

**Poudre School District
Cache la Poudre Elementary
Major Renovations Package
Fort Collins, Colorado**



Schematic Design Documents
October 21, 2014
Project No. 14012

**POUDRE SCHOOL DISTRICT
CACHE LA POUDRE ELEMENTARY
MAJOR RENOVATION PACKAGE**

PROJECT ROSTER

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POUDRE SCHOOL DISTRICT CACHE LA POUDRE ELEMENTARY MAJOR RENOVATION PACKAGE

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POUDRE SCHOOL DISTRICT CACHE LA POUDRE ELEMENTARY SCHOOL MAJOR RENOVATION PACKAGE

PROJECT SUMMARY

GENERAL INTRODUCTION

The Scope of Work for the Cache la Poudre Elementary Major Renovation Package is as follows:

- Finish hardware replacement (mainly locksets and cylinders) to address ADA and security issues
- Replace floor finishes at selected toilets.
- Replace carpet overlaying hazardous flooring
- Renovation at main entry to increase level of security
- Install flood doors at selected exterior openings at the south and west side of the building
- Heating & ventilation system replacement/renovation
- Replacement of Building Automation System (BAS) with Direct Digital Control (DDC)

Belford Watkins Group LLC has been working with the school's Facilities Department, school staff and FCI Construction since late September 2014. These efforts have included development of design concepts and options and review of budget estimates. The Schematic Design Documents contained herein represent the culmination of these efforts.

DOOR HARDWARE

The intent of this area of work is to increase classroom and building security and to eliminate non-ADA compliant locksets. Work in this area also includes new security hardware related to Entry Security. All new hardware would be US 626 finish. To this end, scope would include that hardware outlined in the attached Outline Door Hardware Spec.

TOILET FLOORING REPLACEMENT

Flooring at certain toilet rooms has reached the end of its useful life (VCT Floors) and at some locations contains asbestos containing mastic (Sheet Vinyl). The following toilets are to receive flooring replacement:

- Boys Toilet 163 (currently VCT)
- Girls Toilet 165 (currently Sht Vinyl)
- Kindergarten Toilets 130 & 131 (currently VCT)
- Administration Toilets 120 & 121 (currently Sht Vinyl)
- PE Toilet 110 (currently Sht Vinyl)

The flooring to be replaced with Crossville Eco – Cycle 8x8 square tile and 4x8 tile base. See attached Scope Plan for graphic representation of scope.

ENTRY SECURITY

To following improvements will be undertaken to improve security of the main entry (see Secure Entry Enlarged Plan):

- A new hollow metal frame containing secure doors and sidelites will be installed at the main entry lobby after the main entry airlock to provide a Secure Vestibule. Door hardware will be as outlined in the Outline Door Hardware Spec.
- A new door opening will be installed between this vestibule and the adjacent Office 118 to route visitors through the admin area. The size of the Office Manager office 118 will be modified to allow an entry alcove leading to the Receptionist. Door hardware will be as outlined in the Outline Door Hardware Spec.
- The existing door 119 will be removed and a new door that swings to the Lobby installed. Door hardware will be as outlined in the Outline Door Hardware Spec.
- New walk off carpet (CA abrasive action) will be installed at the existing air lock and at the new Secure Vestibule. The name of the school will be cut into the walk-off carpet in one of the school colors. Carpet at the Lobby and Office 118 will be replaced.

Visual control of the main entry approach will be by existing camera system at the receptionist's desk. The secure doors at the Secure Vestibule can be left open during certain times of the day to provide unimpeded access and visual oversight only. Alternately, the secure doors can be locked down forcing visitors to the Administration area from which access to the school at large can be granted.

CARPET REPLACEMENT

The “double stick” carpet installation at 107 and 109 overlays Vinyl Asbestos Tile. The district’s desire is to abate hazardous flooring at these rooms and install new carpet. See attached Scope Plan for graphic representation of scope.

STRUCTURAL OVERVIEW

The proposed remodel involves the removal and replacement of three roof top mechanical units and the addition of a new RTU. The replaced units are located in the 1972 building addition and the new RTU in the 1992 addition (Kindergarten area). A preliminary review regarding the structural situation for the roof top mechanical equipment has been performed as follows:

- The existing units to be replaced are located with the long dimension of the unit parallel to and straddling existing roof beams.
- The new unit is to be located with the long dimension of the unit parallel to and straddling an existing roof beam separating the Kindergarten Rooms.
- The weight of the existing units that are to be replaced is currently unknown

Based on preliminary review of the existing drawings provided:

- the existing building at the location of the proposed mechanical units is one-story construction
- the structural roof system is steel joists with steel roof deck
- in general the existing steel joists are spaced at 6’-0” at the 1972 addition and at 4’-0” at the 1992 addition.
- the steel roof joists are supported by exterior CMU walls; and interior custom steel trusses, steel beams and CMU walls

Conclusion:

The proposed location for the replacement units and new unit makes sense with the existing structural conditions. It is anticipated that the existing roof joists supporting the unit would require minor or no joist reinforcing depending on the existing unit weight versus the new unit weight at the replaced units, and the weight of the new unit.

Reinforcing of the existing steel roof joists would likely involve the typical type of welded reinforcing associated with these situations; which can involve reinforcing the top and bottom joist chords with rods, reinforcing the joist webs with steel angles, and reinforcing the joist bearing seats.

FLOOD DOORS

Existing exterior doors, frames and hardware are to be removed and replaced in accordance with Architecture Plus drawings dated 6/3/14 (see attached) along with select areas of wall in-fill. Exterior door leafs area to be salvaged and turned over to the school district. Door hardware to be reinstalled at new door leafs/frames.

HEATING AND VENTILATING SYSTEM UPGRADES

The heating and ventilation system consists of the following:

- Three multizone rooftop units installed in the 1972 building addition which include hot water heating and ventilation (no mechanical cooling). Each unit has a design capacity of 9,600 – 9,900 cfm and units have approximately nine zones each.
- One rooftop unit at gym with hot water heat and a design capacity of 6,300 cfm.
- Two rooftop units above the administrative area (5,000 cfm) and computer lab (3,500 cfm) with DX cooling and hot water heating.
- Unit ventilators at twelve classroom locations and three at cafeteria varying from 1,250 to 1,500 cfm each.
- One boiler with a capacity of 1080 MBH sea level output and one boiler with a capacity of 1094 MBH sea level output. Exact age of boilers is unknown.

The scope of work for the heating and ventilation system retrofit shall include the following:

- Remove and dispose of existing three multizone units and 12 UV's. Remove existing piping serving UV's and hangers to nearest branch and cap.
- Replace with new variable air volume (VAV) RTU's including new roof curb, roof repair for new curb sizes, tie-in to existing ductwork, insulated and jacketed hydronic heating water piping with three-way modulating control valve, 2 isolation valves, drain valve, and appurtenances. Unit control by TCC described below. Increase size of RTU-3 by approximately 3,600 cfm to also serve three classrooms currently served by UV's.
- Reseal all existing ductwork connected to existing multizone units to accommodate higher pressure of VAV systems.
- Add new VAV RTU for four (4) northeast classrooms added in 1992 and two (2) original 1962 classrooms, all currently served by UV's, approximately 8000 cfm. Ductwork to two (2) original 1962 classrooms shall be routed across roof and drop down into each classroom due to limited ceiling space in the classrooms.
- Unit arrangement as follows: return/economizer section, MERV-8 filters, 24" access, 2 row heating coil, 24" access, space for future 12 row cooling coil, 24" access, draw through plug supply fan (sized to include future cooling coil pressure drop), discharge plenum (blow thru arrangement is also acceptable).

- Unit construction to include double wall, lights in access sections, convenience outlet on separate circuit, variable frequency drive (with manual bypass), unit phase loss protection, hinged access doors, and spring vibration isolators.
- For RTU-3, provide additional distribution ductwork and rework unit connection for additional zones for those classrooms currently served by unit ventilators.
- Provide a total of 36 pinch off VAV boxes with HW reheat to serve the zones connected to these four new air handling units. At multizone units, cut boxes in to existing ductwork near the multizone unit. Provide modulating control valve, 2 isolation valves, drain valve, and appurtenances. Control by TCC described below.
- Replace existing pneumatic operated fire/smoke dampers where required with electric (120V/1 phase) actuated fire/smoke dampers. Coordinate integration into fire alarm system.

DDC CONTROLS

Provide a complete Building Automation System (BAS) using Direct Digital Controls (DDC). All new unit/zone controllers, network controller will reside on the dedicated BAS network. A primary work BAS graphic workstation is to be provided. All power required for the BAS workstation is to be provided. Provide all new DDC controls for all new, renovated and existing HVAC equipment. All pneumatics and existing components shall be removed from the building. PSD-approved controls vendor shall be utilized.

ELECTRICAL IMPROVEMENTS

All work shall conform to the 2011 National Electrical Code, International Building Code 2009~~12~~, and PSD Standards. The contractor shall be required to submit shop drawings, product data and Operations and Maintenance Manuals, as well as record construction drawings at the completion of construction.

CEILING DEMO/REINSTALLATION

Electrical contractor to remove all lighting and speakers from grid ceilings being removed for new mechanical duct work then re-install to match existing conditions. Electrical contractor shall also remove and relocate electrical circuits or feeders that interfere with new mechanical duct work or piping.

BAS SYSTEM

Electrical contractor will provide 120 volt 20 Amp circuit to control panel locations.

DATA AND VOICE WIRING SYSTEMS

Demolition of any IT or Security Systems data wiring shall be accomplished by a PSD-approved, qualified subcontractor. Current PSD-approved subcontractors are H&H Data and Interface for IT, and Tri-Tech Security for security systems.

If any existing data outlet is to be removed and relocated due to wall removal or any other reason, the contractor shall identify wire numbers from the existing jack identification in the field, or from the project plans.

If required by new mechanical systems and remodeled main entry, voice and data system j-box outlets and raceways stub-ups shall be provided throughout. Conduit will extend from the outlet boxes to above the nearest accessible ceiling.

The system equipment, telephone and data cables, fiber cables, fiber terminations, jacks, spools, frames, patch panels, data management panels, field termination blocks, equipment termination block will be done by an approved Vendor of PSD.

All new HVAC controllers will require a data connection for integration to the BAS.

The existing security panel at CLPES is understood to have capacity to accommodate new card access inputs. This contractor shall include terminating all new security wiring added in this scope.

ACCESS CONTROL

Electrical contractor will provide conduit and box rough-ins and local 120 volt power for power supplies above ceiling at all new access control locations, including the new secure entry points at the main entry.

L.V. cabling devices and termination by approved vendor of PSD.

ELECTRICAL SERVICE AND GEAR:

Existing electrical services will be reused. These services are 120/208 x 3 phase, 120/208V 3 phase, 4 wire.

New switches or breakers may be required to serve new mechanical roof top units

Existing panel board will be reused and with a few new breakers for front entry remodel and miscellaneous mechanical.

Any new phase 3 motor starters required for mechanical will be provided by electrical contractor.

WIRING DEVICES

Wiring devices shall be specification grade, color to match existing. Duplex outlets shall be installed per code and shall be tamper resistant as directed by PSD's electric shop, special receptacles as required by particular equipment.

Light switch test will only consist of turning switches on/off, if switch feels funny or makes noise it will be replaced. Keyed switches will not be tested.

All duplex and light switch cover plates will be metal.

ADDRESSABLE FIRE ALARM SYSTEM

Fire alarm additions will be documented by the fire alarm consultant.

POUDRE SCHOOL DISTRICT CACHE LA POUDRE ELEMENTARY MAJOR RENOVATION PACKAGE

COORDINATION SUMMARY

CONSTRUCTION TIMING

Cache la Poudre Elementary School construction will take place during summer break of 2015. It is anticipated that these construction efforts would commence June 1st, 2015 and extend through August 10th, 2015 with commissioning continuing through Sept. 11th, 2015.

WORK NOT IN CONTRACT

It is anticipated that the following work will not be in the general construction contract and will be coordinated through the school district with other consultants working directly for the school district.

- Abatement
- Remove and reinstall wireless access points

SCHEDULE COORDINATION

The following schedule has been established in order to assure delivery of the renovations.

Pre-Design

- Kick-off Meeting Sept 12, 2014

Schematic Design

- Develop Preliminary Design Concepts Sept 13 – Oct 1
- Review Concepts with Facilities Oct 1
- FCI Initial SD Estimate Oct 15
- Finalize Schematic Design Documents Oct 16 – Oct 21

Contract Documents

- Kick-off Construction Documents Oct 21
- 50% CD documents from Consultants Nov 10
- 50% CD Review with PSD Nov 12
- FCI 50% CD Estimate Nov 13 – Nov 26
- FCI 50% CD Estimate Review with PSD Nov 26
- 95% CD documents from Consultants Dec 8
- 95% CD Review with PSD Dec 10
- 100% CD Documents Dec 22

GMP

- FCI to provide GMP Jan 2015
- Place GMP approval on School Board agenda Feb 10th
- School Board Approval Feb 24th

Construction

- Material and Equipment Pre-Order March - May 2015
- Construction Commencement June 1st 2015
- Construction Complete August 10th, 2015
- Commissioning Complete Sept 11th, 2015

SUMMARY OF ISSUES TO BE RESOLVED

The following issues still require resolution:

- Structural requirements for rooftop units

POUDRE SCHOOL DISTRICT CACHE LA POUDRE ELEMENTARY MAJOR RENOVATION PACKAGE

DESIGN PARAMETERS

CODES AND REGULATIONS

The Cache le Poudre Elementary Major Renovation Package is being designed in compliance with the codes and regulations stipulated by the Colorado Department of Public Safety, Division of Fire Safety, School Construction & Inspection and the Department of Regulatory Agencies (DORA) Electrical and Plumbing Boards. (Note: As of December 2014, the 2015 IBC will be adopted however projects submitted during the December to March period may still be reviewed under the 2006 IBC)

1. Building Permit (2006 IBC & 2006 IEBC)
2. Electrical Permit (2011 NEC)
3. Mechanical Permit (2006 IMC)
4. Plumbing Permit (2009 UPC)
5. Fire and Life Safety (2006 IFC)
6. Energy Code (2006 IEC)

REFERENCE DATA

PSD Technical Specifications

PSD Provided Unofficial Abatement Locations

REPLACEMENT FLOOR FINISH LEGEND

| | | |
|---|---|---|
|  |  |  |
| NEW CARPET TANDUS FIELD DAY | WALK-OFF CARPET TANDUS ABRASIVE ACTION-ASPHALT | 8" x 8" TILE CROSSVILLE ECOCYCLE |

FLOOD DOOR REPLACEMENT = ▲

SECURE ENTRY = - - - - -



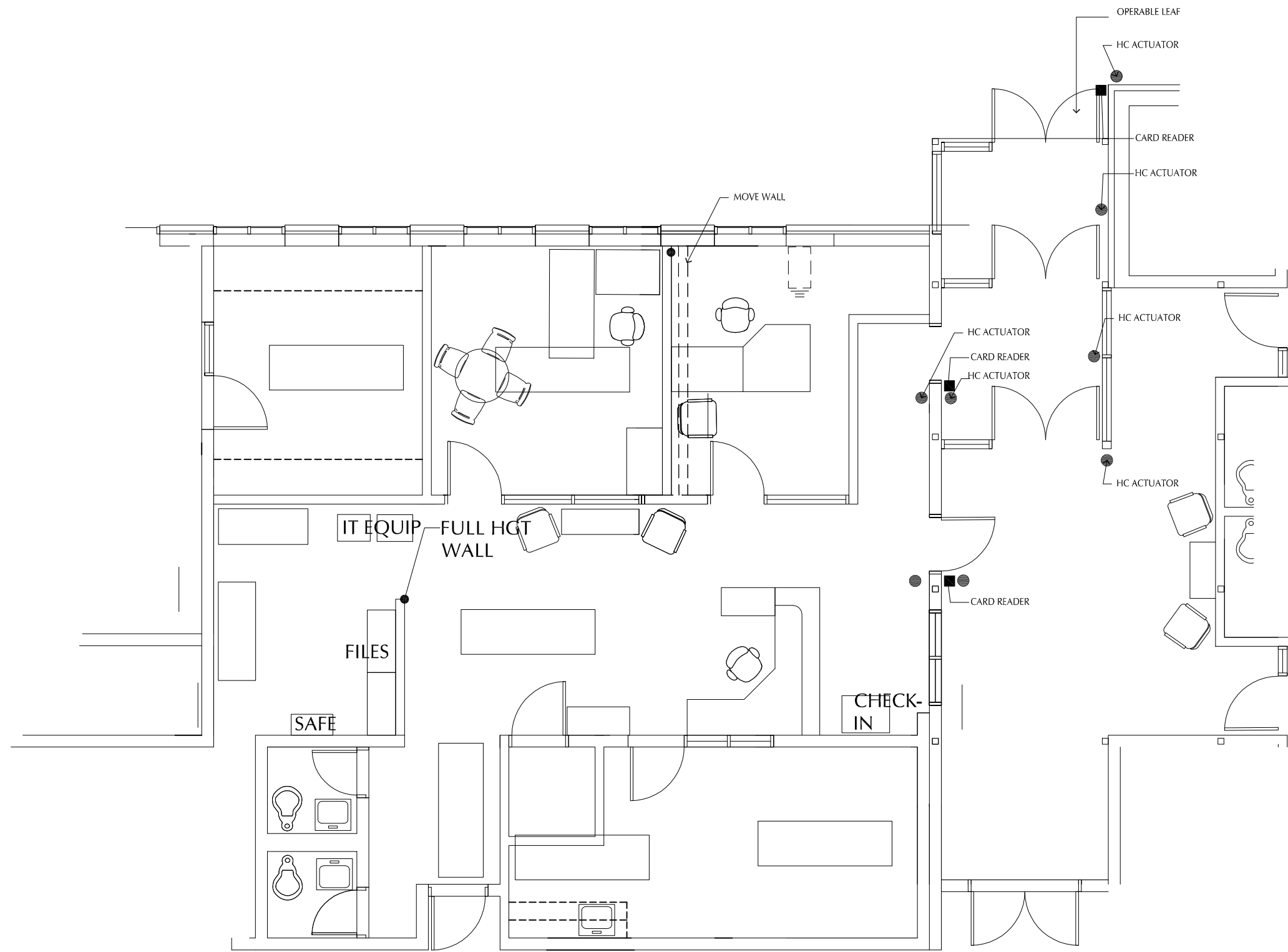
SCOPE PLAN

1/16" = 1'-0"



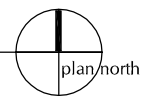
CACHE LA POUUDRE ELEMENTARY SCHOOL
MAJOR RENOVATION SCHEMATIC DESIGN

BWGA ARCHITECTS
10-21-2014



ENLARGED SECURE ENTRY

NTS



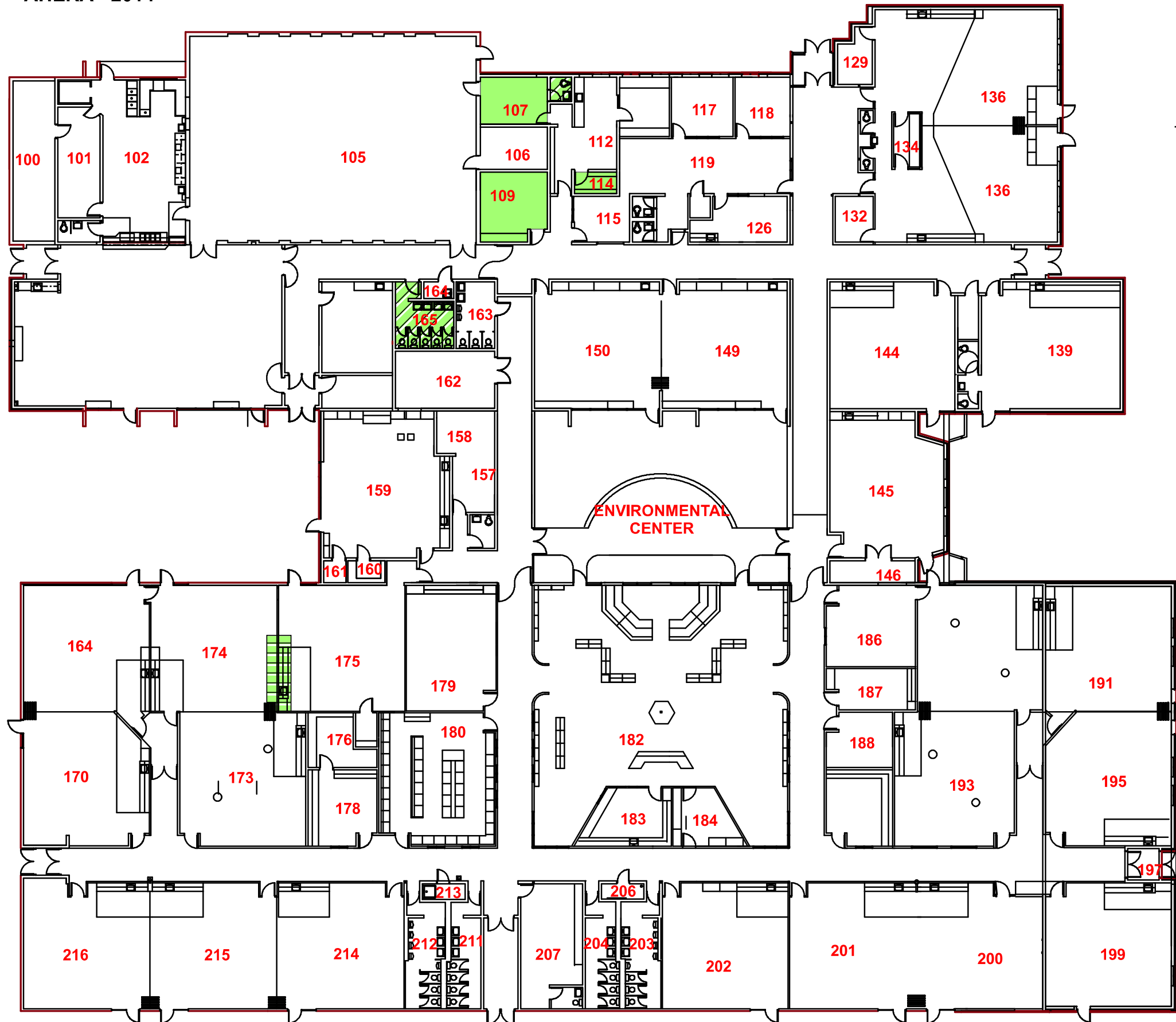
CACHE La Poudre Elementary School
 MAJOR RENOVATION SCHEMATIC DESIGN

BWGA ARCHITECTS
 10-21-2014

CACHE LA POUDBRE ELEMENTARY

3511 W. COUNTY ROAD 54G
FORT COLLINS, COLORADO

AHERA - 2014



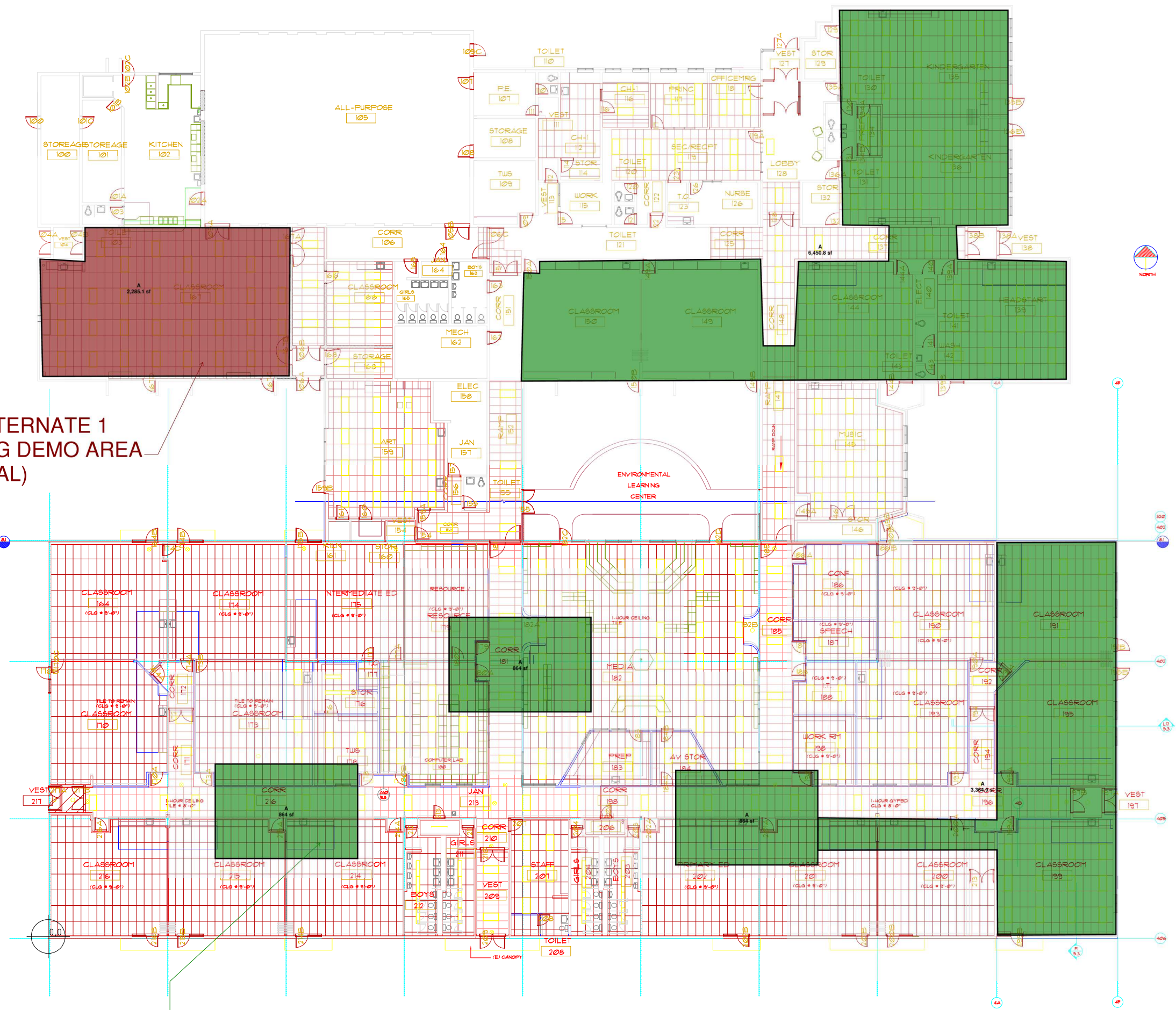
LEGEND

- VAT/Mastic
- Sheet Vinyl
- 2% Texture & Joint Compound

Texture & Joint Compound should be tested prior to disturbance

ACM - Pipe joints located above hard ceilings - I.E. Restrooms, Kitchen, boiler room

Lead Containing paint on some CMU walls



BID ALTERNATE 1
 CEILING DEMO AREA
 (TYPICAL)

BOND ISSUE 1 - OPTION 1- CEILING
 DEMO AREA (TYPICAL)

POUDRE SCHOOL DISTRICT CACHE LA POUDRE ELEMENTARY SCHOOL OUTLINE DOOR HARDWARE SCHEDULE

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Butts and Hinges:
 - i. IVES 5BB1
 - ii. Hager Hinge: BB1279 BB1168.
 - iii. McKinney Hinge: TA714TA786.
 - 2. Continuous Hinges:
 - i. Markar Products, Inc.: FM-300 HG-311.
 - 3. Key Control System: No substitutions allowed.
 - i. Schlage Lock Company: Poudre School District Existing System.
 - 4. Locksets, Latchsets and Deadbolts:
 - i. Schlage Lock Company: D-Vandlgard Series Rhodes Lever Design, L-series mortise 06 lever design and B-series deadbolts.
 - 5. Exit Devices:
 - i. Von Duprin: 94 Series 99 Series.
 - 6. Door Closers and Magnetic Holders:
 - i. LCN, Div. Ingersoll-Rand: 4010/4110 EDA Series. SEM7800
 - 7. Door Trim Units:
 - i. Ives WS406 FS436/438. WS40, WS45
 - ii. Rockwood 407/408 440/442 N/A.
 - iii. Triangle Brass W1274CCS 1211/1212TM N/A.
 - iv. Hager 236W 241F/243F N/A.
- B. Finish: US 26D /ANSI 626, ANSI 652
- C. Keying Systems:
 - 1. Equip locks and cylinders with Schlage six pin interchangeable core cylinders. Cylinders must allow for applications of multiplex keying capabilities and multiple keyways. Keying shall be performed by Schlage Lock factory or acceptable distributor.
 - 2. Owner shall furnish supplier with bitting list for factory to combinate locks, cylinders and cores.
 - 3. Furnish cylinders with temporary construction core keying system during construction period. Owner shall remove temporary construction cores and install permanent keyed cores into locksets and cylinders. Owner shall return temporary construction cores to General Contractor. General Contractor shall return temporary construction cores to supplier for credit. Do not stamp keys with bittings, keyways, or key symbols. Failure to properly comply with these requirements may be cause to require replacement of all or any part of the cylinders and keys involved as deemed necessary at no additional cost to the Owner.

4. Do not package permanent keys with locks. Package key separately from locksets and cores. Deliver all keys, key blanks and other security keys direct to Owner from lock, furnish cylinder with temporary construction core keying system during construction, Owner will install final cores.

D. Hardware Schedule:

Cache la Poudre Elementary School

Priority One Hardware Sets

Hardware Set ES01 (Classroom Security)

Door Number:

109, 112, 135A, 136A, 139A, 144A, 145A, 154, 159A, 164A, 170A, 173A, 174A, 178, 179, 180A, 180B, 180C, 186A, 187, 188, 190A, 191A, 193, 195A, 198, 199A, 200A, 201A, 202A, 214A, 215A, 216A

- 1 EA Vestibule Lockset
- 2 EA FSIC Core

Hardware Set ES02 (Classroom Security)

Door Number:

105A, 105B, 149A, 150A

- 2 EA Panic Trim Conversion
- 2 EA Rim Cylinder
- 2 EA FSIC Core

Hardware Set ES03 (ADA Compliance)

Door Number:

128, 151, 182A, 182B, 194

- 1 EA Lever Latch Trim for Exit Device

Priority Two Hardware Sets

Hardware Set ES04 (Office and Teacher Areas)

Door Number:

101A, 101B, 101C, 102A, 107,111, 115, 116, 117, 118, 119A, 122, 126, 134A, 134B, 183, 184B

1 EA Entrance Lockset

1 EA FSIC Core

Hardware Set ES05 (Staff Areas)

Door Number:

108, 114, 123, 160, 161, 176, 207

1 EA Classroom Lockset

1 EA FSIC Core

Hardware Set ES06 (Core Compliance for New Keying)

Door Number:

129, 132, 140, 146, 157, 162, 164, 168, 184A, 206, 213

1 EA Storage Lockset

1 EA FSIC Core

Hardware Set ES07 (Core Compliance for New Keying)

Door Number:

102C

1 EA Patio Lockset

1 EA FSIC Core

Hardware Set ES08 (Core Compliance for New Keying)

Door Number:

167A

4 EA FSIC Core

Hardware Set ES09 (Core Compliance for New Keying)

Door Number:

106A

3 EA FSIC Core

Hardware Set ES10 (Core Compliance for New Keying)

Door Number:

167B

2 EA FSIC Core

Hardware Set ES11 (Core Compliance for New Keying)

Door Number:

172

1 EA FSIC Core

Priority Three Hardware Sets

Hardware Set ES12 (Single Use Toilets)

Door Number:

103, 110, 120, 121, 130, 131, 155, 208

1 EA Privacy Lockset

Hardware Set ES13 (Exit Latchset)

Door Number:

100, 139B, 144B, 145B, 149B, 150B, 159B, 175B, 182C, 182D, 190B, 191B, 195B, 199B

1 EA Exit X Blank Outside

1 EA Lock Protector

Hardware Set ES14 (Passage Set)

Door Number:

141, 143, 163, 165, 177, 186B, 203, 204, 212, 211

1 EA Passage Lockset

Existing Hardware to Remain

Hardware Set ES15 (Exit Device to Remain)

Door Number:

104A, 105C, 106C, 135B, 136B, 138A, 164B, 167C, 167D, 170B, 174B, 181, 185, 197A, 209, 200B, 201B, 202B, 214B, 215B, 216B, 217A

Hardware Set ES16 (Lockset to Remain)

Door Number:

102B, 170C, 174C, 177A

Hardware Set ES17 (Push/Pull to Remain)

Door Number:

104B, 138B, 197B, 210, 217B

Hardware Sets Related to Secure Entry Renovation

Hardware Set ES18 (Replacement of existing Entry Door Hardware)

Door Number:

127A

| | | |
|---|----|-------------------------------------|
| 2 | Ea | Electric HW Hinge |
| 2 | Ea | Electric Panics |
| 1 | Ea | Interface Box |
| 1 | Ea | Rim Cylinder |
| 2 | Ea | Mortise Cylinder at Special Dogging |
| 1 | Ea | Mortise Cylinder at Mullion |
| 4 | Ea | FSIC Core |
| 1 | Ea | OH Stop |
| 1 | Ea | Surface Auto Operator |
| 2 | Ea | Actuator |
| 1 | Ea | Power Supply |

Hardware Set ES19 (New Door Secure Vestibule to Admin)

Door Number:

119B

- 3 Ea HW Hinge
- 1 Ea Vandl Entrance Lock
- 2 Ea FSIC Core
- 1 Ea Electric Strike
- 1 Ea Lockguard
- 1 Ea OH Stop
- 1 Ea Surface Auto Operator
- 1 Ea Actuator
- 1 Ea Receiver
- 1 Ea Kickplate
- 1 Ea Seals
- 1 Ea Card Reader
- 1 Ea Wiring Diagram
- 1 Ea Power Supply

Hardware Set ES20 (New Security Doors from Lobby to Secure Vestibule)

Door Number:

128B

| | | |
|---|----|-------------------------------------|
| 4 | Ea | HW Hinge |
| 2 | Ea | Electric HW Hinge |
| 1 | Ea | Keyed Removable Mullion |
| 2 | Ea | Electric Panics |
| 1 | Ea | Interface Box |
| 1 | Ea | Rim Cylinder |
| 2 | Ea | Mortise Cylinder at Special Dogging |
| 1 | Ea | Mortise Cylinder at Mullion |
| 4 | Ea | FSIC Core |
| 1 | Ea | OH Stop |
| 1 | Ea | Surface Closer |
| 1 | Ea | Surface Auto Operator |
| 2 | Ea | Actuator |
| 1 | Ea | Receiver |
| 2 | Ea | Kickplate |
| 1 | Ea | Wall Card Reader |
| 1 | Ea | Wiring Diagram |
| 1 | Ea | Power Supply |

Hardware Set ES21 (New Door Admin to Lobby)

Door Number:

119A

- 3 Ea HW Hinge
- 1 Ea Vandl Entrance Lock
- 2 Ea FSIC Core
- 1 Ea Electric Strike
- 1 Ea Lockguard
- 1 Ea OH Stop
- 1 Ea Surface Auto Operator
- 1 Ea Actuator
- 1 Ea Receiver
- 1 Ea Kickplate
- 1 Ea Seals
- 1 Ea Card Reader (reuse existing)
- 1 Ea Wiring Diagram
- 1 Ea Power Supply



POUDRE SCHOOL DISTRICT

CACHE LA POUDRE ELEMENTARY SCHOOL

FLOOD DOOR REPLACEMENT

OWNER:

POUDRE SCHOOL DISTRICT
2445 LAPORT AVENUE
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JERRY GARRETSON
CONSTRUCTION PROJECT MANAGER

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PHONE: 970.493.1220
FAX: 970.224.1314
EMAIL: tomk@plusarch.com

TOM KALERT, AIA
ARCHITECT

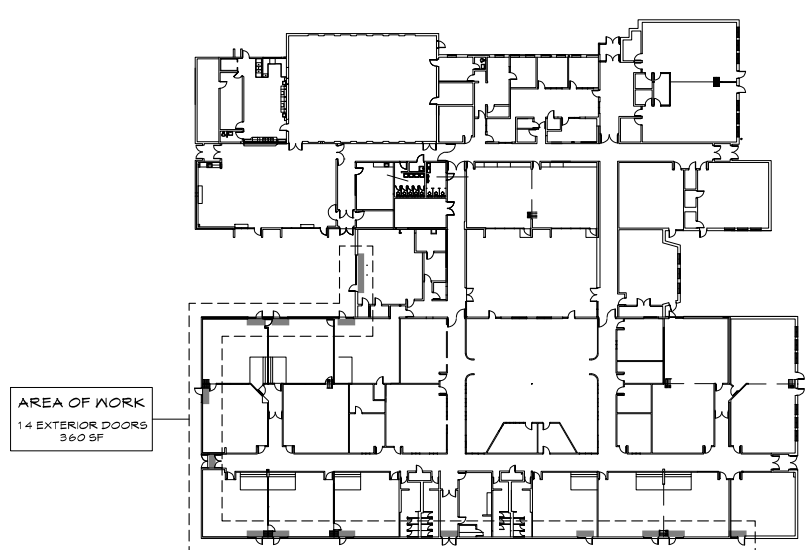
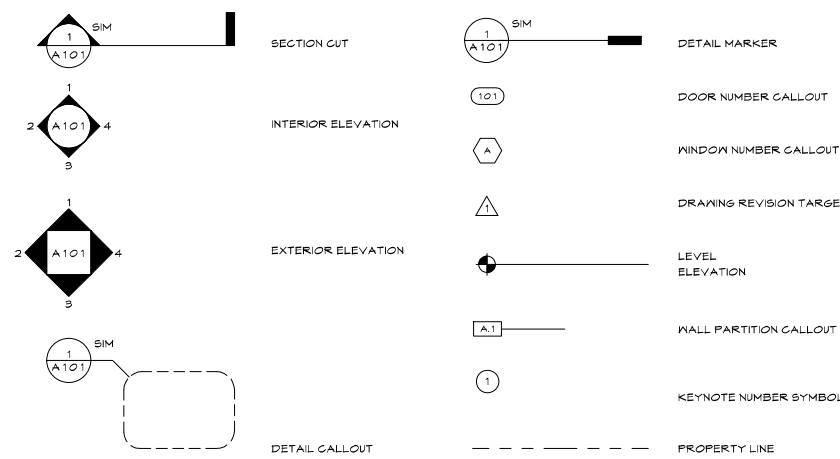
DRAWING INDEX:

T.1 TITLE SHEET, VICINITY MAP AND KEY PLAN
A.1.1 DOOR REPLACEMENT KEY PLAN, DOOR SCHEDULE AND FRAME TYPES, AND DETAILS

ABBREVIATIONS:

| | | | |
|--------|------------------------|----------|----------------------------------|
| ACOUS. | ACOUSTICAL | MATL. | MATERIAL |
| AD. | ACCESS DOOR | MEGH. | MECHANICAL |
| A.F.F. | ABOVE FINISH FLOOR | MEP. | MECHANICAL, ELECTRICAL, PLUMBING |
| ARCH. | ARCHITECTURAL | MIN. | MINIMUM |
| BD. | BOARD | MISC. | MISCELLANEOUS |
| BLDG. | BUILDING | MTD. | MOUNTED |
| BLKS. | BLOCKING | (N) | NEN |
| BOT. | BOTTOM | N. | NORTH |
| BSMT. | BASEMENT | NE. | NORTHEAST |
| C.J. | CONTROL JOINT | NIC. | NOT IN CONTRACT |
| CLG. | CEILING | N.T.S. | NOT TO SCALE |
| CLD. | CLOSET | O.C. | ON CENTER |
| CLR. | CLEAR | O.D. | OUTSIDE DIAMETER |
| COL. | COLUMN | O.F.D. | OVERFLOW DRAIN |
| CONG. | CONCRETE | O.P.N.S. | OPENING |
| CONST. | CONSTRUCTION | OPP. | OPPOSITE |
| CONT. | CONTINUOUS | OPPHD. | OPPOSITE HAND |
| CORR. | CORRIDOR | PL. | PLATE |
| CPT. | CARPET | PL. | PROPERTY LINE |
| CT. | CERAMIC TILE | FL. | PLASTIC LAMINATE |
| DBL. | DOUBLE | FLAM. | PLASTER |
| DEPT. | DEPARTMENT | FLAS. | PLYWOOD |
| DIA. | DIAMETER | FLYND. | PAPER TOWEL DISPENSER |
| DIAG. | DIAGRAM | F.T.D. | PARTITION |
| DIM. | DIMENSION | FTN. | REFLECTED CEILING PLAN |
| DIV.D. | DIVIDED | R.C.P. | ROOF DRAIN |
| DN. | DOWN | R.D. | REQUIRED |
| DR. | DOOR | R.H. | RIGHT HAND |
| DWS. | DRAWING | R.O. | ROUGH OPENING BLOCKING |
| (E) | EXISTING | R.O.W. | RIGHT OF WAY |
| EA. | EACH | S | SOUTH |
| E | EAST | SE | SOUTH EAST |
| E.J. | EXPANSION JOINT | SECT. | SECTION |
| EL. | ELEVATION | S.E.D. | SEE ELECTRICAL DRAWINGS |
| ELEC. | ELECTRICAL | S.F. | SQUARE FOOT |
| EMER. | EMERGENCY | SHT. | SHEET |
| ENCL. | ENCLOSURE | SHTG. | SHEATHING |
| EP. | ELECTRICAL PANEL | S.L.D. | SEE LANDSCAPE DRAWINGS |
| EQ. | EQUAL | S.M.D. | SEE MECHANICAL DRAWINGS |
| EQUIP. | EQUIPMENT | S.P.D. | SEE PLUMBING DRAWINGS |
| F.A. | FIRE ALARM | SPECS. | SPECIFICATIONS |
| F.C.P. | FIRE CONTROL PANEL | S.S.D. | SEE STRUCTURAL DRAWINGS |
| F.D. | FLOOR DRAIN | STOR. | STORAGE |
| FDN. | FOUNDATION | STRUCT. | STRUCTURAL |
| FF. | FINISH FLOOR | SUSP. | SUSPENDED |
| F.F.E. | FINISH FLOOR ELEVATION | T.B. | TOWEL BAR |
| F.E.G. | FIRE EXTINGUISHER CAB. | T & B | TOP AND BOTTOM |
| FIN. | FINISH | TEL. | TELEPHONE |
| FIXT. | FIXTURE | TEMP. | TEMPERED |
| FL. | FLOOR | T & S | TONSUE AND GROOVE |
| F.O.B. | FACE OF BUILDING | THK. | THICK |
| F.O.C. | FACE OF CONCRETE | THRESH. | THRESHOLD |
| F.O.F. | FACE OF FINISH | T.O.P. | TOP OF PLATE |
| F.O.M. | FACE OF MASONRY | T.O.W. | TOP OF WALL |
| F.O.S. | FACE OF STUD | T.P. | TOILET PARTITION |
| F.O.W. | FACE OF WALL | T.O. | TOP OF |
| FR. | FRAME | TYP. | TYPICAL |
| FTS. | FOOTING | U.B.C. | UNIFORM BUILDING CODE |
| GA. | GAUGE | U.L. | UNDERWRITER'S LABORATORY |
| GALV. | GALVANIZED | U.O.N. | UNLESS OTHERWISE NOTED |
| GYP. | GYPNUM | V.P. | VAPOR BARRIER |
| HDR. | HEADER | V.C.T. | VINYL COMPOSITION TILE |
| HDRWD. | HARDWOOD | VERT. | VERTICAL |
| HDR. | HDRWARE | VEST. | VESTIBULE |
| HORIZ. | HORIZONTAL | V.I.F. | VERIFY IN FIELD |
| ID. | INSIDE DIAMETER | W | WEST |
| INSUL. | INSULATION | W/C | WITH |
| INT. | INTERIOR | W.C. | WATER CLOSET |
| JAN. | JANITOR | W.D. | WOOD |
| JST. | JOIST | WIND. | WINDOW |
| JT. | JOINT | W/O | WITHOUT |
| K.P. | KICKPLATE | W/P | WATERPROOFING |
| LAM. | LAMINATE | W.S.G.T. | WAINSCOT |
| LAV. | LAVATORY | WT. | WEIGHT |
| LOUV. | LOUVER | YD. | YARD |
| LT. | LIGHT | | |

SYMBOLS LEGEND:

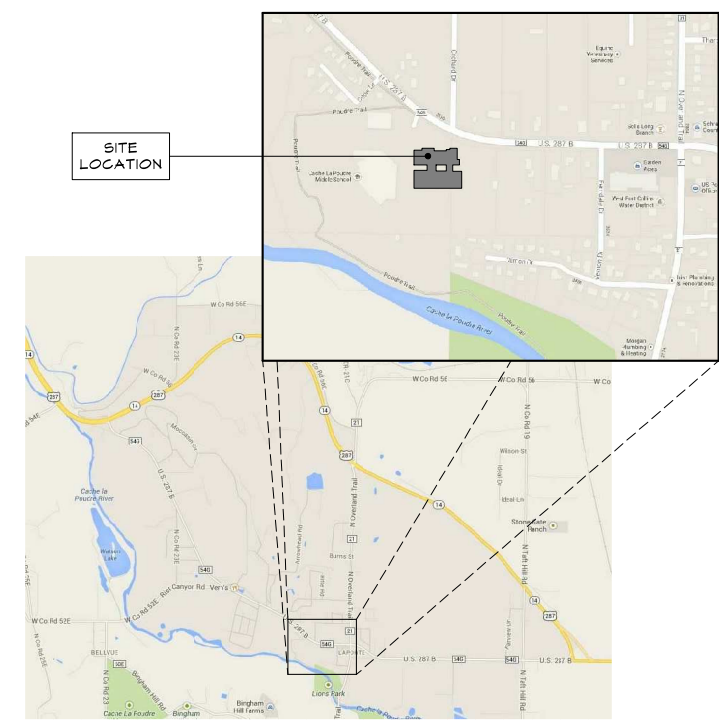


KEY PLAN:

NOT TO SCALE

BASIC CODE INFORMATION:

CODE USED: 2006 IBC
BUILDING OWNER: POUDRE SCHOOL DISTRICT
EXISTING BUILDING AREA: 52,300 SF
AREA OF WORK: (14) EXTERIOR DOOR LOCATIONS APPROXIMATELY 360 SF
BUILDING OCCUPANCY: E



VICINITY MAP:

NOT TO SCALE

ARCHITECTURE PLUS
318 East Oak Street + Fort Collins, CO 80524
1531 West 29th Street + Loveland, CO 80538
970.493.1220 + 888.698.7897 + www.plusarch.com

SHEET CONTENTS
TITLE SHEET, VICINITY MAP AND KEY PLAN

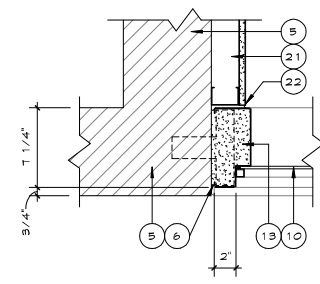
POUDRE SCHOOL DISTRICT
CACHE LA POUDRE ELEMENTARY SCHOOL
FLOOD DOOR REPLACEMENT

PRELIMINARY - FOR REVIEW

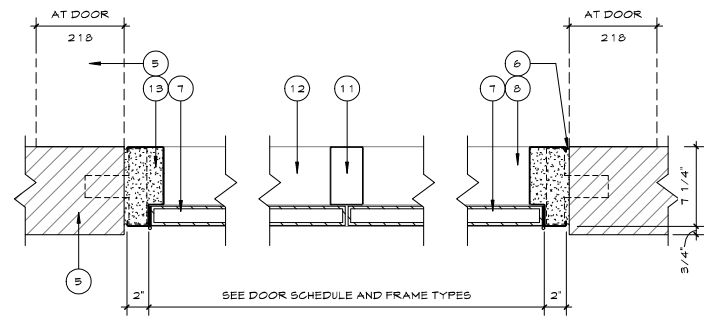
| NO. | BY | DATE | DESCRIPTION | REVISIONS |
|-----|-----|------|-------------|-----------|
| 1 | SFC | | | |
| 2 | TPK | | | |
| 3 | | | | |

DATE: 06.09.14

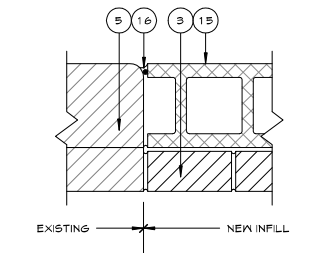
SHEET NO.: T.1



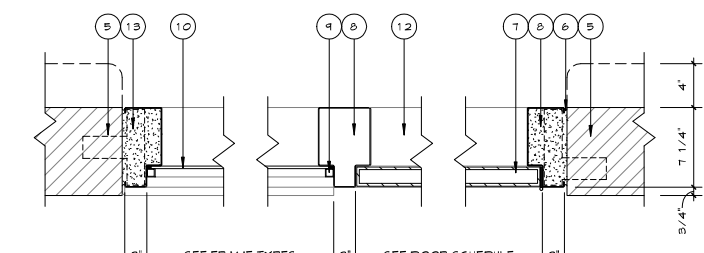
11 JAMB DETAIL
1 1/2" - 1'-0"



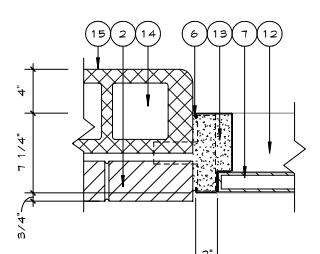
10 JAMB SECTION DETAIL
1 1/2" - 1'-0"



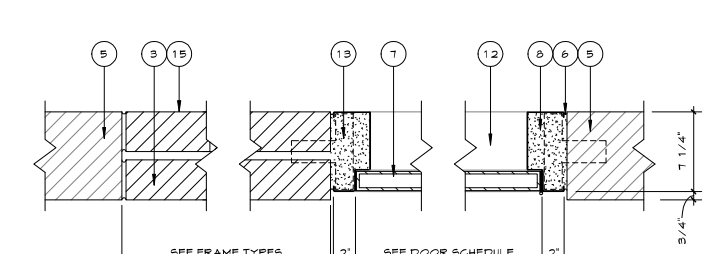
9 JAMB DETAIL
1 1/2" - 1'-0"



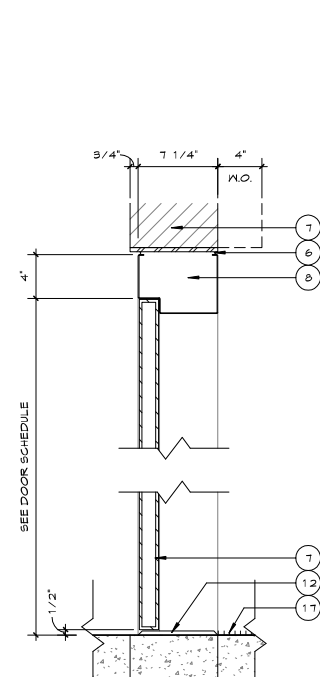
8 JAMB SECTION DETAIL
1 1/2" - 1'-0"



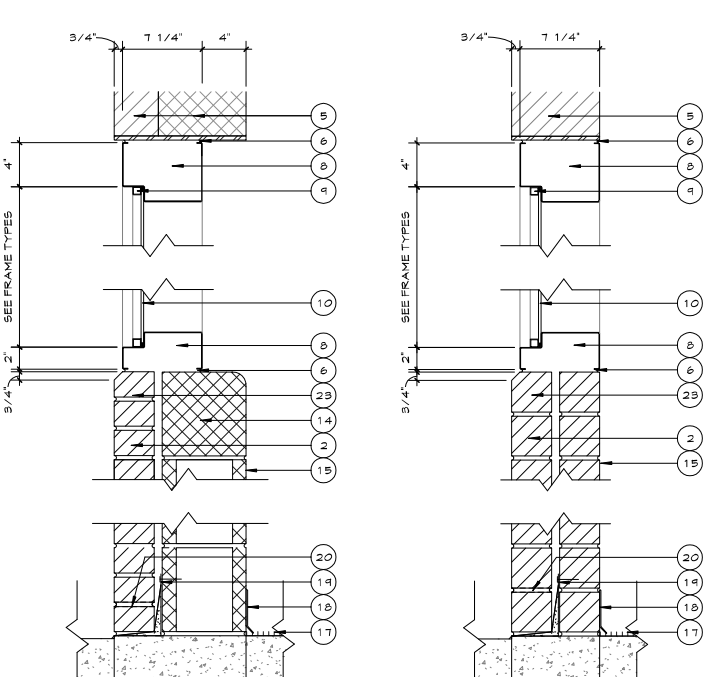
7 JAMB DETAIL
1 1/2" - 1'-0"



6 JAMB SECTION DETAIL
1 1/2" - 1'-0"

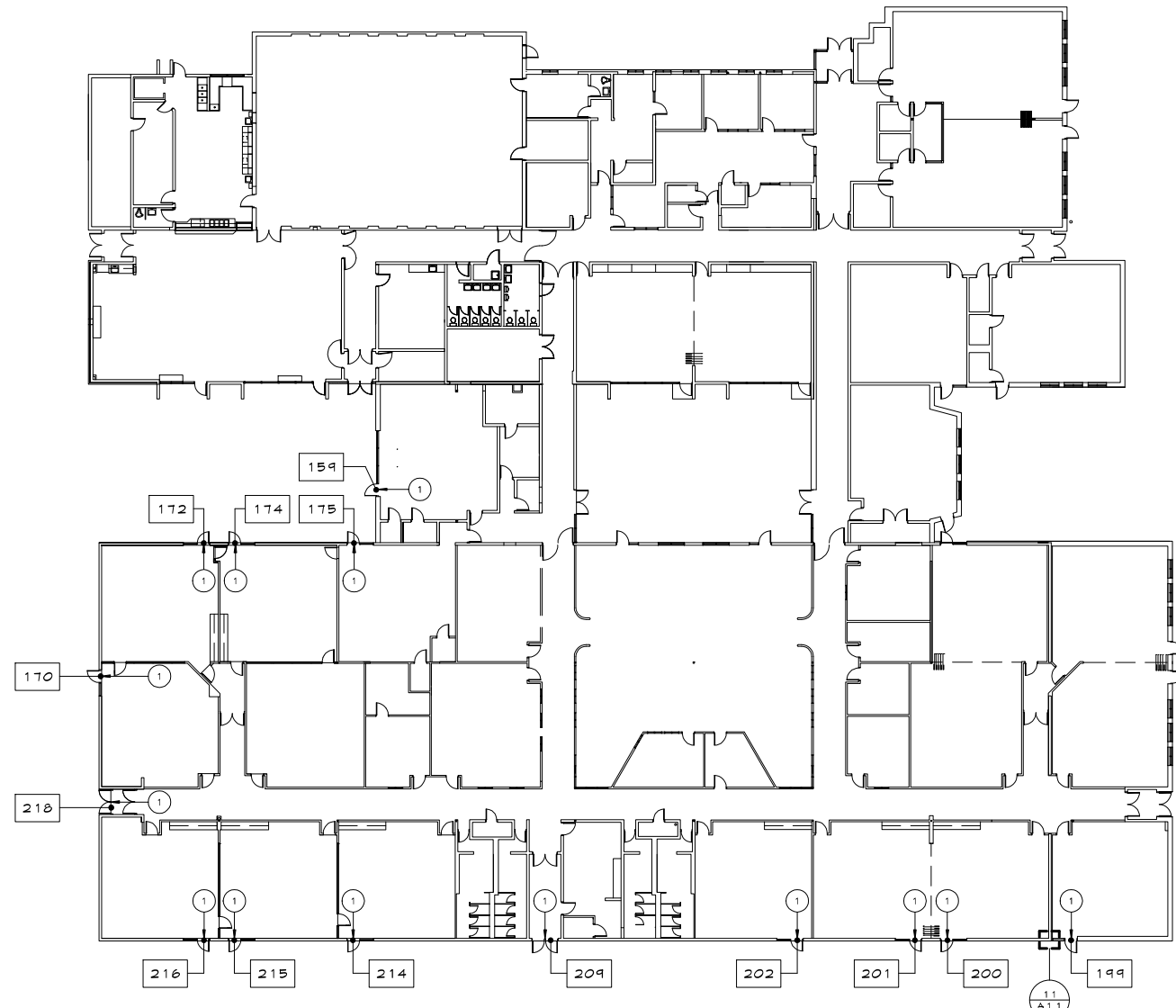


5 DOOR DETAIL
1 1/2" - 1'-0"



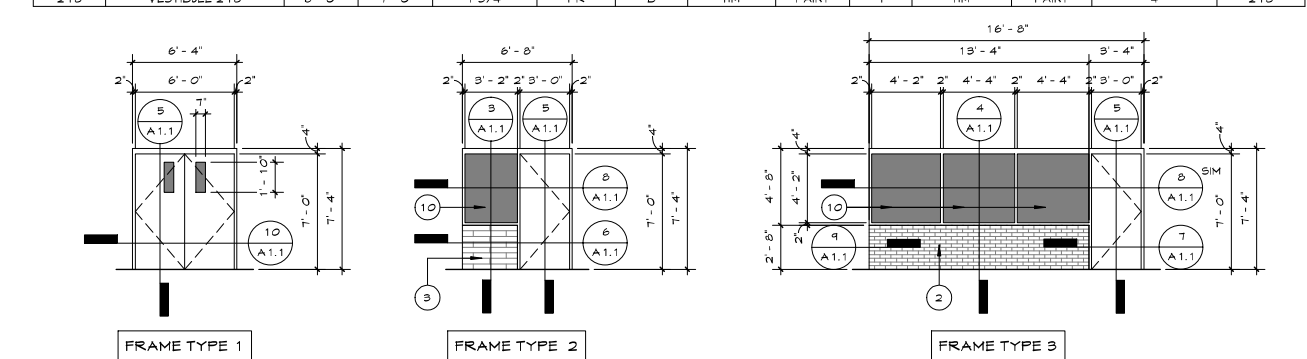
4 WALL INFILL DETAIL
1 1/2" - 1'-0"

3 WALL INFILL DETAIL
1 1/2" - 1'-0"



1 DOOR REPLACEMENT KEY PLAN
1" = 20'-0"

| NEW DOOR SCHEDULE | | | | | | | | | | | | | |
|-------------------|---------------|-------|--------|-----------|-------|------|----------|--------|------|-------|-------|----------|--------|
| MARK | LOCATION | DOOR | | | | | FRAME | | | NOTES | MARK | | |
| | | WIDTH | HEIGHT | THICKNESS | SWING | TYPE | MATERIAL | FINISH | TYPE | | | MATERIAL | FINISH |
| 159 | CLASSROOM 159 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 3 | HM | PAINT | 2, 4 | 159 |
| 170 | CLASSROOM 170 | 3'-0" | 7'-0" | 1 3/4" | R | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 170 |
| 172 | CLASSROOM 172 | 3'-0" | 7'-0" | 1 3/4" | R | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 172 |
| 174 | CLASSROOM 174 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 174 |
| 175 | CLASSROOM 175 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 175 |
| 199 | CLASSROOM 199 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 2 | HM | PAINT | 3, 4, 23 | 199 |
| 200 | CLASSROOM 200 | 3'-0" | 7'-0" | 1 3/4" | R | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 200 |
| 201 | CLASSROOM 201 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 201 |
| 202 | CLASSROOM 202 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 202 |
| 209 | VESTIBULE 209 | 6'-0" | 7'-0" | 1 3/4" | PR | B | HM | PAINT | 1 | HM | PAINT | 4 | 209 |
| 214 | CLASSROOM 214 | 3'-0" | 7'-0" | 1 3/4" | R | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 214 |
| 215 | CLASSROOM 215 | 3'-0" | 7'-0" | 1 3/4" | R | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 215 |
| 216 | CLASSROOM 216 | 3'-0" | 7'-0" | 1 3/4" | L | A | HM | PAINT | 2 | HM | PAINT | 3, 4 | 216 |
| 218 | VESTIBULE 218 | 6'-0" | 7'-0" | 1 3/4" | PR | B | HM | PAINT | 1 | HM | PAINT | 4 | 218 |



2 NEW DOOR SCHEDULE AND FRAME TYPE
3/16" - 1'-0"

- GENERAL NOTES:**
- PROTECT ALL FINISHES DURING CONSTRUCTION. TYPICAL.
 - CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
 - ALL FLOOR FINISHES, MATERIALS AND LABOR TO BE FURNISHED AND INSTALLED BY OWNER, WHERE NEEDED.
 - ALL PAINTING MATERIALS AND LABOR TO BE FURNISHED BY OWNER.

- KEY NOTES:**
- REMOVE EXISTING DOOR, FRAME, GLAZING AND HARDWARE. SALVAGE DOOR HARDWARE AND FOR REINSTALLATION IN NEW DOOR. PREP EXISTING MASONRY TO RECEIVE NEW FRAME.
 - 2'-8" x 13'-4" MASONRY INFILL BELOW WINDOW SILL. CONSTRUCTION TO MATCH EXISTING. 4" STANDARD MASONRY OVER 3" CMU, MASONRY AND GROUT COLOR TO MATCH ADJACENT AT DOOR FRAME.
 - 2'-8" x 3'-4" MASONRY INFILL BELOW WINDOW SILL. CONSTRUCTION TO MATCH EXISTING. DOUBLE WITH THE UTILITY MASONRY, MASONRY AND GROUT COLOR TO MATCH ADJACENT AT DOOR FRAME. REINSTALL EXISTING DOOR HARDWARE IN NEW DOORS.
 - EXISTING EXTERIOR MASONRY WALL 1/4" SEALANT AT PERIMETER OF NEW DOOR FRAME. TYPICAL AT ALL LOCATIONS.
 - NEW FLOOD RESISTANT RATED DOOR. BY OTHERS, SEE DOOR SCHEDULE.
 - NEW FLOOD RATED HOLLOW METAL FRAME 3/4" GLAZING STOPS. TYPICAL.
 - 1/4" TEMPERED GLAZING. VERIFY SIZES IN FIELD.
 - REMOVABLE MULLION BY OTHERS.
 - 1/2" LON SILL, BY OTHERS.
 - GROUT FILL FRAMES AT PERIMETER. COORDINATE ANCHORING IN FIELD WITH NEW OR EXISTING CONDITIONS.
 - PROVIDE BULL NOSED CMU BLOCK AT DOOR 156 JAMB AND SILL TO MATCH EXISTING.
 - PAINT INTERIOR SIDE OF MASONRY FILLING TO MATCH ADJACENT MASONRY.
 - PROVIDE BACKER ROD AND GROUT FULL VOID BETWEEN EXISTING BULLNOSE CMU AND NEW CMU. COORDINATE EXTENT OF CARPET REMOVAL, IF NEEDED.
 - PROVIDE NEW RUBBER BASE TO MATCH EXISTING.
 - PROVIDE THRU-WALL FLASHING AT NEW MASONRY LOCATIONS. GROUT SOLID BEHIND FLASHING. TYPICAL.
 - PROVIDE WEEPS AT 16" O.C. TYPICAL.
 - EXISTING STEEL STUD FURRED WALL. PATCH AND REPAIR GYP. BD. AS NECESSARY FOR REMOVAL AND REINSTALLATION OF NEW HOLLOW METAL FRAME. MATCH ADJACENT FINISHES.
 - PROVIDE METAL J-BEAD TERMINATION STRIP AND CAULKING AT REPAIRED GYP. BD.
 - PROVIDE 3/4" x 45° CHAMFER AT EXTERIOR SILL BRICK. TYPICAL AT ALL LOCATIONS.
 - SEE JAMB DETAIL 11/A.1.1.

| Item | Description | Take-off | UOM | Unit Cost | Direct Cost of Work | Approximate Value Including Bonds, Insurances, Fees | PSD Budget | Delta from FCI to PSD Budget | Comments |
|------------------|--|----------|------|-----------|---------------------|---|--------------|------------------------------|--|
| 1 | Door Hardware | | | | | | | | |
| | Priority 1 - Classroom Security, ADA Compliance | 1 | ls | | \$ 20,561 | \$ 24,262 | | | |
| | Priority 2 - Office/Staff Areas, New Cores | 1 | ls | | \$ 13,406 | \$ 15,819 | | | |
| | Priority 3 - Bathrooms, Exits, Passage Sets | 1 | ls | | \$ 16,986 | \$ 20,043 | | | |
| | Entry Security Hardware | 1 | ls | | \$ 23,995 | \$ 28,314 | | | Moved hardware for entry security here |
| | Subtotal | | | | | \$ 88,438 | \$ 32,000 | \$ (56,438) | |
| 2 | Flooring | | | | | | | | |
| | Priority 1 - Restrooms 110, 120, 121, 163, 165 | 393 | sqft | \$ 34.75 | \$ 13,656 | \$ 16,114 | | | |
| | Priority 2 - Kindergarten RR 130, 131 | 102 | sqft | \$ 20.95 | \$ 2,137 | \$ 2,522 | | | |
| | Priority 3 - Vestibule 127, Lobby 128 | 0 | sqft | \$ - | \$ - | \$ - | | | Moved Priority 3 flooring to entry security |
| | Priority 4 - Room 107, 109 | 45 | sqyd | \$ 41.22 | \$ 1,855 | \$ 2,189 | | | |
| | Subtotal | | | | | \$ 20,825 | \$ 31,360 | \$ 10,535 | |
| 3 | HVAC | | | | | | | | |
| | OPTION 1: Replace three (3) RTU's over South classrooms, reseal existing ductwork, add new RTU for four (4) Northeast classrooms, add ductwork from RTU #3 to service classrooms currently with Unit Ventilators, provide 36 each 'Pinch-off' VAV boxes for new RTU's, replace 20 existing fire/smoke dampers, coordinate with fire alarm. | 1 | ls | | \$ 573,200 | \$ 676,376 | \$ 857,600 | \$ 181,224 | Cost increase here is due to clarification of scope provided by US Engineering, and Trautman & Shreve. Previous number did not include cleaning ALL ductwork, re-sealing ALL ductwork, demo of existing Unit Ventilators and relocating three existing vent hoods. |
| | Cost for new controls associated with HVAC Option 1 | 1 | ls | | \$ 34,620 | \$ 40,852 | | | |
| | Provide all new DDC controls for all remaining existing HVAC equipment | 1 | ls | | \$ 168,300 | \$ 198,594 | | | |
| | Subtotal Controls | | | | | \$ 239,446 | \$ 139,200 | \$ (100,246) | |
| 3a | Total HVAC Option 1 including controls | | | | | \$ 915,822 | \$ 996,800 | \$ 80,978 | |
| | OPTION 2: Remove three (3) RTU's as in above, remove twelve (12) Unit Ventilators, abandon existing ductwork, provide 39 ea 1,500 cfm UV's with 2 row heating, 4 row cooling coils, new ductwork, new louver openings (patch existing), replace 20 existing fire/smoke dampers, coordinate with fire alarm. | 1 | ls | | \$ 410,520 | \$ 599,020 | \$ 779,200 | \$ 368,680 | |
| | Cost for new controls associated with HVAC Option 2 | 1 | ls | | \$ 65,453 | \$ 77,235 | | | |
| | Provide all new DDC controls for all remaining existing HVAC equipment | 1 | ls | | \$ 168,300 | \$ 198,594 | | | |
| | Subtotal Controls | | | | | \$ 275,829 | \$ 139,200 | | |
| 3b | Total HVAC Option 2 including controls | | | | | \$ 874,849 | \$ 918,400 | \$ 43,551 | |
| 4 | Controls | | | | | | | | |
| | Cost for new controls associated with bid alternate 1 | 1 | ls | | \$ 17,176 | | | | |
| | Cost for new controls associated with bid alternate 3 | 1 | ls | | \$ 3,018 | | | | |
| 5 | Entry Security Modifications | | | | | | | | |
| | OPTION 2.4: Demo for new doorway to Room 118, add 5'-4" new HM frame and glass with one (1) pair stile and rail doors, modify existing doors to receive automatic openers, panic hardware, and card readers | 1 | ls | | \$ 26,994 | \$ 31,853 | \$ 24,000 | \$ (2,994) | Moved cost of door hardware including automatic openers to door hardware above. Added vestibule 127, and lobby 128 flooring to this number. |
| Budget Reconcile | General Conditions, associated work including select demolition, rough carpentry, roofing, access doors, remove and reinstall acoustical ceiling, painting, drywall, patches. | 1 | ls | | | \$ 208,535 | | | |
| | Totals | | | | | \$ 1,265,473 | \$ 1,084,160 | | |
| | Total Delta | | | | | \$ (181,313) | | | |

Bid Alternates

| Item | Description | Take-off | UOM | Unit Cost | Direct Cost of Work | Approximate Value Including Bonds, Insurances, Fees | PSD Budget | | Comments |
|------|---|----------|-----|-----------|---------------------|---|------------|--|----------|
| 1 | Remove existing Unit Ventilators servicing cafeteria. Replace with new RTU with 2 row heating coil, and new ductwork for six supply diffusers, and three return inlets. | 1 | ls | | \$ 128,166 | included | ?? | | |
| 2 | Only if HVAC Option 2 is exercised: Demo all existing ductwork below roof from existing RTU's. | 1 | ls | | \$ 13,243 | included | ?? | | |
| 3 | Remove and dispose of existing boilers and pumps. Provide new Buderus boilers and associated pumps wth minimum 3,000 MBH. Provide new water pumps to VFD's. | 1 | ls | | \$ 289,673 | included | ?? | | |
| 4 | Priority 3 Door Hardware - Bathrooms, Exits, Passage Sets | 1 | ls | | \$ 16,986 | \$ 20,043.48 | ?? | | |