

# Overview of Main Street Corridor Study

August 29, 2007

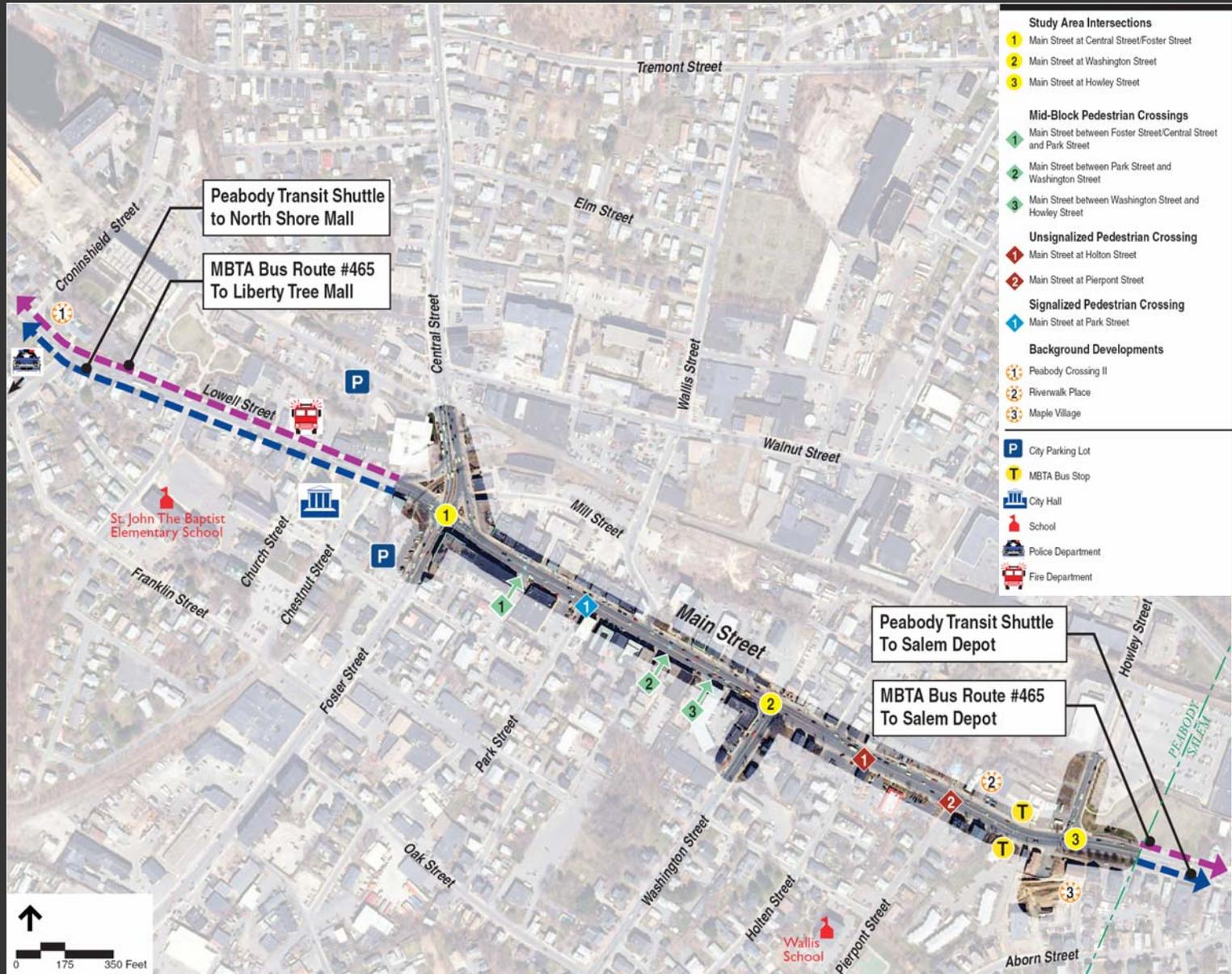
# Agenda

- *Study Goals and Objectives*
- *Existing Conditions*
  - Pedestrian/Bicycle Accommodations
  - Traffic Volumes
  - Vehicular Crash History
- *Future Conditions*
- *Improvement Alternatives*
  - Planted Median
  - Offset Roadway
  - Two-Way Left-Turn Lane
- *Conclusion*

# Study Goals and Objectives

- *Define constraints of existing corridor infrastructure*
- *Determine safety issues and their causes*
- *Investigate improvement alternatives to address issues*
- *Consider ramifications of each alternative*
- *Provide recommendations to City*

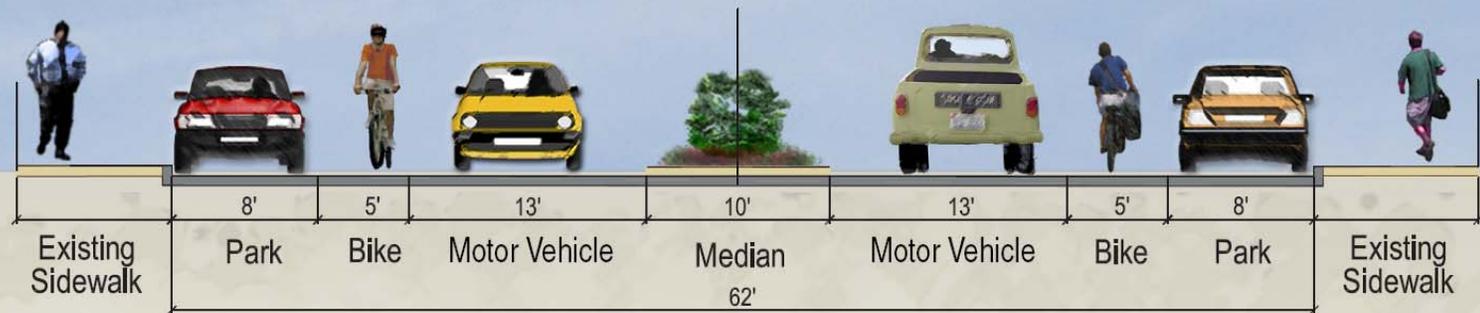
# Main Street Corridor Study Area



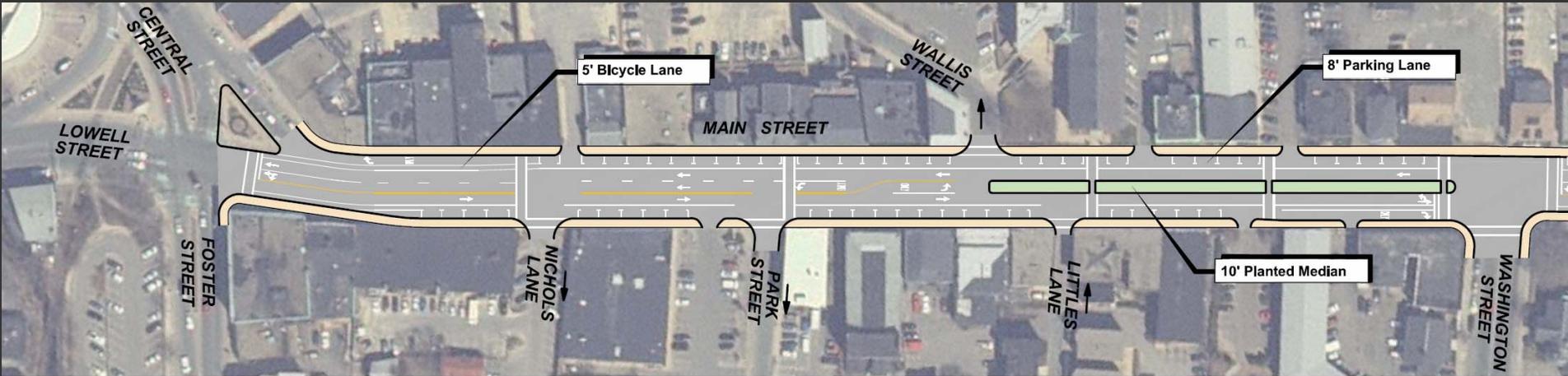
# Main Street Corridor Safety Issues

- *Washington St. among Top 1000 High Crash Locations*
- *70% are angle or rear-end collisions*
  - **Visibility issues at intersections**
  - **Driveway turns into on-coming traffic**
- *High number of sideswipes between intersections*
  - **Weaving to avoid left-turning vehicles**
  - **Driveway turns into on-coming traffic**
- *Majority of crashes occur during non-peak periods*
  - **Congestion not the reason for most crashes**
  - **High speeds likely cause**

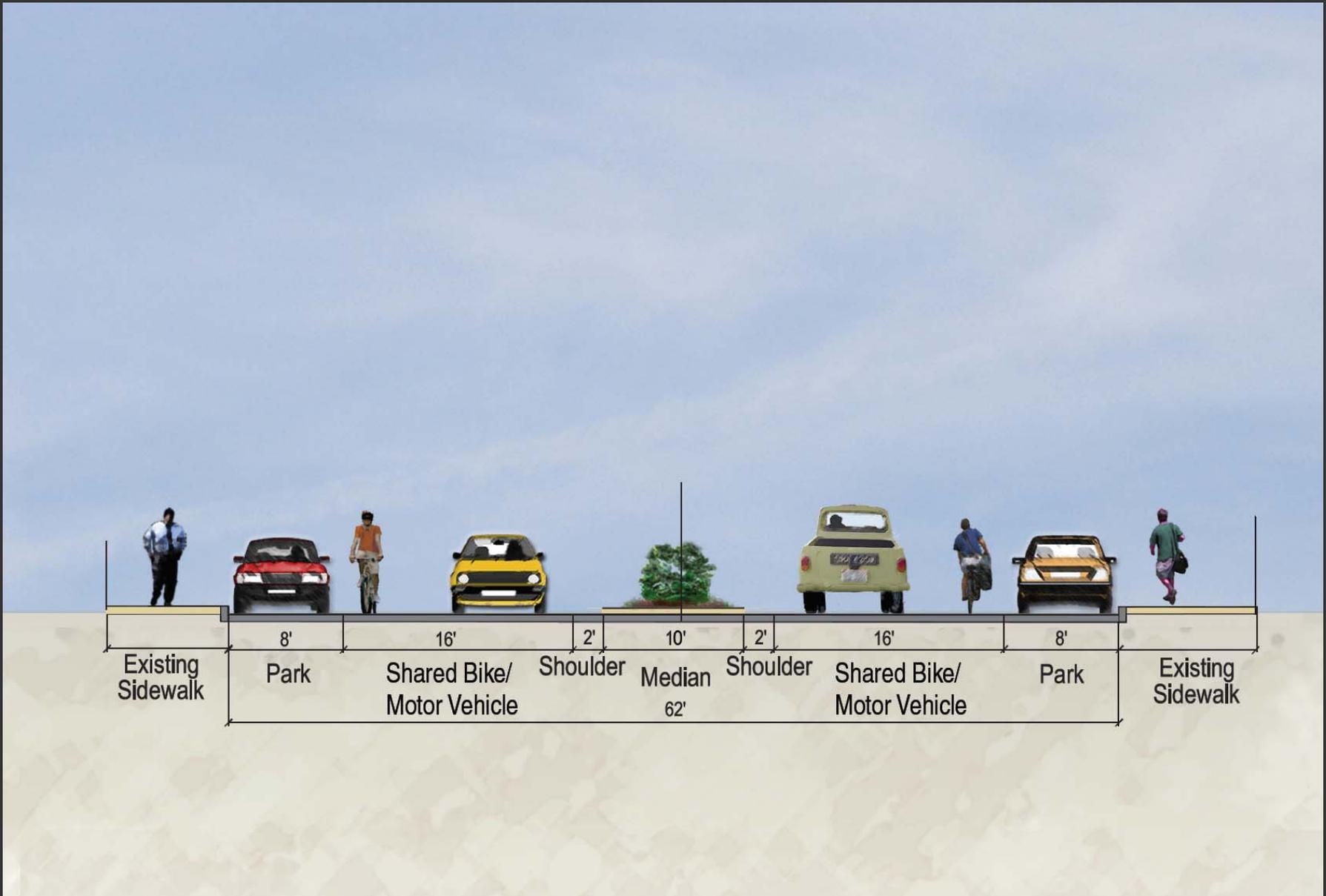
# Alternative 1: Planted Median Typical Cross-Section



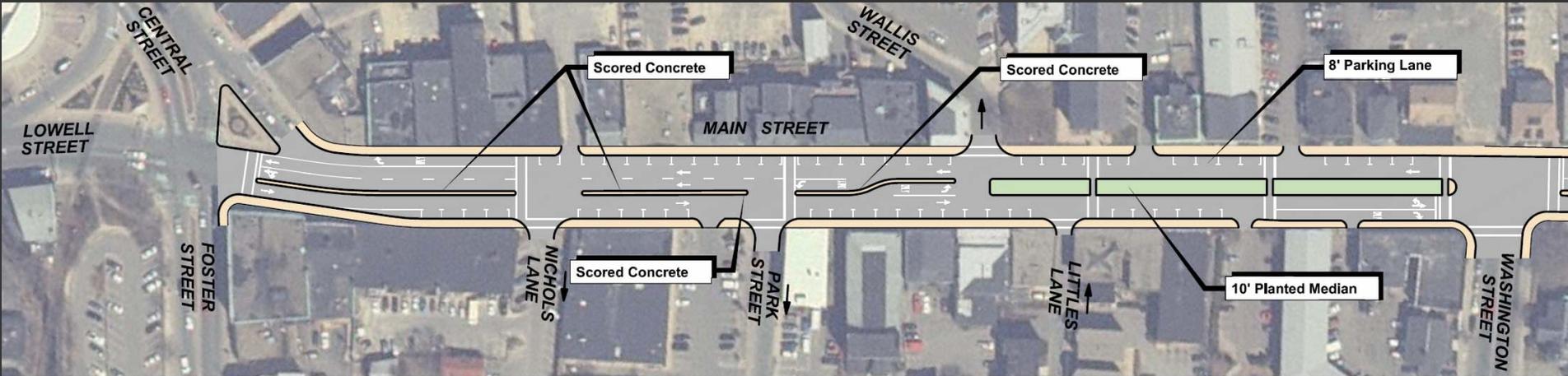
# Alternative 1: Planted Median Conceptual Layout



# Alternative 1A: Planted Median with Design Exception Typical Cross-Section



# Alternative 1A: Planted Median with Design Exception Conceptual Layout



# Alternative 1: Planted Median

- *Advantages*

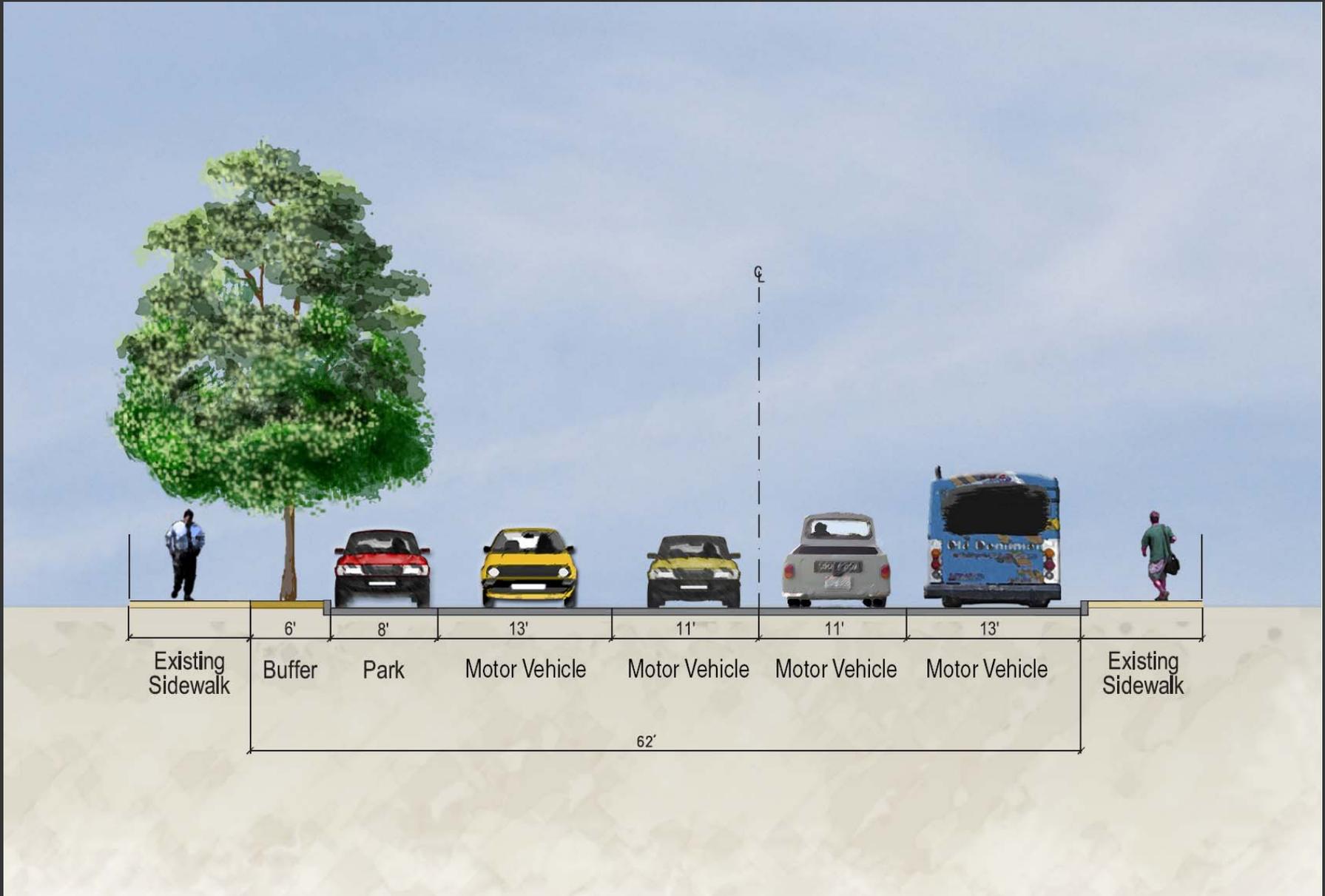
- Encourages lower speeds with single travel lane
- Removes left turns from traffic stream
- Improves safety through reduced traffic conflicts
- Shortens pedestrian crossing distance
- Creates refuges at intersections and mid-block crossings
- Maintains on-street parking on both sides

- *Disadvantages*

- Restricts some driveways to right-in/right-out operation
- Requires major construction along corridor

- *Cost: Estimated \$800,000 - \$1,000,000*

# Alternative 2: Offset Roadway Typical Cross-Section



# Alternative 2: Offset Roadway

- *Advantages*

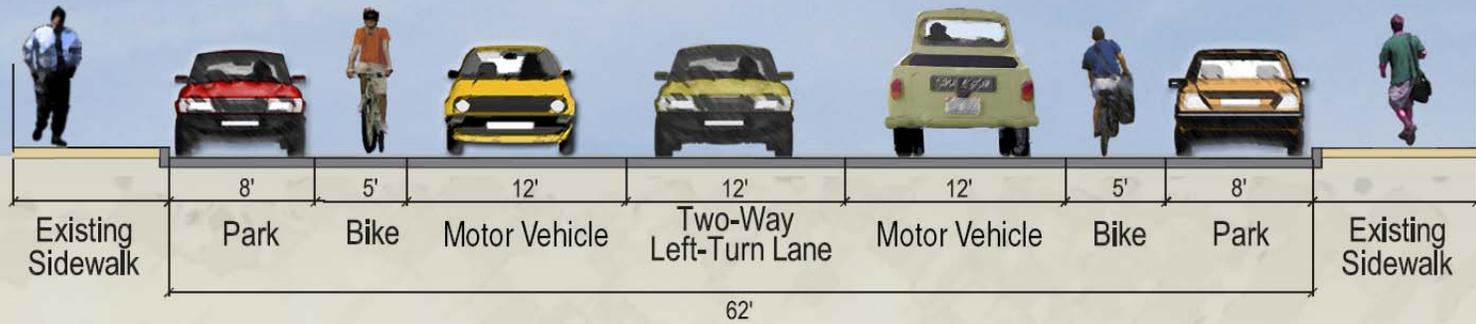
- Improves pedestrian accessibility
- Maintains full vehicular access
- Creates meaningful streetscape/pedestrian zone

- *Disadvantages*

- Encourages higher speeds with two travel lanes and parking on one side only
- Reduces on-street parking by roughly 50%
- Maintains existing vehicular conflicts at driveways
- Requires utility relocation in some areas
- Requires major construction along corridor

- *Cost: Estimated \$1,000,000 - \$1,500,000*

# Alternative 3: Two-Way Left-Turn Lane Typical Cross-Section



# Alternative 3: Two-Way Left-Turn Lane

- *Advantages*

- Encourages lower speeds with single travel lane
- Removes left turns from traffic stream
- Maintains full vehicular access
- Maintains on-street parking on both sides
- Requires minimal construction along corridor

- *Disadvantages*

- Maintains existing vehicular conflicts at driveways
- Causes driver confusion between signals

- *Cost: Estimated \$600,000 - \$800,000*

# Conclusions

- *Each of the alternatives is expected to accommodate the projected traffic volumes.*
- *Alternative 1: Planted Median Preferred*
  - **Improves corridor safety through reduction in vehicular speeds and conflicts at intermediate driveways**
  - **Improves pedestrian safety through shorter crossings and median refuge areas**
  - **Maintains parking accommodations on both sides**
  - **Eliminates weaving to avoid left-turning vehicles by providing dedicated left-turn lanes at specific intersections**
  - **Creates gateway to downtown Peabody**
- *Next steps:*
  - **Public Outreach**
  - **MassHighway Coordination**

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