

**CONCORD PUBLIC WORKS  
ENGINEERING DIVISION**

**Tel: 978 - 318 - 3210  
Fax: 978 - 318 - 3245**

133 Keyes Road  
Concord, MA 01742



**DATE: 07/19/2022**

**MEMORANDUM**

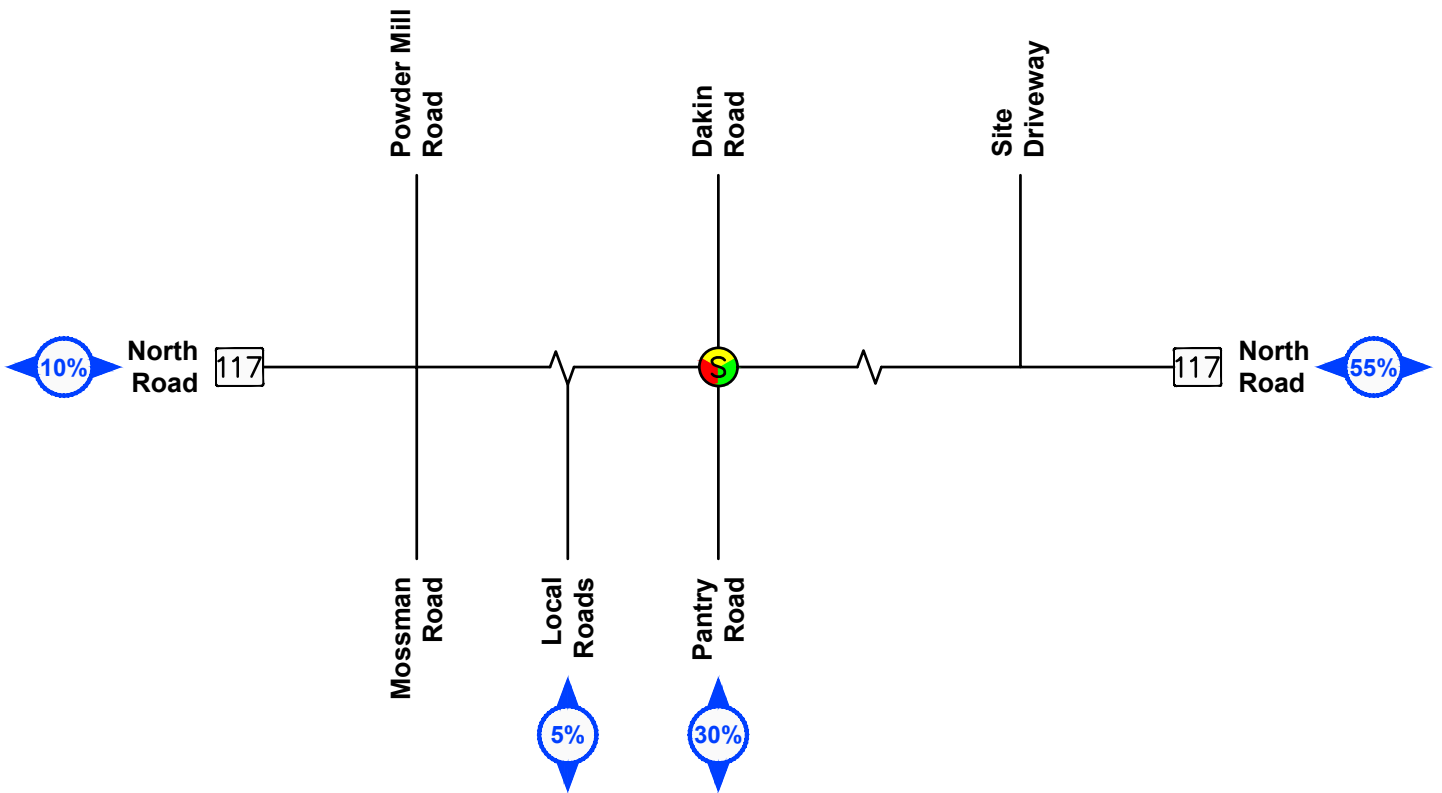
**TO:** Elizabeth Hughes, Town Planner  
**COPY:** Alan Cathcart, Director of Public Works  
**VIA:** Steve Dookran, P.E., Town Engineer  
**FROM:** Justin Richardson, P.E., Assistant Town Engineer  
**SUBJECT:** 48Y Fitchburg Turnpike: ZBA Special Permit

Concord Public Works (CPW) Engineering Division has reviewed the ZBA Special Permit Application, Plans, Calculations and Reports for 48Y Fitchburg Turnpike prepared by Civil Design Group, LLC, dated June 9, 2022 from the Applicant Quarry North Road LLC. The Engineering Division offers the following:

Engineering Division Comments (07/20/2022):

1. Please provide a Stormwater Pollution Prevention Plan (SWPPP) and make the appropriate filings with National Pollutant Discharge Elimination System (NPDES) for the site alterations that are to be performed. **The applicant would have no objection to a condition of approval requiring submission of a copy of the SWPPP to the Engineering Department as requested.**
2. The traffic analysis provided indicates an increase in traffic, but it is unclear how much of the increased traffic will be traveling eastbound into the Town of Concord. Please include that information in the traffic analysis. **55% of the traffic generated will go east when leaving. See attached figure from MDM TIAS.**
3. Are stop signs still necessary where Emery Lane and Cold Brook Drive meet Rookery Lane?  
**The plans have been updated to remove the proposed stop signs at these two locations.**
4. The inside radius of the roadway at the east and west corners is 30-feet. Please show vehicle turning movements around these curves to prove that delivery trucks (including tractor trailer trucks) and emergency services can make the turns. **The Layout Plan (sheet 5) has been updated to show the turning movements for a tractor trailer, which is the largest of the vehicles to be accommodated.**
5. Rookery Lane will remain private in perpetuity and can never be petitioned for street acceptance by the Town of Concord. Property owners abutting the roadway or an established homeowner's association are responsible for all required maintenance including but not limited to snow removal, roadway maintenance, and drainage maintenance in accordance with the Long Term Operation and Maintenance Plan (LTOMP). **These conditions will be incorporated into the governing condominium documents.**
6. Inspection reports from the LTOMP are to be submitted to the CPW Engineering Division annually. **The Applicant requests that this condition be removed as Rookery Lane is a private street.**
7. The bio retention area shall comply with CPW Design and Construction Standards, Sections 2.2.4 Structural Best Management Practices, subsections B and C. Currently, the basin does not have an emergency overflow and the appropriate amount of freeboard. **The bioretention basin detail has been replaced with the Town of Concord's standard bioretention detail. An emergency overflow system has been added and the freeboard has been adjusted in conformance with the town's standard detail.**
8. The Subsurface Infiltration system is in close proximity to house #6's leach field. Please verify that this meets all State and Local requirements for proximity. **The horizontal separation between the leach field for house #6 and the subsurface infiltration system is approximately 20', which exceeds the minimum setbacks requirements of the Concord Board of Health Regulations Chapter 3.00 Section 3.06 as well as 310 CMR 15.211 (Title 5).**

9. Please add Deeps Sump and Hooded Catch Basins to your TSS Removal Calculation Worksheet. Also, add a grass strip to the worksheet for the portions of driveways flowing to the bio-retention basin. **The TSS removal tables have been updated to include deep sump hooded catch basins for the infiltration system and vegetated filter strip for the bioretention system.**
10. The stormwater report includes “TABLE 2: PEAK FLOW RATE COMPARISON”. A similar table should be included that states the pre and post development volumes of discharge as is required under the Concord Public Works Design & Construction Standards & Details. **A volume comparison table has been added showing no increase in volume from the proposed development.**
11. Please show Time of Concentration information (slope, length, designated) lines on Pre and Post Development Watershed plans. **Figures 3 and 4 have been updated to show slope and length for the individual segments of the time of concentration paths.**
12. The Stormwater Report provided rational method calculations, but Concord Public Works Design & Construction Standards & Details, Section 2 - Drainage Standards requires “rational method for a 100 year frequency storm event and Manning’s equation for open channel flow”. The Hydraflow SSA shows flow rates in cfs, but it does not show that the 100-year storm event was used. Please update the Hydraflow analysis to include a column for the rainfall event that was used. **The 100 year storm return period is listed in the bottom left corner of the Storm Sewer Summary Report.**
13. Was soil testing on site performed in the area of the Bio-Retention basin? And if so, was a Town of Concord representative present to observe the testing? **Soil testing was not performed at the bioretention basin. The modeled infiltration rate for the bioretention basin is based on the more restrictive media soil and as such the underlying soil infiltration rate does not factor into the model.**
14. The Engineering Divisions reserves the right to comment on future submittals related to any new or previously submitted information provided to the Town for review including the Definitive Subdivision Plan and supporting documentation.



North

Scale: Not to Scale

**NOTES:**

 = Signalized Intersection