

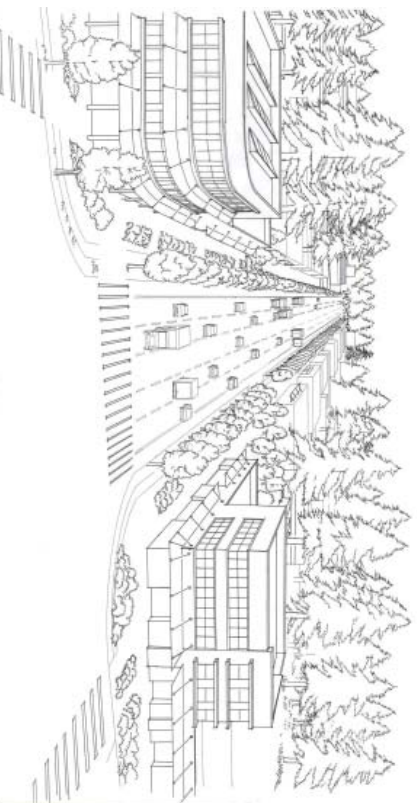
COFFEE CREEK MASTER PLAN

Prepared for:



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1 INTRODUCTION

The Coffee Creek planning effort is being conducted to create a detailed transportation and land use plan for the area located near northwest Wilsonville in unincorporated Washington and Clackamas Counties (see Figure 1). The Coffee Creek Industrial Area is being planned in two parts, including a Master Plan (this document) with a detailed strategy for urbanizing the area South of Day Road, and a separate Concept Plan north of Day Road for long-range planning.

An Urban Reserve Plan was prepared by Olak, Inc. in 1998 as a Concept Plan for the area south of Day Road. Metro followed up with a 2002 decision to include Area 49 into the Metro Urban Growth Boundary (UGB) to allow urban services to extend to the Coffee Creek Correctional Facility, and set the stage for additional industrial development south of Day Road.

In 2004, Metro added additional land to the Metro UGB north of Day Road and east of the Portland and Western Railroad, but conditioned future annexation north of Day Road on the decision regarding a preferred location for the future I-5/Highway 99W Connector route.¹ Hence this Master Plan focuses only on the area south of Day Road.

Purpose and Objectives

The south Metro region has experienced rapid growth over the past two decades. The Cities of Wilsonville, Tualatin and Sherwood have undergone significant increases in population, households and employment. As future growth continues, these cities need to carefully consider the affects of new development on existing and planned public facilities, including roads, transit, sewer, water, and parks facilities. Coordinated planning also needs to continue on the potential I-5/99W Connector, Kinsman Road, and larger transportation planning efforts in the Metro Region.

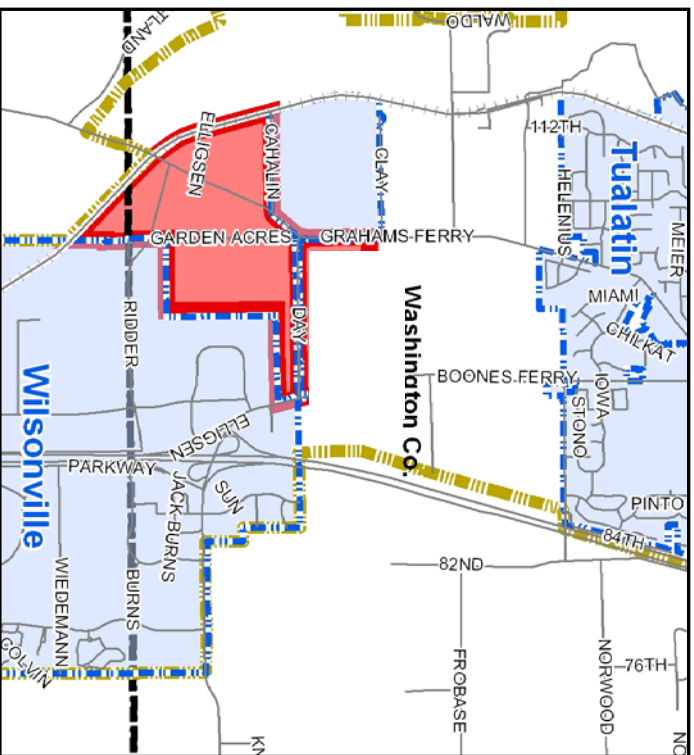
The Objectives for the Coffee Creek Industrial Area planning project include:

- Conducting an effective public involvement program.
- Creating a detailed transportation and land use Master Plan for the area South of Day Road consistent with the Concept Plan that was completed in 1998.
- Continuing to work with involved public and private stakeholder on the potential I-5/99W Connector.
- Identifying infrastructure improvements needed to mitigate future development.
- Analyzing the costs, funding sources, and phasing options for infrastructure improvements.
- Allowing efficient and cost-effective industrial development to proceed south of Day Road, with local adoption of the Master Plan and necessary changes to the City's Comprehensive Plan, Development Code and Transportation System Plan.

¹ When Metro adopted the 2004 UGB expansion, they included conditions (Ordinance #04-104B, Exhibit F) that only pertain to the UGB expansion area north of Day Road. Those conditions require the area north of Day Road to complete Title 11 planning within 2 years from decision of a connector ROW location. Also, those conditions indicate that Title 11 planning can occur North of Day Road as long as it incorporates the general location of the Connector and the Tonquin Trail per Metro 2004 RTP.

Context and Setting

The Coffee Creek Industrial Area includes a Master Plan for 216 +/- gross acres south of Day Road. The Master Plan area is “sandwiched” between City of Wilsonville municipal boundaries. It is primarily located in unincorporated Washington County, with a small triangle (south of Clutter Road) located in unincorporated Clackamas County. The Master Plan area is generally bounded by the Coffee Creek Correctional Facility and Day Road on the north, the Portland and Western Railroad to the west and south, and the existing city limits to the east. Please refer to Figure 1.



Plan Summary

Key features of the Master Plan for the area south of Day Road are summarized in Table 1.

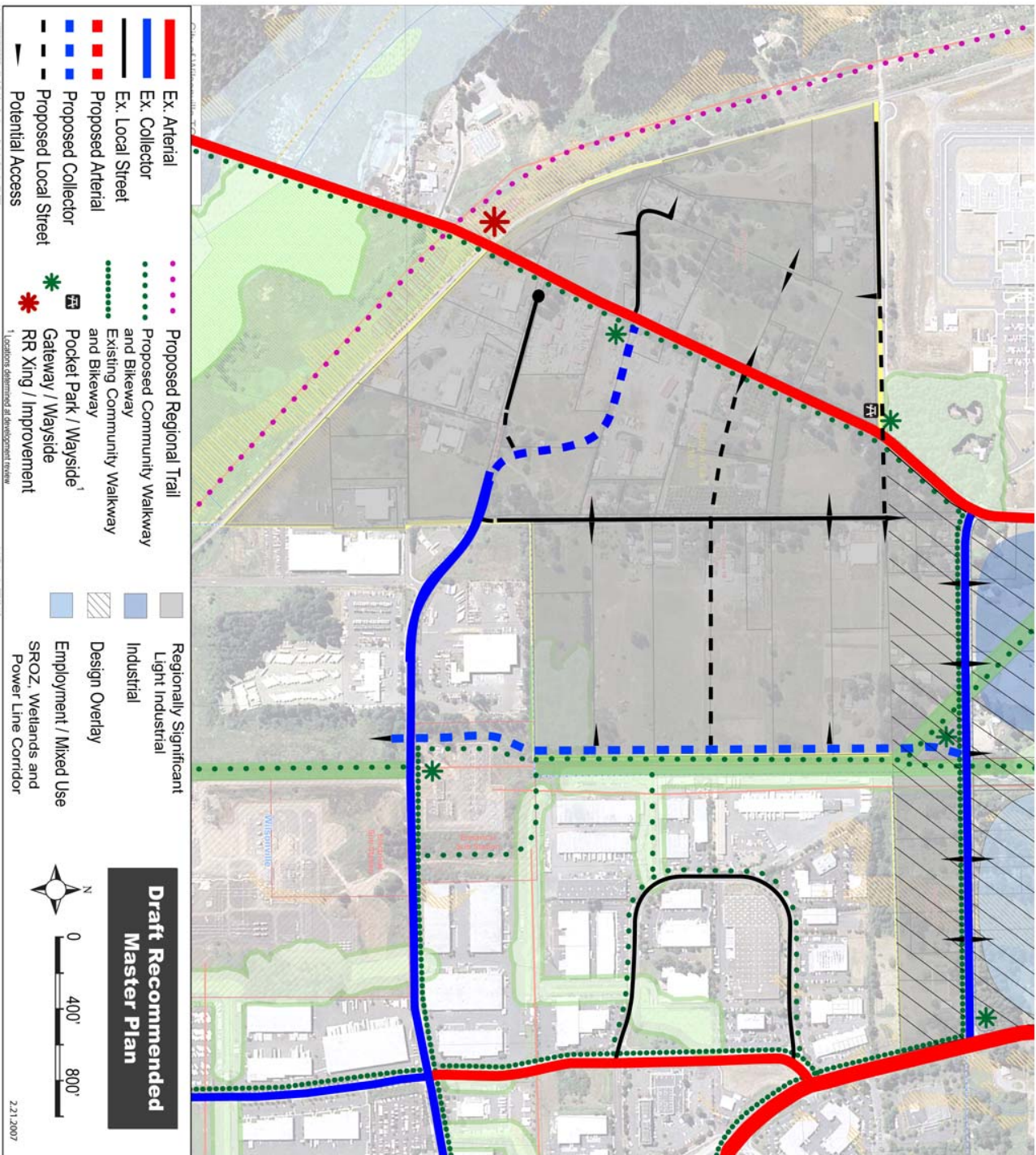
TABLE 1
Master Plan Summary

Element	Description
Land Use	Regionally Significant Industrial Area: allows light industrial with strict limits on non-industrial uses.
Transportation	Primary access is planned from I-5/Ellingsen Road via SW Boones Ferry Road and Day Road. Access will also be provided via Grahams Ferry Road, Ridder Road, and the planned Kinsman Road. Transit routes are located within a 1/2 mile walk of the Master plan area, with bus stops located near Commerce Circle/95 th Avenue.
Water	The City operated Willamette River Water Treatment Plant provides the City's water needs, with its main transmission line that runs up Kinsman Road (south of the Master Plan area). The City's Water Master Plan includes a capital improvement phasing plan that serves the Coffee Creek Industrial Master Plan area.
Sewer	The Coffee Creek Master Plan area is to be served with sanitary sewer by the City of Wilsonville and is reflected as Urban Planning Area 4 (UPA-4) in the City's Sewer Master Plan. This area was assumed to include the Coffee Creek Correctional Institution (on 113-acres) and Master Plan area. Future unit flow assumptions for industrial uses were forecasted to be 2,000 gallons/day/acre. After considering factors for average daily flows, the industrial portion of UPA-4 is assumed to generate 626,000 gallons per day (gpd) of sewer flow at build-out.

TABLE 1
Master Plan Summary

Element	Description
Storm Drainage	The Coffee Creek Planning Area is located within the Coffee Creek Basin. The north tributary to Basalt Creek is located south of Day Road. Basalt Creek drains into Coffee Creek Lake and extends north of Day Road into the City of Tualatin UGB. The Wilsonville Storm Water Master Plan and the Coffee Creek Master Plan identifies potential regional detention facilities in the Coffee Creek Planning Area as effective pollution reduction facilities. In addition, all surface water generated by private development would be handled and treated on site, and with subdistrict facilities, such as detention swales and ponds. The Master Plan also supports construction of "green street design standards" for collector street improvements including Kinsman Road and Grahams Ferry Road.
Parks and Recreation	The Master Plan minimizes potential adverse effects on resources, by identifying and protecting areas within the Significant Resource Overlay Zone, and promotes a variety of open spaces, parks, waysides, and linear pathways for employees and residents.

FIGURE 1. COFFEE CREEK | RECOMMENDED MASTER PLAN



2 PLANNING PROCESS

What is a Master Plan?

A Master Plan guides how land newly added to the UGB will be used, provided with urban services, and developed in the context of existing adjacent communities. Master Plans typically focus on issues of land use, transportation, public infrastructure, and natural resources, are defined in Statewide Land Use Planning Goal 14: Urbanization, and Metro Title 11. The basic parts of a master plan are listed below, with those relevant to the scope for the Coffee Creek Master Plan document shown in *italics*.

1. *Orderly, economic provision for public facilities and services;*
2. *Availability of sufficient land for the various uses to insure choices in the market place;*
3. LCDC goals or the acknowledged comprehensive plan;
4. Encouragement of the development within urban areas before conversion of urbanizable areas.

How Was the Plan Developed?

The planning process consisted of four key components:

- Input from the Plan Advisory Committee
- Involvement of stakeholders and the public
- Establishment of Master Plan goals and objectives
- Review of existing conditions and development alternatives

INPUT FROM TECHNICAL ADVISORY COMMITTEE

Development of the Master Plan was guided by input from a multi-agency Planning Advisory Committee that met four times during the

planning process. This Committee included representatives from the City of Wilsonville, City of Tualatin, City of Sherwood, Washington County, Oregon Department of Transportation (ODOT), Oregon Department of Land Conservation and Development (DLCD), Wilsonville Chamber of Commerce, local property owners, and industrial real estate brokers. Documentation of the Planning Advisory Committee meetings is provided in Appendix A.

INVOLVEMENT OF STAKEHOLDERS AND THE PUBLIC

The broader community was involved in the Master Plan process through public invitation to the Planning Advisory Committee Meetings, and a public open house event. Documentation of the public open house is provided in Appendix B.

ESTABLISHMENT OF MASTER PLAN EVALUATION CRITERIA

Evaluation criteria for the Master Plan alternatives were established early in the planning process by the Planning Advisory Committee. The evaluation criteria included general goals and more specific objectives which were reviewed and affirmed by the Planning Advisory Committee. Table 2 provides a listing of the evaluation criteria.

**Table 2
Master Plan Land Use and Transportation Alternatives
Evaluation Goals**

1	Local, Regional and State Plans (consistency)
2	Adequate Transportation (multimodal facilities and connections)
3	Adequate Public Facilities (public/private cost sharing)
4	Citizen/Stakeholder Participation and Property Owner Support
5	Maintain High Quality Industrial Development

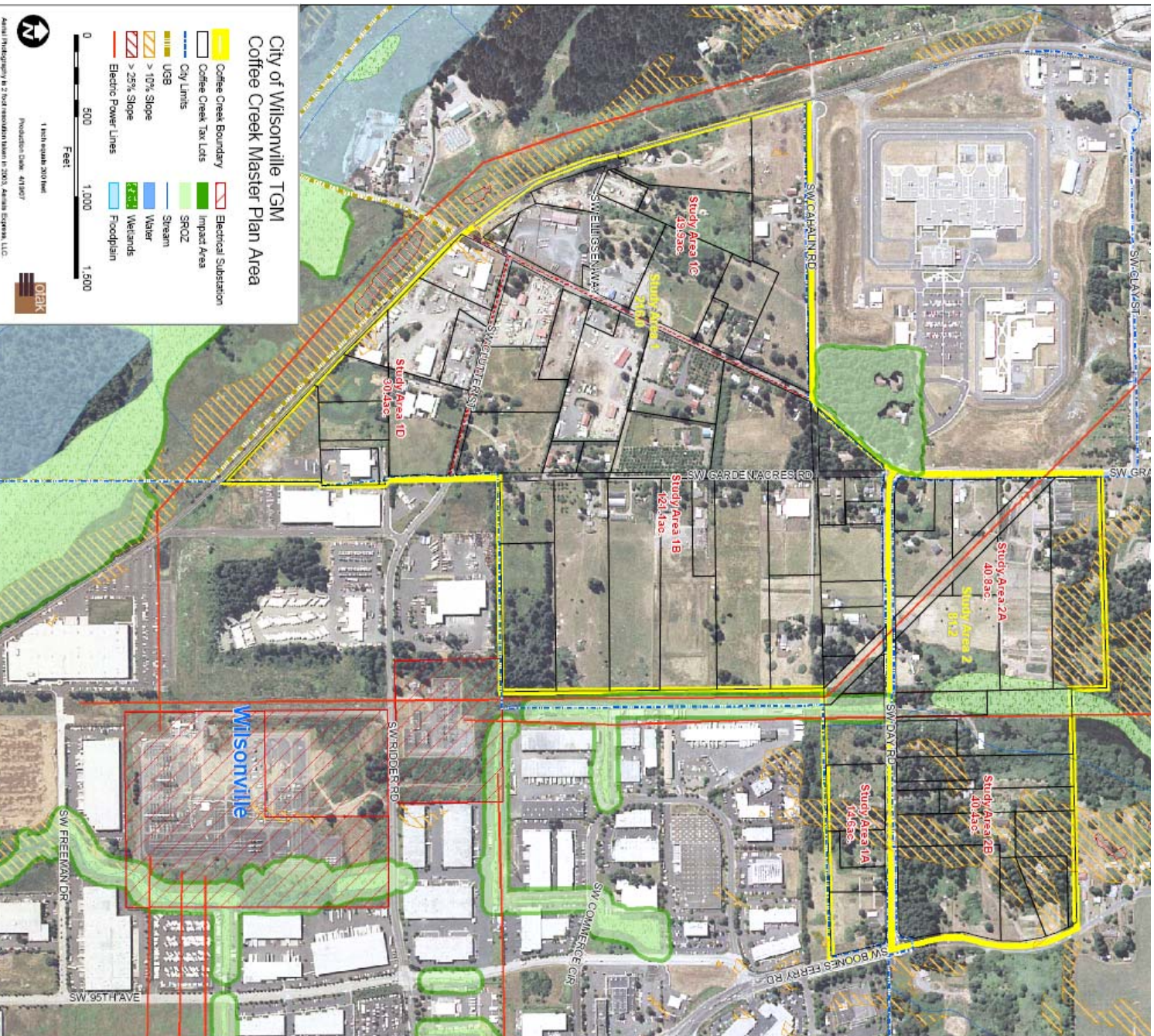
These goals were used to prepare detailed plan evaluation objectives and review criteria which are summarized in Appendix D.

REVIEW OF EXISTING CONDITIONS

The first portion of the technical work for the Master Plan focused on the review and analysis of existing conditions. This included a document review, site visit, and an analysis of land use policies, and transportation and infrastructure conditions. Figure 2 reflects existing tax lots, slopes, and Significant Resource Overlay Zone.

Existing conditions documentation, including a summary of land use and infrastructure policies and plans are included in Appendix C, and a traffic impact assessment (Appendix D). Maps illustrating key existing public facilities are included in Appendix E.

FIGURE 2. EXISTING CONDITIONS



3 MASTER PLAN

The Master Plan is described in the text below and illustrated in Figure 2. The Master Plan was selected following the development and evaluation of two land use/transportation alternatives. Please refer to Appendix D for a summary of the evaluation results.

Land Use and Development Plan

ZONING

In adding the Master Plan area to the UGB, Metro required the City to agree to plan the land to be used for Regionally Significant Industrial purposes: which allow large lot and standard industrial users; and limit non-industrial uses. When land in the Master Plan area is annexed to the City of Wilsonville, the land shall be zoned Planned Development Industrial – Regionally Significant Industrial (PDI-RSIA).

Planned Development Industrial – Regionally Significant

Industrial Area (PDI-RSIA) is the City's newest industrial zone district. This zone designation currently applies to the Coffee Creek Master Plan area and two others in the city. It is appropriate for most light manufacturing, warehousing, distribution, and flex uses. Corporate headquarters and technology campuses are also allowed. Retail and service uses are allowed as long as their uses are limited in floor area as to not exceed 3,000 square feet per use in one building, and not more than 20,000 square feet in multiple buildings. Office uses must not exceed 20% of total floor area within a site. Prohibited uses include any use that violates performance standards regarding: screening of outdoor storage; vibration; emission of odorous gases; night time operations; heat and glare; dangerous substances; liquid and solid wastes; noise; electrical disturbances; discharge standards; open burning; and unscreened outdoor storage.

The PDI-RSIA designation will help meet the Region's documented needs for high wage light industrial development, and provide a land use type that is compatible with surrounding industrial uses, and the Coffee Creek Correctional Facility.

Key development assumptions associated with the PDI-RSIA planning designation are shown on Tables 3 and 4.

Table 3
Permitted Uses within PDI-RSIA Zone District

Industrial Uses	
Warehousing & distribution	P
Outdoor Storage (with proper screening)	P
Product assembly and packing	P
Light manufacturing and processing	P
Motor vehicle services (ancillary only)	P
Fabrication	P
Office complexes- technology or corporate headquarters	P
Call Centers	P
Research & Development, laboratories	P
Industrial Services	P
Product repair, finishing and testing	P
Residential Uses	
Residential Uses (not to exceed 10% of total floor area)	P

TABLE 3 (continued)

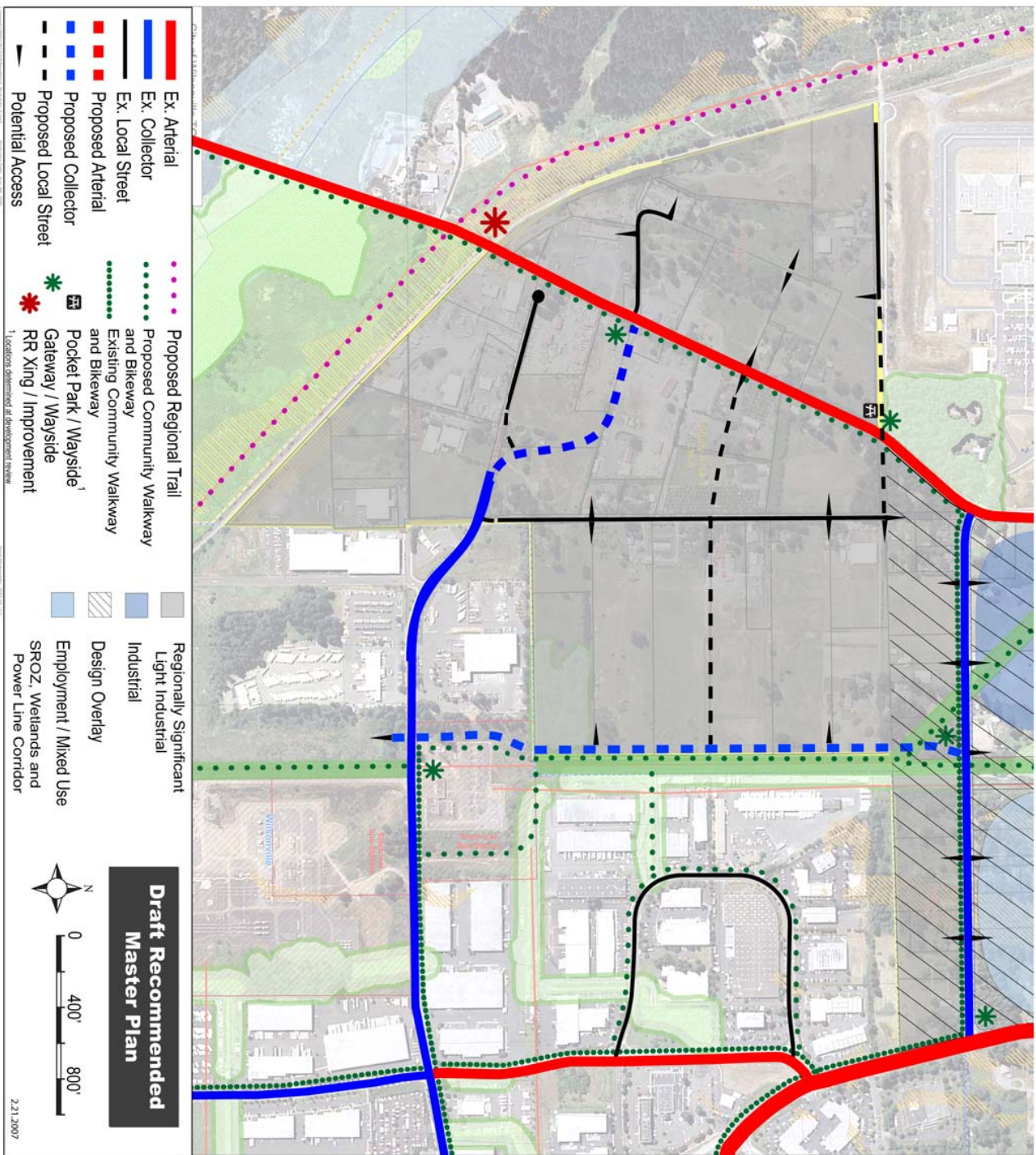
Commercial Uses	
Service or retail uses (not to exceed 3,000 s.f. in floor area in single building or 20,000 s.f. within multiple buildings.	P
Office complexes (not to exceed 20% of total floor area within a site)	P
Training facilities with primary purpose to meet industrial needs	P
Temporary buildings or structures (removed within 30 days)	P
Public and Other Uses	
Public facilities (e.g., utilities, school district bus facilities, public works yards, vehicle storage)	P
Accessory Uses, incidental to permitted uses	P
Expansion of buildings or uses approved prior to Oct. 25, 2004 of up to 20% of added floor area and/or 10% of added land area	P
Other uses, per judgment of Planning Director to be consistent with purpose of PDC Zone	P
Public park and recreation facility and open space	P

Notes: P = Permitted Use. Source: Wilsonville Development Code, Chapter 4, Section 4.135.5.

**TABLE 4
Development Assumptions for PDI-RSIA Zone District**

Parking	0.3 spaces/1,000 square feet of building area for storage, warehouse, wholesale, rail or truck freight operations. Maximum of 0.5/1,000 sq.ft. 1.6 spaces/1,000 minimum for manufacturing establishments. No maximum limit.
Setbacks	Front: 30 feet Side/back: 30 feet
Landscaping and Open Space	At least 15% of the site must be landscaped. Parking lots with more than 200 cars require additional tree planting, and pedestrian paths.
Design Review and Performance Standards	New Design Overlay Zone recommended for properties fronting Day Road. Additional performance standards apply to: screening of outdoor storage; vibration; emission of odorous gases; night time operations; heat and glare; dangerous substances; liquid and solid wastes; noise; electrical disturbances; discharge standards; open burning; open storage; light pollution and inadequate landscaping.
Minimum Lot Size	There are no tax lots greater than 50 acres in the Master Plan area. Parcels less than 50 acres are allowed land divisions in conformance with an approved site master plan. Minimum lot size dimensions are 160 feet by 160 feet.
Maximum Structure Height	No set minimum or maximum.

FIGURE 3. RECOMMENDED MASTER PLAN PHASE 1



DEVELOPABLE AREA

Of the approximately 216 acres in the Master Plan area, the actual developable area is reduced by the following factors shown in Table 5, including:

- Approximately 2.4 acres are within Significant Resource Overlay Zone (SROZ) protection areas. This estimate of SROZ land area assumes a 3.6 acre reduction in SROZ mapped land within the Master Plan area is approved by the City Council this year.
- Approximately 12.9 acres within the Master Plan area are considered to be within un-developable easements or public right-of-ways controlled by the City of Wilsonville, Portland and Western Railroad, Portland General Electric, and Bonneville Power Administration.
- Approximately 4.4 acres are within areas that include slopes greater than 10%, which may be considered too steep for certain types of industrial uses.

Table 5 Master Plan Area, Existing Land Use Constraints

	Acres
SROZ*	2.4
Easements & R.O.W.	12.9
Slopes>10%	4.4
Unconstrained Area	196.3
Total Gross Acres (approximate)	216.0

**Significant Resource Overlay Zone per City of Wilsonville ordinance. Includes 3.6 acre SROZ reduction amendment that is pending Council approval as of May 2007.*

FUTURE URBAN EXPANSION

When the Master Plan area is annexed into the City of Wilsonville, it will form the northwestern city limits. The land to the north and west of

the Master Plan area is designated by Metro for industrial development. The Master Plan for the area south of Day Road was prepared with a simultaneous analysis of development alternatives for an area north of Day Road as part of a separate Concept Planning effort by the City of Wilsonville. The City wanted to conduct the Concept Plan north of Day Road to better understand development opportunities and constraints north of Day Road, and to evaluate potential traffic impacts of additional development in the vicinity of the Coffee Creek Master Plan area.

Traffic Analysis

BACKGROUND

As part of the traffic analysis for the Coffee Creek Master Plan, DKS Associates performed an evaluation of existing conditions of the following intersections:

- I-5 Northbound Ramp @ Boones Ferry Road-Elligsen Road;
- I-5 Southbound Ramp @ Boones Ferry Road-Elligsen Road;
- Boones Ferry Road @ Day Road
- Boones Ferry Road @ Commerce Circle/95th Avenue
- Grahams Ferry Road @ Clutter/Ridder
- Grahams Ferry Road @ Day Road
- Grahams Ferry Road @ Tonquin Road
- Day Road @ Kinsman Road (future)
- Ridder Road @ Kinsman Road (future)

The traffic impact analysis was conducted for the City and ODOT to ascertain the specific capacity and multimodal improvements needed

to accommodate planned development, and to recommend appropriate amendments to the City and County Transportation System Plans.

RECOMMENDED MITIGATION MEASURES

To maintain adequate traffic performance standards within the study area during the PM peak period, mitigation measures are necessary to reduce the negative transportation impacts of future traffic growth.

NON-PROJECT ORIENTED TRANSPORTATION MITIGATION (NO BUILD AND SAFETY)

The following measures are related to estimated traffic growth on study area roadways. These mitigations would be necessary whether or not the Coffee Creek industrial area was developed. Additional safety related mitigations have been identified as well. Non-project oriented mitigations are summarized in Table 6.

Table 6: 2030 No Build and Safety Related Mitigations (PM Peak Hour)

Intersection	Recommended Mitigation
Tonquin/SW Grahams Ferry Road	<ul style="list-style-type: none"> Install eastbound left turn lane Install northbound left turn lane Install traffic signal
Day Road/Boones Ferry Road	<ul style="list-style-type: none"> Construct a four-lane roadway on Boones Ferry Road north of Day Road. Construct two-lane extension of Kinsman Road from RxR tracks to Day Road.
Kinsman Rd. Extension	<ul style="list-style-type: none"> Construct traffic signals at Kinsman Road/Day Road and Kinsman Road/Ridder Road intersections. Construct left turn pockets on all approaches at the Kinsman Road/Ridder Road intersection.

<p>Boones Ferry Road/95th Avenue</p>	<ul style="list-style-type: none"> • Construct an eastbound right turn lane on 95th Avenue. The eastbound approach would consist of a shared through-left turn lane and dual right turn lanes. • Stripe a westbound separate left turn pocket on the private industrial park approach • Install median on 95th Avenue to modify the Commerce Circle north approach to 95th Avenue to right in and right out movements only. The median would provide for improved operation of the intersection and increased storage with the existing center turn lane being available for left and through movements. • Construct a second northbound left turn pocket on Boones Ferry Road at 95th Avenue. Additional widening for two southbound through lanes (a minimum of 500' plus taper) would be required on 95th Avenue to facilitate the dual left turns.
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<p>Grahams Ferry Road/Clutter Road</p>	<ul style="list-style-type: none"> • Construct a westbound left turn pocket on Clutter Road • Construct a southbound left turn pocket on Grahams Ferry Road • Construct a traffic signal
Recommendation	
<p>Grahams Ferry Road Grade Separated Railroad Crossing</p>	<ul style="list-style-type: none"> • Reconstruct Grade Separated Railroad Crossing to City of Wilsonville Minor Arterial standards.
<p>Clutter Road/Grahams Ferry Road Intersection Sight Distance</p>	<ul style="list-style-type: none"> • Realign Clutter Road to the North as shown in Alternative 2.
<p>Boones Ferry Road Horizontal Curve</p>	<ul style="list-style-type: none"> • As part of the Boones Ferry Road widening, bring horizontal curve up to current standards.

As new industrial development is added in the Coffee Creek Master Plan area south of Day Road, additional transportation improvements would be required. The following measures as shown in Table 7 are related to the impacts of the proposed Coffee Creek Master Plan area south of Day Road. The mitigations as shown are in addition to the improvements identified for the 2030 No build scenario.

Table 7: Coffee Creek Master Plan Area South of Day Road Mitigations

Intersection/ Roadway	Recommended Mitigation
Day Road/Kinsman Road	<ul style="list-style-type: none"> Construct northbound left turn pocket
Grahams Ferry Road/Day Road	<ul style="list-style-type: none"> Construct dual southbound left turn lanes
Boones Ferry Road	<ul style="list-style-type: none"> Construct a third southbound through lane on Boones Ferry Road from Day Road that would drop at the I-5 southbound on-ramp. The existing southbound right turn lane on Boones Ferry Road at 95th Avenue could be removed at the time the third through lane is constructed.

Transit, Bicycle and Pedestrian Facilities

There are currently few existing bicycle and pedestrian facilities and no transit service within the Coffee Creek Master Plan area today. The closest transit stop is located nearby with a SMART bus line that provides stops along 95th Avenue and Commerce Circle (within ½ mile of the Master Plan area).

In addition to providing bike lanes and sidewalks or pathways along planned collectors and arterial roadways, the Master Plan supports local and regional pedestrian and bicycle trail connections that are consistent with the City's Parks and Open Space Plan. These future

pathways can be constructed within existing power line easement corridors and should connect with Metro's planned regional trail that will parallel the Portland and Western Railroad. Please refer to Appendix F for a map of existing and planned parks and natural areas and trails.

A pedestrian/bicycle trail connection is recommended between the planned Kinsman Road and Commerce Circle to provide more direct, safe and convenient access to existing SMART bus service. Future transit service routes and bus stops are recommended as the Master Plan area develops over time with new uses and additional employment.

Existing Conditions: Existing bicycle and pedestrian facilities are limited to Day Road and portions of Ridder Road. SMART bus transit stops are located approximately ½ mile east of the Master Plan area along 95th Avenue and Commerce Circle.

Development Issues: Future development has the opportunity to provide adequate setbacks from roadways and property boundaries to allow public access easements for development of future pedestrian and bicycle trails in accordance with the Master Plan. Funding for additional transit service within the Master Plan area will be supported, in part, through increased transit tax revenues that result from the additional employment/payroll that is attracted to the Master Plan area over time.

Please refer to Appendix G Traffic Impact Analysis; and Appendix H Fiscal Impact/Annexation Analysis for added information.

Infrastructure Needs

WATER SYSTEM

Prior to the construction of the City of Wilsonville's Willamette River Water Treatment Plant in 2002, the City relied on eight underground wells in the Troutdale Aquifer to serve its needs. The Willamette River Water Treatment Plant now provides for the City's water needs, with its main transmission line that runs up Kinsman Road. The Water Master Plan provides a plan for evaluating future water system needs to meet anticipated growth.

The Water Master Plan assumes current water usage rates of 44-gallons per day for industrial (average) and 176-gallons per day (peak) per user. The City's Community Development Department has also assumed that two 1.0 mgd average daily demand (ADD) industrial users will locate in the City by 2020 that will also need to be accommodated. The resulting analysis of water demand indicates that average peak day demand for industrial uses will increase from 1.25 mgd (2000) to 8.35 mgd (2020). Total water demand for the city is forecasted to increase from 6.8 mgd (2000) to 20.02 mgd (2020).

The existing Willamette Treatment Plant combined with existing wells has the capacity to handle approximately 10 mgd of total water demand. Future capacity expansion is planned to include 5 mgd through reservoirs (using aquifer storage and recovery wells) and another 5 mgd through expansion at the Willamette Treatment Plant.

The Water Master Plan includes a capital improvement phasing plan that identifies the need to add 4,220 linear feet of 12-inch water line between Grahams Ferry to Ridder Road and Ridder Road to Garden Acres. A preliminary list of recommended water system improvements for the Coffee Creek Industrial Area is provided in Appendix E, and Tables 3-4.

It is important to note, that all identified projects and cost estimates are made for preliminary planning purposes. Site survey work will need to occur and the City will need to update its water system model to determine more accurate on and off-site water system improvements and trunk line size, location and cost. Hence, additional water system

improvements could include a pro rata share of off-site improvements for the new reservoir and pump stations. The City operates Willamette Water Treatment Plant, which provides the majority of the City's water needs, with its main transmission line that runs up Kinsman Road (south of the Master Plan area).

The City's Water Master Plan includes a capital improvement phasing plan that serves the Coffee Creek Industrial Master Plan area.

Development Issues: Water main transmission supply lines exist through the central and southern portions of the Master Plan area.

Infrastructure Needs: The water master plan needs to be updated to reflect more accurate site topography and current long-range demand levels. An additional reservoir would be needed at some point to provide adequate peak capacity prior to build out of the Master Plan area. Once the water master plan has been updated, more specific estimates of future infrastructure needs can be made.

SEWER SYSTEM

The Coffee Creek Master Plan Area is located in the City of Wilsonville's United Disposal Interceptor sewer trunk line basin subarea. The majority of the Coffee Creek Urban Planning Area was included as Urban Planning Area 4 (UPA-4) in the Sewer Master Plan. This area was assumed to include the Coffee Creek Correctional Institution (on 113-acres) and 313-acres of future industrial land. Future unit flow assumptions for industrial uses were forecasted to be 2,000 gallons/day/acre. After considering factors for average daily flows, the industrial portion of UPA-4 is assumed to generate 626,000 gallons per day (gpd) of sewer flow at build-out.

It should also be noted that the assumptions included in the Preliminary Urban Reserve Plan for Coffee Creek Area 42 (prepared in 1998), calculated sewer flows at 3.0 mgd for the prison and industrial sites that can serve between 12 and 21 persons per acre. The current sewer master plan assumes 0.8 mgd of average flows from this area, which is consistent with the lower end of the range in employment (12 jobs/acre).

The master plan for Coffee Creek Industrial Area (south of Day Road) estimates potential employment to be 9 jobs/gross buildable acre for each Alternative. Hence, the sewer capacity assumptions appear to be in line with current sewer master plan assumptions.

The sewer master plan identifies two specific capital improvements that would be required to adequately serve the majority of the Coffee Creek Planning Area. These include:

- United Disposal Parallel Pipe (CIP-UD1 and listed as SS-1 in Appendix C). Includes construction of a 12-inch line from SMH3503 to SMH0269 to convey peak wastewater flows over a distance of 5,315 feet. The project includes an 8-foot diameter manhole with a diversion weir. Rail-crossing will require trenchless technology. Alternative alignments should be investigated to minimize impacts to wetland and natural areas. This project should coordinate with Kinsman Road extension where possible. Estimated cost for the Kinsman segment of this pipe is \$680,000. Additional off-site costs were estimated by the City in 2001 to be approximately \$1,105,704. After adjusting for cost escalation, the current cost for off-site construction for this project is likely to be approximately \$1.47 million.
- Garden Acres Road New Trunk Sewer (CIP-UD3 and SS-3 in Appendix C). Includes a new 12-inch trunk service extension along Garden Acres Road between Day Road and SW Ridder Road to serve future development. A portion of this project was constructed a few years ago to accommodate the prison demand. Remaining cost for the Garden Acres extension segment of this pipe is approximately \$200,000.

Additional sewer line improvements that are recommended for the Planning Area are reflected in the sewer facility maps in Appendix F. It is important to note, that all identified projects and cost estimates are made for preliminary planning purposes.

Development Issues: Sewer Main trunk links are located within the central portion of the Coffee Creek Master Plan area.

Infrastructure Needs: The sewer master plan includes the Master Plan area in the hydraulic modeling and long range capital improvement program. Site survey work will need to occur and the City will need to update its sewer system model to determine more accurate on and off-site sewer system improvements and trunk line size/location, pump station requirements, and cost.

STORM DRAINAGE

The Coffee Creek Master Plan area is located within the Coffee Lake Creek Basin. The north tributary to Basalt Creek is located south of Day Road. Basalt Creek drains into Coffee Creek Lake and extends north of Day Road into the City of Tualatin UGB. The master plan area is relatively flat with topography that varies 1-5 feet in elevation, and gently slopes from north to south.

The Storm Water Master Plan identifies potential regional detention facilities in the Coffee Creek area as effective pollution reduction facilities. Planned facilities in the Planning Area include:

- North Wilsonville Planning Area comprehensive storm drainage system. The former Urban Reserve Area 42 (portion of Coffee Creek Planning Area) requires a system of storm drainage improvements in addition to on-site storm water detention and treatment provided by developers.

The City requires each new development within the Coffee Creek Industrial Master Plan area to detain and treat any projected run off per existing City Code, it is recommended that the planned Kinsman Road and Grahams Ferry Road improvements be constructed as "green streets." Green streets will require a variance from existing City Street Standards to allow bio-swales and pervious surfaces to be used in lieu of curb and gutter to help convey storm water runoff.

Another recommendation of the Coffee Creek Master Plan is for the City to conduct a Basalt Creek and Coffee Creek sub-basin analysis to better define existing storm water events and flooding-related issues. Future development within the sub-basin should be modeled to

ascertain likely impacts of urban development, and to identify impacts of beneficial storm water design standards. The possibility for a new regional storm water detention pond within the Coffee Creek Planning Area should be assessed. Please refer to Appendix F for a map of existing and planned storm water facilities.

Development Issues: Storm Water facilities are an important element of the Coffee Creek Master Plan area given the site's proximity to the Coffee Creek Lake wetlands area, and its tributaries.

Infrastructure Needs: Runoff from future streets or access roads and development will need to meet City design criteria for storm water quality and quantity control, by handling potential runoff with on-site detention and treatment facilities. A new conveyance system can be installed along the roadways. Site development runoff will need to be treated and detained, if necessary, before being discharged to the public drainage systems.

OTHER UTILITIES

Northwest Natural Gas currently serves the master plan area.

Portland General Electric provides local power distribution and has a high power transmission main running parallel to the east side of the master plan area.

Communications, internet, and television services are provided by a variety of service providers within close proximity.

Parks and Recreation

Protecting natural resources is a hallmark of the Wilsonville Comprehensive Plan and the Parks and Recreation Master Plan. Natural resource protection and opportunities to partner with private land owners, as has historically been the case in Wilsonville, should be considered during the planning process for the Coffee Creek Area. Focus is placed on creating an interconnected park system including

greenways and trails, but also connections for bike, pedestrian, and transit transportation choices.

The recommended plan for the Coffee Creek Master Plan area includes at least four new waysides which can function as strategic "gateway" design features with informational displays that depict area site/building configurations. These waysides should also function as "pocket parks" for local employees and residents with picnic tables and benches.

There are also local and regional pedestrian and bicycle trail connections that are included in the Coffee Creek Industrial Area plan. These pathways can be constructed within existing power line easement corridors and should connect with Metro's planned regional trail that will parallel the Portland and Western Railroad. Please refer to Appendix F for a map of existing and planned parks and natural areas and trails.

Existing Conditions: No existing parks facilities exist within the Master Plan area.

Development Issues: Future development has the opportunity to incorporate pocket parks/wayside facilities into the Master Plan area. In addition to providing facilities along roadways, pedestrian and bicycle paths can be provided as linear parks along existing power line easements, and adjacent to SROZ areas.

4 IMPLEMENTATION

This section addresses four key considerations for Master Plan implementation: provision of urban services, costs, funding options, and consistency with City plans and policies.

Provision of Urban Services

The Coffee Creek Industrial Master Plan will provide a framework to guide the development of public facilities and private uses.

Developers will be responsible for providing local streets and utility connections to trunk line systems. However, to maintain flexibility, the plan focuses primarily on collector and arterial roadway improvements, and water and sewer trunk lines and does not identify specific locations or configurations for local connections. Assumptions are that the best configuration of development would be determined by market opportunities and constraints at the time of development, allowed uses, and other Wilsonville Development Code requirements.

Cost Estimates

Total capital costs for major roads, sewer, water, and stormwater systems have been estimated for buildout of the Master Plan area. (See Table 8) Unit costs were prepared based on local and regional experience with a variety of roadway and pathway projects.

The preliminary capital cost estimates do not include extraordinary cost for right-of-way acquisition, permitting or geotechnical soils work. Extraordinary costs may include special environmental mitigation, subsurface soil enhancements, structural engineering systems, and business/residential relocation assistance.

The preliminary cost estimates also assume "green street" design standards for Kinsman Road and Grahams Ferry Road which are

assumed to consist of 2-lanes with landscaped medians, buffer strips, bike lanes, sidewalks, underground utilities and street illumination. Pathways are assumed to be a mix of pervious and paved surfaces.

TABLE 8 ESTIMATED CAPITAL COSTS FOR COFFEE CREEK MASTER PLAN

Public Facility System	Years 1-5	Years 6+	Total
Water (mainline system)	\$420,000	\$720,000	\$1,140,000
Sanitary Sewer (trunk system)	\$680,000	\$850,000	\$1,530,000
Surface water	*	\$300,000	\$300,000
Transportation			
Collector & Arterial Streets**	\$6,280,000	\$19,840,000	\$26,120,000
Local Streets***	—	—	—
RR-xing	—	\$4,000,000	\$4,000,000
Parks and Waysides	—	\$570,000	\$570,000
Other (planning/permitting/legal)	\$200,000	\$300,000	\$450,000
Total	\$7,630,000	\$26,580,000	\$34,210,000

*Source: Otak, Inc. All costs are stated in 2007 dollar amounts for public facilities within Master Plan area. Additional off-site costs may be required. * Storm water improvements also include benefits derived from construction of green streets for Kinsman Road. ** These transportation projects include \$16.7 million for roads and \$4.0 million for the railroad crossing that is recommended under the "no build" scenario. *** Local street costs are not estimated and will be incurred by developers.*

Major public infrastructure items including roads, trails, water, sewer, and storm water facilities are estimated to cost approximately \$7.6 million over the initial five years, as indicated in Table 8. Additional capital costs are expected to require another \$26.6 million for on-site public facility investments (excluding local streets, which are assumed to be paid and constructed by private developer(s)). It should be noted that

approximately \$16.7 million in road costs and the \$4.0 million rail road crossing improvement are recommended even without annexation and development in Coffee Creek.

Funding Strategies

As with most successful large master planned developments, the Coffee Creek Industrial Area will require a mix of public and private funding and financing for on- and off-site improvements.

The first step in the funding process entails amendments to local (City of Wilsonville and Washington County) Transportation System Plans to identify the facilities identified in Appendices F and G. After the TSP amendment processes occur (assuming there is support from ODOT and other state, Metro and local agencies/stakeholders), the county and/or city can work with ODOT and local stakeholders to update local ordinances (such as the Wilsonville and Washington County Systems Development Charge Methodology), capital improvement programs, and the ODOT State Transportation Improvement Program (STIP) to designate appropriate improvements for funding.

As local plan amendments are adopted, funding sources should be identified. Potential local funding sources may include the following:

- Local Systems Development Charges (City and County)*
- Local Improvement District (LID)*
- Developer Dedications*
- Wilsonville Urban Renewal Program*
- Metro Transportation Improvement Program*
- Oregon Statewide Transportation Improvement Program*
- Oregon Immediate Opportunity Program*
- Oregon Community Development Block Grant Program*
- Oregon Industrial Development Revenue Bond Program (financing)*
- Oregon Infrastructure Bank (financing)*
- OECD Special Public Works Fund (financing)*

ECONOMIC AND FISCAL IMPACTS

If we assume the Master Plan area is fully built out by year 2030, the general conclusions that can be reached by this analysis include:

- Total assessed value of development would increase from approximately \$16 million today to \$258 million per year.
 - At current property tax rates, the increase in local assessed value would generate about \$1.4 million in new annual property tax revenues for the City, and \$6.5 million in new annual property tax revenues for Washington County.
 - Annual net city revenue collections (revenues from fees less governmental service costs for water, sewer, police, planning, etc.) are expected to yield a net annual fiscal benefit to the City of Wilsonville of approximately \$325,000 per year (before any additional debt service).
 - Significant positive economic impacts are anticipated from the more than hundreds of construction jobs and 1,470 permanent jobs.
 - The added permanent income of \$55 million in direct payroll to the site's 1,470 employees is expected to generate an total direct/indirect regional economic impact of approximately \$135 million per year.
 - The direct payroll is expected to support over \$4.0 million in annual state income tax revenues at buildout.
 - Additional transit tax revenues will be realized by SMART (local transit provider) as new payroll is added within their service district.
- Please refer to Appendix H for a detailed analysis of economic and fiscal impacts.

Consistency with City Plans and Policies

The Coffee Creek Industrial Master Plan will provide a framework to guide the development of public facilities and private uses. This means that the policies, zoning, and codes must be consistent with the Master Plan to support the long-term vision. Implementation is strengthened by the supportive City policies including:

- Establish new design overlay zone for properties along Day Road that are achievable and flexible yet focused on building forms, site layout, landscaping, and transit/pedestrian connectivity.
- Ensure that existing remaining SROZ areas are protected with natural landscaping, vegetation, and mature trees. "Incorporated" into future site development plans and projects.
- Adopt new code language that requires coordinated annexation requests for a stated minimum threshold of land area not less than 50 acres at a time, unless this condition cannot be met.
- Explore ways to limit storm water run-off impacts caused by increases in impervious surface areas (e.g., building rooftops, parking areas, streets, etc.) by conducting a sub-regional storm water basis analysis and action strategy. This storm water analysis should consider impacts of various public and private improvements, such as green streets, sub-regional detention/treatment ponds, bio swales, filtration devices, and eco-roofs.
- Allow green street design standards as a potential variation to the City's current roadway design standards within the Master Plan area.
- Explore and quantify potential local funding sources that can be used to pay for new collector and arterial roads, transit service, bicycle/pedestrian facilities, storm water mitigation, water, and sewer improvements. This additional analysis should include but not be limited to the formation of a new System Development Charge overlay district, Local Improvement Districts, and/or an Urban Renewal District.

Draft development code amendments are included in Appendix 1. In addition to the development code amendments, the City of Wilsonville and Washington County may be required to adopt additional

amendments to Comprehensive Plans, Public Facility Plans, Transportation System Plans, and Capital Improvement Programs to implement the Master Plan. The City of Wilsonville and Washington County should also review and update their intergovernmental agreement for planning and providing urban services for areas north of Day Road and west of the Portland and Western Railroad.

Washington County Transportation System Plan

Amendments may be required to the County TSP pending the outcome of the Traffic Impact work. Potential TSP amendments may include:

- Identification of planned improvements to widen Lower Boones Ferry Road north of Day Road to four lanes.

Wilsonville Transportation System Plan

Amendments will be required to the Wilsonville TSP to address adequate public facility requirements in accordance with Oregon Land Use Planning Goal 12 Transportation and Metro Title 11 requirements. Recommended TSP amendments include amending Chapter 5 of the 2003 TSP by adding the projects listed in Table 9.

Table 9 City of Wilsonville Draft TSP Amendments

ID #	Project Name	Prelim. Cost Estimate (millions)	Priority
C-24	Kinsman Road (Day Road to Ridder Road)	\$6.00	Years 1-5
T-4	Boones Ferry Road/95 th Avenue northbound turn lane	\$0.20	Years 6+
T-5	Clutter Road/Grahams Ferry Road westbound left turn lane	\$0.85	Years 6+
T-6	Grahams Ferry Road/Clutter Road southbound turn lane	\$0.30	Years 6+

Table 9 (continued)

T-7	Grahams Ferry Road/Clutter Road signal	\$0.28	Years 6+
T-8	Grahams Ferry Road Railroad Crossing	\$4.00	Years 6+
T-9	Boones Ferry Road widen four-lane section north of Day Road	\$2.49	Years 6+
T-10	Tonquin/SW Grahams Ferry Road westbound turn lane	\$0.30	Years 6+
T-11	Tonquin/SW Grahams Ferry Road northbound turn lane	\$0.30	Years 6+
T-12	Tonquin/SW Grahams Ferry Road signal	\$0.28	Years 6+

Source: *Otak and DKS Associates.*

Wilsonville Capital Improvement Program

Additional projects that are recommended for inclusion in the City's CIP include:

- Kinsman Road Engineering and Permitting (with \$500,000 to identify corridor issues, traffic conditions, right-of-way requirements, design sections, land use forecasts, improvement alternatives analysis, capital costs, environmental impacts, and recommendations regarding design sections, alignment, improvement, and phasing/funding);

- Coffee Creek I water transmission line extension along Kinsman Road with approximately \$420,000 for planning, design, and capacity improvements;
- Coffee Creek I sanitary sewer transmission line extension along Kinsman Road with approximately \$680,000 for planning, design, and capacity improvements;
- Coffee Creek Industrial Area SDC Overlay and Urban Renewal Study, with an approximately \$60,000 in funding to be scheduled in 2007/08.
- Coffee Creek I survey work and update of the City's water and sewer capacity models, with approximately \$40,000 in funding, to be schedule in 2007/08.
- Coffee Creek area storm water sub basin analysis, with approximately \$100,000 in funding, to be scheduled in 2008/09.

Note, that all of these recommended CIP improvements would likely require funding that exceeds existing local SDC funding commitments. Hence, the city should work closely with ODOT and other state and local entities to leverage non-city public and private funding resources.

The city should adopt the Master Plan, and then subsequently complete updates to the City Water and Wastewater Master Plans. There are several preliminary water and sewer improvements identified in the Master Plan that can be incorporated into annual updates of the City's Water and Wastewater Improvement Programs.

OTHER

To codify the Master Plan, a number of refinements to public facility plans and the draft code amendments for the Master Plan may need updating with map changes and additional text. Recommended code amendments include a new design overlay district for Day Road (Figure

4) and Green Street roadway standards (Figure 5). Additional amendments will be identified by City of Wilsonville planning staff as part of the adoption process.

The Coffee Creek Master Plan recommends adoption of green street design standards (example shown in Figure 5) within the Master Plan area. Green streets can be an element of an overall storm water control plan and Action Strategy for the Basalt Creek/ Coffee Lake sub-basin to mitigate storm water run-off impacts caused by increases in impervious surface areas (e.g., building rooftops, parking areas, streets, etc.), and to alleviate impacts that would be caused during peak flood events.