# **JACOBS**°

# **Ashland Downtown Revitalization Plan**

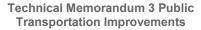
**Technical Memorandum 3 Public Transportation Improvements** 

February 20, 2020

City of Ashland Oregon Department of Transportation

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### 1. Introduction

This memorandum presents a range of potential transportation improvements and identifies potential impacts to address transportation deficiencies as outlined in Technical Memorandum (TM) 2, Existing and Future Conditions.

The potential transportation improvements identified in this memo were informed by the TM2 analysis, observed conditions, and in conversation with the Technical Advisory Committee, the Citizen Advisory Committee, and members of the public. Public input was gathered at an open house held on November 6, 2019 and an online open house available throughout November 2019, where community concerns were captured. The analysis that forms the basis of this memo identifies improvements for motorized traffic as well as bicycle, pedestrian, and transit traffic, with an emphasis on safety and improved access for all people.

# 2. Background

The purpose of the Ashland Downtown Revitalization Plan ("the Plan") is **to identify** and prioritize a series of fundable transportation improvements to improve the sense of community and place, while creating a safe and functional multi-use transportation network in the downtown core. Downtown Ashland today is auto-dominated, and community leaders and stakeholders have identified a major objective to identify opportunities to shift the transportation network from auto-dominated to a more balanced system that increases safety and access. A general goal is to provide improved connections and better incorporate transit, walking, including using a mobility device such as a wheelchair, and bicycling, or using other non-motorized devices (scooters, skateboards, etc).

### 2.1 Key Issues

Analysis performed for this memo identified two primary issues in downtown Ashland: Inadequate bicycle and pedestrian facilities throughout downtown and risky conditions at the Oak Street intersections at both Main Street and Lithia Way.

- Observed deficiencies in bicycle and pedestrian facilities:
  - Missing, narrow, or poor conditions of bicycle facilities (bike lane, sharrows, bicycle protection at intersections and near driveways) and pedestrian facilities (sidewalks, curb ramps, crossings, intersections) along Main Street and Lithia Way, as well as side streets.
  - Safety deficiencies make biking and walking challenging at certain locations in the study area (Figures 1 and 2).



- Intersections of Oak Street and Main Street; Oak Street and Lithia Way:
  - Many pedestrians and increasing vehicle traffic over time at Oak Street and Main Street are likely to create potentially risky interactions between modes.
  - The intersection at Lithia Way and Oak Street experiences the highest crash rate (and longest wait times) in the study area.



Figure 1: Pinch Point on Sidewalk Near Rogue Valley Transit District Transit Stop (Source: ODOT Technical Memorandum #3 Transportation Improvements).



Figure 2: Narrow Sidewalks and Poor Condition Sidewalk Ramps (Source: ODOT Technical Memorandum #3 Transportation Improvements).

### 3. Transportation Improvement Scenarios

Four alternative scenarios were developed to address transportation deficiencies identified in TM2. All of the scenarios and potential improvements had the same goal: a vibrant, modern, and multimodal downtown Ashland, but there are many ways the City and ODOT might achieve that vision. The range of scenarios and multimodal options demonstrate that breadth of approaches.

In central business districts like downtown Ashland, it is appropriate for design decisions to give priority to bicycle, pedestrian, and transit modes because they are more vulnerable than vehicles and much more prevalent in a vibrant downtown than in less urban contexts. Improvements to the transportation system in downtown Ashland should be designed for people walking, biking, and accessing transit, with accommodations made for automobiles and freight vehicles. While parking and loading zones will be accommodated in each scenario, the design focus for creating and maintaining a thriving downtown will be to balance those needs with the need for improvements for pedestrians, cyclists, and transit users.

#### 3.1 Scenario Elements

Two major improvements were considered in the scenarios: (a) the closure of Pioneer Street between Main Street and Hargadine Street and (b) a lane safety reconfiguration, which would reduce the number of travel lanes on Main Street from three to two between Oak Street and East Main Street. Four combinations of these two options were analyzed, which are detailed in Table 1.

**Table 1: Scenario Elements** 

Scenario	Main Street (Oak to East Main Street)	Pioneer Street
1	Three lanes	Open
2	Three lanes	Closed
3	Two lanes	Open
4	Two lanes	Closed

Two important takeaways emerged from the scenario analysis. The greatest impact on bicycle comfort and safety Reducing Main Street from three to two-lanes had the greatest impact on bicycle comfort. Modeling revealed that the number of travel lanes is the biggest factor in whether people would be comfortable riding bicycles on Main Street, more than the *type* of bicycle facility.

Although a two-lane Main Street would one less travel lane, modeling suggests that travel patterns would remain relatively unchanged from future conditions without the modification. Delay in the peak hour is expected. However, the biggest potential traffic impacts would result from the closure of Pioneer Street. Because Pioneer Street is a



common north-south route, closure of this street would divert quite a bit of traffic to First Street. With this increase in traffic, the intersections of First Street with Main Street and Lithia Way both met preliminary signal warrants, meaning signalization of these intersections may be justified based on expected traffic levels. With new signals at these two intersections, traffic flow is expected to improve throughout downtown.

#### 3.2 Common Elements and Assumptions for All Scenarios

While each scenario tests different combinations of the two improvements under consideration, a set of common elements and assumptions were included in all four scenarios (Figure 3). They include the following:

- Close Beaver Slide
- Leave Oak Street unsignalized
- Install a signalized pedestrian crossing west of Oak Street and Main Street
- Transform Oak Street into a Festival Street
- Signalize Water Street and Main Street
- Remove signal at the Main Street and Helman Street intersection and reduce to one lane on Lithia Way
- Narrow Main Street and Lithia Way
- Install a wider bike lane on Lithia Way
- Americans with Disabilities Act (ADA) ramp upgrades
- Widened sidewalks along Main Street
- Remove street parking on one side of Main Street
- Close Beaver Slide Beaver Slide is an issue for all users, regardless of travel mode. Safety concerns for Beaver Slide include the steep grade, limited sight distance at Water Street, a very narrow sidewalk, and no sidewalk ramps (Figure 4). Church Street provides a nearby and much preferable alternate route located just one block to the northeast.



Figure 3: Narrow Curb Tight Sidewalk on Beaver Slide
(Source: ODOT Technical Memorandum #3 Transportation Improvements)

- 2. Leave Oak Street unsignalized An intersection at Oak Street and Main Street was considered for inclusion in the scenarios because it could potentially provide a safer pedestrian environment. However, this intersection is too close to the signalized intersection at Pioneer Street and Main Street, according to the Manual of Uniform Traffic Control Devices (MUTCD) requirements. The MUTCD are national standards for traffic design. If signals are too close together, traffic can worsen for all users.
- 3. Install a signalized pedestrian crossing west of Oak Street and Main Street Initially, a type of pedestrian-initiated crossing known as a rapid flashing beacon was considered as a potential crosswalk improvement at Oak Street and Main Street. However, high numbers of pedestrians continually triggering the crosswalk here could stop vehicle traffic along Main Street for long periods of time. Over time, this situation could cause the flashing pedestrian lights to lose effectiveness and potentially reduce the safety for all users. To remedy this, a mid-block pedestrian signal crosswalk is proposed about 100 feet to the northwest, (about halfway between Pioneer Street and the ((future signalized)) Water Street intersections).



4. Remove the southeast crosswalk at Oak Street and Main Street – Main Street expands from two to three lanes at Oak Street where traffic from the Plaza enters Main Street, which complicates travel options for pedestrian and cyclists (Figure 5). Removing the southeast crosswalk would eliminate turning conflicts from Oak Street with pedestrians and avoid any MUTCD spacing issues with the signalized northwest crosswalk.



Figure 4: Current Configuration at Oak Street and Main Street (Plaza Exit) (Source: ODOT Technical Memorandum #3 Transportation Improvements).



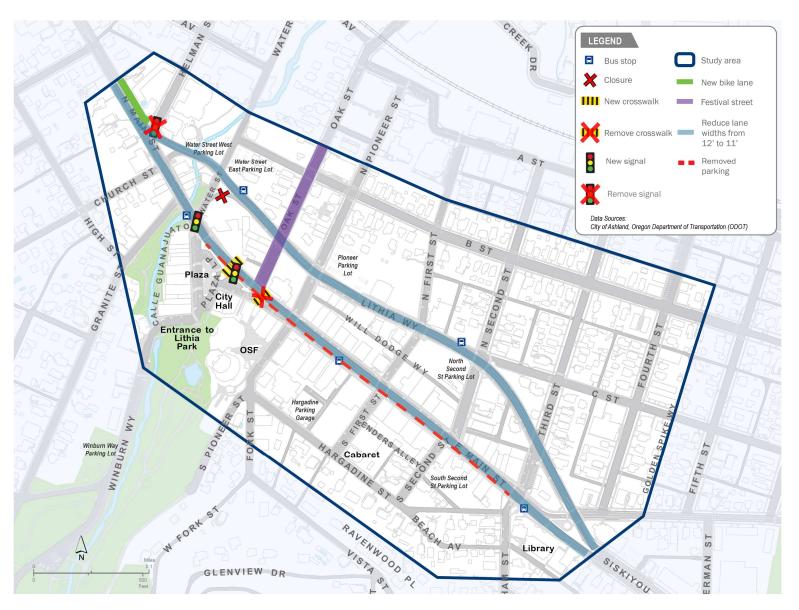


Figure 5: Common Elements for All Scenarios



5. Transform Oak Street into a Festival Street – A festival street (as seen on Figures 6 and 7) is a street that uses pavers, colored pavement, and other elements that prioritizes pedestrians in a low-seed, mixed-mode environment. While still accommodating car traffic, a festival street prioritizes easier pedestrian use, pop-up events, and street closures when needed. Oak and Pioneer Streets were both valuated to determine which would best accommodate this treatment. Testing revealed that closing Oak Street would be idea because a closure would mainly shift traffic to Pioneer Street, whereas a closure of Pioneer Street would have a much greater impact on the couplet and the rest of the study area as whole.



Figure 6: Shared Street Design Treatment Source: Trinity College Dublin 2012.



Figure 7: A Festival Street During Closure
Source: Hewitt. 2018.

6. **Signalize Water Street and Main Street** – A signal at Water Street and Main Street would improve safety near the plaza where visibility can be difficult, and a high number of pedestrians cross the street. This signal meets pedestrian warrants due to pedestrian volumes and according to Oregon Department of Transportation (ODOT) signal warrant criteria.



7. Remove signal at the Main Street and Helman Street intersection and reduce to one lane on Lithia Way – The northwest-bound lanes on Lithia Way would reduce to one lane ahead of Helman Street with the inside lane going to the turnaround at Church Street, for drivers wishing to travel back down the couplet. The southeast-bound lanes would also be reduced to one lane from the project limits (around Bush Street) to Helman Street. The left turn from Helman would add a southeast-bound lane to match up with the two existing couplet lanes (Figure 8).

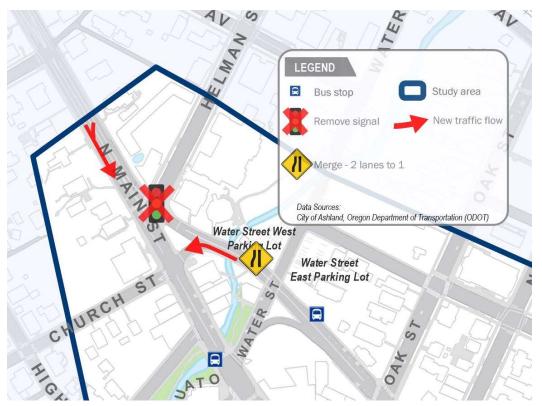


Figure 8: Proposed Main Street/Lithia Way/Helman Street Unsignalized Intersection

- 8. Narrow Main Street and Lithia Way Lane widths would be reduced from 12 to 11 feet on Main Street and Lithia Way consistent with ODOT standards for downtown commercial areas like downtown Ashland.
- 9. Install a wider bike lane on Lithia Way Narrower lanes and proposed lane reductions ahead of Helman Street would create enough room for a 6-foot bike lane on Lithia Way from Oak Street northwest-bound to the project limits around Bush Street. Additionally, there would be enough room on Main Street for a bike lane from the north project limits to Helman Street (extending the current bike lane southeast) (Figure 9).





Figure 9: Proposed narrowing lanes on Lithia Way to create room for 6-foot bike lane from Oak Street to northwest-bound project limits to Bush Street

- 10. Americans with Disabilities Act (ADA) ramp upgrades The scenarios all assume that ADA ramp upgrades would be made as needed along and crossing Main Street. Mid-block sidewalk bump-outs and corner curb extensions likely would need rebuilding to accommodate improvements to sidewalks and bicycle facilities along Main Street.
- 11. **Widened sidewalks along Main Street** Sidewalk widths outlined in the Existing Conditions Memo (TM2) would be upgraded as needed.
- 12. Remove street parking on one side of Main Street For analysis purposes, no parking was assumed for the southern side of Main Street. Many of the recommended improvements that improve conditions for active modes would impact the parking along the southern side of Main Street. Parking and loading zones would remain on the northern side

# 4. Options within the Scenario

Three options were developed for each of the four scenarios to address the identified deficiencies. The options focus on optimizing travel for everyone – people walking, riding bikes, using mobility devices, and driving. Four key considerations were used in the development of the multimodal options: Sidewalk widths, bicycle facilities, a three or two-lane roadway, and parking. These considerations were used in combination to create a set of options that attempt to improve mobility for all users in downtown



Ashland. The options and their benefits are described in three different categories below: No Curb Movement, 3 Lane, and 2 Lane.

Options that suggest new bike facilities would suggest buffered bike lanes, using paint or flexible posts, or a protected bike lane using a row of parked cars (Figures 9 through 11).



Figure 10: Buffered Bicycle Lane

Source: Bend, OR



Figure 11: Post-protected Separated Bike Lane

Source: FHWA 2015, p.84





Figure 12: Parking-protected Separated Bike Lane Source: Jonathan Maus/BikePortland

### 4.1 Options that Maintain Curb-to-Curb Distance

Short-term options are those that attempt to provide a balanced roadway without the cost and time associated with construction (moving curbs, building sidewalks, and realigning roadway lanes). These options are good near-term options because they do not disrupt things like daily travel, business operations, deliveries, visitors, and events in downtown Ashland. Figures 12 and 13 show the applicable cross sections for this option.

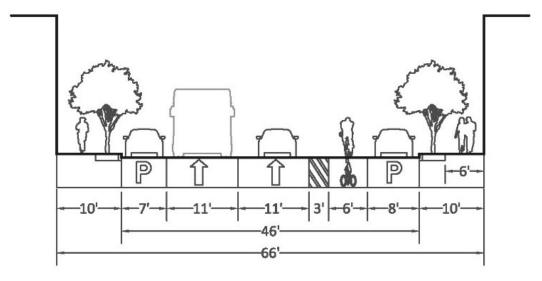


Figure 13: 2 Lane, Buffered Bike Lane, and Parking on Both Sides

This solution that would maintain the existing curb-to-curb dimension of the street. It reduces the roadway from three to two lanes and adds a 6-foot bike lane with a 3-foot



buffer adjacent to the travel lane. Paint and/or flexible posts could be used to buffer the bike lane from traffic. This option keeps parking on both sides of the street.

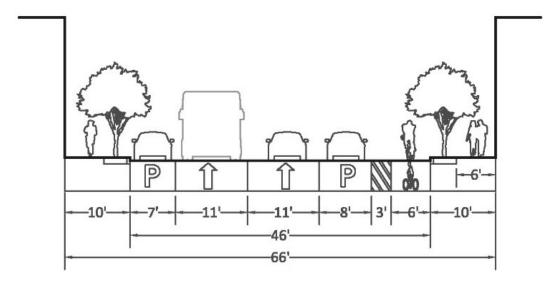


Figure 14: 2 Lane, Parking-Protected Bike Lane, and Parking on Both Sides

This solution would maintain the existing curb-to-curb dimension of the street. It reduces the roadway from three to two lanes and adds a parking protected 6-foot bike lane with a 3-foot buffer adjacent to the travel lane. This option keeps parking on both sides of the street.

### 4.2 Three-Lane Options

Three-lane options maintain the current travel lanes on Main Street. In order to provide a multimodal street than provides mobility for all users, there are tradeoffs involved. For these options, parking would be traded for a travel lane to provide bicycle facilities or wider sidewalks. Figures 14 and 15 show the applicable cross sections for this option.



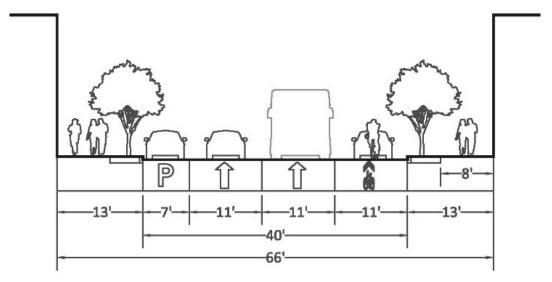


Figure 15: 3-Lane, Shared Bike Lane, Wider Sidewalks, and Parking on One Side

This option would increase sidewalk width from 10 to 13 feet (8-foot pedestrian zone, 5-foot furnishing zone). To provide more sidewalk space, this option would remove parking from one side of the street (the southern side) but maintain the three travel lanes and the existing shared bike and vehicle lane.

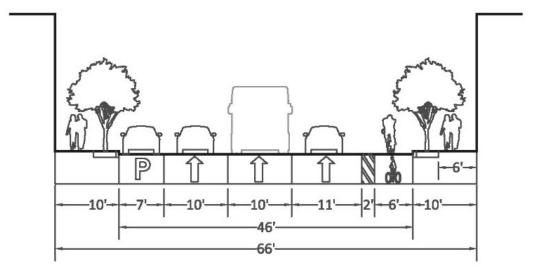


Figure 16: 3 Lane, Buffered Bike Lane, and Parking on One Side

This option would maintain the current curb-to-curb dimension, as well as the three travel lanes. Parking would be removed along the southern side of the street to make room for a 6-foot bike lane with a 3-foot buffer, using paint or flexible posts, adjacent to the vehicle travel lanes.



### 4.3 Two-Lane Options

Two-lane options reconfigure Main Street by reducing the number of vehicle travel lanes from three to two. This reconfiguration would create space for safe and comfortable bike facilities, wider sidewalks that activate downtown Ashland's public spaces, and parking that creates easy access to businesses and events for drivers. Figures 16 and 19 show the applicable cross sections for this option. Among the concerns of a two-lane option is the impact of large delivery vehicles that park in the travel lanes to make deliveries. A coordinated policy to restrict deliveries to morning hours and identify parking bays to accommodate large trucks would be put in place to alleviate possible congestion.

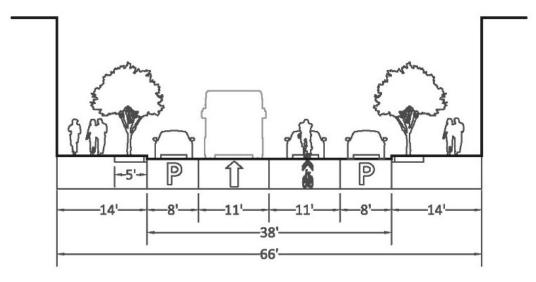


Figure 17: 2 Lanes, Shared Bike Lane, Wider Sidewalks, and Parking on Both Sides

This option would increase sidewalk width from 10 to 14 feet (9-foot pedestrian zone, 5-foot furnishing zone), but reduce the roadway from three to two lanes to do so. It maintains parking on both sides of the street and maintains the existing shared bike and vehicle lane.



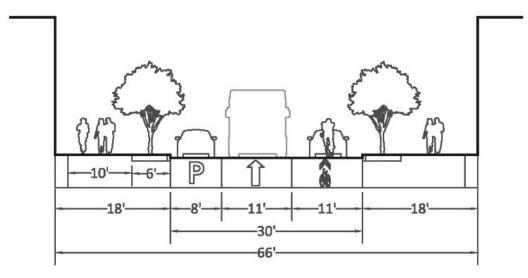


Figure 18: 2 Lanes, Shared Bike Lane, Wider Sidewalks, and Parking on One Side

This option would increase sidewalk width from 10 to 18 feet (2-foot building frontage, 10-foot pedestrian zone, 6-foot furnishing zone). To provide more sidewalk space, this option would reduce the vehicle travel lanes from three lanes to two, remove parking from the southern side of the street, and maintain the existing shared bike and vehicle lane.

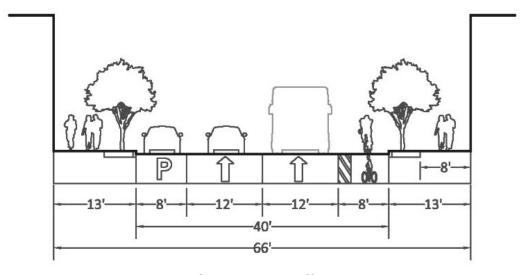


Figure 19: 2 Lanes, Wider Sidewalks, Buffered Bike Lane, and Parking on One Side

This option would attempt to balance pedestrian and bike needs by increasing the sidewalk width from 10 to 13 feet (8-foot pedestrian zone, 5-foot furnishing zone), and adding a 6-foot bike lane with a 2-foot buffer. To accommodate these improvements, this option would reduce the three vehicle travel lanes to two lanes and remove parking on the southern side of the street.



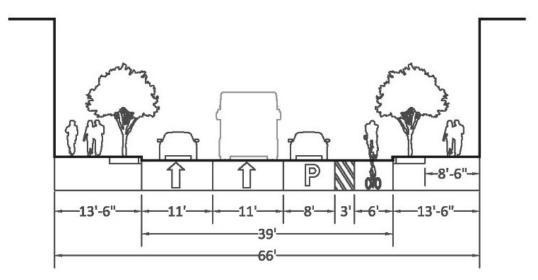


Figure 20: 2 Lanes, Parking-Protected Bike Lane, Wider Sidewalks, and Parking on One side

This option would reconfigure the existing three lanes to two lanes with parking removed from the northern side of the street. Parking removal is needed to accommodate wider sidewalks. Parking would be provided along the southern side of the street and would provide protection for the bike lane. The bike lane in this option would be 6 feet wide with a 3-foot buffer adjacent to the parking lane.

# 5. Pedestrian and Bicycle Safety and Comfort

### 5.1 Bicycle Level of Traffic Stress

#### 5.1.1 Bicycle Level of Traffic Stress Overview

The overall bicycle levels of traffic stress (BLTS) values are based on speeds and widths (that is, bike lane or parking) for road segments, intersection crossings, and intersection approaches (if turn lanes are present). A BLTS of 1 or 2 reflects a low-stress, safe, and comfortable environment for people riding bikes. Anything above a BLTS 2 is likely to feel dangerous and inaccessible for all riders.

Figures 21 through 23 show the overall BLTS level results from each option. The results for each scenario and multimodal options are similar; therefore, only one figure represents improvements in BLTS for each of the scenario-multimodal options (Prioritizing Bicycle Facilities, Prioritizing Pedestrian Facilities, and Balanced Facilities). Figures are shown in the following Scenario Outcomes subsection.

#### 5.1.2 Scenario Outcomes

- BLTS would improve in all scenarios and options from existing conditions.
  - Currently, 84 percent of all road segments in the study area are at a BLTS 1 or 2.



- Under all scenarios and multimodal options, BLTS 1 or 2 would increase to 94 to 98 percent.
- BLTS 1 would increase from 6 percent currently to 15 to 17 percent after improvements to bicycle facilities in certain two and three-lane options.
- On a system basis, there is not much difference between the different bicycle facility types. Because bicycle facilities can be obtained in multiple ways, the biggest determiner of BLTS would be the change from a three-lane to a two-lane Main Street rather than facility type.



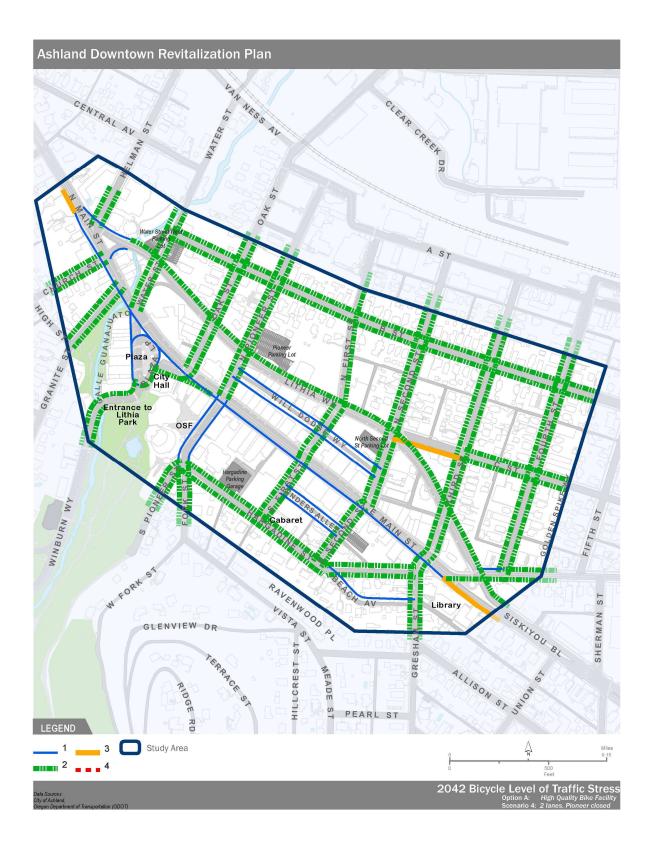


Figure 21: Bicycle Level of Traffic Stress Map



#### **5.2** Pedestrian Level of Traffic Stress

#### 5.2.1 Pedestrian Level of Traffic Stress Overview

The overall pedestrian levels of traffic stress (PLTS) values are based on sidewalk width and condition; buffer width and type; roadway speed and lanes for segments and speeds; and lanes and volumes for intersection crossings. A PLTS of 1 or 2 indicates that there are buffered, safe, and accessible sidewalks, resulting in little to no traffic stress for all adults and children.

Figures 24 through 26 show the overall PLTSs for the multimodal options. Like with BLTS, because the results for each scenario and multimodal option are similar, only a few representative scenario-multimodal options are shown in the following subsections. Generally, Main Street is a PLTS 2 while Lithia Way is a PLTS 2 or 3 in most scenarios and options. The wider sidewalks in all options would lower the PLTS to 1 or 2 with Scenario 3.

#### 5.2.2 Scenario Outcomes

- PLTS would improve in all scenarios and multimodal options from existing conditions.
  - Currently, 57 percent of all road segments in the study area are at PLTS 1 or 2.
  - Under all scenarios and multimodal options, PLTS 1 or 2 would increase to 67 or 68 percent.
- The biggest impact to the overall PLTS score would be improving the deficient sidewalk ramps and sidewalk sections rather than changing the overall sidewalk or buffer widths.



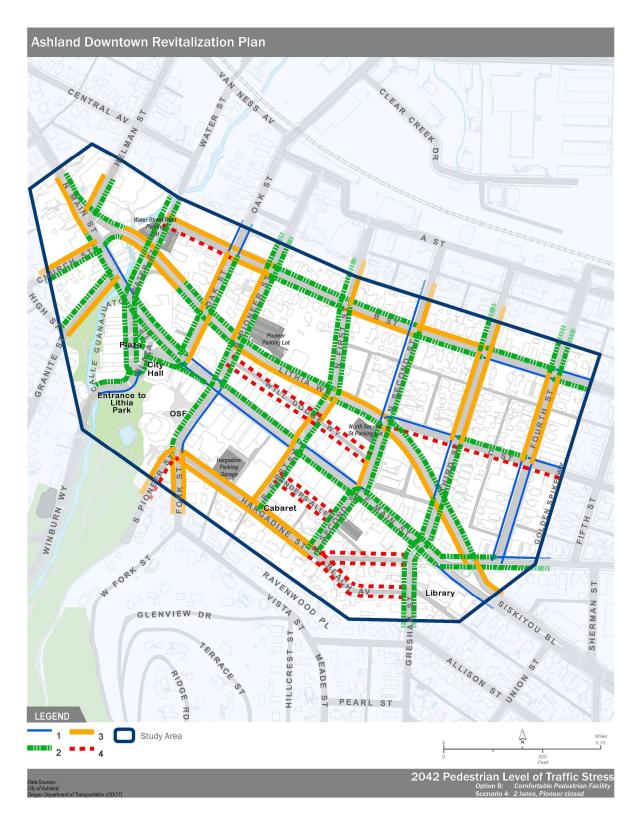


Figure 22: Pedestrian Level of Traffic Stress Map



### 6. Transit

There are no transit-specific options because the Rogue Valley Transit District (RVTD) controls the transit system, not the City of Ashland (the City). However, because every transit trip starts or ends with walking, bicycling, riding a scooter, skateboarding, or using a mobility device, enhancements that improve conditions for people walking or riding a bike have the potential to improve the overall transit experience.

Before committing to future transportation refinements, a closer look is needed at the interactions between bus and bicycles at transit stop locations to ensure there are not safety conflicts for pedestrians or undue delays for cyclists. These refinements will require coordination between RVTD and the City.

A transit island platform is one refinement that has great potential to enhance transit. Integrated into the parking lane, a transit island platform would provide easy access for buses to pick up and drop off passengers without taking time to pull in and out of traffic, mixing with bikes, and providing clear sightlines stops for transit riders (Figure 27). Because travel speeds along Main Street and Lithia Way are generally slow, the transit island platform is a recommended design option to keep transit moving efficiently and avoid delays associated with bus pull-out locations. Transit island platforms have the potential to impact parking conditions along Main Street.

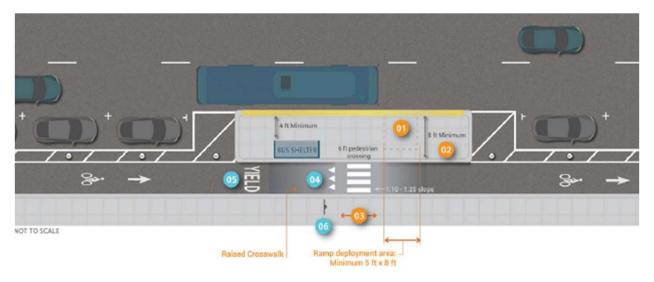


Figure 23: Transit Island Platform

Source: FHWA, 2015, p.93.



# 7. Multimodal Level of Service (MMLOS)

Multimodal level of service is a rating system that estimates the bicycle and pedestrian level of service within the study area, based on four components: traffic speed, traffic volume, number of lanes, and presence/quality of pedestrian and bicycle facilities. Road segments are graded from best (Level A) to worst (Level F) based on these criteria.

#### 7.1 Pedestrian Level of Service

In Scenarios 1 (three lanes on Main Street, Pioneer Street open) and 2 (three lanes on Main Street, Pioneer Street closed), the pedestrian level of service would fluctuate between C, D, and E along Main Street. In Scenarios 3 (two lanes on Main Street, Pioneer Street open) and 4 (two lanes on Main Street, Pioneer Street closed), the two-lane Main Street section would improve to Level C.

On Lithia Way, the service would improve generally to Level C, except for the Level E narrow sidewalk sections from Pioneer Street to First Street on the southern side of the street and the Water Street overcrossing on the northern side in all scenarios. These pinch points in the sidewalk affect the level of service for pedestrians in all scenarios.

### 7.2 Bicycle Level of Service

The best bicycle level of service is achieved from the two-lane option shown in Figure 16. The separated bike lane that would be protected by a parking row would provide a full level of separation from vehicle traffic to give the highest level of comfort to riders (Level A), extending from Oak Street south to the end of the couplet. The post-separated bike lane section from Helman Street to Oak Street would give Level B.

# 8. Traffic Impacts

#### 8.1.1 Street Closure and Alternate Routes

In all scenarios, the closure of Pioneer Street between Main and Hargadine Streets would have the greatest impact on traffic. With the street closure, traffic would divert to First Street to reach Lithia Way. The reduction of travel lanes on Main Street would not result in any significant diversions to other streets. The removal of Beaver Slide also would change local travel patterns as more traffic would then use the Church Street turnaround to access Main Street and the Plaza.

### 8.2 Preliminary Signal Warrants

Preliminary signal warrants are locations where signals are deemed necessary or warranted based on preliminary evaluations. Four intersections were identified for signal warrants within the study area (Figure 28):

Main Street and Church Street



- While this location meets PSW, it is too close to the Main Street & Water Street signalized intersection, according to MUTCD standard requiring signals to be spaced 300 feet apart.
- Main Street and First Street
- Lithia Street and First Street
- Main Street and Oak Street (100 feet northwest of intersection)
- Water Street and Main Street (a future signal under all scenarios)

Meeting a preliminary signal warrant does not mean a signal will be installed at a particular location. Further study including a full warrant analysis will need to be performed by the applicable jurisdiction, the City or ODOT, and approval gained.



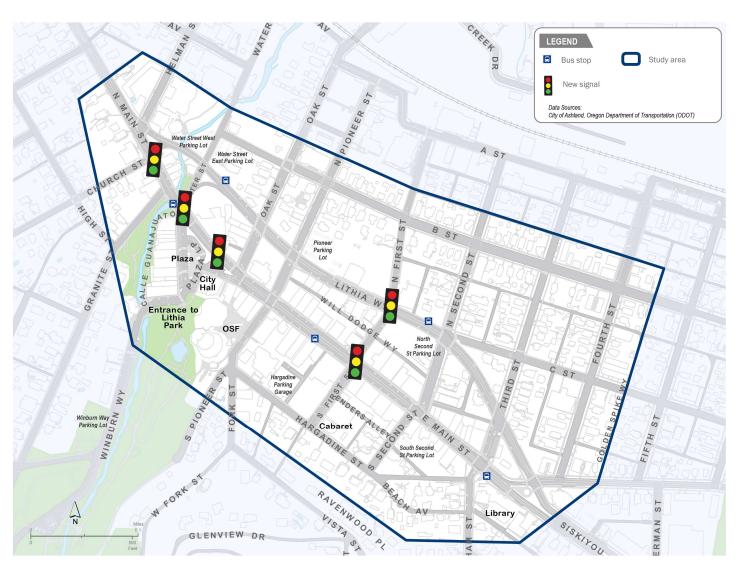


Figure 24: Preliminary Signal Warrants



#### 8.3 Traffic Volume

Overall, there is very little change in traffic volumes and delay along Main Street from current day to the future, with queuing issues caused by vehicles waiting to turn left onto Main Street (from Oak Street, for example) or across Main Street (at Water Street). Based on traffic analysis, traffic volume conditions for Scenarios 1 (three lanes on Main Street, Pioneer Street open) and 2 (three lanes on Main Street, Pioneer Street closed) are essentially the same as the future no-build conditions reported in TM2. These conditions include long wait times on Main Street because of left turning vehicles and the Pioneer Street and Lithia Way bottleneck. Reducing the through lanes from three to two in Scenarios 3 (two lanes on Main Street, Pioneer Street open) and 4 (two lanes on Main Street, Pioneer Street closed) would impact delay times at intersections, with up to 1 minute of increased travel time across the Main Street and Lithia Way couplet.

# 9. Deliveries and Loading Zones

Truck loading and unloading presents a challenge to pedestrian safety and traffic flow in Ashland's downtown core, particularly during peak travel hours and tourist seasons. Currently, large delivery vehicles are stopping in travel lanes and making deliveries. This lack of managed freight deliveries creates conflicts and delays and increases congestion.

To improve the freight delivery situation in Ashland, one proposal is to time-manage deliveries by permitting truck loading and unloading to the north side of Main Street on Monday through Saturday between 6 AM and 11 AM. Time-managed deliveries would eliminate congestion caused by trucks stopping in travel lanes during the busiest times of times of the week along Main Street and reduce pedestrian conflicts along Main Street.

Designated loading zones should be established mid-block, away from the corner of the streets to prevent pedestrian and cyclist sightline issues at intersections when crossing or entering the roadway. For example, delivery vehicles often park next to the Plaza, which prevents drivers from seeing pedestrians crossing Main Street at Water Street. For effective implementation, freight delivery vehicles would pull into loading zones within on-street parking areas at designated loading areas, rather than stopping in the travel lanes.

Smaller delivery vehicles such as cargo vans could be directed by signage to use Will Dodge Way alley for deliveries. Will Dodge Way provides good rear access for many businesses on Main Street and allows deliveries to be made without needing to stop on Main Street.

With number of deliveries increasing over time, it is critical for Ashland to manage delivery vehicle traffic. There are examples from other cities across the country of creative ways to better manage their curb spaces. Columbus, Ohio, has partnered with <a href="curbFlow">curbFlow</a> to manage curbside space and is now providing nine new loading



management zones for short-term pick-ups and drop-offs. Washington, DC, is piloting the program to alleviate double parking problems on their streets.

For Ashland, proposed designated loading zones would be long enough to accommodate large semi-truck deliveries and be located in four consolidated locations:

- Between Water Street and Oak Street
- Between Pioneer Street and 1st Street
- Between 1st Street and 2nd Street
- Between 2nd Street and 3rd Street

# 10. Parking

Parking is a critical need for a thriving downtown. Parking may be impacted by improvements to downtown that increase access for residents and visitors. When improvements occur parking spaces should be adding to other parts of downtown.

### Parking Tradeoffs

Balancing improvements that benefit all road users will require tradeoffs. Scenario options that recommend bicycle lanes or wider sidewalks often require removal of parking on one side of the street or the removal of one travel lane. Among all options, however the three-lane options are less flexible because they trade parking for a travel lane in order to provide other improvements. The list below highlights potential changes from scenario options related to parking.

- Angle Parking: Replacing parallel on-street parking with angle parking on East Main Street and B Street would allow for more parking spaces. Figures 29 and 30 are concept sheets from previous planning efforts that identify additional parking spaces and loading zone changes along East Main Street and B Street.
- Loading zones: Loading zones can be placed anywhere there is parking available. Where parking is limited, loading zones are assumed to be located on the north side of Main Street and/or to applicable side streets to make room for the south side Main Street improvements.
- Parking-protected bike lanes: In areas with the parking-protected separated bike lane, parking needs to be removed at least 20' upstream of any driveway. This is needed for safety as drivers need to be able see bicyclists in the bike lane when turning into or out of a driveway and to be able to see oncoming vehicular traffic.
- Bus stops: Parking also needs to be removed at bus stops to make space for enhanced bus stop platforms.

### Parking Management

There is a need to make changes to the City's parking management strategies to address ongoing parking capacity and turnover issues, as well as potential parking removal as mentioned above.



Parking improvements have been analyzed for several years in Ashland. The City's 2012 TSP update included recommendations for parking improvements, which were further studied as part of a 2014 parking strategy. Most recently, the 2017 Downtown Parking Management Strategy Plan identified a set of clear and logical steps for addressing parking needs in downtown Ashland. The 2017 plan was accepted by the city council but not officially adopted.

The 2017 plan recognizes that the parking in downtown regularly exceeds 85% utilization (that is, 85% of spaces are occupied at peak times), which is a threshold for active management of parking supply.

This project's recommendations carry forward the following fiscally responsible and clearly defined parking management steps presented in the 2017 Plan:

- 1) Actively manage the current parking system by zone through time limits and signage
- Consider partnerships with the private sector to utilize existing off-street parking areas
- 3) Consider paid parking programs to manage parking demand
- 4) Consider the addition of new parking areas when all capacity-management options are maximized

Parking is a major concern for businesses, who strive to serve both employees and customers. And with many visitors coming to downtown, parking areas need to be clearly marked and Downtown Ashland needs a cohesive management strategy that enables people to park once and walk, or be transported by bus or van, to multiple destinations.





Figure 25: East Main Street Angle Parking and Loading Zone Concept



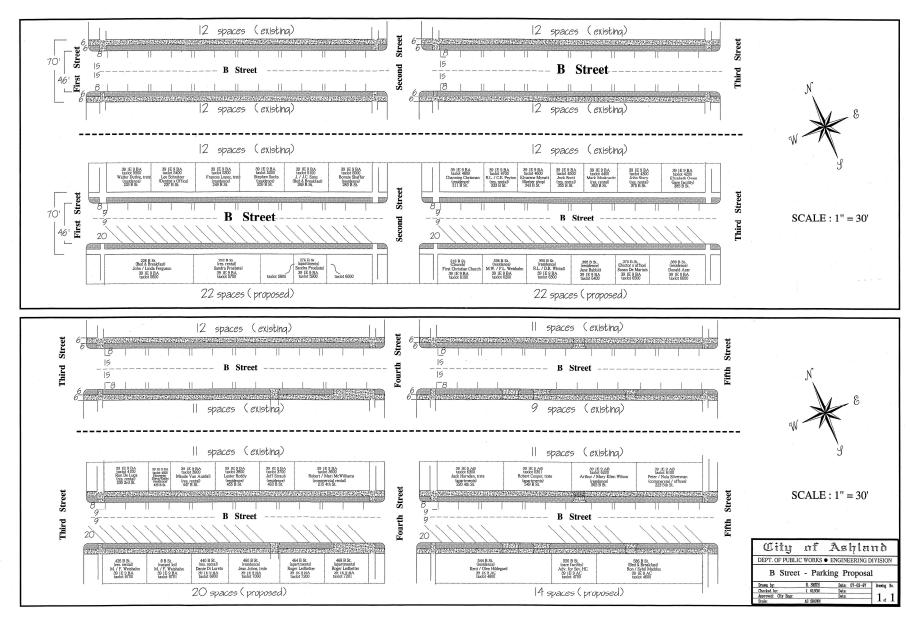


Figure 26: B Street Angle Parking Concept



# 11. Signage and Wayfinding

There is a need for improved signage and wayfinding system in the downtown core. Ashland residents feel that installing clear and easy to understand signage would improve the experience for visitors by directing them to local destinations and by reducing the amount of traffic congestion that occurs when drivers are circling downtown looking for parking. The City's 2012 Transportation System Plan (TSP) also highlighted the need for improved wayfinding by identifying clear signage as a key implementation strategy for helping residents and visitors get around downtown.

This project would provide guidance to the City to improve district wayfinding and design options. Wayfinding signage would provide visitors and residents with clear directions to local destinations, designated parking areas, and important driving directions.

The list below highlights public feedback received on signage and wayfinding for various locations in downtown Ashland. None of the issues or improvements below are currently part of the project but will be considered in later phases of the plan.

- Street signs –Consider updating street signs to be two-sided. Currently, street signs
  only serve drivers, and street names are not visible for pedestrians traveling the
  opposite direction of vehicle traffic flow. Making street signs two-sided would
  prioritize and improve mobility and safety for pedestrians, visitors, and all users.
- Bike routes and bike parking Because bike routes and bike parking can be difficult
  to find for both residents and visitors, consider adding signage to educate visitors,
  drivers, and bicyclists around downtown more safely and efficiently.
- Consider installing a 'points of interest' map that includes distances and easy navigation, such as:
  - Lithia Park, a large, 93-acre park with hiking and other outdoor activities
  - Plaza, a central civic space in downtown Ashland
- Parking areas (including electric vehicle parking spaces) Drivers often waste time circling downtown looking for parking, and updated signage would help direct drivers to available parking.
- Directional signs –Installing directional signs would increase safety by directing drivers to not drive the wrong way down certain streets.
- Time-limited loading zones –Consider limiting the timeframe for deliveries to improve traffic conditions during peak time periods.

### 12. Street Trees and Stormwater Management

Street trees and other landscaping elements enhance a street by providing cooling and shade in the summer heat, reducing air pollution, and improving the City's stormwater



management efforts. Many community members identified trees and landscaping as an extremely important characteristic of downtown Ashland, referencing how much they enjoy the trees and planters and would like to see more in the future.

This project would provide enhancements to improve the natural elements of the streetscape, including street trees and landscape buffers. It would provide trees and landscaping along Main Street and Lithia Street between the sidewalk and street, meeting the ODOT permitted placement, spacing, and site distance standards.

The list below highlights public feedback received on street trees and stormwater management for various locations in downtown Ashland. None of the issues or improvements below are currently part of the project but will be considered in later phases of the plan.

- Consider installing larger excavated planter boxes to support long-lasting, healthy tree growth
- Consider installing improved drainage design systems as part of street trees
- Consider installing safe grates around trees and on sidewalks that are flush with the sidewalk to avoid tripping hazards

# 13. Sidewalk Seating

Sidewalk seating is an important aspect of downtown Ashland's streetscape. Many residents voiced their support for more seating options, both along the street and at restaurants. During peak visitor times of the year, places to sit along the sidewalk can be hard to find.

This project would provide seating options for residents and visitors by installing benches, and constructing low walls, steps, or other surfaces that allow people to sit and enjoy Ashland's public spaces. Seating would meet ADA guidelines.

# 14. Lighting

Improved street lighting helps people feel more comfortable walking and crossing the street at night. Several community members expressed their support for more lighting along Main Street and Lithia Way; specifically, lighting that illuminates the sidewalks and pedestrian spaces.

This project would add additional street lighting to downtown Ashland's sidewalks to improve pedestrian safety and security. Street lighting in this context would be at a pedestrian-scale, meaning that lighting would illuminate sidewalks more so than the roadway.

Important considerations for pedestrian-scale lighting include energy efficiency, downcast lighting to reduce light pollution (in line with the Dark Sky standards), and design features that enable installation of flower baskets and dedicated plumbing.



The list below highlights public feedback received on lighting for various locations in downtown Ashland. None of the issues or improvements below are currently part of the project but will be considered in later phases of the plan.

- B Street Consider installing improved lighting at uncontrolled intersections along B Street to improve navigation to other streets in and around the study area.
- 1st, 2nd, and 3rd Streets Consider improved lighting on 1st, 2nd, and 3rd Streets between B Street and A Street to support pedestrians accessing shops on A Street or downtown Ashland.
- Main Street and 1st Street –Consider adding additional lighting to improve safety at Main Street and 1st Street.
- Lithia Way near Taj Indian Cuisine –Consider adding improved lighting from sidewalk to parking area is needed.

### 15. References

City of Ashland. 2012. Transportation System Plan.

City of Ashland. 2014. Ashland Downtown Parking Management and Multi-Modal Circulation Plan.

City of Ashland. 2017. Downtown Strategic Parking Management Plan.

Federal Highway Administration (FHWA). 2015. Separated Bike Lane Planning & Design Guide. May.

Hewitt. 2018. HewittSeattle.com/2018/09/, Seattle, Washington. September.

Trinity College Dublin. 2012. Key Findings & Recommendations. August.

City of Bend. Making Bend Safer by Design. February.

BikePortland/Jonathan Maus. 2018. A Sneak peek at Portland's new protected bike lane design guide. January.