

July 19, 2018

Timothy Wales, P.E., City Engineer  
City of Saratoga Springs  
474 Broadway  
Saratoga Springs, New York 12186

Re: 385 Broadway Apartment Project  
Engineering Review

File: 539.046.001

Dear Mr. Wales:

Barton & Loguidice, D.P.C. (B&L) has completed a review of the following reports and information for the 385 Broadway Apartment project proposed by 385 Broadway, LLC.

- Full Environmental Assessment Form (FEAF) undated and unsigned;
- Application for Site Plan Review signed by Thomas Newkirk and dated June 7, 2018;
- Cost Estimate for Letter of Credit dated June 7, 2018;
- Engineering Report for Water and Sanitary Sewer dated May 24, 2018 as prepared by LA Group, PC;
- Stormwater Pollution Prevention Plan (SWPPP) dated May 24, 2018 as prepared by LA Group, PC;
- Plan Set (12 Sheets) dated June 7, 2018 as prepared by LA Group, PC;
- Narrative as prepared by LA Group, PC, dated May 24, 2018;
- City of Saratoga Springs Complete Streets Checklist, dated May 24, 2018;
- New Water Service Agreement and Application.

This review was conducted on behalf of the City of Saratoga Springs. The above referenced documents and information were reviewed only with respect to our scope outlined in our task order/proposal.

## General

1. Has the project received any correspondence from or coordinated with NYSSHPO in regard to the existing NYS Heritage areas or nearby historic district?
2. Provide city with colored elevations showing existing and proposed street trees.
3. Are bike racks proposed in the parking garage? These will be most desired for residents as opposed to Broadway which are good for commercial business operations and should be retained.

## SEQR

1. Why does document list green/landscaping area as zero? There is not much proposed but some lawn and landscaped area is proposed.

## Water and Sanitary Sewer

1. Add statement that existing system can provide sufficient quantity and flow rate for sprinkler systems from existing system without fire pumping to boost pressure. Is 6" water service sufficient for large fire event on multiple floors? Confirm anticipated fire flow demand (1,000 GPM) from building architect for appropriate building classifications and considerations of occupancy and construction materials. Confirm fire protection systems and water system capacity meets NYS Insurance Services Office and NFPA standards.
2. Where will a backflow preventer be located for this project? Factor in RPZ and all head losses for fire prevention calculations and indicate available top floor pressures.
3. Add a calculation of available pressure at the top floor shower heads at 6' above finished floor. Pressure is anticipated to be adequate. Needs to be 35-40 psi minimum.
4. How will water be made available for green roof irrigation during extended dry periods?

## Stormwater

### *Stormwater Pollution Prevention Plan (SWPPP)/stormwater modeling*

1. We suggest the continued use of the NYSDEC Stormwater Practice worksheets to aide with stormwater calculations green roofs but without exceeding maximum porosity levels. Value for drainage layer porosity seems higher than maximum. Show extent of green roof on the plan set.
2. Use P =1.2 inches in lieu of 1.15. water quality volume will not increase much.



3. The green roof detail lacks detail to know specifics to check calculation assumptions supporting 10-inch per hour infiltration, porosity and drainage layer characteristics.
4. The green roof detail indicates 1" maximum ponding but the horizontal orifices modeled are above that as well as peak elevations for the storms modeled. Please clarify and provide roof planting plan with slopes to roof drains with proposed elevations.
5. Is there an underdrain proposed for the green roof? How does drainage to the drainage layer shown at 2" depth get conveyed out of the roof system?
6. Add in statement that upon completion and one year after to perform site inspection with city of Saratoga Springs staff to identify any needed corrective measures and/or maintenance.
7. Submit NOI as required from revised calculations.
8. Provide operations and maintenance manual as a separate appendix in SWPPP.

#### **Cost Estimate**

1. Costs for concrete curb (onsite) and granite curb offsite are very low and need to factor in excavation, asphalt sawcutting at Broadway, preparation and imported materials and placement. Costs presented should be doubled at least.
2. As built plan cost seems quite low.

#### **Plans**

##### *L-2*

1. Wooden split rail fence does not seem to fit the look of this site in our opinion and suspect a metal fence and railing system would be better suited. Detail does not indicate wooden system is pressure treated and believe this will require more maintenance than a metal based system.

##### *L-03*

1. Provide more spot elevations for proposed grading along west part of site both south and north of garage entry.



*L-04*

1. We suggest substitution of NYSDOT type 2 sub-base where Type 4 is called out for better resistance to moisture, particularly beneath replacement curb on Broadway like concrete curb section and sidewalks.
2. For granite curb along Broadway that will be adjacent to parking and occasional mounting by trucks and adjacent to snowplowing activities we recommend continuous dry mix concrete under curb instead of just at joints for prevention of curb damage.

*L-06*

1. Green /roof section requires much more detail regarding materials, depths, and product data.
2. Is 6-inch water service sufficient for proposed fire protection flows?

*DRC13, DRC14, DRC15 and DRC16*

1. Provide colored elevations and show any roof top equipment.
2. Is rooftop access still below maximum 70' building height?

If you have any questions, please feel free to contact our office.

Sincerely,

BARTON & LOGUIDICE, D.P.C.

A handwritten signature in black ink that reads "Bradley D. Grant".

Bradley D. Grant  
Senior Project Manager

BDG/ojf