

## NORWALK SCHOOL BELL TRAFFIC STUDY

### FHI Studio Proposal

4/4/2022

#### Base Plan

This includes intersection turning movement counts at school access points and nearby intersections during school session, and during non-school session (spring break or summer break). Non-school session traffic volumes will be used to establish baseline traffic counts without school traffic. Morning observations of each corridor would also be included to support data collection efforts. This approach would then estimate morning travel patterns for each school throughout each focus corridor (Strawberry Hill and Highland Avenue). Based on the later bell time schedule and the counted traffic volumes at each school, estimated maximum traffic volumes at each intersection based on the "Later Bell Time" schedule will then be constructed with volumes added on the baseline traffic counts. This will be compared to the counts conducted during school session to evaluate maximum traffic volumes at each intersection between the two bell time scenarios. A qualitative summary report comparing volumes at each intersection will be produced with key findings highlighted. No capacity analysis will be conducted in this plan.

The following tasks would be included:

- 1) Counts at school driveways (630A – 9A – 1 day during school session and one day outside school session)
  - a. Strawberry Hill Area
    - i. Norwalk High School – County Street Access
    - ii. Norwalk High School – Strawberry Hill Ave – Access Out & Alrowood Drive
    - iii. Naramake Elementary – Parking Lot Access on King Street
    - iv. Nathan Hale Middle School – Entry on Strawberry Hill Ave
  - b. Highland Avenue Area
    - i. Brien McMahon High School – Highland Ave Access 1
    - ii. Brien McMahon High School – Highland Ave Access 2
    - iii. Brien McMahon High School – Highland Ave Access 3
    - iv. Roton Middle School – Highland Ave Access
    - v. Brookside Elementary – Highland Ave Access
    - vi. Brookside Elementary – Michael Street Access
  - c. Note - Bus traffic at bus driveways to be added and removed based on district schedules
- 2) Counts at nearby intersections (630A – 9A – 1 day during school session and one day outside school session)
  - a. Strawberry Hill Area
    - i. Strawberry / County
    - ii. Strawberry / King
    - iii. Strawberry / Walter

- iv. Strawberry / Tierney
- v. Strawberry / Rte 1
- vi. County / William
- b. Highland Avenue Area
  - i. Highland / Flax
  - ii. Highland / Soundview & Devils Garden Road
  - iii. Highland / Witch
  - iv. Michael / Soundview
  - v. Michael / Flax Hill Road
- 3) Morning Observation of Highland Ave during school session
- 4) Morning Observation of Strawberry Hill during school session
- 5) Establish estimated flow diagrams for each school during peak 15-minute interval
- 6) Establish maximum traffic volumes at each intersection based on "Later Bell Time" schedule
- 7) Deliver summary report with key findings

### **Option 1: SYNCHRO Analysis - Recommended**

Option 1 would include the addition of SYNCHRO analysis for each of the two bell time scenarios provided. This would be based on counted traffic volumes in the current bell time scenario and the estimated traffic volumes in the "Later Bell Time" scenario. The SYNCHRO analysis would provide typical traffic engineering measures including vehicle delay, level of service, and queues at each intersection. This plan would provide confidence on the impact of different volumes under each bell time scenario. For example, the qualitative findings of additional traffic volume at each intersection may not lead to significant traffic impacts if signal timings can handle increased traffic volumes.

The following tasks in option 1 would be included:

- 1) Prepare base data including traffic signal plans and volume data
- 2) Conduct capacity and queue analysis in Synchro 10.0 for 21 intersections for one (1) time period (AM) and two (2) bell-time scenarios
- 3) Summarize capacity and queue analysis tables

### **Drone Analysis at Strawberry Hill – Not Recommended**

After further review, drone analysis is not recommended due to the time required for data collection and the geographic scope of each corridor analysis.

## Cost Proposal

	Project Manager	Sr. Engineer	Cost
<b>Base Plan</b>			
Observations	0	12	\$1,800
School Traffic Flow Diagrams	4	16	\$3,300
Estimate "Later Bell Time" Traffic Volumes in Network	4	16	\$3,300
Reporting	8	24	\$5,400
Direct Costs – CT Counts (School Driveways)	0	0	\$3,750
Direct Costs – CT Counts (Nearby Intersections)	0	0	\$4,175
<b>Sub-Total</b>	16	72	\$21,775
<b>Option 1 – Synchro</b>			
Prepare Base Data	0	4	\$600
Capacity and Queue Analysis	8	40	\$7,800
Summarize capacity and queue analysis tables	2	8	\$1,200
<b>Sub-Total</b>	10	52	\$9,600
<b>Total (Base + Opt 1)</b>			\$31,375

## Contact

Chris Henry, AICP  
 Director of Mobility & Land Use  
 FHI Studio  
[chenry@fhistudio.com](mailto:chenry@fhistudio.com)

cc: Parker Sorenson  
[psorenson@fhistudio.com](mailto:psorenson@fhistudio.com)