

**RAILS WITH TRAILS  
ALBANY TO CORVALLIS  
PEDESTRIAN AND BICYCLE PATH  
FEASIBILITY STUDY**

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***Chuck Knoll, P.E., Senior Engineer  
Andrew Monaco, GIS Analyst and Maps  
Mark Peterson, Associate Engineer  
Roger Irvin, P.E., Public Works Director***

# **RAILS WITH TRAILS ALBANY TO CORVALLIS PEDESTRIAN AND BICYCLE PATH**

## **FEASIBILITY STUDY**

### **INTRODUCTION**

This feasibility study addresses the technical feasibility of the design and construction of a pedestrian and bicycle path from Albany to Corvallis. The continued uninterrupted operation of the railroad and associated issues pertaining to liability is of primary importance and will need to be addressed subsequent to this study and in the engineering design and location of this path.

Portland and Western Railroad presently lease this section of railroad located between Albany and Corvallis from the Union Pacific Railroad. For the purposes of this study the term Railroad will be used to describe both organizations.

Highway 20 presently provides the primary if not only timely and direct connection for those seeking to travel from Albany to Corvallis. Albany and Corvallis are two cities with major population centers separated from the limits of each city by only 6 miles. However, there is not any viable means to support bicycle or pedestrian traffic between these two cities other than on the shoulders of the busy Highway 20. There are safety concerns for bicyclists on this section of highway. The commute by pedestrian or bicyclist is infrequent while the average daily traffic on Highway 20 is between 17,000 to 20,000 vehicles per day. This occurs in the section of Highway 20 from Circle Blvd in Corvallis to the Highway 20 Willamette River Bridge in Albany. The narrower sections of widened road shoulders attempt to serve as bike lanes are also in this section of highway.

The location of the Railroad provides a direct connection between Albany and Corvallis that is separated from Highway 20. The area within and next to the Railroad right of way provides an option for a pedestrian and bicycle path that needs to be considered. This study addresses the feasibility of locating a pedestrian and bicycle path within the proximity of the rail. It also addresses the feasibility of the design and construction of a rails with trails that parallels the Railroad.

This Feasibility Study for the Rails with Trails Albany to Corvallis Pedestrian and Bicycle Path is formatted to provide known information and factors to be considered in the design and location of this trail. Review of this study is expected to generate constructive comment and information from the public as well as local, county, state and federal agencies, which will be incorporated into this study as it is made available. It is requested of the reviewer to provide written comment to Benton County Public Works Engineering to ensure accurate transfer and consideration of this information for incorporation into an updated revision of this feasibility study.

This study considers the following features that are presently documented between Corvallis and Albany:

1. Existing bike and multi-use paths

2. Flood plains and flood ways
3. Stream crossings
4. Property owners
5. Right of way and easement locations
6. Topography
7. Wetlands
8. Vehicular traffic
9. Soil survey information
10. Location of and access routes to businesses
11. Parks and attractions
12. Safety hazards
13. Characteristics and location of roadway intersections with rails
14. Cost estimates for design and construction of segments of the path way
15. Local knowledge of the area.

## **SUMMARY AND RECOMMENDATIONS**

Construction of the rails with trails pedestrian and bicycle path between Albany and Corvallis is technically and economically feasible and will be a major attraction to this area.

It would be desirable to design and construct the rails with trails project in a one to two year period. If this is not possible, it would be best to design and construct segments of this rails with trails where the most benefit may be realized with each segment. A good network of bicycle paths, multiuse paths, and bike lanes exists in the northern part of Corvallis. A similar network needs to be developed in North Albany leading into Albany as well as toward Corvallis to provide a complete network of bicycle and pedestrian paths and lanes. This will result in a successful and well-used rails with trails project when construction is complete. For this reason, it is recommended to construct the rails with trails path starting from Albany and ending in Corvallis. The section from Springhill Drive to North Albany Road should be constructed first as this will serve as a bike path collector. The next sections constructed should proceed towards Corvallis. This will also provide bicycle access to attractions such as Hyak Park located on the Willamette River.

To ensure a coordinated design and implementation of construction of this rails with trails project, an Engineering Design and Location of the trail should be completed first or in coordination with the engineering design of the first segment. This may consist of detailed aerial topography of the project segments, identification and location of existing right of way and easements, completion of detailed topographical and right of way surveys in selected locations, layout design, and location of the path. More detailed wetland delineation and surveys for threatened and endangered plants and wildlife will also be necessary once the location is determined. Property owners also need to be involved to obtain their input regarding local information to assist in determining the best design and location.

## **ECONOMIC AND COMMUNITY BENEFIT**

Rails with trails projects in other communities have been documented to bring life to economies bringing new businesses. Connector trails are constructed in subdivisions and local downtown and neighboring areas providing direct access to the trail. Bike shop business increase, tourist business increases guest registers, restaurants, and businesses next to or

near the trail. The trail directs visitors to the downtown areas increasing the economy in downtown areas. Both Albany and Corvallis have visitor activities that would complement this activity associated with the waterfront downtown areas. Developers recognize the value of a trail as an attraction for potential homeowners. For areas that lack recreation areas, a trail will energize and unite communities along its length. On weekdays the trail will be primarily used for commuting and on weekends the trail will come alive with recreational users and visitors. The renewed sense of a community that develops from a trails construction is revitalizing neighborhoods, renewing pride in the community, and helping residents get acquainted with their neighbors. A trail properly located and constructed can also preserve and protect the natural environment providing residents and visitors with a safe and accessible facility for recreation and non-motorized transportation.

## **GOALS**

To realize this economic and community benefit and to create a safe corridor for transportation by bicycle the following goals should be addressed in engineering design and location of the pedestrian and bicycle path.

- Minimize out of direction travel for bicyclists and pedestrians traveling from Albany to Corvallis.
- Separate pedestrian and bicyclists from heavy traffic located on Highway 20.
- If possible, provide a pathway for bicyclists and pedestrians separated from major collectors and roads with heavy traffic.
- Connect to existing multiuse paths and bike lanes
- Choose a location for the path that will be economically feasible to design and construct
- Connect to existing and potential accesses to parks, and the Willamette River.
- Connect to businesses and local attractions
- Create a scenic and enjoyable experience for those using the path

## **RELATIONSHIP TO SURFACE TRANSPORTATION**

The City of Albany provides connection to other modes of transportation in close proximity to its downtown area. This includes the Amtrak Station and connection to the Corvallis to Albany Transit System. A bus stop for this local transit system is also located in North Albany.

The City of Corvallis also provides a Greyhound bus stop as well as a number of bus stops for the local transit system. The Railroad located between Corvallis and Albany is used primarily for transportation of freight and does not provide surface transportation for commuters.

A copy of the transit systems and stops for both Corvallis and Albany are provided as an attachment to this study.

Both Albany and Corvallis have extensive networks of bike paths and bike lanes located on widened road surfaces. The location of these paths and lanes are indicated in this feasibility study as each segment of the proposed rail with trail is discussed.

## **FORMAT OF THE STUDY**

This study considers the feasibility of locating a pedestrian and bike path in the general vicinity of the Railroad. Locating the trail within the right of way of the Railroad would seem to be the easiest solution. However, this may not be the correct or best solution when all factors other than right of way are considered. In addition, the width of the Railroad right of way is narrow in some stretches of the railroad. The width of this right of way is shown on the aerial photography maps that are part of this report. Also shown on the maps are the location of wetlands, physical features and buildings, parks, flood plains, topography contours, soil type, property owners, existing roads and bike paths. The general area to be considered for location of the trail near the rail (designated RWT Location Area) is also illustrated in connection with existing and proposed future roads, and proposed future bike path connectors to the rails with trails bike path. The stations shown on the maps and discussed in the text are not the stations or mileage markers used by the railroad.

These maps have been prepared for separate sections of the rails with trails. Information is provided for each of these segments that should be considered in the engineering design and location of this path. The segments include the following:

1. 3<sup>rd</sup> Avenue near Highway 99W to Walnut Blvd.
2. Walnut Blvd. to Conifer Blvd.
3. Conifer Blvd to Steele Avenue
4. Steele Avenue to Garlands Nursery
5. Garlands Nursery to Granger Road
6. Granger Road to Independence Highway
7. Independence Highway to Rondo Lane (Hyak Park)
8. Rondo Lane (Hyak Park) to Scenic Drive
9. Scenic Drive to North Albany Road
10. North Albany Road to Springhill Drive
11. Springhill Drive to Water Street (Albany)

There is a separate study and effort being conducted by Railroad. The present trestle that crosses from Springhill Drive to Water Street in Albany has structural concerns that require a speed limit for trains crossing this trestle. The Railroad is seeking funding to complete an engineering design and construction to replace this trestle. A pedestrian and bike path associated with this trestle crossing could be included in this effort. Therefore, this feasibility study does not include consideration of this Trestle Crossing.

## **PATH CONFIGURATION**

The path should be designed for use by both walking and bicycling. Standard design configuration for a combined path based on both ODOT standards and AASHTO standards indicate a 10-foot wide paved path with three feet of clearance on the edge of the paved path. This provides width for two bicyclists and one pedestrian in the same space at the same time. The three-foot clearance on the side of a 10-foot wide paved path dictates a 16-foot wide bridge crossing with bridge rails.

The railing for the Railroad is standard and is typically supported by timber ties that are nine feet long. The timber ties and rock base may be replaced as part of a maintenance operation.

Clearance is needed on the side of the rail to remove and replace the nine-foot tie. Clearance is also needed off of the side of the rail during normal train operation.

The attached drawing provides a standard configuration for the paved bicycle and pedestrian path when constructed next to the railroad or when constructed separate of the railroad. A configuration for the cross section of a typical bridge is also shown. This configuration should also provide an opportunity for access to the rail for maintenance of the railroad. The compacted rock base between the path and the rail also provides this access to the rail for maintenance.

The paved trail may need to be built narrower in certain sections of the rails with trails due to the physical limitations presented by existing structures, and hillside topography. The slope of the path should also be designed to meet ODOT and AASHTO requirements for bike paths. The Railroad should be consulted to determine minimum separation required from the rail.

The typical rail with trail configuration indicates a 4 to 6 foot high cyclone fence to separate the rails from the trails for safety purposes. Since many sections of the rail are used as crossings for small animals, the bottom of the cyclone fence should provide a foot of clearance for animal passage. Similarly for deer, the fence should be appropriately located or have openings so the deer will not become trapped especially during passage of the train.



## FLOOD LEVELS

Information provided by the Flood Insurance Study for Benton County, August 1986, show predicted profiles of the Willamette River for 100-year and 10-year flood levels. The aerial photographs of the February 1996 Willamette River Flood Event also provide flood levels for the largest flood in the past 30 years since flood control improvements were constructed in the Willamette River watershed. The 10-year flood level predicted profiles were higher than the February 1996 flood event. Consideration of flood data is important in establishing the proper location and elevation of the trail since the higher the elevation the more expensive the trail will be due to the cost to build up the base to the elevation of the surface of the path. The cost estimate for this study was generally based on placing the path approximately one foot above the 10-year flood level. This study does not recommend the elevation that the trail needs to be constructed at. This elevation should be established during the design process and should address areas of localized flooding as well. The Benton County Code requires review and approval by the Community Development Department for placement of a structure or fill in a flood way or flood plain.

The elevations of the Willamette River for the 10-year and 100-year flood level are provided for informational purposes as part of this feasibility study.

<b>Location on Willamette River</b>	<b>River Mile</b>	<b>10-year Flood Elev.</b>	<b>100- year Flood Elev.</b>
Highway 34 Bridge	131.3	214.3	219.7
Near Steele Ave	125.0	203	210
Hyak Park	121.5	199.2	206.8
Scenic Dr	121.1	198.0	205.0
U. S. Highway 20 Bridge	119.3	195.3	201.6
Rail Road Trestle	118.9	195.0	201.0

## HAZARDOUS MATERIALS

Excavation, removal, transport and disposal of hazardous materials or soils and debris contaminated with hazardous materials encountered during the construction of a project can be costly. Any remediation for removal of hazardous materials should be completed before the construction of the rails with trails project. There are not any known hazardous materials or soils contaminated with hazardous materials in the general location area for the rails with trails from Albany to Corvallis. Agricultural land or residential properties, Highway 20 right of way, or county or city right of way border both sides of the railroad. There are not any industrial centers located next to the railroad that would be associated with hazardous materials.



## **SOILS AND WETLANDS**

The types of soils shown on the map are based on the Soil Survey of Benton County Area, Oregon completed by the United States Department of Agriculture Soil Conservation Service. The soils were reviewed to determine if they were on the Hydric Soils List for Benton County, Oregon as provided by the Natural Resource Conservation Service of the U. S. Department of Agriculture. The following table is a summary of the Hydric Soils List for each soil located in the proximity of the location area of the rails for trails path. If a soil is determined to be hydric for a section along the rails to trails path then wetland delineation may need to be completed as part of the design process.

The National Wetlands Inventory as well as the Local Wetlands Inventory provided by the City of Corvallis and the City of Albany was reviewed to locate any known wetlands in the general proximity of the rails with trails location area. These wetlands are shown on the aerial photography maps.

Any removal of wetlands by excavation or fill in excess of 50 cubic yards requires a permit from the Engineering Corps of Engineers as well as the Oregon Division of State Lands. Wetland mitigation may also be required. Wetland mitigation should be considered in the engineering design of sections of the path as a means to create a scenic and enjoyable experience for those using the path.

**SOILS WITHIN THE AREA OF THE RAILS WITH TRAILS  
CORVALLIS TO ALBANY PROJECT**

<b>Symbol</b>	<b>Soil Name</b>	<b>Component</b>	<b>Hydric</b>	<b>Landform</b>
Am	Amity Silt Loam	Amity and Woodburn	No	Terrace
		Concord and Dayton	Yes	Terrace
Bc	Bashaw Clay	Bashaw and Waldo	Yes	Flood Plain
Ch	Chehalis Silty Clay Loam	Chehalis, Cloquato, Newberg, and McBee	No	--
Cm	Cloquato Silt Loam	Cloquato, Chehalis, Newberg, Camas	No	--
		Wet Spots	Yes	Flood Plain
Cn	Coburg Silty Clay Loam	Coburg, Woodburn, Malabon	No	--
		Wet spots and Conser	Yes	Terrace
Co	Concord Silt Loam	Concord and Dayton	Yes	Terrace
		Amity	No	--
Da	Dayton Silt Loam	Dayton, and Concord	Yes	Terrace
		Amity	No	--
DuC	Dupee Silt Loam	Dupee, and Hazelair	No	--
HeC	Hazelair Complex, 3%	All Components	No	--
HeD	Hazelair Complex, 12%	All Components	No	--
Ma	Malabon Silty Clay Loam	Malabon, Coburg, Willamette	No	--
		Wet Spots	Yes	Terrace
Ng	Newberg Sandy Loam	All Components	No	--
Nm	Newberg Loam	All Components	No	--
Wa	Waldo Silty Clay Loam	Waldo and Bashaw	Yes	Flood Plain
Wc	Wapato Silty Clay Loam	Wapato	Yes	Flood Plain
		Mc Bee and soils with thick dark surf	No	--
WeA	Willamette Silt Loam 0%	Willamette	No	--
WeC	Willamette Silt Loam 3 %	Willamette	No	--
WoA	Woodburn Silt Loam	Woodburn, Willamette, and Amity	No	--
		Wet Spots	Yes	Terrace

## **COST ESTIMATE**

The estimated cost for an improvement is often associated with its economic feasibility. Therefore, an approximate cost estimate is provided for each segment of the rails with trails path. This estimate is expected to be refined once the location of the path has been determined and engineering design has been completed. The design is based on the general cross section of the bike path that is provided in this report. The estimate was completed using a customized data base spread sheet analysis and incorporating data pertaining to the physical features provided by the aerial photography layout of the trail.

The following unit costs were used in estimating a cost for each section of the path:

- a. Cyclone Fence - \$10/lineal foot installed
- b. Prestressed Concrete Bridge, 16 feet wide, with Bicycle Railing supporting by Steel Piling and reinforced concrete steel abutments.- \$100/square foot
- c. Asphalt Concrete (HMAC) - \$40/ton in place
- d. Compacted aggregate base - \$18/cubic yard
- e. Excavation - \$12/cubic yard
- f. Embankment - \$20/cubic yard
- g. Erosion Control and Clearing - \$10/lineal foot of trail
- h. Wetland Mitigation \$1.50/square foot
- i. Mobilization – 5%
- j. ROW Purchase - \$10,000 to \$50,000/acre
- k. Preliminary Engineering and Design – 15%
- l. Construction Engineering -15%
- m. Construction Contingency – 20%

The cost estimates may be considered conservative. For instance, a minimum road base of 12 or 18 inches is used for different sections of the path to ensure the path will be constructed out of any localized flooding of the terrain during winter months. An elevated bridge with a minimum length of 50 feet is placed at each stream or significant drainage crossing rather than a large drainage culvert. The following table provides the estimated cost for each section of rail with comments for options of the location and construction of the rail.

**COST ESTIMATES FOR SECTIONS OF THE  
ALBANY TO CORVALLIS RAILS WITH TRAILS PROJECT**

<b>Section of Rail</b>	<b>Length (ft)</b>	<b>Stream Crossings</b>	<b>Cost of Path</b>	<b>Comments, Other Options</b>
NW 3 <sup>rd</sup> (Corvallis) to Circle Blvd	5,300	Minor	\$500,000	Option - existing bike path next to HWY 99W and Circle Blvd
Circle Blvd to Walnut	1,200	50 ft	\$400,000	Option – Existing bike lanes on Walnut and Conser within 100 ft of rail.
Walnut Blvd to RR Underpass	400	50 ft	\$212,000	Option – Existing bike lanes on Conser within 200 ft of rail and RR underpass.
RR Underpass to Conifer Blvd	1,200	None	\$126,000	Option – Existing pedestrian path in Corvallis Park
Conifer Blvd to Steele Ave	4,700	None	\$389,000	
Steel Ave to Garland's	6,900	None	\$581,000	
Garland's to Granger Ave	3,600	None	\$268,000	
Granger Ave to Independence Hwy	4,200	None	\$414,000	
Independence Hwy To Rondo Ln	6,000	150 ft	\$1,029,000	
Rondo Lane to Scenic Drive	5,100	None	\$398,000	
Scenic Drive to North Albany Road	7,300	230 ft	\$1,548,000	Cost is provided with a bridge at one of 3 trestle crossings. Option - W. Thornton Lake Drive is a potential option.
North Albany Road to Springhill Drive	3,100	None	\$391,000	Cost is provided without an existing 50 ft bridge crossing
Springhill Dr to Water St (Albany)	---	---	---	Cost not included in this study.

## **EVALUATION OF EACH RAIL WITH TRAIL SEGMENT**

An evaluation of the feasibility of each segment of rails with trails between Corvallis to Albany is provided. The segments are presented in the following order:

1. 3<sup>rd</sup> Avenue Near Highway 99W to Walnut Blvd
2. Walnut Blvd to Conifer Blvd
3. Conifer Blvd to Steele Avenue
4. Steele Avenue to Garland's Nursery
5. Garland's Nursery to Granger Road
6. Granger Road to Independence Highway
7. Independence Highway to Rondo Lane (Hyak Park)
8. Rondo Lane (Hyak Park) to Scenic Drive
9. Scenic Drive to North Albany Road
10. North Albany Road to Springhill Drive
11. Springhill Drive to 3<sup>rd</sup> Avenue, Albany

## **NW 3<sup>rd</sup> AVENUE NEAR HIGHWAY 99W TO WALNUT BLVD**

### **Feasibility of Segment**

The cost of engineering design and construction of this section should be reasonable due to the level topography, the section of land being primary owned by the City of Corvallis, and minimal stream crossings.

The construction of this portion of the trail will provide a more direct route from downtown Corvallis to the shopping center that is typically accessed from the north on Circle Blvd. The businesses should welcome this additional access route to their shopping center. The trail will also provide a more direct route than the existing bike paths and lanes for those traveling to Albany. The trail will also provide another access to the South entrance of Hewlett Packard that is more removed from vehicular traffic.

### **Recommended Location of Trail**

The location of the trail should be to the west of the rail from NW 3<sup>rd</sup> Street to Circle Blvd. This will be to avoid the wetlands located to the east of the rail. This will also provide a connection to the existing path that is parallel to Highway 99W. This will also connect to the shopping center located to the west near Circle Blvd.

The location of the trail to the north of Circle Blvd should most likely follow the existing bike lanes on Conser Street and Walnut Blvd located to the east of the rails. The trail could be located to the west of the rail in this location but the existing wetlands, and private businesses located on this side of the rail make this unlikely. There is a railroad connection that loops from the west that connects to the railroad that parallels Highway 99W. The crossing of this railroad with the path needs to be considered in deciding the final location of this rails with trails pedestrian and bicycle path.

### **Transportation System**

An existing bike path is located on the underpass of Highway 99W and NW 3<sup>rd</sup> Street in Corvallis. This path parallels the east side of Highway 99W going to the north. Bike lanes are also located on both sides of Circle Blvd. There are also bike lanes on the shoulders of Highway 20 from downtown Corvallis at the Highway 34 Bridge going north to Circle as well as Conifer. Traffic is heavy on Circle Blvd from Highway 99W going east. This is only expected to increase with the recent addition of a stadium seating theatre, a Safeway store and possible addition of a large hardware store. This section of road also serves as an entrance to Hewlett Packard; therefore, it is quite appropriate to provide an alternate route for pedestrians and bicyclists seeking to travel from Corvallis to Albany on the rails with trails path or even to work at Hewlett Packard.

The rails with trails path will provide a direct connection from downtown Corvallis to the shopping center to the north on Circle. It will connect to the bicycle lanes on Circle Blvd, and the existing path next to Highway 20. Consideration should be made to properly locate the path at the intersection of the rail and Circle Blvd. since the final rails to trails project may incorporate the use of the existing bike lanes located on Walnut Blvd and Conser St.

## **Wetlands**

No known wetlands are located next to the rail except the stream crossing located to the north of Circle Blvd. The soils in this area are predominately Woodburn Silt Loam and Concord Silt Loam and Amity Silt Loam. Hydric Soils are located in a terrace landform consisting of these soils. There is a small stream crossing; therefore, wetland delineation may be necessary. Wetland mitigation may be required should the path be located in an area determined as a wetland.

Documented wetlands that are supported by Wapato Silty Clay Loam soil are located approximately 100 feet to the east of the trail area in this segment of rail. Locating the path on the west side of the rail may reduce the potential for addressing issues associated with wetlands.

## **Flood Levels**

Flooding from the Willamette River is not a concern for this section of rail. Localized flooding for this area should be evaluated before establishing the elevation of the path as part of the design process.

## **Existing Crossings**

There are not any rail crossings within this section of railroad.

## **Property Owners**

The City of Corvallis owns property on both sides of the initial 3,000 feet of this section of the path. Property is owned by private property owners on the both sides of the remaining 2,000 feet of this section of path. Since the property on the west side of the rail is associated with retail business it would be expected that they would encourage and accommodate locating the trail on the west side to encourage business.

## **Cost Estimate**

The cost for engineering design and construction of the 5300 linear foot section of trail from only NW 3<sup>rd</sup> Avenue to Circle Blvd was estimated to be about \$500,000. This estimate is based on donated land and the construction of a culvert rather than a bridge at the stream crossing.

The cost for the section of trail from NW 3<sup>rd</sup> Avenue to Walnut Blvd for engineering design and construction and property acquisition if it was located next to the rail for the full length of the rail was estimated to be \$900,000. This could be reduced by about \$130,000 if the property is donated. This could be reduced by an additional \$200,000 if it is determined during engineering design and location that a 50 foot bridge will not be required for each of the two small stream crossings.

## **WALNUT BLVD TO CONIFER BLVD**

### **Feasibility of Segment**

Bike lanes are located on the roads parallel to and connecting to the intersections with the railroad on both Walnut Blvd and Conifer Blvd. There is also a pedestrian underpass midway in this section of rail. Even though it is feasible to design and construct a new trail that is separate from these existing bike paths, it is unlikely due to the cost involved. An appropriate and feasible segment of bike and pedestrian path could be added next to the rail between and existing stream crossing and Conifer Blvd. that would be a more direct connection to the rail with trail going north to Albany. This section should be reasonable due to the level topography, and the section of land being owned by the City of Corvallis.

### **Recommended Location of Trail**

The trail should incorporate the bike lanes presently located on Walnut Blvd and Conser Street located to the east of the rail and the pedestrian railroad underpass. The trail should then be constructed to parallel the west side of the rail on the backside of the City of Corvallis Park until it reaches Conifer Blvd. The land that is available should provide a good crossing of Conifer Blvd a reasonable distance to the west of the rail to provide for a safe trail crossing.

### **Transportation System**

An existing bike lane is located on Conser Street that connects Walnut Blvd and Conifer Blvd in the general proximity east of the rail. There is also a pedestrian path that connects Conser Street to the City of Corvallis Park located on the west side of a rail with a path that goes under the rail. Bike lanes are also located on Conifer Blvd and Walnut Blvd. There is also a pedestrian and bicycle bridge crossing from Sherwood Way that crosses the existing stream in the close proximity of the railroad.

### **Wetlands**

Wetlands are located on the east side of the rail for a distance of about 1500 feet from Walnut Blvd to the stream crossing. On the west side of the rail wetlands extend for about 500 feet from the same stream crossing toward Conifer Blvd. The soils in this area are predominately Woodburn Silt Loam, Dayton Silt Loam, and Amity Silt Loam. Hydric Soils may be located in a terrace landform or wet spots for these soil types. Wetland delineation will be necessary should a stream crossing be constructed as part of this path. Wetland mitigation may be required should the path be located in an area determined as a wetland.

### **Flood levels**

Flooding from the Willamette River is not a concern for this section of rail. Localized flooding for this area should be evaluated before establishing the elevation of the path as part of the design process.

### **Existing Crossings**

There is a pedestrian underpass that crosses under the railroad in this section of rail.



**Property owners**

The City of Corvallis owns the property on the east side of the rail from Walnut Blvd to the stream crossing and the property on the west side of the rail from the stream crossing to Conifer Blvd. The remainder of the property next to the rail is primarily residential.

**Cost Estimate**

The cost for the design and construction of the 1200 linear feet section of trail to the north of the existing stream to Conifer Blvd is estimated at \$126,000.

The cost for the design and construction of this entire 1600 linear feet section of trail that would be next to the rails is estimated at \$338,000. This trail would be located on land presently owned by the City of Corvallis and would include a 70-foot bridge crossing.

## **CONIFER BLVD TO STEELE AVENUE**

### **Feasibility of Segment**

The design and construction of this segment of trail next to the rail is feasible and appears to be straightforward. The location of the right of way for the railroad and the infrequent residential properties needs to be determined before this selection is finalized.

### **Recommended Location of Trail**

The trail should be located to the west of the rail to connect with the recommended location of the trail as it approaches the busy intersections of Granger Avenue, Independence Highway and Scenic Drive,

### **Transportation System**

An existing bike lane is located on Conifer Blvd. Agricultural lands that do not provide any connection to the existing transportation system border the remaining segment of this rail.

### **Wetlands**

No known wetlands are located next to the rail. The soils in this area are predominately Woodburn Silt Loam, Amity Silt Loam, and Willamette Silt Loam. Hydric Soils may be located in a terrace landform or wet spots for these soil types. The Jackson Frazier Wetland that is located in Bashaw Clay and Waldo Silty Clay Loam is located to the west of and the rail and removed from the general area of path location. Wetland delineation is not expected to be necessary since soils on both sides of the rail support grain and vegetable crops.

### **Flood levels**

Flooding from the Willamette River as well as local flooding is not a concern for this section of rails with trails.

### **Existing Crossings**

There is a private road crossing at the end of Steele Avenue.

### **Property owners**

The property along this section of rail is primarily agricultural except for a few residential properties.

### **Cost Estimate**

The cost for the design, construction and related property acquisition for this 4700 linear feet section of trail is estimated at \$390,000. It should be considered one of the least expensive sections of trail to construct on a per linear foot basis.

## **STEELE AVENUE TO GARLAND'S NURSERY**

### **Feasibility of Segment**

The design and construction of this segment of trail next to the rail is feasible and appears to be straightforward. The location of the right of way for the railroad and the very few residential properties need to be determined before this selection is finalized.

### **Recommended Location of Trail**

The trail should be located to the west of the rail to connect with the recommended location of the trail as it approaches the busy intersections of Granger Avenue, Independence Highway and Scenic Drive.

### **Transportation System**

The entrance into Garland's Nursery and the rail crossing at Steele Avenue provides an access to Highway 20. Agricultural lands that do not provide any connection to the existing transportation system border the remaining segment of this rail.

### **Wetlands**

No known wetlands are located next to the rail. The soils in this area are predominately Willamette Silt Loam. Hydric conditions to support wetlands do not occur in this soil type. The Jackson Frazier Creek Ditch that is located in Bashaw Clay is located to the west of the rail and removed from the general area of path location. Wetland delineation is not expected to be necessary since soils on both sides of the rail support grain and vegetable crops.

### **Flood Levels**

Flooding from the Willamette River as well as local flooding is not a concern for the section of rail.

### **Existing Crossings**

There are not any rail crossings in this section of rail except for Steele Avenue and Garland's Nursery.

### **Property owners**

The property along this section of rail is primarily agricultural except for a few residential properties.

### **Cost Estimate**

The cost for the design, construction and related property acquisition for this 6900 linear feet section of trail is estimated at \$581,000. It should be considered one of the least expensive sections of trail to construct on a per linear foot basis.

## **GARLAND'S NURSERY TO GRANGER AVENUE**

### **Feasibility of Segment**

The design and construction of this segment of trail next to the rail is feasible and appears to be straightforward. The location of the right of way for the railroad and the very few residential properties need to be determined before this selection is finalized.

### **Recommended Location of Trail**

The trail should be located to the west of the rail to connect with Hyslop Road. Hyslop Road should be improved to include bike lanes to avoid the construction of a rail loading area to the west of the rails and north of Granger Avenue. The use of Hyslop Road as a bike path will also provide a trail crossing a good distance from the intersection of Highway 20 so as to provide a safe crossing of Granger Avenue by pedestrians and bicyclists during peak hours of traffic.

### **Transportation System**

The entrance into Garlands Nursery provides an access to Highway 20. This access may be relocated to Granger Avenue as shown on the aerial map. Granger Avenue is a major connector to Highway 20. Agricultural lands that do not provide any connection to the existing transportation system border the remaining segment of this rail.

### **Wetlands**

No known wetlands are located next to the rail. The soils in this area are predominately Willamette Silt Loam. Hydric conditions to support wetlands do not occur in this soil type. The Jackson Frazier Creek Ditch that is located in Bashaw Clay is located to the west of the rail and removed from the general area of path location. Wetland delineation is not expected to be necessary since soils on both sides of the rail support grain and vegetable crops.

### **Flood levels**

Flooding from the Willamette River as well as local flooding is not a concern for the section of rails with trails.

### **Existing Crossings**

Other than the rail crossing at Granger Avenue and the entrance to Garland's Nursery, there is one pedestrian rail crossing at a midway point in this segment of the rail to provide access to a mailbox.

### **Property owners**

The property along this section of rail is primarily agricultural except for a few residential properties.

### **Cost Estimate**

The cost for the design, construction and related property acquisition for this 3600 linear foot section of trail is estimated at \$268,000. It should be considered one of the least expensive sections of trail to construct on a per linear foot basis.

## **GRANGER AVENUE TO INDEPENDENCE HIGHWAY**

### **Feasibility of Segment**

The design and construction of this segment of trail next to the rail is feasible and appears to be straightforward. The location of the right of way for the railroad and the very few residential properties need to be determined before this selection is finalized.

### **Recommended Location of Trail**

The trail should be located to the west of the rail to use Hyslop Road for locating part of this trail as bike lanes. Hyslop Road should be improved to include bike lanes to avoid the construction of a rail loading area to the west of the rails and north of Granger Avenue. The use of Hyslop Road will also provide a trail crossing a good distance from the intersection of Highway 20 so as to provide a safe crossing of Granger Avenue by pedestrians and bicyclists during peak hours of traffic. Similarly a crossing of Independence Highway should be to the west of the rail. The trail should be located around and west of a residential property that borders the rail and Independence Highway to provide the safe crossing of Independence Highway and the heavy traffic entering onto and off of Highway 20.

### **Transportation System**

Granger Avenue and Independence Highway are major collectors to Highway 20. Agricultural lands that do not provide any connection to the existing transportation system border the remaining segment of this rail other than Hyslop Road.

### **Wetlands**

No identified wetlands are located next to the rail. The soils in this area are predominately Willamette Silt Loam, and Woodburn Silt Loam. Hydric conditions to support wetlands would be expected to occur in wet spots for the Woodburn Silt Loam Silt Loam located in terraced landforms. This may occur in the ditches located between the rails and Highway 20. Wetland delineation is not expected to be necessary for the west side of the rail that supports grain and vegetable crops. Wetland delineation may be required for the east side of the rail.

### **Flood levels**

Flooding from the Willamette River as well as local flooding is not a concern for the section of rails with trails.

### **Existing Crossings**

The only rail crossings are located at Granger Avenue and Independence Highway.

### **Property owners**

The property along this section of rail is agricultural. A short portion of property next to the rail is owned by Oregon State University.

### **Cost Estimate**

The cost for the design, construction and related property acquisition for this 4200 linear feet section of trail is estimated at \$414,000. It should be considered one of the lesser expensive sections of trail to construct on a per linear foot basis.

## **INDEPENDENCE HIGHWAY TO RONDO LANE (HYAK PARK)**

### **Feasibility of Segment**

The design and construction of this segment of trail next to the rail is technically feasible. It will include a 150 foot bridge crossing parallel to the existing narrow railroad trestle. It will also include some wetland delineation work as part of the design process. Wetland mitigation may be necessary for this section of rails with trails. The approach to Rondo Lane from Highway 20 is located directly across from Hyak Park, which provides access to Willamette River. The design of the crossing with Rondo Lane should consider significant pedestrian and bicycle traffic that will take advantage of this access to a park located on the Willamette River.

### **Recommended Location of Trail**

The trail should be located to the west of the rail to avoid crossing the rail from the intersection at Independence Highway. The landform to the east of the railroad experiences flooding and provides a longer bridge crossing at Bowers Slough. There is also a private gravel road on the north end of this section of rails with trails that is located on the west side of the rail. A spur off of the path could also be made to take advantage of a dirt road underpass to gain access to Highway 20 if deemed necessary.

### **Transportation System**

Independence Highway is a major collector to Highway 20. The remaining segment of this rail is bordered by agricultural lands that do not provide any connection to the existing transportation system until Rondo Lane, which connects to Highway 20.

### **Wetlands**

In this section, the rail crosses Bowers Slough that is supported by Waldo Silty Clay Loam, which is considered a Hydric Soil that supports the wetland in this crossing. Malabon Silty Clay Loam and Dayton Silt Loam borders the Waldo formation to the north and south which may be hydric in wet spots in terraced landforms. The other soil in the section is Willamette Silt Loam, which would not support a wetland. Wetland delineation is expected to be necessary for crossing Bowers slough. Wetland mitigation may be required for construction of a path and bridge crossing for the area associated with Bowers Slough.

### **Flood levels**

Flooding from the Willamette River as well as local flooding is not a concern for the section of rails with trails except in the proximity of Bowers Slough and to the east of the railroad. The 10-year flood level is about 200.0 at this location. The area to the east of the railroad in this area is about 195.0 or less and is frequently flooded.

### **Existing Crossings**

The only rail crossings are located at Independence Highway and Rondo Lane. There is an underpass associated with Bowers Slough that includes a dirt road on the north side of the Slough. The road has access to Highway 20 to the east.

### **Property owners**

The property along this section of rail is agricultural. A short portion of property next to the rail is owned by the City of Adair on which the water treatment plant and pumping station is located.

### **Cost Estimate**

The cost for the design, construction and related property acquisition for this 6000 linear foot section of trail is estimated at \$1,029,000. This includes the cost for a 150 foot bridge crossing.

## **RONDO LANE (HYAK PARK ACCESS) TO SCENIC DRIVE**

### **Feasibility of Segment**

The design and construction of this segment of trail next to the rail is technically feasible and economically feasible. It does not include any bridge crossings and the topography is level. A portion of the paved trail may need to be narrowed to less than 10 feet in this section due to the steep sides of the bank on both sides of the rail and narrower than usual opening. A portion of Kouns Drive can be widened to include bike lanes on the road shoulders. This should be considered in the approach to the crossing of Scenic Drive which experiences average daily traffic of about 7,000 to 8,000 vehicles per day. Traffic is backed up at the Springhill Drive intersection with Highway 20 and on the Highway 20 northbound turn lane onto Scenic Drive during peak traffic hours.

### **Recommended Location of Trail**

The trail should be located to the west of the rail for the crossing at the intersection of Rondo Lane and Scenic Drive. There is also more room on the west side of the rail and Kouns Drive which can be widened to provide bike lanes is also on the west side of the rail. The location of trail on the west side of the rail is also compatible with the next section of rail with trail, which needs to be located on the west side of the rail

### **Transportation System**

The trails with rails path will parallel Highway 20. Rondo Lane provides a good opportunity to access the Willamette River at Hyak Park that is across the intersection with Rondo Lane. The average daily traffic of Highway 20 is about 18,000 vehicles per day at this location.

The average daily traffic on Scenic Drive is about 1700 vehicles per day at the intersection with the railroad. During morning and evening hours the traffic is backed up at Scenic Drive and West Thornton Lake Drive. The intersection at Highway 20 also provides a constant supply of vehicle traffic heading up Scenic Drive. Because of the heavy and intense traffic during these time periods it is important to provide a pedestrian and bicycle crossing as far away from the intersection of Highway 20 and Springhill Drive as possible. Kouns Drive which is located opposite of West Thornton Lake Drive at the intersection of Scenic Drive provides an opportunity to locate this crossing to the west of the rail and also provides widened shoulders for bike and pedestrian lanes before it continues southward towards Corvallis.

The average daily traffic for Kouns Drive is 240 vehicles per day. The average daily traffic for West Thornton Lake Road is 330 vehicles per day. These roads may be suitable for shoulder widening to provide pedestrian and bike lanes.

### **Wetlands**

No identified wetlands are located next to the rail. The soils in this area located to the west of the rail are Hazelair Complex, and Willamette Silt Loam which are not a hydric soil and will not support a wetland. The soils located to the east of the rail are Malabon and Coburg Silty Clay Loam, which may provide hydric soils in wet spots and on a terraced landform. This may occur in the area located between the rails and Highway 20. Wetland delineation is not expected to be necessary for the west side of the rail.



## **Floodways and Crossings**

Flooding from the Willamette River as well as local flooding is not a concern for the section of trail located to the east or west the rail.

## **Property owners**

There are few structures located on the properties that border this section of rail due to the banked slopes to the west of the railroad and Highway 20 located to the east of the railroad. Three private landowners are associated with the land located to the west of the railroad, which appears to have a significant right of way width. An investigation of the location of the right of way in combination with the design and location of the paved trail may indicate that the trail may be contained on the Railroad right of way.

## **Cost Estimate**

The cost for the design, construction for this 5100 linear foot section of trail is estimated at \$398,000. It should be considered one of the lesser expensive sections of trail to construct on a per linear foot basis.

## **SCENIC DRIVE TO NORTH ALBANY ROAD**

### **Feasibility of Segment**

The cost of engineering design and construction of this section will be considerable due to the flood plain, topography, potential wetlands, and need to acquire right of way outside the rail right of way. The natural features and the isolation from developed property will however provide an enjoyable trail experience and should be considered as it will provide not only an attraction to visitors and recreational riders and pedestrians on the weekends but it will also provide an essential segment of a commuter's route for bicyclists during the week days.

Even though it is feasible to construct, it may be difficult to find funding for this section of trail. Because of this cost the improvement of W. Thornton Lake Road with widened shoulders to provide a bike path might be considered as a viable alternative. The improvement of W. Thornton Lake Drive also provides other benefits and will improve the safety of this narrow road that has experienced a number of accidents. There are also other advantages with this project and the construction of this segment with bike paths should be considered regardless where the rails with trails is located and constructed. An estimate for costs associated with the design and improvement of W. Thornton Lake Drive is not included as part of this feasibility study but would be considerable due to acquisition of property in this narrow right of way, the topography, and the length of the project.

### **Recommended Location of Trail**

A review of the property owners, the density of development, the value of the property, the need to avoid flood plain and potential wetlands, and the availability of the combined Benton County and rail right of way for this section of rail leads one to consider locating the trail on the west side of the rail. This will also allow the bicyclist to transition onto W. Thornton Lake Drive and cross the intersection of Scenic Drive away from the busy turnoff from Highway 20 onto Scenic Drive.

The cost of engineering design and construction of this section will be considerable due to the flood plain, topography, potential wetlands, and need to acquire right of way outside the rail right of way. The natural features and the isolation from developed property will however provide an enjoyable trail experience. Because of this cost the improvement of W. Thornton Lake Drive with widened shoulders to provide bike lanes should be considered as a viable alternative. The improvement of W. Thornton Lake Drive also provides other benefits and will improve the safety of this narrow road that has experienced a number of accidents.

### **Floodways and Crossings**

There are three trestle crossings, each approximately 230 feet. Two crossings provide openings for what appears to be a floodway. Floodwaters were not seen to be flowing through this crossing in aerial photographs for the February 1996 flood. The bottom these two crossings are at an approximate elevation of 193.0 with the lowest elevation of land to the east of the trestles at about 198.0. The 10-year flood level for this area is about 196.0. It is expected that this crossing was originally built to drain the area to the east of the rail into W. Thornton Lake or to provide passage for livestock or farm equipment. With this expectation a crossing may not be needed for construction of a bike path at an elevation of about 196.0 to 198.0. A small culvert may be required at these crossings to provide for local drainage.

The third crossing spans over the inlet to Thornton Lake and does serve as a floodway. The aerial topography indicates the bottom of this crossing to be at an elevation of about 183.0. A topographical survey is necessary to determine the actual elevation and length of a bridge for a path at this location. A floodway evaluation may determine that the trail could be constructed just above the 10-year flood level at a reasonable cost with shorter bridge crossing for the trail than that which presently exists for the rail. The cost estimate for this section of trail is based on requiring a bridge for the path to span 230 feet.

### **Flood levels**

The 10-year flood level for this section of rail for the Willamette River is at about 196. The 100-year flood elevation is at about 202. The area next to this section of rail was not flooded during the February 1996 Flood except for a few wet spots. Construction of the trail away from the trestle acting as a floodway between 195 to 197 should be adequate as long as the area will drain during the winter months.

### **Wetlands**

There are documented wetlands located to the west of the rail between Sta 583+00 to 591+00. The actual location of the edge of the wetland is roughly 120 feet to the west of the rail right of way. There are also documented wetlands located about 120 to 150 feet to the east of the rail between Sta 545+00 to 551+00. Both wetlands are at a considerable elevation below the ground next to the rail where a trail would be located. The soil in this area is Wapato Silty Clay Loam, Waldo Silty Clay Loam, and Coburg Silty Clay Loam, and Malabon Silty Clay Loam. This soil is documented to provide hydric conditions supporting a wetland in terraced areas or wet spots. A wetland delineation which will include a survey for hydric vegetation as well as for any plants listed as threatened and endangered should be completed for the location selected for the trail and bridge crossing as part of the preliminary engineering design for this section of trail.

### **Existing Crossings**

Other than the intersections, there is one private drive that crosses the rail at Station 560+00 and provides access to a farm home setting

### **Property owners**

Station 529+00 (Scenic Drive) to 554+00 - The right of way of the Railroad is 100 feet. The Benton County right of way for W. Thornton Lake Drive borders railroad right of way on the left. The property on the east side of the rail is owned by ODOT for the first 1000 feet of this section of rail. For the remaining stretch of property next to the east side of the railroad right of way for the remaining 1600 feet, private landowners own this property. A portion of this section of land is in a flood way with the ground level approximately 16 feet below the elevation of the rail.

Station 554+00 to 578+00 - The right of way of the Railroad is 100 feet. This portion of the rail is located above a flood plain. Three 230 foot long trestles for a total distance of 700 feet are located within this 2400 foot section of rail. The height of the tracks above the base ground surface is considerable varying mostly between 10 to 20 feet. This may require the location of this section of trail partially if not completely outside the railroad right of way. Property along

the west side of this stretch of railroad includes an orchard for half this distance. Undeveloped private lands complete the remaining distance on both sides of the rails except for a dwelling located on a short section of land that is equal in height to the rails. A railroad crossing provides entrance to this property from Highway 20 on a private road. The property is less developed next to the rails on the west side of the track.

Station 578+00 to 585+00 - The Right of Way of the Railroad is 100 feet. The natural ground level is close to the elevation of the tracks this wide right of way provides opportunity for the economical location of the trail with out acquisition from a private property owner.

Station 585+00 to 595+00 - The right of way of the Railroad is 100 feet. This portion of the rail is located in variable topography due to the presence of a flood plain. The height of the tracks above the base ground surface is considerable varying between 6 to16 feet. This may require the location of this section of trail partially if not completely outside the railroad right of way. Property owners along this stretch of railroad include developers and private landowners. The property is less developed next to the rails on the west side of the track.

From STA 595+00 to 602+00 (North Albany Road)- The Right of Way of the Railroad is 100 feet. The natural ground level is close to the elevation of the tracks this wide right of way provides opportunity for the economical location of the trail with out acquisition from a private property owner.

### **Cost Estimate**

The estimated cost for the engineering design and construction of the segment of rails with trail is \$1,548,000. This provides one bridge crossing of 230 feet. The length of this section is 7300 linear feet providing an average cost for the trail at \$212 per lineal foot. Further evaluation of this section may determine this estimate to be low if wetlands are determined to be present.

## **NORTH ALBANY ROAD TO SPRINGHILL DRIVE**

### **Feasibility of Segment**

The construction of this segment of road is feasible and cost effective. This is due to the existing 100 foot Railroad right of way and the additional 20 foot County right of way located for a 1400 foot segment of the rail west of Springhill Drive. This section of trail also provides the opportunity to connect to other neighborhoods located to the north and the developing neighborhood to the south of Green Acres Lane.

### **Recommended Location of Trail – Northern and West side**

A review of the property owners, the density of development, the value of the property, the need to avoid wetlands, and the availability of the combined Benton County and Railroad right of way for this section of rail leads one to consider locating the trail on the north side of the rail West of Springhill Drive. The trail could then cross the rail beyond the end of the determined wetlands located on the south side of the rail and then continue to North Albany Road. The trail could also remain on the north and west side of the rail for the entire distance. The location of the structures on the property on the north side of North Albany Road and the determined location of the Railroad right of way need to be evaluated prior to making a final determination.

### **Transportation System**

Pedestrians and bicyclists presently use Springhill Drive and North Albany Road, which have bike lanes. The average daily traffic for these sections of road is between 7,000 to 8,000 vehicles per day. Roadways with heavy traffic are not recommended for use by bicyclists and pedestrians especially in or near schools or activities that attract children. This is a developing area with traffic rates expected to increase.

The construction of this segment of the pedestrian and bike path will collect and direct pedestrian and bicyclists in the North Albany Area into Albany or to Corvallis with the completion of the Rails with Trails project from Albany to Corvallis. This segment will serve as a bicycle collector. It will also complete a bikeway network in North Albany Area. The bicycle and pedestrian path will also provide safe passage away from the busy roads for bicyclists, pedestrians, and children going to the schools and other activity areas located in North Albany.

This project will improve the Safe Routes to Schools Program. School children need safe access to the two schools located near the proposed intersection of the bike path on North Albany Road. There is also a school as well as a public golf course at the intersection of the proposed path on Springhill Drive. In addition, the Grange Hall is located at the intersection of the proposed bikeway and North Albany Road. There are also churches within the close proximity of these two intersections.

Since this section of trail will serve as a collector, it should be constructed as one of the first phases. This will ensure the success of the rails with trails project when it is completed.

## **Wetlands**

There are documented local wetlands located to the south of the rail between Sta 618+00 to 626+00. The edge of the wetland next to or part of the rail right of way and is about 100 feet wide. The soil in this area is Malabon Silty Clay Loam. This soil is documented to provide hydric soil conditions supporting a wetland in terraced areas or wet spots. A wetland delineation, which will include a survey for wetland vegetation as well as for any plants listed as threatened and endangered, should be completed for the location selected for the trail as part of the preliminary engineering design for this section of trail.

## **Floodway and Stream Crossings**

There is one trestle location on this section of rail that is 45 feet long. The bottom of the crossing is at an elevation of about 192.0. The property elevation immediately around this crossing is at an elevation of about 196 and increases in elevation going east. Floodwaters were not seen to be flowing through this crossing in aerial photographs for the February 1996 flood. It is expected that this crossing was originally built to drain the area to the east of the rail into Thornton Lake or to provide passage for livestock or farm equipment. With this expectation a crossing may not be needed for construction of a bike path at an elevation of about 196.0.

## **Flood levels**

The 10-year flood level for this section of rail for the Willamette River is at about 195. The 100-year flood elevation is at about 201.5. The area next to this section of rail was not flooded during the February 1996 Flood except for a few wet spots. Construction of the trail between 195 to 197 should be adequate as long as the area will drain during the winter months.

## **Rail Crossings**

There are not any existing crossings of the rail between North Albany Road and Springhill Drive. The extension of Belden Lane NW and the abutment of Green Acres Lane right of way with the railroad right of way provide a good opportunity for a bicycle and pedestrian path rail crossing in this general location to enhance this path network and keep the neighborhood pedestrian and bicycle traffic away from Springhill Drive.

## **Intersection of Springhill Drive**

If possible, a crossing at this intersection should be made a reasonable distance to the North of the intersection with the Railroad. This is to avoid the traffic associated with the entrance to the Golf Club of Oregon and a gravel road (Benton Place NW) located to the South of the tracks. An easement to the North of the house located next to the tracks is shown on the map and should be investigated as an option for approach to crossing Springhill Drive.

## **Property owners and Right of Way**

The Railroad right of way is 100 feet wide for this section of rail. On the north side of the rail going west from Springhill Drive there is an additional 20 feet of what appears on the Benton County property maps as Benton County right of way that parallels the railroad right of way for 1400 feet just beyond the southern end of the right of way for Green Acres Lane that abuts the

railroad right of way. Beyond this 20 foot wide strip there is an additional 200 feet of easement that is 20 feet wide. This is an ideal situation for locating the bike path, as additional property for this section of road will not be required.

The property on the northerly west side of the rail beyond Green Acres Lane is owned primarily by one property owner and used to grow and harvest grass seed products and hay.

On the southeasterly side of the rail, the property that borders the right of way is owned by private landowners and a land development company. Benton Place, a private gravel road, also approaches Springhill Drive at this location next to the rail right of way for about 200 feet.

### **Cost Estimate**

Two estimates are provided since further evaluation during the design process may result in the elimination of the need of a bridge for the path.

\$691,000 is estimated for the design and construction of a trail next to the railroad with the construction of a 50 foot path bridge and purchase of right of way.

\$391,000 is estimated for the design and construction of a trail next to the railroad without a bridge.

These estimates could be lowered an additional \$22,000 to \$27,000 if property acquisition outside of the existing railroad and county right of way will not be required. It is expected that the lower of the two estimates will result after completion of the final engineering design placing the cost of the trail at about \$130 per lineal foot.

## **SPRINGHILL DRIVE TO WATER STREET (ALBANY)**

### **Feasibility of Segment**

The crossing of the Willamette River with a bicycle and pedestrian path is feasible and has been completed in two locations in the Eugene area as well as at the City of Salem and the City of Portland.

There is a separate study and effort being conducted by the Railroad. The present trestle that crosses from Springhill Drive to Water Street in Albany has structural concerns that require a speed limit for trains crossing this trestle. The Railroad is seeking funding to complete an engineering design and construction to replace this trestle. A pedestrian and bike path associated with this trestle crossing could be included in this effort. Therefore, this feasibility study does not include consideration of this trestle crossing.

### **Recommended Location of Trail**

Traveling from Springhill Drive towards Albany provides numerous options to consider. Fairmont School is located on the North side of the rails and its park setting and location across a crossing of Springhill Drive North of the rails provides an easy choice to consider for location. On the south side of the rails there includes a private drive and the congestion associated with the golf course.

The railroad going to the east is bordered by the first and second holes of the Golf Club of Oregon for approximately 1000 yards. At first impression one may seek to locate a pathway on the south side of the rails so the traveler can observe the golfers. However, not only would this be unsafe but it would hold up play and also present a considerable liability to the golfer should a golf shot go awry. To protect the pedestrian or bicyclist, a shield in different locations on this path must be considered in particular from approximately 50 yards to 250 yards from each golfers tee box for which an errant pulled or hook shot by a golfer will fly into or through the chosen pathway.

The area of Water Street as park and walk or bicycle area and bike path feeder into the rails with trails path to North Albany and Corvallis has been considered by the City of Albany.

### **Transportation System**

Springhill Drive is a major collector to Highway 20 and has been previously discussed. On the east side of the river the City of Albany provides a network of bike lanes and paths for transportation as well as the Dave Clarke Memorial Waterfront Trail that follows the Willamette River from Monteith Park and the Downtown Albany Area to Bowman Park in the north part of Albany. It is expected that the Willamette River Pedestrian and Bicycle Path crossing would start at Water Street with a cloverleaf entrance onto the rails with trails path.

### **Wetlands**

The soils located in this section on the west side of the Willamette River are Ma (Malabon Silty Clay Loam, Ng (Newberg Silty Clay Loam, Nm (Newberg Loam), Ch (Chehalis Silty Clay Loam, and Pk (Pilchuck Fine Sandy Loam). The Newberg and Pilchuck soils are not associated with hydric soils and will not support wetland conditions. The Chehalis soil, which covers the length of the second hole of the Golf Club of Oregon, may support wetland



conditions in a flood plain. Since the a trestle will be located in this section of trail, wetland impact is not anticipated.

### **Flood Levels**

The 10-year flood level for the crossing at Willamette River is 195.0 feet and the 100-year flood level is 201.0 feet. The bottom of the bridge crossing should be located above the 100-year flood level.

### **Property Owners**

The Fairmount School, the Golf Club of Oregon, and agricultural land are located next to the railroad right of way. There is also available room on the east side of the Willamette River to locate a ramp to this river crossing.

### **Cost Estimate**

A cost estimate is not provided for this segment of the rails with trails as part of this feasibility study.