CEDAR FALLS COMMUNITY SCHOOL DISTRICT

CFHS PORTABLE RELOCATION

1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

95% REVIEW DOCUMENTS

1.23.2018

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND ORDINANCE IN FORCE AT TIME OF CONSTRUCTION.

2. VERIFY ALL DIMENSIONS, EXISTING AND NEW CONDITIONS ON THE JOB BEFORE PROCEEDING WITH THE WORK. DISCREPANCIES, IF ANY, ARE TO BE REFERRED TO THE ARCHITECT PRIOR TO START OF WORK.

3. UNLESS NOTED OTHERWISE, THE PLAN DIMENSIONS SHOWN ARE:
   A. TYPICALLY TO THE CENTERLINE OF STUD AT INTERIOR PARTITIONS
   B. TO THE FACE OF WALLS IN HALLWAYS SHOWING CLEAR WIDTHS
   C. TO THE FACE OF FURRED OUT WALLS
   D. TO THE FACE OF MASONRY OR FACE OF CONCRETE WHERE INDICATED (NOMINAL)
   E. IF DIMENSION POINT IS IN QUESTION, CONTACT ARCHITECT

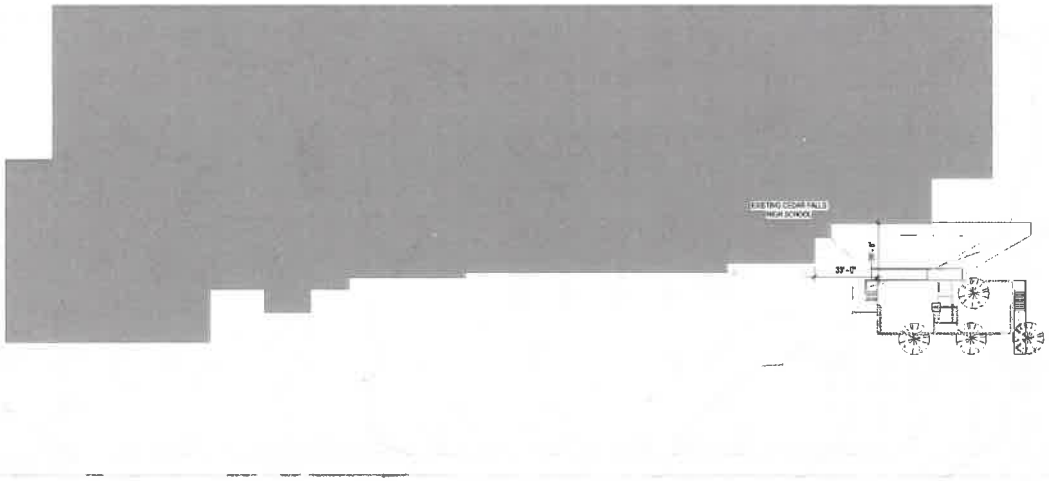
4. THE CONTRACTOR SHALL VERIFY ALL ROUGH-IN DIMENSIONS AND EQUIPMENT, FURNISHED AND INSTALLED BY HIMSELF/HERSELF OR OTHERS, PRIOR TO PROCEEDING WITH WORK.

5. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL NOTES AND SYMBOLS

6. PROVIDE CONSTRUCTION AND CONTROL JOINTS IN CONCRETE SLABS ON GRADE AS SHOWN OR DETAILED ON STRUCTURAL DRAWINGS, IF NOT SHOWN, PROVIDE JOINTING PLAN

7. EXISTING PORTBALE MUST BE FIELD VERIFIED PRIOR TO MOVING FROM SOUTHDALE. REVIEW CONDITIONS BELOW PORTABLE. COORDINATE W/ MOVING COMPNAY ON WHAT NEEDS TO STAY AND WHAT CAN BE REMOVED, PRIOR TO MOVING PORTABLE.

8. FIELD VERIFY EXISTING UTILITIES BELOW GRADE AT NEW SITE AT CEDAR FALLS HIGH SCHOOL PRIOR TO DIGGING.



NORTH 1 OVERALL SITE PLAN
1" = 30'-0"

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed architect under the laws of the State of Iowa.

Printed or typed name — Date

Signature

Registration expires

GENERAL AND ARCHITECTURAL SERIES
Pages or sheets covered by this seal

MATERIALS LEGEND:

FINISH CONTOURS	GYPSUM BOARD
EXISTING CONTOURS	PLYWOOD
EARTH	ACOUSTICAL BOARD
GRAVEL	MASONRY
BRICK	STEEL
CONCRETE	DIMENSION LUMBER
PARTICLE BOARD	ALUMINUM
PRECAST CONCRETE	FINISH LUMBER
RIGID INSULATION	BATT INSULATION

SHEET INDEX:

0. GENERAL
G0.01 TITLE SHEET

5. ARCHITECTURAL
A1.10 SITE PLAN
A1.11 FLOOR PLAN & CRAWL SPACE/ FOUNDATION PLAN & DETAILS
A2.01 EXTERIOR ELEVATIONS
A3.01 STAIR & RAMP SECTIONS

8. MEP
ME000 COVER SHEET/SITE PLAN
ME100 MEP FLOOR PLANS
ME200 SPECIFICATIONS

NORTH 2 SOUTHDALE LOCATION MAP
1/4" = 1'-0"

NORTH 3 CFHS LOCATION MAP
1/4" = 1'-0"

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MEP ENGINEER
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REVISIONS:

Description	Date	No.

OWNER SIGN-OFF:

DATE	NAME

CEDAR FALLS COMMUNITY SCHOOL DISTRICT
CFHS PORTABLE RELOCATION
1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

PROJECT NO: 17106

DATE: 1.23.2018

SHEET SET: 95% REVIEW DOCUMENTS

SHEET NAME: TITLE SHEET

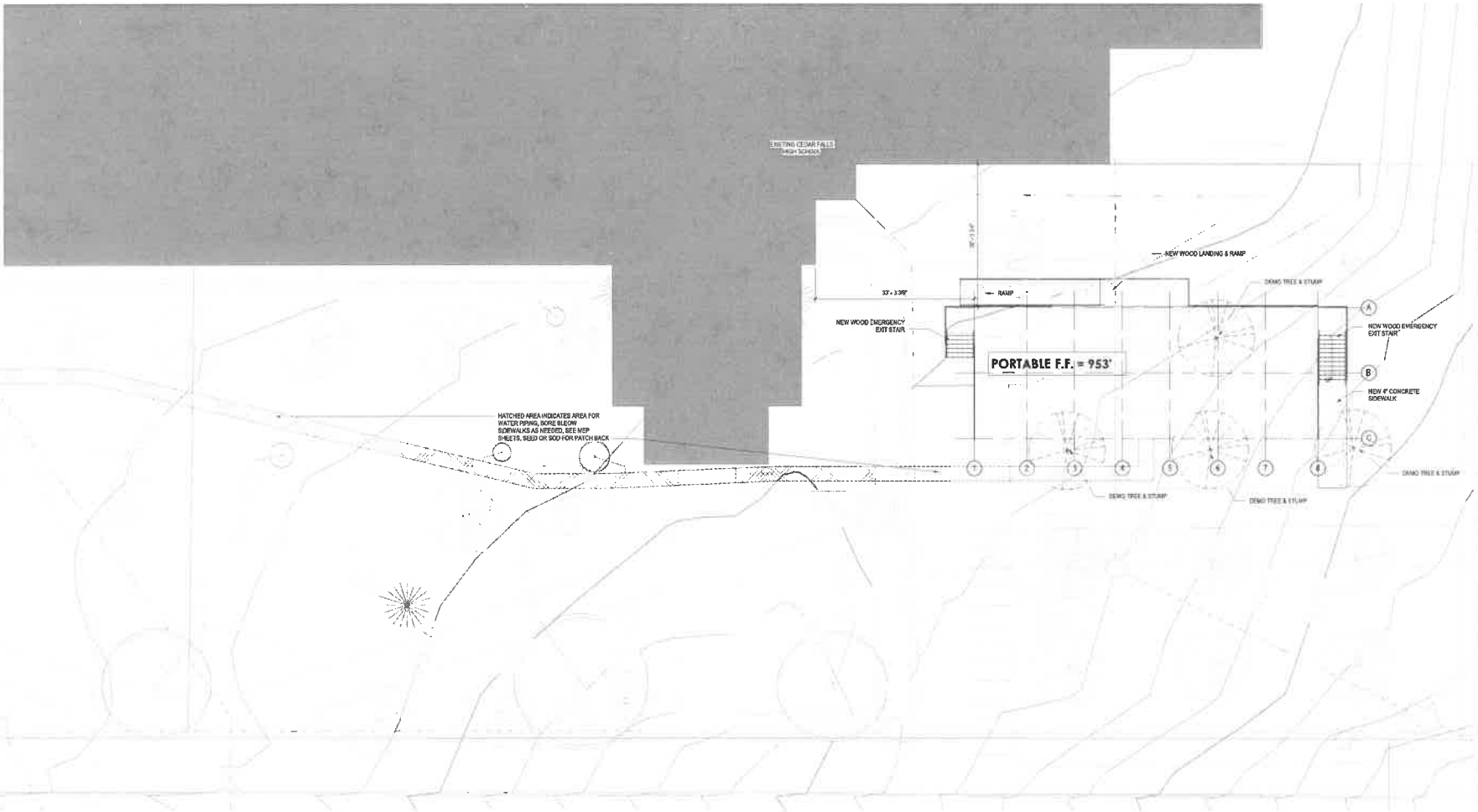
SHEET: G0.01

GENERAL SITE PLAN NOTES:

1. DEMO TREES & STUMPS AS SHOWN ON PLAN
2. SEED ALL DISTURBED AREAS (SOD ALTERNATE #1)
3. BOTTOM OF ALL PIERS TO BE 48" BELOW GRADE
4. FINISHED FLOOR TO BE @ 953' PER SITE PLAN
5. VERIFY EXISTING UTILITIES BELOW GRADE PRIOR TO DIGGING.
6. FIELD VERIFY EXISTING PORTABLE STRUCTURE BEFORE MOVING FROM SOUTHDALE. COORDINATE WITH MOVING COMPANY WHAT NEEDS TO STAY AND WHAT CAN GET REMOVED BELOW PORTABLE
7. PROTECT ALL EXISTING PAVING, REPLACE DAMAGED AREAS TO MATCH ADJACENT.
8. PROTECT EXISTING TREES NOT CALLED OUT AS DEMO'D.

GENERAL DEMO SITE PLAN NOTES:

1. DEMO EXISTING PIERS, CONCRETE PADS & GRANULAR FILL @ SOUTHDALE
2. SEED OR SOD ANY DISTURBED AREAS @ SOUTHDALE
3. DISCONNECT PORTABLE MEP @ SOUTHDALE, SEE MEP SHEETS



1 SITE PLAN
1" = 10'-0"

NORTH

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PROJECT NO: 17106

DATE: 1.23.2018

SHEET SET: 95% REVIEW DOCUMENTS

SHEET NAME: SITE PLAN

SHEET: A1.10

SHEET RESPONSIBILITY: HARTDALE
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GENERAL NOTES:

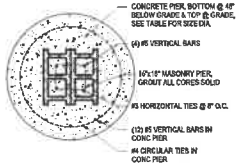
1. ANY DAMAGE TO INTERIOR OF PORTABLE CLASSROOM DURING MOVE MUST BE REPAIRED TO MATCH ADJACENT SURFACE.

2. PORTABLE WILL BE MOVED AS (1) PIECE. COORDINATE W/ MOVING COMPANY AS WHAT NEEDS TO REMAIN BELOW PORTABLE AND WHAT MUST BE REMOVED.

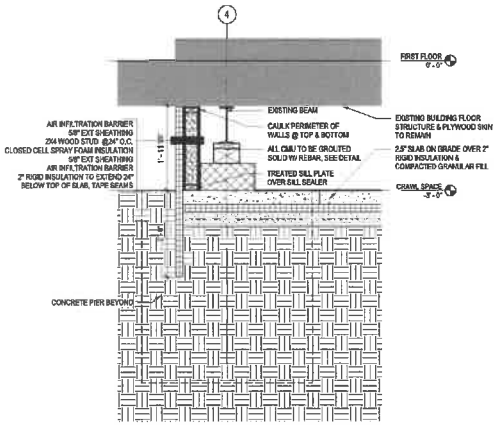
PIER SIZE (DIA):

32"	36"	3'-4"x3'-4"	6'-4"x6'-4"
1A, 1C	2A, B, C	1B, 5B	4B, 5B
6A,B,C	3A, B, C		
	4A, 4C, 4.5B		
	5A, 5C,		
	6A, B, C		
	7A, B, C		

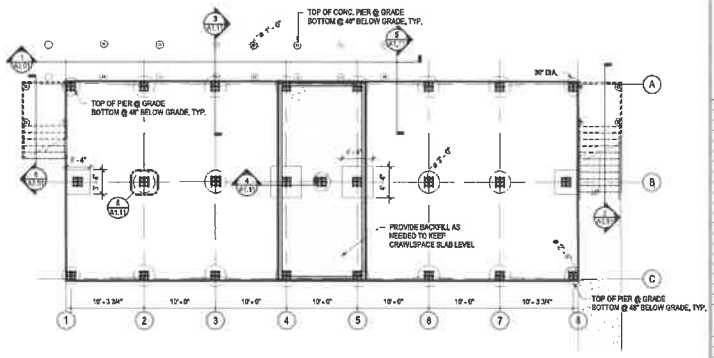
*- ALL OTHER CONCRETE PIERS TO BE 12" DIA (WOOD RAMP & STAIRS)



6 TYPICAL PIER DETAIL
3/4" = 1'-0"

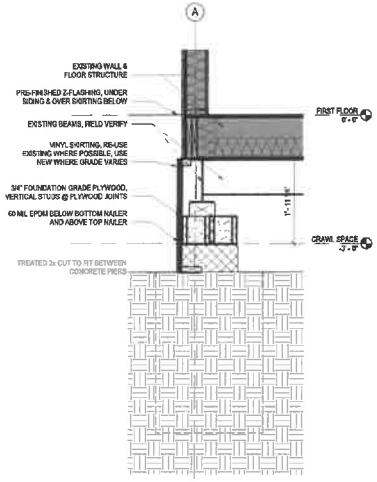


4 INSULATED CRAWL SPACE WALL SECTION
3/4" = 1'-0"

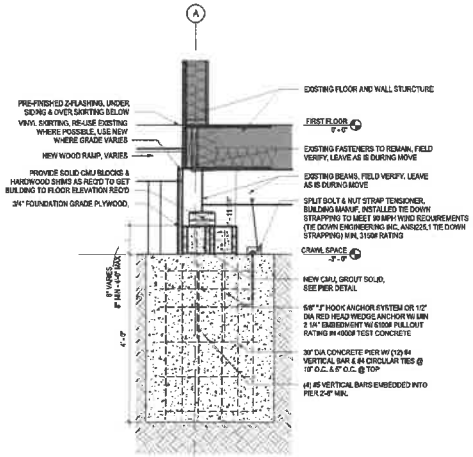


NORTH

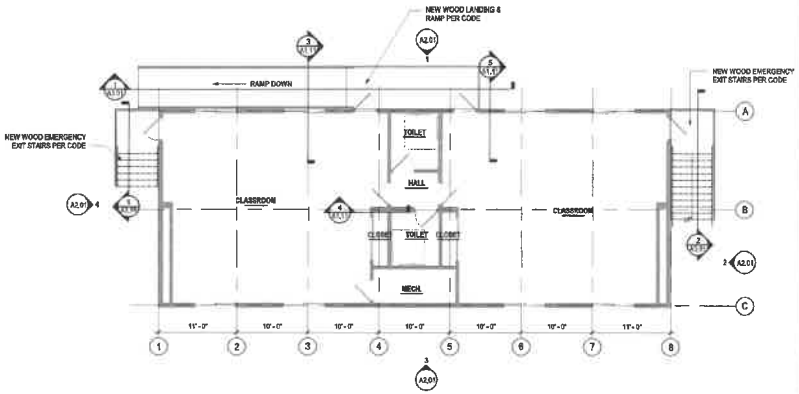
2 CRAWL SPACE & FOUNDATION
1/8" = 1'-0"



5 CRAWL SPACE SKIRTING SECTION
3/4" = 1'-0"



3 TYPICAL PIER DETAIL
3/4" = 1'-0"



NORTH

1 1ST FLOOR PLAN
1/8" = 1'-0"

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Description	Date	No.

OWNER SIGN-OFF:
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CEDAR FALLS COMMUNITY SCHOOL DISTRICT
CFHS PORTABLE RELOCATION
1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

PROJECT NO: 17106

DATE: 1.23.2018

SHEET SET: 95% REVIEW DOCUMENTS

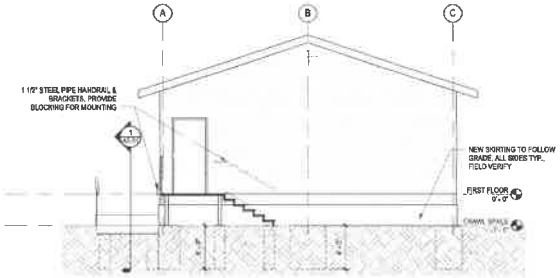
SHEET NAME: FLOOR PLAN & CRAWL SPACE/ FOUNDATION PLAN & DETAILS

SHEET: A1.11

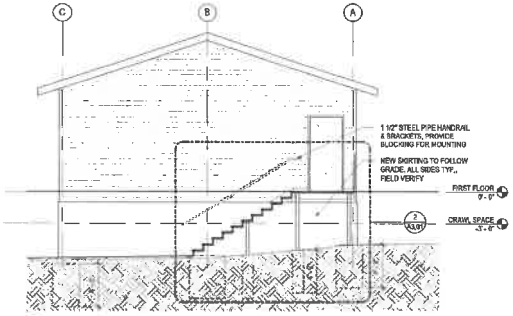
SHEET RESPONSIBILITY: INVISION 1/18/2018 3:34:21 PM \\Sherver-nas\company\Projects\20-7\17106_CFCSD_PortableRelocation\Drawings\Modeling\17106_CFHS Portable Relocation_Central.rvt

GENERAL ELEVATION NOTES:

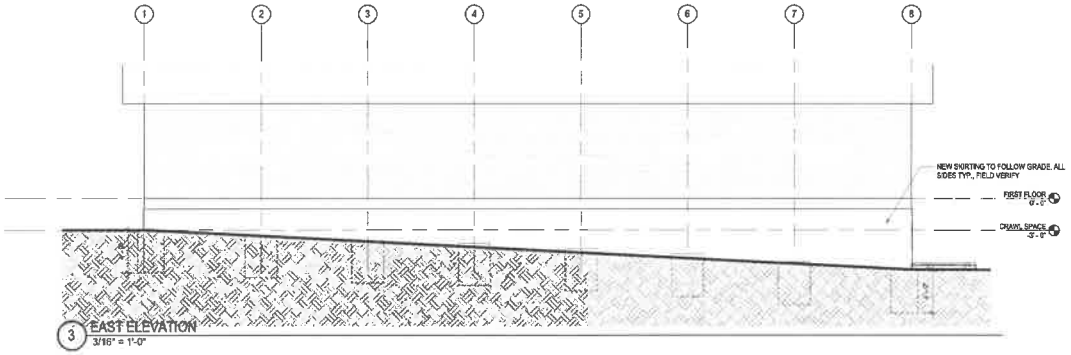
1. FIELD VERIFY GRADE TO MATCH SITE PLAN PRIOR TO CONSTRUCTION.
2. STAIRS & RAMPS MUST MEET CODE.



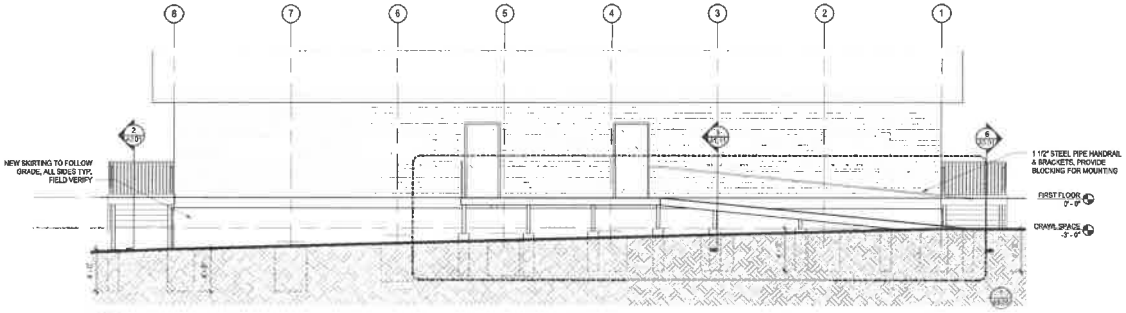
4 SOUTH ELEVATION
3/16" = 1'-0"



2 NORTH ELEVATION
3/16" = 1'-0"



3 EAST ELEVATION
3/16" = 1'-0"



1 WEST ELEVATION
3/16" = 1'-0"

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PROJECT NO: 17106

DATE: 1.23.2018

SHEET SET: 95% REVIEW DOCUMENTS

SHEET NAME: EXTERIOR ELEVATIONS

SHEET: A2.01

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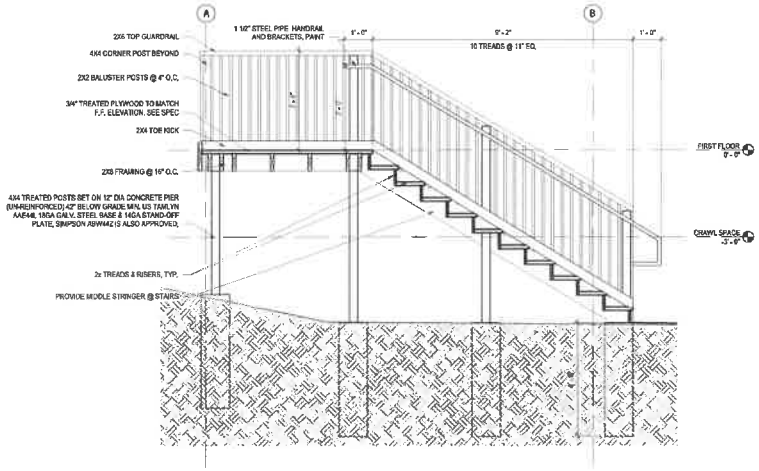
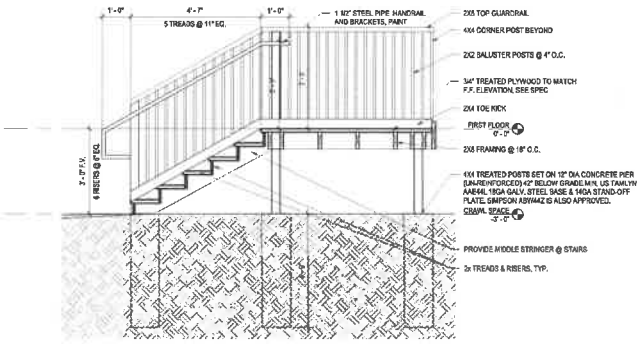
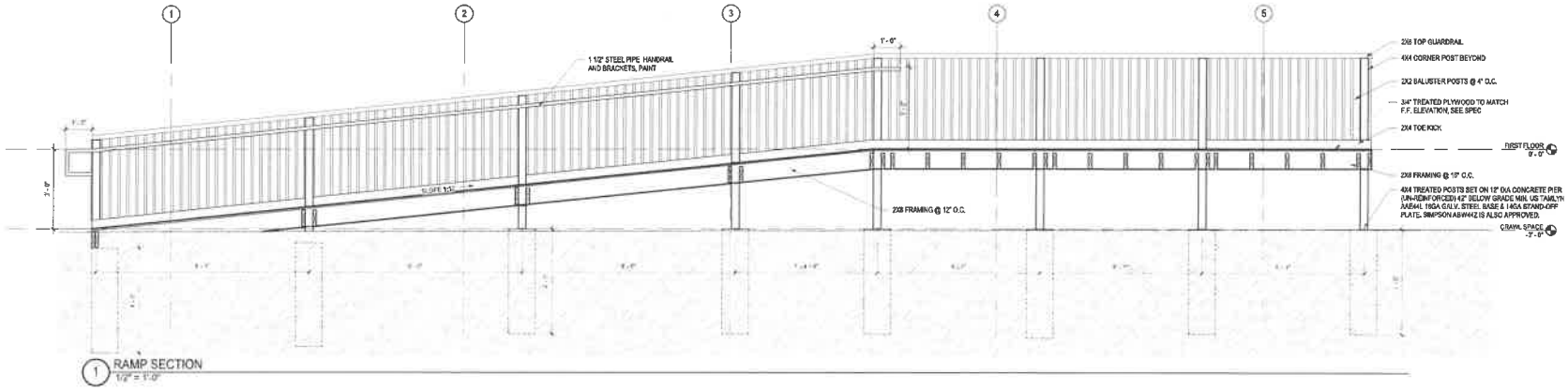


2 EXIT STAIR SECTION - NORTH
1/2" = 1'-0"



6 EXIT STAIR SECTION - SOUTH
1/2" = 1'-0"



1 RAMP SECTION
1/2" = 1'-0"

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CFHS PORTABLE RELOCATION
1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

PROJECT NO:
17106

DATE:
1.23.2018

SHEET SET:
95% REVIEW DOCUMENTS

SHEET NAME:
STAIR & RAMP SECTIONS

SHEET:
A3.01

CEDAR FALLS HIGH SCHOOL PORTABLE RELOCATION

1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

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MECHANICAL SYMBOLS LIST

NOTE: NOT ALL SYMBOLS SHOWN MAY BE REQUIRED FOR THIS PROJECT

PLUMBING

- DOMESTIC COLD WATER LINE - CW
- SANITARY SEWER LINE BEYOND BUILDING
- STORM SEWER LINE BEYOND BUILDING

PIPING SPECIALTIES

- PIPE REDUCER
- PIPE BRIDGE
- PIPE CAP
- BACKFLOW PREVENTER
- BALL VALVE
- WALL HYDRANT
- CURB STOP

MISCELLANEOUS

- EXISTING LINE TO REMAIN
- EXISTING LINE TO BE REMOVED
- EXISTING LINE TO BE ABANDONED
- POINT OF NEW CONNECTION
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- EXISTING TO BE RELOCATED

ELECTRICAL SYMBOLS LIST

NOTE: NOT ALL SYMBOLS SHOWN MAY BE REQUIRED FOR THIS PROJECT

WIRING DEVICES

- DUPLEX WALL RECEPTACLE
- DUPLEX WEATHERPROOF GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
- QUADRUPLEX RECEPTACLE
- DUPLEX CEILING RECEPTACLE
- JUNCTION BOX

EQUIPMENT WIRING

- DISCONNECTING MEANS
- WEATHERPROOF DISCONNECTING MEANS

DISTRIBUTION

- SUBPANELBOARD PANEL
- PUSHBUTTON PANEL
- TRANSFORMER
- CT CABINET
- METER

COMMUNICATIONS SYSTEMS

- TELEPHONE OUTLET ON WALL
- TELEPHONE OUTLET ABOVE COUNTER BACKSPLASH
- TELEPHONE OUTLET FOR WALL MOUNTED TELEPHONE
- DATA OUTLET ON WALL
- DATA OUTLET ON WALL WITH 2 OF JACKS
- DATA OUTLET ABOVE COUNTER BACKSPLASH
- WIRELESS ACCESS POINT
- COMBINATION PHONE/DATA OUTLET ON WALL
- COMBINATION PHONE/DATA OUTLET ABOVE COUNTER
- TELEVISION OUTLET ON WALL
- WALL SPEAKER
- CEILING SPEAKER
- INTERCOM PUSH BUTTON
- MICROPHONE OUTLET ON WALL
- MICROPHONE OUTLET ON FLOOR
- MICROPHONE OUTLET IN WALL
- MICROPHONE OUTLET IN FLOOR
- CLOCK LOCATION
- CLOCK LOCATION - DOUBLE FACE

FIRE ALARM & DETECTION

- DUCT SMOKE DETECTOR
- SMOKE DETECTOR - CEILING MOUNTED
- HEAT DETECTOR - RATE OF RISE
- HEAT DETECTOR - FIXED TEMPERATURE
- FIRE ALARM PULL STATION
- FIRE ALARM HORN/STROBE - WALL MOUNTED
- FIRE ALARM HORN/STROBE - CEILING MOUNTED
- FIRE ALARM SPEAKER - WALL MOUNTED
- FIRE ALARM SPEAKER - CEILING MOUNTED
- FIRE ALARM SPEAKER/STROBE - WALL MOUNTED
- FIRE ALARM SPEAKER/STROBE - CEILING MOUNTED
- FIRE ALARM STROBE LIGHT - WALL MOUNTED
- FIRE ALARM STROBE LIGHT - CEILING MOUNTED
- FIRE ALARM RELAY
- FIRE ALARM HOLD-OPEN CONNECTOR
- FIRE/SMOKE DAMPER CONNECTION
- SPRINKLER TAMPER SWITCH MONITORING
- SPRINKLER FLOW SWITCH MONITORING
- POST INDICATOR VALVE MONITORING
- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUNCIATOR PANEL
- SPRINKLER CONTROL BOX

MISCELLANEOUS

- EXISTING - TO REMAIN
- EXISTING - TO BE RELOCATED
- EXISTING - TO BE ATTACHED
- CONDUIT
- UNDER GROUND CONDUIT
- EMPTY CONDUIT
- POINT OF NEW CONNECTION
- WEATHERPROOF
- ABOVE FINISHED FLOOR
- ABOVE FINISH GRADE

SITE GENERAL NOTES:

A. UTILITIES SHOWN ARE INDICATED SCHEMATICALLY. CONTRACTORS SHALL VERIFY ALL DEPTHS AND ALL LOCATION/S/ DIMENSIONS PRIOR TO EXCAVATING. ALL UTILITIES MAY NOT BE SHOWN.

B. REFER TO CIVIL DRAWINGS FOR ADDITIONAL SITE UTILITIES.

C. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION ON EXISTING AND NEW SITE CONDITIONS.

D. ALL UNDERGROUND UTILITIES, PIPING, ETC. SHALL BE LOCATED EXACTLY BEFORE DIGGING.

E. ANY BACKFILL SHALL BE TAMPED AND COMPACTED TO PREVENT FUTURE SETTLING. ALL EXCESS DIRT SHALL BE CLEARED FROM THE AREA AND DISPOSED OF.

F. MECHANICAL AND ELECTRICAL CONTRACTORS SHALL REPAIR ALL DISTURBED SURFACES SUCH AS SIDEWALKS, DRIVEWAYS, STREETS, GRASS, AND CONCRETE. REPLACED SURFACES SHALL MATCH EXISTING.

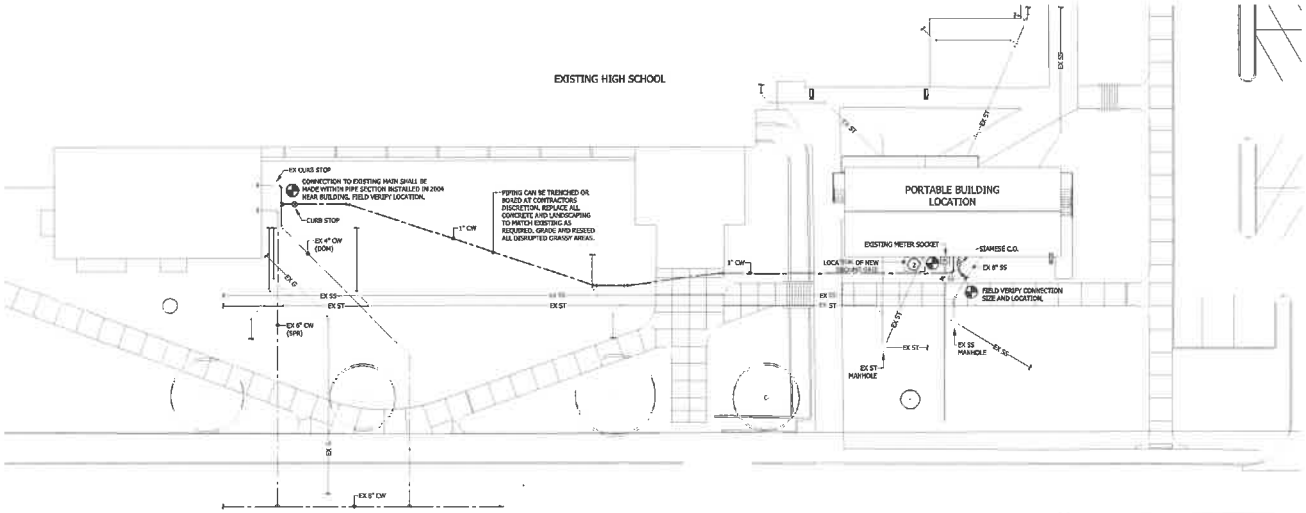
G. CONTRACTOR IS RESPONSIBLE FOR DOING ALL WORK PER LOCAL RESPECTIVE UTILITY REQUIREMENTS.

H. VERIFY EXACT LOCATIONS OF UTILITY CONNECTIONS PRIOR TO START OF WORK.

SITE REFERENCED NOTES:

(NOT ALL NOTES MAY BE APPLICABLE TO THIS SHEET)

1. SECONDARY CONDUIT AND WIRE FROM ELECTRICAL PEDESTAL TO NEW PORTABLE BUILDING SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. FURNISH AND INSTALL (2) 250 MCM THWN-2 WIRE IN 2-1/2" SCH 40 PVC CONDUIT FROM PEDESTAL TO NEW PORTABLE BUILDING, INSTALL TRACER WIRE AND UNDERGROUND WARNING TAPE AS REQUIRED BY THE SPECIFICATIONS.
2. LOCATION OF NEW GROUND FIELD FOR PORTABLE BUILDING. BOND TO GROUND BAR IN ELECTRICAL PANEL. GROUND PER SPECIFICATIONS.



MEP SITE PLAN
1" = 20'-0"

SHEET INDEX	
ME000	COVER SHEET / SITE PLAN
ME100	MEP FLOOR PLANS
ME200	SPECIFICATIONS

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa. My license renewal date is December 31, 2018.

Method J. Bracht — Date

Pages or sheets covered by this seal:
Specification Div. - SEE DRAWINGS
Drawings: SEE SHEET INDEX

NOTE:
UTILITIES SHOWN ARE INDICATED SCHEMATICALLY. CONTRACTORS SHALL VERIFY ALL DEPTHS AND ALL LOCATIONS/DIMENSIONS PRIOR TO EXCAVATING. ALL UTILITIES MAY NOT BE SHOWN.

NOTE:
VERIFY BUILDING DIMENSIONS FOR ROUGH-IN WORK WITH ARCHITECT'S DRAWINGS.

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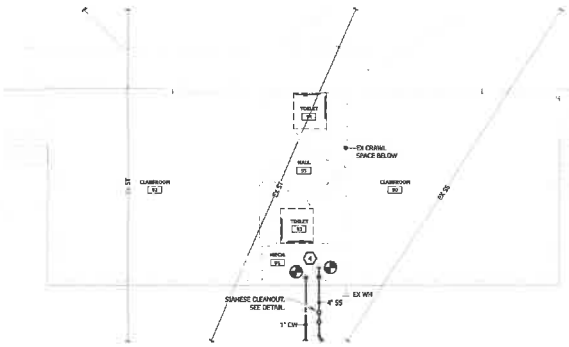
CEDAR FALLS COMMUNITY SCHOOL DISTRICT:
CFHS PORTABLE RELOCATION
1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

PROJECT NO: 17106
DATE: 1.22.2018
SHEET SET: REVIEW SET
SHEET NAME: COVER SHEET/SITE PLAN
SHEET: ME000

17-166 CFHS PORTABLE RELOCATION



1 FIRST FLOOR MECHANICAL PLAN
1/8" = 1'-0"

GENERAL NOTES:

A. ALL DEVICES SHOWN ARE EXISTING. THE PORTABLE BUILDING IS EXISTING AND MOVING FROM SOUTHDALE.

B. ALL SERVICES SHALL BE RECONNECTED AND TESTED FOR A COMPLETE AND WORKING SYSTEM ALL SERVICES SHALL BE RECONNECTED AND TESTED FOR A COMPLETE AND WORKING SYSTEM.

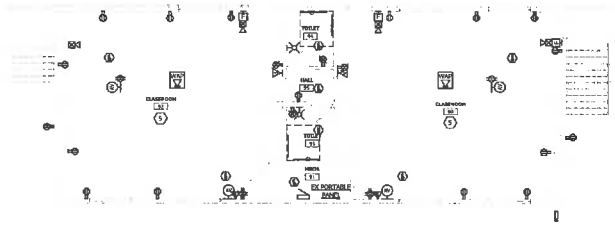
C. COORDINATE ALL CONNECTIONS TO HIGH SCHOOL SERVICES WITH OWNER PRIOR TO START OF THE PROJECT.

D. INTERCOM SYSTEM IS AN OLDER SYSTEM AND CONTRACTORS SHALL VERIFY FINAL CONNECTIONS AND ACCESSORIES NEEDED FOR A COMPLETE AND WORKING SYSTEM PRIOR TO BID.

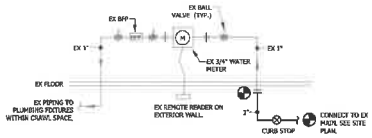
REFERENCED NOTES:

(REF ALL NOTES MAY BE APPLICABLE TO THIS SHEET)

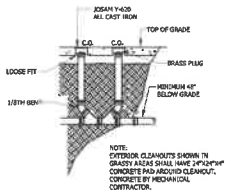
1. EXISTING SIMPLEX 4100 FIRE ALARM PANEL IN THE FRONT OFFICE. EXISTING SIMPLEX 4100 FIRE ALARM PANEL IN THE FRONT OFFICE. ALL FIRE ALARM DEVICES SHALL BE REPLACED TO WORK WITH THE SIMPLEX PANEL. CONTRACTOR SHALL TIE ON TO THE EXISTING HIGH SCHOOL FIRE ALARM LOOP TO PICK UP THE ADDED DEVICES. VERIFY FOR ANY NEEDED ACCESSORIES NEEDED PRIOR TO BID.
2. FOR BIDDING PURPOSES ONLY, CONTRACTOR SHALL PROVIDE 3 ADDITIONAL DATA DROPS - ONE AT EACH OF THESE APPROXIMATE LOCATIONS. VERIFY COVERAGE AND NEEDS WITH OWNER FOR OWNER PROVIDED CAMERAS. VERIFY EXACT LOCATIONS PRIOR TO ROUGH-IN.
3. PROVIDE THREE (3) 1" CONDUITS FOR LOW VOLTAGE SERVICES. ONE FOR FIRE ALARM, ONE FOR INTERCOM, AND ONE FOR FIBER BACKBONE. SERVICES INSIDE THE HIGH SCHOOL SHALL BE ABOVE CEILINGS OR IN EXISTING PATHWAYS. PENETRATE TO THE EXTERIOR AND ROUTE UNDERGROUND TO THE PORTABLE. THE LEAST AMOUNT OF CONDUIT ON THE EXTERIOR SHALL BE DESIRABLE BASED ON AESTHETICS.
4. CONNECT NEW SANITARY SEWER AND WATER PIPING TO EXISTING PLUMBING AND PIPING LOCATED WITHIN CRAWL SPACE. RECONNECT EXISTING PLUMBING AND PIPING IN CRAWL SPACE AS NECESSARY FOR RELOCATION OF PORTABLE.
5. ELECTRICAL CONTRACTOR SHALL MAKE ELECTRICAL AND LOW VOLTAGE CONNECTIONS BETWEEN THE TWO HALVES OF THE PORTABLE BUILDING FOR A COMPLETE AND WORKING SYSTEM.



4 FIRST FLOOR ELECTRICAL PLAN
1/8" = 1'-0"



3 EXISTING WATER METER DETAIL
No Scale

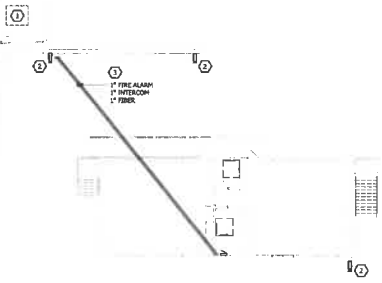


NOTE:
EXTERIOR CLEANOUTS SHOWN IN GRASSY AREAS SHALL HAVE 24"X24"X4" CONCRETE PAD AROUND CLEANOUT. CONCRETE BY MECHANICAL CONTRACTOR.

2 SIAMESE CLEANOUT DETAIL
No Scale

EXISTING PAGING SYSTEM

EXISTING TELECOM



5 FIRST FLOOR LOW VOLTAGE OVERALL PLAN
1/16" = 1'-0"

NOTE:
VERIFY BUILDING DIMENSIONS FOR ROUGH-IN WORK WITH ARCHITECT'S DRAWINGS.

PRELIMINARY
NOT FOR CONSTRUCTION

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WATERLOO | DES MOINES | IOWA CITY

REVISIONS:
Description Date No.

OWNER SIGN-OFF:
DATE NAME

CEDAR FALLS COMMUNITY SCHOOL DISTRICT
CFHS PORTABLE RELOCATION
1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

PROJECT NO:
17106

DATE:
1.22.2018

SHEET SET:
REVIEW SET

SHEET NAME:
MEP FLOOR PLANS

SHEET:
ME100

Section 22 1116 DOMESTIC PLUMBING PIPING
PART 1 GENERAL
Submittals:

Product Data: Provide data on pipe materials, pipe fittings, valves and accessories. Provide manufacturers catalog information. Indicate valve data and ratings. This contractor is required to submit full scale utility coordination drawings for review and approval prior to beginning installation.

Quality Assurance:
Manufacturer's name and pressure rating marked on valve body.
Welder's Certification: In accordance with ASME Section IX.
All cast iron soil pipe and fittings shall be installed according to the latest edition of the Cast Iron Soil Pipe and Fittings Handbook.

Part 2 Products
Sanitary Sewer Pipe (Below Grade):
PVC Pipe: Schedule 40:
1. ASTM D2665.
2. Fittings: PVC.
3. Joints: ASTM D2855 solvent weld with ASTM D2564 solvent cement.

Water Piping (Below Grade):
Cross-Linked Polyethylene (PEX)
1. ASTM F876, SDR 9 polyethylene PEX-a tubing
a. Rated for continuous operation by the Plastic Pipe Institute (PPI) at the following conditions: 160 psi @ 73.4 deg F, 100 psi @ 180 deg F, 80 psi @ 200 deg F.
b. Oxygen barrier shall limit oxygen diffusion through the piping to a maximum of 0.32mg/(m2*day) at a water temperature of 104 deg F.
c. Minimum bend radius for cold bending of the pipe shall not be greater than 6 times the outside diameter of the pipe. Provide bend supports supplied by the tubing manufacturer for all bends with a radius tighter than this requirement.
d. Plenum Rating: Pipe shall not exceed a maximum flame spread/smoke emission rating of 25/50 in compliance ASTM E84. Provide metal shields clipped to bottom side of piping or fully insulate piping as necessary to meet this requirement.
e. Fittings: ASTM F2080 or ASTM F1960 cold-expansion, compression sleeve fittings. Provide specific fitting types as required to maintain warranty of piping manufacturer.

Manufacturer shall provide components of the buried/embedded PEX tubing system including all plastic piping, fittings, manifolds, supports, and any other ancillary items required for a complete installation.

Warranty: Plastic piping shall carry a 25-year non-prorated warranty against failure due to defect in material and workmanship. Manifolds, headers, thermostats, actuators, and other ancillary components shall be warranted for 12 months from date of substantial completion.

Ball Valves:
Up To and Including 2-1/2 Inches: Bronze two piece full port body, stainless steel ball and stem. Teflon seats and stuffing box ring, lever handle, solder or threaded ends.
Manufacturer: Appollo #77-240, Watts #B-6080-SS or engineer approved equal.

Fittings:
All fittings shall be of the same material as the pipe. Material joining the fitting to the pipe shall be free from cracks and shall adhere tightly to each joining surface.
All fittings shall be capped with a plug of the same material as the pipe, and gasketed with the same gasket material as the pipe joint or be of material approved by the engineer. The plug shall be able to withstand all test pressures involved without leakage.

PART 3 EXECUTION
Installation:
Install in accordance with manufacturer's instructions.
Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
Remove scale and dirt, on inside and outside, before assembly.
Prepare piping connections to equipment with flanges or unions.
Provide non-conducting dielectric connections wherever jointing dissimilar metals.
Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
Install piping to conserve building space and not interfere with use of space.
Group piping whenever practical at common elevations.
Install piping to allow for expansion and contraction without stressing pipe, joints or connected equipment.
Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
Provide access where valves and fittings are not exposed. Coordinate size and location of access doors.
Where pipe support members are welded to structural building frame, scrape, brush clean and apply one coat of zinc rich primer to welding.
Prepare exposed, unfinished pipe, fittings, supports and accessories not pre-finished, ready for finish painting.
Install bell and spigot pipe with bell end upstream.
Install valves with stems upright or horizontal, not inverted.Install water piping to ASME B31.9.
All cast iron soil pipe shall be installed in accordance with cast iron soil pipe institute handbook (latest edition).
Horizontal lengths of all branch sanitary runs shall not exceed 80 linear feet.
Install unions downstream of valves and at equipment or apparatus connections.
Install brass male adapters each side of valves in copper piped system. Solder adapters to pipe.
Slope water piping minimum 0.25% and arrange to drain at low points.
Prior to starting work, verify system is complete, flush and clean.
The plumbing contractor is to make sure sanitary sewer lines are running smooth by running a snake through the sanitary sewer lines prior turning the facility over to the owner.

DIVISION 27 - COMMUNICATIONS

27 0050 BASIC COMMUNICATIONS REQUIREMENTS

The electrical scope for this project shall consist (but not exclusive) of the following:
Existing electrical demolition
Installation of device outlets and associated wiring
Rough-in for low voltage services, including device pathways.
All telecom wiring
Any items shown in the construction documents or typically associated with the complete construction of this type.

The electrical scope does not include the following:
Telecom system electronics
Telecom system terminations

All work shall be in accordance with the following Codes and Standards:
International Existing Building Code, 2015
International Building Code (IBC) 2015
Iowa State Building Code, 2015
National Electric Code (NEC) NFPA 70, 2017

Rough-in for low voltage services shall consist of a single gang steel back box and a 1" EMT conduit with plastic bushings to above accessible ceiling. Provide blank stainless steel faceplate to cover single gang opening.

All wiring shall be in conduit. No splices shall be made to any service in inaccessible locations.

This contractor shall coordinate with other contractors on site to assure adequate clearances and access to devices per national and local code.

Before beginning construction, the contractor shall check and verify with the owner each item of existing equipment that must be removed. The owner will designate which items of material or equipment not reused that he may wish to keep. The contractor shall then remove these items with care and store in a location designated by the owner for the owner's disposal.

27 0528 PATHWAYS FOR COMMUNICATIONS SYSTEMS

Install polyethylene pulling string in each empty conduit over ten feet (10') in length or containing a bend.

This contractor shall provide blank cover plates for all indicated telephone and computer outlets.

All conduit sizes shall be verified with the owner prior to installation.

Provide one inch conduit with box from each outlet location, above accessible ceiling, to within 12" of nearest cable tray where applicable.

Maintain all existing electrical systems in service.

DIVISION 28 - FIRE ALARM AND SECURITY

28 0050 BASIC ELECTRONIC SAFETY AND SECURITY REQUIREMENTS

The electrical scope for this project shall consist (but not exclusive) of the following:
Existing electrical demolition
Installation of devices and associated wiring
Life safety connections to mechanical equipment.
Any device contained in our drawings or for a complete construction of this type.

All work shall be in accordance with the following Codes and Standards:
International Existing Building Code, 2015
International Building Code (IBC) 2015
Iowa State Building Code, 2015
National Electric Code (NEC) NFPA 70, 2017

All wiring shall be in colored conduit unless exposed. No splices shall be made to any service in inaccessible locations.

This contractor shall coordinate with other contractors on site to assure adequate clearances and access to devices per national and local code.

Before beginning construction, the contractor shall check and verify with the owner each item of existing equipment that must be removed. The owner will designate which items of material or equipment not reused that he may wish to keep. The contractor shall then remove these items with care and store in a location designated by the owner for the owner's disposal.

Clearance around the conduit, cable trays, and all other devices or assemblies passing through fire or smoke rated construction shall be sealed to maintain the rated integrity of the construction (1 hr., 2 hrs, etc.). This contractor shall verify rating and location of all such construction with the architectural drawings and seal all penetrations.

28 3100 FIRE DETECTION AND ALARM

Provide new wiring and devices necessary for a complete system as per current codes.

Installer: Company specializing in installing the products specified in this section with minimum 3 years experience. A job site supervisor is to be present on-site at all times during installation. The supervisor shall be a NICET Level II (or higher) technician. All work relating to the fire alarm shall be performed by a NICET Level I (or higher) technician. A list of technicians with any level of responsibility with this project shall be submitted for review and acceptance during the submittal process with copies of their NICET Certifications and manufacturer's training certificates for the system. Installer shall be capable of answering trouble calls from a permanently maintained location less than 100 miles from project site.

Maintain all existing fire alarm systems in service, Existing fire alarm control panel to remain. Expand panel as necessary to provide sufficient initiating and indicating circuits.

Shop Drawings: Provide a building layout showing each device and wiring connection required.

Area thermo-detectors shall be 135 deg F rate of rise and fixed. They shall cover 2500 sq. ft. Compatible with existing fire alarm control panel.

Area smoke detectors shall operate on the photo-electric principle using a stable LED light source and a silicone photodiode to form a very highly accurate means of smoke detection. Shall be so designed for a 360 degree smoke entry for optimum response. Regardless of sensitivity setting the detector stability shall be unaffected by high air velocity. Compatible with existing fire alarm control panel.

Horn/Strobe Indicators: Wall mounted to comply with Americans with Disabilities Act and compatible with existing fire alarm control panel. Flush mounted combination unit with red thermoplastic faceplate, "FIRE" in white letters.

Strobe Only Unit: Xenon light.

Fire Alarm Power Branch Circuits: Building wire as specified.

28 3100 FIRE DETECTION AND ALARM (continued)

Initiating Device and Indicating Appliance Circuits: All fire alarm wiring shall be in [illegible] conduit. Concealed in finished area. Wiring shall be as specified by the manufacturer.

Total load carrier by conductors in each conduit at any voltage shall be limited to 5 am[illegible] voltage above 30 VAC-DC shall be in a separate conduit. Wire shall be color coded as [illegible] Power Circuit: Violet (+) and Blue (-); Signal Circuit: Red (+) and Black (-); Fan [illegible] Circuit: Brown (+), White (-) and Green for ground.

Provide insulated bushing on conduit ends and wirenold ends.

Install products in accordance with manufacturer's instructions.

This contractor shall relocate all existing devices from existing ceilings and mount on new ceilings. New ceilings are indicated on the drawings. Existing devices may be reused where appropriate.

Test in accordance with NFPA 72.

Upon completion of the fire alarm system installation, this contractor shall provide a written statement advising the architect of completion and to be in compliance with fire and electrical codes and in accordance with wiring diagrams, instructions and directions provided by the manufacturer.

Representative of the manufacturer shall certify the system complete and that the owner has received adequate instructions in system operation.

The fire alarm system manufacturer shall approve the low voltage cable. It shall have the word "FIRE" printed on it. All low voltage electrical cable that is installed as part of the new fire alarm system shall be plenum rated cable where required.

he electrical contractor shall document all alarms associated to the fire alarm system and contact T owner prior to performing general demolition.

Clean and repair existing materials that remain or are to be reused. Clean exposed surfaces and check for tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement for panels. Remove existing luminaires for cleaning. Use mild detergent to clean all exterior and interior surfaces; rinse with clean water and wipe dry. Replace lamps, ballasts, and broken electrical parts.

PRELIMINARY
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REVISIONS: Description Date No.

OWNER SIGN-OFF:
DATE NAME

CEDAR FALLS COMMUNITY SCHOOL DISTRICT
CFHS PORTABLE RELOCATION
1015 DIVISION ST.
CEDAR FALLS, IOWA 50613

PROJECT NO: 17106
DATE: 1.22.2018
SHEET SET: REVIEW SET
SHEET NAME: SPECIFICATIONS
SHEET: ME200

NOTE:
VERIFY BUILDING DIMENSIONS FOR ROUGH-IN WORK WITH ARCHITECT'S DRAWINGS.

	Cost Opinion		
Item	Description	Total	
	General Conditions 10%	$	15,000
	Bonds	$	1,500
	Permits	$	1,500
	General Construction Allowance	$	25,000
	Cast-in-Place Conc, Slabs, Masonry, etc.	$	25,000
	Steel Handrails & Rough Carpentry	$	15,000
	Thermal Insulation	$	2,000
	Vinyl Skirting	$	5,000
	EPDM Membrane	$	2,000
	MEP	$	35,000
	Earthwork & Backfill	$	13,000
	Seed/Sod	$	5,000
	Tree Demo	$	3,000
	Concrete Demo	$	8,000
	Construction Total	$	156,000
	Bid Estimate	**150-165k**	
	Alysworth Moving	$	23,000
	Grand Total Estimate	**175-190k**	