



MEADOW WALK
SUDBURY



AVALON
SUDBURY

526 & 528 Boston Post Road Sudbury, Massachusetts



CONSTRUCTION MANAGEMENT PLAN

February 8, 2016



2310 Washington Street
Newton Lower Falls, MA 02462
617.965.7300 | Cranshaw.com

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1.0 PROJECT DESCRIPTION

Meadow Walk is a mixed use redevelopment of the former Raytheon facility located at 526 & 528 Boston Post Road in Sudbury, Massachusetts. The area of the Project Site is approximately 50 acres. The site is currently occupied by several one and two story industrial/office buildings with origins that date back to the 1950s. The total existing building area is approximately 560,000 square feet

The project site is bordered by Boston Post Road (Route 20) to the south, to the east by commercial properties, to the west by a commercial nursery and open space and to the north by a former railroad right of way.

A portion of the site will remain partially occupied by a limited staff of Raytheon employees. The site will be mostly vacated by the end of 2016.

The proposed redevelopment will include the demolition of the existing buildings and construction of a mix of village style commercial/retail space, residential apartment units, age-restricted condo units and senior assisted living units. Additionally, improvements will be made to the existing storm and waste water management systems on site. The redevelopment will also require off-site mitigation in the form of traffic and roadway improvements.

Retail Grocer – The retail development shall consist of approximately 75,000sf of new upscale retail occupying four to five single story buildings. Wholefoods Market will serve as anchor for the retail development and will occupy 45,000sf of the proposed retail space. The remaining space will include 10,000 square feet of restaurant space and 25,000 square feet of retail business use.

The senior housing development will occupy a single 2 story building totaling approximately 45,000sf, and will include 48 units of managed care housing with interior and exterior common space.

The Multi-Family housing project, managed by Avalon Bay Communities, will include up to 250 units of rental housing, greenspace and amenity buildings.

The active-adult residential community will be constructed as for sale condominiums and will include up to 60 units of garden and townhouse style buildings.

Traffic mitigation for the full buildout will include new traffic signals at the main entrance to the property on route 20, widening of the existing route 20 corridor to include turn-in lanes into the project. Sidewalks and landscape improvements will also be constructed along the property edge of route 20.

Renovations and general improvements to the existing Waste Water Treatment Facility will be made to create sufficient capacity to support the proposed development.

2.0 CONSTRUCTION SITE PLAN

Taking into account the advantages provided by the the size of the site and phased approach to the project, the construction logistics plans and the construction schedule are designed to allow multiple trades to work on site concurrently in a safe manner and consistent with industry standards and best practices. The various construction trades will follow an organized progression of work from one part of the project to the next. A schedule of activities will be developed and coordinated so that the tradespeople are able to work efficiently following all safety-related best practices.

Site Phasing Plans have been prepared to show a representation of how the site will be utilized during demolition, site preparation and construction. These Site Phasing Plans are available as Exhibits to this Construction Management Plan.

2.1 CONSTRUCTION SITE ACCESS AND EGRESS

Access to the site for materials, equipment and personnel will be obtained from Boston Post Road (Route 20). Incoming traffic will emanate from the east and west and enter the site through one of three access gates, east gate, west gate and an existing central gate that will be reactivated for construction activities.

Each construction access point will remain paved until such time as site improvements are required. At that point, pavement will be removed and temporary stone tracking mats will be installed to help reduce the amount of dust and dirt tracked on the Town streets. A wheel wash area will also be available when weather conditions warrant its use. Excess wheel wash water runoff will be routed into a settling pool prior to discharging into the storm-water drainage system.

Street sweeping will be available at all times during construction hours of operation following best practices as outlined in the Project's Stormwater Pollution Prevention Plan (SWPP) that will be submitted to the E.P.A. under the National Pollutant Discharge Elimination System (NPDES) program. Boston Post Road (Route 20) will be monitored for cleanliness on a weekly basis, and more frequently during periods of inclement weather.

Due to the project's proximity to Sudbury Fire Station #2, all incoming and outgoing construction traffic will be instructed to yield to fire apparatus responding to calls for assistance.

2.2 CONSTRUCTION TRUCK ROUTES

Trucking routes, lay down areas and contractor parking zones will be established on site to respect the temporary occupancy conditions of Raytheon employees, while maintaining a safe and efficient flow of construction work.

Egress from the site will be restricted to the central and west gates for the initial phase of construction. Trucks and heavy equipment leaving the construction site will be required to head westbound on Boston Post Road (Route 20) during peak traffic times of the day. Restricting truck traffic to westbound egress during peak

traffic times will help to reduce the impact of construction vehicles on the Town's streets and residents. When westbound egress is impractical, eastbound egress will be allowed provided accepted traffic management personnel and provided to allow the safe and efficient passage of pedestrian vehicles.

2.3 CONSTRUCTION SITE OFFICE, MATERIAL STORAGE AND LAYDOWN AREA

Material storage and construction laydown will be contained within the limits of the property, and will not encumber the streets of the Town or Boston Post Road (Route 20).

During phased demolition operations, debris will be contained within fenced enclosures and will be segregated, loaded into tractor trailers, and shipped off site for disposal.

Excess soils near (and, if relevant, within) wetland buffer areas will be managed consistent with the requirements of the local Conservation Commission Order of Conditions for the Project and the NPDES SWPPP. In all cases, soil stockpiles will have perimeter runoff protection and will be covered to help reduce dust.

2.4 CRANES AND HOISTING

Cranes and hoisting equipment will be accommodated within the Project site. Cranes will be located adjacent to the buildings under construction and will be protected with safe work zones that will mark the perimeter of the area. Cranes will be adequately supported at all times. Attention will be given when crossing utilities and loading on underground infrastructure.

2.5 CONSTRUCTION WORKER PARKING

Construction worker parking will be contained within a segregated, fenced area during phase 1 demolition operations. Contractor parking may expand as a result of the ongoing construction phasing and additional construction activity on site. At no time will parking be allowed inside of any of the buildings or on the streets of the Town or Boston Post Road (Route 20).

2.6 CONSTRUCTION PROCEDURES

Equipment that is used in wetland resource areas or buffer zones thereto that use fuel, oil, or hydraulic fluid shall be inspected daily for leakage. No fuel or hydraulic fluids will be stored within the buffer zone. Equipment requiring repair shall, to the extent possible, be moved out of the buffer zone to such resource areas.

Construction activities shall be performed in accordance with the approvals granted by the Town of Sudbury and its related Departments, The Massachusetts Department of Environmental Protection and Department of Public Safety, and the U.S. Environmental Protection Agency.

Copies of this Construction Management Plan will be distributed to each of the relevant contractors working on the project. The entire document or portions thereof will be distributed to each subcontractor to advise its work crews of the plan as may be relevant to each particular discipline. The relevant requirements

of the CMP will be reviewed weekly by the construction manager with all on site personnel.

2.6.1 SECURITY

The construction site will be enclosed by a 6'-0 high chain link fence with protective screening at all times. Construction gates will remain locked on off-hours. At points during the construction of the project, video surveillance and or security personnel may be engaged to monitor the site to ensure a safe and secure environment.

2.6.2 SITE MAINTENANCE

The construction site will be occupied by professional construction management staff at all times during work hours. Construction dumpsters will be maintained on site at all times. Trash and debris will be cleaned on a daily basis. Portable bathroom facilities and handwash stations will be used throughout the project.

The site will be monitored for cleanliness on a daily basis. The site and roadways immediately adjacent to the project will be swept on an "as needed" basis.

Dust control measures will be employed as required, through the duration of construction activities. All dust control measures will comply with the DEP, EPA and local Conservation Commission requirements.

2.6.3 CONSTRUCTION HOURS

Construction operations will comply with the Town of Sudbury for starting and quitting times, and will strictly adhere to the Town's noise ordinance. It is anticipated that daily construction operations will occur include Monday through Saturday. Sundays or Holidays may be required but will not occur without the review and approval of that applicable Town Departments, and the Sudbury Fire and Police Departments.

2.6.4 DELIVERIES

Deliveries to the site will be routed through one of the active construction gates to the Construction Manager's field office trailer. The construction manager will accept deliveries or notify the appropriate party to authorize release.

3.0 CONSTRUCTION PHASING

Meadow Walk will be constructed in multiple phases due to the phased vacancy of the site by Raytheon staff and the ongoing permitting of the project. The Phases will include hazardous materials abatement, demolition, site preparation and construction, and will follow the following sequence:

- 3.1 Phase 1 (Existing Buildings 2-3-4 – Grocer Building 1)
 - 3.1.1 Hazardous Materials Abatement
 - 3.1.2 Demolition Phase 1 (Buildings 2-3-4)
 - 3.1.3 Site Preparation
 - 3.1.4 Building Construction
- 3.2 Phase 1A (Off-Site and Traffic Improvements)
- 3.3 Phase 2 (Existing Buildings 1, 5, Radar Tower, Test Site – Retail 2-3-4-5)
 - 3.3.1 Hazardous Materials Abatement
 - 3.3.2 Demolition Phase 2 (Buildings 1, 5, Radar Tower, Test Site)
 - 3.3.3 Site Preparation
 - 3.3.4 Building Construction
- 3.4 Phase 2A (Multi-Family Residential)
 - 3.4.1 Site Preparation
 - 3.4.2 Building Construction
- 3.5 Senior Housing
 - 3.5.1 Site Preparation
 - 3.5.2 Building Construction
- 3.6 Waste Water Treatment Facility
 - 3.6.1 Building Construction & Site Improvements
- 3.7 Active Adult Community
 - 3.7.1 Site Preparation
 - 3.7.2 Building Construction

Note:

While this Construction Management Plan is currently anticipated to include the phases outlined above, the phasing may need to change due to the timing of entitlements for any particular portion of the Project, in which case, this Construction Management Plan will be updated and resubmitted to the Town of Sudbury for review and approval by the Town's Building Department.

4.0 CONSTRUCTION SCHEDULE

- 4.1 Haz-Mat Removal
- 4.2 Demolition
- 4.3 Site Preparation
- 4.4 Retail Phase 1
- 4.5 Off-Site and Traffic Improvements
- 4.6 Retail Phase 2
- 4.7 Multi-Family Residential
- 4.8 Senior Housing
- 4.9 Waste Water Treatment Facilities
- 4.10 Active Adult Community

- 4.1.1 The existing buildings of Phase 1 (2,3,4) will be segregated from the partially occupied buildings of Phase 2 (1,5). Temporary plywood partitions will be constructed in the connectors between 2&1 and 4&5 to prevent occupants of the partially occupied buildings to stray into active construction zones. The fire alarm system, which currently loops from building 1 through buildings 2,3 &4, and back through building 5, will be separated and rewired so that Building 1&5 will act as a stand-alone FA system with independent reporting back to Sudbury Fire. Building 2,3&4 will be re-wired and have a new fire alarm control panel and Master-box installed so that these buildings may continue with fire alarm coverage, and will report trouble and alarm conditions back to the Sudbury Fire Department.

Hazardous materials abatement will commence upon receipt of permits. Hazardous materials primarily include the identification and removal of Asbestos Containing Materials (ACM) from floors, walls, ceilings and utility insulation. There are minor contaminants in some sealants which are also scheduled for removal. Work zones will be contained using the appropriate, Code compliant tarpaulin, so that ACM is isolated, and that upon removal, will not pose a threat to surrounding areas. Negative air machines and water will be utilized to further reduce the risk of creating airborne contaminants. ACM will be removed, contained and disposed of in lined containers which will be transported to the appropriate facilities for legal disposal. Partial interior demolition will be required to access some of the ACM.

The work will commence in building 2 and continue through building 4.

- 4.1.1.1 Schedule – 12 weeks

General note related to all abatement related work described in this Plan:
Shipping and landfill receiving manifests for all hazmats will be assembled and included in an abatement close out report by the Owner's licensed third-party hazmat/abatement consultant. Prior to building demolition (and as part of the demolition permit application), the Owner's consultant will provide written confirmation to the Town of Sudbury's

Building Department that all hazmats in the building(s) to be demolished have been removed and properly disposed of.

- 4.2.1 Upon completion of ACM removal through building 3, mobilization to demolish building 2 will commence. It is the intent of the project schedule to commence building demolition activities in building 2 prior to the completion of ACM removal in building 4. A safe-zone will be maintained providing adequate separation between buildings so that demolition may continue without the risk of unsafe conditions for ACM removal in building 4. Demolition debris will be stockpiled and segregated on the ground to separate steel from concrete and other demolition debris. All demolition debris will be loaded into demolition containers and transported off site for legal disposal.

Demolition activities will commence in building 2 and continue through building 4. (See Exhibit D)

4.2.1.1 Schedule – 12 weeks

- 4.3.1 Site preparation will begin upon completion of the demolition of the buildings. Site preparation will include the removal of existing site furnishings, asphalt paving, underground and above-ground utilities, etc. Building foundations will be over-excavated, replaced and compacted to ensure that the proposed building is founded on firm, structural fill. Appropriate construction controls will be used to ensure proper foundation and building pad preparation. These conditions will be reviewed and approved by third-parties with oversight by the Owner's geotechnical engineers and materials testing consultants. Groundwater management operations will commence during this phase.

4.3.1.1 Schedule – 52 weeks (through opening of Phase 1)

- 4.4.1 Construction of Building 1 of Phase 1 shall commence upon completion of demolition of the Phase 1 buildings and in conjunction with the site preparation operations of this phase. Shell building construction is scheduled to be completed within seven (7) months of commencement. Shell building construction operations typically overlap with interior tenant construction operations. Completion of the this building will coincide with the completion of the Phase 1 utility infra-structure, loop roads and parking fields. (See Exhibit E)

4.4.1.1 Schedule – 30 weeks (shell building only)

- 4.5.1 Off-site and Traffic Improvements will include the widening of Boston Post Road along the frontage of the project, removal and relocation of the existing overhead utility poles and cables currently installed along Route 20 (north side), the construction of new entryways into the Meadow Walk project and Shaw's Plaza, and installation of traffic signals.

4.5.1.1 Schedule – 52 weeks

- 4.6.1 The existing buildings of Phase 2 (1,5,Radar Tower & Test Site) are partially occupied and will be vacated in December of 2016. Once unoccupied, Hazardous material removal will commence.

Hazardous materials primarily include the identification and removal of Asbestos Containing Materials (ACM) from floors, walls, ceilings and utility insulation. There are minor contaminants in some sealants which are also scheduled for removal. Work zones will be contained using the appropriate, Code compliant tarpaulin, so that ACM is isolated, and that upon removal, will not pose a threat to surrounding areas. Negative air machines and water will be utilized to further reduce the risk of creating airborne contaminants. ACM will be removed, contained and disposed of in lined containers which will be transported to the appropriate facilities for legal disposal. Partial interior demolition will be required to access some of the ACM.

The work will commence in building 1 and continue through building 5.

4.6.1.1 Schedule – 14 weeks

Upon completion of ACM removal through building 1, mobilization to demolish building 1 will commence. It is the intent of the project schedule to commence building demolition activities in building 1 prior to the completion of ACM removal in building 5. A safe-zone will be maintained providing adequate separation between buildings so that demolition may continue without the risk of unsafe conditions for ACM removal in building 5. Demolition debris will be stockpiled and segregated on the ground to separate steel from concrete and other demolition debris. All demolition debris will be loaded into demolition containers and transported off site for legal disposal.

Demolition activities will commence in building 1 and continue through building 5. (See Exhibit D)

4.6.1.2 Schedule – 14 weeks

Site preparation will begin upon completion of the demolition of the buildings. Site preparation will include the removal of existing site furnishings, asphalt paving, underground and above-ground utilities, etc... Building foundations will be over-excavated, replaced and compacted to ensure that the proposed buildings are founded on firm, structural fill. Groundwater management operations will commence during this phase.

4.6.1.3 Schedule – 42 weeks (through opening of Phase 2)

Construction of Buildings 2, 3, 4 &5 of Phase 2 shall commence upon completion of demolition of the Phase 2 buildings and in conjunction with the site preparation operations of this phase. Shell building construction is scheduled to be completed within nine (9) months of commencement. Shell building construction operations typically overlap with interior tenant construction operations. Completion of these buildings will coincide with the completion of the Phase 2 utility infrastructure, loop roads and parking fields.

4.6.1.4 Schedule – 39 weeks (shell buildings only)

4.7.1 Site preparation will begin upon completion of the demolition of the Phase 1 buildings. Site preparation will include the removal of existing site furnishings, asphalt paving, underground and above-ground utilities, etc... Groundwater management operations will commence during this phase.

4.7.1.1 Schedule – 78 weeks (through completion of the multi-family residential project)

Building construction will commence in conjunction with site preparation operations. Buildings will be constructed from the south to the north (Boston Post Road to the rear of the site). The first phase of construction will include the construction of several multi-family residential apartments, and the Clubhouse which will house project amenities and leasing operations. Subsequent construction activities will continue through completion of the project.

4.7.1.2 Schedule – 78 weeks

4.8.1 Site preparation will begin upon completion of the demolition of the buildings 1&5 in Phase 2. Site preparation will include the removal of existing site furnishings, asphalt paving, underground and above-ground utilities, etc... Groundwater management operations will commence during this phase.

4.8.1.1 Schedule – 60 weeks

Building construction will commence in conjunction with site preparation operations. Building will be constructed from the south to the north (Boston Post Road to the rear of the site) with projected completion 14 months after commencement.

4.8.1.2 Schedule – 60 weeks

4.9.1 Permitting activities for the WWTP will commence during the first quarter of 2016. Construction operations are scheduled to commence upon completion of permitting and continue for twelve (12) months. The WWTP is expected to be active and operational for the completion and occupancy of the Phase 2 & 2A buildings.

4.10.1 Site preparation will begin in conjunction with the site preparation for the senior housing facility. Site preparation will include the removal of existing site furnishings, asphalt paving, underground and above-ground utilities, etc... Groundwater management operations will commence during this phase.

4.10.1.1 Schedule – 52 weeks

Building construction will commence in conjunction with site preparation operations. Building will be constructed from the south to

the north (Boston Post Road to the rear of the site) with projected completion 12 months after commencement.

4.10.1.2 Schedule – 52 weeks

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5.0 CONSTRUCTION IMPACT MITIGATION

The following measures will be implemented in order to mitigate air quality, noise and traffic impacts of the project's construction.

- 5.1 Air Quality** - To ensure that air quality is not impacted by dust resulting from construction activities the following construction controls will be implemented:
- Conditions within the Order of Conditions issued by the Conservation Commission and regulations as administered by the Department of Environmental Protection will be adhered to.
 - When required, wet suppression will be used to minimize the generation of dust from excavation operations and on-site vehicle traffic, with provisions for run-off control.
 - Where construction vehicles are not on paved streets, site access points will be stabilized by compacting the soil or using gravel matting
 - A street sweeper will be available at all times during exterior construction, when the project site contains areas of exposed soils. The streets adjacent to the jobsite.
 - Stockpiled soils will be protected with erosion control measures where required and stabilized with a spray-tackifier material
 - Trucks hauling debris and excavated material from the site will be securely covered.
 - Trucks and other vehicles located off-site will not be allowed to idle (in accordance with the Commonwealth of Massachusetts regulation prohibiting vehicle idling) in excess of five minutes
 - The contractor will participate in the Commonwealth of Massachusetts Department of Environmental Protection (DEP) Diesel Retrofit Program
- 5.2 Water Quality** - To ensure that potential impacts to water quality are kept to a minimum, the contractor will provide the following measures during construction as appropriate:
- A spill management plan for hazardous materials will be ready to be implemented during work in the resource area or within 100 feet of the water's edge. A quick absorbent material will be stored in a dry, readily available area and used in the event that petroleum based fluids are spilled or leaked. The spent material will then be containerized and disposed of properly.
 - Refueling of vehicles and equipment will not be allowed in or around any of the wetland resource areas.
 - Erosion control devices and on site drainage structures and outfalls will be installed and maintained according to the engineer's specifications throughout construction to minimize erosion, sedimentation, contamination or debris from entering the water resources.
- 5.3 Noise Controls** - To reduce the noise impacts of construction on the surrounding neighborhood, the following noise mitigation measures will be implemented:
- Mufflers on noise-generating equipment will be monitored and maintained in proper working order.
 - Each construction task will utilize the most efficient equipment where possible
 - All contractors will be required to properly maintain their equipment.

- Back-up alarms on vehicles and equipment will be adjusted as low as possible to reduce noise. This procure will be required to maintain sounds levels required by OSHA and to ensure that safety of the construction staff and community members is maintained.
- Trucks and other vehicles located off-site will not be allowed to idle (in accordance with the Commonwealth of Massachusetts regulation prohibiting vehicle idling) in excess of five minutes
- Operational on-site equipment will be located as far as practical from residential neighbors.
- Engine housing panels will be kept closed while equipment is operational.
- Electricity will be obtained from municipal electrical power sources as is feasible, in order to reduce the use of portable generators.

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6.0 FIRE SAFETY

Fire prevention procedures are paramount for work on this project. Existing fire alarm and fire suppression systems will remain active and operational as long as practical during hazardous materials removal and demolition operations. When the construction schedule demands the removal of said systems, temporary fire-fighting measures will be utilized on site to assist with the Sudbury Fire Department's ability to effectively respond to emergency situations. The existing underground fire service piping and hydrants will remain active as long as practical. Access to and around the construction areas will be left free of obstructions and will be clearly marked as fire service lanes when appropriate. During construction, temporary fire extinguishers will be kept within close proximity to work zones for immediate fire responses.

Smoking will be prohibited in all buildings at all times and will only be allowed in designated areas in isolated locations on site.

Vehicles traveling to and from the site will be instructed to yield to law enforcement, emergency and fire-fighting apparatus at all times.

In consultation with the Sudbury Fire Department and consistent with all relevant rules and regulations including any Conservation Commission Order of Conditions and the NDPE SWPPP, the Contractor will ensure that all fuels needed for construction activities are appropriately located, contained and protected to ensure fire safety and the protection of natural resources.

The Sudbury Fire Department, Police Department and related Town Departments will be consulted regularly and invited to inspect the jobsite and conduct site tours with department personnel to become familiar with field operations and to get a general sense of construction sequencing and schedules.

7.0 SUMMARY

Cranshaw Construction is committed to providing a high level of service to our client and will work with the town and neighborhood to ensure a successful project.

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8.0 TEAM

Owner/Development Manager: National Development
Steve Senna – Vice President

Avalon Bay Communities
David Gillespie – Senior Development Director

Contractor: Cranshaw Construction
Chris Iannelli – Vice President

Avalon Bay Communities
Matt Gendron – Senior Director of Construction

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