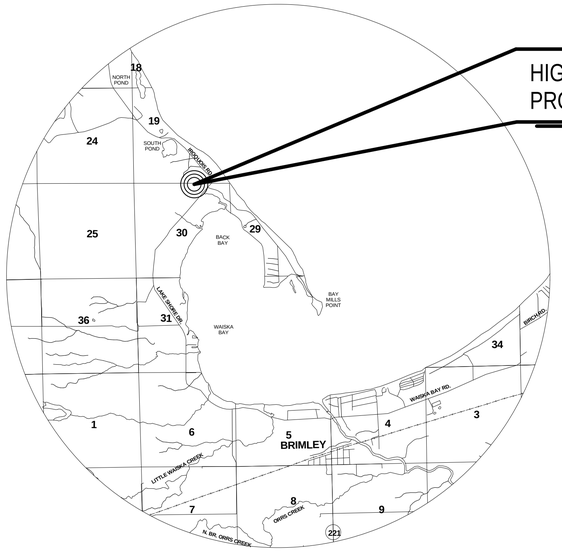
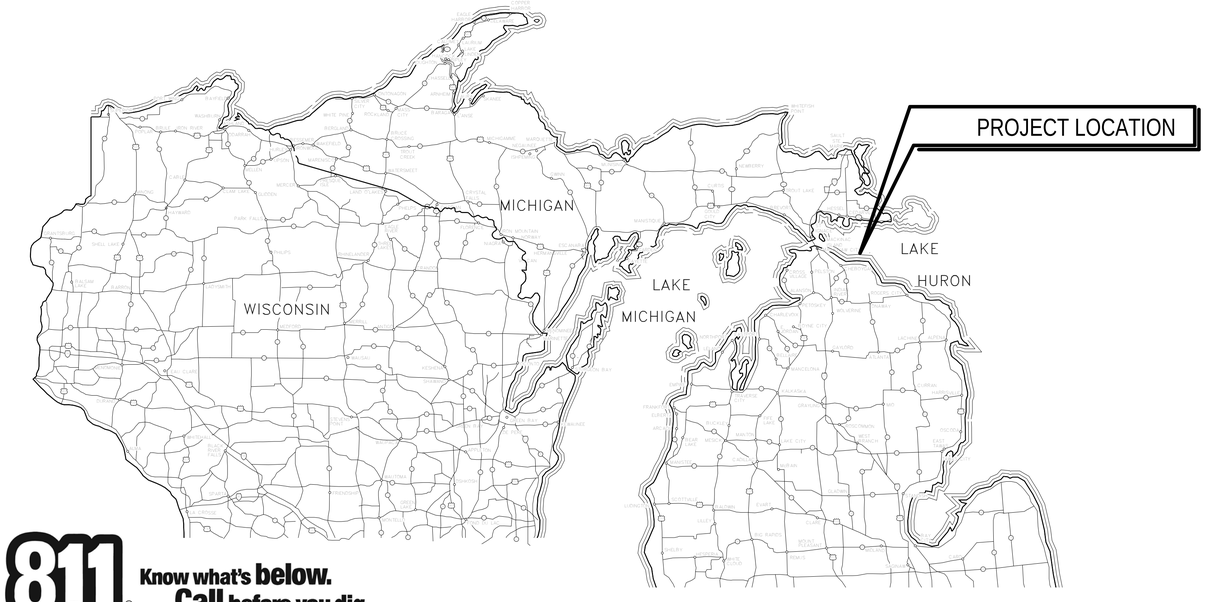
HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI



PROJECT VICINITY MAP



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

CODE REVIEW SUMMARY

OJIBWE CHARTER SCHOOL
ADDITION AND REMODEL
BAY MILLS TOWNSHIP, MICHIGAN

APPLICABLE CODES:	2015 MICHIGAN BUILDING CODE 2012 NFPA 101 - LIFE SAFETY CODE w/ SCHOOL FIRE SAFETY RULES 2015 MICHIGAN PLUMBING CODE 2015 MICHIGAN MECHANICAL CODE 2017 NATIONAL ELECTRIC CODE + MI PART 8
EXISTING OCCUPANCY TYPE:	E - EDUCATIONAL
EXISTING CONSTRUCTION TYPE:	TYPE IIB
PROPOSED ADDITION OCCUPANCY:	E - EDUCATIONAL
PROPOSED ADDITION CONSTRUCTION TYPE:	TYPE IIB
EXISTING SF:	22,337 ± SF
PROPOSED ADDITION SF:	4,979 SF
ALLOWABLE BUILDING AREA / HEIGHT:	E OCCUPANCY / TYPE IIB CONSTRUCTION: 14,500 SF PER STORY / 2 STORIES / 55'-0" HT
OCCUPANT LOAD:	BUILDING ADDITION: (4) CLASSROOMS: 784 / 20 SF = 40 OCCUPANTS PER CLASSROOM = 160 OCCUPANTS
REQUIRED EXITS: (MINIMUM PER STORY)	500 OCCUPANTS REQUIRES 2 EXITS
PROVIDED EXITS:	2
EXIT ACCESS TRAVEL DISTANCE:	WITHOUT SPRINKLER SYSTEM / E OCCUPANCY = 150'-0"
COMMON PATH OF EXIT TRAVEL:	E OCCUPANCY/NON-SPRINKLERED = 75'-0"
CORRIDOR SEPARATION:	NON-FIRE SPRINKLERED - 1 HOUR RATING REQUIRED, UNLESS DOORS ARE PROVIDED FROM CLASSROOMS DIRECTLY TO THE EXTERIOR.
FIRE AREA A (GYM):	6,330 SF
FIRE AREA B (EXISTING SCHOOL):	13,454 SF
FIRE AREA C (ADDITION & REMODEL):	7,314 SF
FIRE WALL:	TABLE 706.4: GROUP E OCCUPANCY FOOTNOTE A: IN TYPE II CONSTRUCTION, WALLS ARE PERMITTED TO HAVE A 2 HR. FIRE-RESISTANCE RATING
FIRE PROTECTION:	GROUP E – <12,000 SF FIRE AREA: FIRE SPRINKLER NOT REQUIRED
FIRE ALARM:	GROUP E – FIRE ALARM SYSTEM REQUIRED
FIRE EXTINGUISHERS:	PER SECTION 906

SHEET INDEX

NUMBER	SHEET NAME
G001	COVER SHEET
C100	GENERAL NOTES AND SPECIFICATIONS
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C103	SITE GRADING PLAN
C104	SITE UTILITY PLAN
C401	SANITARY AND STORM PROFILES
C501	DETAILS
C502	DETAILS
S001	STRUCTURAL NOTES
S100	FOUNDATION PLAN
S101	ROOF FRAMING PLAN
S501	DETAILS
S502	DETAILS
A001	GENERAL ARCHITECTURAL NOTES
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A101	OVERALL FLOOR PLAN
A102	ENLARGED FLOOR PLANS
A103	ENLARGED FLOOR PLANS
A104	REFLECTED CEILING PLANS
A105	REFLECTED CEILING PLANS
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A302	BUILDING SECTIONS
A303	WALL SECTIONS
A304	WALL SECTIONS
A305	SECTIONS
A306	ROOF DETAILS
A307	DETAILS
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A701	INTERIOR ELEVATIONS
A702	INTERIOR ELEVATIONS
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MD101	FIRST FLOOR EXISTING MECHANICAL PLAN
MD201	ROOF EXISTING MECHANICAL PLAN
M101	FIRST FLOOR PROPOSED OVERALL MECHANICAL PLAN
M201	ROOF PROPOSED MECHANICAL PLAN
M401	ENLARGED PROPOSED MECHANICAL PLANS
M402	ENLARGED BOILER PLANS
M501	MECHANICAL DETAILS
M502	MECHANICAL DETAILS
M503	GAS SHUTOFF DETAILS
M601	MECHANICAL SCHEDULES
M602	MECHANICAL SCHEDULES
M603	MECHANICAL SCHEDULES
PD100	UNDERSLAB EXISTING PLUMBING PLAN
PD101	FIRST FLOOR EXISTING PLUMBING PLAN
P100	UNDERSLAB PROPOSED OVERALL PLUMBING PLAN
P101	FIRST FLOOR PROPOSED OVERALL PLUMBING PLAN
P400	ENLARGED UNDERSLAB PROPOSED PLUMBING PLANS
P401	ENLARGED FIRST FLOOR PROPOSED PLUMBING PLANS
P501	PLUMBING DETAILS
P502	PLUMBING DETAILS
P601	PLUMBING SCHEDULES
E001	ELECTRICAL ABBREVIATIONS
ED101	EXISTING / DEMO POWER PLAN
ED201	EXISTING / DEMO LIGHTING PLAN
ED601	EXISTING PANEL SCHEDULES
ED602	EXISTING PANEL SCHEDULES
E101	OVERALL POWER PLAN
E102	AREAS A, B PROPOSED POWER PLAN
E103	AREAS C, D, E PROPOSED POWER PLAN
E104	EXISTING / DEMO & NEW ROOF ELECTRICAL PLAN
E201	PROPOSED LIGHTING PLAN NORTH
E202	PROPOSED LIGHTING PLAN SOUTH
E301	PROPOSED FIRE ALARM PLAN NORTH
E302	PROPOSED FIRE ALARM PLAN SOUTH
E501	ELECTRICAL DETAILS
E502	ELECTRICAL DETAILS
E503	ELECTRICAL DETAILS
E601	PROPOSED PANEL SCHEDULES

U.P. ENGINEERS & ARCHITECTS, INC.

100 PORTAGE STREET
HOUGHTON, MI 49931
P (906) 482-4810
F (906) 482-9799

424 S. PINE ST.
ISHPEMING, MI 49849
P (906) 485-1011
F (906) 485-1013

1701 DUNLAP AVE., SUITE 8
MARINETTE, WI 54143
P (715) 732-4188
F (715) 732-4189

707 ASHMUN STREET
SAULT STE. MARIE, MI 49783
P (906) 635-0511
F (906) 635-0612

2906 N. STEPHENSON AVE, SUITE 2
IRON MOUNTAIN, MI 49801
P (906) 779-0937
F (906) 779-0947

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www.upea.com

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

COVER SHEET

G001

4/14/2021 4:09:05 PM
C:\Users\anderson\Desktop\UPEA Work From Home Files\097-01165 Ojibwe Charter School Addition and Renovation\Dwgs\O97-01165_OCS HS Addition_R20.rvt

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GENERAL NOTES:

1. EXISTING TOPOGRAPHIC AND UTILITY INFORMATION BASED UPON SURVEYS PERFORMED BY U.P. ENGINEERS & ARCHITECTS, INC. IN 2020. SUPPLEMENTAL UTILITY INFORMATION BASED UPON CONSTRUCTION PLANS AND UTILITY MAPS PROVIDED BY THE OWNER. CONTRACTOR SHALL USE EVERY PRECAUTION IN EXCAVATING FOR NEW UTILITIES SINCE ACTUAL UNDERGROUND UTILITIES MAY NOT BE AS SHOWN. CONTRACTOR SHALL MAKE HIMSELF THOROUGHLY FAMILIAR WITH ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY EXCAVATION AND VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES.
2. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL CONFORM TO LOCAL GOVERNMENT STANDARD SPECIFICATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING, INSTALLING, CLEANING, MAINTAINING, AND REMOVING ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES NECESSARY DURING CONSTRUCTION AND RESTORATION WORK.
3. CONTRACTOR SHALL MAINTAIN ACCESS TO BUILDING AT ALL TIMES DURING CONSTRUCTION.
4. ALL WORK SHALL CONFORM TO THE CURRENT MDOT STANDARD SPECIFICATION FOR CONSTRUCTION UNLESS OTHERWISE STATED ON DRAWINGS OR SPECIFICATIONS.

GENERAL SITE DEMOLITION NOTES:

1. CONTRACTOR TO REMOVE ALL ITEMS SHOWN OR NOT AS NEEDED TO ALLOW FOR THE INSTALLATION OF ALL THE PROPOSED WORK. CONTRACTOR TO MAKE THEMSELVES AWARE BY SITE VISIT OF ALL DEMOLITION ITEMS PRIOR TO THE BID AS THIS IS A LUMP SUM PROJECT.
2. ALL REMOVED MATERIALS FROM THE SITE BECOME THE PROPERTY OF THE CONTRACTOR WITH EXCEPTION TO THOSE MATERIALS CLAIMED BY THE OWNER OR UTILITY PROVIDER.
3. ALL REMOVALS AND TRANSPORTATION OF THE REMOVED ITEMS SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND ALL LOCAL, STATE, AND FEDERAL LAWS.
4. REMOVALS SHALL BE COMPLETED TO DESCRIBED LIMITS AND ARE TO BE INCLUDED IN THE LUMP SUM CONTRACT. LIMITS MUST COINCIDE WITH PROPOSED WORK, CONTRACTOR TO COORDINATE AS NEEDED.
5. SAW CUT EXISTING PAVEMENT/SIDEWALK TO FULL DEPTH PRIOR TO REMOVAL. IF A SAWCUT EDGE BECOMES DAMAGED PRIOR TO THE INSTALLATION OF NEW MATERIAL THE EDGE SHALL BE RECUT AS DIRECTED BY THE OWNER AND THE PAVEMENTS REPLACED AT NO COST TO THE ORIGINAL CONTRACT.
6. CONTRACTOR RESPONSIBLE TO RESTORE ANY AND ALL AREAS DISTURBED OR DAMAGED OUTSIDE THE OWNERS PROPERTY AT NO ADDITIONAL COST TO THE PROJECT.
7. ALL UTILITIES THAT SERVICE THE EXISTING BUILDING AND PARKING AREA SHALL BE ABANDONED/REMOVED AS REQUIRED TO THE SATISFACTION OF EACH UTILITY PROVIDER. CONTRACTOR TO COORDINATE.
8. EXISTING UTILITY SYSTEMS ARE TO REMAIN IN USE UNTIL THE PROPOSED UTILITY CONNECTIONS ARE INSTALLED AND THE BUILDING UTILITY SYSTEMS ARE COMPLETED TO A POINT WHERE A SWITCH TO THE NEW SERVICES CAN BE ACCOMPLISHED WITHOUT INTERRUPTING THE BUILDING SERVICES FOR A PERIOD OF MORE THAN 8 HOURS. CONTRACTOR TO COORDINATE WITH OWNER.
9. CONTRACTOR TO SALVAGE AS MUCH OF THE EXISTING PAVEMENT AS POSSIBLE. REPLACE ENTIRE AREA DEPICTED AS A PART OF THE CONTRACT COST.

GENERAL SITE NOTES:

1. CONTRACTOR RESPONSIBLE TO SEED, MULCH, & FERTILIZE ALL DISTURBED AREAS OUTSIDE PAVING LIMITS AND AGGREGATE SURFACE LIMITS..
2. REFER TO ARCHITECTURAL/STRUCTURAL PLANS FOR DIMENSIONS OF PROPOSED BUILDINGS.
3. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING/LAYOUT. PROPOSED BUILDING CORNERS ARE TO BE PLACED DIMENSIONALLY FROM THE ARCHITECTURAL/STRUCTURAL PLAN SETS. SURROUNDING AMENITIES LOCATIONS ARE TO BE INSTALLED BASED OF FIELD VERIFICATION OF EXISTING ITEMS AND PROPOSED BUILDING PERIMETER
4. EXTERIOR CONCRETE SIDEWALK/FLAT SURFACES SHALL CONFORM TO MIX DESIGN IN SPECIFICATIONS. FLAT TRAFFIC BEARING SURFACES WILL RECEIVE A LIGHT BROOMED FINISH.
5. ALL SITE PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. ALL INFORMATION PROVIDED ON SITE PLANS INCLUDING FEATURES, UTILITIES AND PROPERTY BOUNDARIES ARE ONLY ESTIMATED BASED ON AERIAL PHOTOS AND UTILITY COMPANY INFORMATION. CONTRACTOR TO VERIFY ALL SITE CONDITIONS PRIOR TO EXECUTION OF THE CONTRACT.
7. SEE STRUCTURAL DRAWINGS FOR CONCRETE RETAINING WALL AND APRON DETAIL INFORMATION

GENERAL GRADING NOTES:

1. FINAL GRADING SHALL PROVIDE POSITIVE DRAINAGE ACROSS THE ENTIRE SITE AWAY FROM BUILDING.
2. GRADES ADJACENT TO BUILDING FOOTPRINT SHALL BE AT LEAST 4" BELOW F.F.E.
3. SITE CLEARING SHALL INCLUDE SURFACE DEBRIS, DESIGNATED TREES, SHRUBS AND OTHER PLANT LIFE AND ABANDONED UTILITIES INDICATED ON THE DRAWINGS OR AS NECESSARY TO PERFORM WORK IN CONTRACT. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF WASTE MATERIALS FROM THE SITE. CONTRACTOR SHALL PROTECT ALL SURVEY CONTROL POINTS, BENCH MARKS OR EXISTING STRUCTURES FROM DAMAGE OR DISPLACEMENT.
4. CONTRACTOR TO GRADE THE SITE ACCORDING TO SITE PLAN. IN THE ABSENCE OF A PLAN, CONTRACTOR TO GRADE SITE SO NEW GRADES BLEND GENTLY INTO EXISTING GRADES. CONTRACTOR TO SLOPE GRADE AWAY FROM BUILDINGS MINIMUM OF 2 INCHES IN 10 FEET. MAINTAIN OPTIMUM MOISTURE CONTENT OF MATERIALS WHEN GRADING. WHEN EXCAVATING THROUGH ROOTS, PERFORM WORK BY HAND AND CUT ROOTS WITH SHARP AXE. REMOVE EXCESS SUBSOIL FROM THE SITE UNLESS DIRECTED OTHERWISE BY OWNER OR ENGINEER.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF EROSION CONTROL DEVICES INCLUDING SILT FENCING, BERMS, DITCHES, ETC, THAT MEET LOCAL EROSION CONTROL REQUIREMENTS. CONTRACTOR RESPONSIBLE FOR ALL PERMITS AND FEES NECESSARY WITH SUCH SYSTEMS. SUCH DEVICES SHALL BE INSTALLED IN ALL AREAS OF DISTURBED SOIL AND WHERE SURFACE RUN-OFF CAN OCCUR.
6. THE DATUM FOR THIS PROJECT IS A DESCRIBED IN SPECIAL SURVEY NOTES ON THIS SHEET.
7. AT ALL PROPOSED DRIVEWAY AREAS THE CONTRACTOR IS RESPONSIBLE FOR BLENDING THE PROPOSED GRADES TO MATCH TO THE EXISTING ROAD SURFACES.
8. SPECIFIC TO THIS SITE, THE INTENT OF THE GRADED SURFACE IS TO DRAIN WATER AWAY FROM THE BUILDING TOWARDS THE EXISTING AND PROPOSED DRAINAGE SWALES.
9. SEE ARCHITECTURAL PLANS FOR COORDINATION OF FINISHED FLOOR ELEVATION BETWEEN EXISTING AND PROPOSED BUILDING
10. SLOPE AND TURF STABILIZATION WILL BE REQUIRED ON DISTURBED AND CREATED SLOPE SURFACES.
    - 10.1. SLOPES LESS THAN 3:1 – 4" TOPSOIL, MDOT SEED MIX "TUF", AND MULCH BLANKET ARE ALL REQUIRED AND TO BE PLACED PER 2012 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION
    - 10.2. SLOPES STEEPER THAN 3:1 – MDOT RIPRAP, PLAIN IS REQUIRED TO BE PLACED ON TOP OF MARAFI 500X GEOTEXTILE FABRIC.

GENERAL UTILITY NOTES:

1. SEE ELECTRICAL, MECHANICAL, AND PLUMBING PLANS FOR EXACT CONNECTIONS TO PROPOSED BUILDING UTILITIES
2. EXISTING UTILITIES SHOWN HEREIN THIS PLAN SET ARE FOR REPRESENTATION PURPOSES ONLY, CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY OWNER AND ENGINEER OF ANY MAJOR DISCREPANCIES FOUND DURING VERIFICATION.
3. DAMAGE TO EXISTING UTILITIES OUTSIDE THE SCOPE OF THAT SHOWN HERE IN THIS PLAN SET ARE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIR AS SUCH SHALL NOT ADD ADDITIONAL COST TO THE CONTRACT
4. CONTRACTOR SHALL COORDINATE ALL OF THEIR WORK WITH THE UTILITY COMPANIES' WORK AT NO ADDITIONAL COST TO THE PROJECT
5. FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH STATE OF MICHIGAN ACT 174 OF PUBLIC ACT 2013, THE CONTRACTOR SHALL DIAL 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
6. COSTS AND FEES CHARGED BY UTILITY COMPANIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE MADE A PART OF THE LUMP SUM CONTRACT.
7. UTILITY DISINFECTION AND OTHER TESTING AS REQUIRED BY GOVERNING CODE REQUIREMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. UTILITY MATERIALS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH EACH UTILITY PROVIDERS STANDARD REQUIREMENTS.
9. IF NOT OTHERWISE STATED IN THE DRAWING OR SPECIFICATIONS ALL UTILITIES SHALL BE INSTALLED PER MDOT STANDARD DETAILS AND SPECIFICATION OR THAT OF THE STANDARD CITY SPECIFICATIONS.
10. INSTALLATION ROUTING AND LOCATIONS OF MINOR UTILITIES SUCH AS COMMUNICATIONS LINES, ETC. SHALL BE COORDINATED INDIVIDUALLY BY THE CONTRACTOR.
11. CONTRACTOR SHALL COORDINATE DOWN TIME FOR UTILITIES (SANITARY, WATER, POWER) WITH OWNER TO TO ENSURE MINIMAL DISRUPTION TO SERVICE. ENSURE PROPOSED SYSTEM IS IN OPERATION PRIOR TO SWITCHING AND TAKING OFF EXISTING LINE.
12. ALL DIRECTIONAL CHANGES WITH SANITARY PIPING THAT ARE NOT BY MANHOLE SHALL INCLUDE A CLEAN OUT PER STANDARD DETAIL.
13. CONTRACTOR SHALL LOCATE EXISTING SANITARY SEWER LINE @ PSMH-1 LOCATION AND VERIFY DEPTH. IF LINE IS DIFFERENT ELEVATION, CONTACT ENGINEER TO COORDINATE DEPTH MODIFICATION PRIOR TO ORDERING MANHOLES.
14. SEE ELECTRICAL PLANS FOR CIRCUIT AND WIRE SIZE INFORMATION

ELEVATION EQUATION FOR PROPOSED F.F.E.
SITE ELEVATION = 615.23
= ARCHITECTUAL ELEVATION OF F.F.E. = 100'-0"

NOTE:
PUBLISHED COORDINATES ARE MICHIGAN STATE PLANE, NAD 83, NORTH ZONE, INTERNATIONAL FEET, ESTABLISHED FROM THE MICHIGAN CORS NETWORK.

SOIL BORING	HAND BORING
SANITARY MANHOLE	HYDRANT
WATER SHUTOFF	BENCHMARK
UTILITY POLE	GUY POLE
TELEPHONE PEDESTAL	GUY WIRE
ELECTRICAL PEDESTAL	IRON PIN
LIGHT POLE	CONTROL POINT
WATER VALVE	TEST PIT
TREE (CONIFER)	SINGLE POLE SIGN
TREE (DECIDUOUS)	DOUBLE POLE SIGN
FUEL OIL TANK	FLAG POLE
WATER WELL	EXISTING BITUMINOUS
PROPANE TANK	DEMOLITION AREA
	CONCRETE
OHT	OVERHEAD TELEPHONE LINE
OHE	OVERHEAD ELECTRIC LINE
LPG	LP GAS LINE
WTR	WATER LINE
UGT	UNDERGROUND TELEPHONE LINE
UGE	UNDERGROUND ELECTRIC LINE
SAN	SANITARY SEWER
	PROPERTY BOUNDARY
	TREE LINE
	EDGE OF GRAVEL
	CONSTRUCTION FENCE

THE FOLLOWING UTILITIES MAY BE LOCATED IN OR NEAR THE RIGHT OF WAY OF THE PROPOSED PROJECT.

WATER & SEWER
BAY MILLS TRIBAL OFFICE
12140 W. LAKESHORE DRIVE
BRIMLEY, MI 49715
(906) 322-6233
CONTACT: DENNIS CARRICK

GAS
DTE ENERGY – MICHCON
1125 E. EASTERDAY AVE
SAULT STE. MARIE, MI
(906) 632-3330
CONTACT: RICH ACKERMAN

ELECTRIC
CLOVERLAND ELECTRIC COMPANY
2916 W. M-28
DAFTER, MI 49724
(906) 203-5501
CONTACT: MEGAN ATKINSON
(906) 440-7573
CONTACT: T.J. WAYBRANT

TELEPHONE
CHIPPEWA COUNTY TELEPHONE CO.
9984 W. STATE STREET
BRIMLEY, MI 49715
(906) 248-3211

CABLE
CHARTER COMMUNICATIONS COMPANY
2682 ASHMUN STREET
SAULT STE. MARIE, MI
(906) 635-3102x13912
CONTACT: JEFF GREGG

CONTRACTOR SHALL COORDINATE ALL OF THEIR WORK AND THE UTILITY COMPANIES' RELOCATION WORK AT NO ADDITIONAL COST TO THE PROJECT.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH STATE OF MICHIGAN ACT 174 OF PUBLIC ACT 2013, THE CONTRACTOR SHALL DIAL 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM

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OJIBWE CHARTER SCHOOL ADDITIONS AND RENOVATIONS
BAY MILLS INDIAN COMMUNITY
BAY MILLS, MICHIGAN

ISSUED FOR: BID SET — DATE: 04/19/2021

OJIBWE CHARTER SCHOOL ADDITIONS AND RENOVATIONS BAY MILLS INDIAN COMMUNITY
PROJECT NO: O97-011165

DESIGNED BY:	ASJ
DRAWN BY:	GAP
CHECKED:	ASJ
APPROVED:	JG

NOTES

C100

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BENCHMARK DATA			
I.D.	DESCRIPTION	ELEVATION	LOCATION
1686	BM–POST–90NAIL	614.649	

CONTROL POINT DATA			
I.D.	DESCRIPTION	ELEVATION	LOCATION
1	CP1–REBAR	613.850	
2	CP2–PK	612.848	
3	CP3–PK	612.191	
4	CP4–REBAR	614.096	
5	CP5–REBAR	613.602	
6	CP6–SPK	614.118	
1468	CP1468–SPK	614.127	
1469	CP1469–SPK	614.426	
1519	CP1519SPK	615.196	

OJIBWE CHARTER SCHOOL

CP6–SPK
CP1–REBAR
CP2–PK
BM–POST–90NAIL EL.=614.65
CP3–PK
CP4–REBAR
CP5–REBAR
CP1519SPK

WIGWAM
REMOVE WOODEN RAMP
SHEDS (3)
COORDINATE RELOCATION WITH OWNERS
RELOCATE GREENHOUSE
REMOVE EXISTING CONCRETE WALK/STOOP
REMOVE WOODEN STAIRCASE WITH SECOND FLOOR ACCESS
TRANSFORMERS
CANOPY
REMOVE EXISTING SANITARY LINE
EXISTING WELL
ABANDONED WATER LINE
REMOVE/COLLAPSE EXISTING TANKS AND ASSOCIATED SEPTIC FIELDS
REMOVE SEPTIC VAULT W/ALARM PEDESTAL
REMOVE ELECTRICAL LINE AND CONDUIT
REMOVE CONCRETE (TYP)
REMOVE AND RELOCATE TRANSFORMER (SEE C104)
REMOVE EXISTING PIPE BOLLARDS (TYP)
ESM #1
BASE BID
ALTERNATE #1
SAW CUT FULL DEPTH FOR HMA REMOVAL
EXISTING 6" PVC SANITARY SERVICE LINE
PROPOSED SILT FENCE AROUND EXCAVATION LIMITS AS NEEDED FOR FOR SESC PERMITTING
EXISTING 15" CONCRETE STORM SEWER
REMOVE EXISTING UNDERGROUND ELECTRIC LINE
REMOVE CONCRETE SIDEWALK AND BIT PAVEMENT SEE C102 FOR LAYOUT DETAILS
REMOVE EXISTING STORM SEWER TO NEW MANHOLE
REMOVE EXISTING SANITARY LINE
STRIP AND STOCK PILE EXISTING TOPSOIL ON SITE FOR REUSE @ SLOPE RESTORATION
SILT FENCE (TYP.)
CONTRACTOR TO LOCATE SANITARY CONNECTION INVERTS PRIOR TO PROPOSED WORK BEGINS AND CONVEY INVERT ELEVATION TO ENGINEERING FOR VERIFICATION OF WORKING SANITARY SLOPES
CLEAR AND GRUB AS NEEDED TO INSTALL PROPOSED UTILITIES AND GRADING
EDGE OF WETLAND
614.90

C3 EXISTING SITE/DEMO PLAN
SCALE: 1"–20'

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

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OJIBWE CHARTER SCHOOL
ADDITIONS AND RENOVATIONS
BAY MILLS INDIAN COMMUNITY
BAY MILLS, MICHIGAN

ISSUED FOR: BID SET
DATE: 04/19/2021

OJIBWE CHARTER SCHOOL
ADDITIONS AND RENOVATIONS
BAY MILLS INDIAN COMMUNITY
PROJECT NO: O97-01165

DESIGNED BY: ASJ
DRAWN BY: GAP
CHECKED: ASJ
APPROVED: JG

EXISTING SITE/DEMO PLAN

C101

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BENCHMARK DATA			
I.D.	DESCRIPTION	ELEVATION	LOCATION
1686	BM–POST–90NAIL	614.649	

CONTROL POINT DATA			
I.D.	DESCRIPTION	ELEVATION	LOCATION
1	CP1–REBAR	613.850	
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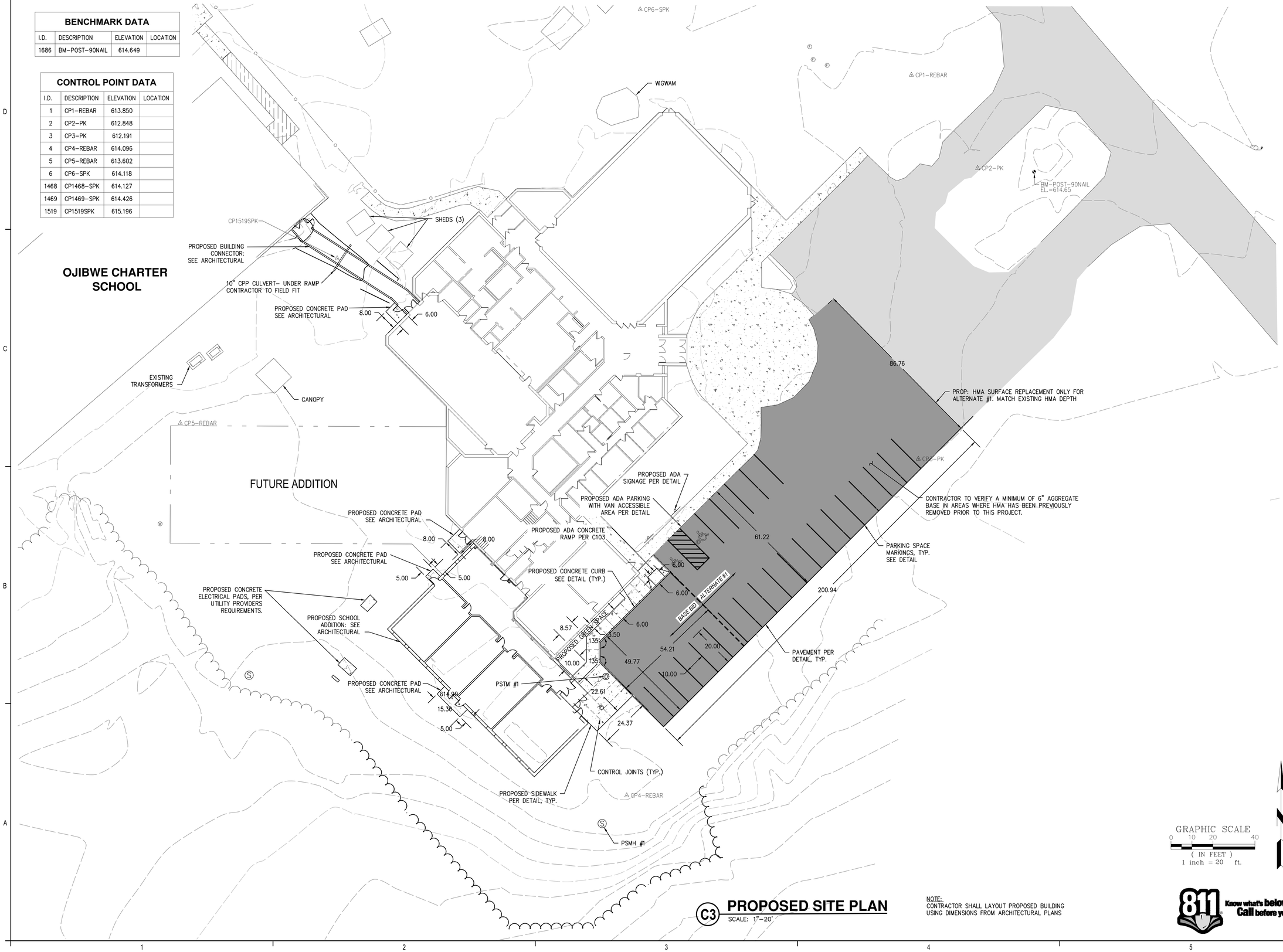
3	CP3–PK	612.191	
4	CP4–REBAR	614.096	
5	CP5–REBAR	613.602	
6	CP6–SPK	614.118	
1468	CP1468–SPK	614.127	
1469	CP1469–SPK	614.426	
1519	CP1519SPK	615.196	



C3 PROPOSED SITE PLAN

SCALE: 1"–20'

NOTE:
CONTRACTOR SHALL LAYOUT PROPOSED BUILDING USING DIMENSIONS FROM ARCHITECTURAL PLANS

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

Know what's below. Call before you dig.

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OJIBWE CHARTER SCHOOL
ADDITIONS AND RENOVATIONS
BAY MILLS INDIAN COMMUNITY
BAY MILLS, MICHIGAN

ISSUED FOR:	DATE:
BID SET	04/19/2021

OJIBWE CHARTER SCHOOL ADDITIONS AND RENOVATIONS BAY MILLS INDIAN COMMUNITY

PROJECT NO: O97-01165

DESIGNED BY:	ASJ
DRAWN BY:	GAP
CHECKED:	ASJ
APPROVED:	JG

PROPOSED SITE PLAN

C102

4/14/2021 4:02 PM
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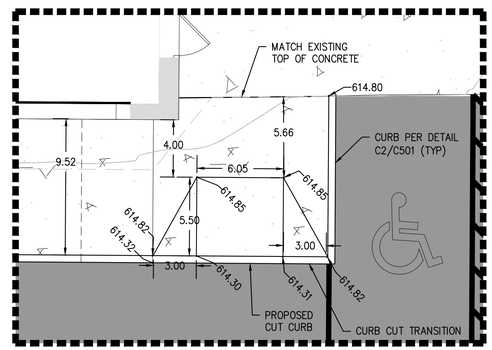
BENCHMARK DATA			
I.D.	DESCRIPTION	ELEVATION	LOCATION
1686	BM-POST-90NAIL	614.649	

CONTROL POINT DATA			
I.D.	DESCRIPTION	ELEVATION	LOCATION
1	CP1-REBAR	613.850	
2	CP2-PK	612.848	
3	CP3-PK	612.191	
4	CP4-REBAR	614.096	
5	CP5-REBAR	613.602	
6	CP6-SPK	614.118	
1468	CP1468-SPK	614.127	
1469	CP1469-SPK	614.426	
1519	CP1519SPK	615.196	

OJIBWE CHARTER SCHOOL

FUTURE ADDITION

CP6-SPK
CP1-REBAR
CP2-PK
BM-POST-90NAIL EL.=614.65
CP1519SPK
EXIST. F.F.E.=618.35
PROP. F.F.E.=618.35
SHEDS (3)
???
615.59
615.61
PROP. F.F.E.=615.23
EXIST. F.F.E.=615.23
TRANSFORMERS
CANOPY
CP5-REBAR
2.0%
MATCH EXISTING GRADE
612.01
CP3-PK
615.22
EXIST. F.F.E.=610.21
614.90
614.89
615.23
EXIST. F.F.E.=615.14
615.01
614.87
614.44
614.25
614.81
614.74
614.81
BASE BID
ALTERNATE #1
3.0%
613.23
PROP. F.F.E.=615.23
615.23
614.99
614.53
614.27
615.15
613.65
614.53
614.21
3.5%
613.60
SLOPE RESTORATION ALL DISTURBED AREAS (TYP)
CP4-REBAR
PSMH #1
TUFT STABILIZATION ALL NEW GRADING (TYP.)
GRADING LIMITS: GRADE AT 6:1 SLOPE AND MATCH TO EXISTING GRADE
GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.



C1 ENLARGED CONCRETE ADA RAMP DETAIL
SCALE: 1"=5'

C3 SITE GRADING PLAN
SCALE: 1"=20'

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

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OJIBWE CHARTER SCHOOL ADDITIONS AND RENOVATIONS
BAY MILLS INDIAN COMMUNITY
BAY MILLS, MICHIGAN

ISSUED FOR: BID SET
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BAY MILLS INDIAN COMMUNITY
PROJECT NO: O97-01165

DESIGNED BY: ASJ
DRAWN BY: GAP
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APPROVED: JG

SITE GRADING PLAN

C103

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1469	CP1469–SPK	614.426	
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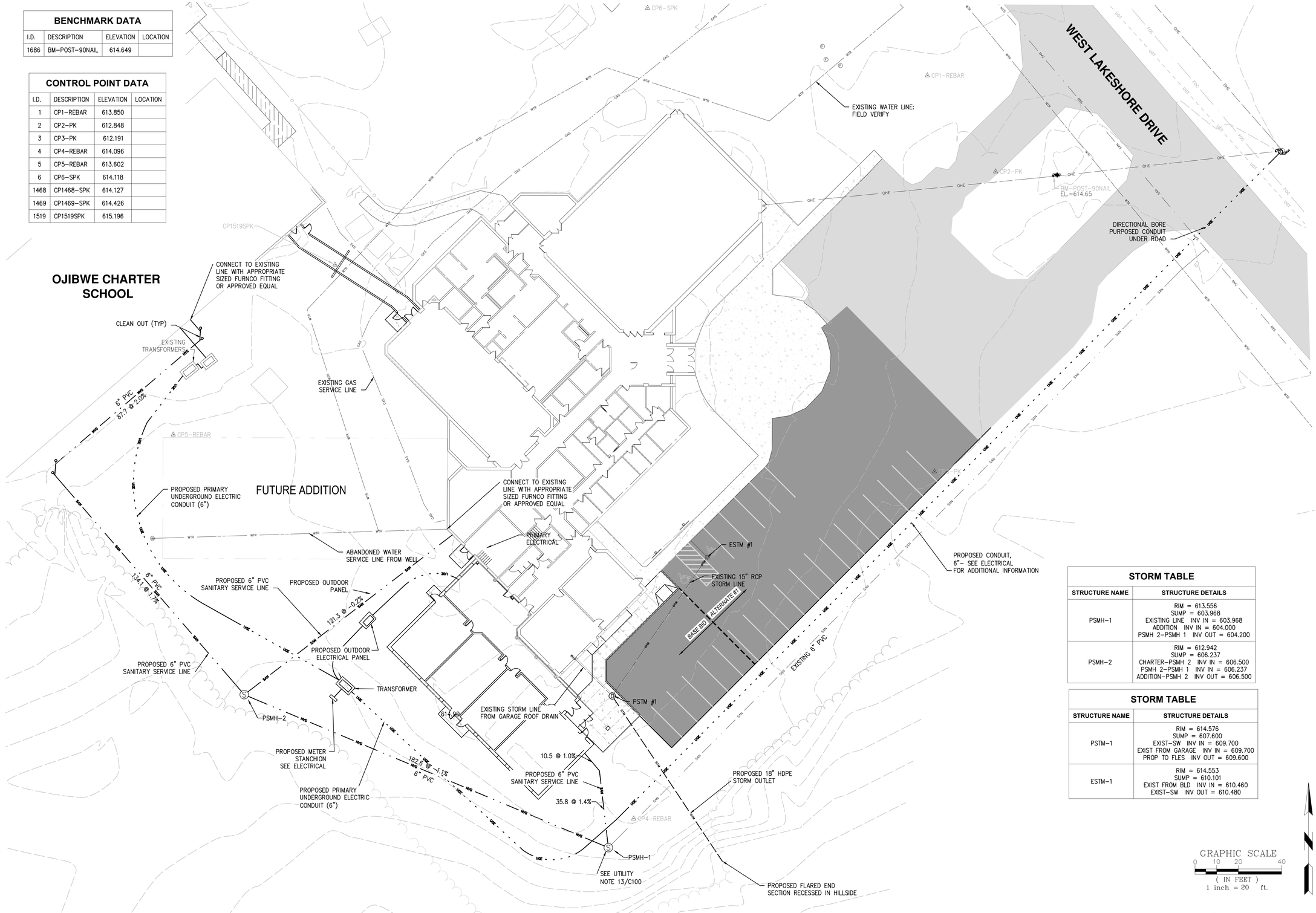

STORM TABLE	
STRUCTURE NAME	STRUCTURE DETAILS
PSMH–1	RIM = 613.556 SUMP = 603.968 EXISTING LINE INV IN = 603.968 ADDITION INV IN = 604.000 PSMH 2–PSMH 1 INV OUT = 604.200
PSMH–2	RIM = 612.942 SUMP = 606.237 CHARTER–PSMH 2 INV IN = 606.500 PSMH 2–PSMH 1 INV IN = 606.237 ADDITION–PSMH 2 INV OUT = 606.500

STORM TABLE	
STRUCTURE NAME	STRUCTURE DETAILS
PSTM–1	RIM = 614.576 SUMP = 607.600 EXIST–SW INV IN = 609.700 EXIST FROM GARAGE INV IN = 609.700 PROP TO FLES INV OUT = 609.600
ESTM–1	RIM = 614.553 SUMP = 610.101 EXIST FROM BLD INV IN = 610.460 EXIST–SW INV OUT = 610.480

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

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C3 **SITE UTILITY PLAN**
SCALE: 1"–20'

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SITE UTILITY PLAN

C104

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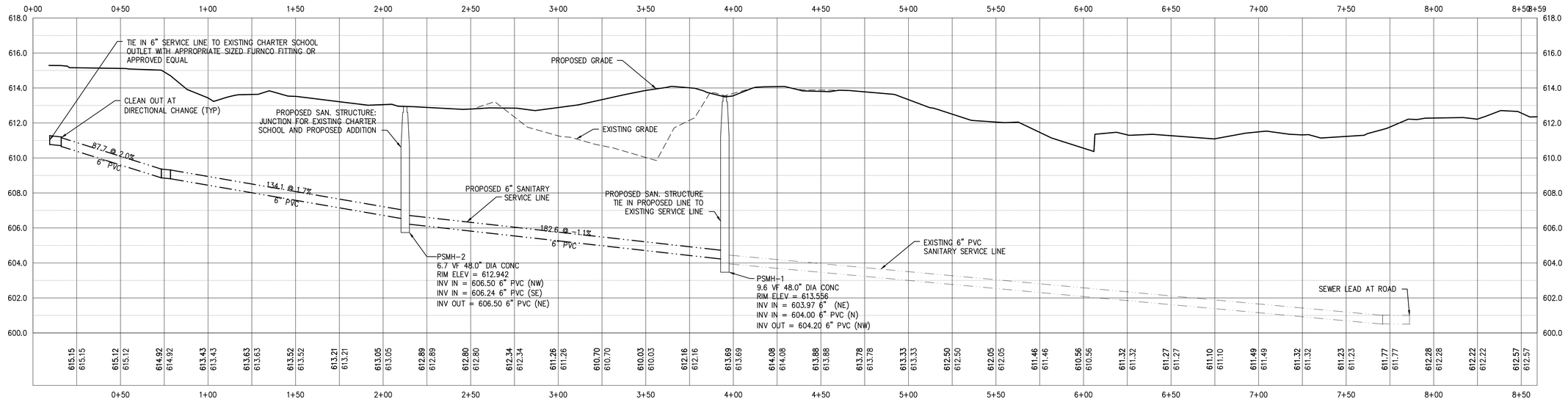
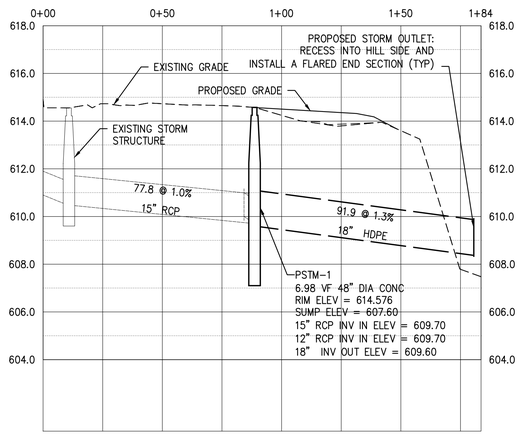


C3 SANITARY PROFILE

SCALE: HORZ– 1"–30' VERT– 1"–10'



A1 STORM PROFILE

SCALE: HORZ– 1"–30' VERT– 1"–10'

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

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SANITARY & STORM PROFILES

C401

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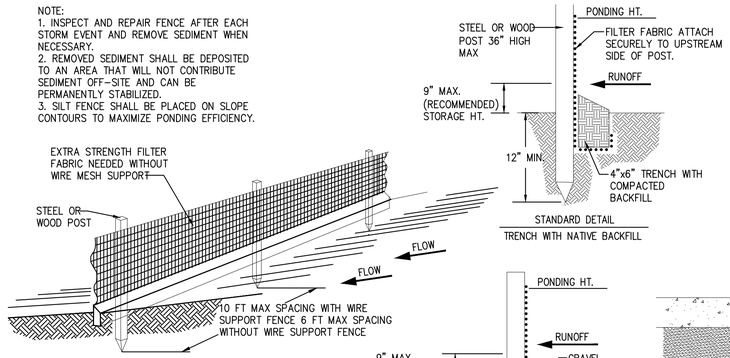
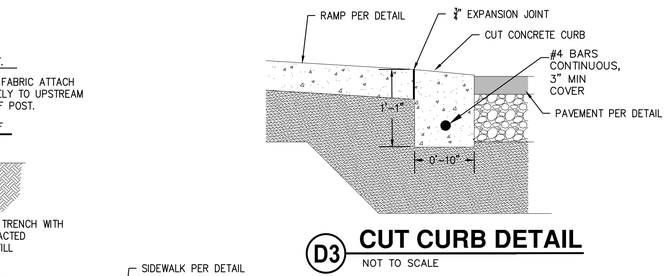
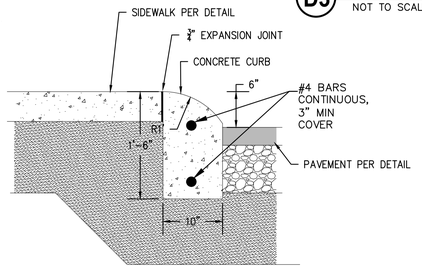


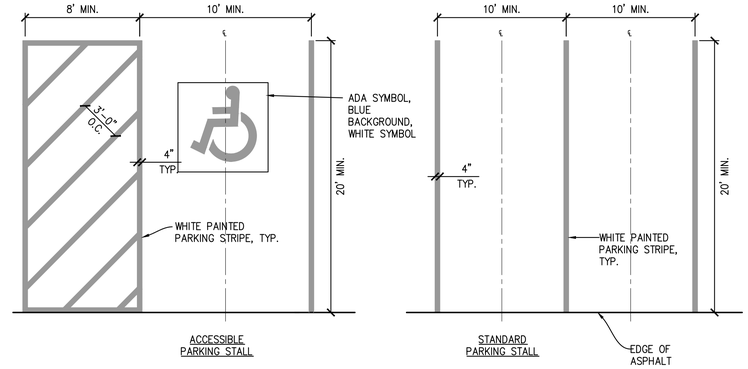
C1 TYPICAL SILT FENCE INSTALLATION
NOT TO SCALE



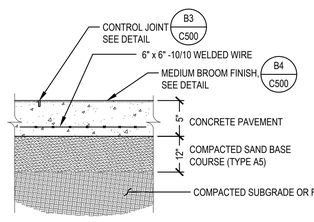
D3 CUT CURB DETAIL
NOT TO SCALE



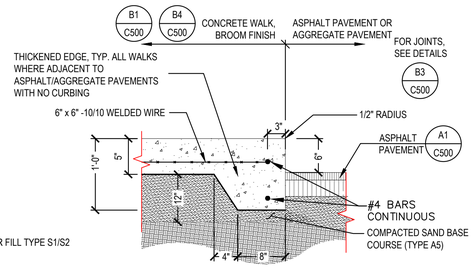
C2 CURB DETAIL
NOT TO SCALE



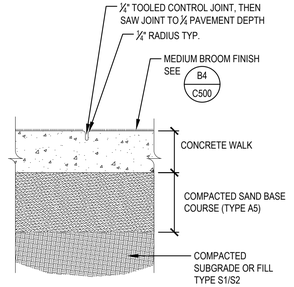
C4 TYPICAL PARKING STRIPING DETAILS
NOT TO SCALE



B1 CONCRETE WALK
NOT TO SCALE

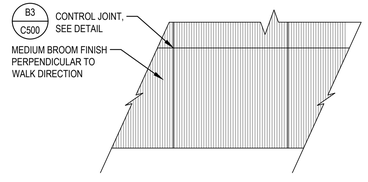


B2 THICKENED EDGE CONCRETE PAVED NON- CURBED EDGES
NOT TO SCALE

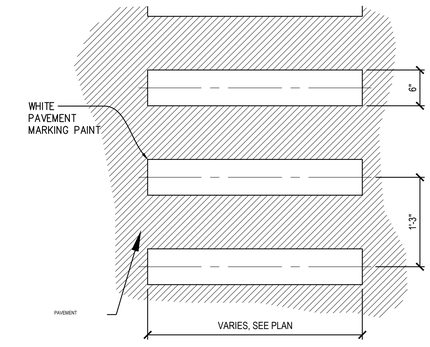


B3 CONTROL JOINT
NOT TO SCALE

NOTE:
1. CONTROL JOINTS FOR APRONS TO BE EQUALLY SPACED MAXIMUM EVERY 20'
2. CONTROL JOINT FOR SIDEWALK TO BE PLACED EVERY 6'
3. EXPANSION JOINT FOR APRON/SIDEWALK TO BE LOCATED EVERY 50'
4. ¾" EXPANSION JOINT MATERIAL TO BE PLACED BETWEEN ALL INTERIOR AND EXTERIOR CONCRETE SLABS

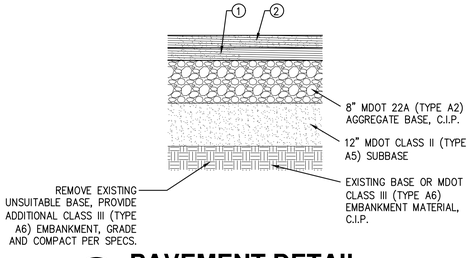


B4 MEDIUM BROOM FINISH
NOT TO SCALE



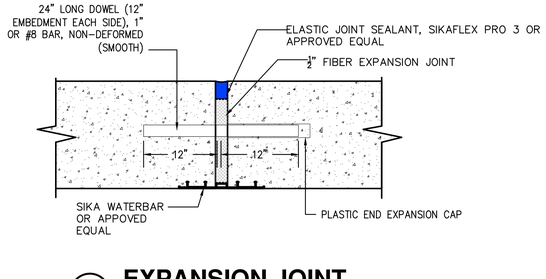
B5 PEDESTRIAN CROSSWALK STRIPING
NOT TO SCALE

HMA APPLICATION TABLE				
IDENT. NO.	ITEM	RATE PER yd2	PERFORMANCE GRADE	REMARKS
1	HMA, 4E1	165#	58-28	BASE COURSE
2	HMA, 4E1	165#	58-28	TOP COURSE (AWI=220)
HMA BOND COAT		0.1 GAL/SYD		FOR INFO ONLY



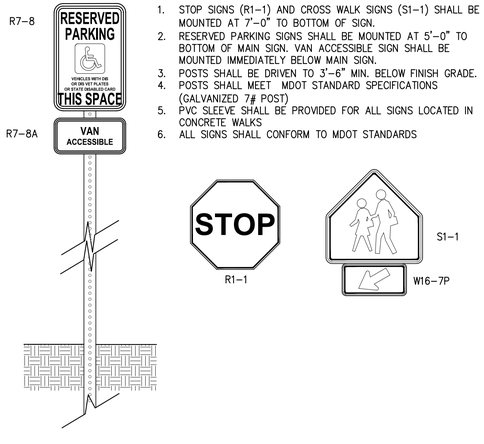
A1 PAVEMENT DETAIL
NOT TO SCALE

NOTE: ANY COLD CONSTRUCTION JOINTS SHALL BE KEYED UTILIZING A PRE-MOLDED JOINT FROM AND HAVE REBAR CONTINUOUS THROUGH JOINTS



A3 EXPANSION JOINT
NOT TO SCALE

NOTES:
1. STOP SIGNS (R1-1) AND CROSS WALK SIGNS (S1-1) SHALL BE MOUNTED AT 7'-0" TO BOTTOM OF SIGN.
2. RESERVED PARKING SIGNS SHALL BE MOUNTED AT 5'-0" TO BOTTOM OF MAIN SIGN. VAN ACCESSIBLE SIGN SHALL BE MOUNTED IMMEDIATELY BELOW MAIN SIGN.
3. POSTS SHALL BE DRIVEN TO 3'-6" MIN. BELOW FINISH GRADE.
4. POSTS SHALL MEET MDOT STANDARD SPECIFICATIONS (GALVANIZED 7# POST)
5. PVC SLEEVE SHALL BE PROVIDED FOR ALL SIGNS LOCATED IN CONCRETE WALKS
6. ALL SIGNS SHALL CONFORM TO MDOT STANDARDS



A4 SIGNAGE
NOT TO SCALE

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DETAILS

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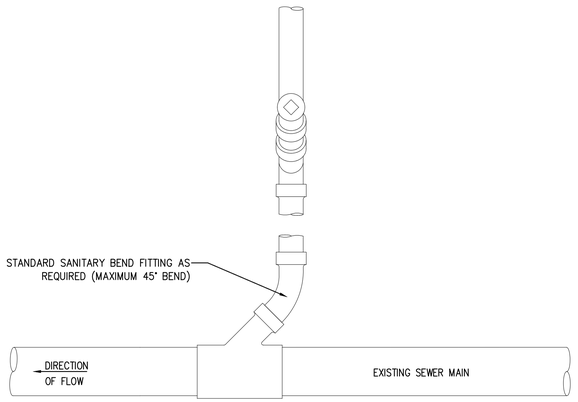
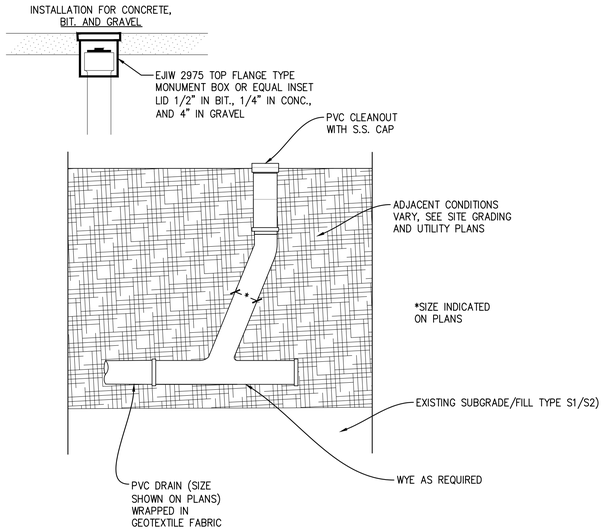


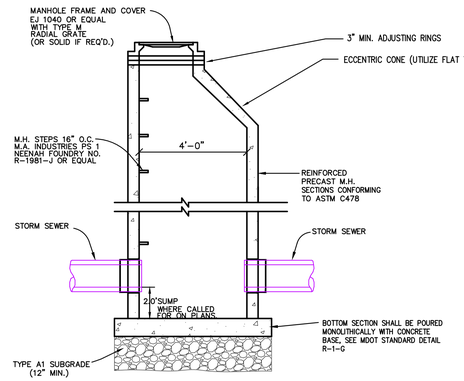
D1 PLAN VIEW OF SEWER LATERAL

NOT TO SCALE



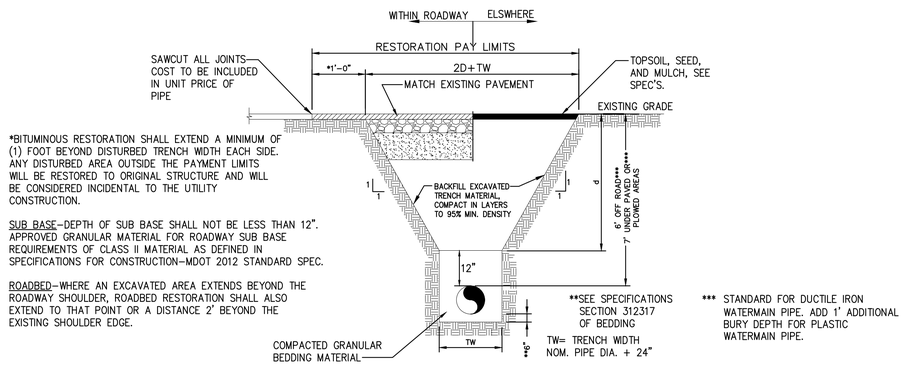
B2 TYPICAL SANITARY CLEAN OUT DETAIL

NOT TO SCALE



D5 CATCH BASIN DETAIL

NOT TO SCALE

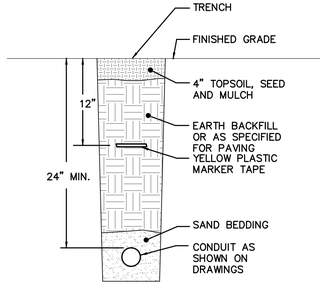


B1 ASPHALT DRIVE REPLACEMENT AND TRENCH DETAIL

NOT TO SCALE

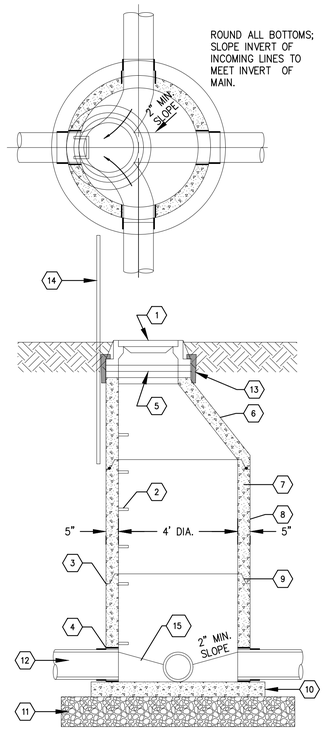
KEYNOTE SCHEDULE

NUMBER	DESCRIPTION
1	WATERTIGHT CAST IRON FRAME AND LID w/ SELF SEALING LID (RUBBER GASKET AT MACHINED GROOVE) AND CONCEALED PICK HOLE MARKED "SEWER". MINIMUM WEIGHT 380lbs. (EJ #1048 FRAME AND 10400 AGS COVER, OR EQUAL) DEPRESS MANHOLE RIMS ½" IN PAVED AREAS SEE MANHOLE NOTES.
2	MANHOLE STEPS 16" O.C. M.A. INDUSTRIES PS 1 NEENAH FOUNDRY No. R–1982–F OR EQUAL.
3	PROVIDE 10" BITUMASTIC LAP AT ALL JOINTS – CADILLOC WRAP
4	RUBBER BOOT WATERTIGHT SEAL
5	3" MINIMUM ADJUSTING RINGS
6	ECCENTRIC CONE
7	REINFORCED PRECAST MANHOLE SECTIONS
8	ASTM D–449–79 TYPE II BITUMINOUS COATING
9	DOUBLE RIBBED RUBBER GASKETS OR Rub'R Nek
10	8" BASE POURED MONOLITHIC w/ BOTTOM SECTION
11	BEDDING MATERIAL – 12" MINIMUM
12	SEWER MAIN
13	CHIMNEY SEALS TO BE EXTERNAL RUBBER SEALS WITH STAINLESS STEEL TOP & BOTTOM BANDS WHERE REQUIRED, IN WET AREAS, BY THE ENGINEER.(INCIDENTAL TO MANHOLES)
14	GREEN CARSONITE MARKER SLATS SHALL BE PLACED AT ALL MANHOLES OFF THE "TRAVELED WAY" AS SPECIFIED BY THE ENGINEER. (INCIDENTAL TO COST OF MH)
15	CONCRETE BENCH



A1 TYPICAL UNDERGROUND CONDUIT DETAIL

NO SCALE



A4 STANDARD MANHOLE DETAIL

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BUILDING LOADS		
LIVE LOADS	Floor Deflection Limits = L/360	
LOAD TYPE		
1. UNIFORM FLOOR LIVE LOAD		200 psf
2. FLAT ROOF SNOW LOAD, Pf		80 psf
ROOF SNOW LOADS	Roof Deflection Limits = L/360	
LOAD TYPE		
1. GROUND SNOW LOAD, Pg		80 psf
2. FLAT ROOF SNOW LOAD, Pf (NO REDUCTION ALLOWED)		80 psf
3. UNBALANCED SNOW LOAD		N / A
4. LOAD TYPE ROOF DEAD LOAD		10 psf
5. LOAD TYPE MECHANICAL / PLUMBING DL		20 psf
SNOW LOAD FACTORS		VALUE
1. SNOW EXPOSURE FACTOR LOAD, Ce (NO REDUCTIONS ALLOWED)		1.0
2. SNOW LOAD IMPORTANCE FACTOR, Is		1.0
3. THERMAL FACTOR, Ct		1.1
4. SLOPED ROOF FACTOR X / X PITCH		1.0
WIND LOADS	Lateral Story Drift Limits = L/360	
LOAD OR VARIABLE		VALUE
1. ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)		115 MPH
2. RISK CATEGORY		II
3. WIND EXPOSURE CATEGORY		C
4. MAIN WIND FORCE RESISTING SYSTEM (MAX ROOF UPLIFT)		15 psf
5. MAIN WIND FORCE RESISTING SYSTEM (MAX WALL)		25 psf
6. INTERNAL PRESSURE COEFFICIENT (ENCLOSED BUILDING)		±0.18
EARTHQUAKE DESIGN DATA		
LOAD VARIABLE		VALUE
1. RISK CATEGORY		II
2. SEISMIC IMPORTANCE FACTOR, Ie		1.0
3. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, Ss		0.055
4. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S1		0.019
5. SITE CLASS		D
6. SEISMIC DESIGN CATEGORY		A
7. BASIC SEISMIC FORCE RESISTING SYSTEM		(SPECIFY)
8. SEISMIC RESPONSE COEFFICIENT(s), Cs		
9. RESPONSE MODIFICATION COEFFICIENT(s), R		
10. ANALYSIS PROCEDURE: MINIMUM LATERAL FORCE ANALYSIS PROCEDURE, SECTION 1616.4		
ASSUMED BEARING STRENGTH		2,000 psf
CONTRACTOR SHALL VERIFY SOIL BEARING CAPACITY PRIOR TO CONSTRUCTION		
NOTES:		
1. LOADS ARE BASED ON SECTION 16 OF MBC 2015 UNLESS OTHERWISE NOTED.		

GENERAL STRUCTURAL NOTES:

1. THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS. AND SPECIFICATIONS. SHOULD CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR THE GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.
2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED, SELF SUPPORTING, STABLE STRUCTURE UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND CONSTRUCTION SEQUENCE AND PROVIDE ALL MEASURES NECESSARY TO ENSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENTS THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES, ETC.
3. THE GOVERNING BUILDING CODE IS THE MICHIGAN BUILDING CODE 2015.
4. SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, ETC. SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER FOR CONFORMANCE WITH DESIGN INTENT ONLY.
5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST APPROVED MANUFACTURERS CERTIFIED EQUIPMENT DRAWINGS.
6. MECHANICAL FRAMING LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO MECHANICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND OTHER TRADES TO VERIFY EQUIPMENT SIZE AND LOCATIONS. ANY CHANGES IN EQUIPMENT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR RECORD.
7. UNLESS NOTED OTHERWISE, REQUIREMENTS GIVEN FOR ONE OR MORE LOCATIONS ALSO APPLY AT OTHER LOCATIONS AT WHICH CONDITIONS ARE SIMILAR. THE REQUIREMENTS GIVEN SHALL BE ADAPTED TO CONDITIONS AT SUCH OTHER LOCATIONS.
8. DO NOT SCALE THE DRAWINGS TO DETERMINE BUILDING DIMENSIONS.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND FOR COORDINATING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THOSE SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. IF DISCREPANCIES IN THE DIMENSIONS OCCUR, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING THE DISCREPANCY TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
10. CONTRACTOR SHALL NOT MIX GALVANIZED AND STAINLESS STEEL. ANY METAL PARTS IN CONTACT WITH OTHER METAL PARTS SHALL BE OF A SIMILAR MATERIAL.

SOILS:

1. ALL FOUNDATION BACKFILL MATERIAL SHALL BE MDOT CLASS I GRANULAR FILL COMPACTED 95% MAXIMUM DENSITY. ALL DENSITIES SHALL BE DETERMINED BY THE MODIFIED PROCTOR METHOD.
2. ALL BASE MATERIAL UNDER SLABS AND SIDEWALKS SHALL BE MDOT CLASS II GRANULAR FILL COMPACTED 95% MAXIMUM DENSITY WITH A MINIMUM THICKNESS OF SIX (6) INCHES UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION PLANS AND "FOUNDATIONS NOTE 1."
3. ALL FOOTINGS SHALL BE PLACED ON NATURAL, UNDISTURBED SOILS, UNLESS SITE CONDITIONS PROHIBIT. FOOTINGS REQUIRING BASE FILL MATERIAL SHALL BE BACKFILLED WITH MDOT CLASS II GRANULAR FILL COMPACTED 98% MAXIMUM DENSITY.
4. THE SOIL BORING LOGS PRESENTED ON THE PLAN SHEETS REPRESENT POINT INFORMATION ONLY. PRESENTATION OF THIS INFORMATION IN NO WAY INFERS THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN AT THE EXACT LOCATION OF THE BORING.
5. ANY SUBSURFACE CONDITIONS OR EXISTING FOUNDATIONS ENCOUNTERED THAT ARE NOT REPRESENTED ON THE PLANS OR IN THE SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER FOR INSPECTION AND / OR ALTERNATE FOUNDATION/FOOTING DESIGN.

FOUNDATIONS AND FOOTINGS:

1. ALL FOOTINGS HAVE BEEN SIZED BASED ON AN ALLOWABLE BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT (psf). CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING AND PROVIDING 2,000 psf BEARING CAPACITY AT THE PREPARED SITE FOR ALL FOOTINGS AND SLABS WITH LESS THAN ½" SETTLEMENTS. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
2. ALL EXCAVATED AREAS AROUND STRUCTURES SHALL BE BACKFILLED WITH GRANULAR MATERIAL. ALL FILL SLOPES SHALL BE PLACED IN 12" LAYERS AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHOD.
3. ALL REINFORCING STEEL LAP SPLICES, NOT OTHERWISE SHOWN ON THE CONSTRUCTION PLANS, SHALL BE AS FOLLOWS:

   A. #4's - 18"
   B. #5's - 24"
   C. #6's - 36"
   D. #8's - 48"

CAST-IN-PLACE CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE LATEST EDITION OF THE ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 4301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
2. CONCRETE FOR THIS PROJECT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH ACCORDING TO THE FOLLOWING:

   A. FOOTINGS: 4,000 psi
   B. WALLS, COLUMNS, STRUCTURAL CONCRETE: 4,000 psi
   C. INTERIOR SLABS ON GRADE: 3,500 psi
   D. EXTERIOR SLABS ON GRADE: 4,000 psi

3. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60 (Fy= 60,000 psi). ALL WELDED WIRE FABRIC (WWF) SHALL BE IN ACCORDANCE WITH ASTM A185 (65,000 psi).
4. REINFORCEMENT PROTECTION SHALL BE AS FOLLOWS:
   CONCRETE POURED AGAINST EARTH 3"
   ALL OTHER CONCRETE 2"
5. CONTRACTOR SHALL PROVIDE CORNER BARS OF EQUAL OR GREATER SIZE TO HORIZONTAL WALL REINFORCEMENT AT ALL CORNERS AND INTERSECTIONS OF CONCRETE FOUNDATIONS.
6. ALL WELD PLATES AND MISCELLANEOUS STEEL SHALL BE Fy = 36 ksi
7. WELDED CONNECTIONS SHALL CONFORM TO THE AWS STRUCTURAL WELDING CODE AND US 60 ksi ELECTRODES.
8. ALL EMBEDDED ITEMS SHALL BE PLACED IN THE FORMWORK PRIOR TO PLACING CONCRETE. DRILLING AND GROUTING IS ACCEPATBLE AND SUBJECT TO ENGINEER APPROVAL.
9. FIELD WELDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT WRITTEN CONSENT OF THE ENGINEER.
10. FIELD BEND BARS COLD. DO NOT FIELD BEND BARS WITH HEAT OR BARS PARTIALLY EMBEDDED IN CONCRETE.
11. ALL EXTERIOR CONCRETE INCLUDING WALLS SHALL BE AIR-ENTRAINED.
12. SEE ARCHITECTURAL DRAWINGS FOR ALL FLOOR FINISHES, SLOPES, FLOOR DRAINS, ETC. NOT SHOWN ON FOUNDATION PLANS.
13. THE CONCRETE FLOOR SLAB SHALL BE CUT WITH A ¼" WIDE x 1-½" DEEP SAW-CUT PER PLAN. IF A PLAN IS NOT PROVIDED, CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER / ARCHITECT FOR APPROVAL. ALL SAW-CUT JOINTS SHALL BE FILLED WITH SEALANT PER SPECIFICATIONS. PERFORM CUTTING IMMEDIATELY AFTER PLACEMENT OF CONCRETE WHEN CONCRETE CAN SUPPORT REQUIRED EQUIPMENT. SAW-CUTTING SHALL OCCUR WITHIN 24 HOURS AFTER PLACEMENT. SAW-CUT JOINTS TO BE STRAIGHT AND TRUE.
14. PROVIDE 16-MIL VAPOR BARRIER UNDER ALL INTERIOR CONCRETE SLABS.

MASONRY:

1. CONCRETE MASONRY SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION, PORTLAND CEMENT ASSOCIATION AND THE AMERICAN CONCRETE INSTITUTE CODES.
2. CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT CONFORMING TO ASTM C90: HOLLOW LOAD BEARING, GRADE N, TYPE II, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,700 psi (NET AREA).
3. FACE BRICK SHALL CONFORM TO ASTM C216, TYPE FBS, GRADE SW.
4. MORTAR SHALL CONFORM TO ASTM C270. TYPES S, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 psi AT 28 DAYS. (PROPORTION SPECIFICATIONS).
5. GROUT SHALL CONFORM TO ASTM C476, FINE OR COARSE TYPE AS APPROPRIATE, WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 psi AT 28 DAYS. LOW LIFT GROUTING SHALL BE USED IN HEIGHTS OF LESS THAN FOUR FEET.
6. HORIZONTAL AND VERTICAL REINFORCING SHALL COMPLY WITH THE ABOVE CODES AND BE OF TYPE, SIZE AND SPACING INDICATED ON THE DRAWINGS. DEFORMED BARS SHALL COMPLY WITH ASTM A615, GRADE 60; COLD-DRAWN STEEL WIRE SHALL CONFORM TO ASTM A82; AND DEFORMED STEEL WIRE SHALL CONFORM TO ASTM A496. LAP JOINT REINFORCING 12" MIN.
7. CONCRETE MASONRY DESIGN PER ACE 530.1 SHALL BE PER THE UNIT STRENGTH METHOD WITH f'm=1,700 psi.
8. A DESIGN MIX FOR THE MORTAR AND GROUT SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION, IN ACCORDANCE WITH THE APPROPRIATE ASTM SPECIFICATIONS AND SHALL INCLUDE ACTUAL 28 DAY COMPRESSIVE STRENGTH TESTS.
9. TEST DATA ON THE PROPOSED MASONRY UNITS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. TEST RESULTS SHALL BE IN ACCORDANCE WITH THE APPROPRIATE ASTM SPECIFICATIONS AND INCLUDE ACTUAL COMPRESSIVE STRENGTH, ABSORPTION, WEIGHT, MOISTURE CONTENT, AND DIMENSIONS.
10. NORMAL MASONRY CONSTRUCTION WEATHER CONDITIONS ASSUME THE AIR TEMPERATURE TO BE BETWEEN 40 AND 90 DEGREES FAHRENHEIT WITH MINIMUM WIND AND RAIN, PLUS AVERAGE RELATIVE HUMIDITY. IF CONDITIONS OTHER THAN THESE OCCUR, THE CONTRACTOR SHALL MODIFY CONSTRUCTION PROCEDURES IN ACCORDANCE WITH SOUND CONSTRUCTION PRACTICES AND THE ABOVE NOTED CODES.
11. EXTERIOR WALLS SHALL BE CONSTRUCTED IN A WEATHERTIGHT MANNER WITH ALL NECESSARY FLASHING AND WEEPS.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST ISSUE OF THE AMERICAN INSTITUTE OF STEEL CONSTUCTION (AISC) SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, Fy = 50 ksi, EXCEPT FOR ANGLES, CHANNELS AND PLATE, WHICH SHALL CONFORM TO ASTM A 36, Fy = 36 ksi.
3. ALL HOLLOW SECTIONS (HSS) SHALL CONFORM TO ASTM A500, Fy = 46 ksi.
4. ALL COLUMN ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GR. 36, UNLESS OTHERWISE NOTED.
5. ANCHOR BOLTS AND BASE PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES OR SIMILAR METHODS. GALVANIZED BOLTS IN ACCORDANCE WITH ASTM A123 OR ASTM A153 AFTER FABRICATION IF SO LABELED.
6. SHOP AND FIELD CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTING. BOLTED CONNECTIONS SHALL CONFORM TO ASTM A325-X USING LOAD INDICATOR WASHERS (LIW) OR LOAD INDICATOR BOLTS (LIB). UNLESS OTHERWISE NOTED, BEAM CONNECTIONS SHALL PROVIDE SHEAR C APACITY TO SUPPORT A REACTION R EQUAL TO HALF THE SHEAR CAPACITY OF THE BEAM. USE ¾" Ø BOLTS, E70XX ¼" WELD, AND 5/16" ANGLE THICKNESS.
7. WELDED CONNECTIONS SHALL CONFORM TO THE AWS STRUCTURAL WELDING CODE. ALL WELDING SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70 ksi (E70 ELECTRODE) USING THE SHIELDED METAL ARC WELDING PROCESS (SMAW) AND IN ACCORDANCE WITH AWS SPECIFICATIONS. ANY OTHER SIZE OF ELECTRODE OR ANY OTHER TYPE OF WELDING PROCESS MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.

LIGHT GAUGE METAL FRAMING:

1. ALL LOAD BEARING LIGHT GAUGE METAL FRAMING SHALL BE Fy = 50,000 psi. NON LOAD BEARING MEMBERS MAY BE Fy = 36,000 psi.
2. CONTRACTOR SHALL SUPPLY MATERIAL AND FOLLOW THE REQUIREMENTS OF AISI S200-12 AND AISI 201-12. MEMBERS SHALL BE 20 GA MIN. (0.0375 INCHES) WITH 660 COATING UNLESS NOTED OTHERWISE.
3. CONNECTIONS SHALL BE BY SELF-TAPPING SCREWS MEETING THE REQUIREMENTS OF ASTM C1513 OR WELDS IN ACCORDANCE WITH AISI S100 AND AWS D1.3. SCREWS SHALL BE SPACED AT A MINIMUM OF 3 TIMES THE NOMINAL DIAMETER OF THE SCREW. THE MINIMUM EDGE DISTANCE FOR SCREWS SHALL BE 1.5 TIMES THE NOMINAL DIAMETER.
4. STUDS SHALL BE SEATED SQUARELY IN TRACK WITH STUD FLANGES ABUTTING TRACK FLANGES. STUDS SHALL BE PLUMBED, ALIGNED, AND SQUARELY ATTACHED TO FLANGES ON TOP AND BOTTOM TRACK.
5. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED. PROVIDE BRIDGING AND WEB REINFORCING PER MANUFACTURER'S RECOMMENDATIONS.
6. FIELD ABRASIONS TO MEMBERS FROM FIELD WELDING SHALL BE TOUCHED UP WITH ZINC-RICH PAINT.
7. PROVIDE SLIP TRACK AT NON-BEARING WALL TO ALLOW FOR FLOOR/ROOF DEFLECTIONS. SLIP TRACK SHALL ALLOW FOR ½" MINIMUM DEFLECTION UNLESS NOTED OTHERWISE.

BAR JOIST/METAL DECKING:

1. ALL STEEL BAR JOISTS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION STANDARD SPECIFICATION FOR STEEL JOISTS AND JOIST GIRDERS PUBLISHED BY THE STEEL JOIST INSTITUTE.
2. CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY AND PERMANENT LATERAL BRACING AND BRIDGING ACCORDING TO JOIST MANUFACTURERS SPECIFICATIONS AND OSHA REQUIREMENTS.
3. MINIMUM BEARING SHALL BE 6" ON MASONRY OR 4" ON STEEL U.N.O. PLACE BEARING PADS OVER CENTERLINE OF STEEL BEAM OR WALL U.N.O.
4. ALL STEEL DECK SHALL BE 22 GA, 1.5" WRIB, C60 GALVANIZED, 1-½" METAL DECK, USE 36/5 FASTENER PATTERN AND #10 SCREWS @ 12" O.C. FOR SIDE LAPS. FOR 3" ACOUSTIC DECK, USE 24/4 FASTENER PATTERN AND #10 SCREWS @ 12" O.C. FOR SIDE LAPS.
5. ACOUSTIC DECK SHALL BE PROVIDED WHERE NOTED. INCLUDE FIBERGLASS INSULATION IN FLUTES.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: GAK
DRAWN BY: RMA
CHECKED: GAK
APPROVED: GAK

STRUCTURAL NOTES

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FOOTING SCHEDULE

ID	DESCRIPTION	SIZE W	SIZE L	SIZE D	REINFORCEMENT	NOTES
WF1	WALL FOOTING	4'-0"	SEE PLAN	12"	(4) #5 BARS CONTINUOUS #4 BARS @ 48" TRANSVERSE	1,2,3
WF2	WALL FOOTING	2'-0"	SEE PLAN	12"	(4) #5 BARS CONTINUOUS	1,2,3
WF3	WALL FOOTING	8"	SEE PLAN	12"	(4) #5 BARS CONTINUOUS	1,2,3
PF1	PIER FOOTING	4'-0"	4'-0"	12"	(4) #5 BARS, EACH WAY	1,2,3
TS1	THICKENED SLAB	2'-0"	SEE PLAN	8"	(2) #5 BARS CONTINUOUS	1,6

NOTES:

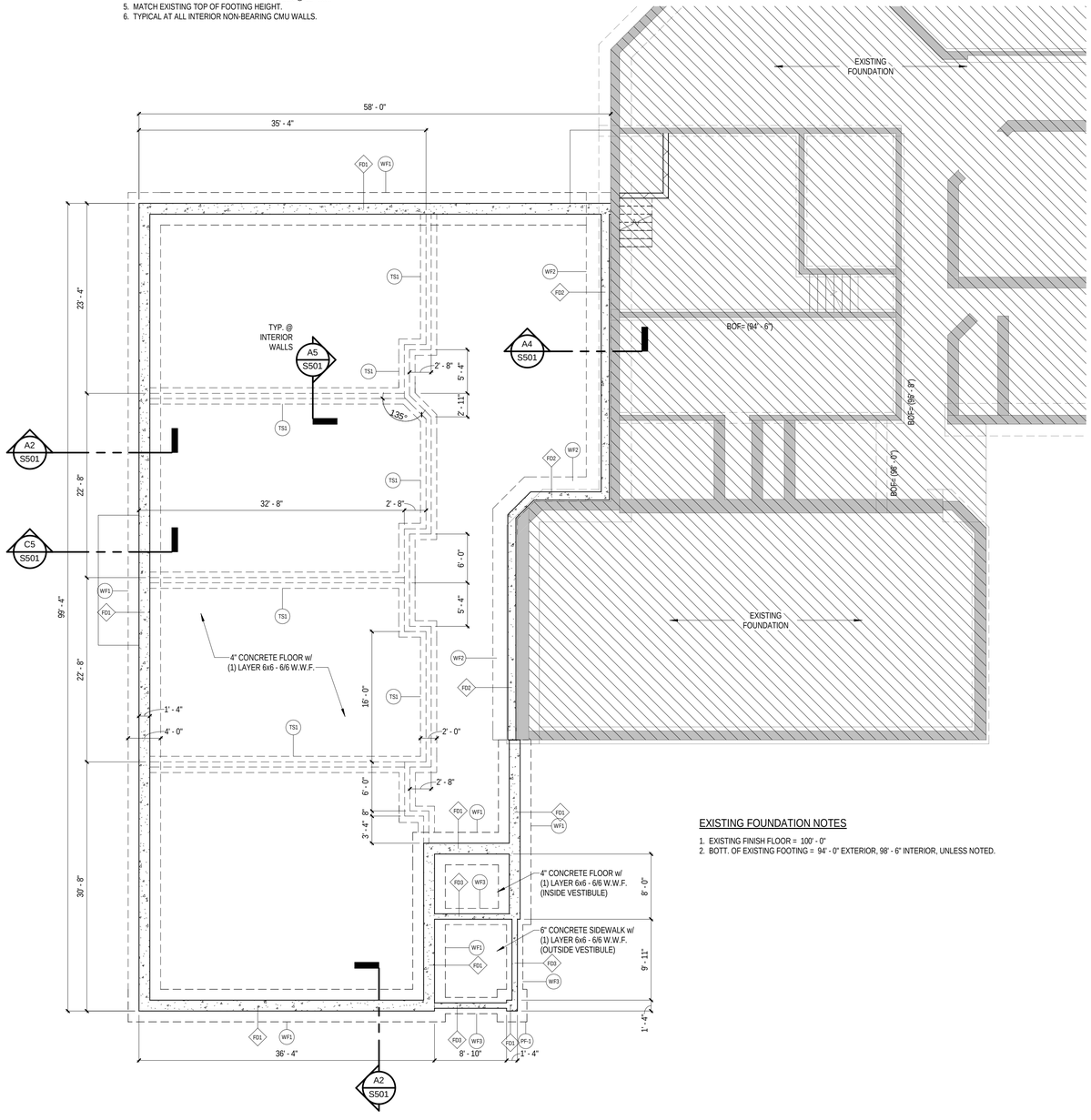
1. USE 3" CLEAR COVER FOR REINFORCING ON BOTTOM & SIDES.
2. SEE FOUNDATION TYPE FOR WALL DOWELS IN FOOTING.
3. BOTTOM OF FOOTING MINIMUM 4'-0" BELOW GRADE.
4. DOWEL INTO EXISTING FOOTING w/ #5 DOWELS @ 12" O.C.
5. MATCH EXISTING TOP OF FOOTING HEIGHT.
6. TYPICAL AT ALL INTERIOR NON-BEARING CMU WALLS.

FOUNDATION SCHEDULE

ID	DESCRIPTION	SIZE W	SIZE L	REINFORCEMENT	WALL DOWELS IN FOOTING	NOTES
FD1	CONCRETE WALL	16"	SEE PLAN	#5s @ 24" O.C. VERTICAL, EACH FACE #5s @ 16" O.C. HORIZONTAL, EACH FACE	#5 x 24" DOWELS (w/ 8" HOOK) @ 18" O.C. EACH FACE	1,2
FD2	CONCRETE WALL	12"	SEE PLAN	#5s @ 24" O.C. VERTICAL, EACH FACE #5s @ 16" O.C. HORIZONTAL, EACH FACE	#5 x 24" DOWELS (w/ 8" HOOK) @ 18" O.C. EACH FACE	1
FD3	CONCRETE PIER	16"	16"	(4) #8 BARS & #4 BAR TIES @ 12"O.C.		1

NOTES:

1. SEE FOUNDATION DETAILS FOR TOP OF WALL HEIGHT(S).
2. SEE FOUNDATION DETAILS FOR LEDGE DIMENSIONS.
3. DOWELS IN FOOTING TO MATCH DOWEL SPACING IN PIER.

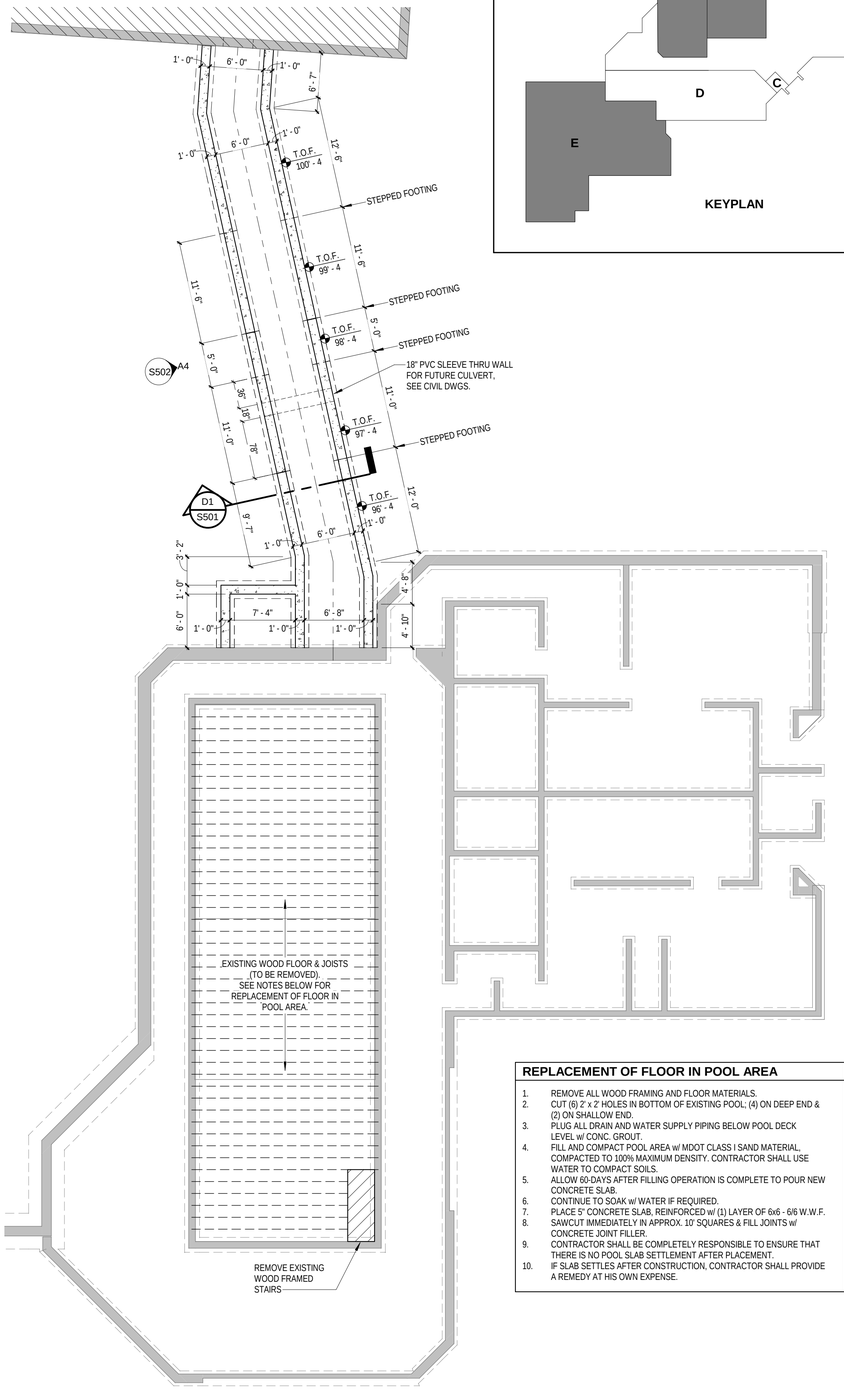


EXISTING FOUNDATION NOTES

1. EXISTING FINISH FLOOR = 100' - 0"
2. BOTT. OF EXISTING FOOTING = 94' - 0" EXTERIOR, 98' - 6" INTERIOR, UNLESS NOTED.

A1 FOUNDATION PLAN @ ADDITION

1/8" = 1'-0"

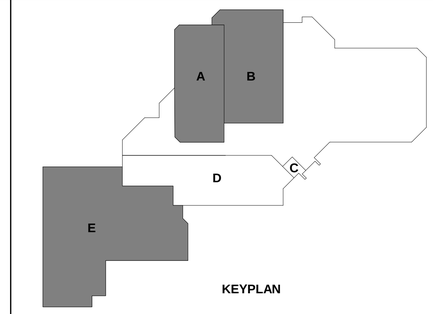


REPLACEMENT OF FLOOR IN POOL AREA

1. REMOVE ALL WOOD FRAMING AND FLOOR MATERIALS.
2. CUT (6) 2' x 2' HOLES IN BOTTOM OF EXISTING POOL; (4) ON DEEP END & (2) ON SHALLOW END.
3. PLUG ALL DRAIN AND WATER SUPPLY PIPING BELOW POOL DECK LEVEL w/ CONC. GROUT.
4. FILL AND COMPACT POOL AREA w/ MDOT CLASS I SAND MATERIAL, COMPACTED TO 100% MAXIMUM DENSITY. CONTRACTOR SHALL USE WATER TO COMPACT SOILS.
5. ALLOW 60-DAYS AFTER FILLING OPERATION IS COMPLETE TO POUR NEW CONCRETE SLAB.
6. CONTINUE TO SOAK w/ WATER IF REQUIRED.
7. PLACE 5" CONCRETE SLAB, REINFORCED w/ (1) LAYER OF 6x6 - 6/6 W.W.F.
8. SAWCUT IMMEDIATELY IN APPROX. 10' SQUARES & FILL JOINTS w/ CONCRETE JOINT FILLER.
9. CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE TO ENSURE THAT THERE IS NO POOL SLAB SETTLEMENT AFTER PLACEMENT.
10. IF SLAB SETTLES AFTER CONSTRUCTION, CONTRACTOR SHALL PROVIDE A REMEDY AT HIS OWN EXPENSE.

A4 FOUNDATION PLAN @ MULTI-PURPOSE

1/8" = 1'-0"



KEYPLAN

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: GAK
DRAWN BY: RMA
CHECKED: GAK
APPROVED: GAK

FOUNDATION PLAN

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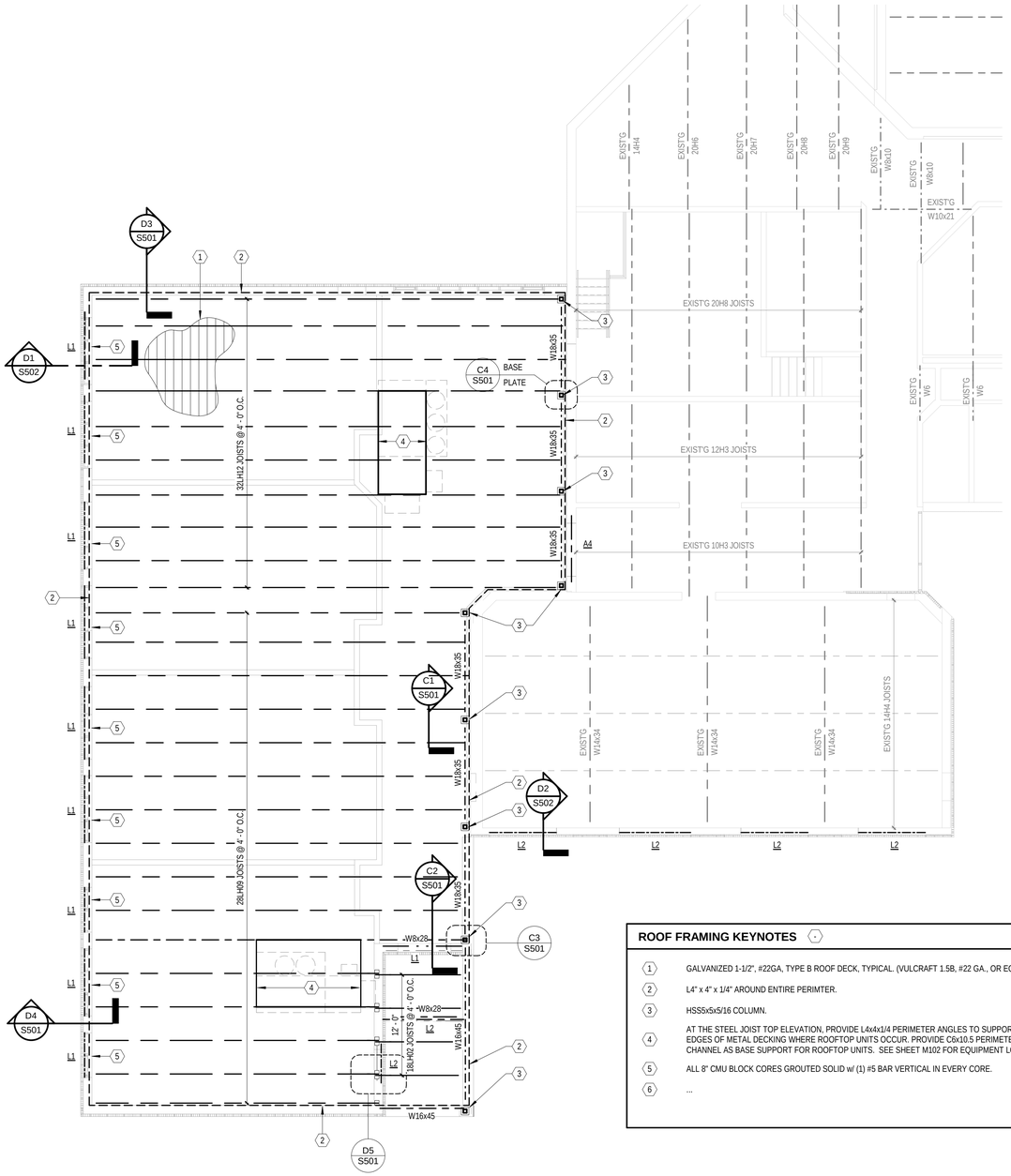
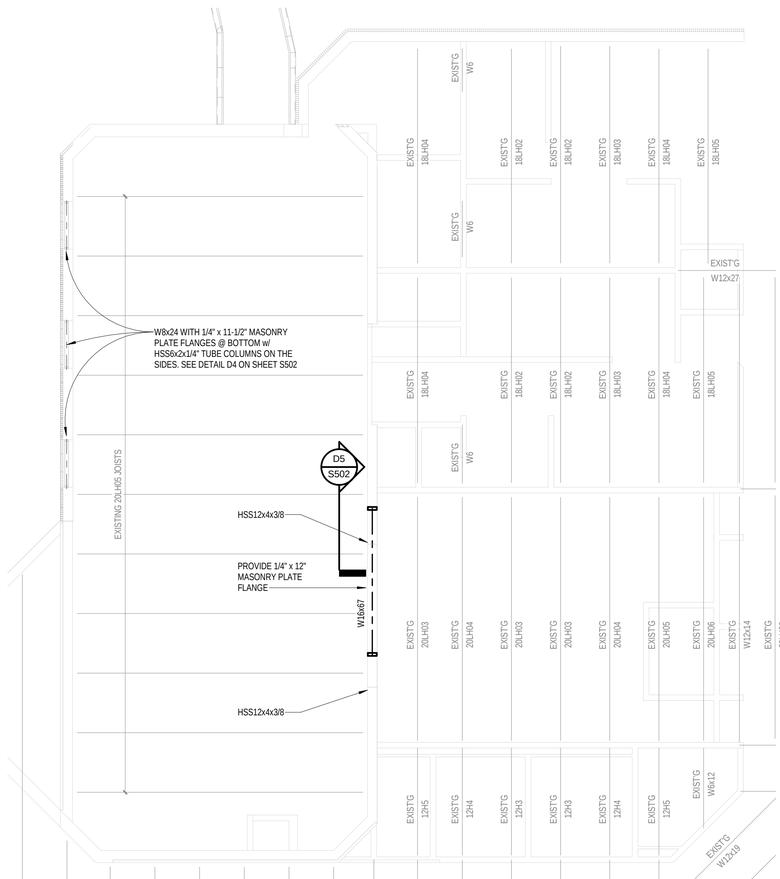
DESIGNATION	DESCRIPTION	DETAIL
L1	W8x28 BEAM, C8x13,75 CHANNEL, 1/2" PLATE, L6" x 3-1/2" x 5/16" STEEL ANGLE	D1 / S502
L2	L6" x 3-1/2" x 5/16" STEEL ANGLE, L3-1/2" x 3-1/2" x 5/16" STEEL ANGLE	D2 / S502
L3	...	...



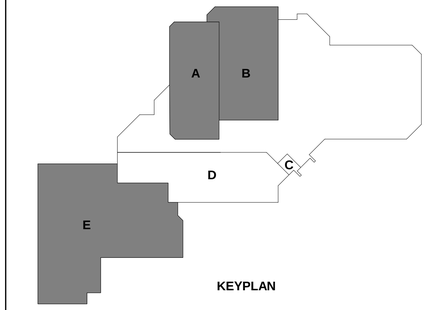
ROOF FRAMING KEYNOTES

1. GALVANIZED 1-1/2", #22GA, TYPE B ROOF DECK, TYPICAL. (VULCRAFT 1.5B, #22 GA., OR EQUAL)
2. L4" x 4" x 1/4" AROUND ENTIRE PERIMTER.
3. HSS5x5x5/16 COLUMN.
4. AT THE STEEL JOIST TOP ELEVATION, PROVIDE L4x4x1/4 PERIMETER ANGLES TO SUPPORT ALL EDGES OF METAL DECKING WHERE ROOFTOP UNITS OCCUR. PROVIDE C6x10.5 PERIMETER CHANNEL AS BASE SUPPORT FOR ROOFTOP UNITS. SEE SHEET M102 FOR EQUIPMENT LOCATIONS.
5. ALL 8" CMU BLOCK CORES GROUTED SOLID w/ (1) #5 BAR VERTICAL IN EVERY CORE.
6. ...

A1 ROOF FRAMING PLAN
1/8" = 1'-0"



A4 ROOF FRAMING @ MULTI PURPOSE ROOM / KITCHEN
1/8" = 1'-0"



KEYPLAN

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: GAK
DRAWN BY: RMA
CHECKED: GAK
APPROVED: GAK

ROOF FRAMING PLAN

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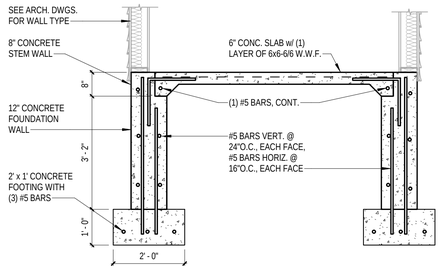
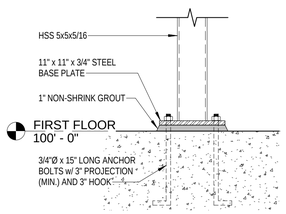
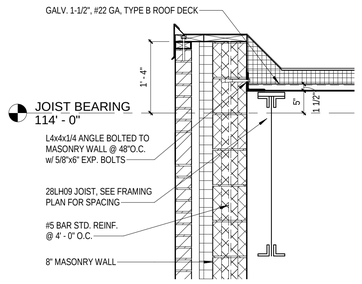


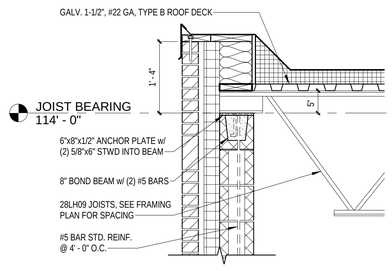
D1 SECTION @ WALKWAY
1/2" = 1'-0"



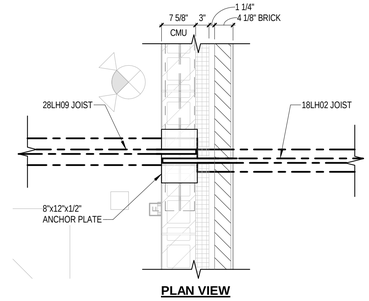
D2 TYP. COL. BASE PLATE DETAIL
1" = 1'-0"



D3 SECTION @ JOIST
3/4" = 1'-0"

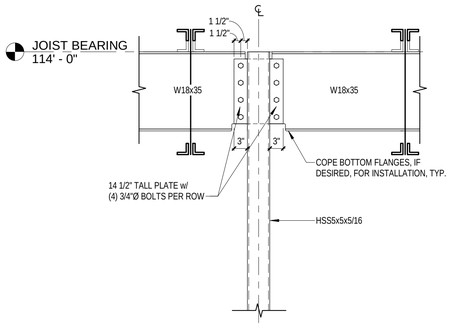


D4 SECTION @ JOIST BEARING
3/4" = 1'-0"

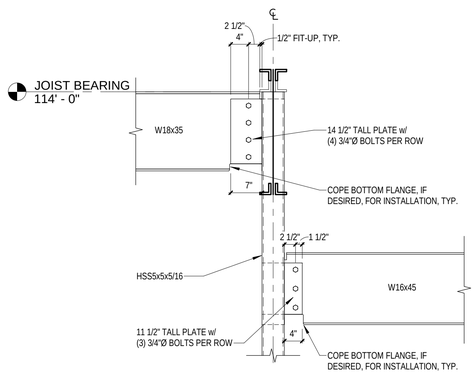


PLAN VIEW

D5 JOIST BEARING DETAIL
3/4" = 1'-0"



C1 BEAM CONNECTION 2
3/4" = 1'-0"



C2 BEAM CONNECTION 1
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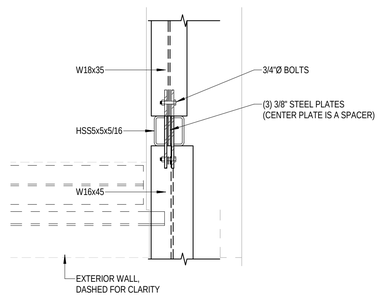
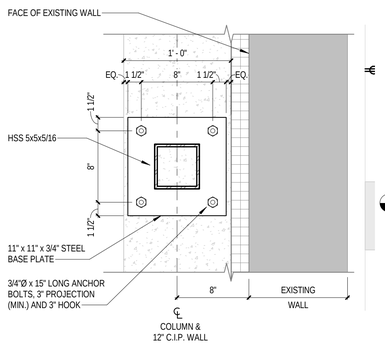
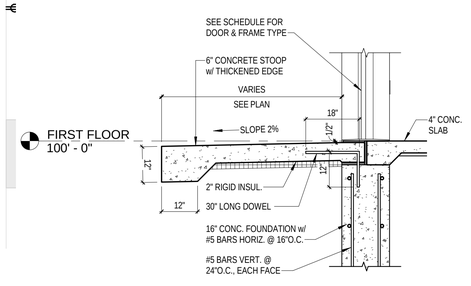


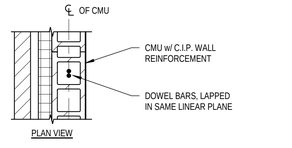
C3 BEAM TO BEAM CONN.
1" = 1'-0"



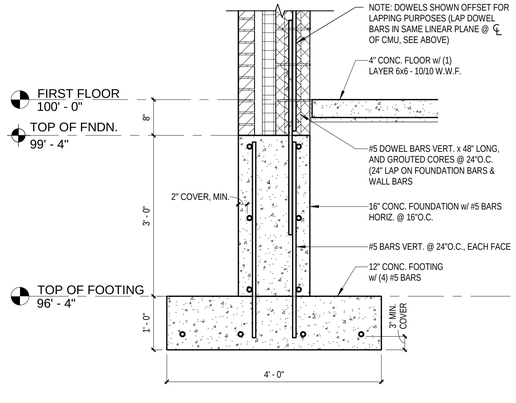
C4 BASE PLATE DETAIL
1 1/2" = 1'-0"



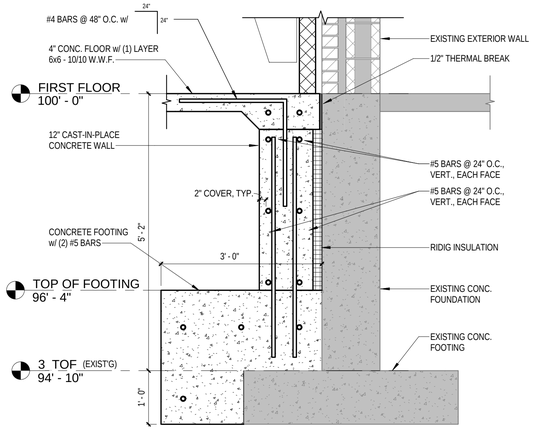
C5 SECTION @ CONC. STOOP
1/2" = 1'-0"



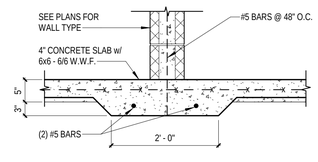
PLAN VIEW



A2 SECTION @ FNDN 1
3/4" = 1'-0"



A4 SECTION @ FNDN 2
3/4" = 1'-0"



A5 SECTION @ THICKENED SLAB
3/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

PROJECT NO:	O97-01165
DESIGNED BY:	GAK
DRAWN BY:	RMA
CHECKED:	GAK
APPROVED:	GAK

DETAILS

S501

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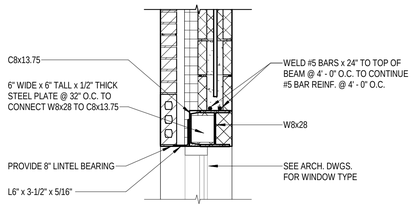
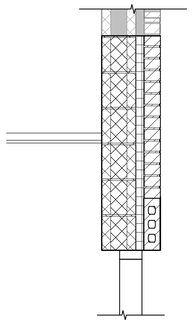
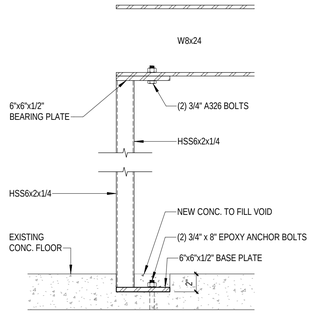


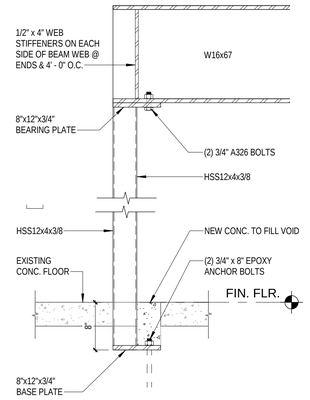
D1 LINTEL DETAIL L1
3/4" = 1'-0"



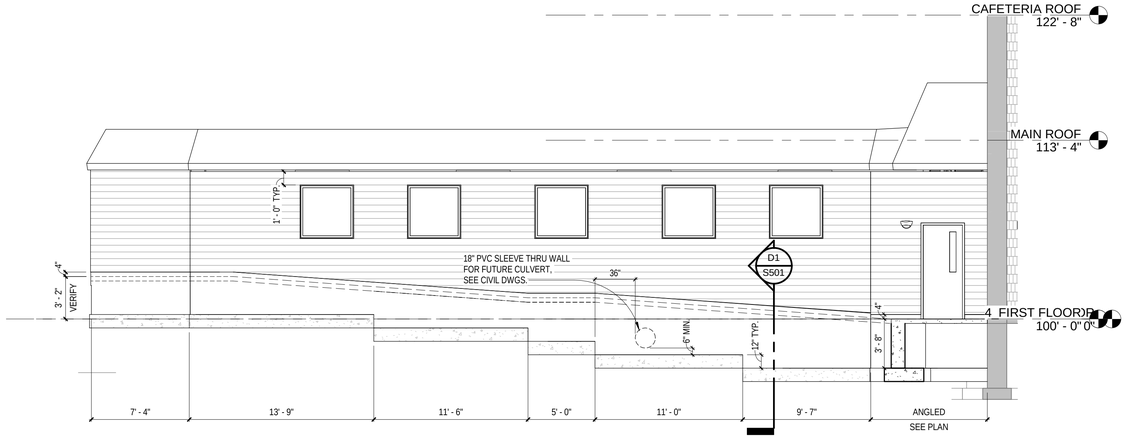
D2 LINTEL DETAIL L2
3/4" = 1'-0"



D4 SECTION @ ENTRY WINDOW
1 1/2" = 1'-0"



D5 SECTION @ COILING DOOR
1" = 1'-0"



A4 ELEVATION @ WALKWAY FOUNDATION
3/16" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:
BIDSET

DATE:
04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: GAK
DRAWN BY: RMA
CHECKED: GAK
APPROVED: GAK

DETAILS

S502

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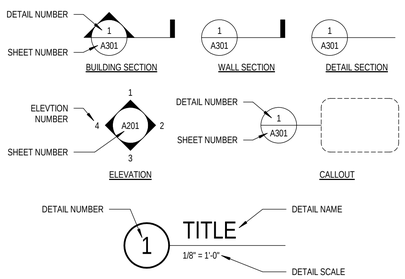
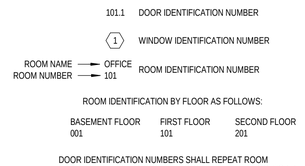
SYMBOLS



DOOR, WINDOW, & ROOM IDENTIFICATION NUMBERS



ROOM IDENTIFICATION BY FLOOR AS FOLLOWS:

BASEMENT FLOOR	FIRST FLOOR	SECOND FLOOR
001	101	201

DOOR IDENTIFICATION NUMBERS SHALL REPEAT ROOM NUMBER. MULTIPLE DOORS IN A ROOM WILL USE A POSTSCRIPT LETTER FOR EACH ADDITIONAL DOOR REQUIRED.

FIRE RATINGS

- 1/2 HOUR
- 1 HOUR
- 2 HOUR
- 3 HOUR
- SMOKE PARTITION

ABBREVIATIONS

A

AB	ANCHOR BOLT
AC	ACOUSTIC / ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
A/C	AIR CONDITIONING
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL

B

BBR	BASEBOARD RADIATION
BD	BOARD
BDRY	BOUNDARY
BF	BARRIER FREE
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT

C

CA	COMPRESSED AIR
CB	CATCH BASIN
C/C	CENTER TO CENTER
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CLT	CLOSET
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONF	CONFERENCE
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CW	COLD WATER

D

DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DW	DISHWASHER
DWG	DRAWING

E

E	EAST
EA	EACH
EF	EXHAUST FAN
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EMER	EMERGENCY
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXP	EXPANSION
EXT	EXTERIOR
EXTG	EXISTING

F

FA	FIRE ALARM
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISHED FLOOR ELEVATION
FIN	FINISHED
FLR	FLOOR
FT	FOOT OR FEET
FTG	FOOTING
F.V.	FIELD VERIFY

G

GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GPBD	GYPSUM BOARD
GYP	GYPSUM

H

HB	HOSE BIB
HGT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPDL	HIGH PRESSURE DECORATIVE LAMINATE
HTR	HEATER
HVAC	HEATING / VENTILATION / AIR CONDITIONING
HW	HOT WATER

I

IN	INCH
INSUL	INSULATION

J

JAN	JANITOR
JST	JOIST
JT	JOINT

K

KD	KNOCKDOWN
KO	KNOCKOUT

L

LAM	LAMINATE
LAV	LAVITORY
LB	POUND
LF	LINEAR FOOT / FEET
LL	LIVE LOAD
LT	LIGHT
LTG	LIGHTING

M

MAX	MAXIMUM
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRRORED
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED

N

N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE

O

OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
O/O	OUT TO OUT
OPG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OZ	OUNCE

P

PC	PRECAST
PL	PLATE
PLAM	PLASTIC LAMINATE
PNL	PANEL
PNT	PAINT
PR	PAIR
PREFIN	PREFINISHED
PT	PRESSURE TREATED
PWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH

Q

QT	QUARRY TILE
QTY	QUANTITY

R

REINF	REINFORCE
RD	ROOF DRAIN
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT

S

S	SOUTH
SAN	SANITARY
SCHED	SCHEDULE
SF	SQUARE FOOT / FEET
SIM	SIMILAR
SPEC	SPECIFICATIONS
SQ	SQAURE
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
S & V	STAIN AND VARNISH
SYS	SYSTEM

T

TEL	TELEPHONE
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL

U

UNO	UNLESS NOTED OTHERWISE

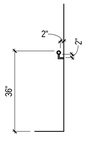
V

V	VENT
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VTR	VENT THRU ROOF
VWC	VINYL WALL COVERING

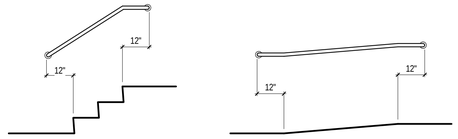
SYMBOLS

&	AND
L	ANGLE
@	AT
x	BY (AS IN 2 x 4)
℄	CENTERLINE
Ø	DIAMETER
"	INCH
/	PER
±	PLUS OR MINUS
#	POUND

1. ENDS OF HANDRAILS SHALL RETURN TO WALL.
2. PROVIDE HANDRAILS ON BOTH SIDES OF STAIR OR RAMP.
3. HANDRAILS SHALL BE CIRCULAR IN CROSS-SECTION w/ 1-1/2" TO 2" OUTSIDE DIAMETER.

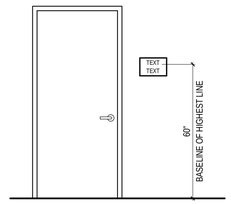


TYPICAL SECTION



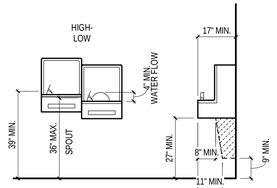
STAIR RAMP

TYPICAL RAMP & STAIR RAILINGS

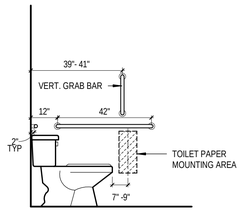


MOUNT SIGNAGE ON LATCH SIDE OF DOOR

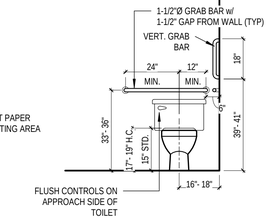
SIGNAGE



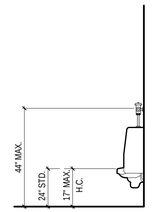
DRINKING FOUNTAINS



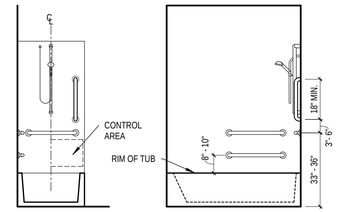
WATER CLOSET SIDE WALL



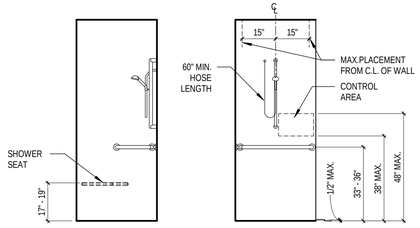
WATER CLOSET BACK WALL



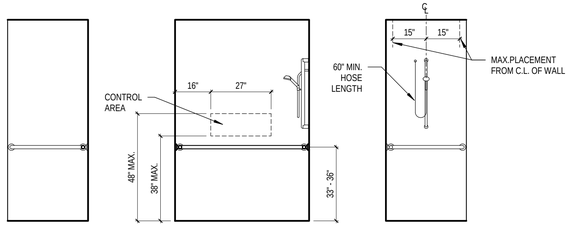
URINAL



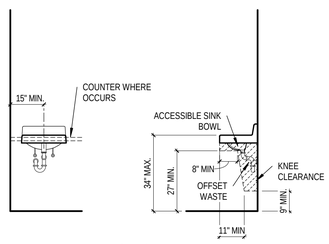
TUB



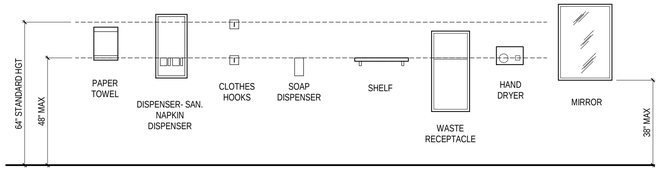
TRANSFER TYPE SHOWER



ROLL-IN TYPE SHOWER
(NIC)



LAVATORY OR VANITY SINK



TOILET ROOM ACCESSORIES

MOUNTING HEIGHTS

3/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

GENERAL ARCHITECTURAL NOTES

A001

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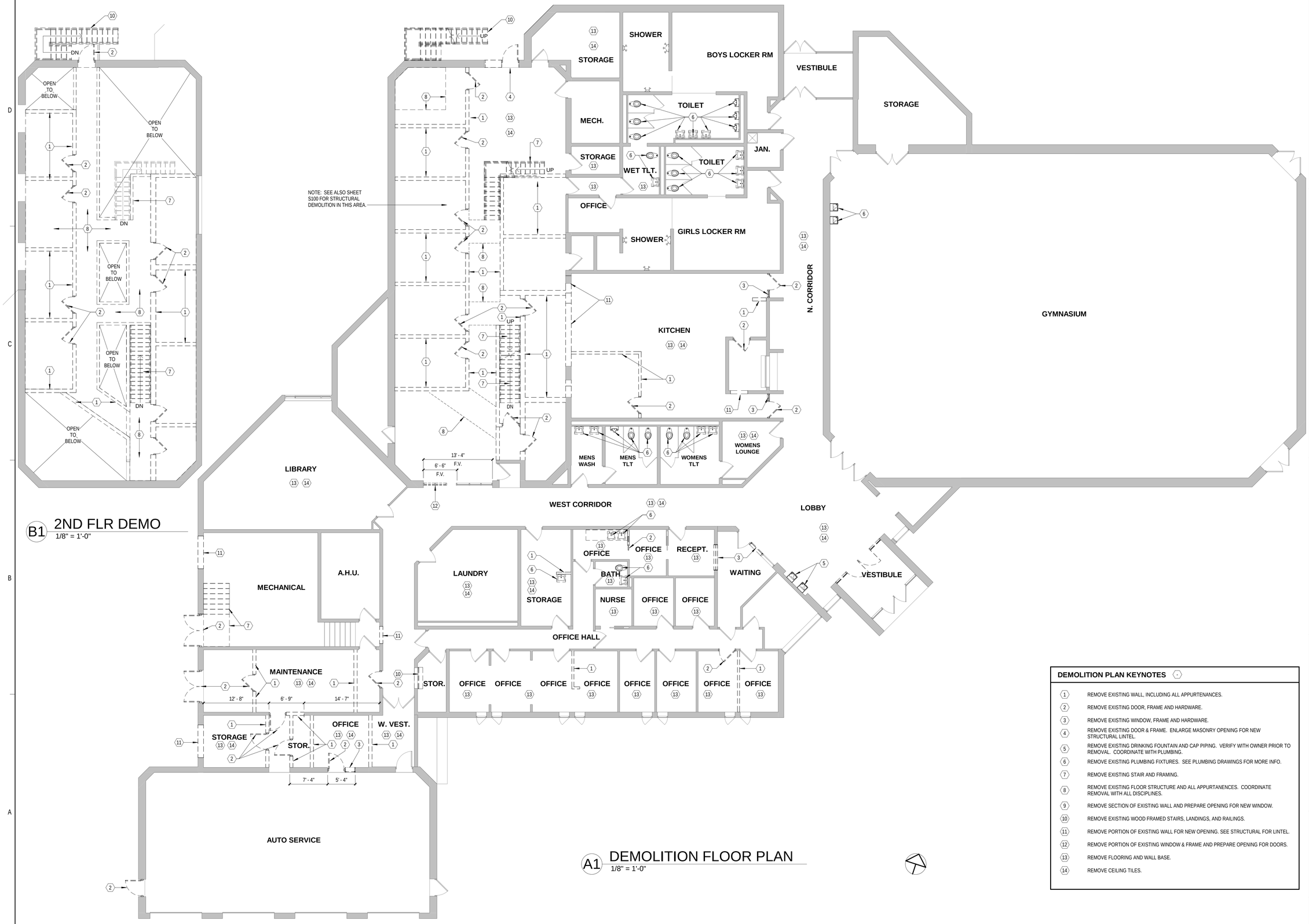

B1 2ND FLR DEMO
1/8" = 1'-0"

A1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"

DEMOLITION PLAN KEYNOTES

1. REMOVE EXISTING WALL, INCLUDING ALL APPURTENANCES.
2. REMOVE EXISTING DOOR, FRAME AND HARDWARE.
3. REMOVE EXISTING WINDOW, FRAME AND HARDWARE.
4. REMOVE EXISTING DOOR & FRAME. ENLARGE MASONRY OPENING FOR NEW STRUCTURAL LINTEL.
5. REMOVE EXISTING DRINKING FOUNTAIN AND CAP PIPING. VERIFY WITH OWNER PRIOR TO REMOVAL. COORDINATE WITH PLUMBING.
6. REMOVE EXISTING PLUMBING FIXTURES. SEE PLUMBING DRAWINGS FOR MORE INFO.
7. REMOVE EXISTING STAIR AND FRAMING.
8. REMOVE EXISTING FLOOR STRUCTURE AND ALL APPURTANENCES. COORDINATE REMOVAL WITH ALL DISCIPLINES.
9. REMOVE SECTION OF EXISTING WALL AND PREPARE OPENING FOR NEW WINDOW.
10. REMOVE EXISTING WOOD FRAMED STAIRS, LANDINGS, AND RAILINGS.
11. REMOVE PORTION OF EXISTING WALL FOR NEW OPENING. SEE STRUCTURAL FOR LINTEL.
12. REMOVE PORTION OF EXISTING WINDOW & FRAME AND PREPARE OPENING FOR DOORS.
13. REMOVE FLOORING AND WALL BASE.
14. REMOVE CEILING TILES.

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BAY MILLS, MI

ISSUED FOR: BIDSET
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OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

DEMOLITION FLOOR PLAN

A100

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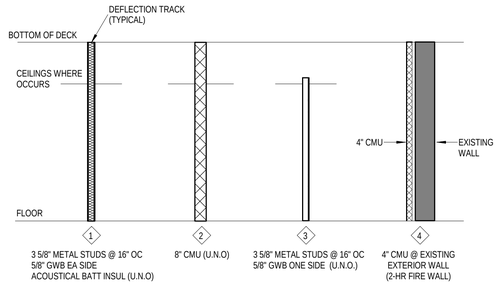
INTERIOR WALL KEY

METAL STUD PARTITION

CMU WALL

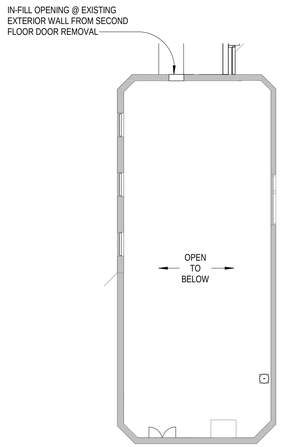
WALL NOTES:

1. ALL INTERIOR PARTITION WALLS SHALL BE TYPE 1
2. ALL INTERIOR CMU WALLS SHALL BE TYPE 2
3. ALL AREAS SHOWN ON ROOM FINISH SCHEDULE AS C.T., SEE SPECIFICATIONS FOR BACKER.
4. ALL INTERIOR METAL STUD PARTITIONS TO RECEIVE FULL THICKNESS FIBERGLASS BATT SOUND INSULATION. SET STUD TRACKS IN CONTINUOUS BED OF ACOUSTIC SEALANT, TOP AND BOTTOM. PROVIDE CONTINUOUS ACOUSTIC SEALANT AT TOP AND BOTTOM OF GWB.



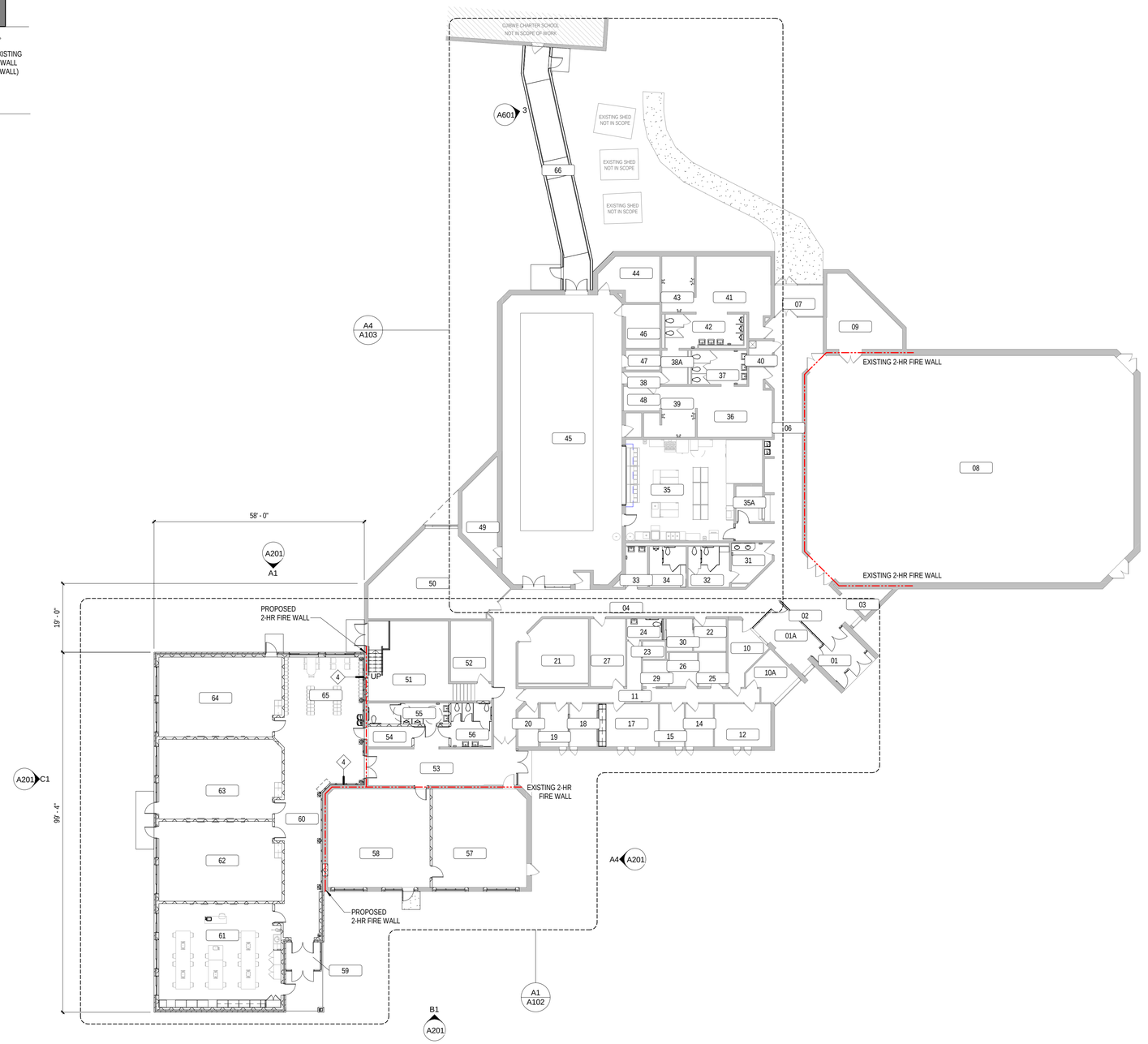
WALL LEGEND

1/4" = 1'-0"



B1 MULTI-PURPOSE ROOM - UPPER

1/16" = 1'-0"



A1 OVERALL PROPOSED FLOOR PLAN

1/16" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:
BIDSET

DATE:
04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

OVERALL FLOOR PLAN

A101

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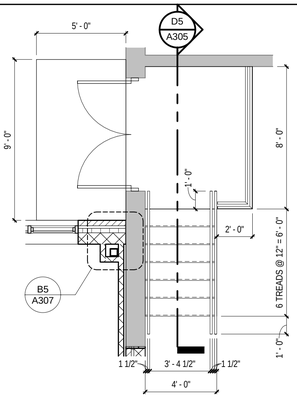
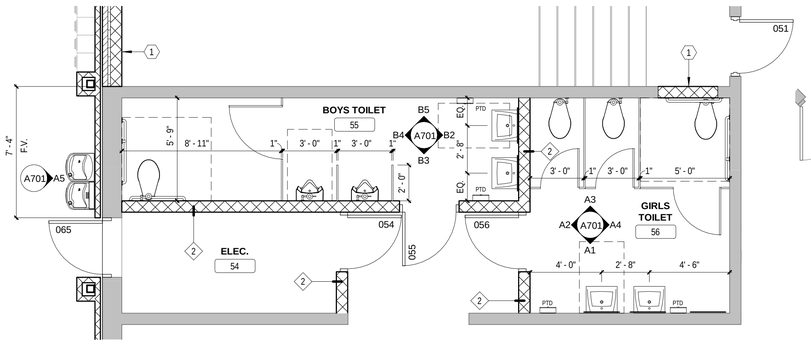
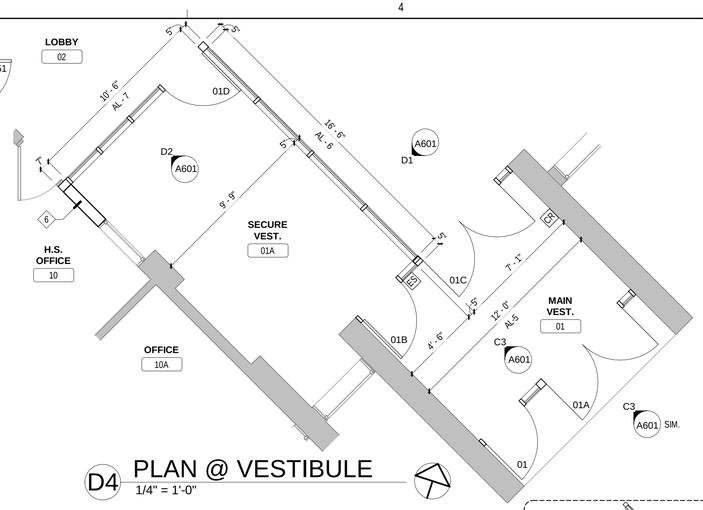


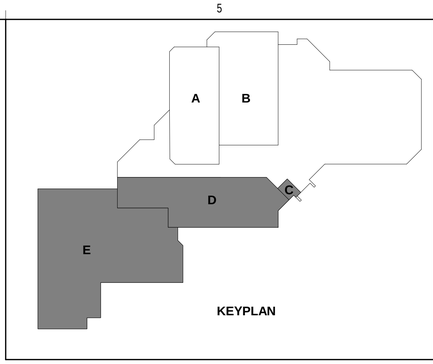
D1 ENLARGED PLAN @ STAIR
1/4" = 1'-0"

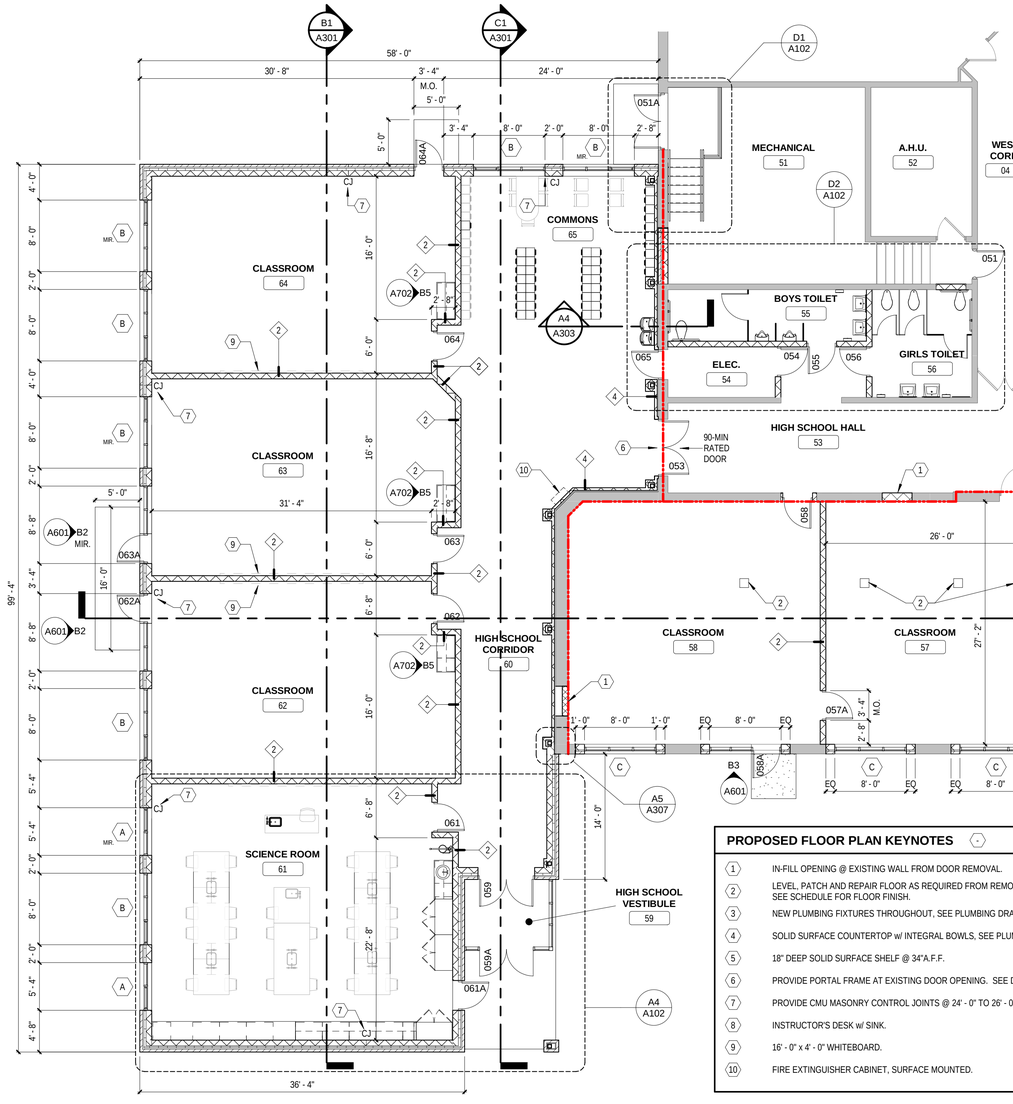


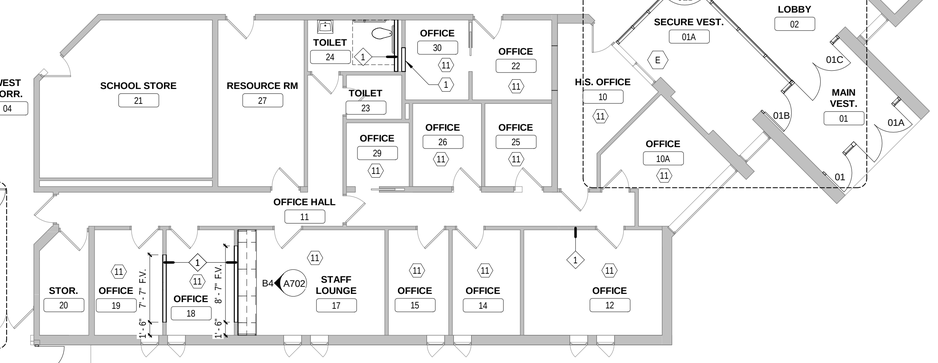
D2 PLAN @ TOILETS
1/4" = 1'-0"

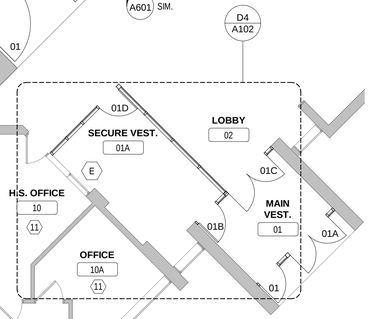


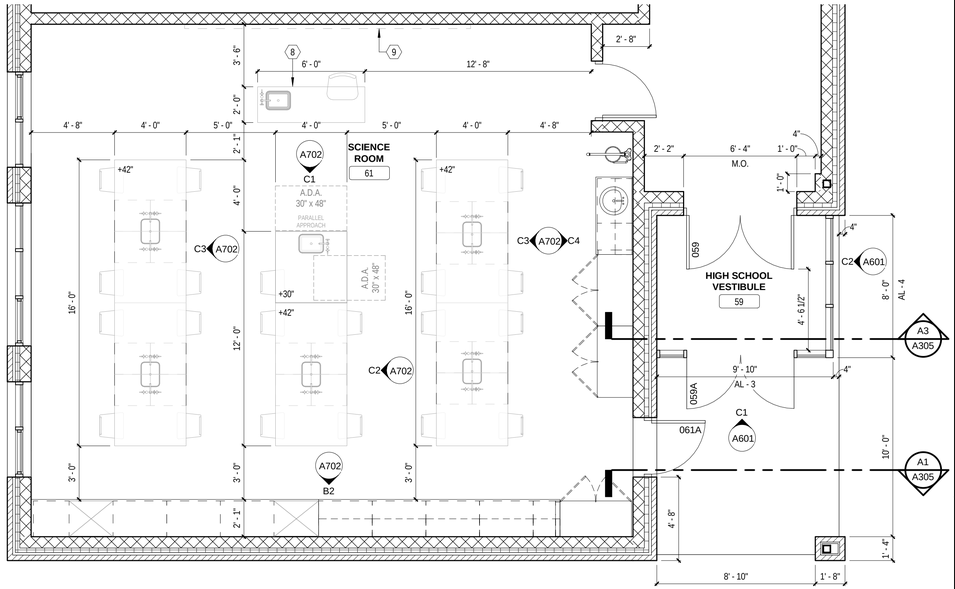
D4 PLAN @ VESTIBULE
1/4" = 1'-0"











PROPOSED FLOOR PLAN KEYNOTES

1. IN-FILL OPENING @ EXISTING WALL FROM DOOR REMOVAL.
2. LEVEL, PATCH AND REPAIR FLOOR AS REQUIRED FROM REMOVAL OF EXISTING FLOOR DRAIN. SEE SCHEDULE FOR FLOOR FINISH.
3. NEW PLUMBING FIXTURES THROUGHOUT, SEE PLUMBING DRAWINGS FOR MORE INFO.
4. SOLID SURFACE COUNTERTOP w/ INTEGRAL BOWLS, SEE PLUMB. DWGS.
5. 18" DEEP SOLID SURFACE SHELF @ 34"A.F.F.
6. PROVIDE PORTAL FRAME AT EXISTING DOOR OPENING. SEE DETAILS ON SHEET A601.
7. PROVIDE CMU MASONRY CONTROL JOINTS @ 24' - 0" TO 26' - 0" INCREMENTS, MAXIMUM.
8. INSTRUCTOR'S DESK w/ SINK.
9. 16' - 0" x 4' - 0" WHITEBOARD.
10. FIRE EXTINGUISHER CABINET, SURFACE MOUNTED.

A1 PLAN @ HIGH SCHOOL / OFFICES
1/8" = 1'-0"

A4 PLAN @ SCIENCE RM / HIGH SCHOOL VEST.
1/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:
BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

ENLARGED FLOOR PLANS

A102

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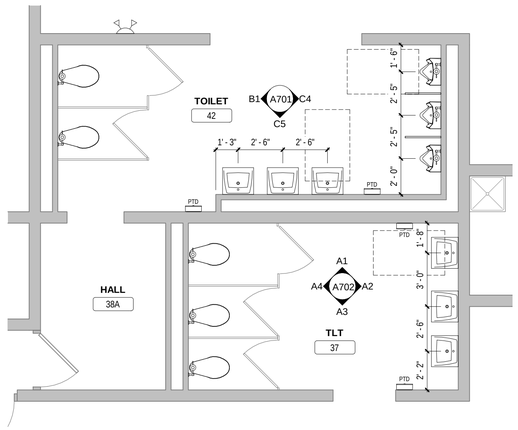
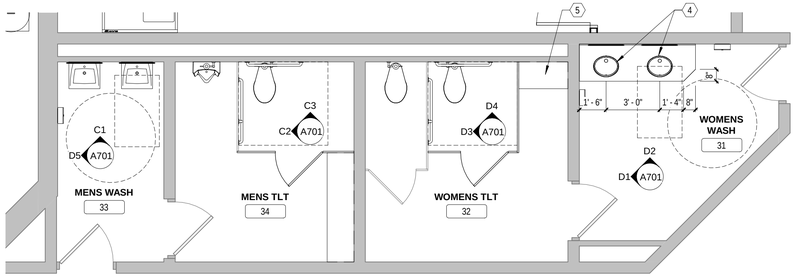


D1 ENLARGED PLAN @ TOILET RENOVATIONS 2

1/4" = 1'-0"

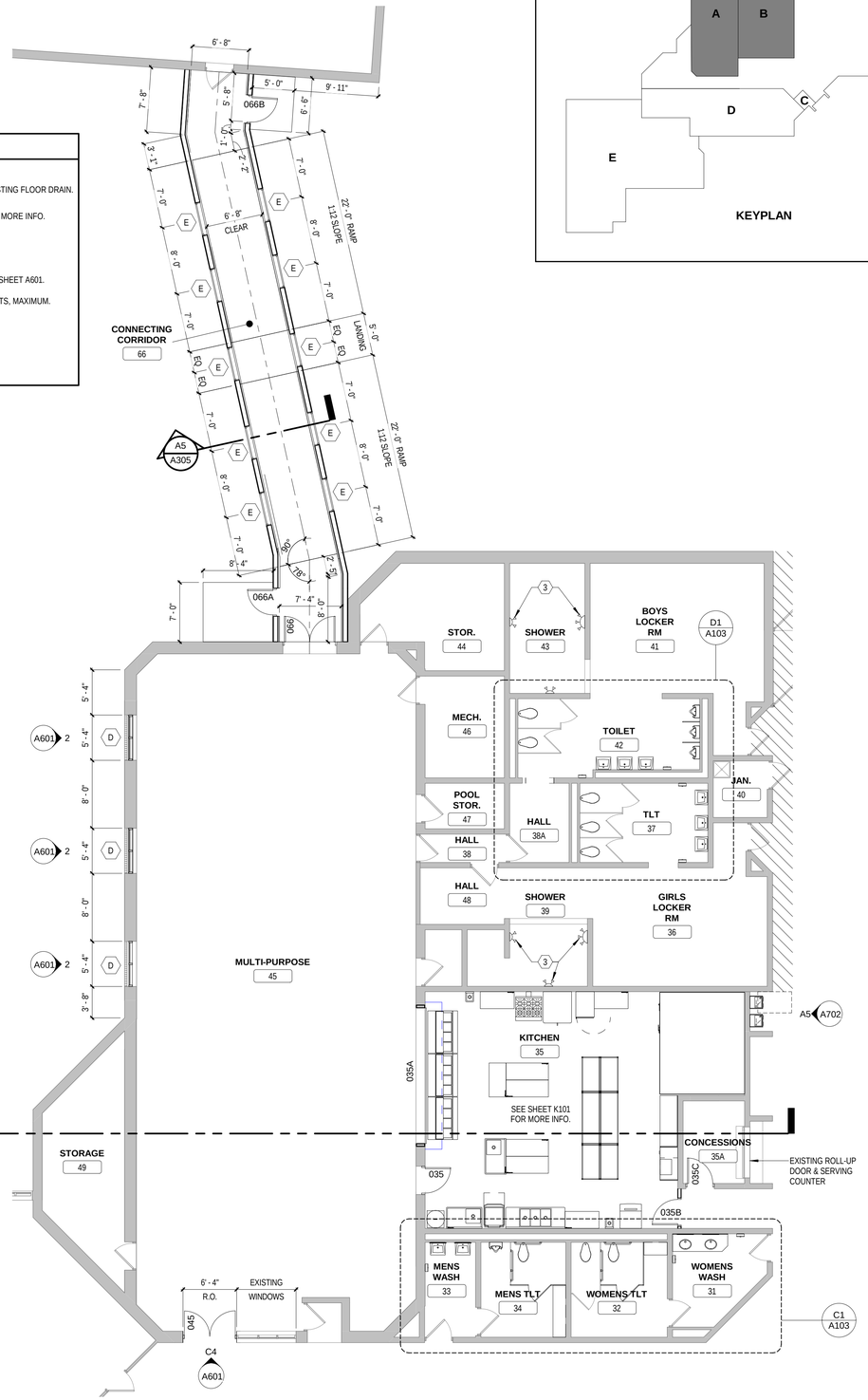


C1 ENLARGED PLAN @ TOILET RENOVATIONS

1/4" = 1'-0"

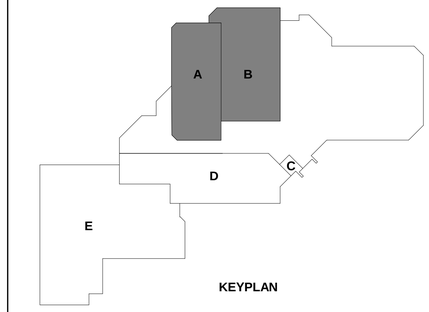
PROPOSED FLOOR PLAN KEYNOTES

1. IN-FILL OPENING @ EXISTING WALL FROM DOOR REMOVAL.
2. LEVEL, PATCH AND REPAIR FLOOR AS REQUIRED FROM REMOVAL OF EXISTING FLOOR DRAIN. SEE SCHEDULE FOR FLOOR FINISH.
3. NEW PLUMBING FIXTURES THROUGHOUT, SEE PLUMBING DRAWINGS FOR MORE INFO.
4. SOLID SURFACE COUNTERTOP w/ INTEGRAL BOWLS, SEE PLUMB. DWGS.
5. 18" DEEP SOLID SURFACE SHELF @ 34"A.F.F.
6. PROVIDE PORTAL FRAME AT EXISTING DOOR OPENING. SEE DETAILS ON SHEET A601.
7. PROVIDE CMU MASONRY CONTROL JOINTS @ 24' - 0" TO 26' - 0" INCREMENTS, MAXIMUM.
8. INSTRUCTOR'S DESK w/ SINK.
9. 16' - 0" x 4' - 0" WHITEBOARD.
10. FIRE EXTINGUISHER CABINET, SURFACE MOUNTED.



A4 ENLARGED PLAN @ COMMONS / KITCHEN

1/8" = 1'-0"



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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

ENLARGED FLOOR PLANS

A103

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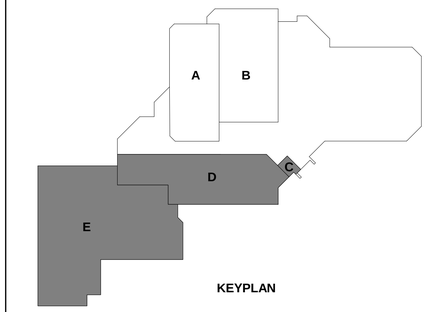

KEYPLAN

A2 ENLARGED RCP @ ADDITION

1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:

BIDSET

DATE:

04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

REFLECTED CEILING PLANS

A104

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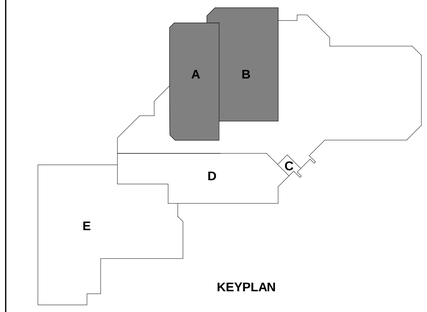
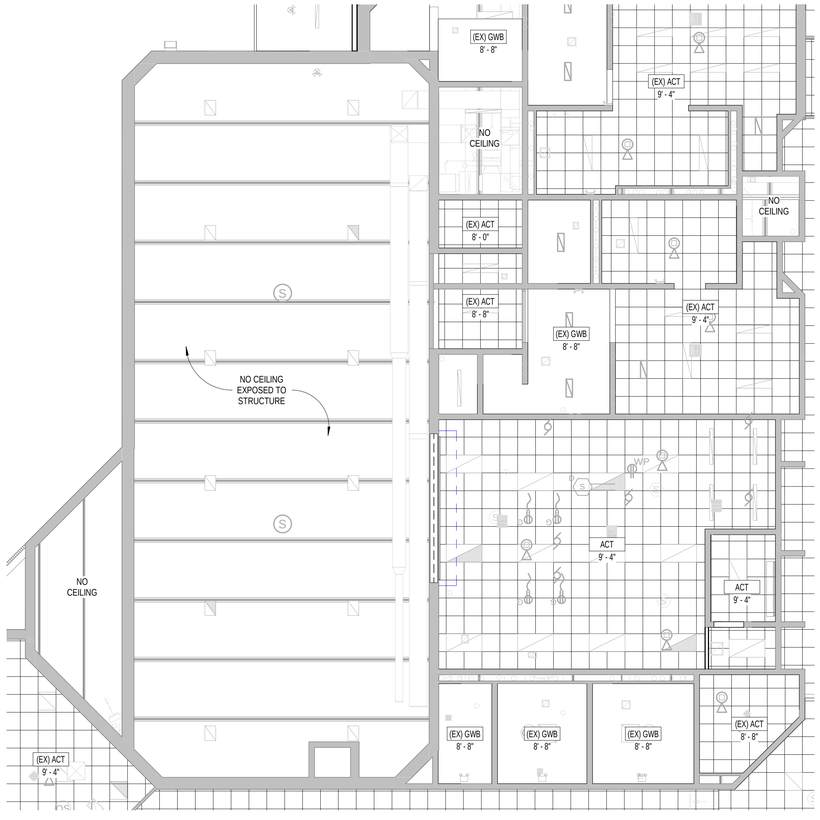


KEYPLAN



A4 RCP @ MULTI-PURPOSE / KITCHEN
1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

DATE: (04/19/2021)
ISSUED FOR: BIDSET

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

REFLECTED CEILING PLANS

A105

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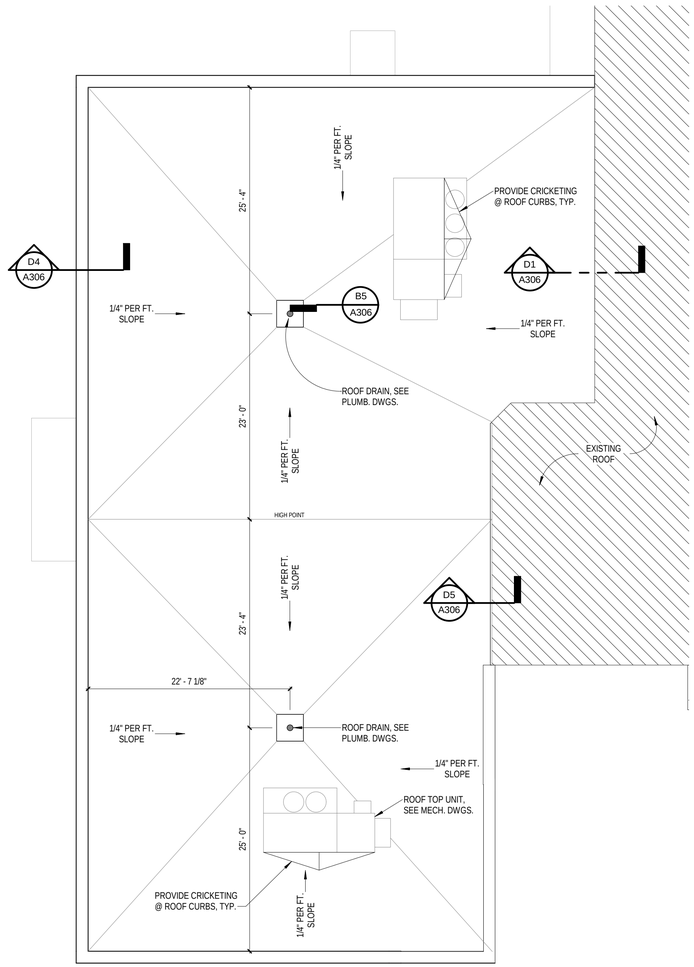
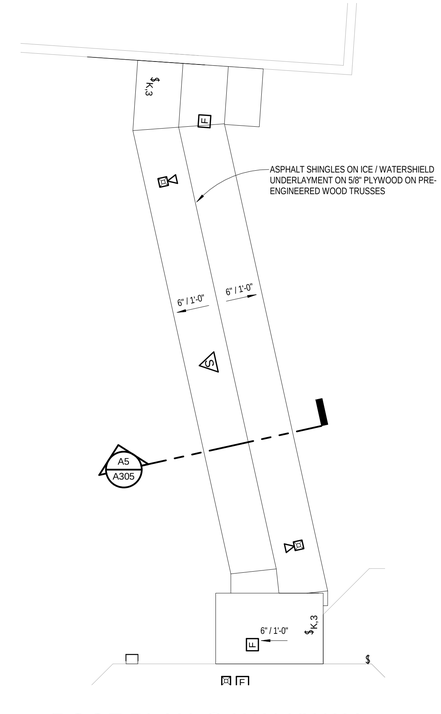


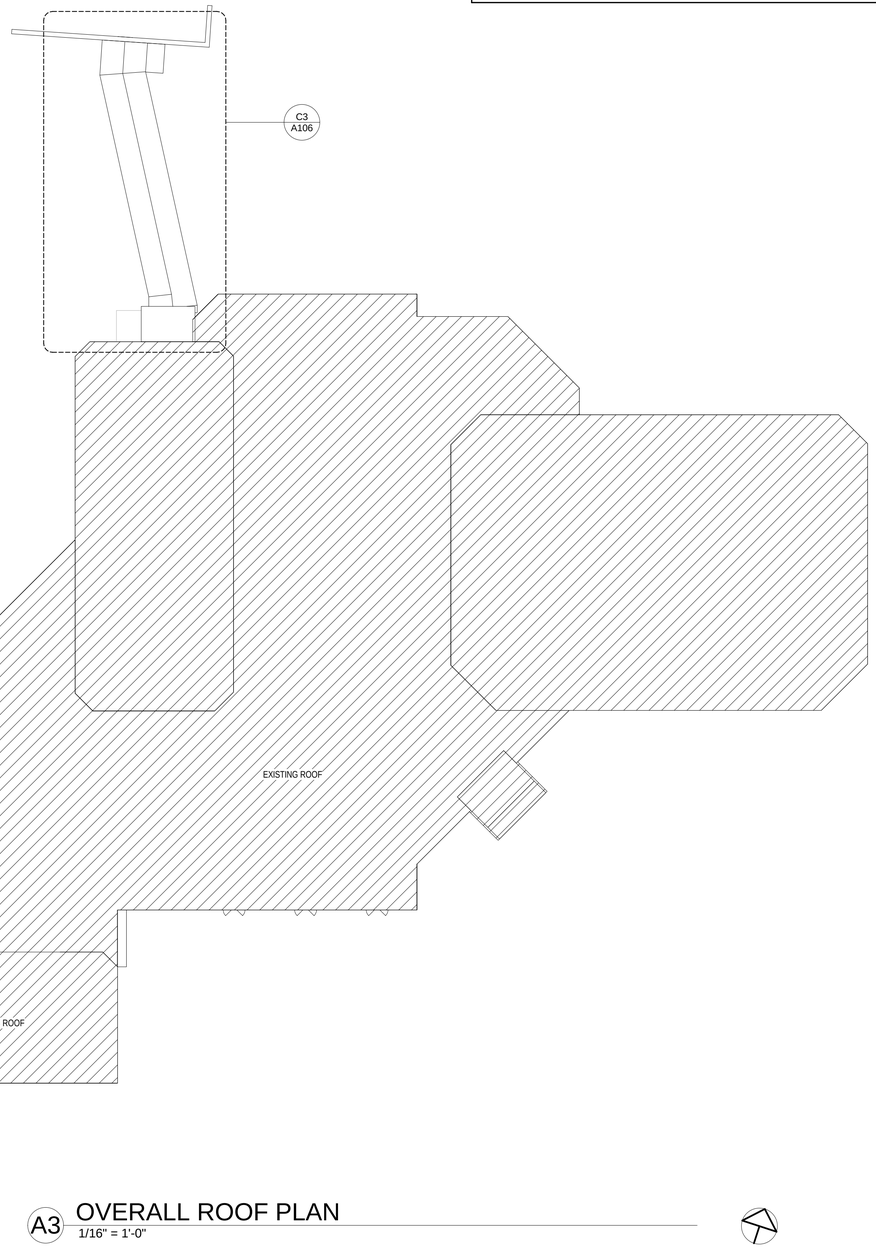
A1 ROOF PLAN @ ADDITION
1/8" = 1'-0"



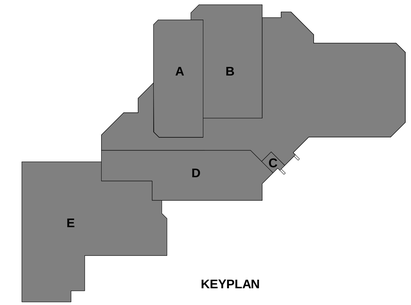
C3 ROOF PLAN @ WALKWAY
1/8" = 1'-0"

GENERAL ROOF NOTES

1. VERIFY SIZE, LOCATION, TYPE AND QUANTITIES OF ALL ROOF CURBS, OPENINGS, PENETRATIONS AND OTHER ACCESSORIES PRIOR TO COMMENCING ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER WEATHERTIGHT PERFORMANCE AND REQUIRED WARRANTY AT ALL ROOF CONDITIONS, WHETHER SPECIFICALLY INDICATED ON CONSTRUCTION DOCUMENTS OR NOT.
2. AT ALL LOCATIONS WHERE NEW ROOF INTERSECTS EXISTING BRICK WALL, PROVIDE WALL FLASHING PER DETAIL D5 / A306.



A3 OVERALL ROOF PLAN
1/16" = 1'-0"



KEYPLAN

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

ROOF PLAN

A106

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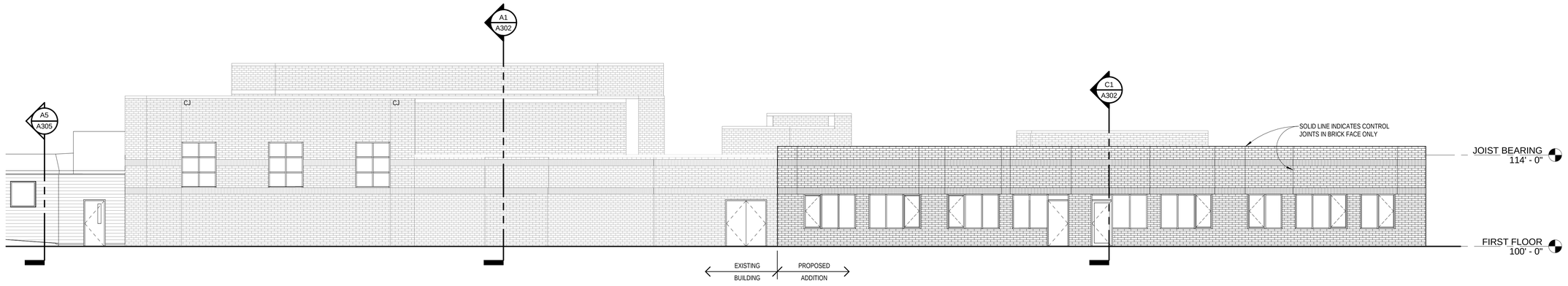
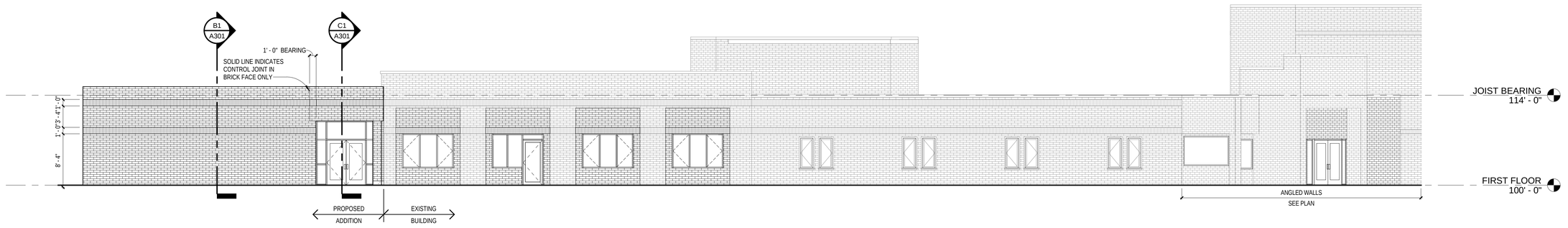
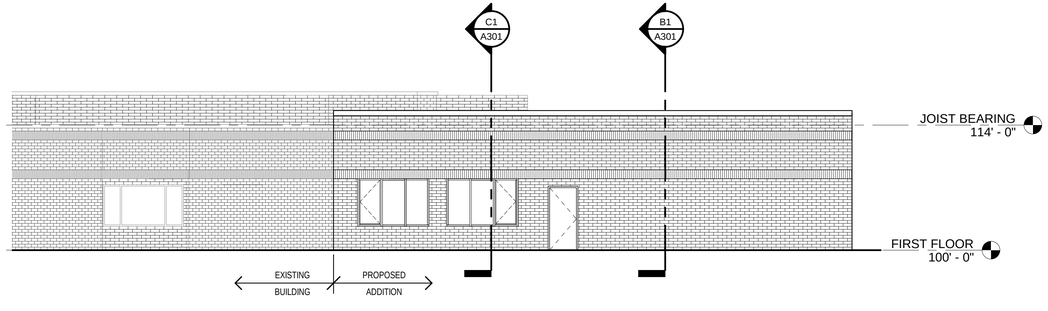


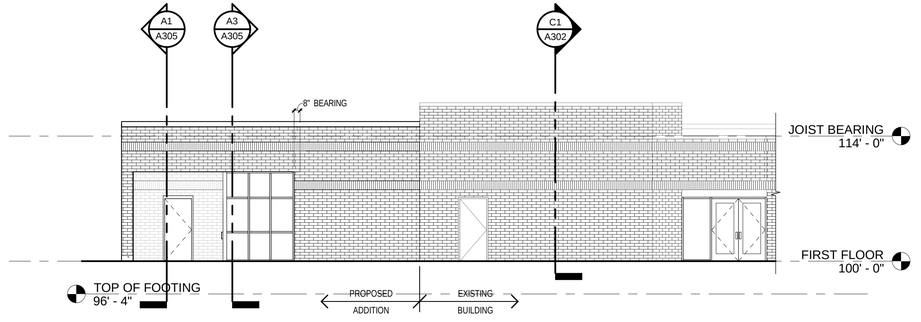
C1 WEST ELEVATION
1/8" = 1'-0"



B1 SOUTH ELEVATION
1/8" = 1'-0"



A1 NORTH ELEVATION
1/8" = 1'-0"



A4 EAST ELEVATION
1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL

PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

EXTERIOR ELEVATIONS

A201

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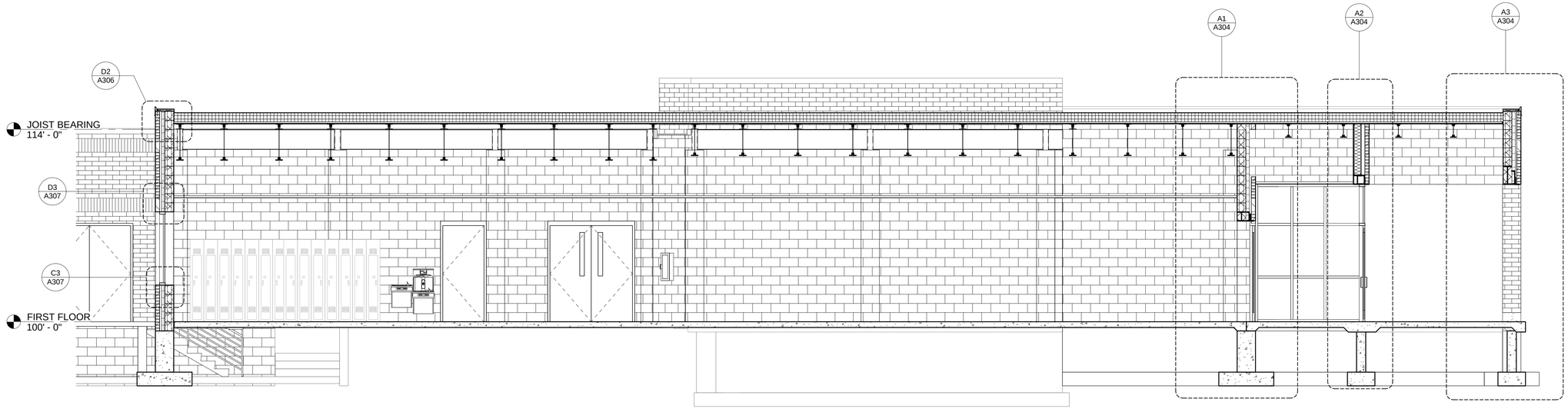
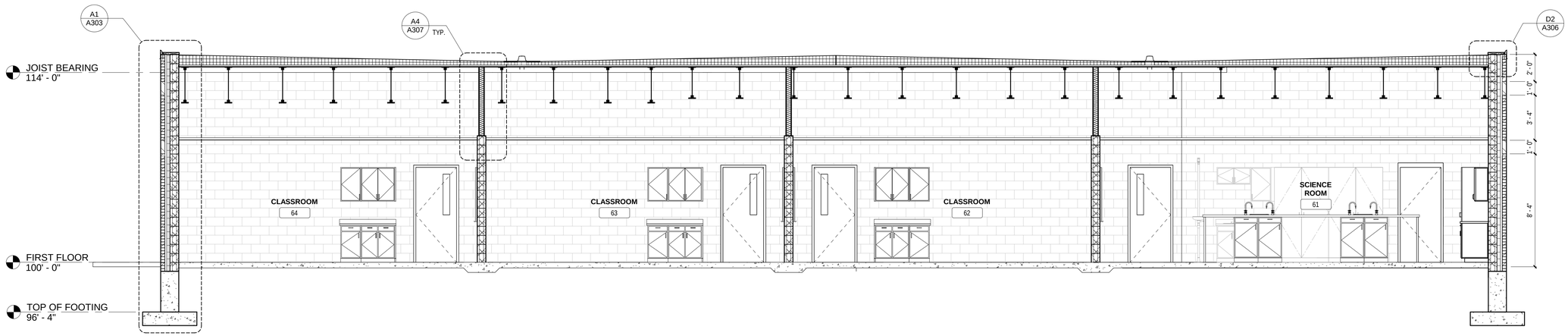


C1 NORTH / SOUTH SECTION 2
1/4" = 1'-0"



B1 NORTH / SOUTH SECTION 1
1/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

BUILDING SECTIONS

A301

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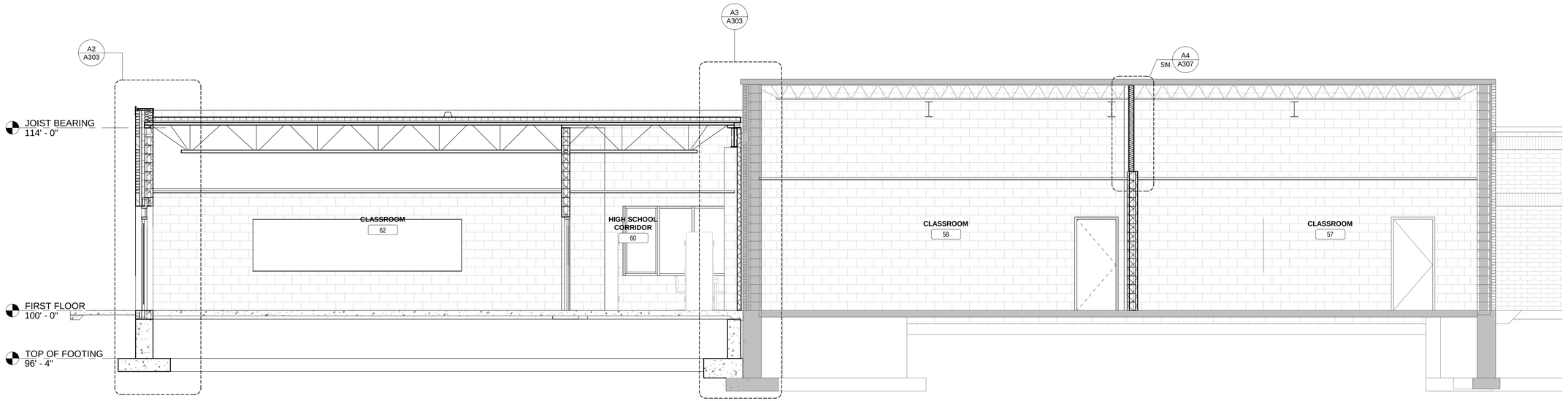
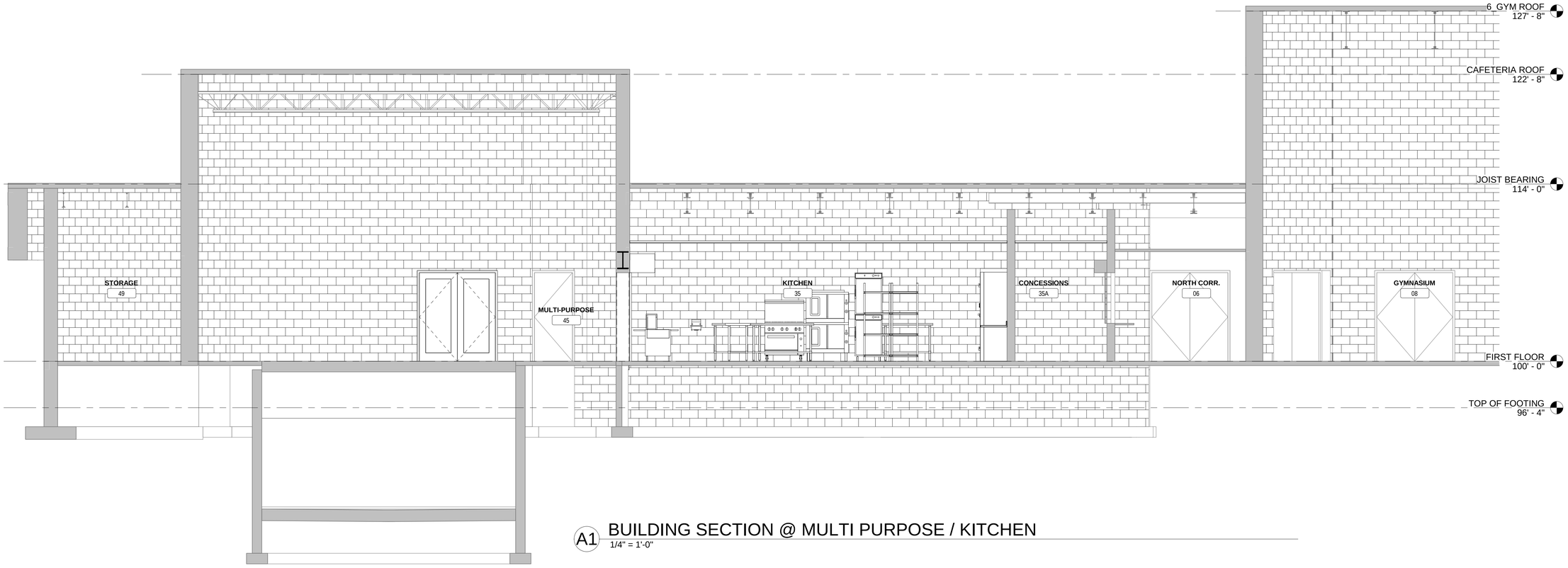


C1 EAST / WEST BUILDING SECTION
1/4" = 1'-0"



A1 BUILDING SECTION @ MULTI PURPOSE / KITCHEN
1/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
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APPROVED: JKG

BUILDING SECTIONS

A302

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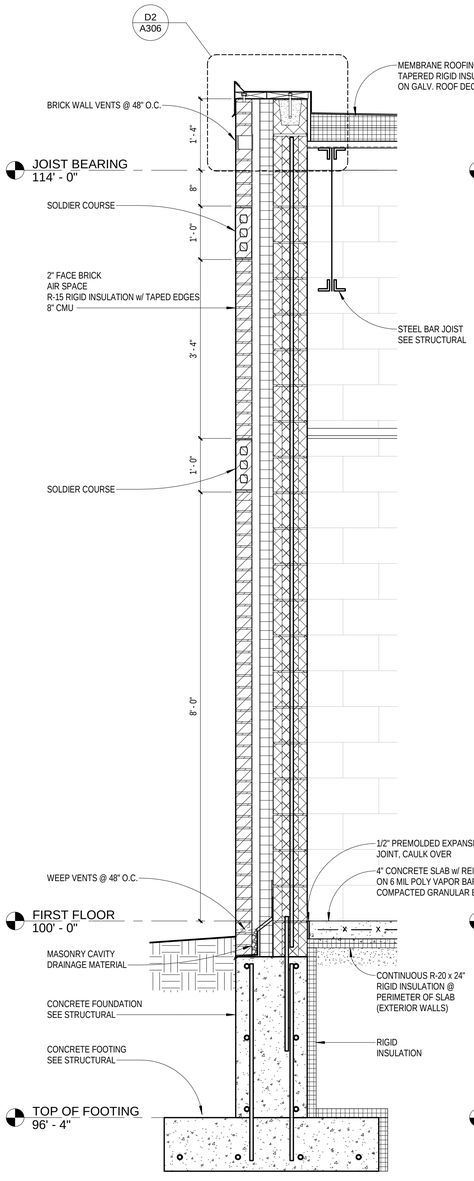
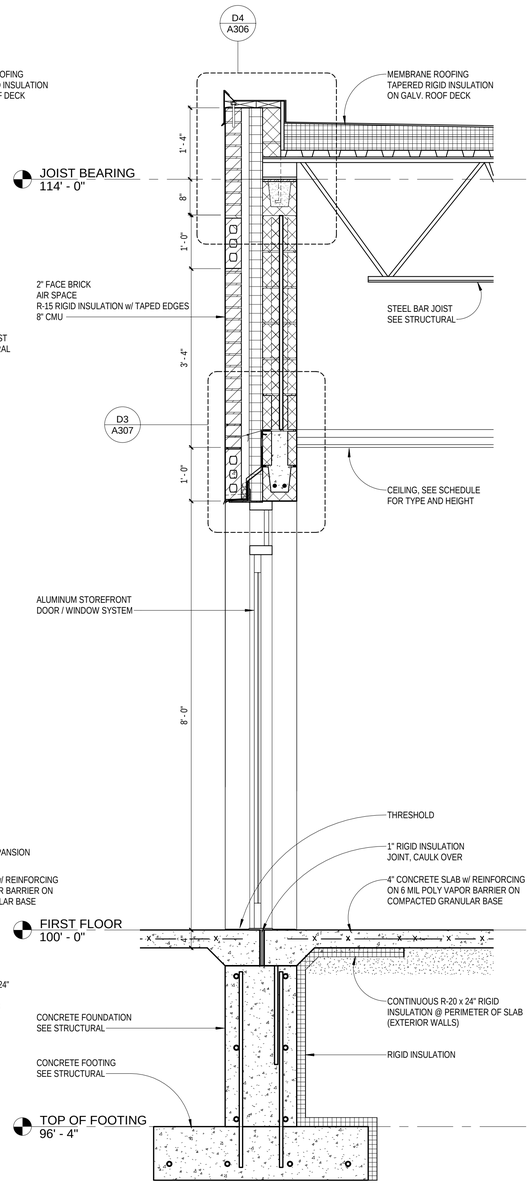


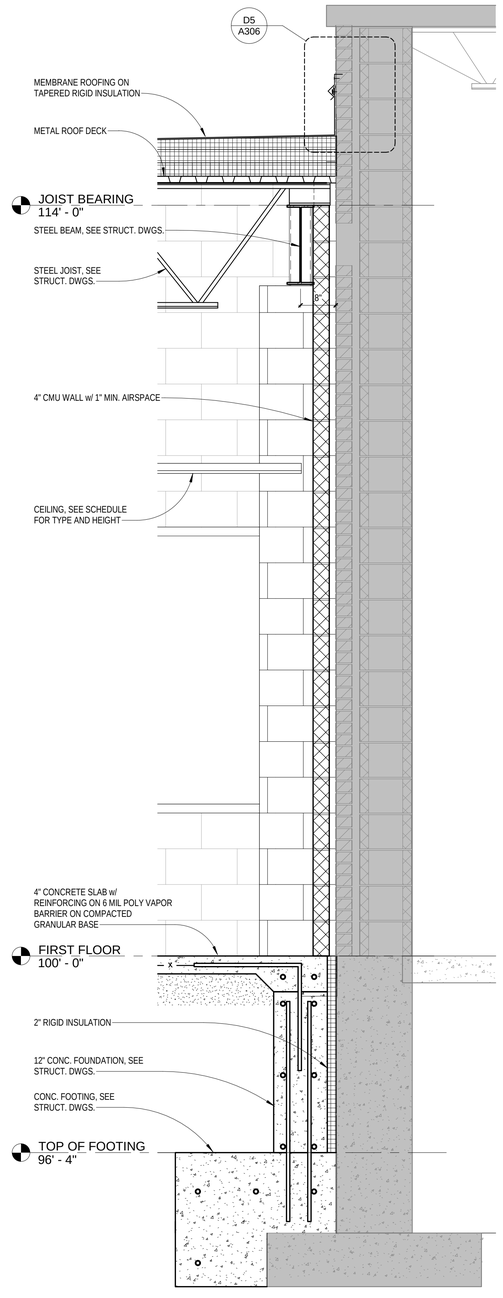
A1 TYPICAL WALL SECTION

3/4" = 1'-0"



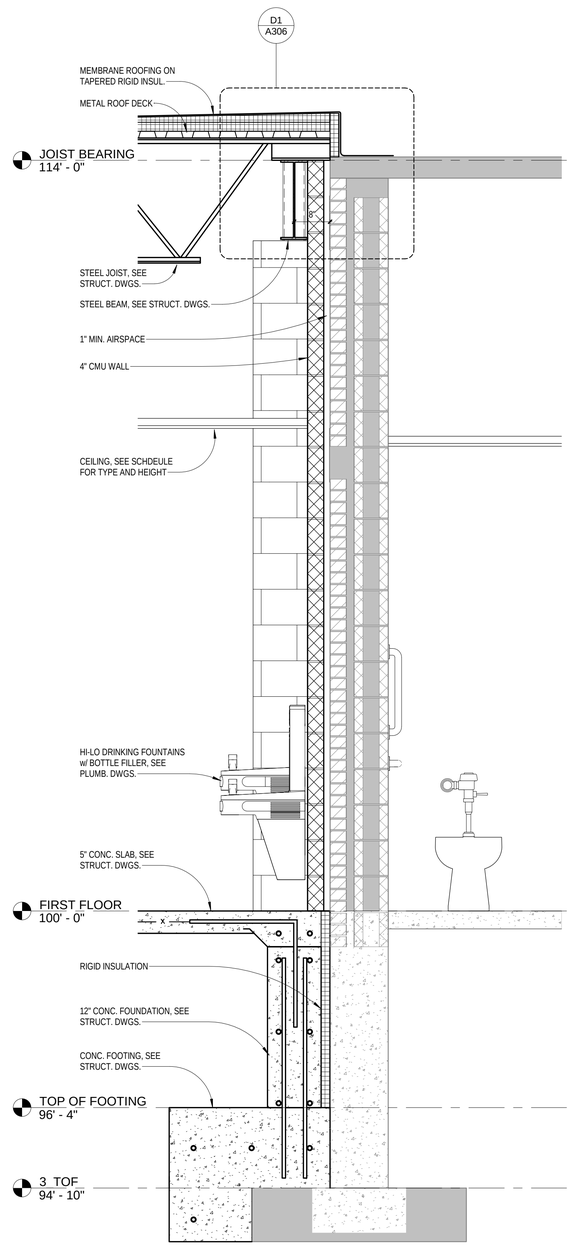
A2 SECTION @ CLASSROOM WALL

3/4" = 1'-0"



A3 SECTION @ EXISTING WALL

3/4" = 1'-0"



A4 SECTION @ EXISTING WALL

3/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

WALL SECTIONS

A303

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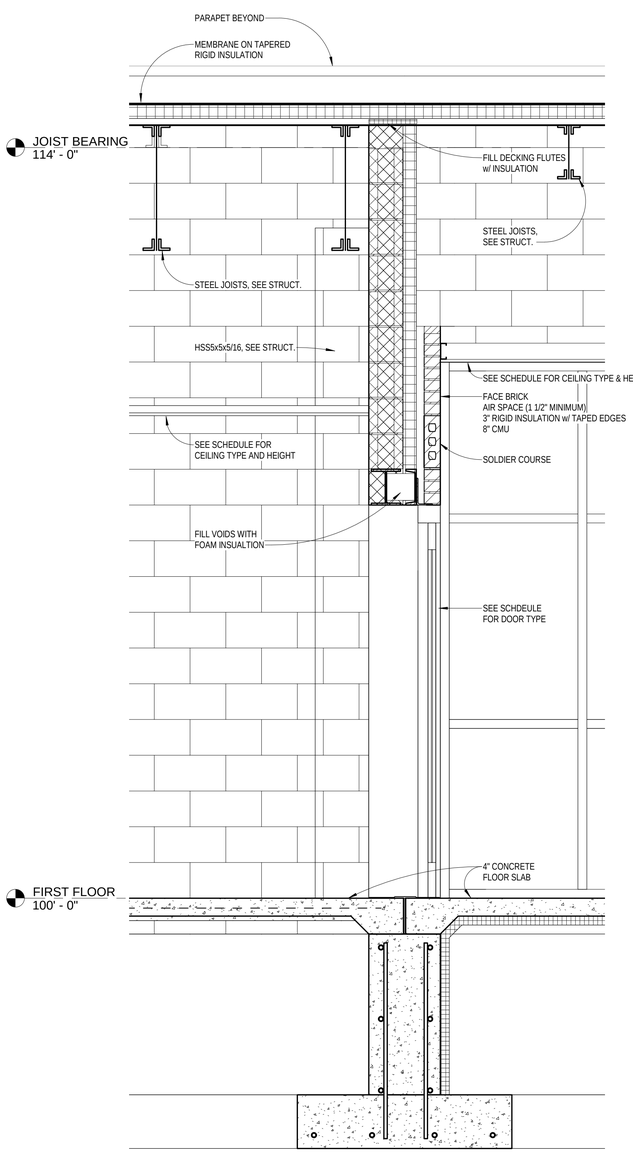
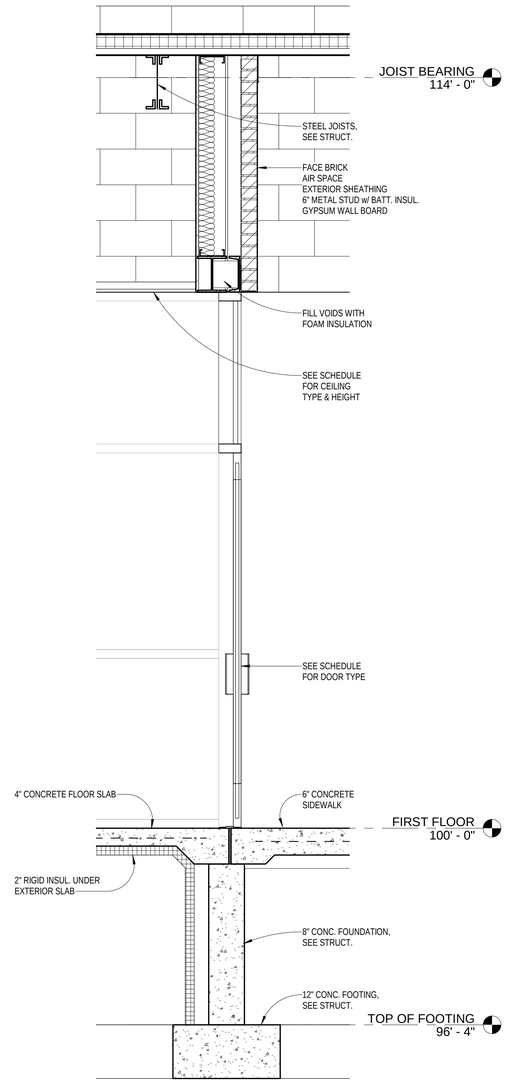
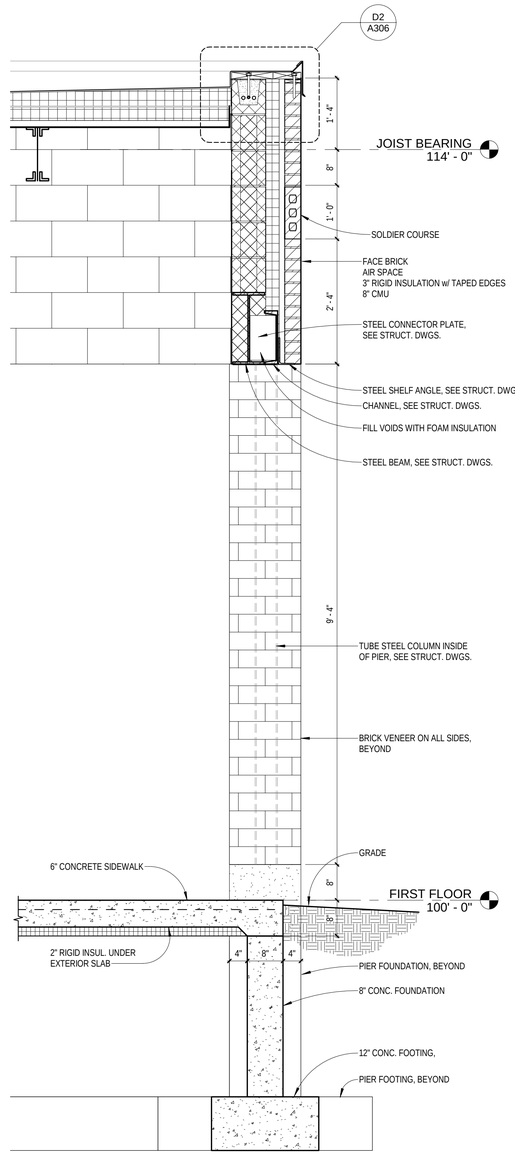


A1 VESTIBULE SECTION 2
3/4" = 1'-0"



A2 VESTIBULE SECTION
3/4" = 1'-0"



A3 VESTIBULE SECTION 3
3/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
BIDSET	04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

WALL SECTIONS

A304

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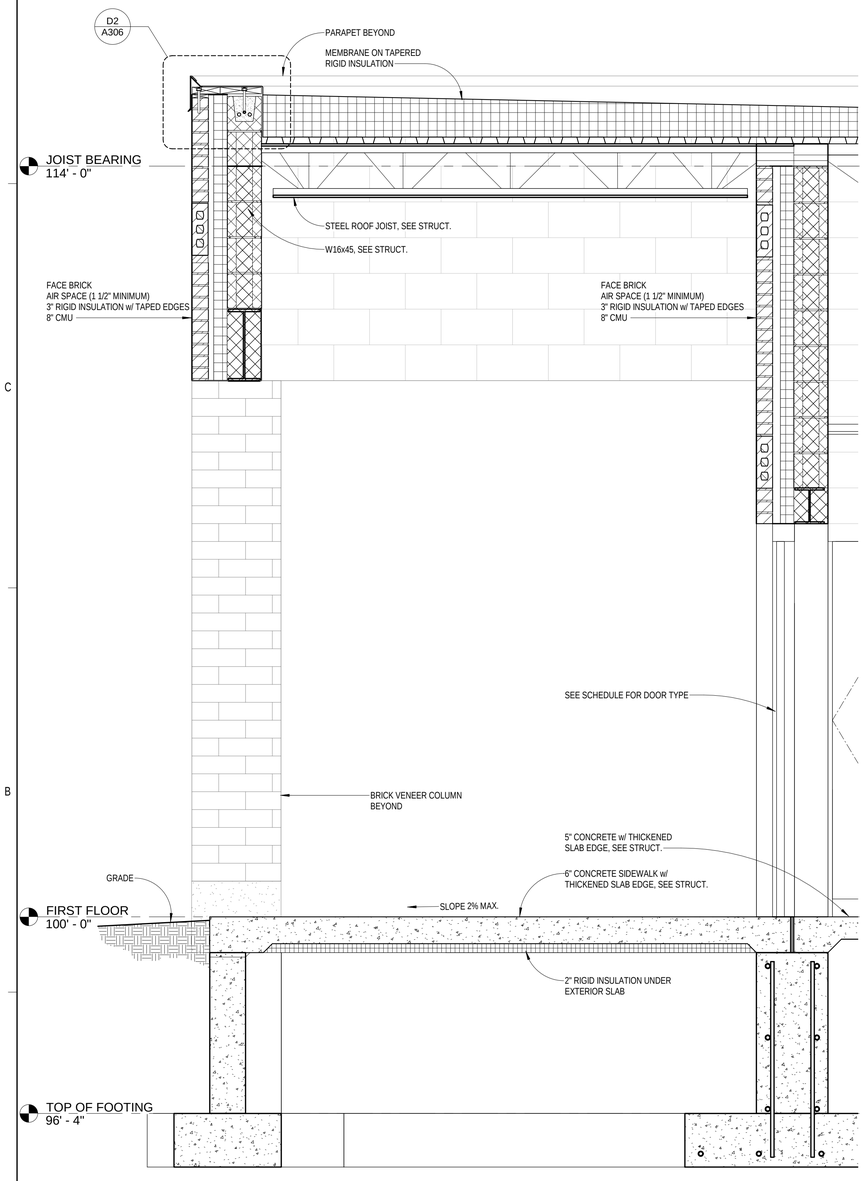
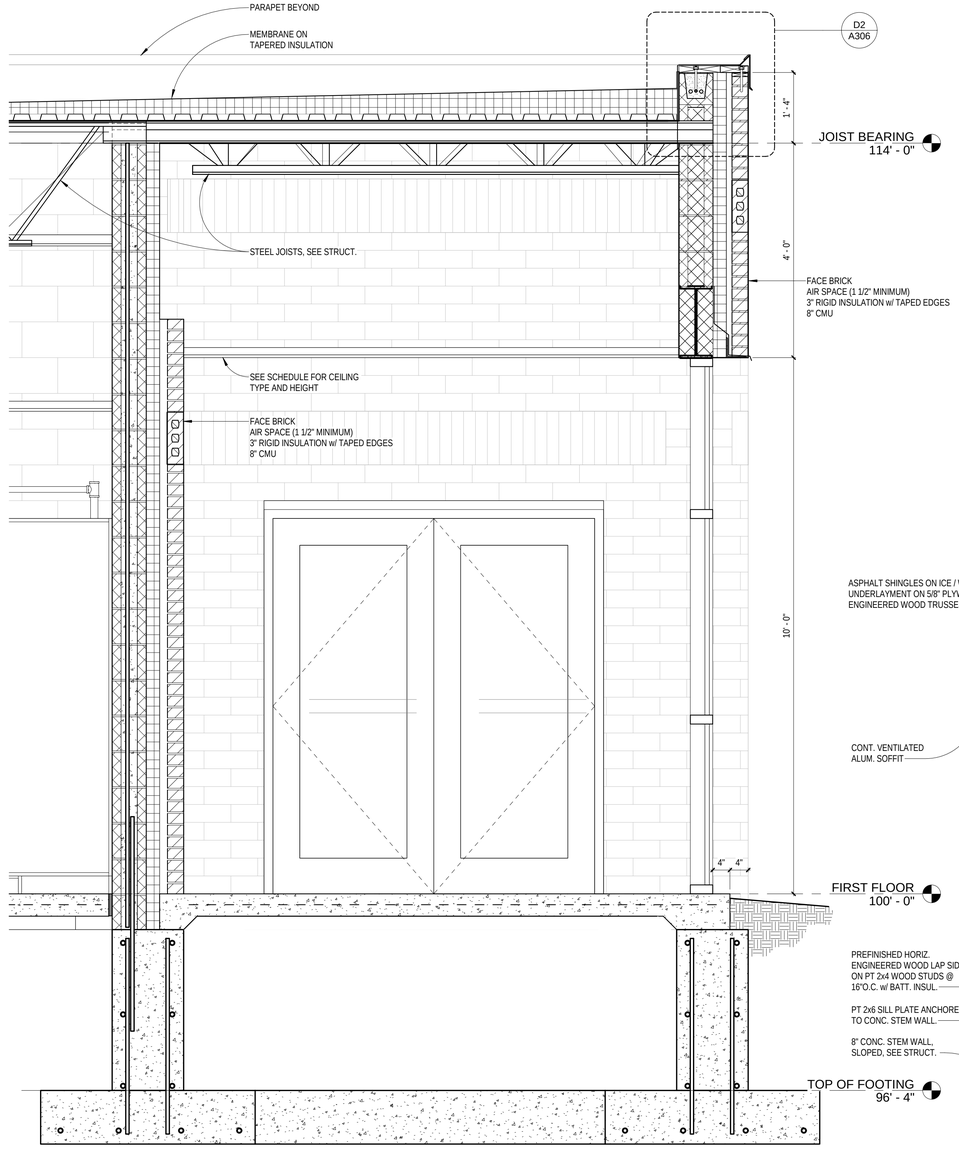
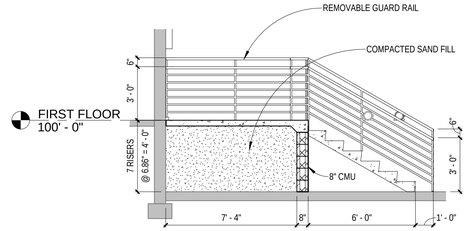


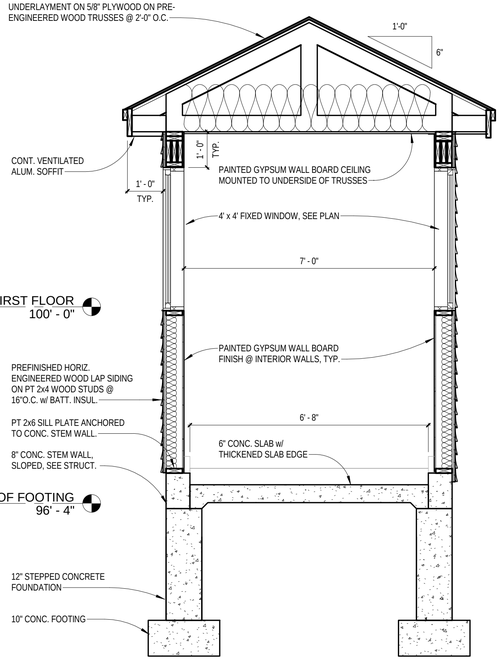
A1 VESTIBULE SECTION 4
3/4" = 1'-0"



A3 VESTIBULE SECTION 1
3/4" = 1'-0"



D5 SECTION @ STAIR
1/4" = 1'-0"



A5 SECTION @ COVERED WALKWAY
1/2" = 1'-0"

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OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:
BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

SECTIONS

A305

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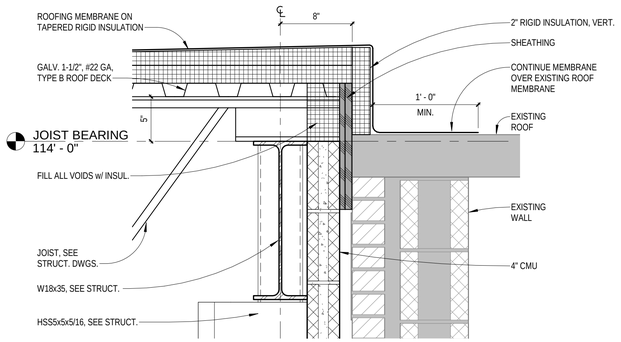
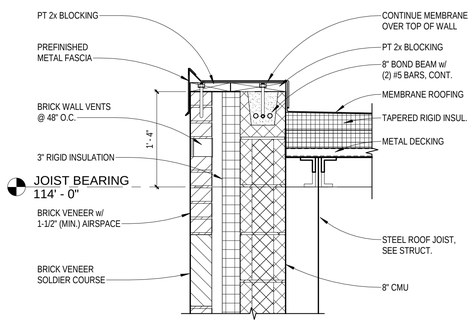
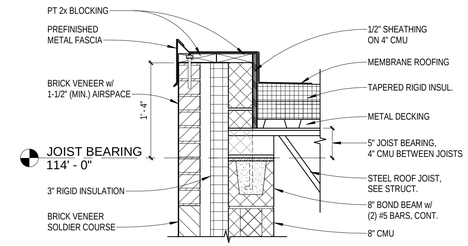


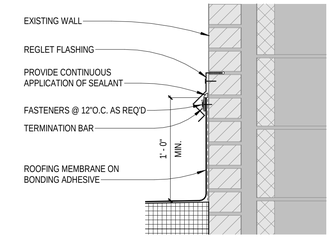
D1 SECTION @ ROOF CONNECTION
1 1/2" = 1'-0"



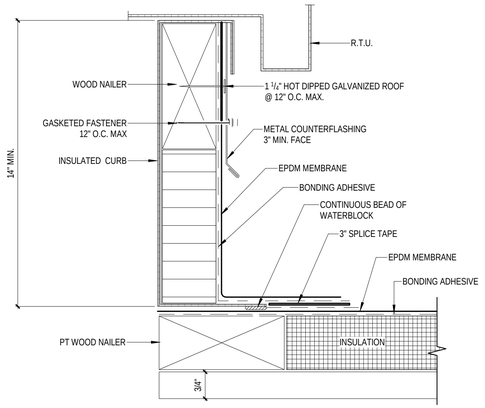
D2 ROOF EDGE DETAIL 2
1" = 1'-0"



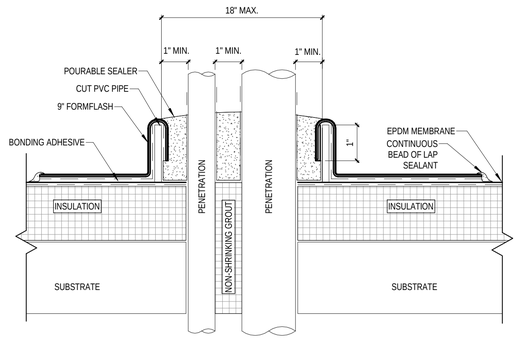
D4 ROOF EDGE DETAIL 1
1" = 1'-0"



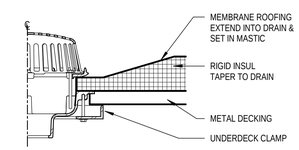
D5 DETAIL @ TERMINATION BAR
1 1/2" = 1'-0"



B2 TYPICAL ROOF HOOD
NOT TO SCALE



B4 TYPICAL ROOF PENETRATION
NOT TO SCALE



B5 ROOF DRAIN DETAIL
1 1/2" = 1'-0"

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DESIGNED BY: KRC
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ROOF DETAILS

A306

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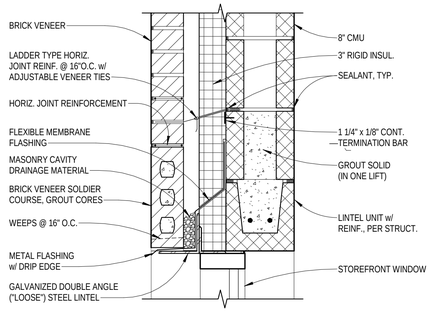
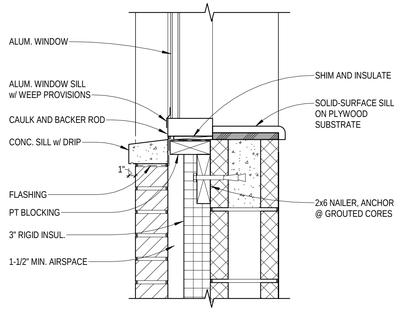
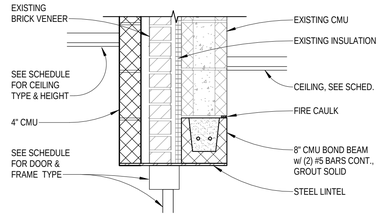


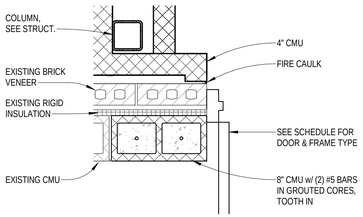
D3 WINDOW HEAD
1 1/2" = 1'-0"



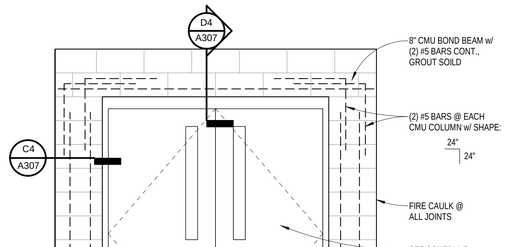
C3 WINDOW SILL
1 1/2" = 1'-0"



D4 PORTAL FRAME HEAD
1" = 1'-0"

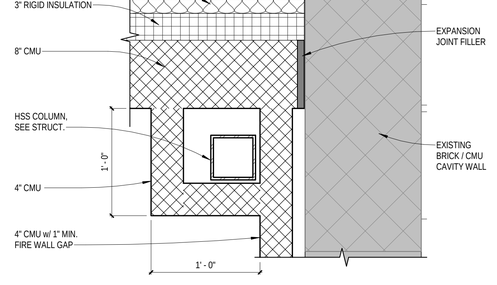


C4 PORTAL FRAME JAMB
1" = 1'-0"

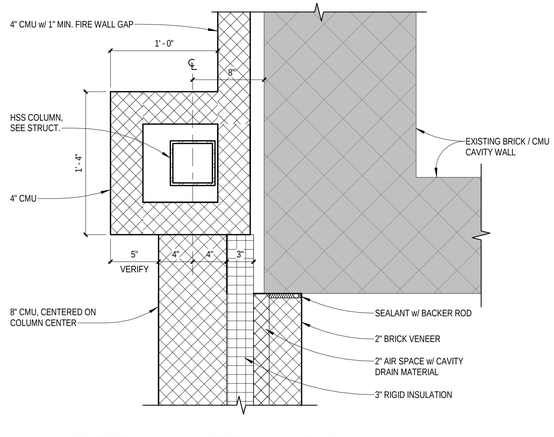


C5 PORTAL FRAME ELEV.
1/2" = 1'-0"

A4 CLASSROOM PARTITION
1 1/2" = 1'-0"



B5 INTERSECTION @ EXISTING WALL
1 1/2" = 1'-0"



A5 FIRE WALL TRANSITION
1 1/2" = 1'-0"

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OJIBWE CHARTER SCHOOL
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DESIGNED BY: KRC
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CHECKED: KRC
APPROVED: JKG

DETAILS

A307

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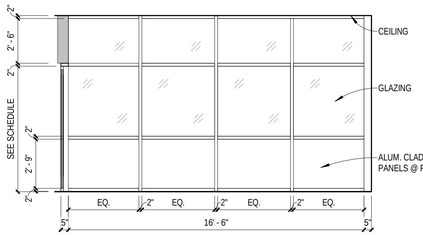
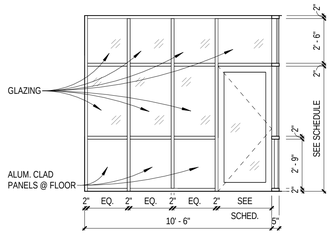
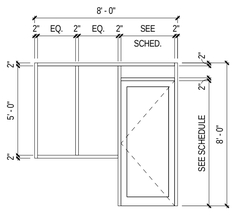


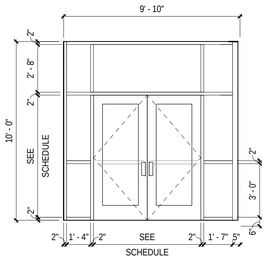
AL-6



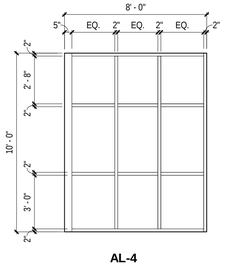
AL-7



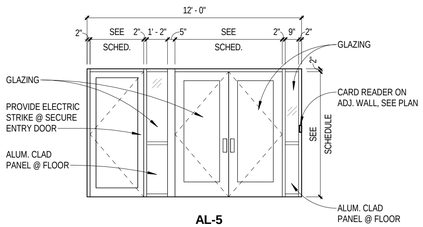
AL-2



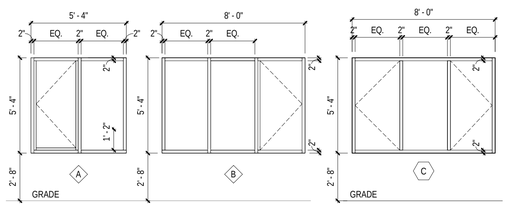
AL-3



AL-4



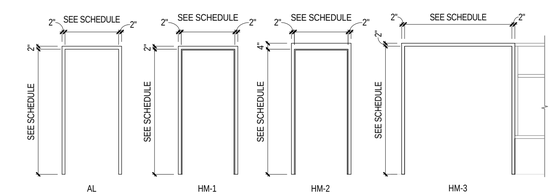
AL-5



AL-1

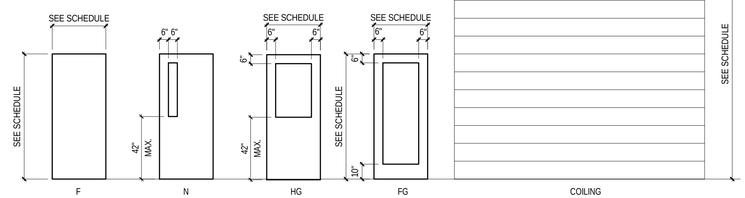
B1 WINDOW TYPES

1/4" = 1'-0"



DOOR FRAME TYPES

1/4" = 1'-0"



DOOR TYPES

1/4" = 1'-0"

DOOR & ROOM ABBREVIATIONS	
ACT	ACOUSTICAL CEILING TILE
B	BRICK, NOT PAINTED
C	CONCRETE
CPT	CARPET
CT	CERAMIC TILE
EG	EGG SHELL PAINT
EP	EPOXY PAINT
EPF	EPOXY FLOOR
EX	EXISTING
GWB	GYPSUM BOARD
HM	HOLLOW METAL
LVT	LUXURY VINYL FLOOR TILE
MT	MOSAIC TILE
PB	PAINTED CMU BLOCK
PT	PORCELAIN TILE
QT	QUARRY TILE
SC	SEALED CONCRETE
SG	STOREFRONT
V	VINYL WALL BASE
VCT	VINYL COMPOSITION TILE
WD	WOOD

DOOR & FRAME SCHEDULE

DOOR NO.	DOOR TYPE	DOOR MATERIAL	DOOR SIZE PAIR	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THK.	RATING	FRAME ELEV	FRAME MATERIAL	HDWR SET	Remarks
01	FG	AL		3' - 0"	7' - 0"	1 3/4"		AL-5	AL	3	
01A	FG	AL	YES	6' - 0"	7' - 0"	1 3/4"		AL-5	AL	1	
01B	FG	AL		3' - 0"	7' - 0"	1 3/4"		AL-5	AL	4	PROVIDE ELECTRIC STRIKE
01C	FG	AL	YES	6' - 0"	7' - 0"	1 3/4"		AL-5	AL	2	PROVIDE CARD READER
01D	FG	AL		3' - 0"	7' - 0"	1 3/4"		AL-8	AL	5	
035	N	WD		3' - 0"	7' - 0"	1 3/4"	60 MIN	HM-2	HM	14	DUTCH DOOR w/ SHELF
035A	COILING	-		16' - 0"	7' - 0"	1 3/4"	60 MIN	-	-	-	COILING DOOR
035B	N	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	7	
035C	F	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	6	
045	FG	HM	YES	6' - 0"	7' - 2"	1 3/4"		AL-6	HM	9	
051	F	WD		3' - 0"	7' - 0"	1 3/4"	60 MIN	HM-2	HM	7	
051A	F	HM	YES	6' - 0"	7' - 0"	1 3/4"		HM-2	HM	13	
053	N	WD	YES	6' - 0"	7' - 0"	1 3/4"	90 MIN	HM-2	HM	8	
053A	EXIST'G	AL	YES	6' - 0"	7' - 0"	1 3/4"		HM-1	AL	16	REPLACE EXIT DEVICE
054	F	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	7	
055	F	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	10	
056	F	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	10	
057	N	EXIST'G		3' - 0"	7' - 0"	1 3/4"	90 MIN	HM-2	HM	-	EXIST'G B-LABEL DOOR
057A	N	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	15	
058	N	WD		3' - 0"	7' - 0"	1 3/4"	90 MIN	HM-2	HM	6	3" FRAME TO FILL OPENING
058A	N	HM		3' - 0"	7' - 0"	1 3/4"		AL-2	HM	12	
059	FG	AL	YES	6' - 0"	7' - 0"	1 3/4"		HM-1	AL	2	
059A	FG	AL	YES	6' - 0"	7' - 0"	1 3/4"		AL-3	AL	1	
061	N	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	6	
061A	F	HM		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	12	
062	N	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	6	
062A	FG	HM		3' - 0"	7' - 0"	1 3/4"		AL-1	HM	12	
063	N	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	6	
063A	FG	HM		3' - 0"	7' - 0"	1 3/4"		AL-1	HM	12	
064	N	WD		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	6	
064A	F	HM		3' - 0"	7' - 0"	1 3/4"		HM-2	HM	12	
065	F	WD		3' - 0"	7' - 0"	1 3/4"	90 MIN	HM-2	HM	7	
066	FG	AL	YES	6' - 0"	7' - 0"	1 3/4"		HM-2	AL	1	
066A	HG	HM		3' - 0"	7' - 0"	1 3/4"		HM-1	HM	12	
066B	HG	HM		3' - 0"	7' - 0"	1 3/4"		HM-1	HM	12	

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR MATERIAL	FLOOR FINISH	FLOOR BASE	WALLS NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	CEILING FINISH	CEILING HGT.	REMARKS
01	MAIN VEST.	(EX) CONC	LVT	-	EG	EG	EG	EG	ACT		
01A	SECURE VEST.	(EX) CONC	LVT	V	EG	EG	EG	EG	-	-	NO CEILING
02	LOBBY	(EX) CONC	LVT	-	EG	EG	EG	EG	ACT	9' - 10"	
03	COATS	(EX) CONC	LVT	-	EG	EG	EG	EG	ACT	8' - 8"	
04	WEST CORR.	(EX) CONC	LVT	V	PB	PB	PB	PB	ACT	8' - 8"	
05	WEST VEST.	(EX) CONC	LVT	-	S	B	S	B	ACT	8' - 8"	
06	NORTH CORR.	(EX) CONC	LVT	V	-	-	PB	PB	ACT	8' - 8"	
07	NORTH VEST.	(EX) CONC	LVT	-	-	-	B	B	ACT	8' - 8"	
08	GYMNASIUM	(EX) CONC	-	-	PB	PB	PB	PB	-	-	
09	STORAGE	(EX) CONC	-	-	-	-	-	-	-	-	
10	H.S. OFFICE	(EX) CONC	CPT	V	G	G	S	G	ACT	8' - 8"	
10A	OFFICE	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
11	OFFICE HALL	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
12	OFFICE	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
14	OFFICE	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
15	OFFICE	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
17	STAFF LOUNGE	(EX) CONC	LVT	V	G	G	G	G	ACT	8' - 8"	
18	OFFICE	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
19	OFFICE	(EX) CONC	CPT	V	G	G	G	G	ACT	8' - 8"	
20	STOR.	(EX) CONC	CPT	V	PB	PB	PANEL	PB	ACT	8' - 8"	
21	SCHOOL STORE	(EX) CONC	CPT	V	PB	PB	PB	PB	2x2 ACT	8' - 8"	
22	OFFICE	(EX) CONC	CPT	V	G	G	G	G	2x2 ACT	8' - 8"	
23	TOILET	(EX) CONC	LVT	V	G	G	G	G	2x2 ACT	8' - 8"	
24	TOILET	(EX) CONC	LVT	V	PB	G	G	G	2x2 ACT	8' - 8"	
25	OFFICE	(EX) CONC	CPT	V	G	G	G	G	2x2 ACT	8' - 8"	
26	OFFICE	(EX) CONC	CPT	V	G	G	G	G	2x2 ACT	8' - 8"	
27	RESOURCE RM	(EX) CONC	CPT	V	PB	G	G	G	2x2 ACT	8' - 8"	
29	OFFICE	(EX) CONC	CPT	V	G	G	G	G	2x2 ACT	8' - 8"	
30	OFFICE	(EX) CONC	CPT	V	PB	G	G	PB	2x2 ACT	8' - 8"	
31	WOMENS WASH	(EX) CONC	CT	CT	PB	PB	PB	PB	ACT	8' - 8"	
32	WOMENS TLT	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	EP	8' - 8"	
33	MENS WASH	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	EP	8' - 8"	
34	MENS TLT	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	EP	8' - 8"	
35	KITCHEN	(EX) CONC	EPF	V	PB	PB	PB	PB	2x2 ACT	9' - 4"	
35A	CONCESSIONS	(EX) CONC	EPF	V	PB	G	PB	PB	2x2 ACT	9' - 4"	
36	GIRLS LOCKER RM	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	2x2 ACT	9' - 4"	PATCH MOSAIC TILE
37	TLT	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	2x2 ACT	9' - 4"	PATCH MOSAIC TILE
38	HALL	(EX) CONC	CT	CT	G	G	G	G	2x2 ACT	8' - 8"	
38A	HALL	(EX) CONC	CT	CT	PB	PB	PB	PB	GWB	8' - 8"	
39	SHOWER	(EX) CONC	EPF	-	PB	PB	PB	PB	GWB	8' - 8"	PATCH MOSAIC TILE
40	JAN.	(EX) CONC	-	-	-	-	-	-	-	-	
41	BOYS LOCKER RM	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	2x2 ACT	9' - 4"	PATCH MOSAIC TILE
42	TOILET	(EX) CONC	EX MT	EX MT	PB	PB	PB	PB	2x2 ACT	9' - 4"	PATCH MOSAIC TILE
43	SHOWER	(EX) CONC	EPF	-	PB	PB	PB	PB	GWB	8' - 8"	PATCH MOSAIC TILE
44	STOR.	(EX) CONC	CPT	R	PB	PB	PB	PB	-	-	
45	MULTI-PURPOSE	(EX) CONC / STL STUDS	-	-	-	-	-	-	-	-	
46	MECH.	(EX) CONC	-	-	-	-	-	-	-	-	
47	POOL STOR.	(EX) CONC	-	-	-	-	-	-	-	-	
48	HALL	(EX) CONC	-	-	-	-	-	-	-	-	
49	STORAGE	(EX) CONC	-	-	-	-	-	-	-	-	
50	LIBRARY	(EX) CONC	CPT	V	PB	PB	PB	PB	-	-	
51	MECHANICAL	(EX) CONC	CONC	-	PB	PB	PB	PB	-	-	
52	A.H.U.	(EX) CONC	CONC	-	PB	PB	PB	PB	-	-	
53	HIGH SCHOOL HALL	CONC	LVT	V	EG	EG	EG	EG	ACT-1	8' - 8"	
54	ELEC.	CONC	-	-	-	-	-	-	-	-	
55	BOYS TOILET	CONC	EPF	EPF	EP	EP	EP	EP	ACT-2	8' - 8"	
56	GIRLS TOILET	CONC	EPF	EPF	EP	EP	EP	EP	ACT-2	8' - 8"	
57	CLASSROOM	(EX) CONC	LVT	V	PB	PB	PB	PB	ACT-1	10' - 0"	
58	CLASSROOM	(EX) CONC	LVT	V	PB	PB	PB	PB	ACT-1	10' - 0"	
59	HIGH SCHOOL VESTIBULE	CONC	LVT	V	EG	EG	EG	EG	ACT-1	10' - 0"	
60	HIGH SCHOOL CORRIDOR	CONC	LVT	V	EG	EG	EG	EG	ACT-1	9' - 0"	
61	SCIENCE ROOM	CONC	LVT	V	EG	EG	EG	EG	ACT-1	9' - 0"	
62	CLASSROOM	CONC	CPT	V	EG	EG	EG	EG	ACT-1	9' - 0"	
63	CLASSROOM	CONC	CPT	V	EG	EG	EG	EG	ACT-1	9' - 0"	
64	CLASSROOM	CONC	CPT	V	EG	EG	EG	EG	ACT-1	9' - 0"	
65	COMMONS	CONC	LVT	V	EG	EG	EG	EG	ACT-1	9' - 0"	
66	CONNECTING CORRIDOR	CONC	LVT	V	EG	EG	EG	EG	GWB	-	MOUNT CLG. TO UNDERSIDE OF TRUSS

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR: BIDSET

DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

SCHEDULES, DOOR AND WINDOW TYPES

A601

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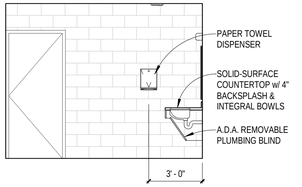
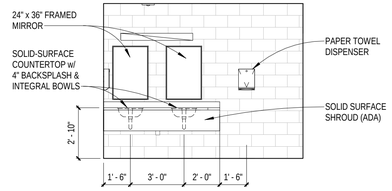


D1 WOMENS WASH 31 - ELEV 1
1/4" = 1'-0"



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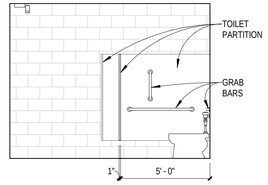

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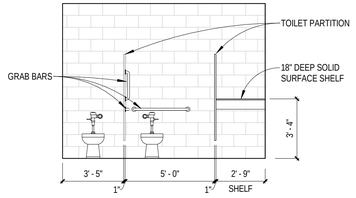
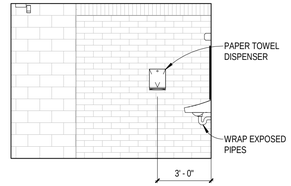


D4 WOMENS TLT 32 - ELEV 2
1/4" = 1'-0"



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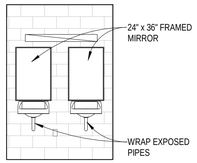
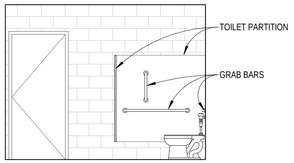
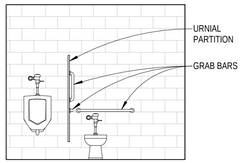
1/4" = 1'-0"



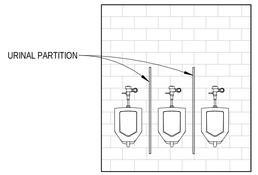
C1 MENS WASH 33 - ELEV 2
1/4" = 1'-0"



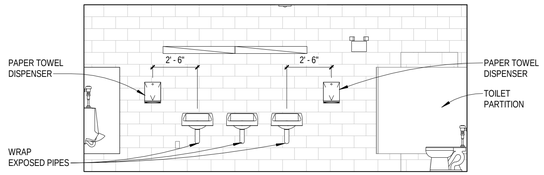
C2 MENS TLT 34 - ELEV 1
1/4" = 1'-0"



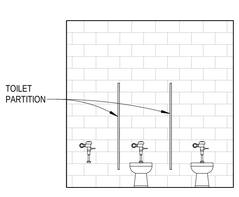
C3 MENS TLT 34 - ELEV 2
1/4" = 1'-0"



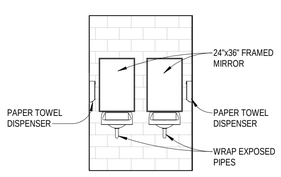
C4 TOILET 42 - ELEV 1
1/4" = 1'-0"



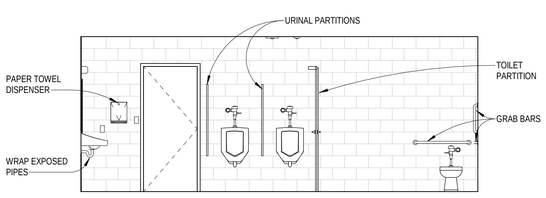
C5 TOILET 42 - ELEV 2
1/4" = 1'-0"



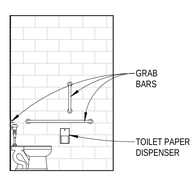
B1 TOILET 42 - ELEV 3
1/4" = 1'-0"



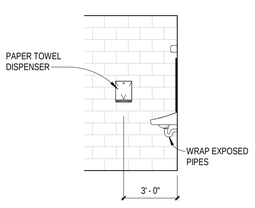
B2 BOYS TLT 55 - ELEV 1
1/4" = 1'-0"



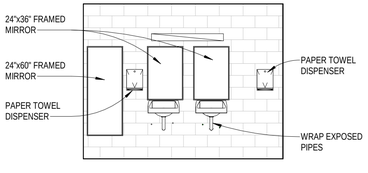
B3 BOYS TLT 55 - ELEV 2
1/4" = 1'-0"



B4 BOYS TLT 55 - ELEV 3
1/4" = 1'-0"

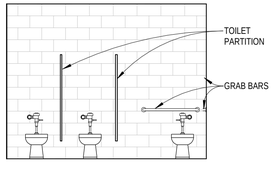


B5 BOYS TLT 55 - ELEV 4
1/4" = 1'-0"

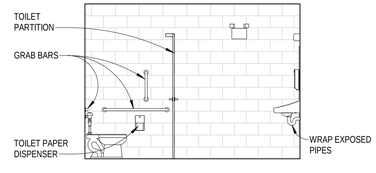


A1 GIRLS TLT 56 - ELEV 1
1/4" = 1'-0"

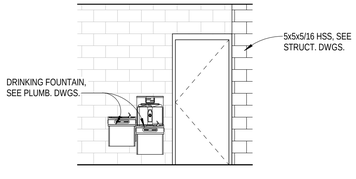
A2 GIRLS TLT 56 - ELEV 2
1/4" = 1'-0"



A3 GIRLS TLT 56 - ELEV 3
1/4" = 1'-0"



A4 GIRLS TLT 56 - ELEV 4
1/4" = 1'-0"



A5 ELEV @ EWC
1/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

INTERIOR ELEVATIONS

A701

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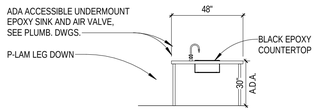
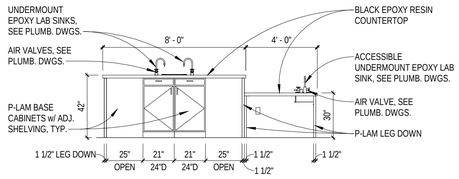
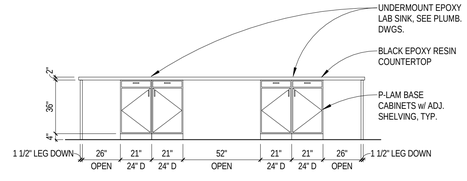


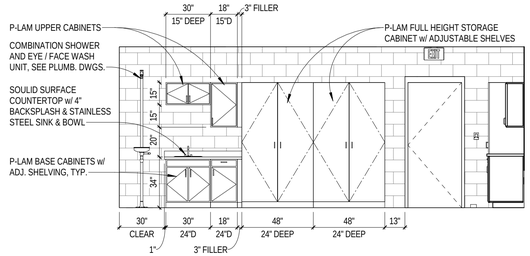
C1 SCIENCE RM ELEV 6
1/4" = 1'-0"



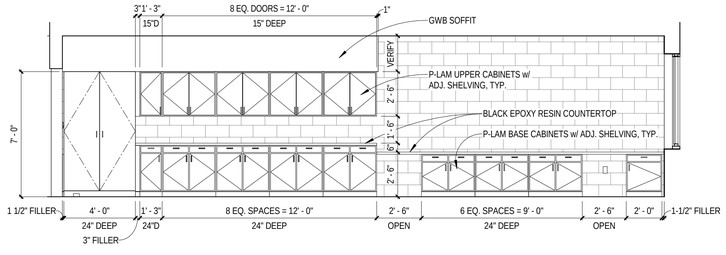
C2 SCIENCE RM ELEV 5
1/4" = 1'-0"



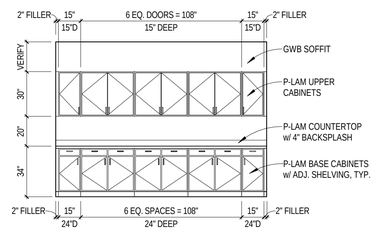
C3 SCIENCE RM ELEV 4
1/4" = 1'-0"



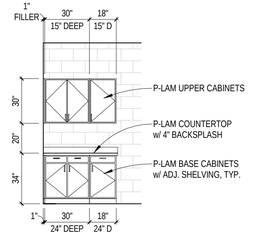
C4 SCIENCE RM ELEV 3
1/4" = 1'-0"



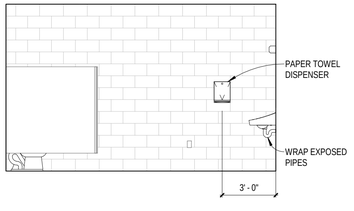
B2 SCIENCE RM ELEV 1
1/4" = 1'-0"



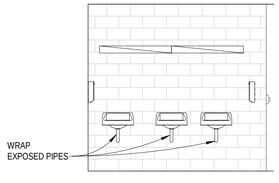
B4 STAFF LOUNGE 1
1/4" = 1'-0"



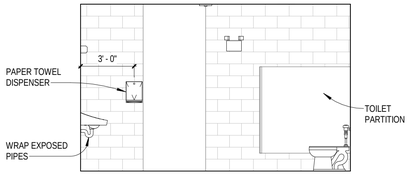
B5 TYP. CLASSROOM ELEV.
1/4" = 1'-0"



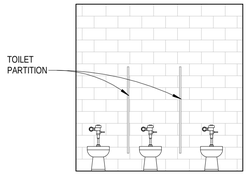
A1 TLT ELEV 1
1/4" = 1'-0"



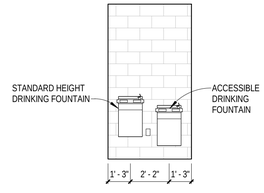
A2 TLT ELEV 2
1/4" = 1'-0"



A3 TLT ELEV 3
1/4" = 1'-0"



A4 TLT ELEV 4
1/4" = 1'-0"



A5 ELEV @ DRINKING FOUNTAIN
1/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

INTERIOR ELEVATIONS

A702

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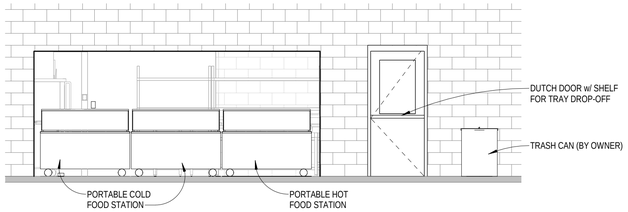
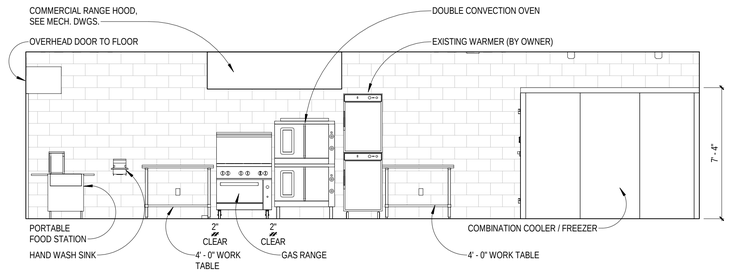
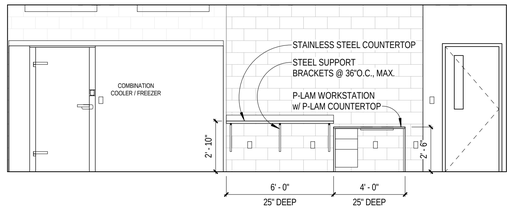


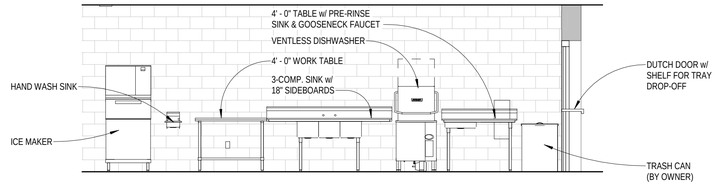
D1 KITCHEN ELEV 4
1/4" = 1'-0"



C1 KITCHEN ELEV 1
1/4" = 1'-0"



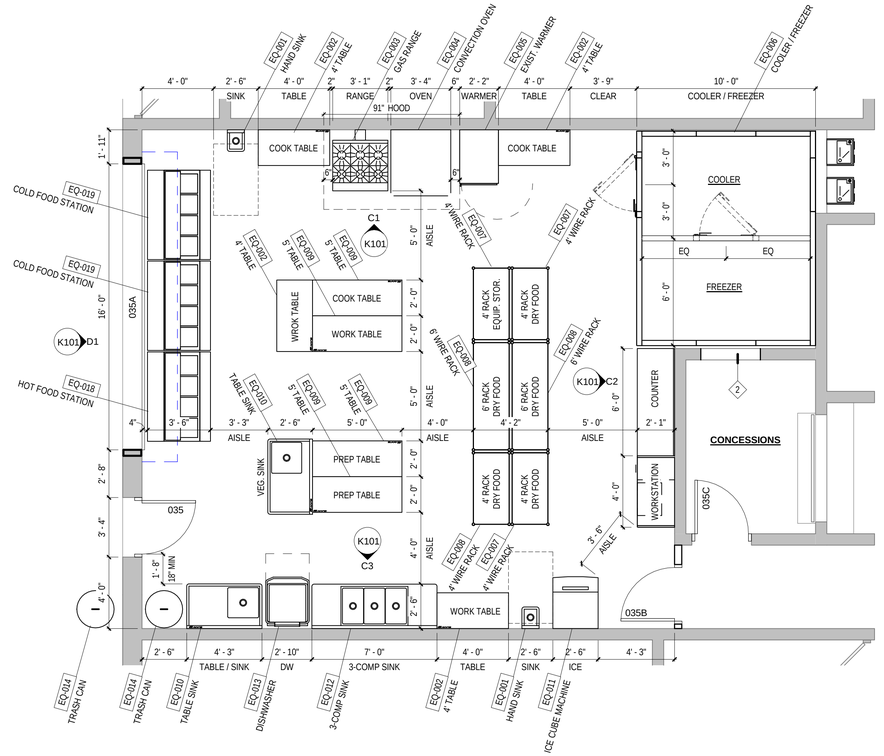
C2 KITCHEN ELEV 2
1/4" = 1'-0"



C3 KITCHEN ELEV 3
1/4" = 1'-0"

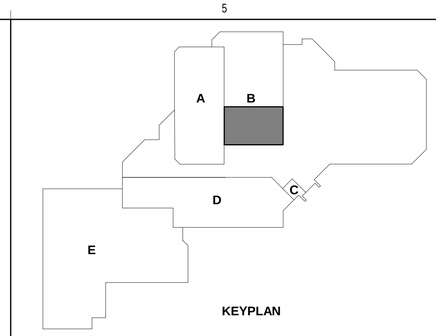
EQUIPMENT SCHEDULE					
ITEM	QTY	ITEM DESCRIPTION	MODEL	AMPS	VOLTAGE
EQ-001	1	STAINLESS STEEL HAND SINK (9"W x 9"D x 4"H)	HS10-CWP	N/A	N/A
EQ-002	4	STAINLESS STEEL TABLE, 4'W	T2448CWP-3	N/A	N/A
EQ-003	1	36" GAS RANGE, 6-BURNER	SGR-6	N/A	N/A
EQ-004	1	DOUBLE CONVECTION OVEN	VC44GD	N/A	N/A
EQ-005*	1	EXISTING WARMING RACK (BY OWNER)	N/A	N/A	N/A
EQ-006	1	WALK-IN COOLER & FREEZER, 12' x 10' w/ REMOTE CONDENSERS	KL771012	15.7 (COOLER) 7.5 (FREEZER)	208 / 60 / 1
EQ-007	4	WIRE SHELVING, 24"D x 48"W	SL2448CWP	N/A	N/A
EQ-008	2	WIRE SHELVING, 24"D x 72"W	SL2472CWP	N/A	N/A
EQ-009	4	STAINLESS STEEL TABLE, 5'W	T2460CWP-3	N/A	N/A
EQ-010	2	STAINLESS STEEL 1-COMPARTMENT SINK w/ RIGHT DRAINBOARD	1C24x24-R-24X	N/A	N/A
EQ-011	1	ICE CUBE MACHINE	IRT0500A	15	208 / 60 / 1
EQ-012	1	STAINLESS STEEL 3-COMPARTMENT SINK w/ DRAINBOARDS	D3CWP16202-18	N/A	N/A
EQ-013	1	DISHWASHER	DH-6000T	46	208 / 60 / 3
EQ-014*	2	44 GAL. TRASH CAN w/ LID (BY OWNER)	N/A	N/A	N/A
EQ-015	1	PORTABLE HOT FOOD STATION, 5'W	T39732N	N/A	N/A
EQ-016	2	PORTABLE COLD FOOD STATION, 5'W	38738N	N/A	N/A

* = ITEMS NOTED WITH (*) SHALL BE OWNER SUPPLIED AND OWNER INSTALLED.



A4 ENLARGED PLAN @ KITCHEN
1/4" = 1'-0"

THIS SHEET NOT FOR CONSTRUCTION - ISSUED FOR REFERENCE ONLY



KEYPLAN

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 04/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: KRC
DRAWN BY: RMA
CHECKED: KRC
APPROVED: JKG

KITCHEN EQUIPMENT PLAN

K101

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ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
APD	AIR PRESSURE DROP
AS	AIR SEPERATOR
B	BOILER
BB	BASEBOARD
BC	BOOSTER COIL
BDD	BACKDRAFT DAMPER
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSE POWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BT	BATH TUB
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
C	CONVECTOR
CA	COMPRESSED AIR
CB	CATCH BASIN
CC	COOLING COIL
CCF	100 CUBIC FEET
CD	CEILING DIFFUSER
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFP	CLEAN OUT FERRULE AND PLUG
CH	CHILLER
CI	CAST IRON
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CO	CLEAN OUT
CO	CARBON MONOXIDE
COND	CONDENSATE
CO2	CARBON DIOXIDE
CT	COOLING TOWER
CU	CONDENSING UNIT
CU FT	CUBIC FOOT
CUH	CABINET UNIT HEATER
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DIFFUSER
DB	DRY BULB
DEG F	DEGREE FAHRENHEIT
DF	DRINKING FOUNTAIN
DI	DIGITAL INPUT
DIA	DIAMETER
DN	DOWN
DO	DIGITAL OUTPUT
DWV	DRAIN, WASTE AND VENT
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EG	EXHAUST AIR GRILLE
ELEV	ELEVATION
ER	EXHAUST AIR REGISTER
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
EXH	EXHAUST
F	FURNACE
FAI	FRESH AIR INTAKE
FBO	FURNISHED BY OTHERS
FC	FAN COIL
FD	FLOOR DRAIN
FD	FIRE DAMPER
FIN	FIN TUBE RADIATION
FLG	FLANGE
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FT	FOOT OR FEET
F&T	FLOAT AND THERMOSTATIC TRAP
G	GAS (NATURAL)
GAL	GALLON
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GT	GREASE TRAP
H	HYDROGEN
HB	HOSE BIBB
HC	HEATING COIL
HCO	HORIZONTAL CLEANOUT
HP	HORSE POWER
HTR	HEATER
HVAC	HEATING, VENTILATING & AIR COND
HW	HOT WATER
HWC	HOT WATER RECIRCULATING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IF	INLINE FAN
IN	INCH OR INCHES
IP	IRON PIPE
INV	INVERT
IWH	INSTANTANEOUS WATER HEATER
JAN	JANITOR
JC	JANITOR'S CLOSET
JS	JANITOR'S SINK
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS	POUNDS
LHWR	LOW TEMPERATURE HOT WATER RETURN
LHWS	LOW TEMPERATURE HOT WATER SUPPLY
LIQ	LIQUID (REFRIGERATION)
LV	LOUVER
LP	PROPANE GAS (LIQUID)
LWT	LEAVING WATER TEMPERATURE
M	METER
MAU	MAKE-UP AIR HANDLING UNIT
MAX	MAXIMUM
MB	MOP BASIN
MBH	BRITISH THERMAL UNITS (1000)
MBTUH	BRITISH THERMAL UNITS (1000)
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
N2O	NITROUS OXIDE
NC	NORMALLY CLOSED
NIC	NOT INCLUDED OR NOT IN CONTRACT
NIT	NITROGEN
NO	NORMALLY OPEN
OA	OUTDOOR AIR
OAI	OUTDOOR AIR INTAKE
OC	ON CENTER
OD	OVERFLOW DRAIN
ODP	OPEN DRIP PROOF
OXY	OXYGEN
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PNEUMATIC OPERATED DAMPER
PIV	POST INDICATING VALVE
PRV	PRESSURE REDUCING VALVE
PT	PRESSURE TEMPERATURE PLUG
PTAC	PACKAGED TERMINAL AIR COND. UNIT
PVAC	PROCESS VACUUM
R	REGISTER
RA	RETURN AIR
RD	ROOF DRAIN
RET	RETURN
RF	RETURN FAN
RG	RETURN AIR GRILLE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
RR	RETURN REGISTER
RTU	ROOF TOP UNIT
S	SINK
SA	SUPPLY AIR
SAD	SUPPLY AIR DIFFUSER
SAF	SUPPLY AIR FAN
SAN	SANITARY SEWER
SD	SMOKE DETECTOR
SG	SUPPLY AIR GRILLE
SH	SHOWER HEAD
SHC	STEAM HEATING COIL
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
ST	STORM
STM	STEAM
SUCT	SUCTION (REFRIGERATION)
TCC	TEMPERATURE CONTROL CONTRACTOR
TCD	TEMPERATURE CONTROL DAMPER
TCP	TEMPERATURE CONTROL PANEL
TD	TRANSFER DUCT
TG	TRANSFER AIR GRILLE
TT	THERMOSTATIC TRAP
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UV	UNIT VENTILATOR
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VS	VENT STACK (SANITARY)
VTR	VENT THRU ROOF (SANITARY)
VUV	VERTICAL UNIT VENTILATOR
W	WASTE
WB	WET BULB
WC	WATER CLOSET
W/O	WITHOUT
WH	WATER HEATER
WSHP	WATER SOURCE HEAT PUMP

NOTE:
NOT ALL ABBREVIATIONS AND/OR SYMBOLS ARE USED IN THIS SET OF DOCUMENTS.

SYMBOL LEGEND

- SUPPLY AIR DIFFUSER
- LINEAR DIFFUSER
- RETURN OR EXHAUST AIR GRILLE
- EXHAUST FAN - ROOF
- FRESH AIR INTAKE HOOD - ROOF
- RELIEF AIR HOOD - ROOF
- SUPPLY REGISTER
- RETURN OR EXHAUST REGISTER
- SQUARE TO ROUND TRANSITION
- VOLUME CONTROL DAMPER
- FIRE DAMPER (RATING DETERMINED BY WALL TYPE)
- MOTORIZED DAMPER
- DUCT SMOKE DETECTOR
- THERMOSTAT - 60" A.F.F.
- HUMIDISTAT - 60" A.F.F.
- AIR FLOW
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- RETURN AIR DUCT UP
- RETURN AIR DUCT DOWN
- EXHAUST AIR DUCT UP
- EXHAUST AIR DUCT DOWN
- BALL VALVE
- BUTTERFLY VALVE
- CIRCUIT SETTER
- CHECK VALVE
- GATE VALVE
- GLOBE VALVE
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- PRESSURE RELIEF VALVE
- BALANCE VALVE
- INLINE PUMP
- STRAINER
- CAP
- PIPING 90
- PIPING "T"
- METER
- CONNECTION TO EXISTING

- PIPE BREAK
- PIPE DOWN
- PIPE UP
- CLEAN OUT
- GAS METER
- UNION
- HOSE BIBB
- ELECTRIC BELL
- SIAMESE CONNECTION
- BARE FIN TUBE ELEMENT
- FIN TUBE ELEMENT WITH COVER
- EXTERNALLY INSULATED DUCTWORK
- INTERNALLY LINED DUCTWORK

PLUMBING PIPING

- CW — DOMESTIC COLD WATER - EXISTING
- CW — DOMESTIC COLD WATER - DEMO
- CW — DOMESTIC COLD WATER - NEW
- HW — DOMESTIC HOT WATER - EXISTING
- HW — DOMESTIC HOT WATER - DEMO
- HW — DOMESTIC HOT WATER - NEW
- HWC — DOMESTIC HOT WATER RECIRC - EXISTING
- HWC — DOMESTIC HOT WATER RECIRC DEMO
- HWC — DOMESTIC HOT WATER RECIRC - NEW
- SAN — SANITARY - EXISTING
- SAN — SANITARY - DEMO
- SAN — SANITARY - NEW
- V — VENT - EXISTING
- V — VENT - DEMO
- V — VENT - NEW
- ST — STORM - EXISTING
- ST — STORM - DEMO
- ST — STORM - NEW
- OD — OVERFLOW STORM - EXISTING
- OD — OVERFLOW STORM - DEMO
- OD — OVERFLOW STORM - NEW
- G — GAS - EXISTING
- G — GAS - DEMO
- G — GAS - NEW

DUCTWORK

- 24x14 SA — SUPPLY AIR DUCT - EXISTING
- 24x14 SA — SUPPLY AIR DUCT - DEMO
- 24x14 SA — SUPPLY AIR DUCT - NEW
- 24x14 RA — RETURN AIR DUCT - EXISTING
- 24x14 RA — RETURN AIR DUCT - DEMO
- 24x14 RA — RETURN AIR DUCT - NEW
- 24x14 OA — OUTSIDE AIR DUCT - EXISTING
- 24x14 OA — OUTSIDE AIR DUCT - DEMO
- 24x14 OA — OUTSIDE AIR DUCT - NEW
- 24x14 EA — EXHAUST AIR DUCT - EXISTING
- 24x14 EA — EXHAUST AIR DUCT - DEMO
- 24x14 EA — EXHAUST AIR DUCT - NEW

MECHANICAL PIPING

- HWS — HYDRONIC HOT WATER SUPPLY - EXISTING
- HWS — HYDRONIC HOT WATER SUPPLY - DEMO
- HWS — HYDRONIC HOT WATER SUPPLY - NEW
- HWR — HYDRONIC HOT WATER RETURN - EXISTING
- HWR — HYDRONIC HOT WATER RETURN - DEMO
- HWR — HYDRONIC HOT WATER RETURN - NEW
- FP — FIRE PROTECTION - EXISTING
- FP — FIRE PROTECTION - DEMO
- FP — FIRE PROTECTION - NEW
- CDS — CONDENSOR WATER SUPPLY
- CDS — CONDENSOR WATER SUPPLY - DEMO
- CDS — CONDENSOR WATER SUPPLY - EXIST
- CDR — CONDENSOR WATER RETURN
- CDR — CONDENSOR WATER RETURN - DEMO
- CDR — CONDENSOR WATER RETURN - EXIST
- CHWS — CHILLED WATER SUPPLY
- CHWS — CHILLED WATER SUPPLY - DEMO
- CHWS — CHILLED WATER SUPPLY - EXIST
- CHWR — CHILLED WATER RETURN
- CHWR — CHILLED WATER RETURN - DEMO
- CHWR — CHILLED WATER RETURN - EXIST
- AIR — COMPRESSED AIR - EXISTING
- AIR — COMPRESSED AIR - DEMO
- AIR — COMPRESSED AIR - NEW
- STM — STEAM - EXISTING
- STM — STEAM - DEMO
- STM — STEAM - NEW
- C — CONDENSATE - EXISTING
- C — CONDENSATE - DEMO
- C — CONDENSATE - NEW

NOTES

MECHANICAL/PLUMBING AND FIRE PROTECTION GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS AND OPERATIONS AND PERFORM ALL LABOR REQUIRED FOR INSTALLATIONS AS INDICATED THE DRAWINGS, IN THE SPECIFICATIONS AND AS REQUIRED BY LOCAL, STATE AND FEDERAL CODES, AND AS MAY BE REASONABLY IMPLIED TO ACCOMPLISH COMPLETE MECHANICAL SYSTEMS.

2. ALL CLOSE ELECTRICAL DISCONNECTS REQUIRED PER NEC CODE SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.

3. CONTRACTOR SHALL PROVIDE PRODUCTS AS SPECIFIED ON THE DRAWINGS AND SPECIFICATIONS, HOWEVER, WHERE THE WORDS "EQUAL TO" ARE USED, ADDITIONAL PRODUCTS MAY BE SUBMITTED AS PROPOSED SUBSTITUTIONS, BUT REQUIRE APPROVAL FROM ARCHITECT/ENGINEER.

4. DESIGN DRAWINGS SHOW GENERAL ARRANGEMENT AND EXTENT OF WORK. THE DRAWINGS ARE DIAGRAMMATIC AND MAY NOT NECESSARILY BE DRAWN TO SCALE FOR PURPOSE OF CLARITY AND LEGIBILITY. IT IS INTENDED THAT ALL ITEMS BE LOCATED SYMMETRICALLY WITH ARCHITECTURAL ELEMENTS WHERE FEASIBLE AND BE INSTALLED TO AVOID OBSTRUCTIONS AND PRESERVE HEADROOM. CONTRACTOR SHALL REVIEW PLANS OF OTHER TRADES WITH HIS OWN WORK TO AVOID CONFLICTS AND INTERFERENCES. CONTRACTOR MUST MAKE USE OF ALL SOURCES OF INFORMATION INCLUDING DRAWINGS OF EQUIPMENT FURNISHED BY OTHERS. FAILURE TO REVIEW WORKING SPACES OR CHECK DIMENSIONS IN QUESTION SHALL NOT WARRANT CONFLICTS. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLIMENTARY.

5. MOTORS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AS REQUIRED BY THE EQUIPMENT FURNISHED BY THE MECHANICAL CONTRACTOR. MOTORS TO BE SUITABLE FOR LOAD, DUTY, VOLTAGE, FREQUENCY, HAZARD, SERVICE AND LOCATION INTENDED. SINGLE PHASE MOTORS MUST HAVE INTEGRAL THERMAL OVERLOAD PROTECTION IN ADDITION TO THAT PROVIDED IN MOTOR CONTROLLERS. MOTORS TO CONFORM IN DESIGN AND PERFORMANCE TO THE MOTOR STANDARDS OF NEMA. MOTORS RATED FOR CONTINUOUS DUTY UNDER FULL LOAD WITH A MAXIMUM TEMPERATURE RISE OF 105 DEG F FOR OPEN, 125 DEG F FOR DRIP PROOF AND 130 DEG F FOR EXPLOSION PROOF AND TOTALLY ENCLOSED TYPES. SUPPLY MOTORS WITH BELT DRIVES WITH ADJUSTABLE BASES, REMOVABLE BELT GUARDS AND VARIABLE PITCH DRIVE PULLEY SELECTED SO THAT MIDPOINT OF VARIABLE RANGE OF PULLEY WILL DRIVE EQUIPMENT AT RATED SPEED. MOTORS 1 HP AND LARGER SHALL BE THREE PHASE (UNLESS OTHERWISE LISTED).

6. MOTOR CONTROLLERS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR FOR MOTORS FURNISHED BY THE MECHANICAL CONTRACTOR. MOTOR CONTROLLERS SHALL BE OF SIZES AND TYPES AS NEEDED TO MEET THE OPERATIONAL CONDITIONS AS REQUIRED BY THE SEQUENCE OF OPERATION. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL THE POWER CIRCUIT, LOCAL DISCONNECT AND CONNECTION TO MOTOR TERMINALS. MECHANICAL CONTRACTOR TO MOUNT MOTOR CONTROLLERS AND CONTROL COMPONENTS AND WIRE AND MAKE ALL FINAL CONTROL CONNECTIONS BETWEEN DEVICES.

7. THE DRAWINGS INDICATE KNOWN UTILITY AND DRAINAGE LINES IN ACCORDANCE WITH THE INFORMATION FURNISHED TO THE ENGINEER. RESPONSIBILITY FOR LOCATING, UNCOVERING, DISPOSING OR MAINTAINING ALL EXISTING UTILITY LINES TO REST SOLELY WITH THE CONTRACTOR. VERIFY LOCATIONS AND DEPTHS OF SERVICE CONNECTION POINTS BEFORE PROCEEDING WITH CONSTRUCTION.

8. CONTRACTOR SHALL CHECK EXISTING PREMISES BEFORE SUBMISSION OF BIDS TO CHECK ALL CONDITIONS WHICH MAY EFFECT THE PERFORMANCE OF THE WORK INVOLVED. NO ALLOWANCES OR EXTRA PAYMENT WILL BE MADE DUE TO CONTRACTOR'S FAILURE TO EXAMINE SITE AND FULLY DISCERN WORKING CONDITIONS.

9. MECHANICAL CONTRACTOR SHALL RECEIVE, PROPERLY HOUSE, HANDLE, HOIST, AND DELIVER TO PROPER LOCATION EQUIPMENT AND OTHER MATERIALS REQUIRED FOR THIS CONTRACT.

10. THE CONTRACTOR SHALL OBTAIN PERMITS, ARRANGE FOR INSPECTIONS, AND PAY FEES AND EXPENSES IN CONNECTION THEREWITH, AS A PART OF THE WORK REQUIRING SUCH PERMITS. EVERY EFFORT IS MADE TO DESCRIBE THE WORK REQUIREMENTS IN CONFORMITY WITH APPLICABLE CODES.

11. THE CONTRACTOR SHALL REVIEW ANY ALTERNATES OF OTHER TRADES, AND PRICE THEIR BID TO ACCOUNT FOR ITEMS AFFECTING HIS WORK.

12. PIPING PASSING THROUGH CORRIDORS, TUNNELS, CHASES, ETC. SHALL BE CONSIDERED FOR PROPER DRAINAGE. CONSULT WITH THE OTHER CONTRACTORS AND AVOID CONFLICT WITH LOCATION OF PIPING. ORDER OF PRIORITY FOR ALL PIPING AND CONDUITS TO BE INSTALLED SHALL BE AS FOLLOWS WITH THE HIGHEST PRIORITY LISTED FIRST.

A. PLUMBING DRAIN LINES
B. CONDENSATE LINES
C. DUCTWORK
D. FIRE PROTECTION
E. HOT AND COLD WATER PIPING
F. ELECTRICAL CONDUIT

13. WORK ASSIGNMENTS INFERRED BY THE DRAWINGS AND NOTES INCLUDED IN THESE PROJECT DOCUMENTS ARE INFORMATIONAL ONLY AND ARE NOT INTENDED TO RELIEVE THE BIDDING CONTRACTOR OF HIS OBLIGATION TO THE OWNER TO PROVIDE A COMPLETE AND COORDINATED PROJECT. COMPREHENSIVE SUBCONTRACTOR COORDINATION AND FINAL WORK ASSIGNMENTS TO SUBCONTRACTORS ARE THE SOLE RESPONSIBILITY OF THE BIDDING CONTRACTOR.

14. ALL DUCTS SERVING SUPPLY, RETURN AND EXHAUST TERMINALS SHALL BE PROVIDED WITH BALANCE DAMPERS. FOR CLARITY, ALL DAMPERS MAY NOT BE SHOWN ON PLANS.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: JH
CHECKED: JH
APPROVED: JG

MECHANICAL AND PLUMBING ABBREVIATIONS AND SYMBOLS

MP001

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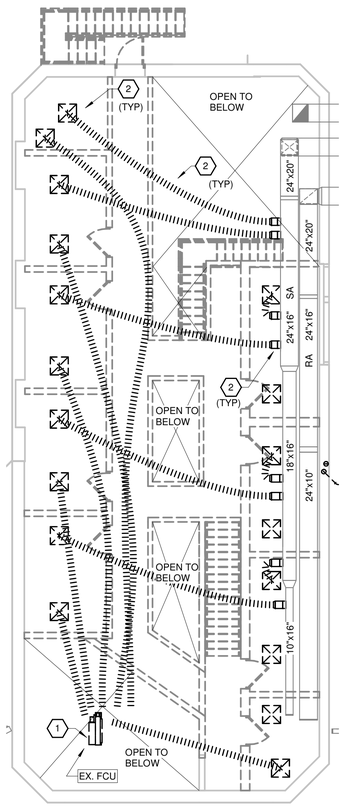
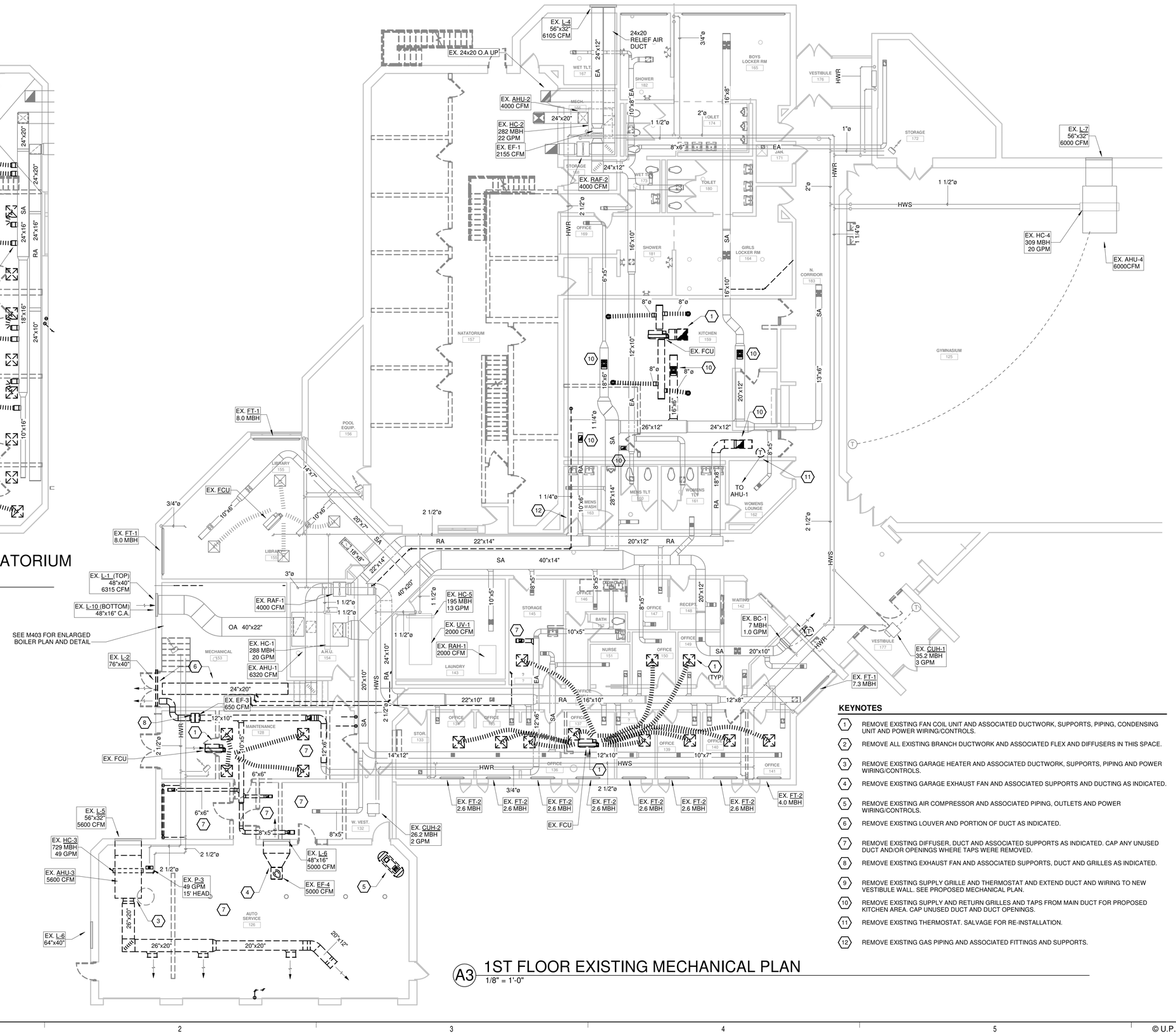


B1 2ND FLOOR EXISTING NATORIUM MECHANICAL PLAN

1/8" = 1'-0"



A3 1ST FLOOR EXISTING MECHANICAL PLAN

1/8" = 1'-0"

KEYNOTES

1. REMOVE EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK, SUPPORTS, PIPING, CONDENSING UNIT AND POWER WIRING/CONTROLS.
2. REMOVE ALL EXISTING BRANCH DUCTWORK AND ASSOCIATED FLEX AND DIFFUSERS IN THIS SPACE.
3. REMOVE EXISTING GARAGE HEATER AND ASSOCIATED DUCTWORK, SUPPORTS, PIPING AND POWER WIRING/CONTROLS.
4. REMOVE EXISTING GARAGE EXHAUST FAN AND ASSOCIATED SUPPORTS AND DUCTING AS INDICATED.
5. REMOVE EXISTING AIR COMPRESSOR AND ASSOCIATED PIPING, OUTLETS AND POWER WIRING/CONTROLS.
6. REMOVE EXISTING LOUVER AND PORTION OF DUCT AS INDICATED.
7. REMOVE EXISTING DIFFUSER, DUCT AND ASSOCIATED SUPPORTS AS INDICATED. CAP ANY UNUSED DUCT AND/OR OPENINGS WHERE TAPS WERE REMOVED.
8. REMOVE EXISTING EXHAUST FAN AND ASSOCIATED SUPPORTS, DUCT AND GRILLES AS INDICATED.
9. REMOVE EXISTING SUPPLY GRILLE AND THERMOSTAT AND EXTEND DUCT AND WIRING TO NEW VESTIBULE WALL. SEE PROPOSED MECHANICAL PLAN.
10. REMOVE EXISTING SUPPLY AND RETURN GRILLES AND TAPS FROM MAIN DUCT FOR PROPOSED KITCHEN AREA. CAP UNUSED DUCT AND DUCT OPENINGS.
11. REMOVE EXISTING THERMOSTAT. SALVAGE FOR RE-INSTALLATION.
12. REMOVE EXISTING GAS PIPING AND ASSOCIATED FITTINGS AND SUPPORTS.

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY:	JH
DRAWN BY:	SP
CHECKED:	JH
APPROVED:	JG

FIRST FLOOR EXISTING MECHANICAL PLAN

MD101

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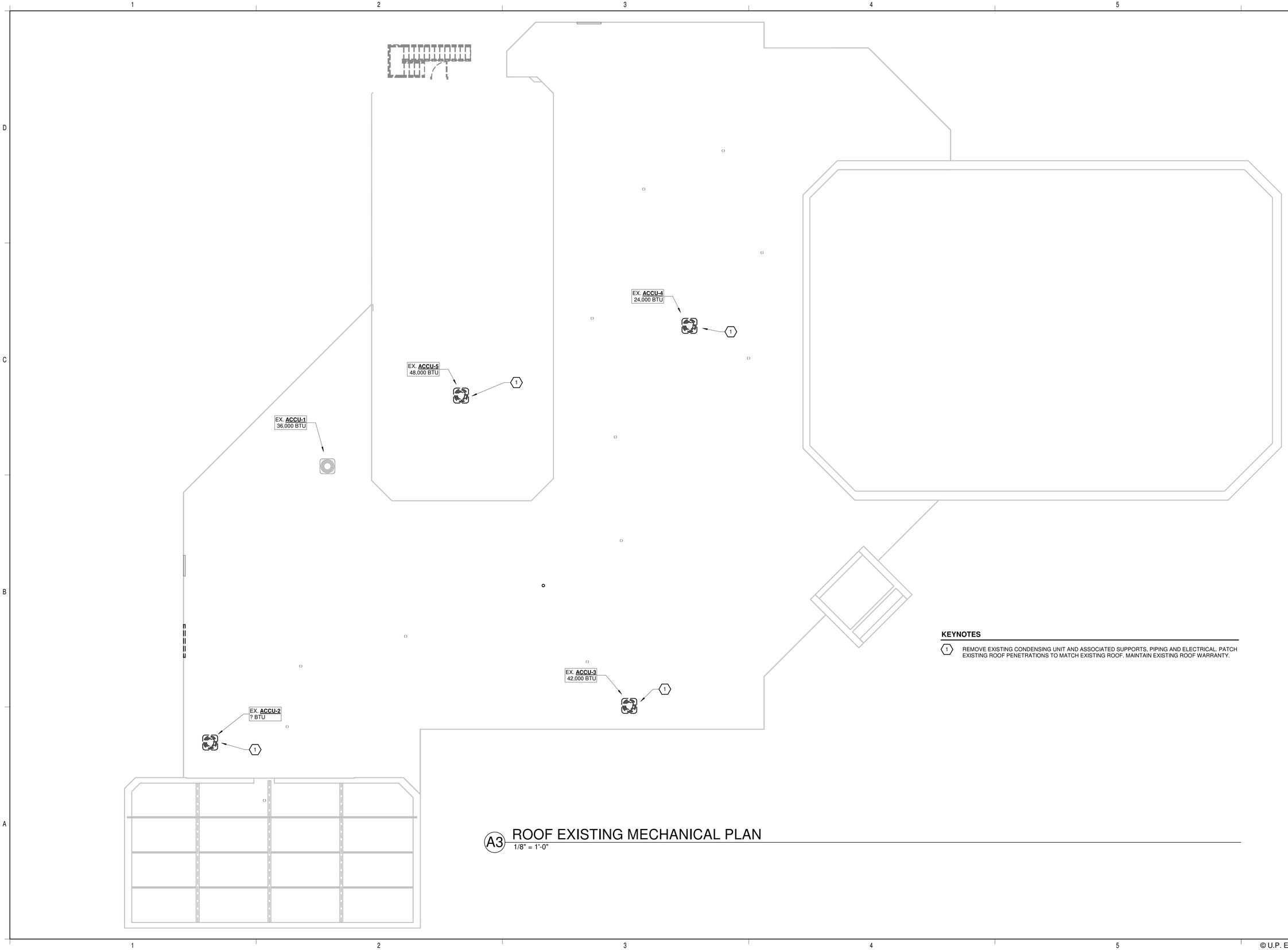

KEYNOTES

1. REMOVE EXISTING CONDENSING UNIT AND ASSOCIATED SUPPORTS, PIPING AND ELECTRICAL. PATCH EXISTING ROOF PENETRATIONS TO MATCH EXISTING ROOF. MAINTAIN EXISTING ROOF WARRANTY.

A3 ROOF EXISTING MECHANICAL PLAN

1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: SPa
DRAWN BY: SPa
CHECKED: SPu
APPROVED: JG

ROOF EXISTING MECHANICAL PLAN

MD201

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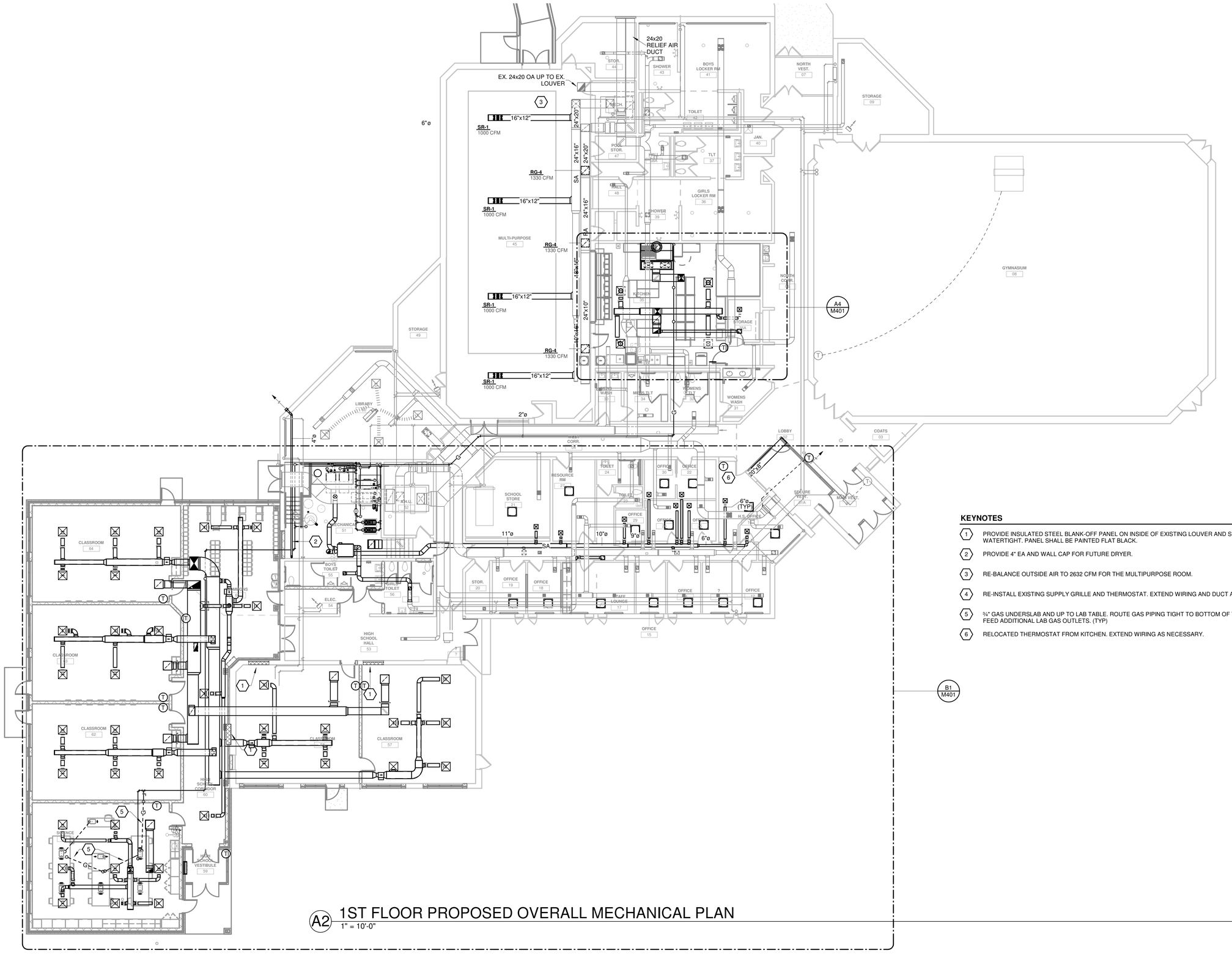

KEYNOTES

1. PROVIDE INSULATED STEEL BLANK-OFF PANEL ON INSIDE OF EXISTING LOUVER AND SEAL WATERTIGHT. PANEL SHALL BE PAINTED FLAT BLACK.
2. PROVIDE 4" EA AND WALL CAP FOR FUTURE DRYER.
3. RE-BALANCE OUTSIDE AIR TO 2632 CFM FOR THE MULTIPURPOSE ROOM.
4. RE-INSTALL EXISTING SUPPLY GRILLE AND THERMOSTAT. EXTEND WIRING AND DUCT AS REQUIRED.
5. ¾" GAS UNDERSLAB AND UP TO LAB TABLE. ROUTE GAS PIPING TIGHT TO BOTTOM OF TABLES TO FEED ADDITIONAL LAB GAS OUTLETS. (TYP)
6. RELOCATED THERMOSTAT FROM KITCHEN. EXTEND WIRING AS NECESSARY.

A2 1ST FLOOR PROPOSED OVERALL MECHANICAL PLAN
1" = 10'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SPa
CHECKED: SPu
APPROVED: JG

1ST FLOOR PROPOSED OVERALL MECHANICAL PLAN

M101

4/14/2021 12:37:48 PM
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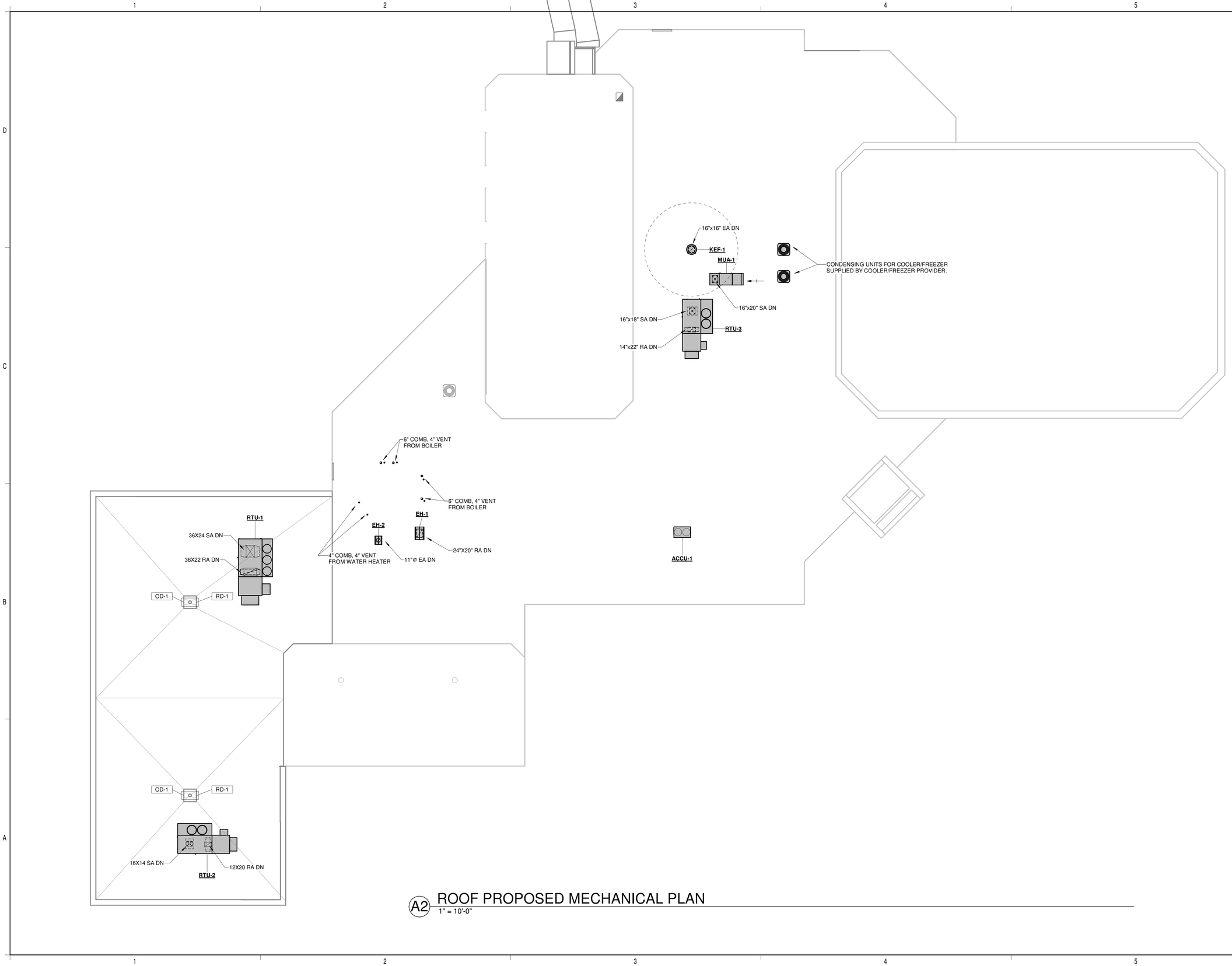

A2 ROOF PROPOSED MECHANICAL PLAN
1" = 10'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: SPu
DRAWN BY: SPa
CHECKED: SPu
APPROVED: JG

ROOF PROPOSED MECHANICAL PLAN

M201

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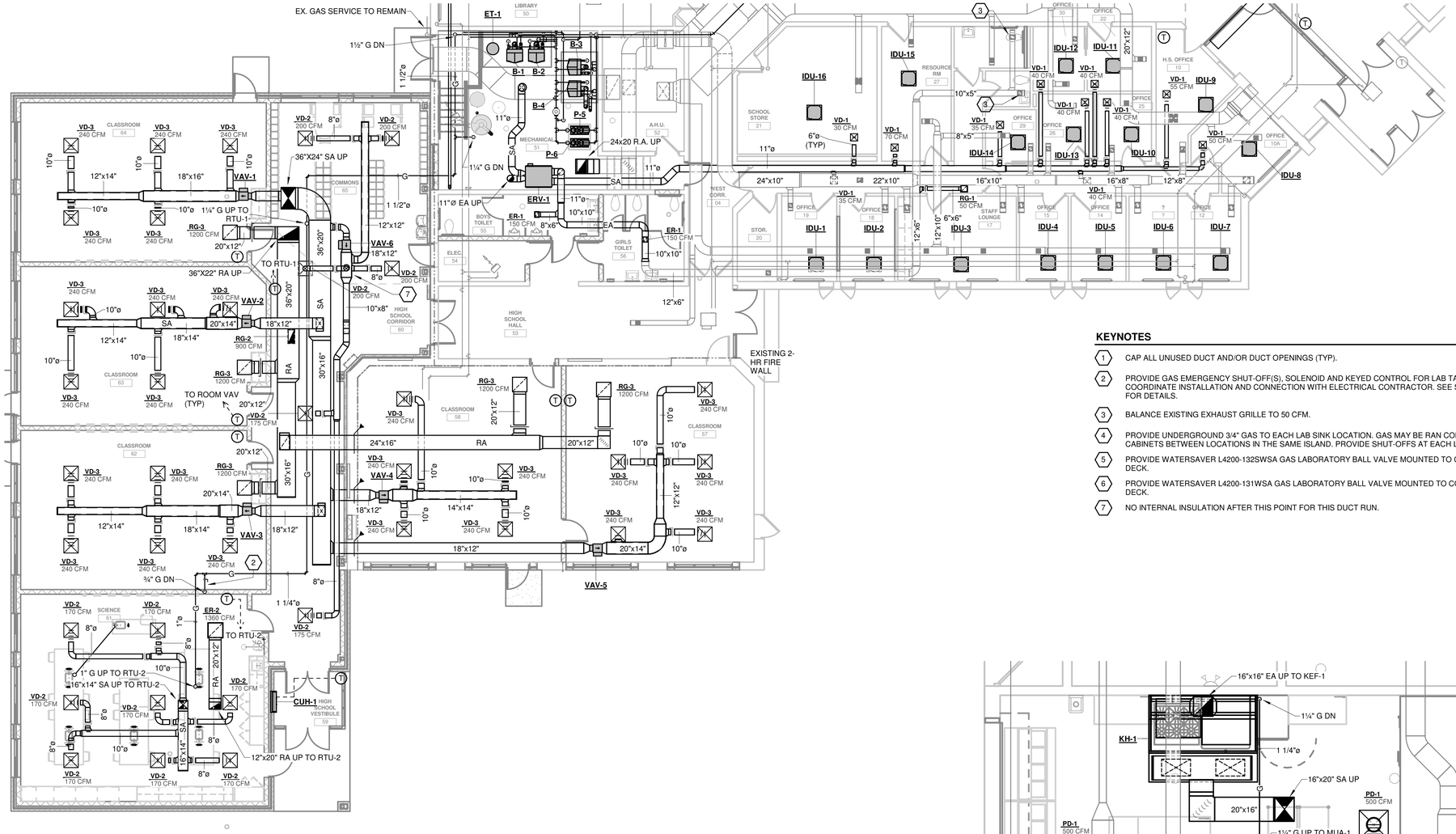
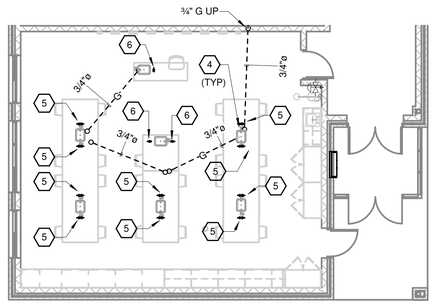


B1 PROPOSED HIGH SCHOOL MECHANICAL PLAN

1/8" = 1'-0"

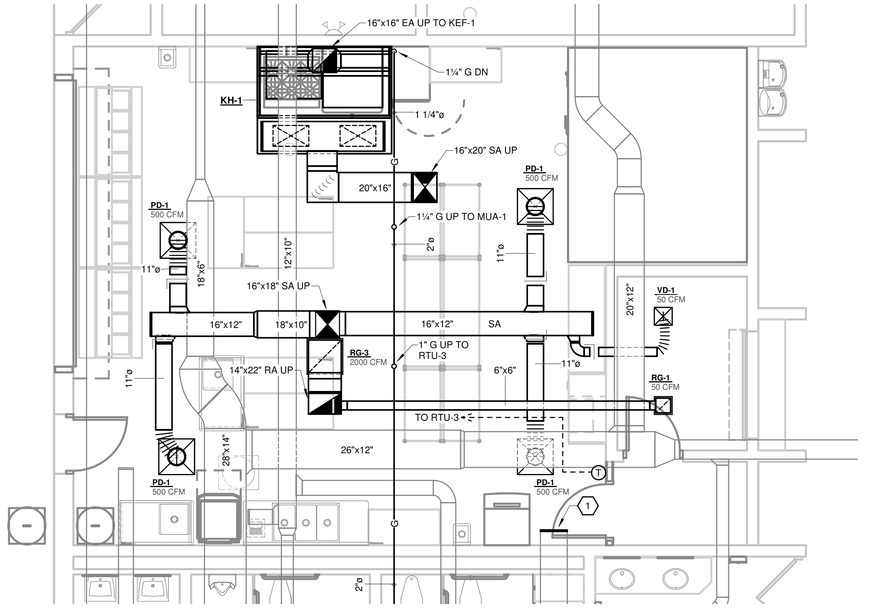


A1 UNDERSLAB PROPOSED SCIENCE ROOM MECHANICAL PLAN

1/8" = 1'-0"

KEYNOTES

1. CAP ALL UNUSED DUCT AND/OR DUCT OPENINGS (TYP).
2. PROVIDE GAS EMERGENCY SHUT-OFF(S), SOLENOID AND KEYED CONTROL FOR LAB TABLES. COORDINATE INSTALLATION AND CONNECTION WITH ELECTRICAL CONTRACTOR. SEE SHEET M503 FOR DETAILS.
3. BALANCE EXISTING EXHAUST GRILLE TO 50 CFM.
4. PROVIDE UNDERGROUND 3/4" GAS TO EACH LAB SINK LOCATION. GAS MAY BE RAN CONCEALED IN CABINETS BETWEEN LOCATIONS IN THE SAME ISLAND. PROVIDE SHUT-OFFS AT EACH LOCATION.
5. PROVIDE WATERSAVER L4200-132SWSA GAS LABORATORY BALL VALVE MOUNTED TO COUNTERTOP DECK.
6. PROVIDE WATERSAVER L4200-131WSA GAS LABORATORY BALL VALVE MOUNTED TO COUNTERTOP DECK.
7. NO INTERNAL INSULATION AFTER THIS POINT FOR THIS DUCT RUN.



A4 PROPOSED KITCHEN MECHANICAL PLAN

1/4" = 1'-0"

HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

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ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SPa
CHECKED: SPu
APPROVED: JG

ENLARGED PROPOSED MECHANICAL PLANS

M401

4/14/2021 12:38:02 PM
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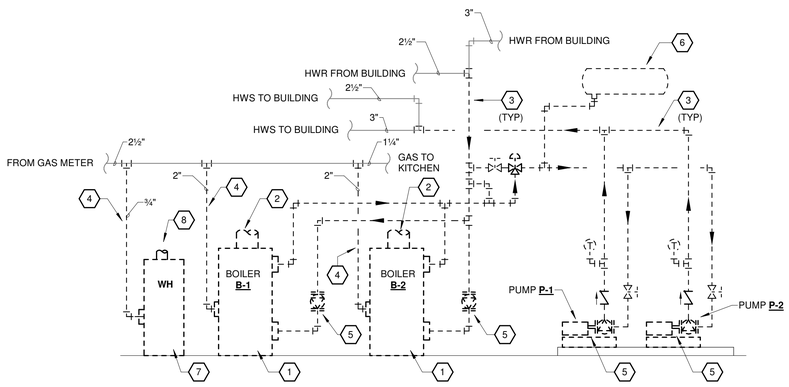
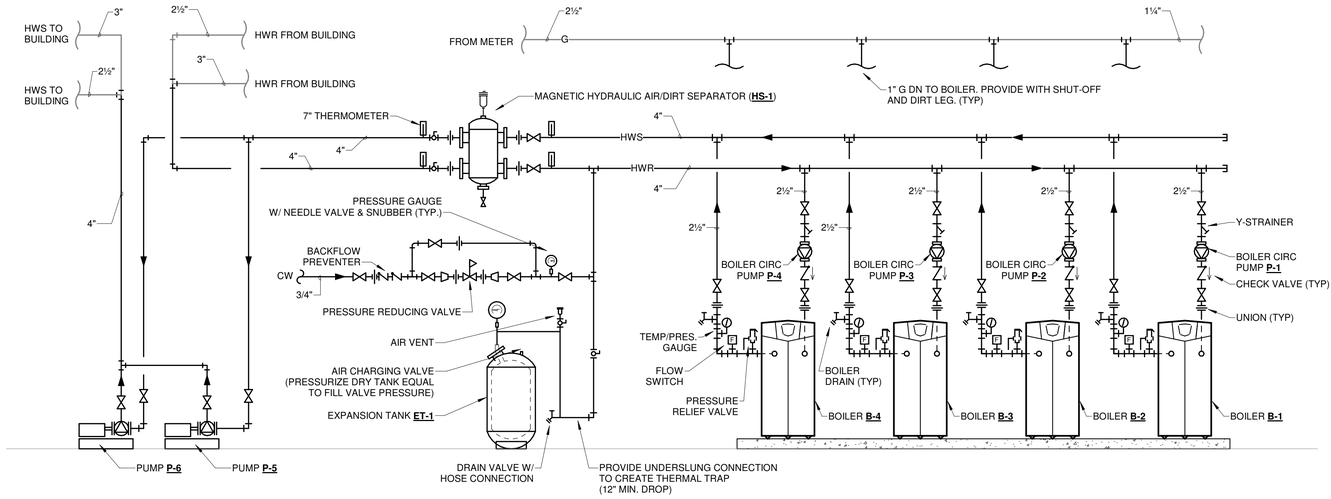


C1 EXISTING BOILER PIPING DIAGRAM
NOT TO SCALE



C3 PROPOSED BOILER PIPING DETAIL
NOT TO SCALE

A1 ENLARGED EXISTING BOILER ROOM MECHANICAL PLAN
3/8" = 1'-0"

KEYNOTES

1. REMOVE EXISTING BOILER AND ASSOCIATED CONTROLS, BREECHING, GAS PIPING AND NEAR BOILER PIPING.
2. REMOVE EXISTING BOILER BREECHING AND ASSOCIATED SUPPORTS. PATCH EXISTING ROOF PER DETAIL B4/M501.
3. REMOVE EXISTING HWS AND/OR HWR PIPING AND SUPPORTS AS INDICATED.
4. REMOVE EXISTING GAS PIPING AND SUPPORTS AS INDICATED.
5. REMOVE EXISTING PUMP AND ASSOCIATED PIPING AND SUPPORTS.
6. REMOVE EXISTING EXPANSION TANK AND ASSOCIATED PIPING AND SUPPORTS.
7. REMOVE EXISTING WATER HEATER AND ASSOCIATED CONTROLS, BREECHING, GAS PIPING AND NEAR WATER HEATER PIPING.
8. REMOVE EXISTING WATER HEATER BREECHING AND ASSOCIATED SUPPORTS. PATCH EXISTING ROOF PER DETAIL B4/M501.
9. 6" E.A AND 4" C.A. THROUGH ROOF. (TYPICAL OF EACH BOILER). TERMINATE PER MANUFACTURER'S REQUIREMENTS.
10. 4" E.A AND 4" C.A. THROUGH ROOF. TERMINATE PER MANUFACTURER'S REQUIREMENTS.
11. PROVIDE NEW 7'x5'x4" THICK HOUSEKEEPING PAD.
12. PROVIDE NEW 9'-6"x5'x3½" THICK HOUSEKEEPING PAD.
13. CONTRACTOR SHALL THOROUGHLY FLUSH/CLEAN ENTIRE HYDRONIC PIPING SYSTEM PRIOR TO CONNECTION OF NEW BOILERS.

A4 ENLARGED BOILER ROOM MECHANICAL PLAN
3/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SP
CHECKED: JH
APPROVED: JG

ENLARGED BOILER PLANS

M402

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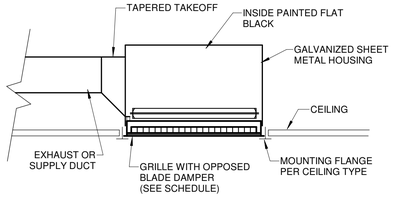
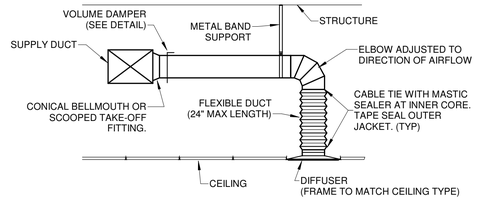
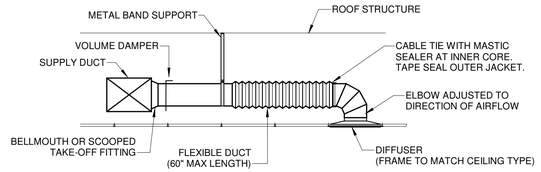


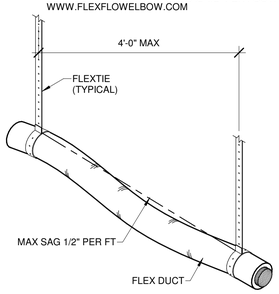
D1 EXHAUST GRILLE DETAIL
NOT TO SCALE



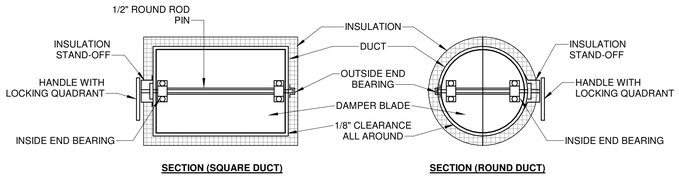
D3 FLEX DUCT CONNECTION DETAIL
NOT TO SCALE

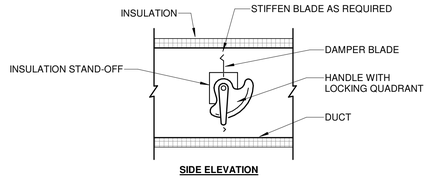


INSTALL "FLEXTIE" DUCTWORK HANGERS BY THERMAFLEX. MAXIMUM ALLOWABLE SAG BETWEEN HANGER SUPPORTS IS 1/2" PER FOOT. WWW.FLEXFLOWELBOW.COM



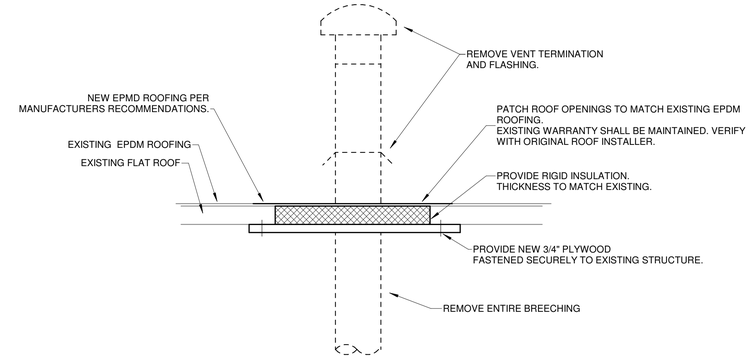
B1 FLEX DUCT SUPPORT DETAIL
NOT TO SCALE



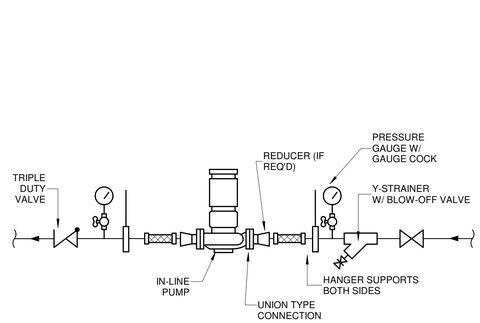


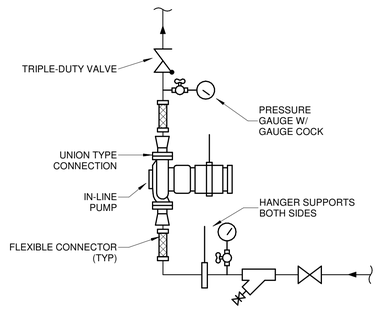
NOTES:
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS AND ROUND DAMPERS.

B2 DAMPER DETAIL
NOT TO SCALE



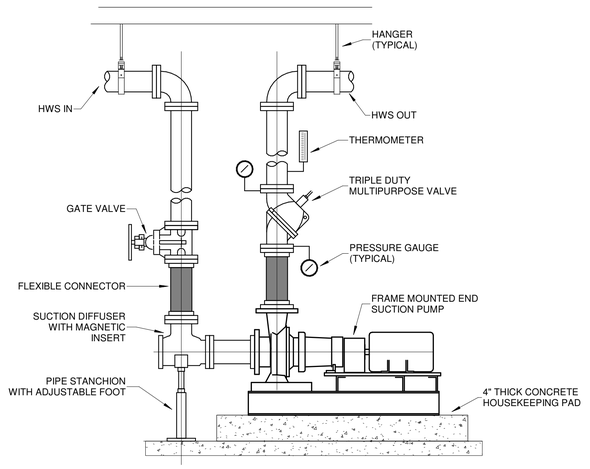
B4 BREECHING DEMOLITION DETAIL
NOT TO SCALE





NOTES:
1. PUMP SHALL BE SUPPORTED INDIPENDENTLY FROM PIPING.
2. PROVIDE FLEXIBLE PIPE CONNECTION FOR PUMPS WITH MOTORS 1/2 HP AND GREATER.
3. INSTALL MOTOR DEAD-LEVEL WITH LUBRICATION POINTS UP.

A2 INLINE PUMP DETAIL
NOT TO SCALE



A4 BASE MOUNTED PUMP DETAIL
NOT TO SCALE

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY:	JH
DRAWN BY:	JH
CHECKED:	SPu
APPROVED:	JG

MECHANICAL DETAILS

M501

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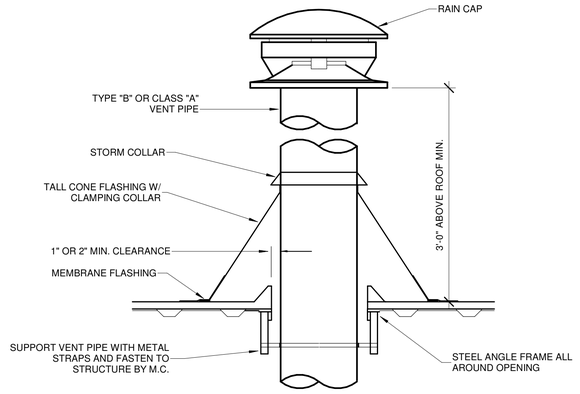
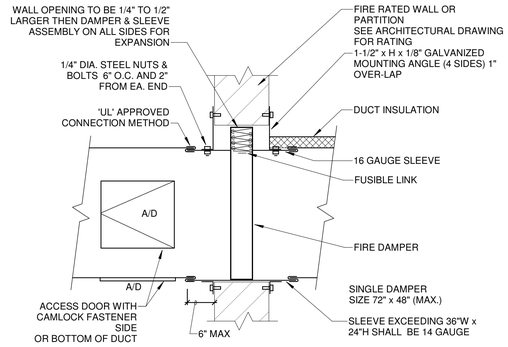
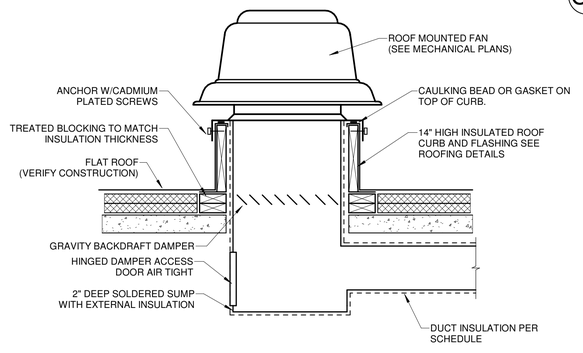


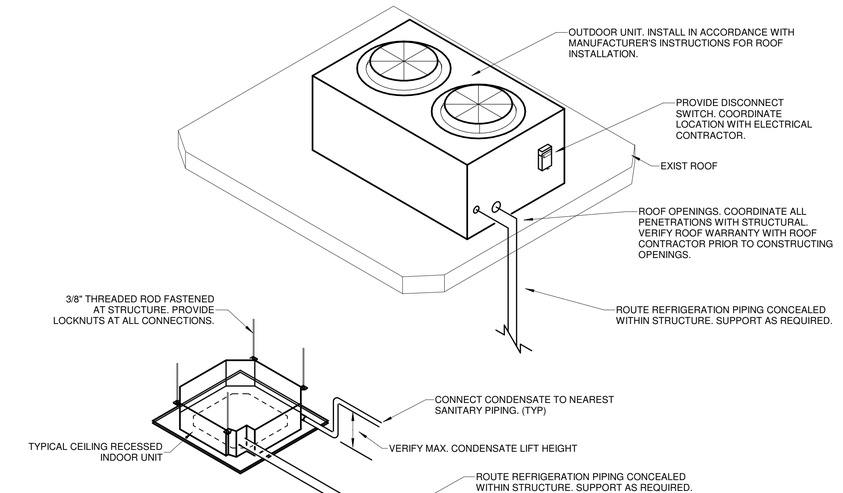
C2 VENT THROUGH ROOF DETAIL
NOT TO SCALE



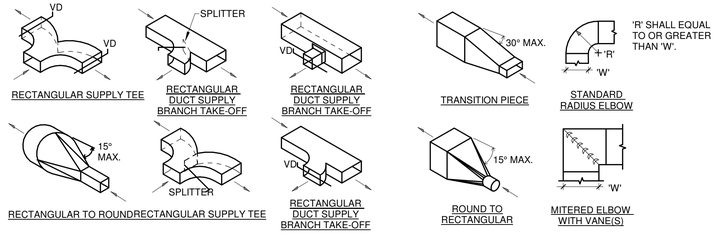
B1 FIRE DAMPER DETAIL
NOT TO SCALE



B2 DOWNBLAST EXHAUST FAN
NOT TO SCALE



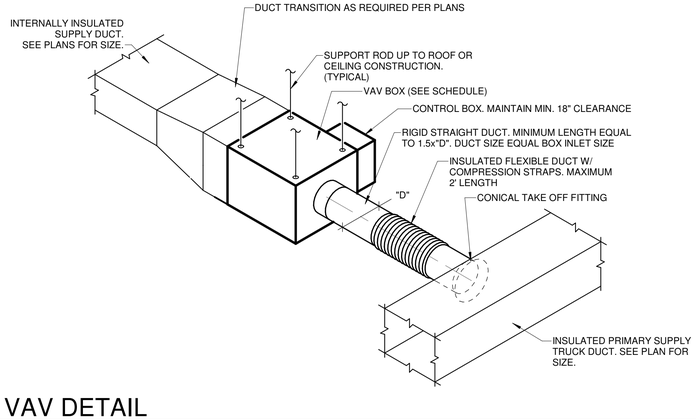
C4 VRF SYSTEM DETAIL
12" = 1'-0"



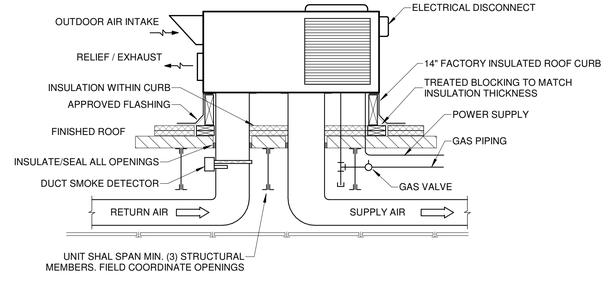
NOTES:

1. PROVIDE STANDARD RADIUS ELBOWS WHEN POSSIBLE - USE MITERED ELBOWS WHERE REQUIRED.
2. ALL MITERED ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED & FASTENED AS RECOMMENDED BY SMACNA

B4 TYPICAL DUCT FITTINGS
NOT TO SCALE



A2 VAV DETAIL
NOT TO SCALE



A4 ROOFTOP UNIT DETAIL
NOT TO SCALE

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY:	JH
DRAWN BY:	SP
CHECKED:	JH
APPROVED:	JG

MECHANICAL DETAILS

M502

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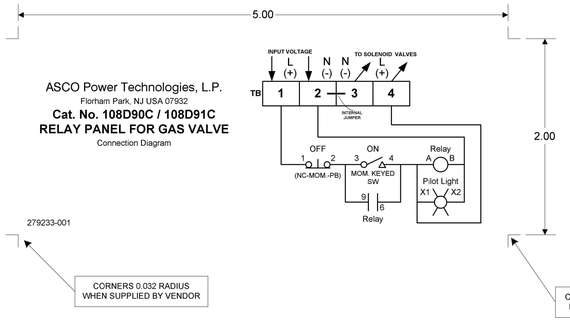

ASCO Power Technologies, L.P.
Florham Park, NJ USA 07932
Cat. No. 108D90C / 108D91C
RELAY PANEL FOR GAS VALVE
Connection Diagram

APPLY LABEL TO INSIDE OF ENCLOSURE COVER.

MFG.	MFG. MATERIAL NO.	UL FILE NO.	FORM FACTOR
F.B. JOHNSTON	POLY-PLATE 162	MH8557	ROLLS
AVERY DENNISON	THERMARK UNDERCOVER N48	MH7834	ROLLS

NOTES:
A. Crop marks for cutting alignment when made at ASCO.
B. All dimensions in inches.
C. Label sized to be placed on the inside of enclosure cover 735300-XXX.
D. Characters and line work are black on white background.
E. Roll quantity of 100, 250 or 500 labels.

MATERIAL- POLYESTER

THICKNESS- .003"

ADHESIVE- .002" PRESSURE SENSITIVE ACRYLIC

CERTIFICATE OF COMPLIANCE REQUIRED FOR MATERIAL FOR EACH SHIPMENT

CHANGE LETTER	ECN NO.	BY	APP.	DATE
H	223439	BWM	BWM	6/09
G	222507	BWM	BWM	4/09
F	219771	BWM	BWM	1/09
E	206428	BWM	BWM	10/05
D	164356	BWM	WK	7/03
C	161158	BWM	WK	7/02
B	159460	BWM	WK	12/01
A	159174	BWM	WK	10/25/01
-	159136	BWM	WK	10/01

SUBSIDIARY DISTRIBUTION

PROJECT NAME:
IDENTIFICATION | LABEL
Relay Panel for Gas Valve
Cat. No. 108D90C / 108D91C

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	BWM	10/01
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	WK	10/01

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055

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FLORHAM PARK, NEW JERSEY 07932 PRINTED IN U.S.A.

ASSEM_REF
ASSEM. REF. NO.

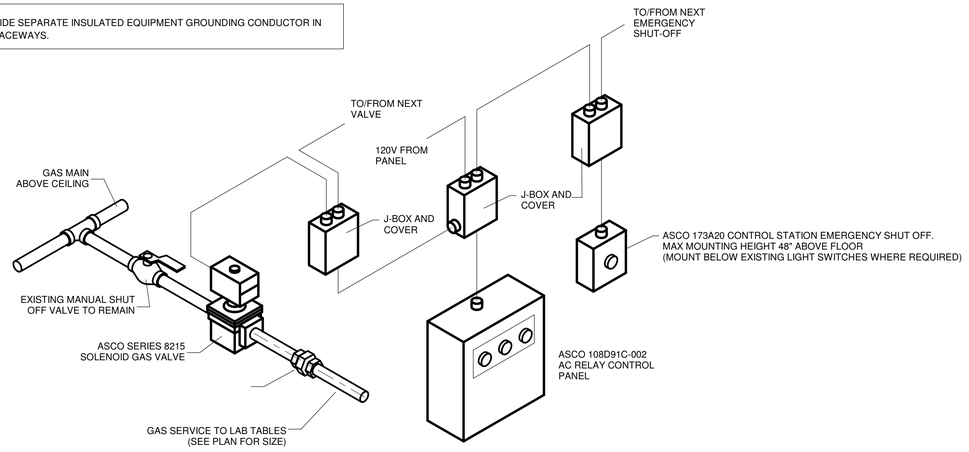
COMPUTER GENERATED DRAWING

SCALE 1:1 | FILE

SIZE AS | DWG. NO. 279233-001

CHANGE LETTER H | ECN NO. 223439 | SHEET

1. PROVIDE SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL RACEWAYS.



A1 GAS SHUTOFF DETAIL
NOT TO SCALE

ASCO Relay Control Panels

Applications

ASCO relay control panels were originally designed to New York City Board of Education specifications to operate ASCO DC solenoid valves controlling gas flow to school kitchens, domestic cooking classes, ceramic and metal shops. Because of its many features and silent operation, the ASCO relay panel has also been used in many other similar institutions and schools outside New York City. Vandalism and malicious mischief have caused some city governments to make it mandatory that the gas supply be secured during hours when schools are closed. Other governmental bodies and consulting engineers have also recognized this need, and specify the ASCO relay panel even when not mandated by code.
ASCO relay panels may also be used in industrial and commercial installations where control of various gases and fluids are important.

ASCO Relay Panel
Catalog No 108D10C
Input Voltage: 120 volts, 60Hz
Output Voltage: 80 volts DC
Output Current: 0.8 amp maximum

Operations
Operating the key switch on the control station energizes the relay, opening a normally closed ASCO DC solenoid valve which turns on the gas flow.

Panel Features

- **Reliability**
ASCO's long experience in control assures a highly dependable system especially when used in combination with ASCO valves. If the control voltage is lost completely, or reduces to approximately 50% of normal value, the relay de-energizes the normally-closed valve to shut off the gas flow. The gas may also be shut off by depressing the normally closed push-button switch located on the control station.

The valve will not open at restoration of voltage until an authorized person operates the key switch on the control station. This eliminates the danger of gas unknowingly escaping.

For convenience, auxiliary push-buttons, ASCO Catalog numbers 173A19 and 173A20 may be located at various access points throughout the building, for immediate shutoff under emergency conditions.

- **Silent Operation**
Utilization of DC output provided by the relay panel to the valves eliminates constant AC hum.

- **Appearance**
Shallow-depth NEMA Type 1 flush mounted enclosure permits in-stallation directly into the wall for convenience, and elimination of obstructions in corridors or high traffic areas.

- **Long Life**
ASCO dust-tight industrial relay and solid-state rectifier are designed to provide long life.

- **Ease of Installation**
Clearly marked terminals and installation drawings located on inside of door.

- **Approvals**
Originally designed for and approved by the New York City Board of Education for use in public schools.

AC Relay Control Panel
Catalog No. 108D90C provides the same features as the DC panels previously described, except with 120/60 AC voltage output for AC valves. Features a key-operated switch with manual "on" and "off" buttons directly on the cover. 108D90C is for flush mount applications and supports surface mount installations.
The 108D90C is also available with 24 VAC, 24 VDC, 208 VAC, and 240 VAC output. Contact ASCO for further details.

ASCO®

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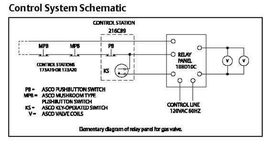
ASCO® Relay Control Panels

Control System Schematic



Elementary diagram of relay panel for gas valve.

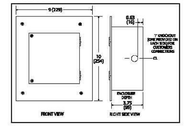
Master Control Station
Catalog No. 216C89 consists of a key-operated, normally-open switch and a normally-closed pushbutton mounted in a stainless steel faceplate for flush installation. Switches are labeled "Open" over the key switch and "Shut" over the pushbutton. Four inch square wall box is not included. Required for use with 108D10C; not applicable to 108D90C installs.

Control Stations
Catalog No. 173A19 (flush mounted) and Catalog No 173A20 (surface mounted) consist of a momentary mushroom push-button labeled "Emergency Stop". When the button is depressed power to valves is shut off, cutting off gas flow in less than 0.1 seconds.

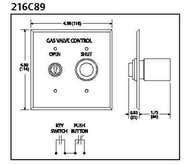
Solenoid Valves
Series 8215 Solenoid Valves feature 2-way normally-closed operation for gas service. They are explosion proof and designed to handle low pressure city gas. Control voltage is 80 to 90 volts DC or 120/60 volts AC.

Dimensions

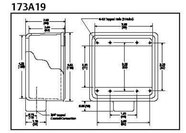
108D10C



216C89



173A19



DC Valves for use with Panel 108D10C

Pipe Size (ins.)	Catalog Number	Max. Pressure (psi)	CV Flow Factor	Holding Watts
1/2	EF8215G20	25	4.4	11.6
3/4	EF8215G30	25	5.1	11.6
1	EF8215B50	25	21	14.9
1 1/4	EF8215B60	25	32	14.9
1 1/2	EF8215B70	25	35	14.9
2	EF8215B80	15	60	14.9

Solenoid Valves
Order by Catalog Number and Voltage (Ex. EF8215G20 80-90VDC)
Contact ASCO Valve, Inc. at 800-972-2726
www.ascovalve.com

AC Valves for use with Panel 108D90C (replaces AEP7200)

Pipe Size (ins.)	Catalog Number	Max. Pressure (psi)	CV Flow Factor	Holding Watts
1/2	EF8215G20	50	4.4	10.1
3/4	EF8215G30	50	5.1	10.1
1	EF8215B50	25	21	15.4
1 1/4	EF8215B60	25	32	15.4
1 1/2	EF8215B70	25	35	15.4
2	EF8215B80	25	60	15.4

Gas Panels, Master Stations, and Control Stations
Order by Catalog Number (Ex. 108D10C)
Contact ASCO Power Technologies at 800-800-2726
www.ascopower.com

Emerson Network Power
ASCO Power Technologies,
50 Hanover Road, Florham Park, NJ, 07932
EmersonNetworkPower.com/ASCO

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY:	JH
DRAWN BY:	SP
CHECKED:	JH
APPROVED:	TP

GAS SHUTOFF DETAILS

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ENERGY RECOVERY UNIT SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	AIRFLOW EA/OA (CFM)	WINTER EADB (ºF)	WINTER EAWB (ºF)	WINTER LADB (ºF)	WINTER EFFECT. (%)	SUMMER EADB (ºF)	SUMMER EAWB (ºF)	SUMMER LADB (ºF)	SUMMER EFFECT. (%)	ELECTRICAL						NOTES
												VOLTS	PH	HP	FLA	MOCP	WEIGHT (LBS)	
ERV-1	RENEWAIRE	EV450JIN	475/482	-9.4	-10.2	46.7	69.7	83.6	69.9	77.5	54	115	1	(1) 0.6	7.2	15	199	1,2,3

1. PROVIDE VIBRATION ISOLATION PER MANUFACTURER'S RECCOMENDATIONS.
2. PROVIDE CONTROL SYSTEM TO INTERLOCK WITH CORRESPONDING OCCUPANCY SENSORS COORDINATE WITH CONTROLS CONTRACTOR.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

KITCHEN HOOD SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	CLASSIFICATION	HOOD TYPE	CONSTRUCTION	DIMENSIONS			CAPACITY				UTILITY CABINET	NOTES
						LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	EXHAUST CFM	EXHAUST ESP.	SUPPLY CFM	SUPPLY ESP.		
KH-1	GREENHECK	GHEW-90.00-S	TYPE-I	WALL CANOPY	STAINLESS	90	48	24	2250	0.563	2250	0.45	WALL	1,2,3,4

1. PROVIDE WITH ZERO CLEARANCE BACK OPTIONS, STAINLESS SIDE SKIRTS, BAFFLE FILTERS, STAINLESS BACKWALL, INTEGRAL PERFORATED FACE SUPPLY PLENUM.
2. PROVIDE WITH RECESSED LED LIGHTING AND FACTORY INSTALLED ANSUL SYSTEM INCLUDING REMOTE CABINET ALL PIPING AND CONTROLS.
3. PROVIDE WIRING AND CONTROLS TO INTERLOCK WITH GAS VALVE UNDER HOOD, MAKE-UP AIR UNIT AND ASSOCIATED EXHAUST FAN.
4. INSTALL ALL TYPE-1 AND TYPE-2 HOODS PER CURRENT MICHIGAN MECHANICAL CODE AND ALL APPLICABLE NFPA CODES.

FAN SCHEDULE

ID	DESCRIPTION	TYPE	MANUF.	MODEL NUMBER	AIR FLOW (CFM)	EXT. SP. (FT)	RPM	DUCT CONNECTION (IN)	ELECTRICAL				NOTES
									VOLTS	PH	HP (WATTS)	FLA	
KEF-1	KITCHEN HOOD EXHAUST	UPBLAST	GREENHECK	CUBE-140-7	2,250	0.813	1546	16"x16"	208	3	3/4	3.5	1,2
EH-1	EXHAUST HOOD	ROOF MOUNTED	GREENHECK	FGR	4000	0.382	-	24"x16"	-	-	-	-	3
EH-2	EXHAUST HOOD	ROOF MOUNTED	GREENHECK	FGR	481	0.066	-	10"x10"	-	-	-	-	3

1. SEE KITCHEN EQUIPMENT DRAWINGS FOR ADDITIONAL DETAILS AND REQUIRED ACCESORIES/OPTIONS.
2. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
3. PROVIDE WITH 18"H INSULATED ROOF CURB.

VAV UNIT SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	UNIT SIZE	MAX COOLING (CFM)	NOTES
VAV-1	CARRIER	D3001	10	1200	1,2,3
VAV-2	CARRIER	D3001	10	1200	1,2,3
VAV-3	CARRIER	D3001	10	1200	1,2,3
VAV-4	CARRIER	D3001	10	1200	1,2,3
VAV-5	CARRIER	D3001	10	1200	1,2,3
VAV-6	CARRIER	D3001	10	1200	1,2,3

1. PROVIDE WITH ACCESS DOOR AND HANGER BRACKET.
2. PROVIDE WITH CONTROL CAPACITY TO INTERLOCK WITH BACnet BUILDING AUTOMATION SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR.
3. INSTALL PER DETAILS SHEET M502.

ELECTRIC CABINET UNIT HEATER SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	HEATING CAPACITY (BTU)	KW	CFM LOW/HIGH	DIMENSIONS WxHxD (IN)	ELECTRICAL				NOTES
							VOLTS	PH	HP	AMPS	
CUH-1	QMARK	CU935	13,652	4	200/250	35x26-3/8x9-3/4	208	3	-	12	1,2,3

1. COLOR TO BE SELECTED BY ARCHITECT.
2. PROVIDE REMOTE THERMOSTAT CONTROL SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

EXPANSION TANK SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	GALLON CAPACITY (GAL)	CONNECTION DIAMETER (IN)	DIMENSIONS (IN)	SHIPPING WEIGHT (LBS)	NOTES
ET-1	TACO	CA215-125	57	1"	20"Wx59"H	290	1

1. PROVIDE WITH ISOLATION VALVE.

HYDRAULIC/AIR/DIRT SEPARATOR SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	FLANGED CONN. SIZE (IN)	SIZE (HxDIA.)	GPM	SHIPPING WEIGHT (LBS)	NOTES
HS-1	CALEFFI	NA549102AM	2	48.25"x18.5"	247	120	-

PUMP SCHEDULE

ID	DESCRIPTION	MANUF.	MODEL NUMBER	FLOW (GPM)	HEAD (FT)	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	ELECTRICAL				NOTES
								VOLTS	PH	HP	AMPS	
P-1	BOILER CIRCULATOR	TACO	VR15-3	71	4.9	1.5"	1.5"	120	1	1	5.3	1,3
P-2	BOILER CIRCULATOR	TACO	VR15-3	71	4.9	1.5"	1.5"	120	1	1	5.3	1,3
P-3	BOILER CIRCULATOR	TACO	VR15-3	71	4.9	1.5"	1.5"	120	1	1	5.3	1,3
P-4	BOILER CIRCULATOR	TACO	VR15-3	71	4.9	1.5"	1.5"	120	1	1	5.3	1,3
P-5	SYSTEM CIRCULATOR	TACO	SFI2007D	144	40.0	2.5"	2.5"	208	3	3	10.6	1,2,3
P-6	SYSTEM CIRCULATOR	TACO	SFI2007D	144	40.0	2.5"	2.5"	208	3	3	10.6	1,2,3

1. PROVIDE CONTROL SYSTEM TO INTERLOCK WITH CORRESPONDING BOILER. COORDINATE WITH CONTROLS CONTRACTOR.
2. PROVIDE WITH VFD OPTION.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

PIPING INSULATION TYPE SCHEDULE

INSULATION TYPE	DESCRIPTION
P-1	ASTM C547, MOLDED GLASS FIBER PIPE INSULATION, OPERATING TEMPERATURE RANGE: 0 TO 850 DEG F, VAPOR BARRIER JACKET: ASTM C1136, TYPE I, FACTORY APPLIED REINFORCED FOIL DRAFT WITH SELF SEALING ADHESIVE JOINTS.

HEATING PIPE INSULATION SCHEDULE

SYSTEM TYPE	INSUL. TYPE	PIPE SIZES	INSULATION THICKNESS
LOW TEMPERATURE HEATING WATER SUPPLY AND RETURN (40 TO 105 DEGREES F)	P-1	ALL SIZES	1"
MED TEMPERATURE HEATING WATER SUPPLY AND RETURN (105 TO 140 DEGREES F)	P-1	1-1/4" AND SMALLER 1-1/2" AND LARGER	1" 1-1/2"
HIGH TEMPERATURE HEATING WATER SUPPLY AND RETURN (141 TO 200 DEGREES F)	P-1	1-1/4" AND SMALLER 1-1/2" AND LARGER	1-1/2" 2"

BOILER SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	INPUT CAPACITY MAX/MIN (MBH)	OUTPUT CAPACITY (MBH)	WATER CONNECT (IN)	GAS CONNECT. (IN)	VENT (IN)	COMB. AIR (IN)	EWT/LWT (ºF)	SHIPPING WEIGHT (LBS)	ELECTRICAL				NOTES
											VOLTS	PH	HP	AMPS	
B-1	LOCHINVAR	FTX725N	725/13.5	705	2½"	1"	6"	4"	160/180	510	120	1	-	-	1,2,3
B-2	LOCHINVAR	FTX725N	725/13.5	705	2½"	1"	6"	4"	160/180	510	120	1	-	-	1,2,3
B-3	LOCHINVAR	FTX725N	725/13.5	705	2½"	1"	6"	4"	160/180	510	120	1	-	-	1,2,3
B-4	LOCHINVAR	FTX725N	725/13.5	705	2½"	1"	6"	4"	160/180	510	120	1	-	-	1,2,3

1. PROVIDE WITH CONDENSATE NUETRALIZER KIT, CONCENTRIC VENT KIT, BOILER CIRCULATOR AND LOW-WATER CUT-OFF W/ MANUAL RESET.
2. PROVIDE PRIMARY/SECONDARY PIPING PER DETAIL.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

DUCT INSULATION SCHEDULE

SYSTEM TYPE	INSUL. TYPE	INSULATION OR LINER THICKNESS
COMBUSTION AIR	D-2	1-1/2"
OUTSIDE AIR INTAKE DUCTS	D-2	1-1/2"
SUPPLY DUCTS (EXTERNALLY INSULATED)	D-1, D-2, D-5	1-1/2"
RETURN DUCTS (EXTERNALLY INSULATED)	D-1, D-2, D-5	1-1/2"
KITCHEN EXHAUST DUCTS (2-LAYER, 1-1/2" EACH)	D-6	3"
EXHAUST DUCTS WITHIN 10 FEET OF EXTERIOR OPENINGS	D-1, D-2	1"
RECTANGULAR SUPPLY DUCTS DOWNSTREAM OF VAV BOXES (INTERALLY INSULATED)	D-3, D-4	1"

DUCTWORK INSULATION TYPE SCHEDULE

INSULATION TYPE	DESCRIPTION
D-1	ASTM C1290, TYPE III, FLEXIBLE GLASS FIBER, COMMERCIAL GRADE WITH FACTORY APPLIED REINFORCED FOIL JACKET MEETING ASTM C1136, TYPE II, MAX. OPERATING TEMPERATURE: 250 DEG F, DENSITY: 1.5 LBS/CU FT.
D-2	ASTM C612, TYPE IA OR IB, RIGID GLASS FIBER, WITH FACTORY APPLIED ALL SERVICE FACING MEETING ASTM C1136, TYPE II, DENSITY: 6.0 LBS/CU FT.
D-3	ASTM C1071, TYPE I, FLEXIBLE, GLASS FIBER DUCT LINER WITH COATED AIR SIDE, DENSITY: 3.0 LBS/CU FT, MAX. OPERATING TEMPERATURE: 250 DEG F, MAX. AIR VELOCITY: 6000 FPM
D-4	SAME AS D-3, EXCEPT: TYPE II, RIGID, MAX. AIR VELOCITY: 4000 FPM
D-5	ASTM C534, TYPE II, FLEXIBLE, CLOSED CELL ELASTOMERIC INSULATION, SHEET, SERVICE TEMPERATURE RANGE: MINUS 58 TO 180 DEG F.
D-6	INORGANIC BLANKET ENCAPSULATED WITH SCRIM REINFORCED FOIL MEETING UL 1978, THERMAL COND.: 0.42 @ 500 DEG F, WEIGHT: 1.4 LBS/SQ FT, SURFACE BURNING CHARACTERISTICS: MAX 0/0 FLAME SPREAD/SMOKE DEVELOPED INDEX TESTED IN ACCORDANCE WITH ASTM E84.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: JH
CHECKED: SPu
APPROVED: JG

MECHANICAL SCHEDULES

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VENTILATION CALCULATION AND CODE REQUIREMENTS

097-01165

Project data				2015 Michgan Mechanical Code Table 403.3.1.1						2015 MMC 403.3.1.1.1					2015 MMC 403.3.1.1
Space	Space	Az		#	Pz	Rp	Ra	Re	/De	Rp*Pz	Ra*Az	Vbz	Ez	Voz	Ebz
Zone, location, name, number, etc.	Occupancy classification 2015 MMC Table 403.3.1.1 or ASHRAE 62.1-2013*	Floor area of zone, ft2, **or** # of units	Air Distribution Configuration	Occupancy Density, People /1000 ft2	Zone population, # of people in the space or spaces in the zone.	People outdoor air rate, cfm/person	Area outdoor air rate, cfm/ft2	Exhaust airflow rate, cfm	Exhaust airflow rate, denominator	People outdoor air rate, cfm (Pz*Rp), cfm	Area outdoor air rate, (Az*Ra) cfm	Outdoor airflow to the zone (Pz*Rp + Az*Ra), cfm	Zone air distribution effectiveness	Zone outdoor airflow (Vbz/Ez), cfm	Exhaust airflow rate from the zone, (Az*Re), cfm
MULTIPURPOSE - 45	Multi-use Assembly	2593	Ceiling supply warm air & ceiling return	100	260	7.5	0.06			1,950	156	2,106	0.80	2,632	

SYSTEM LEVEL		
∑Az	**Zone floor area, ft2**	**2593**
∑Pz	**Zone population, #**	**260**
Vot	**Outdoor air required, (∑Voz) cfm**	**2632**
∑Ebz	**Exhaust air required, cfm**	

VENTILATION CALCULATION AND CODE REQUIREMENTS

097-01165

Project data				2015 Michgan Mechanical Code Table 403.3.1.1						2015 MMC 403.3.1.1.1					2015 MMC 403.3.1.1
Space	Space	Az		#	Pz	Rp	Ra	Re	/De	Rp*Pz	Ra*Az	Vbz	Ez	Voz	Ebz
Zone, location, name, number, etc.	Occupancy classification 2015 MMC Table 403.3.1.1 or ASHRAE 62.1-2013*	Floor area of zone, ft2, **or** # of units	Air Distribution Configuration	Occupancy Density, People /1000 ft2	Zone population, # of people in the space or spaces in the zone.	People outdoor air rate, cfm/person	Area outdoor air rate, cfm/ft2	Exhaust airflow rate, cfm	Exhaust airflow rate, denominator	People outdoor air rate, cfm (Pz*Rp), cfm	Area outdoor air rate, (Az*Ra) cfm	Outdoor airflow to the zone (Pz*Rp + Az*Ra), cfm	Zone air distribution effectiveness	Zone outdoor airflow (Vbz/Ez), cfm	Exhaust airflow rate from the zone, (Az*Re), cfm
SCIENCE - 61	Science laboratories	881	Ceiling supply warm air & ceiling return	25	23	10.0	0.18	1.00	ft2	230	159	389	0.80	486	881

SYSTEM LEVEL		
∑Az	**Zone floor area, ft2**	**881**
∑Pz	**Zone population, #**	**23**
Vot	**Outdoor air required, (∑Voz) cfm**	**486**
∑Ebz	**Exhaust air required, cfm**	**881**

DIFFUSER, GRILLE, REGISTER SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING FRAME	NECK SIZE (IN)	MODULE SIZE (IN)	THROW	MATERIAL	COLOR	NOTES
VD-1	CEILING SUPPLY DIFFUSER	NAILOR	RNS	LAY-IN	6"Ø	12"x12"	4-WAY	STEEL	WHITE	1,2,3
VD-2	CEILING SUPPLY DIFFUSER	NAILOR	6500	LAY-IN	8"Ø	24"x24"	4-WAY	STEEL	WHITE	1,2,3
VD-3	CEILING SUPPLY DIFFUSER	NAILOR	6500	LAY-IN	10"Ø	24"x24"	4-WAY	STEEL	WHITE	1,2,3
SR-1	SIDEWALL SUPPLY REGISTER	NAILOR	51SV	SURFACE	24"x12"	26"x14"	-	ALUMINUM	WHITE	1,2,4,6
PD-1	PERFORATED SUPPLY DIFFUSER	NAILOR	4320	LAY-IN	12"Ø	24"x24"	4-WAY	STEEL	WHITE	1,2,7
ER-1	CEILING EXHAUST REGISTER	NAILOR	51EC	SURFACE	6"x6"	8"x8"	-	ALUMINUM	WHITE	1,2,5
RG-1	CEILING RETURN GRILLE	NAILOR	51EC	LAY-IN	10"x10"	12"x12"	-	ALUMINUM	WHITE	1,2,5
RG-2	CEILING RETURN GRILLE	NAILOR	51EC	LAY-IN	20"x10"	24"x12"	-	ALUMINUM	WHITE	1,2,5
RG-3	CEILING RETURN GRILLE	NAILOR	51EC	LAY-IN	20"x18"	24"x24"	-	ALUMINUM	WHITE	1,2,5
RG-4	SIDEWALL RETURN GRILLE	NAILOR	51FH	SURFACE	22"x22"	24"x24"	-	ALUMINUM	WHITE	1,2,5

1. BORDER TYPE SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE IN WHICH THE DEVICE IS LOCATED.
2. SEE PLAN FOR LOCATIONS AND QUANTITIES OF AIR DEVICES.
3. 18"x18" CORE, 24"x24" FULL LOUVER FACE.
4. 3/4" BLADE SPACING. BLADES PARALLEL TO LONG DIMENSION.
5. 1/2"x1/2"x1/2" EGGCRATE GRID.
6. PROVIDE WITH OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE.
7. 4-WAY PERFORATED SUPPLY DIFFUSER.

VRF INDOOR UNITS SCHEDULE

INDOOR UNIT TYPE MARK	OUTDOOR UNIT TYPE MARK	MANUFACTURER	INDOOR UNIT MODEL NUMBER	OUTDOOR UNIT MODEL NUMBER	CFM (HIGH)	CAPACITY			ELECTRICAL				WEIGHT (LBS)	NOTES
						COOLING (BTU/H)	REFRIGERANT	HEATING (BTU/H)	VOLTS	PH	HZ	FLA		
IDU-1	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-2	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-3	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-4	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-5	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-6	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-7	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-8	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-9	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-10	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-11	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-12	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-13	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-14	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-15	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4
IDU-16	ACCU-1	YORK	TIC4008B21S	YVAHP120B32S	530	6,600	R410A	8,400	208	1	60	0.20	44	1,2,3,4

1. PROVIDE INSTALLATION PER MANUFACTURER'S RECCOMENDATIONS.
2. SEE DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
4. PROVIDE LOW AMBIENT CONTROL KITS, GROUP CONTROL KIT AND SIMPLE CONTROLLER FOR EACH ZONE.
5. PROVIDE FACTORY-APPROVED REFRIGERANT PIPING SYSTEM WITH BRANCH/HEADER PIPING.

VRF OUTDOOR UNIT SCHEDULE

TYPE MARK	MANUFACTURER	MODEL NUMBER	CFM (HIGH)	CAPACITY						ELECTRICAL					NOTES
				GROSS COOLING (MBH)	SENSIBLE COOLING (MBH)	REFRIGERANT	REFRIGERANT CHARGE	GROSS HEATING (MBH)	SENSIBLE HEATING (MBH)	VOLTS	PH	HZ	MCA	MOPD	
ACCU-1	YORK	YVAHP120B32S	9,037	120	105.6	R410A	40.5	144	134.4	208	1	60	42	50	1,2,3

1. PROVIDE INSTALLATION PER MANUFACTURER'S RECCOMENDATIONS.
2. SEE DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR

MAKE-UP-AIR UNIT SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	AIRFLOW (CFM)	EXT. STATIC PRESS. (IN)	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	GAS (IN)	DUCT CONNECTION SIZE (IN)	ELECTRICAL						NOTES
									VOLTS	PHASE	HP	MCA	MOCP	WEIGHT (LBS)	
MUA-1	GREENHECK	DGX-P112-H12-MF	2250	0.7	237.7	218.7	3/4	17x23	208	3	1-1/2	8.9	15	700	1,2,3

1. PROVIDE WITH 16" HIGH INSULATED ROOF CURB
2. PROVIDE FACTORY INSTALLED CONTROL SYSTEM PER SPECIFICATIONS. COORDINATE WITH CONTROLS CONTRACTOR.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

GAS-FIRED ROOFTOP UNIT SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	FAN				HEATING						COOLING							UNIT ELECTRICAL						EXHAUST FAN ELECTRICAL				
			CFM	RPM	BHP	ESP (IN)	MBH	SUPPLY AIR (CFM)	RETURN AIR (CFM)	OUTSIDE AIR (CFM)	OAT (°F)	MAT (°F)	LAT (°F)	TYPE	GROSS CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EADB (°F)	EAWB (°F)	LADB (°F)	LAWB (°F)	VOLTS	PH	HP	MCA	MOCP	NOTES	VOLTS	PH	HP	MCA	MOCP
RTU-1	GREENHECK	RVE-85-52-15H-17.5I-J	7150	1781	5.94	0.75	300	7150	4760	2390	-15	65.7	96.7	DX	226.2	173.0	75.9	63.7	53.8	53.2	208	3	-	116.5	125	1,2,3,4,5	-	-	-	-	-
RTU-2	GREENHECK	RVE-40-30-30L-5I-C	1360	1656	0.37	0.5	100	1360	479	881	-15	61.3	115.7	DX	65.7	42.7	76.5	64.5	47.8	47.7	208	3	-	29.6	40	1,2,3,5	-	-	-	-	-
RTU-3	GREENHECK	RV-25-5I-G	2117	1278	0.716	0.5	200	2117	1553	564	-15	49.6	119.6	DX	76.6	55.5	75.8	63.7	51.9	51.5	208	3	-	25.6	35	1,2,3,4,5	208	3	-	3.9	15

1. PROVIDE WITH 12"H INSULATED ROOF CURB, 120V FACTORY INSTALLED CONVINENCE OUTLET, THROUGH BASE CONNECTION AND NON-FUSED DISCONNECT.
2. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT AND ALL REQUIRED CONTROL COMPONENTS AND WIRING. COORDINATE WITH CONTROLS CONTRACTOR.
3. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
4. PROVIDE WITH DUCT SMOKE DETECTOR IN RETURN AIR PLENUM. INSTALLED PER MMC-2012 SECTION-606.
5. PROVIDE WITH ENTHALPY ECONOMIZER OPTION AND LOUVERED HAIL GUARD.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:

	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: SPa
DRAWN BY: SPa
CHECKED: SPu
APPROVED: JG

MECHANICAL SCHEDULES

M602

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KITCHEN MECHANICAL VENTILATION CALCULATION AND CODE REQUIREMENTS

O97-01165

Project data				2015 Michigan Mechanical Code Table 403.3.1.1						2015 MMC 403.3.1.1.1					2015 MMC 403.3.1.1
Space	Space	Az		#	Pz	Rp	Ra	Re	/De	Rp*Pz	Ra*Az	Vbz	Ez	Voz	Ebz
Zone, location, name, number, etc.	Occupancy classification 2015 MMC Table 403.3.1.1 or ASHRAE 62.1-2013*	Floor area of zone, ft2, **or** # of units	Air Distribution Configuration	Occupancy Density, People /1000 ft2	Zone population, # of people in the space or spaces in the zone.	People outdoor air rate, cfm/person	Area outdoor air rate, cfm/ft2	Exhaust airflow rate, cfm	Exhaust airflow rate, denominator	People outdoor air rate, cfm (Pz*Rp), cfm	Area outdoor air rate, (Az*Ra) cfm	Outdoor airflow to the zone (Pz*Rp + Az*Ra), cfm	Zone air distribution effectiveness	Zone outdoor airflow (Vbz/Ez), cfm	Exhaust airflow rate from the zone, (Az*Re), cfm
35 - KITCHEN	Kitchens (cooking)	805	Makeup air on the opposite side	5	5			0.70	ft2				0.80		564
35A - CONCESSION	Storage rooms (occupied)	71	Ceiling supply warm air & ceiling return				0.12				9	9	0.80	11	

SYSTEM LEVEL

∑Az	**Zone floor area, ft2**	**876**
∑Pz	**Zone population, #**	**5**
Vot	**Outdoor air required, (∑Voz) cfm**	**11**
∑Ebz	**Exhaust air required, cfm**	**564**

VENTILATION CALCULATION AND CODE REQUIREMENTS

097-01165

Project data				2015 Michgan Mechanical Code Table 403.3.1.1						2015 MMC 403.3.1.1.1					2015 MMC 403.3.1.1
Space	Space	Az		#	Pz	Rp	Ra	Re	/De	Rp*Pz	Ra*Az	Vbz	Ez	Voz	Ebz
Zone, location, name, number, etc.	Occupancy classification 2015 MMC Table 403.3.1.1 or ASHRAE 62.1-2013*	Floor area of zone, ft2, **or** # of units	Air Distribution Configuration	Occupancy Density, People /1000 ft2	Zone population, # of people in the space or spaces in the zone.	People outdoor air rate, cfm/person	Area outdoor air rate, cfm/ft2	Exhaust airflow rate, cfm	Exhaust airflow rate, denominator	People outdoor air rate, cfm (Pz*Rp), cfm	Area outdoor air rate, (Az*Ra) cfm	Outdoor airflow to the zone (Pz*Rp + Az*Ra), cfm	Zone air distribution effectiveness	Zone outdoor airflow (Vbz/Ez), cfm	Exhaust airflow rate from the zone, (Az*Re), cfm
CLASSROOM -64	Classrooms (age 9 plus)	695	Ceiling supply warm air & ceiling return	35	25	10.0	0.12			250	83	333	0.80	417	
CLASSROOM - 63	Classrooms (age 9 plus)	692	Ceiling supply warm air & ceiling return	35	25	10.0	0.12			250	83	333	0.80	416	
CLASSROOM - 62	Classrooms (age 9 plus)	696	Ceiling supply warm air & ceiling return	35	25	10.0	0.12			250	84	334	0.80	417	
HIGH SCHOOL CORRIDOR - 60	Corridors	715	Ceiling supply warm air & ceiling return				0.06				43	43	0.80	54	
LOCKERS - 65	Lobbies/prefunction	517	Ceiling supply warm air & ceiling return	30	16	7.5	0.06			120	31	151	0.80	189	
BOYS TLT - 55	Toilet rooms - public (continuous)	3	Ceiling supply warm air & ceiling return					50	Toilet/urinal				0.80		150
GIRLS TLT - 56	Toilet rooms - public (continuous)	3	Ceiling supply warm air & ceiling return					50.00	Toilet/urinal				0.80		150
CLASSROOM - 58	Classrooms (age 9 plus)	789	Ceiling supply warm air & ceiling return	35	28	10.0	0.12			280	95	375	0.80	468	
CLASSROOM - 57	Classrooms (age 9 plus)	707	Ceiling supply warm air & ceiling return	35	25	10.0	0.12			250	85	335	0.80	419	
H.S. VESTIBULE - 59	Corridors	102	Ceiling supply warm air & ceiling return				0.06				6	6	0.80	8	

SYSTEM LEVEL

∑Az	**Zone floor area, ft2**	**4919**
∑Pz	**Zone population, #**	**144**
Vot	**Outdoor air required, (∑Voz) cfm**	**2387**
∑Ebz	**Exhaust air required, cfm**	**300**

OFFICE NATURAL VENTILATION CALCULATION

Room	Floor Area (sq ft)	Window Openable Area (sq ft)	Door Openable Area (sq ft)	Total Window and/or Door Openable Area (sq ft)	Percentage of Openable Area to Floor Area	SPACE COMPLIES WITH 2015 MMC 402.2	This is an Adjoining Space	SPACE COMPLIES WITH 2015 MMC 402.3
12 - OFFICE	88	9.33		9.33	10.60%	YES	NO	N/A
13 - OFFICE	90	9.33		9.33	10.37%	YES	NO	N/A
14 - OFFICE	90	9.33		9.33	10.37%	YES	NO	N/A
15 - CONF / BREAK ROOM	184	18.66		18.66	10.14%	YES	NO	N/A
17 - OFFICE	90	9.33		9.33	10.37%	YES	NO	N/A
18 - OFFICE	90	9.33		9.33	10.37%	YES	NO	N/A
19 - OFFICE	90	9.33		9.33	10.37%	YES	NO	N/A

OFFICE MECHANICAL VENTILATION CALCULATION AND CODE REQUIREMENTS

O97-01165

Project data				2015 Michigan Mechanical Code Table 403.3.1.1						2015 MMC 403.3.1.1.1					2015 MMC 403.3.1.1
Space	Space	Az		#	Pz	Rp	Ra	Re	/De	Rp*Pz	Ra*Az	Vbz	Ez	Voz	Ebz
Zone, location, name, number, etc.	Occupancy classification 2015 MMC Table 403.3.1.1 or ASHRAE 62.1-2013*	Floor area of zone, ft2, **or** # of units	Air Distribution Configuration	Occupancy Density, People /1000 ft2	Zone population, # of people in the space or spaces in the zone.	People outdoor air rate, cfm/person	Area outdoor air rate, cfm/ft2	Exhaust airflow rate, cfm	Exhaust airflow rate, denominator	People outdoor air rate, cfm (Pz*Rp), cfm	Area outdoor air rate, (Az*Ra) cfm	Outdoor airflow to the zone (Pz*Rp + Az*Ra), cfm	Zone air distribution effectiveness	Zone outdoor airflow (Vbz/Ez), cfm	Exhaust airflow rate from the zone, (Az*Re), cfm
10 - OFFICE	Office space	129	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	8	13	0.80	16	
10A - OFFICE	Office space	120	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	7	12	0.80	15	
11 - CORRIDOR	Corridors	296	Ceiling supply warm air & ceiling return				0.06				18	18	0.80	22	
21 - SCHOOL STORE	Storage rooms (occupied)	62	Ceiling supply warm air & ceiling return				0.12				7	7	0.80	9	
22 - OFFICE	Office space	79	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	5	10	0.80	12	
25 - OFFICE	Office space	69	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	4	9	0.80	11	
26 - OFFICE	Office space	71	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	4	9	0.80	12	
27 - RESOURCE OFFICE	Office space	179	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	11	16	0.80	20	
29 - OFFICE	Office space	50	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	3	8	0.80	10	
30 - OFFICE	Office space	63	Ceiling supply warm air & ceiling return	5	1	5.0	0.06			5	4	9	0.80	11	

SYSTEM LEVEL

∑Az	**Zone floor area, ft2**	**1118**
∑Pz	**Zone population, #**	**8**
Vot	**Outdoor air required, (∑Voz) cfm**	**139**
∑Ebz	**Exhaust air required, cfm**	

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR: BIDSET
DATE: 4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: SPa
DRAWN BY: SPa
CHECKED: SPu
APPROVED: JG

MECHANICAL SCHEDULES

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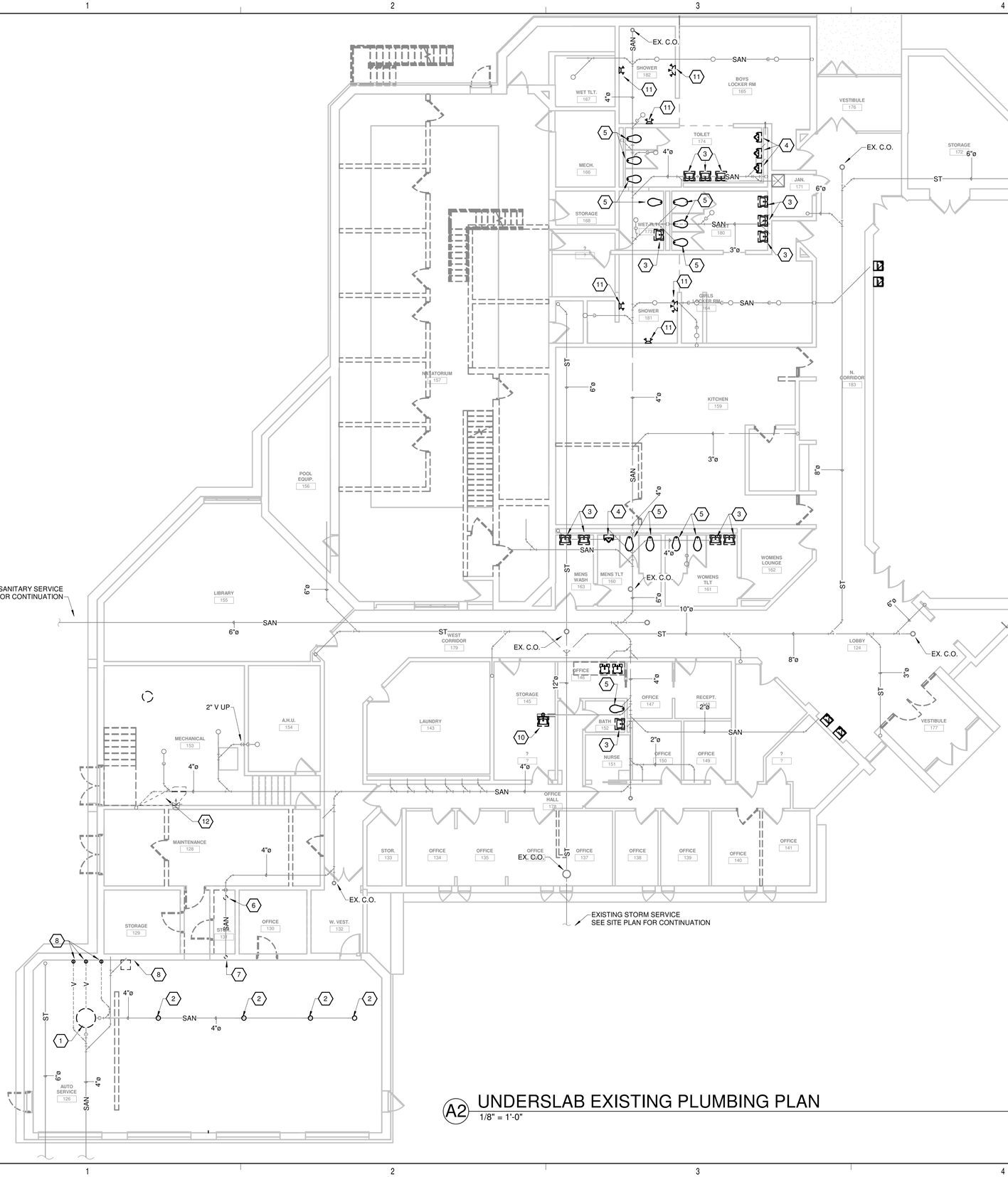

GENERAL NOTES:

1. IT IS THE INTENT TO REPLACE ALL PLUMBING FIXTURES NOT BEING REMOVED FOR RENOVATION WITH NEW FIXTURES. SEE PROPOSED PLUMBING PLANS AND PLUMBING FIXTURE SCHEDULE.

KEYNOTES

1. REMOVE EXISTING GARAGE DRAIN COVER AND INFILL OPENING WITH CLEAN COMPACTED SAND. PROVIDE CONCRETE CAP FOR DRAIN OPENING AND SLOPED PORTION OF FLOOR. FINISH TO EXISTING FLOOR ELEVATION.
2. REMOVE EXISTING FLOOR DRAIN AND CAP PIPING. PROVIDE CONCRETE CAP FOR DRAIN OPENING AND SLOPED PORTION OF FLOOR. FINISH TO EXISTING FLOOR ELEVATION.
3. REMOVE EXISTING LAVATORY AND ASSOCIATED FAUCET, P-TRAP, SUPPLIES, ESCUTCHEON AND SUPPORTS.
4. REMOVE EXISTING URINAL FLUSH VALVE.
5. REMOVE WATER CLOSET AND ASSOCIATED SUPPLY LINE AND ESCUTCHEON.
6. REMOVE PIPING SERVING WATER CLOSET AND CAP BELOW FLOOR. PATCH FLOOR WITH CONCRETE. FIXTURE HAS BEEN REMOVED.
7. REMOVE PIPING SERVING LAVATORY AND CAP BELOW FLOOR/ABOVE CEILING. PATCH FLOOR WITH CONCRETE. FIXTURE HAS BEEN REMOVED.
8. REMOVE EXISTING SERVICE SINK AND ASSOCIATED PIPING AND SUPPORTS. CAP PIPING ABOVE CEILING.
9. REMOVE EXISTING VENT PIPING AND CAP PIPING BELOW FLOOR.
10. REMOVE EXISTING LAVATORY AND ASSOCIATED PIPING AND SUPPORTS. CAP UNUSED PIPING ABOVE CEILING AND BELOW FLOOR.
11. REMOVE EXISTING WALL-MOUNT SHOWER.
12. SAWCUT FLOOR AS INDICATED TO EXTEND SANITARY PIPING TO NEW WASHER BOX. REMOVE PORTION OF SANITARY PIPING FOR CONNECTION TO NEW PIPING. REPLACE CONCRETE AFTER NEW SANITARY PIPING TO MATCH EXISTING.

A2 UNDERSLAB EXISTING PLUMBING PLAN

1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SP
CHECKED: JH
APPROVED: JG

UNDERSLAB EXISTING PLUMBING PLAN

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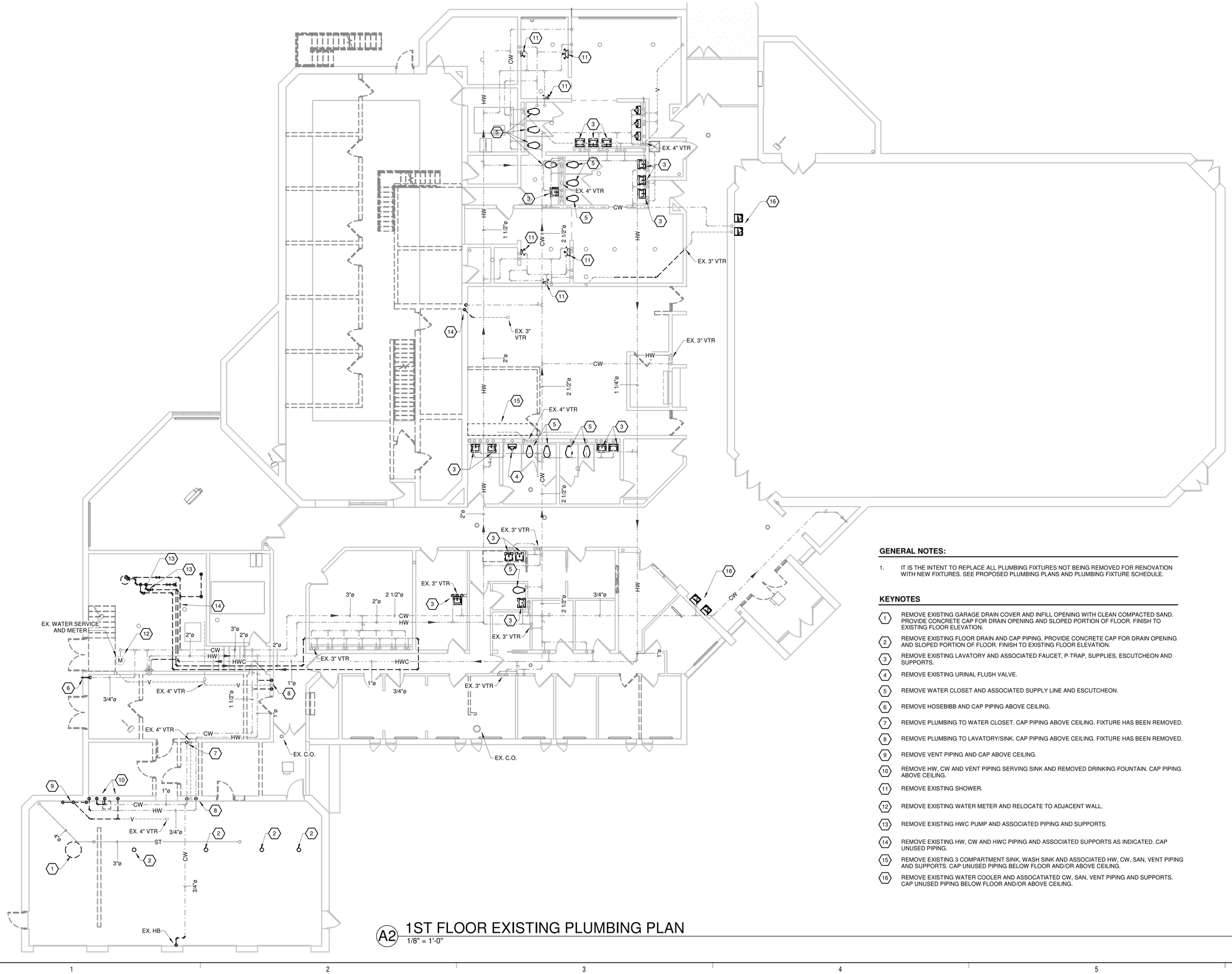

A2 1ST FLOOR EXISTING PLUMBING PLAN
1/8" = 1'-0"

GENERAL NOTES:

1. IT IS THE INTENT TO REPLACE ALL PLUMBING FIXTURES NOT BEING REMOVED FOR RENOVATION WITH NEW FIXTURES. SEE PROPOSED PLUMBING PLANS AND PLUMBING FIXTURE SCHEDULE.

KEYNOTES

1. REMOVE EXISTING GARAGE DRAIN COVER AND INFILL OPENING WITH CLEAN COMPACTED SAND. PROVIDE CONCRETE CAP FOR DRAIN OPENING AND SLOPED PORTION OF FLOOR. FINISH TO EXISTING FLOOR ELEVATION.
2. REMOVE EXISTING FLOOR DRAIN AND CAP PIPING. PROVIDE CONCRETE CAP FOR DRAIN OPENING AND SLOPED PORTION OF FLOOR. FINISH TO EXISTING FLOOR ELEVATION.
3. REMOVE EXISTING LAVATORY AND ASSOCIATED FAUCET, P-TRAP, SUPPLIES, ESCUTCHEON AND SUPPORTS.
4. REMOVE EXISTING URINAL FLUSH VALVE.
5. REMOVE WATER CLOSET AND ASSOCIATED SUPPLY LINE AND ESCUTCHEON.
6. REMOVE HOSEBIBB AND CAP PIPING ABOVE CEILING.
7. REMOVE PLUMBING TO WATER CLOSET. CAP PIPING ABOVE CEILING. FIXTURE HAS BEEN REMOVED.
8. REMOVE PLUMBING TO LAVATORY/SINK. CAP PIPING ABOVE CEILING. FIXTURE HAS BEEN REMOVED.
9. REMOVE VENT PIPING AND CAP ABOVE CEILING.
10. REMOVE HW, CW AND VENT PIPING SERVING SINK AND REMOVED DRINKING FOUNTAIN. CAP PIPING ABOVE CEILING.
11. REMOVE EXISTING SHOWER.
12. REMOVE EXISTING WATER METER AND RELOCATE TO ADJACENT WALL.
13. REMOVE EXISTING HWC PUMP AND ASSOCIATED PIPING AND SUPPORTS.
14. REMOVE EXISTING HW, CW AND HWC PIPING AND ASSOCIATED SUPPORTS AS INDICATED. CAP UNUSED PIPING.
15. REMOVE EXISTING 3 COMPARTMENT SINK, WASH SINK AND ASSOCIATED HW, CW, SAN, VENT PIPING AND SUPPORTS. CAP UNUSED PIPING BELOW FLOOR AND/OR ABOVE CEILING.
16. REMOVE EXISTING WATER COOLER AND ASSOCIATIATED CW, SAN, VENT PIPING AND SUPPORTS. CAP UNUSED PIPING BELOW FLOOR AND/OR ABOVE CEILING.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SP
CHECKED: JH
APPROVED: JG

1ST FLOOR EXISTING PLUMBING PLAN

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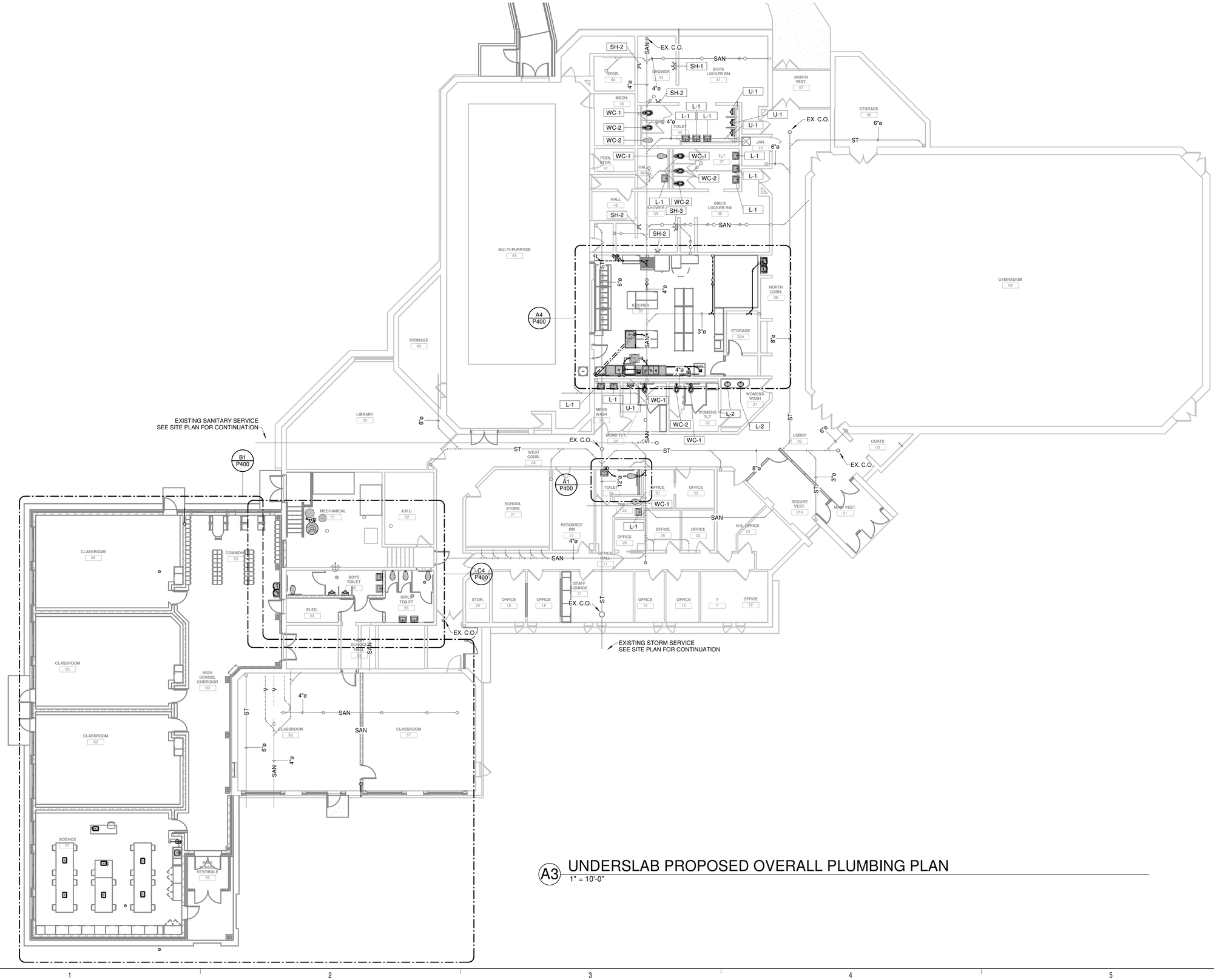

A3 UNDERSLAB PROPOSED OVERALL PLUMBING PLAN

1" = 10'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: JH
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APPROVED: JG

UNDERDERSLAB PROPOSED OVERALL PLUMBING PLAN

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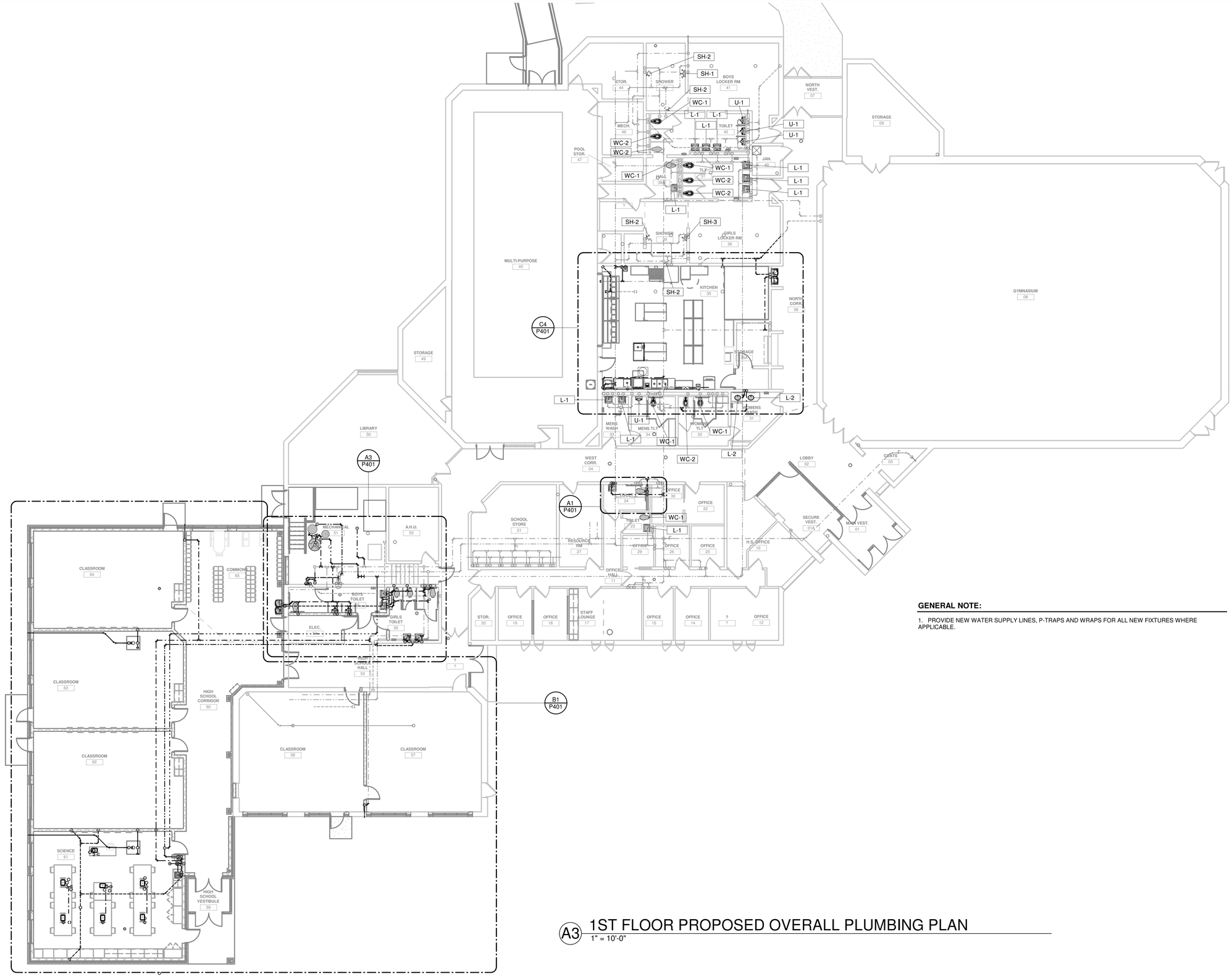

GENERAL NOTE:

1. PROVIDE NEW WATER SUPPLY LINES, P-TRAPS AND WRAPS FOR ALL NEW FIXTURES WHERE APPLICABLE.

A3 1ST FLOOR PROPOSED OVERALL PLUMBING PLAN

1" = 10'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/2/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SP
CHECKED: JH
APPROVED: JG

1ST FLOOR PROPOSED OVERALL PLUMBING PLAN

P101

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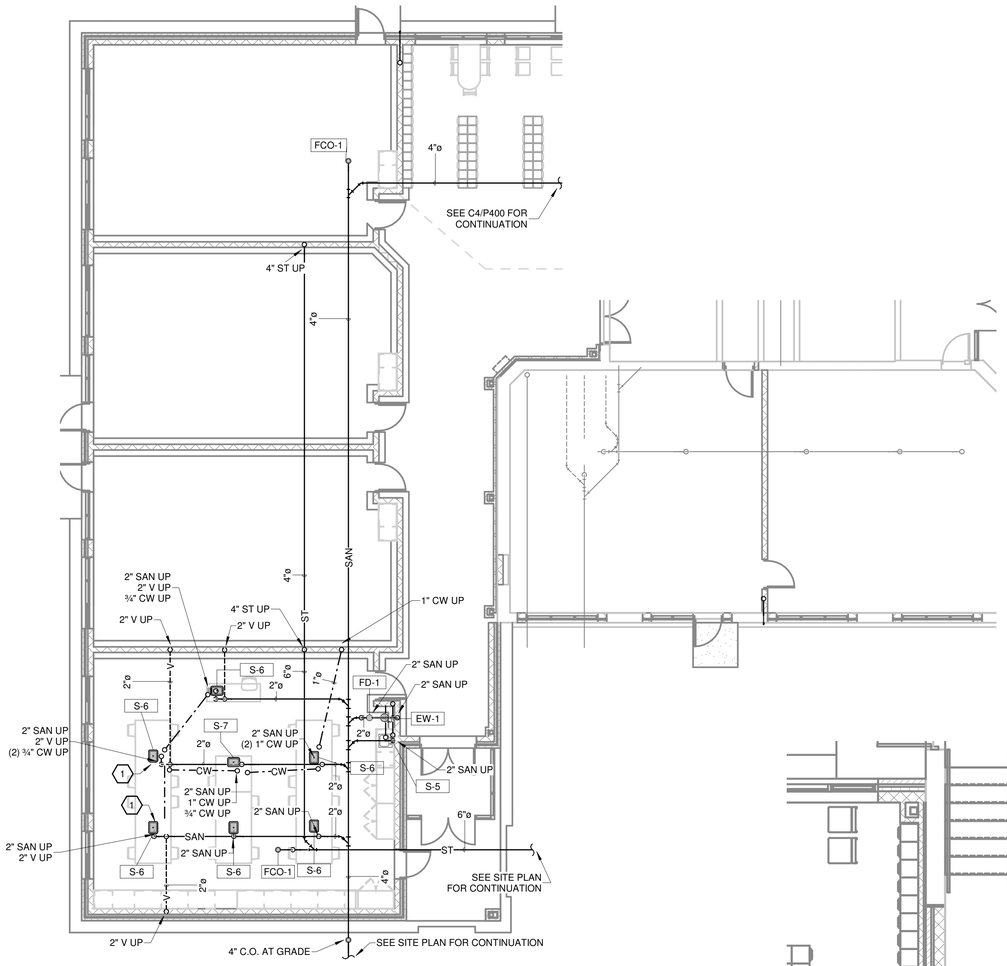
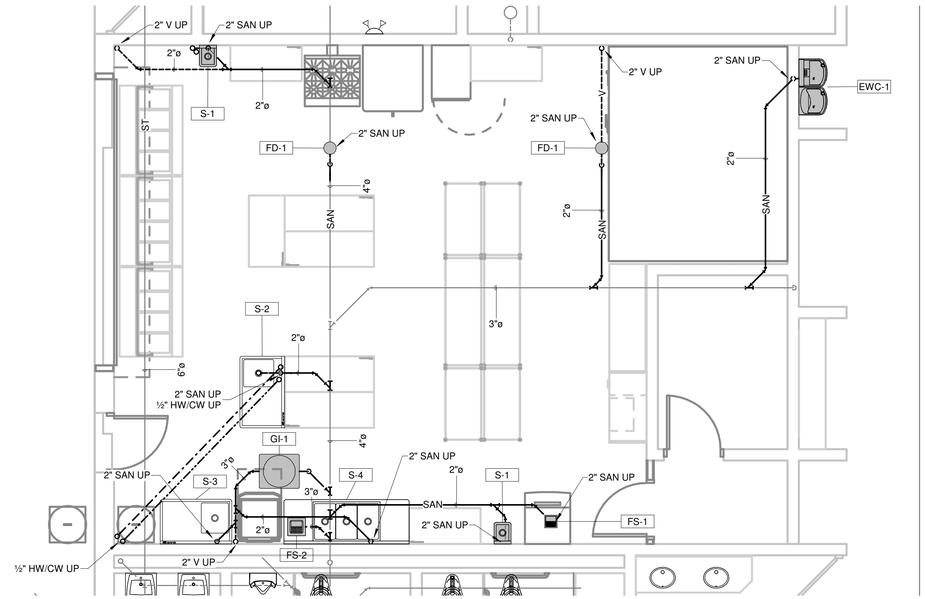
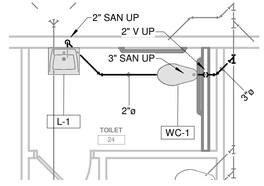


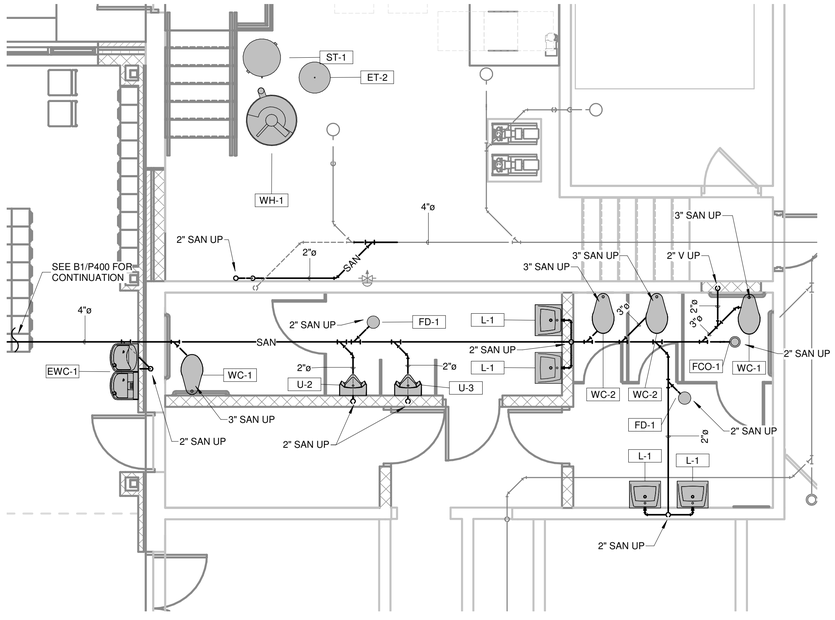
B1 HIGH SCHOOL PROPOSED UNDERSLAB PLUMBING PLAN
1/8" = 1'-0"



A4 KITCHEN PROPOSED UNDERSLAB PLUMBING PLAN
1/4" = 1'-0"



A1 STAFF TOILET PROPOSED UNDERSLAB PLUMBING PLAN
1/4" = 1'-0"



C4 BATHROOMS PROPOSED UNDERSLAB PLUMBING PLAN
1/4" = 1'-0"

KEYNOTES

1 PROVIDE ISLAND FIXTURE VENTING PER MPC SECTION 916. SEE ALSO DETAIL A1/P501.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: SP
DRAWN BY: SP
CHECKED: JH
APPROVED: JG

ENLARGED UNDERSLAB PROPOSED PLUMBING PLANS

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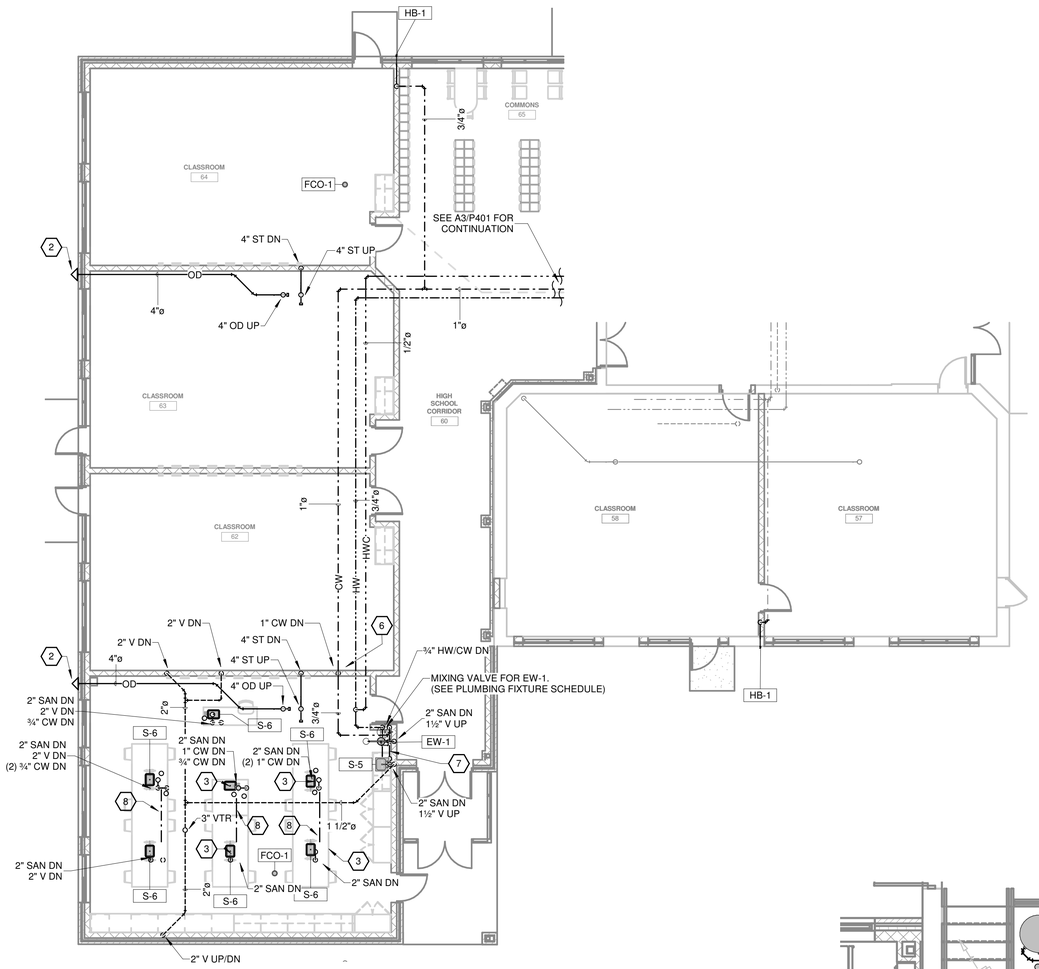
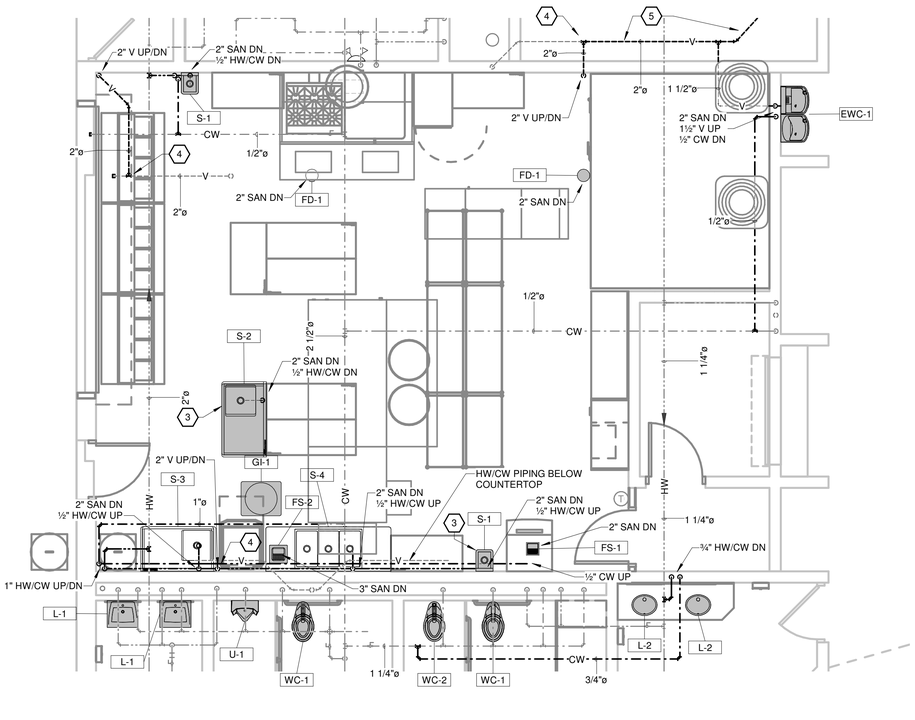
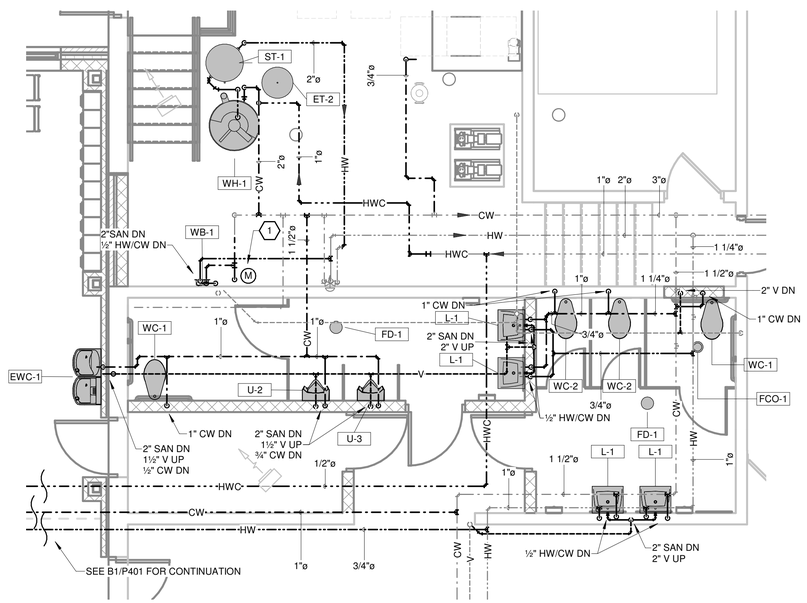


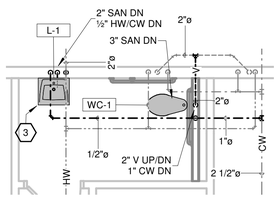
B1 ENLARGED HIGH SCHOOL PROPOSED PLUMBING PLAN
1/8" = 1'-0"



C4 ENLARGED KITCHEN PROPOSED PLUMBING PLAN
1/4" = 1'-0"



A3 ENLARGED BATHROOMS PROPOSED PLUMBING PLAN
1/4" = 1'-0"



A1 ENLARGED STAFF TOILET PROPOSED PLUMBING PLAN
1/4" = 1'-0"

KEYNOTES

1. EXTEND WATER PIPING TO RELOCATED METER.
2. PROVIDE DOWNSPOUT. SEE PLUMBING FIXTURE SCHEDULE.
3. PROVIDE AIR ADMITTANCE VALVE. INSTALL PER MPC-2015 SECTION 918.
4. CONNECT NEW VENT TO EXISTING VENT PIPING.
5. REPLACE EXISTING 1½" VENT PIPING WITH NEW 2" VENT PIPING.
6. PROVIDE SHUT-OFF ABOVE CEILING FOR CW TO LAB ISLANDS.
7. ROUTE HW/CW PIPING TIGHT TO BACK WALL AND NEAR THE FLOOR.
8. PROVIDE 1/2" CW CONCEALED IN CABINETS BETWEEN SINKS IN THE SAME ISLAND.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: SP
CHECKED: JH
APPROVED: JG

ENLARGED 1ST FLOOR PROPOSED PLUMBING PLANS

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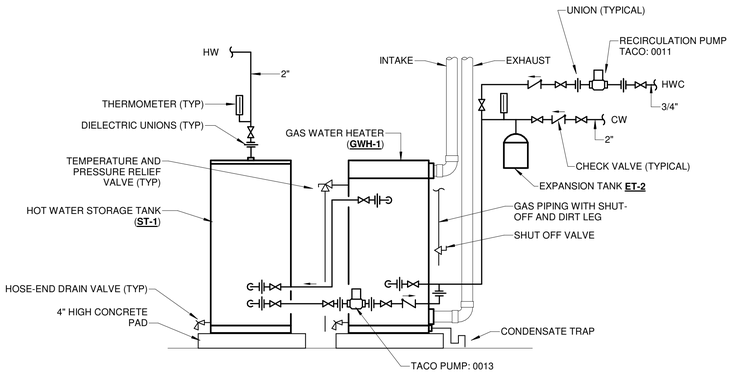
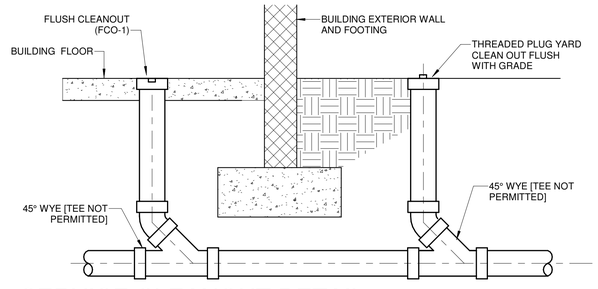
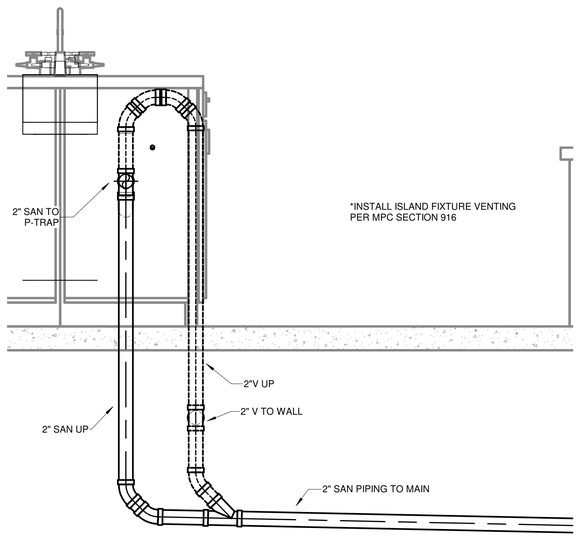


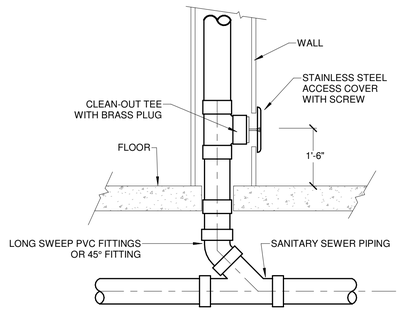
C1 WATER HEATER PIPING DIAGRAM
NOT TO SCALE



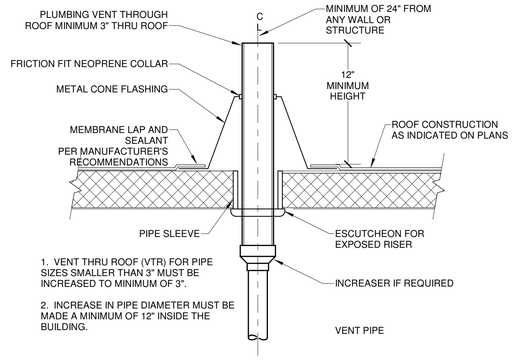
B1 SERVICE CLEANOUT DETAIL
12" = 1'-0"



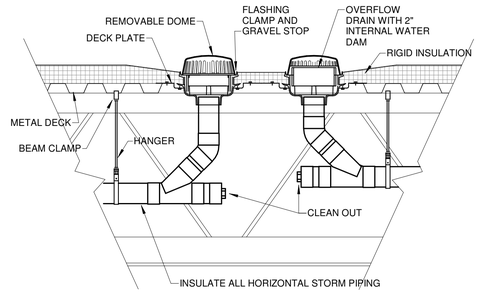
A1 Island Fixture Venting Detail
1" = 1'-0"



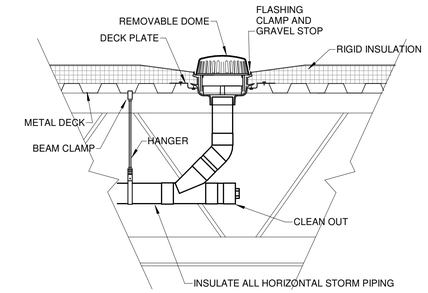
D3 WALL CLEANOUT DETAIL
NOT TO SCALE

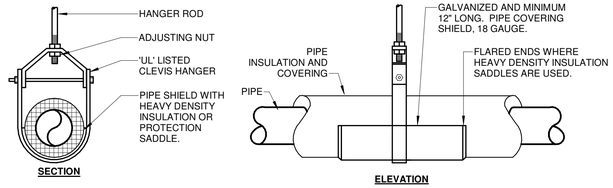


D4 VENT THROUGH ROOF DETAIL
NOT TO SCALE

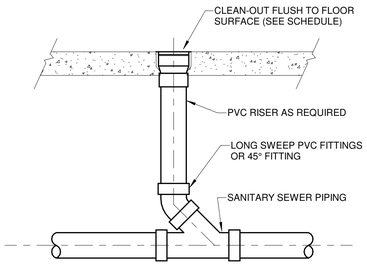


C3 ROOF DRAIN DETAIL
NOT TO SCALE

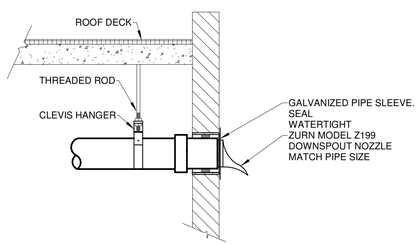




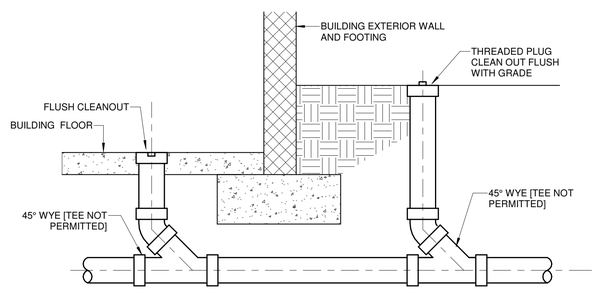
B3 PIPE HANGER DETAIL
NOT TO SCALE



B5 FLOOR CLEANOUT DETAIL
NOT TO SCALE



A3 DOWN SPOUT - HIGH WALL DETAIL
NOT TO SCALE



A4 CLEANOUT DETAIL
NOT TO SCALE

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: JH
CHECKED: SPu
APPROVED: JG

PLUMBING DETAILS

P501

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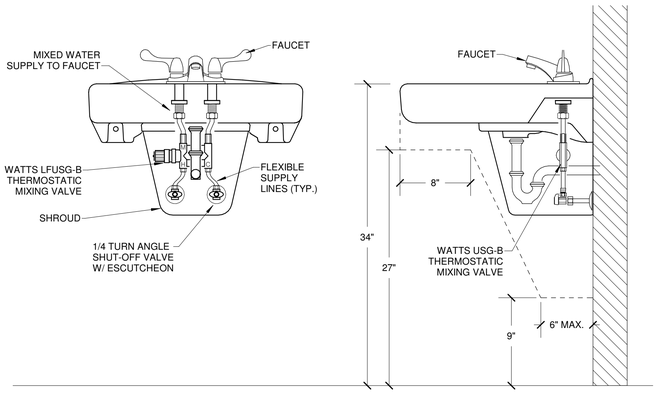
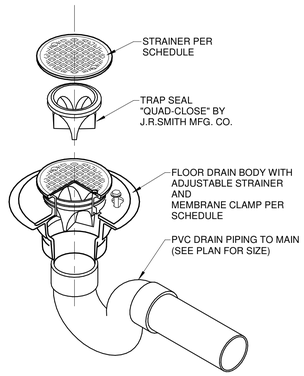
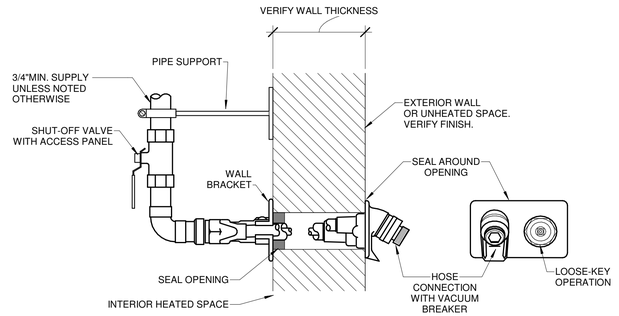
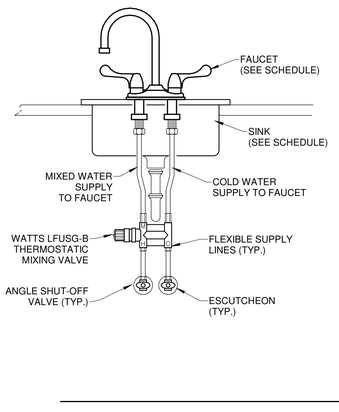


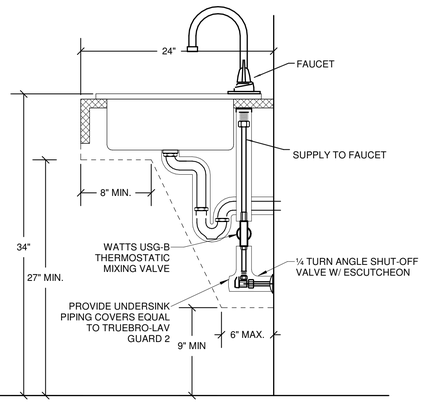


C3 FLOOR DRAIN DETAIL
12" = 1'-0"

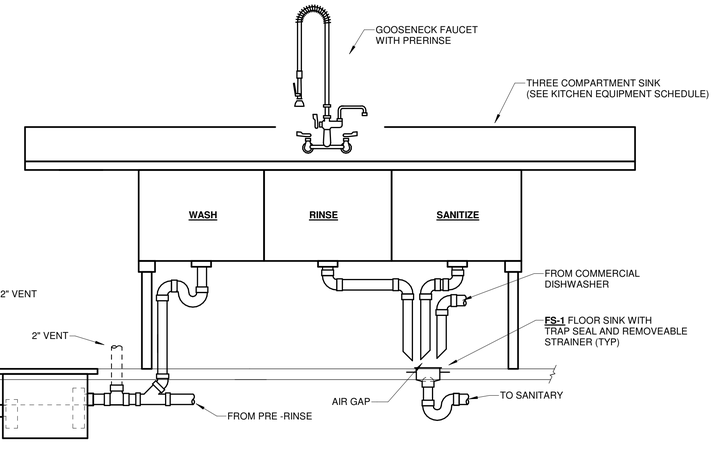


D4 HOSE BIBB DETAIL
NOT TO SCALE

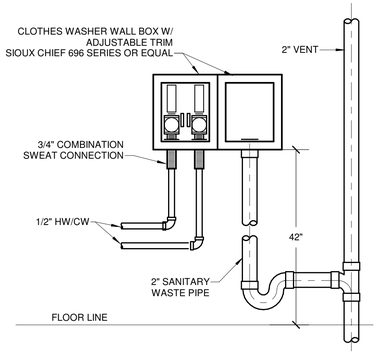




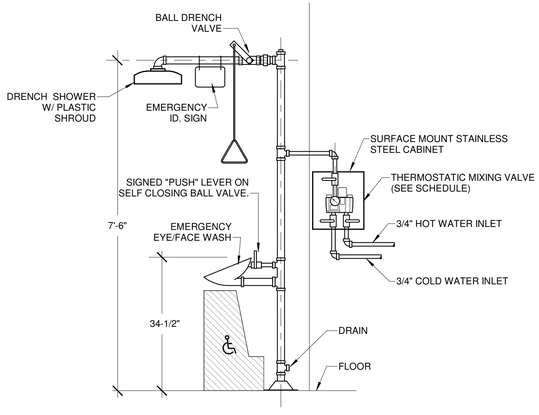
B1 MIXING VALVE DETAIL
NOT TO SCALE



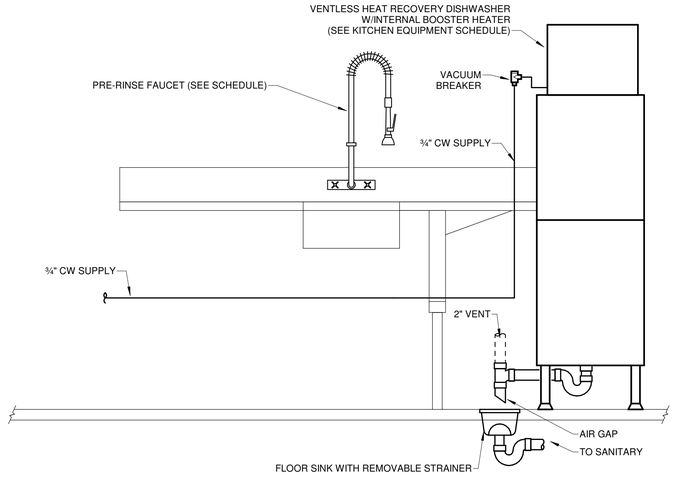
B4 GREASE INTERCEPTOR DETAIL
NOT TO SCALE



A1 WASHING MACHINE OUTLET DETAIL
NOT TO SCALE



A2 EMERGENCY EYEWASH SHOWER DETAIL
NOT TO SCALE



A4 DISHWASHER DETAIL
NOT TO SCALE

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OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY:	SPa
DRAWN BY:	SPa
CHECKED:	SPu
APPROVED:	JG

PLUMBING DETAILS

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STORAGE TANK SCHEDULE				
ID	MANUFACTURER	MODEL NUMBER	CAPACITY (GAL)	SIZE (IN)
ST-1	A.O. SMITH	TJV-200M	175	32x77

EXPANSION TANK SCHEDULE							
ID	MANUFACTURER	MODEL NUMBER	GALLON CAPACITY (GAL)	CONNECTION DIAMETER (IN)	DIMENSIONS (IN)	SHIPPING WEIGHT (LBS)	NOTES
ET-2	FLEXCON	WHV120	32	1"	21"Wx28"H	60	1

1. PROVIDE WITH ISOLATION VALVE.

GAS WATER HEATER SCHEDULE															
ID	MANUFACTURER	MODEL NUMBER	INPUT CAPACITY (BTU)	CAPACITY (GAL)	RCOVERY RATE @ 100°F RISE (GPH)	SIZE (IN)	WATER CONN. (IN)	GAS CONN. (IN)	VENT/ COMB. CONN. (IN)	SHIPPING WEIGHT (LBS)	ELECTRICAL				NOTES
											VOLTS	PHASE	HP	AMPS	
WH-1	A.O. SMITH	BTH-400A	399,900	119	460	33x75	1-1/2"	1-1/2"	4"	855	120	1	-	-	1,2

1. PROVIDE PRESSURE AND TEMPERATURE RELIEF VALVE AND PIPE TO FLOOR DRAIN.
2. PROVIDE 4" CONCRETE HOUSEKEEPING PAD.

PLUMBING FIXTURE SCHEDULE												
ID	ADA	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MATERIAL	BASIN DIMENSIONS (IN)	TRIM MANUF.	TRIM MODEL	HOT WATER (IN)	COLD WATER (IN)	SANITARY (IN)	NOTES
EW-1	-	COMBINATION SHOWER AND EYEWASH STATION	BRADLEY	S19314AA1BBAA00	GALVANIZED STEEL/PLASTIC	-	-	-	3/4"	3/4"	1-1/2"	3
EWC-1	YES	WALL-MOUNT ELECTRIC WATER COOLER	ELKAY	EZSTL8WSLK	STAINLESS STEEL	-	-	-	-	1/2"	1-1/2"	6
FCO-1	-	6" ADJUSTABLE FLOOR CLEANOUT	ZURN	Z1400-BZ	CAST IRON	-	-	-	-	-	PER PLAN	
FD-1	-	6" DIAMETER FLOOR DRAIN WITH STRAINER	ZURN	Z415BZ	CAST IRON	6"	-	-	-	-	PER PLAN	4
FS-1	-	8"x8"x6"D FLOOR SINK WITH 1/2 GRATE	ZURN	Z1910	CAST IRON	-	-	-	-	-	PER PLAN	
FS-2	-	12"x12"x6"D FLOOR SINK WITH 1/2 GRATE	ZURN	Z1900	CAST IRON	-	-	-	-	-	PER PLAN	
GI-1	-	25 GPM GREASE INTERCEPTOR	SCHIER	GB1	POLYETHYLENE	27x23x12	-	-	-	-	3"	11
HB-1	-	AUTOMATIC DRAINING HOSE BIBB WITH VACUUM BREAKER	WOODFORD	67	BRASS	-	-	-	-	3/4"	-	
L-1	YES	WALL MOUNT LAVATORY	KOHLER	K-2007	VITREOUS CHINA	-	KOHLER	K-7516	1/2"	1/2"	1-1/2"	1
L-2	YES	UNDER-COUNTER MOUNT LAVATORY	KOHLER	K-2210	VITREOUS CHINA	-	KOHLER	K-7516	1/2"	1/2"	1-1/2"	1
OD-1	-	OVERFLOW DRAIN DOWNSPOUT NOZZLE	ZURN	Z100-C-EA-R-W2	CAST IRON	-	-	-	-	-	-	10
RD-1	-	15" ROOF DRAIN	ZURN	Z100-C-EA	CAST IRON	-	-	-	-	-	-	
S-1	YES	1-BASIN WALL MOUNT STAINLESS STEEL HANDWASH SINK WITH FAUCET	SERV-WARE	HS10-CWP	STAINLESS STEEL	9x9x4	-	-	1/2"	1/2"	1-1/2"	
S-2	-	4' STAINLESS STEEL WORK TABLE WITH INTEGRAL SINK AND FAUCET	SERV-WARE	TSF-3048-L	STAINLESS STEEL	16x20x12	-	-	1/2"	1/2"	1-1/2"	
S-3	-	1-BASIN PRE-RINSE SINK W/ RIGHT SIDE BOARD	SERV-WARE	1CWPH182R-24	STAINLESS STEEL	18x24x14	ZURN	Z842X1-XL-AF	1/2"	1/2"	1-1/2"	
S-4	-	3-COMPARTMENT WASH SINK	SERV-WARE	D3CWP16202-18	STAINLESS STEEL	(3) 16x20x12	ZURN	Z842X1-XL-AF	1/2"	1/2"	1-1/2"	
S-5	YES	1-BASIN COUNTERTOP KITCHEN SINK	ELKAY	LRADQ221965	STAINLESS STEEL	(1) 18x14x6-3/8	ELKAY	786-GN2FCXKABCP	1/2"	1/2"	1-1/2"	1
S-6	-	1-BASIN UNDERMOUNT EXOPY LAB SINK	DURCON	U15C	EPOXY	(1) 16x12x8	WATER SAVER	L611VB	1/2"	1/2"	1-1/2"	12
S-7	YES	1-BASIN DROP-IN EXPOXY LAB SINK	DURCON	A05	EPOXY	(1) 14x10x5	WATER SAVER	L611VB	1/2"	1/2"	1-1/2"	1,12
SH-1	-	2-STATION WALL SHOWER	BRADLEY	WS-2W-HD-SF-LBJ-ST-RSD-SHV-VS	STAINLESS STEEL	-	-	-	3/4"	3/4"	-	7
SH-2	YES	3-STATION WALL SHOWER	BRADLEY	WS-2W-HN-HD-SF-VR-LBJ-SHV-RSD-VS	STAINLESS STEEL	-	-	-	3/4"	3/4"	-	7
SH-3	YES	3-STATION WALL SHOWER	BRADLEY	WS-2W-HN-HD-SF-VL-LBJ-SHV-RSD-VS	STAINLESS STEEL	-	-	-	3/4"	3/4"	-	7
U-1	-	-	-	-	-	-	SLOAN	8186-0.5	-	3/4"	-	8,9
U-2	YES	WALL HUNG URINAL WITH FLUSH VALVE	KOHLER	4991-ET	VITREOUS CHINA	-	SLOAN	8186-0.5	-	3/4"	-	5
U-3	-	WALL HUNG URINAL WITH FLUSH VALVE	-	-	VITREOUS CHINA	-	SLOAN	8186-0.5	-	3/4"	-	
WB-1	-	WASHING MACHINE OUTLET WITH ARRESTORS	OATEY	8983	BRASS	-	-	-	1/2"	1/2"	2"	
WCO-1	-	WALL CLEANOUT WITH STAINLESS COVER AND PLUG	ZURN	Z1468	STAINLESS STEEL	-	-	-	-	-	VARIES	
WC-1	YES	FLOOR-MOUNT TANK-TYPE WATER CLOSET COMFORT HEIGHT (PRES ASSIST)	KOHLER	Z5560	VITREOUS CHINA	-	-	-	-	1/2"	3"	2,5
WC-2	-	FLOOR-MOUNT TANK-TYPE WATER CLOSET COMFORT HEIGHT (PRES ASSIST)	KOHLER	Z5570	VITREOUS CHINA	-	-	-	-	1/2"	3"	2
WCO-1	-	WALL CLEANOUT WITH STAINLESS COVER AND PLUG	ZURN	Z1468	STAINLESS STEEL	-	-	-	-	-	VARIES	

1. PROVIDE THERMOSTATIC MIXING VALVE AND TRAP WRAPS PER ADA REQUIREMENTS.
2. PROVIDE OPEN FRONT PLASTIC ELONGATED BOWL SEAT. FLUSH HANDLE TO WIDE SIDE OF STALL.
3. PROVIDE WITH SEPERATE APPROVED THERMOSTATIC MIXING VALVE EQUAL TO BRADLEY S-19-2150 (EFX20).
4. PROVIDE WITH TRAP SEAL EQUAL TO "QUAD-CLOSE" BY J.R. SMITH.
5. MOUNT PLUMBING FIXTURE PER ADA REQUIREMENTS. VERIFY WITH GENERAL CONTRACTOR.
6. PROVIDE WITH SHROUD AND ALL ACCESORIES TO BE ADA COMPLIANT.
7. PROVIDE WITH 6'-0" SHOWERHEAD HEIGHT.
8. CONNECT TO EXISTING CW SUPPLY.
9. REMOVE EXISTING FLUSH VALVE AND REPLACE WITH NEW.
10. PROVIDE WITH ZURN Z199-ZARB DOWNSPOUT.
11. PROVIDE WITH RISER AS REQUIRED AND VENTING PER MANUFACTURER'S RECOMMENDATIONS.
12. PROVIDE WITH 180 DEGREE HANDLE CONFIGURATION.

PIPING INSULATION TYPE SCHEDULE	
INSULATION TYPE	DESCRIPTION
P-1	ASTM C547, MOLDED GLASS FIBER PIPE INSULATION, OPERATING TEMPERATURE RANGE: 0 TO 850 DEG F. VAPOR BARRIER JACKET: ASTM C1136, TYPE I, FACTORY APPLIED REINFORCED FOIL DRAFT WITH SELF SEALING ADHESIVE JOINTS.
P-2	ASTM C534, TYPE I, FLEXILE, CLOSED CELL ELASTOMERIC INSULATION, TUBULAR, OPERATING TEMPERATURE RANGE: MINUS 70 TO 180 DEG F.

PLUMBING PIPE INSULATION SCHEDULE			
SYSTEM TYPE	INSUL. TYPE	PIPE SIZES	INSULATION THICKNESS
DOMESTIC HOT WATER SUPPLY AND RECIRC	P-1	ALL SIZES	1"
DOMESTIC COLD WATER	P-1 P-2	1-1/4" AND SMALLER 1-1/2" AND LARGER	1-1/2" 1"
STORM AND OVERFLOW PIPING (ABOVE GROUND WITHIN BUILDING)	P-1 P-2	ALL SIZES	1/2"
STORM AND OVERFLOW PIPING (ABOVE GROUND WITHIN CANOPY)	P-1 P-2	ALL SIZES	1"
SANITARY SEWER PIPING (ABOVE GROUND WITHIN BUILDING)	P-1 P-2	ALL SIZES	1/2"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:
- OWNER REVIEW — DATE: 4/02/2021
- BIDSET — DATE: 4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: 097-01165

DESIGNED BY: JH
DRAWN BY: JH
CHECKED: SPu
APPROVED: JG

PLUMBING SCHEDULES

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ELECTRICAL ABBREVIATIONS, SYMBOLS AND NOTES

ABBREVIATIONS AND SYMBOLS LEGEND

ABBREVIATIONS

A	AMPERES
AV	PANELBOARD AV
AV	AUDIO/VIDEO
A/V	AUDIO/VIDEO
C	PANELBOARD KPP-C
C.B.	CIRCUIT BREAKER
GFCI	GROUND FAULT CIRCUIT INTERUPTING
GFI	GROUND FAULT CIRCUIT INTERUPTING
KVA	KILO-VOLT AMPS (ELECTRIC POWER)
QT	QUAD TUBE (FLUORESCENT LAMP)
TT	TWIN TUBE (FLUORESCENT LAMP)
TYP	TYPICAL
V	VOLT
4W	FOUR WIRE
3ø	THREE PHASE

LIGHTING SYMBOLS

- A — LIGHT FIXTURE - RECESSED FLUORESCENT OR LED
- LIGHT FIXTURE - EMERGENCY (WALL MOUNT)
- LIGHT FIXTURE - EXIT/EMERGENCY (DIRECTIONAL ARROWS WHERE INDICATED ON PLANS) (WALL OR CEILING MOUNT)
- B — LUMINARE - STANDARD FLUORESCENT STRIP LIGHT
- LUMINARE - RECESSED FLUORESCENT OR INCANDESCENT
- LUMINARE - SURFACE MOUNT FLUORESCENT OR INCANDESCENT
- C — LIGHT FIXTURE - SURFACE FLUORESCENT OR LED

SWITCHES AND RECEPTACLE SYMBOLS

- DUPLEX RECEPTACLE
- FLOOR RECEPTACLE (GFI PROTECTED WHERE REQUIRED)
- QUAD RECEPTACLE (GFI PROTECTED WHERE REQUIRED)
- G — GROUND FAULT INTERUPTING RECEPTACLE. PROVIDE WEATHER-PROOF WHILE IN USE COVER WHERE LOCATED OUTDOORS.
- C — COUNTERTOP RECEPTACLE (GFCI WHERE REQUIRED)
- TOP SWITCHED RECEPTACLE
- IG — ISOLATED GROUND RECEPTACLE
- POLE RECEPTACLE
- S — SWITCH - SINGLE POLE
- S_3 — SWITCH - THREE WAY
- S_4 — SWITCH - FOUR WAY
- SS — DUAL LEVEL SWITCHING - SWITCH OUTER (2) LAMPS SEPARATE FROM CENTER LAMP
- S_K — SWITCH - SINGLE POLE, KEYED
- S_T — SWITCH - SINGLE POLE, TIMED
- S_D — SWITCH - DIMMER
- S_P — SWITCH - PILOT
- TC — SWITCH - TIME CLOCK
- SWITCH - PUSH BUTTON
- M_S — OCCUPANCY SENSOR (CEILING MOUNTED)
- S_M — OCCUPANCY SENSOR (WALL MOUNTED)
- PC — PHOTO CELL

TELEPHONE, DATA AND COMMUNICATION SYMBOLS

- TELEPHONE/DATA OUTLET. PROVIDE 1"CONDUIT WITH PULL STRING PER LOCATION. DATA CABLES AND TERMINATIONS BY OTHERS.
- TELEPHONE/DATA OUTLET - FLOOR MOUNTED
- WIRELESS ACCESS POINT (WAP)
- SPEAKER - WALL MOUNTED
- SPEAKER - CEILING MOUNTED
- IC — INTERCOM
- A — AMPLIFIER
- C — CLOCK - WALL MOUNTED
- TV — TELEVISION CABLE OUTLET
- J — JUNCTION BOX
- J — JUNCTION BOX
- SECURITY CAMERA (OUTDOOR/INDOOR PER PLAN)
- DL — DOOR ALARM KEYPAD. PROVIDE 1"CONDUIT WITH PULL STRING PER LOCATION. DATA CABLES AND TERMINATIONS BY OTHERS.

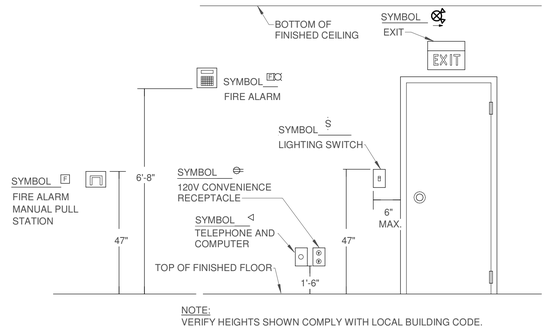
MISCELLANEOUS SYMBOLS

- DISCONNECT
- FUSED DISCONNECT
- STARTER DISCONNECT
- CONNECTION TO MOTOR
- T — THERMOSTAT
- TRANSFORMER
- IN-LINE FUSE
- GROUND
- M — ELECTRIC METER
- FUSED SWITCH
- NORMALLY CLOSED CONTACT
- NORMALLY OPEN CONTACT
- CIRCUIT BREAKER WITH SIZE AS NOTED
- NORMALLY CLOSED SWITCH
- NORMALLY OPEN SWITCH
- DISCONNECT
- N L E — AUTOMATIC TRANSFER SWITCH (ATS)
- PANEL - SURFACE MOUNT
- PANEL - RECESSED

FIRE SAFETY AND ALARM SYMBOLS

- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ALARM ANNUNCIATOR PANEL
- FIRE ALARM BOOSTER PANEL
- SD — SMOKE DETECTOR
- H — HEAT DETECTOR
- CO — CARBON MONOXIDE DETECTOR
- D — DUCT SMOKE DETECTOR
- F — MANUAL PULL STATION
- FIRE ALARM HORN/STROBE (WALL MOUNTED)
- FIRE ALARM HORN/STROBE (CEILING MOUNTED)
- FIRE ALARM HORN/STROBE (WALL MOUNTED)
- FS — FLOW SWITCH
- TS — TAMPER SWITCH
- S — FIRE ALARM SPEAKER
- ELR — END OF LINE RESISTOR
- MAGNETIC DOOR HOLD OPEN
- GONG

NOTES & DETAILS



NOTE:
VERIFY HEIGHTS SHOWN COMPLY WITH LOCAL BUILDING CODE.

TYPICAL DEVICE MOUNTING HEIGHT

GENERAL NOTES:

1. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO NOTIFY OTHER CONTRACTORS TO ARRANGE CLEARANCES AND ACCESS OPENINGS FOR ALL LARGE ELECTRICAL EQUIPMENT.

2. IT SHALL BE UNDERSTOOD THAT THE ACT OF SUBMITTING A BID BY THE CONTRACTOR CARRIES WITH IT THE AGREEMENT TO ALL ITEMS AND CONDITIONS REFERRED OR INDICATED OR IMPLIED ON THE DRAWINGS AND THE SPECIFICATIONS AND NO CONSIDERATION WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED FOR WORK TO BE DONE.

3. THE ELECTRICAL INSTALLATION SHALL COMPLY WITH RULES AND REGULATIONS OF THE LATEST EDITION OF THE OCCUPATIONAL SAFETY AND HEALTH ACT, NATIONAL ELECTRICAL CODE, STATE ELECTRICAL CODE, LOCAL MUNICIPAL CODE AND ANY OTHER BOARD HAVING JURISDICTION OVER THE ELECTRICAL INSTALLATION.

4. THE ELECTRICAL CONTRACTOR SHALL NOT ASSUME THAT ANY DRAWING OR SPECIFICATION FORMING A PART OF THE CONTRACT DOCUMENTS AUTHORIZES THE VIOLATION OF ANY CODE, REGULATION OR STANDARD. WHERE CONFLICTS ARISE, IT SHALL BE DEEMED THAT THE CONTRACTOR HAS ESTIMATED THE COST OF ALL WORK TO BE COMPLETED IN ACCORD WITH THE PREVAILING CODE.

5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ELECTRICAL WORK AND SHALL PAY ALL REQUIRED FEES AND SALES OR USE TAX AND FINES AS APPLICABLE TO THIS BRANCH OF WORK.

6. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL DELIVER TO THE OWNER WITHOUT COST ALL REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

7. THE INTENT AND OBJECT OF THESE SPECIFICATIONS AND DRAWINGS IS TO INCLUDE A COMPLETE WIRING SYSTEM FROM SERVICE PANEL TO EACH AND EVERY OUTLET INDICATED OR SPECIFIED, INCLUDING CONNECTING ALL ELECTRICAL DEVICES AND/OR EQUIPMENT FURNISHED BY THE OWNER OR OTHER CONTRACTORS.

8. THE DRAWINGS, WHICH CONSTITUTE A PART OF THE CONTRACT, ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND OUTLETS, LOCATION OF SWITCHES, PANELBOARD AND OTHER WORK, BUT EXTREME ACCURACY IS NOT GUARANTEED AND FIELD VERIFICATION OF ALL LOCATIONS AND DIMENSIONS IS DIRECTED.

9. GROUND ALL EQUIPMENT INCLUDING CONDUIT, RECEPTACLES, LIGHTING, MOTORS, PIPING AS PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, AND AS SHOWN ON THESE DRAWINGS.

10. PROVIDE ONLY MATERIALS THAT ARE NEW OF THE TYPE AND QUALITY SPECIFIED, WHERE UNDERWRITERS LABORATORIES HAVE ESTABLISHED STANDARDS FOR SUCH MATERIALS, PROVIDE ONLY MATERIALS BEARING THE U.L. LABEL.

11. ARCHITECTURAL DRAWINGS SHOWING DIMENSIONS FOR ELECTRICAL DEVICES TAKE PRECEDENCE OVER THE ELECTRICAL DRAWINGS.

12. SYSTEMS SHALL BE FREE FROM SHORTS AND GROUNDS. TEST FOR MECHANICAL AND ELECTRICAL DEFECTS. VERIFY CORRECT CONNECTION OF HOT, NEUTRAL AND GROUND CONDUCTORS. ALL CONDUCTORS SHALL BE COLOR CODED AND LABELED WITH ZONE IDENTIFICATION FOR THE CASE OF LIGHTING.

13. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, WITHIN THREE DAYS AFTER RECEIPT OF NOTICE OF SUCH NON-COMPLIANCE, REMOVE THE NON-COMPLYING ITEMS FROM THE JOB AND REPLACE WITH NEW ITEMS MEETING THE REQUIREMENTS. COSTS FOR REPAIR OF NON-COMPLIANCE WORK SHALL BE BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.

14. UPON COMPLETION OF THE WORK, THOROUGHLY CLEAN ALL DEVICES AND EQUIPMENT.

15. ALL TELECOM, TV CABLE AND DATA CABLE SHALL BE DEDICATED RUNS FROM THE OUTLET LOCATIONS TO THE BACKBOARD LOCATION.

16. WORK ASSIGNMENTS INFERRED BY THE DRAWINGS AND NOTES INCLUDED IN THESE PROJECT DOCUMENTS ARE INFORMATIONAL ONLY AND ARE NOT INTENDED TO RELIEVE THE BIDDING CONTRACTOR OF HIS OBLIGATION TO THE OWNER TO PROVIDE A COMPLETE AND COORDINATED PROJECT. COMPREHENSIVE SUBCONTRACTOR COORDINATION AND FINAL WORK ASSIGNMENTS TO SUBCONTRACTORS ARE THE SOLE RESPONSIBILITY OF THE BIDDING CONTRACTOR.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

ELECTRICAL ABBREVIATIONS

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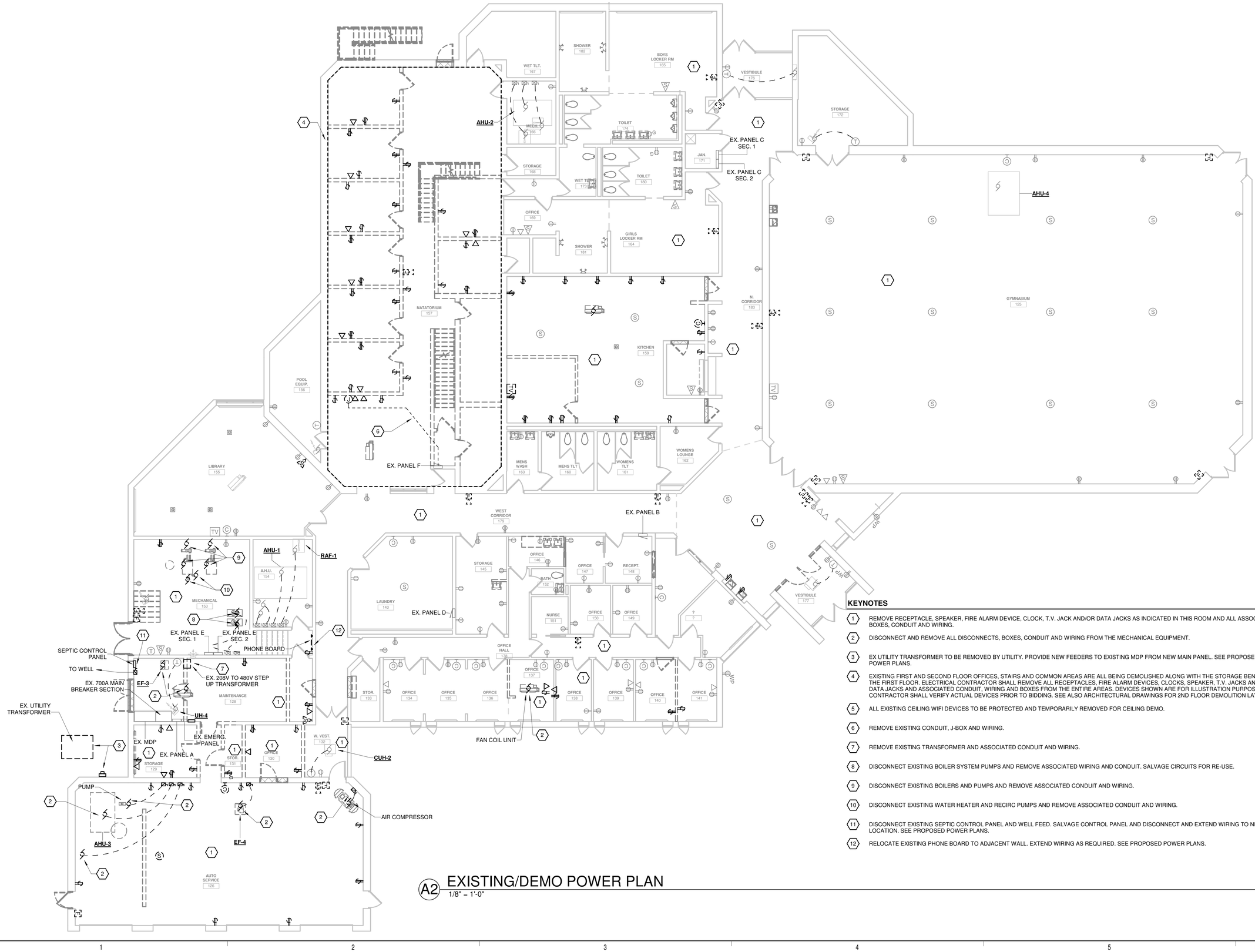

KEYNOTES

1. REMOVE RECEPTACLE, SPEAKER, FIRE ALARM DEVICE, CLOCK, T.V. JACK AND/OR DATA JACKS AS INDICATED IN THIS ROOM AND ALL ASSOCIATED BOXES, CONDUIT AND WIRING.
2. DISCONNECT AND REMOVE ALL DISCONNECTS, BOXES, CONDUIT AND WIRING FROM THE MECHANICAL EQUIPMENT.
3. EX UTILITY TRANSFORMER TO BE REMOVED BY UTILITY. PROVIDE NEW FEEDERS TO EXISTING MDP FROM NEW MAIN PANEL. SEE PROPOSED POWER PLANS.
4. EXISTING FIRST AND SECOND FLOOR OFFICES, STAIRS AND COMMON AREAS ARE ALL BEING DEMOLISHED ALONG WITH THE STORAGE BENEATH THE FIRST FLOOR. ELECTRICAL CONTRACTOR SHALL REMOVE ALL RECEPTACLES, FIRE ALARM DEVICES, CLOCKS, SPEAKER, T.V. JACKS AND/OR DATA JACKS AND ASSOCIATED CONDUIT, WIRING AND BOXES FROM THE ENTIRE AREAS. DEVICES SHOWN ARE FOR ILLUSTRATION PURPOSES. CONTRACTOR SHALL VERIFY ACTUAL DEVICES PRIOR TO BIDDING. SEE ALSO ARCHITECTURAL DRAWINGS FOR 2ND FLOOR DEMOLITION LAYOUT.
5. ALL EXISTING CEILING WIFI DEVICES TO BE PROTECTED AND TEMPORARILY REMOVED FOR CEILING DEMO.
6. REMOVE EXISTING CONDUIT, J-BOX AND WIRING.
7. REMOVE EXISTING TRANSFORMER AND ASSOCIATED CONDUIT AND WIRING.
8. DISCONNECT EXISTING BOILER SYSTEM PUMPS AND REMOVE ASSOCIATED WIRING AND CONDUIT. SALVAGE CIRCUITS FOR RE-USE.
9. DISCONNECT EXISTING BOILERS AND PUMPS AND REMOVE ASSOCIATED CONDUIT AND WIRING.
10. DISCONNECT EXISTING WATER HEATER AND RECIRC PUMPS AND REMOVE ASSOCIATED CONDUIT AND WIRING.
11. DISCONNECT EXISTING SEPTIC CONTROL PANEL AND WELL FEED. SALVAGE CONTROL PANEL AND DISCONNECT AND EXTEND WIRING TO NEW LOCATION. SEE PROPOSED POWER PLANS.
12. RELOCATE EXISTING PHONE BOARD TO ADJACENT WALL. EXTEND WIRING AS REQUIRED. SEE PROPOSED POWER PLANS.

A2 EXISTING/DEMO POWER PLAN
1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

EXISTING/DEMO POWER PLAN

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KEYNOTES

1. REMOVE LIGHT FIXTURE(S) AND/OR SWITCHE(S) IN THIS ROOM AND ALL ASSOCIATED CONDUIT, WIRING AND BOXES.
2. REMOVE WALL PACK AND ALL ASSOCIATED CONDUIT AND WIRING. PROVIDE J-BOX ABOVE CEILING, WHERE APPLICABLE, AND EXTEND WIRING TO KEEP THE CIRCUIT ACTIVE.
3. REMOVE AND REPLACE EXISTING LIGHT FIXTURES AND/OR SWITCHES. SEE PROPOSED LIGHTING FOR NEW LIGHTING. WHERE NEW LIGHTS ARE NOT INSTALLED IN THE SAME LOCATION AS EXISTING LIGHTS, REMOVE ASSOCIATED CONDUIT WIRING AND BOXES AND EXTEND EXISTING CIRCUIT TO NEW LIGHT AND/OR SWITCH LOCATION.
4. EXISTING FIRST AND SECOND FLOOR OFFICES, STAIRS AND COMMON AREAS ARE ALL BEING DEMOLISHED ALONG WITH THE STORAGE BENEATH THE FIRST FLOOR. ELECTRICAL CONTRACTOR SHALL REMOVE ALL LIGHTS AND SWITCHES AND ASSOCIATED CONDUIT, WIRING AND BOXES FROM THE ENTIRE AREAS. DEVICES SHOWN ARE FOR ILLUSTRATION PURPOSES. CONTRACTOR SHALL VERIFY ACTUAL DEVICES PRIOR TO BIDDING. SEE ALSO ARCHITECTURAL DRAWINGS FOR 2ND FLOOR DEMOLITION LAYOUT.

A2 EXISTING/DEMO LIGHTING PLAN
1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

EXISTING/DEMO LIGHTING PLAN

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Branch Panel: EX. EMERG. PANEL

Location: ELEC. 54
Supply From:
Mounting: Surface
Enclosure:

Volts: 120/208 Single
Phases: 1
Wires: 3

A.I.C. Rating:
Mains Type:
Mains Rating: 100 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	Exit Lights	20 A	1	0 VA	0 VA			1	20 A	Exit lights	2
3	Emergency Lights	20 A	1			0 VA	0 VA	1	20 A	Fire Alarm	4
5	Emergency Lights	20 A	1	0 VA							6
			Total Load:	0 VA		0 VA					
			Total Amps:	0 A		0 A					
			Total Connected Load:	0 VA							

Legend:

Branch Panel: EX. PANEL C SEC. 1

Location: JAN. 40
Supply From: EX. MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1	Spare	--	20	1	0	0					1	20	--	Spare	2
3	Spare	--	20	1			0	0			1	20	--	Spare	4
5	Spare	--	20	1					0	0	1	20	--	Spare	6
7	Spare	--	20	1	0	0					1	20	--	Spare	8
9	Spare	--	20	1			0	0			1	20	--	Spare	10
11									0	0	3	15	--	AHU-2	12
13	Spare	--	15	3	0	0									14
15							0	0							16
17									0	0	3	20	--	Spare	18
19	Spare	--	15	3	0	0									20
21							0	0			1	20	--	Spare	22
23	Spare	--	20	1					0	0	1	20	--	Spare	24
25	Spare	--	20	1	0	0					1	20	--	Spare	26
27	Spare	--	20	1			0	0			1	20	--	Spare	28
29	Spare	--	20	1					0	0	1	15	--	Spare	30
			Total Load:		0 VA		0 VA		0 VA						
			Total Amps:		0 A		0 A		0 A						
			Total Connected Load:		0 VA										

Legend:

Branch Panel: EX. PANEL C SEC. 2

Location: JAN. 40
Supply From: EX. PANEL C SEC. 1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1	Spare	--	20	1	0	0					1	20	--	Spare	2
3	Spare	--	20	1			0	0			1	20	--	Spare	4
5	Spare	--	20	1					0	0	1	20	--	Spare	6
7	Spare	--	20	2	0	0					1	20	--	Spare	8
9							0	0			2	20	--	Spare	10
11	Spare	--	20	2					0	0					12
13					0	0									14
15	Spare	--	20	1			0	0			3	15	--	AHU - Gym	16
17	Spare	--	20	1					0	0					18
19	Spare	--	20	1	0	0					1	20	--	Spare	20
21	Spare	--	20	1			0	0			1	20	--	Spare	22
23	Spare	--	20	1					0	0	2	30	--	Spare	24
25	Spare	--	20	1	0	0									26
27	Spare	--	15	1			0	0			1	20	--	Spare	28
29	Spare	--	20	1					0	0	1	20	--	Spare	30
			Total Load:		0 VA		0 VA		0 VA						
			Total Amps:		0 A		0 A		0 A						
			Total Connected Load:		0 VA										

Legend:

Branch Panel: EX. MDP

Location: ELEC. 54
Supply From: MAIN
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: SQUARE D

A.I.C. Rating:
Mains Type: Main Breaker
Mains Rating: 700 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1					0	0									2
3	EX. PANEL A		100	3			0	0			3	300		EX. PANEL D	4
5									0	0					6
7					0	0									8
9	Well Pump (Abandoned?)	--	100	3			0	0			3	125		EX. PANEL C	10
11									0	0					12
13					0	0									14
15	EX. PANEL B		100	3			0	0			3	100		EX. PANEL F	16
17									0	0					18
19					0										20
21	EX. PANEL E		100	3			0								22
23									0						24
25															26
27															28
29															30
			Total Load:		0 VA		0 VA		0 VA						
			Total Amps:		0 A		0 A		0 A						
			Total Connected Load:		0 VA										

Legend:
Note: Remove neutral to equipment grounding bonds.

Branch Panel: EX. PANEL A

Location: ELEC. 54
Supply From: EX. MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: SQUARE D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1	Spare	--	30	2	0	0					1	20	--	Outside Lights	2
3							0	0			1	20	--	Corridor Unit Vent	4
5	***Rec - Shop Office***	--	20	1					0	0	1	20	--	Lights - Corridor	6
7	***Lights - Shop***	--	20	1	0	0					1	20	--	***Rec - Shop E***	8
9	***Rec - Shop W, Shop N***	--	20	1			0	0			1	20	--	***Rec - Shop W***	10
11	Phone Equipment	--	20	1					0	0	1	20	--	***Lights - Shop Storage***	12
13	***Shop Office Lights***	--	20	1	0	0					1	20	--	Boiler Room Lights	14
15	Laundry Unit Vent	--	20	1			0	0			1	20	--	Rec - Storage, Outside	16
17	Laundry Rec	--	20	1					0	0					18
19	Laundry LIghts	--	20	1	0	0					2	20	--	Spare	20
21	Rec - Floor Library	--	20	1			0	0			1	20	--	***Lights - Shop***	22
23	Lights Library	--	20	1					0	0	1	20	--	Lights - This Room	24
25	Lights Library	--	20	1	0	0					1	20	--	Exhaust Fan This Room	26
27	Unit Heater This Room	--	20	1			0	0			2	30	--	Spare	28
29	Library Rec	--	20	1					0	0					30
31	Spare	--	20	2	0	0					1	20	--	Spare	32
33							0	0			1	20	--	Unit Heater - Pool Mech	34
35	A/C Fan Coil	--	20	2					0	0	1	20	--	Spare	36
37					0	0					1	20	--	Spare	38
39	Spare	--	40	2			0	0			2	40	--	A/C Condensing Unit	40
41									0	0					42
			Total Load:		0 VA		0 VA		0 VA						
			Total Amps:		0 A		0 A		0 A						
			Total Connected Load:		0 VA										

Legend:
Bold Italicized indicates circuit being removed.

Branch Panel: EX. PANEL B

Location: OFFICE 22
Supply From: EX. MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1	Rec. 28	--	20	1	0	0					1	20	--	Rec. 15-16	2
3	Rec. 24-28	--	20	1			0	0			1	20	--	Rec. 16-17	4
5	Lights 27-28	--	20	1					0	0	1	20	--	Lights 12-13-14-15	6
7	Bathroom Lights	--	20	1	0	0					1	20	--	Rec. 14-15	8
9	Entry Heater	--	20	1			0	0			1	20	--	Rec. 12-13	10
11	Rec. Entry	--	20	1					0	0	1	20	--	Lights 16-17-18-19-20	12
13	Lights Lobby	--	20	1	0	0					1	20	--	Rec. 17-18	14
15	Rec. Bathroom GFI	--	20	1			0	0			1	20	--	Rec. 19-20	16
17	Rec. 30	--	20	1					0	0	1	20	--	Lights 25-26-29 Ex. Rooms Lts	18
19	Lights 22-23-24-30	--	20	1	0	0					1	20	--	Lights Corridor-Waiting Area	20
21	Rec. 27-28	--	20	1			0	0			1	20	--	Rec. Waiting 10-22	22
23	Rec. Waiting Rm	--	20	1					0	0	1	20	--	Clocks	24
25	Rec. 22-25	--	20	1	0	0					1	20	--	Rec. 17-18	26
27	Rec. 25-26	--	20	1			0	0			1	20	--	Rec. 16	28
29	Rec. Lobby	--	20	1					0	0	1	20	--	Recepts.	30
31						0					1	20	--	Spare	32
33															34
35															36
37															38
39															40
41															42
			Total Load:		0 VA		0 VA		0 VA						
			Total Amps:		0 A		0 A		0 A						
			Total Connected Load:		0 VA										

Legend:

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

EXISTING PANEL SCHEDULES

ED601

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Branch Panel: EX. PANEL F

Location: MULTI-PURPOSE 45
Supply From: EX. MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1	Load	--	20	1	0	0					1	20	--	Load	2
3	Copy Room	--	20	1			0	0			1	20	--	Load	4
5	Load	--	20	1					0	0	1	20	--	Load	6
7	Load	--	20	1	0	0					1	20	--	Load	8
9	Load	--	20	1			0	0			1	20	--	Load	10
11	Load	--	20	1					0	0	1	20	--	Load	12
13	Load	--	20	1	0	0					1	20	--	Load	14
15	Load	--	20	1			0	0			1	20	--	Load	16
17	Load	--	20	1					0	0	1	20	--	Load	18
19	Comp. Rm. Rec.	--	20	1	0	0					1	20	--	Load	20
21	Load	--	20	1			0	0			1	20	--	Load	22
23	Load	--	20	1					0	0	1	20	--	Load	24
25	Load	--	20	1	0	0					1	20	--	Load	26
27	Load	--	20	1			0	0			1	20	--	Load	28
29	Load	--	20	1					0	0	1	20	--	Load	30
31	Load	--	20	1	0	0					1	20	--	Load	32
33	Load	--	20	1			0								34
35															36
37	Treadmills	--	20	1	0	0					1	20	--	Treadmills	38
39	Treadmills	--	20	1			0	0			1	20	--	Treadmills	40
41	Treadmills	--	20	1					0	0	1	20	--	Treadmills	42
				Total Load:	0 VA		0 VA		0 VA						
				Total Amps:	0 A		0 A		0 A						
				Total Connected Load:			0 VA								

Legend:

Branch Panel: EX. PANEL D

Location: SCHOOL STORE 21
Supply From: EX. MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 400 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1	Spare	--	20	1	0	0					1	20	--	Spare	2
3	Spare	--	20	1			0	0			1	20	--	Spare	4
5	Spare	--	20	1					0	0	1	20	--	Spare	6
7															8
9	Rooftop Unit Fitness Room	--	30	2			0								10
11									0						12
13															14
15															16
17	Exercise Fitness	--	20	1					0						18
19	Exercise Fitness	--	20	1	0										20
21	Exercise Fitness	--	20	1			0								22
23	Exercise Fitness	--	20	1					0						24
25	A/C Blower	--	20	2	0										26
27							0								28
29															30
				Total Load:	0 VA		0 VA		0 VA						
				Total Amps:	0 A		0 A		0 A						
				Total Connected Load:			0 VA								

Legend:

Branch Panel: EX. PANEL E SEC. 1

Location: MECHANICAL 51
Supply From: EX. MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 100 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1					0	0					1	15	--	Johnson Air Compressor	2
3	Sewage Pump	--	15	3			0	0			2	30	--	Johnson Air Compressor	4
5									0	0					6
7					0	0									8
9	Sewage Pump	--	15	3			0	0			3	15	--	Boiler Room Heater	10
11									0	0					12
13					0	0					1	20	--	***Hot water Circ Pumps***	14
15	***Exhaust Fan - Shop***	--	15	3			0	0			1	20	--	Spare	16
17									0	0	1	20	--	Desk and Fridge recepts	18
19	Honeywell Dryer - Controls	--	20	1	0										20
21	Spare	--	15	1			0								22
23	***Boiler Pump 1***	--	20	1					0						24
25	***Boiler Pump 2***	--	20	1	0										26
27	***Boiler 1***	--	20	1			0								28
29	***Boiler 2***	--	20	1					0						30
				Total Load:	0 VA		0 VA		0 VA						
				Total Amps:	0 A		0 A		0 A						
				Total Connected Load:			0 VA								

Legend:
Bold Italicized indicates circuit being removed.

Branch Panel: EX. PANEL E SEC. 2

Location: MECHANICAL 51
Supply From: EX. PANEL E SEC. 1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 100 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
1					0	0									2
3	***Air Compressor - Shop***	--	30	3			0	0			3	15	--	Spare	4
5									0	0					6
7					0	0									8
9	AHU - 1	--	15	3			0	0			3	15	--	***Circulator Pump 3 - Shop***	10
11									0	0					12
13					0	0									14
15	Recirc. Fan #1	--	15	3			0	0			3	15	--	Unit Heater - Shop, Fan Motor	16
17									0	0					18
19					0	0									20
21	Circulator Pump #1	--	15	3			0	0			3	15	--	***Car Exhaust Fan - Shop***	22
23									0	0					24
25					0	0									26
27	Circulator Pump #2	--	15	3			0	0			3	50	--	Spare	28
29									0	0					30
				Total Load:	0 VA		0 VA		0 VA						
				Total Amps:	0 A		0 A		0 A						
				Total Connected Load:			0 VA								

Legend:
Bold Italicized indicates circuit being removed.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/2/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY:	PM
DRAWN BY:	SP
CHECKED:	PM
APPROVED:	JG

EXISTING PANEL SCHEDULES

ED602

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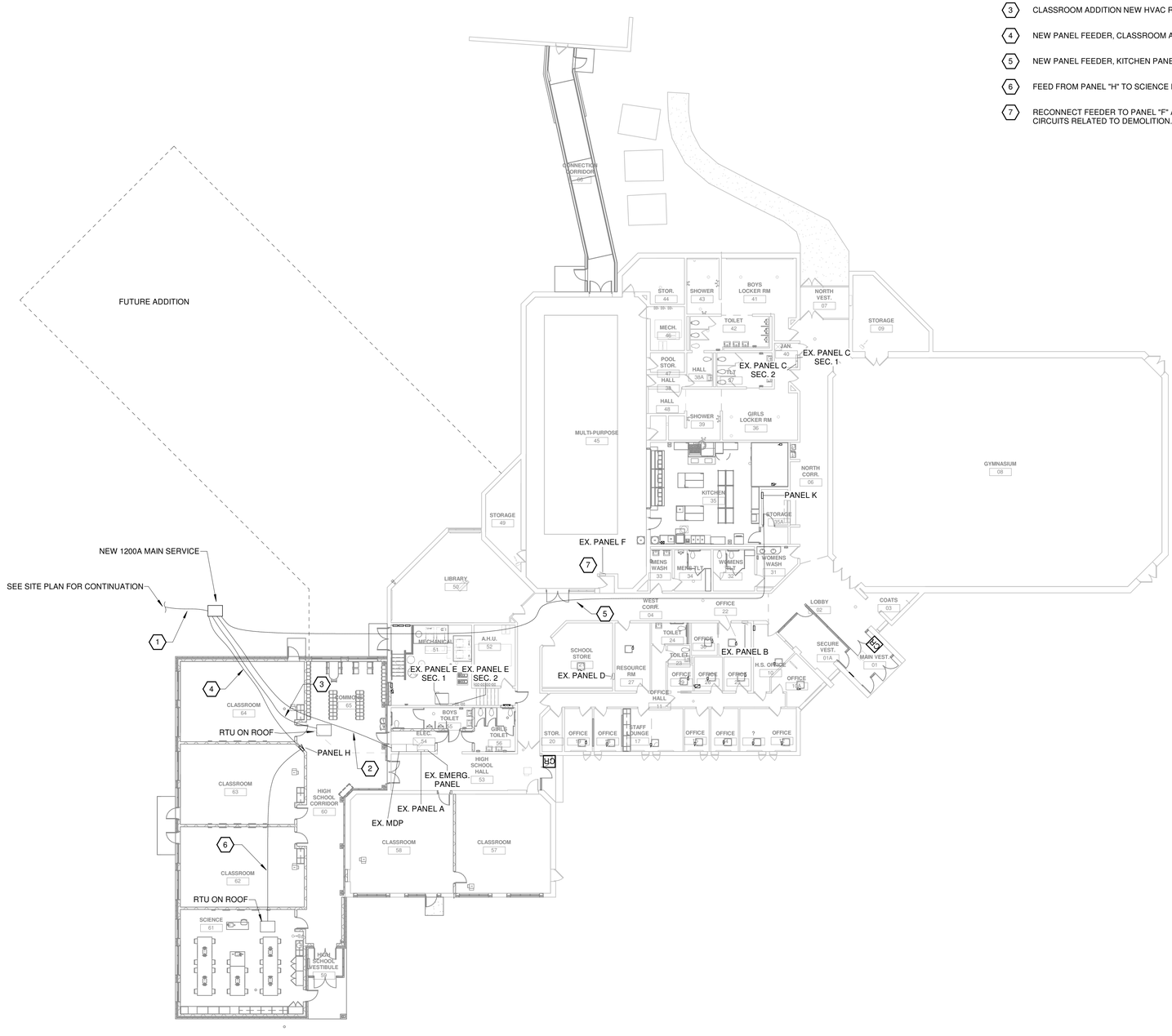
KEYNOTES

1. NEW SERVICE: 1200 AMPS FROM CLOVERLAND ELECTRIC PAD MOUNT TRANSFORMER 208Y/120 VOLT 3ϕ/4W. (4) SETS OF 4" C, 4 - #500 MCM AL IN EACH.
2. (2) SETS 4" C, 4 - #500 MCM CU + 1 - #1/0 CU GND IN EACH. 700 AMP FEEDER TO REFEED EXISTING MAIN SWITCHBOARD.
3. CLASSROOM ADDITION NEW HVAC ROOFTOP FEEDER RTU-1. 125 AMP BREAKER. 1½" C, 4 - #1 CU + 1 - #6 CU GND.
4. NEW PANEL FEEDER, CLASSROOM ADDITION PANEL "H". 200 AMP BREAKER. 2" C, 4 - #3/0 CU + 1 - #6 CU GND.
5. NEW PANEL FEEDER, KITCHEN PANEL "K". 200 AMP BREAKER. 2" C, 4 - #3/0 CU + 1 - #6 CU GND.
6. FEED FROM PANEL "H" TO SCIENCE ROOM ROOFTOP RTU-2. 40 AMP BREAKER. 1" C, 4 - #8 CU + 1 - #10 CU GND.
7. RECONNECT FEEDER TO PANEL "F" AFTER DEMOLITION WORK. EXTEND AS REQUIRED. REMOVE ALL UNUSED CIRCUITS RELATED TO DEMOLITION.



A2 PROPOSED OVERALL POWER PLAN

1/16" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

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APPROVED:	JG

OVERALL POWER PLAN

E101

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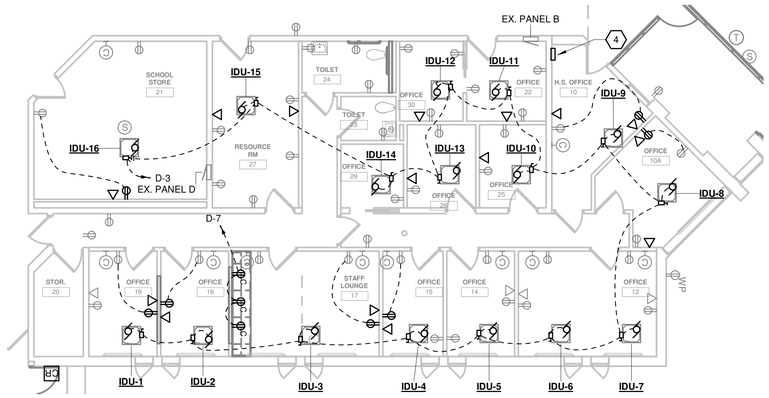
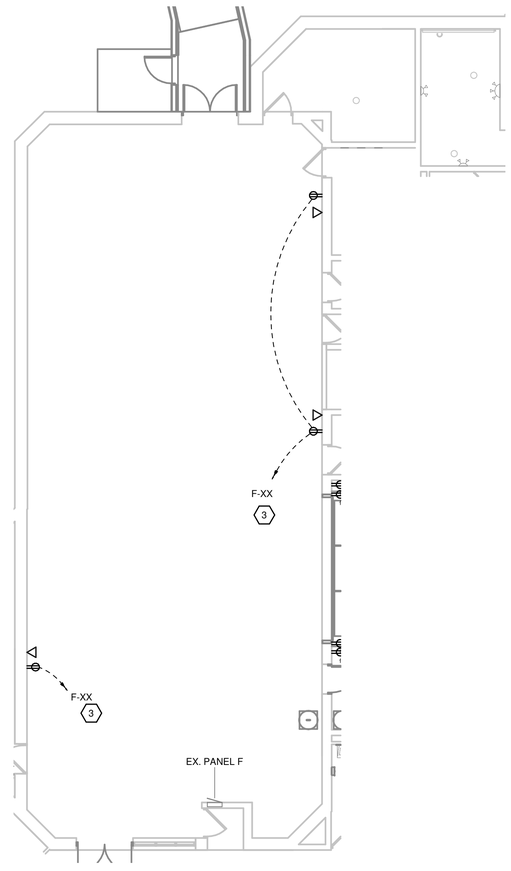
KEYNOTES

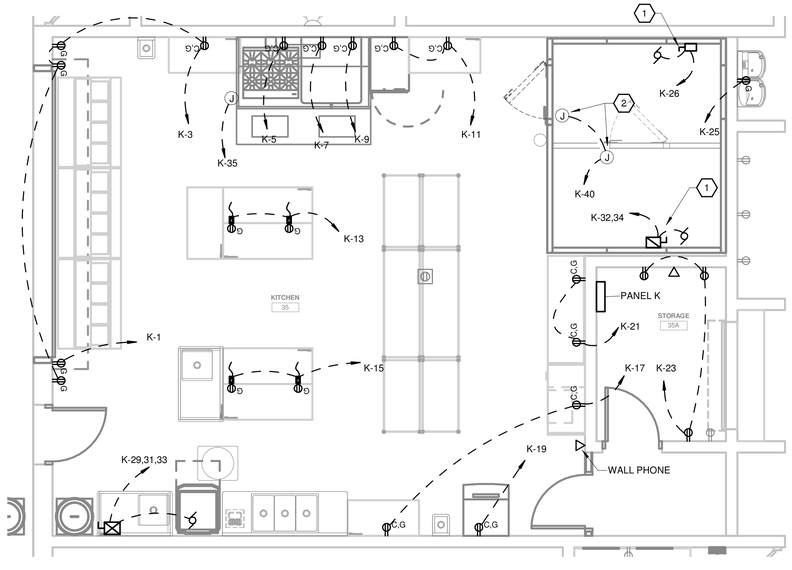
1. CONTRACTOR SHALL VERIFY COOLER/FREEZER CONDENSING UNITS AND EVAPORATOR SIZES PRIOR TO PERFORMING WORK.
2. DOOR HEATERS. CONNECT TO COOLER/FREEZER LIGHTING.
3. CONNECT TO DEMOED CIRCUIT FROM PANEL "F".
4. NEW CONTROLLER FOR DOOR STRIKES/CARD READERS. PROVIDE DEDICATED 120V CIRCUIT FROM EXISTING PANEL B. PROVIDE LOW VOLTAGE CONNECTION PER MANUFACTURER'S SPECIFICATIONS BACK TO MAIN CONTROL PANEL



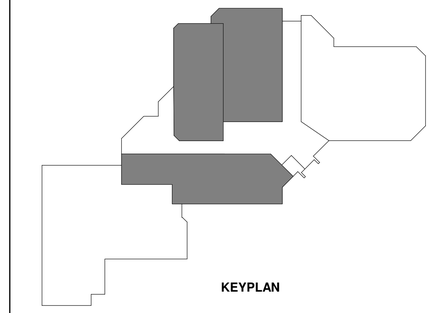
C3 OFFICES PROPOSED POWER PLAN
1/8" = 1'-0"



A1 MULTI-PURPOSE AREA PROPOSED POWER PLAN
1/8" = 1'-0"



A3 KITCHEN PROPOSED POWER PLAN
1/4" = 1'-0"



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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/2/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY:	PM
DRAWN BY:	SP
CHECKED:	PM
APPROVED:	JG

AREAS A,B PROPOSED POWER PLAN

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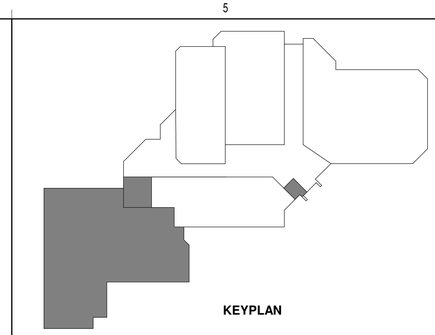
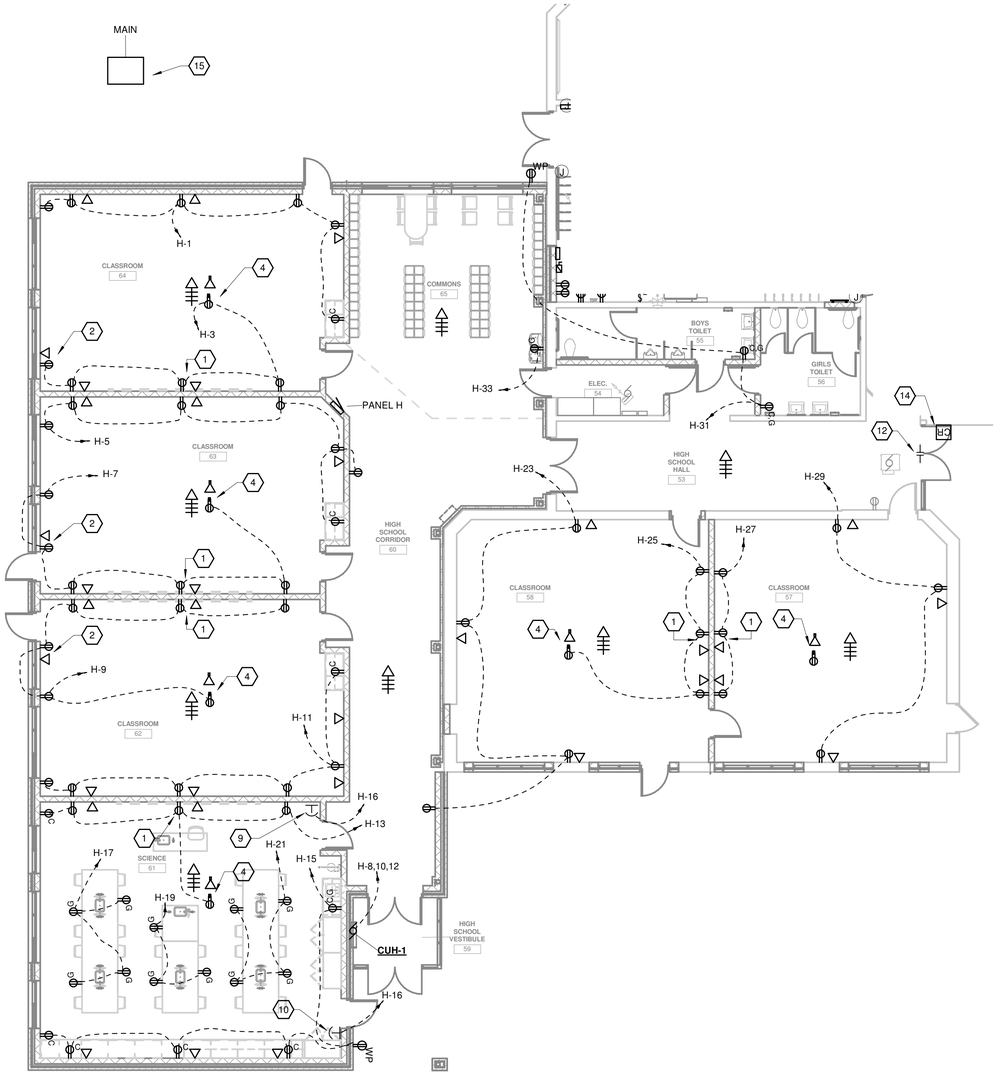
KEYNOTES

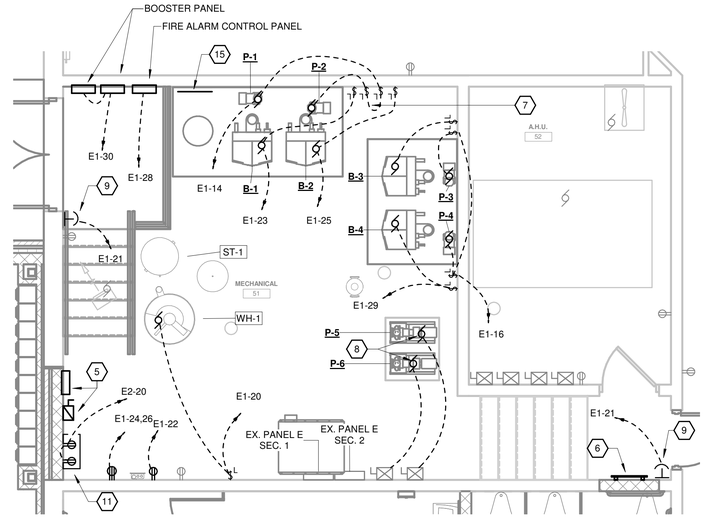
1. PROVIDE POWER DATA AND WIRING FOR SMART BOARD.
2. TEACHER'S DESK LOCATION: PROVIDE POWER, DATA AND WIRING TO SMARTBOARD.
3. FLOOR BOX WITH POWER AND DATA.
4. RECEPTACLE AND DATA AT CEILING FOR PROJECTOR.
5. RE-LOCATED SEPTIC CONTROL PANEL AND WELL DISCONNECT. EXTEND WIRING AS REQUIRED.
6. RE-LOCATED PHONE BOARD. EXTEND WIRING AS REQUIRED.
7. PUMPS P-1, P-2, P-3 AND P-4 SHALL BE ROUTED THROUGH BOILER TO CONTROL PUMP. SEE BOILER INSTALLATION MANUAL.
8. RE-USE EXISTING STARTER/DISCONNECTS FOR PUMPS P-5 AND P-6. CONNECT TO EXISTING CIRCUIT.
9. BOILER E-STOP. SEE DETAIL A3/E501.
9. GAS EMERGENCY SHUT-OFF BUTTON AND KEYED ACTIVATION SWITCH. SEE MECHANICAL PLANS FOR DETAILS. COORDINATE CONNECTION WITH MECHANICAL CONTRACTOR. PROVIDE AND INSTALL ALL NECESSARY WIRING FOR A COMPLETE SYSTEM.
10. GAS EMERGENCY SHUT-OFF BUTTON SWITCH. SEE MECHANICAL PLANS FOR DETAILS. COORDINATE CONNECTION WITH MECHANICAL CONTRACTOR. PROVIDE AND INSTALL ALL NECESSARY WIRING FOR A COMPLETE SYSTEM.
11. NEW WALL-MOUNT TELECOM CABINET.
12. ELECTRIC STRIKE. PROVIDE HOMERUN TO NEW CONTROLLER IN HS OFFICE 10.
13. CAMERA/DOORBELL STATION. PROVIDE HOMERUN TO NEW CONTROLLER IN HS OFFICE 10.
14. CARD READER. PROVIDE HOMERUN TO NEW CONTROLLER IN HS OFFICE 10.
15. GROUND BAR FOR CONNECTION TO NEW SERVICE.



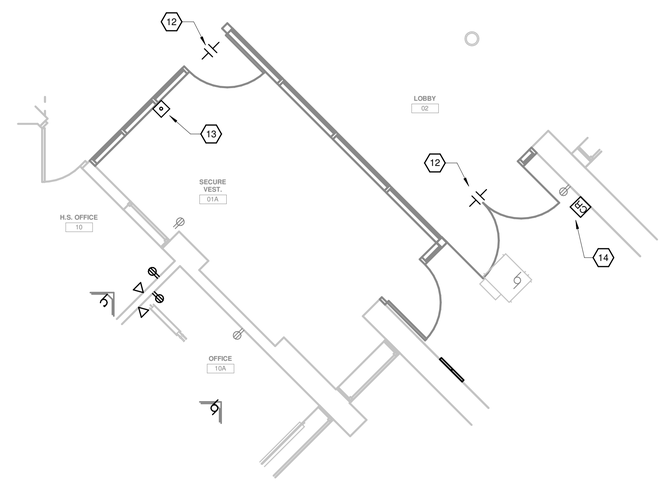
KEYPLAN



A1 HIGH SCHOOL PROPOSED POWER PLAN
1/8" = 1'-0"



B4 PROPOSED BOILER ROOM POWER PLAN
1/4" = 1'-0"



A4 ENTRY PROPOSED POWER PLAN
1/4" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY:	PM
DRAWN BY:	SP
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APPROVED:	JG

AREAS C,D,E PROPOSED POWER PLAN

E103

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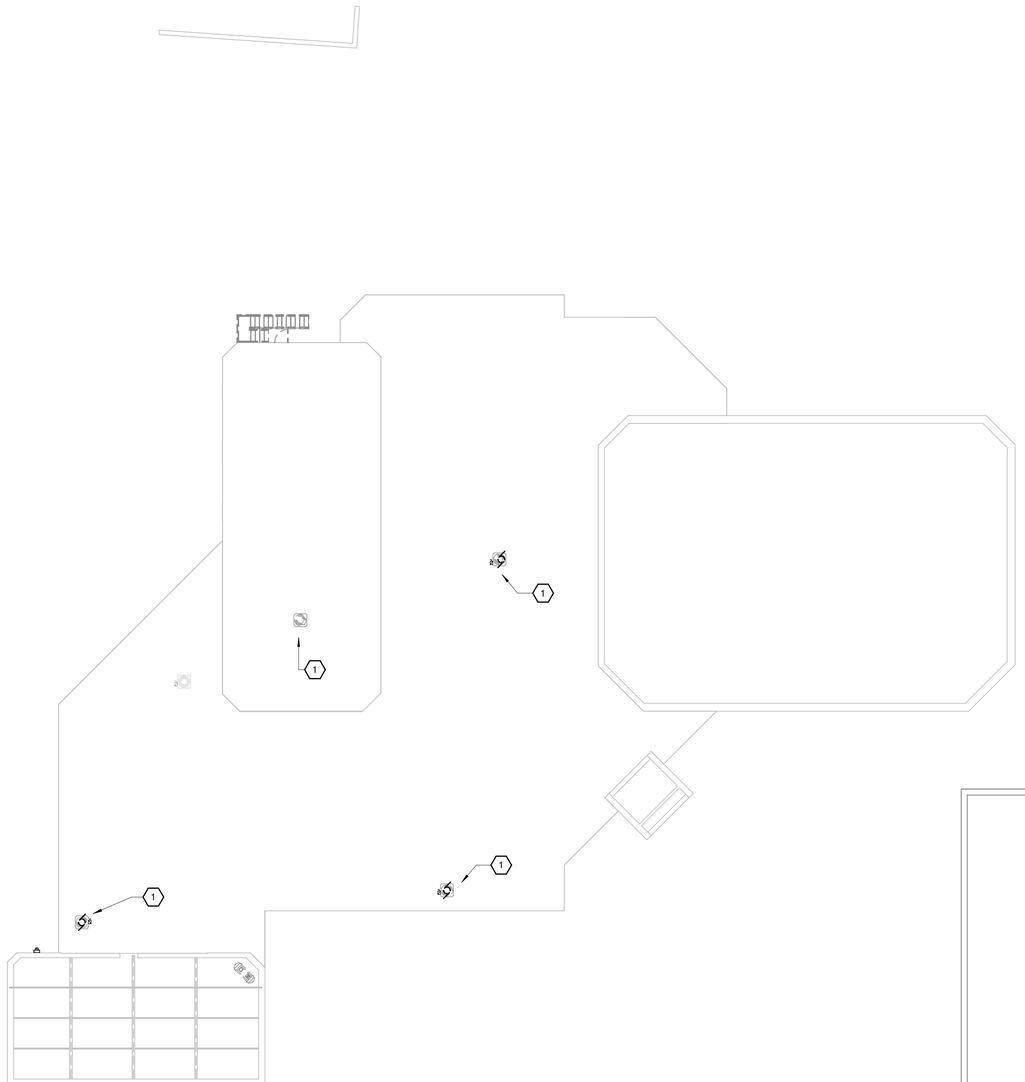
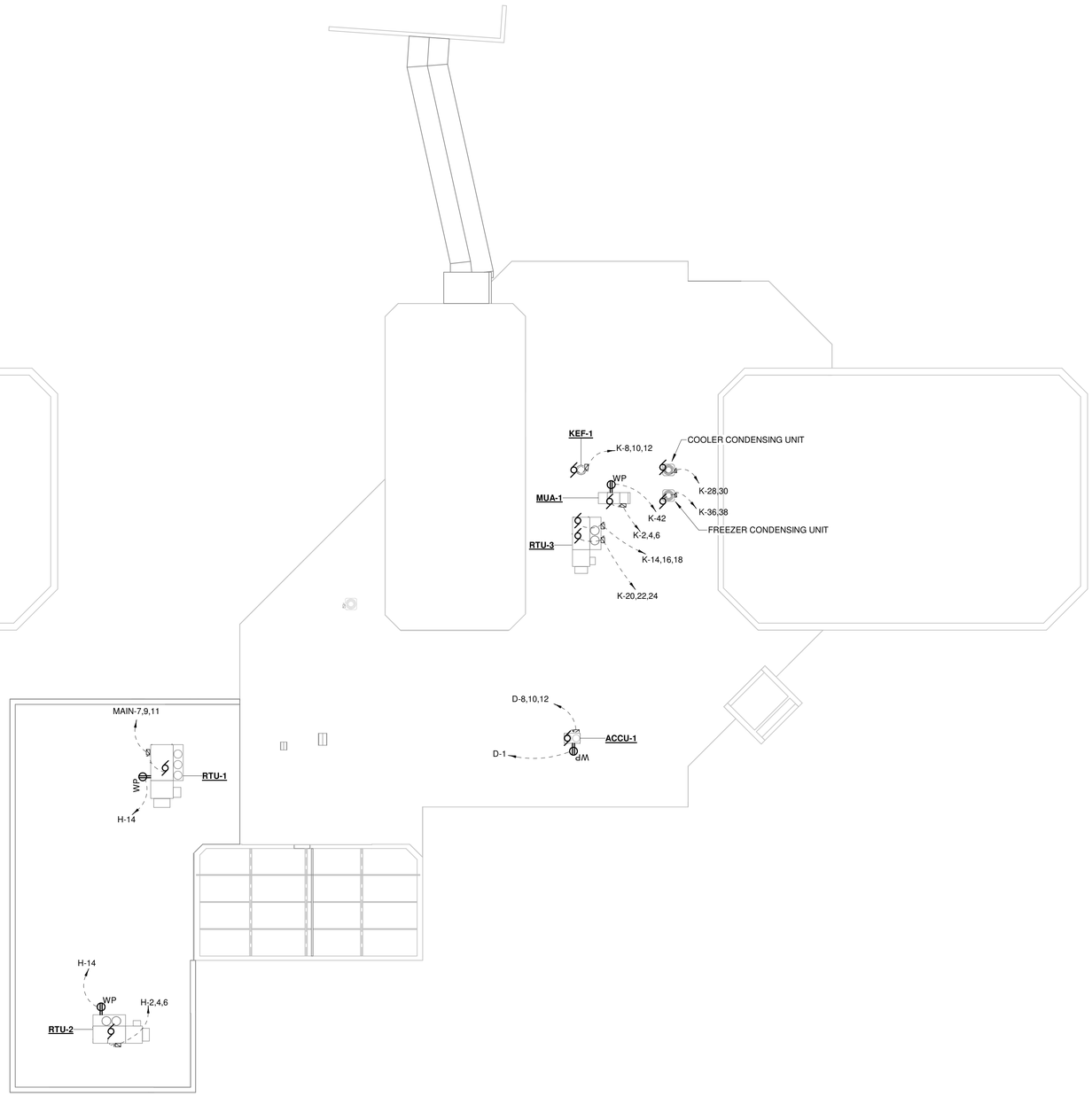
KEYNOTES

1 DISCONNECT CONDENSING UNIT AND REMOVE THE DISCONNECT AND ALL ASSOCIATED WIRING AND CONDUIT.



A1 EXISTING/DEMO ROOF ELECTRICAL PLAN
1/16" = 1'-0"



A3 PROPOSED ROOF ELECTRICAL PLAN
1/16" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY:	PM
DRAWN BY:	SP
CHECKED:	PM
APPROVED:	JG

EXISTING/DEMO & NEW ROOF ELECTRICAL PLAN

E104

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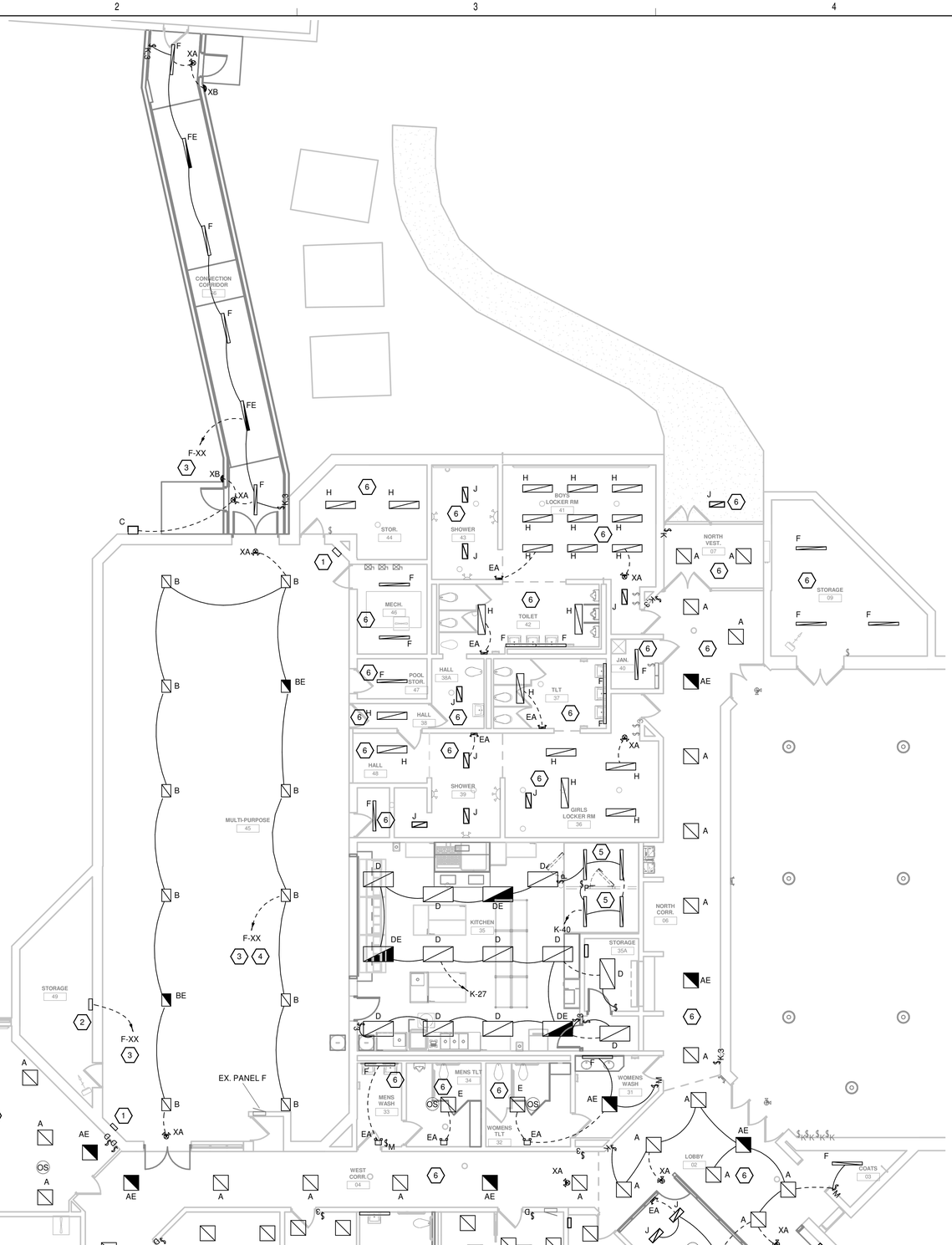
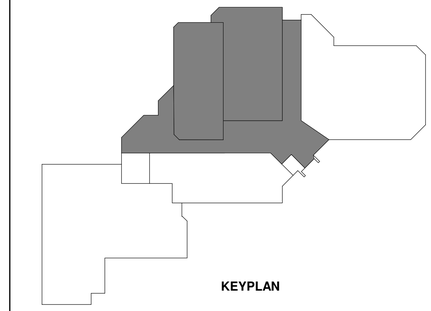


A1 PROPOSED LIGHTING PLAN NORTH
1/8" = 1'-0"



KEYPLAN

KEYNOTES

1. PROVIDE WAVELINX 6-BUTTON WALLSTATION CONTROL FOR TYPE "B" LIGHTS. EATON #W6S-S3-W
2. PROVIDE FIELD PROGRAMMING FOR WALL STATION AND INCLUDE OWNER TRAINING. ALSO PROVIDE EATON #WAC-POE WIRELESS AREA CONTROLLER AND EATON #WPOE-120.
3. CONNECT TO DEMOED CIRCUIT FROM PANEL "F".
4. CONNECT TO WALL STATION AND/OR CONTROL PANEL PER MANUFACTURER'S WIRING DIAGRAM.
5. COOLER/FREEZER LIGHTS BY COOLER/FREEZER SUPPLIER. CONNECT TO DOOR HEATER CIRCUIT.
6. CONNECT NEW LIGHTS TO EXISTING CIRCUIT AND SWITCH LEG. EXTEND WIRING WHERE REQUIRED.

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/02/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

PROPOSED LIGHTING PLAN NORTH

E201

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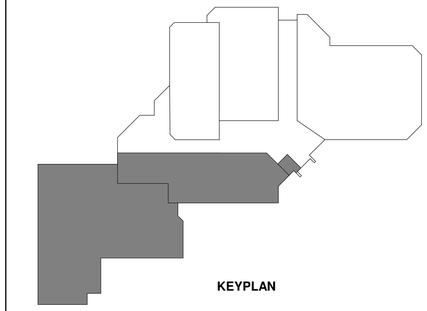
GENERAL NOTE:

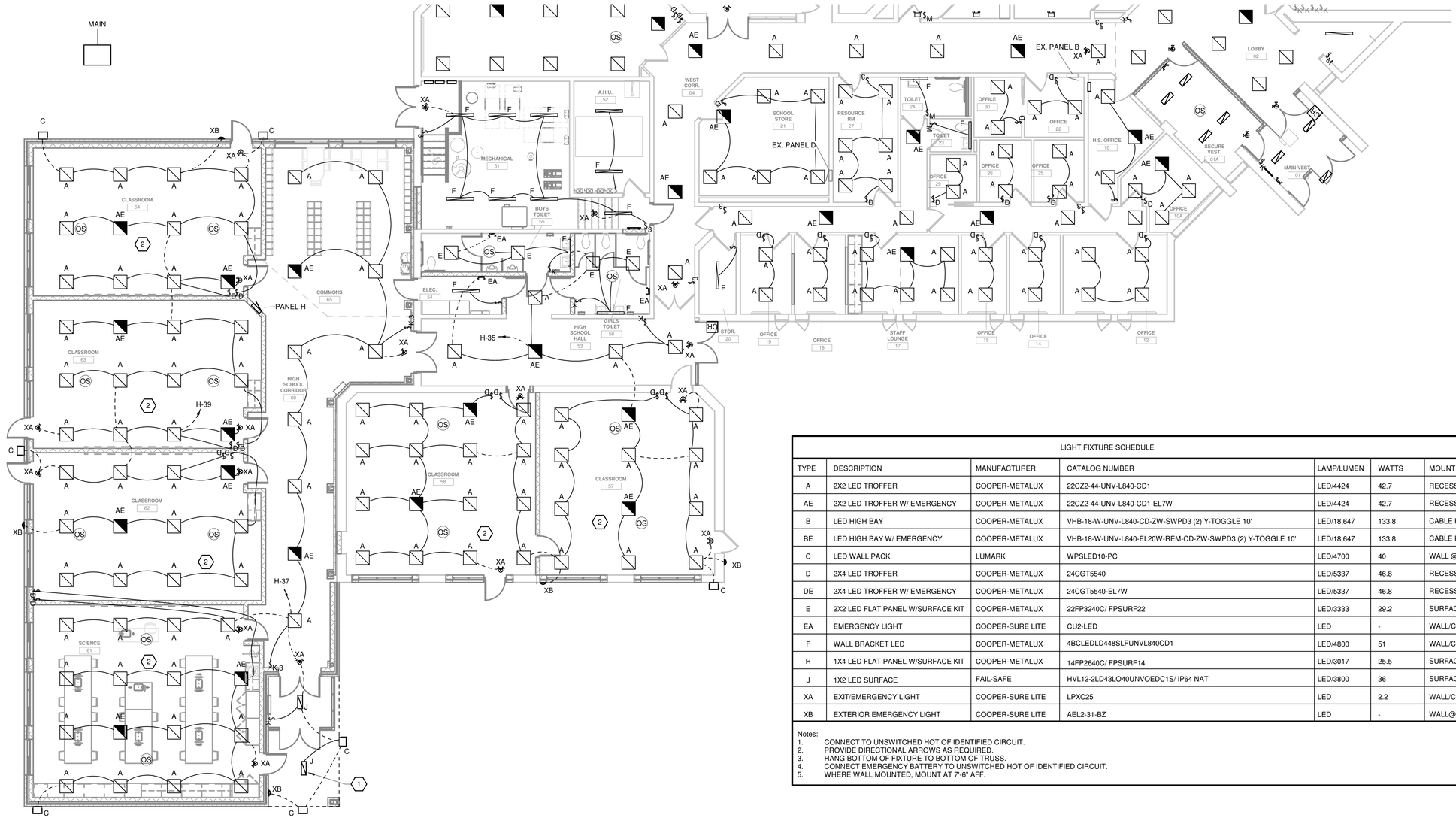
1. CONNECT NEW LIGHTS AND SWITCHES TO EXISTING CIRCUITS UNLESS NOTED OTHERWISE.

KEYNOTES:

1. CONNECT TO LOAD SIDE OF PHOTOCELL LOCATED ON TYPE C LIGHT AS INDICATED.
2. OCCUPANCY SENSORS IN THIS ROOM SHALL OVERRIDE BOTH DIMMERS.



KEYPLAN



A1 PROPOSED LIGHTING PLAN SOUTH

1/8" = 1'-0"

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMP/LUMEN	WATTS	MOUNTING	NOTES
A	2X2 LED TROFFER	COOPER-METALUX	22CZ2-44-UNV-L840-CD1	LED/4424	42.7	RECESSED	
AE	2X2 LED TROFFER W/ EMERGENCY	COOPER-METALUX	22CZ2-44-UNV-L840-CD1-EL7W	LED/4424	42.7	RECESSED	4
B	LED HIGH BAY	COOPER-METALUX	VHB-18-W-UNV-L840-CD-ZW-SWPD3 (2) Y-TOGGLE 10'	LED/18,647	133.8	CABLE HUNG	3
BE	LED HIGH BAY W/ EMERGENCY	COOPER-METALUX	VHB-18-W-UNV-L840-EL20W-REM-CD-ZW-SWPD3 (2) Y-TOGGLE 10'	LED/18,647	133.8	CABLE HUNG	4
C	LED WALL PACK	LUMARK	WPSLED10-PC	LED/4700	40	WALL @ 11'-5" AFF	
D	2X4 LED TROFFER	COOPER-METALUX	24CGT5540	LED/5337	46.8	RECESSED	
DE	2X4 LED TROFFER W/ EMERGENCY	COOPER-METALUX	24CGT5540-EL7W	LED/5337	46.8	RECESSED	4
E	2X2 LED FLAT PANEL W/SURFACE KIT	COOPER-METALUX	22FP3240C/ FPSURF22	LED/3333	29.2	SURFACE	
EA	EMERGENCY LIGHT	COOPER-SURE LITE	CU2-LED	LED	-	WALL/CEILING	1,5
F	WALL BRACKET LED	COOPER-METALUX	4BCLEDLD448SLFUNVL840CD1	LED/4800	51	WALL/CEILING/HUNG	
H	1X4 LED FLAT PANEL W/SURFACE KIT	COOPER-METALUX	14FP2640C/ FPSURF14	LED/3017	25.5	SURFACE	
J	1X2 LED SURFACE	FAIL-SAFE	HVL12-2LD43LO40UNVOEDC1S/ IP64 NAT	LED/3800	36	SURFACE	
XA	EXIT/EMERGENCY LIGHT	COOPER-SURE LITE	LPXC25	LED	2.2	WALL/CEILING	1,2
XB	EXTERIOR EMERGENCY LIGHT	COOPER-SURE LITE	AEL2-31-BZ	LED	-	WALL@ 7'-0" AFF	

Notes:
1. CONNECT TO UNSWITCHED HOT OF IDENTIFIED CIRCUIT.
2. PROVIDE DIRECTIONAL ARROWS AS REQUIRED.
3. HANG BOTTOM OF FIXTURE TO BOTTOM OF TRUSS.
4. CONNECT EMERGENCY BATTERY TO UNSWITCHED HOT OF IDENTIFIED CIRCUIT.
5. WHERE WALL MOUNTED, MOUNT AT 7'-6" AFF.

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HIGH SCHOOL ADDITION AND RENOVATIONS

OJIBWE CHARTER SCHOOL

BAY MILLS, MI

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

PROPOSED LIGHTING SOUTH

E202

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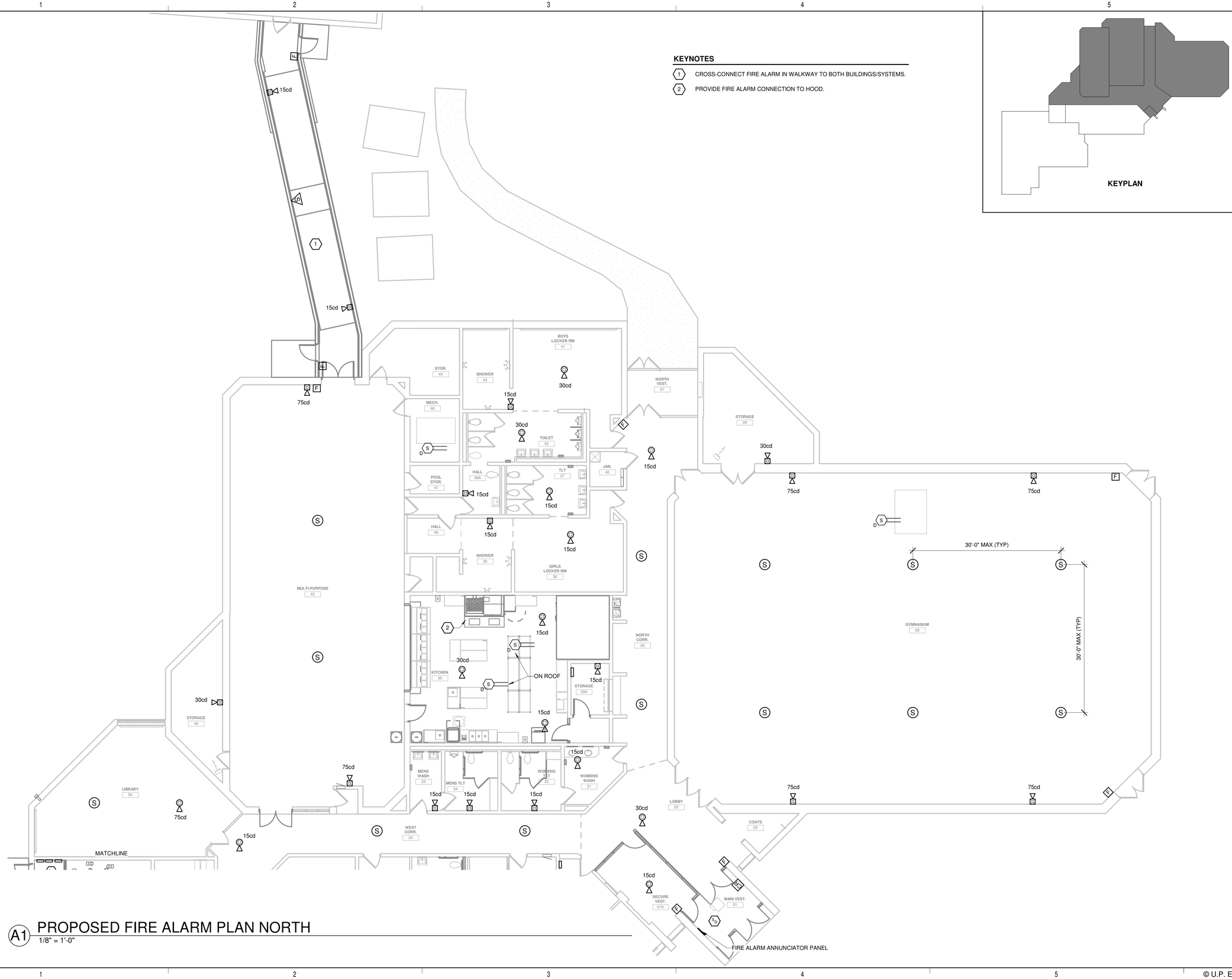
KEYNOTES

1. CROSS-CONNECT FIRE ALARM IN WALKWAY TO BOTH BUILDINGS/SYSTEMS.
2. PROVIDE FIRE ALARM CONNECTION TO HOOD.



A1 PROPOSED FIRE ALARM PLAN NORTH
1/8" = 1'-0"

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

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HIGH SCHOOL ADDITION AND RENOVATIONS
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PROJECT NO: O97-011165

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PROPOSED FIRE ALARM PLAN NORTH

E301

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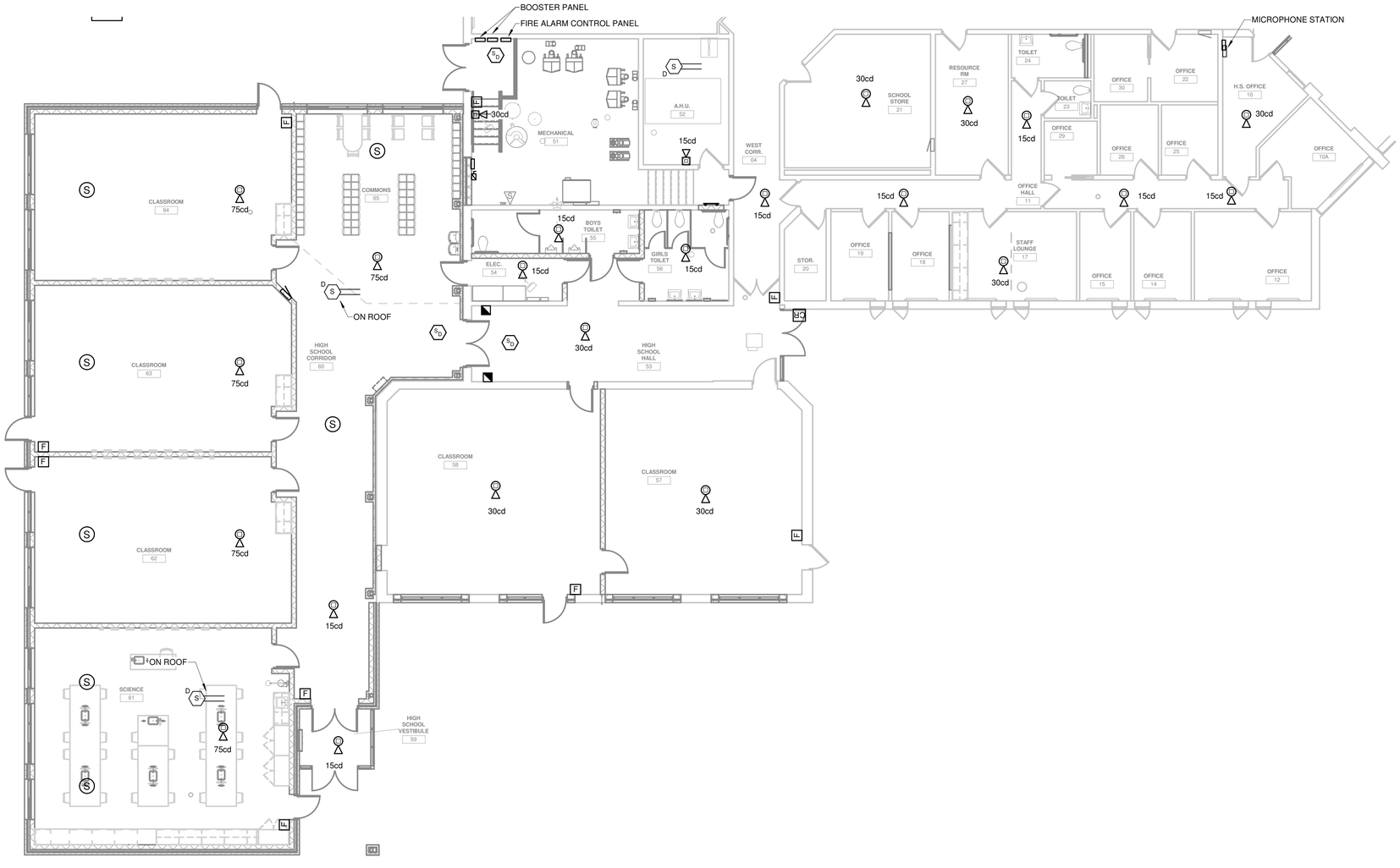
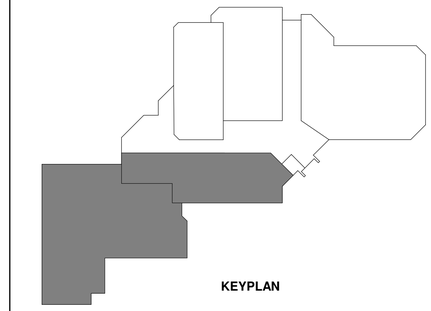


A1 PROPOSED FIRE ALARM PLAN SOUTH

1/8" = 1'-0"



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DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: KC

PROPOSED FIRE ALARM PLAN SOUTH

E302

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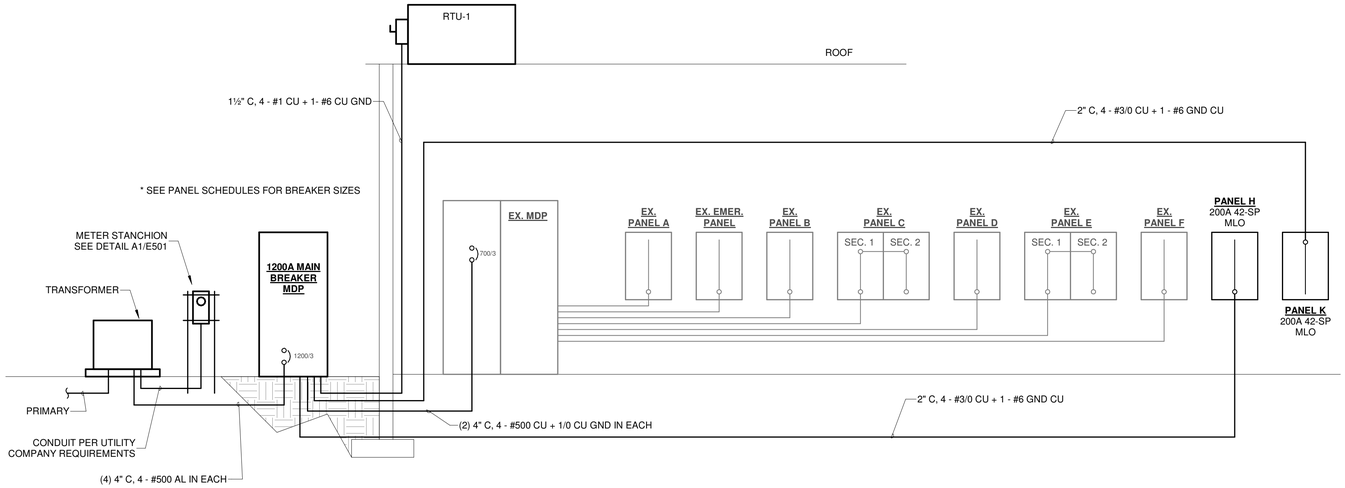
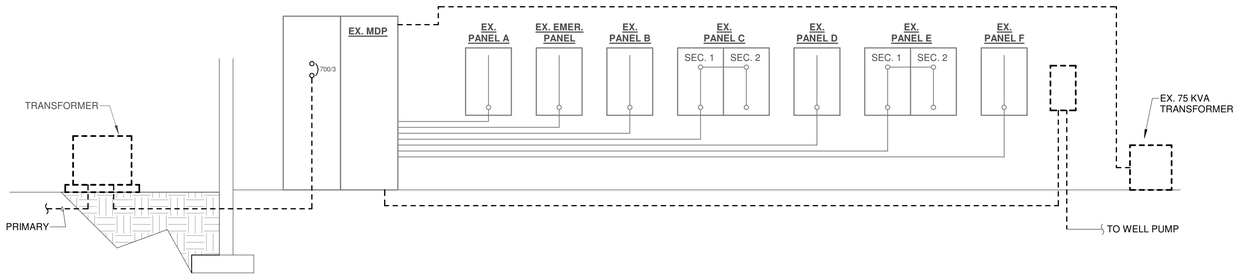
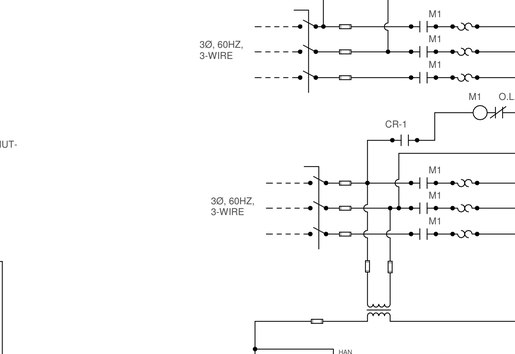


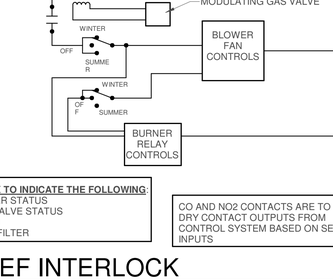
C1 PROPOSED RISER DIAGRAM
NOT TO SCALE



B1 EXISTING RISER DIAGRAM
NOT TO SCALE



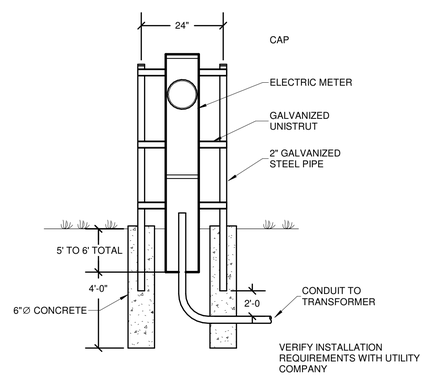
D4 GROUNDING AND BONDING DETAIL
NOT TO SCALE



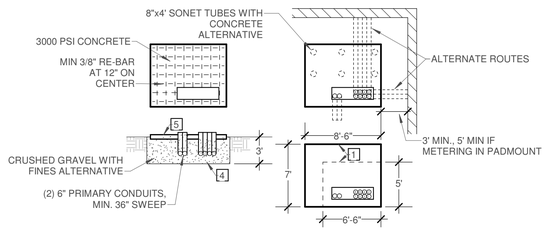
C5 TYPE 1 HOOD SHUNT DETAIL
NOT TO SCALE

CONTROL BOX TO INDICATE THE FOLLOWING:
1. BLOWER STATUS
2. MAIN VALVE STATUS
3. ALARM
4. DIRTY FILTER

CO AND NO2 CONTACTS ARE TO BE DRY CONTACT OUTPUTS FROM CONTROL SYSTEM BASED ON SENSOR INPUTS

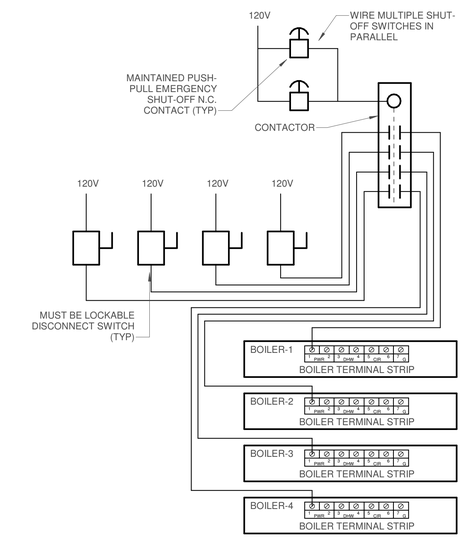


A1 METER STANCHION DETAIL
NOT TO SCALE



1. THE ALTERNATE DIMENSIONS OF 6'-6"x5'-0" MAY BE USED FOR TRANSFORMERS THAT WILL ONLY SERVE ONE SERVICE THAT IS 1200 AMPS OR LESS. IF THE INSTALLATION REQUIRES CONCRETE FOOTINGS BECAUSE OF DISTURBED SOIL, FOUR SONET TUBES ARE ACCEPTABLE FOR CASES WITH ONE SERVICE OF 1200 AMPS OR LESS.
2. SERVICE CONDUITS SHALL ALWAYS START FROM THE FRONT RIGHT CORNER OF THE WINDOW, TIGHT TO EACH OTHER AND IN NUMBERED ORDER. INSTALL THE CONDUITS TO A MIN. OF 1'-0" BEYOND THE EDGE OF THE PAD.
3. THE PRIMARY CONDUITS SHALL ALWAYS START FROM THE FRONT LEFT CORNER OF THE WINDOW AND TIGHT TO EACH OTHER. THERE SHALL BE (2) 6" CONDUITS. INSTALL THE CONDUITS TO A MIN. OF 6" BEYOND THE EDGE OF THE SLAB.
4. FOR GRAVEL BASE INSTALLATIONS, DIG DOWN TO UNDISTURBED SOIL. IF YOU HAVE TO GO DOWN TO THE 3'-0" DEPTH, MAKE SURE THE SOIL BELOW IS COMPACTED. YOU CAN USE LESS DEPTH ON THE BASE IF THE SOIL IS UNDISTURBED AND CAPABLE OF CARRYING THE TRANSFORMER WEIGHT. INSTALL CRUSHED GRAVEL WITH FINES TAMPED EVERY 12" UP TO GRADE LEVEL. IF UNDISTURBED OR UNCOMPACTED SOIL IS NOT ENCOUNTERED WITHIN 3'-0" OF EXCAVATION, FOOTINGS ARE REQUIRED TO GET DOWN TO SOIL THAT WILL SUPPORT THE EQUIPMENT WEIGHT.
5. TYPICAL WEIGHTS OF TRANSFORMERS ARE 75 kva = 2300 LBS, 500 kva = 6000 LBS, 750 kva = 8400 LBS, 2500 kva = 17000 LBS.
6. VERIFY ALL INSTALLATION REQUIREMENTS WITH UTILITY COMPANY.

A2 TRANSFORMER PAD
NOT TO SCALE



A3 BOILER SHUT-OFF DETAIL
NOT TO SCALE

A5 MUA/EF INTERLOCK
NOT TO SCALE

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APPROVED:	JG

ELECTRICAL DETAILS

E501

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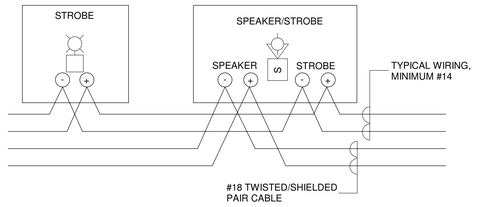
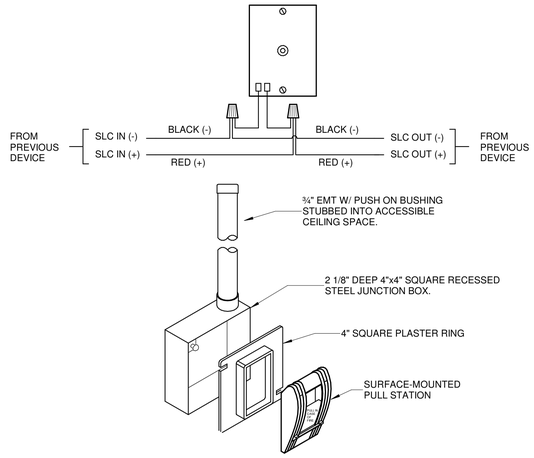
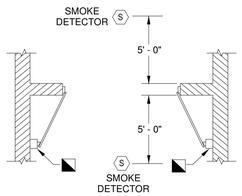


NOTE:
1. ALL WIRING IN CONDUIT.

D1 SPEAKER/STROBE WIRING DETAIL
NOT TO SCALE

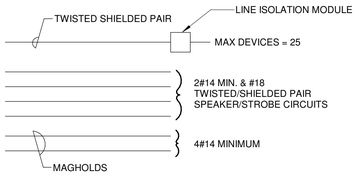


B1 WALL MOUNT PULL STATION
NOT TO SCALE



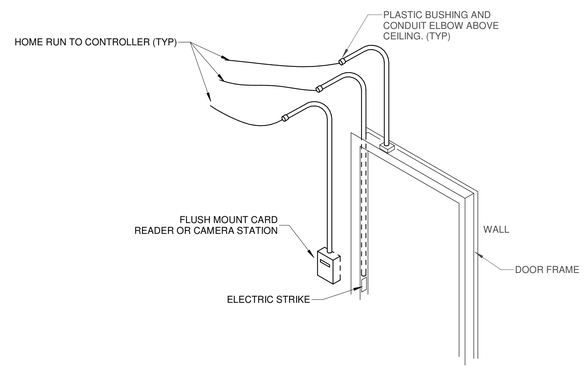
NOTES:
1. DOUBLE DOOR SHOWN, SINGLE DOORS SIMILAR, EXCEPT ONLY ONE MAGNETIC DOOR HOLDER.
2. ALL EXPOSED WIRING IN SURFACE METAL RACEWAY. USE ONLY IF THE WALLS ARE SOLID CONCRETE.
3. PROVIDE ALL FLUSH MOUNTED OUTLET BOXES WHERE WALL IS NEW OR WALL IS HOLLOW (E.G. CONCRETE BLOCK) AND CAN BE FINISHED.
4. WIRE INTO FIRE ALARM SYSTEM.
5. ◣ MAGNETIC DOOR HOLDER
6. PROVIDE FLOOR MOUNTED ◣ MAGNETIC DOOR HOLDER WHERE INDICATED ON THE FLOOR PLANS.
7. ALL DOORS WITH MAGNETIC DOOR HOLDERS ARE TO CLOSE UPON ACTIVATION OF THE BUILDING FIRE ALARM.

C3 SMOKE DOOR INSTALLATION
NOT TO SCALE

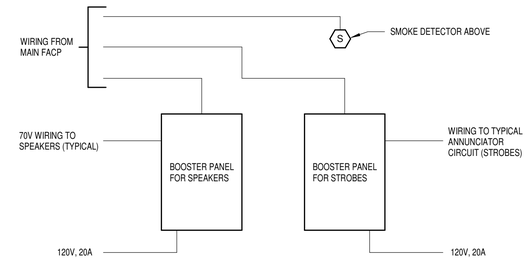


NOTES:
1. ALL WIRING IN CONDUIT.

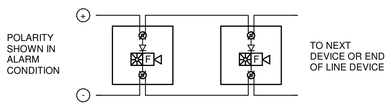
B3 MISC WIRING DETAIL
NOT TO SCALE

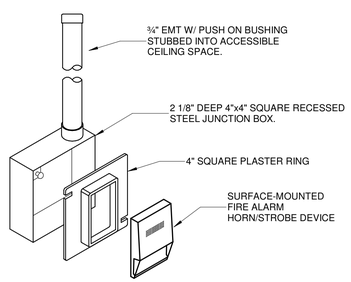


C4 CARD READER/DOOR STRIKE DETAIL
NOT TO SCALE

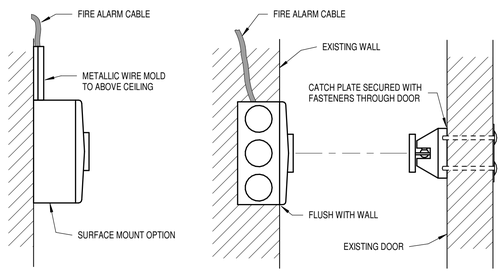


B5 BOOSTER PANEL DETAIL
NOT TO SCALE

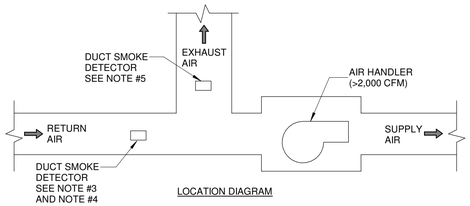




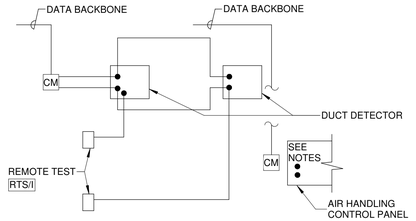
A1 WALL MOUNT SPEAKER/STROBE
NOT TO SCALE



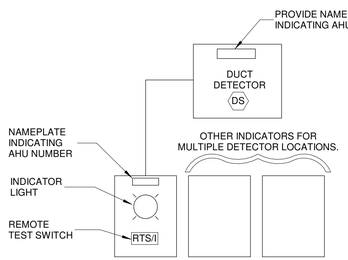
A2 MAGNETIC DOOR HOLDER
NOT TO SCALE



LOCATION DIAGRAM



WIRING DIAGRAM



NOTES:
1. WIRE INTO HVAC CONTROL PANEL OR STARTER TO SHUT DOWN AIR HANDLER IN THE EVENT SMOKE IS DETECTED. PROVIDE OVERRIDE SWITCH (KEYED SWITCH OR START PUSH-BUTTON STATION IN LOCKED ENCLOSURE) ADJACENT TO FACP TO RESTART THE HVAC UNIT. PROVIDE WRITTEN STATEMENT TO OWNER'S REP. THAT THE SYSTEM WAS TESTED AND OPERATES CORRECTLY.
2. MOUNT REMOTE TEST STATION ON NEAREST WALL THAT PROVIDES ACCESS. IN INSTALLATIONS WHERE TWO OR MORE AHU'S ARE INSTALLED TOGETHER, MOUNT ALL TEST SWITCHES IN ONE AREA.
3. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS WITH A CAPACITY GREATER THAN 2,000 CFM, IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.
4. WHERE RETURN AIR RISERS SERVE TWO OR MORE STORIES AND ARE PART OF A RETURN AIR SYSTEM HAVING A CAPACITY GREATER THAN 15,000 CFM, DUCT SMOKE DETECTORS SHALL BE INSTALLED AT EACH STORY. SUCH DUCT SMOKE DETECTORS SHALL BE LOCATED UPSTREAM OF THE CONNECTION BETWEEN THE RETURN AIR RISER AND ANY AIR DUCTS OR PLENUMS.
5. THE ACTUATION OF A DUCT SMOKE DETECTOR SHALL ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION .

A3 AIR HANDLING SHUTDOWN DETAIL
NOT TO SCALE

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APPROVED: JG

ELECTRICAL DETAILS

E502

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Electrical Load Calculations

O97-01165
SCHOOL ADDITIONS

Ojibwa Charter School
Total Square Feet: 34982

factor	Description	Quantity	VA Ungrnd	VA Neutral
3	watts/sq-ft (General Lighting)	34982	104,946	104,946
180	VA per General Receptacle	200	36,000	36,000
	future receptacles	7706	7,706	7,706
1500	Small Appliance Circuits	3	4,500	4,500
	NEC 220.44 demand reduction		-16,853	-16,853
	Gen. Light Circuit Amps @ 120V	1175		
	÷12A = # 15A circuits required:	98		
	÷16A = # 20A circuits required:	74		
	Total General Lighting Load		136,299	136,299
	Net General Lighting Load		**136,299**	**136,299**

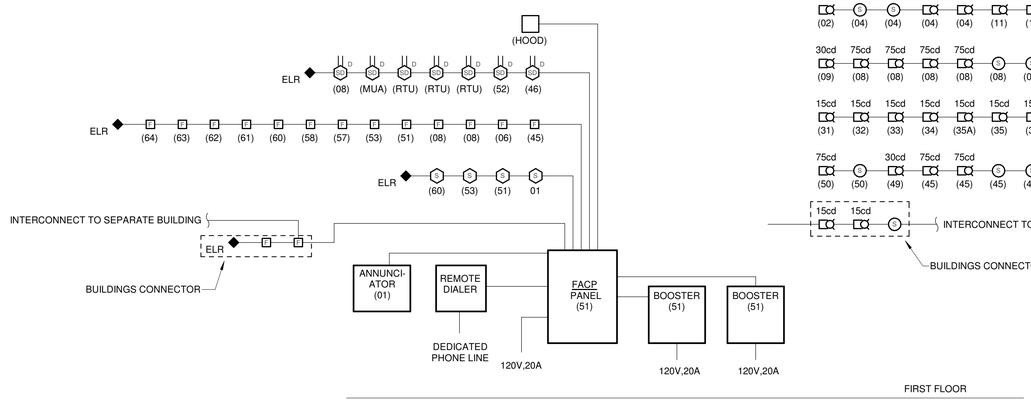
item	*Kitchen Equipment - updated 3.23.2021*			
	Fire Protection/Ansul system	1	200	200
EQ018	Serving Line - Hot Food	1	2100	735
EQ003	Gas Range	1	0	0
EQ004	Combi Oven - Gas	2	3696	3696
EQ	Exist Warming Rack Heated Cabinet	1	1560	1560
	MUA/hood controls/lights ckt	1	750	750
EQ014	Ice Machine	1	1380	1380
EQ016	Dishwasher	1	16572	5800
	Pop/vending Machine(s) ?	2	1680	1680
8	Walk-in Freezer Fans		2500	2500
8	Walk-in Freezer Compressors		3500	3500
8	Walk-in Cooler Fans		2000	2000
8	Walk-in Cooler Compressors		3000	3000
	Kitchen Appliances Total		38,938	26,801

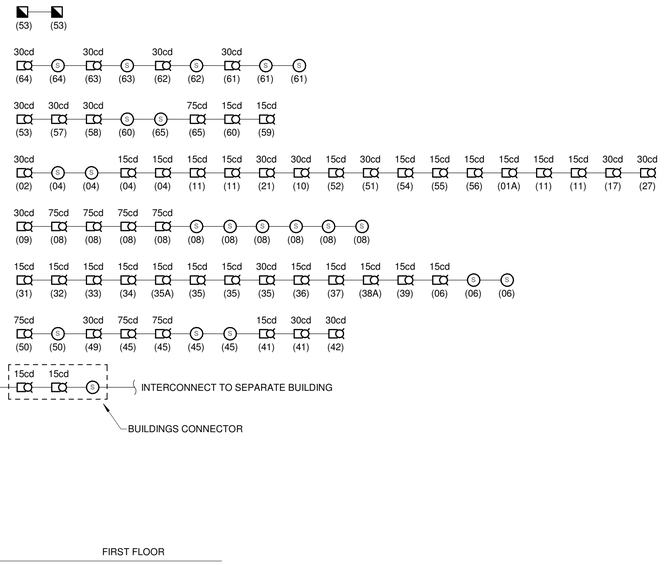
	Mechanical Loads - updated 4.1.2021			
	RTU rooftop Unit for Kitchen	1	11132	3896
	Office Area Rooftop VRF outdoor uni	1	16212	16212
	Office Area VRF indoor units total	1	998	998
	Multipurpose Existing AHU-2?	1	2486	870
	RTU-1 rooftop Unit for Classrooms	1	41970	41970
	rooftop Units for Future	2	83940	29379
	RTU-2 Science Room Rooftop	1	10664	10664
	ERV-1	1	1,080	378
	Kitchen Hood Exhaust Fan - Rooftop	1	1261	441
	MUA - for kitchen hood	1	3206	1122
	Existing EF's	1	2000	2000
	Exist AHU-1 for Office area?	1	3963	1387
	Exist AHU-4 for Gym?	1	2810	983
	Exist Heating water pumps	2	7926	2774
	25% of Largest Motor(430-24)		10492	10492
	Total Volt-Amperes		**375,375**	**286,667**
	Total Amperes at 208-V, 3-Phase		**1042**	**796**

Actual PROPOSED NEW Service Size: **1200**

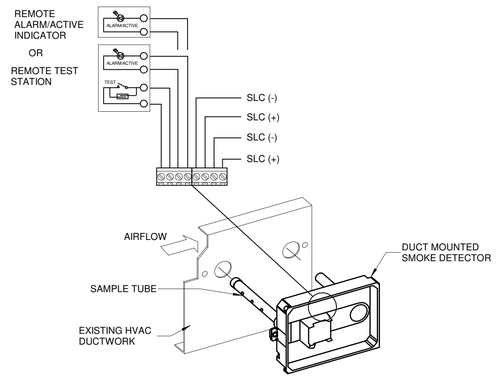
FIRE ALARM SHALL BE IN COMPLIANCE WITH NFPA 72. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL BE BY A FIRM CERTIFIED BY THE STATE OF MICHIGAN. FIRE ALARM CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND ALL REQUIRED FORMS.

NOTE: SYMBOLS SHOWN CAN BE WALL OR CEILING MOUNTED. SEE PLANS FOR LOCATIONS.

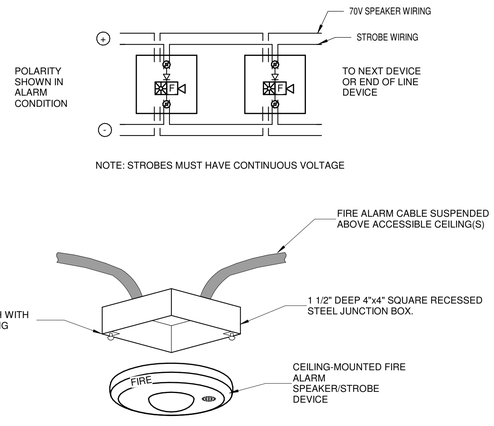




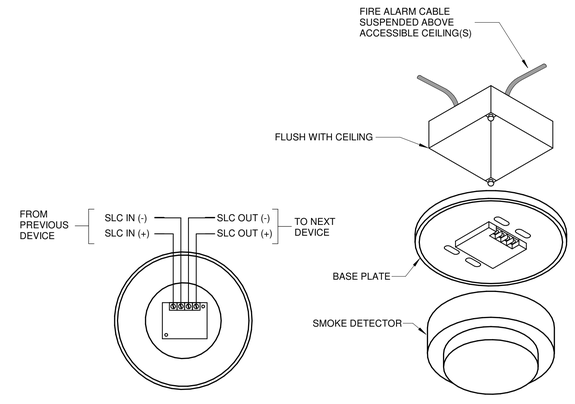
B3 Fire Alarm Riser Diagram
NOT TO SCALE



A1 DUCT SMOKE DETECTOR
NOT TO SCALE



A2 CEILING MOUNT SPEAKER/STROBE OR SPEAKER
NOT TO SCALE



A4 CEILING MOUNT SMOKE DETECTOR
NOT TO SCALE

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

ELECTRICAL DETAILS

E503

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Branch Panel: PANEL K

Location: STORAGE 35A
Supply From: MAIN
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
K-1	Hot Food Station	#10	30 A	1	2100	855									K-2
K-3	Receptacle - Kitchen West	#12	20 A	1			720	855			3	15 A	#12	MUA-1	K-4
K-5	Receptacle - Gas Range	#12	20 A	1					180	855					K-6
K-7	Receptacle - Gas Convection Oven	#12	20 A	1	924	420									K-8
K-9	Receptacle - Gas Convection Oven	#12	20 A	1			924	420			3	15 A	#12	KEF-1	K-10
K-11	Receptacle - KitchenNorth	#12	20 A	1					360	420					K-12
K-13	Receptacle - Kitchen Cord Drop North	#12	20 A	1	360	2460									K-14
K-15	Receptacle - Kitchen Cord Drop South	#12	20 A	1			360	2460			3	35 A	#8	RTU-3	K-16
K-17	Receptacle - Kitchen South, East	#12	20 A	1					360	2460					K-18
K-19	Receptacle - Ice Machine	#12	20 A	1	1380	374									K-20
K-21	Receptacle - Kitchen East	#12	20 A	1			360	374			3	15 A	#12	RTU-3 EF	K-22
K-23	Receptacle - Kitchen Storage	#12	20 A	1					540	374					K-24
K-25	Receptacle - Electric Water Cooler (GFI)	#12	20 A	1	720	100					1	20 A	#12	Cooler Evaporator	K-26
K-27	Kitchen Lights	#12	20 A	1			655	593			2	20 A	#12	Cooler Condensing Unit	K-28
K-29									5524	593					K-30
K-31	Dishwasher	#6	60 A	3	5524	575					2	20 A	#12	Freezer Evaporator	K-32
K-33							5524	575							K-34
K-35	Hood Control/Shunt	#12	20 A	1					200	1570	2	20 A	#12	Freezer Condensing Unit	K-36
K-37	Spare	--	20 A	1	0	1570									K-38
K-39	Spare	--	20 A	1			0	704			1	20 A	#12	Cooler/Freezer Lights and Door Heaters	K-40
K-41	Spare	--	20 A	1					0	180	1	20 A		Receptacle - Rooftop	K-42
				Total Load:	17362 VA		14524 VA		13616 VA						
				Total Amps:	146 A		122 A		113 A						
				Total Connected Load:	45502 VA										

Legend:

Branch Panel: EX. PANEL D

Location: SCHOOL STORE 21
Supply From:
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 400 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
D-1	**Receptacle - Rooftop**	**#12**	20	1	180	0					1	20	--	Spare	D-2
D-3	**IDU1-16**	**#12**	20	1			576	0			1	20	--	Spare	D-4
D-5	Spare	--	20	1					0	0	1	20	--	Spare	D-6
D-7	**Receptacle - Staff Lounge 17**	**#12**	**20**	**1**	540	4419									D-8
D-9	Rooftop Unit Fitness Room	--	30	2			0	4419			**3**	**60**	**#6**	**ACCU-1**	D-10
D-11									0	4419					D-12
D-13															D-14
D-15															D-16
D-17	Exercise Fitness	--	20	1					0						D-18
D-19	Exercise Fitness	--	20	1	0										D-20
D-21	Exercise Fitness	--	20	1			0								D-22
D-23	Exercise Fitness	--	20	1					0						D-24
D-25	A/C Blower	--	20	2	0										D-26
D-27							0								D-28
D-29															D-30
				Total Load:	5139 VA		4995 VA		4419 VA						
				Total Amps:	44 A		42 A		37 A						
				Total Connected Load:	14553 VA										

Legend:

Branch Panel: EX. PANEL E SEC. 2

Location: MECHANICAL 51
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 100 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
E2-1					0	0									E2-2
E2-3	Spare	--	30	3			0	0			3	15	--	Spare	E2-4
E2-5									0	0					E2-6
E2-7					0	0									E2-8
E2-9	AHU - 1	--	15	3			0	0			3	15	--	Spare	E2-10
E2-11									0	0					E2-12
E2-13					0	0									E2-14
E2-15	Recirc. Fan #1	--	15	3			0	0			3	15	--	Unit Heater - Shop, Fan Motor	E2-16
E2-17									0	0					E2-18
E2-19					1273	360					**1**	**20**		**Telecom Cabinet**	E2-20
E2-21	**Boiler System Pump P-5**	#12	15	3			1273								E2-22
E2-23									1273						E2-24
E2-25					1273	0									E2-26
E2-27	**Boiler System Pump P-6**	#12	15	3			1273	0			3	50	--	Spare	E2-28
E2-29									1273	0					E2-30
				Total Load:	2907 VA		2547 VA		2547 VA						
				Total Amps:	24 A		21 A		21 A						
				Total Connected Load:	8000 VA										

Legend:

Branch Panel: MAIN

Location:
Supply From:
Mounting:
Enclosure: Type 3R

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: Main Breaker
Mains Rating: 1200 A

Notes:

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	A		B		C		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
MAIN-1					10619	17362									MAIN-2
MAIN-3	PANEL H	#3/0	200 A	3			10606	14524			3	200 A	#3/0	PANEL K	MAIN-4
MAIN-5									10290	13616					MAIN-6
MAIN-7					11192	0									MAIN-8
MAIN-9	RTU-1	#1	125 A	3			11192	0			3	700 A	#500	EX. MDP	MAIN-10
MAIN-11									11192	0					MAIN-12
MAIN-13					0										MAIN-14
MAIN-15	Spare	--	200 A	3			0								MAIN-16
MAIN-17									0						MAIN-18
MAIN-19															MAIN-20
MAIN-21															MAIN-22
MAIN-23															MAIN-24
				Total Load:	39168 VA		36317 VA		35096 VA						
				Total Amps:	328 A		304 A		292 A						
				Total Connected Load:	110581 VA										

Legend:

Branch Panel: PANEL H

Location: HIGH SCHOOL CORRIDOR 60
Supply From: MAIN
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A

Notes:

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
H-1	Receptacle - Classroom 64 North	#12	20 A	1	1080	2843									H-2
H-3	Receptacle - Classroom 64 South	#12	20 A	1			900	2843			3	40 A	#8	RTU-2	H-4
H-5	Receptacle - Classroom 63 North, Corridor	#12	20 A	1					1260	2843					H-6
H-7	Receptacle - Classroom 63 South	#12	20 A	1	1080	1441									H-8
H-9	Receptacle - Classroom 62 North	#12	20 A	1			1080	1441			3	20 A	#12	CUH-1	H-10
H-11	Receptacle - Classroom 62 South	#12	20 A	1					1080	1441					H-12
H-13	Receptacle - Classroom 61 North	#12	20 A	1	900	360					1	20 A	#12	Receptacle - Rooftop	H-14
H-15	Receptacle - Classroom 61 South, W/P	#12	20 A	1			1080	100			1	20 A	#12	Science Room Gas Emergency Shut-off Valve	H-16
H-17	Receptacle - Classroom 61 Island West	#12	20 A	1					720	0					H-18
H-19	Receptacle - Classroom 61 Island Middle	#12	20 A	1	540	0					3	20 A	--	Spare	H-20
H-21	Receptacle - Classroom 61 Island East	#12	20 A	1			720	0							H-22
H-23	Receptacle - Classroom 58, Corridor	#12	20 A	1					720	0					H-24
H-25	Receptacle - Classroom 58 East	#12	20 A	1	720	0					2	20 A	--	Spare	H-26
H-27	Receptacle - Classroom 57 West	#12	20 A	1			720	0			1	20 A	--	Spare	H-28
H-29	Receptacle Classroom 57	#12	20 A	1					540	0	1	20 A	--	Spare	H-30
H-31	Receptacle - Boys Tlt, Girls Tlt, W/P	#12	20 A	1	540	0					1	20 A	--	Spare	H-32
H-33	Receptacle - Electric Water Cooler (GFI)	#12	20 A	1			180	0			1	20 A	--	Spare	H-34
H-35	Lighting - Boy's, Girl's, Classroom 57,58, Hall	#12	20 A	1					1699	0	1	20 A	--	Spare	H-36
H-37	Lighting - Corridor, Entry, Science	#12	20 A	1	1170	0					1	20 A	--	Spare	H-38
H-39	Lighitng - Classroom 62, 63, 64		20 A	1			1578	0			1	20 A	--	Spare	H-40
H-41	Spare	--	20 A	1					0	0	1	20 A	--	Spare	H-42
				Total Load:	10619 VA		10606 VA		10290 VA						
				Total Amps:	89 A		89 A		86 A						
				Total Connected Load:	31514 VA										

Legend:

Branch Panel: EX. PANEL E SEC. 1

Location: MECHANICAL 51
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Manufacturer: Square D

A.I.C. Rating:
Mains Type: MLO
Mains Rating: 100 A

Notes:
1. Electrical Contractor shall verify all equipment requirements prior to ordering breakers.
2. Electrical Contractor is responsible to verify all circuits prior to starting work. Update/revise schedule to reflect actual work performed.

CKT	Circuit Description	Wire	Brkr Size	Brkr Poles	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		Brkr Poles	Brkr Size	Wire	Circuit Description	CKT
E1-1					0	0					1	15	--	Johnson Air Compressor	E1-2
E1-3	Sewage Pump	--	15	3			0	0			2	30	--	Johnson Air Compressor	E1-4
E1-5									0	0					E1-6
E1-7					0	0									E1-8
E1-9	Sewage Pump	--	15	3			0	0			3	15	--	Boiler Room Heater	E1-10
E1-11									0	0					E1-12
E1-13					0	1344					1	20	**#12**	**Boiler Pumps P-1, P-2**	E1-14
E1-15	Spare	--	15	3			0	1344			1	20	**#12**	**Boiler Pumps P-3, P-4**	E1-16
E1-17									0	0	1	20	--	Desk and Fridge recepts	E1-18
E1-19	Honeywell Dryer - Controls	--	20	1	0	300					**1**	**20**	**#12**	**Gas Water Heater**	E1-20
E1-21	**Boiler Emergency Shut-Off**	**#12**	15	1			100	180			**1**	**20**	**#12**	**Washer**	E1-22
E1-23	**Boiler B-1**	**#12**	20	1					1200	2500	**2**	**30**	**#10**	**Dryer**	E1-24
E1-25	**Boiler B-2**	**#12**	20	1	1200	2500									E1-26
E1-27	**Boiler B-3**	**#12**	20	1			1200	500			**1**	**20**	**#12**	**Fire Alarm Control Panel**	E1-28
E1-29	**Boiler B-4**	**#12**	20	1					1200	500	**1**	**20**	**#12**	**Fire Alarm Booster Panels**	E1-30
				Total Load:	5344 VA		3324 VA		5400 VA						
				Total Amps:	47 A		28 A		48 A						
				Total Connected Load:	14068 VA										

Legend:

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HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
BAY MILLS, MI

ISSUED FOR:

	DATE:
OWNER REVIEW	4/22/2021
BIDSET	4/19/2021

HIGH SCHOOL ADDITION AND RENOVATIONS
OJIBWE CHARTER SCHOOL
PROJECT NO: O97-01165

DESIGNED BY: PM
DRAWN BY: SP
CHECKED: PM
APPROVED: JG

PROPOSED PANEL SCHEDULES

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