Problem Statement: Residents of the Riverside neighborhood raised concerns over pedestrian fatalities at signalized intersections in the downtown area.

Traffic Analysis

Five pedestrian fatal crashes, shown with dots in the figure below, occurred at intersections in the study area over the last five years (2017 to 2021).

Study intersections are described below:

- Riverside Avenue/Steven Street
  - Riverside Avenue is classified as a minor arterial and Steven Street is classified as major arterial, both with a posted speed limit of 30 miles per hour.
  - Riverside Avenue provides four lanes with two-way traffic, Steven Street provides four lanes serving one-way southbound traffic.

- 3rd Avenue/Howard Street
  - 3rd Avenue is classified as a major arterial and Howard Street is classified as minor arterial, both with a posted speed limit of 30 miles per hour.
  - 3rd Avenue provides four lanes serving one-way eastbound traffic while Howard Street provides two lanes serving two-way traffic.

- Pacific Avenue/Browne Street (SR 2)
  - Pacific Avenue is classified as local access street with a posted speed limit of 25 miles per hour while Browne Street is classified as an urban other principal arterial with a posted speed limit of 30 miles per hour.
Spokane Traffic Calming Master Plan

- Pacific Avenue provides two lanes serving two-way traffic while Browne Street provides four lanes serving southbound traffic.
- 2nd Avenue/Browne Street (SR 2)
  - 2nd Avenue is classified as a major arterial with a posted speed limit of 30 miles per hour.
  - The roadway provides four lanes serving westbound traffic.
- 3rd Avenue/Division Street (SR 2)
  - Division Street is classified as an urban other principal arterial with a posted speed limit of 30 miles per hour.
  - The roadway operates one-way street serving northbound traffic, where the south leg provides five lanes and converges into three lanes on the north leg.

The table below summarizes each of the five reported pedestrian fatal crashes that occurred at a downtown intersection. Two additional pedestrian fatal crashes are summarized which occurred at a midblock location.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Control Type</th>
<th>Collision Type</th>
<th>Striking Vehicle Contributing Circumstances</th>
<th>Other Circumstances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverside Avenue at Steven Street</td>
<td>May 2021</td>
<td>Signal</td>
<td>Left Turning</td>
<td>Distracted driver</td>
<td>Daytime, dry weather</td>
</tr>
<tr>
<td>3rd Avenue at Howard Street</td>
<td>Dec 2020</td>
<td>Signal</td>
<td>Right Turning</td>
<td>Under influence of drugs</td>
<td>Nighttime, streetlights on, dry weather</td>
</tr>
<tr>
<td>Pacific Avenue at Browne Street</td>
<td>Sept 2021</td>
<td>Two-way-stop</td>
<td>Straight</td>
<td>None</td>
<td>Nighttime, streetlights on, dry weather</td>
</tr>
<tr>
<td>2nd Avenue at Browne Street</td>
<td>June 2018</td>
<td>Signal</td>
<td>Left Turning</td>
<td>Did not grant right-of-way to non-motorist</td>
<td>Daytime, dry weather</td>
</tr>
<tr>
<td>3rd Avenue at Division Street</td>
<td>Aug 2017</td>
<td>Signal</td>
<td>Sideswipe</td>
<td>Disregard stop and go light</td>
<td>Daytime, dry weather</td>
</tr>
<tr>
<td>Howard Street south of 1st Avenue</td>
<td>Nov 2017</td>
<td>None</td>
<td>Backing</td>
<td>Did not grant right-of-way to non-motorist</td>
<td>Daytime, dry weather</td>
</tr>
<tr>
<td>2nd Avenue east of Lincoln Street</td>
<td>June 2021</td>
<td>None</td>
<td>Straight</td>
<td>Distracted driver</td>
<td>Nighttime, streetlights on, dry weather</td>
</tr>
</tbody>
</table>

The city has funding to install traffic signals at the Pacific Avenue/Browne Street and Pacific Avenue/Division Street intersections as part of the Pacific Avenue Greenway project.

**Recommended Solution:**

The signal timing on key downtown corridors, such as 2nd and 3rd Avenues, should be updated to provide a leading pedestrian interval (LPI) to give pedestrians the opportunity to enter the marked crosswalk at an intersection 3 to 7 seconds before opposing vehicles are given a green light indication.
Pedestrians can better establish their presence in the crosswalk before vehicles have a signal to turn right or left. This treatment would increase vehicle delay at the intersection slightly, however implementing a leading pedestrian interval has crash reduction factor\(^1\) of 19% for pedestrian-involved collisions.

Install curb extensions at the following intersection locations to shorten the pedestrian crossing distance and reduce pedestrian exposure:

- 3\(^{rd}\) Avenue at Howard Street – east and west leg crosswalks
- 2\(^{nd}\) Avenue at Browne Street – east leg crosswalk

At the Pacific Avenue/Browne Street intersection, add curb extensions on both the east and west legs across Pacific Avenue and marked pedestrian crossings on all intersection approaches.

\(^1\) Crash Modification Factors Clearinghouse, March 2019
WEST THIRD AVENUE

NOT FOR CONSTRUCTION

PRELIMINARY

SOUTH HOWARD STREET

PROPERTY LINE

LEGEND

INSTALL NEW CONCRETE SIDEWALK PER COS
STD PLAN F-102B

INSTALL CURB RAMP PER COS STD PLAN F-105

INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING PIPE WHERE SHOWN.

REMOVE EXISTING INLET. PLUG AND ABANDON EXISTING PIPE.

CONSTRUCTION NOTES

District 1, Riverside: Third Avenue and Howard Street Intersection
Estimate: $208,000
WEST SECOND AVENUE
NOT FOR CONSTRUCTION
PRELIMINARY
NORTH BROWNE STREET
PROPERTY LINE
LEGEND
CONSTRUCTION NOTES
INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-102B
INSTALL CURB RAMP PER COS STD PLAN F-105
INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING PIPE OR NEW MANHOLE WHERE SHOWN.
REMOVE EXISTING INLET. PLUG AND ABANDON EXISTING PIPE.
EXISTING MANHOLE TO REMAIN IN PLACE.
REMOVE EXISTING INLET AND INSTALL NEW STORM MANHOLE.

District 1, Riverside: Second Avenue and Browne Street Intersection
Estimate: $291,000
West Third Avenue

Legend

Not for Construction

Preliminary

District 1, Riverside: Third Avenue and Division Street Intersection

Estimate: $122,000
District 1, Riverside: Pacific Avenue and Browne Street Intersection
Estimate: $235,000

CONSTRUCTION NOTES

- INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING PIPE OR NEW MANHOLE WHERE SHOWN.
- EXISTING MANHOLE TO REMAIN IN PLACE.
- EXISTING INLET TO REMAIN IN PLACE.

LEGEND

PROPERTY LINE
NEW CONCRETE SIDEWALK PER COS STD PLAN F-102B
NEW CURB RAMP PER COS STD PLAN F-105