



SECTION 30 Urban Employment Center

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Introduction

Plan Purpose

The Section 30 Employment Center Plan presents the vision and policies related to the future development of properties within the Section, many that either are, or in the future will no longer be utilized for aggregate resource extraction and processing. In 2004, Clark County and the City of Vancouver adopted a Plan to guide the redevelopment of the Section, but since then the area has undergone significant changes that include annexation to the City, extensive new development to the south of the plan area, newly annexed areas by the City of Camas to the east, and the termination of a proposed land fill. This updated plan considers these changes as well as input from all the stakeholders. It addresses both the opportunities and constraints presented by the site, while providing guidance for future development, provision of needed infrastructure, promotion of low impact quality development, and connection to adjacent existing neighborhoods, schools, and parks.

The Plan update recognizes and respects existing property owner development agreements, while proposing a long term vision with flexible plan implementation approaches that reflect market conditions and interests within the Plan's anticipated 20 to 30 year build out period.



The plan envisions a dynamic mix of urban development.

FIGURE 1. Vicinity Map

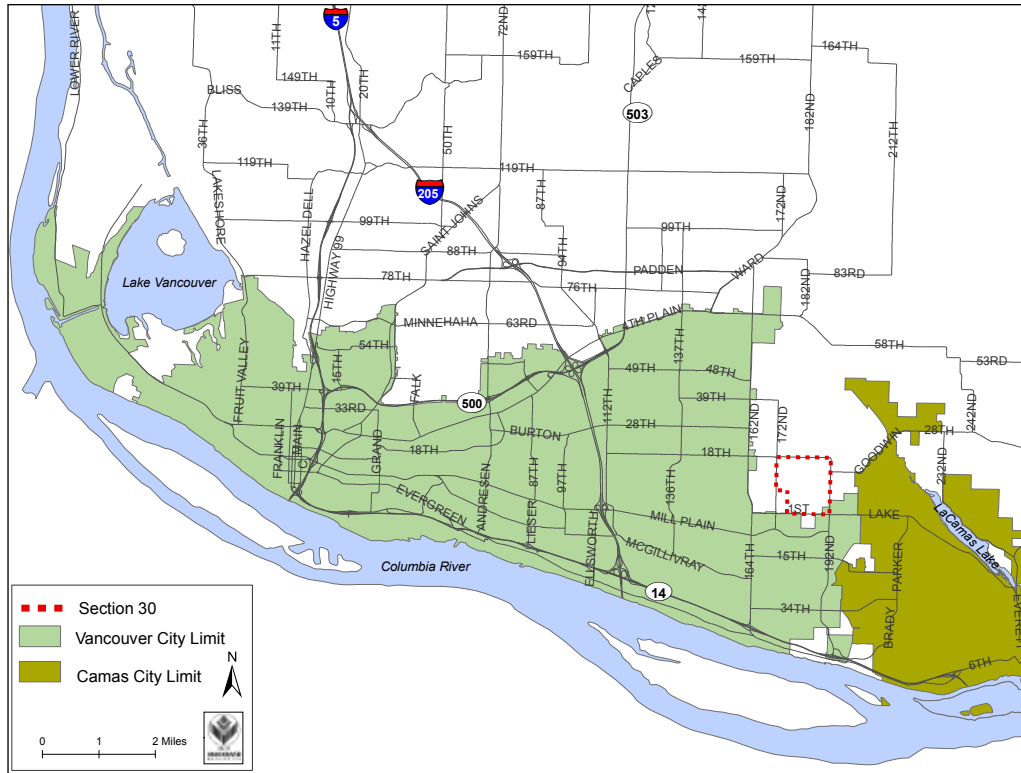


FIGURE 2. Section 30 Map



Plan Approach

The project approach for the Plan included compiling information on existing conditions in the study area to create a “baseline” for future planning, actively engaging property owners and interested citizens, and soliciting advice from development, real estate, and regulatory specialists.

In February 2008, the public engagement for the Plan began with property owner interviews. The purpose of these interviews was to inform stakeholders of the plan update, share information about the planning process, and discuss individual property owner goals.

Following these initial stakeholder interviews, staff and consultants solicited information and shared ideas in a variety of ways; including group property owner meetings, public open houses, neighborhood meetings, individual property owner meetings, meetings with various specialists and meetings with interested public agencies, including Evergreen School District, Washington Department of Natural Resources, City of Camas and Clark County.

In addition, the city provided information on the Plan through e-mails, newsletters and a project website. Public workshops and hearings were held before the Vancouver Planning Commission and City Council leading to plan adoption in the fall of 2009. Refer to the Public Process Summary report located in the Technical Report Appendix for more detail.

Plan Context

Annexation

On July 16, 2008, the City of Vancouver annexed Section 30 and as part of this process, the city made individual development agreements with several of the property owners. In general, the agreements address allowed uses (preserving the right to continue resource related heavy industrial uses as the area redevelops), as well as rights of access to surrounding arterial streets. Initial zoning upon annexation is the City of Vancouver zone equivalent to previous Clark County zones that applied to the site prior to annexation.

Surrounding Area Characteristics

The lands to the west, north, and east of Section 30 lie within Unincorporated Clark County and for the most part contain suburban residential communities with churches, parks and schools.

To the south and within the City's boundary is the 400-acre master planned mixed-use development called the Columbia Tech Center (CTC). It is one of the city's largest employment centers employing over 6,000 people and includes light industrial and office campus uses, a regional commercial center, and residential communities. The newly constructed Clark College East Satellite Campus is located in CTC and includes classrooms, science and electronics labs and a work force development program.





Existing gravel processing

Section 30 is located in a key area between Eastern Vancouver and Camas and is expected to be influenced by Camas growth to the Northeast. In this larger context of east Vancouver and west Camas, several major employers have sited their headquarters or branch offices. Companies such as, Hewlett Packard, Wafertech Semiconductor, SEH America, Sharp Labs and Microelectronics, Nautilus World Headquarters, Logitech, Novellus, Dynex, and Underwriters Laboratories to name a few.

Plan Area Characteristics and Land Use

The Section 30 planning area is approximately 553 acres bounded on the west by a subdivision and NE 172nd Avenue, on the east by NE 192nd Avenue, on the south by SE 1st Street and on the north by NE 18th Street. Refer to Appendix for *Existing Conditions Memorandum*.

For more than four decades property owners used the bulk of the planning area for gravel mining and mining-related uses. Over time, the mining has provided a growing Clark County with a significant economic resource in the form of sand and gravel for roads and buildings. Today, owners of the gravel mine sites are no longer extracting gravel and the majority of mined sites are vacant and in various stages of reclamation, a process governed by the State Department of Natural Resources. Some of the mine sites have completed reclamation and are filling and grading in preparation for future development. A few sites continue with mining related activities, such as gravel processing, asphalt batching and concrete manufacturing.

Clark County owns over one hundred acres of which approximately 40 acres is leased to the Harmony Sports Association for the use of youth sports facilities. The Association includes the Vancouver United Soccer Alliance, the Cascade Little League, and the Columbia River Miracle League. This leased property has not been mined for sand and gravel. The remaining County properties include a monitored closed solid waste facility and two shooting ranges, one for law enforcement and one leased for public recreation.

The law enforcement range is operated adjacent to the closed solid waste facility site on lands owned by the Clark County Solid Waste fund. This range is managed for law enforcement

training, and is used by agencies from throughout the Vancouver/Portland metropolitan areas. The Clark County Gun Club operated facility is the only private outdoor shooting range that allows for public use in Clark County. The public uses the range for gun safety classes, sighting in firearms, and general recreational shooting. The range is also heavily used by area law enforcement agencies, including the Vancouver Police Department (VPD) and the interagency SWAT team.

A new 8-acre commercial development, the Lacamas Market Center, has been approved for the northwest corner of NE 192nd Ave. and SE 1st Street. A Humane Society facility has been approved for construction on a 5 acre portion of the City of Vancouver public works site located on NE 192nd Ave., near where a future extension of 9th Street would occur. The existing City public works operations center located south and adjacent to the Humane Society parcel is planned for relocation to an identified site away from Section 30.

In the north portion of the plan area there are two residences, a construction materials recycle business and the Bonneville Power Administration easement and owned lands with high voltage transmission lines. Some of the transmission line corridor is owned by BPA and some is on easements. An active business named, Ultrablock is located on a small parcel on the west side of the plan area at the corner of 172nd Ave, near where a future extension of 9th Street may occur. Located in the southwest corner is the English Vineyard and Winery a unique commercial agriculture enterprise. The owner intends to remain and continue to nurture the growth of the vineyard and winery.

The list below identifies the key properties and existing uses as of the date of this plan update. Of these listed uses, only a few are likely to remain over the life of the 20 to 30 year plan - the Closed Solid Waste Disposal Facility; Harmony Sports Complex; the English Vineyard and Winery; the Humane Society; and the proposed Lacamas Market Center.

Key Existing Properties and Uses

- CEMEX – Gravel Processing, Asphalt Batching;
- Glacier Northwest – Concrete Manufacturing;
- Columbia Rock and Aggregate – Vacant (former mine)
- Schmid – Construction Materials Recycle;
- English – English Vineyard and Winery;



Remaining Quarry side slopes



The plan promotes the relocation of the existing shooting ranges.

- Blundell – Ultra Block Business;
- FGE/Bjornsen – Vacant (former mine);
- Grayrock – Vacant (former mine);
- DIRG – Vacant (former mine);
- Friberg Properties – (former mine);
- Gramor – Proposed LaCamas Market Center;
- Clark County – Harmony Sports Complex leased by the Harmony Sports Assoc;
- Clark County – Sheriff Firing Range;
- Clark County – Recreational Shooting Range;
- Clark County – Closed Solid Waste Facility;
- City of Vancouver – Department of Public Works Operations facility;
- City of Vancouver – Humane Society Facility;
- Bonneville Power Administration – High Voltage Transmission line.



Existing vineyard and winery

Reclamation Grades and Slopes

Decades of mining and subsequent reclamation activities have left much of Section 30 as a deep depression from nearby terrain. Some areas of Section 30 are 90 feet below the adjacent street elevation of plus or minus 290 feet. Many of the owners are modifying grades through filling based on reclamation plans for their properties.

The initial assessment of reclamation grades is based on the property owner's estimated reclamation elevations for their properties and the generalized cross-sections shown in the Appendix *Surface Mine Reclamation Considerations Technical Memorandum*. The project area is divided into a "north portion" and "south portion" with the existing 9th Street haul road separating the two.

Reclamation bottom grades on the north portion vary from elevation 210 to elevation 285. In the south portion, bottom elevations are more variable and range from 215 ft to 280 ft. The attached cross-sections show typical slope variability across the site. In general, grades on individual parcels on the south portion of the site vary by 20-ft or greater compared to grades on adjacent property. These grade differentials create substantial side slopes, which take up significant potentially developable property, as well as create drainage, access and building set-back constraints. For example, the bottom grade of site S-3 creates slopes totaling about 5.5 acres of property on parcels S-1 and S-4.

In general, it appears that additional excavation or fill to create a single consistent bottom elevation may not be feasible since several sites are in the process of being filled, or are at grade with surrounding roads. Filling of individual properties to several common elevations is likely the most feasible option other than maintaining existing conditions. Refer to the *Grading and Elevations* Section of this Plan.

Utilities

Currently, water and sanitary sewer do not serve most of Section 30. The City of Vancouver will be the purveyor of both water and sanitary sewer as Section 30 develops. Gravity sewer service to existing sewer mains is not feasible for most of Section 30. A 12-inch sanitary sewer main is located near the intersection of SE 1st Street and NE 192nd Avenue. This main will provide a discharge point for domestic sewage pumped from Section 30. A few 12 inch water distribution mains exist within portions of the street right-of-ways located along the boundaries of the plan area. There are long gaps between these existing water mains and as development progresses; the water mains will eventually need to be connected. To date there are no stormwater facilities developed in Section 30.

Private utility providers to the Section 30 plan area include Northwest Natural Gas and Clark Public Utilities (CPU). Electric power is supplied to the planning area by CPU. BPA maintains a high-voltage transmission line that runs in the east-west direction along the north edge of the plan area.

Existing Transportation Conditions

The undeveloped and recently annexed Section 30 plan area does not have internal public streets. The existing perimeter roads although classified as principal and minor city arterials, are today 2 lane unimproved rural type roadways.

A list of the roadways that serve the Plan area and their classification is shown in Table 1 and the existing operating level of service are shown in Table 2.

The *Transportation Existing Conditions Report* (see appendix) addresses congestion, safety, transit, roadway design, and pedestrian and bicycle facilities. In summary:

Congestion

Today, the worst traffic congestion in the study area is on Mill Plain Boulevard and on 164th Avenue. Key intersections on each corridor operate at level of service D. Queue backup between



Table 1. Section 30 Transportation Study Area Roadway Classifications

Street	From	To	Classification
NE 18th Street	NE 136th Avenue	NE 192nd Avenue	Principal Arterial
SE 1st Street	SE 164th Avenue	East URB	Principal Arterial
SE Mill Plain Boulevard	SE 136th Avenue	SE 192nd Avenue	Principal Arterial
SE 34th Street	SE 164th Avenue	East URB	Principal Arterial
NE/SE 162nd/164th Avenue	NE 28th Street	SR 14	Principal Arterial
NE/SE 192nd Avenue	NE 18th Street	SR-14	Principal Arterial
NE 28th Street	NE 138th Avenue	NE 172nd Avenue	Minor Arterial
NE 138th/SE 136th Avenue	NE 28th Street	SE McGillivray	Minor Arterial
NE/SE 172nd Avenue	Tech Center Drive	NE 39th Street	Minor Arterial
NE 13th Street	NE 192nd Avenue	East URB	Collector Arterial
NE 9th Street	NE 162nd Avenue	East UGB	Collector Arterial
NE 176th Avenue	SE Mill Plain Boulevard	NE 9th Street	Collector Arterial
NE 11th Street	NE 162nd Avenue	NE 172nd Avenue	Local Street
NE 11th Street	NE 192nd Avenue	East URB	Local Street

intersections, especially on 164th Avenue, also adds to peak hour congestion. Several minor intersection movements experience excessive delay.

Safety

No significant safety problems have been identified at intersections adjacent to Section 30 (defined as more than 1.0 collision per million entering vehicles (MEV)). The intersection of SE Mill Plain Boulevard and SE 164th Avenue experience a higher than average collision (e.g., over 40 during the five year analysis period between 2003 and 2007), but the city has proposed signal timing and/or intersection improvements to address this.

Transit

Aside from CTRAN Route 30, which passes through the intersection of SE 1st Street and 172nd Avenue, Section 30 is not served by public transit. However, a high level of transit service is provided on SE 164th Avenue, particularly during peak travel periods.

Table 2. 2008 PM Peak Hour Intersection Levels of Service

PM PEAK HOUR					
No.	Signalized Intersections		Average Delay (sec./veh.)	V/C Ratio	LOS
1	NE 28th Street @ NE 138th Avenue		11.4	0.61	B
2	NE 28th Street @ NE 162nd Avenue		49.9	0.71	D
3	NE 18th Street @ NE 138th Avenue		20.7	0.55	C
4	NE 18th Street @ NE 162nd Avenue		45.4	0.72	D
5	NE 18th Street @ NE 172nd Avenue		13.0	0.55	B
7	NE 13th Street @ NE 192nd Avenue		16.1	0.64	B
8	NE 11th Street @ NE 162nd Avenue		27.5	0.34	C
11	SE 1st Street @ SE 164th Avenue		39.0	0.58	D
12	SE 1st Street @ SE 172nd Avenue		13.9	0.54	B
13	SE 1st Street @ SE 192nd Avenue		25.8	0.43	C
14	SE Mill Plain Boulevard @ SE 136th Avenue		54.0	0.72	D
15	SE Mill Plain Boulevard @ SE 164th Avenue		52.6	0.72	D
16	SE Mill Plain Boulevard @ SE 172nd Avenue		28.1	0.42	C
17	SE Mill Plain Boulevard @ SE 192nd Avenue		25.5	0.58	C
18	SE 34th Street @ SE 192nd Avenue		21.3	0.35	C
No.	Unsignalized Intersections	Critical Movement	Average Delay (sec./veh.)	V/C Ratio	LOS
6	NE 18th Street @ NE 192nd Avenue	EB all	10.7	0.38	B
		WB all	39.5	0.05	E
9	NE 9th Street @ NE 162nd Avenue	WB all	>100.0	1.31	F
10	NE 9th Street @ NE 172nd Avenue	EB all	10.6	0.05	B

Pedestrian and Bicycle Facilities

Section 30 has little standard urban infrastructure. Surrounding areas that have developed recently do include sidewalks, bike lanes, and safe roadway crossings. But, most of the streets directly adjacent to Section 30 today have wide travel lanes, relatively high vehicle speeds, and spotty roadway frontage improvements. As a result, pedestrian and bicycle level of service is low.



Depending on national employment growth and market conditions in the Vancouver/Portland Metropolitan Area, Section 30 is projected to fully develop over a 20 to 30 year planning horizon.

Economic Trends

Economic Trends and Future Opportunities

Multiple indicators of the past, current, and projected market conditions in the area are positive for new community development for an area as large as Section 30. Refer to Appendix, *Economic Analysis Reports*. The East Vancouver/Camas area has experienced robust growth in employment, housing and retail uses in the past decade and continues to be a locus of development for high end housing and excellent jobs. This activity made the area attractive for the new retail development that has emerged south of Section 30 in the CTC.

Current office, retail and industrial development activity has been in response to the substantial employment base in the area, including major employers such as Hewlett-Packard, Wafertech, Underwriters Laboratories and Nautilus. In addition, Clark College is building a satellite campus in CTC that will add to the estimated 6,500 jobs already in this project alone. Depending on national employment growth and market conditions in the Vancouver/Portland Metropolitan Area, Section 30 is projected to fully develop over a 20 to 30 year planning horizon.

Future Use Potential in Section 30

Overall demand appears strong for all major urban uses—industrial (including light industrial and tech/flex), office, retail and residential in Section 30. Many urban uses could develop in Section 30, complimenting existing uses that will continue in Section 30 and add to the mix of uses that have or will develop in the immediate area. However, specific locational characteristics of the site and the immediate area do present relative advantages and disadvantages for some uses that are discussed below:

Industrial (light industrial and tech/flex)

Industrial uses in Section 30 will likely take two forms—light industrial buildings and so-called “tech/flex” buildings. Light industrial buildings tend to be single story buildings with high ceilings, over 20 feet, to accommodate manufacturing equipment and storage. Tech/flex buildings also tend to be single story with large free span spaces that easily transition between uses—assembly, storage and office uses for individual businesses. Both are typical in suburban business parks. Warehouse/distribution is not envisioned as a likely use on the site because this industry typically prefers to be near freeways. In addition, warehouse/distribution generally creates relatively few jobs per acre and is not conducive of developing an urban environment.

Demand for light industrial or tech/flex buildings will likely be strong in Section 30 when national demand resumes. Shortages of industrially designated lands within the Vancouver/Portland metropolitan area puts Vancouver, and Section 30 in a good position to capture a healthy portion of future growth. Based on past growth, Section 30 could absorb about 100 net acres of industrial lands in approximately 24 years.

Section 30 also presents the opportunity to support development on larger (50 acre plus) sites. In the Vancouver/Portland metropolitan area, there continues to be a shortage of larger, unfragmented sites that could accommodate large industrial facilities, similar to the large industrial land users already in east Clark County.

Office

The immediate area where Section 30 is located has become a significant node of high quality, professional office development in east Clark County. To the south, CTC has developed a number of high-quality, mid-rise office buildings. These buildings are typically three or four stories in height. This type of development can be expected in Section 30 as redevelopment begins.

Based on past employment growth in east Clark County, demand for office space should be healthy, and sites in Section 30 will provide opportunities for new mid-rise office buildings. Based on growth projections, about 100 acres of land developed as office uses would fully develop in around 30 years.

The site also lends itself well to large, institutional uses that have characteristics similar to office complexes. Technical schools and medical facilities are potential uses for Section 30 and could accelerate the time horizons for development of the site.

Shortages of industrially designated lands within the Vancouver/Portland metropolitan area puts Vancouver, and Section 30 in a good position to capture a healthy portion of future growth.





As people seek more urban environments to live closer to their employment, new development patterns may include more developments that integrate housing into employment environments.

Retail

Retail development has been booming in the area immediately south of Section 30 with major retailers establishing new stores that serve a large trade area in east Clark County. In the near future, a new community scale shopping center will be built on a 9 acre site at the SE corner of Section 30, as well as another proposed for a 20 acre parcel just east and adjacent to the Section 30 plan area.

Due to topography and existing retail services in the immediate area, Section 30 is not likely to be a major retail center, but retail at a more neighborhood scale. There will be demand for small-scale retail in the center of Section 30, and possibly along a perimeter arterial to serve new development and the adjoining neighborhood. This retail could develop as part of one or two new “town centers” that will be developed in mixed use structures with retail at street level and housing or offices above. These new town centers will be supported by new residential development immediately adjacent to them within Section 30 and the immediately adjoining neighborhoods. Retail uses could include convenience-scale retail (coffee shops, modest restaurants, business-support services) up to neighborhood scale retail, which could include a modest supermarket, and one or two larger restaurants.

Some retail development could occur in a town center positioned along a perimeter arterial in conjunction with some new residential development immediately adjacent to it. Development of a town center in the center of Section 30 would likely only occur after substantial employment development occurred in the area and in conjunction with additional housing development in the immediate area.

Residential

Housing will be an integral part of a new urban center in Section 30. As an employment center, housing in Section 30 will not be a dominate use, but will be integrated into mixed use nodes. Attached housing developed as townhouses will be the most likely initial housing form, with condominium “flats” only coming later as land values justify construction cost associated with more dense housing, including structured parking.

To create flexibility in the plan to respond to future housing trends, housing on second stories or above is encouraged throughout Section 30. As people seek more urban environments to live closer to their employment, new development patterns may include more developments that

integrate housing into employment environments. This trend has been seen in a number of developments throughout the metropolitan area in mixed use retail/residential projects and is a potential in other employment areas, including office and some industrial uses.

Residential development is projected at approximately 1800 units, incorporated in both mixed use buildings and town homes. More residential development is possible, especially if housing is included in development plans for second story and above in industrial and office uses.

The pace of residential development will be governed by both market demand and the nature and pace of redevelopment within Section 30. Adequate buffering between existing heavy industrial uses and future residential development will have to occur before new projects are likely.

Continued Existing Uses

Several uses that contribute to the character and the economic base of Section 30 will continue and are not planned at this time for redevelopment. The English family plans to retain the vineyard and winery that is developed on 20 acres at the SW corner of the site. Besides the jobs, retail trade and aesthetic contribution of English Winery, it also has the potential for additional, complementary uses on the site.

Harmony Fields has provided a generation of children and their parents with a place for sports—baseball and soccer. Amateur sports generate its own economic activity as families from both in the immediate area, and from a broader area, visit and end up spending money in the community. Harmony Fields has the potential to be a benefit to all of Section 30 through bringing activity to the area, especially on weekends, and by providing open space, and potentially shared parking benefits. It is understood that other uses will continue in Section 30 for a period of time.

Urbanizing Over Time

One of the key challenges for Section 30 is to promote immediate development, while keeping the perspective that this area will likely develop over a 20 to 30 year planning horizon. To fulfill

Harmony Fields has the potential to be a benefit to all of Section 30 through bringing activity to the area, especially on weekends, and by providing open space, and potentially shared parking benefits.



the vision of a major urban employment center for East Vancouver, Section 30 must be planned in a way that allows for more intensive future development to occur as market forces permit.

This plan and associated implementation policies and codes set standards that optimize the flexibility for future developers to maximize utilization of their properties, promoting a smooth transition from more suburban development forms to denser, urban environments. The speed of transitions and character of new urban form will depend on a number of factors, including evolving markets, good planning by the “pioneers” in Section 30 and the level of public participation in partnerships to facilitate urbanization.

Future Businesses

The character of how and where people work has changed dramatically over the last 30 years, and will change again in the 20 to 30 year planning horizon for Section 30. Planning for future uses and types of facilities demanded by a future workforce is a daunting challenge. Planning must emphasize flexibility to allow different forms of buildings to house employment—whether it is a computer workstation in one’s spare bedroom or an automated factory floor packed with high tech equipment.

Leading the regional economic development efforts on an international stage is the Columbia River Economic Development Commission (CREDC) located in Vancouver and Greenlight Greater Portland. The City of Vancouver also follows economic development trends through its Economic Development Services group in the City Manager’s office.

Some trends are evident in the daily news coverage of our changing workplace and are born out in the analysis of employment trends for this market area. Manufacturing employment has declined and non-manufacturing employment has grown, including such broad areas as professional services, information, education, and healthcare, among others.

How we obtain our goods and services and where they are produced may go through another set of major adjustments due to a shift from oil based energy to other sources. Past “conventional wisdom” on the future of employment in the Vancouver/Portland metropolitan



Planning must emphasize flexibility to allow different forms of buildings to house employment—whether it is a computer workstation in one’s spare bedroom or an automated factory floor packed with high tech equipment.

area, may be seen as very short sighted as demands for new products and an accounting of the costs of transporting goods will create a new environment for business closer to home.

Economic development efforts will continue to focus on “traded sector” business clusters that sell goods and services in competition with firms outside the immediate trade area, be it local, state or national. Clusters of businesses (similar firms, using similar suppliers and workers), by selling most of their products or services primarily outside of their immediate trade area bring new revenue and income into the area. Examples of traded sectors in Washington include manufacturing, information services, professional and management services, and even the federal government.

Several “clusters” of economic activity are expected to contribute significantly to local economic growth.

- Renewable Energy—investments in a range of alternative energy equipment, from wind turbines to solar panels present the possibility of a boom over the next several decades in this area. The Pacific NW provides significant incentives through the provision of cost effective water and energy. The solar industry is a seamless transition from the semiconductor industry both in using the same facilities and in the use of silicon by-products in photovoltaic cells. The recent siting of Solar World in Hillsboro, Oregon is a precursor of more development in this sector.
- High Tech — both semiconductor/electronics and software development have strong footholds in the region and in Vancouver. Factors that lured the semiconductor industry here initially—low labor costs, inexpensive water and competitively priced power—still positively impact industry decisions on expansions or siting new facilities. The Vancouver-Portland area has drawn disproportionately high numbers of professionals in the software development area. The region’s “freelance” community includes 2,900 software consultants, significantly higher than the national per capita averages.
- Based on evolving trade policies creating a more “level playing field” and the desire to improve quality and create some goods closer to home, the high tech sector that once grew rapidly in Vancouver may very well see resurgence.

Economic development efforts will continue to focus on “traded sector” business clusters that sell goods and services in competition with firms outside the immediate trade area, be it local, state or national.



- Professional Services/Corporate Headquarters—a number of corporate headquarters have chosen Vancouver as their home, including Fisher Investments, Hewlett-Packard and Nautilus. Issues of quality of life, tax structure and strong workforce all support a continuation of additional professional services and corporate headquarters being developed in Vancouver.
- Biomed—medical research has been a part of the Metro area for years. With the new Genentech manufacturing facility recently opened in Hillsboro, Oregon, the potential for related medical manufacturing facilities building in this region is greatly enhanced. With increasing concerns over quality control, opportunities to develop biomed facilities in the U.S., and hence, in Vancouver is more likely.

The Plan's employment target is approximately 9400 jobs with 8,346 jobs of office and industrial type and the remaining 1,054 jobs in the retail/commercial type. This employment target compares to the 9,400 target of similar character in the Vancouver City Center and the existing jobs of (approximately 7,000) located in CTC.

Table 3. Projected Land Use Needs

Land Use	Net Acres	Dwelling Units
Traditional Retail	9 acres	
Mixed-Use Town Centers	20 acres	360 units
Town homes/Apartments	70 acres	1400 units
Office Industrial	100 acres	
Industrial	113 acres	
Subtotal	312 net acres	1760 units
Existing Uses	134 acres	
Total	446 net acres	1760 units



Subarea Concept

Fulfilling the Vision

The City of Vancouver envisions Section 30 as a major urban employment center on the city's eastern boundary. Considering the magnitude of development issues in Section 30, creating reality from such a vision must be based on realistic principles that encompass the needs of the city, property owners and adjoining neighbors. The development principles for Section 30 listed below will guide the direction of plan policy and inform the paths to implementation over the next 20 to 30 years as the approaches to community development respond to changes in the world.

The vision will most realistically be achieved through coordination among property owners and where the mix of uses provides the opportunity for a new urban community where people work and live. This new community will minimize transportation impacts around it, "capturing" internal vehicle trips and thus minimizing the costs of development. A unified plan also will lessen energy use, provide efficient stormwater management, provide for more affordable living and working environments and provide an efficient environment for businesses to flourish.

Vision

Envisioned as one of Vancouver's largest 21st Century urban employment centers, Section 30 will attract emerging technology and provide for growth in family wage jobs. Unique urban neighborhoods where people live and shop are neatly interwoven with enterprising workplaces. Workers and residents benefit from convenient shopping, available recreation, walking and driving on attractive interconnecting trails and tree lined streets, and the amenities of interesting vistas, public plazas, and green spaces that promote a healthy, prosperous economy and lifestyle.



Development Principles

- Create an urban center with an emphasis on employment uses as primary land uses, with commercial and residential use as secondary
- Create a dense urban community with a unique identity
- Protect property values through a coordinated plan that emphasizes lasting quality
- Maximize developable land and minimize costs for off-site project improvements
- Foster environmental stewardship and energy conservation design

Concept Overview

Broadly, the concept plan reflects the City of Vancouver's Comprehensive Plan policies, identification of Section 30 as a future major urban center, and the established past and present expectation that Section 30 will provide land for many of the city's future family wage jobs. More specifically, it recognizes topographic opportunities and constraints, unique existing uses that plan to remain, and opportunities for integration by means of land use, connecting street patterns, and open space/park systems.

The concept plan is intended as a framework to serve several functions: as a visual depiction of the plan's vision and goals, as an illustration of one response to the site planning constraints and opportunities of the mined area; a cohesive street and open space layout based on east/west and north/south collector access; and as a concept which illustrates the proposed future character. The concept illustration, additional figures shown within the plan, and the accompanying text provide the framework for the development of all of the land within Section 30. For example, where the concept plan depicts an open space linkage or trail, it is important that a proposed development through a master plan process incorporate the intent of the linkage, or that an alternative linkage be designated at that time.

The broad uses depicted, as well as the conceptual collector street and open space systems organize the concept illustrated on Figure 3. Discussion of the concept plan's implementing measures of land use and zoning approaches, and flexible street and open space systems follows.



FIGURE 3. Overall Concept Map



FIGURE 4. Comprehensive Plan Designations

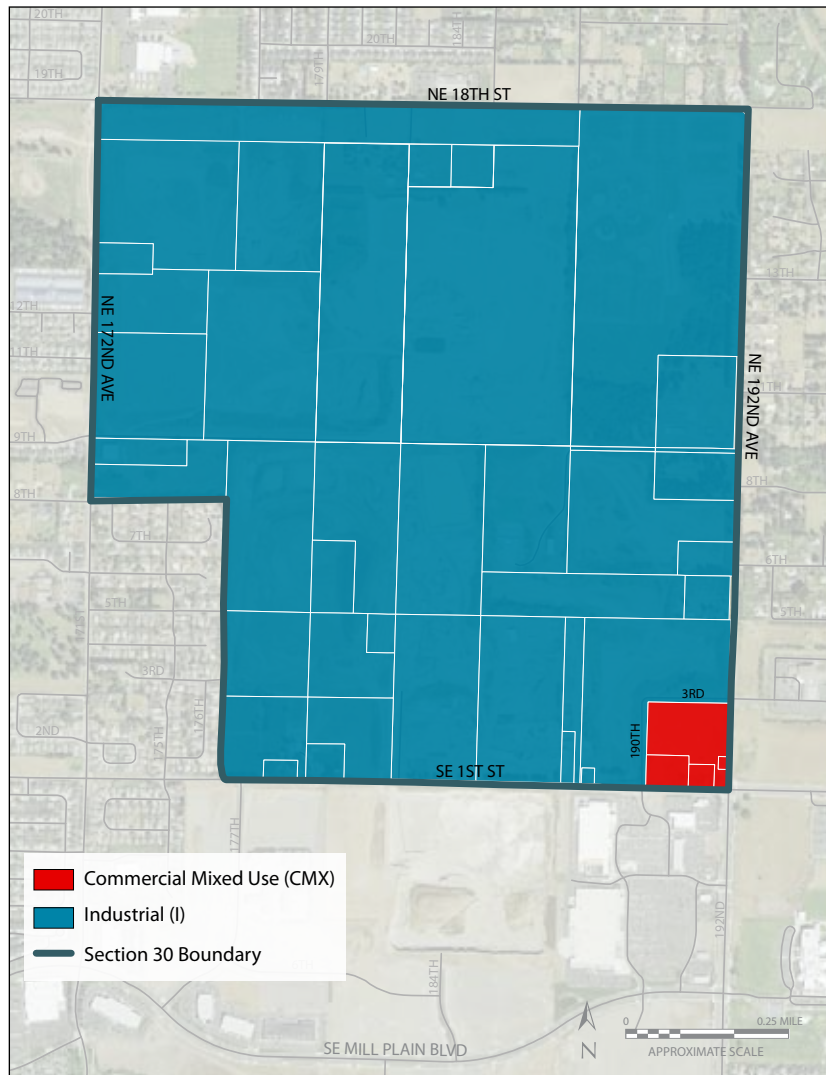
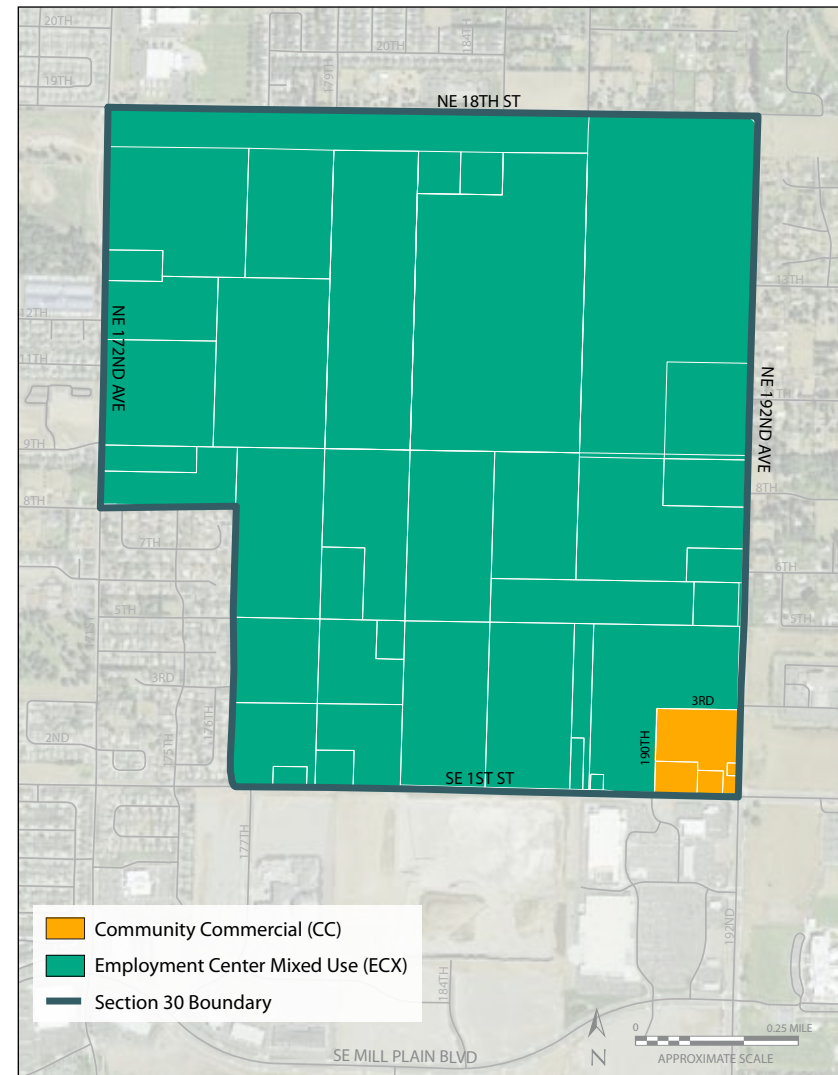


FIGURE 5. Zoning Designations



Land Uses and Zoning

Industrial

By far, the largest land use within the Section 30 Plan is employment development. Envisioned in this employment urban center is an approximate 30 year land supply of a mix of office and light industrial uses. For example, initially the market for office development may favor lower rise buildings of 2 to 3 stories. However, over the life of the plan, it is envisioned that a more intensive urban form to maximize ratios of available land to family wage jobs would occur. To ensure the opportunity for the assumed number of family wage jobs, the plan must consider effective implementation measures that allow flexibility for the future transition to a more intensive urban form.

Commercial

A 9 acre retail development located in the southeast corner of Section 30 acts as an extension of an established and expansive regional commercial center just to the south of the plan area. Additionally, directly to the east are 20 vacant acres of commercially zoned land. Due to the existence of the mentioned commercial lands, the plan acknowledges that any future commercial development over and above the amount already allowed will need to be of a different character. New commercial should be more intimate, with a neighborhood “Main Street” appeal or small scale commercial directly serving future employment development.

Urban Neighborhoods

The addition of one or two mixed-use urban neighborhoods will support and enhance the vision of a Section 30 employment center. These urban neighborhoods with housing and small scale retail and services will offer opportunities for people to live and shop in the same close knit community where they work.



Initially, the market may favor 2-3 storey buildings.



Over the life of the plan, it is envisioned that a more intensive urban form will occur.



A variety of housing units is envisioned, types from live-work units to clusters of townhomes and urban condominiums.

This plan envisions the opportunity to develop two urban neighborhoods accessed by new collector level streets that will provide transportation connections within the site. The Overall Concept Plan illustrates the flexible urban neighborhood concept, but does not designate a location. Establishing the specific location and character of both urban neighborhoods will occur through the master planning process and under the guidance of the Vancouver Municipal Code as discussed under the *Master Plan and Plan District Approach*.

The urban neighborhoods are envisioned to encompass between 50 and 100 acres with approximately 1700 housing units of a variety of types from live-work units to clusters of townhomes and urban condominiums. This number of units is needed to support the economic success of the mixed use center, but is not so large as to change the overall character of an employment center.

The two Section 30 urban neighborhoods should develop around a public focus or center and follow traditional neighborhood design principles. Whether the focus is a “main street” with shops and offices on the ground floor and housing above, arrayed along a pedestrian friendly street, or a town square, or an open space such as a small lake or park, the center will act as the nucleus where commerce and living activity concentrates. Clusters of town homes and/or urban condominiums will develop around the established mixed use center. Additionally, design principles such as narrow tree lined streets and 200’ to 300’ blocks will establish the sense of place and character envisioned.

Special Uses and Features

Over the last decades, Section 30 has been a very active place beyond the gravel mining and processing. Four non-mining uses on site create opportunities for growth and transformation in the future. This plan recognizes the continuation of three of these uses in Section 30 and includes options for their expansion, redevelopment or relocation.

Harmony Fields Sports Facility

Harmony Fields has been a focal point for youth sports in east Clark County for over 26 years. The facility includes sport fields for soccer and baseball, and an off-street parking lot. The Harmony Sports Association (HAS) manages the fields and leases the 40 acres of the 58 acre Clark County owned parcel. The existing fields were built primarily with private donations and

volunteer labor. Further expansion of the facility through work done by the Miracle League is currently in the works. This site is also identified for improvements to the sports fields as part of the Greater Clark Park District (GCPD) program. Monies will be spent by 2012 to improve the baseball fields. Updated use agreements will be adopted as part of the GCPD improvements.

Over the last 5 years, there have been discussions on relocating Harmony Sports Fields within Section 30 in order to improve the fields and allow mining of the aggregate on the site. By the terms of their lease, relocation would only occur within close proximity to their existing location and with new fields built at or better than the existing facility. New fields would have to be built and fully functional before gravel mining on the site would be allowed to start.

The Concept Plan will accommodate the relocation of Harmony Fields in several locations within Section 30. For further discussion and illustration refer to Figure 10 located in the *Openspace, Trails, and Public Facilities Section* of this plan. Harmony Fields is located on land zoned Office/Commercial/Industrial. If relocation of the fields should occur, maintaining a similar amount of employment land in any land trades is essential.

English Vineyard and Winery

The English family has transformed the original family “homestead” on the southwest corner of the Section 30 planning area into an active winery, with vineyards, tasting rooms, and wine production. Plans call for a continuation of the winery and potential growth to encompass a variety of related activities, such as gift shop and restaurant. The 20 acre site even includes an area terraced for development as an outdoor amphitheater where weekend concerts could be performed.

While much of the grapes to produce the wine are brought to the site, the retention of a small vineyard on the site is important to the character of the overall development and provides an aesthetic amenity to the community.

Clark County Closed Solid Waste Facility

For decades, Clark County operated a solid waste facility in Section 30. Today, the site is distinguished by the remaining waste transfer building and a four acre “mountain”



English Vineyard and Winery



Potentially, a park may transform the closed solid waste facility.

that rises over 30 feet above the surrounding lands. The county closed the facility in 1977 and the Clark County Solid Waste department has managed it since. To minimize water infiltration and the potential for groundwater contamination, the county placed a clay cap on the landfill. In addition, the county has monitored groundwater quality since 2002 with almost no gas or leeching from the site.

The county has reviewed ideas to remove the material and allow the land to redevelop for some other use. To date, the cost of removing all the material and transporting it to a disposal site does not make economic sense.

The county supports leaving the 4-acre hill of the 15-acre site essentially untouched, and exploring the potential it offers as a park or open space, and possibly a small vantage point where people could walk up to the top for the view or a picnic. For additional discussion and policy, refer to Section *Open Space, Trails and Public Facilities*.

Shooting Ranges—One Public and One Private

Outdoor shooting has been a part of Section 30 for decades with many years of target practice. Currently, there are two ranges, one operated by Clark County Sheriff's Office and a second range known as the English Shooting Range. Open to the public, the English Shooting Range is operated by the Clark County Gun Club and publicly owned and managed.

The Clark County Sheriff's Office will relocate their shooting range at some point. No immediate plan to move the facility is in place, although the Sheriff's Office has explored opportunities to relocate to Camp Bonneville when that property is available for county use.

Clark County owns the land that the private shooting range is located. The private shooting range is operated under a lease arrangement between Vancouver-Clark Parks and Recreation (VCPRD) and the Clark County Gun Club. There are no plans at this time to relocate this well-used facility.

There is a clear demand for several shooting ranges in Clark County that would be used by law enforcement and the general public. Opportunities exist for partnerships between Vancouver, Clark County and the private gun clubs to work together and develop one large facility in Clark County. The joint use of facilities that support the ranges, parking lots, restrooms and meeting

rooms, are obvious opportunities, since peak use times between public agency and the general public are generally different.

The Vancouver Police Department, and County Sheriff's Office will actively work together to relocate these facilities at such time as either the lands are sold for redevelopment or redevelopment on adjacent lands creates an incompatibility between land uses.

Potential for Lake Development

Sub-grade development is generally very expensive due to excavation costs. Because excavation has already occurred in Section 30, there may be an opportunity for an attractive large water feature such as a lake or series of lakes. A lake would be an amenity and could act as a catalyst for development providing a center attraction, where people gravitate for shopping, working, living and recreating. Such a unique attribute has the potential to deliver a premium price for adjacent properties.

The feasibility of creating a lake in the plan area is more fully discussed in the *Surface Mine Reclamation Considerations Technical Report* found in the appendix. In brief, the report states that mining beneath the water table, sometimes referred to as "wet" mining, is allowed by the State Department of Natural Resources subject to adequate environmental and hydro-geologic analysis. The benefits of wet mines include additional aggregate extraction, and creation of a surface water feature that has recreational, aesthetic, habitat, and stormwater management value.

A wet mine in the project area may be feasible depending on hydro-geologic conditions and land use economics. The feasibility of creating a lake would likely depend, at least in part, on the resulting long term land use benefit (increase in property value, positive impact on surrounding lands, stormwater management benefits etc.) relative to the costs for lake creation and reduction in potential development area.



A lake would be an amenity and could act as a catalyst for development.

Land Use Policy

General

- LU – 1 Create a new self-sufficient urban employment center that attracts emerging technology, growth in family wage jobs, and provides live, work, shop and play opportunities in close proximity.
- LU – 2 Provide unique urban neighborhoods that offer the choice for people to live in the same close knit community where they work.
- LU – 3 Promote an integrated park, open space and trail network to support health and well being through enhanced recreation, aesthetics and quality pedestrian experiences.
- LU – 4 Promote the vertical mix of uses in individual buildings.
- LU – 5 Promote utility and transportation service approaches to efficiently serve different areas of the site, depending on which area develops first.
- LU – 6 Create a plan district, utility plan and transportation network that will facilitate creation of appropriately sized and served development sites.
- LU – 7 Since Section 30 will likely develop over a 20 to 30 year period, site and development designs should plan for future more intense urbanization by considering and allowing for additional structures, taller structures, new access ways and structured parking critical to fulfilling Section 30's vision.
- LU – 8 The City in partnership with the private sector should complete a branding exercise and prepare a promotional packet to effectively market Section 30 as an employment center.

Industrial

- LU – 9 Designate and zone most of the Section 30 plan area to allow for family-wage employment-based development and to promote success in reaching the employment target.
- LU – 10 Encourage large site retention and property consolidation to provide opportunities for major employers to develop larger facilities, such as corporate headquarters or large manufacturing facilities needing 50 acres or greater.



- LU – 11 If Harmony Fields is relocated from its current site, land trades shall not reduce land designated for employment.

Commercial

- LU – 12 Limit auto-oriented retail to the one existing retail center located with prime visibility at the corner of 192nd Avenue and 1st Street.
- LU – 13 Promote pedestrian-oriented retail integrated with office and/or residential within mixed use urban neighborhood areas. Promote only small scale pedestrian-oriented commercial uses to serve industrial and office developments.

Urban Neighborhoods

- LU – 14 Provide for the development of two unique urban neighborhoods within Section 30 Subarea. Develop an overlay district with design principles to guide form, size, uses, character, and scale of these mixed use urban neighborhoods. The precise location of the neighborhoods will be determined as part of a master planning process.
- LU – 15 Provide a mixed use center with civic focus, whether a plaza, park, lake, or “Main Street” within the urban neighborhoods where commerce and living activities concentrate.
- LU – 16 Mixed use buildings and residential buildings should front the street to create an active, interesting pedestrian street environment.
- LU – 17 Promote a variety of attached housing types and prohibit single family detached housing within the urban neighborhoods.
- LU – 18 Approximately 1000 housing units are envisioned within the urban neighborhood, targeting approximately 200 units within the mixed use center and approximately 800 clustered housing units adjacent to the mixed use center of the urban neighborhood.
- LU – 19 Provide a variety of options for people to get to the urban neighborhood and to move about it conveniently.



- LU – 20 Master plans for each of the mixed use urban neighborhoods should include a publicly accessible open space that meets the City’s design guidelines.

Special Features

English Vineyard and Winery

- LU – 21 Encourage the preservation and economic vitality of the English Vineyard and Winery.
- LU – 22 Establish guidelines and standards to reduce possible agriculture impacts to adjacent residences.

Shooting Range

- LU – 23 Support efforts to find a new site for both the Sheriff’s Office and privately managed range. The City of Vancouver will work through the VCPRD and Vancouver Police Department to site these important community uses in coordination with the Clark County Sheriff’s Office.

Potential Lake Development

- LU – 24 Encourage further investigation into the unique opportunity within Section 30 to create a lake amenity that would provide numerous benefits from the standpoint of an aesthetic community focus, increased land value, and sustainable storm water management practices.



Master Plan and Plan District Approach

The plan area's size of approximately 550 acres, the number of property owners, the absence of urban infrastructure, and the physical characteristics of the area (especially varying elevations from past mining) present a challenge to implementing the vision of a cohesive integrated urban employment center. Development will occur in phases, over a 20 to 30 year period.

Coordinated planning will be necessary to, at a minimum, ensure:

- adequate access and efficient internal circulation that is integrated into the regional street system
- an integrated park/open space and trail network
- equitable development of infrastructure
- various property grades and finished elevations are appropriately determined to allow for balanced grade transitions between properties and to maximize land development
- compatible development and appropriate buffers or screening

Nearly all of the properties within Section 30 have related Development Agreements (DAs). These existing DAs control the uses and development standards of the affected properties. Owners of properties with DAs will have the option of developing,

1. solely under the uses and standards determined by the DAs; or
2. solely under the current zoning code including uses and standards; or
3. solely under the uses determined by the DAs and current code standards.

Considering these unique challenges of the Section 30 Plan area, the regulatory program must balance predictability with flexibility, be fair to all, and promote desired development. The requirement to master plan development provides a decision point for new projects where overall efficiencies of services within Section 30 can be assessed. Without this higher level of coordination, the overall cost of development will increase for all properties within Section 30.

The Vancouver Municipal code allows for the creation of a Plan District to meet the unique characteristics and needs of a plan area. In addition, the Plan District will include a master planning process for all development within the Section 30 Subarea.

Considering these unique challenges of the Section 30 Plan area, the regulatory program must balance predictability with flexibility, be fair to all, and promote desired development.



Master Plan Policy

- MS – 1 Create a Section 30 Plan District to address the plan area’s unique circumstances and to ensure cohesive development.
- MS – 2 Use master planning to direct development proposals over time, consistent with the goals and policies of this plan.
- MS – 3 Require a master plan development approach that supports development of all properties by ensuring compatible development, appropriate buffers or screening, transitional grades, efficient extension of public utility services, and effective transportation and pedestrian connectivity.
- MS – 4 Allow existing mining activities to continue under the review of the Vancouver zoning standards.
- MS – 5 Recognizing that market dynamics create new development, the implementation strategy should afford a reasonable degree of flexibility while addressing important public policy issues.
- MS – 6 Establish design standards and guidelines to direct new development in a way that is consistent with the Section 30 Plan vision.

Unifying Urban Design Framework

A successful community that incorporates good urban design will in turn maximize economic benefit to all Section 30 land owners and businesses. The most memorable communities that endure as centers of employment, commerce, and are great places to live have common qualities that can inform new development. These successful communities include:

- buildings of complementary architectural style giving them a sense of cohesiveness;
- places for people to meet and congregate are well located and well used;
- people can move about in a variety of ways on attractive tree-lined streets and trails; and
- the community has a cohesive network of parks, open spaces and trails.

Currently, urban designs that promote these tested principles are moving from the special to the commonplace. As a “blank slate,” Section 30 also affords the possibility to implement many new

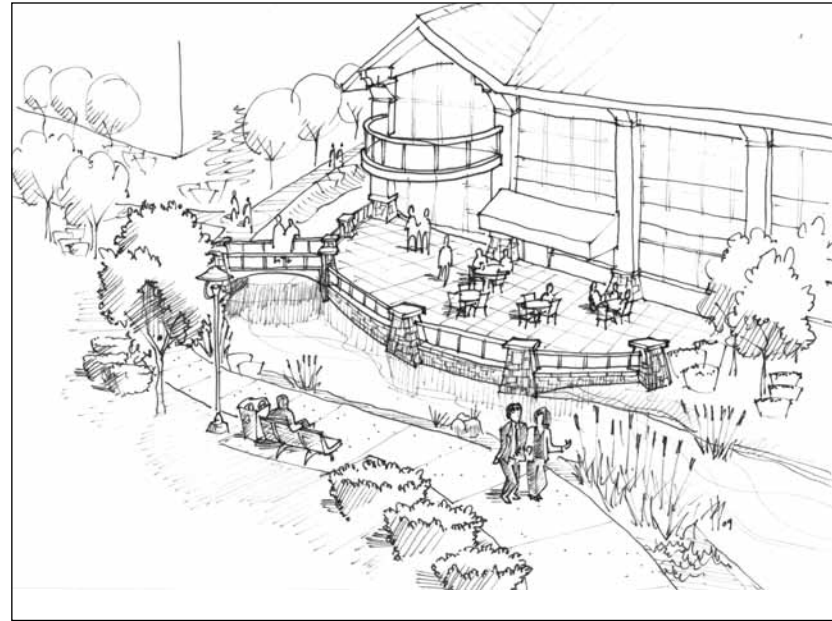


approaches to development that are environmentally friendly, increase property value, and minimize the costs of development and ongoing maintenance.

A commitment to a design framework that emphasizes urban form, health, safety, aesthetics, and low impact development techniques would ensure a unique development image and community character envisioned by this plan.

Urban Design Policy

- UD – 1 Ensure compatibility between different land uses through careful site design.
- UD – 2 Recognize existing uses that will not redevelop in the foreseeable future, and provide adequate screening for new development where appropriate.
- UD – 3 Encourage compact and urban forms of development.
- UD – 4 Ensure that proposed developments plan for future increased density by identifying a phased or “shadow platting” approach, reservation of future rights-of-way and potential locations of structured parking.
- UD – 5 Promote “green” designs and practices that minimize environmental impacts and energy use.
- UD – 6 Encourage use of local energy efficient building materials and development of small scale energy systems that recognize evolving opportunities in the area of wind, solar, geothermal and biomass sources of energy.
- UD – 7 Encourage the preservation of mature tree stands located within the plan area.
- UD – 8 Provide an attractive and connected system of sidewalks, trails, and pathways throughout the Section 30 site.



The plan promotes places for people to meet and congregate and for a cohesive network of parks and trails.



The plan envisions that people can move about on attractive-active-tree-lined streets.

- UD – 9 Emphasize human scale, façade articulation, fine detailing, quality building materials, and an inviting appearance in new buildings.
- UD – 10 Promote the use of distinctive design treatments along 192nd Avenue and 1st Avenue and other highly visible locations including street corners.
- UD – 11 Promote convenient vehicular circulation without negatively impacting the pedestrian environment and visual character of the area.
- UD – 12 Promote parking configurations that minimize impacts to the pedestrian environment.
- UD – 13 Site design should orient building entrances to street frontages, pedestrian ways or plazas in a manner consistent with an overall project concept and complementary with the approach to building orientation in adjacent development.
- UD – 14 Emphasize landscaping as a prominent design element of development and encourage the use of native plant materials and minimize irrigation of landscaped areas.
- UD – 15 Locate and design service elements and mechanical equipment to minimize impacts to the visual environment and surrounding uses.
- UD – 16 Promote common themes that help create a unique identity—by street design, grading plans, street tree selection, open space network and other amenities.
- UD – 17 Design standards and guidelines should be established to direct new development in a way that is consistent with the Section 30 Plan vision.

Elevations and Grading

The Section 30 site presents an opportunity to take advantage of the post-reclamation elevations to make it a special place. Section 30 may be viewed as a “valley” with moderate varying topographic levels and features below the surrounding arterial streets and adjacent communities. Creative grading could add aesthetic interest and possible special topographic features such as small hills, plateaus, and even lakes. However, it is essential to coordinate final elevations between properties to ensure a sense of place and community, a well connected street system with utility services and an environment conducive to and convenient for bicycling and walking.

Creative grading could add aesthetic interest and possible special topographic features such as small hills, plateaus, and even lakes.

To reach this vision of more moderate and interesting elevation variations within a valley, some additional fill and grading will most likely need to supplement fill efforts that are ongoing on some properties. Through coordinated efforts, unique development styles could evolve from stark elevation changes on the site into terraced streets, water features, and vista points.

Base Elevations and Conceptual Grading Plan

Current property owners provided elevations from their reclamation plans or to reflect future grades from current filling and grading efforts. These are illustrated on the Estimated Elevations Concept Plan Figure 7.

FIGURE 6. Conceptual Grading Plan

Based on estimated elevations, Figure 7

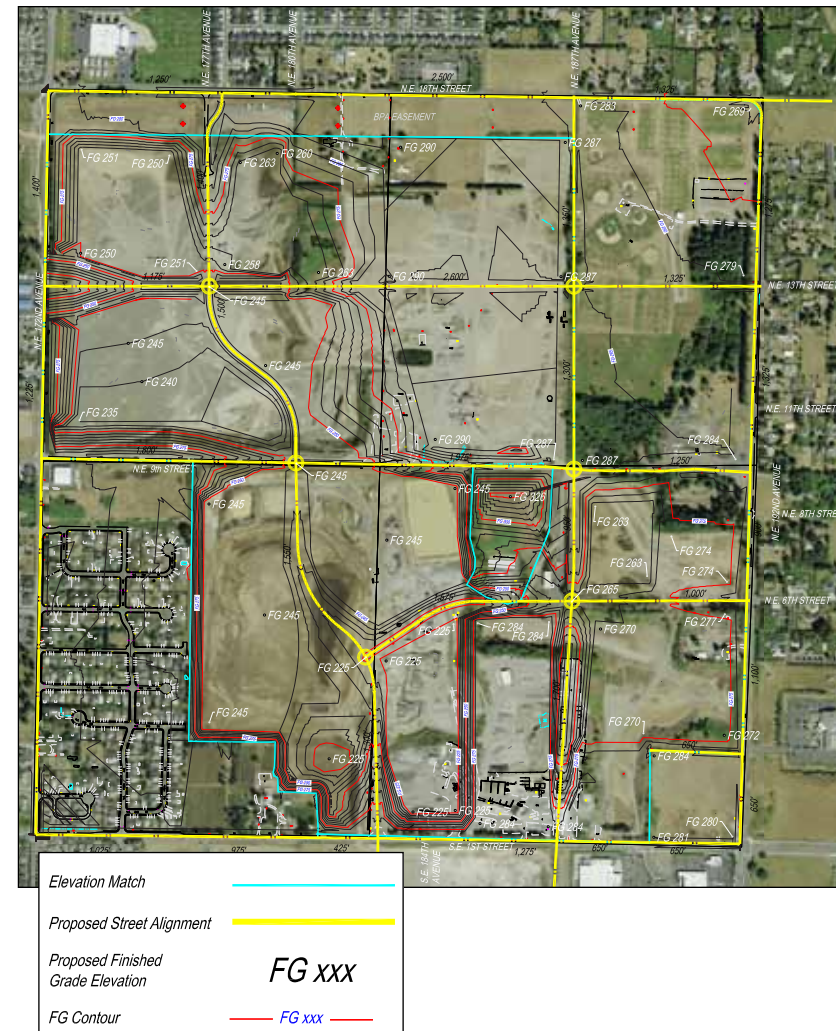
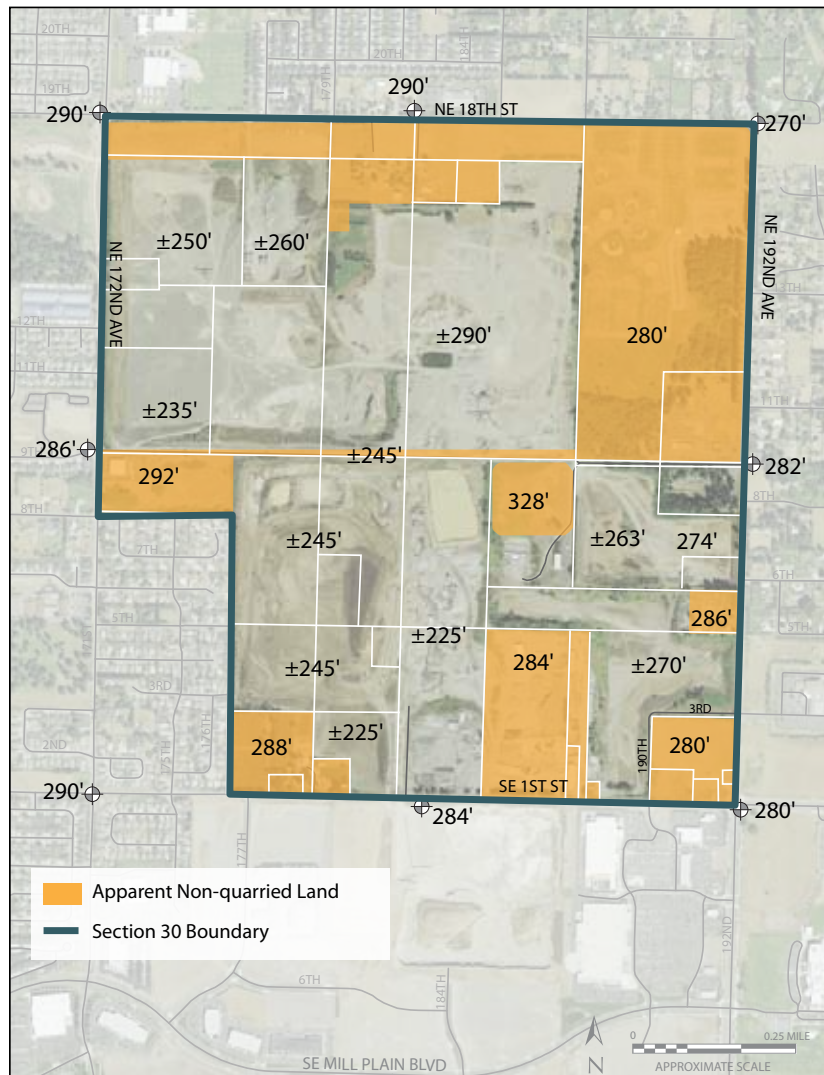


FIGURE 7. Estimated Elevations Concept Plan



The Section 30 Subarea Concept Plans are developed based on these proposed elevations. These elevations were used to develop locations for collector level streets, as well as utility systems. The proposed elevations also fit with the potential variety of land uses. Some filling above these initial estimated elevations, if coordinated among adjoining property owners, could be beneficial by increasing the amount of developable land and by reducing impacts to adjacent properties. Because the sanitary sewer systems and stormwater facilities are developed based on gravity flows, final grades are important to locate collection vaults, pump stations and infiltration systems.

Grade Transitions, Slope Utilization and Maximizing Developable Lands

Site elevation and grade transition between properties should be coordinated to maximize the development potential of Section 30. A coordinated elevation and grading plan between development sites will create an interesting and cohesive development, and will maximize the value of all parcels. Failure to coordinate elevations and grades may work for one or two property owners to maximize short-term return, but the long term cost in lost potential for the entire subarea will be substantial.

Tall berms along property lines will detract from the overall development potential in Section 30 because tall berms will obscure sight lines, impair internal connectivity, and segregate land uses. That outcome would be inconsistent with this plan. The development concept for Section 30 is designed to maximize the potential for the entire site by integrating internal land uses, creating an interesting landscape and excellent internal connectivity, and creative incorporation of green and active spaces.

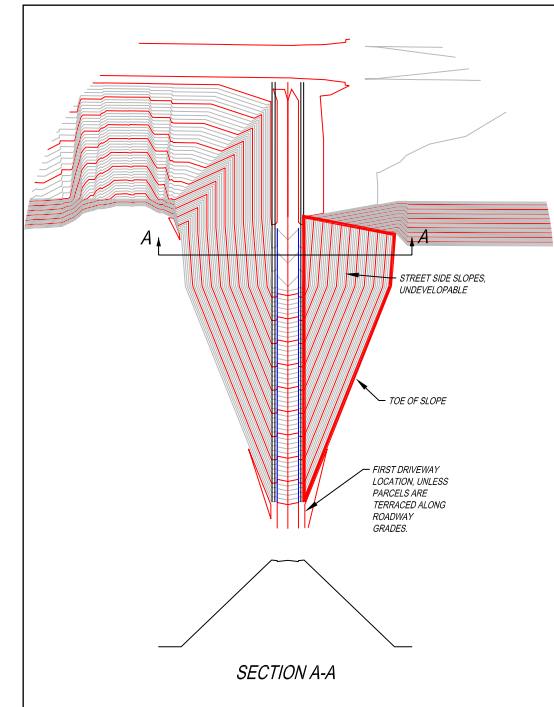
The Master Planning process will provide one venue for grade coordination. Property owners will also likely coordinate development elevation and grade transitions between sites through private understandings.

One challenge shared by several property owners on the northwest side of Section 30 is the steep slope on the east side of 172nd Avenue. (designed to DNR specifications at a 2:1 slope). That edge of the Subarea will remain well below the street grade unless a significant amount of fill is applied. Because of the elevation differential, transportation connections in the northwest corner will be particularly challenging.



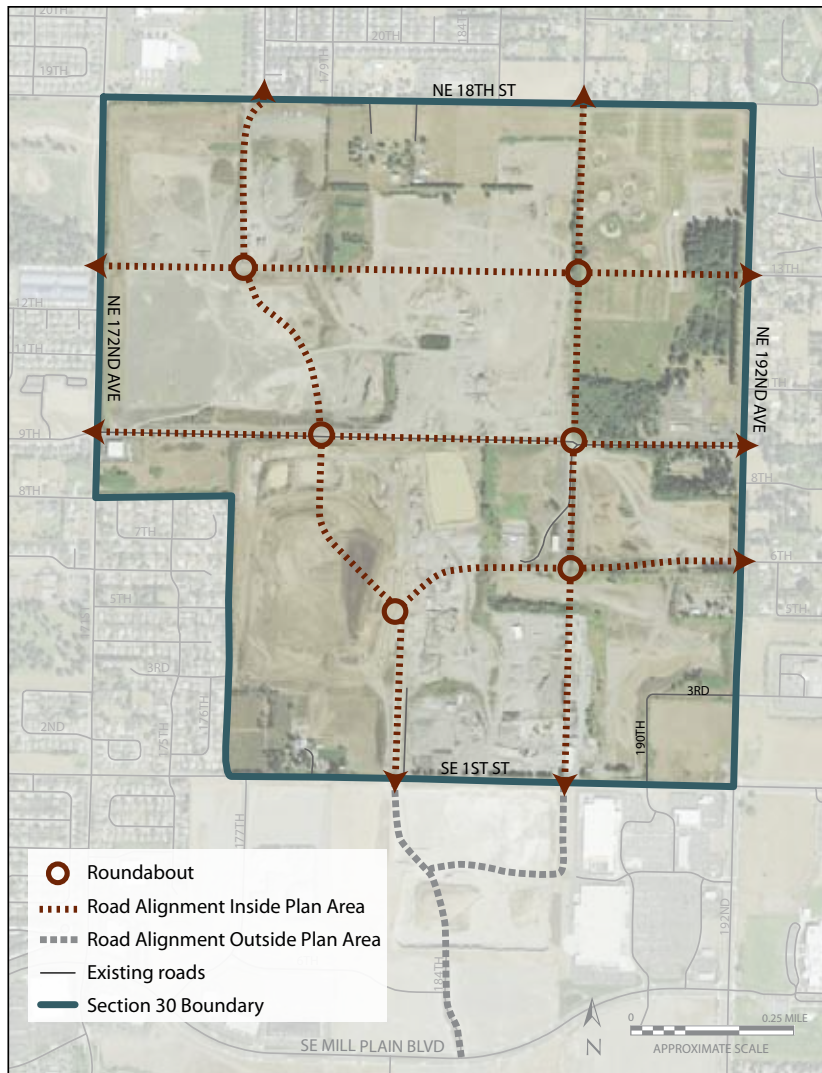
However, a steep slope, if properly planned and integrated into a master plan could become site assets rather than liabilities that “waste development potential”. For example, buildings can be designed to be built into slopes, or slope areas might be prime locations for stormwater infiltration and/or creating landscaped open space and trail corridors. Terracing development or creating plateaus of varying elevations where development occurs on each plateau may be a viable approach to developing Section 30 in a cohesive interconnecting manner.

- GE – 1 Master Plans for individual developments should include analysis of grade transitions on development sites and potential impacts on adjacent properties.
- GE – 2 Encourage property owners to enter into agreements that will ensure efficient, smooth and effective multimodal connectivity through balanced grading approaches between properties.
- GE – 3 Finished grades at property lines should not adversely impact the physical development of neighboring properties.
- GE – 4 Grading plans shall minimize the use of large retaining walls, and emphasize the use of landscaped slopes between building pads, pedestrian paths and streets.
- GE – 5 To ensure a safe and effective street network quarry elevations may need to be raised to reduce extreme elevation variations and appropriate customized street design requirements may need to be made.



Some existing elevations make it challenging for street and pedestrian connections.

FIGURE 8. Flexible Collector Street Concept



Transportation

Overview

Section 30 will develop as a major urban employment community that includes urban mixed use neighborhoods with integrated residential and retail development. This plan envisions a transportation system that enhances and creates a unique identity for the new Section 30 community. How people get around in a district – whether by foot, bike, car, bus, or motor scooter – is an important defining characteristic that can help create a unique and memorable place.

Arterial roadways serving Section 30

Section 30 is located on several main transportation corridors. Today N.E.192nd Ave., S.E. 1st Street and N.E. 18th Street are designated principal arterial roadways. N.E. 172nd Ave. is a designated minor arterial. None are currently built to their designated standard. Today, 13th Street/Goodwin Road provides the major connection between east Vancouver and northwest Camas. In the future, 18th Street, which ends at 192nd Avenue today, may be extended to provide that major connection. Nonetheless, an 18th Street extension will be expensive and difficult to construct, so the 13th St./Goodwin Road connection will serve the area for the foreseeable future.

Significant transportation system improvements are needed to serve growth in Section 30 and surrounding areas. Transportation system improvements, consistent with Vancouver’s adopted comprehensive plan, will balance the demands of motor vehicles, bicycles, pedestrians, and transit.

Efficient transportation system design will maximize developable lands and minimize the environmental impact of hard surfaced improvements. Because of Section 30’s unique topography, development of the transportation system needs to be carefully coordinated to assure seamless street, sidewalk, and trail connectivity.

Transportation Strategy

The transportation strategy is designed to provide safe, efficient, and attractive connections to land uses and urban amenities, to minimize congestion and environmental impacts, and to encourage walking within the planning area and to surrounding areas.

Success will depend on strategic improvements to the regional roadways surrounding Section 30 and creation of a rational interconnecting hierarchy of internal collector and local roadways. External links to streets, bicycle facilities, sidewalks, and trails are important for efficient and safe multi-modal access to the district. Internal street patterns must allow for a walkable connected street network. These connections are essential to integrate new with existing development and to avoid congestion.

To serve a mix of uses within Section 30, from light industrial, to neighborhood commercial, to residential, a well thought out mix of transportation options is needed. The amount and mode of travel between uses within Section 30 (internal trips) will evolve over time with increasing congestion and changes in the relative cost of travel of various modes. Evolution of transportation modes used to access Section 30 from outside its boundaries will also occur.

Transportation system development needs to fully respond to all transportation options and be flexible in its implementation. Within this broad direction, the future Section 30 transportation

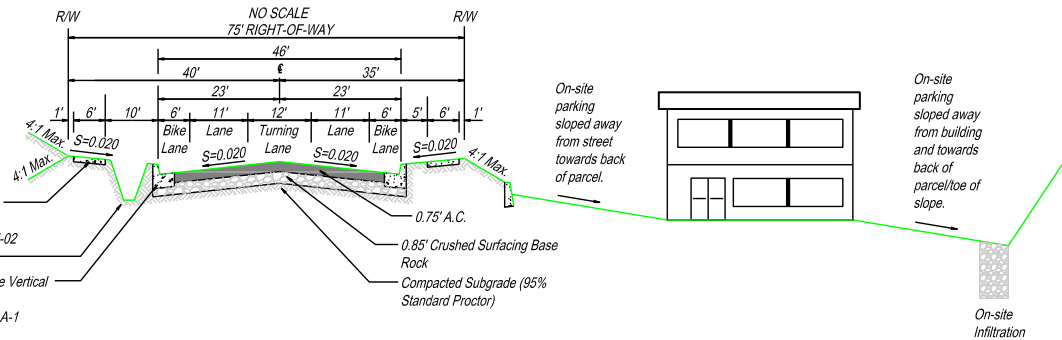
NOTE: This street section is for dry weather conditions. Consult the Geotechnical Engineer for wet weather sections.

STREET SECTION FOR MINOR ARTERIAL/COLLECTOR WITH SWALE BUILDINGS LOWER THAN ROADWAY

NO SCALE
Soil Type: LgB AASHTO A-2

- 6' Wide Concrete Sidewalk per T02-01 & T05-02
- Swale Section
- Standard Concrete Vertical Curb & Gutter Per T01-01, Type A-1
- 0.75' A.C.
- 0.85" Crushed Surfacing Base Rock
- Compacted Subgrade (95% Standard Proctor)

PER DETAIL T10-12
3-LANE COLLECTOR/MINOR ARTERIAL WITH BIKE LANES



system will include design elements that provide for a mix of vehicle types, increased pedestrian and bicycle safety and convenience, traffic calming, and an attractive and pleasant urban environment.

Internal Trip Capture and Minimizing Off-Site Impacts

This plan is based on a representative range of land uses within Section 30 and accounts for growth in travel demand from the surrounding areas of Vancouver, Camas, and Clark County.

A mixed use development pattern generates fewer automobile trips than traditional (post-war) suburban single-use development. However, successful trip reduction depends on achieving the right mix and density of land uses, an internal transportation network of connected streets, bikeways, sidewalks, trails and open space, and good external connections to local and regional transit service and major roadways.

Creating an environment conducive to and convenient for bicycling and walking takes more than simply dense adjacent uses and a connected street network. The infrastructure must be designed with pedestrian and bicyclists in mind. Design elements such as wide sidewalks, pedestrian/roadway separation, convenient transit, street furniture, well marked pedestrian crossings, adequate bicycle parking all need to be incorporated to ensure internal trip capture and creation of a sense of place that makes it convenient and comfortable to walk around. External trips that are generated will add to the burden of off-site transportation improvements needed to address impacts from development of Section 30. External traffic impact mitigation will add to site development costs.

The discussion of traffic impacts below, including the mitigation plan is predicated on capturing shorter local trips within Section 30 by 1) designing an urban mixed use environment and 2) building multi-modal infrastructure to support walking, biking, and transit use. Higher internal trip capture will reduce external trips, and reduce the impacts of growth in Section 30 on the surrounding arterial street system. This analysis assumes up to 20% internal trip capture.

External Connections and Internal Flexible Collector Streets

The roadway system surrounding Section 30 is well established. As a result, the external links between Section 30 and its neighbors are well defined. See Figure 8 for key external connection locations.



Within Section 30, because it is a “blank slate” there is considerable flexibility in future roadway alignments. The primary constraint on internal alignment is to make key connections to the surrounding arterial system. Approximately five collector arterial roadways – running east/west and north/south - will provide for internal circulation and primary connection to the surrounding street system. Several other roadway types will serve the area. A small-block traditional street pattern characterized with narrow streets, alleyways, on-street parking in retail areas, and slow travel speeds will serve mixed use neighborhood areas. Larger scale developments will be served with narrow roadways, managed access, roundabouts with landscaped medians, and detached sidewalks. Modern roundabouts are designed to serve large truck as well as automobile capacity.

Specific roadway alignments are not prescribed in this plan. General alignments are illustrated to show the required external connections for internal roadway facilities, but internal roadway alignments are flexible to account for build-out of the site by different owners at different times.

Collector streets generally include two traffic lanes with medians or turn lanes, bike lanes, parking where appropriate, and sidewalks. Collector street to collector street intersections shall utilize roundabouts within Section 30. Overall right-of-way needs will typically be 80 feet, although more right-of-way may be needed at major site access intersections on SE 1st Street, NE 18th Street, and 172nd and 192nd Avenues. Those details will be determined either at master or site plan review. Streetscape designs that include required storm water facilities, sidewalks and street landscaping on easements outside the street right-of-way shall be considered.¹ Another important element in overall streetscape design will be the placement and types of landscaping needed to create tree-lined, canopied streets. Arterial and local streets should exhibit context sensitive design to achieve the overall land use and design goals of the Section 30 plan.

Roundabouts

Section 30 affords an excellent opportunity to build a system or grid of roundabout intersections to serve internal collector arterial street intersections, rather than traditional signalized intersections. When constructed as a system, roundabouts can provide considerably more efficient traffic flow with fewer severe accidents, and lower long-term operation and maintenance costs. Use of roundabout intersections is consistent with the Plan’s vision and development



Use of roundabouts maximizes development and minimizes cost.

¹ See attached civil roadway design technical report.

principles to create a dense urban community with a unique identity; to maximize developable land and minimize costs; and to foster environmental stewardship and energy conservation.

Roundabout intersections will promote a unique identity for Section 30, a continuous, smooth traffic flow and slower travel speeds that foster safety for cars, trucks, pedestrians, and bikes and provide a very efficient way of moving vehicle traffic through the collector street system.

Roundabouts are consistent with a low impact development concept. Modern urban roundabouts are designed to accommodate all vehicle types that will access Section 30 and will maximize buildable land through efficient use of public rights-of-way. As a system, roundabouts allow for narrower roadways (additional turn lanes not needed) which can minimize roadway stormwater impact, and continuous traffic flow minimizes acceleration, deceleration, and idling.

Local Streets

Local streets will provide access to all areas within Section 30, and should be designed to provide access to collector streets and not serve as routes for traffic passing through Section 30. Local streets should provide direct property access in order to avoid unnecessary driveway connections to collector arterial streets.

Local street design will generally include two traffic lanes for motorized vehicles, on-street parking where appropriate and consistent with the access needs of the planned development, and sidewalks. As with collector streets, design flexibility is intended to allow on-site storm water treatment options, including the potential of placing storm water facilities, sidewalks and street landscaping in easements outside the public right-of-way.

Traffic Calming Through Design

Maintaining vehicle traffic at safe speeds and avoiding conflicts between different types of transportation modes are important plan objectives. Traffic calming includes a full toolbox of strategies to integrate calming into roadway design and can be applied in Section 30 to achieve plan goals. The design of streetscapes for both collector and local streets shall be context sensitive and consistent with sustainable design principles, such as minimizing impervious surface. Conflicts between large commercial vehicles and, automobiles, motor scooters, bikes



and pedestrians shall be minimized through the placement of heavy industrial uses in locations with more direct access to the arterial street system.

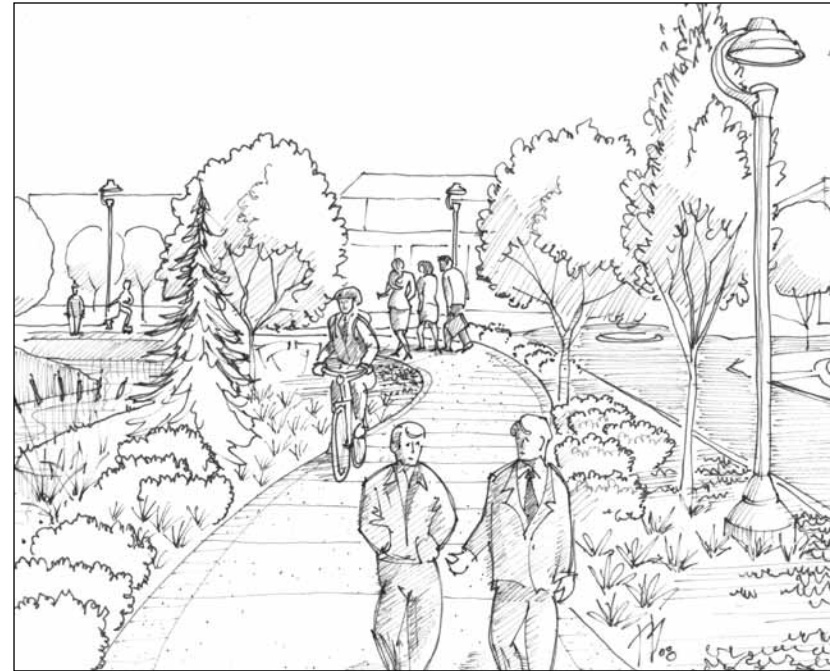
Trails, Bike Paths and Sidewalks

As specific land development projects are designed, the location of trails, bike paths and sidewalk connections should be integrated into an overall accessibility and site grading plan, and not considered as an afterthought. Project master plans should accommodate regional and local trail corridors and provide for local pedestrian connections throughout the site and to all surrounding bike and pedestrian system infrastructure. In some cases, depending on the ultimate elevation and grade differences between uses or between a use and an adjacent roadway, public staircases may be appropriate. In addition to safe pedestrian crossing at intersections, mid-block crossing with median refuge and traffic calming will be appropriate where greenway trails intersect roadways.

Trail designs that provide off-street routes for recreational use, at times creating more direct pathways or more aesthetically pleasing passageways are encouraged. Due to challenges of topography within Section 30, some connections for trails and sidewalks may need to employ stairs, as long as alternative routes meet Americans with Disabilities Act requirements. Trails should be integrated with a greenway and storm water plan to allow for intermittent flooding during major storm events.

Transit Facilities

At full build out, Section 30 will be a thriving employment oriented community with well over 10,000 people working, visiting and living there. Demand for transit use beyond the minimal existing bus service will grow with development. As demand grows, the character and location of needed facilities will become more apparent. Roadway designs should anticipate this need, and make provision for transit stops where appropriate and provide efficient circulation routes.



Trail, bike path, and sidewalk connections should be integrated into an overall accessibility and site grading plan.

Transportation Policy

Sight Design and Automobile Trip Reduction

Successful trip reduction depends on an appropriate mix and density of land uses, an internal transportation network of connected streets, bikeways, sidewalks, trails and open space, and good external connections to local and regional transportation facilities (all modes) and transit service and major roadways. In addition, it depends on the creation of an environment conducive to and convenient for bicycling and walking with infrastructure designed with pedestrian and bicyclists in mind.

- TR – 1 Trip generation for development in Section 30 may be reduced if proposed development is consistent with the above principles and if trip reduction is justified in a traffic impact analysis completed by a licensed traffic engineer for a proposed development.

Street Connectivity

- TR – 2 Collector streets should be connected to the surrounding arterials substantially as shown in Figure 8. Internal alignments should be consistent with the general alignments illustrated, but may be varied somewhat to allow for site design.
- TR – 3 As each property owner plans for development, a master plan shall include a local circulation plan, demonstrating how the on-site connections proposed for the underlying development fit into the arterial, collector, and local street network that will serve all of Section 30. The circulation plan will show both future alignments and street grades to allow for extensions beyond the property proposed for development.
- TR – 4 Minimize storm runoff by efficiently sizing streets and roundabout intersections, and by incorporating pervious pavement where possible.

Street Grades

- TR – 5 To foster efficient use of land and ensure quality connectivity, development standards should guide maximum grade for collector and local streets.
- TR – 6 Street and trail designs shall minimize the use of large slope easements.



Intersection Spacing

- TR – 7 Collector streets within Section 30 shall be spaced about 800 ft. apart with connections as generally depicted on the concept map. These are flexible corridors, so long as spaced to provide adequate collector level street access and sufficient capacity to all portions of Section 30 is provided.
- TR – 8 Local streets should provide access to all portions of Section 30. Local streets should be spaced at 200 to 300 feet apart in urban neighborhood mixed-use areas. Local streets should be spaced at 400 to 600 feet in business and industrial use areas. Exceptions may be justified where streets abut arterial streets, Harmony Sports Fields, and where elevations make the spacing infeasible.
- TR – 9 To simultaneously promote continuous, smooth traffic flow, and slower travel speeds that promote safety for cars, trucks, pedestrians, and bikes; to conserve buildable land through efficient use of public rights-of-way; to promote lower energy use through eliminating traffic lights and minimizing vehicle idling time; the Section 30 internal collector arterial intersections shall be single lane urban roundabouts with 100 to 130 foot inscribed circle diameter to accommodate all vehicle types that will access the site.

Pedestrian Facilities

- TR – 10 All trails and sidewalks shall be consistent with the connectivity and grade policies of the Plan.
- TR – 11 To encourage pedestrian connectivity, development standards should describe allowed maximum slopes for trails or sidewalks constructed outside of the street development.
- TR – 12 Sidewalks shall be developed consistent with typical street cross sections for collector and local access streets at a minimum. Wider sidewalks and additional landscaping are encouraged.
- TR – 13 Mid-block and other safe pedestrian crossings shall be developed to provide very high pedestrian level of service, especially in mixed use urban neighborhoods.
- TR – 14 Where possible and desirable, sidewalks and trails should be constructed of pervious surface, and be integrated into the storm water control plan.



Bicycle Facilities

TR – 15 On street bicycle lanes shall be provided consistent with the collector street cross section.

Parking—Motorized Vehicle

TR – 16 Off street parking should be located behind or to the side of structures in all districts with the exception of “tech flex” development, which may locate parking for customers only between the street and building front.

TR – 17 On street parking may be provided where appropriate and the parking spaces immediately adjoining a property shall be counted towards a development’s overall parking requirement.

TR – 18 Joint use parking facilities are encouraged where peak parking lot use is different between adjoining users.

TR – 19 Access between off street parking facilities without requiring street access to travel between lots is encouraged.

Access to Streets by Motorized Vehicles

TR – 20 Minimize driveway access directly to arterial streets, and prohibit driveway access to arterial and collector streets when local street access is possible.

TR – 21 Direct access to arterial streets, when allowed, should meet minimum intersection spacing requirements.

TR – 22 Joint driveways accessing to two or more properties are encouraged.

TR – 23 Minimize industrial truck traffic on residential areas, identify potential truck routes and identify streets to be posted for no through trucks through the master plan process.

TR – 24 Within the Urban Neighborhood Center areas, alleys will provide automobile access for residential land uses. Dwelling units should front to all streets including arterial roadways to create an active, interesting, and welcoming environment for pedestrians.



And, on street parking can be combined with other traffic calming strategies to serve short-term parking demand.

Traffic Calming and Street Character

- TR – 25 Street designs shall incorporate a full range of integrated urban traffic calming strategies to achieve safe, context sensitive roadways.
- TR – 26 Street designs shall incorporate principles of context sensitive design to support active, attractive and healthy urban environments.

Transit Facilities

- TR – 27 Vancouver Transportation Services, Vancouver Community Planning, CTRAN and property owners will continue to evaluate the need for a major transit hub to accommodate transit needs within Section 30 and evaluate potentials for transit systems such as bus rapid transit.
- TR – 28 Master plans should include transit facilities (e.g. bus turnouts and shelters) where required by the City, and consistent with Section 30 roadway standard plans.

Needed Improvements

Development of Section 30's transportation system will present various design challenges and relatively high costs, but will also afford substantial flexibility in how the system is developed. The unique topography of Section 30 will lend itself to unique and creative transportation infrastructure solutions. Listed below is a brief description of identified transportation needs. A more detailed analysis of design and costs are included in the *Infrastructure Costs* Section, *Transportation Facilities* (and related appendices to this plan).



Potential Transportation System Improvements

Based on the traffic operations analysis, improvements to the street system surrounding Section 30 should include the following:

- Widening NE 162nd Avenue south of NE 18th Street to a six through lane cross-section.
- Widening NE 18th Street to provide a five lane cross-section from NE 138th Avenue through NE 192nd Avenue. Widening NE 18th Street east of 177th Avenue may be phased.²
- Constructing NE 192nd Avenue to a full five-lane cross-section.
- Additional turn lanes in many locations.
- Improvement of SE Mill Plain Boulevard at SE 136th and SE 164th Avenues, consistent with the City's current capital improvement plans.
- Monitoring traffic operations at the intersection of NE 9th Street with NE 162nd Avenue.
- Widening SE 1st Street to a three lane section in the vicinity of NE 172nd Avenue, with right hand turn lanes where right-of-way allows. Widening east of 172nd will occur as need is identified by later traffic analyses, but the city anticipates a five lane cross section for SE 1st between 177th Avenue and 192nd Avenue. As with the widening of NE 18th Street east of NE 177th Avenue, the timing for future widening of SE 1st Street depends on specific land development activity, driveway location, and overall Section 30 trip distribution.
- A new north/south collector street south of SE 1st Street along the general alignment of SE 182nd Avenue to link Section 30 directly to SE Mill Plain Boulevard. This new road will enhance connectivity between CTC and Section 30 and will improve traffic operations along SE 1st Street, NE 172nd, and NE 192nd Avenue.

² A November 2007 transportation study conducted for the City of Camas recommends that the entire NE 18th/ NE Goodwin/ NE 28th Avenue corridor from NE 192nd eastward to NE 242nd Avenue be constructed as a five-lane facility. "Camas North UGA Expansion Traffic Analysis", DKS Associates, November 6, 2007.



Section 30 Internal Street System Findings and Recommendations

The internal collector arterial street system for Section 30 will consist of a series of north/south and east/west roadways to link every portion of the site with the external transportation system.

Two north/south roadways are proposed that would run generally parallel through the site, one just east of NE 172nd Avenue and one just west of NE 192nd Avenue. For purposes of this report, these streets have been named: NE 177th / 179th/ 182nd Avenue (westerly street) and NE 187th Avenue (easterly street). The exact alignments of these roadways are not as critical as the general north/south alignment and logical connection to the external roadway system.

Three east/west roadway will connect the site to NE 9th Street, NE 13th Street, and NE 6th Street. NE 13th Street will extend to the west from NE 192nd Avenue into the heart of the site, and could end in the northwest quadrant just to the west of NE 179th Avenue. Depending on the master plan, this street could be extended to connect with NE 172nd Avenue, although the existing grade differential between the existing street and the quarry floor make that connection problematic. NE 9th Avenue will connect NE 172nd Avenue to NE 192nd Avenue, serving as the major east-west spine. In the southern portion of the site, a third east/west street would run from west from NE 192nd Avenue near its existing intersection with NE 6th Street and will connect to both north/south arterial roadways.

Based on the City's street standards and proposed functional classification system for the internal street network in Section 30, it is recommended that collector arterial streets within Section 30 be designed to provide 60 - 70-foot right-of-way bike lanes, sidewalks, and turn lanes where appropriate.

Direct land use access to arterial roadways should be generally discouraged. In the Urban Neighborhood Center area, automobile access to residential developments will be by alleyway only.

Collector street intersections internal to Section 30 should be compact urban roundabouts.³

³ There is additional discussion of this strategy in the traffic and transportation engineering technical appendices.



Bicycles and Pedestrians

The Section 30 plan envisions an urban center with a mix of uses, urban densities, and capture of a certain level of urban activity within the site. A complete system of bicycle and pedestrian facilities is essential to achieve that plan vision. By providing a safe, pleasant and well-connected system for non-motorized travel, the Section 30 transportation system will encourage the use of modes other than the auto to reach work, shopping, school and other destination.

To serve pedestrians, sidewalks will be constructed along all internal streets and will connect to the existing sidewalk and trail system surrounding the development. It is anticipated that the regional shared use pathways, already planned and partially constructed on the 18th Street and NE 192nd Avenue corridors, will be carried through Section 30.

Bicycle lanes will be provided on all arterial streets within the development consistent with the City's existing Street Standards for these roads.

Public Transportation and Transportation Demand Management

Another critical part of building a successful mixed use development in Section 30 that can reduce the demand for auto travel, will involve providing improved public transportation services and offering an array of Transportation Demand Management (TDM) strategies to encourage reduced use of the automobile. To achieve that result, development of the master plan should include:

- Work with C-TRAN (the Clark County public transit provider) to offer improved public transportation services along major travel corridors adjacent to Section 30 and, to the extent practical, to connect with major internal destinations.
- Work with the Evergreen School District to provide pupil transportation services to the future residents of Section 30.
- Consideration of expanding the GTEC boundary for East Vancouver to add Section 30 and initiate increased efforts to provide effective TDM strategies to employers in the area.



Open Space, Trails And Public Facilities

Creating an interconnected system of parks, open space, and trails is manifestly more beneficial than creating parks in isolation. A cohesive green network will help establish the character and shape of a community, enrich the health of a community and an individual, buffer incompatible uses, enhance ecological functions, and reduce costs for stormwater management and flood control.

The vast undeveloped area of Section 30 provides ample opportunity for new parks, open spaces, and trails. Recognizing that land values surrounding these amenities will reflect a premium, coordinated development between property owners around the parks, open spaces and trails is encouraged.

Through coordination with the VCPRD, park impact fee credits may be available to property owners that dedicate public park land and provide improvements that meet the City's park and open space standards and are in accordance with the Section 30 Concept Plan.

Plan Concept

The Section 30 Concept Plan proposes open spaces and pedestrian connections to link to existing and proposed public and semi-public outdoor amenities such as Harmony Sports Fields, the proposed open space on the site of the County Closed Solid Waste Facility and the English Estates Vineyard and Winery. This open space and pathway system will encourage fluid and safe pedestrian movement from the proposed urban mixed use neighborhoods to parks to shopping to work. The network will connect with surrounding neighborhoods, adjacent parks such as Pacific Park to the west, nearby schools, and jobs and shopping located at the Columbia Tech Center to the south.

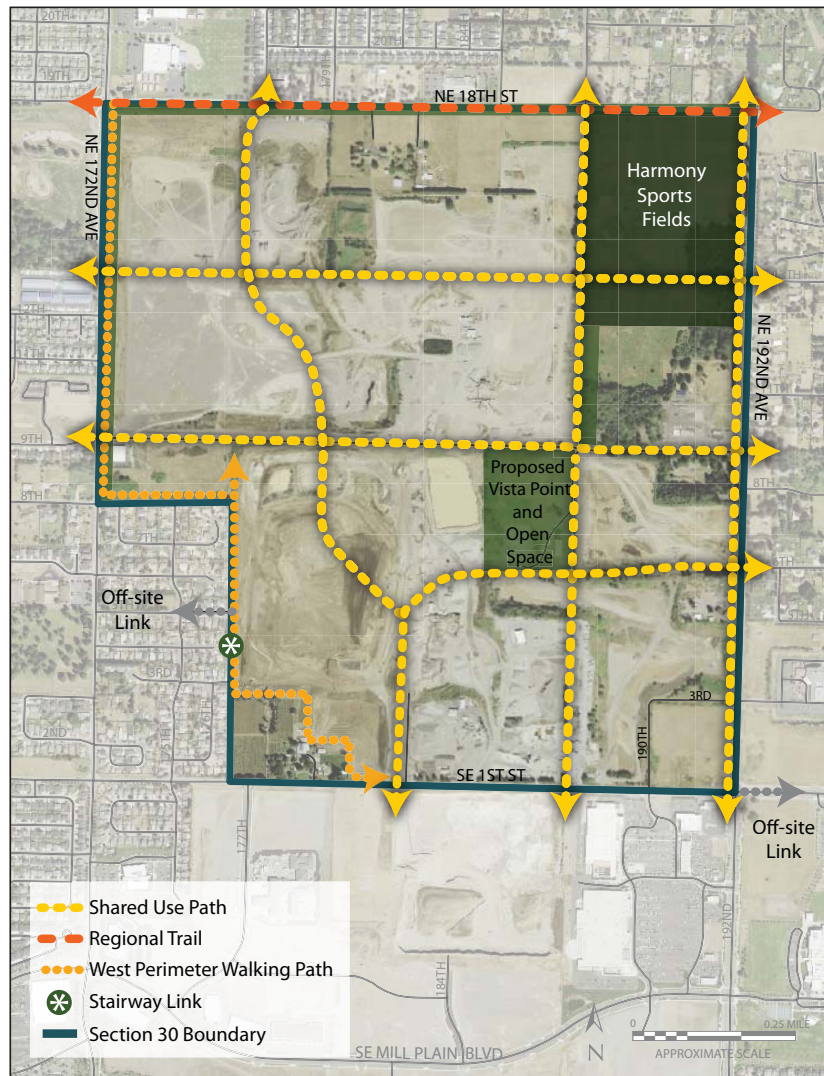


The plan encourages a connecting park, open space and trail system.



The plan promotes plazas as opportunities for informal public gathering places.

FIGURE 9. Parks, Trails and Open Space Concept



Open spaces are not limited to green parks, however. Central plazas, courtyards, promenades and other outdoor spaces provide opportunities for informal public gatherings, a farmer’s market, or even organized musical events with graduated seating elevations incorporated into the built environment. These spaces can be designed to complement nearby development and connect different land uses. They can also be marketed as a premium amenity. The spaces can range in scale from small seating areas at sidewalk intersections to larger gathering places that allow for social interaction.

Opportunities

Regional Trail Linkages

The VCPRD Comprehensive Plan and the Clark County Regional Trails Plan identifies two major trails within the Section 30 Plan area – a link of the planned east/west LaCamas/Vancouver Regional trail system following the north edge of Section 30, and a north/south link of the 192nd Avenue shared–use path located along the eastern boundary of Section 30. It is essential that these two trail links are completed with the future development of Section 30 to contribute to the larger connecting regional trail system. The conceptual plan shows one possible alignment for the two trails within Section 30. Other alignments are certainly possible. To assure an integrated pedestrian system within the plan area, additional shared-use path alignments are depicted in concert with the transportation system.

West Perimeter Trail and Open Space buffer

The Section 30 parks, trails and open space concept also envisions the construction of a walking path following the west perimeter quarry slopes. Such a trail and open space amenity would significantly benefit Section 30 development by creating a natural buffer and connection

to existing adjacent neighborhoods and park facilities, preserving and enhancing the permeability of the existing slopes for possible stormwater infiltration, and increasing the aesthetics and value of future development. Presently, the western quarry slopes are steep and high. To successfully construct a west perimeter trail and open space system that allows for both north/south and east/west pedestrian travel, a set of staircases as shown on the concept plan may be the most feasible and cost effective means to achieve the east/west connections.

“Vista Point” Open space on the Closed Solid Waste Facility

The existing Clark County Closed Solid Waste Facility provides a potential site for a future public overlook park. This is the highest elevation in Section 30, and developing it into a multi-faceted public space with a primary vista point at the top would offer a great amenity to the area. The regulations tied to the cap on the landfill may limit park development opportunities on the actual elevated lands. The 15-acre parcel size could potentially support enough infrastructure (parking and restrooms) to allow some active recreation programming. Using the unconstrained flatter acreage to complement the overlook would provide the diversity in programming uses that creates a successful public park. An open space connection that could link this public space to the Harmony Sports Fields to the north would compliment the park amenities.

Harmony Sports Fields Potential Relocation

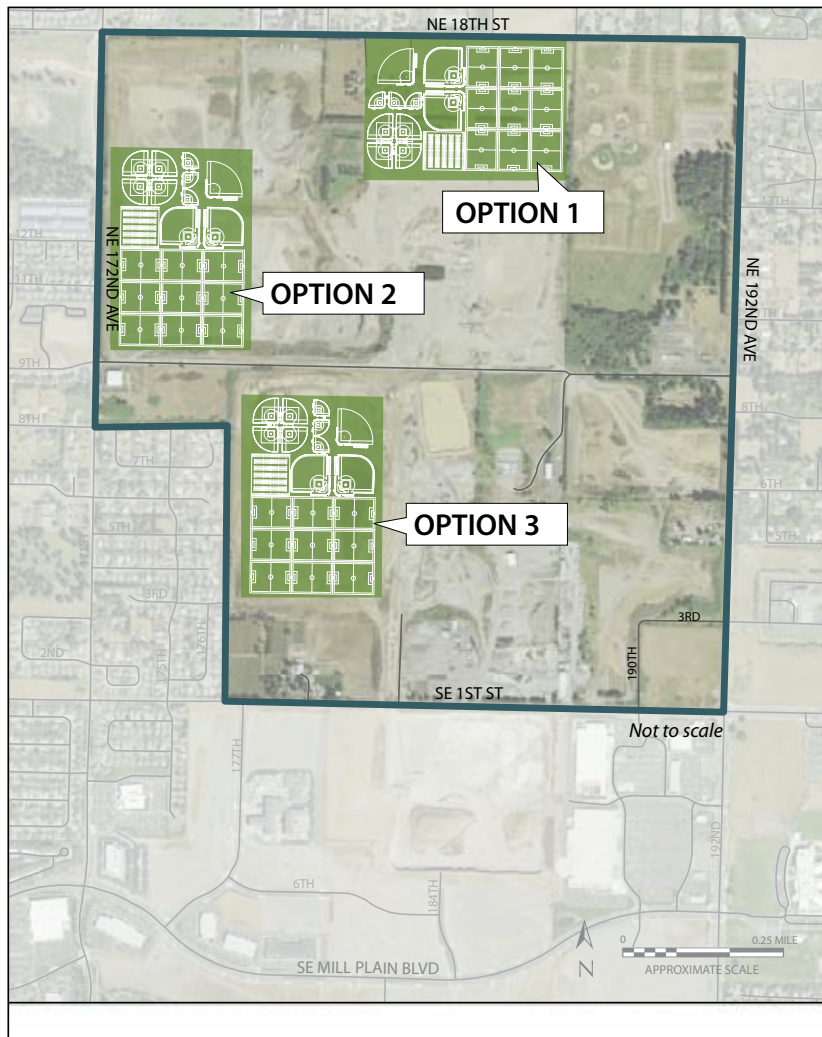
The conditions that would need to be met to relocate Harmony Sports fields will be challenging to meet. However unlikely it seems today that this facility would be relocated it would be remiss to simply ignore the future possibility. Therefore, this Plan illustrates three possible location alternatives that may yield a level, buffered, well accessed, and adequately sized site for developing sports fields equal to or better than the existing facility (See Figure 10). Any plans to relocate the fields need



There may be an opportunity for a “Vista Point” on the closed solid waste facility.

The plan promotes trails and open space as a unifying design element.

FIGURE 10. Possible Harmony Field/Miracle Field Relocation Areas



to ensure that the sports fields are accommodated at a level that meets or exceeds current field standards. Currently planned improvements for the Miracle Field and GCPD field improvements will continue to proceed until such time as a relocation of the fields has been negotiated.

Open Space, Trails, Public Facility Policy

General

- OS – 1 Construct trails, plazas, and parks in conjunction with master planned development. Locating and construction of parks and recreation amenities should not be undertaken at the last moment. The City should partner with the developers to ensure that parks and trails are available as the different phases of development occur.
- OS – 2 Open spaces, parks and trails should be configured generally as indicated in Figure 9, allowing for adjustments in the master planning process. Provision of more open space, trails, and a variety of different types of parks, open space, and recreation areas is encouraged.
- OS – 3 Park and recreation amenities should be located in convenient proximity to residential areas located within the plan area and on the perimeter of the plan area.
- OS – 4 Promote the combination of passive open space with stormwater facilities or areas where major storm events may cause temporary flooding as much as practicable.
- OS – 5 Encourage the integration of greenways, trails, and shared paths with stormwater facilities or areas as much as practicable.



- OS – 6 Open spaces near residential development should be designed to provide space for community gardens or mini-farmers' markets to encourage the use of local food sources.
- OS – 7 Open spaces, trails and community gardens should incorporate a rainwater management system and stormwater management facilities to provide onsite irrigation.

Trail Linkages (See also the transportation section.)

- OS – 8 The Section 30 links of the proposed east/west Vancouver/Lacamas Regional Trail and the north/south shared-use path of 192nd Avenue should be provided for as indicated in Figure 9, allowing for alignment adjustments in the master planning process.
- OS – 9 An internal network of multi-purpose trails, pathways, and sidewalks connecting to adjacent neighborhoods, parks and schools should be developed as conceptually shown on Figure 9.
- OS – 10 Non-motorized trails and pathways should be developed to connect residential areas to active recreation areas such as parks and sports fields.
- OS- 11 Trail connection opportunities between recreational and open space sites should be maintained.
- OS – 12 Trail connections may be achieved using stairways if suitable alternative routes are available that meet Americans with Disability Act requirements.
- OS – 13 Trail designs shall minimize the use of large slope easements.

West Perimeter Slope

- OS – 14 Remaining side slopes, especially the western perimeter slopes created from past mining activities, should be considered as a combined green open space, stormwater infiltration, and perimeter trail system.



Closed Solid Waste Facility as park/open space

- OS – 15 The VCPRD should consider converting the Closed Solid Waste Facility into a multi-faceted park with a trail leading to the top and complimentary recreational programming.
- OS – 16 Development of buildings and streets adjacent to the closed solid waste facility shall minimize soil disturbance.

Harmony Sports Facility

- OS – 17 The City of Vancouver, Clark County, and the Harmony Sports Association (and the individual leagues who utilize the field space) should plan cooperatively for the future redesign of Harmony Sports Facility to more efficiently and effectively serve the needs for youth sports, as relocation opportunities arise.
- OS – 18 If an agreement is reached to relocate Harmony Sports Fields, the new location should be within Section 30 or in the district serving all parties associated with the Harmony Sports Association.



Public Utilities & Services

Sanitary Sewer and Water

The City of Vancouver will be the purveyor of both water and sanitary sewer as Section 30 develops. The utility concept plans show the approximate location of the water and sewer mains needed to complete a connected system to serve Section 30.

Twelve inch sanitary sewer and water mains should be sufficient for most development; however, if an exceptionally large water user for example an industry like Wafertech were to locate in Section 30, additional improvements may be necessary to handle the intensive industrial water and wastewater needs.

Stormwater

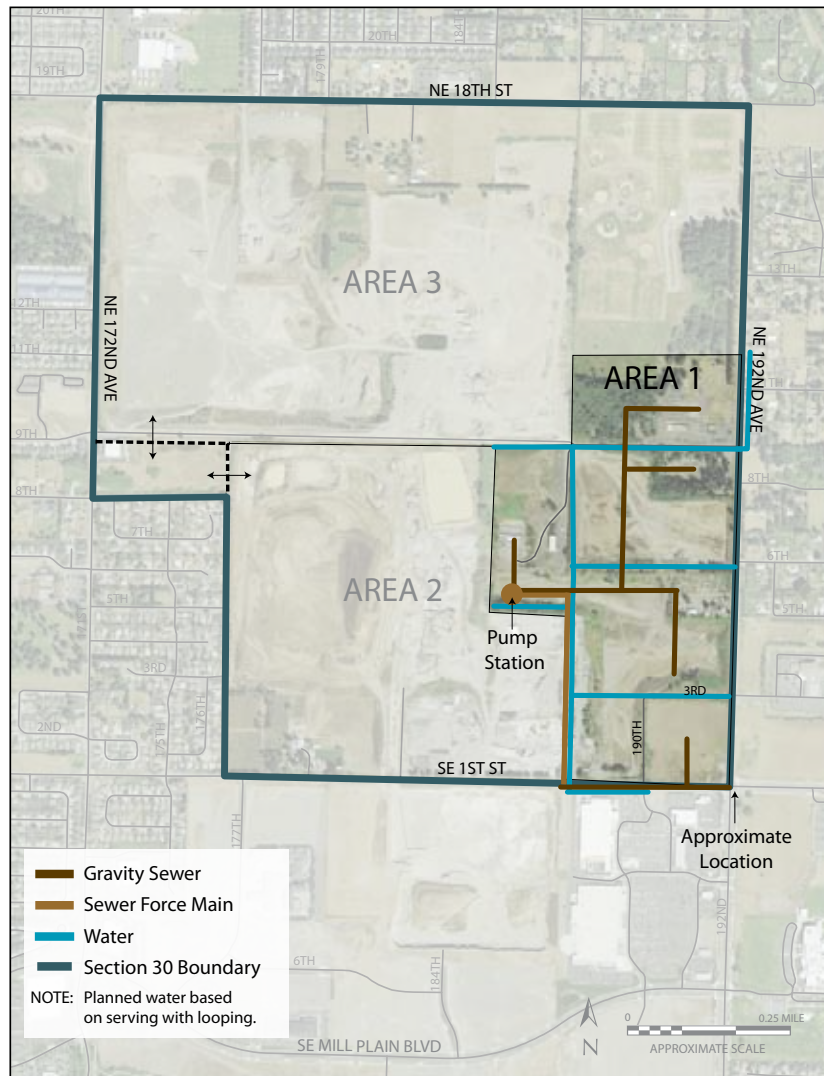
The ability to manage stormwater through infiltration into the ground will have a significant impact on developable acres and overall urban design of Section 30. Some areas, particularly around the perimeter of the basin created through mining, are seen as likely areas of use for infiltration of stormwater. As projects are developed within Section 30, there will be the “low point(s)” where Stormwater will either infiltrate or pond based on soil permeability or stormwater management facilities constructed (above or below ground). These site conditions and potential design challenges will not be fully known until geotechnical analysis is done within all of Section 30. This analysis will likely be done at the time of individual developments.

The City of Vancouver recognizes that optimal stormwater solutions are those that include low impact development (LID) methods, methods that most mimic natural processes of infiltration and biofiltration. Trees, vegetation, and permeable soil slow surface water flow rates and improve water quality. Among the acceptable LID options for private systems are pervious paving, eco-roofs/roof gardens; infiltration planters; flow through planters; sand filters; and tree boxes. Acceptable LID options for public systems include street swales, vegetated-filter strips, and vegetated-infiltration basins.

Low impact development is the preferred stormwater treatment methodology for the Section 30 plan area. However, the varied site features and potential land uses in Section 30 will require a need to assess stormwater methods on a site-by-site basis. The most suitable method would consider a combination of site features, land use, and current regulatory requirements. If low impact



FIGURE 11. Area 1 Utility Concept



development methods alone do not meet needed stormwater requirements, a combination of low impact development and regional facilities may be the most suitable approach to addressing stormwater issues.

Utility Concepts for Sanitary Sewer and Water Service

Three sewer and water utility service concepts are provided for the plan area. Each service concept was designed to stand alone without the requirement of prior development. The concepts took into account the property owner’s suggested finish grades, likely transportation rights-of-ways, the location of existing water and sanitary sewer main lines and the most probable property clusters to develop. For efficiency and cost effectiveness, a maximum of two public pump stations should be sited to serve all of Section 30. These utility concepts represent only one efficient method of service - other approaches are possible. For example, if one large development occurs, adjustments to utility service approaches by remaining undeveloped properties may be needed.

Public Utility Policy

General Utility

- PU – 1 Coordinated utility planning for the whole of Section 30 is essential to cost-efficient service provisions. Locate easements to consider future utilities’ needs and be consistent with existing plans.
- PU – 2 Include within sanitary sewer and water construction plans the design and construction of all facilities necessary for development of the site.
- PU – 3 Coordinate pipe and pump station sizes to serve no less than the plan’s land use build out assumptions.

FIGURE 12. Area 2 Utility Concept

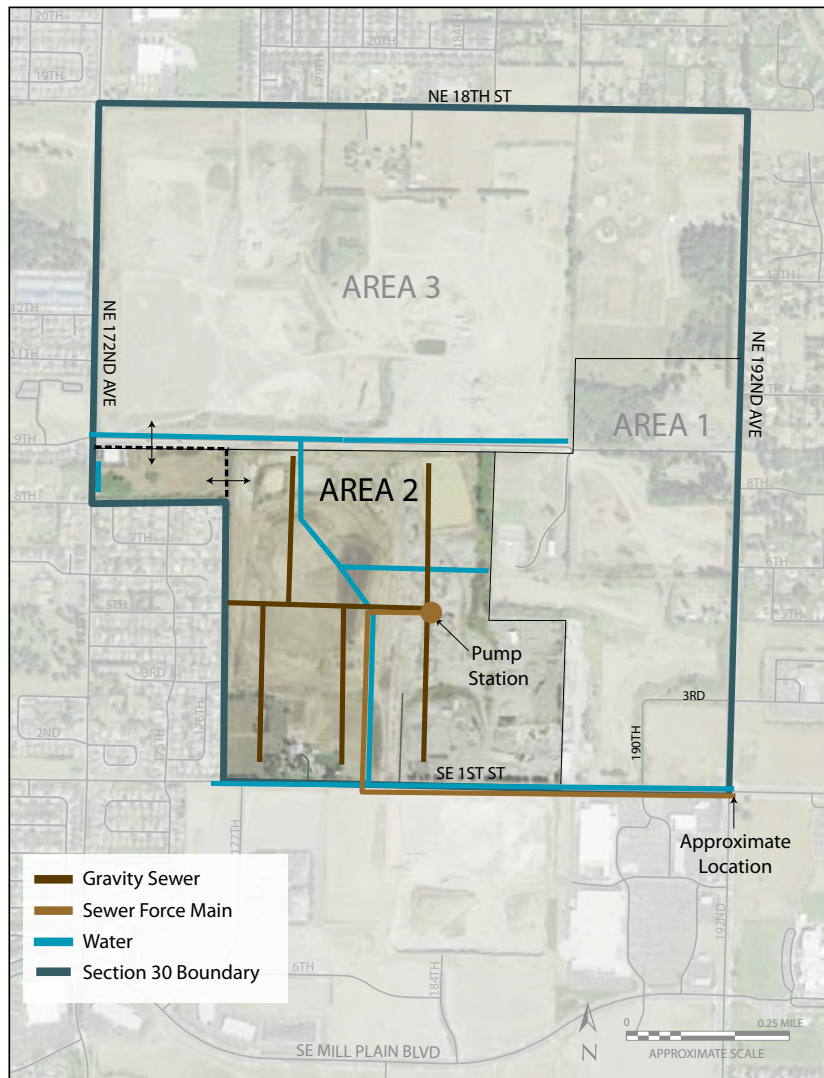
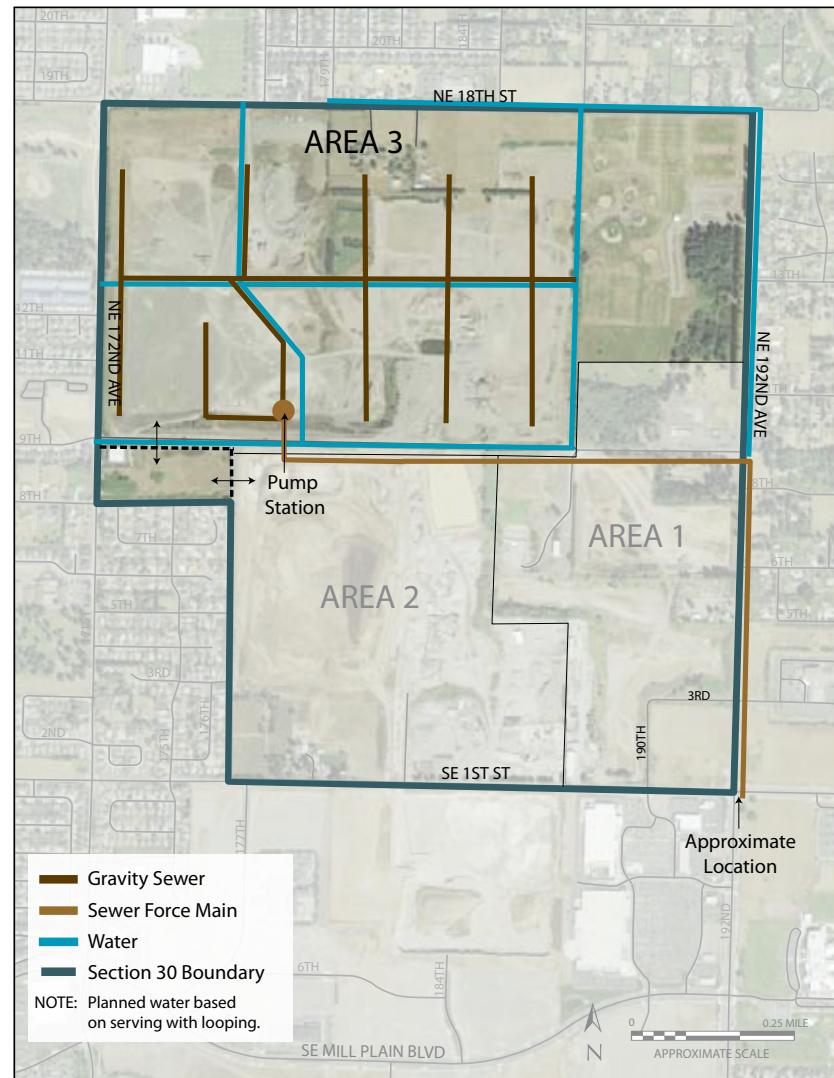


FIGURE 13. Area 3 Utility Concept



- PU – 4 Consider an efficient relationship between road and infrastructure line design and layout, and minimize utility line locations outside of existing or proposed rights-of-way.
- PU – 5 Encourage and provide opportunities within rights-of-way for new energy systems piping or cabling needs.
- PU – 6 Agreements between property owners that demonstrate how future public utilities will be extended beyond a proposed project are encouraged to be documented with the city.

Sanitary Sewer

- PU – 7 Provide a maximum of two public pump stations located at low points with gravity sewers extending outward to serve higher elevation areas. One main pump station is preferable.
- PU – 8 Interim systems should not be allowed.
- PU – 9 Development with more intensive industrial wastewater needs shall be responsible for any needed additional improvements including pre-treatment and added or larger sewer mains, and an added or larger pump station with a longer force main to a “to be determined” discharge location.
- PU – 10 Design new sewer lines to allow for sequential development.

Water

- PU – 11 Promote sustainability through water conservation and the use of water collection systems and existing wells.
 - PU – 12 Design new internal water line systems to maximize system looping.
 - PU – 13 Design new internal water lines to allow for sequential development.
 - PU – 14 Coordinate new water lines with existing 12-inch water mains, connecting gaps in the existing system around the boundary of Section 30 where necessary for adequate service. Provide at a minimum 12 inch water mains on the perimeter of Section 30 and at least one 10-inch or larger water main in an east/west direction in the approximate center of the planning area.
-



- PU – 15 Development with more intensive water service needs, including fire flow and unique pressure requirements, shall be responsible for any needed additional improvements.

Stormwater

- PU – 16 Section 30 stormwater shall be managed within Section 30 plan area.
- PU – 17 Require where physically feasible, low impact development stormwater management techniques including, but not limited to, decentralized infiltration facilities, compost filters within landscaped excavated basins, and various forms of vegetation.
- PU – 18 When necessary based on physical feasibility, allow stormwater management techniques that combine low impact development and regional facilities.
- PU – 19 Restrict individual development stormwater facility design in impacting other properties from surface and ground water runoff, particularly those at lower elevations.
- PU – 20 Provide a geotechnical report prior to the design and construction of stormwater facilities including, general soil characterization, infiltration rates, and groundwater elevation.
- PU – 21 Promote street right-of-way design to include sufficient width to accommodate stormwater facilities and/or integrated stormwater facilities with trails, shared paths, or greenways.
- PU – 22 Provide appropriate stormwater methods that consider separately the industrial use portion and the non-industrial use portion of a site.
- PU - 23 An integrated approach to greenway, trail and stormwater plans is encouraged to allow for intermittent flooding during major storm events.
- PU – 24 Use of public openspace for accommodating the 100 year storm event may be allowed.



Infrastructure Costs

Overview

General concepts for the provision of basic infrastructure are illustrated and described in the Transportation and Public Utilities & Services sections. These infrastructure concepts are meant to inform and guide future development decisions; however, in all likelihood, the final right-of-way alignments and infrastructure improvements will vary from these descriptions. Therefore, the rough cost estimates based on the Plan's concepts provide information to give an idea of what one approach would look like and might cost.

Not shown and not included in these initial cost estimates are the local streets and sewer/water connections which will be the responsibility of individual developers as specific land parcels are developed. Also, due to the site's grade and soil variability stormwater cost estimates are not included. Finally, it is anticipated that infrastructure improvements and extensions outside of Section 30 will be needed to serve Section 30 developments and it is anticipated that, for the most part, these will be funded through impact fee assessments on developments, which are over and above the costs associated with development within Section 30.

A range of strategies are available to fund the shared Section 30 infrastructure improvements and these are described in the section *Strategies and Next Steps*. These optional strategies rely primarily on the initiative of the owners/developers or some form of public-private approach.

Public Utilities Services

Cost Estimate Methodology

The following cost estimates for water and sewer infrastructure improvements are based on the previous descriptions and use the three utility concept area boundaries to assist in identifying both



needed improvements and costs. These are “magnitude of cost” estimates and are based on 2008 unit costs (inclusive of materials and labor), do not reflect future changes in costs or right-of-way costs, but do include a contingency of 40 % that covers soft costs (20% construction contingency, 10% design engineering, and 10% legal/administration/permitting/environmental).

Public Utility Services Cost Estimates

Table 4. Water and Sewer Improvements/Cost Estimates for Section 30 Concept Plan

Assumptions:

1. Based on Utility Concept figures shown in this plan;
2. Intent of cost estimates are to be order of magnitude only for preliminary planning purposes; and
3. No surface restoration is included for any utilities.

Area 1

Item	Amount	Unit Price	Cost Estimate
Water			
12-inch water line	9400	\$45.00	\$423,000.00
12-inch valves	20	\$2,500.00	\$50,000.00
Fire hydrant/valve	20	\$3,000.00	\$60,000.00
1-inch service line	3600	\$12.00	\$43,200.00
Contingency (40%)		\$384,133.00	\$384,100.00
Subtotal – Water			\$960,300.00
Sewer			
8 – 10 inch gravity sewer	6000	\$35.00	\$210,000.00
Manholes	12	\$3,000.00	\$36,000.00
6-inch service line	3600	\$15.00	\$54,000.00
Sewer pump station	1	\$500,000.00	\$500,000.00
8-inch sewer force main	2300	\$30.00	\$69,000.00
Contingency (40%)		\$579,333.00	\$579,300.00
Subtotal - Sewer			\$1,448,300.00
Total Estimated Cost			\$2,408,600.00

Note: Stormwater facilities are not included in the following infrastructure cost estimates.



Area 2

Item	Amount	Unit Price	Cost
Water			
12-inch water line	12200	\$45.00	\$549,000.00
12-inch valves	25	\$2,500.00	\$62,500.00
Fire hydrant/valve	25	\$3,000.00	\$75,000.00
1-inch service line	4500	\$12.00	\$54,000.00
Contingency (40%)		\$493,666.00	\$493,700.00
Subtotal – Water			\$1,234,200.00
Sewer			
8 – 10 inch gravity sewer	7500	\$35.00	\$262,500.00
Manholes	15	\$3,000.00	\$45,000.00
6-inch service line	4500	\$15.00	\$67,500.00
Sewer pump station	1	\$500,000.00	\$500,000.00
8-inch sewer force main	4500	\$30.00	\$135,000.00
Contingency (40%)		\$673,333.00	\$673,300.00
Subtotal - Sewer			\$1,683,300.00
Total Estimated Cost			\$2,917,500.00

Area 3

Item	Amount	Unit Price	Cost
Water			
12-inch water line	19000	\$45.00	\$855,000.00
12-inch valves	38	\$2,500.00	\$95,000.00
Fire hydrant/valve	38	\$3,000.00	\$114,000.00
1-inch service line	9000	\$12.00	\$108,000.00
Contingency (40%)		\$781,333.00	\$781,300.00
Subtotal - Water			\$1,953,300.00
Sewer			
8 - 10 inch gravity sewer	15100	\$35.00	\$528,500.00
Manholes	30	\$3,000.00	\$90,000.00
6-inch service line	9000	\$15.00	\$135,000.00
Sewer pump station	1	\$500,000.00	\$500,000.00
8-inch sewer force main	6500	\$30.00	\$195,000.00
Contingency (40%)		\$965,666.00	\$965,700.00
Subtotal - Sewer			\$2,414,200.00
Total Estimated Cost			\$4,367,500.00

Transportation Infrastructure Cost Estimates

Table 5. Transportation Improvements/Cost Estimates for Section 30 Concept Plan

Note: Intent of cost estimates are to be order of magnitude only for preliminary planning purposes.

Item	Amount	Unit Price	Cost Estimate	Add 30% Contingency
2-3 Lane Collector Arterial	5.3 miles	\$7.65 million	\$41 million	\$54 million
100' Inscribed Radius Roundabout Intersections	6	\$.5 million	\$3 million	\$4 million
4-5 Lane Principal Arterial	2.7 miles	\$9.8 million	\$26.5 million	\$35 million
Stormwater Treatment	3 each	\$.3 million	\$.9 million	\$1.2 million
Total Roadway Cost				\$95 million



Strategies and Next Steps

Over the life of this Section 30 Plan, many important decisions will be made impacting how development evolves. Cooperation between property owners will be a most important determinate in the creation of quality urban communities and economic success of any pursued ventures.

Cooperation is essential because of the challenges of topography, the large size of the plan area and the provision of public services. These words must take the form of action to realize the vision and policies of Section 30. Listed below are both longer term frameworks for implementing the development of Section 30 and immediate steps needed to start development in all areas of Section 30.

Funding Strategies, Grant Opportunities and Partnerships

A range of ways are available to fund the basic and shared Section 30 infrastructure; with local site specific infrastructure connections being the responsibility of the developers of individual sites.

The options vary with respect to the degree to which the City engages in and assists with provision of the basic infrastructure; and are based on the degree to which development occurs in response to market opportunities. The following is a list of options and a brief description of each; and some of these may be combined to provide other options.

Private Agreement Options

There are several ways individual property owners can group together to accomplish jointly held goals in developing Section 30.

- Private Agreements: Owners/developers enter into agreements with each other; form a separate legal entity to act on their behalf or one party is authorized to commit or obtain private financing to provide shared infrastructure



- **Private corporation:** A private corporation, such as a limited liability corporation, could be formed by all the owners and that LLC would take on the responsibility of developing a detailed plan and infrastructure financing
- **Private Agreements with a Lead Developer:** A lead developer agrees to front-end the costs of the shared infrastructure, and is reimbursed by others as development on other properties occur

Agreements between the City and Private Property Developments

Resources currently available to the city to build the needed infrastructure are extremely scarce. The city has had more abundant funds in the past that could support infrastructure projects, and hopefully, those times will return. However, the city does have some tools that help facilitate infrastructure development.

- **Reimbursement Contract Agreement:** The City enters into a contract and sets up an accounting system to reimburse a developer for the cost of extending off-site water and sewer mains to reach their property. Later developers that utilize the main installed by the first developer will pay for their share of the costs of installing the main. Costs are based on the length of the main across the frontage of the later developed properties.
- **Public-Private Development Agreements:** New development agreements between the City and all or some of the property owners specify financing needs and responsibilities for area wide infrastructure needs.
- **Tax increment financing (TIF) or community redevelopment financing** is a method of distributing property tax collections within designated areas to finance infrastructure improvements within these designated areas. Under the TIF method, infrastructure is financed by the incremental increase in tax revenue that is made possible by infrastructure improvement within the designated area.
- **Local Improvement District (LID):** The City working with owners/developers establishes a local improvement district which includes an agreed-upon repayment schedule based on agreed-upon equitable criteria; the city sells bonds to cover the costs of infrastructure to be built within the district, and the owners/developers pay off the bonds through regular payments usually over a 10 to 20 year period.



- **Impact Fee Overlay District:** The costs of infrastructure are estimated and a fee is established that represents the degree to which a development is anticipated to have an impact, i.e. place a demand on services); and as developments are permitted, impact fees are paid. This fee would be in addition to any system-wide impact fee requirements but these overlay funds would be designated for use in the Section 30 only; and the City could sell bonds to pay for the infrastructure improvements in anticipation of receiving these overlay fees.
- **Public Development Authority (PDA) (RCW 35.21.730-35.21.755):** The PDA established by City Council would have a board of directors appointed by the City. The PDA staff would be charged with developing and carrying out the plan's implementation and would have the powers of a public corporation and could seek federal or state grants to pay for improvements, own and sell real property, etc. The City Council is responsible for PDA oversight. This would require that all parties agree to a specific shared master development plan and infrastructure development plan.
- **Community Renewal District (RCW 35.81):** A community renewal district could be formed which in this instance is based on a finding of blight that Section 30 lacks infrastructure and that this is a deterrent to private development. A renewal agency, i.e. the City Council, is responsible for developing a community renewal plan which addresses provision of infrastructure in accord with a plan that encourages economic growth through job creation. The agency can issue bonds to pay for the planning, infrastructure and other investments to be repaid by the jurisdiction in accord with RCW 35.81.100.
- A Section 30 Land Trust could be formed to pay property owners for dedications for public open space (trail corridors, parks, plazas, etc.), with reimbursement coming from incremental increases in property taxes as development occurs. This concept has not been done before in Vancouver, but the feasibility is worth exploring, as it addresses the need to establish open space before development occurs.

Grant Opportunities

While no specific grant opportunities have been identified that would be a good match for needed improvements in Section 30, over the 30 year period of development, grant opportunities will likely emerge.



Section 30 includes aspects that should make it attractive for grants that promote economic development, especially in these current times of economic recession. Here are two areas that should be carefully and continuously monitored for opportunities to inject capital into Section 30's development.

- Large tracts of land with access challenges are good candidates for transportation grant funding that target's economic development opportunities. Grants could assist in financing arterial street upgrades and even the collector system within Section 30.
- Section 30 is well positioned to obtain grants promoting new industrial sectors, especially the solar and wind energy areas. A number of clusters of activity in this area are emerging in the Vancouver/Portland metropolitan area. These types of grants usually subsidize site development costs.

Marketing and Branding Section 30

“Section 30” is not a very exciting name for a new, 21st Century community. Marketing and, especially the concept of “branding,” have become important components of the successful development of new communities.

Unless Section 30 develops with one developer or a “master developer,” a marketing campaign with an appropriate brand for the area will only occur with the united support of all the property owners in Section 30. Such a marketing program with an established brand for the area will further demonstrate the common vision and cooperation among the property owners.

The City of Vancouver Economic Development Department in partnership with the private sector may assist in developing a branding program in which all owners can participate. This effort will help with individual property owner's marketing efforts, regional marketing by public and private groups and be an important component in seeking grants.

- A Marketing and Branding package may include more specific design guidelines for such elements as lighting, street furniture, and signage.

