

From: [Siri Daly](#)
To: [EIS](#)
Cc: [Steve Roos](#)
Subject: Draft EIS Comment
Date: Monday, September 27, 2021 3:59:22 PM
Attachments: [EIS Comment Letter.pdf](#)

[CAUTION - EXTERNAL EMAIL]

On behalf of STCA, please see attached comment letter and attachments.

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September 27, 2021

Via Email (eis@sammamish.us)

City of Sammamish
ATTN: BLUMA EIS Team
801 228th Ave SE
Sammamish, WA 98075

Re: *BLUMA Draft EIS*

Dear SEPA Responsible Official:

On behalf of STCA, LLC and STC JV 1 LLC (together “STCA”), we submit the following comments on the Draft City of Sammamish Balanced Land Use and Mobility Analysis Draft Environmental Impact Statement (“DEIS”). A table with additional comments is attached hereto as ATTACHMENT A.

1. 196-Unit Growth Assumption is Inconsistent with other Data.

A critical premise of the entire DEIS is that only 196 residential units remain on the City’s 2035 growth target. This premise, in turn, is based on the DEIS’s assumption that 3,963 units have been permitted from 2006 through 2019. *See* DEIS at 1-25. This figure, however, is significantly at odds with the permit data that City staff presented to the Sammamish City Council last year. That data indicated that 2,540 units were permitted between 2006-2018, with an additional 232 units “finaled” in 2019. Data from ARCH indicates that even fewer units have been permitted, only 2,353, 40% less than the DEIS’s number.

The significant discrepancies between the numbers used in the DEIS and those previously provided by City staff and ARCH were discussed in a comment letter submitted on behalf of STCA by HR&A Advisors to King County earlier this year during the comment period on the Urban Growth Capacity Study and Growth Targets. We hereby incorporate by reference that comment letter, including its detailed discussion of the discrepancies in the data on the number of permitted and constructed permits in the City since 2006. *See* ATTACHMENT B. The DEIS does not mention these other growth numbers, and it is not clear what efforts, if any, have been made to explain or reconcile them, or if City staff believes the OFM estimates are more accurate or reliable than the data provided to the City Council last year, which was presumably based on City-specific information. Because these numbers are so critical to the rest of the EIS, the EIS team should undertake additional and rigorous analysis to determine the actual growth that has occurred in the relevant time frame. The EIS should disclose the ARCH data and the data presented to the City Council. If the EIS uses OFM data, it should explain why these “estimates” are being used rather than the ARCH data or the presumably more reliable permit numbers previously provided to the City Council.

To the extent OFM data is used, the source of this data should be disclosed in full, including any caveats or limitations that OFM has noted in the accuracy of the estimates. Appendix B (page 3) of the DEIS states that the City is relying on OFM's "Postcensal Estimates of Housing Units." However, along with its spreadsheet of numbers, OFM acknowledges in an accompanying note that "data users seeking [a] more consistent series should use OFM's official April 1 *intercensal* estimates." Those intercensal numbers report a total of 14,649 housing units in 2006 compared to the 13,815 housing units in the postcensal estimates on which the DEIS relies.¹ Using the intercensal number as the 2006 starting point, the total additional units from 2006-2019 would be at least 834 units *less* than the DEIS's assumption. This in turn would result in a remaining growth number of 196 units *plus* 834, for a total of 1,030 units--more than a *fivefold increase* compared to what the DEIS is using as the foundation for the entire EIS.

Finally, although the EIS references the Klahanie annexation in a single sentence, a detailed explanation should be provided, including both the 2006 and 2019 numbers used for the Klahanie annexation area. The City should clarify if and how it is relying on pre-annexation growth in Klahanie as part of the 3,963 housing units it claims have been added since 2006. The EIS should also explain why it only added 209 units to its growth target upon Klahanie annexation when the King County Countywide Planning Policies (KCCP) added 350. *See* DEIS Appendix B (page 3); KCCP at Table DP-1.

2. The DEIS Assumes No Further Residential Growth in the Town Center.

The DEIS's approach to the Town Center contains several errors. The root problem is that it assumes *no further residential growth in the Town Center* beyond the 326 residential units that according to the City have been built to date and the 386 housing units that are currently in the pipeline as part of STCA's Phase 1 applications.² The DEIS correctly notes that "the City's 2015 Comprehensive Plan plans for development of 2,000 units of residential housing in the Town Center," DEIS at 1-53, but then fails to acknowledge that this means approximately 1,288 residential units of additional growth between now and 2035 beyond what has been built or is in the pipeline. Inexplicably, the DEIS's starting assumption for purposes of its traffic and concurrency is only 196 single-family units allocated evenly to the part of the City north of the Town Center and south of the Town Center, with no residential growth of any kind in the Town Center itself beyond what has been built or is in the permit pipeline. *See* DEIS at 1-24.

¹ Both numbers appear to be estimates of housing units prior to Klahanie annexation.

² *See* November 6, 2018 City Council Agenda Bill Memo re Phase 1 MOU ("To date, three projects have been permitted by the City [in the Town Center] totaling 326 residential units and approximately 136,000 SF of commercial and office space plus infrastructure improvements"). STCA's proposed Phase 1 housing units include 348 units in the TC-A-1 zone and 38 units in the TC-B and TC-C zones under the most recent submittal.

All the alternatives are limited to an analysis of the presumed 2035 growth target--i.e., 196 additional single-family housing units and approximately 450,000 square feet of commercial development. DEIS at 3-69. This is the equivalent of 12 homes per year from 2020-2035 for a City whose currently population is over 65,000, and again no additional growth in the Town Center. The DEIS makes no mention of how these 12 new homes per year would support the additional planned commercial development in the City.

The failure to account for any further Town Center residential growth is a glaring error in the DEIS's analysis. Using the ARCH or City staff numbers, the remaining growth target (excluding the pipeline) would be 1,807 or 1,388 units respectively. The remaining Town Center residential units of 1,288 would be within these counts. Moreover, regardless of whether the Town Center's residential units put the City above or below its remaining 2035 growth target, the Town Center's residential and commercial development is unquestionably part of the growth and future the City has been planning since at least 2007. The City has made numerous commitments in furtherance of this Plan, including the adoption of the Town Center Sub-Area Plan in 2008, the Town Center Infrastructure Plan and Development Code in 2010, the statements about the Town Center in the 2014 King County Buildable Lands Report, the construction of SE 4th Street with significant state funding, the Interlocal Agreement with King County for the purchase of TDRs for use in the Town Center, City resolutions supporting the Town Center Plan, and the 2018 Memorandum of Understanding between STCA and the City. These plans, statements, and commitments underscore and confirm the Comprehensive Plan's plan for 2,000 units of residential housing in the Town Center. The internal consistency required under the GMA obligates the City to ensure that its concurrency standards and capital improvement plans fully consider and account for further commercial *and residential* growth in the Town Center.

In a recent decision on STCA's Phase 1 proposal, the Planning Department emphasized the numerous benefits of the Town Center, as summarized below:

The Town Center subarea is a mixed-use center within the City that provides an opportunity for various housing types, specialty retail and restaurants, professional services, pedestrian and transit connections, civic and community services, and recreational uses. The Town Center subarea has a distinctive design character focusing on promoting sustainability by balancing the natural and built environment. The Comprehensive Plan's Land Use Goal LU.3 describes the Town Center subarea as a designed commercial/mixed-use center planned to host a diversity of high-quality places to live, work, shop, and recreate.³

³ See Findings/Conclusions/Decision, UZDP 2019-00562, at 7. The Department's Decision denying the UZDP was reversed by the City Hearing Examiner for multiple reasons, but this statement about the purpose and importance of the Town Center is not in dispute.

The DEIS appears to acknowledge the importance of the Town Center to the City's future by stating that a "significant impact" under SEPA would be any alternative that would "substantially disincentive development in the Town Center or act as a barrier to the Town Center achieving its planned share of adopted Comprehensive Plan growth targets." DEIS at 1-52.

With little analysis, the DEIS concludes that none of the alternatives would have a significant impact on the Town Center. DEIS at 1-53. But this conclusion appears superficial at best. All four alternatives assume that the only relevant growth target between now and 2035 is the minimum necessary to meet the alleged target-number of 196 residential units beyond what's built or in the pipeline. The menu of traffic improvements, at least for Alternatives 1, 2, and 3, is limited to what is necessary to accommodate these 196 units, none of which are assumed to occur in the Town Center. While Alternative 4 appears intended to provide additional capacity, it appears that further analysis is needed to determine whether the additional improvements listed under Alternative 4 would cover the residential growth in the Town Center called for in the Comprehensive Plan.

The Town Center is a critical component of the City's future planning, yet the DEIS is devoid of any analysis that would allow a careful and rigorous understanding of how the potential concurrency standards, and the costs associated with curing any concurrency failures, will affect the Town Center. This information is critical before the City can reach any conclusion about whether the Alternatives might "disincentivize" future Town Center development, which the DEIS acknowledges would be a significant adverse impact.

3. The DEIS Fails to Plan for Additional Affordable Housing.

The Comprehensive Plan relies on the Town Center, and specifically multi-family housing in the Town Center, for the provision of future affordable housing in the City:

Given the cost of single-family housing, and because mixed use and multifamily housing types are typically more affordable than single family, detached housing, the City recognizes the importance of having sufficient zoned capacity for multi-family and Town Center mixed use development in order to meet affordability needs.

COMPREHENSIVE PLAN, Volume 1, Housing Element, at 78; *see also* COMPREHENSIVE PLAN, Volume 2, Housing Background Information at H.35-H.36 (noting the importance of the Town Center for the City's housing affordability and diversity). Zoned capacity is inextricably linked with concurrency capacity. Having provided the zoned capacity in the Town Center to help implement its strategy for diverse and affordable housing, the City must likewise provide the concurrency capacity to meet its obligations under the Growth Management Act. By failing to plan for any additional residential growth in the Town Center beyond what's in the permitting pipeline, the DEIS effectively plans for no additional affordable housing between now and 2035. This directly contradicts the affordable housing goals and policies of the Growth Management Act and the City's current Comprehensive Plan.

We note that the DEIS's statement (page 3-94) that all of the residential units in the Town Center will be either senior or affordable housing is inaccurate. A significant component of the Town Center residential growth must be affordable, as provided in SMC 21B.75, but this in no way means each and every unit will be either senior or affordable housing. Instead, the Town Center Plan calls for a blend of commercial uses, market-rate residential units consisting of different housing types, and affordable housing units. This variety and diversity is a critical aspect of the Town Center character and should be reflected in the FEIS's comments about the Town Center.

4. The EIS Must Consider More Than One Potential V/C Standard.

STCA's Scoping Comment Letter specifically recommended that a range of V/C Standards should be considered, rather than simply the 1.1/1.4 standards that the City Council previously adopted. The DEIS nevertheless analyzes a single V/C Standard, reflecting an apparent pre-determination to simply rubber-stamp its prior action rather than thoughtfully considering and comparing alternative V/C Standards. As Transpo and others have repeatedly pointed out, the City's "capacity" number is not the roadway's true capacity; it is simply a number that the City has derived by making various assumptions, several of which are inaccurate. The result is a capacity number that is in fact demonstrably lower than actual capacity. Rather than simplistically assuming that higher V/C Standards than 1.1/1.4 are unacceptable and not even worthy of analysis, the EIS should look at such higher standards as part of its obligation under SEPA to consider alternatives, and then evaluate how these different alternatives might compare in terms of the extent of road improvements (and associated environmental impacts) and travel speeds.⁴

5. Without Cost and Travel Speed Information, the DEIS Fails to Facilitate Informed Decision-making.

Overall, the DEIS fails to provide the kind of information that would allow informed decision-making about the costs and tradeoffs associated with the potential additional layer of V/C Standards. The following additional information is needed, at a minimum.

First, the FEIS should use the proper 2035 growth assumptions, as discussed above. This would include *at a minimum* the 196 additional single-family units outside the Town Center, the 450,000 SF of commercial within the Town Center, *and* approximately 1,300 housing units within the Town Center.

⁴ Prior to the City Council's adoption of V/C standards in 2019, the Transpo Group submitted a number of memos and comments to the City regarding the assumed capacity numbers and the V/C standards. Those comments were included in the record of the GMHB challenge to those V/C Standards (GMHB Case No. 19-3-0015). Transpo's comments along with an additional memo from Transpo dated September 1, 2020, are attached to this comment letter and hereby incorporated by reference. *See* ATTACHMENT C.

Second, the FEIS should determine, as a baseline, how measured roadways and intersections would function in 2035 (in terms of travel speeds) with this level of growth and no additional improvements at all. We note that in March 2020, Perteet provided data to the City Council that compared future roadway performance in a 2035 growth scenario. One scenario assumed 2035 growth and essentially no further road improvements beyond what currently exists, the other looked at 2035 growth and roadway improvements costing \$120-140 million dollars. The difference in the two scenarios was *less than a minute* over the stretch of roadway from NE 12th to SR 202. *See* ATTACHMENT D (Sahalee Way Corridor Updates Presentation by City Public Works Department).⁵ In a similar vein, the DEIS reports less than a 1 MPH difference between Alternative 1 (retaining intersection standards only) and Alternative 2 (adopting 1.1 and 1.4 V/C Standards). *See* DEIS at 1-61 (Exhibit 1-29).

Third, the FEIS should consider not just the 1.1/1.4 V/C Standard, but also at least one additional V/C Standard. The FEIS should then calculate the costs of undertaking the roadway improvements necessary to allow roadways and intersections to meet potential new standards, and then the resulting travel speeds that would result from such improvements. This would allow the City to determine whether the new concurrency standards--and the costs of building the roadway improvements necessary to meet them--is worth the costs. To take a hypothetical example, is it worth imposing a V/C Standard of 1.1/1.4 if the improvements needed to meet those standards with 2035 growth is \$50 million as well as additional environmental costs associated with road construction, but the improved travel speed is minimal compared to speeds with no improvements? *See* DEIS at 1-61 (noting that “additional flexibility in standards could reduce the footprint of required roadway improvements”). The public must have enough information to understand this trade-off before it can provide meaningful comment, but that information is either not available or has not been presented in an accessible manner in the DEIS.

This three-step approach is depicted in the chart below. The first column reflects the potential concurrency standard. The second reflects the costs needed to build the road improvements necessary to meet those standards with 2035 growth. The third shows the resulting travel times on key roadways. The preparation of a chart with this information is needed for informed decision-making about future roadways and concurrency standards.

⁵ It appears that the 2035 growth number used in the Perteet analysis was higher than the 2035 growth number of 196 residential units the City is currently using. This too should be clarified in the Final EIS.

Concurrency Standard	Costs of Roadway Improvements to Meet Standards with 2035 Growth (including Town Center)	Travel Time with Improvements to Meet Standards
Intersections Only		
1.1-1.4 V/C Standard		
Alternative V/C Standard		

The DEIS fails to provide this needed information. Notably, the “Proposal” is described as including “financing information,” and SEPA regulations specifically provide for a discussion of the costs of public services, including roads, that may result from a proposal. *See* DEIS at 2-2; WAC 197-11-440(6)(3). Yet even though the DEIS has been underway for well over a year now, no financing information is provided in the DEIS or its technical appendices that would allow the public to understand the costs of the potential concurrency standards at even a general level, and compare those costs with any gains in travel speed through key City corridors.

6. Suggestions and Recommendations Are Provided in Transpo Memo.

The attached Memo from the Transpo Group contains further discussion regarding the above inadequacies in the DEIS, and others. *See* ATTACHMENT E (herein incorporated by reference).

Thank you for this opportunity to comment. As always, STCA stands ready and willing to meet with the City to discuss any of the foregoing concerns and comments, or any other aspect of the Town Center.

Sincerely,



Stephen H. Roos

E-Mail: steve.roos@hcmp.com
Direct Dial: (206) 470-7645

ATTACHMENT A

ATTACHMENT A – REVIEW MATRIX

#	BLUMA Page #	Summary of BLUMA Content	Response to BLUMA
1	1-6; 1-11; 1-20; 1-25	Provides a high-level overview of the alternatives, including their effects on transportation, intersection LOS, land use, and policy and regulatory amendments.	The overview of the alternatives should include estimated costs associated with pursuing each alternative to better understand how the alternatives would affect Sammamish and the economic viability of each alternative. See STCA comment letter.
2	1-24; 1-25	Alternative 3 and 4 both assume a 15 percent reduction in peak traffic in response to the COVID-19 Pandemic.	If Alternatives 3 and 4 assume a 15 percent reduction in traffic, Alternative 1 should similarly show the effects of a 15 percent reduction in traffic. This will better help the community be able to accurately compare the various alternatives.
3	1-24	DEIS assumes that 10 to 11 percent of new units (half of units not otherwise in the pipeline) will be comprised of smaller units including small scale single family detached dwelling units, townhouses, and duplexes.	What is the basis of this assumption and does it consider development plans the City is aware of that do not yet have units in the pipeline? Where will these units be allocated in the City? How will the allocation interact with and affect the various alternatives? Is this statement consistent with the assumption stated elsewhere in the DEIS that all 196 units not in the pipeline are assumed to be single-family units and outside the Town Center? <i>See</i> DEIS at 3-122.
4	1-25	The City assumes, based on the Washington Office of Financial Management (“OFM”) projections, that Sammamish built 3,963 residential units between 2006 and 2019.	The City uses OFM estimates regarding how many residential units were built in Sammamish between 2006 and 2019. The City states 3,963 units were built while the Puget Sound Regional Council’s A Regional Coalition for Housing (ARCH) data indicates that 2,353 units were built during approximately this same period, and City staff reported that 2,540 residential units were built from 2006-2018 with an additional 232 residential unit permits “finaled” in 2019. The difference in these housing assumptions are significant, with the ARCH and City staff numbers showing that the City needs to accommodate significantly more housing units than it currently plans for under this DEIS to reach its growth targets. The DEIS does not explain why it uses the OFM numbers rather than the ARCH numbers, an organization Sammamish is part

			of, or its own City staff numbers. Nor does it explain the reason for the discrepancies. The City should verify whether its housing unit numbers are correct, especially in light of the large delta between the OFM growth estimates, and the ARCH and City staff counts. See STCA comment letter.
5	1-53; 3-70	Discusses Town Center Impacts and notes the 2015 plan to locate 2000 housing units in the Town Center.	Though the DEIS discusses the plan in the Comprehensive Plan to locate 2000 housing units in the Town Center, it does not appear that any of the alternatives identify the transportation infrastructure improvements needed to allow the remainder of the 2,000 residential units to be built. If Alternative 4's improvements would provide that capacity, it should be so stated. If it does not, the DEIS should explain why none of the alternatives provide sufficient improvements to accommodate a known plan that would bring much needed housing, and especially affordable housing, to the City. There should be an alternative that incorporates sufficient transportation improvements to support the planned Town Center growth. See STCA comment letter.
6	1-57	The alternatives would not directly affect the housing types allowed or quantity of housing constructed in Sammamish, and the associated transportation improvement projects would not create long-term barriers to development of affordable or diverse housing types.	It does not appear that any of the alternatives account for the improvements that would be needed for the remaining residential growth in the Town Center. Importantly, the Town Center was identified as one of the chief locations to provide affordable housing to the community. If the Town Center cannot be built as planned under any of the alternatives, long-term barriers would exist that affect both the quantity of housing constructed in Sammamish and the ability to develop affordable or diverse housing types. See STCA comment letter.
7	3-88	The City has a zoned capacity of approximately 2,655 residential units, but only has a growth target of 855 residential units.	The alternatives would enact limited improvements that would likely allow the City to meet the DEIS's stated growth target of 855 residential units, but would not facilitate growth of additional residential units in the Town Center beyond what is built or in the pipeline, including much needed affordable housing or senior housing. Unless Alternative 4 already does so (and if it does it should be stated explicitly), at least one

			<p>alternative should consider enacting traffic improvements necessary to allow the additional residential units the City has planned for the Town Center to meet concurrency standards. Among other things, this will allow the community to better facilitate its affordable housing and regional growth goals, as described in the City’s Comprehensive Plan, and respond to the 2016 data stating that one in five Sammamish households is cost-burdened due to housing costs – data that predated potential economic insecurity exacerbated by the COVID-19 pandemic. See STCA comment letter.</p>
8	3-94	<p>“Similarly, these new alternatives assume that half of new multi-family development outside of the Town Center and all new multi-family housing within the Town Center will consist of either affordable housing units or senior housing.”</p>	<p>This should be clarified to more clearly explain whether the assumption is that (1) all the new housing units within Town Center will either be affordable units or senior housing; or (2) all the developments within the Town Center will have an affordable housing or senior housing component. In either case, the DEIS should explain why the assumption is being made, highlighting the basis for the assumption. See STCA comment letter.</p>
9	3-95	<p>“As described in the discussion of housing supply and diversity above, it is not expected that adoption of new LOS standards and concurrency requirements would significantly restrict overall housing supply or impede the development of multi-family housing, which is often more affordable than single-family housing. As previously discussed, improved transportation access to mixed-use centers, including the Town Center, could accelerate development in these areas, promoting the development of more affordable housing types.”</p>	<p>While we agree that improved transportation access to mixed-use centers, including the Town Center, could accelerate development in these areas and promote development of more affordable housing types, it is also clear that setting LOS standards too low or having concurrency requirements that are too stringent will absolutely affect the ability for developers to provide multi-family housing, and consequentially, affordable housing. LOS standards and concurrency requirements must work in concert with improved transportation access to mixed-use centers, such as the Town Center, to facilitate the diverse housing types that will strengthen the Sammamish community.</p>
	Section 3.6.2	Impacts to Plan and Policies	<p>This section should include a separate discussion of impacts to the Town Center Plans and Town Center Subarea.</p>

10	3-104	<p>“Most of this growth [of 885 dwelling units] is anticipated to occur in Town Center.”</p>	<p>In fact, only 386 housing units are in the pipeline (see attached comment letter) and no additional Town Center residential growth is included in the DEIS’s additional growth number of 196 units. See DEIS at 3-122. Thus, under the DEIS’s assumptions, the Town Center would account for only 44% of the what the DEIS considers the “unbuilt portion” of residential growth. As stated in STCA’s comment letter and the Transpo Memo, additional Town Center growth must be included in the EIS’s concurrency analysis.</p>
11	3-104	<p>“Compared to alternatives 1 and 2, alternatives 3 and 4 would promote an increase in diverse housing types, including small single-family, townhouse and duplexes, and affordable and senior citizen multi-family development. See the discussion of housing in Section 3.5 of this EIS.”</p>	<p>Given the local and regional need for diverse housing types, as well as goals set forth in the Growth Management Act, the King County Countywide Planning Policies, and Sammamish Comprehensive Plan, promotion and facilitation of creating diverse housing types should be an emphasis during this process. Though both Alternatives 3 and 4 best promote and facilitate diverse housing types, it appears Alternative 4 would better promote and facilitate these housing types if the improvements are adequate to cover the additional housing planned for the Town Center.</p>
12	3-122	<p>“To calculate 2035 growth beyond permitted development, a long-range forecast of 196 new single-family dwelling units and 462,800 square feet of office and retail space were also added to the 2035 model. The 196 new single-family units were allocated throughout the City of Sammamish, with approximately half of the new units allocated to the north of Sammamish Town Center and half of the new units to the south.”</p>	<p>Why was there no assumption there would be additional multi-family development? Throughout the DEIS, many remarks have been made about supporting diverse housing types, yet the assumption made is that only a single homogenous housing type would be permitted as growth beyond the current 2035 permitted development. See EIS at 3-122. These two approaches seem incongruent.</p>
13	3-122	<p>“A total of 462,800 square feet of office and retail growth was allocated to the Sammamish Town Center subarea with a split of approximately 70% retail, 15% general office,</p>	<p>As a mixed-use area, the Town Center needs both retail growth and residential growth allocations to achieve its development potential and create a healthy supportive environment that maximizes its potential. Nonetheless, the DEIS only allocates commercial growth, ignoring the</p>

		and 15% medical/dental office, similar to Sammamish Village ratios.”	residential potential and benefits offered by the Town Center. The alternatives should allocate additional residential growth assumptions for the Town Center to be reviewed by the community.
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ATTACHMENT B

MEMORANDUM

To: King County Growth Management Council

From: HR&A Advisors, Inc.

Date: May 4, 2021

Re: Comment on the Draft 2021 King County Urban Growth Capacity Report and Countywide Planning Policies

HR&A Advisors, Inc. (HR&A) was engaged by STCA, LLC and STC JV 1 LLC (STCA) to review King County’s draft Urban Growth Capacity Report, the draft growth targets in the Countywide Planning Policies, and related data. HR&A is a nationally active consulting firm with 40 years of experience working on projects at the intersection of economics, public policy, and real estate. Our work throughout the Greater Seattle Area includes developing a funding strategy for ongoing operations and maintenance of new open space along the Central Waterfront, advising a local developer and City north of Seattle on the feasibility and potential economic and fiscal impacts associated with a proposed large-scale development, and most recently, advising on the economics of a proposal to create a lid over portions of I-5 in Downtown Seattle.

STCA had observed that the City of Sammamish’s proposed growth capacity calculations and growth targets were significantly reduced from previous levels and are misaligned with the City’s own Comprehensive Plan as well as with the County’s policy goals. Based on HR&A’s review of countywide development trends, City of Sammamish’s public statements and data, and King County planning documents, we urge King County to closely review the data and rationale behind City of Sammamish’s draft growth capacity figures and growth targets before acceptance. Our assessment found that:

- **The City of Sammamish’s progress toward past growth targets is unclear and requires verification.**
- **Low draft growth capacity targets are driven by large discounts to developable land area and infrastructure capacity limitations that are not clearly explained and may only be temporary.**
- **The currently-proposed growth capacity targets would signal that the City is eliminating capacity for multifamily development in the Town Center – the primary, if not only, location in the city to deliver affordable housing. This approach is misaligned with the City’s Comprehensive Plan and the County’s policy goals and would set a concerning precedent for high-opportunity areas throughout the county.**

The below memorandum summarizes HR&A’s analysis of the market and planning context surrounding development of the draft growth capacity calculations and growth targets and identifies key areas for further consideration and review. Select documents referenced throughout this memorandum are attached for reference.

Introduction

As the Growth Management Planning Council (GMPC) and County team know well, King County’s population and economy have expanded rapidly over the past ten years, fueled by the region’s high quality of life and continually high number of job opportunities, particularly with major tech industry employers. Between 2010 and 2019, King County’s population increased by 16.2%, while the number of jobs in King County grew by just under 29%, amounting to 1.5 million jobs in the county. In the past five years alone, the county’s population increased by 200,000 (9.5%), while adding 100,000 jobs (7%). During this same period, job growth has outpaced the demand for, and delivery of, housing units in the county’s urban cores. Between

2010 and 2019, 199,000 new housing units were delivered in the county, increasing total housing stock by 13.9%. This means that for every new job in King County, only 2/3rds of one housing unit is delivered.

The housing market was reaching a critical point even before the COVID-19 pandemic, but the effects of the pandemic, which are driving a greater number of residents and households out of the urban core, will exacerbate the housing shortage. According to the Seattle Times, 5,750 households left Seattle during the pandemic, the vast majority of which relocated to the east side of King County, increasing housing market pressure in this part of the county. Since the onset of the pandemic, the median home sale price on the east side of King County has increased by 27%, the total number of homes sold has increased by 56%, and the average number of days on the market has decreased by 88%. As the region's communities and economy recover from the pandemic, more opportunities to produce housing and more diverse housing options, rather than less, will be key to enabling further growth and regional strength.

Moreover, the county needs additional affordable housing at all levels, particularly in areas close to job centers and urban cores. All levels of government in Washington State have elevated and are responding to this need. The State has demonstrated a legislative focus on affordable housing as well, with the signing of four bills (SB 5235, HB 1220, SB 5287, and HB1277) in quick succession to address a wide range of issues including: removing arbitrary limits on housing options, providing additional revenue sources for eviction prevention and housing stability services, supporting emergency shelters and housing through local planning and development regulations, and amending affordable housing unit incentives.^{1, 2, 3, 4} These four bills currently await the Governor's signature, but indicate the legislature's focus on fostering more affordable housing and recognition of the impact that the current underproduction of affordable housing is having on the region. The most recently posted draft County Planning Policies indicate a need for more than half a million units at various levels of affordability by 2044.⁵ At the local level, cities throughout the east side are responding by modifying incentive programs and codes to foster and accommodate affordable housing. For example, Bellevue is in the process of modifying its Multi-Family Tax Exemption Program, while Kirkland has enacted a series of tools and legislation to increase the production of affordable housing, including an inclusionary zoning policy, tax exemptions for projects that include 10% to 20% affordable units, and most recently, new missing middle and accessory dwelling unit rules and regulations that make the development and purchase of cottage units more accessible.^{6, 7, 8}

The City of Sammamish's draft growth capacity calculations included in the 2021 King County Urban Growth Capacity Report and the draft growth targets in the Countywide Planning Policies are in opposition to the above-described policy focus and the County's priorities around growth, goals to meet the need for affordable housing, and commitment to bring an equity lens to regional planning. The targets would effectively eliminate the mandate to continue development in line with the creation of a vibrant, mixed-use town center, which is associated with the creation of jobs and diverse housing options and are inconsistent with the City's own Comprehensive Plan.

Analysis of the City of Sammamish's calculated capacity, the County's draft growth targets, and implications for local and regional development are described further below. These capacity calculations and growth targets (as with all jurisdictions') should be carefully examined to ensure that they do not create unwarranted or inappropriate obstacles to much-needed development in high-opportunity areas of King County.

¹ ["Senate Bill ESSB 5235 – Final Bill Report."](#)

² ["House Bill E2SHB 1220 – House Bill Report."](#)

³ ["Senate Bill E2SSB 5287 – Final Bill Report."](#)

⁴ ["House Bill E2SHB 1277 – House Bill Report."](#)

⁵ ["GMPC Approved Public Review Draft – Proposed 2021 Countywide Planning Policies \(March 31, 2021\)."](#)

⁶ ["Kirkland Municipal Code - Chapter 113 – Cottage, Carriage, and Two/Three-Unit Homes."](#)

⁷ ["City of Kirkland Receives 2020 Municipal Champion Award."](#)

⁸ ["Kirkland Municipal Code – Chapter 112 – Affordable Housing Incentives – Multifamily."](#)

City of Sammamish Residential Capacity & Draft Growth Targets

The City's Phase 3 estimates for growth capacity, developed in 2020, reported a residential capacity of 3,288 residential units.⁹ Then, after the Phase 4 "market factor discount" analysis, the April 2021 draft of the King County Urban Growth Capacity Report (the Report) lists the City of Sammamish's residential unit capacity as 1,144 units, with 661 units currently in the pipeline, leaving a net capacity of 483 residential units to be developed in Sammamish over the next 25 years.¹⁰ The 65% reduction between the Phase 3 capacity estimates and the draft Report's stated capacity requires further review before acceptance. The assumptions used to achieve this reduction and key considerations around these are described below.

- **The assumption for residential units delivered between 2006 and 2019 requires clarification and verification.** During a November 2, 2020 City Council meeting, City of Sammamish staff stated that 3,963 units were delivered in Sammamish between 2006 and 2019. We understand that this is based on housing estimates King County derived from data in the Washington State Office of Financial Management's Small Area Estimates, which may vary somewhat from on-the-ground unit counts based on methodology used to project units. These estimates should be verified before acceptance.¹¹

Additionally, there are discrepancies in data from different sources citing the number of units delivered between 2006 and 2018. It appears that the King County has used OFM estimates to arrive at a calculation that 3,585 units were delivered between 2006 and 2018, while the Puget Sound Regional Council's A Regional Coalition for Housing (ARCH) data indicates that 2,353 units were built during this same period, and City staff reported that 2,540 residential units were built from 2006-2018 (with an additional 232 residential unit permits "finalized" in 2019).^{12,13} There is no apparent or clear reason for these discrepancies and our review did not identify public documents in which these different estimates are reconciled.

The City is currently using the OFM estimate of 3,963 units built from 2006 to 2019 to support its current development moratorium.¹⁴ The assumptions behind this number should be verified and the significant discrepancies in the above numbers should be reconciled or explained through review of local permitting data or other sources.

- **The City's discount for right of way and public purpose is high compared to other cities and towns within Sammamish's cohort, and should be closely examined.** After determining land capacity, the City through the "Phase 3" process reduces available land for residential development by the amount of land that makes up critical areas and then reduces this again based on discounts for right of ways and public purpose, a total reduction of 34%.¹⁵ This assumption is consistent with the assumption Sammamish used in the 2007 and 2014 Buildable Lands Studies but is far higher

⁹ City Council Agenda Bill Memo dated October 30, 2020 ("Update to King County Countywide Planning Policies (CPPs) Regional Growth Allocations/Targets"), submitted with November 2, 2020 City Council Meeting Agenda. See *Attachment 1*.

¹⁰ "[2021 King County Urban Growth Capacity Report – Preliminary Draft Appendix](#)," March 31, 2021.

¹¹ City Council Agenda Bill Memo dated October 30, 2020 ("Update to King County Countywide Planning Policies (CPPs) Regional Growth Allocations/Targets"), submitted with November 2, 2020 City Council Meeting Agenda.

¹² [Puget Sound Regional Council Residential Building Permits, 2006-2018](#)

¹³ See Sammamish Growth--Planned v. Actual, from Exh. 1 of City Council Agenda Bill Memo dated March 10, 2020, Town Center Work Program, submitted with March 17, 2020 City Council Meeting Agenda. See *Attachment 2*.

¹⁴ [City of Sammamish Ordinance No. O2021-529](#)

¹⁵ Critical areas are established areas that are protected from development to preserve the natural environment, wildlife habitats, and sources of fresh drinking water. Right of Way and Public Purpose discounts are calculated based on the percent of the gross acreage that is to be developed either for a public purpose (like a plaza, sidewalks, etc.), or will be undevelopable as it is part of the right of way for the parcel.

than the assumptions used by other municipalities in the Cities and Towns group, which range between a 0% and 20% discount. As with the consideration above, the rationale for this assumption should be reviewed closely, as this discount removes over one third of the land that may be eligible for development and included in capacity calculations.

- **The City’s use of growth capacity targets as a ceiling for development is at odds with its own planning decisions.** City officials have openly discussed the potential need to halt all development that exceeds the growth targets. In a presentation made during a City Council meeting on March 9, 2021, City staff included the following consideration: “If we assigned a target of 661 units we would then need to halt development until 2044 and likely be in a moratorium of some kind to stop development...”.¹⁶ The following assumptions, which require further examination, constrict the submitted development capacity and could be used to undermine local commitments to growth. Moreover, the current development moratorium, extended by the City Council on April 20, 2021, explicitly cites the City’s development progress and draft Urban Growth Capacity calculations as evidence of Sammamish’s incapacity to support development.
 - **Minimum allowable density, rather than planned density, is used to calculate land capacity.** The City’s determination of land supply is based on the use of minimum density per zone for all developable areas evaluated (a total of ~738 acres at densities ranging from 1 to 18), rather than using the maximum planned densities (which range from 1 to 40 dwelling units per acre).¹⁷ The rationale for the use of minimum densities should be examined closely, as this does not align with the City’s own planning decisions, which resulted in the planned densities, and adjusting this assumption to rely on planned densities, particularly for mixed-use zones like the Town Center, could drastically increase the City’s capacity for development.
 - **A temporary infrastructure constraint may be used as the basis for long-term limits on residential growth.** The City’s most recent development moratorium cites, among other reasons, a moratorium on certificates of sewer availability adopted by the Sammamish Plateau Water and Sewer District on February 22, 2021.¹⁸ The City appears to be using this same sewer certificate moratorium as a basis for the 65% “Market Factor Discount” on estimated land capacity. This is a 90-day moratorium scheduled to expire on May 24, 2021.¹⁹ This temporary condition should be carefully weighed against the potential to shape planning decisions for the next 25 years. Further, as a matter of transparency, we recommend that the County ask the City to cite the specific factors that led to the 65% Market Factor Discount, and to evaluate whether those factors justify such a significant discount over an extended planning period. To the extent deficiencies in infrastructure are identified as a capacity constraint, the County should ask what actions have been or could be taken to cure those deficiencies and in what time frame.
 - **There is misalignment between the City’s Comprehensive Plan and current growth capacity calculations.** The 2014 Buildable Lands Supply stated that the City’s Town Center “with planned capacity for over 600,000 square feet of commercial development

¹⁶ “King County Countywide Planning Policies Growth Target Discussion – Cities and Towns Regional Geography Caucus.” April 2, 2021

¹⁷ [“Sammamish Municipal Code – Chapter 21A.25 and Chapter 21B.25 Development Standards - Density and Dimensions and Chapter 21B.”](#) March 30, 2021

¹⁸ Memo from D. Pyle, Director of City of Sammamish Department of Community Development, dated March 9, 2021, Table 4 (Draft UGCS Phase IV Results), citing “constraints identified by SPWSD” (Sammamish Plateau Water and Sewer District.). See *Attachment 3*.

¹⁹ [Sammamish Plateau Water and Sewer District, King County, Washington, Resolution No. 5018](#)

and approximately 2,000 housing units” would represent “a large majority of the City’s overall capacity of commercial and residential development.”²⁰ These same numbers are reported in the City’s Comprehensive Plan.²¹ To date, 314 units have been built in the Town Center, with an additional 392 in the pipeline--a total of 706 units.^{22, 23} The draft Report now states there is no residential capacity in the Town Center for additional units for the next 25 years beyond these 706 units that have been built or are in the pipeline. This has particular implications for affordable housing. The City’s Comprehensive Plan states: “Given the cost of single-family housing, and because mixed-use and multifamily housing types are typically more affordable than single-family, detached housing, the City recognizes the importance of having sufficient zoned capacity for multifamily and Town Center mixed-use residential development in order to meet affordability needs.” According to the 2014 Buildable Lands report, the Town Center’s multi-family capacity was 1,742 residential units – representing 99% of the total multi-family capacity of 1,770 units City-wide.²⁴ Vision 2050 notes the importance of locally-designated town centers in Cities and Towns and recommends that they “become priority areas for future investments and growth at the local level.”²⁵ Consistent with this guidance, King County should closely examine what specific factors led the City to reach its conclusions about the significant reductions in total Town Center capacity compared to what was stated in the 2014 Buildable Lands Report.

Relationship to King County Growth & Equity Goals

While the Cities and Towns regional cohort, Sammamish’s cohort, is allocated only 5% of the county’s residential growth, VISION 2050 identifies these jurisdictions as providing “important housing, jobs, commerce, and services in their downtowns and local centers.”²⁶ Moreover, VISION 2050 states that jurisdictions in this cohort that are located within the contiguous urban growth area (as Sammamish is) “should be able to accommodate a larger share of growth due to their proximity to the region’s large cities, existing and planned transportation systems, and other supporting infrastructure.”²⁷ Under the draft Growth Targets, the City would have a target just under 4.3% of the Cities and Towns total growth target, despite its large population for the cohort. Sammamish is a large city for this cohort, with 64,700 residents compared to the average jurisdiction’s population of 10,100 residents. It also has many attributes that make it an important part of the housing ecosystem in King County, so it is imperative that Sammamish prepare to receive an appropriate share of projected growth over the next 20+ years.^{28, 29} Among other things, the Sammamish’s schools rank above average, with school districts ranked as the 4th and 5th best school districts in the state, respectively.³⁰ Additionally, the city offers access to significant open space and natural recreation, including two open space preserves, nine City parks, and easy access to six other County or State nature preserves

²⁰ 2014 King County Buildable Lands Report.

²¹ City of Sammamish Comprehensive Plan. Volume 2, Page LU.8.

²² See Sammamish Growth--Planned v. Actual, from Exh. 1 of City Council Agenda Bill Memo dated March 10, 2020, Town Center Work Program, submitted with March 17, 2020 City Council Meeting Agenda.

²³ See Memo from D. Pyle, Director of City of Sammamish Department of Community Development, dated March 9, 2021, Table 4 (Draft UGCS Phase IV Results), citing “constraints identified by SPWSD” (Sammamish Plateau Water and Sewer District.)

²⁴ “2014 King County Buildable Lands Report.”

²⁵ “VISION 2050.” Puget Sound Regional Council

²⁶ “VISION 2050.” Puget Sound Regional Council

²⁷ “VISION 2050.” Puget Sound Regional Council

²⁸ ACS 5 Year Estimates – 2014-2019

²⁹ “King County Urban Growth Capacity Study – Overview and Next Steps.” April 2020

³⁰ [Niche](#). April 20, 2021

and parks.³¹ Sammamish also has the highest median income in the region, with a median income just over \$174,000, while the county has a median income of \$94,970. Inappropriately constrained residential growth targets in an area that provides a high quality of life is antithetical to the King County Growth Management Planning Council's recent commitment to viewing growth management planning through an equity lens.

Moreover, the City of Sammamish's low residential growth targets are misaligned with the need for affordable housing throughout the county, and particularly on the east side. Over the past decade, the median home value in King County has nearly doubled, rising from \$386,000 in 2010 to \$643,000 in 2019. This trend can be seen in the multifamily market as well, with rents per square foot rising from \$1.66 to \$2.29 in 2019.³² Increasing costs coupled with more moves out of the urban core (as described earlier in this comment) will only increase the need for affordable housing in areas like Sammamish.

The City of Sammamish's Comprehensive Plan indicates that 1,856 affordable housing units – the amount that is required to bring Sammamish in line with the County's affordability standards for new development – will be delivered between 2020 and 2035.³³ According to *Sammamish Home Grown*, only 85 affordable housing units have been delivered since 1998.³⁴ The remaining number of affordable housing units required to complete Sammamish's affordable housing commitment (approximately 1,580 units per OFM Small Area Estimates) exceeds the entire growth target and capacity included in the Report. Sammamish has accounted for less than 1% of the affordable housing produced on the east side of King County between 1998 and 2017, and their current targets set them up to continue this trend.³⁵ This burdens other municipalities in the immediate region to deliver affordable housing at a time when that housing is much-needed and these cities and towns are already working to increase affordable housing in the immediate region and to produce their proportionate share of affordable housing.

Based on the above-described findings, the King County team should carefully review the City of Sammamish's submitted data, growth capacity calculations, and growth targets. More broadly, the County team should consider the implications of allowing one jurisdiction to offload its responsibility for supporting regional growth, before accepting the stated targets, both in terms of meeting its policy goals and its responsibilities under the State Growth Management Act.

³¹ ["City of Sammamish, Parks & Trails."](#) April 2020

³² CoStar

³³ ["Sammamish Comprehensive Plan – Housing."](#) April 2020

³⁴ ["Sammamish Home Grown | A Plan for People, Housing, and Community."](#) April 2020

³⁵ ["Sammamish Home Grown | A Plan for People, Housing, and Community."](#) April 2020

ATTACHMENT 1: City of Sammamish Agenda Bill for November 2, 2020 City Council Regular Meeting

Agenda Bill

City Council Special Meeting

November 02, 2020



SUBJECT: Update to King County Countywide Planning Policies (CPPs) Regional Growth Allocations/Targets

DATE SUBMITTED: October 30, 2020

DEPARTMENT: Community Development

NEEDED FROM COUNCIL: Action Direction Informational

RECOMMENDATION: Following presentation by and Q&A with King County on the County's Urban Growth Capacity Study (UGCS) and updates to the County's Countywide Planning Policies (CPPs) (see November 2, 2020 Special Meeting Agenda Item #5), separately discuss the City's engagement in the regional effort of updating growth allocations/targets and provide direction to staff on further engagement in this regional process.

EXHIBITS: [1. Exhibit 1 - Cities and Towns Geography Caucus Survey](#)








BUDGET:

Total dollar amount N/A

Fund(s) N/A

- Approved in budget
- Budget reallocation required
- No budgetary impact

WORK PLAN FOCUS AREAS:

- | | |
|---|---|
| <input checked="" type="checkbox"/>  Transportation | <input checked="" type="checkbox"/>  Community Safety |
| <input checked="" type="checkbox"/>  Communication & Engagement | <input checked="" type="checkbox"/>  Community Livability |
| <input checked="" type="checkbox"/>  High Performing Government | <input checked="" type="checkbox"/>  Culture & Recreation |
| <input checked="" type="checkbox"/>  Environmental Health & Protection | <input checked="" type="checkbox"/>  Financial Sustainability |

NEEDED FROM COUNCIL:

Discuss the City's engagement in the regional effort of updating growth allocations/targets as part of the County's update of Countywide Planning Policies (CPPs) and provide direction to staff on further engagement in this regional process. How does the Council want staff to proceed in engaging and how does the Council want to receive future updates on this County program?

KEY FACTS AND INFORMATION SUMMARY:

King County has scheduled the next Geography Caucus meeting for the Cities and Towns Geography group to continue discussions amongst the Cities regarding growth allocations/targets for Tuesday November 10 from 10-12 AM. With this in mind, the November 2 meeting is the only/last chance to get the Council together on this topic before staff return to the conversation with the other 18 cities that are part of our Caucus to discuss growth allocation/targets. This agenda item provides a venue for the Council to discuss what was learned from

the King County presentation (see November 2, 2020 Special Meeting Agenda Item #5) and provide direction to staff.

It is important to note that this is a King County process, not a City of Sammamish process. City staff represent the City in the Geography Caucus discussions. A question on the Council's role is included below with the King County response:

CITY COUNCIL QUESTION: Are elected officials be able to enter these caucus meetings & are any other elected officials present at this juncture?

KING COUNTY RESPONSE:As to the question about electeds attending, all previous growth target discussions have been staff-level deliberations, with staff responsible for briefing their city's elected officials and bringing that perspective back to their Regional Geography meetings. This creates a peer-to-peer environment, which we have found levels the playing field and helps to support open communication.....The ultimate venue for elected official participation, review and approval of the Countywide Planning Policies is the Growth Management Planning Council.

Background

Below we have included a very high level and simplified overview of the division of growth forecasted for the Puget Sound, King County, the Cities and Towns Geography group, and finally what this means for **Sammamish**.

NOTE: The data received from King County includes fractional units and fractional percentages. The numbers below are shown as rounded for the purpose of simplicity in reporting. Keep in mind fractional units and fractional percentages makes a difference in the final numbers and must be included in any independent calculations.

1. Start Here – Regional Growth

Vision 2050 Regional Forecast: Growth of ~1,321,674 people between 2019-2044 (*this is how many people are forecasted to move to the Puget Sound region in the next planning horizon of 2019-2044*).

2. Then break down to King County

King County Share of Vision 2050 Forecast (50%): Growth of ~660,837 people between 2019-2044 (*this is how many people PSRC anticipates will move to the King County portion of the region in the next planning horizon of 2019-2044 which is 50% of the regional share*).

3. Then break down to Cities and Towns Geography group

Cities and Towns Geography Category Share of King County Growth (5%): Growth of ~33,307 people between 2019-2044 (*this is how many people King County anticipates moving to areas in the Cities and Towns Geography group and is adjusted for factors such as unit vacancy rates – 5% of the growth in King County is anticipated to take place in areas that are within the Cities and Towns geography group*).

Cities and Towns Geography: The Cities and Towns Geography group is made up of 19 cities with varying attributes. See table below.

4. Then convert from people to housing units

Cities and Towns Housing Units (convert from people to housing units): Growth of ~13,985 housing units between 2019-2044 (*converted based on a per-household rate of 2.75 as assigned by King County*).

UGCS/ CPP Cities and Towns Household Size Used: 2.75 (adjusted Household Size for Cities and Towns Geography).

5. Then break down to Sammamish specifics:

Sammamish PRELIMINARY Land Capacity (reported by King County from Phase 3 of draft UGCS): 3,288 Units (Before application of Market Factor – Market Factor to be added in next and final phase of UGCS).

The following numbers represent three different representations of possible growth for Sammamish from 2019-2044 and are **based on ratios relative to several descriptive statistics that compare how Sammamish fits into the Cities and Towns Geography group** (how Sammamish compares to other Cities as a method to divide growth allocation for Cities and Towns). These numbers do not represent maximum or minimum values for a draft or final growth allocation, these are simply relative numbers as to how Sammamish fits into the Cities and Towns Geography Group (e.g. don't interpret these numbers to be possible growth targets). These number are **not binding** in the growth allocation discussion.

Sammamish High Relative Factor: 4,547 Units between 2019-2044 (a function of Sammamish's share in percentage of land area in the Cities and Towns category – Sammamish makes up the largest area in the Cities and Towns Geography group at 33% - if Sammamish's growth allocation was based in its size respective to other cities in the group, this is what it would be).

Sammamish Average Relative Factor: 3,773 Units between 2019-2044 (a function of the average of statistical factors relative to Sammamish compared to other cities in the Cities and Towns category such as total number of housing units in 2020, ratio compared to past housing unit target, land area, etc. – if Sammamish's growth allocation was based on a compilation of various attributes this is one example of what it could be).

Sammamish Low Relative Factor: 1,743 Units between 2019-2044 (a function of Sammamish's actual **draft** land capacity in units as reported by King County from the Urban Growth Capacity Study as it relates to capacity of other Cities – this is the low number under Sammamish's descriptive statistics and Sammamish has ~12% of the land capacity in the Cities and Towns Geography group – if Sammamish's growth allocation was based on its land capacity relative to other cities in the group, this is what it would be).

6. Other Factors:

Sammamish Housing Units Achieved from 2006-2019: 3,963 Units (reported through OFM Small Area Estimates - Sammamish constitutes 30% of the housing unit growth from 2009-2019 within the Cities and Towns Geography Group).

Total Cities and Towns Geography Group Capacity as reported by King County with Draft Urban Growth Capacity (UGCS): King County reports that there are ~26,381 units available in capacity in the Cities and Towns Geography group (~3,288 units are estimated as available in Sammamish -this is 12% of the capacity across the whole Cities and Towns Geography group).

Cities and Towns Geography: The Cities and Towns Geography group is made up of 19 cities with varying attributes.

Jurisdiction	2020 Existing Housing Units (Reported by OFM)	2006-2035 HU Target (CPP Adopted)	Land Area In Acres	2006-2019 HU Achieved (Reported by OFM)	Initial Draft UGCS HU Capacity (Provided by King County)
Algona	1,060	190	835.88	93	337
Beaux Arts	119	3	52.22	0	2
Black Diamond	2,087	1900	4553.86	185	4,708
Carnation	920	330	644.83	164	488
Clyde Hill	1,099	10	676.78	17	0
Covington	7,185	1470	3869.79	1,632	4,988
Duvall	2,778	1140	1560.42	636	1,768
Enumclaw	5,682	1425	3241.51	486	1,668
Hunts Point	184	1	288.70	3	5
Maple Valley	9,432	1800	3953.71	2,515	1,298
Medina	1,253	19	1111.09	71	54
Milton	735	50	408.48	271	184
Normandy Park	2,881	120	1625.70	82	4,248
North Bend	3,955	665	2831.65	416	2,311
Pacific	2,466	285	1167.96	314	589
Sammamish	22,390	4180	15393.77	3,963	3,288
Skykomish	173	10	212.97	7	54
Snoqualmie	5,024	1615	4613.29	2,168	375
Yarrow Point	422	14	303.28	15	17

Sammamish Household Size Per OFM Data: 3.04 (*this factor is not used but we wanted to include it for your awareness as to how we stack up as compared to the other cities in the Cities and Towns Geography group*).

Next Geography Caucus Meeting Scheduled

The next Cities and Towns Geography Caucus meeting has been scheduled by King County for November 10, 2020 from 10-12 AM. The focus of this meeting will be on discussion of each City's attributes as it relates to growth, including past growth targets and the jobs/housing connection. In anticipation of the upcoming scheduled meeting, King County has prepared a short survey for each jurisdiction to complete with the purpose of promoting though and awareness of relevant factors related to growth. A copy of the survey is included as Exhibit 1.

The City can only complete this survey once and staff would benefit from City Council feedback on the survey questions before we complete the survey and submit it to King County. We do not anticipate discussion on actual Cities and Towns Geography Caucus group growth target setting with this next meeting. Rather, we expect the Caucus will be discussing preliminary capacity numbers (Sammamish makes up 12% of the preliminary capacity in the Caucus group) and each of the community's attributes, strengths, and weaknesses as it relates to growth allocation/targets. Following the November 10 meeting, a third meeting will be held with the Geography Caucus where we anticipate formal discussion on growth allocations/targets will occur (when we will talk about the actual numbers). Further meetings will be held as needed to continue the discussion with the Caucus and finalize growth allocations/targets within the group. This process is likely to continue into the winter months.

Previous Council Discussions

[October 6, 2020 Joint Planning Commission/City Council Meeting](#) - Discussion on Status of King County UGCS and update to King County CPPs.

ATTACHMENT 2: City of Sammamish Agenda Bill for March 17, 2020 City Council Regular Meeting

Agenda Bill

City Council Regular Meeting
March 17, 2020



SUBJECT:	Town Center Work Program	
DATE SUBMITTED:	March 10, 2020	
DEPARTMENT:	Community Development	
NEEDED FROM COUNCIL:	<input type="checkbox"/> Action <input checked="" type="checkbox"/> Direction <input type="checkbox"/> Informational	
RECOMMENDATION:	Direct staff to add Town Center Phase I code updates to the 2020 work program.	
EXHIBITS:	1. Exhibit 1 - City Council Retreat Presentation 2. Exhibit 2 - Town Center QOL Workbook	
BUDGET:		
Total dollar amount	\$150,000 allocated in the 2019-2020 Biennial Budget	<input checked="" type="checkbox"/> Approved in budget
Fund(s)	Economic Development - Prof Svcs-Town Center Consultant (001-058-558-70-41-00)	<input type="checkbox"/> Budget reallocation required <input type="checkbox"/> No budgetary impact
WORK PLAN FOCUS AREAS:		
<input type="checkbox"/> Transportation	<input type="checkbox"/> Community Safety	
<input type="checkbox"/> Communication & Engagement	<input checked="" type="checkbox"/> Community Livability	
<input type="checkbox"/> High Performing Government	<input type="checkbox"/> Culture & Recreation	
<input type="checkbox"/> Environmental Health & Protection	<input type="checkbox"/> Financial Sustainability	

KEY FACTS AND INFORMATION SUMMARY:

Summary Statement

In response to Council’s request for a discussion on the Town Center regulations during the January 25, 2020 City Council Retreat, staff presented (Exhibit 1) the following four options related to Town Center for consideration:

Table 1:

Option	Description	Cost	Timeline	Additional Work Needed
1	Rewrite of the Town Center Sub-Area Plan and Development regulations	\$500,000 - \$700,000	4-5 years	New FEIS Required
2	Revise planning policies/goals for areas not docketed	\$300,000 - \$500,000	2-years	Addendum to the FEIS Required
3	Revise planning policies/goals and related regulations for docketed areas including Urban Forest Canopy, Green Spine, Public Transportation, Regional Stormwater, Solar Generation, and Public Right of Way Design Standards	Currently budgeted	18-months	Standard non-project SEPA
4	Revise Sammamish Municipal Code (SMC) regulations related to docketed areas	Currently budgeted	12-months	Standard non-project SEPA

Staff distributed a workbook (Exhibit 2) at the Retreat to assist each Councilmember in performing a gap analysis. Following the retreat, staff requested further feedback from Council on their preferred option to assist in finalizing the 2020 work program.

The feedback received from Councilmembers was helpful for understanding individual perspectives, but there did not appear to be clear direction on a desired path forward. In lieu of further individual work on the gap analysis workbook, staff received a request to schedule this topic for discussion among the full Council.

Without knowing the full Council's direction, staff's feeling is that there is interest in making immediate changes to the Town Center regulations codified in Chapter 21B SMC and in ensuring that the code is properly directing the implementation of the Town Center Vision. It is also staff's feeling that there is substantial Council interest in further work on Town Center policy and regulations beyond a code update effort.

In response, staff are proposing a three-phased approach that incorporates options 2-4 identified in Table 1 to adequately address potential updates to Town Center policy and regulations. The justification for this phased process is due to the timing constraints on work that has not been docketed*. (See Docketed* explanation below).

- Council can update the Town Center code (development regulations) at any time; however those updates must conform to adopted policy.
- Council can update the Comprehensive Plan policies that have been formally docketed. Policies not on the docket must be added and can be updated the year after they are docketed.

For this reason the phased approach outlined below provides not only an immediate opportunity for action through targeted code changes, but it also provides a strategic process to get underway with policy changes, including the potential to docket further policy changes that are not already included on the docket.

Phase 1 – Code Changes

The scope of work for Phase 1 includes identifying areas within the Town Center Development Code (Chapter 21B SMC) that can be immediately amended in a manner that ensures existing Town Center

policies and goals are being implemented appropriately through code. To help assist in this effort, staff would examine public and staff review comments from past and current Town Center development proposals to help understand the issues within the Code. This is similar to the effort that yielded the changes made to the City's R-Zone development regulations in 2019. This phase of work is already budgeted and would begin this summer with anticipated adoption in early 2021.

Phase 2 – Currently Docketed Policy/Regulation Changes

The scope of work for Phase 2 would be at the City Council's discretion but limited to those items that have already been docketed (refer to option 3 in Table 1 above). This work includes:

- reviewing existing policy;
- completing a policy-to-code gap analysis;
- overseeing an extensive public engagement process; and
- seeing proposed amendments to planning policies and implementing regulations through the legislative process.

The approximate timeline would be 18 months starting in the fall of 2020 and concluding in early 2022. The budget to complete this work is dependent on the final scope of work directed by the City Council and may require a budget request for Council's consideration of the 2021-2022 biennial budget.

Phase 3 – Non-Docketed Policy/Regulation Changes

The scope of work for Phase 3 includes amendments to existing policy or creation of new policy and amendments to associated regulations that the City Council was interested in bringing forward with Phase 1 or Phase 2 but were not docketed in 2019 (refer to option 2 in Table 1 above). This work includes:

- a review of existing policies and goals;
- identification of areas of deficiency not completed during Phase 2;
- taking proposed amendments or additions through the City's docketing process;
- amending the Town Center Final EIS;
- overseeing an extensive public engagement process; and
- seeing the proposed amendments through the legislative process.

The approximate timeline would be 24 months starting in 2021 and concluding in early 2023. As with Phase 2, the budget to complete this work is dependent on the final scope of work directed by the City Council and may require a budget request for Council's consideration of the 2021-2022 biennial budget. Phase 3 would include any work found necessary by the Council as part of Phase 1 or Phase 2 but that is outside of the scope of work for either of those phases.

*Docketed:

Under [State Law](#) the City may amend the Comprehensive Plan no more than once per year. The City's annual [Comprehensive Plan Amendment Docket](#) is the City's official policy amendment work plan. This work plan includes items formally queued up for review by the City Council under [SMC 24A.10.010](#). The Docket is cumulative and includes carryover items from years past; unless deliberately removed by the Council an item added to the Docket remains on the Docket. Once on the Docket, the Council may direct staff to proceed with legislative review of a specific item, however it must be added to the City's work plan. That is, an item added to the Docket through the Docket process does not automatically get

added to the Council's work plan due to budget and schedule constraints. The Council need not re-docket an item that was added in years past unless that item was formally removed by the Council or that item was acted upon by passing of Ordinance amending the Comprehensive Plan. The [Town Center](#) Quality of Life [Amendments](#) that were docketed under Resolution [R2018-811](#) remain docketed and are available for activation by the Council. For this reason the Council may move forward with specific amendments topics already docketed, however new topics proposed to be added for consideration must be added following the formal docket process outlined in [SMC 24A.10](#).

Direction Needed

Does the Council agree that this phased method of updating Town Center policies and regulations is appropriate?

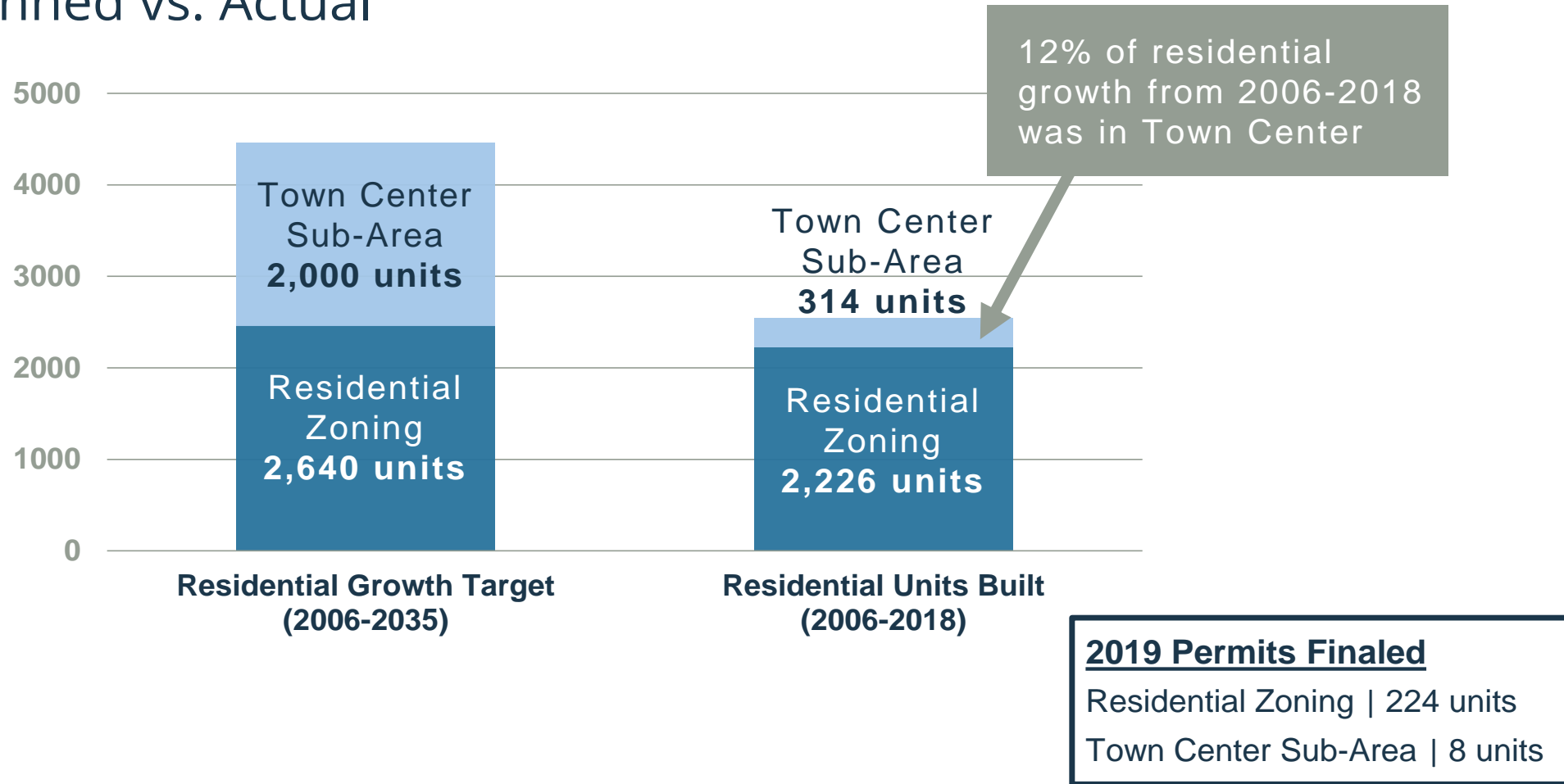
RELATED CITY GOALS, POLICIES, AND MASTER PLANS:

[Town Center Plan](#)

[Chapter 21B SMC - Town Center Development Regulations](#)

Sammamish Growth

Planned vs. Actual



ATTACHMENT 3: City of Sammamish Agenda Bill for March 16, 2021 City Council Regular Meeting

Agenda Bill
City Council Regular Meeting
March 16, 2021



SUBJECT:	King County Countywide Planning Policies (CPP) Cities and Towns Caucus Growth Target														
DATE SUBMITTED:	March 12, 2021														
DEPARTMENT:	Community Development														
NEEDED FROM COUNCIL:	<input type="checkbox"/> Action <input checked="" type="checkbox"/> Direction <input type="checkbox"/> Informational														
RECOMMENDATION:	Discuss revising the City's current (March 10, 2021) position on the City's growth target in the King County Countywide Planning Policies Cities and Towns Regional Geography Caucus. Provide direction to staff.														
EXHIBITS:	1. Exhibit 1 -March 9 CPP Caucus Growth Target Position Memo														
BUDGET:	<table border="0"> <tr> <td>Total dollar amount</td> <td>N/A</td> <td><input type="checkbox"/></td> <td>Approved in budget</td> </tr> <tr> <td>Fund(s)</td> <td>N/A</td> <td><input type="checkbox"/></td> <td>Budget reallocation required</td> </tr> <tr> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td>No budgetary impact</td> </tr> </table>			Total dollar amount	N/A	<input type="checkbox"/>	Approved in budget	Fund(s)	N/A	<input type="checkbox"/>	Budget reallocation required			<input checked="" type="checkbox"/>	No budgetary impact
Total dollar amount	N/A	<input type="checkbox"/>	Approved in budget												
Fund(s)	N/A	<input type="checkbox"/>	Budget reallocation required												
		<input checked="" type="checkbox"/>	No budgetary impact												
WORK PLAN FOCUS AREAS:	<table border="0"> <tr> <td><input type="checkbox"/> Transportation</td> <td><input type="checkbox"/> Community Safety</td> </tr> <tr> <td><input type="checkbox"/> Communication & Engagement</td> <td><input checked="" type="checkbox"/> Community Livability</td> </tr> <tr> <td><input type="checkbox"/> High Performing Government</td> <td><input type="checkbox"/> Culture & Recreation</td> </tr> <tr> <td><input type="checkbox"/> Environmental Health & Protection</td> <td><input type="checkbox"/> Financial Sustainability</td> </tr> </table>			<input type="checkbox"/> Transportation	<input type="checkbox"/> Community Safety	<input type="checkbox"/> Communication & Engagement	<input checked="" type="checkbox"/> Community Livability	<input type="checkbox"/> High Performing Government	<input type="checkbox"/> Culture & Recreation	<input type="checkbox"/> Environmental Health & Protection	<input type="checkbox"/> Financial Sustainability				
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<input type="checkbox"/> Environmental Health & Protection	<input type="checkbox"/> Financial Sustainability														

NEEDED FROM COUNCIL:

Should the Council direct staff to adjust the City's current (March 10, 2021) growth target position in the King County Countywide Planning Policies Cities and Towns Regional Geography Caucus?

KEY FACTS AND INFORMATION SUMMARY:

During the March 9, 2021 City Council Study Session staff received direction on the City's growth target position for the March 10, 2021 King County Countywide Planning Policies Cities and Towns Regional Geography Caucus meeting. Staff attended the meeting and presented the position outlined in the March 9, 2021 position memo included as **Exhibit 1**.

The position presented included:
Housing Units: 885 (661 "pipeline" + 224 "new through 2044" = 885 housing units)
Jobs: 305 (304 "pipeline" + one "new through 2044" = 305 jobs)

The position was affirmed and accepted as reasonable and was not further discussed. Based on growth target positions presented by a majority of the members of the Cities and Towns Caucus group, the group's housing unit target of 13,985 (5% of the King County share of the region's growth) will be exceeded/surpassed by a few thousand units. King County representatives asked if any of the member cities were interested in revising their targets to reduce the number of units. Following the meeting a summary communication was sent to the City Council and identified that the Caucus anticipates an overrun of the 13,985 unit allocation by several thousand units (based on preliminary numbers and still missing smaller city positions). Should the Council wish to amend/adjust the City's growth target position, additional direction to staff would be needed, including justification for that adjustment. Unless we request an adjustment, our position (growth target numbers) as outlined in the attached memo (**Exhibit 1**) are the numbers that have been provided to the Caucus and currently stands as what King County is including as Sammamish's King County Countywide Planning Policy Growth Target to be used by King County in the next phase of their CPP update process.

QUESTION: Does the City Council wish to amend/adjust the City's King County Countywide Planning Policy Growth Target position within the Cities and Towns Caucus?

REFINEMENT: If yes, what is an appropriate growth target position for the City and what is the rationale?

There is some leeway in the King County CPP growth target vs. the City's Comp Plan target. If the gap is too great, it is problematic in attaining certification of the Comp Plan. For example, if we lower our CPP target due to sewer constraints, road constraints, school constraints, and also due to pipeline project uncertainty, and over the next three years (the next major City Comp Plan Update is due for completion in 2024) additional capacity is unlocked if interim sewer capacity measures/solutions are identified, EIS and ensuing actions/investments results in added road capacity, schools receive funding to build new schools, etc., and we identify that as part of the Comp Plan we need to plan for more units than we have in our CPP target (e.g. expectations regarding development have changed), so long as the difference is not extreme (e.g. more than 200 or 300 units), certification should not be a problem. However, if Sammamish's King County CPP growth target is too low, and the 2024 City Comp Plan housing and jobs target ends up resulting in a larger gap (due to information/changes in the years leading up to the 2024 major City Comp Plan update), the King County CPP target may need to be amended upward to account for the discrepancy which results in a much more complicated process. The target we set now is important to our actions later as part of the 2024 City major Comp Plan update. The optimal position is one that is as closely aligned to capacity as possible while considering infrastructure limitations.

Issues for Consideration:

Issue #1: We cannot erase or delete housing or job pipeline units (661 housing units and 304 jobs in pipeline from 2019 forward) and must account for them in our 2019-2044 King County CPP target. However, there is uncertainty as to if these units will all actually be built, if they are not and projects are cancelled, we will still retain the number in the growth target (if a project is cancelled the number is not automatically reduced to reflect the project being removed).

Issue #2: We have 885 housing units remaining in our last (2006-2035) KC CPP target.

Issue #3: We cannot set a target that is less than our pipeline for jobs or housing (661 housing units and 304 jobs).

Issue #4: We should not set a target of zero new housing units (excluding the 661 pipeline units) when our future development capacity for housing units shown in the UGCS is 483 housing units (UGCS capacity of 1,144 minus 661 pipeline = 483) and natural growth will continue. We estimate ~646 vacant parcels *outside* of sewer constrained areas. While many of these parcels were removed as part of the UGCS due to ownership, constraints, or other factors, many of them are still considered to be developable with one new single-family residence. It would not be unrealistic to expect that many of these parcels *could* be built on with new single-family residences as “natural growth” (e.g. one new home on one existing new lot) over the next 25 years (through 2044). These are vacant residential lots that are not subject to the SPWSD moratorium, not subject to school concurrency, and not subject to the traffic concurrency moratorium. Outside of zoning controls, critical areas, and development regulations, there is nothing stopping them from being built on.

Issue #5: We can set a target of one (1) new job (excluding the 304 pipeline jobs) as our future development capacity for jobs shown in the UGCS is one new job.

Issue #6: If road, sewer, or school infrastructure capacity is added at some level in next planning horizon it will be harder to update the comprehensive plan and may require modifying the City’s CPP target if is set too low (e.g. zero). Planning for minimal baseline/natural growth that more closely matches new development capacity and pipeline units is more realistic.

Issue # 7: Outside interests.

Issue #8: We will be going through this process again in ~eight years. Additional information on the Comprehensive Plan Periodic Update Process is available at [MRSC](#). The City needs to address the infrastructure service constraints and issues during the next planning horizon and intends to use the upcoming planning period to lay a stronger foundation for future growth by working with partners to address sewer/wastewater, road, and school infrastructure gaps. This will be reflected in the periodic update to the Comprehensive Plan and is reflected in the requested growth targets. While the target is for a planning horizon of 2019-2044, we will have opportunity to assess this again in ~8 years.



Department of Community Development

801 228th Avenue SE ■ Sammamish, WA 98075 ■ phone: 425-295-0500 ■ fax: 295-295-0600 ■ web: www.sammamish.us

To: Dave Rudat, City Manager

From: David Pyle, Director, Department of Community Development

Date: March 9, 2021

Re: March 10, 2021 King County Countywide Planning Policies (CPP) Cities and Towns Geography Caucus Growth Target Discussion – Housing and Jobs Growth Targets

At the upcoming King County March 10, 2021 Cities and Towns Geography Caucus meeting City staff representatives will be asked to present their position on proposed housing and job growth targets. In anticipation of this meeting, and following City Council discussion and direction during the March 2, 2021 Sammamish City Council meeting, staff have continued with the final stages (Phase IV) of the King County Urban Growth Capacity Study (UGCS) and have weighed the City's draft UGCS final land capacity with the objectives of growth target setting. This memo outlines our findings and presents a possible position for Sammamish at the March 10, 2021 Caucus meeting.

Data Points For Consideration:

1) Draft UGCS Housing and Job Capacity Results:

- a. Housing Capacity:** 1,144 housing units (from UGCS Phase IV Draft Final Capacity Report sent to King County on 03/09/2021 - see **Table 4** below)
 - i. Pipeline Capacity:** 661 housing units
 - ii. New Development Capacity:** 483 housing units
- b. Jobs:** 305 jobs (from UGCS Phase IV Draft Final Capacity Report sent to King County on 03/09/2021 - see **Table 4** below)
 - i. Pipeline Capacity:** 304 jobs
 - ii. New Development Capacity:** One (1) Job

Description: This is the City's draft Final Capacity for housing units reported from the UGCS. This number includes "pipeline units" (see #3 and #5 below) and has been adjusted to reflect the sewer capacity constraints reported by SPWSD. The draft UGCS Final Capacity roll-up report is included as **Table 4** below. Based on the UGCS formulas and methodology, if the City's UGCS report is accepted by King County (we send them our final "draft" and the County reviews) then King County would consider Sammamish to have 1,144 units of capacity for housing and capacity for 305 jobs. These numbers are baselines for regional planning. This includes 483 units of development capacity as well as 661 "pipeline units" for a total of 1,144 units of housing capacity. This also includes 304 "pipeline jobs" and one (1) job from development capacity for a total of 305 jobs. This report is baselined in 2019 data. Please see **Table 4** below.

2) Previous CPP Growth Target Remaining Housing Units: 885

Page 1 of 4

March 10, 2021 King County Countywide Planning Policies (CPP) Cities and Towns Geography Caucus Growth Target Discussion
King County CPP Housing and Jobs Growth Targets

Description: This is the number of housing units that remain from the 2006-2035 previously adopted King County CPP growth target as of 2019. It is important to note that in the arena of growth target goal setting for King County CPP updates, what is most important is understanding and using data that is used by King County. That is, to best understand how a possible King County CPP growth target might measure up against past growth performance on a King County level, we need to use the same data used by King County. So, to understand 1) What the City's past King County CPP assigned growth target was, and 2) How many units remain in this past King County CPP growth target, we engaged King County directly to ask them (as opposed to City staff attempting to calculate how many units King County considers as remaining) - we felt it best to ask King County directly to provide this number to the City. In response to this inquiry, we met with King County following their pulling data. In 2019 King County has reported to the City that the City has completed 3,963 housing units from the 2035 adjusted target of 4,849 housing units with 885 (or 886 depending on how you round decimals) units remaining in the 2035 growth target as of 2019.

3) Pipeline Housing Units In-Process: 661 Housing Units (see Table 4)

- a. **Town Center Housing Units:** There are 392 pipeline housing units in Town Center
- b. **Residential District Housing Units:** There are 269 pipeline housing units in the R-Districts

Description: This is the number of units that are currently in process in some phase of entitlement or construction (or even complete and occupied) as of 2019. See draft UGCS roll-up report included as **Table 4** below. These units are included in the UGCS report and will be counted as part of the City's progress towards the 2044 housing unit target. We cannot arbitrarily erase or delete these units from the UGCS report as these projects are all at some point in entitlement or construction.

4) New Units – Pipeline Units vs. Previous CPP Target Remainder: There is a difference of 224 new units between the previous CPP target remainder (885) and pipeline units in process (661).

Description: This is the difference between the balance of the past housing target (885 remaining units – see item #2 above) and the pipeline units (661 – see #3 above). That is, this is the number of units that would be the *effective* new target if the City received a CPP target of 885 units for 2019-2044 (Calculation: #2 [885] minus #3 [661] = #4 [224]). This is because there are already units in the pipeline that we cannot erase; these pipeline units will likely be built by end of 2024 (at least in part and we cannot delete these units), and the 224 new units (beyond the 661 pipeline units) would be the effective target for 2044. Under this premise, and assuming the 661 are built by ~2024, we would have an effective target of 224 between ~2025 and 2044, or around 11 or 12 units per year between 2025 and 2044. Under this scenario, the City's King County CPP target for 2019-2044 would be 885 units, of these there are 661 in the pipeline and 224 would be "new". It is also important to note that if any of the 661 pipeline units fail to reach construction and end up being removed from the list of pipeline projects, we would still retain the number of units in our growth target. For example, if the 154 units from the R-4 zone (see **Table 4**) were for some reason to not be built and expired due to delay or inactivity, then we would still have a target of 885 units. In this sense, even though we need to count the pipeline units and cannot arbitrarily remove the pipeline units from consideration; if our target includes these units and they later disappear we are still required to account for them in meeting our target over the planning cycle.

5) New Pipeline Jobs: The UGCS Final Capacity Study is reporting 305 new jobs in the pipeline (see **Table 4**).

- a. **Job Capacity from Development:** There is one (1) job reported as capacity from development.
- b. **Town Center Jobs:** There are 222 TC jobs in the pipeline in Town Center.
- c. **Residential District Jobs:** There are 83 jobs in the pipeline in the R-Districts (new school that is under construction).

(NOTE: Jobs are rounded in the UGCS causing the difference in math of 304 vs. 305.)

Description: This is the number of jobs that are reported from the UGCS Final Capacity report and includes one (1) job from development capacity and 305 jobs currently in process in some phase of entitlement or construction as of 2019. See draft UGCS roll-up report included as **Table 4** below. Under this scenario, the City's King County CPP target for 2019-2044 would be 305 jobs, of these there are 304 in the pipeline and one (1) would be "new". It is also important to note that if any of the 304 pipeline jobs fail to reach construction and end up being removed from the list of pipeline projects, we would still retain the number of jobs in our growth target. For example, if the 222 jobs from the TC-A1 zone (see **Table 4**) were for some reason to not be built due to complications with the project, then we would still have a target of 305 jobs. In this sense, even though we need to count the pipeline jobs and cannot arbitrarily remove the pipeline jobs from consideration; if our target includes these jobs and they later disappear we are still required to account for them in meeting our target over the planning cycle.

Issues for Consideration:

Issue #1: We cannot erase or delete housing or job pipeline units (661 housing units and 304 jobs in pipeline from 2019 forward) and must account for them in our 2019-2044 King County CPP target.

Issue #2: We have 885 housing units remaining in our last (2006-2035) CPP target; requesting less than 885 would be a retroactive adjustment to the last assignment and would be cancelling a prior regional commitment.

Issue #3: We cannot set a target that is less than our pipeline for jobs or housing (661 housing units and 304 jobs).

Issue #4: We cannot set a target of zero new housing units (excluding the 661 pipeline units) when our future development capacity for housing units shown in the UGCS is 483 housing units (UGCS capacity of 1,144 minus 661 pipeline = 483) and natural growth will continue.

Issue #5: We can set a target of one (1) new job (excluding the 304 pipeline jobs) as our future development capacity for jobs shown in the UGCS is one new job.

Issue #6: If road, sewer, or school infrastructure capacity is added at some level in next planning horizon it will be harder to update the comprehensive plan and may require modifying the City's CPP target if is set too low (e.g. zero). Planning for minimal baseline growth that matches new development capacity and pipeline units is more realistic.

Issue # 7: Outside interests.

Cities and Towns Geography Caucus Growth Target Discussions:

- 1) **CURRENT INITIAL POSITION:** February 23, 2021 Sammamish Initial Preliminary Targets (proposed at February 23, 2021 King County Cities and Towns Geography Caucus meeting):
 - a. **Housing Units:** 885
 - b. **Jobs:** 10

- 2) **PROPOSED POSITION:** March 10, 2021 Sammamish Preliminary Targets (proposed position for March 10, 2021 King County Cities and Towns Geography Caucus meeting):
 - a. **Housing Units:** 885 (661 "pipeline" + 224 "new through 2044" = 885 housing units)
 - b. **Jobs:** 305 (304 "pipeline" + one "new through 2044" = 305 jobs)

TABLE 4: Draft UGCS Phase IV Results – Final Capacity (Includes constraints identified by SPWSD)

Table 4: Final Capacity						
Residential Capacity						
Zone	Zone Type	Initial Capacity	Existing Dwelling Units on Redevelopable Parcels	Development in the Pipeline	Final Residential Capacity (Dwelling Units)	Final Employment Capacity
Name of the Zone	SFR/MR/MU	From Table 2	From Table 2	From Phase 2	= Column C + Column E - Column D	= Column F / Column G
R-1	SFR	15	3	0	12	0
R-4	SFR	422	139	154	437	0
R-6	SFR	116	22	88	182	0
R-8	SFR	14	138	27	40	0
R-12	MFR	33	138	0	0	0
R-18	MFR	194	1,230	0	0	0
C-A1	MU	0	0	348	348	0
C-A2	MU	0	0	0	0	0
C-A3	MU	0	0	0	0	0
C-A4	MU	0	0	0	0	0
C-A5	MU	0	0	24	24	0
C-D	MFR	0	0	30	20	0
C-D	MFR	0	0	0	0	0
C-E	SFR	0	0	0	0	0
C-E	SFR	6	0	0	6	0
Neighborhood Business	MU	0	0	0	0	0
Community Business	MU	76	0	0	76	0
Development in the Pipelines		0	0			0
TOTAL		873	1,533	661	1,144	0
Non-Residential Capacity						
Zone	Zone Type	Initial Capacity	Existing Construction on Redevelopable Parcels	Development in the Pipeline	Final Employment Capacity (Square Feet)	Final Employment Capacity (Jobs)
Name of the Zone	Ind/Comm/MU	From Table 2	From Table 2	From Phase 2	= Column C + Column E - Column D	= Column F / Column G
TC-A1	MU	0	0	82,000	82,000	222
TC-A2	MU	0	0	-	0	0
TC-A3	MU	0	0	-	0	0
TC-A4	MU	0	0	-	0	0
TC-A5	MU	0	0	-	0	0
TC-B	MU	0	0	-	0	0
TC-C	MFR	0	0	-	0	0
TC-D	MU	0	0	-	0	0
TC-E	SFR	0	0	-	0	0
Office	MU	6,698	20,006	-	13,308	0
Neighborhood Business	MU	0	0	-	0	0
Community Business	MU	1,004	9,211	-	438	1
Res/School		0	0	83,266	83,266	83
Development in the Pipelines		0	0	0	0	0
TOTAL		16,747	29,617	167,266	154,396	305

Negative capacity; unlikely new development with less commercial square footage will occur

Negative capacity; unlikely redevelopment with less units will occur

ATTACHMENT C

MEMORANDUM

Date: November 21, 2017 **TG:** 15020.00

To: STCA, LLC

From: Kevin L. Jones, P.E., PTOE – Transpo Group

Subject: Public Hearing for Emergency Ordinance O2017-445 – Development Moratorium

I plan to enter the following comments into the record at the November 21, 2017 public hearing.

My name is Kevin Jones and I'm a Principal at Transpo Group. My address is 12131 113th Avenue NE, Suite 203 in Kirkland. I'm here on behalf of STCA to offer support for removing the Town Center UZDPs and related approvals from the moratorium. My reasoning is twofold.

First, exempting UZDPs would allow planning to continue but due to the length of the UZDP review and approval process, and additional time required to obtain construction permits, new Town Center development will not generate any traffic for at least a year. Second, Town Center development will help address some of the traffic issues at the city's perimeter due to an existing imbalance in land use. I'll spend the balance of my remarks on this second point.

To the extent there's a traffic issue in Sammamish, it's largely caused by the fact that so many Sammamish residents must travel outside the city for jobs and services. Town Center development will help in four (4) specific ways. *First* and perhaps most important, new commercial development will intercept existing trips traveling outside the city. This will reduce traffic demand at the city's perimeter. *Second*, new multi-family development will attract workers who have no choice but to live outside the city due to limited affordable housing options. This will also reduce demand at the perimeter. *Third*, the mix and scale of development will better support investments in transit service from King County Metro. This will affect travel modes and reduce single-occupancy vehicle traffic. *Finally*, much of the new trip generation will be *internal* to the Town Center due to linked trips between different land uses. This is repeatedly demonstrated by existing multi-use development.

The fact that nearly all roads lead to a few key intersections north and south of the city complicates matters. In fact, most of the identified "problem intersections" are located outside the city: SR 202/East Lake Sammamish Parkway, SR 202/Sahalee Way, Issaquah-Fall City Road/Issaquah-Pine Lake Road, and Issaquah-Fall City Road/East Lake Sammamish Parkway. No moratorium on development or change to the concurrency program will address existing traffic conditions at these key intersections. However, Town Center development can.

Recent concurrency testing has shown that city intersections meet LOS standards during the PM peak hour and this is undisputed. In contrast, the AM peak hour has generated much debate. I encourage the Council to take a closer look at the facts and specifically, traffic counts at 40 city intersections collected just last spring. In most cases, PM peak hour traffic volumes exceed AM peak hour volumes and consequently, many city intersections likely meet LOS standards during the AM peak hour as well.

Therefore, given that most "problem intersections" are located outside the city and intersections within the city meet or likely meet LOS standards during the peak hours, an emergency moratorium seems misplaced. Considering this information, I encourage you to consider lifting the moratorium and if not, at a minimum, exempting UZDPs and related permits and approvals in the Town Center sub-area. Thank you.

MEMORANDUM

Date: May 15, 2018 **TG:** 15020.00

To: Mayor Malchow and Sammamish City Councilmembers

From: Kevin L. Jones, P.E., PTOE – Transpo Group

cc: City Manager Howard and City Clerk Anderson

Subject: Comprehensive Plan Transportation Element Update

By way of introduction, I'm a Principal at Transpo Group USA, a local traffic engineering and transportation planning consulting firm. I'm also a licensed Professional Engineer (P.E.) in Washington State, certified Professional Traffic Operations Engineer (PTOE), and member of the Institute of Transportation Engineers (ITE) with over 20 years of consulting experience. I prepared this memo in response to specific comments expressed at the May 1st City Council meeting. Those comments focused on (1) model reliability and (2) cohesiveness of the updated Comprehensive Plan.

For many months now, City Council has been committed to a two-step process, beginning with an interim concurrency update by July followed by a more comprehensive and longer-range Transportation Master Plan (TMP) by the middle of next year. At the May 1st City Council meeting, comments were expressed with respect to observed delay at a couple of the 43 concurrency intersections and how this delay compares to estimated modeled delays in Background Table T-5. On this issue, I would like to offer a few points.

1. It is not at all unusual for estimated modeled delay to differ from what can be observed on any given day. This is because this estimate represents a weighted average of the worst 15-minute period on the day existing peak hour traffic counts were collected and therefore, will not necessarily mirror what can be observed on any given day.
2. It is quite normal that there could be a few intersections where delays initially estimated by the model appear noticeably different than observed delays. The ordinary and well-accepted way to proceed when such discrepancies are identified is not to abandon the model but to take a closer look at those intersections and as necessary, make appropriate adjustments. In most cases, that process will bring the estimated modeled delay much closer to what can be generally observed. The intersection of Sahalee Way and NE 36th Street is a prime example and I believe further review and adjustments will determine less average delay than originally reported.
3. If there are still concerns after adjustments are made, it may be reasonable to measure existing delay in the field and compare it to estimated modeled delay to verify that those calculations are close to the measurements. It certainly would not be necessary, nor customary, to compare measured and estimated modeled delay at all 43 concurrency intersections to verify that the model is sufficiently reliable. A handful of intersections would be sufficient.

I would also emphasize that none of these efforts require deviation from the concurrency update schedule nor do they require the City to extend the existing moratorium beyond July. Any adjustments to the model can be done in the normal course, likely in a matter of weeks, as the City moves forward with its Comprehensive Plan update and Code modifications as scheduled. Moreover, starting over at this point would increase future costs well above the approximate

\$376,000 already spent on consulting fees for the concurrency update, as identified in Exhibit 1 of the Comprehensive Plan Agenda Bill.

Comments were also expressed at the May 1st City Council meeting that roadway segment volume-to-capacity analysis has not been removed from the section of the Comprehensive Plan addressing the 20-year time horizon, as it has for the 6-year time horizon relevant for concurrency testing. While I understand this may seem inconsistent, this should not be an obstacle to moving forward as proposed by City staff. Given the sequencing of the updates, there will be a short period of time when the 20-year analysis in the Comprehensive Plan is not updated, but that is a very temporary situation. The TMP will address these longer-term projections and 20-year time horizon. It is important to note that in the meantime, this will have no adverse consequence on concurrency testing which looks solely at the 6-year time horizon.

I look forward to summarizing the key points of this memo during the public comment period at tonight's City Council meeting.

KLJ/



MEMORANDUM

Date:	June 4, 2018	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	City Manager Howard and City Clerk Anderson		
Subject:	Transportation Concurrency and Responses to Recent Misinformation		

By way of introduction, I'm a Principal at Transpo Group USA, a local traffic engineering and transportation planning consulting firm. I'm also a licensed Professional Engineer (P.E.) in Washington State, certified Professional Traffic Operations Engineer (PTOE), and member of the Institute of Transportation Engineers (ITE) with over 20 years of consulting experience. I prepared this memo in response to recent misinformation that others have shared with respect to the new concurrency model. I am referring primarily to three of the claims you may have read in the *Sammamish Comment* on May 21 and May 22, 2018.

1. 2012 and 2016 Modeled Traffic. It's been stated that the model used to estimate existing delay at Sammamish intersections is flawed because it shows delay "improved" (i.e., decreased) "all over the city" when comparing 2012 and 2016 modeled conditions. This statement is not correct. While there's evidence that estimated delay at certain intersections decreased when the City updated 2012 weekday PM peak hour traffic volumes with newer 2016 traffic volumes, there's also evidence that estimated delay at several other intersections increased¹. These mixed results are not unusual or indicative of a flawed model. Given something as dynamic as peak hour traffic volumes and, in at least one example, changes in intersection traffic control, it's not unusual or surprising that even as average weekday daily traffic (AWDT) volumes increased approximately 2% per year, on average², estimated average delays during the peak 15-minute period of the peak hour might improve at some intersections and worsen at others. **Such results are in no way an indication of a flawed model.**

2. Traffic Congestion. Others have recently claimed that the existing development moratorium was enacted because the "concurrency system was rigged to never fail by ignoring congestion" and that the new model doesn't analyze congestion. Both statements are false. The City's original Moratorium Ordinance (No. O2017-445) in no way even implies that the prior concurrency model was rigged. The Ordinance simply states that the Council was "concerned about transportation concurrency...and related traffic impacts." It's also false to suggest that the revised model developed over the last several months doesn't consider congestion. Motorists experience congestion when traffic volumes approach the effective capacity of an intersection. The City's model forecasts future intersection volumes and where those volumes are equal to or, in some extreme cases, exceed the intersection's capacity, future congestion can be predicted and analyzed accordingly. In this way, **the model can forecast future traffic congestion at concurrency intersections.**

3. Model's 97% Accuracy. The model calibration plot presented at the May 15, 2018 City Council meeting showed "97 percent accuracy" between actual measured traffic counts and existing traffic

¹ This statement is based on the tracked changes version of Background Table T-5 (2016 Intersection LOS – AM and PM Peak Hour) in the *Draft Sammamish Comprehensive Plan Update* dated April 2018.

² This statement is based on the tracked changes version of Background Table T-2 (2016 Average Weekday Daily Traffic Volumes) in the *Draft Sammamish Comprehensive Plan Update* dated April 2018. This table also demonstrates that AWDT volumes on roadways with more than 20,000 AWDT decreased by 1% per year, on average; AWDT volumes on roadways with more than 10,000 AWDT and less than 20,000 AWDT increased by 1% per year, on average; and AWDT volumes on roadways with less than 10,000 AWDT increased by 4% per year, on average.

volumes estimated by the model. In response to this impressive result, some are trying to claim that it does not pertain to existing traffic conditions. Nothing could be further from the truth. The model calibration plot compares over 150 existing peak hour traffic counts and estimated peak hour volumes from the model and demonstrates that the model is, in the words of the City's traffic modeler (Josh Anderson of David Evans & Associates), "extremely well calibrated." Based on my experience and professional judgment, the City Council is fortunate to have such a well calibrated model and should have **great confidence in the ability of the model to forecast future peak hour traffic volumes for concurrency testing purposes.**

I look forward to summarizing the key points of this memo during the public comment period at tomorrow's City Council meeting.

KLJ/

MEMORANDUM

Date:	September 18, 2018	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	Interim City Manager Patterson and City Clerk Anderson		
Subject:	Transportation Concurrency Misconceptions		

By way of introduction, I'm a Principal at Transpo Group USA, a local traffic engineering and transportation planning consulting firm. I'm also a licensed Professional Engineer (P.E.) in Washington State, certified Professional Traffic Operations Engineer (PTOE), and member of the Institute of Transportation Engineers (ITE) with over 20 years of consulting experience. I prepared this memo to shed some light on a couple misconceptions I've heard expressed at recent City Council meetings, namely:

- Misconception No. 1: Relying on an intersection-only approach to measure transportation concurrency (as embodied in "Option 4") is insufficient and warrants the addition of road-segment capacity analyses; and
- Misconception No. 2: New development and its associated vehicle traffic has created an "emergency" because of increased congestion (e.g., travel times) for Sammamish motorists, particularly during the weekday commuting hours.

Concurrency Test

With respect to the first misconception, the intersection-only approach, also referred to as "Option 4" in recent meetings, is not only sufficient for the purposes of transportation concurrency testing but it's scope is more rigorous and comprehensive than any other city or county in Washington State. If adopted by Council, "Option 4" will essentially mean that, depending on the intersection and traffic control, motorists cannot experience more than 25 to 55 seconds of average delay throughout the entire day, including the 15-minute period of greatest traffic demand on weekday mornings and late afternoons. This standard would apply to 43 intersections throughout Sammamish and where such a standard would be unachievable with three approach lanes per direction, the average delay threshold would be set at 80 seconds or less. This allowance would only apply to a handful of select intersections.

This is unprecedented in and of itself, whether the concurrency test is supplemented with road-segment capacity analyses (e.g., volume-to-capacity [V/C] comparison) or not. Moreover, with the scope of an intersection-only approach so thorough in terms of the number of intersections, time periods, and level of service (LOS) standards, it is far more likely than not that an intersection would be forecast to exceed the established LOS standards well before any nearby roadway segment would exceed such standard. Consequently, there is very little value in supplementing "Option 4" to include V/C analyses, whether it's a few select road segments, certain roadway classifications, or all roadways throughout Sammamish.

Travel Times

The second common misconception is that travel times have created an “emergency” by steadily increasing over the last several years in conjunction with, and as a directly result of, new residential and commercial development in Sammamish. This simply is not the case. There’s been no correlation between recent development activity in the City and travel times. In fact, based on recent INRIX travel time data recorded on Tuesdays, Wednesdays and Thursdays during the same 3-month period in the spring of 2015 through 2018:

- Maximum travel times from Sammamish City Hall to the nearest SR 520 and I-90 interchanges have fluctuated by **no more than a minute** between 7 and 8 a.m.; and
- Maximum travel times from the nearest SR 520 and I-90 interchanges to Sammamish City Hall have fluctuated by **less than a minute** between 4:45 and 5:45 p.m.

These one-hour time periods reflect the periods selected by Council for future transportation concurrency testing and generally represent the time periods of greatest traffic demand at Sammamish intersections during the weekday morning and late afternoon hours. The consistency in these travel times demonstrate that **new development activity within the last four years has had no appreciable effect on travel times**. Any suggestion otherwise is not corroborated by the data.

I look forward to summarizing the key points of this memo during the public hearing at this evening’s City Council meeting.

KLJ/

MEMORANDUM

Date:	October 16, 2018	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	Interim City Manager Patterson and City Clerk Anderson		
Subject:	Roadway Segment Capacity and Level of Service Analysis Options		

I've shared my credentials in other memos but as a reminder, I'm a Principal at Transpo Group USA, a local traffic engineering and transportation planning consulting firm. I'm also a licensed Professional Engineer (P.E.) in Washington State, certified Professional Traffic Operations Engineer (PTOE), and member of the Institute of Transportation Engineers (ITE) with over 20 years of consulting experience.

I've reviewed the October 16, 2018 Agenda Bill and its attached volume-to-capacity (V/C) summary table along with pertinent chapters of the *Highway Capacity Manual* (HCM, 2016) and *Quality/Level of Service (Q/LOS) Handbook* (Florida Department of Transportation [FDOT], 2013). I prepared this memo to share **three reasons why the City Council should not use the roadway LOS methodologies in the HCM and FDOT Handbook. Both should be rejected and instead, I recommend you focus future transportation concurrency testing on intersections only.**

The first reason Council should not use the Highway Capacity Manual or Florida DOT methodologies is that they do not consider roadway conditions unique to Sammamish and instead, rely on general and unverified assumptions that fail to adequately consider the specific characteristics of the City's roadways. Secondly, and likely for this reason, the information in the HCM and Florida DOT documents is unreliable and underestimates the actual capacity of Sammamish's principal and minor arterials alike. The third reason is that the methodologies in both documents are for general planning purposes only and by their own admission, provide only a "ballpark" estimate of roadway level of service; this is not the rigor necessary for transportation concurrency testing.

These reasons are expanded upon below.

1. Methodologies in the HCM and FDOT Handbook fail to consider local conditions.

The **HCM methodology** relies on generalized service volumes based on just two variables (number of lanes and posted speed limit) and several very general assumptions. For example, it's assumed that all facilities are 2 miles in length without raised medians and without right-turn lanes. It assumes through traffic represents 80% of all approach traffic at signalized intersections, spaced every 1,050 feet or 1,500 feet depending on the posted speed limit, and no other type of traffic control exists. There are more but these assumptions are very technical and focus on signal timing/phasing, peaking characteristics and the base saturation flow rate. Many of these conditions do not apply to the various arterials in Sammamish. This is in stark contrast to the intersection LOS approach which includes significantly more location-specific variables and far fewer assumptions.

Similarly, the **FDOT methodology** relies on generalized service volumes "developed based on the definitions and methodology of the HCM" (FDOT Handbook, Page 128). I agree with what I've heard expressed by Deputy Mayor Moran. It's difficult to understand the applicability of these methodologies to Sammamish. The FDOT Handbook states, "FDOT personnel conducted numerous traffic and signalization studies and developed values to reflect typical conditions in Florida. Daily and directional

data were derived from FDOT’s continuous traffic count stations throughout Florida. Signal timing data were obtained from analyses of traffic signal timings in Miami, Tampa, Tallahassee, Gainesville, DeLand, and Lake City” (Page 128).

While the generalized service volumes in the FDOT Handbook are based on a few more variables than the HCM methodology, the methodology still “makes extensive use of default values” (Page 127)—i.e., presupposes one set of general roadway conditions for all arterials in Sammamish. No effort has been made to modify these default values based on actual conditions, as was done with the intersection LOS approach Council has already adopted.

2. The generalized service volumes in the HCM and FDOT Handbook are unreliable and underestimate the capacity of Sammamish roadways.

Attached to the October 16, 2018 Agenda Bill was a table summarizing existing (2016) peak hour directional traffic volumes and roadway characteristics for principal and minor arterials in Sammamish. What are described as “capacities” in this table are really the maximum generalized service volumes for level of service (LOS) E. Roadways with existing volumes exceeding these maximums are defined as LOS F, whether exceeding the maximum by 1% or in some cases, by more than 110%. This table implies that as many as 6 roadway corridors and 27 directional segments currently operate at LOS F¹. This is not a credible finding and reflects an underestimate of actual capacity, defined as the maximum number of vehicles that can traverse a segment of roadway in a one-hour period under prevailing conditions.

For example, if the “generalized service volumes” for LOS E are treated as “capacities,”² then albeit impossible, existing peak hour directional traffic counts at 7 different arterials exceed the “capacity” of these roadways by 20% or more, including segments of:

- East Lake Sammamish Parkway NE
- NE Inglewood Hill Road
- Sahalee Way NE
- 228th Avenue SE
- Issaquah-Pine Lake Road SE
- SE Issaquah-Fall City Road
- SE Duthie Hill Road

This does not match reality because in much the same way that a one-gallon container can hold up to one gallon of milk and not anything more (let alone 1.2 gallons or more), it is both mathematically and physically impossible for existing traffic volumes to exceed the carrying capacity of the roadway. This strongly suggests an underestimation of the capacity of the above arterials and calls into question the reliability of the generalized service volumes for this application. It’s far more likely and credible that the methodology in the HCM and FDOT Handbook is underestimating the maximum service volume and by extension, the roadway capacity of many, and potentially all, principal and minor arterials in Sammamish.

3. Using methodologies in the HCM or FDOT Handbook for concurrency purposes is without merit and will invite challenge.

The HCM’s generalized service volumes are summarized in Chapter 16, Urban Street Facilities, Exhibit 16-16 (Page 16-30). This same page states that the information in this exhibit “**should not be used to analyze any specific urban street facility**” and is useful “as a **first pass** to determine

¹ Council should keep in mind that this information is limited to existing conditions and does not include a six-year forecast. Future conditions would be more informative when deciding LOS standards for concurrency and its effect on necessary improvements in the City’s Transportation Improvement Program (TIP).

² This assumption is not specifically addressed in the HCM but is supported by the FDOT Handbook as it states, “Many of the LOS E service volumes in the hourly directional tables also represent the capacity of the roadway” (Page 129).



where problems exist or arise, or in **determining where improvements might be needed.**" (Emphasis added.)

Determining whether a proposed development meets Sammamish's transportation concurrency standards is not a "first pass" analysis. It must be much more definitive and defensible. If a Certificate of Transportation Concurrency is denied, it cannot be because a corridor or roadway segment, based on a "first pass" analysis, may need to be improved. Such a consequential determination demands greater certainty, not the type of conjecture or speculation that would result if the HCM or FDOT values are used in Sammamish.

This is echoed in the FDOT Handbook. The Generalized Service Volume Tables are introduced in Chapter 11, Generalized Planning Analysis and on Page 127 it states, "Generalized planning is a broad type of planning application that includes statewide analyses, initial problem identification, and future year analyses. Generalized planning is **applicable when the desire is for a quick, "in the ballpark" estimate of LOS.**" (Emphasis added.) Again, when Sammamish evaluates a proposed development and determines if a Certificate of Transportation Concurrency should be approved or denied, it should not be a quick, "first pass," "in the ballpark" estimate. It should be far more rigorous and defensible like the methodology used to evaluate intersection LOS.

I hope the City Council finds the information in this memo helpful. I recommend that you reject both roadway LOS methodologies for the reasons described and consider evaluating transportation concurrency based on an intersection-only approach. This approach is (1) very thorough in terms of the number of intersections, time periods and LOS standards, (2) more reflective of local conditions, and (3) much more reliable than using either the HCM or FDOT methodologies to establish roadway capacity and roadway LOS for purposes of evaluating transportation concurrency.

KLJ/

MEMORANDUM

Date:	November 13, 2018	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	Interim City Manager Patterson and City Clerk Anderson		
Subject:	Roadway Corridor and Segment Capacities, and Level of Service Standard Options		

I've shared my credentials in other memos but as a reminder, I'm a Principal at Transpo Group USA, a local traffic engineering and transportation planning consulting firm. I'm also a licensed Professional Engineer (P.E.) in Washington State, certified Professional Traffic Operations Engineer (PTOE), and member of the Institute of Transportation Engineers (ITE) with over 20 years of traffic engineering and transportation planning consulting experience.

I've reviewed the October 16, 2018 Agenda Bill and its attached volume-to-capacity (V/C) summary table, the November 13, 2018 Agenda Bill and its attached V/C summary tables, and pertinent chapters of the *Highway Capacity Manual* (HCM, 2016) and *Quality/Level of Service (Q/LOS) Handbook* (Florida Department of Transportation [FDOT], 2013). I prepared this memo to share **several reasons why the City Council should not use the roadway LOS methodologies in the HCM and FDOT Handbook. Both should be rejected and instead, I recommend focusing future transportation concurrency testing on intersections only.**

Executive Summary

Summarized below are the many reasons supporting my recommendation to not use any of the roadway LOS methodologies considered to-date.

1. The Highway Capacity Manual and Florida DOT methodologies do not consider roadway conditions unique to Sammamish and instead, rely on general and unverified assumptions that fail to adequately consider the specific characteristics of the City's roadways.
2. The information in the HCM and Florida DOT documents is unreliable and underestimates the actual capacity of Sammamish's principal and minor arterials alike.
3. Methodologies in both documents are for general planning purposes only and by their own admission, provide a "ballpark" estimate of roadway LOS; this is not the rigor necessary for transportation concurrency testing.
4. City staff and consultant team have identified many shortcomings in using the HCM and Florida DOT methodologies for concurrency testing in Sammamish. These professional perspectives should be strongly considered and should cause the Council to hold off on imposing any roadway LOS standards until the Transportation Master Plan (TMP) process when the City will have the benefit of more information as well as a full and robust public participation process.
5. Despite the compelling reasons otherwise, if the Council decides to establish new roadway LOS standards on an interim basis, I recommend setting a 1.50 V/C threshold for roadway corridors and a 1.85 V/C threshold for segments.

6. Setting an admittedly deficient standard using HCM or “HCM Plus” capacity estimates would set unrealistic LOS expectations and would be inconsistent with the Growth Management Act’s concurrency regulations regarding land use planning/policies and the need to balance priorities.

The six reasons summarized above are expanded upon in the pages that follow.

1. Methodologies in the HCM and FDOT Handbook fail to consider local conditions.

The **HCM methodology** relies on generalized service volumes based on just two variables (number of lanes and posted speed limit) and several very general assumptions. For example, it’s assumed that all facilities are 2 miles in length without raised medians and without right-turn lanes. It assumes through traffic represents 80% of all approach traffic at signalized intersections, spaced every 1,050 feet or 1,500 feet depending on the posted speed limit, and no other type of traffic control exists. There are more but these assumptions are very technical and focus on signal timing/phasing, peaking characteristics and the base saturation flow rate. Many of these conditions do not apply to the various arterials in Sammamish. This is in stark contrast to the intersection LOS approach which includes significantly more location-specific variables and far fewer assumptions.

The more recently evaluated “**HCM Plus**” methodology takes this gross methodology and marginally increases or decreases capacity estimates based on the existence of left-/right-turn lanes and/or medians. While rational, it does not reconcile the HCM methodology’s fundamental shortcomings when it comes to realistically estimating roadway capacity. This is evidenced by the number of segments where existing (2016) directional peak hour traffic volumes exceed the “HCM Plus” capacity estimate, some by more than 30%. This is discussed more on Page 3 of this memo.

Similarly, the **FDOT methodology** relies on generalized service volumes “developed based on the definitions and methodology of the HCM” (FDOT Handbook, Page 128). I agree with what I’ve heard expressed by Deputy Mayor Moran. It’s difficult to understand the applicability of these methodologies to Sammamish. The FDOT Handbook states, “FDOT personnel conducted numerous traffic and signalization studies and developed values to reflect typical conditions in Florida. Daily and directional data were derived from FDOT’s continuous traffic count stations throughout Florida. Signal timing data were obtained from analyses of traffic signal timings in Miami, Tampa, Tallahassee, Gainesville, DeLand, and Lake City” (Page 128).

While the generalized service volumes in the FDOT Handbook are based on a few more variables than the HCM methodology, the methodology still “makes extensive use of default values” (Page 127)—i.e., presupposes one set of general roadway conditions for all arterials in Sammamish.

2. The generalized service volumes in the HCM and FDOT Handbook are unreliable and underestimate the capacity of Sammamish roadways.

Attached to the October 16, 2018 Agenda Bill was a table summarizing existing (2016) peak hour directional traffic volumes and roadway characteristics for principal and minor arterials in Sammamish. What are described as “capacities” in this table are really the “maximum generalized service volumes” for level of service (LOS) E. Roadways with existing volumes exceeding these maximums are then defined as LOS F, whether exceeding the maximum by 1% or in some cases, by more than 110%. This table implies that as many as 6 roadway corridors and 27 directional segments currently operate at LOS F. This is not a credible finding and reflects an underestimate of actual capacity, defined as the maximum number of vehicles that can traverse a segment of roadway in a one-hour period under prevailing conditions.



For example, if the “generalized service volumes” for LOS E are treated as “capacities,” then albeit infeasible, 2016 peak hour directional traffic counts at 7 different arterials exceed the capacity of these roadways by 20% or more, including segments of:

- East Lake Sammamish Parkway NE
- NE Inglewood Hill Road
- Sahalee Way NE
- 228th Avenue SE
- Issaquah-Pine Lake Road SE
- SE Issaquah-Fall City Road
- SE Duthie Hill Road

This does not match reality because in much the same way that a one-gallon container can hold up to one gallon of liquid and not anything more (let alone 1.2 gallons or more), it is both mathematically and physically impossible for existing traffic volumes to exceed the carrying capacity of the roadway. This strongly suggests an underestimation of the capacity of the above arterials and calls into question the reliability of the generalized service volumes for this application. It's far more likely and credible that the methodology in the HCM and FDOT Handbook is underestimating the maximum service volume and by extension, the roadway capacity of many, and potentially all, principal and minor arterials in Sammamish.

Many shortcomings were acknowledged at the October 22, 2018 City Council Special Study Session regarding use of HCM generalized service volumes for estimating capacities. In response, the V/C summary tables attached to the November 13, 2018 Agenda Bill include “HCM Plus” capacities. These capacities are HCM-based estimates that City staff and consultant team have, at the Council’s direction, increased or decreased based on existing turn lanes and/or medians. (It’s worth noting that the estimated capacity for 18 different roadway segments were unadjusted and reflect the original HCM capacity estimates.) What’s important to understand is that marginally increasing or decreasing the original capacity estimates does not fundamentally reconcile the repeated underestimation of roadway capacity. In fact, existing peak hour directional traffic counts at 4 different arterials exceed the “HCM Plus” capacity estimate of these roadways by more than 30%, including segments of:

- East Lake Sammamish Parkway NE
- Sahalee Way NE
- Issaquah-Pine Lake Road SE
- SE Issaquah-Fall City Road

Replacing the original HCM capacity estimate with an “HCM Plus” estimate does not remedy this issue and continues to underscore how unreliable the generalized service volumes are in the HCM, however modified, when applied to concurrency testing in Sammamish.

3. Using methodologies in the HCM or FDOT Handbook for concurrency purposes is without merit.

The HCM’s generalized service volumes are summarized in Chapter 16, Urban Street Facilities, Exhibit 16-16 (Page 16-30). This same page states that the information in this exhibit “**should not be used to analyze any specific urban street facility**” and is useful “as a **first pass** to determine where problems exist or arise, or in **determining where improvements might be needed.**” (Emphasis added.)

Determining whether a proposed development meets Sammamish’s transportation concurrency standards is not a “first pass” analysis. It must be much more definitive and defensible. If a Certificate of Transportation Concurrency is denied, it cannot be because a corridor or roadway segment, based on a “first pass” analysis, may need to be improved. Such a consequential determination demands greater certainty, not the type of conjecture or speculation that would result if the HCM or FDOT values are used in Sammamish.



This is echoed in the FDOT Handbook. The Generalized Service Volume Tables are introduced in Chapter 11, Generalized Planning Analysis and on Page 127 it states, “Generalized planning is a broad type of planning application that includes statewide analyses, initial problem identification, and future year analyses. Generalized planning is **applicable when the desire is for a quick, “in the ballpark” estimate of LOS.**” (Emphasis added.) Again, when Sammamish evaluates a proposed development and determines if a Certificate of Transportation Concurrency should be approved or denied, it should *not* be a quick, “first pass,” “in the ballpark” estimate. It should be far more rigorous and defensible like the methodology used to evaluate intersection LOS.

4. The most responsible decision the Council can make is to follow the recommendation of City staff and consultant team and not use roadway LOS analysis for concurrency testing.

I attended the October 22, 2018 City Council Special Study Session and given all the discussion, it was clear that City staff and consultant team recommended either using roadway V/C information (1) as a data point for purposes of the future TMP rather than as a concurrency standard or, should the Council decide to adopt a new roadway V/C standard now, (2) only as a placeholder with a sufficient cushion to account for the extremely gross nature of the roadway capacity estimates. It's important to acknowledge that the analysis completed by City staff and consultant team can still be used for other, productive purposes beyond transportation concurrency. It's not necessarily “all or nothing” and there's still time to reject the HCM and Florida DOT methodologies for transportation concurrency testing in Sammamish.

5. If the Council adopts a roadway LOS standard despite the compelling reasons otherwise, I recommend setting a 1.50 V/C threshold for corridors and a 1.85 V/C threshold for segments.

It is my understanding that some Councilmembers have expressed an interest in a V/C standard for two reasons—first, as a better indicator of “driver experience” and second, as a backstop to the intersection LOS standard. Given the uncertainties in the data and particularly, the “capacity” estimates, a roadway LOS standard will not serve either purpose. If, nevertheless, the Council chooses to move forward with a V/C standard based on incomplete and/or inaccurate information in advance of the TMP, I recommend no lower than a 1.50 V/C threshold for corridors and no lower than a 1.85 V/C threshold for segments.

This recommendation relies on information in the existing (2016) V/C summary table attached to the November 13, 2018 Agenda Bill as well as the Council discussion at the October 22, 2018 Special Study Session. This table shows V/C ratios for segments as high as 1.43 based on 2016 traffic counts. Recognizing that the information in this table is limited to 2016 conditions and does not reflect any potential increase in traffic volumes in 2017 and 2018, does not consider increases in traffic attributable to background traffic and approved development activity in the pipeline, and most importantly, relies on highly questionable capacity estimates, it would be prudent to set V/C thresholds above existing V/C ratios. For these reasons, I recommend a 1.85 V/C threshold for segments because this represents a reasonable (approx. 30%) increase. Setting a lower threshold would either (1) establish an existing deficiency the City would need to address by way of updating its Transportation Improvement Program (TIP) or (2) set the threshold just above 2016 conditions such that, as acknowledged in the November 9, 2018 Fehr & Peers memo, it is likely the first new development tested would not meet concurrency standards.

At the October 22, 2018 City Council Special Study Session, all Councilmembers expressed support for setting the V/C threshold for segments higher than the V/C threshold for corridors and agreed to exclude the entirety of East Lake Sammamish Parkway NE/SE. All advocated that the segment V/C threshold should be 20 to 25% higher than the corridor V/C threshold. For that reason and to be consistent with the Council's policy perspective, I recommend setting a 1.50 V/C threshold for corridors and a 1.85 V/C threshold for corridors as this represents a 20 to 25% increase.

6. Setting a V/C threshold based on grossly underestimated roadway capacity contradicts how cities should establish appropriate concurrency LOS standards as described in the WAC.

WAC 365-196-840(3)(c) of the GMA's implementing regulations states, "Counties and cities should set level of service to reflect **realistic expectations consistent with the achievement of growth aims**. Setting levels of service too high could, under some regulatory strategies, result in no growth. As a deliberate policy, this would be contrary to the act." (Emphasis added.) Potentially denying development because projected traffic volumes would exceed an unrealistically and/or erroneously low estimate of roadway capacity could be considered a deliberate decision by the Council to stop growth and any realistic ability for Sammamish to achieve the growth aims set forth in the land use plan and policies of its Comprehensive Plan.

In addition, WAC 365-196-840(3)(e) states, "The level of service standards adopted by the county or city should vary based on the urban or rural character of the surrounding area and should be consistent with the land use plan and policies. The county or city should also balance the desired community character, funding capacity, and traveler expectations when adopting levels of service for transportation facilities." It appears the Council is considering a V/C standard without access to key information about how the corridors and segments would function with the growth anticipated under the Sammamish Comprehensive Plan between now and 2035. Without such information—and without more realistic estimates of existing capacities—the Council is unable to address the critical question of whether any V/C standard is "consistent with [the City's] land use plan and policies."

Moreover, recent Council deliberations appear to show an imbalance, placing nearly all attention on "driver experience" without considering the effects on community character and perhaps more importantly, ability to realistically fund such improvements. Setting a concurrency LOS standard and methodology that requires constructing additional travel lanes to remedy a "failure" as the only possibility doesn't properly consider whether such improvements are desirable let alone financial feasible.

Should the Council move forward with a roadway V/C standard for concurrency testing, it's imperative that you're mindful of the WAC and make sure any capacity estimate is appropriate. In fact, the term "capacity" or "capacities" is used nearly 20 times in WAC 365-196-840(5)(c) when describing concurrency regulations and features in designing a concurrency management system. This underscores the importance of having confidence in the assumptions and information used to develop a capacity estimate before trying to establish a V/C standard. City staff and consultant team have acknowledged that they do not currently have confidence in the capacity estimates that would support even an interim V/C standard.

I hope the City Council finds the information in this memo helpful. I recommend that you reject both roadway LOS methodologies for the reasons described and consider evaluating transportation concurrency based on an intersection-only approach. This approach is (1) very thorough in terms of the number of intersections, time periods and LOS standards, (2) more reflective of local conditions, and (3) much more reliable than using either the HCM or FDOT methodologies to establish roadway capacity and roadway LOS for purposes of evaluating transportation concurrency.

KLJ/

MEMORANDUM

Date:	January 15, 2019	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	Interim City Manager Patterson and City Clerk Anderson		
Subject:	Transportation Concurrency and Level of Service Interim Development Regulations		

I'm submitting this memorandum into the record as part of the January 15, 2019 Public Hearing associated with City of Sammamish Ordinance O2018-477. This ordinance adds road segments and corridors to the City's existing transportation concurrency program and sets a volume-to-capacity (V/C) standard of 1.10 or less for roadway corridors and 1.40 or less for roadway segments.

As you know, the City's estimates of roadway capacity largely rely on a methodology in the Highway Capacity Manual (HCM). As I explained in my November 13, 2018 memorandum, the HCM methodology relies on generalized service volumes based on just two variables (number of lanes and posted speed limit) and several very general assumptions. At Council direction, City staff and consultant team have modified these service volumes to try and account for existing turn lanes, medians, flashing yellow arrows, and Intelligent Transportation System (ITS) technologies. However, these modifications do not overcome two (2) major defects in the City's V/C standards.

1. The roadway capacity estimates in the Interim Development Regulations grossly underestimate existing capacity, including that of Sahalee Way NE.

These adjustments do not adequately reconcile the HCM methodology's fundamental shortcomings when it comes to realistically estimating roadway capacity in Sammamish. This is evidenced in Exhibits 1 and 2 of the November 20, 2018 Agenda Bill and specifically, by the number of segments where existing directional peak hour traffic volumes exceed the "2016 HCM Mod." capacity estimates on East Lake Sammamish Parkway NE/SE, Issaquah-Pine Lake Road SE, Sahalee Way NE, SE Duthie Hill Road, and SE Issaquah-Fall City Road, several by more than 30% and one segment by more than 75%. This is not credible and reflects a gross underestimate of actual capacity, defined as the maximum number of hourly vehicles traversing a roadway segment under prevailing conditions.

Estimates of roadway capacity should be much more tailored and consider not only existing roadway and intersection conditions but also existing directional traffic volumes. Otherwise, the capacities included in Ordinance O2018-477 set unrealistic level of service (LOS) expectations and are inconsistent with the Growth Management Act's concurrency regulations regarding land use planning/policies and the need to balance such priorities.

2. The City's V/C standards for roadway corridors and segments are largely arbitrary.

While City Council appears to acknowledge the likelihood of underestimated capacity by setting V/C thresholds greater than 1.0, there appears to have been little or no rigor in assessing the appropriate margins or thresholds by roadway segment or corridor. Council adopted V/C standards of 1.10 or less for corridors and 1.40 or less for segments without making any effort to determine why these standards are more appropriate than what was recommended otherwise.

My review of the record as well as Council's deliberations indicates that the established standards were essentially guesswork or perhaps "reverse engineered" to achieve a desired result based on forecasted volumes and in many cases, underestimated capacities. The adopted V/C thresholds certainly do not reflect any recommendation from City staff or consultant team about what the appropriate margin should be based on the acknowledged uncertainties in the capacity estimates. You may recall that at the October 22, 2018 City Council Special Study Session, TSI Principal Victor Salemann recommended variable V/C thresholds depending on the unique characteristics of the City's various roadway corridors and segments. Instead, Council has imposed uniform V/C thresholds for corridors and segments alike, failing to recognize the unique character of, for example, the Sahalee Way NE corridor which, like East Lake Sammamish Parkway NE and unlike most other roadways in the City, is directly affected by congested conditions on SR 202 north of Sammamish.

In my November 13, 2018 memorandum, I recommended greater margins than 1.10 and 1.40 V/C based on all the available information, including existing (2016) directional traffic volumes and recognizing these volumes were collected over two years ago and does not consider increases in traffic attributable to background traffic and approved development activity in the pipeline. Unless roadway V/C standards are revised to be more tailored and variable, I urge the Council to reconsider the V/C thresholds described in Ordinance O2018-477 and instead, set a V/C standard of 1.50 or less for corridors and a V/C standard of 1.85 or less for segments. Additional support for this recommendation is provided in my November 13, 2018 memorandum.

KLJ/

MEMORANDUM

Date:	March 7, 2019	TG:	15020.00
To:	Chairman Baughman and Sammamish Planning Commissioners		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	Interim City Manager Patterson		
Subject:	Transportation Concurrency and Level of Service Interim Development Regulations		

As you know, the Sammamish City Council adopted a significant expansion of its concurrency program last September. With that change, the City went from testing 23 intersections during the weekday PM peak hour only, to testing 43 intersections during the AM and PM peak hours. This represented a near quadrupling in the extent of intersection concurrency testing.¹ In November, for reasons that remain unclear, a slight majority of the City Council decided to go even further. It adopted on an interim basis a concurrency program that tests not only 43 intersections during the AM and PM peak hours, but also an additional 22 roadway corridors and 70 roadway segments throughout the City during both the AM and PM peak hours, with a maximum volume-to-capacity (“V/C”) standard of 1.1 for corridors and 1.4 for segments.² The Ordinance before the Planning Commission would make those corridor and segment standards a permanent part of the City’s concurrency program.

I want to cover two areas in this memo. First, I will note the key flaws in the corridor and segment V/C standards. Second, I will offer some recommendations for how the Planning Commission might remedy these flaws while still serving the public’s interest in an effective transportation system. For greater context, attached are two other memos I prepared for the City Council on this topic, one dated November 13, 2018 and the other dated January 15, 2019.

Key Flaws in the Interim V/C Standards

Before addressing the flaws in the V/C standards, it is important to note that the decision to adopt these V/C standards was a decision of the City Council alone. To my knowledge, at no point in time did City staff or its consultants recommend that the City Council go beyond the intersection standards in September and adopt this vast additional layer of testing of corridors and segments. This is not surprising to me because, in my professional judgment, the V/C standards suffer from two glaring flaws. I will identify and then briefly expand on these flaws before turning to my recommendations.

¹ In other words, the City went from testing 23 intersections during PM peak hour conditions (a total of 23 tests) to testing 43 intersections during AM *and* PM peak hour conditions (a total of 86 tests).

² To be clear, this means a total of 184 individual V/C tests because the 92 directional corridors and segments are tested during AM *and* PM peak hour conditions. This combined with the 86 intersections tests means the City’s concurrency program now involves 270 “mini-tests,” every one of which must pass before a concurrency certificate can be issued.

1. The Capacity Numbers in the Ordinance are a Significant Underestimate of True Capacity.

A V/C standard is a measurement of volume (“V”) to capacity (“C”). A 1.1 V/C standard means the projected volume along any road corridor cannot be more than 1.1 times its capacity. For such a standard to work properly and fairly, the capacity number must be accurate. A reasonably accurate capacity number is the foundation of any rational V/C test. The first glaring flaw in the Ordinance is that it uses capacity numbers that are not accurate. They are significantly less than actual capacity. Simply put, these corridors and segments have the capacity to handle far more vehicles at reasonable speeds than the table in the Ordinance would indicate. I have discussed this point at length in my prior memos. Rather than repeating those points, I would direct you to those memos.

I would note that neither City staff nor its consultants have seriously disputed this criticism that the capacity numbers in the Ordinance are far too low. After my last testimony to the City Council, some on Council responded that the City’s capacity estimates are sufficiently reliable because a nationally-recognized authority like the Highway Capacity Manual (HCM) is used as a basis. The problem, however, is that the City’s V/C standards reflect the *misuse* of the HCM. The HCM estimates capacity based on just two variables (number of lanes and posted speed limit) and several very general assumptions. As a result, the capacity numbers provided by the HCM are, at best, extremely rough. Presumably, in recognition of this fact, the HCM expressly states that its capacity numbers “**should not be used to analyze any specific urban street facility**” and is useful “as a **first pass** to determine where problems exist or arise, or in **determining where improvements might be needed**.” (Emphasis added.) The reason the HCM inserts these caveats is that it recognizes that the capacity numbers are based on an extremely limited set of factors (number of lanes and posted speed limit), with no consideration of local factors.

The misuse of the HCM would be a problem in any situation. But it is particularly problematic when the unreliable capacity numbers are then used as the basis for a PASS/FAIL concurrency test where failure at even a single of the 92 tested corridors and segments in either the AM or PM peak hour (so, a total of 184 individual tests) means a proposed development is stopped in its tracks. The HCM states specifically that it should be used as a “first pass” analysis, yet the City is now using those numbers for a definitive PASS/FAIL test to determine whether a proposed development can proceed.

Recognizing the inaccuracy of using the HCM to derive capacity numbers, City staff made a hurried effort in November to try and account for additional factors, such as existing turn lanes, medians, flashing yellow arrows, and Intelligent Transportation System (ITS) technologies. These adjustments do not adequately reconcile the HCM methodology’s fundamental shortcomings when it comes to realistically estimating roadway capacity in Sammamish. This is evidenced on Pages 22 and 23 of tonight’s agenda and specifically, by the number of segments where existing directional peak hour traffic volumes exceed the “2016 HCM Mod.” capacity estimates on East Lake Sammamish Parkway NE/SE, Issaquah-Pine Lake Road SE, Sahalee Way NE, SE Duthie Hill Road, and SE Issaquah-Fall City Road, several by more than 30% and one segment by more than 75%. This is not credible and reflects a gross underestimate of actual capacity. In sum, even with the adjustments City staff attempted to incorporate into the capacity numbers at the final Council meeting before adoption, the capacity numbers in the Ordinance continue to underestimate actual capacity.



2. The City's V/C Standards for Roadway Corridors and Segments are Largely Arbitrary.

The second flaw in the V/C standards is that there appears to have been little or no rigor in assessing the appropriate margins or thresholds based on the uncertainties in the capacity estimates. Council adopted V/C standards of 1.1 or less for corridors and 1.4 or less for segments without making a meaningful effort to demonstrate why these standards are appropriate. Instead, they relied on the impressions offered by Fehr & Peers' Kendra Breiland and TSI's Victor Salemann during the November 13, 2018 City Council Study Session. But the comments from both Ms. Breiland and Mr. Salemann at that meeting and an earlier one carried at least two specific caveats that the Council largely ignored:

- Contrary to the recommendations of Ms. Breiland and Mr. Salemann, the Council adopted the same 1.1 and 1.4 V/C standards uniformly throughout Sammamish. At the October 22, 2018 City Council Study Session, Mr. Salemann recommended variable V/C thresholds depending on the unique characteristics of the City's various roadway corridors and segments. Similarly, in her comments at the November Study Session, Ms. Breiland suggested that certain corridors should be given "special treatment" due to their unique character, and she cited Sahalee Way as an example. Instead, Council has imposed uniform V/C thresholds for corridors and segments alike, failing to recognize the unique character of, for example, Sahalee Way NE which, like East Lake Sammamish Parkway NE and unlike most other roadways in the City, is directly affected by congested conditions on SR 202 north of Sammamish.
- Both Ms. Breiland and Mr. Salemann cautioned that the City should not impose a V/C standard that created a concurrency failure unless the City had determined that curing that failure was feasible or in Ms. Breiland's words, "doable." That type of feasibility analysis was not done before the City Council adopted its largely arbitrary 1.1 and 1.4 V/C standards.

Recommendations

Before making three (3) specific recommendations, I would like to emphasize the unprecedented magnitude of transportation concurrency testing in Sammamish. If one of 43 intersections is anticipated to operate with too much delay during the morning or afternoon peak hours, or if the V/C ratio of one of 22 directional corridors or one of 70 directional segments is anticipated to exceed the applicable threshold during the AM and PM peak hours, then a proposed development is denied concurrency. A single concurrency test is really 270 mini-tests³ and all it takes is failure of one of these mini-tests to be denied a certificate. In my 20+ years as a transportation consultant, I have never encountered a concurrency program so vast and all-encompassing in terms of the number of intersections and roadways being tested before a proposed development can proceed. The fundamental

³ See Footnote 2. Despite all of these mini-tests and what are obvious underestimates of roadway capacity, all of the 270 test points are projected to meet concurrency standards with one exception (the northbound Sahalee Way NE corridor during the AM peak hour). This is reassuring and an indication that after nearly 18 months and several hundred thousand dollars in consulting fees, the City now has a high level of confidence that its transportation infrastructure is holding up well and adequately accommodating growth while focusing on the worst-case, weekday peak hour conditions.

problem, though, is not as much the *number* of tests, as it is the *unfairness* of the tests considering the flaws noted above.

I recommend the Planning Commission consider the following to remedy the major flaws in the City's V/C standards.

1. Give roadway capacity estimates the type of scrutiny the City Council was unwilling or unable to undertake before. These capacity estimates (underestimates in many cases) should be revisited and much more tailored to reflect actual conditions. This should be cured for the northbound Sahalee Way NE corridor in particular (which is currently the only corridor or segment that does not pass during both peak hours) before any such standard is adopted on a permanent basis; or
2. Move away from uniform V/C thresholds for roadway corridors and segments alike and establish variable thresholds depending on the roadway's unique characteristics. The northbound Sahalee Way NE corridor would be an appropriate candidate for a different standard, given the unique influence of a condition outside the City's control (SR 202 congestion) on that corridor. If variable standards are not feasible, higher uniform standards would be appropriate given the overall underestimates of capacity in the Ordinance's capacity table. I recommend a V/C standard of 1.5 for corridors and 1.85 for segments for reasons further explained in my November 13, 2018 memorandum; or
3. Focus concurrency on intersections and move away from roadway V/C standards altogether. An intersection-only approach is very thorough in terms of the number of locations, time periods and LOS standards, more reflective of local conditions, and a much more defensible approach.

Attached: Transpo Group Memo dated November 13, 2018
Transpo Group Memo dated January 15, 2018

MEMORANDUM

Date:	May 23, 2019	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	City Manager Rudometkin and City Clerk Anderson		
Subject:	Transportation Concurrency and LOS for Road Segments and Corridors		

I've shared my credentials in other memos but as a reminder, I'm a Principal at Transpo Group USA, a local traffic engineering and transportation planning consulting firm. I'm also a licensed Professional Engineer (P.E.) in Washington State, certified Professional Traffic Operations Engineer (PTOE), and member of the Institute of Transportation Engineers (ITE) with over 20 years of traffic engineering and transportation planning consulting experience.

I attended the subject Public Hearing on May 7, 2019 on behalf of STCA and observed the discussion between City Councilmembers and the City's transportation consultants, namely TSI Principal Victor Salemann and DEA Senior Transportation Engineer Josh Anderson. I've prepared this memo to emphasize several key points that surfaced during this discussion, clarify some of the information I presented at this hearing, and provide additional information I believe the Council will find helpful.

1. The City acknowledges that the roadway capacity estimates in the proposed concurrency regulations underestimate existing capacity, including that of Sahalee Way NE.

I've made this point about the underestimate of capacity several times previously, including in oral testimony at the May 7, 2019 Public Hearing. The same point was made in written comments submitted to you on May 7, 2019 by Transportation Engineering Northwest (TENW). Please note as well that in response to a question by Councilmember Stuart, Mr. Salemann acknowledged that 951 vehicles per hour underestimates the roadway capacity of northbound Sahalee Way NE between NE 37th Way and the northern city limit. He also agreed that this estimate does not account for the heavy directional flow during the commuting peak periods.

What also appears to have emerged during this discussion is a different definition of the word "capacity." This word has a singular and well-recognized meaning in the *Highway Capacity Manual*: the maximum number of vehicles that can repeatedly traverse a segment of roadway in a one-hour period under prevailing conditions. There does not appear to be any disagreement that under this definition, the capacity of the Sahalee Way-228th Avenue North Corridor and associated segments is far greater than the capacity numbers reported in the proposed concurrency regulations (Figure 1, SMC 14A.10.050(2)). When this was noted during the Public Hearing, the City appeared to acknowledge that the "capacity" numbers in the proposed concurrency regulations do not actually reflect "capacity" as that term is used in the *Highway Capacity Manual* or as defined in the November 16, 2018 Fehr & Peers memo but instead, something much more subjective (e.g., "level of pain, frustration"). It's not clear how this can be the basis of something as consequential as a pass-fail concurrency test.

2. Defects in the City's concurrency roadway LOS standards are not limited to underestimates of roadway capacity.

More key defects in the roadway level of service standards surfaced during the discussion that followed the Public Hearing.

Limited Benefits of Adding a Third Lane to Sahalee Way NE. Both Mr. Salemann and Mr. Anderson explained that widening Sahalee Way NE would allow it to “barely pass” concurrency, meaning these solutions will be very short lived and failure will return with even a very modest amount of new development activity. And at a steep price. According to the City’s draft 2020-2025 Transportation Improvement Plan, such widening would cost more than \$54 million. That such a significant investment yields such an insignificant increase in capacity further underscores a key defect in the City’s concurrency roadway LOS standards.

Under City's Flawed V/C Approach, Decreased Congestion Would Cause Greater V/C Failures on Sahalee Way NE. Mr. Anderson explained that fixing the bottleneck at SR 202/Sahalee Way NE would have the greatest impact on reducing congestion on Sahalee Way NE during the weekday morning commute. However, due to the limitations in how the City estimates roadway capacity, improvements at SR 202/Sahalee Way NE would not translate to greater capacity on Sahalee Way NE; indeed, under the City’s methodology, such improvements would cause V/C ratios to increase, making the measured concurrency failure on Sahalee Way NE *even worse*¹. This absurd result is yet another way in which the City’s concurrency roadway LOS standards are fundamentally flawed.

3. Some of the information I presented during the Public Hearing was misunderstood and warrants clarification.

When reviewing my exhibit, Councilmember Hornish assumed it suggested no difference in speed for the different flow rates, namely the City’s maximum volume (951) and measured volumes of 1,256 and 1,403 vehicles per hour. To clarify, these volumes are represented by the colored vertical lines and the vertical placement of the “dots” was not intended to suggest a particular (or same) speed. The “dots” were used to simply label these volumes and to demonstrate they were greater than the “capacity” number in the proposed concurrency regulations. Since the City did not collect speed data, it was impossible to illustrate the difference in speed for these different volumes.

To clarify this matter, I’m attaching a graph that conceptually illustrates the City’s maximum volume or “capacity” (951), existing concurrency threshold of 1,331 vehicles per hour (increase of 40 percent), and measured volume of 1,403 vehicles per hour. These volumes are represented by the colored vertical lines. The graph demonstrates how the City’s capacity number of 951 is far less than the roadway’s capacity as that term is defined in the *Highway Capacity Manual* and understood in the traffic engineering industry. The graph also demonstrates that for this road segment (Sahalee Way-228th Avenue NE, City Limit – NE 37th Way), a V/C threshold of 1.4 fails to cure the underestimate of capacity. If the City Council chooses to adopt V/C concurrency standards despite the flaws I and others have noted, a more appropriate V/C threshold for this segment would be 1.85 as I have indicated in earlier testimony and memos.

¹ Mr. Anderson explained that hourly traffic volumes on Sahalee Way NE in Sammamish would increase with capacity enhancements at SR 202/Sahalee Way NE. However, the City’s adopted methodology has no way to account for increases in roadway capacity attributable to such capacity enhancements downstream and therefore, V/C ratios would only increase (get worse) because roadway volumes would increase, and roadway capacities would not change.

4. Recent traffic counts on northbound Sahalee Way NE should not be used to indicate trending but can help approximate the roadway's capacity.

Mayor Malchow indicated that she found the measured volumes in my exhibit informative. She assumed correctly that during the 7 to 8 a.m. hour, there was more northbound vehicles (1,403) measured on Sahalee Way NE north of NE 37th Way on Tuesday, May 2, 2017 than the other weekdays counted (May 1-5, 2017). The Mayor further indicated she would like to understand how traffic volumes have changed during this one-hour period since 2016 when the 3-day average was 1,256 vehicles (Tues.-Thurs., April 19-21, 2016). As part of Sammamish's annual traffic count program, the 3-day average increased to 1,339 in 2017 (Tues.-Thurs., May 2-4, 2017) and decreased to 1,325 in 2018 (Tues.-Thurs., June 5-7, 2018). Given the small sample size, this information should not be used to extrapolate future traffic volumes but does demonstrate that the capacity of Sahalee Way NE north of NE 37th Way is at least 1,403 vehicles per hour and likely more.

Attachment

KLJ/

MEMORANDUM

Date:	June 4, 2019	TG:	15020.00
To:	Mayor Malchow and Sammamish City Councilmembers		
From:	Kevin L. Jones, P.E., PTOE – Transpo Group		
cc:	City Manager Rudometkin and City Clerk Anderson		
Subject:	Transportation Concurrency and the Sahalee Way-228th Avenue North Corridor		

This memo supplements information I've submitted in earlier memos and testimony I've provided on the subject matter.

The City Council has placed on its June 4, 2019 meeting agenda for consideration a proposed addition to Sammamish's 2020-2025 Six-Year Transportation Improvement Plan (TIP) relating to resolving a level of service (LOS) concurrency failure for the Sahalee Way-228th Avenue North Corridor between NE 12th Place and the northern city limit. To resolve this failure, the draft TIP proposes adding a third lane (center median), bike lanes, right-turn lanes at intersections, curb, gutter sidewalk on one side of the street, and installing traffic signals at NE 14th Street/228th Avenue NE and NE 19th Drive/228th Avenue NE. The City estimates the total cost of these improvement projects could be approximately **\$54.5 million**.

We have analyzed what the capacity created by these improvements would mean as far as the existing concurrency failure on the Sahalee Way-228th Avenue North Corridor. The Agenda Bill for the May 7, 2019 City Council Meeting stated that these improvements would result in a northbound volume-to-capacity (V/C) ratio of 1.07 for this corridor during the future AM peak hour. This means the increase in capacity would allow only **32 additional vehicles/hour**¹ before the corridor V/C threshold of 1.10 would be exceeded, causing the corridor to fail concurrency again. This is about the same number estimated by TSI's Victor Salemann and DEA's Josh Anderson during their discussion with City Councilmembers on May 7, 2019.

KLJ/

¹ This number is derived as follows:

- (1) the Sahalee Way improvements would increase the northbound capacity of the Sahalee Way-228th Avenue North Corridor to approx. 1,060 vehicles/hour based on the City's methodology for estimating roadway capacity;
- (2) the Agenda Bill packet indicates these improvements will cause the corridor to operate at a V/C ratio of 1.07;
- (3) the City's maximum V/C ratio for roadway corridors is 1.10;
- (4) $(1,060 \text{ vehicles/hour} \times 1.10) - (1,060 \text{ vehicles/hour} \times 1.07) = 32 \text{ vehicles/hour}$.

MEMORANDUM

Date: September 1, 2020 **TG:** 15020.00

To: Mayor Moran and Sammamish City Councilmembers

From: Kevin L. Jones, P.E., PTOE – Transpo Group

cc: City Manager Rudat and City Clerk Hachey

Subject: Moratorium on the Acceptance of Applications for Concurrency Certificates

In reviewing Ordinance No. O2020-508, I do not find evidence to justify the subject moratorium.

Sammamish's existing concurrency standard reflects the expanded intersection LOS standards adopted by the City Council in September 2018. These standards involve an evaluation of future AM and PM peak hour conditions at 43 intersections throughout the City. This policy significantly expanded the previous policy in which future PM peak hour conditions were evaluated at 23 City intersections. This current policy is much more rigorous and comprehensive than any other city or county in Washington State. Depending on the intersection and traffic control, the current standards require that motorists experience no more than 25 to 55 seconds of average delay¹ during the two 15-minute periods of greatest weekday traffic demand.

With such a thorough intersection LOS concurrency policy in place in terms of the number of intersections, time periods and LOS standards, it is unclear why a moratorium is necessary and what adverse impacts would occur without the City amending these standards to include additional LOS standards in the form of roadway volume-to-capacity (V/C) ratios throughout the City.

KLJ/

¹ The average delay threshold is increased to 80 seconds for intersections along principal arterials which have three or more approach lanes in one or more directions. This applies to no more than four (4) signalized intersections in the City.

ATTACHMENT D



AGENDA - REVISED

City Council Special Meeting

6:00 PM - Tuesday, March 3, 2020

City Hall Council Chambers, Sammamish, WA

Page

Estimated Time

CALL TO ORDER

6:00 pm

ROLL CALL

PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA

EXECUTIVE SESSION

6:05 pm

* Potential Litigation pursuant to RCW 42.30.110 (1)(i)

PUBLIC COMMENT

6:30 pm

Note: *This is an opportunity for the public to address the Council. Three-minutes limit per person or five-minutes if representing the official position of a recognized community organization. If you would like to show a video or PowerPoint, it must be submitted or emailed by 5 pm, the end of the business day, to the City Clerk, Melonie Anderson at manderson@sammamish.us. Please be aware that Council meetings are videotaped and available to the public.*

CONSENT CALENDAR

7:00 pm

1. **Payroll:** For the Period Ending February 15, 2020 For a Pay Date of February 20, 2020 in the Amount of \$496,795.49
2. **Claims:** For Period Ending March 3, 2020 In The Amount Of \$2,013,402.18 For Check No. 56413 Through 56483
[View Agenda Item](#)

4 - 8

- 9 - 26 3. **Resolution:** Council Rules of Procedure
[View Agenda Item](#)
- 27 - 29 4. **Contract:** Sammamish Community and Aquatic Center Parking
Garage Traffic Coating Replacement Project / TBD
[View Agenda Item](#)
- 30 - 72 5. **Contract:** Maintenance and Operations Center Improvements
Project / Driftmier Architects, P.S.
[View Agenda Item](#)
- 73 - 80 6. **Contract:** Youth Mental Health Services / Youth Eastside
Services
[View Agenda Item](#)
- 81 - 87 7. **Contract Amendment:** Sahalee Way NE Corridor Analysis
Update Contract Amendment / Perteet
[View Agenda Item](#)
- 88 - 92 8. **Minutes:** For the February 4, 2020 Regular Meeting
[View Agenda Item](#)
- 93 - 96 9. **Minutes:** For the February 18, 2020 Regular Meeting
[View Agenda Item](#)

PRESENTATIONS / PROCLAMATIONS

PUBLIC HEARINGS

UNFINISHED BUSINESS

NEW BUSINESS

7:05 pm

- 97 - 124 10. **Discussion:** Development Regulations Update Phase Two
[View Agenda Item](#)
- 125 - 127 11. **Update:** Sahalee Way Corridor Analysis
[View Agenda Item](#)

COUNCIL REPORTS/ CITY MANAGER REPORT

EXECUTIVE SESSION – IF NECESSARY

ADJOURNMENT

10:00 pm

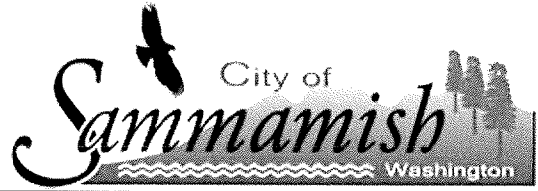
LONG TERM CALENDAR

- 128 [View Calendar](#)

* added an Executive Session to beginning of meeting.
Meeting will now begin at 6:00 pm

City Council meetings are wheelchair accessible. American Sign Language (ASL) interpretation is available upon request. Please phone (425) 295-0500 at least 48 hours in advance. Assisted Listening Devices are also available upon request.

Agenda Bill
City Council Regular Meeting
March 03, 2020



SUBJECT: Sahalee Way Corridor Analysis Update

DATE SUBMITTED: February 11, 2020

DEPARTMENT: Public Works

NEEDED FROM COUNCIL: Action Direction Informational

RECOMMENDATION: Provide feedback on the presentation summarizing the findings of the Sahalee Way Corridor Analysis Update.

EXHIBITS:

BUDGET:

Total dollar amount	N/A	<input type="checkbox"/> Approved in budget
Fund(s)	N/A	<input type="checkbox"/> Budget reallocation required
		<input checked="" type="checkbox"/> No budgetary impact

WORK PLAN FOCUS AREAS:

<input checked="" type="checkbox"/> Transportation	<input type="checkbox"/> Community Safety
<input type="checkbox"/> Communication & Engagement	<input type="checkbox"/> Community Livability
<input type="checkbox"/> High Performing Government	<input type="checkbox"/> Culture & Recreation
<input type="checkbox"/> Environmental Health & Protection	<input type="checkbox"/> Financial Sustainability

NEEDED FROM COUNCIL:
 Presentation of the Sahalee Way Corridor Analysis Update

KEY FACTS AND INFORMATION SUMMARY:

Summary

On September 3, 2019, Council directed staff to update the analysis of the corridor, utilizing the current concurrency standards and traffic demand model. Council also directed staff to expand the analysis limits to be from NE 12th Place to State Route 202, which includes areas outside of the City's jurisdiction. Staff will present the findings of the updated analysis and answer the Council's questions. Following input from the Council, staff plans to return on April 14th with a second presentation to provide answers to any additional questions that arise and seek a decision regarding the project scope to move forward into the design phase.

Background

The analysis for the Sahalee corridor looked at three different scenarios comparing performance under the concurrency standard and using the VISSIM traffic simulation software. VISSIM is a more robust, detailed analytical tool that can consider holistic impacts to the corridor and to travel times. The analysis projected to the forecast years of 2025, i.e. "pipeline"; and the 2035 Comprehensive Plan's horizon year. The three scenarios that were analyzed and being presented are:

- No Build scenario
- Three-Lane scenario
- Concurrency scenario

The No Build scenario is shown for comparison purposes only and is not being recommended as an option. This scenario fails the concurrency standards for intersections, segments and corridor in both 2025 and 2035. Video simulations are available for your review of the projected traffic under the 2035 Three Lane AM scenario and the 2035 Concurrency AM scenario. Please note that the vehicular speeds in the videos are twice that of actual and simulates the worst of the AM peak hour.

- [2035 Three Lane AM scenario](#)
- [2035 Concurrency AM scenario](#)

The Three-Lane scenario fails the concurrency standard for the corridor in 2025, and has both concurrency failures for segments and the corridor in 2035. The scope of improvements includes widening for center turn lanes, bike lanes, curb, gutter, sidewalks and amenity strips on both sides between NE 12th and NE 25th; and sidewalks on the west side only from NE 25th to NE 37th, with the east side to remain as a widened shoulder for pedestrians and bicyclists to share. New intersection signals would be installed at NE 14th, NE 19th, NE 28th and NE 36th. The estimated planning-level cost for this option is \$61.5M - \$71.2M. Travel times in the corridor are improved compared to the No Build scenario.

The Concurrency scenario follows the three-lane scenario described above, but widens to five lanes between approximately 217th Place NE and NE 37th Way, and four lanes for the remainder of the corridor down the hill to State Route 202. This scenario is the only option that passes the concurrency standards in both 2025 and 2035 with estimated planning level costs of \$121.3M - \$140.5M. Travel times in the corridor are further improved in this option versus the other scenarios. However, it is a minimum scenario that is needed to pass concurrency and would only provide a future buffer of approximately nine additional vehicles in the peak hour before triggering another concurrency segment and corridor failure beyond 2035. Additional future capacity might be obtained by extending the five lane section further south to at least NE 28th Place. The aforementioned cost estimate does not include an extension of the five lanes.

The analysis includes important assumptions. The first assumption is that State Route 202 will continue to operate in the AM peak in 2035 with vehicle speeds roughly similar to today. This would require that State Route 202 corridor would need additional detailed analysis and improvements so that performance does not dramatically decline. The cost estimates are planning level and based on 2019 figures that are indexed to construction in 2023 with assumed 5% inflation per year. It is also assumed that concurrency policies do not change, that a roundabout at State Route 202 and Sahalee is not

constructed, no significant increases in transit services or significant shifts in mode share occur, and that the region's assumptions about growth are fairly accurate.

FINANCIAL IMPACT:

The current financial impact is for the traffic analysis only as directed by the Council. The future financial impacts for this project will be based on the design concept selected by the City Council. A high level discussion regarding funding options will be introduced in this meeting with a more robust and detailed discussion during development of the 2021-2022 budget.

OTHER ALTERNATIVES CONSIDERED:

There were no other alternatives considered as this is in response to the Council's direction last fall.

RELATED CITY GOALS, POLICIES, AND MASTER PLANS:

Comprehensive Plan - Capital Facilities

Comprehensive Plan - Transportation

*Public
Works*



Sahalee Way Corridor Updates

**City Council Regular
Meeting**

March 3, 2020



Agenda

- Study area
- Concurrency: old vs. new
- Concurrency evaluation results
- Analysis summary: travel times, preliminary costs
- Traffic simulation videos
- Funding options
- Q&A / Discussion



Study Area

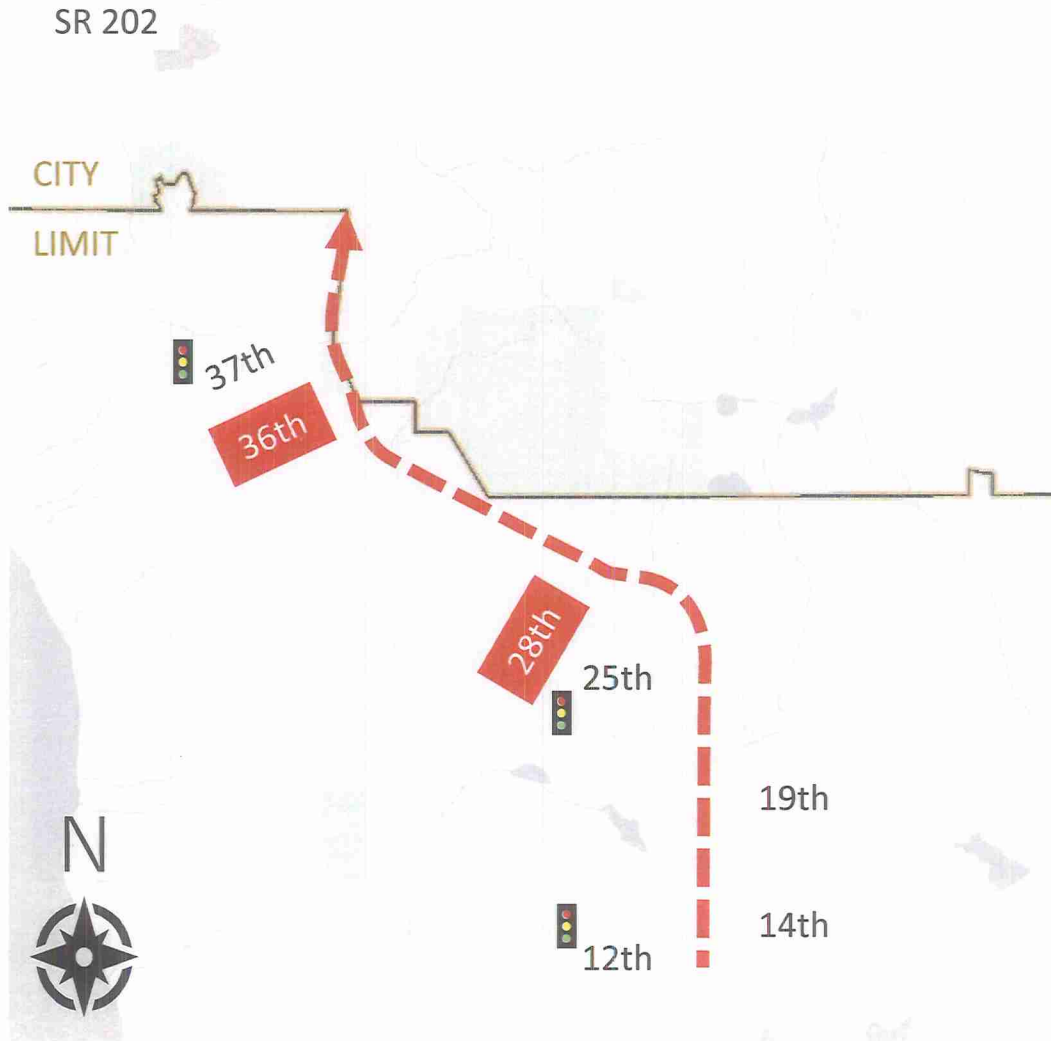
- 228th/Sahalee “North” Corridor
 - NE 12th Place to NE 25th Way
 - NE 25th Way to NE 28th Place
 - NE 28th Place to NE 36th Street
 - NE 36th Street to NE 37th Way
 - NE 37th Way to City Limit
- City Limit to SR 202
- Eight intersections
 - Seven within Sammamish
 - SR 202 & Sahalee

Concurrency: Old vs. New

- Key differences between the current and prior concurrency policies:
 - Old policy gave capacity credit to multi-modal corridor elements (sidewalks, bike lanes, etc.)
 - New policy establishes capacity based only on driver elements (number of lanes, ITS at signals, etc.)
 - Old policy evaluated *daily* travel volumes
 - New policy evaluates *peak-hour* travel volumes
 - Old policy intersection evaluations were only in the PM peak hour
 - New policy evaluates AM and PM peak hours

Current Concurrency Level of Service Standards

- **Corridor**
Passing: $v/c \leq 1.1$
- **Segment**
Passing: $v/c \leq 1.4$
- **Intersection**
Passing: LOS D or better, or LOS E or better if 3+ lanes on any approach



Existing Conditions

Data collected September 2019

- Corridor failures:
 - AM Northbound ($v/c = 1.14$)
- Segment failures:
 - None
- Intersection failures:
 - 28th (LOS F)
 - 36th (LOS F)



2025 No-Build

28th is signalized, ITS installed

- Corridor failures:
 - AM Northbound (v/c = 1.17)
- Segment failures:
 - None
- Intersection failures:
 - None



2035 No-Build

28th is signalized, ITS installed

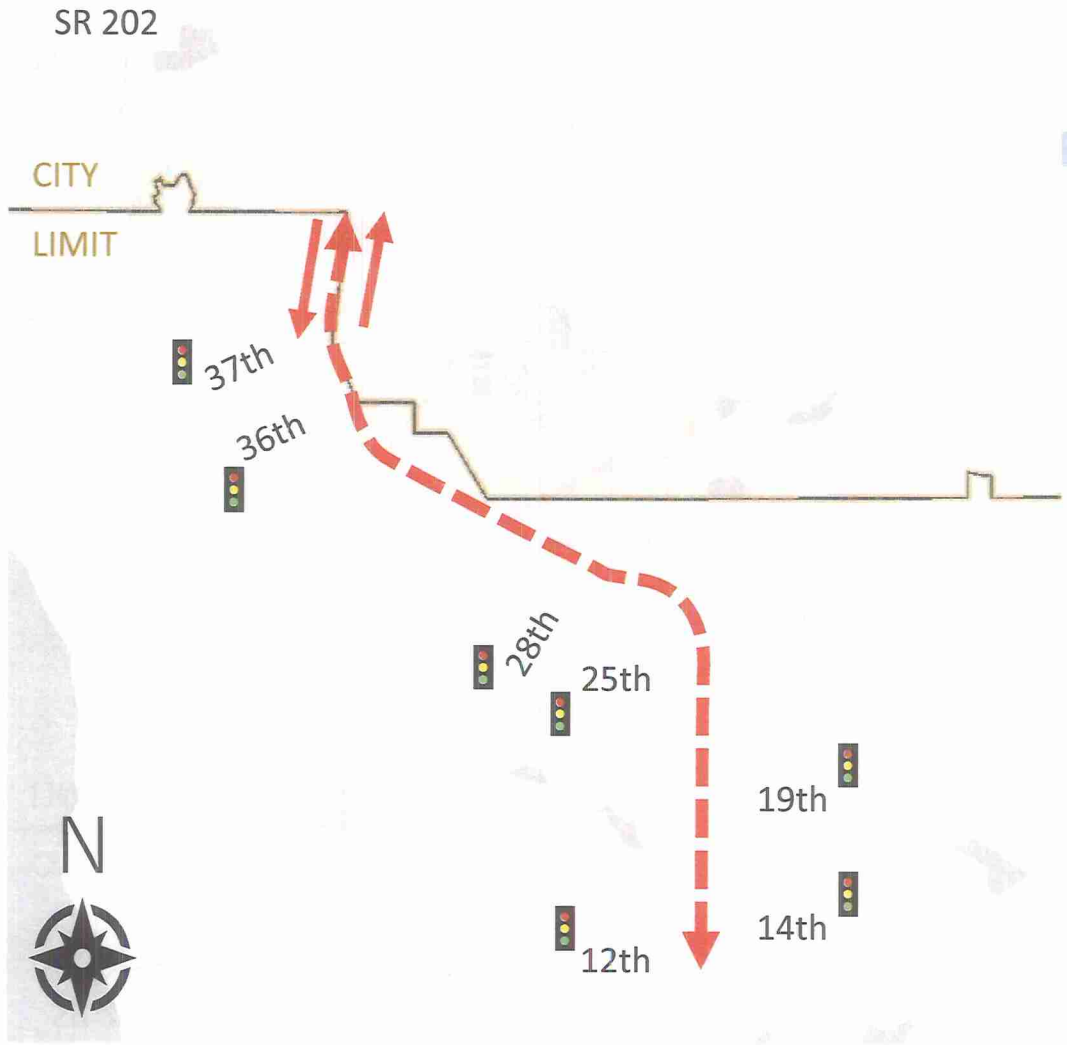
- Corridor failures:
 - AM Northbound (v/c = 1.36)
 - PM Southbound (v/c = 1.22)
- Segment failures:
 - 37th to City Limit, AM NB (v/c = 1.60)
 - 37th to City Limit, PM SB (v/c = 1.44)
- Intersection failures:
 - 14th (LOS E)
 - 36th (LOS F)

2025 Three-Lane Alt.



Seven signals; multi-modal; widen to three-lanes (with median) between 12th and 37th

- Corridor failures:
 - AM Northbound (v/c = 1.13)
- Segment failures:
 - None
- Intersection failures:
 - None



2035 Three-Lane Alt.

Seven signals; multi-modal; widen to three-lanes (with median) between 12th and 37th

- Corridor failures:
 - AM Northbound (v/c = 1.31)
 - PM Southbound (v/c = 1.18)
- Segment failures:
 - 37th to City Limit, AM NB (v/c = 1.60)
 - 37th to City Limit, PM SB (v/c = 1.44)
- Intersection failures:
 - None



2035 Concurrency Alt.

Minimum widening and intersection improvements to meet concurrency requirements through 2035

- Corridor failures:
 - None
- Segment failures:
 - None
- Intersection failures:
 - None
- Capacity Buffer:
 - Corridor : 25 extra vehicles
 - Segment : 7 extra vehicles (28th – 36th)

Travel Times Details

Current travel times are dictated by:

1. Four traffic signals, including SR 202
2. Buses stopping in-lane
3. Platoon-leading vehicle travel speeds

Three-Lane / Concurrency Alternative travel times are dictated by:

1. Eight traffic signals, including SR 202
2. Platoon-leading vehicle travel speeds in single-lane sections
3. Higher traffic volumes by 2025 and 2035
4. Driver “aggressiveness” (distance between cars, reaction times, etc.)

Summary

Metric/Element	No-Build	Time-Care Alternative	Concurrency Alternative
2025 Pipeline Concurrency	Fails corridor	Fails corridor	Passes
2035 Concurrency	Fails intersections, segments, and corridor	Fails segments and corridor	Passes
2035 Peak Hour Average Vehicle Travel Times ^{1,2}	AM NB: 594 seconds PM SB: 359 seconds	AM NB: 591 seconds PM SB: 343 seconds	AM NB: 542 seconds PM SB: 314 seconds
Transit Improvements	None	Bus pullouts	Bus pullouts + outside lanes
Sidewalks	West side from 12 th and 25 th	Adds sidewalk on east side from 12 th to 25 th , on west side from 25 th to 37 th , and at bus pullouts	
Bicycle Facilities	SB bike lane from 25 th and 12 th narrow shoulders elsewhere	Adds NB bike lane between 12 th and 25 th , SB bike lane between 37 th and 25 th , and 8' shoulders elsewhere	
Project Cost (2023 \$) ²	?	\$61.5 to \$71.2 million	\$121.3 to \$140.5 million ³

1. Future results assume SR 202 operates with similar speeds to today and some drivers are more "aggressive" to combat delays from increased volumes.
2. Preliminary data. Include full project limits: NE 12th Place to SR 202.
3. Concurrency Alternative costs include portion down to SR 202, but does not include cost of new roundabout.
4. No-Build is for comparison purposes only. A new project would be required to address intersection failures and non-motorized safety improvements.

Traffic Model Simulations



Three-Lane Alternative
2035 AM Peak Hour



Concurrency Alternative
2035 AM Peak Hour

Thank You

Q&A, discussion

End of Presentation

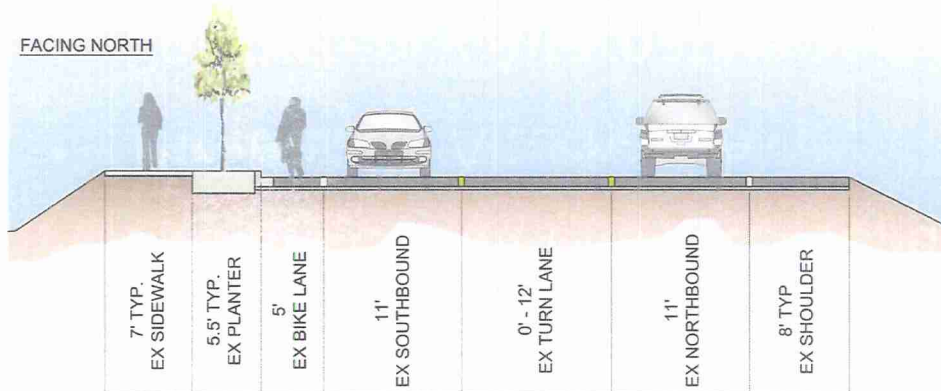
Supplemental slides follow

Alternatives and Cross Sections

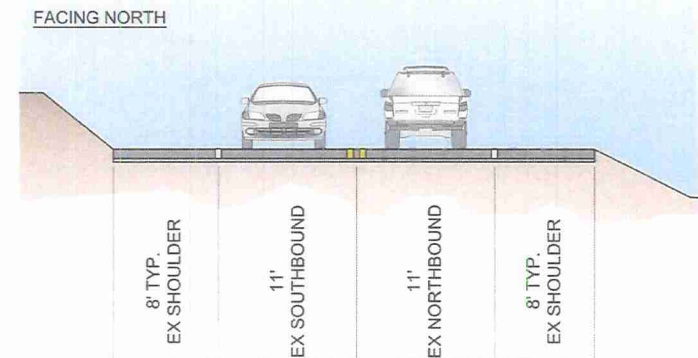
- Existing Conditions / No-Build
- Three-Lane Alternative
- Concurrency Alternative

Existing Conditions

South of NE 25th Way

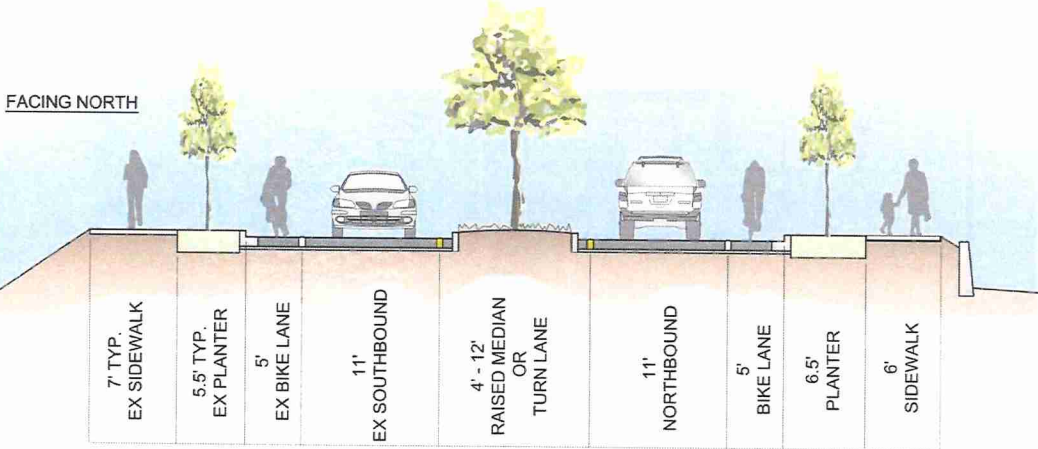


North of NE 25th Way

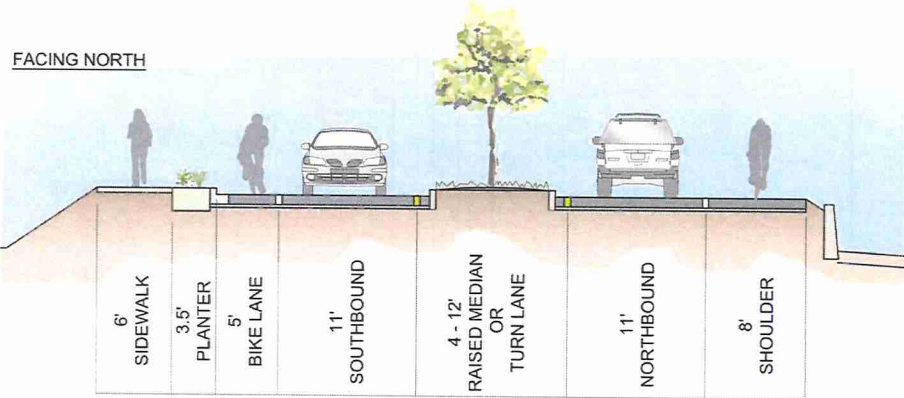


Three-Lane Alternative

South of NE 25th Way

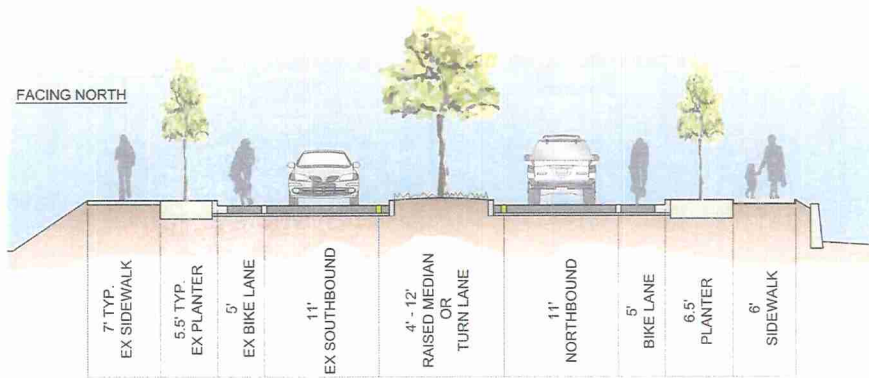


NE 25th Way to NE 37th Way

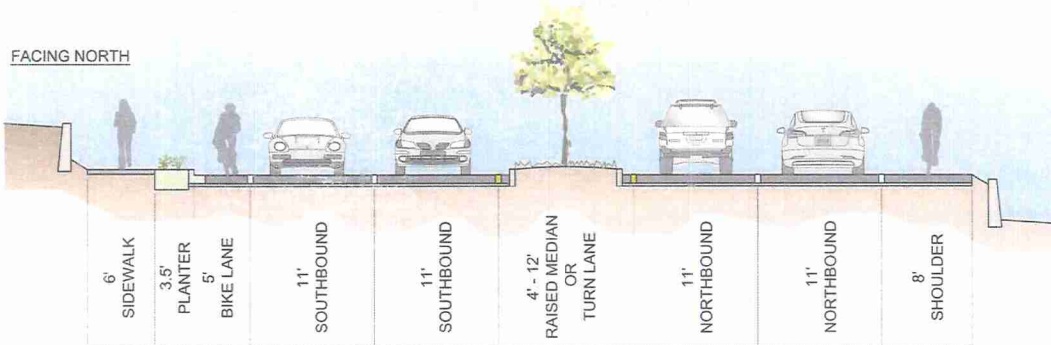
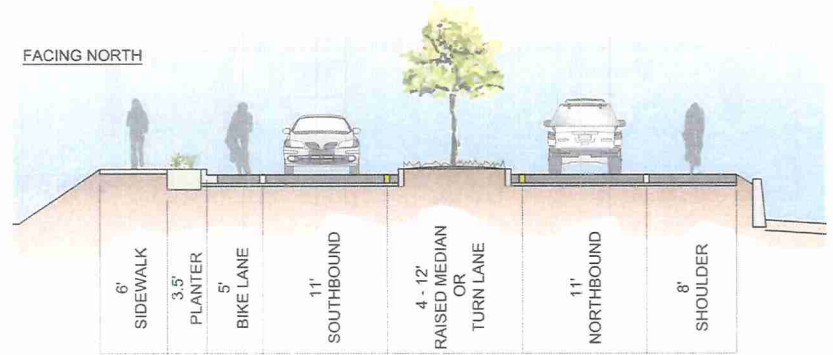


Concurrency Alternative

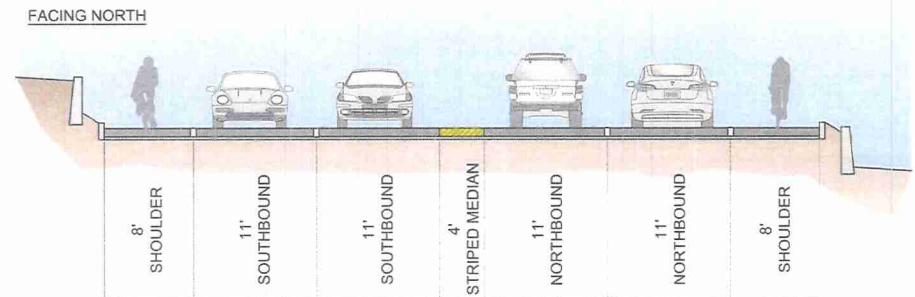
South of NE 25th Way



NE 25th Way to Sahalee C.C.



Sahalee C.C. to NE 37th Way



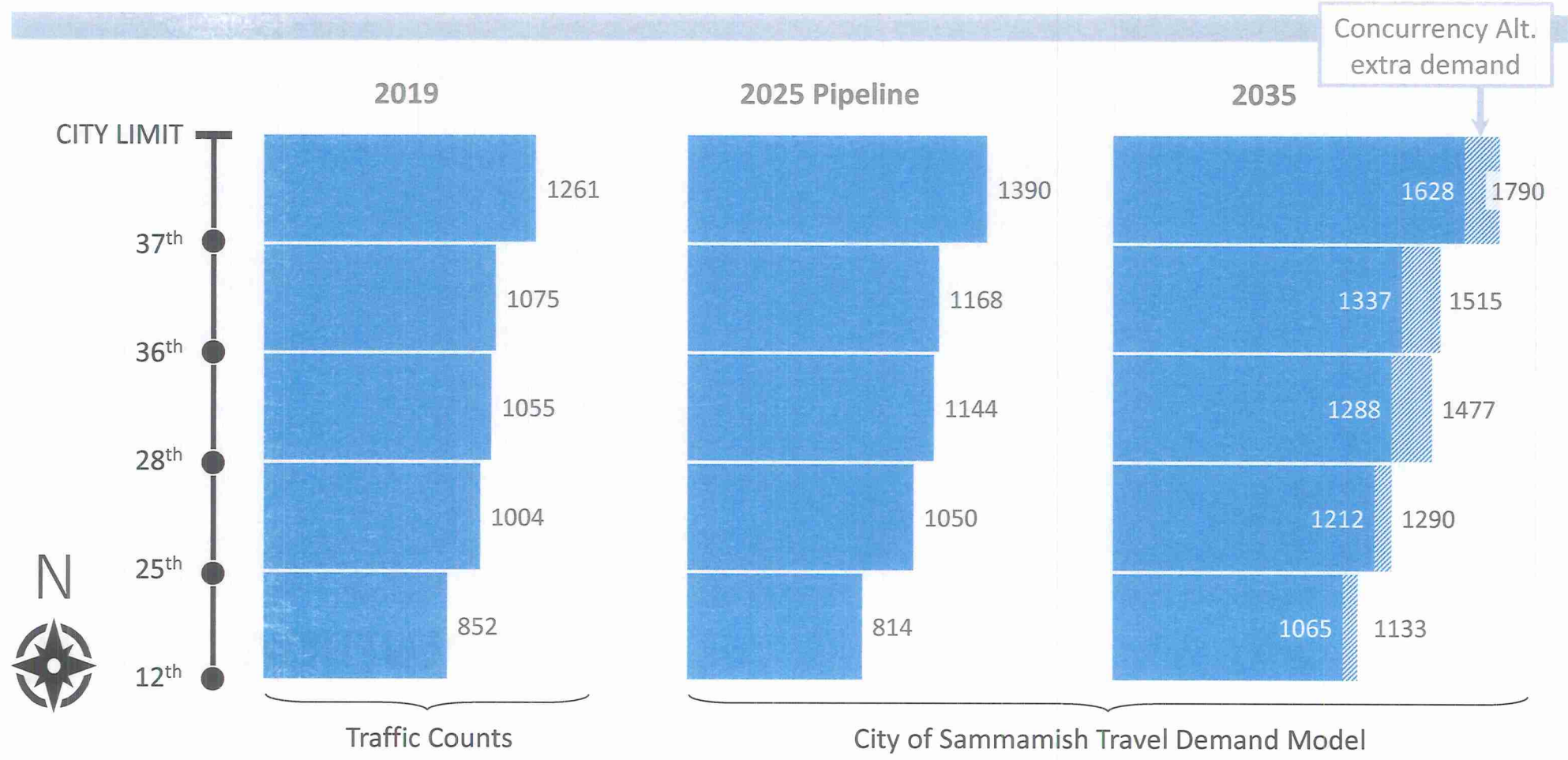
NE 37th Way to SR 202

Traffic Volumes

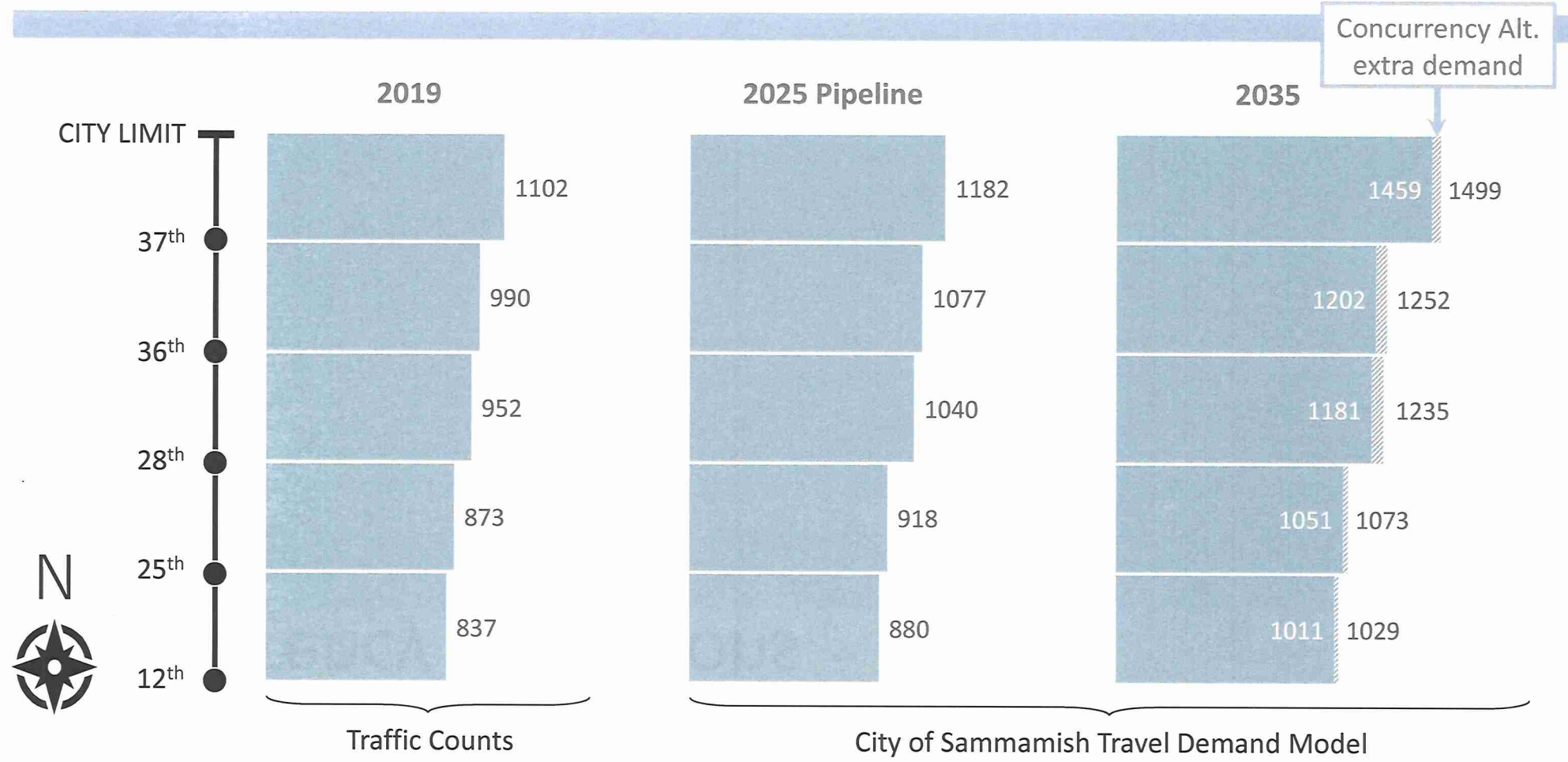
- September 2019 Traffic Counts
Collected after school started
- 2025 Pipeline *
- 2035 *
Concurrency Alternative triggers extra volumes

* Data from City's Travel Demand Model is **PRELIMINARY** and subject to change

Traffic Volumes – Northbound AM Peak Hour



Traffic Volumes – Southbound PM Peak Hour



Concurrency Definitions

- Detailed comparison of old vs. new

Basis of Old vs Current Capacity Calculations

	Element	Old Method (Table T-8)	Current Method (HCM Modified)
Segments/Corridors	Evaluates daily volumes*	Yes	Yes
	Evaluates peak hour volumes	No	Yes
	Evaluates peak direction volumes	No	Yes
	Considers non-motorized capacity	Yes	No
	Roadway characteristics that affect segment and corridor capacities	<ul style="list-style-type: none"> • Base capacity* • No. of lanes • Lane widths • Bike lane /shoulder width 	<ul style="list-style-type: none"> • Median* • Regional trail width • Road classification
Considerations	<ul style="list-style-type: none"> • Presence of non-motorized features affects capacities • Source of base capacities not documented • Capacities determined from Table T-8 	<ul style="list-style-type: none"> • More labor intensive to implement • Greater amount of professional judgement required 	
Intersections	Delay	Average delay per vehicle in seconds except for 2-way stops.	Average delay per vehicle in seconds except for 2-way stops.

* Volumes attributed to these features are not calculated the same way by each method.

ATTACHMENT E

MEMORANDUM

Date: September 24, 2021 **TG:** 1.15020.00

To: BLUMA EIS Team

From: Dan McKinney, Jr. and Brent Turley, PE

Subject: Sammamish Balanced Land Use and Mobility Analysis - Comments

On August 26, 2021, the City of Sammamish published a Draft EIS titled Sammamish Balanced Land Use and Mobility Analysis that is open for comment. On behalf of STCA, LLC and STCJV1, LLC, we have reviewed the Draft EIS and have noted key objectives are ignored. As detailed below, baseline growth assumptions do not maintain consistency with the vision of the Comprehensive Plan regarding the Town Center and, the Action Alternatives do not acknowledge or implement level of service standards that represent real world transportation conditions. In addition, the Draft EIS fails to provide an accurate comparison of LOS standards and concurrency thresholds, which was a primary purpose of the EIS.

Please consider the following comments and addressing our concerns prior to finalizing the EIS.

1. *The analysis underestimates growth in the Town Center and baseline growth forecasts should be updated to reflect what the adopted Comprehensive Plan includes for the Town Center.*

The growth targets outlined in the EIS state that only a total of 196 residential units are added above and beyond the pipeline development. This level of growth is not consistent with the City's own adopted Comprehensive Plan. The EIS states that the adopted Comprehensive Plan "plans for development of 2,000 residential housing in Town Center." (Section 1.6.4.2). Approximately 700 residential units are built or in the concurrency pipeline within the Town Center, leaving approximately 1,300 residential units unaccounted for. The EIS analysis evaluates a condition that is well below what is in the City's Comprehensive Plan. Stating the EIS analysis is consistent with the Comprehensive Plan is inaccurate and should include the residential growth within the Town Center assumed in the Comprehensive Plan in order to accurately evaluate and compare alternatives.

There are statements in the EIS that indicate half of the 196 residential units were placed north and half of the units were placed south of the Town Center. Placing these units outside of the Town Center area doesn't present an accurate assessment of where growth in the city could occur and adding growth to periphery of the City provides unrealistically low impacts to the City street system. There should be alternatives evaluated to account for higher residential and traffic volume growth from the Town Center area. Statements in the EIS also indicate that additional improvement may be required to meet the proposed V/C standards depending upon actual development patterns in the future. Assuming only a small amount of residential growth and having it outside of the Town Center is not accurately identifying true impacts of growth assumed by the adopted Comprehensive Plan.

2. *The EIS presents an inaccurate comparison of multimodal road improvement metrics by alternative*

As shown in Exhibit 1-28, Alternative 1 shows zero sidewalk added miles, zero bike lanes added miles, and zero vehicle lane miles improved. The table includes a footnote that says Alternative 1 could include segment and non-motorized improvements not associated with concurrency projects. The EIS does not include these other non-concurrency driven projects in Alternative 1

metrics. In Alternative 4, there is a set of segment and non-motorized improvements assumed that improve capacity on principal arterials, complete substandard arterials, and accommodate transit and non-motorized options not associated with concurrency projects (in other words, assumed prior to any LOS threshold testing). Yet these projects were included in the metrics in Exhibit 1-28. An accurate comparison would include these projects in both Alternative 1 and Alternative 4 metrics, or neither alternative.

- 3. It is unclear which projects in Alternative 4 are included either because of the “holistic strategy” or because LOS thresholds were surpassed. This makes a clear comparison of EIS alternatives impossible.**

This “holistic strategy” includes projects that could also be applied to an intersection-only LOS concurrency standard (Alternative 1). This may or may not yield the same projects identified in Alternative 4. By omitting this information from the EIS, it is impossible to understand the true impact of Transportation LOS and Concurrency thresholds, a key purpose of the EIS.

- 4. As we have identified in the EIS scoping comments, the Action Alternatives should evaluate a range of possible V/C LOS standards and not be limited to a standard of 1.1 for corridors and 1.4 for segments.**

In the EIS, one of the key objectives is to “acknowledge and implement a transportation level of service that represents real world transportation conditions in the City” (Section 1.4.1). As has been identified in past comments for scoping the EIS, many of the capacity numbers in these V/C standards have been shown to be inaccurate and significantly less than actual capacity as evidence by the City’s own traffic counts. In other words, the capacities used in every one of the Action Alternatives do not represent real world transportation capacity conditions in the City. Furthermore, language in the EIS acknowledge these poorly developed capacities and suggest they could be improved (see Section 1.6.7.4). The Action Alternatives should include alternatives that represent real world transportation conditions by evaluating improved capacity assumptions and/or evaluating higher V/C standards that allow for realistic traffic volumes.

- 5. A high-level cost benefit analysis should be completed to better understand the true impacts of each alternative.**

All of the Alternatives require a different mix and range of transportation improvements necessary to meet concurrency. The EIS presents measures of effectiveness by alternative based on the assumed transportation improvements evaluated in each alternative that are summarized in Exhibit 1.29. This includes operational measures such as average travel speed and travel time. The average speed between the alternatives was not very significant and the only alternative to have higher average speeds than the baseline condition during the PM peak hour was Alternative 4, which included the most improvements. In order to provide a viable comparison between the alternatives, a cost benefit analysis should be completed that would compare the level of investment to the benefit in mobility. There are only slight differences in overall measurable improvement between some of the alternatives. For example, when comparing Alternative 1 and 2, Alternative 2 includes 8 corridor projects that only result in an improvement of 0.7 mph during the PM peak hour. Understanding the level of financial investment necessary to build these improvements as compared to the operational benefit would be of value.