

# Improving Community Health in Crook County through Pedestrian Design: A Rapid Health Impact Assessment of Prineville's Highway 26 Streetscape Improvement Project

Oregon Health Authority Health Impact Assessment Program

Crook County Health Department

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## Executive Summary

The purpose of this rapid health impact assessment (HIA) is to help inform decisions related to the planning and implementation of a streetscape improvement project for Hwy 26 in downtown Prineville. It is the result of a full day workshop led by staff from the Oregon Health Authority's HIA program in Prineville on May 17<sup>th</sup>, 2017 with local public health and planning professionals and other local stakeholders with knowledge of the project and community. Through this workshop, participants identified the key health issues that would be impacted by the project and assessed different possible project components based on their relative potential to impact the key health issues.

## Findings

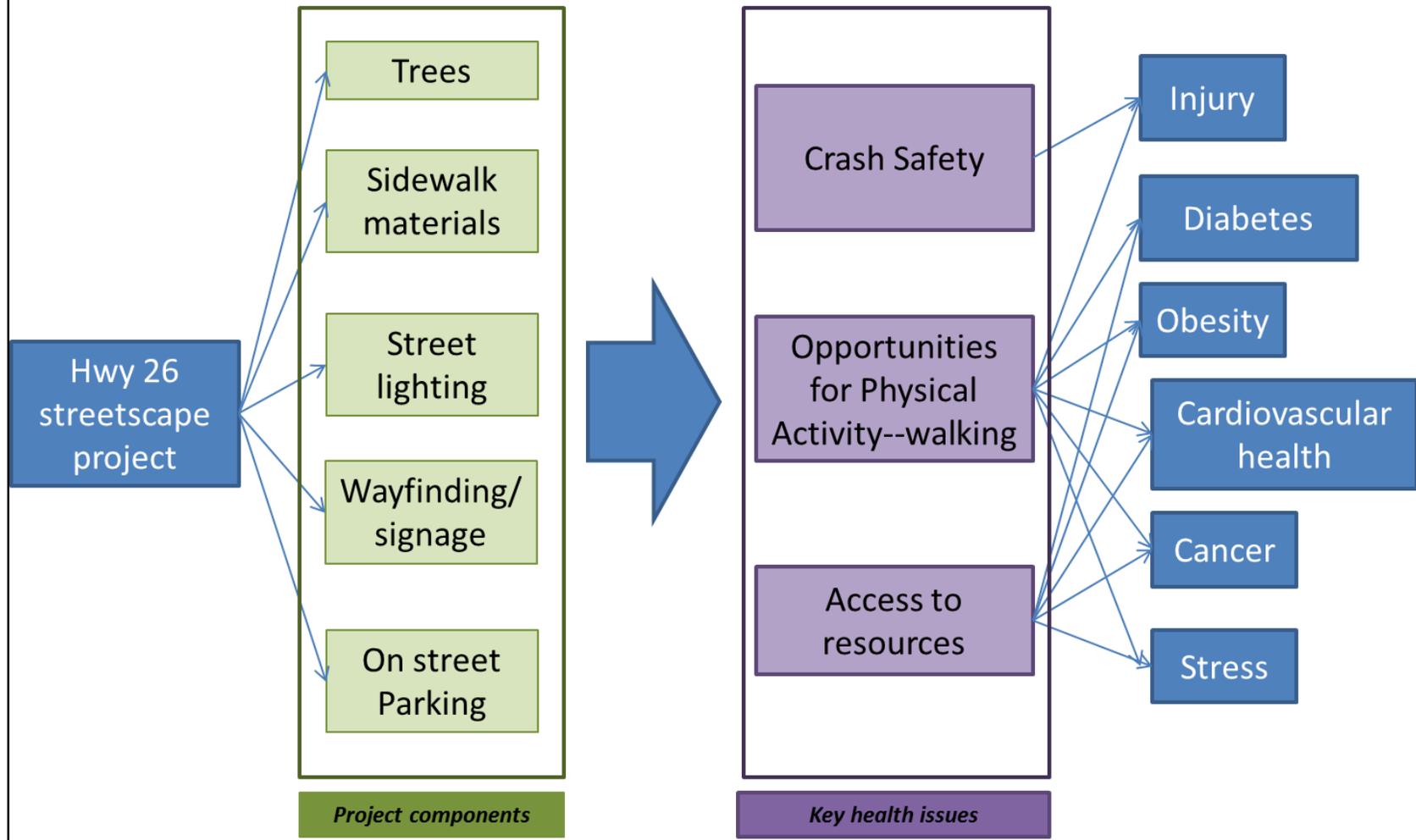
- **Wayfinding/signage and street lighting are the two project components that would have the greatest impact on all three health issues.** If properly designed and placed, directional signs could facilitate motor vehicle movement through the area by providing clear directions to off-street parking facilities, particularly for vehicles with trailers, which are very common in Prineville. Currently drivers are often confused about where to go, occasionally resulting in congestion and distracted driving as they try to navigate the area. For bicyclists and pedestrians, signs and maps could facilitate their movement in and through the area by encouraging them to use nearby trails and low-traffic streets which are safer and more convenient and enjoyable for people moving through the area.
- **The presence of trees and use of attractive paving materials would also likely encourage walking and improve access to local health supportive resources such as healthy food retail and public services.** By creating a more attractive walking environment, these project components would make walking more attractive. Properly chosen paving materials could also facilitate mobility for people using mobility devices such as canes and walkers. Street trees would also provide shade.
- **Minor changes to on-street parking were judged to have relatively little impact on the health issues.** While it is possible that this might support pedestrian movement, the group thought that the impacts would be relatively minor.

## Recommendations

The findings above and the workshop discussion support the following recommendations:

- Ensure inclusion of wayfinding and signage, trees, lights, and decorative concrete in the project design.
- Work with ODOT and local stakeholders to ensure that these four project components are well-designed, specifically that:
  - Wayfinding and signage is effectively designed for motorists, pedestrians, and bicyclists
  - Paving materials are designed with input from people with access and functional needs, including blind people.

## Connecting Health and the Hwy 26 streetscape Project

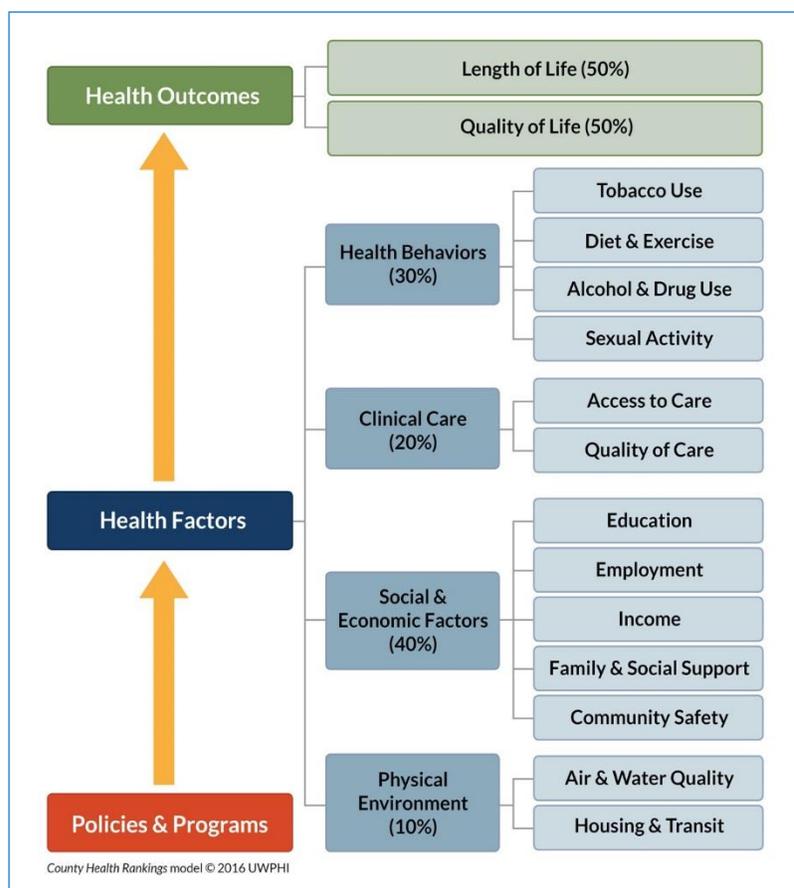


## Introduction

Health impact assessment (HIA) is a structured process developed by public health professionals in order to facilitate engagement with non-health sectors to explicitly consider and address the potential direct and indirect health impacts of proposed plans, policies, and projects.<sup>1</sup> The primary reason that public health professionals are interested in engaging other sectors is that research has increasingly demonstrated that many of the primary health issues facing most communities are influenced by decisions made in non-health sectors. According to the University of Wisconsin’s Population Health Institute, only about 20% of the differences between the health of one community from another can be explained by the relative accessibility and quality of clinical care (Figure 1). Much more important are the social, economic and physical conditions in which people live, along with their individual behaviors and choices, many of which are also influenced by these conditions. Because our social, economic, and physical environment are shaped largely by decisions in non-health sectors such as education, community development, and transportation planning, it is important to ensure that the health impacts of decisions made in these sectors are taken into consideration. HIA is one tool for helping ensure that this happens.

The top three priorities listed in Crook County’s health improvement plan are diabetes, cardiovascular disease, and social determinants of health, including the built environment. Supporting the development of communities that promote active transportation and physical activity address all three of these issues. Because of this, one of the primary goals of the Crook County Public Health Department (CCPHD) in the past few years has been to use HIAs to support their efforts to work with city and county land use and transportation planners to ensure that their plans, policies, and projects support the development of communities that promote active lifestyles. CCPHD completed its first HIA in 2011. The “Crook County/City of

**Figure 1: Health Determinants**



<sup>1</sup> A more complete overview of HIA practice, including tools, resources, and examples of other HIAs done in Oregon, can be found on the Oregon Health Authority’s HIA program webpage: <https://public.health.oregon.gov/HealthyEnvironments/TrackingAssessment/HealthImpactAssessment/Pages/index.aspx>

Prineville Pedestrian and Bicycle Safety HIA” focused on informing the City of Prineville’s transportation planning efforts in order to ensure that plans promoted biking and walking and addressed safety issues for bicyclists and pedestrians.

Based on the success of that project, CCPHD applied for a small grant from the Oregon Health Authority’s (OHA) Health Impact Assessment Program to conduct a rapid HIA of a streetscape improvement plan being developed by the City of Prineville in partnership with the Oregon Department of Transportation (ODOT). The streetscape improvement plan is a part of a larger project being led by ODOT to update the traffic signals along State Highway 26 in Prineville. A primary component of this project involves pulling up the sidewalks in order to re-wire the traffic signals. The City of Prineville is using this as an opportunity to add some streetscape enhancements such as street lighting, decorative sidewalk materials, and curb ramps, when the sidewalks are re-built.

CCPHD chose to do an HIA on this project for three reasons. First, they saw it as an opportunity to continue address key health issues and improve community health by promoting active lifestyles. Second, they saw it as an opportunity to continue to develop and strengthen relationships with the City of Prineville’s Planning Department (CPPD). Finally, the timing was right. ODOT and CPPD are starting to make decisions about what features to include in the streetscape improvement plan, so there is the opportunity to use the HIAs findings and recommendations to guide these decisions.

The primary goals of this HIA are to:

- Increase awareness of health in planning/urban design among city employees and local residents.
- Recommend design features for the 3rd Street Project that would have positive health effects.
- Inform ODOT and project stakeholders about the potential health impacts of the 3rd Street Project.
- Conduct an HIA according to the established HIA Minimum Elements and Practice Standards.

In addition to these project goals, this project is also serving as a case study for OHAs “HIA-in-a-Day” project model, in which staff from OHAs HIA program work with staff at local health departments to conduct a full day HIA workshop for project stakeholders. In addition to training participants to use and participate in HIAs, the workshop also involves gathering input from the participants that can help inform the assessment of the project that the HIA is seeking to inform. OHA staff then use this input, along with other information such as published research, to conduct the assessment, and then work with the local health department to develop recommendations and a final report. In addition to being designed to support decisions that are happening on a relatively quick timeline, the HIA-in-a-Day model also acknowledges that, particularly for smaller, community-scale projects, local community members and stakeholders are often the experts and know best how their community will be impacted by project decisions. In the absence of time and resources for conducting more formal assessments, pairing this knowledge with existing research can still provide useful information for decision-makers about the possible health impacts of their decisions.

This report has three sections. The existing conditions section provides an overview of Prineville, including information on key health issues facing its residents. The following section on assessment contains a more detailed description of the project and study area, a description of the methodology used to assess the potential health impacts of the project, and a summary of the anticipated impacts.

The assessment section will be followed by the HIAs recommendations for how to best ensure that the new streetscape best promotes active lifestyles among Prineville’s residents and visitors.

## Existing Conditions

### Demographics

Prineville is the county seat for Crook County, which located east of the Cascade Mountains in Central Oregon. With a population of 9,258, Prineville accounts for almost half of Crook County’s 20,998 residents. Prineville is the only incorporated town in Crook County and, as such, serves as a central location for county residents where people come to shop, access county services, and gather for parades and other community events.

Table 1 below contains some summary information on Prineville and Crook County demographics. While Prineville and Crook County have been growing in population for the past few years, it has done so more slowly than Oregon as a whole. At 17.4% and 20.0% respectively, both Prineville and Crook County have a higher percentage of seniors than Oregon (13.9%). Based on 2010 information, Prineville also has a higher percentage of youth than both Crook County (21.9%) and Oregon (22.6%). Both Prineville and Crook County residents are predominantly white, with Latinos making up the largest share of non-white residents. Both Prineville and Crook County have lower high school graduation rates than the state as a whole, as well as significantly lower percentages of residents with college degrees. Prineville and Crook County residents also earn less than the state as a whole, and Prineville also has a significantly higher poverty rate (27.9%) than either Crook County (18.3%) or Oregon (16.6%).

Table 1: Summary Demographics for Prineville and Crook County			
	Prineville	Crook County	Oregon
<b>Population (2015)</b>	9,530	21,630	4,028,977
<b>Population, % change, 2010-15</b>	3.0%	3.1%	5.2%
<b>Persons under 18 (2014)</b>	<i>na</i>	19.4%	21.6%
<b>Persons under 18 (2010)</b>	25.5%	21.9%	22.6%
<b>Persons 65 years and over (2014)</b>	<i>na</i>	24.2%	16.0%
<b>Persons 65 years and over (2010)</b>	17.4%	20.0%	13.9%
<b>White alone-not Hispanic or Latino (2014)</b>	<i>na</i>	88.6%	77.0%
<b>White alone-not Hispanic or Latino (2010)</b>	86.0%	89.4%	78.5%
<b>Hispanic or Latino (2014)</b>	<i>na</i>	7.4%	12.5%
<b>Hispanic or Latino (2010)</b>	10.1%	7.0%	11.7%
<b>Foreign born (2010-14 average)</b>	2.4%	2.3%	9.8%
<b>Education</b>			
<b>High school graduate or higher (2010-14 average)</b>	83.2%	84.8%	89.5%
<b>Bachelor's degree or higher (2010-14 average)</b>	11.2%	14.7%	30.1%
<b>Income and Poverty</b>			
<b>Median household income (2010-14 average)</b>	\$29,249	\$36,158	\$50,521
<b>Persons in poverty (2010-14 average)</b>	27.9%	18.3%	16.6%
<i>Source: US Census Quick Facts (<a href="http://www.census.gov/quickfacts/">www.census.gov/quickfacts/</a>)</i>			

The largest economic sectors in Prineville and Crook County include manufacturing, trucking and ground transport, and agriculture. Crook County’s largest employer is Les Schwab Tire Centers, which is based in Prineville and employs over 1,000 people in Crook County. In addition, Prineville is now home to multiple data centers owned by Facebook and Apple. The economic activity generated by both traditional and new businesses has helped support significant public investments in community facilities in Prineville, including a new high school, public library, parks, trails, and playgrounds, expanded hospital facilities, and a fully serviced industrial park.<sup>2</sup>

## Health

The primary health issues impacted by transportation infrastructure include injuries and premature deaths from crashes, chronic diseases related to physical activity including diabetes, cardiovascular disease, obesity, stress, anxiety, depression and some cancers, and acute and chronic respiratory issues related to air pollution such as asthma and reduced lung function. According to data from the 2015 Central Oregon Regional Health Assessment<sup>3</sup> that included data from Crook County, unintentional injuries are the leading cause of death for people aged 1-44 and motor vehicle crashes are the most common cause of unintentional injuries for people aged 5-24, and the second most common cause for people aged 25 and over. Table 2 below summarizes the data from the Regional Health Assessment for many of the transportation-related health issues listed above.

	Crook	Deschutes	Jefferson	Oregon
<b>% of population with asthma</b>	7.7%	10.5%	24.2%	10.4%
<b>mortality rate per 100,000 from all cancers</b>	146.0	154.5	168.6	169.3
<b>% with heart disease</b>	2.5%	2.8%	2.2%	3.6%
<b>% with Diabetes</b>	7.7%	4.5%	8.4%	8.2%
<b>% Obese</b>	25.1%	21.8%	40.1%	25.9%
<b>mortality rate per 100,000 from motor vehicle crashes</b>	12.6%	11.8%	34.9%	10.2%

*Source: 2015 Central Oregon Regional Health Assessment*

In Crook County, one of the primary health issues is physical inactivity, which contributes to each of the county’s leading causes of death--cancer, heart disease, chronic lower respiratory disease, and stroke—and to many other chronic health conditions such as obesity, diabetes, asthma, and depression. These chronic conditions not only diminish the quality of life of those that have them, but also impose economic burdens on their communities. According to the US Centers for Disease Control and Prevention (CDC), each year Oregon spends \$411 million on asthma, \$1.9 billion on cancer, \$892 million on depression, \$1.7 billion on diabetes, and \$3.6 billion on cardiovascular diseases including stroke and

<sup>2</sup> City of Prineville Comprehensive Plan, 2007.

<sup>3</sup> Available on-line at:

[https://www.deschutes.org/sites/default/files/fileattachments/health\\_services/page/149/2015-co-regional-health-assessment.pdf](https://www.deschutes.org/sites/default/files/fileattachments/health_services/page/149/2015-co-regional-health-assessment.pdf)

hypertension.<sup>4</sup> About 30-40% of these costs are borne by taxpayers via state and federal health care programs. Employers and residents also pay through increased health insurance costs, lost productivity, and diminished disposable income that could otherwise be used to support local businesses.

## Assessment

Assessment for this HIA was conducted during a full day workshop with local stakeholders representing local public health and health care organizations, local businesses, and local, regional, and state planners. The first half of the day focused on providing participants with an overview of HIA, information on current community health issues in Crook County, information on the connections between transportation infrastructure and health, and information on the proposed streetscape project, including a site tour. The second half of the day focused on developing the scope for the HIA, and then on conducting a rapid assessment of the proposed streetscape improvement project.

## Project overview

The Hwy 26 streetscape improvement project is a part of a larger project being led by ODOT to update the traffic signals along State Highway 26 in Prineville. A primary component of this project involves pulling up the sidewalks in order to re-wire the traffic signals. The City of Prineville is using this as an opportunity to add some streetscape enhancements such as street lighting, decorative sidewalk materials, and curb ramps, when the sidewalks are re-built.

Hwy 26 is the main street running through downtown Prineville and is also the primary route by which people access the downtown area. The section of Hwy 26 that will be impacted is between Harwood Street and Elm Street in downtown Prineville. This section is about two thirds of a mile long and constitutes a significant about of the downtown streetscape. The street has one lane in each direction, with a center turn lane, parallel on-street parking, and sidewalks for the entire length. Significant land uses along Hwy 26 include a grocery store, multiple retailers of good and services such as restaurants and banks, city and county services and administrative offices, off-street parking lots, and multiple parks and recreation facilities. 2<sup>nd</sup> and 4<sup>th</sup> Streets, which run parallel to Hwy 26 also provide additional on-street parking, sidewalks, and access to additional resources, but with much less traffic than Hwy 26. In addition, the Ochoco Creek trail runs parallel to Hwy 26, about two blocks to the north of Hwy 26. In addition to meeting transportation needs, this section of Hwy 26 is also the site of multiple parades throughout the year, and thus provides a strong community gathering space with events that promote social cohesion and the development of a shared community identity.

In addition to upgrading the street signalization system, the project will also include improvements such as curb ramps in order to comply with the Americans with Disabilities Act (ADA). Optional project components that the City of Prineville is considering for inclusion include lighting for sidewalks, street trees, wayfinding and signage for motorists, pedestrians, and bicyclists, decorative paving materials, changes to on-street parking, and other amenities such as hanging flower baskets, sidewalk benches, etc.

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<sup>4</sup> US Centers for Disease Control and Prevention, "Chronic Disease Cost Calculator Version 2" available on-line at: <http://www.cdc.gov/chronicdisease/calculator/index.html>

## Scoping summary

Scoping in HIA involves determining who will be most likely impacted by the policy, plan or project under consideration, identifying how the policy, plan or project will impact health, and determining which health issues will be most impacted.

## Impacted populations

Workshop participants identified the following groups of people as likely to be most directly impacted by decisions about how the streetscape project is designed.

- **People without cars**, including youth, since they are more likely to be reliant on pedestrian infrastructure for getting to where they need to go.
- **Shoppers** in the downtown area using the sidewalks on 3<sup>rd</sup> to get to stores.
- **People with access and functional needs**, including elderly and disabled people, who rely on well-designed infrastructure to facilitate use of mobility devices such as walkers and wheel chairs. Blind people can be particularly vulnerable to sidewalk design because of the potential for amenities such as benches, light poles, and signs to hinder their mobility, but also because of the potential for sidewalk materials such as textured pavers to facilitate mobility.
- **Visitors and tourists**, including people passing through who might be stopping to shop or visit local attractions, and people coming to Prineville to conduct business, access good and services, attend cultural events such as Prineville’s many parades, or engage in other local activities.
- **Business owners and employees** whose businesses rely on customers being able to access their businesses via the roads, sidewalks, and parking areas along 3<sup>rd</sup> street.
- **All Prineville residents** since they use 3<sup>rd</sup> street to access many goods and services in and around the project area to meet their daily needs.

## Health Pathways

According to existing research, there are five primary health determinants, or pathways, through which pedestrian infrastructure can impact health outcomes (see figure 2 below).<sup>5</sup>

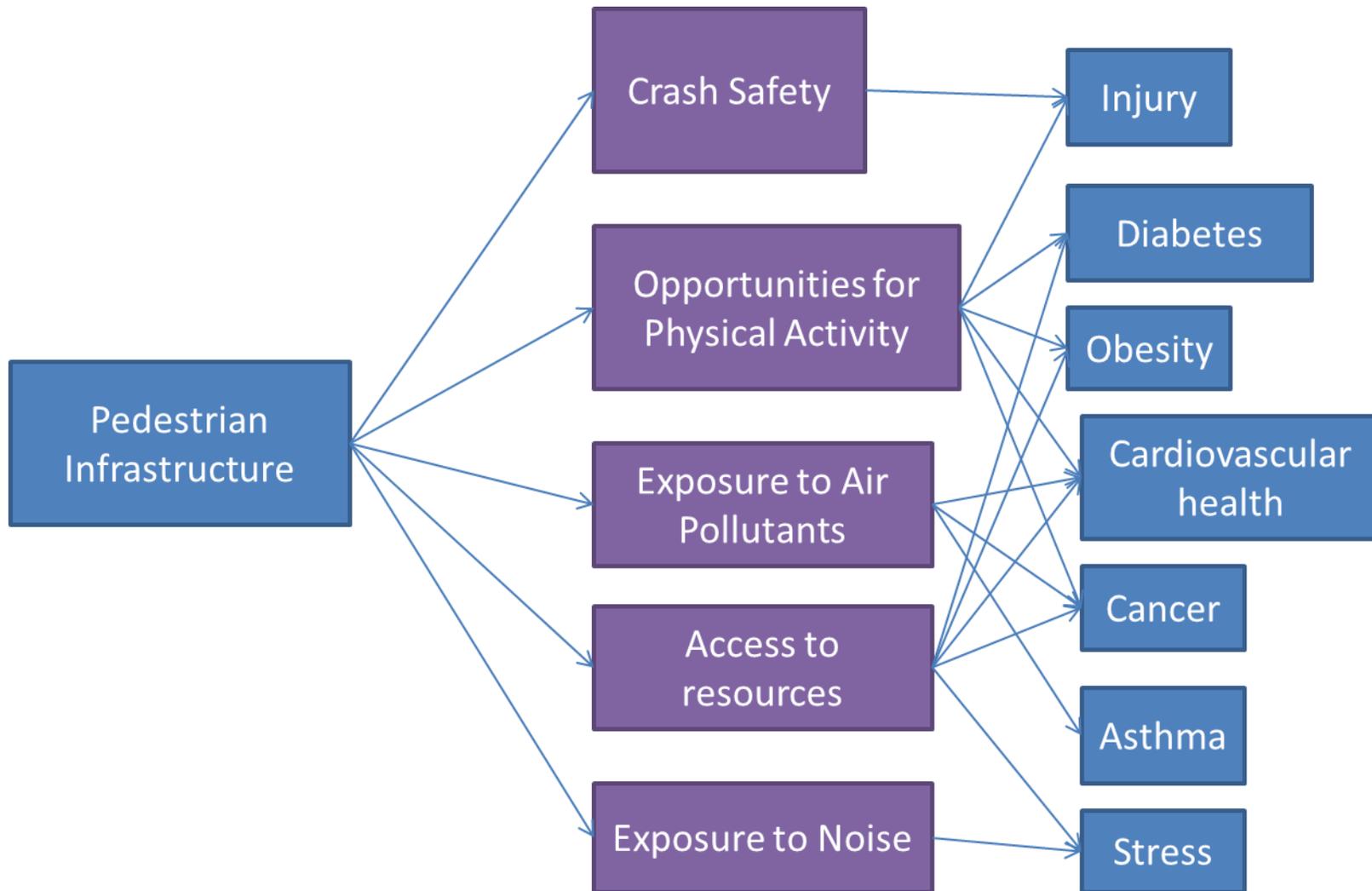
1. Providing **opportunities for physical activity**. Increasing physical activity can reduce the risk of numerous health risks, including the risks for:
  - a. Multiple cancers
  - b. Cardiovascular disease
  - c. Stroke
  - d. Heart attack
  - e. Diabetes
  - f. Obesity
  - g. Injury
  - h. Anxiety, stress, and depression

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<sup>5</sup> For a more detailed review and discussion of the research connecting transportation systems and health, see the Oregon Health Authority’s “Transportation Research Briefs”, available on-line at: <https://public.health.oregon.gov/HealthyEnvironments/TrackingAssessment/HealthImpactAssessment/Documents/OHA%208246%20Transportation%20Research%20Brief%20Final.pdf>

2. Reducing or exacerbating **crash risk**. Pedestrian infrastructure can positively or negatively impact the risk of crashes, depending on how they are designed and how they align with and intersect roads.

Figure 2. Pathways between Pedestrian Infrastructure and Health



3. Providing improved **access to health supportive resources**, particularly for people without cars. Good health requires access to resources such as healthy food retail, healthcare, employment, education, parks and recreation facilities, publicly accessible gathering spaces, and social services. Research has shown that a person's ability to each of these resources can influence their health:
  - a. **Access to healthy food** has been linked with rates of obesity and type-2 diabetes.
  - b. **Clinical healthcare access** has been linked with a wide variety of health outcomes, and has been identified as a primary driver of health disparities between different socio-economic groups in America.
  - c. **Employment** is the primary source of income for most people, and income levels are correlated with a wide variety of health outcomes, in large part because it determines a person's ability to access health-supportive resources. In addition, lower income levels contribute to higher levels of psychological stress that undermines physical health. Frequent or continuous exposure to stress can result in adverse effects on cardiovascular and immune systems leading to heart disease, diabetes, high blood pressure, strokes, depression, infections, and premature death. The stress and lack of opportunity associated with lower income levels also lead to the increased likelihood of engaging in unhealthy behaviors such as smoking, crime, substance abuse, and physical abuse.
  - d. **Education** impacts health primarily through its influence on a person's income level. In addition, education can impact health by providing access to information and by allowing a person the opportunity to develop cognitive skills useful for identifying, avoiding and/or changing unhealthy or risky behaviors. Schools also offer opportunities for social engagement. Social engagement influences social cohesion which can contribute to improved health outcomes by enabling the dissemination of health-related information about healthcare options and healthful behaviors, and by reinforcing social norms and practices associated with healthful behaviors
  - e. **Parks, and recreation facilities** offer opportunities for physical activity and social engagement with attendant health benefits. Access to green space has also been correlated with mental health benefits.
  - f. **Publicly accessible gathering spaces**, including public spaces such as libraries, parks, plazas, schools, and community centers, as well as private spaces such as restaurants and neighborhood retail establishments that facilitate chance encounters with other community members, can increase social engagement and social cohesion.
  - g. **Social services** encompass a broad set of services which directly and indirectly address numerous physical and mental health issues. Such services include those that help people cope with issues stemming from aging, disability, substance abuse, domestic violence, social isolation, poverty, and mental illness. These services can be provided by both public and private sector organizations.
4. Reduce or exacerbate **exposure to air pollution**. Depending on how pedestrian facilities are designed and used, they can decrease people's exposure to air pollution by reducing automobile use and associated emissions and by separating pedestrians from more polluted areas near high traffic corridors. Pollution from motor vehicles is highly localized near roadways. Placing bicycle

and pedestrian facilities even short distances, such as 50' or 100', can reduce exposure to air pollution for bicyclists and pedestrians. However, bicycle and pedestrian facilities that are placed alongside, or very close to, roadways can increase bicyclist and pedestrian exposure to air pollutants. Health issues related to air pollution include asthma, some cancers, and reduced lung function. Health issues related to noise exposure include sleep deprivation, stress, and anxiety.

5. Reduce or exacerbate **exposure to noise**. Chronic exposure to moderate levels of noise can lead to interference with activity and speech, sleep disturbance, impaired memory, reading, and learning in schoolchildren, and increased blood pressure and higher prevalence of cardiovascular conditions.

Secondary pathways through which transportation systems can impact health include providing opportunities for social interaction and cohesion, and influencing economic development.

Research also demonstrates that the health benefits of walking outweigh the risks. Considering the combined risks of crashes and exposure to air pollutants and noise, researchers have found that the health benefits resulting from increased physical activity and improved access to health supportive resources outweigh these risks.

Research also indicates that, while all members of a community can benefit from well-designed pedestrian infrastructure, such facilities can provide greater benefits to vulnerable groups including youth, elderly, people with low incomes, and people with disabilities. Because these people are typically less likely to own cars and more likely to be dependent on walking for mobility, providing safe, convenient walking facilities can greatly improve their mobility, safety, and physical activity levels.

To determine how the streetscape project might impact these health issues, the Prineville Planning Director, Phil Stenbeck, provided an overview of the project, including possible options being considered for the streetscape improvement project. Workshop participants also took a walking tour of the project area. Based on the project information and their knowledge of the project area and community, workshop participants identified and prioritized the following health issues as potentially being impacted by the project:

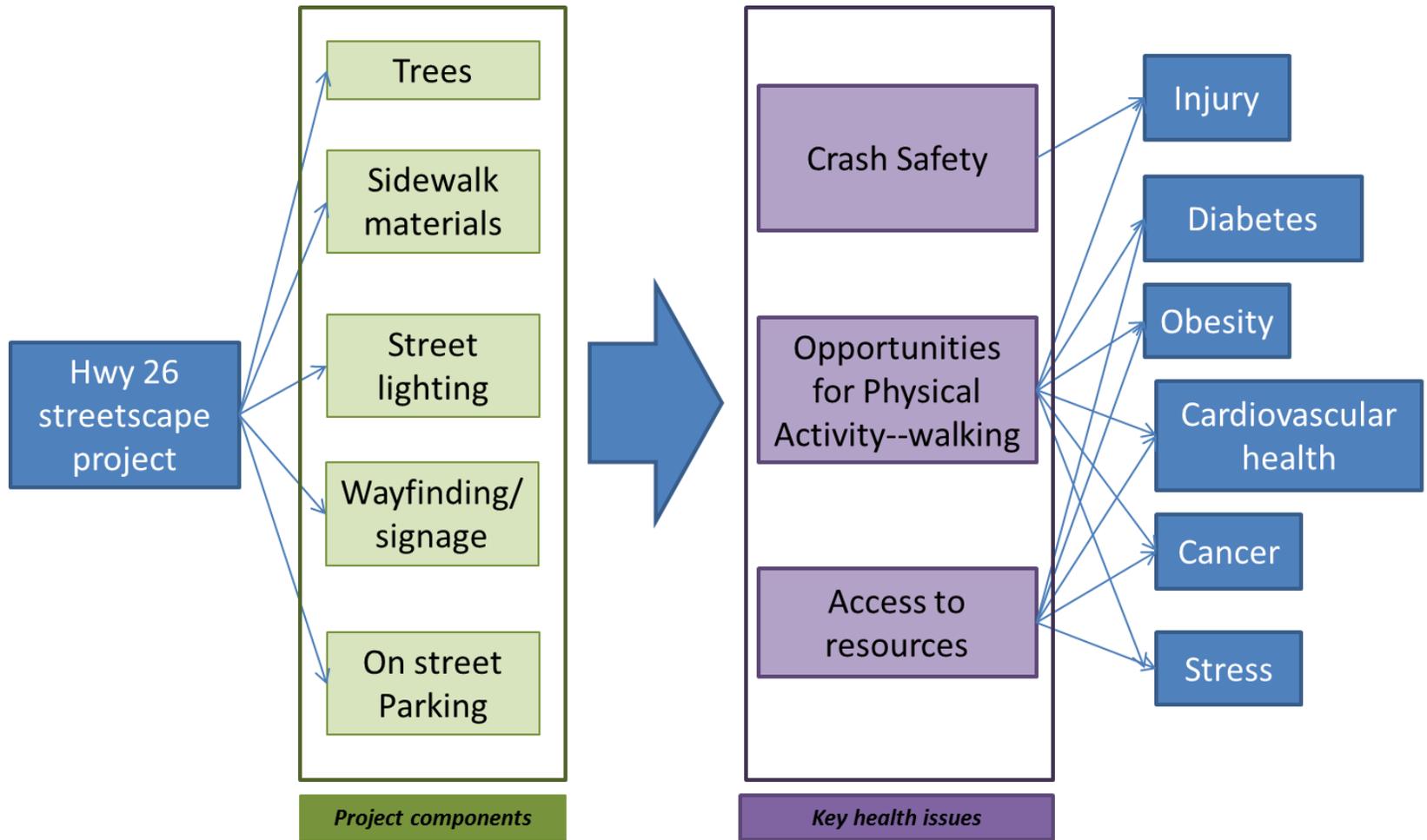
- **Walking/physical activity (11)**
- **Access to resources (6)**
- **Crash safety (5)**
- Trees/aesthetics (4)
- Auto mobility—speed (4)
- Social cohesion (2)
- Air quality (2)
- Biking (2)
- Noise pollution (0)

The issues in bold font were those that the group prioritized based on the likelihood that they would be impacted and the degree to which they might be impacted. Prioritization was conducted by group vote. The numbers in parentheses indicate how many votes each health issue received.

The group also identified and prioritized the possible project components that would potentially impact these issues. This components in bold font are those that the group prioritized for additional consideration based on their potential for impacting the prioritized health issues listed above. The group also decided to focus only on “optional” project components currently under consideration and not on the essential project components—primarily signals and ADA features—that will be included in the project regardless of what other components are included.

- **Lighting** (for sidewalk areas)
- **Concrete “style”**
  - **Material**
  - **Color**
- **Changes in on-street car parking availability** (such as the removal of 1-2 spaces per block near intersections in order to facilitate pedestrian crossing)
- **Trees** (along sidewalks)
- **Wayfinding/signage** (to ensure that pedestrians and bicyclists are aware of nearby trails and low-traffic streets, and that motorists, including those with trailers, know where appropriate off-street parking is)
- Art/flowers
- Bike parking
- Signals
- ADA—curb ramps, sidewalk width
- Medians in the middle of Hwy 26 to facilitate pedestrian crossings

Figure 3: Health pathways for Hwy 26 streetscape improvement project



## Assessment Methodology

The assessment for this HIA focused on determining the relative impacts of the project components on each of the three key health issues (see Figure 2) using a scoring approach that OHA staff have developed and used in other similar small-scale rapid HIAs. The scoring approach involves working with local stakeholders that are familiar with the project, project area, and impacted populations to develop a set of assessment questions for each health issue that can be asked and scored for each project component. It is based on the assumption that, for local, small-scale projects, local stakeholders are in the best position to understand how their community might be impacted by the proposed changes. Assessment questions for this HIA were developed collaboratively by workshop participants working in two small groups. Each group developed and scored three questions for each issue and were as follows:

- Crash safety
  - Will the project component decrease the likelihood of crashes involving vehicles?
  - Will the project component increase the sense of safety?
  - Will the project component improve traffic flow?
  - Will the project component reduce traffic speed?
  - Will the project component improve visibility between drivers and pedestrians?
  - Will the project component reduce bike-car conflict areas?
- Walking
  - Will the project component improve the sense of safety for pedestrians?
  - Will the project component improve aesthetics and support social interaction and cohesion?
  - Will the project component increase connectivity, particularly with the nearby trail network?
  - Will the project component improve mobility for people with access and functional needs?
- Access to resources
  - Will the project component improve bicycle and pedestrian accessibility to the area?
  - Will the project component improve ADA access?
  - Will the project component decrease traffic congestion?
  - Will the project component improve livability and promote social cohesion?

Answers to each of the questions were based on professional/personal judgment and expressed in numerical scores, based on the following scale:

- 2="Yes, a lot (relative to the other recommendations)"
- 1="Yes, a little (relative to the other recommendations)"
- 0=no impact
- -1="No, it would actually negatively impact this issue a little (relative to the other recommendations)"
- -2="No, it would actually negatively impact this issue a lot (relative to the other recommendations)"

Workshop participants answered each question individually, but did so in the context of small groups so that participants could discuss each issue to ensure that they understood the issues and discuss the

rationale for their scores with other participants. Scoring was facilitated with the use of a worksheet that aligned the questions with the project components (Appendix A), and allowed for the scores for each project component to be summed and compared. After all of the participants completed their scoring worksheets, OHA staff combined all of the scores to determine the group’s assessment of the relative impacts of each of the project components on each of the health issues. Table 1 below displays the total and average scores for each component for each health issue. The scores provided by individual participants is contained in Appendix C.

<b>Table 1: Summary project component scores for each health issue</b>		
<b>Walking</b>		
	<i>Total</i>	<i>Average</i>
<b>Street lighting</b>	42	5.3
<b>Wayfinding/signage</b>	30	3.8
<b>Concrete style</b>	25.5	3.2
<b>Trees</b>	25	3.1
<b>On street parking</b>	7	0.9
<b>Crash safety</b>		
<b>Wayfinding/signage</b>	32	4.0
<b>Street lighting</b>	29	3.6
<b>Trees</b>	9	1.1
<b>Concrete style</b>	4	0.5
<b>On street parking</b>	-2	-0.3
<b>Access to resources</b>		
<b>Wayfinding/signage</b>	32	4.0
<b>Street lighting</b>	26	3.3
<b>Concrete style</b>	19	2.4
<b>Trees</b>	11	1.4
<b>On street parking</b>	7	0.9

## Findings

It is important to note that the above assessment was conducted over the course of an afternoon largely by a group of people just learning about health impact assessments. However, it is also important to note that the group was primarily made up of local public health and planning professionals and engaged community members with a solid understanding of the community and project context. While the rapid nature of the assessment means that the findings should be treated as preliminary, there was general consensus among the group about the relative impacts of the project components on the health issues. As such, these findings provide a strong starting point for considering which components to include to address the identified health issues.

Based on the scores above, the key findings are

- **Wayfinding/signage and street lighting are the two project components that would have the greatest impact on all three health issues.** If properly designed and placed, directional signs could facilitate motor vehicle movement through the area by providing clear directions to off-street parking facilities, particularly for vehicles with trailers, which are very common in Prineville. Currently drivers are often confused about where to go, occasionally resulting in congestion and distracted driving as they try to navigate the area. For bicyclists and pedestrians, signs and maps could facilitate their movement in and through the area by encouraging them to use nearby trails and low-traffic streets which are safer and more convenient and enjoyable for people moving through the area.
- **The presence of trees and use of attractive paving materials would also likely encourage walking and improve access to local health supportive resources such as healthy food retail and public services.** By creating a more attractive walking environment, these project components would make walking more attractive. Properly chosen paving materials could also facilitate mobility for people using mobility devices such as canes and walkers. Street trees would also provide shade.
- **Minor changes to on-street parking were judged to have relatively little impact on the health issues.** While it is possible that this might support pedestrian movement, the group thought that the impacts would be relatively minor.

## Recommendations

The findings above and the workshop discussion support the following recommendations:

- Ensure inclusion of wayfinding and signage, trees, lights, and decorative concrete in the project design.
- Work with ODOT and local stakeholders to ensure that these four project components are well-designed, specifically that
  - Wayfinding and signage is effectively designed for motorists, pedestrians, and bicyclists
  - Paving materials are designed with input from people with access and functional needs, including blind people.

## Appendix A: Sample Assessment Scoring Worksheet

Scoring: 2="Yes, a lot (relative to the other recommendations)"; 1="Yes, a little (relative to the other recommendations)"; 0=no impact ; -1="No, it would actually negatively impact this issue a little (relative to the other recommendations)"; -2="No, it would actually negatively impact this issue a lot (relative to the other recommendations)"				
	<b>Health Determinant #1: Walking/Physical activity</b>			
<b>Project Components</b>	<b>"Does the component..."</b>			
	<b>Q1: "...Improve the sense of safety for pedestrians?"</b>	<b>Q2: "...Improve aesthetics and invite social interaction and cohesion?"</b>	<b>Q3: "...increase connectivity with nearby trails?"</b>	<b>Total Score</b>
Wayfinding/signage				
Street lighting				
Concrete style				
Street trees				
On-street parking				

## Appendix B: Workshop Participants and Event Summary

### **Attending:**

- Muriel Delavergne-Brown (CCHD-director)
- Holly Wenzel (CCHD-VISTA)
- Katie Plumb (CCHD-Health Promotion)
- Kylie Loving (CCHD-SPArC)
- Kris Williams (CCHD-TPEP)
- Vicky Ryan (CCHD-Emergency Preparedness)
- Ruby Ruiz (CCHD)
- Phil Stenbeck (Prineville Planning Director)
- Josh Smith (Prineville Sr Planner)
- Betty Roppe (Prineville Mayor)
- Maggie O'Connor (St. Charles Health System, Community Benefit)
- Carlos Salcedo (St. Charles Health System, Community Benefit)
- Donna Mills (Central Oregon Health Council—ED)
- Donna Barnes (Ochocco Lumber)
- Ann Beier (Crook County Deputy Planning Director)
- Michael Duncan (ODOT Region 4)
- Bill Mintiens
- Steve White (OHA HIA Program Coordinator)

### **Training overview:**

Health Impact Assessment (HIA), is a framework for determining how a decision on a policy, project, or project could impact public health. Using the best available evidence, including research, local expertise, and public health data, HIAs present both findings and recommendations for improving health outcomes from decisions in transportation, land use planning, education, and other arenas, for everyone in the community.

Crook County health department staff and their colleagues in land use and transportation planning and public works hosted a full-day training on HIA in order to learn about the connections between transportation plans, policies, and projects and local health concerns, and

lay the foundation for a rapid assessment of a proposed downtown streetscape improvement project in Prineville. The training was designed to achieve the following goals:

**Training Goals:**

- Participants will leave the training with
  - a grounding in the environmental determinants of health, particularly those related to land use and transportation planning
  - an understanding of local health and planning issues, including
    - primary health issues related to the streetscape plan
    - primary components of the streetscape plan and how it might impact health
  - the ability to participate in an HIA, and
  - new tools and resources for understanding how transportation and health intersect
- Participants will also provide input useful for informing the development of a health impact report that,
  - Identifies and characterizes health impacts related to the Prineville streetscape plan, and proposes recommendations for mitigating negative health impacts and maximizing positive health impacts.

The training was led by Steve White, MURP, Oregon HIA Program Coordinator.

**Training summary**

The training was divided into two main components. The first half of the day focused on building participants understanding of health impact assessments, including why public health departments are increasingly using them to improve community health and how they are done. This component also included information and discussion about the connections between the built environment and health, with a particular focus on how bicycle and pedestrian infrastructure can impact health.

The second half of the day focused on developing the scope, conducting a rapid assessment, and drafting an initial set of recommendations for a rapid HIA of the 3<sup>rd</sup> Street streetscape improvement plan being led by the Oregon Department of Transportation in partnership with the City of Prineville’s Planning Department.

## Appendix C: Individual workshop participant assessment scores for each determinant

<b>Health Determinant: Walking/Physical Activity</b>					
Project components	Does the component...				TOTAL
	...improve sense of safety?	...increase aesthetics/ invite social interaction?	...increase connectivity?	...improve mobility for AFN folks?	
Wayfinding/ signage	1	1	1		3
	0	1	1		2
	2	2	2		6
	2	0	2		4
	2	1	1		4
	1	1		0	2
	2	0		2	4
	1	2		2	5
					<b>30</b>
street lighting	2	0	2		4
	2	1	1		4
	2	2	2		6
	2	2	0		4
	2	2	2		6
	2	2		2	6
	2	2		2	6
	2	2		2	6
					<b>42</b>
concrete style	-1	0	2		1
	-1	1	0		0
	0	2	1		3
	-0.5	2	0		1.5
	1	2	1		4
	2	1		2	5
	1	2		2	5
	2	2		2	6
					<b>25.5</b>
on street parking	0	0	0		0
	-1	-1	0		-2
	-1	-2	0		-3
	-1	1	0		0

	1	0	2		3
	1	0		1	2
	1	2		2	5
	1	0		1	2
					<b>7</b>
	2	0	2		4
	1	1	0		2
	1	2	1		4
	0	2	0		2
	1	2	0		3
	2	2		-1	3
	0	2		0	2
	2	2		1	5
					<b>25</b>

<b>Health Determinant: Crash Safety</b>							
Project Components	Does the project component...						TOTAL
	...decrease crashes involving vehicles?	...increase sense of safety?	...improve traffic flow?	...Reduce traffic speed?	...improve visibility between car and ped?	...reduce bike-car conflict areas?	
Wayfinding/ signage	1	1	2				4
	1	1	0				2
	2	2	2				6
	1	2	2				5
				2	0	2	4
				2	0	2	4
				1	2	2	5
				2	0	0	2
							<b>32</b>
Street lighting	1	1	0				2
	1	1	1				3
	2	2	0				4
	2	2	0				4
				0	2	1	3
				2	0	0	2
				2	2	2	6
				2	2	1	5

							<b>29</b>
concrete style	0	0	0				0
	0	1	0				1
	0	1	0				1
	0	1	0				1
				0	0	0	0
				0	0	0	0
				0	0	0	0
				1	0	0	1
							<b>4</b>
on street parking	1	0	1				2
	-1	-1	-1				-3
	-1	0	1				0
	1	1	1				3
				1	-1	-2	-2
				-2	-1	0	-3
				1	2	1	4
				-2	-2	1	-3
							<b>-2</b>
trees	1	2	1				4
	-1	0	0				-1
	0	2	0				2
	0	1	0				1
				1	0	0	1
				-1	0	0	-1
				-1	0	1	0
				1	1	1	3
							<b>9</b>

<b>Health Determinant: Access to Resources</b>					
Project components	Does the project component...				TOTAL
	...improve bike-ped accessibility?	...improve ADA access?	...decrease congestion?	...increase livability (social cohesion)?	
Wayfinding/signage	1		2	1	4
	1		1	1	3
	2		0	2	4
	2		2	2	6
	2	2			4
	2	1			3
	2	2			4
	2	2			4
					<b>32</b>
street lighting	1		0	1	2
	1		1	1	3
	2		0	2	4
	2		0	2	4
	2	0			2
	2	2			4
	1	2			3
	2	2			4
					<b>26</b>
concrete style	0		0	1	1
	0		0	1	1
	1		0	1	2
	1		0	2	3
	2	1			3
	1	2			3
	0	2			2
	2	2			4
					<b>19</b>
on street parking	1		1	1	3
	0		-1	0	-1
	0		0	1	1
	-1		1	2	2

	0	1			1
	-1	1			0
	1	2			3
	-2	0			-2
					<b>7</b>
trees	1		0	2	3
	0		-1	1	0
	1		0	2	3
	1		0	2	3
	1	1			2
	0	0			0
	0	0			0
	0	0			0
					<b>11</b>