MEMORANDUM

TO: LAND USE COMMITTEE OF THE BOARD OF ALDERMEN

FROM: PLANNING DEPARTMENT STAFF

RE: INFORMATION FOR MAY 16, 2006 WORKING SESSION

DATE: MAY 12, 2006

CC: PETITIONERS

IN RESPONSE TO QUESTIONS RAISED AT THE LAND USE COMMITTEE PUBLIC HEARINGS, PREVIOUS WORKING SESSION MEETINGS, AND/OR STAFF TECHNICAL REVIEWS, THE PLANNING DEPARTMENT IS PROVIDING THE FOLLOWING INFORMATION FOR THE WORKING SESSION MEETING.

PETITION #102-06(2) AND PETITION #102-06(03) - LAGRANGE STREET

These are petitions to rezone the property, known as Kesseler Woods, from SR3 to MR3, and to construct a 62 unit residential development on the 15 acres of land north of LaGrange Street. In addition to a special permit for a multi-family attached dwelling, the petitioner is also seeking a special permit for the height (46ft.+/-) and number of stories (3 ½) for the multi-family dwelling, and also seeking several waivers to the parking ordinance. The petitioner presented its proposal to the Land Use Committee of the Board of Alderman on March 14, 2006 and April 11, 2006. This is the second working session of the Land Use Committee. The following issues were identified for further discussion by the Land Use Committee at the first working session held on May 2, 2006.

➢ ***On** May 2, 2006 Members of **the Land Use Committee heard information on the planning process that led to the identification of parcels appropriate for development and/or conservation in the Cooperative Bidding Agreement. The Land Use Committee requested that the table referenced by the Planning Director at that meeting be provided at the May 16th Working Session.***

The table entitled *"Kesseler Woods: Environmental Attributes of Areas 1-4" (SEE ATTACHMENT "A")* was prepared in May of 2003 by the City's Senior Environmental Planner. The table confirms that Area 4 (the parcel next to Saw Mill Brook Conservation area), was considered the most desirable for long-term conservation. Area 1(the site of the single-family subdivision) was considered the lowest priority for conservation. The site subject of this special permit, Area 2, was considered of secondary priority for conservation.

➢ ***The Land Use Committee requested that the petitioner conduct** a balloon test prior to the working session.*

The petitioner informed the Planning Department that ,a successful balloon test was conducted on Monday, May 8th. Copies of photographs taken by the petitioner are attached. ***(SEE ATTACHMENT "B").*** In addition, the Planning Department will ask the petitioner to bring additional copies of the photos to the working session.

➢ *The Land Use Committee asked the City Traffic Engineer to review the original traffic analysis presented by the petitioner, and all subsequent correspondence between the petitioner's traffic consultant, the Planning Department, and the City's peer reviewer. The City Traffic Engineer was*

asked to pay ***particular attention to parking stall width, site distances given road speeds, and the location*** *of the main entrance.*

Substandard Stall Width

In the Planning Department's technical memorandum, dated March10, 2006, Supplemental Memo dated April 7, and again in the working session memo dated April 28, 2006, the Planning Department reiterated its concern about the waiver of the parking dimensions, given that this is new construction. **Of particular concern are the stalls measuring 8 ft. 3 inches in width.** The petitioner's architects provided a "Building — A, Parking Layout Plan" Detail's Number' 13 and 14 show the turning radius for a Chevy Tahoe (SUV) and a four-door BMW sedan. In än e mail to the Planning Department the traffic engineer supports the Planning Departments recommendation that' parking stall width not be decreased below 8 ft. 6 inches, unless the petitioner has a plan for restricting narrower spaces to "compact car only." *(SEE ATTACHMENT "C")* Many of the parking dimensional guidelines were written before the return of large SUV's in the last decade. Noting this, the City's Traffic Engineer believes that 8 ft. 6 inches (9 ft. wide by City zoning) should be the minimum provided where no restrictions are placed on vehicle size.

Site Distance and Location of Site Driveway

The petitioner's traffic consultant from Conley Associates states in her memo of May 5, 2006 that the 400 feet stopping sight distance measured from the proposed site driveway exceeds the 200 ft. minimum required by AASHTO for a 30 MPH design speed. *(SEE ATTACHMENT "D")* She goes on to say that, *"In fact, 400 feet of sight distance meets the requirements for a 45 mile per hour design speed."* As for the location of the site driveway, Conley Associates states that the stopping site distance east of Broadlawn Park is constrained by the roadway curvature as well as the roadway elevation. In addition, the stopping sight distance approaching Broadlawn Park from the east measures 205 ft. For these reasons, Conley Associates does not recommend relocating the site driveway across from Broadlawn Park.

The City Traffic Engineer's review memorandum will be forwarded to the Committee under separate cover.

➢ ***The Land Use Committee requested that the petitioner submit*** *a Construction Management Plan, as previously requested by* ***the Planning Department. The Land Use Committee asked that it include a blasting plan. The Land Use Committee also requested that the Engineering Department report on the impact of the proposed blasting on groundwater conditions in the surrounding neighborhood.***

The petitioner submitted a Construction Management Plan to the Planning Department for review. *(SEE ATTACHMENT "E")* The Planning Department is concerned that the construction process at this site will be particularly burdensome for abutters, given the proposed blasting and the lack of on-site parking. Both the Planning Department and Associate City Engineer believe that the submitted plan lacks sufficient detail *(SEE ATTACHMENT "F").* A revised construction management plan should be submitted that includes more detailed information. This revised plan should include:

- ➢ An explanation as to how the construction site will be secured and any special security procedures that will be in place during blasting.
- ➢ A Construction Phasing Plan that includes an estimated time-line of the various construction activities, including, but not limited to: expected time for blasting, site preparation, construction of each of the buildings and the order in which they will be constructed, expected time line for

occupancy of each of the buildings, and expected time for completion of all building activities and site work;

- ➢ Schematic site plans, for each phase of the project, that should include, but not be limited to:
  - ♦ Proposed construction access/exit;
  - ♦ On-site material storage areas;
  - ♦ On-site truck staging areas;
  - ♦ On-site trailer locations;
  - ♦ On-site employee parking locations;
- ➢ *Potential* locations for off-site parking, truck staging, and/or material storage need to explored and identified.
- ➢ A map showing the recommended truck route(s)

The petitioner consultants, Haley and Aldrich, (a consulting firm that specializes in underground engineering, environmental science, and environmental management consulting), submitted a "Blasting Assessment and Impact Mitigation" report, dated May 8, 2006, was submitted for review *(SEE ATTACHMENT "G")* While the Construction Management Plan includes a section on blasting, which is based on the Alderman's *Standard Blasting Conditions,* Haley and Aldrich has slightly different recommendations. These modifications, all for the positive, include the following:

- The petitioner proposes to conduct a pre-blast survey for the interior and exterior of all structures for properties that abut the site or are within 400 ft. of the basting area. The *Standard Blasting Conditions* recommends a pre-blast survey of 250 ft.
- The petitioner proposes that the blasting contractor carry $3 million in insurance for damage to structures caused by underground explosion and collapse hazard. The *Standard Blasting Conditions* calls for $2 million in insurance.
- The petitioner proposes to deliver blasting notifications by hand, 72 hours in advance of the commencement of any blasting. The *Standard Blasting Conditions* recommends sending the notifications.

Assistant Chief Proia of the Newton Fire Department reviewed the petitioner's Construction Management Plan. Asst. Chief Proia advised the Planning staff that the blasting contractor has to meet, at a minimum, the requirements of CMR 13.00. The Newton Fire Department will also require notification at least 30 minutes prior to each blast and that a paid fire department detail, who will be certified from the Fire Academy on CMR 13.00, to be present for all blasting. The City's, engineering peer review consultants, Woodard & Curran, have reviewed the document submitted by Haley & Aldrich. (SEE ATTACHMENT "H").

The proposed construction management plan also includes the provision of a "Construction Liaison Committee." The purpose of such a committee would be to facilitate communication between abutters, construction managers, and the petitioner. Liaison committees have been established in association with other large development projects in Newton, such as Newton Wellesley Hospital, the Terraces, and Hebrew College. The Planning Department supports the formation of a liaison committee for the Kesseler Woods condominium project and suggests the committee consist of 2 designees of the petitioner, and residents of Rangeley Road, Newton Street, Vine Street, and Harwich Road. In addition, the Planning Department recommends that at least one of the Aldermen from Ward 8 be appointed to serve as members of a Liaison Committee.

Marc Welch, the City's Director of Urban Forestry, also reviewed the construction management plan. The Director of Urban Forestry states that the construction management plan, the blasting mitigation report, and the petitioner's tree protection plans are all adequate for the site.

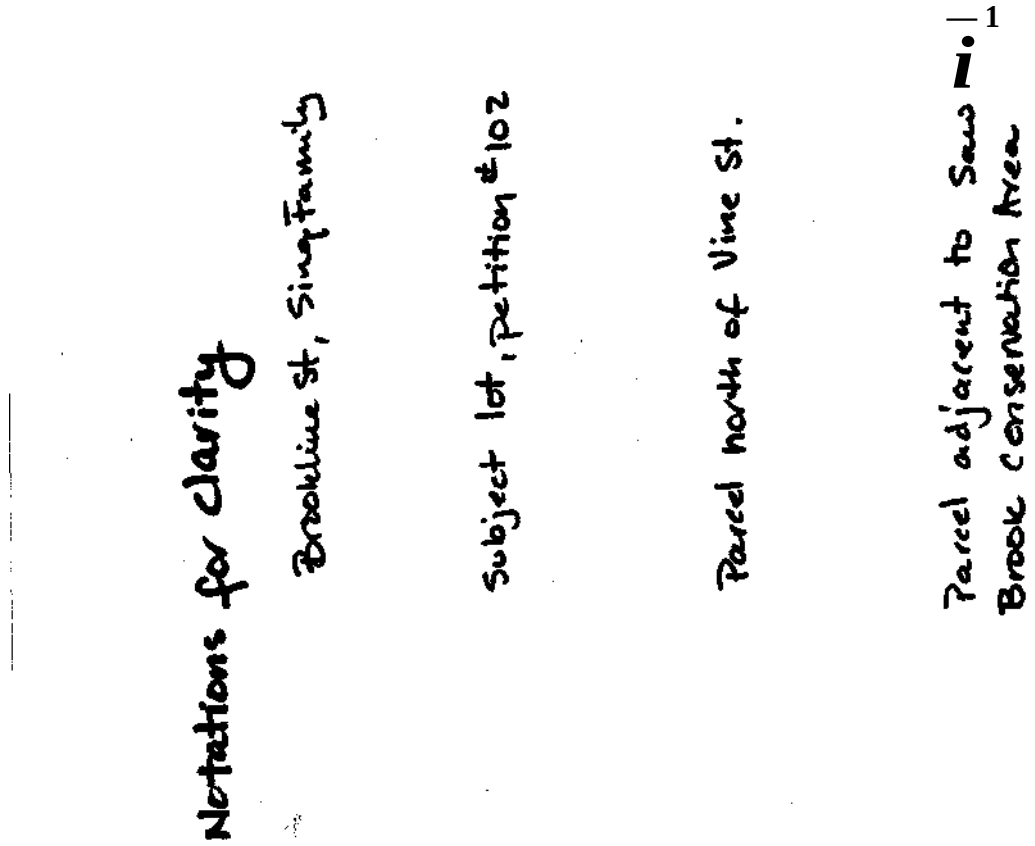
➢ *The City's Senior Environmental Planner provided a memo at the April 11 public hearing requesting that the stormwater collection system use a spread type of* ***release and infiltration system that mimics natural conditions, rather than a point release system.***

The petitioner delivered revised site plans to the Senior Environmental Planner on April 28, 2006. The site details indicate that the stormwater release system will be in the form of a trench that will the spread the release of water over the hillside. The Senior Environmental Planner reports that the length and size of the trench is adequate, but does not mimic the spread of rainwater under natural conditions.

KESSELER WOODS: ENVIRONMENTAL ATTRIBUTES OF AREAS 1-4

	Area 1	**Area** 2	**Area** 3	**Area 4**
Scenic Road Frontage (Vine Street)			X	**X**
Forested	X	X	X	**X**
Adjacent to Forested Land of Others	X		X	**X**
Locally Rare Plant Communities		X		**X**
Flowing Water - Riverine C6rridor		X	X	**X**
Views		X	X	**X**
Existing Trail System				**X**
Potential Trail System	X		X'	**X**

Prepared by the Planning & Development Department, 9 M 2003.



KESSELER WOODS BALLOON TEST
BALLOON TEST AT MIDDLE OF HIGHPOINT BUILDING A

Attachment C

Prom: **"Clint Schuckel" <cschuckel@newtonma.gov>**
To: **jfulkerson@newtonma.gov**
Date sent: **Mon, 01 May 2006 11:43:36 -0400**
Subject: **Parking stall width @ Kesseler Woods**
Send reply to: **cschuckel@newtonma.gov**
Priority: **normal**

Jean-

Please forward this message as necessary for Tue's working session. I support the Planning Dept's recommendation that parking stall width not be decreased below 8.5' unless a petitioner has a plan for restricting narrower spaces to "compact car only." Many of the parking dimensional guidelines were written before the return of large SUV's in the last decade. Noting this, I believe that 8.5' (9' wide by City zoning) should be the minimum provided where no restrictions are placed on vehicle size.

Clint

CONLEY

ASSOCIATES

Memorandum

To: Newton Board of Alderman Land Use Committee

From: Jennifer Conley, PE, PTOE, AICP

CC: Clint Schuckel, PE, Tom Southworth

Date: May 5, 2006

Re: Kesseler Woods Outstanding Issues

Conley Associates, Inc. has completed a traffic impact analysis for the proposed condominium development that has been reviewed by the City of Newton's Traffic Consultant, The Louis Berger Group. In that review a number of issues were raised that have since been addressed to the Traffic Consultant's satisfaction.

At the May 2, 2006 Land Use Committee meeting a few traffic related items were mentioned as still being concerns to the committee. The issues that were identified included a concern regarding the available sight distance and the speeds that vehicles are traveling as well as further discussion regarding locating the site driveway across from Broadlawn Park. This memorandum should clear up any remaining issues that the committee may have.

As detailed in the traffic study, stopping sight distance was measured to be approximately 400 feet approaching the proposed site driveway from the east and west along Lagrange Street. This is significantly more than the 200 feet minimum required stopping sight distance required by AASHTO for a 30 mile per hour design speed. In fact, 400 feet of stopping sight distance meets the requirements for a 45 mile per hour design speed. Copies of the field measured sight distances were included on the site plan that is provided attached.

In regards to the potential of locating the proposed site driveway across from Broadlawn Park, Conley Associates, Inc. measured the stopping sight distance at the intersection of Lagrange Street at Broadlawn Park in March of 2006. The speed limit on Lagrange Street is 30 miles per hour (mph). Based on guidelines from the American Association of State Highway and Transportation Officials manual (AASHTO, 4th Edition, 2001), the minimum stopping sight distance required for a 30 mph design speed is 200 feet.

Conley Associates, Inc. measured the stopping sight distance to be approximately 400 feet approaching Broadlawn Park from the west, which is significantly more than the 200 feet required by AASHTO. Approximately 205 feet of stopping sight distance was measured approaching Broadlawn Park from the east. The stopping sight distance to the east of Broadlawn Park is constrained by the roadway curvature as well as the roadway elevation. Although this meets the minimum requirement for a 30 mph design speed, there is significantly more sight distance at the proposed site driveway location. Because it has been commented that vehicles are traveling Lagrange Street at greater than the posted speed and sight distance is a concern, it is not recommended that the site driveway be relocated across from Broadlawn Park.

CONSTRUCTION MANAGEMENT PLAN

Kesseler Woods Condominiums
May 9, 2006

During construction, the following provisions shall apply:

A. CONSTRUCTION ADMINISTRATION

Contact Person: Applicant will designate a contact person to serve as liaison during the construction process.

Communications: The Applicant will periodically update neighbors designated by the Construction Liaison Committee by letters and/or email. The purpose of those communications is to advise of the schedule and progress of construction, any construction activities that may impact the neighborhood, any changes in plans, or any other construction-related matter that may be of interest. From time to time other neighbors who request being added to that designated distribution group will receive all letters and emails.

Hours of Construction: The hours of construction shall be 7:00a.m. until 6:00p.m. Monday through Friday. When work is performed on Saturdays, it shall be between 8:00 a.m. and 5:00 p.m., unless otherwise permitted by the Commissioner of Inspectional Services. There shall be no exterior construction on Sunday. Interior work may occur at other times when a building is fully enclosed. Exterior construction work may be permitted at other times, due to exigent circumstances, with the advance approval of the Commissioner of Inspectional Services.

Hours of Construction Delivery: Deliveries to the property will be limited to the hours between 7:00a.m. – 6:00p.m. Monday through Friday and 8:00a.m. – 5:00p.m. on Saturdays, unless specifically authorized by the Commissioner of Inspectional Services due to exigent circumstances. The Applicant shall advise the contractors and subcontractors to minimize the number of deliveries during peak access / egress hours, in order to reduce the congestion on site and to minimize conflicts between the delivery trucks.

Trash and debris removal: All trash and debris removal, including emptying, removal or installation of dumpsters or other trash containers, which relates to the construction of the project, will occur within the hours prescribed for external construction.

EXTERMINATOR

A professional exterminator with experience on construction projects will be engaged to inspect and take any necessary measures prior and during each phase of construction to ensure that the excavation of the site does not result in pest problems to the neighborhood. The exterminator's work may include a baiting / trapping program prior

to the start of a phase of construction. The exterminator shall consult with and notify the Newton Health Department on its plans.

NOISE AND DUST CONTROL

Street Cleaning: During construction, the Contractor shall provide a truck washing station, on-site, to minimize the spread of mud on local streets and roads. During construction, the Contractor shall provide street cleaning on LaGrange Street, as necessary, to remove mud or construction debris from the street. The Contractor shall repair any damage to public ways caused by construction vehicles.

Dust: The Contractor shall take appropriate steps to initiate proceedings to eliminate dust generation during grading of the site, excavation and construction (including, but not limited to, wetting down materials when appropriate), stone mats as appropriate, and shall require covers to be placed over any open trucks transporting debris or fill and from the property.

Blasting: A separate blasting report has been prepared under separate cover and is attached hereto. All blasting and drilling for the driveway, utility trenches, service trenches and / or structures, whenever they are built, shall be carried out in accordance with federal, state and local blasting permit law and regulations, and in accordance with the following conditions:

1. *Selection of the Blasting Contractor* - A blasting contractor, acceptable to both the Petitioner and the Newton Fire Department, shall be selected after review of the qualifications of such contractor by a qualified independent geotechnical blasting consultant who shall also be acceptable to both Petitioner and the Newton Fire Department.
2. *Independent Blasting Consultant* - An independent geotechnical blasting consultant, Haley & Aldrich, has been selected and paid for by the Petitioner subject to the approval of the Newton Fire Department. The Consultant shall review the qualifications of the blasting contractor, and review the blasting plan prepared by the blasting contractor, check the calibration of the seismograph monitors, approve the location and installation of the seismograph monitors, and, if required by the Newton Fire Department, shall determine the blasts limits throughout the blast period and shall consult with the Newton Fire Department on an as-needed basis throughout the blasting period.
3. *Pre-Blast Survey* – A pre-blast survey shall be done in accordance with State law for the interior and exterior of all structures for properties on that abut the site or are within 400 feet of the blasting area.
4. *Insurance Coverage* - The blasting contractor shall carry $3,000,000 in comprehensive liability insurance for damage to structures caused by underground explosion and collapse hazard. A certificate shall be submitted to the Newton Fire Department by the contractor documenting that the required coverage will be in force for the duration of the, blasting at the site. If there is a general contractor or developer associated with the blasting, each shall carry a minimum of $1,000,000 in comprehensive liability insurance.

5. *Blasting Limits* – The State blasting limits shall be observed. However, if based upon the recommendations of the independent blasting consultant, the Newton Fire Department concludes that a lower limit is necessary to protect the site and the abutting residential neighbors, that lower limit shall be in effect.
6. *Notification* - Not less than 72 hours prior to the commencement of any blasting, the Petitioner shall deliver by hand written notification to all properties that were entitled to a pre-blast survey under subparagraph c. Such notification shall state when the blasting period shall begin and shall include an explanation of the warning procedures for blasting including soundings. The Petitioner shall make every effort to avoid blasting when children will be present. The Petitioner shall send another letter notifying the same parties that the blasting has been completed.

EROSION CONTROL

Measures: Prior to the start of excavation or earth removal, erosions control measures shall be in place. These shall consist of silt fences, hay bales or whatever other means may be needed to properly control erosion. Erosion control shall be located wherever surface water runoff from the construction site is a potential. Temporary erosions control measures shall be removed only after permanent measures are fully established.

Tree Protection Plan: The Tree Protection Plan approved by the Director of Urban Forestry, detailing the methodology to be used for the protection of all mature trees to be preserved, within the areas of construction, is as follows:

1. Install an appropriate fence of 12-inches for every inch of trunk diameter (DBH). The DBH divided by 2 out from the tree trunk.
2. If working inside the drip line of the tree, cut the roots prior to digging with a sharp hand saw 12-24 inches from the edge of excavation.
3. Clean wood chips can be installed to help improve growing conditions for the remaining root system at a rate of 4-8 inches deep.
4. Subsurface fertilize all trees to be impacted by the construction to improve and promote plant vigor.

Drainage Infrastructure: All drainage infrastructures shall be installed and functioning with the catch basins set at binder grade prior to the installation of the binder course of asphalt. The catch basins will not be raised to finish grade any sooner than one week prior to the installation of the finish course of asphalt.

CONSTRUCTION STAGING AREAS

Staging Ares: Areas shall be designated prior to the start of work including the location of the material staging areas, the location of on-site temporary construction trailers, the locations of on-site truck delivery holding areas, the location of on-site truck washing stations, and the general location of temporary construction dumpsters, and the location of hay bales and other methods of erosion control during construction. As construction continues in different phases, these locations will shift as necessary.

Site Office Trailers: It is anticipated that several office trailers will be required for construction management. These will be located on the property, within the area of the perimeter construction fence and will be clearly marked with the name of the contractor.

Storage Trailers /Containers: During the course of construction there will be a need to maintain storage trailers / containers on-site for storage of materials, tools and /or equipment. These shall also be located within the perimeter, shall be kept secured, and will be removed from the property as soon as they are no longer needed.

Open Storage Areas: Materials will be stored on the property construction during the course of construction. In order to avoid cluttering the site, due to limited available space, materials will be delivered to the property on an as-needed basis. Material storage area(s) shall be clearly defined and shall be secured. The contractor shall make every effort to locate the material storage area(s) as far away from the abutting residential properties as possible.

Delivery Truck Holding Areas:

On-site: On days when the construction activities require multiple truck deliveries, such as for the placement of large quantities of concrete, structural steel deliveries, asphalt paving etc., these deliveries will be carefully scheduled so that there is always adequate onsite are for the holding of the trucks until they can be unloaded. No trucks will be permitted to stand on LaGrange Street or on the neighborhood streets.

Off site: In the event that adequate on site area for the holding of trucks is not available, an off site holding area will be arrange for, in advance, from which the trucks can be directed to the site by radio as o site space allows.

TRAFFIC AND PARKING

1. To the extent adequate parking is not available on the property, the Contractor will make arrangements for offsite parking.
2. At no time will parking for those working on this project be permitted on neighborhood streets. Provisions to this effect are being included in all contracts and subcontracts on this project.
3. The Petitioner shall clean the catch basins annually, and shall have the leaching galleys inspected by a qualified professional ever year and cleaned as necessary. The Petitioner shall file a certificate of such cleanings and inspections with the Commissioner of Public Works.

   The Petitioner shall remove snow from the Project's driveway, loop road including the hammerhead, and parking areas at its sole expense.

ATTACHMENT F

CITY OF NEWTON
ENGINEERING DIVISION

MEMORANDUM

To: Ald. George Mansfield, Land Use Committee Chair.

From: John Daghlian, Associate City Engineer

Re: Special Permit — Kesseler Woods Condominiums

Date: May 12, 2006

CC: Lou Taverna, PE City Engineer (via email)
Nancy Radzevich, Chief Planner (via email)
Linda Finucane, Associate City Clerk (via email)
Jean Fulkerson, Planner (via email)

In reference to the above site, I have the following comments for the Construction Management Plan prepared by: H.W. Moore Associates, Inc., dated May 9, 2006; and Haley & Aldrich's Blasting Assessment & Impact Mitigation Recommendations dated: May 8, 2006.

1. The construction management plan addresses in general terms the minimum concerns of every construction project; however, it needs to be more specific in terms of a project timeline targeting various stages of construction activities from groundbreaking to completion, linking construction activity to target dates and so on. Hours of operation shall be in accordance to the most current City Ordnances.

2. Street sweeping of the Lagrange Street shall be at the discretion of the City Engineer.

3. The construction site shall have a temporary security fence around it.

4. A stabilized construction exit/entrance is needed; a detail needs to be incorporated onto the plans for approval.

5. Catch basins on Lagrange Street downstream of the site may require Siltsacs© during construction, this will be determined by the City Engineer.

6. No construction shall take place during legal holidays and religious holidays.

. Offsite holding areas for delivery trucks need to be identified on a plan for approval.

8. All on site office trailers, storage trailers/containers, and open storage areas need to be identified on a site plan prior to the commencement of construction activity.

9. Adequate warning & construction signs need to be in place prior to any construction activity. The type of signage shall conform to the City's Construction Standards and location of such signage shall need the approval of the City Traffic Engineer prior to any construction activity. A Traffic Mitigation plan is needed for the installation of utilities within Lagrange Street. The plan shall be submitted to the City Traffic Engineer and the Newton Police Chief for approval prior to any construction.

10. The site contractor shall retain Newton Police Officers during all times of construction that impacts traffic, blasting, delivers to the site, and removal of excess material from the site; and at any other time the Chief of Police determines that it is warranted.

11. Prior to any construction activity the developer/applicant/contractor shall retain a qualified contractor that specializes in Closed Circuit Television (CCTV) inspections of the underground pipes within LaGrange Street and any City of Newton easements that abut this project. The CCTV inspection shall be performed on the utility pipes determined by the City Engineer. Pre & Post construction inspections shall be witnessed by a representative of the Engineering Division. The video tapes shall be given to the representative of the Engineering Division at the end of each inspection.

12. The City will require a temporary truck tire wash basin. This will have to be located on site approved the City Engineer, a temporary water service will have to be installed and the base shall consist of 3" crushed stone - 12" in depth, and wide enough for dump trucks & trailers to be washed off; this needs to be identified on the site plans. A water meter and backflow prevention device will be required.

13. Due to the nature of construction process a substantial amount of heavy equipment will enter and exit the proposed driveway. The existing roadway surface is in good condition; the applicant/contractor shall be responsible for the final product of the roadway surface of Lagrange Street. It is recommended that if this project is approved, upon completion and at a time the City Engineer determines the entire roadway surface [Lagrange St.] be milled and overlaid with 1-1/2" Type I-1 bituminous concrete; curb-line to curb-line from the existing sewer manhole near Byron Road to the Brookline town line.

Blasting:

1. Blasting of ledge will require a permit from the Newton Fire Department.

2. In light of the fact that most of the homes abutting this project [Brookline & Newton] are valued around $2,000,000 the insurance coverage limits of $3,000,000 in comprehensive liability for the blasting contractor need to be reviewed and evaluated by the Law Department to ensure that there is adequate coverage.

3. During blasting operations it isn't clear as to weather or not Lagrange Street will be closed down to traffic. This needs to be addressed.

Traffic & Parking:

- Any offsite parking arrangements need to be reviewed by the Traffic Engineer for approval.

If you have any questions or concerns please feel free to contact me @ 617-796-1023.

Suite 2200
Boston, MA 02129-1400

Tel: 617.886.7400
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HaleyAldrich.com

HALEY&
DR CH

Revised 8 May 2006
2 May 2006
File No. 33424-000

Cornerstone Corporation
400 Blue Hills Drive, Suite 2C
Westwood, MA 02090

Attention: Mr. Tom Southworth

Subject: Blasting Assessment and Impact Mitigation Recommendations
Proposed Kesseler Woods Condominium Project
Newton, Massachusetts

Gentlemen:

OFFICES

Cleveland
Ohio

Dayton
Ohio

Detroit
Michigan

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Connecticut

Kansas City
Kansas

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This letter presents the results of our evaluation of blasting required to construct the proposed Kesseler Woods project in Newton, Massachusetts. The purpose of our work was to assess the approximate areas on the site where drilling and blasting may be required, assess the rock cut depths and potential impacts from the required blasting work on residences and people in the area, and to provide recommendations for steps to be taken to reduce the impact of the drilling and blasting on structures and people living in the area.

BACKGROUND

We have received a set of 12 Civil Drawings for the proposed project dated 31 January 2006, revised 6 April 2006, prepared by H.W. Moore Associates, of Boston, Massachusetts. We have also received a colored "Earthwork Plan" prepared by H.W. Moore, which shows proposed cuts and fills at the project site.

We understand the proposed development will consist of three buildings, each holding multiple housing units, on a 14.7-acre property with frontage on Lagrange Street. The property slopes up moving west from Lagrange Street, from about El 185 (unknown datum) to a high point at about El 217 near the center of the site. There are numerous bedrock outcrops at the site consisting of the Roxbury Conglomerate. Bedrock is expected to be at ground surface or at shallow depth in upland areas, so drilling and blasting will be required for construction of many of the roads, utilities, and buildings. Rock cuts of up to about 34 ft are expected to be required in the central area of the site for construction of Building A.

The eastern property line of the site is along the border.between Newton and Brookline, and there are several existing residences located to the east of the project on Rangeley Road in Brookline, and others to the south along Lagrange Street, Broadlawn Park, and Broadlawn Drive in Newton.

As part of our evaluations, our Mr. Andrew McKown visited the site on 27 April 2006 to observe exposed rock conditions at the site and assess areas where blasting may be required to fragment and remove the rock.

Anticipated Blasting Areas, Closest Residences, and Roadway Rock Slope Treatment

The Roxbury Conglomerate observed at the site was generally hard and massive and will require drilling and blasting for excavation. There were numerous bedrock outcrops, especially in the upland portions of the site, so most of the required cuts will be in bedrock. The deepest rock cuts requiring blasting, up to about 34 ft.-; will be required at Building A'in the central portion of the site. Shallower bedrock cuts will be required near 'the 'eastern portion of the site, near the residences on Rangeley'Road in Brookline. Other shallow rock cuts are expected to be required near the entrance road from Lagrange Street, near residences on Lagrange Street, Broadlawn Park, and Broadlawn Drive in Newton. The closest off site residences on Rangeley Road are about 140 to 170 ft from the closest required blasting. The closest residence on Lagrange Street is about 100 ft from the closest estimated blasting area at the entrance roadway.

Up to 17-ft rock cuts will be required at the roadway at the north end of the site, up to about 15 ft at the south end, and up to about 12 ft near the entrance from Lagrange Street. In order to maintain these roadway rock slopes stable over time, it is recommended that perimeter control measures be implemented at permanent roadway and parking lot rock cuts over 10 ft, and that a suitable fall zone, approximately 8 ft wide, be provided at the toe of slope to catch any rock fragments which might fall from the face in the future. Perimeter control measures could include presplitting, cushion blasting (or trim blasting), or line drilling.

Allowable Blast Vibrations at Adjacent Structures

It is recommended that the ground vibrations at adjacent structures be kept below the safe limits recommended by the U.S. Bureau of Mines (USBM RI 8507, 1980), which are provided on Figure 1, and are consistent with the Massachusetts regulations controlling blasting (527 CMR 13.00). These limits are based on the, frequency and the peak particle velocity of the blast vibrations, and are safe limits for preventing cosmetic damage to residential structures.

Air Blast Overpressures at Adjacent Residences

If ground vibrations are kept below recommended limits, it is our experience that air blast overpressures from blasting are not a threat to damage adjacent structures. However, air blast can rattle windows on occasion and cause annoyance, especially in conjunction with ground vibrations. Air blast should be kept below a limit of 133 dB (Peak Impulsive), or 0.013 pounds per square inch (psi), which is the limit recommended by the U.S. Bureau of Mines (and in 527 CMR 13.00) to prevent damage to windows and minimize annoyance.

Impacts on People

People can perceive vibrations from blasting at significantly lower levels than might cause cosmetic damage to structures. Transient vibrations, such as from blasting, may be

noticeable, and therefore may result in complaints, at peak particle velocities as low as 0.02 to 0.06 in/sec. Those vibrations may be disturbing to people, especially if accompanied by noise from air blast, at peak particle velocities as low as 0.2 to 0.4 in/sec. Therefore, residents in the area may feel vibrations, and be disturbed by them, even though the vibration levels are well below threshold cosmetic damage levels. When disturbed by the blast vibrations, people often inspect their homes for signs of damage, and may find pre-existing cracks which they had not noticed previously. These cracks may then be judged by the homeowner to have been caused by the blast vibrations, and a claim could result.

To help prevent or mitigate this type of claim, preblast condition surveys of homes in the area of the project are recommended. These surveys should be performed to a distance of approximately 400 ft from the closest blasting. It'should be noted that this recommended distance is significantly greater than the 250 ft required by Massachusetts regulations (527 CMR 13.00).

CONCLUSIONS REGARDING BLASTING IMPACTS

In summary, it is our opinion that ground vibrations from blasting for the required rock cuts in the areas previously described can be controlled by the blasting contractor to levels which should not adversely impact residential structures in the area. It is recommended that maximum peak particle velocities of ground vibrations at adjacent structures be limited to the safe limits illustrated in Figure 1.

People in the area are likely to hear the blasts and feel the vibrations. Pre-blast condition surveys should be performed to document the conditions of the closest structures in the area (within a minimum of 400 ft of blasting areas), as well as to inform people of the blasting and the precautions to be taken to prevent damage.

RECOMMENDATIONS

It is recommended that several controls be implemented on any blasting for the project in order to help minimize blasting impacts on adjacent residents:

1. Maximum blast induced ground vibrations at the nearest adjacent above ground structure to blasting should be kept below the U.S. Bureau of Mines recommended Safe Limits, as indicated on Figure 1.

2. Maximum air blast overpressures should be kept below 0.013 psi at above-ground structures in the area. This will minimize the possibility of window damage and also minimize annoyance due to rattling of windows and walls.

3. A detailed Blast Plan should be provided by the Blasting Contractor prior to blasting at the site, detailing the planned procedures to be used at the site limits closest to the nearest residences, and also detailing procedures to be used at the deepest rock cut areas in the central portion of the site. The plan should also provide details of a test blast program, consisting of at least three blasts, detonated at least 300 ft from the closest residence, to be used to assess the.planned procedures and adjust the scaled distance relationships at the site. The Blast Plan should also contain a Blast Site

Security Plan showing the locations of sentries to be provided prior to each blast round to keep unauthorized personnel from entering the blast area, and the means of communication from the blaster to the sentry to ensure the area is clear prior to detonation.

4. Initial blasting at the site should be conducted at a location at least 300 ft from the nearest residence, using a scaled distance no less than 75 ft/lbs $^{1/2}$, so that site-specific scaled distance relationships can be determined and charge weights per delay can be adjusted as blasting approaches closer to residences.

5. Blast vibration monitoring should be performed and reported for each round by a qualified firm (not the Blasting Contractor) under contract to the Owner or Blasting Contractor, at the two closest residences on Rangeley Road, at the two closest residences along Lagrange Street (including Broadlawn Park and Broadlawn Drive) and at one other agreed upon location. Monitoring reports should be kept on file at the site for review by the Fire Department and blasting contractor, and the Fire Department and blasting contractor should be notified immediately if any vibrations exceed the regulatory limits.

6. Pre-blast condition surveys should be performed on all above ground structures within 400 ft of anticipated blasting areas.

7. Prior to blasting, the blasting contractor should provide a certificate of insurance verifying that liability insurance in an amount not less than $2,000,000 will be in force for the duration of blasting at the site,

8. Blasting should be limited to between the hours of 9:00 AM to 4:00 PM, Monday through Friday, to minimize disturbance to the residents near the site.

9. A system of warning signals should continue to be used by the blasting contractor to warn personnel at the site and nearby residents prior to each blast. The warning signals should be audible at least 600 ft from the blast area.

10. The following controls should be in place to reduce the potential for flyrock:

    a. Blasting mats should be used to fully cover the blast area for every blast.
    b. Drillers logs should be kept for all blast holes drilled, documenting open joints, seams, and other anomalies; and the logs should be reviewed by the blaster prior to each blast.
    c. Ammonium Nitrate Fuel Oil (ANFO) should not be used on the project.
    d. A videotape should be taken of each blast round detonated so that small problems can be detected and corrected before they become big problems.

11. Noise and dust from the drilling operations should be minimized through the use of appropriate mufflers and the use of water or other fluid to control dust at its source.

12. At roadway and parking areas, permanent rock cut slopes over 10 ft high should be blasted utilizing perimeter control procedures: 'presplitting, cushion blasting (or trim

blasting) or line drilling. In addition, a suitable fall zone, approximately 8 ft wide, should be provided at the toe of slope to catch any rock fragments which might fall from the slope in the future.

Haley & Aldrich will provide technical specifications for Controlled Blasting for the project, which will incorporate these provisions. We hope that the above comments have addressed the

concerns regarding the impacts of the blasting at the Kesseler Woods project. If you have any questions about our recommendations, or require additional information, please feel free to contact us.

Sincerely yours,
HALEY & ALDRICH, INC.

Andrew F. McKown, P.E.
Vice President

Attachments:
Figure 1

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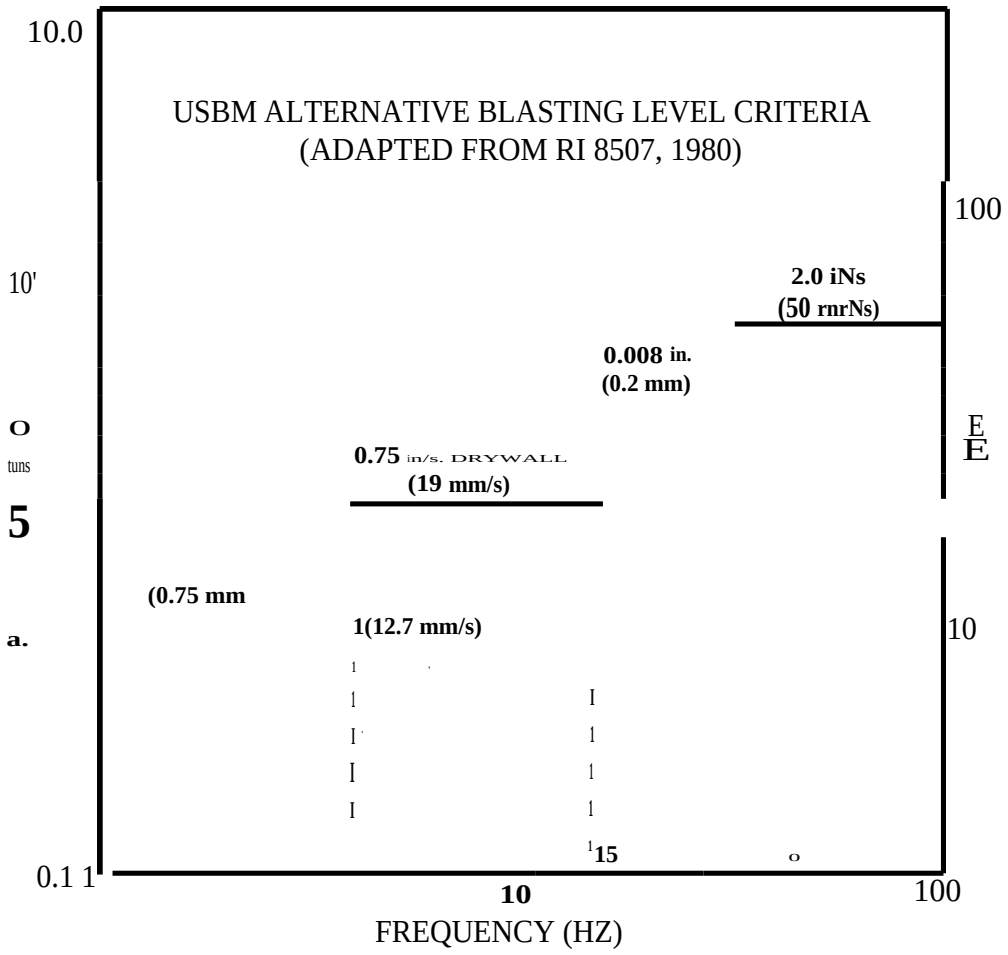

PROPOSED KESSELER WOODS
CONDOMINIUM PROJECT
NEWTON, MASSAACHUSETTS

FIGURE 1

ATTACHMENT H

MEMORANDUM

TO: **Lou Taverna, P.E., Newton City Engineer**

FROM: Chris Kilbridge, Certified Geologist and Rachel Gilbert, P. E.

DATE: May 11, 2006

RE: Kesseler Woods Condominiums, Newton, MA Blasting Assessment and Construction Management Plan

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This memorandum addresses our review of 1) the Blasting Assessment report prepared by Haley & Aldrich dated May 8, 2006 as it relates to groundwater, and 2) the Construction Management Plan dated May 9, 2006 as it relates to stormwater/erosion control.

Blasting Effect on Groundwater

A detailed hydrogeological assessment would be required to accurately determine the potential effects of blasting on groundwater quality or quantity in the vicinity as a result of the work proposed at the site. Given the available information, there is not sufficient data to make this determination and this level of examination is beyond the scope of a peer review. We offer below our opinion based upon the level of detail available but must make clear that in order to conclusively determine risk, additional analysis is required.

Based on our review of the blasting assessment report, the local topography and our experience in the area, it does not seem likely that there will be a significant impact on groundwater movement as a result of this work. The greatest potential impact would occur if a large fracture existed in the rock that provided a substantial conduit for groundwater to recharge the wetlands. Blasting could cause this fracture to close and therefore block the natural flow of groundwater to the wetland. However, this is not very likely due to the blast monitoring controls described in the report by Haley & Aldrich. Furthermore, there does not appear to be any surficial expression of such a mega-fracture extending from the hill into the wetlands that could be the prime (ground) water feeder to sustain the wetlands. Instead, the topography suggests that these wetlands are in a bowl surrounded by highlands, so it would be reasonable to think that surface water drainage is a prime contributor to sustaining the wetness of these wetlands.

There is no mention in the H&A report regarding the maximum volumes of rock allowed to be blasted in one blast. This is a potential method of mitigation to limit the disturbance to the pre-construction rock fracture network and we recommend that the City require the applicant to assure that the blast volumes will be set to minimize groundwater disruption. In addition, the applicant shall_ provide wetland replication in the event that blasting operations result in a significant reduction of natural flow to the surrounding wetland.

If the City is uncomfortable with this degree of certainty, we recommend that the applicant investigate this issue further and submit an opinion with supporting documentation to the City and Woodard & Curran for review. We offer below a suggested outline of requirements.

1. The applicant shall demonstrate through a report signed by a certified geologist that no alterations to groundwater hydrology and flow conditions will be permanently created by the excavation of rock from the site. The report shall contain sufficient data to support the claim.

2. To monitor groundwater conditions before and after blasting to determine actual impacts to the wetland after the fact, the applicant should install monitoring wells as follows:

    a. Install a minimum of three observation wells that monitor the elevation of the water table, within on-site soils that are interpreted to be hydrologically interconnected to the wetlands. Observation wells shall be located in a triangular layout to allow for the calculation of groundwater gradient direction and magnitude. Separation distances between wells shall be a minimum of 100 feet, or as far apart as possible while being within the soils through which groundwater flow moves and discharges into the wetlands. No two wells shall be located on the same topographic contour.

    b. Wells shall be constructed of schedule 40 or schedule 80 PVC or equivalent. Observation wells traditionally used for test pit monitoring for on-site septic systems would be acceptable. Wells shall have a vented cap enclosure over the top of pipe. Wells shall be surveyed to a common datum to establish the elevation of the top of pipe reference point from which depth to groundwater is measured, and spot grade elevation next to the well casing. An as-built well construction log shall be provided for each well.

    c. A minimum of three (3) pre-construction rounds of water table measurements shall be performed. A minimum of one round of readings shall be taken within 1 week prior to commencement of blasting. A minimum of one reading shall be taken greater than 1 week but within 30 days prior to commencement of blasting. A minimum of one reading shall be taken between 45-60 days prior to commencement of blasting.

    d. A minimum of two (2) rounds of water table measurements shall be taken during blasting, with at least 7 days between rounds.

    e. A minimum of three (3) rounds of water table measurements shall be taken after completion of blasting. A minimum of one round shall be taken within 1 week after completion of blasting: a minimum of one reading shall be taken greater than 1 week but within 30 days after completion of blasting; and_ a minimum of one reading shall be taken between 45-60 days after completion of blasting.

    f. All work associated with the collection and analysis of the groundwater data including monitoring well site selection, installation and monitoring shall be performed by a professional hydrogeologist. At the conclusion of data collection, a report shall be prepared by a professional hydrogeologist describing any changes in the groundwater characteristics. Water table elevation data records shall be obtained from the closest and most representative USGS index well(s) and compared to the trends of water table elevation changes observed at the site by the professional hydrogeologist. The professional hydrogeologist shall render an opinion regarding whether a permanent negative impact to the wetlands has been created by the blasting and rock excavation, and present a detailed basis for that opinion in the report to be submitted to the Town.

g. It is preferable to collect data for one year according to the schedule described above, plus a minimum of once per month at other times to cover spring to spring. This would address issues of natural occurrences in groundwater fluctuation.

Construction Management Plan and Stormwater/Erosion Control'

Based on our preliminary review of the construction management, plan relative to stormwater and erosion control, we recommend that the erosion control section be expanded to include the measures listed in the operation and maintenance plan, Appendix F, of the drainage report dated January 10, 2006. Specifically, all catch basins should have geotextile bags or silt sacks installed for the duration of construction.

RG/rg
212700

City of Newton

DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION - TRANSPORTATION
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

David B. Cohen
Mayor

May 12, 2006

To: Nancy Radzevich, Chief Planner
From: Clint Schuckel, City Traffic Engineer
Subject: Review of Traffic Impact Study- Kesseler Woods Phase II

Please find below my comments relative to Conley Associates' report dated November 2004 and associated correspondence, including:

- March 13 City's traffic peer review consultant letter;
- April 6 petitioner's response;
- April 25 City's traffic peer review consultant follow-up letter; and
- May 5 petitioner's follow-up response.

Comments:

1. I agree with the Planning Department's recommendation for parking spaces to be 8.5' minimum width at all locations.

2. I believe that the sight distance calculation should be based on the 85th percentile operating speed, which from experience is higher than the design speed of 30 miles per hour at this location. This would result in minimum sight distance closer to 300 feet (rather than 200 feet). However, in my judgment, the stated available sight distance of 400 feet is sufficient for operating speeds at or above the actual 85th percentile speed on Lagrange Street. Therefore, in my judgment, the driveway has been sited appropriately. Note: to maintain the stated 400 feet of sight distance, the petitioner may need to periodically trim vegetation along the right of way, especially if the above sight distance measurements were made during winter months.

3. The petitioner conducted a traffic delay study at the intersection of Lagrange/Vine to determine that the actual delay on the Vine St. approach averages 45.7 seconds during the evening peak period (April 6 letter). The field study approximately halved the delay reported in the original traffic study (for existing, no-build, and build scenarios), which was based on a computer model, and not actual observations. The field data sheets that led to this important conclusion and significant change from the original report should have been provided as an attachment to the petitioner's April 6 response memo.

4. I agree with the peer review recommendation that the petitioner should submit a signing plan for traffic signing, including tow zone restrictions around the ring road to maintain emergency vehicle access.

5. I find that all other comments made by the City's peer review traffic consultant have been adequately addressed by the petitioner.

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