The Orenco Community Plan

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A project of the Portland State University
Masters in Urban and Regional Planning
Comprehensive Planning Workshop

Final Report

June 1991

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Visiting Assistant Professor Jon Erickson, Faculty Advisor

Printed by the City of Hillsboro
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The members of the workshop wish to thank the many people who helped develop this plan. In particular we wish to thank:

Thomas McConnell and Winslow Brooks,  
City of Hillsboro Planning Department

Tom Hughes, City of Hillsboro Planning Commission

Judith Rees, Portland Development Commission

and the members of our Citizen Advisory Committee:

Rob Lewis  
Daria and Gary Barclay  
Lou Hamberg  
Tim Phipps  
Ron and Kelly Cox  
Joan Kramer  
Jim and Ann Lubischer  
David and Julie Zurer  
Andrew Csergei  
Peggy Laechman  
Steve Daneman—Bedford Properties  
Pat Bremkamp—Toshiba Ceramics  
Cliff Tetreault—West Union School District  
Kevin Martin—Washington County Department of Land Use and Transportation
Executive Overview

Orenco is a small community in Washington County, Oregon. Its rural and historical characteristics as an old company town make it unique in the area. However those characteristics are threatened by growth pressures. This community plan was developed by the students of the 1991 comprehensive planning workshop at Portland State University to help Orenco retain its uniqueness.

Workshop members recommend the following policies for Orenco:

Residents and property owners should form a neighborhood organization independent of Hillsboro or Washington County.

If built, a light rail station in Orenco should be designed to protect the historic townsit, and adjacent residential area from the negative impacts of traffic and parking. In addition, there should be good access to the station for local residents and employees.

Non-local traffic should be discouraged from using residential local streets, especially within the original townsit. Land uses that generate large amounts of non-local traffic should take access, where possible, from designated collector or arterial streets. The grid street pattern of the original townsit area should be extended where possible.

Local streets within the townsit should be built and maintained to Washington County rural local street standards. Streets outside of the townsit should continue to be built and maintained to urban standards.

Property owners should be educated about the serious risk to the existing street trees from Dutch elm disease and encouraged to properly treat and/or replace diseased trees. Planting additional street trees where they are lacking should be encouraged.

Buffer zones around the old townsit should be created by using landscaping on developable properties, preserving the natural buffer areas, and controlling where structures are built.

Orenco residents can take a more active role in the preservation of their wetlands through participation in county and city resource planning and the development permit process.

An Historic and Cultural Design District for the old Orenco townsit and a sepa-
rate transitional district for the surrounding areas should be established with design guidelines specific to each area. District guidelines should recognize and support the contributions to the character of Orenco of the surrounding open space, natural resources, and historic elements to the old townsite.

A design district is a geographically defined area to which special development regulations apply. These regulations take the form of design guidelines and are intended to give government and district residents control over the community features that are necessary for the preservation of the area's character.

The Orenco district has two subareas—the old townsite and outer Orenco—and each is addressed by different but related guidelines. This separation is a recognition of the different existing and future characteristics and resource contributions of each to the area as a whole.

The old townsite has a significant concentration of designated historic structures and is substantially developed. The design guidelines for this area are tools which allow new development in the townsite while preserving and enhancing the rural history of the town. They are intended to guide government, district residents, and property owners in making decisions which affect important community values. The main elements of the area that these guidelines affect are street systems, open space, new construction, and exterior rehabilitation.

Outer Orenco—the area surrounding the townsite—contains historic structures as well, but also contains significant open space, designated natural resources, and is largely undeveloped. Here the design guidelines are tools used to preserve the essential elements which help define the rural character valued by area residents and which support the historic and cultural resources present.
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Introduction

This document was produced by the eight students in the 1991 Comprehensive Planning Workshop, the capstone of the graduate-level urban planning curriculum at Portland State University.

Each year, the workshop members help a local government with a project that it lacks the resources to do by itself. This year, the City of Hillsboro asked that a community plan be developed for the Orenco area in Washington County, Oregon. Because of Orenco's unique character, Hillsboro would like to have the guidance a community plan provides when it deals with the area.

Orenco was an incorporated city in the early years of this century. It has long since disincorporated, but the sense of community and identity of the area has remained intact. Today, portions of Orenco lie within Hillsboro's boundaries. The remainder may be annexed at some future time.

Orenco is located in rapidly growing Washington County and is facing dramatic changes. This is causing concern among Orenco's citizens. The project provided them with a chance to voice those concerns and discuss what they would like their community to be like in the future.

The students involved with the project spent five months collecting data on the area and talking with residents, business owners and local government personnel. They then planned strategies to deal with changes in Orenco. The result of that work is this report.

The report begins by describing what Orenco is like today and the history of the area. It then presents two scenarios. One describes what the impact of growth will be if things continue as they are going. The other describes what the future could be with effective planning.

Following this section, specific issues are described and courses of action are recommended. Issues such as reducing traffic on some streets, protecting the historic character, and mitigating the impact of the planned light rail transit system are covered. These issue descriptions culminate in specific design guidelines for the area.
**Description of Orenco**

The Orenco community lies in the middle of Oregon’s Tualatin Valley. The area once consisted of farms and small towns but these are now being supplanted by high tech industries and suburban developments.

The eastern boundary of the study area is NW 216th Avenue. A small industrial area with two companies—Universal Products and Electronics Diversified—is on the western side of the street. South of the companies’ buildings is a natural area surrounding Rock Creek. This soon changes into a golf course, where a few players are always seen.

Just south of the golf course, NW Quatama Road goes west into the study area. Narrower than 216th Avenue, Quatama is a minor collector. The Hillsboro Elks Lodge is located in a small commercial area on the north side of Quatama Road. On the south side of the road and on the north side beyond the Elks Lodge parking lot are single-family homes. The mix of houses consists of turn-of-the-century farm houses, 1920s bungalows, 1940s and 1950s cottages, and 1960s-1970s ranch homes. They are structurally in good shape although a few have peeling paint or moss growing on the roof.

Lots here are about 100 to 150 feet wide, but they are deep. Some are flag lots with a narrow access to the road. Behind many of the houses are vegetable gardens, orchards or livestock. Many have barns or other types of sheds.

Beyond these homes, the road turns sharply north and drops down a ravine to cross Rock Creek on a narrow bridge. Then it climbs through a similar residential area, until it ends at a junction with Dogwood Street in the old townsite of Orenco.

To the north of Dogwood Street is a large open space that was once the site of the community’s school. Now it is a field, with a small playground and baseball backstop at one end. In the southeast corner of the area is a fire station. West of the field are houses. North is the Orenco Presbyterian Church—a large, Victorian, shingled building. East and north beyond the church is a forested area. Here a hawk can be seen circling, and other birds dart from tree to tree.

In this townsite area, lots are smaller than they are on Quatama Road. About a third of the homes are craftsman-style homes that date from the heyday of the town. The others are a mixture—ranch homes, cape cod cottages, and a couple of manufactured homes. Most of these houses seem to be well maintained although a few have peeling paint or little attempt at landscaping. The people living in these homes are a mixture of elderly folks and families. A few empty lots are scattered throughout the area—most of these are fenced and contain horses or ponies.

The roads in the townsite are narrow with many potholes. They are edged with ditches and over half are lined with elm trees. Dogwood and Alder Street and 227th Avenue seem to have the most traffic—perhaps a car every few minutes. On the other roads, cars are rare—children play in the street and people leisurely stroll down the center of the road.
Stately American elms line Orenco's narrow rural streets.

At the end of NW 229th Avenue, south of Dogwood Street, a new home is being built. Here a sidewalk and curb have been added to the roadway. New construction has also occurred on Chestnut Street, between 231st and 230th Avenues, where four contemporary-styled homes were recently built.

At the northern boundary of the townsite is Alder Street. Beyond it is open space—a buffer strip of bushes and trees that seems to keep out the development occurring just to the north. An old railway right-of-way runs through the middle of this—it is the proposed route for the new westside light rail. Beyond this buffer is an industrial campus area. Currently the only occupant is a Toshiba plant. However, a new wide road that goes nowhere is an indication that more industrial development is expected to occur.

231st Avenue is the western boundary of the old townsite. While its west side has large areas of open space, there are a few commercial and industrial sites. An establishment called Nan's Glad Rags—a resale and costume store operating out of an old farmhouse—is located in the north. South of Nan’s are a couple of industrial buildings, some with trucks and construction equipment in their yards. Behind them glimpses are caught of filbert orchards and fields.

South of the townsite more homes are located on 231st Avenue in larger, deeper lots. In this area, Oelrich Road goes west from 231st Avenue. There are homes scattered along Oelrich Road on large lots with open areas between them. Some of these are newly built, while others are older—a mixture of ranches and mid-century cottages. Again most seem to be well maintained. Near the west end of Oelrich Road, new homes are being constructed in an oak grove.
Returning to 231st Avenue and continuing south, the road meets West Baseline Road at a recently improved intersection. Here the street widens to allow for turn lanes while street lights and curbs edge the street. This is the southern boundary of the study area and shows that while Orenco has seemed an isolated area, change is coming.
Orenco’s History


This is how the first edition of The Orenco Herald, published January, 1914 defined the town. In 1906, Malcolm McDonald and Archibald McGill, the founders of the Oregon Nursery Company, decided to move their nursery from Salem, and purchased and platted 1,200 acres for the future nursery and townsite. The first homes were built on Quatama Road by Hungarian immigrants employed by the nursery.

During the same period, the Oregon Electric Railroad was being built from Portland to Forest Grove. The line was scheduled to be constructed south of the Orenco area but nursery officials persuaded the railroad company to change the route so that the train would pass through the heart of the town. By 1907, Mr. McGill had started to build the first home within the townsite of Orenco. Shortly afterwards, in 1909, the train depot and the nursery office with a two-acre packing shed were also completed.

At that time, the train trip from Portland to Orenco took 45 minutes and cost $1.15 per passenger. Today, a person can travel in a Tri-met bus from Portland to Hillsboro in 45 minutes for the price of $1.20.

The population of Orenco was about 500 people within a few years of the founding. The nursery employed 150 workers and was the largest on the West Coast. Orenco townspeople replaced the original school, which was a tent, with a wooden, four-room schoolhouse. The school was later expanded and housed 169 students. On January 6, 1913, the fast-growing town voted to incorporate and elected Malcolm McDonald as its first mayor.

Orenco’s schoolhouse — 1910.
In its heyday, Orenco boasted street lights, a post office, a printing shop, a hotel, boarding houses, grocery stores, a barber shop, an ice cream parlor, and a hardware and lumber store. The town offered another amenity common to communities of that era—wooden boardwalks that stretched to the outlying farms so that the citizenry could enjoy mud-free walks to and from the town center.

As time progressed, problems developed at the nursery. Archibald McGill left the nursery in 1912 to open his own nursery in Fairview and several other nurseries also opened in the area. This competition and the fact that the Oregon Nursery Company itself planted over two-million trees within a few years led to a dramatic decrease in demand for nursery stock. By 1927 the Oregon Nursery Company was out of business. Most of the town had been employed by the company and so many businesses left along with the residents. The remaining citizens voted to dissolve the government in 1938.

Since 1938, the population has remained around 315 persons. The Orenco Woods Golf Course was built in 1953 on the old Malcolm McDonald property. The McDonald house still stands at the golf course. In 1955, the post office building closed its doors and, in 1961, the long vacant school building was demolished. The town's children now go to West Union schools.

The legacy of the nursery can be seen in the 15 buildings listed on the Washington County Cultural Resources Inventory. Many of these homes are constructed in the bungalow and craftsman style. The nursery office, train depot, packing shed, and many other buildings have not survived.

Original townsite's first homes in 1910. Back of school visible on right side of photo.
Orenco buildings listed on the Washington County Cultural Resources Inventory are listed below:

Orenco Drug: 22670 NW Alder Street

Wilson Residence: 22920 NW Chestnut Street

Berry Residence: 1255 NW 228th Avenue

Olsen Residence: 1205 NW 231st Avenue

McFadden Residence: 22860 NW Birch Street

Holmasen Residence and Barn: 22515 NW Quatama Road

Mincemoyer Farm: 180 NW 231st Avenue

Orenco Presbyterian Church: 27785 NW Birch Street

Church Manse: 22735 NW Birch Street

Orenco Grocery: 22930 NW Alder Street

McGee Residence: 22810 NW Birch Street

Oelrich Residence: 1135 NW 228th Avenue

Pitman (McGill) Estate: 1430 NW 228th Avenue

Golf Course House/McDonald Estate: 22200 NW Birch Street

Kish Residence: 21770 NW Quatama Road
Existing and Future Land Uses

Planning in Orenco

Prior to 1983, land within the Orenco study area had been designated in the Washington County Comprehensive Plan as a “future urban” planning area, precluding urban development. The Orenco study area lies within the boundaries of the East Hillsboro Community Plan, adopted by Washington County in 1983. The historic townsite and adjacent area north of Rock Creek is designated as an area of special concern in this plan.

Also adopted in 1983 was the Hillsboro-Washington County Urban Planning Area Agreement. The Orenco study area is located in an area recognized in the UPAA as Hillsboro’s “active planning area.” The UPAA has been updated several times and is currently again up for revision. In 1985 the UPAA was amended to enable extension of sewer services to unincorporated land within Hillsboro’s “active planning area.” Hillsboro’s comprehensive plan assumes that all land in this planning area is available for annexation and/or development, consistent with the comprehensive plan, zoning, subdivision regulations, and the Urban Planning Area Agreement.

The Urban Planning Area Agreement consists of four actions listed below:

1. It establishes a site-specific Urban Planning Area within the regional Urban Growth Boundary within which both Washington County and the City of Hillsboro maintain an interest in comprehensive planning and development.

2. It confirms the status of existing comprehensive plans and implementing ordinances as they apply to the Urban Planning Area.

3. It establishes additional special policies regarding comprehensive planning and development in the Urban Planning Area.

4. And finally, it establishes a process to amend the Urban Planning Agreement.

The Orenco study area encompasses two of four types of areas outlined by the Planning Area Agreement (see map). Urban Area A is defined as the area west of NW 231st Avenue and north of the Burlington Northern line. Land within this area shall not be converted to urban uses prior to its annexation to Hillsboro. The county will not approve a development proposal or land use action in Urban Area A, if the proposal requires the provision of urban services. The only exception is sewers which have been put in because of health concerns.

Land in all other parts of the study area is in Urban Area C, and may or may not be subject to the development process of the City of Hillsboro depending on its location and whether it is contiguous to the existing city boundary. If land within Area C is contiguous, development is processed through the City of Hillsboro plan amendment process. If the area is not contiguous, the Washington County development process is used, but the city is given the opportunity to submit findings and recommendations on applications for the amendment of land use designations or development proposals.
Orenco Study Area Boundaries

Hillsboro City Limits

Area “A”
Land in this area shall not be converted to urban uses prior to annexation to Hillsboro.

Area “C”
The land in the Orenco Study Area that is not in shaded area “A” is in area “C” which must be converted to urban uses prior to annexation to Hillsboro.

City of Hillsboro Land Use Zones
A-1 Duplex Residential
M-P Industrial Park
C-1 General Commercial
R-7 Single Family Residential

Comprehensive Plan Land Use Zones
RL Residential Low Density
RM Residential Medium Density
PF Public Facility
OS Open Space
FP Flood Plain
Study Area Land Use

Most of the Orenco study area has been planned for large-lot, single-family residential development, zoned at R-5 or R-9 designations (five, or nine lots per acre respectively). Large industrial parcels cross the north and northwest portions of the area.

The only commercial-zoned property is the site of the old Orenco store. Institutional zoning designations have been applied to the neighborhood’s church site, the Elk’s Club Lodge and the golf course.

Land Use Adjacent to Orenco

Just north of Orenco’s industrial zone is a commercial strip along Cornell Road which is large enough to accommodate a shopping center and/or large office complexes. North of this strip is a large housing area zoned for duplexes and multi-family housing. Land to the west is within Hillsboro city limits and is zoned as an industrial park as are the properties to the east of the study area.

Development Potential

With Washington County’s rapid growth and the vacant land around Orenco zoned for industrial, commercial and high-density residential uses, there will be strong pressure in the future to develop land within Orenco’s boundaries.

A conservative estimate of Orenco’s development potential is shown in Table 1. It was calculated by multiplying the maximum number of dwellings per acre permitted under existing zoning by the amount of vacant land (in acres).

Net buildable acreage was calculated by reducing lot area by 20 percent for streets and public right-of-way and then reducing this net lot area by an additional 30 percent based on studies by the Land Conservation Department which indicate that vacant lots are usually not built to maximum density.

Table 1 indicates that over half of the vacant developable land in the study area is zoned industrial. The remainder is zoned residential.
Table 1
Land Available to be Developed

<table>
<thead>
<tr>
<th>Zone Designation</th>
<th>Net Buildable Acreage</th>
<th>Percentage by Zone</th>
<th>Maximum Number of Dwelling Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>317</td>
<td>53%</td>
<td>N/A</td>
</tr>
<tr>
<td>R-5</td>
<td>160</td>
<td>27%</td>
<td>448</td>
</tr>
<tr>
<td>R-9</td>
<td>102</td>
<td>17%</td>
<td>514</td>
</tr>
<tr>
<td>RL*</td>
<td>15</td>
<td>3%</td>
<td>105</td>
</tr>
<tr>
<td>NC**</td>
<td>1</td>
<td>—</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>595</strong></td>
<td><strong>100%</strong></td>
<td><strong>1,067</strong></td>
</tr>
</tbody>
</table>

* RL is a Hillsboro designation equivalent to the county designations of R-5 and R-9.

** NC is the neighborhood commercial designation given to the area around the historic Orenco store.

Housing

Presently there are 136 residential dwellings in the study area. If development occurred to maximum allowable densities, the number of dwellings could increase by 1,067 in the study area.

Of the area’s existing housing, 43 percent was built before the town disincorporated in 1938. The bulk of the remaining 57 percent of the area’s housing is on the periphery of the old townsite and extends into the countryside.

The average square footage of all these dwellings is approximately 1,723 square feet. The square footage ranges from a low of 350 square feet to over 4,626 square feet. Lot sizes average about 1.2 acres (ranging from .2 to 11 acres, with a median of .51 acres) and the average value of land and improvements is approximately $55,000 (1990 dollars). Residential land values average $24,525 (ranging from $4,000 to $116,000) and improvement values average $35,582 (ranging from $6,733 to $149,160).
Scenario—Without a Community Plan

Washington County, particularly the area around Orenco, is one of the fastest growing areas in Oregon. Between 1986 and 1989, the number of households in the county increased by 13,376. Orenco is beginning to see some impacts of this growth, but more and larger impacts will occur in the future.

Currently there are 136 residential dwellings in the study area. If development occurs to the maximum densities allowed under the current land use zoning, the number of dwellings could increase by 1,067.

This growth has several implications. Currently the area has a large number of vacant lots on which homes will be built. In addition, many of the large pieces of property that currently exist will be subdivided and more homes built. The new housing that appears in the old townsite will change its character. Currently, the old homes are the dominant housing style. New homes, however, will most likely be typical contemporary subdivision houses—very different styles that will change the character of the area.

Traffic will also increase in the area, especially on NW 231st Avenue, Quatama Road and through the old townsite. Much of this will occur as people take the shortest route to the light rail station and the commercial areas along Cornell Road. If sufficient parking is not provided at the light rail station, the streets of the old townsite will be lined with parked cars. With this increased traffic and need for parking, the streets will need to be improved and widened.

When streets are widened, the elms lining the roads will be removed. Even without this need to remove them, the trees are likely to die of Dutch elm disease, as there will be no program to control the disease.

Dealing with the problems that occur in Orenco will be difficult because two jurisdictions—Washington County and the City of Hillsboro—control different areas in Orenco in a patchwork pattern. This patchwork will be very evident in the new housing construction. Different development standards will be used depending on which jurisdiction the house is in. One builder may be required to install curbs and sidewalks while another builder a few blocks away will not.

The problem of two jurisdictions will also be felt as the citizens attempt to influence decisions made about their community. Rather than having one local government to lobby, there will be two—requiring twice the effort and doubling the frustration.
Scenario—With a Community Plan

If a community plan is adopted for Orenco, the area will still experience dramatic growth, but its effects will be controlled and Orenco's special character will be preserved.

As will happen without a plan, empty lots will be developed and large pieces of property subdivided to allow for more housing to be built. However if a historic and cultural design district is created in the old townsite, the new homes will look similar to most of the existing homes and will not change the character of the area.

Orenco's special character will also be preserved by the continued existence of the narrow rural streets. With careful planning, non-local traffic will be discouraged in the townsite. Instead, NW Dogwood Street will become a minor collector for traffic going to the golf course, the school and the light rail station. This means that Dogwood Street will be widened and provided with paths for safe walking and bicycle riding.

With the continuation of narrow roads, the street trees will not need to be removed. They will be further protected by the organization of a neighborhood group to educate property owners on Dutch elm disease and its treatment. This group may also plant additional street trees on roads that currently lack them, thus extending the sense of unity in the townsite.

As growth occurs in the area, carefully planned buffer zones will protect the residential areas in Orenco. Strips of land that are a minimum of 50 feet wide and have thick hedges will prevent air, noise and visual pollution from the industrial areas.

The light rail station will be carefully designed to blend with the historic character of the area. To minimize its impact on the townsite, the lights will not glare into the townsite and controls will be instituted to ensure that riders do not park within the townsite.

Orenco will be developed as a unit, with appropriate unified development standards, as the area will be under the jurisdiction of the City of Hillsboro. However, because the area will have an acknowledged community plan, the city will let it develop in ways that are different from the remainder of the city. For example, to maintain the rural character, special standards will be developed for the roads and livestock will be allowed.

The neighborhood plan presented here may provide the basis for an acknowledged community plan or another plan may be developed by Hillsboro working with the citizens of Orenco.
ISSUES AND RECOMMENDED POLICIES
Neighborhood Organization

The Issue

Currently citizens in Orenco have little say in decisions made that affect the area. And yet there is a desire on the part of many residents to participate in the planning and development process for Orenco.

Because the study area is divided between two jurisdictions—Washington County and the City of Hillsboro—the citizen efforts that do occur are diluted.

The Goal

To increase the amount of input and influence the local residents have in determining the future of Orenco.

Recommended Policy

Form a neighborhood organization independent of Hillsboro or Washington County.

Implementing Strategies

Organize around a single issue to ensure commitment and focus. This issue could be saving the street trees or developing a process for implementing a historic district.

Enact bylaws, elect officers, become a recognized entity. Involve all interested parties, property owners, renters, local business leaders in the organization. Raise capital for organizational needs through dues, fund raisers and applicable government grants.

Move to other issues after the organizing issue has been resolved. Possible activities could be crime watches, and providing input on land use decisions and traffic issues.

Other activities could include lobbying for neighborhood needs in the city's and county's budget process and working directly with government departments on projects that impact the neighborhood. A newsletter could be published to keep residents informed of regional events that affect the community.
Background Information

Organizations are necessary to have a voice in local decisions that directly influence daily life. Building neighborhood organizations and using them to improve conditions in local communities has become an important activity in recent years. These organizations help people take responsibility and can be invaluable in solving pressing problems. A neighborhood organization can be an effective forum to advocate that the community receives an equitable amount of government resources. By working on common problems, a neighborhood group improves the cohesiveness of the community.
Light Rail Station

The Issue

If built, the Hillsboro extension of the Westside Light Rail Transit line will most likely bisect the northern portion of the study area. A transit station and park and ride facility may also be built in the area. This facility would have significant impacts upon the community.

The Goal

To ensure that a light rail station, if built in the Orenco area, is compatible with the townsite.

Recommended Policies

The light rail station should be designed to protect the historic townsite and adjacent residential area from the impacts of traffic and parking. In addition, there should be good access to the station for local residents and employees.

Implementation Strategies

If a light rail transit station is to be located in Orenco, locate it east of NW 231st Avenue and north of the tracks. Locate a minimum-sized park and ride lot north of the station.

Allow only pedestrian access to the station from the south. Close NW 229th Avenue to motor traffic and enhance it as pedestrian walkway between residential areas and light rail station. A pedestrian bridge over the tracks may be necessary for safety.

As high-density residential development takes place on the parcels to the north of the tracks, require enhanced pedestrian links to the light rail transit station.

Vehicular access to a light rail transit station and park and ride lot should only be from NW 231st Avenue, NW 229th Avenue (disconnected from NW Alder Street), NW Campus Way or NW Campus Court (See Traffic Circulation Section).

Design the station and pedestrian bridge to conform to the historic character of the old Orenco town.

Lighting for the park and ride lot and station should be oriented in such a way as
to not create glare in residential areas.

Use appropriate parking controls to discourage park and ride overflow parking in residential areas.

Although the light rail may increase pressure for commercial development, such development should be allowed only at the site of the old general store. Change the land use designation and zoning on the remainder of the block from commercial to residential. This will help preserve the residential character of the old townsite.

**Background Information**

The construction of a light rail transit line through Orenco could begin in about five to seven years. It is possible that a light rail transit station would be built inside the study area.

If a decision is made at the regional level that a station is needed in Orenco, the above location is recommended. Virtually all of the Orenco townsite and much of the industrial land is within one quarter mile of the recommended station site. This is considered to be a reasonable walking distance to a transit station.

The old Oregon Electric Railway right-of-way along the northern edge of original Orenco townsite is one of several light rail transit routes and improved bus service options under study. This study, “The Hillsboro Corridor Alternative Analysis,” is being conducted by METRO in cooperation with Tri-Met, Washington County and the City of Hillsboro. It is a major, regional planning project to address traffic congestion anticipated to increase in the Hillsboro Corridor. The light rail transit line would link downtown Hillsboro to downtown Beaverton and Portland. It is an extension of Westside Light Rail which is nearing final stages of planning. The Westside Light Rail is currently planned to terminate at NW 185th Avenue.

Voters in the Portland metropolitan area overwhelmingly approved a $126 million bond measure as partial funding for the Westside Light Rail Project and preliminary engineering on other light rail routes, including the extension to Hillsboro which could pass through Orenco. Washington County election records indicate that the bond measure was approved by 60 to 80 percent of the voters in the precincts overlapping the study area.
Possible Light Rail Transit Station Location

One-Quarter Mile radius walking distance for pedestrians using Light Rail Transit (LRT)

Light Rail Transit Walking Radius
Traffic Circulation & Future Street Alignments

The Issue

Current traffic circulation patterns in the Orenco study area place a significant amount of traffic on several of the original townsite's streets. Future land use and transportation developments, such as a possible light rail transit station and a school, will increase the amount of vehicular traffic in the townsite area.

The Goal

To protect the residential areas of the original townsite district from the negative impacts of non-local traffic.

Recommended Policies

Non-local traffic should be discouraged from using residential local streets, especially within the original townsite. Land uses that generate large amounts of non-local traffic should take access, where possible, from designated collector or arterial streets. The grid street pattern of the original townsite area should be extended where possible.

Implementing Strategies

Remove Minor Collector classification from:
- NW 228th Avenue: NW Dogwood to NW Alder
- NW Alder Street: NW 228th Ave. to NW 229th Ave.
- NW 229th Avenue: NW Alder to NW Campus Drive

Classify NW Dogwood Street as a Minor Collector Street from NW 225th Avenue to NW 231st Avenue. Construct a separate pedestrian and bicycle path as traffic increases and safety needs dictate.

Utilize appropriate traffic control measures to de-emphasize the use of the original townsite local streets as through traffic streets.

Recommend that the golf course change its current access from NW Birch Street to NW Dogwood Street.

If built, the new school should take its access primarily from NW Dogwood Street.
Vehicular access to a light rail transit station and park and ride lot facility should only be from NW 231st Avenue, NW 229th Avenue (disconnected from NW Alder Street), NW Campus Way, or NW Campus Court.

To accommodate traffic increases on NW Dogwood and provide safe vehicular access onto NW 231st Avenue, a traffic signal should be considered for the intersection of NW 231st and Dogwood. The need for signalization will become more apparent when NW 229th is closed.

The alignment of new local residential streets should match and continue the existing grid street pattern, unless constrained by topography, within the area bounded by NW 231st Avenue, NW Alder Street, NW 225th Avenue, and Rock Creek. (See the Street Improvements Section for additional guidelines.)

As properties subdivide and develop south of NW Quatama Road, the future local street system should include an east-west local street to provide connectivity. This local street should not connect with NW 216th Avenue.

The high-density residential-zoned property located north of the railroad tracks and west of NW 216th Avenue, if developed, should not have its vehicular access from the south. Instead access should be from NW Campus Way, NW 229th Avenue, NW 216th Avenue, or NW Cornell Road. A pedestrian link should be provided to the south, possibly via an underpass, to allow access to the school site and golf course.

Background Information

Utilizing the Washington County Transportation Plan Functional Street Classification System and field observations, traffic circulation patterns were identified for the Orenco study area. (See existing traffic patterns map.) A major concern both observed and expressed by the local residents involved the amount of non-local traffic using the original townsite streets to access the golf course and make through movements to NW 231st Avenue. Streets of particular concern were NW Birch Street and SW 228th Avenue.

In addition to the concerns noted about existing conditions, an interest was expressed in maintaining the rural, residential character of the original townsite streetscape in the face of future land use development. Of particular concern was the possible location of a light rail transit station and park and ride facility in or near Orenco. The traffic associated with the future construction of a school was an additional concern.

The recommended goal statement, policy, and implementation strategies are designed to protect as many of the residential streets in the study area as possible from the negative impacts of non-local traffic by consolidating the number and location of county-designated collector streets and directing large traffic generating uses to take access onto the collector system.
It is also recommended that the existing grid street system be extended within the area mentioned above to logically extend and further enhance the character of the original townsite streetscape.

The substandard bridge on NW Quatama Road should be improved to carry emergency vehicles and school buses. To remove the bridge would result in a discontinuous traffic pattern, isolating the Quatama area from the original townsite.
ORENCO
NEIGHBORHOOD PLAN
RECOMMENDED FUTURE TRAFFIC PATTERNS
WITH POSSIBLE LIGHT RAIL TRANSIT STATION OPTIONS

PORTLAND STATE UNIVERSITY
DEPT. OF URBAN STUDIES & PLANNING
COMPREHENSIVE PLANNING WORKSHOP
MARCH, 1991
Street Improvements

The Issue

Many of the local streets within the study area, especially in the original townsite, are not built to city or county street standards. The local streets are gradually deteriorating due to little or no maintenance.

The Goal

To preserve Orenco's unique rural streetscape while providing safe and usable streets.

Recommended Policy

Build and maintain to Washington County rural local street standards the local streets within the townsite. Streets outside of the townsite should continue to be built and maintained to urban standards.

Implementing Strategies

Local streets within the Historic and Cultural Design District should be maintained to Washington County rural standards.

Limit maintenance on existing local streets within the townsite to road surface patching, overlays and, where necessary, minor road base reconstruction.

Street construction and maintenance activities should be designed to avoid damaging the existing street trees. Street trees damaged or removed due to activities in the right-of-way should be replaced with species similar in shape to elms and resistant to disease.

In order to promote water quality and the rural streetscape, storm drainage along streets within the district should continue to be handled with grassy swales and ditches.

Maintenance on improved (paved) streets within the townsite should be performed by the governing jurisdiction (City of Hillsboro or Washington County).

Streets designated as minor collectors should be built and maintained to Washington County rural standards. Roadside shoulders should be widened to allow for safe pedestrian travel. Construct separate paths as traffic increases and safety
needs dictate.

The bridge on NW 227th Avenue should be replaced with a bridge capable of carrying fully-equipped emergency vehicles and school buses.

Background Information

On March 2, 1991 an inventory was conducted of street conditions in the study area. Each street was evaluated as to its pavement condition, type of construction, storm drainage and pedestrian facilities. A street was categorized, based on its functional classification as improved to either county rural or urban street standards, partially improved to county standards, or unimproved. Based on total linear footage of public right-of-way, 38 percent of the local streets are built to urban standards, 40 percent are built or partially built to rural standards, and 22 percent of the local streets are unimproved. (See Appendix C for more inventory and street classification information.)

The condition of the road surface on the study area streets reflects a high level of maintenance on the arterials, a moderate level on the collectors, and little or no maintenance on the local streets. The only exceptions are the local streets recently built west of NW 231st Avenue. Local streets within the original Orenco townsite reflected the least amount of maintenance.

Complicating the improvement of local streets in the original townsite are the existence of over 120 large American elm trees planted well inside the public right-of-way. They average just 30 feet separation across from each other, which limits the pavement widths to about 18 to 20 feet.

Many citizens in the original townsite have expressed a desire to preserve their rural streetscape. They oppose the improvement of local streets to urban standards (curbs, sidewalks, storm sewer, lighting, and wider pavement widths) and the removal of the existing street trees. Some local residents have also opposed street improvements as a way of limiting vehicle speeds through the townsite neighborhood.

Street widening would damage or kill elms.
Improving local streets currently is the responsibility of the abutting and nearby property owners. Local streets built to county standards are maintained by Washington County. It will be up to the combined efforts of the citizens of Orenco, the City of Hillsboro, and Washington County to execute the above-mentioned implementation strategies and work towards providing safe, well-maintained, rural streets.
Street Trees

The Issue

Much of the character of the old Orenco townsite comes from the American elms that line many of the streets. These trees are at risk from Dutch elm disease.

The Goal

To preserve the character and rural feel of Orenco by ensuring that the streets remain lined with trees.

Recommended Policy

Educate property owners about the serious risk to existing trees and encourage the proper treatment and/or replacement of diseased trees. Encourage planting additional trees where they are lacking.

Implementing Strategies

Convince local residents of the importance of the street trees in retaining the character of Orenco for future generations. Strong leadership from a neighborhood group is needed to initiate education, fund raising, treatment and planting.

Contact tree specialists for professional advice. These specialists may include the Oregon State University Extension Service or groups such as Friends of Trees.

Monitor trees for signs of disease. Early signs include wilting leaves and sparse foliage.

Educate property owners on the disease and the need to for prompt action to treat diseased trees or to properly remove them. (For more information on treating diseased trees see Appendix D.)

Plant new trees and replace damaged elm trees with species that have similar shapes and are resistant to disease. An example is the species Zelkova.

Require the planting of trees similar in shape to elms, but resistant to disease, as new development occurs.

A key element of the neighborhood organization’s activities could be fund raising for trees and tree planting.
Background Information

The first citizens of the Orenco community planted American elms along the streets of the town. Today 123 of these trees still exist (see street tree map.) In addition to being a major component of the character of the townsite, these trees provide for Orenco's large bird population.

Orenco's 123 remaining American elms provide habitat for a large bird population.

The future existence of these trees are threatened on two fronts. First, the roads in Orenco are narrow and the trees were planted close in the right of way for the streets. If the roads are widened or new construction occurs, these trees will need to be removed. (For more information, see the section on Street Improvements)

The second threat to the trees is Dutch elm disease. This disease has been threatening American elms since it was brought to the midwestern part of the United States from Europe in 1930. The disease has been moving westward since then and was first found in Portland in 1976 and in Hillsboro in 1987.

The recommended policy will be expensive to implement, but without this course of action it is unlikely that the trees will survive for future generations.
Buffer Zones Around the Old Townsite

The Issue

Development of vacant lands around the old Orenco townsite will create conflicts with the neighborhood’s present rural character. Without buffering, industrial and other land use impacts will eventually alter the old townsite’s character.

The Goal

To preserve the rural character of the townsite from the impacts of the rapid growth occurring in the area.

Recommended Policy

Create buffer zones around the old townsite by landscaping developable properties, preserving natural buffer areas and controlling where structures are built to provide distance and open space.

Implementing Strategies

Industrial park zones north and northwest of the old townsite
Enforce buffer area requirements under Hillsboro Ordinance 11-6.72(10) to provide a landscape buffer 50 feet deep consisting of evergreens at least 7 feet high at maturity for areas abutting residential zones.

Manufacturing facilities on the west of the townsite, along 231st Avenue, were built prior to annexation and do not have buffer zones. Orenco residents and/or the City of Hillsboro should request that these property owners voluntarily establish vegetation buffers on these older manufacturing parcels.

Development north of the townsite
If a light rail station is constructed north of the old townsite on the old electric rail right-of-way, the station and parking should be positioned on the north side of the tracks and an evergreen buffer established south of the tracks and north of the townsite to reduce visual and noise impacts. Pedestrian access through the buffer to the station should be available for Orenco residents.

Northeast of the townsite
Encourage clustered residential development on the triangular area northeast of
the townsite to preserve sensitive forest habitat and to allow open space to serve as a buffer between new development and the old townsite. The buffer will separate the new development’s higher density and different architecture from the old townsite.

**East of the townsite**
If a school is built on the old school site, require dedication of the western portion of the lot as a park or open space to preserve the elm trees and the open space presently buffering the historical homes on the west. Any future school should be positioned to preserve the tall oak trees on this property. Future zoning or comprehensive plans should preserve the golf course as open space.

**South of the townsite**
Preserve floodplain and wetlands on lots south of Dogwood Street as natural buffer areas.

**Background Information**

**Northeast of the townsite**
An undeveloped triangular area northeast of the townsite is listed on Washington County’s East Hillsboro Community Plan as a sensitive forest habitat presently zoned for low density residential (RL) development. This site may be developed up to 9 units per acre compared to 5 per acre in the old townsite.

Air quality and noise conflicts caused by the manufacturing along the west and north of the townsite are regulated by the Oregon Department of Environmental Quality (DEQ).

Hillsboro Ordinance 11-6.72 also restricts glare from exterior lighting to ensure that it is directed away from adjacent properties.

Open storage of materials and equipment must be in an area contained by a sight-obscuring fence at least 6 feet high, but no more than 10 feet high.

**East of the townsite**
On the east side of the townsite is a parcel of approximately 13 acres currently zoned for residential, owned by the West Union School District. The parcel is presently used as an open space for horseback riding, baseball, and a playground using equipment from the school previously on the site. The school property is bordered on the west by American elms along 229th Avenue and on the east by the golf course. Orenco residents prefer the site to be zoned for a future elementary school instead of residential development. Because the lot is larger than most elementary school properties, not all of the site will be needed for a school.

**South of the townsite**
Dogwood Street forms the south border of the old townsite. Lots south of Dogwood which descend into the floodplain and wetlands provide a natural buffer area. Development ordinances should prohibit any alteration or loss of these natural wetlands and floodplains.
The buffer areas proposed for implementation are in agreement with the design standards in Washington County's East Hillsboro Community Plan.

School property east of old townsite provides open space and tree buffer area.
Wetlands

The Issue

Orenco residents value the environmental benefits and visual beauty of their natural wetland areas. The rapid development of land around Orenco will eventually create pressure to more intensively develop Orenco properties containing these wetlands.

Orenco residents want assurance that land-use plans and development regulations will adequately protect their wetlands from destruction or loss.

The Goal

To protect Orenco’s natural wetlands from destruction or adverse effects caused by future development.

Recommended Policy

Encourage Orenco residents to take a more active role in the preservation of their wetlands through involvement in wetlands planning and regulatory processes.

Implementing Strategies

Inform and educate Orenco residents of existing federal, state, local and district wetlands plans and regulations affecting their area.

Educate residents on their public access to wetlands planning and regulatory processes.

Form an Orenco citizens committee to review the effectiveness of existing wetlands regulations and plans.

Background

Wetlands locations. The Orenco wetlands map indicates the location of drainageways (creeks), wetland ponds and wet soils areas. Most of the wet soils areas in the northwest, west and the townsite have been eliminated or permanently altered by previous development or agriculture.

The remaining primary wetlands (ponds, marches, creeks) are in or adjacent to the Rock
Orenco’s lush wetlands provide wildlife habitat and natural filtration of surface waters.

Creek and Beaverton Creek floodplains. The Rock Creek drainage basin flows from the east side of the study area, southwest through the golf course, then forms the south border of the townsite. The Beaverton Creek drainageway forms the southeast border of the Orenco study area. With the exception of the golf course, most of these remaining wetlands are on large lot, single-family parcels that are large enough for future partition or subdivision development.

For information on wetlands planning and regulation, see Appendix E.
Development Guidelines

The Issue

Because of its history as a company town, Orenco is distinctly different from other areas in Washington County. Its uniqueness is evident in its buildings, streets, open spaces and vegetation. The residents of Orenco are interested in preserving this unique rural and historic character.

The Goal

To preserve the rural and historic character of the Orenco townsite.

Recommended Policy

Establish an Historic and Cultural Design District for the old Orenco townsite and surrounding areas with design guidelines specific to each area. District guidelines should recognize and support the contribution of surrounding open space, natural resources, and historic elements to the old townsite.

Implementing Strategies

Specific elements of the recommended Historic and Cultural Design District are listed on the following pages. The process needed to establish a design district is listed below.

Organize a neighborhood group.

Consult with other jurisdictions with similar regulations, for example, Oregon City, St. Helens, Albany and Portland's Ladd's Addition.

Agree on district boundaries and elements.

Consult with local jurisdictions and agree on district boundaries, guidelines, the review body, and the implementing ordinance.

Support ordinance through legislative review and adoption process.

Request that the local jurisdiction inventory the townsite to establish the number of structures that support the historic district process.
Background Information

The mandate to plan preservation of the cultural heritage of Orenco and to address conflicts between new and existing development in Orenco comes from the Oregon Statewide Planning Goals. These goals have the force of law in the state. Goal 5; Open Spaces, Scenic and Historic Areas, and Natural Resources states that

"Cultural, historic, natural, scenic, open space, and wilderness areas shall be inventoried and managed to preserve their original character. In instances where conflicting uses have been identified, the economic, social, environmental and energy consequences shall be identified and programs developed to achieve the goal."

In Orenco, this goal calls for protecting the character of the Orenco townsite and preserving the natural areas and open spaces, while allowing for new development.

The Washington County Comprehensive Plan addresses Statewide Planning Goal 5 through "Section 373; Historic and Cultural Resource Overlay District." The intent of this section is to identify and preserve buildings, sites, and historic districts that reflect special cultural values or heritage. Buildings and structures in the Washington County Cultural Resources Inventory are currently subject to the provisions of the Historic and Cultural Resource Overlay District unless the county has found that the district should not apply. The district applies to specific tax lots and structures identified by the inventory and regulates exterior alteration, relocation, or demolition using criteria set out in Section 373 and applied by a review authority.

The principles that allow the application of the Historic and Cultural Resource Overlay District to the Orenco townsite as a whole, and to specify design guidelines for new construction in the townsite, currently exist in the Washington County code. "District" in this case is defined as a significant linkage of sites united historically by plan or physical development. The code section also deals with infill and is intended to ensure that new and existing development is compatible through a development review process. This could apply wherever there is a concentration of historic sites with significant infill potential such as the old Orenco townsite. These principles must be drawn together to form a review framework intended to avoid impairment of the essential historic character of Orenco. The following proposed design district does that.
ORENCO DESIGN DISTRICT
ORENCO HISTORIC AND CULTURAL DESIGN DISTRICT

A design district is a geographically defined area to which special development regulations apply. The regulations take the form of design guidelines and are intended to give government and district residents control over the community features that are necessary for the preservation of the area's character. Control is applied through a process of design review administered by one or more designated authorities.

The Orenco district has two subareas—the old townsite and the outer Orenco area (see map)—and each is addressed by different but related guidelines. This separation is a recognition of the different characteristics of each area. The old townsite has a significant concentration of designated historic structures and is substantially developed. The surrounding area contains historic structures as well, but also contains significant open space, designated natural resources, and is largely undeveloped.

Design Guidelines for Old Orenco Townsite

Design guidelines are tools which can be used to allow new development in the Orenco townsite while preserving and enhancing the rural history of the town. They are intended to guide government, district residents, and property owners in making decisions which affect important community values. The main elements of these guidelines are street systems, open space, new construction, and exterior rehabilitation.

Street Systems

The old townsite is divided into 300 by 300 feet blocks by a grid street system consisting of 60 feet wide right-of-ways, with streets oriented north, south, east and west. The blocks are bisected by 15 feet wide alleys running east and west (many of which are not used). The grid pattern, lack of through traffic, and low level of development in the area have allowed the residents to use these right-of-ways for community social functions as well as for transportation. These spaces are enhanced by the mature street trees and narrow street surface. Further, the lack of curbs reduces the formality of transitions from public to private space. Undeveloped right-of-ways incorporated into the landscaping, many vacant lots and various building setbacks reinforces the feeling of open space and informality.

Traffic Control: Identify and designate Dogwood Street as the street to access the townsite from 216th Avenue on the southeast and 231st Avenue on the west. Circulation design should generally discourage through traffic in Orenco.

Street Design: Retain existing street surface widths and improve new streets to the same rural scale. Avoid curbing wherever possible and re-configure drainage ditches into swales to further reduce barriers between yards and the street and to filter stormwater runoff. Construct pedestrian paths along roads as traffic and safety dictate. Install disease-resistant street trees similar in form to the existing elms to match the existing tree location pattern for all

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new development. To preserve the historic feel of the old townsite, residents should consider re-naming the numbered streets with their original names.

Service Alleys: Improve alleyways wherever desirable to provide alternative access and allow garages to be located away from front yards.

Open Space

One of the most noticeable features of the old Orenco townsite is the amount of open space that exists because of the random placement of the houses on lots and the small house size. This early 1900s housing stock, in combination with the narrow streets, alley system, and many trees lends to the area's feeling of days gone past. Development within the old townsite should occur with respect to the rural heritage and the maturity of the townsite to preserve the existing open space throughout the community. This can be accomplished by the use of recommended design guidelines as follows.

Minimum Lot Width: Preserve open space by requiring a minimum lot width in the old townsite of 75 feet. This will allow for greater density in the townsite while encouraging space between structures.

Bulk Restrictions: Limit the size of new structures and therefore the lot coverage, to preserve open space in the old townsite.

Street Design: Retain the existing street widths and rural street standards with grassy right-of-ways. The lack of standard sidewalks and curbs promotes the feeling of open space and useable community space.

Service Alleys: Retain the existing alley system and promote the development in other areas of the old townsite where such a system does not exist.

Private Open Space, Front Yards: Orenco front yards are typically open and friendly. Fences and hedges should not close a front yard off visually from the street. This encourages interchange between citizens of Orenco and allows residents to observe activity on the street.

Vegetation: Foremost in Orenco’s history has been its role as a nursery. Care should be taken to retain and incorporate the existing areas of vegetation, whether it be the street trees or the many stands of trees mixed with the natural vegetation of the area.

New Construction Guidelines

Part of the unique character of Orenco lies in the significant concentration of houses in the old townsite which are on the Washington County Historic and Cultural Register. These houses were built during the 1900-1930s period in the craftsman or bungalow styles. Elements common to these houses and their sites can be incorporated into designs for new
development in the townsite as a way to help new homes harmonize with old and to reinforce community identity.

**Development Impacts:** New development should be designed to have the least adverse impact on the district and the surrounding residential area.

**Siting:** Front and side yard setbacks for homes in the old townsite are irregular. This conveys an informal and unstructured rural town atmosphere. Setbacks for single infill houses should differ from those of adjacent houses. Side yard setbacks should total 30 feet. Lots should be a minimum of 75 feet wide, and new structures should cover no more than 20 percent of any given lot. Each new commercial building shall face the street and be pedestrian-oriented. A zero front line setback is required.

**Landscaping:** Large trees are an important element of Orenco yards and help integrate the structure with the site. New development is encouraged to retain mature trees, plant new trees and retain or plant traditional vegetation wherever possible. A recommended plant and tree list can be developed to help residents and developers in maintaining the rural character of the area.

**Garages:** Unlike most new development, garages are not a central feature of old Orenco homes. The impact of garage facades in residential structures should be minimized by moving garage doors back one-third the front to back width of the house, or by building detached garages on the rear portion of the lot. Building garages back from the front of the house also allows better views of the neighborhood from front windows and porches.

**Parking:** Off-site parking for new commercial development should be located in the rear of the building to emulate the historic tradition of pedestrian access to the storefront. No lot shall be converted for the use of surface parking within the historic district.

**Foundation:** The main floor on new houses should be 24 to 32 inches above finish grade. This is a feature of all of the inventoried houses in the old townsite and encourages more prominent entries, provides opportunities for interesting porch details, and creates a place from which to view the neighborhood and interact with neighbors.

**Height:** The 1/2 story feature common to houses on the register adds roof volume and expandable space. One use of this area traditionally has been for storage, a function which is now often a part of the double car garage. Another common use has been for additional sleeping and play areas for expanding families. New houses in the old townsite should be a minimum of 1 1/2 and a maximum of 2 1/2 stories in height to reflect existing historic elements and provide opportunities to increase building function and efficiency. New commercial buildings should not be over two stories high to retain the character of the buildings of the old townsite.

**Roof Elements:** The steep roof pitches common to many Orenco homes are substantial design elements giving the houses prominence, and opportunities for visually interesting and functionally efficient dormers. All roofs for new houses should have a minimum rise of six inches per foot and a minimum one foot overhang at gable ends and eighteen inches at the
eaves. Roofs which have both gables and hips on the same structure are encouraged, as are dormers.

![Diagram of roof structures](image)

One or two story Two story Two story

Example of Orenco dormer with roof gables and hips, and wide overhangs at the eaves.

**Siding:** Building front and side elevations should be covered with materials similar and compatible to those materials used predominantly in the old townsite. Recommended materials can include shiplap, bevel or other narrow course horizontal siding. The use of aluminum siding or vertical plywood siding should be discouraged. Materials used on the exterior of the commercial buildings shall be consistent with those materials predominantly used in the residential buildings.
Windows: Single windows and window pairs in residential structures should be vertically proportioned and be surrounded with trim. Divided panes of glass are preferable to picture windows for front elevations.

Rearranging vertically proportioned windows Group several vertical windows together

Front Facade Detailing: In order to maintain a pedestrian-friendly environment, the main entrances of commercial structures should face the street with no blank walls on the street front.

Signs: Signs on commercial structures shall be attached to the building and be appropriate to the 1900-1930 era. The use of plastic-faced signs is discouraged. Signs should not be a dominant feature of the building.

Street Light Standards: If installed in commercial zones, street light standards should be of the 1900-1930s type of standards.

Historic Plaques and Signs: Standardized historic plaques or signs should be encouraged to mark the buildings, streets, and the district.

Exterior Rehabilitation

Guidelines for exterior rehabilitation apply to buildings listed in the Washington County Historic Resources Inventory. They are intended to guide owner’s decisions on design and selection of materials related to building facades, siding, porches, windows, and other architectural features. Use of appropriate designs and materials will maintain the historic character of a structure, and support property values of the district as a whole. These guidelines supplement the Secretary of Interior’s Standards for Rehabilitation and the provisions of
Landscaping: Large trees are an important element of Orenco yards and help integrate the structure with the site. Retain mature trees wherever possible, plant new trees, and retain or plant traditional vegetation wherever possible. A recommended plant and tree list can be developed to help residents and developers in maintaining the rural character of the area.

Front Facades: The architectural integrity of building elements which are prominently visible from the street, including entrances, porches, dormers and additions, should be maintained and restored.

Siding: Original siding should be retained wherever possible. In instances where replacement siding is required, new or used siding of the same pattern should be installed. Additions should use the original siding patterns or other compatible pattern. The use of aluminum siding or vertical plywood siding should be avoided. Materials used on the exterior of the commercial buildings shall be consistent with those materials predominantly used in the residential buildings.

Roof: Alteration of a roof, such as adding a dormer, should match the existing roof pitch or architectural theme of the structure. Adding skylights in prominent locations should be avoided as should the replacement of roofing shingles with incompatible materials such as metal or tile.

Windows and Doors: Original windows and doors should be retained. If replacement is necessary, new wood frame, sills, and trim should be built to match the original unit. An aluminum or vinyl sash can be used in place of wood sash in this instance for additions, and in cases where the goal is reducing heat loss.

Signs: Signs on commercial buildings shall be attached to the building and be appropriate to the 1910-1940 era. The use of plastic-faced signs is discouraged. The signs should not be a dominant feature of the building.

Street Light Standards: If installed in commercial zones, street light standards should be of the 1910-1940s type of standards.

Historic Plaques and Signs: Standardized historic plaques or signs should be encouraged to mark the buildings, streets, and the district.

Design Guidelines for Outer Orenco:

The Outer Orenco area can be viewed as a transitional area because of the potential for growth due to the availability of developable land. Impacts from the increased development may affect the open space, natural vegetation, wetlands, and potentially, the historic district.

Design guidelines are tools used to preserve essential portions of the study area outside the
Orenco townsite which help define the rural character valued by area residents and which support the Historic and Cultural Resources present.

**Streets:** New streets in residential areas should emulate the old townsite grid and design wherever possible. This is especially important for the area east of the old townsite. Grid street patterns and rural-standard streets are also encouraged in residential areas east of 231st Avenue and south of Dogwood Street. All streets perpendicular to 231st should have outlets onto 231st. As traffic and safety needs dictate, pedestrian and bicycle paths should be constructed.

**New Construction:** New industrial and commercial areas developed in the study area should minimize their impact on the old townsite. Construction near the townsite could support an historic town concept by providing space for many small (rather than one large) businesses in a group of structures architecturally compatible with the historic theme of Orenco. Incompatible structures should be completely buffered from Orenco-compatible development and the old townsite and supporting areas.

**Light Rail Transit Station:** If a transit station is built in the Orenco area, the station and pedestrian bridge should be designed to conform to the historic character of the old Orenco town. Lighting for the park and ride lot and station should be oriented in such a way as to not create glare in residential areas. Appropriate parking controls should be used to discourage park and ride overflow parking in residential areas.

**Natural Resources:** Beaverton and Rock creeks are substantial assets to outer Orenco, and steps should be taken to secure community access wherever possible. Retain unobstructed views of Rock Creek from the Quatama Road bridge and avoid building new roads over Rock and Beaverton creeks. Provide substantial views of these creeks from new public right-of-ways wherever appropriate.

**Density:** Comprehensive plan density for outer Orenco should be reduced to five units per acre. The area of designated floodplain and significant natural features should be removed from comprehensive plan density calculations for the area, or density otherwise transferred to other areas.

Zoning designations to achieve the five-units-per-acre density level should allow for cluster or attached housing, which will enable more open space and natural vegetation to be retained and pose the least impact to an area containing wetlands. In addition, zero-lot-line houses should be recommended—this type of housing allows for more open space than traditionally sited houses.
Appendixes
Appendix A

Citizen Advisory Committee

Twenty residents and property owners within the Orenco study area were asked to participate in a study advisory committee. This group met four times with the workshop members.

The first meeting of the committee was held February 12, 1991. This meeting's purpose was to exchange information. Workshop members presented the information they had already learned about Orenco to check their facts with those who knew the community best. The community people were then asked several questions about their feelings towards the community including: 1) What do you like about Orenco? 2) What will Orenco be like in 15 years? 3) How would you like Orenco to be in 15 years? and 4) What don't you like about Orenco?

Trees, the rural setting and historic quality were the items most appreciated by advisory committee participants. As people thought of Orenco’s future they mentioned being inside the City of Hillsboro, retaining their “island” flavor, improving the old homes and increased population. Recapturing Orenco’s historical character and preserving the street trees were participants’ most mentioned desired vision of Orenco in 15 years. As for what people don’t like, property taxes, development pressure and the removal of trees were most frequently selected.

At the committee’s second meeting on April 2, 1991, citizens discussed issues the workshop students had identified as important to the area. The third meeting on May 1, 1991, involved evaluating various possible actions that could be taken in response to the issues.

The final meeting of the committee was held on June 5, 1991. At this meeting, workshop members presented their final community plan for Orenco and the citizens discussed what their next actions should be.
Appendix B

Orenco Household Survey

Members of the study team conducted a house-to-house survey of the Orenco study area on Saturday, February 23, 1991. The purpose of the survey was to determine the opinions of study area residents with respect to public services and the community.

Eighty-two of the 134 households in the study area, 62 percent, were surveyed. Although the survey was not a scientific random sample, two factors allow the study team to conclude that results can be relied upon to provide guidance in this study. 1) A high proportion of households in the study area was surveyed and, (2) the geographic distribution of surveyed households is fairly even; all sub-areas in the study area were covered.

For the purposes of the survey analysis, the study area was divided into three zones. Zone 1 was the old Orenco townsite and south to the creek, Zone 2 was the area along 231st Street and west and Zone 3 was the Quatama Road and 216th Street area. Non-residential areas north of the railway to Cornell Road were not surveyed and were not included in any of the survey analysis zones. Attempts to gain responses from an even number of males and females as the first respondents in each household were successful. The opinions and attitudes of 39 males and 43 females are analyzed below.

<table>
<thead>
<tr>
<th>Table B-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Respondents by Zone in which Household is Located</td>
</tr>
<tr>
<td>Zone</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table B-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Response by Years of Residency and Age of Respondent</td>
</tr>
<tr>
<td>YEARS OF RESIDENCY</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
</tr>
<tr>
<td>1-5</td>
</tr>
<tr>
<td>6-10</td>
</tr>
<tr>
<td>11-15</td>
</tr>
<tr>
<td>&gt;15</td>
</tr>
</tbody>
</table>

52
Likes and Dislikes
Residents of Orenco and the larger study area like their community. When asked to name three things they liked the most, many people weren’t able to stop at three. Quiet and country-like were the most frequently given reasons. Easy access to or close proximity to jobs, shopping and cities were also commonly mentioned. Dislikes were more varied, but anxiety over what will happen to the community in the future and new development were frequently named. Ninety-four percent of those questioned expected to be living in Orenco in five years.

Work Location
The convenient access to jobs from Orenco is demonstrated by the work locations of residents. Table 2 presents work locations for all household members whose respondent provided the information. The numbers do not include respondents who are not employed for reasons of homemaking, retirement, injuries or lay-offs.

Table B-3
Work Locations for Study Area Residents

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aloha</td>
<td>3</td>
</tr>
<tr>
<td>Beaverton</td>
<td>22</td>
</tr>
<tr>
<td>Hillsboro</td>
<td>20</td>
</tr>
<tr>
<td>Orenco</td>
<td>14</td>
</tr>
<tr>
<td>Portland</td>
<td>17</td>
</tr>
</tbody>
</table>

Public Services
Residents of Orenco appear generally satisfied with their public services except for streets and parks and recreation. Of all services inquired about, streets was the service which received the most “inadequate” responses, followed in descending order by parks and recreation, storm sewers and shopping.

Table B-4
Services Considered Inadequate

<table>
<thead>
<tr>
<th>Service</th>
<th>Number of Responses</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>STREETS</td>
<td>43</td>
<td>53</td>
</tr>
<tr>
<td>PARKS AND RECREATION</td>
<td>24</td>
<td>29</td>
</tr>
<tr>
<td>STORM SEWERS</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>SHOPPING</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>POLICE</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>SANITATION (GARBAGR)</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>HEALTH CARE ACCESS</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>WATER</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FIRE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SCHOOL ACCESS</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Streets
Over two-thirds of the respondents in the old Orenco townsite considered streets to be inadequate. Like respondents in other zones, pot holes and lack of maintenance were the most frequently mentioned reasons for inadequacy.

Table B-5
Dissatisfaction with Streets by Zone of Household

<table>
<thead>
<tr>
<th>Zone of Household</th>
<th>Percent of Respondents Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>63</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>47</td>
</tr>
</tbody>
</table>

Parks and Recreation
Parks and recreation was the second most frequently mentioned inadequate service. It is difficult to determine any clustering of this opinion among years of residency, given the small number of responses in each year category. Residents of zone 1-the old townsite and zone 3-Quatama Road are similar in their consideration of parks and recreation being inadequate. Cited most frequently as the reason for the inadequacy was the lack of parks. Out-of-district fees to Tualatin Parks and Recreation or the City of Hillsboro were also occasionally mentioned as reasons for inadequate parks and recreation services.

Table B-6
Inadequacy of Parks and Recreation by Zone of Household

<table>
<thead>
<tr>
<th>Zone of Household</th>
<th>Percent of Respondents dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>37</td>
</tr>
</tbody>
</table>

Store in Orenco
Residents were asked if they would like a grocery store in Orenco, and if so, what type. More than half, 53 percent, said they would like a store. Of those who had an opinion, most answered that the grocery store should be small, a convenience type, or “mom and pop” type store. A few suggested the old store should re-open. And a few said they wanted a large grocery store. Sentiment against a grocery store was stronger in the old townsite and 231st Street and western areas of the study.
Table B-7
Opinions of a Grocery Store in Orenco by Zone

<table>
<thead>
<tr>
<th>Zone of Household</th>
<th>Percent of Households wanting a Store</th>
<th>Percent of Households not wanting a Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>3</td>
<td>68</td>
<td>26</td>
</tr>
</tbody>
</table>

Light Rail Station
There appeared to be a strong preference, 76 percent, for a light rail station in or near Orenco if light rail is extended west from Portland. Twenty percent did not want a station, while the remainder had no opinion. Of those who had an opinion, more thought the station should be in Orenco than those who thought it should be near, but west of 231st Street and/or closer to Cornell Road.

Table B-8
In Favor of Light Rail Station In or Near Orenco by Zone of Household

<table>
<thead>
<tr>
<th>Zone of Household</th>
<th>Percent of Households in favor of a Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>68</td>
</tr>
<tr>
<td>2</td>
<td>84</td>
</tr>
<tr>
<td>3</td>
<td>84</td>
</tr>
</tbody>
</table>

Table B-9
Not in Favor of Light Rail Station In or Near Orenco by Zone of Household

<table>
<thead>
<tr>
<th>Zone of Household</th>
<th>Percent of Households not in favor of a Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>
There was a small and fairly even spread of sentiment against a light rail station in or near Orenco if light rail is extended.

**Park and Ride Lot at the Transit Station**
Although fewer respondents wanted a park and ride lot at the transit station in Orenco if light rail were extended, more than half, 59 percent, wanted such a station and were fairly evenly spread around the study area.

<table>
<thead>
<tr>
<th>Zone of Household</th>
<th>Percent of Households by Zone Favorable</th>
<th>Percent of Households by Zone Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>52</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>79</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>53</td>
<td>32</td>
</tr>
</tbody>
</table>
Appendix C

Transportation Services

One of the public works issues of most concern to the residents of Orenco is the condition and availability of transportation services. Transportation services in Orenco can be divided into two main areas: streets and transit service.

Street System Characteristics
The street system of the Orenco study area centers on a small grid system of local streets bounded by several collector and arterial streets. Public rights-of-way vary in width from 40 feet to 90 feet. Most of the local streets consist of an oil-mat and gravel, centerstrip paved road surface with some shallow drainage ditches on the sides for storm water run-off. Large street trees line both sides of many of the local streets. Within the actual Orenco townsite, these street trees have been planted well inside of the public right-of-way.

The collector and arterial streets found in the study area are well maintained by Washington County. Most of the local streets in the study area, however, are not built to County street standards and are not maintained by the County. The lack of maintenance is resulting in the gradual deterioration of the local street system.

Street Classifications
Streets in the study area have been classified by their function and purpose in the Washington County Transportation Plan Functional Classification System. In the system, streets are classified in a hierarchical manner with arterial streets designated to carry the highest volume of both local and through traffic, collector streets carry lesser volumes of traffic, and local streets serve mainly as local access to abutting properties. The Plan has classified the following study area streets as:

NW Cornell Road — Major Arterial
NW 216th Ave. — Minor Arterial
Baseline Road — Minor Arterial
NW 231st Ave. — Major Collector
NW Quatama Road — Minor Collector
NW 227th Ave. (Quatama to Dogwood) — Minor Collector
NW Dogwood St. (NW 227th to NW 228th) — Minor Collector
NW 228th Ave. (Dogwood to Alder) — Minor Collector
NW Alder St. (NW 228th to NW 229th) — Minor Collector

NW 229th Ave. (Alder to NW 231st Ave.) — Minor Collector

The remaining streets in the study area are classified as local streets.

Exact descriptions and guidelines for each type of street classification can be found in the Washington County Transportation Plan.

Street Condition Inventory
On March 2, 1991, an inventory was conducted of street conditions in the study area. Each street was evaluated as to its pavement condition, type of construction, number of travel lanes, storm drainage, pedestrian facilities and overhead street lighting. A street was categorized, based on its functional classification (arterial, collector, or local) as improved to either County Rural or Urban Street Standards, partially improved to county standards, or unimproved. The figures are based on percentage of total linear footage of public right-of-way.

<table>
<thead>
<tr>
<th>Arterials</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Built to Urban Standard</td>
<td>25 percent</td>
</tr>
<tr>
<td>Built to Rural Standard</td>
<td>—</td>
</tr>
<tr>
<td>Partially Improved to Rural Standard</td>
<td>75 percent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collectors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Built to Urban Standard</td>
<td>—</td>
</tr>
<tr>
<td>Built to Rural Standard</td>
<td>90 percent</td>
</tr>
<tr>
<td>Partially Improved to Rural Standard</td>
<td>10 percent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Streets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Built to Urban Standard</td>
<td>38 percent</td>
</tr>
<tr>
<td>Built to Rural Standard</td>
<td>13 percent</td>
</tr>
<tr>
<td>Partially Improved to Rural Standard</td>
<td>27 percent</td>
</tr>
<tr>
<td>Unimproved Road</td>
<td>22 percent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Streets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Built to Urban Standard</td>
<td>23 percent</td>
</tr>
<tr>
<td>Built to Rural Standard</td>
<td>34 percent</td>
</tr>
<tr>
<td>Partially Built to Rural Standard</td>
<td>33 percent</td>
</tr>
<tr>
<td>Unimproved Road</td>
<td>10 percent</td>
</tr>
</tbody>
</table>

The condition of the actual road surface on the study area streets in general reflected a high level of maintenance on the arterials, a moderate level on the collectors, and little or no maintenance of the local streets. The only exception was the local streets just recently
constructed west of NW 231st Avenue. Local streets within the actual Orenco townsite reflected the least amount of maintenance. Many of these streets showed signs of roadway degradation including potholes, alligatoring, some base subsidence, and poor drainage ditch maintenance.

Planned Street Improvements
The Washington County Transportation Plan calls for the future improvement of some streets in the study area. Baseline Road is planned to be widened from its existing two lanes to a three lane section along the entire southern boundary of the study area.

NW 231st Avenue is planned to be widened to a minimum three-lane section from Baseline Road to Cornell Road. Sidewalks, curbs, drainage and street lighting would most likely be part of these improvement projects.

The improvement of local streets in the study area is uncertain since local streets are built and improved by the surrounding property owners and developers. As development occurs in the study area, the local streets will be improved to either City of Hillsboro or Washington County standards.
Appendix D

American Elms and Dutch Elm Disease

Dutch elm disease has been threatening American elms in many states since it was brought from Europe to Ohio in the 1930s. It has been moving east and west since then. According to the Oregon State University Extension Service, it was first found in Portland in 1976 and in Hillsboro in 1987.

The disease is caused by a fungus that invades the water-conducting tissue of the elm and restricts water movement. The fungus enters the tree through wounds made by the European elm bark beetle (found throughout the Pacific Northwest).

Early symptoms of the disease are wilting leaves and sparse foliage—at first on single limbs but later the entire tree may be affected. Yellowing and premature defoliation follow. The spread of the disease through the tree may be slow or rapid, but eventually the elm will die.

The only positive way of identifying the fungus is to isolate and culture it. Suspicious twig, branch or wood samples can be sent to the Plant Clinic, Cordley Hall 1089, Oregon State University, Corvallis, Oregon 97331-2903 for identification. The twigs should be about six inches long and from recently killed branches or be small pieces of trunk which show a dark discoloration of the wood just below the bark.

The best method of controlling the disease is the rapid detection and removal of diseased trees. All American elms should be regularly examined for disease symptoms. If early infections are removed, it is possible that the tree may be saved. The infected branches should be removed at least ten feet below wood showing brown streaks under the bark. The pruning wound should be sprayed with insecticide to avoid attracting beetles.

If the infection is not found in the early stages, the entire infected tree should be removed. All of its wood and branches should be burned before new beetles emerge in the spring. If it cannot be burnt before spring, the bark should be removed, as the beetles can live only in logs with intact bark. If burning is impractical, the tree can be buried in a landfill or chipped into extremely small pieces.

Tools used to remove the tree should be disinfected with a solution of ten-percent bleach or shellac thinner. Lubricating oil should be wiped from chainsaws as the fungus can survive in the oil.

Because the roots of adjacent elms often make contact and grow together, elms near a diseased tree should be protected by severing the root contact. This can be done with a mechanical trencher or with fumigants. The Extension Service suggests the fumigant "Vapam." A solution of one part Vapam and three parts water should be poured into holes that are 3/4 to 1 inch wide, 15 inches deep and six to nine inches apart. Solution should not overflow the holes and they should be covered immediately after filling. The fumigant should not be applied within ten feet of a healthy tree.
An alternative means of control is the chemical “Arbotect 20-S.” This can be used as a preventive or therapeutic treatment, but may not eradicate the disease. It must be injected into the tree yearly, following the manufacturer’s directions.

If a replacement tree is wanted for a diseased elm, one recommendation is a Zelkova. This is a good shade tree with leaves and a silhouette similar to an elm. It is a fast grower and is very pest resistant.

For more information, contact the Oregon State University Extension Service.
Appendix E

Wetlands Planning and Regulation

Wetlands are protected under federal, state, local and district regulations. Federal regulations require a national wetland inventory and require states to coordinate with the U.S. Fish and Wildlife Service and the Corps of Engineers to identify wetlands resources and prevent any net loss. No net loss means that wetlands areas destroyed or altered by development must be replaced by equal or greater area of wetlands.

The State of Oregon uses the wetlands inventory as a baseline to assess loss or change in wetland areas and the habitats they provide for wildlife and vegetation. The inventory is based on the interpretation of aerial photography. This is good for large-area analysis but has limitations on accurately delineating and classifying smaller wetlands resources. The national wetland inventory is to provide a base for more accurate protection programs.

The state’s goal of no net loss of wetlands is physically regulated in Oregon Revised Statutes 196.800 - 196.990, the “Removal - Fill” law. U.S. Army Corps of Engineers’ permits are required for projects extracting more than 50 cubic yards of wetland soil. Each project is reviewed to ensure protection and conservation of wetlands and that alternatives have been considered.

Oregon residents will have the most direct access to wetland planning and regulation processes through Washington County and the City of Hillsboro. Under State Land Use Goal number 5, cities and counties must conduct significant natural resource plans as part of their overall comprehensive plan. Wetland resources have been identified in these plans along with their conservation objectives. Residents may provide their input during the ongoing periodic reviews of these comprehensive plans.

The East Hillsboro Community Plan has mapped Orenco’s wetland and water areas that generally provide fish and wildlife habitat. That plan’s Orenco Area Design Elements state that to preserve the drainageway and wetland areas, they “shall be retained in their natural condition in keeping with the provisions of the Community Development Code or, subsequent to annexation, with the provisions of the Hillsboro Zoning Ordinance.”

Besides involvement at the plan level, Orenco residents may publicly access the wetland permit process and provide input. Both Washington County and Hillsboro Development Codes require master plans and site analysis of wetlands with a description and justification of any wetlands alterations and statements of alternatives.

Involvement at the permit process level would require organized vigilance and is a piecemeal approach to regulating development’s impact on wetlands. In contrast, involvement in the wetlands planning process allows treating the wetlands as a connected system.

The optimal method of conserving Orenco’s wetlands as a system would be through a wetlands conservation plan (WCP). WCP’s are locally developed wetland conservation plans.
that are more specific than Goal 5 and state inventories. The locality develops a more detailed inventory, conservation plan and specification of sites suitable for fill and removal. Development controls are handled as a system rather than case by case and the WCP acts as a regional permit system for more easily expediting projects.

The disadvantage of WCPs is their cost—both in financial and human resources. Input by Orenco residents in a WCP would have the advantage of incorporating resident’s goals into a systemwide wetland planning and regulation process. Wetlands conservation could be tailored more accurately to the classification and function of the habitat it provides for wildlife, vegetation or filtration of surface waters.

Other controls on wetland area development include floodplain development regulations and the regulation of surface water and drainage by the United Sewerage Agency.

Washington County and Hillsboro set floodplains at 100 year storm boundaries as identified on U.S. Corps of Engineers maps. Permits are required for building within or on the fringe of the floodplain.

Wetlands provide an important filtration process for surface drainage containing nutrients and pollutants. The Unified Sewerage Agency requires permits for developments that alter surface drainage and wetlands in order to protect the Tualatin and Willamette river water quality.

Although wetlands are heavily regulated, Orenco residents are advised to actively monitor the planning and regulatory processes to ensure their wetlands are not disturbed or destroyed on a piece-meal basis by future development and growth pressures.
Orenco’s Wetland and Floodplain Areas

Study Area Boundaries

- Wetland and Wet Soils Areas Lost to Development or Agriculture
- Remaining Wetland & Floodplain Areas

Sources:  
- U.S. Department of the Interior Wetlands Inventory Map  
- U.S. Soil Conservation Service Washington County Hydric Soils Map
Appendix F

Bibliography


Regional Factbook: 1990. METRO. Data Resource Center, Transportation Department. 1990.

Washington County Uniform Road Improvement Design Standards. Washington County Department of Land Use and Transportation-Engineering and Surveying Division, Ordinance No. 318, Adopted July 22, 1986.