Feasibility Study
MEMORIAL BOULEVARD SCHOOL
Bristol, CT

Drummey Rosane Anderson, Inc.
South Windsor, CT

March 15, 2015

D·R·A

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

D·R·A

Drummey Rosane Anderson Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning
Architecture
Interior Design
e-mail:
website:

860-644-8300 PHONE
860-644-8301 FAX
info@draws.com
www.DRAarchitects.com

EXECUTIVE SUMMARY

DRA was selected by the City of Bristol in November 2014 through a competitive service procurement process. The purpose was to engage a professional design firm to perform a study of the existing conditions and prepare a conceptual design for the adaptive reuse of the existing Memorial Boulevard School.

The school was built in 1921 as the high school and later served as the middle school until 2011 when the Board of Education vacated the building and moved to the new K-8 school. There is a 900+ seat theater in the building that will act as the centerpiece for the multi-use facility. The building has also received Historic Designation.

Structurally, the building is in sound condition. The interior finishes, plumbing/HVAC/electrical systems, however, have lived their useful lives and are in need of replacement or major renovations. Numerous code violations are also present and will require corrections. The site lacks space for parking to satisfy current zoning regulations. However, we have been led to believe by the City Regulatory official that it will not be an impediment in the development of this project.

We utilized all available drawings, reports and past studies to construct an initial picture of the existing conditions. The Design Team then did a thorough field investigation of the building and site using visual observation to enhance the initial picture. The scope of our services did not include any destructive testing or evaluation of hidden conditions. This report contains information from prior reports and studies that are still relevant.

We met with the Planning, Building and Fire Officials to make them aware of the scope of the study and obtain any preliminary feedback from them. They all seem to be very familiar with the building and indicated that the building needs to comply with new codes for the new uses before any occupancy can take place.

We worked closely with the Task Force and the Theater Group during the Programming and Conceptual Design Phases to ensure that broad goals and objectives of the project were always front and center. Major components of the conceptual design are new ADA compliant entrance, a twin elevator tower serving all levels, new cafeteria and interior renovations.

Once the design was complete, we used the services of a professional cost estimator to come up with an "order of magnitude" cost as required by the RFP.

The draft report was presented to the Task Force for their review and comments. Once all feedback was received, the report was finalized.

It is our professional opinion that the building is in excellent structural condition. Furthermore, we endorse the idea of the theater as a centerpiece of this development complimented by other uses in the remaining areas of the building. Once developed fully, this project could become the catalyst for other development and is most likely to bring a demographic change that is crucial for the advancement of cities like Bristol. It has worked elsewhere in the country and there is no reason that if implemented properly it cannot do the same for Bristol.

2. PROJECT UNDERSTANDING

D·R·A

Drummey Rosane Anderson Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning
Architecture
Interior Design
860-644-8300 PHONE
860-644-8301 FAX
e-mail: info@draws.com
website: www.DRAarchitects.com

PROJECT UNDERSTANDING

The RFP 2P15-022 issued by the City of Bristol clearly defines the project scope as ". . . a study of the existing conditions at Memorial Boulevard School. The intent of the study is to identify upgrades required to meet the needs of various uses being considered for the building. Upgrades will include both those mandated (e.g. municipal ordinance, regulations, state law, federal law), as well as those required by other factors (e.g. life expectancy or observed conditions). "

We believe that the RFP was generated after the Task Force was created in response to the recommendations made by the Planning Commission in a letter dated March 28, 2014 to the Mayor at the time. The following is a summary of the recommendations:

1. Retain ownership of MBS
2. Create a Task Force to study the project
3. Consider using MBS for a multipurpose facility
4. Initiate the process for inclusion in the National/CT Register of Historic Places

As a result of the above recommendations, the City created the Task Force and eventually issued the RFP to do a feasibility study as the first step. The RFP outlined clearly the scope of work so that the professional design firms can respond accordingly. The following is what is included in the RFP as the scope of work:

1. Observed code deficiencies based on potential future mixed use
2. Observed system conditions
3. Adequacy and appropriateness of existing systems
4. Life expectancy of the existing systems
5. Recommendations
6. Order of magnitude cost

The RFP goes on to say that the selected firm will evaluate existing available data, and if determined that the data is useful, will develop cost data and other output to upgrade existing electrical, mechanical, plumbing, fire protection, and structural systems for the intended new uses. The City of Bristol made available the following data:

1. Environmental Assessment Report (2008)
2. Theater Feasibility Study by Schoenhardt Architect (2008)
3. *Space Needs Analysis by DRA (2011)*
4. Utility Consumption Data June 2009 Through December 2011
5. Recommendations from Planning Commission (2014)

The data/information listed above provides a wealth of information, a good portion of which is still pertinent and useful. The existing conditions information is somewhat pertinent, although the codes have changed since these studies were done. The energy usage information is pertinent, however the cost figures are obsolete. The 2011 DRA Study of the evaluation of the city wide study of municipal buildings in Bristol, CT included Memorial Boulevard School. This has given us a good foundation for further evaluation of the existing conditions and systems.

It is also important to confirm our understanding about the scope of services expected. The RFP once again clearly lists the following in paragraph 1.3 SCOPE OF SERVICES:

1. Review existing materials and completed studies.
2. Review and observe existing conditions for electrical, mechanical, plumbing, and fire protection Systems.
3. Identify fire code and building code deficiencies.
4. Review the adequacy and appropriateness of existing systems.
5. Review the life expectancy of existing systems.
6. Inventory existing structural and envelope components.
7. Evaluate the structural integrity of the building as a whole in accordance with the most recent applicable building/structural design codes.
8. Prepare a draft report outlining findings and providing recommendations, inclusive of order of magnitude costs.
9. Attend various meetings, workshops, etc. to present study findings, inclusive of presentations to the City Council Building Committee and to the Memorial Boulevard School Task Force.
10. Prepare final report, incorporating comments and/or corrections (provided in digital format as well as six printed/bound copies).

It is our understanding that the pool which has been covered over will remain as is for the purpose of this study. However, if at some future date the need develops for the pool, it is feasible to uncover and refurbish it for use as a swimming pool. Conversely, it is our understanding that for the existing theater to attract various groups and variety of performances, the stage will need expansion, an orchestra pit to be built and a new sound booth installed in the appropriate locations.

It is also evident from existing reports, meeting minutes and other published information that besides the theater as the center piece, the rest of the building can be adapted to many different and varied uses. Furthermore there are at least 23 uses that are allowed under the current regulation in this zone.

The following is a partial listing of possible uses that has been discussed at length by the Task Force and other interested groups:

1. Business Incubator
2. Youth Services/Veterans/NGO Offices
3. Adult Education
4. Artist Studios
5. Satellite Museum
6. Parks Department or any other City Department(s)
7. Day Care
8. Fitness Center/Jogging Track
9. Indoor Gymnasium/Play Areas
10. Dance Studio
11. Adult Education
12. Pub/Cafe/Restaurant
13. Extension of Proposed Development by Renaissance Group

The original goal was to have the study completed by the end of February 2015. Despite all efforts by the Committee and the Architect, the study draft report was not completed until 02/12/2015. The Committee performed their due diligence and asked DRA to provide a concept of a "phased" approach. We worked with the Committee and provided them with this information by early March 2015.

3. APPROACH METHODOLOGY

D·R·A

Drummey Rosane Anderson Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning
Architecture
Interior Design
e-mail:
website:

860-644-8300 PHONE
860-644-8301 FAX
info@draws.com
www.DRAarchitects.com

APPROACH METHODOLOGY

Our approach was based on becoming familiar with the major goals and objectives of the project. We also wanted to make sure that we understood what the city expected as the outcome of this study. We therefore embarked upon a series of meetings with entities such as The Task Force, Public Works, Planning, Building and Fire Safety Departments. We also reached out to individuals such as Roger Rousseau, John Smith and Peter Fusco who provided us valuable information.

We started field investigations and meetings with the various entities concurrently. We wanted to ensure that local Regulatory Agencies were brought into the loop early on. We met with the Planning, Building, Fire and Public Works Department heads to discuss the project goals/objectives and to ask them about their understanding of approvals and compliance that will be needed if the project were to go into design, permitting and construction phases. The following in an outline of the talking points and the feedback from the department heads.

November 25, 2014

MEMORANDUM: MEMORIAL BOULEVARD SCHOOL

I had asked Roger Rousseau to arrange a meeting with the Public Works, Planning, Building and the Fire Departments to go over issues pertinent to this project. I met with the following people on 11/24/2014 at the Purchasing Department Conference Room:

Alan L. Weiner	City Planner
Walter Vescik	Director Public Works
Guy B. Morin	Chief Building Official
Robert Grimaldi	Fire Marshal

I had prepared a list of talking points for each department, which was presented at the meeting. We had a productive meeting with open and frank discussions. My talking points are listed below in black fonts and a summary of the discussion items in the meeting is listed in red fonts.

Planning Issues:

1. The building has 105,000 sq. ft. + - including the theater with approximately 900+ seats. What is the expectation for onsite parking for zoning compliance? The site can hold approximately 80 parking spaces. Once the proposed uses, besides the theater use, is better defined, one option may be to seek zoning variance. He feels that he cannot envision a scenario where the Planning Commission may not approve the project for not being able to meet current parking regulations. He feels that Planning Department and the Commission will look at this project from a practical standpoint. The theater was always there so was the school and the parking worked.

2. What is the nature of understanding for parking arrangements with the industrial building next door? He is not aware of any. However, if there is a verbal agreement, it should be formalized in writing with terms and conditions defined.

3. Will street parking be factored into zoning compliance? No.

4. For the purpose of this project, which is a "Study" only, what is the expectation for site design, permitting and approvals? None for the study phase.

5. Should this project go for 8-24 approval during the study phase? No

6. What can the City provide in terms of existing site survey, utility information and drawings? He asked us to check with other City Departments.

7. Can you think of any other issues that need to be addressed as part of this project? Once the proposed uses are better defined, the Planning Commission might consider changes to the zoning regulations to allow such uses if they are not currently allowed. Other possible scenario might be to change the Zone from R-40 to something else that is more compatible with the proposed building use.

Building Code Issues:

1. Since this is a building owned by the City, can you confirm if compliance with 2010 Standards for State and Local Government Facilities Tile II will be required? Current codes do not require compliance with Title II. However, new codes are around the corner which may require such compliance. Since this project might not be built for a while, he recommends being proactive in terms of code compliance.

2. The last use was "Educational-E". The new uses will be "Assembly-A1" for the theater and most probably will be "Business-B" for the various other uses to be determined. Please confirm if this scenario will be considered "Change of Use". If so, please also confirm if full compliance with applicable current Building Codes will be required? Yes; including but limited to compliance with the Energy Code. Existing elevator does not comply with codes and most probably will not be certified by the State Elevator Inspection and Licensing Office. Their recommendation is not to waste money on refurbishing this elevator.

3. If it is "Change of Use", will a new F.A. System complying with current codes will be required. Depending on if and when the new codes become effective.

4. The 2008 Study by Schoenhardt indicated the Construction Classification as II-A. Please confirm. Agreed that II-A will be acceptable.

5. Will a platform lift be acceptable for stage accessibility from the auditorium? Depending on if and when the new codes become effective.

6. Can you think of any other issues that need to be addressed as part of this project? Be proactive and make an attempt to comply with codes that might become effective in the near future. Keep the Building Department in the loop. They will be willing to look at preliminary designs and offer comments when the time comes.

Fire Safety Code Issues:

1. Does the City have documentation to demonstrate that the existing sprinkler system meets current codes? The system was tested periodically and met requirements of the current code. Will look for any documentation.

2. Is there a "Voice Evacuation" system in the theater? If yes, Does the City have documentations to demonstrate that the existing sprinkler system meets current codes? If not, we assume a new one will be required. There is none. One will be required.

3. There is a 45-K emergency generator which serves the boiler room equipment only and is in poor condition. Will a new one be required for code compliance? Yes

4. Can you think of any other issues that need to be addressed as part of this project? Keep the Fire Department in the loop. They will be willing to look at preliminary designs and offer comments when the time comes.

The Regulatory officials collectively conveyed one message "We feel that the project is feasible. Come back to us when you go to the next phase and have more detailed drawings. Do not attempt temporary use of the place."

Next we met with the "working group" from the Task Force to inform them of the message from the Regulator Officials, get their understanding of the project goals and objectives and to outline a road map for project completion. The following time line was presented to the Task Force

Project Timeline:

11/5/2014	Introduction of DRA to Memorial Boulevard Task Force
11/12/2014	Field checking existing conditions by DRA
11/13/2014	Owner-Architect Agreement Received
11/17/2014	Request by DRA sent out to Bristol to locate available drawings of existing building
11/20/2014	Field checking existing conditions by DRA
11/24/2014	Meeting with City Planner, Building Official, Fire Marshal and Director of Public Works
11/25/2014	Meeting memorandum sent out
12/12/2014	Field checking existing conditions by DRA
12/12/2014	Design Review meeting with Task Force Members

12/30/2014 Design Review Meeting with the Theater Group

2/12/2015 Draft Report Presentation to the Task Force Working Group

2/12/2015 Draft Report Presentation to the entire Task Force

2/29/2015 Report Completion

Development of Conceptual Design then ensued. We found a location on the outside of the southeast corner of the building that will serve as an ideal location for a new elevator shaft and elevator lobbies that will serve all levels in the theater as well as the school sides of the existing building. The proposed cafeteria/outdoor eatery attached to the elevator lobby on the main level was conceived to provide the building a new highly visible well-defined main entrance and also to create a destination for the community when the theater is not in use. Food is a great common denominator and a great equalizer.

Other major renovations include stage expansion in the front and creation of an orchestra enclosure, sound booth, ticket office, intermission lounges, new/renovated toilet facilities and rentable modules of varying sizes. Site improvements include new walks, landscaped paved parking, a new drive to the main entrance, new site lighting and other related improvements.

Since the building has received historic designation, we had to be cognizant of the style and architecture of the new elevator/cafeteria addition. We opted for a transparent glass enclosure that allows a filtered view of the existing building behind the addition. The ethereal nature of the addition blends with and at the same time, respects the historic nature of its backdrop. In order to provide a subtle connection between the new and the existing, we chose to match the proportion of the existing window mullions and color of the existing accent bands with the new aluminum glass framing system of the elevator enclosure.

The building exterior is in great condition. All exterior doors and windows are energy efficient type and the roof was replaced a few years ago.

Since the building will be going through a "Use Change" as defined by code, the entire building will be upgraded to comply with current codes. All existing MEP systems have lived their useful lives and will need major overhaul to comply with codes and to be compatible with new uses. Complete MEP evaluation and recommendations are included in another section of this Report.

4. EXISTING CONDITIONS OVERVIEW

D·R·A

Drummey Rosane Anderson Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning
Architecture
Interior Design
e-mail:
website:

860-644-8300 PHONE
860-644-8301 FAX
info@draws.com
www.DRAarchitects.com

EXISTING CONDITIONS OVERVIEW

GENERAL:

The building was constructed in 1921 as Bristol High School in a joint venture between the City of Bristol and Alfred F. Rockwell, president and founder of New Departure Manufacturing Company. Mr. Rockwell provided the land and 50% of the construction cost. The Architect, Wilson Potter, designed the school in Classical Revival style. The story goes that he actually took two years off from work and performed the duties of Clerk-of-Works during construction.

Subsequently the building served as the Memorial Boulevard Middle School until 2011 when the middle school was moved to the newly built school. The building has been empty since then except for being utilized for one or two special events.

SITE:

The building is located on a parcel of land comprising approximately 7.5 acres at 120 Memorial Boulevard and is located in Zone R-40 Single Family Residential Zone. There are approximately 23 uses allowed under Special Permit Uses. The number of parking spaces required for the Theater and other proposed uses will not fit on the site. However, the City Planner has indicated that his office and the Commission are not likely to turn the project down due to lack of parking. The City has an informal agreement with the Barnes Group, Inc. for 61 parking spaces on the industrial property next door.

The walks and pavements are in fair to poor condition. The new site design includes removal of steps on the east side of the building, re-grading the area to provide a new one-way drive to the new main entrance, which will be located in the existing courtyard adjacent to the theater. The new ADA compliant entrance, drop-off/pick-up and new parking areas will be located adjacent to the main entrance. The remaining site will be re-designed with new parking, drives and sidewalks. A new loading area for stage equipment will be created on the west side. A landscaped earth berm along Memorial Boulevard will provide a visual buffer. New site landscaping, directional signs and lighting will be added to complement the new site layout.

BUILDING EXTERIOR:

Bricks and mortar joints are in excellent condition. Cast stone trims and bands have suffered some damage in certain areas and will require repairs. Cast stone porticos on the north and east side of the building will require replacement and/or reconstruction of deteriorated segments. Some exterior steps will require replacement to comply with codes. The repairs and replacement must follow specific guidelines for historical buildings. Windows and doors were replaced with aluminum frame windows and doors with insulated glazing units and are in good condition. Many sections of exterior railings and fences are rusting and will require repairs and/or replacement.

ROOF:

The City of Bristol completed a roof replacement project in 2008. It is our understanding that the roof has a 20-Year warranty. Therefore, no new roofing work is included in this Study.

INTERIOR:

Smooth bricks in corridors, glazed bricks in the toilet areas and floor tiles are in good condition. However, in areas where new ADA compliant toilet facilities will be located, the floor tiles will need to be removed and replaced with new. The existing original linoleum flooring in the theater and other areas have lived their useful lives and will require replacement. Other existing floor finishes in corridors, classrooms and other areas will also require removal and replacement. Plaster walls and ceiling in the theater suffered damage from water migration before the roof was replaced and will require patching/repair. The Report prepared by Schoenhardt indicates that the original stencil work on walls could be exposed by careful removal of layers of paint applied over the years. We recommend that before the theater walls are painted again, the cost benefit option of restoring the original stencil work be evaluated. The seats in the theater are in fair condition and can be replaced at a later date with more comfortable seats.

The wood trims and door frames are in good condition and can be restored to their original glory by proper refinishing. Some wood doors can be saved by repairing, refinishing and installing new ADA complaint hardware. However, it is our recommendation that to make the rental spaces more desirable, all doors in the rental areas be replaced with wood or fiberglass panel doors with new ADA compliant hardware. We also recommend that new suspended acoustical ceilings be installed in all areas with the exception of the theater, stage and mechanical spaces. Plaster walls will need repairs and painting.

Lockers from the corridors, lab equipment, food service equipment, toilet compartments and any window treatments are not compatible with the proposed uses and will need to be removed. New toilet compartments and ADA compliant signage will be installed.

See the following pages in this section for evaluation of existing plumbing, HVAC, electrical, sprinkler and other building systems and recommendations for replacement.

Mechanical, Electrical, Plumbing and Fire Protection Systems Existing Conditions and Recommended Systems Report

January 29, 2015

Memorial Boulevard School
Bristol, CT 06010

Prepared for:

Drummey Rosane Anderson, Inc.
225 Oakland Road, Studio 205
South Windsor, CT 06074

Prepared by:

Consulting Engineering Services, Inc.
811 Middle Street
Middletown, Connecticut, 06457
CES PN 2014391.00

EXECUTIVE SUMMARY

Consulting Engineering Services has been retained by Drummey Rosane Anderson, Inc. to provide a study for evaluating the existing mechanical, electrical, plumbing and fire protection systems at Memorial Boulevard School and provide recommendations for MEP system improvements in order to convert the building to rentable office space. The Memorial Boulevard School was constructed in 1921 and is approximately 106,000 square feet (70,000 net square feet). The building includes a auditorium/theater, with approximate seating capacity for 900; the City has expressed interest in its continuous operation for community activities. Heating in the building is via #2 oil. Air conditioning exists in the media center and theater but is well past its useful life. This study includes recommendations for Heating, Ventilation and Cooling, Plumbing, Fire Protection and Electrical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical, electrical, plumbing, and fire protection systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

A. 2005 Connecticut State Building Code and Amendments

B. 2005 Connecticut State Fire Safety Code

C. 2003 International Building Code(IBC)

D. 2003 International Plumbing Code

E. 2009 International Energy Conservation Code

F. NFPA, All applicable code sections, Latest Version

G. ASHRAE 90.1

PLUMBING NARRATIVE

PLUMBING UTILITIES – EXISTING SYSTEMS

1. Domestic Water:
   a. Existing Domestic Water Service:The existing domestic water service location and equipment could not be determined during the site walk-thru.

2. Natural Gas:
   a. Existing Natural Gas Service:The existing natural gas service enters the building in the tunnels below the school adjacent to the fire protection water service. There is an indoor meter assembly with shut-off valves. This natural gas service feeds the kitchen appliances and the emergency generator.

3. Sanitary:
   a. Existing Sanitary Service: The sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the building. The piping material above grade is primarily cast iron. The plumbing fixtures drain to buried sanitary waste piping to the buildings exterior and to the municipal sewer system.

4. Storm:

   a. The storm piping is roof drains, secondary roof drains, and downspouts that drain to an underground piping system and drains to a storm water pump station located in an adjacent building at the playfields. Storm water is then pumped to the municipal storm water system. The piping is in fair condition. The storm water pumps and equipment is in poor condition.

   b. Problems with the storm drainage system were reported in the areas of the light wells. There are storm drains in each light well. In the recent storms, storm water has come up thru these storm drains flooding these light wells causing water to enter the building. Maintenance staff has added sump pumps to help pump out the water at these locations.

PLUMBING FIXTURES AND SPECIALTIES

1. Existing plumbing fixtures are as follows:

   - Water closets are wall and floor mounted vitreous china with flush valves. Most of the fixtures are original to the facility in fair condition. The fixtures are non-water conserving type and non-ADA compliant.

   - Urinals are wall hung, vitreous china, with flush valves. The fixtures are original to the facility in fair condition. The original fixtures are non-water conserving type and non-ADA compliant.

   - Lavatories are wall hung vitreous china with two twist or metered style faucets. The fixtures are mainly original to the facility in fair condition. The fixtures are non-water conserving type and the faucets and drains are non-ADA compliant.

- Drinking fountains are wall mounted stainless steel units in fair condition. One of the single units may be ADA compliant with respect to controls however there are other units that do not have ADA compliant controls. In addition, the receptacles serving these drinking fountains are not GFCI protected.



- Stainless steel sinks with two lever type faucets are present in various areas of the facility. These sinks are non-ADA compliant and in fair condition.


- Classroom sinks consist of pedestal mounted fiberglass units with two-lever faucets. These sinks are in good condition but are not ADA compliant. In the Tech Lab, there is also a wash fountain that is in fair condition.

- Janitor sinks are a combination of wall mounted cast iron units with two lever faucets or floor mounted fiberglass units with two lever faucets. Some of these sinks have vacuum breakers. The cast iron sinks are original to the building and in poor condition.

- There are existing showers located in the locker rooms. There is also a single shower in the Custodian Area. This equipment is original to the facility, in poor condition, and non-ADA complaint.

- There is a central vacuum system at the school. This system is operational, however due to leaks in the system the system does not perform as it should. This system is original to the building and in poor condition.

- The Kitchen has a local grease interceptor manufactured by Big Dipper. This equipment is in good condition. There is an original grease trap that once served a dishwashing area that has been abandoned.

- There are emergency eyewash and shower unit located in the lower level that was used when the pool was operational. This unit is in good condition.

- There are emergency eyewash units located at some sinks in the classroom areas. These units drain directly into the adjacent sinks. These units are in good condition.

DOMESTIC HOT WATER SYSTEMS

1. The existing domestic hot water system includes a Burnham Model FD2LLVOT low pressure hot water boiler with a Beckett CF800 Burner. This boiler provides water to a 1000 gallon domestic water storage tank. The boiler, burner, and storage tank are in good condition. The recirculation pump at the storage tank is in poor condition.

2. At (1) sink in one of the classrooms there is an instantaneous electrical water heater installed to serve that particular sink. This water heater is in good condition.

RECOMMENDED PLUMBING SYSTEMS

1. Install new domestic cold water, hot water and hot water recirculating piping throughout the building to serve all new plumbing fixtures. All hot water and hot water recirculating piping shall be insulated to comply with the International Energy Conservation Code.
2. Replace existing oil fired domestic water heater with new high efficiency condensing type gas fired domestic hot water heaters to provide hot water for all new plumbing fixtures. The hot water distribution system shall be 110°F water to serve the building plumbing fixtures and 140°F water to serve the kitchen. The water in the storage tanks will be stored at 140°F. An automatic High/Low tempering valve, by Leonard or approved equal, will reduce the water temperature to 110°F for the building piping. Hot water recirculation pumps shall be installed to maintain the appropriate temperatures in the domestic hot water distribution system. The pump shall be controlled by the building management system (BMS) to minimize energy consumption. Hot water recirculation piping shall be brought to all lavatory, sink and shower locations.
3. Install a new system of sanitary, waste, and vent piping for all new plumbing fixtures. Kitchen plumbing fixtures which could discharge any fats, oil or grease into the building drainage system shall be piped separately to a grease trap/interceptor in compliance with Connecticut DEP requirements.
4. All plumbing fixtures shall be replaced. All plumbing fixtures required to be accessible shall be in accordance with the Americans with Disabilities Act (ADA), 504 and UFAS standards.
    a. Water closets and urinals shall be wall hung, vitreous china, low consumption (0.125 gallon per flush urinals and high efficiency 1.28 gallon per flush water closets), by American Standard or approved equal. Flush valves shall be battery operated, by Sloan or approved equal.
    b. Lavatories shall be countertop type, vitreous china, by American Standard or approved equal. Faucets shall be low consumption battery operated, by Symmons or approved equal.
    c. Wall hangers for water closets, urinals, and lavatories shall be heavy duty adjustable height type installed within chase spaces provided behind fixtures, by J.R. Smith or approved equal.
    d. Drinking fountains shall be stainless steel, two-tier, ADA style, vandal resistant manufactured by Elkay or approved equal.
    e. Mop basins shall be floor mounted, 24”x24”, molded stone, with wall mounted faucet & trim, by Fiat or approved equal.

f. Cast iron floor drains shall be installed at all gang toilet rooms. Heavy-duty cast iron floor drains shall be installed in all mechanical rooms. Floor drains shall be by J.R. Smith or approved equal. Trap primers shall be provided for floor drains.

g. Hose bibs shall be installed in all group toilet rooms, by Woodford or approved equal.

h. Wall Hydrants shall be installed on exterior walls every 100 feet. Wall hydrants shall be non-freeze type by Woodford or approved equal.

5. Replace existing gas meter with a new gas meter and pressure regulator sized to provide the new total connected load and pressure requirements for the building equipment. New piping within the building will be installed to supply gas to the new hot water heating boilers, new domestic water heaters, kitchen make-up air unit and kitchen cooking equipment.

FIRE PROTECTION NARRATIVE

FIRE PROTECTION SERVICE

1. The building is served by a 4" fire protection service fed from a fire main in Summit Street. The original fire protection service only fed the stage area of the Auditorium. The fire service was upgraded to include sprinklers throughout most of the building with the exception of the renovated pool area. Sprinklers were not provided throughout the pool area when it was renovated. The fire service includes a shut-off valve and Watts Model 909 reduced pressure backflow preventer. This fire service equipment has been recently installed; the sprinkler piping and sprinkler heads are an older installation, more than 30 years old.

2. The fire protection system includes (2) antifreeze systems where antifreeze is added to the sprinkler piping to avoid freezing of the piping. This equipment is in good condition.

3. There are hose cabinets and standpipes located on the stage. This equipment is in good condition.

4. There are original hose cabinets located within the building that have been abandoned. It appears that these hose cabinets have been disconnected as there is no valve in the cabinets.

RECOMMENDED FIRE PROTECTION SYSTEMS

1. Replace existing 4" fire protection water service with new 8" fire protection water service from main in street to building sprinkler room. New service shall supply both the new wet pipe sprinkler system and new manual-wet fire standpipe system.
2. Provide new manual-wet fire standpipe system in accordance with NFPA 14 "Installation of Standpipes and Hose Systems" in all exit stairways. Standpipe system shall be a Class I system with 2½" hose connections located on the intermediate landing between floor levels in every required exit stairway.
3. Provide modifications to the existing fire protection system, in accordance to NFPA 13, "Installation of Sprinkler Systems" and NFPA 14, "Installation of Standpipes and Hose Systems" and the City of Bristol standards for complete coverage throughout all areas of the building.
4. Alarm valves and flow switches shall be installed to properly zone the sprinkler system. All fire protection alarms shall be connected to the building fire alarm system.
5. Sprinklers shall be concealed pendants in finished areas with ceilings. Sidewall, upright, and extended coverage sprinklers shall be installed where appropriate. Sprinklers with protective baskets shall be installed where subject to physical damage. Quick response sprinkler heads shall be used in light hazard locations. Sprinklers, unless noted otherwise, shall have a ½" orifice and a 165°F temperature rating. Intermediate temperature classification sprinklers shall be installed within mechanical rooms, kitchen and other applicable areas.
6. Piping for the sprinkler system shall be steel pipe, ASTM A 53, Schedule 40 seamless carbon steel. Schedule 10 pipe shall be allowed for pipe sizes larger than 2" diameter when roll grooved mechanical couplings are used. Sprinkler piping shall be installed above ceilings and concealed within chases where applicable.
7. Fittings shall be grooved mechanical fittings: ANSI A21.10 ductile iron; ASTM A47 grade malleable iron. Couplings shall be ASTM A 536 ductile iron or malleable iron housing, EPDM gasket with nuts, bolts, locking pin, locking toggle or lugs to secure roll grooved pipe and fittings.
8. Kitchen exhaust hoods and ductwork shall be protected by a wet chemical type fire suppression system and shall be connected to the building fire alarm system.

MECHANICAL SYSTEMS:

EXISTING SYSTEMS

1. The existing building is heated by (2) HB Smith Mills 450 21-section cast iron steam boilers with Carlin oil burners. The boilers and burners were installed in 1974 and are in poor condition. The boilers are showing signs of leaks at the individual sections. The boilers serve steam pipe distribution throughout the building.

2. The heating plant also includes a vacuum condensate receiver and boiler feed system. The vacuum condensate system is less than ten years old and in good condition. The boiler feed system is also in good condition.

3. There is a buried 10,000 gallon fuel oil tank located on the north side of the building. There is a duplex fuel oil pump set located in the boiler room that pumps fuel oil from the tank to the boilers. There is also a fuel oil fill alarm system. All of this equipment is in fair to good condition.

4. The present heating system also includes cabinet unit heaters, ceiling mounted unit heaters, cast iron radiators and baseboard radiation. Most of the heating units within the stairwells have been disconnected. Most of this equipment is original to the building and is in fair to very poor condition.








5. There are a number of air handling units that serve various areas of the building. There are (3) Seasons 4 air handling units for heat only. Only (1) of these units is operational. There is a Herman Nelson Audi-Vent unit that serves the Gymnasium. This unit is in poor condition. There is an Aaon air handling unit that is approximately (10) years old that is not operational. The unit that serves the Auditorium is approximately (20) years old and is used for cooling only. The air handling unit that serves the Administration area is located above the ceiling in the area with a remote condensing unit. The remote condensing unit is over (20) years old and in poor condition.

6. The Media Center has a Herman Nelson fan coil/unit ventilator for heating and cooling. The cooling capacity of this piece of equipment is undersized for the amount of space to be cooled, especially with the addition of computers within the media center. This equipment is in fair condition.

7. There are various exhaust fans throughout the building that serve general areas such as corridors and the gymnasium which includes roof mounted exhaust fans, ductwork, grilles and controls. The ventilation systems do not meet current codes for ventilation rates based on the age of the facility. The exhaust fans range from fair to good condition.

8. A number of exhaust fans have been added to various rooms to help with ventilation. A number of louvers have been damaged and others covered over. This equipment is in poor condition.

9. The Tech-Ed area has air filtration systems, wall mounted to process the air within the space. This area should have a dedicated exhaust and make-up air system to remove any air with odors, etc.

10. The Kitchen includes an exhaust fan that serves the hood over the cooking equipment. The duct work from the hood runs exposed in the Kitchen out to a roof mounted exhaust fan. The ductwork then extends up the side of the building to a discharge on the roof. The exhaust fan and ductwork serving this hood does not comply with current NFPA 96 requirements for a grease-laden exhaust system.

11. The steam piping consists of iron supply and condensate return piping. Some of this piping is missing insulation or the insulation has failed and replaced.

12. The existing temperature control system is a pneumatic system consisting of two air compressors, air dryer, and local controls mounted at the individual radiators, cabinet unit heaters, etc. and additional sensors throughout the building. The pneumatic equipment is in fair condition.

RECOMMENDED MECHANICAL SYSTEMS

1. Replace existing oil fired boilers with high efficiency gas fired condensing boilers. The heating plant will consist of two 2,000 output MBh boilers sized at 65% each of the total load to allow for some redundancy.
2. The hot water heating plant will consist of two variable frequency driven hot water pumps. Each pump will be sized for 100% capacity (approximately 250 gpm), for complete redundancy. The pumping will be a variable primary flow arrangement for the boilers to send water to the building for space heating systems and terminal heating units (baseboard fin tube radiation, cabinet unit heaters, unit heaters etc.). The system will include 30% glycol for freeze protection. The space heating hot water temperature will be reset inversely with outside air to minimize energy consumption.
3. The HVAC system will consist of a Variable Refrigerant Flow (VRF) system. The system will include a VFD driven 100% Outside Air Central station air-handling units (DOA) with DX cooling and hot water coil. The unit will provide Outdoor air to VRF terminal units. Approximately 1cfm/sqft will be supplied and slightly less exhausted to maintain positive pressure in the occupied offices/spaces. The DOA will provide approximately 75 Tons of cooling.
4. The building should be provided with approximately 225 Tons of multiple air cooled roof mounted VRF heat pump condensing units. The indoor and outdoor units will be connected via refrigerant piping.
5. The individual offices will all be served by ducted concealed variable refrigerant flow (VRF) air handlers which will reside above the ceiling. The VRF air handlers will be heating and cooling units capable of heat recovery. VRF air handlers shall be fed by branch selector boxes, each box shall serve multiple air handlers and be fed from one of the rooftop heat pump units.
6. The gymnasium shall be provided with a 12,000 cfm single zone variable air volume air handling unit with a hot water coil and remote rooftop DX condensing unit for cooling. The unit will also incorporate demand control ventilation which will modulate the amount of outside air to the space based on occupancy and CO_2. The unit will need to be provided with outdoor air and a relief air via louvers at the perimeter of the building. The gym will be provided with ceiling mounted anti-stratification fans.
7. The existing air handling unit serving the Auditorium will be replaced by a 35-Ton rooftop air handling unit. The existing ductwork distribution will be re-used. The unit will also incorporate demand control ventilation which will modulate the amount of outside air to the space based on occupancy and CO_2. The unit will also be supplied with an energy recovery wheel.

8. A kitchen exhaust fan and welded carbon steel ductwork shall be provided to accommodate the new café. A gas fired make up air unit shall be provided.
9. Data closets will be served by ductless split units. Unit consists of indoor wall mount air handler and roof mount condensing unit.
10. All Toilet Rooms will be provided with exhaust via the dedicated outside air handling units connected to vertical ductwork.
11. A Building Management System (BMS) shall be installed to control the mechanical and selected electrical systems.
    - The system shall include a personal computer with graphics based display, color printer, modem and capabilities for alarming off-site.
    - The BMS shall provide temperature control for all HVAC systems and control select lighting in the building.
    - The system shall be programmed for occupied/unoccupied cycles for the dedicated outdoor air handling equipment, with an override feature for spaces that would be utilized after-hours.
    - The BMS shall be accessible from any Web browser, with proper authorization.

ELECTRICAL NARRATIVE

EXISTING SYSTEMS

1. The building is served by a single electrical service rated 1600 amperes, 208Y/120volts, 3-phase, 4-wire. This service equipment consists of a 1600 amp main disconnect switch, distribution section and metering per utility company requirements. The service equipment is approximately 30 years old and in fair condition.

2. There is a 45kW natural gas fired emergency generator located off the boiler room. This equipment is manufactured by Onan. This generator serves the boiler room equipment only. This equipment is in poor condition.

3. There are a number of electrical panels located throughout the facility. These panelboards range from equipment that was installed original to the building and others that that have been installed to accommodate the addition of computers throughout the school. The condition of these panelboards range from poor to very good.

4. The lighting throughout the facility consists primarily of surface mounted acrylic lensed troffer style linear fluorescent fixtures or pendant mounted louvered linear fluorescent fixtures. Some areas such as storage rooms, mechanical rooms have industrial fluorescent fixtures. Most of the lighting has been upgraded to T8 technology, however, there are other fixtures using older T12 technology or incandescent lamps. Some of the fixtures have been damaged and are missing lenses. The lighting ranges from good to poor condition.





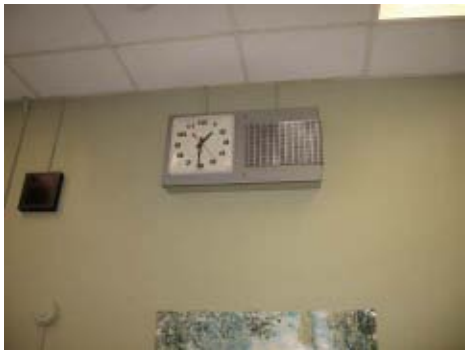

5. The fire alarm system is manufactured by EST. The system includes manual pull stations, horn strobes, and ceiling mounted smoke detectors, and graphic annunciator. Some of the horn/strobe units are non-ADA compliant. This system is in fair condition. Additional audio visual devices as well as replacing the non-ADA compliant devices should be added to the building. The existing system is on record as having numerous maintenance issues.

6. The emergency lighting is provided by two-head self-contained emergency fixtures with batteries or a surface mounted 9”x9” self-contained emergency fixture. This system is operational however the equipment is in poor condition. Additional lighting fixtures are required to meet current requirements for emergency lighting.

7. The exit signs consist of fluorescent exit signs with batteries. This equipment is in good condition. Additional exit signs are required to meet current requirements for exit signs.

8. The facility does have a limited security system consisting of a control panel, limited cameras, door contacts, motion detectors, and a door entry intercom with camera. This system is in fair condition. Additional devices may be considered for enhanced security.

9. The existing PA system consists of wall or ceiling mounted speakers. It is manufactured by Bogen, Model Multicom 2000. The head end equipment is located in the main office. This head end equipment is in very good condition. Some of the speakers show signs of damage and should be replaced.



10. A central clock system manufactured by Simplex, including a control panel and wall mounted clocks is existing at the building. It appears that this system is operational and in fair condition. Some areas have had individual battery operated clocks added.

RECOMMENDED ELECTRICAL SYSTEMS

1. The existing 208/120 volt, 3 phase, 4 wire, 1600 ampere service shall be phased out and removed in favor of a new 2000 ampere 480/277 volt, 3-phase, 4-wire, main electrical service to provide additional system capacity for serving new HVAC equipment. The new service equipment shall feature an LSIG programmable main circuit breaker in cold sequence configuration with a utility approved metering cubicle for a single revenue grade metered account. Other features shall include branch circuit breaker distribution; 2000 ampere Automatic Transfer Switch (see Item #4 - Option #2 below); and an integral load side surge protection system. The main switchboard shall be located in the new Main Electrical Room on the Basement Level, or other location deemed satisfactory.
2. The utility electric service shall be provided underground from a Utility Company owned and maintained pad mounted transformer. A precast concrete pad with proper sub-base provisions and

grounding appurtenances shall be included in the contract documents. Service entrance conductors shall be routed to the electric room installed in Schedule 40 PVC conduit with rigid steel elbows. When crossing roadways, sidewalks, etc, rigid conduit or concrete encased conduit shall be provided.

3. Primary electric service requirements will need to be integrated into the site development. Any pertinent trenching, excavation, backfill requirements shall be performed in conformance with utility regulations. The building contract shall carry all utility costs for the infrastructure upgrade.
4. The building shall be provided with a Standby Generator to support building systems and enhance life safety under the following two scenarios:
    - Option #1 shall be designed to support life safety lighting and minimal optional standby loads. A diesel fired 80 kw/100kva, 480/277v-3ph-4w 60hz, 1800RPM, pad mounted genset with an outdoor-rated sound attenuating weatherproof enclosure and a base mounted fuel tank capable of providing 48 hours of run time at 100% rated load shall be provided. The unit shall incorporate (2) output circuit breakers; (1) 70 ampere for the building emergency/life safety lighting (NEC Article 700) requirements, (1) 70 ampere for the building optional standby (NEC Article 702) requirements. Where acceptable to the authority having jurisdiction, a natural gas version could be acceptable with this size unit. The elevator cannot be picked up on this size genset. Optional standby requirements could include: building wide communication systems, limited convenience receptacles, select small appliances, etc.
    - Option #2 shall be designed to serve the full building load. A diesel fired 750kw/937kva 480/277v-3ph-4w 60hz, 1800RPM, pad mounted genset with an outdoor-rated sound attenuating weatherproof enclosure and a sub-base mounted fuel tank capable of providing 48 hours of run time at 100% rated load shall be provided. The unit shall incorporate (2) output circuit breakers; (1) 100 ampere for the building emergency/life safety lighting (NEC Article 700) requirements, (1) 1000 ampere for the building optional standby (NEC Article 702) requirements. The unit shall be connected to feed the main switchboard ATS with the design intent to pick up the full building electrical load.
    - With Option #1 selected, the 2000 ampere ATS incorporated into the Main Switchboard design shall not be required.
5. The generator shall be mounted at grade level with all required service clearances from doors and windows. The generator shall be installed to satisfy NFPA 110 Level 1 performance requirements.
6. The Main Electric Room (basement level) shall contain:
    - 2000A, 480/277V main switchboard. Switchboard loads shall include 480 volt panel feeders for power, lighting and misc equipment panels.
    - One general purpose distribution panel for normal power shall be 480/277V, 3PH, 4W, 42-pole, 225 amp main circuit breaker type dedicated for small HVAC / miscellaneous loads.
    - One interior / exterior lighting panel shall be 480/277V, 3PH, 4W, 42-pole, 225 amp main circuit breaker type dedicated for normal power lighting loads.
    - (1) Transformer shall be 150 KVA dry-type 480/277V, 3PH, 4W step down transformer to 208/120V, NemaType TP-1 energy saving type. The transformer will be dedicated to normal power loads
    - One (general purpose) distribution panel for normal power shall be 208/120V, 3PH, 4W, 600 amp main circuit breaker type dedicated for feeder distribution to normal power panelboards and any existing to remain equipment.

- One (general purpose) receptacle panel for normal power shall be 208/120V, 3PH, 4W, 84 pole (2 sections), 225 amp main circuit breaker type dedicated for miscellaneous receptacle / equipment loads.
- Where Option #1 is selected from Paragraph #4 above a 100 ampere automatic transfer switch, 480/277v-3ph-4w-100 ampere branch circuit panel, 30 kva transformer, and a 208/120v-3ph-4w-100 ampere 42 pole branch circuit panelboard will be required in the Main Electric Room scope.

7. Emergency Life Safety Electric Closet (basement level) shall contain:
   - (1) 100 amp automatic transfer switch (life safety) will be included. This switch shall receive a dedicated emergency power feed from the new genset.
   - One distribution panel shall be 480/277V, 3PH, 4W, 42-pole, 125 amp main circuit breaker type dedicated for emergency power lighting loads. This panel shall distribute power to life safety panels located on other floors.
   - One Lighting panel shall be 480/277V, 3PH, 4W, 30-pole, 60 amp main circuit breaker type dedicated for emergency power lighting loads.
   - (1) Transformer shall be 30.0 KVA dry-type 480/277V, 3PH, 4W step down transformer to 208/120V, NemaType TP-1 energy saving type. The transformer will be dedicated to life safety 120 volt power or lighting loads.
   - One branch circuit panel shall be 208/120V, 3PH, 4W, 42-pole, 125 amp main circuit breaker type to feed life safety 120 volt loads.
8. Electrical Closets (typical of 3 for Ground Floor, 1st and 2nd Floors) shall contain:
   - One general purpose distribution panel for normal power shall be 480/277V, 3PH, 4W, 42-pole, 225 amp main circuit breaker type dedicated for small HVAC / miscellaneous loads and normal lighting.
   - (1) Transformer shall be 75.0 KVA dry-type 480/277V, 3PH, 4W step down transformer to 208/120V, NemaType TP-1 energy saving type. The transformer will be dedicated to 120 volt receptacle power or misc loads.
   - One Receptacle panel for normal power shall be 208/120V, 3PH, 4W, 84-pole (2 sections), 225 amp main circuit breaker type.
   - One Lighting panel shall be 480/277V, 3PH, 4W, 30-pole, 60 amp main circuit breaker type dedicated for emergency lighting loads.
9. Cafe / Kitchen shall have the following:
   - One Kitchen panelboard shall be 208/120V, 3PH, 4W 84-pole, 225 amp main circuit breaker. Panel shall be flush mounted in the kitchen area with stainless steel cover.
10. Electrical Room at 3rd Floor shall contain:
    - One general purpose distribution panel for normal power shall be 480/277V, 3PH, 4W, 42-pole, 400 amp main circuit breaker type dedicated for rooftop HVAC equipment, miscellaneous distribution and normal lighting circuits.
    - (1) Transformer shall be 75.0 KVA dry-type 480/277V, 3PH, 4W step down transformer to 208/120V, Nema Type TP-1 energy saving type. The transformer will be dedicated to 208/120 volt receptacle power or misc loads.
    - One branch circuit panel for normal power shall be 208/120V, 3PH, 4W, 84-pole (2 sections), 225 amp main circuit breaker type.

- One Lighting panel shall be 480/277V, 3PH, 4W, 30-pole, 60 amp main circuit breaker type dedicated for emergency lighting loads.

11. New lighting systems shall be provided throughout the building.
    - Tenant areas shall be fit up with 2x4 recessed fluorescent fixtures on 8' x 8' centers designed to deliver an average of 50 footcandles of illumination into the space. Energy codes shall be observed relative to design requirements of watts per square foot limitations and required controls. Local occupancy sensors shall be employed.
    - Corridors shall be fit up with pendant mounted 4'-0" long linear fluorescent fixtures designed to deliver an average of 30 footcandles into the space. Fixtures shall be connected to emergency power to provide egress lighting.
    - Common areas, vestibules and assorted other high visibility areas shall be lit with direct/indirect pendant fixtures and matching wall sconces in conformance with good design and selected to promote an upscale modern office building presentation.
    - Building exterior lighting shall be replaced with new LED type lighting with full cutoff optics.
    - Exit signs shall be provided throughout with LED high efficiency long life types in conformance with Connecticut building codes. Signs shall be provided with the International Symbol of Accessibility where required. Additional signs shall be added to correct deficiencies within the existing layout or to highlight new egress travel requirements determined by the Architect.
    - Site lighting shall be designed to promote common pedestrian pathway marking and alleviate security concerns. Automobile parking areas shall be lit with pole mounted LED luminaires to provide an average of 1.0 footcandle, drives shall be lit to a minimum of 1.5 footcandles. Site lighting shall employee photo-cell control.
12. New Telephone service shall be brought into the building. A 100 pair copper cabling plant shall be requested from the utility. Infrastructure to support building wide distribution shall be designed utilizing conduits, backboxes and pullstring throughout the building with specific requirements clarified with the owner during the design development stage.
13. Cable TV broadband and television service shall be brought into the building to support a minimum of 50 accounts. Infrastructure to support building wide distribution shall be designed utilizing conduit and pullstring distributed throughout with specific requirements clarified with the owner during the design development stage.
14. Existing Data Network systems shall be preserved throughout the building. New tenant suites that are developed into the building construction and require new data outlet locations shall be provided with backboxes and conduit stubs at the desired workstation locations. Conduits shall be stubbed into the ceiling cavity above suspended ceilings and provided with a pullstring for installation of data cabling, jacks and faceplates furnished and installed by the owners vendor.

15. Access Control shall be designed with specific input from the owner at the design development stage with conformance to the following guideline:
    - Card readers shall be provided at all entrances to the building. (If the main entrance is required to utilize a door entry intercom system in addition to a card reader this shall be requested in the design development stage).
    - Card readers shall be wired back to an access control system head-end. The head-end panel shall have a network connection, allowing control of the system over the building's LAN. This panel shall be located in the Building Management Office. All wiring and other system accessories will be included in the project and designed by CES.

- All required power supplies for card readers, electric latches, and local controllers will be included in the project and designed by CES.
- Electric door hardware will not be included in the CES scope of work. This shall be provided by division 8 (door hardware). Wiring to the required hardware will be included.

16. Intrusion Detection - A complete intrusion detection / burglar alarm system shall be provided throughout the building. The system shall utilize door contacts, motion sensors, and glass break detectors. The system shall be designed with specific input from the owner at the design development stage and shall conform to the following guideline:
    - Door contacts shall be located at each access-controlled door, and at other locations determined by the owner's representative.
    - Ceiling mounted motion sensors shall be located in the corridor on the main floor.
    - Ceiling mounted glass-break detectors shall be located in each room on the basement or ground floor having a window accessible from grade. Detectors will not be located in mechanical rooms or the kitchen. These shall be audio detectors and will activate upon sound initiation from a glass break event.
    - Door contacts, motion sensors, and glass-break detectors will be armed/disarmed via keypads located at various entrances to the building.
    - All intrusion detection head-end equipment shall be located in the Building Management Office
17. Fire Alarm System: The building will be provided with an addressable fire alarm system in compliance with code requirements and ADA regulations. Voice evacuation capabilities shall be provided throughout the building. The system shall be provided with a fire alarm control panel with an auto-dialer to contact the local fire department or security company providing Central Station monitoring services. Manual pull stations shall be installed in the egress paths at exterior doors and at entrances to stairwells. Audible and visual signaling devices shall be installed in all tenant suites, corridors, toilets, auditorium, cafe, gymnasium, etc. Visual-only signaling devices shall be installed in all conference rooms, work rooms, etc. The system shall include the following equipment:
    - Voice Command Center mounted at main entry door.
    - (1) Speaker/30 candela strobe in all Tenant Suites and rooms less than 900 square feet.
    - (2) Speaker /30 candela strobes in all Tenant Suites and rooms that are 901 to 1600 square feet.
    - Speaker /30 candela strobes within the corridors, 100 feet on center.
    - Voice Evacuation handset and all-call equipment shall be provided in designated places of assembly such as the Auditorium and Gymnasium.
    - (6) Speaker /30 candela strobes in the Auditorium and Gymnasium.
    - Monitoring modules for sprinkler tamper and flow switches.
    - (2) Duct smoke detectors for each air-handling unit, (1) in the supply, and (1) in the return duct. Test switches shall be located in accessible locations.
    - Signal to BMS system for fan shut-down, and damper actuation on alarm condition.

- Magnetic door hold-open devices at all required fire or smoke rated corridor doors, connected to the FACP.

- Smoke detector within five feet of both sides of the corridor doors with magnetic hold-opens, where required by building fire separation.

- Monitor module for Kitchen hood fire extinguishing system (Ansul System).

- All fire alarm system wiring shall be plenum rated fire alarm MC cable where concealed and Wiremold surface raceway / EMT conduit with type THHN wire where exposed.

- Smoke damper (smoke detector) connection to the fire alarm system where ductwork passes through smoke rated walls.

- Carbon monoxide sensors will be provided in the Kitchen and Mechanical rooms where fossil fuel burning equipment is located.

COSTS

Mechanical: (VRF with Dedicated outdoor AHUs, Add Cooling at Gym, BMS)

Construction Cost =$5,194,000 ($49/sqft @106,000 sqft)

Plumbing: (Sanitary Piping, Storm Piping, Water Piping, Gas Piping, Plumbing Fixtures)

Construction Cost =$1,272,000 ($12/sqft @106,000 sqft)

Fire Protection: (Wet Standpipe System, Wet Sprinkler System)

Construction Cost =$530,000 ($5/sqft @106,000 sqft)

Electrical Power and Lighting Systems Cost:

Construction Cost =$3,200,000 ($30/sqft @106,000 sqft)

Emergency Generator:

Construction Cost Option #1 80kw = $50,000

Construction Cost Option #2 750kw = $350,000

Fire Alarm System:

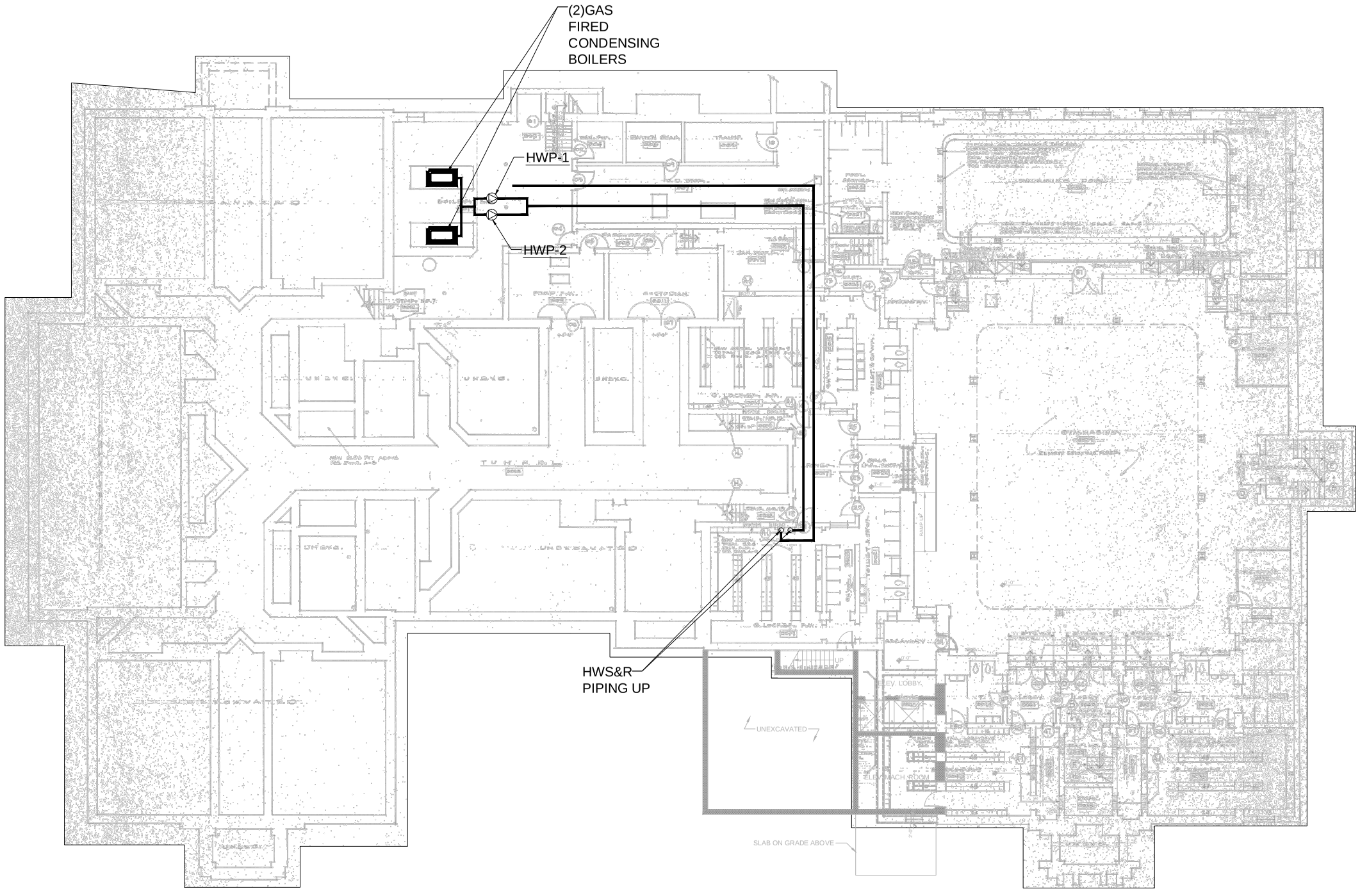
Construction Cost =$424,000 ($4/sq ft @106,000 sqft)

Intrusion/Security/Access Control:

Construction Cost =$212,000 ($2/sq ft @106,000 sqft)

Total without Generator

Construction Cost =$10,832,000



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:		
NO.	DATE	DESCRIPTION
REVISIONS:		

MEMORIAL BLVD SCHOOL

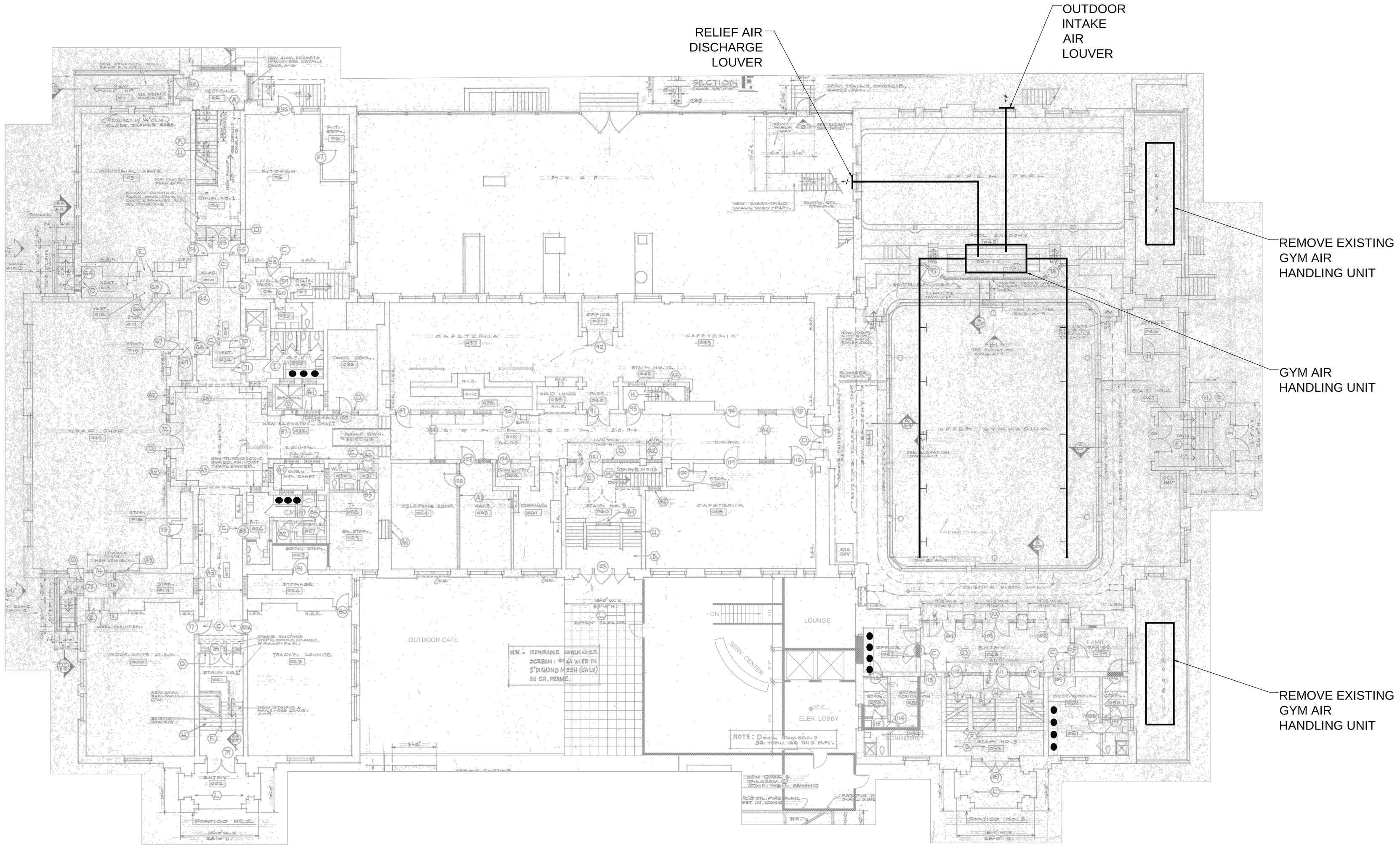
BRISTOL, CT

DRAWING TITLE:
BASEMENT FLOOR PLAN
SCHEMATIC DESIGN

SCALE: NTS | DATE: 1/15/2014

DRAWN: | CHECKED: PMA

SHEET:
M-1



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

GROUND FLOOR PLAN

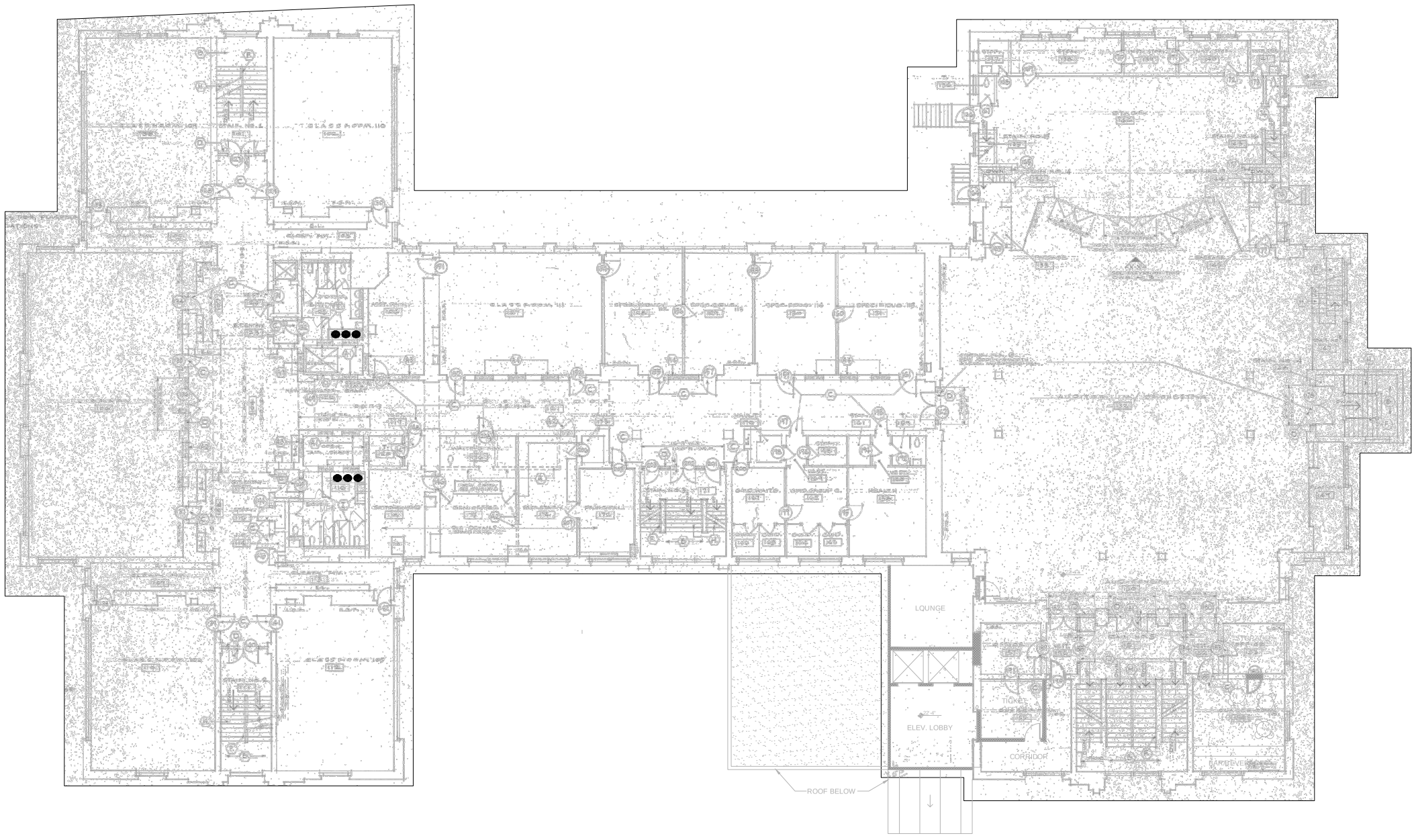
SCHEMATIC DESIGN

SCALE: N.T.S. DATE: 1/15/2014

DRAWN: CHECKED: PMA

SHEET:

M-2



SEAL

CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

FIRST FLOOR PLAN

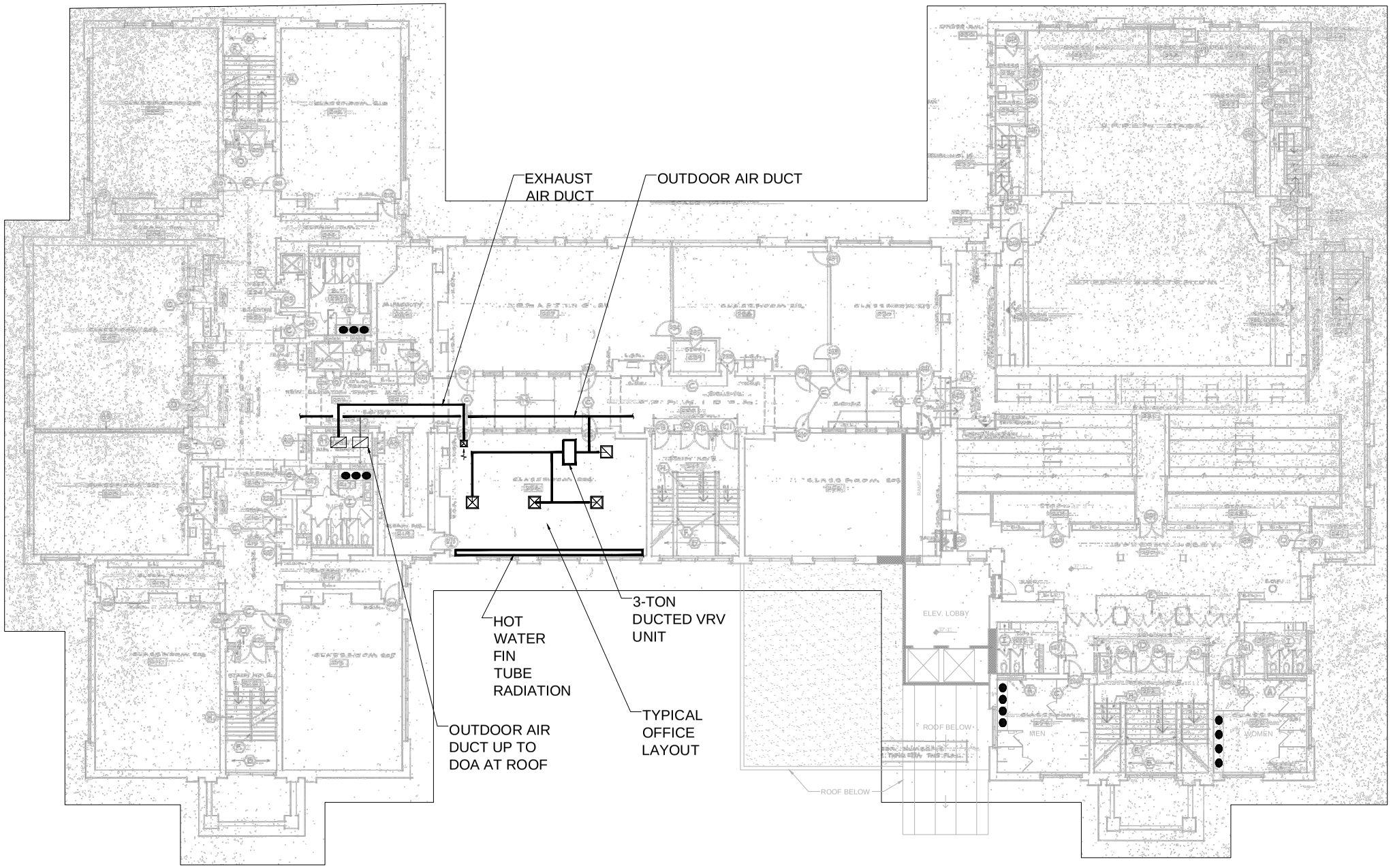
SCHEMATIC DESIGN

SCALE: N.T.S. **DATE:** 1/15/2014

DRAWN: **CHECKED:** PMA

SHEET:

M-3



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel (860) 632-1682
Fax (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

SECOND FLOOR PLAN

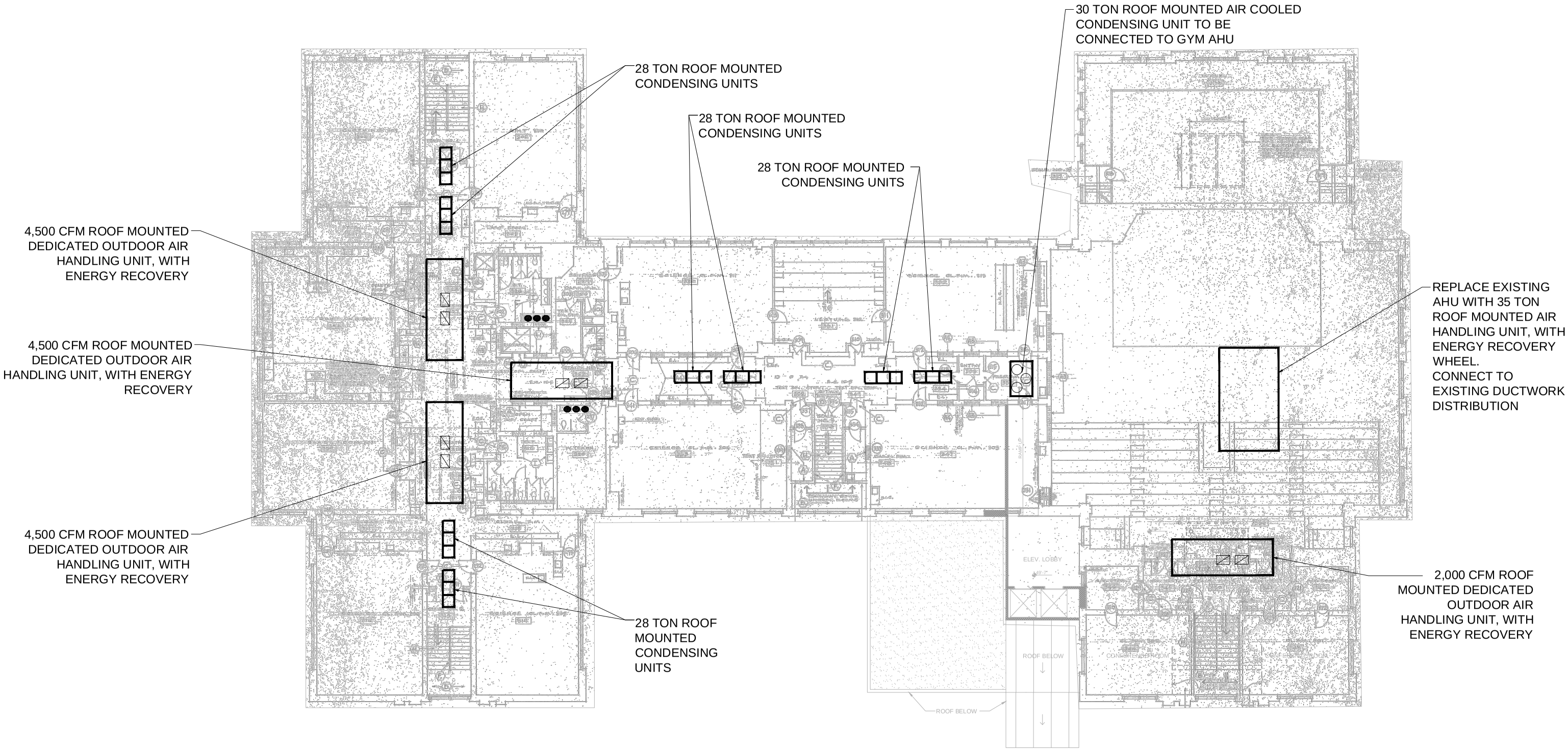
SCHEMATIC DESIGN

SCALE: N.T.S. DATE: 1/15/2014

DRAWN: CHECKED: PMA

SHEET:

M-4



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:		
NO.	DATE	DESCRIPTION
REVISIONS:		

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

THIRD FLOOR PLAN

SCHEMATIC DESIGN

SCALE: N.T.S.

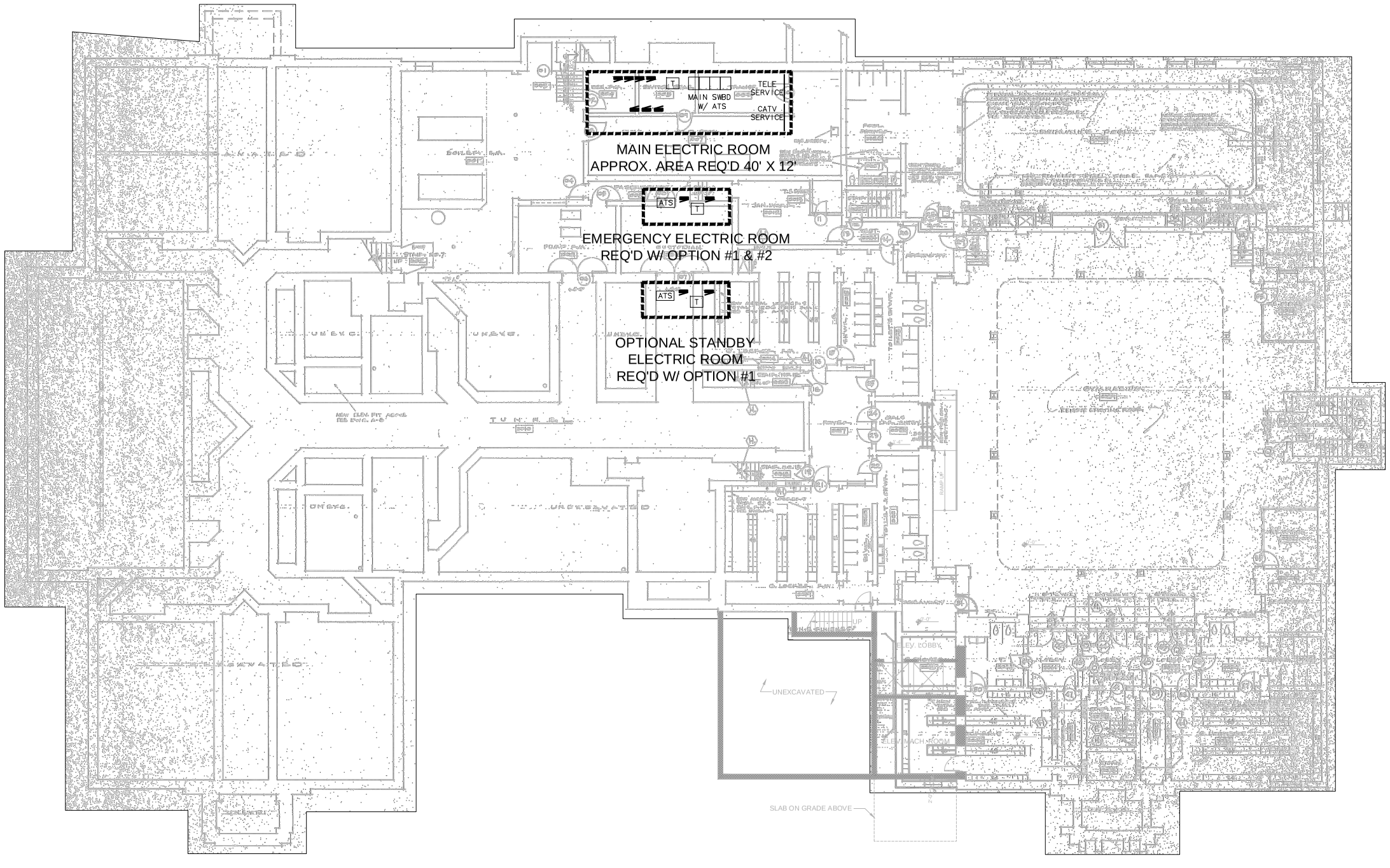
DATE: 1/15/2014

DRAWN:

CHECKED: PMA

SHEET:

M-5



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel (860) 632-1682
Fax (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

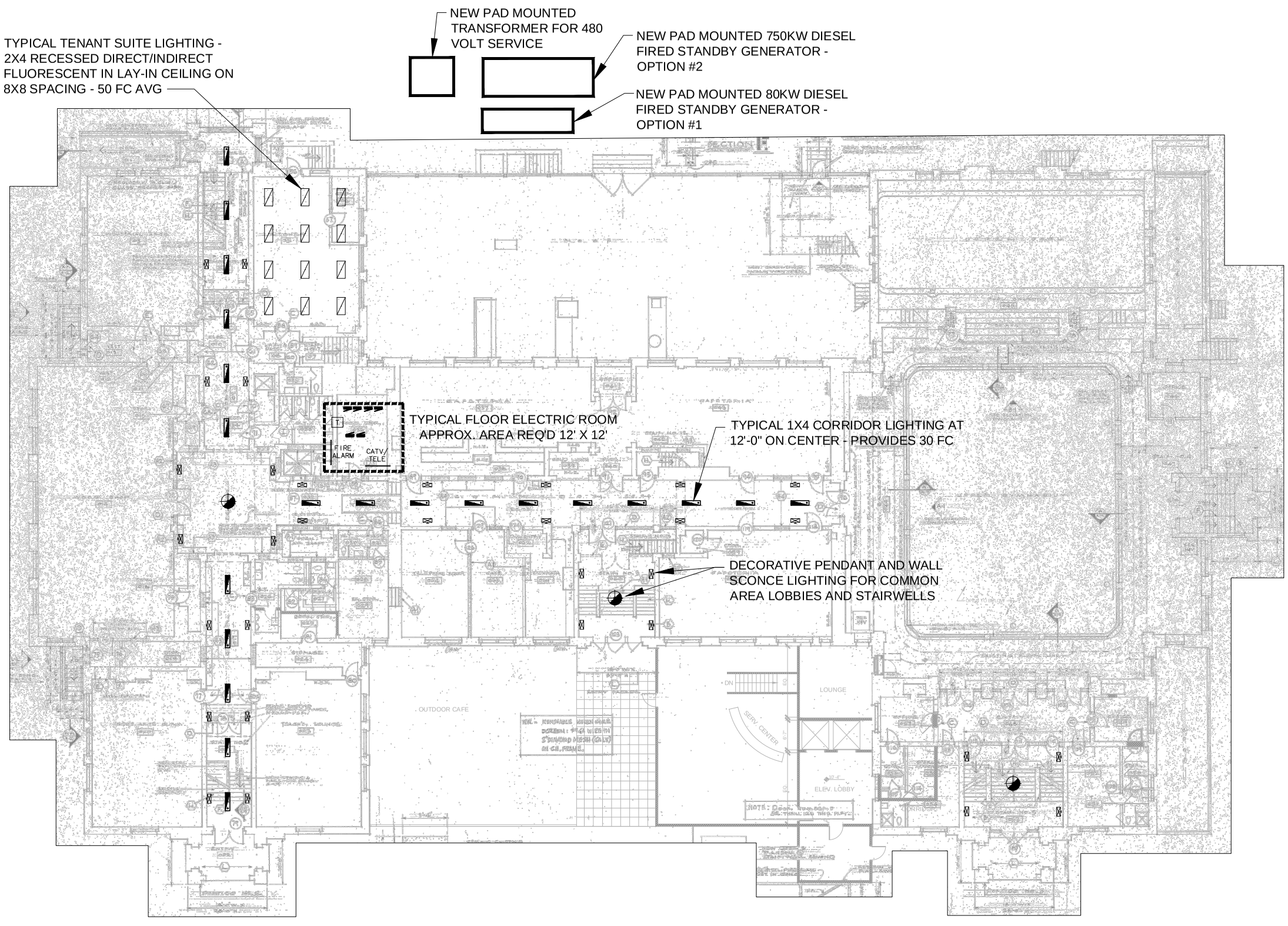
DRAWING TITLE:

BASEMENT FLOOR PLAN
SCHEMATIC DESIGN

SCALE: NTS | DATE: 1/15/2014

DRAWN: | CHECKED: PMA

SHEET: E-1



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel (860) 632-1682
Fax (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

GROUND FLOOR PLAN

SCHEMATIC DESIGN

SCALE: N.T.S.

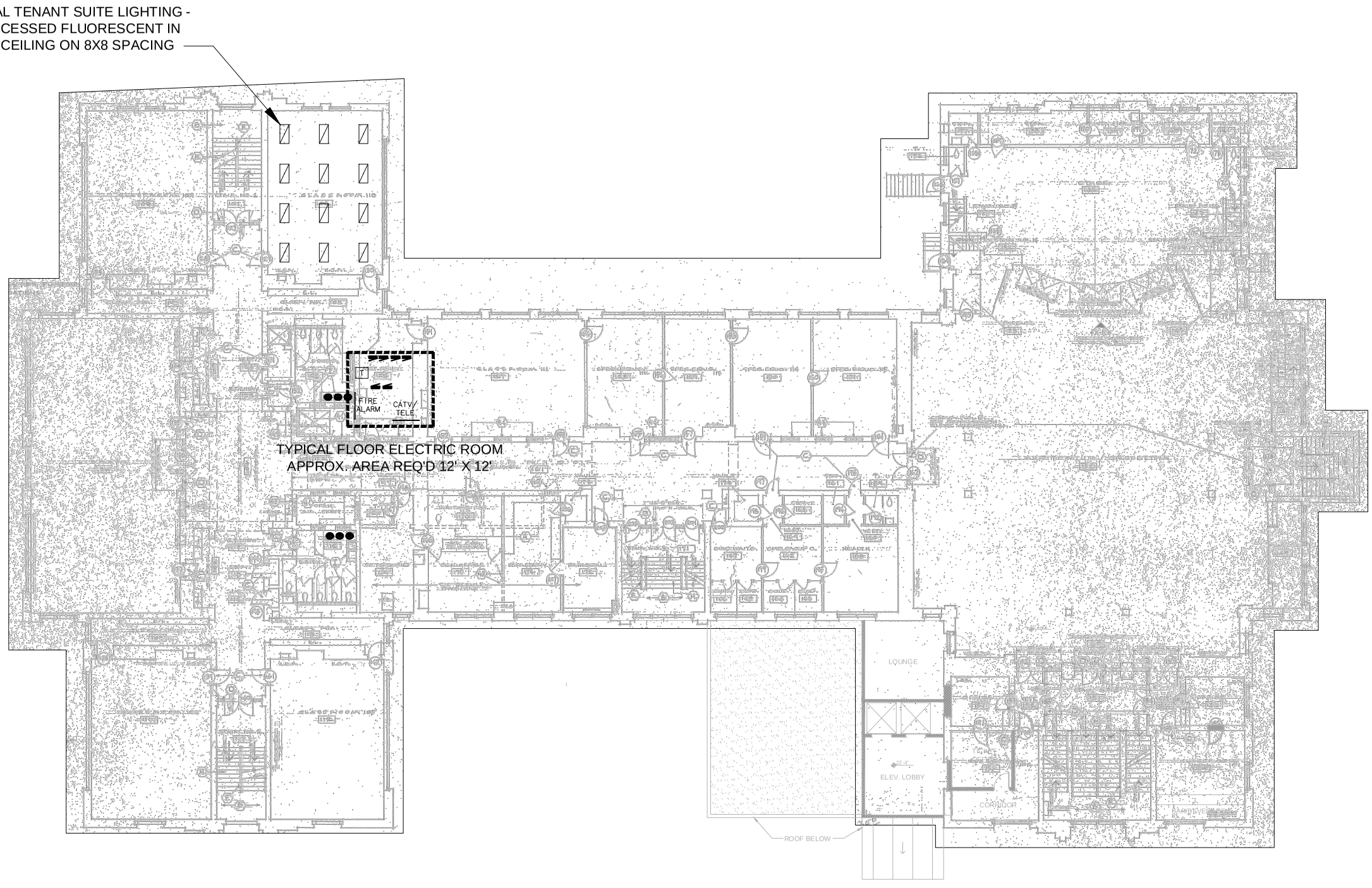
DATE: 1/15/2014

DRAWN:

CHECKED: PMA

SHEET:

E-2



SEAL

CES Engineering LLC
81 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

FIRST FLOOR PLAN

SCHEMATIC DESIGN

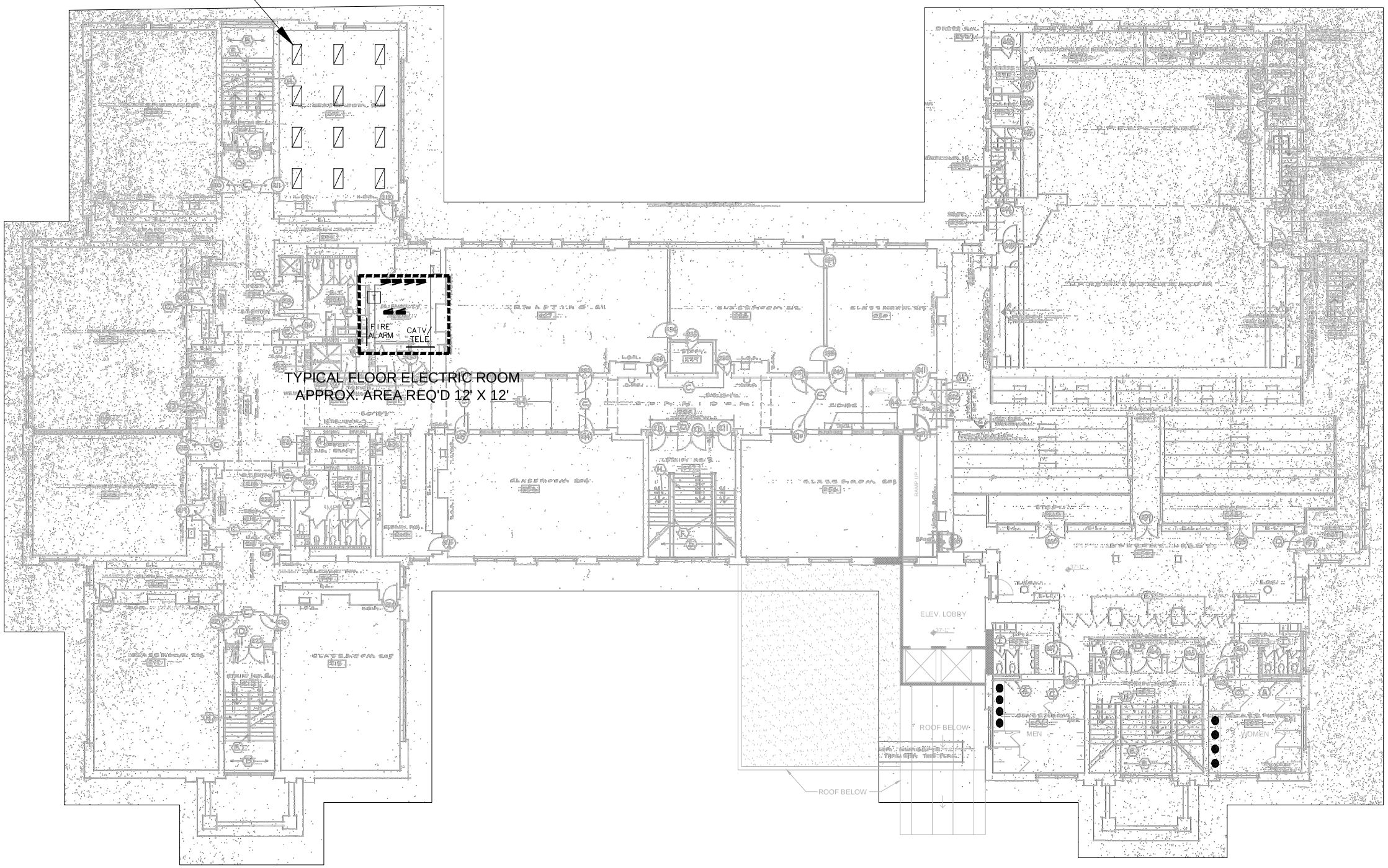
SCALE: N.T.S. **DATE:** 1/15/2014

DRAWN: **CHECKED:** PMA

SHEET:

E-3

TYPICAL TENANT SUITE LIGHTING -
2X4 RECESSED FLUORESCENT IN
LAY-IN CEILING ON 8X8 SPACING



TYPICAL FLOOR ELECTRIC ROOM
APPROX. AREA REQ'D 12' X 12'

SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

SECOND FLOOR PLAN

SCHEMATIC DESIGN

SCALE: N.T.S.

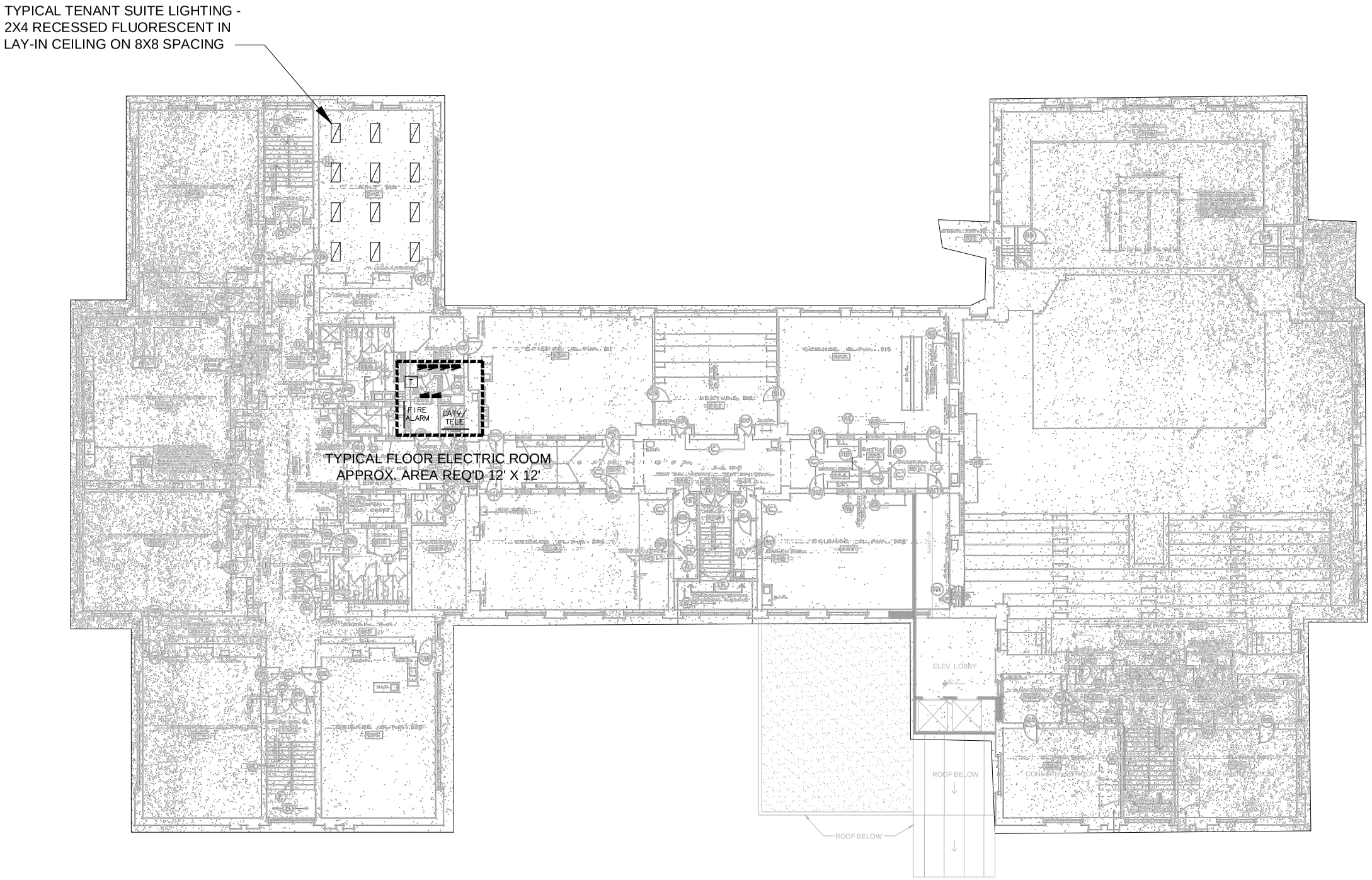
DATE: 1/15/2014

DRAWN:

CHECKED: PMA

SHEET:

E-4



SEAL

CES
CES Engineering LLC
811 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768

PHASE:

NO.	DATE	DESCRIPTION

REVISIONS:

MEMORIAL BLVD SCHOOL

BRISTOL, CT

DRAWING TITLE:

THIRD FLOOR PLAN

SCHEMATIC DESIGN

SCALE: N.T.S. **DATE:** 1/15/2014

DRAWN: **CHECKED:** PMA

SHEET:

E-5

5. CODE EVALUATION

D·R·A

Drummey Rosane Anderson Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning
Architecture
Interior Design

860-644-8300 PHONE
860-644-8301 FAX
e-mail: info@draws.com
website: www.DRAarchitects.com

CODE EVALUATION

The building was last used as a Mixed Use building with the main use as a school (Use Group "E" Educational) and the Theater (Assembly A-1) as an ancillary use. The Theater will continue as Use Group A-1 while the rest of the building will have a "Use Change" to "B" Business for all the rentable areas. The current codes require that once a building goes through "Use Change", it must be brought into full compliance with current applicable codes. The following is a listing of current applicable codes:

1. 2003 IBC + PORTION OF 2005 SBC CT
2. SBC 2009 AMENDMENTS TO 2005 SBC
3. SBC 2011 AMENDMENTS TO 2005 SBC
4. SBC 2013 AMENDMENTS TO 2005 SBC
5. WIND LOAD ERRATA
6. PROPOSED ADOPTION OF THE 2015 BUILDING CODE
7. 2003 IEBC
8. 2003 ICC/ANSI A117.1
9. 2005 CT FIRE SAFETY CODE
10. 2009 AMENDMENTS TO 2005 CT FIRE SAFETY
11. 2012 AMENDMENTS TO 2005 CT FIRE SAFETY
12. 2003 INTERNATIONAL PLUMBING CODE
13. 2003 INTERNATIONAL MECHANICAL CODE
14. 2005 INTERNATIONAL ELECTRICAL CODE
15. 2009 INTERNATIONAL ENERGY CONSERVATION
16. 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

The local Building Official seems to think that it is safe to assume that the construction classification of the existing building is "II-A Non Combustible". Hence it will meet the "Height and Area" requirements. The total numbers of stairs and exit doors are adequate for the intended occupant load of the building.

The major code deficiency is the lack of ADA compliant entrances/exits, access to all levels of the building and access to the stage. The existing elevator does not meet current code. The local officials have indicated that the existing elevator is not likely to be re-certified for new use. A new elevator, short interior ramps and a platform lift will be required to provide access to all levels of the existing building including the stage.

Furthermore, after March 15, 2012 all new or altered facilities owned by the state or local governments must comply with Federal 2010 Standards for State and Local Government Facilities: Title II. These guidelines are similar but more restrictive than ICC/ANSI/A117-2012 which is part of the CT Building Code.

Building elements and systems including but not limited to, accessible clearances, ADA seating/line of sight/assistive hearing system in the theater, door hardware, signage, toilet compartments, toilet accessories, stair tread design, stair handrails, communication equipment, mounting heights do not meet current codes. There is no "Area of Refuge" in the building.

The following is a listing of major code deficiencies that will need to be addressed for new uses and eventual occupancy:

THEATER:

1. ADA compliant parking, accessible route and access to the main entrance
2. New elevator for access to all major levels to be used by the public
3. New ADA compliant toilet facilities; adequate number for 942 seats as required by CT code
4. ADA access to the stage; ramp or platform lift
5. Line of sight compliance from the ADA seating areas
6. New ADA compliant signage; interior and exterior
7. New ADA compliant door hardware
8. New floor, wall and ceiling finishes
9. Voice Evacuation System required for assembly spaces of over 300 occupants
10. Assistive Hearing System
11. ADA compliant Fire Alarm System
12. New generator as required by code
13. Evaluate existing HVAC system to ensure compliance with current codes for "Assembly"

FORMER SCHOOL:

1. ADA compliant parking, accessible route and access to the building.
2. New elevator for access to all major levels to be used by the public.
3. New ADA compliant toilet facilities required by CT code (may be phased floor by floor)
4. New air conditioning system (may be phased floor by floor)
5. New ADA compliant signage; interior and exterior (may be phased floor by floor)
6. New ADA compliant door hardware (may be phased floor by floor)
7. New floor, wall and ceiling finishes (may be phased floor by floor)
8. Evaluate existing HVAC system to ensure compliance with current codes for intended uses
9. ADA compliant Fire Alarm System (may be phased floor by floor)
10. New generator as required by code
11. New ramps for access to all levels from the new elevator (may be phased floor by floor)
12. Abandon existing elevator as it does not meet code and will not receive re-certification

Since the building has received historic designation, some relief from full code compliance is feasible. Conversely, if the building is renovated in phases, the Authorities Having Jurisdiction (Building/Fire Regulatory Officials) will need to review the scope and determine the minimum upgrade that will be needed for the entire building and site even if one portion such as the theater only is being renovated. This might add a premium to the cost of developing the first phase but will pay off when other phases are developed later.

Since there are a very limited number of drawings available of the existing building it is difficult to calculate the R-Value of the building envelope. This will make compliance with the new energy code somewhat complicated. Once again the Authorities Having Jurisdiction will need to weigh in with their interpretations.

Connecticut is scheduled to have a new code cycle soon. The exact date is not know at this time. It is our recommendation that when construction drawings are being developed that they comply with the new code.

6. OUTLINE SPECIFICATIONS

OUTLINE SPECIFICATIONS:MEMORIAL BLVD. SCHOOL

DIVISION O1 – GENERAL REQUIREMENTS		
010000	GENERAL REQUIREMENTS / GENERAL CONDITIONS	By General Contractor or CM
011000	SUMMARY	The work consists of: New elevator addition, code upgrade and renovations of 105,000 sq. ft.
012100	ALLOWANCES / CONTINGENCIES	1. New Electric Service, if Needed $ 2. New Telephone Service, if Needed $ 3. New Cable T.V. Service, if Needed $ 4. New Gas Service, if Needed $
012300	ALTERNATES	TBD
015000	TEMPORARY FACILITIES AND CONTROLS	Trailers, Toilets and Temporary Utilities
017329	CUTTING & PATCHING	To accommodate new construction and renovations as shown
017419	CONSTRUCTION WASTE MANAGEMENT & DISPOSAL	By the Contractor or by CM

DIVISION O2 – EXISTING CONDITIONS		
024116	SELECTIVE DEMOLITION	As required for the new elevator, interior walls, doors, plumbing fixtures, toilet compartments, lockers, interior finishes

DIVISION O3 – CONCRETE		
033000	CAST-IN PLACE CONCRETE	• 3,500 psi For Slabs • 3,000 psi for Footings and Walls • Vapor Retarder 0.01 perm after conditioning and Class “A” <u>SCOPE:</u> New addition footing, foundation, new interior exterior ramps, generator pads, equipment pads
033000	CAST-IN PLACE CONCRETE	<u>TREATMENT & ACCESSORIES</u> 1. Joint sealer for exterior and interior concrete slabs shall be Concrete Joint SL Sealant as manufactured by Titebond. Install per manufacturer’s recommendations. 2. Water-stop between new and existing concrete shall be PVC Retrofit systems in 6” and 9” profile depending on site conditions as manufactured by Greenstreak Group, Inc., St. Louis, MO. Provide epoxy gel, stainless steel batten bars/anchor bolts. Install per manufacturer’s recommendations.
	CONCRETE PATCH INTERIOR	ARDEX-SDP as manufactured by ARDEX Engineered Cements
	CONCRETE PATCH INTERIOR	ARDEX-CP as manufactured by ARDEX Engineered Cements
	CONCRETE SUB-FLOOR PREP	ARDEX Feather Finish

DIVISION 04 – MASONRY		
042000	UNIT MASONRY	CMU: Light Weight 95-100 lbs/cu.ft. ASTM C-90, Light Weight, 1,900 psi as manufactured by Westbrook MORTAR: For Decorative CMU and Face Bricks Colored Pre-blended cement lime as manufactured by Lehigh SCOPE: New interior walls in selected locations

DIVISION 05 – METALS		
051200	STRUCTURAL STEEL FRAMING	As shown
055000	METAL FABRICATIONS	LOOSE LINTELS: ASTM A-36/A-36M with 25% Recycled content, Exterior Galv., Interior Prime Painted, Min. 8" Bearing Both Sides METAL NOSING Model 241-BF by Wooster Products, Inc.
055100	METAL STAIRS	• Concrete Filled Steel Pan Stairs and Landings • 1 ½" O.D. Steel Pipe Railing for Inside Application SCOPE: New stair from Cafe to Kitchen below.

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES		
061000	ROUGH CARPENTRY	Dimensional Lumber, Hem Fir (north), NLGA, Hem Fir, WCLIB or WWPA, Doug Fir or Kiln Dried Spruce
061000	ROUGH CARPENTRY	Hem Fir Pressure Treated Wood. MCQ Micronized Copper Quaternary does not require barrier tape or stainless steel nails.
062000	FINISH CARPENTRY	Plastic Laminate Casework, Counter and Window Sills

DIVISION 07 – THERMAL AND MOISTURE PROTECTION		
071326	SELF-ADHERED SHEET WATERPROOFING	WALLS: 60 Mil Bituthene By W. R. Grace with 1" Protection/Drainage Board "Perimate" by Dow Chemical Co. SLABS: Preprufe 300R By W. R. Grace LOCATION: New elevator addition
075323	EPDM ROOFING	30-YEAR: ASTM D-4637, Type II, 90 Mil, Fully Adhered, Over Protection Board By Carlisle LOCATION: New elevator/cafeteria addition

076200	SHEET METAL FLASHING AND TRIM	Open Valleys & Step Flashing 16 oz Non-Lead Coated Copper Drip Edge, Gutters and Downspouts .032" Alum. Fabricate all shapes and forms with unpainted metal. Paint after fabrication, bending, grinding and welding is complete.
078413	PENETRATION FIRESTOPPING	3M to meet UL Requirements
079200	JOINT SEALANTS	Low Modulus Silicone Sealants: 1. SPECTRUM 1 BY TREMCO 2. SCS 2000 SILPRUF BY GE 3. DOW CORNING 795 4. 890 BY PECORA

DIVISION 08 – OPENINGS		
081113	HOLLOW METAL DOORS AND FRAMES	16 ga galvanized exterior and 16 gauge primed interior
081433	FIBERGLASS PANEL DOORS	Therma-Tru C/S Acrovyn Curries Ceco <u>LOCATION:</u> Remove all existing interior doors and replace with new. Existing frames to remain in place.
083113	ACCESS DOORS AND FRAMES	UF-5000 by Acudor.
084113	ALUMUMINUM FRAMED ENTRANCE & STOREFRONTS	Kawneer Isoglaze 450T with 1" Insul. Glass Units Kawneer 1600 and EFCO 5600 "Thermally Improved" EFCO: System 5600 2 ½" w/ Duracast Fiberglass Pressure Plate Kawneer 1600 UT (Ultra Thermal) New Improved YKK 45XT Dual Thermal Barrier <u>LOCATION:</u> New elevator and cafe addition.
084113	ALUMINUM DOORS WIDE STILE	EFCO D518 DuraStile available in 2", 2 ¼" and 2 ½" thickness <u>LOCATION:</u> New elevator and cafe addition.
087100	DOOR HARDWARE	Hinges: 4 ½"x4 ½" five knuckles standard wt. or heavy wt. full mortise for doors 36" wide or less x 1¾" thick, Finish 630 Locks & Latch Sets: Sargent 8200 Series LW1L Design Finis Door Closer: Sargent 351 Series, Finish 689 Exit Devices: Sargent Door Stops & Holders: Sargent 590 Series, Finish 626 Electromagnetic Holders: Rixon 998 Series, Tri Voltage, Finish 689 Wall Stops: Rockwood 409 Series Finish 626 or 630

		Floor Stops: Rockwood 440 or 442, Finish 626 or 630 Automatic Wall Holder: Ives WS45(X) Finish 626 or 630 Kick Plates: 18 Ga Aluminum Beveled Edges Finish 630 Flush Bolt: Pair Glynn Johnson FB30/40 Series, Fin. 626 Manual Flush Bolt: Rockwood 555/550, Finish 626 Weatherstripping: Pemko 303APKTST, Sweep 315CN, Meeting Stile 18061CP for pair doors Silencers: Rockwood 608 Finish: Generally St. Steel 630 or Brushed Chr. 626 LOCATION: All doors
088000	GLAZING	¼" laminated glass in Rated Doors and Where Required By Code 1" Insulated Tempered Unit at Exterior Glass Doors Fire Rated Glazing: 3/16" 20-Min. to 3-Hrs By Technical Glass Products (TPG) Specify Premium FireLite which polished on both sides For economy specify Standard FireLite, non-polished Triple Silver Low E: MSVD Coated ¼" Solarban 70 XL Annealed+1/2" air space Black (SIL) by Oldcastle Triple Silver Low E: MSVD Coated ¼" Solarban 72 Starphire Solar Control by PPG transmits 11% more visible light than 70 XL and 25% better solar control than Solarban 60 Starphire. Should go on surface #2. Construction: One lite of uncoated Starphire Glass and one lite with triple-silver coating engineered exclusively for use on Starphire substrate as manufactured by PPG and fabricated by Oldcastle and other companies. Translucent Glass: Satin Deco by Guardian Glass (Blue Hills) Sloped Glazing: 3/16" clear HS+.060 clear interlayer+1/4" Solarban XLT HS #4+1/2" Mill Air Space+3/16" clear HS+.060 clear interlayer+3/16" clear HS by Oldcastle (Laurel)
088300	MIRRORS	18"x36" at each lavatory
089000	LOUVERS AND VENTS	Aluminum fixed blade drainable louvers by Airolite or an approved equal

DIVISION 09 – FINISHES		
092216	NON-STRUCTURAL FRAMING	Viper-Stud 0.02" thick as manufactured by Marino-Ware
092900	GYPSUM BOARD/SHEATHING	DensArmor Plus High Performance Interior Panels meeting ASTM D-6329-98 for antimicrobial protection by Georgia Pacific with Fiberglass Taped Joints Tile Backer: Dense Shield by GP ½" Dens-Glass Gold by G-P Gypsum with Glass Mesh Joint Tape LOCATION: Interior of all rooms in of the building at Ground, First, Second and Third Floors. No new gypsum board in the theater and the lower gymnasium.

093000	TILING	2”x2” unglazed ceramic mosaic floor tile by American Olean or an approved equal 12”x12” Cliff Point by DalTile Laticrete Thinset 317 with 333 Super Flexible Additive Laticrete SpectraLOCK PRO Premium Grout (Stain resistant) LOCATION: New elevator/cafe addition. Patch and match at Toilet Rooms which has floor/wall tiles that are in good condition.
095113	ACOUSTICAL PANEL CEILINGS	Armstrong World Industries or an approved equal: TILES: 1. Dune Fine Texture Beveled or Angled Tegular 2. Clean Room Mylar VL (Kitchen) SUSPENSION 1. Interlude XL Dimensional Tee (Fancy) 2. Prelude XL (Basic) LOCATION: Throughout the building except in the Theater.
096513	RESILIENT BASE	4” High, Coils, 0.125” Thick, ASTM F 1861, Type TS Rubber Vulcanized Thermoset, Group 1 Solid Homogenous BY Johnsonite Magellan Adhesive for slabs with moisture LOCATION: All rooms except theater, Upper Gymnasium, Lower Gymnasium and toilet rooms.
096513	TREADS & RISERS	RTR-RD Raised Round Texture Treads and Risers by Johnsonite OR Integral Treads and Risers LOCATION: All stairs
096500	RESILIENT FLOORING	Summary: Include moisture testing and mitigation. Standard Excelon by Armstrong and Essentials by Mannigton are comparably priced. LOCATION: Storage Rooms
096816	SHEET CARPETING	28 Oz. Solution Dyed Nylon Commercial Carpet Glued Down Application Shaw. Magellan Adhesive for slabs with moisture Throughout the building except at Lower/Upper Gymnasium, toilet rooms and areas where tiling is indicated.
099100	PAINTING Specify Extra Materials	One coat primer with two coats of finish per Room Finish Schedule, PPG Manor Hall or an approved equal CMU Walls: One coat block filler: Sherwin Williams Kem Cati-Coat HS Epoxy 2 coats epoxy emul. Coating: Sherwin Williams Armor-Tile HS Polyester Epoxy

		Door Frames: One coat primer: Sherwin Williams Kem Kromic Universal Metal Primer 2 coats finish: Sherwin Williams Duration Home Interior Latex Satin LOCATION: The entire building interior.

DIVISION 10 – SPECIALTIES		
101400	SIGNAGE	1. Exterior Signs 2. Lighted Signs 3. Cast Metal Letters 4. Plaque 5. Interior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements: a. Laminated, Sandblasted Polymer: Raised graphics with Braille 1/32 inch above surface with contrasting colors as selected by Architect from manufacturer's full range and laminated to acrylic back. b. Edge Condition: Beveled. c. Corner Condition: Rounded to radius indicated. d. Mounting: Unframed. Wall mounted with two-face tape and adhesive. e. Lettering Style: Gill Sans upper case or other san serif or simple serif letterforms. f. Color: As selected by Architect from manufacturer's full range. g. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors. h. Thickness: 1/8 inch. 6. Blank back-plate if mounted on clear glass 7. Additional Directional Signs 8. Accessible Building Sign at Main Entrance ADA compliant at all doors LOCATION: Throughout the building and new additions
102113	TOILET COMPARTMENTS	Overhead braced and floor anchored baked enamel metal by Global or an approved equal High Density Polyethylene (HDPE) Texture “EX” by Scranton Products Series EX by Scranton Products LOCATION: At new ADA toilets. Remove existing and replace with new at all other locations.

102800	TOILET ACCESSORIES	Bobrick or an approved equal: T.T. Holder: B-2888 Paper Towel Holder: B-262 Liquid Soap Dispenser: B-2112 Counter Mounted Soap Dis. B-824 with 6V AC Adapter Swing Up Grab Bars: B-4998 Straight Grab Bars: B-490 (1 ¼" satin) Straight Grab Bars: B-6106 (1 ½" satin) Mirror Unit: B-165 Disposal Unit: B-43644 Coat Hooks B-2116 Baby Changing B-2210 (AWJ U944/U945H) Shower Curtain Rod B-6047 Shower Curtain 204-2 or 204-3 Shower Curtain Hooks 204-1 Towel Bar B-205 Shower Seat B-518 World Dryer: SMARTdri High Efficiency LOCATION: At new ADA toilets. Remove existing and replace with new at all other locations.

DIVISION 11 – EQUIPMENT		
	NO ITEMS	

DIVISION 12 – FURNISHINGS		
128413	FLOOR MAT	DESIGNSTEP pattern DURATION as manufactured by Construction Specialties or an approved equal.

DIVISION 14 – CONVEYING EQUIPMENT		
142100	ELEVATOR	Gen2 3500 Glass back elevator by Otis
142100	PLATFORM LIFT	At stage

DIVISION 32 – SITE		
320000	SITE	As shown

7. ROOM FINISH SCHEDULE

ROOM FINISH SCHEDULE:MEMORIAL BLVD. SCHOOL

DRWG REF.	ROOM NAMES	FLOOR	BASE	WALLS	CEILING	HT. IN FT.	REMARKS
B-1	All areas shown in yellow	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	Provide new treads and risers in all stairs.
B-1	All areas shown in green	10% of exist. C.T. floors to be patched with new.	ETR	ETR	2x2 suspended acoustic	8'	
B-1	Gymnasium	ETR	ETR	Paint	2x2 suspended acoustic	8'	
B-1	Swimming Pool	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-1	Mechanical/Storage	Paint	Paint	Paint	Paint	12'	
B-2	All areas shown in yellow except new addition.	VCT	Vinyl	ETR Bricks	2x2 suspended acoustic	9'	Provide new treads and risers in all stairs.
B-2	All areas shown in blue	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-2	All areas shown in green in theater	Ceramic Tile	Ceramic Tile	Paint	2x2 suspended acoustic	9'	
B-2	All areas shown in green school side	10% of exist. C.T. floors to be patched with new.	ETR	Paint	2x2 suspended acoustic	8'	
B-2	Upper Gym Balcony	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-2	New Cafe/Elev. Add.	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-3	All areas shown in yellow except new addition.	VCT	Vinyl	ETR Bricks	2x2 suspended acoustic	9'	Provide new treads and risers in all stairs.
B-3	All areas shown in blue	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-3	All areas shown in green in theater	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-3	All areas shown in green school side	10% of exist. C.T. floors to be patched with new.	ETR	Paint	2x2 suspended acoustic	8'	

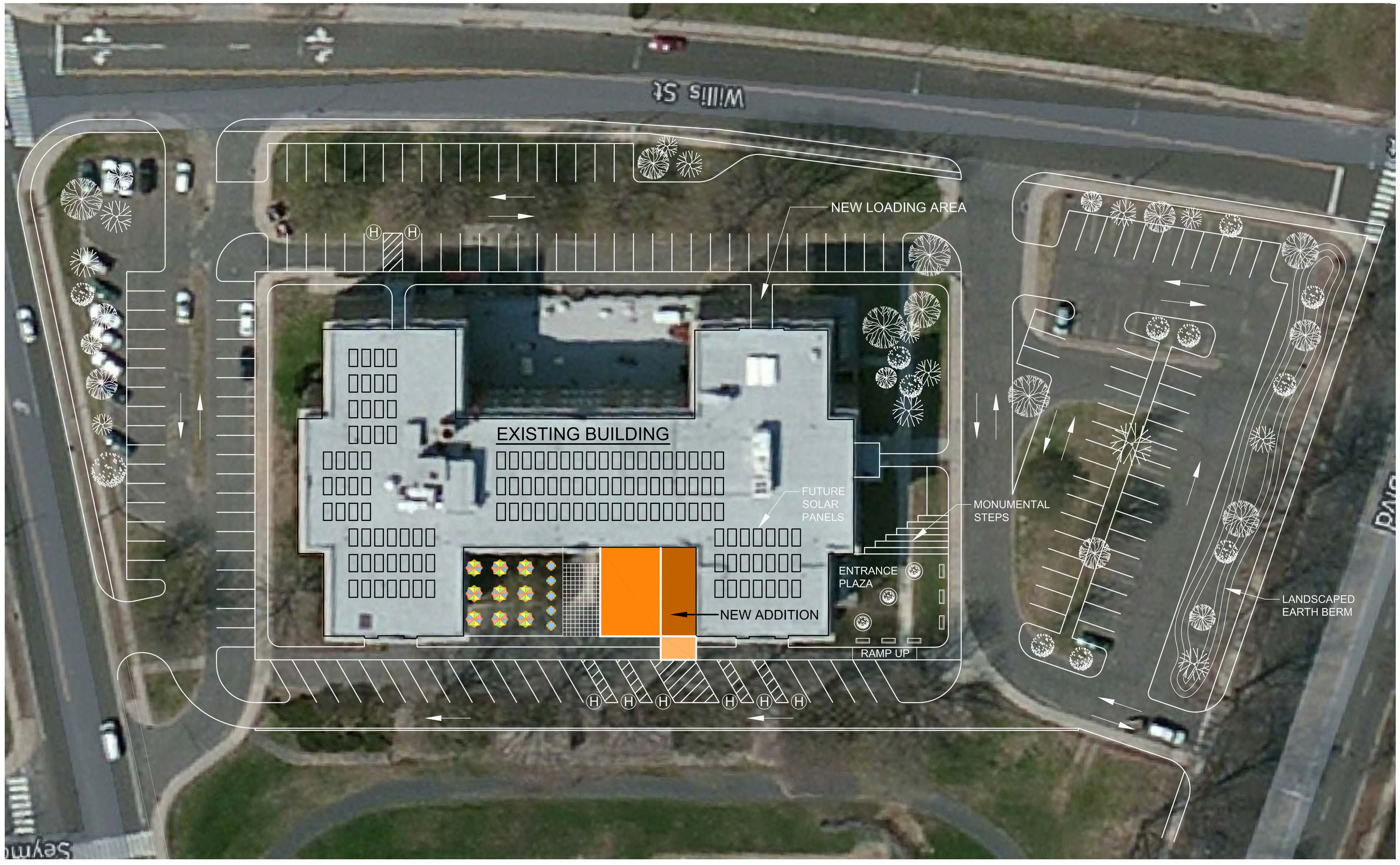
ROOM FINISH SCHEDULE: MEMORIAL BLVD. SCHOOL

DRWG REF.	ROOM NAMES	FLOOR	BASE	WALLS	CEILING	HT. IN FT.	REMARKS
B-3	Theater/Stage	Carpet	Vinyl	Paint	2x2 suspended acoustic	High	
B-3	New Lounge/Elev. Addition	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-4	All areas shown in yellow except new addition.	VCT	Vinyl	ETR Bricks	2x2 suspended acoustic	9'	Provide new treads and risers in all stairs.
B-4	All areas shown in blue	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-4	All areas shown in green on the theater side	Ceramic Tile	Ceramic Tile	Paint	2x2 suspended acoustic	9'	
B-4	All areas shown in green on the stage side	VCT	VCT	Paint	2x2 suspended acoustic	9'	
B-4	All areas shown in green school side	10% of exist. C.T. floors to be patched with new.	ETR	Paint	2x2 suspended acoustic	8'	
B-4	Lower Balcony	Carpet	Vinyl	Paint	Paint	High	
B-4	New Elevator and Lobby Addition	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-5	All areas shown in yellow except new addition.	VCT	Vinyl	ETR Bricks	2x2 suspended acoustic	9'	Provide new treads and risers in all stairs.
B-5	All areas shown in blue	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-5	All areas shown in green in theater	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	
B-5	All areas shown in green school side	10% of exist. C.T. floors to be patched with new.	ETR	Paint	2x2 suspended acoustic	8'	
B-5	Upper Balcony	Carpet	Vinyl	Paint	2x2 suspended acoustic	High	
B-5	New Lounge/Elev. Addition	VCT	Vinyl	Paint	2x2 suspended acoustic	9'	

8. RENDERING & DRAWINGS

D·R·A

Rendering:
Addition & Alterations
MEMORIAL BOULEVARD SCHOOL
Bristol, CT



SITE PLAN

NO SCALE

150 PARKING SPACES

D·R·A

Drummey
Rosane
Anderson,
Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL
BOULEVARD
SCHOOL

Bristol,
Connecticut

BID SET
PROGRESS PRINT
00/00/1998

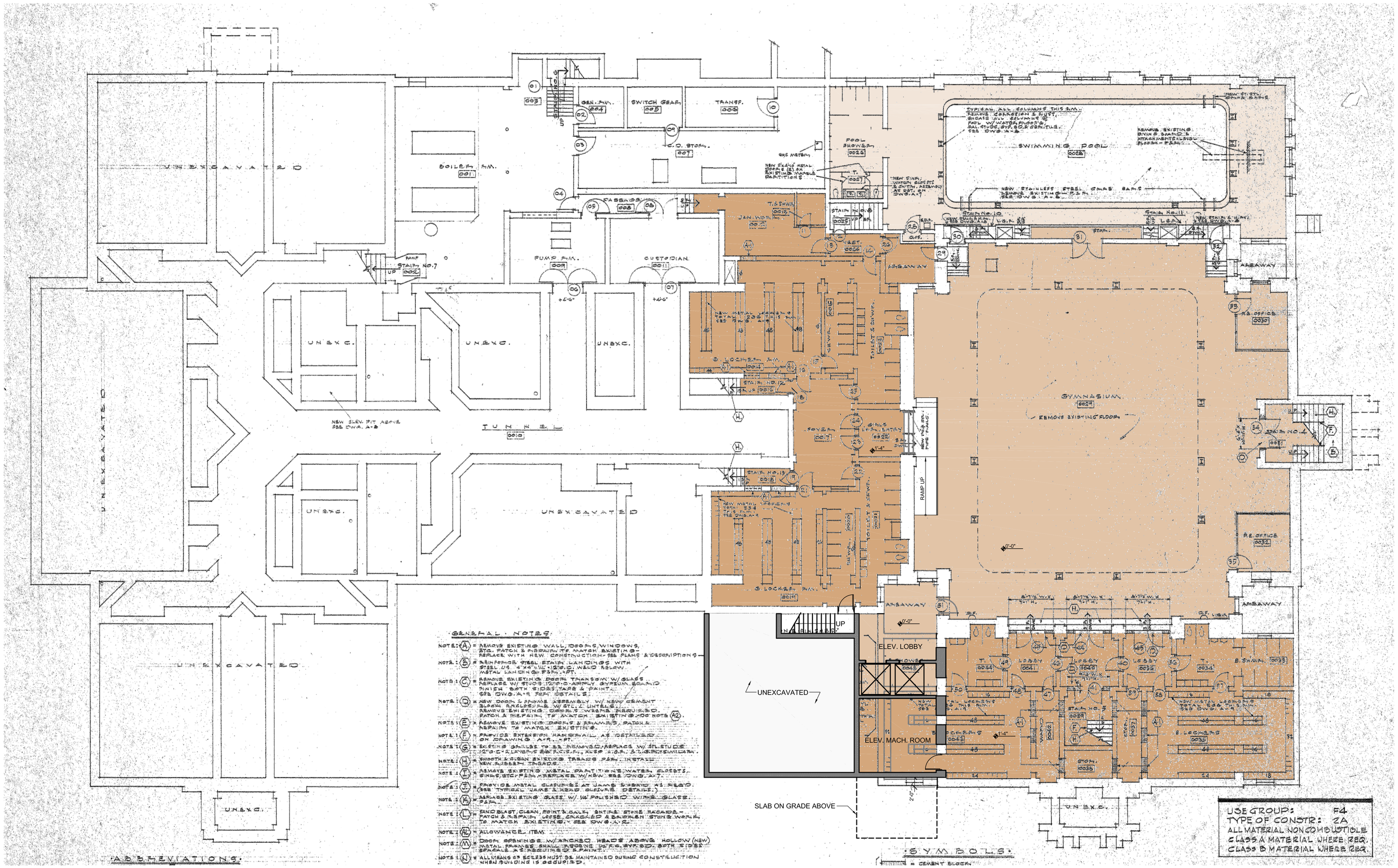
KEY PLAN

N

PROPOSED
SITE PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

C-1



D·R·A

Drummey Rosane Anderson, Inc.
225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

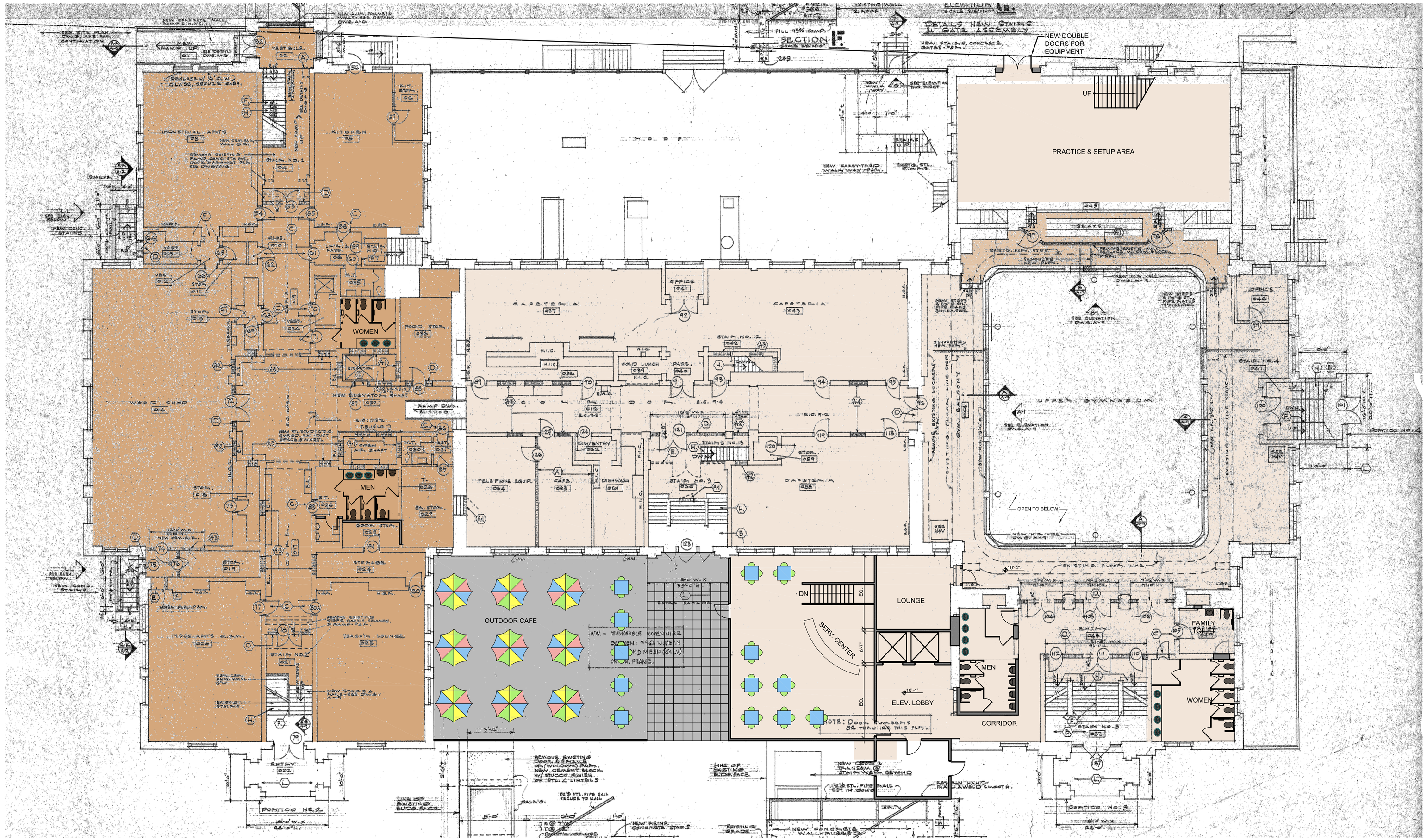
KEY PLAN

N

BASEMENT FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-1



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

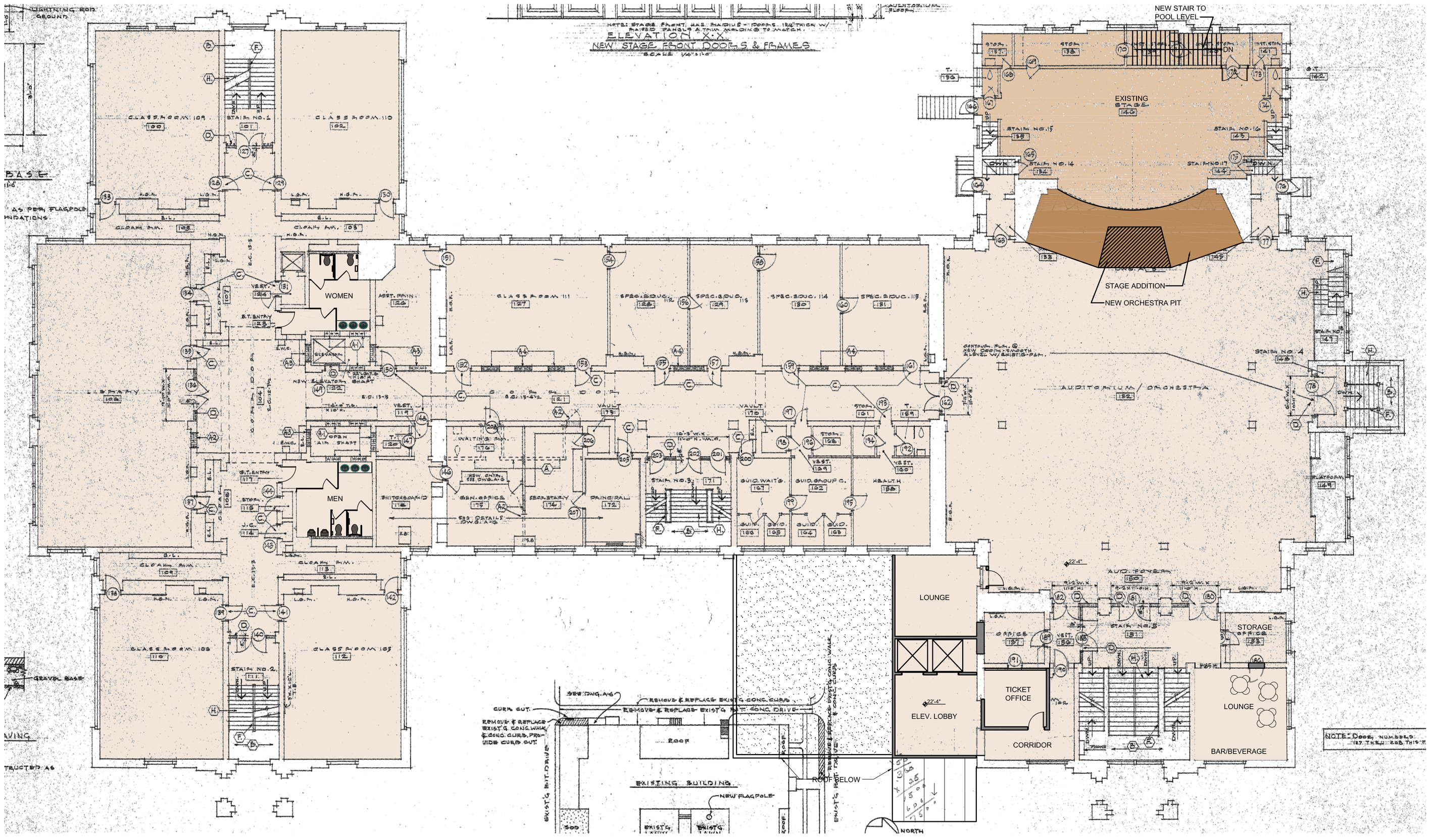
KEY PLAN

N

GROUND FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-2



D·R·A
Drummey Rosane Anderson, Inc.
225 Oakland Road
Suite 205
South Windsor, CT
06074
Architecture
Planning
Interior Design
617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

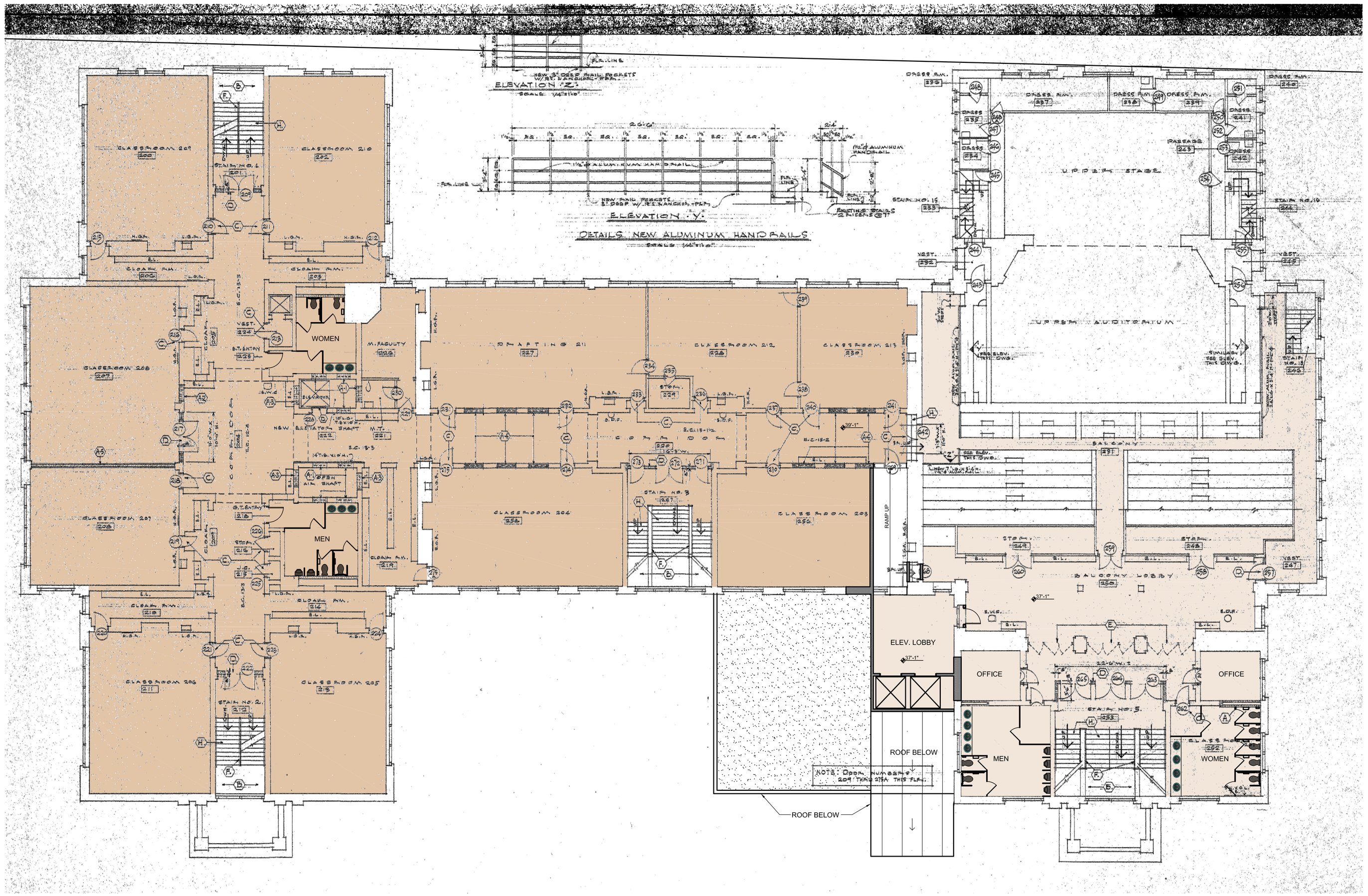
KEY PLAN

N

FIRST FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-3



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

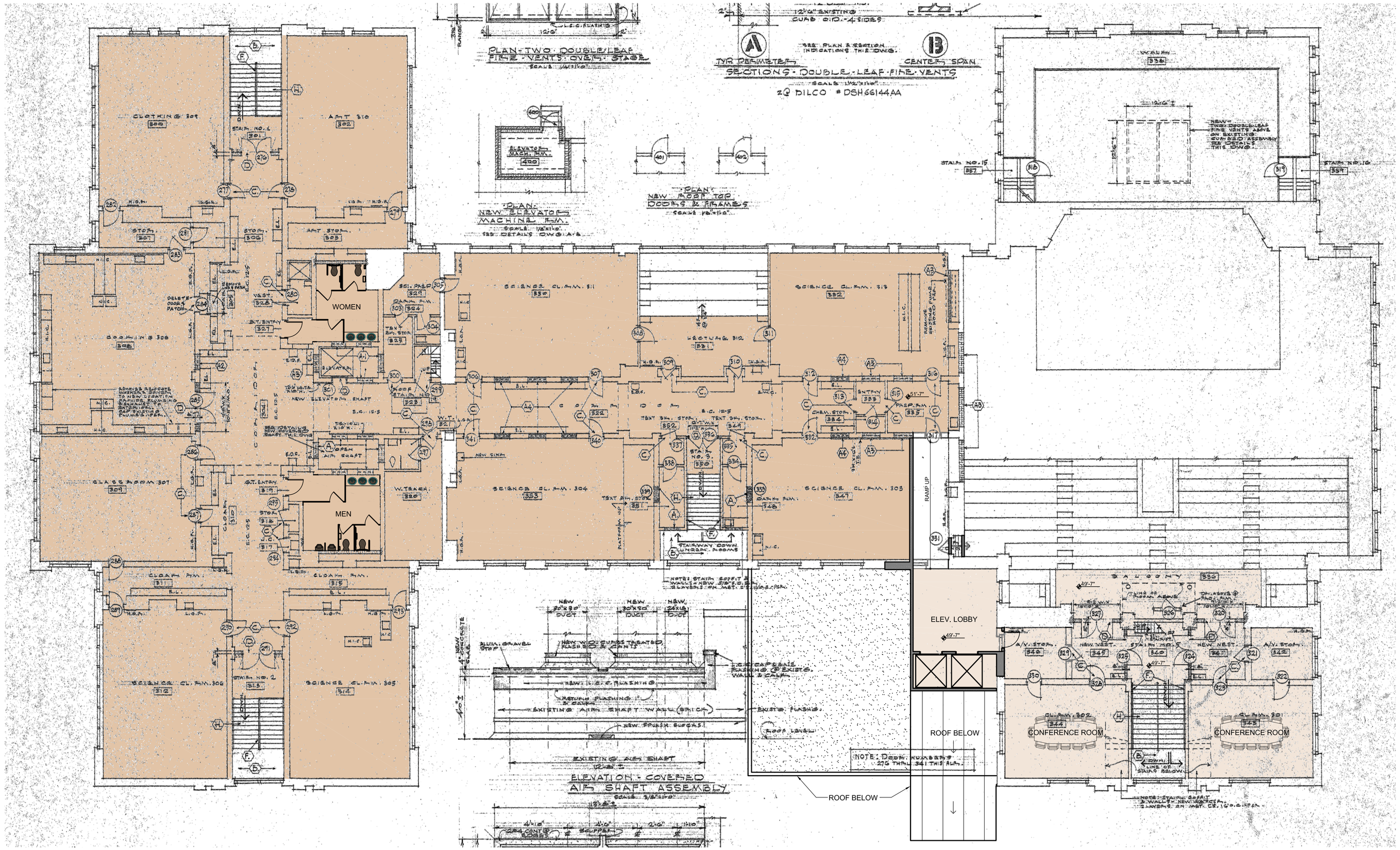
KEY PLAN

N

SECOND FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-4



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

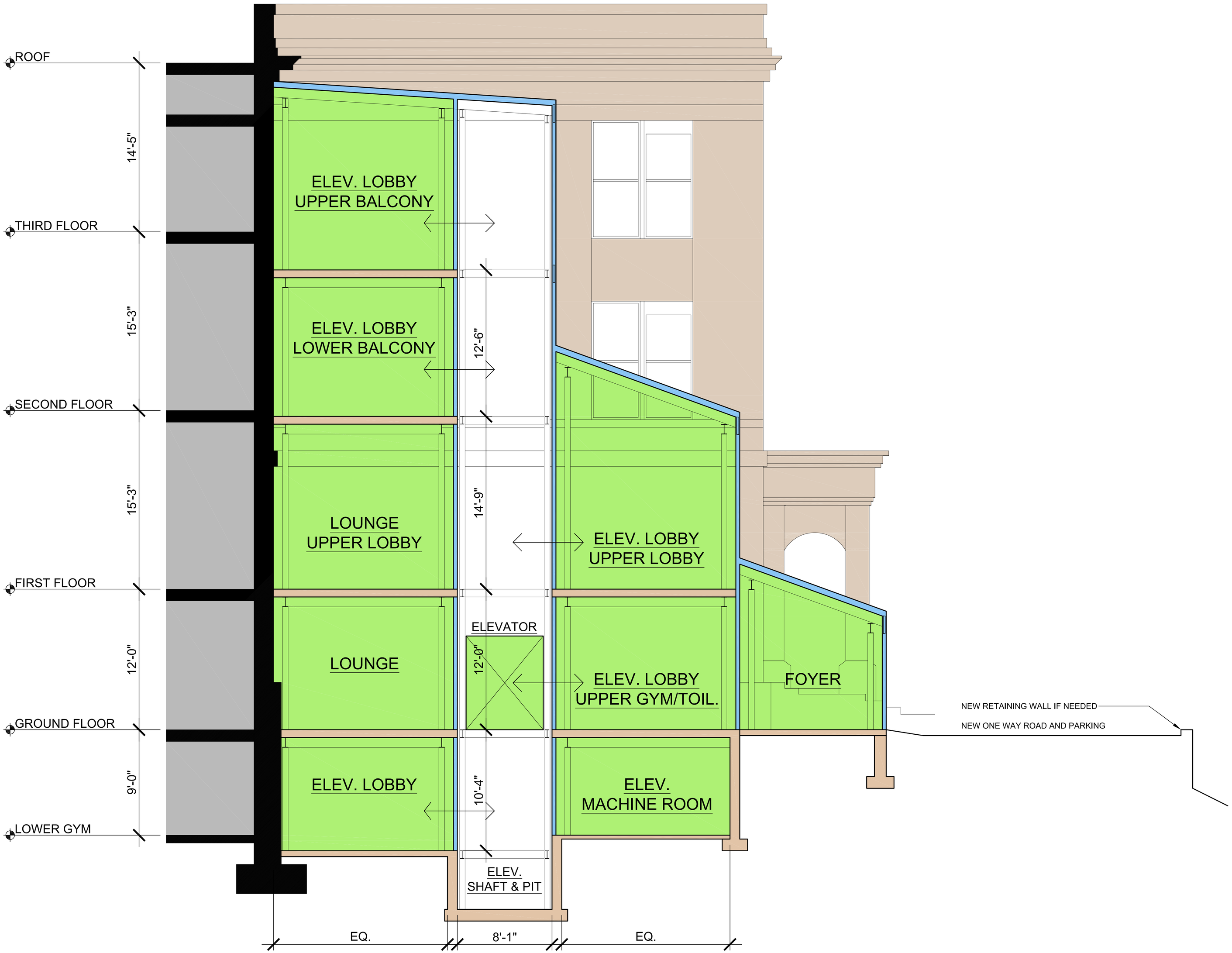
KEY PLAN

N

THIRD FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-5



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

KEY PLAN

N

BUILDING SECTION

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-6

D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

KEY PLAN

N

BUILDING SECTION

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-7

D·R·A

Drummey
Rosane
Anderson,
Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol,
Connecticut

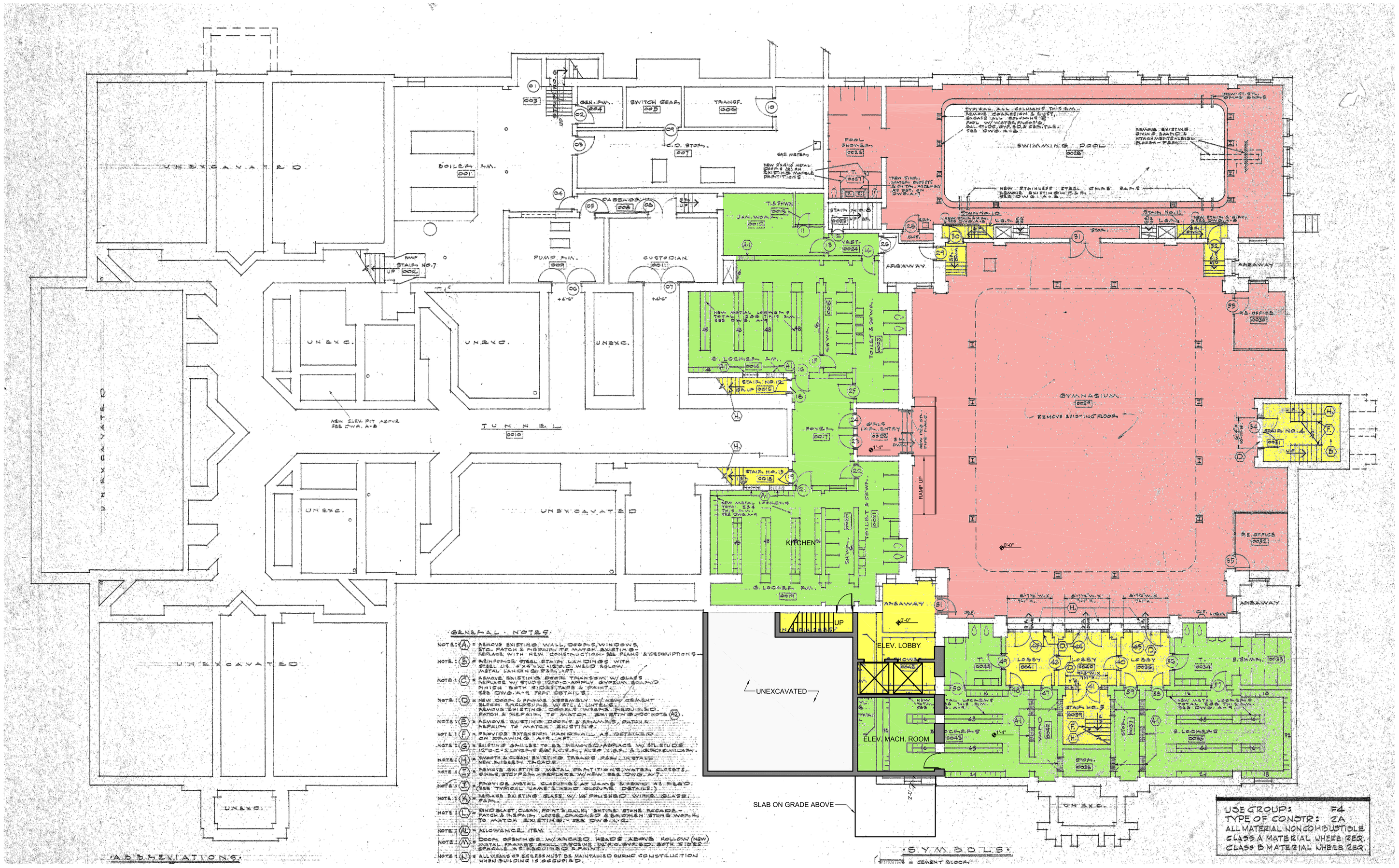
KEY PLAN

N

BUILDING SECTION

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

A-8



D·R·A
Drummey Rosane Anderson, Inc.
225 Oakland Road
Suite 205
South Windsor, CT
06074
Architecture
Planning
Interior Design
617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

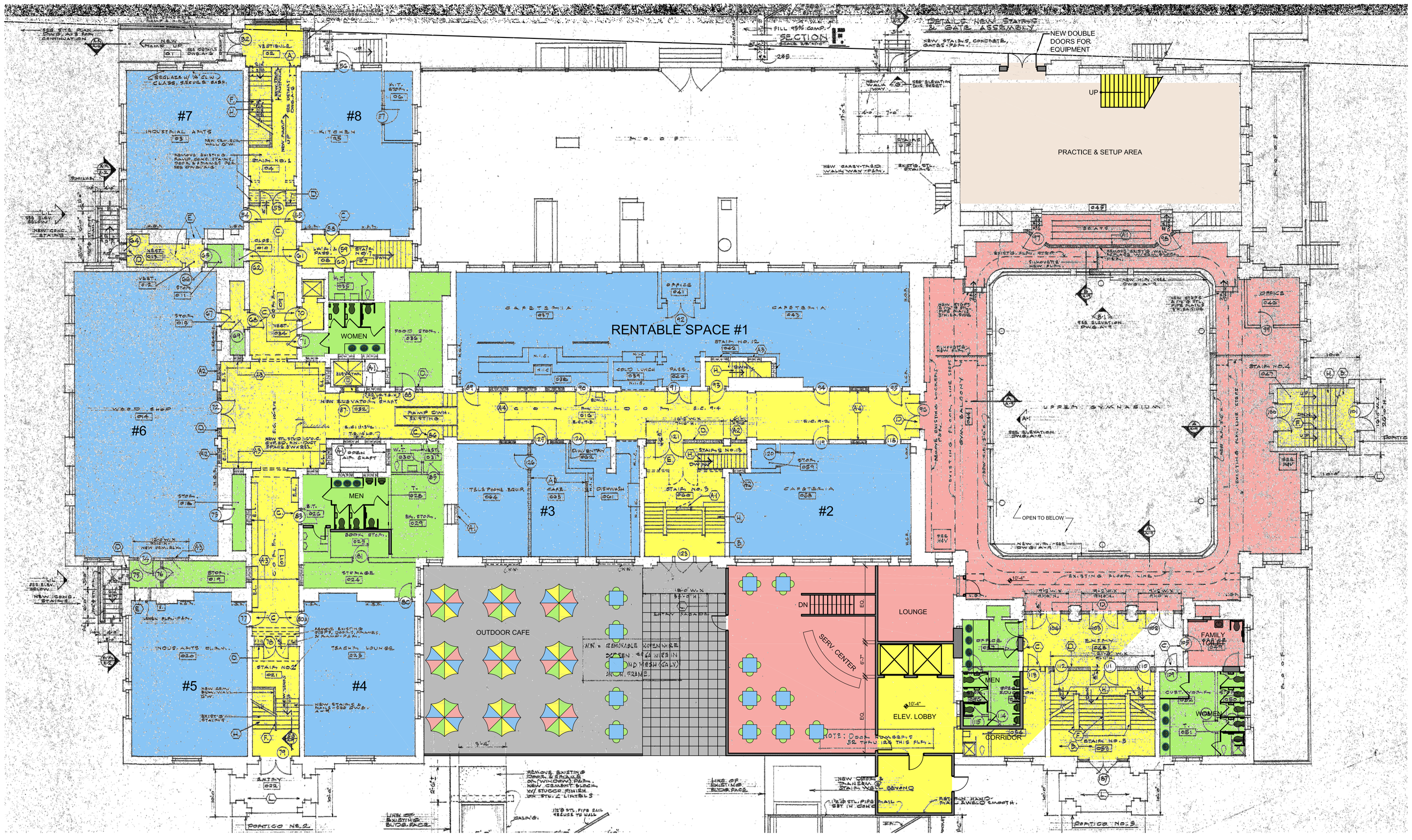
KEY PLAN

N

BASEMENT FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

B-1



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

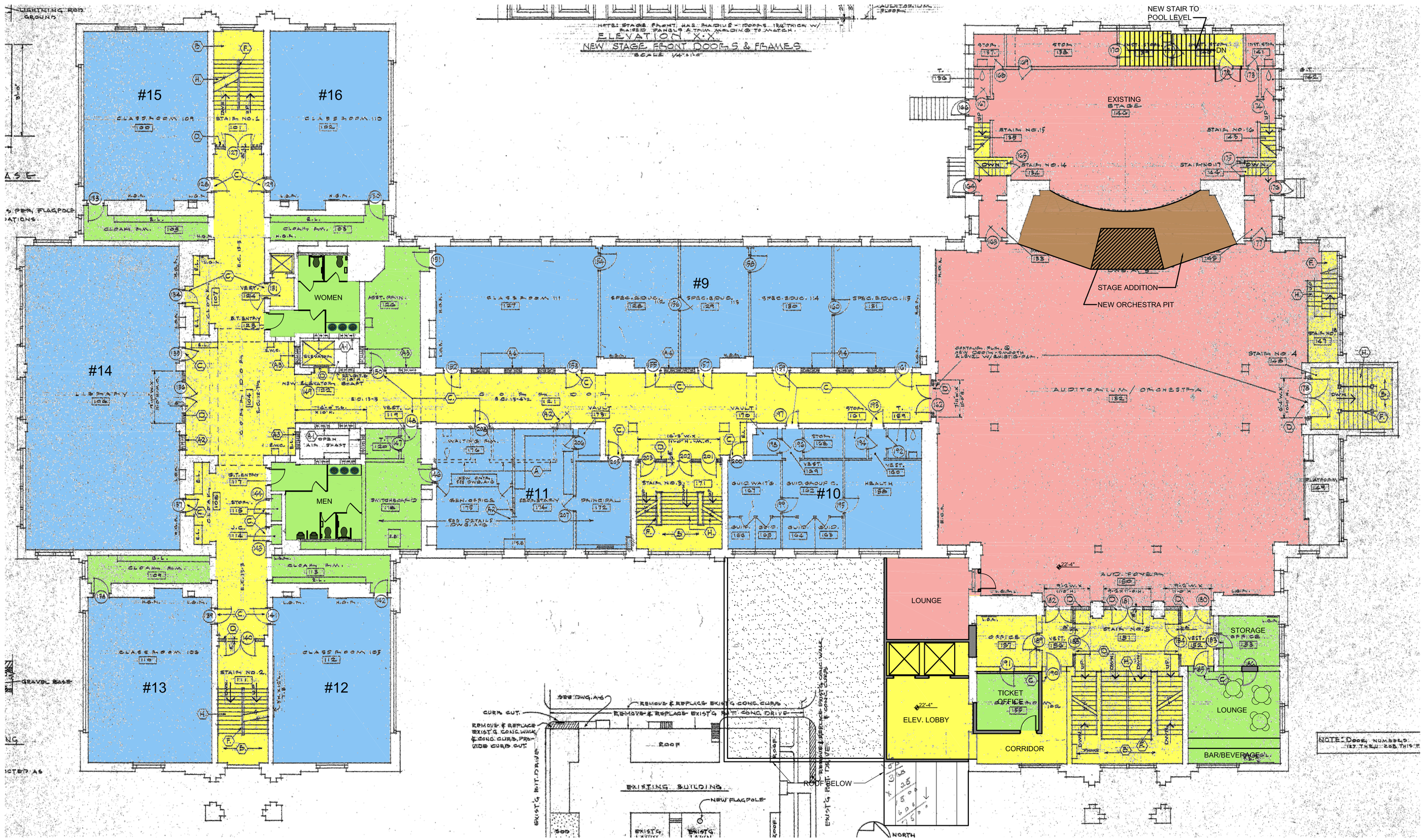
KEY PLAN

N

GROUND FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

B-2



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

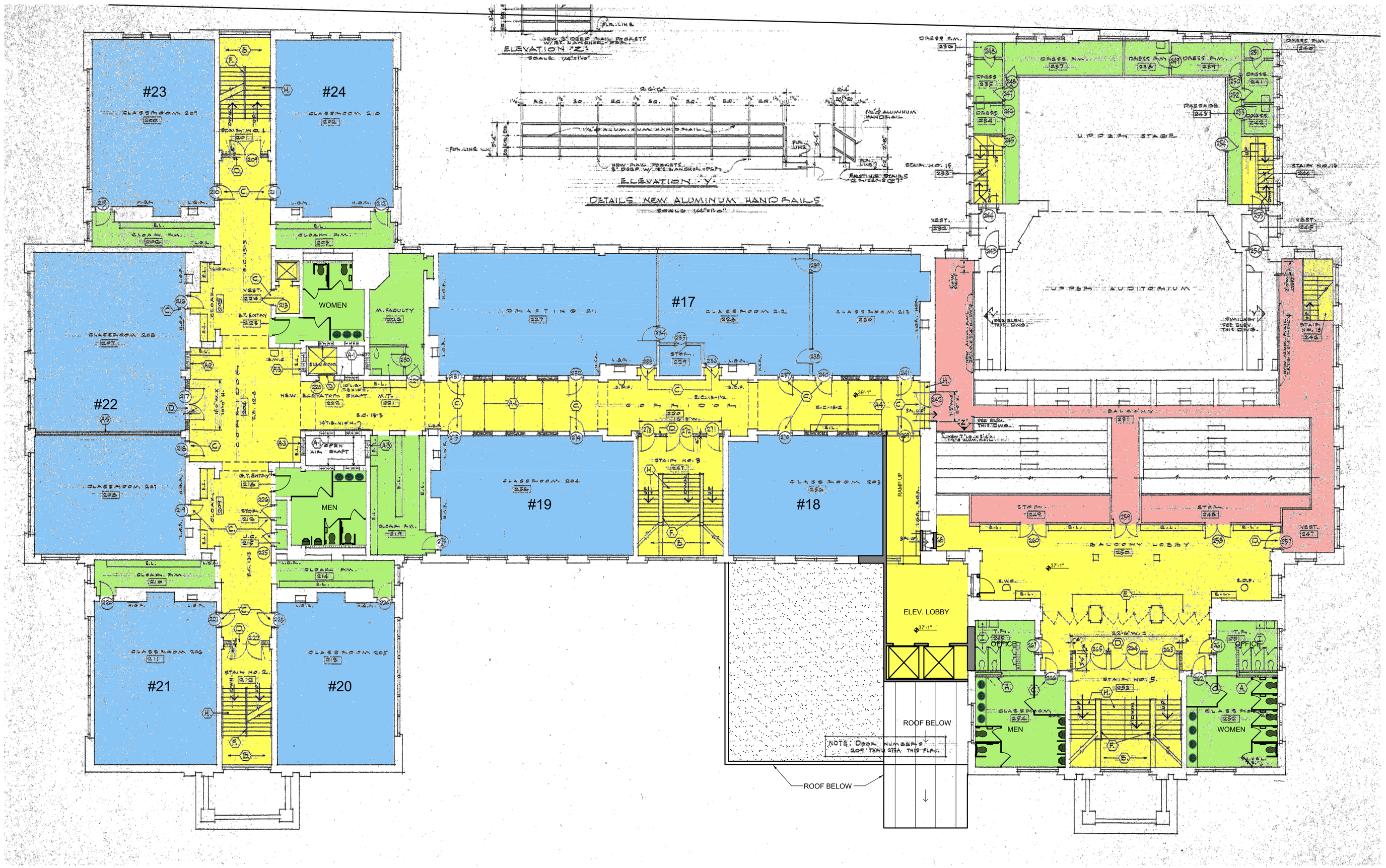
KEY PLAN

N

FIRST FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

B-3



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

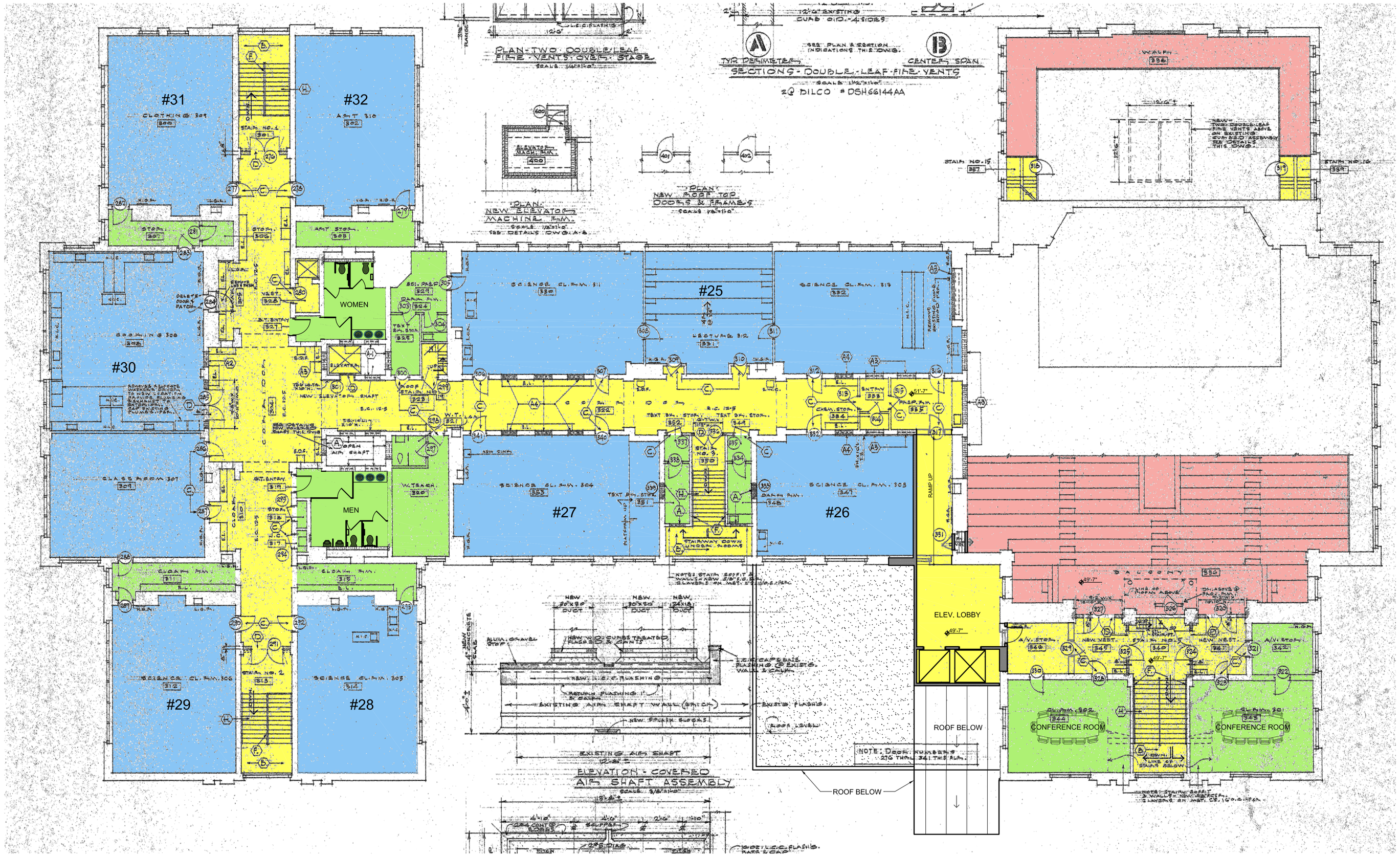
KEY PLAN

N

SECOND FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

B-4



D·R·A

Drummey Rosane Anderson, Inc.

225 Oakland Road
Suite 205
South Windsor, CT
06074

Architecture
Planning
Interior Design

617-964-1700
fax 617-969-9054
info@draws.com

MEMORIAL BOULEVARD SCHOOL

Bristol, Connecticut

KEY PLAN

N

THIRD FLOOR PLAN

Scale: N.T.S.
Drawn by: GEB
Job# 14023.00
Date: 2/12/15

B-5

9. PROJECT PHASING

D·R·A

Drummey Rosane Anderson Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning
Architecture
Interior Design
e-mail:
website:

860-644-8300 PHONE
860-644-8301 FAX
info@draws.com
www.DRAarchitects.com

PROJECT PHASING

We believe a phased implementation of the total scope of work makes the most sense for the project. While it is easy to quantify the scope of work for the theater component of the project, the development of the building and site may be viewed as fluid. Based on the interest expressed by various groups in using the theater, it might be prudent to focus on the development of the theater first. Once the theater is operational on a regular basis, the City can gauge the demand for spaces for other uses and renovate those specific spaces accordingly.

A phased approach will spread out the total expenditure over a number of years and will make financing through Capital Improvements more feasible. However, it must be understood that the first phase will not only include that which is needed for Phase-1 but will also lay the foundation for the future phases to avoid a higher cost as well as disruption to the already completed areas later.

PHASE -1:

A. Site Work for ADA Accessibility Only: $150,000

1. Stripping of existing asphalt pavement on east side only (front of the building, facing fields)
2. Removing existing site steps on the east side, re-grading for new accessible drive to the new accessible entrance which will also become the Main Entrance to comply with ADA
3. New asphalt parking east side only
4. New concrete walks to the Main Entrance
5. New ADA compliant drop-off and pickup area
6. Site lighting on east side only to comply with P&Z requirements

B. New Elevator Addition East Side: $900,000

1. New elevator enclosure from Sub-Basement to Third Floor Levels and hoist-way doors
2. ADA compliant Main Entrance accessible from new ADA compliant access road on the east side
3. New elevator lobbies to be connected to all levels of theater and school at a later date (See C-4 below)
4. New elevator machine room in the Sub-Basement
5. 2 ADA compliant elevator cabs, 4 cab doors, hoists and related equipment
6. Sprinkler, HVAC, lights, fire alarm system, exit lights and emergency lights

C. Theater Renovations (21,300 S.F.): $3,500,000

1. New ADA compliant toilet facilities on the level below and above Main Theater. Total number of toilet fixtures shall comply with Gender Potty Parity as required by code for Places of Assembly
2. Renovate existing spaces to create new Ticket Sales Office, Theater Administrative Offices and Public Waiting Areas
3. Code upgrade and general renovations of all spaces on the theater side starting with the level below the main floor, main floor, lower balcony, upper balcony, orchestra enclosure, extension of stage and platform lift to the stage
4. Break through existing exterior walls to connect all levels from Sub-Basement to the Upper Balcony on the theater side with the new elevator lobbies.
5. Modifications to stair handrails, treads and risers to meet current codes
6. Modifications to the lower and upper balcony seating to create ADA/Companion seating complying with sight line requirements per code
7. New ADA compliant signage with Braille
8. New doors and hardware to comply with ADA - existing frames to remain
9. Modify existing entrance/exit to serve as the Main Entrance capable of allowing exit for the 2/3 of total auditorium occupancy to meet current codes
10. Provide "Floor Proximity Egress Path Marking" and associated lighting to meet current codes
11. Patch, repair and/or provide new, as the case may be, floor, wall and ceiling finishes in renovated Theater areas as described in Line # 3 above.
12. Provide ADA required assisted hearing system for the theater
13. Remove existing and provide new rooftop unit to serve renovated areas as described in Line # 3 above.
14. New Voice Evacuation System including battery backup as required by code
15. Upgrade existing Fire Alarm system to meet current codes
16. Upgrade existing Exit Light system to meet current codes
17. Upgrade emergency light system to meet current codes
18. Please note that amenities of stage lighting and a sound system are not included in this estimate.
19. Existing hot water loop shall supply hot water to new toilets in the Theater area.
20. Existing electrical panels shall feed new electrical systems in the renovated Theater.

D. School Renovations First Floor (16,000 S.F.) $1,700,000

1. New common ADA compliant toilet facilities and code upgrade for public/common areas shown in green and yellow as shown on the Conceptual drawings.
2. Complete renovations including new floors, base, walls/finishes, ceiling, refurbishing of all stairs, toilet compartments, toilet accessories, sprinkler, plumbing lines, plumbing fixtures, HVAC, lights, emergency lights, exist lights, fire alarm system, and electrical services in areas shown in yellow and green
3. General demolition, cleanup of existing construction/furnishings, installation of main lines for sprinkler/electrical/fire alarm/telephone/data, main supply/return and ducts in areas shown in blue. (Tenant fit-up including new ceiling, lights, extension of ducts, ceiling diffusers, and utility lines, dedicated A.C. unit, painting of walls and new flooring will be provided by the tenants. This is one of many models that landlords typically follow as part of the lease).
4. New modular heating/hot water plant, distribution lines and controls for toilets in the theater and first floor of the school
5. New gas service
6. New plumbing work associated with all toilets on the First Floor only
7. New electrical service/meter for the entire building
8. New electrical panels to feed new elevator addition, cafe, kitchen, theater and the first floor of the school
9. Emergency generator for the entire building
10. Additional site development and site lighting

E. CAFE & COMMERCIAL KITCHEN (Owner's option to include in the next phase) : $ 400,000

1. New Cafe & outdoor Eating Space (1,200 S.F. building only)
2. New dedicated hot water, HVAC and electrical system for Cafe/Kitchen
3. Renovate space in the Lower Gymnasium for new kitchen (800 S.F.)
1. Interior fit up, furnishing and commercial kitchen equipment, except hood shall be the responsibility of the tenant as part of the lease.

PHASE-2: SECOND FLOOR SCHOOL (16,000 S.F.): $1,650,000

1. New common ADA compliant toilet facilities and code upgrade for public/common areas shown in green and yellow as shown on the Conceptual drawings.
2. Complete renovations including new floors, base, walls/finishes, ceiling, refurbishing of all stairs, toilet compartments, toilet accessories, sprinkler, plumbing lines, plumbing fixtures, HVAC, lights, emergency lights, exist lights, fire alarm system, and electrical services in areas shown in yellow and green
3. General demolition, cleanup of existing construction/furnishings, installation of main lines for sprinkler/electrical/fire alarm/telephone/data, main supply/return and ducts in areas shown in blue. (Tenant fit-up including new ceiling, lights, extension of ducts, ceiling diffusers, and utility lines, dedicated A.C. unit, painting of walls and new flooring will be provided by the tenants. This is one of many models that landlords typically follow as part of the lease).
4. New modular heating/hot water plant, distribution lines and controls for the second floor of the school
5. New plumbing work associated with all toilets on the Second Floor
6. New electrical panels to feed second floor of the school
7. Additional site development and site lighting as required

PHASE-3: THIRD FLOOR SCHOOL (16,000 S.F.): $1,650,000

1. New common ADA compliant toilet facilities and code upgrade for public/common areas shown in green and yellow as shown on the Conceptual drawings.
2. Complete renovations including new floors, base, walls/finishes, ceiling, refurbishing of all stairs, toilet compartments, toilet accessories, sprinkler, plumbing lines, plumbing fixtures, HVAC, lights, emergency lights, exist lights, fire alarm system, and electrical services in areas shown in yellow and green
3. General demolition, cleanup of existing construction/furnishings, installation of main lines for sprinkler/electrical/fire alarm/telephone/data, main supply/return and ducts in areas shown in blue. (Tenant fit-up including new ceiling, lights, extension of ducts, ceiling diffusers, and utility lines, dedicated A.C. unit, painting of walls and new flooring will be provided by the tenants. This is one of many models that landlords typically follow as part of the lease).
4. New modular heating/hot water plant, distribution lines and controls for the second floor of the school
5. New plumbing work associated with all toilets on the Third Floor
6. New electrical panels to feed second floor of the school
7. Additional site development and site lighting as required

PHASE-4: BASEMENT LEVEL SCHOOL (20,400 S.F.): $2,100,000

1. New common ADA compliant toilet facilities and code upgrade for public/common areas shown in green and yellow
2. Complete renovations including new floors, base, walls/finishes, ceiling, refurbishing of all stairs, toilet compartments, toilet accessories, sprinkler, plumbing lines, plumbing fixtures, HVAC, lights, emergency lights, exist lights, fire alarm system, and electrical services in areas shown in yellow and green
3. General demolition, cleanup of existing construction/furnishings, installation of main lines for sprinkler/electrical/fire alarm/telephone/data, main supply/return and ducts in areas shown in blue. (Tenant fit-up including new ceiling, lights, extension of ducts, ceiling diffusers, and utility lines, dedicated A.C. unit, painting of walls and new flooring will be provided by the tenants. This is one of many models that landlords typically follow as part of the lease).
4. New modular heating/hot water plant, distribution lines and controls for the Basement Level.
5. New plumbing work associated with all toilets on the Basement Level
6. New electrical panels to feed second floor of the school
7. Additional site development and site lighting as required

PHASE-5: SUB-BASEMENT LEVEL SCHOOL (17,000 S.F.): $1,750,000

1. New common ADA compliant toilet facilities and code upgrade for public/common areas shown in green and yellow as shown on the Conceptual drawings.
2. Complete renovations including new floors, base, walls/finishes, ceiling, refurbishing of all stairs, toilet compartments, toilet accessories, sprinkler, plumbing lines, plumbing fixtures, HVAC, lights, emergency lights, exist lights, fire alarm system, and electrical services in areas shown in yellow and green
3. General demolition, cleanup of existing construction/furnishings, installation of main lines for sprinkler/electrical/fire alarm/telephone/data, main supply/return and ducts in areas shown in blue. (Tenant fit-up including new ceiling, lights, extension of ducts, ceiling diffusers, and utility lines, dedicated A.C. unit, painting of walls and new flooring will be provided by the tenants. This is one of many models that landlords typically follow as part of the lease).
4. New modular heating/hot water plant, distribution lines and controls for the Sub-Basement Level
5. New plumbing work associated with all toilets on the Sub-Basement Level
6. New electrical panels to feed second floor of the school
7. Additional site development and site lighting as required

GRAND TOTAL OVER 10 YEARS INCLUDING ESCALATION	**$13,800.00**
PROFESSIONAL DESIGN SERVICES 6.5% +/-	**$930,000**
ALLOWANCE FOR HAZMAT REMOVAL STARTING WITH PHASE-1	**$100,000**
ESCALATION COST STARTING JAN 2016	**4% PER YEAR**