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Construction Management Plan Outline

Project Specifications and/or Drawings will contain language to address the following issues:

A. Noise control

In accordance with Section 12 a) noise generating construction activities will take place within the allowed hours of construction. The loudest construction activities of mechanized rock removal (hoe-ramming) will be scheduled to occur during the summer months of July and August to the greatest extent possible.

The following is proposed specification language addressing noise control:

NOISE CONTROL

- A. *Contractor shall Develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum. Submit noise abatement program to Owner's Project Manager and Architect for review prior to use of noise generating equipment.*
- B. *Execute construction work by methods and by use of equipment that will reduce noise and which will provide minimum interference with neighborhood activities.*
 - 1. *Employ construction methods and equipment that will produce the minimum amount of noise.*
 - 2. *Equip air compressors with silencers, and power equipment with mufflers.*
 - 3. *Handle vehicular traffic and scheduling to reduce noise.*
- C. *Do not allow radio and electronic entertainment equipment to be operated at volume that makes ordinary conversation difficult at ten (10) feet from such equipment.*
- D. *Do not run equipment, including idling of vehicles outside of the specified hours of work.*

B. Hours of construction and hours of deliveries associated with construction activities

In accordance with Section 12 a): Site clearing or disruptive construction shall not occur before 7:00 am or after 5:00pm M-F, and shall not occur at all on Sundays or Holidays. On Saturdays, site clearing or disruptive construction work shall be limited to 9:00am-3:00pm. All forms of mechanized rock removal or rock crushing shall be limited to M-F between 9:00am and 5:00pm. No heavy construction vehicles shall arrive at the site earlier than 7:00am M-F or 9:00am on Saturday.

C. Truck routes

Applicant will request review/consultation with the Carlisle Police Dep't:

During the duration of construction while School is in session: truck traffic will be prohibited from arriving at the site during the times of School Bus and parent arrivals and departures: 7:30am till 9:00am and 2:00pm till 3:30pm.

During Phase 1 of the Project (construction of the new Addition) construction traffic will enter/exit the site at the Church Street western parking lot entry drive. Church St is one way traffic heading east between School St and Bedford Rd/Rte 225. It is anticipated that most truck traffic will utilize Rte 225 (Westford St to the N/W and Bedford St to the S/E). Trucks coming from Bedford St will need to utilize the rotary so as to make the turns to access Church St.

One option for consideration is to allow truck traffic too large to utilize the rotary (steel delivery, large equipment delivery) originating from the S/E is to have a police detail at such times to allow trucks to travel west on Church St between Bedford Rd and the site entry on Church St.

During Phase 2 of the Project (demolition of Spalding and related site development) construction traffic will enter/exit the site on School St. It is anticipated that most truck traffic will utilize Rte 225 (Westford St to the N/W and Bedford St to the S/E). Trucks coming from Bedford St will need to utilize the rotary so as to make the turns to access Church St. Trucks coming from Westford St will turn left onto School St.

The Project Specifications will include language to require the General Contractor to submit a truck route plan for review and approval of the Carlisle Police Department.

D. Trash and debris removal plan

The following language would be included into the Project specifications:

SAFETY AND DISPOSAL REQUIREMENTS

- A. *Standards: Maintain project in accordance with State Building Code and local ordinances.*
- B. *Hazards Control: Store volatile wastes in covered metal containers and remove from premises. Prevent accumulation of wastes which create hazardous conditions. Provide adequate ventilation during use of volatile and noxious substances.*
- C. *Disposal: Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws. Do not burn or bury rubbish and waste materials on project site. Do not dispose of hazardous wastes such as solvents, mineral spirits, oil, paint, paint thinner in storm or sanitary drains. Do not dispose of wastes into streams or waterways.*

DEBRIS CONTROL AND REMOVAL OF RUBBISH

- D. *Ensure that each Subcontractor engaged in the Work bears full responsibility for cleaning up on a daily bases and immediately upon completion of his work, and removes all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of his work; but this shall in no way be construed to relieve the General Contractor of primary responsibility for maintaining a clean building and site free of debris, leaving all work broom clean and in a condition satisfactory to the Architect, Project Manager, and Owner. Refer to Section 017400 – Cleaning and Waste Management for more information.*
- E. *Provide at least one tightly built chute serving each level which shall lead down to angle offset and sliding panel chute at a convenient loading point for trucks or dumpsters.*

- F. Do not permit any material to be thrown from open floors, windows or roof of the building.
- G. Immediately after unpacking, remove all packing materials, case lumber, excelsior, wrapping and other rubbish, flammable and otherwise, from the building and premises.
- H. Initiate and maintain a specific program to prevent the accumulation of debris at the construction site, storage and parking areas, or along access roads and haul routes:
Provide containers for deposit of debris and schedule periodic collection and disposal of debris. Prohibit overloading of trucks to prevent spillage on access and haul routes.
Construction debris shall be removed from the site within twenty-one calendar days after which it is generated.
- I. Contractor shall make provisions for snow and ice removal, as required. In addition Contractor shall provide wheel-washing stations at site egress gates, as directed by the Project Manager, to maintain clean neighborhood streets.

See also attached "Cleaning and Waste Management Section 017400" addressing Salvaging, Recycling and disposal of non-hazardous demolition waste- Applicable to the demolition of the Spalding Building.

See also attached "Asbestos Abatement Project Narrative" regarding the design and construction phase of the asbestos abatement scope. Universal Environmental Consultants has been engaged to develop the abatement scope and construction procedures which will be included in the Project specifications. Additionally, monitoring of the abatement activities during construction by licensed monitors will occur during the abatement activities.

See also attached "Indoor Air Quality Requirements Section 018119) addressing air quality requirements during construction for the protection of the occupants of the existing buildings as well as for the construction workers.

E. Traffic and parking control

Refer also to the attached drawing A1 Phasing and Staging Plan.

During Phase 1 (construction of the new Addition) the contractor will be assigned a staging area encompassing the existing western Church St. parking lot entry up to the north walls of the existing Wilkins and Corey buildings and will include the current bus drop-off/pickup area. The existing 90 (plus 4 H/C) spaces of parking in the Church St lot will continue for use by parents and faculty/staff- entry/exit will utilize the eastern exit to the Church St lot. There are an additional 11 marked paved spaces along Church St which are rarely utilized now- but which are available should they be needed.

The busses will be relocated to the existing School St. parking loop. The existing nine(9) head-end spaces (reserved for administration/staff) will remain. The remaining 13 parallel spaces will be restricted for use by visitors or faculty during the hours (between 9:30am and 1:30pm; after 3:30pm) at the times at which busses will not be present.

Contractor Parking will be limited to be within the delineated Staging Area (refer to Phasing and Staging Plan). Should additional Contractor parking be required at times of peak construction activity it is proposed that the existing 45 spaces located at the eastern end of the site along Church St, by the Athletic Fields be used by the contractor between the hours of 7:00am and 2:30pm (to be vacated prior the School's Spring/Autumn athletics activities need for use of the fields).

During the Summer months of July and August, when school is not in session and therefore staff parking need is minimal, the Church St. parking lot would become available for contractor parking.

During Phase 2 (demolition of Spalding, related site development) the contractor's staging area will be relocated to the west side of the site and will encompass the area from School Street to the walls of the newly constructed and occupied Addition.

During the months of May and June 2012 all school related traffic will utilize the Church Street parking lot and school bus areas.

F. Police details, if required (at the applicant's expense)

Project specifications will require the Contractor to coordinate with the Police Dep't regarding traffic flow interruptions and street closure occurrences required for material and equipment deliveries and for any construction affecting the use of public streets. The Contractor will be required to schedule such road closures at least one week in advance of effective date. It is anticipated that there will need to be traffic control/street closing of School St. during the summer 2011 and summer 2012 months for construction work and deliveries/removals of earthwork operations. It is anticipated that Church St will require traffic control for periodic deliveries of large equipment, concrete and steel

The OPM/Owner/Design team would anticipate meeting with the Police Dep't to review conditions at which police detail will be required and an estimated duration of time for inclusion into the Project Specifications in order to provide for Contractor bids to reflect an anticipated cost for police detail services.

Following is proposed language for inclusion in the specifications:

MUNICIPAL POLICE SERVICES

- A. *Make all necessary arrangements with the municipal police department a minimum of one week in advance of times when regular, off-duty, or reserve police officers will be needed for traffic control or protection due to operations performed under this Contract.*
- B. *Pay police officers in accordance with rates established by the municipality for such services:*
- C. *Extend the Worker's Compensation Insurance and Employer's Liability Insurance required under the General Contract to cover police used on the Project.*

G. Communications (with neighborhood liaison or committee)

Daedalus Projects, Inc is the Owner's Project Manager (OPM) and will have a full-time field personnel who will serve as a liaison between the School Administration, the General Contractor, and the neighborhood.

Daedalus will hold periodic informational meetings open to the neighborhood and other concerned persons regarding construction activities and procedures. They will also send out letters and/or emails to abutters regarding any specific construction activities of concern to abutters.

The School Administration will also provide a person(s) to be a point of contact in regards to the concerns of construction activities upon the neighbors or other concerned persons.

H. Emergency contacts/numbers

Prior to start of construction activities a compilation of Emergency contacts/numbers will be provided by the General Contractor. The list shall include the General Contractor's office

and field personnel, major subcontractor (Electrical, plumbing, HVAC and Fire Protection) contacts, School Administration personnel, and the OPM's office and field personnel. The General contractor shall be required to designate a specific contact person and furnish relevant telephone numbers for use by the OPM during work hours and during job-related emergencies throughout the duration of the construction. In case of an emergency event occurring after work hours the GC's designee shall respond within one hour and shall be present, if necessary, at the job-site within three hours of initial contact.

I. Dust control

The following specification language is proposed to be included in the Project Specifications addressing dust control:

However, as the Carlisle School is served by a well and water storage tank, the means of water supply for the wetting-down of the construction site will need review by the Board of Health, the School Administration, the OPM and the Design Team. A strategy chosen from this review for the provision of water supply will be incorporated into the Project Specifications.

DUST CONTROL

- A. *Maintain the construction site, stockpiles, access, detour, and haul roads, staging and parking area used for the Work, free of dust which would cause a hazard or a nuisance to those at the site or adjacent sites.*
- B. *Provide environmentally safe and positive methods and dust control materials to minimize raising dust from construction operations, and provide positive means to prevent air-borne dust from dispersing into the atmosphere.*
- C. *Wet down dry materials and rubbish to lay dust and prevent blowing dust.*
- D. *Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.*
- E. *Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces, including paint, coatings, sealants, caulking, adhesives.*
- F. *Furnish, erect, and maintain for the duration of the work period, temporary fire-retardant dust proof coverings and partitions as required to prevent the spread of dust beyond the immediate area where work is being performed.*

J. Public street cleaning and repair

The specifications will require the Contractor to provide wheel washing during wet/muddy soil operations such as dewatering and excavation. Street sweeping will be periodically required. The required frequency of street cleaning should be reviewed and discussed by the applicable town agencies, the OPM and the Design team. Such determination of frequency will be included in the Project specifications.

The specifications will require the Contractor to repair any damage to the streets caused by construction vehicles or activities. The following language is proposed to be included in the specifications:

CONDUCT OF WORK

- G. Contractor shall take all steps necessary to protect existing conditions to remain. Damage to existing work caused by Contractor's operations under this Contract shall be repaired at Contractor's expense.
- H. Any street, paving, curb and/or sidewalk damaged as the result of work under this Contract, whether within or outside the limits of the Work, shall be repaired and/or replaced with new matching construction by the Contractor at his expense and in a manner satisfactory to the Architect and authorities having jurisdiction.

K. Planned occupancy of public ways

The most significant planned occupancy of a public way is anticipated to occur in the Summer of 2011 with the installation of the underground Fire Protection cisterns adjacent to School St. This excavation will require ledge removal by means of blasting and as it is approximately 20' of the property line/street edge there will be earth support measures and within close proximity of the street. This is likely to require the partial occupancy of School St. for a period of time in July of 2011.

The contractor will be required to plan this activity and Town requirements with the applicable Town Departments.

L. Erosion control

Refer to the attached Civil Engineers Drawings for the requirements of the Soil Erosion protection to be provided by the Contractor. The following language is repeated on the Drawings and will be included in Project specifications:

EROSION & SEDIMENT CONTROL NARRATIVE

1. Erosion control measures shown herein are a minimum. Contractor shall furnish the services of an independent professional engineer or a certified professional in erosion and sediment control to prepare a stormwater pollution prevention plan (SWPPP). Prior to commencement of demolition site preparation or earthwork said plan shall be implemented. The initial method outlined is intended to route all practicable surface water from the excavation area into erosion control facilities. The contractor shall install any additional protective measures as may be required to control erosion and sediment runoff from the site during construction.
2. Stake the limit of work to ensure that all work will be inside the erosion control facility. The limit of work will be indicated by hay bales & silt fencing. This will include buildings, parking facilities, access roads, detention/retention basins, equipment staging areas and all material stockpile and handling areas.
3. Prior to the start of any construction activities on site, a pre-construction conference shall be held on site to establish supervisory and inspection procedures for sediment and erosion control measures. This meeting shall be attended by the contractor, applicant/owner, architect/engineer and the local planning agent.
4. The contractor shall be totally responsible for protection of any lands or properties as may be subject to any affect or by-product of his demolition/construction effort. Special care shall be taken to avoid erosion of fill or cut slopes onto adjacent properties or downstream siltation of diversion of existing drainage. Any damage is to be corrected immediately by the contractor at no cost to the owner.
5. The work is to be phased. Construct the project in phases as directed by the architect/engineer to suit the project schedule.
6. General sequence shall be as follows:
 - a. Establish haybale/silt barrier & temporary construction fence prior to any earthwork
 - b. Install site entrance mats at site construction entrances as detailed.
 - c. Construct temporary settling basins and install erosion control devices.
 - d. Clean and grub vegetation as required. remove and dispose of all stumps from site.
 - e. Perform mass earthwork and rock excavation for the site.
 - f. Protect all existing and proposed drainage structures from sediment by the use of dandy bags and hay bales at catch basin as detailed.
7. At no time shall silt laden water be allowed to enter environmentally sensitive areas and existing or new drainage systems. Runoff from disturbed surfaces shall be directed through settling basins and erosion control measures prior to entering any environmentally sensitive areas or the drainage system.
8. Dewater all excavations and trenches, as required, with dewatering bags and outfalls at controlled temporary settling basins.
9. Install stone reinforced silt barrier around stockpile areas, truck wash down areas and vehicle fueling areas.
10. Install temporary seed or mulch and erosion control blankets (ECB) to all areas immediately upon formation of grades.
11. Surface stabilization must be implemented within 14 days after construction activity in a portion of the site that has ceased or is temporarily halted.

12. Truck wash down area shall be 20'(l)x20'(w) at a minimum surrounded by stone reinforced silt barrier. Accumulated concrete shall be either recycled on site or disposed of at an approved off-site location.
13. Contractor refueling area shall be 20'(l)x20'(w) at a minimum surrounded by stone reinforced silt barrier. Area shall be scraped and redressed monthly. The depth shall be determined in the field. Scraped material shall be removed and disposed of at an approved off-site location.
14. As soon as paving of drives is completed, all drainage structures shall be cleaned of any accumulated sediment. thereafter, clean up should follow long term maintenance plan.
15. Continually monitor all silt barrier and erosion control devices on a weekly basis, repair any damaged areas immediately. Remove all captured sediment as required and dispose of. Install additional measures as directed by the owner, local DPW, conservation officer and the architect/engineer.
16. Contractor shall reduce surface and air movement of dust from exposed soil surfaces as required by construction activities. Construction activities shall be so scheduled so that the least area of disturbed soil is exposed at one time. In disturbed areas not subject to traffic, contractor shall use temporary seeding and mulching operations. In disturbed areas subject to traffic, contractor shall sprinkle surface with water to minimize dust. Dust control measures shall be maintained through dry weather periods until all disturbed areas have been permanently stabilized and/or as directed by the owner's representative.
17. Remove construction fence, silt barrier and erosion control measures only after establishment of permanent vegetation.

M. Tree protection plan

Refer to the attached Planting Plan for areas of individual trees and wooded areas to remain.

Areas of trees and shrubs and individual trees and shrubs within areas of the Construction Activities shown to remain will be specified to be protected from damage by construction activities. The following language is proposed to be included in specifications:

IDENTIFICATION OF TREES AND SHRUBS TO REMAIN

- A. Prior to starting site clearing operations, stake out all areas of trees and shrubs to be saved as noted on the Contract Documents for approval by the Architect.
- B. Before any clearing is done, the Contractor shall arrange a conference on the site with the Architect to identify trees and shrubs that are to be protected or removed. Do no clearing without clear a understanding of existing conditions to be preserved.
- C. The Contractor shall be responsible for the protection of all existing trees and plants designated to remain for the length of the construction period, including liability for all damages as specified herein. The placement of protection devices additional to those specified shall, however, be at the Contractor's discretion and with no additional cost to the Owner.

PROTECTION OF EXISTING TREES AND SHRUBS

- A. The Contractor shall make every effort not to damage existing plant materials to remain. The Contractor is required to install protection as necessary to assure undamaged plant material and adjacent conditions.
- B. Plants as designated to remain shall be protected by the placement of a tree protection fence enclosure around shrubs, or at the drip line of each tree. Place tree protection additionally at all other locations where trees and/or shrubs may be jeopardized by construction activities. Tree protection fencing shall be supported with specified stakes at maximum 5 ft. on center intervals.
- C. Individual trees shall be protected by wiring two 2 in. x 4 in. x 24 in. lumber closely spaced in vertical alignment around the trunk of each tree. No spikes or nails are to be driven into trees.
1. Tree protection lumber that is longer than 24 inches and does not closely follow the tree trunk and its flares shall not be accepted.
- D. Tree and shrub protection shall remain in place and be maintained in working condition by the Contractor until directed for removal by the Architect. All tree protection devices shall be removed from the site by the Contractor at the completion of the work.
- E. Damage no plants to remain by burning, by pumping of water, by cutting of live roots or branches, or by any other means. No plants to be saved shall be used for crane stays, guys or other fastenings. Vehicles shall not be parked within the dripline or where damage may result to trees to be saved. Construction materials shall not be stored beneath trees to be saved. No solid waste may be disposed of on site without approval of the Architect, but especially within root zones of trees to be saved. No liquid waste shall be disposed of on site without approval of the Architect, but especially within root zones of trees to be saved or uphill from trees to be saved.

N. Wildlife displacement provisions

Not Applicable

O. Blasting plan and all related issues

Blasting will be required for the installation of utilities at various locations on the site: in particular at the location of the new underground Fire Protection cisterns, Fire Pump, and storm-water detention and other water quality control structures. These areas are on the west side of the site adjacent to School St. This work is to be scheduled to occur during the summers of 2011 and 2012. Work hours will be limited to M-F 9:00am to 5:00pm per town regulation.

The following language is proposed to be included in the Specifications:

PER-CONSTRUCTION CONDITION SURVEY

1. *Prior to the start of construction, retain an independent professional engineer acceptable to the Architect to conduct a pre-construction conditions survey of all existing structures and conditions on the site, adjacent to the site, and in the vicinity of the site. The survey shall extend to such structures or conditions as may be affected by the mechanical rock removal or blasting operations. Survey all structures within 250 feet of the proposed rock removal operations.*
2. *The Contractor shall attend a pre-construction meeting to be organized by the Architect. The Contractor will be required to identify proposed structures to be surveyed and the schedule for completing the survey, and to present the schedule for rock removal operations.*
3. *Coordinate activities, issue notices, obtain clearances and provide whatever photographic and secretarial assistance as necessary to accomplish the survey.*
4. *Give notice in writing to the owners of all properties to be surveyed and to any representative of local authorities required to be present at such a survey. Notice to include the dates on which survey is to be made. The Contractor shall obtain permission from the property owners before entering their property. Provide copies of all notices to the Owner.*
5. *The Survey shall consist of a description of the interior and exterior condition of the various structures examined. Include location of any existing cracks, damage or other defects. Where significant cracks or damage exists, or for defects too complicated to describe in words, take photographs as part of the record. If interior of structure cannot be examined, note the fact on the survey and state the reason.*
6. *The survey record shall consist of written documentation and photographs of the conditions identified or may be in the form of a good quality videotape survey with audio descriptions.*
7. *Upon completion of all rock excavation and/or blasting work, make a similar examination of any properties, structures and conditions where complaints of damage have been received or damage claims have been filed. Give notice to all interested parties so that they may be present during the final examination.*
8. *Submit all survey records to the Architect.*

BLASTING

- A. *Blasting shall not be permitted within the Zone 1 of the existing well (202-ft radius).*
- B. *Blasting shall be performed by a Contractor employing supervisors and workmen that are experienced in the handling, storage, loading and firing of explosives.*
- C. *A blasting contractor experienced in controlled blasting techniques shall be present during, and in direct control of all explosives handling, loading, and blasting operations. The Contractor shall provide Architect with a notarized copy of the blaster's experience and state certificates at least 5 days prior to the blaster's starting work on the site.*
- D. *Blasting shall be performed using materials that do not contain perchlorate.*

- E. *Blasts shall be properly covered with blasting mats which are in good condition and every precaution taken to insure the safety of persons and property. The Contractor shall be responsible for all damages caused by blasting and shall immediately notify the Architect of any claims of damage from blasting at the time of claim.*
- F. *The blaster shall keep and record daily reports for each day in which blasting activities are performed. These reports shall be submitted to the Architect in a timely manner and shall include location and elevation of the blast; the depth, spacing, burden, number, and diameter of holes; stemming depth and material, delay pattern, powder factor and maximum quantity of explosive per delay and explosive type; distance to nearest structure; and seismograph locations and copies of seismograph reading records.*
- G. *The blaster shall have at least ten (10) years prior experience in similar blasting operations. The blaster shall submit a list of project experience and the qualifications and background of key personnel which will be responsible for the supervision of blasting operation.*
- H. *All explosives on-site shall be stored in suitable magazines provided and maintained by the Contractor. The magazine shall be appropriate for the types and quantities of explosives to be used. The magazine shall be constructed, fitted out, grounded, and made secure in compliance with all federal and state requirements.*
- I. *Contractor shall keep fully detailed records giving the types and quantities of explosives delivered, on hand and used, including manufacturer's batch numbers. Records of detonators by types and delays shall also be maintained. These records shall be available for inspection by the Engineer, and shall be maintained at Contractor's site office.*
- J. *Transport of explosives and detonators shall be in vehicles suitably grounded and protected from lightning strikes and electrical storm phenomena, in accordance with federal and state requirements.*
- K. *No explosives shall be handled, transported, or in any way made use of during any period of electrical storm, lightning, or other electrical phenomena.*
- L. *The blaster shall take every precaution to prevent premature explosions, flash-overs and misfires. Under no circumstances are power cables to be used for firing.*
- M. *All blasting, storage and use of explosives shall be in strict compliance with requirements of the Safety and Health Standards for Construction, U.S. Department of Labor (OSHA) and with the latest applicable federal, state and local regulations.*
- N. *An adequate warning system shall be provided to ensure that all persons are at a safe distance before a blast is detonated. Blasting signal signs shall conform to 29CFR 1926.909 (OSHA) and shall be posted at each access to the work site.*
- O. *Should a misfire occur, Contractor shall warn all persons affected and no persons other than the designated blaster and supervisor shall enter the work area until the charge has been detonated or been made safe. Only when the Contractor's designated blaster and his project representative are satisfied that danger no longer exists will the workers be allowed back into the area. Explosives and blasting caps which have not detonated, due to a misfire, shall not be left overnight.*
- P. *Unless otherwise permitted, no blasting will be allowed prior to 9:00 a.m. or after 5:00 p.m.*
- Q. *Contractor shall maintain and submit to the Architect after each blast, a blasting record for the blast. The record shall include location and elevation of the blast; the depth, spacing, burden, number, and diameter of holes; stemming depth and material, delay pattern, powder factor and maximum quantity of explosive per delay and explosive type; distance to nearest structure; and seismograph locations and copies of seismograph reading records.*

- R. Contractor shall continuously monitor for stray electrical currents utilizing device(s) designed for detecting both stray ground electric potential and currents and atmospheric electric potential over ground. Monitoring devices shall be OSHA or MSHA approved, and shall be specifically designed for the specified monitoring use.

VIBRATION MONITORING

- A. Contractor shall monitor rock removal operations by means of three-component particle velocity measuring equipment.
- B. Contractor shall provide monitoring equipment and skilled operators to monitor vibrations at a minimum of two locations on and adjacent to the site as required by the Architect. Contractor may use additional monitoring equipment for special areas. Contractor shall submit the results of particle velocity measurements to the Geotechnical Engineer at the end of each day.
- C. Rock removal shall be performed in a manner such that a maximum resultant peak particle velocity of less than 2.0 inches per second (ips) above a frequency of 40 Hz, 1.5 ips between 30 Hz and 40 Hz, 1.0 ips between 20 Hz and 30 Hz and 0.5 ips below 20 Hz is not exceeded at the site fence or immediately adjacent to all in-place construction.

P. Temporary fire protection measure

Proposed language for Project specifications are as follows:

TEMPORARY FIRE PROTECTION

- A. Provide and maintain adequate temporary fire protection in the form of barrels of water with buckets, fire bucket tanks, fire extinguishers, or other effective means of extinguishing fire, ready for instant use, distributed around the Project and in and about temporary inflammable structures during construction of the Work.
- B. Within 30 calendar days after award of Contract, the Contractor shall submit in writing to the Architect, three (3) copies of his proposed methods for fire protection that have been reviewed and approved by the local Fire Department. Post a copy of the approved fire protection plan in the Field Office for reference.
- C. Gasoline and other flammable liquids shall be stored in and dispensed from UL listed safety containers in conformance with National Board of Fire Underwriter's recommendations. Storage shall not be within building.
- D. Make arrangements for periodic inspection by local fire protection authorities and insurance underwriter's inspectors. Cooperate with said authorities and promptly carry out their recommendations.
- E. Tarpaulins used during construction work shall be made of material that is resistant to fire, water, and weather. Tarpaulins shall have UL approval and comply with FS-CCC-D-746.
- F. Torch-cutting and welding operations performed by Subcontractors shall have approval of Contractor before such work is started and chemical extinguisher shall be available within sight and not over ten (10) feet from location where such work is in progress.
- G. Do not light fires in or about premises.

Q. Fire/emergency equipment access

Further review and input from the Fire Dep't. with the School Administration, the OPM and the Design Team will be required to further develop the strategies for Fire/emergency Access to existing buildings as well as for safe evacuation areas for students and staff.

During Phase 1 the proposed construction staging area allows the continued access for Emergency vehicles from School Street to the fire lane in front of Robbins. However vehicles will need to back out of the Fire Lane. Access to the Church Street Parking lot and to the south/rear of Corey Building is also left as an emergency vehicle route.

Gates through the Construction Fence will allow access to the Staging area.

During Phase 2 the proposed construction staging area will allow access as indicated for Phase 1 except that during the summer of 2012 the reconstruction of the fire lane in front of Robbins will be occurring and therefore will restrict vehicles from that portion of the site.

The Contractor will be required to provide a Building Egress Plan for each phase of the project in concert with the Fire Department's requirements.

During Phase 1 of the project the proposed construction staging area affects the safe evacuation area of those portions of Spalding west side and Wilkins north side that currently egress onto the Plaza. Strategies for rerouting those egress paths will need to be reviewed for implementation in the Phasing and Staging Plan.

During Phase 2 of the project the proposed construction staging area eliminates the School St parking loop evacuation area in front of Spalding- since Spalding will be vacated in this Phase this condition may not negatively affect the safe evacuation area of current existing strategies. The new Addition will be occupied at this Phase and strategies for safe evacuation areas from the new Addition will need to be reviewed for implementation in the Phasing and Staging Plan.

R. Project signage

Refer to the attached Phasing and Staging Plan for indications of Project Signage during the construction activities.

The proposed signage is for traffic directional signage along Church St to direct the construction traffic into the staging area gate and to direct visitor/staff/parent parking to the current Church St parking area with a new configuration of one-way traffic routing through the lot. These signs will be standard traffic control signage as per the "Manual on Uniform Traffic Control Devices" and as detailed for new signage shown on the attached Landscape Materials and Details drawings.

S. Pest control

Not Applicable

T. Construction staging plan including:

1) Site office trailers

Refer to the attached Phasing and Staging Plan for the proposed staging areas for Phase 1 and Phase 2 of the Project.

Site Office Trailers shall be located in these designated areas.

2) Storage trailers/containers

Storage trailers/containers shall be located in the designated Staging areas.

3) Staging and storage areas for construction materials and fill

Storage for construction materials will be located in the designated Staging areas.

4) Delivery truck holding areas

Holding areas for construction trucks will be located in the designated Staging areas whenever possible. It is probable that there will be times when delivery trucks (concrete deliveries, dumptruck loading for excavated rock and soils removal) will not be able to be accommodated within the Staging areas. For these times the Contractor will be required to coordinate with applicable Town departments for locations of holding areas and/or traffic control police detail.

5) Significant equipment to be utilized

This project will utilize significant construction equipment: excavators, front-end loaders, cranes, concrete trucks and standard dumptrucks.

6) Snow removal

Snow removal within the Phase 1 staging area will be the responsibility of the contractor. Under most conditions it is expected that snow will be able to be stored within the staging areas. Should the staging area not be adequate for storage of snow, the Contractor will be required to remove the snow off of the site and dispose of in a legal manner in accordance with local and state regulations.

The Phase 2 construction is scheduled for May through August. Snow removal will not be an issue.

Project specifications will require the Contractor to provide a Logistics Plan, with detailed development of specific requirements in accordance with the following proposed specification language. This plan is to be in conformance with the intent of the Phasing and Staging Plan to be provided in the Contract Documents:

CONSTRUCTION LOGISTICS PLAN

H. Layout of Temporary Construction Facilities: Submit location plan showing office, trailer and storage layout.

I. Logistics Plan:

- 1. Contractor shall submit to the Architect, at the Pre-construction Meeting, a detailed Logistics Plan, which shall include:*
 - a. Delivery Hours and Delivery Routes*
 - b. Gate location, and wheel washing location.*
 - c. Hours of Work*
 - d. Delivery Truck holding areas*
 - e. Trailer Area, and Layout of trailers*
 - f. Parking locations for use of Owner and Contractor within the area of work*
 - g. Temp fencing, erosion control, and metering locations*
 - h. Location for stockpiling of soil*
 - i. Location for stockpiling plowed snow*
 - j. Locations for waste management containers.*
 - k. Protection of existing curbs and walkways.*
 - l. Lighting Plan*
 - m. Traffic plan.*
 - n. Police detail.*
 - o. Pedestrian safety plan on site.*

