Metro Corridors Project: Technical Appendix for the Case Study Report

PREPARED FOR
Metro and the Transportation Growth Management Program of the Oregon Department of Transportation and the Department of Land Conservation and Development

March 2005

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March 2005

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Table of Contents

Page

Section 1

Background

This technical appendix, *the Technical Appendix to the Phase II Metro Corridors Project Case Study Report*, documents the research by the project team in Phase II of the Metro Corridors Project. The Metro Corridors Project is a study of corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the corridor design type to achieve the 2040 Growth Concept. The Metro Corridors Project is divided into two phases:

- Phase I of the Metro Corridors Project, completed in December 2004, investigated land use and transportation issues in corridors in general and in a subset of specific corridors in the Portland region. It resulted in the selection of a corridor case study for Phase II of the project.

- Phase II of the project is a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. Its purpose is to identify opportunities for and constraints to achieving development in corridors that conform to the Metro 2040 Growth Concept, Regional Framework Plan, and related documents. Phase II describes how the case-study Corridors and the Beaverton Regional Center complement and compete with each other. It recommends a plan for land use and transportation development that conforms to regional guidelines for development in corridors, and recommends local, regional, and state policies that would be helpful for achieving the plan.

The key findings from both the Phase I and the Phase II Reports will be summarized after this Phase II case-study report is approved in a final report to Metro, the *Metro Corridors Summary Report*.

The rest of the technical appendix is organized into the following nine sections:

- **Existing conditions report.** Metro completed the existing conditions report, which provides information evaluated in Chapter 3 of the Case Study Report.
- **Market analysis.** Johnson Gardner conducted a market analysis of the case-study Corridors which is summarized in Chapter 3. It identifies market opportunities and constraints in the Corridors.
- **Evaluation of land use existing conditions.** Freedman Tung and Bottomley evaluated the existing conditions to identify opportunities and constraints to redevelop the Corridors and achieve 2040 Corridor objectives (as described in Chapter 2 of the Case Study Report). The evaluation of land use existing conditions is summarized in Chapter 3.
- **Evaluation of transportation existing conditions.** Kittelson and Associates evaluated the existing transportation conditions and identified opportunities and constraints to improve the pedestrian

environment, increase access and mobility (of all modes), improve transit, and provide other transportation improvements, which is summarized in Chapter 3.

- **Description of land use concept.** Freedman Tung and Bottomley created a Powerpoint presentation on the land use and development concept for the case-study Corridors, which is summarized in Chapter 4.
- **Description of transportation strategies to support the land use concept**. Kittelson and Associates created a Powerpoint presentation that described transportation strategies that support the land use and development alternative, which is summarized in Chapter 4.
- **Policy recommendations.** Angelo Eaton reviewed policy documents, technical work, and notes from the advisory committee, technical advisory committee, focus groups, and developer interviews.
- **Focus group and interview notes.** ECONorthwest facilitated two sets of focus groups (in November 2004 and March 2005). ECONorthwest staff and Metro staff also conducted two sets of developer interviews during the same time period. The notes for all focus group meetings and interviews are summarized in this section.
- **Advisory Committee and Technical Advisory Committee notes.** ECONorthwest facilitated four advisory committee meetings and two technical advisory committee meetings. The notes for these meetings are summarized in this section.

Section 2

Existing Conditions Report

TASK 2.2 EXISTING CONDITIONS MEMORANDUM

INTRODUCTION

This memo describes the existing conditions in the Beaverton-Hillsdale Highway and Canyon Road Corridors in the Portland Metro area. This memo is an interim project for the Metro Corridors project. The information and key findings will be incorporated into the Case Study Report.

This memo contains five sections:

- **Introduction.** The introduction includes a description of the study area, data sources, and methods

- **Land use and development existing conditions.** This section includes a summary of the existing land use and development conditions along the corridors including: development activity, public land, vacant and redevelopable properties, constraints and policy requirements.

- **Transportation existing conditions.** This section includes a summary of the existing transportation conditions along the corridors including: physical conditions, capacity, safety and operations, development activity and policy requirements.

INTRODUCTION

STUDY AREA

Figure 1 shows the case study area for the two Corridors, Beaverton-Hillsdale Highway and Canyon Road. In general the case study areas begin at the east edge of the Beaverton Regional Center for both corridors and extend to SW Laurelwood Ave on Beaverton-Hillsdale Highway and just past SW 87th Avenue on Canyon Road. For both corridors the case study area is 350 feet deep from the roadway. The two case study areas encompass 557 parcels and 335 acres. Also depicted in Figure 1 is an area of influence that is not directly impacted by the function of the corridor but influences the corridor function and is influenced by the corridor function.

Figure 1. Corridor case study area, Beaverton-Hillsdale Highway and Canyon Road, 2004

Source: Metro Data Resource Center (DRC) (Carol Hall) August 2004.

DATA SOURCES AND METHODS

Metro Planning Department staff compiled the existing conditions data in this memo. The Metro Data Resource Center (DRC) created the land use data and maps. Land use and transportation policy information from Metro, the Oregon Department of Transportation (ODOT), the City of Beaverton and Washington County was obtained from the respective websites. Current and recent development activity data was provided by the City of Beaverton and Washington County. The City of Beaverton, Washington County, ODOT and Metro Travel Forecasting staff provided transportation data.

LAND USE AND DEVELOPMENT EXISTING CONDITIONS

GATEWAY TO THE BEAVERTON REGIONAL CENTER-HILLSDALE HIGHWAY AND CANYON ROAD CORRIDORS

The City of Beaverton has previously identified the general area along Beaverton-Hillsdale Highway and Canyon Road directly west of Highway 217 as gateway areas to the Beaverton Regional Center. Currently this area is not signed as a gateway area nor is there any special treatment to the roadside that would indicate that it is a gateway area. The City has applied for a grant to address the gateway to the Beaverton Regional Center issue.

EXISTING DEVELOPMENT

Beaverton-Hillsdale Highway

The case study section area begins at the east edge of the Beaverton Regional Center at Highway 217 and extends to SW Laurelwood Avenue. This area is primarily a mix of low-density residential and retail/commercial uses. Going west to east, the segment between Highway 217 and Western Avenue contains mostly lower-density retail/commercial with large parking areas, especially at Western Avenue, 109th and 107th Avenues. On the northern side of Beaverton-Hillsdale Highway at the intersection of Highway 217 is a Home Depot and across the street on the south side is a residential neighborhood centered on SW Maple Avenue. Between SW Western Avenue and SW Jamieson Road, the development on the north side of

the corridor continues with a lower-density retail/commercial segment with interspersed residential development including a fairly large assisted living facility. The south side also contains a lower-density retail/commercial segment that has a large single-family residential development directly behind it. Between SW Jamieson Road and SW Laurelwood Avenue the retail/commercial component is reduced, mainly because of Jesuit High School on the south side and the encroachment of single-family residences closer to the roadway on the north side. On either end of Jesuit High School are larger, low-density commercial developments.

Canyon Road

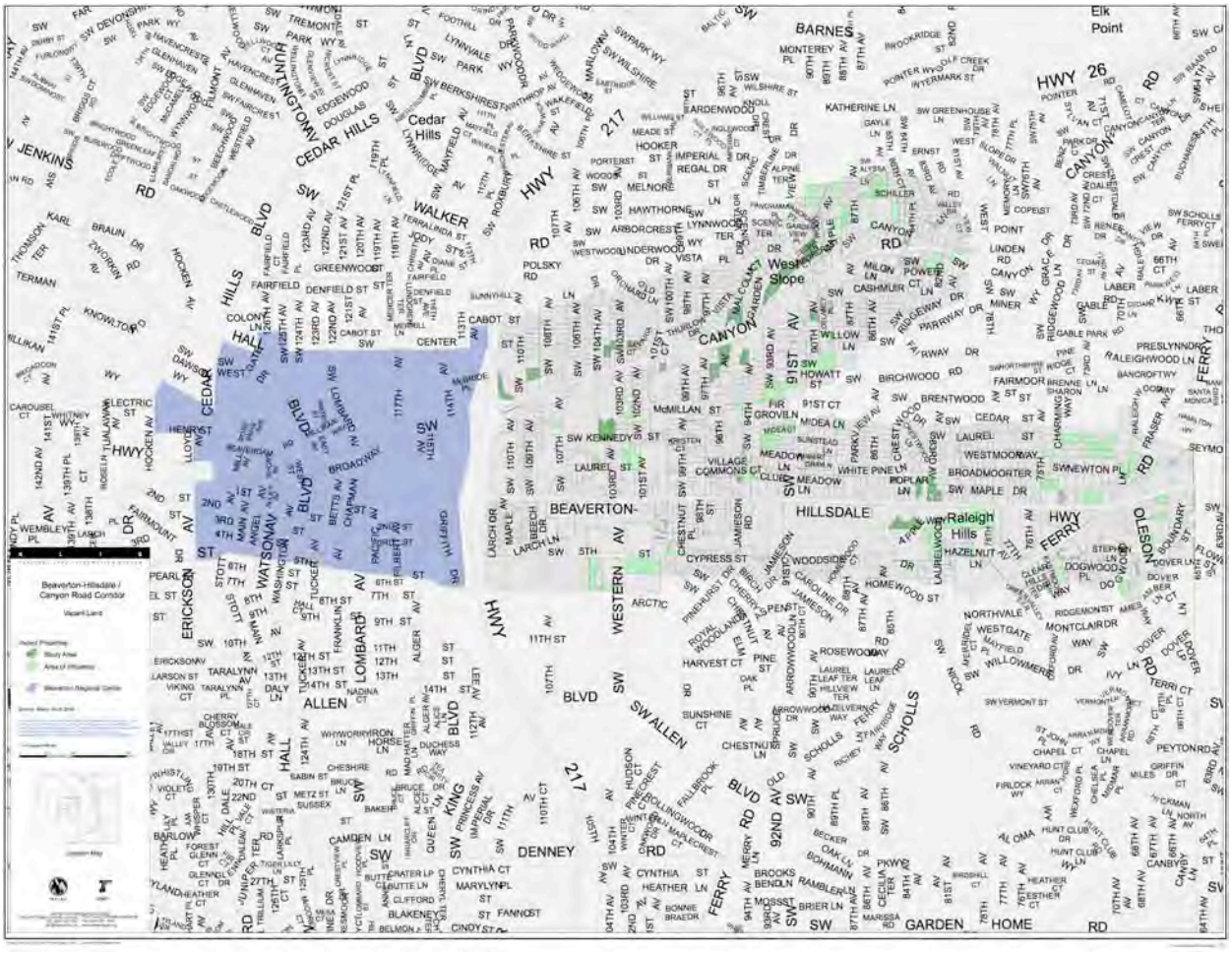
The case study section area begins at the east edge of the Beaverton Regional Center at Highway 217 and extends past SW 87th Avenue. This corridor is primarily developed with low-density commercial uses with large parking areas, dominated by auto sales and related services. Most of the auto dealerships are in the segment between SW Walker Road and SW 87th Avenue, although auto related businesses occur throughout the corridor. The car dealership at Canyon Road and SW 87th Avenue currently is in the process of expanding the showroom. A new car dealership is being constructed at the corner of SW Canyon Road and SW 110th Avenue, near Highway 217. Across Canyon Road from this new dealership is an existing car dealership. Directly adjacent to Highway 217 on the north side is the vacant Home Base building. Interspersed along the corridor are two large parcels that contain a Shilo Inn and church. On both sides of the corridor, residential development abuts the commercial properties, many of which are single-family residences.

Figure 2. Existing development, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004

Source: Metro DRC (Carol Hall) August 2004.

Of the 557 parcels in the two study areas, 529 parcels are considered developed or at least a portion of the parcel is developed. The developed parcels account for 315 acres of the 335 acres within the study areas. The vast majority of the vacant parcels are small, less than an acre and sixteen of the vacant parcels contain Title 3 identified natural resources. In addition, some of the larger vacant portion of parcels are associated with institutional or auto related uses. The vacant parcels can be seen in Figure 3.

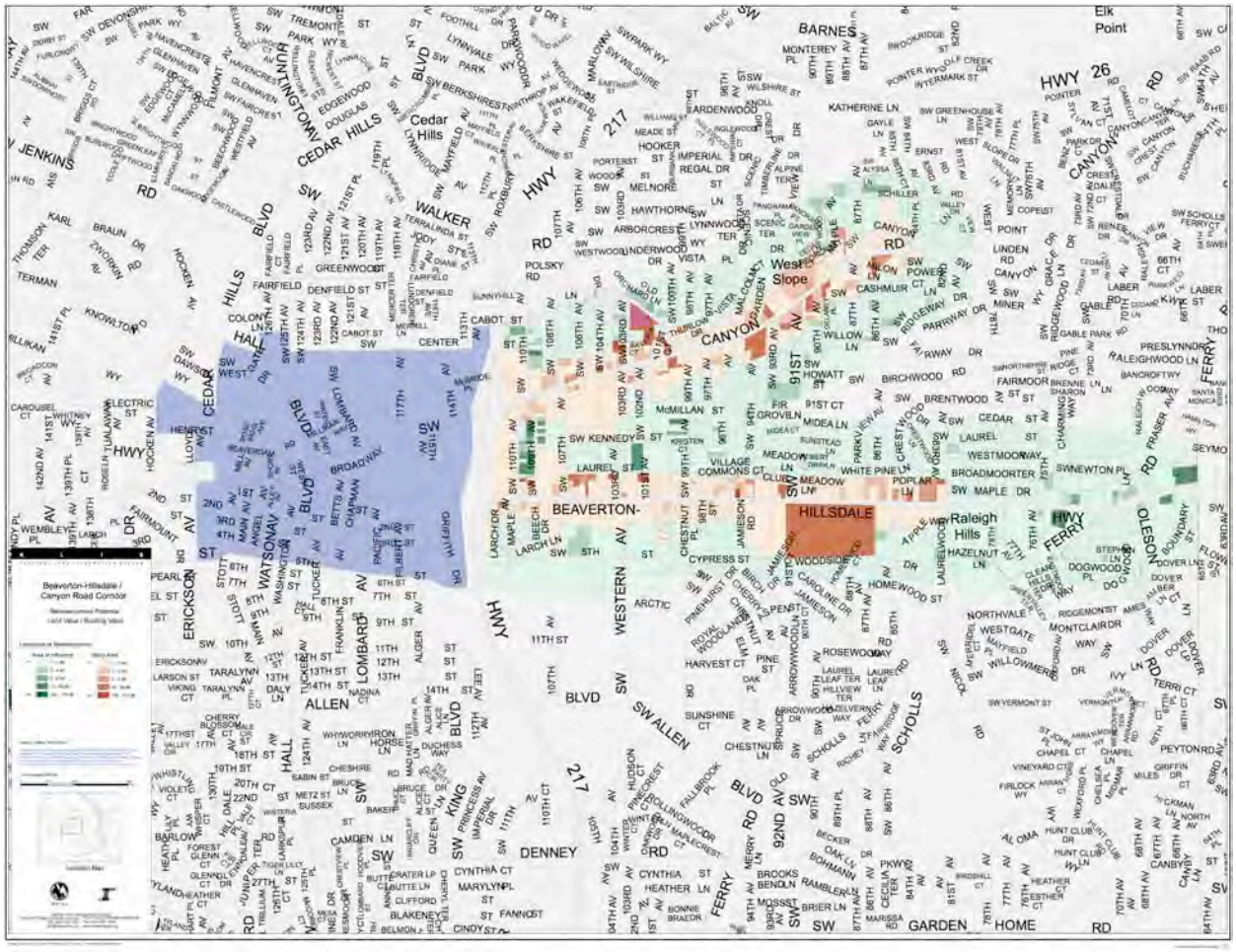
Figure 3. Vacant land, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004



Source: Metro DRC (Carol Hall) September 2004.

The redevelopment potential of property was determined by using a land to building value ratio, under the assumption that low improvement values relative to land values indicate a higher likelihood of redevelopment. This redevelopment methodology is consistent with the methodology utilized in the Beaverton Downtown Regional Center Development Strategy report completed in July 2004. The higher the ratio the greater is the development potential, as these parcels are considered under-utilized or vacant. A low ratio indicates a high value of improvements. The darker the tax lot on Figure 4 below, the greater is the development potential. The very large dark parcel on the south side of Beaverton-Hillsdale Highway is Jesuit High School, which occupies a large land area, much of it devoted to athletic fields and parking. The two large dark parcels south of Canyon Road and adjacent to SW Walker Road are associated to an auto dealership and a church respectively. The remaining parcels with high redevelopment potential are small-underutilized parcels that are scattered throughout the two corridor study areas that do not form very large blocks of land.

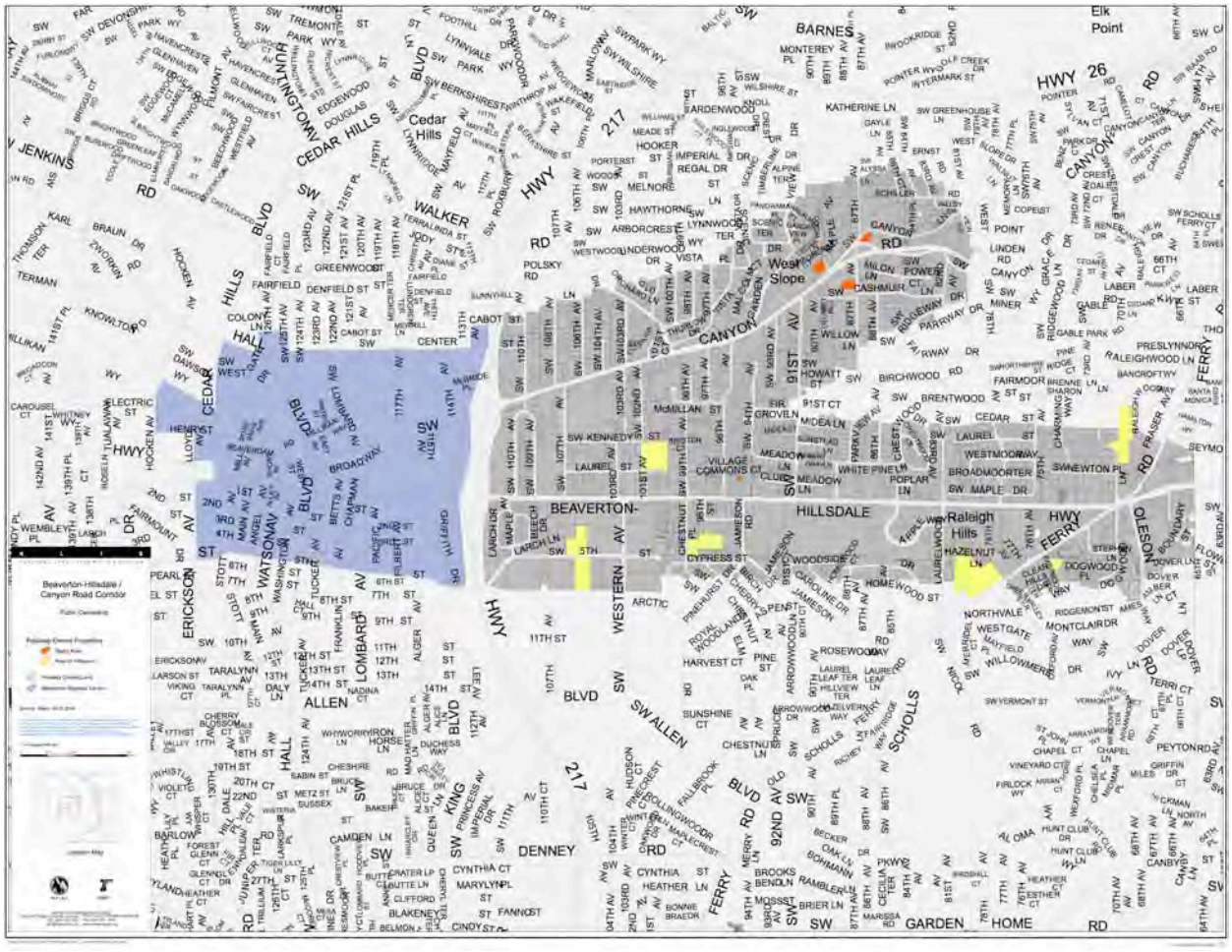
Figure 4. Redevelopable property, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004



Source: Metro DRC (Carol Hall) September 2004.

There are ten publicly owned parcels totaling 2.4 acres within the corridor study areas (see Figure 5). Four of the parcels make up 2.1 acres and are owned by Tualatin Valley Fire and Rescue, U.S. Postal Service and West Slope Water District (2 parcels). The remaining six parcels are owned by ODOT, the City of Beaverton and Washington County and are mainly vacant right-of-way.

Figure 5. Publicly owned land, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004



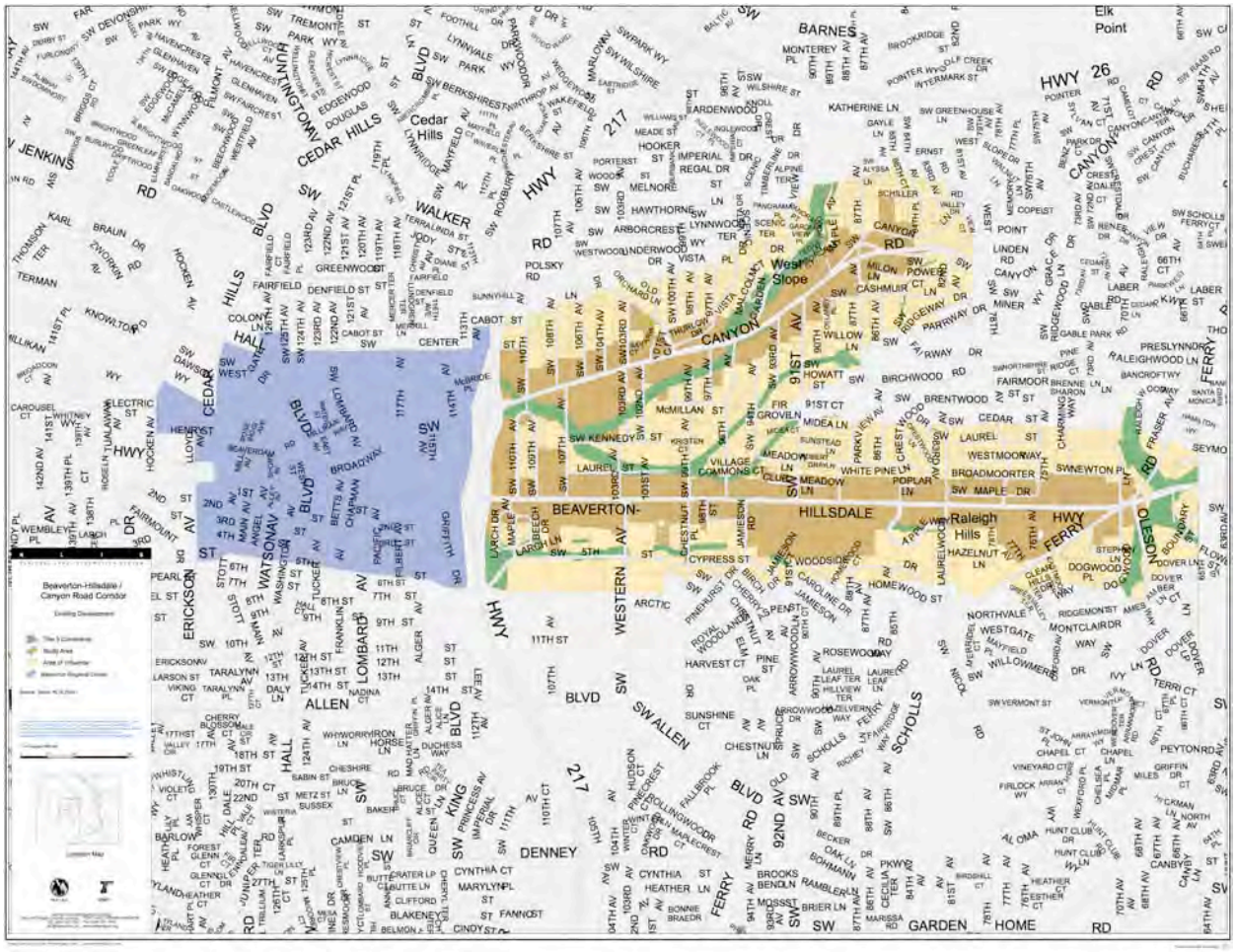
Source: Metro DRC (Carol Hall) September 2004.

CONSTRAINTS

There are 29.3 acres of identified Title 3 natural resources associated with Golf Creek and Hall Creek on 69 parcels in the Canyon Road case study area (see Figure 6). Of the 69 parcels that have some natural resource, 16 are vacant or have vacant portions and 53 are developed. The vacant parcels that do contain some amount of natural resources total 8.4 acres. Development has already occurred on most of the parcels that contain natural resources and it appears the resource has either been piped or channeled to the edge of the property. Thus, the natural resources do not pose much of a constraint for future development or redevelopment purposes.

There are a number of parcels, along both the Beaverton-Hillsdale Highway and Canyon Road corridor study areas that are 1/3 of an acre in size and 100-200 feet in depth. Most of these small parcels are individually owned and currently developed (see Figure 7). These parcels may prove difficult for redevelopment purposes based on a relatively low redevelopment potential value (land value to building value) as can be seen in Figure 4 and an expected difficulty in consolidating parcels for new development.

Figure 6. Title 3 Resource Areas, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004



Source: Metro DRC (Carol Hall) September 2004.

EXISTING POLICIES

This section describes elements of existing land use and transportation policies that show how the Corridors are envisioned to develop in the future. On the land use side the following documents were reviewed: the Beaverton Comprehensive Plan, the Beaverton Development Code, the Washington County Comprehensive Framework Plan, the Cedar Hills – Cedar Mill and Raleigh Hills – Garden Home Community Plans, the Washington County Community Development Code, the Metro Urban Growth Management Functional Plan and the Regional Framework Plan. On the transportation side the following documents were reviewed: the Beaverton and Washington County Transportation System Plans (TSP), the Metro Framework Plan, the Metro Regional Transportation Plan, the Metro Livable Streets document, and the Oregon Highway Plan.

LAND USE

Regional Framework Plan

The Regional Framework Plan (RFP) is intended to be the document that unites all of Metro's adopted land use planning policies and requirements to achieve the 2040 Growth Concept. The RFP incorporates goals, objectives and policies established in the Regional Growth Goals and Objectives (RUGGO), the 2040 Growth Concept, the Functional Plan, the Metropolitan Greenspaces Master Plan and the Regional Transportation Plan.

Corridors, as defined in the 2040 Growth Concept, provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new development would include rowhouses, duplexes and one to three story office and retail buildings, and average about 25 persons per acre. While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more nodal, that is a series of smaller centers at major intersection or other locations along the arterial that have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns - nodal or linear – may meet the corridor objective.

Metro Urban Growth Management Functional Plan

The purpose of the Metro Urban Growth Management Functional Plan (Functional Plan) is to implement regional goals and objectives adopted by the Metro Council as the Regional Growth Goals and Objectives (RUGGO), including the 2040 Growth Concept and the Regional Framework Plan. The Functional Plan contains policies that recommend and require changes to city and county comprehensive plans and implementing ordinances. Title 1: Requirements for Housing and Employment Accommodation, Title 6: Central City, Regional Centers, Town Centers and Station Communities, and Title 12: Protection of Residential Neighborhoods are the most relevant to this project. Both the City of Beaverton and Washington County are in substantial compliance with Titles 1 and 6 of the Functional Plan. At this time Title 12 does not require any action by a city or county, but it does provide for a city or county to designate in its comprehensive plan and land use regulations a Neighborhood Center within or in close proximity to Inner or Outer Neighborhoods to serve as a convenient location of commercial services. In addition, Metro is prohibited from requiring the city or county to increase residential density in an area designated as Inner or Outer Neighborhood.

Depending on the outcome of this project, future amendments to the Functional Plan may occur that result in comprehensive plan and land use regulation requirements that local jurisdictions must address to remain in compliance with the Functional Plan.

Beaverton Comprehensive Plan

Beaverton's Comprehensive Plan only pertains to lands within the City limits. In addition, to satisfy Statewide Goal 2 requirement regarding coordination within the Regional Urban Growth Boundary, Beaverton and Washington County entered into an Urban Planning Area Agreement (UPAA) in 1986 and amended the agreement in 1988. The UPAA establishes: (1) a specific urban planning area that includes land outside the City affecting City planning interests; (2) a process for coordinating planning and development in the urban planning area; and, (3) a process to amend the UPAA. Included in this agreement is a method for transferring the County's Plan and zoning land use designations to the City following annexations. All of the land in this corridor study is either in the city of Beaverton or in the UPAA.

The Beaverton Comprehensive Plan (BCP) contains a number of elements that may relate to this project in an effort to build a dynamic and livable community such as the economy and housing elements. However, the most relevant section of the BCP is the "Corridor" specific designation within the land use element. The goal of the corridor development section is to have an attractive mix of commercial and higher density residential uses along major roads through the City that invites pedestrian activity where appropriate. Both Beaverton-Hillsdale Highway and Canyon Road, and appropriate properties along the roadways have been designated as corridors and the properties have been zoned according to the Comprehensive Plan and Zoning District Matrix contained in the BCP (see below).

COMPREHENSIVE PLAN AND ZONING DISTRICT MATRIX	
Comprehensive Plan Designation	**Zoning District**
Corridor	General Commercial, Convenience Service Center, Office Commercial, Community Service, Neighborhood Service, R-1, R-2, R-3.5, R-4, Corridor-Multiple Use

Within the Corridor land use designation, commercial zoning is intended to provide for a variety of shopping and service needs. Corridor areas include commercial areas requiring extensive outdoor storage and or display of merchandise, equipment or inventory. Also, commercial areas serving the immediate neighborhood with pedestrian, bicycle and auto accessibility are provided within the Corridor land use designation provided the market area for the commercial district is within a 2-3 mile radius (i.e. neighborhood scale).

Residential development within Corridors is intended to provide for single family attached and detached and multi-family developments. Generally, housing density will range from 8 to 43 units per acre. Where possible, residential and commercial uses should be part of integrated mixed use development.

Beaverton Development Code

The City of Beaverton Development Code provides the primary means for implementation of the Beaverton Comprehensive Plan. This Code is designed to regulate the division of land and to classify, designate and regulate the location and use of buildings, structures, and land for residential, commercial, industrial, or other uses.

Zoning

Most of the study area land along Beaverton-Hillsdale Highway and a small portion of study area land along Canyon Road are in the Beaverton city limits. The zoning in these areas falls in two general categories, Commercial and Residential and reflects the corridor zone classifications identified in the BCP. The following zoning classifications occur along the study area corridors: Commercial – Community Service (CS), General Commercial (GC), Neighborhood Service Center (NS), Office Commercial (OC), and Residential – Urban High Density (R-1), Urban Standard Density (R-7) and Urban Low Density (R-10). All of the city-zoned property that fronts the two corridors has a commercial designated zone. The residential zone areas either set back from the roadway or have driveways that extend to the roadway.

The Beaverton zoning districts correspond to the following regional zones that are represented in Figure 2.

City Zone	CS	GC	NS	OC	R-1	R-7	R-10
Regional Zone	CG	CG	CN	CO	MFR2	SFR4	SFR3

The commercial zoning districts provide for a wide variety and scale of commercial uses and residential use, generally consistent with the BCP. The CS district is intended to provide for businesses compatible with and of similar scale to existing commercial activity found principally along Beaverton-Hillsdale Highway, Canyon Road, T.V. Highway, Cedar Hills Boulevard, Sunset Highway and Highway 217. The GC district is intended to provide an area for businesses that require extensive outdoor storage and/or display of merchandise, equipment or inventory. The CS and GC zones also permit detached and attached dwellings. The OC district is intended for a mixing of professional offices and other compatible commercial purposes with medium and high-density residential uses. The OC zone allows detached and attached dwellings with some additional regulations and educational institutions. These commercial zones provide a range of dwelling densities from approximately 9 to 35 units per net acre. The NS district is intended to provide areas that will meet the frequent needs of nearby residents and does not allow residential uses.

The residential zoning districts (R-1, R-7 & R-10) provide for detached and attached dwellings that provide a range of dwelling densities from approximately 3.5 to 35 units per net acre. While residential units are allowed in three of the four commercial zones they are not a requirement of development.

Figure 8. Zoning, City of Beaverton

Source: Metro DRC.

Washington County Comprehensive Framework Plan

The Comprehensive Framework Plan (CFP) is an element of the Washington County Comprehensive Plan that reflects the present and future needs of the County. The CFP contains policies and strategies that are designed to address growth and development issues inside the urban growth boundary. As with Beaverton's Comprehensive Plan many of the County's policies have some implication towards urbanization and development that would be relevant to this study. However, the main urbanization policy relevant to the case study corridors is the policy to prepare community plans and development regulations in accordance with land use categories and locational criteria contained in the CFP.

As a result of this policy two community plans have been prepared that include the unincorporated county lands within the corridor study areas and the area of influence. The Cedar Hills – Cedar Mill Community Plan includes the county land on the north side of Canyon Road. The intent of the community Plan for the Canyon road commercial area is to enhance and upgrade the area while preventing further extension of strip development eastward along Canyon Road. The Canyon Road commercial strip is noted as an area of special concern (No. 9) because of existing, virtually unlimited, and thus uncoordinated access onto SW Canyon Road and a confusing array of signs. The intent in this area is to promote the elimination of those strip commercial features, which are traffic and pedestrian safety hazards, and the addition of features that will enhance the overall appearance of the area.

The Raleigh Hills – Garden Home Community Plan includes a large portion of the area designated as the "area of influence" in this project. There are a number of identified sub-areas that contain specific design elements, some of which address the strip commercial features that are vehicle and pedestrian traffic safety hazards. Copies of both community plans (updated 12/03) can be found at http://www.co.washington.or.us/deptmts/lut/planning/publicat.htm

Washington County Development Code

The Washington County Community Development Code implements the Washington County Comprehensive Plan through the adoption and coordination of planning and development. The provisions of this Code that development applications are required to comply with, apply to any person developing or using land or a structure, and to the person's successor(s) in interest.

Zoning

Most of the study area land along Canyon Road and a small portion of study area land along Beaverton-Hillsdale Highway are in unincorporated Washington County. The zoning in these areas falls in two general categories, Commercial and Residential, which is consistent with the corresponding community plans. The following zoning classifications occur along the study area corridors: Commercial – Community Business District (CBD) and General Commercial District (GC), and Residential – Residential 5 Units per acre (R-5) and Residential 24 Units per acre (R-24). The vast majority of the county-zoned property that fronts the two corridors has a commercial designated zone. There are only a few individual parcels that are zoned residential that front the corridor on Canyon Road; the remaining residential zone areas are set back from the roadway. The Washington County zoning districts correspond to the following regional zones that are represented in Figure 3.

County Zone	CBD	GC	R-5	R-24
Regional Zone	CC	CG	SFR2	MFR1

The commercial zoning districts provide for a wide variety of commercial uses on a medium to large scale and residential use in the CBD zone. The CBD zone is intended to provide the community with a mix of retail, service and business establishments on a medium to large-scale. Medium through high density residential uses, as well as various office and institutional uses, may be permitted. Minimum residential density in the CBD zone is 25 units per acre when not in conjunction with a commercial use. There is no minimum density required when the residential development is in conjunction with a commercial use within the same structure. The GC zone is intended to provide for commercial land to serve the traveling public and to provide for commercial uses which require large sites and a high degree of visibility. This District is intended to recognize the existing strip commercial development pattern in the County, but discourage future extensions of strip commercial development. In addition, the General Commercial District recognizes office uses existing on September 26, 1983. These existing office structures may continue to be used for professional office uses, but expansion of the structures will be subject to the nonconforming use requirements of this Code.

Residential density in the R-5 district shall be no more than 5 units per acre and no less than 4 units per acre. In the R-24 district residential density shall be no more than 24 units per acre and no less than 19 units per acre. While residential units are allowed in one of the two commercial zones they are not a requirement of development.

Figure 9. Zoning, Washington County

Source: Metro DRC.

SUMMARY OF LAND USE POLICIES

Overall the local plans are consistent with the Metro Corridor designation and contain policies that direct the future use of the corridor to meet the 2040 designation. This includes a mixture of commercial and residential uses that is pedestrian friendly with access to transit, generally at major intersections. However the zoning districts intended to implement this vision, do not necessarily follow through. Most of the land area fronting the roadways is zoned commercial, while residential development is allowed in most of these zones it is not requirement of development in the area. Nor is there a requirement for a mixture of uses at the recognizable nodes along the corridors.

TRANSPORTATION POLICIES

OREGON DEPARTMENT OF TRANSPORTATION (ODOT) OREGON HIGHWAY PLAN

The 1999 Oregon Highway Plan defines policies and investment strategies for Oregon's state highway system for the next 20 years. It further refines the goals and policies of the Oregon Transportation Plan and is part of Oregon's Statewide Transportation Plan. The Highway Plan has three main elements:

- The Vision presents a vision for the future of the state highway system, describes economic and demographic trends in Oregon and future transportation technologies, summarizes the policy and legal context of the Highway Plan, and contains information on the current highway system.

- The Policy Element contains goals, policies, and actions in five policy areas; system definition, system management, access management, travel alternatives, and environmental and scenic resources.

- The System Element contains an analysis of state highway needs, revenue forecasts, descriptions of investment policies and strategies, an implementation strategy, and performance measures.

The Highway Plan applies the following general directives to the state highway system:

- Efficient management of the system to increase safety, preserve the system and extend its capacity;

- Increased partnerships, particularly with regional and local governments;

- Links between land use and transportation;

- Access management;

- Links with other transportation modes; and

- Environmental and scenic resources.

METRO REGIONAL FRAMEWORK PLAN

The Transportation element of the Regional Framework Plan presents the overall policy framework for the specific transportation goals, objectives and actions contained in the Regional Transportation Plan (RTP). The policies are grouped into seven (7) subject areas; public process, connecting land use, equal access and safety, protecting the environment, designing the transportation system, managing the transportation system, and implementing the transportation system. The policies also aim to implement the 2040 Growth Concept through the selection of complementary transportation projects and programs, including placing a high priority on projects and programs that best serve the transportation needs of station communities, town centers, main streets and corridors.

METRO REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan (RTP) is a blueprint to guide transportation investments for the next 20 years and address state and federal planning requirements. The 2000 RTP was adopted in August 2002 and acknowledged by the Land Conservation and Development Commission as consistent with state planning requirements.

Metro completed the federal update to the RTP in order to maintain continued compliance with the federal Clean Air Act in December 2003. This update provided a revised set of financially constrained projects and a larger set of "illustrative projects" for federal planning purposes. One project, Beaverton-Hillsdale Highway Frequent Bus service was added to the Financially Constrained System. Proposed policy amendments are limited to several transportation system map changes and policy text changes to establish two tiers of industrial areas for the purpose of transportation planning and project funding. There are a number of proposed amendments to the Regional Street Design and Regional Freight System maps that reflect the Oregon Transportation Commission's interest in creating "special transportation areas" where compact urban centers and main streets are planned along state-owned arterial streets. Beaverton-Hillsdale Highway and Canyon Road are not included in these amendments to the Regional Street Design and Regional Freight System maps.

CITY OF BEAVERTON TRANSPORTATION SYSTEM PLAN

The City of Beaverton completed an update to their Transportation System Plan (TSP) in 2001. The updated plan fulfilled *Transportation Planning Rule* (TPR) requirements for transportation planning in cities in Oregon and reflected Metro's adoption of the Regional Transportation Plan (RTP - August 2000) based upon 2020 future needs. The study area for the TSP update was expanded beyond the city's previous 2015 TSP to respond to planning area agreements and potential future annexations. Both case study segments of Beaverton-Hillsdale Highway and Canyon Road are classified as arterials in the City's TSP.

CASE STUDY CORRIDOR CLASSIFICATIONS

OREGON HIGHWAY PLAN: DISTRICT HIGHWAY

The case study segments of Beaverton-Hillsdale Highway and Canyon Road are classified as District Highways in the Oregon Highway Plan. District Highways are facilities of countywide significance and function largely as county and city arterials and collectors. They provide

connections and links between small-urbanized areas, rural centers and urban hubs, and also serve local access and traffic. The management objective is to provide for safe and efficient, moderate to low-speed continuous flow operation in urban and urbanizing areas for traffic flow and for pedestrian and bicycle movements. Inside STA's, local access is a priority. Inside UBA's mobility is balanced with local access.

Neither case study segment is classified as a State Designated Freight Route.

2040 Growth Concept

2040 Classification: Corridor

Corridors provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new development would include rowhouses, duplexes and one to three story office and retail buildings, and average about 25 persons per acre. While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more nodal, that is a series of smaller centers at major intersection or other locations along the arterial that have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns - nodal or linear – may meet the corridor objective.

Regional Transportation Plan

Beaverton Hillsdale Highway and Canyon Road share the same RTP classifications except for the Public Transportation Classification. The following are summaries of the various RTP classifications.

Motor Vehicle Functional Classification: Major Arterial

These facilities serve as primary links to the principal arterial system. Major arterials, in combination with principal arterials, are intended to provide general mobility for travel within the region. Motor vehicle trips between the central city, regional centers, industrial areas and intermodal facilities should occur on these routes. Major arterials serve as freight routes, with an emphasis on mobility. These routes fall within regional boulevard, regional street, urban road and rural road designs, as defined in the regional street design concepts.

Regional Freight System Functional Classification: Road Connectors.

A road that connects freight facilities or freight generation areas to the main roadway route

Public Transportation Classification: Frequent bus – Beaverton Hillsdale Highway.

Frequent bus service provides slightly slower, but more frequent, local bus service than rapid bus along selected transit corridors. This service runs at least every 10 minutes and includes transit preferential treatments such as reserved bus lanes and signal preemption and enhanced passenger amenities along the corridor and at major bus stops such as covered bus shelters, curb extensions, special lighting and median stations.

PUBLIC TRANSPORTATION CLASSIFICATION: REGIONAL BUS – CANYON ROAD.

Regional bus service is provided on most major urban streets. This type of bus service operates with maximum frequencies of 15 minutes with conventional stop spacing along the route. Transit preferential treatments and passenger amenities such as covered bus shelters, special lighting, signal preemption and curb extensions are appropriate at high ridership locations.

PEDESTRIAN SYSTEM CLASSIFICATION: TRANSIT/MIXED USE CORRIDOR

Transit/mixed-use corridors (referred to only as corridors in the 2040 Growth Concept) are also priority areas for pedestrian improvements. They are located along good-quality transit lines and will be redeveloped at densities that are somewhat more than today. These corridors will generate substantial pedestrian traffic near neighborhood-oriented retail development, schools, parks and bus stops. These corridors should be designed to promote pedestrian travel with such features as wide sidewalks with buffering from adjacent motor vehicle traffic, street crossings at least every 530 feet (unless there are no intersections, bus stops or other pedestrian attractions), special crossing amenities at some locations, special lighting, benches, bus shelters, awnings and street trees. This designation includes multi-modal bridges.

BICYCLE SYSTEM CLASSIFICATION: REGIONAL CORRIDOR ON-STREET BIKEWAY

Regional corridor bikeways function as longer routes that provide point-to-point connectivity between the central city, regional centers and larger town centers. Regional corridor bikeways are generally of longer distance than regional access bikeways and community connector bikeways. Regional corridor bikeways generally have higher automobile speeds and volumes than community connector bikeways.

BEAVERTON TSP CLASSIFICATION: ARTERIAL STREET

Arterial streets serve to interconnect and support the principal arterial highway system. These streets link major commercial, residential, industrial and institutional areas. Arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street. Many of these routes connect to cities surrounding Beaverton.

The Beaverton 2004 Engineering Design Manual and Standard Drawings document provides a standard cross section for Arterial classified streets. The appropriate cross section for the case study segments includes 4 travel lanes, a turn lane/median, bike lanes, planter strips and sidewalks. A planter strip is required on all Arterials and street trees and streetlights are required and shall be located within the planter strip.

WASHINGTON COUNTY TSP CLASSIFICATION: ARTERIAL STREET

Arterial streets interconnect and support the Principal Arterial highway system. Arterials are intended to provide general mobility for travel within the region. Arterial streets link major commercial, residential, industrial and institutional areas. Arterials provide freight movement in support of Principal Arterials. Arterials have moderate access control for cross streets and driveways. Typically residential driveways are not allowed access to Arterials.

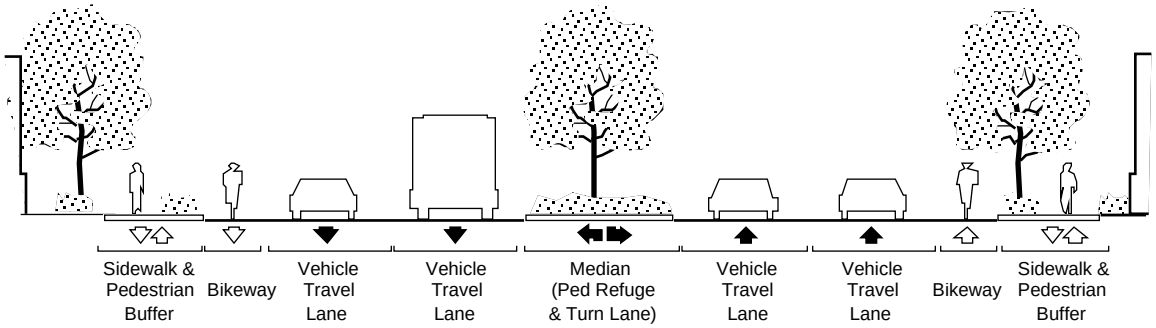
RTP STREET DESIGN CLASSIFICATION: REGIONAL STREETS

Regional street design concepts are intended to serve multiple modes of travel in a manner that supports the specific needs of the 2040 land-use components thereby unifying the different jurisdictional classifications of roadway. The design concepts reflect the fact that streets perform many, often conflicting functions, and the need to reconcile conflicts among travel modes. The Metro Livable Streets and Green Streets design guidelines are tailored to support the Regional Streets Design Elements and provide a series of complimentary design guidelines.

Regional streets are designed to carry significant vehicle traffic while also providing for public transportation, bicycle and pedestrian travel. These facilities serve a development pattern that ranges from low-density residential neighborhoods to more densely developed corridors and main streets, where buildings are often oriented toward the street at major intersections and transit stops. Regional street designs accommodate moderate motor vehicle speeds and usually include four vehicle lanes. Additional motor vehicle lanes may be appropriate in some situations. These facilities have some to many street connections, depending on the district they are serving. Regional streets have few driveways that are combined whenever possible. On-street parking may be included, and a center median serves as a pedestrian refuge and allows for left turn movements at intersections.

These facilities are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Although less substantial than in boulevard designs, pedestrian improvements are important along regional streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing amenities at major intersections. Regional streets have bike lanes or wide outside lanes where bike lanes are not physically possible, or are shared roadways where motor vehicle speeds are low. They also serve as primary freight routes and may include loading facilities within the street design, where appropriate.

Regional Street Design Elements



SUMMARY OF TRANSPORTATION POLICY CLASSIFICATIONS

City of Beaverton and Washington County staff worked very closely with Metro Regional Transportation Planning staff during the development of their respective TSPs to ensure that the two guiding documents are consistent. Both TSPs were found to be consistent with the RTP, which is the implementing document of the RFP. Thus, the local and regional transportation policies are consistent. The Oregon Highway Plan's designation as a District Highway that

functions largely as county and city arterials and collectors is also consistent with the local and regional classifications, resulting in no conflicts within the various guiding documents.

One of the biggest obstacles to developing the desired transportation/land use system may be the multi-jurisdictions (city, county, & state) that have review jurisdiction over different portions of the corridors and adjacent properties. Even though there is review coordination between the different agencies, differing levels of development regulations can impede development along the corridor.

TRANSPORTATION EXISTING CONDITIONS

GUIDING DOCUMENTS AND PROCESSES

Transportation System Plan for Beaverton and Washington County
The Transportation System Plans (TSP) for Beaverton (adopted Transportation Element of Comprehensive Plan) and Washington County can be found at http://www.ci.beaverton.or.us/departments/CDD/ComprehensivePlan/Vol1/Compplanvol1.html and http://www.co.washington.or.us/deptmts/lut/planning/publicat.htm respectively.

TRAFFIC IMPACT ANALYSIS GUIDELINES

Development applications along the case study Corridors must meet the Traffic Impact Analysis requirements of the City of Beaverton. In some cases, where adjacent land is under the jurisdiction of Washington County, additional requirements may need to be met as the County has stricter access requirements than the City. Traffic Impact Analysis Guidelines for the City of Beaverton are contained in the Development Code, Section 60.55, Special Requirements Transportation Facilities, which can be found at http://www.ci.beaverton.or.usdepartments/CDD/CDD_devcode_chap60.html. Traffic Impact Analysis information for Washington County is contained in the Development Code, Article V, Public Facilities and Services, which can be found at http://www.co.washington.or.us/deptmts/lut/planning/publicat.htm. Traffic Impact Analysis Guidelines for ODOT are contained in the Development Review Guidelines document that can be found at http://www.odot.state.or.us/tdb/planning/.

PRIORITIZATION CRITERIA FOR PUBLIC AND PRIVATE TRANSPORTATION IMPROVEMENTS

The prioritization criteria for state transportation improvement projects are outlined in the 2004-2007 Statewide Transportation Improvement Program (STIP). The criteria can be located at http://www.odot.or.us/stip/.

The prioritization criteria for metro transportation improvement projects are outlined in the 2004-2007 Metropolitan Transportation Improvement Program (MTIP). The criteria can be located at http://www.metro-region.org/article.cfm?ArticleID=3814.

There are no prioritization criteria for private transportation improvements.

GUIDELINES FOR STREETSCAPE AND ROADWAY CROSS-SECTIONS

The Oregon Highway Design Manual Chapter 8 provides streetscape and roadway cross-sections for Urban Arterials, Special Transportation Areas and Urban Business Areas. The information can be found at

http://www.odot.state.or.us/techserv/engineer/pdu/Highway%20Design%20Manual/English%202003%20HDM.htm.

The City of Beaverton - 2004 Engineering Design Manual and Standard Drawings Minimal Street Width for Arterials can be found at http://www.ci.beaverton.or.us/departments/engineering/eng_edm_adopted.html.

PARKING POLICY AND REQUIREMENTS BY ZONING CATEGORY

Chapter 10 of the City of Beaverton Code provides the framework for the parking requirements in the city. Off-street parking requirements are based on land use categories and not differentiated by the city's zone categories. Off-street vehicle, bicycle, or both parking spaces shall be provided as follows:

1. Parking Calculation. Parking ratios are based on spaces per 1,000 square feet of gross floor area, unless otherwise noted.

2. Parking Categories.

   A. Vehicle Categories. Contained in the table at Section 60.30.10.5. are vehicle parking ratios for minimum required parking spaces and maximum permitted number of vehicle parking spaces to be provided for each land use. These requirements reflect the parking requirements of Title 2 of Metro's Urban Growth Management Functional Plan.

      1. Minimum Number of Required Parking Spaces. For each listed land use, the City shall not require more than the minimum number of parking spaces calculated for each use.

      2. Parking Zone A. Parking Zone A reflects the maximum number of permitted vehicle parking spaces allowed for each listed land use. Parking Zone A areas include those parcels that are located within one-quarter mile walking distance of bus transit stops that have 20 minute peak hour transit service or one-half mile walking distance of light rail station platforms that have 20 minute peak hour transit service. Beaverton Hillsdale Highway is Parking Zone A.

      3. Parking Zone B. Parking Zone B reflects the maximum number of permitted vehicle parking spaces allowed for each listed land use. Parking Zone B areas include those parcels that are located within one-quarter mile walking distance of bus transit stops, one-half mile walking distance of light rail station platforms, or both, or that have a greater than 20 minute peak hour transit service. Parking Zone B areas also include those parcels that are located at a distance greater than one-quarter mile walking distance of bus transit stops, one-half mile walking distance of light rail station platforms, or both. Canyon Road is Parking Zone B.

      4. Dual Parking Zones. If a parcel is partially located within Parking Zone A, then the use(s) located on the entire parcel shall observe the Parking Zone A parking ratios. Specifically exempted from

this requirement are parcels located within the Regional Center - East zoning district. In the cases in the Regional Center - East zoning district where parcels are bisected by the boundary of Parking Zones A and B, the applicable maximum parking ratios may be averaged, and that average may be applied over the whole parcel. [ORD 4107; May 2000]

3. Ratios. In calculating the required number of vehicle and bicycle parking spaces, fractions equal to or more than 0.5 shall be rounded up to the nearest whole number. In calculating the required number of vehicle and bicycle parking spaces, fractions less than 0.5 shall be rounded down to the nearest whole number. [ORD 3965, October 1996]

4. Uses Not Listed. For uses not specifically mentioned in this section, the requirements for off-street parking facilities for vehicles and bicycles shall be determined with a Parking Requirement Determination (Section 40.55.1) [ORD 4224; August 2002]

5. Parking Tables. The following tables list the required minimum and maximum vehicle and bicycle parking requirements for listed land use types.

Land Use Category	Required Parking Spaces		Maximum Permitted Parking Spaces	
	Multiple Use Zones	All Other Zones	Zone A	Zone B
Residential Uses				
Detached dwellings (per unit)	1.0	1.0	n/a	n/a
Attached dwellings				
One bedroom (per unit)	1.0	1.25	1.8	1.8
Two bedroom (per unit)	1.0	1.50	2.0	2.0
Three or more bedrooms (per unit)	1.0	1.75	2.0	2.0
Dwellings, Live/Work (per unit)	1.25	1.25	1.8	1.8
Dwelling, Accessory Unit	1.0	1.0	1.8	1.8
Mobile Homes (per unit)	1.0	1.0	2.0	2.0
Residential Care Facilities (per bed, maximum capacity)	0.25	0.5	0.5	0.5
Rooming, Boarding, or Lodging Houses (per guest room)	0.5	0.5	1.0	1.0
Commercial Amusements				
Arena / Stadium (per seat, maximum occupancy)	n/a	n/a	0.25	0.25
Movie Theaters (per seat, maximum occupancy)	0.3	0.3	0.4	0.5
Sports Clubs / Recreational Facilities	4.3	4.3	5.4	6.5
Tennis / Racquetball Courts	1.0	1.0	1.3	1.5

INSTITUTIONS					
	Hospital (per bed)	2.0	2.0	3.0	4.0
	Public Buildings or other Structures	2.7	2.7	3.4	4.1
	Welfare or Correctional Institution (per bed)	0.3	0.3	0.5	0.75

Notes:
1. Parking ratios are based on number of spaces per 1,000 square feet of gross floor area unless otherwise noted.
2. Refer to Section 60.30.10.4. for uses not listed in Section 60.30.10.5.
3. Refer to Section 60.30.10.10. for exceptions.
4. In calculating the required number of vehicle parking spaces, fractions equal or more than 0.5 shall be rounded up to the nearest whole number. Fractions less than 0.5 shall be rounded down to the nearest whole number.

PARKING RATIO REQUIREMENTS FOR MOTOR VEHICLES

Land Use Category	Required Parking Spaces		Maximum Permitted Parking Spaces	
	Multiple Use Zones	All Other Zones	Zone A	Zone B
COMMERCIAL USES				
Retail, including shopping centers	3.0	3.3	5.1	6.2
Offices, Administrative Facilities	2.7	2.7	3.4	4.1
Bank, Financial Institutions	3.0	3.3	5.4	6.5
Service Businesses	3.0	3.0	5.1	6.2
Rental Businesses, including vehicle and trailer rental	2.7	3.3	3.5	4.1
Medical, Dental Clinics	3.9	3.9	4.9	5.9
Mortuaries (per seat, maximum occupancy)	0.25	0.25	0.5	0.75
Eating, Drinking Establishments				
Fast Food with drive through service in the RC-TO, SC-MU, and SC-HDR zones.	5.0	n/a	12.4	14.9
Fast Food with drive through service in all other zones.	10.0	10.0	12.4	14.9
Other eating, drinking establishments in the RC-TO, SC-MU, and SC-HDR zones.	5.0	n/a	19.1	23.0
Other eating, drinking establishments in all other zones.	10.0	10.0	19.1	23.0
Temporary Living Quarters (per guest room)	1.0	1.0	1.25	1.5

Notes:
1. Parking ratios are based on number of spaces per 1,000 square feet of gross floor area unless otherwise noted.
2. Refer to Section 60.30.10.4. for uses not listed in Section 60.30.10.5.
3. Refer to Section 60.30.10.10. for exceptions.
4. In calculating the required number of vehicle parking spaces, fractions equal or more than 0.5 shall be rounded up to the nearest whole number. Fractions less than 0.5 shall be rounded down to the nearest whole number.

PARKING RATIO REQUIREMENTS FOR MOTOR VEHICLES

Land Use Category	Required Parking Spaces		Maximum Permitted Parking Spaces	
	Multiple Use Zones	All Other Zones	Zone A	Zone B
Places of Assembly				
Places of Worship (per seat at maximum occupancy)	0.25	0.25	0.6	0.8
Auditoria, meeting facilities; Social or Fraternal Organizations (per seat, maximum occupancy)	0.25	0.25	0.5	0.5
Educational Institutions: College, University, High School, Commercial School (spaces / number of FTE students and FTE staff)	0.2	0.2	0.3	0.3
Educational Institutions: Middle School, Elementary School (spaces / number of FTE staff)	1.0	1.0	1.5	1.5
Nursery Schools, Day or Child Care Facilities (spaces / number of FTE staff)	0.8	1.5	2.0	2.0
Library, museum, art gallery	2.5	2.5	4.0	6.0
Park and Ride facilities	n/a	n/a	n/a	n/a
Transit Centers	n/a	n/a	n/a	n/a
INDUSTRIAL				
Manufacturing	1.6	1.6	2.0	2.0
Storage warehouse, wholesale establishment, rail or trucking terminal, vehicle or trailer storage.	0.3	0.3	0.4	0.5
LIMITED INDUSTRIAL				
Research Facilities	2.5	2.5	3.4	3.4

Notes:
1. Parking ratios are based on number of spaces per 1,000 square feet of gross floor area unless otherwise noted.
2. Refer to Section 60.30.10.4. for uses not listed in Section 60.30.10.5.
3. Refer to Section 60.30.10.10. for exceptions.
4. In calculating the required number of vehicle parking spaces, fractions equal or more than 0.5 shall be rounded up to the nearest whole number. Fractions less than 0.5 shall be rounded down to the nearest whole number.

Exceptions. (ORD 3358) Exceptions to the required vehicle and bicycle parking standards as listed in Section 60.30.10.5. may be granted in the following specific cases:

A. **Vehicle Parking Reduction for Transit Amenities:** [ORD 3965, October 1996] Any existing use or proposed use on an existing transit route may apply for and the City may reduce the number of required vehicle parking spaces by either five percent or ten percent through provision of a pedestrian plaza. The property owner shall initiate the request for parking space reduction through the City application process.

1. A five percent credit may be approved if:

   a. The pedestrian plaza is adjacent to a transit route with transit service currently available, and is within 1/4 mile of a major transit stop on that route. If there is a bus stop along the site's frontage, the plaza must be adjacent to the bus stop,

   b. The pedestrian plaza is open to the public,

   c. The pedestrian plaza is at least 200 square feet exclusive of connecting walkways,

   d. A bench, landscaping and trash receptacle is provided as part of the pedestrian plaza. (Landscaping shall not exceed 50 percent of the total area.), and

   e. The property owner provides a parking analysis demonstrating to the City's satisfaction that the vehicle parking demand for the existing or proposed use will be met with the reduction in place.

2. A ten percent credit may be approved if:

   a. The pedestrian plaza is adjacent to a transit route with transit service currently available, and is within 1/4 mile of a major transit stop on that route. If there is a bus stop along the site's frontage, the plaza must be adjacent to the bus stop,

   b. The pedestrian plaza is open to the public,

   c. The pedestrian plaza is at least 300 square feet exclusive of connecting walkways,

   d. A transit shelter (if required by Tri-Met and the City), landscaping and trash receptacle is provided as part of the pedestrian plaza. (Landscaping shall not exceed 50 percent of the total area.), and

   e. The property owner provides a parking analysis demonstrating to the City's satisfaction that the vehicle parking demand for the existing or proposed use will be met with the reduction in place.

3. Provision of pedestrian plazas shall be coordinated with Tri-Met through the City's application process and shall be constructed to Tri-Met and City standards.

B. Transportation Management Association Participation. [ORD 4107; May 2000] The minimum number of off-street parking spaces may be reduced by as much as ten percent (10%), if the applicant agrees to participate in a Transportation Management Association program approved by the City for the area within which the project is located.

C. [ORD 4107; May 2000] The minimum number of off-street parking spaces may be reduced by as much as thirty percent (30%) subject to all of the following:

1. The combination of uses will permit shared parking sufficient to justify a reduction in the parking standard and the design of the site and parking, and conditions of operation of parking agreed to by the applicant, will promote parking patterns and parking use consistent with the permitted reduction;

2. The probable long-term occupancy of the building or use, based upon its design, will not generate additional parking demand; and

3. The applicant agrees to participate in a Transportation Management Association approved by the City for the subarea within which the project is located.

City of Beaverton Off-Street Loading Requirements

Loading Berth Design. Required off-street loading space shall be provided in berths, which conform to the following minimum specifications:

1. Type A berths shall be at least 60 feet long by 12 feet wide by 15 feet high, inside dimensions with a 60-foot maneuvering apron.

2. Type B berths shall be at least 30 feet long by 12 feet wide by 14 feet 6 inches high, inside dimensions with 30 feet maneuvering apron.

Number of Required Loading Spaces. The following numbers and types of berths shall be provided for the specified uses. The uses specified below shall include all structures designed, intended or arranged for such use. In the case of a use not specifically mentioned, the requirements for off-street loading facilities shall be the same as a use which is most similar.

	USE	AGGREGATE FLOOR AREA (SQ. FT.)	BERTHS REQUIRED	TYPE
1.	Freight terminals, Industrial plants, Manufacturing or wholesale establishments, Warehouses.	12,000 - 36,000 36,001 - 60,000 60,001 - 100,000 each additional 50,000 or fraction thereof	1 2 3 1 additional	A A A A
2.	Auditoria, Motel, Convention Halls, or Sports Arenas. (ORD 3293; Nov. 1982)	25,000 - 150,000 150,001 - 400,000 each additional 250,000 or fraction thereof	1 2 1 additional	B B B
3.	Hospitals, Residential Care Facilities. [ORD 4036; March 1999]	10,000 - 100,000 over 100,000	1 2	B B
4.	Department stores, retail establishments, funeral homes, restaurants, and commercial establishments not otherwise specified.	7,000 - 24,000 24,001 - 50,000 50,001 - 100,000 each additional 50,000 or fraction thereof	1 2 3 1 additional	B B B B
5.	Hotels, Extended Stay Hotels or Office Buildings. [ORD 3958; June 1996]	25,000 - 40,000 40,001 - 100,000 each additional 100,000 or fraction thereof	1 2	B B
6.	Schools	over 14,000	1	B

7. Concurrent different uses. When any proposed structure will be used concurrently for different purposes, final determination of loading requirements will be made by the decision making authority but in no event shall the loading requirements be less than the total requirement for each use based upon its aggregate floor area.

Loading Facilities Location.

1. The off-street loading facilities required for the uses mentioned in this Code shall be in all cases on the same lot or parcel of land as the structure they are intended to serve. In no case shall the required off-street loading space be part of the area used to satisfy the off-street parking requirements.

2. No space for loading or unloading vehicles shall be so located that a vehicle using such loading space projects into any public street. Loading space shall be provided

with access to any alley, or if no alley adjoins the lot, with access to a street. Any required front, side or rear yard may be used for loading unless otherwise prohibited by this Code.

WASHINGTON COUNTY
Parking and loading requirements for properties within Washington County are subject to the following regulations.

PARKING AND LOADING
The following off-street parking and loading and on-street parking standards shall apply in all Districts. Requirements include minimum on-street parking, minimum off-street parking, minimum vanpool/carpool parking, maximum off-street parking, and minimum off-street loading.

General Off-Street Parking and Loading Criteria

Off-street parking spaced within all districts, except non-residential Transit Oriented Districts, shall be provided on or within one hundred (100) feet of the site of the primary use. For non-residential uses within Transit Oriented Districts, off-street parking spaces shall be provided on or within four hundred (400) feet of the site of the primary use. Distance shall be measured in a straight line from the property line to the nearest space. Street and alleys shall be included in the measurement.

Off-street parking and loading requirements shall be provided in amounts specified for the particular use. Development shall provide at least the minimum number of off-street parking spaces listed in Section 413-9, unless reduced by Sections 413-10, 413-12, 413-13 or 413-14. The minimum off-street parking requirements for a use not listed in Section 413-9 shall be the same as the most similar listed use, as determined by the Review Authority.

The maximum number of off-street parking spaces permitted within a new development shall be based upon a development's proximity to frequent transit service and location in either Zone A or Zone B as shown on the applicable Community Plan's Parking Maximum Designations. New development shall provide no more than the maximum number of off-street parking spaces listed in Section 413-15.2, unless adjusted by Section 413-15.3 or 15.4, or exempted by Section 413-15.5.

The maximum number of off-street parking spaces permitted for a use not listed in Section 413-10 shall be determined by the Review Authority based upon the following:

A. Within Zone A, the maximum number of off-street parking spaces shall not exceed thirty-five (35) percent of the minimum number of off-street parking spaces established for the same use by Section 413-9 or 413-2.3. Beaverton Hillsdale Highway is Zone A.

B. Within Zone B, the maximum number of off-street parking spaces shall not exceed sixty (60) percent of the minimum number of off-street parking spaces established for the same use by Section 413-9 or 413-2.3. Canyon Road is Zone B.

On-Street Parking Requirements for Urban Residential Districts

The following on-street parking standards shall apply to all urban residential districts, including Transit Oriented Districts:

. For single family detached dwelling units and single family attached dwelling units with individual on-site parking and individual vehicular access to a local or Neighborhood Route public or private street, the following on-street parking shall be provided:

A. For a dwelling with one (1) off-street parking space, a minimum of two (2) on-street parking spaces shall be provided along the dwelling's street frontage, except as provided in Sections 413-6.1 D. or 413-6.3.

B. For a dwelling with two (2) off-street parking spaces, a minimum of one (1) on-street parking space shall be provided along the dwelling's street frontage, except as provided in Sections 413-6.1 D. or 413-6.3; and

C. For dwellings with more than two (2) off-street parking spaces, a minimum of one (1) on-street parking space for every two (2) lots with more than two (2) off-street parking spaces shall be provided along the frontage of those lots, except as provided in Sections 413-6.1 D. or 413-6.3.

D. The requirements for on-street parking are not applicable to flag lots or lots that are provided access from the terminus of a non-through street (e.g., cul-de-sac bulb or hammerhead).

Required on-street parking shall be provided along the affected lot's street frontage by parallel or angled parking (perpendicular parking is not allowed) in accordance with the standards of the Washington County Uniform Road Improvement Design Standards. Parallel parking spaces shall be at least eighteen (18) feet long for one (1) or two (2) adjoining spaces. When three (3) or more adjoining spaces are provided, the minimum length of each space shall be twenty (20) feet. Angled parking shall be provided on a street corner and not along the front of dwelling units. Driveway aprons and cross walk area shall not be used for on-street parking. Curb frontage with a fire hydrant or congregate mail boxes shall not be used to satisfy the required on-street parking standards.

Portions of the on-street parking required by Section 413-6.1 may be provided in parking courts that are interspersed throughout a development when the following standards are met:

A. No more than eight (8) parking spaces shall be provided in a parking court;

B. A parking court shall be located within one hundred (100) feet of the affected lot as in accordance with the requirements of Section 413-2.2.;

C. No more than two (2) parking courts shall be provided within a block, with only one (1) parking court provided along a block side;

D. A parking court shall be paved and shall comply with the standards of this Section and the grading and drainage standards of this Code;

E. A parking court shall be landscaped in accordance with the standards of Section 407-6 and Sections 431-6.2 B. (3)(a and b);

F. A parking court shall be illuminated;

G. A parking court shall be privately owned and maintained. For each parking court there shall be a legal recorded document which includes:

(1) A legal description of the parking court;

(2) Ownership of the parking court;

(3) Use rights; and

(4) A maintenance agreement and the allocation and/or method of determining liability for maintenance of the parking court;

H. No portion of a parking court, including landscape areas, shall be used to satisfy any requirement for open space, recreational facilities or areas, or be used as a development's water quality or quantity facility; and

I. A parking court shall be used solely for the parking of operable passenger vehicles.

Minimum Off-Street Parking Requirements

The minimum number of off-street parking spaces by type of use shall be determined in accordance with the following table:

	USE	MINIMUM NUMBER OF STANDARD OFF-STREET PARKING SPACES PER UNIT OF MEASURE
	Residential:	
A.	Detached	One (1) per each dwelling unit
B.	Attached including duplex	
	(1) 1 Bedroom or Studio	One (1) per each dwelling unit
	(2) 2 Bedroom	One and five-tenths (1.5) per each dwelling unit
	(3) 3 or more Bedroom	One and seventy-five hundredths (1.75) each per dwelling unit
C.	Boarding House	One (1) space for each sleeping room
D.	Manufactured Dwelling	Two (2) per each dwelling unit
	Institutional:	
A.	Churches, temples, or buildings of similar use with fixed seats	One (1) space for each two (2) seats.
B.	Golf Course, Recreational Facilities, Sports Club, and Tennis or Racquetball Club	
	(1) Golf course open to the public, except miniature “par-3” course	Four (4) for each one (1) golf hole and one (1) for each employee
	(2) Private golf clubs	Parking will be based on a parking study submitted at the time of application for the use. Parking shall be reviewed through the same procedure as required for the use.
	(3) Recreational facilities and sports clubs	Four and three-tenths (4.3) spaces for each thousand (1000) square feet of gross floor area.
	(4) Tennis or racquetball clubs	One (1) space for each thousand (1000) square of gross floor area.
C.	Homes for the aged and convalescent homes	One (1) space for each four (4) beds, plus one (1) space for each employee, including nurses, on maximum working shift.

	USE	MINIMUM NUMBER OF STANDARD OFF-STREET PARKING SPACES PER UNIT OF MEASURE
D.	Hospitals	One (1) for each two (2) patient beds, plus one (1) space for each staff or visiting doctor and each employee, including nurses, on maximum working shift.
E.	Libraries, museums, and post office buildings.	One (1) for each five hundred (500) square feet of gross floor area, plus one (1) space for each employee employed therein.
F.	Lodge halls, meeting halls and community centers or buildings of similar use without fixed seats.	One (1) for each four (4) persons allowed by the maximum seating capacity as established by fire, building or health codes.
G.	Passenger Terminal (bus, air or rail)	One (1) space for each one thousand (1,000) square feet of gross floor area plus one space for each two (2) employees.
H.	Public office building not specified elsewhere	Two and seven-tenths (2.7) for each thousand (1000) square feet of gross floor area.
I.	Schools	
	(1) Preschool child care (day nurseries)	Two spaces plus one (1) for each employee.
	(2) Elementary and junior high school	One (1) for each one (1) teacher and administrator, in addition to the requirements of the auditorium.
	(3) Senior high schools and colleges	One (1) for each five (5) students and staff.
J.	Stadium, sports arena or similar place of assembly	One (1) for each three (3) seats or six (6) feet of benches, and one (1) for each employee on a maximum working shift.
K.	Theaters and auditoriums	One (1) for each three (3) seats.
L.	Free-standing Communication Towers subject to Section 430-109	Two (2) spaces plus one space for each two (2) employees at facilities which require on-site personnel.
	Business and Commercial	
A.	Assembly halls, without fixed seats for commercial recreation including pools or billiard parlors, dance halls,	One (1) space for each hundred (100) square feet of gross floor area used for permitted use.

	USE	MINIMUM NUMBER OF STANDARD OFF-STREET PARKING SPACES PER UNIT OF MEASURE
	skating rinks and exhibition halls or buildings for similar assembly uses.	
B.	Auto wash	One (1) for each employee. In addition, adequate waiting space for autos provided on the premises to accommodate fifty (50) percent of the hourly rate of capacity.
C.	Automobile service station	Two (2) for each lubrication, stall rack or pit; and one (1) for each gasoline pump.
D.	Beauty parlor or barber shop	Three (3) spaces for each of the first two (2) beauty or barber chairs, and one and one-half (1 _) spaces for each additional chair.
E.	Bowling alleys	Four (4) for each one (1) bowling lane, plus one (1) for each employee on a maximum working shift.
F.	Commercial schools	To be determined through Development Review.
G.	Drive-in restaurant or similar drive-in used for the sale of beverages, food or refreshments for consumption off the premises.	Nine and nine-tenths (9.9) per thousand (1000) square feet of gross floor area.
H.	Establishments for sale and consumption on the premises of beverages, food or refreshments	Fifteen and three-tenths (15.3) per thousand (1000) square feet of gross floor area.
I.	Furniture and appliances, household equipment, repair shops, showroom of plumber, decorator, electrician or similar trade, shoe repair and other similar uses.	One (1) for each eight hundred (800) square feet of usable floor each used in processing, plus one (1) for each employee on maximum working shift.
J.	Laundromats and coin-operated dry cleaners.	One (1) for each two (2) washing machines.
K.	Miniature or “par 3” golf courses	Three (3) for each one (1) hole plus one (1) for each employee.
L.	Mortuary	One (1) for each fifty (50) square feet of usable floor space, plus one (1) for each employee on maximum working shift.

	USE	MINIMUM NUMBER OF STANDARD OFF-STREET PARKING SPACES PER UNIT OF MEASURE
M.	Motel, hotel or other commercial lodging establishment	One (1) for each one (1) unit for occupancy, plus extra spaces for dining rooms, ballrooms or meeting rooms as required by Section 431-9.3 A and H above, where the capacity of such areas exceeds the number of beds in the building.
N.	Motor vehicle and service establishments	One (1) for each two hundred (200) square feet of usable floor space sales room and one (1) for each one (1) auto service stall in the service room.
O.	Retail stores, except as otherwise specified herein	Four and one-tenth (4.1) for each thousand (1000) square feet of gross area.
	Offices	
A.	Banks	Four and three-tenths (4.3) for each thousand (1000) square feet of gross floor area.
B.	Business offices or professional offices except as indicated pursuant to Section 413-9.4 C.	Two and seven-tenths (2.7) for each thousand (1000) square feet of gross floor area.
C.	Professional offices of doctors, dentists, or similar professions.	Three and nine-tenths (3.9) for each thousand (1000) feet of gross floor area.
	Industrial	
A.	Industrial or research establishments, wholesale establishments, and industrial park	One and six-tenths (1.6) for each thousand (1000) square feet of gross floor area.
B.	Wholesale less than one hundred fifty thousand (150,000) gross square feet in size.	Five-tenths (0.5) for each thousand (1000) square feet of gross floor area.
C.	Warehouses greater or equal to one hundred fifty thousand (150,000) gross square feet in size.	Three-tenths (0.3) for each thousand (1000) gross square feet of floor area.

Reduction of Minimum Off-Street Parking Based on Transit

The following conditions must be met in order to reduce minimum off-street parking requirements based upon the availability of transit.

Through a Type II procedure, minimum off-street parking requirements may be reduced up to twenty (20) percent based upon the availability of transit. The following conditions (items A. and B., below) must be met in order to reduce minimum parking requirements based upon the availability of transit:

A. The property must be located within one-quarter (1/4) mile of a transit route which provides at least twenty (20) minute or more frequent service between 10:00 a.m. and 2:00 p.m. each weekday; and

B. The use of the property must be office, retail or institutional.

When a development provides a transit amenity associated with a bus stop (including space for a landscaped buffer, enhanced pedestrian linkages, building awnings, covered walkways, pullout, or bus shelter or other amenity the transit district determines improves the convenience or safety of transit customers), parking spaces may be reduced at a ratio of 1 parking space for each 50 square feet of transit amenity space provided above and beyond the minimum required by this ordinance.

Vanpool/Carpool Parking

Preferential parking for vanpool/carpool shall be provided for all institutional, office, and industrial uses having 50 or more parking spaces as set forth below.

After any reductions based upon availability of transit in Section 413-10, at least ten (10) percent of the minimum employee or student spaces required in Sections 413-9.2, 413-9.4, and 413-9.5 shall be designated for exclusive use by vanpools/carpools.

Spaces reserved for exclusive use by vanpools/carpools shall have a minimum width of 9.5 feet and be clearly marked for vanpool/carpool use.

Vanpool/carpool spaces shall be generally located closest to the primary entrance for employees or students utilizing such spaces but not closer than spaces for handicapped parking or visitor parking. For developments with more than 20 required vanpool/carpool spaces and more than one primary entrance, 50 percent of all of the required vanpool/carpool parking may be clustered in one or more centralized, convenient locations.

In case of enlargement of a building or a change in the use of a building, the number of parking spaces required shall be based on floor area or capacity of the entire use of the building. If the building is part of a larger existing use with multiple buildings, only the subject building shall meet the parking requirements.

Reduction of Minimum Off-Street Parking Based on Vanpool/Carpool

Sites having fifty (50) or more parking spaces may reduce total minimum parking space requirements by two (2) standard or compact size spaces for every one (1) vanpool/carpool space provided. Vanpool/carpool spaces are exempt from the maximum parking requirements of Section 413-10.

Reduction of Minimum Off-Street Parking Based on Bicycle Parking

Sites having fifty (50) or more parking spaces may reduce total minimum automobile parking space requirements by one (1) standard or compact size space for every one (1) bicycle space provided.

Total Reductions to Minimum Off-Street Parking Requirements

The minimum number of off-street parking spaces required by Section 413-9 may be reduced through the application of Sections 413-10, 413-12 and 413-13 shall not exceed forty (40) percent of the required minimum spaces.

Maximum Off-Street Parking Requirements

In accordance with the Community Plans' Parking Maximum Designations, urban unincorporated properties shall be identified as being located in either Zone A or Zone B. Properties brought into the Urban Growth Boundary after adoption of the Parking Maximum Designations shall be considered to be located within Zone B for the purposes of Section 413 unless the property meets the following Zone A criteria. Zone A properties are located within one-quarter (1/4) mile of a bus route that provides twenty (20) minute peak hour service or within one-half (1/2) mile of a light rail station. Zone B properties are the remaining urban unincorporated areas.

The maximum number of allowable off-street parking spaces by type of use shall be determined by the following or Section 413-2.4:

MAXIMUM OFF-STREET PARKING RATIOS IN ZONE A AND ZONE B

(parking ratios are based on spaces per 1,000 gross square feet unless otherwise stated)

USE	Maximum Parking Zone A (Transit Accessible Areas)	Maximum Parking Zone B (Remaining Urban Areas)
Residential	None	None
Bank with drive-in	5.4	6.5
Business offices, office park, "flex space", or professional offices (except those for doctors, dentists or similar professions)	3.4	4.1
Professional offices of doctors, dentists, or similar professions	4.9	5.9
Public office building	3.4	4.1

MAXIMUM OFF-STREET PARKING RATIOS IN ZONE A AND ZONE B (parking ratios are based on spaces per 1,000 gross square feet unless otherwise stated)		
USE	**Maximum Parking Zone A** (Transit Accessible Areas)	**Maximum Parking Zone B** (Remaining Urban Areas)
Warehouse (greater than or equal to 150,000 gsf)	0.4	0.5
Senior high schools, colleges and universities (spaces per # of students and staff)	0.3	0.3
Tennis or racquetball clubs	1.3	1.5
Recreational facilities and sports clubs	5.4	6.5
Retail stores and shopping centers (except as otherwise specified in Section 413-9 or 413-15)	5.1	6.2
Theaters and auditoriums (spaces per # of seats)	0.4	0.5
Drive-in restaurant or similar drive-in used for the sale of beverages, food or refreshments for consumption off the premises	12.4	14.9
Establishments for sale and consumption on the premises of beverages, food or refreshments	19.1	23
Churches, temples, or buildings of similar use with fixed seats (spaces per # of seats)	0.6	0.8

Parking spaces in parking structures, fleet parking, parking for vehicles that are for sale, lease, or rent, and employee vanpool/carpool parking spaces are exempt from the maximum off-street parking standards in Section 413-15.2.

In Zone A, the Review Authority may approve through a Type II procedure off-street parking in excess of the maximum parking standards if a development is located more than a one-quarter (1/4) mile walk via easements for public travel to the closest bus stop with twenty (20) minute peak hour service, or if twenty (20) minute peak hour service is no longer provided within one-quarter (1/4) mile of a property. In either case, the maximum number of off-street parking spaces shall not exceed the Zone B maximum standard for the same use.

In either Zone A or B, the Review Authority may approve through a Type II procedure off-street parking in excess of the maximum parking standards based on findings that:

A. The nature of the development will result in a higher off-street parking demand relative to similar uses in the same parking zone; and

B. To the greatest degree practicable, the development includes the implementation of opportunities for shared parking, parking structures, utilization of public parking spaces and other appropriate demand management programs. Demand management programs may include, but are not limited to, subsidized transit passes, shuttle service, and carpool programs.

Minimum Off-Street Loading Requirements

In all primary districts, loading areas shall be provided according to the following schedule:

Residential:

None required, except for high rise (above three (3) stories) attached dwelling units which shall be provided with one (1) loading space as a minimum and shall provide one (1) additional loading space for each fifty (50) dwelling units over one-hundred (100) dwelling units.

	USE	MINIMUM NUMBER OF STANDARD OFF-STREET PARKING SPACES PER UNIT OF MEASURE
	Institutions	
A.	Convalescent home; institution for children; welfare; correction institute; institutions for the aged.	One (1) space where the number of beds exceed twenty-five (25)
B.	Hospital - Floor Area	
	5,000 to 40,000 square feet 40,000 to 100,000 square feet 100,000 to 150,000 square feet	One (1) space Two (2) spaces Three (3) spaces
	Public Safety	
A.	Amusement park; bowling alley, dance hall or skating rink; indoor arena or theater; sports and commercial amusement; stadium or racetrack.	Minimum of one (1) space
B.	Auditorium	Minimum of one (1) space.
C.	Schools	Minimum of two (2) off-street loading

USE	MINIMUM NUMBER OF STANDARD OFF-STREET PARKING SPACES PER UNIT OF MEASURE
	spaces for school buses plus one (1) additional space for each two-hundred - fifty (250) bussed pupils.

Commercial

Floor Area	Loading Space Required
Under 5,000 square feet	0
5,000 to 25,000 square feet	1
25,000 to 50,000 square feet	2
50,000 to100,000 square feet	3

Industrial

Floor Area	Loading Space Required
Under 25,000 square feet	1
25,000 to 50,000 square feet	2
50,000 to 100,000 square feet	3

General Loading Requirements

It shall be unlawful to store or accumulate goods in a loading space if it renders it useless for loading and unloading operations.

Loading spaces shall be located on the site and directly accessible to main structures. The location of the loading spaces shall comply with the requirements of Sections 403-2.3 E. (2) and 406-2.5 B.

The minimum length and width of loading spaces shall be according to the requirements in the following table:

	Use	Length Linear Ft.	Width Linear Ft.
A.	All except wholesale and industrial	35	12
B.	Wholesale storage and industrial	65	12

PLANNED, PROGRAMMED AND FUNDED CAPITAL TRANSPORTATION PROJECTS

Capital Improvement Program

There are no projects on Beaverton-Hillsdale Highway or Canyon Road that are in the current Capital Improvement Program's (CIP) of the City of Beaverton or Washington County.

Transportation System Plan
The City of Beaverton completed an update to their Transportation System Plan (TSP) in 2001. The updated TSP was incorporated into the Transportation Element of the Comprehensive Plan. There are a number of planned projects on or near the case study segments of Beaverton Hillsdale Highway and Canyon Road that are not currently funded. They are outlined below by modal type. These projects are also depicted graphically in the Transportation Element (see Attachment A).

Pedestrian System
There are no pedestrian system improvement projects on Beaverton-Hillsdale Highway or Canyon Road that have committed funds. The Pedestrian Action Plan indicates the following projects should be funded in the near term. This includes projects near Beaverton-Hillsdale Highway or Canyon Road that impact the corridors.

Pedestrian Action Plan		
Project	**From**	**To**
Canyon Road (sidewalks and crossings)	91st Avenue	Ore 217
Canyon Road (fill in gaps in pedestrian network)	US 26	110th Avenue
110th Avenue (gap one side)	Beaverton-Hillsdale Highway	Canyon Road
103rd Avenue (sidewalk part of road improvement)	Walker Road	Western Avenue
Laurelwood Ave/87th Ave (pedestrian corridors that connect neighborhoods)	Canyon Road	Scholls Ferry Road
91st Avenue (pedestrian corridors that connect neighborhoods)	Canyon Road	Beaverton-Hillsdale Highway
96th Avenue (pedestrian corridors that connect neighborhoods)	Canyon Road	Beaverton-Hillsdale Highway

Bicycle System
There are no bicycle system improvement projects on Beaverton-Hillsdale Highway or Canyon Road that have committed funds. The Bicycle Action Plan indicates the following projects should be funded in the near term. This includes projects near Beaverton-Hillsdale Highway or Canyon Road that impact the corridors.

Bicycle Action Plan		
Project	**From**	**To**
Canyon Road (connect key bicycle corridors)	142nd Avenue	91st Avenue
Western Avenue bike lanes	Beaverton-Hillsdale Highway	Allen Boulevard
Beaverton-Hillsdale Highway bike lanes	Ore 217	91st Avenue
Beaverton-Hillsdale Highway bike lanes	91st Avenue	Washington County Boundary
Walker Road bike lanes (construct with roadway	Ore 217	Canyon Road

improvement projects)		
Canyon Road bike lanes (construct with roadway improvement projects)	US 26	110th Avenue

Transit
There are no Tri-Met ten-year service improvement projects on Beaverton-Hillsdale Highway or Canyon Road. Currently there is frequent bus service on Beaverton-Hillsdale Highway and regional bus service on Canyon Road.

Motor Vehicles
There are no Street Improvement Master Plan Projects on the case study segments of Beaverton-Hillsdale Highway or Canyon Road that have committed funds. There are a number of projects needed by the TSP forecast year of 2020 and are listed below. This includes projects adjacent to Beaverton-Hillsdale Highway and Canyon Road.

Street Improvement Plan	I
Project	**Improvement Description**
Beaverton-Hillsdale Highway/Scholls Ferry Road	Redesign the intersection to improve safety for all modes of travel. RTP# 1184 2006-2010
103rd Avenue: Western to Walker	Improve existing roadway and construct new connections and intersection alignments. Include sidewalks and bike lanes. Build as development occurs. Replaces RTP# 6012
Beaverton-Hillsdale Highway/Western (intersection improvement)	Add EB right turn lane; add WB double left turn lanes; add NB through lane.
Canyon/Ore 217 SB	Add SB left turn lane and restripe SB lanes
Beaverton-Hillsdale Highway/Ore 217 SB	Add SB left turn lane
Beaverton-Hillsdale Highway/Ore 217 NB	NB double left turn lanes
Beaverton-Hillsdale Highway/SW Laurelwood	Add SB left turn lane (signal modification and right-of-way)

The Transportation Element also includes Local Connectivity Maps that identify recommended and adopted local bicycle, pedestrian and multi-modal street connections. These potential future local connections shall be evaluated and considered with new development. Two future local connections are identified in the general case study area; (1) 103rd Avenue and 103rd Court and (2) 93rd Avenue and Fir Grove Lane.

METRO MTIP

There are no MTIP projects on Beaverton Hillsdale Highway or Canyon Road listed in the Metropolitan Transportation Improvement Program, Portland Metro Area, Federal Fiscal Years 2004-2007 Report (April 2004).

ODOT STIP AND OTIA

There is one STIP project on Beaverton-Hillsdale Highway in the 2004-2007 Statewide Transportation Improvement Program, ODOT Region 1. This project is from Highway 217 to SW Maple Drive, project number 12905. The project is to widen to create standard lane width and upgrade off-ramp signal for dual left turn movement. The project work type is pavement

preservation and also has significant safety elements. Construction is scheduled to begin in 2004. See http://www.odot.or.us/stip/Documents/2004_2007_STIP/index.htm.

There no OTIA projects on the case study corridors.

TRANSIT SERVICE

Existing Transit Routes and Stop Locations

A map of the existing transit routes, including the location of shelters and benches can be seen in Figure 10.

Figure 10. Existing Transit Routes and Stop Locations, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004

Source: Metro DRC

Ridership by Route and Stop

TriMet Line 54 serves Beaverton Hillsdale Highway from downtown Portland to the Beaverton Transit Center. TriMet Line 58 serves Canyon road from downtown Portland to the Beaverton Transit Center. See Attachment B for ridership information by route and stop.

DEVELOPMENT ACTIVITY APPROVED AND IN-PROCESS

Recent and Current Development Plans and Status

According to the City of Beaverton Community Development Department there are two active development projects on Canyon Road, both by the Kuni Auto Dealership: 1) Kuni BMW new dealership under construction at 10999 SW Canyon Road and, 2) Kuni Lexus dealership expansion, which is almost finished at 8840 SW Canyon Road.

On Beaverton-Hillsdale Highway there is one project presently under construction, a new US Bank building at the northwest cornet of SW Laurelwood and Beaverton-Hillsdale Highway (it currently does not have an address (ref 1S1-13BB Tax Lot 6600). There are two projects that are currently under review by the Beaverton Community Development Department; 1) Crystal Spa, located at 8635 SW Beaverton-Hillsdale Hwy (2 ac. site with 12,000 sq. ft. of building) and 2) the Thomas Court eight townhouse project located at 8345 SW Beaverton-Hillsdale Highway. The Community Development Department staff is not aware on any other future project in the study area.

RECENT AND CURRENT TRAFFIC IMPACT ANALYSIS

The City of Beaverton Engineering Department indicated the following projects have submitted or will be submitting Traffic Impact Analysis Studies.

Beaverton-Hillsdale Highway

Zwahlen Ct.:
Located at SE Corner of BH Highway and Laurelwood (not in Beaverton), retail, office and 100 apartments.

US Bank:
Located at NW Corner of SW Laurelwood Avenue and SW Beaverton-Hillsdale Highway. Washington County Assessor's Map 1S1-13BB, Tax Lot 06600. The building is 3,043 sq ft, with two drive-up tellers on approx. 0.80 acres.

Oregon Telco Credit Union:
Located at 10500 SW BH Highway, south side of BH & 107th, Credit Union with drive-up.

Home Depot:
Located at 4401 SW 110th Avenue; Washington County Assessor's Map 1S1-15AA on Tax Lot 6600. The parcel is zoned Community Service (CS). 105,500 sq ft building, approx 12 acres, between BH Highway and Canyon
Road.

Canyon Road
Kuni BMW New Car Dealership:
Located at the NE corner of SW Canyon Road and SW 110th Avenue. Tax Lots 2100, 2300, 2401, 2500, 2600 and 2700 on Washington County Assessor's Map 1S1-10DD. Tax Lots 2100, 2300, 2401 and 2500 are zoned General Commercial (GC) while Tax Lots 2600 and 2700 are zoned Community Service (CS). A 48,976 sq. ft. automobile sales and service building, approximately 4.24 acres in size.

Kuni Lexus:
Located at the SW corner of SW Canyon Road and SW 87th Ave. Tax Lots 7800, 7900, and 8900 on Washington County Assessor's Map 1S1-11DA and Tax Lot 1290 on Washington County Assessor's Map 1S1-11DB. Exterior remodel of the existing 15,760 sq ft showroom and construction of an approx. 35,807 sq ft addition and construction of 4,444 sq ft car wash facility and storage area.

See Figure 11 for a map of recent development activity and Traffic Impact Study locations identified by the City of Beaverton. Copies of studies (if any) will need to come from Beaverton Community Development Department.

Figure 11. Recent Development Activity & Traffic Impact Study Locations, Beaverton-Hillsdale Highway and Canyon Road Corridors, 2004

SOURCE: METRO DRC

HIGHWAY CAPACITY

Traffic Counts

2002 Average Daily Traffic (ADT) All Vehicles as reported in the ODOT 2002 Transportation Volume Tables Report (June 2003).

Beaverton-Hillsdale Highway

Location on Highway	2002 ADT All Vehicles
0.05 mile east of Highway 217	38,200
0.01 mile west of SW Western Avenue	35,700
0.10 mile east of SW Western Avenue	38,500
0.01 mile west of SW Jamison Road	34,400
East city limits of Beaverton, 0.04 mile west of SW 91st Avenue	31,900
0.01 mile west of SW Laurelwood Avenue	32,500
0.01 mile east of SW Laurelwood Avenue	31,700
0.01 mile west of Scholls Ferry Road (Ore 210)	34,600
0.01 mile east of Scholls Ferry Road (Ore 210)	28,700
0.01 mile west of Washington-Multnomah County line	27,700

Canyon Road

Location on Highway	2002 ADT All Vehicles
0.24 mile southwest of Sunset Highway (US26)	26,600
0.01 mile southwest of Canyon Lane	26,100
0.10 mile east of SW 87th Avenue	21,900
0.01 mile west of SW 91st Avenue	27,800
0.01 mile east of SW Walker Road	29,600
0.01 mile west of SW Walker Road	23,300
0.06 mile east of Highway 217	30,900
0.01 mile west of Highway 217	41,700

Additional traffic counts can be found in the Beaverton TSP.

BASE YEAR AND FUTURE YEAR LINK VOLUMES FOR THE WEEKDAY PM PEAK HOUR

See Attachment C for auto volume plots.

VOLUME TO CAPACITY RATIOS OF ALL KEY INTERSECTIONS

See Attachment C for auto volume plots.

ROADWAY SAFETY AND OPERATIONS

Signal Timing Plans

See Attachment D for signal timing plans for Beaverton-Hillsdale Highway and Canyon Road.

Crash Data

The following information is from the 2002 Oregon State Highway Crash Rate Tables, September 2003. This information can also be found at http://www.oregon.gov/ODOT/TD/TDATA_CAR/publications.shtml.

Beaverton-Hillsdale Highway

	2002			Crashes per million vehicle miles				
Section Description	Miles	Crash	ADT	2002	2001	2000	1999	1998
Begin to 217 O-xing	0.04	5	38,200	8.94	19.98	18.46	38.63	26.61
217 U-xing to SW Laurelwood	1.56	77	34,551	3.90	3.81	4.76	4.15	5.13
Total Beaverton	1.60	82	34,642	4.05	4.27	5.14	5.12	5.74

Canyon Road

	2002			Crashes per million vehicle miles				
Section Description	Miles	Crash	ADT	2002	2001	2000	1999	1998
Sunset Hwy to SW Canyon Dr	1.38	12	26,219	0.90	0.68	0.77	0.85	2.39
SW Canyon to SW Hall	2.07	91	30,957	3.87	4.17	3.95	4.91	4.16

PHYSICAL CONDITIONS INVENTORY

Cross-section data including sidewalks of Beaverton-Hillsdale Highway mile points 0.97 to 3.41 were previously provided by ODOT. Additional information for Canyon Road mile points 1.61 to 2.90 is available at http://www.odot.state.or.us/transview/highwayreports/mlpt_detail_parms.cfm.

6000-7999 Public:6869 Metro Corridors :Task 2 Case Study and Fi#2B94B1:Case Study:Technical Report:1.T2.2_EC_Metro_110104.doc

Section 3

Market Analysis

Market Analysis

This appendix is a analysis of market conditions in the Corridor completed by Johnson Gardner in September 2004.

WHAT ARE KEY OPPORTUNITIES AND CONSTRAINTS OF THE AREA FROM A DEVELOPMENT PERSPECTIVE? (BY MAJOR LAND USE TYPE)

The study area has a number of attributes that influence its ability to attract alternative forms of development. The current land use pattern in the area includes a wide variety of land uses, reflecting the generally conducive environment in the area for these development forms. This section summarizes the key opportunities and constraints as it relates to attracting and retaining development.

Opportunities include:

- The Beaverton School District is well regarded, and considered a marketable amenity for residential development.
- The local area includes strong demographics, both in terms of residential density as well as income profile.
- The B**eaverton-Hillsdale** Highway has a significant traffic volume
    - Drive-by market support for retail
    - Exposure for retail and office
- An existing strong commercial mix provides for cross shopping opportunities
- Relative geographic isolation allows for limited cross competition, particularly for convenience goods.
- The local park network is well developed
- High-end amenities such as the Portland Golf Club, Oregon Episcopal School, and Jesuit High School
- Good infill site opportunities
- Good regional access
- Good transit linkages

Constraints include:

- The Beaverton-Hillsdale Highway, Scholls Ferry Road, and Oleson Road intersection is consistently congested
- There are significant slopes on the eastern portion of the Corridor
- Limited parcel size and/or depth

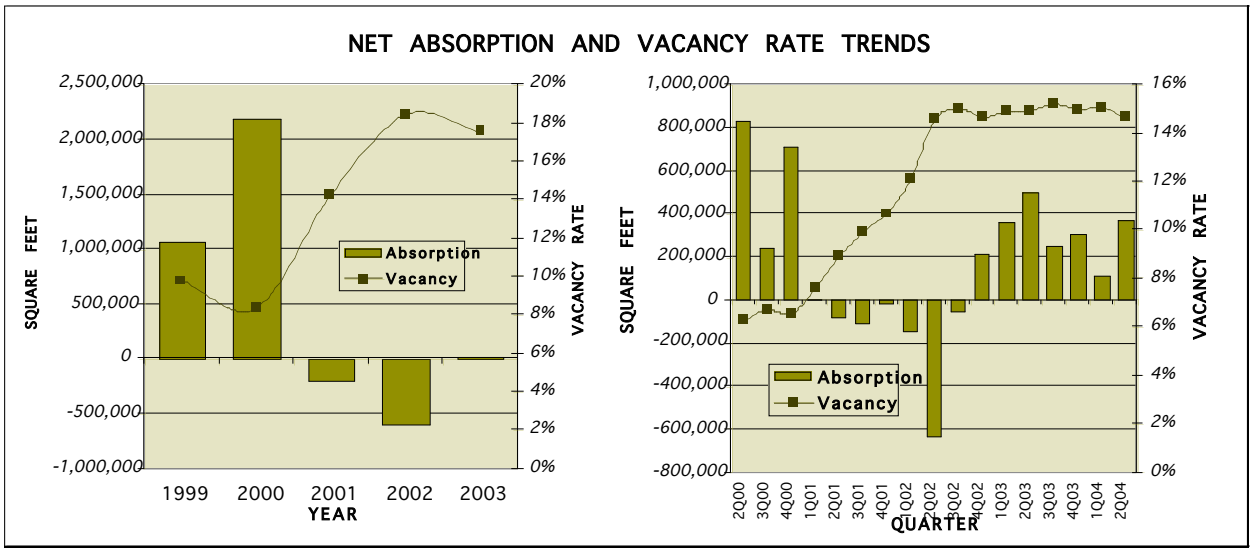
WHAT ARE FACTORS IMPACTING THE VIABILITY OF DEVELOPMENT IN THE STUDY AREA?

The Portland metropolitan area is emerging from a pronounced economic downturn. During this time, the market saw a significant oversupply of a number of income property types. These include speculative office space, industrial space, and rental apartments. The ownership residential market, meanwhile, continued to see strong demand due to a combination of historically low mortgage rates as well as continued in-migration despite the lack of economic growth. The following is an overview of general as well as specific market trends by major land use classification.

OFFICE MARKET

At a metropolitan area level, the speculative office market has begun to recover, although it is still considered too soft to support new speculative construction. Soft market conditions have depressed achievable lease rates below the level required to underwrite new construction, and are not expected to rebound until 2006 at the earliest.

Figure D-1. Office net absorption and vacancy rate trends, AREA?, 1999 to 2004



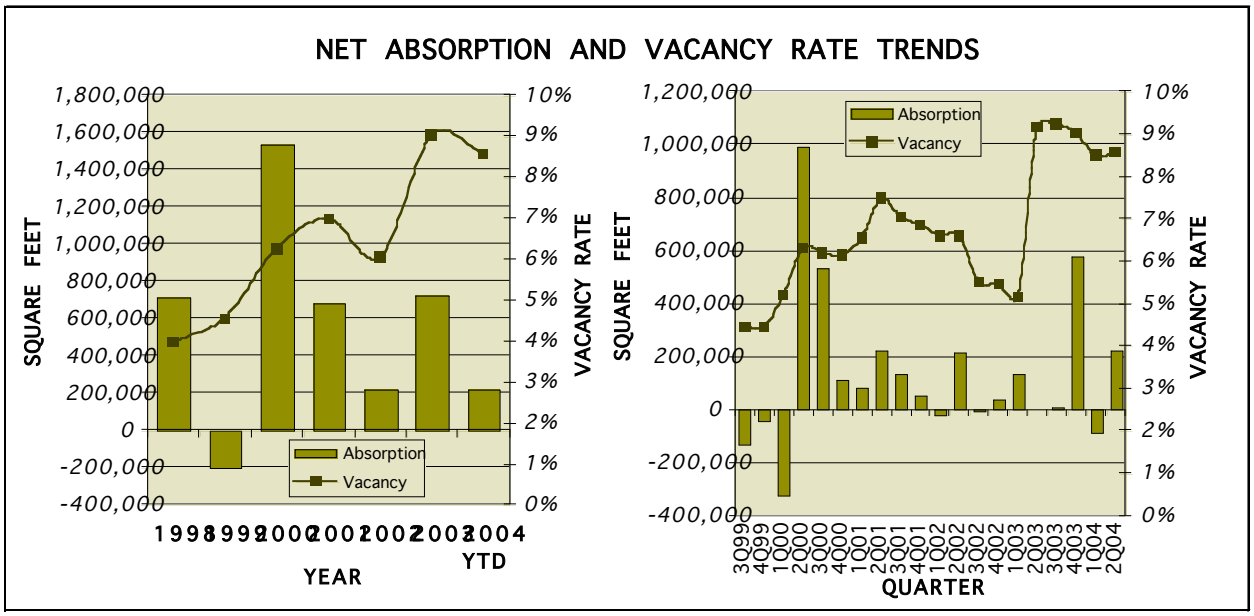
Source: JGA, 2004 (GET CORRECT Source info)

While the overall market is weak, the most appropriate office space uses along the Beaverton-Hillsboro Corridor are neighborhood serving uses, which serve a more specific geographic area and are less impacted by metropolitan area conditions. These types of uses include medical/dental office space and service office users (i.e., title companies, travel agencies). The strength of surrounding demographics make these more limited office tenants viable uses over both the short as well as longer-term horizon.

RETAIL MARKET

While the office and industrial markets have been impacted by recent economic declines, the retail market has continued to perform well. While retail demand is a function of changes in buying power, the retail market remains largely tenant-driven, in that the demand for space is tied to the availability of interested and appropriate tenants. This accounts for occupancy, with shifts in buying power directly impacting sales per square foot levels more than overall occupancy levels.

Figure D-2. Retail net absorption and vacancy rate trends, AREA?, 1999 to 2004



Source: JGA, 2004 (GET CORRECT Source info)

Retail is a highly Darwinistic segment of the real estate market, with stronger retail formats and specific retailers displacing less competitive retailers on a regular basis. Retail locations and/or concentrations are also highly competitive, with location vis-à-vis the market and competition playing an extremely important function in the success of retailers.

The demographic strength of the area surrounding the Beaverton-Hillsdale Corridor is highly favorable to retail development, as demonstrated by the extremely strong tenant mix found in the corridor. The western edge of the corridor is anchored by large format retailers such as Home Depot and Target,

with major grocery anchors on the eastern edge led by Fred Meyers, Zupan's, and New Seasons. Uwajimaya, a major Asian grocer, anchors the center of the corridor.

The existing concentration of grocers probably limits new grocery demand, but support continues for a wide range of neighborhood-serving tenant types. Regional-draw tenants are more appropriately located at the western edge of the corridor, in proximity to Highway 217 and the Beaverton Regional Center.

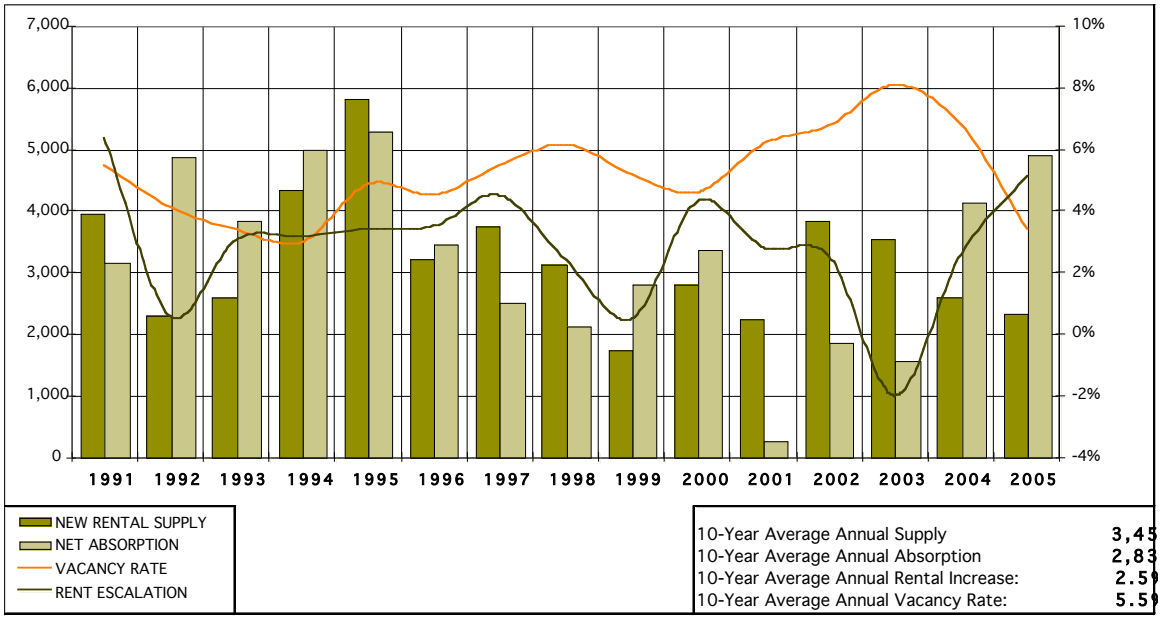
RENTAL APARTMENT MARKET

The Portland metropolitan area's rental apartment market has been substantially over-built for the last several years, with market-rate projects struggling to keep occupancy. This has been a function of overbuilding in the late 1990s, low interest rates increasing homeownership rates, weak economic growth and an influx of tax-credit projects sapping market demand. The overall market occupancy rate was estimated at 93.4% at the end of the second quarter of 2004. Current estimated occupancy rates range from 91.9% in the Close-in Westside to 94.9% in the Hillsboro/Tanasbourne subregion. All sub-markets except the Close-in Westside (which includes the Beaverton/Hillsdale Corridor) experienced a rise in occupancy over the quarter.

According to Norris Beggs & Simpson, average rents increased 1.5% during the second quarter, reflecting a 6.1% annualized rate. Investment activity in existing apartment complexes was robust, with 39 transactions reported during the first quarter. Tightening market conditions came on the heels of recent economic growth and reflects a marked improvement over weak market performance throughout 2003. With interest rates expected to rise over the next year, competition from ownership products should continue to diminish.

Weakness in the Close-in Westside may be attributed to several factors including a disproportionately large number of renters taking advantage of lower interest rates and buying homes. It also may be due to a preference for newly constructed apartment product in the nearby Central City. Following a surge in new construction, the Central City sub-market is showing signs of weakness, despite a moderate rise in occupancy. In the second quarter, recently constructed Central City projects offered substantial price discounts and average rents fell by over 18%. Although rental rates are significantly improving in most suburban sub-markets, new construction remains limited to tax-credit projects outside of Downtown Portland, with achievable lease rates still insufficient to justify new market rate construction.

Figure D-3. Rental apartment market trends / market-rate units, AREA?, 1991-2005



Source: JGA, 2004 (GET CORRECT Source info)

Net absorption is projected to outpace new supply in 2004, for the first time since 2000. Overall market conditions are expected to improve through 2005, with average occupancy approaching 95% by mid-2005. Despite recent increases, rent levels are still fairly low and will keep new construction to a minimum until there is a more substantial shift in achievable rents. With a rising interest rate environment and local economic expansion expected, a significant shift in rents is expected in the latter half of 2004 and beginning of 2005.

Over the short-term, rental apartment demand is expected to be limited due to soft market conditions. Over a longer-term horizon, the Beaverton-Hillsdale Corridor remains a very strong residential market, achieving relatively high lease rates for a suburban location.

OWNERSHIP HOUSING

As noted previously, the ownership housing segment of the market has performed extremely well within the metropolitan area over the last several years.

Sales activity for both attached and detached product surged in the second quarter and was up by 26.1% over activity last year. Attached sales)volume was 19.5% higher than during the first quarter of 2003, while detached volume was 27% higher. The overall sales volume during the quarter was 10,843 units, of which 10.8% were attached. The market has not seen this level of sales activity for several years. With interest rates expected to rise, many buyers appear to be acting now to secure lower rates.

Table D-1. Home ownership sales volume and average sale price, Portland Metropolitan area, 2002-2004

Total Sales Volume	Detached	Attached	Total
2nd Quarter-04	9,670	1173	10,843
1st Quarter-04	5,593	797	6,390
4th Quarter-03	7,064	876	7,940
3rd Quarter-03	8,870	966	9,836
2nd Quarter-03	7,616	982	8,598
1st Quarter-03	5,609	696	6,305
4th Quarter-02	6,642	816	7,458
Annual Percent Increase (Decrease)	**27.0%**	**19.5%**	**26.1%**

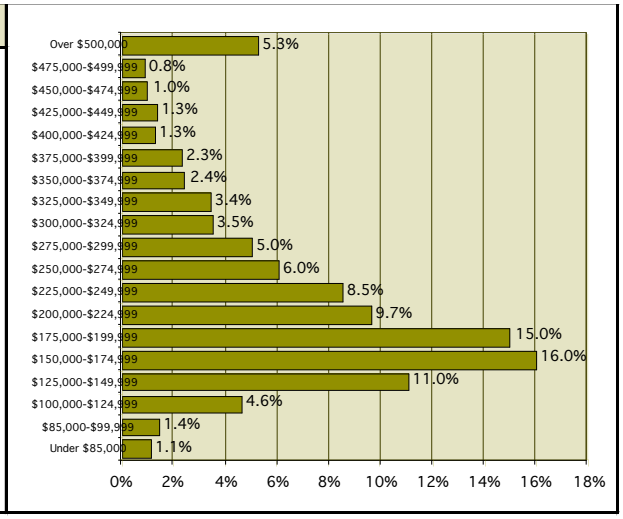
Average Sales Price -- New Construction	Detached	Attached	Attached/ Detached
WESTSIDE			
NEW	$415,525	$271,922	***65.4%***
ALL SALES	$368,932	$202,505	***54.9%***
EASTSIDE			
NEW	$258,827	$196,796	***76.0%***
ALL SALES	$250,578	$158,862	***63.4%***
CLARK COUNTY			
NEW	$323,137	$204,808	***63.4%***
ALL SALES	$219,082	$167,321	***76.4%***

Source: JGA, 2004 (GET CORRECT Source info)

Prices rose significantly during the first quarter, with average pricing for new product in the Westside almost $40,000 per unit higher than reported during the first quarter of 2004. The average sales price of new detached product was $415,525 on the Westside, $323,137 in Clark County and $258,827 on the Eastside. New attached product averaged $271,922 on the Westside, $196,796 on the Eastside and $204,808 in Clark County.

Table D-2. Home sales, Portland Metropolitan area, DATE?

Price Range	Total Sales Detached	Total Sales Attached	Distribution
Under $85,000	52	71	1.1%
$85,000 $99,999	72	82	1.4%
$100,000 $124,999	337	163	4.6%
$125,000 $149,999	945	252	11.0%
$150,000 $174,999	1,577	160	16.0%
$175,000 $199,999	1,509	119	15.0%
$200,000 $224,999	985	64	9.7%
$225,000 $249,999	860	67	8.5%
$250,000 $274,999	604	50	6.0%
$275,000 $299,999	516	27	5.0%
$300,000 $324,999	363	20	3.5%
$325,000 $349,999	355	18	3.4%
$350,000 $374,999	252	12	2.4%
$375,000 $399,999	238	15	2.3%
$400,000 $424,999	128	9	1.3%
$425,000 $449,999	137	9	1.3%
$450,000 $474,999	100	9	1.0%
$475,000 $499,999	87	5	0.8%
$500,000 & Over	553	21	5.3%
Total	9,670	1,173	100%



Source: JGA, 2004 (GET CORRECT Source info)

Units priced below $200,000 accounted for 49.2% of all activity during the first quarter, with units priced below $300,000 accounting for 78.5%. Attached housing continued to prosper as a low-price housing alternative, accounting for

29% (should this really be 70% (29% and 41%) of sales below $150,000?) of all sales priced below $150,000 and 41% of all sales priced below $125,000.

The Beaverton-Hillsdale Corridor is well established as a residential location, with high-end, single-family housing and a strong existing amenity base supportive of attached for-sale development over the short- and longer-term horizons.

VIABLE USE CHARACTERISTICS FROM A MARKET PERSPECTIVE IN THE STUDY AREA? (SHORT-, MID- AND LONG-TERM)

The following tables summarize what we consider to be viable uses, target market, potential tenants, and site characteristics and locational factors along the Beaverton-Hillsdale Highway and Canyon Road Corridors.

Table D-3. What are viable uses in the Corridors (2004)?

Land Use Category	Short-Term Uses	Mid- and Long-Term Uses
Office Space	Service Office Medical Office	Service Office Medical Office
Retail Space	Restaurants Neighborhood Serving (i.e., coffee, bakery, convenience) Regional serving at west end Specialty retail (i.e., Asian)	Specialty Grocer Restaurants Neighborhood Serving (i.e., coffee, bakery, convenience) Regional serving at west end Specialty retail (i.e., Asian)
Rental Residential	Limited, potentially tax-credit affordable project. (Wood frame walk-up) Senior housing	Market-rate projects, potentially in a mid-rise configuration at appropriate site. Senior Housing
Ownership Residential	Townhomes Condominium Flats Single Family Homes	Townhomes Condominium Flats (potentially mid-rise) Single Family Homes
Construction Types	Single story tilt-up or wood frame construction Surface parking	Single story tilt-up or wood frame construction Potential for podium or tuck-under parking in prime locations.

Source: JGA, 2004.

Table D-4. What are the target markets for residential development in the Corridors?

Land Use Category	Target Markets
Rental Residential	Households employed locally, in downtown Beaverton, the Washington Square area and the CBD. Young singles and couples Small families Seniors
Ownership Residential	First time homebuyers/Price Sensitive Buyers Empty Nesters/Larger Units w/higher amenity level

Source: JGA, 2004.

Table D-5. Who are potential tenants for commercial development in the Corridors (2004)?

Land Use Category	Potential Tenants
Office Space	**Service Office** Realtor Office Travel Agency Title Insurance **Medical Office** Medical Clinic Dental Office Alternative (Chiropractor/Naturopath)
Retail Space	**Restaurants** Family sit-down Fast Food Deli **Special Occasion** Neighborhood Serving Retail Coffee Store Bakery Convenience Store Auto Service Bookstore Regional serving at west end Specialty retail (i.e., Asian)

Source: JGA, 2004.

Table D-6. What are the key physical and locational requirements for viable land uses in the Corridors (2004)?

Land Use Category	Physical Requirements	Locational Requirements
Office Space	Off-street parking Left hand turn out	Exposure from arterial
Retail Space	Adequate parking (3:1,000 minimum) Left hand turn out Loading bays in some instances	Excellent exposure from arterial
Rental Residential	Minimum parking ratio of 1 space per bedroom for market rate Noise abatement	Exposure Proximity to transit stop Pedestrian link to retail if possible.

Ownership Residential	Residential edge, separation from arterial 2 parking spaces per unit	Pedestrian link to retail

Source: JGA, 2004.

WHAT IS THE RELATIONSHIP BETWEEN CENTERS AND CORRIDORS, AND HOW DO THEY COMPLEMENT AND COMPETE WITH EACH OTHER?

The centers and corridors serve similar markets, particularly the town centers, which have more of a neighborhood as opposed to a regional draw. As a result, there is a great deal of cross competition for commercial tenants. As cross shopping within the town centers is currently quite limited, the corridors do not suffer a significant competitive disadvantage for most tenants, and often provide clearer access. Most town centers are composed of a series of self-supporting developments, with exclusive parking and little provision for cross shopping.

The linear pattern of commercial development along the corridors typically reflects a relatively limited depth to the commercial zoning. As a result, larger format uses are more commonly concentrated in the centers, although this is not always the case.

Table D- What are achievable lease rates/sales prices in the study area for viable land uses? What are current land values by use in the Corridors (2004)?

Land Use Category	Lease Rates/Sales Prices	Land Values
Office Space	$12.00 - $16.00 psf NNN	$8.00 - $10.00 psf
Retail Space	$14.00-$18.00 psf NNN	$10.00 - $25.00 psf
Rental Residential	$0.80 - $1.10 psf/Month	$5.50 - $6.50 psf
Ownership Residential	$120 - $160 psf	$7.50 - $8.50 psf

Source: JGA, 2004.

What are the potential impacts of changing transportation patterns?

Traffic patterns are a key determinant in the viability of many development forms. Residential market areas are often delineated based on commuting corridors, while retail trade areas, as well as the trade area for service office uses, can be characterized like a watershed. As a result, shifting transportation patterns can have a significant impact on market function and subsequently development activity. Retail and service office uses will rely for a significant component of their business on drive-by traffic, in addition to local residents. Changes in the

functionality of the Beaverton/Hillsdale highway or key intersections will impact development potential to the extent that it impacts accessibility and/or visibility.

Section 4

Evaluation of Land Use Existing Conditions

BEAVERTON HILLSDALE HGWY/ CANYON ROAD

Phase II – Case Study Existing Conditions

Phase I of this project investigated land use and transportation issues in Corridors and selected a single corridor – the Beaverton Hillsdale Highway / Canyon Road corridor - for a detailed case study. Phase II of this project applies the findings of the Phase I analysis to that case study corridor.

Several common problems faced by commercial corridors were identified in the Phase I analysis:

1. Street Design: Arterials are built almost exclusively for the motor vehicle, with little space or thought given to the pedestrian.
2. Aesthetics: While the corridor is often the most visible part of a City, it is aesthetically unappealing, with a utilitarian streetscape and lined with unattractive box buildings surrounded by surface parking lots and outsized signage.
3. Development Pattern: Corridors are generally lined by low-density, linear development strung out along the corridor, which prevents synergy between businesses and discourages movement between them
4. Existing Commercial Assets: With its expanse of available land, the corridor is attracting the kinds of uses that should be located in centers, draining their vitality and market share.
5. Market Conditions: The strip is continuously zoned for commercial development, creating a vast oversupply of retail land.
6. Movement: Without good neighborhood connections, too many driveways and frequent left turns, traffic is on the strip is slow-moving and congested.

These issues form a framework for the analysis of the case study corridors. While the primary focus of Freedman Tung & Bottomley's analysis is to develop an understanding of the land use patterns along the corridor, it is important to note that land use is integrally related to the street that serves as its setting. Thus, the analysis that follows includes a review and analysis of the physical conditions of the street as well as the pattern of land use and development along its edges.

Study Area:

The Beaverton Hillsdale Highway / Canyon Road corridor study area has been defined for the project to include Beaverton Hillsdale Highway from Highway 217 to Laurelwood Avenue, and Canyon Road from Highway 217 to just east of 87th Avenue. The project study area includes all properties within this area fronting and/or within 350 feet of Beaverton Hillsdale Highway or Canyon Road. East of Laurelwood Avenue is a designated Concept Town Center which is not included in the official study area.

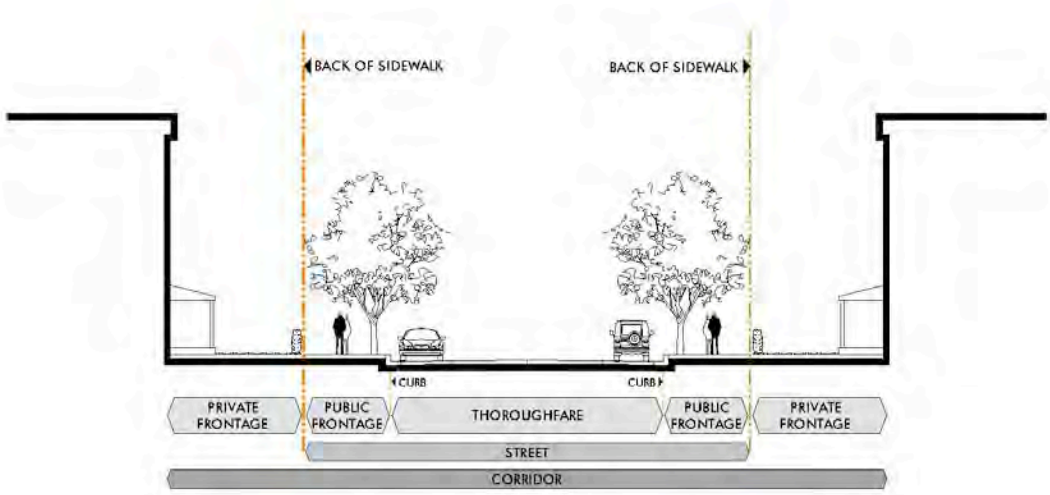
The overpass of Highway 217 forms a western natural gateway to each of the study area corridors; and the intersection of 87th Avenue, marked by a distinct grade change and a shift in roadway character to a tree-lined parkway, creates a natural eastern gateway to the Canyon Road corridor. However, no perceivable or visible change marks the Laurelwood Avenue intersection with Beaverton Hillsdale Highway. A more natural gateway occurs at the six-point intersection of Beaverton Hillsdale, Ferry and Oleson Roads. Thus, for the purposes of this analysis FTB will consider all enfronting properties along the Beaverton Hillsdale Highway up to the Ferry-Oleson

intersection, and including those properties fronting and surrounding the intersection, as a part of the area being analyzed.

Conditions on the Case Study Corridors

Street Design

The physical roadway of a corridor is made up of several components, from the public right-of-way of the street, the thoroughfare, the roadway's public frontage, and enfronting development's private frontage. These components are shown on the diagram below.



The thoroughfares of Beaverton-Hillsdale Highway and Canyon Road are similar: both carry two lanes of traffic in each direction, with a continuous central turn ("suicide") lane and an occasional right turn lane for access into adjacent businesses. The central turn lane provides for the constant driveway access required by enfronting retail. Curb cuts and driveways along the roadway are frequent. There is little landscape treatment within the public right-of-way, and street lights and street furniture are kept to a bare minimum.

The public frontage along both streets consists of a narrow concrete sidewalk located directly adjacent to the curb. This sidewalk runs (for the most part) continuously along Beaverton Hillsdale Highway, but occurs only sporadically along Canyon Road. Frequently the sidewalk at the Canyon Road's northeastern segment bleeds into parking lots that intrude into the roadway, or is broken by planted or gravel areas where there is no sidewalk at all.

Pedestrian Environment:

On most of Beaverton-Hillsdale Highway and Canyon Road, the pedestrian realm has no protection from the vehicular traffic that runs alongside it. There is no on-street parking along the corridor to form a buffer of parked cars. Save a few frontages that provide a small planting strip between the sidewalk and the road, there is no greenery or trees planted along the sidewalk edge. Where there is any landscaping at all, it occurs inside the sidewalk between the pedestrian and the business. In most cases, the pedestrian is sandwiched between fast-moving traffic in the roadway, and

asphalt or a sea of parked cars along property frontages. However, there are a few segments in front of the auto dealerships on Canyon Road that have been improved with new sidewalks, street trees and occasional planting strips.

Walking along either corridor is not easy. There are frequent curb cuts to businesses along the busier stretches, so the pedestrian must be aware of traffic entering and leaving establishments. Signalized pedestrian crossings are provided at major intersections, but along some frontages of Beaverton-Hillsdale Highway intersections can separated by up to a quarter of a mile, and along Canyon Road they are even further, making crossing opportunities few and far between.

The pedestrian realm along the corridor consists solely of the concrete sidewalk along the roadway described above. There are few other pedestrian walkways or connections leading from the street to public businesses. Each business generally provides its own internal circulation, providing minimal walkways from their private parking areas to building entries, with no connections to adjacent businesses.

Aesthetics

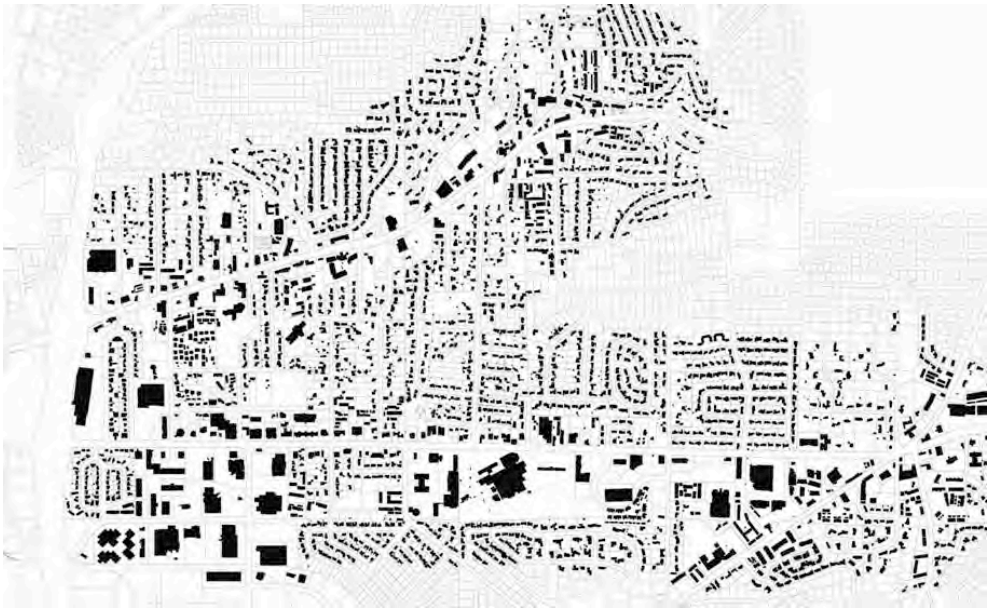
The roadways themselves are relatively barren, with a utilitarian design that contains little landscape or street furniture. Buildings along the roadway are set back behind parking, and the private frontage along the roadway is lined with parking. Parking lots are sometimes separated from the public realm by a minimal planting strip, but often the paving extends right up to the sidewalk.

The development lining the roadways is unmemorable. Commercial development on corridors usually places more importance on signage than on building design, and the case study corridors provide a good example of the result. On Beaverton-Hillsdale and on Canyon Road, most developments along the corridor utilize large-scale signage to announce their businesses. Pole-mounted signs dot the corridor. Continuous signage bands cover strip buildings. Billboard or monument development signs announce several businesses. Large sandwich boards line the sidewalks. The overall effect is a cacophonous jumble of signs. Buildings are usually an afterthought. Most retail buildings are undecorated boxes at varying scales, with flat, shed or mansard roofs, and blank walls along some of their facades.

Focus group participants at a November 10th workshop generally agreed that the issue of aesthetics was of primary concern, and agreed that most of the development design and architecture along the Corridors is unattractive. They suggested that redevelopment activities should attempt to improve aesthetics along the Corridors.

Development Pattern

A close look at the development pattern on the ground along and adjacent to the corridor brings two important points about scale to the forefront: One, the scale of buildings increases greatly from the finer grained pattern within the adjoining neighborhoods towards the land enfronting the corridor, with the largest scale pattern adjacent to the freeway. Two, the distance between buildings increases greatly from pattern within the neighborhoods towards the properties along the corridor.



The Phase I analysis classified a set of segment types found within the Portland Metro designated corridors. All of these segment types can be found along the Beaverton-Hillsdale/Canyon Road study corridors:

- Corridor Nodes, which are activity nodes that are different than Metro's "regional centers" or "town centers". Corridor nodes in the study are include the cluster of regional serving retail near the freeway, and several grocery store-anchored neighborhood centers along the corridor.
- Strip Commercial Development, defined as low density commercial with parking in front. Much of Beaverton-Hillsdale, and two smaller segments of Canyon Road fall into this category.
- Specialty Segments, i.e. those featuring Auto Sales and Service or some other Specialty Use as the predominant use along the segment. The length of auto sales and services along Canyon road falls into this segment type.
- Residential Parkway Segments, where residential uses face, side or rear the corridor. Residential areas are often completely screened by landscaping form the corridor – the segment along Canyon Road east of 87th Avenue is an example.

In terms of use, Beaverton-Hillsdale Highway is home to a range of retail, commercial, and institutional uses at varying sizes and scales. The highway's western end, along the Corridor Node segment, is anchored by Target and Home Depot, and includes a few medium box grocery or discount stores as well. The area between 107th and 99th Avenues is marked by a relatively high concentration of furniture stores or related home equipment. The Jesuit High School takes

up a long segment of the corridor's frontage between Jamieson Road and Apple Way. At the corridor's eastern end, several neighborhood commercial centers provide groceries and other conveniences to nearby residents. But in between these segments, and all along its length, small-scale businesses from restaurants to retail sales to commercial services dot the corridor. Small office buildings, and the occasional larger-scale workplace, occur sporadically. And no residential uses front the corridor at all, although they do directly abut the northern roadside from Laurelwood to the Ferry-Oleson intersection.

Canyon Road is most notably lined with auto-oriented commercial uses along its Specialty Segment. New automobile dealerships occur along its entire length, beginning with the Chrysler dealership at 107th Avenue, but are primarily clustered between 97th and Maple Avenue. Support auto uses, from tire sales to autobody work and detailing, also occur along much of the roadway. An empty big-box parcel lies at Canyon's intersection with Highway 217, and a number of stand alone buildings or strip malls house random retail establishments and several restaurants as an example of the Strip Commercial segment type close to the Highway. A number of struggling businesses occur in run-down buildings on the south side between 102nd and Orchard Lane. The study area's eastern edge holds a few neighborhood uses, with several vacancies.

The area abutting and between both corridors is primarily single-family residential, true to the pattern of most commercial corridors. Along some stretches of corridor, residential uses directly abut the corridor (as previously mentioned along Beaverton-Hillsdale from Laurelwood to the Ferry-Oleson), or are only separated from the roadway by a narrow strip of commercial (the north side of Beaverton-Hillsdale between 99th and Laurelwood Avenues). In other areas, particularly south of Beaverton-Hillsdale, relatively deep parcels separate the corridor and its adjacent neighborhoods.

Commercial Development Types

FTB identified several common development types that repeat again and again along the corridor. The development types identified along Beaverton Hillsdale Highway / Canyon Road corridors encompass:

- Big Box: Typically a large-scale building of 100,000 or more square feet set back from the roadway behind a large parking lot. Sometimes includes in-line or pad stores on the same site. Examples include Target or Home Depot.
- Medium Box: A medium-sized box building of 50,000-75,000 square feet set in or behind parking. Uses are usually neighborhood serving, like a grocery or drug store This type may also include in-line stores.
- Small Box: A smaller box building of 10,000-25,000 square feet, with parking in front or to the side of the building, often with additional parking to the rear. Typical uses range from national or chain retailers to gyms or offices.
- Strip: A long building with multiple tenants, usually greater than 7,500-10,000 square feet depending on the number of stores in the strip. The strip is always fronted by parking, although that can range from a half to a full bay lot, with additional parking in the rear in some cases
- Stand Alone: A single freestanding building of anywhere from 3,000-6,000 square feet set in the middle of a parking lot. Often a fast food or convenience store.

- Shack: A small business of approximately 1,000-2,000 square feet on its own small paved lot. Typically houses an independent businesses in a one-room buildings or a converted single family home.

These development types are important to identify as the building blocks of the corridor. They provide a catalog of the kinds of properties that can be either improved or redeveloped along the corridor.. By identifying the opportunities and constraints presented by each, based on use, parcel size and depth, one can identify the spectrum of possibilities for the redevelopment for each.

Existing Commercial Assets

In Phase I, we identified the kinds of uses that were appropriate for corridors. These included neighborhood-oriented retail, office and its supporting services and convenience uses, fast food establishments, and the sale of large scale goods, like warehouse retail, furniture and appliances,, or auto-related. Most of these uses already occur on the study area corridors.

We also identified the kinds of uses that are potentially competitive with centers. These uses, because of their orientation, scale, and most importantly their ability to generate activity, generally belong in areas where people are intended to gather – namely, centers. These include sit-down restaurants, entertainment uses like cinemas and theaters, regional anchor stores, specialty and boutique retail, and civic uses (discounting neighborhood civic, like schools). Many of these kinds of uses also occur on the study area corridors, pointing to the possibility that the corridors will detract from the possibility of creating an active regional or town center nearby.

Market

In viewing the market demand for retail on the corridor, it is important to view its market share in the context of a larger network of retail centers in the region, made up of the centers, shopping districts and neighborhood nodes that serve the city or region. The strip does not exist in isolation, and retail demand is finite within a region. Any retail that is located in one area takes away demand from any of the other shopping locations in the region.

We asked Johnson Gardener to perform a retail analysis that answered the question “How much retail can be supported on the corridor?”. Johnson Gardner found that current household composition allows the support of approximately 1,124,250 square feet of retail space on the corridors, not counting automotive parts, accessories and tire stores. Currently the total non-auto oriented retail on the corridors totals roughly 1,645,500 square feet. This means that the corridors have roughly one-third more retail than their surrounding communities can support. The retail market is likely being stretched far too thin across too many stores, with each individual establishment doing enough business to survive but not enough to thrive.

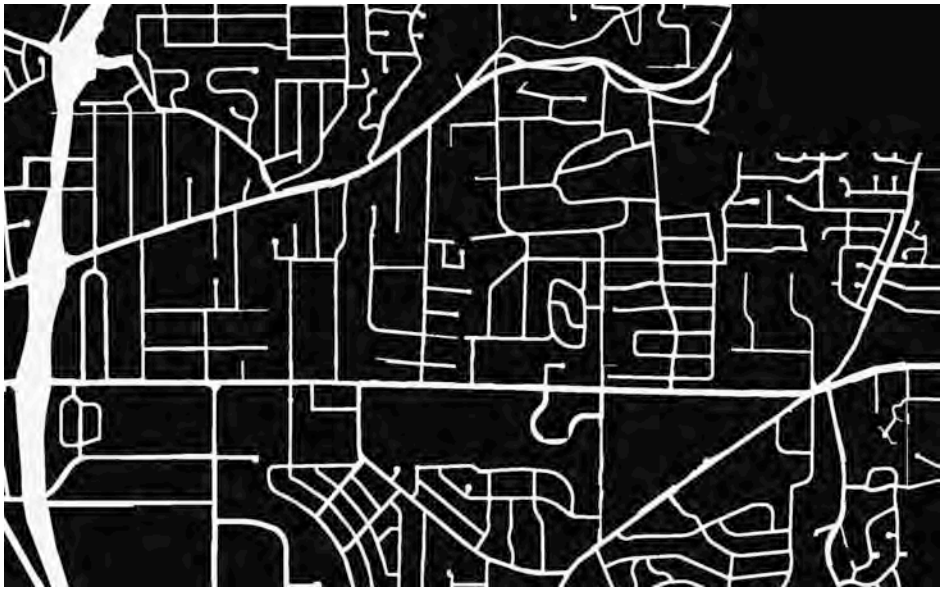
This oversupply means that the existing retail space on the corridor is declining in value. The result is evident in the pockets of disinvestment occurring on the corridor, which is illustrated by several vacant sites, and many more underutilized properties. Sizable vacant parcels exist on Canyon Road directly adjacent to the freeway, and on the south side of Beaverton-Hillsdale between Laurelwood and 78th Avenue. Underutilized segments are evident along the corridor segment further from the freeway on Beaverton Hillsdale, and in between the auto dealerships on Canyon Road, particularly near its intersection with 87th Avenue. These disinvested areas provide the corridor with its strongest opportunities for change.

Regarding market opportunities for new development, Johnson Gardener noted the following:

- Regional Retail: Strong tenant mix at western edge/freeway with Home Depot and Target can serve as an attraction for other regional-draw tenants near Highway 217 and the Beaverton Regional Center.
- Neighborhood Retail: Major grocery anchors of Fred Meyers, Zupan's, New Seasons and Uwajimay will continue to lure supporting, in-line neighborhood-serving tenants.
- Office: Office market is weak in the short-term, but there is limited demand for neighborhood serving uses like medical/dental office space and service office users i.e., title companies, travel agencies.
- Rental Housing: Rental market is extremely limited in the short-term, but will increase over longer-term horizon.
- Ownership Housing: Strong demand for ownership residential, especially in smaller housing types like condominiums, townhomes, and attached for-sale development.

Circulation Network

Cross streets occur along the corridors every 500 to 1000 feet, although some stretches extend for more than a quarter of a mile, with up to 1800 feet from Maple to Western Avenue and 78th Avenue to the Ferry-Oleson intersection and even up to 2400 feet at the school frontage from Jamieson to Apple Way and Laurelwood to Ferry-Oleson. Many of these streets are no more than alleys, servicing buildings and providing access to rear properties without public sidewalks, street lights or other amenities.



Few streets cross the corridors to connect the neighborhoods behind them, and even fewer connect between the two corridors. As a result, those streets that provide full connections are often used as cut-throughs. Both 107th and 91st Street are residential streets that receive relatively high amounts of cut-through traffic. As a result, 107th is lined with multi-family uses, which are less sensitive to high traffic than single family housing; and 91st has attempted to slow the traffic with frequent speed bumps and signage.

Focus group participants at a November 10th workshop rated traffic as the most important issue in the corridors. Focus group participants discussed the following issues: (a) safety (for both pedestrian and motorists), (b) congestion, (c) speeding traffic (especially as drivers come into the Canyon Road Corridor at 87th), (d) inappropriate auto shortcuts through parking lots and neighborhoods, and (e) lack of bike lanes along some sections of the Corridors.

Policy Framework

Jurisdiction over the study area is split between the City of Beaverton and Washington County. The City of Beaverton controls most of Beaverton-Hillsdale Highway and the land lining the east side of Highway 217, including a few parcels along Canyon Road at the freeway and around the intersection of SW 87th Avenue. Washington County retains control over the unincorporated areas along most of Canyon Road, from SW 110th Avenue eastward to SW 87th, as well as the portion of Beaverton Hillsdale west of Laurelwood, including the land area at the Ferry-Oleson intersection.

The majority of Beaverton-Hillsdale Highway up to Laurelwood Avenue, including the area along Highway 217 and at the highway's intersection with Canyon, is classified as "General Commercial" (City of Beaverton). It is intended to provide an area for retail, service and automotive uses, especially those that require extensive outdoor storage. It also permits residential development at mid to high densities as of right. Heights along this segment are limited to 35 feet (or up to 60' on corridor?), with some parcels zoned for Office or Neighborhood Commercial limited to 30-25 feet.

Form Laurelwood to the intersection, land is primarily zoned "Central Commercial" with some "Office Commercial" designations (Washington County), and is intended to provide the community with a mix of medium to large-scale retail, services and businesses. Permitted uses include office development and medium-scale and convenience retail, with mid to high density residential allowed under certain conditions. In keeping with its "gateway" location, heights along this segment can extend from 65 to 100 feet.

Canyon Road is primarily "General Commercial" (County), which has been designated to recognize the existing strip development pattern. Uses are generally restricted automotive uses, large-scale retail like furniture and building supply, and restaurants. A few parcels are also zoned "Central Commercial". Heights in this segment are also permitted from 65 to 100 feet.

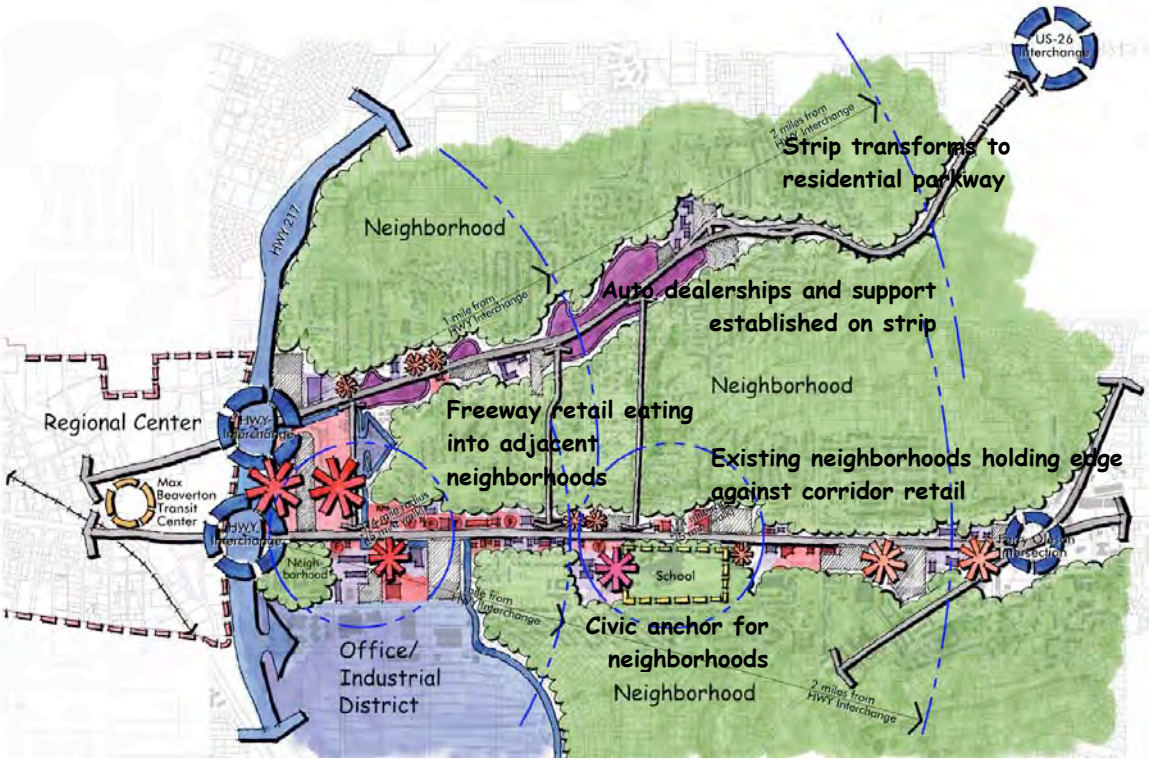
The dual controls governing properties on the corridors complicate any intended land use pattern. While both City and County district designations are similar, including general, neighborhood and office designations, the application of these districts is scattered across the entire corridor length rather than along focused segments. Often these categories are not creating the kind of district intended. The General Commercial areas of the City and County are intended to provide an area for large-scale, highly visible commercial, yet they permit detached and attached dwellings, as well as neighborhood oriented uses like grocery, and restaurants. The Neighborhood Commercial areas are intended to provide areas that will meet the frequent needs of nearby residents, yet they permit all of the same retail types that are permitted in General Commercial areas, so there is no specific community orientation. And while the Office Commercial areas do seem to have the right policies to create the intended mixing of professional offices and other compatible commercial, their locations are often too scattered to allow for the intended synergy between offices and the businesses that support them.

The policy specifications of both City and County are limited in terms of what aspects of development they control. Currently zoning policy covers only permitted and prohibited uses, minimum lot area & dimensions, •minimum yard setbacks, maximum building height, percent of landscaping, open air display, amount of parking and amount of signage. In order to control the design and the built character of new development, far more specifications are needed, such as maximum as well as minimum yard setbacks, public street frontage/sidewalk, minimum as well as maximum building heights, landscape design and character, parking location and design, signage location and design, building orientation, building massing and architectural design

Summary of Opportunities and Constraints

The corridors today have many positive aspects. Success is happening along the corridor where one would expect it to: there are several strong anchors near the freeway, with supporting retail development; the cluster of auto dealerships on Canyon is very successful, and there are the beginnings of another specialty segment, with furniture and home goods oriented to a local market, on Beaverton Hillsdale. Additionally, the corridors have good freeway access, high visibility, and are supported by a large adjacent residential population.

However, there are also many problems. The pedestrian environment on both corridors is uncomfortable to walk along or be on. They are characterized by a general level of visual cacophony, with unattractive buildings, too much signage and in many cases, uncared-for sites. There is too much retail, with too little synergy between that retail, scattered along both corridor's lengths. And while the community beyond the corridor is attractive and unique, the corridors do not represent their value at all.



Summary of Opportunities and Constraints

In summary, revitalization of the corridor must address several issues:

Market Issues:

- An Oversupplied Retail Market: Retail is overbuilt by _ million square feet, resulting in creeping disinvestment across the corridors. Not only is this bad for the corridor itself, but it is bad for the envisioned centers adjacent to the corridors. With this much retail oversupplied just on the corridor, there is little room left for demand for retail in the centers.
- A Streetscape Unsuited To Non-Retail Development: The market demand for residential (short/med/long term) and office (med/ long term) is more than sufficient to provide properties with value. But housing has not been attracted to the corridor thus far, in large part because the existing physical character of street is a powerful disincentive for housing investment.

Shopping Industry Trends and Preferences:

- Retailers are abandoning the commercial corridor and its linear strip format of retail in favor of large concentrations – superstores and power centers - at major crossroads such as freeway interchanges or high-traffic intersections.
- Retailers are showing a preference for downtown-style shopping formats, with amenities such as lively street environments, walkable scales, and the ability for shoppers to "park once".
- Retail is increasingly mixing with restaurants and entertainment, to create a recreational experience.
- Retail developments are increasingly being developed as mixed-use, with office and residential uses.

The implications of these issues demonstrate both opportunities and issues for the study area corridors. One major opportunity is the area adjacent to the freeway along the study area corridors. This freeway zone, particularly within a half-mile radius of the on-ramps, is ripe with opportunity, especially on the PM peak side (carrying home-bound trips) of the roadway. However, its role needs to be planned in relation to, and in cooperation with, the adjacent planned Beaverton Regional Center. However, east of the freeway interchange, land is constrained by existing development, low visibility, and, in many cases, shallow parcels. There is no real opportunity to accommodate these new market preferences. And our review of existing development policies has demonstrated that the policies in place provide no framework to guide the physical organization of separate developments on the corridor, and do nothing to insure the synergy demanded by contemporary market forces.

Compounding these opportunities and issues for change are the expectations of property owners on the strip. In order to instigate change, land use policy will need to be re-structured; entitlements and approved development patterns will need to change. This will cause irritation to those accustomed to the way things have been for too long. It will require education and participation of stakeholders. Property owners with commercial zoning on the strip are accustomed to expecting profits from their retail entitlements, no matter how unrealistic these expectations may be. The only way to overcome these obstacles is community buy-in. Through a substantial education process with several open community workshops, stakeholders and the public at large can receive objective information about the economics of the corridor and what kinds of options they have for change.

Section 5

Evaluation Of Transportation Existing Conditions

METRO 2040 Existing Transportation Conditions

The following discussion focuses on the transportation issues and opportunities, to be considered and resolved along the Beaverton-Hillsdale Highway and Canyon Road corridors. As pilot corridors the analysis will build a framework for similar environments within the Urban Growth Boundary. True to form, many of the observations here are typical of post-war auto-oriented suburban development patterns. Changing the road and place names to those of another community would, in many cases, net a perfectly usable characterization of that place and its transportation issues. The most striking aspect of these corridors, and especially the diverse Beaverton-Hillsdale Highway corridor, is the amount of land covered by roads and parking relative to building, landscaping, and open space coverage. The existing conditions of the study area environment challenge us to identify solutions to create much greater land use efficiencies and a more human scale transportation system.

The Oregon Highway Plan characterizes both the Beaverton-Hillsdale Highway (ORE 8) and Canyon Road (ORE 10) corridors as District Highways, meaning they are "facilities of countywide significance." As conveyors of traffic, these roads must balance their regional mobility function with local land access needs. Both of these Metro Portland Regional Transportation Plan (RTP) designated arterials also offer regional transit access, through moderately frequent bus service. Area transit service is further enhanced by the location of the Beaverton Round light rail stop and Beaverton Transit Center just beyond the study area but well within its area of influence. The suburban pattern of development and availability of comfortable, dependable transit increase the presence of pedestrians and bicycles within a system not specifically designed to safely accommodate them (Figure 1). These existing transit assets can also help to build a more efficient and attractive use of land along these corridors.

Figure 1

THE CORRIDORS

Beaverton Hillsdale Highway and Canyon Road provide access to a suburban scale residential and commercial land use pattern and fit the Urban Business Area (UBA) ODOT designation. Functioning as true arterials, both highways bring traffic to and from surrounding neighborhoods and corridor businesses to the regional network. They are important mobility links to ORE 217, I5, and ORE 26. Both roads through the corridor are 5 lanes, typically 4 through lanes with a striped continuous two-way center left-turn lane, without marked bike lanes, on-street parking or acceleration/deceleration lanes. Several neighborhood routes link Canyon Road with the Beaverton-Hillsdale Highway, including SW 78th Avenue, 87th Avenue, 91st Avenue, 96th Avenue, 103rd Avenue, 107th Avenue, and 110th Avenue (a collector facility).

Beaverton-Hillsdale Highway Traffic Elements

Situated to the south of Canyon Road, the Beaverton-Hillsdale Highway is the more diverse of the two corridors in terms of function, form, and character. Year 2002 traffic volumes in the study area varied between 31,700 and 38,500 vehicles daily, with the highest volumes occurring closest to the Western Avenue and ORE 217 intersections. Several high volume intersections accommodate free right turns and a recent resurfacing of the Beaverton-Hillsdale Highway included a raised median in front of the Target retail center and the addition of sidewalk to meet the 6 foot ODOT recommended width and ADA standards (Figure 2). Most Beaverton-Hillsdale Highway intersections are operating at a Level of Service C and within ODOT's mobility standards, according to the recent studies. Which studies? Can you footnote them?

Figure 2

Between bus stops and several key signalized intersections, the corridor is home to industrial distribution and storage users, low-rise office buildings (Figure 9), older strip retail (Figure 3), adapted residential retail and office (Figure 10), and big box retail users (Figure 2) in close proximity to the ORE 217 interchange. With so many interesting offerings, the many neighborhoods backing directly to the corridor use an informal network of pedestrian paths through parking lots, drive aisles, and fence breaches helps to shorten the walk. The separation and shear size of many of these site layouts make for strong barriers to access from the neighborhoods by pedestrians, bicyclists, and automobiles. Significant parking field land consumption is empty much of the time and its unfriendly scale adds to walking trip length. Barriers between businesses and the lack of continuous rear access roads return drivers to the highway for most local trips along the corridor.

Figure 3

Canyon Road Traffic Elements

Average daily traffic on Canyon Road is generally lower in the study area. It ranges from 21,900 east of 87th Avenue to 30,900 east of ORE 217. According to the Beaverton Transportation System Plan, that major intersections within the corridor operate at a Level of Service C or better. The 110th Avenue intersection is identified for safety improvements due to incidents of crashes here.

Figure 4

The Canyon Road corridor is flanked by small nodes of strip retail and its dominant commercial users, auto dealerships have by several access points and considerable auto storage parking (Figure 4). The area draws fewer pedestrians than Beaverton-Hillsdale Highway, except at key commercial and transit nodes. One of the few deviations of the curb line is a bus pull out located at a commercial center along Canyon Road (Figure 5).

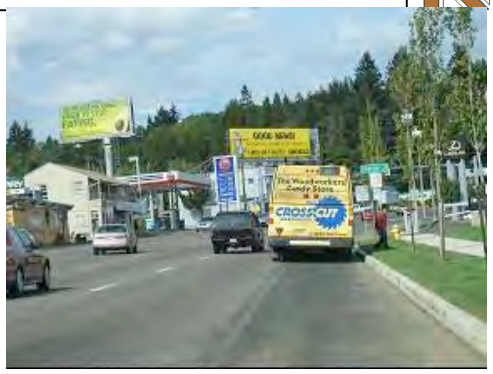


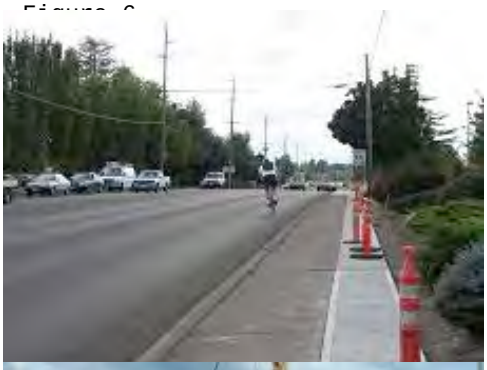
Figure 5

Transit System Elements

TriMet operates bus service along both corridors. The #58 operates with 15 to 30 minute peak hour headways on Canyon Road. The #54 provides 20 to 60 minute headways during peak hours along the Beaverton- Hillsdale Highway. On an average weekday, 238 riders board the #58 and 337 riders board the #54 within the study area. Both routes terminate at the Beaverton Transit Center just west of ORE 217, with 241 weekday boardings on the #58 and 463 on the #54. Shelters are provided at stops with the highest ridership. The study area is also close to the Beaverton Round Light Rail Station (Figure 6) providing unique regional access options.

Bicycle System Elements

While both roads are designated as regional access bikeways, neither road has striped bike lanes (Figure 7). Off-street paths and parallel neighborhood routes for local trips, recreation, and inexperienced riders are limited and discontinuous. The only street marked for bicycle use is 96th Avenue. Limited roadway width on the Beaverton Hillsdale Highway prohibited a recent resurfacing from providing more than wide unmarked curb lanes for bicycles.



Pedestrian System Elements

Residents and employees walk along the corridors to schools, transit, retail and service attractions. Except for missing links along Canyon Road (Figure 8), sidewalk coverage along both arterials meets minimum guidelines. The recent Beaverton-Hillsdale Highway resurfacing upgraded sidewalk to meet ADA requirements. Lack of sidewalk and formal pedestrian pathways on side streets and through parking fields is a significant issue and will be discussed in the connectivity section.

Figure 8

TRANSPORTATION ISSUES

ACCESS

Numerous private accesses and a center two-way left-turn lane along both Beaverton Hillsdale and Canyon Road contribute to existing safety concerns for motorists and the less visible pedestrian and bicycle modes, especially where these modes are required to share the travelway. ODOT's access spacing guidelines recommend a series of local roads at regularly spaced intervals serving multiple sites rather than individual driveway access for each site. Any retrofit of the current system should create a more redundant street network and rely less on direct site access from the arterials.

NEW COMMERCIAL ACCESS

While the land use mix is fairly diverse on Beaverton-Hillsdale Highway, the separately developed and self-sufficient supporting infrastructure requirements have built a barrier-intense environment. Each property has its own access point or set of entries depending on its size and the access needs of its typical user. The scale of driveway openings depends on the arrival and departure characteristics of users. The suburban office park pictured in Figure 9 features limited points of entry characterized by multiple marked lanes in each direction and ample driveway storage to serve the majority of employees arriving and leaving at the same time.

Figure 9

RESIDENTIAL REUSE TO COMMERCIAL ACCESS

Driveway spacing is frequent, especially in the older developments along the corridor. This pattern of entrances requires frequent use of the center left turn lane and increasing conflict points along the corridor. It also significantly denigrates the pedestrian realm and roadway aesthetic. This condition shown in Figure 10 occurs on the Beaverton Hillsdale Highway, but also occurs on 109th and 110th Avenues, where the option of creating more on-street parking with driveway consolidation might have helped to reduce on site parking needs and the over-abundance of paved yards.

Figure 10

TRAFFIC CONNECTIVITY

BETWEEN ARTERIALS AND OVERALL REDUNDANCY

A generally comprehensive grid of streets connects these two major arterials. The hierarchical system lacks collector streets designed to bring local street traffic to the arterial network. In the study area local streets and neighborhood routes, defined by frequent residential driveways, carry collector street traffic between Canyon Road and the Beaverton-Hillsdale Highway. These neighborhood connections not only carry community traffic, but are also shortcut roads for regional through traffic further frustrating neighboring property owners.

Figure 11

On SW 87th Avenue, neighboring property owners have taken traffic control into their own hands with makeshift roadside signage (Figure 11) and organized support for the installation of diverter islands at the neighborhood approaches (Figure 12).

CUT THROUGH BUSINESSES

South of the Beaverton-Hillsdale Highway, several commercial driveways provide neighborhood shortcuts to the corridor. The commercial driveway shown in Figure 13 has been retrofit with speed humps to reduce cut through traffic and reduce access between the corridor and SW 5th Street/Cypress Street, a collector road.

Figure 13

BUSINESS TO BUSINESS AND REAR ACCESS

The site-by-site approach to parking and access is reinforced as property owners set up barriers to neighboring businesses to avoid sharing these critical assets (Figure 14). Whether intentional or not, the internally focused site design reduces links between uses sending cars and pedestrian to the arterial for moving from place to place. Opportunities to create rear access links between uses on the north side of the Beaverton-Hillsdale Highway are also limited due to sensitive environmental features.

Figure 14

PARKING MANAGEMENT

Parking on the Beaverton-Hillsdale Corridor is perhaps the most critical contributor to the degraded condition of area aesthetics, the natural environment, pedestrian access and overall transportation efficiency. The shortest distance between two points is typically through an empty parking lot or a drive aisle (Figure 15). Providing parking according to the uses proposed on a site-by-site basis creates many empty lots throughout much of the day. A system that can integrate compatible land use for shared parking will be an important outcome of this study.

Figure 15

PARKING ALLOCATION AND REGULATION

Consistent with the TPR requirement of reduced per capita parking stalls in the Metro region, Metro's 2040 framework plan established guidelines for maximum parking ratios in new developments. Parking Zone A (Beaverton-Hillsdale Highway) and Zone B (Canyon Road) types were created based on the availability of high frequency peak hour weekday transit service. Beaverton and Washington County have incorporated this 2040 framework guidance for maximum parking ratios and zones related to transit frequency into the parking sections of their community development codes. They also offer developers options to reduce minimum parking requirements with improvements to encourage non-single occupancy vehicle use.

The City of Beaverton goes a step further allowing reductions in parking requirements for transit amenities, such as pedestrian plazas. The City allows a reduction up to 30% of minimum for reduced demand through participation in a Transportation Management Association (TMA). In Washington County, the minimum parking requirement can be reduced by up to 20 percent when close to frequent off-peak weekday transit service and with provision of other transit amenities. Designated carpool/vanpool and bicycle parking can also reduce parking requirements. The minimum parking requirement can be reduced by up to 40 percent in Washington County.

INTERNALLY FOCUSED PARKING MANAGEMENT

The scale, orientation and layout of parking lots also rely on the land's dominant use without particular regard for or coordination of improvements on adjacent properties. The net effect is a near continuous stream of parking interrupted by barrier fences and landscaping with low density buildings laying somewhere near the center of the parking field. Figure 16 demonstrates the poor condition of street appeal after working hours along this section of the Beaverton-Hillsdale Highway.

Figure 16

PEDESTRIAN REALM

Overall, the effort to provide for pedestrian use of an auto-oriented transportation network has lead to considerable investment in sidewalks, signal heads, and crosswalks in recent years. While this work has greatly improved pedestrian safety and heightened driver awareness of pedestrians in the right-of-way, the fundamental issue of scale and utility of these facilities is still a concern. Creating pedestrian systems on roads and land developed for auto scale access and circulation is generally inconsistent with walking comfort for humans. The following observations of study corridor conditions identify the range of pedestrian challenges facing planners and designers concerned about the safety, comfort, and aesthetics for pedestrians using these corridors.

PEDESTRIAN NETWORK

Drive aisles and informal links from neighborhoods to corridor services dot the area. Employees arriving by transit and residents living near the wide array of goods and services offered at commercial nodes and along the corridors use drive aisles and other informal links to walk to buildings there. Many local streets lack sidewalk and separated paths for pedestrians. (Figure 17) The City and County have plans to fund the addition of sidewalk on local streets that have not yet been included in capital programs.

Figure 17

PEDESTRIAN FACILITY DESIGN

Sidewalks are present on most of both highways and meet minimum ODOT design standards. Higher numbers of pedestrian generators and the more comfortable scale of the Beaverton Hillsdale Highway produce more pedestrians than does Canyon Road. A recent resurfacing of Beaverton Hillsdale Highway included spot sidewalk upgrades, but funding to move obstructions was not included. (Figure 18)

WIDE AND FREQUENT DRIVEWAY OPENINGS

Urban areas that work well for pedestrians consolidate access for automobiles to single points that are evenly spaced at a scale comfortable for pedestrians. ODOT's guidelines recommend access connections to public roads and/or frontage roads rather than directly on to the State highway. Public roads that create crossing points at intersections perpendicular to the road are preferable to a series of varying scaled and spaced driveways. Figure 19 shows the auto scale of the driveway length and its wide opening unfriendly to pedestrians crossing it.

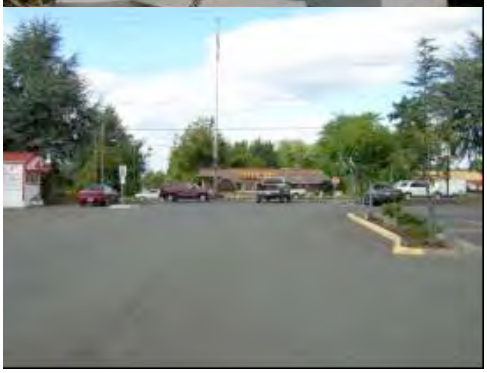


Figure 19

INTERSECTION SPACING AND DESIGN

High volume intersections, especially those with heavy turning activity are typically uncomfortable for pedestrians. Much like the Beaverton-Hillsdale Highway intersection with Western Avenue (Figure 20), they are designed with wide turning radii, free right turn lanes and lack a refuge median. There is also a high probability that transit stops will flank various corners. This generous space for vehicles contributes to high turning speeds and long crossing distances for users on foot. Targeted attention to balance high

levels of vehicle activity with the needs of non-motorized users will be important in the roads transformation to a multimodal facility.

ROADWAY EDGE

The characteristics of the street edge are important aspects of a safe and comfortable pedestrian environment and will be the subject of more discussion in the land use section. As an aspect of the pedestrian environment, sidewalks and pathways next to long blank walls (Figure 21) and large parking fields leave the pedestrian feeling vulnerable and alone, especially after dark. Reinforcing pedestrian pathways with "active" building fronts, such as windows and doors, produces the impression that there are "eyes on the street" and greatly enhances walkability.

Figure 21

TRANSIT ACCESS

A network of well-spaced intersecting streets with adequate crossing time and a supporting built environment help to improve the use of pedestrian crossing facilities by intended users. Rushing to meet a bus with infrequent suburban headways can cause unsafe pedestrian behavior as seen in Figure 22 However the design of spaces to a more traditional urban scale and orientation of building access can help to give positive guidance to system users on foot seeking the most direct, if not the most pleasant route.

Figure 22

BICYCLE SAFETY

The study area lacks a network of neighborhood connections to the corridors. Figure 23 shows a young bicyclist riding counter-flow to this bicycle shop on a sidewalk designed to meet minimum width for pedestrians. Using the arterial sidewalk on the most convenient side of the street is perhaps more practical and safer for local trips. Even an experienced cyclist using the arterial must boldly maneuver left across two lanes of oncoming traffic from the continuous two-way left turn lane. Multimodal area planning should provide a bicycle system that includes not only access to the region-serving arterial, but also a network of streets with crossing intervals to public roads that access businesses from the side or rear.

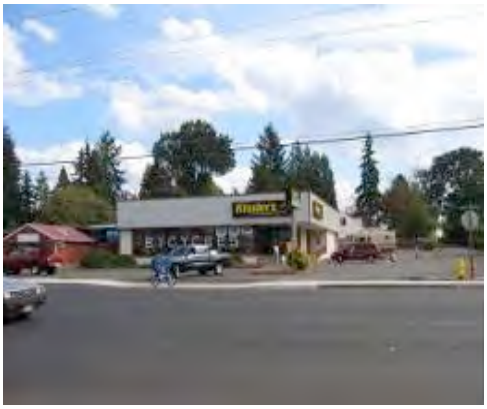


Figure 23

CONCLUSION

The mix of uses, vibrant commercial environment and available capacity of the roadway network create many opportunities for the Beaverton Hillsdale Highway and Canyon Road corridor redevelopment. The shortcomings of the existing system to adequately serve modes other than the private automobile and the area's link to high quality regional transit makes these corridors, particularly Beaverton Hillsdale Highway, ripe for a new development model; one whose infrastructure and urban form support multiple modes of moving about within the community and within the region.

Section 6

Land Use Concept Evaluation

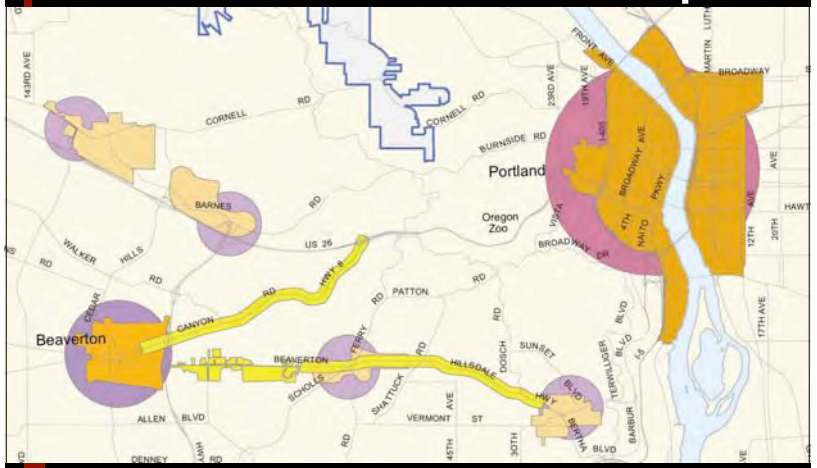
PHASE II - Case Study

Preliminary Recommendations

Urban Design & Development

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Context: 2040 Growth Concept



Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

City of Beaverton Zoning

Washington County Zoning

1. General Commercial
2. Office Commercial
3. Neighborhood Commercial

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

NEXT STEPS
(from previous session)

- Strategies to attract the right kind of new development to the corridors
- Policies to guide development to make the most of contemporary patterns of demand, aesthetically attractive, and a good neighbor to its community
- Improvements to transform the corridor to an attractive, walkable street that supports each segment of land use.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Retail Market

"How much retail can be supported on the corridor?'

- 1,124,250 square feet demanded
- 1,645,500 square feet supplied!

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Market Potential

- **Regional Retail:** Strong tenant mix at western edge/freeway with Home Depot and Target, attraction for other regional-draw tenants near Highway 217 and the Beaverton Regional Center.
- **Neighborhood Retail**: Major grocery anchors of Fred Meyers, Zupan's, New Seasons and Uwajimay will continue to lure supporting, in-line neighborhood-serving tenants.
- **Office:** Office market is weak; limited demand for neighborhood serving uses like medical/dental office space and service office users i.e., title companies, travel agencies.
- **Rental Housing:** No rental market in short-term, but will increase over longer-term horizon.
- **Ownership Housing**: Market for ownership strong, supports smaller types like condominiums, townhomes, attached for-sale development.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Viable Development Types

Land Use Category	Short-Term Uses	Mid- and Long-Term Uses
Retail Space	Restaurants Neighborhood Serving Regional serving at west Specialty retail (i.e., Asian)	Restaurants Neighborhood Serving Regional serving at west Specialty retail (i.e., Asian)
Office Space	Service Office Medical Office	Service Office Medical Office
Rental Residential	Limited, affordable project Senior housing	Market-rate projects - mid-rise Senior Housing
Ownership Residential	Townhomes Condominium Flats Single Family Homes	Townhomes Condominium Flats Single Family Homes

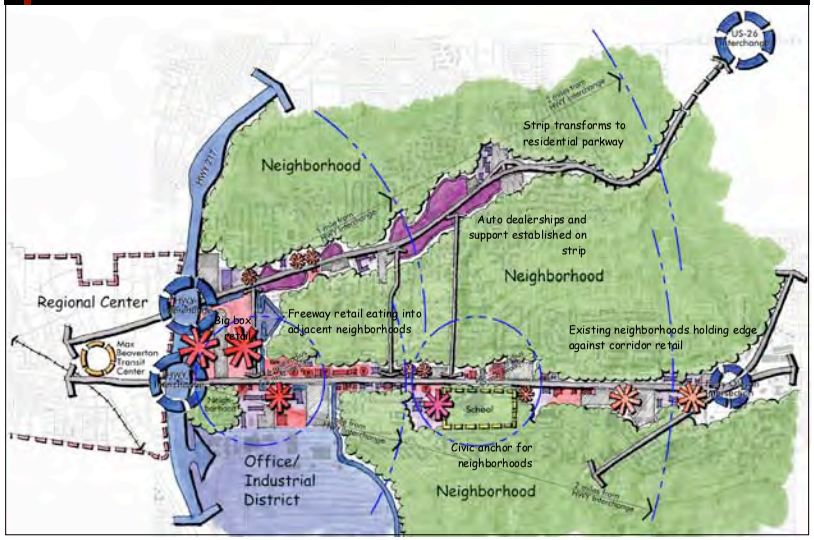
Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

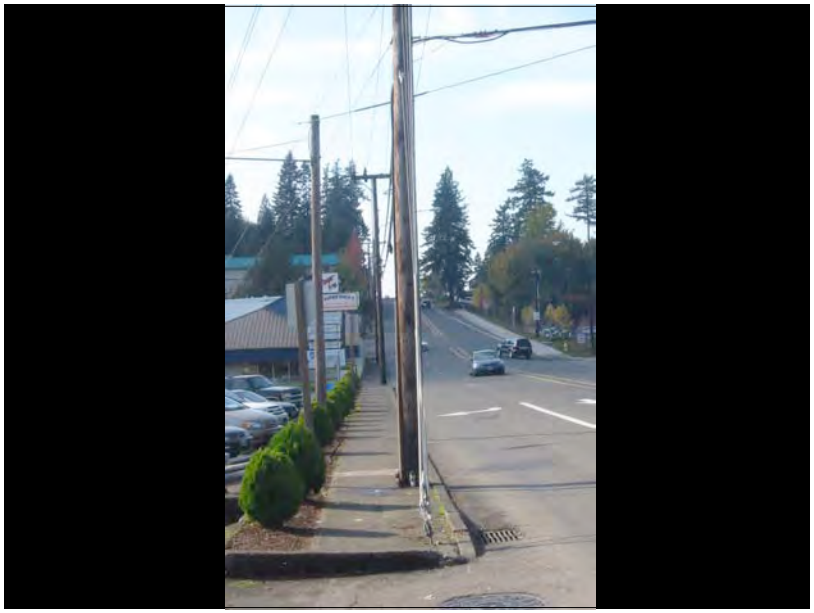
Corridor Trade Area Issues

- Retail overbuilt by _ million s.f. (disinvestment): Assumes area primarily dines & shops on corridor = little support for centers.
- Market demand for residential (short/med/long term) and office (med/long) is more than sufficient to provide properties with value.
- Best engine is residential market BUT existing physical character of street is a powerful disincentive for housing investment.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Patterns of Development and Change





Focus Group Comments November 10 2004

Summary

Focus group participants generally agreed that the following issues were of most concern to them:

- **Traffic. Traffic was rated as the most important issue in the Corridors. Focus group participants discussed the following issues: (a) safety (for both pedestrian and motorists), (b) congestion, (c) speeding traffic (especially as drivers come into the Canyon Road Corridor at 87th), (d) inappropriate auto shortcuts through parking lots and neighborhoods, and (e) lack of bike lanes along some sections of the Corridors.**
  - High congestion at Scholls Ferry Rd. intersection
  - Canyon Road and 87th intersection unsafe for pedestrians due to speeding
  - Canyon Road is not bicycle friendly.
  - Public transit does not make a direct connection between the Corridors.
  - Density aggravates transportation problems.
  - Drivers use neighborhoods as a shortcut

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Summary of Identified Problems

1. Discourages walking, bicycling, transit-riding.
2. Most visible, yet unattractive, part of the City.
3. Haphazard cacophony of forms, signs, uses.
4. Inefficient use of land; hastens need to expand land area within UGB.
5. Competes with centers or prevents their development; spreads market share for retail too thin.
6. Vastly oversupplied for retail
7. Traffic is congested; too many conflicts; movement "not smooth."
8. Corridor development types often poor neighbor to single family housing.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

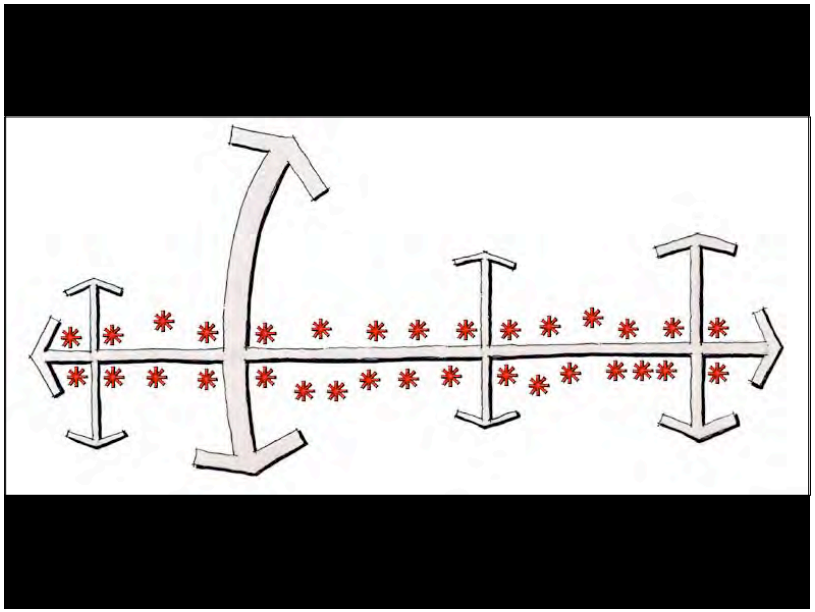
Commercial Corridors have entered a period of accelerating transition: retail is concentrating at major intersections and freeway off-ramps.

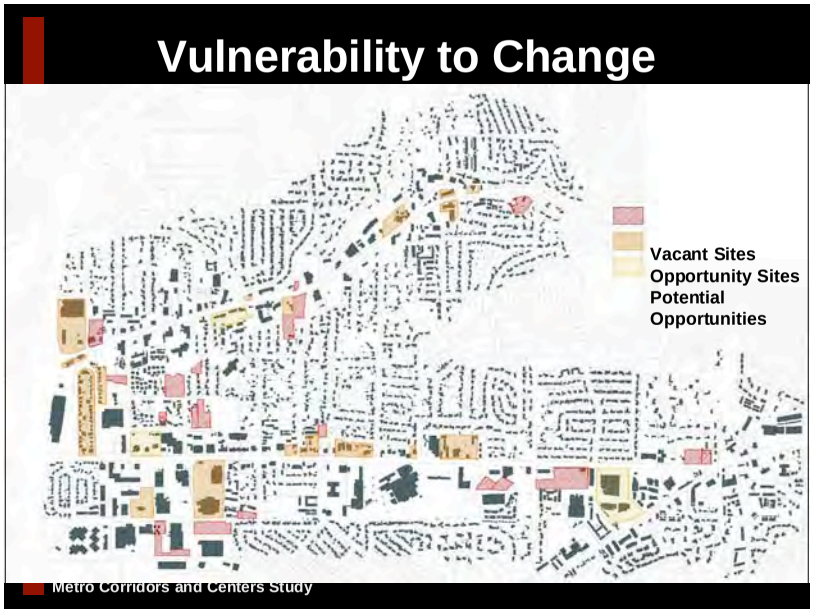
These crossroads-located centers are draining economic vitality from properties located everywhere else – particularly those in between major intersections or bypassed entirely by freeways with new interchange concentrations.

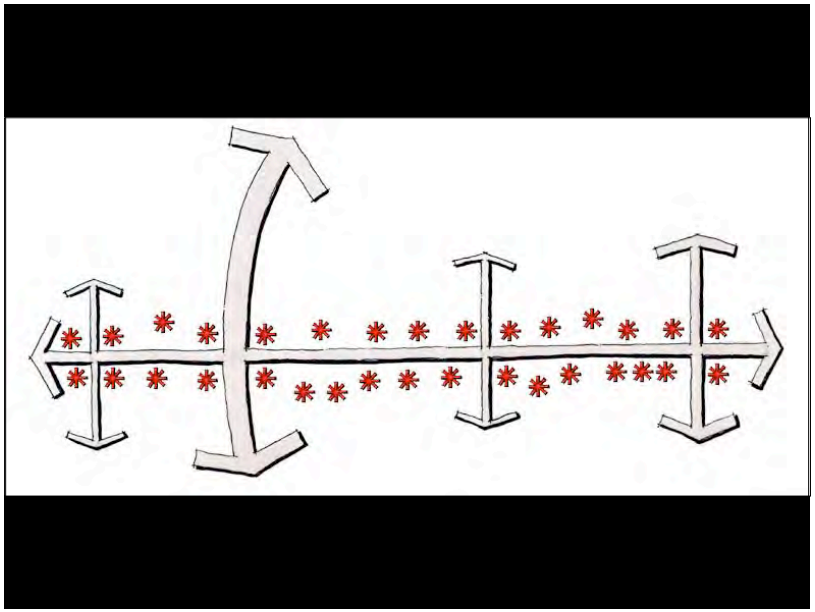
Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

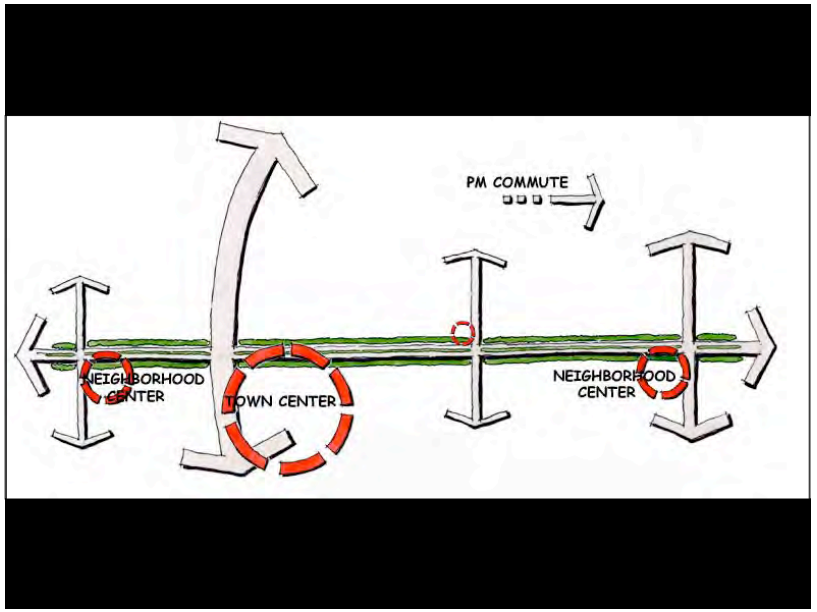
To restore property values & vitality to corridors, land use & development and the design of the thoroughfare must be significantly restructured to reflect investor preferences and to respond to the real pattern of demand in the locality.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study




Vulnerability to Change
Vacant Sites
Opportunity Sites
Potential
Opportunities
Metro Corridors and Centers Study




PM COMMUTE
NEIGHBORHOOD CENTER
TOWN CENTER
NEIGHBORHOOD CENTER

Restructuring Plan: Envisioned Pattern of Development

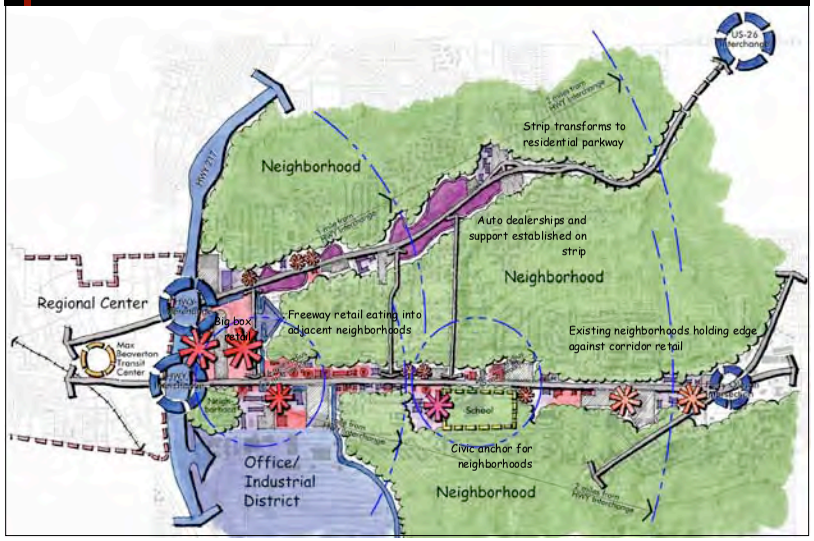
Guiding Private Actions Toward a Healthy Coexistence of Corridors & Centers

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

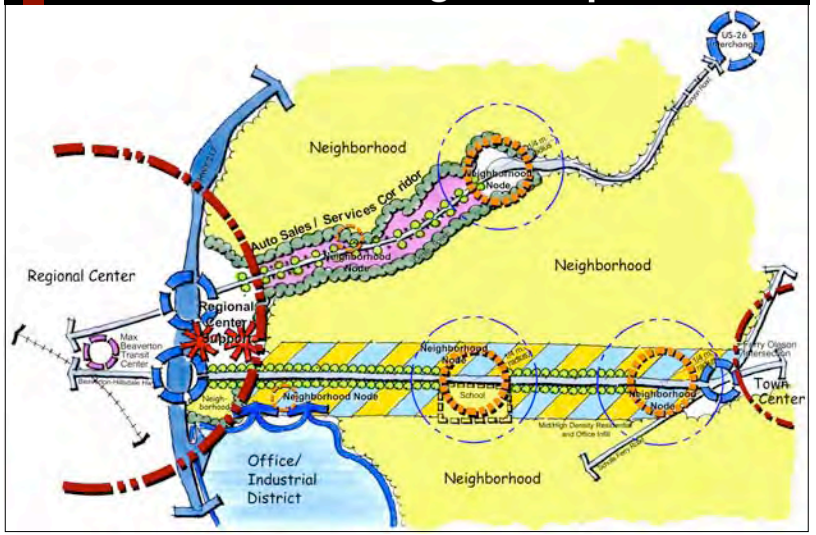
"Broad-brush" Restructuring Concept

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Patterns of Development and Change



Restructuring Concept



Restructuring Plan: Land Use & Development Policy

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

1. Significantly reduce the amount of land intended for commercial development along the Corridor.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

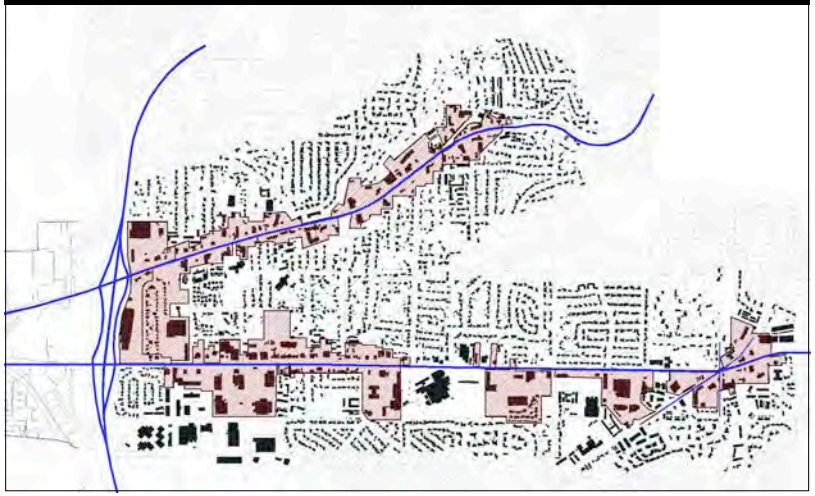
Facilitate the transition from a linear pattern of exclusively commercial development to a "nodal" pattern more capable of responding to contemporary demand and investment preferences – i.e. with retail concentrated at major crossroads in amounts that do not overwhelm market demand.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

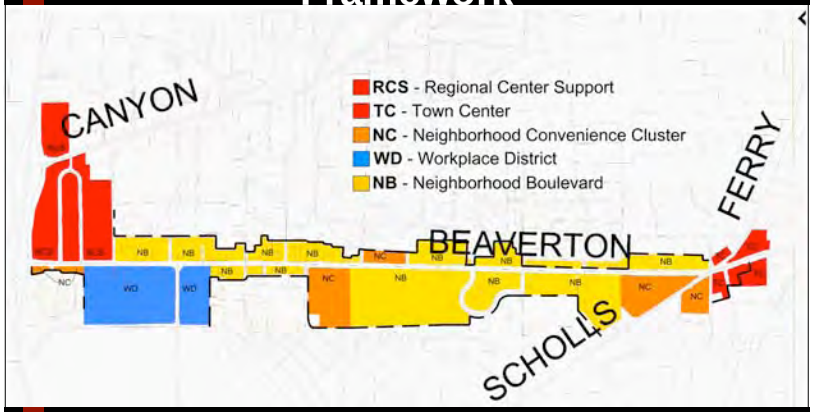
Existing Zoning

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

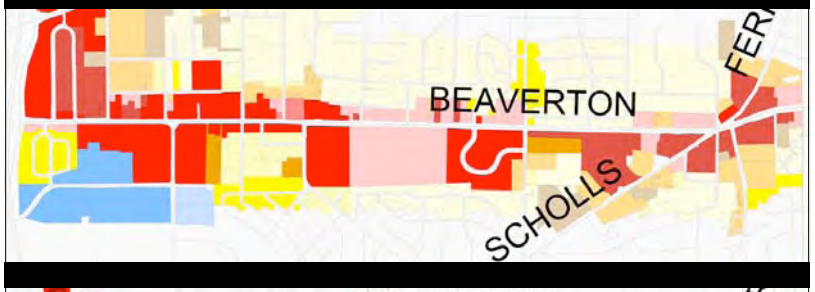
Retail Permitted

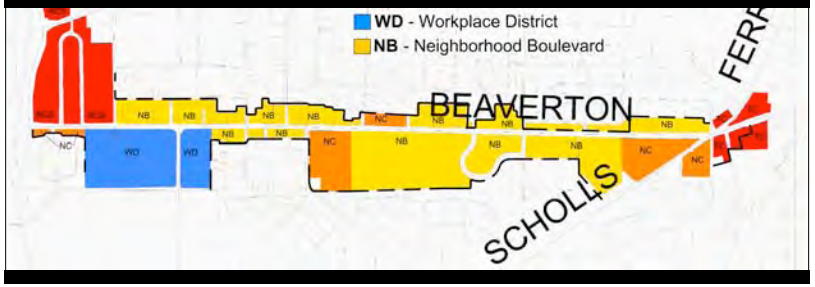


Restructuring Plan – Policy Framework



Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

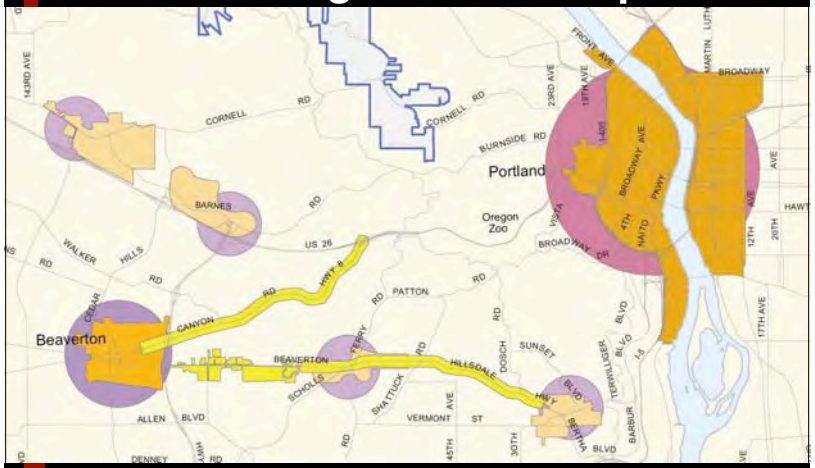




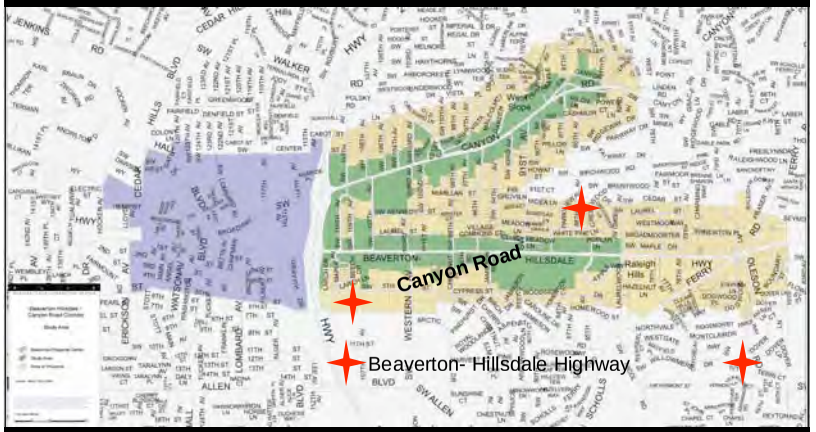
2. Strip corridor restructuring must be planned in relation to the pattern of existing & planned retail-driven centers in the city and region.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Pattern of Regional Development



Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study



Retail Market

"How much retail can be supported on the corridor?'

- 1,124,250 square feet demanded
- 1,645,500 square feet supplied!

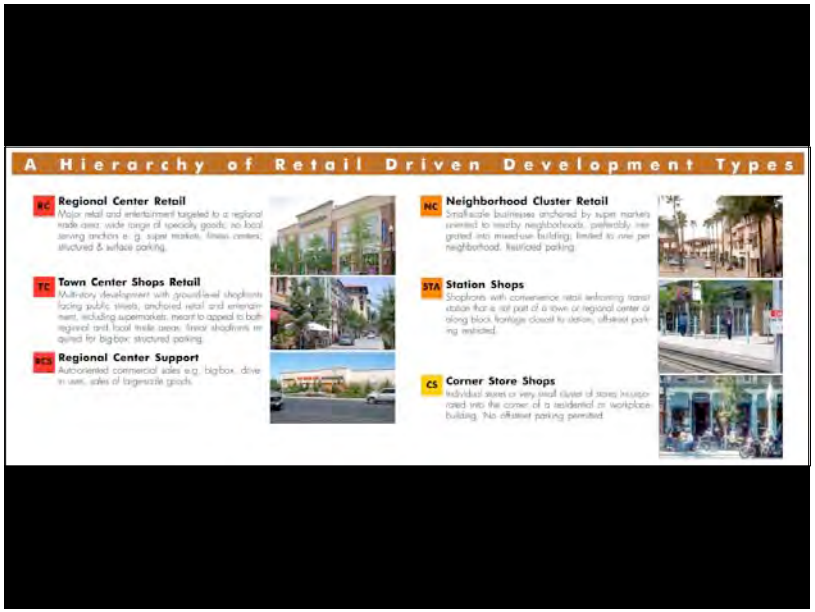
Suppportable Retail Development

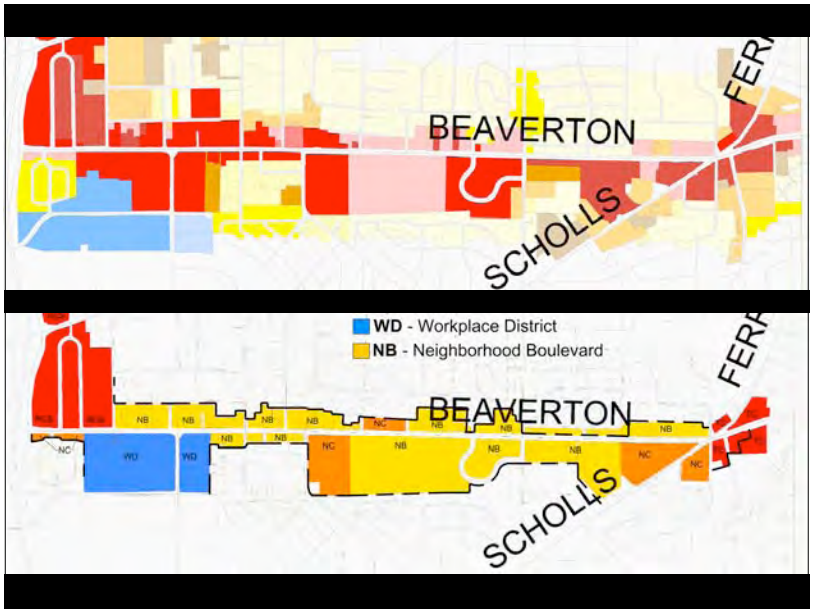
PROJECTIONS OF HOUSEHOLD RETAIL SALES
BEAVERTON HILLSDALE HIGHWAY/CANYON ROAD CORRIDOR
2004-2024

PROJECTIONS OF COMMERCIAL RETAIL SPACE NEED
BEAVERTON HILLSDALE HIGHWAY/CANYON ROAD CORRIDORS
2004-2024

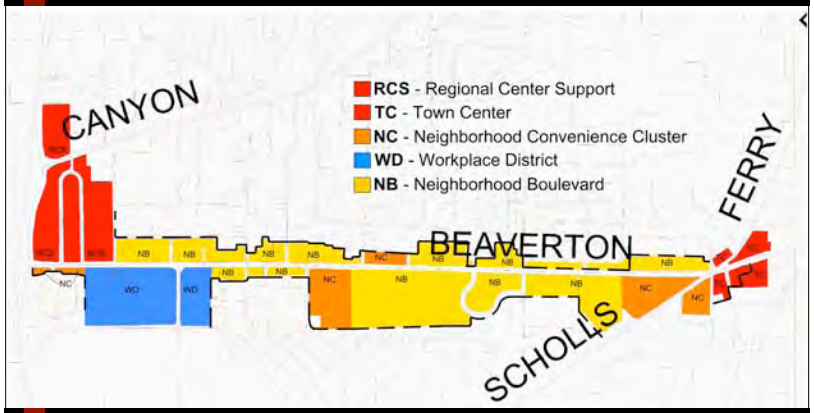
Retail-driven Development Types

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study





Restructuring Plan – Policy Framework

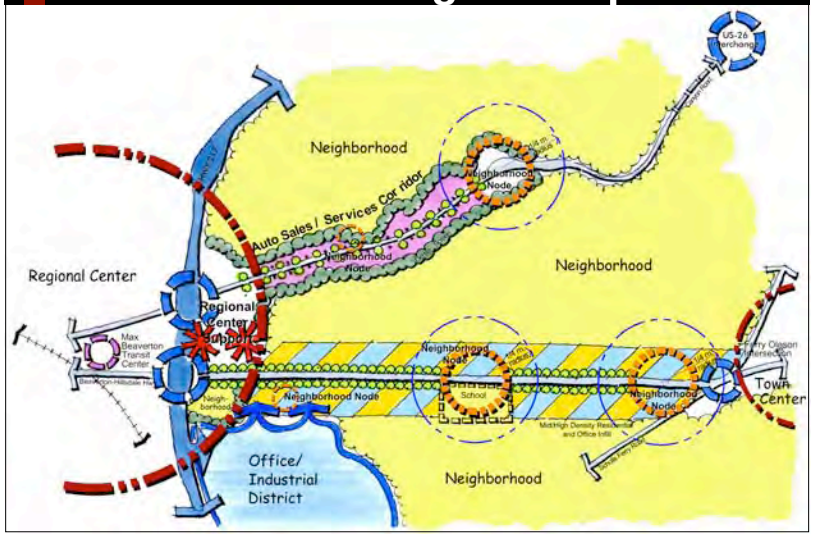


Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

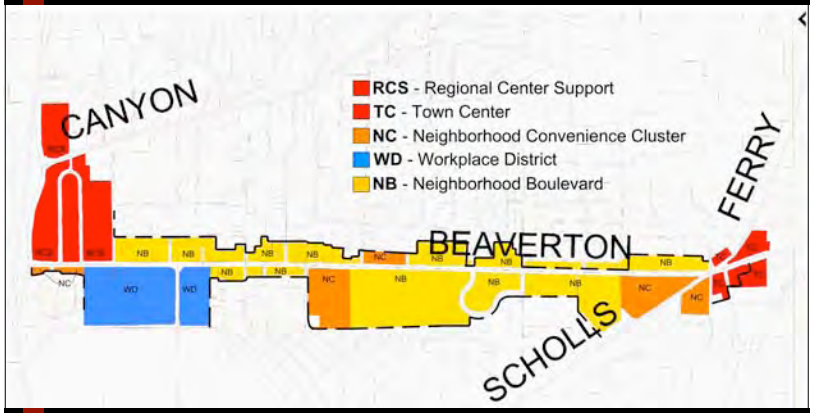
3. Promote the transformation of the long segments of corridor in between the major crossroads/centers to residential, workplace, lodging* and other uses not competitive with retail concentrations.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Restructuring Concept



Restructuring Plan – Policy Framework



Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Land Use & Development Policy

- Focus development standards & design guidelines on insuring that all allowed uses are designed to make good neighbors to housing.
- Require appropriate scale, setback, side & rear yard transitions across from and adjacent to single family residential development.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Single-Family Residential Transition Line

4. Organize public and private investment to foster the emergence of a "Grand Boulevard" that flatters the community, captures value for property owners, and provides an appealing "edge/seam" between residential neighborhoods.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Focus Group Comments

November 10 2004

Summary

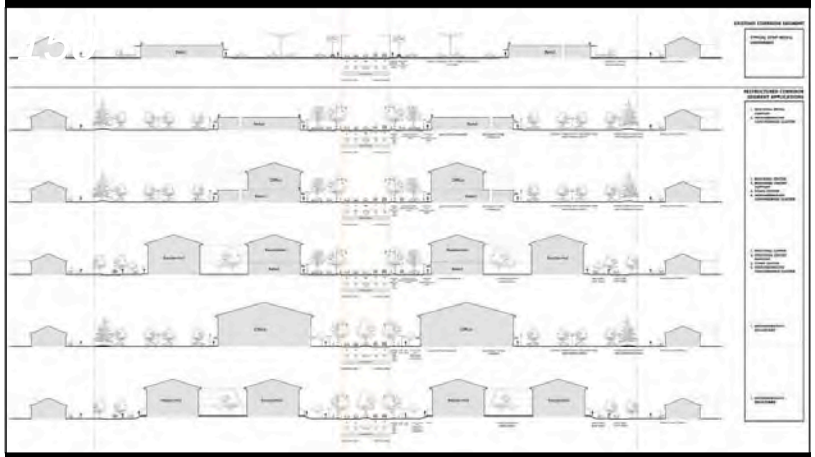
Focus group participants generally agreed that the following issues were of most concern to them:

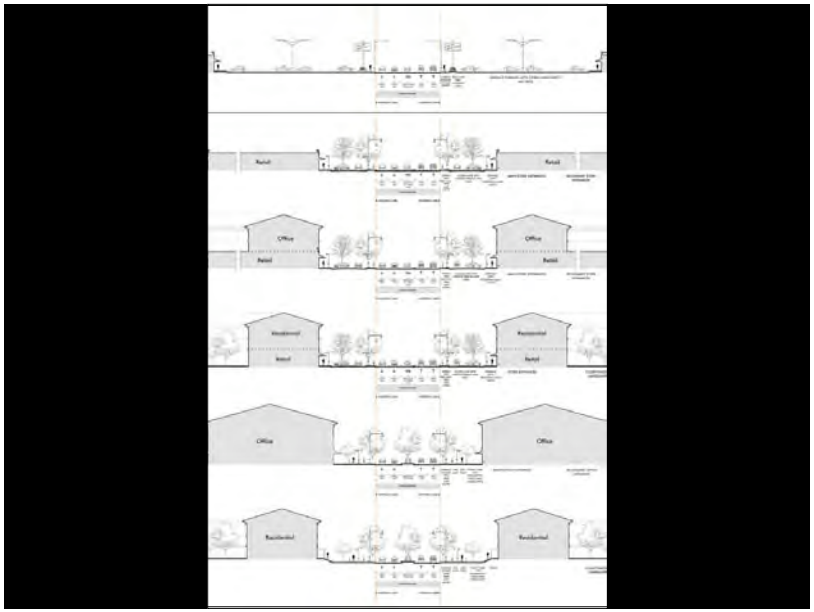
- **Aesthetics. Participants agreed that most of the development design and architecture along the Corridors is unattractive. They suggested that redevelopment activities should attempt to improve aesthetics along the Corridors.**
  - A participant commented, "This is an ugly area (87th and Canyon). How do we transform the 1960s-1970s buildings? We should have design review standards. Why can't we apply improved design standards along the Corridor? Let's change the architectural style."
  - Another participant said the area needs a "face lift."
  - Signage is important to the participants. "Right now it adds to the ugliness. Beaverton has a sign standard, but it is not pretty."
  - Someone suggested that business is improved when aesthetics are improved. He suggested that Irvington Place and Orenco Station might be good aesthetic models.
  - Cost is an obstacle to improved design standards. Some property owners will resist upgrading the design of buildings due to the cost

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Grand Boulevard A. Boulevard Form

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study



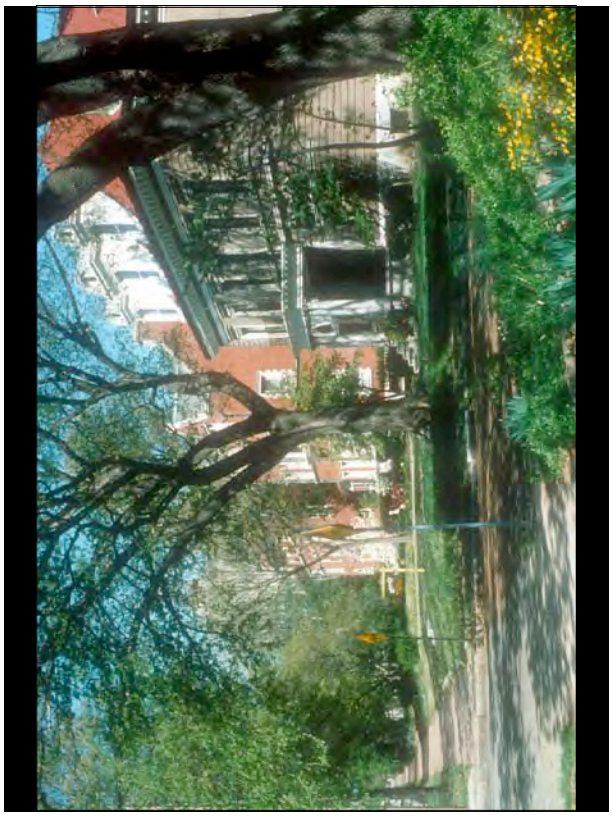


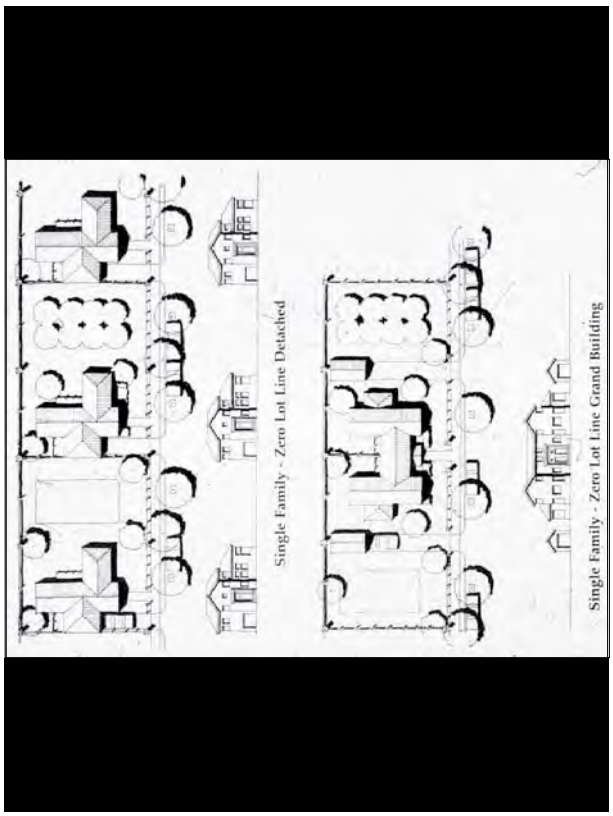
Grand Boulevard B. What form should the Residential* Segments take?

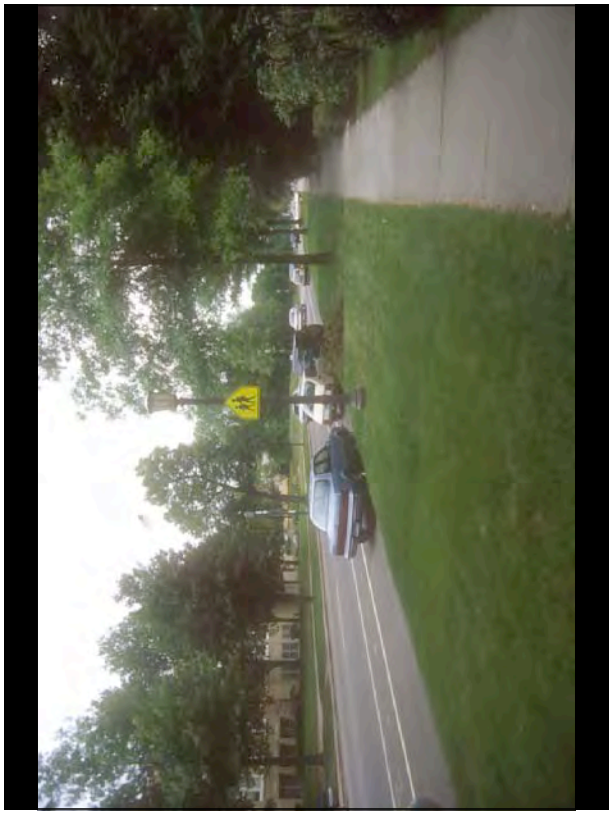
* Residential along with other compatible uses, e.g. workplace, lodging, appropriate commercial.

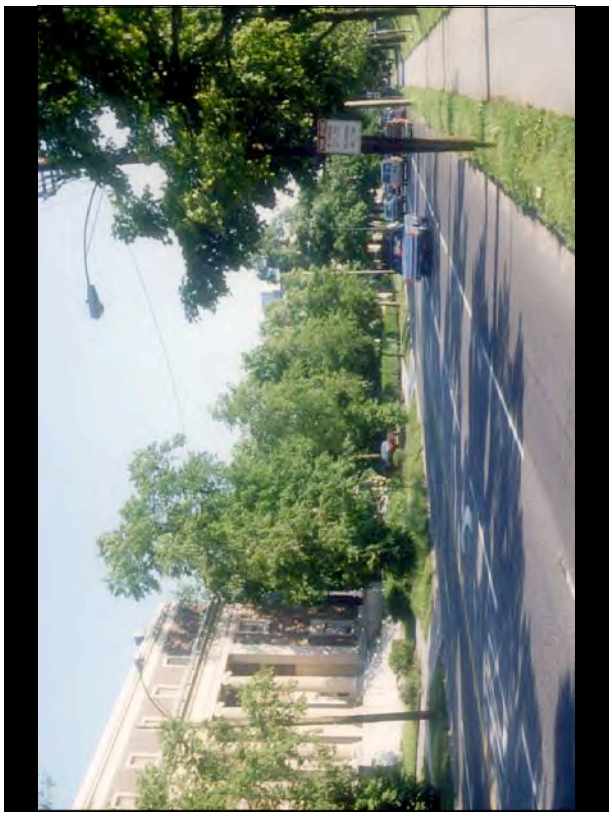
Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

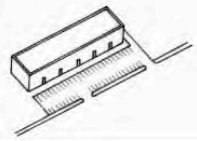
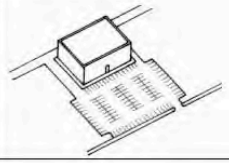
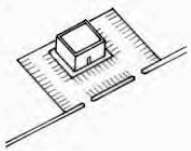
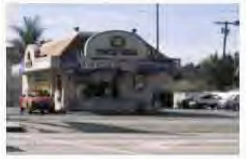

Professional/Retail/ PRIVATE SUITES
RENT, SELL OR TRADE 632-6270
368

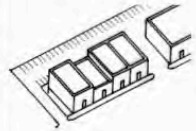
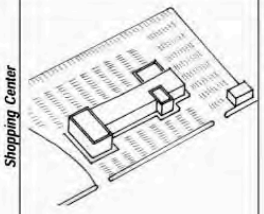



Single Family - Zero Lot Line Detached
Single Family - Zero Lot Line Grand Building



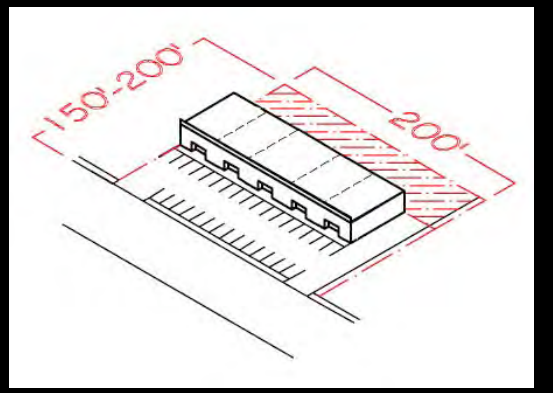


RETAIL BUILDING TYPE	CHARACTERISTICS	EXAMPLES
Strip 	***One-story building with several tenants separated from the road by 1-2 bays of parking.*** - Retail entrances are set back behind parking, and removed from sidewalk. - Building has monotonous appearance; individual stores have no identity.	
Big Box 	***Individual freestanding business fronted by a large parking area.*** - Building has no connection to other retailers. - Building has no connection to pedestrian realm or to street. - Storefront and merchandise is not visible from street - only the parking is!	
Single Vendor 	***Individual small scale business surrounded by parking.*** - Building is set in sea of asphalt. - Business is isolated, and cannot share customers or parking with nearby stores.	

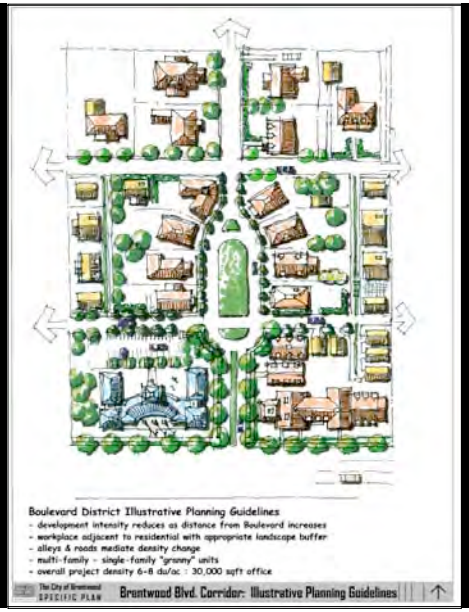
RETAIL BUILDING TYPE	CHARACTERISTICS	EXAMPLES
Storefront 	***Multiple contiguous shops built to property line, with parking behind.*** - Entrances are accessed directly from sidewalk! - Stores are visible to pedestrians and to cars. - Street frontage is activated by retail. - Parking is hidden from view.	
Shopping Center 	***Large single structure with interior access to multiple tenants.*** - No shops or businesses are visible from the road. - Surrounded by an overabundance of parking. - Very few pedestrian entrances, and these are hard to find. - All circulation and activity is internally-oriented.	

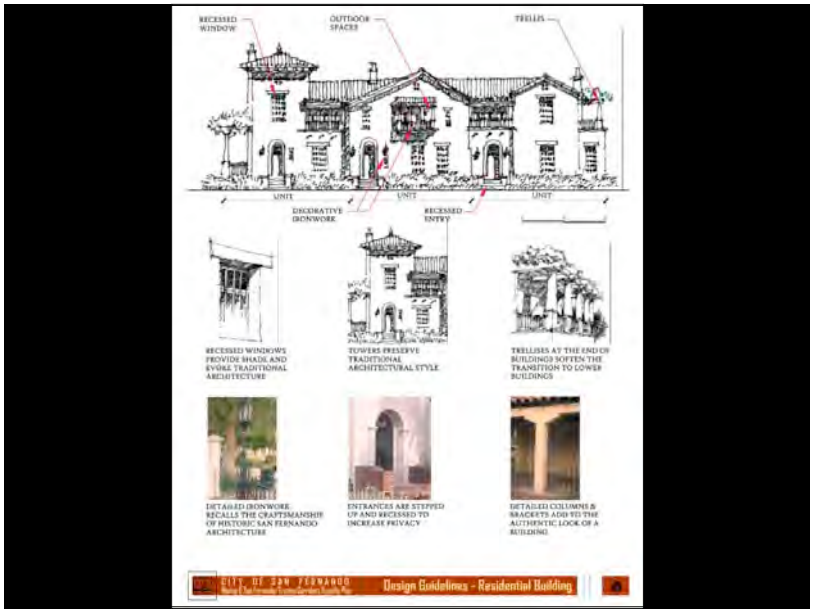
STRIP

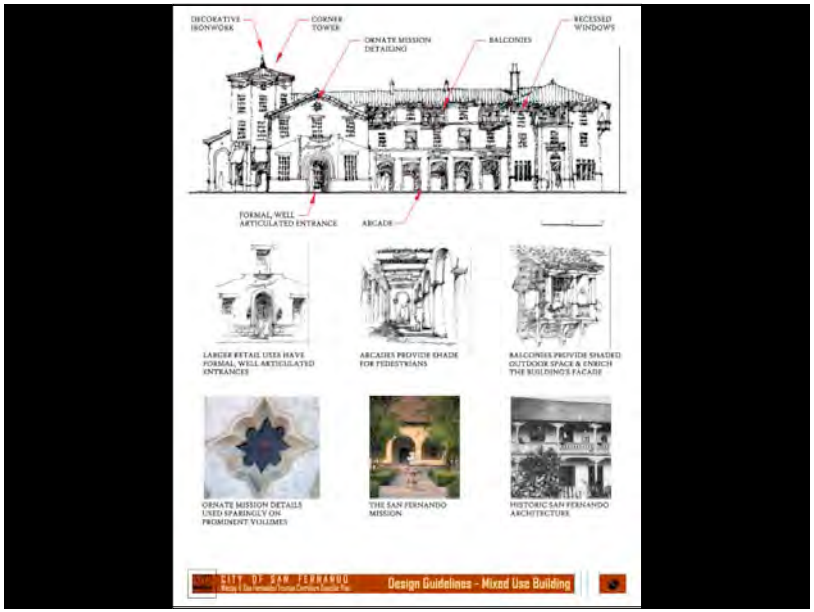
- Long building with multiple tenants
- Depends on number of stores, but frequently 7,500-10,000 square feet
- Typically 2-5 tenants along a continuous facade
- Fronted by a single bay of parking with additional parking in the rear in some cases
- Variations: : L-Strip, Half-Bay

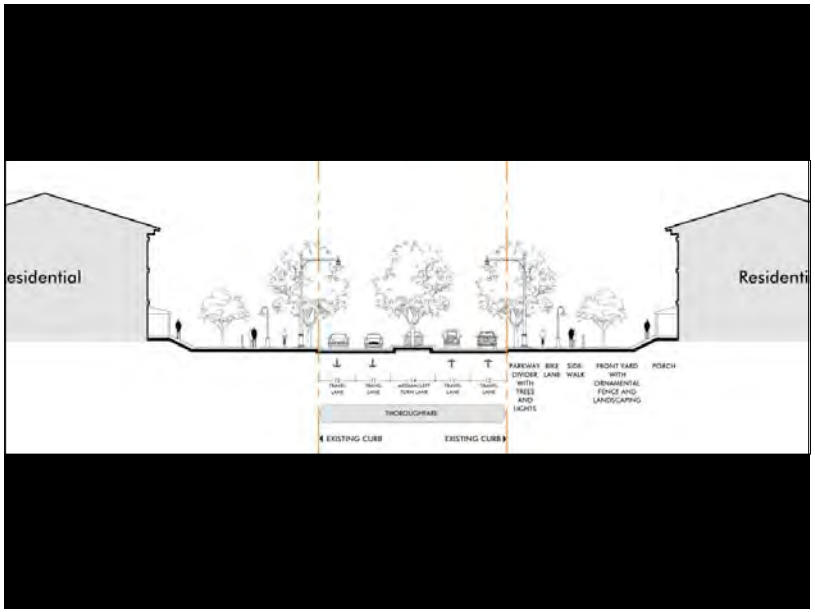


Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study









Community Specifications

Specified by Current Policy

- Permitted and Prohibited Uses
- Minimum Lot Area & Dimensions
- Minimum Yard Setbacks
- Maximum Building Height
- Landscaping (%)
- Open Air Display (permitted)
- Parking (minimum, maximum)
- Signage (amount)

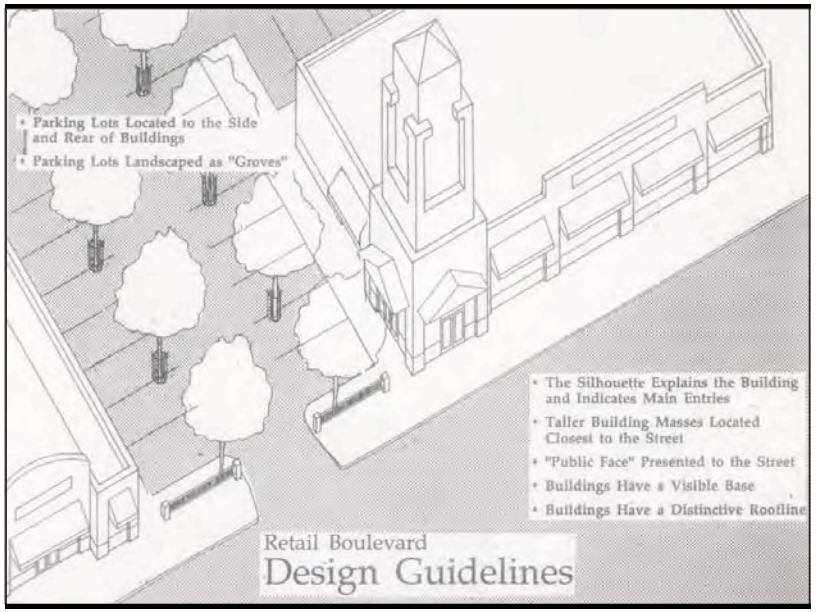
Not Specified by Current Policy

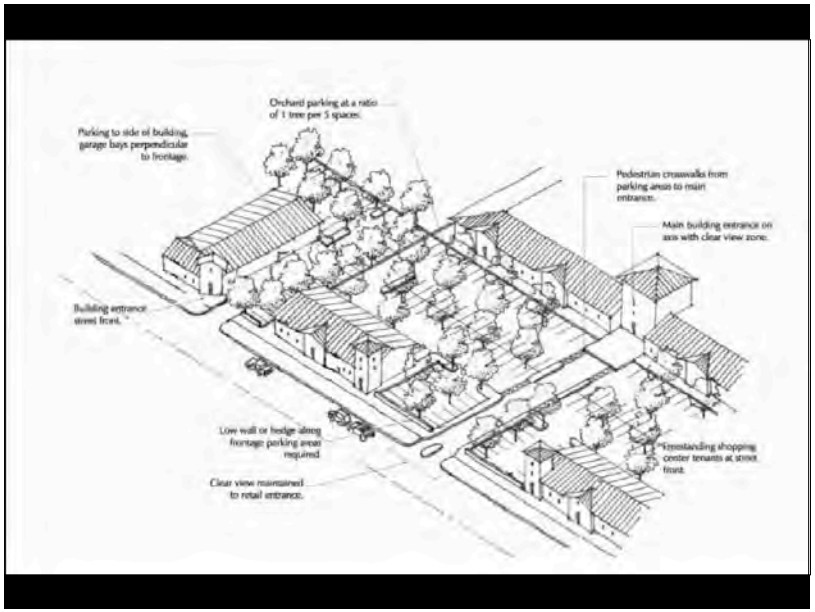
- Permitted and Prohibited Uses
- Minimum Lot Area & Dimensions
- Minimum Yard Setbacks
- Maximum Yard Setbacks
- Public Street Frontage/Sidewalk
- Maximum Building Height
- Minimum Building Height
- Landscaping (%, design and character)
- Open Air Display (permitted and design)
- Parking (minimum, maximum, location and design)
- Signage (amount, design and location)
- Building Orientation; Frontage coverage

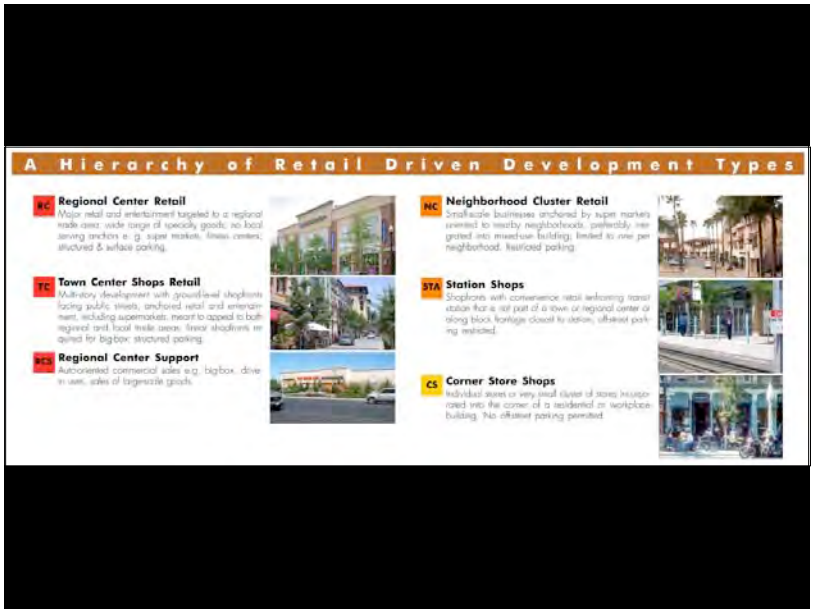
Beaverton-Hillsdale Highway / Canyon Road Metro Corridors and Centers Study

Grand Boulevard C. What form should the Retail Clusters (and unavoidable free-standing reatil) take?

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

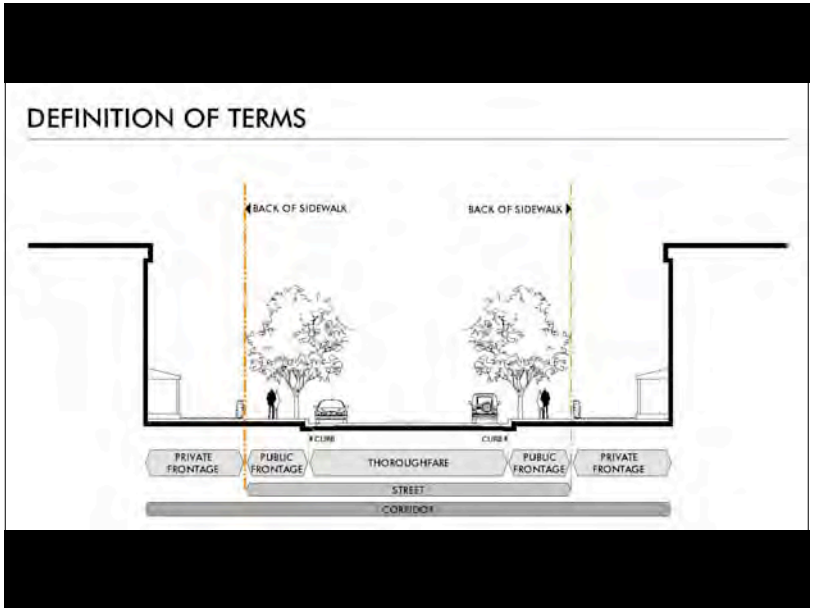


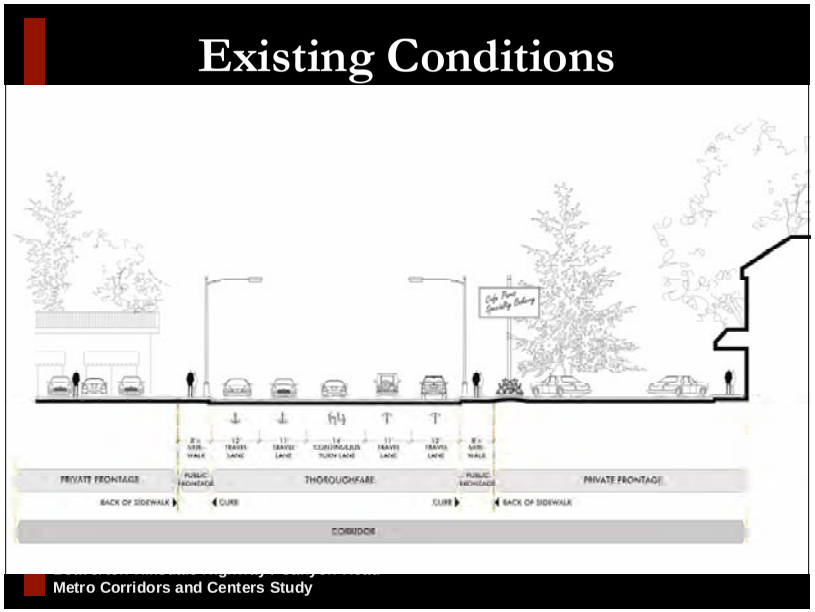


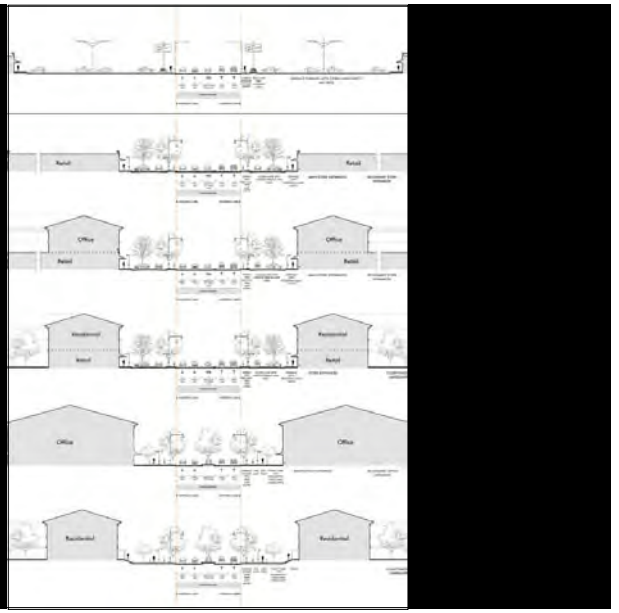


Grand Boulevard D. Focus street improvement resources to re-configure each segment to create environments that are supportive of the enhanced market focus of the desired forms of investment. That is: each segment's development types must be paired with the appropriate **form** of street design.

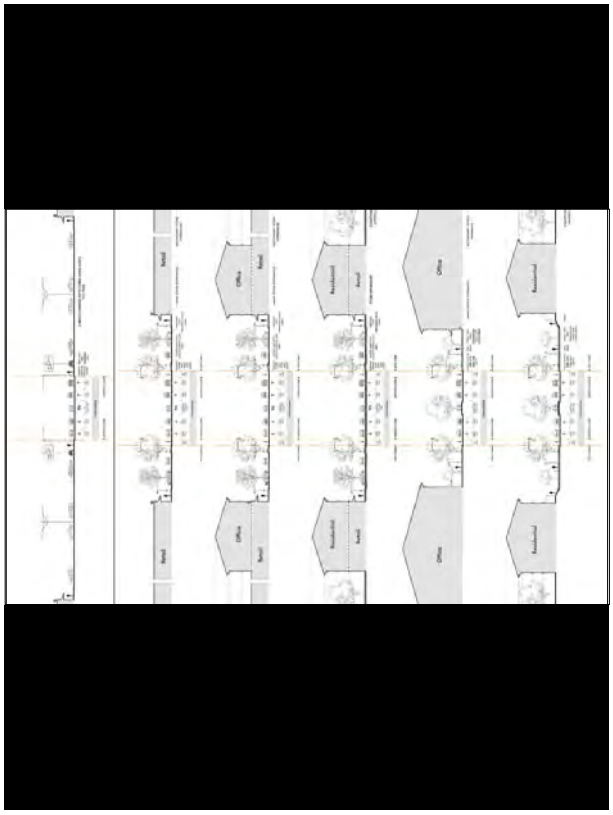

INCOME TAX
SERVICE

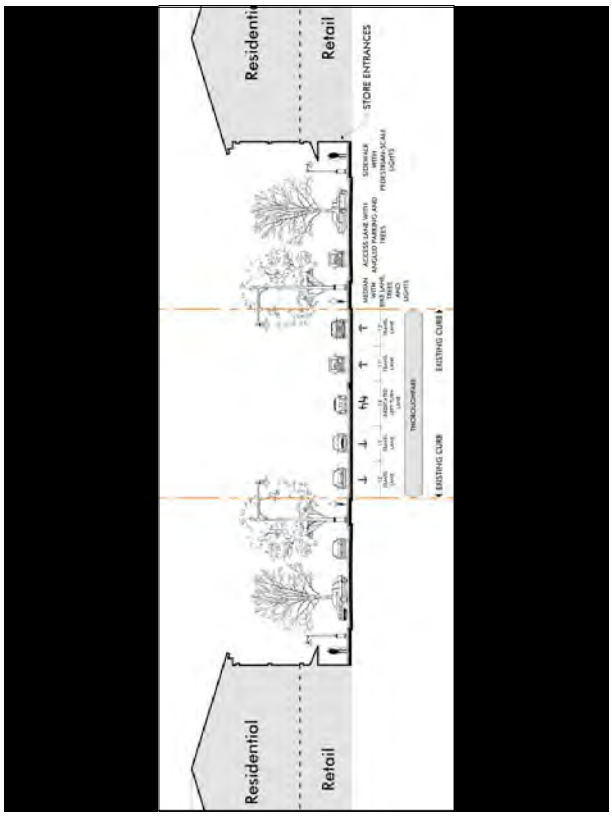

DEFINITION OF TERMS
BACK OF SIDEWALK
BACK OF SIDEWALK
CURB
CURB
PRIVATE FRONTAGE
PUBLIC FRONTAGE
THOROUGHFARE
PUBLIC FRONTAGE
PRIVATE FRONTAGE
STREET
CORRIDOR

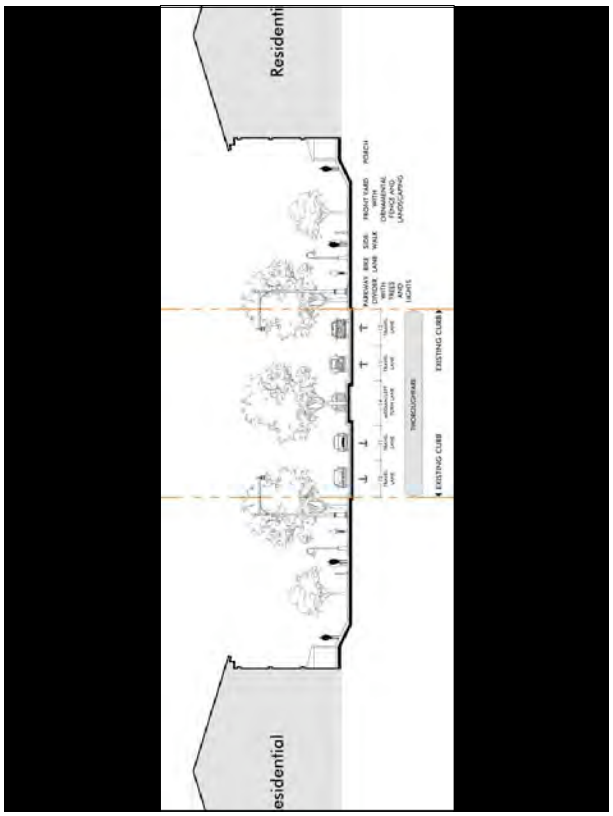

Existing Conditions
PRIVATE FRONTAGE
PUBLIC FRONTAGE
THOROUGHFARE
PUBLIC FRONTAGE
PRIVATE FRONTAGE
BACK OF SIDEWALK
CURB
CURB
BACK OF SIDEWALK
CORRIDOR
Metro Corridors and Centers Study

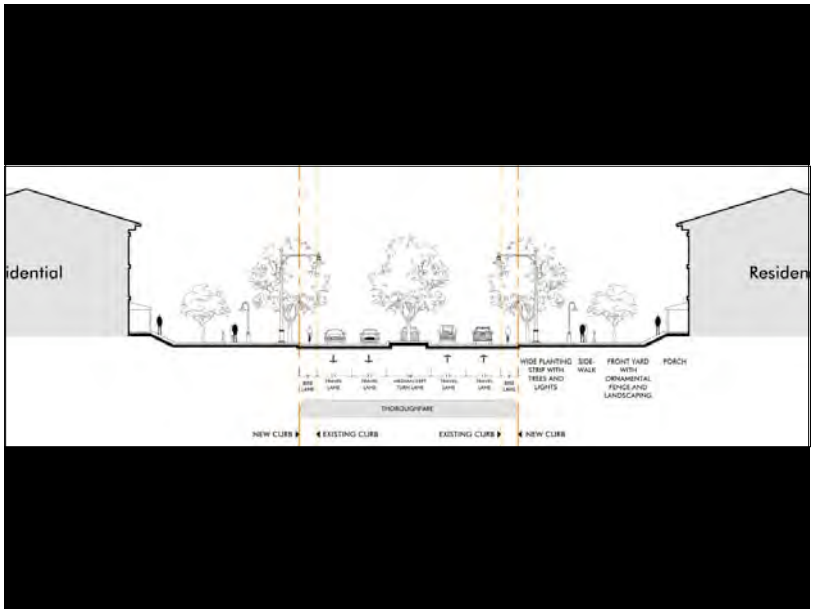


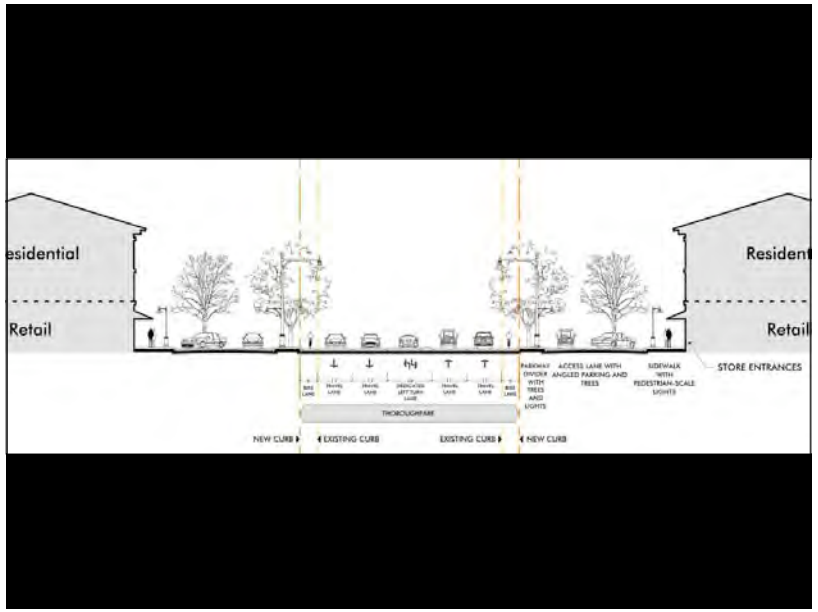

IMAX
IMAX




Residential
Retail
STORE ENTRANCES
Residential
Retail


Residenti
esidential





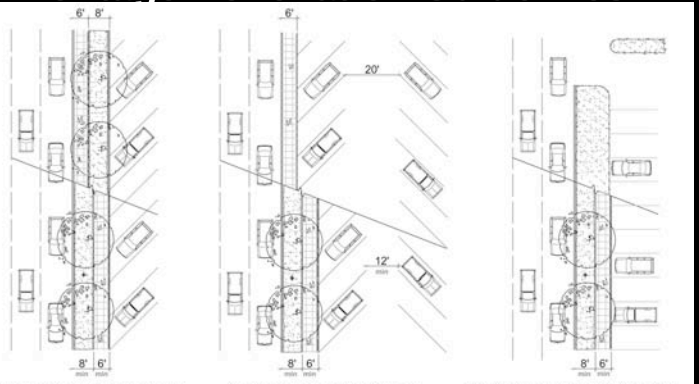
Renovation of Existing Frontages

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Pedestrian Environment

Beaverton-Hillsdale
Metro Corridors and

Frontage Renovation Guidelines



Sidewalk adjacent to Landscape Strip & Parking

- Reverse sidewalk & landscape strip to buffer pedestrian
- Plant trees in landscape strip, approximately every 30' o.c.

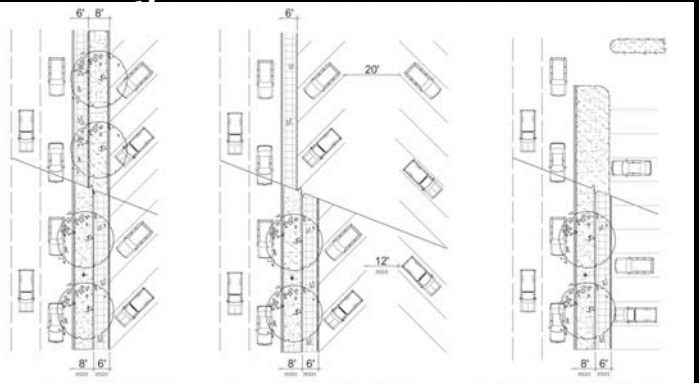
Sidewalk adjacent to Parking Frontage

- Reduce oversized parking access lane to acceptable minimum
- Move sidewalk & install planting strip to buffer pedestrians
- Plant trees in landscape strip, approximately every 30' o.c.

No Sidewalk w/ Paved Frontage

- Plant trees
- Install sidewalk & planting strip along dead frontage
- Separate pedestrians from parking w/decorative fencing or edge
- Change undefined parking area to marked parking spaces
- Plant trees in landscape strip, approximately every 30' o.c.

Frontage Renovation Guidelines



Sidewalk adjacent to Landscape Strip & Parking

- Reverse sidewalk & landscape strip to buffer pedestrian
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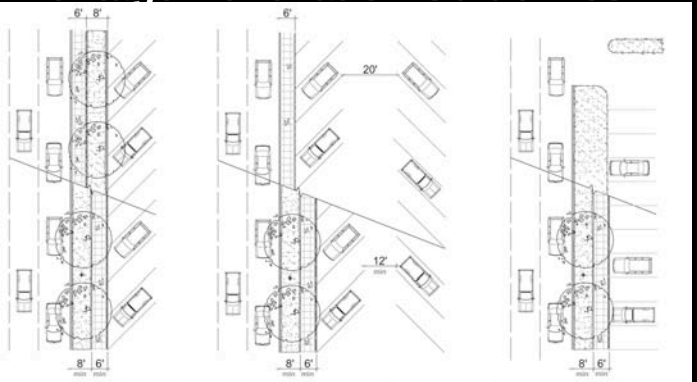
Sidewalk adjacent to Parking Frontage

- Reduce oversized parking access lane to acceptable minimum
- Move sidewalk & install planting strip to buffer pedestrians
- Plant trees in landscape strip, approximately every 30' o.c.

No Sidewalk w/ Paved Frontage

- Plant trees
- Install sidewalk & planting strip along dead frontage
- Separate pedestrians from parking w/decorative fencing or edge
- Change undefined parking area to marked parking spaces
- Plant trees in landscape strip, approximately every 30' o.c.

Frontage Renovation Guidelines



Sidewalk adjacent to Landscape Strip & Parking

- Reverse sidewalk & landscape strip to buffer pedestrian
- Plant trees in landscape strip, approximately every 30' o.c.

Sidewalk adjacent to Parking Frontage

- Reduce oversized parking access lane to acceptable minimum
- Move sidewalk & install planting strip to buffer pedestrians
- Plant trees in landscape strip, approximately every 30' o.c.

No Sidewalk w/ Paved Frontage

- Plant trees
- Install sidewalk & planting strip along dead frontage
- Separate pedestrians from parking w/decorative fencing or edge
- Change undefined parking area to marked parking spaces
- Plant trees in landscape strip, approximately every 30' o.c.

Public Improvements within the Right-of-Way

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

SAN LEANDRO BUILDS SYMBOLIC ARCH

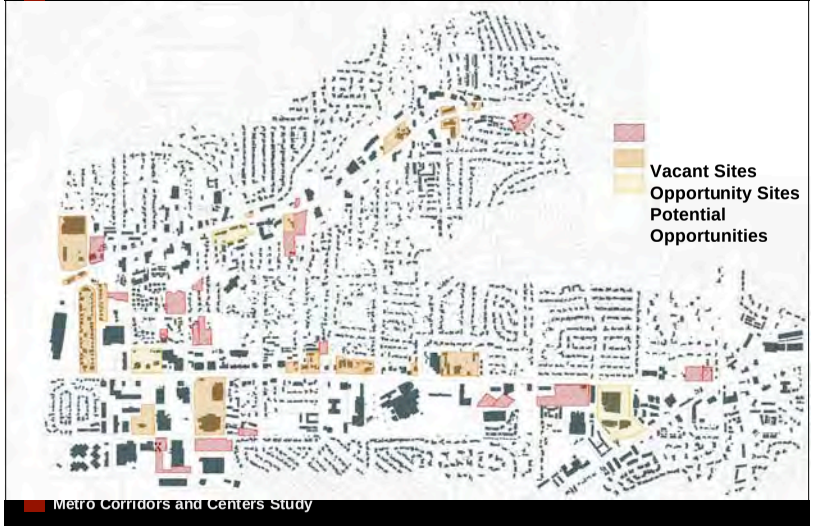
RENAISSANCE

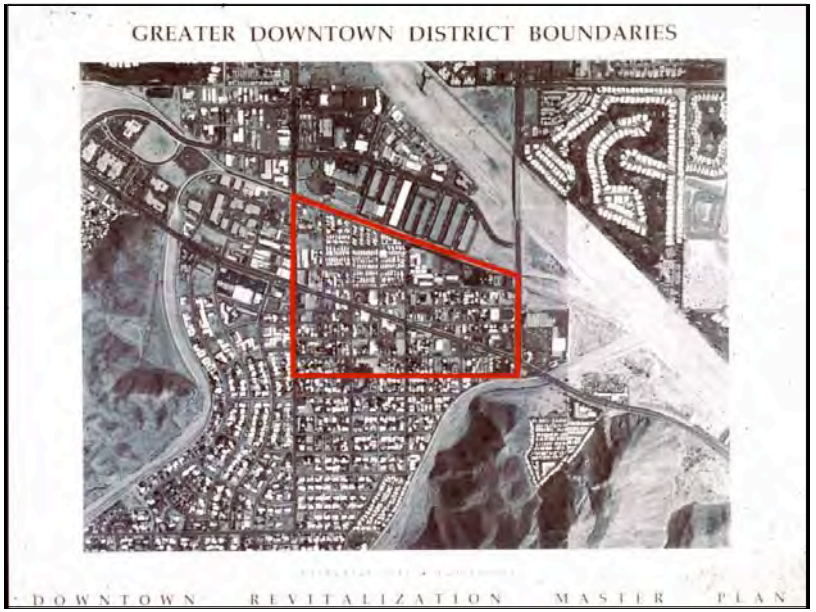
Monument stands for city's past and future

5. Look for opportunities to redevelop large scale "greyfield" sites.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Vulnerability to Change

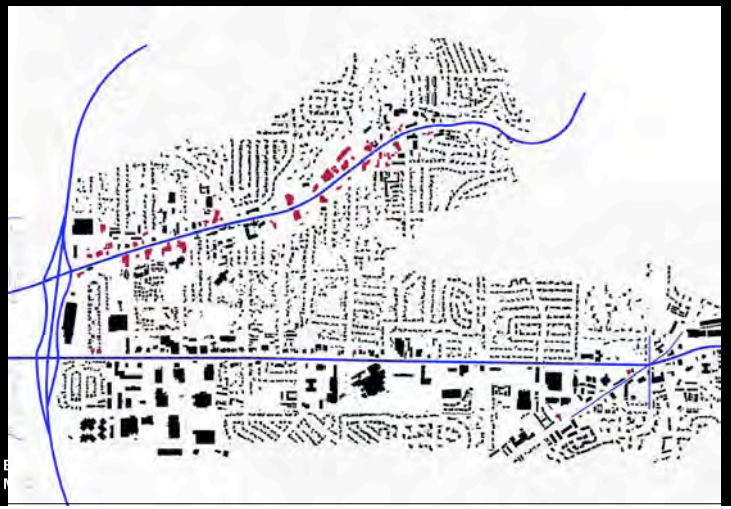


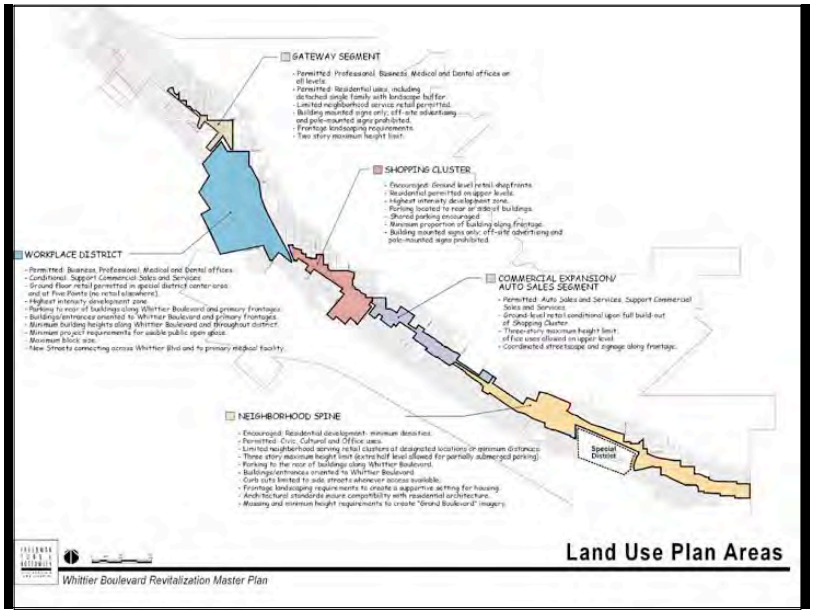


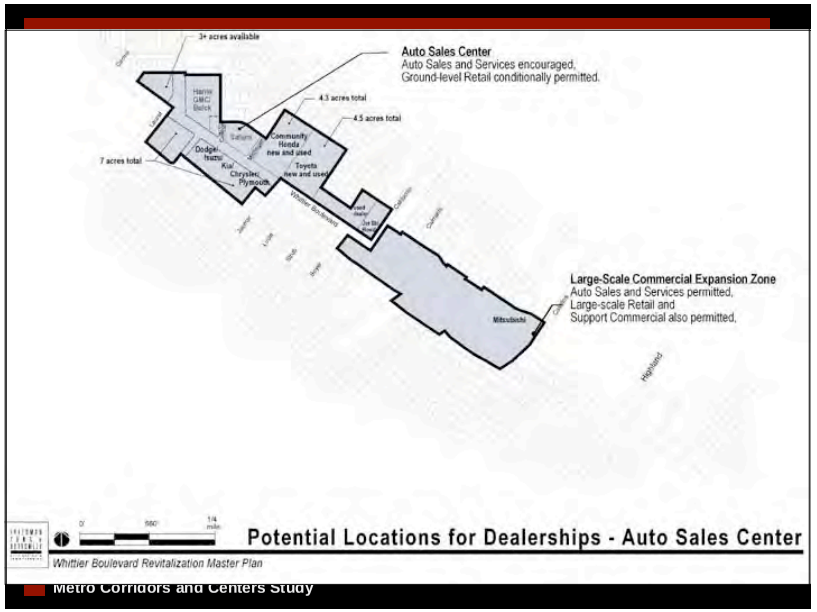
6. Promote the continued success of specialty segments e.g. auto sales and services. Cluster such specialized uses whenever possible.

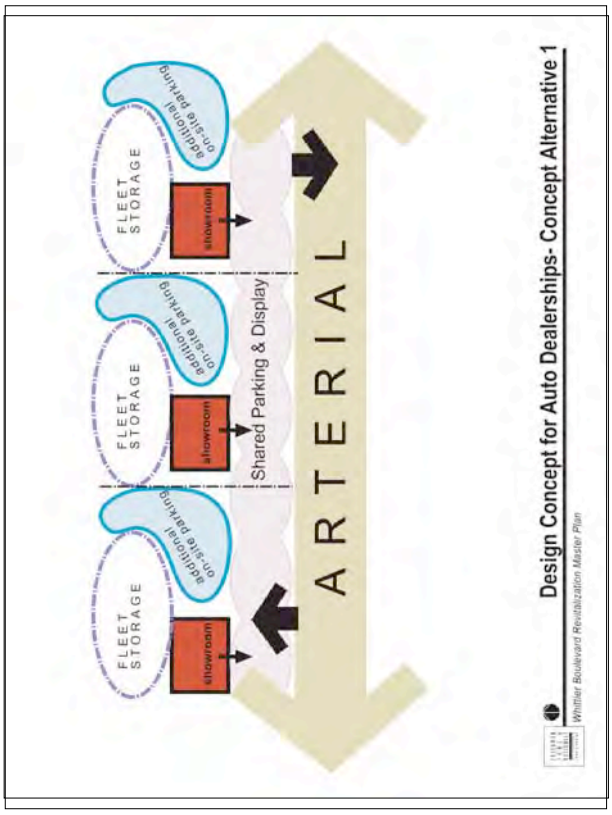
Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

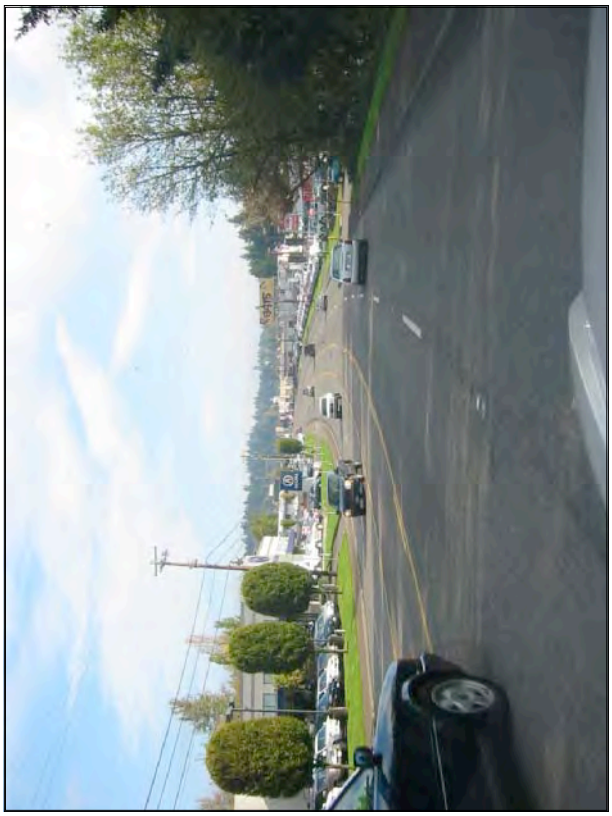
Existing: Auto Dealerships & Auto-Related

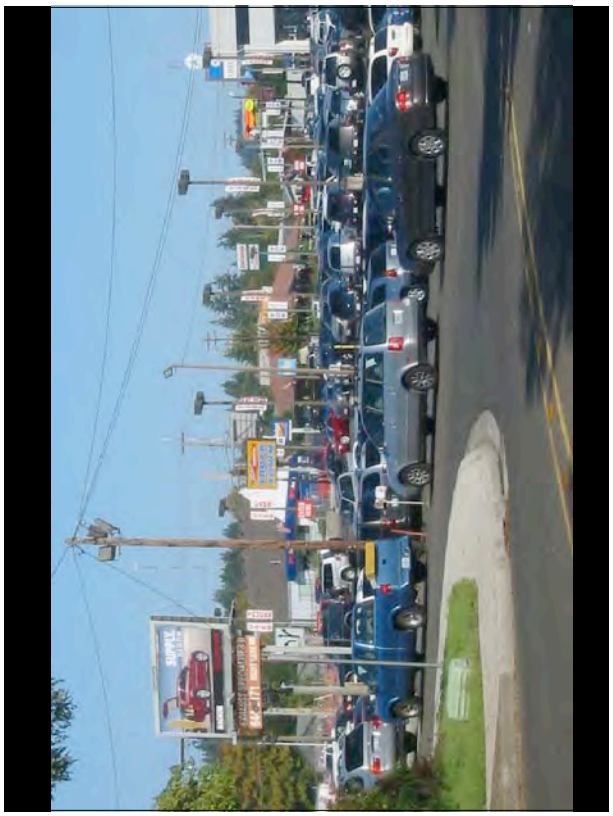


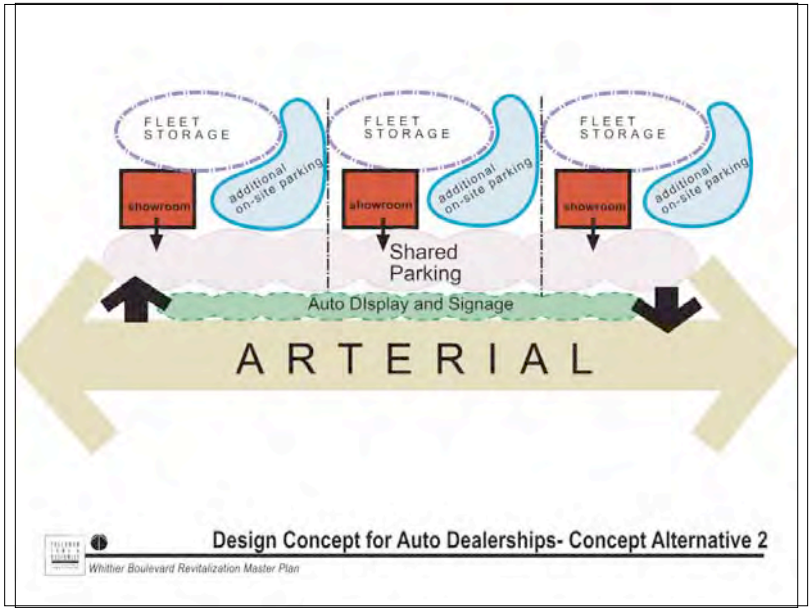


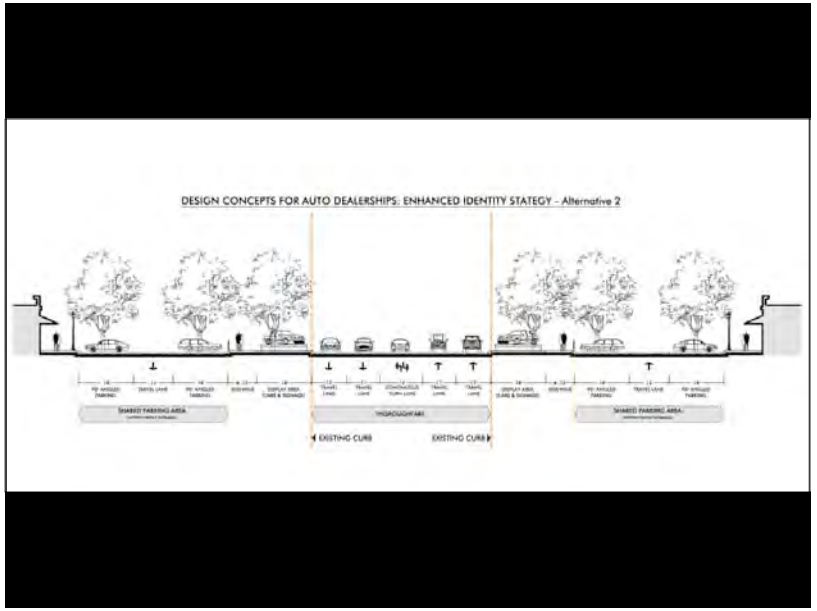


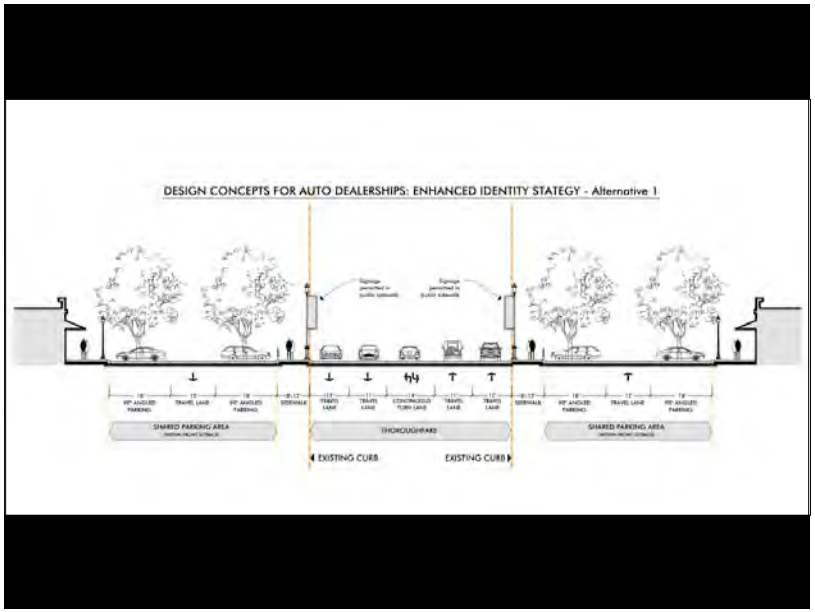

Design Concept for Auto Dealerships- Concept Alternative 1
Whittier Boulevard Revitalization Master Plan
ARTERIAL
Shared Parking & Display
showroom
FLEET STORAGE
additional on-site parking



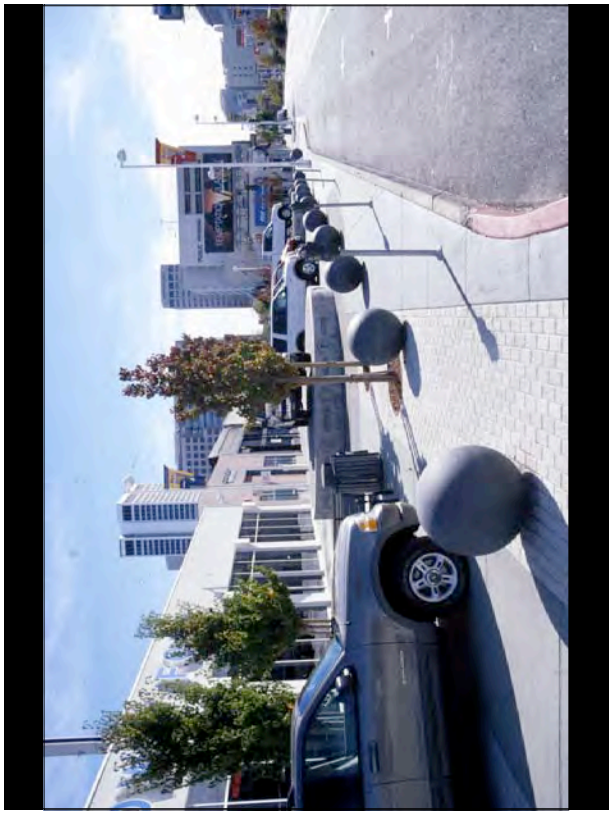


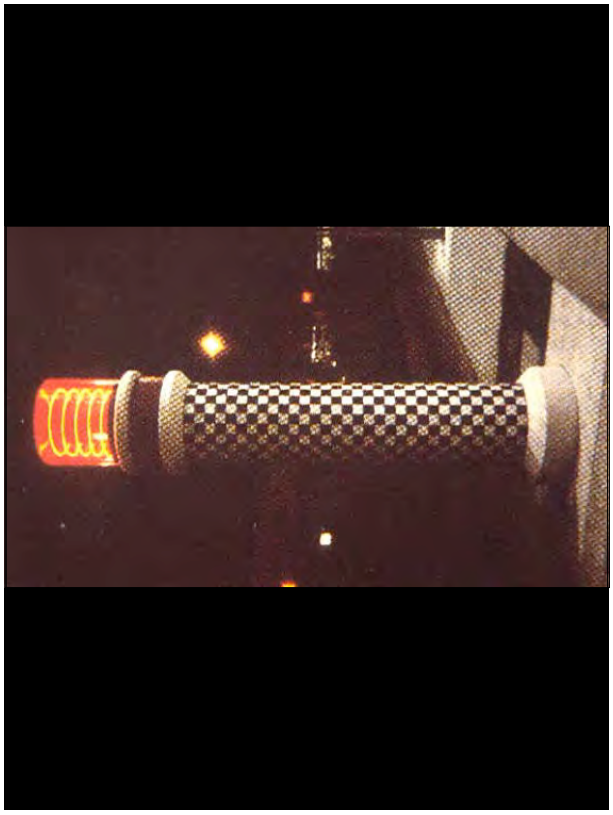

FLEET STORAGE
FLEET STORAGE
FLEET STORAGE
showroom
showroom
showroom
additional on-site parking
additional on-site parking
additional on-site parking
Shared Parking
Auto DIsplay and Signage
ARTERIAL
Design Concept for Auto Dealerships- Concept Alternative 2
Whittier Boulevard Revitalization Master Plan

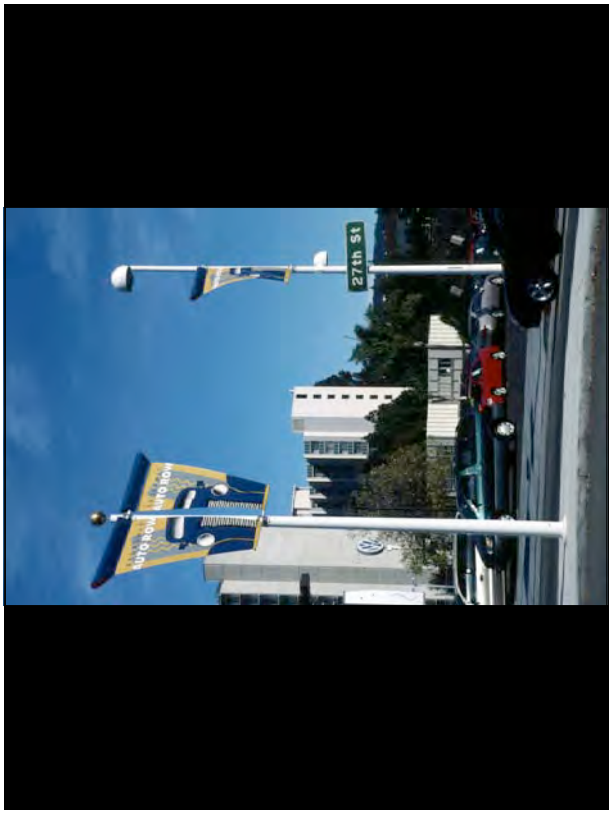

DESIGN CONCEPTS FOR AUTO DEALERSHIPS: ENHANCED IDENTITY STATEGY - Alternative 2
EXISTING CURB
EXISTING CURB

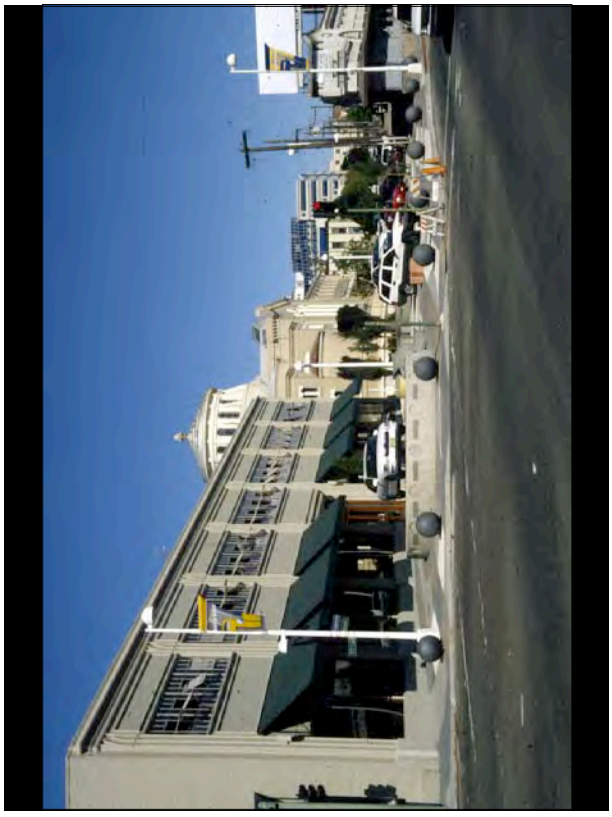

DESIGN CONCEPTS FOR AUTO DEALERSHIPS: ENHANCED IDENTITY STATEGY - Alternative 1
EXISTING CURB
EXISTING CURB

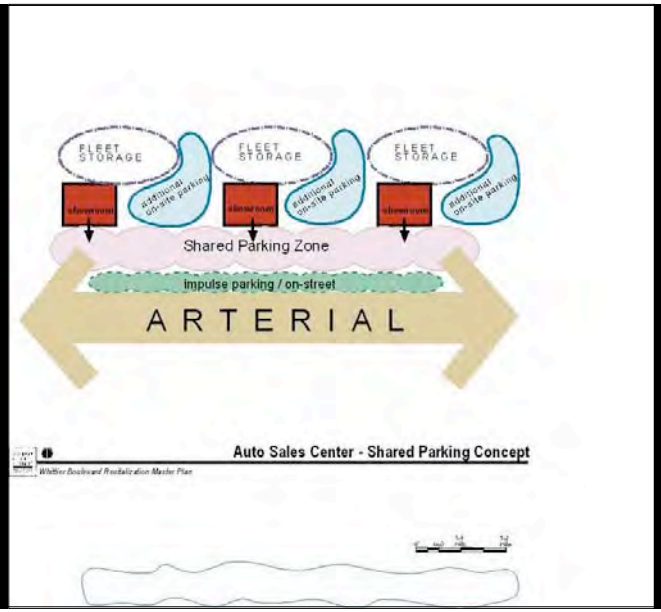

AUTO ROW
AUTO ROW
KEEP RIGHT






27th St





Restructuring Plan: Implementation Strategy

Implementation within a Measure 37-influenced environment

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

#1. Reorganize Entitlements

- Modify anything-goes retail zoning to a more focused hierarchy of retail development types. Use zoning to limit the distribution, layout and retail mix permitted.
- In NB zones, permit only corner store retail
- Replace the majority of retail entitlements with more extensive residential ones.
- Measure 37 Response: show housing as ultimate highest & best use between centers.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

#2. Adopt Parallel Track Zoning

- Keep existing entitlements unchanged.
- Use incentives to promote community plan. For example:
  - Projects applying under existing entitlements go thru administrative plan check, architectural review board, planning commission and city council for approvals.
  - Projects applying under the community's preferred corridor plan track go thru administrative review only. If conform to development standards, plan is approved.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

1B/2B. Use Streetscape as Catalyst

- Community is first investor in plan.
- Install segment-based streetscape improvements that provide an environment that is attractive to desired/envisioned forms of investment, and that significantly decreases the functionality for strip retail.

Beaverton-Hillsdale Highway / Canyon Road
Metro Corridors and Centers Study

Barriers to Success

- Primary obstacle: Stakeholder opposition to change brought on by the belief that retail demand can be returned as before.
- This requires a patient and open community workshop series in which stakeholders are provided with objective information and case studies so they can understand the major shifts effecting their properties and decide for themselves.

Advent of Commercial Strip: Application of only standard zoning practice for commercial land (main streets & streetcar corridors) to miles of suburban & rural highways – no one left out.

Barriers to Success 2

- There are very few precedents. Planning the restructuring and revitalization of commercial corridors is a relatively recent endeavor. Stakeholders, residents and developers have trouble envisioning what success will look like.

Barriers to Success 3

- A primary cause of the problem that also operates as an obstacle: separation of land use and development planning from right-of-way design – of planning departments from public works departments.
- A healthy corridor is characterized by the integration of right-of-way configuration with a development configuration that it serves. Achieving this in separate efforts would be a major coincidence.

Section 7

Transportation Strategies To Support The Land Use Concept

Metro Corridors and Centers Study

Corridor Transportation Concepts

February 15, 2005

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Existing Transportation Opportunities

- Creation of connections between sites
  - Reduce reliance on arterials
  - Shared parking opportunities
  - Reduction in private access points
- Creation of human scale transportation system
- Connectivity to and through adjacent neighborhoods
- Well-spaced and easy to cross locations to connect pedestrians to bus stops
- Infrastructure and urban form support multiple modes of moving within community

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Building Value: Corridor Design

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Corridor Design: Auto-Oriented Efficiency

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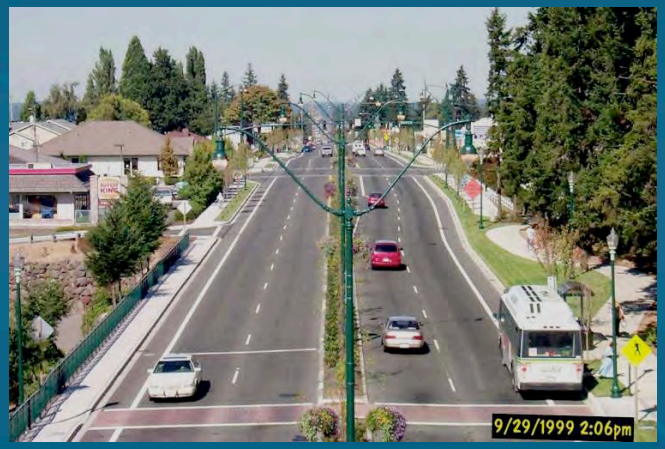
Corridor Design : Multi-Mode Efficiency & Safety



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Parking & Access Efficiency

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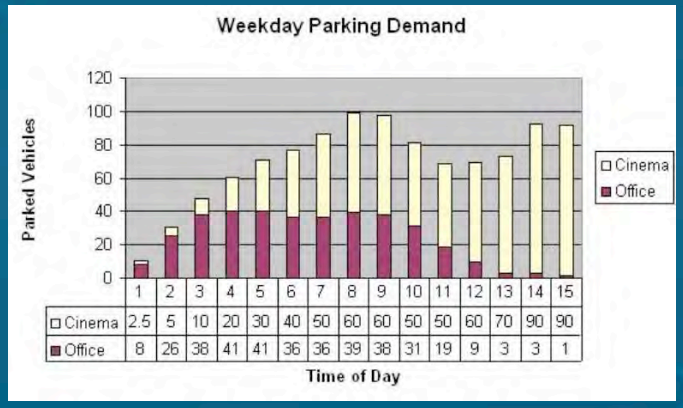
Parking & Access Management

- Joint use of compatible uses builds efficiency



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cinema	2.5	5	10	20	30	40	50	60	60	50	50	60	70	90	90
Office	8	26	38	41	41	36	36	39	38	31	19	9	3	3	1

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Intersecting Street Spacing: Neighborhood Spine

Unsignalized 300-500' from signals

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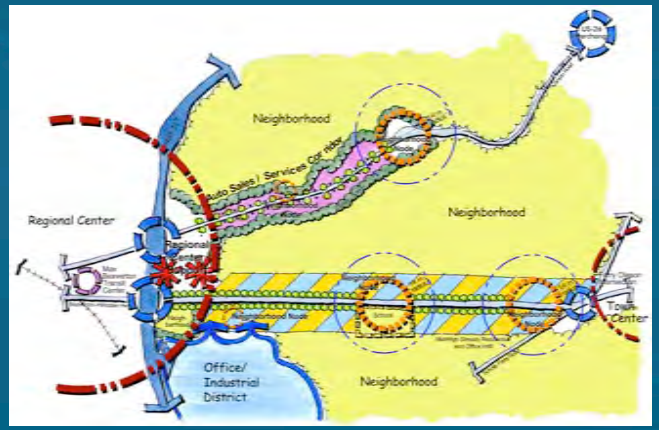
Intersecting Street Spacing: Node and Center Focus

Signalized Intersection 600-1000' to preserve capacity



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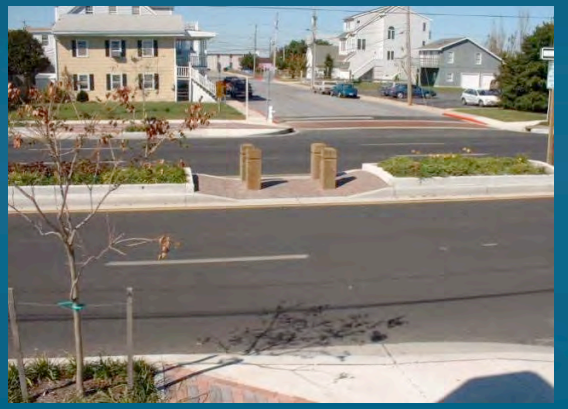
Intersecting Street Spacing : Right In/Out Access

Median with unmarked mid-block refuge



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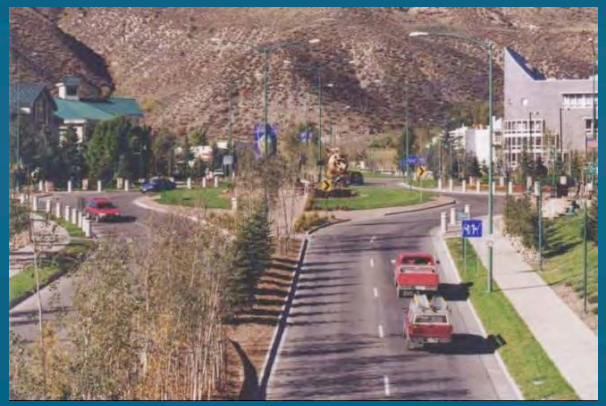
Private/Parking Access

- Focus access at Center Support and Convenience Cluster
- Eliminate private access along Neighborhood Boulevard



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Private Parking Access using an urban grid

Access from perpendicular and parallel streets

Permits on-street parking

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Parking: Off street perpendicular or diagonal

- Building fronts oriented to a comfortable sidewalk
- Access and spaces shared by multiple users

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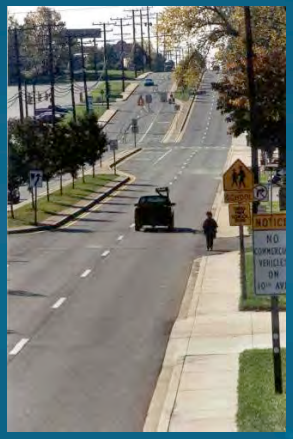
Cross-section alternatives

- Avoid more than 4 through lanes on arterials
- If demand exceeds capacity of 4 lanes, consider
  - parallel routes,
  - service roads, and
  - lower Level of Service
- Median refuge (6') at intersections and within landscaped median separating traffic direction



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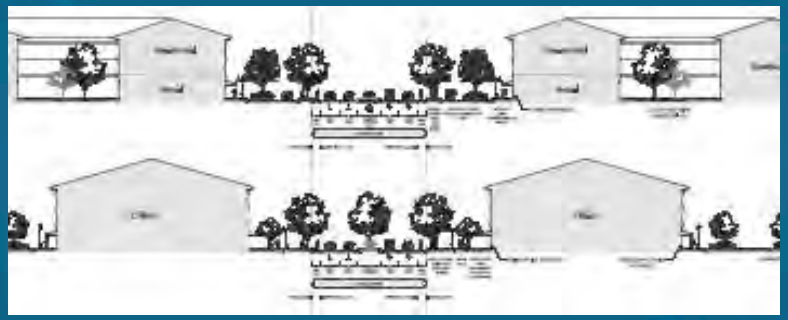
Cross-section Alternatives



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Alternative Corridor Cross Section

Where access grid is unachievable

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Traditional signaled four-way intersection

- Include left turn storage on the corridor

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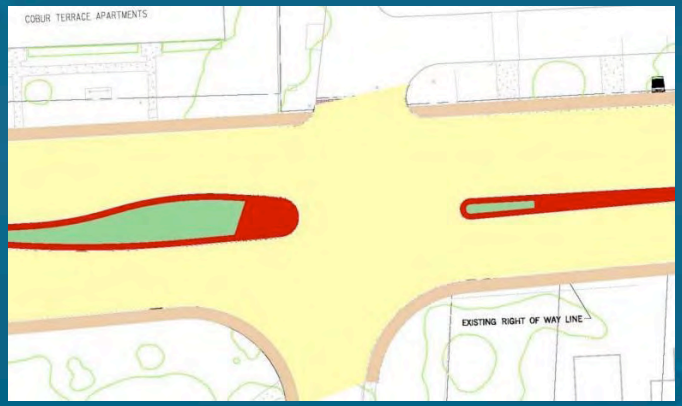
Widen intersections for truck U-turns

- Absent the urban grid or service road
- Requires curb relocation at corners only



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Multiple Roundabouts

- Facilitates u-turning and/or traffic control
- Mixes with traditional intersection design

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Corridor Intersection Treatments

- Curb extensions to reduce turning speed and crossing distance
- Pedestrian-oriented corner turning radii, especially right-in-right-out intersections

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Grid Streets Cross-Section

- Streets link corridor activities and destinations to neighborhoods
- Streetscape and building orientation support pedestrian and bicycle activity on secondary streets
  - includes rear commercial access alley streets

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Pedestrian Treatments: Crosswalks

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Pedestrian Treatment: Roundabout Refuge

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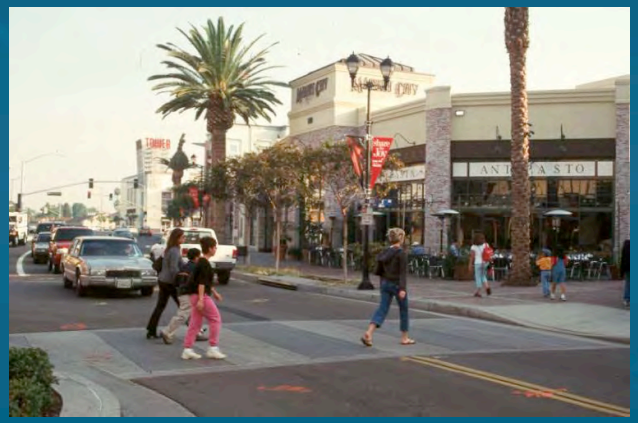
Pedestrian Treatments: Intersecting Streets

"Light" user priority



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Transit Treatments: Shelter Design & Location

- Eliminate bus pull-outs
- Adjacent to marked intersections

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Bicycle Treatments: Uninterrupted system

- 5-6' marked bicycle lanes along corridor and next to parking in secondary street
- Parking at all destinations

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Concept Conclusions

- Each corridor area type uses different treatments for comfortable, convenient and safe travel for each mode.
- Corridors are the work horses of the transportation system providing
  - Regional network mobility
  - Business and neighborhood access
- Efficiency of transportation facilities relies on complimentary land uses laid out to balance and support user access and circulation
- Win-win change requires
  - Detailed network planning
  - Incentives provided within the development code

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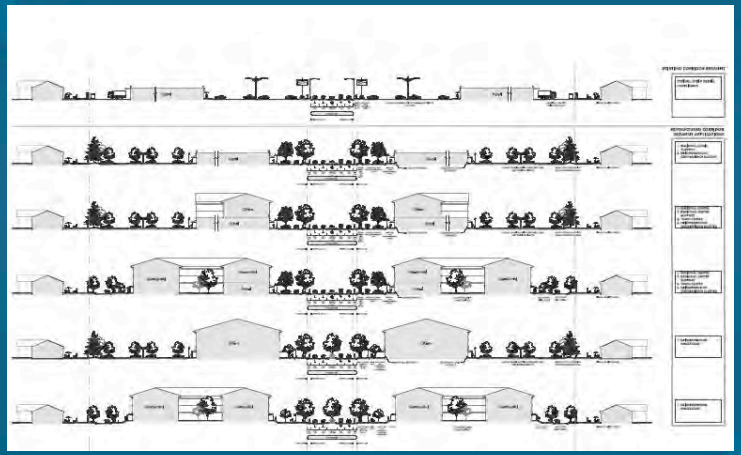
Corridor Cross Sections



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Section 8

Policy Recommendations

33 Forest Street, Suite 308
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Eaton Planning

MEMORANDUM

DATE: March 7, 2005

TO: Becky Steckler, Terry Moore EcoNorthwest

FROM: Chris Eaton, AICP

CC: Darci Rudzinski

RE: Metro 2040 Corridors Case Study DRAFT Policy and Implementation Implications

Background and Purpose

This DRAFT memorandum pulls out policy implications of the conclusions and discussions from the work to date in the Metro 2040 Corridors study which includes Phase I (*Phase I Report*) and Phase II (*Metro Corridors Case Study Report,* hereinafter referred to as the "case study"). Following review and comment by the Technical Advisory Committee and revisions by the project team, the concepts in this memorandum will become Chapter 5 in the *Metro Corridors Case Study Report*. Ultimately, the recommended policy and/or regulation changes may be part of the *Metro 2040 Corridors Summary Report,* which will be presented to state, regional and local staff, policy advisors and decision makers.

The *Phase I Report* studied Corridors around the Portland metropolitan region and made general observations including differentiating Corridor types and segments. The Phase II, *Metro Corridors Case Study Report* -- which at this time is a work in progress -- documents existing development and market conditions for the Beaverton –Hillsdale and Canyon Road Corridors, explores opportunities and constraints, and suggests a land use and transportation plan to improve transportation function and land uses along this particular corridor.

The purpose of this DRAFT memo is preview potential policy implications arising from Phase I and Phase II. Many of the observations are based on work done in the Beaverton-Hillsdale Highway and Canyon Corridor Case Study, but can be, and are extrapolated to local governments generally and to Metro and ODOT/State perspectives as well. The project team seeks Technical Advisory Committee (TAC) responses at the March 8, 2005 meeting. We seek TAC reactions to these possible policy changes – including whether or not certain implementation suggestions or possibilities are not captured here.

The memorandum is organized into three sections that address policies, implementation measures, rules, or regulations at the following levels of government:

- State (S)
- Regional (R)
- Local (L)

Each section includes a list of issues (enumerated separately) with a brief summary, and a list of possible policy changes following each "issue". Inevitably, there is some overlap and cross reference between these groupings, which are noted in each case.

Implications for State Agency Rules and Policies

S.1 The *Case Study* documented conflicts with Oregon Department of Transportation priority for operations and maintenance that may hamper implementation of locally preferred street design and improvement suggestions. While Special Transportation Areas (STAs) and Urban Business Areas (UBAs) have been created in the Oregon Highway Plan to recognize special standards in certain circumstances, the Case Study notes that a UBA designation is more appropriate for Metro Corridor designations, it does not recommend generally that UBAs be considered as a tool for the Beaverton-Hillsdale and Canyon Road Corridors.

Possible policy changes/implementation measures:

- Review the reasons UBAs are not appropriate tool for Corridors and if needed consider additional description to address Corridor suggestions resulting from this study.
- ODOT could re-examine it's policies regarding street tree spacing (ASHTO interpretation) along the sections of Corridors that are "Grand Boulevards" to allow for more density of Street Trees and other street design changes desired in Corridor plans.

S.2. The Case Study phase illustrated that Transfer from ODOT to Local ownership and maintenance can be a crucial factor for Corridors. However, it may be easier for ODOT to implement controversial improvement projects (such as medians) before transferring ownership to local governments.

Possible policy changes/implementation measures:

- ODOT and local governments should review local Corridor plans in addition to TSPs to determine the best timing for implementing new road designs or improvement projects.

Implications for Regional Agency Rules and Policies

R.1 The Corridor Overview/Phase I concluded that Corridors are not unique throughout the region, and that there are different Corridor types.

Possible policy changes/implementation measures:

- Add sub-categories or descriptions for different types of corridors in Metro's Design Types description. Detail similar and contrasting goals and objectives of each. Corridor Types identified in Phase I of the project include:
  1. Higher Intensity Residential/Commercial (mixture of uses at a high intensity with shared parking)
  2. Retail/Commercial and Lower Density Residential (Power centers auto oriented
  3. Primarily Residential (not mixed use)
  4. Specialty segments (dominance by single land use such as Car Dealers or employment)
- Consider whether some Corridors Types continue to have residential targets (e.g. employment corridor) in Metro's capacity calculations.
- Width of Corridors in Metro is _ mile each side of street. Consider different approach to this designation as it is not applicable at the local level.
- Reinforce the importance of Corridor planning and implementation at the local level with funding priority for Corridor Plans and improvements.
- Consider requiring 2040 Corridor Planning to be done as part of local TSP/TSP refinements for governments within Metro boundaries.

R.2. The Case Study concluded that retail zoning and strip development should be limited and concentrated in nodes as well as in existing centers (regional and town centers) over time but that changes in land use regulations is not the best way to achieve this end.

Possible policy changes/implementation measures:

- Current Metro Design Types do not address retail at a smaller scale than "Main Street" but Corridors are composed of a mix of different size and scale retail development. Consider revised descriptions of Corridors to recognize that any one of these retail node types may be desired/exist along a Corridor:

o

- Regional Center support. Auto-oriented commercial sales e.g. big box, drive-in uses, sales of large-scale goods.
- Neighborhood cluster retail. Small-scale businesses anchored by super markets oriented to nearby neighborhoods, preferably integrated into mixed-use building; limited to one per neighborhood. Restricted parking.
- Station stops. Shop fronts with convenience retail enfronting transit station that is not part of a town or regional center or along block frontage closest to a transit station; off-street parking restricted.
- Corner store shops. Individual stores or very small cluster of stores incorporated into the corner of a residential or workplace building. No off-street parking permitted.

- An important part of preserving commercial corridors is to cluster retail development into nodes and the Functional Plan could suggest that local planning efforts identify the appropriate location and type of retail nodes. The Functional Plan can encourage local governments to use a variety of tools to achieve retail clusters:
  - New Development Code District/Overlays (see "Local" section for details)
  - New performance based Development Code language
  - Street Improvements
  - Note: The difficulty with post-Measure 37 changes to development codes is the need to prove increased value, and removing or limiting retail on an individual property may not pass this test. Local Governments may develop new districts that are optional for property owners and encourage business districts to adopt them.

R-3. The Case Study concluded that transportation improvements (Grand Boulevard streetscape is one example) may be the most effective way to initiate land use changes along corridors.

Possible policy changes/implementation measures:

- Recognize need for corridor improvements in Metropolitan Transportation Improvement Program (MTIP) and other regional funding priorities and award credits for projects that propose corridor improvements in accordance with corridor plans and improvements that will encourage Regional Corridor goals.
- Prioritize Corridor improvements and streamline multi-jurisdictional road design standards and requirements. See contextual road design description below in L.1.

R-4. The Case Study concluded that Gateways should be recognized along Corridors.

Possible policy changes

No policy change needed to implement this, although Gateways can be included in the description of corridors and encouraged. Regional transportation funding could assist in new gateway projects.

Figure 1. Corridor Gateway

Implications for Local Government Policies and Development Codes

L.1 The Case Study suggests that street design should be "contextual" or matched to the desired adjacent development. This concept does not fit neatly within current TSP requirements and the way Road Hierarchy is mapped and roads are built.

Possible policy changes/implementation measures:

- Consider contextual road designs within local Transportation System Plans (TSPs). Encourage different road designs within the Corridor and remove policy obstacles and acknowledge the importance of road improvements/funding as the way to achieve desired conditions in Corridors. See R.3 related to funding.
- In order to improve coordination, review how and when Corridor Plans are required to be completed by local governments and how Corridor Planning is coordinated with TSPs.

L.2 The Case Study suggests that there should be two additional road classifications added to Local TSPs. These include 1) the Neighborhood Connector type which will improve transportation function along corridors by adding designated connections off of the Corridor and establishing better grip patterns and auto choice; and 2) the "Grand Boulevard" which is portions of Corridors that should have special access spacing, road design and function from other portions of the Corridor. Both of these functional classification types are missing from existing local Transportation Planning.

Possible policy changes/implementation measures:

- Recognize "Neighborhood Connectors" and "Grand Boulevards" in local TSPs. For newly developing corridors require this street type with certain street spacing.
- Recognize "Neighborhood Connectors" and "Grand Boulevard" as a road hierarchy type analyzed and mapped in Transportation System Plans.

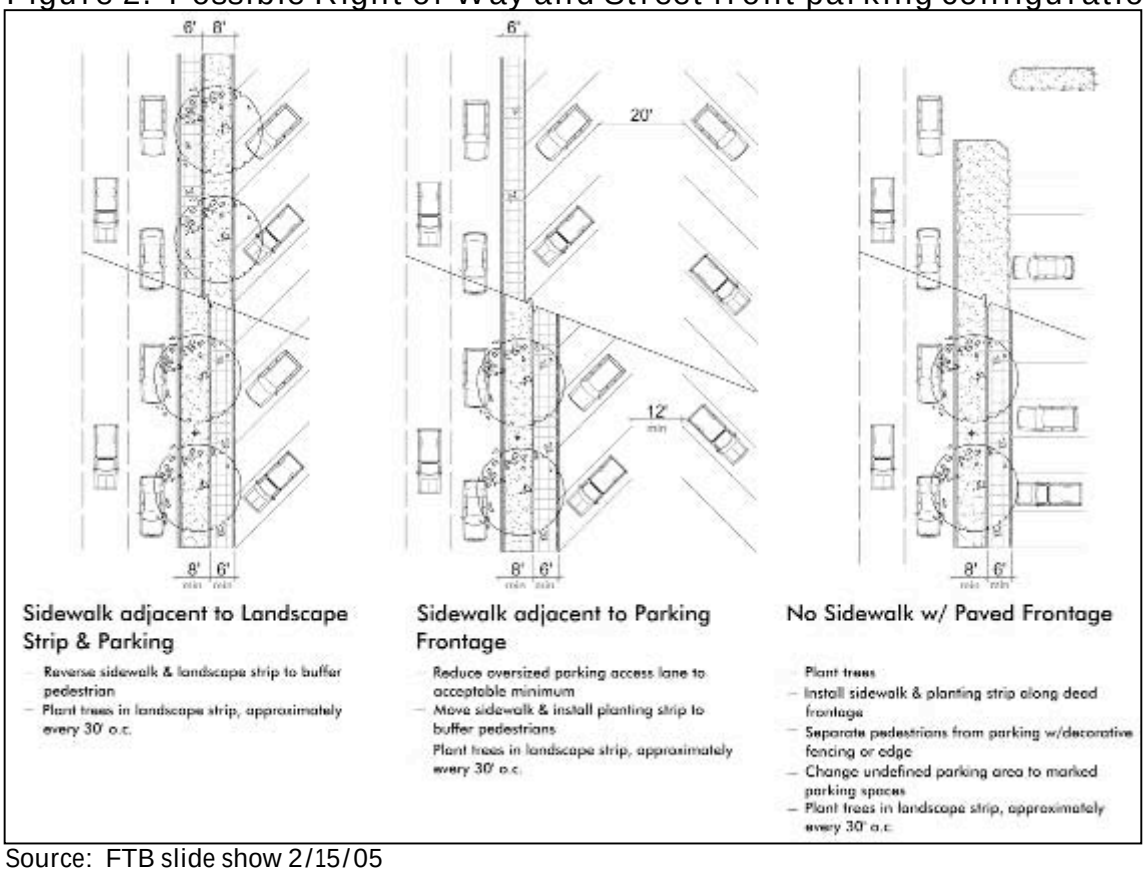
L.3 The Case Study suggest that certain Corridors (such as Beaverton-Hillsdale) should be a "Grand Boulevard" that acts like a green seam between neighborhoods with residential, office lodging in long green segments, and retail at intense nodes.

Possible policy changes/implementation measures

- Include Grand Boulevards in Transportation Planning (TSPs) where appropriate. Set appropriate "public frontage", sidewalk location and street tree planting (where appropriate) standards for new development.
- Institute Corridor volunteer tree planting and publicly/privately funded maintenance programs.
- Promote/require redevelopment of street-side parking lots and frontages to achieve better pedestrian protections. See Figure 2.

(L.3 continued)

Figure 2. Possible Right of Way and Street front parking configurations.



Source: FTB slide show 2/15/05

L.4 Limit the amount of retail along corridors by instituting new zoning districts.

Possible policy changes/implementation measures:

- Examine commercial zoning types along corridors, see if the following designations could apply, create a vision for each corridor and match local districts as appropriate to the following zoning categories. Create new districts (as needed) in Development Code with use restrictions, design standards that buffer adjacent single family residential areas.
- In terms of applying the districts, work with local private organizations such as chamber of commerce or local business groups to get property owners to voluntarily apply the new districts and make the changes "friendly legislative changes" or streamlined individual zone changes consistent with a locally adopted Corridor plan.

(L.4. Continued)

- New District Categories:
  - Regional Center Support – this is the big box zone
  - Workplace District (Campus Industrial)
  - Grand Boulevard (new district that is mixed uses but not retail or very limited retail, primarily office, lodging, multi-family, big duplexes and large setbacks to the corridor)
  - Neighborhood cluster (Neighborhood Commercial)

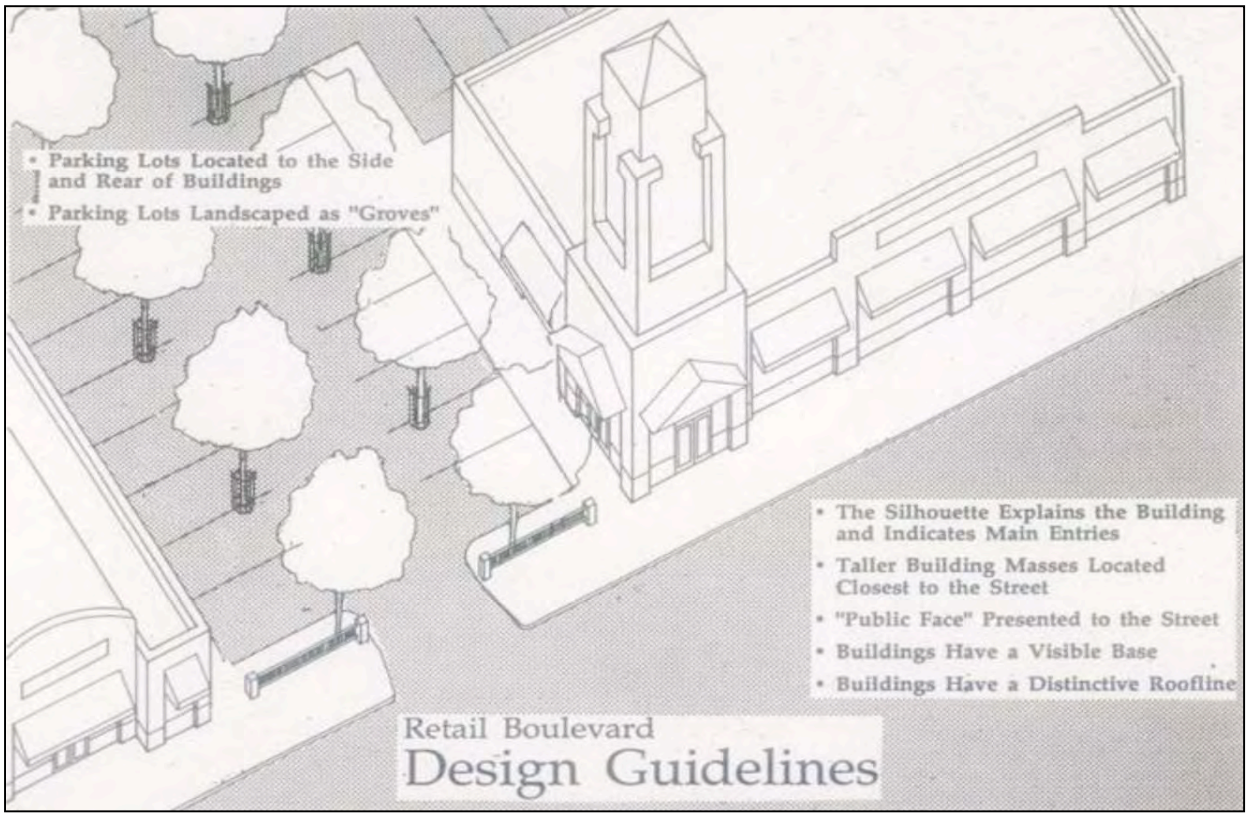
L.5 Consider new Design Guidelines and Development Standards for retail districts along corridors (see Figure 3).

Possible policy changes/implementation measures:

- Minimum building heights for retail buildings
- Maximum building setbacks (or "build to" lines) to a certain percentage of "frontage coverage" along street lot lines
- Public street frontage requirements
- Limitations on parking location and design (to the side and rear and with "orchard" landscaping of one tree per five spaces and exterior screening)
- Building entrances oriented to streets as well as parking lots
- Limits on building massing (required "breaks" and/or material/color changes)
- Design of open air storage and display

(L.5. Continued)

Figure 3. Example of Retail design features



Source: FTB slideshow 2/15/05

L.6. Vertical Housing Tax Credits provide financial incentives to developers of mixed use buildings within a Vertical Housing Tax Credit district. Local governments must adopt these special tax districts, and only buildings built or renovated within those areas are eligible. Local Governments can spur redevelopment and mixed use buildings by using this relatively new state law (ORS 285C.450 to 285C.480). NOTE: the 2005 legislature is considering changes to the existing law that may change the details described herein.

- Consider forming a Vertical Housing District(s) to encourage higher intensity developments.

Section 9

Focus Group And Interview Notes

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November 17, 2004

TO: **Metro Corridors Project Case Study Advisory Committee**
FROM: **Terry Moore and Becky Steckler**
SUBJECT: **CASE STUDY FOCUS GROUPS**

This memorandum is a summary of the first (of three) Metro Corridors project focus group meetings. There are three sections:

- Background
- Summary
- Detailed meeting notes

BACKGROUND

The Metro Corridors Project is a study of Corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the Corridor design type to achieve the 2040 Growth Concept. Phase I of the project investigated land use and transportation issues in Corridors, and resulted in the selection of a Corridor case study. Phase II of the Project is a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. By conducting a case study, Metro hopes to identify opportunities and constraints to achieving the Metro 2040 Corridors design type. Phase II will also identify how the case study Corridors and the Beaverton Regional Center complement and compete with each other. Finally, the case study will result in selection of a preferred alternative that includes recommended actions to improve the performance of Corridors with respect to the objectives of the Growth Concept. The key findings from both the Phase I and the Phase II Reports will be summarized in a final report to Metro, the *Metro Corridors Summary Report*.

As part of this project, ECONorthwest conducted a focus group comprised of six Corridor residents, business owners, and property owners to gather information about opportunities and threats in the Corridor. ECONorthwest conducted the first of three focus group meetings on Wednesday, November 10 from 5:30 p.m. until 7 p.m. Terry Moore, ECONorthwest facilitated the meeting.

Observers included:

- Hal Bergsma, City of Beaverton

- Tim O'Brien, Metro
- Becky Steckler, ECONorthwest

SUMMARY

Focus group participants generally agreed that the following issues were of most concern to them:

- **Traffic.** Traffic was rated as the most important issue in the Corridors. Focus group participants discussed the following issues: (a) safety (for both pedestrian and motorists), (b) congestion, (c) speeding traffic (especially as drivers come into the Canyon Road Corridor at 87th), (d) inappropriate auto shortcuts through parking lots and neighborhoods, and (e) lack of bike lanes along some sections of the Corridors.
- **Aesthetics.** Participants agreed that most of the development design and architecture along the Corridors is unattractive. They suggested that redevelopment activities should attempt to improve aesthetics along the Corridors.
- **Nodes of development**. Participants suggested that instead of looking to redevelop the entire Corridor, the City (and Metro) should consider concentrating changes in "nodes." Participants representing the neighborhood association on the Canyon Corridor suggested a node at 87th and Canyon. Several participants resisted the idea that density should increase along the entire Corridor. They fear that increased density will worsen transportation issues, and that the market will not respond to increased density.

MEETING NOTES

The following notes include a summary or a direct quote (indicated by quotation marks) of each of the comments made by the focus group participants. The comments are organized by topic and are not in the order they were made during the focus group meeting.

TRANSPORTATION ISSUES

- Something has to be done regarding the Beaverton-Hillsdale Highway and Scholls Ferry Rd. intersection (Olson and Dogwood are also problematic). There are many accidents and high congestion at this intersection. Several focus group participants indicated the traffic problems in this area are one of the most important issues to residents.
- Participants indicated that recent street improvements in the Beaverton-Hillsdale Highway Corridor improved safety and the flow of traffic. They mentioned that the medians have helped improve traffic conditions. They also expressed their dissatisfaction with how long it took to complete construction. Overall, they think traffic flow is better now than before construction.
- Beaverton-Hillsdale Highway has different problems in different areas. From Laurelwood to Western, traffic flows. But from Western to 110, there are no lights, so drivers take shortcuts and use parking lots inappropriately. Access between businesses should be

improved in this area. Pedestrian safety is jeopardized when drivers cut through parking lots.

- The Canyon Road and 87th intersection (at the beginning of the commercial area) is unsafe for pedestrians due in part to speeding motorists.

- Canyon Road is not bicycle friendly.

- Public transit does not make a direct connection between the Corridors. Residents along Canyon Road have to go to the Beaverton Transit Center and back out along Beaverton-Hillsdale. Due to the lack of grocery stores along Canyon Road, it discourages residents from taking transit for grocery shopping.

- Transportation issues are the most important issues to all property and business owners in the Corridors. Their perception is that increased density aggravates transportation problems. One participant said that traffic is bumper to bumper along Canyon Road from Walker Rd. to 217. Drivers use Walker Road through the neighborhood as a shortcut, though it is not designed to handle the traffic volume. Drivers are using side roads (like Walker), because of congestion on Canyon Road.

- One participant thought it would be beneficial to increase the amount of parking in the Corridors; and then he qualified his statement to say that most people will drive if their destination is more than 1/2-mile away. He felt that areas designed to be pedestrian friendly are not always used. Commercial areas need to provide adequate parking. He followed up in an email to say that the "current parking standards in the City of Beaverton are woefully inadequate since the reality is people use their cards even for short trips less than 1/2 mile." He gave the example of a convenience store and Teufel Nursery (where there are only about 2 parking spaces per unit (per the participant)). Finally, he said that "bicycle and pedestrian-friendly designs look good on paper, but in reality are seldom used."

- Another person said that you can limit parking in nodes, but that it doesn't make sense on Highways.

- One participant thought that parking for transit users or commuters should be promoted. They thought that parking is inadequate for these users.

- One person thought that structured parking would not occur in Beaverton in the short or long term ("in my lifetime"). He also thought that aggregation of parcels is a difficult thing to do. With the current traffic situation, increased density is undesirable.

- A participant said, "We use our cars more than planners would like us to. We have to focus on autos and parking because that is what people use. If you increase density, you have to transform transportation along Highway 8 and Highway 10, and improve aesthetics through design review standards that increase property values in the area."

- Several neighborhood representatives said that they feared that if a node (pedestrian friendly, neighborhood serving commercial area) was not built, then the car dealerships would overtake the entire Canyon Road Corridor.

INCREASING DENSITY ALONG THE CORRIDORS

- Neighborhood residents "would be less than enthused" to see brownstone-type, high-density housing in the Corridor (like Boston, New York, and San Francisco). "How would that apply between 217 and 87th (along the Canyon Corridor)? Where does the money come from to buy out some of the existing properties (such as the new car dealerships)."

- One participant commented, "The planners in general, have some lofty goals and ideas that in the real world may not make sense. The Round, for example." He thought that the market was not ready for high-density residential uses built for pedestrian and bicycles. "It will take a long time before that could happen; implementation of that kind of change is premature." Another participant stated that single-family residential uses have to be protected through 2040. They did say that the market might be ready for high density "someday."

- Several participants thought there are opportunities for nodes of higher-density development along Canyon Road (and maybe Beaverton-Hillsdale). They suggested a node at 87th and one at Walker. They think car dealerships can coexist with the nodes.

- Some of the residential uses could come out along the Corridor. There aren't good connections (visual or access) between the Corridor and the residential areas.

- One of the business owners said that 45% of his business comes from within a 5-mile radius. The highway has to transport these customers to his business. He would like his employees to live closer to work.

- When Terry asked what the neighborhood response would be to a higher density, mixed-use node, one person said that neighbors would oppose it. Another participant qualified his statement to suggest that adding amenities for neighbors could mitigate some of the objections.

- The West Slope Neighborhood representatives said their group conducted an informal poll of neighbors to see if they would like a higher density node on Canyon Road. They thought a node would work if it were like a "little village square." He did not suggest that the entire Corridor be come a mixed-use area, but instead suggested "pulses" of activity. He thought it would be a good place for civic uses (bring the library; the fire station and post office are already there).

- One person suggested that residential be an allowed use on the Corridors.

- One participant thought that Beaverton would become denser over time. He said one property recently sold/leased for $30/sq. ft. and he suggested that structured parking is possible at that price. He also suggested that Beaverton is moving from "a quaint village" towards "the Bellevue of Seattle." He said be believed that Beaverton will become the second most important city outside of Portland someday.

- One person didn't want Beaverton to be like Bellevue. "Growth is inevitable, but it has to be managed. The market will dictate what will happen."

- Another participant said "the nature of the community is stronger in Beaverton than in Tigard or Tualatin."

- The Corridors are critical to successfully absorbing future increases in population. The participant thought increased development is inevitable inside the urban growth boundary.

- It will take small steps to realize greater intensity of use along the Corridors.

- The participants do not envision the auto dealerships leaving the Corridors. Residents are not opposed to change or letting existing business expand. The neighborhood group participants said they talked to the owners of auto dealership about conflicts. Residents are concerned about safety and vehicle flows. The dealership owners responded by controlling employee driving patterns, parking issues, and other issues. The offloading of cars has been a problem, but it has improved (Lexus was required to build offloading sites on their new lot).

- One person said he was opposed to higher density on Canyon Road between 217 and 87th. He also thinks the density is high enough along the Beaverton-Hillsdale Highway.

AESTHETIC ISSUES

- A participant commented, "This is an ugly area (87th and Canyon). How do we transform the 1960s-1970s buildings? We should have design review standards. Why can't we apply improved design standards along the Corridor? Let's change the architectural style."

- Another participant said the area needs a "face lift."

- Signage is important to the participants. "Right now it adds to the ugliness. Beaverton has a sign standard, but it is not pretty."

- Someone suggested that business is improved when aesthetics are improved. He suggested that Irvington Place and Orenco Station might be good aesthetic models.

- Cost is an obstacle to improved design standards. Some property owners will resist upgrading the design of buildings due to the cost.

JURISDICTIONAL ISSUES

- Participants discussed the difficulties of working with multiple jurisdictions in the Corridors (especially Canyon Road). One person suggested that the City of Beaverton manage land use and transportation along Canyon Road.

- The participants recognized that neighborhood residents don't like change and they don't get involved unless there is a major problem.

- TriMet needs to be involved to discuss transit issues.

- It is difficult to address issues in unincorporated areas.

MISCELLANEOUS ISSUES

- One person said his wife would like to remove the adult business in the Corridor.
- Participants mentioned the difficulties the City had with the Southwest Plan. Residents were afraid of increasing densities.

Developer Interview Summary

This appendix, the *Developer Interview Summary*, is a summary of developer interview for the Metro Corridors Case Study Project. It has two sections:

- **Introduction** lists who was interviewed and when they were interviewed.
- **Summary of interviews** describes the key findings, including general comments about the residential and commercial market in the Corridors, opportunities and constraints, general transportation comments, and recommendations for promoting redevelopment in Corridors.

INTRODUCTION

This appendix summarizes the results of a series of interviews[1] with developers and Metro staff conducted between November 17 and December 10, 2004. The interviews were designed to ask developers what they thought were the opportunities and constraints to redevelopment in the study area corridors. Interviewees described the current residential and commercial markets, discussed the potential for residential and commercial redevelopment along the corridors, and offered suggestions for improving the potential for redevelopment to achieve the 2040 Corridor design type.

The interviews solicited a range of opinions regarding the regulations that guide development in Corridors and the potential for redevelopment in these areas; the summary below may therefore include some conflicting points of view.

The developers interviewed are (date of the interview is in parentheses):

Mike Rossman, Peak Development (November 17, 2004)

Mark Perniconi, C.E. John Company, Inc. (November 18, 2004)

Skip Stanton, HSM Realty (November 19, 2004)

David Bell, GSL Properties (November 22, 2004)

Jim Winkler, Winkler Development Co. (December 3, 2004)

Jerry Foy, Westwood Development Corporation (December 8, 2004)

Marc Guichard, Senior Regional Planner (December 9, 2004)

Phil Whitmore, TOD Program Manager, Metro (December 9, 2004)

Barry Cain, Gramor Development (December 10, 2004)

Tom Kemper, Kemper Co. (December 10, 2004)

[1] The interviews replaced the proposed focus group meeting for developers described in Task 2.1.

SUMMARY OF INTERVIEWS

RESIDENTIAL AND COMMERCIAL MARKET

- **New redevelopment projects face competition from existing retail and residential developments.** Some developers felt that Cedar Mills, Tanasbourne, and Washington Square retail outlets may have saturated the market. While demand may remain for some "big-box" stores, it is unclear that there is demand for smaller-scale retail developments in the Corridors.

- **Mixed-use development is not typical in Corridors and can be difficult to "sell" to retailers.** Businesses seeking to locate along Corridors have traditional approaches to retail: they seek easy access to nearby parking, large traffic volumes nearby, signalized intersections, and high visibility from the street. It will be difficult to attract pioneering businesses interested in a different development style.

- **No demand for office developments.** While there may be demand for retail or residential development, there is little to no demand for office uses in this area.

- **Residential units are risky in the current market; retail may be the best use.** While it might be possible to promote units designed for homeownership, there is not much precedence for high density ownership units in Corridor areas. Rental units would be less risky, but retail is the safest development option.

OPPORTUNITIES FOR REDEVELOPMENT

- **Corridors are superior locations for development.** They have the advantage of proximity to existing hubs of activity, including jobs and retail. Close-in developments near transit lines will be desirable. Because land is becoming increasingly scarce and prices continue to rise, Centers and Corridors will increasingly be targeted for redevelopment.

- **The demand for mixed-use is increasing.** Demand for mixed-use housing may be increasing as buyers become more familiar with successful condominium projects in the Pearl and other locations throughout the metropolitan area. Mixed-use developments have achieved successes in areas that are auto-oriented (such as urban areas in Arizona).

- **There may be an opportunity for development of senior housing in Corridors.** Many seniors prefer to stay in their own neighborhoods, but need to move to a more compact and accessible location.

- **Successful condominium development is a sign that the area can be redeveloped.** Residential uses increase demand for neighborhood serving uses. If condominiums can sell, then mixed-use developments are possible.

- **Corridors may be suitable for affordable housing developments.** Access to transit and likely focus on multi-family development make Corridors a good location for development of affordable housing.

- **Increased residential density could lead to increased demand for retail; this presents an opportunity for mixed-use developments in Corridors.** Beaverton's residential population is growing slowly; though commercial growth has been steady, there is not enough demand for redevelopment in Corridors to be a top priority. Residential developments that increase densities in Corridors would also increase demand for retail outlets. This fact highlights the potential for mixed-use developments.

- **Corridors are excellent areas for retail development.** The Beaverton-Hillsdale Highway, in particular, has a high car count and excellent visibility for retail developments.

CONSTRAINTS TO REDEVELOPMENT

- **Few developers know how to build mixed-use projects in Corridors.** Most of the mixed-use developers specialize in close-in Portland locations. Few have experience in Corridors and may be hesitant to move into these areas.

- **It can be difficult to find sites that are appropriate for redevelopment.** Lots must be of the right size and zoned to allow the development that the market demands to occur. The assemblage of parcels can be especially complicated given existing uses, ownership patterns, and availability.

- **The Beaverton-Hillsdale Highway lacks a welcoming pedestrian environment, making residential uses difficult to sell.** Additionally, any new developments would be competing with existing developments in the suburbs.

- **Lack of undervalued pedestrian-scaled buildings.** Interviewees observed that Corridors closer to downtown Portland (within 82nd Avenue) are being successfully redeveloped if there are older, undervalued buildings that are pedestrian scaled (built up to the sidewalk). These buildings often have affordable lease rates that attract restaurants and retail businesses, which attract customers, "liven the street," and help to foster a sense of "place."

- **Corridor streets are unwelcoming to residences, complicating promotion of a residential product.** An entire mixed-use package, complete with anchors and other retail uses, needs to be implemented for a residential project to achieve success. Given land constraints, this can be very difficult.

- **Development costs are higher along the corridor.** The area's potential will have to justify the 40-50% higher development costs.

- **Corridors lack visual continuity.** Corridors typically lack unifying features such as matched street lights, street trees, or transit stops. Design standards along the Corridors impact local parcels as they redevelop.

- **The cost of development and rent prices are imbalanced.** One major constraint to residential development is more closely related to economics than to the condition of the Corridors. Current low interest rates have meant a glut of homebuyers and fewer renters. While interest rates will almost certainly be rising, currently there is little economic incentive to build rental properties.

- **The permitting process can be prohibitively time-consuming and expensive.** The permitting phase of a development can take two years; more complex developments might require as much as six years. This presents a deterrent, especially given the complexities of some redevelopment projects.

TRAFFIC AND ALTERNATIVE TRANSPORATION IN CORRIDORS

- **Oregon Department of Transportation (ODOT) regulations and land use regulations sometimes have conflicting objectives.** For example, curb cut requirements and parking limitations can make redevelopment difficult. These requirements limit developers' flexibility, and mean that development is more expensive and time consuming to complete.

- **Heavy traffic can impede mixed-use development.** Large volumes of traffic complicate efforts to increase density and create pedestrian- and transit-friendly developments along Corridors. Heavy traffic makes it difficult to establish a "sense of place" along the Corridors; it is hard to sell mixed-use housing, even conceptually, if there is not a "sense of place" on the street level.

- **Auto-oriented uses and lack of connectivity between businesses discourages pedestrian activity.** The interviewees viewed the current dependence on the automobile to move around the Corridor as a barrier to developing the 2040 Corridor design type. Other interviewees commented that, while a focus on transit it appreciated in corridors, 95% of shoppers will continue to drive to their destinations. Transit has limited use in the radius of cities.

- **Visibility and access are crucial to retail developers**. Large retailers will primarily be interested in locating near Highway 217.

SUGGESTIONS FOR PROMOTING REDEVELOPMENT

- **Consider node activity on one side of the street.** Both Canyon and Beaverton-Hillsdale Highway are difficult to cross. A node of higher

density activity on one side of the road or facing a side street may help to alleviate this problem.

- **A node at the eastern gateway of Canyon Road is possible.** The eastern edge of the Canyon Road Corridor includes older building stock that has potential for redevelopment as a neighborhood that includes retail and services.

- **The Metro TOD may be able to participate in projects in the Corridors.** The Metro TOD program expanded in July to include Corridors with frequent bus services. At the same time, Metro Council has expressed some concern that the TOD program may be spreading itself too thin by expanding into Corridors.

- **Create incentives to encourage new residential developments.** Residential projects in Corridors must compete with commercial projects for available land. Commercial projects are often considered a better risk than residential uses in Corridors. Incentives may be necessary for developers to consider residential development in Corridors (tax abatements or tax freezes, for example). Incentives allow developers to be creative and meet residential demand. Some condemnations or gap financing of existing commercial buildings might also be appropriate. Local governments might also consider simplifying the administrative process for development of residential units. For example, they could guarantee that they would act on development applications within a specified amount of time.

- **Connect distant parts of Beaverton.** Beaverton is somewhat disjointed; connecting the different parts of the city with a streetcar or bike and walking paths could improve the potential for redevelopment.

- **Provide incentives for compact development of auto dealerships.** Auto dealerships require a large amount of land, and many are located in the Canyon Road Corridor. Developable land could be freed if incentives were available for dealers to grow up instead of out.

- **Separate through traffic and the local traffic to reduce conflicts.** A boulevard design may work well in the Corridors.

- **Develop plazas and public spaces in strip malls.** Many strip malls in Arizona have created outdoor public spaces; this sort of development may help create a sense of place and encourage pedestrian activities.

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March 4, 2005

TO: **Metro Corridors Project Case Study Advisory Committee**
FROM: **Terry Moore and Becky Steckler**
SUBJECT: **CASE STUDY FOCUS GROUP**

This memorandum is a summary of a Metro Corridors project focus group meeting held on March 3, 2005 in the Beaverton City Library from 5:30 to 7:00 p.m. There are three sections:

- Background
- Summary
- Detailed meeting notes

BACKGROUND

The Metro Corridors Project is a study of Corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the Corridor design type to achieve the 2040 Growth Concept. Phase I of the project investigated land use and transportation issues in Corridors, and resulted in the selection of a Corridor case study. Phase II of the Project is a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. By conducting a case study, Metro hopes to identify opportunities and constraints to achieving the Metro 2040 Corridors objectives (described in Chapter 2). Phase II will also identify how the case study Corridors and the Beaverton Regional Center complement and compete with each other. Finally, the case study will result in selection of a preferred alternative that includes recommended actions to improve the performance of Corridors with respect to the objectives of the Growth Concept. The key findings from both the Phase I and the Phase II Reports will be summarized in a final report to Metro, the *Metro Corridors Summary Report*.

As part of this project, ECONorthwest conducted two focus groups with Corridor residents, business owners, and property owners to gather information about opportunities and threats in the Corridor. These notes summarize the conversation in the second focus group.

Becky Steckler, ECONorthwest facilitated the meeting. She began by describing the Case Study Alternatives. Participants were asked to react to this plan during the focus group conversation that followed.

Participants included:

- Matthew Spicer
- Ralph Shoemaker
- Ray Bowman

Observers included:

- Hal Bergsma, City of Beaverton
- Tim O'Brien, Metro
- Lorelei Juntunen, ECONorthwest

SUMMARY

Focus group participants generally agreed that the following issues were of most concern to them:

- Traffic safety, especially at some of the high intensity locations that have been identified as nodes
- Bus service and public transportation access
- Changes resulting from increased residential density, including higher traffic volumes and changing neighborhood character
- Lack of connection between the Canyon Road Corridor and the Beaverton-Hillsdale Highway Corridor. Because the area is not developed on a grid system, it can be very difficult to move from one area to another.

Participants made the following suggestions for next steps in the Corridor planning process:

- Address jurisdictional issues as a first step. This may involve annexations of land currently managed by Washington County.
- Develop a Corridor plan through a process that includes extensive public involvement and addresses specific design and transportation infrastructure issues. The Case Study Alternatives can serve as a framework for a more detailed plan.
- Provide incentives and design guidelines to encourage development or redevelopment that fits with Corridor goals.
- Provide support for the areas designated as centers.

DETAILED MEETING NOTES

The following notes include a summary or a direct quote (indicated by quotation marks) of each of the comments made by the focus group participants. The comments are organized by topic and are not in the order they were made during the focus group meeting.

WHAT DO YOU LIKE OR DISLIKE ABOUT THE LAND USE AND TRANSPORTATION CONCEPT?

- People choose to live in Beaverton because of the existing stock of lower density housing, and are not interested in high-density, multi-family developments.

- For any plan, it is important to involve the public, because the public has a better sense of what happens in the community.

- Increased density results in increased traffic, which will be a problem over time. An example of this is the U.S. Bank development. The public was opposed to this development because of the traffic problems that it might create. The bank was built anyway, and has had problems with access and safety issues.

- The area around the corridors is a desirable location to live. There are many middle-class neighborhoods in the area and the location is central. However, increased density will make the area less desirable. This is compounded if the density comes in the form of rental units, which can lead to transitory residents.

- ODOT has not been receptive to public calls for changes along cross roads to Beaverton-Hillsdale (especially the Scholls Ferry /Oleson Intersection). ODOT has, however, identified this intersection in their TSP for improvements.

- Participants wondered how additional residential development in the area might impact water, sewer, and electrical capacity.

- Canyon Road and Beaverton-Hillsdale Highway may not warrant significant public investment, especially given the many roads that have experienced disinvestment in the area. In general, development guidelines are an appropriate method for encouraging well-designed developments that fit the neighborhood character. Goose Hollow is an example. However, it may not be appropriate to invest time and money in trying to reverse existing development patterns; governments cannot afford to put public money into these types of projects. In general, it is better for " the developer pony up the costs for the design upgrades."

- TriMet connections are not ideal in the area; access can be difficult. TriMet has been unresponsive to public comments.

- 91st and 107th could serve as connector streets between the two Corridors.

- Some thought could be given to sustainable design in the Corridors. Concepts include linking nodes to one another with public transportation to reduce traffic, and focusing on developing the pedestrian environment.

- "Improving centers and making them more attractive is a laudable goal."

- Safety is a critical issue. Safety problems can result in a disincentive for additional development. This has happened at the northeast corner of Canyon Road. Some developments have been built that do not meet safety standards.

HOW SHOULD THE CONCEPT BE IMPLEMENTED?

- Some money for improvements may be available from ODOT for increasing traffic safety.
- The transportation planners and economic development experts should be communicating with one and planning jointly. Economic development should be a goal for plans in the Corridor.
- Vacancies in business parks should be addressed.
- Identify one or two nodes where "reasonable changes" can be made. Create a task force to study these areas and to connect with affected property owners in the planning process. One or two successful projects can create a inertia for future projects.

GENERAL COMMENTS

- Beaverton-Hillsdale has traditionally been smaller retail, which can be "fickle." Stores change hands often and are more likely to fail during periods of recession. This Corridor is not "disadvantaged;" it is reliant on small businesses that are more likely to experience disinvestment.

March Interview Notes

This appendix summarizes the results of a series of interviews with developers, Washington County, and Metro staff conducted between March 1st and March 3rd, 2005. The interviews were designed to gather opinions regarding a land use and transportation concept for the Canyon Road and Beaverton-Hillsdale Highway Corridors. Interviewees described what they like and don't like about the concept plan and how they thought it might be implemented.

The interviews solicited a range of opinions regarding the concept plan, regulations and other implementation tools that guide development in Corridors, and the potential for redevelopment in these areas (as described in Chapter 4); the summary below may therefore include some conflicting points of view.

The following developers and planners were interviewed:

David Bell, GSL Properties, March 2, 2005

Andy Back, Washington County, March 3, 2005

Jerry Foy, Westwood Development Corporation, March 1, 2005

Marc Guichard, Senior Regional Planner, March 3, 2005

Tom Kemper, Kemper Co., March 1, 2005

Mike Rossman, Peak Development, March 3, 2005

Skip Stanton, HSM Realty, March 3, 2005

WHAT INTERVIEWEES LIKE AND DISLIKE

- **The Canyon Road concept plan generally makes sense.** Auto dealers have to locate somewhere, and not all corridors can be lined with pedestrian-friendly, mixed-use development. On a regional scale, though, is Canyon Road the best location for an auto sales/services corridor? How many are needed in the region?

- **Canyon Road is well-located at on- and off-ramps and has high visibility and pass-by traffic.** It would be good for higher intensity retail development. Auto sales is not an intensive land use, and it is easy to change because there are fewer buildings. The auto sales/service corridor may not be the best use for Canyon Road.

- **Nodal development is a good idea.** If the auto-dealers agree that they should locate in the Canyon Road Corridor, it seems like a good, long-term plan for locating these uses.

- **The streetscapes in the plan are a strong concept and look good.** It is important to use landscaping to buffer the housing from the street, but this can be complicated because of the design of existing development and infrastructure in the Corridor areas.

- **The location of the big-box retail presents a barrier to pedestrians trying to move from the Corridors to the Center.** These developments are not very pedestrian friendly.

- **Pedestrian improvements can impact the capacity of the road.** Both of these Corridors are arterials, and should continue to function as such.

- **Medians have benefits for moving traffic and for pedestrian safety, however, they do not generally enjoy political support, and may be difficult for local jurisdictions to implement.** They would be easier to implement if someone outside of the public agency championed the idea, or if ODOT could build them.

- **On-street parking makes sense in some arterials, but may not make sense in these Corridors.**

- **In the Beaverton-Hillsdale Highway, some businesses are doing well and others are not.** There is some possibility that developing office or multi-family developments in the Corridor will detract from business and residential activities in the Center. It would be a mistake to reduce the auto flow or change the orientation of buildings. The market should dictate improvements in the area.

- **Mixed-use developments in other areas have had limited success, though many have not been in operation long enough to have a strong track record.** They may not be a good investment, and developers will be wary.

- **Implementation should focus on nodes first before turning to the corridor area between nodes.**

IMPLEMENTING THE PLANS

Interviewee comments regarding implementation generally fell into four categories. Interviewees discussed incentives that encourage particular types of development, design techniques that maximize utility and minimize development impacts, the importance of prioritizing implementation, and barriers to effective implementation.

INCENTIVES

- **Consider a vertical housing property tax exemption (ORS 285c.450, 20% exemption for mixed-use developments).** Seven or eight jurisdictions (including Milwaukie) have tried this.
- **Service development charges could be an implementation tool; they could be tailored to encourage certain development types.**
- **Provide funding for locating car dealers through LID.**

- **One possibility is to zone the entire area for mixed-use and let the market direct development.** Especially given Measure 37, requiring change can be complicated.

- **Streamlined or incentive development codes don't always work to encourage the type of development you would prefer to see.** Developers aren't waiting that long to get through the current process and the building code requirements (which can't be changed) will remain time consuming even with shortened schedules. Saving two to three months isn't a strong enough incentive.

- **The zoning code should be more flexible to allow for both commercial and mixed-use developments; the market can determine what type of development there is the demand to support.**

DESIGN

- **Parking lots need to be secure to prevent inappropriate nighttime activities.** Lighting is one possibility for achieving this, but it shouldn't shine on any nearby housing.

- **Implementing a re-design of the Beaverton-Hillsdale Highway could put existing businesses at risk.** Any design requirements that restrict traffic convenience (access restrictions, maximum parking allocations, building orientation requirements, etc.) can harm businesses and complicate re-development efforts.

- **Many big-box retailers have been willing to use new types of plans with multiple stories that can fit into centers and corridors better.** This could be a consideration for the concept plan.

PRIORITIZING IMPLEMENTATION

- **The town center and regional center need to be successful (attractive) places for the transition of the corridors to occur.** The high cost of new construction and the market cost of retail space will restrict the movement of some retailers into the center. Focus energy the centers to get development rolling, and it will spill over to the corridors.

- **The first step in implementing this should be to convince the decision-makers that it is a priority.** Political leadership is important. None of these ideas will be implemented without the involvement of the mayor and the city council (of the local jurisdiction).

- **Providing some public money, whether it is in streetscape or medians, will provide some incentive for development.** Since limited money is available, it should go to the centers first. The next

priority is the connection from the center to the corridor. Waiting for the market to determine could result in an inconsistent pattern of development that inhibits the overall plan.

CONSIDERATIONS AND BARRIERS

- **Property owners will take the path to the greatest return; in most cases, this means retail rather than residential development.** Residential developments are difficult, especially in corridors; the cost penalties for residential buildings are high. Ownership in a high-density building is difficult to sell in corridors; it is more appropriate in the centers. Performance based or streamlined zoning doesn't resolve the underlying cost issues of developing the residential product on the commercial land.

- **Many commercial property owners still believe that their property is worth much more than it actually is.** The Bridgeport Village project in Tualatin is now getting $50 per square foot for the retail spaces and people are lining up to pay it. This projects the belief that the retail market is the market to be in. This belief makes it even more unlikely that people will believe that residential uses are the highest and best uses for their properties.

- **Many retailers on the corridor are smaller retailers who cannot afford rent or property in the centers.** It is important to maintain some affordable retail space for them.

- **Parcels size and existing ownership patterns are obstacles to development in these Corridors.** This presents a problem for developers of retail or mixed-use residential uses.

- **Expect resistance from surrounding neighborhoods that don't like density.**

- **There are opportunities for good mixed-use developments; the area near Jesuit is an example.** Safe access through a signalized intersection would be an important first step.

- **Redevelopment of a corridor is not dependent on the prior development of the centers, but rather on the cost of the land along the corridors.** The cost of the land is too high for rental units, but condominiums or town homes may work, especially on the smaller parcels that can be found in corridor areas. The units would need to be affordable but also have good design to work with the neighbors.

- **The City could look at land acquisition programs to consolidate parcels.**

Section 10

Advisory Committee And Technical Advisory Committee Notes

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November 23, 2004

TO: **Project Team and Advisory Committee**
FROM: **Terry Moore and Becky Steckler**
SUBJECT: **NOVEMBER 22 ADVISORY COMMITTEE SUMMARY**

This memorandum is a summary of the first Metro Corridors Advisory Committee Meeting for the Case Study. It was held on Monday, November 22, 2004 from 1 p.m. until 4:30 p.m.

BACKGROUND

The Metro Corridors Project is a study of Corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the Corridor design type to achieve the 2040 Growth Concept.

Phase II of the Project is a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. By conducting a case study, Metro hopes to identify opportunities and constraints to achieving the Metro 2040 Corridors design type. Phase II will also identify how the case study Corridors and the Beaverton Regional Center complement and compete with each other. Finally, the case study will result in selection of a preferred alternative that includes recommended actions to improve the performance of Corridors with respect to the objectives of the Growth Concept.

Phase II builds upon work completed in Phase I of the Metro Corridors Project, which investigated land use and transportation issues in Corridors, and resulted in the selection of a Corridor case study. The key findings from both the Phase I and the Phase II Reports will be summarized in a final report to Metro, the *Metro Corridors Summary Report.*

ATTENDEES

Attendees include the advisory committee and the project team.

Advisory Committee

Hal Bergsma, City of Beaverton

Fr. Pat Conroy, Jesuit High School

Sam Hunaidi, ODOT

Bob LeFeber, Commercial Realty Advisors

Kelly Ross, Homebuilders Association of Metropolitan Portland

Andrea Vannelli, Washington County, (for Andy Back)

Mark Whitlow, Perkins Coie

Project Team

Tim O'Brien, Metro

Sherry Oeser, Metro

Lidwien Rahman, ODOT

Terry Moore, ECONorthwest

Becky Steckler, ECONorthwest

Chris Eaton, Angelo Eaton

Michael Freedman, Freedman Tung and Bottomly

Sarah Dennis, Freedman Tung and Bottomly

Julia Kuhn, Kittelson and Associates

SUMMARY OF ADVISORY COMMITTEE COMMENTS

The following is a summary of the comments from the advisory committee.

- Several participants indicated that they thought it would be difficult for the Corridors to develop a pedestrian-friendly development pattern due to: (1) high land values, (2) cost of improving the design of buildings, (3) maximum parking would not be adequate, (4) high congestion, (5) difficulty of locating residential on the Corridors, and (6) large number of small lots and the difficulties (especially the cost) of aggregating parcels.

- Participants were concerned about the existing traffic congestion. They want to know how the alternatives will affect congestion.

- Participants believe that the Corridor needs aesthetic improvements, however, they cautioned against the application of too many design standards because of the added cost to individuals.

- The Advisory Committee would like to see additional market information. They thought the largest parcels (closer to Centers) were selling or leasing at some of the highest prices in the region, however, they also implied that some of the smaller parcels sell or lease at lower costs (providing opportunities for ethnic and "mom and pop" types of businesses).

MEETING NOTES

WELCOME AND PROJECT BACKGROUND

Terry welcomed participants, conducted introductions, and summarized the Phase I Report.

He defined the role of the advisory committee as:

- Providing guidance to the project team
- Verifying our data with their "local" knowledge (is the data correct?)
- Providing input on alternatives

He emphasized that the group is not a steering committee that tells the project team what to do.

LAND USE EXISTING CONDITIONS AND EVALUATION

Michael Freedman and Sarah Dennis from Freedman Tung and Bottomly (FTB) presented an evaluation of existing land uses. Sarah discussed the general problems along Corridors from the Phase I study. Problems include: (a) street design, (b) aesthetics, (c) development patterns, (d) commercial assets, (e) market conditions, too much retail, and (f) movement (congestion).

She noted that retail power concentrates at major freeway interchanges. FTB reviewed the gateways of the Corridors, and said that the more natural gateway at the eastern edge of the Beaverton-Hillsdale Highway is at the Scholls Ferry Road intersection.

Sarah added that the policy framework doesn't create a vision for the Corridor. They noted that the commercial and neighborhood serving zones allow many of the same types of development. Office zoning is slightly more successful.

TRANSPORTATION EXISTING CONDITIONS AND EVALUATION

Julia Kuhn from Kittelson and Associates discussed transportation existing conditions. She discussed roadway volumes and function, pedestrian and bicycle information, transit information, and then gave a summary of the transportation opportunities and constraints.

FEEDBACK AND QUESTIONS FROM THE ADVISORY COMMITTEE

The following is specific feedback and questions asked by the Advisory Committee.

- Pat commented that there are many aesthetically unappealing uses from Scholls Ferry to the Salvation Army. He asked, "Is it true that clustering some of the uses would result in more successful businesses?" There are many obstacle to making this happen on a small scale, but larger businesses generally can take the risk of consolidating sites. Michael emphasized that local property owners must go through an educational process and come to that realization themselves.
- How do you make residential work on the Corridor? Two ways: (1) the expensive way is for the city to make significant investments (such as building a leafy boulevard), or, (2) continue with the residential area along the eastern edge of the Beaverton-Hillsdale Highway. Need to allow both types.
- Bob said that the Corridors have some of the highest comps in the Metro region. The Home Depot property acquisition was one of the highest in the region. New Seasons is one of the highest lease rates (and they had to redevelop). He thinks there is a problem of

aggregation. He believes there is an inability to create a "life-style" area. Land is too expensive. He thought there is a high demand for large lots, however, the high cost of land has depressed demand. He thought that densifying a project might make it less marketable, because he thinks more parking would be needed than allowed.

- Bob also discussed the need for businesses to function well within the building. He was worried that planners focus on the outside of buildings more than what is happening inside of buildings.

- Mark discussed some of the aesthetic considerations, and noted that they cost money. He didn't think that there was a large amount of vacancy along the Corridor. Many of the businesses in the neighborhood have a hard time keeping up with the rents.

- Is the goal to get to more nodes than strips? If we reorient the parking lot behind the buildings, but then the neighbors look at parking lots, which they tend to dislike.

- The state is encouraging economic development, how do we get there? How do we implement economic development? Property owners are rarely at the table; they need to be involved.

- Hal thought the classifications for buildings was interesting. He asked how much people are getting out of their buildings? Does it vary by type of building? How many are occupied by the property owners?

- There is an opportunity for some medium to long-term potential for residential and office, especially along the eastern edge of the Corridor (away from the Freeway).

- The community has to be involved with the redevelopment.

- Mark asked about the viability of "affordable" mom and pop commercial businesses along a redeveloped Corridor? If we reduce the retail, we reduce the number of small-scale retail.

- Lidwien asked for the Johnson Gardner report. She also asked about the potential for specialty retail that is ethnically oriented. It is locating further out (on the outskirts of the Metropolitan area) or on the eastside. Is there a potential for an international district around the Asian oriented grocery store. There are also Korean businesses. Michael asked if these types of businesses should be in the Corridors? Or in the Centers? Lidwien responded by saying that ethnic stores are attracted to cheap rent. In Portland, they tend to be in the Corridors.

- Sam said that ODOT is in discussions with Beaverton and Washington County to transfer jurisdiction to the City and County. This would have a major effect on the way policy is implemented.

- We haven't had any success in getting (UBA?) segments designated in many Corridors. Instead, these areas have a rural designation, which allows more access points. One could increase mobility and reduce curb cuts. Which segment of the Corridor would we want to redesignate?

- Sam said Washington County is considering a 7-lane highway along Canyon Road / TV Highway. (Andrea wasn't sure if this was true). Julia said that she would check the TSP and the transportation planners.

- The car dealerships along Canyon, for the most part, don't feel constrained. The one exception is a dealer that has a small lot.

- Terry said we have to be clear about why we are doing this project.

- Kelly said that it would be good to look at schools issues that affect residential development: capacity, proximity, transportation routes, and shifts in the tax base (rezone from commercial to residential). Would the city have to do a Goal 9 review?

- The group discussed Measure 37, and Michael reminded us that there are several ways to instigate change; we may only have incentives with M 37.

- Also discussed the Jaqua (transportation and land use planning litigation out of Springfield, OR) analysis regarding of different uses and the impacts of transportation issues.

DISCUSSION OF ALTERNATIVES

- Bob said he couldn't get beyond the traffic problems. Will we improve traffic or calm the traffic? If you improve the flow of traffic, then you get a similar problem as Hillsboro at Cornell. They wanted an Orenco type development, but the transportation network is not conducive to this type of redevelopment, because the secondary streets don't support this type of development.

- According to the City's level of service (LOS), there is not a capacity problem. They are still meeting the LOS, but there is not a lot of excess capacity. Someone thought Scholls Ferry Road is failing.

- Michael restated Bob's comment; he doesn't see traffic calming and creation of a pedestrian environment a goal of Corridors.

- Bob suggested that the Corridor be designated as an UBA.

- Bob doesn't have a problem with neighborhood serving retail, but he doesn't think you can get a good pedestrian environment along the Corridor. He would like to see more of a shopping center environment that could be planned as a unit. This is difficult to do with small, disaggregated parcels.

- Is this just a question of scale? Our study area may be too short. Is the development appropriate for the spacing between the two centers? Should the Centers serve as the nodes of pedestrian-oriented development?

- Hal doesn't think you can make this a great pedestrian environment. There might be a way to make it better, especially for transit, or improve bicycle access.

- Pat noted that there are 700 students involved in after school activities around the High School. About 1/3 of them every day are pedestrians. What can we do for the school? There is a different kind of node and potential right near the high school. Michael suggested a node that is not on both sides of B-H Highway on just one side of the road. We could improve the environment for a minor node at this location. (At 91st).

- Is the Urban Business Segment a possibility? Lidwien suggested that we *not* do this, and instead apply access management. This would require getting rid of curb cuts.

- Mark discussed the urban other designation, and Lidwien wanted us to think about access management. If not business as usual, access management or UBA.

- Participants discussed that the eastern edge of Canyon is a good node, small node at Beaverton-Hillsdale Highway.

- Chris recommended that we might want to think about what we recommend for Centers. For example, we might want to encourage the auto dealers to move from the Centers to the Corridors. The development in the Corridors should be supportive of Centers. How can everybody benefit from these policy recommendations?

- They noted that there is not enough land for other types of uses, resulting in the conversion of industrial land to other types of uses. What are the incentives we can do to get desirable land uses in the Corridors? The participants cautioned against exclusionary zoning in one area or another.

- Mark expressed some confusion over the goal of Centers. He noted that the way local jurisdictions have implemented that goal has been to do high-density residential, village commercial and retail, but they allowed uses that include high traffic volumes.

- Lidwien disagreed with Mark's description, and argued that design standards help to alleviate some of the problems in Centers.

- Mark indicated that Centers don't look like Centers yet.

- Michael said he heard participants say, let's maintain the traffic conditions. People are talking about mobility values. They would like to enhance mobility. On the other hand, there is the desire to bend to the market. The Advisory Committee does not desire a "Main Street" design on the Corridors. However, we can build better sidewalks and plant street trees.

- What would the transportation impacts be if the Corridors become denser or stay auto-oriented? How much more development can they hold and what does that do to trip generation?

- Bob cautioned about design standards. There are already maximum parking, but not minimum density. He thought that Corridors need to be a bit more of a free-for-all of uses.

- Julia asked Mark about the UBA designation comment and what he saw as the long-term benefits of UBAs? He thought there was one idea to catch the existing uses, or, to

envision something new. If it is new, it should be more nodal than linear. Linear is not a preferred design; the market prefers nodes. However, we have a historical design type.

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February 18, 2005

TO: **Project Team and Advisory Committee**
FROM: **Terry Moore and Becky Steckler**
SUBJECT: **FEBRUARY 15 ADVISORY COMMITTEE SUMMARY**

This memorandum is a summary of the second Metro Corridors Advisory Committee Meeting for the Case Study. It was held on Tuesday, February 15 from 2 p.m. until 5:00 p.m.

BACKGROUND

The Metro Corridors Project is a study of Corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the Corridor design type to achieve the 2040 Growth Concept.

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Phase II builds upon work completed in Phase I of the Metro Corridors Project, which investigated land use and transportation issues in Corridors, and resulted in the selection of a Corridor case study. The key findings from both the Phase I and the Phase II Reports will be summarized in a final report to Metro, the *Metro Corridors Summary Report.*

ATTENDEES

Attendees include the advisory committee and the project team.

Advisory Committee

Hal Bergsma, City of Beaverton

Fr. Pat Conroy, Jesuit High School

Sam Hunaidi, ODOT

Bob LeFeber, Commercial Realty Advisors

Matthew Spicer, West Slope Neighborhood Group

Anthony Bonforte, Development consultant

Project Team

Tim O'Brien, Metro

Sherry Oeser, Metro

Lidwien Rahman, ODOT

Terry Moore, ECONorthwest

Becky Steckler, ECONorthwest

Michael Freedman, Freedman Tung and Bottomly

Julia Kuhn, Kittelson and Associates

Yolanda Takesian, Kittelson and Associates

SUMMARY OF ADVISORY COMMITTEE COMMENTS

The following is a summary of the comments from the advisory committee.

- A retail trend is to cluster retail at major intersections and freeway on- and off-ramps.
- Implementation of successful Centers and Corridors are dependent.
- Retail should be appropriate to the land use and transportation design. For example, regional centers, town centers, regional center support, neighborhood clusters, station shops, and corner stores would all have a different type of retail with different market area draw.
- Canyon Road is appropriate for specialty retail (auto sales and service) that is more appropriate in Corridors than in Centers.
- Beaverton-Hillsdale Highway is appropriate for a "Grand Boulevard" with clusters of neighborhood retail nodes that supports the surrounding neighborhoods and the segments between the nodes and the regional and town centers characterized by mid- to high-density residential, commercial, and lodging land uses.
- Residential uses on the Corridor must fit the scale of the road. For example, duplexes and townhouses that are "mansion-size" in mass and height, with deeper setbacks from the street, elevation change in the living area (such as steps up to a front porch and entryway), and landscaping that buffers the residences from the street can work well along a Corridor.
- Transportation strategies to support the land use and development concept include median treatments in the in-between segments. Parking and access improvements can improve the Corridor transportation efficiency.

- Avoid more than four lanes on a Corridor and a median refuge at intersections and within landscaped median separating traffic direction.

- Regarding intersections, include left turn areas at intersections. Possibly look at widening intersections to allow U-turns. Another idea for intersections is to use round-abouts at intersections.

- Make transit treatments "stand out" and create marked bicycle lanes along the Corridor. The bicycle system has to be part of the network.

- Committee members asked about how the Corridors would transition over time to the land use and development concept. A developer on the committee said that he liked the street change as a catalyst and the parallel permitting process (especially in the Measure 37 environment).

- One committee members showed an illustration of a residential project proposed on Beaverton-Hillsdale Highway that looks like it would conform with the 2040 Corridor objectives.

- ODOT is concerned about operations and maintenance of transportation facilities in the right-of-way. They indicated that it is ODOT's preference that local jurisdictions take responsibility for all landscaping, maintenance, lighting, elements in the right-of-way.

- Several members of the advisory committee mentioned the importance of education and help up the Get Centered! education campaign around 2040 Centers objects as a good example of educating the development community.

- Committee members mentioned several times that implementing the 2040 Corridors design type solely through regulation is not the best way to precede. It was noted that if the regulations do not correspond with the market reality, the result could be an environment with uses not changing and existing businesses continuing to disinvest.

MEETING NOTES

WELCOME AND PROJECT BACKGROUND

Tim welcomed participants and conducted introductions. Terry summarized the project to date and reminded the committee of the purpose of the project. The purpose of the case study is to provide information about how to implement the 2040 Corridor design type.

LAND USE AND DEVELOPMENT ALTERNATIVES

- Michael Freedman from Freedman Tung and Bottomly (FTB) presented the land use and development and streetscape. Michael talked about policies, improvements, and strategies. He summarized the market analysis conducted by Johnson Gardner. He also summarized the physical condition of the Corridors.

- Michael also talked about the trend to concentrate retail at major intersections and freeway off-ramps. Less and less like the continuous commercial and retail strip. More

common now to see power centers/anchored centers. They are cross roads anchored centers and they are draining the vitality of properties located in other places.

- To restore property values and vitality to corridors, land use and development and the design of the thoroughfare must be restructured. Need to cluster specific uses. There is a need to create a restructured plan.

- Broad brush concept will cluster neighborhood types in specific areas.

- Significantly reduce the amount of land use zoned commercial/retail along Corridors.

- Strip corridor restructuring must be planned in relation to the pattern of existing and planned retail-driven centers in the city and the regional. Centers can't exist in centers and retail and corridors.

- Instead of thinking of retail as a use, but instead think about specific types of retail that have different types of draws. He described regional center retail, town center shop retail, regional center support, neighborhood cluster retail, station shops, and corner store shops.

- Promote the transformation of the "land in between" the major centers to residential, workplace, lodging, and other uses not competitive with retail concentrations. Make all uses appropriate to housing and make the strip a great edge to the neighborhood.

- Organize public and private investment to foster the emergence of a "Grand Boulevard" that flatters the community, captures value for property owners, and provides an appealing "edge/seam" between residential neighborhoods.

- Michael also talked about streetscapes. He talked about the Boulevard form. In a boulevard has the mass of the building opening towards the doorway. Current setback keeps activities away from the street, and puts garbage and blank walls towards the neighborhoods. Changing the orientation of the buildings and the parking can improve the street life and the transitions from the Corridor to the neighborhood.

- He also talked about having residential uses on the Corridor. Some people don't like the idea of having multifamily on the Corridor. However, we do have good examples of "grand boulevard" residences. There is a scale of the building to the scale of the road. There are buffers (trees, porches, rise in elevation, change in elevation between semi-private front yard and sidewalk, deeper setback). Duplex or fourplex, a mansion-style building would work well. Single-family neighborhoods "thicken" as they get to the wide road. A wide planting strip and sidewalk work well as well.

- He also talked about rethinking policies.

- What form should the retail clusters take? Need to build a minimum amount of the building up to the sidewalk. Use the building as the sign, not more signs.

- Focus street improvement resources to reconfigure each segment to create environments that are supportive of the enhanced market focus of the desired street design.

- Public improvements within the right-of-way. That may instigate development.

- Promote the continued success of specialty segments eg auto sales and service. Cluster uses whenever possible. Michael described having a display area, with the show room and some public parking is closer to the street.

- Implementation strategies suggested are to reorganize entitlements to focus on a hierarch of retail development types. In NB zone, permit only corner store retail, replace the majority of retail entitlements with more extensive residential ones. Show that housing is the highest and best use. Another option is to allow parallel track zoning with fast tracking of development. Third option is to use the streetscape as a catalyst that provides the environment that supports the desired land use.

TRANSPORTATION STRATEGIES

- Yolanda discussed the existing opportunities in the Corridor, such as connecting sites, creating a human scale transportation system, connectivity to and through adjacent sites.

- She discussed the power of the boulevard and median treatment can help build a sense of space. She discussed how it can also improve efficiency. She spoke to reducing access points along the Corridor and improving the environment for walkers, bicyclists, and transit users.

- Parking and access efficiency can improve with a Corridor treatment. There are possibilities to share parking, for example in Target and surrounding businesses.

- Need to look for opportunities to increase the local street access to the Corridor. Share parking.

- Avoid more than four lanes on a Corridor and a median refuge at intersections and within landscaped median separating traffic direction.

- Regarding intersections, include left turn areas at intersections. Possibly look at widening intersections to allow U-turns. Another idea for intersections is to use round-abouts at intersections.

- Corridor intersection treatments, build curb extensions and narrows crossing distance. Need to make sure that pedestrians can get from the corridor to surrounding neighborhoods. Make sure there are crosswalk treatments as well and pedestrian refuges in round-a-bouts.

- Make transit treatments “stand out” and create marked bicycle lanes along the Corridor. The bicycle system has to be part of the network.

- The Corridor has to be a comfortable and safe mode of transportation for each mode. Corridors are the workhorses of the transportation system, efficiency relies on complimentary land uses.

FEEDBACK FROM THE COMMITTEE

- Bob LeFeber noted that we need cheap retail, which means we need disinvested retail because that is all we can afford. We don’t want it to be in the Centers, but then where do

they go? He agreed with Michael's comments about retail going to intersections. But he said that he doesn't see the public assistance to put the types of retail in Centers. Hard to consolidate parcels for larger developments. This needs to be planned over time. He thinks there has to be a transition to this full buildout scenario. A lot of the regulations can't be implemented with existing market conditions. Downzoning retail concerns him, but he is open to the idea that the higher and best use may be residential; he knows that the residential prices are getting close to Corridor land values. He also thought the retail has different types of uses, but that it changes over time. It may be hard to transition the format over time. He is concerned when parking is limited, or there is no parking. With ADT of 35,000 to 40,000 this is too many traffic counts to make successful retail. He thought there was inconsistency by bringing the building up to the street, or buffering.

- Anthony Bonforte showed a schematic of a residential project that shows residential above, retail office below and parking structured below. Home owner condominiums. Similar to Pearl District condos, at 2/3^{rds} the price. His project has been approved. He thinks this is a liner use. He doesn't think about wide Boulevard uses (cafes) along the highway. Commercial property in the area is trading between $20 to $30 per square foot. They can make structured parking work. There are possibilities for big densities along the Corridors. He wants to see the infrastructure capable for servicing the densities. He has "high-end" for the Beaverton market. This is a similar class as the Beaverton Round. He thinks this is the lower end type of residential between the power structures.

  He also sees the potential for an office power complex. He would like to see industrial zone replaced with employment zone. Need to plan for the uses that are coming. Where is Beaverton going to get the money for infrastructure? He also talked about the difficulty of working with multiple owners of small parcels.

- Father Pat Conroy talked about new trends and asked if the trend we are talking about going to last to 2040? He asked if Bob and Tony are talking about the same thing or not. Bob was focused on retail and Tony focused on residential.

- Sam Hunaidi asked about asked about access control. Need to address access issues and landscaping and maintenance obligations (implementation issues). He also mentioned signage and related rules for signage (no advertisement on state right-of-way). ODOT discussed that if ODOT builds it (bark dust only), they don't want to do maintenance. BH Highway is a targeted road for transfer to local jurisdiction. He also mentioned the ASHTO requirement that most properties in the area, if you put landscaping, there could be sight distance issues.

  Sam also asked about TriMet's participation in the project. Tim clarified to say that TriMet representatives are on the Technical Advisory Committee.

  He also said that he had utility concerns regarding the maintenance of overhead and underground utilities.

- Lidwien said that ODOT will only build these types of improvements if there is a commitment by the locals to take over jurisdictions. Michael said that whether this is a state highway or not, the land use and development recommendations would be benefited by these changes. Lidwien said that there is the potential for partnerships with the state

and local government and private partners. Michael said that you don't have to assume no transformation if there wasn't jurisdictional transfer. The final report has to reflect that this is a state highway, with relinquishment and not relinquishment, how do we deal with under all of the scenarios. This is an implementation level. Julia also mentioned the lighting.

- Mathew Spicer talked about the inter-jurisdictional issues and the difficulty of dealing with these areas. He asked if Washington County is part of the study? Tim clarified that yes, they are. (They were unable to attend the meeting today). Terry said that this study is an application regardless of jurisdiction.

- Tony said that utility companies have to have a role. He thought utilities are like their own government and if we would like them to underground their utilities, this can be very difficult.

- Bob noted that the land prices are still not high enough to redevelop. Green or vacant sites are easier to develop, but if there is a lousy retail performer it is hard to do. He likes the street change as a catalyst and a parallel permitting process. There needs to be incentives to make the change fiscally possible. Terry talked about Oregon's planning program and how we must have clear and objective standards, but how we might have a concept plan and how the area could develop, create the vision, and allow the vision to occur. It still allows the old development, but over time encourage the vision to be built.

- Terry asked Bob to figure out an implementation that is sensitive to market forces, but is trying to adjust them one way. Bob says that the regulatory force is not the way to instigate change. You have to recognize what you have in place to get you were you need to go. Work to bring the use closer to what the community wants. Bob really likes the parallel track to incentivize the way we want to develop.

- Yolanda mentioned the educational aspect to encourage change and Bob thought this is a great idea. He likes having the tools necessary to do his job, such as examples, aerials, etc. He hates it when the client ties up a property with a concept and realizes that it will never happen.

- Lidwien said that in the McLoughlin Corridor plan the conclusion was that the regulation was not the way to go if the market is not there. Disinvestment is created, not the ideal plan. She also talked about redevelopment and big box uses. She sees a lot of big box replaced by even bigger boxes. She is looking forward to how to do that type of development right. What are our suggestions about better rather than best.

- Hal said that WalMart is coming to town and they are complying with new development.

- Michael said that some of the new Center anchors are big box like Target.

- Tony asked about the application of LIDs in Corridors. Hal said legally they could do it, but they might not have the political willingness to do that. Michael said that there has to be a public involvement process to get the support of Beaverton, ODOT, and locals wanting to do it, that is when the money comes. Work the politics and the politics bring the money. You shouldn't be regulating the market place and freezing existing uses, which are dissenvesting. Need to change all policies and streetscapes to let the market go

where it wants to go. This is a response to where the market wants to go. He suggested that regulation should be based on a market analysis that supports the regulated development. Regulation may be mute because of Measure 37, but the legal fees to make the case would make it impossible. But Measure 37 makes the parallel track possible.

We need a strategy for transition that shows how we get from there to here. Need to think about staff time and limited public resources. If we don't think about strategy and restructuring then it won't happen. And the Centers aren't there (yet) that supports the Corridor.

- Tony wants to make sure that the Corridor planning is applied. Hal thought that parallel track is the only way to do it under Measure 37. There are other incentives like reduced fee, give them back their property taxes at the end of the deal. The question is how do you break the ice. Public investment is more important to land value.

- Hal also mentioned split property tax rates and said that there was a resolution introduced in this legislation to consider this to be allowed in communities.

FINAL COMMENTS

- Tony: dynamics power, it has to be pushed hard. Corridor planning is critical to the Portland area (we are unique). It has to be all encompassing. The public sector has to think big about how everything comes together and allow this to happen. Change is hard for locals, but it will happen regardless, so lets make it different in a good way.

- Pat: If change is inevitable, then educational aspects of implementation are important. Need to make sure people understand that there is no option to change. The message has to be, not do you want it to stay the same, but, change will happen and here are the options that could happen. Lead with education.

- Bob: Talked about the mechanics of the return on what they have right now, or, how much would they have to charge to get a return on brand new development. Terry added that it is sometimes amazing how quickly how quickly those land values can increase, especially with public investments or some one else takes the risk to show that it is possible.

  Allow the transition to occur over time, don't require uneconomic formats, infrastructure investment to encourage private investment, pilot projects with educations.

- Matthew: Communication and education is key for these projects. People are afraid of change and they go to the negatives like congestion and fear of bad design. Make the observations and turn them around to discuss each aspect. Some people are afraid of the process (regulations) and possible land use changes. He wants to know how some of the different ideas are formatted.

- Lidwien: On education, she is a public sector planner and she could use education on the market side. Government planners don't have the understanding necessary to understand the risks in new development.

On the other side, she thought the landscaping and street trees are really good for the aesthetics and pedestrian environment along the Corridors.

- Hal: Talked about the importance of public investment instead of regulations. Hal also talked about the resistance of new density, and they may be able to overcome with education. The resistance comes from a fear of lost privacy and increased traffic generation. Hal agrees that Corridors shouldn't compete with Centers. People will want to live near good Centers. He also mentioned UGB expansion, it wasn't on the Westside, if there is an expansion, that could be a problem. Keep the UGB tight.

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March 8, 2005

TO: **Project Team and Advisory Committee**
FROM: **Terry Moore and Becky Steckler**
SUBJECT: **MARCH 8 ADVISORY COMMITTEE SUMMARY**

This memorandum is a summary of the second Metro Corridors Advisory Committee Meeting for the Case Study. It was held on Tuesday, March 8 from 1:30 p.m. until 4:00 p.m.

BACKGROUND

The Metro Corridors Project is a study of Corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the Corridor design type to achieve the 2040 Growth Concept. Phase I of the project investigated land use and transportation issues in Corridors, and resulted in the selection of a Corridor case study. Phase II of the Project is a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. By conducting a case study, Metro hopes to identify opportunities and constraints to achieving the Metro 2040 Corridors objectives (described in Chapter 2). Phase II will also identify how the case study Corridors and the Beaverton Regional Center complement and compete with each other. Finally, the case study will result in selection of a preferred alternative that includes recommended actions to improve the performance of Corridors with respect to the objectives of the Growth Concept. The key findings from both the Phase I and the Phase II Reports will be summarized in a final report to Metro, the *Metro Corridors Summary Report*.

ATTENDEES

Attendees include the advisory committee and the project team.

Advisory Committee

Hal Bergsma, City of Beaverton

Fr. Pat Conroy, Jesuit High School

Sam Hunaidi, ODOT

Bob LeFeber, Commercial Realty Advisors

Matthew Spicer, West Slope Neighborhood Group

Andy Back, Washington County

Project Team

Tim O'Brien, Metro

Sherry Oeser, Metro

Lidwien Rahman, ODOT

Terry Moore, ECONorthwest

Becky Steckler, ECONorthwest

SUMMARY OF ADVISORY COMMITTEE COMMENTS

The following is a summary of the comments from the advisory committee.

- The committee recognized that public resources to redevelop corridors is limited, and generally, centers are prioritized over corridors.
- Corridors across the region are different from each other. The Beaverton-Hillsdale and Canyon Road redevelopment alternatives may make sense in some corridors (or sections of some corridors), but it may not make sense in all corridors. There should be enough flexibility to allow for different applications.
- Retail developers are concerned about retaining affordable land for retail development.
- Jesuit High School administrators are concerned about student safety at the school, and in the surrounding neighborhoods.

MEETING NOTES

WELCOME AND PROJECT BACKGROUND

Terry welcomed participants and conducted introductions. He summarized the project to date and reminded the committee of the purpose of the project. Terry summarized the conversation we had with the Technical Advisory Committee in the morning. He then discussed the case study report and the final policy report, reviewing the Table of Contents of the case study report, in detail.

Becky Steckler and Tim O'Brien gave an overview of the focus group meetings and the developer interviews.

POLICY FEEDBACK

- Questions in land value for 20 dwelling units per acre (dua) to 30 dua; there doesn't seem to be much change per value. Residential units cost about $20,000 to $22,000 per door for homeowner for the value of the land, and about $10,000 less for apartments. (According to Bob LeFeber).

- Matthew asked about phasing about part of the implementation plan to start the process. The focus group talked the need for safety, and this could be part of the criteria to focus investment. Terry responded to what are the policies and how do you put them into place. We will address this issue, to the degree available. We will address it, but we probably won't solve it as part of this project.

- Lidwien commented that we may not want to prioritize Corridors as part of the MTIP process. ODOT may need to prioritize among the Centers because we can't do Centers. That is an obvious thing to say, we can recognize where Corridors fit in the hierarchy of priority. There is a point system (TIM). There are other pots of money for other types of improvements. Put more money in the multi-modal pot of money.

- Lidwien also said that safety and preservation is important along the Corridors. Why not focus on mechanisms to supplement preservations to make things a little bit better for bikes, pedestrians, and transit?

- We may want to recommend giving some points to neighborhood centers.

- Chapter 4, it is an opportunity of what the Corridor should be and what it should not be, as bounded by the 2040 Corridor concept. What does this study say about the Corridor concept and Corridor objectives? Terry responded to say that we get to his point by a slightly different way. In this particular Corridor, does it make sense to do what the Metro Corridor would suggest? We can address this by assuming that this is what you want, and what would you have to do that, and how difficult is that to do? In the face of market and political decisions? Or, we can look at this to look at whether or not Corridor policies make sense.

- Bob said that historically, the corridors were described in their value of higher density. However, corridors are different, and how can we get these corridors to remain viable and allow them to work. Are these the right objectives? And should we expect residential uses in corridors? Terry said that the way that we will answer that question is to say, can we meet those objectives, and what are the policies we would need to do that, and then determine if this is a reasonable policy.

- When you look at the amount of land in corridors compared to centers, the corridors may be more important to increasing density in the region. Among the opportunities for redevelopment are probably in corridors.

- On the retail-side, Bob said that the retail folks are depending on corridors. The retail community is in favor of supporting corridors and in favor of them transitioning over time. We should probably be explicit about the fact that certain types of uses (auto-dependent uses) should be along corridors. Some types of uses are very difficult in centers. There are more opportunities to redevelop corridors.

- Centers really have to succeed (Tualatin is a good example of a new center). City of Tigard had a meeting with a downtown retail group, and it was depressing for Bob because of the numerous constraints.

- Include implications for Metro and state in Chapter 5.

POLICY

Terry presented an overview of policy issues that we've identified. He talked about UBAs and STAs. There may be conflicts between the Metro Corridor objectives and what UBAs would allow.

- Our objectives may not be consistent with UBA designation. Lidwien's recollection was that the designation allows slightly more access, and the roadway design standards are that there is no on-street parking.

- The Transportation Planning Rule (TPR) requirement for building orientation along Corridors allows for buildings to be closer to the street, or provide a pedestrian plaza, the main entrance has to be oriented towards the street. The policy sections should review what the County and City require (for building orientation, parking lots, public plazas) for major transit stops.

- Implications of the case study may impact Goal 9. Lidwien brought up the issue of the relationship between centers and corridors. We may need to look at the viability of centers if we expand commercial along Corridors. Terry said that the Goal 9 analysis gets to "where is the buildable land?"

- Mark Whitlow is "hitting us hard" (through Bob) about the rising rents in many centers. The space along corridors often provide alternative locations for businesses. Allowing the transformation to occur if the market is there is good, but downzoning might be overreaching. He argues that there is the need for affordable retail.

- Jesuit High School administrators (and parents) are interested in the safety of the students. They have runners (track and field) that run in the neighborhood. Additionally, there are safety issues with students coming in and out of parking lot (they experienced a fatality about two years ago). The campus is not restricted; students can go off campus during the day. They see most of the issues or problems would happen right after school.

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March 11, 2005

TO: **Metro Corridors Project Team, Tim O'Brien, Metro, and Lidwien Rahman, ODOT**
FROM: **Becky Steckler**
SUBJECT: **MARCH 8, 2005 TECHNICAL ADVISORY COMMITTEE SUMMARY**

This memorandum is a summary of the second Metro Corridors Technical Advisory Committee Meeting, held Tuesday, March 8, 2005 from 9 a.m. until 11:30 a.m.

BACKGROUND

The Metro Corridors Project is a study of Corridors within the context of the 2040 Growth Concept. Its purpose is to determine how the region can support the successful implementation of the Corridor design type to achieve the 2040 Growth Concept. Phase I of the project investigated land use and transportation issues in Corridors, and resulted in the selection of a Corridor case study. Phase II of the Project is a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. By conducting a case study, Metro hopes to identify opportunities and constraints to achieving the Metro 2040 Corridors objectives (described in Chapter 2). Phase II will also identify how the case study Corridors and the Beaverton Regional Center complement and compete with each other. Finally, the case study will result in selection of a preferred alternative that includes recommended actions to improve the performance of Corridors with respect to the objectives of the Growth Concept. The key findings from both the Phase I and the Phase II Reports will be summarized in a final report to Metro, the *Metro Corridors Summary Report*.

ATTENDEES

Attendees include the advisory committee and the project team.

Technical Advisory Committee

Hal Bergsma, City of Beaverton

John Borge, Clackamas County

Dan Drentlaw, City of Oregon City

Denny Egner, City of Lake Oswego

Jon Holan, City of Forest Grove

Doug McClain, Clackamas County

Marc Guichard, Metro

Barbara Shields, City of Tigard

Bridget Wieghart, Metro

David Zagel, TriMet

Project Team

Tim O'Brien, Metro

Sherry Oeser, Metro

Lidwien Rahman, ODOT

Terry Moore, ECONorthwest

Becky Steckler, ECONorthwest

SUMMARY OF TECHNICAL ADVISORY COMMITTEE COMMENTS

The following is a summary of the comments from the technical advisory committee.

- TAC members were concerned that Corridors across the region are different and the alternatives from the case study may not be applicable to their corridor.

- While TAC members acknowledge that local jurisdictions may be disinclined from adopting new regulation, the TAC wanted the report to include regulatory policy changes. A few members were interested in the potential for a proactive analysis that argues that government policies *increase* land values, or, that the changes are necessary for health and safety reasons. These reasons may protect local jurisdictions against Measure 37 claims.

- The TAC discussed several of the transportation strategies at length. They recognize the difficulty of constructing medians in established neighborhoods. They also discussed the lane/road widths required for ODOT for U-turns (which would result in very wide roads).

- Several TAC members thought it was important to indicate that there are several types of development uses that are appropriate for corridors, such as auto sales and service, storage rental, and gas stations. These uses should be permitted. One member asked about the placement of mobile home parks along the corridor, and if corridors are an appropriate location.

- The TAC discussed the appropriateness of big box retailers at the edge of centers. This issue was not resolved.

- Several TAC members liked the Beaverton-Hillsdale Highway proposal for residential between neighborhood-serving nodes.

- The TAC was also concerned about the relationship and connectivity of the corridor to the surrounding neighborhood.

MEETING NOTES

WELCOME AND PROJECT BACKGROUND

Tim welcomed participants and conducted introductions. Terry and Becky summarized the progress to date on the project and reminded the committee of the purpose of this phase of the project. The purpose of the case study is to provide information about how to implement the 2040 Corridor design type.

OVERVIEW OF PRESENTATION

- Terry clarified that there are few ways to develop Corridors that satisfy the Metro Corridor objectives. There are many policy ideas embedded in the objectives. We have draft material on policy from Chris Eaton (Eaton Planning and Angelo Eaton) regarding potential policy changes.

- Terry also discussed Measure 37 issues. One option is not to change anything in policy or implementation. The other option is to plan for preferred development patterns, and then provide incentives for proposals that match those preferences. If jurisdictions require owners to make the changes, they can explain how the change will increase the property value. An example is along Grand Boulevard, where higher-density residential has a higher value than the existing commercial/retail. In corridors, landowners sometimes have an inflated idea of the worth of their property. The results in an underused corridor. Nodal areas will benefit from public investments.

- Terry described the policy [governing corridor development]. Regarding state policy: (1) ODOT would prefer to transfer capital, operations, and maintenance responsibility to the local jurisdiction. (2) UBA and STA allowed uses may be in conflict with 2040 Growth Plan objectives. UBAs allow parking in front, deep setbacks, and frequent access. (3) Recent ASHTO interpretation of requirements for site distances, at the extreme, may not allow street trees along the corridor.

FEEDBACK FROM TAC

- Auto dealers want a lot of cars on their lots, and they sometimes store their inventory in spaces designed for employees and customers. To add extra parking, some dealers are putting parking on the roof of their buildings. Some also use streetscape landscaping as extra parking.

- Jon Holan suggested a shared operations and maintenance plan between the local jurisdiction and ODOT.

- Doug asked about the presumption that centers and corridors will act similarly across the region. He described McLoughlin Boulevard and Sunnyside Corridor as examples. He thought Sunnyside Road could look like Beaverton-Hillsdale highway, while McLoughlin or 82nd Avenue have very different characteristics. Terry clarified that we didn't see how we could suggest a different alternative for the *Beaverton-Hillsdale Highway*, but that we recognize that other corridors will act differently. Doug said that they allowed mixed use in the McLoughlin Corridor, but it has never been developed.

There may be fewer differences between the regional centers. They are seeing a development pattern of a big-box tenant, with associated uses aggregating in mini-malls. That pattern typifies redevelopment of the corridor areas.

- Lidwien said that we are seeing UBA-like patterns, which aggregates access and improves internal access. She would like to see conclusions to step-away from BH Highway to look at something like 82nd (don't make all conclusions on BH and Canyon only). Terry said that the final policy report will discuss application to the corridors across the region.

- Doug feels that Measure 37 is based on individual property assessments. Hal thought that jurisdictions are *disinclined* to require property owners to make changes because of Measure 37; subsequently, jurisdictions should consider incentives. Bridget thought that emphasizing how land use changes could increase property value proactively and is an exciting option.

- Jon asked us not to abandon regulation as an implementation measure. Hal said that regulations should be valid, and discuss options and incentives.

- Hal suggested the following possible incentives: (1) provide an expedited process for development applications that meet certain criteria. However, the 120-day rule may already provide that in some form; (2) Reduce fees for some applications, that could be difficult because budgets are tight; (3) Rename the zone (in the development code) to better describe allowed uses. For example, most of the land in BH Highway allows residential development, but because it is not explicit in the name, some owners might not know that residential is an option. (4) Reduce the minimum density, currently set at 44 units per net acre (5) Describe all improvements as public health and safety measures. Measure 37 exempts public health and safety, there are traffic concerns about increased density. We might want to limit the number of trips per use, restrict turning movements; that could be our tie-in to changing the land use.

- Bridget discussed medians at the Cornell Barnes Town Center. They were trying to encourage commercial and retail development, and wanted access for both right- and left-hand turns. Local support for medians would be helpful.

- Denny asked about the typology and the associated strategies. Terry reminded the group that we learned general information about typology in Phase I, and we tried to find a case study that incorporated many of these types in Phase II. We are more confident about certain typologies than other typologies. Some recommendations are solid based on what we observed in the BH Highway and Canyon Road, but others are more speculative (because they were not in BH Highway or Canyon Road).

- Tim said that he observed that each corridor is different. They are hoping to identify the characteristics of regional corridors, as well as opportunities and constraints to improving them.

- Denny talked about issues surrounding medians in the Town Center plan and the Boones Ferry corridor through the center. Local owners wanted a five-lane corridor with a turn lane. The Town Center Citizen Group wants the median and U-turns that businesses are demanding for access. ODOT standards, however, require 52 feet for a U-turn, and the

location is only 44-feet. Bigger vehicles won't be able to make the turn. The Committee came up with a "Great Street" concept. In this project, transportation planners suggested that inclusion of visual signals to warn drivers know that they are entering an area that has more pedestrians. Design can affect the speed of the traffic.

- Lidwien looked at the draft from Chris Eaton. She thinks that at the regional level, conclusions about regional street design are missing. The conclusions should be couched with the cross section that we suggest and what is in the regional street design, does it rise to the level of suggestion street policies? There is a street design guideline and our cross sections should be compared to that. The "in-between" sections should be called something other than Boulevard. The term "boulevard" has a specific definition in the street design guidelines.

- Jon Holan suggested that Chapter 5 focus on the objectives of corridor typologies. He is concerned that the chapter does not differentiate among corridor typologies. He likes the transportation menu (in Chapter 4). He also suggested that implementation recommendations focus on incentives rather than regulations.

- John Borge asked about placement of mobile home parks. There is a need for affordable housing like mobile home parks, and perhaps corridors are the most appropriate locations. Perhaps we should make sure that we provide for the specialty uses that we may not want to go anywhere else. Terry followed up to say that we don't have a perspective. Instead, we looked at the policies and at the market, to make conclusions about implementation of the policies. Our conclusion in the case study is that for implementation of Corridor objectives, we came up with the most viable alternatives.

  John agreed with Terry's comments, but cautioned that we shouldn't outlaw activities that we don't want in other places. Examples are storage facilities and gas stations.

- David Zagel said that he has some concerns about wide cross sections (two different pictures in the report and the handout). In Gladstone, there are 7-lanes to get across the street. He described the distances and how they don't improve the environment.

- Bridget asked about clarifying appropriate locations for big box. Do we want it at the edge of the center?

- We should show both light rail and commuter rail in the diagram. The diagram is still showing the Scholls Ferry/Oleson Road in the diagram.

- Doug said that there are two different issues that we should address separately: (1) how to create an environment that isn't auto-oriented; and (2) changing the development use. He discussed 82nd Avenue north of the town center. The area is zoned almost exclusively for commercial use, with the opportunity for residential use. They are trying to improve design to improve the pedestrian environment. This generally happens through the conversion of smaller uses to larger uses. This presents an opportunity to consolidate access and improve the pedestrian environment. If they had adopted a more aggressive approach, they might have been able to do more. There are some things that we could do without changing the use, and some things will only happen through changing the use.

- Doug also asked about where we want the big box, small shopping center. They don't want it in the Center; instead, they will locate in the Corridor. It may be illustrative to compare this to trends in other Corridors. We see the big box along the freeway interchanges.

- The final report can raise the big issues such as the base locations for big box retail, and how to implement plans. We might want anecdotal information from each of the other jurisdictions. We may be able to cull some information from the Phase I report, but we may also need to ground-truth this with information from the other corridors. The TAC agreed that that we could use an hour of their time for this purpose. Terry said he wants to keep this within the context of the case study and the Corridor types.

- Bridget preferred to see more residential between the nodes, and felt that the report should make the case for this development pattern more strongly, focusing on implementation.

- Hal brought up the importance of the relationship between the Corridor and the surrounding neighborhood. It's important to consider buffering and think about noise reductions.

- David Zagel asked about the connectivity back through the neighborhood. Terry talked about the opportunities and constraints of transportation connectivity, adding that improved connectivity is desired and should be addressed in the final report. David asked if we should show the connectivity between the nodes and into the neighborhoods.

- Lidwien noted that the draft policies mention the need to implement the Metro requirement for connectivity. We should start by looking at the existing policy to see if it is adequate, and then implementing it.