

Project: A060800 Town of Maynard  
 CampusName: Green Meadow Elementary School  
 AssetName: Green Meadow Elementary School

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**Requirement Name: Automatic Temperature Control System**

Category: Beyond Service Life  
 Prime System: Controls and Instrumentation  
 Priority: 1-Currently Critical  
 Action Date:  
 Inspector Name: Garcia Galuska DeSousa - HVAC  
 Inspection Date: 9/18/2006  
 Finish Date:  
 Status: Open

**Requirement Description:**

The existing automatic temperature control system is of the pneumatic design and is generally the original system and approximately 50 years old. The system includes an air storage tank with a double tank mounted compressors and motors, a wall mounted refrigerated air dryer, oil/water separators, and distribution system providing for day and night control. Thermostats located throughout the building for the most part have been changed over the years presumably due to the presence of oil suspended in the distribution air piping. Once oil contaminates the distribution system the control orifices become clogged which cannot be repaired. The cost of fixing the equipment where possible, the extreme antiquated nature of the basic system, and the general state of disrepair would render its future expected life as an uneconomical choice.

**Action Description:**

Replace the entire pneumatic automatic temperature control system with a new system of the direct digital electronic type. The system will include a communicating network of electronic sensors, controllers, and devices which will modulate various dampers and valve, monitor space and discharge air and water temperatures, and adjust supply water temperature circulated to the individual pieces of equipment based on outside temperature. All space thermostats will be of the low voltage electronic type and will communicate to the central network all of which will be monitored through a head end computer for centralized control of the entire HVAC system.

**Estimate:**

Number:	Description:
1	Replace Automatic Temperature Control System
2	Patch / Paint Allowance



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
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**Requirement Name:** Exhaust Fans

**Category:** Functionality  
**Prime System:** Other HVAC Systems and Equipment  
**Priority:** 1-Currently Critical  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - HVAC  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The entire building is provided with a series of roof mounted exhaust fans which are intended to remove code required amount of outside air introduced generally at the classroom unit ventilators. The exhaust fans for the original building are approximately 50 years old many of which are not operating and the addition building are approximately 25 years old all of which appear to be operating. The result is that the code required amount of ventilation air is compromised primarily in the original 1942 section of the building.

**Action Description:**

Considering the age of the equipment and the minimal cost of replacing with new it is not recommended that the fans be rebuilt however it is recommended all fans be replaced. The existing roof mounted curbs will remain in place and adapters will be installed on the existing curbs to accept the new exhaust fans. The existing wiring will be reused. All fans will be balanced to current building code ventilation requirements.

**Estimate:**

**Number: Description:**

1 Replace Existing Exhaust Fans

Project: A060800 Town of Maynard  
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**Requirement Name: Kitchen Hood**

Category: Beyond Service Life  
 Prime System: Other HVAC Systems and Equipment  
 Priority: 1-Currently Critical  
 Action Date:  
 Inspector Name: Garcia Galuska DeSousa - HVAC  
 Inspection Date: 9/18/2006  
 Finish Date:  
 Status: Open

**Requirement Description:**

The existing kitchen exhaust hood appears to be relatively new and is of the single wall design. The hood is not provided with a fire protection system. The hood is provided with vaportight incandescent lighting which is code compliant and removable cleanable cartridge filters. The exhaust hood is vented through a roof mounted exhaust fan also assumed to be installed at the same time as the hood. The exhaust hood and fan do operate and maintain adequate exhaust air of which does appear to be code compliant. The hood is of the proper size to completely contain all cooking equipment under the hood. The overall condition considering its age is very good with no apparent surface soiling or contamination. Make up air for the kitchen hood is through wall openings to the adjacent spaces. Recommendation

**Action Description:**

Reuse the kitchen exhaust hood and add a code compliant fire protection system.

**Estimate:**

Number:	Description:
1	Fire Protection Devices
2	Patch / Paint Allowance



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Power Plant

**Category:** Beyond Service Life  
**Prime System:** Energy Supply  
**Priority:** 1-Currently Critical  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - HVAC  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing powerplant includes two HB Smith low-pressure hot water boilers distributing approximately 200° supply water throughout the building. One boiler is original and approximately 50 years old and a second boiler appears to have been installed in approximately 1975. Both boilers have extensive surface contamination and evidence of water leaks as indicated on the mud drums. Hot water is distributed by two base mounted end suction pumps through a schedule 40 black steel piping system insulated with fiberglass. Expanded water is controlled by ceiling suspended air elimination expansion tanks. Breeching for the boiler combustion gas is through a welded ducting system to a masonry chimney. The breeching insulation could contain asbestos. All components which make up the system including boiler, pumps, piping with insulation, breeching, and chimney are all original and approximately 50 years old and all equipment has reached their maximum serviceable life. The cost of fixing the equipment considering its future expected life is an uneconomical choice considering the level of contamination and general state of disrepair.

**Action Description:**

Replace all existing boilers, pumps, piping with insulation, expansion tanks, breeching, chimney, and combustion air system with new cast iron sectional boilers each sized at 50% of the overall building capacity, a primary and standby base mounted end suction hot water pump controlled with a variable frequency drive, diaphragm expansion tanks, double wall positive pressure breeching with chimney, and combustion air louvers provided with motor operated dampers. All piping throughout boiler room will be replaced with new and insulated with fiberglass insulation.

**Estimate:**

**Number: Description:**

1 Replace Powerplant (see description of work above)



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Roofing

**Category:** Beyond Service Life  
**Prime System:** Roofing  
**Priority:** 1-Currently Critical  
**Action Date:**  
**Inspector Name:** Tappe Associates, Inc.  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

All 4 in 12 slope shingled roof areas appear in good condition. The adhered membrane flat roof on the original building appears to be in good condition, including the chimney from the boiler area. The flat ballasted loose membrane roof on the 80's addition is in distress at all locations where it joins the sloped roof forms. A portion was being repaired at the time of inspection. Maintenance informed the areas had been repaired several times. It appears the loose laid ballasted system may be the wrong choice in this condition due to ice and snow accumulation and freeze-thaw working to pull the membrane. This results from the roof forms causing snow build-up.

**Action Description:**

The roof will function better if this condition is replaced with a fully adhered system. An additional consideration could be installing heat trace cable through out the snow accumulation area.

**Estimate:**

Number:	Description:
1	Demo and removal
2	Replace with fully adhered system
3	Edge Flashing
4	Expansion Joint



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Exterior Glazing and Doors

**Category:** Beyond Service Life  
**Prime System:** Exterior Doors / Walls / Windows  
**Priority:** 2-Potentially Critical  
**Action Date:**  
**Inspector Name:** Tappe Associates, Inc.  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

All windows and glazing in the 80's addition appear in very good condition including the exterior doors which are galvanized. It appears that the galvanizing was not fully prepared for paint as there is evidence of peeling. The original buildings fixed and operable glazing walls of wood and single thickness glass are in very poor condition and in need of full replacement. This includes the doors within this system and concrete slab edge.

**Action Description:**

Replace all wood doors and windows from original building

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Strip / Prepare / re-Paint doors
2	Demo wood glazing wall
3	Replace with new Aluminum glazing system
4	Repair door threshold concrete



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Exterior Masonry and Siding

**Category:** Beyond Service Life  
**Prime System:** Exterior Walls  
**Priority:** 2-Potentially Critical  
**Action Date:**  
**Inspector Name:** Tappe Associates, Inc.  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The exterior masonry and ship lap siding appear in good condition. The single exceptions are above roof areas distressed by snow and ice build up as noted under roofing.

**Action Description:**

There are areas needing fascia and trim, siding and misc. flashing repairs.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Fascia and Trim Repairs
2	Ship Lap siding repairs
3	Misc Flashing
4	Patch / Paint Allowance



## Requirement Description

Project: A060800 Town of Maynard  
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**Requirement Name: Fuel Burning System**

Category: Beyond Service Life  
Prime System: Site Mechanical Utilities  
Priority: 2-Potentially Critical  
Action Date:  
Inspector Name: Garcia Galuska DeSousa - HVAC  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

The existing fuel oil storage tank appears to be of the single wall steel design which is buried adjacent to the boiler room. The supply and return lines which communicate between the boiler room and the tank are direct buried and also appear to be of the single wall design. The level gauge located within the boiler room is extremely antiquated and the entire system appears to be original and approximately 50 years old. With proper installation techniques applied the maximum serviceable life of the entire system is approximately 25 years. Considering the age and the potential catastrophic loss which could occur relating to contaminated soil if oil leakage is present does suggest a complete replacement and examination of the existing soil conditions.

**Action Description:**

Upgrade the entire fuel-burning system with natural gas assuming it is available at the site. We do not recommend the utilization of dual fuel since the additional cost would not be recovered in a reasonable timeframe as compared to natural gas.

**Estimate:**

**Number: Description:**

1 Upgrade the entire fuel-burning system with natural gas assuming it is available at the site



Project: A060800 Town of Maynard  
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**Requirement Name:** Water Service and Sanitary Sewer Service

Category: Functionality  
Prime System: Sanitary Waste  
Priority: 2-Potentially Critical  
Action Date:  
Inspector Name: Geller DeVellis  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

There are no known problems with these utility services. The water line may need replacement depending on age and pipe material. Water pressure was not raised as an issue from the school staff.

**Action Description:**

A video inspection of the sewer system would be required to determine the actual condition.

**Estimate:**

**Number: Description:**

1 Video inspection of the sewer system



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Access Road and Parking Areas

**Category:** Code Compliance  
**Prime System:** Architectural  
**Priority:** 3-Necessary-Not Yet Critical  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing bituminous concrete pavement of the main parking area needs replacement and the addition of an accessible parking area of 15 spaces is required for the associated athletic plays field.

**Action Description:**

Pulverize the existing bituminous pavements of the main parking area, and re-pave the entire lot with accessible parking and building access. Provide curbing and new drainage systems and regulatory/informational signage as necessary. Provide a new 15 space accessible parking area for the rear athletic/play field with associated curbing, walks and drainage systems.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Reclaim (General Parking Area) - Pulvarize and Re-Pave
2	New Parking Area - Asphalt Concrete with Curb and Walks



## Requirement Description

Project: A060800 Town of Maynard  
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**Requirement Name:** Hard surface play areas

Category: Functionality  
Prime System: Architectural  
Priority: 3-Necessary-Not Yet Critical  
Action Date:  
Inspector Name: Geller DeVellis  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

All paved play surfaces are bituminous concrete and in poor condition. The surface has many cracks and un-level surfaces causing tripping hazards.

**Action Description:**

Existing paved ball-play surfaces should be removed, base course materials leveled and re-conditioned and new pavement installed. Provide new pavement markings and play lines, signage, fencing, and play fixtures.

**Estimate:**

**Number: Description:**

1 Play Surface (Basketball Courts, misc play areas)



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Site signage

**Category:** Functionality  
**Prime System:** Architectural  
**Priority:** 3-Necessary-Not Yet Critical  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

Provide site signage for accessibility routes and informational and regulatory information.

**Action Description:**

Provide new site signage installations including concrete footings, poles and signs. Provide wall mounted signs where needed to identify access/egress doorways and walks.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	New Signs
2	Re-set Existing Signs



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Storm Water Drainage

**Category:** Environmental  
**Prime System:** Rain Water Drainage  
**Priority:** 3-Necessary-Not Yet Critical  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing drainage system utilized many swales and shallow channels throughout the site. Many of these channels were eroded or caused erosion. Catch basins did not have hoods and most seemed clogged and require maintenance. The system discharges untreated stormwater directly into low lying depressions of the site. This does not comply with the MA DEP Stormwater Management Policy. The drainage within the enclosed courtyard is in very poor condition and in need of complete replacement.

**Action Description:**

All existing storm water drainage system components are in need of cleaning and reconditioning. To conform with Massachusetts DEP standards for storm water best management practices the site requires the introduction of new catch basins with sediment-trapping sumps and hoods. The installation of a new storm water detention/sediment basin is required for mitigating down stream drainage discharge from the site and impact upon resource areas.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	New Detention Pond - With Inlet and Outlet Structures
2	New Catch Basins with Sumps and Hoods
3	Cleaning of Existing System



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Branch Circuit Wiring

**Category:** Functionality  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

Existing wiring consists mostly of Romex cable including places of assembly. All Romex should be removed from the project.

**Action Description:**

Existing wiring should be replaced as phasing progresses. A system of double neutral feeders will be used for computer grade panelboards and dedicated neutrals in branch circuits feeding devices that connect to these panels. Normal/emergency wiring will be kept entirely separate from normal only power in accordance with code.

Devices for computers and other electronic loads would be circuited to computer grade panelboards and identified as such by having a different finish. Devices installed on existing walls would be on surface type raceways similar to wiremold. It is recommended that an uninterruptible power supply "UPS" be provided for the telecommunications system such as voice mail, data, etc.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	UPS
2	Branch Circuits
3	Remote Panelboard and Feeders (Original panel replacement and new comp panels only)

Project: A060800 Town of Maynard  
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**Requirement Name: Cafeteria Air Handling Unit**

Category: Air and Water Quality  
 Prime System: Terminal and Package Units  
 Priority: 4-Recommended  
 Action Date:  
 Inspector Name: Garcia Galuska DeSousa - HVAC  
 Inspection Date: 9/18/2006  
 Finish Date:  
 Status: Open

**Requirement Description:**

The existing cafeteria is provided with one air handling unit located in a mechanical space adjacent to the boiler room generally under the cafeteria. The air handling unit is provided with supply fan, hot water coil to with valve control, filters, and outside air drawn in through a roof hood. Return air is generally drawn from two individual wall grills within the cafeteria back to the air handling unit where it is mixed with outside air for redistribution. Supply air is provided to the cafeteria through wall mounted registers located located approximately 12 feet above the floor over the return air registers. This condition is short cycling the amount of air provided to the space minimizing the ventilation effect of the system The air handling equipment was approximately 50 years old and generally in a state of disrepair. The overall volume of total and outside air appears to be undersized for the population of the space and does not appear code compliant. The stage area which is located at the opposite side of the air supply is not provided with any direct mechanical ventilation of which is non code compliant. The exhaust fans within the space do not appear to operate. Recommendation

**Action Description:**

Replace the existing air handling equipment with a single roof mounted heating ventilating and air-conditioning unit sized for the population and code required outside ventilation air requirement. Provide new insulated overhead supply ductwork feeding new supply diffusers located within the ceiling, and new return air ductwork drawing from approximately 12 inches above the floor. Replaced the existing roof mounted exhaust fan, all ductwork and exhaust registers.

**Estimate:**

**Number: Description:**

- 1 Rooftop HVAC Unit
- 2 Exhaust Air Fans
- 3 Ductwork



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
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**Requirement Name:** Ceiling Finishes

**Category:** Appearance  
**Prime System:** Architectural  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Tappe Associates, Inc.  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing ceiling finishes vary between the two sections of the building. The 1954 original section has acoustical tiles which are in average to good condition. The addition has a tectum board finish and appears to be in good condition through out.

**Action Description:**

Replace the 1954 ACT ceiling with a new hung ceiling.

**Estimate:**

**Number: Description:**

1 Demo and Replace old ceiling with new hung ceiling system.





## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Classroom Unit Ventilators

**Category:** Code Compliance  
**Prime System:** Other HVAC Systems and Equipment  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - HVAC  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The original building classrooms are presently served by classroom unit ventilators which introduce outside air through a wall mounted louver which provide full ventilation of the space as well as heating. The intake louver was noted to be in the area of vegetative growth which could be a source of mold formation. The classroom unit ventilators are provided with pneumatic automatic control valves controlled by a wall mounted thermostat to maintain comfortable space temperatures. Through a series of valves and dampers located within the classroom unit ventilator adequate ventilation and heating are achieved. All equipment is generally original and approximately 50 years old and have not been upgraded over the years. The general condition is antiquated, slight damage and soiling, failed automatic controls, and the suspicion that proper ventilation may not be adequate to meet building code requirements. The failed dampers and actuators are causing an excessive energy consumption, and the availability of replacement parts and devices is becoming difficult.

**Action Description:**

Replace all existing classroom unit ventilators with new of similar size and capacity. Balance outside air quantity to meet current building code requirements. Adjust adjacent shelving units and provide fillers as required to provide for seamless installation. Existing intake louver will remain.

**Estimate:**

**Number: Description:**

- 1 Replace Existing Classroom Unit Ventilators
- 2 Patch / Paint Allowance



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Domestic Water Piping

**Category:** Functionality  
**Prime System:** Domestic Water Piping  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Plumbing & Fire Pr  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

Building has a 6" ductile iron water service entering the basement mechanical room. The 6" service is split in the basement to a 2" domestic and 6" fire service. There are two (2) 2" disc water meters piped in parallel. Copper piping is distributed to the building. The installation is part of the 1988 building addition project. Piping where exposed appears to be copper with sweat joints. The piping is insulated. Piping within the 1988 addition and any updated piping as a result of that addition scope could remain.

**Action Description:**

Because of its age and possible lead joints, a major renovation should include all new water piping for the original building and 70's addition. It was noted by the maintenance staff that the hot water piping within the original building does not function properly. Hot water was not present at the classroom sinks.

**Estimate:**

**Number: Description:**

1 Replace Domestic Water (Hot and Cold) in original construction



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
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**Requirement Name:** Dumpster Pad, Enclosure and Service Area

**Category:** Functionality  
**Prime System:** Architectural  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The dumpster is located in the parking area with no screening, security or enclosure. Delivery and maintenance access to the building is via a paved area in front of the school where school/student activities take place.

**Action Description:**

Remove and replace the existing dumpster pad with a reinforced concrete apron and provide new vinyl coated chain link fencing and security locks. Provide dumpster screening slats. Provide a paved area and signage for truck deliveries away from student areas.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Dumpster Pad, Enclosure and Service Area



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
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**Requirement Name:** Emergency Generator, Lighting and Exit Signs

**Category:** Life Safety  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing facility is equipped with emergency battery units. There are no wire guards present in gymnasium emergency lights or exit signs.

**Action Description:**

It is recommended that a new generator fired with natural gas or diesel be provided for the entire facility. Emergency lighting will be by the same normal/emergency luminaries used for general lighting. These fixtures may be utilized for night/light purposes when power is available and automatically switch to emergency power when normal power fails.

Exit signs would be of the long life, energy efficient "LED" type.

Two automatic transfer switches would be provided, one for the life safety systems and the other for essential loads that are not life safety including kitchen coolers and freezers, freeze protection including boilers and pumps, sump pumps, telecommunications systems, lifts and elevator, etc.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	125K Emergency Generator and Transfer Switch
2	Emergency Panels and 2hr. Rated Feeder
3	Exit Signs (23 Total)



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Fencing and Guardrails

**Category:** Security and Safety  
**Prime System:** Architectural  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

There is limited fencing on site which is in poor condition and needs replacement. The site has some wood guard rails which are in need of repair.

**Action Description:**

Existing chain-link fencing should be removed and replaced with new vinyl coated fencing, new footings, posts and rails. The existing wood guardrails should be removed and replaced where damaged or as necessary for safety.

**Estimate:**

**Number: Description:**

- |   |   |
|---|---|
| 1 | New Fence - Vinyl Chain Link Fence with 2 Rails |
| 2 | Repair Guard Rail                               |



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Fire Alarm

**Category:** Life Safety  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The building is equipped throughout with an automatic fire alarm system with smoke detectors in the corridors and heat detectors in the classrooms. The horn/lights do meet ADA.

There is a backlighted annunciator and master box at the main entrance.

The fire alarm devices in the gym do not have wire guards installed and stopper covers on the pull stations. Therefore, the equipment is subject to physical damage.

The fire alarm system is conventional and manufactured by Simplex model 4002. The control panel is obsolete.

**Action Description:**

A new fire alarm system is recommended for ADA and life safety compliance.

**Estimate:**

**Number: Description:**

1 Manual Fire Alarm System (requires full sprinkler system)

Project: A060800 Town of Maynard  
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**Requirement Name: Floor Finishes**

Category: Beyond Service Life  
Prime System: Floor Finishes  
Priority: 4-Recommended  
Action Date:  
Inspector Name: Tappe Associates, Inc.  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

The floor surfaces in the majority of the building are carpet, with the exception of the cafeteria (ACT 12 x12), the gymnasium (rubber sports floor), and the bathrooms (tile).

**Action Description:**

The carpets are old and worn and should be replaced. Replace asbestos tile in cafeteria with new VCT tiles.

**Estimate:**

Number:	Description:
1	Replace all carpet throughout the building
2	Replace asbestos tile in cafeteria with new VCT floor



## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Inner Courtyard

**Category:** Accessibility  
**Prime System:** Civil and Landscape  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

Repair and re-construct the outdoor inner courtyard and play area to provide Handicapped Accessibility and safe areas. Drainage systems improvements are needed.

**Action Description:**

Repair and reconstruct the pavements and landscape areas of the outdoor inner courtyard, remove and replace all pedestrian pavement areas to provide accessibility and install improved drainage systems including drain inlets, catch basins and piping.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Re-Condition Inner Courtyard





## Requirement Description

**Project:** A060800 Town of Maynard  
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**Requirement Name:** Lighting System

**Category:** Functionality  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing lighting system consists of various types of fixtures. Incandescent fixtures are still present in mechanical areas.

Generally the types of fixtures are as follows:

The main corridor is not adequately lighted. The light level appears low.

Corridors: Wraparound fluorescent Fixtures

Cafeteria: 2' x 4' acrylic lensed fixtures renovated in the 1980's.

Classrooms/Instructional Spaces/Offices: Fluorescent Industrial fixtures with acrylic sides.

Exposed structure area: Indirect Fluorescent strip lighting fixture

**Action Description:**

Provide new lighting fixtures with 10ft of wiring

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Lighting System - Gymnasium
2	Lighting System - Cafeteria
3	Lighting System - Classroom and Admin.
4	Repair Ceiling where necessary



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Local Area Network System

**Category:** Functionality  
**Prime System:** Communications and Security  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

There is a local area network (LAN) present. The wiring consists of CAT 5 cable. There is 24 strand fiber present from the Fowler School. Typically, there is one computer drop per classroom. The MDF is located in the kindergarten wing. IDF's are located in the hallway.

**Action Description:**

We recommend that each classroom be equipped with (4) student drops and (1) teachers work station. In addition a wireless access point drop should be provided in each classroom. Each classroom should be equipped with "LCD" project outlet at ceiling with patch connection at teacher's work station for video and sound.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	IDF's (Intermediate Distributer Frame)
2	MDF (Main Distributer Frame)
3	Computer Drops - Classroom and Admin
4	Computer Drops - Gymnasium
5	Fiber Backbone
6	Classroom VGA / Audio Patch
7	Broadband Distribution
8	Patch / Paint Allowance



## Requirement Description

Project: A060800 Town of Maynard  
CampusName: Green Meadow Elementary School  
AssetName: Green Meadow Elementary School

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**Requirement Name: Mechanical System Wiring**

Category: Functionality  
Prime System: Electrical Service and Distribution  
Priority: 4-Recommended  
Action Date:  
Inspector Name: Garcia Galuska DeSousa - Electrical  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

The existing mechanical system wiring should be upgraded where Romex was used.

**Action Description:**

It is recommended that new wiring be installed as HVAC equipment is upgraded.

**Estimate:**

**Number: Description:**

1 Mechanical System Wiring



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Media Center

**Category:** Air and Water Quality  
**Prime System:** Terminal and Package Units  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing media center is provided with one air handling unit located above a ceiling in an adjacent work room. The air handling unit is provided with supply fan, hot water coil to with valve control, filters, and outside air drawn in through a roof hood. Return air is generally drawn from two individual wall grills within the media center approximately 10 feet above the floor back to the air handling unit where it is mixed with outside air for redistribution. Supply air is provided to the media center through a single supply duct generally located in the center of the room approximately 15 feet above the floor. The location of the supply duct in close relationship to the return air registers is short cycling an amount of air provided to the space minimizing the ventilation effect of the system. The air handling equipment appears to have been recently installed and was noted to be in good condition. The overall volume of total and outside air appears to be undersized for the population of the space and does not appear code compliant.

**Action Description:**

Relocate the existing return air registers to a point approximately 12 inches above the floor. This will improve the overall air distribution and air quality within the space

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Relocate Return Registers
2	Patch / Paint Allowance

Project: A060800 Town of Maynard  
 CampusName: Green Meadow Elementary School  
 AssetName: Green Meadow Elementary School

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**Requirement Name: Plumbing Fixtures**

Category: Functionality  
 Prime System: Plumbing Fixtures  
 Priority: 4-Recommended  
 Action Date:  
 Inspector Name: Garcia Galuska DeSousa - Plumbing & Fire Pr  
 Inspection Date: 9/18/2006  
 Finish Date:  
 Status: Open

**Requirement Description:**

Plumbing fixtures are in good condition, but are typically non-accessible and non-water conserving in the original building and 70's addition.

The original building contains floor mounted water closets with flush valves. Predominantly, the water closets are wall mounted vitreous china flush valve type in the 70's & 1988 addition. Urinals are wall hung, flush valve, vitreous china. Lavatories are wall hung vitreous china. Faucets are predominantly deck mounted, 2 handle, non-water conserving faucets. Drinking fountains are wall hung type, stainless steel bowl with vinyl cabinet water coolers, the coolers are not hi-lo units and are not accessible. Janitor's sinks are cast iron slop sinks. Classrooms contain counter mounted non-accessible stainless steel sinks with hot and cold water handle faucets.

**Action Description:**

If the total work is less than \$100,000.00 and if this work were to include any Plumbing, then the Plumbing Work would need to comply. If the total work is over \$100,000.00 and less than 30% of the full and fair cash value of the building, then an accessible toilet and drinking fountain must be part of the work. If the cost of the work exceeds 30%, then all of the existing and new Plumbing Facilities need to be accessible. This would require accessible facilities at every toilet room and sink including all the classrooms. The school plumbing systems could continue to be used with maintenance and replacement of failed components; however other non-dependent decisions will likely force the plumbing upgrade.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Replace Fixtures



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Power

**Category:** Functionality  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing electrical service is located below in the main electrical room. The service rating is 1200 amps, 120/208 volt, 3Ø, 4 wire manufactured by ITE and is in good condition.

**Action Description:**

The service is back feeding original service equipment which should be replaced.

The electrical service capacity is rated at 960 amps or 345.6 Kw. The existing service yields approximately 4.11 watts/square foot. New service standards are typically designed for 10 watts/square foot. We recommend a new 1200 amp, 277/480V, 3Ø, 4 wire service if air conditioning for the facility is required in the future.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Switchboard
2	Pad Mounted Transformer
3	200 ft Primary Cable (Includes Excavation)
4	100 ft Secondary Cable (Includes Excavation)
5	New Electric Room
6	Patch / Paint Allowance

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name: Security System**

**Category:** Functionality  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

No Security system was observed.

**Action Description:**

It is recommended that a new security system be provided with contacts at exterior doors, roof access hatches, overhead doors, etc. Also passive infrared/motion sensors be provided in grade level perimeter rooms with windows. The system would be zoned strategically to meet the Owner's needs. The system would remain connected to a remote monitoring service. Panic stations should be provided at the main reception area. Other auxiliary functions would be provided such as automatically turn "on" all lighting in public spaces upon alarm.

It is recommended that a solid state system with high resolution cameras be provided with digital storage into a hard drive. This eliminates the need for VCR and changing of tapes. Recording would be into a computer hard drive with network accessibility.

It is recommended that a card access system be provided at all exterior doors.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Security System - Motion Sensors
2	Security System - Door Contacts
3	Security System - Security Panel
4	CCTV - PTZ Cameras
5	CCTV - DVR
6	CCTV - Wiring
7	Access Control System - Card Readers
8	Access Control System - Software / Computer
9	Patch / Paint Allowance



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Site Lighting

**Category:** Functionality  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The existing site lighting consists of utility pole mounted fixtures with flood lights. The system appears to be owned by the Utility Company and monthly charged to the Owner. The quantity of lighting does not appear to be in accordance with IFS-NA recommendations (0.5 fc). The canopy lighting is not operational.

**Action Description:**

Exterior lighting would be replaced with new where required in parking and circulation areas. A new system of building mounted perimeter luminaires would be provided for general security and at exit discharges. Luminaires will be of the high intensity discharge "HID" type, more than likely metal halide. Luminaires at exit discharge areas will contain a quartz restrrike feature for instant "on" during cold or hot restrikes. The fixtures at exit discharge areas will be connected to normal/emergency panelboards. All exterior lighting will be controlled via photocell "on" and timed "off". The timing "off" of these luminaires will be by zone to allow flexibility and energy conservation. The schedule will be coordinated with the end user and programmed by the contractor.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Wall Packs
2	Entry Fixtures
3	Pole Fixtures





## Requirement Description

Project: A060800 Town of Maynard  
CampusName: Green Meadow Elementary School  
AssetName: Green Meadow Elementary School

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**Requirement Name:** Telephone System / Paging System

Category: Functionality  
Prime System: Communications and Security  
Priority: 4-Recommended  
Action Date:  
Inspector Name: Garcia Galuska DeSousa - Electrical  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

There is an existing telephone system present. There is a Panasonic key switch present. The system appears to have been recently upgraded. Each classroom is equipped with a telephone hand set.

**Action Description:**

The system is in good condition but should be relocated to head room. The telephone system is used for paging. Upgrade should include new paging system including two-way speakers in classrooms.

**Estimate:**

Number:	Description:
1	New Paging System - Classroom and Admin
2	New Paging System - Cafeteria
3	New Paging System - Gymnasium
4	Patch / Paint Allowance



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Theatrical Lighting

**Category:** Functionality  
**Prime System:** Electrical Service and Distribution  
**Priority:** 4-Recommended  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Electrical  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

There is no theatrical lighting present at the platform in the cafeteria.

**Action Description:**

A new system for stage theatrical lighting should be provided. A new dimming system for theatrical lights with remote controls should be provided.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Dimming
2	Theater Lighting



## Requirement Description

Project: A060800 Town of Maynard  
CampusName: Green Meadow Elementary School  
AssetName: Green Meadow Elementary School

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**Requirement Name:** Vestibule Interlocks

Category: Energy  
Prime System: Other HVAC Systems and Equipment  
Priority: 4-Recommended  
Action Date:  
Inspector Name: Garcia Galuska DeSousa - HVAC  
Inspection Date: 9/18/2006  
Finish Date:  
Status: Open

**Requirement Description:**

The entrance and secondary exits throughout the building were not provided with vestibule interlocks and were also not provided with adequate door heating to prevent adjacent areas from sub cooling during frequent use.

**Action Description:**

The main entrance should be reconfigured to provide an entrance vestibule and provided with adequate door heating to prevent the building space temperature from reducing during frequent use. This condition should also be applied to all secondary entrances and exits throughout the building.

**Estimate:**

Number:	Description:
1	Door Heating Equipment
2	Provide Internal double interlock doors



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Automatic Sprinkler System

**Category:** Functionality  
**Prime System:** Sprinklers  
**Priority:** 5-Does Not Meet Codes / Standards  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Plumbing & Fire Pr  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The Building contains a water based permanent fire protection system that protects the 1988 addition. A 6" double check valve assembly with 6" alarm valve is located in the basement mechanical space. The basement mechanical and storage spaces are also protected with sprinklers as part of the 1988 modifications.

**Action Description:**

Massachusetts code requires that any substantially renovated school building, 12,000 s.f. or more must be sprinklered. Should the project scope meet those thresholds a sprinkler system within the original building and any space which is not currently protected will be required. The existing municipal water supply, double check valve assembly and alarm valve can be reused.

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	Sprinkler unprotected areas



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Kitchen Grease Traps

**Category:** Functionality  
**Prime System:** Kitchen  
**Priority:** 5-Does Not Meet Codes / Standards  
**Action Date:**  
**Inspector Name:** Garcia Galuska DeSousa - Plumbing & Fire Pr  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

Kitchen fixtures are in good condition, however the two bowl pot sink and dishwasher are not fitted with interior grease interceptors as would be required by current code.

**Action Description:**

Recommend installation of interior grease traps.

**Estimate:**

**Number: Description:**

1 Install Interior Grease Interceptor at Dishwasher & Pot Sink



## Requirement Description

**Project:** A060800 Town of Maynard  
**CampusName:** Green Meadow Elementary School  
**AssetName:** Green Meadow Elementary School

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**Requirement Name:** Walkways and Ramps (Accessibility)

**Category:** Accessibility  
**Prime System:** Architectural  
**Priority:** 5-Does Not Meet Codes / Standards  
**Action Date:**  
**Inspector Name:** Geller DeVellis  
**Inspection Date:** 9/18/2006  
**Finish Date:**  
**Status:** Open

**Requirement Description:**

The majority of pedestrian walkways are not Handicapped Accessible or are in need of replacement and in some cases may require Accessible Ramps with handrails. Walks are in disrepair or provide unacceptable longitudinal and traverse cross-slopes and need replacement.

**Action Description:**

Nearly all walkways around the school and those serving the outdoor inner play area (see below) need to be removed and replaced. Some building access/egress doors will require Accessible ramps and handrails. Signage for Accessible routes must be provide

**Estimate:**

<b>Number:</b>	<b>Description:</b>
1	New Concrete Landings and Walkways from door with railings as needed
2	Full Ramps to Doors with Railings
3	Misc. Concrete Ramps around Site
4	New Walkways around Site (Concrete, 6' wide average)
5	Overlay (Walkways, Maintenance Access)



