A New Future for the Sisters Elementary School Site

Fall 2022
Sisters

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COLLEGE OF DESIGN

UNIVERSITY OF OREGON
CITY OF SISTERS
SCI Sustainable Cities Institute
SCYP Sustainable City Year Program

Acknowledgements

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Nancy Connolly, City of Sisters City Council President
Scott Woodford, City of Sisters Community and Development Director
Curtiss Scholl, Sisters School District Superintendent
Jennifer Holland, Sisters Parks and Recreation District Executive Director

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About SCI

The Sustainable Cities Institute (SCI) is an applied think tank focusing on sustainability and cities through applied research, teaching, and community partnerships. We work across disciplines that match the complexity of cities to address sustainability challenges, from regional planning to building design and from enhancing engagement of diverse communities to understanding the impacts on municipal budgets from disruptive technologies and many issues in between.

SCI focuses on sustainability-based research and teaching opportunities through two primary efforts:

1. Our Sustainable City Year Program (SCYP), a massively scaled university-community partnership program that matches the resources of the University with one Oregon community each year to help advance that community's sustainability goals; and

2. Our Urbanism Next Center, which focuses on how autonomous vehicles, e-commerce, and the sharing economy will impact the form and function of cities.

In all cases, we share our expertise and experiences with scholars, policymakers, community leaders, and project partners. We further extend our impact via an annual Expert-in-Residence Program, SCI China visiting scholars program, study abroad course on redesigning cities for people on bicycle, and through our co-leadership of the Educational Partnerships for Innovation in Communities Network (EPIC-N), which is transferring SCYP to universities and communities across the globe. Our work connects student passion, faculty experience, and community needs to produce innovative, tangible solutions for the creation of a sustainable society.

About SCYP

The Sustainable City Year Program (SCYP) is a yearlong partnership between SCI and a partner in Oregon, in which students and faculty in courses from across the university collaborate with a public entity on sustainability and livability projects. SCYP faculty and students work in collaboration with staff from the partner agency through a variety of studio projects and service- learning courses to provide students with real-world projects to investigate. Students bring energy, enthusiasm, and innovative approaches to difficult, persistent problems. SCYP's primary value derives from collaborations that result in on-the-ground impact and expanded conversations for a community ready to transition to a more sustainable and livable future.

From Time Immemorial: Inhabitants of the Indigenous Plateau

The Tribes within the Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Cayuse, Umatilla and Walla Walla, and Confederated Tribes of Warm Springs gathered, traded, and moved in sync with the seasons traveling across the Indigenous Plateau.

The Indigenous Plateau defines the coherent cultural area that recognizes the cultural patterns and material culture unique to the tribes in this area. The Pacific Northwest geography and tributaries of the Columbia, Fraser, and Snake River systems shaped travel patterns and provided seasonal resources to sustain communities. Through rich oral traditions indigenous communities shared historical knowledge and stories that represented life lessons. These stories represent a key component of indigenous practices, customs, and culture. How these stories are shared represent an important component to how communities learn and teach. Although these stories were seldom written down, there are many other cultural practices that represent a physical manifestation of these stories. Cultural practices including beadwork and weaving were artistic forms of storytelling that created a snapshot of a particular place, event, or experience.

The practice of sustainably harvesting materials and the act of creation showcase the ways of living within indigenous communities and their relationship to the natural world. Indigenous communities believe that people inhabit land and do not view it in the same legal context as land ownership in the American land-use system. Prior to settlement, the indigenous plateau was inhabited by numerous autonomous tribes with rich and distinct identities. The knowledge and experiences of these communities are an integral part of the history of the West.

Source
Creations of Spirit, High Desert Museum
Warm Springs Museum

Acknowledgements
Contributing tribal and community members that supported the creation and execution of all exhibits at the High Desert and Warm Springs Museums.

About City of Sisters

Located at the foot of the Cascade Mountains in Central Oregon, the City of Sisters offers beautiful natural surroundings, a variety of year-round recreational opportunities, and a vibrant local economy.

Sisters was a place where Paiute, Warm Springs, and Wasco peoples stopped during movement across central Oregon. The name of Whychus Creek, a tributary that runs through town and joins the Deschutes River just beyond the city limits, comes from a Sahaptin phrase, "The Place We Cross the Water." Sisters became a way station and became accessible once roads were constructed through McKenzie Pass and Santiam Pass in the Cascade Mountain Range. In the early twentieth century, Sisters was a center for sheep and cattle ranching and later became a focus for the timber industry, with numerous mills surrounding Sisters and even a mill in town.

The townsite of Sisters was platted in 1901, although the town was not incorporated until 1946. The original townsite for the City was six blocks in size, circumscribed by Adams Street on the north, Larch Street on the east, Cascade Street on the south, and Elm Street on the west, which represents the downtown core of the City of Sisters north of Cascade Avenue today.

With Sisters' strategic location as the "Gateway to the Cascades," major industries have included sheepherding, cattle ranching, timber production, and provision of goods and services for travelers. Sisters has capitalized on

accommodating visitors, initially serving the transient tradesmen that traveled through central Oregon.

Many people know Sisters for its Western frontier design theme that derives architectural inspiration from the town's beginnings in the 1880s. However, Sisters did not always look this way. When Brooks Resources developed Black Butte Ranch, a resort community eight miles west of Sisters, it envisioned a plan to help the Sisters downtown core reinvent itself. In coordination with the City Council, Brooks Resources offered loans, forgiveable after 10 years, to businesses who built with a Western theme. From this idea, the City developed a strong identity that helped attract people to Sisters as a tourism destination. The economy strengthened, the population returned, and in 1992, the Sisters School District reopened its high school after 25 years of sending students to Redmond High School.

The 2021 population in Sisters totaled 3,475 residents, a result of the population doubling every decade since the 1990s. Sisters continues to serve as a gateway to the central Oregon region while also being known for local attractions including Hoodoo Ski Area and prominent community events such as the Sisters Rodeo, the Sisters Outdoor Quilt Show, and the Sisters Folk Festival.

Figure 1: Course participants at the Sisters Site Visit

Course Participants

Community and Regional Planning Graduates

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Executive Summary

Over fall term 2022, Community and Regional Planning graduate students worked with the City of Sisters to design a research-based redevelopment proposal for the Sisters Elementary School and Sisters School District administration building site.

Students analyzed potential opportunities and challenges of revitalizing these two adjoining properties through three different lenses: 1) age friendly neighborhoods; 2) adaptive reuse of pre-existing structures, and 3) a community and recreation center.

Despite different focus areas, as the teams moved through the planning process, they sought to incorporate what they understood to be community values: connection, livability, accessibility, equity, and safety. With their focus areas and these values in mind, they organized their proposals around the overarching themes of connectivity, built spaces (especially housing), and open and green spaces. The teams imagined the site in a way that would sustain Sisters' strong sense of pride and community as the city continues to grow in the future. They also wanted to encourage healthy lifestyles for Sisters' residents and ensure that people of all ages, incomes, and abilities could access the site safely. This report describes the information that the teams gathered and analyzed to create their designs, details each team's site proposal, and offers ideas for implementation.

Introduction

Sisters has grown tremendously over the last 10 years and has experienced economic prosperity from its small-town tourism and nearby recreational offerings.

Figure 2: Cyclists enjoying Sisters' scenery.

Photo: Russ Roca

A dramatic increase in population from 2000 to 2020 has been a significant factor in Sisters' focus on planning for the city (Blesius et al., 2021; Ryan et al., 2019). The city's population is likely to continue to grow between 2020 through 2040. This continued population growth presents significant challenges for the city's planning for the future (Blesius et al., 2021; Ryan et al., 2019; see Appendix 2a).

With growth comes new challenges. The city must find a way to provide enough housing, amenities, and economic opportunities for its residents. Currently, the housing supply in Sisters does not adequately accommodate low- to middle-income households. With rapidly rising housing prices and cost of living, Sisters is struggling to support and retain its local workforce and is concerned about maintaining its welcoming nature and small-town character (Blesius et al., 2021; Ryan et al., 2019). Growth also presents social challenges. It can be difficult to maintain close ties to other community members as cities grow larger. Sisters also has a large population of older adults and a growing population of school-aged children, which means the city must adapt to accommodate these groups' different needs simultaneously.

The City of Sisters and Sisters School District are exploring redevelopment of the existing Sisters Elementary School as construction of a new facility on the other side of town will begin in a few

years. UO students envision a new future for the existing school building, adjacent administration building, and adjoining large open space.

Additionally, the city, in partnership with the Oregon Department of Transportation (ODOT), is planning to build a roundabout at the intersection of North Locust Street and US Highway 20. The intent of this change is to prevent freight traffic from running through downtown Sisters by rerouting it north along Locust Street. The roundabout will cut through the southeastern edge of the Elementary School site and change traffic patterns in the area in a way that could possibly reduce community members' ability to access parts of the city.

These changes present a unique opportunity to implement strategies to increase Sisters' housing opportunities, local connectivity to amenities, and accessible recreational space.

Methodology

This section describes the process that the teams used to gather data on Sisters and to inform their design proposals.

Sisters Site Visit

In October 2022, students visited Sisters to gather data, explore the site, and understand the site's relationship to the city. Students spoke with city officials, volunteers, and staff from the Sisters Planning Department, Parks and Recreation District, and Sisters School District to learn more about Sisters' values and history, current challenges, and future needs. Students documented conversations, points of interest, notable documents, and existing conditions on the site. In addition to visiting the site, the teams also studied area maps and history to help them consider the challenges and opportunities of the site (Appendices 1b and 1c).

Existing Site Conditions

Sisters Elementary School and the School District Administration Building site occupy 13.54 acres east of downtown Sisters (Assessor's Office, n.d.). The school and its associated structures consume less than half of the lot's acreage, leaving significant open space. The site is bordered by Cascade Avenue to the north, US Highway 20 to the south and west, and Timber Creek residential area to the east. North Locust Street splits the site into two sections. The site's eastern section contains the elementary school, a portable classroom, transportation center, and a parking lot with capacity of just under 100 cars. It also has open fields, tennis and pickleball courts, an asphalt play area, and garden area. Large evergreen trees run along the site's southern and eastern edges.

Figure 3: Sisters Elementary School entrance.

Figure 4: Sisters Elementary School paved play area.

The elementary school entrance is on the north side of the building. Inside the school, three wings surround a central area that includes the cafeteria, stage, offices, and kitchen. The west wing, or A-wing, contains ten classrooms, bathrooms, a computer lab, the counselor's office, and a library. The south wing, or C-wing, contains six classrooms with shared individual bathrooms and offices. Each C-wing classroom has a door to the outside. The east wing, or B-wing, contains four classrooms and bathrooms. An enclosed hallway coming from B-wing connects the gym to the rest of the building. The gym holds a basketball court, bleachers, locker room, storage space, and a lounge area.

Figure 5: Sisters Elementary School indoor gym area.

Figure 6: Outdoor view of Sisters school administration building.

Figure 7: Indoor view of Sisters school administration building.

The site's western section contains the Administration Building and a 39-space parking lot. The entrance of the Administration Building is on its north side, facing the parking lot. A grassy lawn frames the building to the south. The building contains four rooms, restrooms, and the main hallway. Two rooms serve as offices, and the others are open meeting rooms.

Figure 8: View to the west, as seen from the lawn of the administration building.

The site's proximity to amenities in Sisters presents an opportunity for a highly walkable neighborhood. The site is an eight-minute walk to downtown Sisters, where amenities such as the library, City Hall, farmer's market, parks, shops, and restaurants are located. The site's proximity to these locations and services creates an opportunity to connect the site to the larger urban system and connect the eastern part of Sisters to the rest of the city. Downtown Sisters has a consistent grid of small blocks that makes the area walkable and supports wayfinding.

Figure 9: Visualization of how Sisters' grid structure might extend onto the elementary school site.

Teams explored how to extend the walkable grid structure that already exists in downtown Sisters onto the site, with an emphasis on safety (Figure 9). They noted that fast-moving traffic on Highway 20 posed a safety hazard to pedestrians and cyclists, and that many of the sidewalks surrounding the site are narrow and difficult to differentiate from the street.

Many street crossings near the site lacked pedestrian crossing lights and required people crossing the road to use orange flags to be visible to cars (Figure 10). These potentially hazardous conditions contrast with the pedestrian networks in downtown Sisters, which tended to be much safer.

Figure 7: Orange flags currently facilitate safe street crossings in Sisters.

The teams observed that a road separates the project site from downtown Sisters (Figure 11) and wanted to address the disconnect between the two areas to ensure that both sides did not feel isolated from one another. In addition, although the site is easily accessible along Cascade Avenue by car, networks for other (non-vehicular) forms of travel do not extend onto the site, which limits the ability of people traveling by other modes. Consequently, each team proposed alternative transportation solutions and networks of accessible pathways.

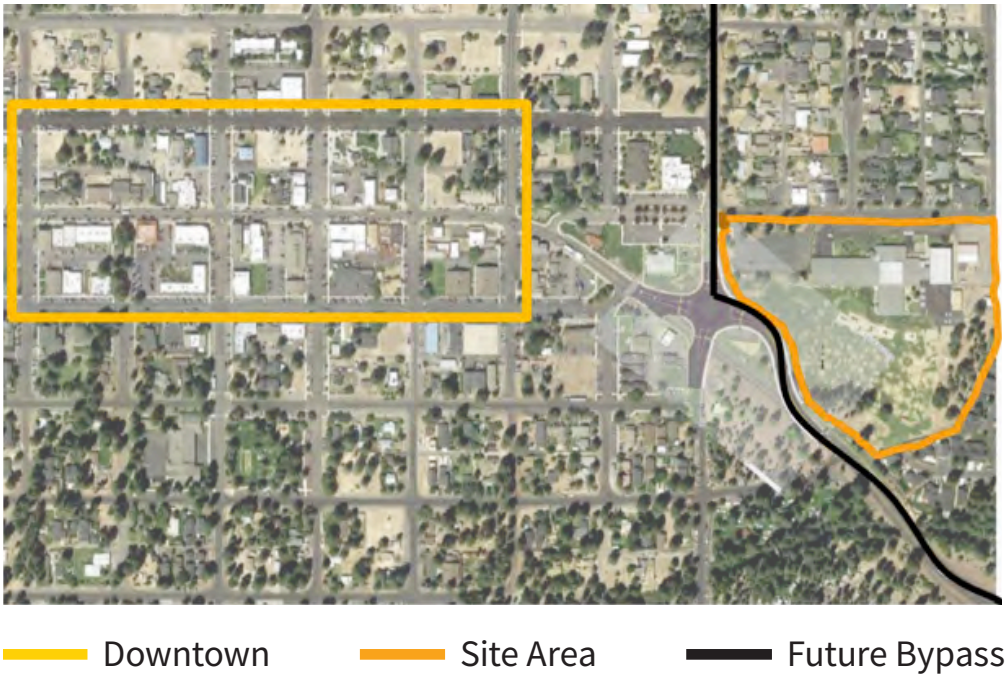

Figure 11: North Locust Street separates the project site from downtown Sisters.

Document Review

Student teams reviewed city planning documents to learn more about Sisters and the project site, selecting plans that could help them understand the city's goals and values and the challenges it is currently working to overcome. Documents included:

- Sisters Comprehensive Plan
- Parks Master Plan
- Sisters Country Vision
- Housing and Residential Land Needs Assessment
- Sisters Housing Plan Update
- Sisters Economic Profile
- Urban Renewal Plan
- Citizens4Community (C4C) Survey

Although the documents cover a wide range of topics, many contain overlapping themes such as housing. For example, the Comprehensive Plan and Sisters Country Vision state that low- and middle-income housing development and availability are imperative for Sisters' future. The Economic Plan and Comprehensive Plan emphasize the community's entrepreneurialism and the desire for economic development in the downtown area (Blesius et al., 2021, p. 21). The C4C Survey and Sisters Country Vision revealed how important genuine community engagement and collaboration is within the Sisters community.

Data Analysis & Case Studies

Students conducted data analysis, researched related case studies, obtained demographic and housing data from the U.S. Census Bureau, and analyzed how Sisters compared to the state and the country to support their proposals. The teams also found examples of successful projects related to their assigned themes (Appendices 2-4).

Design Charette

Students conducted a design charrette in November 2022 where each team created a vision for the site and proposed several draft layouts. After analyzing how well each configuration met their evaluation criteria, each team selected the proposal that ranked highest and refined their design. Teams then presented their proposals to Sisters staff and the Sisters School District.

Community Values

Figure 12: Sisters is a thriving community.

Source: cascadebusnews.com/sisters-a-small-town-where-business-arts-community-intersect

Sisters is committed to its planning efforts and values a high level of community engagement. City documents emphasize the need to address challenges that come with growth by integrating community values. Feedback offered by community members on what they value and how they envision the future of Sisters were echoed by city and Sisters School District staff during the site visit and subsequent correspondence with city officials, and include:

Connection: Sisters is a close-knit community where people take care of each other and welcome newcomers warmly.

Livability: Sisters boasts a multitude of walkable, open spaces that support and encourage active lifestyles and recreation balanced with respect for nature and environmental stewardship.

Accessibility: Sisters strives to create an atmosphere that encourages people along the continuum of human ability and experience to feel welcome and to engage in the community.

Equity: Sisters desires to be a community in which all its residents enjoy a high quality of life and sense of belonging through access to quality housing and education regardless of income, race, age, or ability.

Safety: Sisters seeks to be an environment whose inhabitants are free to go about their lives without having to worry about danger, risk, or injury.

Based on these values, the three teams sought to design a safe and accessible place for all ages that considers the needs of the Sisters' growing senior and elementary-school aged populations.

Common Themes Across All Three Teams

Each team designed a site that focused on one of the following themes: 1) age-friendly neighborhood; 2) adaptive reuse of the site, 3) a community and recreation. Through the design process each team independently included components to their design that resonated across all three proposals and tied into the community's values. Those themes include connectivity, built spaces, and open and green spaces.

Connectivity

Each team considered how to connect the site with the rest of Sisters. These new transportation networks could enable Sisters to become a leader in active transportation in the region. Sisters has the potential to be a place where anyone can easily and safely access the whole town without a car. Cohesive networks facilitate trip chaining (where a person can park once and conduct multiple errands on foot) and bus and active transportation options could be integrated, which set the conditions for a lively, environmentally friendly, and physically active community.

Connectivity is essential for site access. Supporting active transportation (any form of human-powered transportation such as walking or biking), encourages physical activity, which is critical to health. The Centers for Disease Control recommend that, to stay healthy, adults need at least 150 minutes of physical activity each week, and that kids between the ages of 6 and 17 need at least 60 minutes per day (USDHHS, n.d.). Active transportation networks allow physical activity to be integrated into daily routines.

Figure 13: Examples of safe street crossing infrastructure.

Source: Google maps (top), nycstreetdesign.info/geometry/pedestrian-safety-island (bottom).

Effective transportation networks factor safety into their designs. Teams considered the best locations for pedestrian lights, islands, and explored the ideas of 'complete streets' and 'traffic calming.' A complete street is intentionally designed through visual cues and street width to enable safe use by multimodal transportation. Traffic calming involves design techniques that encourage drivers to pay closer attention and to drive more slowly.

Transportation-related design elements can be direct or indirect. Direct elements include speed bumps and speed tables that force drivers to slow, curb bulb-outs that force drivers to take right turns slowly, and frequent intersections that force drivers to stop. Indirect elements calm traffic by creating a street environment that necessitates paying close attention to one's surroundings. Narrow lanes, medians, islands, and trees are examples. Brick paving and permeable pavement can also calm traffic because the different sensation alerts drivers to the change in their surroundings. These elements support safer streets for pedestrians and bicyclists and tend to be more effective than simply posting speed limit signage.

Increasing bicycle infrastructure is a strategy to provide additional transportation options in the community. Bicycles are a versatile mode of transportation that can be utilized by all age groups. Bike networks provide an accessible and equitable transportation option that is safest when transportation infrastructure recognizes cyclists' unique needs and space. For example, it could be beneficial to consider a way to integrate separate bike and pedestrian infrastructure in the design of the future roundabout (Appendix 5a).

Providing additional connectivity to the site would support existing infrastructure in Sisters, which includes the two bus routes, route 28 and 29, and Sisters Transportation and Ride Share (STARS), a micro-mobility program where community members can request individual rides 48 hours in advance.

Built Spaces

Teams considered how best to integrate built spaces, especially housing, on the site in order to augment the housing supply in Sisters. Sisters has the potential to be a place where people of all income levels can live, work, and recreate comfortably in walkable neighborhoods. Establishing community-friendly buildings, commercial buildings, and middle housing options would further contribute to a diverse, well-connected, socially active community.

Figure 14: Example of middle housing.

Source: courses.planetizen.com/course/missing-middle-housing.

Diverse, affordable housing options can help support a workforce in Sisters. Developing middle housing on this site can fill this critical need. Middle housing is defined as duplexes, triplexes, quadplexes, cottage clusters, and townhouses (Oregon HB 2001; Figure 15). Middle housing is key to increasing the supply of affordable housing units while also promoting connectivity and walkability. According to Opticos Design, a well-regarded middle-housing developer, "missing middle housing...highlights the need for diverse, affordable housing choices in sustainable, walkable places" (The Missing Middle Housing Collection, 2022). The AARP Missing Middle Housing Study identifies that middle housing development supports neighborhoods becoming more age friendly. More specifically, it states that middle housing is "great for retirees who want to age-in place, as well as single-parent families, recent graduates, young couples and individuals" (AARP, 2022b). According to the American Planning Association, people of all ages are looking for smaller housing units that offer greater walkability and community connection (Investing in Place, 2014).

Figure 15: The range of options middle housing can provide.

Source: Opticos Design, opticosdesign.com/wp-content/uploads/2017/08/MissingMiddle_Slides_OpticosDesign.pdf.

While development of housing itself does not create community, thoughtful middle housing development with an emphasis on walkability, affordability, and access to nearby amenities creates more comfortable, accessible, and sociable space. This, in turn, facilitates a stronger community feel and benefits people of all ages (What Makes a Successful Place, 2022). The AARP Missing Middle Housing Study states that "walkability is key to the benefits provided by missing middle housing" and that it is "ideally located within a walkable area, close to amenities" (AARP, 2022). This walkability factor fits the elementary school location and, when coupled with middle housing development, meets Sisters' desire to be a highly livable community.

A key component of a highly livable community is the ability to easily access amenities and resources, such as shops, grocery stores, and chance encounters with neighbors. Incorporating commercial and community spaces amidst residential spaces supports mixed-use spaces that promotes walkability, chance encounters, and a lively environment. Arranging built spaces in a way that enables people to work, play, and shop in the same place, means that community members of all ages can fulfill their daily needs, even without a vehicle (Appendix 5b).

Figure 16: The elementary school currently has large, open green spaces.

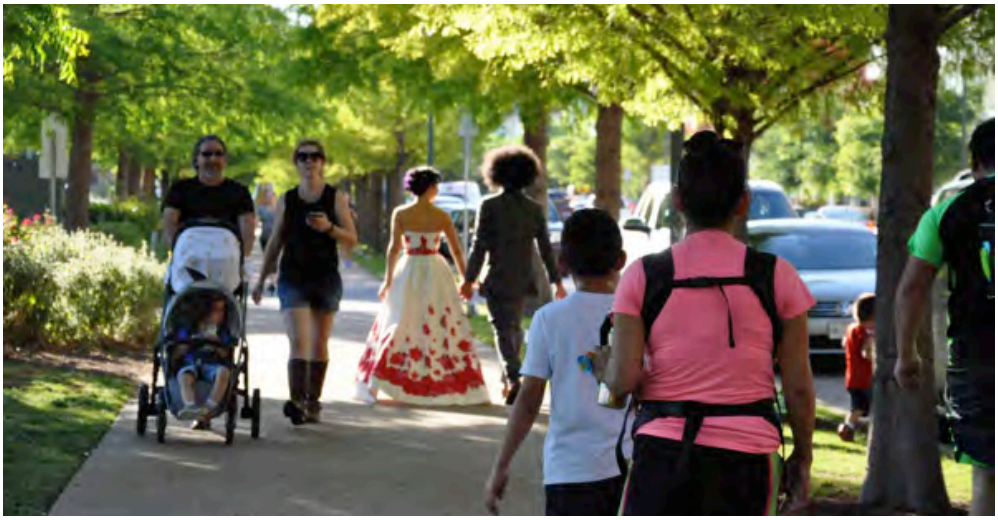

Figure 17: Open and green spaces create opportunities to socialize with neighbors.

Source: slipstreaminc.org/solutions/resilient-communities.

Open and Green Spaces

The final theme, open and green spaces, is intended to get community members outside and moving. Maintaining access to rich natural amenities and outdoor recreation, preserving open and green spaces within the city limits, providing opportunities to develop interpersonal and leadership skills through outdoor clubs and activities, and establishing quality and programmable open and green spaces can support health and development for all ages.

As people age, occurrence of injury and disease tends to increase and leads to progressive disability and motor impairment, which reduces a person's ability to live independently (Kimic, & Polko, 2022). Research shows, however, that older people who stay physically, mentally, and socially active tend to maintain better health for longer. Thoughtfully designed neighborhoods and urban parks provide people, especially seniors, with important opportunities to engage in activities and interact with members of other generations, which benefits their long-term health. Urban parks, including community and recreation centers, encourage more frequent physical activity, time in nature, and social interaction (Kimic & Polko, 2022) (Appendix 5c).

Figure 18: Open and green spaces provide opportunities for people to interact.

Source: medium.com/interviews-and-articles-on-art-public-spaces/interactive-public-spaces-make-successful-places-c522b4346e55.

Open and green spaces also facilitate and encourage social interaction. By including these places in their designs, students sought to foster relationship building between existing and incoming residents. Research shows that amenity-rich communities like Sisters often experience high rates of population in-migration, which can lead to social conflict between new and established residents (Matarrita-Cascante et al., 2006). Research suggests, however, that "frequency of interaction with neighbors" plays an important role in mitigating negative effects related to rapid population growth. One study found that more frequent opportunities for social interaction reduced "impersonality and anonymity" and strengthened "solidarity and reciprocity." It also found that city members who participated more in the community tended to be more satisfied with that community (Matarrita-Cascante et al., 2006).

Figure 19: Open and green spaces allow people with different interests to share space.

Sources: tripadvisor.com/Restaurant_Review-g52072-d10500535-Reviews-Food_Cart_Garden-Sisters_Central_Oregon_Oregon.html (top).

dogparkproduct.com/build-your-park/community-benefits/ (bottom).

Design Proposals

This section presents each team's design proposals. Although the teams each focused on a unique perspective (Age Friendly, Adaptive Reuse, and Community and Recreation Center), they all considered and integrated three common themes in their designs: connectivity, built spaces, and open and green spaces.

Age Friendly Neighborhood Focus

The American Association of Retired Persons (AARP) defines an age friendly neighborhood as "a community that is livable for people of all ages" and that helps people live in their homes and communities comfortably and easily as they age (Communities, n.d.). According to the World Health Organization (WHO), it is "the common vision of making [a] community a great place to grow old…" (WHO Regional Office for South-East Asia, 2013). These organizations suggest that communities can implement age friendly ideals through the eight age friendly domains (Figure 20): Outdoor Spaces and Buildings, Transportation, Housing, Social Participation, Respect and Social Inclusion, Civic Participation and Employment, Communication and Information, and Community Support and Health Services (Age Friendly Rural/Remote Communities Initiative, 2007). The Age Friendly team named their design "The Quilt" because it weaves together different uses to create a livable and age friendly future for Sisters.

Figure 20 (left): AARP's eight Age Friendly domains.

Source: fostercity.org/citymanager/page/foster-city-age-friendly-community-initiative.

Figure 21 (right): The Quilt.

Sources: amazon.com/Sisters-Oregon-Mountains-Meadow-Design/dp/B00N5CM9KY

Age Friendly Vision Statement

The Age Friendly team envisioned an age friendly Sisters community that integrates livability, accessibility, and inclusivity. The proposal quilts together accessible streets, diverse housing, and welcoming gathering spaces to create a safe, multigenerational community.

How the Age Friendly Theme Shaped the Design

Planners can influence the three physical aspects of the age friendly domain wheel: Outdoor Spaces and Buildings, Transportation, and Housing (the domains outlined in Figure 20). These are the three specific domains that this team focused on for its urban design proposal. These aspects have the capacity to support the other age friendly domains on the wheel through possible programming and interaction on the site. The team suggests amenities and urban design elements to accommodate all age friendly domains. See Figure 22 for the team's overall design proposal.

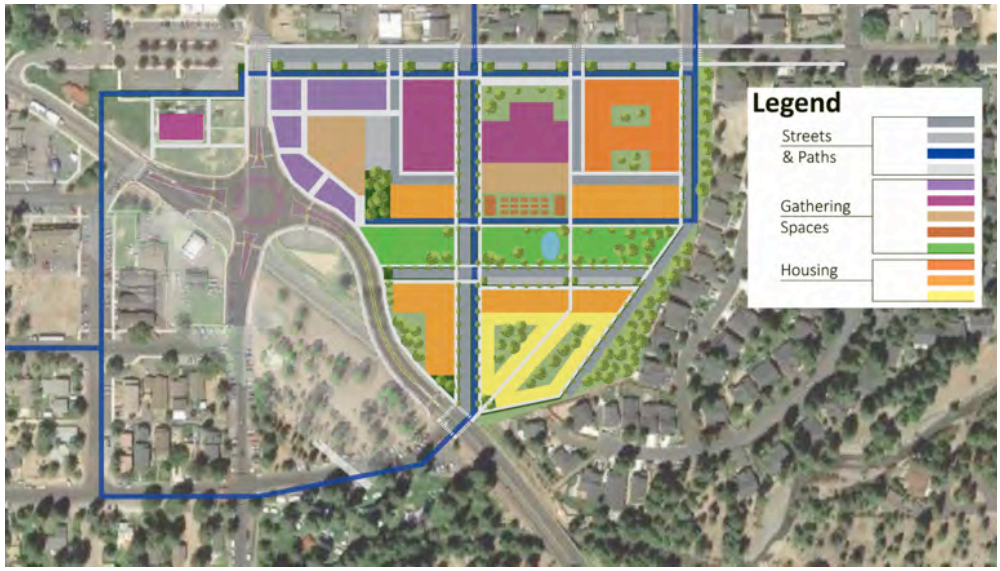

Figure 22: Age Friendly overall design proposal.

The Three Overarching Themes in the Age Friendly Proposal

Connectivity

The Age Friendly team sought to design a safe and interconnected transportation network, defined as a network with reduced barriers that allows people of all ages to get to and around the site confidently. To accomplish this the team integrated the site into Sisters' already strong, pedestrian-friendly block structure with a clear, defined block structure on the site that merged with the grid of downtown Sisters. Extending nearby streets (such as Maple and Tamarack), designing alleyways, sidewalks, bicycle paths, and angled parking spaces all supported walkability (Figure 23). In addition to being safe and accessible, the network increases functional and social connection and the team considered human needs in addition to convenient automobile transport. The elements of block structure, safe intersections, streets without dead-ends, and a supportive network of alleys, parking, sidewalks, and bike paths underpin the entirety of the neighborhood plan. The team employed the following transportation elements to ensure the site's connectivity.

Figure 23: Age Friendly transportation design proposal.

Maple Street: The team extended Maple Street to connect to Jefferson Avenue at the site's southern end, envisioning it as the site's main vehicular and bicycle connector street. The team recommended a dual lane bike path that is separated from car traffic by vegetated medians and on-street parking (Figure 24). The street would include eight-foot wide sidewalks with room for landscaping and trees for shade, increased urban canopy, and support traffic calming.

Cascade Avenue: The team envisioned Cascade Avenue as another major access road to the site and recommended adjustments similar to Maple Street (Figure 24). Cascade Avenue is particularly important because it is the only one that directly connects the site to downtown.

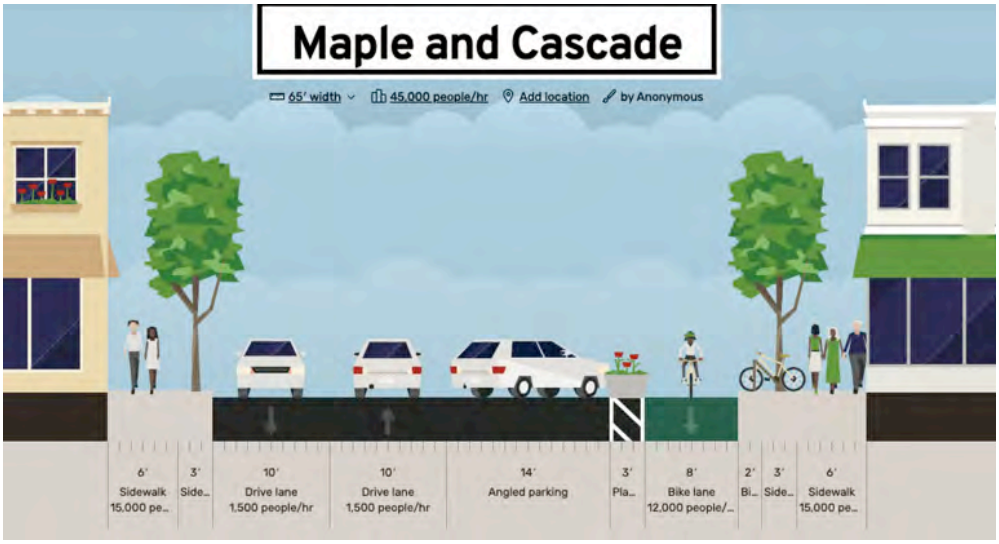

Figure 24: Age Friendly proposed design for Maple Street and Cascade Avenue.

Tamarack Street and Alleyways: These elements support the main roads and active transportation network as well as provide access to public and residential buildings for private parking, maintenance, waste, emergency vehicle, and utilities access. The team designed alleyways based on the "woonerf" model to encourage pedestrian use and signal that cars are guests. See Figure 25a for the layout of alleyways and Figure 25b for a cross-section view of Tamarack Street.

Maker Street: The team recommended a new street to facilitate visitor access to its proposed linear park. The new street would run parallel to the linear park, connect Maple Street to Tamarack Street, and prevent dead-end streets. This street also includes wide sidewalks, vegetated medians, on-street diagonal parking, and accessible parking spaces for people with disabilities. See Figure 26.

Figure 25a: Age Friendly proposed alleyway layout.

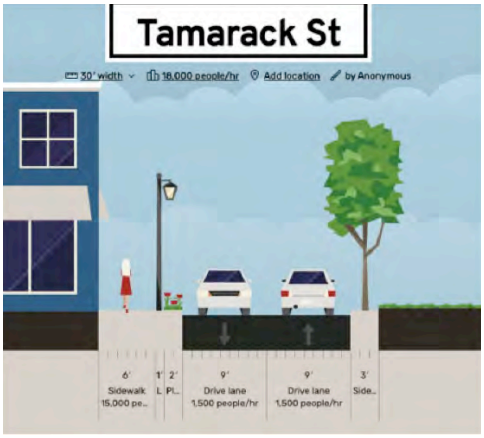

Figure 25b: Age Friendly proposed design for Tamarack Street.

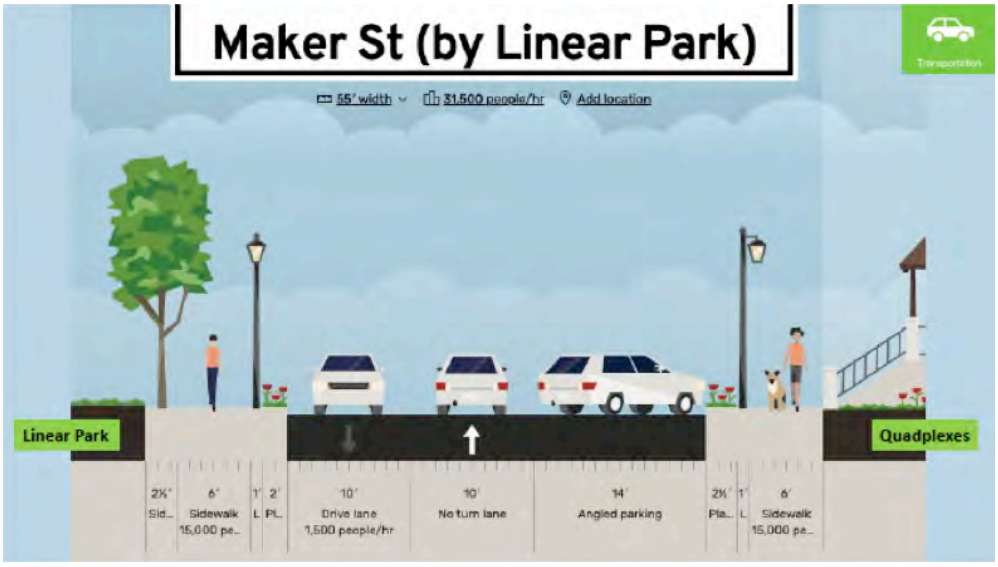

Figure 26: Age Friendly proposed design for Maker Street.

Parking: The team prioritized active transportation to and from the site while recognizing automobile parking as a necessary element. The design includes 150-250 on-street parking and a 21-car parking lot near the commercial plaza for residents, people with disabilities, and community center and commercial area employees. The team allotted space for one private parking space per housing unit, in accordance with Sisters Development Code Chapter 3.3.300.F and 4.5.400.C. Townhouse and cottage residents would access this parking via the alley system. Multi-family apartment structure residents would use a parking garage on the ground level with one parking space per unit. To create an age-friendly, accessible site, the team recommended exceeding accessible parking requirements outlined in Sisters Development Code 3.3.400.M.

Pedestrian Pathways: The team proposed a network of pedestrian paths throughout the site with trees, landscaping, and wide, paved sidewalks to create a friendly, welcoming place for people of all ages and abilities. These pathways support a high-quality pedestrian infrastructure that benefits the city's economy by expanding the downtown commercial district and providing more spaces for residents and tourists to shop, eat, play, and explore on foot. The team proposed incorporating

frequent intersections that will create more opportunities for pedestrians to cross safely, reduce jaywalking, and decrease car travel speeds (because they must stop more frequently). Intersections also give pedestrians more route options.

Bicycle Network: The team proposed two-lane, protected bike paths on site to increase safety, comfort, and convenience for cyclists. The team noted the importance of keeping bicycle traffic separate from vehicular roundabout and highway traffic, and planned bicycle route layout accordingly. The team envisioned bike parking at multiple locations, including adjacent to residences, the community center, and the commercial center.

Bike Share Program: The team proposed that Sisters adopt a bikeshare program. Such a program would benefit residents, provide visitors with an alternative transportation mode to explore the city, generate revenue, reduce vehicular traffic, and encourage active transportation. Knowing that the location of bike share docking stations affects how likely people are to use the bikes, the team recommended specific locations for docking stations (Figure 27). Because the bikeshare program's integration with other transportation systems is crucial, the team templated docking stations by public transit stops, parking lots in the downtown area, and near the proposed multimodal pathways from the Sisters Transportation Plan. Smaller stars on the map represent smaller docking stations, and bigger stars indicate larger ones.

Figure 27: Age Friendly proposed bikeshare program docking hubs.

Built Spaces

The Age Friendly team combined public and commercial buildings on the site to provide Sisters with opportunities to build community and foster economic vitality. The team's proposed built spaces include a two-building community center in the elementary school, commercial space on the northwest corner, and reuse of the administrative building (Figure 28). The site layout would provide parking for non-residents with walkable pathways and housing as the priority. The team designed the buildings to front the street and create a calming and human-scaled atmosphere that promotes the social goals of age friendly neighborhoods.

Community Centers: The team proposed splitting the current elementary school building down the middle with the extension of Maple Street. The western half of the building would be a large versatile space for gatherings, recreation, meetings, and volunteer opportunities that the community could adapt to meet social, physical, and organizational needs. The eastern half of the building would include the school kitchens and classrooms for educational and childcare use. The kitchens would be available for age friendly programs such as cooking classes, food preparation, and volunteer opportunities through local organizations. The classrooms could serve as adult education and childcare space. The team specifically envisioned some of the classrooms as daycare space for Sisters' workforce and families living in the area. Daycare is an important service to provide in a development seeking to assist a workforce. This service, as well as job seeker support, employer support, and work training are important amenities that support working classes (Workforce Solutions - How We Help, n.d.).

Figure 28: Age Friendly proposed neighborhood spaces.

Commercial Space: The commercial space located on the northwest corner (Figure 28) would extend the downtown business district and draw people to the site by providing space for commercial tenants who serve residents and tourists. Within the site's mixed-use context, the commercial spaces would help fulfill residents' daily needs for groceries, dining, and shopping. The businesses would help make this space a welcoming, safe, and unique place for people to visit and gather. The prosperity of such commercial spaces would also generate tax revenue to help the city recoup its investments into public infrastructure. The commercial buildings could also serve as a location for live-work housing.

Administrative Building: The Age Friendly team proposed keeping the current school district administrative building for community uses. It could accommodate education and day programs, historical education, visitor information, and art. The building is an adaptable space, and public engagement could help determine the community's preferences for its use. According to the 2020 Business Survey, a visitors center with information about local businesses could benefit shops (City of Sisters, 2021) – the administrative building could fulfill this role. Additionally, the green space surrounding the building could be ideal for art and garden space.

Housing Development Proposal on Site: The Age Friendly team proposed 80-100 new units of middle housing on the site, ranging from 400-1200 square feet with a variety of configurations to accommodate all ages and household sizes. Zero-step entry and accessible units would be interspersed to accommodate people of all abilities. Figure 29 highlights where the team proposed to build different types of housing. For more specific details on size and feasibility of these housing types, refer to Appendices 5b, 6a, and 6d. In general, the units in each section include:

- Low-capacity housing: 20 cottage clusters
- Medium-capacity housing:
- 6 townhomes
- 8 duplexes
- 9 quadplexes
- 10 live-work units above the retail spaces
- High-capacity housing: 30–50-unit apartment building

The team interspersed green space throughout the residential areas to provide smaller, more private outdoor areas that promote social connection among residents. The team's goal was to create middle housing that offers new price, style, and size options while also matching the housing aesthetic that already exists in Sisters. The 5 Pines Lodge in Sisters (Figure 30) is an example of how a higher-capacity apartment building could be designed to match Sisters' style.

Figure 29: Age Friendly proposed neighborhood housing.

Figure 30: Age Friendly example apartment building style.

Source: hotels.com

Open and Green Spaces

The team provided programmable open space and prioritized placemaking, which uses a community's assets, potential, and inspiration to its advantage to create quality public spaces that benefit people's well-being, health, and happiness. The team recognized that park designs often do not consider the needs of older adults or people with disabilities and sought to prioritize a mix of uses and promote inclusive spaces. The team envisioned residents coming together to determine the types of intergenerational programs to use these open spaces for, believing strongly that such public involvement helps people of all ages to feel included in their community.

Figure 31: Open and green spaces allow for intergenerational interaction.

Source: suwaneemagazine.com/splash-into-summer (top).

sohma.org/tai-chi (bottom).

Linear Park: The linear park encourages recreation, physical activity, and socializing. The Placemaking for an Aging Population report informed the proposal's open space design by encouraging the presence of natural attributes, age friendly elements that invite physical activity, and an environment designed to support social interaction (Loukaitou-Sideris et al., 2014). Multisensory amenities like a playground, splash pad, garden, viewing spaces, comfortable and accessible seating, good lighting, and trees all contribute to the area's sense of place. Positioning these amenities next to the community center and commercial space in the middle of the site supports accessibility and makes it a safe, low traffic area. Throughout the linear park there are accessible walking paths, water fountains, restrooms, bioswales, and native vegetation.

Figure 32: Age Friendly linear park examples.

Source: archdaily.com/957586/landscaping-on-an-urban-scale-12-linear-park-projects (top).

segd.org/30-urban-linear-parks-projects-2000 (bottom).

Age Friendly Programming, Partnership, and Marketing Opportunities

The Age Friendly team recommends collaboration with different Sisters organizations to support age friendly programming in the community centers and park. Private industries or nonprofits could support programs such as childcare, yoga, Tai Chi, drop-in soccer, tee ball, cooking classes, and garden education. Sisters Parks and Recreation Department, local organizations like Seed to Table, and national organizations like Head Start that run reading and childcare programs are a few examples of potential partners. Targeted marketing could attract diverse groups of people including working class people, seniors, teachers, service providers, and active retirees to live and recreate at the site. Using targeted marketing strategies through local agencies, such as *The Nugget Newspaper*, Age Friendly Sisters Country, the Sisters School District, and other service-oriented organizations could support engagement with a diverse group of potential tenants.

Phasing

The Age Friendly team imagines its proposal coming to fruition in four phases:

Phase 1:

1 Rezone the elementary school parcel as Multifamily Residential (MFR) with a Master Planned Development and revise the Comprehensive Plan, development code, and zoning maps to match (refer to Appendix 7 for more information on zoning recommendations).
2 Divide the site into the necessary parcels and develop objective standards for housing and infrastructure to guide development built by the private market. These standards would ensure that private developers comply with design requirements for target populations and income classes.

Phase 2:

City secures funding and lays infrastructure and utilities for new public streets and pathways to open the door for private development. Possible funding sources include street bonds, park bonds, expanding the Urban Renewal Area and using tax increment financing to pay for investments (City of Sisters Urban Renewal Plan, 2022). Refer to Appendix 6a for more information on funding recommendations. Constructing the transportation network would physically divide the land into parcels and allow access for construction in later phases.

Phase 3:

Sell and/or distribute new parcels to nongovernment organizations and government agencies. Affordable housing land acquisition authorities that acquire land for housing could then ensure affordable housing through loans. This option separates the value of land from the value of a structure, making home ownership more affordable and equitable (Oregon Housing and Community Services: Land Acquisition Revolving Loan Program, n.d.).

Phase 4:

Build structures. Private developers would produce commercial spaces and some housing. Builders like Pacific Crest Affordable Housing or Northwest Real Estate Capital Corporation, who specialize in affordable housing and senior living, could build specific units (Northwest Real Estate Capital Corp., n.d.). These units and construction companies would account for the physical needs of aging and disabled populations. The city could maintain ownership of and responsibility for the community centers and parks.

Adaptive Reuse Focus

Adaptive reuse "refers to the repurposing of an existing structure for new use" and is a practice that can "[breathe] new life into historic structures by converting them into something useful for the surrounding area, like low-income housing, student housing, community centers, or mixed-use creative venues" (MasterClass, 2021). Adaptive reuse is an important strategy to consider for several reasons. It preserves cultural heritage by restoring sites of cultural significance that in other circumstances would be demolished to make room for new structures or left to decay. It can help reduce and slow urban sprawl because an already-existing structure is being repurposed rather than building a new structure further from the city center. Adaptive reuse has the potential to create unique, popular-with-the-community places with lower construction costs (uses more labor than building materials, forgoes demolition expenses, local tax incentives and federal historic tax credits ease budget concerns), and less time needed for construction. The Adaptive Reuse team prioritized finding ways to reuse existing structures, specifically the Sisters Elementary School, to preserve Sisters' history and pride.

The site's history as an elementary school has shaped its current layout. Students recognize that the school and administration buildings hold cultural significance to the community and sought to preserve that culture while also adapting the site to a new purpose. The school building's large size and school-oriented internal configuration required the team to consider how much of the original building to keep, which internal reconfigurations were possible, and how to maximize the remaining outdoor space. The school building's positioning on the site also required consideration. The building cuts off the southern part of the site from connection opportunities. The building's significant setback from the bordering roads necessitated new favorable 'edge conditions' for non-vehicle users (pedestrians and cyclists, for example). Favorable 'edge conditions' include situations in which building walls 'meet,' or come right up to the edge of the streets surrounding a site. Favorable edge conditions limit curb cuts and create a comfortable street front that provides safety for pedestrians and cyclists moving along them.

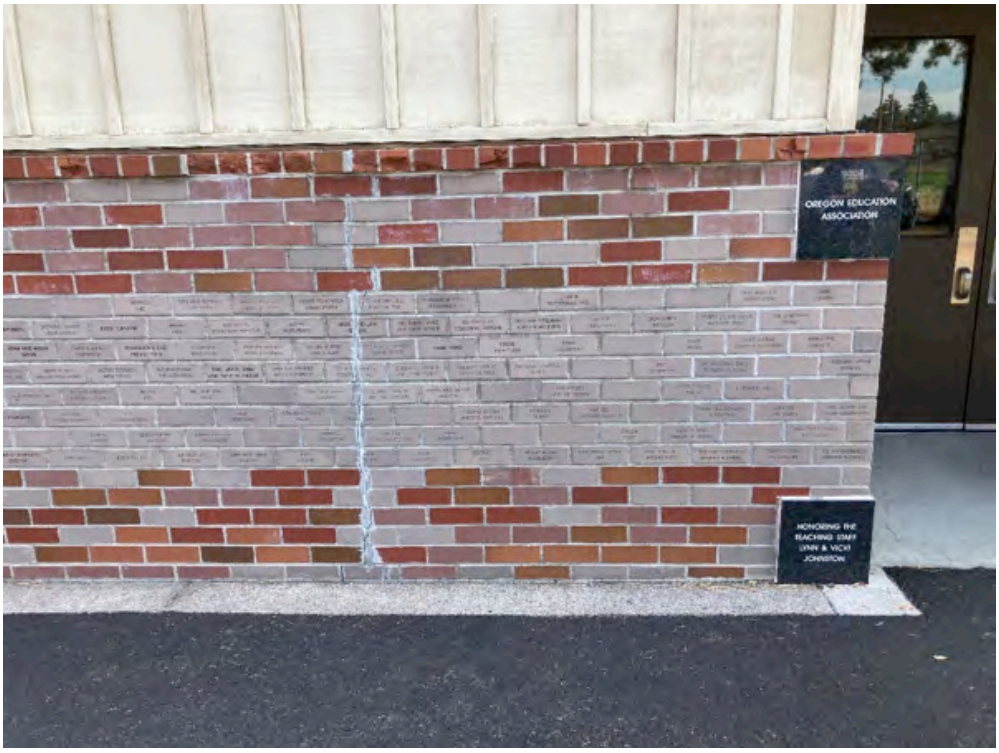

Figure 33: Dedications along the Sisters Elementary School west-facing wall.

Adaptive Reuse Vision Statement

The Adaptive Reuse team envisioned the Sisters School District modeling sustainable rural development through the adaptive reuse of the Sisters Elementary School as a community hub that includes workforce housing for school district employees.

How the Adaptive Reuse Theme Shaped the Design

The site's size and location presented an opportunity for redevelopment and by prioritizing reuse of existing buildings, community identity and local pride (Gauger 2020) could be maintained and fostered. The design features a mixed-use concept with community and commercial spaces, diverse housing options, open space for the public, and a multi-modal transportation network.

The team extended commercial spaces from downtown onto the site and created affordable workforce housing. The proposal includes a plan for funding and phasing that supports repurposing the school building for immediate use to avoid vacancy and deterioration. The team also applied a sustainability lens as it considered reurbanization and the implications of growth in the face of climate change.

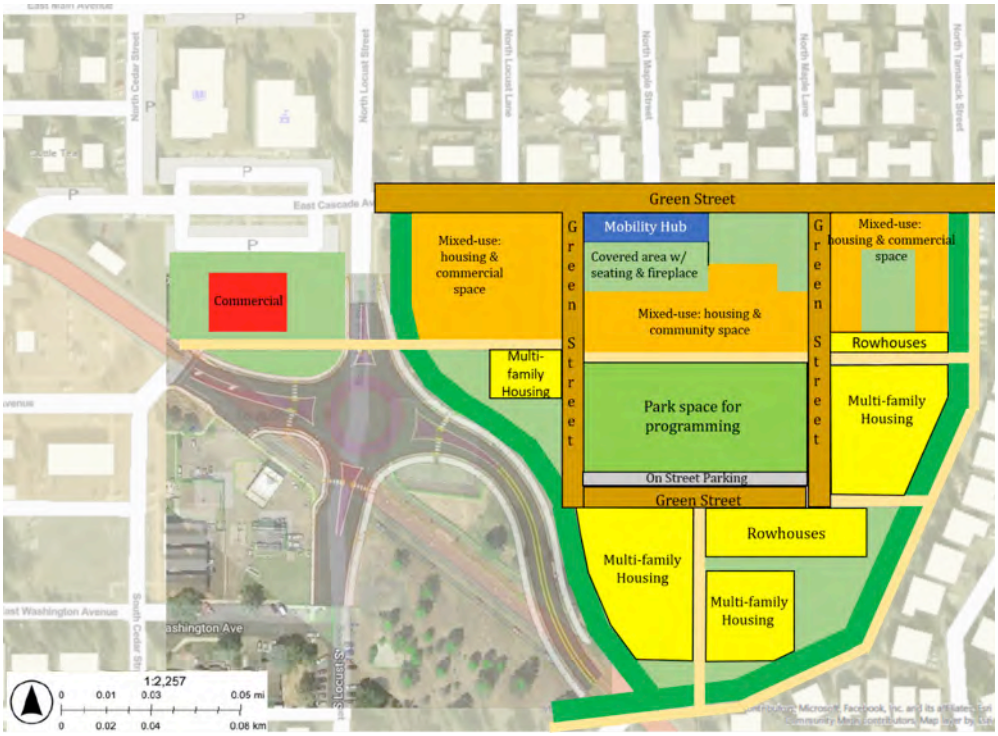

Figure 34: Adaptive Reuse overall design proposal.

The Three Overarching Themes in the Adaptive Reuse Proposal

Connectivity

A connectivity network is essential to make the site's proposed community gathering places, open spaces, and commercial opportunities accessible to the community. The team emphasized low-user-cost and multimodal (pedestrian, biking, and public transit) connections that preserve Sisters' small town feel and realize the community value of sustainability. A robust alternative and low-cost connection network become even more important if the community center serves as an emergency shelter during natural hazard events to ensure equitable access across the city. In addition, the team focused on strengthening connections prioritized in Sisters' planning documents that connect residents to work (such as the new school campus), nature (such as Whychus Creek), and Sisters' culture and commerce (such as downtown). Those new to Sisters will use these connections to learn about and integrate into the community, while residents on the site who know and love Sisters will find these connections support easy access to important community spaces. See Figure 35 for connectivity map.

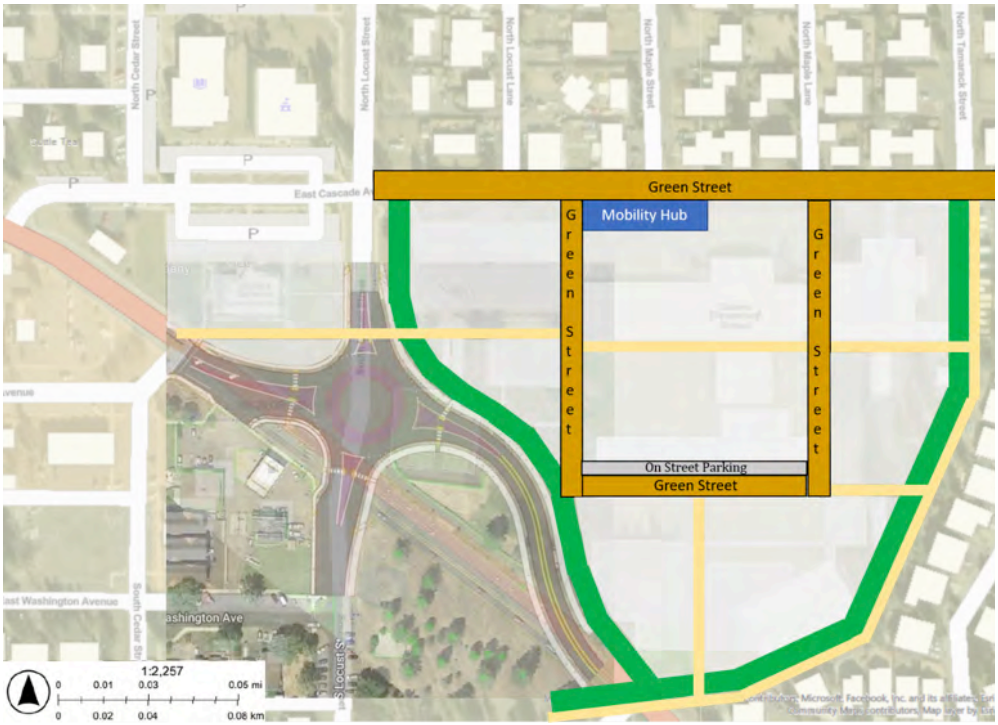

Figure 35: Adaptive Reuse connectivity proposal.

Green Streets: Green streets will connect through the site and will include sidewalks, parallel parking, and a narrow one-way travel lane that loops through the site for connectivity at the northern edge of the site. The narrow travel lane will ensure that automobile travel through the site is slow and safe. These green streets will be composed of permeable surfaces to allow rainwater and snow melt to permeate the surface, which will reduce runoff and help recharge the water table. Tree planting along the streets will cool the site and reduce runoff and pollution. The southern green street will include additional street parking for the surrounding housing units. East Cascade Avenue will be converted to a green street with new sidewalks and bike lanes on both sides while maintaining the two travel lanes, increasing connectivity to the site and the surrounding community. See Figure 36 for example of what green streets through the site could look like.

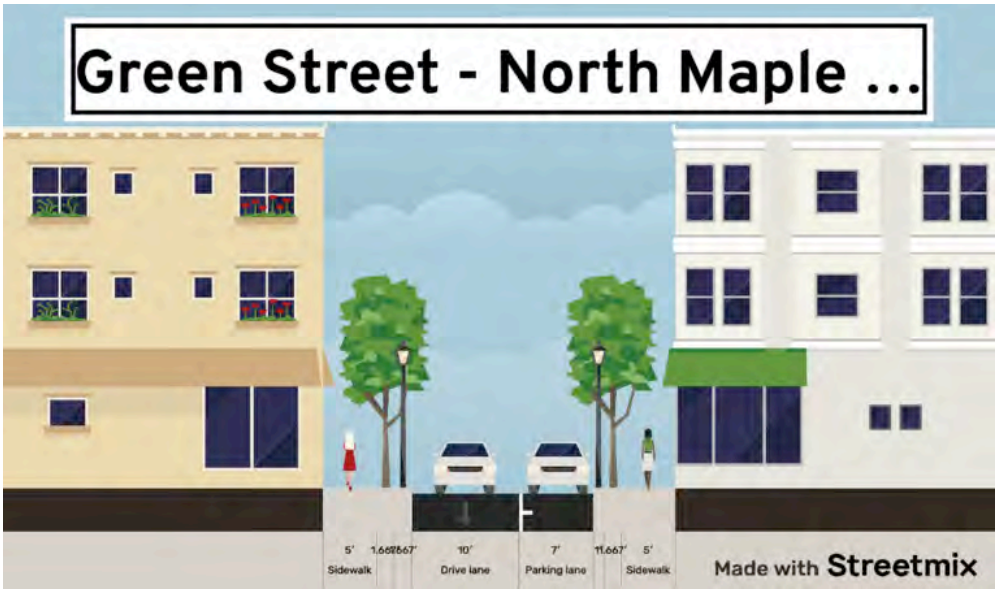

Figure 36: Adaptive Reuse proposed green streets design.

Mobility Hub: Just north of the elementary school, the team envisioned a mobility hub consisting of a covered bus stop, bikeshare hub, and bike racks. Figure 37 provides an example of what the mobility hub could look like.

Figure 37: Adaptive Reuse proposed mobility hub.

Source: newcivilengineer.com/latest/arup-unveils-vision-for-future-mobility-hubs-to-connect-fragmented-transport-systems-22-09-2021

Bus Network: The team also proposed a bus service to increase the connectivity and access to the site and through Sisters with stops at key points. Figure 38 presents the bus's potential route and stops. The bus route would connect the eastern portion of the urban growth boundary (UGB), the site, city hall and the library, downtown, the commercial area at the west entrance to Sisters, and the K-12 schools. Frequent, reliable service could enable residents to take the bus to work and run errands. A bus service could also increase accessibility for Sisters' disabled and transportation-disadvantaged residents, increase connectivity, establish Safe Routes to School, and decrease congestion.

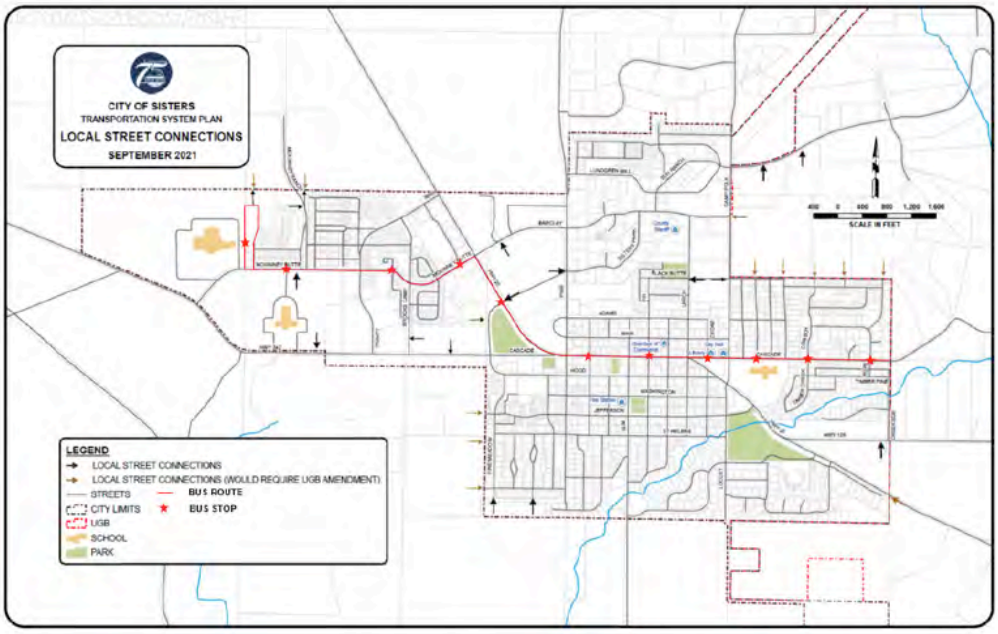

Figure 38: Adaptive Reuse proposed bus service route.

Source: City of Sisters—Public Works

Source: City of Sisters – Public Works

Pedestrian and Bike Network: New pedestrian and two-way bike lanes are proposed to increase connectivity to downtown, neighborhoods north and east of the site, Creekside Park, and other locations in Sisters. Figure 39 shows a cross-section of what those trails could look like. Figure 40 shows how the bicycle paths could connect to existing bicycle networks and Figure 41 shows how the added pedestrian paths could connect to the existing pedestrian path infrastructure and promote walkability.

Figure 39: Adaptive Reuse proposed design for pedestrian and bicycle network.

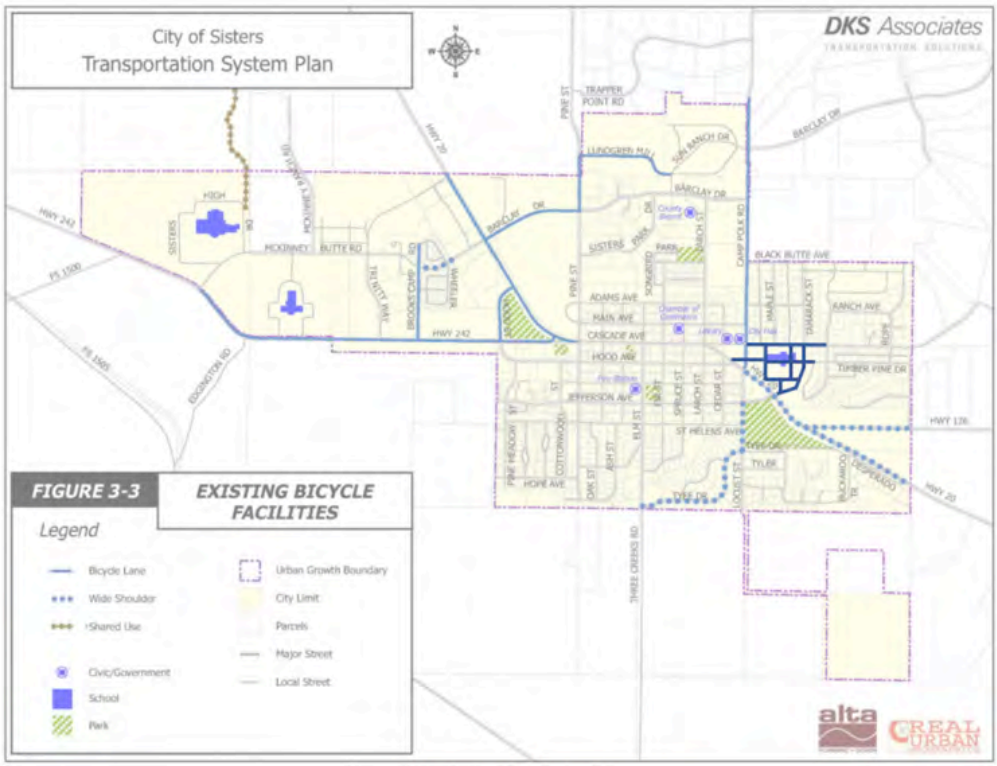

Figure 40: Adaptive Reuse proposed network of additional bicycle lanes.

Source: City of Sister—Public Works

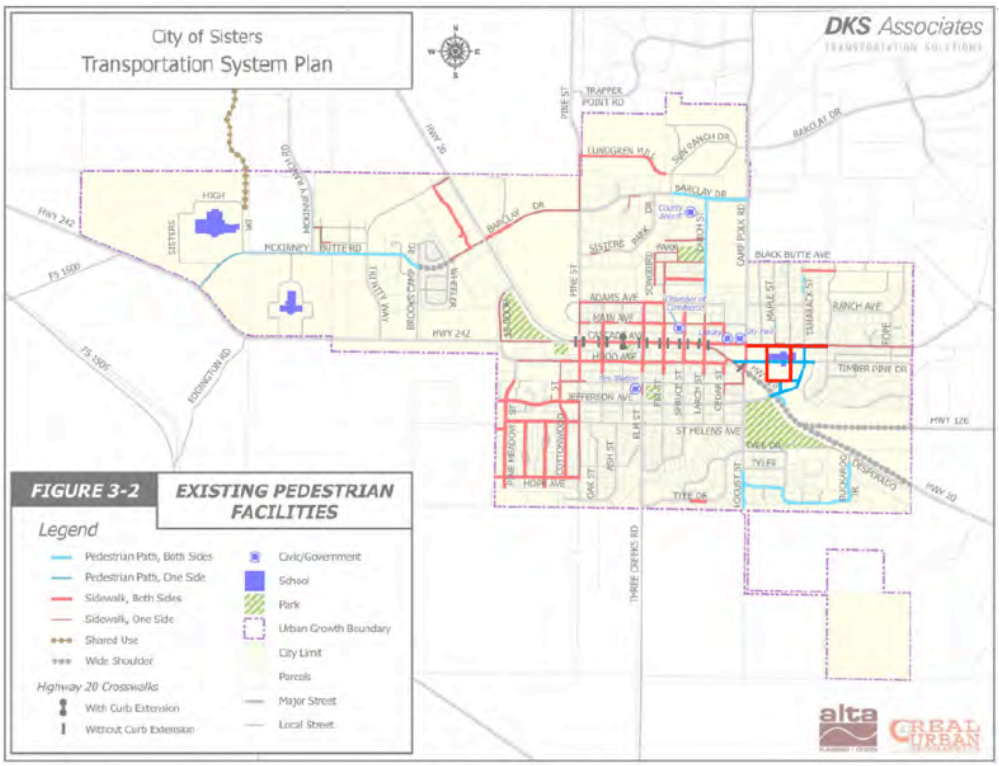

Figure 41: Adaptive Reuse proposed network of pedestrian path improvements.

Source: City of Sister—Public Works

Built Spaces

Traveling east from downtown Sisters, the land use transitions from higher intensity public use (commercial/community) to open spaces and housing. The northern edge of the site would contain commercial and community spaces with a mix of smaller housing units on the second story.

Sisters Elementary School Building: The team wanted to maintain the building's exterior brick. Since the Sisters Elementary School was recently renovated with bond funds, there are opportunities to use the building immediately. Cities throughout the country are adapting and reusing vacant public buildings to create housing for employees and community spaces. The C wing could be torn down to create a more cohesive site layout and better connectivity.

From School Building to Housing: Figure 42 shows a school hallway in Prineville, Oregon, that has been repurposed into apartments for teachers. We envision building workforce apartments as a second story to the existing school building, in the same way that many downtown buildings in Sisters have already been adapted for upstairs living quarters. A second-story addition to the current school will provide an additional 27,000 square feet or about 63 studio apartments for workforce housing.

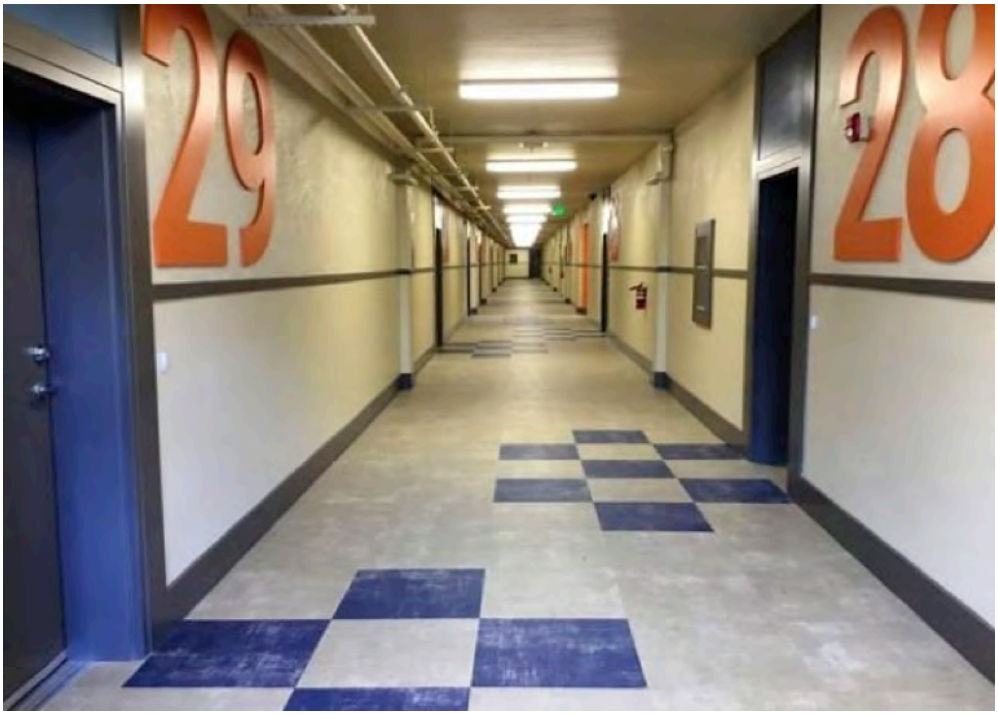

Figure 42: Former classrooms in Prineville, Oregon, that have been converted to apartments.

Source: affordablehousing online.com/ housing-search/ Oregon/Prineville/ Ochoco-School-Crossing/10108620

Figure 43: Sisters Elementary School classrooms.

From School to Community Center: Sisters Elementary School would be converted to community spaces on the ground floor with a community center and rooms that the Park and Recreation District could use. The main level of the school would become a community center where the auditorium is and existing classrooms would become rooms that the Parks and Recreation District could use for programming and for a Head Start program or another childcare program. In addition to recreational uses, the center could serve as a warming, cooling, or clean air center during extreme weather events. See Figure 44.

Figure 44: Example of classroom that could be used as a community gathering space.

Commercial Space: Commercial spaces will replace the current parking lot, gym, and bus barn, and the Sisters School District administration building will also serve as commercial space (Figure 34). The commercial spaces replacing the parking lot will inhabit 45,300 square feet on the ground floor, and an additional 45,300 square feet on the second floor will supply roughly 73 one-bedroom units of workforce housing. The building replacing the gym and bus barn will occupy approximately 21,500 square feet of solely commercial space with an additional 21,500 square feet of housing on the second floor comprised of 49 studio apartments. Ground floor commercial spaces will function as an extension of downtown and a mixture of shopping and dining options will attract site residents, nearby neighbors, community members, and visitors. These neighborhood-centered commercial spaces, visible from the Highway 20 entrance to Sisters, could provide an excellent location for rent-subsidized business incubator space, especially for entrepreneurs of color and other historic Sisters minorities.

Housing Development Proposal on Site: Because of the Sisters Elementary School adaptive reuse and community gathering places, there is the potential for much more workforce housing and far more diverse housing types than the 88% of single-family homes that make up Sisters' current housing stock. As seen in Figure 45, the team proposes dense housing built to the street's edge to cut down on utility costs, infrastructure costs, and costs associated with street construction. The dense housing would include 159,600 square feet consisting of row houses and multi-family buildings that have the potential to accommodate about 100 two-bedroom units and 66 three-bedroom units. The team recommends 351 housing units (254,500 square feet), including the

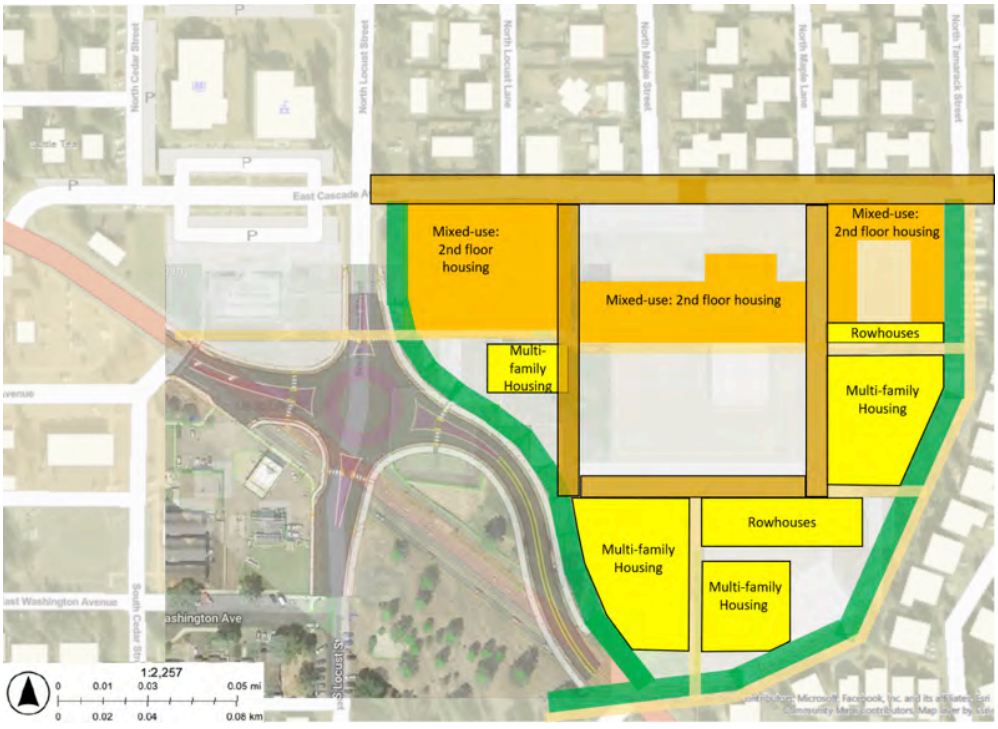

Figure 45: Adaptive Reuse proposed built space layout.

second-story housing on East Cascade Avenue. Resident parking options would include off-street parking, first-floor garages in rowhouses, and multifamily building carports, which could also serve as patio space for second story residents (Figure 46). Dense housing can be built that fits with the character of historic downtown Sisters and existing buildings in the area. Hotel Sisters is an example of a small block building that could be replicated to serve as a small block studio apartment building (see Figure 47; additional photo examples are available in Appendix 5b).

Figure 46: Patio-carport combination example.

Source: id.weber/en/blog/pilihanmu/improve-function-your-house-exterior-maximizing-space-carport.

Figure 47: Example of housing design that matches the character of Sisters.

Open and Green Spaces

In response to the community's interest in access to the outdoors, the proposed design maintains open spaces and views, and preserves over three city blocks worth of open space and green space (Figure 48).

Centralized Green Space and Pocket Parks: Students focused on increasing visual and outdoor access by maintaining open spaces and unobstructed views of Mt. Jefferson and the Sisters mountains from the site. Situated between the mobility hub and the re-envisioned elementary school, a covered area with seating and fireplaces would serve as a place for community members to gather organically.

Figure 48: Adaptive Reuse proposed open and green space layout.

Ecological Corridor: To make the site more welcoming and connected to the larger ecology of Sisters Country, an ecological corridor with native plantings will act as a buffer (from highways/traffic) along the edges of the site. The buffer will be 27' wide with a wood chip pedestrian path to accommodate the full growth span of Ponderosa pines (Figures 49-51).

Figure 49: Adaptive Reuse proposed location for an ecological corridor and pedestrian path.

Figure 50: Adaptive Reuse proposed ecological corridor location.

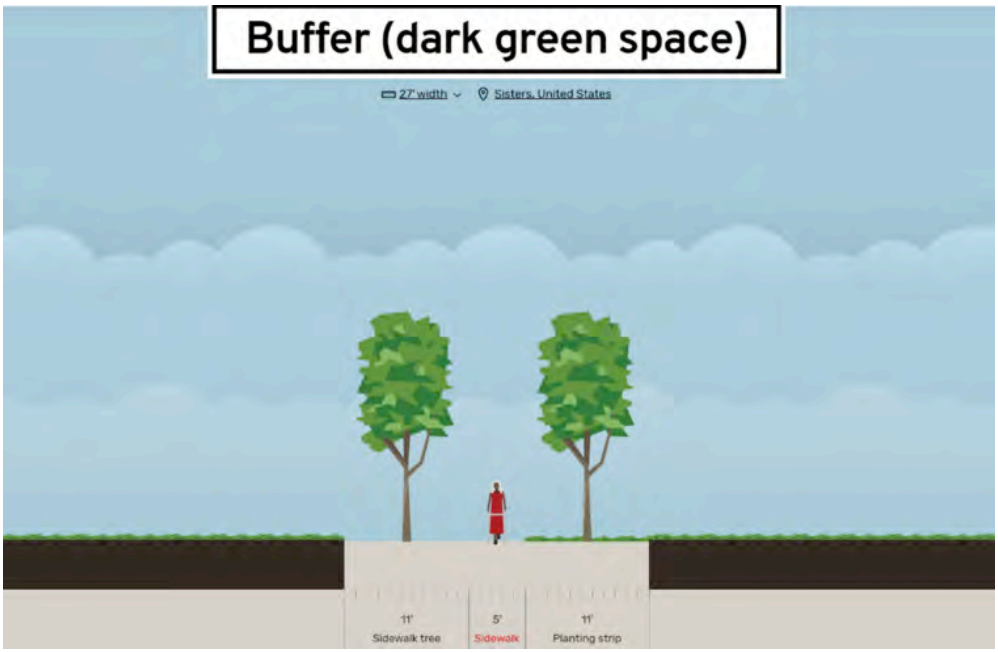

Figure 51: Adaptive Reuse proposed ecological corridor design.

Adaptive Reuse Phasing

The Adaptive Reuse team proposed the following phases to implement its plan:

Phase 1:

The Sister 2040 Comprehensive Plan (Policy 4.2.5) allows certain creative interim uses on vacant properties. This project's pre-development phase may take three to six years or more. Sisters School District could partner with the Parks and Recreation District as soon as the school becomes vacant to start providing community center programming inside and outside with minimal structural changes. Example programming could include outdoor recreation fields, indoor basketball, cooking classes in the commercial kitchen, and movie nights in the cafeteria. Piloting the community center at this stage could help inform recommendations for future development.

Phase 2:

Focus on the site's key feature, the redevelopment of the school as a community center with housing units on top to address school district housing needs. The team recommends beginning construction in late spring when recreation activities shift to the site's green space or other outdoor community spaces.

Phase 3:

Finish the street façade on Cascade Avenue with additional commercial uses and second story housing spaces.

Phase 4:

Complete the denser residential development in parallel with growing housing needs. The result would be a reimagined experience of the Sisters Elementary School that remains tied to community values of education, connection, livability, and equity.

Recreation and Community Center Focus

Recreation and community centers are valuable assets to the communities they serve. "A well-run community center is a thriving hub of activity for youth, families, senior citizens…[and] civic organizations…" that "[improves] the overall quality of life within a community" (https://rciadventure.com/adventure-attraction-news/the-unique-power-held-by-recreation-centers/). These amenities promote healthy, active lifestyles by providing safe, well-equipped spaces for people to engage in sports and other physical activities, art, and other hobbies and forms of recreation. They also support community members by offering programs such as daycare services and afterschool programs as well as opportunities to cultivate relationships through participation in teams, clubs, and classes.

Recreation and Community Center Focus

Recreation and Community Center Vision Statement

The Recreation team envisioned the "Whychus Creek Recreation Center" as an accessible and connected recreation hub for intergenerational play to support a healthy, happy, and socially thriving Sisters community.

How Recreation and Community Center Theme Shaped Design

Although Sisters is surrounded by recreation opportunities and has a robust park system, its residents have limited access to public fields. The closest sports field complexes that the school district does not control are in Bend, a 25-minute drive away. This information, combined with the community's strong recreation and sports-focused response on the *Citizens4Community* survey that asked what should become of the elementary school property, led the team to consider sports fields and facilities as a central element of its proposal. Consequently, the team considered how best to transform the project site from an elementary school campus into a thriving communal recreation center by prioritizing outdoor space for sports fields, adjusting the structure of the current elementary school building, strengthening the site's connection to the rest of Sisters, and integrating workforce housing onto the site.

Figure 52: Recreation and Community Center overall design proposal.

Three Overarching Themes in Recreation and Community Center Proposal

Connectivity

The Recreation and Community Center team saw connectivity as essential for the success of the recreation center as a "hub" of activity within the area. The team wanted everyone to be able to easily and safely access the site from throughout Sisters, including other recreation/parks spaces, via active transportation as well as by car.

Cascade Avenue: The team redesigned Cascade Avenue, imagining it as a 55.5 foot wide right-of-way with a two-way bike lane buffered from two-way car traffic by a vegetated median and with wide, tree-shaded sidewalks on each side (Figures 52 and 53). The team intended for the design to calm traffic and improve safety for people using active modes of transportation. The team envisioned the new design running from the recreation center to US Highway 20 to the west and the residential area to the east.

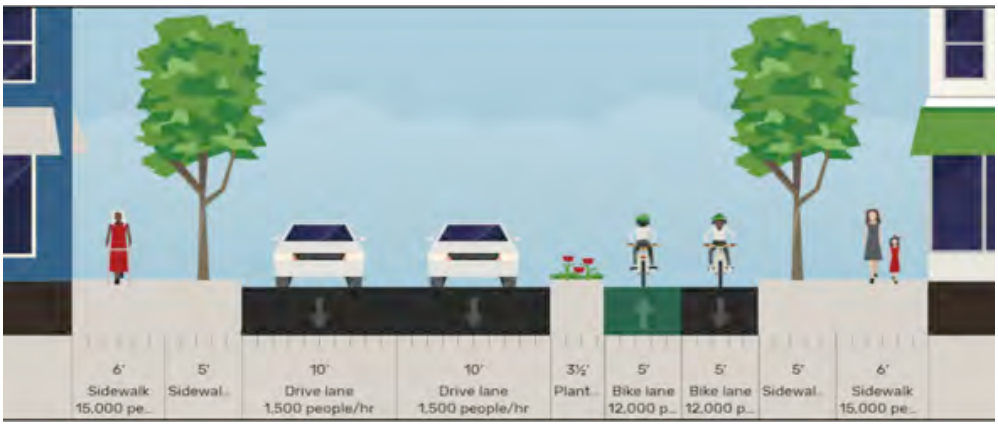

Figure 53: Recreation and Community Center proposed design for Cascade Avenue.

Alleyway: The team envisioned an alleyway extending from North Tamarack Street along the perimeter of the site that would allow cars to access the residential parking lot, garden, and playground. It would also enable cyclists and pedestrians to travel along the site's eastern side and connect to the site's southern access point (Figure 52).

Eco Parking Courts: To maximize the space available on the site for recreation, the team looked for creative ways to integrate parking. In addition to the approximately 350 parking spaces that already exist within an eighth of a mile of the site, the team proposed two new parking lots. The first, located just south of the proposed housing development, would accommodate parking for the site's residents. The second parking lot, located just north of what is currently the school building, would be an eco-parking court with a semi-permeable surface to accommodate stormwater runoff and solar panel awnings to generate clean energy and provide shelter from the elements. This area would primarily serve as community space for activities like farmers' markets, gear exchanges, and festivals. Secondarily, it could also accommodate some visitor and on-site worker parking (community center employees, for example) and enable bus drop-off and pick-up at the recreation center entrance when needed (Figure 54).

Figure 54: Recreation and Community Center proposed eco-parking court examples.

Source: lidpermeablepaving.ca/benefits-of-permeable-paving-for-parking-lots (top).

uxdesign.cc/parking-lot-green-is-the-new-black-3dc743d9a5e9 (bottom).

Pedestrian and Bicycle Pathways: The team proposed pedestrian paths and a multi-use path for pedestrians and cyclists around the site's perimeter (Figure 54) that provides access to and through the site's southern end. This connection point would provide direct access to Creekside Park and would include a crosswalk with pedestrian lights to ensure pedestrian and cyclist safety when crossing Highway 20.

Sisters Bicycle Network: The team envisioned city residents being able to fulfill their daily needs without a car and proposed an extensive bicycle network connecting the site to parks, residential areas, and commercial areas in Sisters (Figure 55). Protected bike lanes would increase riders' feelings of safety, therefore encouraging more use of active transportation. A robust network would provide cyclists with route options and allow them to choose the route they feel is the safest.

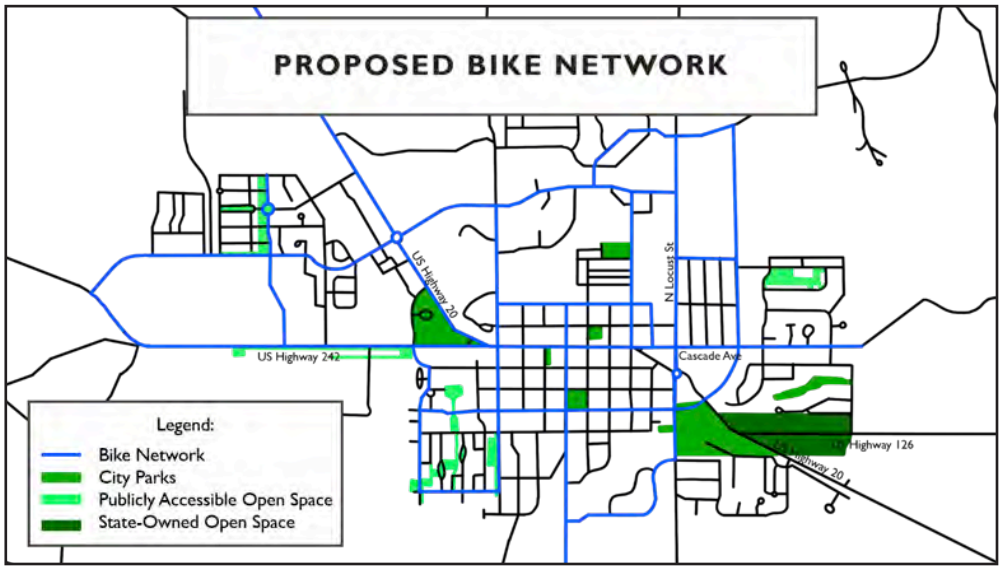

Figure 55: Recreation and Community Center proposed bike network.

Sisters Bus Loop: Proposed bus service would increase site accessibility and students imagined a bus route with frequent stops at the school complex, the commercial area, downtown, and in front of the recreation center (Figure 56).

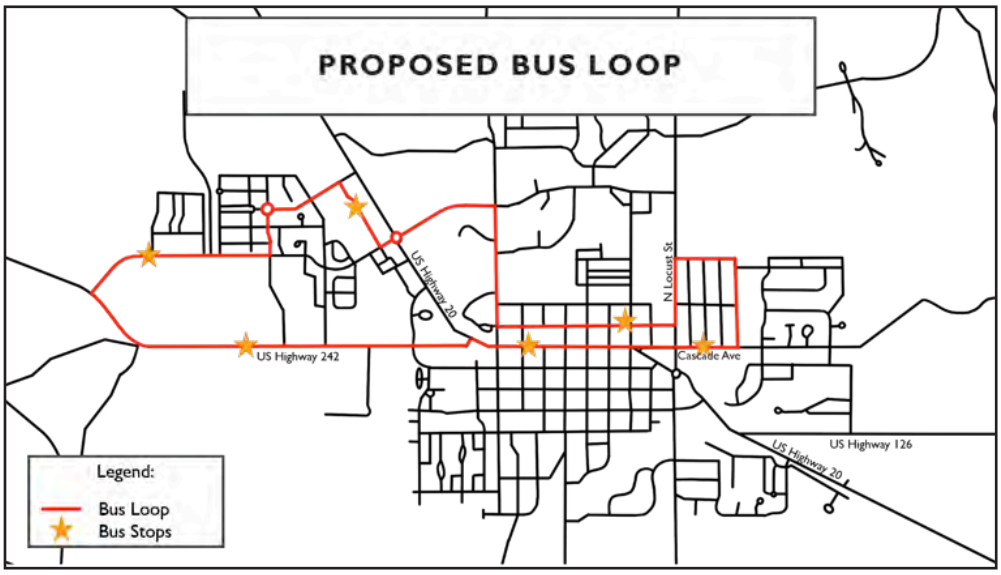

Figure 56: Recreation and Community Center proposed bus loop.

Built Spaces

While sports fields and courts are emphasized, students also envisioned the site as a hub of other activity for the community with facilities to accommodate a wide range of interests, ages, and abilities. Built spaces promote traffic calming, provide opportunities to create revenue streams to support the site and the city, and create a feeling of continuity between the site's two halves on either side of North Locust Street.

Recreation Center: The team proposed a comprehensive renovation of the school building. The renovation would include a multipurpose gym with two new indoor basketball courts, which could also be converted into volleyball courts, an elevated track, climbing wall, locker rooms, and childcare facilities. The addition to the recreation center adjusts the building footprint to meet the street edge and would contribute to traffic calming conditions along Cascade Avenue. The team also recommended demolishing the existing building's C wing to create space for an outdoor multi-use field. These adjustments to the building create more indoor space to accommodate sports and other physical activities, which ensures year-round access to these activities, regardless of weather, and continuous use of the site (Figure 57).

Figure 57: Example of a multipurpose gym.

Source: sunsetac.com/amenities.html

Sports Fields: Demolishing the existing school's C wing would accommodate a north-south oriented multi-sport field. North-south orientation is important to consider because, according to competition standards, the orientation of soccer fields must be oriented within 15 degrees of the north-south axis to minimize negative effects of the sun on competing teams (Soccer Field: The Official Dimensions, Surfaces and Standards, n.d.). The same orientation standards apply to the tennis, pickleball, and outdoor basketball courts. The baseball and softball diamond, located on the west edge of the site, does not require a particular orientation. The team included two spectator viewing areas, one between the multi-sport field and the playground and another between the recreation center and the baseball diamond (Figure 52).

Blacktop Game Facilities: The team proposed resurfacing the site's current blacktop area to create an outdoor space for basketball, volleyball, and foursquare (Figure 52).

Clubhouse and Pro Shop: The team imagined constructing a building to house a clubhouse and pro shop to accompany the tennis and pickleball courts, in what is currently the school parking lot. This L-shaped building would provide structure to the site's northwest corner and serve as a traffic calming element on North Locust Street. The first floor could have space for a retail store as a source of revenue for the Sisters Park and Recreation District, while the second floor could provide office space for the Parks and Recreation staff (Figure 58).

Figure 58: Example of a clubhouse.

Source: dattner.com/projects/view/princeton-university-tennis-center.

Administration Building: The team sought to strengthen the connection between the site's western (current administration building) and eastern (current elementary school) halves. Team members imagined using the administration building as a space for after-school programming and other community programs.

Housing Units: The team envisioned transforming the school's current transportation hub on the site's northeast corner into a housing development of four eight-unit townhouses. The team felt that locating housing in this location supported the existing housing patterns and would allow it to act as a gradient from west to east along Cascade Avenue as it transitions from downtown commercial to residential. The housing proposal is based on the County Crossroads Apartments building footprints in Junction City, OR (Figure 59). The housing development includes a pedestrian courtyard and walkway to encourage consistent active outdoor use while creating additional green space.

Figure 59: Country Crossroads in Junction City, Oregon, as a housing example.

Source: Google Maps (left).

countrycrossroadsapt.com (right).

Open and Green Spaces

The Community and Recreation Center team integrated open spaces into its design to achieve several goals. First, to provide more potential activities on the site, especially those that would complement other components, such as on-site food options and thoughtfully positioned play structures. Second, the team wanted the site's open spaces, like a community garden, to enable the site to support and give back to the community.

Courtyard and Play Structure: The team designed a communal courtyard with a play structure in the site's northwest corner to accompany the tennis and pickleball courts. Positioning the play structure in this area allows parents to play or watch tennis or pickleball while their children play nearby.

Sculpture Garden: The team proposed transforming the large lawn around the administration building, which will be slightly smaller after installation of the roundabout, into a sculpture garden. Positioning sculptures in this location allows people passing through or visiting Sisters to experience Sisters' personality and creates a beautiful, unique place for locals and visitors to admire and explore.

Food Truck Plaza: The team also considered how to generate more activity in the parking lot to the north of the administration building. Team members proposed using the space as a food truck plaza to attract more people to the area and to benefit the local economy.

Community Garden: The team proposed upgrading the existing garden on the site's eastern side. Building a greenhouse next to the current garden plot would create a space for an indoor-outdoor community garden. The garden would serve as a recreational and educational activity for people of all ages and benefit the community by providing access to fresh, local produce. (Figure 60)

Dog Park: The team envisioned fencing off the southern portion of the site to create an off-leash dog park. Sisters does not currently have an off-leash dog park, the closest one is in Bend, 30 minutes away.

Figure 60: Example of a community garden with a greenhouse.

Source: ediblejersey.ediblecommunities.com/food-thought/community-garden-cultivates-organic-produce-bridgetons-farmworkers.

9.3.4 Recreation and Community Center Phasing

The Recreation and Community Center team proposed the following phases to implement its plan:

Phase 1:

The first phase could begin before ODOT breaks ground on the new roundabout and could provide immediate benefits to the community by focusing on construction of the northeast and southern corners of the site. One key action for this phase would be to remove the chain link fence around the site's perimeter to allow people to access it more easily and to begin relating to it as their own space. Phase 1 would also include building the outdoor basketball courts, playground, dog park, and garden space. Completing these less construction-heavy amenities early in the process would signal progress on the project and help people to start seeing the site as a place for recreation. Housing construction could also begin during this phase since the need is there and because selling the parcel of land designated to housing for development could help generate revenue for further site development.

Phase 2:

The second phase would occur as ODOT builds the roundabout. As the roundabout occupies the current location of the tennis and pickleball courts, the city could coordinate reconstruction concurrently in their new location on the site's northwest corner. This phase could also include construction of the pro shop and clubhouse because these buildings provide office space for the recreation center and revenue once they are open. Completion of the site's northwest corner will attract people to the area. Implementation of pathways through the site would also occur during this phase, allowing users to become familiar with its layout and laying the foundation for further site development.

Conclusion

Sisters' residents value their small, tight-knit community, their connection to the outdoors, and the beautiful scenery that extends in every direction. Projections indicate that Sisters is likely to grow significantly in the coming years. To stay true to the aspects of itself that it loves, while simultaneously welcoming and integrating newcomers, the city recognizes that it will need to adapt to support a wide range of people – young, old, and members of the workforce that keep the city running. To stay healthy, happy, and connected, these people will need transportation options that allow them to move about the city and to safely fulfill their daily needs. They will need a variety of housing types that accommodate their unique families and financial circumstances. They will need access to indoor and outdoor community spaces that provide opportunities to build relationships with each other, exercise, and spend time in nature.

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Appendices

Appendices

Appendix 1: History & Geography

Appendix 1a: Historical Context

Human settlements are driven by patterns in movement. The movement of humans across the landscape is driven by motion capacity, our bodies' ability to move, and movement path, physical movement across a landscape (Kuhn et al., 2016). These factors, coupled with people's navigational capacity, knowing where to go, in a new landscape, influence our decision to travel to new destinations.

When examining the historic settlement and current growth of Sisters' population, we must examine the internal and external motivators that influenced the movement of people across the Indigenous Plateau (Figure 1). Thinking about movement through an ecological framework, Kuhn describes the internal and external factors that shape our decision to move. Internal motivators are described as reward-based, decision-based, or a combination of both. External factors include constraints and opportunities of topography, resource availability, and interactions with others (Kuhn et al., 2016).

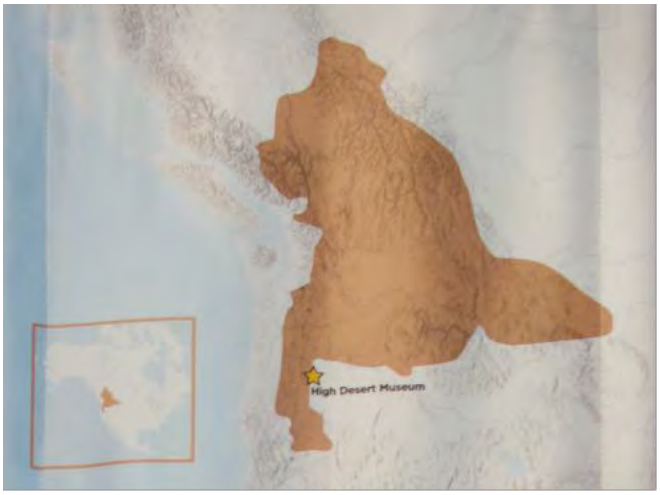


Figure 1. Geographic distribution of the Indigenous Plateau.

Source: Creations of Spirit, High Desert Museum

The topography of the Cascade Mountain range and the seasonal availability of resources in the high desert plateau were external factors that influenced the mobility and interaction of indigenous tribes East of the Cascades. The diversity of languages West of the Cascades reflects how abundant resource availability required only local travel, which led to concentrated populations that developed independent languages. In comparison, the large

language range and population distribution of the Molalla people, who traveled throughout the area that is now Sisters (Figure 2) reflects the distance needed to travel in order to obtain resources over the course of the seasons. The landscape and the ability to move across it shaped people's ability to access vital resources and the distance that was necessary to travel to obtain these resources shaped languages and communities which led to the establishment of navigational paths that eventually informed settler roads to the west.

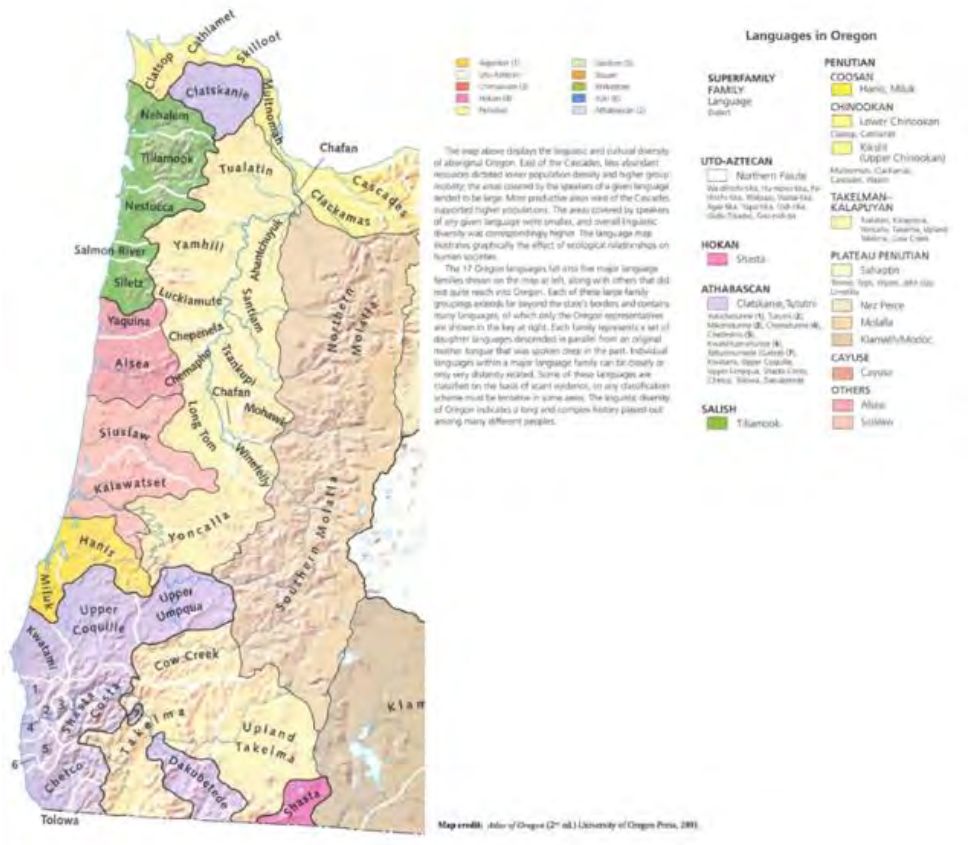


Figure 2. Map of indigenous language distribution in Oregon (Source: http://native-land.ca/maps/territories/molalla/)

In the 1850s, the river basin attracted white settlers to imagine a passage through the Cascades, inspired by the passages made by Native Americans. In 1864, Willamette Valley and Cascade Mountain Wagon Road Co. collaborated to construct a road with the support of an 860,000-acre government land grant that created access to the land where Sisters is today (Terry, 2010). The Santiam Wagon Road was established as a primary trade route between the areas west of the cascades and Central Oregon to the east. Surveyors eager to cross the Cascades followed existing Indian trade routes to safely cross the landscape (Wiley, n.d.). This route became known as Santiam Wagon Road which traveled from Albany

through Sisters, all the way to Ontario, and was used until the completion of US Highway 20 in 1939 (Figure 3).

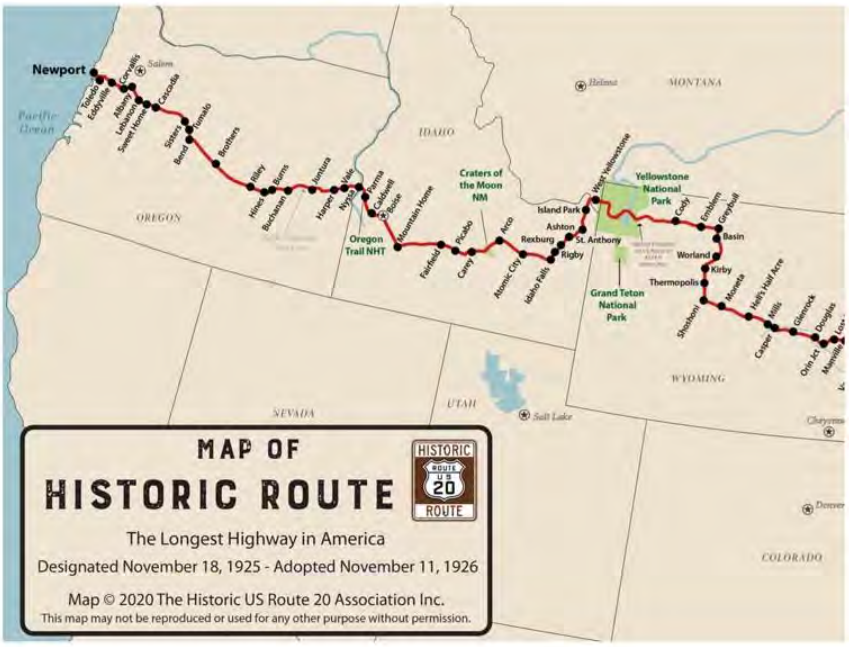


Figure 3. Expansion of Historic Route 20 from East to West. Source: https://historicroute20.org

In the 1880s, Sisters was the only settlement between Eastern Oregon and the Cascades (Wilson & Scott, 1974). The cattle, sheep, fur trapping, logging, lumber, and forest service industries supported early Sisters settlement. In 1901, Alex Smith and Robert Smith platted the townsite of Sisters comprised of six city blocks with Cascade St on the south, Adams on the north, Elm on the west and Larch on the east (Wilson & Scott, 1974) (Figure 4).

Figure 4. Original platting for the Sisters settlement.

The lumber industry contributed to the continued growth of Sisters and its eventual incorporation in 1946. After the decline of the lumber industry (by 1963), Sisters population began to decline. However, the tourist-related industry supported Sisters becoming known as the "Gateway to the Cascades", and the establishment of the Black Butte Ranch allowed Sisters to grow its commercial sector (History of Sisters, Oregon, 2022).

Appendix 1b. Site History

Our project site has been a part of the school district for a long time. It has been used for a variety of school structures and field space, until the current school building was built in the early 1980s. The Board of Deschutes County School District No. 6 constructed the current elementary school building on the site between 1974 and 1988. In 1988, the elementary school site had the main building near the northern edge of the site, the gym to the east of the main building, and open fields in the southern part of the site (United States Department of the Interior, 1988). By 1995, the site contained tennis courts along the western edge, a parking lot to the west of the main building, playgrounds to the south of the main building, a black top to the south of the gym, a transportation center in the northeast corner, and a small baseball field in the southeast corner (Oregon Geospatial Enterprise Office, 1995). Additionally, the C-wing or the southern wing expanded by 1995.

Amid statewide budget cuts and diminished public tax funds in 1996 (Sisters Schools Foundation, n.d.-a, n.d.-b), the community raised $1 million in 1997 through the Starry Nights Concert to help build additional classrooms (Sisters Schools Foundation, n.d.-a). These classrooms are what is now the school's A-wing, or the western wing (Oregon Geospatial Enterprise Office, 2000). The names of the Sisters residents who donated to the cause are etched onto the bricks of the addition (Sisters School District, n.d.). Since 2000, the elementary school site has experienced only minor changes. For example, the district added a garden and portable classroom and updated the parking lot and playground area (Oregon Geospatial Enterprise Office, 2000, 2016).

The current administration building was originally built in 1937 to accommodate high school students. In 2005, a historic rehabilitation project restored and converted the building (National Park Service, 2006) to its current use as the administration office for Sisters School District No. 6 (National Park Service, 2006). This building has remained relatively unchanged while the city has changed and grown around it. Additionally, the city extended Cascade Ave to cut between the administration building and the library and town hall (Oregon Geospatial Enterprise Office, 2005, 2009).

Appendix 1c: Site Geography

The Sisters Elementary School parcel sits west of Whychus Creek at the edge of the Deschutes floodplain (Figure 5). Characterized as an outwash plain with a linear shape, the

ground has almost no slope (0-3% slope grade), which makes it an ideal site to build on. Soils are well-drained, Lundgren sandy loam with a high capacity to transmit water (1.98 – 5.95 in/hr) (Soil Survey, 2022.).

Figure 5. Proximity of habitat patches to flood plain on the site.

According to Roberts Field-Redmond Municipal Airport climate data, the annual precipitation accumulation in Sisters is 13.48 in, and the snowfall in 2021 was 15.1 in (Figure 6). Since the water table is located 80 inches below the soil, there is no frequency of flooding or ponding (Soil Survey, 2022.).

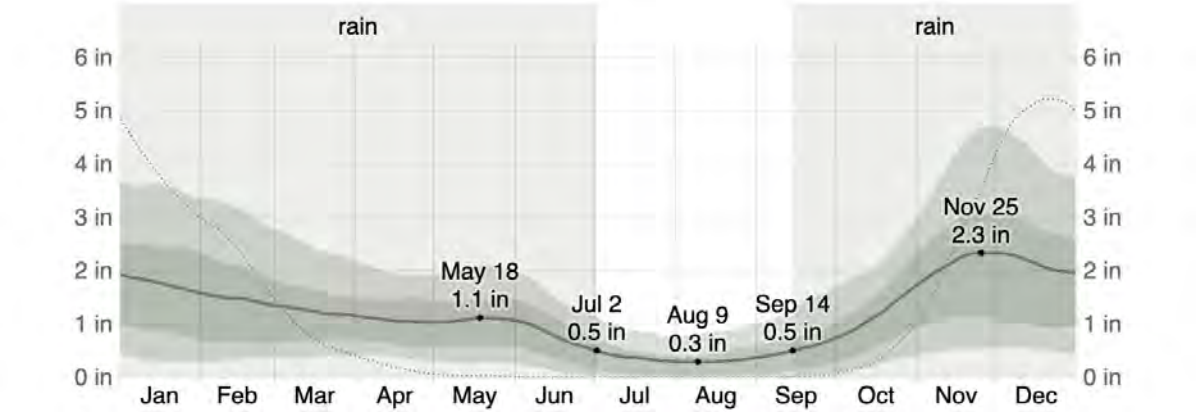


Figure 6. Rainfall over the course of the year in Sisters, OR. (Source: Roberts Field-Redmond Municipal Airport Climate) Source: Roberts Field-Redmond Municipal Airport climate data

Historic channelization of Whychus Creek resulted in cascading negative impacts on fish and other wildlife, as well as the quantity and quality of river water. Since then, the Deschutes Land Trust has restored 930 acres of floodplain (high-quality grasslands, old-growth juniper, cottonwood, and aspen stands), restored connectivity, and enhanced floodplains that support habitat for aquatic species (fish, salamanders, amphibians, Water

Ouzel) and beavers have returned to the area (Whychus Canyon Preserve, n.d.) (The Nugget, 2022).

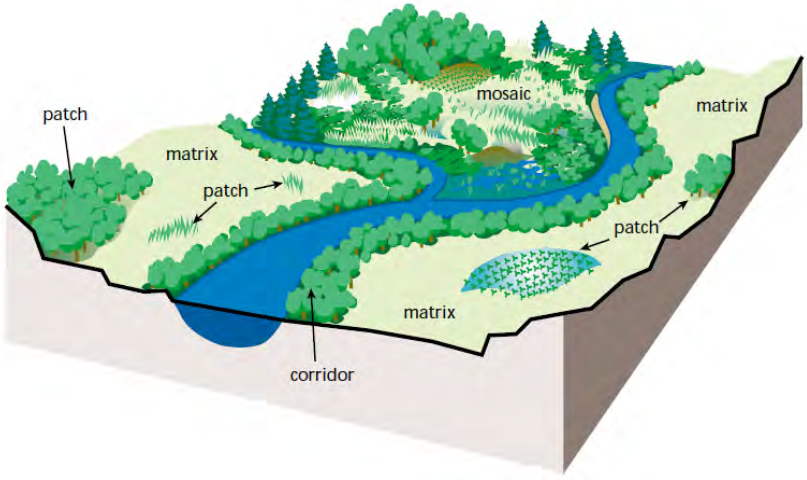


Figure 7. Habitat distribution and connection types across the landscape.

The Elementary School site's proximity to Whychus Creek offers opportunities to support this restoration work through ecological corridors, matrix, or steppingstones (Figure 7) to improve wildlife habitat (Gökyer, 2013). As shown in Figure 5, Ponderosa pines create a corridor on the site's eastern edge, and the cluster on the southern edge of the site offers a steppingstone for wildlife to connect to Whychus Creek and the surrounding wildlands. The trees offer habitat for terrestrial (mule deer, rabbits, golden-mantled ground squirrel, yellow pine chipmunk) and avian species (wild turkey, northern spotted owl (endangered), northern goshawk (endangered) (Sisters Oregon Guide - Wildlife, n.d.). The trees in the southern portion of the site offer shade along the summer and winter solstice sun path, but otherwise, the sun path is unobstructed (Figure 8). The average solar energy hitting the ground ranges from 7.9 kWh (July) to 1.5 kWh (December).

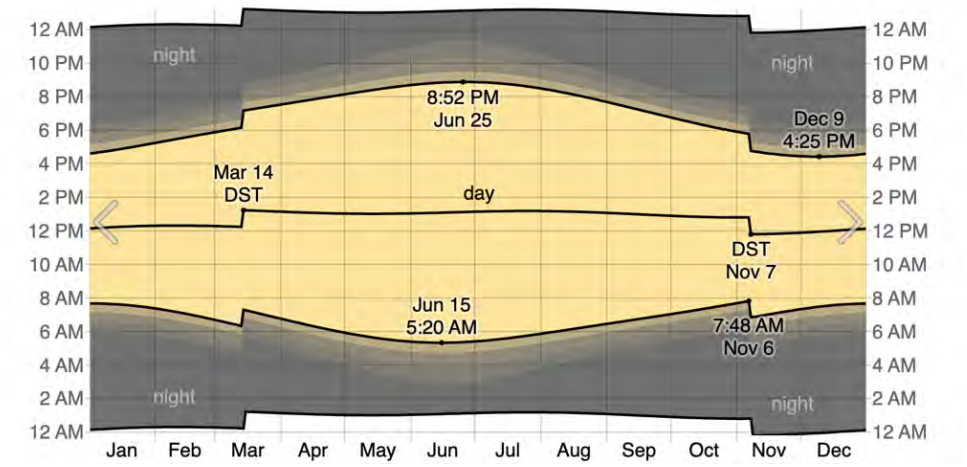


Figure 8. Sun path at summer and winter solstice (esp. at prominent times of day for the site).

Source: Roberts Field-Redmond Municipal Airport climate data

Appendix 2: Sisters Population Demographics

This appendix presents a demographic profile for the City of Sisters Teams used this information to build understanding of the city's demographics and to develop relevant design recommendations for the planning area. The teams gathered census data from the Social Explorer website on three geographies – the state of Oregon, Deschutes County, and the City of Sisters (Census Tract 5). For each geography they compared data from the 2010-2014 and 2015-2019 American Community Surveys (ACS) to establish current trends and to see how Sisters differed from or conformed to patterns in the larger geographies. Teams analyzed information for population change and age distribution.

Appendix 2a: Sisters' Population Growth

Between 2010 and 2019, Oregon, Deschutes County, and Sisters' populations grew at different rates (Table 1).The state grew most slowly, increasing its population by only 6%. Although the county grew faster than the state, it still did not grow as quickly as Sisters. Sisters' population increased by 24%, or four times as quickly as the population in Oregon.

Table 1. Population change in Oregon (2010 - 2019).

Location	Population Change (# ppl)	% Population Change
Oregon	229,460	6%
Deschutes County	23,110	14%
City of Sisters	1,386	24%

Source: Census.gov

Appendix 2b: Sisters Age Distribution

In 2019, Sisters age distribution was distinct from state and county data in several ways (Figure 1). In general, Sisters had fewer children under the age of 14 and young adults between the ages of 25 and 44 than Oregon or Deschutes County. Its population of older adults between the ages of 55 and 84, however, was noticeably higher. Sisters' share of older adults in this age range was 43.4%, compared to Oregon's 28.4% and Deschutes County's 32.0%.

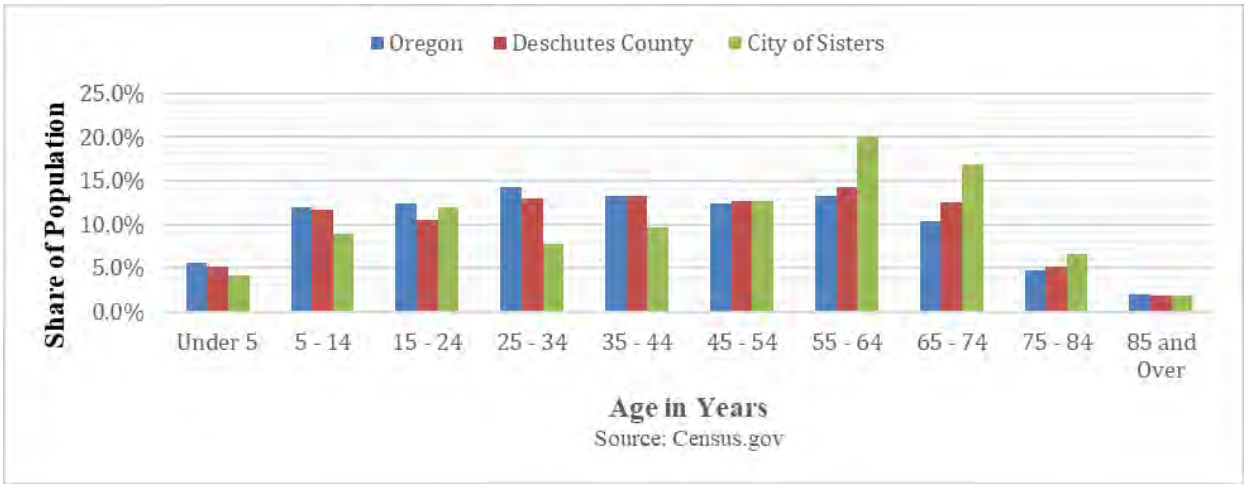


Figure 1. Population Age Distribution (2019).

Appendix 2c: Key Demographic Trends and Implications

Sisters' population is growing quickly compared to the state and the county. People living in Sisters also tend to be older. The teams recognized that these trends are important to consider when redesigning the project site. If the trend continues, Sisters' population (especially its senior population) will grow rapidly over the next several decades. As the city grows, Sisters' inhabitants hope to maintain the quality of life they have enjoyed up to this point. Because growth will likely lead to increased car and freight traffic moving through the area, the teams looked for ways to incorporate the site into a variety of transportation networks, allowing inhabitants to safely reach the site by foot, bike, or car. The teams hoped to maximize safety and feelings of community by enabling people of all ages, races, income levels, and abilities to meet and interact.

Appendix 3: Sisters Housing Data

The teams analyzed housing data from the U.S. Census Bureau, which they accessed through the Social Explorer website. Again, the teams examined data for three geographies – the state of Oregon, Deschutes County, and the City of Sisters (Census Tract 5) – using data from the 2019 five-year American Community Survey (ACS). Comparing these locations helped to uncover patterns and determine how closely Sisters mirrored the larger geographies' housing trends. The teams considered three measurements in their analyses – cost burden, housing value to income ratio, and housing units in structure.

Appendix 3a: Housing Cost Burden

The United States Department of Housing and Urban Development (HUD) defines housing cost burden as households spending 30% or more of their income on housing needs. Figure 1 summarizes the share of cost burdened households by location. In Sisters, 46% of households fall into the 'cost burdened' category – the largest share of the three locations. It is five percentage points higher than Deschutes County's share of 41% and six percentage points higher than Oregon's share of 40%.

Figure 1. Cost Burdened Households by Location

Source: Census.gov

Appendix 3b: Housing Value to Income Ratio

"Housing value to income ratio" is a measure of a homeowner's house value compared to her annual income. Teams calculated these values for each location by dividing the location's median house value by median household income for homeowners in that location. Table 2 summarizes housing value to income ratios by location. Sisters had the highest ratio (5.1), followed by Deschutes County (4.7) and Oregon (3.9).

Table 2. Housing Value to Income Ratio by Location

Location	Housing Value to Income Ratio
Oregon	3.9
Deschutes County	4.7
Sisters	5.1

Source: Census.gov

Appendix 3c: Housing Units in Structure

"Housing units per structure" describes whether a building accommodates single- or multi-family living, and also accounts for less conventional living configurations such as mobile homes, boats, RVs, and vans. Figure 2 summarizes data for housing units in each structure by location. In the city, county, and state, the majority of structures contained only one housing unit. Again, however, Sisters had the largest share of the three geographies in this category, with 88% of its structures having only one unit of housing. Comparatively, Deschutes County's share of structures having only one unit of housing was 78% and Oregon's was 68%.

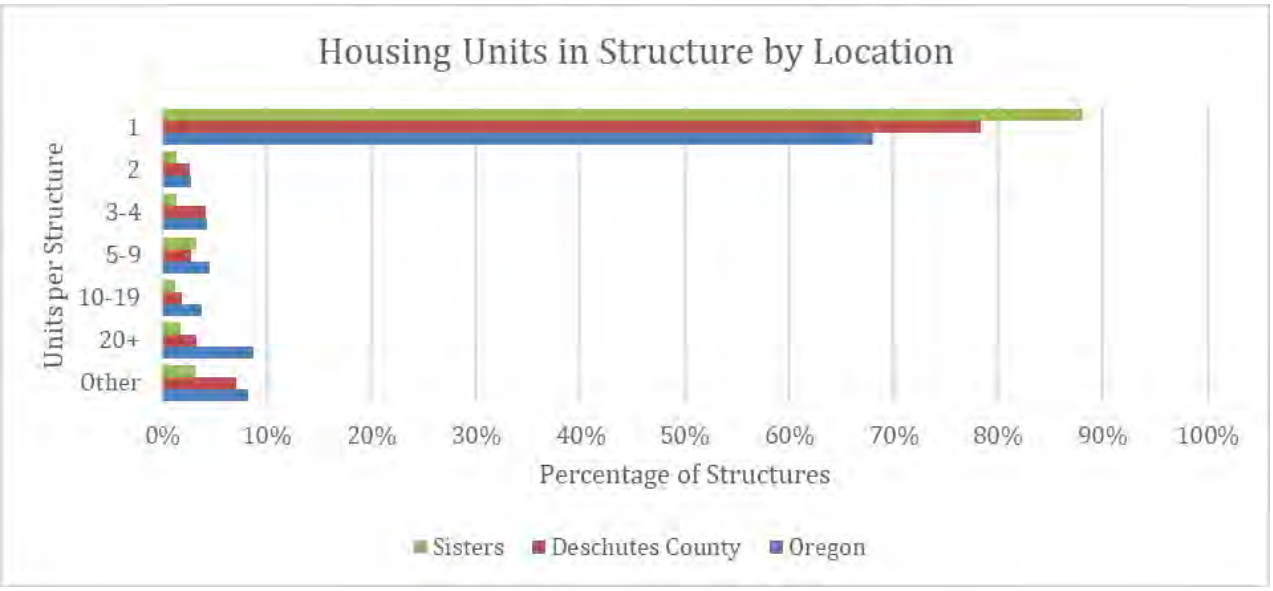


Figure 2. Housing Units in Structure by Location

Source: Census.gov

Appendix 3d: Key Housing Trends and Implications

The share of cost-burdened people living in Sisters is high, suggesting that many residents are financially challenged to afford their homes. Similarly, the very high housing value to income ratio in Sisters suggests that homes are not affordable to households making the median household income. This indicates that the general workforce is likely unable to afford to purchase a home in Sisters (based on the 2020 market). With such a high share of single-family homes, there is also less opportunity for Sisters residents to purchase multi-family housing units, which tend to be more affordable. Many workers who would provide valuable services to Sisters cannot afford to live there and must either live elsewhere and commute long distances to work every day or find work in a city where housing is more affordable. While Deschutes County's housing trends are more consistent with Sisters than with the State, the housing data in Sisters are more drastic comparatively, which suggests Sisters is experiencing more severe housing challenges, but that Deschutes County is struggling with the same trends. These data confirm many of the housing challenges stated in the Sisters Comprehensive Plan (Blesius et al., 2021), and reiterate the need for more affordable housing options in Sisters, for both rental and for purchase.

Appendix 4: Sisters' Economy

The teams conducted an economic analysis of Deschutes County to better understand its economic conditions and to further inform their site designs. They studied data from the Oregon Regional Economic Analysis Project website and examined data for three geographies – the United States, the state of Oregon, and Deschutes County. They compared data from 2010 and 2020. The teams' analysis revealed that the county's most reliable export sectors are Arts, Entertainment, and Recreation, Accommodation and Food Services, and Retail Trade. Strong exports of Arts, Entertainment, and Recreation, Accommodation and Food Services, and Retail Trade are consistent with Deschutes County's tourism-based economy. This information helped the teams see how Deschutes County supports itself and to get a better idea of Sisters' values.

Appendix 5: Case Studies - Integrating the Three Main Themes

The teams researched examples of projects that successfully integrated the three themes of connectivity, built spaces, and open and green spaces.

Appendix 5a: Connectivity Case Studies

Alternative Roundabout Design - One way to safely connect the site to downtown Sisters for pedestrians and bicyclists is to consider alternate roundabout designs. ODOT's current roundabout design does not prioritize pedestrian and bicyclist safety. Concerns include that it does not designate a large enough area for turning traffic to yield to pedestrians and bicyclists, and that having bicycles and vehicles share the road could impede traffic flow. One way to address these concerns is by installing separate bicycle and pedestrian lanes into the roundabout. This design maximizes safety and is also beneficial for traffic flow. Images illustrate the current roundabout design and show an example of an alternate design that includes separate pedestrian and bike lanes.

Source: https://www.thebeacon.net/danbury-officials-critical-of-odot-roundabout-plan/ (left); https://www.strongtowns.org/journal/2016/3/17/ask-r-moses (right)

Source: https://biketarrytown.org/regeneron-100c/100c-9a-bridge-response-02.php

Connectivity in High Point, Seattle - The High Point neighborhood, a master planned redevelopment project in Seattle, is an example of the successful integration of a new development within an existing urban network. The designers aligned the streets with the existing urban grid of the nearby West Seattle neighborhood. The paths vary in size and form from complete streets to bike and pedestrian only paths. The streets are narrow and have wide, vegetated medians that act as a buffer between cars and people and both aspects promote safe, easy navigation for pedestrians. The walkability and bikeability of the neighborhood also make it safer for children to play and travel independently. The Center for Disease Control (CDC) released a study called "Using the Community Readiness Model to Examine the Built and Social Environment" on this development in 2014 (Buckner-Brown et al., 2014). This study concluded that physical activity rates have increased amongst High Point residents, in part due to the urban design. Short blocks, narrow streets, and wide medians between cars and people were all integral. According to the CDC the walkability and proximity of residences also have potential benefits for mental health. Residents reported more frequent interaction with neighbors which made them feel more connected to their community.

Source: Chupa et. al., 2015

Appendix 5b: Built Space Case Studies

Integrating Community in High Point, Seattle – The High Point Seattle project also served as an excellent example of how to integrate community and social connection into built spaces. The project accomplished this goal through programmable space in the High Point Community Center and the Providence Elizabeth House, an assisted living apartment building for seniors, as well as through partnership with Neighborhood House, a nonprofit focused on assisting low-income and immigrant families. The variety of different spaces offered an extensive list of community amenities, including a library, workout facilities, community gardens, and a daycare. It also offered programs such as a lifelong recreation program, educational classes, health classes, and teen and afterschool programs. Technology is also made accessible through free Wi-Fi in the Community Center and a computer lab in Providence Elizabeth House. The community buildings are centrally located to be accessible to everyone in the neighborhood as well as those in the larger Seattle area. This development project prioritized programmable spaces because they create a designated space for social interaction and participation. They also fit into the development's goal of bringing individuals and households from different socio-economic backgrounds together by providing accessible spaces where they can gather. Additionally, there are a variety of neighborhood councils and commissions that residents of all backgrounds can join so they can have an active voice in the future of their community.

Cottage Clusters in Alameda, CA – Cottage clusters are an example of a middle housing development that fits Sisters' residential needs and community values. Cottage clusters are a type of middle housing with small (typically 400-800 square feet), detached homes arranged around a shared court or green space. Cars are usually parked in back alleys or on a main street in front of the cluster. With their configuration around common outdoor space, cottage clusters offer a strong community feel. They also provide great opportunities for accessible support services and amenities, especially for older adults or people with disabilities who seek to maintain their independence (Cottage Court, n.d.). An example of a successful cottage cluster development is Greenwood Avenue Cottages in Bungalow Court in Alameda, CA. There are 8 small units of varying sizes located on 0.35 acres with a shared center green space and walking path. Parking is available on-street in front of the cluster, with 0.6 parking spaces per unit.

Source: Cottage Court. (n.d.)

Townhomes in South Jordan, UT – Townhomes are another middle housing type that could be successful in Sisters. They take little time to build and provide capacity for many residents, without losing small-town character and walkability. The AARP Middle Housing Study found that "townhouses represent the fastest growing percentage of new housing…far outpacing other Missing Middle types". It explains that "because of their small footprints and shared walls, townhouses make efficient use of land, which means they can be constructed and sold at a lower price than a new detached house" (AARP, 2022a).

The Salt Lake City developer and builder "Holmes Homes" partnered with Opticos Design to construct a new type of affordable townhome in South Jordan, Utah. Constructed on two deep, oddly shaped lots, Opticos designed housing facing an inner row of buildings on a pedestrian-only, ambling walkway (called mews). The mews split the deep blocks into quadrants and promote a greater sense of community through walkable neighborhoods and large outdoor "living rooms." This design also avoids awkward or underutilized space at the center of the block. Further, the development sits within close walking proximity to local schools, amenities, and light rail (Mews HomesTM, 2022). The alleyway design of

Mews Homes keeps vehicles away from pedestrian walkways and prioritizes pedestrian access and communal spaces within the neighborhood. The homes only provide 1-car garages, thus limiting off-street parking and prioritizing safe, active transportation.

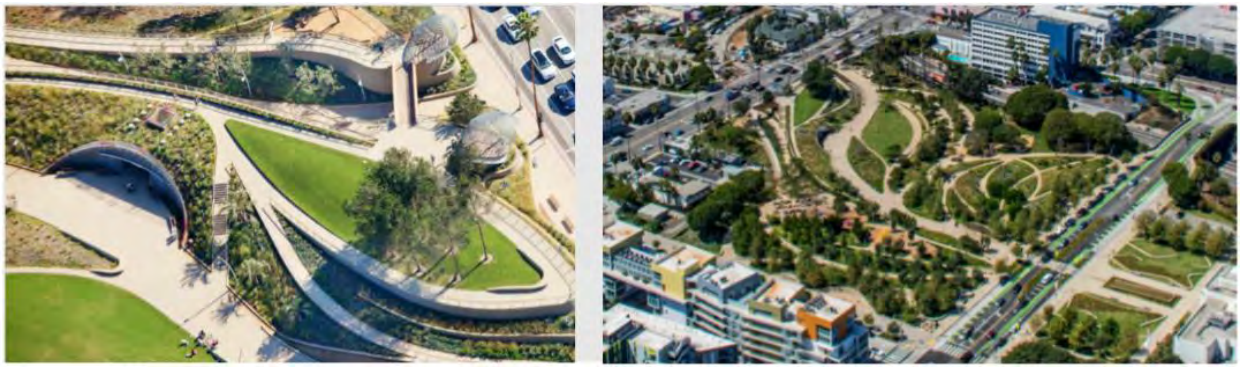
Mews Homes offers a great example of how walkability can be prioritized in development of new housing, creating a more livable and connected community. With a price point around $220,000 in 2017, Mews Homes sold quickly, indicating the high demand for affordable and walkable homes (Mews HomesTM, 2022). A New York Times Article called 'Starter Homes', identifies the Mews Homes as a success in the Salt Lake City Area ("Whatever Happened to the Starter Home?, 2022).

Mews Homes is also an example of a successful master planned development. Previous zoning in South Jordan did not allow for proposed multi-family developments like Mews Homes. However, in 2002, the site was re-zoned through a master planning housing development process (Diversifying Housing Options with Smaller Lots and Smaller Homes, 2019). The Daybreak Community, including Mews Homes, represents a successful zoning change through implementation of a master planned community.

Source: Mews Homes, 2022

Appendix 5c: Open and Green Space Case Studies

Tongva Park and Ken Genser Square - The Tongva Park in Santa Monica, CA was a former parking lot that the city transformed into a lush landscape. The city created the park to restore the ecosystem with native plants and to encourage diverse social use with flexible spaces. Because of its location in Santa Monica, it is meant to "re-knit the city fabric through strong linkages to downtown, the adjacent neighborhoods, the Santa Monica Beach, Palisades Park, and the Main Street commercial area." This case study inspired the greenery and vegetation that the Age Friendly team sought to restore to the elementary school site. This park is also located near downtown Santa Monica, which also shows how necessary it can be to provide open spaces close to downtown centers.



Source: https://www.gooood.cn/tongva-park-and-ken-genser-square-by-james-corner-field-operations.htm

Portland Memory Park - The Ed Benedict Park in Portland was designed for people with Alzheimer's and other memory problems. The park offers places to sit and a walking pathway that has landmarks to assist with wayfinding. The designers chose the garden's plants specifically to provide sensory stimulation to visitors. This case study inspired the Age Friendly team to make its linear park more inclusive by providing ample seating options and prioritizing their use for older adults.

Source: https://www.wedding-spot.com/venue/5554/Portland-Memory-Garden/

Let's All Play Place - The "Let's All Play Place" in Salem, OR used to be a School for the blind. It was designed to support cognitive, social, behavioral, and physical activities in a public playground setting. This park also offers a water feature and a multisensory playground. The Age Friendly team sought to incorporate aspects of this case study's inclusivity in its design.

Source: https://www.harpersplayground.org/playgrounds/lets-all-play-place/

Appendix 6: Funding

Sisters would likely need to secure a variety of funding sources to make any of the teams' proposals a reality. Each team identified several possible funding streams. Because the financial landscape for workforce housing is so complex, the Education Workforce Housing in California report recommends school districts work with a developer to investigate financing strategies (Vincent et al., 2021).

Appendix 6a: Age Friendly Team Funding Recommendations

Public-Private Partnership (PPP): PPPs are relationships in which "public and private sectors work cooperatively towards shared…objectives" and share a project's risks and responsibilities (Kwak et al., 2009). PPPs come in different forms. To implement the Age Friendly design, the team recommends the "Operation- Maintenance" (OM) model, in which the public sector finances the project construction through the capital investment fund and then, once construction is complete, transfers responsibility to the private sector for operation and maintenance.

Infill Development: Opportunities for infill development encourage housing density and infrastructure construction. These projects attract public funding because they help revitalize communities and improve local amenities, housing options, and economic opportunities. In Oregon, it is also a great thing to consider because it increases density within the Urban Growth Boundary, making government agencies more likely to support it.

System Development Charge (SDC): Another strategy for public funding for this design is an SDC. An SDC could fund the linear park and infrastructure like bioswales, restrooms, and pathways. The SDC has two parts: the improvement fee and the reimbursement fee. The improvement fee is the projected per person cost for acquiring new parkland and development of facilities. The reimbursement fee includes the charges based on use of existing park facilities and costs associated with compliance with Oregon SDC regulations (Parks Master Plan, 2016).

Grants: The community center and the education center provide opportunities for programming that can be funded through grants. For example, if the education center and the public library collaborate to host a reading program hosted, the organizers could use grant funding to run the program. Operating grants would also be helpful because they allow organizations to use the money they receive as they see fit.

Tax Incremental Funding (TIF): Expansion of the Urban Renewal District - "The Downtown Sisters Urban Renewal Plan is intended to promote the development of downtown as the commercial and cultural center of the Sisters community" (Urban Renewal Plan, 2022). With the Age Friendly team's focus on enhancing greater pedestrian and vehicular circulation, promoting a mix of commercial and residential uses on central downtown properties, and

positioning the site as a key community center, it supports all the goals of the Urban Renewal Plan (Urban Renewal Plan, 2022). The team recommends that Sisters consider extending the Urban Renewal District to include the elementary school site. Sisters could then use TIF to support further development on the site. The prosperity of the commercial area and walkable infrastructure on the site will return investment on the TIF. As infrastructure improves and increases in value, it will contribute to paying back and contributing to further development in the urban renewal area.

Appendix 6b: Adaptive Reuse Team Funding Recommendations

Federal Funding: Low-Income Housing Tax Credit (LIHTC): The LIHTC subsidy is the most common funding source for affordable housing projects. Affordable housing projects using LIHTC generally target populations making 60% or less of the Area Median Income (AMI). However, workforce housing projects generally provide housing to people with slightly higher incomes (80%-120% AMI) (*Housing Plan Update*, 2022). In Sisters, teachers in 2022-2023 will make between 61% and 121% Sisters' 2019 AMI, while staff will make 45%-95% of that AMI (Sisters SD No. 6 & OSEA Sisters Chapter 92, 2021; Sisters SD No. 6 & OSEA Sisters Chapter 92, 2021).

LIHTC funds are distributed through the state government and have specific requirements for the projects they fund. States may require or recommend additional elements to make projects more competitive in the fund allocation process, but the federal requirements are:

- 40% of units must be reserved for tenants whose incomes do not exceed 60% of gross AMI
- Or 20% of units must be reserved for tenants with incomes less than 50% AMI (State of Oregon, 2022.)

These federal tenant income requirements will restrict some units to only a subsection of school district staff and teachers.

LIHTC funding is also limiting because developments it funds are subject to the Fair Housing Act, which prohibits discrimination for housing based on occupation, meaning that not all units on a development can be limited to workforce housing (although some could be) (Vincent et al., 2022). Our urban design proposal provides for more housing than our projections calculate only school district staff and teachers will need in the next 20 years. However, resident eligibility requirements may need to be balanced between funding source requirements and community support.

State Funds: State funds, similar to federal, often have specific requirements the project would need to conform to in order to be eligible.

Oregon Missing-Middle Housing Fund: funds workforce housing projects using innovative, cost-saving construction practices and where at least 50% of units target households making 80%-120% AMI (Services | Missing Middle Housing Fund, 2022).

Certificates of Participation: non-taxable bond financing tool used in California school districts' capital projects, in which investors loan funds that are paid back with project revenue. This revenue source is less common for education projects in Oregon and requires state legislative approval (rather than voter-approval as general obligation bonds do) (See Casa del Maestro case study; Turpin, n.d.).

Housing Development Grant Program: up to $500,000 for pre-development and development costs of housing projects that reserve at least 75% of units for very low-income households (incomes at or below 50% of AMI) and the remainder of units for households below 80% AMI (Housing Development Grant Fact Sheet, 2022).

Oregon Affordable Housing Tax Credit: up to 4% interest rate reduction on affordable housing loans to support reduced rents for households making 80% or less AMI (Oregon Affordable Housing Tax Credit Fact Sheet, 2022).

Local (City and County): General Obligation Bonds: as the Sisters Housing Plan Update recommends (Recommendation 4.1), a voter-approved bond measure could partially fund the project. This method allows for more local flexibility in determining residency requirements than state and federal sources.

Sisters city staff have also already recommended local policies like tax abatements and fee waivers in the Sisters Housing Plan update as well (recommendation 4.4). For example, Bend implemented a System Development Charges (SDC) Exemption policy that exempts developers from paying SDC charges for any affordable housing project (for households with incomes below 80% AMI) (*Affordable Housing Developer Resources*, 2022).

Private: Philanthropy: large-scale and small-scale donations also may provide more flexibility around project requirements, purposes, and tenant eligibility, but may be less certain funding sources. Ravenswood City Elementary School District in Palo Alto partnered with Facebook to secure below-market workforce housing apartments (Vincent et al., 2022).

Developer Equity and Financing: some housing developers have non-profit subsidiaries and specifically invest in affordable housing and even teacher workforce housing projects (*Teacher Housing in California – Education Housing Partners, Inc. – Thompson Dorfman LLC*, 2022).

Market-Rate Units and Commercial Income: With high enough density, rental income can cover operating costs, even at below-market rents. The site managers can generate additional revenue (and possible sources for rent-subsidization) through renting commercial spaces. Finally, project leaders could consider having some market-rate units to offset below-market rents and pay back any development loans. This option would also be compatible with Sisters 2040 Comprehensive Plan (Policy 5.1.3), the promotion of mixed-income neighborhoods.

Appendix 6c: Recreation and Community Center Team Funding Recommendations

Sale of Housing Site: Sisters could sell the Northeast corner of the site (designated for housing) to a private developer and incentivize the addition of affordable housing or offer financial incentives to affordable housing developers. Oregon Housing and Community Services (OHCS), which is Oregon's housing finance agency to support housing for Oregonians with lower and moderate income, could provide the funding to incentivize such housing. For example, OHCS awarded a non-profit developer over $3 million for a housing project in Eugene and Corvallis for people making under 80% of the area's median income (Weisend, 2022). In this strategy, the developer owns the land and infrastructure while the homeowner owns the building. The mortgage the homeowner pays is solely for the house and ground lease fee. If they desire to move, homeowners must sell their homes to someone who meets the income criteria (Weisend, 2022).

State and Federal Bonds and Grants: Oregon's Open Project Selection Process (OPSP) sets criteria for grant selection for projects focused on outdoor recreation resource development. OPSP is a partnership between the Statewide Comprehensive Outdoor Recreation Plan and the Use of Land and Water Conservation Fund grants (Bergerson & Lovellette, 2019). OPSP finds Deschutes County to be a high priority county for families with children. Consequently, OPSP funding priorities for the county include children's playgrounds and community trail systems that connect public land. As part of Deschutes County, Sisters could apply for grants to help fund the recreation center's external amenities (the nonmotorized paths, for example). Deschutes Trails Coalition is a potential organization that Sisters can work with to form a potential non-motorized trail fund coalition (Bergerson & Lovellette, 2019).

Revenue Streams: A recreation center could generate profits from both locals and visitors through adventure trip fees, gear rentals, and more. This revenue will circulate within the regional economy creating multiplier effects. Spending from outdoor recreation generates local and state tax revenues through income and property taxes paid by businesses related to recreation and their employees (Mojica et al., 2021). There are further tax benefits from trip related expenditures such as rental cars and fuel.

Jobs: Building a recreation center in Sisters could generate full and part-time recreation sector and greenspace management jobs and economic output.

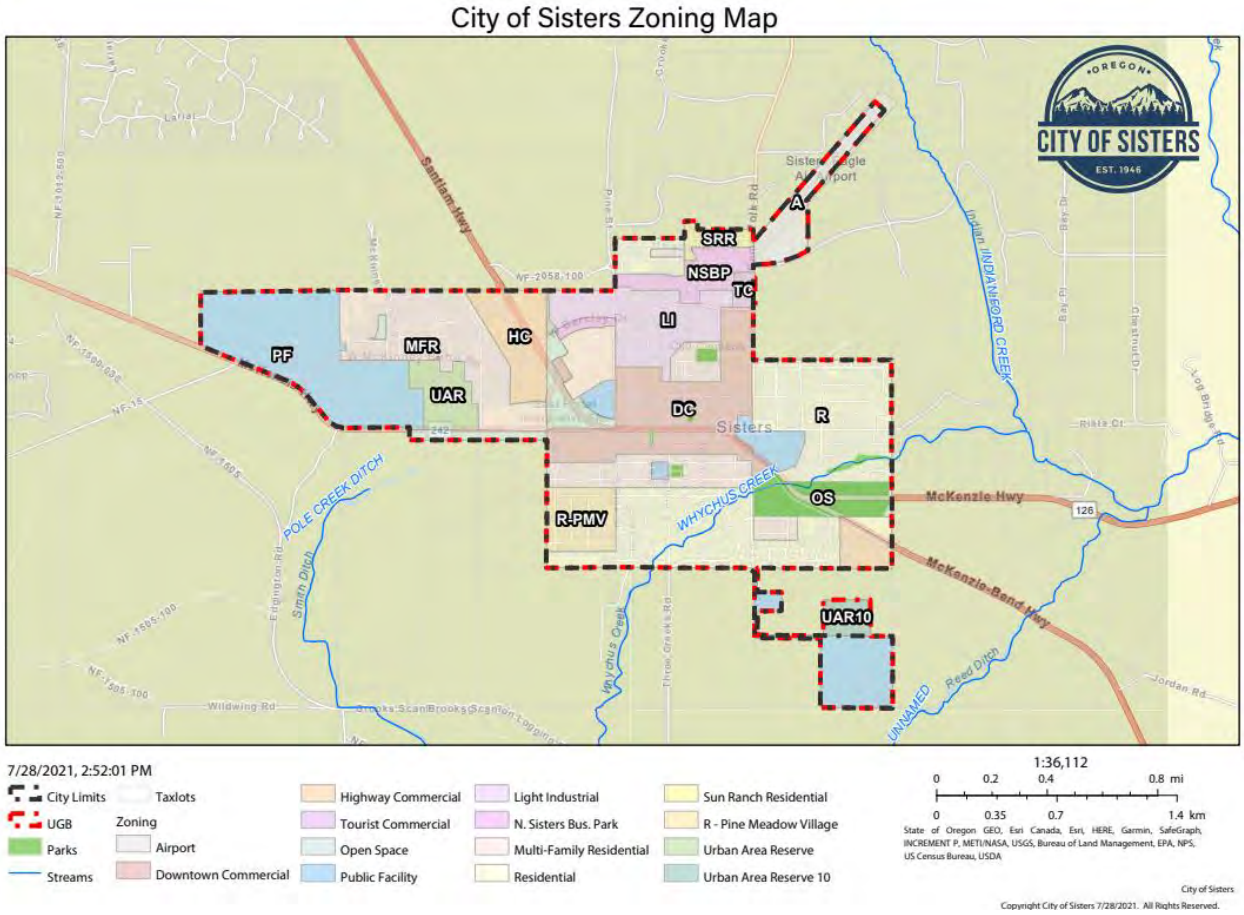
Appendix 6d: Funding Case Studies

Public-Private Partnership in John Day, Oregon - John Day is a successful in-progress case study on the use of public investment to stimulate mass-scale development and public-private partnerships. Public investments on private developments by using private loans and public grants together lowers the costs of all projects and leads to more accessible (affordable) developments, like housing, the production of which has increased ten-fold over the past year for the city (Ketchum, 2022). The city makes the roads and other infrastructure cheaper for the developer, so the housing is cheaper for the buyer. The city is supporting this kind of spending by innovative policy on public-private partnerships. John Day is using a privately managed venture-capital fund to stimulate recovery, opened in 2017. "Currently, the fund is seeding investments in main street buildings and rehabilitating property to encourage private sector investment" (Community Development / Venture Capital Investment Fund, n.d.). Because of the location of the Sisters Elementary school and its proximity to the downtown area, it is a highly desirable piece of land that can benefit from a PPP where the public sector may use it to advance housing options and investors can take advantage of such a partnership.

Expansion of Urban Renewal Area in John Day, Oregon - John Day used an Urban Renewal Area to revitalize the city in only five years. By creating the Urban Renewal Plan, the city created an opportunity for a low interest rate Business Oregon loan and a (TIF) to pay it back. By freezing the Urban Renewal districts at John Day's current low tax rate and seeding improvements for productive private use, the tax increments will be profitable quickly and payable on the loan (Banks, 2022). TIF works well in John Day because of its shrinking economy and would similarly work well on the Sisters Elementary site because it is currently not a productive location but has high opportunity to increase in value with commercial and multi-family residential investment.

Appendix 7: Land Use

Appendix 7a: City of Sisters Zoning Map



Appendix 7b: Current Land Use

The site is zoned as Public Facilities, which allows for a land use of public schools and public playfields (Sisters Development Code, n.d.). A full list of the permitted uses for this zone can be found in Section 2.7.200 of the Development Code. The administration building and the transportation center are accessory uses or structures permitted under the development code if attached to already permitted primary use. Other land uses surround the elementary school site. To the north of the administration building is a Public Facility district containing the Town Hall and the Sisters Library (City of Sisters Zoning Map, 2019). A residential district lies north and east of the site where many single-family homes reside. The vacant lot to the site's south is part of the downtown commercial district.

Appendix 7c: Potential Land Use Adjustments

A Public Facilities zoning designation does not allow for many of the land uses the teams proposed. Implementation of any of the three proposals would require adjustments to Sisters' current comprehensive plan, zoning map, and/or development code. Many of Sisters' planning documents, however, encourage greater residential development within the urban growth boundary, which suggests that the city may be willing to consider the changes required to implement the proposals. According to Sisters' Comprehensive Plan, the development of multi-family housing is a priority for the city (Blesius et al., 2021). Similarly, Sisters' Housing Plan identifies rezoning and redesignation of non-residential land to residential as a high priority strategy. Specifically, it states that "a change from non-residential designations to residential zones may have the effect of increasing supply of land available for housing" and that "the city should pursue this strategy to enable additional residential development at multifamily densities" (Sisters Housing Plan Update, 2022). Additionally, the housing plan suggests developing the elementary school site into low- and middle-income housing in strategy 2.2 (Sisters Housing Plan Update, 2022). The city suggests the need for a short-term action to "undertake a zoning map update or text update to allow certain residential uses in the Public Facilities zone" to allow for the implementation of strategy 2.2. The following sections describe the specific comprehensive plan, zoning map, and/or development code updates that implementation of each proposal would require.

Appendix 7c.1: Age Friendly Zoning Recommendations

The Age Friendly team recommended rezoning the elementary school parcel as Multifamily Residential (MFR) with a Master Planned Development. This change to the zoning map would require a comprehensive plan amendment and Type IV administrative review and approval (Sisters Development Code, n.d.). The City Council would need to approve a legislative amendment to change the site to MFR on the Land Use District (Zoning) Map. Because the Comprehensive Plan Map designates the site as a public facility, a legislative amendment to the Comprehensive Plan must be approved (Blesius et al., 2021).

A Master Planned Development designation on the site would allow for its development as a mixed-use space. The city encourages creativity, flexibility, and open space in the planning of residential developments, according to development code 4.5.100. Should an amendment be approved to designate the site as MFR, a Type III Quasi-Judicial Procedure would be required to designate the site as a Master Planned Development, as outlined in development code 4.5.400 (Sisters Development Code, n.d.).

The consideration of zoning and use of the site for sale across the highway to the south could expand upon needs stated in the Sisters Country Vision. It is important here that this southern property works in tandem with the administration building site and the

elementary site to create a complete street and safe traffic conditions. The property is currently zoned as 'downtown commercial,' which allows for a variety of mixed-uses. This zoning would allow for commercial/retail development along the edge of a roundabout to create a functional gateway into Sisters from the south and is an ideal opportunity for creating a distinctive Sisters identity. It would also allow for development of the area as recreational fields or public park space.

Appendix 7c.2: Adaptive Reuse Zoning Recommendations

To make the Adaptive Reuse team's recommendation possible, the city would need to agree to rezone the site for multi-family housing and commercial space development. The team recommended implementing Sisters 2022 Housing Plan Update Recommendation 1.7 to allow residential-only development on commercial land and then rezoning the site as Downtown Commercial. A zoning change would also require a corresponding update to the Comprehensive Plan. The Community Development Director or their designee will approve or deny a Minor Conditional Use Permit for multi-family development based on the proposal meeting the conditions of Sisters Development Code Chapter 4.4.500 Conditions of Approval. These development standards have been crafted to facilitate higher density consistent with Sisters' current character. The team also suggested adding a Workforce Housing special provision into Development Code Chapter 2.15, similar to the Affordable Housing provision, that includes a density bonus, height bonus, and decreased parking restrictions.

Additionally, zoning the Sisters Elementary School parcel as Downtown Commercial Zone would automatically apply the Western Frontier Architectural Design Theme to all new development there. This design continuity would further connect the site to downtown and ensure that although some of the higher density development may sound new in Sisters, the look and feel of the buildings will support the city's aesthetic identity per Sisters 2040 Comprehensive Plan (Policy 4.1.8). The team encourages the city to use this opportunity to review, amend, and/or expand the Western Frontier Architectural Design Theme development standards as outlined in Sisters Development Code 2.15.2600. Currently, the development code defines the "Western Frontier" aesthetic solely as designs originating from 1880s white settler architectural innovations. However, that is not the only "western frontier" experience from that time, and a more complete historical celebration of Sisters' design aesthetics could also capture local indigenous designs. The current western frontier aesthetic celebrates the City of Sisters' rich legacy of a self-sufficient and resilient people that the city has good reason to be proud of. However, the aesthetic presentation does not currently recognize the contributions indigenous people made to the place before and after western settlement or the world-upending losses of land and ways of life that western settlement in this place inflicted upon the Warms Springs, Wasco, and Pauite people. Sisters is certainly not alone in this balance between different historical experiences.

Indeed, essentially all modern cities in North America celebrate western settlement with very little general recognition or space creation for indigenous histories and modern culture (*This Land Is Your Land*, 2020). However, the Sisters 2040 Comprehensive Plan directs the city to "develop and implement an action plan to address current and historical practices related to diversity, equity, and inclusion in Sisters" (*Sisters 2040 Comprehensive Plan*, 2021, p. 41). Sisters could explore how increased co-urban design with local indigenous tribes could support a more welcoming community for people from all backgrounds (Raerino et al., 2021).

Appendix 7c.3: Community and Recreation Center Zoning Recommendations

To implement the Community and Recreation Center team's proposal, the city would need to adjust the zoning of the site's northeast corner to MFR. This change would allow a developer to build housing on that part of the site. For the rest of the site, zoning would not need to change because the site's current zoning as a Public Facility District allows for the land uses that the team proposed. Permitted uses in a Public Facility District include public buildings and structures, community buildings, public play fields, sports complexes and similar recreational facilities, public trails, public playgrounds, and accessory uses and structures to a permitted primary use with city approval (Sisters Development Code, n.d.). One aspect that might require a development code update would be the ability to sell or rent gear at the clubhouse. Any zone changes and comprehensive plan amendments are type IV development decisions, according to table 4.1.220 in the development code (Sisters Development Code, n.d.). Type IV decisions are legislature matters considered initially by the Planning Commission. The City Council makes a final decision on if the changes and amendments pass.

Another option that the city could pursue, instead of rezoning the housing site in the northeastern corner, would be to update the development code to allow for specific residential uses in Public Facility Districts. A code amendment is also a type IV development decision (table 4.1.200) that applies to legislature procedures (Sisters Development Code, n.d.).

Appendix 8: Community Engagement Considerations

Sister's Country Vision Action Plan recommends achieving a more "Connected Sisters" by "bring[ing] Sisters Country's less frequently heard voices into a more diverse, welcoming and inclusive community conversation," while the Sisters 2040 Comprehensive Plan (Policy 1.2.4) stipulates that the community would benefit from actively encouraging unrepresentative population participation (Ryan et al., 2019). Over-representing racial and other social demographics that are currently underrepresented in Sisters on committees and task forces has the potential to help offset majority-minority power dynamics and allow more authentic participation from individuals with traditionally underrepresented backgrounds (Smith, 2009).

Focus groups specifically for school district staff and teachers, as well as site neighbors (and eventually site residents), could add depth to community input from those who are likely to be most impacted and benefit the most. Focus group participants could either be randomly selected from school district employee lists or nominated as community leaders. The city could consider compensating focus group participants in accordance with the Sisters 2040 Comprehensive Plan (Policy 1.1.3).

The Sisters' Elementary School redevelopment presents an opportunity for Sisters to consult with the Warm Springs and Pauite Tribes. Successful collaboration could lead to continued conversations around native participation in city planning efforts and community projects (Te Ara Mua- Mana Whenua, 2022).