RSG INC.
RESOURCE SYSTEMS GROUP, INC.

southburlington
VERMONT

Chittenden County
Regional Planning Commission

Williston Road Complete Street Study

Presentation to the City Council

November 7, 2011

Presentation Overview

Project Purpose and Phase I Overview

Study Area and Cross Sections

Conclusions and Recommendations

Analyses of Entire Corridor

- Crash Summaries
- Speed Study
- Roadway Schematics
- Traffic Analysis for Entire Corridor

Analysis of Eastern Corridor Segment

- Roadway Schematics
- Traffic Analysis for Eastern Segment

Dorset Street Lane Assignment Changes

Project Purpose and Phase I Overview

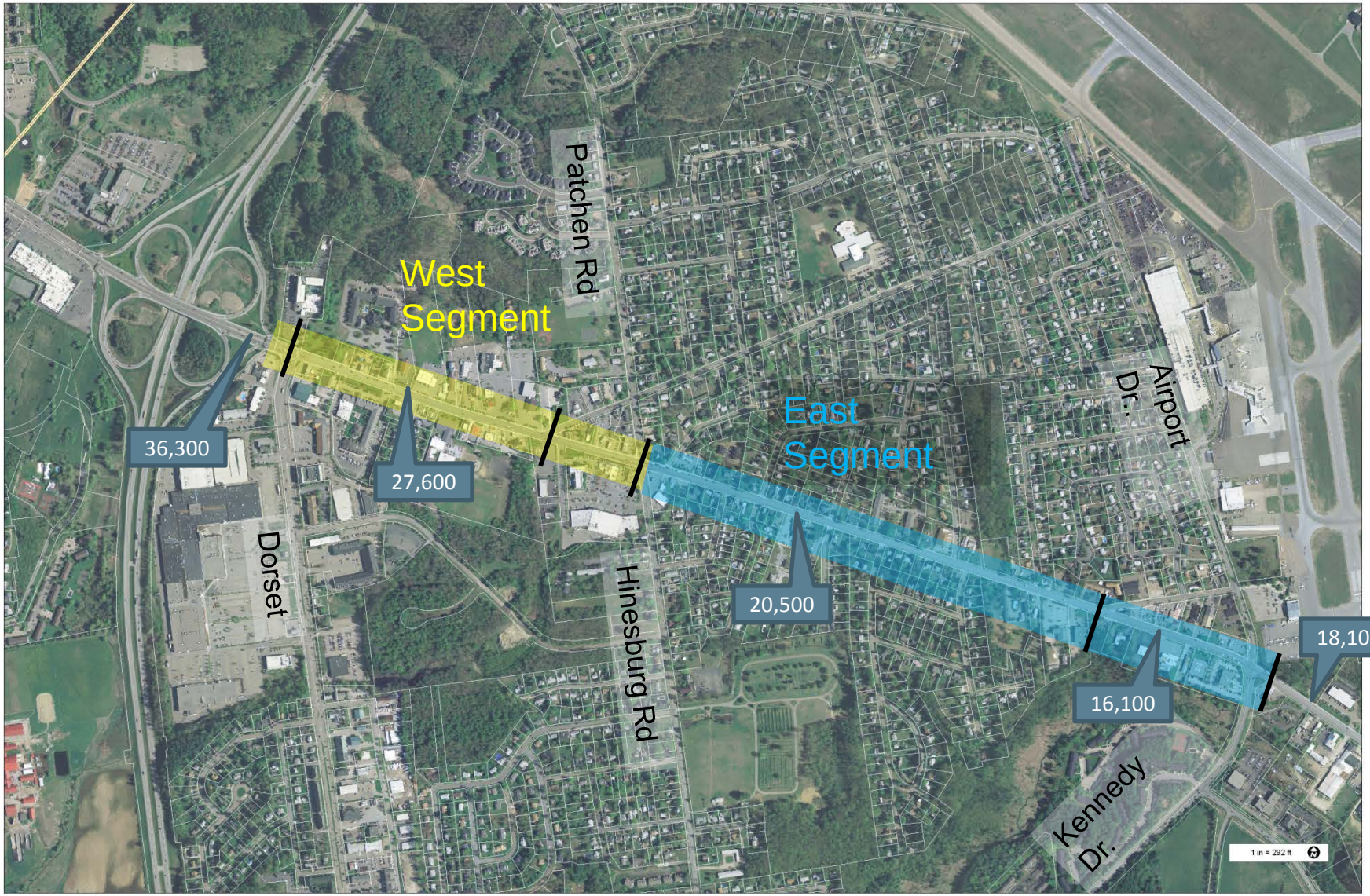
Evaluate the feasibility of a "Complete Streets" concept for Williston Road – Dorset Street to Kennedy Drive

- Reduce number of travel lanes from 4 to 3
- Add bike lanes
- Retain existing roadway width (curb to curb)

Current Phase I: Technical Feasibility of Complete Streets

- Congestion, Capacity and Safety Analyses
- Develop Schematic Plans
- Steering Committee input
- Presentation to City Council - decision on next steps

Study Area & Annual Average Daily Traffic



2010 AADT

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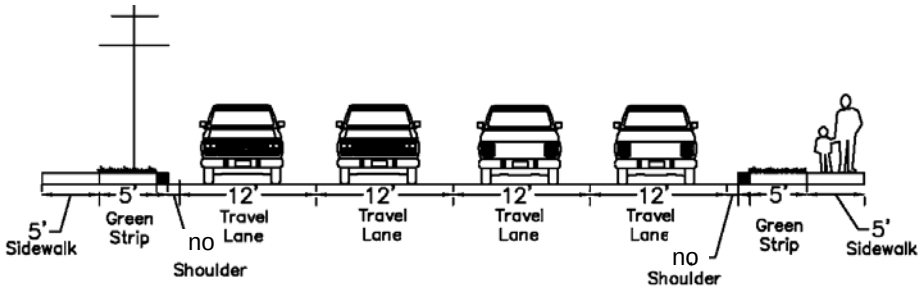
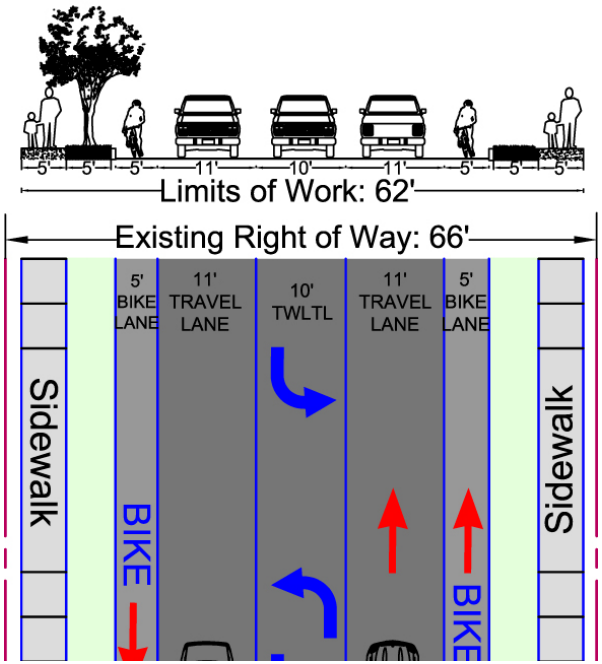
Roadway Cross-Sections



Existing Cross-Section



Complete Streets Cross-Section:
2 Travel Lanes with Two-Way Left Turn Lane

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Conclusions

Complete streets lane configuration for Williston Rd corridor (Dorset St to Kennedy Dr) creates significantly more congestion under 2011 traffic conditions

- Williston Rd experiences high traffic volumes during PM Peak hours of travel—a 39% reduction in traffic is required to allow for a Complete Street cross section

Complete streets lane configuration for the eastern segment (Hinesburg Rd to Kennedy Dr) creates significantly more congestion under 2011 traffic conditions

- The Williston Rd/Hinesburg Rd intersection is the limiting factor in allowing for a Complete Street cross section

There are other improvements that could increase traffic safety, ease congestion and improve pedestrian travel

Recommendations

Pave Market Street & Continue to plan for frontage roads

- Local roadway connections are crucial to reducing traffic on Williston Rd

Prohibit eastbound left turns onto Patchen Rd

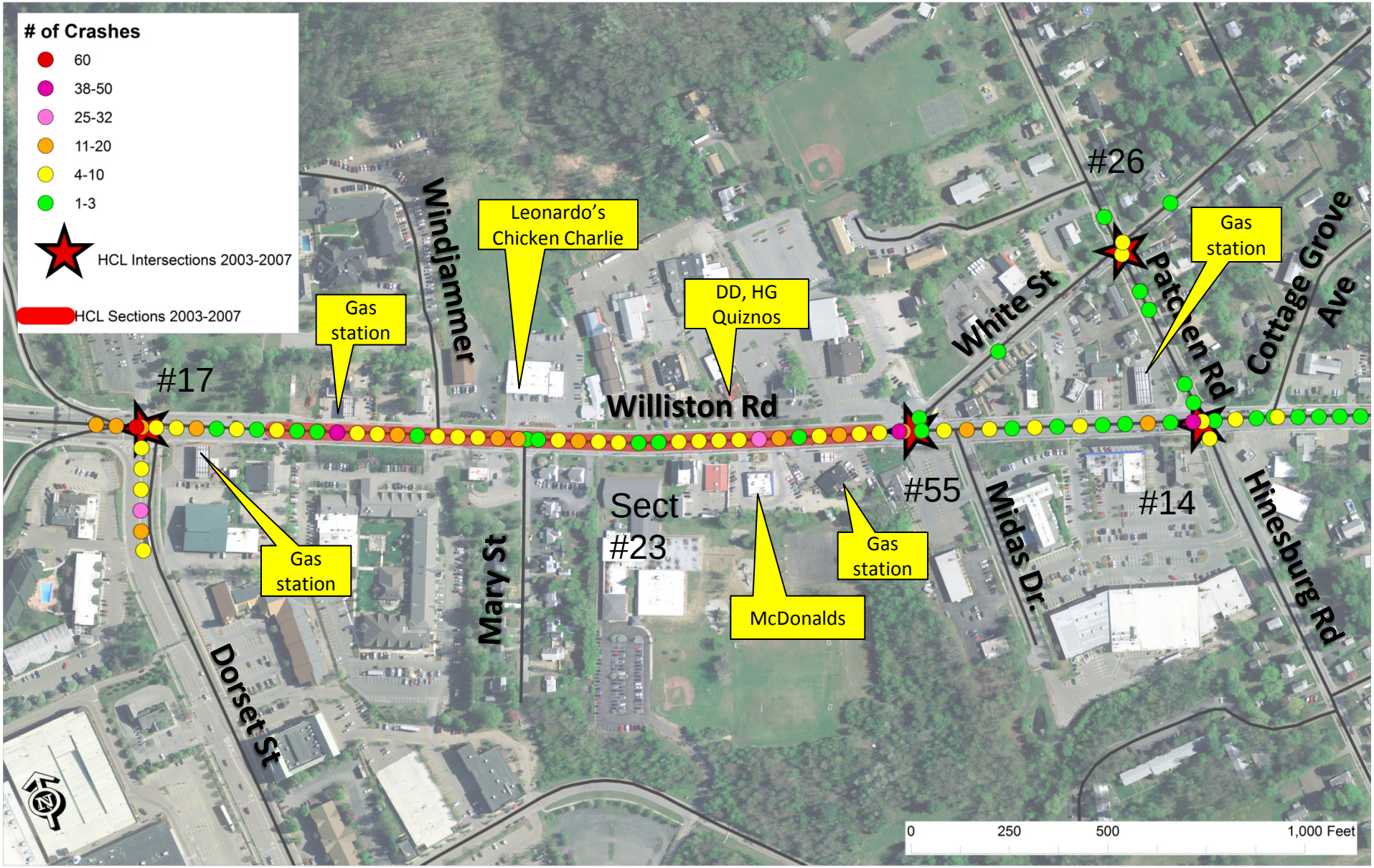
Upgrade pedestrian signals along the corridor (2012 Paving)

Following further evaluation, change lane designation for westbound traffic at Dorset St

- Existing: 2 LT, 1 Thru, 1 Thru/RT
- Proposed: 1 LT, 2 Thru, 1 Thru/RT

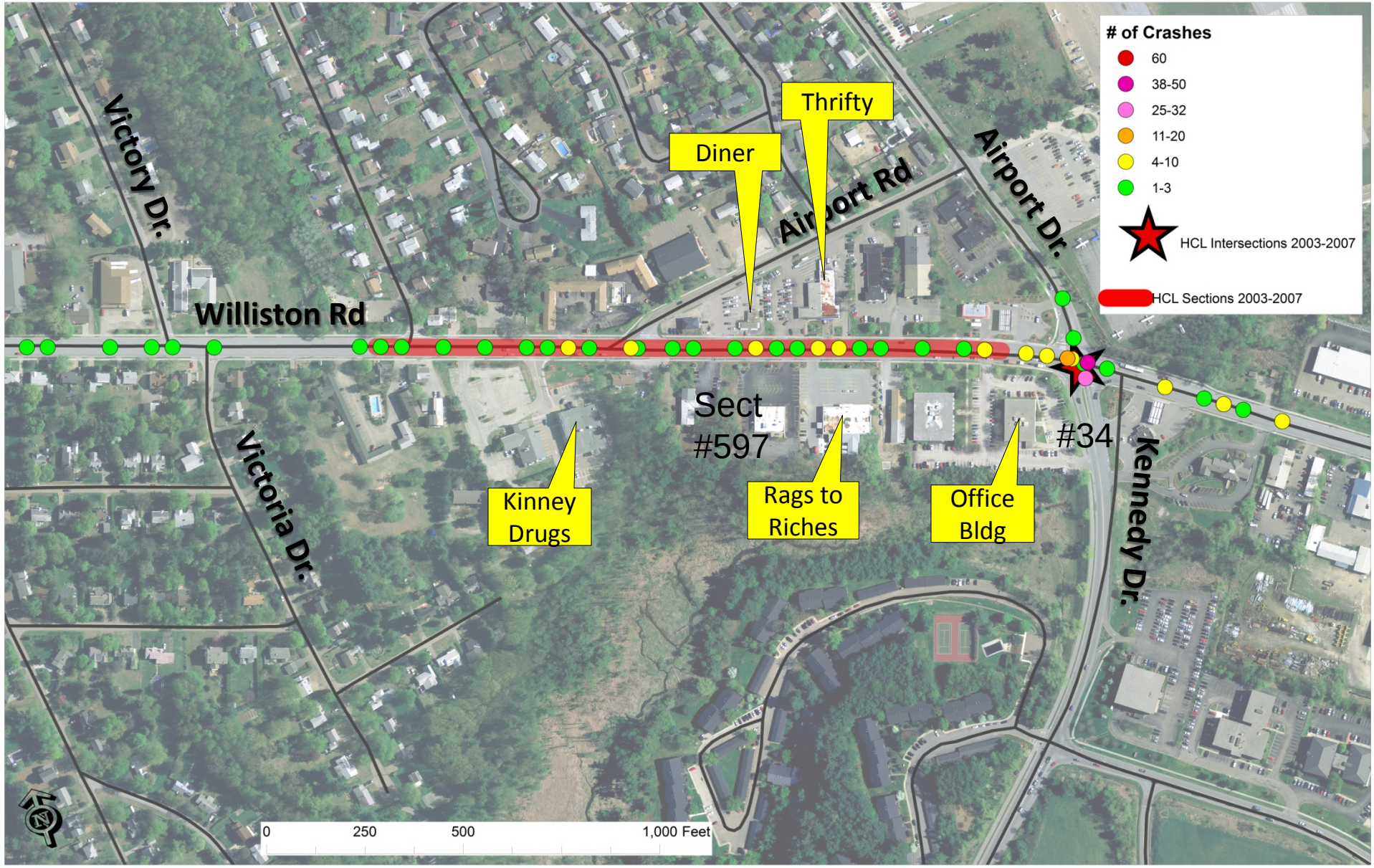
Phase II: Conduct a comprehensive *Access Management Plan* for the western segment with participation of all area businesses and property owners

Safety Analyses – Western Segment



Note: 131 HCL intersections in VT, 653 segments

Safety Analyses – Eastern Segment



Note: 131 HCL intersections in VT, 653 segments

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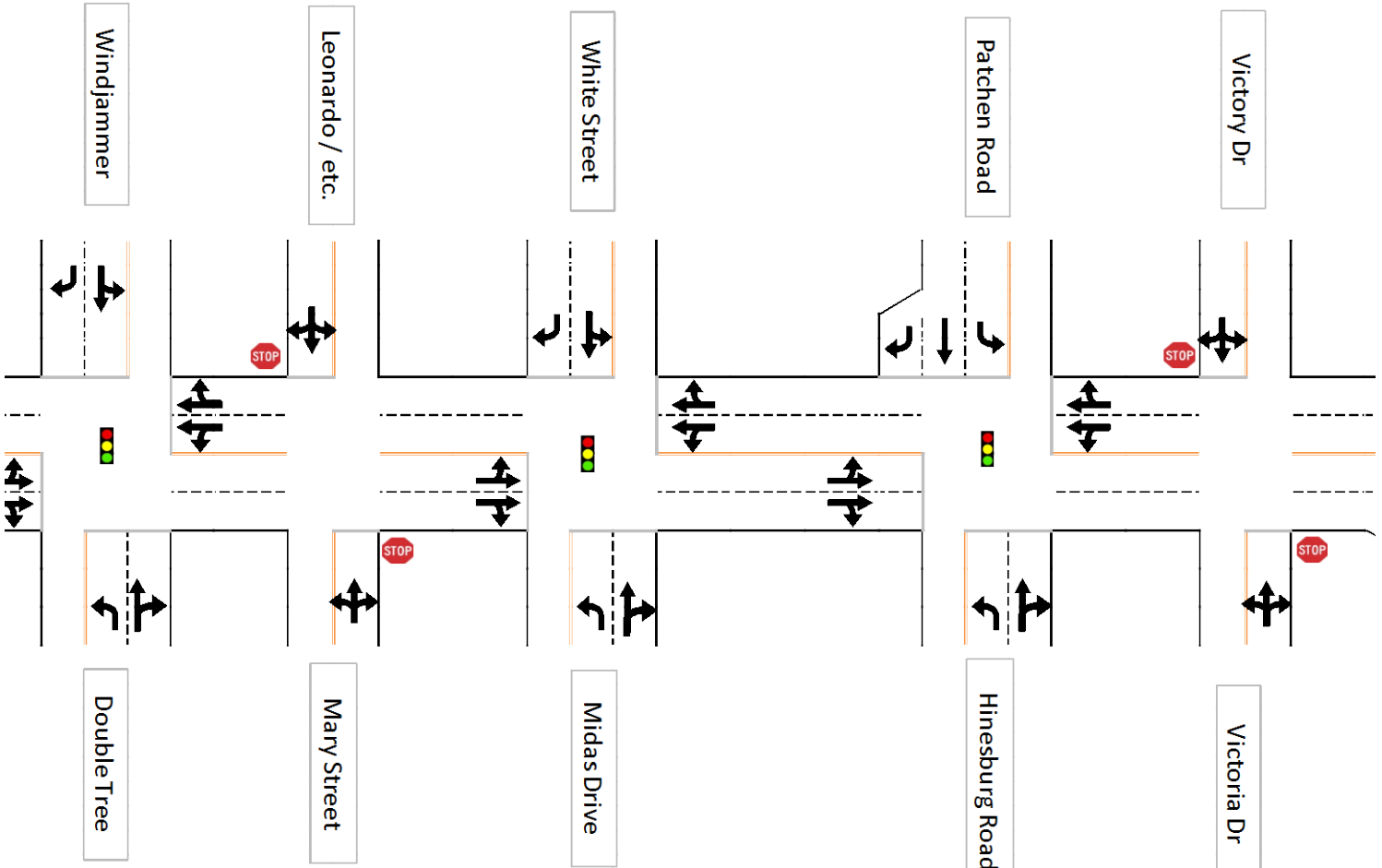
Safety Summary

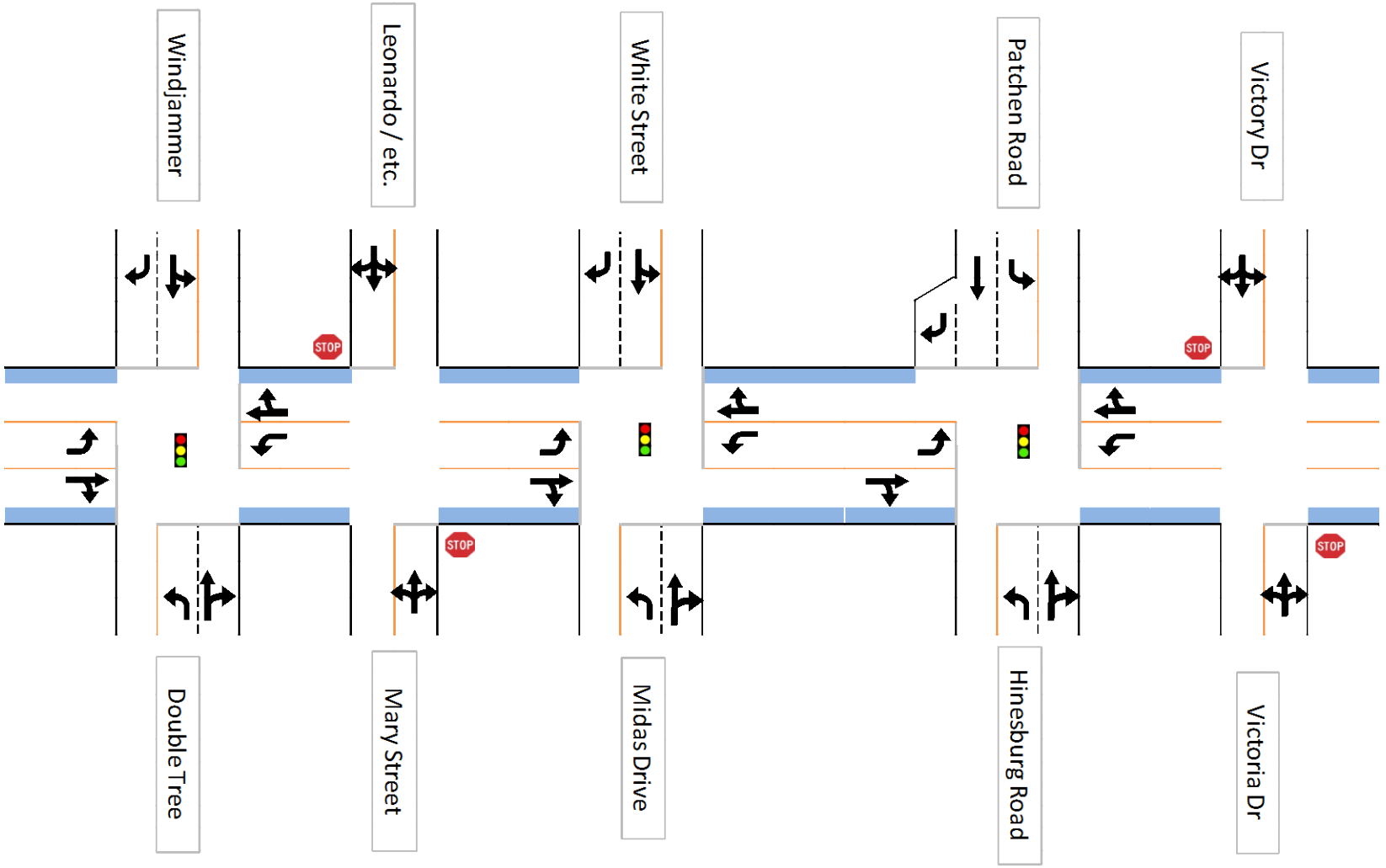
Crashes within the study corridor are typical of areas with access management issues and heavy congestion

- Crash types – broadside crashes, rear ends, sideswipes
- Contributing factors – inattention, failure to yield, followed too closely
- Highest concentration of crashes occurs during the PM peak hour

Roadway Schematics – Existing



Roadway Schematics – Complete Street



Traffic Performance Summary for Entire Corridor

Implementing *Complete Streets* for entire study corridor will create the following conditions:

- Increased Congestion – vehicles can not enter the corridor at various approaches (e.g., Dorset St, Kennedy Dr)
- Williston Rd/Hinesburg Rd intersection experiences the worst congestion
  - Long delays and queues at all approaches to the intersection
- Williston Rd/Kennedy Dr goes from an overall LOS C to a LOS F
  - Long delays and queues for westbound traffic at the intersection

For a *Complete Street* road cross section to succeed a 39% reduction in traffic is needed

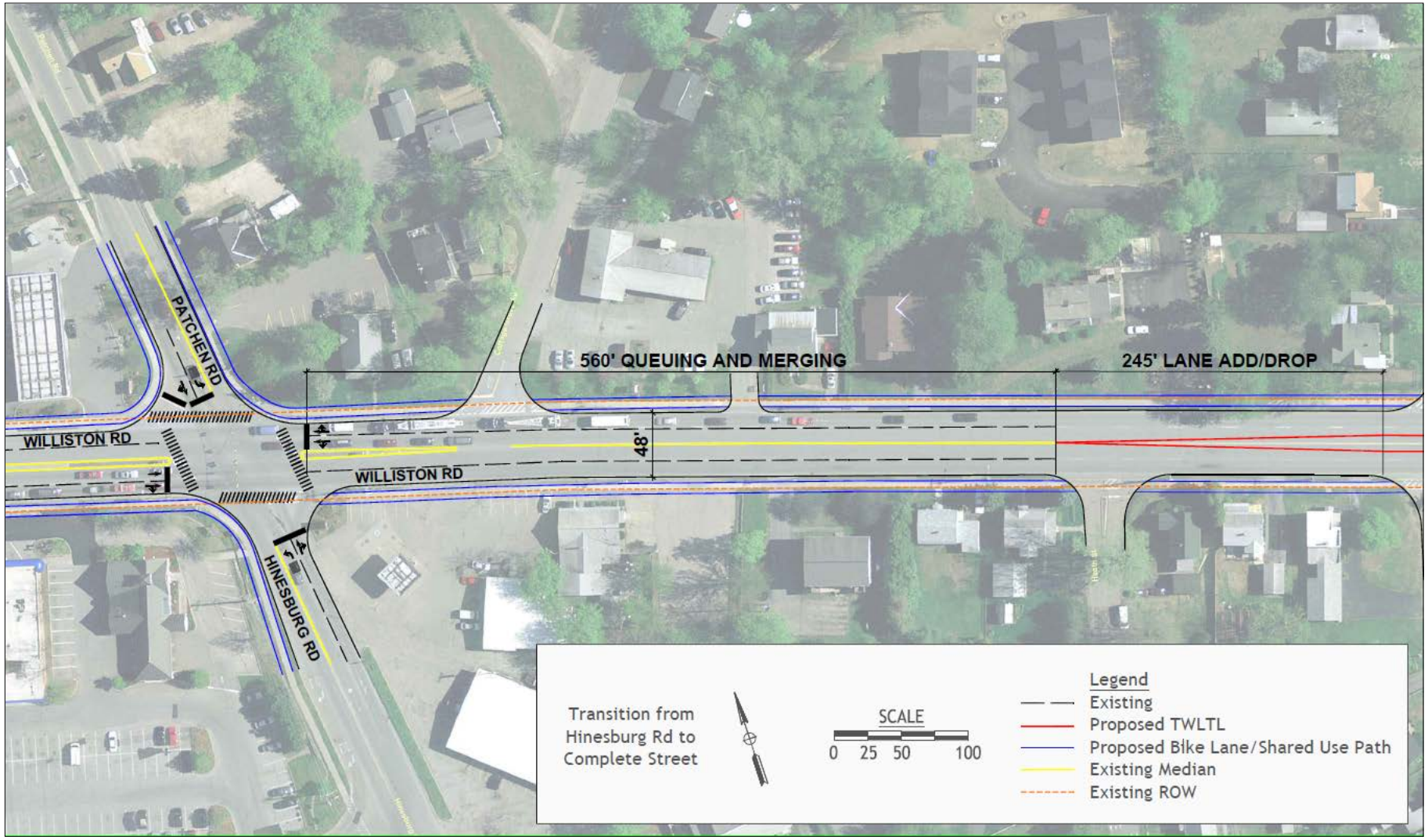
How can Williston Road traffic be reduced?

Concepts from the US 2 Corridor Study (2007)

- Looked at the effects of *Previously Identified Projects (PIPs)* and Additional Concepts
  - *PIPs:* Exit 12B, Circ Highway, Tilley Drive Connector, Champlain Parkway, Airport Extension, 3 lanes on Interstate, etc.
  - *Additional Concepts:* New local Street between Patchen Road and the Holiday Inn, I-189 U-Turn at Exit 13, etc.
- PIPs and Additional Concepts reduce traffic on Williston Road by 24% to 31%

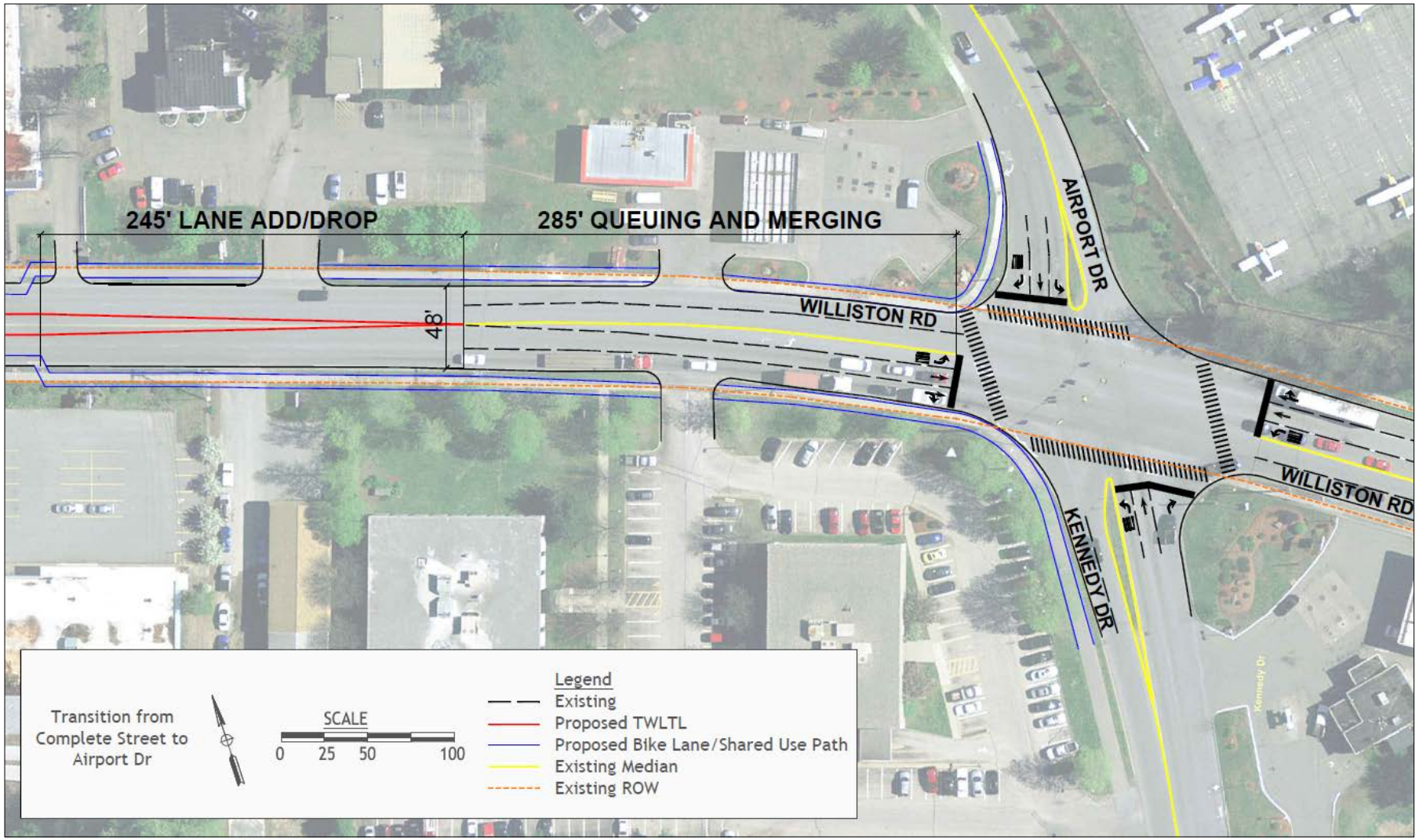
Complete Streets at Eastern Segment- Geometric Layout

Transition to Complete Street east of Hinesburg Road



Complete Streets at Eastern Segment- Geometric Layout

Transition from Complete Street west of Airport/Kennedy Drive



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Traffic Performance for Eastern Segment

Implementing *Complete Streets* for only the eastern segment of the corridor will create the following conditions:

- Congestion (queues and delays) increases substantially at the Williston Rd/Hinesburg Rd intersection
- Delays and queues increase substantially for westbound traffic at Williston Rd/Kennedy Dr intersection
- Ingress and egress to side streets and driveways becomes too difficult
  - Four lanes of travel are condensed into two lanes
  - Drivers will be forced to accept inadequate gaps in traffic creating unsafe conditions

Traffic Performance at Dorset St./Williston Rd.

Lane designation changes at Dorset St/Williston Rd create the following conditions:

- Overall LOS is improved (E to D)
- Delays decrease for Dorset Street traffic (LT/Thrus/RT)
- Delays and queues decrease for Williston Rd westbound thru and right turn traffic
- Delays and queues increase for Williston Rd westbound left turn traffic

Further study is needed to determine how the lane designation changes at Williston Rd/Dorset St intersection impact the rest of the corridor

- Geometric constraints
- Signal timing
- Coordination with VTrans

Next Steps

Steering Committee Meeting #1: Kick-off (March)

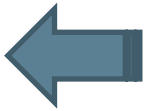
Data Collection (March-April)

Schematic Plans, Traffic Analysis 2011 and Future Conditions 2021

Steering Committee Meeting #2: Present Results of Traffic and Safety Analysis (June)

Additional analyses for Eastern Corridor Segment

Steering Committee Meeting #3 (September)

City Council Meeting (November 7) 

Draft Report & Public Comment Period

Final Report (February)

Phase II?

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Thank You

Comments? Questions?