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SNOHOMISH COUNTY COUNCIL
SNOHOMISH COUNTY, WASHINGTON

AMENDED ORDINANCE NO. 98-051
ADOPTING THE MILL CREEK UGA PLAN,
AS A NEW PLAN AND AMENDING THE SNOHOMISH COUNTY
GROWTH MANAGEMENT ACT COMPREHENSIVE PLAN;
AMENDING AMENDED ORDINANCE 94-125

WHEREAS, the Snohomish County Council adopted the Snohomish County Growth Management Act Comprehensive Plan (GMACP) on June 28, 1995, and

WHEREAS, the Growth Management Act (GMA) at RCW 36.70A.110(1) requires that each city that is located in the county shall be included within an urban growth area (UGA); and

WHEREAS, the GMA at RCW 36.70A.110(2) requires that each UGA "shall permit urban densities and shall include greenbelt and open space areas"; and

WHEREAS, the City of Mill Creek and the county entered into an interlocal agreement because there was a continuing need to coordinate and refine the GMA comprehensive plans of each jurisdiction through a joint planning process; and

WHEREAS, a joint planning process was conducted in 1996-97 with full city participation and including a public workshop on May 8, 1997; and

WHEREAS, the Snohomish County Planning Commission was briefed by the joint planning team on planning issues in the area and preliminary plan contents at a session on July 22, 1997, and considered the draft Mill Creek UGA Plan in a workshop session on September 23, 1997; and

WHEREAS, the Mill Creek Planning Commission was briefed at a work session on July 17, 1997; and

WHEREAS, environmental review pursuant to the State Environmental Policy Act (SEPA) was conducted by county staff leading to the preparation and issuance of an addendum to the FEIS for the GMACP on October 30, 1997 and a revised addendum on May 22, 1998; and

WHEREAS, the city and county planning commissions held a joint public hearing in Mill Creek on November 6, 1997 to take public testimony and to discuss the draft Mill Creek UGA Plan; and

WHEREAS, the Snohomish County Planning Commission held public hearings on November 25 and December 16, 1997 and recommended adoption of the Mill Creek UGA Plan as an amendment to the GMACP; and

WHEREAS, on February 26, 1998 the Mill Creek Planning Commission deliberated and recommended that the Mill Creek City Council support the adoption of the Mill Creek UGA Plan; and

WHEREAS, on March 24, 1998 the Mill Creek City Council passed Resolution #98-244 recommending that the Snohomish County Council adopt the Mill Creek UGA Plan recommended by both planning commissions; and

WHEREAS, the Snohomish County Council held public hearings on July 8, July 15 and August 3, 1998 to consider the entire record and hear public testimony on Ordinance 98-051, adopting the Mill Creek UGA Plan, and Ordinance 98-052, adopting area-wide rezones to implement the Mill Creek UGA Plan.

NOW, THEREFORE, BE IT ORDAINED:

Section 1: Findings and Conclusions.

The Snohomish County Council makes the following findings of fact and conclusions:

- A. The Mill Creek UGA Plan is consistent with the directives of the GMA, the adopted Countywide Planning Policies for Snohomish County, and the overall policy directives of the GMACP- General Policy Plan (GPP.)
- B. The changes to the Future Land Use Map of the GPP which are established through the Mill Creek UGA Plan will help further the policy directives of the GPP and establish consistency with the City of Mill Creek's comprehensive plan.
- C. The designation of 36.0 additional acres of "Urban Commercial" (UC) land within the Mill Creek UGA Plan is supported by the following factors:
 - 1) Projected employment growth in the Mill Creek UGA supports additional land for this designation.
 - 2) Projected population growth indicates a need for additional commercial uses and land to serve that population.
 - 3) The new UC designations at Sites # 2, 17, and 19 (see Map 1, Exhibit A) are consistent with the land use designations on the land use map in

the City of Mill Creek's comprehensive plan, and are supported by the commercial locational criteria established in the city's comprehensive plan and incorporated in the Mill Creek UGA Plan.

- 4) The new UC designation at Site #14 is consistent with the existing zoning and development at the site.
- 5) The new UC designation at Site #19 is consistent with a 1990 development agreement between area property owners and residents which was reflected in an amendment to the North Creek Area Comprehensive Plan adopted by Motion No. 90 -151 adopted on July 18, 1990.
- 6) The new UC designation at the southwest corner of Site #12 and the northwest corner of Site #13 is consistent with the commercial location criteria and consistent, in part, with the city's comprehensive plan land use map.

D. The designation of 118.4 acres of "Urban Medium Density Residential" (UMDR) land within the Mill Creek UGA Plan is supported by the following factors:

- 1) Projected population growth in the Mill Creek UGA indicates the need for additional population holding capacity. This requires an increase in allowable residential densities by replacing Urban Low Density Residential land with higher density designations on appropriate sites.
- 2) The new UMDR designation at Site #12 (see Map 1, Exhibit A) is consistent with the land use designation on the land use map in the City of Mill Creek's comprehensive plan, and is supported by the medium density residential locational criteria established in the city's comprehensive plan and incorporated in the Mill Creek UGA Plan.
- 3) The new UMDR designations at Sites # 6,7, and 8 are supported by their frontage on a minor arterial road and by the medium density residential locational criteria established in the city's comprehensive plan and incorporated in the Mill Creek UGA Plan.
- 4) The new UMDR designation at Site #4 is supported by the site's frontage on an arterial road, its adjacency to non-residential uses to the east and the west, and its proximity to commercial land to the west.
- 5) The new UMDR designation at Site #18 is supported by the site's frontage on a principal arterial road, its adjacency to non-residential uses to the west, and its proximity to commercial land to the west.

E. The designation of 11.0 acres of "Urban High Density Residential" (UHDR) land within the Mill Creek UGA Plan is supported by the following factors:

- 1) Projected population growth in the Mill Creek UGA indicates the need for additional population holding capacity. This requires an increase in allowable residential densities by replacing Urban Low Density Residential land with higher density designations on appropriate sites.
 - 2) The new UHDR designation at Site #13 is generally supported by the high density residential locational criteria established in the city's comprehensive plan and incorporated in the Mill Creek UGA Plan. The UHDR designation is further supported by the site's frontage on a principal arterial road, its adjacency to commercial uses to the south, and its proximity to city business park land to the west. Owner/developer cooperation with neighboring residents in providing additional buffering from single-family development to the east, as evidenced in Planning Commission Exhibit No. 42 and the draft declaration of covenants presented publicly on July 15, is also noted.
- F. The designation of 23.8 additional acres of "Urban Industrial" (UI) land within the Mill Creek UGA Plan is supported by the following factors:
- 1) The reduction of urban industrial land through the redesignation to urban commercial of Sites #17 and 19 supports a compensating redesignation at appropriate locations.
 - 2) Projected employment growth in the Mill Creek UGA supports additional land for this designation.
 - 3) The new UI designation at Site #16 (see Map 1, Exhibit A) is consistent with the land use designation on the land use map in the City of Mill Creek's comprehensive plan.
- G. The designation of 242.7 acres of "Public Use" land designated within the Mill Creek UGA Plan is supported by the following factors:
- 1) All sites within this new designation are either in active public use or in public ownership, and most sites are in both public use and public ownership.
 - 2) Site #5 is owned by a private company engaged in the delivery of a public utility service that is publicly regulated.
 - 3) Sites #1 and 20 are in full county ownership, and Site #15 is about 90% in county ownership, with the remainder in county easements.
 - 4) Sites #9 and 11 are occupied by public elementary schools.
 - 5) Site #3 is occupied by a public water district's facilities.
 - 6) Site #10 is occupied by a public fire district station.

- H. Adoption of the Mill Creek UGA Plan and implementing rezone actions will facilitate the concentration of growth within the Southwest UGA that might otherwise occur in the rural portions of Snohomish County, and will therefore decrease inappropriate rural growth and reduce pressure on the UGA boundaries.
- I. The adoption of the Open Space Corridor/Greenbelt Map (Map 3 of the Mill Creek UGA Plan, attached as Exhibit A) will provide a geographical framework to guide present and future implementation strategies for preserving open space and developing greenbelt corridors within the Southwest UGA.
- J. The county has conducted environmental review of the Mill Creek UGA Plan and implementing zoning according to the provisions of SEPA, Chapter 43.21C RCW and Title 23 SCC, the Snohomish County Environmental Policy Ordinance, through "Addendum No. 9 to the Final Environmental Impact Statement (FEIS) for the Snohomish County GMA Comprehensive Plan and Adoption of Existing Environmental Documents." Revisions to that addendum incorporating additional information concerning estimated and projected traffic volumes were issued on May 22, 1998. The addendum has been prepared to provide additional information and analysis of impacts, in conformance with SEPA requirements. The addendum describes the proposed GMACP and zoning amendments contained in companion Ordinance 98-052. The amendments in this and the zoning ordinance are within the range of the alternatives and scope of analysis contained in the FEIS.
- K. The County has met and exceeded the public participation requirements of the GMA and Snohomish County Code.
- L. The adoption of the Mill Creek UGA Plan is consistent with the GMA, the GMACP and the countywide planning policies for Snohomish County.
- M. The adoption of the Mill Creek UGA Plan is not inconsistent with the multi-county policies adopted by the Puget Sound Regional Council.
- N. Adoption of the Mill Creek UGA Plan as a part of the GMACP is permitted by RCW 36.70A.130(2), which allows amendment of a GMA comprehensive plan more frequently than once per year if the amendment is the initial adoption of a subarea plan.

Section 2. The County Council bases its findings and conclusions on the entire record of testimony and exhibits, including all written and oral testimony before the Planning Commission and the County Council.

Section 3. Based on the foregoing findings and conclusions, the County Council hereby adopts the Mill Creek UGA Plan and land use plan map, which are attached hereto as Exhibits A and B respectively, and incorporated by this reference, as part of the Snohomish County GMA Comprehensive Plan (GMACP). The GMACP, adopted by Amended Ordinance 94-125 on June 28, 1995 and last amended by Ordinance No. 98-036 on July 22, 1998, is amended to incorporate the Mill Creek UGA Plan and the Mill Creek land use plan map, attached as Exhibits A and B, respectively.

Section 4. The GMACP Future Land Use Map, adopted as Map 4 to the GPP by Amended Ordinance 94-125 on June 28, 1995 and last amended by Ordinance No. 98-036 on July 22, 1998 is, amended to incorporate the Mill Creek UGA Plan land use map, which is attached to this ordinance as Exhibit B.

Section 5. The Mill Creek UGA Plan and land use map (Exhibits A and B) supersede and replace the map and textual portions of the North Creek Area Comprehensive Plan, adopted on May 25, 1977, applicable to the area known as Area A and indicated on Exhibit B, as contemplated by the GPP at IN-14.

Section 6. Severability. If any provision of this ordinance or its application to any person or circumstance is held invalid, the remainder of the ordinance or the application of the provision to other persons or circumstances is not affected.

PASSED this 3rd day of August, 1998.

ATTEST:

Sheila McCallister
Asst. Clerk of the County Council

Snohomish County, Washington

Kristle Dennis
Chair, County Council

- Approved
 Emergency
 Vetoed

Date

8-6-98
[Signature]
County Executive

ATTEST:

[Signature]

D.2

MILL CREEK UGA PLAN

[Adopted by Council 8/3/98]

INTRODUCTION

Prior Comprehensive Planning Efforts

The origin of the City of Mill Creek was in the form of a master planned community approved by and developed in unincorporated Snohomish County in the 1970's. Following substantial building activity and population growth during the late 1970's, residents of the new community decided to pursue municipal incorporation, which was successfully achieved in 1983. Growth and new construction in and around the new city of Mill Creek accelerated again during the second half of the 1980's and has continued at a substantial pace through the present day.

The City began its first comprehensive planning process in 1986 to help guide its future development beyond the limits of the original master plan. That planning process was well advanced when the state adopted the Growth Management Act in 1990. Although the city did adopt its first comprehensive plan in 1992, it immediately set out to modify that plan to meet the requirements of the new state law, resulting in the 1994 adoption of a comprehensive amendment to the plan. Another amendment to the City Plan was adopted in 1996 to reflect the latest progress on the city's Town Center project.

Snohomish County began its growth management planning in 1991, focusing much of its initial effort on the development of county-wide planning policies and the delineation of urban growth areas. The county was not able at that time to also undertake detailed reviews of each of the 13 sub-area plans that established future land use designations throughout much of the county prior to the GMA. In the Mill Creek area the North Creek Area Comprehensive Plan (NCACP) originally adopted in 1977 and most recently amended in 1991, established the land use designations for the unincorporated lands. When Snohomish County adopted its new GMA Comprehensive Plan in 1995, the Future Land Use Map contained in the plan generally reflected the designations of the earlier NCACP. Policy language throughout the new plan makes it clear that an in-depth review of land use designations will be undertaken within urban growth areas as part of a "Phase II" joint planning process undertaken in collaboration with the affected cities.

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In 1994, the Surface Water Management Division of Snohomish County Public Works completed a watershed management planning process for the North Creek watershed, which includes all of the Mill Creek UGA. The results of that effort are documented in the North Creek Watershed Management Plan, which had the participation of several local agencies - including the City of Mill Creek - and was approved by the state Department of Ecology. The plan identifies capital improvement projects, maintenance and operations actions, and public education actions to improve water quality and reduce flooding in the watershed. As a management plan, it is of continued relevance and importance in the UGA and does not conflict with the GMA Comprehensive Plan or the recommended changes in land use proposed by this UGA plan.

In late 1995 Snohomish County and the City of Mill Creek entered into a joint planning agreement to complete this Phase II planning in the unincorporated areas around the city. This document is the product of that agreement.

The Urban Growth Boundary

One of the primary responsibilities of counties planning under the state growth management process is the delineation of urban growth areas (UGAs) around its cities and other areas "characterized" by urban growth. These areas are intended - and must be properly sized and located - to accommodate the urban growth that is forecasted to occur within the county through the year 2012. While counties have the final authority to draw the urban growth area boundary lines, they are required to consult with the affected cities about the size and location of the UGA that will surround them.

In Snohomish County, a sizable share of the urban and urbanizing area is situated in the southwest corner of the county along the I-5 corridor from the King County line north to Everett. This area contains 9 cities and a large unincorporated area that are home to about 65% of the county's 550,000+ residents. Snohomish County established this area, which includes the City of Mill Creek, as one large UGA. The north, west, and south boundaries of this large UGA are fairly self-evident natural or political limits. However, the eastern boundary is not so easily identified, and determining its final location was the subject of considerable discussion and debate prior to the adoption of the GMA Comprehensive Plan and the final UGA boundaries in 1995.

With the adoption of its GMA Comprehensive Plan Amendment in 1994, the City of Mill Creek had identified its preferred urban growth boundary, which is clearly delineated on its Land Use Map. A negotiated agreement with the City of Everett established Mill Creek's northern limit at 132nd St. SE. The city, through its own internal planning process, independently determined the southern, eastern and western UGA boundaries for its 20-year planning horizon. The unincorporated areas within that boundary are referred to as the "A" Area in the interlocal planning agreement, and they are the subject of this first installment of

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the joint planning process around Mill Creek. That boundary has 35th Ave. SE as its eastern limit.

Snohomish County originally considered 35th Ave. SE as the eastern limit for the larger Southwest County UGA when the interim UGA lines were drawn. However, subsequent analysis of forecasted growth and estimated holding capacity of the available land suggested that an expansion of the UGA would be necessary to accommodate the projected population and employment for the area. This analysis and resulting expansion produced a final UGA boundary that is located about one-half mile east of 35th Ave. SE. The area within the final UGA that is located east of 35th Ave. SE is part of the much larger "B" area defined by the interlocal planning agreement to be addressed in the next stage of the Mill Creek joint UGA planning process.

Purpose of the UGA Plan

Snohomish County has two primary objectives for the UGA plans. The first objective is to complete an in-depth review of current land use designations that, in most cases, originated with the sub-area planning process that pre-dated the GMA. The second objective is to collaborate with the cities in this process to resolve any inconsistencies that might exist between adopted city plans and the county's GMA Comprehensive Plan. While the focus of this consistency review is on land use designations, there are other elements of the plan - particularly policies and maps addressing housing, transportation, capital facilities, etc. - that can also produce conflicts between the two plans. Plan implementation measures, particularly those leading to specific development regulations, are also appropriately dealt with in this joint planning process.

Snohomish County also intends to produce and publish within its UGA plans much more area-specific and detailed information about capital facilities, utilities, and other elements of the comprehensive plan than was possible during the initial growth management planning process that produced the GMA Comprehensive Plan.

POPULATION AND EMPLOYMENT

Population

The Mill Creek area has seen significant growth rates in recent years that match or exceed those of Snohomish County - which is one of the fastest growing counties in the state of Washington. From 1990 to 1995 state estimates show the city's population grew from 7,180 to 9,230, a 28% increase in only 5 years, while the county's population was growing by 13% during the same period. The city increase reflects the impacts of both new construction and annexation activity that has occurred during that period.

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Recent growth in the unincorporated areas around Mill Creek, while not as easily documentable as city population growth, appears also to have been significant. The estimated population of the total Mill Creek UGA (city + unincorporated areas) in 1992, which is the base year for GMA planning in Snohomish County, was 17,046. The latest estimate of current population is a 1996 population estimate prepared by county staff using state information. This estimate shows a population of 18,239 for the total UGA, of which 9420 are within the city and 8,819 are in the unincorporated areas.

The forecasted 2012 population for the total UGA is 25,888, which - if realized - would represent a 42% increase over the next 16 years. During the same period the currently unincorporated "A" areas (based on 1996 city boundaries) are expected to see their population grow from 8,819 to 11,946. These figures are generally consistent with the population forecasts for Mill Creek that were included in the reconciled forecasts for cities and unincorporated areas. The reconciled forecasts were approved by Snohomish County Tomorrow in 1995, and were subsequently adopted by Snohomish County as an amendment to the County-wide Planning Policies. Those numbers are slightly different from the numbers in this plan only because the reconciled forecasts are based on 1993 city limits and because the unincorporated areas do not correspond to the "A area" of this plan.

As will be seen in the section on land use, land within the Mill Creek UGA is being rapidly consumed for urban development. By the year 2012 virtually all developable land within the "A" areas will likely be in active urban use, which will significantly limit further growth beyond the 2012 population level for many years.

Employment

The latest estimate of employment for the unincorporated Mill Creek UGA was prepared by Snohomish County, using data generated by the Puget Sound Regional Council. It shows an estimated 1137 non-construction jobs in the unincorporated UGA in 1994, compared with 1425 jobs in the city at that time. Employment is projected to grow significantly during the next 18 years, reaching 2289 non-construction jobs in the city, and 1629 jobs in the (currently) unincorporated "A" areas, for a total of nearly 4000 non-construction jobs in and around Mill Creek by the year 2012. Overall, this represents a 53% increase in jobs for the UGA, which is moderately higher than the area's projected population growth during the same period.

Job growth in the unincorporated UGA is expected to be at a 43% growth rate for the remainder of the planning period (through the year 2012.) This is somewhat lower than projected within the city but is, nevertheless, a significant increase. These forecasts are somewhat higher than previous forecasts, primarily due to a much higher estimate of current (1994) employment. The majority of the new jobs projected to locate within the city are expected to be in the financial / insurance / real estate / services (FIRES) sector, whereas the retail sector is expected to account for most of the new jobs in the unincorporated areas. The

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wholesale / transportation / communication / utilities (WTCU) sector is projected to experience a significant percentage reduction in jobs within the unincorporated UGA. Other sectors are expected to see slight to moderate job growth over the next fifteen years. These forecasts suggest the need for an evaluation of the lands designated for urban commercial use to assess their capacity to absorb the expected growth in this employment sector. This plan does not attempt such an evaluation, but the subsequent effort in the greater UGA should include a supply/demand analysis of commercial lands throughout the entire UGA.

LAND USE

Existing Land Use Patterns

The Mill Creek UGA contains approximately 1800 acres of unincorporated land. This is in addition to more than 2500 acres within the city limits. The county planning staff conducted an inventory of land uses within the unincorporated UGA in late 1995. That inventory shows that nearly half of the unincorporated Mill Creek UGA is in single-family residential development. The next largest land use category in the unincorporated UGA is "Urban Unbuilt" which includes undeveloped sections of large single-family parcels, as well as vacant parcels. Some of these vacant parcels are in public ownership or may otherwise be unavailable for future housing or other private development. Others have already had subdivisions or other development proposals approved, if not started, in the time since the inventory was completed. These factors mean that a much smaller portfolio of land is currently "available for residential development" than is indicated by the 1990 inventory of "Urban Unbuilt" land.

Residential Land

The 1995 land use inventory confirms that the predominant land use in the unincorporated Mill Creek UGA is single-family residential, accounting for about one half of the total land supply. Multi-family residential development, by contrast, accounts for less than 1% of the total land supply. However, within the city itself the amount of land devoted to multi-family development is much more significant, producing a reasonable over-all balance between single-family and multi-family development throughout the UGA as a whole.

The 1995 land use inventory estimated that nearly 300 acres of residentially designated land within the unincorporated UGA was undeveloped and, therefore, available for development. Since a significant share of this undeveloped residential land is within parcels that already contain a single-family residence, it is considered "partially used" residential land in the 1995 Land capacity analysis discussed below. The vast majority of residential land in the Mill Creek UGA is occupied by single-family residences on lots of 20,000 square feet or less. The only realistic means for increasing population holding capacity in these areas is through the

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introduction of accessory dwelling units associated with a primary residence. However, there are some larger parcels on the periphery of the UGA that do have realistic potential for future subdivision.

Other Land Uses

The 1995 land use inventory included 11 non-residential categories of land use. In addition to the category of urban unbuilt land discussed above, the following categories also contain measurable acreage within the Mill Creek UGA: public and private parks; right-of-way (major streets only) and utilities; common ground; commercial; government/education; and resource production.

Public lands - including those used for road rights-of-way, utilities, parks, schools, and other public uses - constitute a significant family of land uses. Lands classified as "common ground," which can include stormwater detention sites, native growth protection tracts, and other common open space lands resulting from private land developments, account for about 5% of the total UGA land. Resource production, commercial, and business park/industrial developments each account for small percentages of the total land inventory. Non-residential lands are generally concentrated near the edges of the UGA - specifically at the northwest corner of the UGA near the 128th St/I-5 interchange, at the southern edge near the SR 527/180th St. intersection, and near the 132nd/35th Ave. intersection.

Land Capacity and Future Growth

In 1995 Snohomish County, in collaboration with the cities, issued a report summarizing a detailed analysis of the population holding capacity of all lands within the urban growth areas. That analysis was the result of two years of staff effort. It demonstrated that, on a countywide basis, there was sufficient land available within the designated UGAs to accommodate the projected population growth through the year 2012. Individual cities and sub-areas of the unincorporated UGAs were analyzed separately as part of that report.

The City of Mill Creek contributed to the analysis, and estimated the population holding capacity of the unincorporated portions of its UGA to be about 14,000. This estimate indicates that the developable residential land (available in 1992) could accommodate about 6,000 additional residents (or, about 2500 additional dwelling units) over and above the 1992 level. However, the county's estimate of that area's population holding capacity was only about 3000 - or about one half the city's estimate. The principal reason for the discrepancy was the comparatively large inventory of "Watershed-Site Sensitive" designated land under the North Creek Area Comprehensive Plan, which provided the basis for the county's estimate and which significantly reduced the overall density achievable in the Mill Creek UGA. Another contributor is the difference in designations on selected sites between the city's plan and the county land use map.

The city's analysis was originally performed in 1993 for the city limits existing at that time. It showed that the available land - either vacant, under-utilized, or redevelopable - had the capacity to accommodate an additional 4,417 people. Thus, the estimated population capacity of the City of Mill Creek, reflecting the city's comprehensive plan designations and the 1993 corporate limits, was estimated to be just over 12,700. This capacity is just sufficient to accommodate the 12,730 people forecasted to live in this area by the year 2012. The actual city is likely to be geographically larger in 2012 and to have a correspondingly larger population, reflecting further annexation activity over the next 16 years.

In order to take into account the changes in city boundaries resulting from annexations since 1993, as well as changes in land use designation and development regulations affecting density that have occurred in the last three years, a re-assessment of the UGA's population holding capacity was performed as part of this planning process. The provisions of the county's new "critical area" regulations, which protect wetlands and other environmentally sensitive areas, do not always reduce a project's potential total yield of dwelling units. This factor, in conjunction with the higher densities envisioned under the new plan designations, is reflected in an updated estimate of available capacity in vacant and partially-utilized lands.

Two different data sources and methods were used to evaluate land capacity, producing a range for this estimate, rather than a single point. The first method is based on the "urban unbuilt" land from the 1995 land use inventory, while the second method uses "vacant residential" land from 1995 MetroScan (Assessor data.) Both sources reflect conditions at the end of 1995, but they produce different estimates of remaining available capacity. The first approach yields a remaining population capacity of 1,777, while the second method produces an estimate of 2,815. The difference is primarily attributable to differing treatment of "partially used" lands, whose capacity may be over-stated by the MetroScan-based approach, and may be understated by the land use inventory-based approach. It seems highly likely that ultimate development will reveal that the area's real remaining capacity (under the county's present land use designations) lies somewhere within this range.

In order to accommodate projected population growth, the "holding capacity" of developable residential land must be equal to or greater than the forecasted additional population. Where an area's estimated holding capacity is insufficient under current land use designations, it may be necessary to adjust the designations of some lands within the area. By shifting from low density to medium or high density residential land uses, allowable densities increase to achieve the necessary balance between projected population growth and land capacity. The projected increase in population within the unincorporated Mill Creek UGA between 1996 and 2012 is 3127. If that area's real remaining capacity is the mid-point between the range given above, which is 2296, then the population holding capacity deficiency is 831, or over 300 dwelling units.

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Expanding the residential carrying capacity of the land can be done through changes in the land use designation of developable land from lower allowed densities to higher. Each acre of land that changes from the "Urban Low Density Residential" to the "Urban Medium Density Residential" designation, for example, increases the UGA's theoretical population holding capacity by about 16 (the average household size times 6 additional dwelling units.)

Therefore, in order to correct the estimated capacity deficiency in the unincorporated UGA of Mill Creek, at least 50 acres of ULDR land should be re-designated to UMDR (or 25 acres to UHDR, or some combination.) Since higher densities often correlate with more affordable units, such a land use strategy can also promote the affordable housing goals of the GMA and the county comprehensive plan.

Increasing the population carrying capacity of the UGA to accommodate additional growth after the year 2012 is also possible. This would likely require redesignating fully developed residential land to higher density designations and allowing the redevelopment forces of the real estate market to operate to replace existing units with higher density development. Such forces do not generally come into serious play until residential structures are approaching the end of their economic life. This seldom occurs sooner than 30 years after construction - and often times much longer - and only where a significant increase in density can occur. Since the Mill Creek area is not yet in that situation, redevelopment is not a serious factor in this plan, although it may become one in the next generation of comprehensive planning.

In the following section, specific sites that have been identified as candidates for land use change are presented and discussed.

Changes in Land Use Designations

Residential Designations

The currently unincorporated portions of the Mill Creek UGA comprise nearly 1800 acres. The Future Land Use (FLU) Map, originally adopted with the GMA Comprehensive Plan in 1995 and amended in 1996, designates the vast majority of this land (approximately 1500 acres) as Urban Low Density Residential. Except for a small area of Urban Medium Density Residential land located immediately west of McCollum Park, the remainder of the UGA land was originally designated either for Urban Industrial (lands near the I-5/128th St. SE interchange and the SR 527/180th St area intended for business park use) or Urban Commercial (lands along 128th/132nd St. SE near I-5 and 35th Ave. SE.)

In order to boost the area's population holding capacity, some changes in the ULDR designations are needed. The joint planning team reviewed the area for candidate sites that could be considered for the Urban Medium Density Residential or the Urban High Density Residential designations. Sites which are designated for comparable densities in the city's adopted comprehensive plan, or which can meet the locational criteria specified in the city

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plan and remain consistent with the policy language in the GPP, were identified and evaluated by the team. Following this staff evaluation, a final list of proposed sites and new designations was compiled for inclusion in the final plan. Further modifications and refinements were made to the list of sites following public meetings before the city and county planning commissions in November and December. These sites are summarized in Table 1 below.

TABLE 1

Sites Recommended for New Residential Land Use Designations

| Site # | Location | Area [acres] | 1995 County Designation | Current City Designation | Existing Use | New Designation |
|--------|---|--------------|-------------------------|--|---------------------------------|-------------------------|
| 4 | 132nd/24th Ave. | 6.5 | ULDR | Low Density Residential | mixed/low density | UMDR |
| 6 | 35th Ave south of Thomas Lake Ctr. | 16.9 | ULDR | Medium Density Residential | low density residential | UMDR |
| 7 | SW quadrant of 35th Ave./Silver Crest Dr. | 9.1 | ULDR | Low Density Residential | unbuilt/resource processing | UMDR |
| 8 | NW quadrant of 35th Ave./144th St. | 28.6 | ULDR | Low Density Residential | resource processing | UMDR |
| 12 | area of SR 527 and Seattle Hill Road | 53.3 | ULDR | Medium Density Residential/ Neighborhood Commercial | unbuilt/low density residential | UMDR and UC (1.5 acres) |
| 13 | SE quadrant of 173rd/SR 527 | 13.3 | ULDR | Neighborhood Commercial/ Medium Density Residential | unbuilt | UHDR and UC (2 acres) |
| 18 | 180th St. east of SR 527 business | 6.1 | ULDR | Low Density Residential | unbuilt/low density residential | UMDR |

All of these sites have existing development and parcel pattern characteristics that are conducive to a higher density designation. These sites also meet the locational criteria

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outlined in the city plan for medium or high density residential use, which can be summarized as follows:

1. They are capable of being served by a full range of urban services.
2. They are adjacent to existing or planned transit facilities, commercial uses, or compatible low density residential development.
3. They are in close proximity to transportation corridors, recreation facilities and major commercial and employment areas.

The city's locational criteria are consistent with the policy language of the Land Use Element of the GPP - specifically, the policies under Land Use Objectives LU 2.A and LU 2.C. They are also contained within the city's adopted plan and are, therefore, appropriate policy supplements for this Mill Creek UGA plan amendment. The following paragraphs describe the application of these criteria to the sites listed above, and the recommended new land use designations for these sites.

SITE 4: 132nd St. SE at 23rd Ave. SE

This small site is flanked by the Silver Lake reservoir and offices on the west and a GTE switching and office facility on the east. These adjoining uses combined with the site's frontage on 132nd St., which is classified as a principal urban arterial in the Transportation Element, make it far more appropriate for medium density rather than low density residential development. It is also within 1000 feet of the commercial node at 132nd St. SE and SR 527. Bus service is provided by Community Transit along 132nd St. SE, a street that contains a 12" water main and a lateral sanitary sewer that are immediately accessible to the site.

Recommended Designation: Urban Medium Density Residential.

SITE 6: 35th Ave. SE immediately south of Thomas Lake Center.

This site fronts 35th Ave., which is classified as a minor urban arterial in the county's Transportation Element. This section of the road is scheduled for widening and improvement within the next 2-3 years. 132nd St. SE, approximately 700 feet north of this site, is currently a bus route for Community Transit. With the increasing growth and urbanization that will occur in the eastern areas of the southwest county UGA, 35th Ave. is a logical location for future transit routing for inter-city travel within southwest Snohomish County. It is served by the Silver Lake Water District, which maintains a 15" sanitary sewer and a 12" water main within 35th Ave. that could accommodate higher residential densities and building heights at this location. It also adjoins the new Thomas Lake shopping center, providing ready access to daily shopping needs for future residents. However, much of the eastern one-half of the site is within wetlands, which will reduce the overall yield of the site. Therefore, the medium density designation is more appropriate although the site meets the locational criteria for the higher density designation.

Recommended Designation: Urban Medium Density Residential

SITE 7: SW Quadrant of 35th Ave. SE / Silver Crest Dr. Intersection.

This site is located between Sites 6 and 8 and generally has similar locational characteristics to Site 6, described above. However, because it is not immediately adjacent to commercial development and is somewhat more distant from direct transit access on 132nd St., it is marginally less appropriate for high density residential. This site also is impacted by wetland and flood-prone low lands along 35th Ave. Until the full extent of these constraints can be assessed, it is difficult to know the overall development potential of the site. Those areas of the site that are developable are probably more suitable for attached or multi-family than single-family residential development, which further supports a change to the medium density designation. Despite this fact, however, more site analysis is required before a multi-family zoning classification can be recommended (see the discussion under the section on "Implementing Zoning.")

Recommended Designation: Urban Medium Density Residential

SITE 8: Pacific Topsoils Site.

This site, like sites #6 and #7, fronts on 35th Ave. As the pressures of urbanization increase, the continuation of the existing resource processing operation becomes problematic. Water service is available and sewer service can be provided through extensions of the Silver Lake Water District line in 35th Ave. Like Sites #6 and 7 immediately north, this site is impacted by wetlands and flood-prone low lands. Until the full extent of these limitation can be assessed, the site's full development potential is difficult to evaluate at this time. As with Site #7, this site's characteristics suggest it is more suitable to attached or multi-family than single-family residential development and, therefore, to a medium density designation. Similarly, more site analysis is required before a multi-family zoning classification can be recommended (see discussion under the section on "Implementing Zoning.")

Recommended Designation: Urban Medium Density Residential

SITE 12: Seattle Hill Rd. / SR 527 Area

This area east of SR 527 along Seattle Hill Rd. and 173rd St. is Designated for medium density residential development in the city's plan. It represents a logical southern extension of a larger medium density residential area that begins along west Village Green Dr. and Seattle Hill rd. to the north. SR 527 is a major transportation corridor classified as a principal urban arterial in the Transportation Element. Bus service is provided by Community Transit, and the corridor also contains a 12" water transmission line south of 172nd St. The area is currently without sanitary sewers, but service could be provided through lateral extensions from the Alderwood Water District's North Creek interceptor sewer. **Recommended Designation: Urban Medium Density Residential and Urban Commercial** (see next section for discussion of the site's non-residential land use potential.)

SITE 13: SE Quadrant of SR 527 / 173rd St. Intersection.

This site is located across SR 527 from the southern end of the current city limits. It is currently designated for Neighborhood Commercial (northwest portion) and Medium Density Residential on the city's plan. The topography and adjacent common open space serve to isolate the site from the single-family development to the east. Site 12, recommended for medium density residential designation, is located immediately north across 173rd St. Across SR 527 to the west is land within the city designated for business park. Commercial and other business development convenient to residents is located south at the 180th St. intersection. SR 527 is a major transportation corridor classified as a principal urban arterial in the Transportation Element. Bus service is provided by Community Transit, and the corridor also contains a 12" water transmission line south of 172nd St. The area is currently without sanitary sewers, but service could be provided through lateral extensions from the Alderwood Water District's North Creek interceptor sewer. **Recommended Designation: Urban High Density Residential and Urban Commercial** (see next section for discussion of the site's non-residential land use potential.)

SITE 18: 180th St. west of Brook Blvd.

This small site fronts 180th St. and is located immediately east of the business development at the SR 527 intersection. A common open space tract adjoins the site to the north, while single-family development is found to the east and south across 180th St. Utilities provided by the Alderwood Water District include a 12" water main and a 12" sanitary sewer located in 180th St. which are immediately accessible to the site. **Recommended Designation: Urban Medium Density Residential.**

Non-Residential Designations

The FLU Map includes some sites with non-residential designations within the "A" area, most of which have comparable designations on the city's comprehensive plan. The "Urban Commercial" designation on the county map is paralleled by the city's "Community Business" and "Neighborhood Business" designations. The only lands within the "A" area designated "Urban Commercial" on the 1996 FLU Map are situated along the 128th/132nd St. corridor: 1) the Thomas Lake Center site at 35th Ave.; and 2) the frontage between the I-5 interchange and 4th Dr. Except for a small site immediately west of 4th Dr., these lands are also designated "Community Business" on the city plan.

The FLU Map also includes lands within the Mill Creek UGA with the "Urban Industrial" designation. About 65 acres immediately southeast of the I-5/128th St. interchange and about 75 acres around the 180th St./SR 527 intersection have this land use designation. As with the commercially designated land, most of this land is designated "Business Park" in the city plan. Because the GPP identifies the county's business park zone as an implementing zone for the urban industrial designation, the city and county designations can be considered

comparable, although the city designation is narrower than the county designation. Generally the gap between the broader county designations and the narrower city designations can be bridged through the use of the appropriate implementing zones, which are discussed in the next section.

In addition, the FLU Map designates an urban center to be located in the vicinity of the I-5 / 128th St. SE interchange. The southeast quadrant of this interchange, which is within the Mill Creek UGA, has a substantial percentage of its area in either undeveloped or underdeveloped condition. This condition makes the southeast quadrant a superior candidate to the western quadrants of the interchange for new high intensity, mixed-use development envisioned for these centers. In particular the site of the urban industrial and urban commercial designations at this interchange are proposed for a special overlay designation on the FLU Map as an "Urban Center Development Area." The purpose of this overlay is to apply the general design guidelines contained in the GPP under Objective LU 4-B as review criteria in the evaluation of development proposals within the UCD Area. These criteria may impose additional requirements that would need to be codified in Title 18, and they may also work to relax certain limitations regarding mixed uses and building height that would otherwise apply to the underlying zoning districts. The following policy articulates this purpose:

MC-1: Future development proposals within the Urban Center Development Area designated on the Future Land Use Map shall achieve the development and design objectives articulated in the General Policy Plan that are applicable to projects within urban centers, and such other applicable performance standards for urban center projects as may be later developed and incorporated into county code.

The implementation strategies discussed in the last section of this plan include further work on the development of site planning performance standards for the Urban Center Development Area that could be incorporated into Snohomish County Code.

There are a few sites within the Mill Creek UGA that are currently designated Urban Low Density Residential on the FLU Map that are more appropriately designated for other use. The primary factors that support change are: 1) that the site's existing (and probable long term future) use is inconsistent with the current designation; or 2) that the site's locational characteristics and the city's plan designation support another designation. The recommended new designations for these sites, which are identified in Table 2 on the following page, are "Urban Commercial," "Urban Industrial," and a new designation created after adoption of the original GPP entitled "Public Use." There are also a few cases where the map designation does not follow existing development and parcel patterns precisely, such as the limits of the urban industrial designation on the east side of SR 527. Those cases are corrected through the new FLU Map that accompanies this plan and which reflects current parcel lines and/or current or proposed zoning lines.

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Sites that are in public ownership (or long-term land lease) and are in active public use are the primary candidates for the Public Use designation. Within the unincorporated Mill Creek UGA, there are 7 sites that fit that description: McCollum Park, Silver Lake Water District's reservoir and office site, Cedar Wood Elementary School, Woodside Elementary School, the county's North Creek stormwater detention facility and park, the Fire District #7 station, and the county-owned segments of Seattle City Light's transmission corridor through the Mays Pond area. One other site is also a good candidate for the public use designation although it is not in public ownership - the GTE switching and office facility on 132nd St. SE. Telephone service is a regulated public utility, and the sites of facilities that directly provide that utility service are appropriate for the public use designation, although the ownership may not be public.

The other sites within the Mill Creek UGA which are proposed for change from their existing ULDR designation are discussed below and summarized on Table 2 on the following page.

SITE 2: 132nd St. SE at 21st Dr. SE

This small site of approximately 3 acres fronts 132nd St. SE and is flanked by the Silver Lake reservoir site to the east and commercially designated land within the city to the west. Although it is presently occupied by a small church, its long-term potential for commercial re-use appears good, whereas its potential for single-family residential use is low. The property is designated "Community Business" on the city's plan and generally meets the locational criteria for a business designation.

Recommended Designation: Urban Commercial.

SITE 12: Seattle Hill Rd. / SR 527 Area (Southwest Corner.)

This site is described above as a candidate for Urban Medium Density Residential, and most of the site is recommended for that designation. However, the 173rd St. / SR 527 intersection, which includes the southwest corner of this site, also meets the city's locational criteria for its "Neighborhood Commercial" designation. Neither the city nor the county has attempted to perform a rigorous market analysis of the Mill Creek area to assess the immediate or long-term demand for additional commercial land. However, it is reasonable to assume, based upon both employment forecasts in the retail sector and population growth forecasts for the Mill Creek UGA, that some additional commercial land may be needed. The county's 1994-95 analysis of employment land capacity does support a modest increase in the supply of commercial land in the unincorporated Southwest County UGA.

Policies LU 3.A.2 and LU 3.A.5 of the General Policy Plan address neighborhood commercial development and are consistent with the city's locational criteria for neighborhood commercial. These policies and criteria provide support for the establishment of a small neighborhood commercial node the 173rd St. / SR 527 intersection. The recommended configuration includes a small portion of Sites # 12 and

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TABLE 2
Sites Recommended for New Non-Residential Land Use Designations

| Site # | Location | Area [acres] | 1995 County Designation | Current City Designation | Existing Use | Rec. Designation |
|---------------|--|---------------------|--------------------------------|---------------------------------|--------------------------------|-------------------------|
| 1 | McCollum Park | 69.5 | ULDR | Public Open Space/Facilities | park/park and ride lot | P |
| 2 | 132nd St. SE at 21st Dr. | 3.9 | ULDR | Community Business | church | UC |
| 3 | 132nd St. SE east of Site 2 | 3.2 | ULDR | Public and Quasi-Public | public water reservoir | LDMR |
| 5 | 132nd St. SE at 25th Ave. SE | 2.1 | ULDR | Public and Quasi-Public | telephone switch station (GTE) | P |
| 9 | 35th Ave. SE and 168th St. SE | 12.8 | ULDR | Public and Quasi-Public | school (Cedar Wood E.S.) | P |
| 10 | 35th Ave. SE and 180th St. SE | 1.5 | ULDR | Public and Quasi-Public | fire station | P |
| 11 | 23rd Ave. SE north of 171st St. SE | 10.6 | ULDR | Public and Quasi-Public | school (Woodside E.S.) | P |
| 12 | Southwest corner at SR 527/173rd St. | 1.5 | ULDR | Medium Density Res. | undeveloped | UC |
| 13 | Northwest corner at SR 527/173rd St. | 2.0 | ULDR | Neighborhood Business | undeveloped | UC |
| 14 | SR 527 and 15th Ave. SE | 3.4 | ULDR | Business Park | commercial business park | UC |
| 15 | southwest corner of UGA | 114.5 | ULDR | Public Open Space/Facilities | North Creek Park and detention | P |
| 16 | northwest quadrant of SR 527 and 183rd St. SE | 23.8 | ULDR | Business Park | undeveloped | UI |
| 17 | SR 527/180th St. SE | 14.0 | UI | Community Business | commercial uses | UC |
| 19 | north side of 130th St. SE at NW corner of UGA | 10.3 | UI | Community Business | undeveloped | UC |
| 20 | Seattle City Light ROW and adjacent | 28.5 | ULDR | Public Open Space/Facilities | undeveloped county parkland | P |

13 dedicated to Urban Commercial, thereby creating a small neighborhood commercial center to serve the convenience shopping needs of the Mays Pond area.

Recommended Designation: Urban Commercial.

SITE 13: SE Quadrant of SR 527 / 173rd St. SE Intersection (Northwest Corner.)

This site is described above as a candidate for Urban High Density Residential, and most of the site is recommended for that designation. However, as described above, the northwest portion of the site also meets the city's locational criteria for its "Neighborhood Commercial" designation - and is so designated on the city's plan. The recommended configuration includes a small portion of Sites # 12 and 13 dedicated to Urban Commercial, thereby creating a small neighborhood commercial center to serve the convenience shopping needs of the Mays Pond area. Approximately 2 acres of Site #13 is within the recommended configuration for this Urban Commercial node.

Recommended Designation: Urban Commercial.

SITE 14: NW Corner of SR 527 and 15th Ave. SE

This small triangular shaped site is occupied by a small business park development and is designated Business Park in the city plan. Its current zoning classification is General Commercial. There is no basis for the ULDR designation on the 1996 FLU Map that dates back to the North Creek Area Comprehensive Plan. Although the 1996 city plan designates this site "Business Park," the current county zoning is more consistent with an urban commercial designation. **Recommended Designation: Urban Commercial.**

SITE 16: East Side of North Creek Park.

This under-developed site has an urban industrial designation for its central section, while the north section (along SR 527) and the south section (along 183rd St.) are designated ULDR on the 1996 FLU map. The irregular boundary between the two designations originated with the 1977 NCACP. The city's plan designates the entire site for business park, which supports a change in the FLU Map designation to place it within the urban industrial designation. The city is now considering a significant reduction in its designated business park land along SR 527 as part of a major amendment to its comprehensive plan. Adoption of this amendment would justify a modest expansion of the urban industrial designation in the SR 527 / 180th St. area. The characteristics of the 180th St./SR 527 urban industrial area, including the parcel pattern and the scale and character of existing development in and around the designated area, support a small scale, clean business development more closely defined by the city's business park designation. This UGA plan retains the basic urban industrial designation, but further defines it through the appropriate implementing zones, as described in the following section of this plan.

Recommended Designation: Urban Industrial.

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Two sites of existing and future business development are designated "Community Business" on the city plan and "Urban Industrial" on the 1996 FLU Map. In both cases a change in the county's designation to match the city designation is the appropriate action to resolve the inconsistency. These sites are described as follows:

SITE 17: SR 527 / 180th St. SE Intersection.

This is a logical location for community business to serve growing residential areas between Mill Creek and Bothell - and was recognized as a neighborhood business location in the original NCACP. While most of this area has already been developed, a changed land use designation is still relevant in the long term as a guide to potential redevelopment or intensification at the site. This location meets the city's criteria for commercial development, and some properties along the east frontage of SR 527 already have commercial zoning. These factors support to a change in designation.

Recommended Designation: Urban Commercial.

SITE 19: North frontage of 130th St. SE

The north side of 130th St. within the southeast quadrant of the I-5 / 128th St. SE interchange is a logical candidate for the urban commercial designation. The existing commercial frontage along 128th St. SE is relatively shallow by today's standards and devoting the full depth of the block to commercial use could stimulate early re-development that could provide more transit-friendly and mixed-use development consistent with the urban center overlay at this pivotal location. This designation is also consistent with a development agreement between property owners and residents that was negotiated in 1990 and recognized by the county through a comprehensive plan amendment. The change to commercial land use designation would also partially compensate for the recent approval of the rezoning of the 21-acre drive-in theater site west of Meridian Ave. from Freeway Service to Business Park, which is an implementing zone for the urban industrial designation.

Recommended Designation: Urban Commercial.

Implementing Zones

A primary regulatory mechanism for implementing the land use element is zoning. Snohomish County's zoning regulations are contained in Snohomish County Code and are applied to specific properties through a series of zoning maps which cover all lands within unincorporated county territory. In general, zoning classifications are more numerous and more precise regulators of land use than the land use designations on the Future Land Use Map. With the advent of the GMA in Washington, it has become mandatory for local governments to assure that their zoning maps are consistent with the land use patterns delineated in their comprehensive plans. In November of 1996, Snohomish County adopted an area-wide rezoning involving thousands of acres of rural and urban lands throughout the county to achieve that consistency of zoning and land use plan now required by the GMA.

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An important objective of UGA planning is to review and, where necessary, modify the General Policy Plan's Future Land Use Map and the zoning map to maintain that consistency. UGA plans must also achieve greater precision by specifying the appropriate zoning classification for all lands within the planning area, rather than listing a series of possible zoning classifications for each land use category, as is done at the countywide scale within the General Policy Plan. Where lands have already been developed in accordance with an existing zoning classification, the land use designation should generally reflect that fact, unless there are compelling reasons to induce long-term change in the existing development pattern. In these cases, the potential creation of legal non-conforming uses may be justified by the overall community interest in changing the development. In the absence of compelling reasons, however, the existing development and zoning should be maintained. There are examples of this situation in the business development in the area of SR 527 and 180th St. where the land use designations are being fine-tuned for consistency with the existing development and zoning patterns.

In the following paragraphs each of the land use designations within the Mill Creek UGA will be reviewed in the context of the city's plan and the county's zoning classification system to determine the recommended zoning for all lands within the "A" area. Sites identified above for changes in land use designation, and other sites where a zoning change is appropriate to achieve consistency, will also have specific zoning classifications recommended for them. These recommended zones shall be deemed to be the final implementing zoning classifications within the sub-area plan designations.

Residential Designations and Zones

Urban Low Density Residential. The largest land use designation in the Mill Creek UGA is the Urban Low Density Residential (ULDR) designation. Under the language of the GPP, implementing zones for this designation include the county's three single-family zones - R-9600, R-8400 or R-7200 - as well as the PRD variations of those zones. These zones all permit single-family detached homes and duplexes as the primary use, and differ only in the size of the lots that are allowed (minimum average lot size is indicated by the zone name.) The R-7200 zone is also an implementing zone for the Urban Medium Density Residential (UMDR) designation, since it often produces net development densities in the 6-8 units/acre range, and sometimes higher if a Planned Residential Development (PRD) overlay is also utilized. Because of this and the nature of much of the single-family development in and around Mill Creek, the R-7200 zoning is only appropriate for the ULDR designation under limited conditions described below. In the county's zoning system, the PRD overlay is considered a zoning change and triggers all of the hearing and notification requirements of any rezoning. However, a series of design parameters and submittal requirements spelled out in the code for PRDs makes them a specialized type of development that typically involves somewhat higher densities than would occur under conventional zoning.

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In the Mill Creek area, the ULDR designation should generally be implemented through the R-9600 or R-8400 zones, or their PRD variations. Current county zoning in the area is predominantly R-9600, except for land in the northeast corner of the UGA, where the R-8400 classification prevails. As modified through the zoning changes contained in this plan, this existing zoning pattern over the Mill Creek UGA is the appropriate implementing zoning. This zoning pattern is also consistent with the city's comprehensive plan, which envisions development densities in the range of 3-4 units / gross acre within this designation - which generally equates to about 4-6 units / net acre. This zoning is also reflective of the existing single-family development and zoning pattern in and around Mill Creek.

Only two small areas in the northeast corner of the UGA that are within the ULDR designation are proposed for rezoning at this time. These areas are located along 4th Dr. SE and Meridian Ave. and are adjacent to the Urban Industrial / Business Park area at the I-5 interchange. Both sites are shown on the rezoning map. Individual rezone requests to R-8400, R-7200, or their PRD overlays may also be considered on a case-by-case basis in the future without the need for a comprehensive plan amendment where sound planning principles based upon the contents of this UGA Plan, the county GPP, or the city's comprehensive plan support such requests.

While the R-9600 zone should be viewed as the primary implementing zone in the Mill Creek area, and R-8400 as a secondary implementing zone - particularly in the northeast corner of UGA, there are some limited circumstances in which the R-7200 zone may be an appropriate implementing zone for the ULDR designation within the Mill Creek UGA. The following criteria shall be used in evaluating rezone proposals to the R-7200 or PRD-7200 classifications within the ULDR designation within the Mill Creek UGA:

1. Adjacent properties' designations and/or zoning classifications. Where adjacent property is designated for urban medium or high density residential development, or is classified on the zoning map R-7200, T, LDMR or MR, or any commercial or industrial classification within the city or the county, the R-7200 or PRD-7200 classification may be considered.
2. Adjacent roads' functional classifications. Lands which adjoin an urban arterial or collector street, as designated on the Arterial Circulation Map of the Transportation Element of the GMA Comprehensive Plan, may also be appropriate locations for the R-7200 or PRD-7200 classifications.

Snohomish County is also evaluating a possible transfer-of-development rights program to achieve greater preservation of agricultural land in the county. These programs usually rely upon appropriate "receiving areas" within UGAs for the transferred development rights. If such a program is created in Snohomish County, the R-7200 zoning classification is likely to be a good classification for receiving areas, which will certainly include land allocations within the greater Southwest UGA.

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Urban Medium Density Residential. Several sites described above are recommended for Urban Medium Density Residential (UMDR) designation. The GPP identifies three zoning classifications as potential implementing zones for this designation: R-7200, Townhouse (T) and Low Density Multi-family Residential (LDMR.) The Townhouse zone permits single-family attached residential structures up to 30 feet in height and at densities up to 9 units per net acre. The LDMR zone permits multi-family residential structures up to 35 feet in height and at densities up to 11 units per net acre. The recommended implementing zone for each of the new UMDR sites and a discussion of the reasons for these recommendations is given below.

SITE 4: 132nd St. SE at 23rd Ave. SE

[Recommended Land Use Designation - Urban Medium Density Residential.]

This small site is flanked by the Silver Lake reservoir and offices on the west and a GTE switching and office facility on the east. It is currently zoned R-8400, as are the other parcels fronting 132nd St. between the city limits and the Thomas Lake Center. The implementing zones listed in the GPP available for this designation are R-7200, Townhouse (T,) and Low Density Multiple Residential (LDMR.) Key factors in selecting the most appropriate of these are: 1) the awkward parcel pattern of narrow deep parcels; 2) the site's frontage on a principal arterial street; and 3) the presence of non-residential uses on both sides of the site; and 4) the proximity of shopping and services within easy walking distance at SR 527. All of these factors support the higher density and greater flexibility of the LDMR and T zones. However, the need for adequate screening and buffering from adjacent single-family residences necessitates careful site planning and site review through the PRD process before a multi-family zoning classification is approved. **Recommended Zoning Classification:** R-7200 (future reclassification request by applicant to PRD-T or PRD-LDMR also supportable with acceptable site plan.)

SITE 6: 35th Ave immediately south of Thomas Lake Center

[Recommended Land Use Designation - Urban Medium Density Residential.]

Although this site meets the locational criteria for higher densities, it is constrained by substantial wetland areas over the eastern half, so the critical area regulations will likely reduce significantly the buildable area of the site. In view of the county code provisions that allow for on-site transfers of allowable densities, the R-7200 classification over the entire site should afford the capability of achieving higher density yields on the buildable portions of the site. Proximity to single-family residences also requires careful screening and buffering which is best achieved through the PRD process, which must be initiated by the owner or developer.

Recommended Zoning Classification: R-7200 (future reclassification request by applicant to PRD-T or PRD-LDMR also supportable with an acceptable site plan.)

SITE 7: SW Quadrant of 35th Ave. / Silver Crest Dr. Intersection

[Recommended Land Use Designation: Urban Medium Density Residential]

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This site is located between Sites 6 and 8 and generally has similar locational characteristics to Site 6. Two key differences between these sites, however, are found in this site's direct access to Silver Crest Dr., which allows access to come from a street other than 35th Ave., and a site geometry that appears conducive to single-family attached or detached development by means of a loop road off Silver Crest. However, neither the parcel pattern nor the presence of flood-prone areas along the eastern one-half of the site readily support a single-family detached development pattern. The recommended implementing zone at this time is R-7200, the lowest density of the 3 implementing zones for the UMDR designation. This selection is based on the need for more site analysis before a higher density classification, which is more appropriate to the site's locational features, can be recommended.

The most effective way to develop this site would be through a Planned Residential Development (PRD) plan covering the entire site. Single-family attached housing provides greater flexibility in site planning than small lot detached development, and is also more compatible in scale to the adjoining single-family detached subdivisions. Imposing the PRD requirement also assures that adequate site analysis and planning work must be done and a formal review process completed before higher-density development is approved. With the transferability of density allowed in the code, the T classification will likely provide sufficient unit count to maximize the yield capability of the buildable portions of the site consistent with the UMDR land use designation. As with site 6, if future changes in county regulations are enacted which cause allowable densities on the buildable portion of the site to fall below 24 units/acre, a PRD or other residential rezone action to achieve such density could be considered to be consistent with this UGA plan. **Recommended Zoning Classification: R-7200** (future reclassification request by applicant to PRD-T also supportable with acceptable site plan.)

SITE 8: Pacific Topsoils Site

[Recommended Land Use Designation: Urban Medium Density Residential]

This site shares most of the same features and locational characteristics of site 7, which is immediately to the north. However, its larger parcel pattern and somewhat better buffering from adjacent single family to the south and southwest make this site more suitable for the LDMR classification. The somewhat higher allowable densities of the LDMR zone can better support the site recovery work necessary to convert the land from resource processing to residential use.

As with Site #7, environmental constraints necessitate the imposition of the PRD requirement as a condition to future rezone to assure that adequate site analysis and planning work is done and a formal review process completed before higher-density development is approved. Similarly, while the site's locational characteristics support a higher classification, the recommended implementing zone for this site at this time is R-7200, the lowest density zone for this designation. This selection is based on the same need as Site #7 for more site analysis before the higher density classification can be

recommended. **Recommended Zoning Classification: R-7200** (future reclassification request by applicant to PRD-LDMR supportable with acceptable site plan.)

SITE 12: Seattle Hill Rd. / SR 527 Area.

[Recommended Land Use Designation: Urban Medium Density Residential.]

This area east of SR 527 along Seattle Hill Rd. and 173rd St. SE is designated for medium density residential development in the city's plan. It represents a logical southern extension of a larger medium density residential area that starts along west Village Green Dr. and Seattle Hill Rd. to the north. For the purpose of evaluating zoning classifications, this large site should be divided into smaller sections, where different classifications may be appropriate.

The central / southeastern section between Seattle Hill Rd. and 173rd St. has some residential development but a larger area with further development potential. This section's proximity to single-family development to the south and east make it suitable for the R-7200 classification. The northeast section to the north of Seattle Hill Rd. is currently developed as a large estate and has similar long-term development potential. The western portions of the site located along the major arterial street of SR 527 are suitable for the LDMR classification.

Recommended Zoning Classifications: R-7200 [eastern half], and
Low Density Multiple Residential (LDMR)
[western half.]

SITE 18: 180th St. west of Brook Blvd.

[Recommended Land Use Designation: Urban Medium Density Residential.]

This small site fronts 180th St. and is located immediately east of the business development at the SR 527 intersection. Its frontage on a minor arterial street and its proximity to commercial development and to transit, together with its relatively well-buffered situation in relation to nearby single-family development, make it highly suitable for the LDMR classification.

Recommended Zoning Classification: Low Density Multiple Residential (LDMR.)

Urban High Density Residential. One sites within the Mill Creek UGA is recommended for Urban High Density Residential (UHDR) designation. The GPP identifies two zoning classifications as implementing zones for this designation: Low Density Multi-family Residential (LDMR) and Multiple Residential (MR.) The LDMR zone permits multi-family residential structures up to 35 feet in height and at densities up to 11 units per net acre. The MR zone permits multi-family residential structures up to 35 feet in height and at densities up to 22 units per net acre. The recommended implementing zone for the new UHDR sites and a discussion of the reasons for the recommendation is given below.

SITE 13: SE Quadrant of SR 527 / 173rd St. SE Intersection.

[Recommended Land Use Designation: Urban High Density Residential.]

This site is located across SR 527 from the southern end of the current city limits. It is currently designated for Neighborhood Commercial (northwest portion) and Medium Density Residential on the city's plan. For a number of reasons outlined above, it is recommended for the high-density residential designation. The site's location on a major thoroughfare, its proximity to existing and planned future commercial development, and the natural buffering created by topography and adjacent common open space to the east make it suitable for the higher density MR classification.

Recommended Zoning Classification: Multiple Residential (MR.)

Planned Residential developments. Planned Residential Developments (PRDs) are rezone actions which follow specified procedural and substantive requirements in Snohomish County Code and that generally provide density bonuses in return for higher design quality. PRDs are appropriate in the Mill Creek area, particularly where they produce a markedly higher standard of site design or development than would be expected under the conventional zoning. The city's subdivision and residential development standards regarding landscaping and public improvements are generally higher than the comparable standards in Snohomish County. As a means of encouraging the use of these higher standards in unincorporated residential developments around Mill Creek, PRD applications should demonstrate that proposed projects will meet those higher standards, particularly for landscaping, bikeways and paths, and roadway design. Appropriate code modifications will be explored, as necessary, to implement this additional PRD review criterion.

Non-Residential Designations and Zones

Urban Commercial Lands. The county's Future Land Use Map contains only one urban commercial designation and it has the full range of commercial zoning classifications as potential implementing zones. The city's land use plan has two commercial designations, one for Community Business and the other for Neighborhood Commercial. However, the city's only Neighborhood Commercial designation is on Site #13, which is now proposed for change to High Density Residential, with a small section also changing to Urban Commercial. A small part of Site #12 is also recommended for change to Neighborhood Commercial in the city's plan - the remaining commercial designations are all Community Business. The Thomas Lake Shopping Center at 132nd St. SE and 35th Ave. SE, and other smaller parcels to the west along 132nd St. SE which are designated for commercial use, are all appropriately located and sized for Community Business zoning. The shopping center site was rezoned to Community Business by Snohomish County prior to development.

The land use and zoning at the I-5 / 128th St. SE interchange merits special attention, particularly in view of the urban center designation that it features. The 128th St. SE frontage at this location has been designated for Urban Commercial use. The existing zoning of this commercial frontage is Freeway Service and Multiple Residential (MR.) Vacant or under-developed properties west of McCollum Park within the Urban Commercial designation which are zoned MR should be reclassified to Planned Community Business. This zoning is

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consistent with the general guidance of the GPP and also the more specific direction within the city's comprehensive plan. It will also require more formalized site planning review to occur within the context of the urban center designation. Criteria contained in the GPP and in this UGA plan which are implemented through Snohomish County Code may then be used to evaluate development proposals to better achieve urban center design objectives.

Three sites within the Mill Creek UGA (and portions of two other sites) are recommended for a change of land use designation to Urban Commercial, and the implementing zones for each are discussed below.

SITE 2: 132nd St. at 21st Dr.

[Recommended Land Use Designation: Urban Commercial.]

This 3-acre site is presently occupied by a small church and is zoned R-8400. Because its long-term potential for commercial re-use appears good, whereas its potential for single family residential use is low, its designated future land use is changing to urban commercial. The property is designated "Community Business" on the city's plan and its location and site characteristics are most consistent with the intent of the Community Business zone. **Recommended Zoning Classification: Community Business (CB.)**

SITE 12: Seattle Hill Rd. / SR 527 Area (Southwest Corner.)

[Recommended Land Use Designation: Urban Commercial.]

This is a small (1.5-acre) part of Site #12 located at the northeast quadrant of the SR 527/173rd St. intersection. The purpose for the commercial designation at the intersection is to permit the development of a small neighborhood-serving commercial node to serve the medium and high density residential development planned for the surrounding area. Despite the location on a major highway, the intent is not to create an additional opportunity for regional comparison goods commercial development at this location. Therefore, the appropriate zoning classification for this site is Neighborhood Business (NB.) **Recommended Zoning Classification: Neighborhood Business (NB.)**

SITE 13: SE Quadrant of SR 527 / 173rd St. SE Intersection (Northwest Corner)

[Recommended Land Use Designation: Urban Commercial.]

This is a small (2-acre) part of Site #13 located at the southeast quadrant of the SR 527/173rd St. intersection. The purpose of the commercial node at this location is described above, and the appropriate implementing zoning is the same as for the Urban Commercial portion of Site #12.

Recommended Zoning Classification: Neighborhood Business (NB.)

SITE 17: SR 527 / 180th St. Intersection.

[Recommended Land Use Designation: Urban Commercial.]

This is a logical location for community-oriented business to serve growing residential areas between Mill Creek and Bothell - and it was recognized as a neighborhood business location in the original NCACP. The land use designation is recommended for change

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from urban industrial to urban commercial, consistent with the city's land use designation. The land use inventory reveals that most of the site, consisting of several parcels at all 3 quadrants of the intersection, has already been developed for commercial use. Community business is the appropriate implementing zone for the site's small to moderate-sized parcels located at this type of important sub-regional road intersection, and for the type and scale of business appropriate to it.

Recommended Zoning Classification: Community Business (CB) [for parcels not already zoned in a commercial classification.]

SITE 19: North Frontage of 130th St. SE

[Recommended Land Use Designation: Urban Commercial.]

Site #19 is located immediately south of the 128th St. SE frontage and is recommended for a change in designation to from urban industrial to urban commercial. The easternmost sections of this site which are adjacent to the freeway interchange are currently zoned Freeway Service, but the remainder is now zoned R-9600. As with the adjacent 128th St. SE frontage discussed above, this residentially zoned land should also be reclassified to Planned Community Business for all of the same reasons.

As noted above, this reclassification is also consistent with a 1990 development agreement between several owners of business property and neighboring residents that established certain standards and requirements for business park development and zoning. The parcels within site #19 were targeted for either business park or planned community business development by that agreement. It is the intent of this UGA plan to preserve the land use restrictions and development requirements and standards contained in that agreement that were subsequently incorporated into the 1990 comprehensive plan amendment to the North Creek Area Comprehensive Plan. These restrictions and requirements continue to apply to properties within both the Urban Commercial and the Urban Industrial areas at the southeast quadrant of the 128th St. SE interchange.

Recommended Zoning Classification: Planned Community Business (PCB.)

Urban Industrial Lands. Two small concentrations of industrially designated lands exist within the unincorporated Mill Creek UGA, but they are characterized by different development and zoning patterns. The north industrial area contains about 60 acres located south of 128th St. at the I-5 interchange and is affected by the 1990 development agreement mentioned above. Within this area is a 21-acre site situated between Meridian Ave. and I-5 that has been recently rezoned to Business Park (BP.) The development plan approved for this site will create a business park of nearly 300,000 square feet of mixed use business space in several 2 and 3-story buildings. This project follows the parameters established in the 1990 agreement and the amendment to the North Creek Area Comprehensive Plan. The remainder of the industrially designated land at this location is currently zoned R-9600, which is not consistent with either the 1990 comprehensive plan amendment or the 1996 FLU Map. The appropriate implementing zone to carry out the intent of the 1990 agreement and amendment, as well as the city's comprehensive plan, is Business Park (BP.) However, as discussed

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below, additional design parameters should be established for future development at this location in order to carry out the intent of the General Policy Plan for urban center development.

The second area of urban industrial land is located around the intersection of SR 527 and 180th St. SE at the southern edge of the "A" area. This area contains about 100 acres, including Site #16, the only site in the Mill Creek UGA recommended for change to the urban industrial designation. Additional industrial acreage also extends southward along SR 527 beyond the Mill Creek "A" area.

SITE 16: East side of North Creek Park.

[Recommended Land Use Designation: Urban Industrial.]

This under-developed site has an urban industrial designation dating back to the NCACP for its central section, while the north section (along SR 527) and the south section (along 183rd St.) are designated ULDR on the 1996 FLU map. The existing zoning on the north half of the site was recently changed to Light Industrial through a decision of the Hearing Examiner on a rezone application. The current zoning on the south half of the site is R-9600. The site's characteristics as well as the city plan designation of the site for business park indicates the appropriate implementing zoning to be "Business Park (BP.)" However, the light industrial zoning recently approved by the hearing examiner on the north half of the site should be retained.

Recommended Zoning Classification: Business Park (south half of site.)

The industrially designated land to the east of Site #16 has been developed and is currently zoned Light Industrial (LI.) Developed lands in this area that are presently zoned LI are not included in the areawide rezoning to implement this plan because of the potential problems associated with non-conforming uses that could result. Therefore, the LI zone is the appropriate implementing zoning for those areas. However, Business Park zoning is also consistent with this plan and with the city's vision for employment development outside its Town center and retail core areas. Therefore, any future rezone applications to BP for sites in the Mill Creek UGA that are designated for Urban Industrial would be considered consistent with this comprehensive plan. Because some of these light industrial areas abut residential zones, the issue arises of appropriate buffering and screening. To address that issue, the following supplemental policy is proposed to guide any needed amendments to Title 18 to establish adequate screening and buffering requirements for future development or redevelopment of industrial parcels that adjoin residential land:

Policy MC-2: Industrial development within the Mill Creek UGA that involves construction of new building, expansion of existing buildings, or a change of use that is clearly visible from adjacent residential property should provide adequate screening and buffering along the common property lines. Adequate screening and buffering shall generally mean any one or combination of dense plantings, decorative walls or solid

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fences, and landscaped berms that serve to visually screen and acoustically shield the residential property from the industrial uses.

Public Use Lands. Several sites described herein are recommended for Public Use designation. Sites #9, #10, #11, and #20 are all within the large southeast section of the UGA that is designated ULDR and zoned R-9600. Since county code treats most public uses as conditional uses in most zoning districts, R-9600 is the appropriate implementing zone for those sites and no reclassification is appropriate or necessary. The other public use sites have features or surroundings that merit further investigation and discussion and, in some cases, a change in zoning. The recommended implementing zone for each of these sites and the basis for these recommendations is given below.

SITE 1: McCollum Park.

This county park is currently zoned Forestry & Recreation (F & R,) a classification that was originally designed for natural resource environments, but which has been recently expanded to apply to publicly-owned parks within UGAs. Therefore, the zoning classification of this site can remain unchanged.

Recommended Zoning Classification: Forestry & Recreation (no change.)

SITE 3: Silver Lake Water District Reservoir.

This is also a public use site and is currently zoned R-8400. It is situated between two other sites recommended for changes in land use designation and zoning. Immediately west, the existing church site is recommended for Community Business (CB) zoning, while the residential parcels to the immediate east are recommended for LDMR zoning. Because the Silver Lake W.D. facilities can operate in either zone, it is recommended that the more restrictive of the two adjacent zoning classifications be applied to this property, thereby extending the LDMR classification further west to include this property.

Recommended Zoning Classification: LDMR.

SITE 5: GTE Switching and Offices.

This small site is occupied by the GTE facilities and is currently zoned R-8400. Lands to the south and east are developed for single family residential use and are also zoned R-8400. Land to the west is within Site #4 and is proposed for reclassification to LDMR. Since the existing use is likely a non-conforming use in either zoning classification, there is no need for a change of classification at this time.

Recommended Zoning Classification: R-8400 (no change.)

SITE 15: North Creek County Park and Stormwater Detention Facility.

This site consists of approximately 96 acres of county-owned land on the east side of North Creek that is used for both passive recreation and stormwater management (detention) purposes. North Creek Park is comparable in size to McCollum Park, but it is much less developed for active recreational use than McCollum. As discussed above, McCollum Park has been zoned F & R and is recommended to remain in that zone - a

classification which appears to be at least as appropriate for the North Creek Park site, which is currently zoned R-9600. The site also includes about 13 acres of privately held land within drainage easements. These contiguous easements cover the rear portions of several ownership parcels adjoining the park on the west side of North Creek. No zoning change is recommended for this section of the site for the following reasons: 1) it is not in fee-simple county ownership; 2) it consists of segments of several parcels, which would require splitting the parcels between two zoning classifications; and 3) the remainder of these parcels may be developable, and the easements could preserve development rights that would be easily transferable to the other sections of these parcels.

Recommended Zoning Classifications:

R-9600 [western section within easements, no change]

Forestry & Recreation [east section, county-owned park]

Open Space

The 1996 amendment to the GMA Comprehensive Plan included the addition of a county-wide map entitled Open Space Corridors / Greenbelt Areas. The map incorporates several different categories of land use and/or public ownership that qualify for delineation as open space pursuant to the direction of policy LU 10.A.1. of the General Policy Plan (GPP). The text of the GPP was also expanded and modified to describe the purposes and uses of this new map. This text is found within the Land Use Section at the narrative describing the Future Land Use Map. It indicates that open space delineations may be expanded or refined through "...UGA-level open space maps that will be developed in later planning phases..." as more specifically directed by Policy LU 10.A.2. Accordingly, the Mill Creek UGA plan includes an open space map to complement the Future Land Use map and to supplement the countywide open space map incorporated into the GPP.

Open space delineation is handled somewhat differently by Mill Creek. The city's comprehensive plan includes several designations on its land use map that incorporate one or more of the open space categories on the county's open space map - specifically, Golf Course, Private/Public Open Space/Facilities, Public Open Space/Facilities, and Public & Quasi-Public. Within the Private Open Space designation on the city map are lands along the North Creek and Penny Creek corridors. These corridors are characterized by wetlands associated with the creeks which makes them reasonable candidates for open space status and places them within the parameters of GPP policy LU 10.A.1. Such areas were not included on the countywide map because of the level of effort that would have been required and the scale differential between most "critical areas" and a single countywide map. However, it is appropriate to include such areas within UGA plans, particularly where the associated city has done so within its comprehensive plan.

HOUSING

The Countywide Planning Policies, which guide the comprehensive planning of both the county and the cities, contain several policies addressing housing - particularly housing affordability and geographical distribution of low and moderate housing throughout the county. To satisfy these countywide policies, as well as the goals and directives of the Growth Management Act (GMA) regarding housing, both the General Policy Plan and the city's Comprehensive Plan contain a housing element. The county housing element includes a series of goals, objectives and policies addressing the GMA housing goals and the countywide planning policies. Of particular importance for land use policy are objectives HO 1.B ("Assure a broad range of housing types is available in urban and rural areas.") and HO 1.D ("Maintain an adequate supply of appropriately zoned developable land.") These policies provide direction for future planning (particularly within UGAs) and for regulatory decisions that could affect the availability and affordability of housing (particularly for lower income households.)

The city's plan acknowledges and documents the growing gap between income and housing prices in the Mill Creek area - which widened considerably during the 1980's. In 1990, median household income in Mill Creek was 36% above the county median, but the median value of a house was 73% higher than the countywide average, suggesting that, even for Mill Creek households, housing affordability is a significant issue.

The county and cities are collaborating on a growth monitoring process that will document changes in land availability, price, and population and household growth to assess the impact of our comprehensive plans on the land and housing markets in Snohomish County. This process was originally called for in the countywide planning policies and it is now also required by state law. The initial report in the growth monitoring process, issued in July, 1997, is a compilation of data that describes recent platting and permitting activity and housing price and vacancy information on a countywide, city and UGA basis. This data is not yet available at the sub-area scale necessary for identifying trends in the immediate Mill Creek area, which is but one part of the much larger Southwest UGA. As the monitoring process advances and is refined over the next two years, it will play an increasingly vital role in shaping future planning policy - particularly in the land use and housing elements.

Existing Housing Supply

There are approximately 4000 housing units within the city of Mill Creek. About 20% of those units have been constructed since 1990, reflecting the substantial growth rate that has characterized this area in recent times. Most of the housing units in and around Mill Creek are less than 30 years old, so housing conditions are generally good to very good throughout the area. Within the city there is a relatively good mix of housing types. Although single-family detached homes are still the predominant housing type at about 58% of all units, single-family attached, multi-family rentals and condominiums, and mobile homes are all represented

in the city's housing inventory. Within the unincorporated portions of the "A" area the overwhelming majority of all residential units are in single-family detached homes, with a small number of mobile homes and duplex units, but virtually no multi-family units.

The robust economic conditions now evident throughout the region are accelerating housing demand for all types and in all price ranges, producing low vacancy rates and correspondingly higher prices and rents throughout the area. The 1997 Growth Monitoring Report shows that apartment rents in the Mill Creek/Bothell area have increased 7.2% over the previous year, while vacancy rates have dropped from 5.2% to 2.9% during the same period. Rent levels in this area are 14% above the countywide average, reflecting this area's high market demand for housing. Sale prices of single-family homes is even more dramatic, with the average Mill Creek home sold in 1995 having a 58% higher price than the average price throughout the Southwest UGA, reflecting the size and quality of homes, public services and environmental features of the area, and their high demand.

Residential Land Use Needs Analysis (RLUNA)

Several objectives and policies within both jurisdictions' housing elements call for a mix of housing types, sizes and prices in order to better accommodate the needs of household types and income levels found throughout Snohomish County. One strategy for addressing these objectives is through the use of land use policies and regulations which promote more attached housing types and higher residential densities as a means to help reduce many of the cost components of a housing unit. Savings on the per unit costs of land, infrastructure and construction, for example, can be realized through smaller unit sizes, party walls, and shared building systems.

In order to convert the housing goals of the comprehensive plans into quantifiable land use terms, a methodology was developed through Snohomish County Tomorrow referred to as the Residential Land Use Needs Analysis (RLUNA.) The methodology uses existing information on countywide household income groupings and housing preferences, together with existing housing and future population projections for an area, to produce an estimated need for medium density and high density residential land in a particular area. At the sub-county level, the RLUNA methodology is well suited to single-city UGAs, such as Lake Stevens or Monroe, because such areas are well-defined housing markets. The methodology is less well suited to relatively small sub-UGA areas such as the Mill Creek "A" area, which is part of the much larger Southwest UGA, and the results must be carefully interpreted.

The analysis for the Mill Creek UGA - when applied only to the unincorporated portions of this area - revealed a substantial need for medium and high density residential land. This is not surprising given the current housing stock and the existing household income distribution around Mill Creek. The land use changes proposed in this plan are a balanced and realistic attempt to address the findings of this analysis. Furthermore the city housing stock, which has a more balanced range of types and densities, and the city's plan amendments for the SR 527

corridor north of the Town Center now under consideration, have a significant mitigating impact on the overall need for multi-family residential development in the UGA indicated by the RLUNA.

The RLUNA methodology will also be applied to the larger "B" area as part of that future planning process. While the "B" area has a much larger population than the "A" area, it is expected to have a housing stock and a household income profile that more closely approximates the county average. That fact, combined with the area's much larger inventory of developable land, will produce a more realistic and accurate assessment of housing need that can be more readily addressed through changes in land use designation.

TRANSPORTATION

Transportation in general, and the road network in particular, is addressed in the Transportation Element, a separate document that is a part of the county's GMA Comprehensive Plan. The city's adopted comprehensive plan also contains a section devoted to transportation. This section of the Mill Creek UGA plan is intended to update and supplement the information contained in those documents.

Road System

Mill Creek has transportation linkages to the remainder of the Southwest UGA through two primary state routes that connect to the interstate highway system. SR 527 (Bothell-Everett Highway) is a primary north-south arterial road through the Southwest UGA, and it bisects the Mill Creek UGA. SR 527 connects to I-5 in Everett north of Silver Lake, and to I-405 in north Bothell, and is classified as a Major / Principal Arterial road on both cities' plans. While currently a two-lane roadway between 132nd St. SE and 164th St. SE, SR 527 is planned for widening to a 5-lane arterial once state funding is in place. This improvement is given a priority "1" ranking in the county's Transportation Element, which means it is of critical importance to the expanded roadway system to be completed by the year 2001.

The other state highway is SR 96 (132nd St. SE) which is also a principal arterial and serves northern Mill Creek in the east-west direction. East-west transportation was cited as a problem in the public workshop that preceded preparation of this UGA plan. SR 96 roadway is developed as a 5-lane urban arterial through the Mill Creek area, but a widening to 7-lanes is contemplated between the I-5 interchange and Dumas Rd. by the year 2012. A third primary roadway link between Mill Creek and the interstate system is provided by 164th St. SE, which is a county road and not a state highway. This arterial roadway between I-5 and the city limits is currently undergoing widening to 5 to 7 lanes with bike lanes. When completed, this expanded road, which continues eastward from SR 527 along Mill Creek Blvd. / Seattle Hill Rd. to 35th Ave. SE, will improve east-west traffic flows into and through Mill Creek.

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Two other roads in the Mill Creek UGA are classified as minor arterial roads in the county's Transportation Element: 35th Ave. SE, which connects east Mill Creek with southeast Everett and north Bothell; and 180th St., which connects southeast Snohomish County to SR 527. 35th Ave. SE is planned for widening to 3 lanes in the Mill Creek UGA, while 180th St. SE is planned for widening to 5 lanes between SR 527 and Brook Blvd. The segment of 35th Ave. between 132nd St. and Seattle Hill Rd. is expected to be completed by the year 2000.

The county Transportation Element also calls for the construction of two new roadway extensions before the year 2012 which are designed to facilitate east-west movements in the Mill Creek area. One of these new roads is an eastward extension of 148th St. from Jefferson Way (in the eastern Lynnwood area) to SR 527. This new collector street is planned to improve sub-regional traffic flows between Mill Creek and Lynnwood, and it will require the assistance and participation of the city in order to reach SR 527. The city does not presently delineate this future roadway in its comprehensive plan, but does include a small road crossing of North Creek as part of its town center development plan. The difficulty and cost of this relatively narrow crossing indicate that another, much wider crossing at 148th St. SE would be impractical. The city staff is not proposing another crossing of North Creek within the city's comprehensive plan amendment now under study for the SR 527 corridor north of the new Town Center, which includes the 148th St. SE alignment. The preliminary assessment from county transportation planners suggests that the county road extension could terminate at Cascadian Way and still fulfill much of its traffic-relieving functions.

The other new road is a westward extension of 180th St. between SR 527 and North Rd. The Transportation Element also calls for a widening of North Ave. from this extension south to I-405, thereby creating a new link between south Mill Creek and the greater Puget Sound region via I-405 and I-5. The public review process for this plan revealed a deep-seated and widespread public opposition to developing this proposed roadway. Furthermore, this opposition goes back many years to earlier county proposals to extend 180th St. west from SR 527.

Therefore, this plan calls for a re-evaluation of the southwest county road network to develop alternative transportation solutions to these two road segments. This re-evaluation should produce a subsequent amendment to the Transportation Element that 1) eliminates the 180th St. extension from the future road network and project list, 2) terminates the 148th St. extension at Cascadian Way rather than at SR 527, and 3) effects other changes in LOS or the future road network and project list necessary to accommodate these modifications. This roadway evaluation may also necessitate a subsequent re-assessment of future land uses in the southeast sections of the Southwest County UGA called for under the comprehensive plan, including the recommended changes made through this UGA plan.

There are two other planning issues affecting the Mill Creek area's roadway system that merit brief discussion here. The first concerns a new roadway segment planned to connect Seattle

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Hill Rd. and 173rd St. SE. In the city's plan this new road extends southwesterly from the point on Seattle Hill Rd. west of 7th Ave. where it turns due west, to approximately the north-south section line, and then extends due south to 173rd St. This new collector road is delineated on the city's plan and is contained within a Medium Density Residential area. It is not included in the county Transportation Element because it is a short road segment that connects two non-classified streets. However, the Mill Creek UGA plan acknowledges the importance to the local road network of creating this road link. The county will work with the city and affected landowners to see that this connection is built as development occurs.

The other significant transportation issue concerns incomplete local road connections in the Mays Pond area south of the existing city limits. The unusual development history of the area, both prior to and following city incorporation in 1983, has created an incomplete local road system that presents a dilemma for the city and the county to complete. At present, all access into and out of the large unincorporated area in the southeast quadrant of the "A" area must come from 180th St. SE on the south or from 35th Ave. SE on the east. Since large volumes of traffic from this area are destined for points to the north and east, substantial costs in time, energy, and lowered air quality resulting from the lack of roadway connections in those directions are incurred by residents, visitors and service vehicles every day. Reduced emergency response capabilities are also a potential adverse consequence of this incomplete road network.

There are potentially 5 separate connections available to the north and west that would complete the local road system. The county's public works staff has analyzed existing and projected traffic movements in the area under different connection scenarios and has consistently maintained that all 5 connections should be opened simultaneously to disperse the resulting traffic impacts over the local road network. Residents along these streets, in both the city and the unincorporated neighborhoods, have generally opposed the street opening, which has made both jurisdictions hesitant to take the necessary actions to resolve the problem.

Because the current situation is inefficient, environmentally damaging, and potentially dangerous to area residents needing emergency services, the Mays Pond area road connections should be completed. A recommended strategy to resolve the current impasse would begin with a negotiating process involving city and county public works, planning, and legislative representation, and lead to a formal interlocal agreement that lays out the duties and responsibilities of both jurisdictions. Through such a process the county and city could set down a timetable for completing all requisite tasks needed to effect the agreed upon roadway improvements.

Transit System

The Mill Creek area also enjoys transit connections to the remainder of Southwest County and to the greater Puget Sound region through Community Transit bus routes that run along SR

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96, SR 527, 164th St. SE and on collector streets within Mill Creek and the Mays Pond area. The latest transit facility made available to the area is the new park and ride lot situated on the McCollum Park site. Three park and ride lots are located within reasonable proximity of Mill Creek. Two lots are located on the west side of I-5 - one south of 128th St. SE and the other on 164th St. SE west of SR 525 - and one lot is located at SR 527 and I-405.

Regional bus service to and from the Mill Creek UGA can be expected to improve over the next 5 years as the Regional Transportation Authority (RTA) begins to carry out the regional transportation plan approved by the voters last Fall. The RTA plan will utilize a regional bus system and commuter rail system to provide improved transportation linkages between Snohomish, King, and Pierce Counties. The current program calls for a regional bus route along SR 527 to I-405 to be in operation by the year 2000. This route will connect Southwest Snohomish County, including Mill Creek, to Canyon Park, Bellevue, and other "East Side" employment centers. This route will have a stop in Mill Creek in the area of 164th St. SE. A regional bus route from Everett to Seattle, also planned for operation by the year 2000, will run along I-5 with a stop in the area of northwest Silver Lake. This route is expected to be accessible to Mill Creek residents through connecting local bus routes and/or a new park and ride lot near the Silver Lake stop. It may be 8-10 years, however, before the Silver Lake park and ride lot is completed, according to the RTA's preliminary schedule of improvements.

The RTA's plans are still evolving, and can be expected to change as the many projects needed to support the plan get nearer to design and construction. To illustrate, the 128th St. interchange does not appear to play a prominent role in the current plans, although it has many attractive features already in place which make it a logical choice for a transit connection. 128th Street provides a good arterial road connection to I-5 from southwest Everett, via Airport Rd., including developed HOV lanes from SR 99. East of the interchange, 132nd St. provides good arterial access to and from the Silver Firs / Snohomish Cascade developments. Two developed park and ride lots with combined capacity for over 1000 cars are located within 1/2 mile of the interchange. These and other factors may cause RTA to refine its current investment strategies to place more emphasis on the 128th St. interchange (see also the discussion of the designated urban center at this location contained in the land use section.)

Non-Motorized System

Bikeways and walkways are an important component in a community's over-all transportation network. Bikeways provide a viable transportation alternative for short trips that can help take automobiles off increasingly congested roadways. Bikeways can be provided as part of road improvement projects in the form of widened shoulders or as separated pathways, depending upon the availability of adequate right-of-way. A good system of bikeways is also a recreational asset that can provide health benefits as well as alternative transportation access to commercial and recreational destinations along the network. Accordingly, a collaboration between Snohomish County's Parks and Public Works staffs has produced a separate non-

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motorized transportation plan entitled "Paths for People." This stand-alone document has not been formally incorporated into the GMA Comprehensive Plan, but the recommended implementation strategy in the GPP calls for amending the Transportation Element in 2 phases over 2 years to fully incorporate the "Paths for People" goals, policies, and projects.

The Transportation Element does delineate a proposed bikeway system to serve the southwest county, including the Mill Creek area. The system includes existing bikeway routes along 132nd St. and - within the city limits - along Seattle Hill Rd., Mill Creek Blvd. and Village Green Dr. It also proposes new bikeway routes along 35th Ave., SR 527 and the North Creek corridor, as well as along 180th St. and 164th St.

CAPITAL FACILITIES

County Facilities - Parks

Snohomish County owns and operates two large park sites within the Mill Creek UGA: The McCollum Park complex off 132nd St. SE in the northwest section of the UGA; and the new North Creek Regional Park and stormwater detention facility off 183rd St. SE at the southwest corner of the UGA. McCollum Park is an 80-acre site that has been in county ownership for many years. The park underwent significant improvements in 1996 in conjunction with the construction of a new Community Transit park-and-ride facility at the northeast corner of the site. The park contains both active and passive recreational facilities, including an outdoor pool, ball fields, and walking paths. The new Northwest Stream Center being developed by the Adopt-a-Stream Foundation, and the WSU Cooperative Extension Service are also located within the park site. McCollum Park is truly a multi-purpose and multi-agency facility that serves many people throughout the northern half of the Southwest County UGA, including residents of the Mill Creek UGA.

A fairly recent county acquisition is the 115-acre site of the North Creek Regional Park and stormwater detention facility. This site is primarily in fee-simple ownership, but also includes about 15 acres of easement over private ownerships. It is jointly managed by the Public Works and Parks Departments and provides regional stormwater management functions and other environmental benefits, as well as passive recreational opportunities to properties and persons inside and outside of the Mill Creek UGA. The park presently contains a paved parking area, a small path and boardwalk system, and interpretative displays. Further improvements are expected over the next 5 years as the county works to secure funding to fully implement the park master plan.

The Countywide Parks and Recreation Plan was developed in 1993 through a collaborative planning project sponsored by Snohomish County Tomorrow that involved the county and most of the cities within the county, including Mill Creek. This plan focused on regional parks, and was adopted by Snohomish County as part of its GMA Comprehensive Plan. However,

the plan also investigated existing levels of service for a variety of park and recreational facility types and established a framework for further joint parks planning within UGAs. It is anticipated that the next phase of joint planning for the "B" area around Mill Creek will include a joint parks planning component that will examine park supply and demand within the entire Mill Creek UGA. Such joint park planning is a necessary prerequisite for designing a reciprocal park impact mitigation program similar to the one now in effect for roads. The feasibility of creating such a program will be explored for the greater Mill Creek area as a part of the next phase of the UGA planning process.

Special Districts' Facilities and Services

Schools

The vast majority of the Mill Creek UGA lies within the Everett School District. A small area at the northwest corner of the UGA is within the Mukilteo School District, and a small strip along the west edge south of 155th St. is within the Edmonds School District. These areas, upon eventual annexation to the City of Mill Creek, could be transferred into the Everett School District, in accordance with state law and regulation.

The Everett School District operates two schools within the southeast section of the unincorporated UGA: Cedar Wood Elementary School, located on the southwest corner of 35th Ave. and 168th St.; and Woodside Elementary School, located on 23rd Ave. between 169th St. and 171st St. Heatherwood Middle School and Jackson High School, which serve these and other elementary schools, are located on a joint campus site on the north side of the city. The district also owns a 20-acre parcel on the east side of SR 527 between Seattle Hill Rd. and 173rd St. (within Site #12 described in the land use section of this document,) but at this time it has no plans to develop this site in the near future.

The Everett School District prepared a capital facilities plan in 1994 as part of a collaborative planning project sponsored by the county that included all of the county's public school districts. The district is currently in the process of updating that plan in anticipation of future changes to the county's school mitigation program.

Fire Protection

The City of Mill Creek contracts for fire protection with the Clearview Fire Protection District (FPD) #7, whose boundaries extend south and east of the city to include those portions of the unincorporated UGA. Unincorporated portions of the "A" area located north of 144th St. are served by the Silver Lake FPD #11. A small section of the unincorporated UGA along the western UGA boundary is served by South County FPD #1. As territory within these districts is annexed to the city, jurisdiction will be transferred to FPD #7.

MILL CREEK UGA / AREA A
Sub Area Plan Supplement to the GMA Comprehensive Plan

The Clearview FPD operates from two fire stations within the Mill Creek UGA. One station is located on Mill Creek Blvd. near the center of the city, and another station is located at the northwest corner of 35th Ave. SE and 180th St. SE. The district provides fire suppression and emergency medical aid through the district's boundaries. The district is also planning for a new station to be built within the city at the intersection of SR 527 and 152nd St. SE near the proposed town center.

UTILITIES

County Facilities - Stormwater Management

Snohomish County Public Works, Surface Water Division, manages a regional stormwater detention facility in the southwest corner of the UGA. The large site in the North Creek corridor is co-managed with the Parks Department as a combination regional park / stormwater detention facility. The detention facility is under development and is expected to be in full operation in 12 to 18 months following construction of the control structures planned for 1998. Other public stormwater management facilities in the unincorporated UGA, such as storm sewer, culverts, improved drainage channels, etc. are also under the jurisdiction of the division.

Following a very wet winter and spring, public awareness of drainage issues and problems was aptly demonstrated at the May 8, 1997 public workshop for the Mill Creek UGA planning process. Areas of poorly drained soils along the 35th Ave. corridor are especially vulnerable to stormwater management problems, and residents in those areas commented on the problem at the workshop. Regulatory mechanisms that require development to properly detain and drain its own storm water are a primary tool for public management of stormwater. Most of the county's regulations are contained in Title 24 of Snohomish County Code, which is now undergoing a complete staff review. It is likely that code modifications will be proposed to reflect technological advances made since the original code was adopted in 1979.

In addition to the regional detention facility at North Creek Park, Snohomish County can also develop and sponsor smaller scale stormwater management projects to address localized problems that were created by or left unresolved during the development process. In some cases, partnerships with cities or special districts in these projects is appropriate. There are certain problem areas along the Mill Creek city limits at 35th Ave. SE where corrective projects are being developed in cooperation with the city. As funding becomes available, primarily through property-based fees and state grants, these projects are included within the county's six-year capital plan. In many cases, future problems can be avoided through better cooperation in the development review process and through greater coordination or stormwater management standards and requirements for developers.

Special Districts' Facilities and Services

Water Supply

The Mill Creek area - including the city - is served by two major water districts that also serve larger areas beyond the Mill Creek UGA. The northern 1/3 of the "A" area is within the Silver Lake Water District, which provides both water supply and sanitary sewer service to its customers. The southern 2/3 (and portions of the west side) of the area is served by the Alderwood Water District, which also provides sanitary sewer service as well as water supply to its customers. Both of these special service districts are major utility providers in southwest Snohomish County and each is governed by its own district commission under state rules and regulations. A small area south of 169th St. SE at the southeastern corner of the UGA is served by the Cross Valley Water District.

Water supply to the Mill Creek area originates in the Sultan River watershed in eastern Snohomish County. Water is impounded, treated, and transmitted to southwest county by the City of Everett, which then wholesales it to the two water districts under the terms of their respective service agreements. Each district is guided by its own comprehensive water system plan, prepared according to state guidelines and reviewed by both the City of Mill Creek and Snohomish County. The Silver Lake plan was prepared and adopted in 1991, whereas the Alderwood plan was prepared in 1996 and adopted early this year. Alderwood's draft document was reviewed by PDS staff which submitted comments which were incorporated into the final plan adopted by the district. The plan received the formal county approval required by state statute on September 3, 1997.

The Alderwood plan features a major water supply project to be jointly undertaken with the City of Everett and other wholesale customers for a new transmission line from Everett's Pipeline #5 to a major new reservoir to be built in the Clearview area east of Mill Creek. These new regional facilities are referred to as the "Clearview Facilities" and are currently in the active planning and pre-design phase. When they are completed, which is planned to occur within the next 5 years, water supply reliability to southwest Snohomish County, including the Mill Creek area, will be significantly enhanced. The Alderwood water plan also calls for a new water supply transmission line to be built from the new Clearview reservoir westward along 180th St. SE to SR 527 and then continuing west along 183rd St. SE - generally following the southern boundary of the "A" area. The district plans no other major water supply projects in the Mill Creek area over the next 20 years. Developer-financed water main extensions to complete missing segments of the distribution network and to provide service to the few areas within the "A" area that are not presently served will, of course, continue to occur.

The Silver Lake Water District's offices and Reservoir #1 are located on 132nd St. SE at 22nd Ave. SE at the northern edge of the Mill Creek UGA. The district's current Comprehensive Water Plan was prepared in 1991 and approved by Snohomish County in

1993. It identifies several capital projects for the north Mill Creek area, some of which have been completed and others which have not. The district's primary transmission main in the Mill Creek area is its 12" main along 132nd St. A second 12" main along 136th St. by Jackson High School was completed when the school was built. A new 12" main is also planned for construction along SR 527 from 132nd St. SE south to 164th St. SE. The timing of this project is contingent on planned road improvements by the state, for which a schedule has not been firmly established at this time. Another 12" main extension is planned along 35th Ave. south of Silver Crest Dr., although the district is currently re-evaluating that project as part of its capital plan update now in progress.

Sanitary Sewer

In the County's General Policy Plan, sanitary sewer service is considered the primary and defining "urban service." Except under highly restricted conditions, sanitary sewer extensions into the rural areas are prohibited (policy UT 3.C.1.) while sewer service is required for most new urban development (policy UT 3.B.2.)

Within the Mill Creek UGA, sanitary sewer service as well as public water is provided by the Silver Lake and Alderwood Water Districts. The Silver Lake Water District maintains a collection system of sewer lines and lift stations that conveys wastewater to the Everett system to the north for treatment and discharge. The Alderwood District's wastewater system serves the Bothell and south Mill Creek areas and - in the southern 2/3rds of the district - is essentially an extension of the Metro trunk line system in north King County. Unlike Silver Lake's system, Alderwood's is primarily a gravity system using very few pumps.

While most of the central area of the Mill Creek UGA has sanitary sewers in close proximity, there are pockets of unserved areas on the east and west edges. Most of these unserved areas are within district boundaries and could be served by sewer extensions or the construction of new lateral sewers from existing trunk lines. Much of the eastern 1/4 mile of the "A" area along 35th Ave. SE is presently unserved, and the southeast corner at 180th St. SE is not even within the Alderwood district limits, although it is certainly capable of annexation. There are also significant areas along the western side of the UGA within the North Creek corridor and along SR 527 that are also currently unserved by sanitary sewer, although the entire corridor is within either the Silver Lake or the Alderwood district.

The Silver Lake Water District has recently updated its comprehensive sewer system plan. The draft plan has been reviewed by county planning staff, but formal county approval has not yet been requested by the district. Future demand on the sewer system is projected by utilizing GMA-based population forecasts from Snohomish County and the land use plans of the city and the county. The district's plan projects build-out to occur around the year 2026, and addresses this ultimate demand as well as the year 2012 demand. The district's agreement for wastewater treatment with the City of Everett appears to easily accommodate the projected demand at build-out, so treatment capacity does not appear to be a serious problem.

MILL CREEK UGA / AREA A
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An evaluation of the collection system under projected flows did reveal "critical components" that will require capacity expansions over the next 20 years. Four lift stations and three force mains - all major components of the system - comprise these critical components. Lift Station #3 and the Pioneer Trails Force Main are both expected to reach capacity within the next six years, and both are included in the district's six-year capital improvement program.

The new plan shows the Silver Lake sewer system expanding into the unserved areas of the Mill Creek UGA over the next 10-15 years through developer-financed extensions and improvements. Included in this list of anticipated developer improvements is an 18" trunk line extension of Alderwood's North Creek interceptor sewer, and a 15" sewer line and lift station along 35th Ave. between Seattle Hill Rd. and 164th St. SE. The plan also recommends that the district negotiate a transfer of treatment service with Alderwood for the 600 acres to be served by the anticipated 35th Ave. sewer. The only district-financed project planned for the Mill Creek UGA is a segment of 12" pipe in the area of Silver Crest Dr. and 139th St. SE which will permit elimination of the Silver Crest lift station.

The plan assumes that existing properties within the district that are not presently served by the system will gradually hook up to the system, which - together with new development that requires sanitary sewer - will create a 100% service rate by the time of buildout in 2026. The new plan does not anticipate any major system capacity problems that would adversely impact development activity in the Mill Creek area. However, if development projects of sufficient size to finance the necessary trunk sewer extensions cannot be put together by the private sector, some interim financial participation by the district in these projects may be required to allow development to occur in the North Creek and 35th Ave. SE corridors. Timing is also a potential issue, if necessary district projects are not brought on line ahead of actual demand.

The Alderwood Water District has recently begun a complete overhaul of its comprehensive sewer system plan. The new plan is not expected to be available, even in draft form, before the end of 1997. This will be the first time since the district began providing sanitary sewer service under its original system plan in 1966 that a comprehensive update of the complete plan has been undertaken. At present the district operates under a long-term agreement with Metro/King County for wastewater conveyance and treatment. Metro/King County is currently evaluating alternative approaches to meeting its projected long-term wastewater treatment requirements. Site and environmental constraints at its two principal regional treatment facilities are leading the agency to consider possible construction of a third treatment facility to serve the north King / south Snohomish County area. This may be a major topic in the district's new facilities plan, although it should be of no direct consequence to the Mill Creek UGA.

Electric Power

Electric power to the area is supplied by the Snohomish County PUD #1, which generates power at the Culmbach Dam and purchases power from the major regional suppliers, most

notably the Bonneville Power Administration (BPA.) It also has a partnership position in coal-generating facilities located outside of the county, which supplies a small portion of the total local demand.

The BPA and Seattle City Light also own and operate major electrical transmission facilities within Snohomish County and the eastern and southern sections of the Mill Creek UGA. A major electrical transmission corridor runs north-south along the eastern edge of the UGA boundary. This corridor is the logical location for new or upgraded transmission and substation facilities location in the future. Future projects to serve the UGA are likely to be sponsored by the PUD in locations within or close to this transmission corridor. Some upgrading of transmission facilities is anticipated by the "GMA Electrical Facilities Plan" compiled by Puget Power in collaboration with other utility companies in 1993.

IMPLEMENTATION STRATEGIES

The General Policy Plan identifies within Appendix H a substantial list of recommended implementation strategies to make the plan an active force in shaping the future development of the county. Completing UGA plans for all designated UGAs is one of the principal implementation strategies that potentially affects all of the major elements of the plan. However, comprehensive plans - even at the scale of an individual city's UGA - cannot and do not fully implement the policy direction of the GPP nor fully apply those general policies to the specifics of the local area. The following implementation measures are necessary to fully realize the direction provided by this plan.

Code Review and Modifications

The principal implementation measures for land use plans generally take the form of changes to the zoning code or the zoning map, which are the principal land use regulating tools at local government's disposal. The land use element of this plan details the recommended changes in both land use designation on the Future Land Use Map and zoning district boundaries in the "A" area. In addition, it lays out criteria for considering future changes to the zoning map without the need for amending the Future land Use Map.

Changes to the zoning code itself are also required to fully implement this plan, but they are generally of greater significance than a single city or UGA, such changes will usually take place following countywide hearings and consideration of all of the impacts throughout the county of making such a change. Those changes to county code which are required in order to apply the policies of this plan to future development proposals will be pursued through future code amendments. The full implementation of this plan cannot be realized without selected changes to county code.

Joint Parks Planning

The Countywide Park and Recreation Plan which was adopted by Snohomish County as a part of its comprehensive plan in 1994 (and re-adopted as part of the GMA Comprehensive Plan in 1995) was the product of a collaboration among the parks and planning staffs of Snohomish County and several cities, including Mill Creek. That plan focused on regional parks and facilities, but it also established a framework for more area-specific local park planning at the UGA level. It recommends a consolidated park inventory and evaluation of the local park system serving a city and its immediate unincorporated surroundings, and promotes the creation of consolidated level of service guidelines for parks, trails, and facilities to be used throughout a UGA. These can be the frame of reference for assessing local park needs and priorities and, eventually, for creating coordinated capital facilities plans and, if mutually agreed, to reciprocal mitigation or impact fee systems.

The county and the city are currently partnering on a new community park on the east side of 35th Ave. south of 168th St. While the site itself is just outside the "A" area, the service area for the park will certainly include a sizable portion of this area. Approximately 40 acres of land have been acquired and the master planning for the site is now underway. Although originally conceived as the site for a new regional ball field complex, environmental constraints may reduce the scale of this function and result a mix of active and passive recreational opportunities to serve a broader demographic range of local residents.

In order to fully carry out the direction of the Countywide Park and Recreation Plan in the Mill Creek area, and to partially carry out several implementation strategies for the Capital Facilities Element listed in Appendix H, the city and county should undertake a UGA level parks system analysis and long-range planning effort to jointly assess the existing facilities, establish agreed upon priorities for land acquisition and facilities development within the area over the next 6 - 10 years, and pursue a program of joint/reciprocal mitigation to assist in the funding of the necessary acquisition and development projects.

Coordinated Development Review

Development activity that occurs within the city can and does impact county facilities and services, such as McCollum Park and 35th Ave. SE. Similarly, development that occurs just outside the city can and does impact city facilities and services. Furthermore, development permitted by Snohomish County within the unincorporated UGA that does not approach the city's established design and construction standards may be viewed by the city as inappropriate for eventual annexation if the additional maintenance or facility upgrading costs it requires are projected to exceed the tax revenues it generates. In the absence of municipal annexation within UGAs, the county will be responsible for providing those areas with urban services not provided through special districts for the indefinite future. It is in both parties' best interests to avoid such situations, wherever possible, and creating a process for

development review that takes greater account of city standards - particularly those standards which directly impact the cost of municipal services - is a reasonable method to do so.

Mill Creek is one of several cities in Snohomish County that has expressed a desire to see Snohomish County adopt some of its own (city) development standards within its defined UGA. While it is easy to see why this is a particularly appealing approach from the cities' perspective, there are practical and legal issues that make it much less appealing for the county. Nevertheless, it is clear that some better approaches to coordinating development standards and project reviews must be found if successful development and orderly transfer of jurisdiction is to occur on a regular basis within urban growth areas. It may be possible, for example, to establish evaluation criteria for new development in unincorporated areas where adopted city and county plans are totally consistent, that give formal weight to meeting city development standards. If a city presents evidence that a development does or does not meet its standards, that could add or subtract points on an evaluation score prepared by staff that goes to the hearing examiner or other designated authority.

One method that could be considered to achieve development that is consistent with selected city standards would be through an overlay zone. Such an overlay would correspond to a mutually recognized urban growth area for the city that would apply the selected city standards to the development of unincorporated land within the zone. In the case of the Mill Creek UGA, the scope of the additional standards might be limited to streetscape design and stormwater design standards, which the city has identified as priority issues in development review. Using these standards as additional criteria for PRD reviews within the overlay would seem to be especially appropriate, given the purpose of the PRD regulations and the discretionary nature of the approval process. Snohomish County will continue to explore potential code modifications utilizing such innovative approaches to address this issue with those cities, including Mill Creek, for whom development standards and review is an important concern.

Coordinated Capital Facilities Planning

Mill Creek and Snohomish County have collaborated in the past on joint projects of mutual benefit to citizens of incorporated and unincorporated areas around the city. Roads, parks, and stormwater control projects are all logical areas of mutual interest where each jurisdiction is a direct provider and each jurisdiction is also a potential affected party by the other's capital improvement decisions.

Interlocal agreements are the most common mechanism to secure commitments from each jurisdiction to engage in specific activities and commitments that are of mutual benefit. The city and county should undertake discussions on one or more ILAs with the goal of producing better coordination of capital facilities planning, particularly where projects are located within the city's defined UGA, or when the project impact area includes significant portions of that UGA. Such discussions should include possible provision in the ILA for reciprocal mitigation

agreements where both jurisdictions impose mitigation or impact fees for a particular facility type. Other relevant topics related to capital facilities planning include inter-jurisdictional transfer conditions for facilities built by one jurisdiction (typically, the county) and transferred to the other (typically, the city) for maintenance.

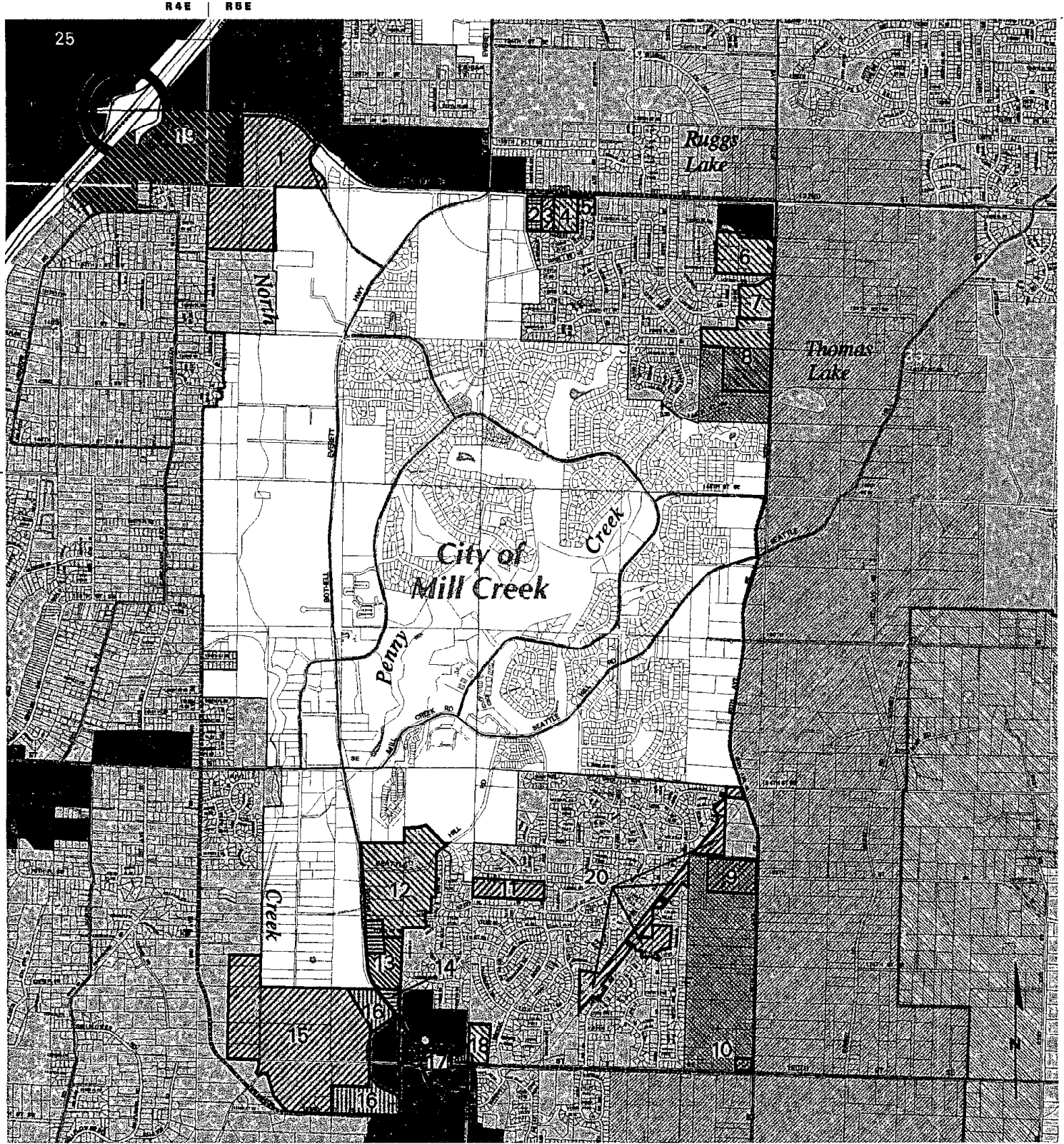
Urban Center Development Area

The Land Use section of this plan identifies a new overlay designation for the F.L.U. Map to specifically identify lands where the urban center development is especially appropriate and encouraged. A policy is established that directs the application of center objectives to the review of development proposals within the zone. In order to carry out this directive, and to better articulate these objectives for direct use by both developers and county officials, specific performance standards for developments within urban centers need to be created and formally incorporated into county code. This process should involve input from many sources, including the RTA and particularly those cities which have their own designated centers or whose UGA includes center locations designated by the county. Ideally, general performance standards applicable to centers around the county would be formulated first, and then more customized criteria and standards could be crafted for each specific Urban Center Development Area. If this ideal sequencing is not practical in the immediate future, Mill Creek and Snohomish County should undertake a customized project leading to potential code revisions for each jurisdiction that could be applied to the I-5 / 128th St. Zone.

Transportation Element Review and Amendment

As mentioned in the Transportation section of this document, a re-evaluation of the southwest county road network is needed. A broad and in-depth transportation study will be undertaken as part of the next phase of UGA planning around Mill Creek. That planning effort will focus on future land uses within the growth phasing overlay area along the eastern edge of the Southwest County UGA. This study should produce a subsequent amendment to the Transportation Element that 1) eliminates the 180th St. extension from the future road network and project list, 2) terminates the 148th St. extension at Cascadian Way rather than at SR 527, and 3) effects other changes in LOS or the future road network and project list necessary to accommodate these modifications and the more intensive land uses of this plan.

This transportation analysis may necessitate a subsequent re-assessment of future land uses in the southeast sections of the Southwest County UGA called for under the comprehensive plan, including the recommended changes made through this UGA plan. This type of iterative planning process is essential for effective growth management planning during times of rapid growth.



Mill Creek UGA - Area "A"

CHANGES IN LAND USE DESIGNATION

LEGEND

JULY 1998

GPP FUTURE LAND USE DESIGNATIONS

- Rural Residential (1 DU/5 Acres Basic)
- Urban Low Density Residential (4 - 6 DU/Acre)
- Urban Medium Density Residential (6 - 12 DU/Acre)
- Urban High Density Residential (12 to 24 DU/Acre)
- Urban Commercial
- Urban Industrial
- Incorporated Cities, Towns, Tribal Lands, & Rights-of-Way
- Growth Phasing Overlay (GPO)
- Rural/Urban Transition Area
- Delete G.P.O.

SITES WITH DESIGNATION CHANGES

- To Urban Medium Density Residential
- To Urban High Density Residential
- To Urban Industrial
- To Urban Commercial
- To Public Use
- Urban Center Development Area
- Centers Designations
- Incorporated City Area
- Urban Growth Area Boundary
- A Area Boundary

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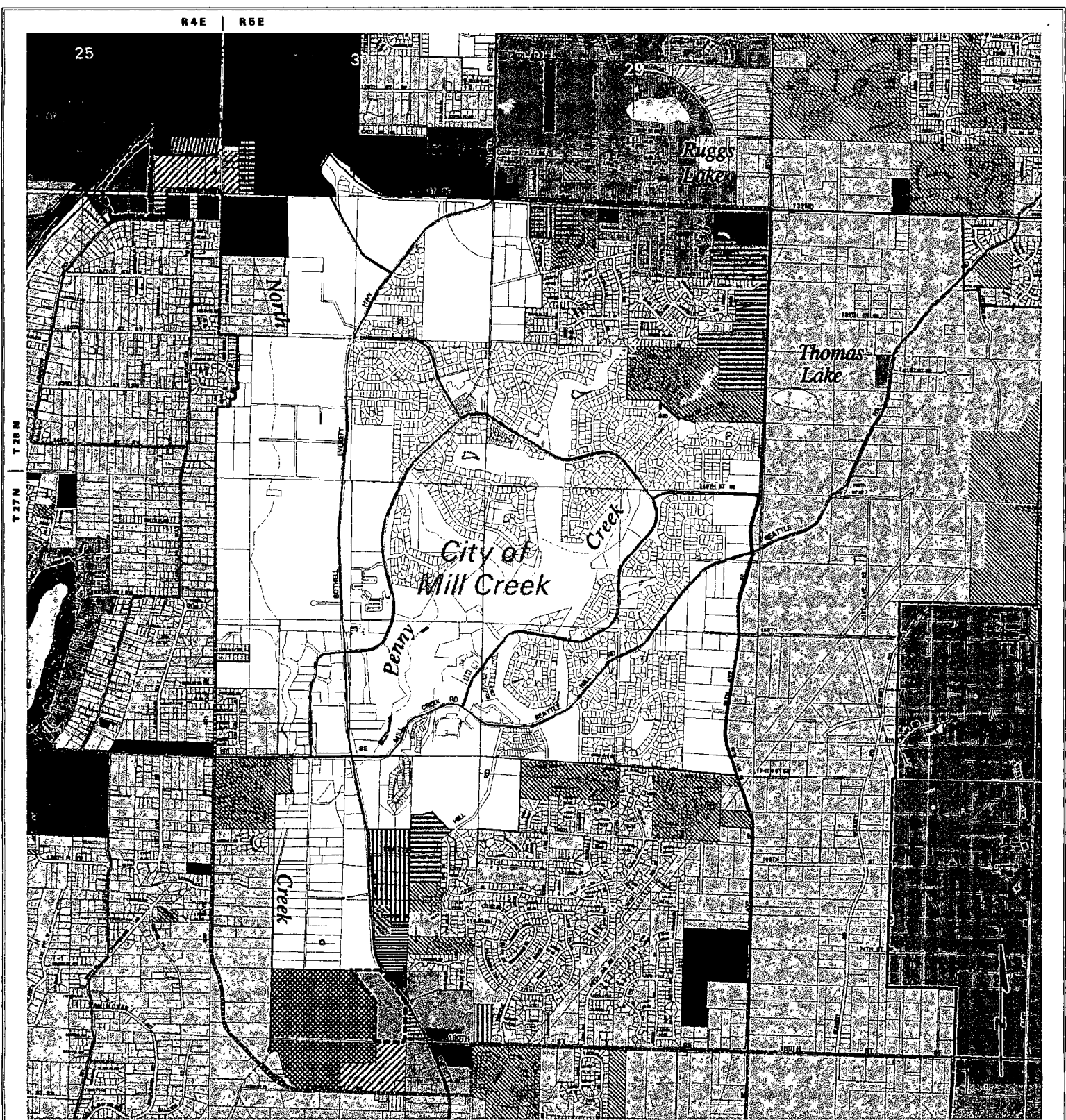
The base used to compile parcelization on this map is incomplete. Please consult the appropriate reference parcel map for other parcels not shown on this map.

Please refer to the General Policy Plan for explanation of Comprehensive Plan designations. Detailed maps showing or delineating boundaries for urban growth areas, as well as agricultural, forest, and natural land designations are available in the office of Brookshire County Planning and Development Services.

Map produced by the Brookshire County Department of Planning and Development Services, Cartography Section, 607A, UTRACOS.
















Brookshire County Planning and Development Services



Mill Creek UGA - Area "A" REZONES - Option A

LEGEND

PLEASE SEE MILL CREEK ZONING MAP FOR ZONING DESIGNATIONS

- | | | | |
|--|--|---|-------------------------------|
|  | To Forestry and Recreation (F&R) |  | To Planned Community Business |
|  | To Residential 7200sf (R-7200) |  | Urban Growth Area Boundary |
|  | To Low Density Multiple Residential (LDMR) |  | Incorporated City Boundary |
|  | To Multiple Residential (MR) |  | A Area Boundary |
|  | Neighborhood Business (NB) |  | B Area Boundary |
|  | To Community Business (CB) |  | Recent Rezone Sites |
|  | To Business Park | | |

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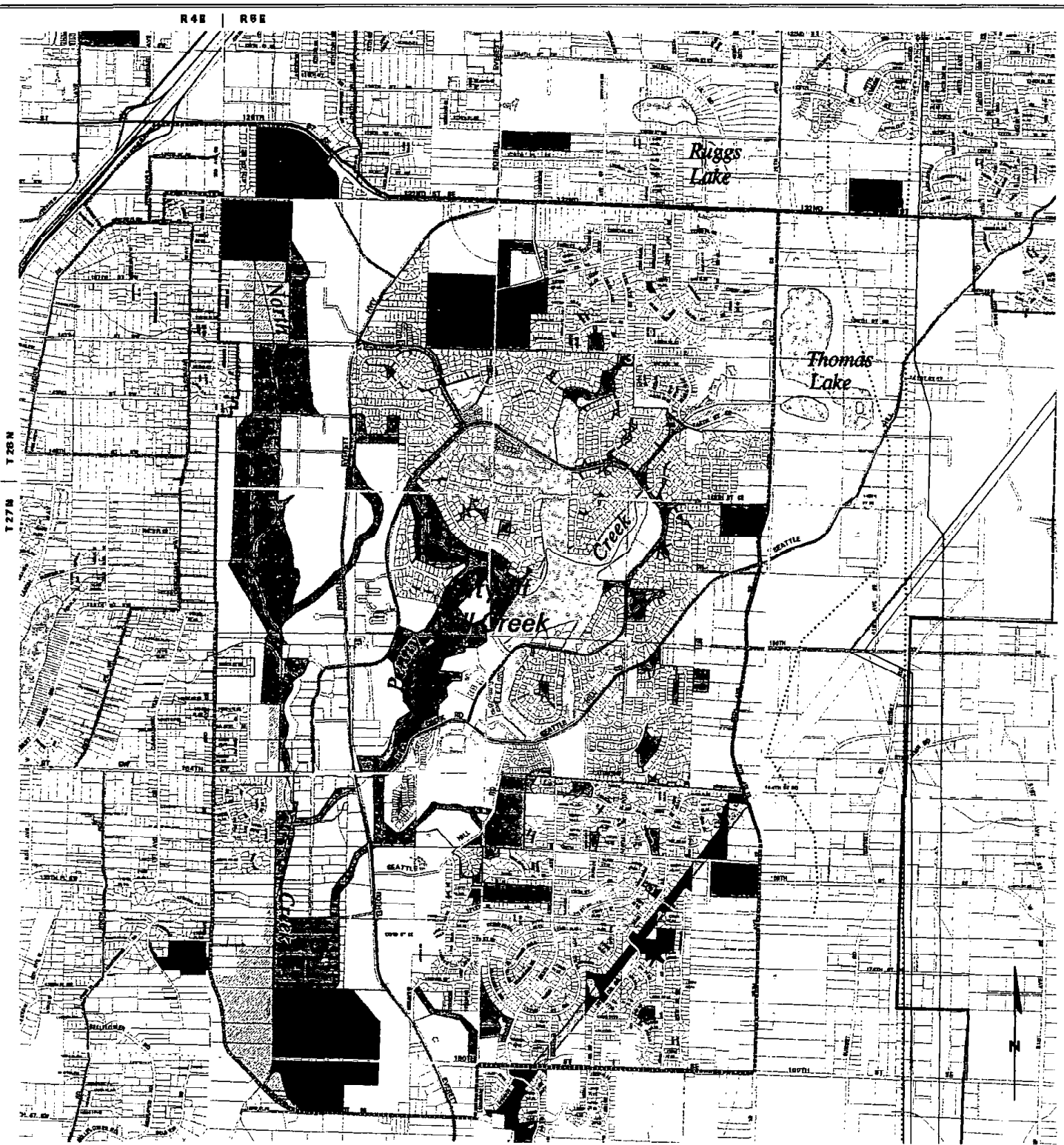
Please refer to the General Policy Plan for explanation of Comprehensive Plan designations. Detailed maps showing precise boundaries for urban growth areas, as well as, agricultural, forest, and mineral land designations are available in the office of Snohomish County Planning and Development Services.

Map produced by the Snohomish County Department of Planning and Development Services, Cartography Section, 07/30/98.

JULY 1998



0 650 1300
Scale in Feet
<http://pro/mill/zotom.asp>



Mill Creek UGA Area

Map 3, Ord 98-051
Attachment A

OPENSOURCE CORRIDORS/GREENBELT AREAS

SEPTEMBER 1997

- City Parks and/or Designated Public Open Space
- Snohomish County Park Lands
- Public School Sites
- Private and City Golf Courses (Sno. Co. courses included in Sno. Co. Parks)
- Electric Power Transmission Corridors (not County owned within area A)

- Environmentally Sensitive and City Designated Openspace (Private)
- Incorporated City Areas
- Lakes, Rivers, and Major Water Areas (as per DNR)
- Existing Snohomish County Trail Lands
- Proposed Snohomish County Trail Lands

- Electric Power Transmission Corridors (existing/proposed 230KV lines or higher)
- Buried Petroleum/Natural Gas Pipeline
- Urban Growth Area Boundary
- Incorporated City Boundary
- A Area Boundary
- B Area Boundary

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This map is used for general informational purposes only. Please consult the appropriate sewer permit map for appropriate sewer updated information.

Please refer to the General Policy Plan for explanation of Comprehensive Plan designations. Detailed maps showing precise boundaries for urban growth areas, as well as, all political, census, and natural land designations are available in the office of Snohomish County Planning and Development Services.

Map produced by the Snohomish County Department of Planning and Development Services, Geography Section, 111, Bayview Blvd 1997.

Snohomish County

0 500 1000
Scale in Feet

Geographic Information Systems

**TECHNICAL WORKING PAPER
3-98-1**

**MILL CREEK SUBAREA - PRELIMINARY TRAFFIC IMPACT
ANALYSIS
April 9, 1998**

**CONTACTS:
Mark Simonson,
George Godley,
Transportation and Environmental Services (TES)**

Purpose: This analysis was undertaken to assess future traffic pattern shifts and level of service impacts on key roadways in the vicinity of the City of Mill Creek, as related to the intensification of land use currently being considered by the City of Mill Creek and Snohomish County. A complicating factor is the potential deletion of the 180th Street SE extension (SR-527 to North Road) and 148th SW Street extension (Cascadian Way to SR-527) from the county's arterial plan. Thus, the analysis included three scenarios: 1) both extensions built by 2012, 2) 180th Street SE Extension removed, and 3) both extensions not constructed by 2012. Using the results of these scenarios, this analysis made a preliminary determination if additional roadway and intersection improvements are needed beyond those that are currently documented within the county's Transportation Element.

In order to quantify traffic impacts, 20 key roadway segments were selected to compare traffic forecasts with the roadway's effective peak hour capacity. The roadways include sections of 35th Avenue SE, Mill Creek Road, Seattle Hill Road, 128th/132nd Street SE, 148th Street SW Extension, 164th Street SE, 180th Street SE, 180th Street SE Extension, SR-527, and SR-524. Along with the roadway sections, three important signalized intersections were analyzed along SR-527, including intersections at 132nd, 164th and 180th Streets SE.

Methodology and Limitations: This analysis of traffic impacts for the Mill Creek subarea employed land use forecasts prepared by PDS, EMME/2-based traffic forecasts prepared by TES, roadway section capacity analysis and intersection level of service analysis. The key steps followed during this analysis are outlined below:

1. PDS prepared land use inventory and developed specific land use forecasts for 2002 and 2012,
2. PDS land use inventory and forecasts were reported at small zone structure,
3. DPW prepared trip generation (1996, 2002 and 2012) based on land use forecasts,
4. DPW factored rudimentary trip distributions for 1996, 2002 and 2012,
5. DPW calibrated 1996 assignments and validated forecasts for 2002 and 2012,

6. DPW prepared traffic forecasts for 2002 and 2012 for Mill Creek subarea with: 1) all planned roadway improvements, 2) 180th Street SE Extension removed, and 3) with both the 180th and 148th Streets SE Extensions removed,
7. DPW compared 2002 and 2012 traffic forecasts with old 1994 GPP-based forecasts in terms of volumes-capacity ratios,
8. DPW performed intersection level of service analysis for 2002 and 2012 as per item 6 above (using the intersection method from the 1994 Highway Capacity Manual, Special Report 209, TRB),
9. DPW reviewed transportation element and transportation needs report and identified unanticipated and additional project needs, and
10. DPW identified unanticipated and additional projects related to State facilities.

The traffic analysis provided herein is not of a sufficient technical quality from which to prepare an environmental impact statement or a subarea transportation plan. The study area was not of a sufficient size to evaluate areawide facilities and mitigation of impacts. Importantly, the time frame for the analysis precluded developing an adequate and calibrated gravity model. To expedite the technical work, trip distributions for 1996, 2002 and 2012 were borrowed from existing trip tables. Because of these technical shortcuts, the traffic analysis should be used in a limited way to answer three basic questions. The questions are:

- whether the proposed land use changes within the Mill Creek subarea could cause significant additional impacts on the planned road network that would worsen forecast level of service conditions and increase the potential for concurrency problems,
- whether removal of the planned extensions of 148th Street SW and 180th Street SW from the future planned network of roads would worsen forecast level of service conditions and increase the potential for concurrency problems, and
- whether there are cumulative, detrimental impacts associated with the proposed land use changes and removal of the two road extensions (148th and 180th Streets SE).

The subsequent sections of this memorandum will present technical information and data that will attempt to answer these basic questions in detail. However, the simple and direct answer to all three of these questions is 'yes'. The new forecasts for the Mill Creek subarea are higher than previous forecasts prepared under the General Policy Plan (GPP). As a result, the new forecasts present a somewhat worse traffic congestion condition in 2002 and 2012. Removing 148th and 180th Streets SE from the planned road network does worsen 2002 and 2012 volume to capacity conditions on SR-527, 132nd Street SE, and 164th Street SE. There are cumulative impacts associated with the proposed land use changes and the removal of the two roadway extensions that have not previously been considered.

Land Use and Traffic Generation: The initial step in developing the traffic forecasts was delineating a study area with a smaller area zone structure for land use and traffic forecasting purposes. A total of 24 Micro-Analysis Zones (MAZs), the county's basic zone structure, were carved up into 61 Smaller-Area Zones (SAZs) in order to provide the additional detail needed in a

subarea study. The defined study area extends from 116th Street SE in the north, to 192nd Street SE in the south, and from roughly 51st Avenue SE in the east to I-5 in the west, although only MAZ's north of 148th Street SW were subdivided west of Cascadian Way/North Road.

Next, for each SAZ, planning staff compiled existing land use data from the county assessor's computerized records, using the Metroscan software database. The final land area totals were then aggregated into specific residential or non-residential categories, by either dwelling units, square footage, acreage, or school enrollment. To this information specific employment and/or trip generation factors were applied, consistent with methods utilized by the regional planning agency. A series of checks were performed to ensure that the new information was producing a reasonable number of trips compared to the original GPP trip generation process, given the growth experienced in the area since 1994. The final result was two numbers for each SAZ; a number of trips originating from and number of trips destined to the zone during the afternoon/evening peak hour.

The last step in developing an existing year trip table for the Mill Creek subarea was to add the additional zones into the existing 1994 GPP trip table, and factor the trip information to match the new trip generation data produced by SAZ. Due to the expedited schedule, the trip table construction process was simplified by relying on trip distribution information compiled in the original trip tables. A more accurate analysis would need to include this step, since travel patterns would change due to changed land use plans.

Planning staff, after completing the existing year inventory, then proceeded to develop SAZ-level land use forecasts for 2002 and 2012, for the aggregated land use categories used in the existing year summary. To forecast future land use, planning staff relied on existing land use designations, amount of developable land in each zone, current permits in process, and the proposed land use changes under consideration. Also important were input from City of Mill Creek staff and developers, who were consulted regarding their schedules regarding specific projects. The final future land use estimates were then input into the "calibrated" trip generation procedure to develop the future year 2002 and 2012 trip tables in the same manner as the existing subarea trip table.

In Attachment 1, the final trip generation data for the Mill Creek Subarea analysis is compared to the same data for the Original GPP modeling effort. The data for the Mill Creek Subarea analysis was reaggregated to the original MAZ level for comparison. A total of 1,900 additional trips are in the base year 1996 subarea trip table, partly due to growth since the 1994 GPP modeling was performed, and partly due to more accurate information gathered during the subarea analysis. By 2012, the number of new trips in the subarea analysis increases to over 2,300 trips, which is 15 percent higher than the 2012 GPP figure.

Another notable result in Attachment 1 is the amount of trip generation growth during the first part of the forecast period, from 1994/1996 to 2002. The original GPP procedure generated over 45 percent of the total trip increase by 2002, a figure the new subarea trip table replicates. However, the original GPP trip tables estimated a "smoother" increase in traffic from 1994 to 2002, while the subarea trip tables show a number of zones with either all growth occurring from

1996 to 2002, or from 2002 to 2012. This is further illustrated in Attachment 2, which displays the final trip generation data by SAZ in the same format as the first attachment. This ‘lumpier’ forecast is a natural result of incorporating more detailed land use information and allocation into the forecasting procedure, as opposed to the regional allocation method used in the original GPP work. This sometimes results in roadway forecasts showing sharper increases in traffic in 2002.

In order to more fully quantify the impacts the subarea analysis had on trip generation results, the employment estimates for both the original GPP and Mill Creek subarea modeling work was summarized, and is presented as Attachment 3. Using the trip generation methodology described previously, 3,513 jobs were estimated within the subarea boundaries in 1996, an increase of 130 jobs over the 1994 GPP figure, or roughly 4 percent, which was considered acceptable growth for the time between base years. However, applying that same methodology to the future land use forecast in 2012 results in a doubling of employment in the Mill Creek subarea, to 7,080 jobs, while the GPP 2012 estimate was 5,524 jobs. The new subarea forecast did take into consideration employment sources not included in the GPP analysis, such as the additional development surrounding the 132nd Street SE/35th Avenue SE intersection and redevelopment of the drive-in theater property southeast of the I-5/128th Street SE interchange, for example.

Roadway Section Forecasts and Capacity Analysis: Traffic forecasts for the subarea’s key roadways were prepared for 1996, 2002 and 2012 using the county’s EMME/2 travel forecasting software. The traffic forecasts represent p.m. peak hour vehicles (4:30 - 5:30 p.m.) combined for both directions. In conjunction with the forecasts, three scenarios were modeled, each for the years 2002 and 2012. The scenarios are: 1) all the roadway network improvements recommended within the transportation element of the General Policy Plan (GPP), 2) removal of the 180th Street SE from the GPP roadway network, and 3) removal of 148th and 180th Streets SE from the GPP roadway network. Two-way capacity analysis was performed on each scenario as appropriate for 1996, 2002 and 2012, whereby roadway capacity improvements are taken into account. Volume-to-capacity (v/c) ratios were calculated for each scenario and compared to the original GPP forecasts and v/c ratios. Because capacity can vary significantly depending on individual roadway design features, traffic characteristics and driver experience, interpretation of v/c ratios presented here should use the following general guidance:

| <u>V/C Ratio</u> | <u>Situation</u> | <u>Interpretation</u> |
|------------------|--------------------------------|--------------------------------------|
| 1.00 - 1.10 | marginal congestion problem | operations solution probable |
| 1.11 - 1.20 | significant congestion problem | local capacity solution probable |
| 1.20 + | chronic congestion problem | areawide capacity solutions probable |

Attachment 4 presents capacity analysis for 20 key roadway sections within the Mill Creek subarea for the full GPP network (i.e., all GPP roadway projects are modeled). Current traffic counts compared to effective capacity reveal that SR-527 is operating near its effective capacity during the p.m. system peak hour with significant delay likely on the section of SR-527 from 116th to 132nd Street SE. Also, 164th Street SE between I-5 and SR-527 is approaching its effective capacity. Operations and localized capacity improvements would likely mitigate traffic congestion on these roadway sections and at their intersections.

Future traffic growth will likely push a number of subarea roadways beyond effective capacity. The 2002 volume-to-capacity ratios are calculated for the 20 key roadways and presented within Attachment 4 for both the GPP and new Mill Creek subarea forecasts. The 2002 capacity problems are somewhat worse for the new forecast when compared to the original GPP forecast. Most notably, SR-527 and 164th Street SE would be subject to significant or chronic congestion during the p.m. peak hour by the year 2002. The year 2012 shows the same roadways being subject to more traffic and experiencing worsening congestion problems during the p.m. peak hour, except in instances where planned capacity improvements would be built. For example, the construction of the 148th and 180th Streets SE Extensions diverts 2012 traffic and provides some relief for 164th Street SE (i.e., its volume-capacity ratio decreases from 1.24 in 2002 to 1.16 in 2012.)

Attachment 5 presents the same information as Attachment 4, except that the 180th Street SE Extension, between North Road and SR-527 is removed from the 2012 network. Please note that the interchange at I-405 and Damson Road is also removed from the model road network, as is capacity improvements to North Road. These improvements are considered part-and-parcel with the 180th Street SE Extension. The resulting traffic pattern shifts would place more traffic on SR-527 and the 148th Street SE Extension and 164th Street SE. This additional traffic increases the calculated v/c ratios; thus implying worsening traffic congestion problems.

Attachment 6 presents the final scenario of removing the both the 148th Street SE Extension (between Cascadian Drive and SR-527) and the 180th Street SE Extension from the modeled roadway network for 2012. The resulting traffic pattern shifts are similar to that presented by Attachment 5, except that with the removal of 148th Street SE from the roadway network places additional p.m. peak hour traffic burdens on 132nd Street SE (SR-96) and 164th Street SE. Both of these roadways, expected to operate under chronic congestion conditions by 2012 with the removal of the 180th Street SE Extension, would worsen in their p.m. peak hour traffic congestion conditions.

Intersection Forecasts and Level of Service Analysis: In addition to the roadway link forecasts and volume to capacity analysis, impacts to specific key intersections were developed. Three key intersections along SR-527 were selected for this analysis, based on their potential to impact key arterials and be impacted by 2012 modified network scenarios. These intersections are at 132nd Street SE, 164th Street SE and 180th Street SE. Ground counts are accomplished for each intersection movement at the three intersections, and traffic forecasts for 2002 and 2012 provided for future movements.

The results of the intersection forecasts are shown in Attachment 7. Estimated traffic growth ranges from a 22 percent increase at 180th Street SE, to an increase of 31 percent at 164th Street SE. Assuming the full GPP network is constructed by 2012, (including both the 180th Street Extension and 148th Street Extension) the largest percent increase in traffic would be expected at the 180th Street SE intersection, due to the 180th Extension traffic. The intersection would experience a traffic increase of 38 percent over 2002 forecasts, amounting to nearly 1,500 additional vehicles during the peak hour. As would be expected, forecasts for the 2012 scenarios

without the 180th Extension at this location result in traffic levels increasing by only 23 to 26 percent over 2002 levels.

While the removal of the 180th and 148th extensions from the GPP 2012 network benefits the 180th Street SE intersection, the other intersections along SR-527 would be negatively impacted. Under the full GPP network, traffic volumes at the 164th Street SE and 132nd Street SE intersections increase by 20 to 25 percent over 2002 levels, with 132nd Street SE rising to nearly 6,000 vehicles during the peak hour. Removing the 180th Street Extension from the network primarily impacts the 164th Street SE intersection, with 2012 traffic volumes estimated to increase by 8 percent, or 460 vehicles, during the peak hour; removal of 148th Street Extension would further increase traffic volumes by an additional 160 vehicles. Impacts to the 132nd Street SE intersection are not as significant, with an increase of roughly 3 percent more peak hour traffic estimated due to removal of the GPP Extensions.

To further clarify future traffic conditions at these key intersections, a preliminary series of level of service analyses were conducted using the Highway Capacity Manual Software (HCS). Attachment 8 provides descriptions of the levels of service adapted from the 1994 Highway Capacity Manual. The actual results of the level of service analyses are shown in Attachment 9. Under existing conditions, all three intersections were found to be operating at acceptable urban level of service conditions. The 132nd Street SE/SR-527 intersection was estimated to be providing a LOS of D, while the intersections at 164th and 180th were estimated at LOS C. All three locations, as currently designed and operated, are expected to be able to handle forecast year 2002 traffic volumes, providing a LOS rating of D to intersection users.

By 2012, rising traffic volumes result in the level of service falling to LOS F at both 132nd Street SE and 164th Street SE. The intersection at 180th Street SE would operate at LOS E, unless the 180th Street SE Extension is constructed. To return intersection operation to acceptable LOS ratings of E or higher, additional mitigation beyond projects currently identified in the adopted Transportation Element of the GPP would need to be provided, such as new turning lanes or signal modifications.

Scope of Transportation Needs and Potential Mitigation: As indicated by the capacity analysis performed for roadway sections and the level of service analysis performed for intersections, additional traffic mitigation will likely be needed beyond that identified by the Transportation Element of the GPP in order to accommodate the land uses changes proposed for the Mill Creek subarea. Attachment 10 summarizes transportation project needs through the year 2012, identified by the county's Transportation Needs Report (TNR), the City of Mill Creek's 6-year program and WSDOT's Transportation Plan. The Year 2012 needs already identified by the county could exceed \$134,000,000 in 1996 dollars. For this analysis, the projects included in either the county, city, or state plans and listed in the first three sections of Attachment 10 were assumed to be constructed by 2012. The exception is in the alternative scenarios where either one or both of the extensions were not assumed to be completed by 2012.

The fourth and last section of Attachment 10 lists the roadways and intersections which would need capacity improvements to mitigate the impacts of worsening future year traffic congestion in

the Mill Creek subarea. Road projects identified in this section represent segments where the forecast volume-capacity ratio would exceed 1.20, or intersections where the expected level of service would fall to F, by either 2002 or 2012, even with assumed county, city and state projects in place. The additional project list also reflects the potential impacts of removing the proposed extensions of 148th Street SE and 180th Street SE from the adopted county transportation plan. The scope and cost of these project improvements is unknown and will require further detailed study and collaboration with the City of Mill Creek and WSDOT.

Attachment 1
 Comparison of Trip Generation Data, Original GPP and Mill Creek Subarea Analyses
 System Peak Hour (4:30 pm - 5:30 pm) Data by Original GPP Micro-Analysis Zones (MAZ)

| MAZ | Original GPP Trip Generation Data | | | | Mill Creek Subarea Trip Generation Data | | | | | |
|--------|-----------------------------------|-----------|-----------|------------------------------|--|------------------|-----------|-----------|------------------------------|--|
| | Base Year (1994) | Year 2002 | Year 2012 | Percent Growth, 1994 to 2012 | Percent of 1994 2012 Growth occurring from 1994-2002 | Base Year (1996) | Year 2002 | Year 2012 | Percent Growth, 1996 to 2012 | Percent of 1996 2012 Growth occurring from 1996-2002 |
| 61 | 1,064 | 1,413 | 1,745 | 64.0 | 51.2 | 658 | 904 | 974 | 48.0 | 77.8 |
| 131 | 159 | 178 | 229 | 44.0 | 27.1 | 280 | 280 | 280 | 0.0 | ----- |
| 147 | 329 | 461 | 565 | 71.7 | 55.9 | 395 | 495 | 656 | 66.1 | 38.3 |
| 177 | 845 | 999 | 1,229 | 45.4 | 40.1 | 1,432 | 1,621 | 2,310 | 61.3 | 21.5 |
| 179 | 180 | 256 | 336 | 86.7 | 48.7 | 339 | 520 | 693 | 104.4 | 51.1 |
| 180 | 183 | 298 | 528 | 188.5 | 33.3 | 577 | 659 | 1,239 | 114.7 | 12.4 |
| 181 | 182 | 298 | 509 | 179.7 | 35.5 | 405 | 1,207 | 1,207 | 198.0 | 100.0 |
| 182 | 327 | 480 | 668 | 104.3 | 44.9 | 410 | 435 | 502 | 22.4 | 27.2 |
| 185 | 110 | 120 | 173 | 57.3 | 15.9 | 299 | 349 | 381 | 27.4 | 61.0 |
| 186 | 834 | 1,056 | 1,479 | 77.3 | 34.4 | 534 | 877 | 1,043 | 95.3 | 67.4 |
| 187 | 48 | 74 | 140 | 191.7 | 28.3 | 28 | 67 | 701 | 2,403.6 | 5.8 |
| 188 | 50 | 69 | 102 | 104.0 | 36.5 | 63 | 82 | 191 | 203.2 | 14.8 |
| 189 | 47 | 58 | 87 | 85.1 | 27.5 | 66 | 66 | 186 | 181.8 | 0.0 |
| 190 | 146 | 183 | 192 | 31.5 | 80.4 | 45 | 67 | 131 | 191.1 | 25.6 |
| 191 | 389 | 500 | 465 | 19.5 | 146.1 | 440 | 527 | 546 | 24.1 | 82.1 |
| 192 | 429 | 643 | 727 | 69.5 | 71.8 | 583 | 707 | 898 | 54.0 | 39.4 |
| 193 | 581 | 784 | 822 | 41.5 | 84.2 | 775 | 907 | 907 | 17.0 | 100.0 |
| 194 | 132 | 170 | 259 | 96.2 | 29.9 | 217 | 264 | 264 | 21.7 | 100.0 |
| 195 | 949 | 1,105 | 1,462 | 54.1 | 30.4 | 965 | 993 | 993 | 2.9 | 100.0 |
| 196 | 392 | 501 | 639 | 63.0 | 44.1 | 445 | 541 | 601 | 35.1 | 61.5 |
| 197 | 78 | 96 | 122 | 56.4 | 40.9 | 87 | 134 | 134 | 54.0 | 100.0 |
| 201 | 998 | 1,300 | 1,479 | 48.2 | 62.8 | 1,127 | 1,335 | 1,635 | 45.1 | 40.9 |
| 269 | 453 | 554 | 827 | 82.6 | 27.0 | 577 | 577 | 577 | 0.0 | ----- |
| 270 | 318 | 430 | 554 | 74.2 | 47.5 | 376 | 473 | 611 | 62.5 | 41.3 |
| TOTALS | 9,223 | 12,026 | 15,338 | 66.3 | 45.8 | 11,123 | 14,087 | 17,660 | 58.7 | 45.3 |

Attachment 2
 Final Trip Generation Data, Mill Creek Subarea Analysis
 System Peak Hour (4:30 pm - 5:30 pm) Data by Mill Creek Subarea Zone (SAZ)

| SAZ | Base Year (1996) | Year 2002 | Year 2012 | Percent Growth 1996 to 2012 | Percent of 1996-2012 Growth occurring from 1996-2002 |
|--------|---------------------|-----------|-----------|--------------------------------|---|
| 61 | 241 | 343 | 343 | 42.3 | 100.0 |
| 131 | 103 | 103 | 103 | 0.0 | --- |
| 147 | 98 | 113 | 169 | 72.4 | 21.1 |
| 177 | 36 | 109 | 119 | 230.6 | 88.0 |
| 179 | 319 | 335 | 382 | 19.7 | 25.4 |
| 180 | 128 | 128 | 153 | 19.5 | 0.0 |
| 181 | 139 | 172 | 172 | 23.7 | 100.0 |
| 182 | 152 | 177 | 177 | 16.4 | 100.0 |
| 185 | 169 | 169 | 169 | 0.0 | --- |
| 186 | 159 | 159 | 163 | 2.5 | 0.0 |
| 187 | 4 | 4 | 19 | 375.0 | 0.0 |
| 188 | 26 | 39 | 76 | 192.3 | 26.0 |
| 189 | 35 | 35 | 83 | 137.1 | 0.0 |
| 190 | 28 | 40 | 77 | 175.0 | 24.5 |
| 191 | 335 | 336 | 340 | 1.5 | 20.0 |
| 192 | 121 | 121 | 121 | 0.0 | --- |
| 193 | 242 | 346 | 346 | 43.0 | 100.0 |
| 194 | 217 | 264 | 264 | 21.7 | 100.0 |
| 195 | 725 | 754 | 754 | 4.0 | 100.0 |
| 196 | 445 | 541 | 601 | 35.1 | 61.5 |
| 197 | 87 | 134 | 134 | 54.0 | 100.0 |
| 201 | 718 | 793 | 884 | 23.1 | 45.2 |
| 269 | 208 | 208 | 208 | 0.0 | --- |
| 270 | 32 | 32 | 77 | 140.6 | 0.0 |
| 550 | 258 | 258 | 326 | 26.4 | 0.0 |
| 551 | 266 | 1,035 | 1,035 | 289.1 | 100.0 |
| 552 | 118 | 210 | 264 | 123.7 | 63.0 |
| 553 | 227 | 231 | 270 | 18.9 | 9.3 |
| 554 | 25 | 110 | 269 | 976.0 | 34.8 |
| 555 | 384 | 431 | 481 | 25.3 | 48.5 |
| 556 | 20 | 185 | 311 | 1,455.0 | 56.7 |
| 557 | 85 | 132 | 368 | 332.9 | 16.6 |
| 558 | 0 | 0 | 0 | --- | --- |
| 559 | 341 | 375 | 375 | 10.0 | 100.0 |
| 560 | 8 | 8 | 161 | 1,912.5 | 0.0 |
| 561 | 15 | 15 | 181 | 1,106.7 | 0.0 |
| 562 | 0 | 0 | 514 | 513,900.0 | 0.0 |
| 563 | 1,277 | 1,277 | 1,442 | 12.9 | 0.0 |
| 564 | 120 | 235 | 235 | 95.8 | 100.0 |
| 565 | 278 | 280 | 280 | 0.7 | 100.0 |
| 566 | 46 | 46 | 46 | 0.0 | --- |
| 567 | 297 | 382 | 487 | 64.0 | 44.7 |
| 568 | 11 | 16 | 577 | 5,145.5 | 0.9 |
| 569 | 13 | 46 | 105 | 707.7 | 35.9 |
| 570 | 36 | 43 | 115 | 219.4 | 8.9 |
| 571 | 30 | 30 | 102 | 240.0 | 0.0 |
| 572 | 17 | 26 | 54 | 217.6 | 24.3 |
| 573 | 68 | 78 | 78 | 14.7 | 100.0 |
| 574 | 111 | 120 | 120 | 8.1 | 100.0 |
| 575 | 84 | 408 | 459 | 446.4 | 86.4 |
| 576 | 113 | 113 | 222 | 96.5 | 0.0 |
| 577 | 131 | 180 | 212 | 61.8 | 60.5 |
| 578 | 177 | 177 | 177 | 0.0 | --- |
| 579 | 369 | 369 | 369 | 0.0 | --- |
| 580 | 239 | 239 | 239 | 0.0 | --- |
| 581 | 374 | 403 | 403 | 7.8 | 100.0 |
| 582 | 159 | 159 | 159 | 0.0 | --- |
| 583 | 81 | 181 | 372 | 359.3 | 34.4 |
| 584 | 381 | 406 | 406 | 6.6 | 100.0 |
| 585 | 106 | 191 | 206 | 94.3 | 85.0 |
| 586 | 93 | 235 | 305 | 228.0 | 67.0 |
| TOTALS | 11,125 | 14,085 | 17,659 | 58.7 | 45.3 |

Attachment 3
Comparison of Estimated Employment Data, Original GPP and Mill Creek Subarea Analyses
By Original GPP Micro-Analysis Zones (MAZ)

| MAZ | Original GPP Estimated Employment | | Mill Creek Subarea Trip Generation Data | |
|---------------|-----------------------------------|--------------|---|--------------|
| | Base Year (1994) | Year 2012 | Base Year (1996) | Year 2012 |
| 61 | 810 | 1,501 | 469 | 705 |
| 131 | 13 | 14 | 0 | 0 |
| 147 | 61 | 113 | 4 | 4 |
| 177 | 601 | 831 | 1,084 | 1,969 |
| 179 | 39 | 37 | 32 | 716 |
| 180 | 140 | 273 | 229 | 708 |
| 181 | 2 | 215 | 175 | 603 |
| 182 | 174 | 273 | 200 | 191 |
| 185 | 47 | 55 | 15 | 73 |
| 186 | 373 | 705 | 270 | 514 |
| 187 | 10 | 64 | 0 | 294 |
| 188 | 2 | 17 | 0 | 0 |
| 189 | 9 | 27 | 0 | 0 |
| 190 | 47 | 107 | 0 | 0 |
| 191 | 70 | 81 | 100 | 100 |
| 192 | 276 | 176 | 298 | 354 |
| 193 | 16 | 24 | 64 | 64 |
| 194 | 6 | 3 | 0 | 0 |
| 195 | 312 | 435 | 89 | 89 |
| 196 | 99 | 175 | 61 | 61 |
| 197 | 0 | 0 | 0 | 0 |
| 201 | 102 | 158 | 183 | 393 |
| 269 | 26 | 33 | 0 | 0 |
| 270 | 148 | 206 | 241 | 241 |
| TOTALS | 3,383 | 5,524 | 3,513 | 7,080 |

Attachment 4

Preliminary Analysis For 20 Key Roadway Sections Full GPP Network

Nondirectional Traffic Volumes and V/C Ratios by Alternative Forecasts (4:30-5:30 p.m. peak hour)

| Mill Creek Travel Analysis Southwest Snohomish County UGA | | Current | | 2002 | | 2002 | | 2012 | | 2012 | |
|--|---------------------------------------|----------------|------|--------------|------|--------------|------|--------------|------|--------------|------|
| Arterial Unit | Limits | Traffic Counts | | GPP Forecast | | New Forecast | | GPP Forecast | | New Forecast | |
| | | Veh. | V/C | Veh. | V/C | Veh. | V/C | Veh. | V/C | Veh. | V/C |
| SR-96 | Interstate 5 to SR-527 | 2,679 | 0.99 | 3,520 | 1.30 | 3,493 | 1.29 | 3,450 | 1.28 | 4,033 | 1.49 |
| SR-96 | SR-527 to 35th Avenue SE | 2,176 | 0.81 | 2,580 | 0.96 | 2,814 | 1.04 | 3,073 | 1.14 | 3,512 | 1.30 |
| SR-96 | 35th Avenue SE to S-H Road | 1,887 | 0.68 | 2,526 | 0.91 | 2,253 | 0.81 | 2,981 | 1.07 | 3,429 | 1.23 |
| SR-527 | 116th Street SE to 132nd Street SE | 1,539 | 1.17 | 1,727 | 1.32 | 1,835 | 1.40 | 1,917 | 1.24 | 2,364 | 1.54 |
| SR-527 | 132nd Street SE to 164th Street SE | 1,602 | 1.00 | 2,050 | 0.74 | 2,716 | 0.98 | 2,642 | 0.95 | 3,128 | 1.13 |
| SR-527 | 164th Street SE to 180th Street SE | 2,370 | 0.85 | 2,681 | 0.97 | 3,432 | 1.24 | 2,495 | 0.90 | 3,133 | 1.13 |
| SR-527 | 180th Street SE to SR-524 | 2,566 | 0.92 | 2,726 | 0.98 | 3,201 | 1.15 | 3,075 | 1.11 | 3,661 | 1.32 |
| SR-524 | North Road to SR-527 | 1,104 | 0.76 | 1,237 | 0.86 | 1,574 | 1.09 | 1,218 | 0.44 | 1,665 | 0.60 |
| 35th Avenue SE | SR-96 to S-H Road | 761 | 0.59 | 738 | 0.49 | 963 | 0.64 | 759 | 0.50 | 1,101 | 0.73 |
| 35th Avenue SE | S-H Road to 168th Street SE | 927 | 0.72 | 885 | 0.69 | 1,211 | 0.94 | 1,018 | 0.67 | 1,579 | 1.05 |
| 35th Avenue SE | 168th Street SE to SR-524 | 610 | 0.40 | 786 | 0.52 | 1,084 | 0.72 | 923 | 0.40 | 1,122 | 0.49 |
| Mill Creek Road | SR-527 to Village Green Drive | 1,188 | 0.63 | 1,560 | 0.83 | 1,638 | 0.87 | 1,686 | 0.89 | 1,747 | 0.92 |
| Seattle-Hill Road | 35th Avenue SE to 132nd Street SE | 521 | 0.40 | 488 | 0.38 | 754 | 0.58 | 736 | 0.57 | 1,024 | 0.79 |
| 148th Street Extension | Jefferson Street to SR-527 | - | - | - | - | - | - | 973 | 0.68 | 1,468 | 1.02 |
| 164th Street SE | Mill Creek Blvd to I-5 | 2,670 | 0.99 | 3,251 | 1.20 | 3,345 | 1.24 | 2,835 | 1.05 | 3,135 | 1.16 |
| 180th Street Extension | SR-527 to North Road | - | - | - | - | - | - | 1,207 | 0.49 | 1,408 | 0.57 |
| 180th Street SE | SR-527 to 35th Avenue SE | 1,342 | 0.90 | 1,225 | 0.82 | 1,567 | 1.05 | 1,587 | 0.67 | 2,329 | 0.99 |
| North Road | 164th Street SE to Jonathan Road | 517 | 0.50 | 836 | 0.82 | 873 | 0.85 | 970 | 0.64 | 1,186 | 0.79 |
| Meridian Avenue S. | SR-96 to Meadow Place | 378 | 0.30 | 437 | 0.34 | 732 | 0.58 | 428 | 0.34 | 1,159 | 0.91 |
| 2nd/Meadow Place | Meridian Avenue S. to 164th Street SW | 187 | 0.16 | 221 | 0.19 | 479 | 0.42 | 335 | 0.29 | 521 | 0.46 |

Alternatives

Attachment 5

Preliminary Analysis For 20 Key Roadway Sections 180th Street SE Removed from Network

Nondirectional Traffic Volumes and V/C Ratios by Alternative Forecasts (4:30-5:30 p.m. peak hour)

| Mill Creek Travel Analysis Southwest Snohomish County UGA | Alternatives | | | | | | | | | | | |
|--|---------------------------------------|-------|-----------------------|-------|---------------------|-------|---------------------|-------|---------------------|-------|---------------------|-----|
| | Limits | | Current | | 2002 | | 2002 | | 2012 | | 2012 | |
| | | | Traffic Counts Veh | V/C | GPP Forecast Veh | V/C | New Forecast Veh | V/C | GPP Forecast Veh | V/C | New Forecast Veh | V/C |
| SR-96 | Interstate 5 to SR-527 | 2,679 | 0.99 | 3,520 | 1.30 | 3,493 | 1.29 | 3,450 | 1.28 | 3,959 | 1.47 | |
| SR-96 | SR-527 to 35th Avenue SE | 2,176 | 0.81 | 2,580 | 0.96 | 2,814 | 1.04 | 3,073 | 1.14 | 3,664 | 1.36 | |
| SR-96 | 35th Avenue SE to S-H Road | 1,887 | 0.68 | 2,526 | 0.91 | 2,253 | 0.81 | 2,981 | 1.07 | 3,615 | 1.30 | |
| SR-527 | 116th Street SE to 132nd Street SE | 1,539 | 1.17 | 1,727 | 1.32 | 1,835 | 1.40 | 1,917 | 1.24 | 2,410 | 1.56 | |
| SR-527 | 132nd Street SE to 164th Street SE | 1,602 | 1.00 | 2,050 | 0.74 | 2,716 | 0.98 | 2,642 | 0.95 | 2,993 | 1.08 | |
| SR-527 | 164th Street SE to 180th Street SE | 2,370 | 0.85 | 2,681 | 0.97 | 3,432 | 1.24 | 2,495 | 0.90 | 3,492 | 1.26 | |
| SR-527 | 180th Street SE to SR-524 | 2,566 | 0.92 | 2,726 | 0.98 | 3,201 | 1.15 | 3,075 | 1.11 | 3,763 | 1.35 | |
| SR-524 | North Road to SR-527 | 1,104 | 0.76 | 1,237 | 0.86 | 1,574 | 1.09 | 1,218 | 0.44 | 1,764 | 0.64 | |
| 35th Avenue SE | SR-96 to S-H Road | 761 | 0.59 | 738 | 0.49 | 963 | 0.64 | 759 | 0.50 | 1,106 | 0.73 | |
| 35th Avenue SE | S-H Road to 168th Street SE | 927 | 0.72 | 885 | 0.69 | 1,211 | 0.94 | 1,018 | 0.67 | 1,630 | 1.08 | |
| 35th Avenue SE | 168th Street SE to SR-524 | 610 | 0.40 | 786 | 0.52 | 1,084 | 0.72 | 923 | 0.40 | 1,195 | 0.52 | |
| Mill Creek Road | SR-527 to Village Green Drive | 1,188 | 0.63 | 1,560 | 0.83 | 1,638 | 0.87 | 1,686 | 0.89 | 1,525 | 0.81 | |
| Seattle-Hill Road | 35th Avenue SE to 132nd Street SE | 521 | 0.40 | 488 | 0.38 | 754 | 0.58 | 736 | 0.57 | 884 | 0.69 | |
| 148th Street Extension | Jefferson Street to SR-527 | - | - | - | - | - | - | 973 | 0.68 | 1,745 | 1.22 | |
| 164th Street SE | Mill Creek Blvd to I-5 | 2,670 | 0.99 | 3,251 | 1.20 | 3,345 | 1.24 | 2,835 | 1.05 | 3,695 | 1.37 | |
| 180th Street Extension | SR-527 to North Road | - | - | - | - | - | - | 1,207 | 0.49 | - | - | |
| 180th Street SE | SR-527 to 35th Avenue SE | 1,342 | 0.90 | 1,225 | 0.82 | 1,567 | 1.05 | 1,587 | 0.67 | 2,079 | 0.88 | |
| North Road | 164th Street SE to Jonathan Road | 517 | 0.50 | 836 | 0.82 | 873 | 0.85 | 970 | 0.90 | 928 | 0.86 | |
| Meridian Avenue S. | SR-96 to Meadow Place | 378 | 0.30 | 437 | 0.34 | 732 | 0.58 | 428 | 0.34 | 1,140 | 0.90 | |
| 2nd/Meadow Place | Meridian Avenue S. to 164th Street SW | 187 | 0.16 | 221 | 0.19 | 479 | 0.42 | 335 | 0.29 | 513 | 0.45 | |

Attachment 6

Preliminary Analysis For 20 Key Roadway Sections
180th and 148th Streets SE Removed from GPP Network

Nondirectional Traffic Volumes and V/C Ratios by Alternative Forecasts
(4:30-5:30 p.m. peak hour)

Alternatives

| Mill Creek Travel Analysis Southwest Snohomish County UGA | Arterial Unit | Limits | Current | | 2002 | | 2002 | | 2012 | | 2012 | |
|--|---------------|---------------------------------------|----------------|------|--------------|------|-------|--------------|-------|------|--------------|------|
| | | | Traffic Counts | V/C | GPP Forecast | Veh | V/C | New Forecast | Veh | V/C | New Forecast | Veh |
| SR-96 | | Interstate 5 to SR-527 | 2,679 | 0.99 | 3,520 | 1.30 | 3,493 | 1.29 | 3,450 | 1.28 | 4,633 | 1.72 |
| SR-96 | | SR-527 to 35th Avenue SE | 2,176 | 0.81 | 2,580 | 0.96 | 2,814 | 1.04 | 3,073 | 1.14 | 3,414 | 1.26 |
| SR-96 | | 35th Avenue SE to S-H Road | 1,887 | 0.68 | 2,526 | 0.91 | 2,253 | 0.81 | 2,981 | 1.07 | 3,468 | 1.25 |
| SR-527 | | 116th Street SE to 132nd Street SE | 1,539 | 1.17 | 1,727 | 1.32 | 1,835 | 1.40 | 1,917 | 1.24 | 2,506 | 1.63 |
| SR-527 | | 132nd Street SE to 164th Street SE | 1,602 | 1.00 | 2,050 | 0.74 | 2,716 | 0.98 | 2,642 | 0.95 | 2,983 | 1.08 |
| SR-527 | | 164th Street SE to 180th Street SE | 2,370 | 0.85 | 2,681 | 0.97 | 3,432 | 1.24 | 2,495 | 0.90 | 3,465 | 1.25 |
| SR-527 | | 180th Street SE to SR-524 | 2,566 | 0.92 | 2,726 | 0.98 | 3,201 | 1.15 | 3,075 | 1.11 | 3,820 | 1.37 |
| SR-524 | | North Road to SR-527 | 1,104 | 0.76 | 1,237 | 0.86 | 1,574 | 1.09 | 1,218 | 0.44 | 1,944 | 0.70 |
| 35th Avenue SE | | SR-96 to S-H Road | 761 | 0.59 | 738 | 0.49 | 963 | 0.64 | 759 | 0.50 | 1,091 | 0.72 |
| 35th Avenue SE | | S-H Road to 168th Street SE | 927 | 0.72 | 885 | 0.69 | 1,211 | 0.94 | 1,018 | 0.67 | 1,635 | 1.08 |
| 35th Avenue SE | | 168th Street SE to SR-524 | 610 | 0.40 | 786 | 0.52 | 1,084 | 0.72 | 923 | 0.40 | 1,276 | 0.55 |
| Mill Creek Road | | SR-527 to Village Green Drive | 1,188 | 0.63 | 1,560 | 0.83 | 1,638 | 0.87 | 1,686 | 0.89 | 1,547 | 0.82 |
| Seattle-Hill Road | | 35th Avenue SE to 132nd Street SE | 521 | 0.40 | 488 | 0.38 | 754 | 0.58 | 736 | 0.57 | 930 | 0.72 |
| 148th Street Extension | | Jefferson Street to SR-527 | - | - | - | - | - | - | 973 | 0.68 | - | - |
| 164th Street SE | | Mill Creek Blvd to I-5 | 2,670 | 0.99 | 3,251 | 1.20 | 3,345 | 1.24 | 2,835 | 1.05 | 4,075 | 1.51 |
| 180th Street Extension | | SR-527 to North Road | - | - | - | - | - | - | 1,207 | 0.49 | - | - |
| 180th Street SE | | SR-527 to 35th Avenue SE | 1,342 | 0.90 | 1,225 | 0.82 | 1,567 | 1.05 | 1,587 | 0.67 | 2,133 | 0.91 |
| North Road | | 164th Street SE to Jonathan Road | 517 | 0.50 | 836 | 0.82 | 873 | 0.85 | 970 | 0.90 | 961 | 0.89 |
| Meridian Avenue S. | | SR-96 to Meadow Place | 378 | 0.30 | 437 | 0.34 | 732 | 0.58 | 428 | 0.34 | 1,176 | 0.93 |
| 2nd/Meadow Place | | Meridian Avenue S. to 164th Street SW | 187 | 0.16 | 221 | 0.19 | 479 | 0.42 | 335 | 0.29 | 438 | 0.38 |

Attachment 7
Intersection Turning Movement Forecast Volumes by Alternative
System Peak Hour (4:30 pm - 5:30 pm)

| Intersection and Movement | 1996 / 1997 Base Counts | Year 2002 Full GPP Network | Year 2012 Full GPP Network | Year 2012 GPP Network Without 180th Extension | Year 2012 GPP Network Without 180th and 148th |
|-----------------------------------|-------------------------|----------------------------|----------------------------|---|---|
| SR-527 and 132nd Street SE | | | | | |
| NBL | 36 | 41 | 50 | 50 | 50 |
| NBT | 443 | 530 | 716 | 703 | 674 |
| NBR | 264 | 313 | 488 | 486 | 394 |
| SBL | 187 | 202 | 331 | 323 | 310 |
| SBT | 386 | 529 | 698 | 733 | 699 |
| SBR | 191 | 256 | 394 | 379 | 365 |
| EBL | 267 | 341 | 312 | 345 | 472 |
| EBT | 1,150 | 1,496 | 1,653 | 1,710 | 1,828 |
| EBR | 3 | 0 | 0 | 0 | 0 |
| WBL | 200 | 218 | 285 | 242 | 248 |
| WBT | 504 | 687 | 966 | 923 | 992 |
| WBR | 166 | 173 | 101 | 123 | 119 |
| TOTAL | 3,797 | 4,786 | 5,994 | 6,017 | 6,152 |
| SR-527 and 164th Street SE | | | | | |
| NBL | 441 | 536 | 363 | 574 | 634 |
| NBT | 809 | 885 | 1,319 | 1,111 | 1,147 |
| NBR | 113 | 150 | 175 | 198 | 188 |
| SBL | 215 | 222 | 262 | 286 | 233 |
| SBT | 568 | 832 | 1,077 | 1,042 | 900 |
| SBR | 83 | 127 | 200 | 202 | 236 |
| EBL | 206 | 293 | 359 | 370 | 439 |
| EBT | 449 | 709 | 931 | 1,032 | 1,143 |
| EBR | 286 | 394 | 226 | 542 | 574 |
| WBL | 114 | 131 | 209 | 206 | 206 |
| WBT | 174 | 258 | 331 | 339 | 367 |
| WBR | 123 | 160 | 175 | 185 | 182 |
| TOTAL | 3,581 | 4,697 | 5,627 | 6,087 | 6,249 |
| SR-527 and 180th Street SE | | | | | |
| NBL | 23 | 31 | 45 | 39 | 40 |
| NBT | 930 | 1,009 | 1,293 | 1,166 | 1,238 |
| NBR | 458 | 622 | 708 | 849 | 895 |
| SBL | 511 | 697 | 411 | 761 | 736 |
| SBT | 568 | 660 | 968 | 912 | 912 |
| SBR | 25 | 37 | 46 | 39 | 44 |
| EBL | 49 | 73 | 128 | 77 | 76 |
| EBT | 69 | 72 | 646 | 88 | 95 |
| EBR | 35 | 57 | 141 | 63 | 57 |
| WBL | 236 | 275 | 338 | 393 | 383 |
| WBT | 37 | 42 | 415 | 43 | 44 |
| WBR | 325 | 411 | 344 | 486 | 483 |
| TOTAL | 3,266 | 3,986 | 5,483 | 4,917 | 5,003 |

Attachment 8
Intersection Level Of Service Analysis By Alternative
System Peak Hour (4:30 pm - 5:30 pm)

| INTERSECTION | 1995 Existing Condition | | Year 2002 Full GPP Network | | Year 2012 Full GPP Network | | Year 2012 GPP Network, Without 180th Extension | | Year 2012 GPP Network, Without 180th & 148th | |
|--|-------------------------|-------|----------------------------|-------|----------------------------|-------|--|-------|--|-------|
| | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| SR-527 and 132nd Street SE | | | | | | | | | | |
| No Improvements / Base Condition | D | 35.4 | | | | | | | | |
| Add NBT, SBT (Assumed Base 2002 / 2012) | | | D | 37.7 | F | 100+ | F | 100+ | F | 100+ |
| SR-527 and 164th Street SE | | | | | | | | | | |
| No Improvements / Base Condition | C | 23.1 | D | 33.9 | F | 64.5 | F | 63.8 | F | 64.5 |
| SR-527 and 180th Street SE | | | | | | | | | | |
| No Improvements / Base Configuration | C | 23.1 | D | 30.0 | | | E | 48.5 | E | 51.7 |
| Add EBT (Assumed Base 2012 Full GPP Net) | | | | | F | 100+ | | | | |

**ARTERIAL ROADWAY AND INTERSECTION
LEVEL OF SERVICE DESCRIPTIONS**

The concept of level of service (LOS) uses qualitative and quantitative measures to describe operational conditions within a traffic stream on a given roadway. The levels of service are much like an academic grading system whereby LOS "A" represents the best condition and LOS "F" represents the worst condition. The six levels of service (A-F) presented below describe conditions in terms of average travel speed, traffic volume compared to capacity, freedom to maneuver in traffic and stopped delay at signalized intersections. These descriptions represent typical county arterial units that are urban and are influenced by traffic signals to some degree. These are arterials with low to medium density development along their frontages, have limited pedestrian activity, move traffic at freeflow speeds approaching 40 mph, and may have one to five signals per mile.

LOS "A"

Represents a near free flow condition with an average travel speed of 35 miles per hour or higher. The volume of traffic compared to the practical capacity of the arterial is 37 percent or less. Vehicles are unimpeded within the traffic stream and can be maneuvered easily. Stopped delay at signalized intersections is 5 seconds or less with most vehicles arriving at the intersection on a green phase and not stopping.

LOS "B"

Represents a stable flow condition with an average travel speed of 28 to 34 miles per hour. The volume of traffic compared to the practical capacity of the arterial is 38 to 47 percent. Vehicles are relatively unimpeded within the traffic stream and can be maneuvered with minor restrictions. Stopped delay at signalized intersections is 5 - 14 seconds, with only some vehicles arriving at the intersections on a yellow-red phase and stopping.

LOS "C"

Represents a stable flow condition, but with a lower average travel speed of 22 to 27 miles per hour. The volume of traffic compared to the practical capacity of the arterial is 48 to 66 percent. Vehicles are significantly impeded within the traffic stream and may be somewhat difficult to maneuver, particularly when changing lanes at mid-block locations. Stopped delay at signalized intersections is 15 - 24 seconds, with a significant proportion of vehicles queuing at the intersections or arriving on a yellow-red phase and stopping.

LOS "D"

Represents an unstable flow condition where there can be significant delay, and a lower average travel speed of 14 to 17 miles per hour. The volume of traffic compared to the practical capacity of the arterial is 67 to 82 percent. Vehicles are increasingly impeded within the traffic stream and will be difficult to maneuver, particularly in changing lanes at mid-block locations. Stopped delay at signalized intersections is 25 - 39 seconds, with a large proportion of vehicles queuing at the intersections or arriving on a yellow-red phase and stopping. Some vehicles wait for two or more cycles before clearing intersections.

LOS "E"

Represents an unstable flow condition where there can be significant delay, and a lower average travel speed of 10 to 13 miles per hour. The volume of traffic compared to the practical capacity of the arterial is 83 to 100 percent. Vehicles are increasingly impeded within the traffic stream and will be very difficult to maneuver, particularly in changing lanes at mid-block locations. Stopped delay at signalized intersections is 40 - 59 seconds, with a large proportion of vehicles queuing at the intersections or arriving on a yellow-red phase and stopping. Many vehicles wait for two or more cycles before clearing intersections.

LOS "F"

Represents a forced flow condition where there can be considerable delay and very low travel speeds of less than 13 miles per hour. The volume of traffic compared to the practical capacity of the arterial is in excess of 100 percent. Vehicles are greatly impeded within the traffic stream and will be very difficult to maneuver when changing lanes at mid-block locations and at intersections. Stopped delay at signalized intersections is in excess of 60 seconds, with a large proportion of vehicles queuing at the intersections. Vehicular backups extend back from signalized intersections through unsignalized intersections with storage that is distributed throughout the arterial unit.

Adapted from: Transportation Research Board, 1994. Special Report 209: Highway Capacity Manual, Third Edition, Washington D.C.

**Attachment 10
Current and Needed Transportation Improvement Projects in Mill Creek Subarea**

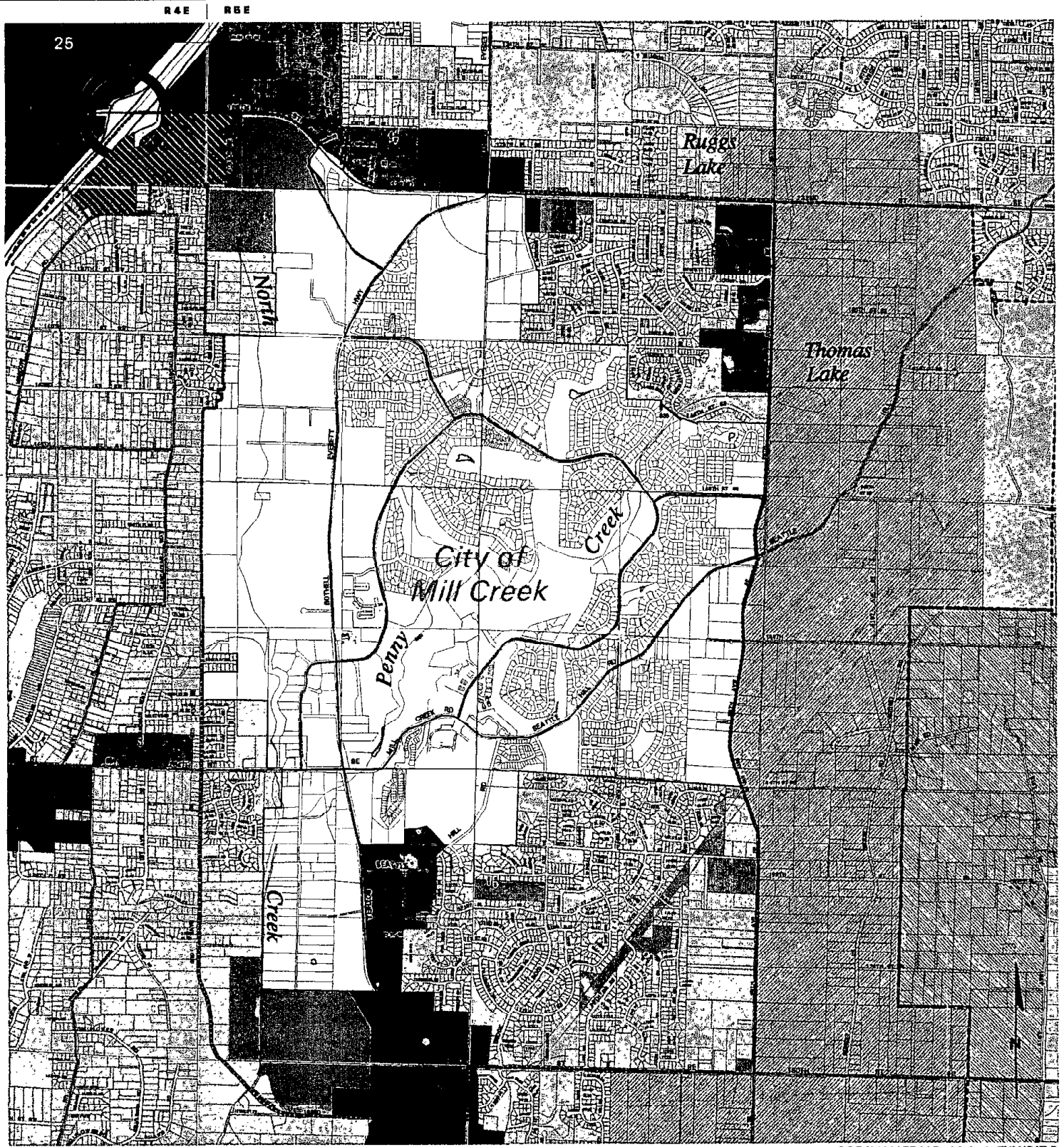
| LOCATION | FROM / TO | | EST. COST(1) | DESCRIPTION |
|--|-------------------|-------------------|-------------------|------------------------------|
| Projects Currently Listed in Transportation Needs Report | | | | |
| 35th Avenue SE | 100th Street SE | 132nd Street SE | \$ 6,420 | Urban 3 Lane with Bike Lanes |
| 35th Avenue SE | 132nd Street SE | Seattle Hill Road | 4,540 | Urban 3 Lane with Bike Lanes |
| 35th Avenue SE | Seattle Hill Road | 198th Place SE | 10,030 | Urban 3 Lane with Bike Lanes |
| 100th Street SE | SR-527 | 35th Avenue SE | 2,700 | Urban 3 Lane with Bike Lanes |
| 132nd Street SE | Seattle Hill Road | Snoh. Cascade Dr. | 1,740 | Urban 4 Lane with Bike Lanes |
| 164th Street SE | 10th Avenue W | Mill Creek C/L | 7,830 | Urban 5 Lane with Bike Lanes |
| 164th Street SE | I-5 Interchange | Meadow Road | 6,050 | Urban 7 Lane with Bike Lanes |
| 180th Street SE | SR-527 | Brook Blvd. | 1,250 | Urban 5 Lane with Bike Lanes |
| North Road | I-405 | 180th Street SE | 2,450 | Urban 3 Lane with Bike Lanes |
| Seattle Hill Road | 35th Avenue SE | 132nd Street SE | 3,350 | Urban 2 Lane with Bike Lanes |
| SR-524 | 24th Avenue W | SR-527 | 16,400 | Urban 5 Lane with Bike Lanes |
| 116th Street SE | Everett C/L | 35th Avenue SE | 2,540 | Urban 3 Lane Section |
| North Road | 164th Street SE | 180th Street SE | 2,570 | Urban Standards |
| Meadow Rd./Pl. SW | 146th Street SW | Meridian Place SE | 2,550 | New Urban 3 Lane Section |
| 148th Street SE | Jefferson Way | Mill Creek C/L | 14,850 | New Urban 3 Lane Section |
| 148th Street SE | Seattle Hill Road | Puget Park Drive | 5,340 | New Urban 3 Lane Section |
| 180th Street SE | North Road | SR-527 | 23,120 | New Urban 5 Lane Section |
| 132nd Street SE | Snoh. Cascade Dr. | SR-9 | 20,490 | New Urban 4 Lane Section |
| Subtotal | | | \$ 134,220 | |
| Projects Listed in City of Mill Creek's 1996 Transportation Improvement Program | | | | |
| Dumas Road | at SR-527 Int. | | \$ 276 | Intersection Improvements |
| Dumas Road | 132nd Street SE | SR-527 | 463 | Adding Bike Lanes |
| Non-County Projects on State Routes | | | | |
| 132nd Street SE | 3rd Avenue W | SR-527 | N/A | Complete Urban Standards |
| SR-527 | 132nd Street SE | 164th Street SE | N/A | Urban 5 Lane Section |
| SR-527 | 132nd Street SE | 112th Street SE | N/A | Urban 3 Lane Section (2) |
| Additional Projects Needed to Mitigation Future LOS Conditions | | | | |
| 132nd Street SE | I-5 Interchange | Seattle Hill Road | Unknown | Additional Capacity |
| SR-527 | 112th Street SE | 132nd Street SE | Unknown | Additional Capacity (2) |
| SR-527 | 180th Street SE | SR-524 | Unknown | Additional Capacity |
| 164th Street SE | I-5 Interchange | Mill Creek Blvd | Unknown | Additional Capacity (3) |
| 148th Street SW | Jefferson Way | Mill Creek C/L | Unknown | Additional Capacity (4) |
| 132nd Street SE | at SR-527 Int. | | Unknown | Intersection Improvements |
| 164th Street SE | at SR-527 Int. | | Unknown | Intersection Improvements |
| 180th Street SE | at SR-527 Int. | | Unknown | Intersection Improvements |

(1) Costs shown in thousands of dollars.

(2) Although modeled as a 3 lane facility, current DOT design plans call for a 5 lane project, which would adequately provide the additional capacity needs identified in this analysis.

(3) Additional capacity on 164th Street SE would most likely not be needed under the Full GPP Scenario.

(4) Although modeled as a 2/3 lane facility, not constructing the 180th Street SE Extension would increase travel demand enough to warrant a 4/5 lane facility.



Mill Creek UGA - Area "A" FUTURE LAND USE GENERAL POLICY PLAN

ORDINANCE NO. 98-051 EXHIBIT B

LEGEND

JULY 1998

| | | | | | |
|--|--|--|--|--|----------------------------------|
| | Rural Residential (1 DU/6 Acres Basic) | | Urban Industrial | | Centers Designations |
| | Urban Low Density Residential (4 - 6 DU/Acre) | | Public Use | | Incorporated City Area |
| | Urban Medium Density Residential (6 - 12 DU/Acre) | | Incorporated Cities, Towns, Tribal Lands, & Rights-of-Way | | Urban Growth Area Boundary |
| | Urban High Density Residential (12 to 24 DU/Acre) | | Growth Phasing Overlay (GPO) | | A Area Boundary |
| | Urban Commercial | | Rural/Urban Transition Area | | Urban Center Development Area |

Snohomish County disclaims any warranty of merchantability or warranty of fitness of this map for any particular purpose, either expressed or implied. No representation or warranty is made concerning the accuracy, currency, completeness or quality of data depicted on this map. Any user of this map assumes all responsibility for use thereof, and further agrees to hold Snohomish County harmless from and against any damage, loss, or liability arising from any use of this map.

The base used to compile parcelization on this map is incomplete. Please consult the appropriate assessor parcel map for discrepancies and/or updated information.

Please refer to the General Policy Plan for explanation of Comprehensive Plan designations. Detailed maps showing precise boundaries for urban growth areas, as well as, agricultural, forest, and mineral land designations are available in the office of Snohomish County Planning and Development Services.

Map produced by the Snohomish County Department of Planning and Development Services, Cartography Section, 6/17/98.



Snohomish County

0 600 1200
Scale in Feet

proj\mills\mllm.aml