11th Street Bikeway
Heron Street to State Street

Concept Design Recommendations
Boise, Idaho

Prepared for:
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11th Street Bikeway Concept Design Recommendations

- Multi-Use Pathway
- Conventional Bike Lanes
- Low Stress Bikeway

**Low Stress Bikeway**
(Wayfinding, branding and sharrows)

**Multi-Use Pathway**
(Through Boise High School Campus)

**Phase 1:**
- Sharrows (Washington St to YMCA Driveway)
- Conventional Bike Lanes (YMCA Driveway to State St)

**Phase 2:**
- Conventional Bike Lanes (Entire Section)

Note: Phase 2 implementation pending successful trial completion of Phase 1 and coordination with YMCA and City of Boise.

- Rectangular Rapid Flashing Beacons with bicyclist pushbuttons
- Bulbouts on all corners to improve sight distance and shorten crossings
- Improved lighting

- All-way stop
- Improved lighting
- Align path entrances/exits with on-street facilities

- Camel’s Back Park
- Albertsons
- YMCA
- Hyde Park
- Boise Co-Op
- 11th Street Bikeway Project Area Map
PROJECT DESCRIPTION

The Ada County Highway District (ACHD) has prepared a concept design for the 11th Street Bikeway. The 11th Street Bikeway will connect the North End and Camel’s Back Park to Downtown Boise via a low stress bikeway. This bikeway also connects people to the Greenbelt and Pioneer Pathway via existing bike lanes south of State St. 11th Street was identified as a potential bikeway in the 2016 North Boise Neighborhood Pedestrian and Bicycle Plan. It’s also included in the 2018 Roadways to Bikeways Bicycle Master Plan Update.

CONCEPT DEVELOPMENT PROCESS

The figure below illustrates the 11th Street Bikeway concept development process. The project team developed the initial concept using motor vehicle volumes and speeds provided by ACHD (see Appendix 1 for further details) in combination with the ACHD Bike Facility Matrix and the findings from a site visit. The concepts were then refined and finalized based on feedback from the public (see Appendix 2 for summaries) and the project technical team.

Public Feedback Summary

November 2018

- Where Respondents Live
  - In the North End: 29%
  - In Ada County: 30%
  - On 11th Street: 8%
  - Within 5 blocks of 11th Street: 33%
  - Outside Ada County: <1%

- Support a Bikeway on 11th Street: 92% of Total Respondents

- Preferred Alternative from State St to Washington St
  - Conventional Bike Lanes (Alt 2): 74%
  - Sharrows (Alt 1): 22%
  - Neither: 4%

- Do respondents within 5 blocks of 11th Street support a bikeway on 11th Street?
  - Yes: 56
  - No: 4

July 2019

- Where Respondents Live
  - In the North End: 28%
  - In Ada County: 32%
  - On 11th Street: 23%
  - Within 5 blocks of 11th Street: 17%

- Support a Bikeway on 11th Street: 92% of Total Respondents

- Preferred Alternative from State St to Washington St
  - Conventional Bike Lanes (Alt 2): 74%
  - Sharrows (Alt 1): 22%
  - Neither: 4%
The corridor is broken into segments to describe the recommended design features along each section of the corridor. The following summarizes the recommended design treatments along each segment of the 11th Street Bikeway. In addition to these recommendations, ACHD’s branding for low-stress bikeways would also be applied to the corridor.

### 11th Street from Heron Street to Fort Street

<table>
<thead>
<tr>
<th>Segment 1</th>
<th>11th Street from Heron Street to Fort Street</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wayfinding Signage</strong></td>
<td>Signage could include these destinations: Camel’s Back Park, Hyde Park, Longfellow Elementary School, North Junior High School, Boise High School, Downtown Boise, and Greenbelt.</td>
</tr>
<tr>
<td><strong>Pavement Markings</strong></td>
<td>Install shared lane markings (i.e., sharrows).</td>
</tr>
<tr>
<td><strong>ACHD Bikeway Branding Signs</strong></td>
<td>Install ACHD Bikeway branding signs for the 11th Street Bikeway</td>
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</table>

### 11th Street from Fort Street to Franklin Street

<table>
<thead>
<tr>
<th>Segment 2</th>
<th>11th Street from Fort Street to Franklin Street</th>
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<tr>
<td><strong>Pavement Markings</strong></td>
<td>Install shared lane markings (i.e., sharrows).</td>
</tr>
<tr>
<td><strong>Fort St Crossing</strong></td>
<td>Provide an enhanced crossing at Fort Street with Rectangular Rapid Flashing Beacons (RRFB’s), pedestrian and bicyclist push buttons, curb bulbouts, and improved lighting.</td>
</tr>
<tr>
<td><strong>Hays St Crossing</strong></td>
<td>Provide an enhanced crossing at Hays Street with Rectangular Rapid Flashing Beacons (RRFB’s), pedestrian and bicyclist push buttons, curb bulbouts, and improved lighting.</td>
</tr>
<tr>
<td><strong>ACHD Bikeway Branding Signs</strong></td>
<td>Install ACHD Bikeway branding signs for the 11th Street Bikeway</td>
</tr>
</tbody>
</table>
### 11th Street
**from Franklin Street to Washington Street**
(to be completed in partnership with Boise High School and the Boise School District.)

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franklin Street</td>
<td>Convert to all-way stop intersection (add stop signs to Franklin Street approaches). Align crossings with multi-use pathway through Boise High School campus, which may include designing a large receiving apron or two separate ramps to split northbound and southbound bicyclists. Improve intersection lighting.</td>
</tr>
<tr>
<td>Multi-Use Pathway</td>
<td>Construct multi-use pathway through Boise High School campus. Will require removal/demolition of obstacles and an easement through the campus.</td>
</tr>
<tr>
<td>Washington Street</td>
<td>Convert to all-way stop intersection (add stop signs to Washington Street approaches). Align crossings with multi-use pathway through Boise High School campus, which may include designing a large receiving apron or two separate ramps to split northbound and southbound bicyclists. Improve intersection lighting.</td>
</tr>
<tr>
<td>ACHD Bikeway Branding Signs</td>
<td>Install ACHD Bikeway branding signs for the 11th Street Bikeway</td>
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</tbody>
</table>

### 11th Street
**from Washington Street to State Street**

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Details</th>
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<tbody>
<tr>
<td>Pavement Markings</td>
<td>Install shared lane markings (i.e., sharrows) from Washington Street to YMCA driveway on 11th Street.</td>
</tr>
<tr>
<td>Conventional Bike Lanes</td>
<td>Install conventional bike lanes from YMCA driveway on 11th Street to State Street and remove on-street parking.</td>
</tr>
<tr>
<td>ACHD Bikeway Branding Signs</td>
<td>Install ACHD Bikeway branding signs for the 11th Street Bikeway</td>
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**South of State Street**
The original project scope included 11th Street from State Street to River Street; however, this section was removed after it was determined that the segment treatments already meet the guidelines provided in ACHD’s Bicycle Facility Selection Matrix. Nearly one-third of respondents to the second round of public engagement requested that this section be added back in. In response to this feedback, ACHD is planning to address the section of 11th Street from Front Street to River Street through operational enhancements that will be implemented separate from the bikeway project.
ESTIMATED COST
$600,000
for the 11th Street Bikeway Project

- **Pedestrian Facilities** - $300,000
  - Enhanced Crossing at Fort St - $144,000
  - Enhanced Crossing at Hays St - $144,000
  - Sidewalk (State St to Washington St) - $12,000

- **Bike Facilities** - $73,000
  - Signage, Striping, and Lighting - $56,000
  - Bike Lanes (State St to Washington St) - $17,000

- **Multi-Use Pathway** (Through Boise High School) - $27,000

- **Design/Survey** - $120,000

- **Contingency** - $80,000
24-Hour Traffic Counts

All data obtained from ACHD

24 Hr Count: 250
Date: 4/29/2019

24 Hr Count: 276
Date: 1/9/2001

Hays St (30 mph):
24 Hr Count: 5,157
Date: 3/1/2017

24 Hr Count: 445
Date: 9/19/2002

Fort St (30 mph):
24 Hr Count: 8,848
Date: 4/27/2017

24 Hr Count: 1,747
Date: 10/18/2017
Bike Facility Matrix

EVALUATION REQUIRED: Engineering analysis required to determine whether bike facilities are appropriate.

Traffic:
- **LOW-STRESS BIKEWAY**
  - Shoulder Bike Lane
  - Conventional Bike Lane
  - Buffered Bike Lane

- **LOW-STRESS CONNECTIONS**

- **MED**
  - Shoulder Bike Lane
  - Conventional Bike Lane
  - Buffered Bike Lane

- **HIGH**
  - Buffered Bike Lane
  - Protected Bike Lane
  - Raised Bike Lane
  - Cycle Track
  - Multi-use Pathway

Speed:
- 85th-percentile speed (preferred), design speed or posted speed (MPH)
### Pedestrian Crossing Treatments

#### 2 Lane Facility

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<tr>
<th>ADT</th>
<th>&lt;9000</th>
<th>9000 - 12000</th>
<th>12000 - 15000</th>
<th>15000 - 20000</th>
<th>&gt;20000</th>
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<tbody>
<tr>
<td>SL &lt;= 30</td>
<td>Level 1</td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 3</td>
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<tr>
<td>SL = 35</td>
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#### 3 Lane Facility

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<td>SL = 35</td>
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<td>Level 2/3*</td>
<td>Level 3</td>
<td>Level 3</td>
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* Use higher level of vehicular control when there is not a pedestrian refuge island (min. 6’ wide) installed in the center turn lane/median.

#### 4 Lane Facility

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<tbody>
<tr>
<td>SL &lt;= 30</td>
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<td>Level 1</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 3</td>
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<tr>
<td>SL = 35</td>
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<td>Level 2</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>SL &gt;= 40</td>
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#### 5+ Lane Facility

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<td>Level 3</td>
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<tr>
<td>SL = 35</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 2/3*</td>
<td>Level 3</td>
<td>Level 4</td>
</tr>
<tr>
<td>SL &gt;= 40</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 4</td>
<td>Level 4</td>
<td>Level 4</td>
</tr>
</tbody>
</table>

* Use higher level of vehicular control when there is not a pedestrian refuge island (min. 6’ wide) installed in the center turn lane/median.

#### Treatments:

**Level 1**
- Install marked crosswalk (continental style) with appropriate ped signs.
- Install advance pedestrian signs where sight distance is limited

**Level 2**
- Level 1 installation plus one of the following:
  - Side mounted flashing beacon
  - Overhead flashing beacon
  - Rapid Rectangular Flashing Beacon (RRFB)

**Level 3**
- Level 1 installation plus one of the following:
  - Pedestrian actuated beacon (HAWK)
  - Full pedestrian signal

**Level 4**
- Level 3 installation plus:
  - Advance flashing beacons

#### Notes:
1. Treatment assumes that warrants for a crosswalk have been met per MUTCD guidance for the device in question.
2. Consider increasing the degree of control if there are very large numbers of pedestrians or there is a significant percentage of users needing additional assistance.
3. Advance flashing beacons may not be necessary if stopping sight distance is adequate for the given roadway conditions.
This memorandum summarizes public feedback received during the first round of public involvement for the 11th Street Bikeway Concept Study. Public comments were collected through an online survey accompanied by an interactive map. The online survey/map was open from November 8, 2018 to November 26, 2018. The online survey had a total of 1,016 responses and the online map collected 249 comments. This memorandum summarizes key findings from the public feedback. The complete survey results are included in Attachment A.

RESPONDENT PROFILE

Respondents were asked to denote where they lived in relation to the study corridor. As shown in Figure 1, approximately 8% lived on 11th Street, 33% lived within five blocks of 11th Street, and 29% lived in the North End, but further than five blocks from 11th Street.

Figure 1 Responses to "Where do you live?"

About half of the respondents have school aged children. Five of the respondents were students at Boise High School (BHS). Most respondents, approximately 75%, say that they bike on 11th Street, in addition to other modes of transportation. The most commonly cited response for biking on or near
11th Street were recreation or exercise (29%), commuting to work (23%), shopping or running errands (16%), social events (11%), or other reasons (13%). 8% of the respondents said that they do not bike on or near 11th Street.

PUBLIC COMMENT THEMES

The survey and interactive map were reviewed and common themes were identified based on the locations of comments and their observations.

Bikeway Support

The majority of respondents, approximately 92%, support the implementation of a bikeway project on 11th Street. Those in favor of the bikeway thought that 11th Street would be a good alternative because of the low traffic activity on the roadway and direct connections from the North End to the Greenbelt, downtown Boise, and BHS. Those who opposed the bikeway typically stated that there were already good bike routes connecting the North End to downtown Boise or that they would rather prioritize bike routes that improved connectivity in other parts of Ada County.

General Themes

When asked how respondents choose a bike route, the top responses were:

- Traffic speed and/or volume
- On-street bicycle accommodations, such as bike lanes or protected pathways

When asked what would increase the likelihood of respondent’s children to bike to school, the top responses were:

- Improved or additional bike facilities
- Safer crossings at major intersections

Location-Based Comments

Figure 2 summarizes comment themes at specific locations along the corridor.

11th Street Resident Responses

The following summarizes the responses for those who said they lived on 11th Street (79 total):

- There was less support for the bikeway from 11th Street residents than in the total responses (71% of residents living on 11th Street supported the bikeway and 92% of the total responses supported the bikeway).
Many respondents were hesitant to show support without seeing a conceptual design (i.e., they need more information to determine their support).

- Residents have the following concerns and questions about the bikeway:
  - Will it remove parking?
  - Will it take away stop signs?
    - There are concerns that removing stop signs will increase vehicle traffic volumes and speed.
  - Will there be property impacts?
- Most respondents listed safety as their primary concern about the implementation of a bikeway on 11th Street for the following reasons:
  - Vehicles speeding due to removal of stop signs and/or parking.
  - Removal of parking on one side of road (which could require residents to cross street).
  - Conflicts between bicyclists and cars parking.
Figure 2

11th St from Fort St to Heron St (24 comments)
- Concerns that street is too narrow to accommodate bicycle facilities and on-street parking

Fort St / 11th St (35 comments)
- Cars parked near intersection limit sight distance
- Difficult to cross during peak hours due to drivers not yielding to people walking or biking

Hays St / 11th St (6 comments)
- Would like more lighting
- Difficult to cross during peak hours due to drivers not yielding to people walking or biking

11th St from State St to Franklin St (47 comments)
- Concerns about existing obstacles through BHS campus
- High traffic activity in this area from YMCA parking, school parking, and school pick-up/drop-off
- Concerns about sight distance at Franklin St and Washington St intersections

River St / Pioneer Pathway (6 comments)
- Existing pedestrian hybrid beacon takes too long to activate and people cross without waiting for it sometimes

Front St / 11th St (28 comments)
- Some respondents feel unsafe crossing
- Would like more time for children to cross on bikes
- Conflicts between southbound right-turning vehicles and southbound bicyclists

Myrtle St / 11th St (43 comments)
- Awkward transition from Pioneer Pathway to northbound 11th St
- Conflicts between southbound left-turning vehicles and northbound bicyclists

River St / 11th St (9 comments)
- Desire for direct connection to Greenbelt

Landmarks
Grocery
School
Parks/Open Space

11th Street Bikeway
Online Survey Comments
This memorandum summarizes public feedback received during the second round of public involvement for the 11th Street Bikeway Concept Study. This round of public involvement collected feedback on the proposed bikeway treatments presented in the draft concept. Public comments were collected through comment sheets submitted during neighborhood pop-up meetings, an online survey, and email correspondence. The online survey was open from July 11, 2019 to July 25, 2019. The pop-up meetings were held on July 11, 2019 at Camel’s Back Park (3:30 p.m. to 4:30 p.m.) and in front of Boise High School (5:30 p.m. to 6:30 p.m.). The online survey had a total of 57 responses, 64 comment sheets were received from the pop-up meetings, and 3 comments were received via email. This memorandum summarizes key findings from the public feedback. The complete survey results are included in Attachment A.

RESPONDENT PROFILE

On both the comment sheets and online survey, the respondents were asked to denote where they lived in relation to the study corridor. As shown in Figure 1, about half of respondents (51%) live on or near 11th Street, while approximately two thirds (68%) live in the neighborhood.

Figure 1 Responses to "Where do you live?"
PUBLIC COMMENT THEMES

The following section summarizes respondents’ support for the concept and common themes gleaned from the responses.

Support of Proposed Treatments

Most respondents, approximately 70%, support the proposed treatments for the 11th Street Bikeway, while most of the rest of the respondents, approximately 17%, are neutral or unsure. Those in support of the treatments agreed that the crossings at Fort Street and Hays Street would greatly increase the safety of the corridor, and that a designated corridor through Boise High School (BHS) would help regional connectivity.

Of the 11% (13 responses) of those that disagreed with the proposed treatment, most were not opposed to a bikeway on 11th Street. Ten of the thirteen respondents that disagreed did so because they did not think the proposed treatments were enough (i.e., the sharrows, signage, and Rectangular Rapid Flashing Beacons (RRFB’s) did not provide enough protection for bicyclists or disagreed with the change in study area). Only three responses were opposed to having the bikeway on 11th Street.

Respondents who were “not sure” or “neutral” (those who said they agreed and disagreed) about the proposed treatments, were generally supportive of a bikeway on the corridor, but wanted an expanded study area or different treatments.

Comments on Specific Treatments

The online survey asked respondents to identify which specific proposed treatments that they liked. The multi-use pathway through the BHS campus received the strongest amount of support, with 89% of respondents saying that they liked that treatment. Sharrows received the least amount of support, though most respondents (52%) indicated they liked that treatment. The remainder of the proposed treatments saw the following levels of support:

- Curb bulb-outs and RRFB’s (Fort St and Hays St) – 66% and 74%, respectively
- All-way stop intersections (Franklin St and Washington St) – 68%
- Wayfinding signs and branding (State St to Heron St) – 56% and 54%, respectively

Respondents identified the following treatments for consideration on the 11th Street Bikeway:
• Traffic signals or pedestrian hybrid beacons at Fort Street and Hays Street
• Additional all-way stop intersections along the corridor
• Further separation of bike and car traffic through protected bike lanes and/or traffic calming

Washington Street to State Street Alternative

Respondents at the pop-up meeting and on the online survey were asked to select a preferred alternative for the bikeway between Washington Street and State Street. As shown in Figure 3, most respondents (74%) would prefer conventional bike lanes to sharrows. Only 4% of respondents do not support bike lanes or sharrows.

Figure 3 Responses to "State St to Washington St - Please indicate your preferred alternative"

General Themes

Respondents also indicated the following themes in the online survey and comment sheets:

• Approximately 29% (36) of all respondents indicated that they would like to see additional bikeway improvements on 11th Street south of State Street.
• The majority of respondents (67%) who indicated that they live on 11th Street agreed with the proposed treatments and generally do not want to see changes to 11th Street north of Fort Street, beyond sharrows and signage.
# 11th Street Bikeway

ACHD

## Engineer’s Conceptual Estimate

Prepared By: KAI  
Date: Aug. 2019

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>TOTAL QUANTITY</th>
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</tr>
</tbody>
</table>

**TOTAL CONSTRUCTION COST** $398,672  
**TOTAL CONSTRUCTION COST SUBTOTAL (20% Contingency)** $478,407

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**ENGINEERING SUPPORT**

Prepared By: KAI  
Date: Aug. 2019

<table>
<thead>
<tr>
<th>ENGINEERING SUPPORT</th>
<th>UNIT</th>
<th>TOTAL QUANTITY</th>
<th>UNIT PRICE</th>
<th>SUBTOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering &amp; Design/Survey</td>
<td>LS</td>
<td>30%</td>
<td>$398,672</td>
<td>$119,700.00</td>
</tr>
</tbody>
</table>

**ENGINEERING SUPPORT SUBTOTAL** $119,700

**TOTAL PROJECT SUBTOTAL** $598,107

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**Notes**

1) There are still specifics to be worked out regarding the pathway design and funding that will be completed in partnerships with the Boise School District and Boise High School.

2) The Hays Street RRFB crossing was programmed as part of ACHD’s Integrated Five Year Work Plan before this project.