

Trapelo Road and Belmont Street
Roadway Improvement Project
Request for Determination of Applicability

Town of Belmont
Conservation Commission
March 2011

Prepared for:
MassDOT – Highway Division
10 Park Plaza, Room 4260
Boston, MA 02116

MassDOT File No. 604688
BSC Project No. 28172.02

Prepared by:



15 Elkins Street
Boston, MA 02127



March 15, 2011

Belmont Conservation Commission
Office of Community Development
Homer Municipal Building
19 Moore Street
Belmont, MA 02478

15 Elkins Street
Boston, MA 02127

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www.bscgroup.com

**RE: Request for Determination of Applicability
Trapelo Road and Belmont Street
Roadway Improvement Project**

Dear Members of the Belmont Conservation Commission:

BSC Group Inc., on behalf of the Massachusetts Department of Transportation – Highway Division (MassDOT) (the applicant) is requesting a review by the Belmont Conservation Commission to determine whether proposed roadway improvement activities are subject to review under the MA Wetlands Protection Act. Specifically, MassDOT respectfully requests the Commission issue a Negative Determination of Applicability for project activities associated with roadway improvements to an approximately 2.5 mile section of the Trapelo Road and Belmont Street corridor in Belmont and Watertown, Massachusetts (See Attachment A, Site Figures). The purpose of the project is to improve roadway and sidewalk surface conditions to better accommodate vehicular, bicycle and pedestrian traffic. Additionally, the replacement of antiquated traffic signal systems along the corridor with new traffic responsive equipment and improvements to the existing stormwater management system are included as project components. The specific project area extends from a point approximately 50-feet east of the Belmont/Waltham boundary (characterized by the centerline of Beaver Brook) and extends east through Belmont where it terminates at Belmont Street at the Belmont/Cambridge boundary. For the purpose of this Request for Determination of Applicability (RDA), only the project activities located adjacent to wetland resource areas are described in the RDA as the majority of the project will occur outside the limits of jurisdictional wetland resource areas. While portions of the project will occur within the 200-foot Riverfront Area associated with Beaver Brook, the majority of project activities will result in an overall improvement to existing conditions. Additionally, a portion of the project will be located within the 100-foot Buffer Zone associated with delineated Inland Bank and Bordering Vegetated Wetland. In addition to roadway improvements, the project includes Best Management Practices (BMPs) to improve stormwater discharge to the Beaver Brook to the maximum extent practicable, most notably a vegetated infiltration swale that will collect some roadway drainage prior to indirect discharge to Beaver Brook.

The implementation of BMP's will reduce and mitigate impacts to adjacent wetland resources to the maximum extent practicable. Specifically, upgrades to the existing stormwater management system will provide an overall improvement to the water quality discharged to the Beaver Brook. We are requesting a Negative Determination of

Engineers
Environmental
Scientists
GIS Consultants
Landscape
Architects
Planners
Surveyors



Applicability as this project has no anticipated negative impacts to jurisdictional wetland resource areas and will utilize erosion and sedimentation control and water quality BMP's. This Request for Determination of Applicability has been prepared in accordance with the Massachusetts Wetland Protection Act, M.G.L. c.131 c.40 (the Act) and implementing regulations (310 CMR 10.00). In addition, the project is being proposed as a Limited Project per provision outlined within 310 CMR 10.53(3)(f) for maintenance and improvements of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems.

Existing Conditions

The Trapelo Road and Belmont Street Reconstruction Project is intended to improve the overall roadway infrastructure to an approximately 2.5 mile section of the Trapelo Road/Belmont Street corridor in Belmont and Watertown Massachusetts. The project begins on Trapelo Road at a point approximately 50-feet east of the Belmont/Waltham boundary (characterized by the centerline of the Beaver Brook) and extends east through Belmont where it terminates at the Belmont/Cambridge boundary.

Review of Existing Data

The 2008 Massachusetts Natural Heritage and Endangered Species Atlas shows no areas of mapped priority or estimated habitat within the limits of the proposed project area.

A portion of the project will occur within a mapped area associated with an Outstanding Resource Water identified as a Stormwater Critical Area. The project will not result in any discharge of dredged or fill material into waters of the U.S. including wetlands.

Wetland Resource Area Discussion

Jurisdictional wetland resource areas identified within proximity of the project area include:

- Inland Bank (310 CMR 10.54)
- Bordering Vegetated Wetland (310 CMR 10.55)
- Land Under Water Bodies and Waterways (310 CMR 10.56)
- Bordering Land Subject to Flooding (310 CMR 10.57) - According to the applicable Flood Insurance Rate Maps (FIRM), Community Panel 25017C0414E, 25017C0418E and 25017C0419E, each dated June 4, 2010 indicates that no portions of the project area are located within the 100-year Flood Plain (See Attachment A).
- Riverfront Area (310 CMR 10.58)

Wetlands were identified and delineated in accordance with the methodology described in the MA Department of Environmental Protection's (MA DEP) Handbook on Delineating Bordering Vegetated Wetlands (March 1995) and the U.S. Army Corps of Engineers Wetland Delineation Manual (January 1987) and the Supplemental Manual. Please refer to Project Site Plans (Attachment B) for a depiction of delineated wetland resource areas and associated Buffer Zones.



Proposed Conditions

The Trapelo Road and Belmont Street Reconstruction Project is intended to improve the overall roadway infrastructure to an approximately 2.5 mile section of the Trapelo Road/Belmont Street Corridor. The project involves the following components:

- Roadway resurfacing with micro-milling (2.25-inches) and overlay (3.50-inches) using a full depth pavement only where necessary to widen the roadway or replace poor utility trench repairs;
- Widening or Narrowing of the curb-to-curb width to adequately accommodate the present and future vehicle and bicycle traffic demand;
- Reconstruct the sidewalks to provide safe and efficient pedestrian access;
- Replace the antiquated traffic signal systems along the corridor with new traffic responsive equipment;
- Construction of stormwater Best Management Practices (BMP's) in accordance with current Stormwater Management Handbooks issued by MassDOT and the Department of Environmental Protection.

Table 1.0 – Wetland Impact Areas

Wetland Resource Areas	Temporary Impacts	Comments
Inland Bank and Bordering Vegetated Wetland	0 square feet	No impacts to Inland Bank or Bordering Vegetated Wetland are proposed as part of project activities.
Riverfront Area (RFA)	29,000 square feet	Project activities within RFA are limited to previously disturbed portions of existing roadway.
Buffer Zone to Inland Bank and Bordering Vegetated Wetland	15,500 square feet	Approximately 15,500 square feet of project activities will occur within the Buffer Zone to Inland Bank.

Erosion Control and Best Management Practices

While the project will not affect adjacent wetland resource areas, portions of the project occur within the 100-foot buffer zone to Inland Bank and BVW. The project has therefore been designed to incorporate BMP's to ensure adequate protection to nearby wetland resource areas. Mitigation measures are described below. Please refer to Project Site Plans (Attachment B) for additional detail.

Erosion Control

Siltation barriers composed of silt fence and haybales will be installed within direct proximity of the proposed work areas located within the 100-foot buffer zone to jurisdictional wetland resource areas. Catch basins within proximity of work areas will also be protected with filter fabric. The siltation barriers will demarcate the limit of work, form a work envelope and provide additional assurance that construction equipment or sediment will not enter the adjacent wetland areas or catch basins. Sedimentation barriers within the 100-foot buffer zone to BVW will remain in place until all disturbed areas are stabilized.



Construction Stockpiling Locations

There will be no overnight storage of soil, gravel or construction debris within the 100-foot buffer zone. Material excavate will be removed from the project area following the completion of project activities each day.

Dewatering Measures

The need for dewatering is not anticipated. Should the need for dewatering arise, groundwater will be pumped directly into a sediment filter bag and allowed to flow over the roadway toward the nearest catch basin which will be lined with filter fabric.

Impaired Waterway and Stormwater BMP's

The western project limit is situated approximately 50-feet east of the Beaver Brook. The Beaver Brook is currently listed on the listed on the 2010 Massachusetts Integrated List of Impaired Waterways with known water quality impairments including E. Coli, excess algal growth, non-native aquatic plants, anthropogenic substrate alteration, biological indicators, taste and odor and total phosphorus. Additionally, a Final Pathogen Total Maximum Daily Load (TMDL) exists for the Charles River Watershed (January 2007). The applicant proposes to install deep sump catch basins along the 2.5 mile project length as a stormwater BMP. While the applicant proposes to replace the majority of the catch basins along Trapelo Road and Belmont Street, some of the catch basins within Watertown will remain in place. Additionally, a vegetated infiltration swale will be constructed adjacent the Beaver Brook. It is anticipated that the implementation of Stormwater BMP's will serve as an overall improvement to water quality discharged to the Beaver Brook.

We respectfully request that you place this matter on your agenda for the next available public hearing. If you have any questions, please do not hesitate to contact our office with any inquiries you may have. Thank you for your consideration in this matter.

Very truly yours,

BSC GROUP, INC.

Jeffrey T. Malloy
Environmental Planner

cc: MassDOT – Highway Division

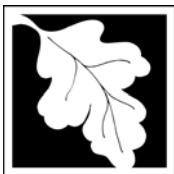
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WPA FORM 1

ATTACHMENT A SITE FIGURES

ATTACHMENT B SITE PLAN



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Belmont
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

MassDOT - Highway Division, Attn: [Insert Name]

Name

E-Mail Address

10 Park Plaza, Room 4260

Mailing Address

Boston

City/Town

MA

State

02116

Zip Code

Phone Number

Fax Number (if applicable)

2. Representative (if any):

BSC Group, Inc.

Firm

Jeffrey T. Malloy

Contact Name

jmalloy@bscgroup.com

E-Mail Address

15 Elkins Street

Mailing Address

Boston

City/Town

MA

State

02127

Zip Code

(617) 896-4300

Phone Number

(617) 269-0139

Fax Number (if applicable)

B. Determinations

1. I request the Belmont Conservation Commission make the following determination(s). Check any that apply:

- ☒ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- ☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- ☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- ☐ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Name of Municipality

- ☒ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

Project activities are limited to approximately 29,000 square feet of roadway improvement within the RFA. Project activities in RFA will occur within previously disturbed roadway and associated shoulders. The project will result in an improvement to roadway conditions in addition to upgrades to the existing stormwater management system.



Massachusetts Department of Environmental Protection

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Belmont

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C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Trapelo Road and Belmont Street

Street Address

Belmont and Watertown

City/Town

N/A - State Roadway

Assessors Map/Plat Number

Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

The proposed project involves reconstruction of a 2.5-mile section of the Trapelo Road and Belmont Street Corridor within the Town of Belmont and Watertown. The project area extends from a point approximately 50-feet east of the Beaver Brook in Belmont and extends east through Belmont where it terminates at Belmont Street at the Belmont/Cambridge boundary. Please refer to the cover letter for additional information.

- c. Plan and/or Map Reference(s):

Title

Date

Title

Date

Title

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The proposed project involves reconstruction of a 2.5-mile section of the Trapelo Road and Belmont Street Corridor within the Town of Belmont and Watertown. The project purpose is to improve traffic flow conditions by creating a uniform width roadway and realigning the intersections. Additionally, the project will improve the pedestrian and bicycle facilities/sidewalks and improve stormwater treatment.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Belmont

City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

Project activities within wetland resource areas are limited to previously disturbed portions of Riverfront Area. Additionally portions of the project will occur within the 100-foot Buffer Zone to BVW and Inland Bank. Project activities are temporary and will result in an overall improvement to the area. The project qualifies as a limited project in accordance with 310 CMR 10.53(3)(f) for Maintenance and improvements of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☒ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

N/A - State Roadway

Name

Mailing Address

City/Town

State

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant

Date

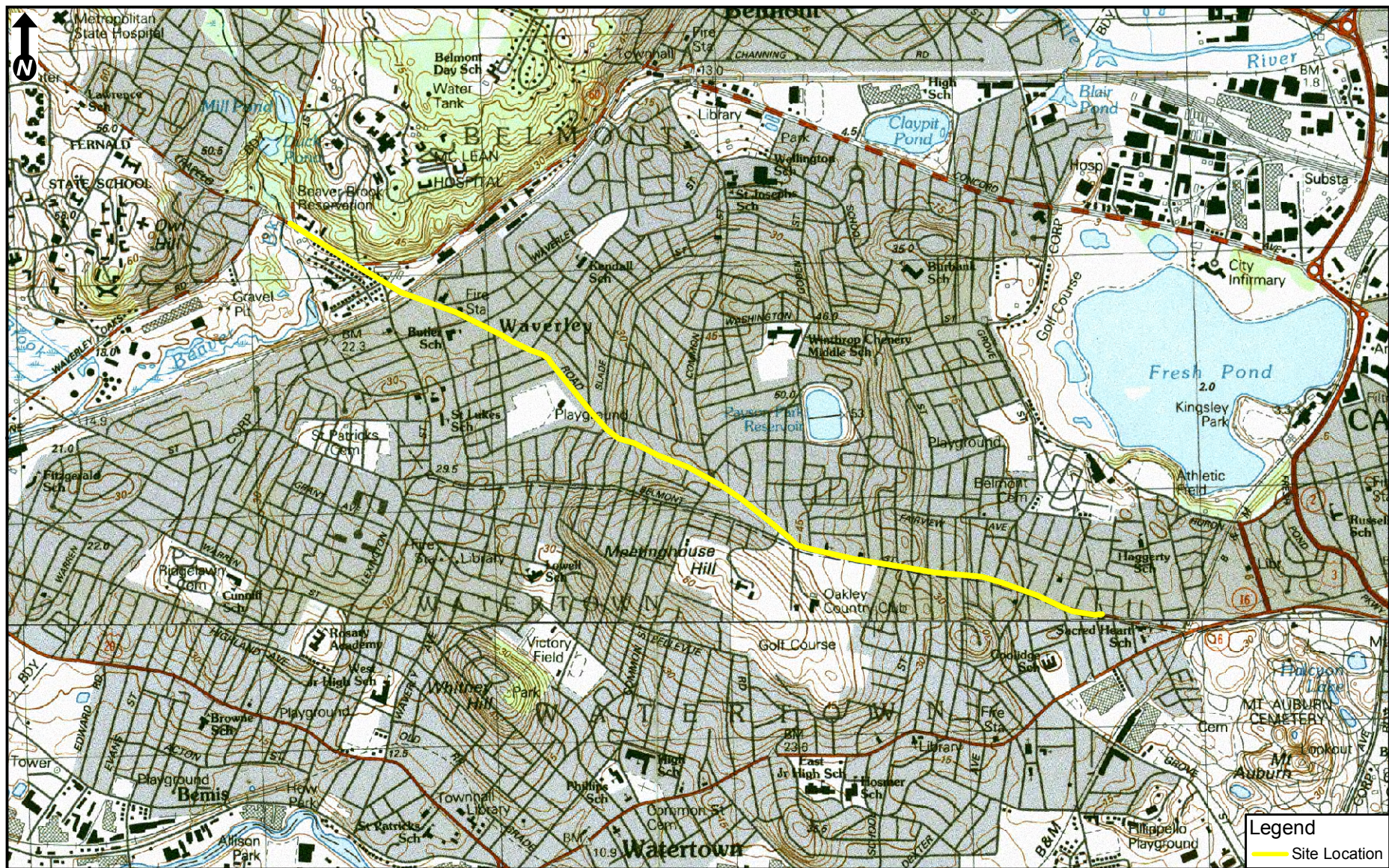
Signature of Representative (if any)

Date

Attachment A

Trapelo Road and Belmont Street
Roadway Improvement Project
Request for Determination of Applicability

SITE FIGURES



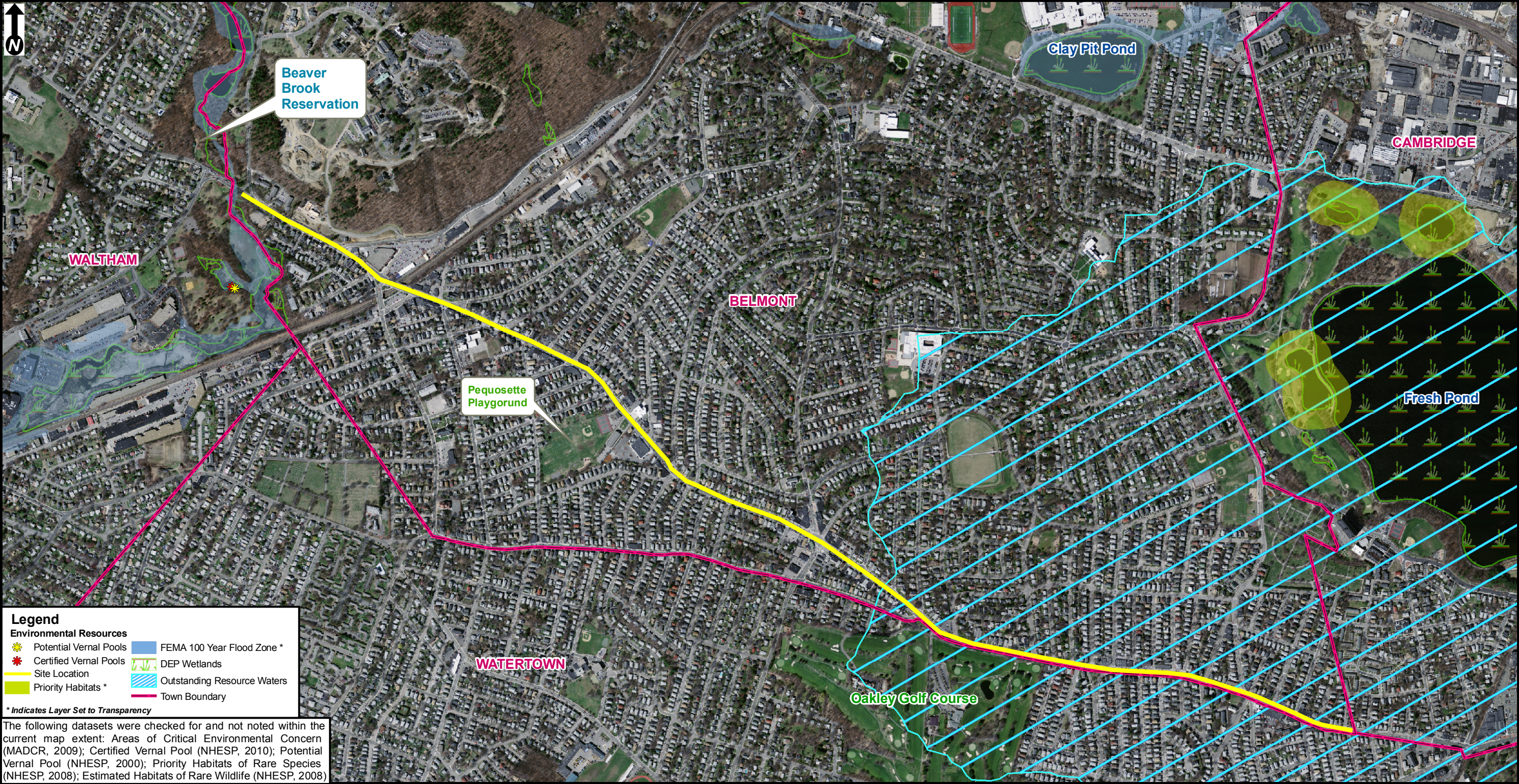
Scale
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 1 in = 2,000 ft
 0 750 1,500
 Feet

Site Locus Map

Roadway Improvement Project for
 Trapello Road & Belmont Street,
 Belmont Massachusetts

Source:
 USGS, 2005

 BSC GROUP



Scale 1:12,000
1 in = 1,000 ft
0 500 1,000
Feet

ENVIRONMENTAL RESOURCES MAP
Roadway Improvement Project for
Trapello Road & Belmont Street,
Belmont Massachusetts

Source: MASSGIS, 2009;
MADEP, 2007, 2010;
MADOT, 2009; FEMA, 1997
NHESP, 2000 & 2008





Scale
 1:3,600
 1 in = 300 ft
 0 150 300
 Feet

Site Locus Map

Roadway Improvement Project for
 Trapello Road & Belmont Street,
 Belmont Massachusetts

Source: MASSGIS, 2009;
 MADEP, 2007; MADOT,
 2009; FEMA, 1997
 NHESP, 2000 & 2008



Attachment B

Trapelo Road and Belmont Street
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Request for Determination of Applicability

SITE PLAN

CONT'D
BELOW

HIGHWAY GUARD
NONE

TRAFFIC SIGNAL CONDUIT
SEE SHEET NO. TSP-1

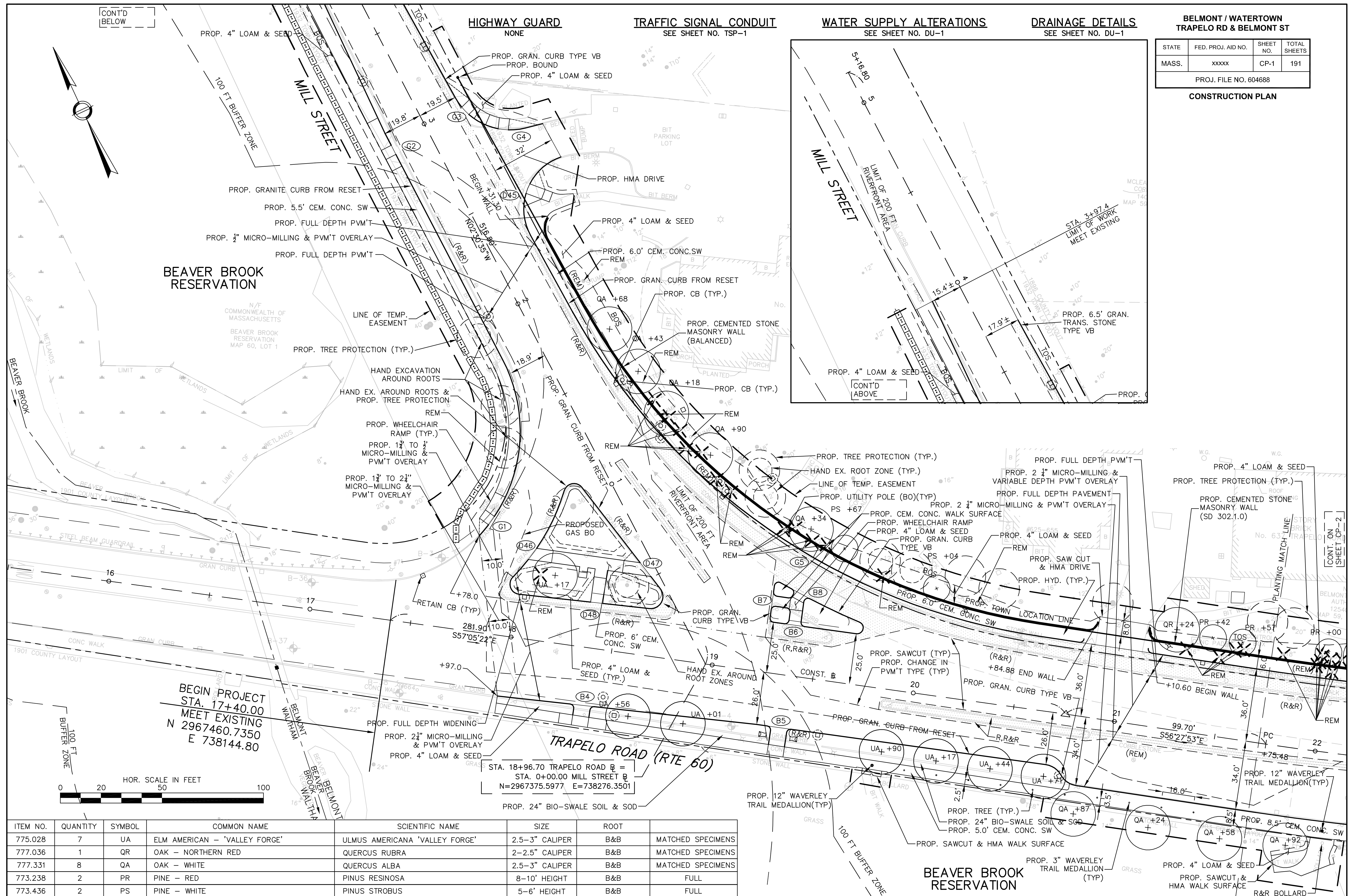
WATER SUPPLY ALTERATIONS
SEE SHEET NO. DU-1

DRAINAGE DETAILS
SEE SHEET NO. DU-1

BELMONT / WATERTOWN
TRAPELO RD & BELMONT ST

STATE	FED. PROJ. AID NO.	SHEET NO.	TOTAL SHEETS
MASS.	xxxxx	CP-1	191
PROJ. FILE NO. 604688			

CONSTRUCTION PLAN



ITEM NO.	QUANTITY	SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	ROOT	
775.028	7	UA	ELM AMERICAN - 'VALLEY FORGE'	ULMUS AMERICANA 'VALLEY FORGE'	2.5-3" CALIPER	B&B	MATCHED SPECIMENS
777.036	1	QR	OAK - NORTHERN RED	QUERCUS RUBRA	2-2.5" CALIPER	B&B	MATCHED SPECIMENS
777.331	8	QA	OAK - WHITE	QUERCUS ALBA	2.5-3" CALIPER	B&B	MATCHED SPECIMENS
773.238	2	PR	PINE - RED	PINUS RESINOSA	8-10' HEIGHT	B&B	FULL
773.436	2	PS	PINE - WHITE	PINUS STROBUS	5-6' HEIGHT	B&B	FULL