

Village at Sudbury Station

Proposed Construction Management Plan

Hudson Road, Sudbury, MA

June 10 , 2016

Submitted to:

The Town of Sudbury

Owner:

Sudbury Station LLC

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PROPOSED CONSTRUCTION MANAGEMENT PLAN

Village at Sudbury Station
Hudson Road, Sudbury, MA

A. GENERAL:

Owner

Sudbury Station LLC

General Contractor: TBD

Date **May 16, 2016**

Project Description

The project is a residential site containing thirteen structures, including a clubhouse, a waste water treatment building, a trash management facility and ten residential structures. Five of the residential structures are made of conjoined two story townhomes for a total of thirty-six two story townhomes. The additional five multifamily buildings are a mix of three and four story residential unit buildings, with a combined total of two hundred and fourteen units. The entire project has a total of two hundred and fifty residential units. Each building contains one level of underground parking for residents. There are a total of 256 garage spaces with 220 under multifamily buildings and 36 under townhomes. There are an additional 238 surface spaces including fourteen handicap accessible spaces. In total there are 494 spaces. The total parcel area is 1,770,230 SF with the buildings covering 113,610 SF and parking covering 164,280 SF with 1,461,810 SF of open land.

Project Location

The project occupies approximately 40 acres and is bounded by Hudson Road to the south, The Town Cemetery to the East, open land to the West and sparse residencies to the north. Access to the site will come from Hudson Rd, Peter's Way and Peter's Way Extension off of Concord Rd.

Special Conditions

The project is to be built in compliance with the below listed specific special conditions:

- Zoning Board of Appeals Comprehensive Permit No. xx-xx
- Superseding Determination of Applicability – Negative. Peter's Way DEP dated April 20, 2016
- Order of Resource Area Delineation Sudbury Conservation Commission dated August 25, 2015
- Natural Heritage and Endangered Species Program File 14-33939 no take determination dated October 29, 2105

B. PROJECT DURATION:

To be determined

Key Constructability Issues:

- Removal of approximately 2,000 cubic yards of fill
- High traffic times from 7:00 to 9:00 AM and 4:00 to 6:00 PM
- Storm water detention system installation

C. PROJECT LOGISTICS:

Truck Access and Deliveries

Trucking route to the site, from the South would be Interstate 95 to route 20 Boston Post Road, to Cochituate Road which turns into Old Sudbury Road (or Route 27) to Hudson Road and arrive at the jobsite. Trucking route to the site from East and West would be I-90 W to exit 15, Newton St which connects with MA-30 W, connecting with MA-20 W, followed by MA-27 N which will bring deliveries to the intersection of Hudson and Concord Rd. Delivery routing from the North shall be via US-3 S and I-495 S to MA-27 S which will connect with Hudson Rd along the proposed site. Major truck access and deliveries to site is via Route MA-27 via I-90 W or US-3 S as identified above. The truck routing is illustrated on the logistics plan Exhibit A.

The town of has reported high local traffic between the hours of 7:00 AM and 9:00 AM as well as 4:00 PM and 6:00 PM and has requested that project deliveries do not occur during these high traffic durations. The project team will coordinate with all trades to ensure large deliveries occur outside of these high traffic times.

There will be two construction entrances to the site as designated on the logistics plan. The entrances will have gates for access to the site. The General contractor will endeavor to understand the daily vehicular traffic and foot traffic patterns for the

surrounding areas all to make their presence as non-interruptive as possible.

Hours of construction deliveries will follow Item **E below** – Hours of Operation. Deliveries will be from 7:30 AM – 5:00 PM. Daily vehicle trips are anticipated to range from 10 – 50 trips per day. Highest vehicular traffic as well as heavy equipment traffic is anticipated for early stages of site work, foundation work, and sewer / water utility work.

During upfront export/import operations, signage will be posted on Hudson Road and Concord Road, identifying “entering Construction Zone.”

Reference attached **Exhibit A** - Site Logistics Plan

Construction Parking

Subcontractor parking will be limited to on-site only during construction. Subcontractor carpooling will be encouraged. No parking will be allowed on the properties access ways.

Construction Staging

Designated areas of the site will be for construction staging areas, storage of equipment and materials and site office trailer. Delivery truck holding areas will be on-site as to not impede vehicular traffic on Hudson Road and Concord Road. Reference attached **Exhibit A** - Site Logistics Plan.

Safety and Security

Appropriate safety signage will be posted at the site indicating no trespassing, hard hat requirements, authorized personnel only; visitor entranceway access as well as delivery information signage will be posted.

All subcontractors working on site shall provide and maintain all safety measures, procedures and documentation as required by governing agencies. No pets are allowed on-site for Construction personnel. The jobsite will be enclosed by temporary fencing. General contractor personnel will meet with Town Officials to review the proposed traffic management plan to ensure acceptance and compliance with local jurisdiction.

A minimum of 2-gates will be utilized for access with appropriate designation.

Reference attached **Exhibit A** - Site Logistics Plan

Onsite Refueling

During site development activities, it is anticipated that onsite refueling of machinery will

be required. The site contractor will obtain the necessary onsite refueling permit prior to commencing site development activities.

Fuel will be needed for temporary heat to be used on the interior of the buildings and / or the exterior façade and the appropriate permits/inspections will be obtained from the plumbing inspector and fire department.

D. PROJECT TEMPORARY FACILITIES:

Field Office

A temporary General contractor field office trailer will be set up on the construction project site and will be equipped with power, phone and fax, and all appropriate furniture. All project operations including project meeting with subcontractors and the Owner/Architect will be at the field office. Portable type toilets will be provided on site for construction staff. Members of the General contractor and all its subcontractor will use only the General contractor provided toilets.

Subcontractors will be informed of this daily.

Reference attached **Exhibit A** - Site Logistics Plan for Office trailer location.

Temporary Electric

Project will attain its temporary electric from adjacent street. The General contractor and its electrical contractor will provide OSHA compliant lighting and power for project construction and safety.

Trash and Debris Removal

Dumpsters will be set and moved at various areas throughout the site as work progresses. Dumpsters will be set in such a manner as to not interfere with any emergency access.

The General contractor will also follow a strict recycling program for all recyclable waste generated throughout the course of construction. Clean-up will be daily!

Water Usage & Tie-Ins / Sewer Tie-Ins

The project shall tie into the municipal water system. The required street opening permits and traffic plan approval will be obtained from the town.

E. COMMUNICATION ITEMS:

Hours of Operation

Monday – Friday 7:00 AM* – 6:00 PM

*(No equipment/machinery or power tools or activities that may produce high noise levels will commence prior to 7:00am)

Saturday 7:00 AM – 4:00 PM

Blasting is not anticipated.

The General contractor Contact Designation

1. On Site Superintendent
2. Project Manager
3. Asst. Project Manager
4. Director of Field Operations
5. Project Executive

A Project Contact sheet will be clearly posted in the General contractor's construction trailer that will contain the above information as well as Police, Fire, Department of Public Works and Building Commissioner's contact information. This contact sheet will also be posted at the Town Hall during construction duration.

Pre-Construction

The General contractor will meet with the Town of Sudbury Building Department & Town Officials to review construction procedures and to finalize all details of this CMP plan prior to any work beginning on-site.

Pre-Construction Meetings

Two weeks prior to mobilization of any subcontractor the Project Manager and Onsite Foreman is required to attend a preconstruction meeting. At this meeting the subcontractor's personnel are oriented to the project, their specific scope of work is reviewed for content and execution, the project schedule is reviewed and accepted by the subcontractor, safety and housekeeping requirements are reviewed.

F. Quality Control and Quality Assurance Program

The General contractor Quality Control and Quality Assurance Program will be a Team approach towards exceeding the client's expectations towards the quality of their project. Pre-planning as well as establishing open dialog during the procurement and submittal processes allows for meeting and/or exceeding the specified products to be utilized. This is the control aspect of quality insurance. Quality Assurance starts with First Inspections and Bench Mark Construction. *Utilizing Construction Indoor Air Quality Management, Building Industry Safety and Housekeeping Practices, Moisture Mitigation and Lean Construction Scheduling Methods* we continue to assure quality at every aspect of the project.

Procurement and Submittals

An accurate and efficient procurement and submittal process is crucial for a seamless transference of information. The proposal schedule has a detailed schedule for procurement and submissions. This will insure an accurate and complete process without schedule delay.

First Inspections

A first inspection consists of a copy of the approved as-noted submittal for the proposed construction material, equipment and/or finishes. Prior to accepting and allowing the materials to be delivered or used, the material is inspected for conformation with the approved as noted submittal. If the materials are found to be deficient and/or incorrect the material is not allowed on the project. This process eliminates the use of inferior materials and delays to the project due to potential removal and replacement of materials.

Bench-Mark Construction

At each critical phase of the construction process the work in place is reviewed as the bench-mark for quality and correct execution of the work. The bench mark construction is reviewed by the entire project team prior to continuing with the construction. The Project Team should consist of the following; Architect's Representative, Owner's Representative, Superintendent, Project Manager, and the Subcontractor(s) involved in the scope of work being reviewed.

Third Party and Independent Consultants

There are many aspects of the construction project that a third party and/or a specialized consultant can assure consistency of quality. Examples of such specialized inspections are including but not limited to, Building Envelope Consultants for curtain

wall systems, A.V.B. systems, and Commissioning Agents. Inserted into our project schedules are the Pre-construction Conferences, Owner Third Party Inspections for designated building systems and required means and methods to insure quality within the schedule duration.

Construction Indoor Air Quality Management

Managing air quality starts at the ductwork manufacturing facility. All material is cleaned at the fabrication shop and sealed with polyethylene plastic to be ready for shipment to the project. When the ductwork is received at the site, the poly is repaired if necessary before distribution. At the end of each working day any open ended ductwork installed is resealed with poly. If for any reason the poly is not installed, missing and/or removed, the subcontractor is required to clean the interior of the ductwork and seal it. After each individual HVAC system is completed, but before occupancy, measures are taken to insure that the HVAC systems are not operated until construction cleaning has been performed. This sequence of operation is meant to prevent unnecessary dust contamination in the ductwork and HVAC equipment. If it is necessary to operate these systems out of sequence, pre-filters at the return registers and construction filters at the equipment are utilized. The equipment construction filter should be left in the unit fan coil and changed upon occupancy of the unit by the future tenants.

Safety and Housekeeping Practices

Prior to the start of work by any subcontractor a Hazardous Risk Assessment Plan is reviewed. During this review all potential hazardous work requirements and the safety plans required to mitigate these risks are confirmed. Housekeeping and project hygiene are critical to a high quality project and an expeditious completion date. Weekly Project Foreman Meetings are held and each subcontractor onsite is required to have a representative attend this meeting. Safety and Housekeeping are just two of the many subjects discussed on a weekly basis.

Moisture and Mold Mitigation

The mitigation process is started by the education of our Field Management Staff to identify potential sources of moisture and mold concerns early on. Through the proper scheduling of material deliveries that have a high potential for moisture damage, proper storage and protection of these materials will be provided for. First inspections of building materials (i.e. wood framing, drywall, etc.) to ensure we are not receiving materials that have already been exposed to moisture that indicate signs of mold growth. Rapid response procedures to water events during construction will be implemented. Follow-up inspections after water events are performed by teaming with

an environmental hygienist to monitor potential areas of concern. Utilizing predetermined procedures for proper removal of contaminated materials and documentation of actions taken.

Lean Construction Scheduling

This project has multiple similar construction activities and/or units that repeat throughout the schedule. The activities required to complete a single unit are identified to the smallest of activities. During the work required to complete this single unit the activities are verified for time and quality. The construction personnel work as a team, in the same order repeating their individual work activities as a group. This process is repeated and insures the project schedule duration and quality are maintained.

G. Coordination Operation Procedures

Overview:

We believe whole heartedly that professional coordination is one of the major keystones in delivering a successful, on budget, on schedule high quality project. While we have a varying degree of project sizes we believe that coordination meetings and drawings should be a standard procedure on all of our projects. The degree of coordination requirements will be determined at the beginning of the project with the Superintendent and the Project Manager.

Project Coordination Manager – General Contractors Representative:

The project coordination manager (PCM) will administrate the MEP coordination team and ensure subcontractor participation and performance in all coordination efforts. The PCM will also create the mutually agreed upon construction and BIM (if applicable) coordination schedules and ensure the two are kept up to date and reconciled with each other. The PCM will maintain meeting minutes, monitor subcontractor performance against the coordination and construction schedules, and resolve issues of noncompliance. The PCM will obtain and convey to the MEP coordinator (see following chapter for role definition) all structural and architectural features that are required to complete the MEP coordination. Specifically, the PCM will manage the timely distribution of architectural, structural and MEP electronic data and hard copy drawings between the design team (Project Architect, Mechanical Engineer, Plumbing Engineer, Electrical Engineer etc.) and The MEP coordination team and maintain all current logs. The PCM will act as liaison between the MEP coordination team, the owner and designers to ensure that all parties are aware of any design changes or issues requiring design input for resolution. Design changes that affect the MEP systems or issues

requiring resolution by the design team but not conveyed to the MEP coordination team in a timely fashion may adversely affect the coordination and construction schedules and impact cost. In the event a coordination issue cannot be resolved between the MEP coordinator and MEP subcontractors, the PCM will act as final arbitrator.

Project Coordination Schedule:

The General contractor will prepare and maintain a mutually agreed upon coordination schedule with coordination drawing submittal milestones that meet the overall project construction schedule. A realistic and mutually agreed upon preconstruction coordination schedule created by the General contractor with input from all subcontractors participating in the coordination is imperative to success. Coordination drawing development, coordination submittal drawing submission and review by the engineer of record, fabrication duration and delivery lead times will be included to support the project construction schedule.

Submittal and Coordination Sign-Off Drawings:

When all interferences and coordination issues have been resolved, each MEP coordination team member will produce complete and full annotated installation drawings of their respective systems, including title blocks appropriate for installation by their field team. One hard copy and one PDF data file are required for submission to the design team for review of compliance within the design intent. Upon approval by the design team, a copy of the fully coordinated coordination submittal drawings, signed by each participant will become the official “coordination sign-off drawings”. The coordination sign-off drawings (stored by the general contractor) form the basis for resolution of any field installation conflicts or disagreements. Persons installing components not shown on, or not installed in accordance with the “coordination sign-off drawings” will relocate those components at their expense. Non-compliant parties will bear all costs for rework, re-coordination or schedule impact required to accommodate components not shown on or not listed in accordance with the “coordination sign-off drawings” including impacts to other parties affected by their lack of compliance.

H. PUBLIC AGENCIES OF INTEREST, MISC. NOTIFICATIONS:

Identification of Existing underground Utilities

Prior to the start of construction all areas of the site will be “Dig Safe” in accordance with MA regulations. A certification of boundaries will be obtained from the Conservation Commission and a 48 hour notice will be given to Conservation for any and all inspections. Project Dig Safe #: To Be Issued

Safety Inspections & Documentation

At the start of construction, the General contractor will generate a Site Specific Safety plan with their in- house Safety Director and Risk Manager. Daily safety inspections are performed by the onsite supervision. Furthermore, the site will be inspected on as needed basis by the Safety Director. Copies of the safety report and corrective actions taken are on file for viewing at the projects site field office.

Permits

The General contractor shall maintain all applicable local, state and federal licenses and permits that apply to this construction project. In addition to the Building Permit, the General contractor personnel will review the requirements with the Inspectional Services Department, to obtain additional Permits such as:

- Temporary Fence permit
- Temporary electric permit
- Construction trailer permit
- Site signage permit
- Temporary heat permits
- On-site fuel storage permits

Applicable permits shall be stored and displayed in clear view at the job trailer.

Public Notification

Prior to commencement of construction activities, site development, the General contractor will meet with Town Officials to review construction schedule, detailing anticipated start and end points for each significant activity of construction.

Project Sign

A project sign shall be constructed and posted that includes the entities associated with this project and contact information.

Safety and Security Signage shall be posted per Item C, "Safety and Security"

I. GENERAL ENVIRONMENTAL:

Site Control Issues, Storm Water Control, Dust and Street Cleaning

The site-work will require dust and storm water control management. Conventional dust control methods, water and/or calcium will be applied on an as needed basis. Traffic entering and exiting the site will be monitored and debris cleaned daily. The

construction site fence will be post driven chain link with scrim screening attached to reduce potential dust contamination from leaving the project site.

A stabilized construction entrance will be installed and maintained during the course of construction to help minimize the excess mud, dirt or rock tracked from the site. The paved access ways adjacent to the site entrance will be swept to remove any excess sediment or debris. Trucks hauling material to or from the construction site will be covered with a tarpaulin as necessary. Adequate provisions will be made to control and minimize dust on and emanating from the site during construction, using water sprays.

During heavy earthwork operations, a Sweeper and Water Truck will be on site.

Erosion Control

All construction shall follow Best Management Practices for erosion and sediment control per project specifications and all permits or approvals issued by the Town of Sudbury or the Housing Appeals Committee, or other required authority, as applicable. The use of hay bales, silt fences, and tree protection will be implemented and used in accordance with the project specifications or approvals. Stock piles of material will be protected with erosion control devices.

Plowed snow collected from the roadway and parking area will be stockpiled in accordance with the contract drawings and the snow management plan filed with the Sudbury Zoning Board of Appeals.

Trees

Limits of clearing and grubbing operations as identified within Civil Drawings. Any trees that are to remain undisturbed shall be protected during construction as per project specifications.

Noise

The General contractor will take measures to ensure that noise from construction activities shall not exceed acceptable levels, as set forth by Federal and State regulatory agencies relative pertaining to generally accepted construction Best Management Practices. Schedule start and finish times will be established prior to the commencement of the foundation demolition to insure minimal disruption to the abutting apartment building occupants. Loud music and loud vulgar language will not be allowed on the site.

Ground vibration and noise generated during construction will be monitored and is expected to be limited to truck traffic, site excavation, and other related site work.

Blasting

We do not anticipate any blasting on this project, as borings do not indicate that ledge will be encountered. If blasting is required, the General contractor will follow the guidelines imposed from the Town of Sudbury.

Adjoining Properties

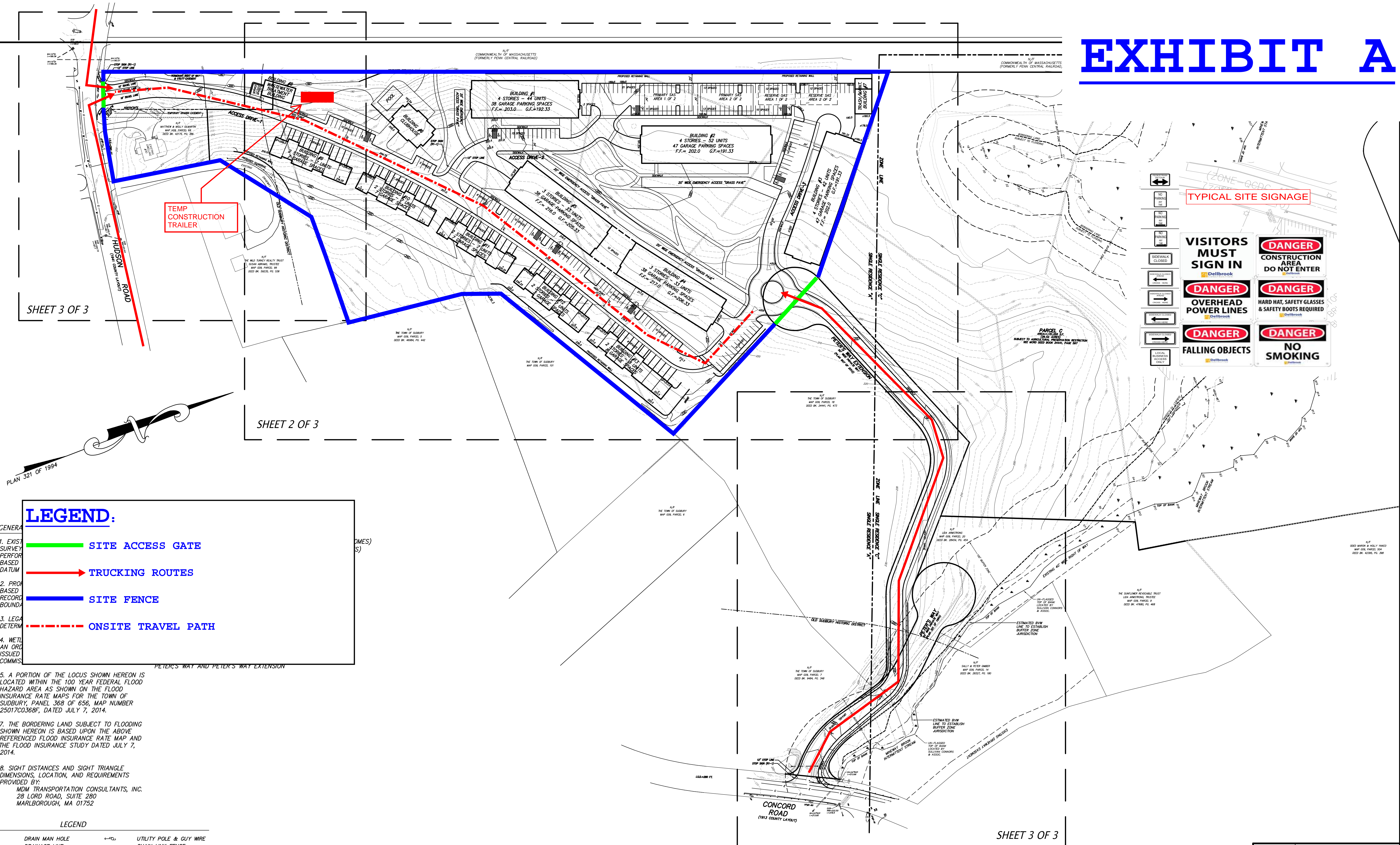
No subcontractor shall excavate on land close enough to a property line to endanger any adjacent conservation areas, wetlands, public street, sidewalk, and alley, other public or private property, or easement, without supporting and protecting the property from any damage that might result from construction operations.

J. ENFORCEMENT:

The General contractor will enforce all aspects of the Construction Management Plan as detailed above as follows:

1. The first corrective action is a verbal warning to the subcontractor and an explanation of the violation with a timeframe for compliance.
2. The second corrective action is a written warning or correction notice to the subcontractor with a timeframe for compliance.
3. Third and final notice is a stop work order, and the subcontractor will be removed from the site and replaced.

EXHIBIT A



4-29-16	REVISED STORMWATER DETAILS
4-22-16	REVISED SITE GRADING & PROFILES
3-18-16	STORMWATER DETAILS
3-14-16	MODIFY ROUNDABOUT & INTERSECTIONS
3-11-16	PROFILES
REVISED:	DESCRIPTION:
DRAWN BY: REM	CHECK BY: VC
DATE: JANUARY 25, 2016	
SCALE: 1"=80'	SHEET 1 OF 7