

*Old Colony Planning Council (OCPC)*  
*Old Colony Metropolitan Planning Organization (MPO)*

# Hanover Route 139 Corridor Study

Corridor Study DRAFT Findings and  
Recommendations

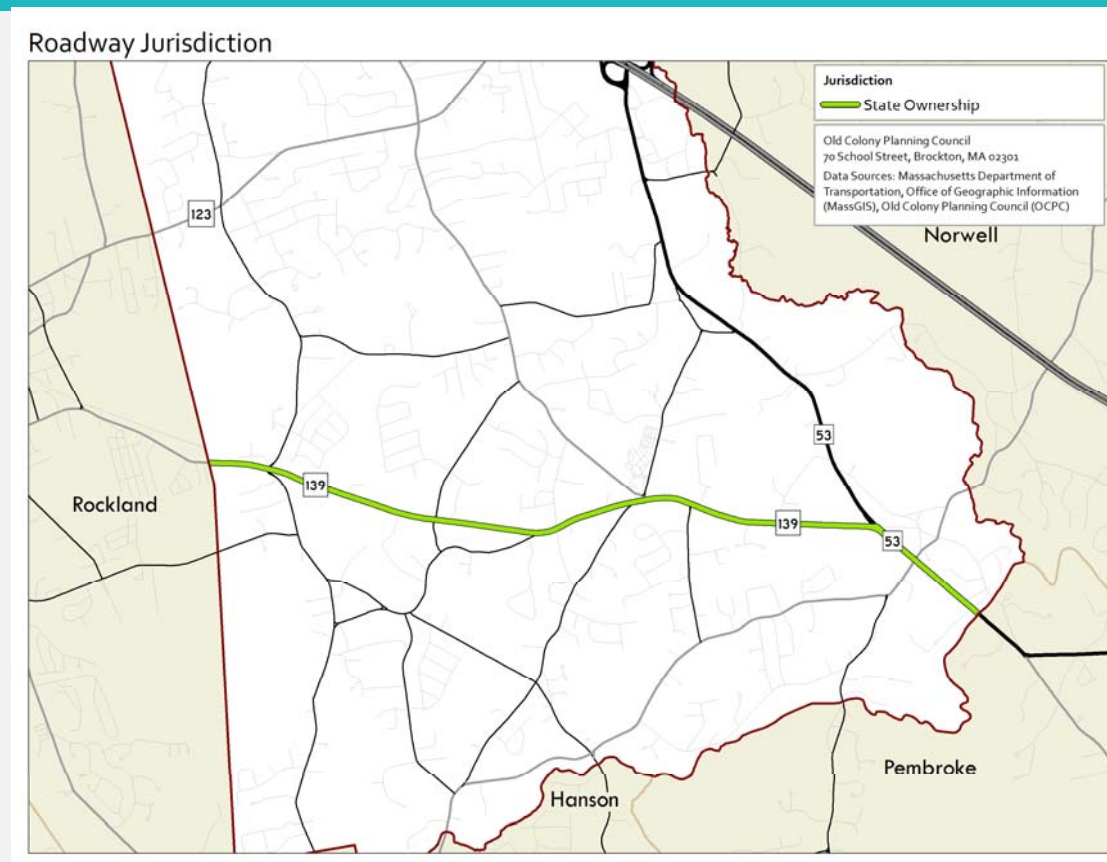
September 2020



# Hanover Route 139 Corridor Study – Project Scope

- Geographic Scope: Route 139 (Hanover Street and Rockland Street), from Rockland Town Line to Washington Street (Route 53)
- Timeline: October 2019 through September 2020 with funding from Old Colony MPO FFY 2020 Unified Planning Work Program
- Provide comprehensive assessment of existing conditions (traffic volumes and speed, congestion levels (level of service), pavement conditions, lighting, signage, sidewalks and other pedestrian infrastructure, bicycle capacity, and crash history and crash rates)
- Forecast future conditions based on both baseline growth and anticipated development
- Identify deficiencies, and work with stakeholders (Town and MassDOT) on improvement opportunities
- Prepare Final Report detailing findings from Study and recommendations

# Hanover Route 139 Corridor Study – Project Scope



# Hanover Route 139 Corridor Study – Completed to Date

- Traffic data collection (volumes, speeds, and vehicle classification) from Route 139 and side streets, and peak hour turning movement counts at intersections
- Existing and projected morning and afternoon Level of Service (measure of delay) analysis at intersections
- Calculation of existing crash rates (crashes per million entering vehicles), Crash Data 2015 through 2019
- Identification and scenario testing (conceptual) of potential improvements
- Development of Draft Report
- Updates to Old Colony Joint Transportation Committee (JTC), Old Colony Metropolitan Planning Organization (MPO), and Hanover Traffic Safety Committee, and Hanover Residents (Cable Access TV)

# Hanover Route 139 Corridor Study – Existing Mainline Traffic Conditions

Location	<u>Average Daily Volume</u>			Speed Limit	<u>85th Percentile Speed</u>			<u>% Heavy Vehicles</u>		
	EB	WB	Total		EB	WB	Combined	EB	WB	Combined
Route 139, at Rockland Town Line	5,424	5,310	10,734	35 MPH	44 MPH	45 MPH	44 MPH	12.6%	13.4%	13.0%
Route 139, west of Plain Street	5,350	5,301	10,651	45 MPH	43 MPH	42 MPH	42 MPH	7.1%	6.2%	6.7%
Route 139, east of Plain Street	4,887	4,850	9,737	45 MPH	47 MPH	48 MPH	47 MPH	16.7%	14.4%	15.0%
Route 139, west of Grove Street	4,904	4,807	9,711	40 MPH	45 MPH	44 MPH	44 MPH	13.7%	5.4%	9.6%
Route 139, east of Grove Street	6,433	6,168	12,601	40 MPH	43 MPH	44 MPH	43 MPH	6.1%	5.6%	5.9%
Route 139, west of Main Street	8,433	8,429	16,862	40 MPH	38 MPH	40 MPH	39 MPH	12.2%	12.3%	12.2%
Route 139, east of Main Street	7,245	7,825	15,070	40 MPH	43 MPH	42 MPH	42 MPH	10.5%	10.2%	10.4%
Route 139, east of Hanover Street	6,745	6,471	13,216	45 MPH	44 MPH	44 MPH	44 MPH	5.6%	7.0%	6.8%

# Existing Conditions and Projected Traffic Volumes and Congestion (2% Annual Growth)

Intersection	Existing 2020 Conditions				Estimated 2025 No Build Conditions		
	Average Daily Entering Volume	AM Peak LOS	PM Peak LOS	Crash Rate (Crashes/MEV)	Average Daily Entering Volume	AM Peak LOS	PM Peak LOS
Route 139 at Pleasant Street and Circuit Street	23,167	F	F	0.73	25,484	F	F
Route 139 at Plain Street	12,078	F	F	0.73	13,286	F	F
Route 139 at Circuit Street	13,756	C	C	0.08	15,132	C	C
Route 139 at Grove Street	14,967	F	F	0.77	16,464	F	F
Route 139 at Center Street	18,722	F	D	0.06	20,594	F	F
Route 139 at Center Street / Town Hall Drive	18,611	F	F	0.24	20,472	F	F
Route 139 at Main Street	22,356	F	F	0.44	24,592	F	F
Route 139 at Spring Street	16,933	F	F	0.16	18,626	F	F
Route 139 at Hanover Street	16,133	B	C	0.27	17,746	C	D
Route 53 at Route 139	32,789	D	E	0.42	36,068	D	E

Crash rate based on MassDOT Crash Data from January 1, 2015 through January 31, 2019. Regional MassDOT District 5 average crash rates are 0.75 for signalized intersections and 0.57 for un-signalized intersections. For un-signalized intersections, LOS is given for critical (heavier volume) approach

# Potential Improvements to Hanover Route 139 Corridor



# Hanover Street at Plain Street

- Deficiencies Identified
  - Poor Level of Service
  - High Crash Rate
  - High Rate of Crash Severity
- Potential Mitigation
  - Short Term / Lower Cost
    - Close off southern leg of Plain Street connecting Hanover Street to Circuit Street (0.2 miles)
  - Longer Term / Higher Costs
    - Reconstruct Intersection with Roundabout
    - Reconstruct Intersection with Traffic Signals

# Hanover Street at Grove Street

- Deficiencies Identified
  - Poor Level of Service
  - High Crash Rate
- Potential Mitigation
  - Longer Term / Higher Cost
    - Reconstruct Intersection with Roundabout
    - Reconstruct Intersection with Traffic Signals

# Conceptual Level of Service with New Traffic Controls

## Route 139 at Plain Street; Route 139 at Grove Street

Intersection	Estimated 2025 No Build Conditions			Roundabout Build		Traffic Signal Build	
	Average Daily Entering Volume	AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS
Route 139 at Plain Street	13,286	F	F	A	A	B	B
For un-signalized intersections, LOS is given for critical (heavier volume) approach							

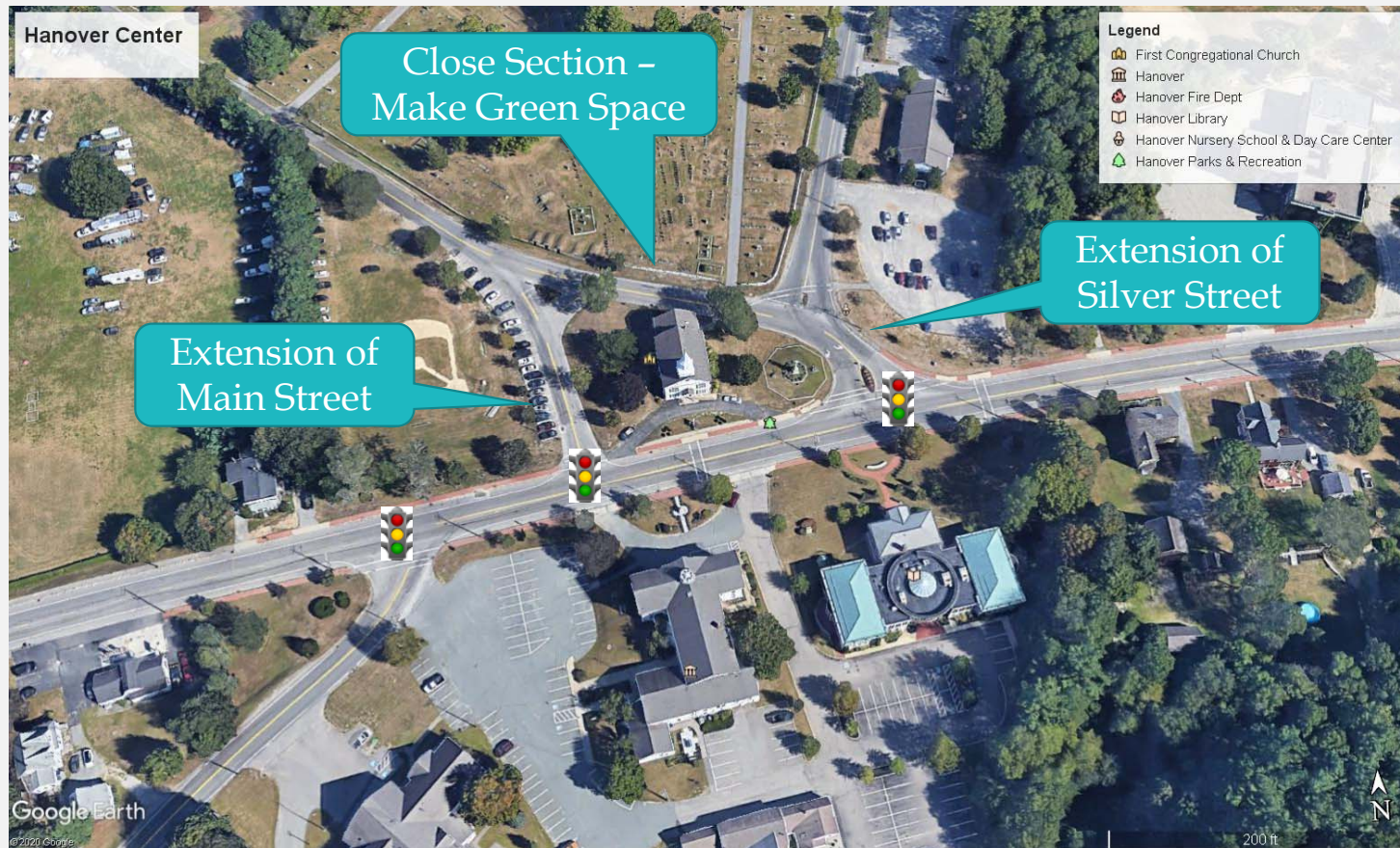
Intersection	Estimated 2025 No Build Conditions			Roundabout Build		Traffic Signal Build	
	Average Daily Entering Volume	AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS
Route 139 at Grove Street	16,464	F	F	A	C	B	B

*For un-signalized intersections, LOS is given for critical (heavier volume) approach*

# Hanover Street at Center Street / Main Street / Silver Street (Hanover Center)

- Deficiencies Identified
  - Complicated Layout – High Volume of Turning Movements in Concentrated Area
  - High Levels of Congestion During Peak Demand
  - Poor Levels of Service
- Potential Mitigation
  - Longer Term / Higher Cost
    - Signalization of Route 139 at Center Street and Route 139 at Main Street
  - Redesign Silver Street / Main Street / Center Street layout
    - Remove piece of Main Street between Silver Street and Center Street
    - Extend Silver Street to Route 139
    - Extend Main Street to Route 139 over destining Center Street

# Potential Redesign for Hanover Center



# Analysis of Conceptual Redesign for Hanover Center

Intersection	Estimated 2025 No Build Conditions			Traffic Signal Build	
	Average Daily Entering Volume	AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS
Route 139 at Center Street	20,594	F	F	C	A
Route 139 at Center Street / Town Hall	20,472	F	F	A	A
Route 139 at Main Street	24,592	F	F	C	B
<i>For un-signalized intersections, LOS is given for critical (heavier volume) approach</i>					

# Bicycle and Pedestrian Improvements

- Enhanced connections to Colby Phillips Recreational Area and athletic fields and sports courts at Hanover Playground
  - Improves Safety
  - Improves Community Health
  - Reduces reliance on automobile
    - Shared-use side path where sufficient right-of-way is present (western end of corridor)
    - Sharrows in other locations
    - Pedestrian crossing controls at Hanover Street at Pleasant Street and Circuit Street
    - Enhanced pedestrian crossing safety in Hanover Center
      - HAWK signals?
      - Rectangular Rapid Flashing Beacons

# Route 139 Corridor Study – Next Steps

- Release Draft Report for 2 week public review period
  - Incorporate public feedback into report, and finalize Report
- Continued coordination between OCPC, Town of Hanover, and MassDOT on conducting Road Safety Audits
  - Route 139 at Plain Street
  - Route 139 at Grove Street
- Continue to work with Town of Hanover officials on prioritizing long term capital improvements
  - Hanover Town Center
  - Route 139 at Plain Street / Circuit Street and Circuit Street Loop
  - Route 139 at Route 53
  - Other
- Continued coordination between OCPC, Town of Hanover, and MassDOT for initiation, planning, and programming of any potential capital improvements

# Questions/Thoughts/Suggestions?

Bill McNulty – Project Manager  
Principal Transportation Planner

[wmcnulty@ocpcrpa.org](mailto:wmcnulty@ocpcrpa.org)



Thank  
you!