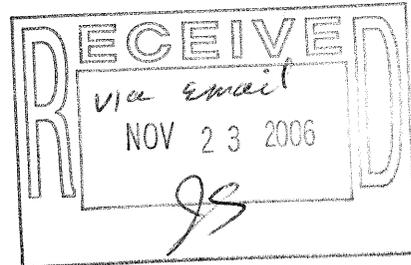


Ref: 4452

November 22, 2006

Mr. William Chin, Chairman  
Zoning Board of Appeals  
Belmont Town Hall  
455 Concord Avenue  
Belmont, MA 02478



Re: Residences at Acorn Park  
Site Plan, Building and Roadway Modifications  
Acorn Park Drive  
Belmont, Massachusetts

Dear Mr. Chairman:

At the request of O'Neill Properties, Vanasse & Associates, Inc. (VAI) has evaluated the impact of shifting the buildings and roadways on the site plan and consequent modifications to Acorn Park Drive to avoid a resource area in the rear of the property. It is our understanding the spatial relationships between all site plan elements does not change and the total site plan has been relocated towards the northeast.

**Acorn Park Drive** Acorn Park Drive along the site's frontage will now display the existing cross-section of  $\pm 30$  feet reconfigured. This is sufficient and proper to accommodate both existing and projected ambient traffic, as well as the 1,856 daily vehicle trips associated with the currently configured project at  $\pm 300$  dwelling units. The essential functional utilization of the cross-section width allocation remains as before when it was proposed as a  $\pm 32$ -foot travel way comprised of two lanes per direction at 12-feet each and 4-foot shoulders/bike lanes along both edges. At either width, no capacity, safety, or mobility issues would be anticipated with now the 30-foot section adequate for measured, projected, and generated traffic volumes, as well as a bi-directional shared shoulder/bike/travel area. Connectivity under either plan is provided for vehicles and bicycles, and as before, a new sidewalk would also connect the Route 2 ramp intersection to Acorn Park Drive to the east of the site, thus making a continuous pedestrian walkway.

**Life-Safety Issues** – AutoTurn© runs of a single-unit unarticulated Fire Vehicle indicated, as before, full access to all sides of the building is possible. Driveway widths, corner radii and transitional areas did not change with the building relocation and remain in conformance with acceptable and required standards.

**Sidewalks** – Also as before, and mentioned above, a five-foot sidewalk will be constructed adjacent to the site along the westerly side of Acorn Park Drive and will connect to the existing sidewalk at the Route 2 ramp intersection to the north and with the existing Acorn Park Drive sidewalk within the office park to the south and east.

**Bicycle Lanes** – Bicycle lanes, directly adjacent to the travel lanes as in the previous layout will be provided with a total of 15-feet per direction for the joint use of the paved roadway. A total of 28-foot minimum is required to accommodate travel and bicycle lanes in a shared configuration, and that is achieved.

Mr. William Chin, Chairman  
November 28, 2006  
Page 2 of 2

The proponent will restripe the roadway to present 15' either side of the center line with 11-foot travel lanes, plus 4-foot shoulders in each direction, with edge lines delineating the 4-foot area.

As stated in the initial report, the satisfactory and acceptable operation of Acorn Park Drive with respect to traffic, safety, and mobility criteria was not dependent on the proposed widening of the roadway directly adjacent to the site. The operating characteristics of Acorn Park Drive, both link and intersection capacities, are essentially independent of the widening, will function acceptably at its present existing width, and provide satisfactory levels of service, satisfy safety criteria, stopping sight distance, and not create any mobility deficiencies at its existing 30 feet in width.

Essentially, it is our view the function and provision of appropriate width travel lanes, shared bike areas, sidewalks, life-safety vehicle access and site circulation routings, driveway widths, and corner radii geometry, have been provided with this version of the site plan, and the changes are acceptable.

Please communicate if you have any questions or comments.

Sincerely,

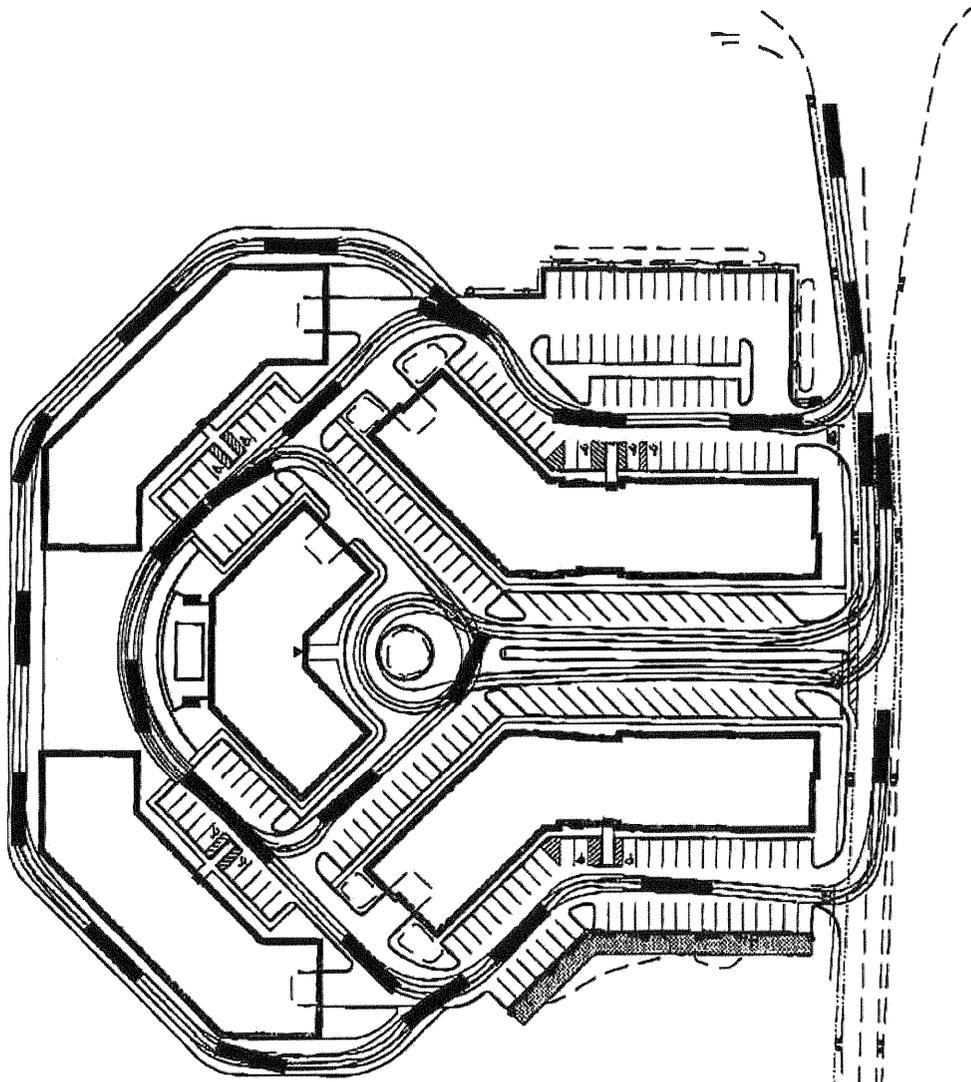
VANASSE & ASSOCIATES, INC.



Robert D. Vanasse, P.E. #27940  
President

RDV/mef

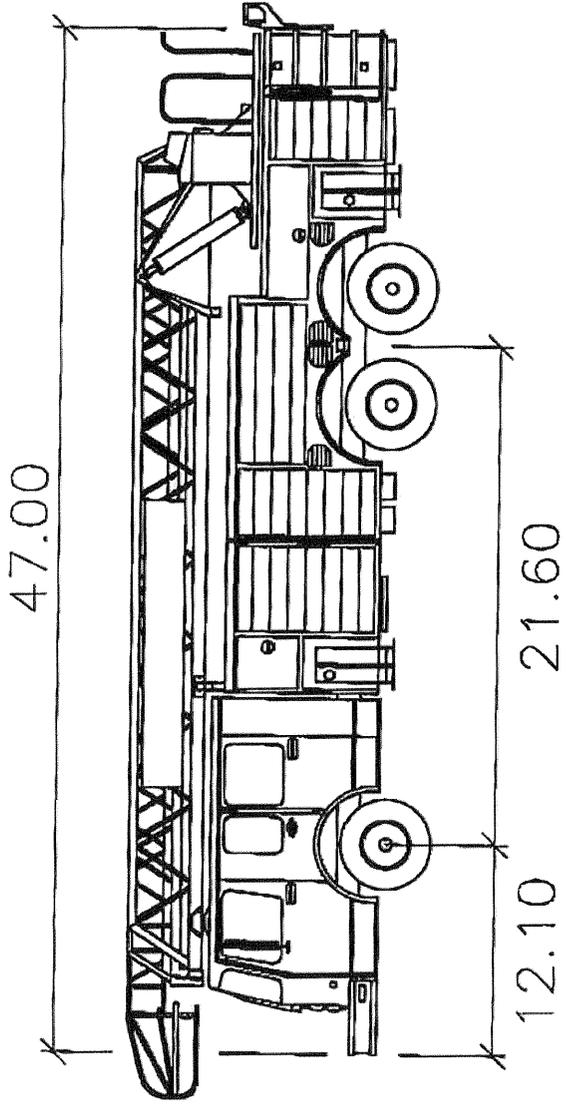
cc: RDV, JSD, File



NOTES: 1. THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION.

**VAI** TRANSPORTATION ENGINEERS & PLANNERS

Fire Truck (Ladder) Access Plan



### LADDER

feet

- Width : 8.50
- Track : 8.50
- Lock to Lock Time : 6.00
- Steering Angle : 45.00



**VAI**  
Transportation Engineers & Planners

Fire Truck (Ladder)