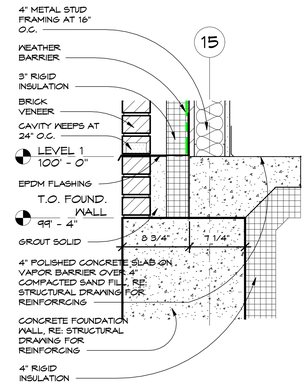
2 DETAIL

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



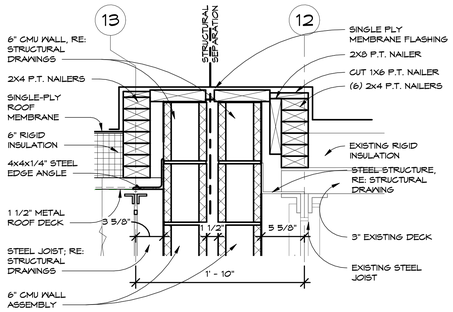
3 DETAIL

1 1/2" = 1'-0" 7



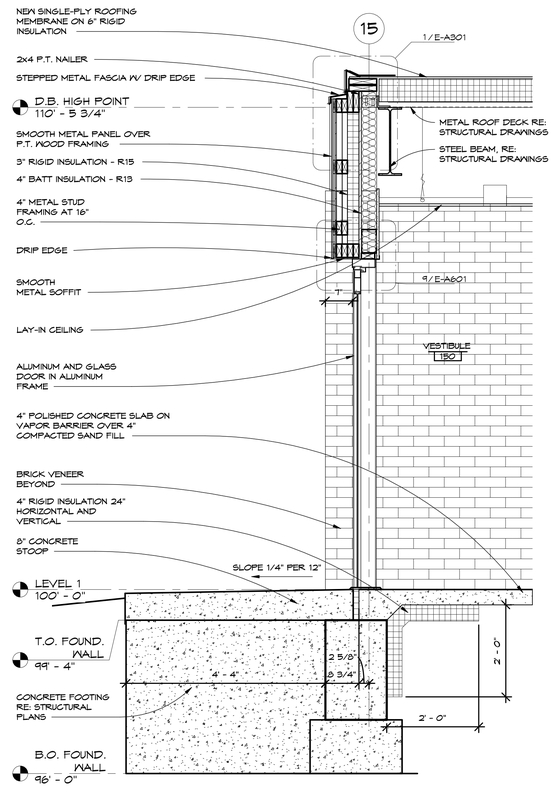
4 DETAIL

1 1/2" = 1'-0" 7



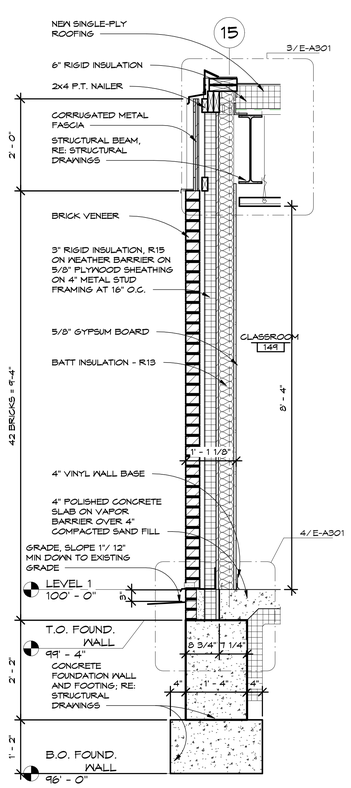
5 DETAIL

1 1/2" = 1'-0" 8



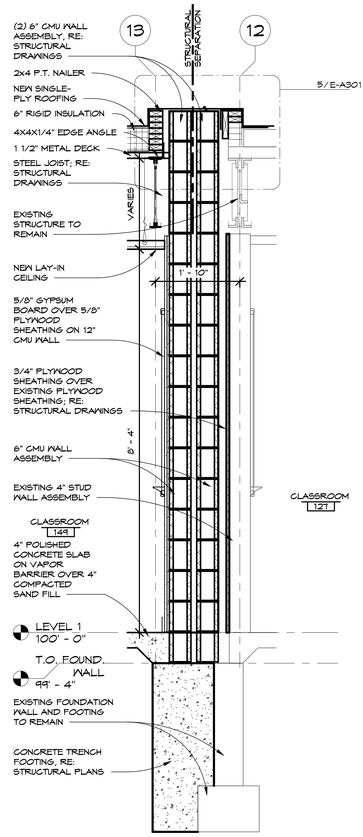
6 WALL SECTION

3/4" = 1'-0" 14



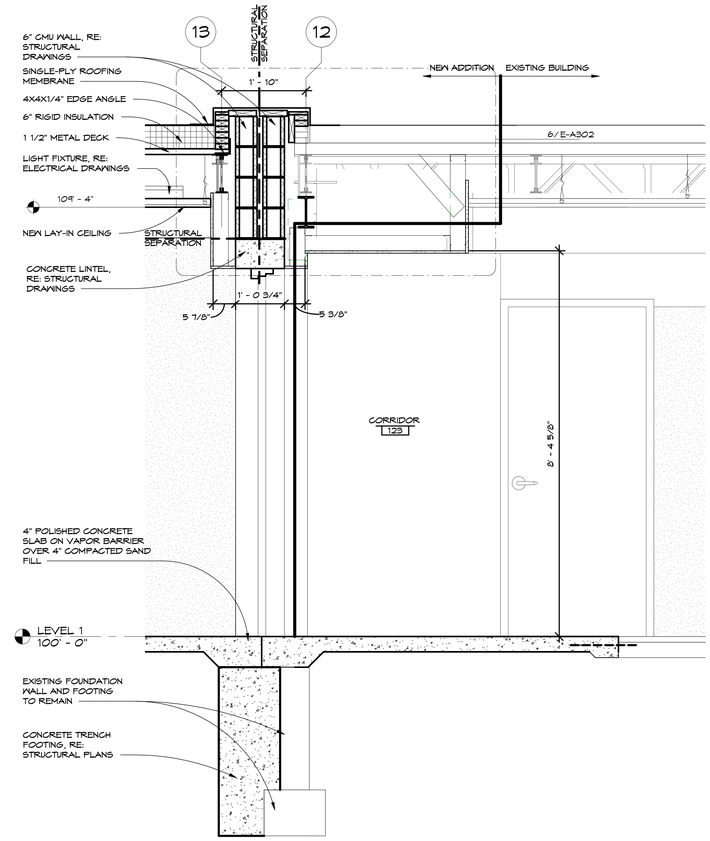
7 WALL SECTION

3/4" = 1'-0" 14



8 WALL SECTION

3/4" = 1'-0" 2



9 WALL SECTION

3/4" = 1'-0" 14

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

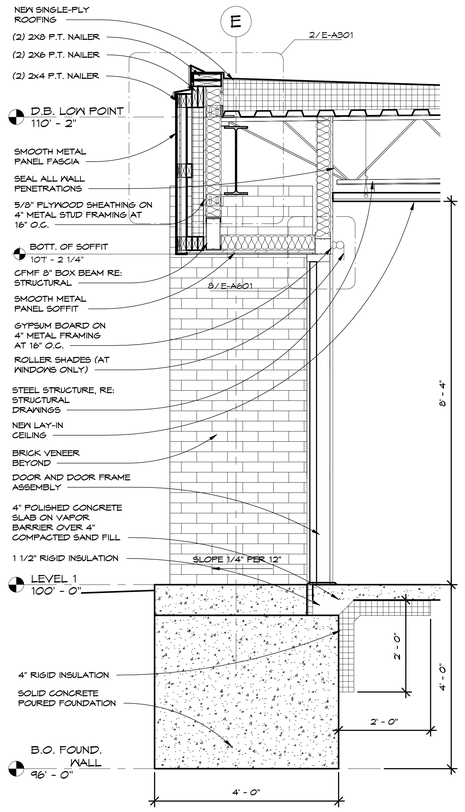
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

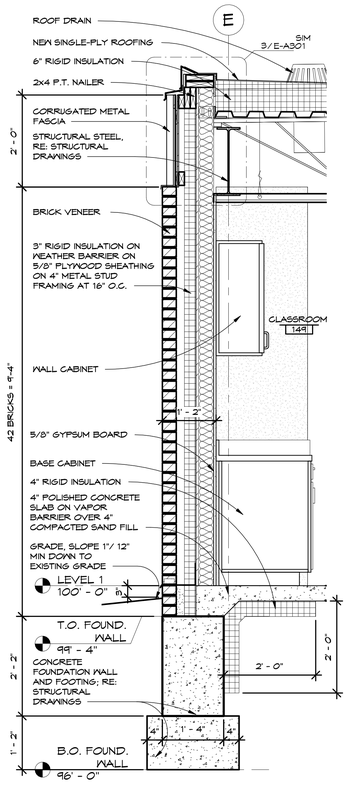
WALL SECTIONS

SEAL	DRAWN: EVA	PROJECT NO.: 26-210
	CHECKED: JESS	DRAWING NO.: E-A301
	REVIEWED: MLB	
	DATE: OCT 19, 2026	SHEET NO.: 19 OF 31
	SCALE: As indicated	

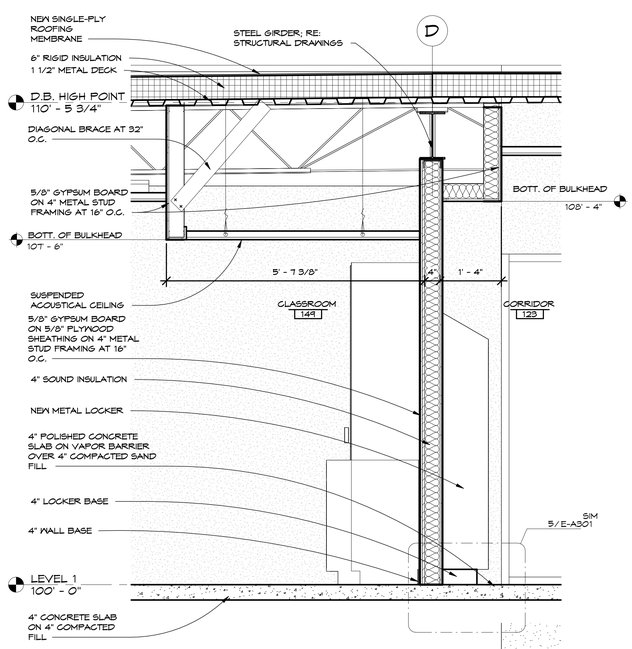
C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Wall_eakkermanetha-Flint.com.rvt
10/19/2026 8:31:55 AM



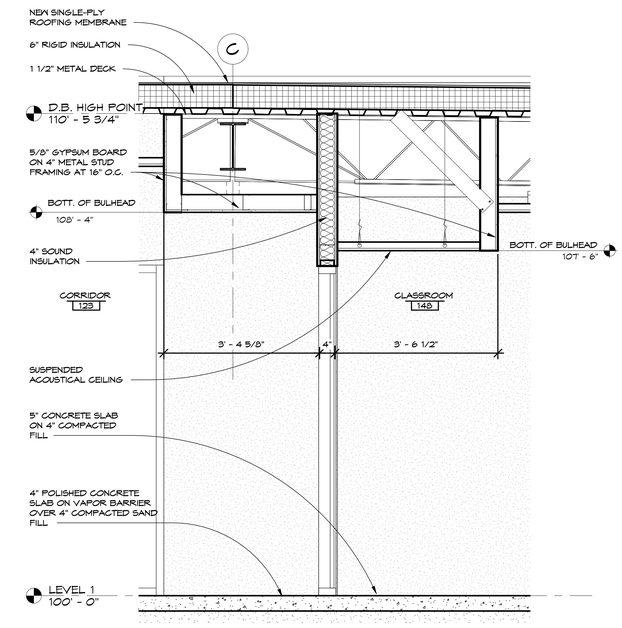
1 WALL SECTION
3/4" = 1'-0" | 14



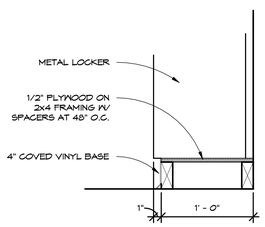
2 WALL SECTION
3/4" = 1'-0" | 14



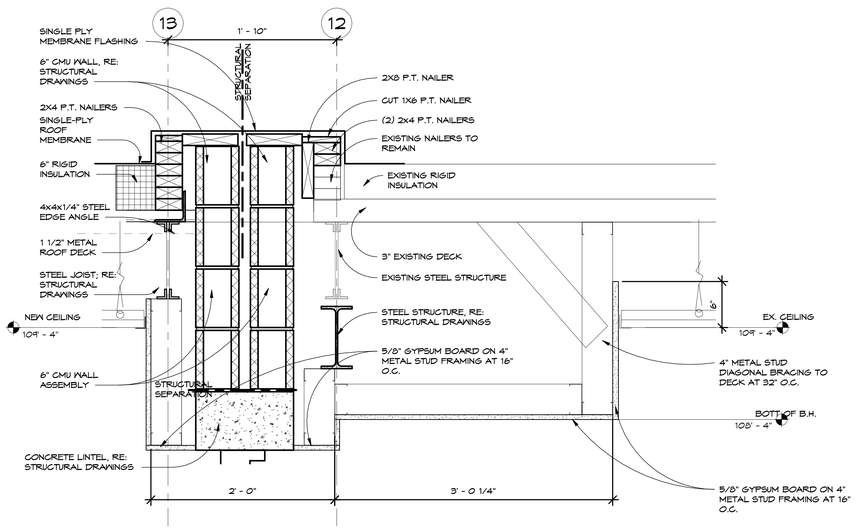
3 WALL SECTION
3/4" = 1'-0" | 14



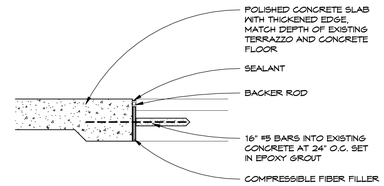
4 WALL SECTION
3/4" = 1'-0" | 4



5 LOCKER BASE DETAIL
1 1/2" = 1'-0"



6 BULKHEAD DETAIL
1 1/2" = 1'-0" | 9



7 EXPANSION JOINT DETAIL
1 1/2" = 1'-0"

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

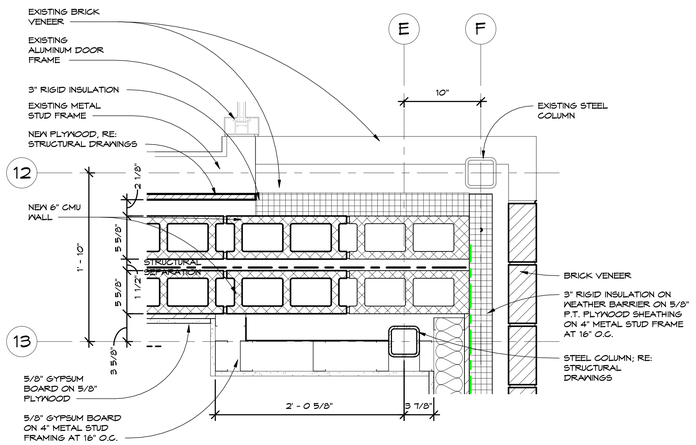
PROJECT 'E' ADDITION AND RENOVATIONS TO:
PINE RIVER ELEMENTARY SCHOOL
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
WALL SECTIONS

SEAL	DRAWN: EVA	PROJECT NO.: 26-210
	CHECKED: JESS	DRAWING NO.: E-A302
	REVIEWED: MLB	
	DATE: OCT 19, 2026	SHEET NO.: 20 OF 31
	SCALE: As indicated	

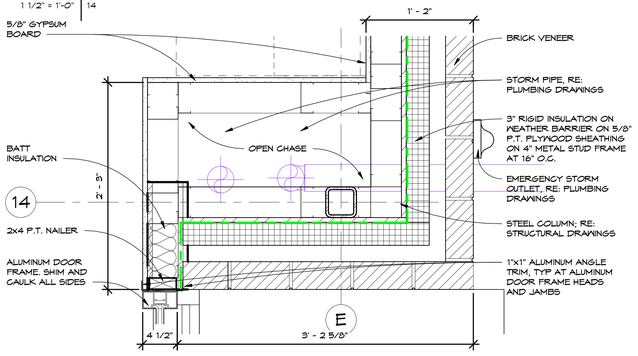
C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Wall_eakkermanetha-flint.com.rvt
10/19/2026 8:31:56 AM

PROJECT 'E'



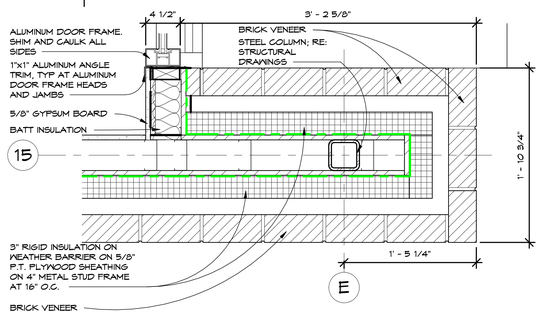
1 PLAN DETAIL

1 1/2" = 1'-0" | 14



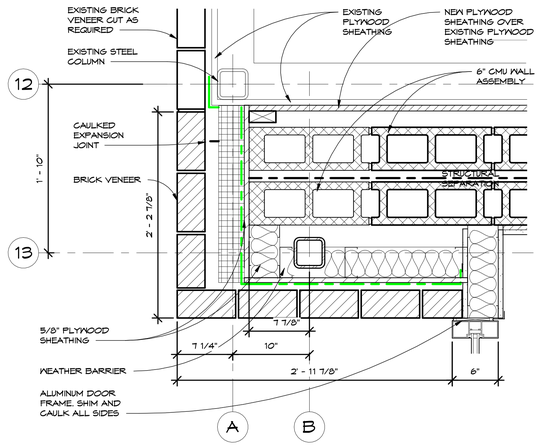
2 PLAN DETAIL

1 1/2" = 1'-0" | 14



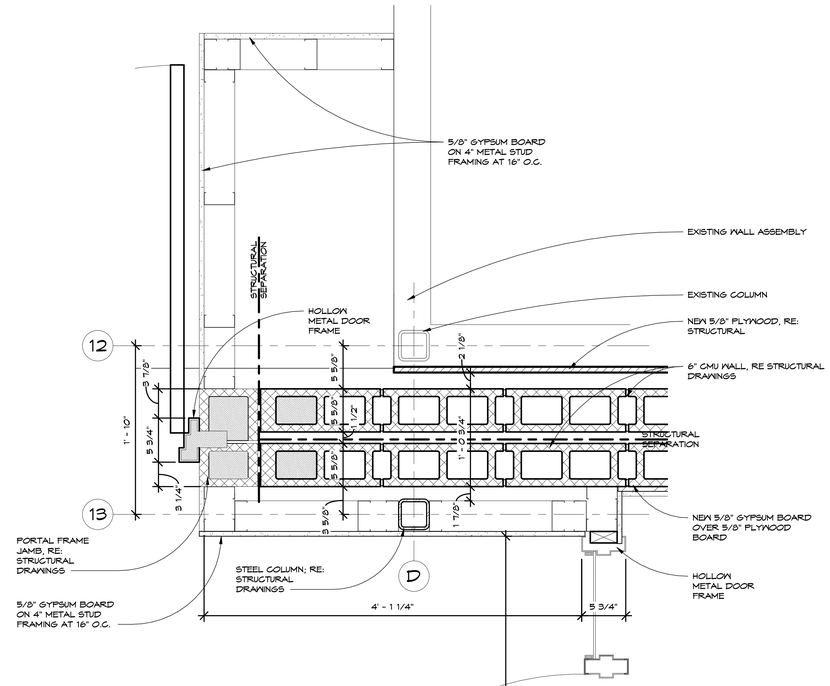
3 PLAN DETAIL

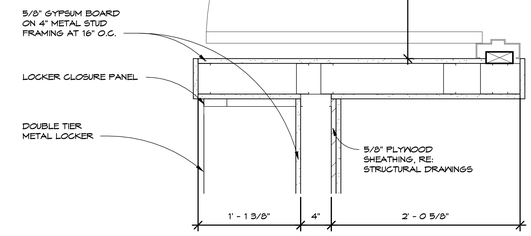
1 1/2" = 1'-0" | 14



4 PLAN DETAIL

1 1/2" = 1'-0" | 14





5 PLAN DETAIL

1 1/2" = 1'-0" | 14

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

DETAILS

SEAL

DRAWN: EVA	PROJECT NO.: 26-210
CHECKED: JESS	DRAWING NO.: E-A501
REVIEWED: DJB	
DATE: OCT 19, 2026	SHEET NO.: 21 OF 31
SCALE: 1 1/2" = 1'-0"	

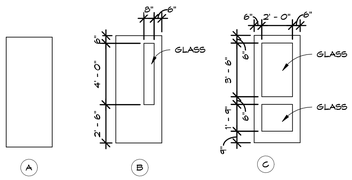
C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Wall_eakkermanetha-Flint.com.rvt
10/19/2026 8:31:58 AM

PROJECT 'E'

DOOR & FRAME SCHEDULE

NUMBER	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	FIRE RATING	HARDWARE	NOTES
123A	(2) 3'-0"x7'-0"	C	AL	4	ALUM	9/E-A601	5/E-A601		04	
123B	(2) 3'-0"x7'-0"	C	AL	4	ALUM	6/E-A601	7/E-A601		06	
123C	(2) 4'-0" x7'-10"	A	MTL	6	HM	11/E-A601	5/E-A601	90 MIN	24	
148A	3'-0"x7'-0"	A	FRP	1	ALUM	8/E-A601	2,4/E-A601	---	03	
148B	3'-0"x7'-0"	B	WD	2	HM	5/E-A601	4/E-A601		05	
149A	3'-0"x7'-0"	A	FRP	5	ALUM	8/E-A601 SIM	2,3/E-A601	---	03	
149B	3'-0"x7'-0"	B	WD	2	HM	5/E-A601	4/E-A601		05	

NOTE: CONNECT NEW DOOR HARDWARE TO SALVAGED CARD READER, INSTALL IN DOOR FRAME



ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	BASE MATERIAL	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CEILING HEIGHT	ACCESSORIES	NOTES
125	CORRIDOR	F02	B02	N01	N01	N01	N01	C01/ C02		04	
126	CLASSROOM	F03	B02	N02	N02	N02	N02	C03			
127	CLASSROOM	F03	B02	N02	N02	N02	N02	C03			
148	KITCHEN	F03	B02	N02	N02	N02	N02	C04			
148	CLASSROOM	F02	B01	N01	N01	N01	N01	C01/ C02		01, 02, 03	N01
149	CLASSROOM	F02	B01	N01	N01	N01	N01	C01/ C02		01, 02, 03	N01
150	VESTIBULE	F02	B01	N01	N01	N01	N01	C01			

ROOM FINISH LEGEND

FLOOR

F01 LVT
F02 STAINED POLISHED CONCRETE
F03 EXISTING TO REMAIN

BASE

B01 4" VINYL
B02 EXISTING TO REMAIN

WALLS

N01 PAINTED GYPSUM BOARD
N02 EXISTING TO REMAIN

CEILING

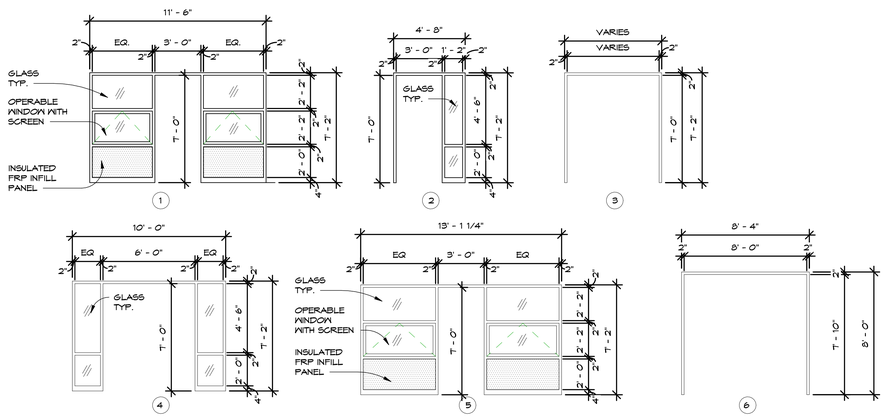
C01 2X2 SUSPENDED ACOUSTICAL CEILING - TYPE 'A'
C02 PAINT NEW GYPSUM BULKHEAD
C03 EXISTING TO REMAIN
C04 2X2 SUSPENDED ACOUSTICAL CEILING - TYPE 'B'

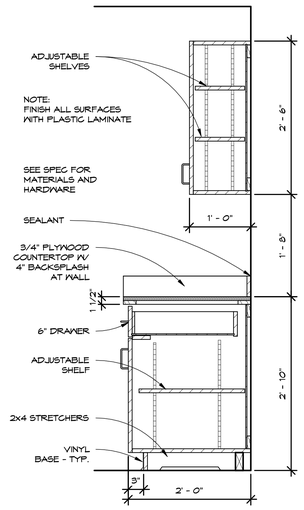
ACCESSORIES

01 MARKER BOARD
02 TACK BOARD
03 CASEWORK
04 LOCKERS

NOTES

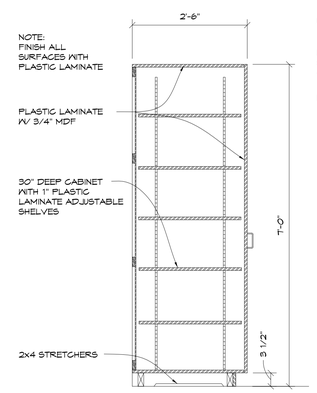
N01- EXTEND WALLS TO DECK, SEAL AND INSULATE FOR SOUND





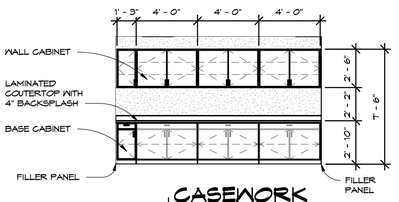
1 CABINET SECTION

1" = 1'-0"



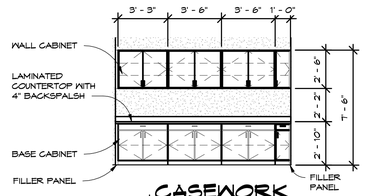
2 TALL CABINET SECTION

3/4" = 1'-0"



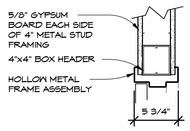
12 CASEWORK ELEVATION

1/4" = 1'-0" | 14



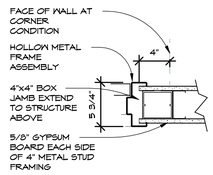
13 CASEWORK ELEVATION

1/4" = 1'-0" | 14



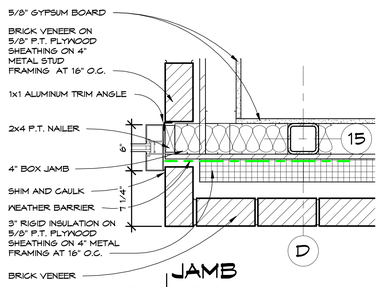
3 HEAD DETAIL

1 1/2" = 1'-0"



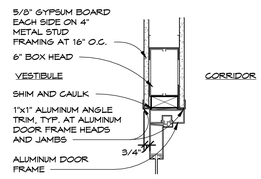
4 JAMB DETAIL

1 1/2" = 1'-0"



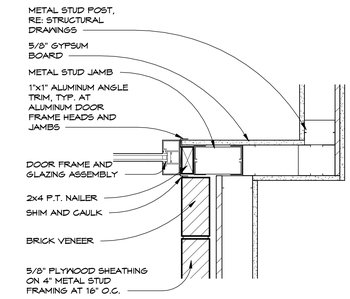
5 JAMB DETAIL

1 1/2" = 1'-0" | 14



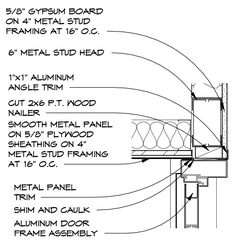
6 HEAD DETAIL

1 1/2" = 1'-0"



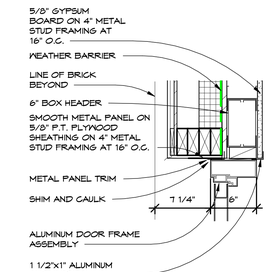
7 JAMB DETAIL

1 1/2" = 1'-0" | 14



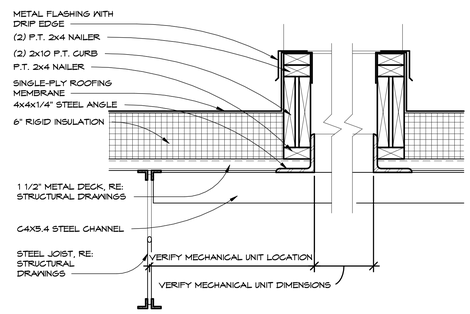
8 HEAD DETAIL

1 1/2" = 1'-0" | 1



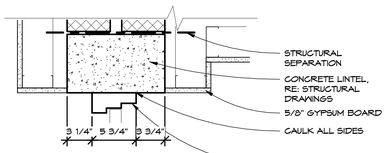
9 150A HEAD

1 1/2" = 1'-0" | 6



10 CURB DETAIL

1 1/2" = 1'-0"



11 HEAD DETAIL

1 1/2" = 1'-0"

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

SCHEDULES

SEAL

DRAWN	Author
CHECKED	Checker
REVIEWED	Approver
DATE	OCT 19, 2026
SCALE	As indicated
PROJECT NO.	26-210
DRAWING NO.	E-A601
SHEET NO.	22 OF 31

C:\Users\eakkerman\OneDrive - THA Architects\Desktop\Revit Projects\Pine River- Fire Wall_eakkermanetha-Flint.com.rvt
10/19/2026 8:31:57 AM

SYMBOLS & ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BFF	BELOW FINISH FLOOR
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDENSATE
CB	COMBINATION UNIT
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
COND	CONDENSATE
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
°F	DEGREE FAHRENHEIT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FPM	FEET PER MINUTE
FT	FEET
G	GAS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HW	HOT WATER
HW (140)	HOT WATER (140 °F)
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HWR	HOT WATER RETURN
HWR (140)	HOT WATER RETURN (140 °F)
KW	KILOWATT
L OR LAV	LAVATORY
MBH	ONE THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MTD	MOUNTED
PH	PHASE
PSI	POUND PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RE	REFER TO DRAWING
RG	RETURN GRILLE
RH	RELIEF HOOD
RTU	ROOFTOP UNIT
S	SINK
SA	SUPPLY AIR
SAN	SANITARY
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SS	SERVICE SINK
ST	STORM
UH	UNIT HEATER
UR	URINAL
UV	UNIT VENTILATOR
V	VENT OR VOLT
VA	VALVE
VTR	VENT THRU ROOF
W	WASTE OR WATT
WC	WATER CLOSET
WH	WATER HEATER
WV	WASTE & VENT

CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HW (140)	DOMESTIC HOT WATER 140°F DES
HWR	DOMESTIC HOT WATER RETURN
HWR (140)	DOMESTIC HOT WATER RETURN 140°F DES
C	CONDENSATE
G	GAS
SAN	SANITARY
V	VENT
STM	STORM
HWHS	HOT WATER HEATING SUPPLY
HWHR	HOT WATER HEATING RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
	PIPE DROP
	PIPE RISE
	ARROW INDICATES DIRECTION OF FLOW
	BALL VALVE
	GATE VALVE
	UNION
	PRESSURE GAUGE W/ SHUTOFF
	STRAINER
	CHECK VALVE
	THERMOMETER W/ SHUTOFF
	THREE WAY CONTROL VALVE
	PETE'S PLUG (TEMPERATURE-PRESSURE TEST FITTING)
MV	MANUAL AIR VENT
AV	AUTOMATIC AIR VENT
	FLOW CONTROL
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	NON FREEZE WALL HYDRANT
	FLOOR CLEANOUT
T	THERMOSTAT
CO2	CARBON DIOXIDE SENSOR

10xδ	DUCT SIZE(CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
10Ø	ROUND DUCT DIAMETER SIZE
	VOLUME DAMPER IN DUCT
	DUCT DOWN
	SLOT DIFFUSER
	CEILING SUPPLY DIFFUSER
	CEILING RETURN DIFFUSER
	CEILING EXHAUST DIFFUSER
T	THERMOSTAT
	HORIZONTAL FIRE DAMPER W/ACCESS DOOR
	VERTICAL FIRE DAMPER W/ACCESS DOOR
SD	HORIZONTAL SMOKE DAMPER W/ACCESS DOOR
SD	VERTICAL SMOKE DAMPER W/ACCESS DOOR
	DIRECTION OF AIR FLOW
	HOOD EXHAUST DUCT
	HOOD SUPPLY AIR DUCT
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR SUPPLY DUCT DN
	RECTANGULAR RETURN DUCT DN
	RECTANGULAR EXHAUST DUCT DN
	ELBOW WITH TURNING VANES

KITCHEN EQUIPMENT SCHEDULE

KITCHEN HOOD
GREENHECK MODEL SHEN, TYPE 1 BAFFLE FILTER WALL CANOPY HOOD, 82" LONG, 54" WIDE, 24" TALL WITH EXHAUST VOLUME OF 1,346 CFM AT 0.452" SP. 430 STAINLESS STEEL, UL-710 RATED WITHOUT FIRE DAMPER, 3" INTEGRAL AIR SPACE ON BACK, 54" LONG, 12" WIDE, 24" HIGH UTILITY CABINET MOUNTED ON WALL, (5) 16" X 20" ALUMINUM BAFFLE FILTERS, 4 INCANDESCENT/CFL LIGHTS, BACK SPLASH PANEL. PROVIDE HOOD COMPLETE WITH SWITCHES, ANSUL SYSTEM 6 DROPS, CONTACTS FOR INTERLOCKING, FIRE ALARM, EMERGENCY GAS SHUT OFF VALVE, SHUNT TRIP BREAKER CONTACTS, TEMPER SENSOR FOR SYSTEM OVERRIDE, CONTACTS FOR INTERLOCKING WITH MAKE-UP AIR UNIT INCLUDING START AND SHUT DOWN. UNIT MOUNTED SWITCHES FOR HOOD AND LIGHTING CONTROL.

HOOD CONTROL SEQUENCE
MECHANICAL TRADES SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING AND INTERLOCKING HOOD WITH MAKE-UP AIR UNIT

START-UP OF THE KITCHEN EXHAUST CONTROLS SHALL BE DONE BY THE SWITCH ON THE HOOD OR HEAT SENSOR IN HOOD. PROVIDE HOOD WITH CONTACTS FOR CONNECTING TO RTU/MAU. HOOD CONTROLS SHALL HAVE EXHAUST FAN AND SAFETIES FOR FIRE SHUT DOWN. THE HOOD FIRE PROTECTION SYSTEM SHALL BE TIED INTO BUILDING FIRE ALARM SYSTEM TO ACTIVATE THE BUILDING FIRE ALARM ON RELEASE OF SYSTEM AND SHUT DOWN HOOD EXHAUST, MAKE-UP AIR UNIT AND COOKING EQUIPMENT AND GAS VALVE. THE MAKE-UP AIR UNIT AND SHALL BE INTERLOCKED TO SHUT DOWN AND THE EXISTING HOODS IN ACCENT KITCHEN. THE HOODS CONTROLS SHALL SHUT DOWN UPON THE BUILDING FIRE ALARM ACTIVATION. PROVIDE RELAYS FOR FIRE ALARM AND SHUNT TRIP BREAKER FOR GAS COOKING EQUIPMENT.

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	GREENHECK MODEL NO.	ELEC.	CFM	"SP	FAN HP	FAN RPM	SONES	NOTES
EF-K1	KITCHEN HOOD	CUBE-140-3	115V-1P	1,346	0.682	1/3	1725	10.3	1,2,3
EF-1 (EXISTING)	STORAGE ROOMS	G-9T-VG	120V-1P	275	.25	1/4	1479	8.3	1,4,5
EF-2	BOYS TOILET 136	SP-B200	120V-1P	200	.375	172 W	980	5.8	6,7

NOTES:
1. PROVIDE SPEED CONTROLLER IN FAN
2. PROVIDE WITH ROOF CURB, CURB EXTENSION, HINGE KIT, GREASE TRAP. (DETAIL FOR ADDTIONAL REQUIREMENTS)
3. INTERLOCK FAN WITH HOOD CONTROLS
4. PROVIDE WITH BACK DRAFT DAMPER, DISCONNECT
5. PROVIDE WITH CURB ADAPTOR TO FIT EXISTING CURB (FIELD VERIFY SIZE)
6. CEILING MOUNTED CONNECT TO EXHAUST DUCT, DISCHARGE HOOD
7. PROVIDED WITH BACK DRAFT DAMPER, DISCONNECT AND SPEED CONTROLLER

CABINET UNIT HEATER SCHEDULE

TAG	RITTLING MODEL NO.	MBH	GPM	ELEC	CFM	FAN HP	NOTES
CUH-1	RGN-420-04	30.7	3.2	120V-1P	310	1/25	1,2,3
CUH-2	RFFI-250-04	30.7	3.2	120V-1P	310	1/25	1,2,4

NOTES:
1. BASED ON 180° ENT, 70° EAT, 30° TEMPERATURE DROP.
2. INSTALL ISOLATION VALVES, DRAINS, ETC.
3. INSTALL FULLY RECESSED IN LAY-IN CEILING WITH CEILING FLANGE.
4. SURFACE WALL MOUNTED TO COVER EXISTING OPENING FIELD VERIFY OPENING

ROOF TOP UNIT SCHEDULE

TAG	TRANE MODEL #	AREA SERVED	CFM	MIN OA	ESP	FAN HP	HEAT	COOLING (MBH) TOTAL	COOLING (MBH) SENSIBLE	VOLTAGE	MCA	MOP	WEIGHT (LBS)	NOTES
RTU-1	TSK036	CLASSROOM	1200	120/ 325	1.0"	3/4 HP	HC-1	36	29	460V-3P	10	15	784	1,2,3,4,5,6
RTU-2	TSK036	CLASSROOM	1200	120/ 325	1.0"	3/4 HP	HC-2	36	29	460V-3P	10	15	784	1,2,3,4,5,6

NOTES: 1. PROVIDE WITH ROOF CURB (WITH WIRING THROUGH CURB), OUTSIDE ENTHALPY CONTROL HIGH PERFORMANCE ECONOMIZER FACTORY INSTALLED
2. PROVIDE WITH HINGED DOORS, 2" MERV 13 FILTERS
3. FACTORY INSTALLED DISCONNECT AND GFI OUTLET (FIELD WIRE BY ELECTRICAL) AND PHASE MONITOR.
4. PROVIDE CO2 CONTROL MINIMUM TO MAXIMUM OUTSIDE AIR FLOW
5. PROVIDE UNIT WITH HAIL GUARDS AND MULTI SPEED AIR VOLUME FAN.
6. HEATING COIL IN DUCTWORK SEE COIL SCHEDULE

HEATING WATER COIL SCHEDULE

TAG	CFM	FACE AREA	AIR PD "WC	AIR TEMP INLET	HEAT MBH	GPM	WATER PD FEET	NOTES
HC-1	1200	24x12	0.45	48	73	5.0	0.45	1,2
HC-2	1200	24x12	0.45	48	73	5.0	0.45	1,2

NOTES:
1. HOT WATER COIL HEATING GACPIT BASED ON 180 ENT, 150 LVT
2. PROVIDE ACCESS DOORS FOR COIL INSPECTION/CLEANING

MAKE-UP AIR UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	ELEC.	CFM	OA	ESP	FAN HP	MCA	MOP	WEIGHT (lb)	HEATING (MBH) INPUT	HEATING (MBH) OUTPUT	NOTES
MAU-K1	GREENHECK	IGX-P112-H12	230V-1P	1340	1340	0.75	1/3	7.3	15	1044	150	121.5	ALL

NOTES: 1. PROVIDE UNIT WITH DISCONNECT SWITCH, STARTER FOR CONNECTION TO HOOD CONTROL PANEL
2. UNIT SHALL PROVIDE 100% OUTSIDE AIR AND MOTORIZED INLET DAMPER
3. PROVIDE WITH INTAKE HOOD AND FILTER RACK WITH 2" DISPOSABLE FILTERS
4. PROVIDE WITH ROOF CURB
5. PROVIDE WITH ALUMINUM MESH WEATHER HOOD
6. PROVIDE WITH DISCHARGE THERMOSTAT AND AND MODULATING STAINLESS STEEL HEAT EXCHANGER.
7. PROVIDE WITH FREEZE PROTECTION, DISCHARGE CONTROL WITH ROOM OVERRIDE
8. PROVIDE REMOTE CONTROL PANEL FOR CONTROL AND INTERLOCK TO COOKING HOOD
9. PROVIDE WITH GFI RECEPTACLE TO BE WIRED BY OTHERS

GRILLE AND DIFFUSER SCHEDULE

"A" TITUS SUPPLY DIFFUSER MODEL TMSA, ADJUSTABLE AIR PATTERN, 24x24, MOUNTING TYPE 3 (LAY-IN), WHITE FINISH

CFM	NECK SIZE
100-225	8"Ø

"B" TITUS RETURN GRILLE MODEL 50F, 1/2x1/2x1/2 ALUMINUM EGG CRATE, 20x20 NECK, PANEL MOUNTED FOR LAY-IN CEILING, WHITE FINISH, PROVIDE WITH 20x20x12 PLENUM PAINTED FLAT BLACK ON INSIDE

"C" TITUS SUPPLY GRILLE MODEL 272 RL, SURFACE MOUNTED, DOUBLE DEFLECTION, WHITE FINISH

CFM	NECK SIZE
100	8x8

"D" TITUS RETURN GRILLE MODEL 4FL, 45° FIXED DEFLECTION, SURFACE MOUNTED, WITH OPPOSED BLADE DAMPERS, WHITE FINISH

CFM	NECK SIZE
100	8x8

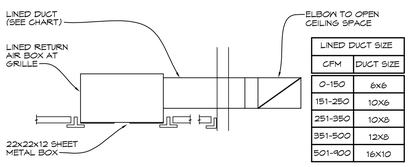
OUTDOOR AIR VENTILATION SCHEDULE

HVAC SYSTEM	OCCUPANCY CLASSIFICATION	AREA (SQ. FT.)	MAXIMUM OCCUPANCY PER 1000 S.F.	OCCUPANT LOAD	OUTDOOR AIR REQUIRED PER PERSON (CFM)	OUTDOOR AIR FLOW RATE BREATHING ZONE (CFM)	OUTDOOR AIR RATE BREATHING ZONE (CFM)	OUTDOOR AIR RATE FOR PEOPLE ZONE (CFM)	OUTDOOR AIR REQUIRED FOR EACH SPACE (CFM)	TOTAL OUTDOOR AIR REQUIRED (CFM)	TOTAL OUTDOOR AIR PROVIDED (CFM)
RTU-1 S.A.: 1,200 CFM 27% OA 325 OA	CLASSROOM	745	25	19	10	0.12	90	190	280	245	325
	CORRIDOR	250	--	--	--	0.06	15	--	15		
RTU-2 S.A.: 1,250 CFM 27% OA 325 OA	CLASSROOM	745	25	19	10	0.12	90	190	280	280	325

NOTES: 1. TOTAL OUTDOOR AIR PROVIDED IS IN COMPLIANCE W/THE REQUIRED OUTDOOR VENTILATION AIR PER TABLE 403.3.1.1 OF THE 2021 MMC.

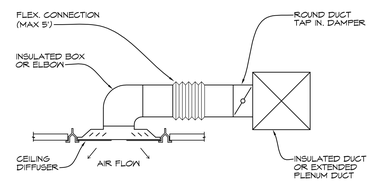
GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT

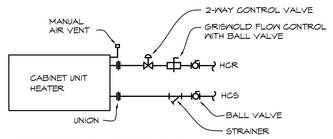


LINED DUCT SIZE	
CFM	DUCT SIZE
0-150	6x6
151-250	10x6
251-350	10x8
351-500	12x8
501-900	16x10

RETURN GRILLE DETAIL
NO SCALE

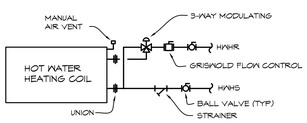


SUPPLY AIR DIFFUSER DETAIL
NO SCALE

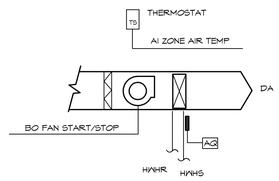


NOTE: CONTROL VALVE TO BE IN SHUT POSITION WHEN SYSTEM IS IN COOLING MODE. (TYPICAL FOR EXISTING & NEW COILS/UNITS)

TYPICAL CUH COIL PIPING DETAIL
NO SCALE

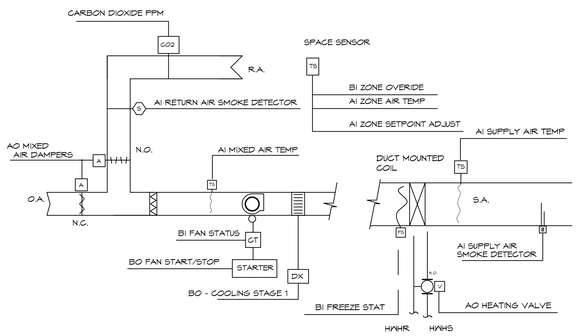


TYPICAL HEATING COIL PIPING DETAIL
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. REMOVE EXISTING PNEUMATIC THERMOSTAT AND OTHER PNEUMATIC COMPONENTS INCLUDING TUBING
3. PROVIDE NEW AQUASTAT TO BE WIRED IN SERIES WITH FAN CONTROL WIRING CIRCUIT
4. DDC SPACE SENSOR SHALL REPLACE EXISTING THERMOSTAT

CUH - BAS CONTROL CONTROL DIAGRAM
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. TC CONTRACTOR TO PROVIDE BACNET CONTROLLER FOR UNIT
3. USE FIRE ALARM SYSTEM CUT-OUT TO MOTOR STARTER CONTROL CIRCUIT
4. DDC TO INSTALL SPACE AND CO2 SENSORS

RTU - HOT WATER CONTROL DIAGRAM
NO SCALE

NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

MECHANICAL SCHEDULES

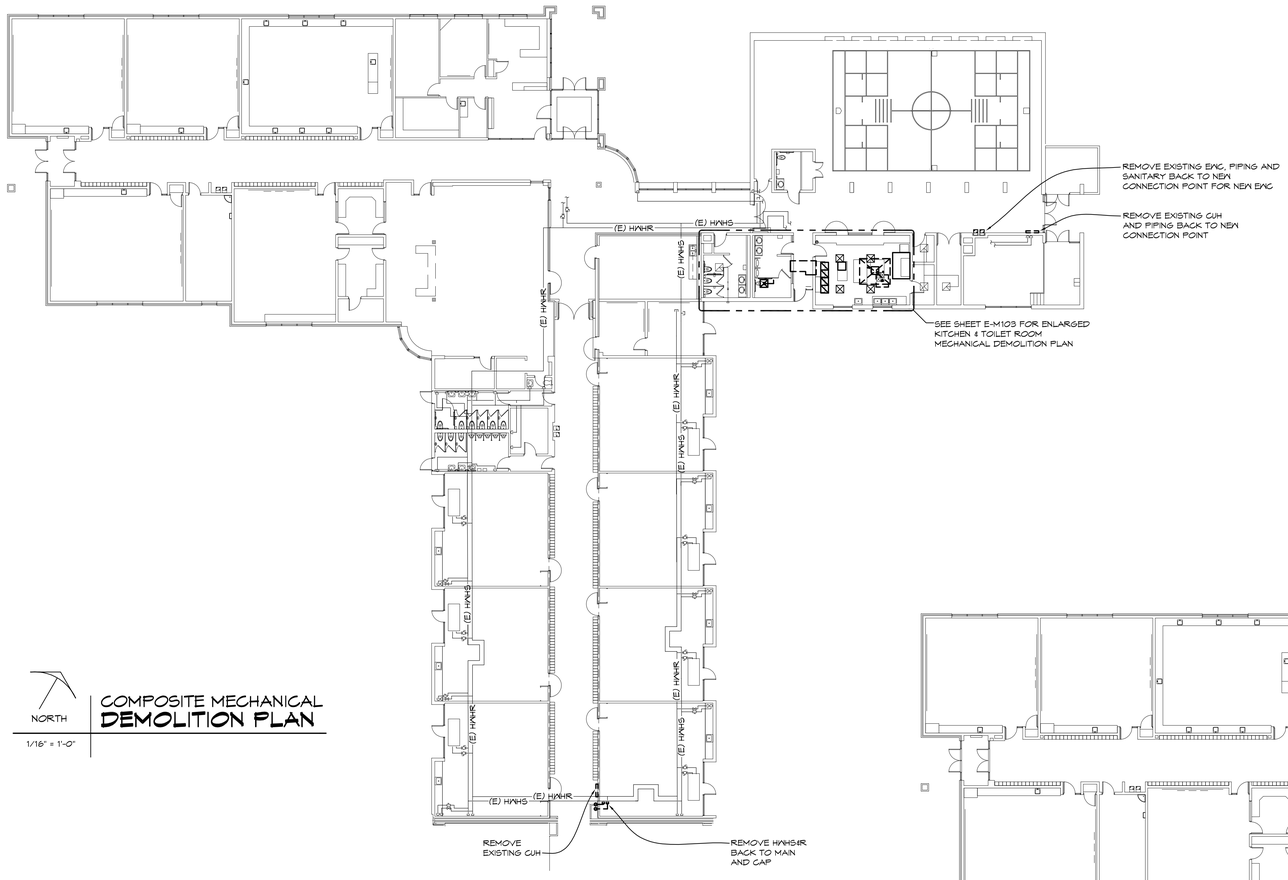
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. E-M001
	REVIEWED MLB	DRAWING NO. E-M001
	DATE OCT 19, 2026	SHEET NO. 23 OF 31
	SCALE AS NOTED	

PROJECT 'E'

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\EC PE\E-M001 MECH SCHEDULES.dwg
Plot date: 10/19/2026 11:06 AM

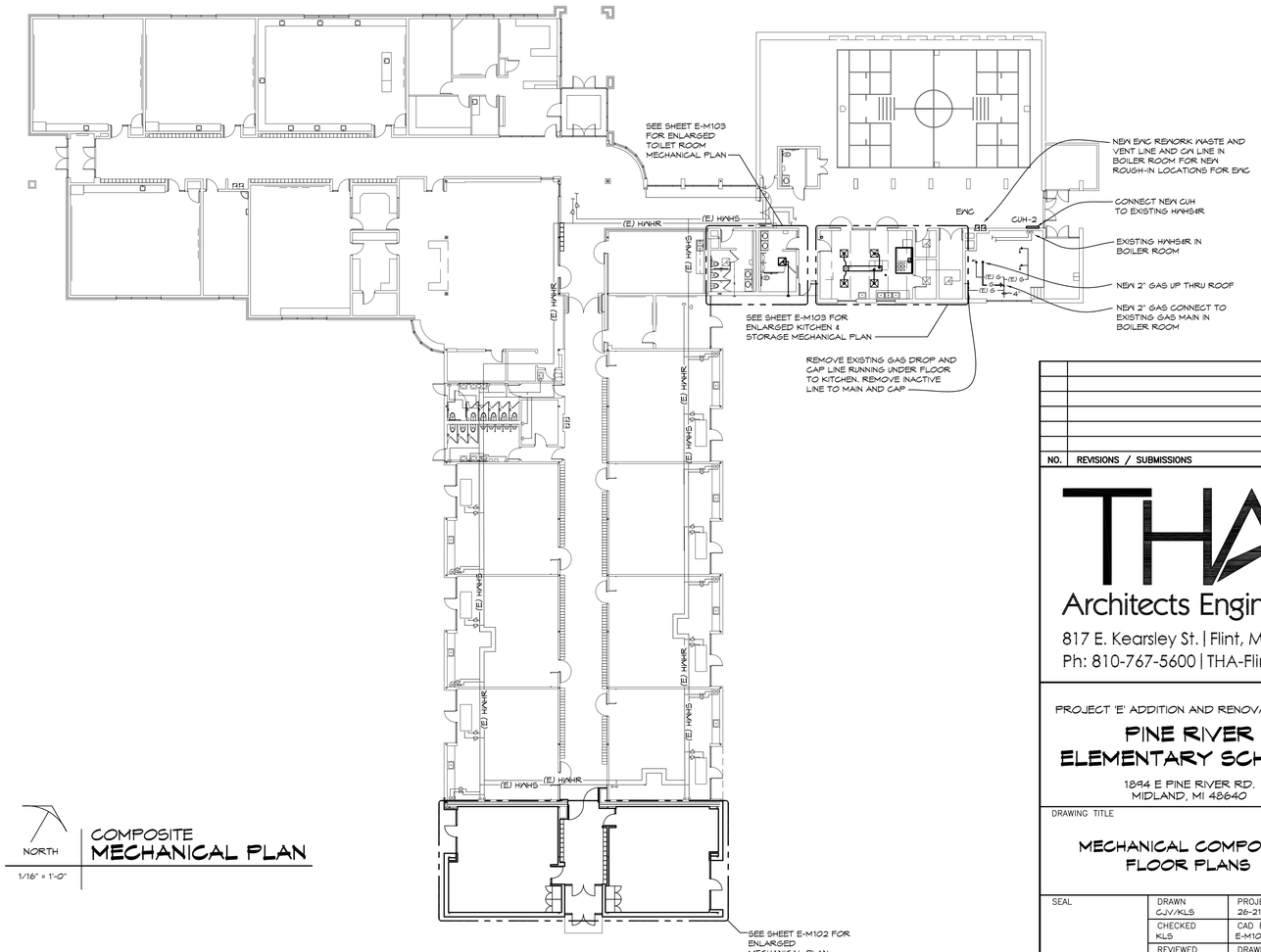
GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT



NORTH
1/16" = 1'-0"

COMPOSITE MECHANICAL DEMOLITION PLAN



NORTH
1/16" = 1'-0"

COMPOSITE MECHANICAL PLAN

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

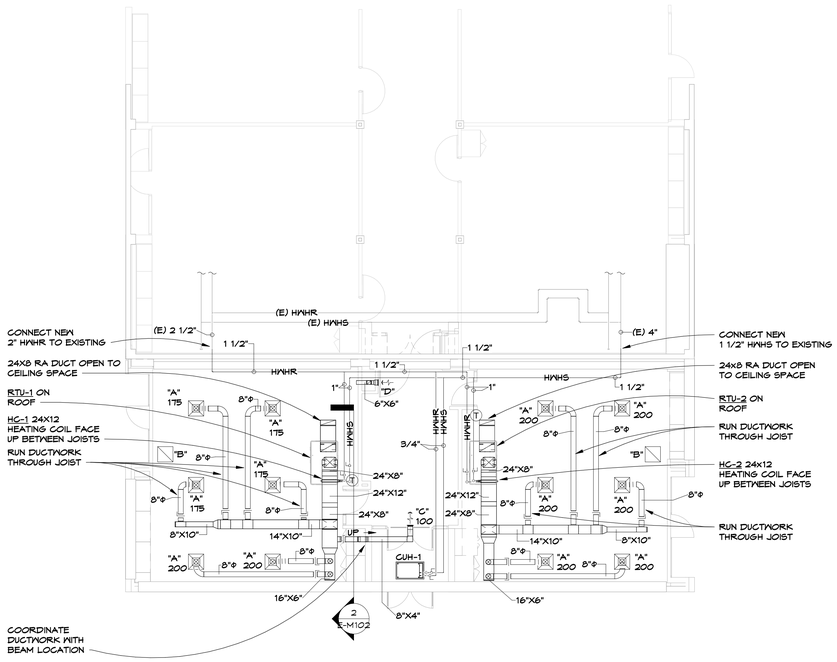
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

MECHANICAL COMPOSITE FLOOR PLANS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. E-M101
	REVIEWED MLB	DRAWING NO. E-M101
	DATE OCT 19, 2026	SHEET NO. 24 OF 31
	SCALE AS NOTED	

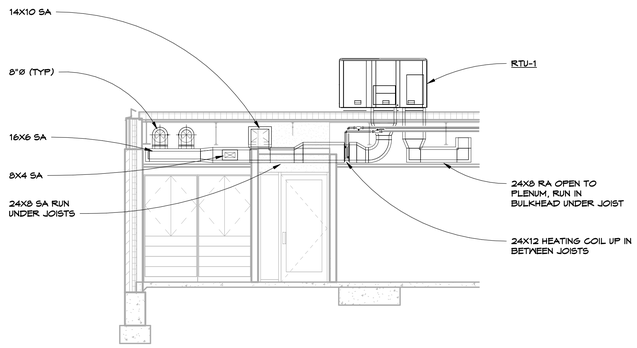
THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\05-CAD\D2-D3\BC PROJ-E-M101 COMPOSITE MECHANICAL DEMOLITION PLAN.dwg
Plot date: 10/19/2026 11:00 AM



ENLARGED MECHANICAL FLOOR PLAN

NORTH

1/8" = 1'-0" | 1



SECTION A-A

1/4" = 1'-0" | 2

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION & RENOVATIONS FOR:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

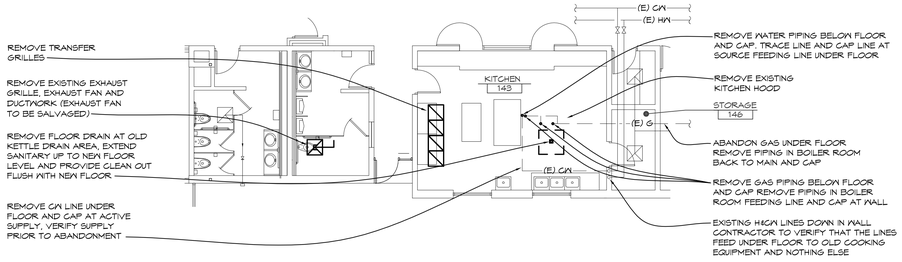
DRAWING TITLE

ENLARGED MECHANICAL FLOOR PLAN

SEAL	DRAWN CJV	PROJECT NO. 26-210
	CHECKED KLS	DRAWING NO. E-M102
	REVIEWED MLB	
	DATE OCT 19, 2026	
	SCALE As Indicated	SHEET NO. 25 OF 31

P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\02-Revit\02-DD\Pine River - Mechanical 10/17/2026 10:02:06 AM

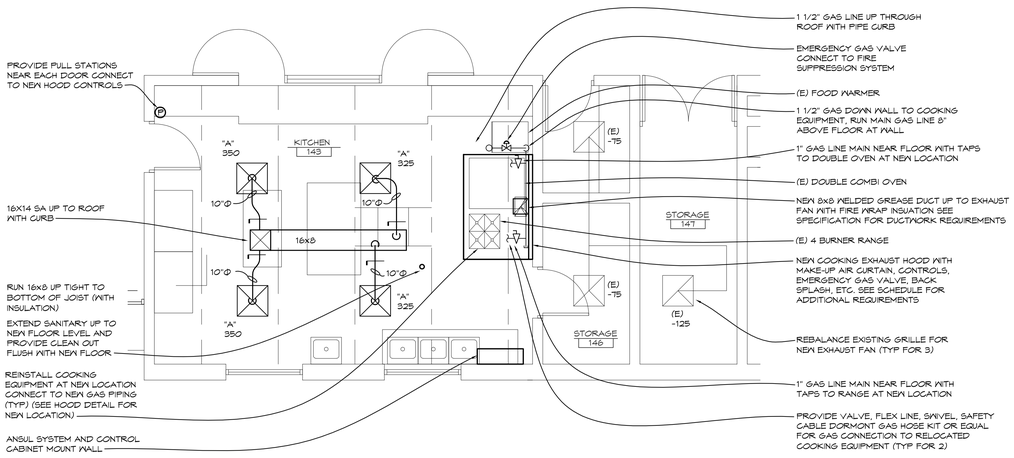
PROJECT 'E'



NORTH

1/8" = 1'-0"

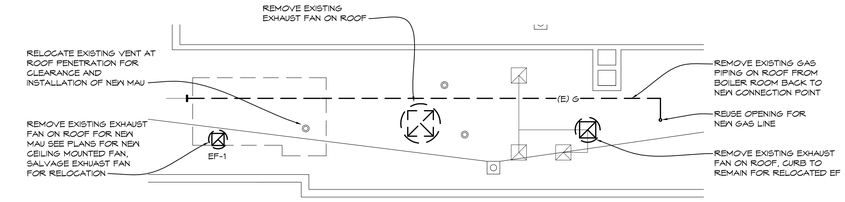
ENLARGED KITCHEN & TOILET ROOM MECHANICAL DEMOLITION PLAN



NORTH

1/4" = 1'-0"

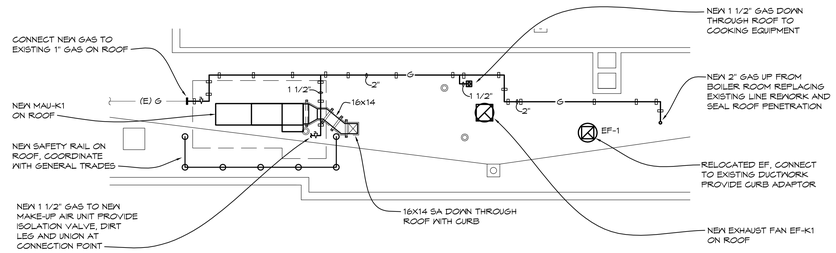
ENLARGED KITCHEN & STORAGE MECHANICAL PLAN



NORTH

1/8" = 1'-0"

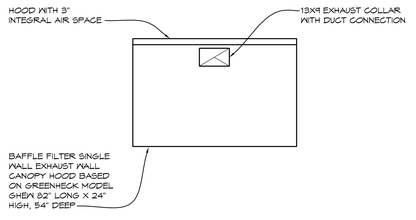
ENLARGED ROOF MECHANICAL DEMOLITION PLAN



NORTH

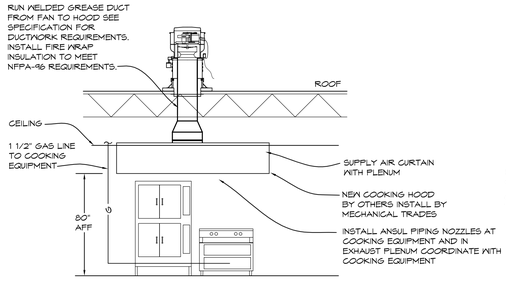
1/8" = 1'-0"

ENLARGED ROOF MECHANICAL PLAN



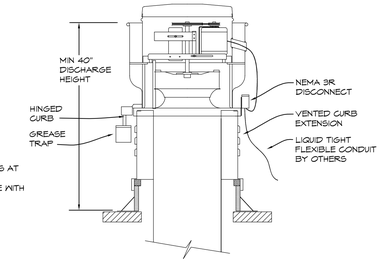
NO SCALE

COOKING HOOD DETAIL



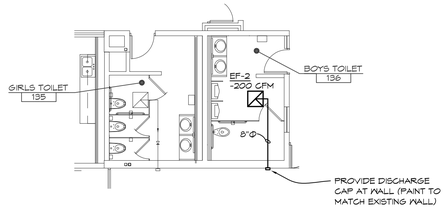
NO SCALE

COOKING HOOD ELEVATION



NO SCALE

COOKING HOOD EXHAUST FAN DETAIL



NORTH

1/8" = 1'-0"

ENLARGED TOILET ROOM MECHANICAL PLAN

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
9. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. PROVIDE DIRT LEG AND UNION AND ISOLATION VALVE AT CONNECTION POINT AT ALL GAS FIRED EQUIPMENT

PLUMBING GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
8. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH. CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION AND RENOVATIONS TO:

PINE RIVER ELEMENTARY SCHOOL

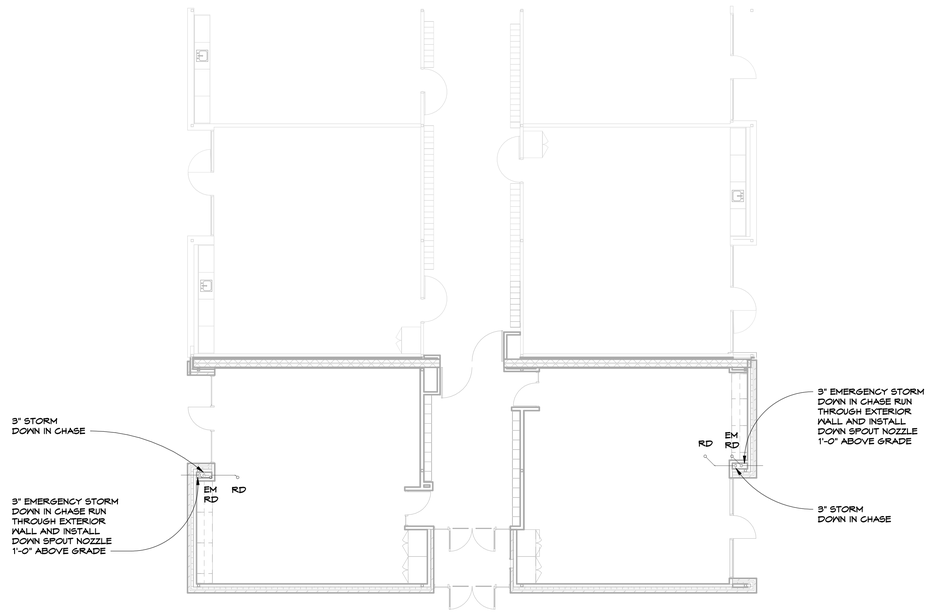
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

ENLARGED KITCHEN MECHANICAL PLANS AND DETAILS

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. E-M103
	REVIEWED MLB	DRAWING NO. E-M103
	DATE OCT 19, 2026	SHEET NO. 26 OF 31
	SCALE AS NOTED	

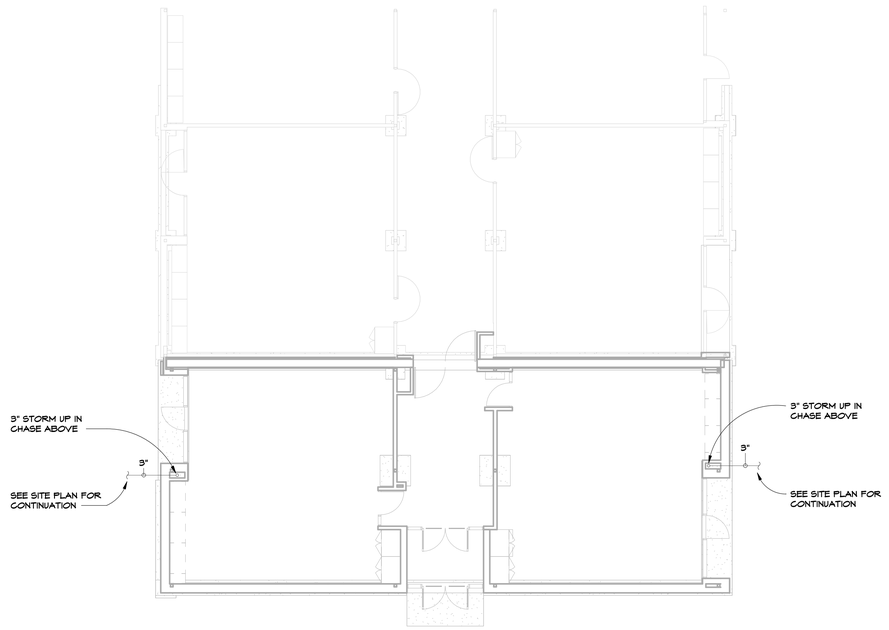
THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\05-CAD\02-DD\BC PR\E-M103 ENLARG
Plot date: 10/19/2026 11:00 AM



NORTH

ENLARGED PLUMBING PLAN

1/8" = 1'-0" | 1



UNDER FLOOR ENLARGED PLUMBING PLAN

1/8" = 1'-0" | 2

GENERAL PLUMBING NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
8. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH, CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION & RENOVATIONS FOR:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

ENLARGED PLUMBING FLOOR PLANS

SEAL	DRAWN CJV	PROJECT NO. 26-210
	CHECKED KLS	DRAWING NO. E-P101
	REVIEWED MLB	
	DATE OCT 19, 2026	SHEET NO. 27 OF 31
	SCALE 1/8" = 1'-0"	

P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\02-Revit\02-DD\Pine River - Mechanical 10/21/2026 11:02:07 AM

GENERAL NOTES:

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE, NEC AND ALL LOCAL CODES.
2. COORDINATE THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND CONNECTIONS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND EQUIPMENT DRAWINGS.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER, CONDUIT, CABLETRAY, AND OTHER COMPONENTS AS SHOWN ON THE EQUIPMENT PROVIDER DRAWINGS FOR INSTALLATION OF SYSTEM.
4. "BACK TO BACK" OR THROUGH THE WALL BOXES SHALL NOT BE USED.
5. INSTALL HANDLE LOCK-ON, ON ALL CIRCUIT BREAKERS CONTROLLING NIGHT LIGHT, EMERGENCY LIGHT AND EXIT LIGHT CIRCUITS.
6. ALL RECEPTACLES SHALL BE HARD USE, SPECIFICATION GRADE.
7. PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY APPLICABLE CODES.
8. RECEPTACLES INDICATED AS GROUND FAULT CIRCUIT INTERRUPTER TYPE SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, PER CODE OR PROVIDED WITH A GFCI BREAKER.
9. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM WIRES SHALL NOT BE USED.
10. MINIMUM CONDUIT SIZE SHALL BE 1/2" FOR POWER FEEDS AND 1" FOR DATA FEEDS.
11. FINAL CONNECTION TO ITEMS SUBJECT TO VIBRATION SHALL BE MADE WITH LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
12. 120/208V AC CIRCUIT WIRING FOR ANY ROOM OR AREA MAY BE GROUPED INTO RACEWAYS UNLESS SEPARATE RACEWAYS ARE REQUIRED BY THE NEC. COMPLY WITH NEC REQUIREMENTS FOR CONDUCTOR DERATING.
13. PROVIDE EQUIPMENT GROUNDING CONDUCTORS FOR ALL POWER AND LIGHTING CIRCUITS.
14. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM. ALL CONTROL CONDUCTORS SHALL BE 14 AWG MINIMUM OR AS SPECIFIED BY MANUFACTURER.
15. DEDICATED NEUTRAL SHALL BE PROVIDED FOR ALL CIRCUITS. SHARED NEUTRALS ARE NOT ALLOWED.
16. BASIS OF DESIGN IS FOR A COMPLETE ELECTRICAL SYSTEM, INSTALLED PER CODE REQUIREMENTS.
17. PROVIDE AN UNSWITCHED HOT TO ALL EMERGENCY BATTERY PACKS, LIGHTING INVERTERS AND EMERGENCY LIGHTING UNITS AHEAD OF AN LIGHTING CONTROLS FROM THE BRANCH CIRCUIT SERVING LIGHTING IN THE SURROUNDING AREA.

GENERAL DEMOLITION NOTES:

1. DEMOLITION NOTES ARE BASED UPON FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY EXACT CONDITIONS AT SITE AND REPORT DISCREPANCIES TO THE ARCHITECT/ENGINEER BEFORE DISTURBING THE INSTALLATION.
2. THE SCOPE OF REQUIRED DEMOLITION IS NOT LIMITED TO ITEMS OR WORK INDICATED ON THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR ACCEPTS EXISTING SITE CONDITIONS AT THE START OF DEMOLITION.
3. WHERE ELECTRICAL COMPONENT ARE SHOWN TO BE REMOVED, THE ELECTRICAL CONTRACTOR SHALL RECONNECT REMAINING COMPONENTS TO EXISTING CIRCUIT(S).
4. WHERE THE DRAWINGS SHOW DEVICES OR EQUIPMENT TO BE PERMANENTLY REMOVED, THE ELECTRICAL CONTRACTOR SHALL REMOVE CONDUCTORS BACK TO SOURCE. TURN BREAKER "OFF" AND LABEL THE BREAKER AS SPARE ON NEWLY PRINTED PANEL DIRECTORY.
5. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED CONDUIT. THE ELECTRICAL CONTRACTOR SHALL CUT CONDUIT FLUSH WITH WALLS AND FLOORS, UON. PATCH ALL SURFACES AND PROVIDE FIRESTOP WHERE REQUIRED.
6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF DAMAGE TO ALL ADJACENT CONSTRUCTION AND FINISHES. REPAIRS SHALL BE MADE TO RETURN SPACE TO ORIGINAL CONDITION PRIOR TO COMPLETION OF PROJECT.
7. EQUIPMENT AND DEVICES SHOWN AS DASHED ON THE DRAWING ARE TO BE REMOVED.
8. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ALL ELECTRICAL SYSTEMS IN WALLS, FLOORS AND CEILINGS SCHEDULED FOR REMOVAL, INCLUDING SPECIAL SYSTEMS.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN OPERATION OF EXISTING SYSTEMS DURING CONSTRUCTION. CONDITIONS SHALL BE RETURNED TO NORMAL AT THE CLOSE OF THE PROJECT.
10. CONTRACTOR SHALL MAINTAIN ALL POWER AND DATA CONDUIT AND WIRING SERVING AREAS NOT INCLUDED IN THE SCOPE OF WORK, UON. NOTIFY ARCHITECT/ENGINEER IF THESE DEVICES WILL IMPEDE UPON SCOPE OF WORK DURING RENOVATION TO RECEIVED DIRECTION ON RESOLUTION.
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE BLACK COVERS ON ALL JUNCTION BOXES WHERE DEVICE HAS BEEN REMOVED AND THE JUNCTION BOX IS TO REMAIN FOR FUTURE USE.
12. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL LAMPS AS REQUIRED AND DIRECTED IN THE LATEST STATE LAWS.
13. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL EQUIPMENT AND DEVICES REMOVED.
14. ALL DISRUPTIONS OF SERVICE SHALL BE COORDINATED AND APPROVED BY OWNER.

ABBREVIATIONS

A, AMP	AMPERES
AF	AMP FUSE OR AMP FRAME
AFC	AVAILABLE FAULT CURRENT (SYMMETRICAL)
A.F.F.	ABOVE FINISHED FLOOR
AIC.	AMPERE INTERRUPTING CAPACITY
AM.	AMMETER
ASYM.	ASYMMETRICAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CAP.	CAPACITY OR CAPACITOR
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT. ,CCT	CIRCUIT
C.O.	CONDUIT ONLY
CONN.	CONNECT OR CONNECTION
CU	COPPER
DA	DURESS ALARM
DB	DOOR BELL
DISC.	DISCONNECT
DPST	DOUBLE POLE SINGLE THROW
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATION OR ELEVATOR
EMERG, EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EMT	ELECTRICAL METAL TUBING
FIXT.	FIXTURE
FLA	FULL LOAD AMPERES
FLUOR.	FLUORESCENT
GRC,GCR	GALVANIZED RIGID CONDUIT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRD,GND,G	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ.	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
I.G.	ISOLATED GROUND
INCAND.	INCANDESCENT
JB	JUNCTION BOX
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE, METAL HALIDE OR MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
N.C.	NORMALLY CLOSED
N.E.C.	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
NF	NON FUSIBLE
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OL	OVERLOADS
P	POLE
PB	PULLBOX
PH OR ø	PHASE
PNL	PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE
PWR.	POWER
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
SOL	SOLENOID
SPDT	SINGLE POLE DOUBLE THROW
SPKR	SPEAKER
SPST	SINGLE POLE SINGLE THROW
SW.	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TEL	TELEPHONE
XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BACKBOARD
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT AMPERES
VD	VOLTAGE DROP
VM	VOLT METER
W	WATTS OR WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XP	EXPLOSION PROOF

GENERAL

MOUNTING HEIGHTS TO BE AS INDICATED UON. MOUNTING HEIGHTS ARE TO CENTER OF DEVICE FROM FINISHED FLOOR OR GRADE UON. SEE SPECIFICATION 16010 FOR ADDITIONAL REQUIREMENTS

- DEMO NOTE REFERENCE SYMBOL. DENOTES "SEE DEMO NOTE NO. #"
- CONSTRUCTION NOTE REFERENCE SYMBOL. DENOTES "SEE CONSTRUCTION NOTE NO. #"
- FOOT ON DEVICE INDICATES WALL MOUNTED

DEMOLITION AND REMODEL

- EXISTING ELECTRICAL ITEM TO BE REMOVED
- EXISTING ELECTRICAL ITEM TO BE REMOVED AND RELOCATED
- EXISTING ELECTRICAL ITEM RELOCATED. NEW LOCATION
- EXISTING ELECTRICAL ITEM TO REMAIN
- EXISTING ELECTRICAL ITEM TO BE REMOVED AND PROVIDED WITH A BLANK COVERPLATE
- EXISTING ELECTRICAL OR SYSTEMS CIRCUIT TO REMAIN
- EXISTING ELECTRICAL CIRCUIT TO BE REMOVED SHOWN ONLY WHERE CLARIFICATION BETWEEN EXISTING TO REMAIN AND REMOVED ITEMS IS REQUIRED

CIRCUIT DESIGNATIONS

1LN1-1 — PANEL NAME / POLE NUMBERS

BRANCH CIRCUIT HOMERUN. PROVIDE PHASE, NEUTRAL AND GROUND CONDUCTORS FOR EACH INDICATED CIRCUIT OR MULTI WIRE BRANCH AS REQUIRED. PROVIDE SWITCH LEGS FOR SWITCH CIRCUITING AS REQUIRED. PROVIDE EQUIPMENT GROUND WIRE IN ALL BRANCH CIRCUIT RACEWAYS/CIRCUITS. PROVIDE SEPARATE ISOLATED GROUND WIRE TO ALL ISOLATED GROUND DEVICES.

CONDUIT SIZE	MAX QUANTITY OF CONDUCTORS PER CONDUIT		
	CONDUCTOR SIZE		
	12	10	8
3/4 INCH	5 TO 8	5 TO 6	1 TO 3
1 INCH	9 TO 13	7 TO 11	4 TO 5
SEE SPECIFICATIONS FOR LIMITATIONS ON QUANTITY OF CURRENT CARRYING CONDUCTORS PER CONDUIT			

- CONDUIT RISER UP
- CONDUIT RISER DOWN
- INDICATES CIRCUIT CONTINUATION
- STUB INTO ACCESSIBLE CORRIDOR CEILING SPACE UNLESS OTHERWISE NOTED
- CONDUIT SEAL FITTING FOR HAZARDOUS AREAS
- CONDUIT SLEEVE
- CAP END OF CONDUIT
- CABLE OR CORD CONNECTED

LIGHTING

NOTE A: UPPER CASE ALPHANUMERIC SUBSCRIPT DENOTES FIXTURE TYPE. SEE SCHEDULE(S)

NOTE B: LOWER CASE LETTER SUBSCRIPT PROVIDED ADJACENT TO SWITCHING DEVICE AND ASSOCIATED LIGHT FIXTURE(S) WHERE REQUIRED FOR CLARIFICATION.

- CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- DIRECTIONAL AIMED FIXTURE AIM IN DIRECTION OF ARROW
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- UNDER CABINET/COUNTER LIGHT OUTLET OR STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO NORMAL SOURCE
- EXIT LIGHT OUTLET WITH FIXTURE - SHADING INDICATES LOCATION OF FACE(S). ARROWS INDICATE DIRECTIONAL ARROWS WHERE REQUIRED. WALL MOUNTED SIGNS AT +90" CENTERED ABOVE DOOR WHERE APPLICABLE
- EMERGENCY LIGHT FIXTURE WITH INTEGRAL BATTERY SOURCE AND ADJUSTABLE HEADS
- TRACK LIGHT OUTLET WITH FIXTURE. TYPE INDICATED, QUANTITY AND LENGTH AS SHOWN OR SCHEDULED
- PENDANT LIGHT FIXTURE CONNECTED TO NORMAL SOURCE
- LIGHTING STANDARD POLE FIXTURE, PROVIDE QUANTITY OF HEADS AND ORIENTATION AS INDICATED
- LIGHTING STANDARD WITH POST-TOP FIXTURE
- BOLLARD FIXTURE
- CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- PENDANT LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- S — SWITCH AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE VARIOUS TYPES OF SWITCHES.

NO SUBSCRIPT - SINGLE POLE
2 — DOUBLE POLE
3 — THREE WAY
4 — FOUR WAY
D — LIGHTING DIMMER
P — PILOT LIGHT
L — LIGHTED HANDLE
K — KEY OPERATED
TE — MANUAL STARTER WITH THERMAL ELEMENT
XP — EXPLOSION PROOF
M — MOTOR RATED

- LV — LOW VOLTAGE SWITCH
- PC — PHOTOCELL
- TC — TIME CLOCK AT +48"
- OS — OCCUPANCY SENSOR WITH INTEGRAL SWITCH-WALL MOUNTED AT +48"
- OS — OCCUPANCY SENSOR - CEILING MOUNTED

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPES OF OCCUPANCY SENSORS

NO SUBSCRIPT - COMBINATION INFRARED/ULTRASONIC SENSOR
I — INFRARED SENSOR
U — ULTRASONIC SENSOR

POWER AND DIAGRAMS

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" U.O.N.

NOTE B: RECEPTACLES LOCATED AT COUNTERS SHALL BE LOCATED 18" AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED U.O.N.

NOTE C: WHERE (AC) IS INDICATED NEXT TO RECPTACLES AT WORK COUNTER, RECEPTACLES SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

NOTE D: RECEPTACLES IN MECHANICAL AND ELECTRICAL SPACES SHALL BE MOUNTED AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE DIFFERENT TYPES OF RECEPTACLES

GF — GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE AT +42" IN TOILETS
ST — SAFETY TYPE RECEPTACLE
XP — EXPLOSION PROOF RECEPTACLE
IG — ISOLATED GROUND RECEPTACLE
WP — WEATHERPROOF
SW — TOP HALF OF DUPLEX RECEPTACLE SWITCHED
CL — CLOCK RECEPTACLE AT +84"
H — HORIZONTAL MOUNTING
U — RECEPTACLE SERVED BY UPS

- 20A, 125V, 2 POLE, 3 WIRE GROUNDING DUPLEX RECEPTACLE, NEMA 5-20R
- 20A, 125V, 2 POLE, 3 WIRE GROUNDING SINGLE RECEPTACLE, NEMA 5-20R
- 20A, 125V, 2 POLE, 3 WIRE GROUNDING DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R
- PEDESTAL TYPE, FLOOR OR COUNTER MOUNTED RECEPTACLE RECEPTACLE TYPE AS INDICATED ABOVE
- CEILING MOUNTED RECEPTACLE, TYPE AS INDICATED ABOVE
- FLUSH FLOOR BOX WITH RECEPTACLE, TYPE AS INDICATED ABOVE
- COMBINATION POWER/COMMUNICATIONS FLOOR BOX, SEE COMMUNICATIONS PLAN FOR SYSTEMS DEVICE
- PIGTAIL DENOTES CONNECTION TO LIGHT SWITCH, LIGHT FIXTURE OR FIXED EQUIPMENT
- SPECIAL PURPOSE RECEPTACLE SUBSCRIPT DENOTES NEMA TYPE, REFER TO SPECIFICATIONS
- JUNCTION BOX, 4 INCH SQUARE UNLESS OTHERWISE NOTED
- PLUG-IN RECEPTACLE STRIP (LENGTH AS INDICATED)
- TELECOMMUNICATIONS/POWER POLE
- 208 VOLT PANELBOARD AT +72" TO TOP
- 480 VOLT PANELBOARD AT +72" TO TOP
- CABLE TRAY OR WIREWAY
- SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/POLES.
- FUSED SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSESIZE/POLES.
- MAGNETIC MOTOR STARTER AT +54". CHARACTERISTICS AS INDICATED BY FRAME SIZE/POLES/NEMA SIZE.
- COMBINATION MAGNETIC MOTOR STARTER WITH DISCONNECT AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSE/POLES/NEMA SIZE
- AFD — ADJUSTABLE FREQUENCY DRIVE
- MAGNETIC CONTACTOR AT +54". AMPS/POLES/CONTACT VOLTS/ COIL VOLTS AS INDICATED.
- SEPARATELY MOUNTED, ENCLOSED MOLDED CASE CIRCUIT BREAKER AT +48". FLUSH MOUNTED IN FINISHED AREAS. AMP/POLES AS INDICATED.
- CIRCUIT BREAKER. AMP/POLES AS INDICATED
- FUSE. SIZE AS INDICATED
- FUSIBLE SWITCH. AMP/POLES/FUSE SIZE AS INDICATED
- AUTOMATIC TRANSFER SWITCH +72" TO TOP OR FLOOR MOUNTED.
- DISCONNECT STABS FOR DRAWOUT TYPE EQUIPMENT
- TRANSFORMER
- GROUND CONNECTION
- MOTOR CONNECTION, HP AS INDICATED
- G — GENERATOR
- START-STOP PUSHBUTTON STATION AT +48"
- GROUNDING SYSTEM TEST WELL
- GROUNDING CONNECTION
- GROUND BUS ON STANDOFFS
- CONTROL PANEL: INTEGRAL PART OF, OR FURNISHED BY OTHER THAN DIVISION 16
- EQUIPMENT OR TERMINAL CABINET AT +72" TO TOP
- PS — POWER SUPPLY
- PUSHBUTTON STATION AT +48"

FIRE DETECTION AND ALARM

- FACP — CONTROL PANEL AT +72" TO TOP
- FAA — FIRE ALARM ANNUNCIATOR PANEL AT +72" TO TOP
- FIRE SUPPRESSION SYSTEM ABORT SWITCH STATION AT +48"
- M — MANUAL STATION AT +48"

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF MANUAL STATIONS, FIRE SUPPRESSION SYSTEM CONTROL PANELS AND/OR ABORT SWITCHES

NO SUBSCRIPT - STANDARD FIRE ALARM PULL STATION

- S — SMOKE DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF SMOKE DETECTORS

NO SUBSCRIPT - PHOTO ELECTRIC AREA BEAM

- DUCT SMOKE DETECTOR
- AUTOMATIC HEAT DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF HEAT DETECTORS

NO SUBSCRIPT - FIXED TEMPERATURE (155 DEGREE U.O.N.)
R/F —COMBINATION RATE OF RISE FIXED TEMPERATURE (135 DEGREE U.O.N.)
XP —EXPLOSION PROOF, FIXED TEMPERATURE (135 DEGREE U.O.N.) CLASS 1, GROUP C

NOTE: WALL MOUNT VISUAL AND COMBINATION AUDIO/VISUAL NOTIFICATION APPLIANCES AT +80" AFF TO BOTTOM OF FACE PLATE U.O.N.

- VISUAL NOTIFICATION APPLICANCE
- WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE
- WALL MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE
- F — CEILING MOUNTED VISUAL NOTIFICATION APPLIANCE
- F/V — CEILING MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE
- M — MAGNETIC DOOR HOLDER/RELEASE. COORDINATE MOUNTING HEIGHT WITH DOOR MANUFACTURER.
- PS — SPRINKLER OR STANDPIPE FLOW ALARM SWITCH CONNECTION
- TS — VALVE TAMPER SWITCH
- SV F — SOLENOID VALVE FOR PREACTION SPRINKLER SYSTEM
- AP F — AIR PRESSURE MONITOR SWITCH FOR PRE-ACTION OR DRY PIPE SPRINKLER SYSTEM
- FR — CEILING MOUNTED REMOTE ALARM INDICATOR
- WALL MOUNTED REMOTE ALARM INDICATOR AND TEST STATION AT +48"
- FIRE FIGHTERS TELEPHONE JACK AT +48"
- FIRE FIGHTERS TELEPHONE HANDSET AT +48"

TELECOMMUNICATION

GENERAL NOTES

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" UON.

NOTE B: OUTLETS LOCATED AT COUNTERS SHALL BE LOCATED 18"AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED UON.

NOTE C: WHERE ASTERISK (*) IS INDICATED NEXT TO OUTLET AT WORK COUNTER, OUTLET SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

- STANDARD TELECOMMUNICATIONS OUTLET - PROVIDE EXTRA DEEP DOUBLE GANG BOX WITH SINGLE GANG MUD RING AND 1-1/4" CONDUITS TO ABOVE FINISHED CEILING. PROVIDE PLASTIC BUSHING AT THE ENDS OF THE CONDUITS. DATA DEVICES AND WIRING PROVIDED BY OTHERS U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS (NON-STANDARD) TYPES OF OUTLETS

// — 1ST NUMBER INDICATES QUANTITY OF DATA CABLES
2ND NUMBER INDICATES QUANTITY OF VOICE CABLES
B — BLANK (ROUGH-IN TO ACCESSABLE CEILING SPACE)
F — FIBER
W — WALL PHONE OUTLET AT +48"
C — CEILING PHONE OUTLET
P — PUBLIC TELEPHONE AT +44"
FL — PEDESTAL FLOOR FITTING

SECURITY

- FIXED VIDEO SURVEILANCE CAMERA
- PTZ — PAN/TILT/ZOOM VIDEO SURVEILANCE CAMERA
- DOOR POSITION SWITCH
- CONNECTION TO ELECTRIC OR PNEUMATIC DOOR LOCK
- CR — CARD READER AT +48"

NOTE:
SYMBOLS SHOWN ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE A CHECK LIST OF DEVICES REQUIRED BY THE CONTRACT

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION & RENOVATIONS FOR:

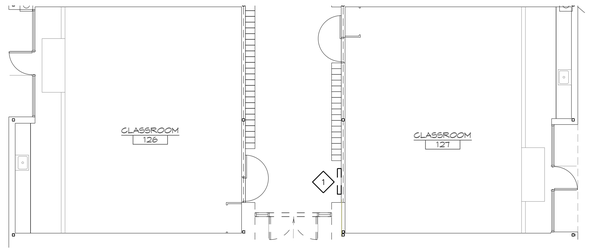
PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

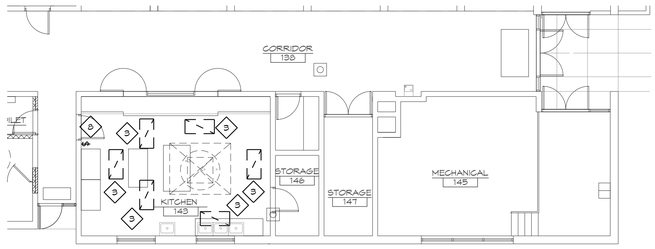
ELECTRICAL COVER SHEET

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. E-E000
	DATE OCT 19, 2026	SHEET NO. 28 OF 31
	SCALE	



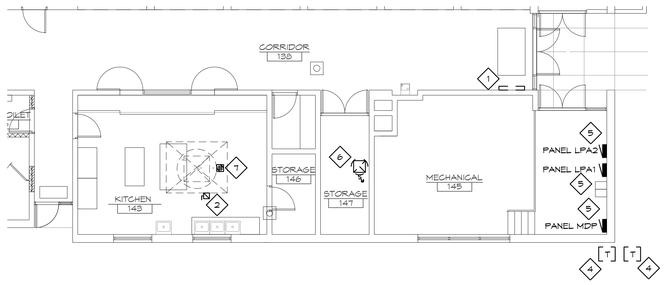
1 ADDITION ELECTRICAL DEMOLUTION PLAN

1/8" = 1'-0"



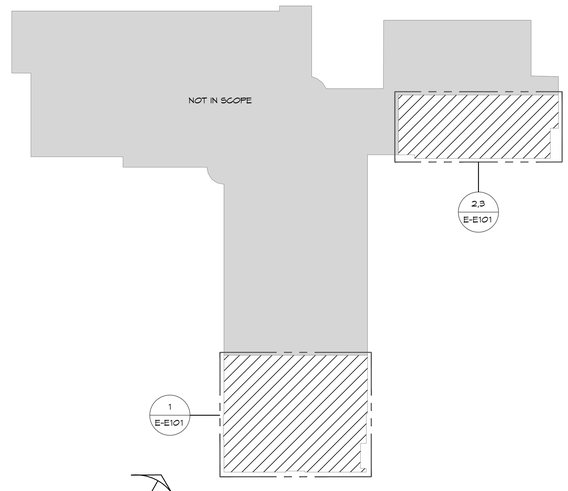
2 KITCHEN DEMOLITION LIGHTING PLAN

1/8" = 1'-0"



3 KITCHEN DEMOLITION POWER PLAN

1/8" = 1'-0"



NORTH

KEY PLAN

1/32" = 1'-0"

DEMOLITION NOTES

1. UNIT HEATER TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN BRANCH CIRCUIT FOR NEW HEATER.
2. KITCHEN HOOD AND ASSOCIATED EXHAUST FAN TO BE REMOVED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
3. REMOVE LIGHTING IN KITCHEN. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN BRANCH CIRCUIT FOR NEW LIGHTING.
4. REMOVE EXISTING ABANDONED TRANSFORMER. REMOVE WIRE AND CONDUIT BACK TO SOURCE. SEAL PENETRATION LEFT FROM REMOVED CONDUIT. MATCH EXISTING CONDITIONS. TRANSFORMER TO BE TURNED OVER TO OWNER.
5. EXISTING PANEL TO REMAIN.
6. EXHAUST FAN AND SWITCH TO BE REMOVED. PULL BACK WIRE AND CONDUIT AS NEEDED TO REMOVE EXHAUST FAN. MAINTAIN BRANCH CIRCUIT FOR NEW EXHAUST FAN.
7. REMOVE QUADRECEPTACLE. REMOVE WIRE AND CONDUIT BACK TO SOURCE.
8. REMOVE EXISTING SWITCH. REMOVE WIRE AND CONDUIT BACK TO SOURCE.

PROJECT 'E'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION & RENOVATIONS FOR:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

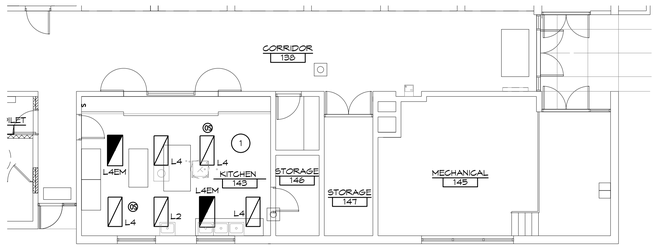
DRAWING TITLE

ELECTRICAL DEMOLITION PLANS

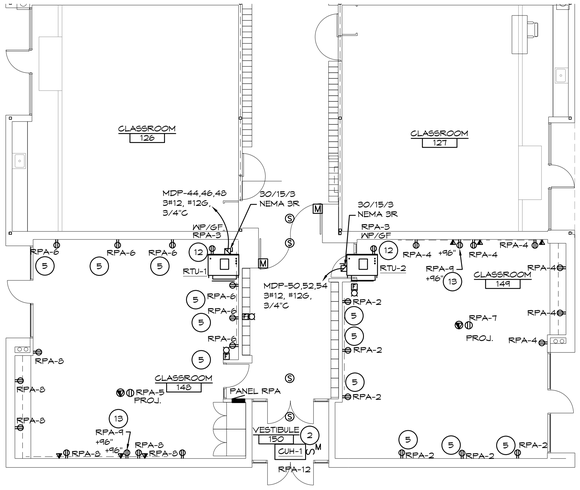
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. E-E101
	DATE OCT 19, 2026	SHEET NO. 29 OF 31
	SCALE	



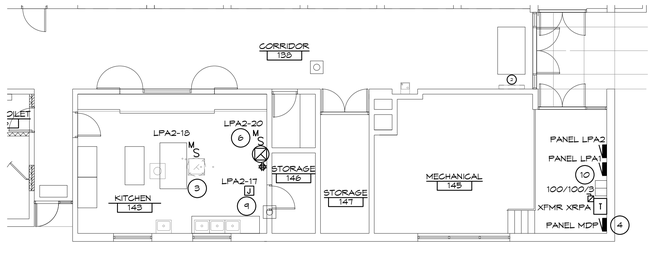
1 ADDITION NEW LIGHTING PLAN
1/8" = 1'-0"



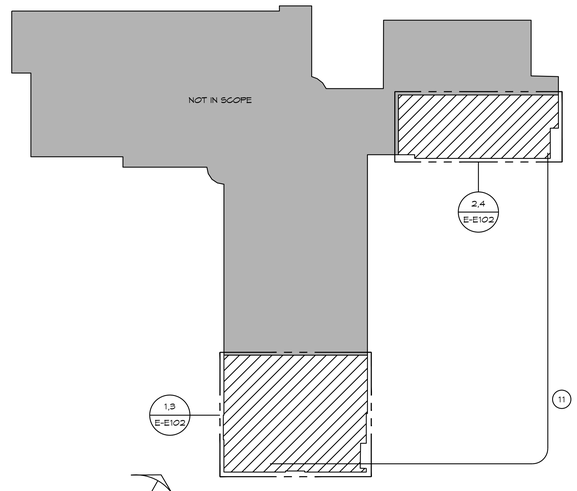
2 KITCHEN NEW LIGHTING PLAN
1/8" = 1'-0"



3 ADDITION NEW POWER PLAN
1/8" = 1'-0"



4 KITCHEN NEW POWER PLAN
1/8" = 1'-0"



NORTH KEY PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURE FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW CABINET UNIT HEATER FROM EXISTING CIRCUIT. EXTEND WIRE AND CONDUIT AS NEEDED.
3. PROVIDE CONNECTION TO MAKE UP AIR UNIT FROM CIRCUIT AS SHOWN.
4. PROVIDE NEW BREAKER IN EXISTING EXHAUST FAN BREAKER POSITION MDP-19,21,23 FOR NEW EXHAUST FAN.
5. PROVIDE EXTRA REQUIRED POWER PACKS FOR RECEPTACLE SWITCH VIA THE LIGHTING CONTROLS. SEE DETAIL 4/E601.
6. PROVIDE CONNECTION TO NEW EXHAUST FAN FROM CIRCUIT AS SHOWN.
7. PROVIDE CONNECTION TO EXHAUST HOOD CONTROL PANEL FROM CIRCUIT AS SHOWN.
8. PROVIDE CONNECTION TO NEW QUAD RECEPTACLE TO CIRCUIT AS SHOWN. PROVIDE WITH SHUNT TRIP BREAKER. SEE PANEL SCHEDULES FOR MORE INFORMATION.
9. PROVIDE CONNECTION TO HOOD CONTROL PANEL. PROVIDE ALL NECESSARY WIRE, CONDUIT, BOXES, TERMINATIONS, AND ALL OTHER ELECTRICAL APPURTENANCES FOR A COMPLETE INSTALLATION.
10. PROVIDE A 100A/3P DISCONNECT AFTER SECONDARY SIDE OF NEW TRANSFORMER.
11. APPROXIMATE ROUTING TO PANEL RPA FROM TRANSFORMER/MDP. SEE ONE LINE DIAGRAM FOR MORE INFORMATION.
12. RECEPTACLE LOCATED ON ROOF AT ROOF TOP UNIT.
13. PROVIDE POWER AND DATA TO CLOCK LOCATION. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO CONSTRUCTION.
14. PROVIDE CONNECTION AND CONTROLS FOR NEW SOFFIT DOWN LIGHTS FROM EXISTING SOFFIT DOWN LIGHTS CIRCUIT. PROVIDE DEDICATED HOTLEG FROM ADJACENT CORRIDOR LIGHTING FOR CONNECTION TO EMERGENCY BATTERY.

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION & RENOVATIONS FOR:

PINE RIVER ELEMENTARY SCHOOL

1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE

ELECTRICAL NEW PLANS

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. E-E102
	DATE OCT 19, 2026	SHEET NO. 30 OF 31
	SCALE	

PROJECT 'E'

PANEL NAME: LPA2
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** ELEC RM XYZ **MOUNTING:** SURFACE
BUS: 100A **MAIN:** MLO **MIN KAIC:** 65 **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** LPA
* DENOTES GFCI CIRCUIT BREAKER
BOLD DENOTES NEW BREAKER IN EXISTING PANEL

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	UNIT VENTILATOR						20	1	1	A	2	1	20						TEMPATURE CONTROLS	2
3	KITCHEN RECP						20	1	3	B	4	1	20						SUMP PUMP	4
5	KITCHEN RECP						20	1	5	C	6	1	20						EXHAUST FAN BOILER RM	6
7	KITCHEN RECP						20	1	7	A	8	1	20						BOILER 1	8
9	NEW SIGN						20	1	9	B	10	1	20						BOILER 2	10
11	SPARE						20	3	11	C	12	1	20						WATER HEATER	12
13	-						-	-	13	A	14	1	20						PUMP B2 (BOILER CIRC PUMP)	14
15	-						-	-	15	B	16	1	20						PUMP B2 (BOILER CIRC PUMP)	16
17	KITCHEN RECP						20	1	17	C	**18**	**1**				**500**			**MAU**	**18**
19	SHUNT TRIP						20	1	19	A	**20**	**1**				**500**			**KITCHEN EXHAUST FAN**	**20**
21	SPACE							1	21	B	22	1							SPACE	22
23	SPACE							1	23	C	24	1							SPACE	24
25	SPACE							1	25	A	26	1							SPACE	26
27	SPACE							1	27	B	28	1							SPACE	28
29	SPACE							1	29	C	30	1							SPACE	30
31	SPACE							1	31	A	32	1							SPACE	32
33	SPACE							1	33	B	34	1							SPACE	34
35	SPACE							1	35	C	36	1							SPACE	36
37	SPACE							1	37	A	38	1							SPACE	38
39	SPACE							1	39	B	40	1							SPACE	40
41	SPACE							1	41	C	42	1							SPACE	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	0.0	0.5	0.0	0.0	0.5
PHASE B CONNECTED KVA	0.0	0.0	0.0	0.0	0.0	0.0
PHASE C CONNECTED KVA	0.0	0.0	0.5	0.0	0.0	0.5
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	0.0	1.0	0.0	0.0	1.0	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	DEMAND KVA
							2.8	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0			1.0	CONTINUOUS/NONCONT FACTOR
							2.8	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: RPA
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** ADD. CORRIDOR **MOUNTING:** RECESSED
BUS: 100A **MAIN:** 100A MCB **MIN KAIC:** 65 **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** MDP VIA XRPA
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	ADDITION LIGHTING	777					20	1	1	A	2	1	20		1080				SWITCHED E. CLASSROOM RECP	2
3	ROOF TOP UNIT RECP		360				20	1	3	B	4	1	20		1080				EAST CLASSROOM RECP	4
5	WEST CLASSROOM PROJECTOR				500		20	1	5	C	6	1	20		1080				SWITCHED W. CLASSROOM RECP	6
7	EAST CLASSROOM PROJECTOR				500		20	1	7	A	8	1	20		1080				WEST CLASSROOM RECP	8
9	CLASSROOM CLOCK RECP		360				20	1	9	B	10	1	20	25					EXTERIOR LIGHTING	10
11	SPARE						20	1	11	C	12	1	20			100			CUH-1	12
13	SPARE						20	1	13	A	14	1	20						SPARE	14
15	SPARE						20	1	15	B	16	1	20						SPARE	16
17	SPARE						20	1	17	C	18	1	20						SPARE	18
19	SPARE						20	1	19	A	20	1	20						SPARE	20
21	SPARE						20	1	21	B	22	1	20						SPARE	22
23	SPARE						20	1	23	C	24	1	20						SPARE	24
25	SPARE						20	1	25	A	26	1	20						SPARE	26
27	SPARE						20	1	27	B	28	1	20						SPARE	28
29	SPARE						20	1	29	C	30	1	20						SPARE	30
31	SPARE						20	1	31	A	32	1	20						SPARE	32
33	SPARE						20	1	33	B	34	1	20						SPARE	34
35	SPARE						20	1	35	C	36	1	20						SPARE	36
37	SPARE						20	1	37	A	38	1	20						SPARE	38
39	SPARE						20	1	39	B	40	1	20						SPARE	40
41	SPARE						20	1	41	C	42	1	20						SPARE	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.8	2.2	0.0	0.5	0.0	3.4
PHASE B CONNECTED KVA	0.0	1.8	0.0	0.0	0.0	1.8
PHASE C CONNECTED KVA	0.0	1.1	0.1	0.5	0.0	1.7
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.8	5.0	0.1	1.0	0.0	6.9	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.8	5.0	0.1	1.0	0.0	6.9	0.0	6.9	DEMAND KVA
							19.3	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0			1.0	CONTINUOUS/NONCONT FACTOR
							19.8	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: MDP
SECTION: 1 OF 1 **POLES:** 54 **LOCATION:** ELECTRICAL ROOM **MOUNTING:** SURFACE
BUS: 400A **MAIN:** 400A MCB **MIN KAIC:** 65 **ISO GND BUS:** NO
L-L VOLTS: 480 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** UTILITY
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE
BOLD DENOTES NEW BREAKER

CKT	LOAD DESCRIPTION	LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	EXISTING PANEL LPD				31605		150	3	1	A	2	3	150						EXISTING PANEL LPB	2
3	"				31605		-	-	3	B	4	-	-						"	4
5	"				31605		-	-	5	C	6	-	-						"	6
7	SPARE						100	3	7	A	8	3	100						SPARE	8
9	"						-	-	9	B	10	-	-						"	10
11	"						-	-	11	C	12	-	-						"	12
13	EXISTING LOAD						20	3	13	A	14	3	100						SPARE	14
15	"						-	-	15	B	16	-	-						"	16
17	"						-	-	17	C	18	-	-						"	18
19	KITCHEN EXHUAST FAN						20	3	19	A	20	3	40						SPARE	20
21	"						-	-	21	B	22	-	-						"	22
23	"						-	-	23	C	24	-	-						"	24
25	SYSTEM PUMP 1						30	3	25	A	26	3	30						SPARE	26
27	"						-	-	27	B	28	-	-						"	28
29	"						-	-	29	C	30	-	-						"	30
31	SYSTEM PUMP 2						30	3	31	A	32	3	30						SPARE	32
33	"						-	-	33	B	34	-	-						"	34
35	"						-	-	35	C	36	-	-						"	36
37	SPARE						30	3	37	A	38	3	40	777	2160	0	500	0	TRANSFORMER RPA	38
39	"						-	-	39	B	40	-	-	25	1800	0	0	0	"	40
41	"						-	-	41	C	42	-	-	0	1080	100	500	0	"	42
43	SPARE						70	3	43	A	44	3	15			2768			RTU-1	44
45	"						-	-	45	B	46	-	-			2768			"	46
47	"						-	-	47	C	48	-	-			2768			"	48
49	SPARE						70	3	49	A	50	**3**	**15**			**2768**			**RTU-2**	50
51	"						-	-	51	B	52	-	-			**2768**			"	52
53	"						-	-	53	C	54	-	-			**2768**			"	54

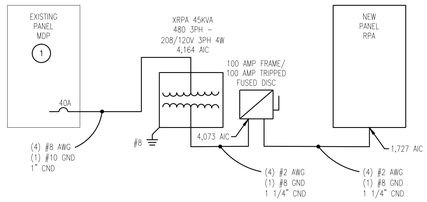
SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.8	2.2	5.5	32.1	0.0	40.6
PHASE B CONNECTED KVA	0.0	1.8	5.5	31.6	0.0	39.0
PHASE C CONNECTED KVA	0.0	1.1	5.6	32.1	0.0	38.8
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.8	5.0	16.7	95.8	0.0	118.4	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.8	5.0	16.7	95.8	0.0	118.4	0.0	118.4	DEMAND KVA
							142.4	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0			1.0	CONTINUOUS/NONCONT FACTOR
							142.6	MIN. OVERCURRENT DEVICE AMPS

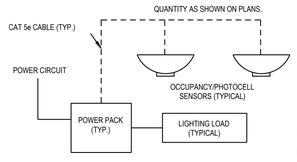


1 ONE LINE DIAGRAM
N.T.S.

LIGHTING FIXTURE SCHEDULE

General: Lighting fixtures as hereinafter specified are identified by type as noted on drawings. Fixture specifications are based on construction and performance. Manufacturer's catalogue numbers are of general nature and indicate level of quality required, but do not necessarily reflect complete options as specified. Approval shall be based on description and specification of fixture as well as catalogue number indicated. Provide appropriate trim for fixture based on ceiling

	DESCRIPTION	MANUFACTURER & CATALOG NO.	LAMPS QUANTITY AND WATTS FLUOR	LAMPS QUANTITY AND WATTS LED	LAMPS QUANTITY AND WATTS INC	BALLAST	MOUNTING	NOTES
D1	6" LED DOWN LIGHT. 3000 LUMENS, 3500K COLOR TEMPATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION ELRSD. 10 WATT EMERGENCY BATTERY PACK WITH REMOTE TEST SWITCH. TEST SWITCH TO BE LOCATED IN VESTIBULE CEILING.	LITHONIA: LDN6-35-30-L06-AR-LD-TRW-MVOLT-GZ10		33W		DRIVER	RECESSED	
L1	2'X4' LED FLAT PANEL. 4000 LUMEN , 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E10WLCP. 10 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CPX-2X4-4000LM-80CRI-4000K-SWL-MIN10-MVOLT		37W		DRIVER	RECESSED	
L4	2'X4' LED FLAT PANEL. 4000 LUMEN , 4000K COLOR TEMPERATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION E10WLCP. 10 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CPXIP-2X4-4000LM-80CRI-4000K-ASWM-MIN1-MVOLT-IP65		35.2W		DRIVER	RECESSED	
W1	WALL MOUNTED LED FIXTURE. 3000 LUMEN, 4000K COLOR TEMPERATURE INTEGRAL PHOTOCELL/OCCUPANCY SENSOR. PROVIDE TYPE 'EM' WITH OPTION E7WC 7 WATT EMERGENCY BATTERY BACK UP. CONFIRM	LITHONIA: WSTLED-P2-40K-VW-MVOLT-PIR		25W		DRIVER	WALL MOUNTED	



APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
4. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.

2 CORRIDOR LIGHTING CONTROL
N.T.S. XO1

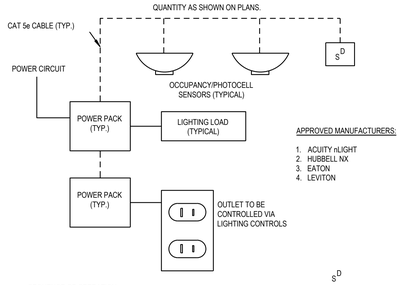


BASIS OF DESIGN:
1. PROVIDE ACUITY #WSX-PDT-LV-NL-WH

APPROVED ALTERNATES:
1. EATON
2. LEVITON
3. HUBBELL

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. AUTO ON AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. TOILETS AND STORAGE CLOSETS SHALL BE AUTOMATIC ON/OFF.

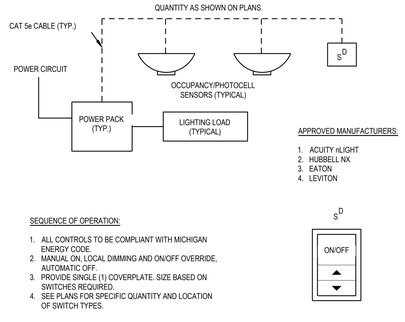
3 STAND ALONE OCCUPANCY WALL SWITCH
N.T.S. XO1



APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
4. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.

4 CLASSROOM LIGHTING/RECEPTACLE CONTROLS
N.T.S. XO1



APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE.
2. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
4. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.

5 KITCHEN LIGHTING CONTROLS
N.T.S. XO1

CONSTRUCTION NOTES

1. EXISTING LOAD OF SERVICE FROM PREVIOUS 12 MONTHS OF ELECTRICAL BILLS IS 75.852KVA. LOAD SHOWN WITH 1.25X DEMAND FACTOR OF 94.815KVA IN CIRCUIT BREAKER IN MDP-1,3,5.

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'E' ADDITION & RENOVATIONS FOR:
PINE RIVER ELEMENTARY SCHOOL
1894 E PINE RIVER RD.
MIDLAND, MI 48640

DRAWING TITLE
ELECTRICAL SCHEDULES AND DETAILS

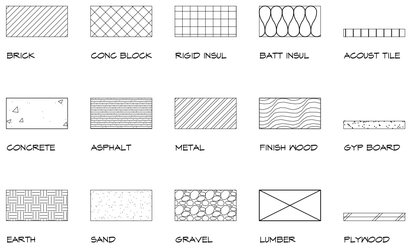
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. E-E601
	DATE OCT 19, 2026	SHEET NO. 31 OF 31
	SCALE	

PROJECT 'E'

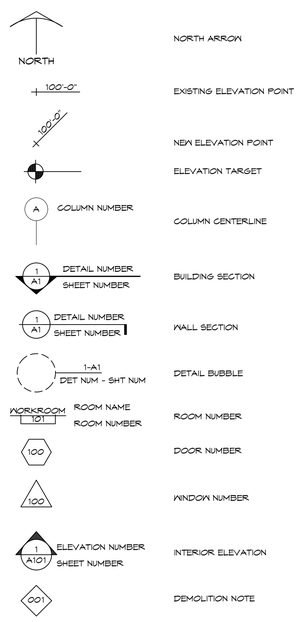
STANDARD ABBREVIATIONS

@	at	KO	knockout
A/C	air conditioning		
ACOUST	acoustical	LAM	laminate
AD	adjustable	LAV	lavatory
AFF	above finish floor	LH	left hand
ALT	alternate	LL	live load
ALUM	aluminum	LLH	long leg horizontal
ANCH	anchor, anchorage	LLV	long leg vertical
ARCH	architect/architectural	LTWT	light weight
BD	board		
BIT	bituminous	MB	markerboard
BLDG	building	MAS	masonry
BLK	block	MAX	maximum
BLKG	blocking	MECH	mechanic/mechanical
BM	bench mark	MET	metal
BOTT	bottom	MH	manhole
BRG	bearing	MIN	minimum
BSMT	basement	MISC	miscellaneous
		MO	masonry opening
C/C	center to center	MCJ	masonry control joint
CAB	cabinet	MT	metal threshold
CB	chalkboard/catch basin	MULL	mullion
CEM	cement	NIC	not in contract
CER	ceramic	NO	number
CF	cubic foot	NOM	nominal
CHWR	chilled water return	NRC	noise reduction coefficient
CHWS	chilled water supply	NTS	not to scale
CI	cast iron		
CJ	control joint	O/O	out to out
CLG	ceiling	OA	overall
CMU	concrete masonry unit	OC	on center
CO	clean out	OD	outside diameter
COL	column	OPG	opening
CONC	concrete	OPP	opposite
CONST	construction		
CONT	continuous/continuing	PCF	pounds per cubic foot
CONTR	contract/contractor	PLAS	plaster
CONV	convector	±	plus or minus
CRS	course(s)	PLF	pounds per lineal foot
CT	ceramic tile	PSF	pounds per square foot
CUH	cabinet unit ventilator	PSI	pounds per square inch
CW	domestic cold water	PART	partition
CY	cubic yard	PVC	polyvinyl chloride
		PMT	pavement
°	degree		
DET	detail		
DF	drinking fountain	R	riser/radius
DIAG	diagonal	RA	return air
DIA or Ø	diameter	RD	roof drain
DIM	dimension	REF.	reference
DIV	division	REF	refrigerator
DP	dampproofing	REINF	reinforce(d)/reinforcing
DS	downspout	RES	resilient
DWG	drawing	REV	revision(s)/revised
		RH	right hand
		RM	room
EA	each	RO	rough opening
EIFS	exterior insulation finish system (synthetic plaster)	ROW	right of way
		RS	roof sump
ELEC	electric/electrical	RWC	rainwater conductor
EQ	equal		
EQUIP	equipment	SAN	sanitary
EWC	electric water cooler	SD	storm drain
EXIST	existing	SECT	section
EXH	exhaust	SHT	sheet
EXT	exterior	SIM	similar
		SPEC	specification(s)
FA	fire alarm	SQ	square
FAI	fresh air intake	SS	service sink
FD	floor drain	SST	stainless steel
FE	fire extinguisher	STL	steel
FEC	fire extinguisher cabinet	STD	standard
FIN	finish(ed)	SUSP	suspended
FL	floor(ing)	SYM	symetry/symmetrical
FOUND	foundation		
FTR	fin tube radiation	T&G	tongue/groove
FTG	footing	T	tread
		TB	tackboard
G	gas	TEL	telephone
GA	gage/gauge	TERR	terrazzo
GC	general contractor	THR	threshold
GI	galvanized iron	TV	television
GL	glass/glazing	TYP	typical
GST	glazed structural tile		
GALV	galvanized	UH	unit heater
		UR	urinal
HB	hose bibb	UV	unit ventilator
HDWR	hardware		
HM	hollow metal	V	vent
HORIZ	horizontal	VERT	vertical
HGT	height		
HTG	heating	W	width/wide
HVAC	heating/ventilating/air conditioning	W/	with
HW	domestic hot water	WC	water closet
HWHR	hot water heating return	WD	wood
HWHS	hot water heating supply	WH	water heater
HWR	domestic hot water return	WI	wrought iron
		W/W	wall to wall
ID	inside dimension	WWR	welded wire reinforcement
INT	interior		
INV	invert		

HATCHING PATTERN KEY



SYMBOLS KEY



DEVELOPMENT DATA

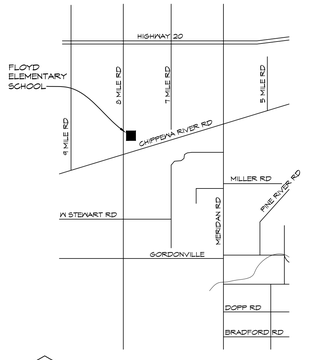
APPLICABLE CODES & ORDINANCES
- 2021 MICHIGAN REHABILITATION CODE -ALTERNATION, LEVEL 1
- 2021 MICHIGAN BUILDING CODE
- 2012 MICHIGAN MECHANICAL CODE
- 2021 MICHIGAN PLUMBING CODE
- 2023 NATIONAL ELECTRICAL CODE (NEC)
- NFPA 101 LIFE SAFETY CODE 2012 AS ADOPTED BY MICHIGAN BUREAU OF FIRE SAFETY (MBFS)
- ICC A117.1 - 2009

BUILDING USE
EXISTING: E, EDUCATION

BUILDING CONSTRUCTION TYPE
TYPE II-B (0,0,0) NON-COMBUSTIBLE

BUILDING AREA
EXISTING GROSS AREA = 44,950 SF

OCCUPANCY
PER CODE = 469 OCCUPANTS TOTAL



NORTH — NO SCALE

LOCATION MAP

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT #26-210

1420 SOUTH BADOUR ROAD MIDLAND, MI 48640

PROJECT 'D'
ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD MIDLAND, MI 48640

INDEX OF DRAWINGS

D-G001 TITLE SHEET

D-S001 STRUCTURAL NOTES
D-S002 SPECIAL INSPECTIONS AND TYPICAL DETAILS
D-S100 STRUCTURAL PLANS, SECTIONS, AND DETAILS

D-A100 COMPOSITE DEMOLITION PLAN
D-A101 COMPOSITE FLOOR PLAN
D-A102 COMPOSITE ROOF PLAN AND ENLARGED ROOF PLAN
D-A103 DEMOLITION PLAN, PARTIAL FLOOR PLAN, AND REFLECTED CEILING PLAN
D-A104 FOUNDATION PLAN, FLOOR PLAN, RCP, AND ROOF PLAN

D-A201 ELEVATIONS AND BUILDING SECTIONS

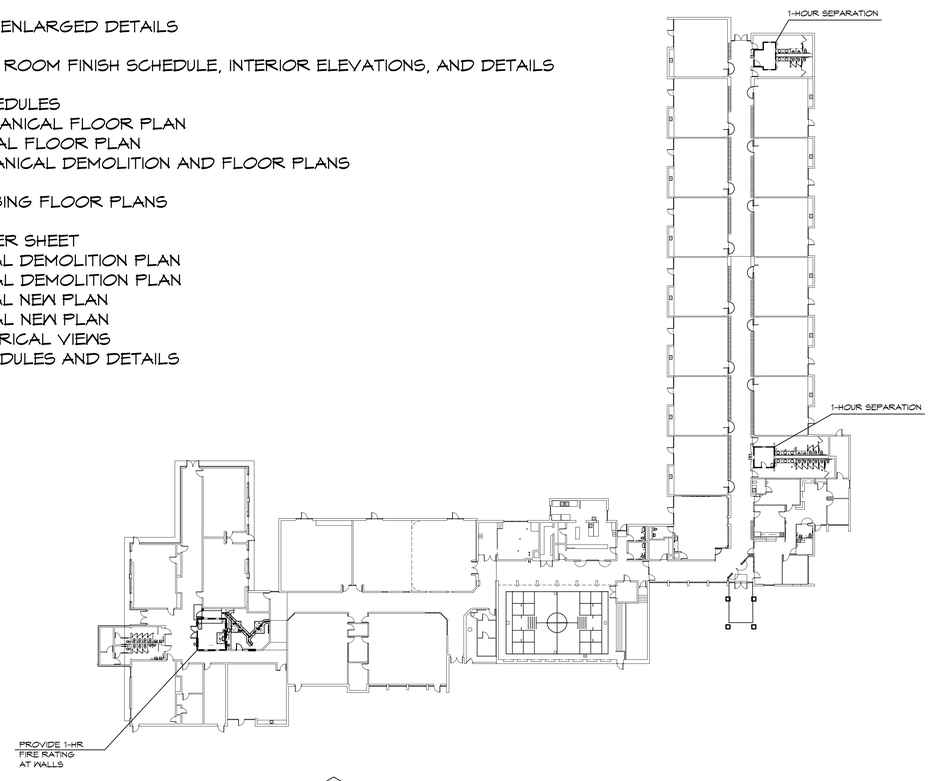
D-A301 WALL SECTIONS & ENLARGED DETAILS

D-A601 DOOR SCHEDULE, ROOM FINISH SCHEDULE, INTERIOR ELEVATIONS, AND DETAILS

D-M001 MECHANICAL SCHEDULES
D-M101 COMPOSITE MECHANICAL FLOOR PLAN
D-M102 UNIT 'A' MECHANICAL FLOOR PLAN
D-M103 ENLARGED MECHANICAL DEMOLITION AND FLOOR PLANS

D-P101 ENLARGED PLUMBING FLOOR PLANS

D-E000 ELECTRICAL COVER SHEET
D-E101 UNIT 'A' ELECTRICAL DEMOLITION PLAN
D-E102 UNIT 'B' ELECTRICAL DEMOLITION PLAN
D-E103 UNIT 'A' ELECTRICAL NEW PLAN
D-E104 UNIT 'B' ELECTRICAL NEW PLAN
D-E105 ENLARGED ELECTRICAL VIEWS
D-E601 ELECTRICAL SCHEDULES AND DETAILS



NORTH — NTS

COMPOSITE PLAN

XO1

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

Wolgast Corporation
Executive Offices
Executive One Building
4835 Towne Centre Road
Suite 203
Saginaw, MI 48604
Phone : (989) 790-9120
Fax : (989) 790-9063
www.wolgastconstruction.com

BULLOCK CREEK SCHOOL DISTRICT
2023 BOND- SERIES 2 2027 IMPROVEMENTS
THA PROJECT# 26-210
1420 SOUTH BADOUR ROAD MIDLAND MI 48640
PROJECT 'D'
ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD MIDLAND MI 48640

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

SEAL	DRAWN KRS	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. D-G001
	REVIEWED MLB	DRAWING NO. D-G001
	DATE OCT 19, 2026	SHEET NO. 1 OF 24
	SCALE N.T.S.	

STRUCTURAL NOTES

GENERAL

1. THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE DRAWINGS AND THE WRITTEN SPECIFICATIONS. IN THE EVENT OF CONFLICT BETWEEN THE INFORMATION ON THE WRITTEN SPECIFICATIONS, THE DRAWINGS, AND THESE NOTES, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION TO ACCOUNT FOR ALL FORCES, INCLUDING BUT NOT LIMITED TO: GRAVITY, WIND, EARTH PRESSURE, AND UNBALANCED FORCES DUE TO CONSTRUCTION SEQUENCE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES, AND JOB SAFETY.
3. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION METHODS WILL NOT CAUSE DAMAGE TO ADJACENT BUILDINGS, UTILITIES, OR OTHER PROPERTIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING WORK, AS WELL AS ANY OTHER APPLICABLE TRADES. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES AND/OR INTERFERENCES IMMEDIATELY.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK. CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND BE RESPONSIBLE FOR SAME.
6. IN CASES OF CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND/OR PROCEEDING WITH THE WORK.
7. THE CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH OTHER DISCIPLINES. THE DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS, AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES. OPENINGS REQUIRED BUT NOT SHOWN ON STRUCTURAL DRAWINGS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
8. APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE, OR NOTE.
9. DO NOT SCALE DRAWINGS. ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS.
10. ISOMETRIC VIEWS, IF INCLUDED, ARE TO GIVE A GENERAL SENSE OF THE STRUCTURE AND MASSING. THEY DO NOT SUPERSEDE THE STRUCTURAL DRAWINGS AND ARE PROVIDED AS SUPPLEMENTAL INFORMATION ONLY. THE STRUCTURE SHALL BE PROVIDED PER THE STRUCTURAL DRAWINGS, DETAILS, NOTES, AND SPECIFICATIONS.
11. CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
12. CENTERLINES OF FOUNDATIONS COINCIDE WITH COLUMN LOCATIONS, UNLESS NOTED OTHERWISE.
13. THE CONTRACTOR SHALL OBTAIN COPIES OF THE LATEST CONTRACT DOCUMENTS INCLUDING ALL BULLETINS AND ADDENDA, AND SHALL PROVIDE THE RELEVANT PORTIONS TO ALL SUBCONTRACTORS AND SUPPLIERS PRIOR TO SUBMITTAL OF SHOP DRAWINGS, FABRICATION, AND ERECTION OF STRUCTURAL MEMBERS.
14. STRUCTURAL ENGINEER OF RECORD'S ACCEPTANCE MUST BE SECURED FOR ALL STRUCTURAL SUBSTITUTIONS.
15. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, OR OTHERWISE REDUCED IN STRENGTH UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD..
16. SUPPORT DETAILS FOR ARCHITECTURAL, MECHANICAL, AND ELECTRICAL EQUIPMENT IS BASED UPON AVAILABLE INFORMATION OF MANUFACTURER. CONTRACTOR SHALL COORDINATE REQUIREMENTS OF ACTUAL EQUIPMENT SUPPLIED WITH DETAILS AND SHALL PROVIDE ANY ADDITIONAL FRAMING REQUIRED.
17. PERIODIC SITE OBSERVATION VISITS MAY BE PROVIDED BY THE ARCHITECT/ENGINEER. THE SOLE PURPOSE OF THESE OBSERVATIONS IS TO REVIEW THE GENERAL CONFORMANCE OF THE CONSTRUCTION WITH THE CONTRACT DOCUMENTS. THESE LIMITED OBSERVATIONS SHOULD NOT BE CONSIDERED AS CONTINUOUS OR EXHAUSTIVE INVESTIGATIONS TO VERIFY THAT ALL CONSTRUCTION IS IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

REFERENCED CODES AND STANDARDS

1. PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE LATEST EDITIONS OF THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE CONTRACT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, LATEST EDITIONS AS REFERENCED IN THE CURRENT BUILDING CODE IN THE STATE OF THE PROJECT, UNLESS NOTED OTHERWISE:
   - 2021 MICHIGAN BUILDING CODE
   - ASCE 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   - ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
   - ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   - TMS 492/602 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES
   - HOT AND COLD WEATHER MASONRY CONSTRUCTION BY THE MASONRY INDUSTRY COUNCIL
   - AISC 303, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
   - AISC 360, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
   - AISI S100, NORTH AMERICAN SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL MEMBERS
   - NDS, NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

DESIGN CRITERIA

1. GENERAL
   - CONCRETE DESIGN — LRFD
   - STEEL DESIGN — ASD
   - COLD FORMED DESIGN — ASD
   - WOOD DESIGN — ASD
   - RISK CATEGORY — II
2. DEAD LOADS (SUPERIMPOSED)
   - CANOPY — 15 PSF
3. SNOW LOADS
   - GROUND SNOW LOAD (P_G) — 35 PSF
   - SNOW EXPOSURE FACTOR (C_E) — 1
   - SNOW IMPORTANCE FACTOR (I_S) — 1
   - THERMAL FACTOR (C_T) — 1.2
   - FLAT ROOF SNOW LOAD (P_F) — 29.4 PSF
4. WIND LOADS
   - BASIC WIND SPEED (V) — 115 MPH
   - EXPOSURE CATEGORY — C
   - UPLIFT — 30 PSF
5. EARTHQUAKE LOADS
   - SEISMIC SITE CLASS — D
   - DESIGN SPECTRAL ACCELERATION (S_{DS}) — 0.04
   - DESIGN SPECTRAL ACCELERATION (S_{D1}) — 0.032
   - SEISMIC DESIGN CATEGORY — B
   - SEISMIC IMPORTANCE FACTOR (I_E) — 1
   - ORDINARY STEEL MOMENT FRAME — R=3.5
   - SEISMIC RESPONSE COEFFICIENT (C_S) — 0.0114
6. FLOOD LOADS
   - LOCATED WITHIN AREA PRONE TO FLOODING? — N

SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT FOR ARCHITECT/ENGINEER REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SUBMITTALS, AND THE DATE THEY WILL BE RECEIVED, AT LEAST TWENTY (20) WORKING DAYS PRIOR TO THE FIRST SUBMITTAL. THE SCHEDULE SHOULD ACCOUNT FOR AT LEAST TEN (10) WORKING DAYS OF REVIEW TIME BY THE ARCHITECT/ENGINEER FOR EACH SUBMITTAL.
2. SHOP DRAWINGS AND/OR DETAILS THAT ARE PREPARED FROM REPRODUCTIONS OF THE STRUCTURAL ENGINEER OF RECORD'S DESIGN DOCUMENTS, IN WHOLE OR IN PART, SHALL NOT BE USED AND WILL BE REJECTED.
3. THE ARCHITECT/ENGINEER MAY RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE PROJECT REQUIREMENTS.
4. THE CONSTRUCTION, MANUFACTURE, AND/OR FABRICATION OF ANY ITEMS PRIOR TO THE ARCHITECT/ENGINEER REVIEW WILL BE ENTIRELY AT THE RISK OF THE CONTRACTOR.
5. ARCHITECT'S/ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE AND COMPLIANCE WITH THE DESIGN CONCEPT AND CONTRACT DOCUMENTS. ANY ACTION NOTED DOES NOT WAIVE ANY REQUIREMENT OF CONTRACT DOCUMENTS. COORDINATION OF TRADES, AND SATISFACTORY PERFORMANCE OF THEIR WORK WHICH ARE THE CONTRACTOR'S COMPLETE RESPONSIBILITY.
6. FOR COMPONENTS THAT REQUIRE A SPECIALTY ENGINEER, THE SUBMITTAL SHALL BE SEALED BY THE ENGINEER RESPONSIBLE FOR THE DESIGN. "SPECIALTY ENGINEER" IS DEFINED AS THE STRUCTURAL ENGINEER EMPLOYED BY THE SUPPLIER TO DESIGN PRODUCTS TO MEET THE SPECIFIC CRITERIA OUTLINED IN THE CONTRACT DOCUMENTS. SEALING OF THE SUBMITTAL IMPLIES THAT THE SPECIALTY ENGINEER HAS REVIEWED THE CONTRACT DOCUMENTS AND HAS, TO THE BEST OF THEIR KNOWLEDGE, INCORPORATED ALL OF THE SPECIAL DESIGN CRITERIA CONTAINED THEREIN.
7. ITEMS THAT REQUIRE SUBMITTAL FOR STRUCTURAL REVIEW ARE:
   - CONCRETE MIX DESIGNS
   - CONCRETE REINFORCING LAYOUT
   - ANCHOR RODS
   - STRUCTURAL STEEL
   - COLD-FORMED METAL FRAMING
   - PRE-MANUFACTURED STEEL TRUSSES

FOUNDATIONS

1. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL, HAVING A MINIMUM SAFE BEARING CAPACITY OF 3,000 PSF.
2. CONTRACTOR SHALL NOTIFY THE [GEOTECHNICAL ENGINEER] WHEN EXCAVATIONS ARE COMPLETED SO THAT CONDITIONS MAY BE INSPECTED PRIOR TO PLACEMENT OF ANY FILL, REINFORCING, OR CONCRETE. NOTIFY ARCHITECT/ENGINEER OF ANY VARIATION FROM THE ANTICIPATED BEARING CAPACITY FOR APPROPRIATE REDESIGN OR LOWERING OF FOOTING.
3. THE BOTTOMS OF ALL FOOTINGS SHALL BE MINIMUM 3'-6" BELOW FINISHED GRADE.
4. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A GREATER THAN 1 VERTICAL TO 2 HORIZONTAL SLOPE WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION, UNLESS UNDERPINNING OR SHORING AND BRACING OF EXISTING FOOTING OR EXCAVATION IS PROVIDED. UNDERPINNING SHALL BE DONE SO AS NOT TO CAUSE SETTLEMENTS OF EXISTING STRUCTURE AND SHALL BE SUCH THAT COMPLETE CONTACT IS ACHIEVED BETWEEN NEW UNDERPINNING AND EXISTING CONCRETE.
5. BACKFILL FOUNDATION PIERS WITH EARTH ON BOTH SIDES OF THE PIER BY ALTERNATELY PLACING BACKFILL ON EACH SIDE SUCH THAT HEIGHT OF BACKFILL DOES NOT DIFFER BY MORE THAN 1'-0" FROM EITHER SIDE.
6. NO FOUNDATIONS OR SLABS SHALL BE PLACED ON OR AGAINST SUB-GRADE CONTAINING WATER, FROST, OR ICE. CONTRACTOR SHALL FURNISH ALL REQUIRED DE-WATERING EQUIPMENT TO MAINTAIN A DRY EXCAVATION UNTIL BACKFILL IS COMPLETE.
7. SLABS ON GRADE SHALL REST ON CLEAN GRANULAR FILL. ALL BACKFILL WITHIN CANOPY LINES SHALL BE ENGINEERED GRANULAR FILL PLACED UNDER THE FULL-TIME SUPERVISION OF A SOIL ENGINEER AND SHALL BE COMPACTED TO ACHIEVE 95% MODIFIED PROCTOR DENSITY (AS DEFINED BY ASTM D1557 MODIFIED PROCTOR TEST). FILL SHALL BE PLACED IN 9" MAXIMUM LIFTS.
8. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS, ADJACENT STRUCTURES, PAVEMENTS, AND UTILITIES. DO NOT REMOVE SHORING, SUCH AS SHEET PILING, IF IT WILL CAUSE SETTLEMENT OR DAMAGE TO EXISTING OR NEW STRUCTURES, PAVEMENT, AND/OR UTILITIES.
9. THE FOUNDATION CONTRACTOR SHALL REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS.

CONCRETE

1. ALL CONCRETE SHALL BE MADE WITH PORTLAND CEMENT AND STONE AGGREGATE, WITH MIXES DESIGNED TO MEET 28-DAY MINIMUM COMPRESSIVE STRENGTHS IN VARIOUS ELEMENTS OF THE STRUCTURE AS FOLLOWS, UNLESS NOTED OTHERWISE:

ELEMENT	F'C	TYPE	MAX. AGG.	MAX. W/C	MAX. SLUMP
FOOTINGS	4,000	I/II	1 1/2"	0.49	4" (+/- 1")
WALLS AND PIERS	4,500	I/II	3/4"	0.46	4" (+/- 1")
SLAB ON GRADE	4,500	I/II	3/4"	0.46	4" (+/- 1")

2. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE ACI 301, 318, AND SP-66 (315 INCLUDED AS A CHAPTER), LATEST EDITIONS.
3. PROVIDE NORMAL WEIGHT CONCRETE WITH CURED DENSITY OF 145 PCF AND AGGREGATE CONFORMING TO ASTM C33, UNLESS NOTED OTHERWISE.
4. CONCRETE EXPOSED TO MOISTURE AND FREEZING-AND-THAWING CYCLES (WITH OR WITHOUT EXPOSURE TO DE-ICING CHEMICALS) SHALL BE AIR-ENTRAINED.
5. THE USE OF CALCIUM CHLORIDE AND/OR OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS AND CONCRETE IS PROHIBITED.
6. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES AND PREVIOUS TESTS HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. CONCRETE PROPORTIONS SHALL BE BASED UPON FIELD EXPERIENCE AND/OR TRIAL BATCHES PER ACI 301 AND ACI 318. THE CONTROLLED CONCRETE TO BE USED SHALL CONFORM TO THE APPROVED DESIGN MIX. THE USE OF ANY ADDITIVES NOT PRESENT IN THE DESIGN MIX IS PROHIBITED. REPRESENTATIVE TEST CYLINDERS WILL BE TAKEN FROM THE CONCRETE PLACED EACH DAY IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DRAWINGS FOR REVIEW OF ALL JOINTS IN THE CONCRETE WORK INCLUDING CONSTRUCTION, EXPANSION, CONTRACTION, AND MOVEMENT JOINTS. DRAWINGS SHALL BE SUBMITTED AT LEAST TWO WEEKS PRIOR TO EXPECTED START OF WORK. JOINT LOCATIONS SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS DESCRIBED IN ACI 224, LATEST EDITION.
8. ALL CONCRETE STRUCTURAL MEMBERS SHALL BE PLACED FOR THEIR FULL DEPTHS IN ONE OPERATION.
9. CONTRACTOR SHALL DEPOSIT ALL CONCRETE DURING PLACING IN SUCH A MANNER AS TO NOT OVERLOAD THE FORM WORK.
10. ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS, VERIFY WITH THE STRUCTURAL ENGINEER OF RECORD.
11. CONCRETE SHALL NOT BE PLACED UNTIL PREPARATIONS HAVE BEEN APPROVED BY THE TESTING AND INSPECTION AGENCY INCLUDING FORMWORK, REINFORCEMENT, EMBEDMENTS, AND ACCESSORIES.

CONCRETE REINFORCEMENT

1. REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES.
   - DEFORMED BARS — ASTM A615, GRADE 60
   - WELDED WIRE REINFORCEMENT — ASTM A1064
2. UNLESS NOTED OTHERWISE, THE CONCRETE COVER FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL NOT BE LESS THAN THE FOLLOWING:
   - CAST AGAINST EARTH — 3"
   - EXPOSED TO EARTH/WEATHER — 2"
   - SLABS, WALLS, AND JOISTS
     - NO.11 BAR AND SMALLER — 3/4"
   - BEAMS AND COLUMNS
     - TIES, STIRRUPS, SPIRALS — 1 1/2"
3. DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI 318, ACI 315R, AND THE ACI DETAILING MANUAL SP-066, LATEST EDITIONS.
4. WHERE A 90-DEGREE, 135-DEGREE, OR 180-DEGREE HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE.
5. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS NOTED OTHERWISE.
6. UNLESS NOTED OTHERWISE, ALL LAP SPLICES ARE TO BE CLASS B TENSION LAP SPLICES EXCEPT THE MINIMUM LAP LENGTH SHALL BE 24".
7. LAP WELDED WIRE REINFORCEMENT TWO PANEL SPACES. WIRE MESH SHALL BE SUPPORTED ON CHAIRS SO THAT PROPER COVER IS MAINTAINED. DO NOT USE THE METHOD OF PULLING UP WITH A HOOK DURING CONCRETE POURING TO POSITION THE REINFORCING.
8. UNLESS NOTED OTHERWISE, TERMINATE BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.

STRUCTURAL STEEL

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE:
   - W-SHAPES, C-SHAPES, MC-SHAPES — ASTM A992, MIN 50 KSI
   - ANGLES, M-SHAPES, S-SHAPES, HP-SHAPES — ASTM A572, MIN 50 KSI
   - HSS-SHAPES — ASTM A500, GRADE C, MIN 50 KSI
   - ALL OTHER — ASTM A36, MIN 36 KSI
2. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:
   - ANGLES, PLATES & BARS (MAX 4" THICKNESS) — ASTM A572, MIN 50 KSI
   - WT-SHAPES — ASTM A992, MIN 50 KSI
   - BOLTS — ASTM F3125
   - NUTS — ASTM A563
   - WASHERS — ASTM F436
   - ANCHOR RODS — ASTM F1554 WELDABLE, GRADE 55
   - WELD ELECTRODES — E70XX
3. ALL BOLTED CONNECTIONS ARE BEARING TYPE CONNECTIONS MADE WITH 3/4" DIAMETER HIGH-STRENGTH BOLTS IN 13/16" DIAMETER OPEN HOLES INSTALLED TO THE SNUG TIGHT CONDITION, UNLESS NOTED OTHERWISE.
4. SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER OF RECORD.
5. DO NOT USE OVERSIZED OR SLOTTED HOLES FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
6. STEEL THAT MAY ACCUMULATE WATER SHALL HAVE DRAIN HOLES. ALL DRAIN PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1-INCH IN DIAMETER AND SHALL BE GROUND SMOOTH. THESE DRAINS MUST BE KEPT CLEAN AND OPEN.
7. SHOW ALL COPES, HOLES, OPENINGS, AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS.
8. ALL WELDING SHALL BE DONE BY CERTIFIED, LICENSED WELDERS AND SHALL BE IN CONFORMANCE WITH THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1, LATEST EDITION.
9. NO PENETRATIONS ARE PERMITTED THROUGH STRUCTURAL STEEL MEMBERS UNLESS INDICATED ON STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
10. APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD SHALL BE MANDATORY FOR THE USE OF CUTTING TORCH IN THE FIELD.
11. ALL GROUT UNDER STEEL PLATES SHALL BE NON-SHRINK "PRE-MIX" TYPE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI, TESTED IN ACCORDANCE WITH CONCRETE SPECIFICATIONS. USE NON-STAINING GROUT AT EXPOSED LOCATIONS. GROUT BENEATH COLUMN BASE PLATES SHALL BE INSTALLED AS NOTED IN "THE AISC CODE OF STANDARD PRACTICE" AFTER THE STEEL FRAMING ABOVE THE BASE PLATE IS PLUMB AND HELD IN PLACE WITH TEMPORARY GUYING, IF NECESSARY, AND PRIOR TO POURING ANY SUPPORTED SLABS ON METAL DECK THAT ARE SUPPORTED BY THE FRAME OR CONSTRUCTING ANY ENGAGED WALLS THAT WOULD PREVENT PROPER PLUMB OF THE FRAME FROM BEING ACHIEVED.
12. THE STEEL FABRICATOR MAY SUBSTITUTE HEAVIER SECTIONS IN PLACE OF THE SECTIONS SHOWN ON THE DRAWINGS TO ACHIEVE ECONOMY OF REPETITION, FOR AVAILABILITY, OR TO TAKE ADVANTAGE OF ROLLING MILL PRODUCTION SCHEDULES SO LONG AS THE CHANGES ARE MADE KNOWN TO THE ARCHITECT AND STRUCTURAL ENGINEER, AND ARE ACCEPTABLE TO BOTH.
13. ALL STRUCTURAL STEEL EXCEPT COLUMNS AND COLUMN BASE PLATES SHALL BE PAINTED WITH ONE SHOP-APPLIED COAT OF RUST INHIBITING PRIMER AFTER SURFACE PREPARATION BY THE SOCIETY FOR PROTECTIVE COATINGS (SSPC) SP2 "POWER TOOL CLEANING", UNLESS NOTED OTHERWISE. HSS COLUMNS AND BASE PLATES SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A123.
14. ALL STRUCTURAL STEEL EXPOSED TO VIEW IN THE FINISHED WORK INCLUDING BEAMS, COLUMNS, GIRTS, TRUSSES, BRIDGING, BRACING, AND CONNECTIONS SHALL BE CLASSIFIED AS "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" (AESS) AND SHALL MEET THE ADDITIONAL REQUIREMENT GIVEN IN AISC "STEEL CONSTRUCTION MANUAL", LATEST EDITION - SECTION 10 OF AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES". SEE ARCHITECTURAL DRAWINGS AND SPECS FOR LOCATIONS AND FINISH REQUIREMENTS OF AESS.
15. FOR MISCELLANEOUS STEEL CONSTRUCTION NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

FIELD DRILLED ADHESIVE ANCHORS

1. BASIS OF DESIGN FOR FIELD DRILLED ADHESIVE ANCHORS AND REBAR IN CONCRETE SHALL BE HILTI HIT-HY 200 V3 AS MANUFACTURED BY HILTI, OR EQUIVALENT PRODUCT. BASIS OF DESIGN FOR FIELD DRILLED ADHESIVE ANCHORS AND REBAR IN MASONRY SHALL BE HILTI HIT-HY 270 AS MANUFACTURED BY HILTI, OR EQUIVALENT PRODUCT. FOR HOLLOW OR MULTI-WYTHE MASONRY, PROVIDE APPROPRIATELY SIZED SCREEN TUBE PER INSTALLATION INSTRUCTIONS. FOR SUBSTITUTION PURPOSES, SIGNED AND SEALED CALCULATIONS SHALL BE PROVIDED FOR REVIEW, INDICATING THE SUBSTITUTED ANCHOR MEETS THE CAPACITY REQUIREMENTS OF THE DETAILED ANCHOR.
2. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
3. USE ONLY CODE-APPROVED ANCHORS WITH VALID EVALUATION REPORT FOR USE IN THE BASE MATERIAL SHOWN ON THE CONSTRUCTION DOCUMENTS. SUBMIT EVALUATION REPORT TO STRUCTURAL ENGINEER OF RECORD AND SPECIAL INSPECTION AGENT FOR APPROVAL. DO NOT INSTALL ANCHORS UNTIL SUBMITTAL IS RETURNED "REVIEWED WITHOUT COMMENT."
4. ONLY ONE LENGTH ANCHOR SHALL BE PRESENT ON THE JOB SITE FOR A GIVEN ANCHOR DIAMETER, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
5. ALL FIELD INSTALLED ADHESIVE ANCHORS SHALL CONFORM TO AC-308. INSTALLER OF FIELD INSTALLED ADHESIVE ANCHORS SHALL BE TRAINED BY ANCHOR MANUFACTURER TO ENSURE PROPER INSTALLATION REQUIREMENTS SUCH AS HOLE CLEANING, HORIZONTAL AND OVERHEAD APPLICATIONS, EMBEDMENT DEPTHS GREATER THAN 10 INCHES, AND WATER FILLED HOLES.
6. ADHESIVE ANCHORS OF THE DIAMETER AND EMBEDMENT SHOWN ON THE DRAWINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNDER THE CONTINUOUS SUPERVISION OF AN INDEPENDENT TESTING AGENCY. WHERE THE PROVISIONS OF THE ABOVE REFERENCED DOCUMENTS ARE IN CONFLICT, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. AT LOCATIONS WHERE ANCHORAGE IS NOT SPECIFIED, CONSULT STRUCTURAL ENGINEER OF RECORD.
7. CLEAN EXISTING CONCRETE SURFACE TO SOLID STRUCTURAL CONCRETE. GRIND SMOOTH FOR FULL STEEL CONTACT AND TO PREVENT GAPS BETWEEN STEEL AND CONCRETE. ALTERNATIVELY, PROVIDE NON-SHRINK GROUT IN ALL VOIDS BETWEEN STEEL AND BASE MATERIAL. FOREIGN MATERIAL SHALL NOT BE PLACED IN THE HOLES THAT RECEIVE ADHESIVE ANCHORS. ALL ABANDONED HOLES DRILLED IN CONCRETE SHALL BE COMPLETELY FILLED WITH STRUCTURAL GRADE EPOXY.
8. THE CONTRACTOR SHALL CREATE A TEMPLATE AT EACH ADHESIVE ANCHOR CONNECTION LOCATION **PRIOR** TO FABRICATING HOLES IN CONNECTING PLATES OR ROLLED SHAPES. TEMPLATES SHALL BE MADE BY FIRST LOCATING EXISTING REINFORCING STEEL USING NON-DESTRUCTIVE TESTING EQUIPMENT, AND THEN DRILLING ANCHOR HOLES SUCH THAT NO CONFLICT EXISTS WITH THE EXISTING REINFORCING. ANCHOR LOCATIONS IN THE FIELD MAY BE RELOCATED A MAXIMUM OF 1 1/2 INCHES FROM THE DIMENSIONS SHOWN ON THE DRAWINGS TO AVOID CONFLICTS WITH THE EXISTING REINFORCING STEEL. HOWEVER, DO NOT EXCEED MINIMUM ANCHOR SPACINGS OR EDGE DISTANCES PER MANUFACTURER'S REQUIREMENTS.
9. ADHESIVE ANCHORS SHALL BE INSTALLED PERPENDICULAR TO THE FACE OF THE SURFACE BEING DRILLED. THE MAXIMUM TOLERANCE FOR DEVIATION FROM PERPENDICULAR SHALL BE 6 DEGREES. ALL ADHESIVE ANCHORS INSTALLED OUTSIDE OF THE SPECIFIED TOLERANCE SHALL BE CONSIDERED UNACCEPTABLE. USE OF DIAMOND CORE BIT WITH ROUGHENING TOOL FOR ANCHOR HOLES REQUIRES APPROVAL FROM STRUCTURAL ENGINEER OF RECORD PRIOR TO DRILLING.
10. HOLES IN CONNECTION PLATES SHALL BE NO MORE THAN 3/16 INCH LARGER THAN THE ADHESIVE ANCHOR ROD DIAMETER. IF LARGER DIAMETER HOLES ARE USED FOR ERECTION PURPOSES, THE CONTRACTOR MUST PROVIDE PLATE WASHERS WITH HOLES NO MORE THAN 1/16 INCH LARGER THAN THE ANCHOR. PLATE WASHERS MUST BE WELDED TO THE CONNECTION PLATE TO TRANSFER THE LOAD. WELDING MUST TAKE PLACE AFTER HOLES ARE DRILLED, BUT PRIOR TO ADHESIVE INSTALLATION TO AVOID BURNING OR MELTING THE ADHESIVE.

SAW CUTTING EXISTING CONCRETE AND/OR MASONRY

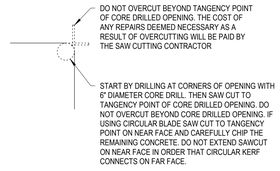
1. SAW CUTTING OF NEW OPENINGS IN EXISTING CONCRETE AND/OR MASONRY WALLS SHALL BE DONE WITHOUT OVERCUTTING BEYOND THE BOUNDARIES OF THE INTENDED OPENING. ANY STRUCTURAL REPAIRS REQUIRED BY THE STRUCTURAL ENGINEER OF RECORD AS A RESULT OF OVERCUTTING BEYOND THE BOUNDARIES OF AN OPENING SHALL BE PAID FOR BY THE SAW CUTTING CONTRACTOR. SEE DRAWINGS FOR ADDITIONAL INFORMATION.

FIELD DRILLED MECHANICAL ANCHORS

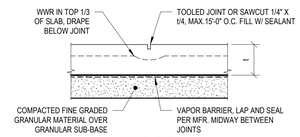
1. BASIS OF DESIGN FOR FIELD DRILLED MECHANICAL ANCHORS IN CONCRETE AND SOLID GROUTED MASONRY SHALL BE HILTI KWIK BOLT TZ2 ANCHORS AS MANUFACTURED BY HILTI, OR EQUIVALENT PRODUCT. FOR SUBSTITUTION PURPOSES, SIGNED AND SEALED CALCULATIONS SHALL BE PROVIDED FOR REVIEW, INDICATING THE SUBSTITUTED ANCHOR MEETS THE CAPACITY REQUIREMENTS OF THE DETAILED ANCHOR.
2. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
3. USE ONLY CODE-APPROVED ANCHORS WITH VALID EVALUATION REPORT FOR USE IN THE BASE MATERIAL SHOWN ON THE CONSTRUCTION DOCUMENTS. SUBMIT EVALUATION REPORT TO STRUCTURAL ENGINEER OF RECORD AND SPECIAL INSPECTION AGENT FOR APPROVAL. DO NOT INSTALL ANCHORS UNTIL SUBMITTAL IS RETURNED "REVIEWED WITHOUT COMMENT."
4. ONLY ONE LENGTH ANCHOR SHALL BE PRESENT ON THE JOB SITE FOR A GIVEN ANCHOR DIAMETER, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
5. ALL FIELD INSTALLED MECHANICAL ANCHORS SHALL CONFORM TO AC-193. INSTALLER OF FIELD INSTALLED MECHANICAL ANCHORS SHALL BE TRAINED BY ANCHOR MANUFACTURER TO ENSURE PROPER INSTALLATION REQUIREMENTS SUCH AS DRILLING METHODS, HOLE CLEANING, AND INSTALLATION TORQUE.
6. MECHANICAL ANCHORS OF THE DIAMETER AND EMBEDMENT SHOWN ON THE DRAWINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNDER THE CONTINUOUS SUPERVISION OF AN INDEPENDENT TESTING AGENCY. WHERE THE PROVISIONS OF THE ABOVE REFERENCED DOCUMENTS ARE IN CONFLICT, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. AT LOCATIONS WHERE ANCHORAGE IS NOT SPECIFIED, CONSULT STRUCTURAL ENGINEER OF RECORD.
7. CLEAN EXISTING CONCRETE SURFACE TO SOLID STRUCTURAL CONCRETE. G

TABLE 1705.6 - REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS		
TYPE	**CONTINUOUS**	**PERIODIC**
Verify materials below shallow foundations are adequate to achieve the design bearing capacity	--	X
Verify excavations are extended to proper depth and have reached proper material	--	X
Perform classification and testing of compacted fill materials	--	X
During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	X	--
Prior to placement of compacted fill, inspect subgrade and verify that the site has been prepared properly	--	X

TABLE 1705.3 - REQUIRED SPECIAL INSPECTION AND TESTS OF CONCRETE CONSTRUCTION		
TYPE	**CONTINUOUS**	**PERIODIC**
Inspect reinforcement, and verify placement.	--	X
Inspect anchors cast in concrete	--	X
Inspect anchors post-installed in hardened concrete members:		
Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	--
Mechanical anchors and adhesive anchors not defined above	--	X
Verify use of required design mix	--	X
Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	X	--
	X	--
Verify maintenance of specified curing temperature and techniques	--	X
Inspect formwork for shape, location, and dimensions of the concrete member being formed	--	X

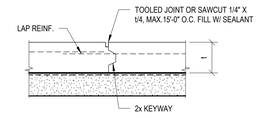


3 D-S002 NEW OPENINGS IN EXISTING CONCRETE
Not to Scale



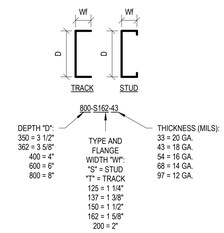
CONTROL JOINT

- PURPOSE OF SLAB ON GRADE JOINTING IS TO BREAK THE SLAB POURS INTO SIZES THAT ARE MANAGEABLE FOR FINISHING AND TO LIMIT TOTAL SHRINKAGE.
- PLACE CONSTRUCTION JOINTS SUCH THAT THE MAXIMUM SLAB POUR SIZE IS LIMITED TO 60'-0" x 60'-0". THIS POUR LIMITATION MAY BE EXPANDED BASED ON CONTRACTOR'S METHOD OF PLACEMENT, CURING TECHNIQUE, AND EXPERIENCE IN CONTROLLING CRACKING IN SIMILAR POUR SIZES. A POUR PLAN SHALL BE SUBMITTED AND REVIEWED BY RDA. ANY COMMENTS MADE BY RDA ARE ONLY RECOMMENDATIONS AS THE CONTRACTOR IS ULTIAMTELY RESPONSIBLE FOR CONCRETE PLACEMENT AND ASSOCIATED RESULTS.
- SLAB POURS SHALL BE SQUARE IF POSSIBLE. BUT IN NO CASE SHALL THEY BE GREATER THAN TWICE AS LONG AS THEY ARE WIDE.
- CONTROL JOINTS SHALL SUBDIVIDE A SLAB POUR INTO APPROX. 15'-0" x 15'-0" OR SMALLER AREAS.
- JOINTS SHALL BE PLACED WHERE POSSIBLE TO ALIGN WITH MAIN COLUMN LINES AND TO ELIMINATE RE-ENTRANT CORNERS IN THE SLAB.
- PROVIDE SLAB JOINT PATTERN AS SHOWN ON THE DRAWINGS, OR IF NOT SHOWN, CONTRACTOR SHALL SUPPLY A PROPOSED JOINT LAYOUT PATTER TO THE ARCHITECT FOR APPROVAL.



CONSTRUCTION JOINT

4 D-S002 TYPICAL SLAB ON GRADE JOINTS
Not to Scale



5 D-S002 CFMF DESIGNATIONS
Not to Scale

STRUCTURAL STEEL REQUIREMENTS PER: AISC 360 - CHAPTER N - QUALITY CONTROL AND QUALITY ASSURANCE			
MINIMUM REQUIREMENTS			
PER IBC 2021 1705.2.1 STRUCTURAL STEEL: SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES, AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360			
QC	QUALITY CONTROL	O	THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
QA	QUALITY ASSURANCE	P	THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT (OR BOLTED CONNECTION)

TABLE N5.4-1 - INSPECTION TASKS PRIOR TO WELDING		
TASK	**QC**	**QA**
Welding qualification records and continuity records	P	O
Welding procedure specifications (WPS) available	P	P
Manufacturer certifications for welding consumables available	P	P
Material identification (type/grade)	O	O
Material identification system	O	O
Fit-up of groove welds (including joint geometry): • Joint penetrations • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location) • Backing type and fit (if applicable)	O	O
Fit-up of CJP groove welds of HSS T-, Y-, and K-joints w/o backing (including joint geometry): • Joint preparations • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	P	O
Configuration and finish of access holes	O	O
Fit-up of fillet welds: • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	O	O
Check welding equipment	O	--

TABLE N5.4-2 - INSPECTION TASKS DURING WELDING		
Control and handling of welding consumables: • Packaging • Exposure Control	O	O
No welding over cracked tack welds	O	O
Environmental conditions • Wind speed within limits • Precipitation and temperature	O	O
WPS followed: • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flow rate • Preheat applied • Interpass temperature maintained (min/max) • Proper position (F, V, H, OH)	O	O
Welding techniques: • Interpass and final cleaning • Each pass within profile limitation • Each pass meets quality requirements	O	O
Placement and installation of steel headed stud anchors	P	P

TABLE N5.4-3 - INSPECTION TASKS AFTER WELDING		
Welds cleaned	O	O
Size, length, and location of welds	P	P
Welds meet visual acceptance criteria: • Crack prohibition, weld/base-metal fusion, crater cross section • Weld profiles, weld size, undercut, porosity	P	P
Arc strikes	P	P
k-area	P	P
Weld access holes in rolled heavy shapes and built-up heavy shapes	P	P
Backing removed and weld tabs removed (if required)	P	P
Repair activities	P	P
Document acceptance or rejection of welded joint or member	P	P
No prohibited welds have been added without the approval of the EOR	O	O

TABLE N5.6-1 - INSPECTION TASKS PRIOR TO BOLTING		
TASK	**QC**	**QA**
Manufacturer's certifications available for fastener materials	O	P
Fasteners marked in accordance with ASTM requirements	O	O
Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O
Correct bolting procedure selected for joint detail	O	O
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	P	O
Proper storage provided for bolts, nuts, washers, and other fastener components	O	O

TABLE N5.6-2 - INSPECTION TASKS DURING BOLTING		
Fastener assemblies placed in all holes and washers and nuts are positioned as required	O	O
Joint brought to the snug-tight condition prior to pretensioning operation	O	O
Fastener component not turned by the wrench prevented from rotating	O	O
Fasteners are pretensioned in accordance with RSCS Specification, progressing systematically from the rigid point toward the free edges	O	O

TABLE N5.6-3 - INSPECTION TASKS AFTER BOLTING		
Document acceptance or rejection of bolted connections	P	P

robert darvas associates
consulting structural engineers
440 south main street
ann arbor, mi 48104
RDA No. 26013

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITIONS AND RENOVATIONS TO:

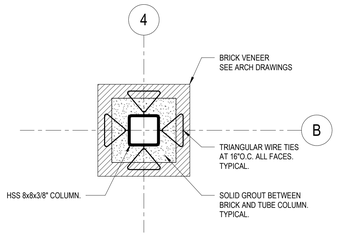
FLOYD ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD
MIDLAND, MI 48640

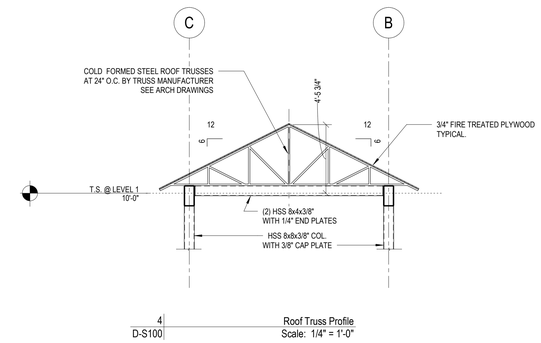
DRAWING TITLE

SPECIAL INSPECTIONS AND TYPICAL DETAILS

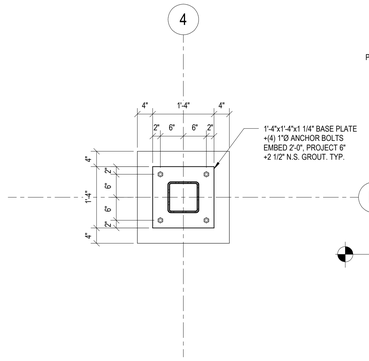
SEAL	DRAWN: NM	PROJECT NO.: 26-210
	CHECKED: SMR	DRAWING NO.: D-S002
	REVIEWED: SMR	
	DATE: OCT 19, 2026	SHEET NO.: 3 OF 23
	SCALE: As indicated	



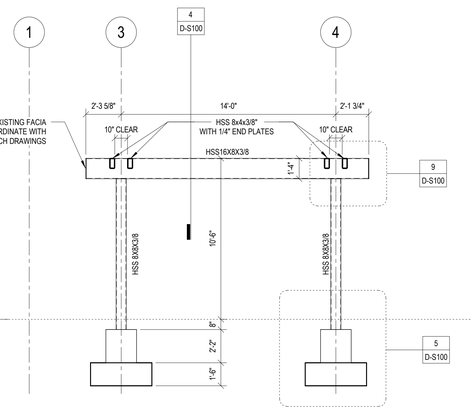
8 D-S100 Brick Pier Plan Detail
Scale: 3/4" = 1'-0"



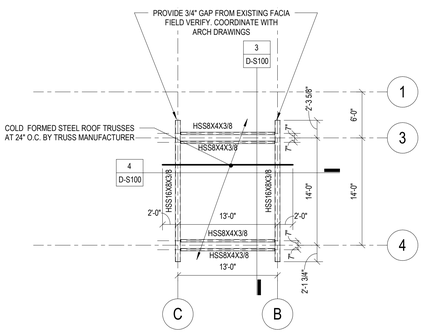
4 D-S100 Roof Truss Profile
Scale: 1/4" = 1'-0"



7 D-S100 Base Plate Plan Detail
Scale: 3/4" = 1'-0"

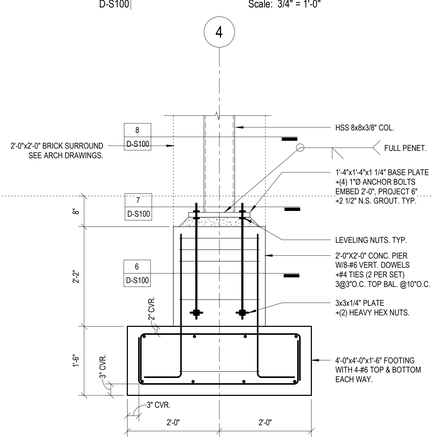


3 D-S100 Canopy Section
Scale: 1/4" = 1'-0"

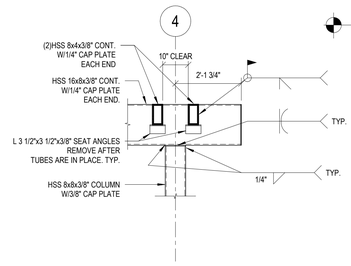


ALL CANOPY STEEL MEMBERS ARE TO BE HOT DIP GALVANIZED AND PREPARE FOR PAINTING

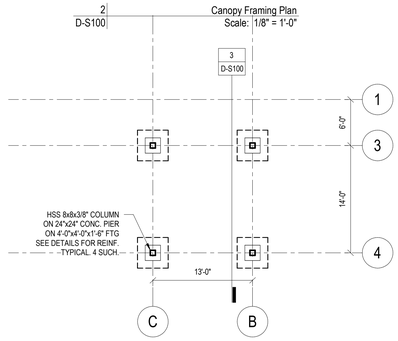
6 D-S100 Concrete Pier Plan Detail
Scale: 3/4" = 1'-0"



5 D-S100 Pier and Footing Detail
Scale: 3/4" = 1'-0"



9 D-S100 Beam/Column Connection Detail
Scale: 1/2" = 1'-0"



2 D-S100 Canopy Framing Plan
Scale: 1/8" = 1'-0"

1 D-S100 Foundation Plan
Scale: 1/8" = 1'-0"

robert darvas associates
consulting structural engineers
440 south main street
ann arbor, mi 48104
RDA No. 25013

NO.	REVISIONS / SUBMISSIONS	DATE

Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITIONS AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

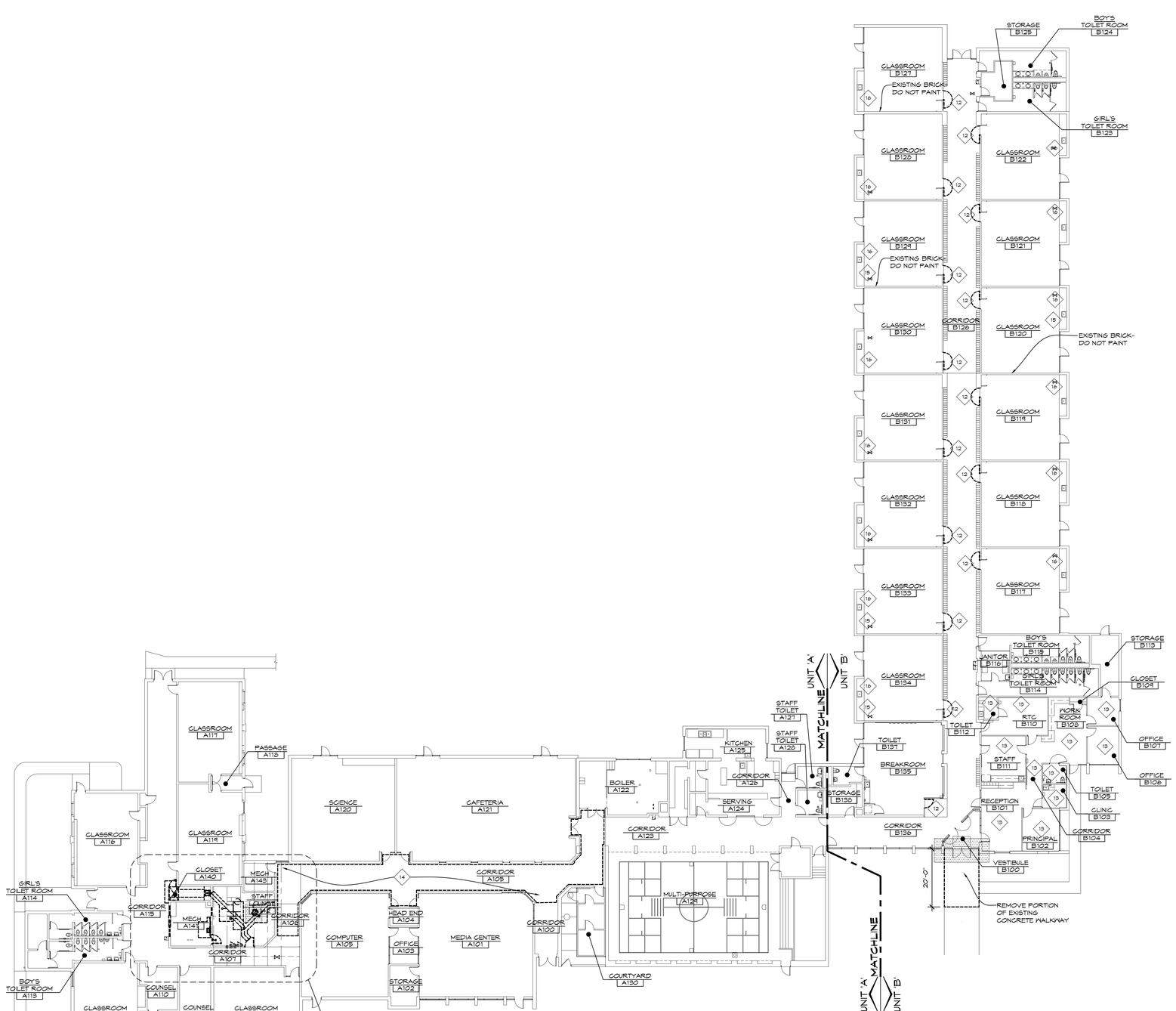
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI 48640

DRAWING TITLE

STRUCTURAL PLANS, SECTIONS, AND DETAILS

SEAL	DRAWN NM	PROJECT NO. 26-210
	CHECKED SMR	DRAWING NO. D-S100
	REVIEWED SMR	
	DATE OCT 19, 2026	SHEET NO. 4 OF 23
	SCALE As indicated	

PROJECT 'D'



NORTH

1/16" = 1'-0"

COMPOSITE DEMOLITION PLAN

X01

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED. HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.

PROJECT 'D'

◇ DEMOLITION NOTES

1. REMOVE EXISTING LOUVER.
2. REMOVE EXISTING DOOR AND FRAME.
3. SAW CUT AND REMOVE PORTION OF EXISTING CONCRETE FLOOR AS REQUIRED TO REMOVE FLOOR DRAINS/ CLEAN OUTS. COORDINATE WITH PLUMBING TRADES.
4. REMOVE EXISTING GAS LINE.
5. REMOVE EXISTING CONCRETE EQUIPMENT PAD.
6. REMOVE EXISTING COUNTERTOP AND BASE CABINETS.
7. REMOVE EXISTING SINK.
8. REMOVE EXISTING WOOD STUD WALL.
9. REMOVE EXISTING ELECTRICAL PANEL. RE: ELECTRICAL
10. REMOVE PORTION OF EXISTING MASONRY WALL.
11. REMOVE EXISTING SHELF.
12. REMOVE EXISTING WOOD DOOR, REMOVE SECURITY BOOT AND STORAGE CASE FROM EXISTING DOOR PANEL AND SALVAGE FOR RE-INSTALLATION. EXISTING FRAME TO REMAIN.
13. REMOVE EXISTING FLOORING AND WALL BASE.
14. REMOVE EXISTING LAY-IN CEILING.
15. REMOVE EXISTING WALL COVERING.
16. REMOVE EXISTING SHELVES. SALVAGE FOR RE-INSTALLATION.
17. REMOVE AND SALVAGE EXISTING VCT FLOOR TILE.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

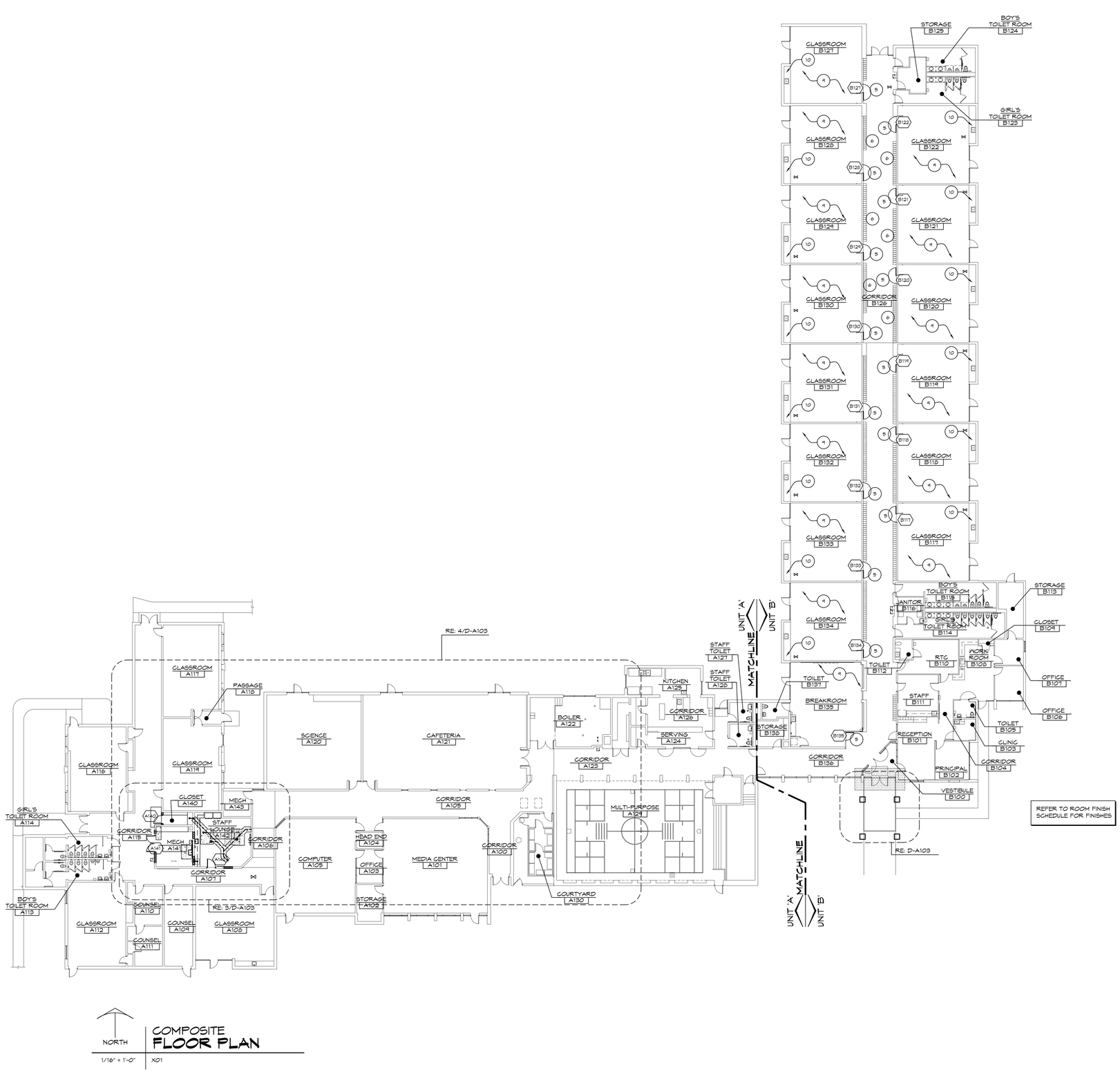
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE DEMOLITION PLAN

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. D-A100
	REVIEWED MLB	DRAWING NO. D-A100
	DATE OCT 19, 2026	SHEET NO. 5 OF 24
	SCALE 1/16"=1'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC FLOYD D-A100.COT
Plot date: 10/19/2026 11:19 AM



NORTH

1/16" = 1'-0"

COMPOSITE FLOOR PLAN

X01

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.
10. AT ALL EXISTING FINISHES, REPAIR WALLS, CEILINGS AND SURFACES AT DEMOLITION WITH SAME MATERIAL TO BE SMOOTH WITH EXISTING MATERIAL AND READY FOR PAINTED FINISH.

○ CONSTRUCTION NOTES

1. NEW DOOR AND FRAME.
2. CONCRETE FLOOR AT EXISTING FLOOR OPENING.
3. NEW SHELVING, RE: DETAIL 3/D-A601
4. INFILL EXISTING WALL OPENING WITH CMU MASONRY. TOOTH AND KEY MASONRY.
5. NEW DOOR IN EXISTING FRAME. RE-INSTALL EXISTING SECURITY BOOT AND CASE.
6. SAND AND PAINT EXISTING LOCKERS (ADD ALTERNATE #1).
7. INSTALL SELF-LEVELING TO ELIMINATE EXISTING SLOPE IN FLOORING, ASSUME ENTIRE ROOM.
8. 4" CONCRETE WITH 6x6x1.4x1.4 WWR, DOWEL INTO EXISTING CONCRETE FLOOR WITH #3 BARS AT 16" O.C.
9. PAINT EXISTING PLASTER WALLS.
10. RE-INSTALL EXISTING SHELVING.

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

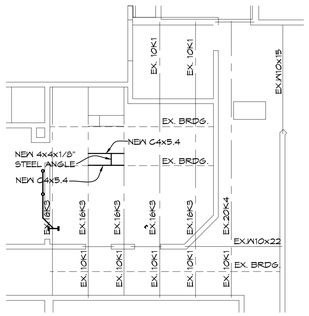
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE FLOOR PLAN

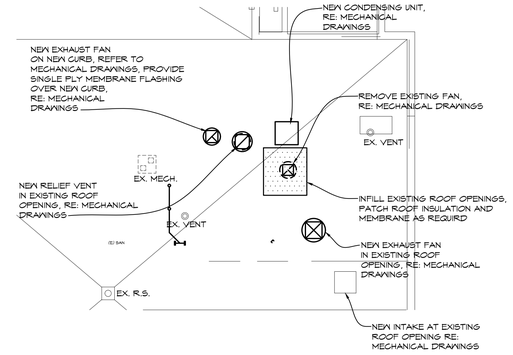
SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. D-A101
	REVIEWED MLB	DRAWING NO. D-A101
	DATE OCT 19, 2026	SHEET NO. 6 OF 24
	SCALE 1/16"=1'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC FLOYD D-A101 COF
Plot date: 10/19/2026 11:19 AM



NORTH | **2** ENLARGED **FRAMING PLAN**

1/4" = 1'-0" | X01



NORTH | **1** ENLARGED **ROOF PLAN**

1/4" = 1'-0" | X01

NORTH | COMPOSITE **ROOF PLAN**

1/16" = 1'-0" | X01

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.
10. AT ALL EXISTING FINISHES, REPAIR WALLS, CEILINGS AND SURFACES AT DEMOLITION WITH SAME MATERIAL TO BE SMOOTH WITH EXISTING MATERIAL AND READY FOR PAINTED FINISH.

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

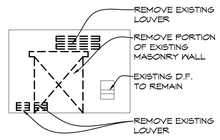
FLOYD ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE
COMPOSITE ROOF PLAN AND ENLAREGED ROOF PLAN

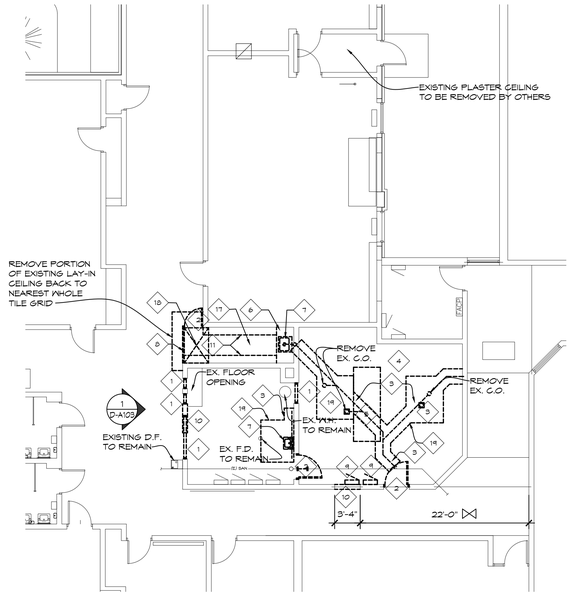
SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. D-A102
	REVIEWED MLB	DRAWING NO. D-A102
	DATE OCT 19, 2026	SHEET NO. 7 OF 24
	SCALE 1/16"=1'-0"	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC FLOYD D-A102 COMPOSITE ROOF PLAN AND ENLAREGED ROOF PLAN.dwg
Plot date: 10/19/2026 11:19 AM



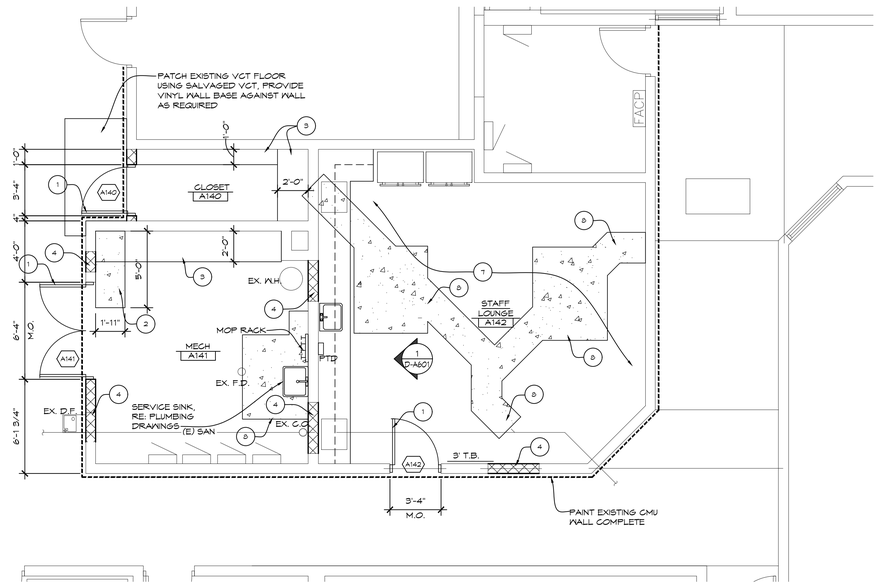
1 DEMOLITION ELEVATION

1/8" = 1'-0"



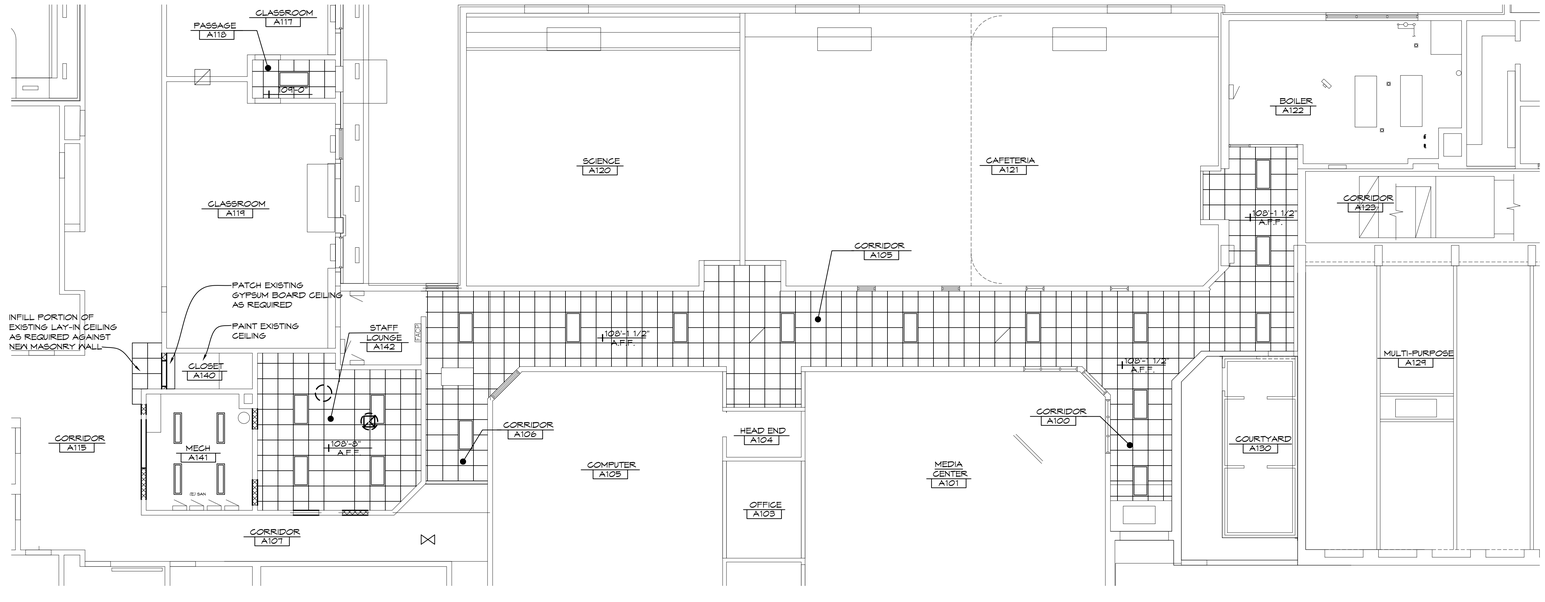
2 PARTIAL DEMOLITION PLAN

1/8" = 1'-0" X01



3 PARTIAL FLOOR PLAN

1/4" = 1'-0" X01



NORTH 4 PARTIAL REFLECTED CEILING PLAN

1/8" = 1'-0" X01

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
2. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT BEING REMOVED.
3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.
4. AT ALL DEMOLITION AREAS, PATCH AND FINISH TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND/OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS ELEMENTS.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS SCHEDULED FOR REMOVAL.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
8. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED. HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN.
9. REPAIR ALL WALLS, FLOORS AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES
10. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS OF THE BUILDING DURING CONSTRUCTION TO PREVENT DAMAGE, INCLUDING WEATHERPROOFING AT ALL OPENINGS.
11. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING AND DISCONNECTING ALL INCIDENTAL ITEMS.

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN.
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNNG WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.
10. AT ALL EXISTING FINISHES, REPAIR WALLS, CEILINGS AND SURFACES AT DEMOLITION WITH SAME MATERIAL TO BE SMOOTH WITH EXISTING MATERIAL AND READY FOR PAINTED FINISH.

DEMOLITION NOTES

1. REMOVE EXISTING LOUVER.
2. REMOVE EXISTING DOOR AND FRAME.
3. SAW CUT AND REMOVE PORTION OF EXISTING CONCRETE FLOOR AS REQUIRED TO REMOVE FLOOR DRAINS/ CLEAN OUTS. COORDINATE WITH PLUMBING TRADES.
4. REMOVE EXISTING GAS LINE.
5. REMOVE EXISTING CONCRETE EQUIPMENT PAD.
6. REMOVE EXISTING COUNTERTOP AND BASE CABINETS.
7. REMOVE EXISTING SINK.
8. REMOVE EXISTING WOOD STUD WALL.
9. REMOVE EXISTING ELECTRICAL PANEL. RE: ELECTRICAL
10. REMOVE PORTION OF EXISTING MASONRY WALL.
11. REMOVE EXISTING SHELF.
12. REMOVE EXISTING WOOD DOOR, REMOVE SECURITY BOOT AND STORAGE CASE FROM EXISTING DOOR PANEL AND SALVAGE FOR RE-INSTALLATION. EXISTING FRAME TO REMAIN
13. REMOVE EXISTING FLOORING AND WALL BASE.
14. REMOVE EXISTING LAY-IN CEILING.
15. REMOVE EXISTING WALL COVERING.
16. REMOVE EXISTING SHELVES. SALVAGE FOR RE-INSTALLATION.
17. REMOVE AND SALVAGE EXISTING VCT FLOOR TILE.
18. REMOVE PORTION OF EXISTING GYPSUM BOARD CEILING AND FRAMING ABOVE AS REQUIRED FOR NEW WALL CONSTRUCTION.
19. SAW CUT AND REMOVE PORTION OF EXISTING CONCRETE FLOORING AS REQUIRED FOR NEW UNDERFLOOR PLUMBING WORK, COORDINATE WITH PLUMBING DRAWINGS.

CONSTRUCTION NOTES

1. NEW DOOR AND FRAME.
2. CONCRETE FLOOR AT EXISTING FLOOR OPENING.
3. NEW SHELVING, RE: DETAIL 3/D-A601
4. INFILL EXISTING WALL OPENING WITH CMU MASONRY. TOOTH AND KEY MASONRY.
5. NEW DOOR IN EXISTING FRAME. RE-INSTALL EXISTING SECURITY BOOT AND CASE.
6. SAND AND PAINT EXISTING LOCKERS (ADD ALTERNATE #1).
7. INSTALL SELF-LEVELING TO ELIMINATE EXISTING SLOPE IN FLOORING, ASSUME ENTIRE ROOM.
8. 4" CONCRETE WITH 6x6x1.4x1.4 WWR, DOWEL INTO EXISTING CONCRETE FLOOR WITH #3 BARS AT 16" O.C.
9. PAINT EXISTING PLASTER WALLS.
10. RE-INSTALL EXISTING SHELVING.

CEILING LEGEND

- NEW 2x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- NEW 1x4 LIGHT FIXTURE, RE: ELECTRICAL PLANS
- 2X2 SUSPENDED ACOUSTIC CEILING - TYPE 'A'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

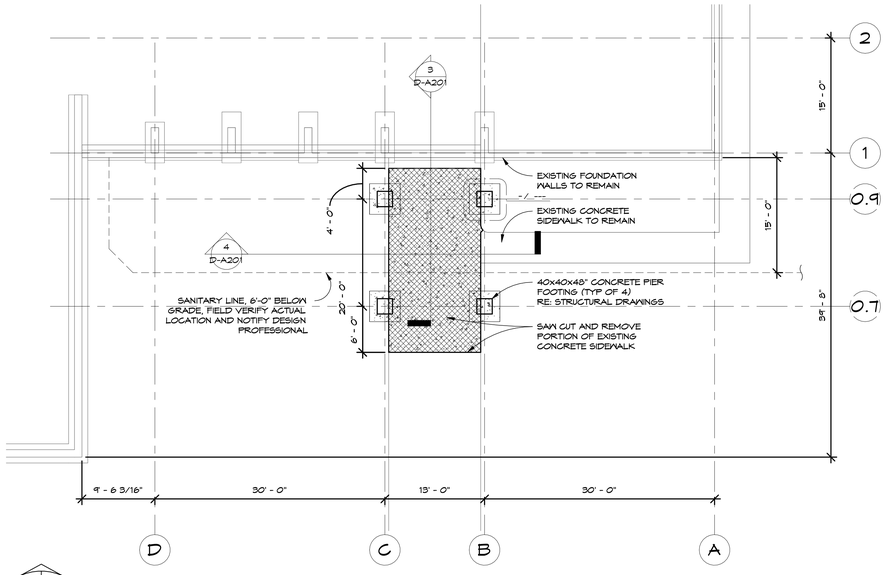
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

DEMOLITION PLAN, PARTIAL FLOOR PLAN, AND REFLECTED CEILING PLAN

SEAL	DRAWN EVA	PROJECT NO. 26-210
	CHECKED JESS	CAD FILE NO. D-A103
	REVIEWED MLB	DRAWING NO. D-A103
	DATE OCT 19, 2026	SHEET NO. 8 OF 24
	SCALE AS NOTED	

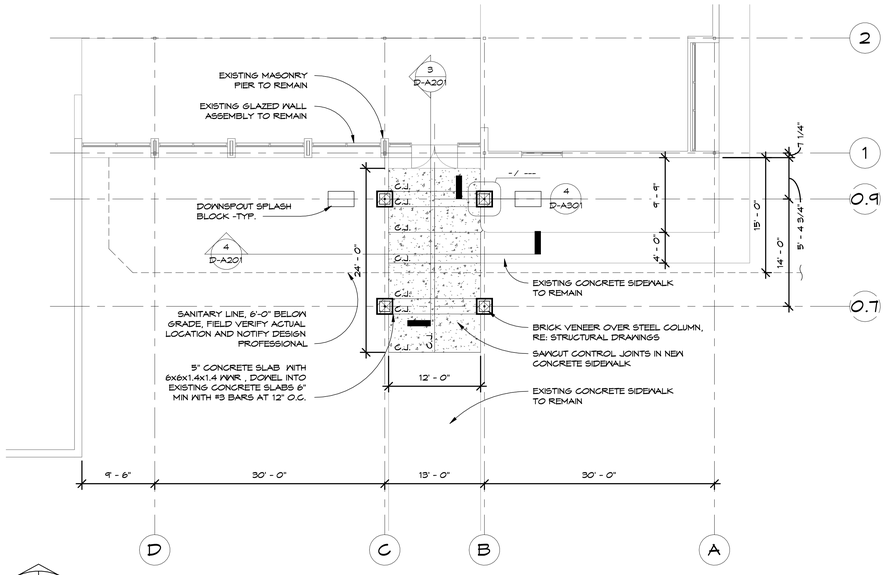
THA Architects Engineers - P:\Bullock Creek\26-210 2025 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC FLOYD D-A103.FLB
Plot date: 10/19/2026 11:19 AM



NORTH

FOUNDATION PLAN

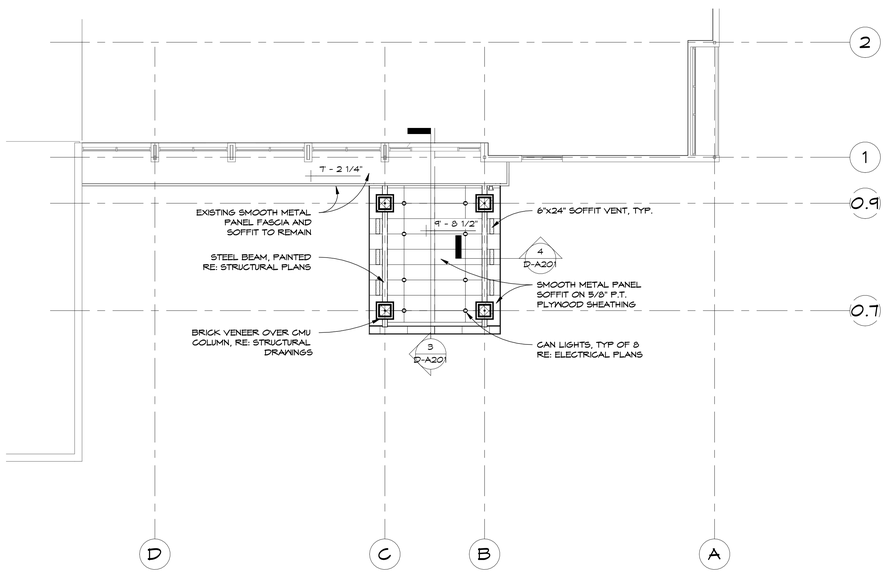
1/8" = 1'-0" | 3



NORTH

FLOOR PLAN

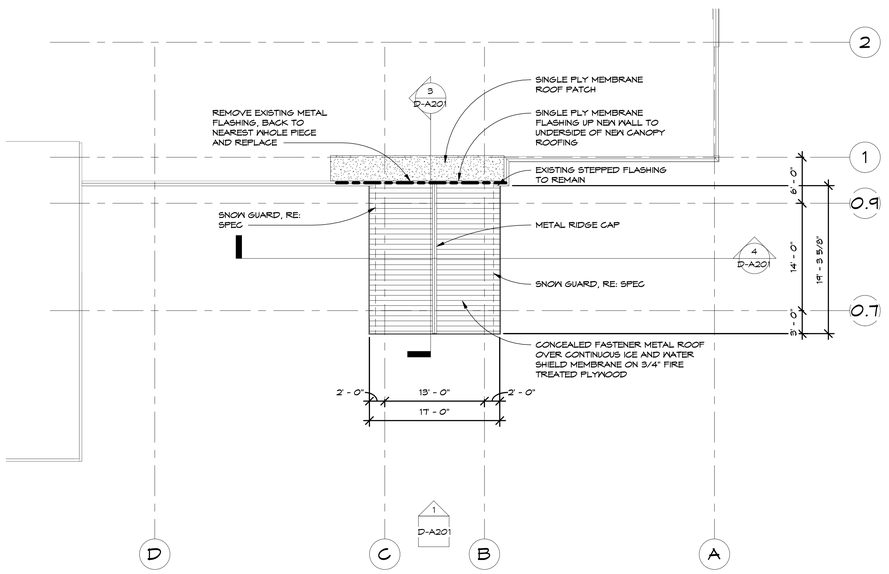
1/8" = 1'-0" | 3



NORTH

REFLECTED CEILING PLAN

1/8" = 1'-0" | 3



NORTH

ROOF PLAN

1/8" = 1'-0"

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.
10. AT ALL EXISTING FINISHES, REPAIR WALLS, CEILINGS AND SURFACES AT DEMOLITION WITH SAME MATERIAL TO BE SMOOTH WITH EXISTING MATERIAL AND READY FOR PAINTED FINISH.

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

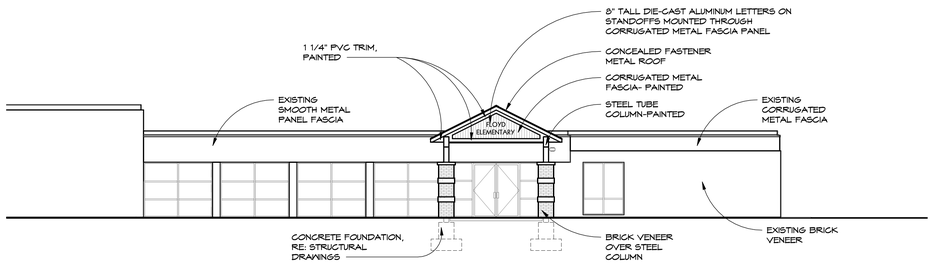
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI 48640

DRAWING TITLE

FOUNDATION PLAN, FLOOR PLAN, RCP, AND ROOF PLAN

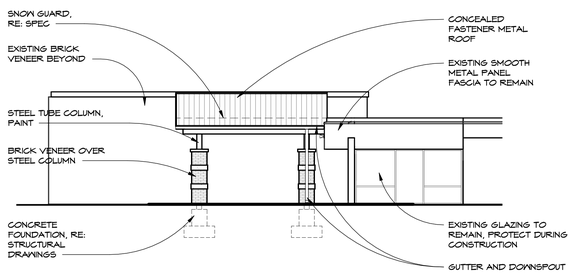
SEAL	DRAWN: EVA	PROJECT NO.: 26-120
	CHECKED: JESS	DRAWING NO.: D-A104
	REVIEWED: MLB	
	DATE: OCT 19, 2026	SHEET NO.: 9 OF 24
	SCALE: 1/8" = 1'-0"	

F:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\02-Revit\02-DD\Floyd Canopy.rvt
10/19/2026 8:29:11 AM



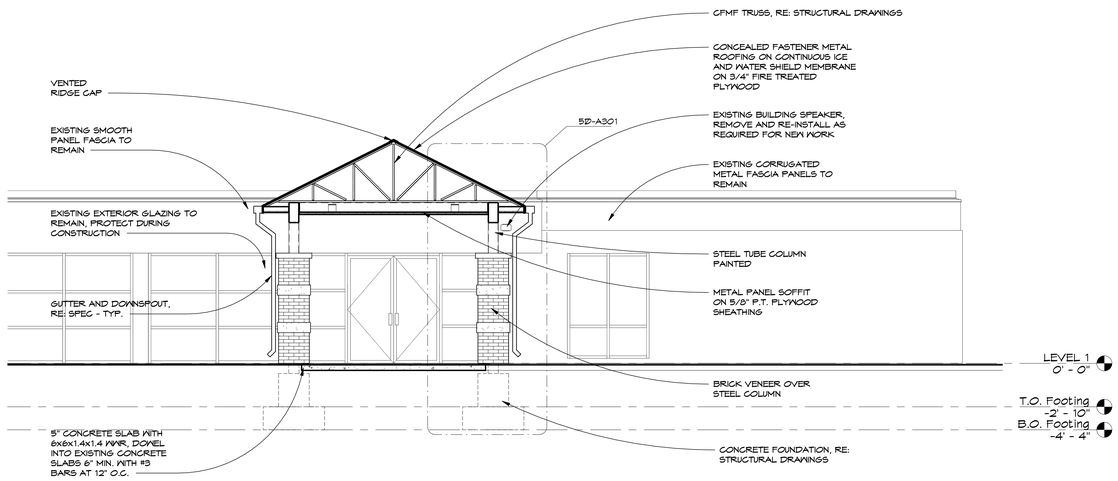
1 SOUTH ELEVATION

1/8" = 1'-0" | 4



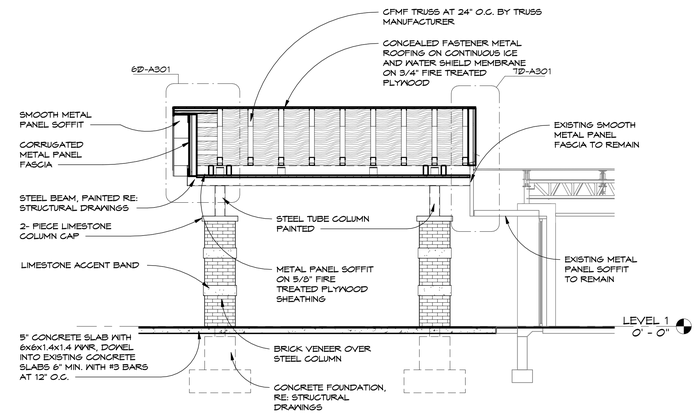
2 EAST ELEVATION

1/8" = 1'-0"



4 BUILDING SECTION

1/4" = 1'-0" | 1



3 BUILDING SECTION

1/4" = 1'-0" | 1

GENERAL NOTES

1. EXISTING FINISH FLOOR ELEVATION VARIES, SEE PLAN
2. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF STUD, AND/OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. COORDINATE DEMOLITION WORK WITH NEW WORK SHOWN ON DRAWINGS.
4. COORDINATE ALL WORK WITH GENERAL, MECHANICAL AND ELECTRICAL TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL OPENINGS REQUIRED OF THESE AND OTHER TRADES.
5. REPAIR ALL WALLS, AND CEILINGS AT ALL AREAS DISTURBED BY DEMOLITION TO MATCH EXISTING FINISHES, UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION FOR ALL COMPONENTS TO REMAIN DURING CONSTRUCTION TO PREVENT DAMAGE.
7. TOUCH UP PAINT AT ALL AREAS DISTURBED BY DEMOLITION AND NEW WORK.
8. ALL PENETRATIONS TO FLOORS, CEILINGS AND WALLS SHALL BE SEALED AND FIRE STOPPED TO A FIRE RATING EQUAL TO THE CONSTRUCTION BEING PENETRATED.
9. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK UNLESS NOTED OTHERWISE.
10. AT ALL EXISTING FINISHES, REPAIR WALLS, CEILINGS AND SURFACES AT DEMOLITION WITH SAME MATERIAL TO BE SMOOTH WITH EXISTING MATERIAL AND READY FOR PAINTED FINISH.

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

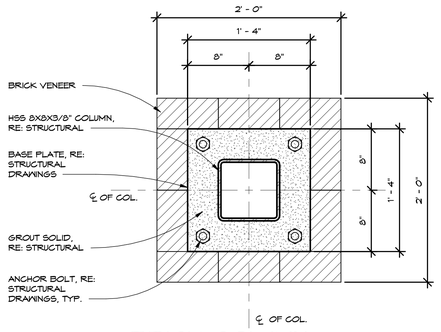
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI 48640

DRAWING TITLE

ELEVATIONS AND BUILDING SECTIONS

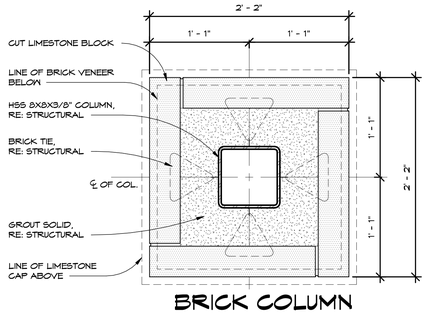
SEAL	DRAWN: KRS	PROJECT NO.: 26-120
	CHECKED: JES8	DRAWING NO.: D-A201
	REVIEWED: MLB	
	DATE: OCT 19, 2026	SHEET NO.: 10 OF 24
	SCALE: As Indicated	

P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\02-Revit\02-DD\Floyd Canopy.rvt
10/19/2026 8:29:12 AM



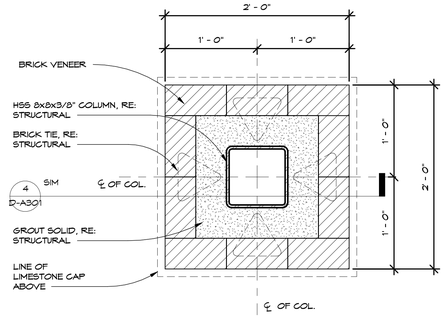
1 BRICK COLUMN BASE

1 1/2" = 1'-0" | 5



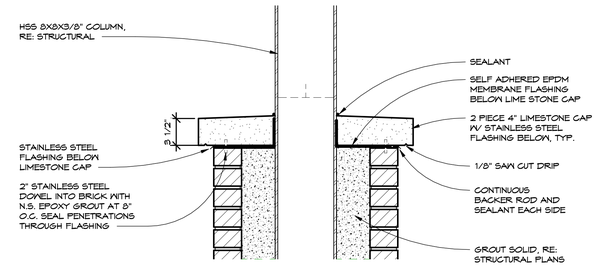
2 BRICK COLUMN LIMESTONE ACCENT DETAIL

1 1/2" = 1'-0" | 5



3 BRICK COLUMN DETAIL

1 1/2" = 1'-0" | 5



4 LIMESTONE CAP DETAIL

1 1/2" = 1'-0" | 1

5 WALL SECTION

3/4" = 1'-0" | 4

6 PARTIAL WALL SECTION

1 1/2" = 1'-0" | 3

7 PARTIAL WALL SECTION

1 1/2" = 1'-0" | 3

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD
MIDLAND, MI 48640

DRAWING TITLE

WALL SECTIONS & ENLARGED DETAILS

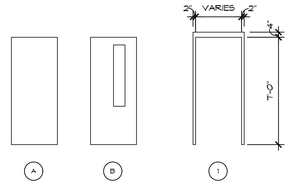
SEAL	DRAWN: KRS	PROJECT NO.: 26-120
	CHECKED: JESS	DRAWING NO.: D-A301
	REVIEWED: MLB	
	DATE: OCT 19, 2026	SHEET NO.: 11 OF 24
	SCALE: As Indicated	

P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\02-Revit\02-DD\Floyd Canopy.rvt
10/19/2026 8:29:12 AM

DOOR & FRAME SCHEDULE

DOOR NO.	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	FIRE RATING (IN MINUTES)	HARDWARE	NOTES
UNIT 'A'										
A140	3'-0"xT'-0"	A	WD	1	HM	4/D-A601	5/D-A601		10	
A141	(2) 3'-0"xT'-0"	A	HM	1	HM	4/D-A601	5/D-A601	45	12	
A142	3'-0"xT'-0"	A	WD	1	HM	4/D-A601	5/D-A601		11	
UNIT 'B'										
B117	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B118	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B119	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B120	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B121	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B122	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B127	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B128	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B129	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B130	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B131	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B132	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B133	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B134	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2
B135	3'-0"xT'-0"	B	WD	EX	HM	N/A	N/A		09	1, 2

NOTES:
1. NEW WOOD DOOR IN EXISTING FRAME.
2. RE-INSTALL EXISTING SECURITY BOOT AND CASE.



ROOM FINISH SCHEDULE

ROOM NO.	ROOM TITLE	FLOOR MATERIAL	BASE MATERIAL	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CEILING HEIGHT	ACCESSORIES	NOTES
UNIT 'A'											
A140	CLOSET	F04	B01	W01	W01	W01	W01	C01	---	A02	
A141	MECH	F05	---	W01	W01	W01	W01	C01	---	A02	
A142	TEACHERS' LOUNGE	F02	B01	W01	W01	W01	W01	C02	9'-0"	A01, A03	
UNIT 'B'											
B101	RECEPTION	F03	B02	---	---	---	---	---	---		
B102	PRINCIPAL	F03	B02	---	---	---	---	---	---		
B103	CLINIC	F04	B01	---	---	---	---	---	---		
B104	CORRIDOR	F03	B02	---	---	---	---	---	---		
B105	TOILET	F04	B01	---	---	---	---	---	---		
B106	OFFICE	F03	B02	---	---	---	---	---	---		
B107	OFFICE	F03	B02	---	---	---	---	---	---		
B108	WORK ROOM	F03	B02	---	---	---	---	---	---		
B109	CLOSET	F03	B02	---	---	---	---	---	---		
B110	RTC	F03	B02	---	---	---	---	---	---		
B111	STAFF	F03	B02	---	---	---	---	---	---		
B112	TOILET	F04	B01	---	---	---	---	---	---		
B117	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B118	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B119	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B120	CLASSROOM	---	---	W02	W02	---	W02	---	---		NO1
B121	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B122	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B127	CLASSROOM	---	---	W02	W02	---	W02	---	---		NO1
B128	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B129	CLASSROOM	---	---	W02	W02	---	W02	---	---		NO1
B130	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B131	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B132	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B133	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B134	CLASSROOM	---	---	W02	W02	W02	W02	---	---		NO1
B135	BREAKROOM	---	---	W02	W02	W02	W02	---	---		NO1

ROOM FINISH LEGEND

FLOOR
- F01 EXISTING TO REMAIN
- F02 NEW LVT
- F03 NEW CARPET
- F04 NEW VCT
- F05 CONCRETE FLOOR SEALER

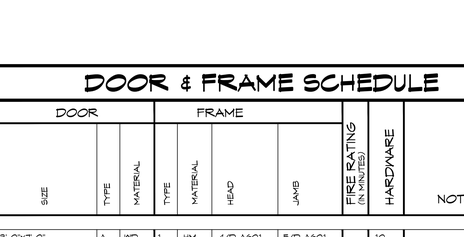
BASE
- B01 4" VINYL
- B02 CARPET BASE

WALLS
- W01 PAINT EXISTING CMU WALL
- W02 PAINT EXISTING PLASTER WALL

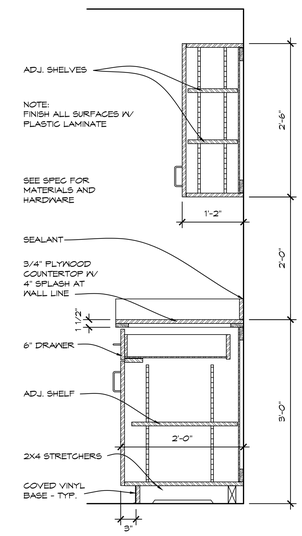
CEILING
- C01 EXISTING TO REMAIN - PAINT
- C02 2x2 SUSPENDED ACOUSTIC CEILING

ACCESSORIES
- A01 TACK BOARD
- A02 ADJUSTABLE SHELVES
- A03 CASEWORK

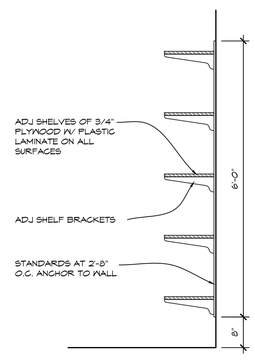
NOTES:
- NO1 REINSTALL EXISTING SHELVING



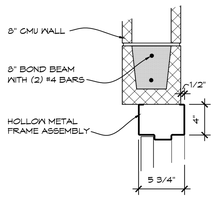
1 CABINETS ELEVATION
1/4" = 1'-0" | CABELEV01



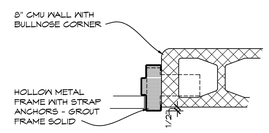
2 CABINETS DETAIL
1" = 1'-0" | PLCAB01



3 SHELVES DETAIL
3/4" = 1'-0" | SHELF01



4 DOOR HEAD
1 1/2" = 1'-0" | HMDRDET20



5 DOOR JAMB
1 1/2" = 1'-0" | HMDRDET22

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE
DOOR SCHEDULE, ROOM FINISH SCHEDULE, INTERIOR ELEVATIONS, AND DETAILS

SEAL		
	DRAWN EVA	PROJECT NO. 25-210
	CHECKED JESS	CAD FILE NO. D-A103
	REVIEWED MLB	DRAWING NO. D-A601
	DATE OCT 19, 2026	SHEET NO. 12 OF 24
	SCALE AS NOTED	

PROJECT 'D'

THA Architects Engineers - P:\Bullock Creek\26-210 2025 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC FLOYD D-A601 DE1
Plot date: 10/19/2026 11:19 AM

SYMBOLS & ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BFF	BELOW FINISH FLOOR
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDENSATE
CB	COMBINATION UNIT
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
COND	CONDENSATE
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
°F	DEGREE FAHRENHEIT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FPM	FEET PER MINUTE
FT	FEET
G	GAS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HW	HOT WATER
HW (140)	HOT WATER (140 °F)
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HWR	HOT WATER RETURN
HWR (140)	HOT WATER RETURN (140 °F)
KW	KILOWATT
L OR LAV	LAVATORY
MBH	ONE THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MTD	MOUNTED
PH	PHASE
PSI	POUND PER SQUARE INCH
PVC	POLY-VINYL CHLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RE:	REFERS TO DRAWING
RG	RETURN GRILLE
RH	RELIEF HOOD
RTU	ROOFTOP UNIT
S	SINK
SA	SUPPLY AIR
SAN	SANITARY
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SS	SERVICE SINK
ST	STORM
UH	UNIT HEATER
UR	URINAL
UV	UNIT VENTILATOR
V	VENT OR VOLT
VA	VALVE
VTR	VENT THRU ROOF
W	WASTE OR WATT
WC	WATER CLOSET
WH	WATER HEATER
WW	WASTE & VENT

CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HW (140)	DOMESTIC HOT WATER 140°F DES
HWR	DOMESTIC HOT WATER RETURN
HWR (140)	DOMESTIC HOT WATER RETURN 140°F DES
C	CONDENSATE
G	GAS
SAN	SANITARY
V	VENT
STM	STORM
HWHS	HOT WATER HEATING SUPPLY
HWHR	HOT WATER HEATING RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
	PIPE DROP
	PIPE RISE
	ARROW INDICATES DIRECTION OF FLOW
	BALL VALVE
	GATE VALVE
	UNION
	PRESSURE GAUGE W/ SHUTOFF
	STRAINER
	CHECK VALVE
	THERMOMETER W/ SHUTOFF
	THREE WAY CONTROL VALVE
	PETE'S PLUG (TEMPERATURE-PRESSURE TEST FITTINGS)
MV	MANUAL AIR VENT
AV	AUTOMATIC AIR VENT
	FLOW CONTROL
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	NON FREEZE WALL HYDRANT
	FLOOR CLEANOUT
T	THERMOSTAT
CO2	CARBON DIOXIDE SENSOR

10xD	DUCT SIZE(CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
10Ø	ROUND DUCT DIAMETER SIZE
	VOLUME DAMPER IN DUCT
	DUCT DOWN
	SLOT DIFFUSER
	CEILING SUPPLY DIFFUSER
	CEILING RETURN DIFFUSER
	CEILING EXHAUST DIFFUSER
T	THERMOSTAT
	HORIZONTAL FIRE DAMPER W/ ACCESS DOOR
	VERTICAL FIRE DAMPER W/ ACCESS DOOR
SD	HORIZONTAL SMOKE DAMPER W/ ACCESS DOOR
SD	VERTICAL SMOKE DAMPER W/ ACCESS DOOR
	DIRECTION OF AIR FLOW
	HOOD EXHAUST DUCT
	HOOD SUPPLY AIR DUCT
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR SUPPLY DUCT DN
	RECTANGULAR RETURN DUCT DN
	RECTANGULAR EXHAUST DUCT DN
	ELBOW WITH TURNING VANES

OUTDOOR AIR VENTILATION SCHEDULE

HVAC SYSTEM	OCCUPANCY CLASSIFICATION	AREA (SQ. FT.)	MAXIMUM OCCUPANCY PER 1000 S.F.	OCCUPANT LOAD	OUTDOOR AIR REQUIRED PER PERSON (CFM)	OUTDOOR AIR FLOW RATE BREATHING ZONE (CFM)	OUTDOOR AIR RATE BREATHING ZONE (CFM)	OUTDOOR AIR RATE FOR PEOPLE ZONE (CFM)	OUTDOOR AIR REQUIRED FOR EACH SPACE (CFM)	TOTAL OUTDOOR AIR REQUIRED (CFM)	TOTAL OUTDOOR AIR PROVIDED (CFM)
UV-1 S.A. 150 CFM 20% OA 150 OA	STAFF LOUNGE A122	406	50	20	5	0.06	25	100	125	150	150
	MECHANICAL A121	207	--	--	--	0.12	25	--	25		

NOTES: 1. TOTAL OUTDOOR AIR PROVIDED IS IN COMPLIANCE W/THE REQUIRED OUTDOOR VENTILATION AIR PER TABLE 403.3.1.1 OF THE 2021 MMC.

PUMP SCHEDULE

TAG	LOCATION	B&G MODEL	TYPE	GPM	HEAD (FT.)	IMP. DIA.	HP	RPM	ELEC. V/PH	NOTES
P-1	BOILER ROOM	E-1510 2.5AC	BASE MOUNTED	265	75	5.0	10	3550	208V-3P	1,2
P-2	BOILER ROOM	E-1510 2.5AC	BASE MOUNTED	265	75	5.0	10	3550	208V-3P	1,2

NOTES: 1. HIGH EFFICIENCY NON-OVERLOADING MOTORS
2. PROVIDE WITH TRIPLE DUTY VALVE, FLEX CONNECTIONS & SUCTION DIFFUSERS

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	UNIT LOCATION	GREENHECK MODEL NO.	ELEC.	CFM	"SP	FAN HP	FAN RPM	NOTES
EF-1	TEACHERS LOUNGE	ROOF	G-098-VG	120V-1P	200	.375	1/4	972	1,2,3

NOTES:
1. PROVIDE FAN WITH ROOF CURB, BACK DRAFT DAMPER AND DISCONNECT.
2. CONNECT EXHAUST FAN TO EXISTING CIRCUIT PROVIDE RELAY FOR BMS CONNECTION
3. PROVIDE SPEED CONTROLLER IN FAN

CONDENSING UNIT SCHEDULE

TAG	TRANE MODEL #	ASSOCIATED UNIT	NOMINAL COOL	VOLTAGE	MCA	MOP	NOTES:
C-1	5TTR4024	UV-27	24 MBH	208V-1P	14	20	1,2,3,4

NOTES:
1. COOLING CAPACITY IS BASED ON 80°F DB/67°F WB & 95°F AMBIENT.
2. PROVIDE W/ EQUIPMENT SUPPORT (SEE DETAIL).
3. ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL GFI RECEPTACLE & DISCONNECT SWITCH.
4. PIPE SIZE BASED ON MANUFACTURER RECOMMENDATIONS.

UNIT VENTILATOR SCHEDULE

TAG	TRANE MODEL #	CFM	MIN OA	MOTOR HP	HOT WATER HEAT CAPACITY					COOLING MBH				VOLTAGE	MCA	MOP	NOTES
					MBH	GPM	DEL-T	EAT	LAT	TOTAL	SENSIBLE	EAT	LAT				
UV-1	HUVC07B10	750	150	1 HP	61	4	30	60	134.09	19.82	15.06	80	55/57	120V-1P	15	--	--

NOTES: RECESSED CEILING HUNG HORIZONTAL UNIT VENTILATOR, WITH HOT WATER HEATING COIL, 3-WAY VALVE, FRONT DISCHARGE DUCT COLLAR, BOTTOM RETURN GRILLE AND BACK OUTSIDE AIR CONNECTION ARRANGEMENT. END PANELS AND CABINET COLORS TO BE SELECTED DURING SHOP DRAWINGS.

UNIT TO BE PROVIDED WITH ULTRA LOW LEAKAGE OUTSIDE AIR DAMPERS, FACTORY INSTALL AND WIRED FREEZE STAT, DAMPERS, DISCHARGE AIR STAT, WIRING STRIP, FOR CONTROLLER CONNECTIONS FOR NEW HONEYWELL CONTROLLER, CONTROLS TO HAVE CAPACITY AND CONNECTION TO EXISTING HONEYWELL CONTROLS CONTROL SYSTEM.

RELIEF AIR HOOD SCHEDULE

TAG	MANUFACTURER	MODEL #	CFM	TOTAL PRESSURE	THROAT SIZE	FREE AREA	THROAT VELC	NOTES
RH-1	GREENHECK	GRSR-12	750	0.103	12x12	0.82 SF	915 FPM	1,2

NOTES:
1. PROVIDE WITH INSULATED ROOF CURB AND HOOD, RELIEF DAMPER, INSECT SCREEN.
2. PROVIDE WITH CURB ADAPTOR

INTAKE HOOD SCHEDULE

TAG	MANUFACTURER	MODEL #	CFM	TOTAL PRESSURE	THROAT SIZE	FREE AREA	THROAT VELC	NOTES
IH-1	GREENHECK	GRSI-16	750	0.041	16X16	1.45 SF	517 FPM	1,2

NOTES:
1. PROVIDE WITH INSULATED ROOF CURB AND HOOD, INSECT SCREEN.
2. PROVIDE WITH CURB ADAPTOR

GRILLE AND DIFFUSER SCHEDULE

"A" TITUS SUPPLY DIFFUSER MODEL TMSA, ADJUSTABLE AIR PATTERN, 24x24, MOUNTING TYPE 3 (LAY-IN), WHITE FINISH
(*) 12x12 FACE PANEL MOUNTED IN 24x24 PANEL

CFM	NECK SIZE
226-300	10"Ø

"B" TITUS RETURN GRILLE MODEL 50F, 1/2x1/2x1/2 ALUMINUM EGG CRATE, 20x20 NECK, PANEL MOUNTED FOR LAY-IN CEILING, WHITE FINISH, PROVIDE WITH 20x20x12 PLENUM PAINTED FLAT BLACK ON INSIDE

"C" TITUS RETURN/EXHAUST GRILLE MODEL 4FL, 45° FIXED DEFLECTION, SURFACE MOUNTED, WITH OPPOSED BLADE DAMPERS, WHITE FINISH

CFM	NECK SIZE
0-75	8x8
76-150	10x6
175-300	10x10
310-450	12x10
451-650	16x16
751-850	18x12

"D" TITUS SUPPLY GRILLE MODEL 272 RL, SURFACE MOUNTED, DOUBLE DEFLECTION, WHITE FINISH

CFM	NECK SIZE
150	8x8

PLUMBING FIXTURE SCHEDULE

S-1
ELKAY SINGLE COMPARTMENT SINK, MODEL LR1918, STAINLESS STEEL 18 GA, SELF RIMMING, PROVIDE WITH ZURN FAUCET MODEL Z831C4-XL-140 GOOSENECK, RESTRICTED SWING SPOUT, CERAMIC DISC CARTRIDGES WITH AERATOR, DRAIN FITTING, TAIL PIECE, TRAP, RISERS, ASSE 1070 MIXING VALVE, ETC

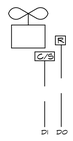
SS
FLORESTONE MODEL 41, 24x24 SINK, PROVIDE W/ MR-371 SPEAKMAN FAUCET W/ VACUUM BREAKER W/ STOPS, 5' LONG HOSE, PROVIDE 24" STAINLESS STEEL HIGH PANEL AT WALL

SEE PLUMBING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LISTED EQUIVALENT MANUFACTURES. PROVIDE NEW TRAPS, STOPS, RISERS, TAIL PIECES, ETC. FOR NEW AND EXISTING FIXTURES FOR COMPLETE PROJECT.

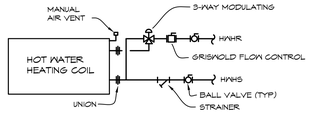
GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
13. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
14. BALANCE ENTIRE HYDRONIC SYSTEM EQUIPMENT, EXISTING HVAC EQUIPMENT, NEW UNITS WITH UPDATED CONTROLS. INSTALL FLOW CONTROL AT EXISTING FINTUBE NOTED ON PLANS.
15. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
16. SCOPE & TRACE SANITARY LINE AT EXISTING BOILER ROOM PRIOR TO FLOOR CUTTING (SEE NOTE ON PLANS)

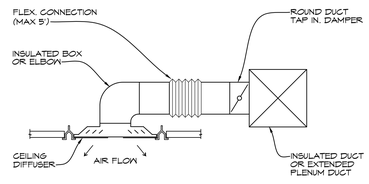
PROJECT 'D'



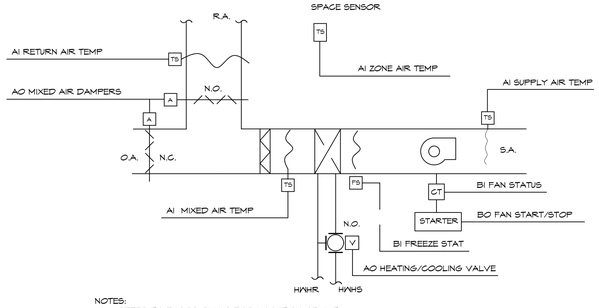
EXHAUST FAN
CONTROL DIAGRAM
NO SCALE



TYPICAL UV
COIL PIPING DETAIL
NO SCALE

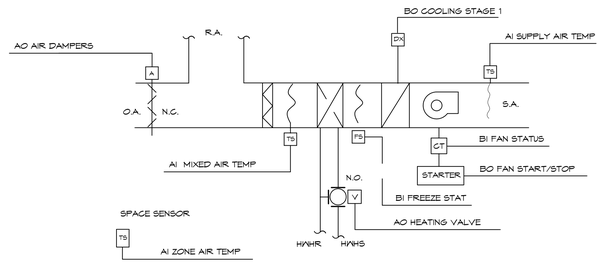


SUPPLY AIR DIFFUSER
DETAIL
NO SCALE



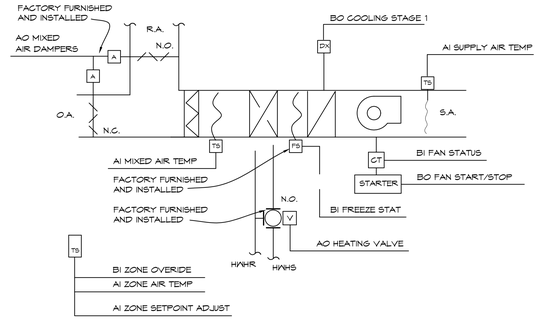
NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNIT
3. TC CONTRACTOR SHALL PROVIDE ALL NEW CONTROLLER AND TEMPERATURE CONTROL DEVICES AND SAFETIES.
4. TC CONTRACTOR SHALL PROVIDE NEW 3-WAY CONTROL VALVE FOR INSTALLATION BY MECHANICAL CONTRACTOR
5. CONNECT CONTROLS TO FIRE ALARM SYSTEM CUT-OUT TO MOTOR STARTER CONTROL CIRCUIT
6. INSTALL VANDAL PROOF DDC SPACE SENSOR
7. REMOVE ALL PNEUMATIC CONTROLS

EXISTING AHU
CONTROL DIAGRAM
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNIT
3. TC CONTRACTOR SHALL PROVIDE ALL NEW CONTROLLER AND TEMPERATURE CONTROL DEVICES AND SAFETIES.
4. TC CONTRACTOR SHALL PROVIDE NEW 3-WAY CONTROL VALVE FOR INSTALLATION BY MECHANICAL CONTRACTOR
5. PROVIDE AND INSTALL NEW OUTSIDE AIR DAMPERS AND ACTUATOR.
6. INSTALL NEW DDC SPACE SENSOR
7. REMOVE ALL PNEUMATIC CONTROLS

EXISTING BLOWER COIL
CONTROL DIAGRAM
NO SCALE



NOTES:
1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS
2. CONTROL VALVE, FREEZE STAT AND MIXED AIR DAMPER OPERATOR(S) FURNISHED AND INSTALLED BY UNIT MANUFACTURER AT NEW UNIT. AT EXISTING UNITS CONTROL MANUFACTURE TO PROVIDE AND INSTALL NEW DAMPER ACTUATORS, FREEZE STATS, SENIORS, ETC FOR NEW DCC CONTROLS AND REMOVE EXISTING PNEUMATIC CONTROLS.
3. TC CONTRACTOR SHALL PROVIDE CONTROLLER AND TEMPERATURE CONTROL DEVICES
4. TC CONTRACTOR SHALL PROVIDE INTERLOCK WIRING BETWEEN INDOOR AND OUTDOOR UNITS
5. REMOVE ALL PNEUMATIC CONTROLS

UNIT VENTILATOR DX COOLING
CONTROL DIAGRAM
NO SCALE

NO.	REVISIONS / SUBMISSIONS	DATE

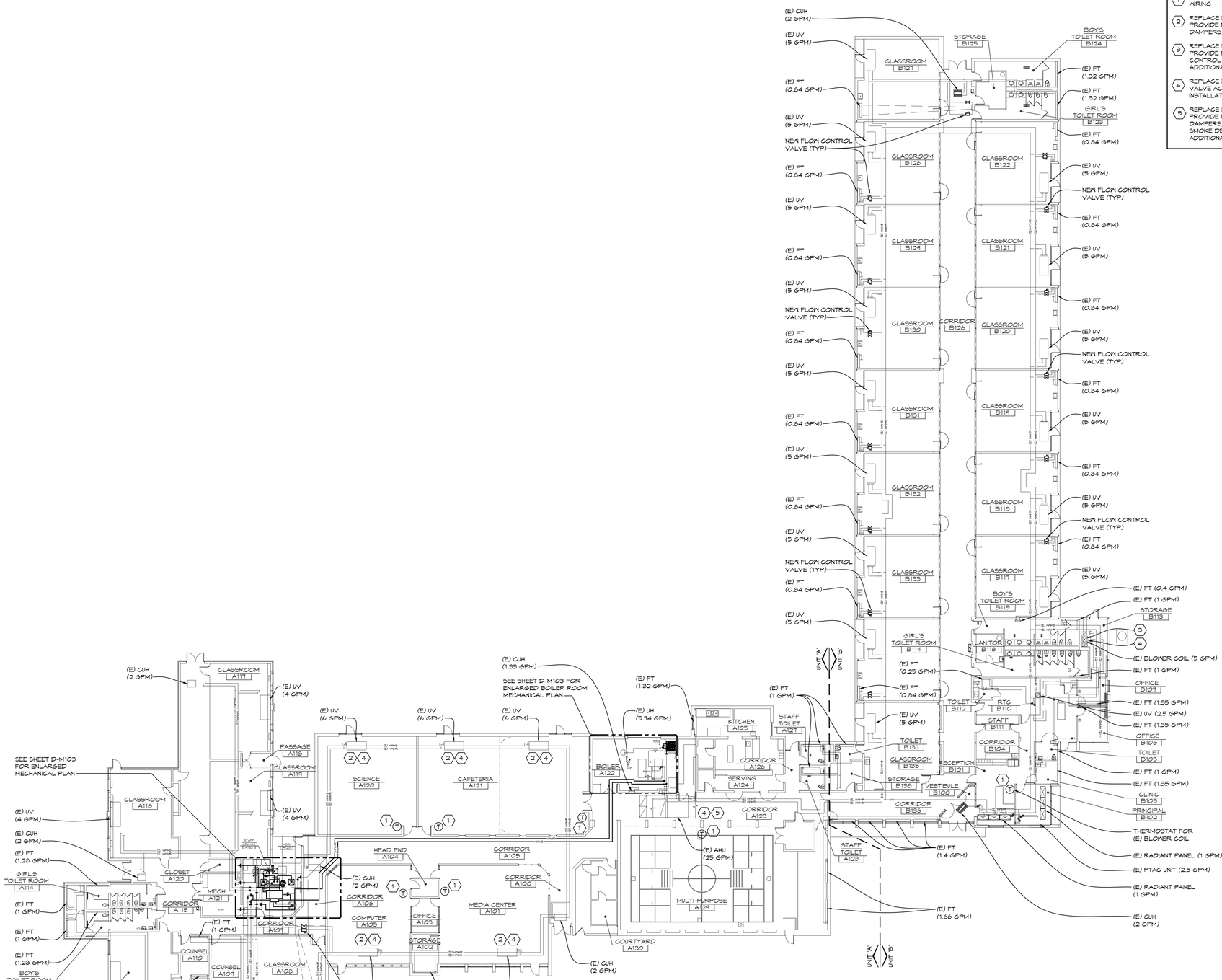
THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE
MECHANICAL SCHEDULES

SEAL	DRAWN CJV/KLB	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. D-M001
	REVIEWED MLB	DRAWING NO. D-M001
	DATE OCT 19, 2026	
	SCALE AS NOTED	SHEET NO. 13 OF 24

THA Architects Engineers - P:\Bullock Creek\26-210 2025 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DRIR\C FLOYD D-M001 MI
Plot date: 10/19/2026 11:19 AM



COMPOSITE MECHANICAL FLOOR PLAN

KEYED CONTROLS NOTES

1. REPLACE EXISTING THERMOSTAT WITH NEW THERMOSTAT & WIRING
2. REPLACE EXISTING CONTROLS AT UNIT VENTILATOR. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR DAMPERS, CONTROL VALVE, ETC.
3. REPLACE EXISTING CONTROLS AT BLOWER COIL UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR CONTROL VALVE. SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS
4. REPLACE EXISTING CONTROL VALVE & CONTROL VALVE ACTUATORS, COORDINATE REMOVAL AND INSTALLATION OF NEW CONTROL VALVES.
5. REPLACE EXISTING CONTROLS AT AIR HANDLING UNIT. PROVIDE NEW CONTROLLER, WIRING, ACTUATORS FOR DAMPERS, CONTROL VALVE, INCLUDING CONNECTIONS TO SMOKE DETECTORS. SEE CONTROL DIAGRAM FOR ADDITIONAL REQUIREMENTS

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
13. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
14. BALANCE ENTIRE HYDRONIC SYSTEM EQUIPMENT, EXISTING HVAC EQUIPMENT, NEW UNITS WITH UPDATED CONTROLS. INSTALL FLOW CONTROL AT EXISTING FINTUBE NOTED ON PLANS.
15. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
16. SCOPE & TRACE SANITARY LINE AT EXISTING BOILER ROOM PRIOR TO FLOOR CUTTING (SEE NOTE ON PLANS)

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

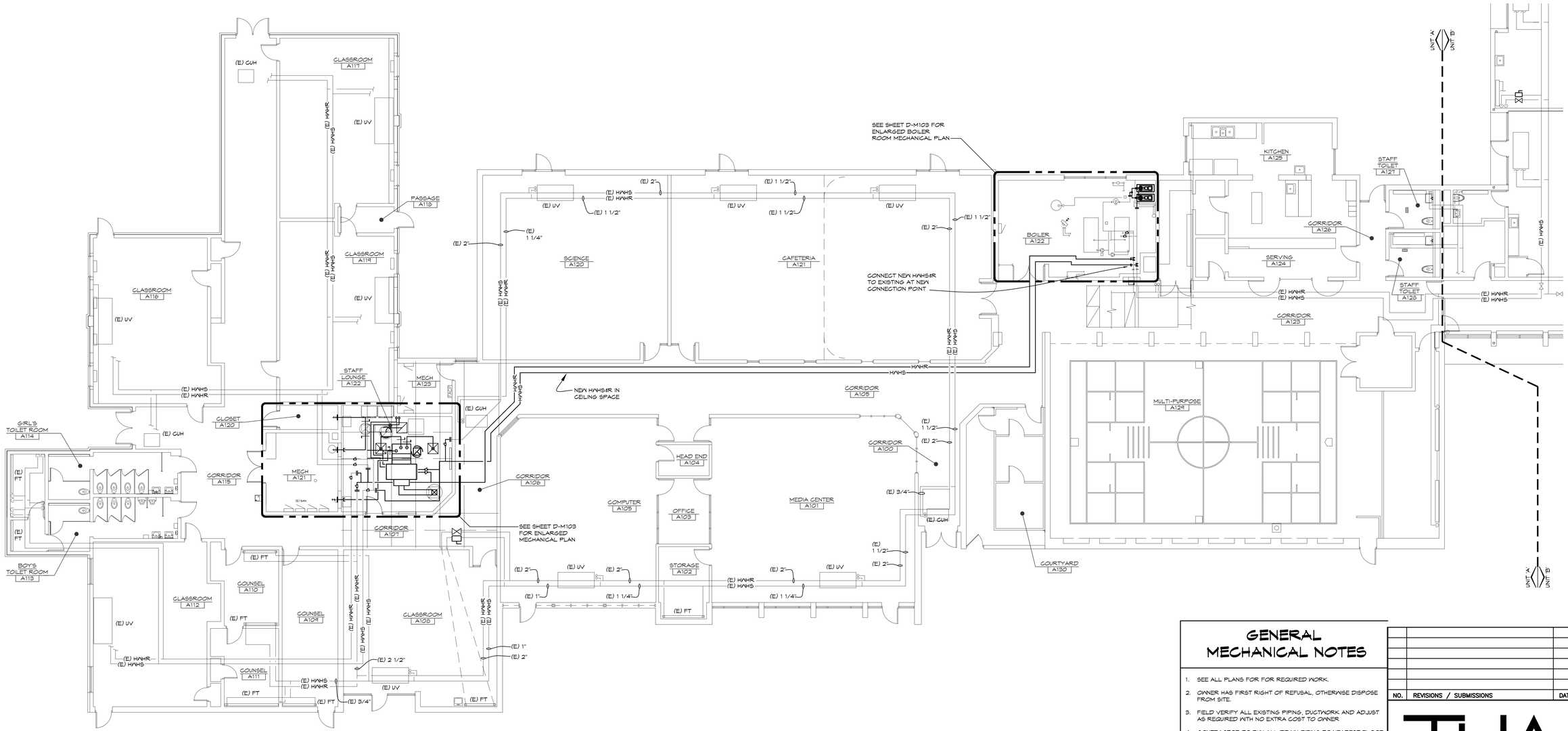
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

COMPOSITE MECHANICAL FLOOR PLAN

SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. D-M101
	REVIEWED MLB	DRAWING NO. D-M101
	DATE OCT 19, 2026	SHEET NO. 14 OF 24
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210\2023 Bond Saves Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC T LOYD D-M101 CO
Plot date: 10/19/2026 11:19 AM



NORTH

1/8" = 1'-0"

UNIT 'A' MECHANICAL FLOOR PLAN

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES, VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
13. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
14. BALANCE ENTIRE HYDRONIC SYSTEM EQUIPMENT, EXISTING HVAC EQUIPMENT, NEW UNITS WITH UPDATED CONTROLS. INSTALL FLOW CONTROL AT EXISTING FITUBE NOTED ON PLANS.
15. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
16. SCOPE & TRACE SANITARY LINE AT EXISTING BOILER ROOM PRIOR TO FLOOR CUTTING (SEE NOTE ON PLANS)

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

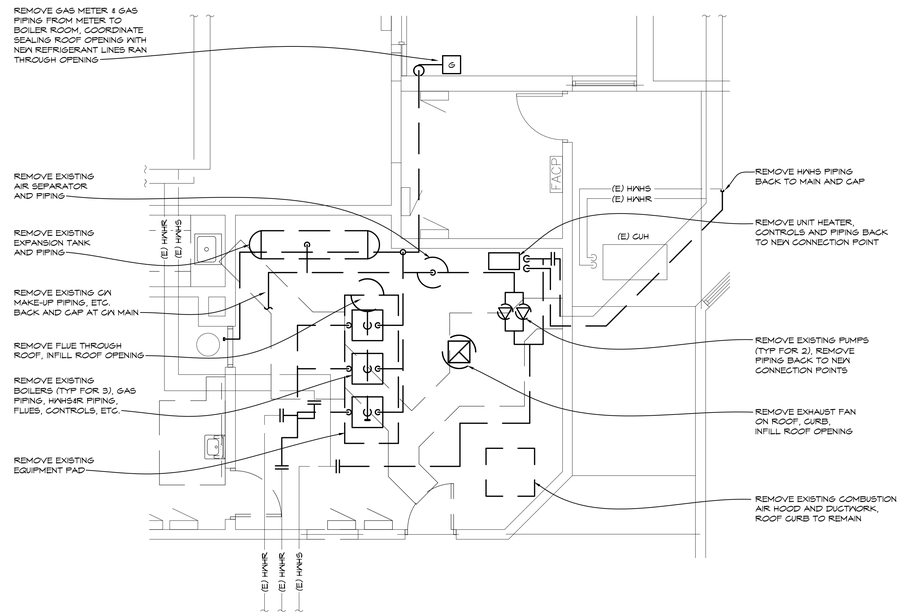
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'A' MECHANICAL FLOOR PLAN

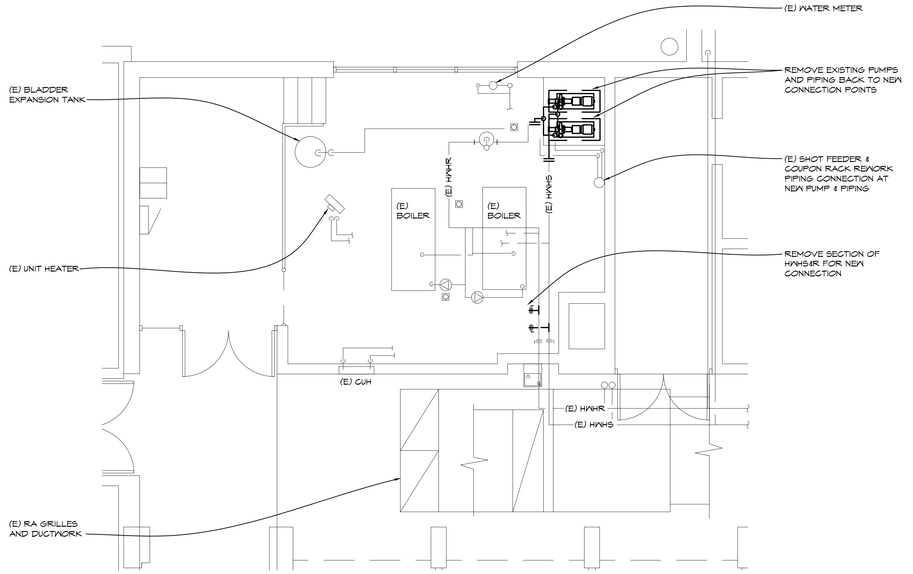
SEAL	DRAWN CJV/KLS	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. D-M102
	REVIEWED MLB	DRAWING NO. D-M102
	DATE OCT 19, 2026	SHEET NO. 15 OF 24
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC FLOYD D-M102 UN
Plot date: 10/19/2026 11:19 AM



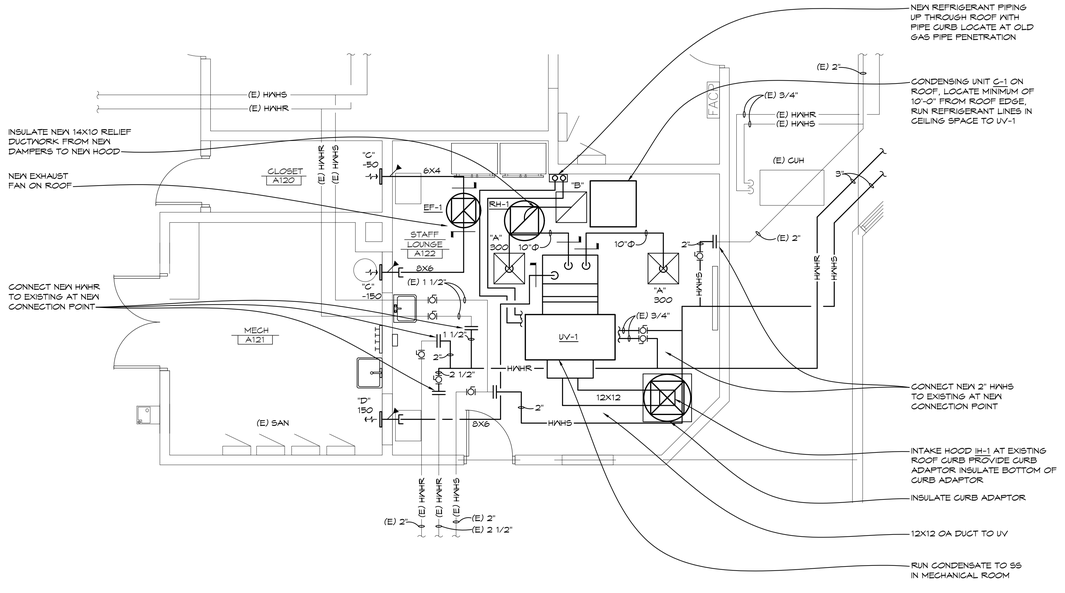
NORTH
1/4" = 1'-0"

ENLARGED WEST BOILER ROOM
MECHANICAL DEMOLITION PLAN



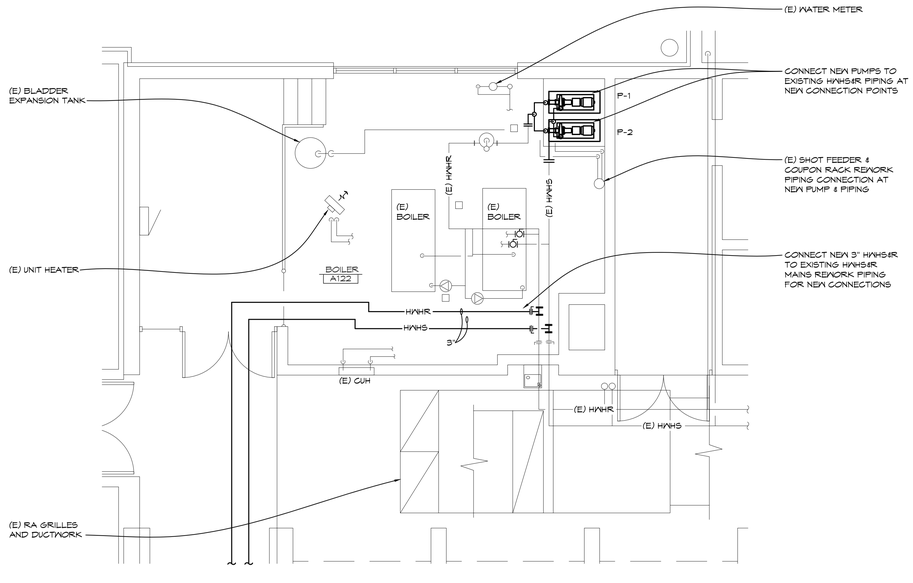
NORTH
1/4" = 1'-0"

ENLARGED EAST BOILER ROOM
MECHANICAL DEMOLITION PLAN



NORTH
1/4" = 1'-0"

ENLARGED STAFF LOUNGE
MECHANICAL FLOOR PLAN



NORTH
1/4" = 1'-0"

ENLARGED EAST BOILER ROOM
MECHANICAL FLOOR PLAN

GENERAL MECHANICAL NOTES

1. SEE ALL PLANS FOR FOR REQUIRED WORK.
2. OWNER HAS FIRST RIGHT OF REFUSAL, OTHERWISE DISPOSE FROM SITE.
3. FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND ADJUST AS REQUIRED WITH NO EXTRA COST TO OWNER
4. CONTRACTOR TO RUN ALL DRAIN PIPING TO NEAREST FLOOR DRAIN WITHOUT CAUSING A TRIP HAZARD.
5. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AND TRADES. VERIFY EXACT SIZES AND LOCATIONS OF ALL WALLS, OPENINGS, EQUIPMENT, ETC REQUIRED OF THESE TRADES.
6. AT AREAS OF DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR REMOVING, CAPPING, DISCONNECTING ALL INCIDENTAL ITEMS.
7. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED, HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR AND THE SUBCONTRACTORS FOR THE VARIOUS TRADES SHALL REMOVE THE MATERIALS RELATED TO THEIR RESPECTIVE TRADES AS REQUIRED TO PERMIT THE CONSTRUCTION OF THE NEW WORK AS SHOWN
8. AT EXISTING EQUIPMENT WITH PNEUMATIC CONTROLS REMOVE AND INSTALL NEW CONTROL VALVES COORDINATE WITH CONTROL CONTRACTOR
9. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK
10. CONTRACTOR TO VERIFY ALL VOLTAGE AND PHASE OF ALL NEW EQUIPMENT PRIOR TO ORDERING.
11. ALL INTERRUPTIONS OF HEATING, GAS, WATER SERVICE, POWER, ETC. SHALL BE COORDINATED TWO WEEKS PRIOR TO REQUIRED WORK WITH SCHOOL.
12. REMOVE ALL CONTROLS NO LONGER IN OPERATION INCLUDING ABANDONED SWITCHES COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTOR
13. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER.
14. BALANCE ENTIRE HYDRONIC SYSTEM EQUIPMENT, EXISTING HVAC EQUIPMENT, NEW UNITS WITH UPDATED CONTROLS. INSTALL FLOW CONTROL AT EXISTING FITUBE NOTED ON PLANS.
15. CONTROL CONTRACTOR TO COORDINATE WORK WITH BALANCING CONTRACTOR
16. SCOPE & TRACE SANITARY LINE AT EXISTING BOILER ROOM PRIOR TO FLOOR CUTTING (SEE NOTE ON PLANS)

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

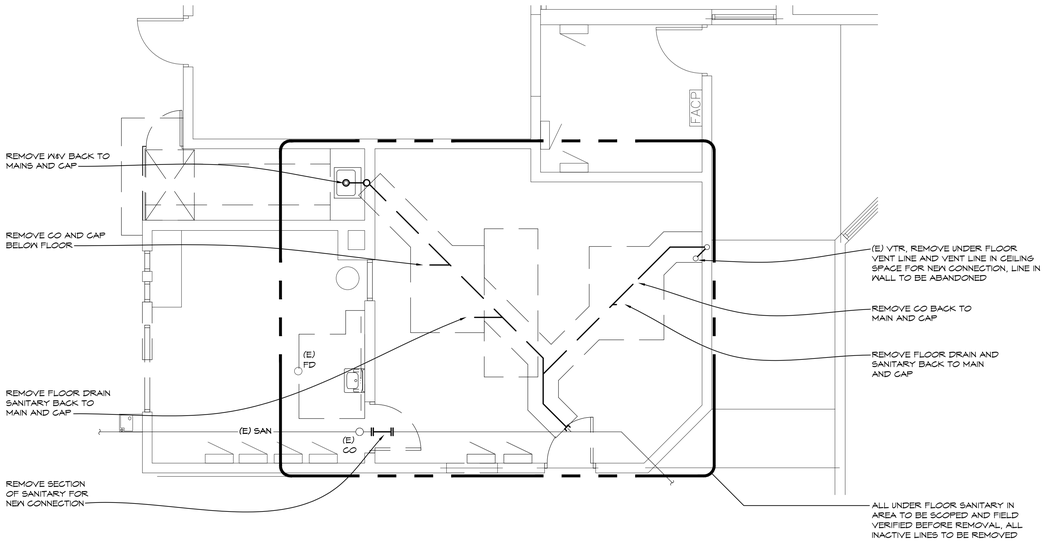
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED MECHANICAL DEMOLITION AND FLOOR PLANS

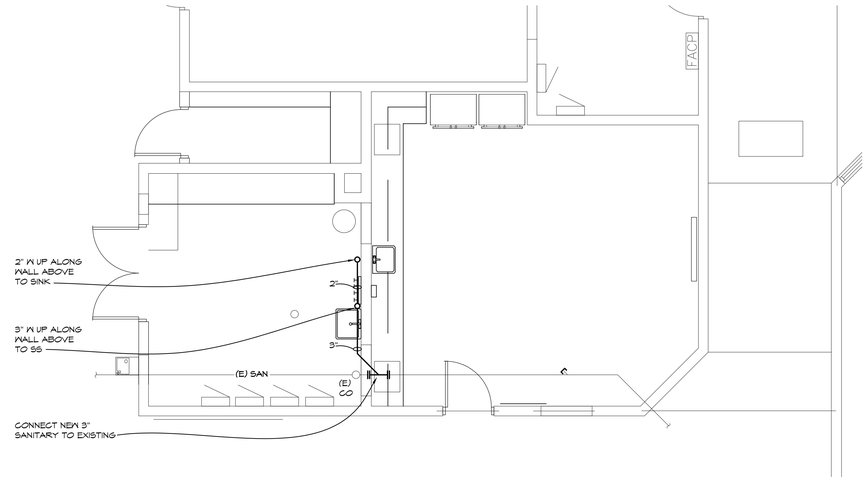
SEAL	DRAWN CJV/KLB	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. D-M103
	REVIEWED MLB	DRAWING NO. D-M103
	DATE OCT 19, 2026	SHEET NO. 16 OF 24
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvements\Drafting\01-CAD\02-DD\BC FLOYD D-M103 EN
Plot date: 10/19/2026 11:19 AM



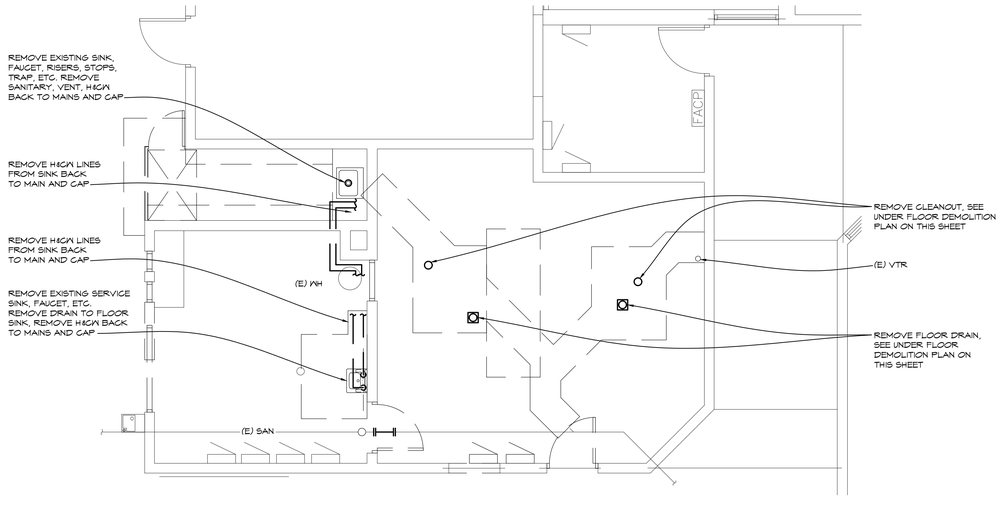
NORTH
1/4" = 1'-0"

ENLARGED STAFF LOUNGE
UNDER FLOOR PLUMBING DEMOLITION PLAN



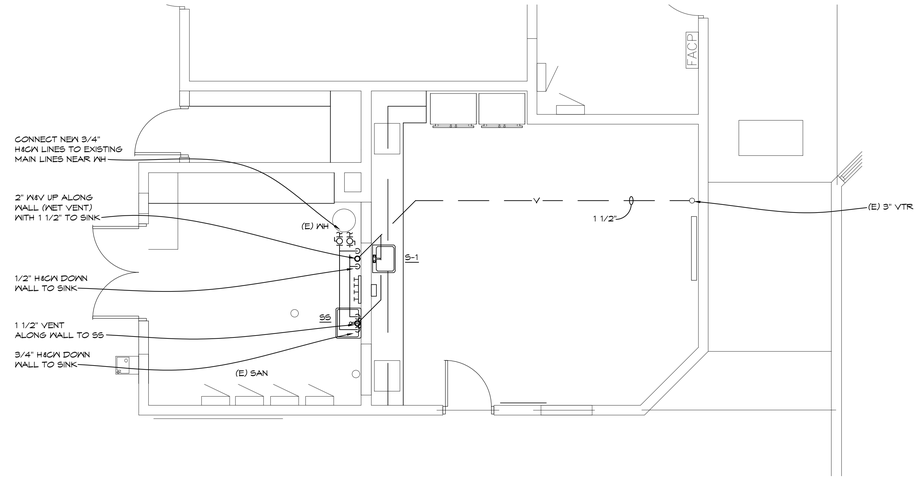
NORTH
1/4" = 1'-0"

ENLARGED STAFF LOUNGE
UNDER FLOOR PLUMBING PLAN



NORTH
1/4" = 1'-0"

ENLARGED STAFF LOUNGE
ABOVE FLOOR PLUMBING DEMOLITION PLAN



NORTH
1/4" = 1'-0"

ENLARGED STAFF LOUNGE
UNDER FLOOR PLUMBING PLAN

PLUMBING GENERAL NOTES

1. DIMENSIONS GIVEN ON DRAWINGS ARE FOR GUIDANCE ONLY, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. FIELD VERIFY ALL EXISTING CONDITIONS. NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK
3. OWNER HAS FIRST RIGHT REFUSAL OF ANY MATERIALS AND EQUIPMENT BEING REMOVED
4. DASHED LINES INDICATE ELEMENTS TO BE REMOVED
5. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK, ANY NECESSARY TEMPORARY SHORING/ BRACING OF ELEMENTS AS REQUIRED AND REMOVAL OF ALL DEMOLISHED MATERIALS
6. NOTATIONS ARE MADE IN VARIOUS PLACES ON THE DRAWINGS TO CALL ATTENTION TO DEMOLITION WHICH IS REQUIRED; HOWEVER, THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED. THE CONTRACTOR SHALL REMOVE THE MATERIALS AS REQUIRED.
7. ALL ROOF WORK TO BE DONE THROUGH ROOF WARRANTY HOLDER
8. LEAVE NO DEAD LEG PIPING AT DOMESTIC WATER DEMOLITION REMOVE LINES BACK TO ACTIVE MAIN OR BRANCH, CAP AT ACTIVE LINE WITHIN 1-1/2 TIMES THE WIDTH OF PLUMBING LINE

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE
ENLARGED PLUMBING FLOOR PLANS

SEAL	DRAWN CJV/KLB	PROJECT NO. 26-210
	CHECKED KLS	CAD FILE NO. D-P101
	REVIEWED MLB	DRAWING NO. D-P101
	DATE OCT 19, 2026	SHEET NO. 17 OF 24
	SCALE AS NOTED	

THA Architects Engineers - P:\Bullock Creek\26-210 2023 Bond Series Series 2 2027 Improvement\Drafting\01-CAD\02-DD\BC FLOYD D-P101 ENL
Plot date: 10/19/2026 11:19 AM

GENERAL NOTES:

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE, NEC AND ALL LOCAL CODES.
2. COORDINATE THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND CONNECTIONS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND EQUIPMENT DRAWINGS.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER, CONDUIT, CABLETRAY, AND OTHER COMPONENTS AS SHOWN ON THE EQUIPMENT PROVIDER DRAWINGS FOR INSTALLATION OF SYSTEM.
4. "BACK TO BACK" OR THROUGH THE WALL BOXES SHALL NOT BE USED.
5. INSTALL HANDLE LOCK-ON, ON ALL CIRCUIT BREAKERS CONTROLLING NIGHT LIGHT, EMERGENCY LIGHT AND EXIT LIGHT CIRCUITS.
6. ALL RECEPTACLES SHALL BE HARD USE, SPECIFICATION GRADE.
7. PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY APPLICABLE CODES.
8. RECEPTACLES INDICATED AS GROUND FAULT CIRCUIT INTERRUPTER TYPE SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, PER CODE OR PROVIDED WITH A GFCI BREAKER.
9. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM WIRES SHALL NOT BE USED.
10. MINIMUM CONDUIT SIZE SHALL BE 1/2" FOR POWER FEEDS AND 1" FOR DATA FEEDS.
11. FINAL CONNECTION TO ITEMS SUBJECT TO VIBRATION SHALL BE MADE WITH LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
12. 120/208V AC CIRCUIT WIRING FOR ANY ROOM OR AREA MAY BE GROUPED INTO RACEWAYS UNLESS SEPARATE RACEWAYS ARE REQUIRED BY THE NEC. COMPLY WITH NEC REQUIREMENTS FOR CONDUCTOR DERATING.
13. PROVIDE EQUIPMENT GROUNDING CONDUCTORS FOR ALL POWER AND LIGHTING CIRCUITS.
14. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM. ALL CONTROL CONDUCTORS SHALL BE 14 AWG MINIMUM OR AS SPECIFIED BY MANUFACTURER.
15. DEDICATED NEUTRAL SHALL BE PROVIDED FOR ALL CIRCUITS. SHARED NEUTRALS ARE NOT ALLOWED.
16. BASIS OF DESIGN IS FOR A COMPLETE ELECTRICAL SYSTEM, INSTALLED PER CODE REQUIREMENTS.
17. PROVIDE AN UNSWITCHED HOT TO ALL EMERGENCY BATTERY PACKS, LIGHTING INVERTERS AND EMERGENCY LIGHTING UNITS AHEAD OF AN LIGHTING CONTROLS FROM THE BRANCH CIRCUIT SERVING LIGHTING IN THE SURROUNDING AREA.

GENERAL DEMOLITION NOTES:

1. DEMOLITION NOTES ARE BASED UPON FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY EXACT CONDITIONS AT SITE AND REPORT DISCREPANCIES TO THE ARCHITECT/ENGINEER BEFORE DISTURBING THE INSTALLATION.
2. THE SCOPE OF REQUIRED DEMOLITION IS NOT LIMITED TO ITEMS OR WORK INDICATED ON THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR ACCEPTS EXISTING SITE CONDITIONS AT THE START OF DEMOLITION.
3. WHERE ELECTRICAL COMPONENT ARE SHOWN TO BE REMOVED, THE ELECTRICAL CONTRACTOR SHALL RECONNECT REMAINING COMPONENTS TO EXISTING CIRCUIT(S).
4. WHERE THE DRAWINGS SHOW DEVICES OR EQUIPMENT TO BE PERMANENTLY REMOVED, THE ELECTRICAL CONTRACTOR SHALL REMOVE CONDUCTORS BACK TO SOURCE. TURN BREAKER "OFF" AND LABEL THE BREAKER AS SPARE ON NEWLY PRINTED PANEL DIRECTORY.
5. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED CONDUIT. THE ELECTRICAL CONTRACTOR SHALL CUT CONDUIT FLUSH WITH WALLS AND FLOORS, UON. PATCH ALL SURFACES AND PROVIDE FIRESTOP WHERE REQUIRED.
6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF DAMAGE TO ALL ADJACENT CONSTRUCTION AND FINISHES. REPAIRS SHALL BE MADE TO RETURN SPACE TO ORIGINAL CONDITION PRIOR TO COMPLETION OF PROJECT.
7. EQUIPMENT AND DEVICES SHOWN AS DASHED ON THE DRAWING ARE TO BE REMOVED.
8. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ALL ELECTRICAL SYSTEMS IN WALLS, FLOORS AND CEILINGS SCHEDULED FOR REMOVAL, INCLUDING SPECIAL SYSTEMS.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN OPERATION OF EXISTING SYSTEMS DURING CONSTRUCTION. CONDITIONS SHALL BE RETURNED TO NORMAL AT THE CLOSE OF THE PROJECT.
10. CONTRACTOR SHALL MAINTAIN ALL POWER AND DATA CONDUIT AND WIRING SERVING AREAS NOT INCLUDED IN THE SCOPE OF WORK, UON. NOTIFY ARCHITECT/ENGINEER IF THESE DEVICES WILL IMPEDE UPON SCOPE OF WORK DURING RENOVATION TO RECEIVED DIRECTION ON RESOLUTION.
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE BLACK COVERS ON ALL JUNCTION BOXES WHERE DEVICE HAS BEEN REMOVED AND THE JUNCTION BOX IS TO REMAIN FOR FUTURE USE.
12. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL LAMPS AS REQUIRED AND DIRECTED IN THE LATEST STATE LAWS.
13. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL EQUIPMENT AND DEVICES REMOVED.
14. ALL DISRUPTIONS OF SERVICE SHALL BE COORDINATED AND APPROVED BY OWNER.

ABBREVIATIONS

A, AMP	AMPERES
AF	AMP FUSE OR AMP FRAME
AFC	AVAILABLE FAULT CURRENT (SYMMETRICAL)
A.F.F.	ABOVE FINISHED FLOOR
AIC.	AMPERE INTERRUPTING CAPACITY
AM.	AMMETER
ASYM.	ASYMETRICAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CAP.	CAPACITY OR CAPACITOR
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT ,CCT	CIRCUIT
C.O.	CONDUIT ONLY
CONN.	CONNECT OR CONNECTION
CU	COPPER
DA	DURESS ALARM
DB	DOOR BELL
DISC.	DISCONNECT
DPST	DOUBLE POLE SINGLE THROW
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATION OR ELEVATOR
EMERG, EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EMT	ELECTRICAL METAL TUBING
FIXT.	FIXTURE
FLA	FULL LOAD AMPERES
FLUOR.	FLUORESCENT
GRC,GCR	GALVANIZED RIGID CONDUIT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRD,GND,G	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ.	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
I.G.	ISOLATED GROUND
INCAND.	INCANDESCENT
JB	JUNCTION BOX
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE, METAL HALIDE OR MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
N.C.	NORMALLY CLOSED
N.E.C.	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
NF	NON FUSIBLE
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OL	OVERLOADS
P	POLE
PB	PULLBOX
PH OR ø	PHASE
PNL	PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE
PWR.	POWER
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
SOL	SOLENOID
SPDT	SINGLE POLE DOUBLE THROW
SPKR	SPEAKER
SPST	SINGLE POLE SINGLE THROW
SW.	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TEL	TELEPHONE
XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BACKBOARD
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT AMPERES
VD	VOLTAGE DROP
VM	VOLT METER
W	WATTS OR WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XP	EXPLOSION PROOF

GENERAL

MOUNTING HEIGHTS TO BE AS INDICATED UON. MOUNTING HEIGHTS ARE TO CENTER OF DEVICE FROM FINISHED FLOOR OR GRADE UON. SEE SPECIFICATION 16010 FOR ADDITIONAL REQUIREMENTS

- DEMO NOTE REFERENCE SYMBOL. DENOTES "SEE DEMO NOTE NO. #"
- CONSTRUCTION NOTE REFERENCE SYMBOL. DENOTES "SEE CONSTRUCTION NOTE NO. #"
- FOOT ON DEVICE INDICATES WALL MOUNTED

DEMOLITION AND REMODEL

- EXISTING ELECTRICAL ITEM TO BE REMOVED
- EXISTING ELECTRICAL ITEM TO BE REMOVED AND RELOCATED
- EXISTING ELECTRICAL ITEM RELOCATED. NEW LOCATION
- EXISTING ELECTRICAL ITEM TO REMAIN
- EXISTING ELECTRICAL ITEM TO BE REMOVED AND PROVIDED WITH A BLANK COVERPLATE
- EXISTING ELECTRICAL OR SYSTEMS CIRCUIT TO REMAIN
- EXISTING ELECTRICAL CIRCUIT TO BE REMOVED SHOWN ONLY WHERE CLARIFICATION BETWEEN EXISTING TO REMAIN AND REMOVED ITEMS IS REQUIRED

CIRCUIT DESIGNATIONS

1LN1-1 — PANEL NAME / POLE NUMBERS

BRANCH CIRCUIT HOMERUN. PROVIDE PHASE, NEUTRAL AND GROUND CONDUCTORS FOR EACH INDICATED CIRCUIT OR MULTI WIRE BRANCH AS REQUIRED. PROVIDE SWITCH LEGS FOR SWITCH CIRCUITING AS REQUIRED. PROVIDE EQUIPMENT GROUND WIRE IN ALL BRANCH CIRCUIT RACEWAYS/CIRCUITS. PROVIDE SEPARATE ISOLATED GROUND WIRE TO ALL ISOLATED GROUND DEVICES.

CONDUIT SIZE	MAX QUANTITY OF CONDUCTORS PER CONDUIT		
	CONDUCTOR SIZE		
	12	10	8
3/4 INCH	5 TO 8	5 TO 6	1 TO 3
1 INCH	9 TO 13	7 TO 11	4 TO 5

SEE SPECIFICATIONS FOR LIMITATIONS ON QUANTITY OF CURRENT CARRYING CONDUCTORS PER CONDUIT

- CONDUIT RISER UP
- CONDUIT RISER DOWN
- INDICATES CIRCUIT CONTINUATION
- STUB INTO ACCESSIBLE CORRIDOR CEILING SPACE UNLESS OTHERWISE NOTED
- CONDUIT SEAL FITTING FOR HAZARDOUS AREAS
- CONDUIT SLEEVE
- CAP END OF CONDUIT
- CABLE OR CORD CONNECTED

LIGHTING

NOTE A: UPPER CASE ALPHANUMERIC SUBSCRIPT DENOTES FIXTURE TYPE. SEE SCHEDULE(S)

NOTE B: LOWER CASE LETTER SUBSCRIPT PROVIDED ADJACENT TO SWITCHING DEVICE AND ASSOCIATED LIGHT FIXTURE(S) WHERE REQUIRED FOR CLARIFICATION.

- CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- DIRECTIONAL AIMED FIXTURE AIM IN DIRECTION OF ARROW
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- UNDER CABINET/COUNTER LIGHT OUTLET OR STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO NORMAL SOURCE
- LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO NORMAL SOURCE
- EXIT LIGHT OUTLET WITH FIXTURE – SHADING INDICATES LOCATION OF FACE(S). ARROWS INDICATE DIRECTIONAL ARROWS WHERE REQUIRED. WALL MOUNTED SIGNS AT +90" CENTERED ABOVE DOOR WHERE APPLICABLE
- EMERGENCY LIGHT FIXTURE WITH INTEGRAL BATTERY SOURCE AND ADJUSTABLE HEADS
- TRACK LIGHT OUTLET WITH FIXTURE. TYPE INDICATED, QUANTITY AND LENGTH AS SHOWN OR SCHEDULED
- PENDANT LIGHT FIXTURE CONNECTED TO NORMAL SOURCE
- LIGHTING STANDARD POLE FIXTURE, PROVIDE QUANTITY OF HEADS AND ORIENTATION AS INDICATED
- LIGHTING STANDARD WITH POST-TOP FIXTURE
- BOLLARD FIXTURE
- CEILING LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- WALL BRACKET LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- STRIP LIGHT OUTLET WITH FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- PENDANT LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- LINEAR PENDANT/SUSPENDED LIGHT FIXTURE CONNECTED TO EMERGENCY SOURCE (LIFE SAFETY BRANCH)
- S — SWITCH AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE VARIOUS TYPES OF SWITCHES.

NO SUBSCRIPT – SINGLE POLE
2 — DOUBLE POLE
3 — THREE WAY
4 — FOUR WAY
D — LIGHTING DIMMER
P — PILOT LIGHT
L — LIGHTED HANDLE
K — KEY OPERATED
TE — MANUAL STARTER WITH THERMAL ELEMENT
XP — EXPLOSION PROOF
M — MOTOR RATED

- LV — LOW VOLTAGE SWITCH
- PC — PHOTOCELL
- TC — TIME CLOCK AT +48"
- OS — OCCUPANCY SENSOR WITH INTEGRAL SWITCH-WALL MOUNTED AT +48"
- OS — OCCUPANCY SENSOR – CEILING MOUNTED

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPES OF OCCUPANCY SENSORS

NO SUBSCRIPT – COMBINATION INFRARED/ULTRASONIC SENSOR
I — INFRARED SENSOR
U — ULTRASONIC SENSOR

POWER AND DIAGRAMS

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" U.O.N.

NOTE B: RECEPTACLES LOCATED AT COUNTERS SHALL BE LOCATED 18" AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED U.O.N.

NOTE C: WHERE (AC) IS INDICATED NEXT TO RECEPTACLES AT WORK COUNTER, RECEPTACLES SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

NOTE D: RECEPTACLES IN MECHANICAL AND ELECTRICAL SPACES SHALL BE MOUNTED AT +48" U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE DIFFERENT TYPES OF RECEPTACLES

GF — GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE AT +42" IN TOILETS
ST — SAFETY TYPE RECEPTACLE
XP — EXPLOSION PROOF RECEPTACLE
IG — ISOLATED GROUND RECEPTACLE
WP — WEATHERPROOF
SW — TOP HALF OF DUPLEX RECEPTACLE SWITCHED
CL — CLOCK RECEPTACLE AT +84"
H — HORIZONTAL MOUNTING
U — RECEPTACLE SERVED BY UPS

- 20A, 125V, 2 POLE, 3 WIRE GROUNDING DUPLEX RECEPTACLE, NEMA 5-20R
- 20A, 125V, 2 POLE, 3 WIRE GROUNDING SINGLE RECEPTACLE, NEMA 5-20R
- 20A, 125V, 2 POLE, 3 WIRE GROUNDING DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R
- PEDESTAL TYPE, FLOOR OR COUNTER MOUNTED RECEPTACLE RECEPTACLE TYPE AS INDICATED ABOVE
- CEILING MOUNTED RECEPTACLE, TYPE AS INDICATED ABOVE
- FLUSH FLOOR BOX WITH RECEPTACLE, TYPE AS INDICATED ABOVE
- COMBINATION POWER/COMMUNICATIONS FLOOR BOX, SEE COMMUNICATIONS PLAN FOR SYSTEMS DEVICE
- PIGTAIL DENOTES CONNECTION TO LIGHT SWITCH, LIGHT FIXTURE OR FIXED EQUIPMENT
- SPECIAL PURPOSE RECEPTACLE SUBSCRIPT DENOTES NEMA TYPE, REFER TO SPECIFICATIONS
- JUNCTION BOX, 4 INCH SQUARE UNLESS OTHERWISE NOTED
- PLUG-IN RECEPTACLE STRIP (LENGTH AS INDICATED)
- TELECOMMUNICATIONS/POWER POLE
- 208 VOLT PANELBOARD AT +72" TO TOP
- 480 VOLT PANELBOARD AT +72" TO TOP
- CABLE TRAY OR WIREWAY
- SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/POLES.
- FUSED SAFETY SWITCH AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSESIZE/POLES.
- MAGNETIC MOTOR STARTER AT +54". CHARACTERISTICS AS INDICATED BY FRAME SIZE/POLES/NEMA SIZE.
- COMBINATION MAGNETIC MOTOR STARTER WITH DISCONNECT AT +54". CHARACTERISTICS AS INDICATED BY FRAME/FUSE/POLES/NEMA SIZE
- AFD — ADJUSTABLE FREQUENCY DRIVE
- MAGNETIC CONTACTOR AT +54". AMPS/POLES/CONTACT VOLTS/ COIL VOLTS AS INDICATED.
- SEPARATELY MOUNTED, ENCLOSED MOLDED CASE CIRCUIT BREAKER AT +48". FLUSH MOUNTED IN FINISHED AREAS. AMP/POLES AS INDICATED.
- CIRCUIT BREAKER. AMP/POLES AS INDICATED
- FUSE. SIZE AS INDICATED
- FUSIBLE SWITCH. AMP/POLES/FUSE SIZE AS INDICATED
- AUTOMATIC TRANSFER SWITCH +72" TO TOP OR FLOOR MOUNTED.
- DISCONNECT STABS FOR DRAWOUT TYPE EQUIPMENT
- TRANSFORMER
- GROUND CONNECTION
- MOTOR CONNECTION, HP AS INDICATED
- G — GENERATOR
- START-STOP PUSHBUTTON STATION AT +48"
- GROUNDING SYSTEM TEST WELL
- GROUNDING CONNECTION
- GROUND BUS ON STANDOFFS
- CONTROL PANEL: INTEGRAL PART OF, OR FURNISHED BY OTHER THAN DIVISION 16
- EQUIPMENT OR TERMINAL CABINET AT +72" TO TOP
- PS — POWER SUPPLY
- PUSHBUTTON STATION AT +48"
- SPEAKER LOCATION

FIRE DETECTION AND ALARM

- FACP — CONTROL PANEL AT +72" TO TOP
- FAA — FIRE ALARM ANNUNCIATOR PANEL AT +72" TO TOP
- FIRE SUPPRESSION SYSTEM ABORT SWITCH STATION AT +48"
- F — MANUAL STATION AT +48"

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF MANUAL STATIONS, FIRE SUPPRESSION SYSTEM CONTROL PANELS AND/OR ABORT SWITCHES

NO SUBSCRIPT – STANDARD FIRE ALARM PULL STATION

- S — SMOKE DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF SMOKE DETECTORS

NO SUBSCRIPT – PHOTO ELECTRIC AREA BEAM

- DUCT SMOKE DETECTOR
- AUTOMATIC HEAT DETECTOR

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS TYPE OF HEAT DETECTORS

NO SUBSCRIPT – FIXED TEMPERATURE (155 DEGREE U.O.N.)
R/F —COMBINATION RATE OF RISE FIXED TEMPERATURE (135 DEGREE U.O.N.)
XP —EXPLOSION PROOF, FIXED TEMPERATURE (135 DEGREE U.O.N.) CLASS 1, GROUP C

NOTE: WALL MOUNT VISUAL AND COMBINATION AUDIO/VISUAL NOTIFICATION APPLIANCES AT +80" AFF TO BOTTOM OF FACE PLATE U.O.N.

- VISUAL NOTIFICATION APPLICANCE
- WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE
- WALL MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE
- F — CEILING MOUNTED VISUAL NOTIFICATION APPLIANCE
- F/V — CEILING MOUNTED COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE
- M — MAGNETIC DOOR HOLDER/RELEASE. COORDINATE MOUNTING HEIGHT WITH DOOR MANUFACTURER.
- PS — SPRINKLER OR STANDPIPE FLOW ALARM SWITCH CONNECTION
- TS — VALVE TAMPER SWITCH
- SV F — SOLENOID VALVE FOR PREACTION SPRINKLER SYSTEM
- AP F — AIR PRESSURE MONITOR SWITCH FOR PRE-ACTION OR DRY PIPE SPRINKLER SYSTEM
- FR — CEILING MOUNTED REMOTE ALARM INDICATOR
- RS — WALL MOUNTED REMOTE ALARM INDICATOR AND TEST STATION AT +48"
- FIRE FIGHTERS TELEPHONE JACK AT +48"
- FIRE FIGHTERS TELEPHONE HANDSET AT +48"

TELECOMMUNICATION

GENERAL NOTES

NOTE A: OUTLETS IN FINISHED OR SHELL SPACES SHALL BE MOUNTED AT +18" UON.

NOTE B: OUTLETS LOCATED AT COUNTERS SHALL BE LOCATED 18"AFF IN KNEE SPACE IF PROVIDED OR 4" ABOVE COUNTER OR BACK SPLASH AS APPLICABLE IF NO KNEE SPACE IS PROVIDED UON.

NOTE C: WHERE ASTERISK (*) IS INDICATED NEXT TO OUTLET AT WORK COUNTER, OUTLET SHALL BE LOCATED ABOVE COUNTER RATHER THAN IN KNEE SPACE.

- STANDARD TELECOMMUNICATIONS OUTLET – PROVIDE EXTRA DEEP DOUBLE GANG BOX WITH SINGLE GANG MUD RING AND 1-1/4" CONDUITS TO ABOVE FINISHED CEILING. PROVIDE PLASTIC BUSHING AT THE ENDS OF THE CONDUITS. DATA DEVICES AND WIRING PROVIDED BY OTHERS U.O.N.

THE FOLLOWING SUBSCRIPTS ARE USED TO INDICATE THE VARIOUS (NON-STANDARD) TYPES OF OUTLETS

// — 1ST NUMBER INDICATES QUANTITY OF DATA CABLES
2ND NUMBER INDICATES QUANTITY OF VOICE CABLES
B — BLANK (ROUGH-IN TO ACCESSABLE CEILING SPACE)
F — FIBER
W — WALL PHONE OUTLET AT +48"
C — CEILING PHONE OUTLET
P — PUBLIC TELEPHONE AT +44"
FL — PEDESTAL FLOOR FITTING

SECURITY

- FIXED VIDEO SURVEILANCE CAMERA
- PTZ — PAN/TILT/ZOOM VIDEO SURVEILANCE CAMERA
- DOOR POSITION SWITCH
- CONNECTION TO ELECTRIC OR PNEUMATIC DOOR LOCK
- CR — CARD READER AT +48"

NOTE:
SYMBOLS SHOWN ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE A CHECK LIST OF DEVICES REQUIRED BY THE CONTRACT

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

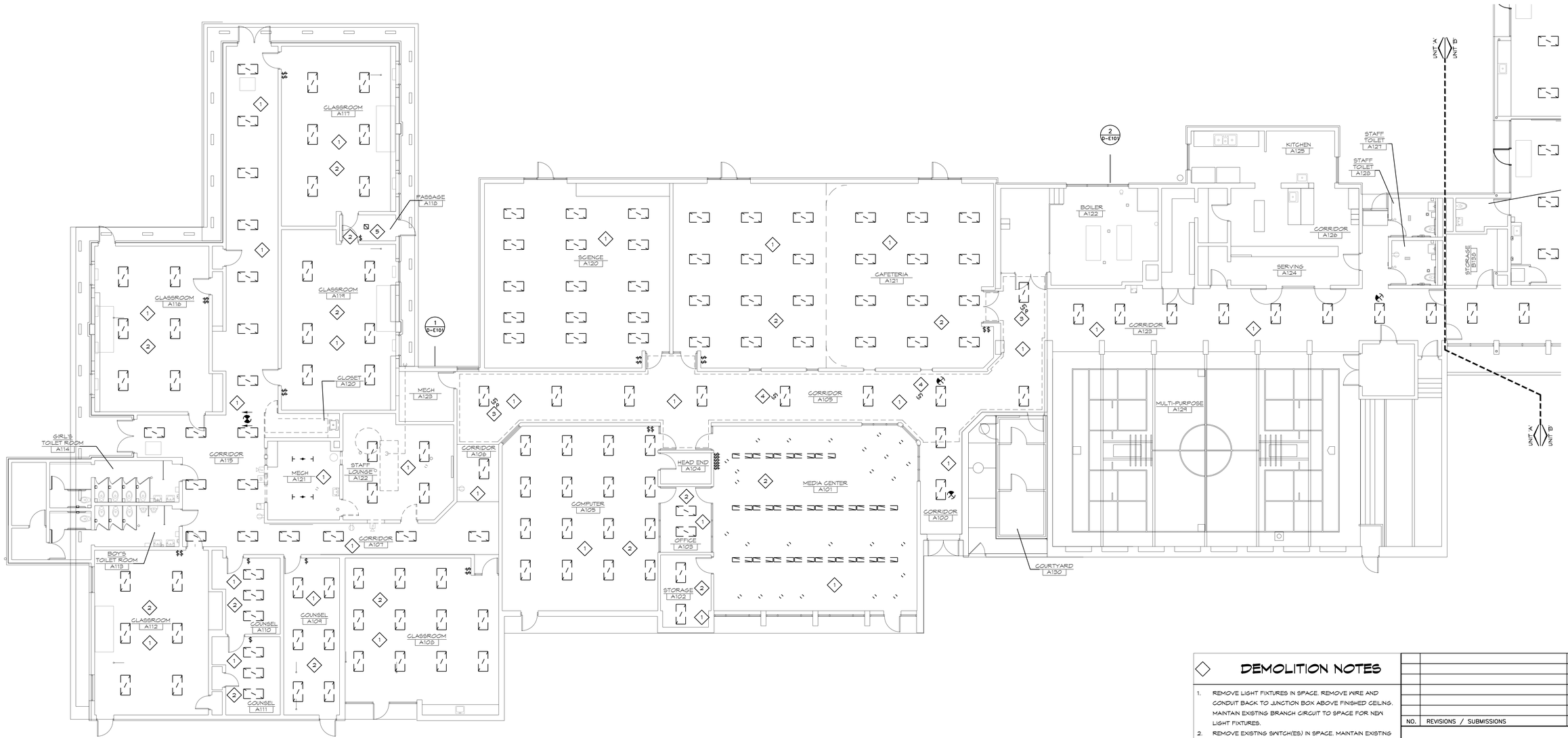
FLOYD ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

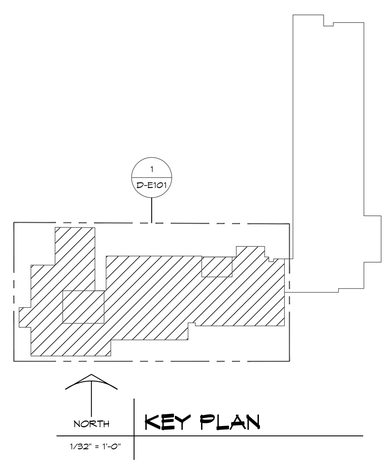
DRAWING TITLE

ELECTRICAL COVER SHEET

SEAL	DRAWN THA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO. E-E000
	REVIEWED RCH	DRAWING NO. D-E000
	DATE OCT 19, 2026	SHEET NO. 18 OF 24
	SCALE AS NOTED	



1 UNIT 'A' ELECTRICAL DEMOLITION PLAN
1/8" = 1'-0"



NORTH
KEY PLAN
1/32" = 1'-0"

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES IN SPACE. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT TO SPACE FOR NEW LIGHT FIXTURES.
2. REMOVE EXISTING SWITCH(ES) IN SPACE. MAINTAIN EXISTING BRANCH CIRCUIT TO BOX FOR NEW SWITCH.
3. SPEAKER TO BE REMOVED FOR REMOVAL OF CEILING. MAINTAIN WIRE AND CONDUIT FOR EXISTING SPEAKER TO BE INSTALLED IN NEW CEILING. COORDINATE WITH ARCHITECTURAL PLANS.
4. SMOKE DETECTOR TO BE REMOVED FOR REMOVAL OF CEILING. MAINTAIN WIRE AND CONDUIT FOR EXISTING FIRE ALARM TO BE INSTALLED IN NEW CEILING. COORDINATE WITH ARCHITECTURAL PLANS.
5. DISCONNECT LIGHT FIXTURE. FIXTURE TO BE ABANDONED. REMOVE WIRE AND CONDUIT BACK TO SOURCE.

NO.	REVISIONS / SUBMISSIONS	DATE

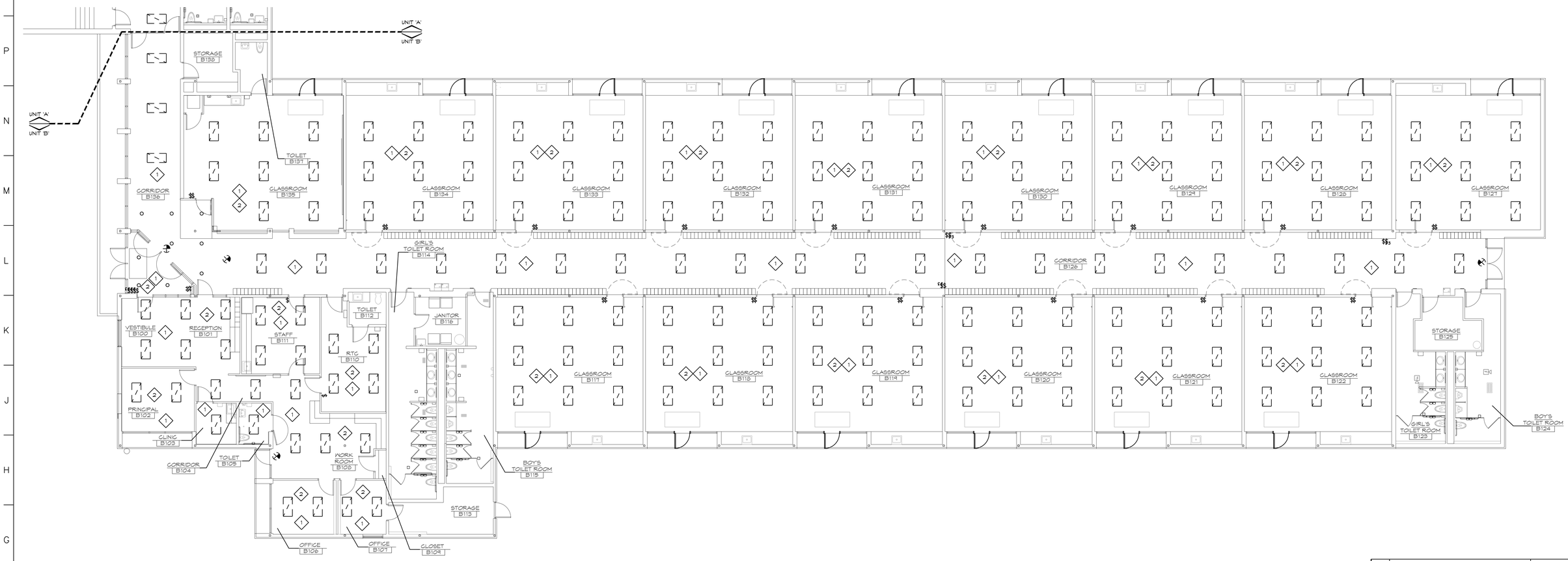
THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE
UNIT 'A' ELECTRICAL DEMOLITION PLAN

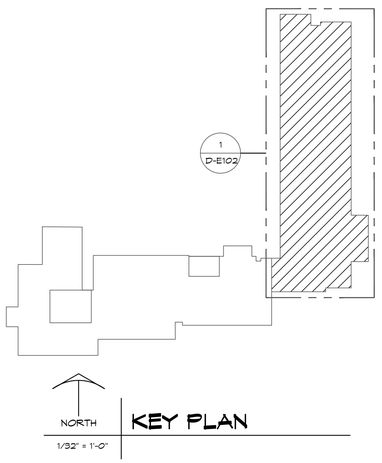
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. D-E101
	DATE OCT 19, 2026	
	SCALE	SHEET NO. 19 OF 24

THA Architects Engineers - D-E101 UNIT 'A' ELEC' DEMO
Plot date: 10/15/2026 3:41 PM



1 UNIT 'B' ELECTRICAL DEMOLITION PLAN

1/8" = 1'-0"



KEY PLAN

1/32" = 1'-0"

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURES IN SPACE. REMOVE WIRE AND CONDUIT BACK TO JUNCTION BOX ABOVE FINISHED CEILING. MAINTAIN EXISTING BRANCH CIRCUIT TO SPACE FOR NEW LIGHT FIXTURES.
2. REMOVE EXISTING SWITCH(ES) IN SPACE. MAINTAIN EXISTING BRANCH CIRCUIT TO BOX FOR NEW SWITCH.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD ELEMENTARY SCHOOL

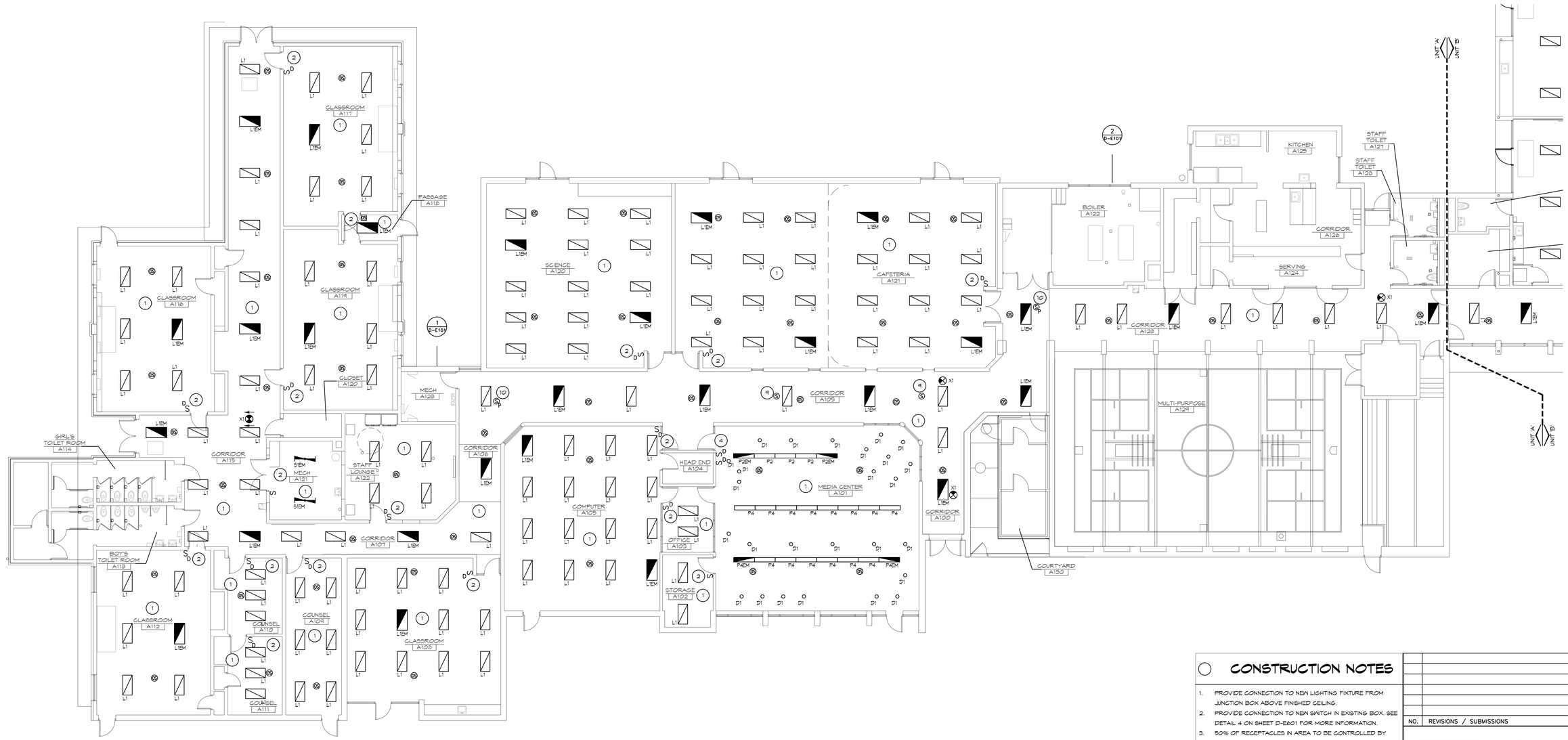
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

UNIT 'B' ELECTRICAL DEMOLITION PLAN

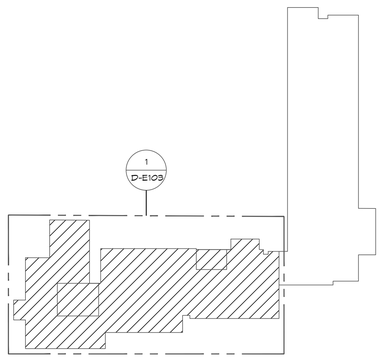
SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. D-E102
	DATE OCT 19, 2026	SHEET NO. 20 OF 24
	SCALE	

THA Architects Engineers - D-E102 UNIT 'B' ELEC DEMO
Plot date: 10/15/2026 3:41 PM



1 UNIT 'A' ELECTRICAL NEW PLAN

1/8" = 1'-0"



KEY PLAN

1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURE FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH IN EXISTING BOX. SEE DETAIL 4 ON SHEET D-E601 FOR MORE INFORMATION.
3. 50% OF RECEPTACLES IN AREA TO BE CONTROLLED BY OCCUPANCY SENSORS (SPLIT DUPLEX METHOD EITHER THE TOP OR BOTTOM OUTLET, OR SEPARATE DUPLEX METHOD, HALF THE RECEPTACLES IN SPACE). SEE DETAIL 3 ON SHEET D-E601 FOR MORE INFORMATION.
4. PROVIDE (2) SWITCHES TO CONTROL LINEAR LIGHTS AND DOWNLIGHTS SEPARATELY.
5. PROVIDE KEYED SWITCH AND ALL NECESSARY POWER PACKS FOR NEW LIGHTING. EXISTING LIGHTING CIRCUITS TO BE REUSED FOR NEW LIGHTING.
6. RELOCATED FIRE ALARM DEVICE. EXTEND WIRE AND CONDUIT AS NEED FOR NEW FIRE ALARM LOCATION.
7. RELOCATED ELECTRICAL DEVICE. EXTEND WIRE AND CONDUIT FOR NEW ELECTRICAL DEVICE LOCATION.
8. OUTSIDE LIGHTING SHALL BE CONTROLLED BY COMBINATION TIME CLOCK AND PHOTOCELL.
9. EXTEND WIRE AND CONDUIT TO NEW LOCATION OF FIRE ALARM DEVICE AS NEEDED FOR MOUNTING IN NEW CEILING.
10. EXTEND WIRE AND CONDUIT TO NEW LOCATION OF SPEAKER AS NEEDED FOR MOUNTING IN NEW CEILING.
11. PROVIDE CONNECTION TO LIGHTING IN SPACE FROM CIRCUIT IN ADJACENT SPACE.

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

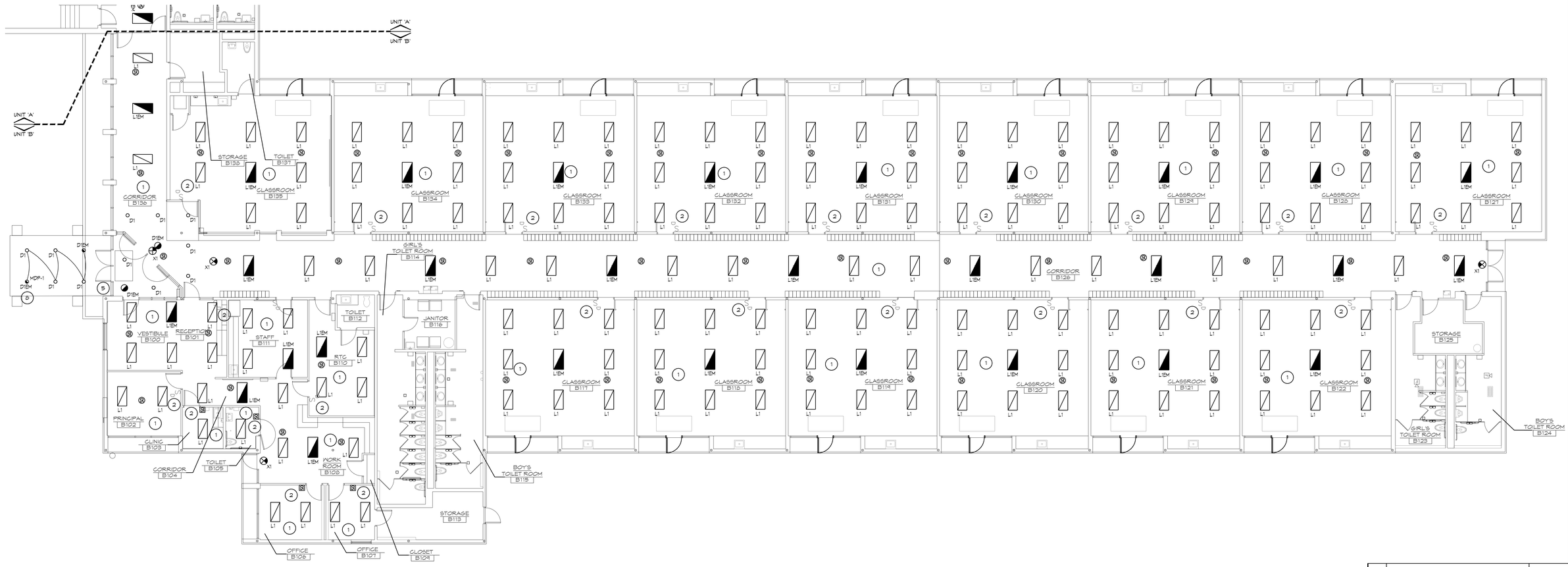
FLOYD ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

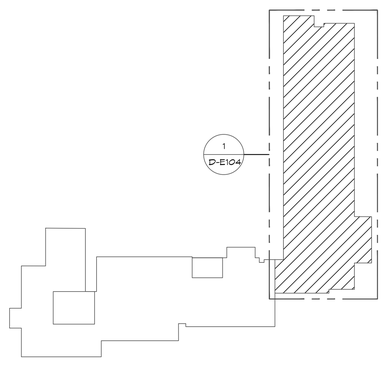
DRAWING TITLE

UNIT 'A' ELECTRICAL NEW PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. D-E103
	DATE OCT 19, 2026	SHEET NO. 21 OF 24
	SCALE	



1 UNIT 'B' ELECTRICAL NEW PLAN
1/8" = 1'-0"



KEY PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURE FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH IN EXISTING BOX. SEE DETAIL 4 ON SHEET D-E601 FOR MORE INFORMATION.
3. 50% OF RECEPTACLES IN AREA TO BE CONTROLLED BY OCCUPANCY SENSORS (SPLIT DUPLEX METHOD EITHER THE TOP OR BOTTOM OUTLET, OR SEPARATE DUPLEX METHOD, HALF THE RECEPTACLES IN SPACE). SEE DETAIL 3 ON SHEET D-E601 FOR MORE INFORMATION.
4. PROVIDE (2) SWITCHES TO CONTROL LINEAR LIGHTS AND DOWNLIGHTS SEPARATELY.
5. PROVIDE KEYED SWITCH AND ALL NECESSARY POWER PACKS FOR NEW LIGHTING. EXISTING LIGHTING CIRCUITS TO BE REUSED FOR NEW LIGHTING.
6. RELOCATED FIRE ALARM DEVICE. EXTEND WIRE AND CONDUIT AS NEED FOR NEW FIRE ALARM LOCATION.
7. RELOCATED ELECTRICAL DEVICE. EXTEND WIRE AND CONDUIT FOR NEW ELECTRICAL DEVICE LOCATION.
8. OUTSIDE LIGHTING SHALL BE CONTROLLED BY COMBINATION TIME CLOCK AND PHOTOCELL.

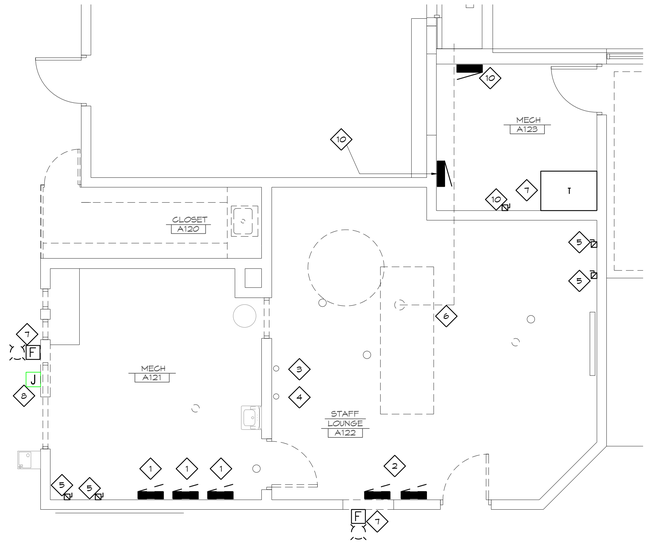
NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

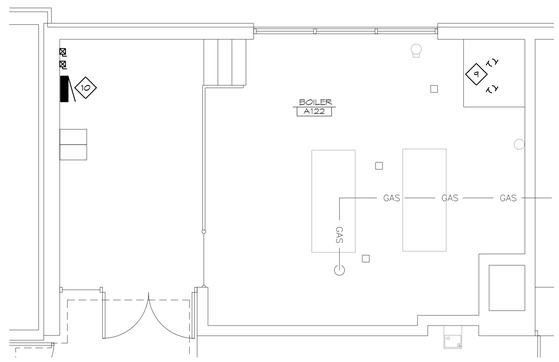
DRAWING TITLE
UNIT 'B' ELECTRICAL NEW PLAN

SEAL	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RGH	CAD FILE NO.
	REVIEWED RGH	DRAWING NO. D-E104
	DATE OCT 19, 2026	SHEET NO. 22 OF 24
	SCALE	



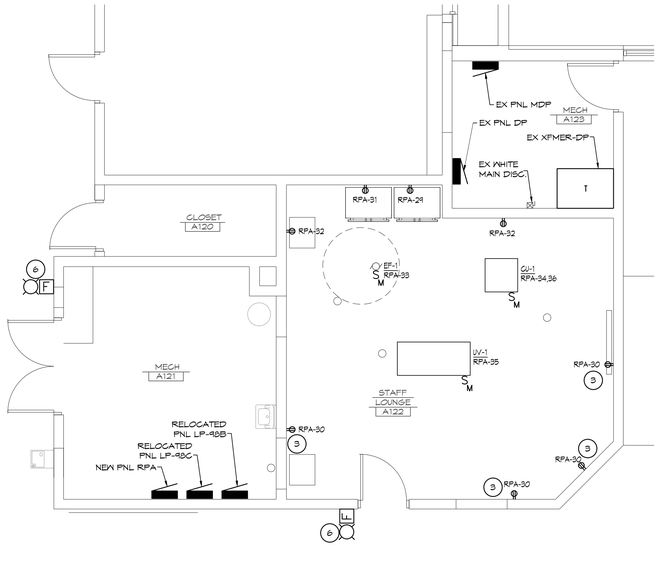
1 ELECTRICAL BREAK ROOM DEMOLITION PLAN

1/4" = 1'-0"



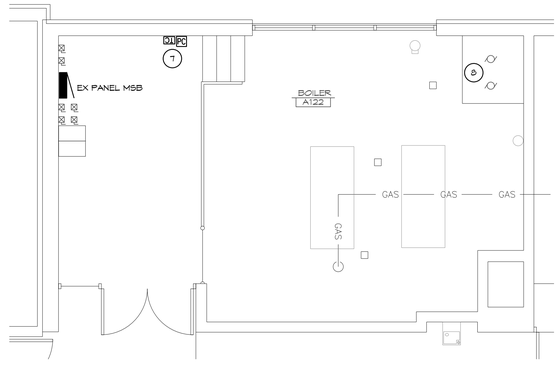
2 BOILER ROOM ENLARGED DEMOLITION PLAN

1/4" = 1'-0"



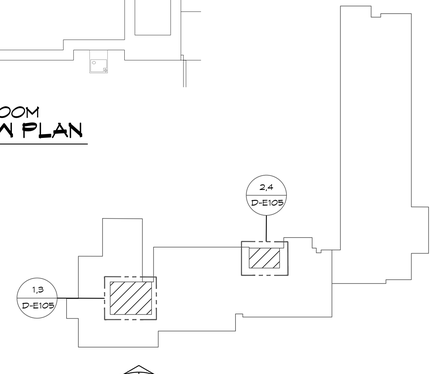
3 ELECTRICAL BREAK ROOM NEW PLAN

1/4" = 1'-0"



4 ELECTRICAL ROOM BOILER NEW PLAN

1/4" = 1'-0"



KEY PLAN

1/32" = 1'-0"

DEMOLITION NOTES

1. CONTRACTOR TO DISCONNECT AND COMPLETELY REMOVE DESIGNATED ELECTRICAL PANELS, CONDUIT, AND WIRE. PATCH WALL (IF NEEDED) AND PREP THE WALL TO RECEIVE ONE (1) NEW AND TWO (2) RELOCATED PANELS IN STRICT ACCORDANCE WITH NEC ARTICLE 110.26 CLEARANCES.
2. DISCONNECT AND REMOVE EXISTING ELECTRICAL PANELS. PANELS TO BE RELOCATED IN MECH ROOM A121 ON SOUTH WALL. CONTRACTOR TO RECORD ALL EXISTING TERMINATIONS FOR RELOCATION OF PANELS. REFER TO DETAIL 1 ON SHEET D-E601.
3. CONTRACTOR TO REMOVE ABANDON CONDUIT BACK TO SOURCE.
4. CONTRACTOR TO VERIFY CONDUIT RUN FROM FLOOR TO CEILING. CONDUIT TO BE REMOVED UNLESS BEING UTILIZED FOR CURRENT SERVICES.
5. DISCONNECT AND REMOVE EXISTING DISCONNECT SWITCHES. REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.
6. CONTRACTOR TO REMOVE ALL ELECTRICAL CONNECTIONS TO EXISTING BOILER SCHEDULED TO BE REMOVED. REMOVE ALL WIRES AND CONDUITS BACK TO SOURCE.
7. FIRE ALARM DEVICE TO BE RELOCATED. PULL BACK WIRE AND CONDUIT TO ABOVE FINISHED CEILING FOR RELOCATION OF DEVICE.
8. DISCONNECT AND REMOVE EXISTING ELECTRICAL DEVICE. REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.
9. PUMPS TO BE REMOVED. PULL BACK WIRE AND CONDUIT FOR REMOVAL OF PUMPS. MAINTAIN WIRE AND CONDUIT FOR CONNECTION TO NEW PUMPS.
10. EXISTING ELECTRICAL DEVICE AND EQUIPMENT TO REMAIN.

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO NEW LIGHTING FIXTURE FROM JUNCTION BOX ABOVE FINISHED CEILING.
2. PROVIDE CONNECTION TO NEW SWITCH IN EXISTING BOX. SEE DETAIL 2 ON SHEET D-E601 FOR MORE INFORMATION.
3. RECEPTACLE TO BE CONTROLLED BY OCCUPANCY SENSOR. SEE DETAIL 1 ON SHEET D-E601 FOR MORE INFORMATION.
4. PROVIDE (2) SWITCHES TO CONTROL LINEAR LIGHTS AND DOWNLIGHTS SEPARATELY.
5. PROVIDE KEYED SWITCH AND ALL NECESSARY POWER PACKS FOR NEW LIGHTING. EXISTING LIGHTING CIRCUITS TO BE REUSED FOR NEW LIGHTING.
6. RELOCATED FIRE ALARM DEVICE. EXTEND WIRE AND CONDUIT AS NEED FOR NEW FIRE ALARM LOCATION.
7. OUTSIDE LIGHTING SHALL BE CONTROLLED BY COMBINATION TIME CLOCK AND PHOTOCELL.
8. EXTEND WIRE AND CONDUIT TO NEW PUMPS FROM EXISTING CIRCUITS.

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA
Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:

FLOYD
ELEMENTARY SCHOOL

725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE

ENLARGED ELECTRICAL VIEWS

SEAL	DRAWN TJA	PROJECT NO. 25-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. D-E105
	DATE OCT 19, 2026	SHEET NO. 23 OF 24
	SCALE	

LIGHTING FIXTURE SCHEDULE

General: Lighting fixtures as hereinafter specified are identified by type as noted on drawings. Fixture specifications are based on construction and performance.
Manufacturer's catalogue numbers are of general nature and indicate level of quality required, but do not necessarily reflect complete options as specified.
Approval shall be based on description and specification of fixture as well as catalogue number indicated. Provide appropriate trim for fixture based on ceiling

	DESCRIPTION	MANUFACTURER & CATALOG NO.	LAMPS QUANTITY AND WATTS FLUOR	LED	INC	BALLAST	MOUNTING	NOTES
D1	6" LED DOWN LIGHT. 1500 LUMENS, 4000K COLOR TEMPATURE. PROVIDE TYPE 'EM' FIXTURES WITH OPTION ELRSD. 10 WATT EMERGENCY BATTERY PACK WITH REMOTE TEST SWITCH. TEST SWITCH TO BE LOCATED IN VESTIBULE CEILING.	GOTHAM: EVO6-40/15-AR-LSS-MWD-MVOLT-GZ1		15W		DRIVER	RECESSED	
L1	2'X4' LED FLAT PANEL, 3000 LUMEN , 4000K COLOR TEMPERATURE, PROVIDE TYPE 'EM' FIXTURES WITH OPTION E7W. 7 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CPX-2X4-3000LM-80CRI-4000K-SWL-MIN10-MVOLT-		25W		DRIVER	RECESSED	
P2	INDIRECT DIRECT LINEAR PENDANT, 2000 LUMEN/FT, 4000K COLOR TEMP, 20FT. SHADED REGIONS INDICATE 4' 10W EMERGENCY BATTERY BACK UP SECTION .	FINELITE: HP-X-P-ID-X-V-V-840-LGD10W		17W/FT		DRIVER	PENDANT	
P4	INDIRECT DIRECT LINEAR PENDANT, 2000 LUMEN/FT, 4000K COLOR TEMP, 32FT. SHADED REGIONS INDICATE 4' 10W EMERGENCY BATTERY BACK UP SECTION .	FINELITE: HP-X-P-ID-X-V-V-840-LGD10W		17W/FT		DRIVER	PENDANT	
S1EM	SURFACE MOUNT 4' LED FIXTURE. 3000LUMEN, 4000K COLOR TEMPATURE. 10 WATT EMERGENCY BATTERY BACK UP.	LITHONIA: CLX-L48-3000LM-SEF-WDL-E10W		30W		DRIVER	SURFACE	
X1	ARCHITECTURAL EDGE LIT LED EXIT SIGN WITH BATTERY OPERATION. PROVIDE CEILING/WALL/END MOUNT AS SHOWN ON PLANS WITH SINGLE/DOUBLE FACE AND DIRECTIONAL SIGNS AS SHOWN ON PLANS.	LITHONIA: EDG-X-RMR-EL-SD		LED		DRIVER	WALL	

PANEL NAME: RPA
SECTION: 1 OF 1 **POLES:** 42 **LOCATION:** MECH A 121 **MOUNTING:** SURFACE
BUS: 100A **MAIN:** 100A MCB **MIN KAIC:** 65 **ISO GND BUS:** NO
L-L VOLTS: 208 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** DP
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	FURNACE 3-4						60	2	1	A	2	2	60						TEACHER LOUNGE	2
3							-	-	3	B	4	-	-							4
5	WATER HEATER						30	1	5	C	6	1	30						TIMER H2 HTR	6
7	EXISTING LOAD						30	1	7	A	8	1	20						EXISTING LOAD	8
9	EXISTING LOAD						30	1	9	B	10	1	20						EXISTING LOAD	10
11	EXISTING LOAD						20	1	11	C	12	1	20						EXISTING LOAD	12
13	EXISTING LOAD						15	1	13	A	14	1	20						EXISTING LOAD	14
15	EXISTING LOAD						30	1	15	B	16	1	30						EXISTING LOAD	16
17	FURN LIGHTS						20	1	17	C	18	1	20						COPIER	18
19	EXISTING LOAD						15	1	19	A	20	1	20						EXISTING LOAD	20
21	CTR						20	1	21	B	22	1	20						EXISTING LOAD	22
23	CSL						15	1	23	C	24	1	20						EXISTING LOAD	24
25	EXISTING LOAD						20	1	25	A	26	1	30						EXISTING LOAD	26
27	EXISTING LOAD						15	1	27	B	28	1	20						EXISTING LOAD	28
29	FRIDGE RECEPT		1000				20*	1	29	C	30	1	20		540				BREAK ROOM RECEPT	30
31	FRIDGE RECEPT		1000				20*	1	31	A	32	1	20		360				BREAK ROOM RECEPT	32
33	EF-1			1200			20	1	33	B	34	2	20			1456			CU-1	34
35	UV-1			1800			20	1	35	C	36	-	-			1456			*	36
37	SPACE								37	A	38								SPACE	38
39	SPACE								39	B	40								SPACE	40
41	SPACE								41	C	42								SPACE	42

SUBTOTAL CONNECTED KVA

	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.0	1.4	0.0	0.0	0.0	1.4
PHASE B CONNECTED KVA	0.0	0.0	2.7	0.0	0.0	2.7
PHASE C CONNECTED KVA	0.0	1.5	3.3	0.0	0.0	4.8
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.0	2.9	5.9	0.0	0.0	8.8	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.0	2.9	5.9	0.0	0.0	8.8	0.0	8.8	DEMAND KVA
							24.5	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							24.5	MIN. OVERCURRENT DEVICE AMPS

PANEL NAME: MSB
SECTION: 1 OF 1 **POLES:** 84 **LOCATION:** BOILER ROOM **MOUNTING:** SURFACE
BUS: 400A **MAIN:** 400A MLO **MIN KAIC:** EXISTING **ISO GND BUS:** NO
L-L VOLTS: 480 **PHASE:** 3 **WIRE:** 4
PROJECT #: 260068.00 **FED FROM:** EX SERVICE XFMR
* DENOTES GFCI CIRCUIT BREAKER
** DENOTES SCREW ON TYPE LOCKING DEVICE

CKT	LOAD DESCRIPTION	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	OCPD	P	CKT	PH	CKT	P	OCPD	LOAD VOLT-AMPERES LTS	REC	MOTOR	OTHER	KIT	LOAD DESCRIPTION	CKT
1	NEW CANOPY LIGHTING	90					20	1	1	A	2								SPACE	2
3	SPACE								3	B	4								SPACE	4
5	SPACE								5	C	6								SPACE	6
7	SPACE								7	A	8								SPACE	8
9	SPACE								9	B	10								SPACE	10
11	SPACE								11	C	12								SPACE	12
13	MULTI HV-3						20	3	13	A	14	3	20						EXISTING LOAD	14
15	"						"	"	15	B	16	"	"						"	16
17	"						"	"	17	C	18	"	"						"	18
19	AIR COMPRESSOR						15	3	19	A	20	3	20						EXISTING LOAD	20
21	"						"	"	21	B	22	"	"						"	22
23	"						"	"	23	C	24	"	"						"	24
25	KITCHEN FAN						15	3	25	A	26	3	20						EXISTING LOAD	26
27	"						"	"	27	B	28	"	"						"	28
29	"						"	"	29	C	30	"	"						"	30
31	BOILER 1						15	3	31	A	32	3	15						EXISTING LOAD	32
33	"						"	"	33	B	34	"	"						"	34
35	"						"	"	35	C	36	"	"						"	36
37	BOILER PUMP 1			7460			15	3	37	A	38	3	20						PUMP 1	38
39	"			7460			"	"	39	B	40	"	"						"	40
41	"			7460			"	"	41	C	42	"	"						"	42
43	BOILER 2						15	3	43	A	44	3	60						TRAILER	44
45	"						"	"	45	B	46	"	"						"	46
47	"						"	"	47	C	48	"	"						"	48
49	BOILER PUMP 2			7460			15	3	49	A	50	3	20						PUMP 2	50
51	"			7460			"	"	51	B	52	"	"						"	52
53	"			7460			"	"	53	C	54	"	"						"	54
55	AIR COMPRESSOR						30	3	55	A	56	3	40						EXISTING LOAD	56
57	"						"	"	57	B	58	"	"						"	58
59	"						"	"	59	C	60	"	"						"	60
61	TRANSFORMER						60	3	61	A	62	3	100						EXISTING LOAD	62
63	"						"	"	63	B	64	"	"						"	64
65	"						"	"	65	C	66	"	"						"	66
67	EXISTING LOAD						60	3	67	A	68	3	100						EXISTING LOAD	68
69	"						"	"	69	B	70	"	"						"	70
71	"						"	"	71	C	72	"	"						"	72
73	1" GOING OUTSIDE						60	3	73	A	74	3	100						TRAILER	74
75	"						"	"	75	B	76	"	"						"	76
77	"						"	"	77	C	78	"	"						"	78
79	SPACE								79	A	80	3	100						PANEL LPB	80
81	SPACE								81	B	82	"	"						"	82
83	SPACE								83	C	84	"	"						"	84

SUBTOTAL CONNECTED KVA

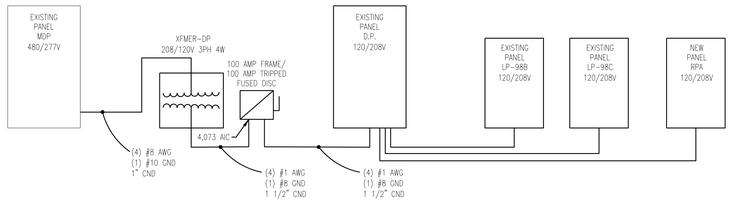
	LTS	REC	MOTOR	OTHER	KIT	TOTAL
PHASE A CONNECTED KVA	0.1	0.0	14.9	0.0	0.0	15.0
PHASE B CONNECTED KVA	0.0	0.0	14.9	0.0	0.0	14.9
PHASE C CONNECTED KVA	0.0	0.0	14.9	0.0	0.0	14.9
25% OF LARGEST MOTOR			0.0			

RECEPTACLE DEMAND FACTOR:
100% FIRST 10 KVA + 50% REMAINING

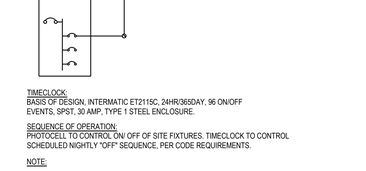
LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MOTOR	OTHER	KIT	SUBTOT	SPARE	TOTAL	
0.1	0.0	44.8	0.0	0.0	44.9	0%		CONNECTED KVA
1.0	#1	1.0	1.0	1.0				DEMAND FACTOR
0.1	0.0	44.8	0.0	0.0	44.9	0.0	44.9	DEMAND KVA
							53.9	DEMAND AMPS
1.25	1.0	1.0	1.0	1.0		1.0		CONTINUOUS/NONCONT FACTOR
							54.0	MIN. OVERCURRENT DEVICE AMPS

DEMAND BASED ON ELECTRICAL BILLS: 121.6KW 146.4355 AMPS
ADDED LOAD FOR BREAK ROOM AND PUMPS: 58.8KW 70.81 AMPS
NEW TOTAL WITHOUT REPLACEMENT OF LIGHTING AND REMOVED LOAD OF EXISTING PUMPS: 180.4KW 217.2455 AMPS



1 ONE LINE DIAGRAM-ELECTRICAL BREAK ROOM
N.T.S XO1

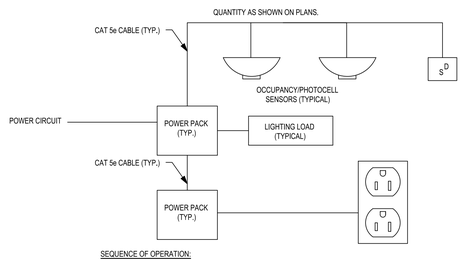


TIMECLOCK:
BASIS OF DESIGN, INTERMATIC ET2115C, 24HR/365DAY, 96 ON/OFF EVENTS, SPST, 30 AMP, TYPE 1 STEEL ENCLOSURE.

SEQUENCE OF OPERATION:
PHOTOCELL TO CONTROL ON/ OFF OF SITE FIXTURES. TIMECLOCK TO CONTROL SCHEDULED NIGHTLY "OFF" SEQUENCE, PER CODE REQUIREMENTS.

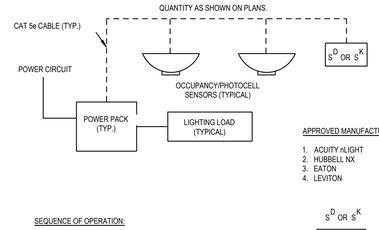
NOTE:
1. COORDINATE FINAL LOCATION OF CONTROLS ADJACENT TO BUILDING PANEL.
2. LIGHTING CONTROLS SHALL MEET MICHIGAN ENERGY CODE COMPLIANCE FOR PHOTOCELL ON CONTROL WITH NIGHTLY TIME OF DAY OFF PER SEQUENCE OF OPERATION.

2 TIMECLOCK & PHOTOCELL CONTROLS
N.T.S XO1



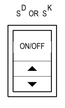
SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE, BASED UPON ASHRAE 90.1, 2019.
2. ALL CONTROLLED RECEPTACLES SHALL BE PERMANENTLY MARKED IN ACCORDANCE WITH NFPA 70.
3. CONTROLLED RECEPTACLE TO ACTIVATE UPON DETECTION OF OCCUPANCY.
4. CONTROLLED RECEPTACLE TO TURN OFF UPON ROOM VACANCY.

3 BREAK ROOM RECEPTACLE CONTROLS
N.T.S XO1



SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE, BASED UPON ASHRAE 90.1, 2019.
2. MANUAL ON, LOCAL DIMMING AND ON/OFF OVERRIDE, AUTOMATIC OFF.
3. PROVIDE SINGLE (1) COVERPLATE. SIZE BASED ON SWITCHES REQUIRED.
4. SEE PLANS FOR SPECIFIC QUANTITY AND LOCATION OF SWITCH TYPES.

APPROVED MANUFACTURERS:
1. ACUITY nLIGHT
2. HUBBELL NX
3. EATON
4. LEVITON



4 TYPICAL LIGHTING CONTROLS
N.T.S XO1



BASIS OF DESIGN:
1. PROVIDE ACUITY #WSX-PDT

APPROVED ALTERNATES:
1. EATON
2. LEVITON
3. HUBBELL

SEQUENCE OF OPERATION:
1. ALL CONTROLS TO BE COMPLIANT WITH MICHIGAN ENERGY CODE, BASED UPON ASHRAE 90.1, 2019.
2. MANUAL ON, ON/OFF OVERRIDE, AUTOMATIC OFF.
3. TOILETS AND STORAGE CLOSETS SHALL BE AUTOMATIC ON/OFF.

5 WALL SENSOR LIGHTING CONTROLS
N.T.S XO1

PROJECT 'D'

NO.	REVISIONS / SUBMISSIONS	DATE

THA Architects Engineers
817 E. Kearsley St. | Flint, MI 48503
Ph: 810-767-5600 | THA-Flint.com

PROJECT 'D' ADDITION AND RENOVATIONS TO:
FLOYD ELEMENTARY SCHOOL
725 SOUTH EIGHT MILE ROAD
MIDLAND, MI

DRAWING TITLE
ELECTRICAL SCHEDULES AND DETAILS

SEAL		
	DRAWN TJA	PROJECT NO. 26-210
	CHECKED RCH	CAD FILE NO.
	REVIEWED RCH	DRAWING NO. D-E601
	DATE OCT 19, 2026	SHEET NO. 24 OF 24
	SCALE	