DESKTOP ASSESSMENTS

PACTS High Crash Locations Study
Desktop Assessments

PREPARED FOR

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PREPARED BY

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July 7, 2020
Assessment
This assessment considers the intersection of May Street and Alfred Street (Route 111) in Biddeford, as well as the roadway segment on Alfred Street leading up to it.

A. Intersection of Alfred Street and May Street: This is a three-way intersection where May Street tees into Alfred Street with a stop sign on May Street. Traffic on Alfred Street does not stop. There are two painted crosswalks, one across May Street and the other across Alfred Street on the east side of the intersection.

B. Roadway Segment on Alfred Street: On Alfred Street there are four driveways providing access to various businesses on both sides of the street.

Safety Issues
A. Intersection of Alfred Street and May Street: The majority of crashes involved vehicles traveling east on Alfred Street: there were four rear-end crashes and one angle crash involving a vehicle turning left onto May Street. There were five crashes involving vehicles on May Street. On May Street there was one rear end, one sideswipe, and one bicycle crash in which the bicyclist was crossing in the crosswalk at the stop sign. The two angle crashes on May Street involved one vehicle turning left and one vehicle turning right onto Alfred Street.

While there were no crashes involving the crosswalk on Alfred Street, pedestrians and bicyclists crossing Alfred Street have to cross a considerable distance and four lanes of traffic. Drivers crossing in and out of May Street...
may not notice crossing pedestrians because they are trying to find their own gap in traffic.

**B. Roadway Segment on Alfred Street:**
Approximately 15 of 28 crashes were related to vehicles trying to turn into or out of the various driveways along this stretch of road. Most of those resulted in angle crashes. Five of these 15 involved vehicles turning left out of the unsignalized Five Points Shopping Center and six were related to vehicles turning left from Alfred Street into Advanced Auto or Park One Eleven. There were nine rear-end crashes, seven of which occurred in the westbound direction. There were eight sideswipe crashes, evenly split by direction. There was one crash involving a pedestrian crossing Alfred Street.

![Aerial view of (B) Alfred Street in the vicinity of the Five Points Shopping Center, from Google Earth](image)

**Recommendations**

**A. Intersection of Alfred Street and May Street:**
- **Alfred Street crosswalk:**
  - Install advance pedestrian crossing warning signs.
  - Consider crosswalk enhancements such as an advance Yield Here To Pedestrians sign and pavement markings, a median refuge, rectangular rapid flashing beacons, or other measures.
- **On Alfred Street:**
  - Install advance intersection warning signs.
  - Install lane designation pavement markings.
  - In the eastbound direction, consider lane reassignment so that the left lane becomes a left-turn only lane approaching the intersection and a left-turn receiving lane (for vehicles on May Street) just past the intersection.
  - In the westbound direction, if adequate width is available, consider marking a right turn only lane or using pavement markings to narrow the roadway and clearly define one through/right-turn lane. Just past the intersection, the right lane could function as a receiving lane for right-turning vehicles off of May Street.
  - Consider controlling all three legs of the intersection, possibly through signalization.

**B. Roadway Segment on Alfred Street:**
- **On Alfred Street:**
  - In the westbound direction, consider lane reassignment so that the right lane becomes a right-turn only lane approaching the intersection and a right-turn receiving lane (for vehicles exiting the stop controlled Five Points Shopping Center driveway) just past the intersection.
  - On the stop controlled Five Points Shopping Center driveway, expand the raised concrete median so that it is right-in, right-out, forcing left-turning vehicles to use the signalized entrance further to the west.
Crash Data
The crash data used for this assessment was based on 2015-2017 crash data. The following table summarizes the crash data for both locations and also shows additional crashes from 2018. The crash diagrams for both locations are shown on the following pages.

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</thead>
<tbody>
<tr>
<td>Alfred Street and May Street</td>
<td>56883</td>
<td>2, 6, 3, 0</td>
<td>11</td>
<td>18.2%</td>
<td>1.28</td>
<td>1/4</td>
<td>25-35 mph</td>
<td>5,000-22,000</td>
</tr>
<tr>
<td>Alfred Street</td>
<td>56883-56882</td>
<td>9, 8, 11, 7</td>
<td>35</td>
<td>39.8%</td>
<td>1.22</td>
<td>1</td>
<td>35 mph</td>
<td>22,500</td>
</tr>
</tbody>
</table>

*See the abbreviations and definitions section at the beginning of this report for more information about each data point.

The legend below will aid in understanding the crash diagrams that follow.

- **LEGEND**
  - MOVING VEHICLE
  - VEHICLE BACKING
  - OVERTURNED
  - OUT OF CONTROL
  - REAR END COLLISION
  - SIDESWİPE COLLISION
  - HEAD ON COLLISION
  - ANGLE COLLISION
  - FIXED OBJECT
  - PARKED VEHICLE
  - FATAL
  - INJURY TYPE
  - PATH OF: P - PEDESTRIAN  B - BICYCLE  A - ANIMAL  S - SLED
  - PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW
  - WEATHER: C - CLEAR, P - FOG, R - RAIN, S - SLEET, S - SNOW, CL - CLOUDY
  - TIME: A - AM, PPM
BIDDEFORD: Intersection of (Route 111) Alfred Street and May Street

A. Intersection of Alfred Street and May Street
**BIDDEFORD:** Intersection of (Route 111) Alfred Street and May Street

**B. Roadway segment on Alfred Street**

[Diagram of Alfred Street and surrounding roads, showing crash points and accident types.]

- **56883-56882**
- **Link:** 56883-56882
- **Element:** 3944233
- **Study Period:** 2015-2017
- **# of Crashes:** 28 / **CRF:** 1.22

Prepared by Office of Safety (MP) 4/29/19
**Biddeford: Intersection of Route 1 and South Street**

Overview map of HCLs reviewed in this assessment.

Street view of Route 1 and South Street traveling North on Route 1, from Google Maps

**Assessment**
The intersection of Route 1 and South Street has two offset, angled intersection approaches. There are three marked crosswalks, one on each South Street approach and one crossing Route 1, through the center of the intersection.

**Recent or Pending Projects**
No major MaineDOT recent or pending projects.

**Municipal Input**
Response received with no comments provided for this location.

**Safety Issues**
Many of the crashes at this intersection (16 of 25) were rear-end collisions. The majority of rear-end crashes occurred on Route 1, with seven in the southbound direction and five in the northbound direction. On South Street, four rear-end crashes occurred in the westbound direction and one in the eastbound direction. While there are two lanes (through and left lanes) and protected left-turn signal phasing in the northbound direction on Route 1 (through and left lanes), there is only one lane in the southbound direction with permissive left-turns signal phasing.

There were six angle crashes, four of which involved northbound drivers on Route 1. One angle crash involved a driver running the red light eastbound on South Street.

Access management is another concern. The numerous driveway entrances can visually distract drivers. Reducing and better defining the access points can help to limit unexpected entries into and exits from the roadway.

**Recommendations**
All approaches:
- Better define driveways, narrow entries and exits, and combine driveways where possible.
**BIDDEFORD: Intersection of Route 1 and South Street**

**Route 1:**
- Restripe approach to make a narrower travel lane width. This may prevent cars from overtaking other vehicles waiting to turn left and also reduce vehicle speeds. Or, if space allows, provide a dedicated left-turn lane with protected phasing.
- Visually define the pedestrian space through sidewalk buffers. This will visually narrow and better define the roadway, along with providing a more appealing space for pedestrians.
- Evaluate yellow clearance interval and retime if necessary.
- Install high friction surface treatment to reduce rear-end crashes.

**South Street:**
- Restrict right-turns on red.
- Investigate alternative geometric configurations to reduce/remove the skew, including potentially using the open lot on the southeast corner of the intersection.
**BIDDEFORD**: Intersection of Route 1 and South Street

Aerial view of Route 1 and South Street, from Google Maps
BIDDEFORD: Intersection of Route 1 and South Street

Crash Data
The crash data used for this assessment was based on 2015-2017 crash data. The following table summarizes the crash data for this location and also shows additional crashes from 2018. The crash diagram for this location is shown on the following page.

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<tbody>
<tr>
<td>Route 1 and South Street</td>
<td>56637</td>
<td>6 7 12 6</td>
<td>31</td>
<td>52.0%</td>
<td>1.13</td>
<td>1/4</td>
<td>25 mph</td>
<td>4,000-13,000</td>
</tr>
</tbody>
</table>

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The legend below will aid in understanding the crash diagrams that follow.

---

**LEGEND**

- MOVING VEHICLE
- VEHICLE BACKING
- OVERTURNED
- OUT OF CONTROL
- REAR END COLLISION
- SIDESWIPED COLLISION
- HEAD ON COLLISION
- ANGLE COLLISION
- FIXED OBJECT
- PARKED VEHICLE
- FATAL
- INJURY TYPE

---

PATH OF: P PEDESTRIAN B BICYCLE A ANIMAL S SLED

PAVEMENT: D DRY, I ICY, W WET, S SNOW
WEATHER: C CLEAR, F FOG, R RAIN, S SLEET, S SNOW, C CLOUDY
TIME: A AM, P PM

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PACTS High Crash Location Desktop Assessments
BIDDEFORD: Intersection of Route 1 and South Street

Intersection of Route 1 and South Street
**SACO: Intersections of Route 1 and Route 5, Exit 2B Off-Ramp**

**Overview map of HCLs reviewed in this assessment.**

**Assessment**
This assessment considers two major intersections along the Route 1 corridor in Saco that provide connections from I-195.

**A. Intersection of Route 1 and Route 5:** There are three different roadways that intersect at this signalized intersection. Route 1 extends through the intersection while both Route 5 and the Route 195 Exit 2A Off-Ramp end at the intersection opposite each other. Vehicular movements are restricted on both the Route 5 and Route 195 Off-Ramp approaches. On Route 5, vehicles must turn left or right at the intersection, and on the Route 195 Off-Ramp, traffic can move straight through or turn right at the intersection. Parallel to Route 1 there is a shared use path on the west side of the road that crosses the Off-Ramp.

**B. Intersection of Route 1 and the Exit 2B Off-Ramp:** At the uncontrolled Route 195 Exit 2B Off-Ramp intersection with Route 1, traffic from the ramp merges onto that of northbound Route 1.

**Recent or Pending Projects**
- Saco and Scarborough Route 1 Corridor Complete Streets Plan, Draft Report dated June 4, 2019, includes recommendations for these locations.
- Traffic signal upgrade/replacement project along Route 1 (PACTS sponsored) included intersection A.
- 1¼” overlay on Route 5 beginning at Route 1 and extending 0.94 miles to the east scheduled for 2020.

**Municipal Input**
- Not one of Saco’s highest critical rate factors, but certainly an intersection along a priority corridor.
- This intersection is being looked at as a specific focus area in the Route 1 Complete Streets study being done by TY Lin through PACTS for Saco and Scarborough.
SACO: Intersections of Route 1 and Route 5, Exit 2B Off-Ramp

- Discussions surrounding eliminating the 195 Ramp eastbound through movement to Ocean Park Road. Access to Route 5, Ocean Park Road, would need to come from the end of Route 195 with some radius improvements to that turning movement. This would reduce movements and speeds in the Route 1 intersection, and greatly improve the Eastern Trail crossing of that ramp.
- Improvement to overall functionality and flow of that intersection may not improve much due to its proximity to the Hannaford intersection.

Safety Issues

A. Intersection of Route 1 and Route 5:
There were 54 crashes at this intersection. The majority of the crashes were rear-end collisions: 11 southbound on Route 1, nine each on the I-195 Off-Ramp and Route 5, and five on northbound route 1. Angle crashes were the second most prevalent crash type. Thirteen of the angle crashes involved vehicles traveling straight from the Route 195 Off-Ramp and left-turning vehicles from Route 5. There were three angle crashes that involved vehicles running the red light. All three involved northbound drivers on Route 1, two of the crashes were with left-turning vehicles on Route 5 and one with a vehicle traveling straight from the Route 195 approach.

B. Intersection of Route 1 and Exit 2B Off-Ramp:
At the intersection of the Exit 2B Off-Ramp and Route 1, all of the 13 crashes were rear-end collisions on the off-ramp.

Recommendations

All approaches:
- Install advance detection.

Route 5 westbound:
- Modify the signal phasing from permissive to protected left turns.
- Apply retroreflective border to signal backplates to enhance conspicuity.

Route 195 Exit 2A Off-Ramp:
- Restrict right-turns on red as drivers are not expecting to have to stop. They are also looking left for a gap in traffic, and may not see shared use path users approaching from the right. The ability to turn right on red, along with the geometric configuration, creates an inherent conflict with pedestrians and bicyclists who have the walk signal on the shared use path crossing.

Route 195 Exit 2B Off-Ramp:
- Consider removing the right slip lane and instead move the right turn lane immediately adjacent to the through lane. This would remove the expectancy of drivers of a free-flow right turn and would require them to slow down before turning right onto Route 1. This change would also help them to better see approaching bicyclists and pedestrians on the shared use path.
- Apply retroreflective border to signal backplates to enhance conspicuity.

Route 195 Exit 2B Off-Ramp:
- Investigate geometric changes to the ramp, such as tying into Route 5, and using the signalized intersection to enter Route 1, rather than
**SACO**: Intersections of Route 1 and Route 5, Exit 2B Off-Ramp

the merge. Depending on the results of a traffic and geometric analysis, this could also lead to changes on the Exit 2A Off-Ramp.

- Consider adding a merge sign on the ramp.
- Consider adding pedestrian crossing ahead sign on the ramp and pedestrian crossing signs at the crosswalk on the ramp.

**Route 1**:

- Evaluate red and yellow clearance interval and retime if necessary.
- Consider high friction surface treatment on intersection approaches to enhance driver’s ability to stop.
- Apply retroreflective border to signal backplates to enhance conspicuity.
**SACO: Intersections of Route 1 and Route 5, Exit 2B Off-Ramp**

**Crash Data**

The crash data used for this assessment was based on 2015-2017 crash data. The following table summarizes the crash data for all three locations and also shows additional crashes from 2018. The crash diagrams for all three locations are shown on the following pages.

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</tr>
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<tbody>
<tr>
<td>Route 1 and Route 5</td>
<td>56667</td>
<td>18 12 24 18</td>
<td>72</td>
<td>31.5%</td>
<td>1.42</td>
<td>1/4</td>
<td>30-35 mph</td>
<td>1,000-14,000</td>
</tr>
<tr>
<td>Route 1 and Exit 2B Off-Ramp</td>
<td>57538</td>
<td>5 0 8 8</td>
<td>21</td>
<td>30.8%</td>
<td>2.99</td>
<td>1</td>
<td>35 mph</td>
<td>2,000-13,000</td>
</tr>
</tbody>
</table>

*See the abbreviations and definitions section at the beginning of this report for more information about each data point.*

The legend below will aid in understanding the crash diagrams that follow.

---

**LEGEND**

- **MOVING VEHICLE**
- **VEHICLE BACKING**
- **OVERTURNED**
- **OUT OF CONTROL**
- **REAR END COLLISION**
- **SIDESWIPES COLLISION**
- **HEAD ON COLLISION**
- **ANGLE COLLISION**
- **FIXED OBJECT**
- **PARKED VEHICLE**
- **FATAL**
- **INJURY TYPE**

---

**PATH OF:**

- **F** Pedestrian
- **B** Bicycle
- **A** Animal
- **S** Sled

**PAVEMENT:**

- D - Dry
- I - Icy
- W - Wet
- S - Snow

**WEATHER:**

- C - Clear
- F - Fog
- R - Rain
- S - Sleet
- S - Snow
- C - Cloudy

**TIME:**

- A - AM
- P - PM
A. Intersection of Route 1 and Route 5
SACO: Intersections of Route 1 and Route 5, Exit 2B Off-Ramp

B. Intersection of Route 1 and Exit 2B Off-Ramp

Saco
Node #57538
Study period 2015-2017
* of Crashes: 13 / CRF 2.99

Prepared by Office of Safety (JP 1/29/18)

Rte. 1/Main St.
SACO: Intersection of Route 1 and North Street/Beach Street

Overview map of HCLs reviewed in this assessment.

The immediate area, each forming one corner of a triangle. In the center of the triangle is Eastman Park.

Recent or Pending Projects
- Saco and Scarborough Route 1 Corridor Complete Streets Plan, draft report dated June 4, 2019.
- Traffic signal upgrade/replacement project along Route 1 (PACTS sponsored) included this intersection.
- Mill and fill on Route 1 completed in 2018, beginning at the Biddeford town line and extending north to North Street/Beach Street (PACTS sponsored).

Municipal Input
Noted concerns by the city include the following:
- This location is part of two ongoing initiatives.
  - It was looked at as the outside limits of the Route 112 corridor study done by TY Lin for MaineDOT, Saco, and the MTA.
  - It is part of an ongoing signal improvement project being administered by MaineDOT that will coordinate several signals along the Route 1 corridor in Saco and Biddeford. The signal locations and upgrades have yet to occur at this intersection.
- All pedestrian movements are signalized at this complicated intersection. There is limited right of way, and limited room between existing homes for any large-scale improvements.

Safety Issues
There were 28 crashes within this intersection. The majority of the crashes (13 of 28) were angle crashes. Four of those angle crashes involved left-turning southbound vehicles on North Street, and vehicles traveling straight on northbound Beach Street. Of the 13 angle crashes, nine involved vehicles running a red light. These red-light running crashes impacted drivers from each direction of the intersection.
Also prevalent at this location were rear-end crashes. There were eight within the intersection and almost all were on the eastbound leg of Route 1. The lane assignment for the eastbound approach of Route 1, with a shared left/through and through/right, in combination with the permissive left-turn signal phasing, may be contributing to the rear-end crashes as drivers are expecting to be able to move forward rather than stop for a turning vehicle. There were also three crashes involving trucks hitting a pole on the northwest corner, as they tried to turn right onto Route 1 from North Street.

Recommendations

- All approaches have a permissive left-turn phase. Consider a capacity analysis to change to protected-only left-turn phases.
- Ensure that all signal backplates have retroreflective borders.
- Consider alternative geometric configurations within the three intersections surrounding the park.

Route 1 eastbound:
- Trim trees so that the signal is fully visible to drivers.
- Review signal timing for potential lane assignment changes, such as a left-turn only lane and a through-right lane.
- Install high friction surface treatment to reduce rear-end crashes.
- Install advance detection.

North Street:
- Investigate ability to increase the northwestern corner radius.
SACO: Intersection of Route 1 and North Street/Beach Street

Aerial view of Route 1 and North Street/Beach Street, from Google Maps
SACO: Intersection of Route 1 and North Street/Beach Street

Crash Data
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<tbody>
<tr>
<td>Route 1 and North St/Beach St</td>
<td>56658</td>
<td>11 8 9 5</td>
<td>33</td>
<td>17.9%</td>
<td>1.19</td>
<td>1/2</td>
<td>25-35 mph</td>
<td>6,000-10,000</td>
</tr>
</tbody>
</table>

*See the abbreviations and definitions section at the beginning of this report for more information about each data point.

The legend below will aid in understanding the crash diagrams that follow.

**Legend**

- MOVING VEHICLE
- REAR END COLLISION
- VEHECILE BACKING
- SIDESW IPE COLLISION
- OVERTURNED
- HEAD ON COLLISION
- OUT OF CONTROL
- ANGLE COLLISION
- FIXED OBJECT
- PARKED VEHICLE
- FATAL
- INJURY TYPE

- PATH OF: F PED ESTRIAN B BICYCLE A ANIMAL S SLED

- PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

- WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SHOW, CL - CLOUDY

- TIME: A - AM, P - PM
SACO: Intersection of Route 1 and North Street/Beach Street

Intersection of Route 1 and North Street/Beach Street

[Diagram of intersection showing traffic signals and minor roads]

Saco
Node: 56658
Study Period: 2015-2017
No. of Crashes: 28 / CRF 119

Prepared by Office of Safety 5/28/18

= Traffic signal
**SCARBOROUGH: Intersection of Mussey Road and Payne Road**

**Assessment**

The intersection of Payne Road and Mussey Road is a three-leg intersection. Mussey Road has an angled approach to the intersection and stop sign where it meets Payne Road. Traffic does not stop on Payne Road.

**Recent or Pending Projects**

No major MaineDOT recent or pending projects.

**Municipal Input**

Noted concerns by the city include the following:

- The primary issue is the geometry of the intersection. Mussey Road intersects Payne Road at an acute angle and sight distance appears to be limited.
- This section of Mussey Road has a Primary School located along it and therefore has higher traffic volumes during commuting hours than expected for a local side street.
- The Town believes that a more traditional intersection design is needed.

Street view of Payne Road and Mussey Road traveling north on Route 1, from Google Maps

Street view of Payne Road and Mussey Road traveling west on Mussey Road, from Google Maps
SCARBOROUGH: Intersection of Mussey Road and Payne Road

Safety Issues
The majority of the crashes (6 out of 10) were angle crashes, most of which involved vehicles turning left out of Mussey Road and those traveling straight on southbound Payne Road. Drivers turning left out of Mussey Road may have trouble judging gaps in traffic on Payne Road due to the intersection skew, and corresponding limited sight distance, as well as other potential factors, such as speed.

Recommendations
- Install dotted edge line across the Mussey Road approach to help drivers to pull forward as much as possible, without encroaching into Payne Road travel lane.
- Install advance intersection warning signs on Payne Road.
- Install an Intersection Conflict Warning System (ICWS) on Payne Road to warn drivers of vehicles entering from Mussey Road entering vehicle.
- The approach of Mussey Road is wide, and right-turning vehicles may bypass waiting, left-turning vehicles. Both vehicles could restrict the sight distance of the other driver. To restrict two vehicles from pulling up to the intersection, narrow the lane through pavement markings or physical measures.
- Investigate geometric changes to remove the intersection skew, and allowing Mussey Road to connect at a right angle.
- Consider enhanced intersection control to provide gaps for vehicles on Mussey Road. Potential alternatives could include a signalized intersection or a roundabout. It should be noted that, given the uninterrupted stretch of roadway to the south, drivers may not be expecting to stop and so a traffic signal could potenially lead to an increase in crashes.
**SCARBOROUGH: Intersection of Mussey Road and Payne Road**

**Crash Data**

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</thead>
<tbody>
<tr>
<td>Mussey Rd and Payne Rd</td>
<td>12552</td>
<td>4 3 3 2</td>
<td>12</td>
<td>20.0%</td>
<td>1.52</td>
<td>2/6</td>
<td>25-45 mph</td>
<td>4,500-16,500</td>
</tr>
</tbody>
</table>

*See the abbreviations and definitions section at the beginning of this report for more information about each data point.

The legend below will aid in understanding the crash diagrams that follow.

**Legend**

- **Moving Vehicle**
- **Rear End Collision**
- **Sidewipe Collision**
- **Head On Collision**
- **Angle Collision**
- **Fixed Object**
- **Parked Vehicle**
- **Fatal**
- **Injury Type**
- **Path of**
- **Pedestrian**
- **Bicycle**
- **Animal**
- **Sled**

**Pavement:**
- D - Dry, I - Icy, W - Wet, S - Snow

**Weather:**
- C - Clear, F - Fog, R - Rain, S - Sleet, S - Snow, C - Cloudy

**Time:**
- A - AM, P - PM
SCARBOROUGH: Intersection of Mussey Road and Payne Road

Intersection of Mussey Road and Payne Road

Scarborough
Node * 12552
Study period 2015-2017
* of Crashes: 10 / CRF: 1.52
Prepared by Office Of Safety
(LM 2-12-18)

Payne Road

Mussey Road

PACTS High Crash Location Desktop Assessments
**Assessment**

This site includes an intersection and a roadway segment.

_A. Intersection of Payne Road and Gorham Road:_ This is a four-leg, signalized intersection. The Gorham Road intersection leg, on the west side, is slightly skewed relative to the other three legs, which are perpendicular to each other.

_B. Roadway Segment on Gorham Road:_ This roadway segment is the stretch of road to the east of the intersection. In the westbound direction, there is a left-turn lane, a thru lane, and a shared thru/right-turn lane. There is one lane in the eastbound direction. There is a driveway with a concrete median (A.K.A. pork chop island) to Cumberland Farms on the north side of this segment.

**Municipal Input**

Noted concerns by the city include the following:

- This intersection is very large in overall width and length, and includes increased turning radii for truck traffic through the intersection.
- There are multiple turning lanes from many of the approaches, which may contribute to motorist’s confusion.
- There have been reports of the eastbound Gorham Road (Rt 114) approach significantly backing up during the morning commuting hours even with dual left turning lanes onto Payne Road.
- The lane designations, and travel patterns for those commuting through the intersection should be reexamined.

**Recent or Pending Projects**

Mill and fill Beginning at Mussey Road and extending north 0.33 of a mile to Gorham Road (PACTS Sponsored) scheduled for 2020.
SCARBOROUGH: Intersection of Payne Road and Route 114 (Gorham Road)

Street view of intersection at Payne Road and Gorham Road traveling South on Payne Road, from Google Maps

Aerial view of Payne Road and Gorham Road, from Google Maps

Safety Issues

A. Intersection of Payne Road and Gorham Road
There were 48 crashes at the intersection between 2015-2017, most of which were rear end or angle crashes. The majority of the crashes (28 of the 48) involved vehicles traveling eastbound on Gorham Road. Eight of the 28 involved a vehicle running a red light. There were two additional red-light-running crashes involving vehicles on other legs of the intersection. Additionally, quite a few vehicles are running the red light at this intersection. In particular this is a problem with vehicles traveling South on Payne Road.

The most prevalent crash type on both southbound Payne Road and westbound Gorham Road was rear end.

B. Roadway Segment on Gorham Road
This segment has only experienced two crashes between 2015-2017 and is not a HCL. There are a number of driveways so safety may increase through access management.

Recommendations

- Investigate speed of vehicles on eastbound Gorham Road, approaching the Payne Road intersection.
- Observe conditions to note if aggressive driving is prevalent. If so, consider conducting aggressive driving enforcement and providing educational messaging.
- Consider applying high friction surface treatments on intersection approaches, particularly those in the eastbound, westbound, and southbound directions.
- Review signal cycle length and phasing, including red and yellow change intervals. Longer cycle lengths may decrease the risk of red-light-running crashes. Also, there are many signals within a short distance on the north leg of Payne Road. Consider evaluating signal timing and retiming/coordination if necessary.
- Install retroreflective borders on signal backplates and consider increasing the size of the signal heads, if possible.
- Add dotted pavement markings between the dual left-turn lanes for eastbound vehicles on Gorham Road.
- Install advance detection.
SCARBOROUGH: Intersection of Payne Road and Route 114 (Gorham Road)

Crash Data
The crash data used for this assessment was based on 2015-2017 crash data. The following table summarizes the crash data for both locations and also shows additional crashes from 2018. The crash diagrams for both locations are shown on the following pages.

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Payne Rd and Gorham Rd</td>
<td>15611</td>
<td>14 17 17 14</td>
<td>62</td>
<td>43.8%</td>
<td>1.45</td>
<td>2</td>
<td>35 mph</td>
<td>5,000-8,500</td>
</tr>
<tr>
<td>Gorham Rd</td>
<td>15611-66237</td>
<td>1 1 - -</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>35 mph</td>
<td>11,000</td>
</tr>
</tbody>
</table>

*See the abbreviations and definitions section at the beginning of this report for more information about each data point.

The legend below will aid in understanding the crash diagrams that follow.

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**LEGEND**

- MOVING VEHICLE
- VEHICLE BACKING
- OVERTURNED
- OUT OF CONTROL
- REAR END COLLISION
- SIDESWIPED COLLISION
- HEAD ON COLLISION
- ANGLE COLLISION
- FIXED OBJECT
- PARKED VEHICLE
- FATAL
- INJURY TYPE
- PATH OF: P PEDESTRIAN E BICYCLE A ANIMAL S SLED
- PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW
- WEATHER: C - CLEAR, F - FOG, R - RAIN, S - SLEET, S - SNOW, CL - CLOUDY
- TIME: A - AM, P - PM
SCARBOROUGH: Intersection of Payne Road and Route 114 (Gorham Road)

A. Intersection of Payne Road and Gorham Road

Note: the businesses are labeled incorrectly. Cumberland Farms should be in the southeast corner and Sam's Club should be in the northeast corner.