

July 14, 2020

North Hampton Library Trustees
237A Atlantic Ave
North Hampton, NH 03862

**RE: Civil Site Design
North Hampton Public Library, 239 Atlantic Avenue, North Hampton, NH**

Dear Trustees:

Wilcox & Barton, Inc. is pleased to submit this letter outlining the basis for design for the new North Hampton Library at 239 Atlantic Avenue in North Hampton, New Hampshire. The site design involved several factors including the following:

1. Site Grading

The decision was to raise the finish floor slab elevation to avoid large amounts of ledge removal. Setting the finish floor of the new library at elevation 87.2 ft above sea level raises the site from the existing high point of elevation 87.0 ft and the average elevation of 85 ft.

Result: Minimizes the amount of ledge to be removed to install foundations and utilities, which in turn minimizes site work costs.

2. Site Drainage

Setting the finish floor elevation at 87.2 allows the site design to accommodate a below grade stormwater infiltration system to control stormwater runoff. The infiltration gallery and stone drip edges will be installed above the existing ledge. This approach allows for the post-development stormwater run-off to match the pre-development runoff which is the desired best practice to control stormwater. This also allows for simple maintenance for inclusion in the MS4 requirements for stormwater run-off and maintenance plans.

Result: Provides a drainage design that controls post-development stormwater runoff in an economical manner.

3. Parking Location:

Placing the new parking lot in the rear of the new library follows the advice from the 2013 Plan NH Charrette that suggested reducing the amount of asphalt between town property and Atlantic Avenue. This approach utilizes the existing parking lot and provides more parking between the new library and the existing library to remain in a safe and ADA-compliant manner.

Result: Provides additional parking spaces that utilize the existing parking lot traffic pattern and to create a campus of three buildings.

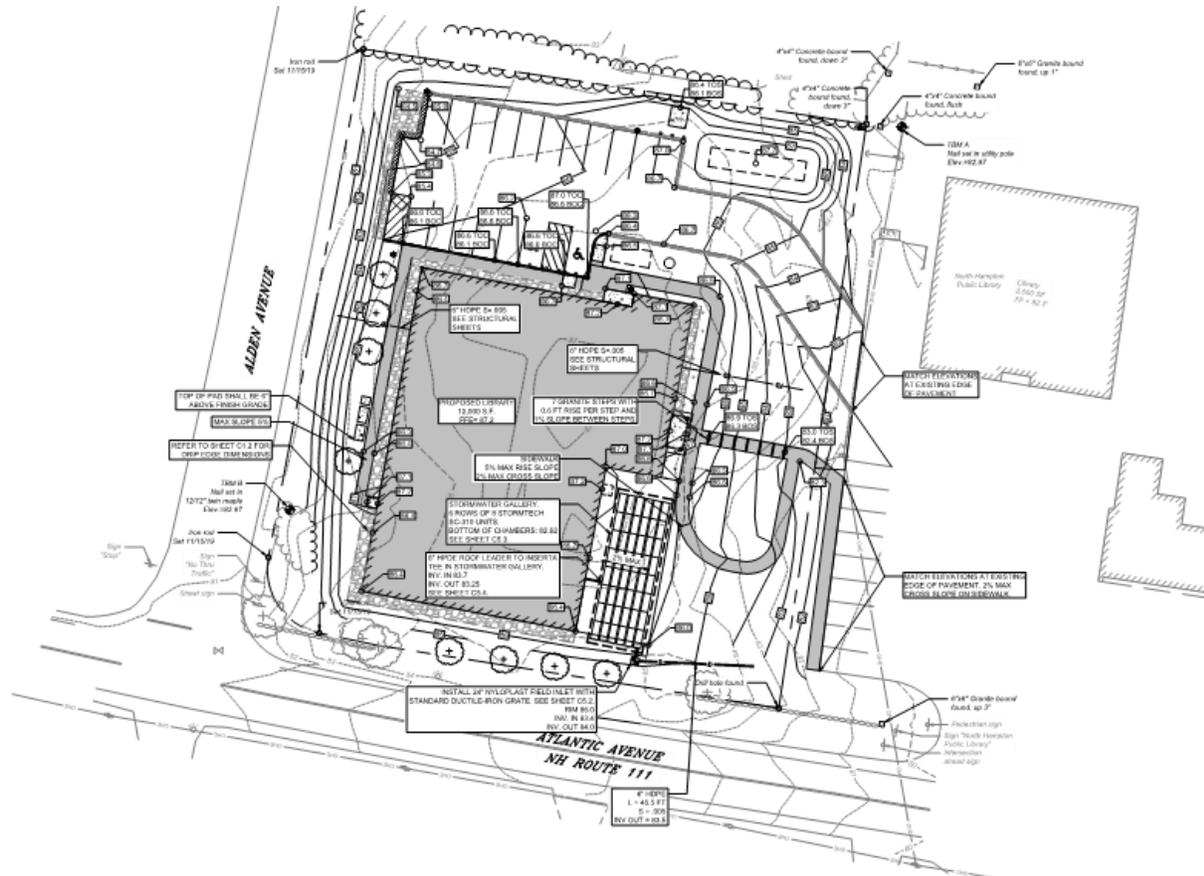
4. Building Orientation:

Orienting the building as shown in the design allows the entrance to the new library to be accessed from the existing and new parking areas. This allows for the desired one main entrance to the library for safety and security reasons. This allows the meeting rooms to face Atlantic Avenue and the large meeting room to face the new parking areas for easy delivery and drop off.

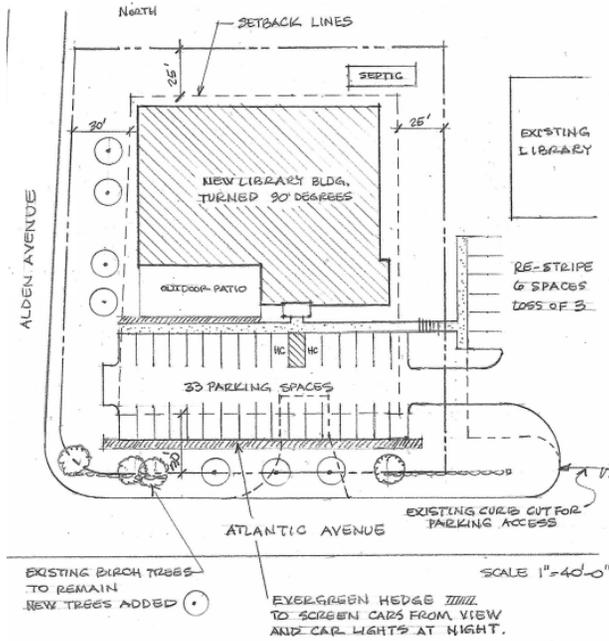
Result: Provides one main entrance that is oriented to both parking areas.

Wilcox & Barton, Inc.'s site design has been reviewed by the Rockingham Planning Commission and by the North Hampton Engineer, Keach-Nordstrom Associates, Inc. Both entities have provided constructive review comments which we have addressed. Our design has also been permitted by the New Hampshire Department of Environmental Services (NHDES) who has jurisdiction over the new septic system for the new Library. The septic system is located and design to accommodate the factors above.

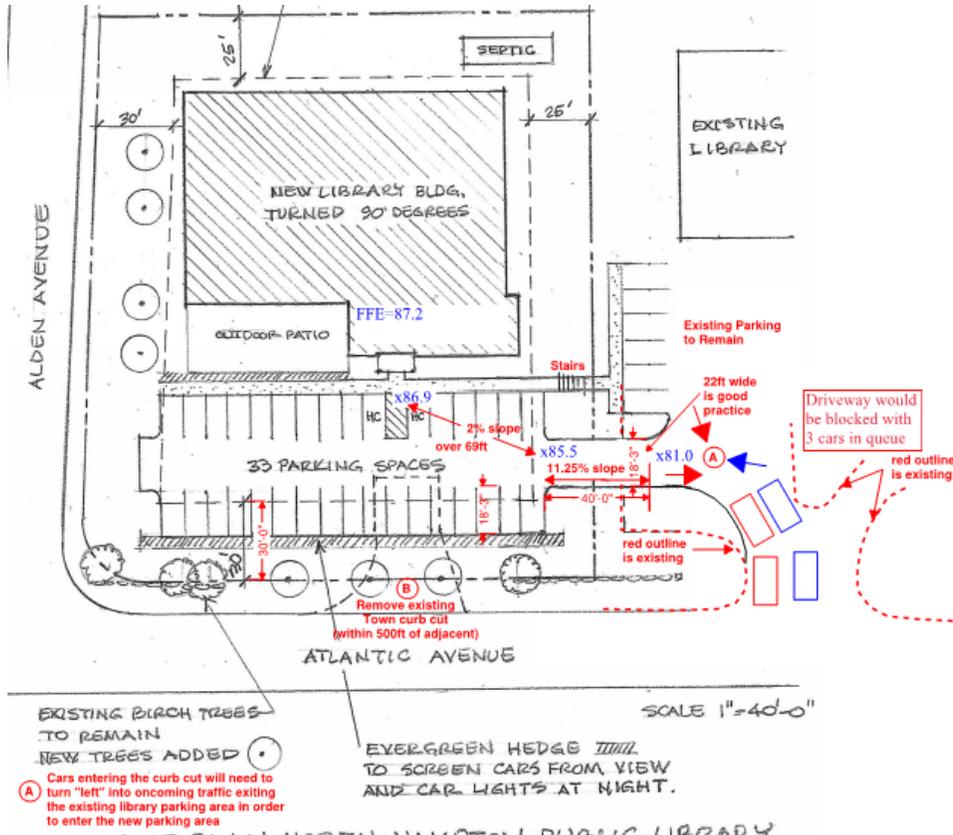
The new Library site design is depicted below and available in greater detail on the Library website.



We understand a local resident prepared an Alternate Design and we have reviewed the sketch with the Trustees, Design Team, the NHDES and New Hampshire Department of Transportation (NHDOT). The Alternate Design is included below.



We reviewed the Resident-Alternate Design and offered the following concerns in our review with the Trustees.



Controlling pre- and post-development stormwater runoff is not possible if the grades of the new library and parking lot are lowered. Excavating and installing an underground infiltration gallery in ledge (rock) will create a basin where stormwater cannot infiltrate. This is a concern our design avoids. The current design has the building and parking at a higher elevation that allows stormwater to infiltrate through soil above the ledge.

Parking located in front of a library would require a vehicle entering the site to make a left turn, crossing traffic exiting the existing library parking and town offices. Cars queuing to exit the site will block access to the new parking lot creating congestion on site. In addition, the grade between the existing parking area and the new parking will require a grade of more than 10% which is not considered a good travel slope. Our design avoids these grading, traffic crossing, and traffic congestion concerns.

Utilizing the existing Homestead property curb cut, which is currently closed off, would require the existing library parking lot driveway to be closed due to the maximum number of curb cuts (driveways) allowed by NHDOT for properties under common ownership.

We provided the design options to the NHDOT with our comments and received the response below:

“...As for your question regarding the residents design it does create potential conflicts and queuing issues at the entrance to the new parking area. ..”

Roger Appleton, P.E.
Assistant District 6 Engineer
NHDOT District Six

For all the reasons above, we believe the current design is the cost-effective and safe approach to the site design. If you have any questions, or require additional information, please contact me at (603) 731-9883.

Very truly yours,

WILCOX & BARTON, INC.



Erin R. Lambert, P.E, LEED AP
Vice President of Civil Engineering