Date: ~~October 5~~January XX, 2024~~3~~

To: Richmond Selectboard~~Transportation Committee (RTC)~~

From: ~~K. Oborne, Director P&Z~~ Richmond Transportation Committee

Subject: Pros and Cons of recommended alternatives to improve safety at the intersection of Bridge Street with Huntington, Cochran and Thompson Roads~~THBC Alternative's Pros and Cons~~

The intersection of Bridge Street with Huntington, Cochran and Thompson Roads (THBC) is dangerous for motorists, pedestrians, and bicyclists alike because it lacks clear signage, crosswalks and sidewalks, and because of the speed at which many motor vehicles move through the intersection. Demands for improving the safety of this intersection have consistently been among the top of the lists of comments the Richmond Transportation Committee has received since its inception in 2018.

Over the past three years, with help from the Chittenden County Regional Planning Commission (CCRPC) and transportation consults, the Richmond Transportation Committee has engaged in multiple planning exercises to evaluate and develop alternatives to improve the THBC intersection. Our ideal alternative, a roundabout with crosswalks, is likely too costly (>$900,000) and too disruptive (it would require acquiring land from adjacent landowners) to recommend.

In lieu of the roundabout option, the Transportation Commission presents two options for the Selectboard's consideration: a four-way stop (figure 1); and, a mountable island in the center of the road (figure 2) both from the Richmond: Bridge Street Complete Streets Corridor Study Technical Memorandum (CCRPC, VHB, 8/4/2021). Neither fully balances the needs of all users, but the status quo of leaving the intersection unchanged is both unsafe and, we believe, unacceptable (the staff of VHB, the engineering/design consultant that helped evaluate this intersection, did not want their names associated with a "no build" alternative because of its inherent danger).

This memo outlines the pros and cons of the two alternatives and includes comments from RTC members as well as excerpts (in italics) from the Complete Streets Study prepared for the town by the CCRPC and VHB.

~~General – At the September 26, 2023 RTC meeting a discussion on the Pros and Cons of the Thompson Road, Huntington Road, Bridge Street, and Cochran Road (THBC) intersection alternatives was discussed. The board has narrowed down the alternatives to two, the Four Way Stop (Alt 1 of the Complete Streets Study, pgs. 9-10) and the VHB alternative (page 35 of the same study).~~

~~Below is a compilation of board member's Pros and Cons as well as input from the VHB Complete Streets Corridor Study, which is denoted in italics:~~

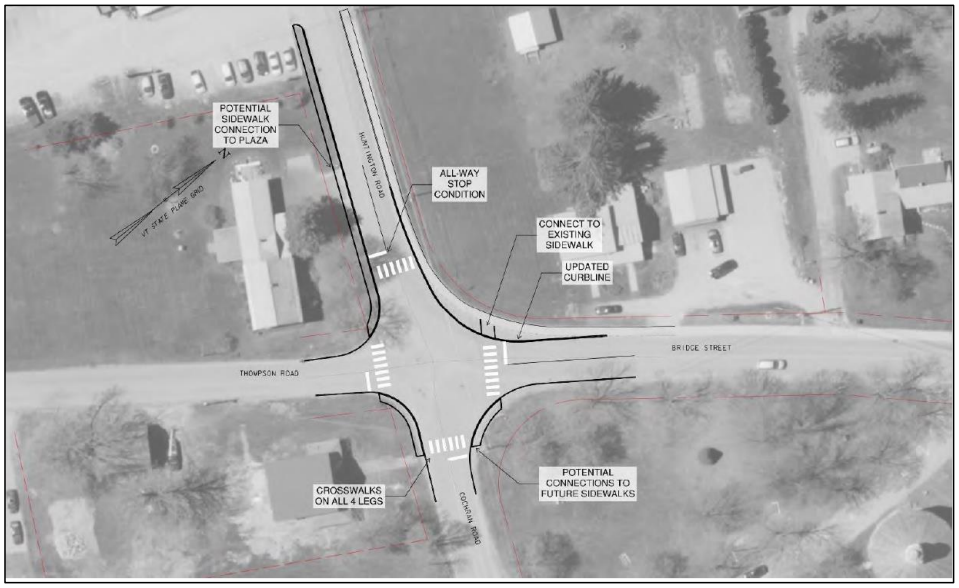


Figure 1. THBC as a Four-way stop

Alternative 1: a four-way stop with curbs, crosswalks, crossing flashers, speed tables on Huntington and Cochran road and a sidewalk on the south side of Huntington Road from the intersection to the Round Church Corners Business Plaza.

Four-way stop - Pros

1. Easily understandable for motorists
2. Safest alternatives for pedestrians to cross – ensures cars will stop and peds will be more visible.
3. ~~Cheaper~~Less expensive option
4. ~~4.~~3. *It would most reliably improve pedestrian safety in crosswalks and thereby allow greater pedestrian access, including to the daycare on Thompson Road, to Richmond Terrace, and to the commercial area on Huntington Road. This alternative best aligns with the 2018 Town Plan goals for a walkable/bikeable community.*
5. ~~5.~~4. *It would "normalize" the intersection to a right-of-way pattern understood by all users, not just locals. This should help reduce the crash frequency (6 crashes listed between 2015-2019).*
5. *It would reduce vehicular speeds in all directions at the intersection.*
6. *It would most reliably improve bike safety in the intersection.*
7. *In the AM peak hour, the delay/queue on Huntington Rd. would reduce the delay/queue on Bridge St, thus same total time to get through the rate limiting Bridge/US2/Jericho intersection but divided into two segments. This could also have the benefit of less congestion at the Railroad/Jolina Ct./Bridge St. intersection.*

Four-way stop - Cons

Commented [JK1]: I think we should include a brief description for each alternative that includes all the 'additional' features that the RTC thinks are needed. I don't know that I captured everything we've discussed here.

Commented [JK2]: I find it confusing, and redundant, to include essentially the same pro/con from the RTC *and* the Corridor Study separately. I suggest either selecting one or combining each pair as a RTC/Corridor study pro or con.
Here I would combine #2, #4 and #6

Commented [CG3]: Chris Cole change

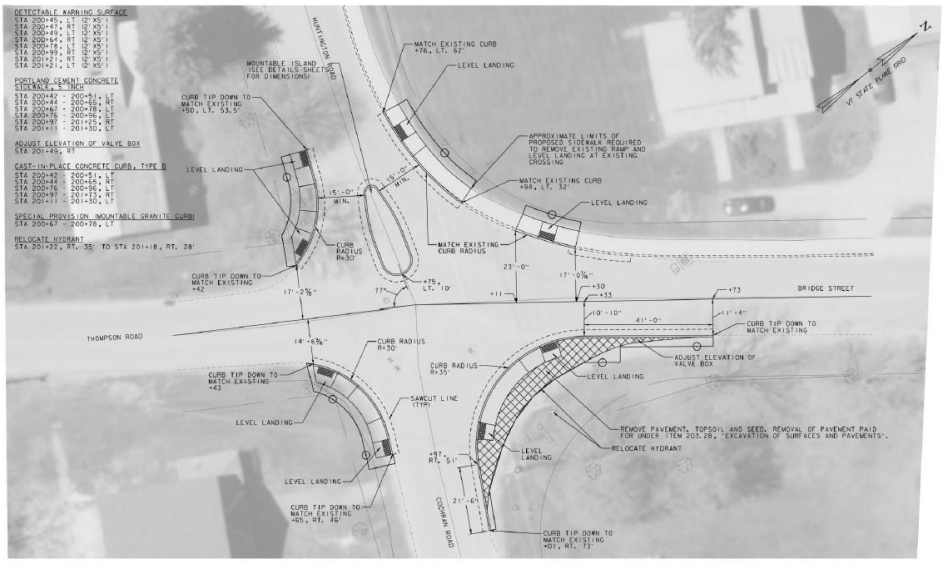
Commented [CG4]: Chris Cole change

Commented [JK5]: Currently queuing along bridge St all the way to the THBC intersection is quite rare. Once the new turn signal is installed at Bridge/Main, the overall backup on Bridge St. will likely decrease. With this in mind, I find it hard to call this a substantive "pro" but if it's kept I suggest changing to read...
"could possibly moderate queuing on Bridge St during the highest usage moments of the morning.

Commented [JK6]: This seems speculative at best. I don't recommend including it.

1. Potential for backing up traffic during the morning commute.
2. May be undesirable for through drivers. The Bridge Street corridor serves approximately 5,400 vehicles per day. All motor vehicles would be required to stop 24hrs/day, 365 days/year, including times of day/night and times of year when few, if any, pedestrians, or bicyclists would be present.
3. Some Neighbors ~~are~~ may not be in favor of stopping/starting of cars & trucks.
4. ~~It will be contentious, might not be necessary to stop traffic here relative to traffic volumes, not clear how pedestrian infrastructure will be part of intersection besides painted crosswalks.~~
5. ~~4.~~ *Vehicle traffic would need to come to a full stop. This would create ~~some~~ approximately a 3 to 6 second delay. From page 9 of the VHB study, "Based on simulations of the all-way stop condition, the most significant queuing would be expected for the Huntington Road approach in the AM peak hour at approximately 100' (95th percentile queue) and for the Bridge Street approach in the PM peak hour at approximately 120' (95th percentile queue). A comparison of simulated queues for the alternatives and the no build condition are detailed in the appendices." This is much less than the queues that occur on Bridge St. northbound in the morning and on US2 eastbound in the evening and westbound in the morning and considered in the acceptable range by traffic engineers.*
6. ~~5.~~ *There would be some increase in noise from vehicles starting from a full stop.*
7. ~~6.~~ *Complaints from vehicle operators are anticipated, as they are accustomed to traversing this intersection without slowing.*

Figure 2. THBC with Mountable Island ~~as a Four-way stop~~:



Alternative 2: Mountable Island with curbs, crosswalks, crossing flashers, speed tables on Huntington and Cochran road and a sidewalk on the south side of Huntington Road from the intersection to the Round Church Corners Business Plaza.

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Commented [JK8]: Combine this with #7 below.

Commented [CG9]: Chris Cole change

Commented [JK10]: I added this

Commented [JK11]: Cathleen added the comment: "I am not sure the neighbors agree with this, as we learned at a recent RTC meeting. I've talked with Gary Bressor, who said he thinks the four-way stop is the safest option."

Commented [CG12]: Chris Cole added Some and both Chris and Cathleen made the other changes.

Commented [JK13]: I don't understand what this means.

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Commented [JK14]: How does this square with #2 in the pros section "Safer for pedestrians to cross...."?

I suggest that our recommended alternatives address these concerns as best as possible (e.g., 4-way stop with crosswalks and crossing beacon) rather than leave that up to the Selectboard to come up with.

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Commented [CG16]: Chris Cole change

Commented [JK17]: This figure is on the last page. If we want it here, it will need reformatting to fit this page.

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Mountable Island~~VHB~~ Alternative – Pros

1. Bump outs are helpful for pedestrians waiting to cross: currently no place to stand at some corners
2. Island design intended ~~might~~ to slow down cars moving from Huntington Road to Cochran Road
3. Keeps major traffic ~~pattern~~ flow~~ing~~ between Bridge St. and Huntington Rd.
4. Squares off the intersection which slows cars down turning onto Bridge St. from Huntington Road
5. Slows traffic without stopping it, converts the intersection into shared-use infrastructure, ~~maybe~~ provides enhanced pedestrian safety.
6. *It is an improvement on the current situation in terms of safety, in that it would slow (but not stop) vehicles.*
7. *It might change driver's perception of the intersection to a more "share the road" and less "Richmond Gran Prix" perspective.*
8. *It is much less expensive than a signalized intersection or a roundabout.*

Mountable Island~~VHB~~ Alternative – Cons

1. Potential for continued confusion unless signage is very clear.
2. Would need flashing walk lights.
3. Would need speed tables for Huntington Road
4. More expensive, still might induce right-of-way confusion.
5. *Compared to a four-way stop, it is less effective in improving pedestrian and bike safety and less effective in achieving the 2018 Town Plan goals.*
6. *It does not reliably slow traffic going straight through from Huntington Rd. to Cochran Rd.*
7. *It does not "normalize" the right-of –way pattern of the intersection. The confusion will remain.*
8. *The mountable center island is seen as a problem by some, although a standard VTRANS infrastructure feature.*

Other Considerations for alternatives 1 and 2

1. Need to consider the effect of increased traffic with the addition of additional housing!
2. Need a sidewalk on the south side of Huntington Road between Thompson Road and the Round Church commercial complex.
3. Could we add the bump outs to the 4-way stop option?
4. Could crosswalks be raised, making them more visible and acting as a small speed bump?
5. Multiple speed tables should be considered.
6. Cost breakout for as designed by VHB and enhanced introduced by committee.

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Commented [CG19]: Chris Cole change

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Commented [JK21]: Combine with #3

Commented [JK22]: In all directions or just crossing Bridge/Huntington?

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Commented [JK23]: I thought we recommend speed tables for both alternatives on both Huntington and Cochran Rds?

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Commented [CG24]: Chris Cole comment - It depends upon what is meant by multiple re: the intersection and not the larger Cochran rd project.