

MEMO

TO: Ben Avery, BlackRock Construction
David Marshall, Civil Engineering Associates, Inc

FROM: Corey Mack, RSG

DATE: April 17, 2020

SUBJECT: Haystack Crossing: Traffic Technical Review Response

RSG received the technical review of the Haystack Crossing traffic impact materials conducted by Stantec Consulting Services, Inc, dated April 3, 2020. RSG provides the following responses to the recommendations of the technical review:

1. Provide Synchro/Highway Capacity Manual reports for intersection operations to define operations by lane group including volume-to-capacity ratios.

The 8/20/18 Traffic Impact Study (TIS) reported SimTraffic microsimulation delay, level of service, and queue length results by approach direction. As noted in the 8/20/18 TIS, the corridor was primarily analyzed in SimTraffic Microsimulation software to model queue interactions between intersections. The Synchro / Highway Capacity Manual (HCM) methodology, as requested by the reviewer, analyzes intersections in isolation and does not account for queue spillback between intersections; RSG believes the Synchro / HCM methodology is limited in this respect.

RSG will provide Synchro / HCM results of the modified corridor analysis (see comment 3 response below), in addition to the microsimulation analysis in the updated TIS.

2. Review crash reports to better understand the cause of crashes occurring at the proposed VT 116 site drive location. Summarize findings and recommend near-term and long-term mitigation strategies as appropriate. (Lowering the VT 116 speed limit in this area has been discussed in the past. Lowering the crest vertical curve on VT 116 may also be a consideration.)

RSG will further explore the available crash data and summarize in the updated TIS.

- 3. Update the No Build conditions to reflect the current status of the Hannaford Bros. project. Omit Hannaford Bros. traffic and Hannaford Bros. mitigation from the No Build and Build conditions.**

RSG will update the other development volumes (ODVs) and changes to mitigation resulting from changes to nearby projects (Hannaford, NRG). Updated volumes to be presented in updated TIS.

- 4. Include the Lantman's entrance driveway intersection in the traffic networks and analysis results.**

RSG will add the Lantman's entrance to the network in the updated TIS.

- 5. Incorporate the current land use program and appropriate trip estimates into the Build condition. Identify trips associated with the proposed town house units.**

RSG will update the land use table and trip generation estimates to match the current development program in the updated TIS.

- 6. Review and revise if appropriate trip generation adjustments made to account for accommodations for alternative modes and internal trip making. Provide documentation to support assumptions made in this regard.**

RSG will formalize trip generation adjustments in accordance with the latest guidance from VTrans; RSG will document TDM adjustments based on site features.

- 7. Define the improvements proposed by VTrans at the Shelburne Falls Road/VT 116 intersection and the schedule for implementing these improvements. Suggest modifications to these improvement plans, if appropriate, to accommodate full-Build (Phase I plus Phase II) condition traffic volumes.**

RSG will include an updated list of upcoming state and local transportation projects, including the Shelburne Falls Road / VT-116 intersection improvement project. RSG will review the design of the intersection with optimal intersection elements, such as lane configuration and turn lane lengths, with the added Phase I traffic.

RSG will evaluate the maximum buildout of phase I, up to phase IA, that will result in acceptable operations of the existing Shelburne Falls Road / VT-116 intersection.

- 8. Expand the study to include the Phase II development program. This should be done as a second Build scenario. An understanding of Phase II impacts can inform decisions regarding proposed site access conditions and area roadway improvements currently under consideration.**



Phase II development program is undefined. Recommend seeking permitting and approval for phased development separately as standalone projects.

9. Evaluate left-turn lane warrants for both site access points including the left-turn condition for traffic entering Riggs Road from VT 116 southbound.

RSG will prepare turn lane warrants for:

- WB Shelburne Falls Road left turn lane into Haystack Crossing
- EB Shelburne Falls Road right turn lane into Haystack Crossing
- SB VT-116 right turn lane into Haystack Crossing
- SB VT-116 left turn lane into Riggs Road

RSG understands that the Riggs Road left turn lane (if warranted) will be the responsibility of a separate development project, to be determined. The Haystack Crossing Phase I is willing to identify and allocate a permanent easement to the Town for eventual construction by a future developer.

10. Evaluate operations for affected intersections assuming full access is provided at the VT 116 access point. (Full access is being considered for the Phase II program.) Explain why providing full access is not appropriate for Phase I.

Phase II development will be considered as a separate project; right-in / right-out access on VT-116 was proposed following discussion with VTrans and the Town. VTrans preferred to limit access on the state highway. Full access is preferred and may be pursued further in Phase II as a separate project and in coordination with other developments.

11. Describe any traffic mitigation measures offered by the proposed development. Consider if mitigation measures associated with the Hannaford Bros. project should still be pursued.

RSG will review the proposed Hannaford mitigation measures, remove them from the existing conditions model, and evaluate the application of these (and other) measures in the proposed condition model.