

**SMYRNA SCHOOL DISTRICT  
Smyrna Elementary School Renovations and Addition  
Bid Number SSD-15-001**

ADDENDUM NO. 2

23 March 2015

Smyrna School District  
Smyrna Elementary School  
121 South School Lane  
Smyrna, Delaware 19977

Fearn-Clendaniel Architects, Inc.  
6 Larch Avenue Suite 398  
Wilmington, Delaware, 19804  
Phone: (302) 998-7615  
Fax: ((302) 998-7685

BIDS DUE:

**3:00 p.m. on April 6, 2015**

LOCATION:

**Smyrna School District Administrative Offices  
82 Monrovia Ave, Smyrna, DE 19977**

ARCHITECT'S PROJECT NO: 14107a

1.0 NOTICE TO ALL BIDDERS:

- 1.1. Bidders are hereby notified that this Addendum shall be and hereby becomes part of their Contract Documents, and shall be attached to the Project Manual for this project.
- 1.2. The following items are intended to revise and clarify the Contract Documents, and shall be included by the Bidder in their proposal.
- 1.3. Bidders shall verify that their sub-bidders are in full receipt of the information contained herein.

2.0 QUESTIONS:

- 2.1 **Q:** Civil – The RCP Pipe states size but not Class. What Class Pipe should we use?  
**A:** Class IV RCP - See Drawing C-05, Sequence of Construction, Note 9.
- 2.2 **Q:** Civil – For the Water line tap, it states use Del Dot traffic Control Standards, is there a mot Sheet available?  
**A:** For bidding purposes, assume MUTCD Case 6: Two-Lane, Two-Way Traffic Lane Closure. For actual construction, traffic controls need to be coordinated with Town of Smyrna. The affected portion of South Street, is within the Town's jurisdiction.
- 2.3 **Q:** Civil – The bio retention ponds appear to show the 2014 Bio mix design, is that correct?  
**A:** Yes, this project is subject to the new 2014 State SWM Regulations.

2.4 **Q:** Civil – The bio retention ponds show ¼ rice stone. Is there a substitute?

**A:** For construction, we can review with DNREC to see if they will accept double-washed ¾" clean stone as an alternate.

3.0 CHANGES TO THE PROJECT MANUAL:

3.1 Project Supplementary Instructions to Bidders: Delete paragraph 8. From the PSITB-3 relating to AIA Bid form. The Delaware State OMB bid bond form shall be used as stated in ITB-7. The OMB form is included in the specifications Volume 1.

3.2 Section 011000 – Summary: Revise typo indicated in paragraph 1.5; A. third sentence; revise February 12, 2015 to read February 12, **2016**.

3.3 Section 26 04 99 – Common Work Requirements for Electrical

a. ADD the following Article 2.09 PROJECTOR SUSPENDED CEILING KIT

a. The suspended ceiling kit (CMA-450) will be manufactured by Chief Manufacturing. Kit will consist of a 2' x 2' plate designed to sit above the suspended ceiling unseen, nine (9) mounting hole positions with threaded ends for accepting 1-1/2" NPT extension column, safety cable, strand wire, two (2) outlet knockouts, four (4) turnbuckles, wood eye bolts, concrete anchors and chrome finishing ring.

3.4 **CHANGES TO THE FOODSERVICE SPECIFICATION SECTION 114000:**

Change the following items: all other conditions of the original specification apply:

ADD THE FOLLOWING ITEM:

Item No: 5

Quantity: 2

Description: Floor Trough

Mfg: Eagle Group

Model No: FT-1254-SG

Sup Info: General contractor shall provide floor recess and install floor pan in recess flush with adjacent kitchen floor in a watertight manner.

CHANGE THE FOLLOWING ITEM:

Item No: 23

Quantity: 1

Description: Existing Two Door Reach In Freezer

Mfg: True Mfg.

Model No: TG2F-2S

Sup Info: Recondition and relocate according to Section 2.6 of the original specification.

MODIFY THE FOLLOWING ITEM PER THE **BOLDED** TEXT:

Item No: 89

Quantity: 1

Description: Walk In Cooler / Freezer Assembly

Mfg: American Panel Corporation / Imperial / WA Brown

Construction: Furnish and erect two compartment sectional urethane insulated walk-in cooler / freezer assembly.

Walk-in assembly shall bear the UL label and NSF and Factory Mutual seals and 2009 Federal Regulations.

Ceiling and wall panels shall be constructed of 4" thick urethane insulation, assembly to be accomplished by the use of integral cam type locking device secured in place during the foaming process. Seams between panels shall be fully insulated with vinyl foamed-in-place gasket material.

**The wall shared by the cooler and freezer compartment shall be a double wall construction. It should be constructed of (2) 4" thick urethane insulated wall panels to total 8" thick. Assembly to be accomplished by the use of integral cam type locking device secured in place during the foaming process. Seams between panels shall be fully insulated with vinyl foamed-in-place gasket material.**

Ceiling and wall panels shall be finished of .032 embossed aluminum on interior and exterior surfaces.

Walk-in assembly shall be provided with 14 gauge galvanized steel floor with 1/8" thick aluminum diamond tread plate overlay with NSF approved coved corners, insulated with 4" thick urethane insulation and reinforced with 3/4" thick 5-7 ply marine grade plywood underlayment. Floor installation shall be in accordance with manufacturer's recommended practice and shall sit in building floor depression. Building floor finish shall be flush and smooth to allow a level transition between the walk-in floor and the adjacent finished kitchen floor.

Walk-in assembly shall be furnished with 36" wide in-fitting type doors and frame assemblies constructed of 16 gauge stainless steel provided with three self-closing cam action chrome plated hinge assemblies, handles with deadbolt with keyed cylinder lock and hardware.

Provide each door with 2" dial type flush mount thermometer with chrome plated bezel mounted in door frame.

Provide each door with triple pane observation and 36" high x 1/8" thick aluminum diamond tread kick plates on both interior and exterior side.

Provide each door with UL listed vapor-proof LED light fixture with automatic timed shut-off complete with toggle switch and pilot light and full perimeter frame condensation heater.

Provide (4) four additional UL listed vapor-proof LED ceiling mounted light fixtures complete with stainless steel mounting hardware.

Install ceiling mounted light fixtures and furnish materials and inter-wire light fixtures and switch.

Walk-in freezer assembly shall be furnished with heated pressure relief port.

Furnish and install .032 embossed aluminum vertical trim angles and ceiling closure panels.

Provide programmable high / low temperature alarm with external relay.

Furnish and install entire refrigeration system complete with Copeland hermetic condensing units and insulated copper refrigeration lines charged with R404A

refrigerant. Each condensing unit shall be interconnected to a low profile, high velocity evaporator coil in each walk-in compartment. Refrigeration system shall include all fittings, valves, switches, controls and all related components to comprise a complete operating unit of sufficient BTU capacity to maintain automatic operation of 35 degree F product temperature in cooler and -10 degree F product temperature in freezer.

Refrigeration system shall be provided with outdoor pre-assembled remote air cooled condensing units with each condensing unit to be located outdoors on the building roof (location TBD).

Condensing units shall be provided with winterized controls (low ambient package) including crankcase heater, head pressure control, dryers and galvanized steel stand with hinged louvered weather hood.

Provide all hangers and brackets as required to install refrigeration lines.

Construction Trade shall furnish all sleeves and openings through walls for passage of refrigeration lines.

Secure condensing unit stands to building roof; Roofing Trade shall provide waterproof roof opening for passage of refrigeration lines.

Foodservice equipment contractor shall furnish materials and inter-wire defrost time clock circuit for walk-in freezer, from condensing unit to evaporator coil.

Furnish materials and install (wrap and insulate with foam pipe insulation) heat tracing tape to evaporator coil condensate line in walk-in freezer.

Furnish and install copper tubing and extend evaporator coil condensate line to floor receptacle.

Set and adjust all temperature and defrost cycles.

Provide start-up and two year material and labor warranty on entire refrigeration system and five years manufacturer's warranty on compressor.

#### 4.0 CHANGES TO THE DRAWINGS:

- 4.1 Replace FS-1, FS-1.1 and FS-1.2 in their entirety, see attached pdf's.
- 4.2 Architectural drawings: ACODE-01, A11-01, A11-03 and A80-01. Under this Addendum, Food Service Equipment has been relocated and revised per Food Service Drawings FS-1 through FS-1.2. This revision does not change or alter location of walls. Graphic location of equipment shall be identical to attached drawing FS-1.
- 4.3 Replace MP001, M102, M103, M401, PD102, P102, P104, P105, P106, P109, P201, P302, FP101 & FP102 in their entirety, see attached pdf's.
- 4.4 DRAWING **E00-01**:
  - A. LEGEND AND ABBREVIATIONS: Add "WP" that denotes "Weatherproof".
  - B. PROJECT NOTES:

ADD the following notes:

    11. Existing Kitchen will be demolished. Disconnect, remove all existing electric and low voltage services to the kitchen, back to the source.
    12. Drawings are based on room numbers assigned by the architect to identify all Rooms and spaces. During construction, a signage plan will be created that will

modify all room numbers. This revised room number assignment will be used to permanently identify all mechanical, plumbing, electrical, telecommunications, security and fire protection equipment on the project. This revised room sequence shall be transcribed by each respective contractor onto all As-Built drawings, operating and maintenance manuals, panel schedules, valve charts, controls graphics, Graphic annunciators, etc. Use of room numbers on bid documents will not be acceptable.

13. All light switches in corridors and common areas shall be provided with barrel style key switches.

14. All occupancy sensors shall be installed as follows:

Single Tech-Ultrasonic: Corridors and Toilets

Single Tech-Infrared: Storage Rooms and copy rooms

Dual Tech-Ultrasonic/Infrared: Classrooms, offices, conference rooms and cafeteria.

In rooms with inboard/outboard switching and occupancy sensors, power packs shall be provided for each switch leg.

15. The following color coding shall be used on all low voltage system cabling for this project. Deviations or systems not identified on this list must be pre-approved by the Architect.

1. Fire Alarm: Red
2. Telecom- Fiber: Orange
3. Telecom-Data: Blue
4. Telecom-Voice: Yellow
5. BAS/Controls: Gray
6. Security: White

**4.5 DRAWING E00-02:**

ADD the following Sheet Note:

2. Under the Base Bid, provide 1-1/2" conduit with pullstring from switchboard MDP to new 20x30' building (building by others) to be located in courtyard in front of existing pad mounted transformer. Terminate conduit 12" above grade at future building for extension by others. Terminate conduit inside building at existing Cutler Hammer Switchboard. Provide all required cutting, patching, excavation, and hydrostatic link seal at wall penetration and site restoration. Note this building is also shown on Drawing E12-02 and designated as Room/Building PB100.

**4.6 DRAWING E11-01**

Room 105 (washer/dryer room), ADD one type D2 Fixture and wall mounted switch. Connect to lighting branch circuit.

**4.7 DRAWING E12-01**

ADD the following General Notes:

9. Plan North shall be to the right of the drawing.

ADD the following Sheet Notes:

7. Provide a surface mounted duplex receptacle, up to 30' of Wiremold surface raceway, homerun to nearest 120v panel with available pole spaces and 1P-20A circuit breaker in the following rooms for new power services to accompany new telecom services:

1. Room 119
2. Room 121

8. Add two (2) ceiling mounted speakers in Nurses Suite (Room 105)

9. Add six (6) ceiling mounted paging speakers in new kitchen and connection to existing Intercom/PA system. Actual location to be confirmed

**4.8 DRAWING E12-02**

ADD the following General Notes:

9. Plan North shall be to the right of the drawing.

ADD the following Sheet Notes:

6. Provide a surface mounted duplex receptacle, up to 30' of Wiremold surface raceway, homerun to nearest 120v panel with available pole spaces and 1P-20A circuit breaker in the following rooms for new power services to accompany new telecom services:

1. Room 180
2. Room 183
3. Room 191
4. Room 147
5. Room 164

7. In Room 143: Provide one recessed Telecom outlet on east and west wall.

8. Provide two recessed duplex receptacles on east and west wall. Connect both to new homerun, 1P-20A Circuit Breaker and 20A homerun to nearest panel with available pole spaces.

9. Provide one dedicated 120/240 Nema 6-20R receptacle on east wall for copier/scanner. Connect to new homerun, 2P-20A circuit breaker and 20A homerun to nearest panel with available pole spaces.

10. Add Fire Alarm Strobes to Toilet Rooms # 154, 155 and 175A.

#### 4.9 **DRAWING E12-03**

ADD the following General Note:

5. Under this Addendum, Food Service Equipment has been relocated and revised per Food Service Drawings FS-1 through FS-1.2. Electrical circuits and services to this equipment have not changed, but will be relocated to suit new equipment locations.

#### 4.10 **DRAWING E40-01**

Alternate #4, First Floor Plan Low Area A - Power & Special Systems - New Work

ADD the following Sheet Notes:

4. In Room 103.ALT, provide ceiling mounted duplex receptacle at new ceiling mounted projector station. Connect to nearest receptacle in new room.

5. Omit Telecom outlet in Room 101D.ALT.

6. In Room 102.ALT, provide duplex receptacle in new wall facing center of larger Admin area. Connect to nearest receptacle in new room.

END OF ADDENDUM NO. 2

## GENERAL NOTES:

- THE CONTRACTOR SHALL MAKE AN ON-SITE SURVEY TO DETERMINE THE FULL SCOPE OF WORK AND FAMILIARIZE THEMSELVES WITH THE SITE CONDITIONS PRIOR TO SUBMITTING A BID OR A PROPOSAL.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2009 INTERNATIONAL MECHANICAL CODE, 2006 INTERNATIONAL PLUMBING CODE, 2009 INTERNATIONAL FUEL GAS CODE, SMYRNA SCHOOL DISTRICT, AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
- THE CONTRACTOR SHALL APPLY FOR, SECURE, AND PAY FOR ALL PERMITS AND/OR CERTIFICATES OF INSPECTION REQUIRED IN THE PERFORMANCE OF THE WORK BY ALL AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AND SHALL FOLLOW ALL OSHA RULES AND CONDITIONS FOR CONTRACTORS.
- THE CONTRACTOR SHALL GUARANTEE THE ENTIRE INSTALLATION FOR A PERIOD OF ONE YEAR (EXCEPT WHERE EXTENSIONS OF THIS ONE-YEAR PERIOD ARE SPECIFIED) FROM THE DATE OF ACCEPTANCE OF THE SYSTEM AS A WHOLE. ANY DEFECTS IN WORKMANSHIP, MATERIALS, MALFUNCTION OF EQUIPMENT OR UNSATISFACTORY PERFORMANCE AND ALL OTHER WORK OR PARTS OF THE BUILDING DAMAGED THEREBY SHALL BE REPAIRED, REPLACED, OR OTHERWISE REMEDIATED WITHOUT EXPENSE TO THE OWNER. SUCH REPAIR AND REPLACEMENTS SHALL BE MADE IN A TIMELY MANNER AND AT THE CONVENIENCE OF THE OWNER.
- THE CONTRACTOR SHALL KEEP THE WORK AREA CLEAN AND ORDERLY.
- ALL DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL VERIFY ALL ROUTING FOR POSSIBLE INTERFERENCES PRIOR TO FABRICATION AND INSTALLATION. CONTRACTOR'S BID SHALL INCLUDE LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO RESOLVE INTERFERENCES.
- ALL VENTILATION LOUVERS FOR THE BOILER ROOM, ELECTRICAL ROOM, ETC. SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWING FINISHES.
- DRAWINGS ARE BASED ON ROOM NUMBERS ASSIGNED BY THE ARCHITECT TO IDENTIFY ALL ROOMS AND SPACES. DURING CONSTRUCTION, A SIGNAGE PLAN WILL BE CREATED THAT WILL MODIFY THE ROOM NUMBERS. THIS REVISED ROOM NUMBER ASSIGNMENT SHALL BE USED PERMANENTLY TO IDENTIFY ALL MECHANICAL, PLUMBING, ELECTRICAL, TELECOMMUNICATIONS, SECURITY AND FIRE PROTECTION EQUIPMENT ON THE PROJECT. THIS REVISED ROOM SEQUENCE SHALL BE TRANSCRIBED BY EACH RESPECTIVE CONTRACTOR ONTO THE AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE MANUALS, PANEL SCHEDULES, VALVE CHARTS, CONTROL GRAPHICS, GRAPHIC ANNUNCIATORS, ETC. USE OF ROOM NUMBERS ON THE BID DOCUMENTS WILL NOT BE ACCEPTED.

## MECHANICAL NOTES:

- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST "SMACNA" STANDARD AND IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- ALL SUPPLY DUCTWORK SHALL BE CLEANED AT THE SHOP AFTER FABRICATION AND SHALL HAVE BOTH ENDS SEALED. DUCT SHALL REMAIN SEALED UNTIL INSTALLATION AT THE JOB SITE. OPEN ENDS OF THE INSTALLED SUPPLY DUCT SHALL BE RESEALED AT THE END OF EACH DAY TO ENSURE THAT THE DUCT REMAINS FREE OF ANY DIRT OR DEBRIS.
- OUTSIDE AIR INTAKES TO ALL AIR HANDLING UNITS, FAN COIL UNITS, UNIT VENTILATORS, ETC. SHALL BE LOCATED A MINIMUM OF TEN FEET FROM ANY NOXIOUS EXHAUST OR VENTS.
- DUCT SIZES NOTES ON THE DRAWING ARE NET FREE AREA.
- WHERE FLEXIBLE DUCTWORK IS INDICATED AS A FINAL CONNECTION TO A DIFFUSER OR REGISTER, FLEX DUCT SHALL NOT EXCEED 6'-0" IN LENGTH.
- ALL SQUARE ELBOWS SHALL BE INSTALLED WITH TURNING VANES. PROVIDE ACCESS DOORS UP STREAM (BEFORE) OF TURNING VANES.
- DUCT TURNS OF 90 DEGREES SHALL BE PROVIDED WITH DOUBLE THICKNESS TURNING VANES.
- ALL BRANCH TAKE-OFFS (ROUND AND RECTANGULAR) SHALL BE PROVIDED WITH VOLUME DAMPERS.
- CONTRACTOR SHALL PROVIDE STEEL SLEEVES FOR DUCTWORK THAT PASSES THROUGH CONCRETE BLOCK WALLS. FILL SPACE BETWEEN SLEEVE AND PENETRATING ITEM WITH FIRE PROOF EXPANDING FOAM AS SPECIFIED. GROUT BETWEEN SLEEVE AND BLOCK. PROVIDE FLASHING ON ALL OUTDOOR PENETRATIONS.
- ALL SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED PER THE PROJECT SPECIFICATION.
- COORDINATE FINAL LOCATIONS OF DIFFUSERS AND REGISTERS WITH THE LIGHTING SPRINKLER HEAD LOCATIONS.
- THE CONTRACTOR SHALL SUBMIT DETAILED AND FULLY COORDINATED SHEET METAL SHOP DRAWINGS. THESE DRAWINGS SHALL SHOW THE SIZE, ROUTING, AND THE LOCATIONS OF ALL ITEMS WITHIN THE HVAC SCOPE OF WORK. DRAWINGS MUST BE COORDINATED WITH ALL OTHER TRADES INCLUDING ARCHITECTURAL, STRUCTURAL, PLUMBING, FIRE PROTECTION, LIFE SAFETY, ETC. DRAWINGS MUST DOCUMENT ANY INTERFERENCES OR CONFLICTS WITH THESE TRADES OF REVIEW BY THE ENGINEER. **NO CHANGE ORDERS WILL BE ACCEPTED OR WORK REQUIRED TO RESOLVE INTERFERENCES THAT WERE NOT INCLUDED OR PROPERLY DOCUMENTED ON THESE DRAWINGS PRIOR TO APPROVAL FROM THE ARCHITECT AND/OR ENGINEER.**

## MECHANICAL PIPING NOTES:

- ALL PIPING SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- ALL PIPING SHALL BE INSULATED PER THE PROJECT SPECIFICATIONS.
- COORDINATE ROUGH-IN LOCATIONS FOR ALL EQUIPMENT PRIOR TO INSTALLATION AND ROUTING OF ANY PIPING SERVICES. CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS.
- ALL PIPING SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING LINES WHERE PRACTICAL.
- CONTRACTOR SHALL PROVIDE UNIONS AT ALL THREADED CONTROL VALVES AND WHERE SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL FLANGES TO FACILITATE INSTALLATION OF PIPING AND REMOVAL AND SERVICES OF PIPING DEVICES SUCH AS VALVES, STRAINERS, PUMPS, ETC. REFER TO PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE DIELECTRIC FITTINGS AT ALL CONNECTIONS BETWEEN PIPING OF DISSIMILAR METALS.
- PIPING SHALL BE INSTALLED ADEQUATE CLEARANCES FOR ROUTINE MAINTENANCE AND INSPECTION OF EQUIPMENT (COILS, CONTROL VALVES, STRAINERS, ETC.)
- ALL PIPING SHALL BE SUPPORTED AS REQUIRED FOR SPANS. DO NOT USE ELECTRICAL TRAYS OR TRAY SUPPORTS TO SUPPORT PIPING. ALL PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL STEEL. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STEEL SUPPORTS AS REQUIRED.
- THE CONTRACTOR SHALL PROVIDE ALL HANGERS, NUTS, BOLTS, AND GASKETS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL MANUAL AIR VENTS AND ALL HIGH POINTS IN THE PIPING SYSTEM TO PREVENT TRAPPING AIR WITHIN THE SYSTEM.
- THE CONTRACTOR SHALL FURNISH AND INSTALL STEEL SLEEVES FOR PIPING THAT PASSES THROUGH CONCRETE BLOCK WALLS. FILL SPACE BETWEEN SLEEVE AND PENETRATING ITEM WITH FIRE PROOF EXPANDING FOAM AS SPECIFIED. GROUT BETWEEN SLEEVE AND BLOCK. PROVIDE FLASHING ON ALL OUTDOOR PENETRATIONS.
- ALL CONDENSATE FROM FAN COIL UNITS, UNIT VENTILATORS, AIR HANDLING UNITS, AND ROOF TOP AIR HANDLING UNITS SHALL BE PIPED AS INDICATED ON THE DRAWINGS TO A LOCATION SUITABLE TO ACCOMMODATE CONDENSATE DISCHARGE.

## PLUMBING NOTES:

- ALL PIPING SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH THE 2012 INTERNATIONAL PLUMBING CODE. ALL NEW DOMESTIC HOT AND COLD WATER PIPING SHALL BE UPONOR CROSS LINKED POLYETHYLENE (PEX-A) PIPE. PIPING SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION FOR PLENUM INSTALLATIONS.
- THE CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO ALL PLUMBING FIXTURES.
- ROUGH-IN AND INSTALLATION OF ALL KITCHEN EQUIPMENT SHALL BE COORDINATED WITH THE LATEST KITCHEN EQUIPMENT ARRANGEMENT PLAN.
- INSTALLATION OF THE GREASE INTERCEPTOR SHALL BE COORDINATED WITH THE CIVIL DRAWINGS AND SHALL BE INSTALLED TO ALLOW PROPER DRAINAGE TO AND FROM THE GREASE INTERCEPTOR.
- ISOLATION VALVES SHALL BE PROVIDED AT ALL BRANCH PIPING FOR PROPER OPERATION AND MAINTENANCE OF ALL PLUMBING FIXTURES.
- ALL PLUMBING CHASES SHALL BE ASSEMBLED TO ALLOW FOR ACCESS TO ALL FIXTURES WITHIN THE CHASE. ALL VALVES SHALL BE LOCATED WITHIN 60" OF THE FLOOR AND A MINIMUM OF 72" CLEAR HEAD ROOM SHALL BE PROVIDED.
- ALL WASTE PIPING SHALL BE SLOPED IN ACCORDANCE WITH THE 2006 INTERNATIONAL PLUMBING CODE.
- ALL FLOOR AND WALL PENETRATIONS SHALL BE SLEEVED AND SEALED. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED TO MAINTAIN THE ASSEMBLIES' RATING.

## COORDINATION NOTES:

- INSTALLATION OF ALL DUCT WORK, HYDRONIC PIPING, CONDUITS, SPRINKLER AND PLUMBING SERVICES ABOVE CEILING SHALL BE COORDINATED BETWEEN ALL TRADES TO MAINTAIN THE CEILING ELEVATIONS INDICATED ON THE ARCHITECTURAL DRAWINGS. COORDINATION DRAWINGS INDICATING AREAS OF POTENTIAL INTERFERENCES BETWEEN TRADES SHALL BE SUBMITTED AS PART OF THE MECHANICAL CONTRACTOR'S SUBMITTALS.
- WHERE RAIN WATER CONDUCTORS PENETRATE STRUCTURAL STEEL MEMBERS, LOCATION OF THE PENETRATION SHALL BE COORDINATED BETWEEN THE PLUMBING CONTRACTOR AND THE STRUCTURAL STEEL SUPPLIER TO ENSURE THAT THIS PENETRATION IS COORDINATED WITH THE STRUCTURAL STEEL SUBMITTAL.
- LOCATION OF ALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE COORDINATED WITH THE CEILING GRID, THE LIGHTING FIXTURES AND SPRINKLER ARRANGEMENT.
- THE FINAL LOCATION FOR ALL THERMOSTATS SHALL BE COORDINATED WITH THE ARCHITECTURAL FEATURES AND ALL OTHER TRADES. THERMOSTATS SHALL BE LOCATED A MINIMUM OF 48" ABOVE FINISHED FLOOR.
- THE CONTROLS CONTRACTOR SHALL ENGAGE THE SERVICES OF THE ON-SITE ELECTRICAL CONTRACTOR TO PROVIDE ALL 120 VAC CIRCUITS REQUIRED FOR THE OPERATION OF ALL CONTROL PANELS AND PERIPHERAL DEVICES ON THE PROJECT. EACH CIRCUIT SHALL BE FED WITH A NEW 20 AMPERE CIRCUIT BREAKER IN THE LOCAL PANEL BOARD AND FED VIA (2) #12 & (1) #12 GND - 2" C. WIRING ABOVE CEILINGS, IN CONCEALED AREAS ONLY, MAY BE INSTALLED WITH TYPE MC CABLE.
- THE FOLLOWING COLOR CODING SHALL BE USED ON ALL LOW VOLTAGE SYSTEM CABLING FOR THIS PROJECT. DEVIATIONS OR SYSTEMS NOT IDENTIFIED ON THIS LIST MUST BE PRE-APPROVED BY THE ARCHITECT.

A. FIRE ALARM:	RED
B. TELECOM - FIBER:	ORANGE
C. TELECOM - DATA:	BLUE
D. TELECOM - VOICE:	YELLOW
E. BAS/CONTROL:	GRAY
F. SECURITY:	WHITE

## ALTERNATES:

**BASE BID CONTROLS:** FURNISH AND INSTALL NEW BAS SYSTEM INCLUDING THE BUILDING CONTROLLER, COMMUNICATION LINES, APPLICATION CONTROLLERS, UNIT CONTROLLERS, CONTROL SYSTEM SERVERS, USER INTERFACE LAPTOP COMPUTER, PROGRAMMING AND GRAPHICS REQUIRED TO ACCOMMODATE ALL NEW HVAC EQUIPMENT AND DEVICES. THIS BAS SHALL INITIALLY CONTROL ALL NEW EQUIPMENT INSTALLED UNDER THE BASE CONTRACT.

### ALTERNATE A-2:

- INTEGRATE ALL THE EXISTING HVAC EQUIPMENT INTO THE NEW BAS SYSTEM. INTEGRATION INCLUDES ALL CONTROL, MONITOR, ALARM AND TRENDDING OF ALL THE EXISTING COMPONENTS. UPON COMPLETION, THE EXISTING ALERTRON CONTROL SYSTEM SHALL BE REMOVED.
- AS PART OF THIS ALTERNATE, ALL EXISTING TEMPERATURE, HUMIDITY CO2 SENSORS SHALL BE REPLACED WITH NEW.
- THIS DRAWING IS PROVIDED TO SHOW THE APPROXIMATE LOCATION AND TYPE OF EQUIPMENT THAT WILL NEED TO BE CONTROLLED BY THE NEW BAS IN ADDITION TO THE NEW EQUIPMENT THAT IS BEING INSTALLED AS PART OF THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY THE EXACT LOCATION OF THIS EQUIPMENT AS WELL AS THE LOCATION OF ALL THE EXISTING CONTROL AND MONITORING DEVICES SUCH AS THERMOSTATS, AIR FLOW SENSORS, DUCT DETECTORS, ETC.
- THESE DOCUMENTS MAY NOT BE INCLUSIVE OF ALL EXISTING SYSTEMS AND ADDITIONAL INVESTIGATION WILL BE REQUIRED BY THE AWARDED CONTRACTOR TO DETERMINE ALL THE EXISTING PARAMETERS THROUGH EXAMINATION OF THE EXISTING BAS PROGRAMMING.

### ALTERNATE A-3:

- AS PART OF THE BAS BID, NEW DOMESTIC HOT AND COLD WATER PIPING IS BEING INSTALLED THROUGHOUT THE BUILDING. INSTALLATION OF THIS PIPING SHALL BE PHASED TO MINIMIZE DISRUPTION AND OPERATION OF THE SCHOOL DURING THE OCCUPIED PERIODS.
- DISCONNECT, REMOVE AND REPLACE THE EXISTING DOMESTIC COLD WATER, HOT WATER AND HOT WATER RETURN IN THE CLASSROOM ADDITION AS INDICATED ON THE CONSTRUCTION DRAWINGS (P 104) REPLACEMENT SHALL INCLUDE INSTALLATION OF NEW ISOLATION VALVES TO THE EXISTING BRANCH PIPING. THE EXISTING BRANCH PIPING TO THE EXISTING PLUMBING FIXTURES SHALL REMAIN.

### ALTERNATE A-4:

- INCLUDES THE RENOVATION OF THE FRONT OFFICE. REFER TO THE ARCHITECTURAL DRAWINGS FOR DESCRIPTION AND DETAILS FOR THE EXTENT OF WORK REQUIRED AS PART OF THIS ALTERNATE.
- SEE 3/M103 FOR ADDITIONAL INFORMATION.

## HVAC LEGEND:

	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK
	BACK DRAFT DAMPER
	NEW FLEX DUCT (MAX. LENGTH 6'-0")
	TURNING VANES
	VOLUME DAMPER
	SPIN COLLAR WITH VOLUME DAMPER
	RECTANGULAR BRANCH WITH DAMPER
	BELL MOUNTED FITTING
	TRANSITION FOR RECTANGULAR TO ROUND DUCT
	DUCT TRANSITION
	EQUIPMENT TAG
	"XX" INDICATES UNIT CONTROL
	2'-0" x 2'-0" SUPPLY AIR DIFFUSER, 300 CFM 4-WAY
	RETURN REGISTER
	RETURN REGISTER W/ SOUNDTRAP
	MOTOR OPERATED DAMPER
	SMOKE DAMPER
	MOISTURE SENSOR
	OVAL DUCT DIMENSION, WHERE # IS THE WIDTH AND DIAMETER

## PIPING LEGEND

	REDUCER
	BALL VALVE
	GATE VALVE
	TRIPLE DUTY VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BALANCING VALVE
	UNION
	CAP
	STRAINER W/ BLOWDOWN VALVE, CAPPED
	THERMOMETER AND PIPE WELL
	COMB. BALL VALVE, UNION, STRAINER W/ BLOWDOWN VALVE AND TEST PORT.
	TEMPERATURE SENSOR AND PIPE WELL
	CONTROL VALVE
	3-WAY CONTROL VALVE (MIXING TYPE)
	PRESSURE GAUGE
	CW
	HWS
	HWR

## PLUMBING LEGEND:

	EXISTING PIPING
	NEW PIPING
	FLOW DIRECTION
	PIPE UP
	PIPE DOWN
	COLD WATER (DOMESTIC)
	HOT WATER SUPPLY (DOMESTIC)
	HOT WATER RECIRC. (DOMESTIC)
	HOT WATER SUPPLY (140°F)
	HOT WATER RECIRC. (140°F)
	SANITARY VENT
	RAIN WATER CONDUCTOR
	CLEANOUT
	FLOOR DRAIN
	COLD WATER CONNECTION
	HOT WATER CONNECTION
	WATER HAMMER ARRESTOR
	CW
	HOT WATER SUPPLY (DOMESTIC)
	HOT WATER RECIRC. (DOMESTIC)
	VENT THRU ROOF
	STORM DRAIN
	VENT
	REFRIGERATOR
	SANITARY
	BACKFLOW PREVENTER
	VALVE
	VACUUM BREAKER
	DOWN
	DISHWASHER
	TYPICAL
	W/
	EXISTING TO REMAIN
	COFFEE MAKER
	ICE MAKER
	WATER CLOSET
	URINAL
	LAVATORY
	MOP RECEPTOR
	ELECTRIC WATER COOLER
	SINK
	SHOWER
	CLEAN OUT
	GREASE WASTE
	INDIRECT WASTE
	FLOOR DRAIN
	FLOOR SINK
	ROOF DRAIN
	HOSE BIBB
	RAIN WATER CONDUCTOR
	COOLING COIL CONDENSATE
	WALL CLEANOUT
	FUNNEL FLOOR DRAIN
	EXPANSION TANK

## ABBREVIATIONS:

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CFM	CUBIC FEET/ MINUTE
CO	CLEAN OUT
COND	CONDENSATE
CONT	CONTINUATION
CU	CONDENSING UNIT
CW	COLD WATER
D	DRAIN
Ø	DIAMETER
DN	DOWN
DWG	DRAWING
EF	EXHAUST FAN
EL	ELEVATION
ER	EXHAUST REGISTER
ETR	EXISTING TO REMAIN
EXIST. (E)	EXISTING
EXH	EXHAUST
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
HP	HEAT PUMP
HW	DOMESTIC HOT WATER
HWR	HOT WATER RECIRCULATION
KEF	KITCHEN EXHAUST FAN
MAU	MAKE-UP AIR UNIT
(N)	NEW
NG	NATURAL GAS
NIC	NOT IN CONTRACT
OA	OUTSIDE AIR
RR	RETURN REGISTER
SD	SUPPLY DIFFUSER
TYP	TYPICAL
VD	VOLUME DAMPER
VTR	VENT THRU ROOF
W/	WITH
WHA	WATER HAMMER ARRESTOR
WWM	WELDED WIRE MESH
AP	ACCESS PANEL
	POINT OF REMOVAL
	POINT OF NEW CONNECTION

## CONSULTANTS:

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEER**  
DEDC, LLC.  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYD ENGINEERING & ES, LLC.  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

## ISSUE DATES:

Issued for Bid	03-11-15
Addendum 2	03-23-15

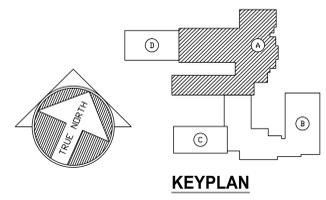
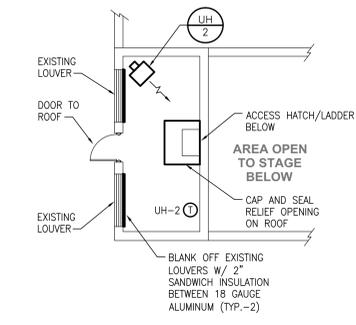
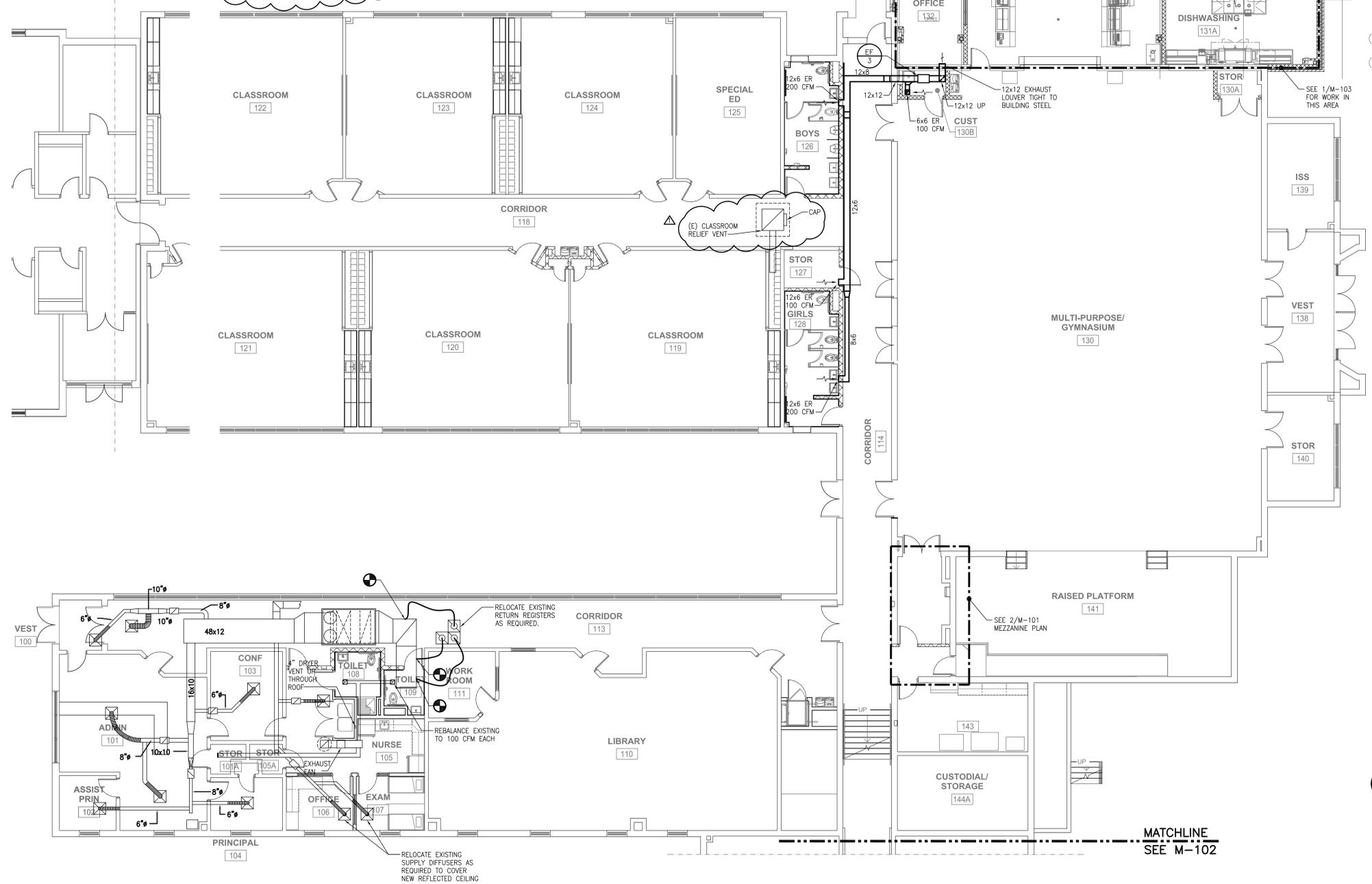
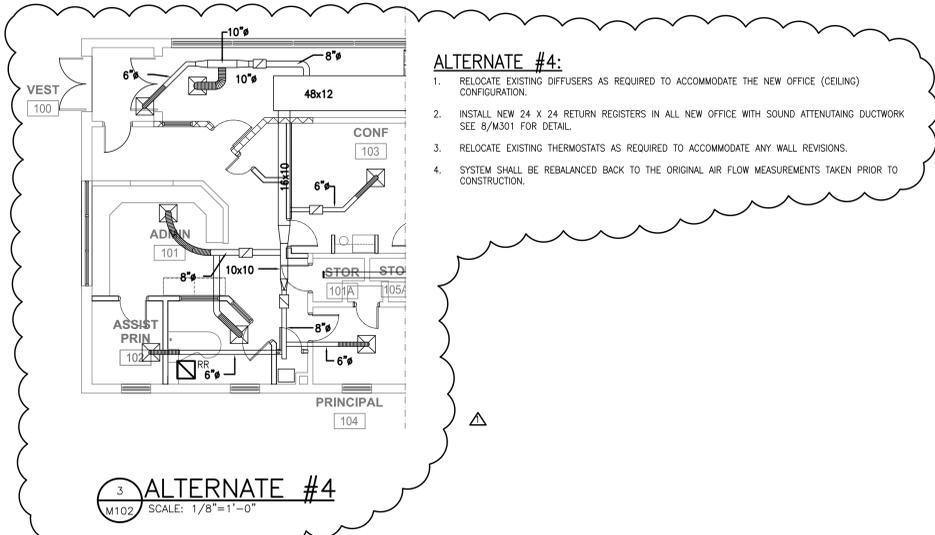
Fearn Clendaniel  
Architects  
INC.  
6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
Ph. 302-998-7615 • Fax. 302-998-7685  
www.fearnclendaniel.com

## PROJECT:

SMYRNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMYRNA, DE

DRAWING TITLE:  
MECHANICAL & PLUMBING NOTES & LEGENDS

OWN. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>MP001</b>	
SCALE: AS NOTED		



**CONSULTANTS:**

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
DEDC, LLC.  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC.  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARNS-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARNS-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1 - Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
INC.  
6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
Ph. 302-998-7615 • Fax: 302-998-7685  
www.fearnclendaniel.com

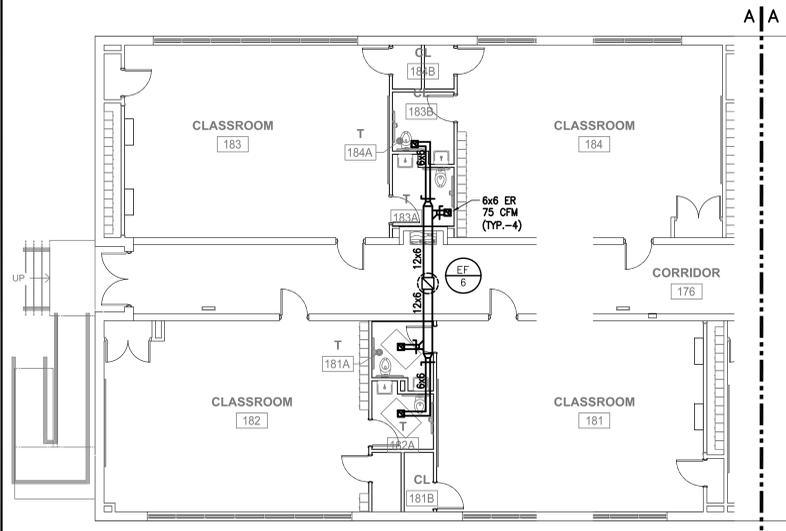
**PROJECT:**

SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMRYNA, DE

**DRAWING TITLE:**  
FLOOR PLAN (SECTION A)  
HVAC PLANS

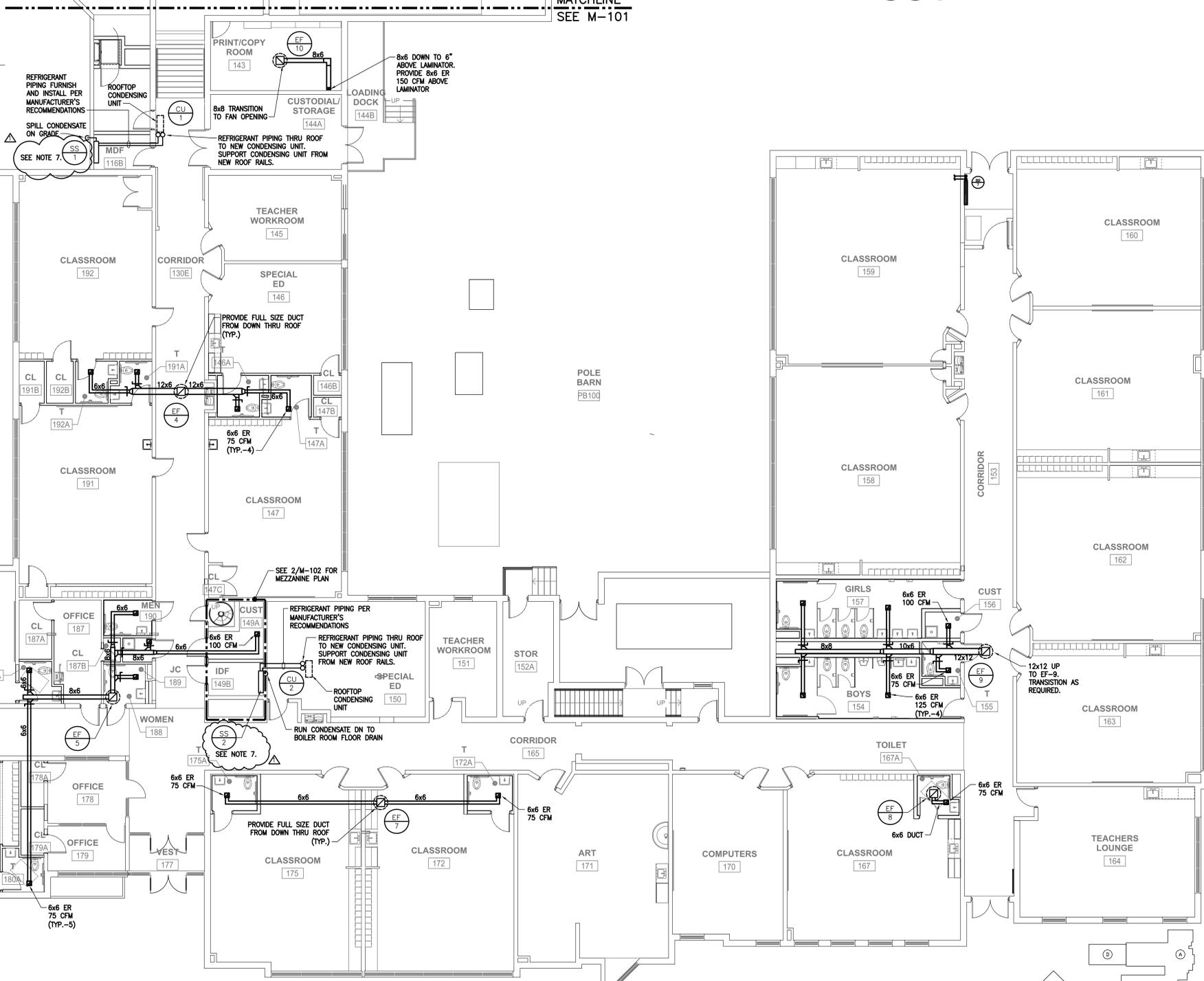
OWN. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>M102</b>	
SCALE: AS NOTED		

MATCHLINE  
SEE M-102



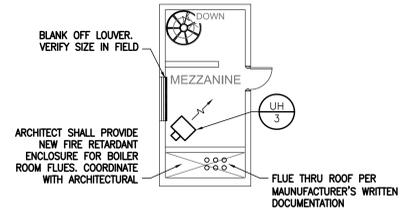
2 FLOOR PLAN (SECTION C) - NEW WORK  
SCALE: 1/8"=1'-0"

MATCHLINE  
SEE M-101

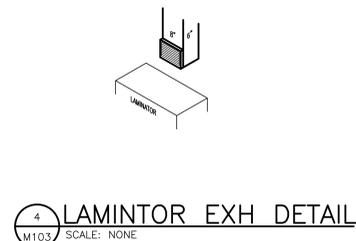


1 FLOOR PLAN (SECTION B) - NEW WORK  
SCALE: 1/8"=1'-0"

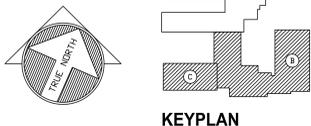
- GENERAL NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL NEW ROOFTOP EXHAUST FANS AS SHOWN. INSTALLATION SHALL INCLUDE INSTALLING AND/OR MODIFYING THE EXISTING ROOF CURB AS REQUIRED TO ACCOMMODATE NEW EXHAUST FAN. ALL ROOFING WORK SHALL BE PERFORMED BY THE ROOFING CONTRACTOR. ROOF WARRANTY SHALL BE MAINTAINED.
  - FURNISH AND INSTALL NEW SPIT SYSTEM AIR CONDITIONING UNITS AS SHOWN. UNITS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE 12" HIGH ROOF RAILS TO SUPPORT CONDENSING UNIT.
  - ALL REFRIGERANT PIPING LOCATED ON THE ROOF, SHALL BE SEALS WITH A UV PAINT OR WEATHER RESISTANT JACKET.
  - IN THE IDF AND IDF ROOM PROVIDE TEMPERATURE MONITORING AND ALARM AS PART OF THE BASE BID ATC SYSTEM.
  - INSTALLATION OF NEW BASEBOARD RADIATION SHALL BE COORDINATED WITH ARCHITECTURAL.
  - PROVIDE NEW HOT WATER SUPPLY AND RETURN LINES TO NEW BASEBOARD RADIATORS. ALL NEW PIPING SHALL BE CONCEALED.
  - COORDINATE THE PLACEMENT OF THE INDOOR EVAPORATOR WITH THE CONFIGURATION OF THE EXISTING EQUIPMENT WITHIN THE IDF & MDF ROOM. UNIT SHOULD BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.



3 MEZZANINE PLAN  
SCALE: 1/8"=1'-0"



4 LAMINATOR EXH DETAIL  
SCALE: NONE



**CONSULTANTS:**

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
DEDC, LLC  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid 03-11-15  
1 - Addendum 2 03-23-15

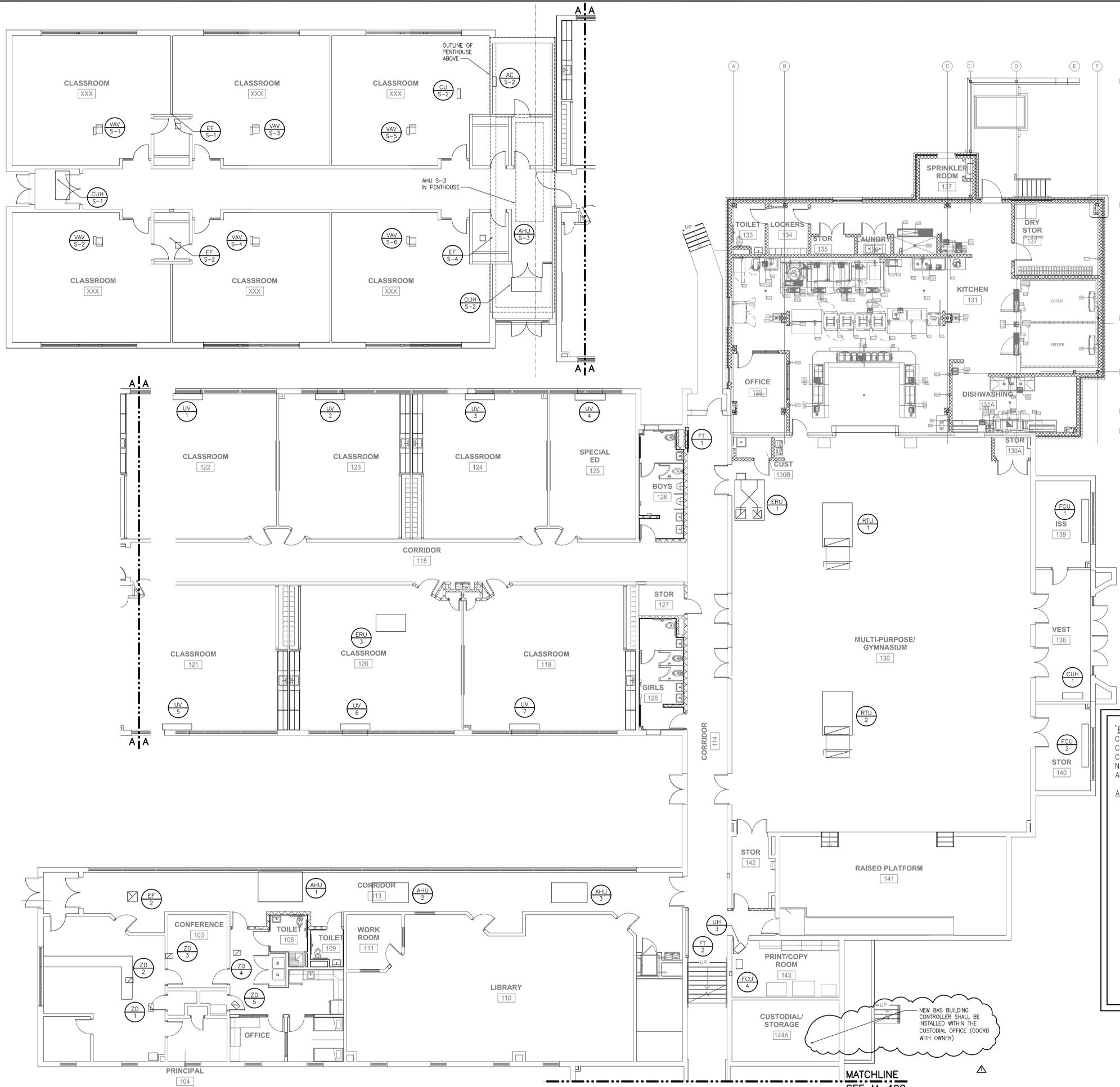
**Fearn Clendaniel Architects**  
INC.  
6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
Ph. 302-998-7815 • Fax. 302-998-7885  
www.fearnclendaniel.com

**PROJECT:**

SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMRYNA, DE

**DRAWING TITLE:**  
FLOOR PLAN (SECTION B)  
HVAC PLANS

OWN. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>M103</b>	
SCALE: AS NOTED		



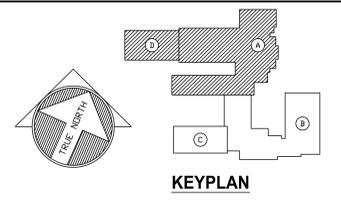
**GENERAL NOTE**  
 THIS DRAWING IS PROVIDED FOR REFERENCE. AS AN ADD ALTERNATE THE CONTROLS FOR THE BUILDING ARE BEING UPGRADED. THIS DRAWING IS TO PROVIDE THE APPROXIMATE LOCATION AND THE TYPE OF EQUIPMENT CURRENTLY BEING UTILIZED THROUGHOUT THE BUILDING. THIS DRAWING IS BASED UPON THE INFORMATION PROVIDED BY THE OWNER AND MAY NOT BE ALL INCLUSIVE BUT REPRESENTATIVE OF THE SYSTEMS THAT ARE CURRENTLY WITHIN THE BUILDING.

**BASE BID:** FURNISH AND INSTALL NEW BAS SYSTEM INCLUDING THE BUILDING CONTROLLER, COMMUNICATION LINES, APPLICATION CONTROLLERS, UNIT CONTROLLERS, CONTROL SYSTEM SERVERS, USER INTERFACE LAPTOP COMPUTER, PROGRAMMING AND GRAPHICS REQUIRED TO ACCOMMODATE ALL NEW HVAC EQUIPMENT AND DEVICES. THIS BAS SHALL INITIALLY CONTROL ALL NEW EQUIPMENT INSTALLED UNDER THE BASE CONTRACT.

**ADD-ALTERNATE A-2:**

1. INTEGRATE ALL THE EXISTING HVAC EQUIPMENT INTO THE NEW BAS SYSTEM. INTEGRATION INCLUDES ALL CONTROL, MONITOR, ALARM AND TRENDDING OF ALL THE EXISTING COMPONENTS. UPON COMPLETION, THE EXISTING ALERTON CONTROL SYSTEM SHALL BE REMOVED.
2. AS PART OF THIS ALTERNATE, ALL EXISTING TEMPERATURE, HUMIDITY CO2 SENSORS SHALL BE REPLACED WITH NEW.
3. THIS DRAWING IS PROVIDED TO SHOW THE APPROXIMATE LOCATION AND TYPE OF EQUIPMENT THAT WILL NEED TO BE CONTROLLED BY THE NEW BAS IN ADDITION TO THE NEW EQUIPMENT THAT IS BEING INSTALLED AS PART OF THIS PROJECT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO FILED VERIFY THE EXACT LOCATION OF THIS EQUIPMENT AS WELL AS THE LOCATION OF ALL THE EXISTING CONTROL AND MONITORING DEVICES SUCH AS THERMOSTATS, AIR FLOW SENSORS, DUCT DETECTORS, ETC.
5. THESE DOCUMENTS MAY NOT BE INCLUSIVE OF ALL EXISTING SYSTEMS AND ADDITIONAL INVESTIGATION WILL BE REQUIRED BY THE AWARDED CONTRACTOR TO DETERMINE ALL THE EXISTING PARAMETERS THROUGH EXAMINATION OF THE EXISTING BAS PROGRAMMING.

NEW BAS BUILDING CONTROLLER SHALL BE INSTALLED WITHIN THE CUSTODIAL OFFICE (COORD WITH OWNER)



**1 FLOOR PLAN (SECTION A) - CONTROLS NEW WORK**  
 M401 SCALE: 1/8"=1'-0"

**CONSULTANTS:**

- CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: (302) 998-9202 F: (302) 691-1314
- STRUCTURAL ENGINEER**  
 BAKER INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: (302) 734-7400 F: (302) 734-7592
- MECHANICAL/PLUMBING ENGINEERS**  
 DEDC, LLC  
 315 SOUTH CHAPEL STREET  
 NEWARK, DE 19711  
 P: (302) 738-7172 F: (302) 738-7175
- ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC.  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1 - Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
 INC.  
 6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
 Ph: 302-998-7615 • Fax: 302-998-7685  
 www.fearnclendaniel.net

**PROJECT:**

**SMRYNA ELEMENTARY SCHOOL  
 RENOVATION & ADDITION**

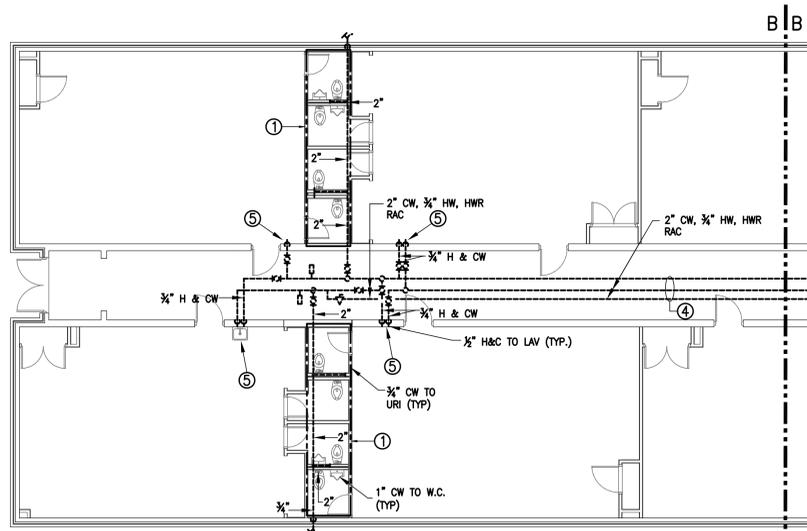
121 SOUTH SCHOOL LANE  
 SMRYNA, DE

**DRAWING TITLE:**  
 FLOOR PLAN (SECTION A & D)  
 EXISTING HVAC EQUIPMENT PLAN

**OWN. BY:** DEDC **CHK. BY:** PG **PROJECT NUMBER:** 14P316

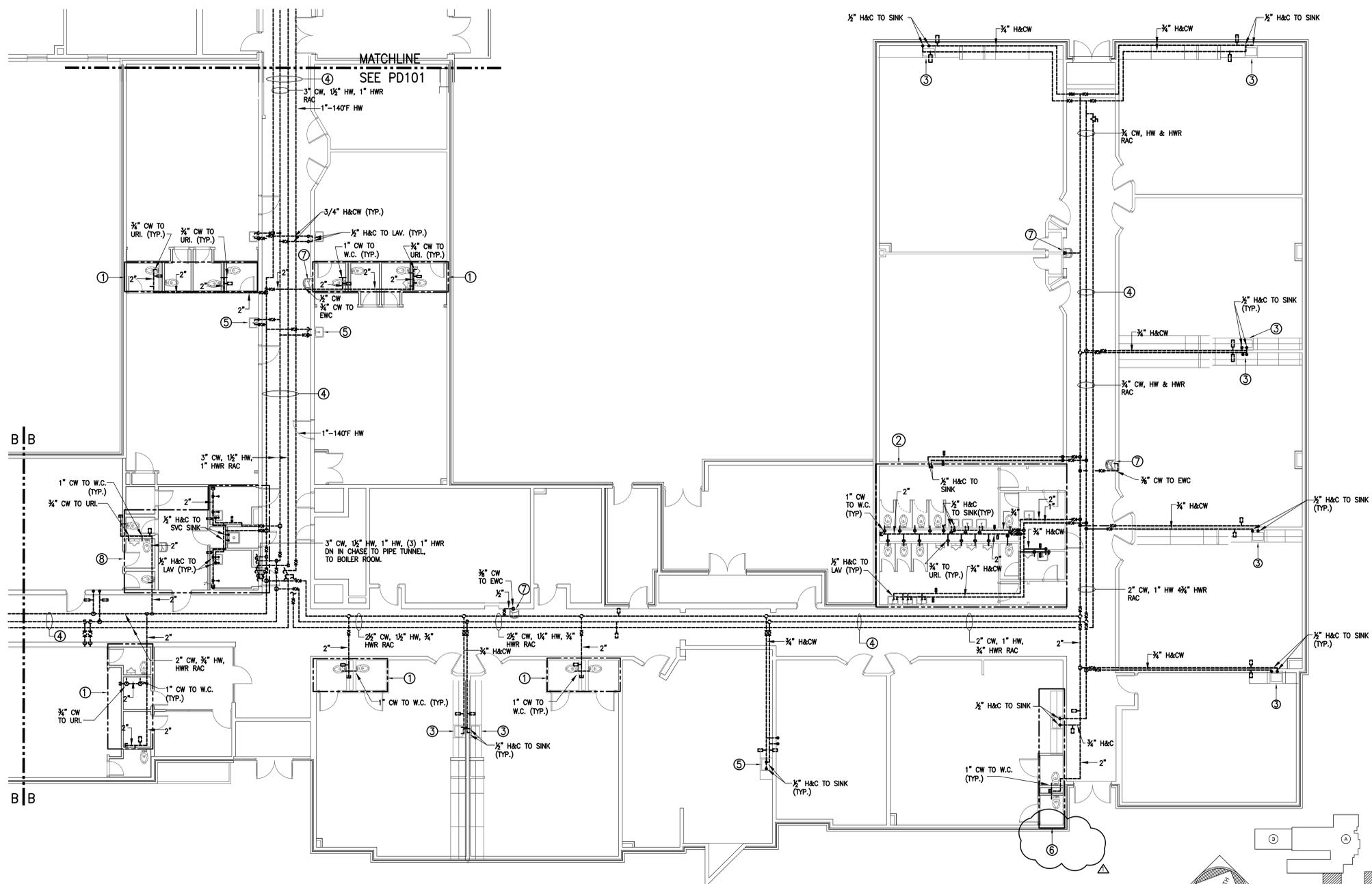
**DATE:** 03/16/2015 **DRAWING NUMBER:** M401

**SCALE:** AS NOTED



2 FLOOR PLAN (SECTION C) - DEMOLITION

PD102 SCALE: 1/8"=1'-0"



1 FLOOR PLAN (SECTION B) - DEMOLITION

PD102 SCALE: 1/8"=1'-0"

**DEMOLITION NOTES:**

1. EXISTING TOILET ROOMS WITHIN THE CLASSROOM ARE BEING RECONFIGURED. ALL EXISTING PLUMBING FIXTURES SHALL BE REMOVED AND LINES CAPPED AT MAINS TO MAINTAIN SERVICES WITHIN THE OCCUPIED PORTIONS OF THE BUILDING. SANITARY LINES ARE UNDER SLAB AND FLOORS SHALL BE SAW CUT AS REQUIRED TO RECONFIGURE SANITARY LINES AS REQUIRED.
2. EXISTING TOILET ROOMS ARE BEING RECONFIGURED. ALL EXISTING PLUMBING FIXTURES SHALL BE REMOVED AND LINES CAPPED TO MAINTAIN SERVICE WITHIN THE OCCUPIED PORTIONS OF THE BUILDING.
3. EXISTING SINKS WITHIN THE CLASSROOMS SHALL REMAIN INCLUDING ALL FAUCETS. DOMESTIC WATER LINES TO THESE FIXTURES SHALL BE REMOVED AND SHALL BE REPLACED WITH NEW "PEX" LINES. ALL NEW LINES SHALL BE CONCEALED IN EITHER EXISTING OR NEW CHASES PROVIDED BY THE CONTRACTOR. SEE NEW CONSTRUCTION PLANS.
4. EXISTING DOMESTIC WATER PIPING ABOVE CEILING SHALL BE REMOVED IN ITS ENTIRETY.
5. EXISTING SINKS WITHIN ART ROOM SHALL REMAIN. EXISTING DOMESTIC WATER PIPING ROUTED WITHIN WALL SHALL REMAIN AND BE REUSED. PIPING SHALL BE ACCESSED ABOVE CEILING AND CONNECTED TO NEW DOMESTIC WATER LINE. SEE NEW CONSTRUCTION SCHEDULE PLANS.
6. EXISTING CLASSROOM TOILET ROOMS, SINK AND CASEWORK ARE BEING REMOVED AND RECONFIGURED. ALL EXISTING PLUMBING FIXTURES SHALL BE REMOVED AND LINES CAPPED AT MAINS TO MAINTAIN SERVICE WITHIN THE OCCUPIED PORTIONS OF THE BUILDING. SANITARY LINES ARE UNDER SLAB AND FLOORS SHALL BE SAW CUT AS REQUIRED TO RECONFIGURE SANITARY LINES AS REQUIRED.
7. EXISTING WATER COOLERS SHALL BE REMOVED AND REPLACED. EXISTING SANITARY AND VENT SHALL BE RECONFIGURED AS REQUIRED TO ACCOMMODATE REPLACEMENT. NEW DOMESTIC WATER SERVICES SHALL BE PROVIDED TO NEW FIXTURES.
8. EXISTING TOILET ROOMS AND JANITORS CLOSET ARE BEING RECONFIGURED. ALL EXISTING PLUMBING FIXTURES SHALL BE REMOVED AND LINES CAPPED AT MAINS TO MAINTAIN SERVICES WITHIN THE OCCUPIED PORTIONS OF THE BUILDING. SANITARY LINES ARE UNDER SLAB AND FLOORS SHALL BE SAW CUT AS REQUIRED TO RECONFIGURE SANITARY LINES AS REQUIRED.

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL REPLACE ALL THE EXISTING DOMESTIC WATER LINES WITH NEW "PEX" LINES. NEW LINES SHALL BE CONCEALED WITHIN THE CRAWL SPACE, ABOVE CEILING, IN WALLS AND/OR CHASES PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE ARCHITECTURAL PLANS.
2. DUE TO PHASING OF THE CONSTRUCTION, NEW DOMESTIC WATER PIPING MAY BE INSTALLED AND OPERATING IN CONJUNCTION WITH THE EXISTING PIPING SYSTEM. THE NEW PIPING SHALL BE TESTED AND DISINFECTED PRIOR TO OPERATION.
3. ALL UNUSED DOMESTIC WATER PIPING SHALL BE REMOVED. PIPING SHALL NOT BE ABANDONED IN PLACE.
4. THE MAJORITY OF THE SANITARY LINES ARE BURIED UNDER SLAB AND CONNECT TO SANITARY LEADERS WITHIN THE CRAWL SPACE. THESE UNDERGROUND SANITARY LINES WILL NEED TO BE REPLACED AND RECONFIGURED TO ACCOMMODATE NEW PLUMBING FIXTURE INSTALLATIONS.
5. REFER TO THE ARCHITECTURAL AND KITCHEN VENDOR DRAWINGS FOR THE LOCATION AND PLACEMENT OF ALL PLUMBING FIXTURES.
6. CONTRACTOR SHALL SAW CUT FLOORS AS REQUIRED TO RECONFIGURE UNDERGROUND SANITARY LINES UNDER RENOVATED TOILET ROOMS. UPON COMPLETION OF INSTALLATION, CONTRACTOR SHALL PATCH AND REPAIR FLOORING. COORDINATE WITH ARCHITECTURAL.
7. EXISTING PLUMBING VENTS SHALL BE REUSED FOR THE NEW PLUMBING FIXTURES. ANY UNUSED VENTS SHALL BE CAPPED AND SEALED.

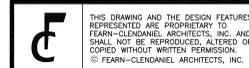
**CONSULTANTS:**

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
DEDC, LLC.  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC.  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053



THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
INC.  
6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
Ph. 302-998-7615 • Fax. 302-998-7685  
www.fearnclendaniel.com

**PROJECT:**

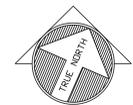
SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMRYNA, DE

DRAWING TITLE:  
FLOOR PLAN (SECTION B)  
PLUMBING DEMOLITION

OWN. BY: DEDC  
CHK. BY: PG  
PROJECT NUMBER:  
14P316

DATE:  
03/16/2015  
DRAWING NUMBER:  
PD102

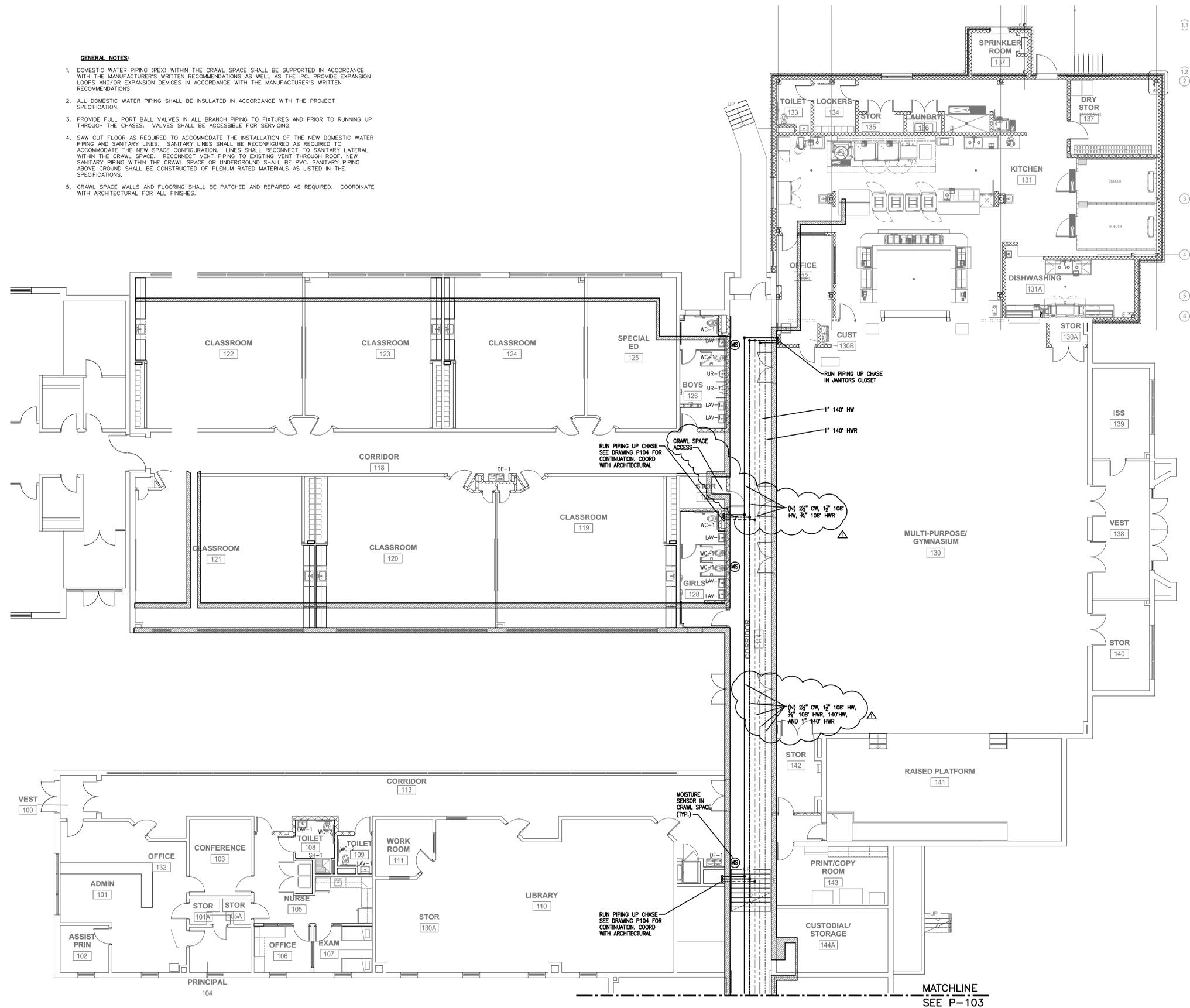
SCALE:  
AS NOTED



KEYPLAN

**GENERAL NOTES:**

1. DOMESTIC WATER PIPING (PEX) WITHIN THE CRAWL SPACE SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS AS WELL AS THE IPC. PROVIDE EXPANSION LOOPS AND/OR EXPANSION DEVICES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
2. ALL DOMESTIC WATER PIPING SHALL BE INSULATED IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
3. PROVIDE FULL PORT BALL VALVES IN ALL BRANCH PIPING TO FIXTURES AND PRIOR TO RUNNING UP THROUGH THE CHASES. VALVES SHALL BE ACCESSIBLE FOR SERVICING.
4. SAW CUT FLOOR AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE NEW DOMESTIC WATER PIPING AND SANITARY LINES. SANITARY LINES SHALL BE RECONFIGURED AS REQUIRED TO ACCOMMODATE THE NEW SPACE CONFIGURATION. LINES SHALL RECONNECT TO SANITARY LATERAL WITHIN THE CRAWL SPACE. RECONNECT VENT PIPING TO EXISTING VENT THROUGH ROOF. NEW SANITARY PIPING WITHIN THE CRAWL SPACE OR UNDERGROUND SHALL BE PVC. SANITARY PIPING ABOVE GROUND SHALL BE CONSTRUCTED OF PLENUM RATED MATERIALS AS LISTED IN THE SPECIFICATIONS.
5. CRAWL SPACE WALLS AND FLOORING SHALL BE PATCHED AND REPAIRED AS REQUIRED. COORDINATE WITH ARCHITECTURAL FOR ALL FINISHES.



**1 CRAWL SPACE PLAN (SECTION A) - DOMESTIC WATER**  
 SCALE: 1/8"=1'-0"

**CONSULTANTS:**

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: (302) 999-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
 BAKER INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
 DEDC, LLC  
 315 SOUTH CHAPEL STREET  
 NEWARK, DE 19711  
 P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1. Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
 INC.  
 6 Larch Avenue • Suite 399 • Wilmington, Delaware 19804  
 Ph: 302-999-7015 • Fax: 302-999-7685  
 www.fcarchitects.net

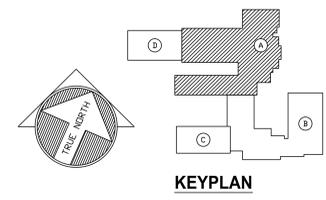
**PROJECT:**

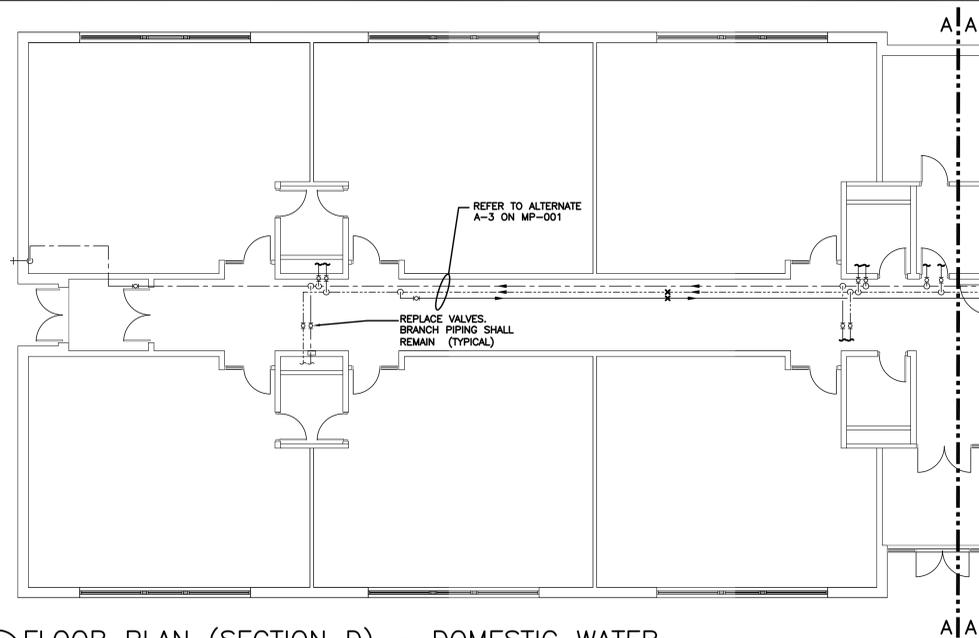
**SMRYNA ELEMENTARY SCHOOL  
 RENOVATION & ADDITION**

121 SOUTH SCHOOL LANE  
 SMYRNA, DE

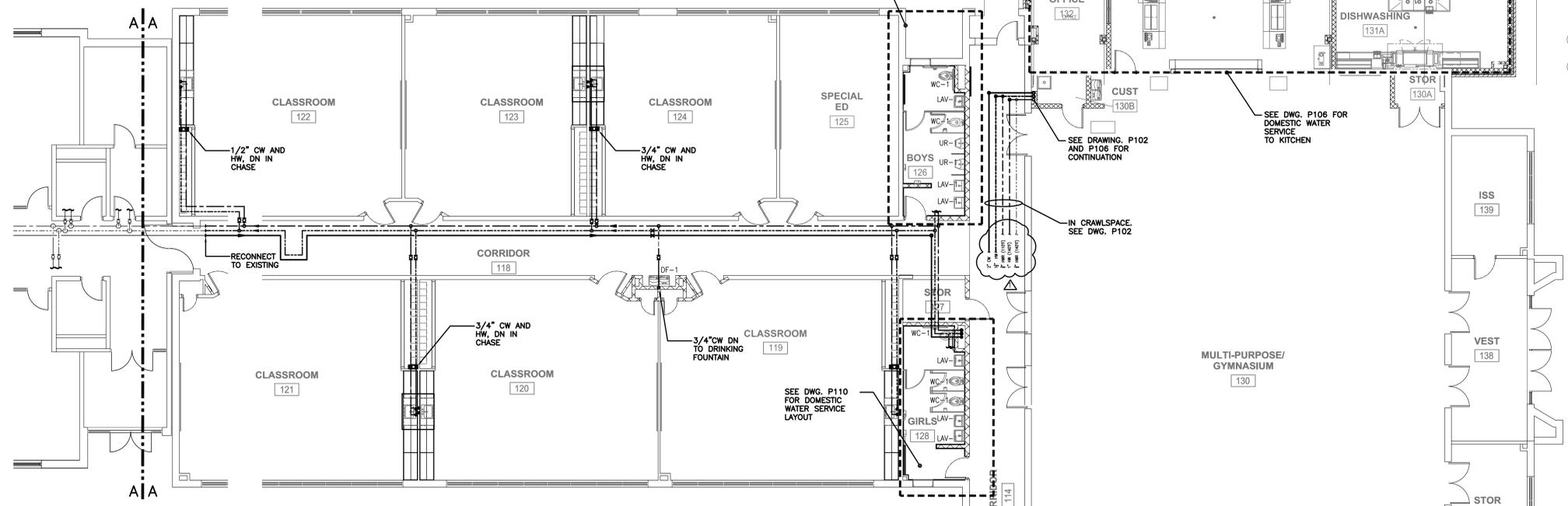
**DRAWING TITLE:**  
 CRAWL SPACE (SECTION A)  
 DOMESTIC WATER PLAN

DWN. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>P102</b>	
SCALE: AS NOTED		





2 FLOOR PLAN (SECTION D) - DOMESTIC WATER  
 P104 SCALE: 1/8"=1'-0"



1 FLOOR PLAN (SECTION A) - DOMESTIC WATER  
 P104 SCALE: 1/8"=1'-0"

- GENERAL NOTES:**
- DOMESTIC WATER PIPING (PEX) WITHIN THE CRAWL SPACE SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS AS WELL AS THE IPC. PROVIDE EXPANSION LOOPS AND/OR EXPANSION DEVICES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
  - ALL DOMESTIC WATER PIPING SHALL BE INSULATED IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
  - PROVIDE FULL PORT BALL VALVES IN ALL BRANCH PIPING TO FIXTURES AND PRIOR TO RUNNING UP THROUGH THE CHASES. VALVES SHALL BE ACCESSIBLE FOR SERVICING.
  - ALL DOMESTIC WATER PIPING SHALL BE CONCEALED EITHER IN EXISTING CHASES, NEW CHASES PROVIDED BY THE CONTRACTOR OR CONCEALED WITHIN THE NEW WALL CONSTRUCTION. COORDINATE INSTALLATION WITH EXISTING CONDITIONS AND WITH THE ARCHITECTURAL DRAWINGS.

**CONSULTANTS:**

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE. SUITE 401  
 WILMINGTON, DE 19804  
 P: (302) 999-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
 BAKER INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
 DEDC, LLC  
 315 SOUTH CHAPEL STREET  
 NEWARK, DE 19711  
 P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC.  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1 - Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
 INC.  
 6 Larch Avenue • Suite 399 • Wilmington, Delaware 19804  
 Ph: 302-999-7015 • Fax: 302-999-7685  
 www.fcarchitects.net

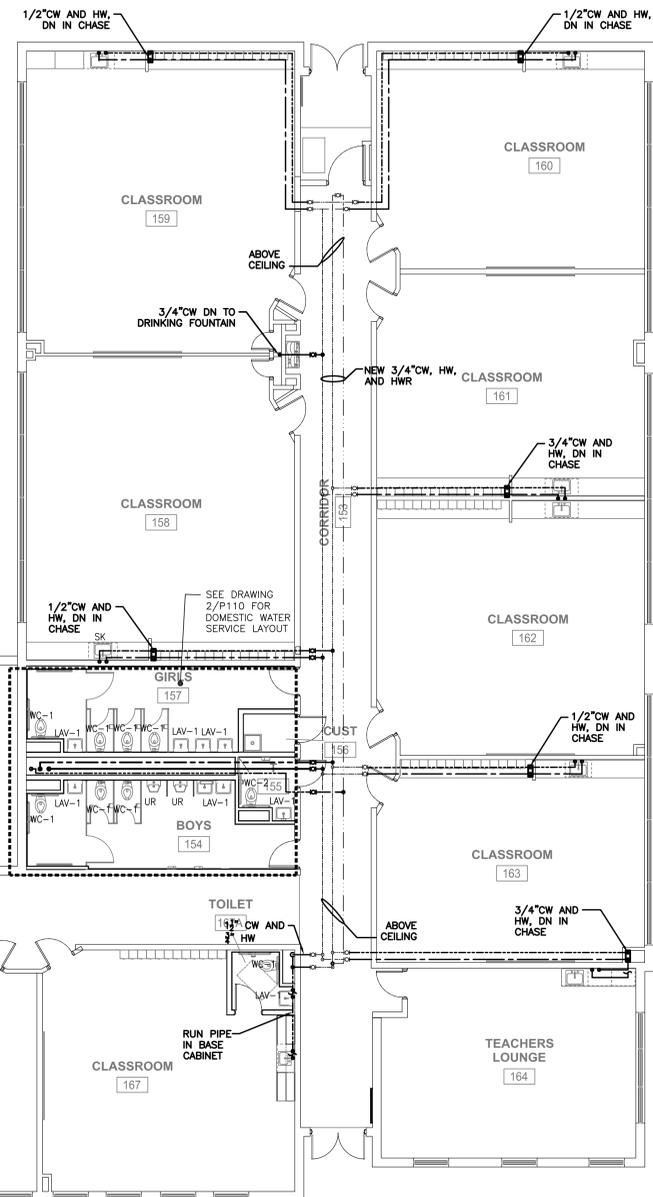
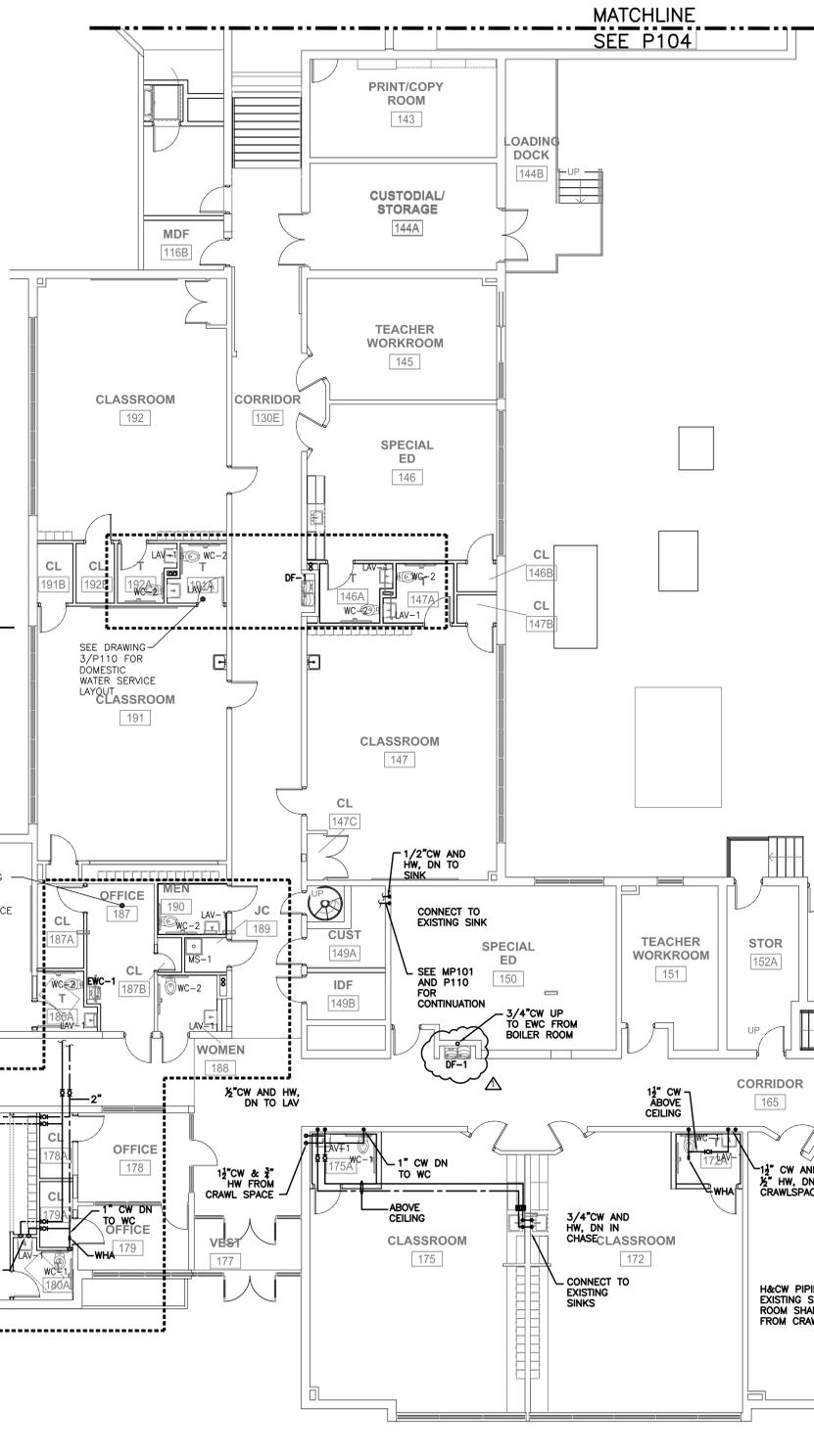
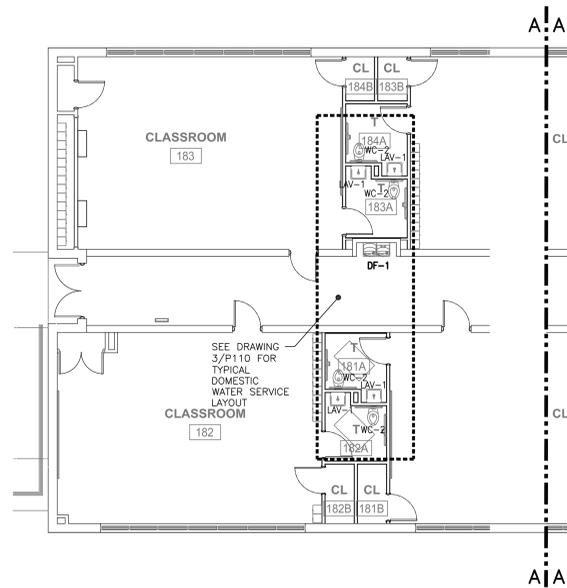
**PROJECT:**

SMRYNA ELEMENTARY SCHOOL  
 RENOVATION & ADDITION  
 121 SOUTH SCHOOL LANE  
 SMYRNA, DE

**DRAWING TITLE:**  
 FLOOR PLAN (SECTION A & D)  
 DOMESTIC WATER PLAN

OWN. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>P104</b>	
SCALE: AS NOTED		





2 FLOOR PLAN (SECTION C) - DOMESTIC WATER

P105 SCALE: 1/8"=1'-0"

1 FLOOR PLAN (SECTION B) - DOMESTIC WATER

P105 SCALE: 1/8"=1'-0"

**GENERAL NOTES:**

- DOMESTIC WATER PIPING (PEX) WITHIN THE CRAWL SPACE SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS AS WELL AS THE IPC. PROVIDE EXPANSION LOOPS AND/OR EXPANSION DEVICES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- ALL DOMESTIC WATER PIPING SHALL BE INSULATED IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
- PROVIDE FULL PORT BALL VALVES IN ALL BRANCH PIPING TO FIXTURES AND PRIOR TO RUNNING UP THROUGH THE CHASES. VALVES SHALL BE ACCESSIBLE FOR SERVICING.
- ALL DOMESTIC WATER PIPING SHALL BE CONCEALED EITHER IN EXISTING CHASES, NEW CHASES PROVIDED BY THE CONTRACTOR OR CONCEALED WITHIN THE NEW WALL CONSTRUCTION. COORDINATE INSTALLATION WITH EXISTING CONDITIONS AND WITH THE ARCHITECTURAL DRAWINGS.

**CONSULTANTS:**

- CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 999-9202 F: (302) 691-1314
- STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592
- MECHANICAL/PLUMBING ENGINEERS**  
DEDC, LLC  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175
- ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION.  
© FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1. Addendum 2	03-23-15

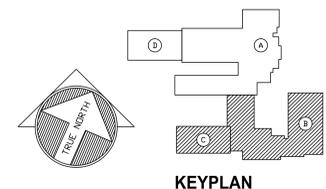
**Fearn Clendaniel Architects**  
INC.  
6 Larch Avenue • Suite 399 • Wilmington, Delaware 19804  
Ph: 302-999-7015 • Fax: 302-999-7685  
www.fearnclendaniel.com

**PROJECT:**

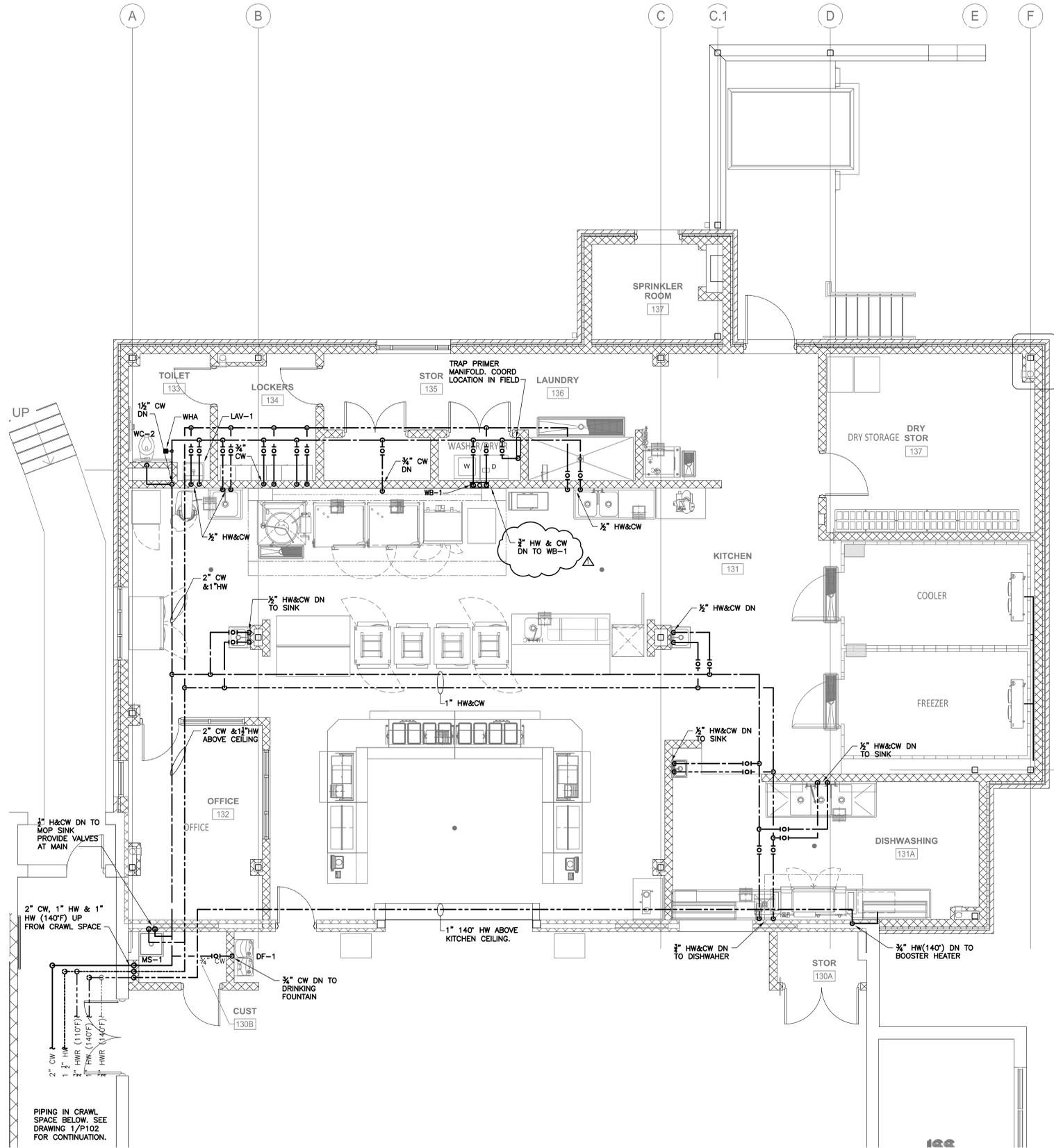
**SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION**  
121 SOUTH SCHOOL LANE  
SMRYNA, DE

**DRAWING TITLE:**  
FLOOR PLAN (SECTION B & C)  
DOMESTIC WATER PLAN

DNW. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>P105</b>	
SCALE: AS NOTED		

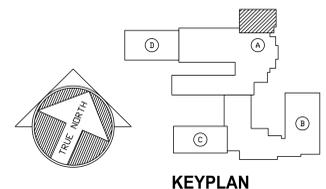


PLUMBING SCHEDULE													
ITEM NO.	QTY.	COLD WATER SIZE (N)	HOT WATER SIZE (N)	WATER TROUGH-IN HEIGHT AFF. (N)	INDIR. DRAIN SIZE (N)	DIRECT DRAIN SIZE (N)	DRAIN TROUGH-IN HEIGHT AFF. (N)	GAS SIZE (N)	MBTUH	CAS TROUGH-IN HEIGHT AFF. (N)	DESCRIPTION	PLUMBING REMARKS	
P1	1										EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY	
P2	1										EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY	
P17	1	1/2	1/2					3/4	140		KETTLE, STEAM JACKETED	SERVICE FORM UDS	
P17A	1											SERVICE FORM UDS	
P20	1	1/2	1/2	18							EXISTING HAND SINK, WALL MOUNT	G.C. TO VERIFY	
P20A	1					1-1/2	18						
P27	1										EXISTING 4 WELL COLD PAN	G.C. TO VERIFY	
P28	1										EXISTING 4 WELL COLD PAN	G.C. TO VERIFY	
P29	1	3/4		64							ICE MAKER W/ BIN	INTERCONNECT WITH FILTER, G.C. TO VERIFY	
P29A	1				3/4								
P51	1										REACH-IN, BLAST CHILLER/ FREEZER		
P54	1	1/2	1/2	18							UTILITY SINK		
P54A	1				1-1/2								
P55A	1	1	3/4	DFA									
P55A.1	1							1-1/2	651.4	DFA			
P58	2	3/4									OVEN-STEAMER, COMBINATION	SERVICE FORM UDS	
P58A	2	3/4										SERVICE FORM UDS	
P58B	2				2							SERVICE FORM UDS	
P58C	2							3/4	75.7			SERVICE FORM UDS	
P59	1							3/4	60		OVEN, CONVECTION, GAS	SERVICE FORM UDS	
P60	1	1/2	1/2	18							WORK TABLE W/SINKS	EXTEND PIPE TO FS	
P60A	1				1-1/2								
P64	1					4	FLR				FLOOR TROUGH		
P65	1					4	FLR				FLOOR TROUGH		
P66	2	1/2	1/2	64							HOSE REEL WITH GUN		
P67	1				1						BIN, ICE DISPENSING		
P68	1	1/2	1/2	64							FILTER SYSTEM, ICEMAKER		
P73	2	1/2	1/2	18							HAND SINK, WALL MOUNT		
P73A	2												
P74	1	1/2	1/2	18							WORK TABLES W/SINKS		
P74A	1				1-1/2								
P80	1	1/2	1/2	18							SOILED DISHTABLE		
P80A	1				1-1/2								
P81	1	1/2	1/2	68							WAREWASHER, RACK CONVEYOR		
P81A	1				2								
P82	1		3/4	12							WATER HEATER, BOOSTER, GAS		
P82A	1							3/4	195				
P84	1	1/2	1/2	18							3 COMPARTMENT POT SINK		
P84A	1				1-1/2								
P91	1										EVAPORATOR COIL, COOLER	PC TO COORDINATE	
P92	1										EVAPORATOR COIL, FREEZER	PC TO COORDINATE	
P94	1					3	FLR				FLOOR TROUGH		
P96	1				1						CONDENSATE HOOD		
P99	1	1/2		36							COFFEE MAKER, AUTOMATIC		
P100	LOT					4	FLR				FLOOR SINK		
P101	LOT					3	FLR				FLOOR DRAIN		



- NOTES:
- KITCHEN VENDOR SCHEDULE INCLUDED HERE FOR REFERENCE. REFER TO KITCHEN VENDOR LATEST DRAWINGS AND CUT SHEETS FOR ACTUAL CONNECTION LOCATIONS AND REQUIREMENTS.
  - COORDINATE INSTALLATION REQUIREMENTS WITH ALL OTHER TRADES.
  - ALL PIPING SHALL BE CONCEALED.

1 PARTIAL FLOOR PLAN - KITCHEN SERVICE PIPING  
P106 SCALE: 1/4"=1'-0"



**CONSULTANTS:**

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
DEDC, LLC.  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC.  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid 03-11-15  
Addendum 2 03-23-15

Fearn Clendaniel  
Architects  
INC.  
6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
Ph: 302-998-7615 • Fax: 302-998-7685  
www.fearnclendaniel.net

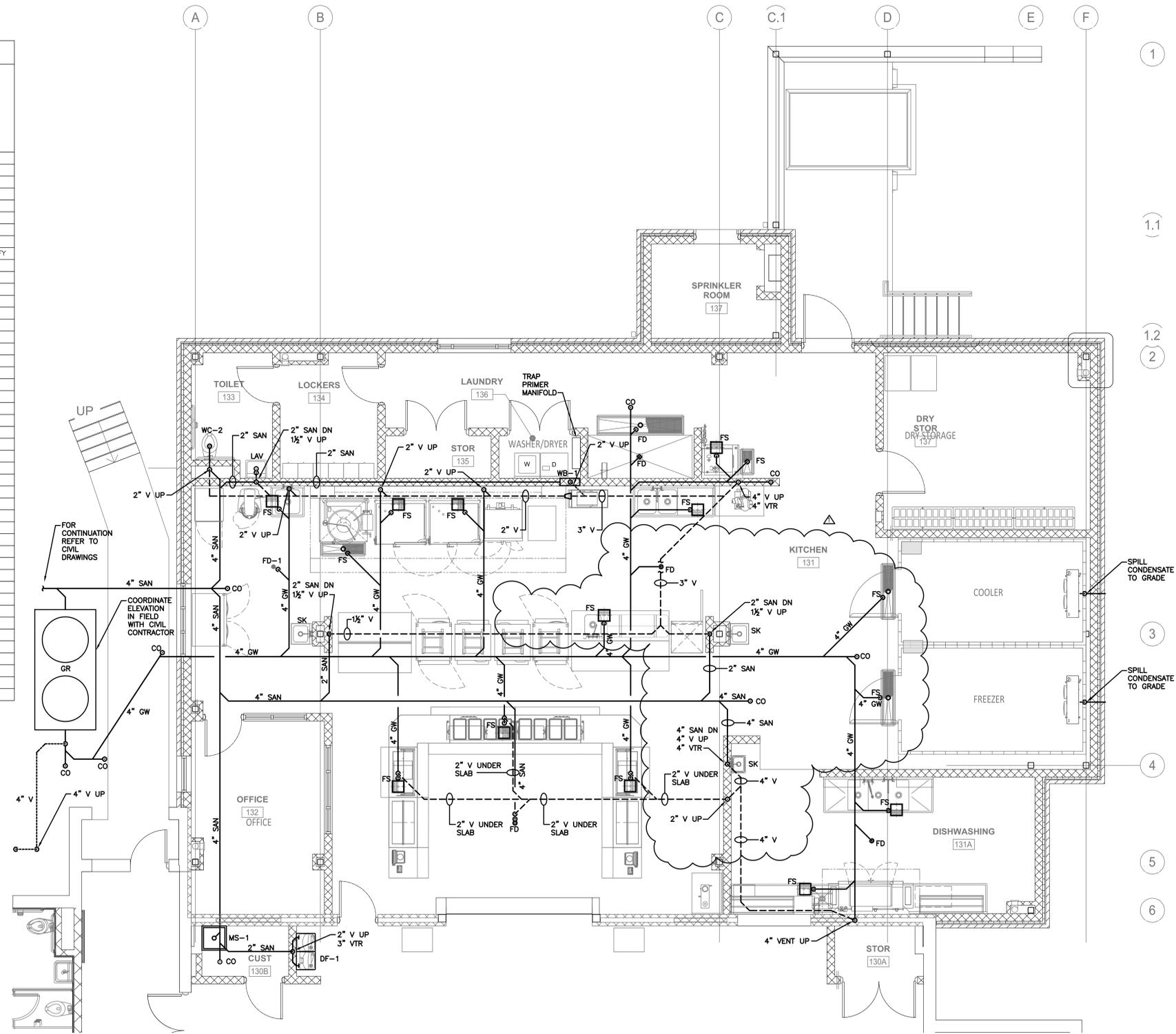
**PROJECT:**

SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMRYNA, DE

**DRAWING TITLE:** KITCHEN DOMESTIC WATER PLAN

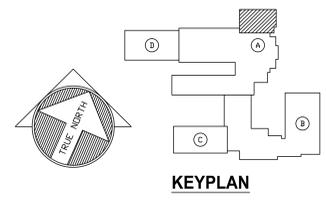
OWN. BY: DEDC  
CHK. BY: PG  
PROJECT NUMBER: 14P316  
DATE: 03/16/2015  
DRAWING NUMBER: P106  
SCALE: AS NOTED

PLUMBING SCHEDULE												
ITEM NO.	QTY.	COLD WATER SIZE (IN)	HOT WATER SIZE (IN)	WATER TROUGH-IN HEIGHT AFF. (FT)	INDIR DRAIN SIZE (IN)	DIRECT DRAIN SIZE (IN)	DRAIN TROUGH-IN HEIGHT AFF. (IN)	GAS SIZE (IN)	MBTUH	CAS TROUGH-IN HEIGHT AFF. (IN)	DESCRIPTION	PLUMBING REMARKS
P1	1										EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY
P2	1										EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY
P17	1	½	½					¾	140		KETTLE, STEAM JACKETED	SERVICE FORM UDS
P17A	1											SERVICE FORM UDS
P20	1	½	½	18							EXISTING HAND SINK, WALL MOUNT	G.C. TO VERIFY
P20A	1											
P27	1					1-½	18				EXISTING 4 WELL COLD PAN	G.C. TO VERIFY
P28	1										EXISTING 4 WELL COLD PAN	G.C. TO VERIFY
P29	1	¾		64							ICE MAKER W/ BIN	INTERCONNECT WITH FILTER, G.C. TO VERIFY
P29A	1				¾							
P51	1										REACH-IN, BLAST CHILLER/ FREEZER	
P54	1	½	½	18							UTILITY SINK	
P54A	1				1-½							
P55A	1	1	¾	DFA								
P55A.1	1						1-½	651.4	DFA			
P58	2	¾									OVEN-STEAMER, COMBINATION	SERVICE FORM UDS
P58A	2	¾										SERVICE FORM UDS
P58B	2				2							SERVICE FORM UDS
P58C	2						¾	75.7				SERVICE FORM UDS
P59	1						¾	60			OVEN, CONVECTION, GAS	SERVICE FORM UDS
P60	1	½	½	18							WORK TABLE W/SINKS	EXTEND PIPE TO FS
P60A	1				1-½							
P64	1					4	FLR				FLOOR TROUGH	
P65	1					4	FLR				FLOOR TROUGH	
P66	2	½	½	64							HOSE REEL WITH GUN	
P67	1										BIN, ICE DISPENSING	
P68	1	½		64							FILTER SYSTEM, ICEMAKER	
P73	2	½	½	18							HAND SINK, WALL MOUNT	
P73A	2											
P74	1	½	½	18							WORK TABLES W/SINKS	
P74A	1				1-½							
P80	1	½	½	18							SOILED DISHTABLE	
P80A	1				1-½							
P81	1	½	½	68							WAREWASHER, RACK CONVEYOR	
P81A	1				2							
P82	1		¾	12							WATER HEATER, BOOSTER, GAS	
P82A	1							¾	195			
P84	1	½	½	18							3 COMPARTMENT POT SINK	
P84A	1				1-½							
P91	1										EVAPORATOR COIL, COOLER	PC TO COORDINATE
P92	1										EVAPORATOR COIL, FREEZER	PC TO COORDINATE
P94	1					3	FLR				FLOOR TROUGH	
P96	1										CONDENSATE HOOD	
P99	1	½		36							COFFEE MAKER, AUTOMATIC	
P100	LOT					4	FLR				FLOOR SINK	
P101	LOT					3	FLR				FLOOR DRAIN	



- NOTES:
- KITCHEN VENDOR SCHEDULE INCLUDED HERE FOR REFERENCE. REFER TO KITCHEN VENDOR LATEST DRAWINGS AND CUT SHEETS FOR ACTUAL CONNECTION LOCATIONS AND REQUIREMENTS.
  - WHERE THE SANITARY AND GREASE PIPING PENETRATES THE FOUNDATIONS WALL PROVIDE WALL SLEEVE. COORDINATE THE INSTALLATION REQUIREMENTS WITH THE STRUCTURAL AND CIVIL.
  - COORDINATE THE INSTALLATION OF ALL UNDER THE FLOOR PIPING WITH ALL OTHER TRADES.
  - ALL PIPING SHALL BE CONCEALED.

1 PARTIAL FLOOR PLAN - KITCHEN SANITARY DRAINAGE PIPING  
 P109 SCALE: 1/4"=1'-0"



CONSULTANTS:

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
 BAKER INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
 DEDC, LLC.  
 315 SOUTH CHAPEL STREET  
 NEWARK, DE 19711  
 P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC.  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

ISSUE DATES:

Issued for Bid	03-11-15
Addendum 2	03-23-15

Fearn Clendaniel Architects, INC.  
 6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
 Ph. 302-998-7615 • Fax: 302-998-7685  
 www.fcarchitects.net

PROJECT:

SMRYNA ELEMENTARY SCHOOL  
 RENOVATION & ADDITION  
 121 SOUTH SCHOOL LANE  
 SMYRNA, DE

DRAWING TITLE: KITCHEN SANITARY PIPING PLAN

OWN. BY: DEDC    CHK. BY: PG    PROJECT NUMBER: 14P316

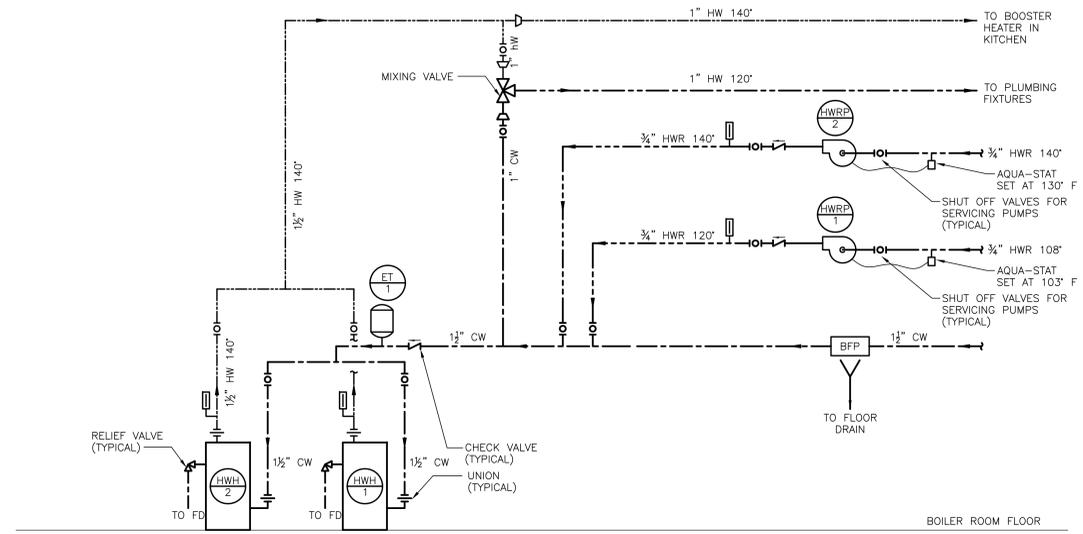
DATE: 03/16/2015    DRAWING NUMBER: P109

SCALE: AS NOTED

## PLUMBING FIXTURE SCHEDULE

TAG	BASIS OF DESIGN	FLUSH VALVE OR FAUCET	CONNECTION SIZES			REMARKS
			CW	HW	DRAIN	
WC-1	KOHLER WELLCOMME MODEL# K-4350	SLOAN ROYAL 111	1-1/2"	-	4"	WHITE FINISH, FLOOR MOUNTED. PROVIDE KOHLER LUSTRA TOILET SEAT MODEL K-4679-CA. PROVIDE FLUSH VALVE RATED FOR 1.6 GPF.
WC-2	KOHLER HIGHCLIFF MODEL# K-4368	SLOAN ROYAL 111	1-1/2"	-	4"	WHITE FINISH, FLOOR MOUNTED. PROVIDE KOHLER LUSTRA TOILET SEAT MODEL K-4679-CA. PROVIDE FLUSH VALVE RATED FOR 1.6 GPF.
UR-1	KOHLER BRANHAM MODEL# K-4920-T	SLOAN ROYAL 186-1.0	3/4"	-	2"	WHITE FINISH, WALL MOUNTED. COORDINATE W/ ARCH. DWGS FOR MOUNTING HEIGHT. PROVIDE WALL HANGER. PROVIDE FLUSH VALVE RATED FOR 1.0 GPF.
LAV-1	KOHLER HUDSON MODEL# K-2867	KOHLER CORALAIS MODEL# K-15243-4	1/2"	1/2"	1-1/4"	WHITE FINISH, WALL HUNG (SEE ARCH DRAWINGS FOR HEIGHT), 4" CENTERS AND GRID STRAINER. PROVIDE ADA COMPLIANT AND VANDAL-RESISTANT HANDLES ON FAUCET. PROVIDE JR SMITH MODEL# 0700-M31 WALL HANGER.
DF-1 EWC	HALSEY TAYLOR MODEL# HACGABLS5-WF	-	1/2"	-	1-1/2"	FILTERED BI-LEVEL BARRIER FREE HIGH EFFICIENCY WATER COOLER. PROVIDE WALL CARRIER. COORDINATE LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL.
SH-1	-	SPEAKMAN MODEL# SM-3000	1/2"	1/2"	2"	COORDINATE W/ ARCH. DRAWINGS FOR SHOWER CONSTRUCTION. PROVIDE SHOWER FAUCET W/ ANTISCALD MIXING VALVE AND HAND-HELD SPRAYER SPEAKMAN VS-1001-ADA-PC
S-1	ELKAY MODEL# GEGR2521	SPEAKMAN MODEL# SC-5724	1/2"	1/2"	1-1/2"	21" X 15 1/2" X 5 1/2" SINGLE BOWL STAINLESS STEEL SELF-RIMMING SINK W/ 8" CENTERS. PROVIDE ADA COMPLIANT HANDLES & VANDAL-RESISTANT HANDLES ON FAUCET.
MS-1	FIAT MODEL# TSB3001	SPEAKMAN MODEL# SEF-9000	1/2"	1/2"	3"	32"x32"x12" PRECAST TERRAZO SINK W/ 6" DROP FRONT. PROVIDE MS3232 STAINLESS STEEL WALL PANELS ON ADJACENT WALLS. PROVIDE VACUUM BRKR, INTERGRAL STOPS, WALL BRACE, & 3/4" HOSE THREAD SPOUT WITH FAUCET
MXV	HOLBY TEMPERING VALVE MODEL# HTV150	-	1-1/2"	1-1/2"	-	TEMPERING VALVE SHALL BE ADJUSTABLE AND CAPABLE OF MIXING 140F WATER WITH DOMESTIC WATER TO MAINTAIN A LEAVING WATER TEMPERATURE OF 108F (ADJUSTABLE).
TRAP PRIMER	PRECISION PLUMBING PRODUCTS MODEL# PTS-1320	-	3/4"	-	-	12"x12"x4" NEMA 1 PANEL WITH COVER PLATE, OUTLET FITTINGS SERVES 13-20 DRAINS. 120V 1 Ø 60 Hz.
WB-1	GUY GRAY MODEL# MWB26*	-	1/2"	1/2"	2"	WHITE POWDER COAT FINISH. FURNISH W/ TOP MOUNT WATER SUPPLY VALVES W/ WATER HAMMER ARRESTERS.
GI-1	JR SMITH MODEL# 8490	-	-	-	6"	500 GPM FLOW RATE, 1000 LB GREASE CAPACITY. PROVIDE FLOW CONTROL FITTING. UNIT TO BE INSTALLED UNDERGROUND IN LOCATION SHOWN ON DWG. 1/P-1.

\* OR APPROVED EQUAL



**1 DOMESTIC WATER HEATER PIPING DIAGRAM**  
SCALE: NONE

### LEGEND:

- CW COLD WATER
- DIR. DIRECT
- HW HOT WATER
- IND. INDIRECT
- FSE FOOD SERVICE EQUIPMENT

### DRAWING NOTES:

- 1) FOR GENERAL NOTES AND LEGENDS SEE DRAWING MP-0.

## DRAIN SCHEDULE

TAG	FUNCTION	BASIS OF DESIGN	PIPE SIZE	REMARKS
FD	FLOOR DRAIN	JR SMITH 2005	FULL	PROVIDE UNIT WITH FULL LINE SIZE CONNECTION.
FS	FLOOR SINK	JR SMITH 3001-13	FULL	PROVIDE UNIT WITH FULL LINE SIZE CONNECTION & 3/4" STAINLESS STEEL GRATE TOP.
RD	ROOF DRAIN	JR SMITH 1010	FULL	PROVIDE UNIT WITH FULL LINE SIZE CONNECTION.

ALL FLOOR DRAINS AND FLOOR SINKS WITHIN THE KITCHEN SHALL BE CONNECTED TO A TRAP PRIMER. SEE PLUMBING FIXTURE SCHEDULE ABOVE.

## GAS-FIRED HOT WATER HEATER SCHEDULE

TAG	DESCRIPTION	BASIS OF DESIGN	STORAGE CAPACITY (GALLONS)	RECOVERY		CONNECTION (IN)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	SHIPPING WEIGHT (LBS)	ELECTRIC SERVICE		REMARKS
				GPH	RISE (°F)					V	PH	
HWH 1	ULTRA HIGH EFFICIENCY GAS-FIRED DOMESTIC HOT WATER HEATER	LOCKINVAR SHIELD WATER HEATER SNA201-100	90	233	100°F	1/2	200	192	725	120	1 Ø	UNIT PROVIDES 140°F HOT WATER TO BUILDING. MOUNTED ON 6" HOUSEKEEPING PAD IN BOILER ROOM. PROVIDE MIXING VALVE FOR 108 °F DISTRIBUTION. SEE DIAGRAM.
HWH 2	ULTRA HIGH EFFICIENCY GAS-FIRED DOMESTIC HOT WATER HEATER	LOCKINVAR SHIELD WATER HEATER SNA201-100	90	233	100°F	1/2	200	192	725	120	1 Ø	UNIT PROVIDES 140°F HOT WATER TO BUILDING. MOUNTED ON 6" HOUSEKEEPING PAD IN BOILER ROOM. PROVIDE MIXING VALVE FOR 108 °F DISTRIBUTION. SEE DIAGRAM.

**NOTE:**  
PROVIDE CONDENSATE TREATMENT KIT FOR EACH WATER HEATER. RUN CONDENSATE TO NEAREST FLOOR DRAIN.

## EXPANSION TANK SCHEDULE

PUMP NO.	SYSTEM	MANUFACTURER & MODEL NO.	VOLUME (GAL.)	ACCEPTANCE (GAL.)	HEIGHT (IN.)	DIAMETER (IN.)	SHIPPING WEIGHT (LBS.)	REMARKS
ET 1	HOT WATER	BELL & GOSSETT MODEL# PTA-60V	25.0	11.3	34	16	96	LOCATED IN BOILER ROOM.

\* OR APPROVED EQUAL

## PUMP SCHEDULE

UNIT NO	PIPING SYSTEM	MFG. SIZE, & MODEL	TYPE	DESIGN CAPACITY (GPM)	DESIGN HEAD (FT)	MOTOR RPM	MOTOR H.P.	VOLTS		REMARKS
								PHASE	PHASE	
HWRP 1	DOMESTIC HOT WATER (108°F)	TACO VIRIDIAN CIRCULATOR VR15-1	INLINE	10	25	1750	1/2	115	1	LOCATED IN BOILER ROOM.
HWRP 2	DOMESTIC HOT WATER (140°F)	TACO VIRIDIAN CIRCULATOR VR15-1	INLINE	10	25	1750	1/2	115	1	LOCATED IN BOILER ROOM.

### CONSULTANTS:

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEER**  
DEDC, LLC.  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC.  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

**Fearn Clendaniel Architects**  
THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. © FEARN-CLENDANIEL ARCHITECTS, INC.

### ISSUE DATES:

Issued for Bid	03-11-15
Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
6 Larch Avenue • Suite 398 • Wilmington, Delaware 19804  
Ph: 302-998-7615 • Fax: 302-998-7685  
www.fearnclendaniel.com

### PROJECT:

SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMRYNA, DE

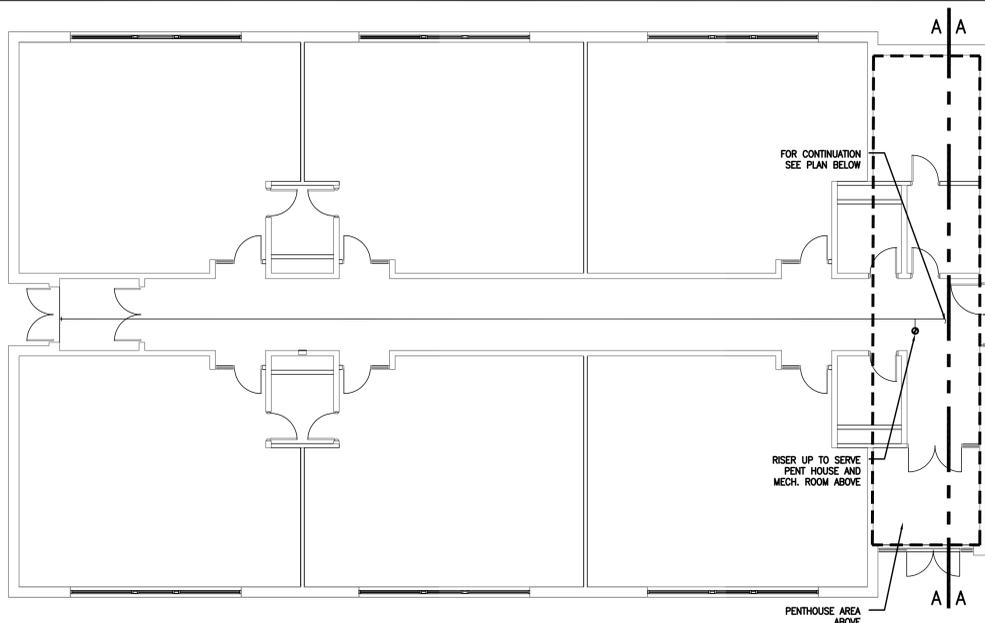
DRAWING TITLE:  
PLUMBING SCHEDULES AND DOMESTIC HOT WATER DIAGRAM

OWN. BY: DEDC  
CHK. BY: PG  
PROJECT NUMBER: 14P316

DATE: 03/16/2015  
DRAWING NUMBER: **P201**

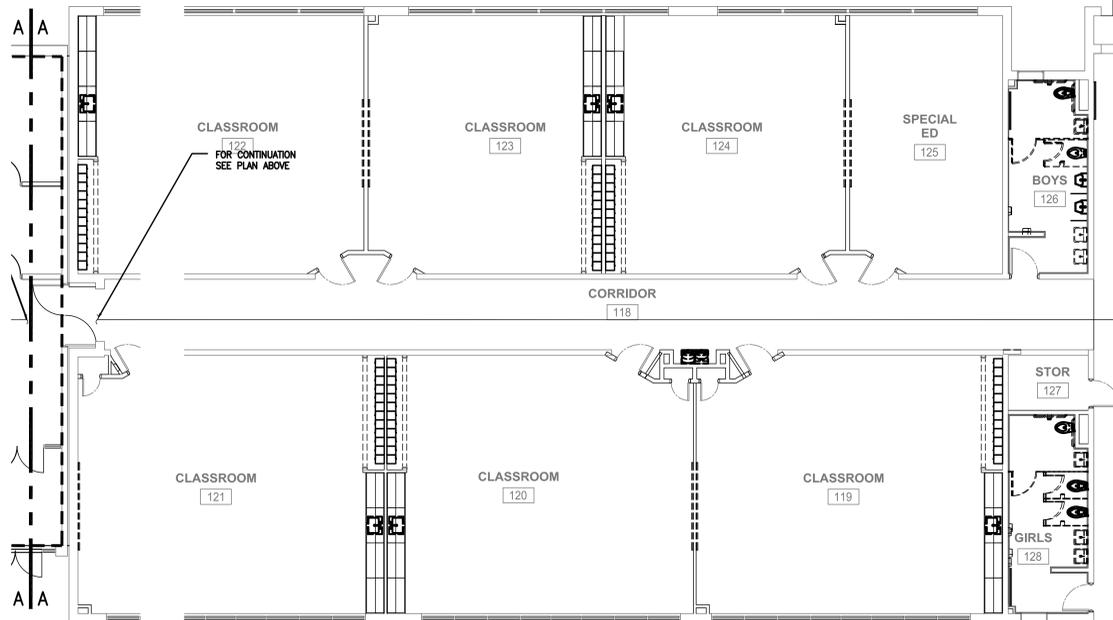
SCALE: AS NOTED





**2 FLOOR PLAN (SECTION D) - NEW WORK**

FP101 SCALE: 1/8"=1'-0"



**3 FIRE PUMP SCHEMATIC DIAGRAM**

FP101 SCALE: NONE



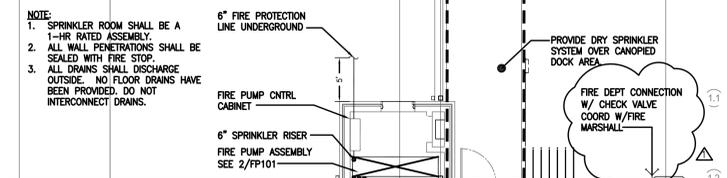
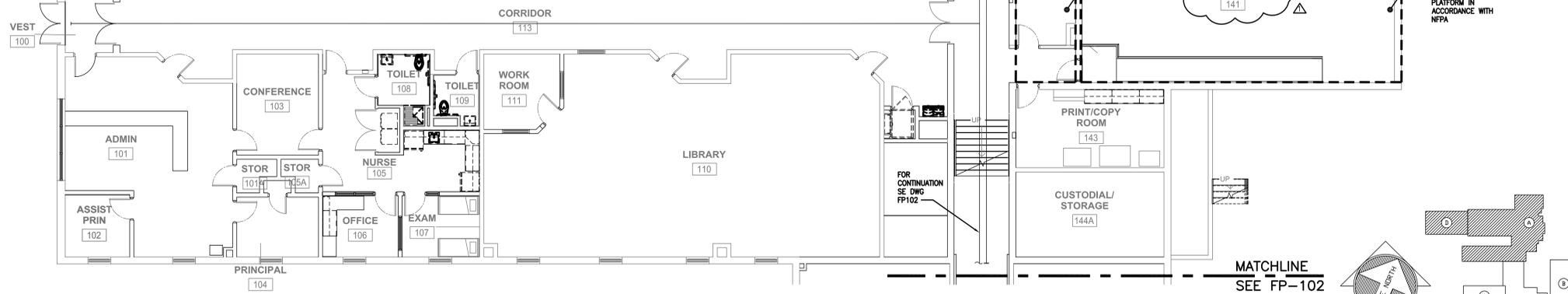
NOTE:  
 1. ALL LINES SHALL BE DESIGNED AND SIZED IN ACCORDANCE WITH NFPA 13 AND NFPA 20.  
 2. ALL VALVES SHALL BE LOCATED IN AN ACCESSIBLE LOCATION FOR SERVICE AND MAINTENANCE.  
 3. ALL DRAINS SHALL DISCHARGE OUTSIDE. COORDINATE DRAIN LOCATION WITH CIVIL AND ARCHITECTURAL DRAWINGS.  
 4. PROVIDE ALL PIPING AND VALVES REQUIRED FOR MONITORING AND CONTROL OF THE FIRE PUMP AND BYPASS (MONITORING AND CONTROL PIPING IS NOT SHOWN IN THIS DIAGRAM)

**FIRE SPRINKLER NOTES**

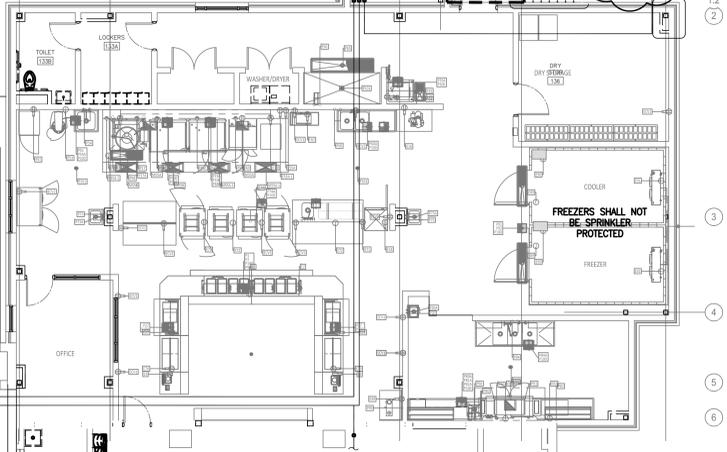
- ALL SPRINKLER WORK SHALL BE PERFORMED BY THE OWNER APPROVED FIRE SPRINKLER CONTRACTOR.
- FIRE SPRINKLER CONTRACTOR SHALL PERFORM THEIR OWN FLOW AND PRESSURE TEST AT THE NEAREST HYDRANTS TO CONFIRM THE SIZE OF THE FIRE PUMP AND JOCKEY PUMP SHOWN. THEIR FIRE SPRINKLER SYSTEM DESIGN SHALL BE BASED UPON THEIR OWN TESTS.
- THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 AND NFPA 20. SPRINKLERS SHALL BE CLASSIFIED LIGHT HAZARD EXCEPT FOR THE BOILER ROOM (ORDINARY 1).
- A DRY SPRINKLER SYSTEM SHALL BE INSTALLED UNDER THE NEW CANOPIED LOADING DOCK AREA. SPRINKLER SYSTEM SHALL INCLUDE ALL NECESSARY MATERIALS AND DEVICES REQUIRED FOR THE PROPER OPERATION. COORDINATE LOCATION OF THE HEADS WITH THE ARCHITECTURAL PLANS. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- THE INTENT OF THE PROJECT IS TO HAVE THE NEW SPRINKLER SYSTEM CONCEALED ABOVE THE LAY IN CEILING AND THE ELEVATIONS OF THE CEILING SHALL REMAIN. COORDINATE INSTALLATION WITH ALL EXISTING CONDITIONS AND ALL OTHER TRADES.
- PLACEMENT OF THE SPRINKLER HEADS SHALL BE COORDINATED WITH THE EXISTING REFLECTED CEILING PLAN (LIGHT FIXTURES, DIFFUSERS, REGISTER, FIRE ALARM AUDIO VISUAL, ETC.) AS WELL AS ALL OTHER TRADES. ANY EXISTING DEVICES RELOCATED OR DISTURBED DURING INSTALLATION SHALL BE RESTORED TO PROPER SERVICE.
- THE SPRINKLER CONTRACTOR SHALL SEEK THE APPROVAL OF THE LOCAL FIRE MARSHAL PRIOR TO INSTALLATION OF THE SPRINKLER SYSTEM.
- CONTRACTOR SHALL PROVIDE OWNER WITH SPRINKLER APPROVAL DRAWINGS INDICATING THE LOCATION OF THE SPRINKLER HEADS. DRAWINGS WILL ALSO INDICATE ROUTING AND SIZES OF THE SPRINKLER MAINS. DRAWINGS SHALL BE PROVIDED IN THE LATEST AUTOCAD VERSION.

**1 FLOOR PLAN (SECTION A) - NEW WORK**

FP101 SCALE: 1/8"=1'-0"



NOTE:  
 1. SPRINKLER ROOM SHALL BE A 1-HR RATED ASSEMBLY.  
 2. ALL WALL PENETRATIONS SHALL BE SEALED WITH FIRE STOP.  
 3. ALL DRAINS SHALL DISCHARGE OUTSIDE. NO FLOOR DRAINS HAVE BEEN PROVIDED DO NOT INTERCONNECT DRAINS.



6" FIRE PROTECTION LINE UNDERGROUND  
 FIRE PUMP CNTRL CABINET  
 6" SPRINKLER RISER  
 FIRE PUMP ASSEMBLY SEE 2/FP101  
 PROVIDE DRY SPRINKLER SYSTEM OVER CANOPIED DOCK AREA  
 FIRE DEPT CONNECTION W/ CHECK VALVE COORD W/FIRE MARSHAL  
 FREEZERS SHALL NOT BE SPRINKLER PROTECTED  
 SPRINKLER SERVICE FOR MULTIPURPOSE ROOM AND STORAGE

**CONSULTANTS:**

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: (302) 999-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
 BAKER INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: (302) 734-7400 F: (302) 734-7992

**MECHANICAL/PLUMBING ENGINEERS**  
 DEDC, LLC  
 315 SOUTH CHAPEL STREET  
 NEWARK, DE 19711  
 P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC.  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION.  
 © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1 - Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
 INC.  
 6 Larch Avenue • Suite 399 • Wilmington, Delaware 19804  
 Ph: 302-999-7015 • Fax: 302-999-7685  
 www.fearnclendaniel.net

**PROJECT:**

**SMRYNA ELEMENTARY SCHOOL**  
**RENOVATION & ADDITION**  
 121 SOUTH SCHOOL LANE  
 SMRYNA, DE

DRAWING TITLE:  
**FLOOR PLAN (SECTION A)  
 FIRE PROTECTION**

OWN. BY: DECD  
 CHK. BY: PG  
 PROJECT NUMBER:  
 14P316

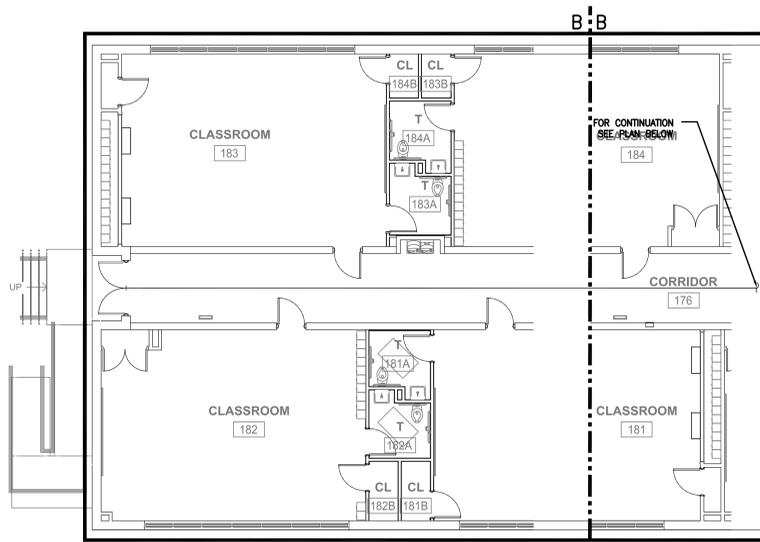
DATE:  
 03/16/2015  
 DRAWING NUMBER:  
**FP101**

SCALE:  
 AS NOTED

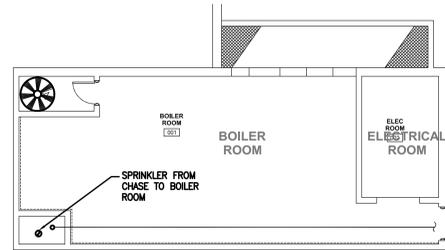
MATCHLINE  
 SEE FP-102



KEYPLAN



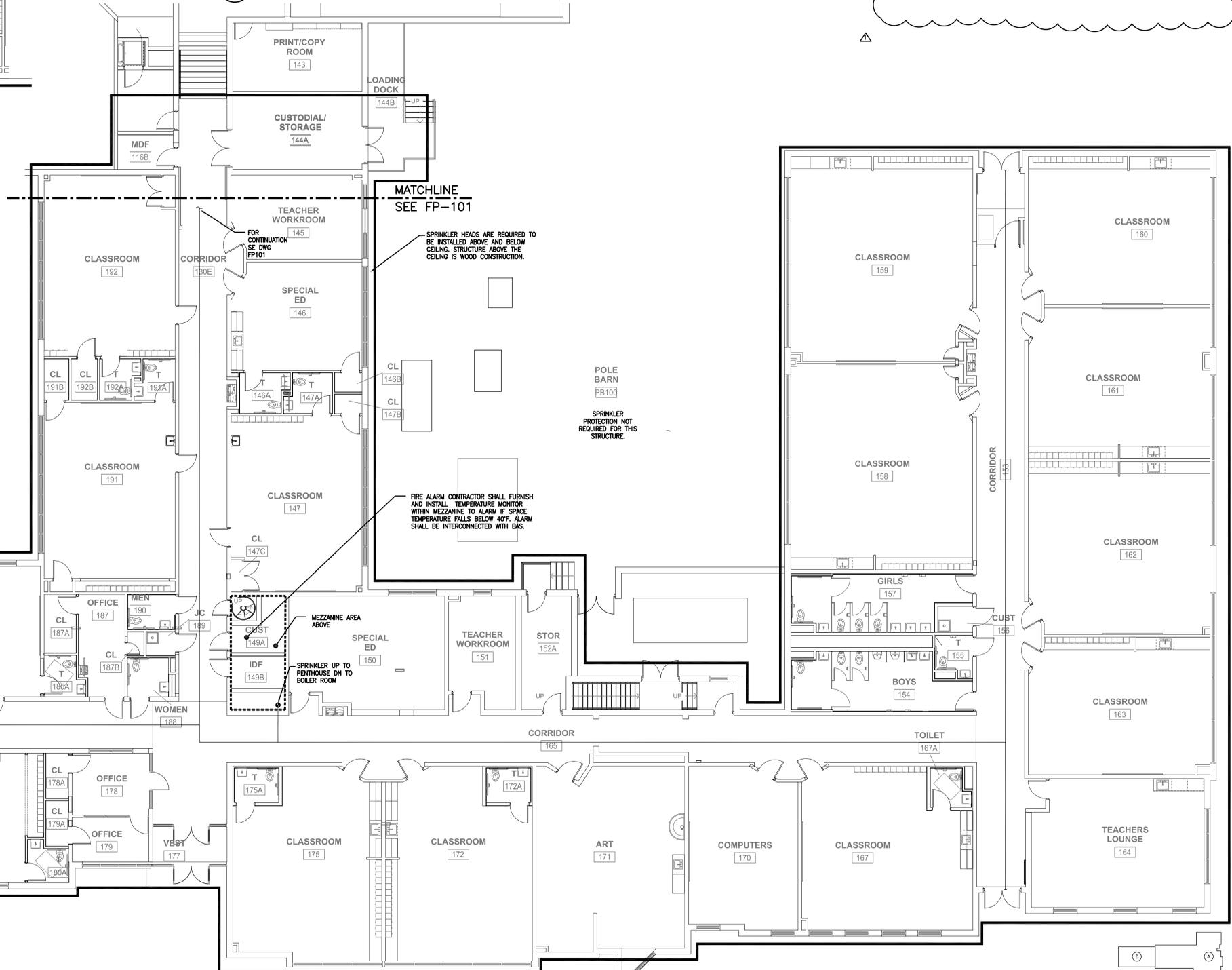
2 FLOOR PLAN (SECTION C) - NEW WORK  
FP102 SCALE: 1/8"=1'-0"



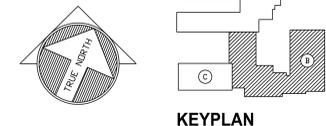
2 BOILER ROOM FLOOR PLAN (SECTION B) - NEW WORK  
FP102 SCALE: 1/8"=1'-0"

**FIRE SPRINKLER NOTES**

1. ALL SPRINKLER WORK SHALL BE PERFORMED BY THE OWNER APPROVED FIRE SPRINKLER CONTRACTOR.
2. FIRE SPRINKLER CONTRACTOR SHALL PERFORM THEIR OWN FLOW AND PRESSURE TEST AT THE NEAREST HYDRANTS TO CONFIRM THE SIZE OF THE FIRE PUMP AND JOCKEY PUMP SHOWN. THEIR FIRE SPRINKLER SYSTEM DESIGN SHALL BE BASED UPON THEIR OWN TESTS.
3. THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 AND NFPA 20. SPRINKLERS SHALL BE CLASSIFIED LIGHT HAZARD EXCEPT FOR THE BOILER ROOM (ORDINARY 1).
4. A DRY SPRINKLER SYSTEM SHALL BE INSTALLED UNDER THE NEW CANOPIED LOADING DOCK AREA. SPRINKLER SYSTEM SHALL INCLUDE ALL NECESSARY MATERIALS AND DEVICES REQUIRED FOR THE PROPER OPERATION. COORDINATE LOCATION OF THE HEADS WITH THE ARCHITECTURAL PLANS. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. THE INTENT OF THE PROJECT IS TO HAVE THE NEW SPRINKLER SYSTEM CONCEALED ABOVE THE LAY IN CEILING AND THE ELEVATIONS OF THE CEILING SHALL REMAIN. COORDINATE INSTALLATION WITH ALL EXISTING CONDITIONS AND ALL OTHER TRADES.
6. PLACEMENT OF THE SPRINKLER HEADS SHALL BE COORDINATED WITH THE EXISTING REFLECTED CEILING PLAN (LIGHT FIXTURES, DIFFUSERS, REGISTERS, FIRE ALARM, AUDIO VISUAL, ETC.) AS WELL AS ALL OTHER TRADES. ANY EXISTING DEVICES RELOCATED OR DISTURBED DURING INSTALLATION SHALL BE RESTORED TO PROPER SERVICE.
7. THE SPRINKLER CONTRACTOR SHALL SEEK THE APPROVAL OF THE LOCAL FIRE MARSHALL PRIOR TO INSTALLATION OF THE SPRINKLER SYSTEM.
8. CONTRACTOR SHALL PROVIDE OWNER WITH SPRINKLER APPROVAL DRAWINGS INDICATING THE LOCATION OF THE SPRINKLER HEADS. DRAWINGS WILL ALSO INDICATE ROUTING AND SIZES OF THE SPRINKLER MAINS. DRAWINGS SHALL BE PROVIDED IN THE LATEST AUTOCAD VERSION.



1 FLOOR PLAN (SECTION B) - NEW WORK  
FP102 SCALE: 1/8"=1'-0"



**CONSULTANTS:**

**CIVIL ENGINEER**  
CDA ENGINEERING, INC  
6 LARCH AVE, SUITE 401  
WILMINGTON, DE 19804  
P: (302) 998-9202 F: (302) 691-1314

**STRUCTURAL ENGINEER**  
BAKER INGRAM & ASSOCIATES  
1050 S. STATE STREET  
DOVER, DE 19901  
P: (302) 734-7400 F: (302) 734-7592

**MECHANICAL/PLUMBING ENGINEERS**  
DEDC, LLC  
315 SOUTH CHAPEL STREET  
NEWARK, DE 19711  
P: (302) 738-7172 F: (302) 738-7175

**ELECTRICAL ENGINEER**  
FAYDA ENGINEERING & ES, LLC  
801 W. NEWPORT PIKE  
WILMINGTON, DE 19804  
P: (302) 999-1060 F: (302) 999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION.  
© FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

Issued for Bid	03-11-15
1 - Addendum 2	03-23-15

**Fearn Clendaniel Architects**  
INC.  
6 Larch Avenue • Suite 399 • Wilmington, Delaware 19804  
Ph. 302-998-7615 • Fax. 302-998-7685  
www.fearnclendaniel.com

**PROJECT:**

SMRYNA ELEMENTARY SCHOOL  
RENOVATION & ADDITION  
121 SOUTH SCHOOL LANE  
SMYRNA, DE

**DRAWING TITLE:**  
FLOOR PLAN (SECTION B)  
FIRE PROTECTION

OWN. BY: DEDC	CHK. BY: PG	PROJECT NUMBER: 14P316
DATE: 03/16/2015	DRAWING NUMBER: <b>FP102</b>	
SCALE: AS NOTED		



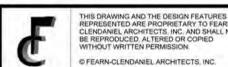
CONSULTANTS:

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: 302-998-9202 F: 302-691-1314

**STRUCTURAL ENGINEER**  
 BAKER, INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: 302-734-7400 F: 302-734-7592

**MECHANICAL/PLUMBING ENGINEER**  
 DEDC  
 315 S CHAPEL STREET  
 NEWARK, DE 19711  
 P: 302-738-7172 F: 302-738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: 302-999-1060 F: 302-999-1053



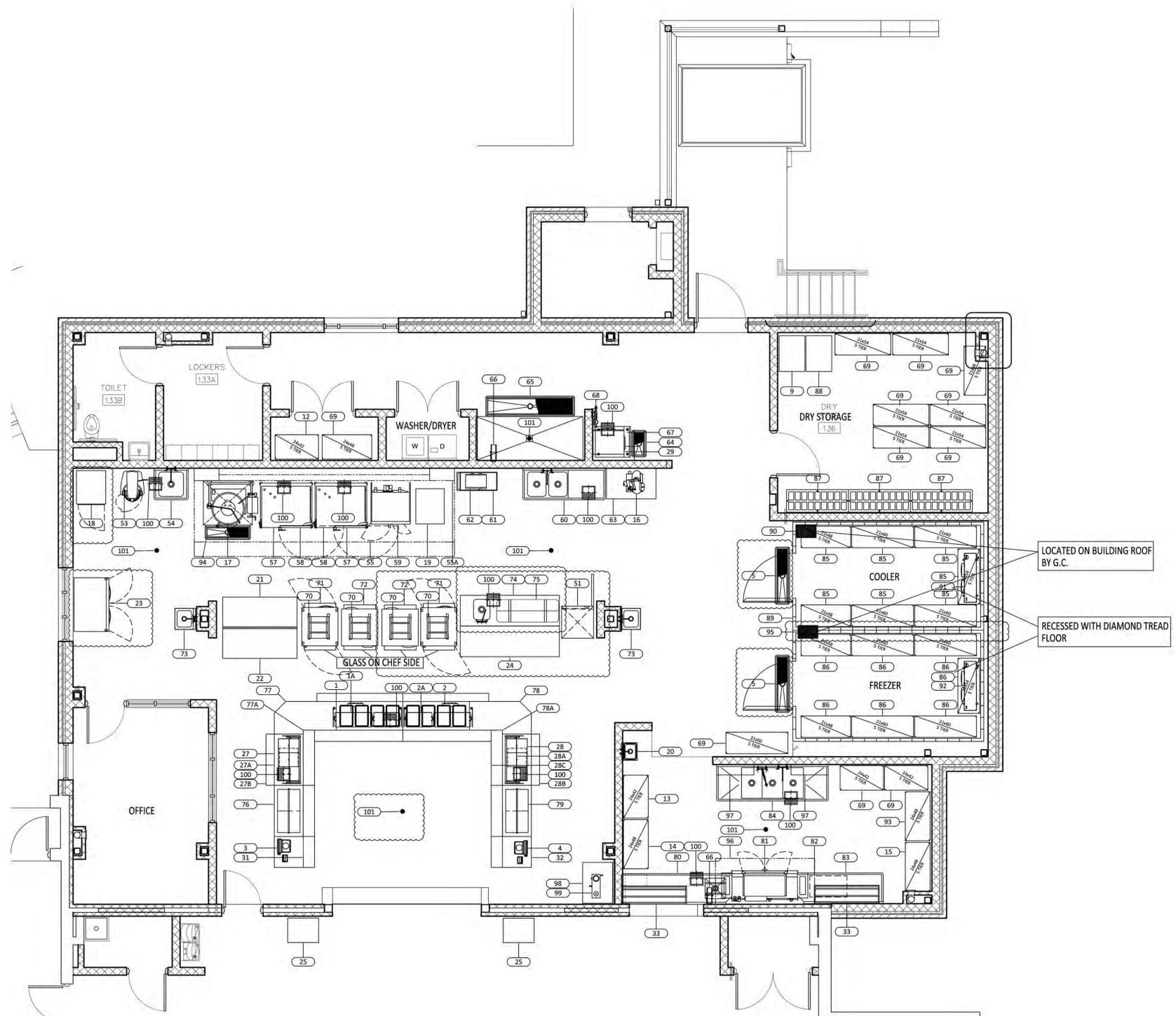
**ISSUE DATES:**  
 1 ISSUED FOR BID 03-11-2015  
 3 ADDENDUM 2 03-23-2015

**Fearn-Cleland Architects, Inc.**  
 6 Larch Avenue Suite 308 Wilmington, Delaware 19804  
 Ph: 302-998-7615 Fax: 302-998-7685  
 www.fearnclend.net

**PROJECT**  
 SMYRNA ELEMENTARY SCHOOL  
 ADDITION AND RENOVATIONS  
 121 South School Lane  
 Smyrna, DE 19977

**DRAWING TITLE:**  
 FOODSERVICE PLAN AND SCHEDULE  
 DWN BY: CHK BY: PROJ NUMBER: 14107A  
 DATE: 03-16-15 DRAWING NUMBER:  
 SCALE: FS-1

EQUIPMENT SCHEDULE			
ITEM NO.	QTY	DESCRIPTION	EQUIPMENT REMARKS
1	1	EXISTING DROP-IN, HOT WELLS	
1A	1	SNEEZE GAURD	
2	1	EXISTING DROP-IN, HOT WELLS	
2A	1	SNEEZE GAURD	
3	1	POS SYSTEM	
4	1	POS SYSTEM	
5	2	FLOOR TROUGH	
6	-	SPARE NUMBER	
7	-	SPARE NUMBER	
8	-	SPARE NUMBER	
9	1	EXISTING RACK, CAN	
10	-	SPARE NUMBER	
11	-	SPARE NUMBER	
12	1	EXISTING SHELF	
13	1	EXISTING SHELF	
14	1	EXISTING SHELF	
15	1	EXISTING SHELF	
16	1	EXISTING SLICER, FOOD	
17	1	KETTLE, STEAM JACKETED	
18	1	EXISTING CABINET, HOLDING/PROOFING	
19	1	EXISTING CABINET, COOK & HOLD	
20	1	EXISTING HAND SINK, WALL MOUNT	
21	1	EXISTING TABLE, WORK	
22	1	EXISTING TABLE, WORK	
23	1	EXISTING REACH-IN REFRIG	
24	1	EXISTING TABLE, WORK	
25	2	EXISTING SILVER-WARE DISPLAY	
26	-	SPARE NUMBER	
27	1	EXISTING 4 WELL COLD PAN	
27A	1	SNEEZE GAURD	
27B	1	COUNTER SIDE PANEL	
28	1	EXISTING 4 WELL COLD PAN	
28A	1	SNEEZE GAURD	
28B	1	NEW COUNTER SIDE PANEL	
28C	1	TRAYSLIDE	
29	1	ICE MAKER W/ BIN	
30	-	SPARE NUMBER	
31	1	POS COUNTER	
32	1	POS COUNTER	
33	2	GLASSRACK SHELF	
34-50	-	SPARE NUMBER	
51	1	BLAST CHILLER/ SHOCK FREEZER, ROLL-IN	
52	-	SPARE NUMBER	
53	1	MIXER, FLOOR	
54	1	UTILITY SINK	
55	1	EXHAUST HOOD	
55A	1	FLOOD TYPE FIRE SUPPRESSION SYSTEM	
56	1	UDS SYSTEM	
57	2	EQUIPMENT STAND	
58	2	OVEN-STEAMER, COMBINATION	
59	1	OVEN, CONVECTION, GAS	
60	1	WORK TABLE W/SINKS	
61	1	CART, UTILITY	
62	1	OVEN, MICROWAVE	
63	1	WORK TABLE	
64	1	FLOOR TROUGH	
65	1	FLOOR TROUGH	
66	2	HOSE REEL WITH GUN	
67	1	BIN, ICE	
68	1	FILTER SYSTEM, ICEMAKER	
69	11	SHELVING, WIRE	
70	4	RACK, PAN	
71	2	REFRIGERATOR, ROLL-THRU	
72	2	CABINET, HEATED, ROLL-THRU	
73	2	HAND SINK, WALL MOUNT	
74	1	WORK TABLES W/SINKS	
75	1	POT RACK, CEILING MOUNT	
76	1	MILK COOLER	
77	1	COUNTER FOR 90 DEGREE TURN	
77A	1	FLAT TOP SERVING COUNTER	
78	1	COUNTER FOR 90 DEGREE TURN	
78A	1	FLAT TOP SERVING COUNTER	
79	1	MILK COOLER	
80	1	SOILED DISHTABLE WITH TRAY SLIDES	
81	1	WAREWASHER, RACK CONVEYOR	
82	1	WATER HEATER, BOOSTER, GAS	
83	1	CLEAN DISHTABLE	
84	1	3 COMPARTMENT POT SINK	
85	7	SHELVING, WIRE	
86	7	SHELVING, WIRE	
87	3	RACK, DUNNAGE	
88	1	RACK, CAN	
89	1	WALK-IN COOLER/FREEZER	
90	1	CONDENSING UNIT, COOLER	
91	1	EVAPORATOR COIL, COOLER	
92	1	EVAPORATOR COIL, FREEZER	
93	1	MOBILE SHEET PAN DRYING RACK	
94	1	FLOOR TROUGH	
95	1	CONDENSING UNIT, FREEZER	
96	1	CONDENSATE HOOD	
97	2	SHELF, WALL MOUNT	
98	1	COFFEE COUNTER	
99	1	COFFEE MAKER, AUTOMATIC	
100	LOT	FLOOR SINK	
101	LOT	FLOOR DRAIN	





**CONSULTANTS:**

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: 302-998-9202 F: 302-691-1314

**STRUCTURAL ENGINEER**  
 BAKER, INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: 302-734-7400 F: 302-734-7592

**MECHANICAL/PLUMBING ENGINEER**  
 DEDC  
 315 S CHAPEL STREET  
 NEWARK, DE 19711  
 P: 302-738-7172 F: 302-738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: 302-999-1060 F: 302-999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN-CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION.  
 © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**

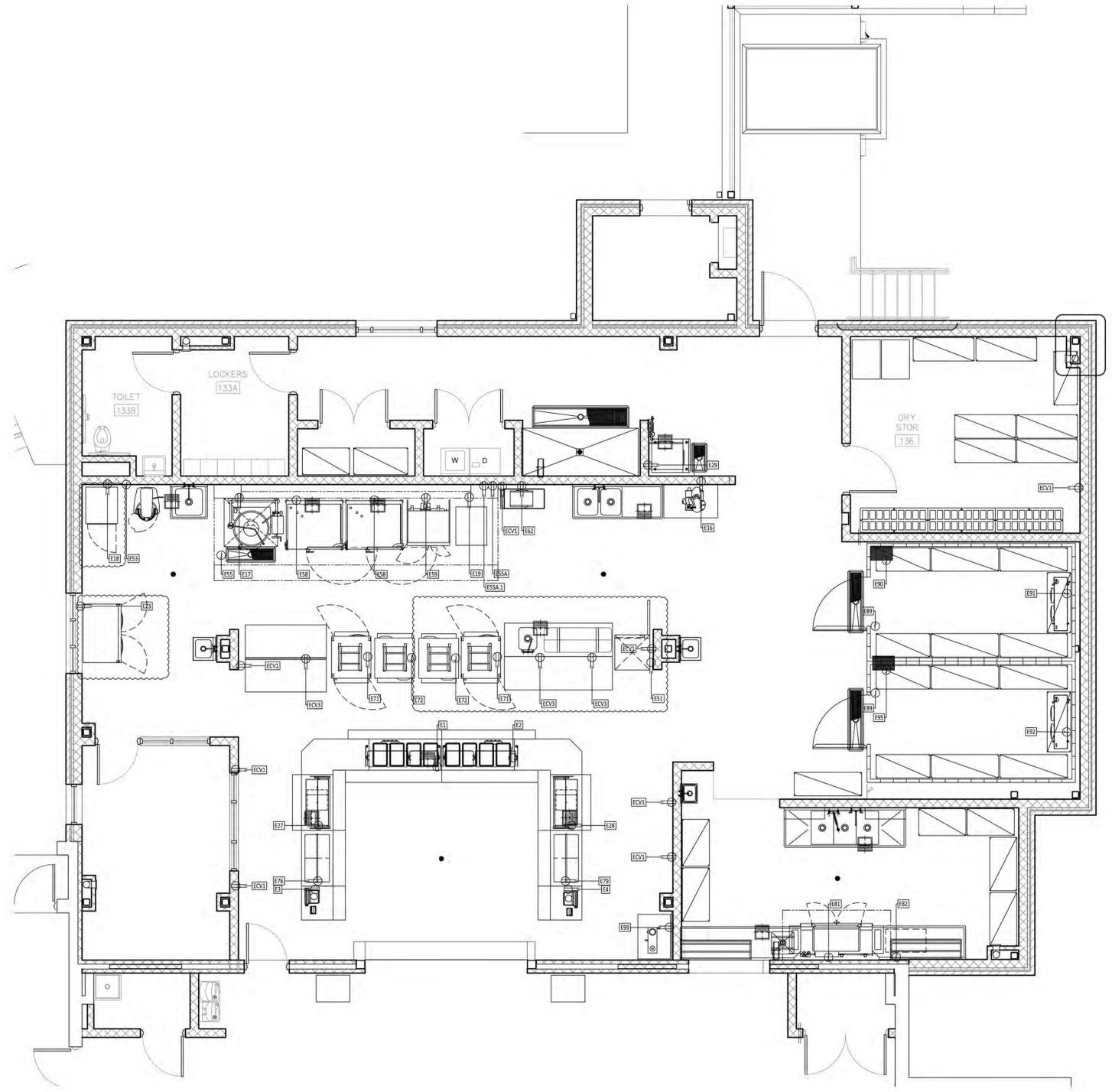
1	ISSUED FOR BID	03-11-2015
3	ADDENDUM 2	03-23-2015

**Fearn Clendaniel Architects**  
 INC.  
 6 Larch Avenue Suite 308 Wilmington, Delaware 19804  
 Ph: 302-998-7615 Fax: 302-998-7685  
 www.fearnclendaniel.com

**PROJECT**  
**SMYRNA ELEMENTARY SCHOOL**  
 ADDITION AND RENOVATIONS  
 121 South School Lane  
 Smyrna, DE 19977

**DRAWING TITLE:**  
**ELECTRICAL PLAN AND SCHEDULE**  
 DWN BY: CHK BY: PROJ. NUMBER: **14107A**  
 DATE: **03-16-15** DRAWING NUMBER:  
 SCALE: **FS-1.1**

ELECTRICAL SCHEDULE											
ITEM NO.	QTY	AMPS	HP	VOLTS	PHASE	DIRECT	PLUG	NEMA	ELECTRICAL AFF. (IN)	DESCRIPTION	ELECTRICAL REMARKS
E1	1	22.0		208	1	X		6-15P	36	EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY
E2	1	22.0		208	1	X		6-15P	36	EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY
E3	1	15.0		120	1	X		5-15P	24	POS SYSTEM	DATA LINE REQ.
E4	1	15.0		120	1	X		5-15P	6	POS SYSTEM	DATA LINE REQ.
E16	1	3.5		120	1	X		5-15P	54	EXISTING SLICER, FOOD	G.C. TO VERIFY
E17	1	10.0		120	1	X		5-15P		KETTLE, STEAM JACKETED	SERVICE FROM UDS
E18	1	16.7		120	1	X		5-20P	6	EXISTING CABINET, HOLDING/PROOFING	G.C. TO VERIFY
E19	1	24.0		208	1	X		6-30P		EXISTING CABINET, COOK & HOLD	G.C. TO VERIFY, SERVICE FROM UDS
E23	1	13.0	3/4	120	1	X		5-20P	48	EXISTING REACH-IN REFRIG	
E27	1	7.5	1/4	120	1	X		5-15P	30	EXISTING 4 WELL COLD PAN	G.C. TO VERIFY
E27A	1	5.0		120	1	X		5-15P	42	SNEEZEGAURD	
E28	1	7.5	1/4	120	1	X		5-15P	30	EXISTING 4 WELL COLD PAN	G.C. TO VERIFY
E28A	1	5.0		120	1	X		5-15P	42	SNEEZE GAURD	
E29	1	20.0		208-230	1	X			60	ICE MAKER W/ BIN	
E51	1	19.5	2-1/2	208	3	X		6-15P	80	REACH-IN, BLAST CHILLER/ FREEZER	
E53	1	9.3	1-1/2	208/240	1	X		6-15P	42	MIXER, FLOOR	
E55	1	2.7		120	1	X				EXHAUST HOOD	
E55A	1	80.0		120/208	3	X			DFA	UDS SYSTEM	
E55A.1	1	15.0		120	1	X			DFA	UDS SYSTEM FIRE/FUEL SHUT OFF	
E58	2	4.9		120	1	X				OVEN-STEAMER, COMBINATION	HARDWIRED, SERVICE FROM UDS
E59	1	6.0	3/4	120	1	X		5-15P		OVEN, CONVECTION, GAS	SERVICE FROM UDS
E62	1	15.3		240	1	X		6-20P	54	OVEN, MICROWAVE	
E71	2	11.8	1/2	120	1	X		5-15P	DFA	REFRIGERATOR, ROLL-THRU	
E72	2	6.3		208/230	1	X			DFA	CABINET, HEATED, ROLL-THRU	
E76	1	6.2	1/4	120	1	X		5-15P	24	MILK COOLER	
E79	1	6.2	1/4	120	1	X		5-15P	24	MILK COOLER	
E81	1	90.6		208	3	X			60	WAREWASHER, RACK CONVEYOR	
E82	1	3.0		120	1	X			12	WATER HEATER, BOOSTER, GAS	
E89	2	5.0		120	1	X			DFA	WALK-IN COOLER/FREEZER	
E90	1	9.2		208	1	X			STU	CONDENSING UNIT, COOLER	
E91	1	1.4		208-230	3	X			STU	EVAPORATOR COIL, COOLER	
E92	1	24.1		208-230	1	X			STU	EVAPORATOR COIL, FREEZER	
E95	1	10.3		208-230	3	X			STU	CONDENSING UNIT, FREEZER	
E99	1	20.0		120	1	X		5-15P	54	COFFEE MAKER, AUTOMATIC	
ECV1	LOT	15.0		120	1	X			24	CONVENIENCE OUTLET	
ECV2	LOT	15.0		120	1	X			54	CONVENIENCE OUTLET	
ECV3	LOT	15.0		120	1	X			STU	CONVENIENCE OUTLET	





CONSULTANTS:

**CIVIL ENGINEER**  
 CDA ENGINEERING, INC  
 6 LARCH AVE, SUITE 401  
 WILMINGTON, DE 19804  
 P: 302-998-9202 F: 302-691-1314

**STRUCTURAL ENGINEER**  
 BAKER, INGRAM & ASSOCIATES  
 1050 S. STATE STREET  
 DOVER, DE 19901  
 P: 302-734-7400 F: 302-734-7592

**MECHANICAL/PLUMBING ENGINEER**  
 DEDC  
 315 S CHAPEL STREET  
 NEWARK, DE 19711  
 P: 302-738-7172 F: 302-738-7175

**ELECTRICAL ENGINEER**  
 FAYDA ENGINEERING & ES, LLC  
 801 W. NEWPORT PIKE  
 WILMINGTON, DE 19804  
 P: 302-999-1060 F: 302-999-1053

THIS DRAWING AND THE DESIGN FEATURES REPRESENTED ARE PROPRIETARY TO FEARN, CLENDANIEL ARCHITECTS, INC. AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION.  
 © FEARN-CLENDANIEL ARCHITECTS, INC.

**ISSUE DATES:**  
 1 ISSUED FOR BID 03-11-2015  
 3 ADDENDUM 2 03-23-2015

**Fearn Clendaniel Architects, Inc.**  
 6 Larch Avenue Suite 308 Wilmington, Delaware 19804  
 Ph. 302-998-7615 Fax 302-998-7685  
 www.fearnclendaniel.com

**PROJECT**  
 SMYRNA ELEMENTARY SCHOOL  
 ADDITION AND RENOVATIONS  
 121 South School Lane  
 Smyrna, DE 19977

**DRAWING TITLE:**  
 PLUMBING PLAN AND SCHEDULE  
 DWN BY: CHK BY: PROJ NUMBER: 14107A  
 DATE: 03-16-15 DRAWING NUMBER:  
 SCALE: FS-1.2

PLUMBING SCHEDULE												
ITEM NO.	QTY	COLD WATER SIZE (IN)	HOT WATER SIZE (IN)	WATER ROUGH-IN HEIGHT AFF (IN)	INDIR DRAIN SIZE (IN)	DIRECT DRAIN SIZE (IN)	DRAIN ROUGH-IN HEIGHT AFF (IN)	GAS SIZE (IN)	MBTU/H	GAS ROUGH-IN HEIGHT AFF (IN)	DESCRIPTION	PLUMBING REMARKS
P1	1				1						EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY
P2	1				1						EXISTING DROP-IN, HOT WELLS	G.C. TO VERIFY
P17	1	1/2	1/2					3/4	140		KETTLE, STEAM JACKETED	SERVICE FROM UDS
P17A	1											SERVICE FROM UDS
P20	1	1/2	1/2	18							EXISTING HAND SINK, WALL MOUNT	G.C. TO VERIFY
P20A	1											G.C. TO VERIFY
P27	1				1		1-1/2	18			EXISTING 4 WELL COLD PAN	G.C. TO VERIFY
P28	1				1						EXISTING 4 WELL COLD PAN	G.C. TO VERIFY
P29	1	3/4		64							ICE MAKER W/ BIN	INTERCONNECT WITH FILTER, G.C. TO VERIFY
P29A	1				3/4							
P51	1				1						REACH-IN, BLAST CHILLER/ FREEZER	
P54	1	1/2	1/2	18							UTILITY SINK	
P54A	1				1-1/2							
P55A	1	1	3/4	DFA								
P55A.1	1							1-1/2	351.4	DFA		
P58	2	3/4									OVEN-STEAMER, COMBINATION	SERVICE FROM UDS
P58A	2	3/4										SERVICE FROM UDS
P58B	2				2							SERVICE FROM UDS
P58C	2							3/4	75.7			SERVICE FROM UDS
P59	1							3/4	60		OVEN, CONVECTION, GAS	SERVICE FROM UDS
P60	1	1/2	1/2	18							WORK TABLE W/SINKS	EXTEND PIPE TO FS
P60A	1				1-1/2							
P64	1					4	FLR				FLOOR TROUGH	
P65	1					4	FLR				FLOOR TROUGH	
P66	2	1/2	1/2	64							HOSE REEL WITH GUN	
P67	1				1						BIN, ICE DISPENSING	
P68	1	3/4		64							FILTER SYSTEM, ICEMAKER	
P73	2	1/2	1/2	18							HAND SINK, WALL MOUNT	
P73A	2				1-1/2	18						
P74	1	1/2	1/2	18							WORK TABLES W/SINKS	
P74A	1				1-1/2							
P80	1	1/2	1/2	18							SOILED DISHTABLE	
P80A	1				1-1/2							
P81	1	1/2	1/2	66							WAREWASHER, RACK CONVEYOR	
P81A	1				2							
P82	1		3/4	12							WATER HEATER, BOOSTER, GAS	
P82A	1							3/4	195			
P84	1	1/2	1/2	18							3 COMPARTMENT POT SINK	
P84A	1				1-1/2							
P91	1										EVAPORATOR COIL, COOLER	PC TO COORDINATE
P92	1										EVAPORATOR COIL, FREEZER	PC TO COORDINATE
P94	1					3	FLR				FLOOR TROUGH	
P96	1				1						CONDENSATE HOOD	
P99	1	1/2		36							COFFEE MAKER, AUTOMATIC	
P100	LOT					4	FLR				FLOOR SINK	
P101	LOT					3	FLR				FLOOR DRAIN	

