ADDENDUM NO. 1

1.01 NOTICE TO BIDDERS

A. Date: 29 March 2013

B. From: Bahr, Vermeer and Haecker Architects, Ltd.

C. To: Prospective Bidders.

D. Project: Wilber-Clatonia High School HVAC Renovation – Final Phase & Interior Renovations

Wilber, Nebraska

E. This addendum is issued by the Architect to all bidders of record prior to receipt of proposals. Bidders shall acknowledge receipt of this addendum by so indicating on the Bid Form. Failure to do so may subject Bidder to disqualification.

F. All information and instructions given herein shall become a part of the Contract Documents.

G. This Addendum contains 6 total pages with 9 attachments.

1.02 PROJECT MANUAL – ARCHITECTURAL

A. Section 000110 – TABLE OF CONTENTS

1. Reference 'DIVISION 8 – OPENINGS'; clarification, the number of pages for Section 087100 shall be 10.

2. Reference 'DIVISION 25 – MECHANICAL'; add the following section to the list of mechanical sections:

   a. Section 232113.33 Ground-Loop Heat-Pump Piping..... 6

3. Reference 'DIVISION 31 – EARTHWORK'; delete the 'Not Used' and add the following sections to the list of earthwork sections"

   a. Section 312200 Grading..... 7
   b. Section 312316.13 Trenching..... 3
   c. Section 312316.26 Rock Removal..... 2
   d. Section 312500 Erosion Control..... 4

B. Section 064100 – ARCHITECTURAL WOOD CASEWORK

1. Reference Paragraph 3.01 MANUFACTURERS; add the following as approved manufacturers of custom cabinets:

   a. LSI Corporation of America
   b. Architectural Arts, 2200 East Ovid, Des Moines, IA 50313-4747

C. Section 087100 – DOOR HARDWARE

1. See Attachment "A" for the new specification Section 087100 – DOOR HARDWARE.

1.03 PROJECT MANUAL – MECHANICAL

A. PRIOR APPROVAL – MECHANICAL

1. The following manufacturers have received prior approval for bidding purposes subject to shop drawing review:

List Equipment Here	List Manufacturer Here
Centrifugal roof/wall exhausters	Acme
Exhaust Fan	Soler & Palau/Jenco
Roof Hood	Soler & Palau/Jenco
Spiral Duct	S.E.T. Duct MFG.
Water Source Heat Pumps	Carrier
Suction Diffusers	Patterson
Triple Duty Valves	Patterson
Expansion Tanks	Patterson
Air/Dirt Separators	Thrush
Flow Controls	Pro Hydronic Specialties
HVAC Pumps	Patterson
Bypass Chemical Feeder	General Treatment Products
Roof Hoods	Loren Cook
Bench Welding Hood	Ventaire
Dust Collector	Ventaire
Air and Dirt Separator	Bell & Gossett
Indirect Water Heaters	Lochinvar
Flow Control Valves	Nexus
Volume Control Dampers	United Enertech
Diffusers, Registers, & Grilles	Tuttle & Bailey
Louvers	United Enertech

1.04 PROJECT MANUAL – ELECTRICAL

A. PRIOR APPROVAL – ELECTRICAL

1. The following light fixture manufacturers have received prior approval for bidding purposes subject to shop drawing review:

Types 1, 1E, 2, 2E, 4, 4E, 6, 7, 7E, 9	Columbia
Type 3	Prescolite
Types 5, 5D	Dual-Lite
Type 8	Eclipse Lighting, Fail-Safe

1.05 PROJECT MANUAL – CIVIL

A. Section 312200 – GRADING

1. See Attachment "E" for the new specification Section 312200 – GRADING.

B. Section 312316.13 – TRENCHING

1. See Attachment "F" for the new specification Section 312316.13 – TRENCHING.

C. Section 312316.26 – ROCK REMOVAL

1. See Attachment "G" for the new specification Section 312316.26 – ROCK REMOVAL.

D. Section 312500 – EROSION CONTROL

1. See Attachment "H" for the new specification Section 312500 – EROSION CONTROL.

1.06 DRAWINGS – CIVIL

A. Sheet C1.1 – STORM WATER POLLUTION PREVENTION PLAN

1. See Attachment "J" for the new sheet, C1.1 – STORM WATER POLLUTION PREVENTION PLAN, which shows the required storm water pollution prevention plan and associated details.

1.07 DRAWINGS – ARCHITECTURAL

A. Sheet D1.2 – FIRST AND SECOND LEVEL DEMOLITION PLAN – AREA A

1. Reference Drawing A1 – FIRST LEVEL DEOMLITION PLAN –AREA A;

a. In Existing Classroom E18C, the existing northwest wall indicated to be demolished in Existing Classroom E18C is a 4" cmu wall, not a metal stud and gypsum board wall.
b. In Existing Classroom E18D, the existing northeast wall indicated to be demolished in Existing Classroom E18C is a 4" cmu wall, not a metal stud and gypsum board wall.
c. In Conference Room E42, protect the existing casework along the west wall during all phases of construction.
d. Clarification; the removal of the existing hollow metal frame and doors at the west end of Corridors E20 and E92 shall be included in the Base Bid.
e. Clarification; the removal of the existing hollow metal frame and doors at the north end and south end of Corridors E14 shall be included in Alternate No. 1.

B. Sheet A1.1 – FIRST LEVEL FLOOR PLAN – AREA A

1. Reference Drawing A1 – FIRST LEVEL FLOOR PLAN – AREA A;

a. In Conference/Board Room 105, a Type F3 wall shall be installed along the entire north wall, along the curved northeast wall, and along the west wall to the north jamb of the existing door in the west wall.
b. In Classroom 106, add a #5 Sheet Note tag just north of the #4 Sheet Note tag on the east wall.
c. In Classroom 107, add a #5 Sheet Note tag just north of the #4 Sheet Note tag on the west wall.
d. Clarification; the new aluminum frame and door, glazing, and associated hardware for Doors 115.3 and 115.4 shall be included in the Base Bid.
e. Clarification; the new aluminum frame and door, glazing, and associated hardware for Doors 115.2 and the new hollow metal frame, wood door, glazing, and associated hardware for Door 115.1 shall be included in Alternate No. 1.

f. Delete Plan Note #7 and replace with the following;

1) New floor safe supplied and installed by the general contractor. Floor safe shall be AMSEC Star Rectangular Body, Round Lift-Out Door Floor safe, Model No. B24 with optional water resistant dust cover. American Security Products, Co., 11925 Pacific Ave., Fontana, CA 92337. 1-951-685-9680. www.amsecusa.com Local Lincoln suppliers/dealers are available.

C. Sheet A1.4 – ROOF PLAN

1. Reference Drawing A21 – EXISTING CURB CAP DETAIL; contact the following company for information concerning the warranty for the existing EPDM roof.

a. Matt Schere
Getzschman Heating LLC.
1700 East 23rd Avenue North
Fremont, NE 68025
1 (800) 657-2158

D. Sheet A1.5 – ENLARGED FLOOR PLANS, PLAN DETAILS, & INTERIOR ELEVATIONS

1. Reference Drawing M22 – PLAN DETAIL; see Attachment "D" for the revised drawing of Drawing M22.

E. Sheet A2.1 – FIRST LEVEL REFLECTED CEILING PLAN – AREA A

1. Reference Drawing A1 – FIRST LEVEL REFLECTED CEILING PLAN – AREA A;

a. In Conference/Board Room 105 and in Classrooms 106, 107, and 108, provide and install a projection screen (Section 115213) suspended from the suspended acoustical tile ceiling. Verify final location with Architect.

F. Sheet A2.2 – FIRST LEVEL REFLECTED CEILING PLAN – AREA B

1. Reference Drawing A1 – FIRST LEVEL REFLECTED CEILING PLAN – AREA B; add the following to RCP NOTE #2:

a. The new metal stud and gypsum board bulkhead shall be constructed of 6" metal stud framing at 16" on center and shall be braced as required. The 6" metal stud framing shall be approximately 8'-0" tall and shall extend up to the existing roof deck. The new gypsum board bulkhead shall have 5/8" gypsum board on the entire exposed face to the gym and shall 5/8" gypsum board installed 6" above the acoustical tile ceiling. The 5/8" gypsum board shall be held off all existing structural members by 1". All exposed faces of the gypsum shall be painted. All HVAC and piping penetrations through the gypsum board bulkhead shall be sealed. Install vertical control joints in the gypsum board bulkhead at 20'-0" on center.

G. Sheet A9.4 – ROOM FINISH SCHEDULE, MATERIALS LIST, & H.M. FRAME ELEVATIONS

1. Reference the 'MATERIAL LIST; add the following to the 'MATERIALS LIST:

a. QT-1 American Olean
Type: Quarry Naturals
Style: 6" x 6"
Color: To be determined
Thickness: 1/2"
Grout: Latricrete Latapoxy – To be determined

2. Reference the 'ROOM FINISH SCHEDULE'; add the following comments to the 'RFS COMMENT LEGEND':

a. All existing rooms noted to receive new flooring material on Sheets A9.1, A9.2, and A9.2 shall receive new resilient base, RB-1.
b. In Corridors E21, E22, E25, E26, and E88, the existing cmu walls shall be painted where the existing metal lockers were removed and relocated to the new gypsum board walls. The new paint color shall match the existing paint color. The painting shall extend the entire height of the wall and shall extend along the wall until coming to a logical stopping point.
c. All new gypsum board walls and existing concrete columns in Corridors E21, E22, E25, and E26 shall be painted.

3. Reference the 'DOOR SCHEDULE'; delete the 'DOOR SCHEDULE' in its entirety and replace with the revised 'DOOR SCHEDULE' on Attachment "B".

4. Reference Drawing D18 – HOLLOW METAL FRAME TYPE ELEVATIONS;

a. See Attachment "B" for the revised drawing of Frame Type HM-3.

5. Reference Drawing G18 – ALUMINUM FRAME TYPE ELEVATIONS;

a. See Attachment "C" for the revised drawings of Frame Types AL-1, AL-2, and AL-3.

6. Reference Drawing L18 – DOOR TYPE ELEVATIONS;

a. See Attachment "C" for the revised drawing of Door Type A1.
b. See Attachment "C" for the revised drawing of Door Type WD2.
c. See Attachment "C" for the drawing of the new Door Type WD3.

1.08 DRAWINGS – STRUCTURAL

A. Sheet S2.0 – GENERAL NOTES AND DETAILS

1. Reference Drawing A9 – CURVED LINTEL DETAIL; the bottom elevation of the lintel shall be 10'-8" above finish floor. Field verify final elevation with Architect.

2. Reference Drawing D9 – TYPICAL STRUCTURAL LINTEL DETAIL; the bottom elevation of the lintel shall be 11'-4" above finish floor. Field verify final elevation with Architect.

1.09 DRAWINGS – MECHANICAL

A. Sheet M1.0 – Site Plan – Mechanical

1. Clarification; a SWPP will be required for the geothermal well field. See Sheet C1.1 (Attachment "J" of Addendum No. 1) for the requirements for the SWPP.

All topsoil shall be removed from geothermal well field area and stockpiled before any drilling or trenching has started. After all of the drilling and trenching required for the geothermal well field has been completed, the well field area shall be returned to the original grades and fine grading shall be completed so the Owner can complete seeding of the area.

B. Sheet M3.2 First Floor Partial HVAC Plan-Area B

1. Supply and Return penetrations on RTHP-1 shall be located within Shower E108A.

1.10 DRAWINGS – ELECTRICAL

A. Sheet ED1.1 First Floor Electrical Demolition Plan – Area A

1. Corridor E027 – Relocate existing smoke detector and wireless access system to new ceiling, extend existing cabling to new location.
2. Existing Vestibule E175
   a. Reference note 22, outlet box shall be extended to new wall finish. Provide new GFCI duplex outlet and coverplate, in lieu of reusing the existing outlet.
   b. Revise sheet note 3 to read: "Relocate Vestibule E175 intercom station, with pushbutton and camera, to north side of new door 101.1. Relocate front desk E45 viewing monitor and pushbutton to new desk in Reception 101. Wire relocated intercom station speaker and camera to viewing monitor and pushbutton at desk to control electric strike in new door 101.1. Coordinate location of pushbutton door release button at desk and intercom station in vestibule with Owner and Architect. Provide 120 volt power to door power supply
   c. Install a new proximity card reader adjacent to relocated intercom station on north side of door 101.1. Card reader shall be similar to existing and shall be wired to control new door 101.1.
3. For reference, existing telecom equipment for data, telephone, and TV is located in Storage E30, along east wall.

B. Sheet ED1.2, First Floor Electrical Demolition Plan, Area B, C

1. Relocate an existing conduit/circuit above the ceiling, in the corridor east of the bleachers, to accommodate new ceiling, field verify exact requirements.

C. Sheet E2.1 First Floor Power Plan – Area A

1. Reference note 26, existing combination clock/speaker is a Simplex unit with square clock and speaker and recessed box.
2. Revise sheet note 23 to read: "Relocate existing push button for automatic door operator and existing card swipe to south of Door 101.1 as shown on architectural drawings. Extend circuits to new location, verify exact location with Architect.

END OF ADDENDUM No. 1

SECTION 087100
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Hardware for doors including swinging, sliding and other doors as indicated.

B. Lock cylinders for items in other specification sections.

C. Electrically operated and controlled hardware including automatic operators.

D. Thresholds.

E. Weather stripping, seals and door gaskets.

F. Mechanical door hardware.

1.02 RELATED REQUIREMENTS

A. Section 081113 - Hollow Metal Doors and Frames.

B. Section 081416 - Flush Wood Doors.

C. Section 083100 - Access Doors and Panels.

D. Section 084313 - Aluminum-Framed Storefronts: Hardware for same.

1.03 REFERENCE STANDARDS

A. 2010 ADA Standards for Accessible Design.

B. ANSI/BHMA Certified Product Standards - A156 Series

C. BHMA A156.1 - American National Standard for Butts and Hinges; Builders Hardware Manufacturers Association, Inc.; 2006 (ANSI/BHMA A156.1).

D. BHMA A156.2 - American National Standard for Bored and Preassembled Locks & Latches; Builders Hardware Manufacturers Association; 2011 (ANSI/BHMA A156.2).

E. BHMA A156.3 - American National Standard for Exit Devices; Builders Hardware Manufacturers Association; 2008 (ANSI/BHMA A156.3).

F. BHMA A156.4 - American National Standard for Door Controls - Closers; Builders Hardware Manufacturers Association, Inc.; 2008 (ANSI/BHMA A156.4).

G. BHMA A156.5 - American National Standard for Auxiliary Locks & Associated Products; Builders Hardware Manufacturers Association; 2010 (ANSI/BHMA A156.5).

H. BHMA A156.6 - American National Standard for Architectural Door Trim; Builders Hardware Manufacturers Association; 2010 (ANSI/BHMA A156.6).

I. BHMA A156.7 - American National Standard for Template Hinge Dimensions; Builders Hardware Manufacturers Association; 2003 (ANSI/BHMA A156.7).

J. BHMA A156.8 - American National Standard for Door Controls - Overhead Stops and Holders; Builders Hardware Manufacturers Association, Inc.; 2010 (ANSI/BHMA A156.8).

K. BHMA A156.13 - American National Standard for Mortise Locks & Latches; Builders Hardware Manufacturers Association; 2005 (ANSI/BHMA A156.13).

L. BHMA A156.16 - American National Standard for Auxiliary Hardware; Builders Hardware Manufacturers Association; 2008 (ANSI/BHMA A156.16).

M. BHMA A156.19.

N. ANSI/BHMA A156.26

O. DHI A115 (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 2004.

P. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; Door and Hardware Institute; 1993; also in WDHS-1/WDHS-5 Series, 1996.

Q. DHI A115-W series.

R. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.

S. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures; National Fire Protection Association; 2012.

T. NFPA 105 - Installation of Smoke Door Assemblies.

U. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association; 1995.

V. UL 10C – Positive Pressure Fire Tests of Door Assemblies; Underwriters Laboratories Inc.; current edition.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.

B. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.

C. Convey Owner's keying requirements to manufacturers.

D. Pre-installation Meeting: Convene a pre-installation meeting one week prior to commencing work of this section; require attendance by all affected installers.

E. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project.

C. Shop Drawings:
   1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, electrical characteristics and connection requirements.
   2. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
      a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
      b. Complete (risers, point-to-point) access control system block wiring diagrams.
   3. Submit manufacturer's parts lists and templates.

D. Hardware Schedule: Detailed listing of each item of hardware to be installed on each door. Use door numbering scheme as included in the Contract Documents. Identify electrically operated items and include power requirements.

E. Keying Schedule: Prepared under the supervision of the Owner, separate schedule detailing final keying instructions for locksets and cylinders in writing. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner to approve submitted keying schedule prior to the ordering of permanent cylinders.

F. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

G. Keys: Deliver with identifying tags to site by security shipment direct from hardware supplier.

H. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

I. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

A. Perform work in accordance with the following requirements:
   1. NFPA 101.
   2. NFPA 80.
   3. NFPA 252.
   4. NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

C. Hardware Supplier Qualifications: Company specializing in supplying commercial door hardware with 3 years of experience.

D. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this section.

E. Source Limitations: Obtain each type and variety of Door Hardware specified in this Section from a single source, qualified supplier unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
   2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

1.07 REGULATORY REQUIREMENTS

A. Conform to applicable code for requirements applicable to fire rated doors and frames.
   1. NFPA 70 "National Electrical Code", including electrical components, devices, and accessories listed and labeled as defined in Article 100 by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
   2. Where indicated to comply with accessibility requirements, comply with 2010 ADA Standards for Accessible Design.:
      a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
      b. Door Closers: Comply with the following maximum opening-force requirements indicated:
         1) Interior Hinged Doors: 5 lbf applied perpendicular to door.
         2) Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
      c. Thresholds: Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.
   3. NFPA 101: Comply with the following for means of egress doors:
      a. Latches, Locks, and Exit Devices: Not more than 15 lbf to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
   4. Fire-Rated Door Assemblies: Provide door hardware for assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252 (neutral pressure at 40" above sill) or UL-10C.
      a. Test Pressure: Positive pressure labeling.
   5. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

B. All Hardware on Fire-Rated Doors: Listed and classified by UL as suitable for the purpose specified and indicated.

C. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.

1.08 PRE-INSTALLATION MEETING

A. Convene one week prior to commencing work of this section.

B. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
   1. Function of building, purpose of each area and degree of security required.
   2. Plans for existing and future key system expansion.
   3. Requirements for key control storage and software.
   4. Installation of permanent keys, cylinder cores and software.
   5. Address and requirements for delivery of keys.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Package hardware items individually; label and identify each package with door opening code to match hardware schedule.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.10 COORDINATION

A. Coordinate the work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware.

B. Furnish templates for door and frame preparation.

C. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

D. Door and Frame Preparation: Related Division 08 Sections (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.11 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
   1. Provide 25 year warranty for manual door closers.
   2. Ten years for mortise locks and latches.
   3. Ten years for extra heavy duty cylindrical (bored) locks and latches.
   4. Seven years for heavy duty cylindrical (bored) locks and latches.
   5. Five years for standard duty cylindrical (bored) locks and latches.
   6. Five years for exit hardware.
   7. Two years for electromechanical door hardware.

1.12 MAINTENANCE PRODUCTS

A. Provide special wrenches and tools applicable to each different or special hardware component.

B. Provide maintenance tools and accessories supplied by hardware component manufacturer.

PART 2 PRODUCTS

2.01 DOOR HARDWARE – GENERAL

A. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.

B. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

C. Provide all items of a single type of the same model by the same manufacturer.

D. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
   2. Substitutions: See Section 016000 - Product Requirements.

E. Finishes:
   1. Dull Chrome (US26D) or Brushed Stainless Steel (US32D) as noted in hardware sets.
   2. Continuous Hinges to be clear anodized.
   3. Closers to be painted aluminum in color.

2.02 DOOR HARDWARE – MANUFACTURERS

A. Hinges:
   1. McKinney (MC)
   2. Hager

B. Continuous Hinges:
   1. McKinney (MC)
   2. Pemko

C. Mortise Locks:
   1. Sargent (SA), 8200 Line, LNJ Design

D. Cylinders:
   1. Sargent (SA)

E. Exit Devices:
   1. Sargent (SA), 80 Series. Supplier to furnish any shims or brackets required for proper installation.

F. Closers:
   1. Sargent (SA), 351 Series.
   2. Supplier to furnish all drop plates and mounting brackets as required for proper installation.
   3. Furnish arm type as noted in hardware sets.
   4. Install closers on side of door for least visibility, unless mounting is required for maximum door swing or protect closure from moisture or corrosive materials.
   5. Installer to properly adjust all hydraulic and spring adjustments for proper operation of closer and door.
   6. Contractor to check and adjust all closers when mechanical systems are in operation.
   7. All closers to have full plastic covers.

G. Protection Plates:
   1. Rockwood (RO)

2. Trimco
3. Protection plates to be fastened with countersunk, oval head screws.
4. Protection plates to be beveled on all four sides.
5. Protection plate size as noted in hardware sets unless restricted by bottom rail of door.

H. Wall and Floor Stops:
1. Rockwood (RO)
2. Trimco

I. Weatherstipping, Gasketing and Thresholds:
1. Pemko (PE)
2. Reese
3. Any weatherstrip aluminum housing attached to metal surfaces to be attached with self drilling TEK screws.
4. Any weatherstrip that is screw applied in an aluminum housing shall have the end fastening screw be 1” or less from the end of the aluminum housing. The hole for this end fastening screw to be drilled in field as required.
5. All fire rated doors are to meet UL10C, Positive Pressure Fire Testing, and are to be Category A doors with concealed intumescence furnished as required by the door manufacturer.
6. Any thresholds that project beyond the face of the door a half inch or more are to be furnished opening width plus four inches and coped around the face of the frame.

J. Silencers:
1. All silencers for hollow metal frames to be furnished and installed by frame supplier.
2. Silencers are not required at frames that are to have gasketing or weatherstripping installed.

2.03 KEYING

A. Approved Key Systems:
1. Sargent (SA) (Keyed to owners existing system.).

B. Locks and cylinders to be keyed per owner’s instructions.

C. Supplier to meet with owner’s representative to determine keying details and submit key schedule for approval.

D. Furnish 10 copies of each master and Grand Master key and 4 copies per door of each change key.

E. Stamp all keys as directed by owner’s representative.

F. Deliver all keys, with identifying tags, to owner or contractor per owner’s instructions. Person receiving keys to sign for them with a copy of receipt to be kept by the receiver and supplier.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that doors and frames are ready to receive work; labeled, fire-rated doors and frames are present and properly installed, and dimensions are as indicated on shop drawings.

B. Verify that electric power is available to power operated devices and of the correct characteristics.

3.02 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.

B. Use templates provided by hardware item manufacturer.

C. Do not install surface mounted items until finishes applied to substrate are complete.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."Section 079005-Silicone Weather Seal Sealant.

E. Mounting heights for hardware from finished floor to center line of hardware item:

1. For steel doors and frames: Comply with DHI "Recommended Locations for Architectural Hardware for Steel Doors and Frames."
2. For wood doors: Comply with DHI "Recommended Locations for Architectural Hardware for Wood Flush Doors."
3. Where indicated to comply with accessibility requirements, comply with
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

F. All fire rated doors are to meet UL10C, Positive Pressure Fire Testing, and are to be Category A doors with concealed intumescence furnished as required by the door manufacturer.

3.03 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 014000.

B. Provide an Architectural Hardware Consultant to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

A. Adjust work under provisions of Section 017000.

B. Adjust hardware for smooth operation.

C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.05 CLEANING

A. Clean adjacent surfaces soiled by hardware installation. Clean finished hardware per manufacturer's instructions after final adjustments has been made. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.07 PROTECTION

A. Protect finished Work under provisions of Section 017000.

B. Do not permit adjacent work to damage hardware or finish.

3.08 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.09 SCHEDULE

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

B. List of Abbreviations
1. MK – McKinney
2. SA – Sargent
3. HS – HES
4. RO – Rockwood
5. PE – Pemko
6. SU - Securitron

Hardware Schedule

Set: 1.0
Doors: 101.1
Description: Door w/ Prox Reader

1	Continuous Hinge	MCK-12HD Custom Cut to Length	CL
1	Storeroom Lock	8204 LNJ	US26D
1	Electric Strike	1006-KM	630
1	SMART Pac Bridge Rectifier	2005M3	
1	Door Closer	351 CPSH 351D 581-2	EN
1	Wall Stop	409	US32D
1	Push Button	PB3ER	
1	Power Supply	BPS-24-1	

Notes: Prox reader releases electric strike allowing entry.
Prox reader furnished and installed by access control supplier
Push button installed in office area to release electric strike remotely
Wiring by electrical contractor

Set: 2.0
Doors: 102.1, 103.1, 104.1, 105.1, 112.1, 113.2
Description:

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D
1	Office Lock	8205 LNJ	US26D
1	Wall Stop	409	US32D

Set: 3.0
Doors: 106.1, 107.1, 108.1, 114.1
Description:

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D
1	Classroom Security Lock	8238 LNJ	US26D
1	Kickplate	K1050 10" x 2" LDW 4BE CSK	US32D
1	Wall Stop	409	US32D
1	Gasketing	S88D	

Set: 4.0
Doors: 110.1
Description:

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D
1	Storeroom Lock	8204 LNJ	US26D
1	Concealed Overhead Holder/Stop	1538S	US26D

Set: 5.0
Doors: 113.1
Description:

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D
1	Office Lock	8205 LNJ	US26D
1	Door Closer	351 P10	EN
1	Kickplate	K1050 10" x 2" LDW 4BE CSK	US32D
1	Wall Stop	409	US32D

Set: 6.0
Doors: 115.1
Description:

4	Hinge	TA2714 4-1/2" x 4-1/2"	US26D
1	Exit Device	8813 ETJ	US32D
1	Door Closer	351 CPSH	EN
1	Kickplate	K1050 10" x 2" LDW 4BE CSK	US32D
1	Wall Stop	409	US32D

Set: 7.0
Doors: 115.2, 115.3
Description: Exterior Alum Door

1	Continuous Hinge	MCK-12HD Custom Cut to Length	CL
1	Exit Device	AD8504 862	US32D
1	Door Closer	351 CPSH 351D 581-2	EN
1	Threshold	171A	
1	Sweep	3452CNB	

Notes: Weatherstrip furnished by alum. door supplier

Set: 8.0

Doors: 115.4

Description: Exterior Alum Doors

2	Continuous Hinge	MCK-12HD Custom Cut to Length	CL
1	Removable Mullion	L980A	US28
1	Exit Device	AD8504 862	US32D
1	Exit Device	AD8510 862	US32D
2	Door Closer	351 CPSH 351D 581-2	EN
1	Threshold	171A	
2	Sweep	3452CNB	

Notes: Weatherstrip furnished by alum. door supplier

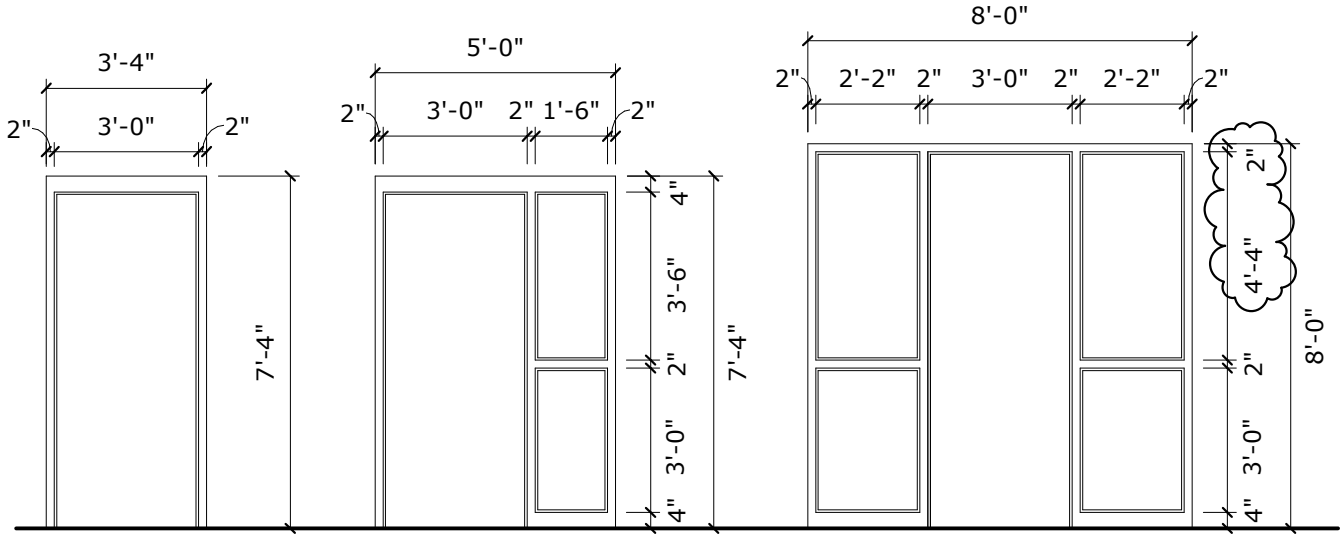
END OF SECTION

WILBER-CLATONIA
HIGH SCHOOL
HVAC RENOVATION -
FINAL PHASE &
INTERIOR RENOVATIONS
ADDENDUM #1 -
ATTACHMENT "B"

☐ ASI NO.:
☒ ADDENDUM NO.: 1
☐ CHANGE PROPOSAL REQUEST NO.:
☐ R.F.I REQUEST NO.:
PROJECT: L13008
PROJECT DATE: 03/08/13
DATE ISSUED: 03/29/13

DOOR SCHEDULE

Door Schedule (ADDENDUM #1)									
Mark	**Width**	**Height**	**Thickness**	**Door Type**	**Frame Type**	**Frame Material**	**Frame Depth**	**HW Set**	**Comments**
101.1	3'-0"	7'-0"	1 3/4"	A1	AL-2	Aluminum	4 1/4	1	
102.1	3'-0"	7'-0"	1 3/4"	WD1	HM-1	Hollow Metal	8 1/4"	2	
103.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	2	
104.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	2	
105.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	2	
106.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	3	
107.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	3	
108.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	3	
110.1	3'-0"	7'-0"	1 3/4"	WD1	HM-1	Hollow Metal	8 1/4"	4	
112.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	2	
113.1	3'-0"	7'-0"	1 3/4"	WD1	HM-1	Hollow Metal	8 1/4"	5	
113.2	3'-0"	7'-0"	1 3/4"	WD2	HM-1	Hollow Metal	8 1/4"	2	
114.1	3'-0"	7'-0"	1 3/4"	WD1	HM-2	Hollow Metal	8 1/4"	3	
115.1	3'-0"	7'-10"	1 3/4"	WD3	HM-3	Hollow Metal	8 1/4"	6	
115.2	3'-0"	7'-10"	1 3/4"	A1	AL-3	Aluminum	4 1/4	7	
115.3	3'-0"	7'-10"	1 3/4"	A1	AL-3	Aluminum	4 1/4	7	
115.4	3'-0"	7'-10"	1 3/4"	A1	AL-1	Aluminum	4 1/4	8	DOUBLE DOOR



HM-1 HM-2 HM-3

D18 HOLLOW METAL FRAME TYPE ELEVATIONS

1/4" = 1'-0"

BAHR VERMEER HAECKER ARCHITECTS
440 N 8TH ST STE 100 LINCOLN NE 68508 V 402 475 4551 F 402 475 0226
bvh.com

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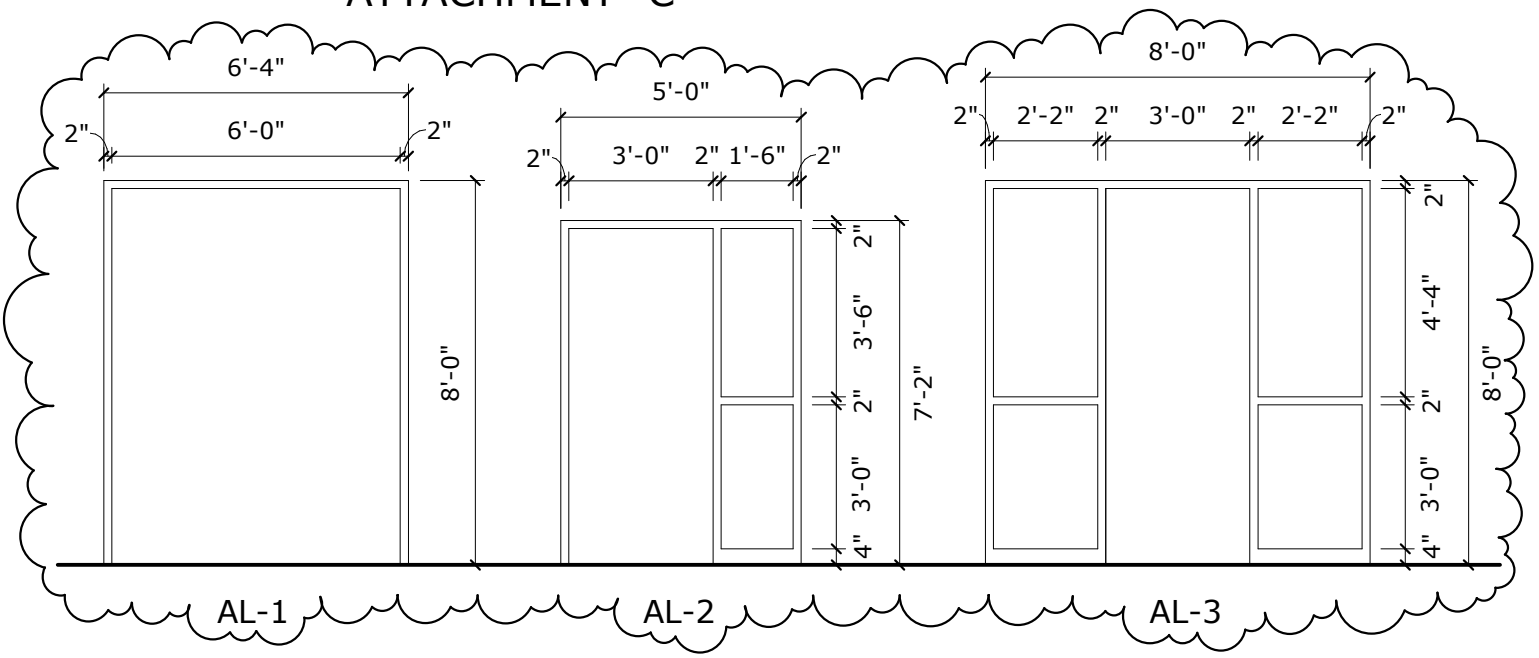
WILBER-CLATONIA HIGH SCHOOL HVAC RENOVATION - FINAL PHASE & INTERIOR RENOVATIONS ADDENDUM #1 - ATTACHMENT "C"

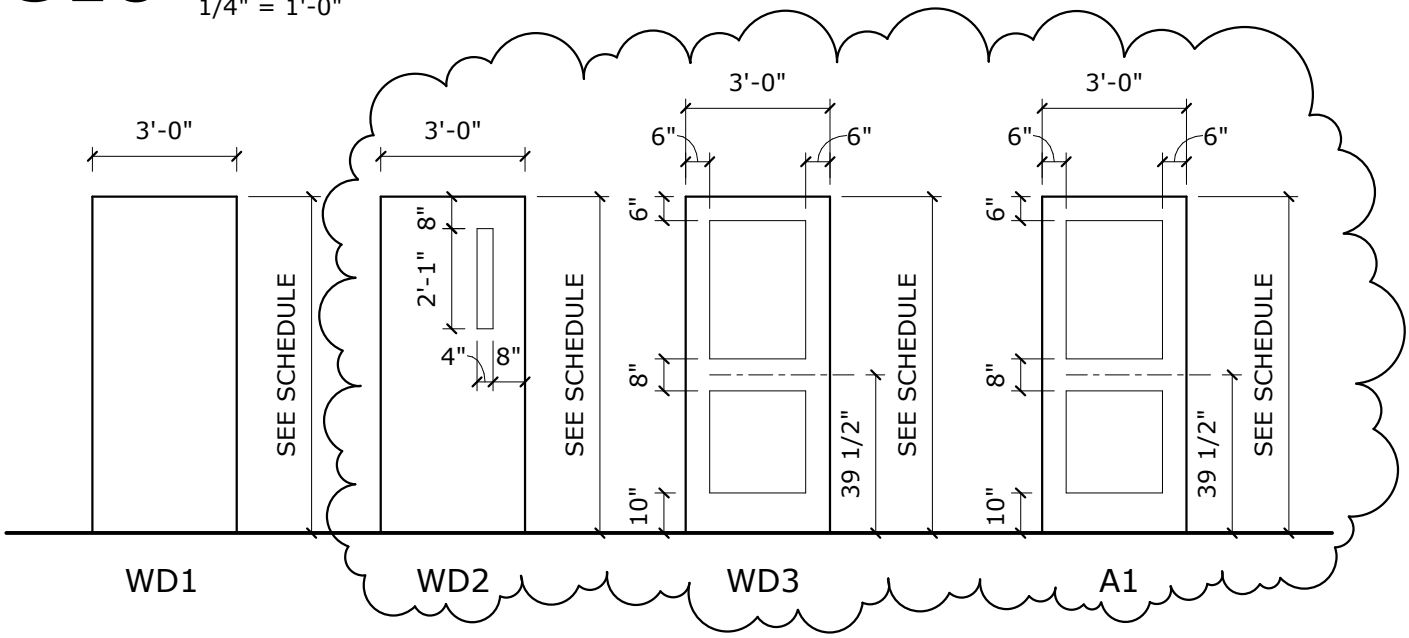
☐ ASI NO.:
☒ ADDENDUM NO.: 1
☐ CHANGE PROPOSAL REQUEST NO.:
☐ R.F.I REQUEST NO.:

PROJECT: L13008
PROJECT DATE: 03/08/13
DATE ISSUED: 03/29/13



G18 ALUMINUM FRAME TYPE ELEVATIONS

1/4" = 1'-0"



L18 DOOR TYPE ELEVATIONS

1/4" = 1'-0"

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bvh.com

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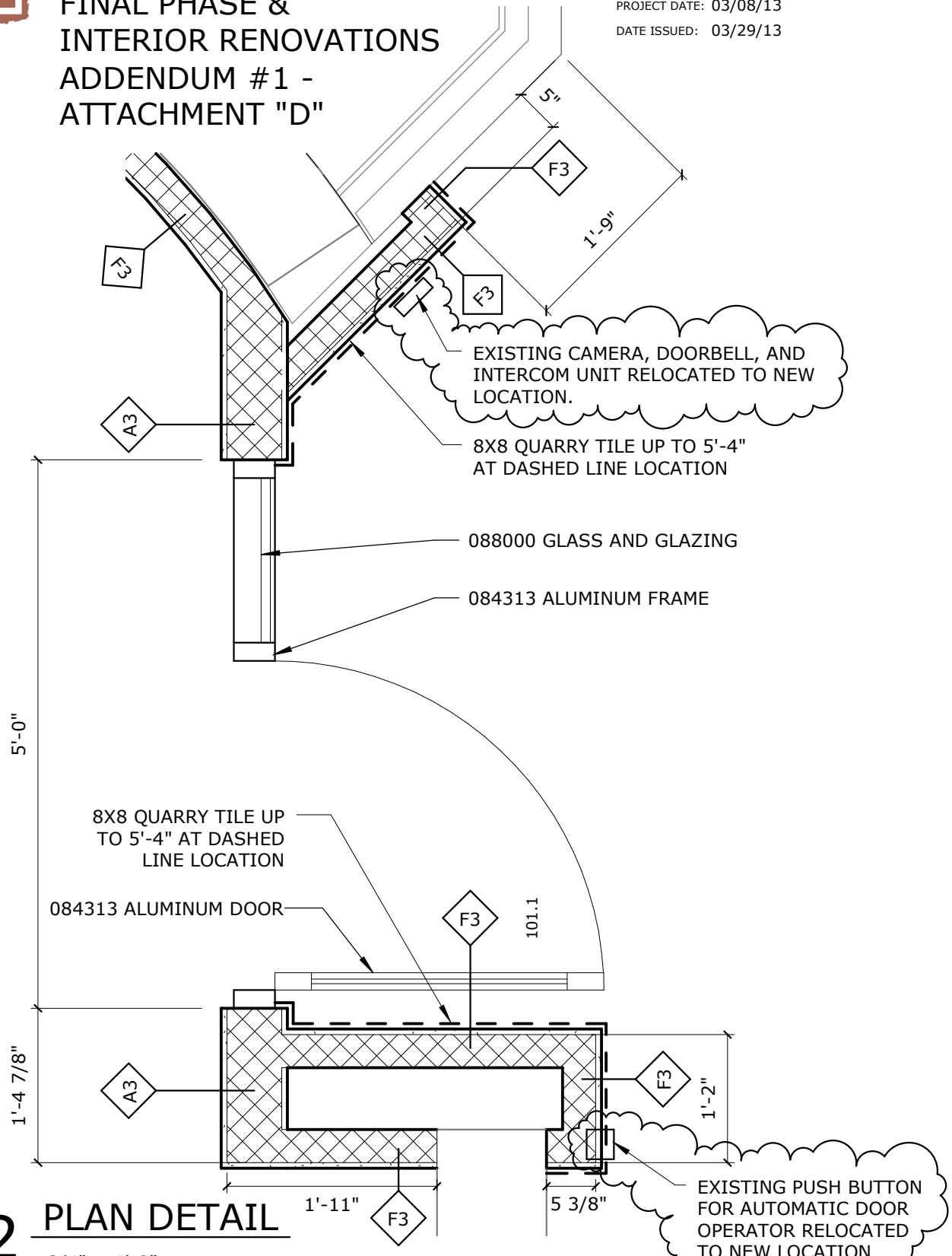
WILBER-CLATONIA HIGH SCHOOL HVAC RENOVATION - FINAL PHASE & INTERIOR RENOVATIONS ADDENDUM #1 - ATTACHMENT "D"

☐ ASI NO.:
☒ ADDENDUM NO.: 1
☐ CHANGE PROPOSAL REQUEST NO.:
☐ R.F.I REQUEST NO.:

PROJECT: L13008
PROJECT DATE: 03/08/13
DATE ISSUED: 03/29/13



M22 PLAN DETAIL

3/4" = 1'-0"

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SECTION 31 22 00

GRADING

PART 1 - GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Section 31 23 16.13 Trenching: Excavation and backfilling for utilities.
B. Section 31 25 00 Erosion Control

1.02 DESCRIPTION OF WORK

A. Work covered under this section shall consist of the fine grading of the site to conform to the grades, lines and contours shown on the Drawings. The Work shall include all excavation, shaping and sloping of all cut areas; all placing, compacting, shaping and finishing of all embankments in fill areas necessary for the completion of all site and roadway regrading; including subgrades, shoulder slopes, intersections, approaches, and entrances. Trench excavation and backfill for utility trenches is also included.

1.03 REFERENCES

A. ASTM D698 Standard Proctor, ASTM D1557 Modified Proctor Tests for Moisture Density Relations of soils and soil aggregate mixture.

1.04 QUALITY ASSURANCE

A. Testing shall be conducted per the project contract documents and specifications. The Contractor shall be responsible for the cost of all retests due to initial tests failing to meet specifications. The Contractor shall also be responsible for scheduling soil testing at least 72 hours prior to needing the testing.

B. In general, the services of the soils engineer shall include, but are not limited to the following:

1. Perform classification tests and determine moisture density relations for materials used for fill and backfill.
2. Test and approve subgrades under foundations, floor slabs and pavements.
3. Perform soil density tests, including observation and testing during compaction of fill and preparation of subgrade to check suitability of soils, proper moisture content and degree of compaction.

C. The following minimum number of compaction and moisture tests, in accordance with appropriate ASTM procedures, shall be made, where directed, in the designated areas:

DESIGNATED AREA	NUMBER OF TESTS
All lifts of fill	1 test per 3000 square feet or per smaller separate area prepared.

1.05 PROTECTION

A. Site Information: Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that Owner will not be responsible for interpretations or conclusions drawn by the Contractor. Data are made available for convenience of Contractor.

1. Additional test borings and other exploratory operations may be made by Contractor at no cost to Owner.

B. The Contractor shall carefully maintain all bench marks, monuments, stakes, and other reference points and replace same if disturbed or destroyed.

C. Contractor shall exercise extreme care to protect all existing underground and overhead utilities. Contractor shall be responsible for repairing all utilities damaged or destroyed during construction.

D. Contractor shall protect trees, shrubs, lawns, and other features which are to remain after construction is completed.

E. Properly dispose of all waste materials. On-site burial will not be allowed.

F. Protect all excavations from the action of the elements. Keep all excavations free of water or snow at all times during the entire progress of construction, regardless of the cause, source or nature of the water. Temporarily grade areas adjacent to excavations to prevent excessive moisture from entering excavations. If water enters excavations, or other construction areas, dewater promptly using means which will ensure dry excavations and the preservation of all lines and grades. Provide ample means and devices at all times during construction to ensure prompt and adequate removal of water. Where soil has been softened or eroded by actions of the elements remove all damaged areas, replace soil and recompact as required by these specifications.

G. Provide for surface drainage during construction of the project so at all times there is positive drainage away from the building area. Soils in the building area, under paving and walks, and within 20 feet of the building perimeters, shall be protected against moisture content increase throughout the construction period.

H. The contractor shall guard against any movement, settlement or collapse of all excavations, buildings, structures, paved areas, drives, sidewalks, streets, utility items or any other item adjacent to or within the construction limits of this project.
The contractor shall adequately brace all walls and other construction during backfilling and compacting operations so movement does not occur.

I. The contractor shall repair, at his expense, all damage occurring to the owner's property or any other property, on or off the premises, that has resulted from a lack of adequate protection. All repair or replacement shall be approved by the Engineer.

1.06 DEFINITIONS

A. Suitable materials include material that is free of debris, roots, organic matter, frozen matter, and which is free of stones or foreign material which any dimension greater than 2 inches. Excavated site soils will not be suitable for reuse as structural fill. All proposed fill material shall be approved by Soils Engineer at least 2 weeks prior to fill placement.

B. Unsuitable materials include all material that contains debris, roots, organic matter, frozen matter, stone with any dimension greater than 2 inches, or other materials that are determined by the Engineer or Soil Engineer as too wet or otherwise unsuitable for providing a stable subgrade.

PART 2 - PRODUCTS

2.01 FILL (EMBANKMENT) AND BACKFILL MATERIAL

A. All fill and backfill materials shall be cohesive or semi-cohesive soils, free of ruble and organics. The fill material shall be low-plasticity cohesive material with at liquid limit less than 45 and a plasticity index between 20% or less. Excavated materials shall be sorted to separate expansive clay from non-expansive soil. When unsuitable materials are

encountered, the Contractor shall notify the Engineer, in accordance with the General Conditions. If directed by the Engineer, the Contractor shall excavate and replace with suitable material. Suitable material for backfill shall be obtained from off-site borrow as approved by the Engineer and Soil Engineer. Finish grade shall be held 4 inch below adjacent sidewalks, curbs and pavement.

1. Top soil shall be placed and supplied by the Contractor.

PART 3 - EXECUTION

3.01 EQUIPMENT

A. All equipment shall be adequate for the purpose for which it is to be used and shall be kept in satisfactory working order. Equipment shall be adequate to perform all excavation, hauling, placement of embankment, compaction, trimming, and shaping.

3.02 FILL AND COMPACTION

A. Strip topsoil and vegetation and excavate to a depth of 12 inches below the root crown and 5 feet beyond the building limits. The Contractor shall consult the Engineer during stripping operations to avoid removing more topsoil than is necessary.

B. Compaction of Fill; All fill and backfill shall be wetted or dried by aeration, and then compacted to the following percentage of maximum density at a moisture content within

C. the limits specified above or below optimum moisture content, as determined by Testing Procedure ASTM D 698, (Standard Proctor) and ASTM D1557 (Modified Proctor), unless otherwise noted:

Material	**Percent of Maximum (Cohesive Soil Only)**	**ASTM**	**Percent Above or Below Optimum Moisture Content**
Trench Backfill grass areas	90% minimum	D698	-3 to +3%
Backfill around Foundations/retaining walls	95**%** minimum	D698	-3 to +3%

D. Compact cohesive soils by the use of sheepsfoot or pneumatic type compactors under optimum moisture conditions.

3.03 EXCAVATION

A. Perform excavation to dimensions and elevations indicated on Drawings or required for footings, and all work incidental thereto. Excavation shall extend a sufficient distance from footings to allow for forming and inspection, except for spread footings and continuous trench beam footings where concrete may be deposited directly against earth surfaces, when approved by Architect and governing authorities. Care shall be taken during excavation and site work to avoid unnecessarily disturbing soils at the greater depth excavations.

B. Excess excavation shall be avoided.

C. All excavated material not suitable for filling, backfilling as approved by the Soils Engineer and all excess earth or other material shall be removed from the site.

D. Unexpected Subsurface Condition. Where suitable bearings are encountered at different elevations from those indicated on the drawings, the Soils Engineer shall direct, in writing,

that the excavation be carried to elevations above or below those indicated on the Drawings. Adjustment in payment shall be made in accord with the terms of the General Conditions.

E. Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding.

F. Finish surfaces free from irregular surface changes, and as follows:

1. Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than 0.10' above or below required subgrade elevations.

G. All excavations should comply with the requirements of OSHA'S "Construction Standards for Excavations".

3.04 EXCAVATION FOR UTILITY STRUCTURES AND APPURTENANCES

Excavate as required for manholes and other appurtenances until firm, undisturbed soil is reached. If excavation is carried below bottom of foundations as

When unstable material is encountered which will not provide suitable bearing (as determined by the soils engineer), fill with 3,000 psi concrete or stabilizing material specified herein, or as directed by Soils Engineer. Contractor shall be entitled to payment for this extra work in accordance with the General Conditions.

3.05 TRENCHING

Perform trenching operations to the depth indicated on the Drawings or as specified.

Pile excavated material suitable for backfill in an orderly manner sufficient distance back from edge of excavation to avoid rollbacks, slides, or cave ins.

Remove soil not suitable for backfill and waste at a disposal area designated by the Architect.

Where new construction crosses or closely parallels existing utilities or utility services, excavate in advance of pipe laying to determine location and crossing arrangement, including exact construction line and grade.

Excavate by open cut under existing streets, utilities, and structures, except as noted on the Drawings or as directed by the Architect.

Keep width of trench as narrow as possible, but provide adequate room for backfilling and jointing. Keep sides of the trench as nearly vertical as practical within the limits of excavation codes and maintain vertical walls of excavation below top of pipe. Trench widths shall be as follows:

Pipe Size	Trench Width
3/4" to 3"	12"
4" to 8"	24"
10" to 16"	36"
18" to 24"	48"
30" and Greater	Pipe size plus 18" each side

Excavate to full depth by machine and level trench bottom to provide uniform bearing and support for full length of pipe. Trench bottom shall be continuous, relatively smooth, and free of rocks.

Do not use granular backfill in exterior trenches.

Bed trench bottom as shown on the Drawings or as directed by the Soils Engineer.

Provide bell holes at each pipe joint and allow access completely around circumference of pipe for proper jointing operations.

Install pipe and provide a minimum pipe envelope consisting of compacted backfill completely around the pipe and a distance of 12 inches above the top of the pipe.

When unstable material is encountered which may not provide a suitable foundation for pipe, notify the Soils Engineer immediately. If determined by the Soils Engineer upon his investigation that the material is unsuitable for foundations, the Soils Engineer may specify and authorize remedial measures. If removal of unsuitable material is authorized, replace it with a stabilizing material consisting of three fourths inch to one and one half inch (3/4" to 1 1/2") size, coarse, sharp, and clear crushed stone or other approved material. Provide a minimum of four inches (4") of bedding material on top of the stabilizing material to prevent point load.

Excavate by hand under and around utilities, where overhead clearance prevents use of machine, and under trees and shrubs where shown on the Drawings.

Construct sheeting, shoring, and bracing required to hold walls of excavation, to provide safety for workmen, to protect existing utilities or structures, and to permit construction in the dry. If wood sheeting is driven below the level of pipe, it shall be left in place to a level 5 feet below finished grade. Steel sheeting shall be pulled upon completion unless indicated otherwise on the Drawings. When a movable trench shield is used below the spring line of the pipe, it shall be lifted prior to any forward movement to avoid pipe displacement.

If dewatering is necessary, obtain the Soils Engineer’s approval of proposed methods of dewatering. When dewatering is necessary, provide for handling of water encountered during construction. Lay no pipe in and pour no concrete on excessively wet soil. Prevent surface water from flowing into the excavations and remove water as it accumulates. Divert stream flow away from areas of construction.

Do not pump water onto adjacent property without approval of Soils Engineer and adjacent property owner. Do not use sanitary sewers for disposal of trench water. The cost of dewatering shall be included in the original Bid Price for construction. No additional remuneration for dewatering shall be permitted.

3.06 GRANULAR FILL

Granular fill for slab on grade shall be placed in uniform depths and compacted by vibratory hand held compaction equipment or other approved means until no significant further consolidation occurs and approved by the soils engineer. Do not use granular backfill in exterior trenches or around foundation elements.

3.07 BACKFILLING

Place the backfill for structures in horizontal uniform layers not to exceed 8 inches. Bring each layer up uniformly on all sides of the structure and thoroughly compact using pneumatic compaction or other methods as approved by the Soils Engineer. Granular backfill shall not be used in exterior areas.

Employ a placement method that will not disturb or damage foundation waterproofing.

When embankments are constructed on sidehill slopes steeper than 4 to 1, the area of the original slope on which embankment is to be placed shall be stepped to a vertical depth of at least twelve inches (12") in order in integrate the embankment and the slope.

Place all embankments to the grades, lines, and contours shown on the Drawings. Place embankment systematically, as early as possible, to allow maximum time for natural settlement. The hauling of embankment material shall be distributed over the entire embankment areas to assist in compacting the material.

Do not place embankments over porous, wet, or spongy subgrade surfaces. If necessary, remove such unsuitable material and replace with satisfactory stabilizing materials, as directed by the Engineer.

The Contractor shall be responsible for the stability of all embankment and excavation areas and shall replace, at Contractor's own expense, any portions which become displaced or unstable prior to the expiration of the warranty period.

Remove excess backfill material from site.

3.08 BACKFILL FOR TRENCHES

Back fill trenches immediately after the location of all lines, connections, and appurtenances are recorded, or at the Soils Engineer’s direction.

Construct manholes and appurtenances and perform backfilling as Work progresses.

Backfill with material removed from excavation except where sand backfill may be specified. Backfill material shall be as specified herein and shall not contain any debris, frozen earth, large clods, stones, or other unsuitable material.

Place backfill simultaneously on both sides of the pipe to prevent displacement. Place backfill into the trench at an angle so that the impact on the installed pipe is minimized. Install a cushion of four feet (4') of backfill above the pipe envelope before using heavy compaction equipment.

Hand place backfill in the pipe envelope and compact finely divided material to twelve inches (12") over the top of the pipe.

Backfill remainder of trench with excavated material up to the bottom of the specified surface restoration.

Backfill top twelve inches (12") of the trench with soil equivalent to adjacent topsoil.

Do not use granular backfill in interior trenches.

3.09 BACKFILL FOR STRUCTURES AND APPURTENANCES

Backfill after concrete or masonry has cured for seven (7) days and has been inspected and approved by Soils Engineer. Backfill with material removed from excavation except where sand backfill is specified. Backfill material shall be as specified herein and shall not contain any debris, frozen earth, large clods, stones, or other unsuitable material. Backfill simultaneously on all sides of the structure to prevent damage at all times. Brace walls of structures as required.

Compact backfill at structures to a density not less than specified in Section 3.02.

Terminate backfill at finish grade as shown on the Drawings and dispose of excess excavation material as directed by the Soils Engineer. Prepare backfill for surface restoration as specified for adjacent trench.

Do not use granular backfill material around foundation elements.

3.10 ROUGH GRADING, TOPSOIL AND FINISH GRADING

A. Contractor shall rough grade the entire site to within 6” below final grade. Upon completion of rough grading by the Contractor, the Owner shall spread topsoil over all areas graded under this Contract and not receiving other surfacing or in the building area. Before spreading topsoil, graded areas shall be scarified for a depth of 3 inches, and all settlements and washes shall be repaired. Finish grade shall be held 1 inch below adjacent sidewalks, curbs and pavement. Topsoil shall be free of rocks, rubble, wood and other undesirable material.

B. Perform finish grading of topsoil adequately for sod, seed or whatever material is placed in each area. Finished surface shall be reasonably smooth, compacted and free from irregular surface changes. The degree of finish shall be that ordinarily obtainable from blade grader operations, except as otherwise needed. Finished surface shall be not more than 0.10 feet above or below established grade or approved cross section. All swales shall be finished so as to drain readily. Prior to the installation of seeding or sod, a final walk thru of the site shall be conducted and any modifications to the site grading shall be made to ensure the entire site has positive drainage. These grading modifications shall be conducted by the Contractor at no additional cost to the Owner.

C. Manually place topsoil around trees, plants, and buildings to prevent damage. No more than 6 inches of fill shall be placed to the original grade elevation under trees or plants. Assure positive drainage away from buildings and structures.

D. Lightly compact placed topsoil. Settle topsoil with a fine spray of water to avoid separation of ingredients. Do not jet or flood topsoil.

E. Hand rake as necessary around trees, plants, buildings, and structures. Maintain sufficient topsoil reserve to regrade as necessary after initial settlement. Upon regrading, remove surplus topsoil and subsoil from the site.

F. Final topsoil thickness shall be as follows:

Location	Thickness (Inches)
Seeded Grass Areas	6 min.
Sod Areas	4 min.
Tree and Shrub Beds	12 min.
Ground cover Areas	12 min.

G. Seeding Disturbed Areas By Owner.

3.11 MAINTENANCE

A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and re establish grades in settled, eroded, and rutted areas to specified tolerances.

B. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, re shape, and compact to required density prior to further construction.

C. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

END OF SECTION 31 22 00

SECTION 31 23 16.13

TRENCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Backfilling and compacting trench.

1.02 LUMP SUM

A. Trench excavation and backfill – subsidiary to laying of pipe and construction of piping, area junction boxes, valves and all incidentals to conduct the work.

1.03 REFERENCES

A. AASHTO T 180 – Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials; 1997.

B. ASTM C 136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 1996a.

C. ASTM D 698 – Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 1991.

D. ASTM D 1556 – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 1990 (Reapproved 1996).

E. ASTM D 1557 – Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 1991

F. ASTM D 2167 – Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 1994.

G. ASTM D 2487 – Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System); 1993.

H. ASTM D 2922 – Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 1996.

I. ASTM D 3017 – Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 1996.

J. ASTM D 4318 – Standard Test Method for Liquid Limit, Plasticity Index of Soils; 1995a.

K. Nebraska Department of Roads (NDR) Standard Specifications for Highway Construction, 1997 English Units Edition, including all current supplemental specifications.

1.04 DEFINITIONS

A. Finish Grade Elevations: Indicated on drawings.

1.05 PROJECT CONDITIONS

A. Verify that survey bench marks and intended elevations for the Work are as indicated.

B. Protect plants, lawns, rock outcroppings, and other features to remain.

C. Protect benchmarks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

PART 2 - PRODUCTS

2.01 FILL MATERIALS

A. General Fill – Subsoil excavated on-site

1. Graded.
2. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris.
3. Conforming to ASTM D 2487 Group Symbol CL.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Identify required lines, levels, contours, and datum locations.

B. Locate, identify, and protect utilities that remain and protect from damage.

C. Notify utility company to remove and relocate utilities.

3.02 TRENCHING

A. Notify Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.

B. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.

C. Do not interfere with 45 degree bearing splay of foundations.

D. Cut trenches wide enough to allow inspection of installed utilities.

E. Hand trim excavations. Remove loose matter.

F. Remove large stones and other hard matter, which could damage piping or impede consistent backfilling or compaction.

G. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.

H. Remove excavated material that is unsuitable for re-use from site.

I. Stockpile excavated material to be re-used in area designated on site.

J. Remove excess excavated material to site designated by the Owner.

3.03 PREPARATION FOR UTILITY PLACEMENT

A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.

B. Compact subgrade to density equal to or greater than requirements for subsequent fill material.

C. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.

3.04 BACKFILLING

A. Backfill to contours and elevations indicated using unfrozen materials.

B. Fill up to subgrade elevations unless otherwise indicated.

C. Employ a placement method that does not disturb or damage other work.

D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.

E. Maintain optimum moisture content of fill materials to attain required compaction density.

F. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth.

G. Correct areas that are over-excavated.

1. Thrust bearing surfaces: Fill with concrete
2. Other areas: Use general fill, flush to required elevation, compacted to minimum 97 percent of maximum dry density.

H. Compaction Density Unless Otherwise Specified or Indicated:

1. Under paving, slabs-on-grade, and similar construction: 97 percent of maximum dry density.
2. At other locations: 90 percent of maximum dry density.

I. Reshape and re-compact fills subjected to vehicular traffic.

3.05 TOLERANCES

A. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.

B. Top Surface of Backfilling Under Paved Areas: Plus or minus 1 inch from required elevations.

3.06 FIELD QUALITY CONTROL

A. Perform compaction density testing on compacted fill in accordance with ASTM D1556, ASTM D2167, ASTM D2922, or ASTM D3017.

B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 (“standard Proctor”), ASTM D 1557 (“modified Proctor”), or AASHTO T 180.

C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

D. Contractor will pay the cost for retesting.

3.07 CLEAN-UP

A. Remove unused stockpiled materials; leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

END OF SECTION 31 23 16.13

SECTION 31 23 16.26

ROCK REMOVAL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Removing identified and discovered rock during excavation.
2. Expansive tools to assist rock removal.

B. Related Sections:

1. Section 31 22 00 - Grading.
2. Section 31 23 16.13 - Trenching: Excavation and backfilling for utilities.

1.02 REFERENCES – Not Used

1.03 DEFINITIONS

A. Rock: Solid mineral material with volume in excess of 1/3 cubic yard or solid material that cannot be removed with 3/4 cubic yard capacity excavator without drilling.

1.04 SUBMITTALS – Not Used

1.05 QUALITY ASSURANCE

A. Perform work in accordance with Grading Specifications Section 31 22 00.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION

3.01 EXAMINATION

A. Section 31 22 00 – Grading Specifications.

B. Verify site conditions and note subsurface irregularities affecting Work of this Section.

3.02 PREPARATION

A. Identify required lines, levels, contours, and datum.

3.03 ROCK REMOVAL BY MECHANICAL METHOD

A. Excavate and remove rock by mechanical method.

1. Drill holes and use expansive tools, wedges, and mechanical disintegration compound to fracture rock.

B. Cut away rock at bottom of excavation to form level bearing.

C. Remove shaled layers to provide sound and unshattered base.

D. In utility trenches, excavate per Mechanical Plans and Specifications.

E. Remove excavated materials from site.

F. Correct unauthorized rock removal in accordance with backfilling and compacting requirements of Trenching and Grading Specifications.

3.04 FIELD QUALITY CONTROL.

A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.

END OF SECTION 31 23 16.26

SECTION 31 25 00

EROSION CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 RELATED WORK

A. Applicable provisions of Division 1 govern work under this Section.

1. Section 31 22 00 - Grading.
2. Section 31 23 16.13 - Trenching: Excavation and backfilling for utilities.

B. Provide erosion control in accordance with the following references:

1. Nebraska Department of Natural Resource District Technical Standards for Construction Site Erosion & Sediment Control and the Environmental Protection Agency (EPA).

1.03 SUBMITTALS

A. The Lead Contractor will submit the following to the A/E:

1. Contractor shall mark-up of the Erosion Control Plan that is included in these documents showing additional or alternate erosion control measures as needed due to the Contractors means and methods throughout all phases of construction. The Contractor may also be required to submit calculations and backup information showing the proposed measures meet applicable regulations.
2. Contractor shall submit weekly inspection reports and inspection reports after every ½ inch rain event.
3. Submittals for materials used to implement the erosion control plan.

B. Submit shop drawings for the following erosion control features:

1. Erosion Control Materials including but not limited to SWPPP sign, erosion control fence, straw mattes, construction entrance materials, wattles and concrete washout materials

1.04 EROSION CONTROL PLAN

A. The A/E has prepared an erosion control plan included in these documents for the project. The erosion control plan is in accordance with the local department of environmental quality and national requirements. The Contractor will provide additional or alternate erosion control measures as needed due to the contractors' means and methods throughout all phases of construction. The Owner has submitted a Notice of Intent (NOI) to the local approving agency for the NPDES Construction Site Stormwater Discharge Permit.

B. Contractor shall comply with all the requirements of the erosion control plan, and the requirements of the General Permit to Discharge under the NPDES.

C. Erosion control and storm water management practices shall be installed and maintained throughout construction in accordance with the NPDES permit.

D. Contractor shall provide all erosion control practices necessary to protect property and the environment. Erosion control and storm water management practices shall be installed and maintained in accordance with the NPDES permit. The contractor shall update and modify the erosion control plan as needed for phasing of work. A copy of the current erosion control plan shall be maintained at the project site and a copy of changes shall be sent to Engineer.

E. Contractor shall not begin grading operations until NOI permit has been approved.

F. At the completion of the project, the contractor shall remove all erosion control measures in accordance with the plans and specification and notify the Owner. The Owner shall complete the Notice of Termination (NOT) for the project and send to the proper agency.

PART 2 - MATERIALS

2.01 GENERAL

A. The Contractor shall install all erosion and storm water control measures in accordance with the plans and specifications and after completed grading operations.

2.02 STRAW BALE BARRIERS

A. Rectangular bales of hay or straw, tightly bound with twine, not wire. Anchor stakes shall be “T" or "U" steel posts, or hardwood, 2.0 by 2.0 inches nominal. Rebar shall not be used to anchor bales.

2.03 SILT FENCE

A. Fence fabric, support posts and support cord shall comply with the requirements of the plans and specifications.

2.04 EROSION MAT

A. Erosion mat and type shall comply with the requirements of plans and specifications.

2.05 STAPLES

A. Use biodegradable staples in accordance with manufacturer’s recommendations for materials being anchored. Wood and metal staples are not allowed.

2.06 RIPRAP

A. Riprap shall be the class specified and shall conform to Standard Specifications for Highway Construction.

2.07 TRACKING PAD STONE

A. The aggregate for tracking pads shall be 3 to 6 inch clear or washed stone. All material shall be retained on a 3-inch sieve.

2.08 SOIL STABILIZERS

A. Soil stabilizers shall be non-asphalt-based products of the type specified.

2.09 SOIL TACKIFIERS

A. Soil tackifiers shall be non-asphalt-based products of the type specified.

2.10 POLYMERS

A. Polymers used to settle suspended sediment shall meet the requirements.

2.11 ANIONIC POLYACRYLAMIDE

A. Water soluble anionic polyacrylamide (PAM) used as temporary soil binding agents to reduce erosion shall meet the NPDES requirements.

PART 3 - EXECUTION

3.01 GENERAL

A. Install and maintain erosion control measures as required by the erosion control plan throughout phases of the project. Notify Construction Representative of modifications to the erosion control plan as dictated by Contractor's means and methods, construction phasing or by differing site conditions.

B. Contractor shall provide all erosion control measures necessary to prevent and manage polluted runoff from the construction site and discharge of sediment onto adjacent property, into storm sewers or waters of the state.

C. Perform all work in accordance with manufacturer's instruction where these specifications do not specify a higher requirement.

3.02 GRADING AND EARTHWORK

A. Install temporary or permanent erosion control measures applicable to each phase of grading or land disturbance prior commencing on that phase.

B. Following all soil disturbances, permanent or temporary seeding for stabilization shall be completed within 14 calendar days including all surface of the perimeter controls, topsoil, stockpiles and any other disturbed areas.

C. Clear only those areas designated for the placement of improvements or earthwork before placement of the final cover. Perform stripping of vegetation, grading, excavation, or other land disturbing activities in phases to minimizing exposure of bare soil. Do not clear the site of topsoil, trees, and other natural ground covers before the commencement of construction. Retain natural vegetation and protect until the final ground cover is placed.

D. Do not stockpile soil within 25 feet of any roadway, parking lot, paved area, or drainage structure or channel. Provide temporary stabilization and erosion control measures on disturbed areas and soil stockpiles which will remain for a period of more than 7 consecutive calendar days.

E. Remove surplus excavation materials from the site immediately after rough grading.

3.03 DRAINAGE

A. Divert roof drainage and runoff from all undisturbed areas upslope of the site around disturbed areas. Minimize runoff on exposed soil. Provide measures to remove sediment, and debris.

B. Convey clean or treated runoff to the nearest adequate stormwater facility. Do not discharge water in a manner that will cause erosion or sedimentation of the site or receiving stormwater facility.

C. Protect storm sewer inlets and catch basins with inlet protection devices meeting NPDES requirements.

D. Provide ditch checks to in swales or ditches to reduce the velocity of water in the channel. Construct in accordance with NPDES specifications.

E. Dewatering discharge shall be routed to a sedimentation basin or sedimentation vessel to reduce the discharge of sediments. Do not discharge water in a manner that will cause erosion or sedimentation of the site or receiving stormwater facility..

3.04 TRACKING CONTROL

A. Construct and maintain Tracking Pads in accordance with the plans and specifications. Provide each entrance to the site with a stone tracking pad at least 70 feet in length with a minimum thickness of 12 inches, placed on top of geotechnical fabric. The tracking pad shall be the full width of the egress point. Inspect tracking pads on a daily basis and replace aggregate when no longer effective.

B. If necessary, provide a crushed aggregate paved parking area.

C. If applicable, wash water shall be discharged to sedimentation basins, sedimentation vessels, or other such control areas. Untreated wash water shall not be routed to storm sewers or waters of the state.

3.05 MAINTENANCE

A. Contractor shall inspect all erosion control measures within 24 hours of the end of each rainfall event that exceeds 0.5”, or daily during periods of prolonged rainfall, or weekly during periods without rainfall. Provide copy of completed inspection report to Owner, Engineer and Architect within 2 working days. Immediately repair and/or replace any and all damaged, failed, or inadequate erosion control measures.

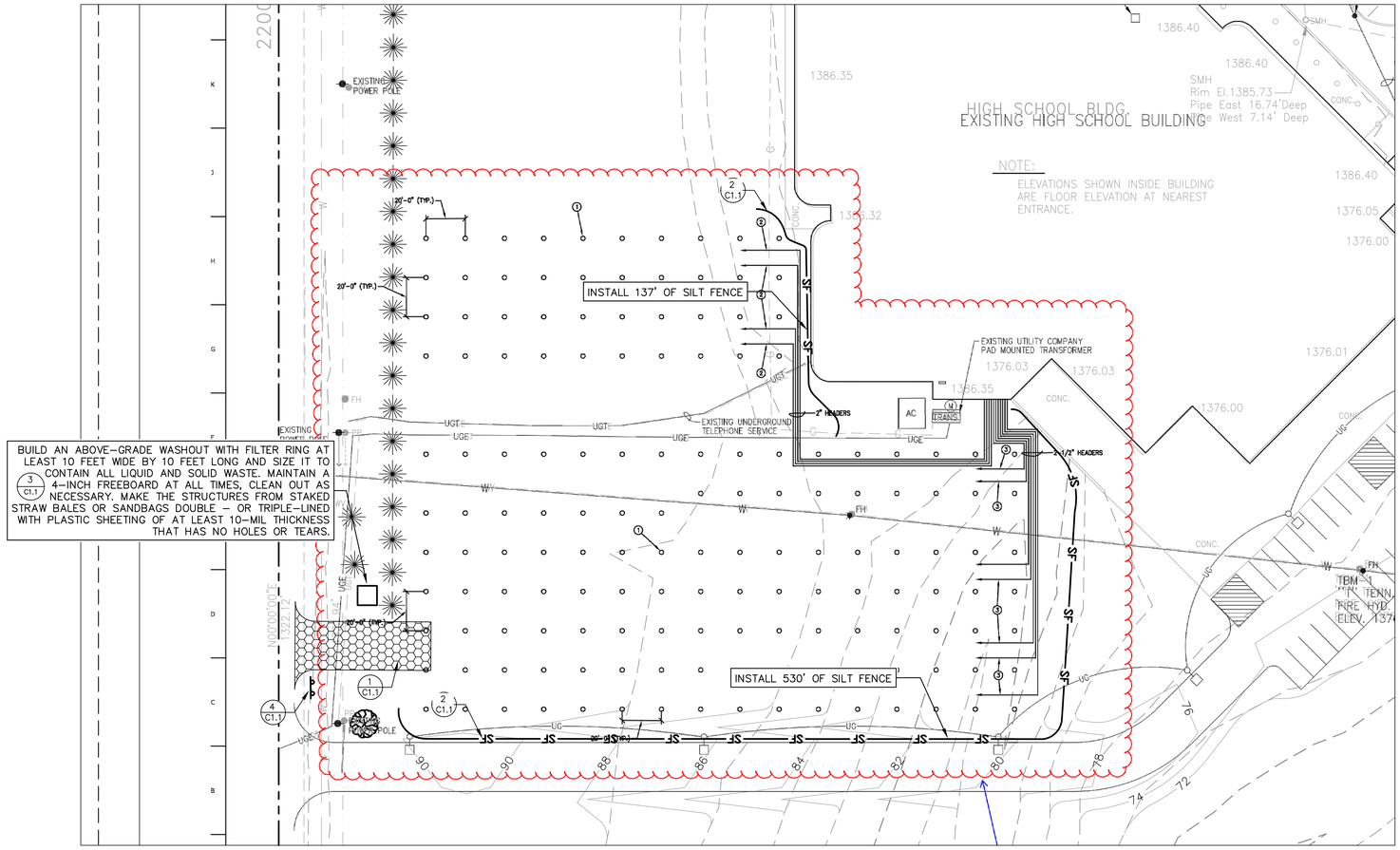
B. Re-apply soil stabilizers, tackifiers, polymers and anionic polyacrylamides as needed to prevent erosion of exposed soil.

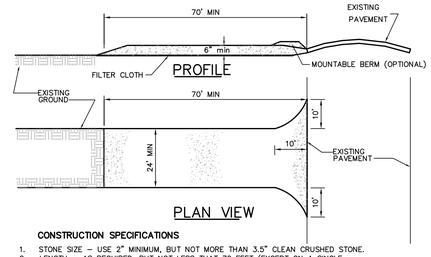
C. Maintain records of all inspections and any remedial actions taken on-site.

D. Remove any sediment reaching a public or private roadway, parking lot, sidewalk, or other pavement. Do not remove tracked sediments by flushing. Completely remove any accumulations not requiring immediate attention at least once daily at the end of the workday.

E. Frequently dispose of all waste and unused construction materials in licensed solid waste or wastewater facilities. Do not bury, dump, or discharge, any garbage, debris, cleaning wastes, toxic materials, or hazardous materials on the site, on the land surface or in detention basins, or otherwise allow materials to be carried off the site by runoff onto adjacent lands or into receiving waters or storm sewer systems.

END OF SECTION 31 25 00



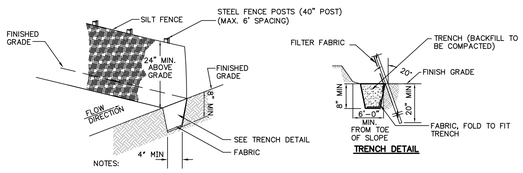


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE 2" MINIMUM, BUT NOT MORE THAN 3.5" CLEAN CRUSHED STONE.
2. LENGTH – AS REQUIRED, BUT NOT LESS THAT 70 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAT SIX (6) INCHES.
4. WIDTH – TWENTY FOUR (24) FOOT MINIMUM, BUT NOT LESS THAT THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5H:1V SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
10. ONLY ONE CONSTRUCTION ENTRANCE IS SHOWN ON THE PLAN. IF CONTRACTOR ELECTS TO HAVE TWO ACCESS POINTS, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT BOTH ACCESS POINTS.

1 C1.1 STABILIZED CONSTRUCTION ENTRANCE

NO SCALE



NOTES:

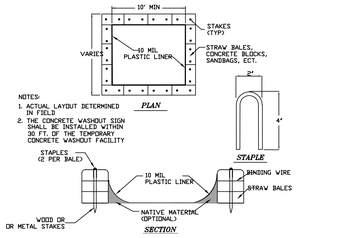
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED AT A 20° ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER SO THAT DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW
3. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL FENCE POST.
4. IF WOVEN WIRE SUPPORT IS UTILIZED, IT SHALL BE ATTACHED SECURELY TO THE STEEL FENCE POSTS WITH WIRE TIES. SILT FENCE SHALL BE ATTACHED TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. WOVEN WIRE SUPPORT SHALL BE EMBEDDED A MINIMUM OF 8" IN THE TRENCH.
5. BACKFILL SHALL BE COMPACTED USING A MECHANICAL OR PNEUMATIC TAMPER.
6. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
7. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
8. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE UNIFORMLY DISTRIBUTED ON THE SOURCE AREA PRIOR TO TOPSOILING.
9. MATERIAL OF SILT FENCE SHALL BE POLYPROPYLENE FABRIC OR NYLON REINFORCED WITH POLYESTER NETTING.
10. MATERIAL OF SILT FENCE SHALL HAVE MULLEN BURST STRENGTH GREATER THAN 150 PSI. THE EDGES SHALL BE TREATED TO PREVENT UNRAVELING.

2 C1.1 SILT FENCE DETAIL

NO SCALE

SWPPP NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING AN ACCURATE SET OF STORM WATER PREVENTION POLLUTION PLANS (SWPPP) ON SITE DURING THE TIME OF THEIR WORK.
2. THE CONTRACTOR SHALL ADHERE TO TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES ON THIS SITE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
4. ALL MEASURES SHOWN ON THE STORM WATER PREVENTION POLLUTION PLAN (SWPPP) SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE.
5. ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE INSPECTED AT LEAST ONCE EVERY FOURTEEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAT 0.5 INCHES OF PRECIPITATION DURING ANY 24 HOUR PERIOD BY THE CONTRACTOR AND MUST BE DOCUMENTED AND KEPT ON SITE FOR ACCESSIBILITY. THE CONTRACTOR SHALL COMPLETE WEEKLY REPORT AND PROVIDE REPORT TO ARCHITECT, ANY CHANGES MADE TO THE SWPPP SHALL BE REDLINED AND INITIALED ON THE PLANS BY THE CONTRACTOR.
6. ANY NECESSARY REPAIRS OR CLEAN UP TO MAINTAIN THE EFFECTIVENESS OF THE BEST MANAGEMENT PRACTICES SHALL BE MADE IMMEDIATELY BY THE CONTRACTOR ON SITE.
7. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
8. SILT FENCE SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCE WHEN IT REACHES ONE HALF THE HEIGHT OF THE SILT FENCE.
9. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED BY THE CONTRACTOR ON SITE, IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOW OF MUD ON THE PUBLIC RIGHT OF WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITION DEMANDS.

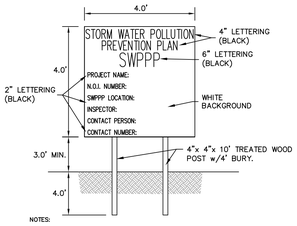


3 C1.1 TEMP. CONCRETE WASHOUT

NO SCALE

LEGEND

- CONSTRUCTION ENTRANCE (1 C1.1)
- SF — SILT FENCE (2 C1.1)
- 1775 — EXISTING CONTOURS
- PROPERTY LINE



NOTES:

1. SIGN TO BE CONSTRUCTED OF RIGID MATERIAL SUCH AS PLYWOOD OR OUTDOOR SIGN MATERIAL. LETTERING AND SIGN PAINT SHALL BE SUCH TO BE PROTECTED FROM THE ELEMENTS. SIGN SHALL BE LOCATED ON PUBLIC RIGHT OF WAY OR EASEMENT.
2. SIGN SHALL BE LOCATED NEAR THE ENTRANCE TO THE SITE AND VISIBLE BY THE GENERAL PUBLIC, AND SHALL NOT BE AN OBSTRUCTION OR SAFETY HAZARD.
3. ALL POSTED DOCUMENTS MUST BE MAINTAINED AT ALL TIMES THROUGH OUT CONSTRUCTION AND UNTIL THE NOTICE OF TERMINATION IS FILED FOR THE PERMIT.
4. CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE SIGN THROUGH OUT CONSTRUCTION AND REMOVE SIGN COMPLETELY AFTER CONSTRUCTION.

4 C1.1 SWPPP SIGN DETAIL

NO SCALE

Retain the Location Request Number for YOUR Own Protection!

Diggers Hotline of Nebraska
1-800-331-5666 (STATEWIDE)

NOTE:
UNDERGROUND UTILITY LOCATIONS SHOWN ARE FROM INFORMATION PROVIDED TO US FROM UTILITY COMPANIES. UTILITY COMPANIES MAKE NO WARRANTIES OR GUARANTEES REGARDING THE ACCURACY OF THE INFORMATION CONTAINED IN THEIR DOCUMENTS AND PROVIDES IT ONLY AS GENERAL INFORMATION TO THE RECEIVER. FOR SPECIFIC LOCATIONS DURING CONSTRUCTION CALL "DIGGERS HOTLINE" 1-800-331-5666 (STATEWIDE) PRIOR TO DIGGING.

REGA
ENGINEERING GROUP, INC.
1620 SOUTH 70TH ST.,SUITE 103
LINCOLN, NEBRASKA 68506
(402).484.7342
- ENGINEERING
- PLANNING

REGA NO. 131097

ISSUED FOR:	DATE:	BY:
ADDENDUM	03/29/13	REGA

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ETI PROJECT NO. 2012-189

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Addendum No. 1
Attachment "J"

WILBER-CLATONIA HIGH SCHOOL
HVAC RENOVATION - FINAL PHASE & INTERIOR RENOVATIONS

PROJECT: L13008 DATE: Issue Date

STORM WATER POLLUTION PREVENTION PLAN

Project North

C1.1