The City of Keizer is committed to providing equal access to all public meetings and information per the requirements of the ADA and Oregon Revised Statutes (ORS). The Keizer Civic Center is wheelchair accessible. If you require any service such as SPANISH translation or other interpretive services that furthers your inclusivity to participate, please contact the Office of the City Recorder at least 48 business hours prior to the meeting by email at davist@keizer.org or phone at (503)390-3700 or (503)856-3412. Most regular City Council meetings are streamed live through www.KeizerTV.com and cable-cast on Comcast Channel 23 within the Keizer City limits. Thank you for your interest in the City of Keizer.

A G E N D A

KEIZER CITY COUNCIL WORK SESSION

Monday, January 10, 2022
6:00 p.m.
Robert L. Simon Council Chambers
930 Chemawa Road NE
Keizer, Oregon 97303

1. **CALL TO ORDER**

2. **ROLL CALL**

3. **DISCUSSION**

   a. **Wheatland Road Multi Modal Study**

4. **ADJOURN**

CITY COUNCIL WORK SESSION: January 10, 2022

TO: **MAYOR CLARK AND CITY COUNCIL MEMBERS**

FROM: **R. WES HARE**
INTERIM CITY MANAGER

THROUGH: **BILL LAWYER**
PUBLIC WORKS DIRECTOR

SUBJECT: **WHEATLAND ROAD MULTI MODAL STUDY**

The City of Keizer received funding through the Salem-Keizer Area Transportation Systems (SKATS) to develop a conceptual design for the Wheatland Road corridor that would remove barriers for all modes of travel and create an enjoyable experience for all users.

Scott Mansur with DKS and Associates will attend City Council Work Session to present and review the draft plan with the City Council.

DKS

WHEATLAND ROAD CORRIDOR PLAN

DECEMBER 2021

ACKNOWLEDGMENTS

CITY OF KEIZER

Bill Lawyer, Public Works Director
Shane Witham, Planning Director

DKS ASSOCIATES

Scott Mansur, PE, PTOE
Jenna Bogert, PE
Travis Larson, EI

AKS ENGINEERING

Richard Walker, PE
Tyler Roth, PE

TECHNICAL ADVISORY COMMITTEE

Hersch Sangster (Keizer Traffic Safety-Bikeways–Pedestrian Committee)
Michael Jaffe (Mid-Willamette Valley Council of Governments)
Dan Fricke (Oregon Department of Transportation – Region 2)
Bill Lawyer and Shane Witham (City of Keizer)

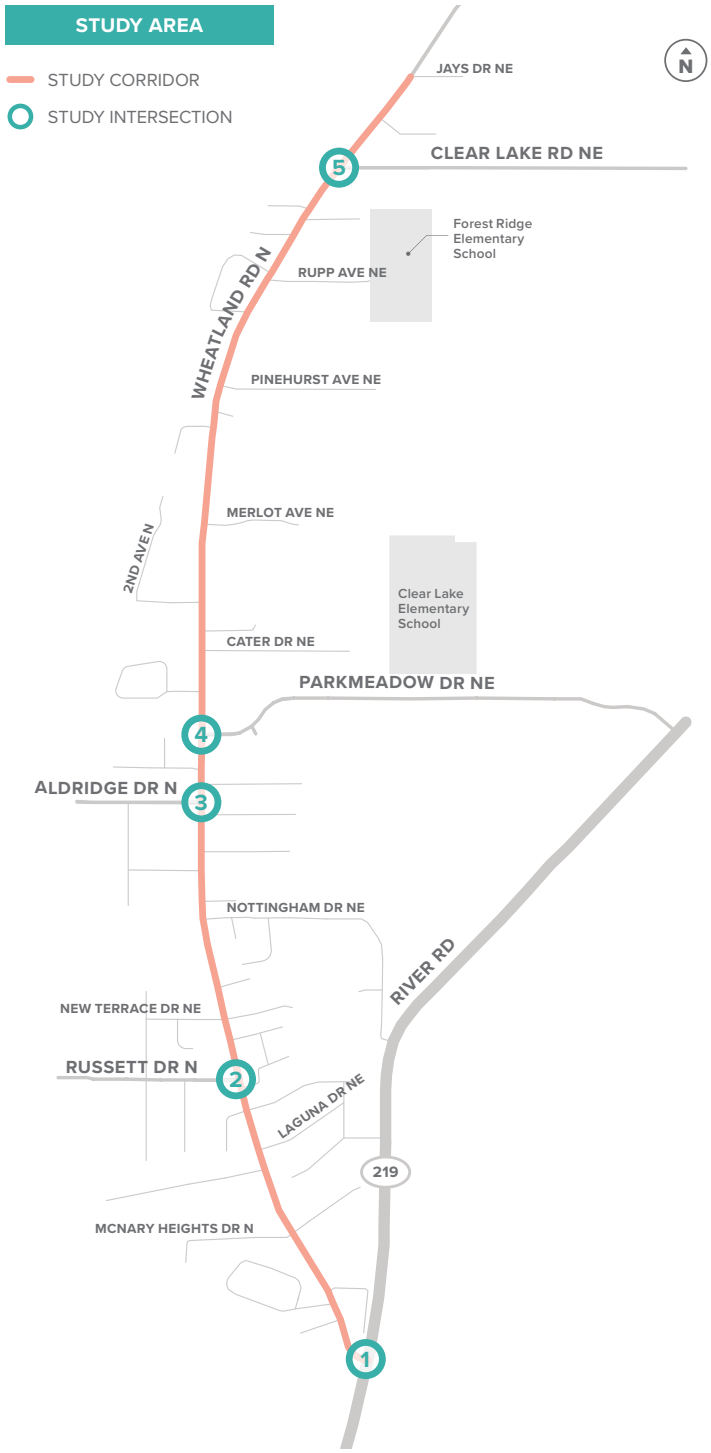
01 EXECUTIVE SUMMARY

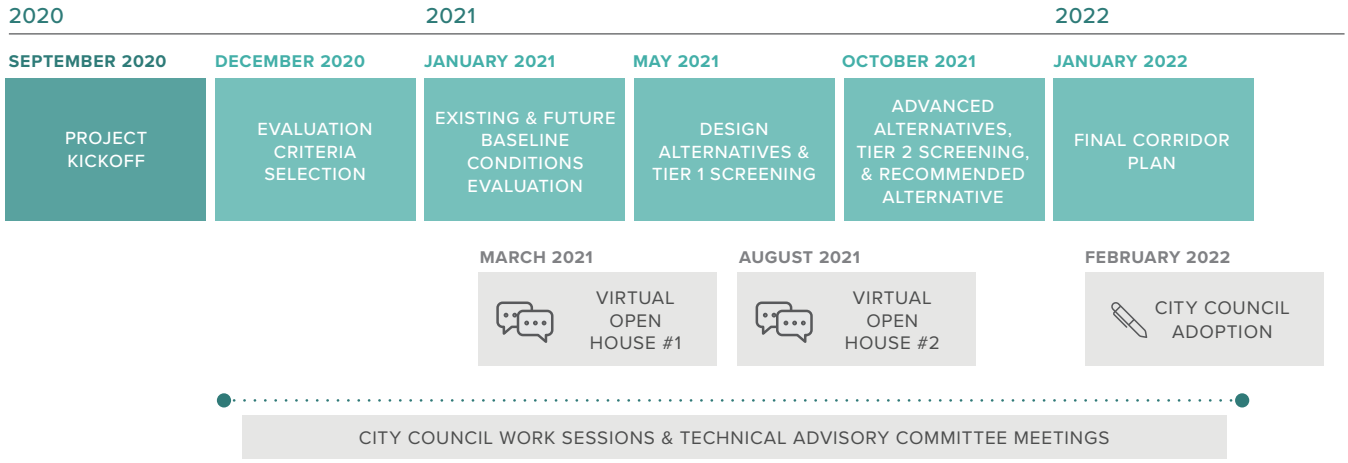
PROJECT INTRODUCTION, GOALS, AND RECOMMENDATION

The primary objective of the Wheatland Road Corridor Plan project was to develop a multimodal corridor plan and conceptual street design that removes barriers for all modes of travel, considers the latest urban safety improvements for pedestrians, bicycles, and transit riders, and creates an enjoyable experience for users. The project included community involvement to assure the design plan is consistent with the needs of key stakeholders (including neighborhoods, schools, and businesses).

The project area along Wheatland Road stretches from Jays Drive, in the north, to River Road, in the south, for a total of 1.8 miles in Keizer, Oregon. The project process included evaluating existing and future baseline conditions, identifying evaluation criteria, screening three project alternatives (Tier 1 Screening), selecting two project alternatives to further screen (Tier 2 Screening), providing a recommended alternative, presenting the findings to City Council, and then adopting the Final Corridor Plan.

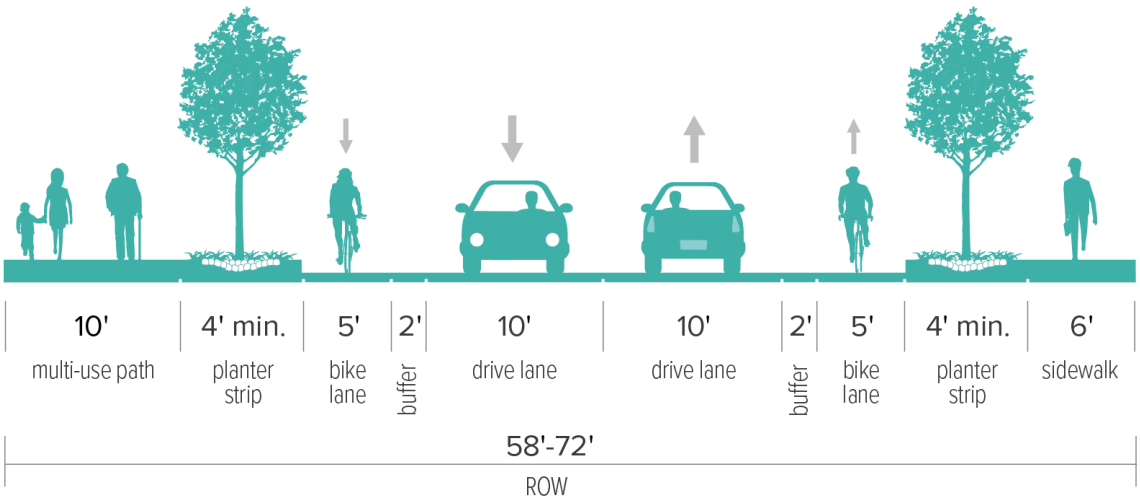
Throughout the project, the project team took time to listen and understand community issues, thereby being able to address concerns to put together the best solution for this particular community. The project team received public input primarily through the two virtual open houses held at key stages of the project. Regular meetings were also held with the City and a Technical Advisory Committee (TAC).





In weighing all the information identified in this study, including the City's transportation goals, community feedback, estimated costs, and technical analysis, the project team recommends that **Alternative #3: Multi-Use Path with Buffered Bike Lanes is the best solution for Wheatland Road**. This alternative is also the general community's preferred alternative and is anticipated to be the safest option, helps support multimodal travel, and is consistent with community's visions for Wheatland Road.

BUFFERED BIKE LANES & MULTI-USE PATH: WHEATLAND ROAD



EXISTING AND FUTURE BASELINE CONDITIONS

Existing transportation facilities and travel conditions on Wheatland Road were evaluated to establish a baseline for existing operations and to assess potential design alternatives and improvements to the corridor.

EXISTING TRANSPORTATION FACILITIES

The existing transportation facilities are summarized as follows:

- **Roadway Configuration**: Two travel lanes with on-street bike lanes
- **Pavement Condition**: Rated either good or very good condition, with some preventative maintenance recommended.
- **Roadway Context**: Majority residential/suburban uses with some commercial uses
- **Right-of-Way**: Width ranges from approximately 60 feet to 72 feet.
- **Sidewalks**: Intermittently spaced sidewalks of standard width and are typically located curbside. Large gaps in connectivity exist with safety concerns for pedestrians, especially young children. Walkability of corridor is generally rated as "Poor." The majority of curb ramps along the corridor are either missing or not meeting current ADA standards.
- **Marked Pedestrian Crossings**: Marked school crossings are located at Clear Lake Road and Parkmeadow Drive.
- **Bike Lanes**: Marked on-street bicycle lanes varying between five feet and six feet wide exist on both sides of Wheatland Road. Bikeability of corridor is generally rated as "Fair."
- **Transit**: Cherriots (Salem Area Mass Transit District) services the southern end of the corridor from Parkmeadow Drive to River Road, with five southbound bus stops located within the project corridor vicinity. None of the transit bus stops currently have amenities or covered waiting areas.
- **Posted Speed Limit**: 40 mph, 85th percentile speed is 44-45 mph.
- **Street Lighting**: Non-uniform lighting throughout the corridor on Portland General Electric (PGE) utility poles.

TRAVEL CONDITIONS HIGHLIGHTS

A wide variety of measures were used to evaluate existing and future baseline travel conditions including traffic patterns, crash data, intersection operations, and quality of travel for pedestrians and bicyclists. Traffic volumes vary by time of day and follow a typical directional pattern; both the morning (AM) peak period (7am to 9am) and evening (PM) peak period (4pm to 6pm) were analyzed.

HIGHLIGHTS OF THE EXISTING TRAVEL CONDITIONS:

DAILY TRAFFIC VOLUME RANGES BETWEEN **5,300 AND 8,600** ALONG THE CORRIDOR

2.75 MINUTES AVERAGE **END-TO-END TRAVEL TIME** ON THE CORRIDOR DURING THE **PM PEAK PERIOD**

85TH PERCENTILE SPEEDS ARE UP TO **5 MPH HIGHER** THAN THE POSTED SPEEDS

ALL STUDY INTERSECTIONS **MEET THE CITY'S OPERATING STANDARDS** FOR BOTH THE EXISTING (2020) AND FUTURE BASELINE CONDITIONS (2042)

RUSSETT DRIVE AND CLEAR LAKE ROAD INTERSECTIONS HAD **CRASH RATES HIGHER THAN 90% OF INTERSECTIONS OF SIMILAR TYPE IN OREGON**

IN THE LAST 5 YEARS, THERE HAS BEEN:

- **1 SERIOUS INJURY**
- **3 PEDESTRIAN CRASHES**
- **1 BICYCLE CRASH**

EVALUATION CRITERIA

The goals, objectives, and policies for the future of Keizer's transportation system are found in the City's Transportation System Plan (TSP). These attributes guided the direction of the Wheatland Road Corridor Study and public process. Based on the goals, objectives, and policies, the following criteria were identified to evaluate the proposed design alternatives.

TIER 1 CRITERIA:

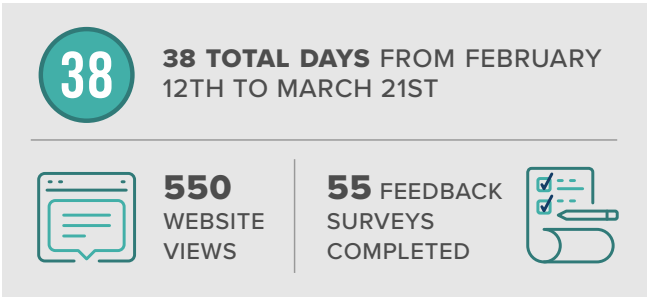
- Neighborhood Livability
- Environmental
- Utilization of Existing Infrastructure
- Traffic Operations
- Safe Routes to School
- Safety
- Transportation Mode Choices/ Multimodal Connectivity
- Equity
- Convenient and Accessible Transit
- Cost-Effective

TIER 2 CRITERIA:

- Traffic Operations (delay, queuing, and speed)
- Pedestrian and Bicycle Qualitative Assessment
- Safety Impacts (including Safe Routes to School)
- Right-of-Way and Utility Impacts
- Planning-Level Cost Estimates

VIRTUAL OPEN HOUSE #1 SUMMARY

Virtual Open House #1 was held from February 12th to March 21st (total of 38 days). The open house was accessed through the City's project website[1] and provided the general public with digital posterboards, the two technical memoranda describing the existing and future baseline conditions and evaluation criteria, as well as a 10-question feedback survey. There were over 550 website views and 55 feedback surveys completed during the open house period.



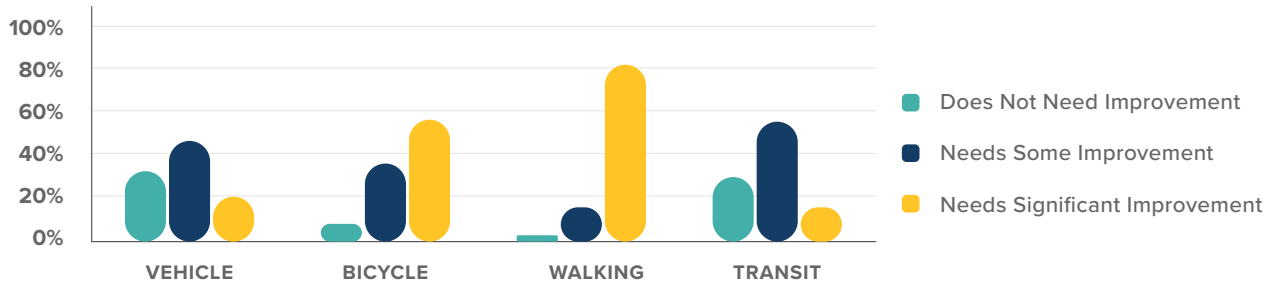
The primary goals of the open house were to determine community priorities and help identify any deficiencies in the corridor that the project team had not identified. The most significant feedback received from the survey is listed below:

- Walking and biking were the modes of travel with the biggest barriers.
- The most common corridor improvements recommended by the public were a multi-use path, continuous sidewalks, enhanced street lighting, and lower vehicle travel speeds.
- Safety, neighborhood livability, and Safe Routes to School were selected as the most important evaluation criteria.
- Over 60 percent of respondents said that they would support a speed limit reduction.

1 https://www.keizer.org/WheatlandRoadMultimodalCorridorPlan

OPEN HOUSE #1: FEEDBACK SURVEY RESULTS

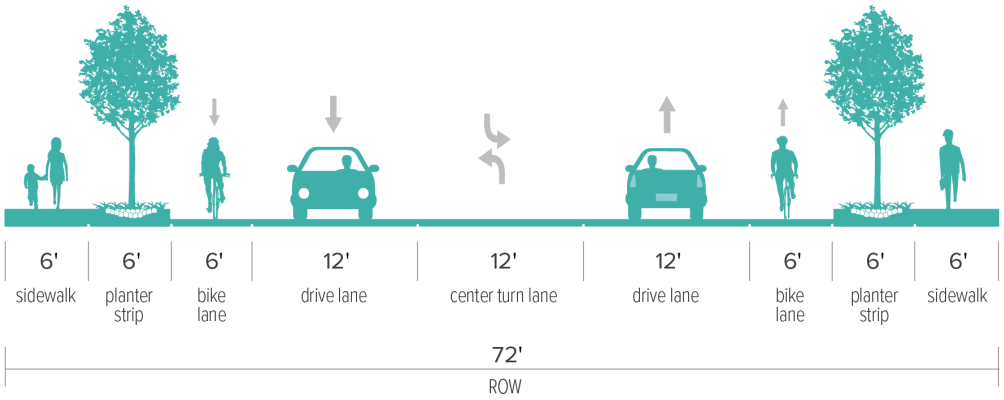
THE GOAL OF THIS PROJECT IS TO INCREASE SAFETY AND MOBILITY FOR ALL MODES OF TRAVEL. WHAT LEVEL OF IMPROVEMENT DO YOU THINK THESE MODE(S) OF TRAVEL NEED?



DESIGN ALTERNATIVES

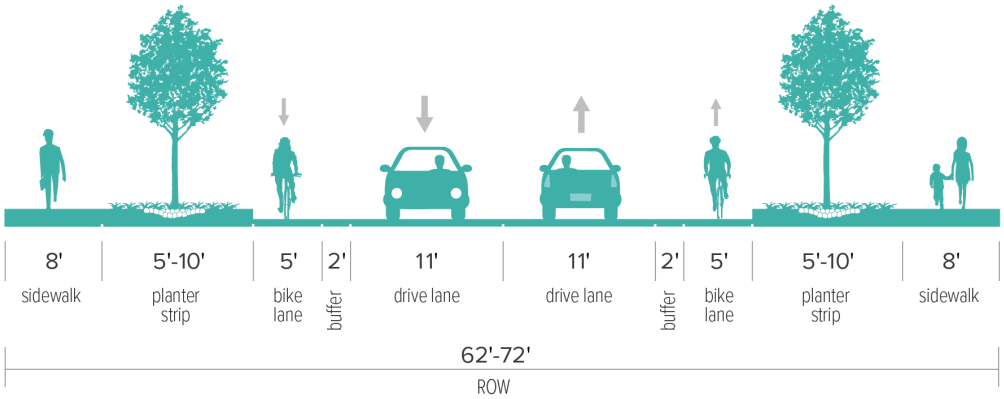
Three conceptual design alternatives and an existing (No Build) scenario were proposed for consideration for the Wheatland Road Corridor. The variety of alternatives included various transportation elements: sidewalks, planter strips, bicycle lanes, bicycle buffers, multi-use path, and vehicle travel lanes. Consideration was given to existing infrastructure and vegetation, right-of-way, and deficiencies and needs identified in Technical Memorandum #1. The three alternatives are shown below.

ALTERNATIVE #1: TRANSPORTATION SYSTEM PLAN



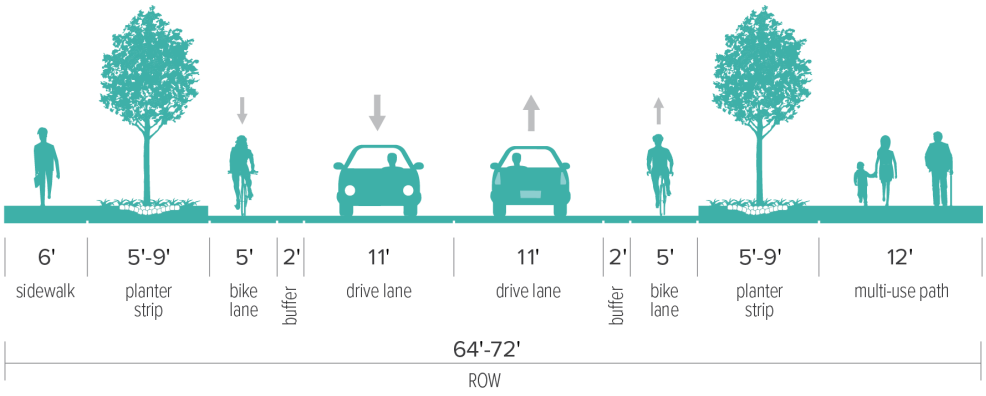
Alternative #1 is based on the City's standard for Minor Arterials and includes a center turn lane, sidewalks, on-street bike lanes, and planter strips.

ALTERNATIVE #2: BUFFERED BIKE LANES



Alternative #2 provides more comfortable bicycle facilities by adding a buffer and includes wide 8' sidewalks on both sides of the road.

ALTERNATIVE #3: BUFFERED BIKE LANES & MULTI-USE PATH



Alternative #3 provides a 12' multi-use path that accommodates cyclists of all ages and abilities as well as buffered bike lanes for more experienced riders.

TIER 1 SCREENING RESULTS

A Tier 1 Screening of the three design alternatives was performed to identify the alternative(s) that would most align with the goals, objectives, and policies of the City. This was done by scoring the alternatives based on the evaluation criteria previously determined. The criteria were scored over a range of -2 to +2 as compared to the Existing Configuration. A score of 0 implied that the alternative had no change from the existing, a negative score implied that the alternative degraded conditions, and a positive score implied that the alternative improved conditions. The scoring weighed each of the ten criterion equally.

All three alternatives were shown to be an overall improvement from existing conditions, with Alternative #3 having the most improvement and Alternative #2 not far behind. The larger difference in scores between Alternative #1 and Alternatives #2 and #3 can be attributed to two factors. First, Alternatives #2 and #3 provide increasingly safer multimodal facilities. The buffered bike lanes and wider sidewalks are safe options for students going to/from school as well as the general public. The multi-use path in Alternative #3 provides additional safety for bicyclists of all ages and abilities. Secondly, Alternatives #2 and #3 have similar pavement cross section widths as the existing condition, meaning that road reconstruction would be less invasive than Alternative #1. More of the existing infrastructure could be utilized for Alternatives #2 and #3, also decreasing the total project cost.

TIER 1 SCORING RESULTS

ALTERNATIVE #1 TRANSPORTATION SYSTEM PLAN	ALTERNATIVE #2 BUFFERED BIKE LANES	ALTERNATIVE #3 BUFFERED BIKE LANES & MULTI-USE PATH
1.25	1.65	1.75

VIRTUAL OPEN HOUSE #2 SUMMARY

Virtual Open House #2 was held from July 23rd to August 8th (total of 17 days). As with the first open house, the second open house was also accessed through the City's project website and provided the public with digital posterboards, all technical documentation to-date, as well as a four-question feedback survey. There were over 740 website views and 196 feedback surveys submitted.

17 TOTAL DAYS FROM JULY 23RD TO AUGUST 8TH

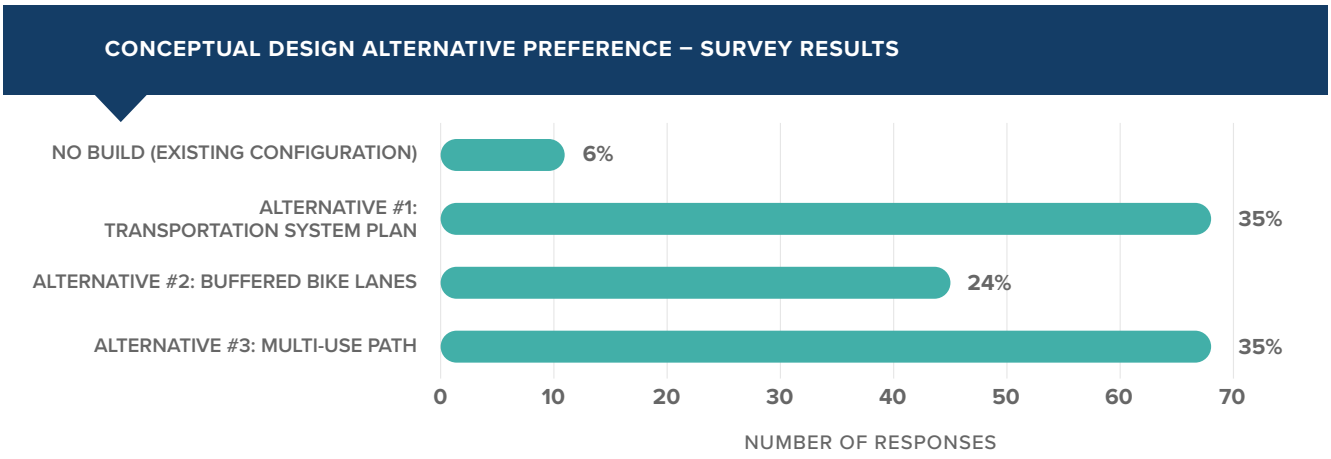
740 WEBSITE VIEWS

196 FEEDBACK SURVEYS COMPLETED

A few additional responses from the public were also emailed to the City staff directly. The primary goals of the open house were to gather community input on the conceptual design alternatives and collect feedback on general project concerns. A few highlights of the survey responses include:

- Alternative #1: TSP and Alternative #3: Multi-Use Path and Buffered Bike Lanes were the most preferred design concepts, both receiving 35 percent of the votes, respectively. It is important to note that Alternatives #2 and #3 are very similar and because of this, most of the voters for Alternative #2 would likely support Alternative #3 over Alternative #1, making Alternative #3 the overall preferred option by the public.
- The most common comments in the survey were related to the following:
  - » Desire for safe and connected sidewalks and bicycle lanes
  - » Need for better street lighting
  - » Right-of-way private property impacts
  - » Landscaping/buffer/planter strips maintained
  - » Speeding

VIRTUAL OPEN HOUSE #2: FEEDBACK SURVEY RESULTS



ADVANCED TWO ALTERNATIVES

Based on the results of the Tier 1 Screening, feedback at the open houses, and direction from the City, Alternative #1: TSP and Alternative #3: Multi-Use Path and Buffered Bike Lanes were advanced to the Tier 2 Screening process, which included full-corridor concept layouts and planning-level cost estimates.

Alternative #3 scored the highest in the Tier 1 Screening of the design alternatives and Alternative #1 scored the lowest of the alternatives. However, Alternative #1 and Alternative #3 shared the highest percentage of votes (approximately 35 percent) based on the public feedback surveys. The City supported the advancement of Alternative #3 based on its high scoring in both the screening process and community feedback. Although Alternative #1 had low support based on the results of the Tier 1 Screening, the alternative received support by the public and was therefore advanced for final consideration.

MODIFICATIONS TO ALTERNATIVE #3: MULTI-USE PATH AND BUFFERED BIKE LANES

During the process of creating the full-corridor concept design layouts, the original cross section design for Alternative #3 was modified to better address the concerns voiced by the public during Virtual Open House #2. Many members of the public voiced their desire for the Wheatland Road project to minimize private property and right-of-way impacts and to provide safer, separated pedestrian and bicycle facilities for all users, including school-age children. Hearing this feedback, the Wheatland Road Technical Advisory Committee (TAC) did not feel as though the original cross section for Alternative #3 provided sufficient separation for users of the multi-use path from the vehicle travel lanes. In order to provide more separation, the multi-use path was moved to the west side of the road where there was more available right-of-way and the width of the path was reduced from 12 feet to 10 feet. These two modifications increased separation and also reduced private property impacts.

During the cost estimating process, the TAC discussed ideas for improving cost savings for Alternative #3 to make the project more affordable. By reducing the travel lanes from 11 feet to 10 feet, a large cost savings was realized as the majority of the existing curb-to-curb width could be preserved along the corridor. Narrower travel lanes will encourage lower vehicle speeds, which was another major concern of the public. However, with the adjacent two-foot bicycle buffer, there is still adequate width for freight activity along the corridor.

Overall, these modifications as well as some adjustments to street utilities, resulted in a reduction of 36% in planning level cost estimates for Alternative #3.

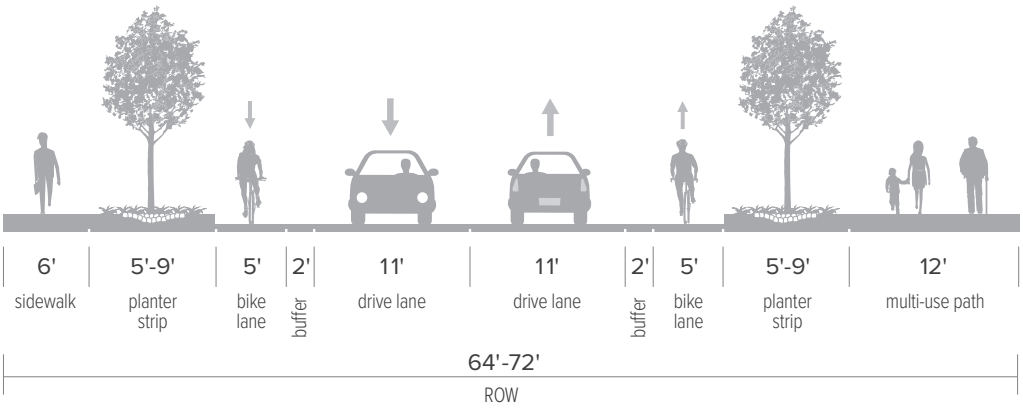
IMPROVEMENTS FOR EITHER ALTERNATIVE

Whether either alternative was selected, there are specific design improvements and details that are included for both alternatives. While they may be implemented in different ways due to cross section restraints, the following improvements were still applicable to both solutions:

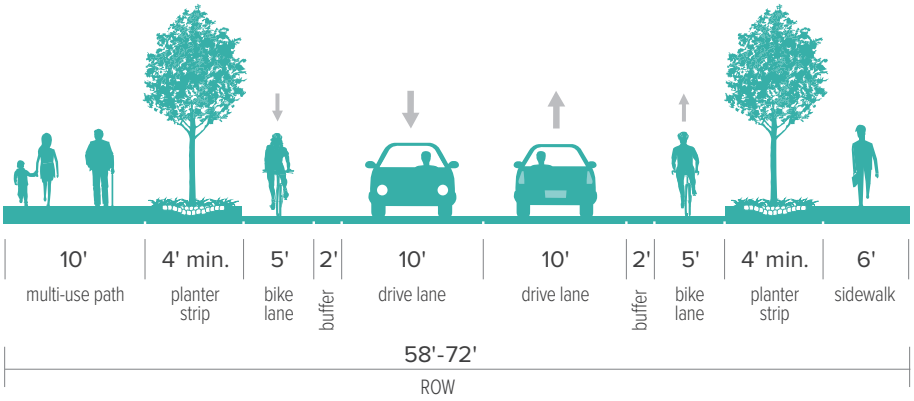
- **Enhanced Pedestrian Crossings**: Enhanced pedestrian crossing treatments including median refuge islands, enhanced signing and pavement markings, and Rectangular Rapid Flashing Beacons (RRFBs) are options to consider. The primary intersections in consideration are the intersections of Clearlake Road, Parkmeadow Drive, Russett Drive, and McNary Heights.
- **Transit Treatments**: Enhancements to the bus stops can include bus stop shelters, open-air

REVISED WHEATLAND ROAD CROSS SECTION FOR ALTERNATIVE #3

ALTERNATIVE #3 CROSS SECTION THAT WAS PRESENTED DURING VIRTUAL OPEN HOUSE #2



MODIFIED ALTERNATIVE #3



benches, and bus stop loading space for transit riders that does not conflict with multi-use path users, called "Concrete Bridges." These improvements will require collaboration with Cherriots during the design phase.

- **ADA Improvements**: All new sidewalks and curb ramps would be built along Wheatland Road and intersections would meet ADA standards. Today, nearly all curb ramps are out of compliance with current Americans with Disabilities Act (ADA) standards.
- **Practical Design Considerations**: Due to the nature of a pre-existing roadway, slight deviations to the chosen alternative cross section are expected in different sections of the corridor to match the existing infrastructure, reduce right-of-way impacts, and preserve mature trees as much as possible. This may include meandering sidewalks to save mature trees (e.g., existing oak trees near Russett Drive) or the absence of a planter strip to mitigate right-of-way acquisition.
- **Street Lighting**: New street lighting will be installed at intersections and segments along the corridor. This may entail new streetlight poles and supplemental lighting on utility poles when applicable.
- **Streetscape Elements**: Where landscaping buffers are provided, pedestrians are further separated from the roadway to increase their comfort level. The alignment of sidewalks are intended to minimize impact to adjacent properties, existing landscaping, and existing mature trees, so the width of the landscaping buffer will change along the corridor. The landscaping can include low-lying vegetation and street trees. The street tree plantings would be consistent with City standards.

SUMMARY OF ADVANCED ALTERNATIVES COMPARISON

Five Tier 2 criteria were evaluated for the final comparison of the two advanced alternatives. These criteria reflected the City's needs and most prominent comments received from the public.

TIER 2 CRITERIA EVALUATED:

- Traffic Operations
- Pedestrian and Bicycle Qualitative Assessment
- Safety Impacts
- Right-Of-Way and Utility Impacts
- Planning-Level Cost Estimates

Each criterion was analyzed for each alternative.

- **Traffic Operations**: Vehicle delay, queuing, and travel times were analyzed for each alternative. The center-turn lane in Alternative #1 provides slightly improved vehicle operations over Alternative #3 with the addition of a continuous left-turn lane.
- **Pedestrian and Bicycle Qualitative Assessment**: Walkability and bikeability scores were assessed for each alternative. Alternative #1 received a "Good" score due to complete sidewalks and standard bicycle lanes. Alternative #3 received an "Excellent" score due to the multi-use path and buffered bike lanes that provides facilities for all ages and abilities.
- **Safety Impacts**: Potential safety impacts including the mitigation of crash variables for current users as well as the enhancement of the system to encourage usage from people who do not currently feel safe using the system. The two-way left-turn lane for Alternative #1 has the ability to reduce rear-end crashes for vehicles. However, in Alternative #3, the buffered bike lanes have the ability to reduce bicycle crashes; also, the proposed bicycle and pedestrian facilities, as a whole, have a greater ability to attract new users who are currently hesitant to use the system due to safety risks. A left-turn lane at the Russett Drive intersection was identified as a key safety need and is included in the concept.
- **Right-of-Way and Utility Impacts**: Alternative #3 requires 90 percent less ROW acquisition (in square feet) than Alternative #1 due to a narrower cross section.
- **Planning-Level Cost Estimates**: Alternative #3 is approximately half the cost to construct compared to Alternative #1 due to its smaller footprint and the ability to maintain existing infrastructure.

PLANNING-LEVEL COST ESTIMATES

ALTERNATIVE #1: $17.9 MILLION

ALTERNATIVE #3: $9.9 MILLION

TIER 2 SCREENING RESULTS

A Tier 2 Screening of the final two design alternatives was performed using the five criteria mentioned previously. The criteria were scored over a range of -2 to +2 as compared to the No Build (Existing Configuration) alternative, similar to the Tier 1 Screening. The average of the Tier 1 and Tier 2 screening scores are shown below.

Alternative #1 scored an average of 1.13 and Alternative #3 scored an average of 1.58 after both Tier 1 and Tier 2 screening evaluations. Both alternatives are shown to be an overall improvement from existing conditions, however Alternative #3 received a higher score.

The difference in scores between Alternative #1 and Alternatives #3 can be attributed to two basic differences amongst the designs which were similarly seem in the Tier 1 screening process.

- First, Alternative #3 provides higher quality multimodal facilities and caters more to safety than mobility, while not sacrificing any vehicular operational measures.
- Second, Alternatives #3 has a pavement cross section width that is similar to the existing condition and will require less additional right-of-way, meaning that road reconstruction and property acquisition would be less invasive than Alternative #1 and has a significantly lower cost estimate.

TIER 1 AND 2 SCREENING SCORES

	ALTERNATIVE #1 TSP STREET DESIGN	ALTERNATIVE #3 BUFFERED BIKE LANES & MULTI-USE PATH
TIER 1 SCREENING	1.35	1.75
TIER 2 SCREENING	0.90	1.40
AVERAGE	1.13	1.58

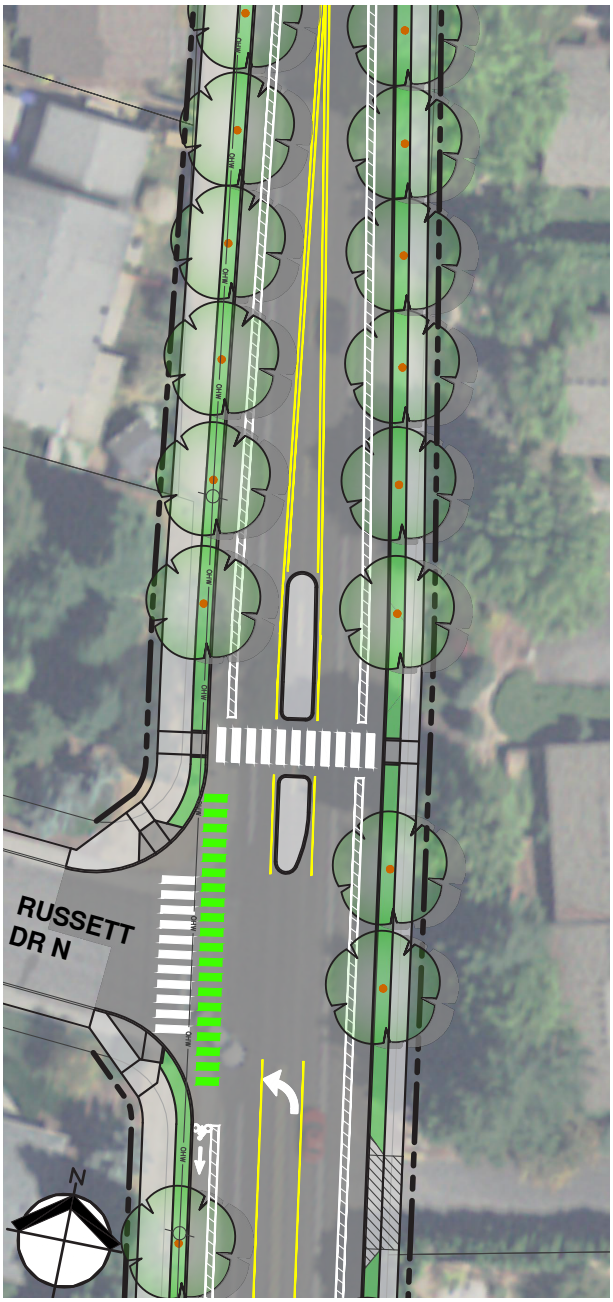
RECOMMENDED ALTERNATIVE

Based upon the results of the Tier 2 screening process, comments from the TAC, and the significant public input received, DKS recommends the following alternative for the Wheatland Road corridor:

ALTERNATIVE #3: MULTI-USE PATH AND BUFFERED BIKE LANES

Alternative #3 is best suited to meet the needs and desires of all users of the Wheatland Road corridor, specifically school-age users, while costing significantly less money and requiring less right-of-way and property impacts than the other alternatives. This solution was the preferred alternative from the general public and provides a safer system and multimodal travel options to improve what exists today. It both maintains the current level of traffic demand and is estimated to adequately accommodate future levels of traffic 20 years into the future. This alternative will also be more competitive to receive transportation funding because of the safety and multimodal design solutions provided.

The corridor plan presented is conceptual and changes to pedestrian improvements and landscaping details may occur during the design process.



CITY OF KEIZER
WHEATLAND ROAD CORRIDOR PLAN

COUNCIL WORK SESSION

JANUARY 2021

SHAPING A SMARTER
TRANSPORTATION EXPERIENCE™
DKSASSOCIATES.COM

AN EMPLOYEE-OWNED COMPANY

DKS

PROJECT MANAGEMENT TEAM

- City of Keizer
  - > Bill Lawyer
  - > Shane Witham
  - > *Hersch Sangster (Traffic Safety-Bikeways-Pedestrian Committee)*

- Mid-Willamette Valley Council of Governments
  - > Mike Jaffe

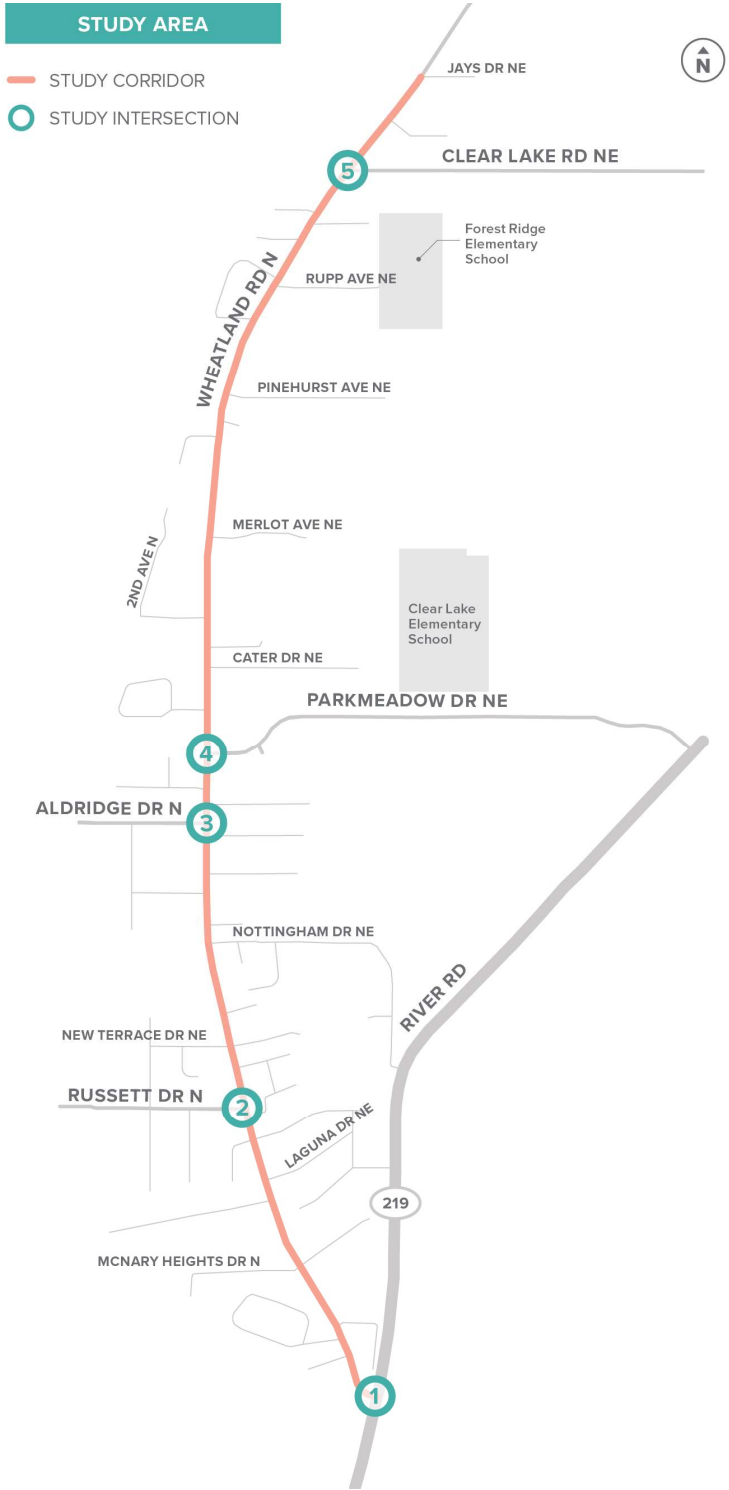
- ODOT Region 2
  - > Daniel Fricke

- DKS Associates
  - > Scott Mansur
  - > Jenna Bogert
  - > Travis Larson

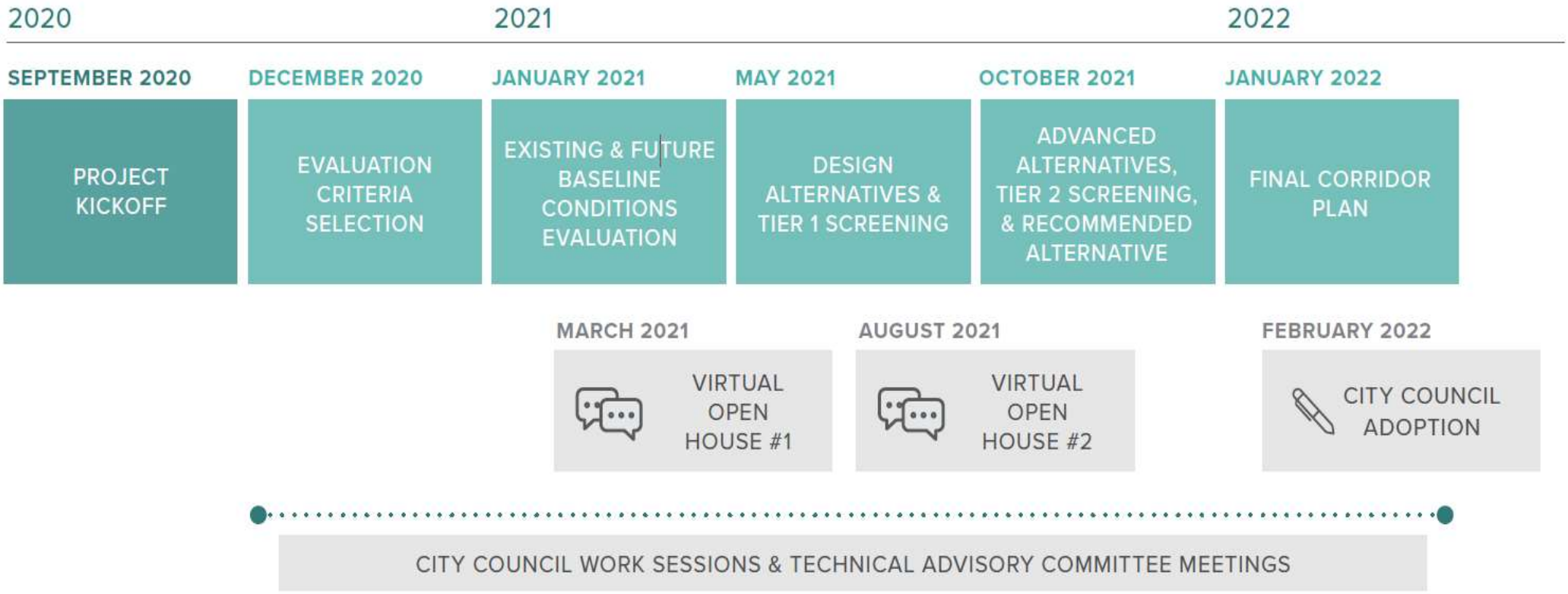
- AKS Engineering
  - > Richard Walker
  - > Tyler Roth

PROJECT PURPOSE

- Primary Objective: Develop a **multimodal corridor plan** that provides facilities for **all modes of travel** and creates an enjoyable experience for **all users**.
- Project Area: Wheatland Road corridor from Jays Drive to River Road (1.8-miles in length).
- Public Input: Provide a plan that the **public supports** and meets the **community's vision**.



PROJECT PROCESS



Continual engagement with the public and stakeholder committees between each deliverable

EXISTING & FUTURE BASELINE CONDITIONS

- Roadway Configuration: Two travel lanes with on-street bike lanes
- Roadway Context: Majority residential/suburban uses with some commercial uses
- Right-of-Way: Width ranges from approximately 60 feet to 72 feet.
- Sidewalks: Intermittently spaced sidewalks of standard width and are typically located curbside.
- Marked Pedestrian Crossings: Marked school crossings are located at Clear Lake Road and Parkmeadow Drive.
- Transit: Cherriots services the southern end of the corridor from Parkmeadow Drive to River Road.
- Street Lighting: Non-uniform lighting throughout the corridor on utility poles.

EXISTING & FUTURE BASELINE CONDITIONS

DAILY TRAFFIC VOLUME RANGES BETWEEN **5,300 AND 8,600** ALONG THE CORRIDOR

2.75 MINUTES AVERAGE **END-TO-END TRAVEL TIME** ON THE CORRIDOR DURING THE **PM PEAK PERIOD**

85TH PERCENTILE SPEEDS ARE UP TO **5 MPH HIGHER** THAN THE POSTED SPEEDS

ALL STUDY INTERSECTIONS **MEET THE CITY'S OPERATING STANDARDS** FOR BOTH THE EXISTING (2020) AND FUTURE BASELINE CONDITIONS (2042)

RUSSETT DRIVE AND CLEAR LAKE ROAD INTERSECTIONS HAD **CRASH RATES HIGHER THAN 90% OF INTERSECTIONS OF SIMILAR TYPE IN OREGON**

IN THE LAST 5 YEARS, THERE HAS BEEN:

- **1 SERIOUS INJURY**
- **3 PEDESTRIAN CRASHES**
- **1 BICYCLE CRASH**

OPEN HOUSE #1 FEEDBACK

Primary Survey Feedback

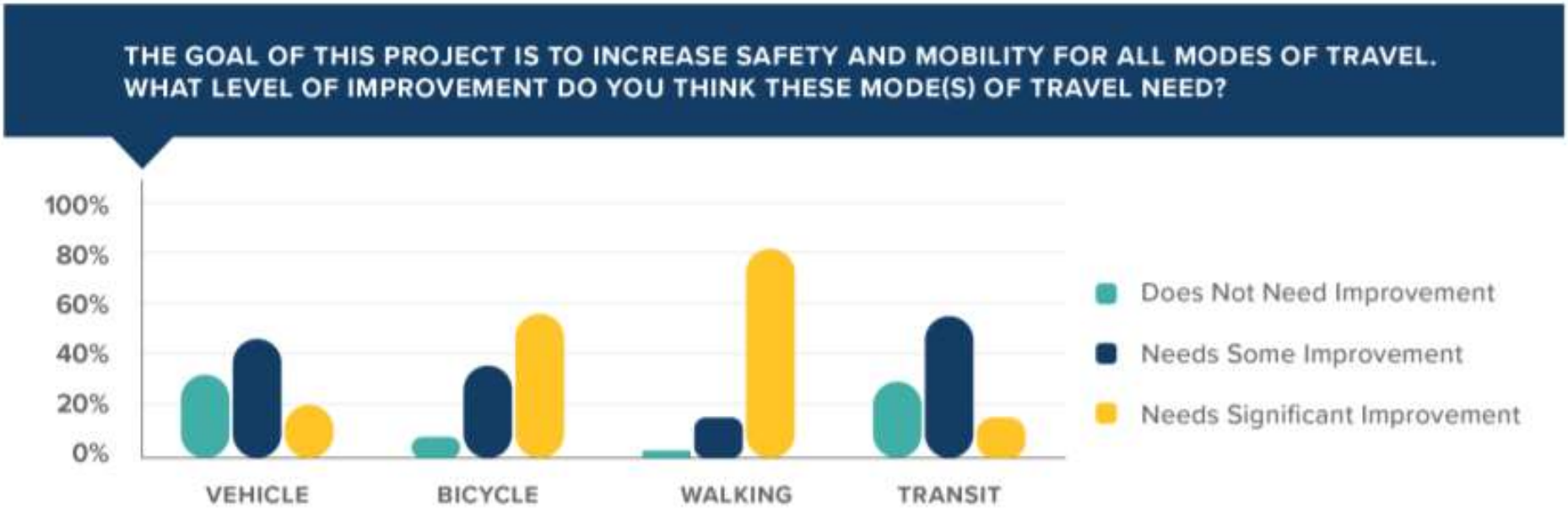
- Walking and biking were the modes of travel with the biggest barriers.
- The most common corridor improvements recommended by the public were a multi-use path, continuous sidewalks, enhanced street lighting, and lower vehicle travel speeds.

38 TOTAL DAYS FROM FEBRUARY 12TH TO MARCH 21ST

550 WEBSITE VIEWS

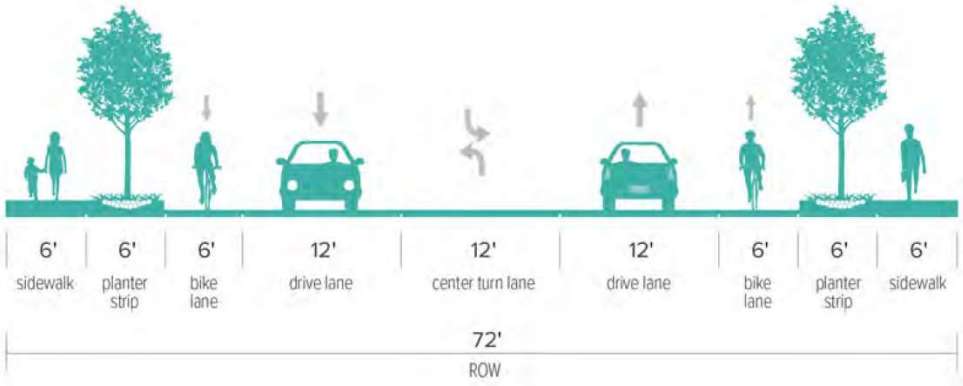
55 FEEDBACK SURVEYS COMPLETED

- Safety, neighborhood livability, and Safe Routes to School were selected as the most important evaluation criteria.
- Over 60% of respondents said that they would support a speed limit reduction.



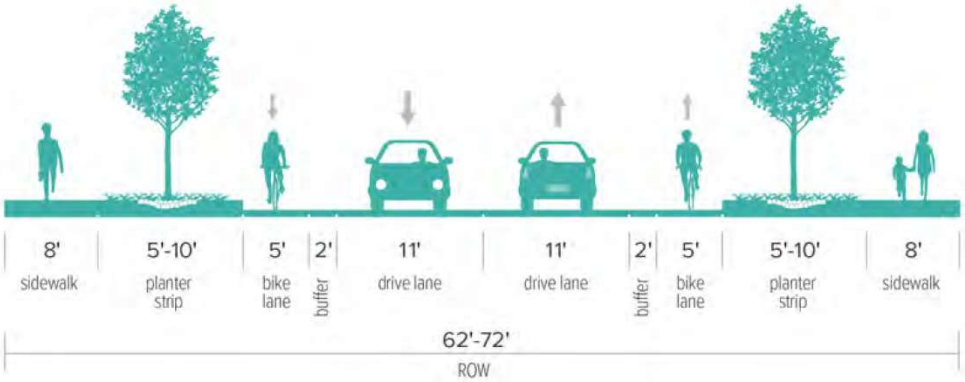
THREE DESIGN ALTERNATIVES

ALTERNATIVE #1: TRANSPORTATION SYSTEM PLAN



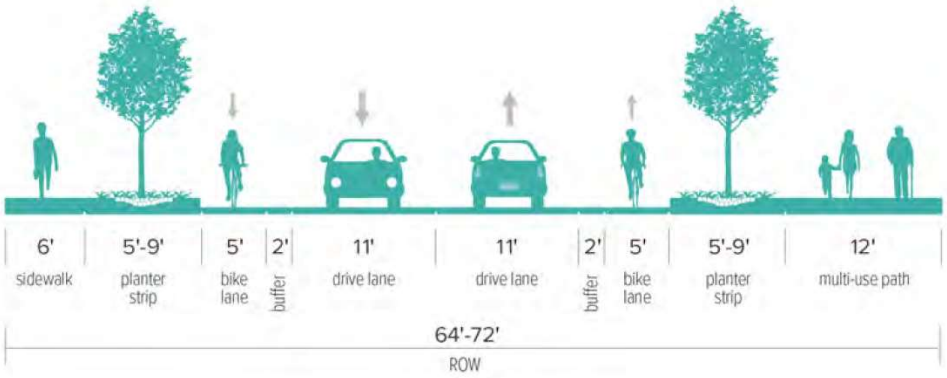
Alternative #1 is based on the City's standard for Minor Arterials and includes a center turn lane, sidewalks, on-street bike lanes, and planter strips.

ALTERNATIVE #2: BUFFERED BIKE LANES



Alternative #2 provides more comfortable bicycle facilities by adding a buffer and includes wide 8' sidewalks on both sides of the road.

ALTERNATIVE #3: BUFFERED BIKE LANES & MULTI-USE PATH



Alternative #3 provides a 12' multi-use path that accommodates cyclists of all ages and abilities as well as buffered bike lanes for more experienced riders.

TIER 1 SCREENING

TIER 1 CRITERIA:

- Neighborhood Livability
- Environmental
- Utilization of Existing Infrastructure
- Traffic Operations
- Safe Routes to School
- Safety
- Transportation Mode Choices/ Multimodal Connectivity
- Equity
- Convenient and Accessible Transit
- Cost-Effective

TIER 1 SCORING RESULTS

ALTERNATIVE #1
TRANSPORTATION SYSTEM PLAN

1.25

ALTERNATIVE #2
BUFFERED BIKE LANES

1.65

ALTERNATIVE #3
BUFFERED BIKE LANES & MULTI-USE PATH

1.75

Range of -2 to +2 as compared to the Existing Configuration.

- A score of 0 implied that the alternative had no change from the existing,
- A negative score implied that the alternative degraded conditions, and
- A positive score implied that the alternative improved conditions.

OPEN HOUSE #2 FEEDBACK

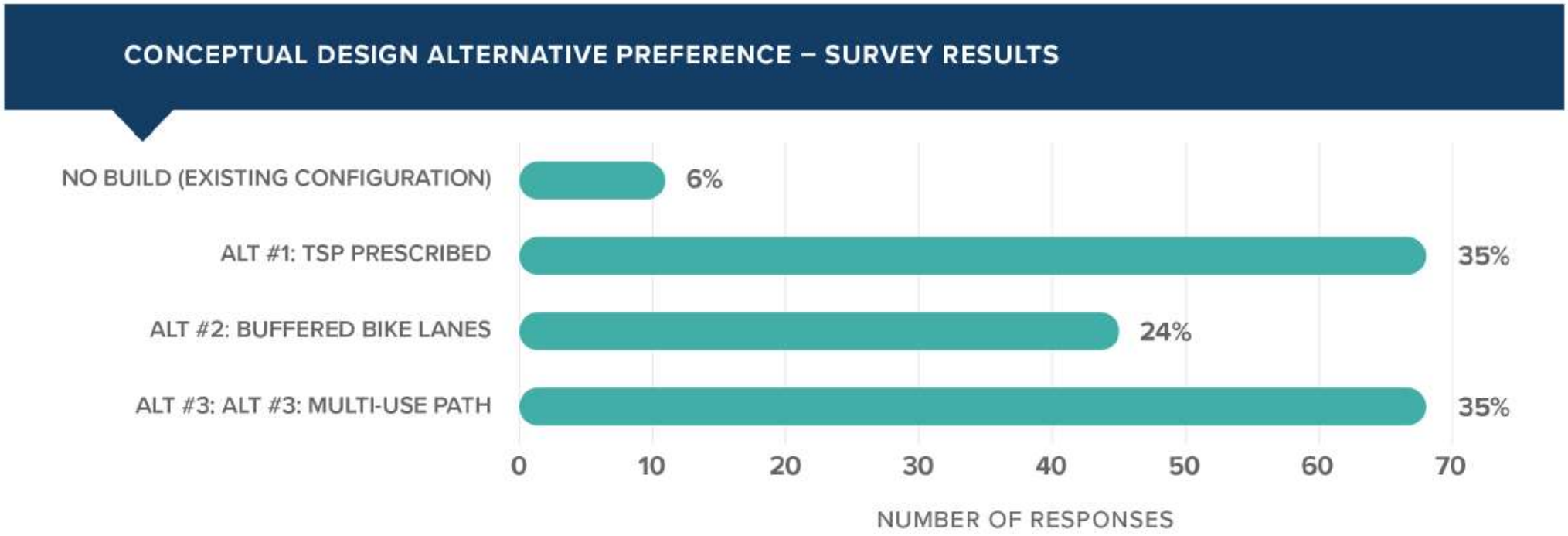
17 TOTAL DAYS FROM JULY 23RD TO AUGUST 8TH

740 WEBSITE VIEWS

196 FEEDBACK SURVEYS COMPLETED

Primary Survey Comments

- Desire for Safe and Connected Sidewalks and Bicycle Lanes
- Need for Better Street Lighting
- Right-of-Way Concerns
- Maintainable Buffer/Planter Strips
- Speed Concerns on Wheatland Road

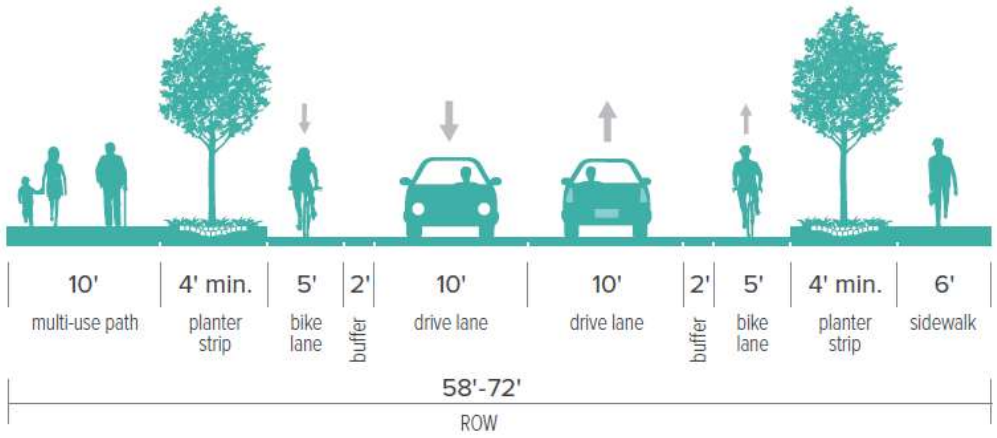


MODIFICATIONS TO ALTERNATIVE #3

- Modifications better address concerns from the public:
  - minimize private property and right-of-way impacts
  - provide safer, separated pedestrian facilities

- Modifications include:

MODIFIED ALTERNATIVE #3



- Modifications resulted in:
  - Reduced **private property/ROW impacts** by 33%
  - Significant **cost savings** of 36%
  - **More street trees and landscape buffering** for multi-use path users

ADVANCED ALTERNATIVES

Alternative #1:
Transportation System Plan

Alternative #3:
Buffered Bike Lanes &
Multi-Use Path

ADVANCED ALTERNATIVES COMPARISON

- Traffic Operations:
  - The center-turn lane in Alt #1 provides slightly improved vehicle operations over Alt #3 with the addition of a continuous left-turn lane.
- Pedestrian and Bicycle Qualitative Assessment:
  - Alt #1 received a "Good" score due to complete sidewalks and standard bicycle lanes.
  - Alt #3 received an **"Excellent"** score due to the multi-use path and buffered bike lanes that provides facilities for all ages and abilities.
- Safety Impacts:
  - The two-way left-turn lane for Alt #1 can reduce rear-end crashes for vehicles.
  - Alt#3 has the **greater ability to attract new users** who are currently hesitant to use the system due to safety risks and the buffered bike lanes can reduce bicycle crashes.
- Right-of-Way and Utility Impacts:
  - Alt #3 requires **3x less ROW acquisition** (in square feet) than Alt #1.
- Planning-Level Cost Estimates:
  - Alt #3 is approximately **half the cost to construct** compared to Alt #1 due to its smaller footprint and the ability to maintain existing infrastructure.

TIER 2 SCREENING

TIER 2 CRITERIA:

- Traffic Operations (delay, queuing, and speed)
- Pedestrian and Bicycle Qualitative Assessment
- Safety Impacts (including Safe Routes to School)
- Right-of-Way and Utility Impacts
- Planning-Level Cost Estimates

Difference In Scores:

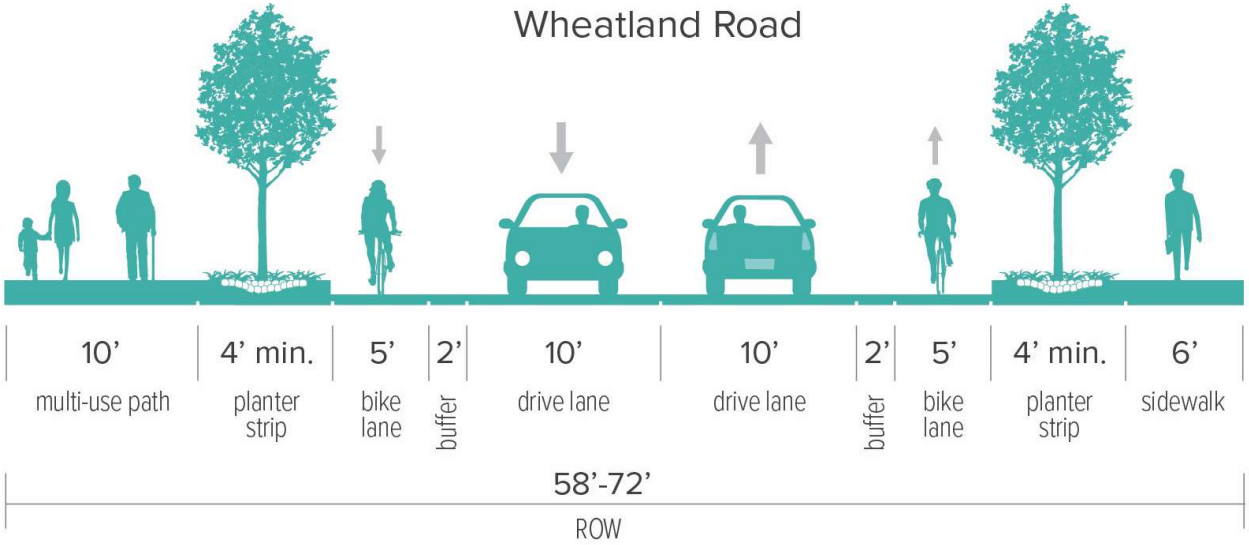
- Alternative #3 provides higher quality multimodal facilities and caters more to safety than mobility, while not sacrificing any vehicular operational measures.
- Alternatives #3 requires less road reconstruction and private property acquisition, resulting in a lower cost estimate.

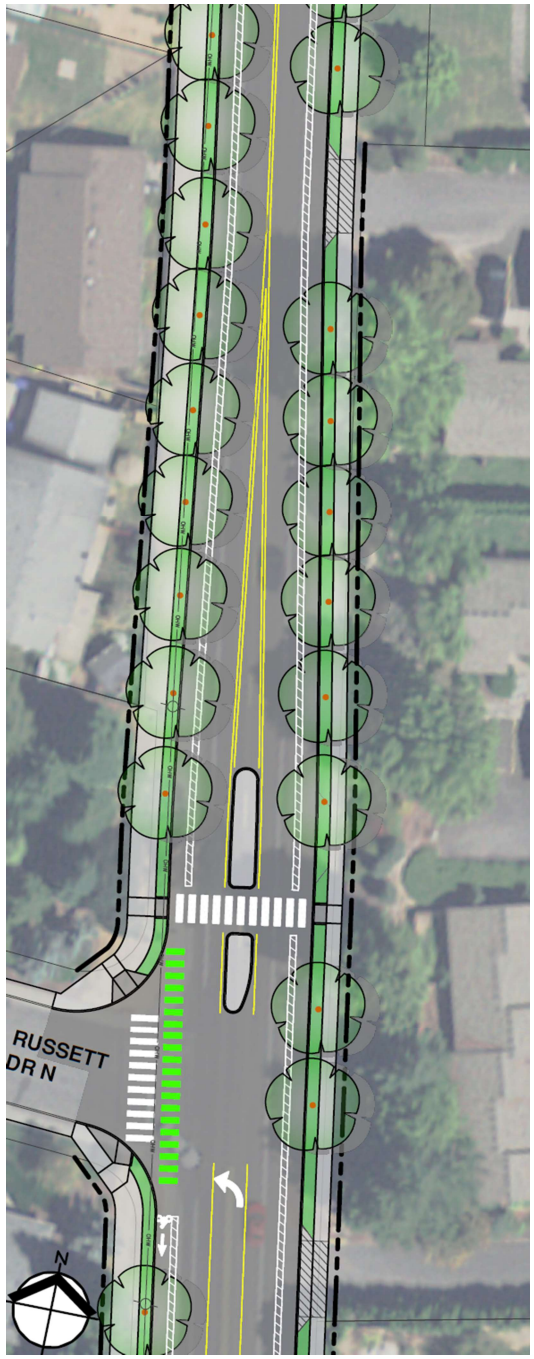
TIER 1 AND 2 SCREENING SCORES

	ALTERNATIVE #1 TSP STREET DESIGN	ALTERNATIVE #3 BUFFERED BIKE LANES & MULTI-USE PATH
TIER 1 SCREENING	1.35	1.75
TIER 2 SCREENING	0.90	1.40
AVERAGE	1.13	1.58

RECOMMENDED ALTERNATIVE

Alternative #3: Multi-Use Path and Buffered Bike Lanes





- **Best suited to meet the needs and desires of the community**
- Provides **safe** multimodal options
- **Lower cost** estimate, competitive for federal grant funding
- **Less right-of-way** and property impacts
- Provides adequate vehicle capacity over next 20 years

RECOMMENDED ALTERNATIVE

Pedestrian & Bicycle Treatments

Buffered Bike Lanes

Rapid Rectangular Flashing Beacon (RRFB)

Green Bicycle Lane Pavement Markings at Conflict Points

Multi-Use Path

Median Pedestrian Refuge Island

NEXT STEPS

- City seeking funding opportunities
  - > Safe Routes to School
  - > SKATS Transportation Improvement Program
  - > All Roads Transportation Safety (ARTS) Program
  - > Infrastructure and Investments Act
- Design process
  - > May include some changes to the conceptual layout
  - > Determination of final locations and types of pedestrian improvements
  - > Coordination of stormwater, utility, landscaping, and other modifications to limit property impacts and minimize costs

QUESTIONS?

THANK YOU