

ATEC ACADEMY ADDITION

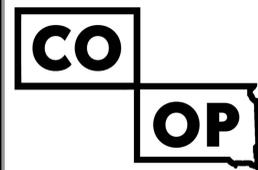
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA



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E200	LIGHTING PLAN
E300	SPECIAL SYSTEMS PLAN
E400	PANEL & FIXTURE SCHEDULES

ARCHITECT:



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STRUCTURAL ENGINEER:



6909 S. Lyncrest Place #110
Sioux Falls, SD 57108
Phone: 605-743-2510
jchristensen@riseincorp.com

CIVIL ENGINEER:



221 Brown County Highway 19
Aberdeen, SD 57401
Phone: 605-225-1212
lucash@helmsengineering.com

MECHANICAL & ELECTRICAL ENGINEER:



Mechanical and Electrical Engineering

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Phone: 605-225-4344

email: traviss@siceng.biz
email: lukem@siceng.biz

100%
CONSTRUCTION
DRAWINGS

05-03-2022

2018 INTERNATIONAL BUILDING CODE									
BUILDING AREA	OCCUPANCY TYPE	TYPE OF CONST.	NUMBER OF STORIES	BUILDING SPRINKLER	PERIMETER W/ 20' YARD (F)	PERIMETER BUILDING (P)	ALLOWABLE AREA/FLOOR	ACTUAL AREA/FLOOR	COMMENTS
8,442	E	II-B	1	Y	712'-11"	712'-11"	68,875	8,442	

ABBREVIATIONS					
A	A/C	AIR CONDITION	L	LAM	LAMINATE
AB	ACPL	ACROUSTICAL PLASTER	LAV	LAV	LAVATORY
ADJ	ADJ	ADJUSTABLE	M	MAX	MAXIMUM
AFF	AFF	ABOVE FINISH FLOOR	MB	MB	MARKER BOARD
AHU	AHU	AIR HANDLING UNIT	MECH	MECH	MECHANICAL
ALUM	ALUM	ALUMINUM	MTL	MTL	METAL
ALT	ALT	ALTERNATE	MIN	MIN	MINIMUM
ANC	ANC	ANCHOR	MO	MO	MASONRY OPENING
APC	APC	ACOUSTICAL PANEL CEILING	MST	MST	MOSAIC TILE
B	BC	BOTTOM OF CURB	MTB	MTB	MOSAIC TILE BASE
BD	BD	BOARD	N	NIC	NOT IN CONTRACT
BLDG	BLDG	BUILDING	NO	NO	NUMBER
BLKG	BLKG	BLOCKING	NOM	NOM	NOMINAL
BN	BN	BULLNOSE	NTS	NTS	NOT TO SCALE
B.O.	B.O.	BOTTOM OF	O	O	ON CENTER
BOW	BOW	BOTTOM OF WALL	OC	OC	OUTSIDE DIAMETER
BRG	BRG	BEARING	OH	OH	OVERHEAD
BRL	BRL	BRICK LEDGE	P	P	PAINT
BURN	BURN	BURNISHED BLOCK	PL	PL	PLATE
C	CG	CORNER GUARD	PLAS	PLAS	PLASTER
CJ	CJ	CONTROL JOINT	PLAM	PLAM	PLASTIC LAMINATE
CLG	CLG	CEILING	PSF	PSF	POUNDS PER SQUARE FOOT
CMU	CMU	CONCRETE MASONRY UNIT	PVT	PVT	PAVER TILE
COL	COL	COLUMN	PTB	PTB	PAVER TILE BASE
COMP	COMP	COMPARTMENT	PWD	PWD	PLYWOOD
CONC	CONC	CONCRETE	Q	Q	QUARRY TILE
CONSTR	CONSTR	CONSTRUCTION	QB	QB	QUARRY TILE BASE
CONT	CONT	CONTINUOUS OR CONTINUE	QT	QT	QUARRY TILE
CONTR	CONTR	CONTRACTOR	R	R	RESILIENT BASE
CPT	CPT	CARPET	RB	RB	RESILIENT BASE
CSV	CSV	COVER SHEET VINYL BASE	RD	RD	ROOF DRAIN
CT	CT	CERAMIC TILE	REF	REF	REFRIGERATOR
CTB	CTB	CERAMIC TILE BASE	ROOM	ROOM	ROOM
D	DBL	DOUBLE	RO	RO	ROUGH OPENING
DBL	DBL	DIAMETER	RST	RST	RESILIENT STAIR TREAD
DIA	DIA	DIAMETER	RT	RT	RUBBER TILE
DIM	DIM	DIMENSION	RVB	RVB	RUBBER VENTED BASE
DEMO	DEMO	DEMOLITION	S	S	SPLASH BLOCK
DET	DET	DETAIL	SB	SB	SPECIAL COATING (COLOR #)
DF	DF	DRINKING FOUNTAIN	SC#	SC#	SEALED CONCRETE
DR	DR	DOOR	SECT	SECT	SECTION
DS	DS	DOWNSPOUT	SH	SH	SIMILAR
DWG	DWG	DRAWING	SQ	SQ	SQUARE
E	EA	EACH	SS	SS	STAINLESS STEEL
EA	EA	EACH	STD	STD	STANDARD
EFPS	EFPS	EXTERIOR INSULATION FINISH SYSTEM	STL	STL	STEEL
EJ	EJ	EXPANSION JOINT	SV	SV	SHEET VINYL FLOORING
ELEV	ELEV	ELEVATION	SYM	SYM	SYMMETRICAL
ELEC	ELEC	ELECTRIC	TAG	TAG	TONGUE & GROOVE
EQ	EQ	EQUAL	TB	TB	TACKBOARD
EQUIP	EQUIP	EQUIPMENT	TBD	TBD	TO BE DETERMINED
ES	ES	EXPOSED STRUCTURE	TC	TC	TOP OF CURB
EW	EW	EACH WAY	TERR	TERR	TERRAZZO
EWC	EWC	ELECTRIC WATER COOLER	T.O.	T.O.	TOP OF
EXPO	EXPO	EXPOSED	TOC	TOC	TOP OF CONCRETE
EXIST	EXIST	EXISTING	TOF	TOF	TOP OF FOOTING
EXT	EXT	EXTERIOR	TOM	TOM	TOP OF MASONRY
F	FBO	FURNISHED BY OTHERS	TOO	TOO	TOP OF OPENING
FBO	FBO	FURNISHED BY OTHERS	TOP	TOP	TOP OF PRECAST
FDN	FDN	FOUNDATION	TOS	TOS	TOP OF STEEL
FE	FE	FIRE EXTINGUISHER	TOW	TOW	TOP OF WALL
FEC	FEC	FIRE EXTINGUISHER CABINET	TPD	TPD	TOILET PAPER DISPENSER
FFE	FFE	FINISHED FLOOR ELEVATION	TS	TS	TALL STORAGE
FF	FF	FINISHED FLOOR	TV	TV	TELEVISION
FLR	FLR	FLOOR	TYP	TYP	TYPICAL
FRP	FRP	FIBERGLASS REINFORCED PANEL	U	U	UNLESS NOTED OTHERWISE
FRP	FRP	FIBERGLASS REINFORCED PANEL	UNG	UNG	UNLESS NOTED OTHERWISE
FT	FT	FOOT	V	V	VINYL COMPOSITION TILE
FTG	FTG	FOOTING	VCT	VCT	VINYL COMPOSITION TILE
FWC	FWC	FABRIC WALL COVERING	VEND	VEND	VENDING MACHINE
G	GALV	GALVANIZED	VERT	VERT	VERTICAL
GALV	GALV	GALVANIZED	VTR	VTR	VENT THRU ROOF
GB	GB	GRAB BAR	VVB	VVB	VINYL WALL BORDER
GC	GC	GENERAL CONTRACTOR	VWC	VWC	VINYL WALL COVERING
GLAZ	GLAZ	GLAZED BLOCK	W	W	WITH
GWB	GWB	GYPSPUM WALL BOARD	W/O	W/O	WITHOUT
GWT	GWT	GLAZED WALL TILE	WB	WB	WOOD BASE
GTB	GTB	GLAZED WALL TILE BASE	WC	WC	WATER CLOSET
H	HB	HOSE BIB	WD	WD	WOOD
HB	HB	HOSE BIB	WD	WD	WOOD
HC	HC	HANDICAPPED	WH	WH	WATER HEATER
HLB	HLB	HORIZONTAL LOUVER BLINDS	WOM	WOM	WALK OFF MAT
HM	HM	HOLLOW METAL	WT	WT	WEIGHT
HPC	HPC	HIGH PERFORMANCE COATING	J	J	JOIST BEARING ELEVATION
HT	HT	HEIGHT	JST	JST	JOIST
HVAC	HVAC	HEATING, VENTING & AIR CONDITIONING	JT	JT	JOINT
I	ID	INSIDE DIAMETER			
ID	ID	INSIDE DIAMETER			
INSL	INSL	INSULATION			
INT	INT	INTERIOR			

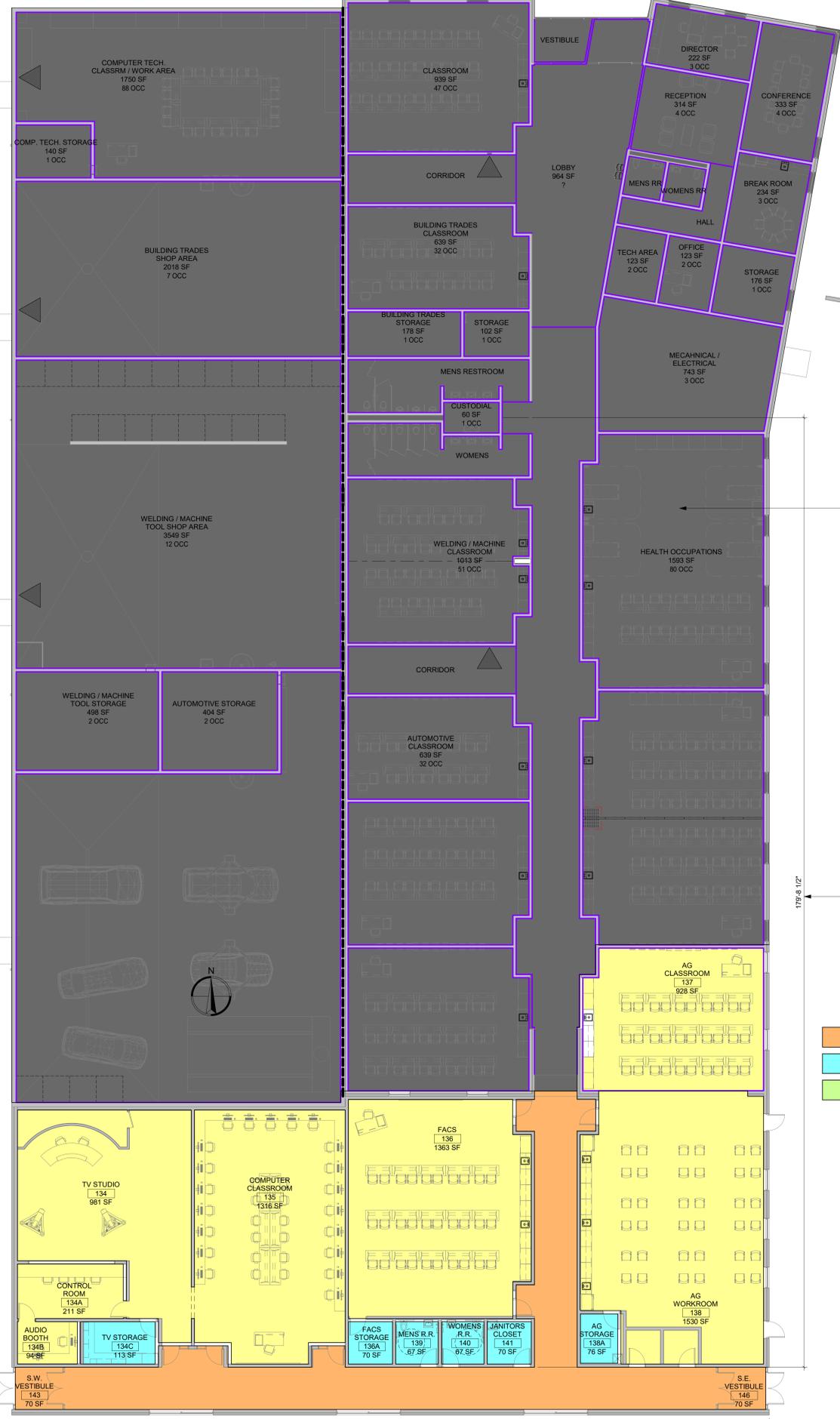
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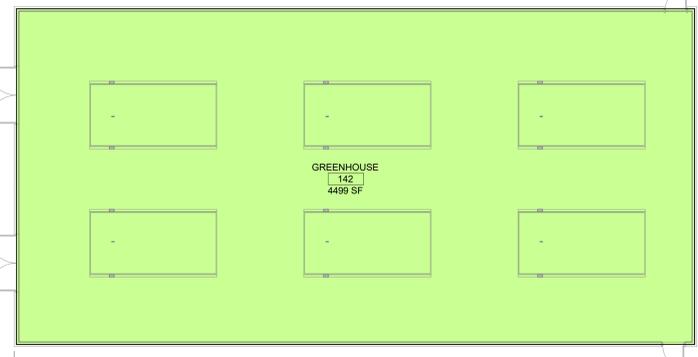
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GRAY AREA (EXISTING ATEC ACADEMY)
NO WORK IN THIS AREA FOR THIS PROJECT

<180' TO THE NEAREST RESTROOMS

- CIRCULATION
- STORAGE
- GREENHOUSE/CLASSROOM



- ### GENERAL NOTES
- THE CONTRACTOR SHALL CONSTRUCT ALL ITEMS WITHIN THIS CONTRACT IN ACCORDANCE WITH THE STATE AND LOCAL REGULATIONS AND CODES.
 - ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THESE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
 - SQUARE FOOTAGES LISTED ARE FOR CODE REVIEW PURPOSES ONLY AND SHOULD NOT BE USED FOR OTHER PURPOSES.
 - SEE DRAWING SHEET A100 FOR WALL TYPES AND RATED ASSEMBLIES AS REQUIRED.
 - SEE DOOR AND FRAME SCHEDULE FOR RATED OPENINGS.
 - SEE DRAWING SHEET A108 FOR ROOM FINISH SCHEDULE & FINISH LEGEND.
 - SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL INFORMATION AND COORDINATION.
 - PROVIDE ACOUSTICAL SEALANTS AT THE TOP AND BOTTOM OF ALL GWB WALLS BETWEEN ROOM.
 - PROVIDE FIRE SEALANTS AT ALL PENETRATIONS IN FIRE RATED WALLS.

PROJECT INFORMATION

PROJECT NAME: ATEC ACADEMY ADDITION

ADDRESS: 2200 SOUTH ROOSEVELT STREET
ABERDEEN, SOUTH DAKOTA 57401

OWNER: ABERDEEN SCHOOL DISTRICT, 6-1

LEGAL DESCRIPTION: ABERDEEN HIGH SCHOOL, 2nd SUBDIVISION

ZONING: R-2

SETBACK REQUIREMENTS: FRONT: 35' SIDE: 15' REAR: 30'

PARKING SETBACK:

PROPERTY AREA:

NEW BUILDING AREA: ADDITION = 8,442 SF / GREENHOUSE = 4,800 SF

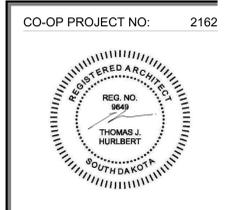
EXISTING BUILDING AREA: N/A

BUILDING HEIGHT: 15'-0" TO T.O. PARAPET CAP

PARKING REQUIRED:

PARKING PROVIDED:

FIRST FLOOR ELEVATION: 1303'



ISSUE: 05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:

REV. DSC. DATE

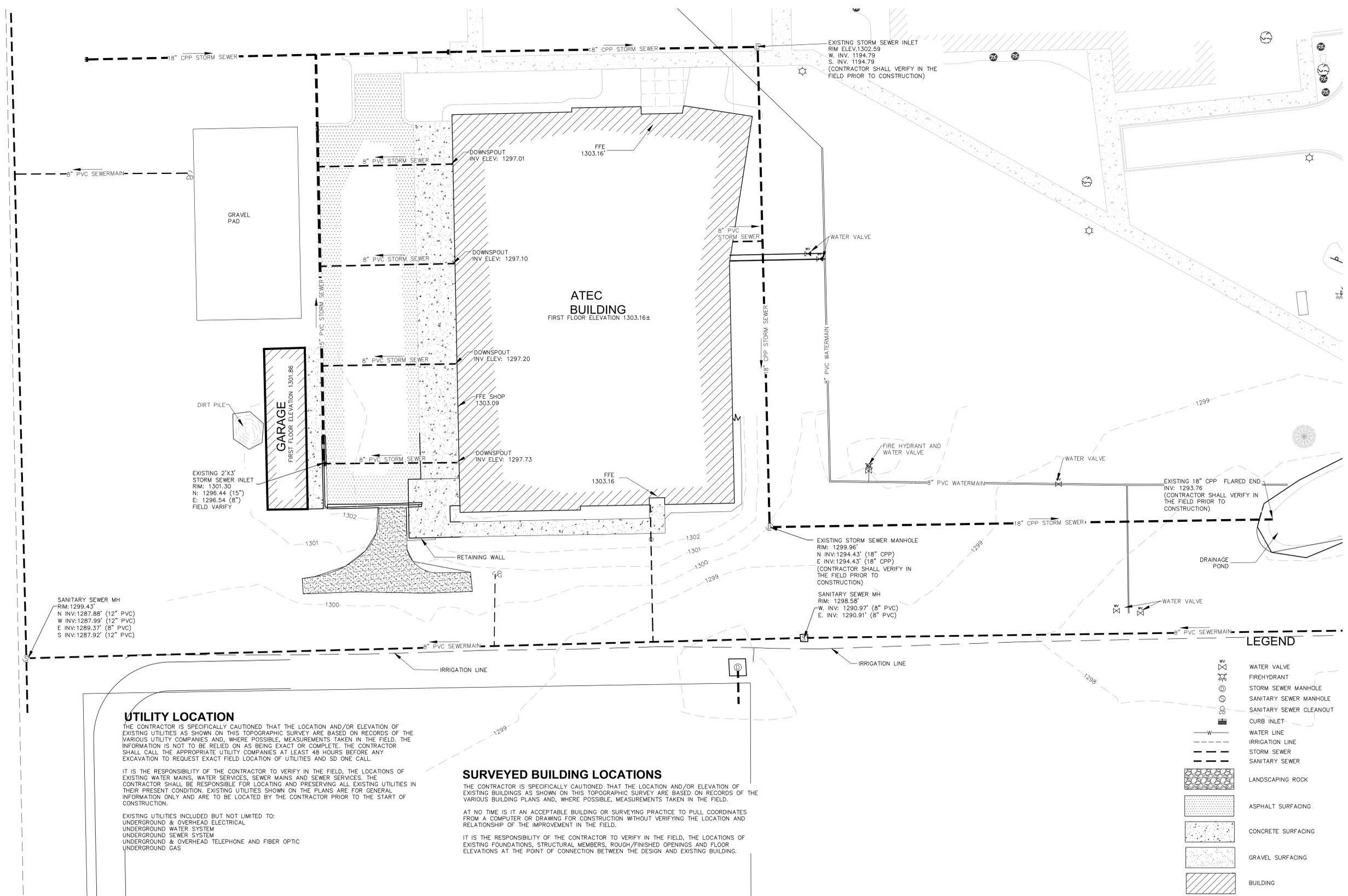
PROJECT: ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE: CODE & ORIENTATION PLAN

GOO1

MAIN LEVEL CODE PLAN
1" = 10'-0"



UTILITY LOCATION

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND SD ONE CALL.

EXISTING UTILITIES INCLUDED BUT NOT LIMITED TO:
UNDERGROUND & OVERHEAD ELECTRICAL
UNDERGROUND WATER SYSTEM
UNDERGROUND SEWER SYSTEM
UNDERGROUND & OVERHEAD TELEPHONE AND FIBER OPTIC
UNDERGROUND GAS

SURVEYED BUILDING LOCATIONS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING BUILDINGS AS SHOWN ON THIS TOPOGRAPHIC SURVEY ARE BASED ON RECORDS OF THE VARIOUS BUILDING PLANS AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD.

AT NO TIME IS IT AN ACCEPTABLE BUILDING OR SURVEYING PRACTICE TO PULL COORDINATES FROM A COMPUTER OR DRAWING FOR CONSTRUCTION WITHOUT VERIFYING THE LOCATION AND RELATIONSHIP OF THE IMPROVEMENT IN THE FIELD.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD, THE LOCATIONS OF EXISTING FOUNDATIONS, STRUCTURAL MEMBERS, ROUGH/FINISHED OPENINGS AND FLOOR ELEVATIONS AT THE POINT OF CONNECTION BETWEEN THE DESIGN AND EXISTING BUILDING.

LEGEND

- WATER VALVE
- FIREHYDRANT
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- CURB INLET
- WATER LINE
- IRRIGATION LINE
- STORM SEWER
- SANITARY SEWER
- LANDSCAPING ROCK
- ASPHALT SURFACING
- CONCRETE SURFACING
- GRAVEL SURFACING
- BUILDING



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Phone: 605.225.1212
Fax: 605.225.3159
Email: bob@helmsengineering.com

CO-OP PROJECT NO: 2162



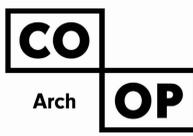
ISSUE:
4/15/2022 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:
REV. # REV. DSC. REV. DATE

PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
EXISTING CONDITIONS PLAN

C100



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Note Regarding Existing Utilities

The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor shall call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities.

It is the responsibility of the contractor to relocate all utilities requiring relocation. It is the responsibility of the contractor to verify in the field, the locations of existing water mains, water services, sewer mains and sewer services. The contractor shall be responsible for locating and preserving all existing utilities in their present condition. Existing utilities shown on the plans are for general information only and are to be located by the contractor prior to the start of construction.

Existing utilities included but not limited to:

- Underground and overhead electrical
- Underground and overhead cable television
- Underground water system
- Underground sewer system
- Underground and overhead telephone
- Underground natural gas

Note Regarding Project Cleanup and Safety

The general contractor shall take all precautions necessary to avoid property damage to adjacent properties during the construction phases of this project. The contractor is held solely responsible for any damages to the adjacent properties occurring during the construction phases of this project.

The designs represented in these plans are in accordance with established practices of civil engineering for the design functions and uses intended by the owner. However, neither Helms and Associates, nor its personnel can or do warranty these designs or plans as constructed except in the specific cases where Helms and Associates personnel observe and control the physical construction on a contemporary basis at the site.

In accordance with generally accepted construction practices, the contractor is solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work this requirement applies continuously and is not limited to normal working hours.

The duty of the engineer or owner to conduct construction review of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on, or near the construction site. The contractor shall clean the entire site on a daily basis and should not restrict local traffic over night. All roads leading to the site shall be cleaned as needed as specified by the owners representative.

Waste Disposal

The contractor shall be required to furnish a site for the disposal of construction/demolition debris generated by this project. Construction/demolition debris may not be disposed of on owner's property.

Salvaging, Stockpiling, and Placing Topsoil

The contractor shall remove a minimum of 6 inches of soil cover for topsoiling operations. The contractor shall place a minimum of 24 inches of topsoil evenly in the areas to receive landscape plantings.

Salvageable Materials

All materials salvaged by the contractor that are not incorporated into the project or as noted in the plans, shall be removed from the property. The contractor shall be responsible for the removal and disposal of all salvaged materials.

Sequence of Operations and Traffic Control

During construction of the project, the existing traffic control devices shall be removed, reset or relocated as necessary by the contractor to safely control traffic through or around the project. Devices no longer needed shall be neatly stockpiled on the project at a location designated by the engineer. This work shall be considered incidental work, no extra compensation will be considered.

The contractor shall furnish and install traffic control devices in accordance with the Manual on Uniform Traffic Control Devices (MUTCD)

The contractor shall have qualified personnel to be responsible for traffic control items 24 hours per day and 7 days per week. The contractor shall be responsible for maintaining all existing traffic control signing for safety of traveling public. Construction operations will be allowed during daylight hours only, unless otherwise allowed by the engineer.

Note Regarding Storm Drainage Provisions

The Contractor shall provide for and maintain drainage of storm waters away from existing buildings, and exposed surfaces or provide immediate pumping of ponded areas on the work site. No compensation will be made for damage resulting from improper drainage during construction.

Note Regarding Building Excavation

Building earthwork volumes are not included in the civil site design.

Contaminated Material

The Contractor shall give notice to the Owner if contaminated soil is encountered on the project. The Owner will contact the Department of Agriculture and Natural Resources (DANR) and consultant to inspect and monitor removal of any contaminated soil.

Contaminated soil may be disposed of at the Brown County Landfill, phone (605) 626-4019.

Piping located in areas of contamination shall require the installation of ductile iron pipe with nitrile butadiene gaskets.

Backfill material for trenches located in contaminated soil areas shall be as shall be Contractor furnished barrow.

Note Regarding Water For Compaction

Contractor shall obtain all permits required and the water source shall be approved by the Owner.

The Contractor shall obtain a Temporary Water Rights Permit to use water for construction, testing, or drilling purposes from the SD Department of Agriculture and Natural Resources for all water sources. Contact Eric Gronlund by phone at 605-773-3352 for more information.

Note Regarding Haul Roads

Contractor shall obtain written permission from the proper state, county, and municipal authorities for use of local roads as haul roads. A copy shall be sent to the Owner prior to construction. Contractor shall obtain a written release from all cities, counties, and townships owning or maintaining the haul roads used by the Contractor upon completion of the construction. Haul road restoration shall be the responsibility of the Contractor.

Unclassified Excavation

All excavation that must be performed to construct the new grades in conformance with the cross-sections and plan details, will be included in the bid. Material taken from excavated areas shall used in the formation of embankments along the project. The excavated or other suitable material, as directed by the engineer, shall be replaced and recompacted to the density specified for the section constructed. Excess material shall be removed from the site, as waste material, upon completion of the Project.

Sidewalks, and Paved Parking Areas

For support of the sidewalks, concrete driveways, and paved parking areas. All topsoil shall be removed. The exposed soils shall be scarified and recompacted 6" prior to the placement of approved fill material.

Earthwork

The excavation shall be carried to the elevations or depths required to obtain the specified depths as shown on the plans. Should the Contractor, through negligence or other fault, excavate below the designated lines or elevations, he shall replace the excavation with suitable materials and properly compact and control the moisture content in a manner as specified. All replacement work shall be at the Contractor's expense.

The Contractor shall inform and satisfy himself as to the character, quantity, and distribution of all material to be excavated. No payment will be made for any excavated material which is used for purposes other than those designated. All spoil areas shall be leveled to a uniform line and section and shall present a neat appearance before project acceptance.

Those areas outside of the embankment areas in which the top layer of soil material becomes compacted due to hauling or to any other activity of the Contractor shall be scarified and disked to a depth of 4 inches as directed to loosen and pulverize the soil.

CO-OP PROJECT NO: 2162



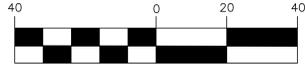
ISSUE:
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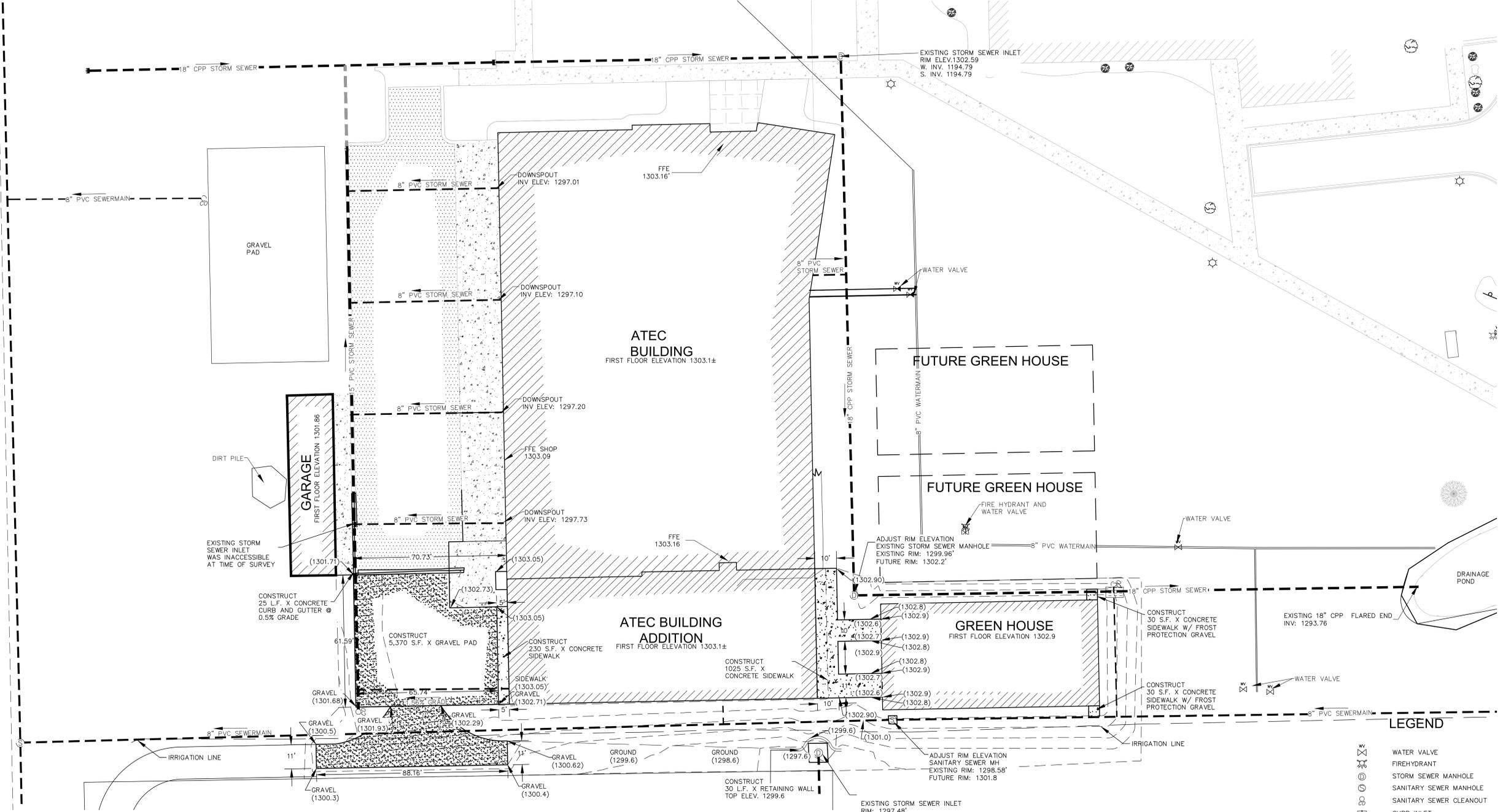
PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
PLAN NOTES AND ESTIMATE
OF QUANTITIES

C101



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ALL DISTURBED AREAS SHALL BE FERTILIZED AND SEEDED.

LEGEND

	WATER VALVE
	FIRE HYDRANT
	STORM SEWER MANHOLE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	CURB INLET
	WATER LINE
	IRRIGATION LINE
	STORM SEWER
	SANITARY SEWER
	LANDSCAPING ROCK
	ASPHALT SURFACING
	CONCRETE SURFACING
	GRAVEL SURFACING
	BUILDING

CO-OP PROJECT NO: 2162



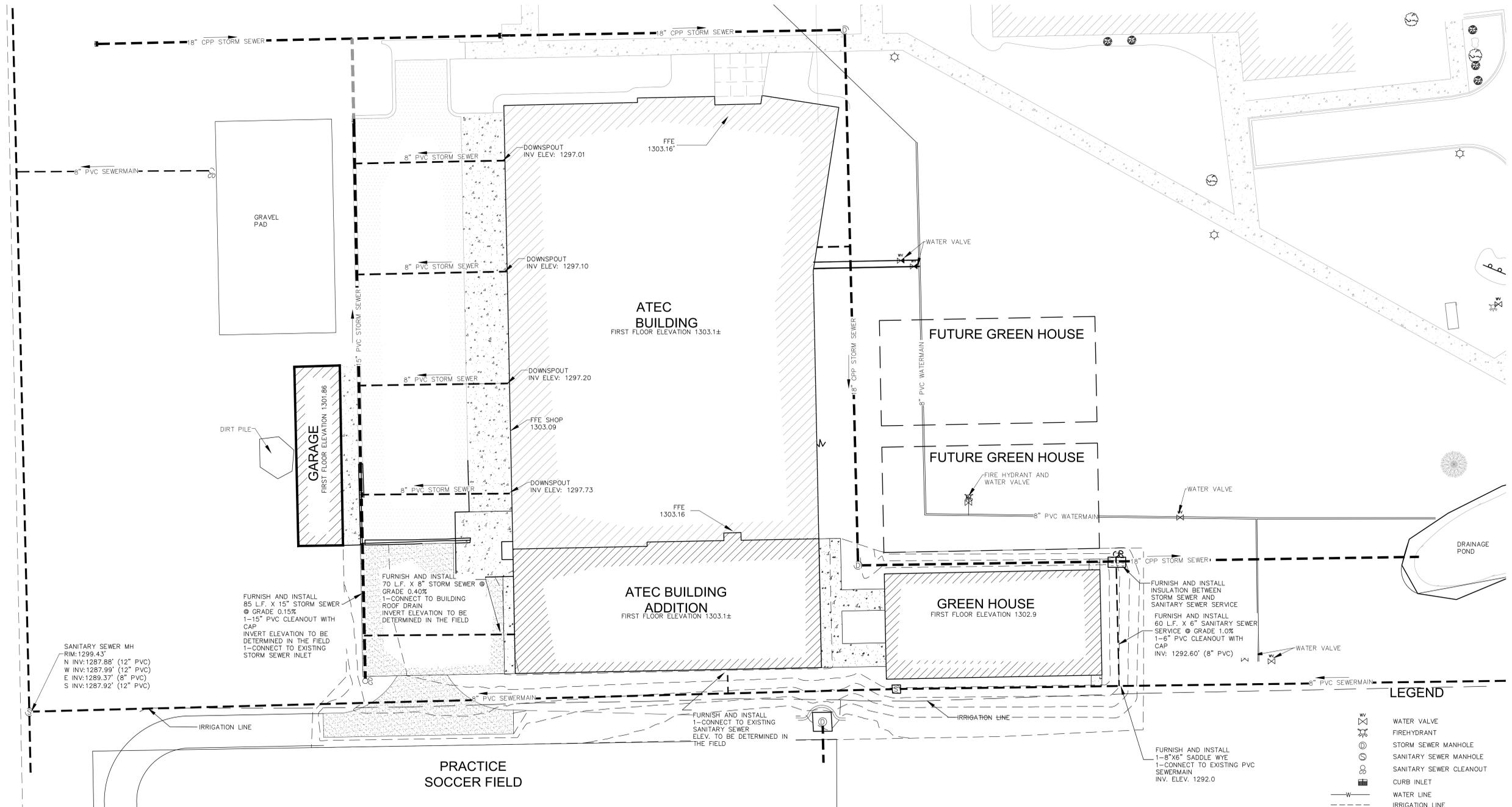
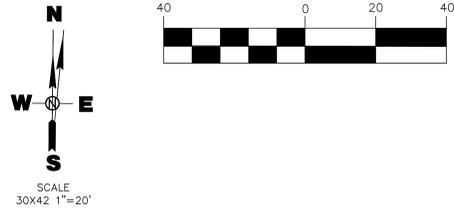
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PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
GRADING



LEGEND

	WATER VALVE
	FIREHYDRANT
	STORM SEWER MANHOLE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	CURB INLET
	WATER LINE
	IRRIGATION LINE
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	CONCRETE SURFACING
	GRAVEL SURFACING
	BUILDING

CO-OP PROJECT NO: 2162



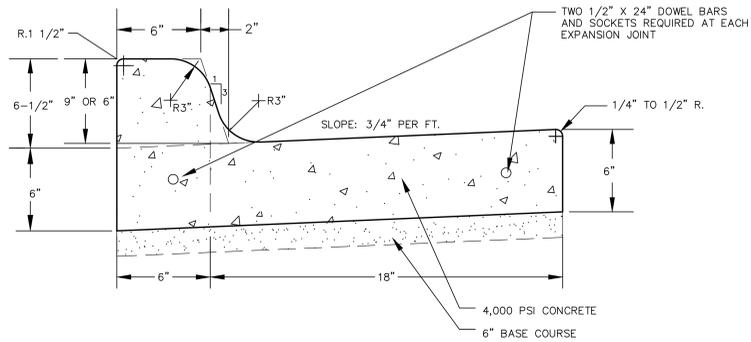
ISSUE:
4/15/2022 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE

PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
UTILITIES LAYOUT SHEET

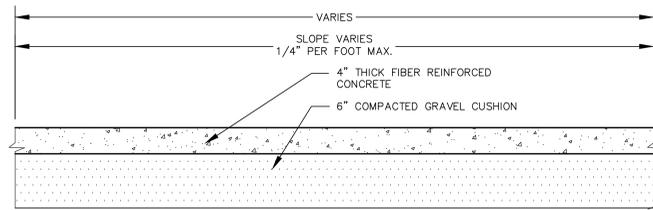


- 1/2" PREFORMED EXPANSION JOINT FILLERS SHALL BE PLACED TRANSVERSALLY IN THE CURB AND GUTTER AS FOLLOWS.
- AT EACH JUNCTION OF RADIUS RETURN CURB AND GUTTER WHICH IS PARALLEL TO THE PROJECT CENTER LINE.
 - AT EACH JUNCTION WITH EXISTING CONCRETE CURB OR CONCRETE CURB AND GUTTER.
 - AT EACH JUNCTION WITH EXISTING CONCRETE SIDEWALK, TO THE DEPTH OF THE SIDEWALK.

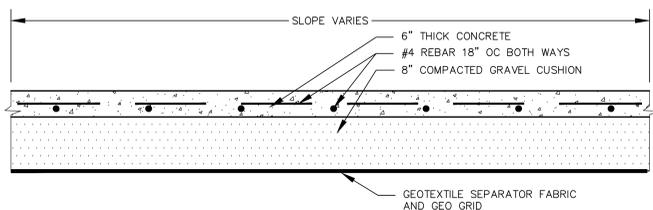
1/2" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED LONGITUDINALLY ALONG THE BACKFACE OF THE CURB, TO THE DEPTH OF THE CONCRETE SIDEWALK, WHERE SUCH BACKFACE OF CURB IS ADJACENT TO AN EXISTING CONCRETE SIDEWALK.

WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 10' INTERVALS EXCEPT WHEN CURB AND GUTTER IS TO BE CONSTRUCTED ADJACENT TO PCC PAVEMENT. THEN THE JOINTS SHALL COINCIDE WITH THE PCC PAVEMENT'S TRANSVERSE JOINTS. THE JOINTS SHALL BE CONSTRUCTED TO A DEPTH OF ONE INCH BY SCORING WITH A TOOL WHICH WILL LEAVE THE CORNERS ROUNDED AND INSURE THE FREE MOVEMENT OF CONCRETE AT THE JOINT.

24" X 6" CONCRETE AND GUTTER DETAIL
NO SCALE



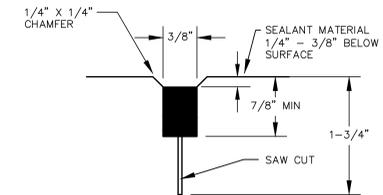
4" FIBER REINFORCED CONCRETE SIDEWALK DETAIL
NO SCALE



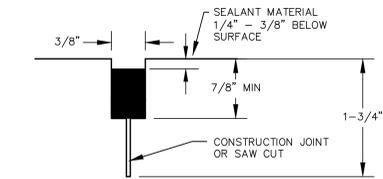
6" REINFORCED CONCRETE SURFACING DETAIL
NO SCALE

CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINTS, AND EXPANSION JOINTS IN SIDEWALKS. JOINT DISTANCE VARIES. SAW CUT CONTROL JOINTS MIN OF 1/4" CONCRETE THICKNESS.
EXPANSION JOINT MAXIMUM DISTANCE 100' O.C.

CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINTS, AND EXPANSION JOINTS IN SIDEWALKS. JOINT DISTANCE VARIES. SAW CUT CONTROL JOINTS MIN OF 1/4" CONCRETE THICKNESS.



TRANSVERSE JOINT
NO SCALE



LONGITUDINAL JOINT
NO SCALE

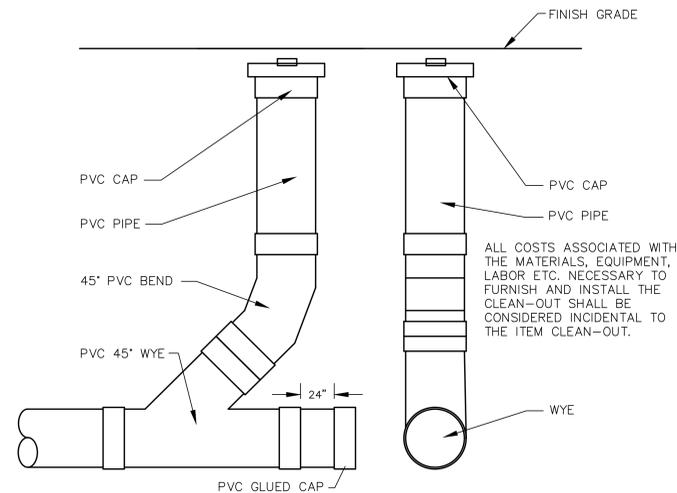
Type	T ₁ (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
P6	6	6 1/2	0.047	21.2
P7	7	7 1/2	0.055	18.1
P8	8	8 1/2	0.064	15.7
P8.5	8.5	8 3/4	0.068	14.6
P9	9	9 1/2	0.072	13.9
P9.5	9.5	9 3/4	0.076	13.2
P10	10	10 1/2	0.080	12.5
P10.5	10.5	10 3/4	0.084	11.9
P11	11	11 1/2	0.088	11.3
P11.5	11.5	11 3/4	0.092	10.8
P12	12	12 1/2	0.096	10.4

GENERAL NOTES:
The concrete for the Type P Concrete Gutter shall comply with the requirements of the Standard Specifications for Class M6 Concrete.
When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.
Transverse contraction joints shall be constructed at 10' intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint shall be constructed in the concrete gutter at each mainline PCC pavement transverse contraction joint location.
When concrete gutter is placed monolithically with mainline PCC pavement, the transverse contraction joints in the concrete gutter shall be sawed and sealed the same as the transverse contraction joints in the mainline PCC pavement.
When concrete gutter is not placed monolithically with the mainline PCC pavement and when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete gutter shall be 1/2" inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be at least 1/4" the thickness of the concrete.

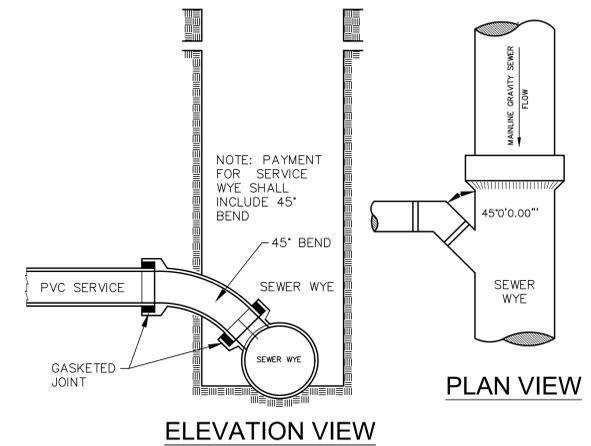
TYPE P CONCRETE GUTTER
NO SCALE

GENERAL NOTES:
The concrete for the type A PCC approach pavement and adjacent driveway shall comply with the requirements of the Standard Specifications for class M6 concrete unless otherwise stated in the plans.
Contraction joints in the type A PCC approach pavement shall be 1/2" inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be at least 1/4" the thickness of the approach pavement. Additional contraction joints not shown in the Plan View shall be spaced as follows:
One joint at the center of the approach for driveways 16' to 24' wide.
Two joints spaced at equal intervals for driveways greater than 24' to 40' wide.
All costs for furnishing and placing the type A PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, and materials including the earthen backfill shall be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement bid item.
All costs for excavation required for placing the type A PCC approach pavement and granular material shall be incidental to the contract unit price per cubic yard for "Unclassified Excavation". All costs for furnishing and placing the granular material shall be incidental to the contract unit price per ton for the corresponding granular material bid item.

TYPE A PCC APPROACH PAVEMENT
NO SCALE

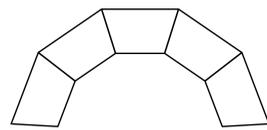


SANITARY SEWER CLEAN-OUT DETAIL
NO SCALE



TYPICAL SERVICE WYE
NO SCALE

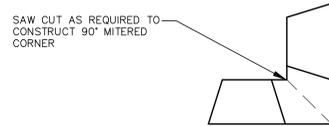




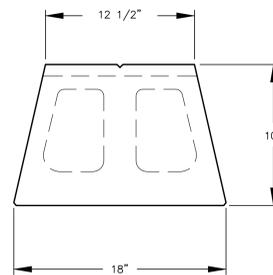
OUTSIDE CURVE



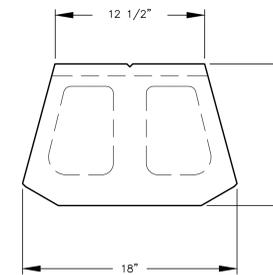
INSIDE CURVE



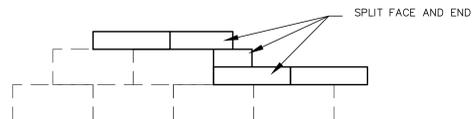
TOP



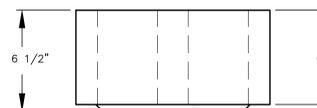
TOP VIEW



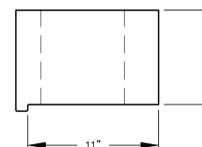
TOP VIEW



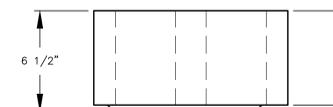
WALL FACE



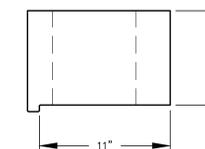
FRONT VIEW



SIDE VIEW



FRONT VIEW



SIDE VIEW

STRAIGHT UNITS

BEVELED UNITS

1. ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
2. LAYOUT CAPS PRIOR TO USING ADHESIVE.
3. CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADII GREATER THAN THE MINIMUM.
4. ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT ROW OF CAPS.
5. USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.
6. WALLS FOR THIS PROJECT SHALL BE ONE BLOCK HIGH PLUS CAP BLOCK.

MODULAR RETAINING WALL CAP BLOCK

NO SCALE

MODULAR RETAINING WALL BLOCK

NO SCALE

SEGMENTAL RETAINING WALL SYSTEMS
THE SEGMENTAL RETAINING WALL SYSTEM WILL BE MEASURED BY LENGTH OF WALL PLACED, INCLUDING CAP BLOCKS, TO THE NEAREST WHOLE LINEAL FOOT. THE EXCAVATION, LEVELING PAD, AND ALL OTHER RELATED ITEMS NECESSARY TO FURNISH AND INSTALL THE COMPLETED WALL TO THE LINES AND GRADES AS SHOWN ON THE PLANS SHALL BE CONSIDERED INCIDENTAL AND SHALL NOT BE MEASURED SEPARATELY.

MASONRY UNITS SHALL BE MACHINE MADE FROM PORTLAND CEMENT, WATER AND AGGREGATES. UNITS SHALL BE KEYSTONE RETAINING WALL UNITS, VERSA-LOK RETAINING WALL UNITS, ANCHOR WALL RETAINING WALL UNITS OR APPROVED EQUAL. CONCRETE WALL UNITS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI. THE CONCRETE SHALL HAVE MAXIMUM MOISTURE ABSORPTION OF 8%.

EXTERIOR DIMENSIONS MAY VARY IN ACCORDANCE WITH ASTM C90. FACE DIMENSIONS SHALL BE APPROPRIATE FOR THE DESIGNED WALL DIMENSION. FACE COLOR SHALL BE THE STANDARD MANUFACTURER'S COLOR UNLESS STATED DIFFERENTLY ON THE PLANS. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER. RIGID ADHESIVES OR MORTAR ARE NOT ACCEPTABLE.

SEGMENTAL WALL STANDARD UNITS SHALL PROVIDE A MINIMUM OF 150 PSF OF WALL FACE AREA. FILL THAT IS CONTAINED WITHIN THE DIMENSIONS OF THE UNITS MAY BE CONSIDERED AS 80% EFFECTIVE WEIGHT. UNITS SHALL HAVE ANGLED SIDES CAPABLE OF CONCAVE AND CONVEX ALIGNMENT CURVES WITH A MINIMUM RADIUS OF 3.5 FEET. UNITS SHALL BE INTERLOCKED WITH NON-CORROSIVE SHEAR CONNECTORS. UNITS SHALL BE INTERLOCKED AND PROVIDE EITHER A NEAR VERTICAL SETBACK OR A BUILT-IN SETBACK OF 1:8. A SETBACK OF 1:16 CAN BE ACHIEVED BY INTEGRATING NEAR VERTICAL AND BUILT-IN SETBACK UNITS. UNITS' MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN ± 1/8 INCH FROM THAT SPECIFIED, EXCEPT HEIGHT, WHICH SHALL BE ± 1/16 INCH AS MEASURED IN ACCORDANCE WITH ASTM C140.

SHEAR CONNECTORS SHALL BE CAPABLE OF INTERLOCKING THE SEGMENTAL WALL UNITS UNDER THE DESIGN LOADS. SHEAR CONNECTORS SHALL BE NON-CORROSIVE AND MUST BE DESIGN TO BE USED WITH THE SEGMENTAL WALL UNITS.

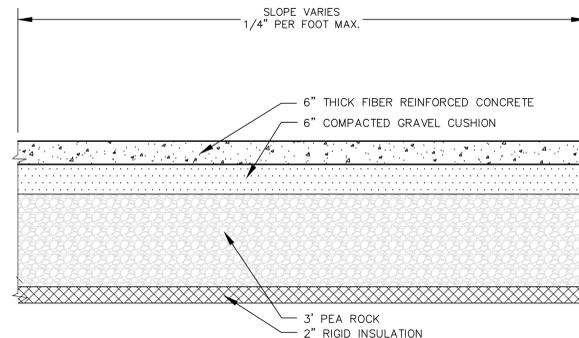
THE LEVELING PAD MATERIAL SHALL CONSIST OF COMPACTED SAND, GRAVEL OR CRUSHED ROCK AND SHALL BE A MINIMUM OF 6 (SIX) INCHES DEEP. NON-REINFORCED CONCRETE A MINIMUM OF THREE (3) INCHES THICK MAY ALSO BE USED.

INSTALLATION:
LEVELING PAD SHALL BE PREPARED TO ENSURE COMPLETE CONTACT OF SEGMENTAL WALL UNIT WITH BASE. MATERIAL SHALL BE PLACED TO EXTEND LATERALLY A MINIMUM OF 6 (SIX) INCHES IN FRONT OF AND BEHIND THE SEGMENTAL WALL UNIT. MATERIAL SHALL BE COMPACTED SO AS TO PROVIDE A LEVEL SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. COMPACTION SHALL BE 95% OF STANDARD PROCTOR FOR SAND OR GRAVEL TYPE MATERIALS. FOR CRUSHED ROCK, MATERIAL SHALL BE DENSELY COMPACTED.

PLACE THE FIRST COURSE OF SEGMENTAL WALL UNITS ON THE LEVELING PAD. THE UNITS SHALL BE LEVELED IN ALL DIRECTIONS AND WITH ADJACENT UNITS, AND ALIGNED TO ENSURE INTIMATE CONTACT WITH THE LEVELING PAD. ALIGNMENT MAY BE MAINTAINED BY A STRING LINE OR OFFSET FROM A BASE LINE.

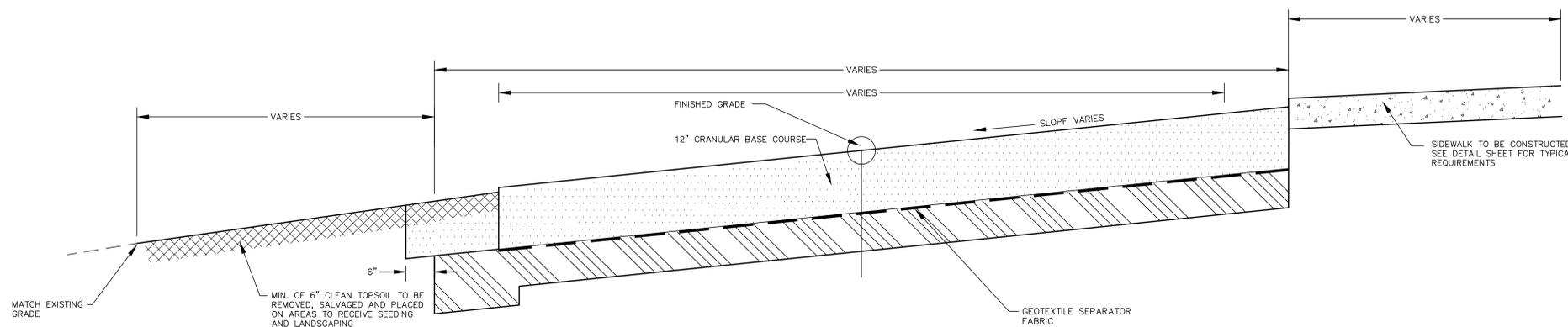
PLACE THE FRONT OF UNITS SIDE-BY-SIDE. NO GAPS MAY BE LEFT BETWEEN ADJACENT UNITS. LAYOUT AND CONSTRUCTION OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INSTALL SHEAR/CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL. SWEEP ALL EXCESS MATERIAL FROM TOP OF UNITS AND INSTALL NEXT COURSE. EACH COURSE SHALL BE FILLED, BACKFILLED AND COMPACTED BEFORE THE PLACEMENT OF THE NEXT COURSE.

* WALLS SHALL BE CONSTRUCTED TO THE MANUFACTURE'S RECOMMENDATIONS, AT A MINIMUM.



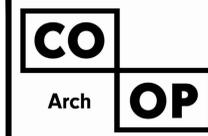
CONCRETE CONCRETE SIDEWALK WITH FROST PROTECTION DETAIL

NO SCALE



GRAVEL PARKING LOT PAVING SECTION

NO SCALE



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CO-OP PROJECT NO: 2162

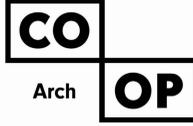
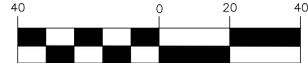


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REV. # REV. DSC. REV. DATE

PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
RETAINING WALL DETAIL

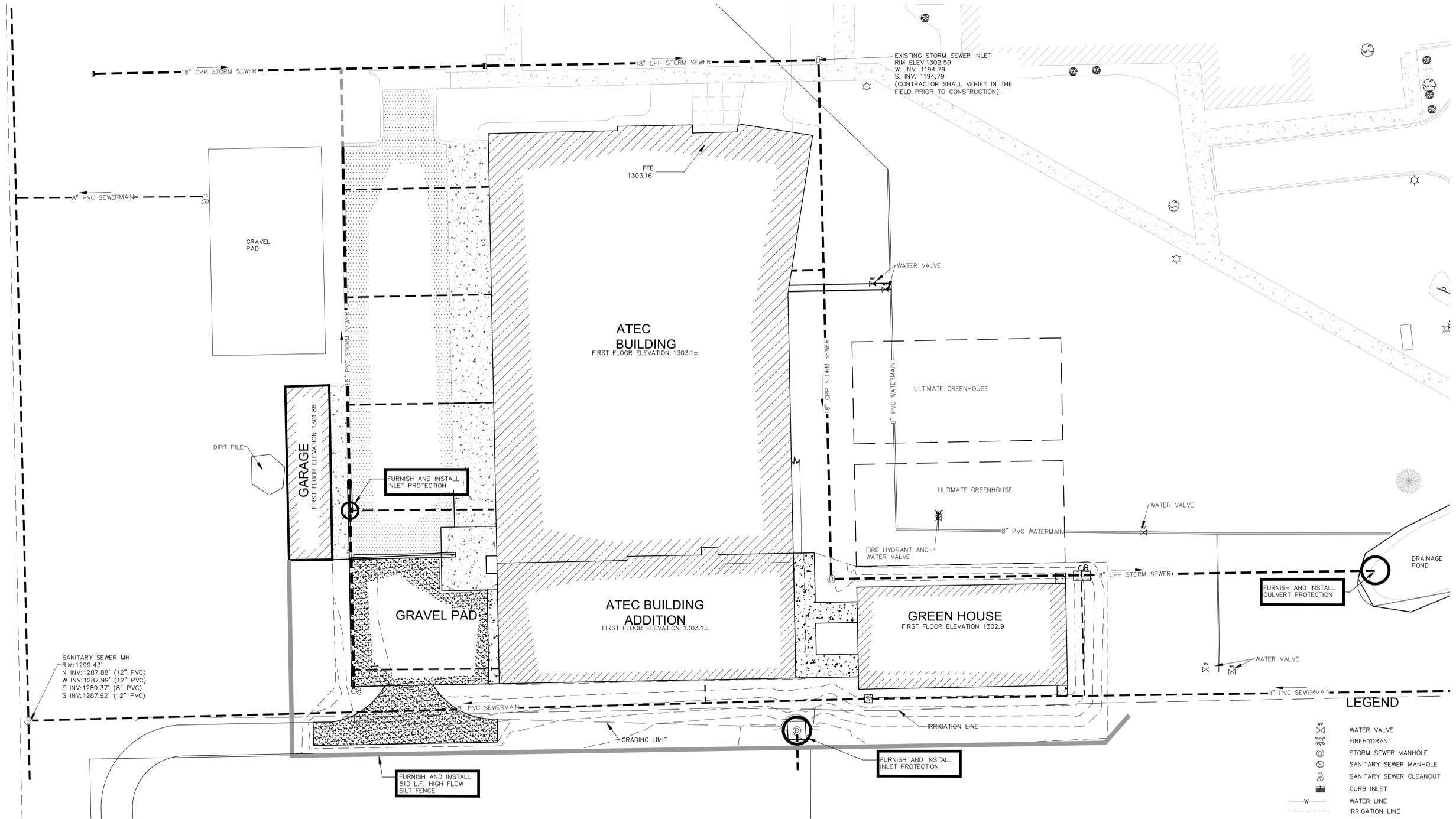
C106



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SANITARY SEWER MH
RIM: 1299.43'
N INV: 1287.88' (12" PVC)
W INV: 1287.99' (12" PVC)
E INV: 1289.37' (8" PVC)
S INV: 1287.92' (12" PVC)

LEGEND

	WATER VALVE
	FIREHYDRANT
	STORM SEWER MANHOLE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	CURB INLET
	WATER LINE
	IRRIGATION LINE
	STORM SEWER
	SANITARY SEWER
	LANDSCAPING ROCK
	ASPHALT SURFACING
	CONCRETE SURFACING
	GRAVEL SURFACING
	BUILDING

CO-OP PROJECT NO: 2162



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PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
STORM WATER POLLUTION
PREVENTION PLAN

C107

STORM WATER POLLUTION PREVENTION PLAN CHECKLIST
*(The numbers right of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES*

❖ **SITE DESCRIPTION (4.2 1)**

- **Project Limits: See Title Sheet (4.2 1.b)**
- **Project Description: See Title Sheet (4.2 1.a.)**
- **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**
- **Major Soil Disturbing Activities** (check all that apply)
 - X Clearing and grubbing
 - X Excavation/borrow
 - X Grading and shaping
 - X Filling
 - X Cutting and filling
 - Other (describe):
- **Total Project Area** 2.5 Acres **(4.2 1.b.)**
- **Total Area To Be Disturbed** 1.5 Acres **(4.2 1.b.)**
- **Existing Vegetative Cover (%)** 95
- **Soil Properties:** AASHTO Soil Classification A-7 **(4.2 1. d.)**
- **Name of Receiving Water Body/Bodies** Moccasin Creek **(4.2 1.e.)**

❖ **ORDER OF CONSTRUCTION ACTIVITIES (4.2 1.c.)**

(Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.)

- **Install perimeter protection where runoff sheets from the site.**
- **Clearing and grubbing.**
- **Remove and store topsoil.**
- **Install utilities, storm sewers, curb and gutter.**
- **Install inlet and culvert protection after completing storm drainage and other utility installations.**
- **Complete final grading.**
- **Complete final paving and sealing of concrete.**
- **Reseed areas disturbed by removal activities.**

❖ **EROSION AND SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))**

(Check all that apply)

➤ **Stabilization Practices (See Detail Plan Sheets)**

- X Temporary or Permanent Seeding
 - Sodding
- X Planting
 - Mulching (Straw or Cellulose Fiber)
 - Erosion Control Blankets or Mats
 - Vegetation Buffer Strips
 - Roughened Surface (e.g. tracking)
 - Gabions-Gabion Mattress
 - Other

➤ **Structural Temporary Erosion and Sediment Controls**

- X Silt Fence
 - Straw Bale Check
 - Temporary Berm
 - Temporary Slope Drain
 - Straw Wattles or Rolls
 - Diversion Channels/Swales
 - Channel Liners (TRM)
 - Stone Rip Rap Sheet

➤ **Structural Temporary Erosion and Sediment Controls (Continued)**

- Rock Check Dams
- Sediment Traps/Basins
- Inlet Protection
- Outlet Protection
- X Surface Inlet Protection
- X Curb Inlet Protection
 - Stabilized Construction Entrances
 - Other

➤ **Wetland Avoidance**

Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes No If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

➤ **Storm Water Management (4.2 2.b., (1) and (2))**

Storm water management will be handled by temporary controls outlined in "EROSION AND SEDIMENT CONTROLS" above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Permanent controls will be shown on the plans and noted as permanent.

➤ **Other Storm Water Controls (4.2 2.c., (1) and (2))**

▪ **Waste Disposal**

All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal, and notices stating proper practices will be posted in the field office. The general contractor's representative responsible for the conduct of work on the site will be responsible for seeing waste disposal procedures are followed.

▪ **Hazardous Waste**

All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the individual designated as the contractor's on-site representative will be responsible for seeing that these practices are followed.

▪ **Sanitary Waste**

Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units in a timely manner by a licensed waste management contractor or as required by any local regulations.

❖ **Maintenance and Inspection (4.2 3. and 4.2 4.)**

➤ **Maintenance and Inspection Practices**

- Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears in order to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.

➤ **Maintenance and Inspection Practices(Continued)**

- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and contractor's site superintendent are responsible for inspections. Maintenance, repair activities are the responsibility of the contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

❖ **Non-Storm Water Discharges (3.0)**

The following non-storm water discharges are anticipated during the course of this project (check all that apply).

- Discharges from water line flushing.
 - Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
 - Uncontaminated ground water associated with dewatering activities.

❖ **Materials Inventory (4.2. 2.c.(2))**

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the headings "EROSION AND SEDIMENT CONTROLS" and "SPILL PREVENTION" (check all that apply).

- X Concrete and Portland Cement
- Detergents
- X Paints
- X Metals
- X Bituminous Materials
- X Petroleum Based Products
- Cleaning Solvents
- X Wood
- X Cure
- X Texture
- Chemical Fertilizers
- Other

❖ **Spill Prevention (4.2 2.c.(2))**

➤ **Material Management**

- **Housekeeping**
 - Only needed products will be stored on-site by the contractor.
 - Except for bulk materials the contractor will store all materials under cover and in appropriate containers.
 - Products must be stored in original containers and labeled.
 - Material mixing will be conducted in accordance with the manufacturer's recommendations.
 - When possible, all products will be completely used before properly disposing of the container off site.
 - The manufacturer's directions for disposal of materials and containers will be followed.
 - The contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.



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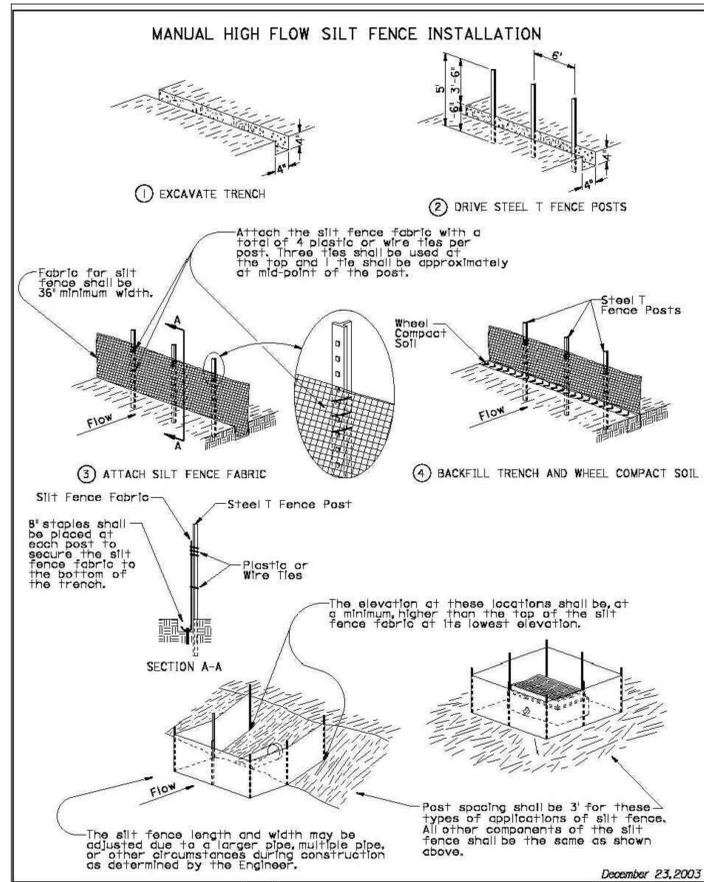
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 4/15/2022 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

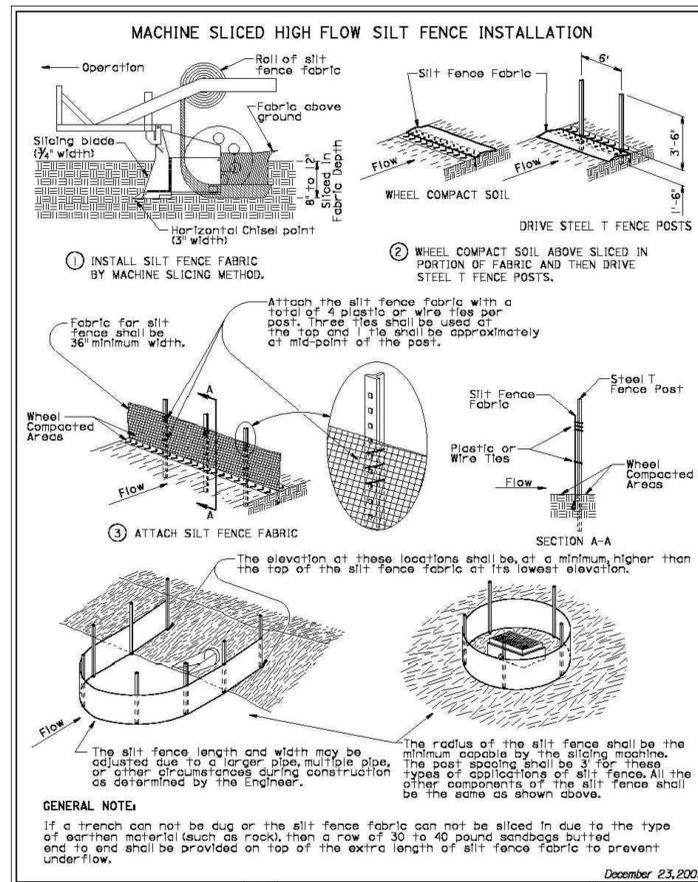
REV. #	REV. DSC.	REV. DATE

PROJECT:
 ATEC ADDITION AND GREENHOUSE
 ABERDEEN SCHOOL DISTRICT
 ABERDEEN, SOUTH DAKOTA

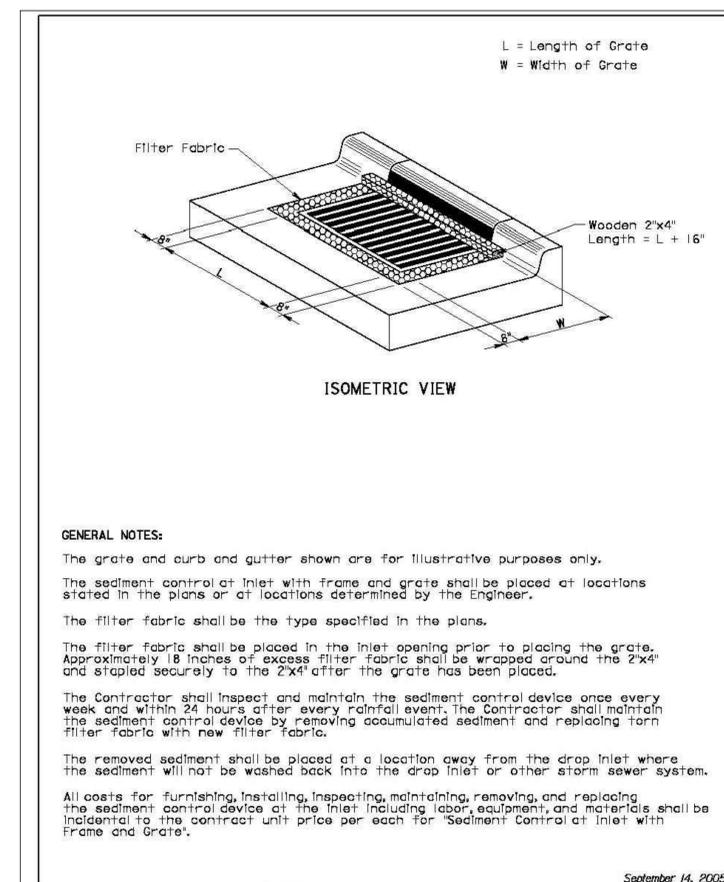
SHEET TITLE:
 STORM WATER POLLUTION
 PREVENTION PLAN NOTES



HIGH FLOW SILT FENCE
NO SCALE



HIGH FLOW SILT FENCE
NO SCALE



SEDIMENT CONTROL AT INLETS WITH FRAME AND GRATES
NO SCALE



ISSUE:
4/15/2022 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE

PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
STOW WATER POLLUTION
PREVENTION PLAN DETAILS



THE GRAVEL ACCESS ROAD SHALL BE CONSTRUCTED FIRST AND AT THE END OF THE PROJECT THE AREA SHALL BE RETURNED TO THE NATURAL STATE. GRAVEL FROM THE ROAD IS TO BE USED ON THE GRAVEL BUILDING PAD.

THIS AREA HAS AN EXISTING IRRIGATION SYSTEM. THIS SYSTEM SHALL BE SALVAGED AND RE-INSTALLED UPON THE COMPLETION OF THE PROJECT.

ORDER OF CONSTRUCTION

1. THE IRRIGATION SYSTEM (SPRINKLER HEADS) SHALL BE SALVAGED
2. TOPSOIL SHALL BE SALVAGED AND STOCKPILED MINIMUM 8" DEEP
3. GEOTEXTILE FABRIC INSTALLED
4. 8" GRAVEL BASE COURSE INSTALLED
5. ROAD TO BE MAINTAINED DURING CONSTRUCTION
6. UPON COMPLETION OF PROJECT BASE COURSE TO BE SALVAGED AND USED ON HAMMERHEAD AND EXISTING GRAVEL PARKING LOT AND ACCESS ROAD.
7. EXCESS GRAVEL AND FABRIC TO BE REMOVED AND DISPOSED.
8. AREA TO BE TOPSOILED MINIMUM 8" DEEP
9. IRRIGATION SYSTEM TO BE REINSTALLED
10. AREA TO BE SEEDED AND FERTILIZED

CO-OP PROJECT NO: 2162



ISSUE:
4/15/2022 CONSTRUCTION DOCUMENTS

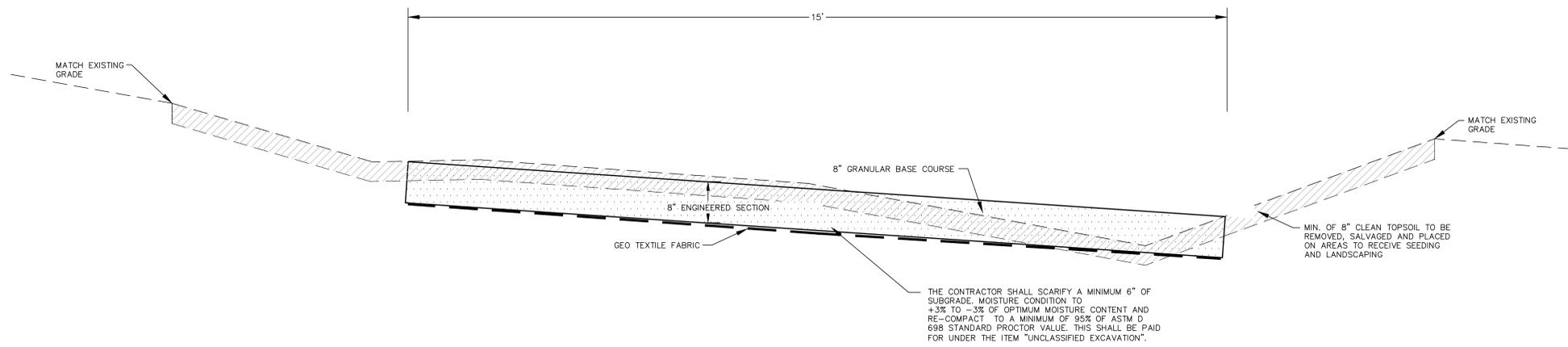
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE

PROJECT:
ATEC ADDITION AND GREENHOUSE
ABERDEEN SCHOOL DISTRICT
ABERDEEN, SOUTH DAKOTA

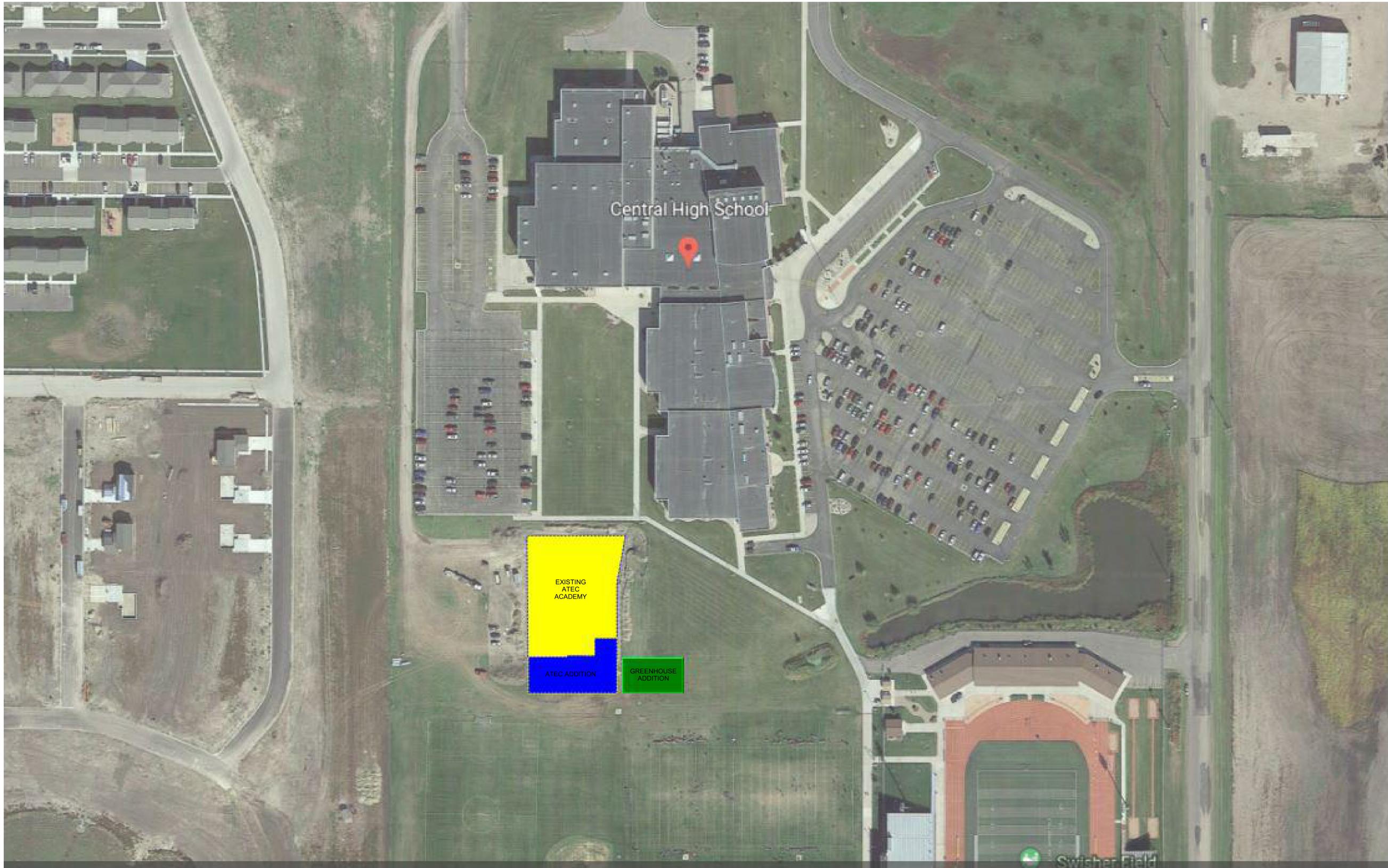
SHEET TITLE:
HAUL ROAD

C110



CONSTRUCTION ACCESS ROAD SECTION
NO SCALE

ABERDEEN PUBLIC SCHOOL DISTRICT
ATEC ACADEMY ADDITION & GREENHOUSE PROJECT



CO
OP

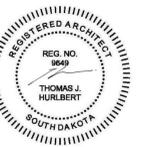
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CO-OP PROJECT NO: 2162



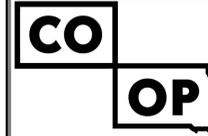
ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ARCHITECTURAL SITEPLAN

A000



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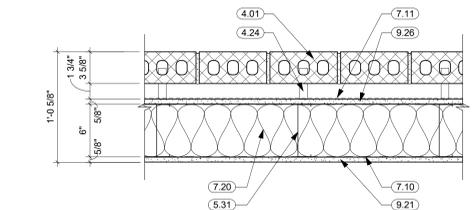
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KEYNOTE SCHEDULE

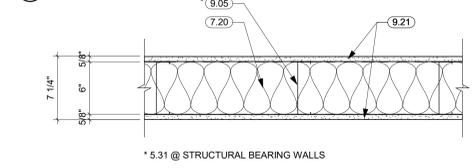
4.01	BRICK VENEER
4.24	BRICK WALL TIES
5.01	4"x4" (8GA) TRIPLE GALVANIZED SQUARE TUBING STRUCTURAL STEEL COLUMNS (INCLUDED IN GROWSPAN 2000 GREENHOUSE PRE-ENGINEERED KIT) - CONTRACTOR TO PROVIDE PRE-ENGINEERED KIT IN PROJECT SCOPE
5.31	6" STRUCTURAL STEEL STUD & TRACK FRAMING (SEE ARCH. & STRUCT.)
6.81	8MM TWINWALL POLYCARBONATE CLADDING (PROVIDED IN GROWSPAN 2000 GREENHOUSE KIT) - CONTRACTOR TO PROVIDE GREENHOUSE PRE-ENGINEERED KIT IN PROJECT SCOPE
7.10	VAPOR BARRIER
7.11	AIR & MOISTURE WEATHER BARRIER
7.20	MINERAL BATT INSULATION
9.05	6" STEEL STUD & TRACK FRAMING
9.21	5/8" GYPSUM BOARD
9.26	5/8" EXTERIOR GYPSUM SHEATHING

GENERAL NOTES

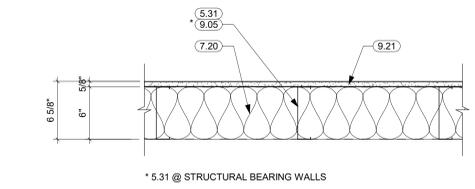
- SEE OVERALL FLOOR PLAN AT LEFT FOR WALL TYPES AND ASSEMBLIES AS REQUIRED. SEE WALL TYPE DETAILS BELOW.
- SEE DRAWING SHEET A108 FOR ROOM FINISH SCHEDULE & FINISH LEGEND.
- ALL DIMENSIONS ARE FROM FACE OF WALL U.N.O.
- SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL INFORMATION AND COORDINATION.
- ALL STUD FRAMED WALLS SHALL BE SOUND, INSULATED AND EXTEND TO THE DECK. SEE WALL TYPES FOR ADDITIONAL INSULATION INFORMATION. COORDINATE WITH SPECIFICATIONS.
- PROVIDE ACOUSTICAL SEALANTS AT THE TOP AND BOTTOM OF ALL GWB WALLS BETWEEN ROOMS.
- PROVIDE FIRE SEALANTS AT ALL PENETRATIONS IN FIRE RATED WALLS.
- FIRE RATED WALLS ARE INDICATED ON CODE PLANS.
- REVIEW ALL INTERIOR ELEVATION SHEETS FOR ACCESSORY AND EQUIPMENT INFORMATION.
- COORDINATE INSTALLATION OF OWNER PROVIDED EQUIPMENT WITH NEW CONSTRUCTION.
- PROVIDE 2X BLOCKING AT ALL GRAB BAR AND FUTURE GRAB BAR LOCATIONS.
- CAULK PERIMETER OF ALL TOILETS, URINALS, SINKS & COUNTERTOPS AS REQUIRED.
- PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.



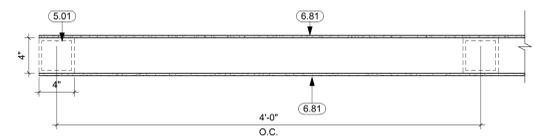
① 5A WALL TYPE
1 1/2" = 1'-0"



② 9A WALL TYPE
1 1/2" = 1'-0"

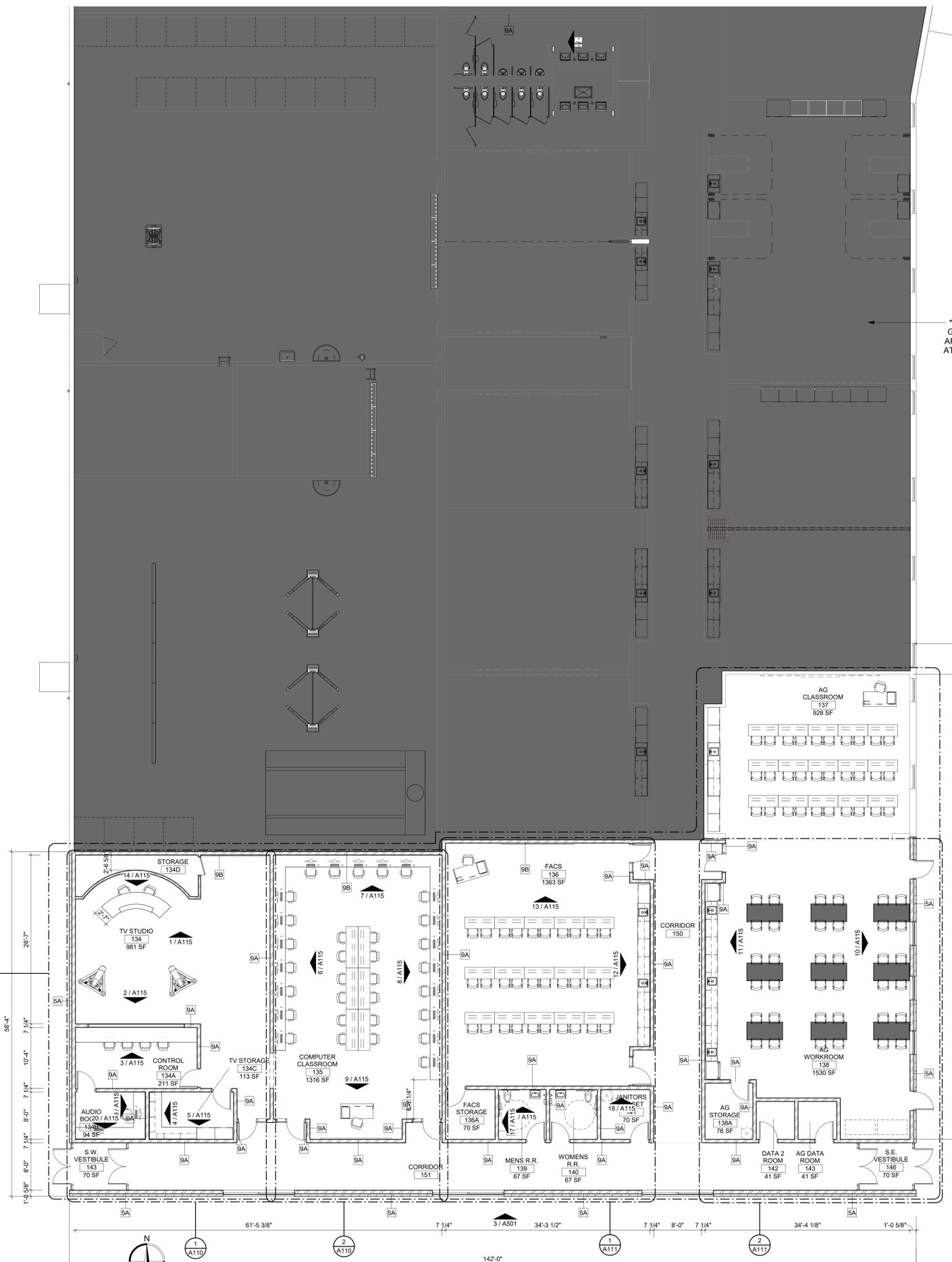


③ 9B WALL TYPE
1 1/2" = 1'-0"

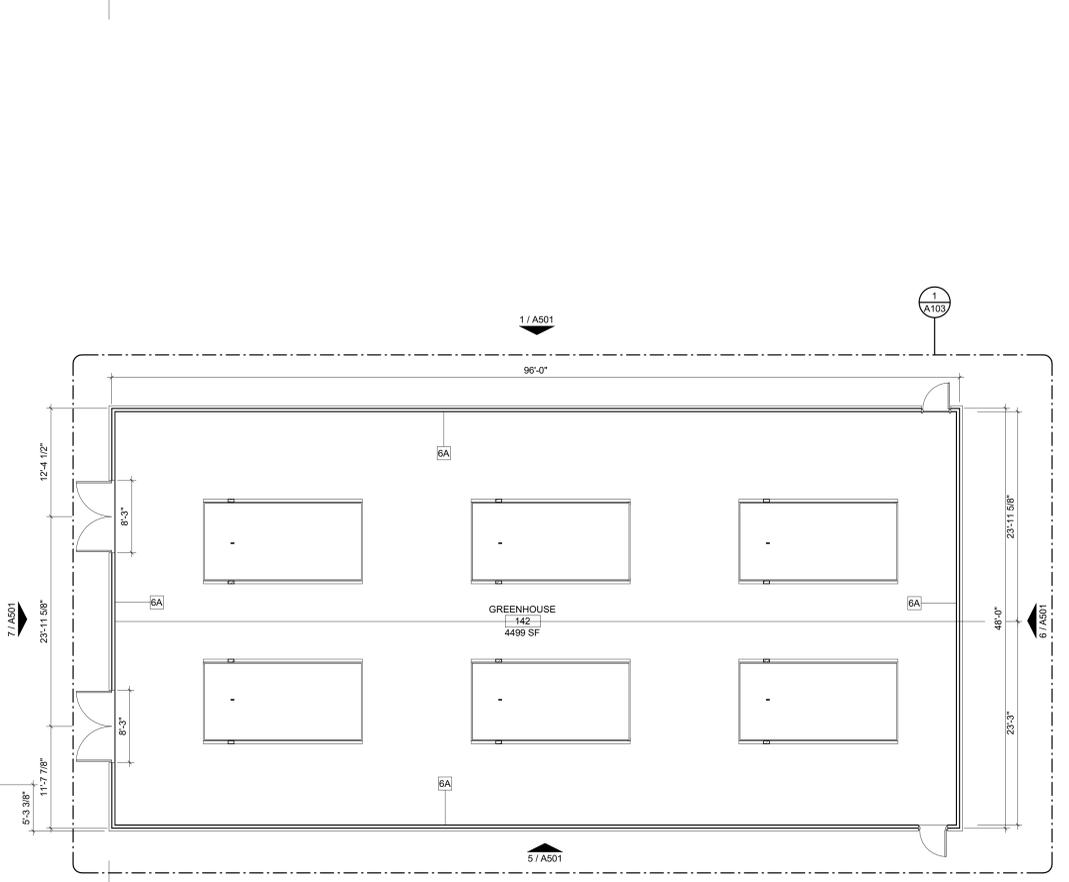


④ 6A WALL TYPE
1 1/2" = 1'-0"

* NO WORK IN GRAY SHADED AREA (EXISTING ATEC ACADEMY)



MAIN LEVEL - FLOOR PLAN
1/8" = 1'-0"



CO-OP PROJECT NO: 2162



ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

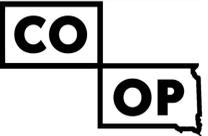
REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ATEC ADDITION - OVERALL
PLAN & WALL DETAILS

A100

KEYNOTE SCHEDULE	
11.32	COMPUTER (OWNER PROVIDED AND INSTALLED). TYPICAL.
12.05	DESK CHAIR (OWNER PROVIDED & INSTALLED)
12.06	STUDENT DESK - B.O.D. 5'-0" L X 2'-0" W - 2 STUDENTS (OWNER PROVIDED AND INSTALLED)
12.09	STAFF DESK (OWNER PROVIDED AND INSTALLED)

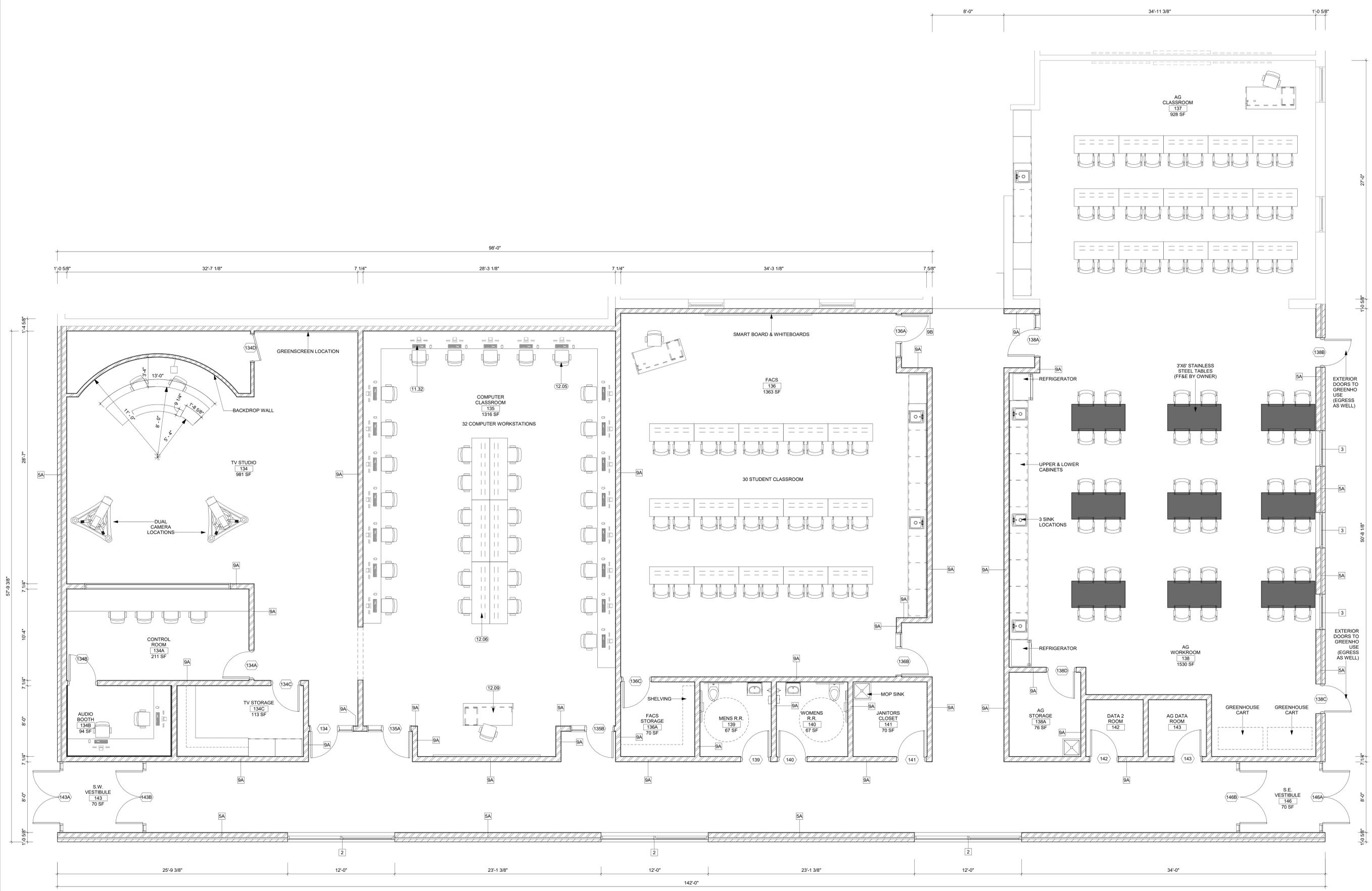


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1 ENLARGED ADDITION FLOOR PLAN
1/4" = 1'-0"

CO-OP PROJECT NO: 2162



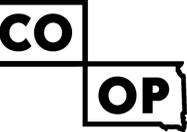
ISSUE:
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REV. DSC. DATE

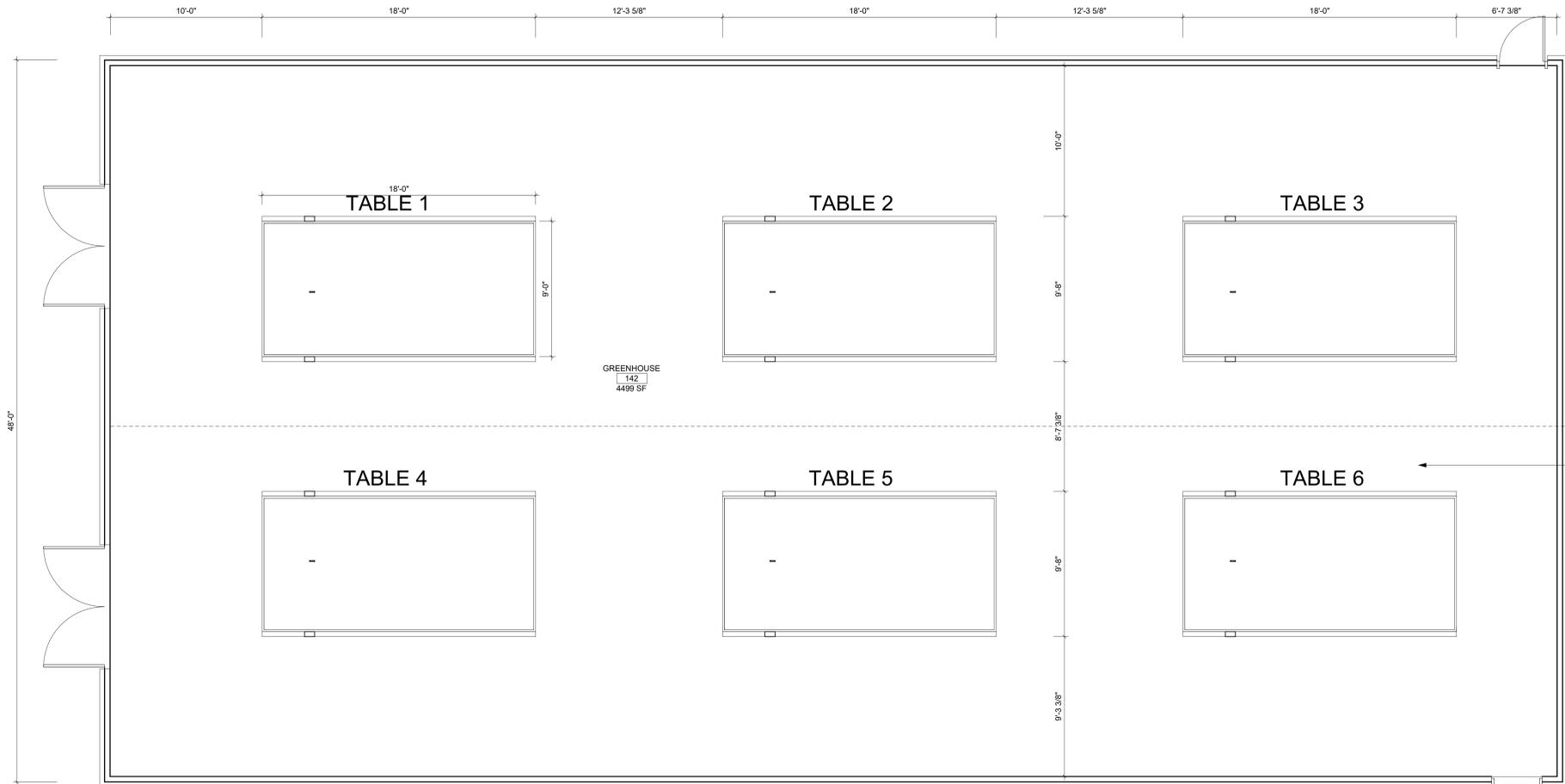
PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ENLARGED ADDITION
FLOORPLAN

A101



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- ← 8MM INTERIOR POLYCARBONATE WALL PANEL
- ← 4"X4" STEEL TUBING FRAME @ 4'-0" O.C.
- ← 8MM EXTERIOR POLYLCARBONATE WALL PANEL

← 9'-0"X18'-0" STEEL TABLES (BY OWNER)

* CONTRACTOR TO PROVIDE & INSTALL GROWSPAN SERIES 2000 GREENHOUSE KIT AS DESCRIBED BELOW; SEE SPECIFICATION FOR ADDITIONAL INFORMATION AND COORDINATION

ENLARGED GROWSPAN GREENHOUSE
1/4" = 1'-0"



GROWSPAN - SERIES 2000 GREENHOUSE - PRODUCT FEATURES/SPECS

- Double GreenHouse - (2) - 24' x 96' (Total Square Footage = 4608 SF)
- 4"x4" square tubing (8 ga) triple galvanized steel columns (4'-0" O.C.)
- Stamped and Engineered to 50 PSF of ground Snow Load and 112 MPH ultimate windload, Category II standards.
- Double Layer (Interior and Exterior) of 8MM Twinwall Polycarbonate over entire structure cladding.
- Kit/Package includes:
 - 3'x7' Aluminum Double Hung Door system
 - QTY 16 - 20" horizontal AirFlow Fans
 - QTY 4 - 140Million BTU Greenhouse LP Heaters
 - QTY 2 - 24" Exhaust Fans and Damper Kits for Motorized Gable Ventilation Louvers.
- Warranty:
 - Greenhouse Shall Have a warranty period of three (3) years for structural defects.
 - 8MM Twinwall Polycarbonate manufacturer warranty of ten (10) years.
 - 8MM Polycarbonate panels also carry a 10 years warranty against yellowing/fading.

* GENERAL CONTRACTOR TO PROVIDE ALL LABOR AND MATERIALS IN THEIR BID FOR PRODUCT/KIT AS SPECIFIED AND DRAWN FOR GREENHOUSE AND ERECTION / CONSTRUCTION OF GREENHOUSE. *



CO-OP PROJECT NO: 2162



ISSUE: 05-03-2022 100% CONSTRUCTION DRAWINGS

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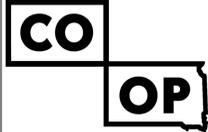
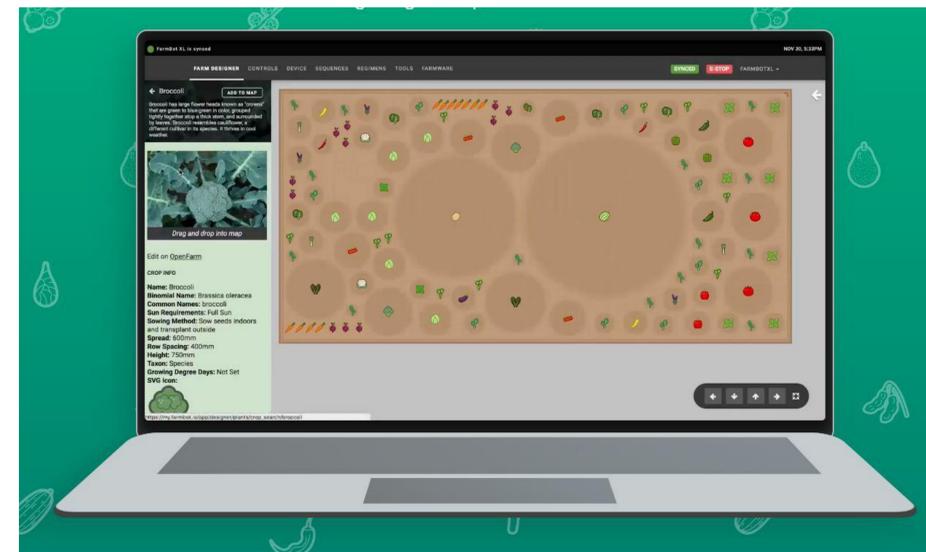
PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
GROWSPAN GREENHOUSE & FARBOTS

A103

FOR MORE INFORMATION AND YOUTUBE VIDEOS ON GROWSPAN SERIES 2000 GREENHOUSES, PLEASE SCAN THE QR CODE AT RIGHT.





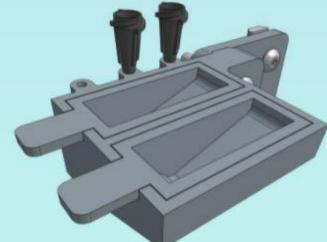
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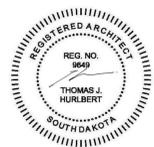
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<p>Rotary Tool <small>NEW</small></p> <p>Powered by a 24 volt DC motor and featuring interchangeable implements and an adjustable motor angle, the rotary tool allows FarmBot to perform light duty weed whacking, soil surface milling, and drilling operations.</p> 	<p>Watering Nozzle</p> <p>Coupled with a solenoid valve, this tool allows you to precision water your plants with a gentle shower. The two-piece design allows custom spray patterns by 3D printing your own lower half.</p> 	<p>Weeder</p> <p>Stomp out weeds before they become a problem with this customizable weeding tool. The medium sized blades come standard, though you can experiment with corkscrews and other implement designs.</p> 
<p>Soil Sensor</p> <p>By measuring the moisture content of the soil at each plant's location, FarmBot can water crops more efficiently. Coming soon is the ability to measure soil temperature to detect the risk of germination failure.</p> 	<p>Camera</p> <p>FarmBot's built-in waterproof camera can take photos of your plants and soil to detect weeds, measure soil height, and one day identify pests, disease, and fruit ripeness.</p> 	<p>Seed Injector</p> <p>Powered by a 24 volt vacuum pump, the seed injector can precisely position seeds in the ground with millimeter accuracy. Interchangeable luer lock needles allow for working with all seed sizes.</p> 
<p>Seed Troughs</p> <p>For faster seeding operations over large areas, the gantry-mounted seed troughs allow FarmBot to carry a small supply of seeds as it moves along the x-axis.</p> 	<p>Seed Bin</p> <p>The seed bin offers a large basin that can hold larger seeds (Squash, Pumpkin, etc) or a high quantity of one type of seed.</p> 	<p>Seed Tray</p> <p>The seed tray is suitable for planting many different crops or when the number of seeds per location needs to be strictly controlled.</p> 

* ALL FARMBOT MACHINES AND TABLES FOR THE FARMBOT MACHINES SHOWN WITHIN THE GREENHOUSE ARE ALL OWNER PROVIDED * GC TO PROVIDE AND INSTALL ALL ASSOCIATED ELEC. AND PLUMB. CONNECTIONS SEE M.E.P. DRAWINGS FOR ADDITIONAL COORDINATION.

CO-OP PROJECT NO: 2162



ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
FARMBOT INFO SHEET (OWNER PROVIDED)

A104

FINISH LEGEND								
TYPE	MARK	MANUFACTURER	STYLE	COLOR	STYLE/COLOR NO.	SIZE	INSTALL	NOTES
CEILING								
ACOUSTICAL CEILING	ACT-1	ARMSTRONG	DUNE REGULAR	WHITE	1774	24" SQ		USE W/ 15/16" SUSPENSION SYSTEM
SPECIALTY	AWP-1	GOLTERMAN & SABO	ACOUSTI-PANEL	GR701 QUARTZ 380		80"H x 1" x...		AUDIO BOOTH
FLOORING & TILING								
CARPET	CPT-1	PHIL. QUEEN COMMERCIAL	AMAZE	PERPLEX	54588-00400	24" X 24"	MONOLITHIC	
	CPT-2	PHIL. QUEEN COMMERCIAL	COLOR ACCENTS	CITRUS	54462-62201	24" X 24"		
	CPT-3	PHIL. QUEEN COMMERCIAL	COLOR ACCENTS	DEEP NAVY	54662-62485	24" X 24"		
	WOC-1	SHAW CONTRACT	WELCOME II TILE	STERLING	5T031-31557	24" X 24"	MONOLITHIC	
VINYL	VCT-1	ARMSTRONG	IMPERIAL TEXTURE	CLASSIC WHITE	51911	12" X 12"		
	VCT-2	ARMSTRONG	IMPERIAL TEXTURE	GENTIAN BLUE	51946	12" X 12"		
	VCT-3	ARMSTRONG	IMPERIAL TEXTURE	GOLDEN	51878	12" X 12"		
CERAMIC & PORCELAIN	PT-1	AMERICAN OLEAN	UNGLAZED MOSAICS	SALT & PEPPER	0A12	2" X 2"		FLOOR TILE, 1/8" GROUT JOINT - USE W/ GRT-1
	PT-2	DALTILE	GLAZED WALL TILE	MATTE ARCTIC WHITE	0790	6" X 6"	STACKED	WALL TILE, 1/16" GROUT JOINT - USE W/ GRT-2
	GRT-1	LATICRETE	PERMACOLOR	PLATINUM	42			
	GRT-2	LATICRETE	PERMACOLOR	BRIGHT WHITE	44			
CONCRETE	SC-1	CONTRACTOR	SEALED CONCRETE					
	CONC-2	CONTRACTOR	CAST IN PLACE...					TROWLED FINISH
PAINT & WALL COVERINGS								
PAINT	P-1	DIAMOND VOGEL	PERMACRYL INTERIOR	NAVAJO WHITE	DS1541-500			ABERDEEN PUBLIC 72709
	P-2	DIAMOND VOGEL	PERMACRYL INTERIOR	FLORIDA WATERS	0599			
	P-3	DIAMOND VOGEL	PERMACRYL INTERIOR	GLOWING LANTERN	0941			
	P-4	DIAMOND VOGEL	INTERIOR ALKYD	BLACK LICORICE	0529			TV STUDIO EXPOSED CEILING
	P-5	DIAMOND VOGEL	INTERIOR ALKYD	MATCH EXISTING				HOLLOW METAL DOORS AND FRAMES
WALL COVERING	FRP-1	CRANE COMPOSITES	GLASBORD	WHITE SMOOTH				4'-0" H X 4'-0" W AT MOP SINK WALLS
WALL BASE, TRANSITIONS & MISC. TRIMS								
VINYL COVE BASE	VCB-1	JOHNSONITE	4" VINYL COVE	BURNT UMBER	63			
WOOD BASE								
TILE BASE								
SCHLUTER								
MILLWORK								
LAMINATE	PL-1	WILSONART	LAMINATE	RIVER CHERRY	7973K-12			PLAM CABINETS
	PL-2	PIONITE	LAMINATE	ROCK OF AGES	AW141-SUEDE			PLAM COUNTERTOPS
STONE & SOLID SURFACE								
WOOD								
MISCELLANEOUS								
PARTITIONS								
GLAZING								

GENERAL NOTES

- SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL INFORMATION AND COORDINATION.
- COORDINATE DEVICE PENETRATIONS AT COUNTERTOPS W/ MECHANICAL & ELECTRICAL.
- REVIEW ALL INTERIOR ELEVATION SHEETS FOR ACCESSORY AND EQUIPMENT INFORMATION.
- COORDINATE INSTALLATION OF OWNER PROVIDED EQUIPMENT WITH NEW CONSTRUCTION.
- CAULK PERIMETER OF ALL TOILETS, URINALS, SINKS & COUNTERTOPS AS REQUIRED.
- PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
- CAULK ENTIRE PERIMETER OF H.M. FRAMES (BOTH SIDES)
- PAINT FRAMES TO MATCH WALL. SPLIT PAINT COLOR AT DOOR GASKET AS REQUIRED.

CO OP

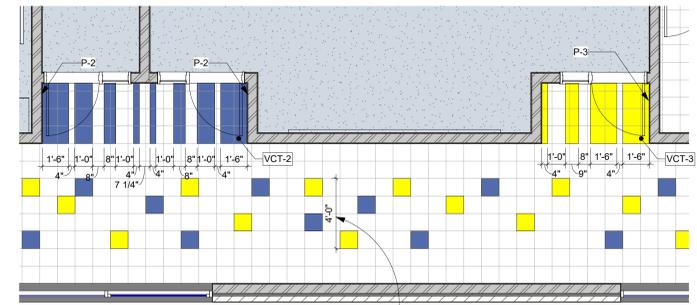
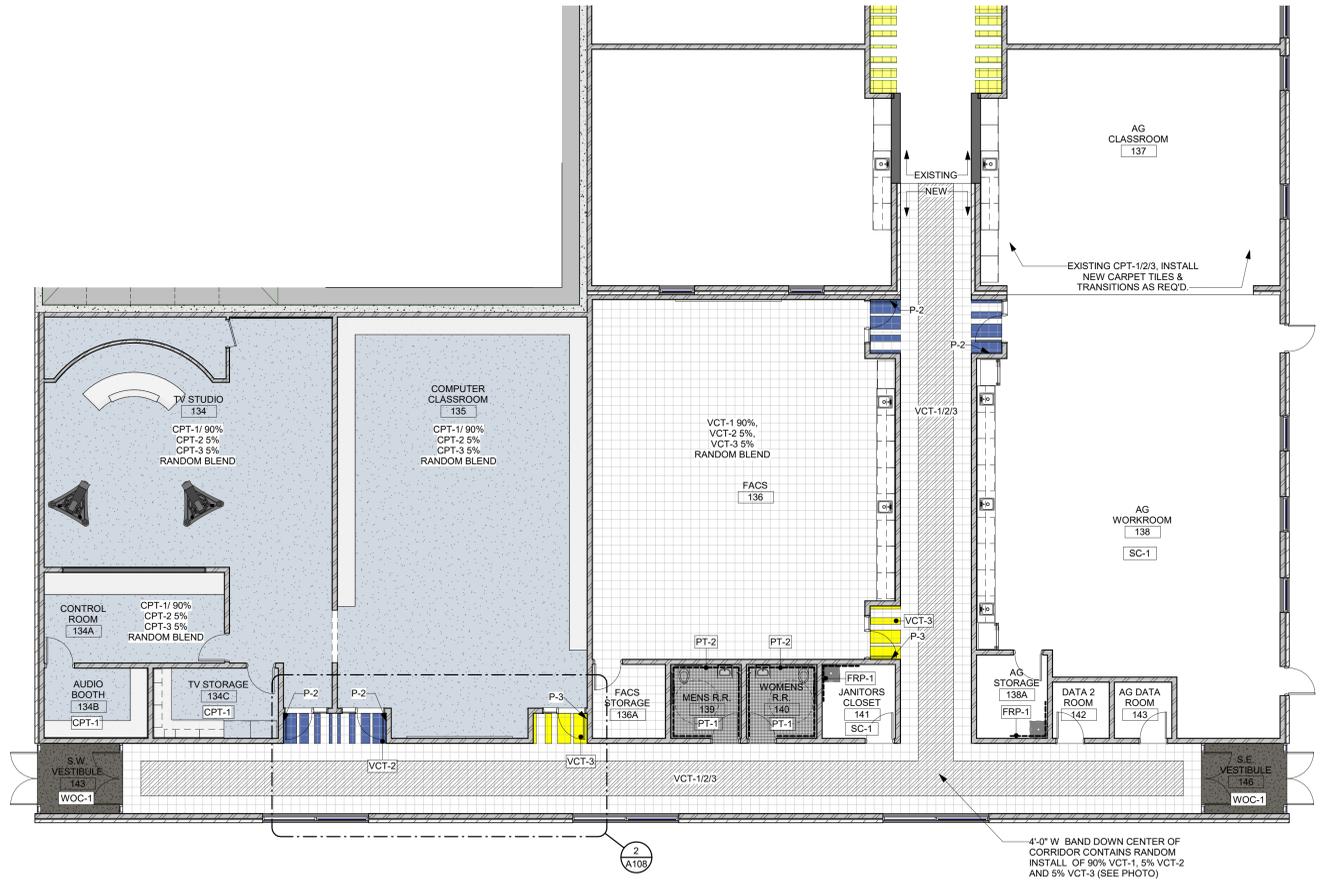
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RM#	NAME	FLR FIN.	BASE FIN.	WALL FIN.	CLG FIN.	CLG HT.	NOTES
134	TV STUDIO	CPT-1/2/3	VCB-1	P-1	ACT-1	9'-4"	PROVIDE SUPPORTS IN ACT CEILING FOR TRACK LIGHTING SYST. (COORD. W/ ELEC.). EXPOSED CEILING AREA SHALL BE PAINTED BLACK
134A	CONTROL ROOM	CPT-1/2/3	VCB-1	P-1	ACT-1	9'-4"	
134B	AUDIO BOOTH	CPT-1	VCB-1	P-1	ACT-1	9'-4"	SEE ACOUSTICAL SOUND WALL PANELS IN THIS ROOM
134C	TV STORAGE	CPT-1	VCB-1	P-1	ACT-1	9'-4"	
134D	STORAGE	CPT-1	VCB-1	P-1	ACT-1	9'-4"	
135	COMPUTER CLASSROOM	CPT-1/2/3	VCB-1	P-1	ACT-1	9'-4"	
136	FACS	CPT-1/2/3	VCB-1	P-1	ACT-1	9'-4"	
136A	FACS STORAGE	CPT-1	VCB-1	P-1	ACT-1	9'-4"	
137	AG CLASSROOM	EXISTING CARPET	VCB-1	P-1	-	9'-4"	CEILING AND FLOORING PATCHING/TIE-INS IN THIS ROOM WITH NEW ROOM 138 AS REQUIRED.
138	AG WORKROOM	SC-1	VCB-1	P-1	ACT-1	9'-4"	
138A	AG STORAGE	SC-1	VCB-1	P-1	P-4	9'-4"	PROVIDE FRP BOARD ON WET WALLS BEHIND MOP SINKS (INCLUDE ALL TRIM/SEAM PIECES, AND CAULK)
139	MENS R.R.	PT-1	PT-2	PT-2	P-4	9'-4"	PROVIDE FRP BOARD ON WET WALLS BEHIND MOP SINKS (INCLUDE ALL TRIM/SEAM PIECES, AND CAULK)
140	WOMENS R.R.	PT-1	PT-2	PT-2	P-4	9'-4"	
141	JANITORS CLOSET	SC-1	VCB-1	P-1	NONE	9'-4"	PROVIDE FRP BOARD ON WET WALLS BEHIND MOP SINKS (INCLUDE ALL TRIM/SEAM PIECES, AND CAULK)
142	DATA 2 ROOM	VCT-1	VCB-1	P-1	NONE	-	
142	GREENHOUSE	CONC-2	-	-	-	-	SEE GROWN SPAN GREENHOUSE SPECS FOR ADD. INFO.
143	AG DATA ROOM	VCT-1	VCB-1	P-1	NONE	-	
143	S.W. VESTIBULE	WOC-1	VCB-1	P-1	P-4	9'-4"	
146	S.E. VESTIBULE	WOC-1	VCB-1	P-1	P-4	9'-4"	
150	CORRIDOR	VCT-1/2/3	VCB-1	P-1/P-2/P-3	ACT-1/P-2/P-3		SEE FINISH PLANS
151	CORRIDOR	VCT-1/2/3	VCB-1	P-1/P-2/P-3	ACT-1/P-2/P-3		SEE FINISH PLANS



2 TYP. VCT INSTALL DETAIL
1/4" = 1'-0"



BLENDED VCT INSTALL PHOTOS

1 FINISH PLAN - ADDITION
1/8" = 1'-0"

CO-OP PROJECT NO: 2162

REGISTERED ARCHITECT
REG. NO. 9869
THOMAS J. HURLBERT
SOUTH DAKOTA

ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
FINISH PLAN

A108

KEYNOTE SCHEDULE	
6.73	PLASTIC LAMINATE BASE CABINET
6.74	PLASTIC LAMINATE WALL CABINET
6.75	PLASTIC LAMINATE TALL STORAGE CABINET
6.80	PROVIDE AND INSTALL PLASTIC LAMINATE COUNTERTOP W/ BRACING EVERY 36" O.C. (PROVIDE BLOCKING AS NEC. FOR THE BRACING) - CONTRACTOR TO ALSO PROVIDE GROMMETS (QTY. 3), COORDINATE WITH OWNER/AE GROMMET LOCATION, AND INSTALL.
9.44	PROVIDE AND INSTALL SOUND ABSORBING WALL PANELS (SEE ELEVATIONS AND SPECS FOR ADD. INFO.)
10.02	PROVIDE AND INSTALL VISUAL DISPLAY BOARD AT DIMENSIONS AS SHOWN ON DRAWINGS.
11.30	TELEVISION PRODUCTION GREEN SCREEN (LOCATION ONLY - OWNER PROVIDED & INSTALLED)
11.33	TELEVISION PRODUCTION CAMERAS (OWNER PROVIDED - COORDINATE IN FLOOR ELECTRICAL)

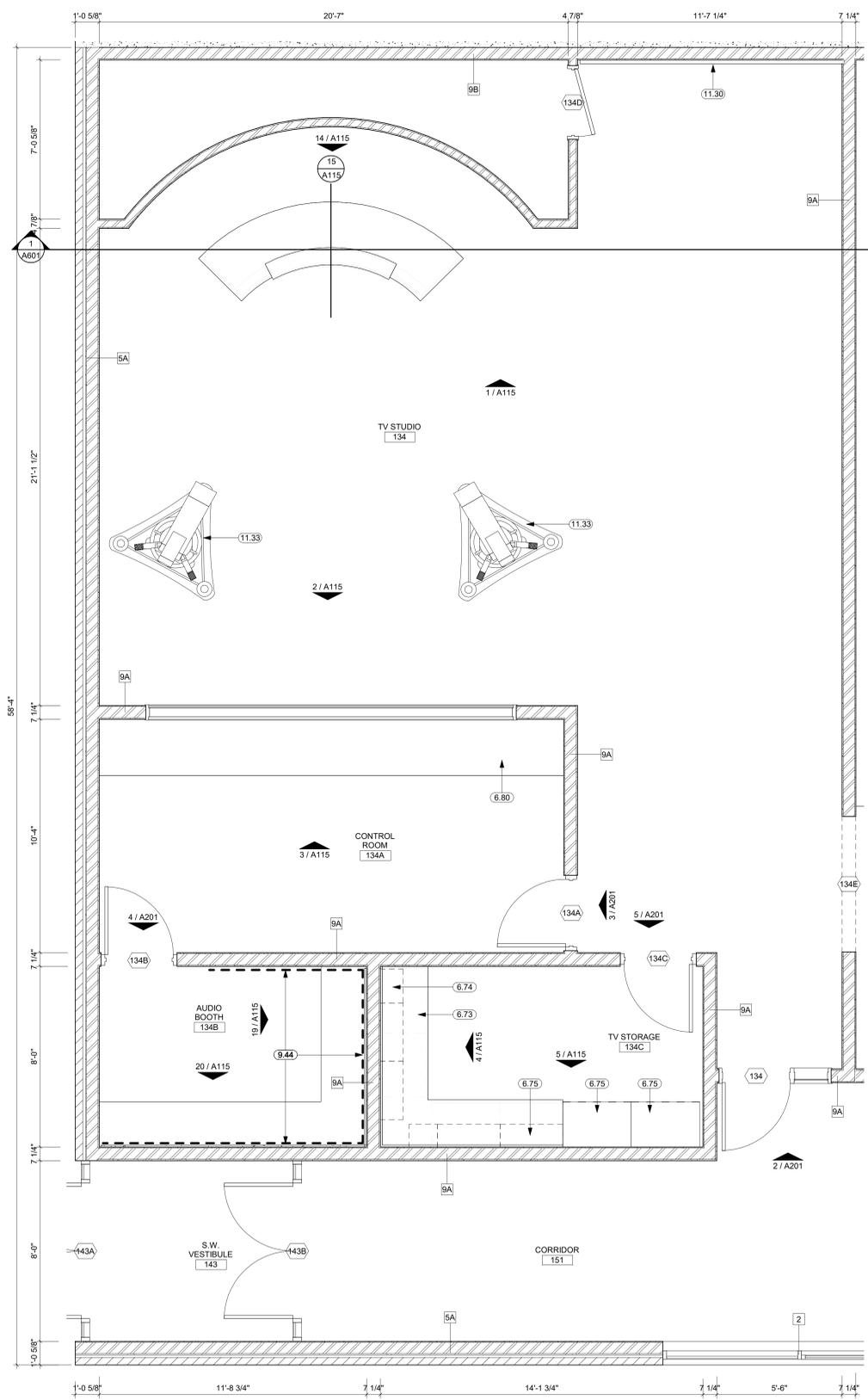
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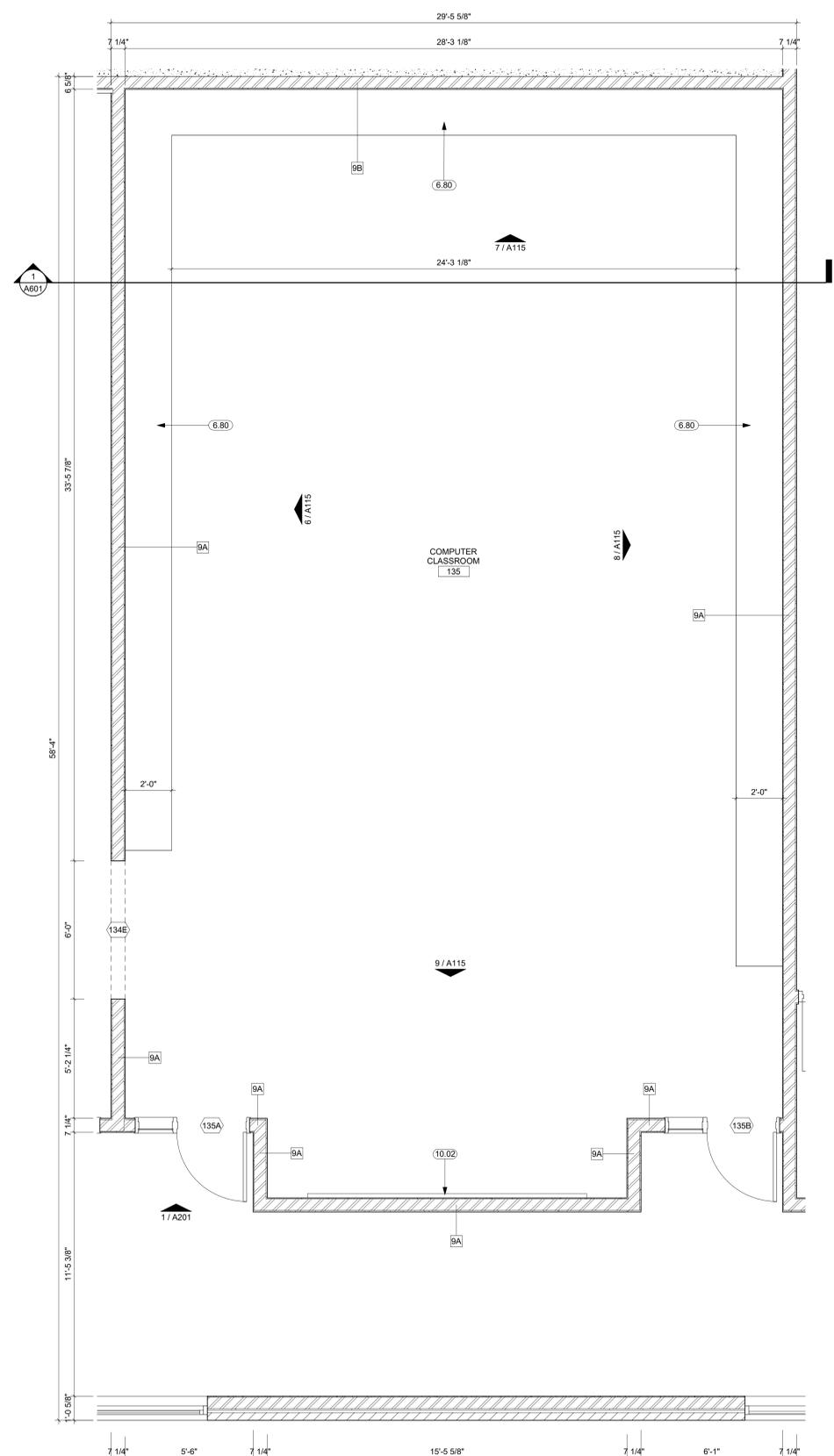
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Rapid City, SD 57701
Phone: 605-716-3652

440 E. 8th St. #221
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Phone: 605-334-9999

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1 ENLARGED TV PRODUCTION - 134
3/8" = 1'-0"



2 ENLARGED COMPUTER CLASSROOM - 135
3/8" = 1'-0"

CO-OP PROJECT NO: 2162



ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
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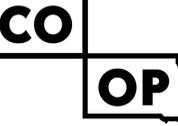
PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ENLARGED PLANS

A110

KEYNOTE SCHEDULE

6.73	PLASTIC LAMINATE BASE CABINET
6.74	PLASTIC LAMINATE WALL CABINET
6.75	PLASTIC LAMINATE TALL STORAGE CABINET
6.82	PROVIDE AND INSTALL LAMINATED PLYWOOD SHELFING - B.O.D. 16" DEEP SHELFING WITH SUPPORT BRACKET EVERY 24" O.C. MIN. (PROVIDE BLOCKING AS NEC. FOR SUPPORT BRACKETS)
10.02	PROVIDE AND INSTALL VISUAL DISPLAY BOARD AT DIMENSIONS AS SHOWN ON DRAWINGS.
10.40	MIRROR w/SS TRIM, BASIS OF DESIGN BOBRICK B-165
10.43	SANITARY NAPKIN DISPOSAL, BASIS OF DESIGN BOBRICK B-254
10.44	TOILET TISSUE DISPENSER, BASIS OF DESIGN BOBRICK B-265
10.48	GRAB BAR
11.10	RESIDENTIAL REFRIGERATOR 36"WIDE (OWNER PROVIDED AND INSTALLED)
22.10	WATER CLOSET
22.13	SINGLE COMPARTMENT SINK
22.18	MOP SINK (SEE MECH. FOR ADDITIONAL INFORMATION)

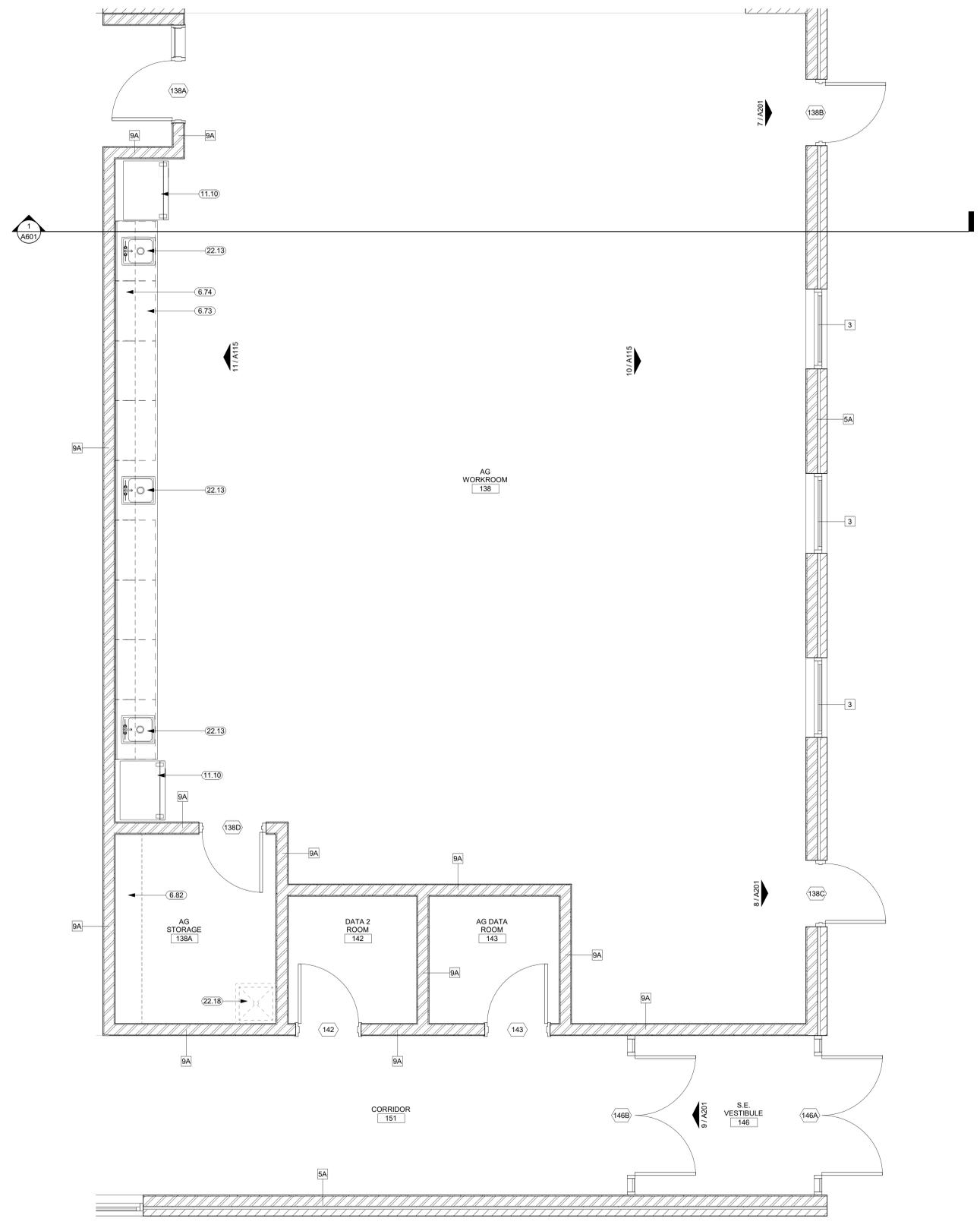
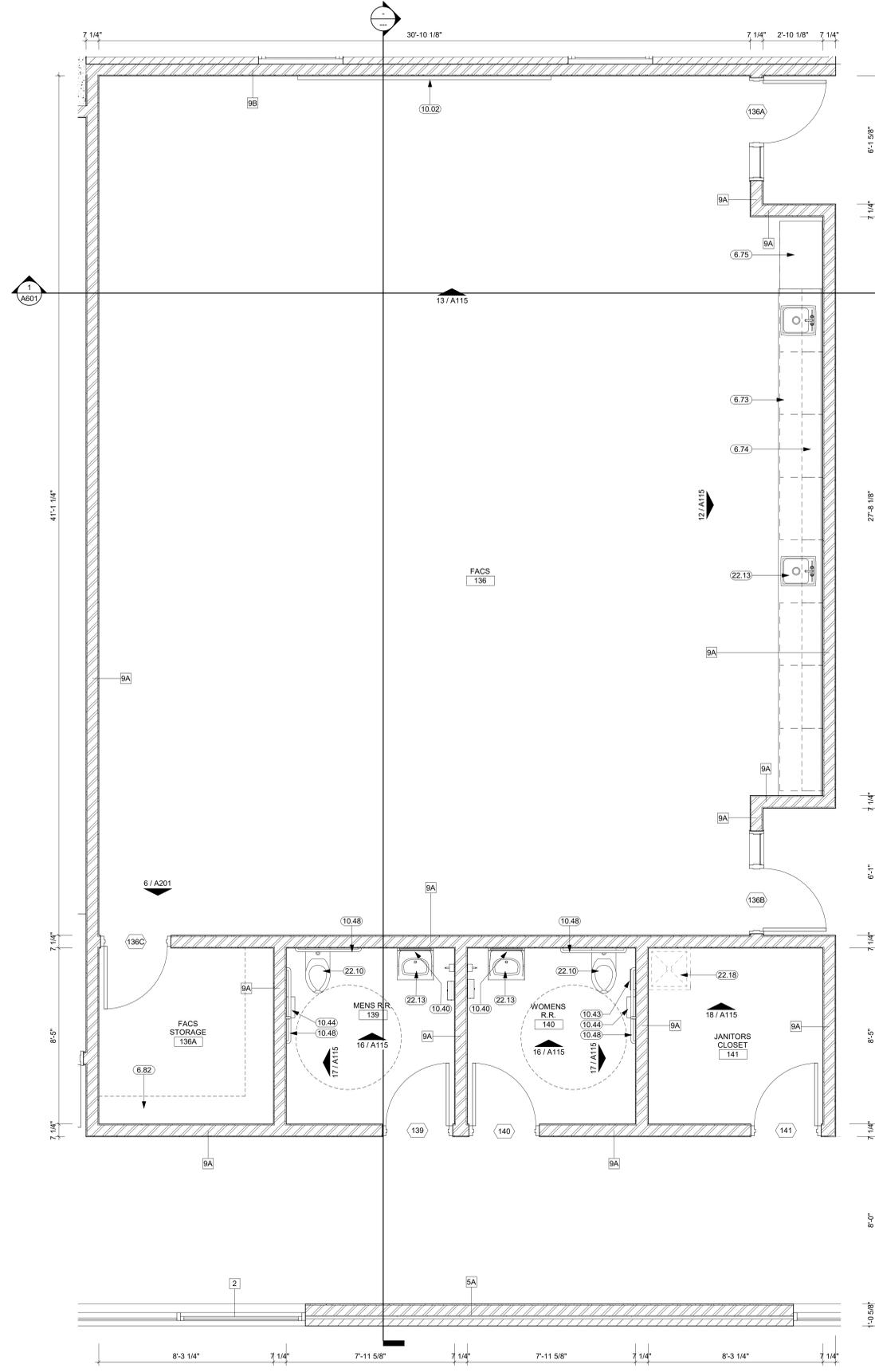


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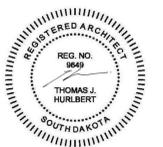
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1 ENLARGED FACS - 136
3/8" = 1'-0"

2 ENLARGED AG WORKROOM - 138
3/8" = 1'-0"

CO-OP PROJECT NO: 2162



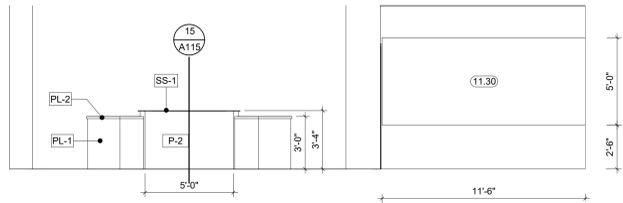
ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

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REV. DSC. DATE

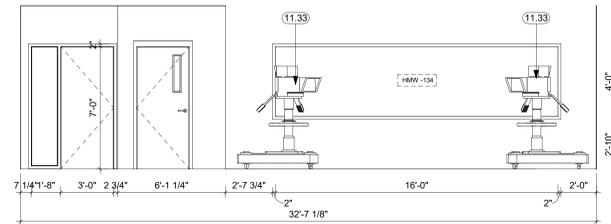
PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ENLARGED PLANS

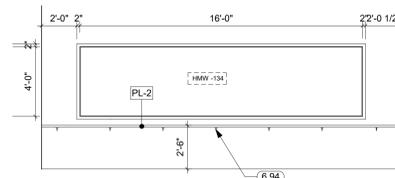
A111



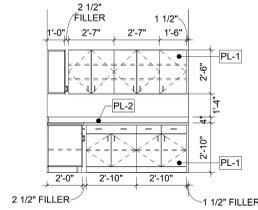
1 TV PRODUCTION-NORTH
1/4" = 1'-0"



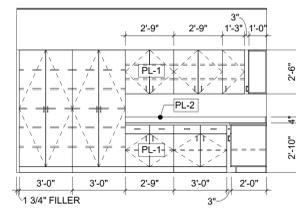
2 TV PRODUCTION - SOUTH
1/4" = 1'-0"



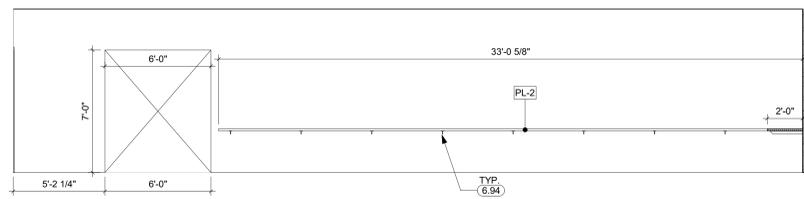
3 TV CONTROL - NORTH
1/4" = 1'-0"



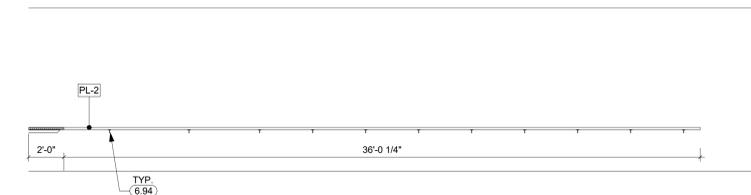
4 TV STORAGE - WEST
1/4" = 1'-0"



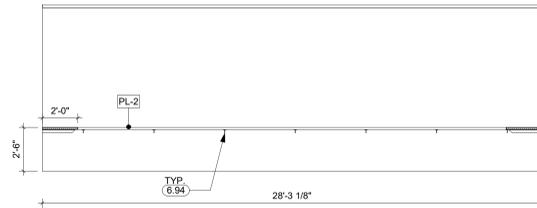
5 TV STORAGE - SOUTH
1/4" = 1'-0"



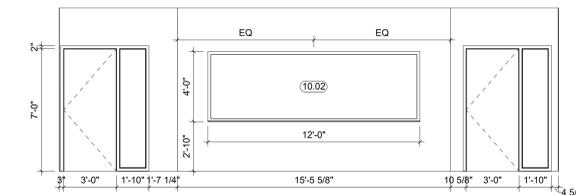
6 COMPUTER CLASSROOM - WEST
1/4" = 1'-0"



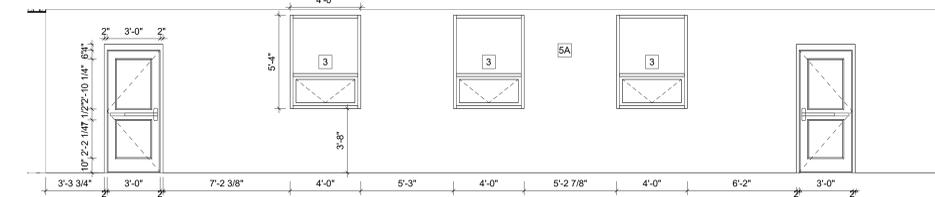
8 COMPUTER CLASSROOM - EAST
1/4" = 1'-0"



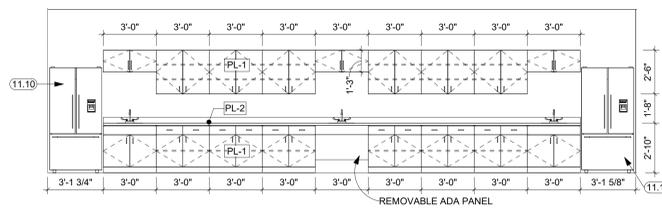
7 COMPUTER CLASSROOM - NORTH
1/4" = 1'-0"



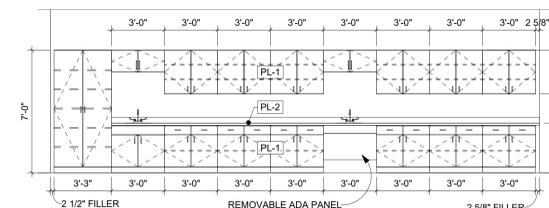
9 COMPUTER CLASSROOM - SOUTH
1/4" = 1'-0"



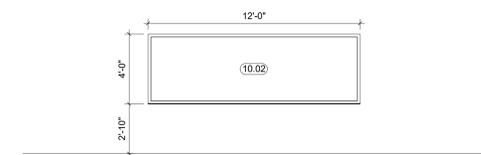
10 AG WORKROOM - EAST
1/4" = 1'-0"



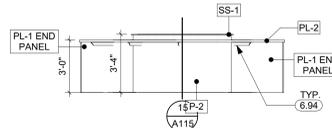
11 AG WORKROOM - WEST
1/4" = 1'-0"



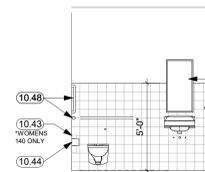
12 FACS CLASS - EAST
1/4" = 1'-0"



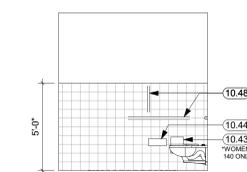
13 FACS CLASS - NORTH INT. ELEV.
1/4" = 1'-0"



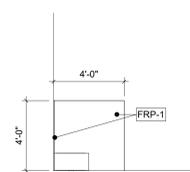
14 TV DESK
1/4" = 1'-0"



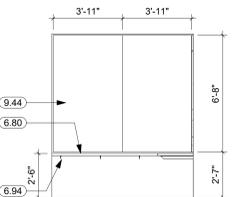
16 140/141 NORTH
1/4" = 1'-0"



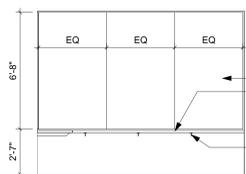
17 RR 139 WEST (140 SIM.)
1/4" = 1'-0"



18 MOP SINK
1/4" = 1'-0"



19 AUDIO BOOTH EAST
1/4" = 1'-0"

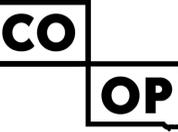


20 AUDIO BOOTH SOUTH
1/4" = 1'-0"

KEYNOTE SCHEDULE	
6.80	PROVIDE AND INSTALL PLASTIC LAMINATE COUNTERTOP W/ BRACING EVERY 36" O.C. (PROVIDE BLOCKING AS NEC. FOR THE BRACING) - CONTRACTOR TO ALSO PROVIDE GROMMETS (QTY. 3), COORDINATE WITH OWNER/RAE GROMMET LOCATION, AND INSTALL.
6.94	COUNTERTOP BRACKET AT 3'-0" O.C. MAXIMUM
9.44	PROVIDE AND INSTALL SOUND ABSORBING WALL PANELS (SEE ELEVATIONS AND SPECS FOR ADD. INFO.)
10.02	PROVIDE AND INSTALL VISUAL DISPLAY BOARD AT DIMENSIONS AS SHOWN ON DRAWINGS.
10.40	MIRROR W/SS TRIM, BASIS OF DESIGN BOBRICK B-165
10.43	SANITARY NAPKIN DISPOSAL, BASIS OF DESIGN BOBRICK B-254
10.44	TOILET TISSUE DISPENSER, BASIS OF DESIGN BOBRICK B-265
10.45	PAPER TOWEL DISPENSER, BASIS OF DESIGN BOBRICK B-262
10.47	SOAP DISPENSER, BASIS OF DESIGN BOBRICK B-2111
10.48	GRAB BAR
11.10	RESIDENTIAL REFRIGERATOR 36" WIDE (OWNER PROVIDED AND INSTALLED)
11.30	TELEVISION PRODUCTION GREEN SCREEN (LOCATION ONLY - OWNER PROVIDED & INSTALLED)
11.33	TELEVISION PRODUCTION CAMERAS (OWNER PROVIDED - COORDINATE IN FLOOR ELECTRICAL)

GENERAL NOTES

- SEE DRAWING SHEET A1-4 FOR WALL TYPES AND RATED ASSEMBLIES AS REQUIRED.
- SEE DOOR AND FRAME SCHEDULE FOR RATED OPENINGS.
- SEE DRAWING SHEET A1-2 FOR ROOM FINISH SCHEDULE & FINISH LEGEND.
- ALL DIMENSIONS ARE FROM FACE OF WALL U.N.O.
- SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL INFORMATION AND COORDINATION.
- ALL STUD FRAMED WALLS SHALL BE SOUND INSULATED AND EXTEND TO THE DECK.
- PROVIDE ACOUSTICAL SEALANTS AT THE TOP AND BOTTOM OF ALL GWB WALLS BETWEEN ROOMS.
- PROVIDE FIRE SEALANTS AT ALL PENETRATIONS IN FIRE RATED WALLS.
- FIRE RATED WALLS ARE INDICATED ON CODE PLANS.
- REVIEW ALL INTERIOR ELEVATION SHEETS FOR ACCESSORY AND EQUIPMENT INFORMATION.
- COORDINATE INSTALLATION OF OWNER PROVIDED EQUIPMENT WITH NEW CONSTRUCTION.
- PROVIDE 2X BLOCKING AT ALL GRAB BAR AND FUTURE GRAB BAR LOCATIONS.
- CAULK PERIMETER OF ALL TOILETS, URINALS, SINKS & COUNTERTOPS AS REQUIRED.
- PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.



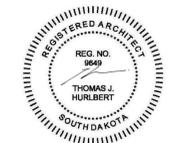
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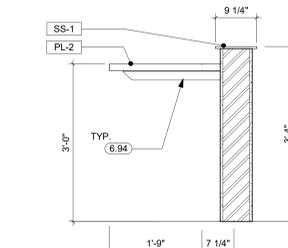
REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
INTERIOR ELEVATIONS

A115



15 TV DESK SECTION
3/4" = 1'-0"

NO.	DOOR				FRAME		FRAME DETAILS				FIRE	HDWRE	ADDITIONAL NOTES
	W	H	T	TYPE	MATL	TYPE	MATL	HEAD	JAMB	SILL			
134	3'-0"	7'-0"	0'-1 3/4"	1	WD	2	HM	12 / A2-2	13 & 14 / A2-2		#HR	08	
134A	3'-0"	7'-0"	0'-1 3/4"	2	WD	2	HM				#HR	08	
134B	3'-0"	7'-0"	0'-1 3/4"	2	WD	2	HM				#HR	08	
134C	3'-0"	7'-0"	0'-1 3/4"	3	WD	2	HM				#HR	08	
134D	3'-0"	7'-0"	0'-1 3/4"	2	WD						#HR	08	
134E	0'-0"	0'-0"	0'-0"										
135A	3'-0"	7'-0"	0'-1 3/4"	1	WD	2	HM	12 / A2-2	13 & 14 / A2-2		#HR	08	
135B	3'-0"	7'-0"	0'-1 3/4"	1	WD	2	HM	12 / A2-2	13 & 14 / A2-2		#HR	08	
136A	3'-0"	7'-0"	0'-1 3/4"	1	WD	2	HM	12 / A2-2	13 & 14 / A2-2		#HR	08	
136B	3'-0"	7'-0"	0'-1 3/4"	1	WD	2	HM	12 / A2-2	13 & 14 / A2-2		#HR	08	
136C	3'-0"	7'-0"	0'-1 3/4"	3	WD	2	HM				#HR	08	
136A	3'-0"	7'-0"	0'-1 3/4"	1	WD	2	HM	12 / A2-2	13 & 14 / A2-2		#HR	08	
138B	3'-0"	7'-0"	0'-1 3/4"	4	ALUM	2	ALUM				#2HR	08	
138C	3'-0"	7'-0"	0'-1 3/4"	4	ALUM	2	ALUM				#2HR	08	
138D	3'-0"	7'-0"	0'-1 3/4"	3	WD	2	HM				#HR	08	
139	3'-0"	7'-0"	0'-1 3/4"	3	WD	2	HM				#HR	08	
140	3'-0"	7'-0"	0'-1 3/4"	3	WD	2	HM				#HR	08	
141	3'-0"	7'-0"	0'-1 3/4"	3	WD	2	HM				#HR	08	
142	3'-0"	7'-0"	0'-1 3/4"								#HR	08	
143	3'-0"	7'-0"	0'-1 3/4"								#HR	08	
143A	6'-0"	7'-0"	0'-1 3/4"	FG	ALUM	8	ALUM	1 / A2-2	3 / A2-2	4 / A2-2	#2HR	20	
143B	6'-0"	7'-0"	0'-1 3/4"	FG	ALUM	8	ALUM	1 / A2-2	3 / A2-2	4 / A2-2	#2HR	20	
144	6'-0"	8'-0"	0'-1 3/4"								#HR	08	
145	4'-0"	8'-0"	0'-1 3/4"										
146	4'-0"	8'-0"	0'-1 3/4"										
146A	6'-0"	7'-0"	0'-1 3/4"	FG	ALUM	8	ALUM	1 / A2-2	3 / A2-2	4 / A2-2	#2HR	20	
146B	6'-0"	7'-0"	0'-1 3/4"	FG	ALUM	8	ALUM	1 / A2-2	3 / A2-2	4 / A2-2	#2HR	20	

KEYNOTE SCHEDULE	
8.01	DOOR (SEE SCHED.)
8.02	FRAME (SEE SCHED.)
8.40	ALUMINUM FRAMED ENTRANCE/STOREFRONT
8.80	1/2" FLOAT GLASS
8.82	1/2" TEMPERED GLASS
8.83	1" INSULATED GLASS
8.84	1" INSULATED TEMPERED GLASS

GENERAL NOTES

- DIMENSIONS ARE FROM FACE OF WALL U.N.O.
- ALL HM FRAMES IN STUD PARTITIONS SHALL BE WRAPPED AROUND BOTH SIDES OF PARTITION (U.O.N.) SEE PLAN FOR WALL THICKNESS.
- CAULK ENTIRE PERIMETER OF H.M. FRAMES (BOTH SIDES)
- PAINT FRAMES TO MATCH WALL. SPLIT PAINT COLOR AT DOOR GASKET AS REQUIRED.
- ALL DOORS AT GREENHOUSE SHALL INCLUDE PANIC HARDWARE PER CODE. SEE DOOR HARDWARE PACKAGE / SCHEDULE FOR ADDITIONAL INFORMATION.

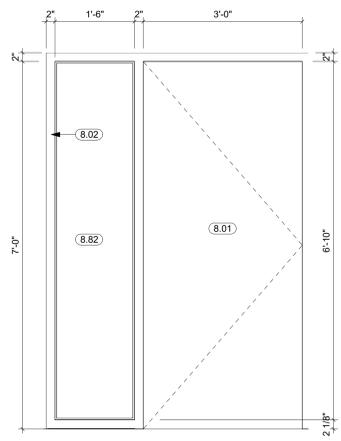
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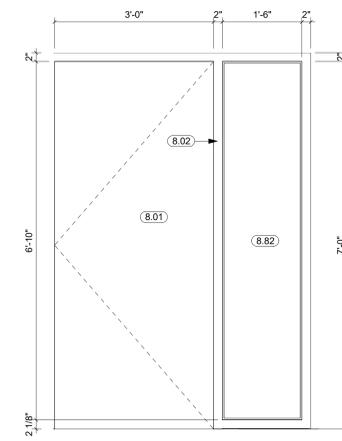
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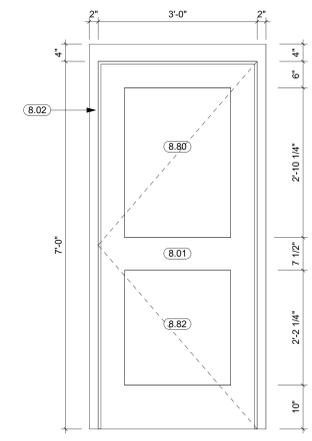
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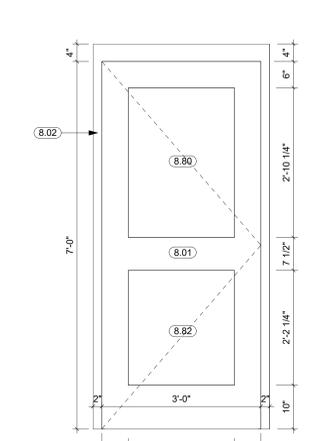
1 DOOR TYPE 1 - LH SWING
3/4" = 1'-0"



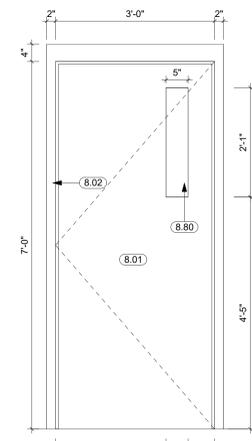
2 DOOR TYPE 1 - RH SWING
3/4" = 1'-0"



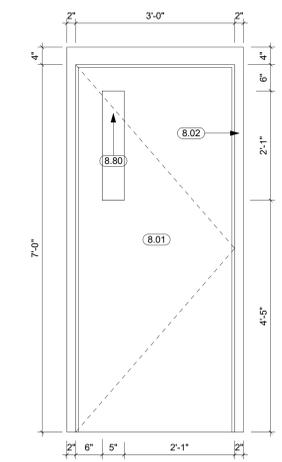
3 DOOR TYPE 2 - LH SWING
3/4" = 1'-0"



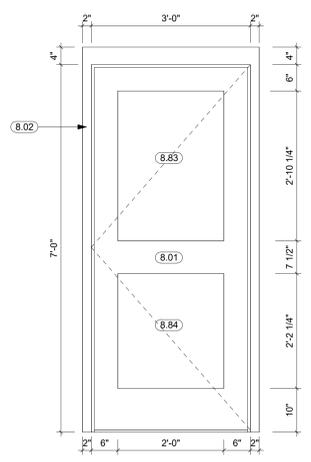
4 DOOR TYPE 2 - RH SWING
3/4" = 1'-0"



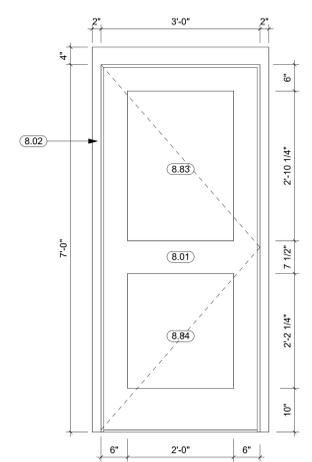
5 DOOR TYPE 3 - LH SWING
3/4" = 1'-0"



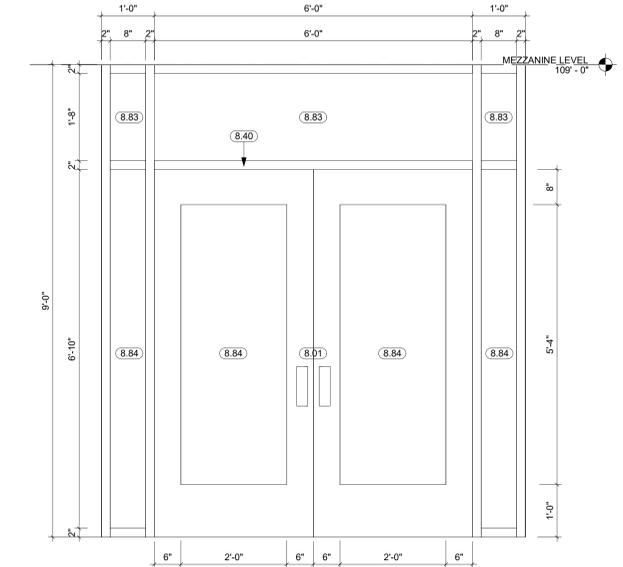
6 DOOR TYPE 3 - RH SWING
3/4" = 1'-0"



7 DOOR TYPE 4 - LH OUTSWING
3/4" = 1'-0"



8 DOOR TYPE 4 - RH OUTSWING
3/4" = 1'-0"



9 DOOR TYPE 5 - HM STOREFRONT
3/4" = 1'-0"

CO-OP PROJECT NO: 2162

REGISTERED ARCHITECT
REG. NO. 9869
THOMAS J. HURLBERT
SOUTH DAKOTA

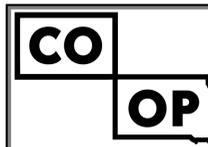
ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
DOOR & WINDOW SCHEDULE & DETAILS



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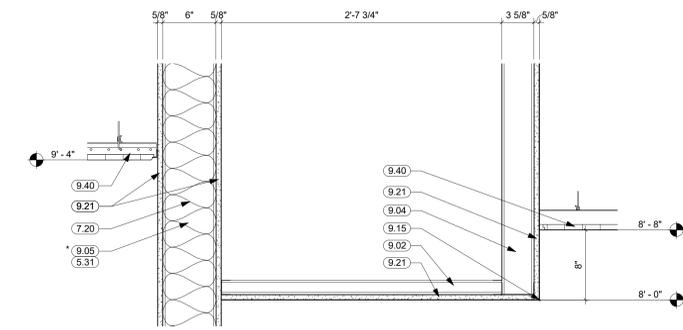
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KEYNOTE SCHEDULE

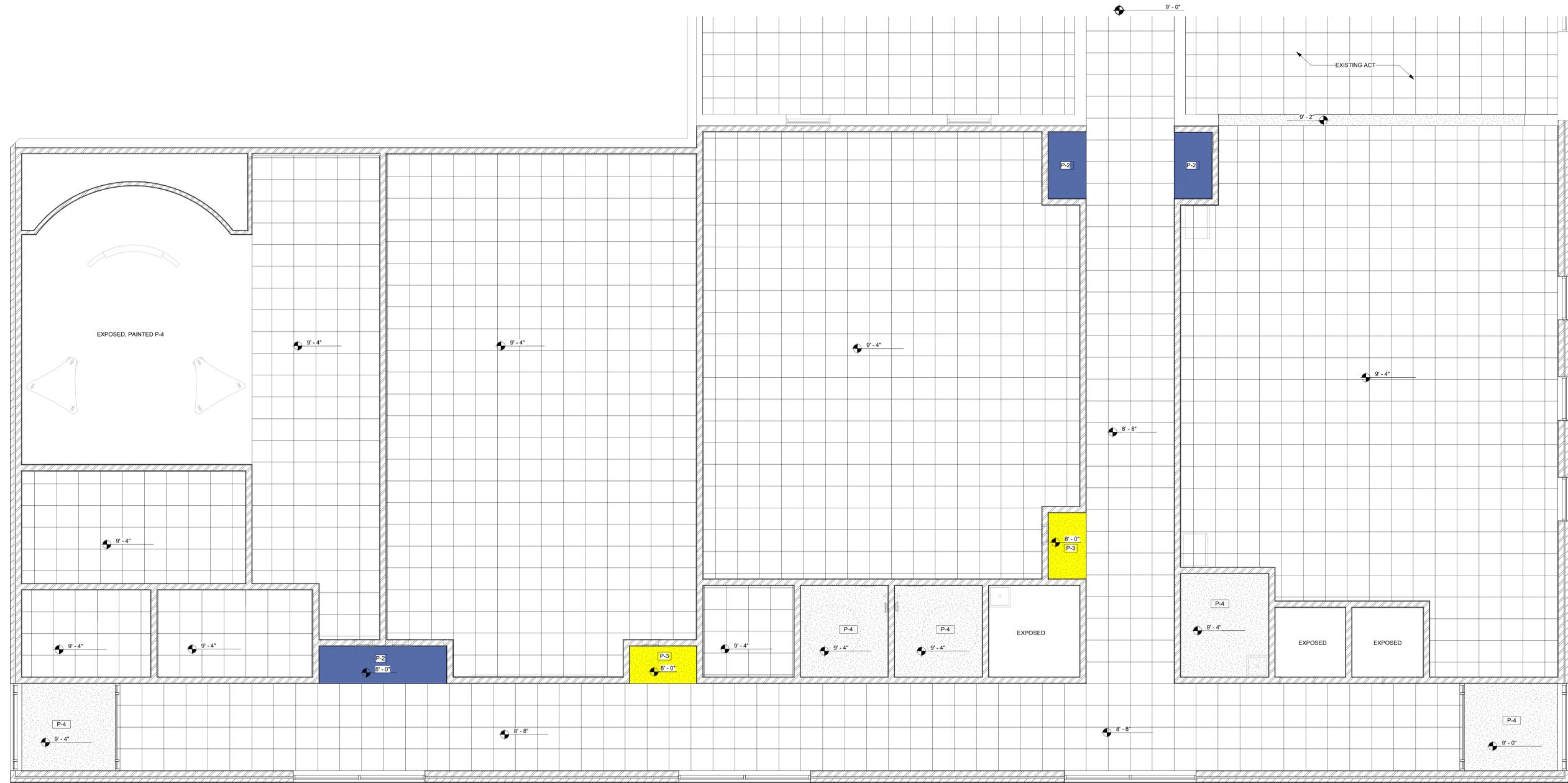
5.31	6" STRUCTURAL STEEL STUD & TRACK FRAMING (SEE ARCH. & STRUCT.)
7.20	MINERAL BATT INSULATION
9.02	1 5/8" STEEL STUD & TRACK FRAMING
9.04	3 5/8" STEEL STUD & TRACK FRAMING
9.05	6" STEEL STUD & TRACK FRAMING
9.15	CORNER BEAD
9.21	5/8" GYPSUM BOARD
9.40	ACOUSTICAL PANEL CEILINGS SYSTEM (COORD. w/ MECH. & ELEC. FOR FIXTURE REQ./LOCATIONS)

GENERAL NOTES

- SEE DRAWING SHEET A108 FOR ROOM FINISH SCHEDULE & FINISH LEGEND.
- ALL DIMENSIONS ARE FROM FACE OF WALL U.N.O.
- SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL INFORMATION AND COORDINATION.
- ALL STUD FRAMED WALLS SHALL BE SOUND INSULATED AND EXTEND TO THE DECK.
- PROVIDE ACOUSTICAL SEALANTS AT THE TOP AND BOTTOM OF ALL GWB WALLS BETWEEN ROOMS.
- PROVIDE FIRE SEALANTS AT ALL PENETRATIONS IN FIRE RATED WALLS.
- FIRE RATED WALLS ARE INDICATED ON CODE PLANS.
- VERIFY DRYWALL CONTROL JOINT LOCATIONS w/ARCHITECT ON SITE PRIOR TO INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONTROL JOINTS AT 30'-0" O.C. MAX. IN LONG WALL EXPANSES. CONTROL JOINTS AT DOOR JAMBS EXTENDING FROM DOOR HEAD TO CEILING. CONSIDERATION SHALL ALSO BE GIVEN TO LOCATING CONTROL JOINTS FROM FLOOR TO CEILING AT EITHER EDGE OF LARGE WINDOW OPENINGS.
- PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
- ALL ITEMS INSTALLED IN CEILINGS, INCLUDING SPRINKLER HEADS, ARE TO BE CENTERED OR SYMMETRICALLY ARRANGED ON OR ABOUT CENTERLINES OF ROOMS AND CENTERED IN CEILING TILES.
- WALL MOUNTED EXIT SIGNS AND FIXTURES ARE TO BE CENTERED OVER DOOR OR DOOR OPENING WHERE APPLICABLE.
- REFER TO SPECIFICATIONS FOR CEILING AND FIXTURE SUSPENSION REQUIREMENTS.



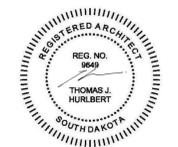
* 5.31 @ STRUCTURAL BEARING WALLS
1 TYP. CLASSROOM SOFFIT
 1 1/2" = 1'-0"



REFLECTED CEILING PLAN
 1/4" = 1'-0"



CO-OP PROJECT NO: 2162



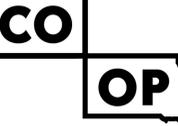
ISSUE: 05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
REFLECTED CEILING PLAN

A301



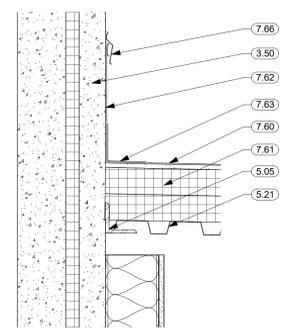
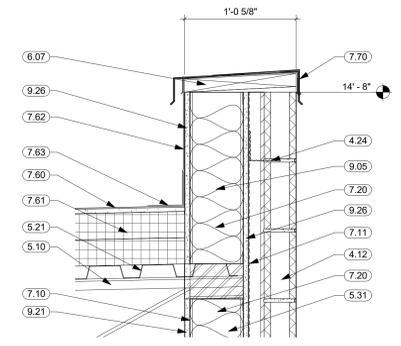
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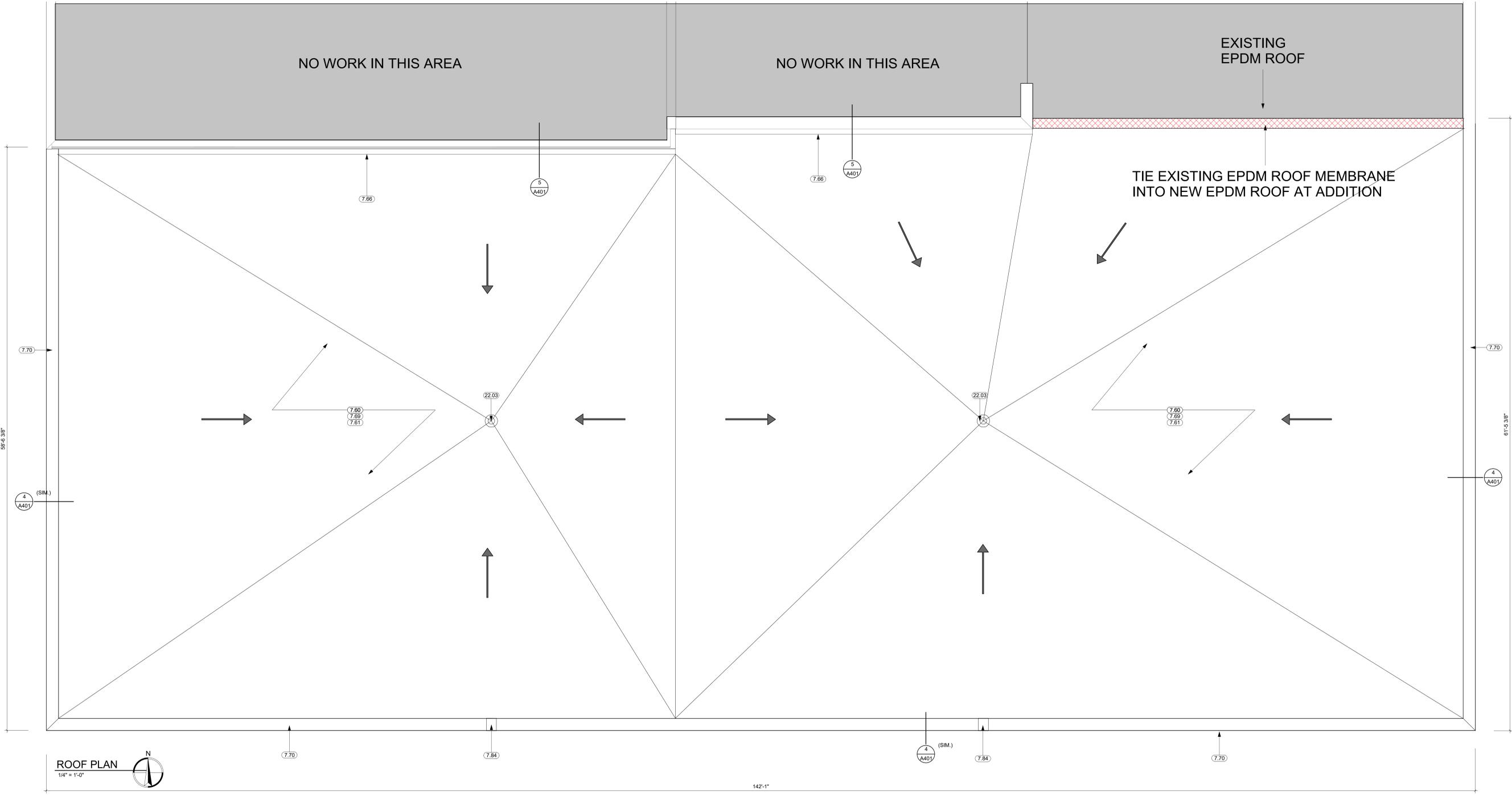
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KEYNOTE SCHEDULE	
3.50	PRECAST TILT-UP INSULATED WALL PANEL
4.12	CMU BURNISHED MASONRY UNIT
4.24	BRICK WALL TIES
5.05	STRUCTURAL STEEL ANGLE (SEE ARCH. & STRUCT.)
5.10	STEEL JOIST (SEE ARCH. & STRUCT.)
5.21	STEEL ROOF DECK (SEE ARCH. & STRUCT.)
5.31	6" STRUCTURAL STEEL STUD & TRACK FRAMING (SEE ARCH. & STRUCT.)
6.07	2x WOOD BLOCKING
7.10	VAPOR BARRIER
7.11	AIR & MOISTURE WEATHER BARRIER
7.20	MINERAL BATT INSULATION
7.60	FULLY ADHERED EPDM SINGLE MEMBRANE ROOF (WRAP PARAPET WHERE OCCURS)
7.61	POLYISOCYANURATE INSULATION SYSTEM
7.62	MEMBRANE FLASHING
7.63	REINFORCED PERIMETER FASTENING STRIP
7.66	TERMINATION BAR
7.69	1/2" ROOF COVERBOARD
7.70	PRE-FINISHED SHEET METAL FLASHING
7.84	PRE-FINISHED SCUPPER COLLECTOR (12"x6")
9.05	6" STEEL STUD & TRACK FRAMING
9.21	5/8" GYPSUM BOARD
9.26	5/8" EXTERIOR GYPSUM SHEATHING
22.03	ROOF DRAIN



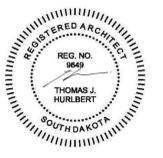
④ PARAPET @ FRAMING/MAS.
1 1/2" = 1'-0"

⑤ LOW ROOF @ PRECAST
1 1/2" = 1'-0"



ROOF PLAN
1/4" = 1'-0"

CO-OP PROJECT NO: 2162



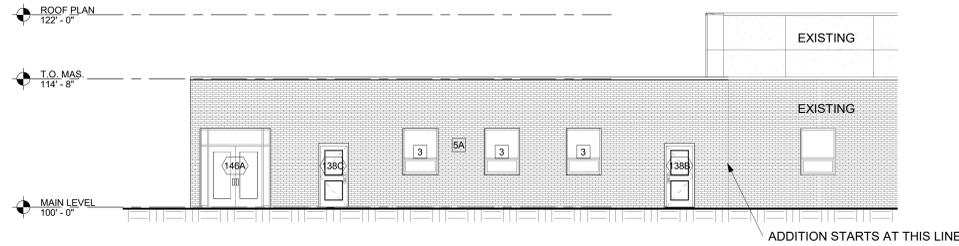
ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

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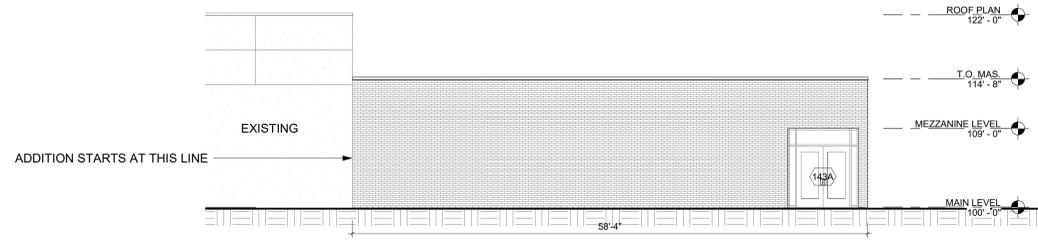
PROJECT:
ATEC ACADEMY ADDITION
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ROOF PLAN & DETAILS

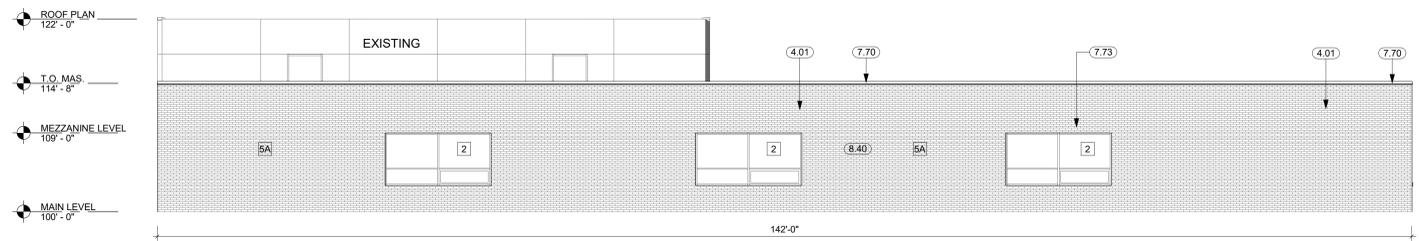
A401



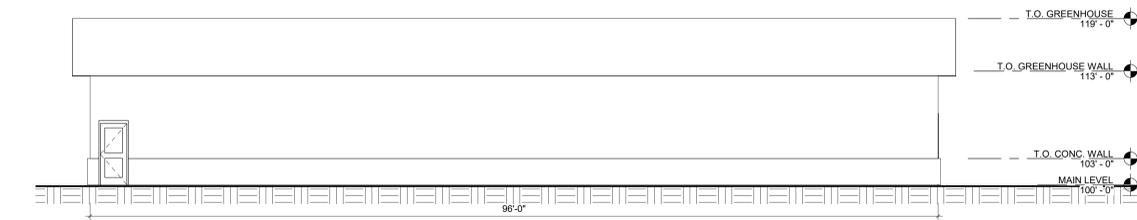
② ATEC ADDITION - EAST ELEVATION
1/8" = 1'-0"



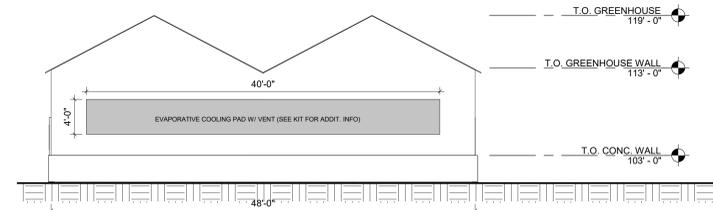
④ ATEC ADDITION - WEST ELEVATION
1/8" = 1'-0"



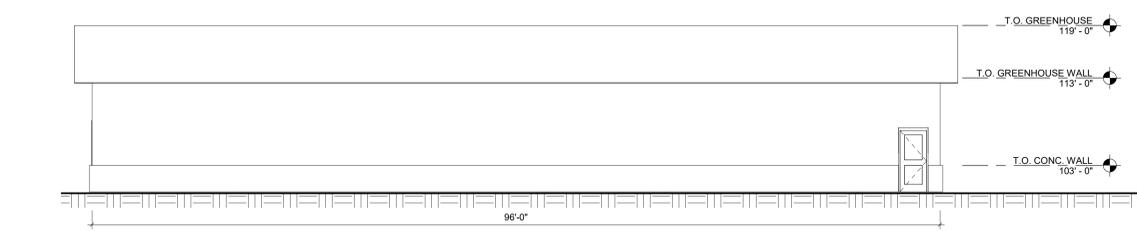
③ ATEC ADDITION - SOUTH ELEVATION
1/8" = 1'-0"



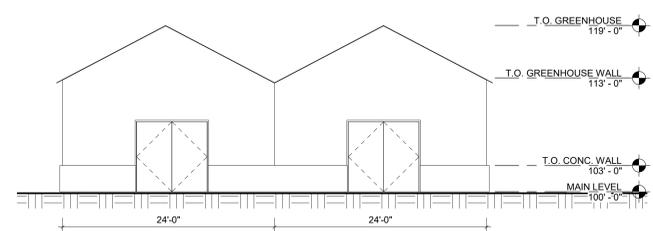
① GREENHOUSE - NORTH ELEVATION
1/8" = 1'-0"



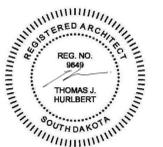
⑥ GREENHOUSE - EAST ELEVATION
1/8" = 1'-0"



⑤ GREENHOUSE - SOUTH ELEVATION
1/8" = 1'-0"



⑦ GREENHOUSE - WEST ELEVATION
1/8" = 1'-0"



GENERAL NOTES

4. SEE DRAWING SHEET A1-4 FOR WALL TYPES AND RATED ASSEMBLIES AS REQUIRED.
5. SEE DOOR AND FRAME SCHEDULE FOR RATED OPENINGS.
6. SEE DRAWING SHEET A1-2 FOR ROOM FINISH SCHEDULE & FINISH LEGEND.
15. SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL INFORMATION AND COORDINATION.
16. ALL STUD FRAMED WALLS SHALL BE SOUND INSULATED AND EXTEND TO THE DECK.
17. PROVIDE ACOUSTICAL SEALANTS AT THE TOP AND BOTTOM OF ALL GWB WALLS BETWEEN ROOM.
18. PROVIDE FIRE SEALANTS AT ALL PENETRATIONS IN FIRE RATED WALLS.
19. FIRE RATED WALLS ARE INDICATED ON CODE PLANS.
20. SEE MECHANICAL FOR ALL FLOOR DRAIN SIZES AND LOCATIONS U.N.O. SET FLOOR DRAINS MINIMUM 1/4" BELOW FINISHED FLOOR. PROVIDE EVEN SLOPE FROM WALL TO DRAIN W/ A MAXIMUM SLOPE OF 1/4" PER FOOT.
21. VERIFY DRYWALL CONTROL JOINT LOCATIONS w/ARCHITECT ON SITE PRIOR TO INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONTROL JOINTS AT 30'-0" O.C. MAX. IN LONG WALL EXPANSES. CONTROL JOINTS AT DOOR JAMBS EXTENDING FROM DOOR HEAD TO CEILING. CONSIDERATION SHALL ALSO BE GIVEN TO LOCATING CONTROL JOINTS FROM FLOOR TO CEILING AT EITHER EDGE OF LARGE WINDOW OPENINGS.
28. COORDINATE INSTALLATION OF OWNER PROVIDED EQUIPMENT WITH NEW CONSTRUCTION.

KEYNOTE SCHEDULE

3.01	CONC. FLOOR SLAB ON GRADE (SEE STRUCT. FOR THICKNESS AND REINF.) w/ 15 MIL. VAPOR BARRIER BELOW
3.02	CONT. CONC. FOOTING (SEE STRUCTURAL PLANS)
3.04	CONT. CONC. FOUNDATION WALL (SEE STRUCTURAL PLANS)
3.11	1/2" EXPANSION/ISOLATION JOINT MATERIAL
3.12	15 MIL VAPOR BARRIER
4.01	BRICK VENEER
4.20	THRU-WALL FLASHING
4.23	MORTAR NET
4.24	BRICK WALL TIES
5.10	STEEL JOIST (SEE ARCH. & STRUCT.)
5.21	STEEL ROOF DECK (SEE ARCH. & STRUCT.)
5.31	8" STRUCTURAL STEEL STUD & TRACK FRAMING (SEE ARCH. & STRUCT.)
7.10	VAPOR BARRIER
7.11	AIR & MOISTURE WEATHER BARRIER
7.20	MINERAL BATT INSULATION
7.21	RIGID INSULATION (2" POLYISO - U.O.N.)
7.60	FULLY ADHERED EPDM SINGLE MEMBRANE ROOF (WRAP PARAPET WHERE OCCURS)
7.61	POLYISOCYANURATE INSULATION SYSTEM
7.70	PRE-FINISHED SHEET METAL FLASHING
9.21	5/8" GYPSUM BOARD
9.26	5/8" EXTERIOR GYPSUM SHEATHING
9.40	ACOUSTICAL PANEL CEILING SYSTEM (COORD. w/ MECH. & ELEC. FOR FIXTURE REQ. LOCATIONS)

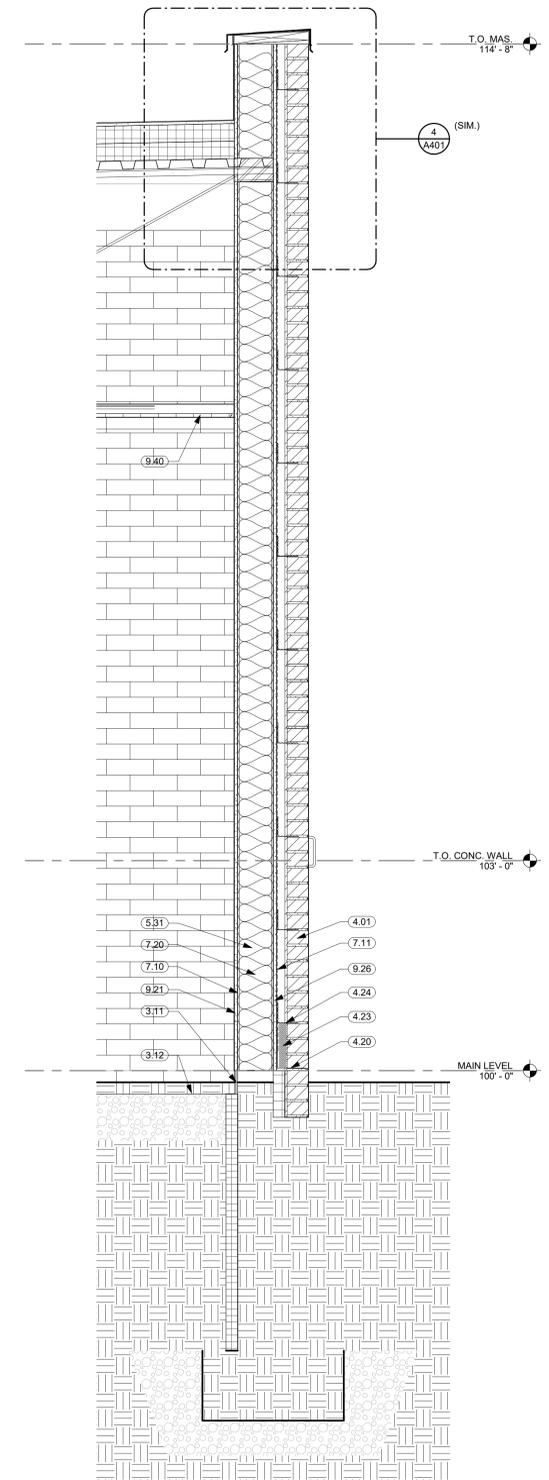
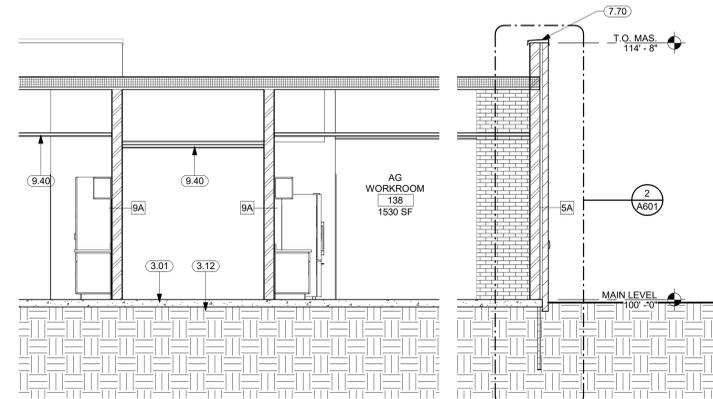
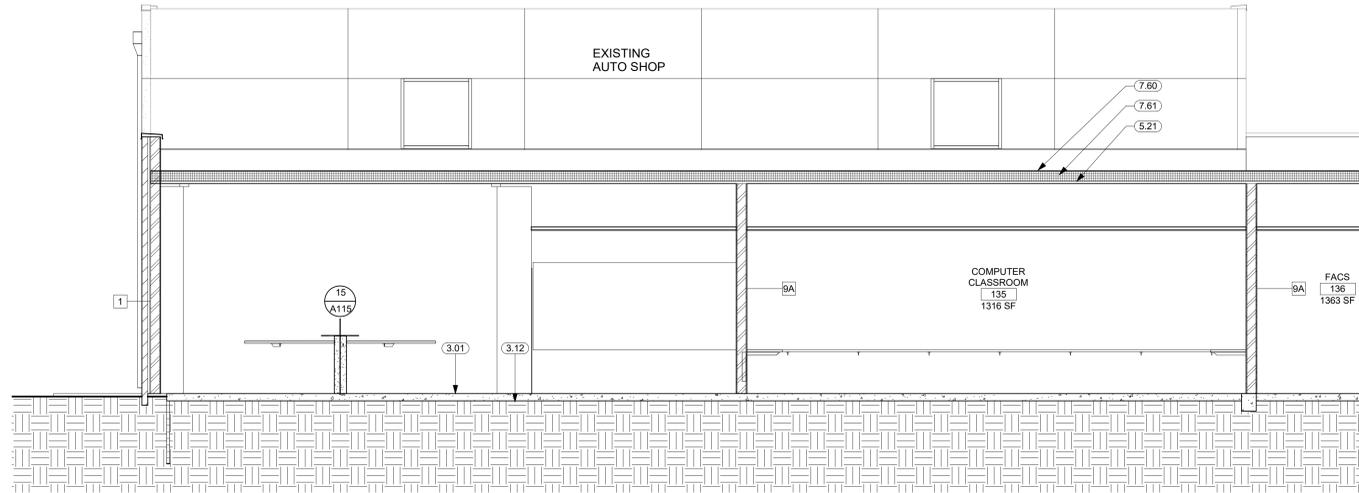


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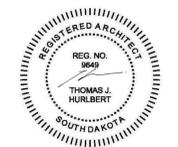


LONGITUDINAL BUILDING SECTION
(EAST/WEST)

1
1/4" = 1'-0"

2 WALL SECTION 5
1" = 1'-0"

CO-OP PROJECT NO: 2162



ISSUE:
05-03-2022 100% CONSTRUCTION DRAWINGS

REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
BUILDING SECTIONS & DETAILS

A601

- GENERAL DESIGN CRITERIA:
- CODES
 - INTERNATIONAL BUILDING CODE, 2021
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION, LATEST EDITION
 - AMERICAN CONCRETE INSTITUTE, LATEST EDITION
 - AMERICAN WOOD COUNCIL, NATIONAL DESIGN SPECIFICATION, LATEST EDITION
 - COMPLY WITH ALL LOCAL CODES AND LAWS, INCLUDING OSHA REGULATIONS
 - LATERAL SYSTEMS- PLYWOOD SHEARWALLS
 - LATERAL SYSTEM- PLYWOOD SHEARWALLS
 - BUILDING OCCUPANCY: B1
 - WIND: BASIC WIND SPEED: 121 MPH
 - EXPOSURE C
 - INTERNAL PRESSURE COEFFICIENT: ENCLOSED
 - COMPONENTS AND CLADDING:
 - ZONE 1: +16PSF / -32PSF
 - ZONE 1: +16PSF / 21PSF
 - ZONE 2: +16PSF / 43PSF
 - ZONE 3: +16PSF / 45PSF
 - ZONE 4: +26PSF / 38PSF
 - ZONE 4 (PARAPET): +83PSF / 60PSF
 - ZONE 5: +26PSF / -32PSF
 - ZONE 5 (PARAPET): +106PSF / -39PSF
 - SUPERIMPOSED - DEAD LOADS:
 - ROOF
 - DECK: 3PSF
 - INSULATION/MEMBRANE: 3PSF
 - CHIEP: 8PSF
 - JOIST BRIDGING: 5PSF
 - LIVE LOADS
 - GROUND SNOW LOAD: 50PSF
 - FLAT ROOF SNOW LOAD (MINIMUM): 43PSF
 - IMPORTANCE FACTOR $I_p = 1.0$
 - SNOW EXPOSURE FACTOR $C_e = 1.0$
 - THERMAL FACTOR $C_t = 1.1$
 - SNOW DRIFT LOAD: ASCE-7 (APPROPRIATE YEAR)

- GENERAL:
- THE CONTRACT DRAWINGS REPRESENT THE COMPLETED STRUCTURE, AT TIME OF SUBSTANTIAL COMPLETION, UNLESS NOTED OTHERWISE. THEY DO NOT REPRESENT THE MEANS AND METHODS OF CONSTRUCTION, SEQUENCING AND MEANS AND METHODS OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH, SAFETY, AND STABILITY OF THE NEW AND EXISTING STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING, AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY. THE CONTRACTOR SHALL, AT HIS DISCRETION, EMPLOY A REGISTERED PROFESSIONAL ENGINEER FOR THE DESIGN OF ANY TEMPORARY BRACING AND SHORING.
 - FIELD VERIFY ANY EXISTING DIMENSIONS, SIZES, AND THICKNESSES SHOWN ON DRAWINGS. IMMEDIATELY NOTIFY ARCHITECT OF ANY DISCREPANCIES.
 - DETAILS AND NOTES SHOWN ON THE STRUCTURAL DOCUMENTS ARE TYPICAL FOR SIMILAR SITUATIONS IN THE PROJECT.
 - OPTIONS, IF SHOWN, ARE FOR THE CONVENIENCE OF THE CONTRACTOR.
 - THE COST OF ADDITIONAL DESIGN WORK NECESSITATED BY SEQUENCING OR CONSTRUCTION ERRORS SHALL BE PAID BY THE CONTRACTOR.
 - ANY ENGINEERING PROVIDED BY OTHERS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

- SPECIAL INSPECTION:
- THE OWNER SHALL EMPLOY SPECIAL INSPECTORS TO PERFORM SPECIAL INSPECTION, BASED ON IBC 2021. SPECIAL INSPECTION WILL BE REQUIRED FOR THE FOLLOWING:
- GEOTECHNICAL INVESTIGATIONS
 - CAST-IN-PLACE CONCRETE
 - STRUCTURAL MASONRY
 - STRUCTURAL STEEL
 - POST-INSTALLED ANCHORS

- FOOTING AND FOUNDATIONS:
- NET ALLOWABLE BEARING PRESSURE:
 - (ASSUMED PRESSURES- TO BE VERIFIED BY THE OWNER'S SOILS CONSULTANT DURING CONSTRUCTION)
 - COLUMN FOOTINGS: 1500PSF
 - WALL FOOTING: 1500PSF
 - CENTER FOOTINGS UNDER WALLS AND COLUMNS, UNLESS NOTED OTHERWISE
 - CONCRETE SHALL NOT BE CAST ON FROZEN GROUND OR GROUND CONTAINING STANDING WATER. OWNER'S SOILS CONSULTANT SHALL REVIEW SUBGRADE PRIOR TO CASTING OF FOOTINGS AND SLABS. PROTECT SOIL FROM FREEZING AFTER CASTING FOOTING.
 - UNLESS NOTED OTHERWISE, SLABS ON GRADE SHALL CONTAIN FIBERMESH REINFORCEMENT. SLAB SHALL BE PLACED OVER VAPOR BARRIER AND 6" MINIMUM COMPACTED GRANULAR FILL. OWNER'S SOILS CONSULTANT SHALL VERIFY SUBGRADE PRIOR TO PLACEMENT OF ANY FILL BELOW SLABS.
 - PLACE REINFORCING IN ALL FOOTINGS PRIOR TO CASTING. FLOATING OF REINFORCING INTO FOOTING AFTER CASTING IS NOT PERMITTED. HOLD REINFORCING IN PLACE DURING CASTING OPERATIONS. CONSOLIDATE CONCRETE.
 - BASEMENT WALLS SHALL NOT BE BACKFILLED UNTIL LOWER LEVEL SLAB AND FIRST FLOOR STRUCTURE IS IN PLACE, UNLESS BRACING IS PROVIDED.
 - BACKFILL PLACED AGAINST FOUNDATION WALLS SHALL BE CLEAN, FREE-DRAINING GRANULAR MATERIAL FOR A MINIMUM OF 2FT AGAINST WALL. COMPACT SOILS ADJACENT TO FOUNDATION WALLS USING HAND EQUIPMENT.
 - STEPS IN FOOTING, FOUNDATION WALLS, AND GRADE BEAMS SHALL BE COORDINATED WITH WALL FORMING SYSTEM.
 - SEE ARCHITECTURAL DRAWINGS FOR OTHER REVEALS, INSERTS, EMBEDS, AND BOLTS.
 - NO KING RUNNING BELOW FOOTING SHALL BE PLACED PRIOR TO FOOTING OPERATIONS AND THE HOLE FILLED WITH LEAN CONCRETE.

- CONCRETE:
- CONCRETE STRENGTHS: 145PCF CONCRETE DENSITY. MINIMUM 28-DAY CONCRETE STRENGTHS SHALL BE AS FOLLOWS:
 - TYPICAL UNLESS NOTED OTHERWISE: 4000PSI
 - FILL ON COMPOSITE MITL DECK: 3500PSI
 - FOOTINGS: 3500PSI
 - FOUNDATION WALLS: 3500PSI
 - SLABS ON GRADE: 4000PSI
 - ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITIONS OF ACI 301, 305, 306, 311, 315, 318 AND 347.
 - CONCRETE MIX DESIGN SHALL CONFORM TO ACI 301 AND 318. WATER SHALL NOT BE ADDED ON SITE, UNLESS CALLED OUT ON THE APPROVED MIX DESIGN.
 - CONCRETE SLABS ON GRADE SHALL HAVE CONSTRUCTION JOINTS OR CUT JOINT AT 12FT O.C. MAXIMUM IN EACH DIRECTION. CUT SLAB BETWEEN 4 AND 12 HOURS AFTER CASTING SLAB. ISOLATE COLUMNS, WALLS, AND PIERS FROM SLABS AS SHOWN ON DRAWINGS. DO NOT CUT SLABS-ON-DECK OR PRECAST TOPPING SLABS.
 - SEE ARCHITECTURAL DRAWINGS FOR SLAB DEPRESSIONS, PITCH SLAB TO DRAIN WITHOUT REDUCING THICKNESS OF CONCRETE SECTION.
 - PROVIDE CONSTRUCTION JOINTS IN EXPOSED WALLS AT A MAXIMUM SPACING OF 40FT. COORDINATE LOCATION OF JOINT WITH ARCHITECTURAL DRAWINGS. PROVIDE CONSTRUCTION JOINTS IN UNEXPOSED WALLS AT A MAXIMUM SPACING OF 60FT.
 - ALL JOINTS IN CONCRETE CONSTRUCTION SHALL BE KEYED WITH A MINIMUM 2X4 KEYWAY. PROPERLY CONSOLIDATE CONCRETE WHEN CASTING.
 - DO NOT PLACE CONDUIT, PIPES, OR DUCTS WITHIN COLUMNS, BEAMS, WALLS, OR SLAB SYSTEMS WITHOUT APPROVAL FROM STRUCTURAL ENGINEER.

- REINFORCING BARS:
- BAR DETAILING SHALL CONFORM TO THE LATEST ACI DETAILING MANUAL. PROVIDE COVER TO REINFORCEMENT AS LISTED IN ACI 318.
 - STEEL SHALL BE AS FOLLOWS:
 - REBAR- ASTM A605- GR 60
 - WELDABLE REINFORCING- A706, GR 60
 - WELDED WIRE FABRIC- ASTM A185
 - ALL FIELD BENDING OF REINFORCING SHALL BE DONE COLD. DO NOT HEAT REINFORCEMENT.
 - BAR LAPS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE. STAGGER SPLICES OF REINFORCING BY 24 INCHES AT ALTERNATE BARS.
 - BEAMS/JOIST TOP AND BOTTOM BARS - 48DB
 - COLUMN/WALL VERTICAL BARS - 48DB
 - TIES - 36DB
 - HOLD REINFORCING IN PLACE DURING CASTING OPERATIONS.

- MASONRY
- HOLLOW CONCRETE MASONRY UNITS: NORMAL WEIGHT, FM=2000, MORTAR TYPE S, GROUT STRENGTH - 2000PSI.
 - MASONRY CONSTRUCTION SHALL COMPLY WITH THE LATEST VERSION OF ACI 530.1. SEE IBC 2021 FOR HOT AND COLD WEATHER PROCEDURES.
 - CMU SHALL BE LAID IN A RUNNING-BOND PATTERN.
 - PROVIDE BOND BEAMS WITH 2 #5 AT ALL FLOOR LINES, ROOF LINES, TOP OF WALL, AND AT 12'-0" O.C. MAXIMUM SPACING IN WALL.
 - PROVIDE REINFORCING AT CENTER OF CORES OF CMU CONSTRUCTION, OR AS INDICATED ON STRUCTURAL DRAWINGS. HOLD REINFORCING IN PLACE DURING GROUTING OPERATIONS. FILL ALL REINFORCED CELLS WITH GROUT. FILL ALL CMU CELLS SOLID BELOW GRADE. SEE DRAWINGS FOR OTHER GROUTING, CONSOLIDATED GROUT.
 - GROUT CELLS FLOOR-TO-FLOOR AT JAMBS OF OPENINGS.
 - LAP BARS 48 BAR DIAMETERS, UNLESS NOTED OTHERWISE.
 - PROVIDE HORIZONTAL JOINT REINFORCEMENT AT 16' O.C. MAX SPACING PER SPECIFICATION.
 - HIGH LIFT GROUTING WILL NOT BE PERMITTED WITHOUT AN APPROVED WRITTEN PROCEDURE SUBMITTED THROUGH THE ARCHITECT.
 - USE GROUTED KEYWAYS OR PREMANUFACTURED JOINTS AT ALL CONTROL JOINTS.
 - DO NOT PLACE CONDUIT, CHASES, OR OTHER EMBED ITEMS IN GROUTED CELLS WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
 - LOCATE CONTROL JOINTS IN CMU AT A MAXIMUM SPACING OF 20FT, UNLESS NOTED OTHERWISE. LOCATE CONTROL JOINTS IN EXTERIOR MASONRY PER ARCHITECTURAL DRAWINGS.
 - CONTINUE REINFORCING THROUGH CONTROL JOINTS. WRAP REBAR WITH BOND-BREAKING TAPE 2'-0" EACH SIDE OF JOINT. DO NOT SPLICE REINFORCING WITHIN 4FT OF JOINTS.

- INTELS:
- INTELS SHALL BE PLACED ABOVE ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION.
 - INTELS NOT SHOWN ON THE CONSTRUCTION DRAWINGS SHALL BE AS FOLLOWS, FOR EVERY 4IN NOMINAL THICKNESS OF MASONRY:
 - SPAN: LINTEL:
 - 0-2FT 1/2" PLATE, OR BOND BEAM WITH 2 #5
 - 2FT-4FT L-3.5X3.5X1/4"
 - 4FT-6FT L-5X3.5X1/4" LLV
 - 6FT-8FT L-5X3.5X1/4" LLV
 - INTELS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE AS FOLLOWS, FOR EVERY 6IN NOMINAL OF MASONRY THICKNESS (EG. 6" CMU):
 - SPAN: LINTEL:
 - 0-2FT 1/2" PLATE, OR BOND BEAM WITH 1 #5
 - 2FT-4FT WT 4X9
 - 4FT-6FT WT 4X9
 - 6FT-8FT L-5X3.5X1/4" W/ BOT PL- 1/2"X5"
 - STEEL LINTELS SHALL HAVE A MINIMUM OF 6" BEARING ON FULLY GROUTED CELL.
 - GROUT ALL CMU CORES SOLID UNDER LINTEL BEARING, BEAMS AND BEARING PLATES. GALVANIZE ALL STEEL EXPOSED TO WEATHER.

- STRUCTURAL STEEL:
- STEEL SHALL BE DETAILED, FABRICATED AND ERECTED PER AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
 - HIGH STRENGTH BOLTS SHALL BE INSTALLED PER AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
 - PROPERTIES:
 - ROLLED W/SHAPED MEMBERS: ASTM A992
 - STEEL TUBES: ASTM A500, GRADE B
 - STEEL PIPES: ASTM A53, GRADE B
 - STEEL ANGLES, CHANNELS, PLATES: ASTM A36
 - ANCHOR BOLTS: ASTM A307
 - SIMPLE SHEAR CONNECTIONS NOT FULLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE SELECTED BY THE STEEL FABRICATOR FROM APPROPRIATE AISC LOAD TABLES USING END REACTION SHOWN ON PLANS. DOUBLE ANGLE, SINGLE ANGLE, OR WELDED SHEAR PLATE CONNECTIONS SHALL BE USED. BOLTED CONNECTIONS SHALL USE A MINIMUM OF 2 BOLTS.
 - ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE IN THAT TYPE OF JOINT. WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE IN LEU OF AWS WELDING CERTIFICATES. WELDERS EMPLOYED ON THE WORK MAY PROVIDE WELDING TESTS THAT HAVE BEEN PERFORMED WITHIN THE LAST 12 MONTHS.
 - UNLESS NOTED OTHERWISE, WELDS SHALL BE 3/16" THROAT THICKNESS. ALL WELDS SHALL USE E70XX ELECTRODES.
 - PAINT STEEL EXPOSED TO VIEW WITH MANUFACTURER'S STANDARD PRIMER. DO NOT PRIME STEEL RECEIVING FIRE-PROOFING, OR AT WELDS, IF STEEL MEMBERS ARE NOT EXPOSED TO VIEW, CONTRACTOR MAY ELECT TO NOT PRIME THIS STEEL. GALVANIZE ALL STEEL EXPOSED TO WEATHER.
 - HEADED STEEL STUDS SHALL BE PLACED ON BEAMS IN FIELD, ARC-WELDED THROUGH METAL FLOOR DECK. SEE STUD REPLACEMENT DETAIL.
 - DO NOT FIELD TORCH-CUT HOLES OR NOTCHES IN STEEL MEMBERS WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
 - BOLTS SHOWN ON STRUCTURAL DRAWINGS SHALL BE 1/2" DIAM, A325-N BOLTS UNLESS NOTED OTHERWISE. USE TWIST-OFF TYPE BOLTS FOR CONNECTIONS REQUIRING FULLY TIGHTENED CONDITIONS.
 - FURNISH AND INSTALL OTHER MISCELLANEOUS STEEL AS CALLED OUT OR REQUIRED BY ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
 - PROVIDE 5.000 PSI NON-SHRINK GROUT UNDER BASE PLATES AND BEARING PLATES WHERE INDICATED. ANCHOR BOLTS SHALL BE EMBEDDED 12 X (DIAM OF BOLT) MEASURED TO UNDERSIDE OF HEAD.

- STEEL DECK:
- DESIGN, FABRICATE, DELIVER AND ERECT METAL ROOF DECK, NON-COMPOSITE METAL DECK, AND COMPOSITE METAL DECK ACCORDING TO THE SPECIFICATIONS AND RECOMMENDATIONS OF THE STEEL DECK INSTITUTE (SDI).
 - STEEL DECK PROPERTIES SHALL BE (AT MINIMUM), THOSE LISTED IN VULCRAFT CATALOGS FOR THE TYPE AND GAGE SHOWN ON THE DRAWINGS.
 - STEEL DECK SHALL BE ATTACHED TO SUPPORTING STRUCTURE AS NOTED ON PLANS.
 - USE WELD-WASHERS WHEN WELDING THROUGH DECK. POWDER DRIVEN FASTENERS, IF DESIRED FOR DECK ATTACHMENT, SHALL BE SUBMITTED FOR REVIEW.
 - ROOF DECK SHALL BE PRIME-PAINTED. NON-COMPOSITE DECK SHALL BE GALVANIZED. COMPOSITE DECK SHALL BE GALVANIZED.
 - ROOF DECK AND NON-COMPOSITE DECK ENDS SHALL BE LAPPED 2' OVER SUPPORT. COMPOSITE DECK ENDS SHALL BE BUTTED OVER CENTER OF SUPPORT.
 - PROVIDE HIP AND VALLEY PLATES, GIRDER FILLERS, END CLOSERS, CANT STRIPS, SUMP PANS, EDGE FORMS AND OTHER ACCESSORIES AS SHOWN ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS, OR AS NEEDED TO PROVIDE A COMPLETE DECK SYSTEM SHOWN ON THE DRAWINGS.
 - SUPPORT DECK AT SUMP PANS AND OTHER ROOF DECK OPENINGS. SEE DETAILS.
 - HANG LOADS FROM STEEL BEAMS AND JOISTS WHENEVER POSSIBLE. PROVIDE UNISTRUT, ANGLES, OR TUBES TO ACCOMMODATE THIS. DO NOT HANG ANY LOADS FROM ROOF DECK OR NON-COMPOSITE DECK. LOADS LESS THAN 100.LBS MAY BE HUNG FROM CURED, COMPOSITE DECK. RESPONSIBILITY FOR DESIGN OF MEP-SUPPORT SYSTEMS WILL BE WITH THE CONTRACTOR.

- STEEL JOISTS:
- DESIGN, FABRICATE, DELIVER, AND ERECT OPEN WEB STEEL JOISTS, JOIST GIRDERS, AND ACCESSORIES ACCORDING TO THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE (SJI).
 - THE BASIS OF DESIGN FOR JOIST SIZES SHOWN ON THE DRAWINGS IS PER VULCRAFT DESIGN CATALOG. SPECIAL JOIST PRELIMINARY SIZES SHOWN ARE BASED ON SNOW DRIFT AND MECHANICAL LOADS SHOWN ON DOCUMENTS.
 - PROVIDE BRIDGING, EXTENDED ENDS, SLOPED BEARINGS, CEILING EXTENSIONS AND OTHER ACCESSORIES AS SHOWN ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS.
 - BRIDGING SHOWN ON DRAWINGS SHALL BE USED FOR ESTIMATING ONLY. FINAL SIZE, CONFIGURATION, AND QUANTITY OF BRIDGING SHALL BE DETERMINED BY THE JOIST MANUFACTURER. LIFT BRIDGING MAY BE REQUIRED- SEE DRAWINGS.
 - WHERE BRIDGING INTERFERES WITH MECHANICAL DUCTWORK OR PIPING, BRIDGING MAY BE REMOVED AFTER ROOF DECK ATTACHMENT. NOTIFY STRUCTURAL ENGINEER OF LOCATIONS PRIOR TO REMOVAL.
 - PAINT JOISTS WITH MANUFACTURER'S STANDARD RUST-INHIBITING PRIMER. JOISTS TO RECEIVE FIREPROOFING ARE NOT TO BE PAINTED.
 - TO AID IN BEARING SEAT DESIGN FOR JOISTS, IF JOIST MANUFACTURER WOULD LIKE TO STAGGER JOISTS ON EITHER SIDE OF A SUPPORT, THIS SHALL BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.
 - JOISTS BEARING ABOVE A COLUMN LINE SHALL HAVE ERECTION BOLTS IN THE BEARING SEAT. BOTTOM CHORDS SHALL BE ALSO EXTENDED TO THE FACE OF THE COLUMN.
 - JOISTS SHALL BE WELDED TO SUPPORTS, TYPICAL.
 - LIGHT-WEIGHT MECHANICAL DUCTS, CONDUIT, AND CEILING MAY BE HUNG AT ANY POINT ALONG THE JOIST BOTTOM OR TOP CHORD.
 - LOADS GREATER THAN 100LBS SHALL BE HUNG WITHIN 6" OF TOP AND BOTTOM CHORD POINTS. LOADS HUNG OUTSIDE THIS RANGE SHALL HAVE ADDED BRACING TO NEAREST CHORD POINT, AS SHOWN ON THE DETAILS.

- LIGHT GAGE STEEL:
- LIGHT GAGE STEEL DESIGN, DETAILING AND ERECTION SHALL FOLLOW STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) GUIDELINES.
 - LIGHT GAGE CALLED OUT ON THE DRAWINGS SHALL HAVE A MINIMUM PROPERTIES CALLED OUT IN THE LATEST EDITION OF SSMA PRODUCT TECHNICAL INFORMATION.
 - END TRACK GAGE SHALL MATCH WALL STUD GAGE. ALIGN STUDS BELOW STRUCTURAL MEMBERS ABOVE. PROVIDE FULL BEARING OF WALL STUDS TO TOP AND BOTTOM TRACK. STUDS SHALL NOT HAVE PUNCH-OUT LOCATED AT ENDS OF STUDS.
 - PROVIDE TRACK, BRIDGING, BLOCKING, HEADERS, CLIP-ANGLES, SLIDE CLIPS, FASTENERS, AND OTHER ACCESSORIES AS NEEDED TO SUPPLY A COMPLETED LIGHT-GAGE SYSTEM AS SHOWN ON THE DRAWINGS.
 - PROVIDE BRIDGING AT 4'-0" O.C. MAXIMUM SPACING IN BEARING SHEAR AND EXTERIOR WALLS. PROVIDE FULL DEPTH BLOCKING AT ALL SHEAR PANEL EDGES.
 - SCREW SHEATHING FOR SHEAR WALLS WITH SCREWS AT 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE FIELD. SCREW SHEATHING FOR FLOORS AND ROOFS WITH SCREWS AT 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE FIELD. STAGGER EDGES OF PANELS.
 - PROVIDE 2 FULL HEIGHT STUDS AT JAMBS OF OPENINGS, UNLESS NOTED OTHERWISE.
 - ALL WELDED CONNECTIONS SHALL BE DONE BY PERSONNEL CERTIFIED IN LIGHT-GAGE WELDING.

- WOOD:
- WOOD CONSTRUCTION SHALL COMPLY WITH IBC 2021, AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, AND THE AMERICAN WOOD COUNCIL.
 - MEMBERS PROPERTIES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
 - WALL SHEATHING- 7/16" APA RATED SHEATHING
 - 2X4 THROUGH 2X12, NO. 2 - SPRUCE-PINE-FIR #1/#2 (OR EQUAL)
 - LAMINATED VENEER LUMBER (LVL) E= 1,900,000PSI, FB= 2,600PSI
 - DO NOT DRILL OR NOTCH STRUCTURAL ELEMENTS WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
 - CONNECTIONS NOT SHOWN SHALL BE FASTENED PER TABLE 2304.10.1 IN IBC 2021.
 - PLYWOOD INDICATED AS RATED SHEATHING, SHALL BEAR THE APPROPRIATE MARK OF THE AMERICAN PLYWOOD ASSOCIATION. ALL WOOD MEMBERS SHALL BEAR THE APPROPRIATE MARK OF THE APPROPRIATE ACCREDITING AGENCY.
 - HOLES FOR BOLTS SHALL BE MATCH-DRILLED IN FIELD TO ENSURE PROPER ALIGNMENT. PROVIDE WASHERS AT ALL BOLT LOCATIONS.
 - NAIL SHEATHING FOR SHEAR WALLS WITH 10D NAILS AT 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE FIELD. NAIL SHEATHING FOR FLOORS AND ROOF WITH 10D NAILS AT 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE FIELD. PROVIDE BLOCKING AT PANEL EDGES WHERE SPECIFIED. STAGGER EDGES OF PANELS.
 - PROVIDE 2 FULL HEIGHT STUDS AT JAMBS OF OPENINGS, UNLESS NOTED OTHERWISE.
 - CONNECT FRAMING MEMBERS WITH APPROVED LIGHT-GAGE CONNECTORS FROM SIMPSON STRONG TIE OR EQUAL. CONNECT PER MANUFACTURER'S INSTRUCTIONS.
 - FOR MEMBERS EXPOSED TO WEATHER, NAILS, SCREWS AND BOLTS LESS THAN 1/2" DIAM SHALL BE STAINLESS STEEL. GREATER THAN 1/2" SHALL BE GALVANIZED OR STAINLESS STEEL.
 - DESIGN, FABRICATE, AND ERECT PLATE-CONNECTED WOOD TRUSSES TO WITHSTAND LOADS SHOWN IN (DESIGN CRITERIA) ACCORDING TO RULES ESTABLISHED BY TPI.
 - SHOP DRAWINGS SHALL INCLUDE STRUCTURAL ANALYSIS STAMPED BY A LICENSED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED.
 - ALL TEMPORARY AND FINAL BRACING SHALL BE DESIGNED PER TPI RECOMMENDATIONS.
 - STORE TRUSSES ON SITE IN A MANNER TO MINIMIZE WARPING.
 - TRUSS DEFLECTION CRITERIA:
 - TOTAL LOAD - L/240
 - LIVE LOAD - L/980

WALL FOOTING SCHEDULE

MARK	SIZE	REINFORCEMENT
WF1	2'0" x 1'-0"	(2) #5 CONT.

SHEARWALL SCHEDULE

MARK	1ST FLOOR		# OF ENDWALL STUDS	REMARKS
	SHEATHING	HOLDOWN		
SW-A	7/16" OSB FASTENED TO STUD FRAMING w/ #6 TEK SCREWS @ 6" O.C. MAX. AT PANEL EDGES	SIMPSON HTT4 w/ (16) #10 TEK SCREWS & 3/8" DIA. x 10" EMBED, THREADED ROD & SIMPSON SET ADHESIVE	2	
SW-B	7/16" OSB FASTENED TO STUD FRAMING w/ #6 TEK SCREWS @ 4" O.C. MAX. AT PANEL EDGES	SIMPSON HTT4 w/ (16) #10 TEK SCREWS & 3/8" DIA. x 10" EMBED, THREADED ROD & SIMPSON SET ADHESIVE	2	

HEADER SCHEDULE

MARK	HEADER	BRG.	KING	REMARKS
H1	(2) 600S162-54 BOX HEADER w/ 600T125-54 TOP & BOT.	2	1	
H2	(2) 800S162-54 BOX HEADER w/ 600T125-54 TOP & BOT.	2	2	
H3	(2) 1000S162-68 BOX HEADER w/ 600T125-54 TOP & BOT.	2	2	
H4	(2) 1000S250-97 BOX HEADER w/ 600T125-54 TOP & BOT.	2	2	



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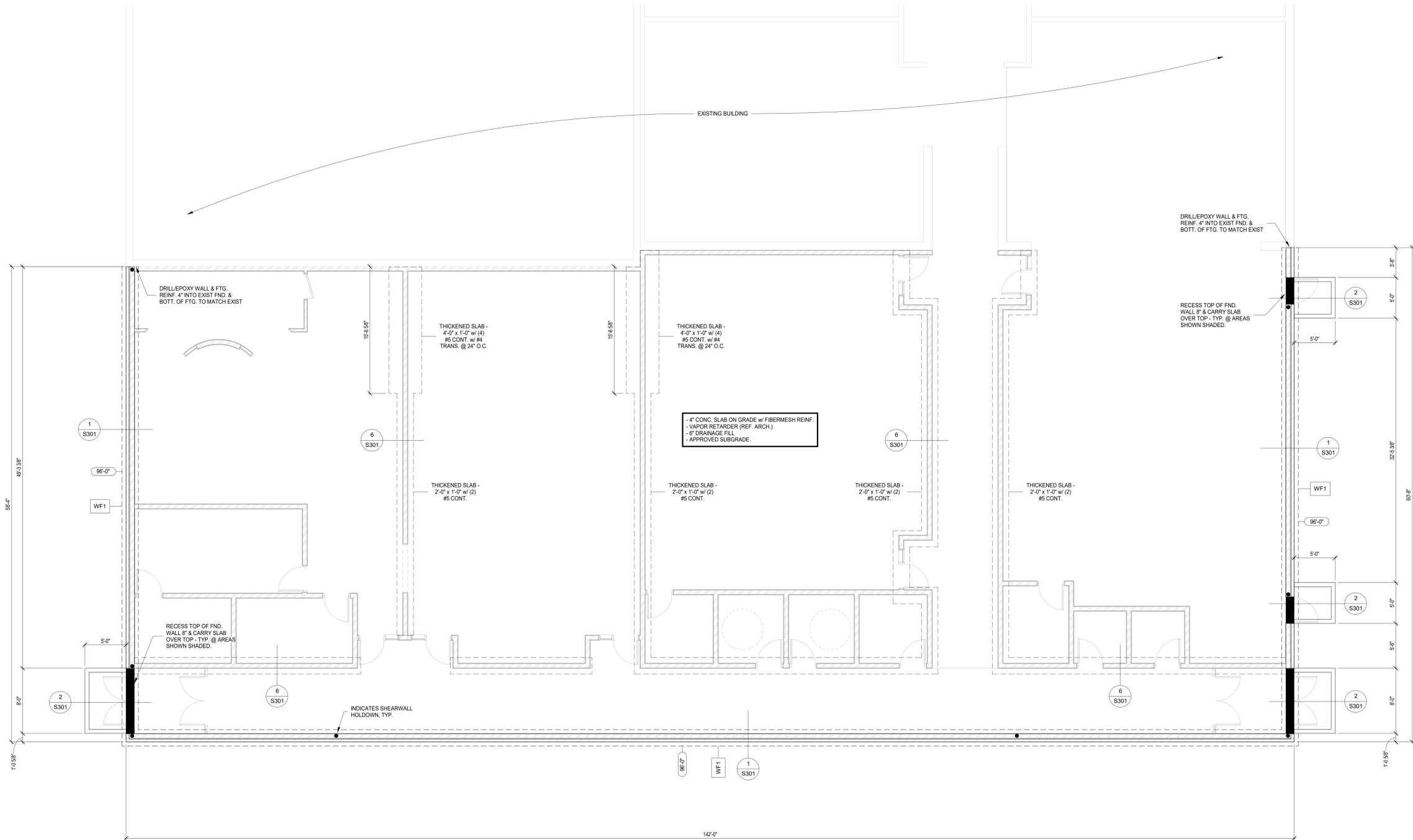
REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
STRUCTURAL NOTES & SCHEDULES

S001



1 ATEC ADDITION F&F PLAN
3/16" = 1'-0" F.F.E. = 100'-0"

- NOTES:
- CONTRACTOR TO SUBMIT CONTROL JOIST LAYOUT FOR ARCH/ENGINEER APPROVAL.
 - SEE STRUCTURAL NOTES FOR SIZE/SPACING LIMITATIONS.
 - SEE DETAILS 4 & 5 ON SHEET S301 FOR TYPICAL CONTROL JOIST JOINT DETAILS.
 - SEE 6/S301 FOR TYPICAL CORNER WALL REINFORCING.
 - GRADING IS ASSUMED TO BE WITHIN 6" OF F.F.E. NOTIFY STRUCTURAL ENGINEERS IF GRADING IS DIFFERENT.

CO-OP PROJECT NO: 22014



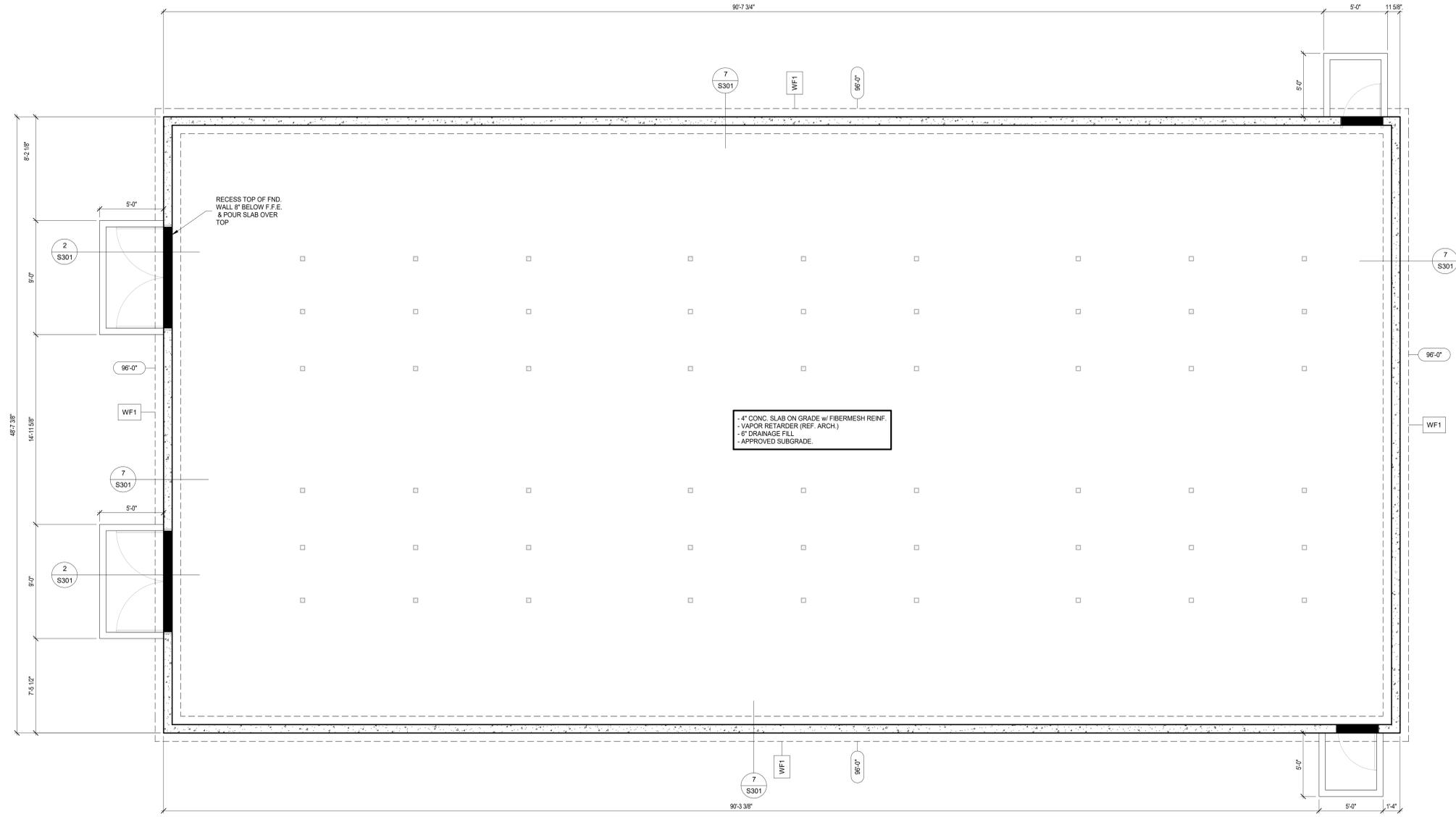
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PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ATEC ADDITION F&F PLAN



GREENHOUSE F&F PLAN
1/4" = 1'-0" F.F.E. = 100'-0"

- NOTES:
- CONTRACTOR TO SUBMIT CONTROL JOIST LAYOUT FOR ARCH/ENGINEER APPROVAL. SEE STRUCTURAL NOTES FOR SIZE/SPACING LIMITATIONS.
 - SEE DETAILS 4 & 5 ON SHEET S301 FOR TYPICAL CONTROL JOIST DETAILS
 - SEE S301 FOR TYPICAL CORNER WALL REINFORCING.
 - GRADING IS ASSUMED TO BE WITHIN 6" OF F.F.E. NOTIFY STRUCTURAL ENGINEERS IF GRADING IS DIFFERENT.

CO-OP PROJECT NO: 22014



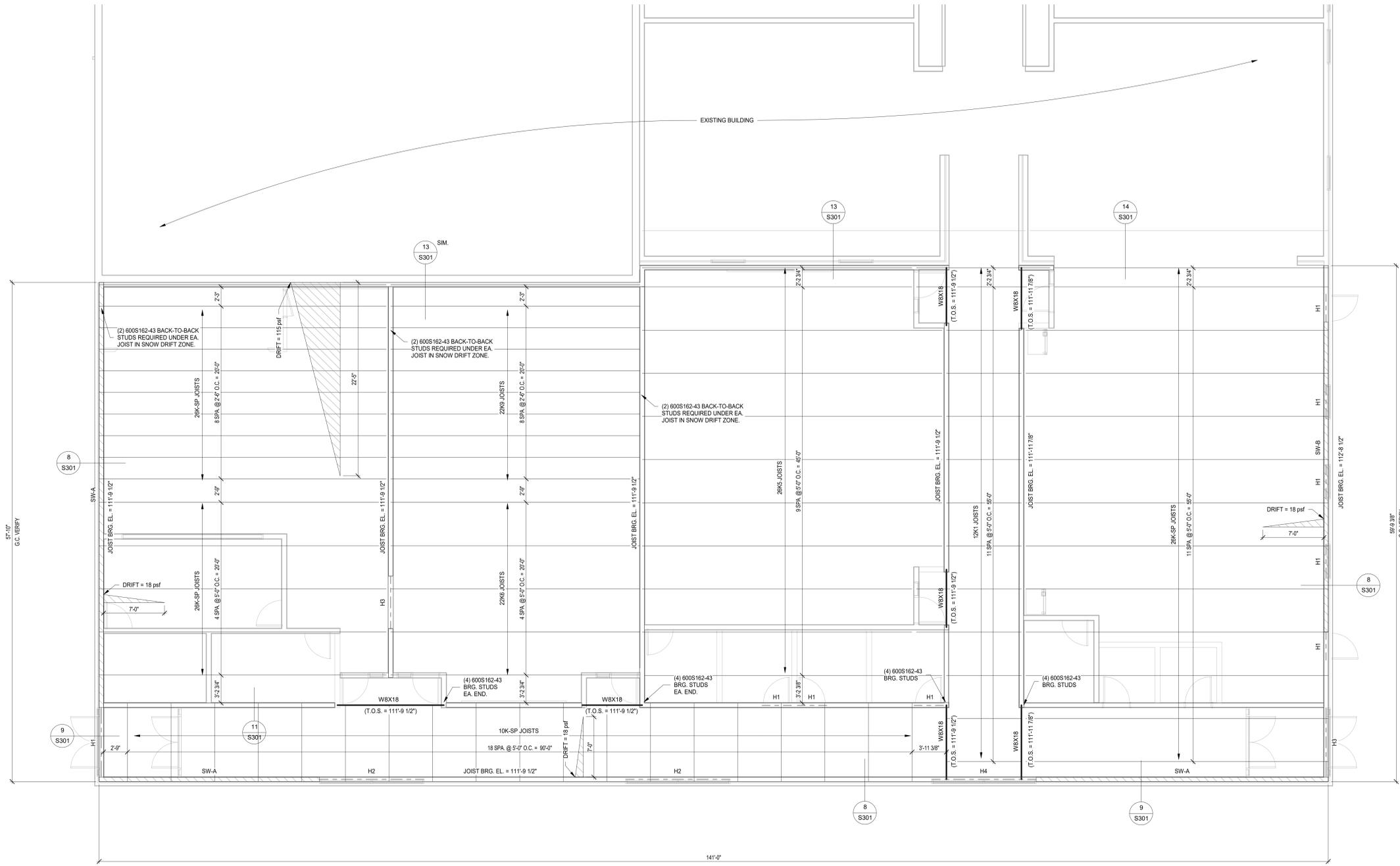
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REVISION SCHEDULE:
REV. DSC. DATE

PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
GREENHOUSE F&F PLAN



1 ROOF FRAMING PLAN
3/16" = 1'-0"

- NOTES:
- ROOF DECKING TO BE 1.5B-22GA, FASTENED W/ HILTI X-HSN24 OR EQUIVALENT IN A 364 PATTERN & #12 SIDE LAP FASTENERS @ 18" O.C.
 - WALL STUDS TO BE 600S162-43 @ 16" O.C. w/ 600T125-43 TOP & BOT. w/ BRIDGING @ 48" O.C. SEE DTL. 3/3302

CO-OP PROJECT NO: 22014



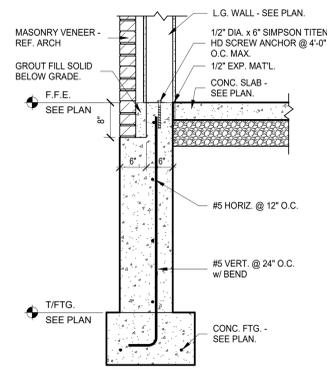
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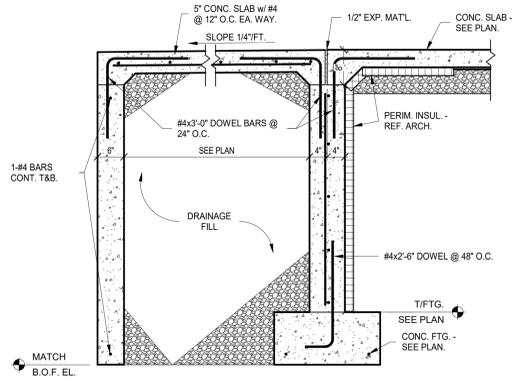
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ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

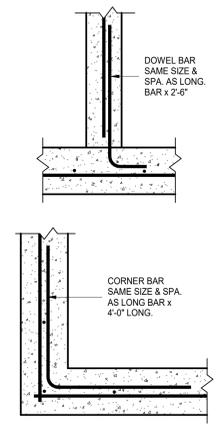
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ATEC ADDITION ROOF
FRAMING PLAN



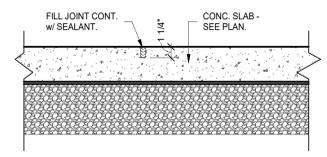
1 TYP. FOUND. SECTION w/ BRICKLEDGE
3/4" = 1'-0"



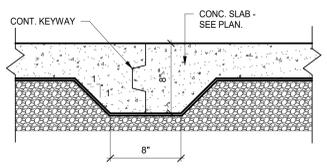
2 FROST STOOP SECTION
3/4" = 1'-0"



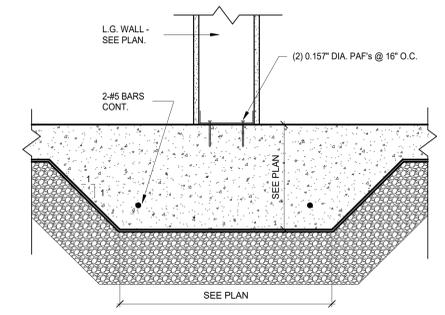
3 WALL CORNER REINF. DTLS.
1" = 1'-0"



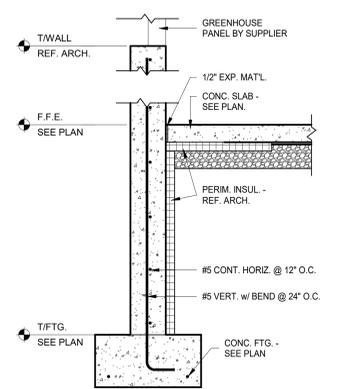
4 CONTROL JOINT DTL.
1 1/2" = 1'-0"



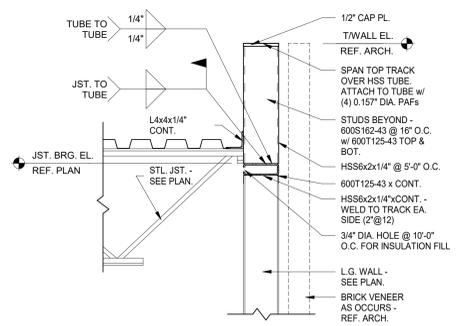
5 KEYED CONSTR. JOINT
1 1/2" = 1'-0"



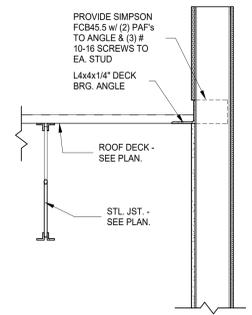
6 THICKENED SLAB DTL.
1 1/2" = 1'-0"



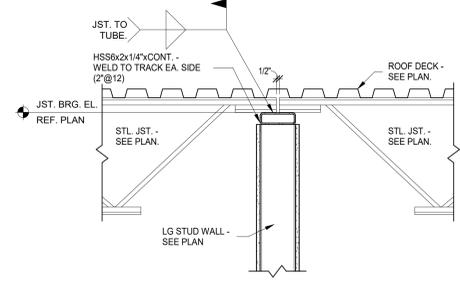
7 FOUND. WALL SEC. @ GREENHOUSE
3/4" = 1'-0"



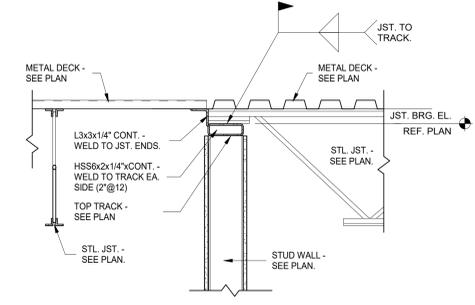
8 JOIST BRG. @ EXT. WALL
1" = 1'-0"



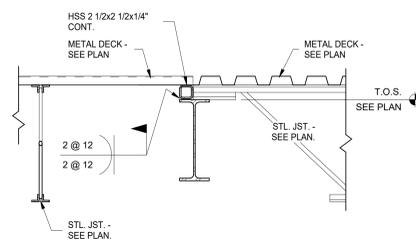
9 DECK BRG. @ EXT. STUD WALL
1" = 1'-0"



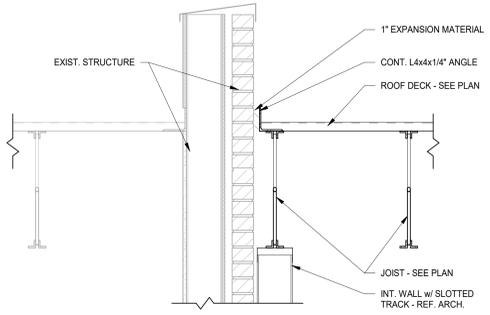
10 ROOF JOIST BRG. @ INT. L.G. WALL
1" = 1'-0"



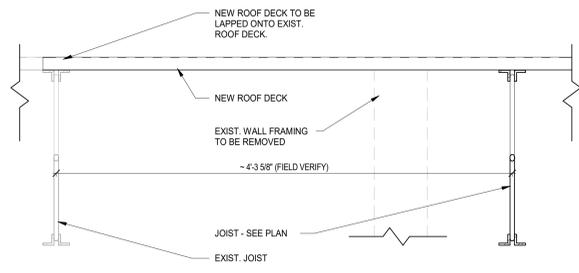
11 CHANGE OF DECK SPAN @ STUD WALL
1" = 1'-0"



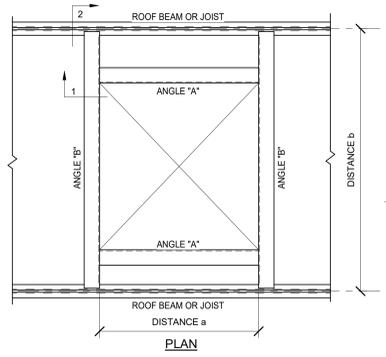
12 CHANGE OF DECK SPAN @ STL. BEAM
1" = 1'-0"



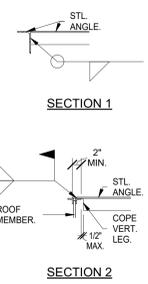
13 DECK BRG. @ EXIST. 1
1" = 1'-0"



14 DECK BRG. @ EXIST. 2
1 1/2" = 1'-0"



15 TYPICAL ROOF OPENING W.A.F.
3/4" = 1'-0"



		DISTANCE b			
ANGLE "a"	ANGLE "b"	0ft - 4ft	4ft - 8ft	8ft - 12ft	12ft - 16ft
0ft - 2ft	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"
2ft - 4ft	L3x3x1/4"	L3x3x1/4"	L5x3x1/4"	L5x3x1/4"	L5x3x3/8"
4ft - 6ft	L5x3x1/4"	L3x3x1/4"	L5x3x1/4"	L5x3x3/8"	L7x4x3/8"
6ft - 8ft	L5x3x3/8"	L3x3x1/4"	L5x3x1/4"	L7x4x3/8"	L5x3x3/8"
		L5x3x1/4"	L5x3x3/8"	L7x4x3/8"	L7x4x3/8"

NOTES: - LONG LEGS VERTICAL. (TYP.)
- FOR OPENINGS LARGER THAN SHOWN, CONTACT STRUCTURAL ENGINEER.

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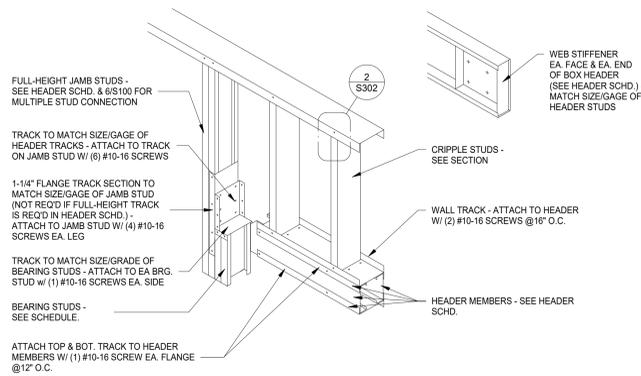
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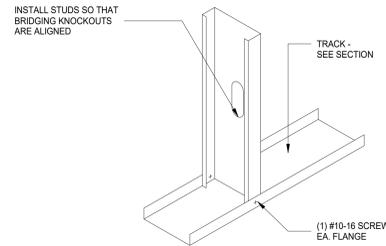
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SHEET TITLE:
STRUCTURAL DETAILS

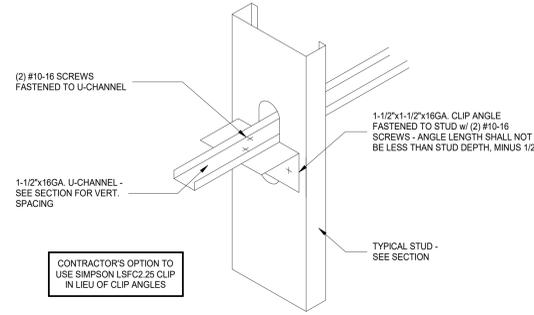
S301



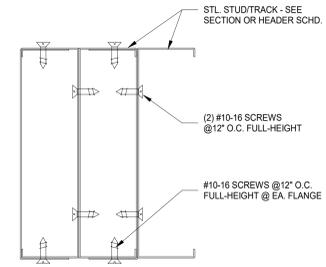
1 BOX HEADER ASSEMBLY
3/4" = 1'-0"



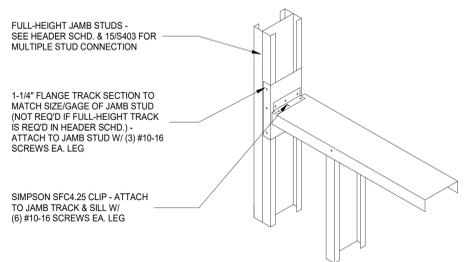
2 STUD TO TRACK DETAIL
1" = 1'-0"



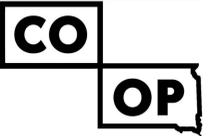
3 L.G. BRIDGING DETAIL
1" = 1'-0"



4 L.G. MULTIPLE STUD CONN. DTL.
6" = 1'-0"



5 L.G. SILL TO JAMB CONN. DTL.
1" = 1'-0"



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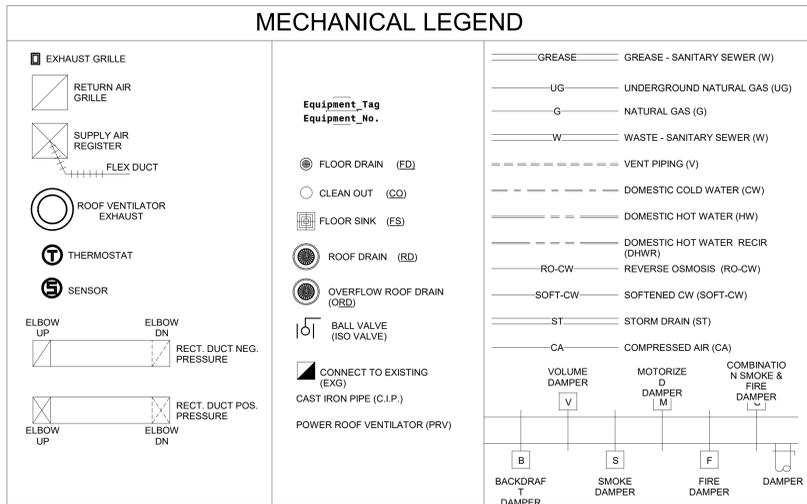
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PROJECT:
ATEC ACADEMY ADDITION

ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
STRUCTURAL DETAILS

S302



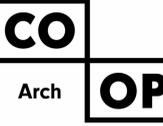
- SPECIAL NOTES**
- IN AREAS WHERE EXISTING CEILINGS ARE TO REMAIN, EACH TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE OR REPAIR NEEDED TO EXISTING CEILINGS AS A RESULT OF THEIR WORK.
 - EACH TRADE SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING AS NECESSARY TO ALLOW FOR COMPLETION OF THEIR WORK.
 - ALL CONTRACTORS SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
 - THERE IS NO ROOFING WORK REQUIRED ON THIS PROJECT.
 - THE EXISTING BUILDING WILL BE IN USE DURING THIS CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTIONS. TEMPORARY SERVICES SHALL BE INSTALLED IF ONE PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING OR IF EQUIPMENT HAS TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION, WHICH EXISTED PRIOR TO THE INTERRUPTION.
 - ALL DDC TEMPERATURE CONTROL WORK TO BE COMPLETED BY G&R CONTROLS (CONTACT PAUL DOOHNEN 605-336-3788).
 - GLYCOL SOLUTION:
 - EXISTING HOT WATER HEATING SYSTEM SOLUTION IS 30% **LOW FROST PROPYLENE GLYCOL**, NEW SYSTEM TO USE SAME TYPE & CONCENTRATION.
 - PRIOR TO ANY PROPOSED WORK, THE PLUMBING/HYDRONICS CONTRACTOR SHALL PROVIDE A COMPLETE ANALYSIS OF THE EXISTING HOT WATER HEATING SYSTEM TO DETERMINE EXACT GLYCOL AND COMPOSITION, ETC. SUBMIT ANALYSIS/RECOMMENDATIONS TO SICHMELLER ENGINEERING & OWNER. OWNER TO PROVIDE ANY RECOMMENDED ADJUSTMENTS TO EXISTING, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE TO PUMP IN THESE ADJUSTMENTS. RETEST UNTIL EXISTING SOLUTION ANALYSIS IS SATISFACTORY.
 - THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND STORING THE EXISTING GLYCOL SOLUTION AS REQUIRED FOR THE PROPOSED WORK.
 - THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND FLUSHING THE NEW HOT WATER HEATING SYSTEM. THE EXISTING HOT WATER HEATING SYSTEM SHALL BE DRAINED AND FILLED WITH GLYCOL SOLUTION, NO CLEANING AND FLUSHING ON EXISTING PIPING.
 - UPON COMPLETION OF THE SYSTEM FLUSHING & PROPOSED WORK, THE EXISTING GLYCOL SOLUTION SHALL BE PUMPED BACK IN AND PROPOSED SYSTEM SOLUTION.
 - AFTER PROPOSED WORK IS COMPLETE, THE PLUMBING/HYDRONICS CONTRACTOR IS TO PROVIDE A COMPLETE ANALYSIS OF THE HOT WATER HEATING SYSTEM TO CONFIRM PROPER GLYCOL % AND TREATMENT. SUBMIT ANALYSIS/RECOMMENDATIONS TO SICHMELLER ENGINEERING & OWNER. IF SOLUTION ANALYSIS INDICATES SOLUTION IS NOT SATISFACTORY, THIS CONTRACTOR TO MAKE ADJUSTMENTS AS RECOMMENDED BY GLYCOL SUPPLIER & RETEST UNTIL ANALYSIS IS SATISFACTORY.
 - EXISTING SYSTEM VOLUME THAT WILL REMAIN: **285** GALLONS. PROPOSED MODIFICATIONS & ADDITION SYSTEM VOLUME: **80** GALLONS. TOTAL EXISTING + PROPOSED SYSTEM VOLUME: **365** GALLONS. CONTRACTOR TO DETERMINE EXACT VOLUME.
 - THIS DRAWING SHOWS GENERAL ARRANGEMENT ONLY - CONTRACTOR TO VISIT THE SITE.

HVAC MOTOR & EQUIPMENT COORDINATION SCHEDULE

EQUIPMENT NUMBER	USE	LOCATION	MOTOR	CONTROLLER BY	DISCONNECT SWITCH BY	SEE SPECS		SWITCH INFORMATION				NOTES	FIRE ALARM INTERLOCK REQUIRED	HP OR VINTAGE (MT OR FRACTIONAL (F))	POWER 60 CYC.		
						POWER WIRING BY	CONTROL WIRING BY	TEMP. CONTROL WIRING BY	THERMISTAT BY	ANALOG BY	SPEED SELECT SWITCH BY				TIME CLOCK BY	VOLTAGE	PHASE
RTU-1	HVAC - ADDITION	NEW ADDITION ROOF				VC	EC	TC									
EF-1	EXHAUST - FACS STORAGE 136A, JAN. CLOSET 139, AG STORAGE 145	NEW ADDITION ROOF				VC	EC	TC						(F)	120	1	
EXG	EXHAUST - AG CLASSROOM 137	AG CLASSROOM 137						TC	TC								
VAV-8	HVAC - AG CLASSROOM 137							TC	TC								
VAV-134	HVAC - TV STUDIO 134, TV STORAGE 134C	SEE PLANS						TC	TC								
VAV-134A	HVAC - CONTROL ROOM 134A	SEE PLANS						TC	TC								
VAV-134B	HVAC - AUDIO BOOTH 134B	SEE PLANS						TC	TC								
VAV-135	HVAC - COMPUTER CLASSROOM 135	SEE PLANS						TC	TC								
VAV-136	HVAC - FACS 136, FACS STORAGE 136A	SEE PLANS						TC	TC								
VAV-138	HVAC - AG WORKROOM 138, AG STORAGE 145	SEE PLANS						TC	TC								
VAV-151	HVAC - CORRIDOR 150 & CORRIDOR 151, VESTIBULES	SEE PLANS						TC	TC								
DSA-140	DUCTLESS SPLIT SYSTEM HEAT PUMP INDOOR UNIT - MAIN DATA 140	MAIN DATA 140				EC	EC	VC	VC & TC					(F)	208	1	
DSA-141	DUCTLESS SPLIT SYSTEM HEAT PUMP INDOOR UNIT - AG DATA 141	AG DATA 141				EC	EC	VC	VC & TC					(F)	208	1	
DSG-140	AIR COOLED CONDENSING UNIT FOR DSA-140	CORRIDOR 150 ABOVE CEILING				EC	EC	VC						(F)	208	1	
DSG-141	AIR COOLED CONDENSING UNIT FOR DSA-141	CORRIDOR 150 ABOVE CEILING				EC	EC	VC	TC					(F)	208	1	
EXG	HEATING - S.W. VESTIBULE 143 (EXISTING CUH-2 TO BE RELOCATED)	S.W. VESTIBULE 143				EXG	EC	TC	TC					(F)	120	1	
CUH-146	HEATING - S.E. VESTIBULE 146	S.E. VESTIBULE 146				PC	EC	TC	TC					(F)	120	1	
-	PVC SLEEVE HEAT TAPE					EC	EC	EC									
GREENHOUSE																	
OWNER PROVIDED	HEATING - GREENHOUSE 142	GREENHOUSE 142				EC	EC	VC						(F)	120	1	
OWNER PROVIDED	HEATING - GREENHOUSE 142	GREENHOUSE 142				EC	EC	VC	VC & TC					(F)	120	1	
OWNER PROVIDED	HEATING - GREENHOUSE 142	GREENHOUSE 142				EC	EC	VC						(F)	120	1	
OWNER PROVIDED	HEATING - GREENHOUSE 142	GREENHOUSE 142				EC	EC	VC						(F)	120	1	
OWNER PROVIDED	EXHAUST - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	EXHAUST - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	EXHAUST - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	EXHAUST - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	UPPER GABLE FANS - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	UPPER GABLE FANS - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	LOWER VENT - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	LOWER VENT - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
OWNER PROVIDED	LOWER VENT - GREENHOUSE 142	GREENHOUSE 142				EC	EC	EC						(F)	120	1	
-	DOMESTIC WATER PVC SLEEVE HEAT TAPE	SEE PLANS				EC	EC	EC						(F)			

MECHANICAL SHEET INDEX

Sheet Number	Sheet Name
M100	LEGEND, MOTOR SCHEDULE
M200	MECHANICAL SITE PLAN
M300	MECHANICAL ROOF PLAN
M400	PLUMBING & HYDRONICS DEMOLITION PLAN
M401	HVAC DEMOLITION PLAN
M500	BELOW GRADE PLUMBING PLAN
M501	ABOVE GRADE PLUMBING & HYDRONICS PLAN
M600	FIRE PROTECTION PLAN
M700	HVAC PLAN
M701	TEMPERATURE CONTROL ZONE PLAN
M800	MECHANICAL SECTIONS
M801	PLUMBING FIXTURE SCHEDULE
M802	MECHANICAL DETAILS
M900	MECHANICAL SCHEDULES



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Mechanical and Electrical Engineering

801 Railroad Ave. SE
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www.siceng.biz

SE PROJECT NO: 210900740



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PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
LEGEND, MOTOR SCHEDULE

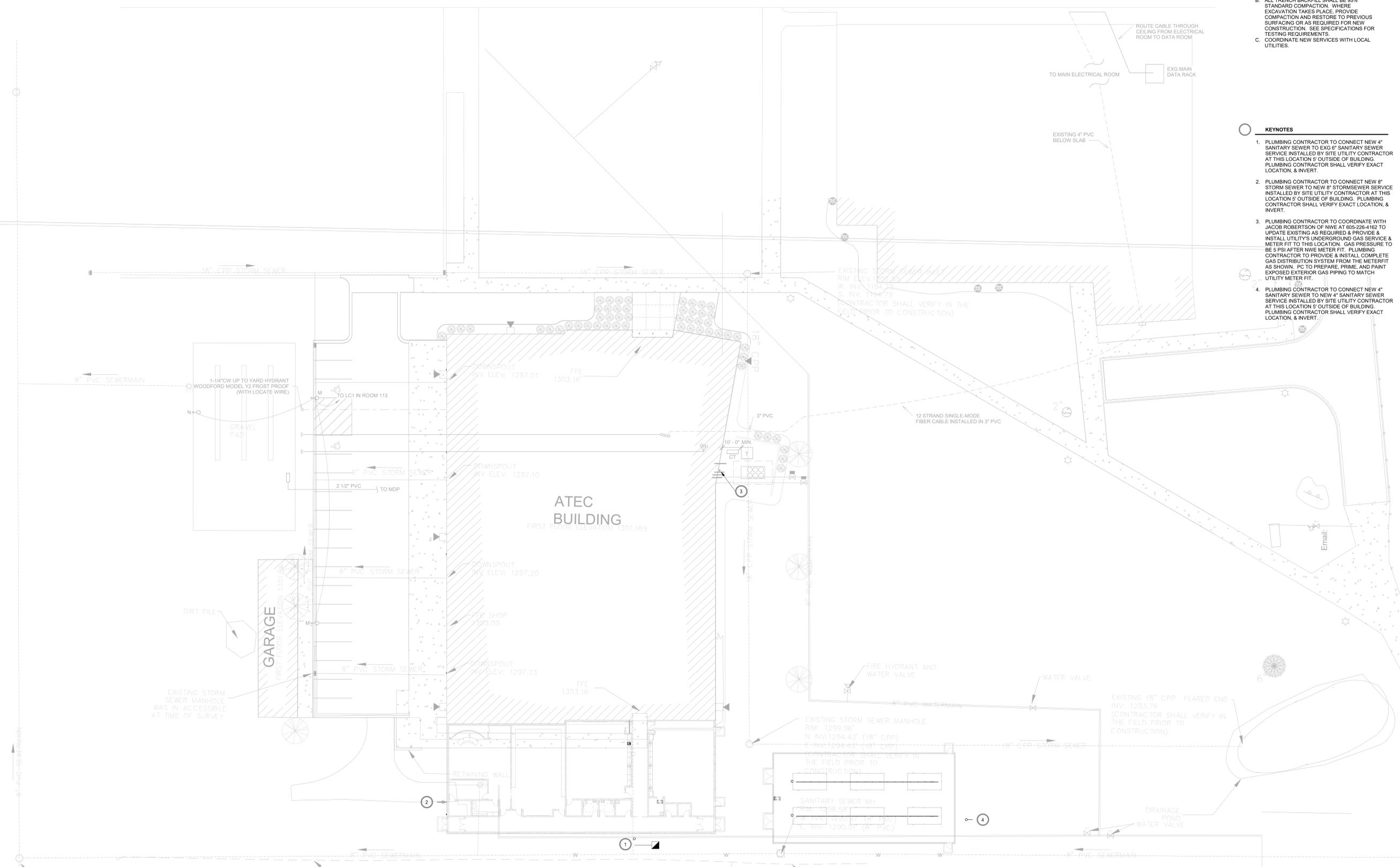
M100

GENERAL NOTES

- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.
- ALL TRENCH BACKFILL SHALL BE 95% STANDARD COMPACTION. WHERE EXCAVATION TAKES PLACE, PROVIDE COMPACTION AND RESTORE TO PREVIOUS SURFACING OR AS REQUIRED FOR NEW CONSTRUCTION. SEE SPECIFICATIONS FOR TESTING REQUIREMENTS.
- COORDINATE NEW SERVICES WITH LOCAL UTILITIES.

KEYNOTES

- PLUMBING CONTRACTOR TO CONNECT NEW 4" SANITARY SEWER TO EXISTING 6" SANITARY SEWER SERVICE INSTALLED BY SITE UTILITY CONTRACTOR AT THIS LOCATION 5' OUTSIDE OF BUILDING. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION, & INVERT.
- PLUMBING CONTRACTOR TO CONNECT NEW 8" STORM SEWER TO NEW 8" STORMSEWER SERVICE INSTALLED BY SITE UTILITY CONTRACTOR AT THIS LOCATION 5' OUTSIDE OF BUILDING. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION, & INVERT.
- PLUMBING CONTRACTOR TO COORDINATE WITH JACOB ROBERTSON OF NWE AT 605-225-4162 TO UPDATE EXISTING AS REQUIRED & PROVIDE & INSTALL UTILITY'S UNDERGROUND GAS SERVICE & METER FIT TO THIS LOCATION. GAS PRESSURE TO BE 5 PSI AFTER NWE METER FIT. PLUMBING CONTRACTOR TO PROVIDE & INSTALL COMPLETE GAS DISTRIBUTION SYSTEM FROM THE METER FIT AS SHOWN. PC TO PREPARE, PRIME, AND PAINT EXPOSED EXTERIOR GAS PIPING TO MATCH UTILITY METER FIT.
- PLUMBING CONTRACTOR TO CONNECT NEW 4" SANITARY SEWER TO NEW 4" SANITARY SEWER SERVICE INSTALLED BY SITE UTILITY CONTRACTOR AT THIS LOCATION 5' OUTSIDE OF BUILDING. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION, & INVERT.

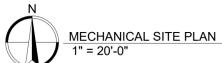


SANITARY SEWER MH
RIM: 1299.43'
N INV: 1287.88' (12" PVC)
W INV: 1287.99' (12" PVC)
E INV: 1289.37' (8" PVC)
S INV: 1287.92' (12" PVC)

EXISTING STORM SEWER MANHOLE
RIM: 1299.96'
N INV: 1294.43' (18" CPD)
S INV: 1294.43' (18" CPD)
(CONTRACTOR SHALL VERIFY IN THE FIELD PRIOR TO CONSTRUCTION)

SANITARY SEWER MH
RIM: 1298.58'
W INV: 1294.97' (6" PVC)
E INV: 1290.91' (8" PVC)

LEGEND



SE PROJECT NO: 210900740



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PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
MECHANICAL SITE PLAN

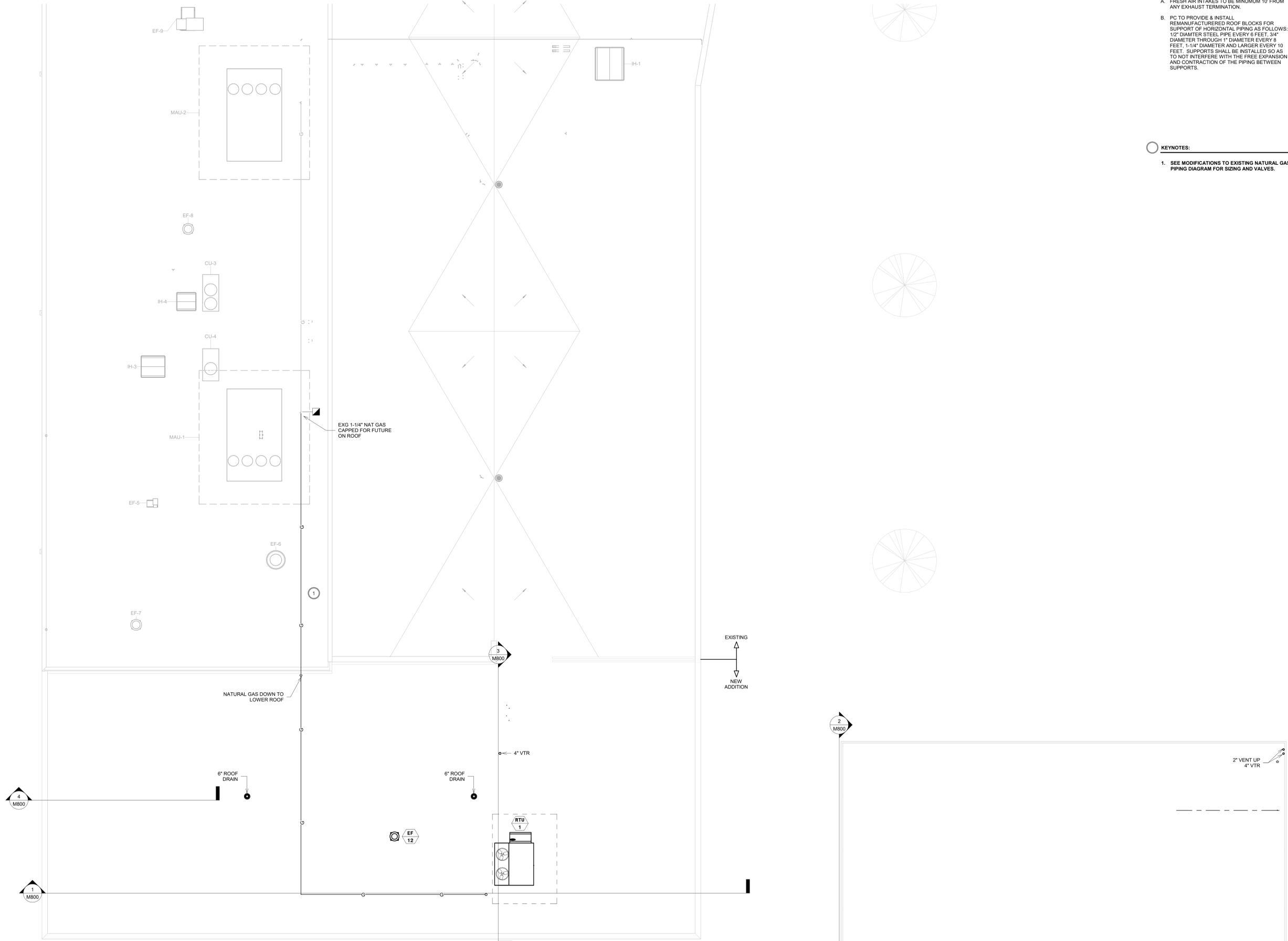
M200

GENERAL NOTES:

- A. FRESH AIR INTAKES TO BE MINIMUM 10' FROM ANY EXHAUST TERMINATION.
- B. PC TO PROVIDE & INSTALL REMANUFACTURED ROOF BLOCKS FOR SUPPORT OF HORIZONTAL PIPING AS FOLLOWS: 1/2" DIAMETER STEEL PIPE EVERY 6 FEET; 3/4" DIAMETER THROUGH 1" DIAMETER EVERY 9 FEET; 1-1/4" DIAMETER AND LARGER EVERY 10 FEET. SUPPORTS SHALL BE INSTALLED SO AS TO NOT INTERFERE WITH THE FREE EXPANSION AND CONTRACTION OF THE PIPING BETWEEN SUPPORTS.

KEYNOTES:

- 1. SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM FOR SIZING AND VALVES.



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

SE PROJECT NO: 210900740



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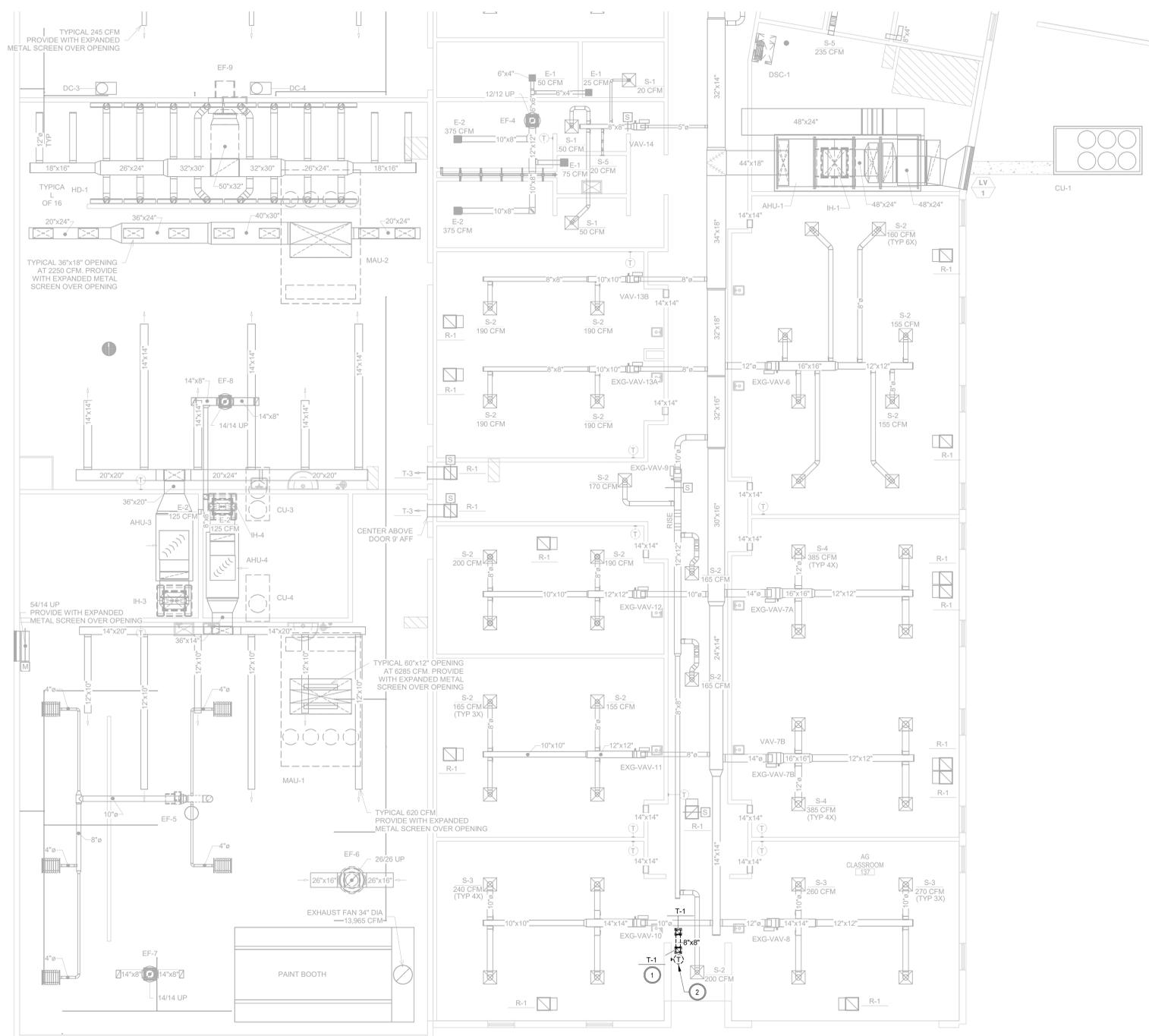
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE

PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
MECHANICAL ROOF PLAN

M300



ALL MECHANICAL SYSTEMS, EXCLUDING DROPS TO BE INSTALLED WITHIN BAR JOISTS TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.



HVAC DEMOLITION PLAN
1/8" = 1'-0"

GENERAL NOTES:

- A. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES, INCLUDING ANY NECESSARY DEMOLITION.
- B. REMOVE MECHANICAL EQUIPMENT IN THE AREAS SHOWN ON THE PLAN, DISCONNECT SERVICES AND REMOVE TO A POINT OUT OF THE WAY OF THE GENERAL DEMOLITION. MARK ON THE PLAN TO CLEARLY SHOW WHERE THESE SERVICES ARE STOPPED. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER. SHOULD QUESTIONS ARISE REGARDING THE REMOVAL OF EQUIPMENT, CONFER WITH THE OWNER BEFORE SUCH EQUIPMENT IS DEMOLISHED. MATERIALS REMOVED BY DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE SPECIFICALLY NOTED. MATERIAL THE OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
- C. EQUIPMENT SHOWN ON DRAWINGS AS EXISTING IS BASED ON EXISTING PLANS AND LIMITED FIELD INVESTIGATION. THE FIELD SURVEY WAS CONDUCTED TO VERIFY AS MUCH AS POSSIBLE. THE ACCURACY OF THE LOCATIONS SHOWN ON THE DRAWINGS AS THE DEMOLITION WORK PROGRESSES. PERFORM MODIFICATIONS AND ADDITIONS AS NECESSARY TO CORRECT FOR THESE HIDDEN CONDITIONS AND ALLOW FOR THE COMPLETION OF THE NEW WORK.
- D. THE EXISTING BUILDING WILL BE IN USE DURING THIS CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTIONS. TEMPORARY SERVICES SHALL BE INSTALLED IF ONE PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING OR IF EQUIPMENT HAS TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION WHICH EXISTED PRIOR TO THE INTERRUPTION.
- E. PROVIDE PENETRATIONS TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION. WHERE EXISTING OR TEMPORARY SYSTEMS ARE BEING DEMOLISHED, WHICH LEAVE OPENINGS IN THE EXISTING BUILDING STRUCTURE, THE BUILDING STRUCTURE SHALL BE PATCHED TO MATCH THE EXISTING CONSTRUCTION AND MAINTAIN THE EXISTING BUILDING FIRE RATINGS. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- F. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- G. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE TESTING & CLEANING OF EACH RESPECTIVE SYSTEM IN ACCORDANCE WITH APPLICABLE STATE & LOCAL CODES. TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION. WRITTEN NOTIFICATION OF TEST, DATE, AND RESULTS SHALL BE FURNISHED TO THE ENGINEER BEFORE CONCEALING OR COVERING THE INSTALLATION. TESTS SHALL BE REPEATED UNTIL EACH SYSTEM IS PROVEN ACCEPTABLE.

KEYNOTES:

1. VC TO DEMO EXISTING T-1 AND ASSOCIATED DUCT AT SOUTH VESTIBULE.
2. TO DEMO EXISTING T-STAT SERVING CUH THAT IS TO BE RELOCATED, PULL WIRE, AND INSTALL STAINLESS STEEL WALL PLATE ON EXISTING BOX. SEE PROPOSED.

SE PROJECT NO: 21090740



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PROJECT:
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EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
HVAC DEMOLITION PLAN

SPECIAL NOTES:

A. ALL MECHANICAL SYSTEMS, EXCLUDING DROPS TO BE INSTALLED WITHIN BAR JOISTS TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.

GENERAL NOTES:

A. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.

B. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.

C. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.

D. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.

E. THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.

F. CONTRACTOR SHALL COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, FIRE SPRINKLER, ELECTRICAL, CIVIL, AND STRUCTURAL DRAWINGS.

G. FRESH AIR INTAKES TO BE MINIMUM 25' FROM ANY EXHAUST TERMINATION.

H. ALL FLOOR EQUIPMENT SHALL BE SET ON 4" HIGH CONCRETE BASES FURNISHED BY THIS CONTRACTOR.

I. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.

J. COORDINATE NEW SERVICES WITH LOCAL UTILITIES.

K. PLUMBING CONTRACTOR TO PROVIDE VENTING FOR ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR SINKS AS SHOWN OR AS REQUIRED BY CODE.

L. UNLESS OTHERWISE NOTED RUNOUTS TO VAV'S SHALL BE 3/4" MINIMUM.

KEYNOTES:

1. THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.

2. SEE MODIFICATIONS TO NATURAL GAS PIPING DIAGRAM FOR VALVING AND SIZING.

3. PLUMBING CONTRACTOR TO COORDINATE WITH JACOB ROBERTSON OF NWE AT 605-226-4162 TO UPDATE EXISTING AS REQUIRED & PROVIDE & INSTALL UTILITIES UNDERGROUND GAS SERVICE & METER FIT TO THIS LOCATION. GAS PRESSURE TO BE 5 PSI AFTER NWE METER FIT. PLUMBING CONTRACTOR TO PROVIDE & INSTALL COMPLETE GAS DISTRIBUTION SYSTEM FROM THE METERFIT AS SHOWN. PC TO PREPARE, PRIME, AND PAINT EXPOSED EXTERIOR GAS PIPING TO MATCH UTILITY METER FIT.

4. PC TO PROVIDE AND INSTALL 3/4" ZURN 975XLZ PRZ BACKFLOW PREVENTOR AND CONNECT TO OWNER'S EVAPORATIVE PAD SYSTEM. CONFIRM EXACT LOCATION WITH OWNER'S GREENHOUSE SUPPLIER.

SE PROJECT NO: 210900740



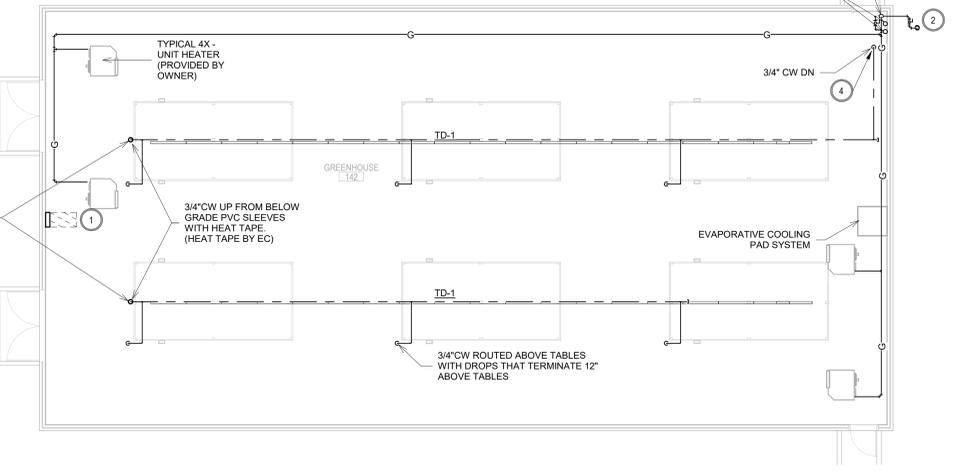
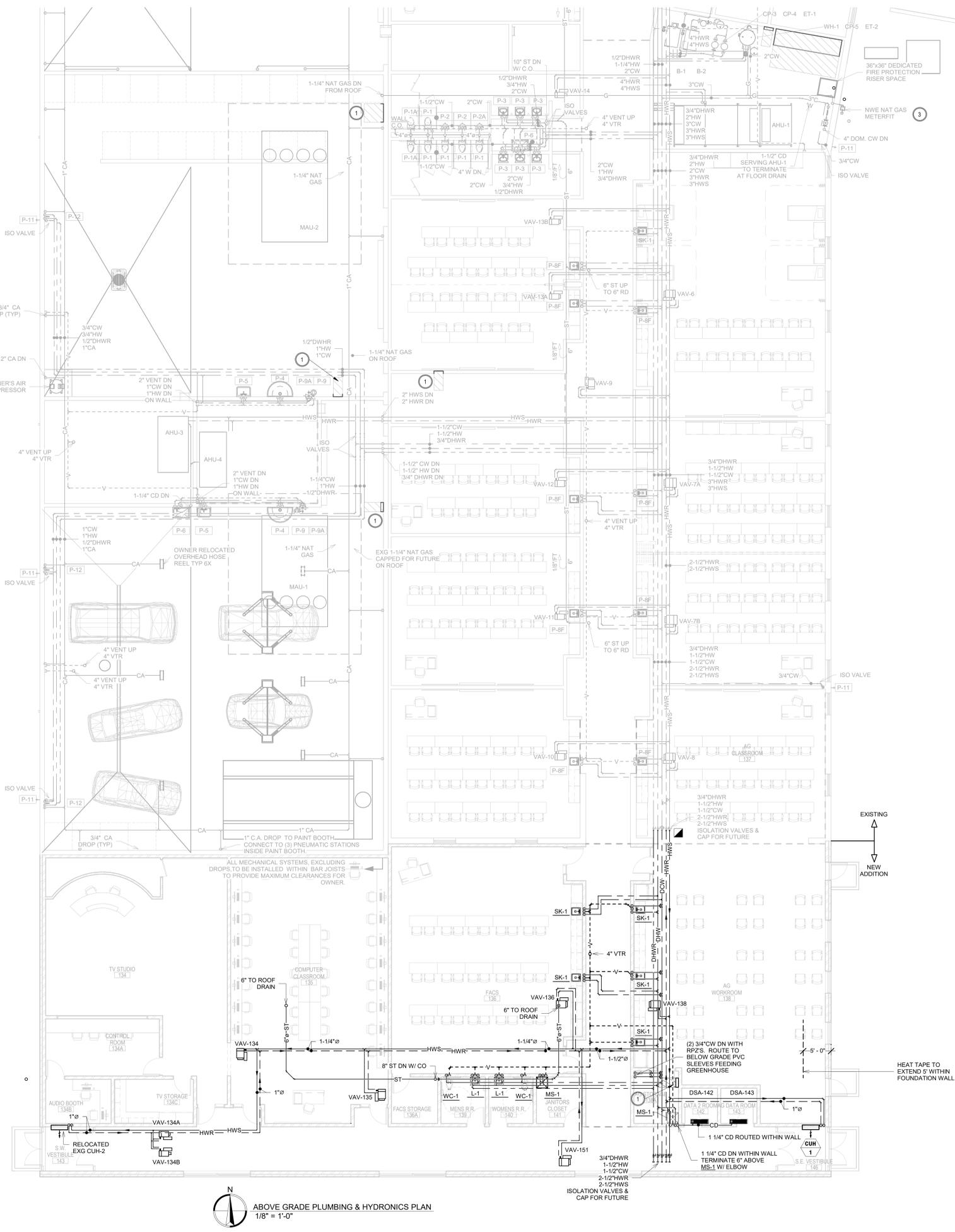
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REVISION SCHEDULE:
REV. # REV. DSC. REV. DATE

PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
ABOVE GRADE PLUMBING &
HYDRONICS PLAN

M501



ABOVE GRADE PLUMBING & HYDRONICS PLAN
1/8" = 1'-0"

FIRE PROTECTION SPECIAL NOTES:

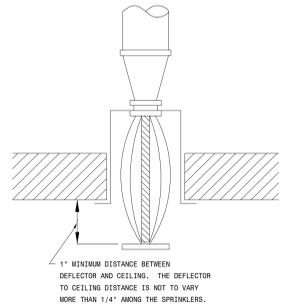
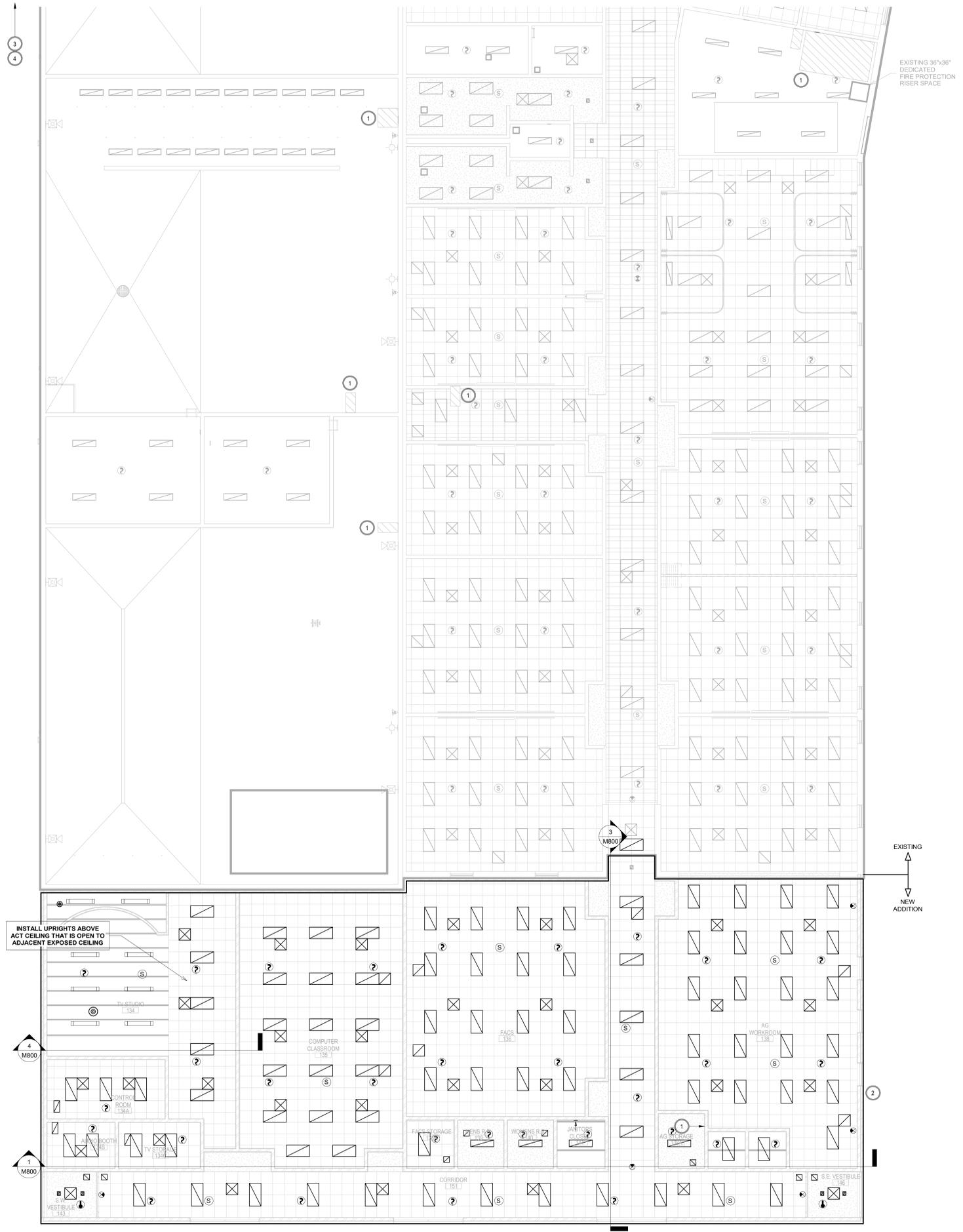
1. REFER TO HVAC PLAN TO IDENTIFY OBSTRUCTION WIDTHS AND NECESSARY PROTECTION.

FIRE PROTECTION GENERAL NOTES:

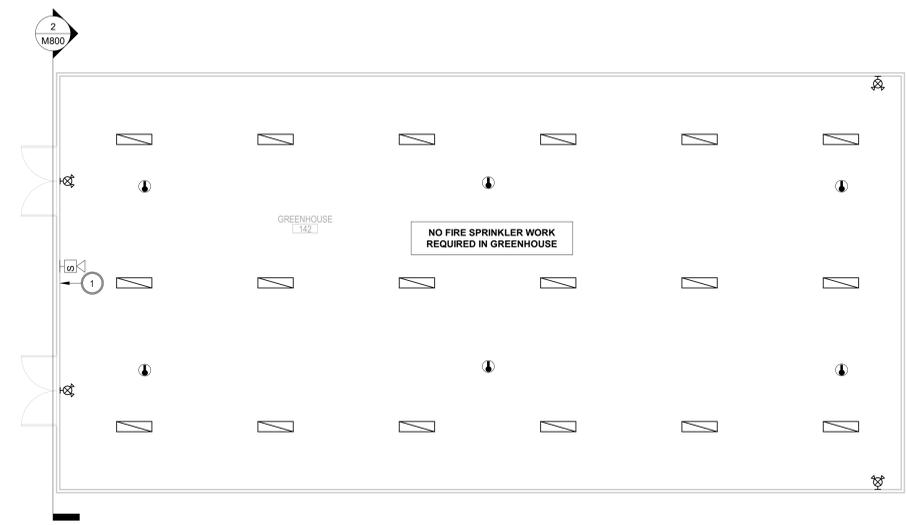
- A. FIRE PROTECTION CONTRACTOR TO PROVIDE A COMPLETE FIRE PROTECTION SYSTEM DESIGN TO ACCOMMODATE THE NEW FLOOR PLAN. DESIGN SHALL BE IN COMPLIANCE WITH NFPA, LOCAL AUTHORITIES, AUTHORITIES HAVING JURISDICTION, AND THE BUILDING OWNER.
- B. THE ENTIRE BUILDING SHALL BE PROTECTED BY A COMPLETE AUTOMATIC WET (INTERIOR BUILDING) FIRE SPRINKLER SYSTEM AS PER NFPA 13 AND LOCAL CODES. PIPING SIZES SHALL BE PROVIDED BY HYDRAULIC CALCULATIONS.
- C. SPRINKLER HEADS IN THE FINISHED CEILING SHALL BE CHROME SEMI-RECESSED TYPE. CENTER HEADS IN CEILING TILE WHERE APPLICABLE. CONTRACTOR SHALL REFER TO ARCHITECTS REFLECTED CEILING PLAN FOR CEILING INSTALLATION & HEIGHTS.
- D. PLANS AND HYDRAULIC CALCULATIONS TO BE PREPARED BY OR CHECKED BY A NICET LEVEL III OR IV TECHNICIAN. PIPING SIZES SHALL BE PROVIDED BY HYDRAULIC CALCULATIONS. THE SPRINKLER PLANS AND HYDRAULIC CALCULATIONS MUST BE SUBMITTED TO THE FOLLOWING AUTHORITIES HAVING JURISDICTION FOR REVIEW:
SICHMELLER ENGINEERING ABERDEEN FIRE MARSHALL
ATTN: TRAVIS SICHMELLER ATTN: MAX STOLTENBURG
801 RAILROAD AVE SE 111 2ND AVE SE
ABERDEEN, SD 57401 ABERDEEN, SD 57401
- E. COORDINATE INSTALLATION REQUIREMENTS WITH OTHER TRADES. PROVIDE DESIGN & INSTALLATION OF A COMPLETE FIRE PROTECTION SYSTEM.
- F. AFTER COMPLETION OF PROJECT, AS-BUILTS AND REQUIRED TESTING/TEST CERTIFICATE SHALL BE SUBMITTED TO AUTHORITIES LISTED ABOVE.
- G. FIRE PROTECTION SYSTEM SHALL NOT BE INTERRUPTED DURING TIMES WHEN THE BUILDING IS OCCUPIED. IF INTERRUPTING EXISTING FIRE PROTECTION SYSTEM, NOTIFY THE BUILDING OWNER OF THE TIME AND DURATION OF THE FIRE PROTECTION WORK. DO NOT LEAVE THE SYSTEM INOPERABLE OVERNIGHT.
- H. AS LONG AS FIELD CONDITIONS ALLOW, THIS CONTRACTOR SHALL INSTALL ALL MAIN PIPING AND BRANCH PIPING A MINIMUM OF 12" ABOVE FINISHED CEILING HEIGHT OR GREATER AS REQUIRED BY FIELD CONDITIONS.
- I. THIS CONTRACTOR SHALL COORDINATE WITH ALL TRADES INCLUDING CEILING CONTRACTOR, ELECTRICAL CONTRACTOR, VENTILATION CONTRACTOR, PLUMBING CONTRACTOR, BEFORE FABRICATION AND INSTALLATION.
- J. AT NO TIME SHALL THE DROPS BE INSTALLED WITHOUT COORDINATION WITH THE CEILING CONTRACTOR.

FIRE PROTECTION KEYNOTES:

1. THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
2. AREA TO BE PROTECTED WITHIN SOLID BOLD OUTLINE - CONNECT TO EXISTING AND MODIFY THE EXISTING FIRE SPRINKLER SYSTEM INSTALLED IN 2014. ORIGINAL FIRE SPRINKLER SYSTEM PLANS ARE AVAILABLE FROM ENGINEER'S OFFICE. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF EXISTING CEILING, ETC. FOR MODIFICATION OF EXISTING FIRE SPRINKLER SYSTEM.
3. EXISTING REMOTE FIRE DEPARTMENT CONNECTION LOCATION TO REMAIN & BE UTILIZED.
4. EXISTING MAIN DRAIN DISCHARGE LOCATION TO REMAIN & BE UTILIZED.



Recessed Sprinkler Detail
NOT TO SCALE



FIRE PROTECTION PLAN
1/8" = 1'-0"

SE PROJECT NO: 210900740



ISSUE:
04/15/22 100% CD

REVISION SCHEDULE:
REV. # REV. DSC. REV. DATE

PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
FIRE PROTECTION PLAN

M600

HVAC SPECIAL NOTES:

A. ALL MECHANICAL SYSTEMS, EXCLUDING DROPS TO BE INSTALLED WITHIN BAR JOISTS TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.

HVAC GENERAL NOTES:

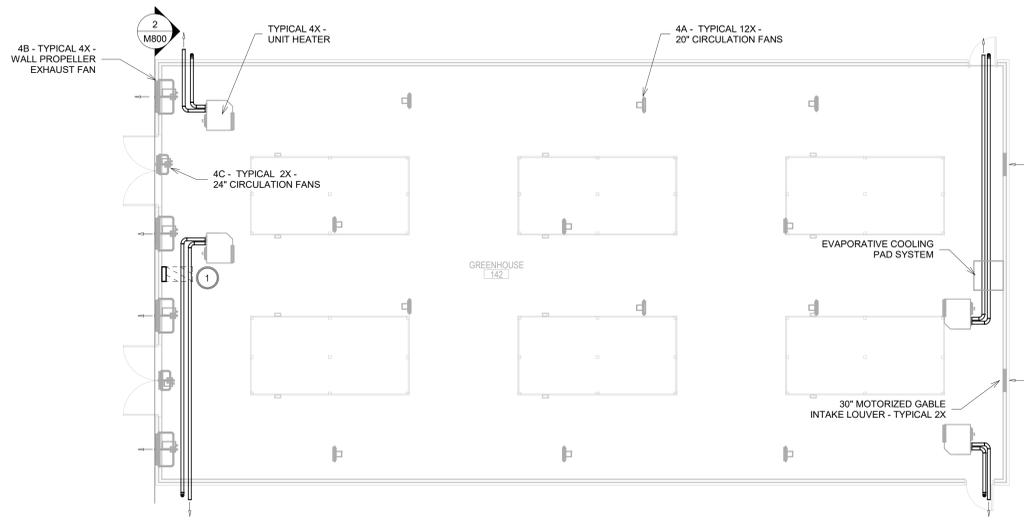
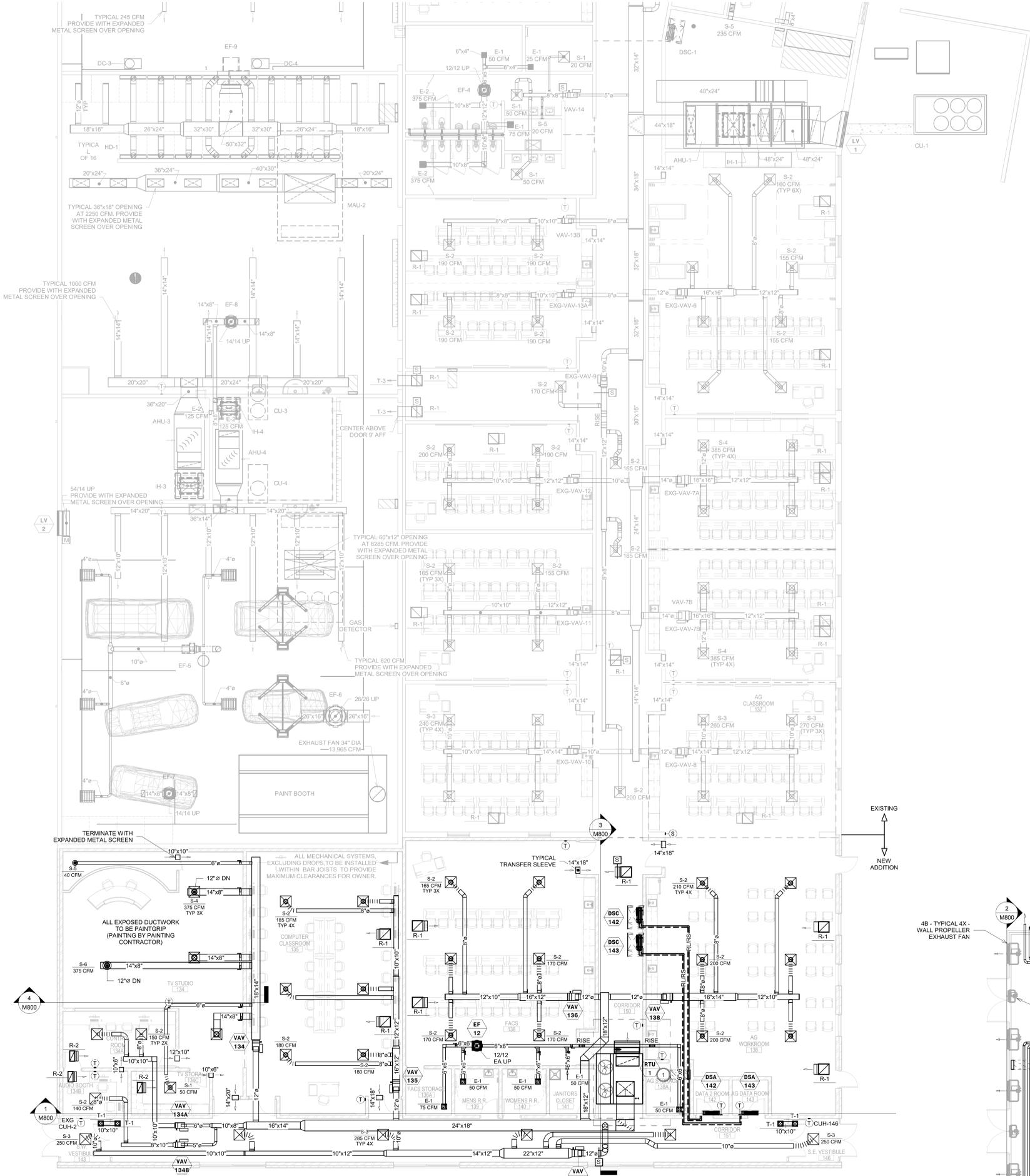
- A. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
- B. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
- C. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- D. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- E. THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
- F. COORDINATE INSTALLATION OF ALL HVAC WITH PLUMBING, FIRE PROTECTION, LIGHT FIXTURES, AND STRUCTURE TO ACCOMMODATE LIMITED CEILING SPACE.
- G. FOR SIMPLICITY DUCT INSULATION NOT SHOWN. DUCT SIZES INDICATED ON DRAWING ARE INTERNAL DIMENSIONS. AS NEEDED ADJUST ACTUAL SIZE FOR INSULATION THICKNESS AS SPECIFIED.
- H. ALL FLEXIBLE DUCTWORK AND CONNECTORS BETWEEN THE LOW PRESSURE DUCTWORK AND THE DIFFUSERS SHALL BE THE SIZE OF THE DIFFUSER INLET.
- I. PROVIDE & INSTALL VIBRATION ISOLATION ON ALL HANGING EQUIPMENT. PROVIDE & INSTALL VIBRATION ABSORPTION MOUNTING PADS ON ALL EQUIPMENT MOUNTED ON FLOOR.
- J. PROVIDE AND INSTALL DURODINE FLEX DUCT CONNECTORS AT ALL EQUIPMENT CONNECTIONS.
- K. ALL DUCTWORK TO BE SEALED AIRTIGHT.
- L. FRESH AIR INTAKES TO BE MINIMUM 2' FROM ANY EXHAUST TERMINATION.
- M. ALL FLOOR EQUIPMENT SHALL BE SET ON 4" HIGH CONCRETE BASES FURNISHED BY THIS CONTRACTOR.
- N. ALL MECHANICAL ROOF EQUIPMENT, INCLUDING PLUMBING VENTS, COMBUSTION INTAKE & EXHAUST, EXHAUST FANS, CURBS, ETC. SHALL BE PAINTED TO MATCH THE ASPHALT SHINGLES. VERIFY COLOR WITH ARCHITECT.

HVAC KEYNOTES:

- 1. THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.

GREENHOUSE EQUIPMENT PROVIDED BY OTHERS

- 4. VENTILATION EQUIPMENT**
 - A. HORIZONTAL AIR FLOW FANS - VALUTEK 20" CIRCULATION FANS. QUANTITY OF (16) TO BE PROVIDED.
 - B. EXHAUST FANS - QUANTITY OF (4) VALUTEK 42-INCH GALVANIZED STEEL BOX FAN.
 - C. UPPER GABLE FAN - QUANTITY OF (2) VALUTEK 24-INCH DIRECT DRIVE SHUTTER STYLE EXHAUST FAN.
 - D. FANS MUST INCLUDE AUTOMATIC SHUTTERS, INLET/OUTLET GUARDS AND BELT TIGHTENERS.
 - E. INLET VENTS AND VENT OPERATORS
 - 1. LOWER VENT - QUANTITY OF (1) 40" WIDE BY 4' HIGH MOTORIZED SWINGING ENDWALL VENT SYSTEM, CONSISTING OF EXTERNAL RACK AND PINION DRIVE SYSTEM, RIDDER RPD150 GEAR MOTOR, AND SEAL KIT. SYSTEM UTILIZES PRE-EXISTING GREENHOUSE GABLE CLADDING.
 - 2. GABLE VENT - QUANTITY OF (2) 30-INCH KEENAN & MEIER 3100 SERIES MOTORIZED LOUVER.
- F. EVAPORATIVE COOLING PAD SYSTEM**
 - 1. QUANTITY OF (1) 40" WIDE BY 5' HIGH KJUL CELL PAD WALL WITH SIMER 2430 SUMP TO PROVIDE ADEQUATE AIRFLOW ACROSS ENTIRE PAD SYSTEM. KIT INCLUDES ALL NECESSARY FULFLOAT VALVES, PLUMBING, FRAMING, AND RESERVOIRS.
- 5. HEATING EQUIPMENT**
 - A. GREENHOUSE IS TO BE EQUIPPED WITH MODINE POWER VENTED HEATERS.
 - B. QUANTITY OF (4) MODINE POP175P SIZED APPROPRIATELY FOR SIZE OF GREENHOUSE AND LOCATION.
 - C. HEATERS ARE TO HAVE STAINLESS STEEL BURNERS AND EXCHANGERS.
 - D. HEATERS WITH ALUMINUM HEAT EXCHANGERS ARE NOT ACCEPTABLE.
 - E. SINGLE WALLED STACKING IS TO BE INCLUDED AS WELL AS APPROPRIATE HEATER HANGERS TO MOUNT THE HEATERS.
 - F. MOUNTING KITS PROVIDED TO FASTEN HEATERS SECURELY TO STRUCTURE.
 - G. POWER-VENTED UNITS. VENTING MATERIAL TO BE PROVIDED BY HVAC SUBCONTRACTOR INSTALLING THE FIXTURE.
 - H. FUEL SOURCE: LIQUID PROPANE
- 6. ENVIRONMENTAL CONTROLS**
 - A. AUTOMATIC CONTROL SYSTEM CAPABLE WITH ONE STAGE OF HEATING, SET POINT, AND THREE STAGES OF COOLING. CONTROLLER TO BE EQUIPPED WITH SENSOR. CONTROLLER IS TO BE COMPLETE WITH CONTACTOR PANEL AND WIRING DIAGRAM. CONTROL SHALL BE LINK4 IGROW 1800 OR EQUAL.
 - B. CONTROL TRAINING BY THE MANUFACTURER'S REPRESENTATIVE. ENHANCED WARRANTY FROM MANUFACTURER TO BE PROVIDED.
 - C. THERMOSTAT CONTROL IS NOT ACCEPTABLE.



N
HVAC PLAN
1/8" = 1'-0"

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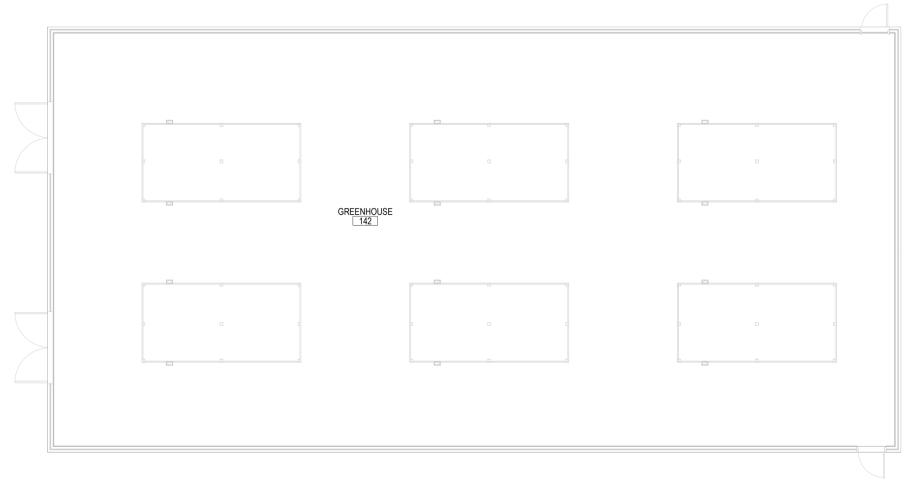
PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
HVAC PLAN

M700



EXISTING
↑
NEW ADDITION
↓



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ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
TEMPERATURE CONTROL
ZONE PLAN

TEMPERATURE CONTROL ZONE PLAN
1/8" = 1'-0"

M701

WC-1
HANDICAPPED
FLUSH VALVE TOILET
FLOOR MOUNTED

IN ANY ROOM OR STALL THAT HAS A WIDE SIDE, FLUSH VALVE TO BE ROUGHED IN ON THE NON-WIDE SIDE SUCH THAT THE SENSOR INSTALLS TO THE WIDE SIDE.

SEE ARCHITECTURAL PLANS FOR DIVIDER & TOILET SPACING

PC TO PROVIDE & INSTALL MANUAL FLUSH VALVE. OWNER TO PROVIDE & INSTALL RETROFIT AUTOFLUSH CLAMP UNIT INSTALLED OVER MANUAL VALVE AS DESIRED BY OWNER

WIDE SIDE (ADA)

17'-1/4"

PLUMBING FIXTURE:
AMERICAN STANDARD #3043.001 "MADERA" VITREOUS CHINA, 1.1-1.6 GPF, ELONGATED BOWL, SIPHON FLUSH ACTION, 1-1/2" TOP SPUD.

PLUMBING ACCESSORIES:
• SLOAN REGAL 111 SFM-1.6 SENSOR OPERATED BATTERY POWERED FLUSH VALVE WITH MECHANICAL OVERRIDE FLUSH BUTTON (ELECTRONIC OVERRIDE FLUSH BUTTON NOT ACCEPTABLE), 1.6 GPF.
• CHURCH #295SCT WHITE OPEN FRONT SEAT LESS COVER.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
1"	-	4"	2"

L-1
NON-ADA AND HANDICAPPED
WALL-MOUNTED LAVATORY

34"

SEE ARCHITECTURAL PLANS FOR SPACING

FIXTURE:
AMERICAN STANDARD #0355.012 "LUCERNE" WALL-MOUNTED SINK, VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FAUCET HOLES 4" ON CENTER.

ACCESSORIES:
• AMERICAN STANDARD #7385.004 "RELIANT 3" SINGLE LEVER HANDLE FAUCET, SCALD GUARD, CERAMIC DISC VALVING, COPPER/BRASS SUPPLY & WATERWAYS, CHROME PLATED BRASS BODY, 1.2 GPM, 4" CENTERS.
• LAWLOR 570 THERMOSTATIC MIXING VALVE WITH COLD WATER BY-PASS & MOUNTING BRACKET.
• CHROME SUPPLIES & DEARBORN QUARTER TURN STOP VALVES.
• DEARBORN #701-1 1-1/4" 17 GA. P-TRAP, DEARBORN #760W-1 OFFSET GRID STRAINER W/TAIPIECE.
• TRUEBRO PREMOLDED INSULATION KIT (WHITE).
• ZURN Z1231 CONCEALED ARMS SUPPORT CARRIER.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
1/2"	1/2"	2"	1-1/2"

SK-1
S.S. SINK
SINGLE COMPARTMENT

3"

PLUMBING FIXTURE:
ELKAY LR-1918 19"X18" SINGLE COMPARTMENT 16"X11.5"X7.5" INSIDE BOWL. TYPE 302 18-GAUGE NICKEL BEARING STAINLESS STEEL. 3" VERT. & 1-3/4" HORI. RADII CORNERS, 3 FAUCET HOLES 4" CENTERS.

PLUMBING ACCESSORIES:
• AMERICAN STANDARD MONTERREY #7500.170 TWO-HANDLE, CENTERSET LAVATORY FAUCET, CERAMIC DISC VALVING, COPPER/BRASS SUPPLY & WATERWAYS, CHROME PLATED BRASS BODY, CHROME SUPPLIES.
• DEARBORN #704 1-1/2" 17 GA. P-TRAP.
• LK-99 DRAIN.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
1/2"	1/2"	2"	1-1/2"

MS-1
MOP SINK

WALL GUARD BY GC

2'-8"

PLUMBING FIXTURE:
ZURN Z1996-24 24"X24"X10" MOLDED HIGH DENSITY COMPOSITE BASIN.

PLUMBING ACCESSORIES:
• W/ AMER. STD. #8354.112 EXPOSED YOKE FAUCET W/ VACUUM BREAKER W/ TOP BRACE, DISC VALVE CARTRIDGES, CAST BRASS BODY, BRASS LEVER HANDLES & SPOUT WITH BUCKET HOOK.
• AMER. STD. ACCESSORIES HH HOSE AND BRACKET, & MH MOP HANGER.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
3/4"	3/4"	3"	1-1/2"

FD
2" ADJUSTABLE
FLOOR DRAIN

PLUMBING FIXTURE:
SIOUX CHIEF MODEL 833-22D-NR 2" CAST IRON NO-HUB CONNECTION. LIGHT DUTY NICKEL-BRONZE ROUND STRAINER IN PEDESTRIAN LOAD AREAS ONLY. CAST IRON BODY WITH BOTTOM OUTLET, FLASHING DRAIN SHALL ALLOW ADJUSTMENT OF 1.25" BEFORE THE CONCRETE POUR, AND 1.25" AFTER THE CONCRETE POUR WITH ROUND OR SQUARE PATTERN TO MATCH ASSOCIATED FLOOR.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
-	-	2"	SEE PLAN

TD
TRENCH DRAIN

PLUMBING FIXTURE:
HUBBELL POLYCAST 600 SERIES PRE-SLOPED POLYESTER TRENCH DRAIN SYSTEM IN 4' AND 2' LENGTHS, INTERLOCKING PIECES, 4" END OUTLET, DUCTILE IRON LONGITUDINAL SLOTTED CLASS C GRATE, CHANNEL INSTALLATION ALIGNMENT CHAIRS, POLYGUARD DA0620B-STAINLESS STEEL, TAMPER RESISTANT LOCKING DEVICES AND ALL ACCESSORIES AS REQUIRED.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
-	-	4"	SEE PLAN

RD
ROOF DRAIN

ROOF DRAIN BY M.C.
EXTEND SPR INTO CLAMP RING SET IN FULL BED OF SLNT.
SLOPE RIGID INSUL. TO ROOF DRAIN
MD. BLKG.
METAL DECK (SEE STRUCTURAL)
RAIN WATER LEADER BY MECH. CONTR.

PLUMBING FIXTURE:
ZURN MODEL ZC-100-C-R, CAST IRON BODY, CAST IRON DOME, SUMP RECEIVER, UNDERDECK CLAMP, NO-HUB OUTLET. SEE PLAN FOR SIZES.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
-	-	SEE PLANS	-

CO
ADJUSTABLE
CLEAN OUT

PLUMBING FIXTURE:
SIOUX CHIEF MODEL 834-4D-NR, 4" NO-HUB CONNECTION. LIGHT DUTY NICKEL-BRONZE ROUND IN PEDESTRIAN LOAD AREAS ONLY. CLEANOUT SHALL ALLOW ADJUSTMENT OF 1.25" BEFORE THE CONCRETE POUR, AND 1.25" AFTER THE CONCRETE POUR WITH ROUND OR SQUARE COVER TO MATCH ASSOCIATED FLOOR.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
-	-	SEE PLAN	-

EXT CO
EXTERIOR
CLEAN OUT

PLUMBING FIXTURE:
ZURN Z1474-N HEAVY DUTY CLEAN OUT HOUSING WITH DURA-COATED CAST IRON TOP AND INTERNAL Z1440 CLEANOUT FERRULE WITH PLUG. INSTALL IN 18"X18"X6" CONCRETE PAD AND INSTALL FLUSH WITH SURROUNDING SURFACE.

PIPING CONNECTIONS			
COLD WATER	HOT WATER	WASTE	VENT
-	-	SEE PLAN	-

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ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
PLUMBING FIXTURE SCHEDULE

M801

PACKAGED ROOFTOP UNIT SCHEDULE - GAS HEAT																												
EQUIP. NO.	MANUFACTURER & MODEL	LOCATION	SERVING	SUPPLY CFM	OUTSIDE AIR CFM	SUPPLY AIR E.A.P. (IN)	FURNISHING	COOLING				HEATING				ELECTRICAL	UNIT WEIGHT (LBS)	NOTES										
								MIN	TOTAL	EAT (IN/HR) (°F)	UNIT LAT (IN/HR) (°F)	MIN	MAX	MIN	MAX				HP (KWH)	FRPM	FAN TYPE/ SIZE (IN/HR)	V./PH./CY.	FLA	MOCP	MIN	MAX		
RTU-1	AORN	NEW ADDITION ROOF	NEW ADDITION	6500	2390	2.75	0.75	20	239.9	80.6/65.8	55.9/55.8	30-370	24.3-219.7	35.3/26.3	68.6/52.0	9.1	1	7.5	1389	INDOOR RPTED PLUMB SUPPLY 1/2"	208/1/60	115	123	150	65	2318	+ CURB	1,2,3,4,5,6,7,8,9,10,11

NOTES: 1. DUAL WALL CONSTRUCTION WITH 2" FIBER INSULATED PANELS (NO INSULATION), 2" MIN 8 PLYED F/175. FACTORY INSTALLED NON-FUSED DISCONNECT WITH SINGLE POINT POWER CONNECTION. FACTORY WROTE POWER CONDUIT/NEUTRAL OUTLET THROUGH THE BASE ELECTRICAL PROVISIONS. PANEL & BROOM OUT PROTECTION. FACTORY INSTALLED STRAP/COMPANION, POWER EXHAUST FAN, FACTORY INSTALLED RAIL, VALVES, POWER SERVICE ACCESS DOORS, AND INSULATION NATURAL GAS HEAT WITH STAINLESS STEEL HEAT EXCHANGER.

2. PROVIDE AND INSTALL 7" TYP. PER MANUFACTURERS RECOMMENDATION.

3. PROVIDE FACTORY AUTHORIZED STARTUP.

4. PROVIDE WITH 100' MINIMUM 1/2" RIGID FIBERGLASS INSULATION.

5. PROVIDE (1) ADDITIONAL SET OF DISPOSABLE FILTERS.

6. PROVIDE WITH FACTORY INSTALLED DIGITAL, SERIAL LEAD COMPRESSOR FOR DR COOLING MODULATION.

7. PROVIDE WITH FACTORY INSTALLED DIGITAL, SERIAL LEAD COMPRESSOR FOR DR COOLING MODULATION.

8. PROVIDE WITH FACTORY INSTALLED DIGITAL, SERIAL LEAD COMPRESSOR FOR DR COOLING MODULATION.

9. PROVIDE WITH FACTORY INSTALLED DIGITAL, SERIAL LEAD COMPRESSOR FOR DR COOLING MODULATION.

10. PROVIDE WITH FACTORY INSTALLED DIGITAL, SERIAL LEAD COMPRESSOR FOR DR COOLING MODULATION.

11. PROVIDE & INSTALL FULLY INSULATED 2" MIN ROOF CURB WITH VIBRATION ISOLATION (WITH VIBRATION SPRING ACCESS DOORS). FOR ADDITIONAL PURPOSES, FIELD INSTALL TWO LAYERS OF WATERPROOF SHEETROCK TOPPED WITH BATT INSULATION TO COMPLETELY FILL ALL GAPS IN THE ROOF CURB. ALL WORK SHALL BE ROOFING CONTRACTOR.

FAN SCHEDULE														
EQUIP. NO.	MANUFACTURER & MODEL (STYLE)	SERVING	LOCATION	CFM	STATIC PRESS. (IN W.G.)	SONES	MOTOR					UNIT WEIGHT (LBS)	NOTES	
							WATTS	HP	FRPM	VOLT./PH./CY.	FLA			
EF-12	COOK ACE-O 90C15DH	FACS STORAGE 136A, MEN'S RR 139, WOMENS RR 140, JANITORS CLOSET 141, AG STORAGE 138A	NEW ADDITION ROOF	275	0.375	5.6	-	1/8	1248	115/1/60	3.8	21	+ CURB	1,2,3,4,5

NOTES: 1. PROVIDE AND INSTALL 120V MOTORIZED BACKDRAFT DAMPER, FAIL TO LAST POSITION. EC TO OPEN AND CLOSE WITH FAN OPERATION.

2. PROVIDE WITH FACTORY INSTALLED DISCONNECT.

3. PROVIDE WITH FACTORY INSTALLED FAN SPEED CONTROLLER FOR BALANCING.

4. PROVIDE & INSTALL MINIMUM 18" HIGH, INSULATED FACTORY ROOF CURB. VERIFY ANY SLOPE WITH CM PRIOR TO ORDERING.

5. ALL ROOFING WORK TO BE BY ROOFING CONTRACTOR, ALL TRADES TO COORDINATE.

GRILLE - REGISTER - DIFFUSER SCHEDULE										
EQUIP. NO.	MANUFACTURER & MODEL	NOMINAL SIZE	THROAT SIZE	MAX CFM	MAX APD	THROW	NC	FRAME	FINISH	NOTES
S-1	PRICE SCD	24X24	6"Ø	100	0.02"	4'	< 15	LAY-IN	WHITE	1
S-2	PRICE SCD	24X24	8"Ø	225	0.04"	8'	< 15	LAY-IN	WHITE	1
S-3	PRICE SCD	24X24	10"Ø	370	0.06"	10'	16	LAY-IN	WHITE	1,4
S-4	PRICE SCD	24X24	12"Ø	500	0.06"	12'	16	LAY-IN	WHITE	1
S-5	PRICE RCD	14"Ø	6"Ø	100	0.03"	4'	< 15	SURFACE	WHITE	1
S-6	PRICE RCD	27"Ø	12"Ø	500	0.05"	11'	< 15	SURFACE	WHITE	1
R-1	PRICE 530	24X24	22X22	1600	0.09"	-	24	LAY-IN	WHITE	1,3
R-2	PRICE 530	24X12	22X10	700	0.08"	-	21	LAY-IN	WHITE	1,3
E-1	PRICE 530	12X12	10X10	50	0.02"	-	< 15	SURFACE	WHITE	1,2,3
T-1	PRICE 530	12X12	10X10	250	0.06"	-	< 15	SURFACE	WHITE	1,3,4

NOTES: 1. V.C. SHALL COORDINATE MOUNTING AND SURFACE CONSTRUCTION PRIOR TO FURNISHING MATERIAL. V.C. SHALL ALSO COORDINATE EXACT LOCATION OF EQUIPMENT.

2. PROVIDE WITH OPPOSED BLADE BALANCING DAMPER.

3. 45 DEGREE DEFLECTION.

4. PROVIDE WITH GPM FRAME FOR REGISTERS INSTALLED IN VEST. 143 & VEST. 146.

VAV TERMINAL SCHEDULE																			
EQUIP. NO.	MANUFACTURER & MODEL	SERVED FROM	SERVING	INLET SIZE	MAX CFM	MIN CFM	MAX TERM APD	MAX RAD NC	MAX DISCH NC	HEATING COIL (EWT =180°F)						RUNOUT SIZE	NOTES		
										CFM	IN	EAT (°F)	LAT (°F)	GPM	UNIT (FT)			HP (FT)	ROWS
EXG VAV-8	ARU-1	EXG	HVAC - AG CLASSROOM 137														7		
VAV-134	PRICE SDV	RTU-1	HVAC - TV STUDIO 134, TV STORAGE 134C	16	1590	640	0.14	-	-	1195	26.7	55	75.6	0.75	106	0.1	2	3/4"	1,2,3,4,5,6
VAV-134A	PRICE SDV	RTU-1	HVAC - CONTROL ROOM 134A	7	300	120	0.09	-	21	225	8.4	55	89.1	0.33	127.7	0.03	2	3/4"	1,2,3,4,5,6
VAV-134B	PRICE SDV	RTU-1	HVAC - AUDIO BOOTH 134B	5	140	65	0.04	-	105	6.0	55	106.7	0.33	142.8	0.02	2	3/4"	1,2,3,4,5,6	
VAV-135	PRICE SDV	RTU-1	HVAC - COMPUTER CLASSROOM 135	12	1100	1100	0.31	-	-	1100	17.8	55	69.9	0.5	106.2	0.09	2	3/4"	1,2,3,4,5,6
VAV-136	PRICE SDV	RTU-1	HVAC - FACS 136, FACS STORAGE 136A	10	1005	1005	0.43	-	21	1005	16.2	55	69.8	0.5	113.1	0.07	2	3/4"	1,2,3,4,5,6
VAV-136	PRICE SDV	RTU-1	HVAC - AG WORKROOM 136, AG STORAGE 145	12	1240	1200	0.36	20	-	1200	31.4	55	79.0	1.25	127.6	0.02	2	3/4"	1,2,3,4,5,6
VAV-151	PRICE SDV	RTU-1	HVAC - CORRIDOR 150 & CORRIDOR 151, VESTIBULES	14	1640	660	0.27	20	-	1420	74.2	55	103.2	6	154.3	3.61	2	1"	1,2,3,4,5,6

NOTES: 1. SOUND DATA SHALL BE TAKEN FROM ARI STANDARD 880 (LATEST EDITION) PUBLISHED DATA.

2. INLET STATIC PRESSURE FOR TERMINAL SELECTOR IS 1.0". TERMINAL S.P. INCLUDES COIL APD.

3. PERFORMANCE BASED ON 30% PROPYLENE GLYCOL.

4. LH OR RH CONNECTION ON COIL PIPING VARIES, SEE PLAN. CONFIRM LH/RH WITH HYDRONICS CONTRACTOR PRIOR TO ORDERING.

5. SEE VAV HEATING COIL PIPING DETAIL.

6. PROVIDE WITH STANDARD 1/2" FIBERGLASS LINER.

7. EXISTING VAV TERMINAL. REBALANCE TO NEW AIRFLOWS AS SCHEDULED.

DUCTLESS SPLIT SYSTEM INDOOR UNIT SCHEDULE															
EQUIP. NO.	MANUFACTURER & MODEL	SERVING	COOLING CAPACITY (BTU/HR.)	HEATING CAPACITY (BTU/HR 84°F)	REFRIGERANT PIPING		ELECTRICAL				DIMENSIONS			UNIT WEIGHT (LBS)	NOTES
					LIQUID	SUCTION	V./PH./CY.	FLA	MOCP	WIDTH	HEIGHT	DEPTH			
DSA-140	DAIKIN FTX090LVJU	MAIN DATA 140	9,000	12,000	1/4"	3/8"	208/1/60	N/A	N/A	31-1/2"	11-5/8"	8-7/16"	20	1,2,3,4,5	
DSA-141	DAIKIN FTX090LVJU	AG DATA 141	9,000	12,000	1/4"	3/8"	208/1/60	N/A	N/A	31-1/2"	11-5/8"	8-7/16"	20	1,2,3,4,5	

NOTES: 1. VC TO PROVIDE & INSTALL OPTIONAL HARDWIRED THERMOSTAT. WIRELESS REMOTE THERMOSTAT WILL NOT BE ACCEPTABLE.

2. UNIT POWER IS FED FROM AND IS INCLUDED IN SCHEDULED ELECTRICAL DATA FOR ASSOCIATED OUTDOOR UNIT INSTALLED IN PLENUM SPACE ABOVE CORRIDOR CEILING.

3. PROVIDE WITH (1) ADDITIONAL REPLACEABLE FILTER.

4. TO INSTALL SENSOR NEAR LOW VOLTAGE T-STAT BY VC FOR MONITORING ONLY. ALARM AS RECOMMENDED BY TC.

5. PC TO PROVIDE AND INSTALL 1-1/4" INSULATED SCH 40 PVC CONDENSATE PIPING AND ROUTE IN WALL TERMINATING WITH ELBOW DOWN INTO OPEN QUARTER OF NEARBY MOP SINK.

DUCTLESS SPLIT SYSTEM OUTDOOR UNIT SCHEDULE															
EQUIP. NO.	MANUFACTURER & MODEL	SERVING	COOLING CAPACITY (BTU/HR)	HEATING CAPACITY (BTU/HR 84°F)	REFRIGERANT PIPING		ELECTRICAL				DIMENSIONS			UNIT WEIGHT (LBS)	NOTES
					LIQUID	SUCTION	V./PH./CY.	MCA	MOCP	WIDTH	HEIGHT	DEPTH			
DSC-140	DAIKIN RX0090VJU	DSA-140	9,000	12,000	1/4"	3/8"	208/1/60	8	15	30-1/8"	21-5/8"	11-1/4"	75	1,2	
DSC-141	DAIKIN RX0090VJU	DSA-141	9,000	12,000	1/4"	3/8"	208/1/60	8	15	30-1/8"	21-5/8"	11-1/4"	75	1,2	

NOTES: 1. FURNISH AND INSTALL LINE SET FOR INDOOR UNIT, BOTH SUCTION & LIQUID LINE TO BE INSULATED.

2. PROVIDE & INSTALL ALL NECESSARY SUPPORTS FOR INSTALLATION IN PLENUM SPACE ABOVE CORRIDOR CEILING, SEE PLANS.

HVAC SHEET METAL DUCTWORK CONSTRUCTION & INSULATION SCHEDULE														
SYSTEM	DUCTWORK			INSULATION THICKNESS (EXTERIOR WRAP UNLESS OTHERWISE NOTED)									NOTES	
	MAX DIMENSION OF RECTANGULAR DUCTS OR DIAMETER OF ROUND DUCTS	GALVANIZED SHEET METAL GAUGE	PRESSURE RATING	CONSTRUCTION	RECTANGULAR SUPPLY AIR BEFORE VAV	ROUND SUPPLY AIR BEFORE VAV	RECTANGULAR SUPPLY AIR AFTER VAV	ROUND SUPPLY AIR AFTER VAV	RETURN AIR	EXHAUST AIR DUCT	TRANSFER AIR	PLENUM TO PLENUM TRANSFER SLEEVES		
LOW PRESSURE DUCTWORK	UP THRU 12"	26	2" W.G.	WHEN LONGEST SIDE IS 36" OR GREATER, SHALL BE CONSTRUCTED USING DUCTMATE 35/25 SLIDE ON SYSTEM, TDF FLANGE	-	-	1/2" LINER	1-1/2"	1/2" LINER	-	-	1/2" LINER	1/2" LINER	1,2,3,4
	OVER 12" THRU 30"	24												
	OVER 30" THRU 54"	22												
	OVER 54" THRU 84"	20												
MEDIUM PRESSURE DUCTWORK	UP THRU 18"	24	3" W.G.	SHALL BE CONSTRUCTED USING DUCTMATE 35/25 SLIDE ON SYSTEMS, TDF FLANGE	-	-	1-1/2"	-	-	-	-	-	-	1,2,3,4
	OVER 19" THRU 48"	22												
	OVER 48" THRU 72"	20												
	OVER 73" THRU 96"	18												

NOTES: 1. FOLLOW ALL SMACNA STANDARDS, SEE SPECIFICATIONS.

2. ALL DUCTWORK 18" AND GREATER IN WIDTH SHALL BE CROSS-BROKEN.

3. ALL SYSTEMS TO BE COMPLETELY INSULATED UNLESS OTHERWISE NOTED.

4. CONCEALED DUCTS MAY BE INSULATED WITH RIGID BOARD OR FLEXIBLE FIBERGLASS INSULATION. EXPOSED DUCTS SHALL BE INSULATED WITH RIGID BOARD FIBERGLASS INSULATION ONLY.

HOT WATER CABINET UNIT HEATER																
EQUIP. NO.	MANUFACTURER & MODEL	LOCATION	CFM	MBH	GPM	LAT	EWT	LWT	WPD (FT)	ELECTRICAL				RUNOUT SIZE	UNIT WEIGHT (LBS)	NOTES
										HP	V./PH./CY	FLA	MOCP			
EXG CUH-2	SIGMA SFF-A-04-SRI	S.W. VESTIBULE 143	400	33.5	3.5	134.2	180	160.0	3.0	1/10	120/1/60	1075	1.7	1"	125	6
CUH-146	SIGMA SFF-A-04-SRI	S.E. VESTIBULE 146	400	33.5	3.5	134.2	180	160.0	3.0	1/10	120/1/60	1075	1.7	1"	125	1,2,3,4,5

NOTES: 1. UNIT SHALL HAVE INVERTED AIR FLOW, SEMI RECESSED WALL MOUNTED TYPE AND SHALL BE MOUNTED AT 8" A.F.F., ARRANGEMENT 101 - FRONT TOP IN, FRONT BOTTOM OUT.

2. PERFORMANCE BASED ON 30% PROPYLENE GLYCOL SOLUTION.

3. PROVIDE WITH UNIT MOUNTED 3 SPEED SWITCH.

4. PROVIDE WITH STANDARD BAKED ENAMEL FINISH - COLOR TO BE SELECTED BY ARCHITECT.

5. SEE CABINET UNIT HEATER DETAIL.

6. PROVIDE WITH (1) ADDITIONAL SET OF DISPOSABLE FILTERS.

7. EXISTING UNIT TO BE RELOCATED, FOR REFERENCE.



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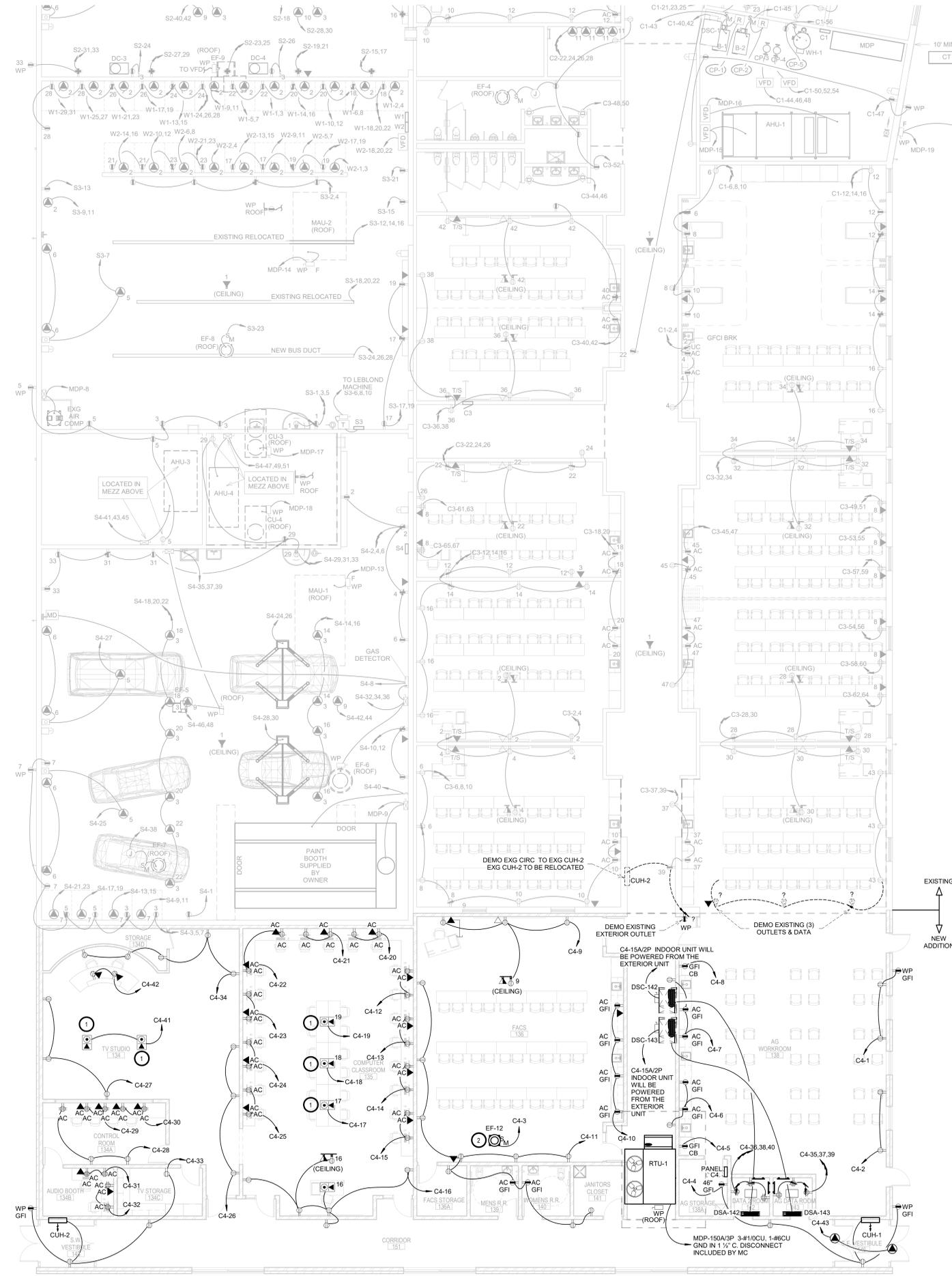
REVISION SCHEDULE:
REV. # REV. DSC. REV. DATE

PROJECT:
ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
MECHANICAL SCHEDULES

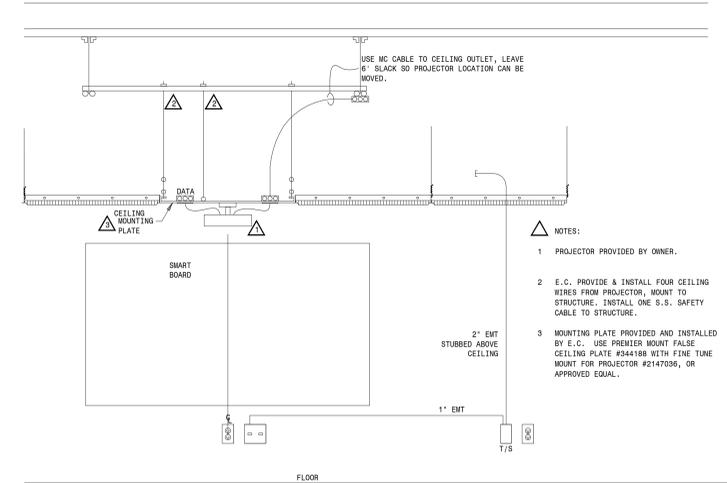
M900

ELECTRICAL SHEET INDEX	
Sheet Number	Sheet Name
E100	POWER & DATA PLAN
E200	LIGHTING PLAN
E300	SPECIAL SYSTEMS PLAN
E400	PANEL & FIXTURE SCHEDULES

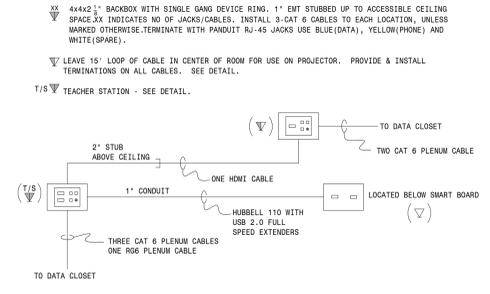


- SPECIAL OUTLETS**
- POWER FOR POWER ASSIST DOOR OPERATORS. INSTALL A RELAY TO THAT HANDICAPPED OPERATOR WILL NOT FUNCTION UNLESS DOOR IS UNLOCKED. THE DOOR SECURITY WILL BE INSTALLED BY OWNER NOT IN THIS CONTRACT.

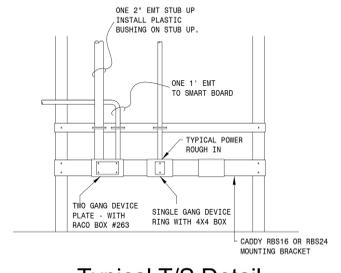
- KEYNOTES**
- USE STEEL CITY 864 OR EQUAL. INSTALL 1 1/4" PVC CONDUIT FOR DATA TO ACCESSIBLE CEILING SPACE. INSTALL AND TERMINATE TWO CAT6 CABLES.
 - PROVIDE J-BOX IN ACCESSIBLE LOCATION SO T.C. CAN ADD A RELAY TO CONTROL THE EXHAUST FAN.
 - PROVIDE CORD DROP TO TABLES. COORDINATE WITH OWNER FOR EXACT LOCATION AND HEIGHT ABOVE THE FLOOR.



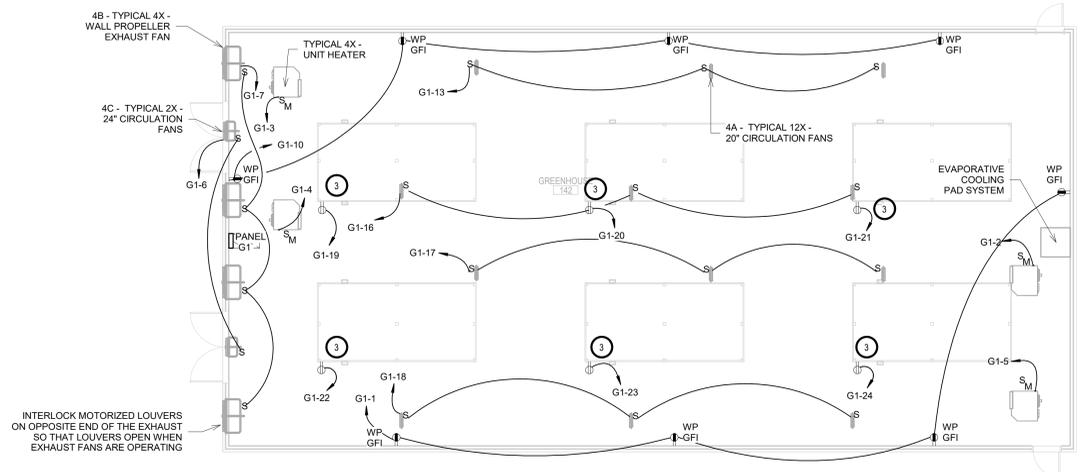
Typical Smart Board Location
NOT TO SCALE



Typical Classroom Data System
NOT TO SCALE



Typical T/S Detail
NOT TO SCALE



INTERLOCK MOTORIZED LOUVERS ON OPPOSITE END OF THE EXHAUST SO THAT LOUVERS OPEN WHEN EXHAUST FANS ARE OPERATING

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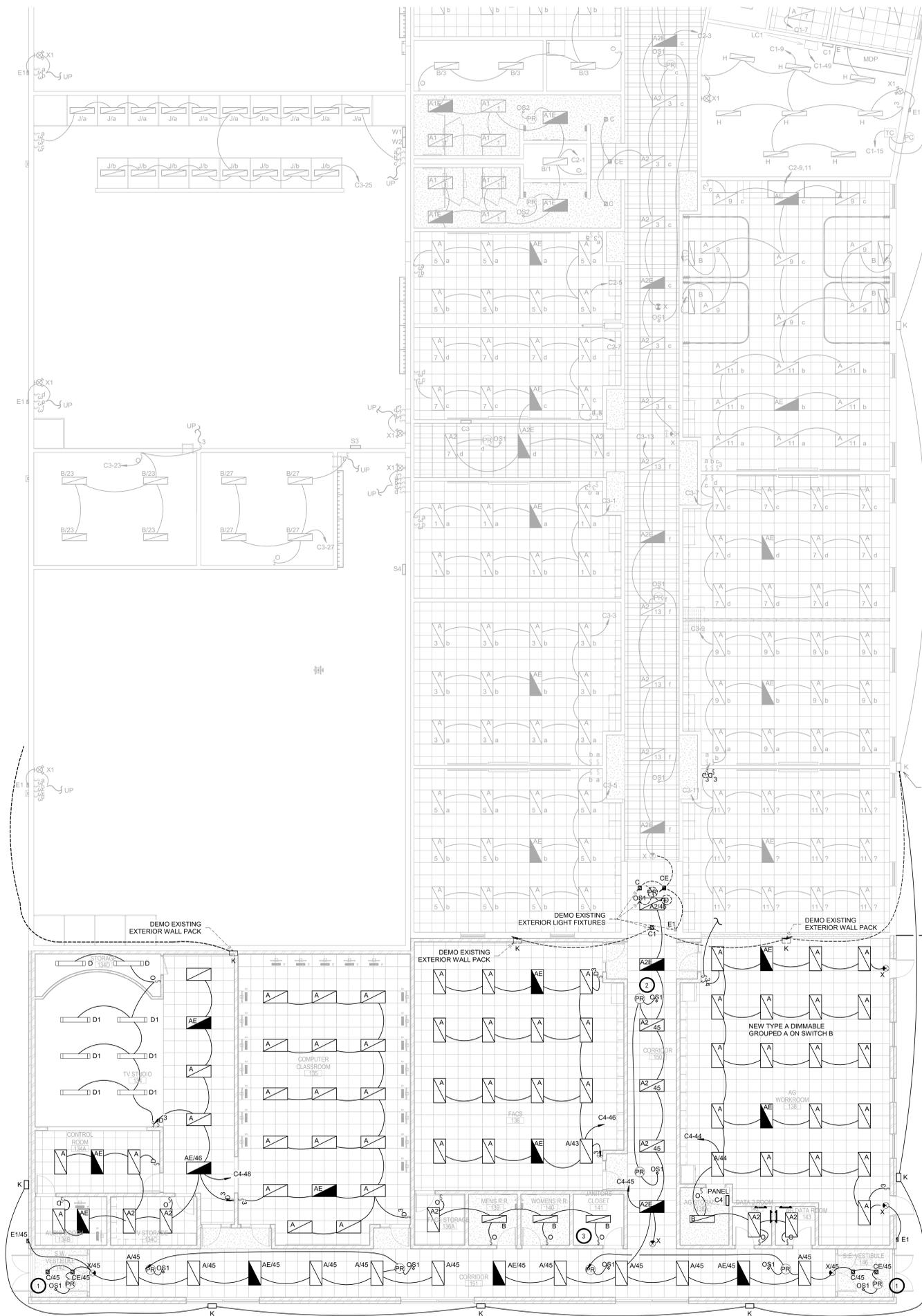


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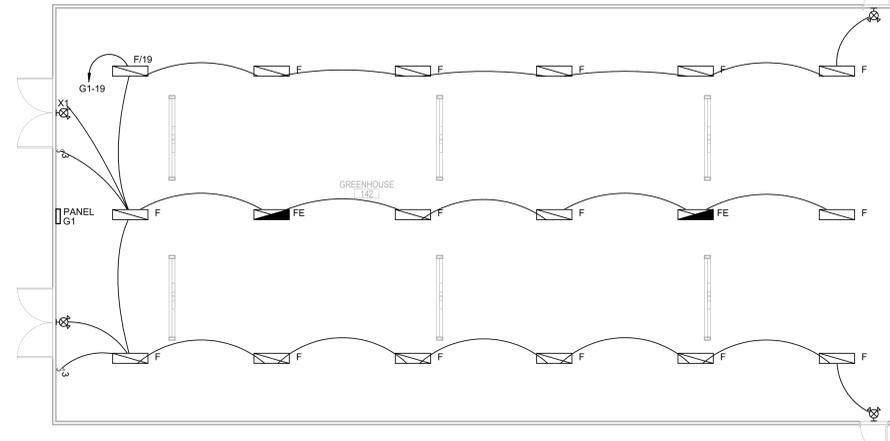
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ABERDEEN TECHNOLOGY
EDUCATION & CAREER BUILDING
ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
POWER & DATA PLAN



CIRCUIT NEW TYPE K LIGHT FIXTURES TO EXISTING EXTERIOR LIGHTING CIRCUIT.

EXISTING
NEW ADDITION



- KEYNOTES**
1. USE A WATT STOPPER POWER PACK WITH A CI-200 OCCUPANCY SENSOR AND AN LS-102 DAYLIGHT SENSOR IN COMBINATION TO CONTROL THE VESTIBULE LIGHTING.
 2. TYPICAL FOR OS1 USE WATT STOPPER CI-200 WITH APPROPRIATE POWER PACK.
 3. TYPICAL FOR WALL OCCUPANCY SENSOR USE WATT STOPPER PW-101.

- SPECIAL OUTLETS**
1. PLACE POWER SUPPLY ABOVE CEILING FOR BACKLIT SIGN. EACH LETTER IS INDIVIDUALLY LIT AND WILL REQUIRE A LOW VOLTAGE LEAD THRU THE WALL UP TO THE POWER SUPPLY. DO NOT PENETRATE EXTERIOR WALL WITHOUT EXACT SIGN LOCATION.



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ABERDEEN SCHOOL DISTRICT, 6-1
ABERDEEN, SOUTH DAKOTA

SHEET TITLE:
LIGHTING PLAN

E200

1 - LIGHTING PLAN
1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE		
Type	Description	Lamps Per Fixture & Type
A	LED, 2x4 5000 lumen, layin panel, 120 volt electronic driver, 0-10 volt dimming, LITHONIA NO. CPX 2X4 5000LM 80CR1 40K SWL M1N10 2T HVOLT 1100LW DAYBRITE, METALIX and HUBBELL shall be considered equal.	INCLUDED
AE	LED, 2x4 5000 lumen, layin panel, 120 volt electronic driver, 0-10 volt dimming, 10 watt emergency battery, LITHONIA NO. CPX 2X4 5000LM 80CR1 40K SWL M1N10 2T HVOLT 1100LW DAYBRITE, METALIX and HUBBELL shall be considered equal.	INCLUDED
A1	Not used.	
A2	LED, 2x4 4000 lumen, layin panel, 120 volt electronic driver, 0-10 volt dimming, LITHONIA NO. CPX 2X4 4000LM 80CR1 40K SWL M1N10 2T HVOLT DAYBRITE, METALIX and HUBBELL shall be considered equal.	INCLUDED
B	LED, 1x4 5000 lumen, layin panel, 120 volt electronic driver, 0-10 volt dimming, dry wall flange, LITHONIA NO. CPX 1X4 5000LM 80CR1 40K SWL M1N10 2T HVOLT 80A14 DAYBRITE, METALIX and HUBBELL shall be considered equal.	INCLUDED
C	LED, 6" recess downlight, 2000 lumens, clear alzak reflector, multi-volt, 0-10 volt dimming, white painted flange, LITHONIA NO. LM6 40K 20 L06 AR LSS HVOLT GZ10 TRW or equal and approved.	INCLUDED
CE	LED, 6" recess downlight, 2000 lumens, clear alzak reflector, multi-volt, 0-10 volt dimming, white painted flange, 10 watt emergency with self diagnostics, LITHONIA NO. LM6 40K 20 L06 AR LSS HVOLT GZ10 TRW or equal and approved.	INCLUDED
D	LED, surface mounted industrial, 4' in length flat lens, multi-volt, 0-10 volt dimming, 4000 K, 80 CRI, white finish, 2000 lumens, LITHONIA NO. CLX L48 3000LM SEF FDL HVOLT GZ10 40K 80CRI DAYBRITE, METALIX and HUBBELL shall be considered equal.	INCLUDED
X	LED exit sign, red letters, white plastic housing with mounting and arrow, as indicated, emergency battery, self diagnostics, LITHONIA NO. LOW LED W R HVOLT ELI 80 DUAL-LITE, LIGHT-ALARMS, HUBBELL and SURE-LITE shall be considered equal.	INCLUDED
E1	Emergency exterior lighting unit, bronze finish, cold temperature rated, self diagnostics, LITHONIA NO. AFF GEL 080T0 HVOLT LTP SPT 04 DUAL-LITE, LIGHT-ALARMS, and SURE-LITE shall be considered equal.	INCLUDED
K	LED wall mounted fixture, 120 volt electronic driver, MORGAN EDSON NO. IST 802 LED E1 BL3 ALP HUBBELL, HADCO & LITHONIA shall be considered equal.	INCLUDED

PANELBOARD: C4																				
LOCATION: SURFACE NEMA 1			VOLTAGE: 120/208 V. 3 ø 4W.																	
MOUNTING: 225A MAIN LUG			A.I.C. RATING: 10,000 AMPS SYMMETRICAL																	
MAIN DEVICE: 225 AMPS			SPECIAL:																	
BUS AMPS: 225 AMPS																				
LOAD DESCRIPTION	BKR	P	CKT	A	B	C	CKT	P	BKR	LOAD DESCRIPTION	BKR	P	CKT	A	B	C	CKT	P	BKR	LOAD DESCRIPTION
RCPT: AG WORKROOM 138	20 A	1	1				2	1	20 A	RCPT: AG WORKROOM 138	20 A	1	1				2	1	20 A	RCPT: AG WORKROOM 138
PWR: EF-12	20 A	1	3				4	1	20 A	RCPT: AG STORAGE 138A	20 A	1	3				4	1	20 A	RCPT: AG STORAGE 138A
RCPT: AG WORKROOM 138	20 A	1	5				6	1	20 A	RCPT: AG WORKROOM 138	20 A	1	5				6	1	20 A	RCPT: AG WORKROOM 138
RCPT: AG WORKROOM 138	20 A	1	7				8	1	20 A	RCPT: AG WORKROOM 138	20 A	1	7				8	1	20 A	RCPT: AG WORKROOM 138
RCPT: FACS 136	20 A	1	9				10	1	20 A	RCPT: FACS 136	20 A	1	9				10	1	20 A	RCPT: FACS 136
RCPT: FACS 136	20 A	1	11				12	1	20 A	RCPT: COMPUTER 135	20 A	1	11				12	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	13				14	1	20 A	RCPT: COMPUTER 135	20 A	1	13				14	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	15				16	1	20 A	RCPT: COMPUTER 135	20 A	1	15				16	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	17				18	1	20 A	RCPT: COMPUTER 135	20 A	1	17				18	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	19				20	1	20 A	RCPT: COMPUTER 135	20 A	1	19				20	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	21				22	1	20 A	RCPT: COMPUTER 135	20 A	1	21				22	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	23				24	1	20 A	RCPT: COMPUTER 135	20 A	1	23				24	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	25				26	1	20 A	RCPT: TV STUDIO 134	20 A	1	25				26	1	20 A	RCPT: TV STUDIO 134
RCPT: TV STUDIO 134	20 A	1	27				28	1	20 A	RCPT: CONTROL ROOM 134A	20 A	1	27				28	1	20 A	RCPT: CONTROL ROOM 134A
RCPT: CONTROL ROOM 134A	20 A	1	29				30	1	20 A	RCPT: CONTROL ROOM 134A	20 A	1	29				30	1	20 A	RCPT: CONTROL ROOM 134A
RCPT: AUDIO BOOTH 134B	20 A	1	31				32	1	20 A	RCPT: AUDIO BOOTH 134B	20 A	1	31				32	1	20 A	RCPT: AUDIO BOOTH 134B
RCPT: TV STORAGE 134C	20 A	1	33				34	1	20 A	RCPT: TV STUDIO 134	20 A	1	33				34	1	20 A	RCPT: TV STUDIO 134
RCPT: DATA 2 ROOM 142	20 A	1	35				36	1	20 A	RCPT: AG DATA ROOM 143	20 A	1	35				36	1	20 A	RCPT: AG DATA ROOM 143
RCPT: DATA 2 ROOM 142	20 A	1	37				38	1	20 A	RCPT: AG DATA ROOM 143	20 A	1	37				38	1	20 A	RCPT: AG DATA ROOM 143
RCPT: DATA 2 ROOM 142	20 A	1	39				40	1	20 A	RCPT: AG DATA ROOM 143	20 A	1	39				40	1	20 A	RCPT: AG DATA ROOM 143
RCPT: TV STUDIO 134	20 A	1	41				42	1	20 A	RCPT: TV STUDIO 134	20 A	1	41				42	1	20 A	RCPT: TV STUDIO 134
RCPT: TV STUDIO 134	20 A	1	43				44	1	20 A	RCPT: AG WORKROOM 138	20 A	1	43				44	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	45				46	1	20 A	RCPT: AG WORKROOM 138	20 A	1	45				46	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	47				48	1	20 A	RCPT: AG WORKROOM 138	20 A	1	47				48	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	49				50	1	20 A	RCPT: AG WORKROOM 138	20 A	1	49				50	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	51				52	1	20 A	RCPT: AG WORKROOM 138	20 A	1	51				52	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	53				54	1	20 A	RCPT: AG WORKROOM 138	20 A	1	53				54	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	55				56	1	20 A	RCPT: AG WORKROOM 138	20 A	1	55				56	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	57				58	1	20 A	RCPT: AG WORKROOM 138	20 A	1	57				58	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	59				60	1	20 A	RCPT: AG WORKROOM 138	20 A	1	59				60	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	61				62	1	20 A	RCPT: AG WORKROOM 138	20 A	1	61				62	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	63				64	1	20 A	RCPT: AG WORKROOM 138	20 A	1	63				64	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	65				66	1	20 A	RCPT: AG WORKROOM 138	20 A	1	65				66	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	67				68	1	20 A	RCPT: AG WORKROOM 138	20 A	1	67				68	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	69				70	1	20 A	RCPT: AG WORKROOM 138	20 A	1	69				70	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	71				72	1	20 A	RCPT: AG WORKROOM 138	20 A	1	71				72	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	73				74	1	20 A	RCPT: AG WORKROOM 138	20 A	1	73				74	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	75				76	1	20 A	RCPT: AG WORKROOM 138	20 A	1	75				76	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	77				78	1	20 A	RCPT: AG WORKROOM 138	20 A	1	77				78	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	79				80	1	20 A	RCPT: AG WORKROOM 138	20 A	1	79				80	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	81				82	1	20 A	RCPT: AG WORKROOM 138	20 A	1	81				82	1	20 A	RCPT: AG WORKROOM 138
RCPT: TV STUDIO 134	20 A	1	83				84	1	20 A	RCPT: AG WORKROOM 138	20 A	1	83				84	1	20 A	RCPT: AG WORKROOM 138

PANELBOARD: G1																				
LOCATION: SURFACE NEMA 1			VOLTAGE: 120/208 V. 3 ø 4W.																	
MOUNTING: 200 A MAIN LUG			A.I.C. RATING: 10,000 AMPS SYMMETRICAL																	
MAIN DEVICE: 200 AMPS			SPECIAL:																	
BUS AMPS: 200 AMPS																				
LOAD DESCRIPTION	BKR	P	CKT	A	B	C	CKT	P	BKR	LOAD DESCRIPTION	BKR	P	CKT	A	B	C	CKT	P	BKR	LOAD DESCRIPTION
RCPT: GREENHOUSE 144	20 A	1	1				2	1	20 A	PWR: UNIT HEATER	20 A	1	1				2	1	20 A	PWR: UNIT HEATER
PWR: UNIT HEATER	20 A	1	3				4	1	20 A	PWR: UNIT HEATER	20 A	1	3				4	1	20 A	PWR: UNIT HEATER
PWR: UNIT HEATER	20 A	1	5				6	1	20 A	PWR: CIRCULATION FANS	20 A	1	5				6	1	20 A	PWR: CIRCULATION FANS
PWR: WALL PROP FANS	20 A	1	7				8	1	20 A	PWR: CIRCULATION FANS	20 A	1	7				8	1	20 A	PWR: CIRCULATION FANS
RCPT: GREENHOUSE TABLE	20 A	1	9				10	1	20 A	RCPT: GREENHOUSE 144	20 A	1	9				10	1	20 A	RCPT: GREENHOUSE 144
RCPT: GREENHOUSE TABLE	20 A	1	11				12	1	20 A	RCPT: GREENHOUSE TABLE	20 A	1	11				12	1	20 A	RCPT: GREENHOUSE TABLE
PWR: CIRCULATION FANS	20 A	1	13				14	1	20 A	PWR: CIRCULATION FANS	20 A	1	13				14	1	20 A	PWR: CIRCULATION FANS
SPARE	20 A	1	15				16	1	20 A	SPARE	20 A	1	15				16	1	20 A	SPARE
PWR: CIRCULATION FANS	20 A	1	17				18	1	20 A	PWR: CIRCULATION FANS	20 A	1	17				18	1	20 A	PWR: CIRCULATION FANS
LG: GREENHOUSE 144	20 A	1	19				20	1	20 A	LG: GREENHOUSE 144	20 A	1	19				20	1	20 A	LG: GREENHOUSE 144
SPARE	20 A	1	21				22	1	20 A	SPARE	20 A	1	21				22	1	20 A	SPARE
SPARE	20 A	1	23				24	1	20 A	SPARE	20 A	1	23				24	1	20 A	SPARE
RCPT: COMPUTER 135	20 A	1	25				26	1	20 A	RCPT: COMPUTER 135	20 A	1	25				26	1	20 A	RCPT: COMPUTER 135
RCPT: COMPUTER 135	20 A	1	27				28	1	20 A	RCPT: COMPUTER 135	20 A	1	27				28	1		