
Hannaford Supermarket – Hinesburg

Traffic Update to Hinesburg DRB

February 21, 2012

Traffic Topics

- Calibration of the Traffic Model
- Trip Generation
- Mitigation
- LOS and Queues
- Findings and Conclusions
- Permit Conditions

Calibration of the traffic model

- Town's traffic consultant, Rick Bryant, stated:
“The action taken by L&D to calibrate the traffic model is reasonable and appropriate for this type of study...the model predicts queues that are in the range of observations made by L&D, Oman and Bryant. No further model calibration is warranted”.

Trip Generation

- Hannaford: Town's traffic consultant, Rick Bryant, stated that the "... *estimates provided by L&D are likely to prove to be more accurate*".
 - All analyses use the ITE Average rate = 386 PM peak hour trips
- Lantman's: We are not claiming a reduction in trip generation at Lantman's as mitigation.
 - All analyses use the current trip generation at Lantman's = 251 PM peak hour trips

Trip Generation

- We believe both Hannaford and future uses at Lantman's are likely to be less than these amounts.
- Thus these numbers are conservative.
- Nonetheless, all of the analyses use these numbers.

Traffic Mitigation

■ Route 116 & Commerce St

- ❑ Widen & lengthen existing Commerce St westbound lanes approaching Route 116.
- ❑ Lengthen existing Route 116 southbound left-turn lane approaching Commerce St.
- ❑ Relocate Aubuchon's existing Commerce St curb cut closest to Route 116 to reduce future conflicts created by turning vehicles.

■ Route 116 & Charlotte Rd

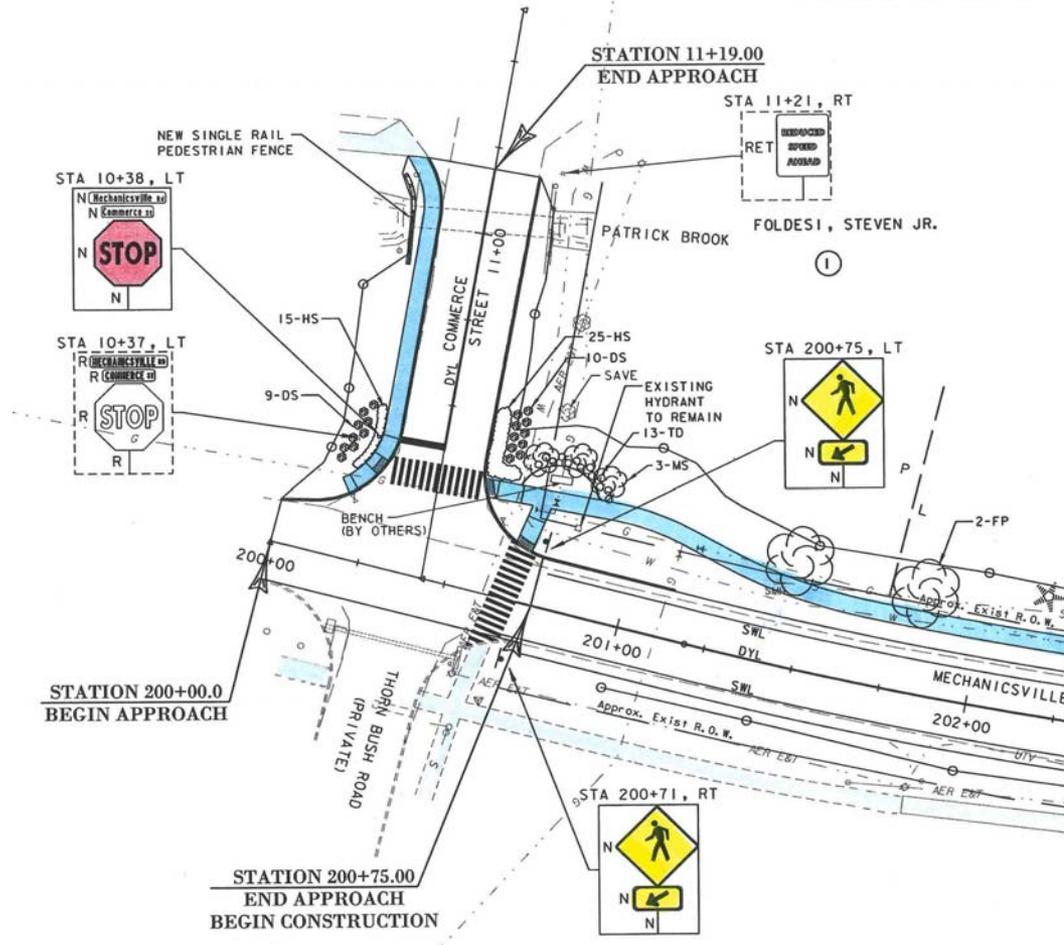
- ❑ Change the signal phasing at the Charlotte Rd intersection to eliminate the existing EB/WB split phasing.
- ❑ Relocate the sidewalk in front of Lantman's to improve the operational efficiency of the traffic signal.

RT 116/Charlotte Rd/Lantman's Intersection



February 21, 2012

Commerce St. & Mechanicsville Rd. Intersection – Pedestrian Improvements



Traffic Mitigation

- **No longer proposed:**
 - South bound left turn lane at Lantman's entrance
 - West bound on Commerce Street, dedicated left turn lane and combined through-right lane; instead will remain dedicated right turn lane with combined through-left
 - Longer signal cycle-length (keep existing 71 sec. cycle-length)

Level of Service and Queues

- Existing and Future Levels of Service & Traffic Congestion Conditions
 - Signalized Intersections (SimTraffic simulation)
 - Analyzed using Lantman's existing peak hour trips

Intersection/Approach	2017 No-Build			2017 Build		
	LOS	Avg. Delay	Max Queue	LOS	Avg. Delay	Max Queue
116/Commerce St/Farmall Dr						
Farmall Dr EB LT/TH	C	25	60'	C	24	64'
Farmall Dr EB RT	B	14	71'	B	12	58'
Commerce St WB LT/TH	E	43	144'	D	36	252'
Commerce St WB RT	A	6	124'	A	6	70'
VT 116 NB LT	C	31	94'	C	33	94'
VT 116 NB TH	C	15	302'	C	20	389'
VT 116 NB RT	A	7	100'	A	9	106'
VT 116 SB LT	D	40	177'	D	39	204'
VT 116 SB TH/RT	C	23	564'	C	24	502'
Overall	C	22		C	24	
116/Charlotte Rd/Lantman's						
Charlotte Rd EB LT	D	38	100'	D	54	101'
Charlotte Rd EB RT	B	13	79'	B	19	162'
Lantman's WB LT/TH/RT	D	46	192'	E	59	299'
VT 116 NB LT/TH/RT	D	44	631'	D	49	742'
VT 116 SB LT/TH/RT	E	71	1,046'	C	23	825'
Overall	E	58		D	35	

Traffic Impact Conclusions

- **Traffic Congestion - Hannaford Supermarket will:**
 - ❑ Maintain existing LOS B at the CVU Rd/Shelburne Falls Rd intersection during weekday pm peak hour.
 - ❑ Maintain existing LOS C at the Commerce St intersection.
 - ❑ Improve Charlotte Rd intersection from LOS E to LOS D. Queue decreases from 1000+ ft to 825 ft
 - ❑ Mechanicsville Rd intersection remains at LOS F.
 - ❑ Silver St intersection remains at LOS D.

Traffic Impact Conclusions

- The preceding results are very conservative due to a number of factors, including:
 - The required traffic impact study procedures and methodology inherently overestimates actual impacts.
 - Vermont supermarket trip generation rates have been shown to be significantly lower than national averages.
 - The results given do not include any allowance for the closing of Lantman's Supermarket.
- Overall, Hannaford will improve traffic flow through Hinesburg village during the weekday pm peak hour.

Traffic Impact Conclusions

- **Pedestrian Safety - Hannaford Supermarket will:**
 - ❑ Add new sidewalk connections along Commerce Street and to the new supermarket from Commerce St, the Canal Bike Path and adjacent properties.
 - ❑ Existing exclusive pedestrian signal crossings and timings at Commerce St and Charlotte Rd intersections will remain unchanged with no increase in cycle length.
 - ❑ Existing pedestrian safety at the Mechanicsville Rd/Commerce St/Thorn Bush Rd intersection will be improved by construction of the new Town Recreation Path this summer.

- **Overall Safety: There is no reason, using accepted traffic engineering standards, to conclude that existing safety conditions for pedestrians or vehicles would be adversely impacted.**

Traffic – Permit Conditions

- Permit Condition #1:
 - ❑ Traffic study 6 to 12 months after store opens.
 - ❑ Count PM peak hour trips – if 20% of more less than estimated, study stops there.
 - ❑ If within 20% of estimate or higher than estimate, then do intersection counts and trip distribution analysis of Hannaford's trips.
 - ❑ If turning movements 20% or more higher than predicted, then review whether further mitigation is warranted

Traffic Permit Conditions

- Permit Condition #2:

- If study 6 to 12 months after opening shows higher than predicted south bound left turn movements at 116/Commerce St. intersection and those left turns block through traffic more than 3 minutes during normal PM peak hour conditions, then re-assess need to lengthen turn lane and widen Patrick Brook culvert.