



**CASCADE  
POLICY  
INSTITUTE**



# **The Mythical World of Transit-Oriented Development**

## **Light Rail and the Orenco Neighborhood Hillsboro, Oregon**

by John A. Charles, MPA, and Michael Barton, Ph.D.

April 2003

## ***About the Authors***

John Charles, MPA, is environmental policy director and Michael Barton, Ph.D., is a research associate with Cascade Policy Institute.

## ***Acknowledgments***

Cascade would like to acknowledge the assistance of research interns Susan Misra and Joseph Coon. We also benefited from helpful comments on earlier drafts of this essay by Mel Zucker, Tony Ruffolo, Ken Dueker and Kurt Weber. Any errors remain the responsibility of the authors.

## ***About Cascade Policy Institute***

Founded in 1991, Cascade Policy Institute is Oregon's premier policy research center. Cascade's mission is to explore and promote public policy alternatives that foster individual liberty, personal responsibility and economic opportunity. To that end the Institute publishes policy studies, provides public speakers, organizes community forums and sponsors educational programs. Focusing on state and local issues, Cascade offers practical, innovative solutions for policy makers, the media and concerned citizens.

Cascade Policy Institute is a tax-exempt educational organization as defined under IRS code 501(c)(3). Cascade neither solicits nor accepts government funding, and is supported by individual, foundation, and corporate contributions. Nothing appearing in this document is to be construed as necessarily representing the views of Cascade or its donors, or as an attempt to aid or hinder the passage of any bill before any legislative body. The views expressed herein are the author's own.

Copyright © 2003 by Cascade Policy Institute. All rights reserved.

**Contents**

About the Authors ..... ii

Acknowledgments ..... ii

About Cascade Policy Institute ..... ii

Executive Summary ..... 1

Introduction ..... 3

Historical Background ..... 4

Analysis ..... 15

Effects of Light Rail Transit on Nearby Bus Service ..... 28

Conclusions..... 30

Notes..... 32

\_\_\_\_\_

## **Executive Summary**

During the past decade, Portland-area planners have embraced Transit-Oriented Development (TOD) as the dominant land use/transportation strategy. They assert that TOD, especially based on light rail, will reduce traffic congestion, increase transit use, improve air quality, and attract private investment.

Dozens of TODs have been constructed in the Portland region since 1990, with several winning national acclaim. Most have received public subsidies, on the assumption that the public benefits of TOD outweigh the costs. However, little is known about how transit-oriented projects actually perform once they are built, in terms of transit use and auto dependency. The purpose of this analysis—the first in a series of Portland, Oregon TOD case studies—is to begin filling in that gap by analyzing one of the most well-known TODs in the country, Orenco Station.

Orenco Station is located at the Orenco/231<sup>st</sup> stop of the Westside light rail line in Hillsboro, Oregon, about 15 miles west of Portland. The area was originally a large nursery, which went bankrupt in 1927. Most of the property was never developed and was eventually used primarily as a site for illegal dumping.

During the 1980s the city of Hillsboro created an urban renewal district to consolidate the land ownership and promote economic development. At the same time Oregon's first light rail line had just opened on the east side of Portland and a Westside line was in the planning stages. The initial plans called for light rail to terminate at 185<sup>th</sup> Avenue, just to the east of the Orenco neighborhood. Rail advocates urged that the line be extended to downtown Hillsboro, and federal funding was secured for the initial planning.

After Hillsboro consolidated land ownership within the urban renewal district, large parcels were sold to two corporate entities: Intel and PacTrust. Intel invested more than \$2 billion to construct the Ronler Acres campus about one mile north of the Orenco light rail station. PacTrust, a development firm, began planning a high-density, mixed-use project nearby based on TOD principles.

TriMet and Hillsboro imposed extensive planning restrictions on the area, mandating high densities near the rail station that were strongly opposed by many existing residents. PacTrust partnered with Costa Pacific Homes and several other developers to build a mixed-use town center along Cornell Road (about 500 yards north of light rail), with various residential projects that included single-family homes, apartments, condominiums, townhouses and live/work row houses. West Hills Development subsequently bought an 82-acre parcel of land on the south side of the LRT station and is currently developing a high-density residential project there.

Westside light rail opened in September 1998. Research for this paper looked at the development patterns near light rail and transit use to see if the alleged public benefits of TOD are being realized.

It is apparent that rail is not a catalyst for development. Most of the earliest construction took place adjacent to Cornell Road, while the land immediately surrounding the rail stop remained vacant. Within the past year West Hills Development has begun developing land south of light rail, but large parcels on the north side lie fallow.

In terms of transit use, Orenco Station has largely proven to be a disappointment. Most

people who take the train from the Orenco/231<sup>st</sup> stop arrive there by car and take advantage of the free Park-n-Ride lot.

The expensive, pedestrian-oriented parkway that connects Orenco Station to the transit station is empty most of the time, despite the wide sidewalks, park benches, and decorative street lighting. The majority of Orenco Station residents live too far away from the transit station to walk there on a regular basis.

Three large employers—Intel, Sitel and Norm Thompson—provide free shuttles for their workers to get to and from the light-rail station. This inflates the ridership of light rail, but adds to local traffic and diminishes the alleged environmental benefits of rail transit. It also amounts to a private subsidy to the rail program.

Since light rail is not used by most nearby residents, development around the Orenco/231<sup>st</sup> station stop has dramatically increased local traffic. By the time the south-side project is built out by West Hills, there will be more than 12,000 additional daily auto trips on the local road system as a result of TOD.

TOD advocates generally assert that light rail is vital to the commercial success of nearby development. In fact, the various PacTrust projects, including the Orenco Station town center, the residential neighborhoods, and a nearby shopping center, have all come to fruition largely because they are auto-oriented and located on a five-lane arterial (Cornell Road).

Of all the public policies that have affected development in the Orenco neighborhood since 1980, the construction of light rail has been one of the least important. Other decisions were much more instrumental in jump-starting development, including: the decision

by Hillsboro to create an urban renewal district to consolidate land ownership; the decision by Intel to locate a facility within the district, thereby creating a critical mass of highly paid workers that could support upscale residential development nearby; and the upgrades to the local road system, including Cornell Road, Evergreen Parkway and Butler Road, which took previously land-locked parcels and allowed them to be available for commercial development.

Most of the development projects near the Orenco/231<sup>st</sup> station have been publicly subsidized. The rail extension itself cost taxpayers more than \$190 million; a \$500,000 Congestion Mitigation Air Quality (CMAQ) grant from the federal government paid for part of the TriMet Park-n-Ride; Hillsboro provided over \$1,000,000 from its Traffic Impact Fund to compensate for infrastructure investments; and Metro spent \$230,000 to pay TOD consultant Peter Calthorpe to do various design sketches for Westside light rail stations, including Orenco.

Based on the performance to date of the Orenco TODs, it is difficult to make the case that taxpayers should continue subsidizing such projects by paying for the three additional light rail lines TriMet and Metro want to build, or approving public giveaways such as property tax abatements. There is no evidence that TOD near Orenco lessens traffic or improves air quality, and many local residents do not feel that high density development improves their quality of life. Zoning is retarding land development north of the rail station due to high density mandates that are not financially feasible.

The experience at Orenco/231<sup>st</sup> suggests that policy makers should lower their expectations of what light rail and TOD can deliver in terms of public benefits.

## Introduction

During the past decade, Portland-area planners have embraced Transit-Oriented Development (TOD) as the dominant land use/transportation strategy. TOD is generally defined as “compact, relatively dense, mixed-use, mixed-income developments [that] concentrate retail, housing and jobs in pedestrian-scaled urban centers, increase non-auto use (transit, bikes, walking) and decrease regional congestion and air pollution.”<sup>1</sup>

Dozens of TODs have been planned or built in the Portland region, and several have become internationally prominent. For example, two local projects, Orenco Station and Fairview Village, were recently featured in a new publication by the Urban Land Institute entitled *Great Planned Communities*, which profiles 26 communities from around the world.<sup>2</sup>

Metro, the Portland regional government, is in the forefront of transit-oriented planning. Metro advocates TOD within the context of the 2040 Growth Concept, the long-range plan that the Metro Council adopted in December, 1995:

Metro’s growth management plan, The 2040 Growth Concept, calls for the region to grow up rather than out into farmland and open space by limiting expansion and focusing growth around transit. The TOD Program focuses on meeting the intent of this growth concept by demonstrating benefits of mixed-use, higher-density developments along the region’s 33 mile MAX light rail transit (LRT) line.<sup>3</sup>

Understanding the relationship between light rail and development is important because TOD has become the primary justification for continued rail expansion in Portland. In

1995 Metro’s John Fregonese stated, “Light rail is not worth the cost if you’re just looking at transit. It’s a way to increase the density of the community.”<sup>4</sup>

More recently, the general manager of Portland Streetcar, Rick Gustafson (the first Executive Officer of Metro), echoed this theme in a presentation at Portland State University. He said, “Light rail is not about transit; it’s a mechanism for controlling sprawl and implementing better land-use planning.”<sup>5</sup>

Given that TriMet is now planning to spend more than \$2 billion in public funds on three new light rail lines within the next decade, it’s important to know if TOD is actually delivering on the promises of reduced auto dependency, decreased congestion and improved air quality. Unfortunately, TOD proponents have shown little enthusiasm for measuring these attributes after projects are built. No information is available from any government agency in Oregon indicating whether transit-oriented development is accomplishing its objectives.

The purpose of this analysis is to begin filling that gap. Westside light-rail has been the showcase for TOD planning since the early 1990s, and Orenco Station has become the most famous Westside project. However, the relationship between that development and the transit line remains unclear. In this paper (the first in a series of Oregon TOD profiles) we look at all the major developments near the Orenco/231st light rail transit (LRT) stop and focus on the following questions:

1. Does the pattern of development show that light rail is an attraction?
2. What was the role of government planning and how much public subsidy was involved?

**In 1995 Metro’s John Fregonese stated, “Light rail is not worth the cost if you’re just looking at transit. It’s a way to increase the density of the community.”**

No information is available from any government agency in Oregon indicating whether transit-oriented development is accomplishing its objectives.

- 3. How do the projects perform as Transit Oriented Developments, in terms of actual transit use?
- 4. Do people living in and near TODs think that transit-oriented planning improves the quality of their lives?

To fully understand how each piece of property has been affected by light rail, a brief history of both the Orenco neighborhood and Westside MAX is important.

**Historical Background**

**The early settlement of Orenco**

Like most Oregon cities, the area surrounding the Orenco/231<sup>st</sup> light-rail stop was originally a farming community. In the 1890s, two Canadian Scots, Archibald McGill and Malcolm McDonald, were managing a large nursery in Salem. They sought to expand their holdings and found suitable land about 17 miles west of Portland, near Hillsboro. In 1896 they bought the land and formed the Oregon Nursery Company. In 1905 a fire destroyed the packing shed at their Salem plant. Rather than re-build, they decided to close the Salem operation and move everything to the Hillsboro facility.

The first building in Orenco—an acronym for Oregon Nursery Company—was a packing shed that covered two acres. However, McGill and McDonald were not content with a mere nursery; they decided to build an entire community. So McGill platted the town to include utilities, residential homes, businesses, a school and a church.

Orenco was originally one square mile, 640 acres, bounded by what is now Cornelius Pass Road, Cornell Road, Baseline Road and 231<sup>st</sup>. It grew to about 1,200 acres, with much of the area used for growing fruit, shade trees

and shrubs for the nursery business. The population reached a peak of about 500.

Unfortunately, the company made a poor business decision around 1916. Anticipating the expansion of European markets, they planted more than a million apple trees. World War I then broke out and the market disappeared. Facing increasing competition from other nurseries, the business was bankrupt by 1927.

In 1938, eight people, representing the city’s remaining families, voted to dissolve the municipality.<sup>6</sup>

**Ronler Acres, fraudulent land deals, and urban renewal**

The former city of Orenco and the surrounding unincorporated areas remained relatively rural during the next several decades, as suburban development concentrated in Beaverton to the east and Hillsboro to the west. In 1959 Ralph Fowler acquired a large parcel between Cornell Road and Evergreen Road. This area, which came to be known as Ronler Acres, is roughly 360 acres.

Fowler platted the property and began selling quarter-acre lots for residential development. He promised buyers that infrastructure such as sewer, water and roads would be installed after houses were built, but that proved to be impractical if not fraudulent. Approximately 800 lots were sold to more than 300 investors all around the globe, but only one single-family home was ever built. The rest of Ronler Acres became known primarily as an area for illegal dumping.<sup>7</sup>

During the early 1980s, Hillsboro decided to create an urban renewal district (URD) in order to consolidate the lots, provide necessary infrastructure and allow large parcels to be sold off to commercial developers. A 300-



acre URD was formed in 1989, and the city began buying up lots from willing sellers. By 1994 the city had agreements from about 90 percent of property owners.

Purchase of the land was only one part of the URD plan. Other elements included an upgrade to the gravel portion of Evergreen Road; a new Butler Road between Shute and Cornell; and extensions of Cornell Road east of Cornelius Pass Road and 229<sup>th</sup> Avenue north of Cornell to Evergreen.<sup>8</sup>

In July 1994, the Hillsboro City Council approved a set of interim policies for the sale and redevelopment of the Ronler Acres site. The city did not intend to do the redevelopment itself. The goal, according to assistant city manager Dave Lawrence, was to “solve the problem, not to get into the real estate business.”<sup>9</sup> The city then worked out agreements with Pacific Realty Associates (Pac Trust), a limited partnership whose partners are the Oregon and Washington public employee retirement systems,<sup>10</sup> to trade and/or sell lots in order to consolidate ownership and enable planned-unit development to begin.

In September 1994, Intel announced that it was considering a purchase of some 200 industrially zoned acres at the north side of the site. The company unveiled a plan to spend \$2 billion to build two manufacturing plants at Ronler Acres, creating as many as 2,000 high-paying jobs by 2000. However, this decision was dependent on the Washington County Board of Commissioners approving a substantial property tax break pursuant to the state’s Strategic Investment Program.

On October 18, the Washington County Commissioners approved a \$52 million property tax break spread over a 15-year period. The full exemption was \$74 million, but Intel agreed to pay \$22 million in “community ser-

vice fees” and other local forms of compensation. This paved the way to a sales agreement between Hillsboro and Intel, which was consummated on November 1, 1994.<sup>11</sup>

Intel purchased 268 acres for \$7.25 million, or \$27,000 per acre. The company also agreed to a \$5.2 million low-interest loan to the city to pay for improvements in the urban renewal district. The most important of those were the construction of Evergreen Road at the north end of the property, Butler Road at the south end, and 229<sup>th</sup> Avenue from Cornell to Evergreen along the eastern border of Ronler Acres. The funds would also pay for a new fire station and improvements to water lines. The loan would be repaid using tax dollars the new facilities would generate for the city.<sup>12</sup>

With the sale to Intel, every parcel in the URD was now in private hands. Intel owned 268 acres, while Pac Trust owned the remaining 32 acres, all in the area between Butler and Cornell roads. This became part of a 190-acre unit that Pac Trust would soon develop into the commercial/residential project known as Orenco Station.

### ***Planning for Westside MAX: A deer on the tracks***

The concept of Westside MAX was first laid out in a 1983 engineering study which looked only at routing the line 12 miles from Portland to NW 185<sup>th</sup> Avenue. As late as 1988, that was still TriMet’s plan. However, with the rapid growth of both jobs and housing in the Hillsboro area, various parties began clamoring for the line to be extended to downtown Hillsboro.

Les AuCoin, the veteran Congressman from that district, supported the extension and pledged to work with U.S. Senator Mark Hatfield to obtain the necessary federal subsidies. The first challenge was to obtain

**The dispute over density highlighted the disparate views government planners and local residents had about the notion of “livability.”**

**In the area south of Cornell Road, north of LRT, and west of Orenco Station Parkway the plan called for a project known as the Cornell Pacific Business Park. That project was never built and the land remains vacant today.**

\$600,000 of federal funds for a preliminary engineering study for the so-called Hillsboro Extension. The man who controlled the fate of the money was U.S. Rep. William Lehman, a Democrat from Florida who was chairman of the House Appropriations transportation subcommittee in 1989. Rep. AuCoin sought Lehman's support, and invited him out to Oregon for a field inspection of the proposed route.

Rep. Lehman visited Portland on March 28, 1989. The plan was to take Lehman on a tour of a portion of the proposed LRT route between Beaverton and Orenco, by traveling over existing Burlington Northern Railroad tracks (right-of-way that Hillsboro was in the process of purchasing) in a specially equipped van that allowed it to travel on rail.

Rail boosters were apprehensive about the reaction Lehman would have to a proposed light-rail route that had almost no people living or working anywhere near it. Unfortunately, this fear was realized when midway through the tour the rail van rounded a curve and there in the middle of the track stood a deer. According to *The Oregonian*, Lehman turned to AuCoin and said, "Where are we Les? Sherwood Forest? This is where you want to put a rail line?"<sup>13</sup>

This was a defining moment for the advocates of transit-oriented development. They were placing the entire credibility of Westside MAX on the premise that building light rail through a series of deer meadows, when accompanied by aggressive land-use planning, would generate the ridership necessary to justify substantial public subsidies.

Congressman Lehman bought the vision. Congress approved the initial planning money and Westside MAX was underway.

### ***Planning for high density at Orenco***

On July 28, 1993 the TriMet board formally approved a 6.2 mile alignment between SW 185<sup>th</sup> Avenue and downtown Hillsboro that would run through Orenco. TriMet calculated that the extension would cost \$191 million to build, with construction set to begin in late 1994. Metro estimated that on a typical weekday in the year 2005, the rail line would attract 850 more riders than if the line stopped at 185<sup>th</sup> Avenue.

In November Metro moved into high gear for TOD planning by hiring New Urbanist guru Peter Calthorpe to do eight community design projects in the Portland area, including the Orenco neighborhood (New Urbanism is a planning theory that embraces TOD principles). Calthorpe's designs, which TriMet was not obligated to implement, were due in February 1994. Metro agreed to pay him \$230,000 to develop two TOD options for each of the eight sites.

### ***Orenco/231st Interim Protection Ordinance***

As Metro was engaging Calthorpe to do model designs for the Orenco/231<sup>st</sup> stop, Hillsboro planners were drafting a proposed Station Area Interim Protection Ordinance (SAIPO) in order to pre-empt any low-density development that might occur in the Orenco neighborhood or near any of the other Hillsboro LRT stops. The initial public reaction was negative.

The *Hillsboro Argus* reported on January 13, 1994 that the proposed ordinance—by then in its fourth iteration—"took blows from some of the community's heavyweights" at a public hearing. Critics of the "transit-supportive" regulations included Jack Orchard, of Hawthorn Farm, who said that the high-tech industrial park had already brought 4,000 potential rail commuters and that mar-

ket forces, not regulation, should determine the density of two vacant parcels still remaining along the rail line.

A number of public meetings were held in the Orenco Presbyterian Church on NW 231<sup>st</sup>. The community turned out en masse and there was tremendous hostility to the densification plans. Sonja Pauli, who bought a house on 231<sup>st</sup> in 1975, attended those meetings and recalls shouting matches between residents and TriMet officials. According to Pauli, there was a particularly heated discussion about a proposal to “improve” streets in the Orenco townsite by cutting down all the big shade trees in order to widen the streets and build sidewalks, which did not exist anywhere in the historic community. Some people responded by saying that trees would be cut “over my dead body,” and that particular proposal was never implemented.<sup>14</sup>

By early February the SAIPO was in its 6<sup>th</sup> draft and the Hillsboro Planning Commission had yet to put it to a vote. The 7<sup>th</sup> draft showed increased flexibility, by removing Hawthorn Farms Industrial Park from many of the density requirements and allowing Tuality Community Hospital to construct a parking lot near LRT.

With more flexibility came reduced resistance and the ordinance was adopted by the City Council in April 1994.

### ***Historic Orenco: A model for New Urbanism?***

In May, TriMet and Metro sponsored two additional days of community visioning, in sessions entitled “Building 21<sup>st</sup> Century Communities: A Westside Light Rail Station Community Planning Conference.” In promoting New Urbanism, planners tried to assuage people’s concerns by asserting that TOD was really



*The historic community of Orenco—just a few blocks from the light rail station—is dominated by single-family homes on very large lots.*

an old idea, reminiscent of historic neighborhoods like Orenco.

A Hillsboro rail planner, Rajiv Batra, described Orenco as a community of short blocks and fairly small lots. According to *The Oregonian*, Batra told the crowd, “I would encourage people to take a walk and go look at the buildings and the layout of Orenco. Everybody walked five minutes or less to get to the street car and go to work.”<sup>15</sup>

In fact the historic community of Orenco was nothing like what the planners had in mind for light-rail TODs. Orenco in 1994 had an average density of one person per acre. Hillsboro’s planning goal for new development at the LRT station was 45 people per acre.

Orenco had (and still has) a mix of mostly single-family housing units on very large lots, featuring an array of designs: classic old bungalows, farm buildings with corrals, old mobile homes and new contemporary homes. Some yards have rusting vehicles on cinder blocks; some have farm animals, and most have huge shade trees.

The neighborhoods that were built subsequent to adoption of the Station Area Community ordinance include hundreds of rowhouses, apartments and townhouses, and

**Orenco in 1994 had an average density of one person per acre. Hillsboro’s planning goal for new development at the LRT station was 45 people per acre.**

**The dispute over density highlighted the disparate views government planners and local residents had about the notion of “livability.”**

the single family dwellings are on tiny lots averaging about 3,800 square feet.

In short, TriMet had no intention of using historic Orenco as a model for their transit-oriented planning.

***TOD comes to Orenco***

The first high-density development project near the Orenco/231<sup>st</sup> LRT station was called Elk Meadows, built between Dogwood and Elm Streets on the western edge of the existing Orenco neighborhood. The project included 20 duplexes, or 40 dwellings, in a neighborhood dominated by single family homes on large lots. Construction began in February 1995.

The second project was called Victoria Station, and included three duplexes and five triplexes (21 dwellings) along Birch Street on the community’s northern edge. Construction on this project began in April.

The third project was known as Dogwood Court. It was to be built on Orenco’s western edge at 231<sup>st</sup> Avenue and Dogwood Street. It included 12 single-family homes on 3,000 square foot lots. This project was approved by the Hillsboro Planning Commission in January.

A group of Orenco residents formed an opposition group to the Dogwood Court development. Members of this group, the Orenco Neighborhood Organization, were concerned that the density would have a number of adverse effects on their lives, including increased traffic, neighborhood crowding, and a possible loss of property value.

The Planning Commission’s decision was appealed by the opponents to the Hillsboro City Council. The council held two contentious hearings in March, and unanimously

approved the proposal on April 4. Opponents then filed an appeal with the state Land Use Board of Appeals (LUBA) and subsequently to the Court of Appeals. Those appeals were also rejected and the project went forward.

The dispute over density highlighted the disparate views government planners and local residents had about the notion of “livability.” Tri-Met’s vision called for neighborhoods to be dense, mixed-use areas with an emphasis on public rather than private open space, and collective rather than single-occupant transport. Orenco residents defined livability very differently; they treasured their large, private yards and quiet streets. They did not see light-rail or transit-oriented development as important to their quality of life.

As resident Sheri Smith told *The Oregonian*, “You start getting the density the city wants, and it’s going to destroy our neighborhood.”<sup>16</sup>

***Saving Orenco’s livability***

Though the neighborhood group lost the specific density battle, the conflict set in motion a process that allowed them to win some of the war. Hillsboro city planners began negotiating with Orenco residents to draft an overlay zone—the Orenco Townsite Conservation ordinance—protecting the historic neighborhood from some of the density as well as radical design changes. The Conservation district begins just east of 231<sup>st</sup> on the South side of the LRT line, and extends generally to the Orenco School on the east edge and about eight blocks to the south.

When LRT planning began, Hillsboro’s goal was an average of 45 people per acre near all their LRT stations; by 1996, it was down to 34.5 for Orenco, and most blocks in the historic Orenco townsite would remain well below that because the neighborhood was restricted to single family homes on larger lots.

This was embraced as an important concession by most of the neighborhood residents. Resident Kathy Peck, who had fought the original plan, ended up supporting it enough to go door to door to collect more than 90 signatures in support of it.

The Hillsboro City Council approved the Orenco Station Community Planning Area (SCPA) ordinance in July 1996. The *Hillsboro Argus* commented that the evolution of the ordinance, “with persistent influence by members of Orenco Neighborhood Organization, has spared the old nursery town from the packed-in housing and business development that is headed for the open fields in the same area.”<sup>17</sup>

### ***Pac Trust and Orenco Station***

In July 1995, TriMet broke ground on the Hillsboro extension, in an area just west of Orenco. More importantly to developers, both Butler Road and 229<sup>th</sup> Avenue were under construction north of Cornell Road. These investments were making previously land-locked parcels available for development, and Pac Trust was ready to take advantage. Pac Trust owned a block of land in the Ronler Acres urban renewal district and had also purchased land south of Cornell for later industrial/commercial development, its specialty.

Pac Trust lacked residential development experience, so they partnered with Costa Pacific Homes, a homebuilder. Working with planners at Hillsboro and two other nearby property owners, Pac Trust and Costa Pacific developed a master plan for a 195-acre parcel straddling Cornell Road just north of the MAX station. This master planning process was encouraged by government planners as a way to ensure that TOD principles were built into the plan. The costs of the plan were partially paid for by a grant from the Oregon Transportation and Growth Management (TGM) program.

Costa Pacific conducted an in-depth market study that served as the basis for the five-year development plan. Trying to understand consumer preferences related to TOD, the developers flew people all over the country to look at historic neighborhoods. According to Scott Peterson, Vice President of Construction and Development at Costa Pacific at the time, “it was critical that we create the product that the market was asking for.”<sup>18</sup>

In July 1995, Pac Trust filed papers with the Hillsboro Planning Department for a planned unit development including apartments, single family homes, and a retail town center. In the original documents, the project was referred to as Orenco Gardens. It was eventually changed to its current name, Orenco Station.

### ***The Orenco Station concept development plan***

Pac Trust/Costa Pacific planned to develop in phases to use revenue from each stage to pay for the next part’s construction.<sup>19</sup> In addition, Pac Trust had sufficient resources beyond owning the land and did not have to obtain outside funding.

The project development team was fully supportive of TOD principles. The concept plan called for an Orenco Station residential area and town center, totaling 68 acres with a minimum density of 6.7 dwelling units/acre. There would also be 8.06 acres of open space, including two parks. Homes would be on lot sizes averaging 3,800 square feet.

Putting so many homes on such tiny lots was a radical change for Hillsboro. To put the issue in context, earlier that year in February, the Hillsboro City Council had directed the Planning Commission to begin amending the city’s comprehensive plan and zoning ordi-

**Putting so many homes on such tiny lots was a radical change for Hillsboro.**

**After Alan Ehrenhalt toured Orenco Station he wrote, “The distance between the town center and the train station may be the most troubling feature of this whole ambitious experiment. Bold as they were, Orenco’s designers didn’t dare build the town center right next to the station—and too far from the road. The local merchants would have had no customers other than the immediate residents, making it difficult to survive commercially.”**

nances to create an R-5 zone with a minimum lot size of 5,000 square feet. At the time, the city’s average lot size for single-family homes was just over 7,100 square feet. A limited number of 5,000 square-foot lots were allowed in developments zoned R-6, as long as the average lot size throughout the development was 6,000 SF. An R-5 zone would allow even more homes in subdivisions, which would “help the city meet mandated density requirements”<sup>20</sup> (referring to the pending Metro 2040 plan).

The Hillsboro Planning Commission was underwhelmed by that idea and in late March voted unanimously to reject the R-5 zone. Yet eight months later, in what would become the largest housing development in Hillsboro’s history, the *average* lot size for single-family homes would be 3,800 square feet.

The Orenco Station plan also called for high-density apartments south of Cornell Road near the LRT line, and a shopping center on Cornell near Butler. The overall plan included 1,867 dwelling units on 135.8 acres, for a density of 13.7 units per acre. Subtracting out open space, roads and various easements, the net acreage was 108.22, or 16.9 dwelling units per acre.

The plan included the construction of a condominium-lined 63<sup>rd</sup> Boulevard south from Cornell to the Westside MAX station. That boulevard would lead to a small, upscale restaurant and retail plaza—which was never built. At the time, that location was the site of a planned TriMet Park-n-Ride. But the company hoped to negotiate a land swap with Hillsboro and TriMet to move the parking area (which did occur, as discussed later).

In the area south of Cornell Road, north of LRT, and west of Orenco Station Parkway the plan called for a project known as the Cornell

Pacific Business Park. That project was never built and the land remains vacant today.

Based on Pac Trust’s demographic research, most of the new Orenco Station community residents were expected to be single or divorced heads of households, senior citizen couples, young couples or unmarried family members sharing a home. It was not designed to attract many families, or people with low incomes.

The public open house for Pac Trust’s plan was held at Tualatin Valley Academy on November 14, 1995. Because this was the largest proposed housing project in Hillsboro’s history, it created quite a stir. Pac Trust projected that “by the year 2015 the area could add 19,367 households and easily double Hillsboro’s current population.” Pac Trust still had to wait for the city to adopt the Station Community Planning Areas (SCPAs) for Orenco and the other Hillsboro LRT stops, which was expected to happen in early 1996, but the company was ready to go.

Unfortunately, many others in Hillsboro were not, and this would end up causing delays. With the rollout of the Pac Trust plan and the continuing evolution of city light rail zoning ordinances, the full extent to which neighborhoods were about to be densified was becoming very clear to residents, and many of them didn’t like it.

The February 29, 1996 edition of *The Argus* had a headline that read, “MAX neighbors fight density.” According to the reporter, “With the planning process almost to its destination, some resident neighbors of Westside MAX are feeling railroaded by the process. Jeers from several angry people rose out of a packed crowd Wednesday night as the planning commission opened public hearings on the creation of Station Community Planning Areas.”

Meanwhile the public review of the Orenco Station concept development plan was also moving along on a somewhat parallel track. The first public hearing on the concept plan was held on February 28, 1996. Rudy Kadlub, CEO of Costa Pacific, promoted the plan as “pre-World War II thinking” because of the small lots, front porches on homes, and alley-way garages. He hoped that construction would begin in April of that year.

That forecast proved to be optimistic. The SCPA zoning for Orenco was not adopted by Hillsboro until August 1996.

### ***Construction begins at Orenco Station***

Pac Trust finally began construction at Orenco Station in the fall of 1996. The first project was an auto-oriented apartment complex built by Fairfield Investments, a San Diego-based development company. Fairfield had purchased 17.26 acres within the 195-acre site, and developed a 360-unit apartment complex between Cornell and Butler Roads known as Cortland Village. The density is 20.7 units per acre.

They followed this with another apartment complex, Seneca Village, on an adjacent lot. Seneca includes 245 apartments on 11.79 acres, or 23.3 dwelling units per acre.

The complexes are essentially identical. They both have a fitness center, swimming pool, and resident conference center. Both range from \$740 to about \$1,430 per month in rents, and feature apartments from 815 to 1,520 square feet.

The apartments are between a half-mile and a mile away from the LRT station. They include open parking, carports and (for a fee) private garages. Perhaps most impor-

tantly, they are within easy walking distance of Intel’s Ronler Acres facility, and many Intel employees live in the apartment complex.

### ***Knowing the value of parking***

Although company executives expressed public support for TOD principles, they were very savvy about making sure their Orenco Station projects were auto-friendly. For instance, even though Pac Trust owned property on both sides of Cornell Road, it chose to develop the property between Cornell and Butler first. This was the parcel furthest away from light rail but closest to a good road system.

Pac Trust also negotiated with Hillsboro to get more parking than the minimum amount required in the SCPA zoning code. The developers planned for 1.5 off-street parking spaces for each condominium/townhouse/row house, and 2 spaces for each single family home; city code only required 1.5 and 1, respectively. Pac Trust estimated a total of 416 dwelling units north of Bennett Street, for which city code required 546 off-street spaces. The company actually built 703.<sup>21</sup>

In addition, project managers designed 405 additional on-street parking spaces throughout the site, with most internal streets offering parking on one or both sides of the street. This effectively created another parking spot for each residential unit.

Pac Trust also took advantage of several discretionary sections of the code to increase their parking levels above those deemed the maximum by city planners. Hillsboro was concerned that Orenco Station would violate the maximum parking limits if both off-street and on-street parking spaces were added together. Pac Trust disagreed, as explained in an August 1996 letter from Vice

**Although company executives expressed public support for TOD principles, they were very savvy about making sure their Orenco Station projects were auto-friendly.**

**While the federal government dictated the density at Orenco Station, local governments still had discretion with regard to project design elements. They chose to use that discretion to enact highly prescriptive zoning ordinances. This caused the biggest single problem developers faced in the process: regulatory delay.**

President Richard Buono to Marion Hemphill:

Section 136.XI.B.5 provides that ‘Where a development project includes the construction of new or reconstruction of existing streets, either of which includes the addition of on street parking, the on street parking spaces may, *at the election of the developer* [emphasis in original], be included in the calculation of maximum allowable parking....’ In this case the developer does not elect to have the on street parking count towards the maximum allowable parking.

Section 136.VIII.A provides that ‘The product of formulas and calculations used to determine requirements, averages and standards called for in Sections 136 through 142 [Station Community Planning] shall be rounded to the nearest whole number.’ When we were reviewing the draft code together and you had put the 0.9 parking space maximum per bedroom in Table 3 of Section 137 I asked you if that meant that a 2 bedroom house could have a 2 car garage and I recall you stated that you agreed that was the case.<sup>22</sup>

The developers were always aware of how important auto use would be to their clients. As Pac Trust President Peter Bechen summarized, ‘At Orenco Station, Pac Trust successfully argued for more parking and slightly larger lots than planners originally envisioned.’<sup>23</sup>

The first residences were sold in the fall of 1997. Though much of the project still remained to be built out and nothing had actually been developed near light rail, Orenco Station began

getting a steady stream of planning awards. At the 1998 National Homebuilders International Show, Orenco Station won six national awards including Master Planned Community of the Year.<sup>24</sup> The development also won the 1998 Governor’s Livability Award and was commended by then-Vice President Al Gore, who visited Hillsboro in October 1998 as part of the Westside MAX inauguration ceremonies.<sup>25</sup>

Alan Ehrenhalt, executive editor of *Governing Magazine*, referred to Orenco Station as ‘perhaps the most interesting experiment in New Urbanist planning anywhere in the country’ when he visited it in late 2000.<sup>26</sup>

Probably the most notable feature of Orenco Station is the retail town center. Four city blocks were built to resemble a Brooklyn or San Francisco neighborhood, with narrow streets and multi-story buildings that feature bay windows, ground-floor retail and residential units on top. The Town Center opened in June 1999, with 55,000 square feet of commercial space. Off the Vine wine shop was the first store to open, followed by a Starbucks, a dental office and an eyewear shop. The Town Center also has three up-scale restaurants. The developers sought a small grocery store for several years and finally succeeded in landing a New Seasons grocery market in 2001.

There are 22 lofts located above street level office, restaurant and retail space. They range in size from 700 to 2,000 square feet, and are priced from \$129,900 to \$350,000.

The 28 live/work town homes feature a two-story town home above with office or retail space below at street level. They include 2,300 square feet, and sell for \$373,400 to \$419,900.

In the residential neighborhood, the detached cottages attempt to replicate early 20<sup>th</sup> cen-



tury development, including Craftsman-style exteriors, front porches, alleyway garages, small lots, and front doors built close to the lot line. The homes range in price from \$235,000 to \$359,000.

New luxury rowhouses opened in May 2002. The three-story brownstone homes seek to replicate the “elegance and charm of Washington D.C.’s historic Georgetown neighborhood.”<sup>27</sup> They range in size from 1,640 to 2,166 square feet, and start in the \$280,000 range.

When completed, Orenco Station will include 1,824 residential units on 145 acres.

### ***The Crossroads at Orenco Station***

Across the road from Cortland Village, on the south side of Cornell near Butler Road, Pac Trust built The Crossroads, a 50-acre commercial center with a mixture of retail and office space. The anchor tenants are two large discount stores, WinCo and G.I. Joes, which opened for business in August 1998. Other retailers include a Shell Oil service station, U.S. Bank, Washington Mutual Bank, Blockbuster Video, Walgreen’s Drugstore and Carl’s Jr. Eventually there will be as much as 450,000 square feet of retail space.

Though the name of the center piggy-backs on the transit-oriented image of Orenco



***Orenco Station Development as seen from the TriMet light rail station.***

Station, it is designed for suburban motorists. The stores are serviced by a large parking lot in the front that has over 1,000 spaces. The four retailers closest to Cornell Road—Walgreen’s, Carl’s Jr., and the two banks—all feature convenient drive-thru lanes. The center is .7 miles from the LRT station, beyond normal walking distance for transit users.

### ***Club 1201***

Simpson Housing owns the land just north of the LRT station (but south of Cornell Road) and originally planned a comprehensive development of 804 multifamily units on 31.8 acres to be called The Villages at Orenco Station. The only piece of this plan that has been completed, or even started as of March 2003, is East Village, now known as Club 1201. Located east of Orenco Station Parkway, Club 1201 consists of 210 one, two and three-bedroom Town homes in 21 buildings of 10 units each. The dwelling units average 1201 square feet each, thus the name “Club 1201.” Grading for the project began in August 1997 and the first units were completed in March 1999. The project started as an apartment complex but changed to condominiums during construction in November 1998 and was sold out in 2001.<sup>28</sup>



***The entrance to Orenco Station town center.***

**Ironically, Club 1201 has received virtually no public acclaim, but it is the only project within the Orenco Station complex that is actually close to the LRT stop. At its southern end the project is approximately 100 yards from the station. Its more famous cousin, the Orenco Station Town Center, is at least 500 yards north of light rail.**

**Government planners used both carrots and sticks to get the project designs they wanted. On the incentive side, Orenco Station was subsidized with a \$500,000 federal Congestion Mitigation Air Quality (CMAQ) grant and Hillsboro provided over \$1,000,000 from the county's Traffic Impact Fund (TIF) fees to compensate for infrastructure investments.**



*Arbor Gardens as seen from the light rail station in November 2002.*

Ironically, Club 1201 has received virtually no public acclaim, but it is the only project within the Orenco Station complex that is actually close to the LRT stop. At its southern end the project is approximately 100 yards from the station. Its more famous cousin, the Orenco Station Town Center, is at least 500 yards north of light rail.

### ***Arbor Gardens***

Though Westside MAX opened in September 1998, by 2000 there was no development of any kind immediately south of the LRT station. It was simply a large grassy field. The 82.6-acre site was owned by Toshiba, which had originally purchased it for construction of a computer chip plant. Changes in the world market for computer chips altered those plans, and in 1999 Toshiba reached a tentative agreement with Costa Pacific Homes to sell the property. Costa Pacific did considerable planning for the site and even filed a concept plan with the city of Hillsboro under the name Orenco Station South. However, the deal with Toshiba fell through and in 2000 the site was sold to West Hills Development, the largest homebuilder in the Portland area.

West Hills filed a concept development plan with Hillsboro in 2000 under the name Orenco Gardens, though billboards there

currently advertise it as Arbor Gardens. The plan includes 808 housing units. There will be 139 rowhouses, 405 single-family homes, 264 units of apartments and 10.82 acres of “open spaces” including parks and buffers for wetlands (the true acreage is less because this figure includes a 50 percent “credit” for the wetland buffers<sup>29</sup>).

The planned Orenco Gardens apartments will be the closest units to LRT, starting immediately adjacent to the south of the station. The 264 units on 10 acres are projected to cost \$19.5 million.<sup>30</sup> The developer of that segment, Trammell Crow, will be building at a density of 26 units per acre, making it the densest project the company has done in Oregon. The typical density for such a project is about 22 to 25 units per acre. This high density is required so that the entire Arbor Gardens project will meet the density requirement for the Station Community Residential Village zoning designation (24 units per acre within 1300’ of a station and 15 units per acre within 2600’ of a station).<sup>31</sup>

### ***Conflicts with neighbors***

Virtually all of the surrounding neighbors, including Simpson Housing, Pac Trust and individual homeowners, had concerns with the West Hills concept plan. As originally proposed Arbor Gardens would have included 426 single-family homes, 129 three-story rowhouses and 250 to 300 apartments in two- and three-story buildings.

Many of the neighbors complained about the effects of building high density. They were concerned primarily about traffic, school crowding, and storm water runoff. Pac Trust was concerned about the appearance of the proposed subdivision, its overall design and lack of recreation opportunities.

In February 2001 the Hillsboro Planning Commission approved a revised plan for Arbor Gardens that addressed some, but not all, of the previously expressed concerns. The developer upgraded the architecture to make it more pedestrian-friendly and will have to meet 76 conditions, including uniform fences throughout the development, 10 acres of open space, no vinyl siding, and a certain percentage of homes with Craftsman detailing to better match the type of homes found at Orenco Station.

**Stonewater at Orenco**

Another project currently underway is Legend Homes’ Stonewater at Orenco. Stonewater is a 370 unit subdivision of single-level condominiums, dual-level townhouses and attached homes, being developed on NW Cherry Drive (east of NW 231<sup>st</sup> and immediately north of the LRT line). Prices will range from \$140,000 to mid-\$200,000 and sizes range from 900 square feet to 1,600+ square feet.

Like other projects close to the Orenco/ 231<sup>st</sup> LRT stop, backers of Stonewater market themselves as transit-oriented, claiming that it is merely a “five minute walk” to the LRT station. In fact, however, the closest homes to light rail are at least 700 yards away, and most transit riders would find it far more convenient to simply drive to the free Park-n-Ride, especially in the rainy winter.

Stonewater celebrated its grand opening on July 27, 2002, and is still being built out.

**Analysis**

**Development patterns around Orenco Light Rail Station**

The clearest indication of the true nature of the developments near the light rail stop at Orenco lies in the pattern of development in the years since the project began in 1995.

**Cheryl Twete, Senior Development Manager at the Portland Development Commission, . . . describes CMAQ as a tool available to complete developments favored by planners. When interviewed, she was not particularly concerned that the actual use of the grant monies was unrelated to the proposal that had been tentatively approved.**



Figure 1 - Arbor Gardens planned layout.

**If light rail is an essential feature of TOD, then residents living near the station should be using light rail regularly and walking to and from the station. The data show just the opposite.**



*Improved pedestrian access to light rail from Orenco Station during a weekday rush hour.*

Development occurred early and thrived north of Cornell Road, while large parcels adjacent to the LRT station have remained empty or are just now being graded for future development.

The photo above, in addition to showing the improved pedestrian walkway between the rail station and Orenco Station development, shows part of the three large parcels just north of the light rail station that remain empty fields of wild grass and weeds. Pac Trust sold these 15 acres, intended for multifamily housing, to Simpson Housing in 1997 because Pac Trust didn't want to get into the apartment business.<sup>32</sup>

The properties, assessed at \$3.23 million,<sup>33</sup> have been the subject of "about 10 different feasibility studies"<sup>34</sup> according to Greg Arms, Simpson Housing development manager and vice president. Arms indicated that Simpson tried to sell the properties but got no offers and is now looking once again at building on the site. He speculates that construction might begin in the summer of 2003 on about 400 units and notes they would still like to sell the five-acre parcel to the east to a condo developer though no negotiations are underway.

While these properties just north of the LRT stop remain untouched the large parcels south of the station only attracted development interest during late 2002. The photo below shows the activity just south of the light rail station while the planned layout of Arbor Gardens, shown in Figure 1,<sup>35</sup> indicates this area is intended for "Future Multifamily."

To illustrate the pattern of development around Cornell Road and the absence of development around the light rail station the following figures show the progression of development since work began on the Westside MAX in the summer of 1993. In these four figures we can see how the land near Orenco light rail station and Cornell Road has been developed including both TODs and other residential and commercial parcels.

The first graphic in Figure 2 shows developed land prior to Westside light rail construction. Figure 3 shows land developed since light rail construction began and includes the Orenco Station development and the first phase of Arbor Gardens. In Figure 4 this information is updated to include areas currently under development. An area was considered under development if any foundation or structure had been started. Figure 5 shows all this data



*Property south of the Orenco/231<sup>st</sup> LRT station in October 2002.*

plus the land parcels remaining undeveloped as of April 1, 2003.

The development along or near Cornell Road includes a variety of residential and business sites. Orenco Station itself is most closely aligned with this major road rather than with the LRT station.

Another automobile-oriented project is the Marriott TownePlace Suites Hotel near Orenco Station, a 136-suite hotel built on Cornell Road at 229th. The area is part of what is planned to become the Orenco Station Commercial and Retail Center, a 50-acre development in the Orenco Station Community Plan. The hotel offers complementary parking.

Two conclusions jump out from these graphics. First it appears to be Cornell Road—along with extensions of Butler Road and 229<sup>th</sup> Street—rather than the light rail line that has attracted the lion's share of development in the eight years since construction began on the Hillsboro extension of MAX.

Second, the land adjacent to the light rail station on the north side remains undeveloped, undermining the arguments of light rail advocates that the rail transit is a “catalyst” for development.

The preference of developers (and implicitly their customers) to build near roads, not rail, is acknowledged even by some TOD supporters. After Alan Ehrenhalt toured Orenco Station he wrote:

The distance between the town center and the train station may be the most troubling feature of this whole ambitious experiment. Bold as they were, Orenco's designers didn't dare build the town center right next to the station—and too far from the road. The local merchants would have had no customers other than the immediate residents, making it difficult to survive commercially.<sup>36</sup>

### ***The role of government planning***

Advocates of TOD assert that there is a consumer demand for transit-friendly designs,

**According to the survey, released in early 2002, 74.9 percent of Orenco Station residents describe themselves as “car-only” commuters.**

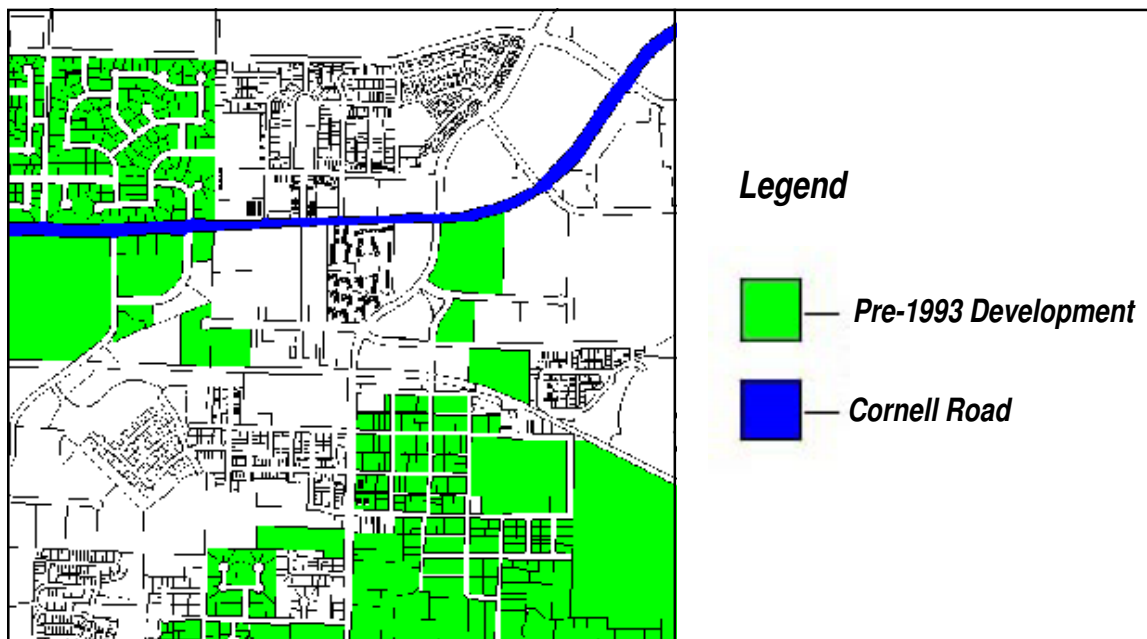


Figure 2 - Development near the Orenco/231<sup>st</sup> LRT station prior to 1993.

**Portland State University graduate student Michael Lapham did a trip generation and mode split analysis of eight light rail TODs, including Orenco Station, in 2000. His analysis showed that the mode split for Orenco Station trips was 82 percent auto, 11 percent light rail, and 7 percent walk/bike.**

but the experience at Orenco suggests that extensive government involvement is necessary to produce high-density projects in suburban settings.

*The federal role*

The Hillsboro extension did not initially qualify for full federal funding due to a projected lack of ridership. Desperate to get the money, TriMet lobbyists came up with the idea of tying local land-use decisions to the funding agreement, in order to guarantee that there would be sufficient density near the LRT stations. They therefore ceded an extraordinary amount of control to the federal government, executed in Attachment 10 of the Full Funding Agreement (FFA) for the LRT Hillsboro Extension.

The FFA was signed by the Federal Transit Administration (FTA) and TriMet on November 14, 1996. In exchange for guaranteeing high-density zoning around all Westside stations, TriMet received \$530,276,986 in federal transit funds, which covered the

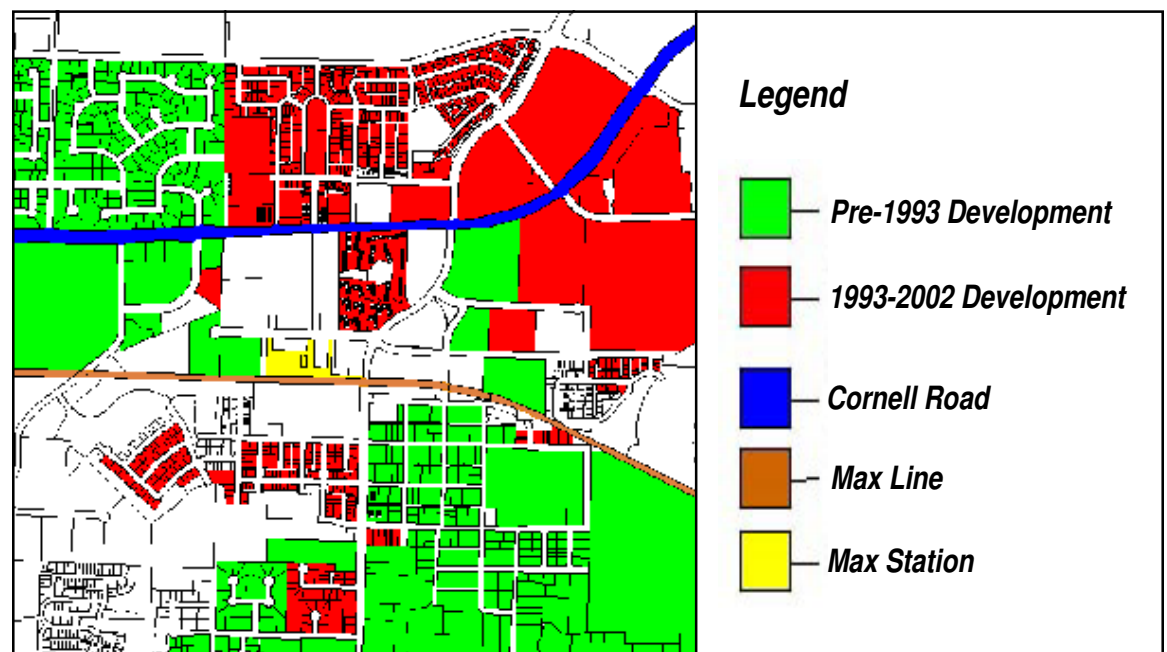
Hillsboro extension as well as other portions of the Westside line.

Attachment 10 opens with the following preamble:

The Government and the Grantee recognize that the success of the extension of the Westside LRT project to Hillsboro will depend, in large measure, on local implementation and enforcement of long-term urban containment policies that lead to transit-supportive land use patterns in the Westside-Hillsboro corridor.<sup>37</sup>

Then the agreement lists four conditions that TriMet—and implicitly the jurisdictions of Beaverton, Hillsboro and Washington County—had to comply with.

The first was that LRT funding by the federal government was conditioned upon “enactment of the current version of the Region 2040 Concept Plan,” the 50-year land-use and transportation plan drawn up by Metro that



*Figure 3 - Development patterns near the Orenco/231<sup>st</sup> LRT station, 1993 - 2002.*

mandated high density development in transit corridors, and forced local governments to accept jobs and housing “targets.” These targets were later used in LRT station area planning debates to justify densities and parking ratios that were generally infeasible in the marketplace and opposed by existing neighborhoods.

The 2040 “Concept Plan” had been approved by Metro in December 1995, but the 2040 “Functional Plan,” which would actually create the legal mechanisms to enforce the concept, was still pending at the time the FFA was signed. One month later, the Metro Council adopted the Functional Plan on a 4-3 vote.

The second condition stated:

Grantee agrees and promises to take any and all actions, within its powers, as may be reasonable and necessary to ensure local adoption of the detailed Region 2040 Framework Plan; to ensure that all cognizant local governments in the vicinity of the Hillsboro

extension continue to comply with the Framework Plan; and to ensure that the Framework Plan is maintained, without any substantial changes in transit station areas that would adversely affect transit ridership, for a period of no less than five years following the completion of the Hillsboro extension, now estimated for September 1998.<sup>38</sup>

The third condition required TriMet to take “any and all actions, within its power” to ensure adoption of local land-use plans and implementing ordinances necessary to carry out the 2040 Plan.

The fourth and final condition required TriMet to do everything possible to implement the state’s Transportation Planning Rule (TPR), which had been enacted by the Land Conservation and Development Commission in 1992. The purpose of the TPR was to reduce automobile driving, and the rule included specific mandates for the four largest urban areas of the state to reduce local vehicle miles traveled by 20

**While having 23.7 percent of transit riders arrive by foot is respectable for a suburban location, it’s clear that ridership at the Orenco stop is dependent on the free TriMet Park-n-Ride. Without that, there would only be 15-20 boardings per hour at the peak.**

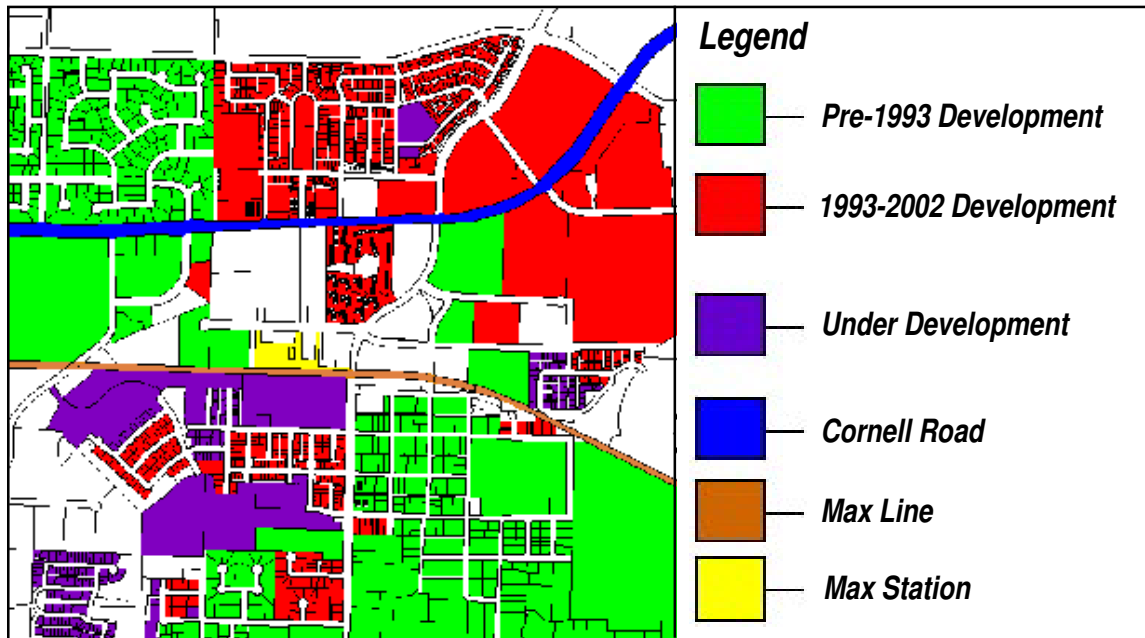


Figure 4 - Land near the Orenco/231<sup>st</sup> LRT stop, including land being developed as of 2003.

The dominant use of the Parkway by motorists rather than pedestrians suggests that spending large amounts of money on extra-wide sidewalks, park benches and ornamental street lighting near transit is of dubious value.

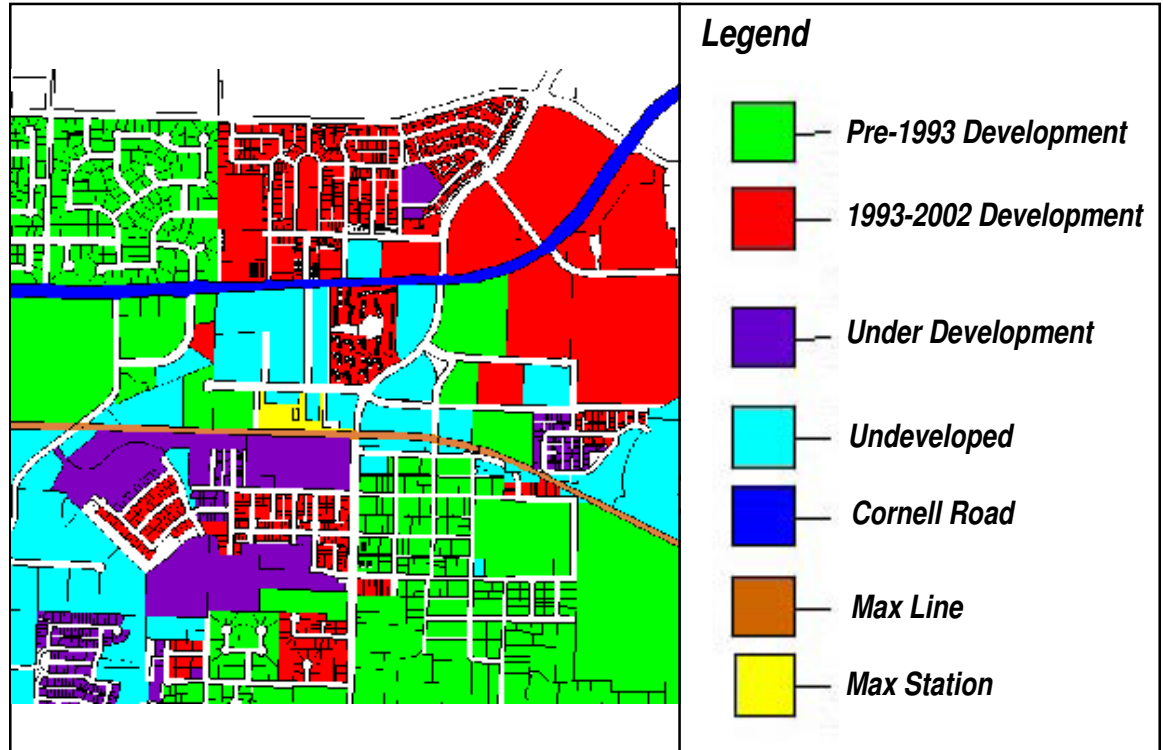


Figure 5 - Orenco Station area including undeveloped land.

percent and reduce parking over a period of several decades.

Once the FFA was signed and the federal cash spigot turned on, both TriMet and Metro used the agreement as leverage in their efforts to force high density development along the LRT line. TriMet general manager Tom Walsh, Metro executive Mike Burton, and Metro transportation manager Andy Cotugno repeatedly referenced the “conditions of federal LRT funding” in letters, memos and media interviews during the mid-1990s to pressure local elected officials into approving high-density zoning that was generally unpopular with local residents.

*Local government role*

While the federal government dictated the density at Orenco Station, local governments still had discretion with regard to project design elements. They chose to use that discretion to

enact highly prescriptive zoning ordinances. This caused the biggest single problem developers faced in the process: regulatory delay. It took two years to develop the zoning in conjunction with Hillsboro, Metro and Washington County. Debbie Raber, planning supervisor at Hillsboro, explained that Orenco Station was not a standard project and it took a long time to develop, especially to work out the details, which ranged from zoning to locating utilities.

These delays increased costs for the developers. When asked at the time (1999), Pac Trust’s Peter Bechen said, “It hasn’t been easy.”<sup>39</sup> Scott Peterson of Costa Pacific was harsher in his assessment, saying, “It is absolutely horrible.”<sup>40</sup>

Under Hillsboro’s code for LRT stations, there are 14 different zones, and the code establishes the floor-area ratios, minimum setbacks, building heights, and parking ratios. Sidewalk widths and planter strips are pre-



scribed in precise detail. Individual developers have very little discretion about density or design.

Projects which came later in the process were easier to move forward, as the regulatory framework was already in place. Steve Bair, general manager of Great West Contractors, LLC, a subsidiary of Simpson Housing and the company that built Club 1201, reported a good experience with local planners during the development. He gave the whole process “an 8 out of 10.”<sup>41</sup>

### *Subsidies*

Government planners used both carrots and sticks to get the project designs they wanted. On the incentive side, Orenco Station was subsidized with a \$500,000 federal Congestion Mitigation Air Quality (CMAQ) grant and Hillsboro provided over \$1,000,000 from the county’s Traffic Impact Fund (TIF) fees to compensate for infrastructure investments.<sup>42</sup> There were also smaller subsidies for planning, including the \$230,000 Metro spent on Peter Calthorpe’s eight TOD designs (including Orenco), and the TGM grant for the Orenco Station master planning process.

### *The CMAQ grant*

The Congestion Mitigation Air Quality (CMAQ) grant program was created as part of the Intermodal Surface Transportation Efficiency Act (ISTEA), passed by Congress in 1991. The stated purpose of the program is to “provide funding for surface transportation and other related projects that contribute to air quality improvements and congestion mitigation.”<sup>43</sup>

During the initial 1992-1997 CMAQ Program period, a total of \$6 billion was available for projects nationwide. In the Portland

region, CMAQ funds are administered by Metro. Prospective projects must go through a competitive grant process.

According to the TriMet Community Building Sourcebook, the Orenco Station TOD project received a \$500,000 CMAQ grant for “pedestrian enhancements to LRT station crossing.”<sup>44</sup> This description corresponds to the first two priority items in the CMAQ proposal from Pac Trust submitted on April 4, 1996. It turns out, however, that these project items were not funded with CMAQ monies. Instead that money paid for a parking lot.

The first hint that things were not as portrayed by TriMet came when Cascade spoke with Marion Hemphill, the project manager responsible for CMAQ grants during Orenco planning. He said, “I forget what we said we spent that for.”<sup>45</sup> After considerable digging, the following story emerged:

In the original Orenco/231<sup>st</sup> LRT station design the Park-n-Ride lot and the pedestrian access to the trains shared a single lot where the loop road now sits. In Pac Trust’s view this cut off access to the station, and they financed and advocated a redesign of the station to accommodate moving the Park-n-Ride lot and making the drop-off and pedestrian access easier. This change was to be implemented by TriMet but paid for by Pac Trust. The experience of other TOD projects with CMAQ funding requirements (such as with Steele Park, a Westside MAX project to be discussed in a separate TOD profile) led the parties to divert the CMAQ funds directly to TriMet for the new Park-n-Ride and have Pac Trust build the pedestrian improvement and crossing changes out of their own funds.

Richard Buono, Vice President of Pac Trust, provided the following chronology:<sup>46</sup>

**The private shuttles run for long hours, burning fuel and adding to local auto-related air pollution. Some of them have high levels of energy consumption per passenger-mile because many of the runs have few passengers.**

**Ann Mlynarczyk of the Washington County Traffic Engineering department provided the data and commented, “The main effect we have seen from MAX is taking people off buses and putting them on trains, not changing their mode of transportation from cars to transit.”**

April 5, 1996 — Pac Trust submits 90 page, \$1,925,000 CMAQ proposal for 10 projects in the Orenco Station development.

June 3, 1996 — In a letter to Dave Lawrence of Pac Trust \$500,000 is promised for improvements to what was then N.E. 63<sup>rd</sup> Parkway (now Orenco Station Parkway) and the pedestrian crossing at Cornell Road.

Dec. 12, 1996 — Richard Buono communicates to Christine Hermann of the Portland Development Commission (PDC) Pac Trust’s desire to instead apply the CMAQ funds to a redesign of the light rail station’s Park-n-Ride lot.

Dec.18, 1996 — In a letter from Christine Hermann to Richard Buono the CMAQ steering committee approves a grant of \$500,000 for the redesigned Park-n-Ride.

Jan. 10, 1997 — In a letter from Tuck Wilson of TriMet to Richard Buono the redesign is confirmed “to accommodate Pac Trust’s development to the north of the redesigned Park-and-Ride lot.”

March 4, 1997 — An agreement between Pac Trust and PDC confirms the conditions and a final invoice is issued.

Cheryl Twete, Senior Development Manager at the Portland Development Commission, who was the administrator of CMAQ funds until that function was taken over by Metro, describes CMAQ as a tool available to complete developments favored by planners. When interviewed, she was not particularly concerned that the actual use of the grant monies was unrelated to the proposal that had been tentatively approved,<sup>47</sup> and blamed it on federal restrictions that made it difficult to spend CMAQ funds on TOD projects.

### ***Assessing the performance of the Orenco Projects as Transit Oriented Development***

If light rail is an essential feature of TOD, then residents living near the station should be using light rail regularly and walking to and from the station. The data show just the opposite. Few local residents use light rail, and those who do arrive at the station primarily by driving the short distance from their homes.

Orenco Station is built to rely on easy automobile access to Cornell Road. The highly-publicized Town Center is located some 500 yards north of the rail stop, while most residential units are even further to the north and east.

Orenco Station residents are primarily automobile commuters. Professor Bruce Podobnik of Lewis & Clark College worked with his students to conduct a survey of Orenco Station residents. According to the survey, released in early 2002, 74.9 percent of Orenco Station residents describe themselves as “car-only” commuters.<sup>48</sup>

Portland State University graduate student Michael Lapham did a trip generation and mode split analysis of eight light rail TODs, including Orenco Station, in 2000. His analysis showed that the mode split for Orenco Station trips was 82 percent auto, 11 percent light rail, and 7 percent walk/bike.<sup>49</sup>

Moreover, few of the Orenco Station residents who do use MAX actually walk there. During a three-hour observation of commuters made on a sunny weekday morning in March 2002, only 18 pedestrians were observed walking the 500 yards either to or from the Town Center to LRT between the hours of 6:30 and 9:30 a.m., and only two people were seen walking from the condominiums at Club 1201 (the residential unit closest to LRT). An additional seven commuters walked to MAX along 229<sup>th</sup> Street.

A second observation was made on Thursday, August 15, 2002. The authors monitored all transit boardings at the Orenco LRT station between 6:00 and 8:00 a.m. It was a beautiful morning, clear and 58° at six o'clock. We counted the number of people arriving for MAX trips and their mode of arrival. The results are summarized in Table 1.

The 122 people arriving by car included the 56 cars that parked in the Park-n-Ride lot or in other nearby free parking and a similar number of cars dropping people off and continuing on elsewhere.

In addition, one person was driven to the station, took her bicycle out of the pickup truck and walked it onto the train. Another driver circled through the drop-off loop in the wrong direction looking extremely lost.

While having 23.7 percent of transit riders arrive by foot is respectable for a suburban location, it's clear that ridership at the Orenco stop is dependent on the free TriMet Park-n-Ride. Without that, there would only be 15-20 boardings per hour at the peak.

We observed some features of the arrival traffic that warrant consideration in future TOD planning. The Orenco Station Parkway, recipient of much attention and upgrading as part of the "pedestrian friendly" design, is mostly used by motorists driving to the Park-n-Ride. Many pedestrians walked to the station via the much narrower 229/231<sup>st</sup> Avenue, which actually has no sidewalks near MAX and is flanked by deep drainage ditches on both sides. Eleven of the 41 pedestrians arriving at MAX came from the east where they might have walked from housing further east or south, or they might have been dropped off by car or gotten off the bus stopping on 231<sup>st</sup> at the LRT crossing.

The expensive improvements that were made to Orenco Station Parkway in 1997-98 were advocated by Peter Calthorpe when he did his eight design plans for Westside MAX stations. At the time he said, "We've invested a billion dollars in this [MAX] line. We should showcase it, not stick it at the end of a meandering road",<sup>50</sup> referring to 229/231 Street. It is indeed showcased, but the dominant use of the Parkway by motorists rather than pedestrians suggests that spending large amounts of money on extra-wide sidewalks, park benches and ornamental street lighting near transit is of dubious value.

#### *Hidden subsidies: Private sector shuttles*

The alleged benefits of TOD near light rail are diminished by the extensive reliance on private shuttles and subsidized transit passes provided by three large employers: Intel, Sitel and Norm Thompson. The private shuttles run for long hours, burning fuel and adding to local auto-related air pollution. Some of them have high levels of energy consumption per passenger-mile because many of the runs have few passengers.

The shuttles are also expensive and amount to a private sector subsidy to the LRT program.

The Sitel shuttle runs every half hour from 5:15 a.m. to 12:45 p.m. and from 1:33 p.m. to 9:03 p.m. Sitel officials estimate the average occupancy of each shuttle to be three to four passengers. The distance between Sitel and the Orenco LRT stop is one mile. The company pays for the buses and employees purchase subsidized TriMet passes from Sitel. Management considers the shuttle system to be an added benefit for employees, though clearly one that is unevenly distributed among the Sitel workforce.<sup>51</sup>

**The traffic increases on Cornell are not surprising because three separate traffic impact analyses done in the past seven years all predicted significant increases in local traffic, even after netting out the effect of transit use.**

**Transit planners clearly knew in 1995 that the densities they were going to impose on future development near the Orenco/231<sup>st</sup> station would result in substantial traffic increases . . . . Nonetheless, Hillsboro adopted high-density zoning ordinances and TriMet continued to tout transit-oriented development as a strategy for reducing traffic.**

The Intel shuttle runs every few minutes from 6:00 a.m. to 10:00 a.m. and from 4:20 p.m. to 8:20 p.m. Mark Gormin, Intel’s in-house Transportation Demand Management (TDM) manager, doesn’t know how many people ride each day, nor is he able to disclose fuel consumption. Intel originally gave away TriMet passes to employees to help increase transit use, but they had to reduce this benefit to a 50 percent discount because the cost of that program and the shuttle itself are high.

Gormin commented, “Without the shuttles employees on the Westside would not ride. Ridership would drop 60 to 70 percent.”<sup>52</sup> This points to an obvious problem with building TODs in suburban settings: virtually all development surrounding the rail line is built at low density, serviced by an extensive network of roads. Once people get off the train, they generally need motorized transport to get them to their next destination.

The Norm Thompson shuttle runs every 15 minutes from 6:30 a.m. to 9:00 a.m., and between 3:30 p.m. to 5:30 p.m. The company claims the shuttles carry an average of 14 passengers per day, or approximately one passenger per trip. During the company’s peak season (September-January) shuttles run from 4:00 a.m. to 10:00 p.m., averaging over 100 boardings per day. The shuttle travels a round trip distance of 4 miles, and total miles traveled for February 2002 was 776 miles. On the morning of our most recent traffic counts (August 15, 2002) the shuttle was stopped in front of the station for most of the two-hour observation period and collected a total of two passengers.

The Norm Thompson representative we spoke with was not sure who pays for the shuttle, but believes that a federal grant was awarded at some time. Employees receive free annual TriMet passes (retail value: \$615) from Norm Thompson.<sup>53</sup>

Arrived at Station	Number
By car	122
By bus	8
On foot	41
On bicycle	1
In wheelchair	1

*Table 1 - Traffic study for Orenco/231<sup>st</sup> LRT Station boarders.*

*Effects of light rail on Cornell Road traffic volumes*

Washington County conducts traffic volume surveys to monitor the flow of automobile traffic and measure transportation needs. Traffic on Cornell Road has been monitored at 231 Street for the years 1994-2002 and should show what effect, if any, the opening of Westside MAX has had on traffic volume. Because getting cars off the road is one of the goals of TOD planning this should be a good indication of how well this goal is being met.

Data obtained from Washington County are plotted in Table 2.<sup>54</sup> The volume represents a 24-hour snapshot of all traffic passing the monitoring points. In this case two monitoring points on Cornell Road were used, one .10 miles east of 231 Street and one .10 miles west of 231 Street. The plotted data show the average of the two stations for years where both measurements were available. It is impossible to discern any improvement due to MAX. Ann Mlynarczyk of the Washington County Traffic Engineering department provided the data and commented, “The main effect we have seen from MAX is taking

people off buses and putting them on trains, not changing their mode of transportation from cars to transit.”<sup>55</sup>

### *Planning for congestion*

The traffic increases on Cornell are not surprising because three separate traffic impact analyses done in the past seven years all predicted significant increases in local traffic, even after netting out the effect of transit use. The first was published in November 1995 by DKS Associates for the SPCA process. DKS modeled three different planning scenarios: Scenario 1 projected land densities at then-current trends; Scenario 2 assumed Region 2040 Concept expectations for much higher densities; and Scenario 3 modeled densities predicted in the Hillsboro Comprehensive plan, a lower-density plan than 2040.

The consultants assumed that the three scenarios represented “the study area lands at build out conditions meshed with regional conditions in the year 2015. Each of these scenarios was analyzed using a consistent future circulation network for the study area.”<sup>56</sup>

The DKS consultants looked at the 2015 enhanced road network intersection capacity with maximum five-lane mitigation measures, and found that Scenario 2—the 2040 concept—would require more intersection mitigation measures to maintain acceptable levels of traffic than Scenario 1 or the Comprehensive Plan.

DKS Associates looked at the average daily traffic (ADT) on the key roadways in the study area and then projected them in the year 2015 for each scenario. The results are summarized in Table 2. The consultants noted that “future scenarios average daily traffic is much higher than the existing ADT.

Scenario 2 ADT is significantly higher than the Comprehensive Plan and Scenario 1 land use alternative ADT.”

The consultants discussed the effects that the high densities of the 2040 plan would have on local traffic: “Scenario 1 and Comprehensive Plan land uses have about 400 less vehicles per hour (VPH) on Cornell and 500 VPH less on Baseline Road in even peak hour (both directions) compared to Scenario 2. The vehicle traffic volumes are reduced due to lower land use development totals within the study area. The outcome of these reduced peak hour volumes is less need for intersection modifications.”

DKS concluded its analysis noting that one way to mitigate traffic would be “scaling back the intended density which would reduce the demand adequately to address the major intersections on Cornell Road.”

Aware that Metro’s planning was driving land-use policy in the region, the consultants advised, “If the land use densities should be reduced to avoid substantial major infrastructure investment, it will require coordination with Metro 2040 needs and be a part of a refinement process of the LRT station area plans. This may be accommodated by a hybrid land use between Comprehensive Plan/ Scenario 1 and Scenario 2.”

Transit planners clearly knew in 1995 that the densities they were going to impose on future development near the Orenco/231<sup>st</sup> station would result in substantial traffic increases, requiring expensive mitigation measures at key intersections. Nonetheless, Hillsboro adopted high-density zoning ordinances and TriMet continued to tout transit-oriented development as a strategy for reducing traffic.

**The Club 1201 Home Owner Association has published newsletters bi-monthly since late 2001 and nearly every newsletter contains items detailing the many problems residents have with parking.**

Nonetheless, it is difficult to be too critical of the developers, because they are under intense pressure by regulators to under-build parking.

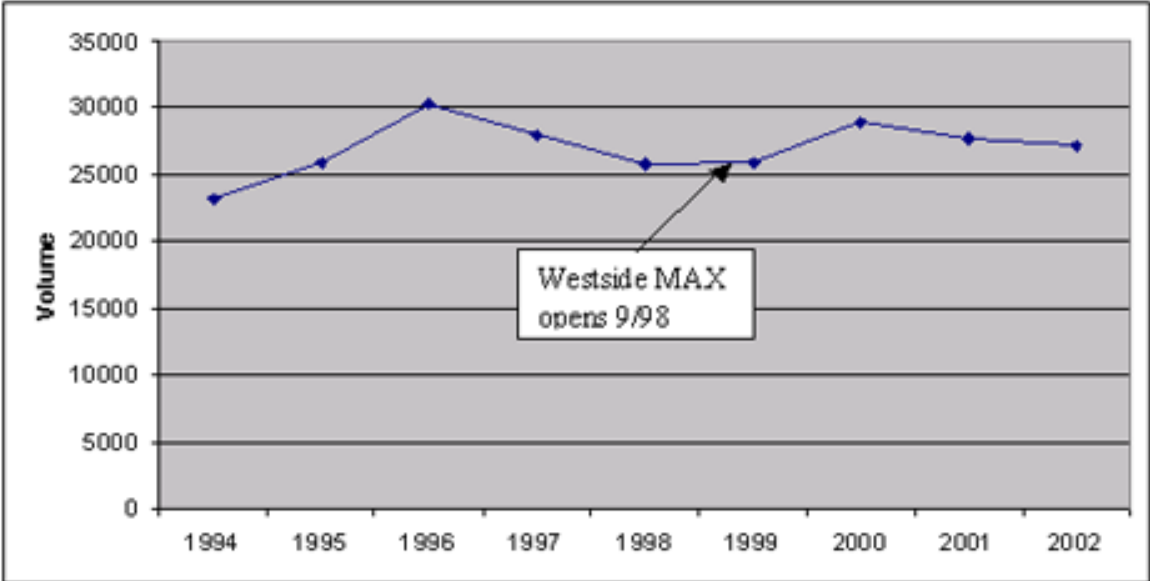


Table 2 - Traffic volume on Cornell Road at 231 Street before and after light rail.

The next traffic impact analysis was performed by Kittleson and Associates, in conjunction with Alpha Engineering on behalf of Pac Trust, as part of the Orenco Station Concept Development Plan. It was submitted to Hillsboro on August 27, 1996, eight months after the DKS Associates report. The Kittleson study concluded that the proposed Orenco Station project would generate approximately 5,945 daily trips at full build-out. After accounting for internal, pass-by, and pedestrian/transit trips, the project would generate approximately 350 net new trips at the weekday morning peak and 570 weekday afternoon peak trips on the local road system.

It's possible that the Kittleson traffic estimates will prove to be slightly over-stated. They estimated that 15 percent of all peak hour trips from residential units within Orenco Station would be pedestrian or transit trips. Michael Lapham's PSU study showed a mode split of 18 percent for transit/pedestrian/bike trips.

The final traffic analysis was done as part of the Concept Development Plan for the Ar-

bor Gardens project on the south side of the Orenco LRT station. The consultants predicted an average of 6,000 weekday one-way vehicle trips generated by the development, after accounting for light rail trips.

Combined with the Orenco Station project, this would lead to an increase of approximately 11,945 daily trips on the local road system compared with baseline conditions of 1995.

*Parking conflicts*

As stated earlier, Pac Trust succeeded in building generous amounts of parking within the Orenco Station town center and residential units north of Cornell Road. However, Simpson Housing apparently was not as successful with the Club 1201 project near the LRT station. Each of the 21 buildings in Club 1201 has 12 garage parking spaces for the 10 units and the entire site shares an additional 39 visitor/overflow spaces on site, for an overall project parking ratio of 1.39 spaces per dwelling unit. This is low not only by Washington County standards but even in comparison with other Portland suburban TODs. For in-

stance, at the LaSalle mixed-use apartment complex next to the Beaverton Creek LRT station, the parking ratio is 1.8 spaces per unit.

The Club 1201 Home Owner Association has published newsletters bi-monthly since late 2001 and nearly every newsletter contains items detailing the many problems residents have with parking. Even with currently-available offsite overflow parking, residents and their guests have been filling the shared parking, parking in front of their neighbors' garages, and in emergency and loading zones. As a result, the Home Owners Association has been looking into the possibility of requiring resident parking permits.<sup>57</sup>

*Parking at Arbor Gardens*

The planned parking for residents and guests at the Arbor Gardens apartments is likely to be insufficient. Different rules in

the TOD zoning applicable to the apartment project set minimum and maximum limits for the off-street parking to be provided. Incredibly, applying the rules to the Arbor Gardens apartments yields a minimum requirement of 396 parking spaces but a maximum of only 383 spaces! The minimum rule is based on the number of dwellings (264 x 1.5), the maximum on the number of bedrooms (426 x 0.9).

Because a variance was clearly going to be required anyway, and to squeeze the requisite number of dwelling units onto the 10-acre site, the developers plan to provide only 358 offsite spaces, a parking ratio of 1.35 spaces per unit. This is below the minimum level of 1.5 that was recommended by DKS Associates for Orenco Station, and below the minimum recommended by traffic consultants for virtually all other suburban TODs that the authors have examined.

**In walking or driving through Orenco Station one is struck by the comfortable combination of residential and commercial use.**

<b>Average Daily Traffic Comparisons</b>				
<b>Roadway</b>	<b>Existing 1995</b>	<b>Scenario 1 2015</b>	<b>Scenario 2 2015 (high density)</b>	<b>Scenario 3 2015 (comprehensive plan)</b>
<b>Cornell east of 216<sup>th</sup></b>	<b>10,000</b>	<b>29,000</b>	<b>36,000</b>	<b>29,000</b>
<b>Cornell west of 216<sup>th</sup></b>	<b>24,000</b>	<b>37,000</b>	<b>42,000</b>	<b>38,000</b>
<b>Baseline Road (near 231<sup>st</sup>)</b>	<b>12,000</b>	<b>22,000</b>	<b>25,000</b>	<b>22,000</b>
<b>185<sup>th</sup> Avenue</b>	<b>27,000</b>	<b>37,000</b>	<b>40,000</b>	<b>37,000</b>
<b>231<sup>st</sup> Avenue</b>	<b>3,500</b>	<b>9,500</b>	<b>14,000</b>	<b>10,000</b>

*Source: DKS Associates, 1995*

*Table 3 -Traffic forecasts for the Orenco Neighborhood, 1995.*

**Chang-Hee Christine Bae, a planning professor at the University of Washington, observed recently in *Transportation Quarterly*, “Most Orenco Station residents appear to have been attracted to the community more because of its upscale character, design characteristics and open space rather than because of its transit access.”**

The developers justified this decision in their variance application by noting that parking will be available on both sides of Birch Street—the automobile entrance to the apartment complex just to the south—making available another 150 parking spaces to residents and guests. They did their best to put a positive spin on this idea by calling it a “benefit” for the residents: “By reducing the off-street parking some cars would be parking on the street. This adds to the pedestrian experience by increasing safety and psychologically protecting them from moving vehicles.”<sup>58</sup>

In the real world cars will likely bypass these Birch Street spots until they have cruised through the onsite parking lots, then return in frustration to look for spots on the street. At full build-out these residents will probably face the same problems residents of Club 1201 now live with.

Nonetheless, it is difficult to be too critical of the developers, because they are under intense pressure by regulators to under-build parking. In fact, they have probably succeeded somewhat in fending off Hillsboro’s land-use planners, to the point where TriMet is only reluctantly supporting the project. In a letter to Hillsboro Planning Supervisor Deborah Raber, TriMet Land Development Planner Michael Dennis wrote: “... although this project is compliant with City zoning and standards, it is less dense and more heavily parking dependent than comparable projects in Gresham and Beaverton.”<sup>59</sup>

### ***Effects of light rail transit on nearby bus service***

In early 1998, as TriMet was preparing to open Westside LRT, the agency announced it would have at least seven bus routes also serving Hillsboro, a net increase of four. Although this sounded good, most of those routes would only go to an LRT station, serving such

major employment centers as Intel, Dawson Creek Park and Amber Glen Business Center. On the negative side of the ledger, the Hillsboro Express bus route would be terminated when MAX opened, forcing those riders to endure a longer commute on MAX, which has no express service despite its name: Metropolitan Area Express.

Unfortunately, this strategy did not turn out very well either for TriMet’s bottom line or for transit riders. The whole process of turning Westside bus routes into LRT feeders introduced two service problems that seriously affect the attractiveness of transit: transfer delays and train crowding. Most surveys of transit riders nationwide show that people dislike having to make transfers. If the inconvenience and time delay becomes significant enough, they stop using transit.

Also, light rail is inherently a low-capacity system, with an average of 74 seats per car and only two cars per train. LRT service on Westside MAX averages about seven trains per hour at the peak hours of 6:00 a.m. to 9:00 a.m.; therefore only 1,036 seats per hour are available. If bus riders have to make a transfer *and* they have to stand on MAX, that is even more of a disincentive to ride.

The problem is not easily solved due to the expense of buying new light rail cars (roughly \$3.5 million each) and the lead time it takes to order them. Because of commitments to the airport line and the IMAX line in North Portland, additional cars are not scheduled for the Hillsboro route until 2004. Even thereafter, however, lightrail capacity will be limited due to mandatory spacing requirements for trains that keep them at least two to three minutes apart at all times.



The LRT feeder routes proved to be unpopular. By January 2001, TriMet was considering chopping seven under-utilized bus routes, including three in Hillsboro. Two of those served the Orenco/231<sup>st</sup> station: the 41s, serving Hawthorn Farms, and the 42s, serving Orenco Station. The Orenco Station shuttle was known to draw as few as three riders across all of its 16 daily runs.

TriMet tried to put a happy face on this development by claiming that because of Orenco Station's high density, "People tend to walk the short distance rather than hopping the bus."<sup>60</sup> In fact, most Orenco Station residents were ignoring MAX, and if they did use it, they usually drove to the free Park-n-Ride.

Later that year, the Orenco Station shuttle was dropped. TriMet cancelled the Hawthorn shuttle effective December 1, 2002.

### ***Do people living in or near Transit-Oriented Developments think that it improves the quality of their lives?***

In walking or driving through Orenco Station one is struck by the comfortable combination of residential and commercial use. This multi-use character is part of New Urbanism and often doesn't work because the uses that are being combined are inconsistent or the planners forbade adequate parking. In Orenco Station the combination appears to work well, and residents have expressed high levels of satisfaction in various news stories. Most residential units sell for a 20 percent to 30 percent premium over comparable units elsewhere, according to the developers, yet most have done well in the market.

However, the satisfaction of Orenco Station residents has little to do with light rail. Ac-



*Though it is part of the pedestrian-oriented Town Center at Orenco Station, the New Seasons Market has ample parking and most customers arrive by car.*

According to Rudy Kadlub of Costa Pacific, "the number one amenity in view of Orenco residents is not light rail or even the ambience of the place, but the idea of walking to buy a quart of milk or visit a 'Cheers' type bar."

Chang-Hee Christine Bae, a planning professor at the University of Washington, observed recently in *Transportation Quarterly*, "Most Orenco Station residents appear to have been attracted to the community more because of its upscale character, design characteristics and open space rather than because of its transit access. In fact, for most residents, access to the rail line is not very appealing. Many live up to a mile away."<sup>61</sup>

For most Orenco residents, MAX remains an "option demand; it is there if we need it, we may use it, but we probably never will."<sup>62</sup>

Early reports from Arbor Gardens indicate that new residents seem pleased and some use light rail for commuting. One woman we spoke with who has lived in Arbor Gardens for three months loves the landscaping and easy access to light rail. She says her husband works in downtown Portland, gets a free transit pass from his employer, and walks to MAX every day (though she admitted his routine hadn't yet

**To the extent that TOD generates increased transit ridership, it does so at tremendous cost, which must be paid for through a variety of public and private subsidies including free Park-n-Ride lots, employer-provided shuttles, fee waivers and government grants.**

**Several other policy decisions made in the Orenco region during the past 20 years have had much greater impact on development patterns than light rail.**

been tested by rain). Her only complaint was the very small back yard for her two children.

However, people living nearby tend to have a less positive reaction. As the station area planning process demonstrated, people in existing neighborhoods overwhelmingly oppose mandated densification. Part of this is a reaction against development in general. People who live near undeveloped areas are almost always saddened when those areas are converted to some other use, so opposition is not necessarily an indictment of TOD.

But the high-density nature of the various Orenco projects also ignited opposition based on very specific concerns such as traffic, crowding and storm water runoff. A man living south of Arbor Gardens in a neighborhood of ten-year-old homes turned two thumbs down when asked about the project and reeled off a description of what he thought the high-density development created: “tension, frustration, confrontation and conflict.”

Leda Marrocco, who lives on NE Laurelee Street, a subdivision south of Arbor Gardens, participated in the public review process for the concept development plan. She stated in a letter to Hillsboro that “I strongly believe that development of this high-density project will become Hillsboro’s future slum area.”

The developers who have built near Orenco would strongly disagree with that statement, but they do concede that they would have preferred to build at lower density. Rudy Kadlub noted several years ago, “Costa Pacific would prefer building more cottages and fewer town houses and rowhouses. But to meet city density requirements along light rail, we had to increase the attached housing.”

## **Conclusions**

Transit-oriented development is expected to improve air quality, decrease traffic and attract private investment, but there is little evidence so far that those expectations are being met in the Orenco neighborhood. The experience since MAX opened in 1998 is that TOD has little effect on air quality, it increases local traffic, and most developers do not want to build high-density projects near rail stops. To the extent that TOD generates increased transit ridership, it does so at tremendous cost, which must be paid for through a variety of public and private subsidies including free Park-n-Ride lots, employer-provided shuttles, fee waivers and government grants.

Although TOD is described as something that improves neighborhood livability, the sustained opposition to mandated densification near the Orenco/231<sup>st</sup> LRT station over the past decade suggests otherwise. The densities sought by planners have little appeal in the marketplace and would not have happened without zoning mandates and/or subsidies.

Orenco Station is basically auto-oriented and functions similarly to other suburban neighborhoods. It does have easy pedestrian access to the town center, but many internal trips to the town center are made by auto because of the convenient parking lot behind the New Seasons Market and on-street parking near the other retailers.

The drive-first mindset of residents is perhaps best captured in how they market their own units when they sell them, and a real estate advertisement in September 2002 was revealing on this point. An internet ad for a large cottage on NE Copper Beech (selling for \$299,000) read in part: “National Award Winning Community—Orenco Station; oversized two car garage with room for a nice shop or a small 3<sup>rd</sup> car.”

### ***Other policies more important for development than light rail***

Several other policy decisions made in the Orenco region during the past 20 years have had much greater impact on development patterns than light rail. Probably the most important action was the decision by Hillsboro to create an urban renewal district to consolidate ownership of property in the Ronler Acres area. That allowed Intel to consider the property for purchase, and it allowed Pac Trust to assemble its Orenco Station acreage.

Other subsequent actions that were critically important to development included: (1) the decision by Washington County to issue property tax breaks to Intel through the state's Strategic Investment Program; (2) Intel's decision to spend \$2 billion on the Ronler Acres facility, thus creating a critical mass of highly paid workers for developers to later service with upscale housing and retail; and (3) the decision to re-align Cornell Road and extend Evergreen Parkway, Butler Road and 229 Street, thereby bringing the Ronler Acres property into the local road system.

The road investments in particular had low costs and high benefits. For example, the re-alignment of Cornell Road cost only \$3.5 million, yet without a well-functioning Cornell Road, there would be no Orenco Station. In contrast, taxpayers spent over \$200 million for the LRT extension to Hillsboro from 185<sup>th</sup>, which has had little effect on development patterns.

This highlights a rather startling fact about Orenco Station: the development is not even a Transit-Oriented Development. For a project to be considered transit-oriented, most or all of the units within the development should be within one-quarter mile of a transit stop. Most of Orenco Station is more than one-quarter mile from the LRT station.

### ***A need for more flexible zoning***

The Orenco/231<sup>st</sup> LRT stop was the subject of intensive planning by several units of government, but the costs of that approach probably far exceed the benefits. As a practical matter, large development firms such as Pac Trust, Costa Pacific and West Hills already have access to highly trained urban planners, architects, and landscape designers; it's unnecessary and a bit patronizing to dumb down the design process with detailed zoning codes that leave developers with relatively few creative options.

The code may also lead, unintentionally, to developments that all look the same, as has happened in Portland's highly-regulated Pearl District.

Restrictive zoning has actually retarded development near the LRT station. The zoning code is based simply on fantasies of planners and has nothing to do with market demand or financial feasibility. That is probably the major reason why the parcel north of LRT between the station stop and Cornell Road remains a large weed patch.

It would make more sense to let the market determine uses, densities, minimum lot sizes and parking ratios, while focusing government planning on controlling negative spillovers and ensuring that new projects pay for necessary infrastructure. This approach to zoning—regulating outputs, not inputs—would likely lead to more market acceptance, faster rates of development, and fewer conflicts between developers and adjacent neighborhoods.<sup>63</sup>

**This highlights a rather startling fact about Orenco Station: the development is not even a Transit-Oriented Development.**

## Notes

<sup>1</sup> Marc Guichard, "TOD Implementation Program," in *Community Building Sourcebook*, TriMet, Portland, OR, 1999, p. 15.

<sup>2</sup> Jo Allen Gause et al, *Great Planned Communities*, Urban Land Institute, 2002.

<sup>3</sup> *Improving Accountability through Enhanced Measures of Service Efforts and Accomplishments: A Report by the Office of the Auditor Regarding Metro's Transit-Oriented Development Program*, March 2001, p. 5.

<sup>4</sup> Randal O'Toole, "The Vanishing Automobile and Other Urban Myths", *Different Drummer*, Vol. 3, No. 2, p. 20, The Thoreau Institute.

<sup>5</sup> Rick Gustafson, presentation at Portland State University, January 17, 2003.

<sup>6</sup> Lou Hanberg, in "Community profile: Historic Orenco makes itself at home in longtime resident's living room", *The Oregonian*, July 28, 2002.

<sup>7</sup> Eric Apalategui, "Hillsboro strikes deal on lots," *Hillsboro Argus*, April 7, 1994, p. 1.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Richard Buono, Vice President of Pac Trust, personal communication with Michael Barton, June 27, 2002.

<sup>11</sup> Eric Apalategui, "City OKs Intel land pact," *Hillsboro Argus*, November 3, 1994, p. 1.

<sup>12</sup> Ibid.

<sup>13</sup> "Creating a lifeline to guide community growth," *The Oregonian*, September 9, 1998.

<sup>14</sup> Sonja Pauli, personal communication with John Charles, November, 2002.

<sup>15</sup> "Citizens offered chance to air light-rail views," *The Oregonian*, May 12, 1994.

<sup>16</sup> Richard Colby, "Rural no more", *The Oregonian*, June 7, 1994.

<sup>17</sup> Eric Apalategui, "Orenco station plan approved," *Hillsboro Argus*, July 18, 1996.

<sup>18</sup> Scott Peterson, Vice President of Construction and Development, Costa Pacific Homes, personal communication with Susan Misra, 1999.

<sup>19</sup> Ibid.

<sup>20</sup> *Hillsboro Argus*, February 9, 1995.

<sup>21</sup> Pac Trust planning documents on file with the City of Hillsboro.

<sup>22</sup> Richard Buono, Pac Trust, letter to Marion Hemphill, August 21, 1996, p. 3.

<sup>23</sup> *Seattle Daily Journal of Commerce*, "A look at Portland's experience with rail, real estate," February 18, 1999.

<sup>24</sup> Scott Peterson, Costa Pacific Homes, personal communication with Susan Misra, 1999.

<sup>25</sup> Costa Pacific Homes, Press Release dated January 19, 1999, [www.orencostation.com](http://www.orencostation.com).

<sup>26</sup> Alan Ehernhalt, "Oregon suburb could become the new face of New Urbanism," *Washington Times*, September 24, 2000, p. 5D.

<sup>27</sup> Costa Pacific Homes, press release dated May 3, 2002, [www.orencostation.com/newsright17.htm](http://www.orencostation.com/newsright17.htm).

- <sup>28</sup> The Great West Contractors website – [www.gwc-or.com/club1201.htm](http://www.gwc-or.com/club1201.htm).
- <sup>29</sup> West Hill Development, Hillsboro Planning Application, November 9, 2001, p. 43.
- <sup>30</sup> [http://www.amaa.com/portfolio/pdfs/Orenco\\_Apt.PDF](http://www.amaa.com/portfolio/pdfs/Orenco_Apt.PDF)
- <sup>31</sup> Hillsboro Zoning Ordinance No. 1945, p. 92.
- <sup>32</sup> Richard Buono, Pac Trust, personal communication with Michael Barton, June 27, 2002.
- <sup>33</sup> Washington County records.
- <sup>34</sup> Greg Arms, Development Manager and Vice President of Simpson Housing, personal communication with Michael Barton, August 19, 2002.
- <sup>35</sup> <http://www.arborhomes.com/CommunityPlans.aspx?Id=ArborGardens>
- <sup>36</sup> Ehernhalt, p. 5D.
- <sup>37</sup> Grant Agreement, Form FTA G-3, US Department of Transportation, Attachment 10, “Special Conditions: Land use and transportation planning”, October 1, 1996.
- <sup>38</sup> Ibid.
- <sup>39</sup> Peter Bechen, President & CEO of Pac Trust, personal communication with Susan Misra, 1999.
- <sup>40</sup> Scott Peterson, personal communication with Susan Misra, 1999.
- <sup>41</sup> Steve Bair, personal communication with Michael Barton, November 5, 2002.
- <sup>42</sup> Debbie Noble, Hillsboro Planning Supervisor, personal communication with Susan Misra, 1999.
- <sup>43</sup> Federal Highway Administration, CMAQ Brochure, [www.fhwa.dot.gov](http://www.fhwa.dot.gov)
- <sup>44</sup> TriMet, *Community Building Sourcebook*, 1999.
- <sup>45</sup> Marion Hemphill, City of Hillsboro, personal communication with Michael Barton, July 2002.
- <sup>46</sup> Richard Buono, personal communication with Michael Barton, July 9, 2002.
- <sup>47</sup> Cheryl Twete, Portland Development Commission, personal communication with John Charles and Michael Barton, July 25, 2002.
- <sup>48</sup> Bruce Podobnik, Ph.D., *Portland Neighborhood Survey, Report on Findings from Zone 2: Orenco Station*, Lewis & Clark College, Portland, Oregon, January 20, 2002.
- <sup>49</sup> Michael Lapham, *Transit Oriented Development: Trip Generation and Mode Split in the Portland Metropolitan Region*, Portland State University, March 2001.
- <sup>50</sup> *Hillsboro Argus*, May 17, 1994, p. 1.
- <sup>51</sup> Personal communication with Joseph Coon, May 2002.
- <sup>52</sup> Mark Gormin, Intel, personal communication with Joseph Coon, May 2002.
- <sup>53</sup> Personal communication with Joseph Coon, May 2002.
- <sup>54</sup> Data from Washington County Department of Transportation.

<sup>55</sup> Ann Mlynarczyk, Washington County Traffic Engineering, personal communication with Michael Barton, October 22, 2002.

<sup>56</sup> DKS Associates, *Hillsboro Station Area Master Plan: Transportation Design Element*, November, 1995, p. 5-4.

<sup>57</sup> Club 1201 Home Owner Association website, <http://www.alfirin.net/club1201/>

<sup>58</sup> West Hills Development Planning Application, November 11, 2001, p. 43.

<sup>59</sup> Letter from Michael Dennis to Debbie Raber, January 8, 2002.

<sup>60</sup> Richard Colby, "7 TriMet bus routes face cloudy future," *The Oregonian*, January 11, 2001.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.

<sup>63</sup> For a more complete discussion of this approach, see John A. Charles, *Beyond Zoning: Land Use Controls in a Digital Economy*, Cascade Policy Institute, 1998.



\_\_\_\_\_





# CASCADE POLICY INSTITUTE

813 SW Alder, Suite 450  
Portland, Oregon 97205  
(503) 242-0900



info@cascadepolicy.org  
www.cascadepolicy.org  
fax (503) 242-3822