

**Black Diamond  
Master Planned Developments**

***TRANSPORTATION***

***A review of key issues, history, and future decision  
points***

**March 2013**

***by***

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***Presented to***

***Black Diamond City Council***

## **Acknowledgments**

This document was prepared by the Citizens' Technical Action Team based on nearly four years of direct involvement with the proposed Master-Planned Developments in the City of Black Diamond, as well as participation in all related Public Hearings.

The Citizens' Technical Action Team was formed to scrutinize all technical aspects of the proposed Master-Planned Developments in the City of Black Diamond. It is comprised of a group of volunteers from the City of Black Diamond and the surrounding communities. This group possesses a diverse technical background in both professional training and experience including the fields of chemistry, engineering, finance, land development, management, and modeling. Its members are all degreed professionals, most with advanced degrees.

The principal author was the Citizens' Technical Action Team Leader and Transportation Focal, Peter Rimbo. Although not a Transportation Engineer, Mr. Rimbo has a Master of Science Degree in Civil Engineering and over 24 years of engineering and project management experience with both Boeing and McDonnell Douglas.

Mr. Rimbo also has served as an elected Unincorporated Area Councilman in the greater Maple Valley area for over 10 years working specifically with the community and King County on growth management and transportation issues and planning.

Although far too numerous to name here, the Citizens' Technical Action Team would like to thank all the people who have participated and worked to ensure the proposed Master-Planned Developments meet all laws, agreements, requirements, and conditions, as well as ensuring their impacts are properly, economically, and timely mitigated.

*---March 22, 2013*

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## Executive Summary

### Scope

This document addresses Transportation aspects and issues of the proposed Master-Planned Developments (MPDs) in the City of Black Diamond. A three-year timeframe is covered from the late 2009 Final Environmental Impact Statements (FEISs) through the Villages MPD Phase 1A (PP1A) subdivision approval in late 2012. Hearing recommendations and decisions, Conditions of Approval (COAs), Development Agreements (DAs), technical issues, and future decision points are covered in detail.

### Purpose

This document is meant to serve as a resource of key MPD transportation issues, decisions, and plans. It provides a review of issues and decisions related to transportation analysis, planning, and mitigation. It has been organized to provide decision-makers with easy access to such information much like an encyclopedia.

### Decision Points

There are several *Future Decision Points* (and mechanisms to accomplish them):

Traffic Monitoring Plan: This is a plan to evaluate and monitor traffic to ensure timely improvements are constructed to keep pace with MPD Development. It includes: (1) Modeling and Analyses, (2) Monitoring, and (3) Mitigation Triggers.

Traffic-Demand Model: This is a computer model simulation of the road grid in the greater Black Diamond area used to predict and evaluate traffic volumes and distribution. A model was originally developed to support the MPD EISs, but the City's Hearing Examiner found a number of deficiencies. A *new* model is under development (as required by MPD Ordinance COA 11), but has yet to be validated.

Transportation Concurrency: As part of the Growth Management Act, concurrency of transportation improvements with development is one of the goals local governments must consider in land-use planning to ensure public facilities and services are adequate to serve new development at time of occupancy without decreasing service levels.

Traffic Mitigation Funding: Besides ensuring traffic mitigation meets the needs of Black Diamond and the surrounding communities, possibly the greatest risk to be confronted is ensuring adequate and timely funding of such infrastructure.

## **Conclusions**

Although many concerns have been identified and discussed, it is concluded that there also exists a framework for MPD transportation issues to be solved and for final mitigation to work as designed:

1. Transportation will be subjected to periodic evaluation and update. Since the Master Developer is not vested to the 2009 Black Diamond Comprehensive Plan Level of Service standards, future stronger standards could apply.
2. The MPD Permits (through MPD Ordinance COA 17) have strong language and, if adhered to, ensure proper traffic analyses.
3. The new Traffic-Demand Model, assumptions, and analyses should result in a much better evaluation of traffic impacts than the original analyses that supported the EISs.
4. Traffic analyses are required to precede each phase.
5. Traffic analyses are required at each mid-phase.
6. Traffic analyses could be triggered at any time at the discretion of the City Council (per MPD Ordinance COA 17a).
7. The Black Diamond Comprehensive Plan allows concurrency testing on SR-169 to ensure mitigation is adequate and timely at several key intersections.

## **Recommendations**

A set of Recommendations have been developed to ensure the City's impending growth and that soon to be experienced in the adjacent cities of Covington, Maple Valley, and Enumclaw and the surrounding unincorporated area communities due to MPD buildout can be managed.

Each Recommendation includes a suggested responsible individual (e.g., *Mayor, City Attorney*) or group (e.g., *City Council, City Staff*) and is followed by a [hyperlinked reference](#) to the section in the document that provides detailed background rationale.

### **Transportation Management**

1. Separate out the transportation function from the Public Works Department to create a stand-alone Transportation Department reporting to the City Administrator. *Responsibility: Mayor. (see [sect. 6. Future Decision Points, Overall Concerns](#))*
2. Ensure Master Development Review Team members have not performed past (or current) MPD traffic work for the Master Developer or the City to avoid any potential conflicts of interest. *Responsibility: City Council and Master Developer. (see [sect. 4. Development Agreements, Exhibits](#))*
3. Develop and implement a MPD Transportation Strategic Plan to include timing of key milestones: model validation; model simulation through full build-out; sensitivity analyses of key assumptions; continuous model adjustments; traffic analyses; and mitigation evaluation. It should include a Model Validation Plan (including COA 11) and a Sensitivity Analysis Plan (COA 17b *only* addresses Peak-Hour Factor). Sensitivity analyses of key assumptions will identify risks involved with traffic volume prediction. Higher sensitivity=greater risk. Greater risks could deleteriously impact mitigation timing and costs. *Responsibility: City Council--can assign to City Staff. (see [sect. 6. Future Decision Points, Overall Concerns](#))*
4. Develop a Flow Chart of all 25 Transportation COAs, especially COA 17 and its 10 subsections and share same with affected cities, KCDOT, and WSDOT. *Responsibility: City Staff. (see [sect. 3. MPD COAs](#))*
5. Establish a City Council Transportation Committee to consider matters related to transportation planning, traffic data, traffic impacts, project financing, and infrastructure implementation. *Responsibility: City Council. (see [sect. 6. Future Decision Points, Overall Concerns](#))*
6. Establish a Citizens' Transportation Panel to review periodic analysis results and impacts. *Responsibility: City Council. (see [sect. 6. Future Decision Points, Overall Concerns](#))* -- In addition, an Amendment to address *Road Citizen Review Committees* is outlined below under [Amendments to Development Agreements](#).
7. Explore apparent conflicting language in COAs 10, 17b, 17f, and 25 as to applicable Level of Service standards for all Traffic Impact Analyses and Transportation



Concurrency testing. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Vesting](#))

### Transportation Concurrency

1. Address Project-Level Concurrency by conducting Transportation Concurrency testing for *each* implementing project (in conjunction with review of Traffic Monitoring results) to better align the timing of needed traffic mitigation. *Responsibility: City Staff.* (see [sect. 2. Past Hearings/Decisions, Development Agreement Hearings](#)) -- In addition, an Amendment to address *Transportation Concurrency Plans* is outlined below under [Amendments to Development Agreements](#).
2. Rigorously enforce Transportation Concurrency--possibly the most valuable tool at the City's disposal--to ensure traffic mitigation is both timely and adequate. *Responsibility: City Staff.* (see [sect. 2. Past Hearings/Decisions, Black Diamond Comprehensive Plan](#))
3. Review COA 17f (i. thru v.) and Development Agreement 11.3B language calling for the City to prove MPDs are causing future traffic problems, as well as triggers for new standards, requirements, modifications, conditions, and mitigations. *Responsibility: City Attorney.* (see [sect. 3. MPD COAs, COA 17f](#) and [sect. 4. DAs, 11.3B](#))

### Traffic Monitoring Plan

1. Revisit trip distributions as traffic is monitored and volumes evaluated. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, The Villages PP1A, Trip Generation and Distribution](#))
2. Re-evaluate queue lengths for closely spaced SR-169 intersections. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, The Villages PP1A, Intersection Queue Lengths](#))
3. Evaluate construction traffic impacts during overlap times with the AM commute. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, The Villages PP1A, Construction Traffic](#))
4. Keep option open to evaluate an improvement after its construction. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#))

5. Revisit language (i.e., “*delay*” and “*impact*”) for mitigation triggers, since a *reactive* protocol is being used. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#))
6. Revisit language to ensure improvements start before Level of Service standards are violated and are not dependent on the City’s “*prompt permit review.*” *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#)) -- In addition, an Amendment to address *Transportation Plans* is outlined below under [Amendments to Development Agreements](#).
7. Determine the means necessary--and what leverage the City would have on a Master Developer--to alter timing of any mitigation to meet needs identified by traffic monitoring. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Traffic Monitoring Reports](#))

### Traffic-Demand Model

1. Review 850-permit threshold for validation and use of the *new* model to determine if, besides exempting PP1A (i.e., threshold was *not* reached), it *also* exempts the *next* phase, as its plat application could be approved based on traffic analyses using the *old* model and assumptions. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, New Traffic Demand Model](#))
2. Establish a Traffic-Demand Model Advisory Board comprised of representatives from all affected entities--Black Diamond, Maple Valley, Covington, the Master Developer, KCDOT, and WSDOT--to periodically review progress on the new model and make final recommendations on its suitability. *Responsibility: City Council.* (see [sect. 3. MPD COAs, COA 11](#))
3. Conduct Internal Capture Rate (ICR) Sensitivity Analyses to ensure the fidelity of assumptions as traffic distribution and volume fluctuate. *Responsibility: City Staff.* (see [sect. 3. MPD COAs, COA 14](#))
4. Determine legal means to affect the Maple Valley Traffic Mitigation Agreement should Peak-Hour Factor sensitivity analyses result in recommendations to modify mitigation. *Responsibility: City Attorney.* (see [sect. 3. MPD COAs, COA 17b](#))

## **Amendments to Development Agreements**

Three Amendments to the Development Agreements are offered to further ensure growth can be managed:

### ***Transportation Concurrency Plan***

A Transportation Concurrency Plan shall be developed that specifies when and how concurrency testing will be done and evaluated. Transportation Concurrency testing shall be periodically conducted for each implementing project and at the beginning, midpoint, and end of each Phase to ensure traffic mitigation is both timely and will comply with the State Growth Management Act-mandated concurrency. The Plan should be based on the premise that no implementing project be approved unless it complies with the City's concurrency requirements. The Transportation Monitoring Plan should be updated periodically to accommodate any changes necessitated by implementing project concurrency.

### ***Transportation Plans***

A complete set of Transportation Plans shall be developed that include, at a minimum, project descriptions, project impacts, mitigations proposed, estimated costs, cost shares, identified funding mechanisms, and risks of potential revenue sources for both route and intersection improvements to fully mitigate all transportation-related impacts on all geographic areas (including Cities of Maple Valley and Covington and the surrounding unincorporated areas of King County) studied before each Phase begins. Cost-Benefit-Risk Analyses shall be conducted for each mitigation proposed to provide specific details for decision-makers and assess potential impacts associated with slips in schedule, not securing adequate funding, and traffic pattern changes. Such Plans shall be submitted to the City for review and approval 180 days before a Phase is scheduled to begin.

### ***Road Citizen Review Committees***

Separate Citizen Review Committees shall be established for the following King County roads: Issaquah-Hobart-Ravensdale-Black Diamond Rd., Auburn-Black Diamond Rd., Kent-Black Diamond Rd., Lake Holm Rd., Thomas Rd., and Covington-Sawyer Rd. Some may be combined should the citizens agree. Each of these Committees will be comprised of five members. The Chair shall be an employee designated by the King County Department of Transportation (KCDOT), who, at the discretion of KCDOT, can chair multiple committees. The other members will include three citizens along the road in question and one representative of the Master Developer. The City of Black Diamond can send a *non-voting* representative to participate in Committee meetings. The Committees will be responsible for setting their goals and agendas. The express intent of

the Committees is to provide the Public a direct voice on potential impacts that could affect them, their property, and their quality of life. The Committees, at their own discretion, can develop and submit reports to the City on the type and timing of mitigations proposed by the Master Developer. The City will be the ultimate arbiter through the DAs, while KCDOT will be the ultimate permitting agency for any mitigation.

## **Organization**

The document is organized into *nine* sections and is fully referenced in each and includes intra-document [hyperlinks](#).

- 1. Introduction.**
- 2. Past Hearings/Decisions.** Recommendations, decisions, and ordinances.
- 3. MPD Ordinance COAs.** Text of all Transportation COAs with specific comments.
- 4. Development Agreements.** Major requirements with specific comments.
- 5. Technical Issues.** Key technical parameters/issues with applicability/comments.
- 6. Future Decision Points.** Important decision points and potential concerns.
- 7. Conclusions.** A framework to solve MPD traffic issues to ensure mitigation works.
- 8. Recommendations.** A set of recommendations and offered DA amendments.
- 9. References.** A list of all references cited in the document.

## **Glossary**

### **B**

BDCC--Black Diamond City Council

BDCP--Black Diamond Comprehensive Plan

BDMC--Black Diamond Municipal Code

### **C**

CFD--Community Facility District

### **D**

DA--Development Agreement

### **E**

ERU--Equivalent Residential Units

### **F**

FEIS--Final Environmental Impact Statement

### **G**

GMA--Growth Management Act

### **H**

HE--Hearing Examiner

### **I**

ITE--Institute of Transportation Engineers

ICR--Internal Capture Rate

### **K**

KCDOT--King County Department of Transportation

**L**

LOS--Level of Service

**M**

MDRT--Master Development Review Team

MPD--Master-Planned Development

MDNS--Mitigated Determination of Non-Significance

**P**

PHF--Peak-Hour Factor

PP1A--Preliminary Plat Phase 1A

PSRC--Puget Sound Regional Council

**S**

SEPA--State Environmental Policy Act

**T**

TDM--Traffic-Demand Model

TMP--Traffic Monitoring Plan

TIP--Transportation Improvement Program

**V**

v/c--Volume to Capacity Ratio

**W**

WSDOT--Washington State Department of Transportation

## 1. Introduction

This document deals with the transportation-related issues of the proposed Master-Planned Developments (MPDs) approved by the Black Diamond City Council (BDCC) in 2010 and their accompanying Development Agreements (DAs) approved by the BDCC in 2011. It covers the timeframe from the late 2009 Final Environmental Impact Statements (FEISs) through the Villages MPD Phase 1A (PP1A) approval in late 2012.

Ensuring transportation infrastructure meets both identified and future needs is both an economic issue and a quality of life issue. The long-term capital outlays and planning involved make this area probably the riskiest for City decision-makers. It is important to understand both the strengths and limitations of any and all contracts let out to Consulting Firms to conduct Transportation-related modeling, analyses, planing, estimates etc. This will directly help inform a myriad of future decisions on permits, mitigations required, funding mechanisms, and risks to the City and its residents.

Transportation--traffic impacts, costs, and infrastructure--was the most critical issue addressed in all MPD hearings to date comprising the most time, evoking much testimony, generating myriad concerns, and affecting a majority of the people. The reasons for this are clear, transportation simply entails the highest costs, largest risks, and longest lead times. Transportation issues also are of critical importance to both Black Diamond residents and surrounding communities. Consequently, this report has been compiled to provide a convenient source for a discussion of the technical issues, what has transpired, what decisions have been made, and what decisions are still to be made.

This document is meant to be used as a resource for key transportation issues, decisions, and plans. It is organized to provide decision-makers with easy access to information. In that sense it is more like an encyclopedia, not meant to be read from cover to cover, but rather to be used to find information quickly. To facilitate this the Table of Contents is *interactive*, making it easy to maneuver around the document. Throughout the Villages Master-Planned Development (MPD) numbering scheme was used, e.g., Ordinance Conditions of Approval (COAs), Development Agreement (DA) sections, etc.

Although every attempt has been made to minimize duplication, due to the “encyclopedic” nature and organization of this document, some duplication cannot be avoided. For example, the Traffic Monitoring Plan (TMP) is mentioned under many sections, as it was the subject of multiple hearings, ordinances, and agreements, as well as its importance to future decision-making. In such cases, only *one* detailed description has been provided (for the TMP that is found in sect. **6. Future Decision Points**) and other areas of mention are kept brief with reference to the more detailed description.

The document is organized into the *nine* sections listed below. The document is fully referenced within each section and includes intra-document [hyperlinks](#). Each reference is identified as: **[reference]**.

- 1. Introduction.** Provides the purpose and organization of the document.
- 2. Past Hearings/Decisions.** Details what has occurred to date including recommendations, decisions, and ordinances.
- 3. MPD Ordinance Conditions of Approval.** The text of all 25 Transportation COAs is provided in its entirety with specific comments on each.
- 4. Development Agreements.** Major transportation requirements are discussed.
- 5. Technical Issues.** Key technical parameters are described and specific technical issues are identified.
- 6. Future Decision Points.** Important decision points which lie ahead are described, along with potential concerns to be addressed.
- 7. Conclusions.** A set of conclusions point to several built-in protections which could ensure traffic mitigation works as designed and analyzed.
- 8. Recommendations.** A set of recommendations going forward are offered for consideration, as well as recommended Amendments to the Development Agreements (DAs).
- 9. References.** A list of all references cited within the document.



## **2. Past Hearings/Decisions**

***What has occurred to date and been decided?***

This section reviews MPD Hearings and recommendations and issued decisions therefrom that led to City Ordinances or Agreements. Five sets of Hearings (some combined per law) were conducted between March 2010 and December 2012:

1. March/April 2010 -- **Final Environmental Impact Statements (FEISs) State Environmental Policy Act (SEPA) Appeals**  
Presiding Body: City Hearing Examiner, Obrechts  
Result: Hearing Examiner issued decision finding the FEISs adequate.
  
2. March/April 2010 -- **MPD Permit Applications**  
Presiding Body: City Hearing Examiner, Obrechts and Black Diamond City Council  
Result: Hearing Examiner recommended conditional approval; Council issued conditional approval (Council conditions differed from Examiner's conditions).
  
3. July/August 2011 -- **Development Agreements**  
Presiding Body: City Hearing Examiner, Obrechts and Black Diamond City Council  
Result: Hearing Examiner recommended conditional approval; Council issued conditional approval (Council conditions differed from Examiner's conditions).
  
4. November/December 2012 -- **The Villages MPD Phase 1A SEPA Appeal**  
Presiding Body: City Hearing Examiner, Obrechts  
Result: Hearing Examiner issued conditional approval.
  
5. November/December 2012 -- **The Villages MPD Phase 1A Plat Application**  
Presiding Body: City Hearing Examiner, Obrechts  
Result: Hearing Examiner issued conditional approval.

### **FEIS SEPA Appeals Hearings**

The appeals of the FEISs resulted in Decisions by the HE who found the FEISs “adequate,” but wanting in many critical areas. Here are but a few (emphasis added):

*“...in several instances there are more accurate methodologies and assumptions available to ensure more complete mitigation.” [HE FEIS SEPA Decision, Conclusions of Law 15, p. 46]*

*“...there are definite advantages to using a more localized traffic model and the Examiner will address this in the conditions of approval recommended for the MPD.” [HE FEIS SEPA Decision, p. 6]*

*“...use of a 0.97 “peak hour factor” (“PHF”). This factor is used to measure variability during peak hour traffic and ultimately influences the amount of traffic projected for a project...The PHF was inflated and served to underestimate traffic impacts within intersections...sufficient evidence has been provided to require the use of a more mainstream factor as a condition of MPD approval.” [HE FEIS SEPA Decision, p. 6]*

*“If mitigation is determined to be unfeasible at the time the project will be built, then GMA [Growth Management Act] concurrency will prevent the development from proceeding.” [HE FEIS SEPA Decision, Conclusions of Law 10, p. 45]*

The State’s Growth Management Act (GMA) requires cities to adopt concurrency regulations which set traffic congestion standards and preclude a jurisdiction from approving projects which would violate those standards. However, cities are free to set those standards at any level, even gridlock. The Black Diamond Comprehensive Plan (BDCCP) provides for *relaxing* Level of Service (LOS) standards, if mitigation is too expensive. **[BDCCP, Chapter 7--Transportation, 7.9.2. Concurrency, Fig. 7-7. p. 7-45]** Thus, if the proposed mitigation is unaffordable or otherwise unattainable, the City can *reduce* its concurrency standards, possibly resulting in inadequate mitigation.

In addition, highways of statewide significance, like SR-169, the backbone of the region’s transportation infrastructure, are not *required* to meet concurrency. However, in 2012 the BDCC amended the BDCCP to *allow* such concurrency testing, thus giving the City an additional tool to help address traffic congestion.

## **MPD Permit Applications Hearings**

The MPD permit application hearings resulted in HE Recommendations to the BDCC. Following the March 2010 FEIS Appeals Hearings--which included extensive Expert Witness testimony from Traffic Consultants, WSDOT, and KCDOT--and the concurrent

MPD Application Hearings, the HE found the *foundation* of the entire traffic analysis wanting in many areas and the resulting analyses and traffic mitigations generated were flawed. This included the Traffic-Demand Model (TDM), which served as the basis for traffic analyses, as well as the evaluation of needed mitigation (emphasis added).

*“The conditions of approval require the Applicant to put together a local model that extends to all jurisdictions within the vicinity, but without the flaws in the Maple Valley model. The new modeling may prove to be costly, but it may also stave off litigation from Maple Valley and other interested parties, which would result in a significant savings to all involved. Most importantly, the new modeling will more accurately predict traffic impacts, which will be of a profound benefit to the quality of life of Black Diamond residents.” [HE MPD Application Recommendations, p. 2]*

*“As identified in Finding of Fact 5(B), the traffic modeling proposed by the FEIS is adequate from an environmental review standpoint but may yield more accurate results through a more localized model similar to that employed by Maple Valley. Greater accuracy in anticipated impacts will in turn provide for greater accuracy in the amount and timing of mitigation. A recommended condition of approval is the development of a more localized traffic model.” [HE MPD Application Recommendations, p. 152]*

*“Black Diamond and Maple Valley each made very compelling arguments that the traffic model of the other was deficient. The record is clear that neither model is optimally suited to predict traffic impacts for the Black Diamond community. The MPD, when completed, will have the effect of introducing the traffic of a new, small city to south King County. This scale of development justifies the creation of a project specific transportation demand model that accounts for all existing and planned local land uses, is validated for local traffic, contains an appropriately fine grained transportation analysis zone network, considers existing peak hour factors, considers both funded and unfunded transportation improvements that coincide with the build-out timeframe for the project, considers safety concerns, attempts to preserve the rural Heritage Corridor, provides a realistic mode split analysis for both transit and non-motorized uses and determines a reasonably accurate internal trip capture rate. Therefore, the project applicant will be required to create a new transportation model that incorporates all the controls identified above and subject that model to peer review and periodic updates.” [HE MPD Application Recommendations, p. 124]*

*“...[new] mitigation be added to the project either through the development agreement or processed as a major amendment to the MPD.” [HE MPD Application Recommendations, p. 124]*

*“The applicant shall create a new transportation model for this project which incorporates, at an appropriately fine level of detail, and at a minimum, the transportation network from the northern boundary of the City of Enumclaw on SR 169 through the City of Maple Valley to the northern limits of that city, and west to SR 167 in Auburn.” [HE MPD Application Recommendations, p. 193]*

*“The new model must contain a sensitivity analysis for the effect of projected peak hour factor assumptions and the varying consequences to project impacts and mitigation measures must be presented to the City and all affected jurisdictions.” [HE MPD Application Recommendations, p. 193]*

The HE also made specific comments on his FEIS “adequacy” Decision *vis-a vis* his MPD Application Recommendations (emphasis added):

*“**BDMC 18.98.080(A)(2):** Significant adverse environmental impacts are appropriately mitigated:*

*The criterion above is satisfied by imposition of the FEIS mitigation measures recommended by this decision in addition to the enhanced mitigation identified in Finding of Fact No. 5. In MPD Exhibit 114, p.3, the Applicant essentially asserts that the FEIS precludes any further discussion of environmental impacts under the criterion above. This is incorrect. Although not directly addressed in the context of an EIS, the courts have ruled that a mitigated determination of nonsignificance does not preclude an additional finding of significant environmental impacts if relevant to permitting criteria. Even with the issuance of an EIS, an applicant must still comply with all permitting criteria. The review standard for an FEIS is significantly different than that under MPD permit review. As noted in the FEIS decisions, the Examiner must give substantial weight to the determination of the SEPA responsible official in assessing the adequacy of an EIS. By contrast, the factual findings made by the City Council in finding compliance with MPD criteria must be supported by substantial evidence. As discussed in Finding of Fact No. 5, there are some environmental impacts that have been adequately mitigated under the rule of reason standard for the EIS but nonetheless do not provide the most effective or comprehensive mitigation. For the reasons discussed in Finding of Fact No. 5, there is substantial evidence to justify the enhanced mitigation identified in Finding of Fact No. 5, including but not limited to revised traffic modeling,....*

*While the Applicant may point to the FEIS as prohibiting additional environmental mitigation, the SEPA Appellants may point to the necessity for additional mitigation as evidence that the FEIS was not adequate. In addition to the reasons set forth in the FEIS on adequacy, a reviewing court should also consider the policy ramifications of undercutting a determination of adequacy because additional study and mitigation is imposed. Due to the hundreds of hours of legal, examiner and staff time involved in these proceedings, the MPD hearings have cost well into the hundreds of thousands of dollars. A finding of inadequacy would require the City to go through the entire MPD hearings again. As recommended by the Examiner, significant additional mitigation would be treated as an amendment to the MPD applications so that the public would have an opportunity to comment on the new mitigation and a clear avenue of appeal would be available to those opposed to the changes. Using the amendment process avoids going through the entire review process again. Given that the traffic...study and mitigation would create discrete and fairly isolated project impacts - traffic changes would be almost entirely exterior to city limits - the segmentation of this review process would not undermine the cumulative nature of SEPA review.” [HE MPD Application Recommendations, pp. 153-154]*

Although the HE ruled the FEISs “adequate,” he recommended specific Conditions on the MPD Applications (emphasis added):

*“11. The applicant shall create a new traffic model for this project which incorporates. at an appropriately fine level of detail. and at a minimum. the transportation network from the northern boundary of the City of Enumclaw on SR 169 through the City of Maple Valley to the northern limits of that city” and west to SR 167 in Auburn, External trips may be captured by any valid methodology including overlaying the new model onto the existing Puget Sound Regional Council transportation model. The new model must be validated for existing traffic.” [HE MPD Application Recommendations, p. 193]*

*“16. The resulting project impacts and mitigations must be integrated into the development agreement or processed as a major amendment to the MPD prior to City approval of any implementing projects.” [HE MPD Application Recommendations, p. 194]*

*“17. The intersections needing mitigation as identified in the analysis required above shall be monitored under a Transportation Monitoring Plan which shall be incorporated into the Development Agreement for the MPD, with each designated improvement being required at the time defined in the Monitoring Plan. The Monitoring Plan shall require that improvements*

*be constructed with development in order to bring mitigation projects into service before the Level of Service is degraded below the City's standard.”*  
**[HE MPD Application Recommendations, p. 194]**

Following the HE's *open-record* MPD Application Hearings the BDCC held *closed-record* MPD Application Hearings, which resulted in Decisions in the form of MPD Ordinances (10-946 and 10-947, The Villages and Lawson Hills MPDs, respectively).

Both the HE's FEIS Appeals Decision and concurrent MPD Applications Recommendations served as the bases for the MPD Applications Decisions by the BDCC in the form of MPD Ordinances. The HE recommended a set of 25 Transportation-specific Conditions of Approval (COAs) to address the Traffic-Demand Model, Analyses, and Mitigation shortcomings found during the FEIS Appeals Hearings. However, in the subsequent MPD Ordinances, the BDCC did not adopt some of the HE's recommendations--which were directly based on myriad technical concerns expressed by the Expert Witnesses--and modified several others. As a result, problems remain which directly impact the analyses of future phases, thus imposing potentially higher risks and higher costs to the City.

The major issue left unaddressed is lack of a validated traffic-demand model to provide predictions, reduce risk, and lend certainty to understanding impacts on the City's and region's transportation infrastructure. Consequently, there is a lack of reliable forecasts of what future scenarios could look like and what mitigations might even work.

Section **3. MPD Ordinance COAs** provides a review of all 25 Transportation COAs.

## **Development Agreements Hearings**

In July 2011 the Hearing Examiner (HE) conducted *open-record* hearings into the MPD Development Agreements (DAs). These were immediately followed by *closed-record* hearings conducted by the City Council, which resulted in Decisions in the form of Ordinances (11-970 and 11-971, The Villages and Lawson Hills DAs, respectively).

In the HE's open-record hearings comments related to transportation dominated--representing over a *fifth* of the total testimony. Issues of major import were: Traffic

Demand Model (timing and assumptions); Transportation Concurrency; South Connector Road; Construction Traffic; Non-Motorized Users; Transit, Vehicle Trip Reduction and the Reduction of Greenhouse Gasses; and Project Phasing, but most could not be argued at the DA stage due to the City Council-approved MPD Ordinances and accompanying Conditions of Approval. However, the HE did find problems with the Traffic Monitoring Plan and Transportation Concurrency testing (emphasis added):

*“Nothing in the DA monitoring plan requires any concurrency during review of implementing projects. The traffic monitoring plans, Ex. F to both DAs, require that the timing of construction be determined for each MPD phase prior to the submission of any implementing permit applications for those phases. The plans are prepared by YB and must set out the timing of construction for traffic improvements. Construction of improvements is required to commence prior to LOS failure for projects within the City, and engineering plans must be completed prior to LOS for projects outside the City. For projects affecting roadways with an already failed LOS, the construction or engineering and design must commence before traffic impacts become worse. However, nothing in the monitoring plan requires concurrency review for implementing projects. Nothing requires that the City deny any implementing project applications that fail to meet concurrency.” [HE Development Agreement Recommendations, September 2011, p. 83]*

*“The DA traffic modeling [HE typo, should have been “monitoring”] plan lacks assurances that traffic mitigation will comply with GMA mandated concurrency requirements.” [HE Development Agreement Recommendations, September 2011, p. 82]*

*The Examiner went further into detail in an ADDENDUM (emphasis added) [HE Development Agreement Recommendations ADDENDUM, B. Recommendation, September 2011, pp. 4-5]:*

*“As discussed in the Examiner's Response to concerns over the traffic monitoring plans for the DAs, DA Ex F, the traffic monitoring plans set up detailed timing requirements for infrastructure improvements that are not linked to implementing project level concurrency assessments. Nothing in the monitoring plans suggests construction of traffic infrastructure will be superseded by the concurrency findings required by DA 11.1.”*

*“Further, the phasing plan adopted by V COA 3 states that the timing of traffic infrastructure is set by the traffic monitoring plans, with no mention of a superseding concurrency provision such as DA 11.1. Given the difference in specificity between the general requirements of DA 11.1 on the one hand and the detailed timing provisions in the traffic monitoring and phasing plans on the other, DA 11.1 is vulnerable to an interpretation that the timing established in the traffic monitoring plan satisfies the timing requirements of DA 11.1, even though they may not meet the timing requirements of GMA traffic concurrency adopted into the City’s comprehensive plan and contemplated by BDMC 19.98.080(A)(4).”*

*“...it is recommended that the [traffic] monitoring plan be amended to make it clear that GMA traffic concurrency review shall supersede any conflicting timing identified in the monitoring plan.”*

Thus, no implementing project should be approved unless Concurrency requirements are met and such concurrency testing should supersede any conflicting timing in the traffic monitoring plan. The State’s GMA *requires* the City ensure each Implementing Project satisfies concurrency. So, *at each stage*, mitigation projects should be funded and included in the 6-yr Transportation Improvement Plan (TIP) so that LOS requirements are met. The Traffic Monitoring Plan should address and incorporate such concurrency requirements.

Finally, the DAs don’t specify what specific steps will be taken to implement *additional* mitigation should traffic analyses and monitoring show planned mitigation is inadequate.

The DAs resulted in Recommendations by the HE to the BDCC. There were two transportation-specific recommendations ***[HE DA Recommendations, IX. Recommended Implementing Conditions]***:

*“T. City Approval of Traffic Reports. The DA traffic monitoring plans, DA Ex. F, should be revised to require City approval of all traffic monitoring reports.”*

*“U. Project Level Concurrency. The DA monitoring plans, Ex. F, should be revised to provide that the City will not approve any implementing projects unless they comply with GMA concurrency requirements as adopted into the City’s concurrency regulations.”*

The BDCC accepted the former, but ignored the latter:



“City Approval of Traffic Reports” was included in the DAs approved by the BDCC. The DAs state the “designated Official” approves:

*“...all documents that result from the Traffic Monitoring Plan, including traffic monitoring reports, are required to be ‘submitted to the designated Official for approval.’ ” [Development Agreement, Exhibit F--Traffic Monitoring Plan, Para. B--Report Requirements, p.3].*

This is important, because it gives the City control over the traffic monitoring and, thus, the interpretation and use of the results therefrom.

“Project Level Concurrency;” however, was ignored in the BDCC-approved DAs. **[Development Agreement Exhibit F--Traffic Monitoring Plan, Para. A--Required Timing for Modeling, p.1]** This could lead to legal ramifications, especially given the strength of the HE’s recommendations and the cogency of his arguments.

**RECOMMENDATION:**  
**Address project-level concurrency by conducting Transportation Concurrency testing for each implementing project (in conjunction with review of Traffic Monitoring results) to better align the timing of needed traffic mitigation.**

Following approval of the DAs some open issues remained in which three MPD COA requirements should be reviewed for compliance:

1. **COA 10:** To specify the mechanism for credits or cost recovery.
2. **COAs 10, 17 (partial), and 18:** To establish pro-rata shares of transportation mitigation projects and provide a Financial Plan for same to cover the costs of added traffic mitigation that could result from HE’s Transportation Concurrency recommendations.
3. **COA 34:** Identify which traffic projects will be built by the developer and by the City.

The BDCC approved the DAs **[The Villages MPD DA Ordinance 11-970, November 2011]** (See [sect. 4. Development Agreements](#) for a full discussion.)

## The Villages Phase 1A SEPA and Plat Application Hearings

The City of Black Diamond issued a Mitigated Determination of Non-Significance (MDNS) for the Villages MPD Preliminary Plat Application Phase 1A (PP1A). **[MDNS, The Villages MPD PP1A, BD City Staff, August 31, 2012]**

PP1A was appealed by citizens. Transportation issues addressed in the SEPA Appeal Hearing included: Traffic Safety, School Traffic, Construction Traffic, Traffic-Demand Model, Traffic Impact Analyses, and Rock Creek Bridge Pedestrian Crossing.

The HE issued a Decision that approved PP1A with no additional Transportation conditions, save for a major condition requiring a Rock Creek Bridge Pedestrian Crossing. The HE decided that all other transportation issues could not be revisited, because the BDCC past “*modification*” decisions were “SEPA” decisions. For example, the HE found the following with respect to the Traffic-Demand Model and Traffic Impact Analysis (emphasis added) **[HE Villages MPD PP1A Decision, December 2012, pp. 34-35]:**

*”All of the transportation COAs found within the FEIS adequacy determination serve to mitigate transportation impacts that the Examiner determined were not adequately addressed in his decision on the FEIS adequacy appeal. In particular, the conditions regarding the transportation model address the significant concern of the Examiner that the transportation model in use by the City is inadequate in both its initial construction and many of its modeling assumption and may not sufficiently address transportation impacts in the FEIS. Consequently, the transportation COAs pertaining to this SEPA appeal issue (III(D)(1)) are construed to be “modifications” to the mitigation recommended in the FEIS under Villages MPD COL 28(A) and, therefore, were imposed through the City Council’s SEPA substantive authority.*

*The FEIS extensively addressed the transportation model and its assumptions. The Council chose, in an exercise of SEPA substantive authority, to implement the Examiner’s FEIS conditions but to limit their application until the City had issued 850 building permits. The present PP1A SEPA determination cannot be used to modify the past SEPA determination with respect to the FEIS and Villages MPD. The Appellants*

*arguments regarding the transportation model and the modeling assumptions therein are an impermissible collateral attack on prior policy decisions, namely the MPD Permit Approval Ordinance 10-946.”*

However, there were some transportation conditions attached to the Mitigated Determination of Non-Significance (MDNS) that became part of the PP1A Decision [**City of Black Diamond Villages MPD PP1A Staff Report, Section VIII. -- Staff Recommendations, October 12, 2012**]:

5. Prior to final plat approval of any division within the Phase 1A Preliminary Plat, the proponent shall re-channelize the south leg of the intersection of SE 288th St and 216th Ave SE to provide a refuge/merge area for westbound left-turning vehicles.

17. Prior to issuance of certificates of occupancy for the 726th ERU (equivalent residential unit), the proponent shall construct a single-lane roundabout at the realigned intersection of Lake Sawyer Rd SE and SE Auburn-Black Diamond Rd (Roberts Dr).

18. Prior to issuance of certificates of occupancy for the 327th ERU, the proponent shall install a traffic signal at the intersection of SE Auburn-Black Diamond Rd (Roberts Dr) and Village Pl SE (aka Main St).

19. Prior to the issuance of certificates of occupancy for the 1,128th ERU, the proponent shall construct a single-lane roundabout at the intersection of SE Auburn-Black Diamond Rd (Roberts Dr) and Villages Parkway SE (aka Community Connector “A”).

Probably the most important transportation-related action resulting from the PP1A SEPA Appeal was a massive generation (in a short time) of analyses, memos, and reports. Immediately prior to the MDNS issuance and through the Appeal itself, several traffic analyses were conducted and reports generated as a direct result of the Appeal and subsequent Briefs, Replies, and Responses. These included: traffic impact analyses, construction trip analyses, Green Valley Rd traffic analysis (all are listed in [sect. 9. References](#)). Such documentation could serve as the *minimum* types of analyses needed in subsequent Phases.

Although PP1A does not impose a *major* impact on traffic, the subsequent phases most likely will, especially *cumulatively*. Full build-out to 6,050 homes, 1.15 M sq ft of

commercial/office space, and 7 schools will strain nearly every major road and many minor arterials within a 10-mi radius of Black Diamond. Impacts on SR-169, which will undergo 20+ years of construction by both the City of Maple Valley and the Applicant, could prove to be the greatest.

There also will be impacts on Auburn-Black Diamond Rd, Lake Sawyer Rd, Issaquah-Hobart-Ravensdale-BD Rd, and several local roads many people use *today* to avoid the *existing* pre-MPD traffic. Today and for the next several years, at least, King County has precious little funds to do anything but basic maintenance of some of its roads. In fact, that is exactly the policy it has articulated through its Tier 1 thru 5 road rating system. **[King County Tiered Service Levels: <http://www.kingcounty.gov/transportation/kcdot/Roads/NewServiceLevels.aspx>]** State and Federal highway funds are not in much better shape and for the time being will continue to be focussed on major thoroughfares near Seattle.

## **Black Diamond Comprehensive Plan**

In late 2012 the Black Diamond City Council (BDCC) approved an amendment to Black Diamond Comprehensive Plan (BDCCP) Chapter 7--Transportation, Transportation Concurrency for SR-169, which allows the City to require (if it chooses to do so) all development proposals meet transportation concurrency on SR-169 to Level of Service (LOS) standards **[BDCCP, Chapter 7--Transportation, 7.2.2. LOS and Concurrency]**. This could solve a dilemma the HE raised in his DA Recommendations:

*“The only methodology available to the City to correct project-created impacts to the LOS of state-owned facilities is to limit the density of the MPDs. The MPD COAs have already authorized the density for the MPD; and therefore this remedy is no longer available.” [HE Development Agreement Recommendations, September 2011, p. 86]*

What *concurrent with development* means is that all transportation infrastructure must be in place to meet a development's impacts. Should a development proposal's

mitigation not meet or exceed SR-169 LOS standards (set by the City in consultation with WSDOT), that proposal can be denied outright. In fact, BDCP section 7.2.2 states:

*"To ensure that future development will not cause the City's transportation system performance to fall below the adopted LOS, the jurisdiction must do one or a combination of the following: modifying the land use element, limiting or "phasing" development, requiring appropriate mitigation, or changing the adopted standard." [BDCP, Chapter 7--Transportation, 7.2.2. LOS and Concurrency, p. 7-3]*

**RECOMMENDATION:**  
**Transportation Concurrency should be rigorously enforced to ensure traffic mitigation is both timely and adequate.**

### 3. MPD Ordinance Conditions of Approval *What has been embodied in law?*

This section provides a complete review (with emphasis added) of each of the 25 Transportation Conditions of Approval (COAs) in the Villages MPD Ordinance [***The Villages MPD Ordinance 10-946, September, 2010***]. Unofficial titles (in parentheses) were assigned to each COA to aid the reader. There is oftentimes a complex interaction between COAs, which makes it difficult to follow the flow of events.

**RECOMMENDATION:**  
**Develop a Flow Chart of all 25 Transportation COAs, especially COA 17 and its 10 subsections and share same with affected cities, KCDOT, and WSDOT.**

#### **COA 10 (Infrastructure Plan)**

*“Over the course of project build out, construct any new roadway alignment or intersection improvement that is:*

*(a) depicted in the 2025 Transportation Element of the adopted 2009 City Comprehensive Plan and in the City's reasonable discretion is:*

*(i) necessary to maintain the City's then-applicable, adopted levels of service to the extent that project traffic would cause or contribute to any level of service deficiency as determined by the City's adopted level of service standard, or  
(ii) to provide access to or circulation within the project;*

*(b) functionally equivalent to any said alignment or improvement; or*

*(c) otherwise necessary to maintain the City's then-applicable, adopted levels of service to the extent that project traffic would cause or contribute to any level of service failure as determined by the City's adopted level of service standard, or to provide access to or circulation within the project, as determined by the City in its reasonable discretion based on the monitoring and modeling provided for in Conditions 25 and 20 below.*

*The Development Agreement shall specify for which projects the applicant will be eligible for either credits or cost recovery and by what mechanisms this shall occur. Any "functionally equivalent" realignment that results in a connection of MPD roads to Green Valley Road shall be processed as a major amendment to the MPD.”*

#### **Comments:**

1. For a detailed discussion of “adopted levels of service standard” see [sect. 6. Future Decision Points, Vesting](#).

2. The phrase “functionally equivalent” is used throughout the COAs. Although the Black Diamond Municipal Code **[BDMC 18.98]** discusses functional equivalency, it is recommended the City ensure that such definitions are firmly set going forward.

### **COA 11 (Traffic Demand Model)**

*“The City shall create, at the expense of the Applicant, a new transportation demand model for this project for use in validating the distribution of project traffic at the intervals specified in Condition No. 17. The new model shall incorporate, at an appropriately fine level of detail, and at a minimum, the transportation network from the northern boundary of the City of Enumclaw on SR 169 through the City of Maple Valley to the northern limits of that city. The new model shall include the intersections studied in the FEIS, together with the following additions: all existing principal and minor arterials in Black Diamond, Covington and Maple Valley and the unincorporated areas between these cities and specifically including the Kent-Black Diamond Road; additional study intersections at SE 231st Street/SR 18 westbound ramps, SR 169/SE 271st Street and SR 169/SE 280th Street in Maple Valley. External trips may be captured by any valid methodology including overlaying the new model onto the existing Puget Sound Regional Council transportation model. The new model must be validated for existing traffic, based on actual traffic counts collected no more than two years prior to model creation. Key to the success of the new model is a well-coordinated effort and cooperation among the cities of Black Diamond, Maple Valley and Covington, the Applicant, King County and the Washington State Department of Transportation. Although the specific assumptions ultimately made in the model may be the subject of differences in professional judgment, the City Council’s goal is that, notwithstanding these differences in judgment, the model will be comprehensive and therefore acceptable to all parties. The City Council therefore directs staff in preparing the model to work within the spirit of openness and cooperation with these other agencies and the Applicant, and similarly requests that other agencies and the Applicant join with the City of Black Diamond staff in working together in the same spirit for the common good.”*

### **Comments:**

1. The first sentence uses the term “validating” with respect to modeling phenomena. The actual intent is “analyzing.” A model is “validated” to determine its capability to predict real-world outcomes and to improve upon its assumptions and construct details for subsequent “analyses.”
2. The new Traffic Demand Model (TDM) is critical to predicting future traffic distribution and volumes leading towards adequate and timely traffic mitigation. As

such, the phrase “*the model will be comprehensive and therefore acceptable to all parties,*” is important both in interpretation and follow-through. While working in “*spirit*” is admirable, the City should ensure it has a viable working model that is agreeable to all parties affected: Black Diamond, Maple Valley, Covington, the Master Developer, KCDOT, and WSDOT. One way to do this is to establish a TDM Advisory Board and invite each entity above to provide a representative.

**RECOMMENDATION:**

**Establish a Traffic-Demand Model Advisory Board comprised of representatives from all affected entities--Black Diamond, Maple Valley, Covington, the Master Developer, KCDOT, and WSDOT--to periodically review progress on the new model and make final recommendations on its suitability.**

**COA 12 (Traffic Demand Model)**

*“The new demand model must take into account recent traffic counts, current and proposed land uses as defined in the applicable Comprehensive Plans areas covered in the study area, and existing speed limits on all roadway links included in the model's roadway network. The model must be run with currently funded transportation projects for each affected jurisdiction as shown in the applicable 6-year Transportation Improvement Plans and with transportation projects shown in the applicable 20-year Transportation Improvement Plans which projects are not funded but are determined to have a reasonable likelihood of obtaining funding based on consultation with each jurisdiction.”*

**Comments:**

1. Although one can make assumptions about projects that “*have a reasonable likelihood*” of being funded out 20 years, should such projects not eventually receive funding, the analyses could *optimistically* show full mitigation will be realized. Because City, County, and State transportation budgets are so tight and project funding liquid, this could be the new normal. According to Puget Sound Regional Council's (PSRC's) *Transportation 2040* there will not be any *external* funding of large mitigation projects in the north-south SR-169 corridor between Maple Valley and Enumclaw at least out to 2040 (see [sect. 6. Future Decision Points, Funding](#)). Since the Master Developer intends to provide *minimal* mitigation funding itself,



reliance on public Community Facility Districts (CFDs), if permitted, would be necessary. This could result in home builders having to inordinately raise the price of their housing to cover the mitigation costs imposed on the CFDs.

### **COA 13 (Mode-Split Analysis)**

*“The new model must contain a mode split analysis that reflects the transit service plans of Sound Transit, King County Metro and any other transit provider likely to provide service in the study area. This mode split analysis should include an estimate of the number of project residents likely to use the Sounder and to which stations these trips might be attributed. This analysis must be presented to the City, the applicable transit agencies, and the jurisdictions in which trips are likely to use park and ride, Sound Transit parking garages or other facilities.”*

#### **Comments:**

1. A “*mode split analysis*” is important, but it becomes a kind of “*chicken-or-egg*” scenario where sufficient users are needed to justify any type of mass transit service, yet transit service is one incentive feature needed to attract prospective residents and businesses.
2. King County Metro recently eliminated bus service near the Villages MPD Phase 1A along Auburn-Black Diamond Rd. It should be considered whether to ensure adequate transit service is restored and expanded to soften the impacts on local roads as the MPDs build out.

### **COA 14 (Internal Capture Rates)**

*“The new model must include a reasonable internal trip capture rate assumption. The assumed internal trip capture rate must be based upon and justified by an analysis of the internal trip capture rates suggested by the currently applicable ITE publication as well as information concerning actual internal trip capture rates in other master planned developments with similar land use mixes in Western Washington. Any subsequent revisions to the model should include the realized trip capture rates for the project, if available.”*

**Comments:**

1. The “*internal trip capture rate (ICR) assumption*” impacts trip distribution and the resulting traffic volume analyses. The critical part is *how* the methodology for choosing the final ICR is “*justified.*” One way to ensure the fidelity of the ICR is through a Sensitivity Analysis to determine how traffic distribution and volume fluctuate with different ICR assumptions.

**RECOMMENDATION:**  
**Conduct Internal Capture Rate Sensitivity Analyses to ensure the fidelity of assumptions as traffic distribution and volume fluctuate.**

2. Studying “*actual ICRs in other MPDs*” is useful, as they often can be *overestimated* (i.e., *external traffic is underestimated*) during initial studies supporting EISs.

**COA 15 (External Traffic Mitigation Agreements)**

*“Intersection improvements outside the City limits may be mitigated through measures set forth in an agreement between the developer and the applicable agency. Where agreement is possible, the developer shall enter into traffic mitigation agreements with impacted agencies outside the city that have projects under their jurisdiction in the list below, and the agreement shall be incorporated as part of the Development Agreement, or as an addendum to an adopted Development Agreement. Any agreement so incorporated supersedes all other conditions and processes that may set mitigation measures and that are contained in the MPD Conditions or Development Agreement. If an agreement is not reached, the projects identified below shall be added to the regional project list and included as part of the Development Agreement, and the developer and the City shall agree on reasonable time frames for construction (for projects located within the City of Black Diamond and subject to Condition No. 10), or Applicant payment of its proportional costs toward construction of projects located outside of the City of Black Diamond.”*

**Comments:**

1. No comment, as Transportation Mitigation Agreements were reached with both the cities of Covington and Maple Valley. Consequently, there is no further action required by the City as it relates to this COA. However, the City should consider monitoring progress--design, funding, schedule--on the Transportation Mitigation Agreements,

since road improvements made outside the City will both directly and indirectly affect Black Diamond commuters and the movement of the City's goods and freight.

2. Of particular concern are changes that might be necessitated by subsequent traffic analyses using the new model, as well as results from Traffic Monitoring program (COA 20). Such timely information should inform outside mitigation, to avoid additional commuting bottlenecks, especially with *staid* Transportation Mitigation Agreements (the only exception is that Maple Valley can appeal over construction traffic impacts). This is partially rectified by COA 17b:

*“If the findings and conclusions determine that the then-existing, adopted PM peak hour LOS will not be met, they shall also determine whether the projects set forth in Conditions 15 and 16 above adequately mitigate the impacts resulting from the failure to meet the adopted LOS. If the findings and conclusions determine that failure to meet adopted transportation LOS will not be adequately mitigated, they shall also recommend such additional measures necessary to adequately mitigate the impacts reasonably attributable to the MPD projects' failure to meet the adopted LOS.”*

#### **COA 16 (External Traffic Mitigation Agreements)**

*“If (a) the City of Maple Valley does not appeal or challenge the MPD Approval for the Villages MPD, (b) the City of Maple Valley does not appeal or challenge the MPD Approval for the Lawson Hills MPD, (c) the City of Maple Valley does not appeal or challenge the Development Agreement for the Villages MPD, (d) the City of Maple Valley does not appeal or challenge the Development Agreement for the Lawson Hills MPD, the Applicant shall provide the following mitigation for the City of Maple Valley, which as to the identified mitigation supersedes [sp] the mitigation projects listed for the City of Maple Valley in Condition 15 above. For purposes of this condition, the percentage of the mitigation project to be contributed by the Applicant to the City of Maple Valley is shown for each project. All references to percentages constitute the combined contribution share of the Villages and Lawson Hills projects.”*

#### **Comments:**

1. [See Comments under COA 15. above.]

## COA 17 (Traffic Impact Analysis and Mitigation)

COA 17 and its many subparts a. thru j., possibly the most critical and certainly the most intricate Transportation COA, are provided below, along with full comments.

a. *“At the point where building permits have been issued for 850 dwelling units at the Villages and Lawson Hills together, and again at such phase or interval determined by the City Council following completion of the review called for by this condition, the City shall validate and calibrate the new transportation demand model created pursuant to Condition 11 above for the then-existing traffic from the Villages and Lawson Hills together. The calibration may include an assumption for internal trip capture rates as set forth in Condition 14 above, rather than actual internal trip capture rates, if an insufficient amount of commercial development has been constructed at the time of the validation/calibration required herein. The City shall then run the model to estimate the trip distribution percentages that will result from the next upcoming phase or interval of MPD development, and to assign the estimated trips from that phase or interval to the intersections identified in Condition 11 above.”*

### Comments:

1. This describes the “*validation*” and “*calibration*” of the TDM that is under development, as well as its use to determine trip distribution and volume.
2. The “*850 dwelling units*” threshold for completion, validation, and use of the new TDM essentially exempts The Villages MPD Phase 1A from any traffic analyses based on the *new* TDM and set of assumptions.
3. The phrase “*at such phase or interval determined by the City Council ... the City shall validate and calibrate the new transportation demand model*” provides the City with flexibility as to *when* and *how often* the TDM should be validated to ensure it is generating information that tracks reality. This is a cyclic process in which model results are confirmed (i.e., validated) and the model’s attributes and/or assumptions are adjusted (i.e., calibrated), accordingly, striving towards convergence.
4. The phrase “*The calibration may include an assumption for internal trip capture rates as set forth in Condition 14 above, rather than actual internal trip capture rates, if an insufficient amount of commercial development has been constructed at the time of the validation/calibration....*” could allow unproven ICRs to be used. Since ICRs have a direct influence on the evaluation of traffic volume, trip distribution, travel

times, and queue lengths, they are, possibly, one of the most important assumptions that feed the Traffic-Demand Model.

**b.** *“Using the trip distribution and trip assignment yielded by the transportation demand model validation and calibration required in subsection (a) above, the City shall conduct an intersection operations analysis of the transportation levels of service (LOS) for the intersections identified in Condition 11 above, and shall issue findings, conclusions and a recommendation as provided below. The intersection operations analysis shall determine whether then-existing, adopted PM peak hour intersection levels of service are met, and whether the then-existing, adopted PM peak hour intersection levels of service are projected to be met by the time of the next validation/calibration/operations analysis identified by the City Council pursuant to subsection (a) above. The intersection operations analysis for existing conditions must take into account the then-existing peak hour factor; the analysis for the next identified phase or interval of development must be based on a reasonable assumption (justified by reasonable traffic engineering practice) as to the future peak hour factor, and contain a sensitivity analysis to identify the effect of such peak hour factor assumption. If the findings and conclusions determine that the then-existing, adopted PM peak hour LOS will not be met, they shall also determine whether the projects set forth in Conditions 15 and 16 above adequately mitigate the impacts resulting from the failure to meet the adopted LOS. If the findings and conclusions determine that failure to meet adopted transportation LOS will not be adequately mitigated, they shall also recommend such additional measures necessary to adequately mitigate the impacts reasonably attributable to the MPD projects' failure to meet the adopted LOS.”*

**Comments:**

1. This describes using the TDM-generated trip distribution and volume in traffic analyses to determine intersection LOSs.
2. Intersection LOSs are to be evaluated both at the time of the TDM's *first* validation and calibration and projected for the time in the future at the TDM's *next* validation and calibration.
3. The “*then-existing peak hour factor*” is to be used, while a reasonable and justified “*then-existing peak hour factor*” shall be assumed to project LOSs for the *next* interval of development. The latter includes a Sensitivity Analysis to better understand the effects of changing PHFs.

4. Recommendations for “*additional measures*” are to be made to ensure traffic impacts are adequately mitigated (for timing, see COA 17 and COA 25). However, although such recommendations could include mitigation external to the City, there is no apparent linkage to fixed Maple Valley or Covington Traffic Mitigation Agreements.

**RECOMMENDATION:**  
**Determine legal means to affect Maple Valley and Covington Traffic Mitigation Agreements should Peak-Hour Factor sensitivity analyses result in recommendations to modify mitigation.**

*c. “The review identified in subsections (a) and (b) above, may be performed concurrent with a preliminary plat application held on either the Villages or Lawson Hills implementing plat, and the City review may incorporate relevant portions of any SEPA documents prepared for the implementing plat which analyze cumulative MPD impacts.”*

**Comments:**

1. The phrase “*may be performed*” allows the review stipulated in COA 17a and 17b at time of a preliminary plat approval, but only after the 850-dwelling unit threshold has been met. This effectively exempted The Villages MPD Phase 1A.

*d. “When the review thresholds identified in subparagraph a. above have been reached, the City shall issue written notice to the Master Developer(s) to each submit within 90 days review documentation summarizing their respective project impacts and compliance with mitigations and conditions to date, as well as any additional information the City deems necessary to perform the transportation demand model validation/calibration and/or intersection operations analysis. In addition, the Master Developer(s) shall each pay a proportionate share of the validation/calibration/operations analysis costs incurred by the City. If a Master Developer fails to submit satisfactory periodic review documentation regarding its project within the 90-day period after notice has been issued as required herein, further permits shall not be approved for that MPD until the required documentation has been submitted.”*

**Comments:**

1. This provides flexibility to the City to evaluate *planned* traffic mitigation adequacy.

2. All costs validation/calibration and analysis are borne by the Master Developer(s).
3. The last sentence should have included approval: “...until the required documentation has been submitted and approved.”
4. COA 17f below describes what the City does with these results.

e. “Not later than 90 days following the City's completion of the validation/calibration/operations analysis, the City Director of Community Development shall consult with other affected jurisdictions as to the review analysis results, obtain any input such jurisdictions wish to provide, issue the City's proposed findings, conclusions and recommendation, and at the close of the 90-day period, the City shall meet with the Master Developer(s) to review the proposed findings, conclusions and recommendation and identify what improvements the Master Developer(s) plans to construct. Within 14 days of the City meeting with the Master Developer(s), the City shall finalize its findings, conclusions and recommendation and shall provide mailed notice to all Parties of Record on the Villages MPD and/or the Lawson Hills MPD that the review has been issued.”

**Comments:**

1. This provides a tight timeline which could be subject to much interpretation and conflict in the future: Within the same “90-day period” the City:
  - (a) “(S)hall consult with other affected jurisdictions” on COA 17a and 17b results (this should include both KCDOT and WSDOT);
  - (b) “(O)btain any input such jurisdictions wish to provide;”
  - (c) Use such input to conduct additional analyses (this is inexplicably omitted and no process to do such analyses is described); and
  - (d) Meet with the Master Developer(s) and “*identify what improvements the Master Developer(s) plans to construct.*”
  
2. Fourteen (14) days thereafter, the City will release its final “*findings, conclusions and recommendation.*” This appears to be unduly time-constrained and could prove difficult to complete. Such analyses should not be rushed and should be peer reviewed possibly by the TDM Advisory Board suggested under COA 11 Comments.

f. *“The City's demand model validation and calibration called for by subsection (a) above, and the intersection operations analysis called for by subsection (b) above, (the “periodic review analysis”) shall result in written findings and conclusions plus a recommendation for new future permit conditions and mitigations for the Villages and/or Lawson Hills, as required. Proposed conditions and mitigations applicable to future permits and associated mitigation within either or both projects shall be revised if the City finds that the conditions or mitigation measures imposed pursuant to the City's standards in effect at the time of MPD approval have resulted in an unsatisfactory level of mitigation, either because the degree of mitigation is inadequate or the quantity of impact demonstrated to be attributable to MPD development exceeds levels predicted. New permit conditions and mitigations imposed for cumulative impacts through the periodic review process shall comply with the following standards and limitations:”*

**Comments:**

1. Following the review in COA 17a. and 17b. *“(p)roposed conditions and mitigations applicable to future permits”* can be revised, if MPD approval *“conditions or mitigation measures”* have proved to be inadequate.
2. The periodic review process can result in *“(n)ew permit conditions and mitigations imposed for cumulative impacts”* using the guidelines identified in the following COA 17f subsections. This could necessitate the City prove the MPDs are causing future traffic problems.

**RECOMMENDATION:**

**Review COA 17f (i. thru v.) language calling for the City to *prove* the MPDs are *causing* future traffic problems, as well as the specific triggers for new standards, requirements, modifications, conditions, and mitigations.**

3. See [sect. 6. Future Decision Points, Vesting](#) for discussion of possible conflicting language.



i. *“No new standards or requirements shall be imposed upon property in any plat recorded within 60 months of MPD approval to the extent that such standards or requirements would affect infrastructure serving said property also constructed within the 60-month timeframe.”*

**Comments:**

1. The analysis results and recommendations from COAa 17a. through 17f cannot alter any transportation infrastructure built “*within 60 months of MPD approval*” (Sept. 2010 through Sept. 2015). While the affect on The Villages Phase 1A is moot (due to the 850-dwelling unit threshold “exemption”), this could affect any other Phase’s transportation infrastructure built *prior* to September 2015.

ii. *“Performance standards more stringent than those contained in the original MPD permit shall not be imposed.”*

**Comments:**

1. In so much as this pertains to “*then-applicable adopted levels of service,*” this directly conflicts with the language of COA 10. This should be clarified and rectified. See [sect. 6. Future Decision Points, Vesting](#) for discussion of possible conflicting language.

iii. *“No retrofitting or major modification shall be required for facilities properly installed in accordance with MPD permits unless such is determined necessary to avoid a threat to public health or safety or a new significant adverse environmental impact, and such impact or threat cannot be mitigated by requirements imposed upon or downsizing of MPD development yet to be constructed.”*

**Comments:**

1. This provides for a choice between “*retrofitting or major modification*” or “*downsizing*” of future Phases should mitigation already built be found to be inadequate. Parameters of how such a major decision is to be made are not stated.

iv. *“New conditions and mitigations shall be limited to those shown to be necessary as a direct result of the MPD development, and such mitigation must be reasonable and achievable without compromising other MPD permit requirements.”*

**Comments:**

1. This could be open to legal interpretation. The City is advised to seek Counsel for interpretation of such language as:
  - a. *“direct result of the MPD development”*--especially as it relates to *outside* jurisdictions which already have ongoing large-scale development;
  - b. *“reasonable and achievable”* mitigation; and
  - c. *“compromising”* of the MPD permits.

v. *“Conditions and mitigations applicable to a MPD shall be modified only to the extent that cumulative impacts are demonstrated to be the result of development of such project. If cumulative impacts have been demonstrated to exist but cannot be attributed solely to the MPDs, or allocated between the two MPDs, responsibility for mitigation shall be apportioned equitably in a proportionate or pro-rata share. For purposes of this condition, “proportionate share” shall mean the ratio of the combined Villages and Lawson Hills MPD project PM peak hour trips projected to use the intersection compared to the total number of PM peak hour trips expected to use the intersection. Any mitigations or conditions imposed shall specify clearly which project and which portion thereof to which they apply.”*

**Comments:**

1. This describes a mechanism for *“pro-rata shares”* between the two MPDs. However, it could be problematic to prove traffic is *“attributed solely to the MPDs.”*

**g.** *“The Villages Master Developer, the Lawson Hills Master Developer, or any other party of record may appeal the periodic review analysis within 21 days of the date of its issuance by filing an appeal statement with the Community Development Director, plus a fee in the amount then applicable to an administrative appeal of a SEPA threshold determination. The appeal statement shall specify in detail the errors alleged to exist in the periodic review analysis and any appeal proceedings shall be limited to analysis of such allegations.”*

**Comments:**

1. This sets up a process to appeal any “periodic review analysis.”

**h.** *“If one or more timely appeals are filed of the City's periodic review analysis, they shall be heard and decided by the Hearing Examiner within 90 days of the date the appeal is filed. The hearing shall be limited to the issues included within the written appeal statement. Participation in the appeal shall be strictly limited to the City, the Applicant and parties who timely filed complete written appeal statements and paid the appeal fee. The appellant shall bear the burden of proof in the appeal. The periodic review analysis shall be upheld on appeal unless found to be clearly erroneous based on the record as a whole.”*

**Comments:**

1. For appeals of any periodic review analysis the “*appellant shall bear the burden of proof.*” It is not clear why the City also does not have to “*bear the burden of proof.*”

**i.** *“The Hearing Examiner's decision on the periodic review analysis shall be a final decision appealable under the Land Use Petition Act, Chapter 36.70C RCW.”*

**Comments:**

1. The City’s Hearing Examiner decision on appeals of any “periodic review analysis” are appealable to Superior Court, not the City Council.

j. *“If no timely appeal of the periodic review analysis is received, its findings, conclusions, and recommendation shall become final and non-appealable 21 days after issuance. If an appeal is filed, the time required for determination of such appeal shall be excluded from the approval period for any MPD permit and preliminary plat in effect on the date of issuance of the periodic review analysis.”*

**Comments:**

1. Appeals do not affect the *“approval period for any MPD permit and preliminary plat in effect on the date of issuance of the periodic review analysis.”*

**COA 18 (Mitigation MPD Pro-Rata Shares)**

*“The responsibilities and pro-rata shares of the cumulative transportation mitigation projects shall be established in the two Development Agreements, which must cover the complete mitigation list and be consistent with one another. (Traffic impacts were studied based on the cumulative impacts of The Villages and the Lawson Hills MPDs. These various projects have a mutual benefit and need crossing over between them.)”*

**Comments:**

1. This was accomplished in the DAs (sect. 11.5--Transportation Regional Facilities). However, should the mitigation list *change* over time, does this remain in force?

**COA 19 (Roundabout Intersections)**

*“For each potential signal, first consider and present a conceptual design for a roundabout as the City’s preferred method of intersection control. [FEIS Mitigation Measure]”*

**Comments:**

1. No comment, except to recognize that each intersection has unique attributes. As such, *each* method of traffic flow control should be evaluated to determine the best fit for ensure proper traffic flow, vehicle and pedestrian safety, and throughput volume.

## COA 20 (Traffic Monitoring Plan)

*“A transportation monitoring plan shall be established as part of the Development Agreement using the projects identified in the list included in Condition 15 (and as that list is modified as a result of the periodic review process), and including trigger mechanisms acceptable to the City. The monitoring plan shall ensure that construction of improvements commences before the impacted street or intersection falls below the applicable level of service, provided that for projects within the State right-of-way, the monitoring plan shall establish timing for commencement of only engineering and design of improvement and shall not including [typo--should be: “include”] deadlines for commencement of construction.”*

### Comments (also see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#)):

1. A Traffic Monitoring Plan was established [*DA, Exhibit F--Traffic Monitoring Plan*], to identify “*trigger mechanisms*” and ensure adequate mitigation is attained.
2. To meet Transportation Concurrency requirements the Traffic Monitoring Plan is to ensure “*construction of improvements commences before the impacted street or intersection falls below the applicable level of service.*”
3. While the need for such a “*State right-of-way*” exception is understood, due to the need for the City and YB to obtain WSDOT approval for *any* improvements on state highways, it causes the timing of completion of SR-169 major improvements to be uncertain. This could result in impacts along the SR-169 transportation corridor.

## COA 21 (Street Grid)

*“Implementing projects shall be designed to foster the development of a street grid system throughout the project.”*

### Comments:

1. There is no definition of “*development of a street grid system;*” does this imply a checkerboard pattern?

## COA 22 (Autocourts)

*“In order to balance the impact of the added street maintenance and the proposed street standards with higher maintenance costs, all auto courts serving 20 units or less, and all alleys shall be private and maintained by the Applicant or future Homeowners' Association(s). The Development Agreement shall provide that, in the event that the Applicant or future Homeowners' Association(s) fails to maintain such auto courts and/or alleys, the City may enter onto the property, repair or maintain the alleys or autocourts as the City determines in its reasonable discretion is necessary, and collect the costs of such repair or maintenance from the Applicant or Homeowners' Association(s), as applicable. The Development Agreement shall also provide that, to secure repayment, the City may lien the individual lots within the subdivision in which the alley or autocourt is located.”*

**Comments:**

1. The language that “the City may enter onto the property, repair or maintain the alleys or autocourts as the City determines in its reasonable discretion is necessary, and collect the costs of such repair or maintenance” appears to open potential private property rights legal issues.

**COA 23 (Street-Side Maintenance)**

*“The applicant or future Homeowners' Association(s) shall be required to maintain all street side landscaping, unless otherwise agreed upon by the City, and the Applicant or future Homeowners' Association(s). The Development Agreement shall provide that, in the event that the Applicant or future Homeowners' Association(s) fails to maintain such street-side landscaping, the City may enter onto the property, repair or maintain the landscaping as the City determines in its reasonable discretion is necessary, and collect the costs of such maintenance from the Applicant or Homeowners' Association(s), as applicable. The Development Agreement shall also provide that, to secure repayment, the City may lien the individual lots within the subdivision in which the street-side landscaping is located.”*

**Comments:**

1. See comments under COA 22.

**COA 24 (Traffic Calming)**

*“Traffic calming measures shall be explored with each implementing development action and implemented at the discretion of the Public Works Director.”*

**Comments:**

1. This appears to provide the City with wide discretion to implement “(T)raffic calming measures”. However, there is no discussion of responsibility to design, construct, and maintain same, nor any mention of timing.

**COA 25 (Phase Traffic Modeling and Monitoring)**

*“The monitoring plan required by these conditions shall require the applicant to model the traffic impacts of a development phase before submitting land use applications for that phase, in order to determine at what point a street or intersection is likely to drop below the City’s adopted level of service. The monitoring plan shall provide for the timing of commencement of construction of projects identified in Condition 15, as well as the amendments to the scope of said projects and/or additions to Condition 15’s project list as determined by the City in its reasonable discretion as necessary to maintain the City’s adopted levels of service in effect at the time of the modeling, to the extent that project traffic would cause or contribute to any level of service failure as determined by the City’s adopted level of service standard. In the event of a disagreement between the applicant and the City about the timing of construction of a transportation project under the monitoring plan, and if the monitoring plan does not already include period modeling, the applicant shall also monitor traffic levels midway through each phase to determine if the traffic generation, trip distribution and assignment patterns are developing as expected.”*

**Comments:**

1. The concept of traffic monitoring “to model the traffic impacts of a development phase before submitting land use applications for that phase” is a good one and follows the Hearing Examiner’s recommendations. However, his original intent was lost with implementation of COA 17a and its exemption of the Villages MPD Phase 1A from using the new traffic-demand model and assumptions.
2. The City has great flexibility to ensure “the timing of commencement of construction of projects” meets the identified need.
3. Should there occur “a disagreement between the applicant and the City about the timing of construction of a transportation project under the monitoring plan.” it is not

clear how it will be rectified, as only the conduct of mid-phase monitoring is mentioned and wide disparities in interpretation of results of same could occur.

4. Further the City can ensure timely mitigation as the Master Developer is required to “*monitor traffic levels midway through each phase.*” Again timing will be established through the Traffic Monitoring Plan.

5. The overall intent of the traffic monitoring should be to satisfy BDMC 18.98.010(1) to provide “*needed services and facilities in an orderly, fiscally responsible manner.*”

### **COA 26 (Park and Ride Lot)**

*“Reserve a site within the commercial area on either the north or south side of Auburn-Black Diamond Road for a future park and ride lot. [FEIS Mitigation Measure] The site shall be of sufficient size to accommodate parking for the number of vehicles identified in the mode-split analysis in the new transportation demand model as set forth in Condition No. 14 above.”*

#### **Comments:**

1. This should refer to COA 13 regarding “*mode-split analysis,*” not COA 14.

### **COA 27 (Points of Access)**

*“No more than 150 residential units shall be permitted with a single point of access 300 units may be allowed on an interim basis, provided that a secondary point of access is provided.”*

#### **Comments:**

1. As clarified by the Hearing Examiner during the Villages MPD Phase 1A (PP1A) Appeals Hearings, this does not mean “*a single point of access*” for every “*150 residential units.*” PP1A has 3 points of access for ~800 residential units.

### **COA 28 (South Connector)**



*“The Development Agreement shall define a development parcel(s) beyond which no further development will be allowed without complete construction of the South Connector.”*

**Comments:**

1. No comment except this should be evaluated under the auspices of the new traffic-demand model to ascertain traffic flow volumes and traffic distribution.

**COA 29 (Infrastructure Implementation Schedule)**

*“Prior to the first implementing project of any one phase being approved, a more detailed implementation schedule of the regional infrastructure projects supporting that phase shall be submitted for approval. The timing of the projects should be tied to the number of residential units and/or square feet of commercial projects.”*

**Comments:**

1. “(A) *more detailed implementation schedule of the regional infrastructure projects*” was provided for PP1A in the Staff Report and Conditions of Approval. However, COA 17a exempts PP1A from use of the *new* traffic-demand model and assumptions.
2. It is not stated who defines how the “*timing of the projects should be tied to the number of residential units and/or square feet of commercial projects.*”

**COA 30 (Neighborhood Street Safety)**

*“The applicant shall apply road design speed control and traffic calming measures so that inappropriate speeds are avoided on neighborhood streets.”*

**Comments:**

1. No comment.

**COA 31 (Pipeline Road)**

*“The timing of the design and alignment of the Pipeline Road shall be included as part of the Development Agreement.”*

**Comments:**

1. This was done (see **DA, Table 11-5-2. Transportation Roadway Improvements**) and construction is slated for Phase 2.

**COA 32 (Rock Creek Bridge Pedestrian Connection)**

*“Provided a study confirms engineering feasibility and reasonable and customary construction costs, a connecting sidewalk and safe pedestrian connection to the programmed sidewalk in the Morganville area shall be required along Roberts Drive. Construction timing should be specified in the Development Agreement. The City and applicant shall work in good faith to seek grants and other funding mechanisms to construct the improvement. The applicant shall otherwise be responsible for construction costs to the extent authorized by law.”*

**Comments:**

1. The caveats: “*study confirms engineering feasibility and reasonable and customary construction costs*” were supplemented by the Hearing Examiner in his Villages MPD Phase 1A Decision (December 2012) based on and to address pedestrian safety needs:

*“The following mitigation measures are added to the MDNS as a result of the SEPA Appeal in order to ensure that the proposal does not create probable significant adverse environmental impacts....The Applicant has three options for addressing pedestrian traffic safety over the Rock Creek bridge.... This condition is designed to supplement and not replace Villages MPD COA No. 32 and Villages DA 11.6. Regardless of the option chosen, the Applicant will have to comply with Villages MPD COA No. 32 and Villages DA 11.6.” [HE PP1A Decision, sect. IV. SEPA Mitigation Measures]*

**COA 33 (Green Valley Road)**

a. *“The City shall commission a study, at the Applicant's expense, on how to limit MPD traffic from using Green Valley Road, and which shall include an assessment of traffic calming devices within the existing improved right-of-way. The study shall also include an analysis and recommended mitigation ensuring safety and compatibility of the various uses of the road. All reasonable measures identified in the study shall be incorporated into the Development Agreement together with a description of the process and timing required for the Applicant to seek permits from King County should King County allow installation of the improvements, and with a proviso that none of the measures need to be implemented if not agreed to by the Green Valley Road Review committee.”*

**Comments:**

1. A study to “*assess(ment of) traffic calming*” was completed and released to the City and the Public.
2. The Traffic Calming Study was not accepted by the Green Valley Road Review Committee (mid 2012), as it was presented as a take-it-or-leave-it proposition (e.g., “*none of the measures need to be implemented.*”). The Green Valley Road Review Committee has requested an amendment to the Development Agreement to address this issue and remains at an impasse.

b. *“A Green Valley Road Review Committee shall be formed. The committee shall consist of two representatives of the Applicant, one representative of the City, and two representatives of the community. If additional community members or representatives of King County desire to participate, they may do so, but only two community members shall have a vote on the committee regarding any matter. The Committee shall meet as needed, and specifically shall meet to review the study required by Condition 34 and attempt to reach agreement on whether any suggested traffic calming devices should be provided. If the community members of the Green Valley Road Review Committee decide against the traffic calming measures, then the Applicant need not construct them. The Committee shall also meet to review the plan to prohibit or discourage the use of Plass Road. The Applicant shall be responsible, at its expense, for drafting a report to the City Council regarding the Committee's findings on the traffic calming devices and on Plass Road.”*

**Comments:**

1. At the specific request of the Green Valley Road Review Committee the City agreed to give its committee seat to KCDOT, which subsequently agreed and provided a representative.
2. The Green Valley Road Review Committee last met in March 2012. A July 2012 meeting was canceled due to the impasse (see [COA 33a, Comments](#) above).
3. Plass Road discussions have been held with KCDOT and efforts proceeding.

### **COA 34 (Mitigation Responsibilities and Cost Recovery)**

*a. "The Development Agreement shall address which traffic projects will be built by the developer, which projects will be built by the City and what projects will qualify for cost recovery."*

#### **Comments:**

1. This was done.

*b. "The Applicant agrees to work in good faith with the City, King County and residents on Plass Road to develop a plan to prohibit or discourage the use of Plass Road as a connection to Green Valley Road. The Applicant will agree to vacate a portion of Plass Road through the Villages property to assure no connectivity to the South Connector roadway towards Green Valley Road, provided the City, King County and Plass Road residents support the road vacation."*

#### **Comments:**

1. See [COA 33b, Comments](#) above).

#### 4. Development Agreements *What has been agreed to be done?*

This section reviews the Development Agreements (DAs), approved by the Black Diamond City Council (BDCC), to implement the MPD Ordinances. ***[The Villages MPD DA Ordinance 11-970, November 2011]*** The State authorizes DAs:

*“A development agreement must set forth the development standards and other provisions that shall apply to and govern and vest the development, use, and mitigation of the development of the real property for the duration specified in the agreement. A development agreement shall be consistent with applicable development regulations adopted by a local government planning under chapter 36.70A RCW.” [RCW 36.70 Local Project Review, 36.70B.170 through 36.70B.210, Development Agreements]*

The State defines DA “*development standards*” as including ***[RCW 36.70B.170(3)]***:

- (a) Project elements such as permitted uses, residential densities, and nonresidential densities and intensities or building sizes;
- (b) The amount and payment of impact fees imposed or agreed to in accordance with any applicable provisions of state law, any reimbursement provisions, other financial contributions by the property owner, inspection fees, or dedications;
- (c) Mitigation measures, development conditions, and other requirements under chapter 43.21C RCW;
- (d) Design standards such as maximum heights, setbacks, drainage and water quality requirements, landscaping, and other development features;
- (e) Affordable housing;
- (f) Parks and open space preservation;
- (g) Phasing;
- (h) Review procedures and standards for implementing decisions;
- (i) A build-out or vesting period for applicable standards; and
- (j) Any other appropriate development requirement or procedure.

Several DA sections are transportation related:

### 11.3 Phasing and Construction of On-Site Regional Facilities

**B. Construction and Funding.** *...the Master Developer shall design and Construct (or cause to be Constructed) the on-site Regional Facilities identified in Tables 11-3-1, 11-3-2, 11-3-3, and 11-3-4 below... While the Master Developer of either the Lawson Hills MPD or The Villages MPD may elect to construct certain facilities prior to a demonstrated need to obtain adequate capacity, nothing in this Section 11 shall be construed to require the Master Developer of either Lawson Hills MPD or The Villages MPD to Construct any infrastructure facility, or pay one hundred percent (100%) of any infrastructure facility cost, which is unnecessary to provide adequate capacity for an Implementing Project of the Lawson Hills MPD or The Villages MPD, respectively.*

*If the Master Developer elects to construct Regional Facilities or projects from the City's Capital Improvements Plan ("CIP"), it may seek reimbursement for costs incurred to Construct any or all of the necessary on-site Regional Facilities in excess of the Master Developer's proportionate share (except from "Exempt Properties," as defined below). The Master Developer may recover costs in excess of its proportionate share (except from "Exempt Properties," as defined below) using methods approved and allowed by City Code, state law, and existing agreements (e.g., WSFFA), including grant funding and mitigation payments received by the City for growth-related impacts, including impacts occurring outside the City's boundaries...*

*Notwithstanding anything to the contrary above, the City shall work in good faith and use reasonable best efforts to: (i) apply for grants and use funds awarded under such grants; and (ii) seek mitigation payments for impacts associated with growth occurring outside the City boundaries pursuant to the State Environmental Policy Act ("SEPA"), to reimburse the Master Developer for the on-site Regional Facilities construction costs it incurs in excess of its proportionate share.*

**Tables 11-3-1 thru 11-3-3** list MPD on-site regional facilities through Phase 2.

#### Comments:

1. This describes timing, design, and necessity of such infrastructure improvements must be consistent with provisions of the Traffic Monitoring Plan.
2. It appears the onus is on the City to prove "which [infrastructure facility] is [un]necessary to provide adequate capacity for an Implementing Project."

**RECOMMENDATION:**  
**Review DA 11.3B language calling for the City to *prove* the MPDs are *causing* future traffic problems.**

3. The process is not clear on how (or why) *“(T)he Master Developer may recover costs in excess of its proportionate share.”*

4. It is not clear the benefit to the City to *“seek mitigation payments for impacts associated with growth occurring outside the City boundaries pursuant to the State Environmental Policy Act (“SEPA”), to reimburse the Master Developer for the on-site Regional Facilities construction costs it incurs in excess of its proportionate share.”*

### **11.5 Transportation Regional Facilities**

**A. Timing:** Pursuant to Conditions of Approval Nos. 10, 18, and 34 of the MPD Permit Approval, the timing associated with the construction of the transportation improvements outlined in Tables 11-5-1 and 11-5-2 is subject to the Traffic Monitoring Plan....

**Tables 11-5-1 and 11-5-2** list each planned MPD transportation intersection and roadway improvements, respectively, through Phase 3.

#### **Comments:**

1. This describes all regional transportation intersection and roadway projects to be designed and built, save for those called for in the Maple Valley and Covington Transportation Mitigation Agreements.

2. The Master Developer is responsible for all projects.

3. The majority of the intersection projects are planned to occur in the latter phases. There are nineteen (19) intersection projects listed, ten (10) occur in Phases 2 and beyond.

4. The majority of the roadway projects are planned to occur in the latter phases. There are thirteen (13) roadway projects listed, nine (9) occur in Phases 2 and beyond.

## 12.10 & 12.11 Maple Valley & Covington Mitigation Agreements

***“12.10.1 Maple Valley Transportation Mitigation Agreement Effect....Pursuant to MPD Permit Approval Condition No. 15, Ordinance 10-946, the Maple Valley Transportation Mitigation Agreement “supersedes all other conditions and processes that may set mitigation measures and that are contained in the MPD Conditions or Development Agreement.” More specifically, Conditions of Approval 10 through 14, and 16 through 34 within Exhibit C of the Villages MPD, Ordinance No. 10-946, are superseded by the Maple Valley Transportation Mitigation Agreement in regards to transportation improvements within the City of Maple Valley.”***

### Comments:

1. These lay out specific projects to be designed and built in the City of Maple Valley. ***[Maple Valley Transportation Mitigation Agreement, October 6, 2010 (later included as DA, Exhibit Q)]***
2. The “superseded” language implies the City absolves itself of any responsibility for its neighbor cities and its own residents who will be using those improvements.
3. The Covington Transportation Mitigation Agreement specifies a monetary compensation only to be paid in installments. ***[Covington Transportation Mitigation Agreement, December 14, 2010 (later included as DA Exhibit R)]***
4. **Sect. 6. Future Decision Points, Funding** addresses potential mitigation challenges.

## 13.8 Green Valley Road

***“Pursuant to Condition of Approval No. 33(a) of the MPD Permit Approval, an expert study entitled “SE Green Valley Road – Traffic Calming Strategies” dated November 29, 2010, examined opportunities to limit MPD traffic using SE Green Valley Road, including an assessment of potential traffic calming devices that could be used within the existing improved right-of-way. Exhibit P includes the measures identified in that study, and describes the process and timing required for the Master Developer to seek permits from King County should King County allow installation of the improvements, including the proviso that none of the measures need to be implemented if not agreed to by the Green Valley Road Review Committee established per Condition of Approval No. 33(b) of the MPD Permit Approval.”***



## Comments:

1. This provides for the “assessment of potential traffic calming devices.”
2. As described under comments under COA 33a the completed Traffic Calming Study was not accepted by the Green Valley Road Review Committee (early 2012), as it was a take-it-or-leave-it proposition (“...measures need to be implemented.”).

## Exhibits

Two other parts of the DAs pertain to transportation: *Exhibit F--Traffic Monitoring Plan* and *Exhibit N--Funding Agreement* (creation of the Master Development Review Team).

The *Traffic Monitoring Plan (TMP)* established a plan: “To assure that the mitigation keeps pace with MPD Development and appropriate improvements are constructed at the appropriate time....” [*DA, Exhibit F--Traffic Monitoring Plan, November 2011, p. 1*]. See [sect. 6. Future Decision Points, Traffic Monitoring Plan](#) for details.

The *Funding Agreement* created the Master Development Review Team (MDRT) [*DA, Exhibit N--Funding Agreement, November 2011, pp. 5-6*]:

“3. **Master Development Review Team.** The primary function of the MDRT is to process, review, and implement development permits and development agreements of the Villages MPD....

a. **MDRT Composition.** The MDRT shall initially be comprised of the following current positions, or their functional equivalent: ... (v) necessary consultants as determined in the City’s sole, reasonable discretion after consultation with the Developer; .... The MDRT composition may be modified by mutual agreement of the parties....

i. For purposes of this Agreement, consultants include, but are not limited to, professional engineering firms, planning and transportation firms, ....”

It appears the MDRT functions as a permitting agency: “...process, review, and implement development permits....” The concept of an MDRT still could prove useful to the City; but, its makeup should be wholly independent from the Master Developer, thus avoiding any conflicts of interest. There potentially is such a problem in the transportation area, where a Parametrix representative provides consultation, but has a built-in conflict

of interest: Parametrix is creating the new Traffic Demand Model; consequently, it should be in a position of judging that model, assumptions, and validation results, as part of the MDRT. Nor should the Transpo Group, which has conducted Traffic Analyses.

**RECOMMENDATION:**

**Ensure MDRT members have not performed past (or current) MPD traffic work for the Master Developer or the City to avoid any potential conflicts of interest.**

## **5. Technical Issues**

### ***What potential problems exist?***

This section identifies and discusses key technical issues related to transportation *analysis* and *evaluation* of impacts. All of these issues have been the subject of one or more Hearings. Potential problem areas are identified and what key aspects to address are discussed. All technical issues are listed in alphabetical order, not order of priority.

The analysis of traffic impacts is a multi-stage, iterative process. It usually includes many of the following steps: (1) Develop methods and assumptions; (2) Analyze existing conditions; (3) Evaluate background traffic; (4) Generate trips; (5) Distribute trips; (6) Assess mode split; (7) Assign trips; (8) Analyze future conditions; (9) Evaluate Level of Service; and (10) Design mitigations.

There are many assumptions that feed such analyses, as well as a variety of outputs that result therefrom. What is described below are some of the key parameters that are *typically* considered and evaluated. The traffic engineer usually assumes much from past experience with similar situations. Models are built and exercised to ascertain basic and complex interactions. Assumptions have an effect on the final results to varying degrees. Consequently, often parallel Sensitivity Studies are conducted to ascertain the effect of small changes in any one or combination of parameters. For example, *Internal* capture rate assumptions could have an outsized affect on *external* traffic volumes and flows.

### **Background Traffic Growth**

Background Traffic Growth generally occurs as a result of population and employment increases in a town and its surrounding communities. To date a constant annual background traffic growth rate of 1.0% was assumed for the Covington area along SR-516 and a 1.5% was assumed in all other areas in all the traffic analyses. ***[The Villages MPD FEIS, Appendix B--Transportation Technical Report, p. 3-23, December 2009]*** This was a concern to City of Maple Valley Expert Witness Mr. Janarthanan who suggested rather a model be used to generate background traffic growth. He stated, since there are much bigger impacts associated with large projects,

one needs to correctly identify *where* those specific impacts will occur, which can only be done confidently with a model:

*"The background growth has been calculated based upon an assumption of annual growth rate of 1.5 percent, so that may not be true at all the locations because it's a long corridor....An appropriate model should have been used....But the magnitude of this project is pretty big. For a project like this, it's mostly appropriate to use a travel demand model too...."* **[FEIS SEPA Appeals Testimony Transcript, March 2010, p. 1361]**

Background traffic growth is not specifically addressed in any of the COAs.

### **Internal Capture Rates**

Internal Capture Rate (ICR) is defined by Institute of Transportation Engineers (ITE) as trips between two distinct *internal* (i.e., on-site) land uses without traveling on the roadway network *external* to the site. Market and demographic surveys were used to determine the internal trips between both retail and residential land uses and between residential and school land uses resulting in the following assumptions: 30% internal trip *reduction* (i.e., "*captured*") for retail, residential, and school uses; 10% pass-by rate for retail land uses (i.e., trips *attracted* from traffic that is "*passing by*" the development on adjacent roadways, as opposed to "*by-passing*" it); and 10% diverted link trips (i.e., trips that are *diverted* for a time and then continue on their way) (also see **Trip Distribution** below).

There is no universal approach to best estimate ICR to develop trip generation estimates for traffic impact analyses. In fact, some ITE methods for ICRs may not be applicable to large MPDs, as testified to by King County Department of Transportation (KCDOT) Expert Witness Matthew Nolan:

*"The applicant used...ITE trip internalization rates. But our experience with the Redmond Ridge Urban Plan Development was that although we met those targets in Redmond Ridge, it was rather unique circumstances that they were met, and so we felt they were somewhat aggressive in those*

numbers.” ***[FEIS SEPA Appeals Testimony Transcript, March 2010, p. 420, ln. 14-19]***

Traffic distribution and volumes on particular roadway segments and through particular intersections are very dependent on ICRs used. A Sensitivity Analysis helps evaluate how traffic distribution and volume fluctuates with ICR. COA 14 addresses ICRs (see [sect. 3. MPD Ordinance Conditions of Approval, COA 14](#)).

### **Mode-Split Analyses**

No Mode-Split Analyses were conducted to support the FEISs as it was assumed the amount of commuters expected to use transit as a primary mode choice would likely be minimal. ***[The Villages MPD FEIS, Appendix B--Transportation Technical Report, p. 3-6, December 2009]***

A Mode-Split Analysis of travel in and around the City will have to be conducted to determine the shares of travel by automobile, carpool, transit, and other modes required to ensure sustainable growth, maintain quality of life, and provide for a balanced transportation system. Typically such an analysis would collect travel data, determine existing modal shares, forecast future-year travel, calculate levels of service, and determine a desirable mode split. COA 13 addresses Mode Split (see [sect. 3. MPD Ordinance Conditions of Approval, COA 13](#)).

### **Queue Lengths**

Queue Length is the stacking up of vehicles at an intersection due to a traffic signal or stop sign. Concerns arise when the queue gets long enough to affect *adjacent* intersections or pedestrian walkways. Long queues are both a safety hazard (i.e., a vehicle is moving at normal speed, but not expecting a long queue up ahead) and traffic

congestion problem (i.e., blocking an adjacent intersection) that contributes to gridlock. Also, long queues affect ingress, egress, and travel of emergency vehicles.

Queue length analyses were not conducted to support the FEISs, MPD Ordinances, or the Development Agreements. In fact, Washington State Department of Transportation (WSDOT) Expert Witness, Ramin Pazooki, stated:

*“It [queue length analysis] is essential for determining the operation of closely spaced intersections and for corridors as a whole.” [FEIS SEPA Appeals Testimony Transcript, March 2010, p. 1445]*

He also stated Level of Service analyses may not reveal Queue Length problems.

Queue Length analyses are recommended for all required pre-phase and mid-phase traffic analyses. Such analyses were conducted to support the Villages MPD Preliminary Plat Application Phase 1A (PP1A).

## **Peak-Hour Factors**

Peak-Hour Factor (PHF) is the measure of the demand fluctuation within the peak hour of traffic flow expressed as *Peak Hourly Flow* divided by four times the *Peak 15-Minute Volume*. Expert Witness Ross Tilghman testified to flaws in assuming the abnormally high PHFs used to support the FEIS traffic analyses, as well as the accompanying detrimental impacts on Level of Service analyses in terms of underestimating both intersection delays and individual leg movement delays:

*“...0.97, and there were a couple of locations where it was 0.98....In urban and near urban situations, peak-hour ratios are frequently between about 0.85 to 0.92, 0.94. .... As volumes increase, that factor [peak-hour] will have an ever greater influence and can actually result in at least a one grade lower level of service.” [FEIS SEPA Appeals Testimony Transcript, March 2010, pp. 584-587]*

PHFs of 0.92 (urban) and 0.88 (rural) are considered accepted engineering practice by the ITE and the National Cooperative Highway Research Program (NCHRP), as well as all Expert Witnesses during the FEIS Appeals Hearings.

See [sect. 3. MPD Ordinance Conditions of Approval, COA 17b](#) for PHF studies.

### **Peak-Hour Trips**

Traffic impact analyses typically evaluate the peak-hours of traffic--those that occur during the AM and PM commutes. Usually the PM peak hour dominates and is selected for evaluation. However, there are times where the AM peak-hour traffic warrants evaluation, because it includes two unique components not shared by the PM peak hour; School Traffic and Construction Traffic, both of which usually end before the PM peak hour occurs. For all MPD traffic analyses PM peak-hours dominated (see PM peak-hour trips in **COA 17b** in [sect. 3. MPD Ordinance Conditions of Approval, COA 17b](#)).

### **Traffic Demand Model**

A Traffic Demand Model (TDM) allows for an *iterative* process that focuses on a set of self-consistent results. The modeling process typically involves: (1) Trip generation--based on types of land uses and the *ITE Trip Generation Manual*; (2) Trip distribution--iterative process usually based on travel times and distances traveled; (3) Mode choice--car, car/van pool, bus, and train; and (4) Traffic assignment--iterative process usually based on travel times.

In general, here is how a typical TDM works:

1. Based on a set of assumptions and a road network/gridwork the model predicts traffic demand in terms of traffic flow on road segments *between* intersections and *at* intersections.
2. Detailed intersection analyses are then performed to evaluate intersection throughput to determine needs for additional signaling, left-turn lanes, etc. (this could be done with a “*local*” analysis simulation tool called SYNCHRO which evaluates intersection capacity).
3. Continuous running of the model coupled with detailed intersection analyses provides an increasingly improved understanding of what mitigation schemes could work both along road segments (i.e., widening, etc.) and intersections (i.e., turn lanes, etc.).
4. Once an “*equilibrium*” is achieved (i.e., predicted *demand* meets mitigated *capacity* during peak-drive hours), then sensitivity analyses often are conducted to understand the importance of different input assumptions to the model and analyses. While there are several assumptions made, possibly the most critical is Internal Capture Rate, which affects the number of *external* commuters at peak AM and PM hours. The level of sensitivity of key assumptions provides a better measure of the risks involved with the predictions of traffic volumes--high sensitivity means greater risk. Greater risks directly impact success, timing, and costs of mitigations. These costs can be large.

The traffic-demand model used to support the DEISs and FEISs was based on the Puget Sound Regional Council’s (PSRC’s) region-wide model. The City of Maple Valley’s Traffic Expert testified the PSRC model did not provide sufficient “*local*” definition. The Hearing Examiner agreed the model used was insufficient to evaluate traffic impacts for the MPDs and recommended a *new* model be developed and used to determine and evaluate mitigations required *prior* to approval of the the DAs or as a major amendment (see [sect. 2--Past Hearings/Decisions, MPD Permit Application Hearings](#)).

There are eight modeling steps in the current PSRC land use and travel demand forecasting model: (1) Economic forecasting; (2) Land use forecasting; (3) Vehicle availability; (4) Trip generation; (5) Trip distribution; (6) Mode choice; (7) Time of day; and (8) Trip assignment. [***Land Use and Travel Demand Forecasting Models: PSRC Model User’s Guide*** [http://www.psrc.org/assets/1512/model\\_usersguide2007.pdf](http://www.psrc.org/assets/1512/model_usersguide2007.pdf)]

COAs 11, 12, 13, 14, and 17 address the traffic-demand model (see [sect. 3. MPD Ordinance Conditions of Approval](#)).



## Traffic Safety

Several concerns relate to traffic safety:

1. How many roads--and road miles with increased traffic--have paved shoulders, gravel shoulders or no shoulders?
2. Where do problems exist with the physical geometry of the roads, sight distances and curves in the roads and what can be done about these?
3. Which roads will have routine pedestrian and/or bicycle traffic?
4. Are there opportunities for new sidewalks and/or bike lanes and how will they interact with increased traffic flows.
5. Are there locations of special concern such as schools, medical facilities, etc.?

Traffic Safety was not evaluated for the FEISs. In fact, the Hearing Examiner stated:

*“The FEIS did not identify safety concerns as a probable significant adverse impact.” [HE FEIS SEPA Decision, Findings of Fact 14, p. 38].*

The COAs do not specifically address traffic safety and there is no mention of traffic safety as a concern in the DAs. The only traffic safety evaluation to support the Villages MPD Phase 1A (PP1A) reviewed three-year collision summaries for *existing* low traffic volume intersections and roadway segments [**Memorandum, Villages PP1A--Response to September 21, 2012 Transportation Comments, Transpo Group, October 24, 2012**]. Transpo identified no safety issues and stated the project’s mitigation will improve safety because it includes redesign of some intersections and road segments to today’s standards. However, the effectiveness of the proposed intersection improvement measures to ensure *future* traffic safety at the volumes predicted is still in question.

Specifically, the Transpo “*traffic safety analysis*” was based on *existing* traffic levels, which are much lower than *future* traffic conditions under full buildout. It is questionable

the *existing* collision rates can be effectively extrapolated to predict *future* collision rates as the entire framework of traffic distribution and volume will change so drastically. Traditional safety analysis consists of employing a *multidisciplinary* approach to both design and implementation of safety features and should be done as each phase proceeds. **[Transportation Safety, Institute of Transportation Engineers]**

### **Travel Times**

Travel Time is important to decision-makers for very large projects with long transportation corridors. Typical traffic models readily give this information for evaluation of different scenarios as described by Ross Tilghman, Transportation Consultant:

*“In the future scenario, I looked at the cumulative Alternative 2 analysis for 2025 in the PM peak hour. That trip would more than double in time, become a 14-and-a-half-minute trip.”* **[FEIS SEPA Appeals Testimony Transcript, March 2010, p. 3397]**

John Perlic, Parametrix Transportation Engineer, concurred:

*“That’s correct, it was not provided [travel times]. However, it’s not typically provided in these kind of documents (“programmatically” EISs). It’s not a bad idea, but it’s not typically provided.”* **[FEIS SEPA Appeals Testimony Transcript, March 2010, p. 2468]**

Travel Times were not assessed in the Villages PP1A Traffic Impact Studies, only time delays at specific intersections.

### **Trip Distribution**

Trip Distribution deals with *where* trips go to and from. The traffic-demand model aids in evaluating Trip Distribution. Model geographic scope, fidelity, and underlying assumptions used all affect results. This was described in great detail by Maple Valley’s Traffic Expert, Jana Janarthanan **[FEIS SEPA Appeals Testimony Transcript, March 2010, pp. 1351-1385]**

ITE methods also were used to develop Internal Capture Rates, which directly affect overall Trip Distribution (see **Internal Capture Rates** above).

COAs 11, 12, 13, 14, 15, 17 and 25 address Trip Distribution (see [sect. 3. MPD Ordinance Conditions of Approval](#)).

## **Trip Generation**

Trip Generation deals with the *number* of trips to and from various locations. The Institute of Transportation Engineers (ITE) provides a voluminous set of data to aid in the prediction of the numbers of trips from various types of land uses (e.g., single-family residence, multi-family residence, office, retail, school, etc.) [*Institute of Transportation Engineers Trip Generation Manual, 9th Edition, 2012*].

To support the FEISs a set of land-use assumptions were made for number of residences, size of retail/office space, and number of school students. Then the number of vehicle trips (AM and PM peak hour trips) generated by the future 2025 alternatives was developed using the ITE Trip Generation Manual, because the number of dwelling units were more than triple the Puget Sound Regional Council (PSRC) dwelling unit growth targets (i.e., 6,050 vs. 1,900).

To aid the Trip generation analyses the measure used is Equivalent Residential Units (ERUs). It has been assumed one single-family residence generates, on average, one PM peak-hour trip. ERUs are calculated by dividing the number of net new project trips by one. One ERU is equivalent to, on average, two multi-family residences, 150 sq ft of retail space, and 600 sq ft of office space. Three types of trips are included: *internal*, *external*, and *pass-by*.

There are several MPD Ordinance Conditions of Approval (COAs) that address Trip generation: COAs 11, 12, 13, 14, 15, 17 and 25 (see [sect. 3. MPD Ordinance Conditions of Approval](#)).

## Volume/Capacity

WSDOT's Pazooki described Volume/Capacity (V/C) ratios in his FEIS testimony:

*"VC ratio, if you have a capacity of a thousand, let's say, on a lane and your volume is 1,800, then you get a 1.8, for example, VC ratio. So you want to keep it below 1, which means that your volume is less than the capacity. And we use it to get more information about particular intersections, because level of service is an average level of service for an intersection. It's not for each movement. You could have a leg that has a level of service F or E, another leg that's a C and one that's an A, and the average would be a D, which is acceptable, but it doesn't reveal the problem at certain legs, and the VC ratio reveals that problem." [FEIS SEPA Appeals Testimony Transcript, March 2010, p. 1443]*

WSDOT had discussed why V/C ratios are important in its FEIS detailed comments:

*"Along with the LOS threshold requirement, VC --'which is volume to capacity'-- ratio of one or less must be met or preserved. Once a certain intersection operation reaches capacity or VC ratio of greater than 1, the LOS measure is no longer effective or less reliable, especially for such large corridor analysis." [FEIS SEPA Appeals Testimony Transcript, March 2010, p. 1442]*

These WSDOT comments make it clear that, when looking at an intersection, one must be careful in only using the Level of Service (LOS), because it could mask problems with individual *legs* of the intersection and not provide the true traffic impacts. WSDOT also was concerned with impacts on "large corridor analysis," i.e., SR-169.

The *Transportation Technical Report [The Villages MPD FEIS, Appendix B--Transportation Technical Report, December 2009]*, prepared by Parametrix, evaluated V/C ratios and found many *mitigated* intersections will exceed 1.0, especially along the SR-169 corridor, as well as along the SR-516 corridor. This was deemed acceptable, because Level of Service standards were not exceeded except for two City of Maple Valley intersections, where *additional* turn lanes were proposed. There is a concern here because it oftentimes is either not feasible or practical to add turn lanes to an already overloaded or geometrically constrained intersection. Although the City of Maple Valley accepted a Transportation Mitigation Agreement with the Master Developer, traffic should be monitored through full MPD buildout and beyond to ensure adequate

traffic operations are preserved throughout the region. This is not only important to the quality of life of residents in SE King County, but also to Black Diamond citizens who commute on many of these roads outside of the City and, thus, will experience these potential traffic delays.

Traffic Impact Analyses for the Villages MPD PP1A found V/C ratios (all <1.0) for five of the six intersections studied. This is not surprising, as PP1A represents only ~13% of full MPD buildout.

## 6. Future Decision Points *What lies ahead?*

This section addresses major decision points as the MPDs proceed. **Overall Concerns** are described, followed by decision points for the **Village MPD Preliminary Plat Phase 1A (PP1A)**, the only plat approved to proceed so far. The bulk of this section looks at specific decisions related to the **Traffic Monitoring Plan, New Traffic-Demand Model, Phase and Mid-Phase Analysis and Monitoring, Traffic Monitoring Reports, Transportation Concurrency, Funding, and Vesting** to specific LOS standards.

### Overall Concerns

1. Traffic-Demand Model. There is no validated baseline Traffic Demand Model to provide predictions, reduce risk, and lend some certainty to understanding impacts to the City's and Region's transportation infrastructure. Consequently, there remains a lack of *reliable* forecasts of what future traffic patterns and volume scenarios could look like and what transportation infrastructure mitigations might work.
2. Mitigation Agreements. Although Transportation Mitigation Agreements have been reached with both the City of Covington and the City of Maple Valley, they do not include mitigations the Hearing Examiner believed were technically defensible (nor any of the *independent* Technical experts, including Maple Valley, KCDOT, and WSDOT, who testified during the FEIS Appeals or subsequent Hearings). The concern remains that those negotiations have no *reliable common* database with which to work and, thus, the adequacy of the mitigations listed could be suspect.
3. Infrastructure Impacts. The final mitigation, once determined, needed to the region's Transportation Infrastructure due to total size of the MPDs--over 6,050 homes and 1.15 million sq ft commercial footprint--will be both a technical and economic challenge due to the geographic and funding constraints. The region's Transportation infrastructure will be impacted through ~20 years of massive site preparation with up to 200,000 truck and "pup" trailer loads (Note: the MPD Ordinances include two mistakes: a transposition of the number of cubic yards of dirt/rock and an inadvertent neglect of the Lawson Hills contribution--~150,000 truck and trailer loads) and road/intersection construction. Also, the region's Transportation infrastructure could suffer *long term* once fully operational due to continual congestion and extended lengths of the AM and PM commute "hour."

4. Funding and Risk. The Master Developer proposes funding sources that rely primarily on other people's money to build needed infrastructure or monies that currently do not exist and are not likely to exist. Both KCDOT and WSDOT have precious little funds to allocate in southeast King County. The Alaskan Way Viaduct Replacement, 520 Bridge Replacement, and I-5 re-paving projects will drain State funding coffers for a very, very long time. King County is trying to stretch its ever-dwindling transportation budget to simply *maintain* road safety, not increase *capacity*, in the unincorporated areas as is its policy. State-elected officials, WSDOT, KCDOT, and the PSRC (e.g., Transportation 2040) have repeatedly made this all clear. This is possibly where risks are the greatest!

Due to the complexity of the technical issues, high infrastructure costs, and high schedule risk, several program management tools should be employed to protect the City and ensure adequate and timely traffic mitigation.

**RECOMMENDATION:**

**Separate out the transportation function from the Public Works Department to create a stand-alone Transportation Department reporting through the Mayor to the City Administrator.**

**RECOMMENDATION:**

**Develop and implement a MPD Transportation Strategic Plan to include timing of key milestones: model validation; model simulation through full build-out; sensitivity analyses of key assumptions; continuous model adjustments; traffic analyses; and mitigation evaluation. It should include a Model Validation Plan (including COA 11) and a Sensitivity Analysis Plan (COA 17b *only* addresses Peak-Hour Factor). Sensitivity analyses of key assumptions will identify risks involved with traffic volume prediction. Higher sensitivity=greater risk. Greater risks could deleteriously impact mitigation timing and costs.**

**RECOMMENDATION:**

**Establish a City Council Transportation Committee to consider matters related to transportation planning, traffic data, traffic impacts, project financing, and infrastructure implementation.**

**RECOMMENDATION:**

**Establish a Citizens' Transportation Panel to review periodic analysis and impacts.**

## The Villages PP1A

As discussed in [2. Past Hearings/Decisions](#), the PP1A plat application received a Mitigated Determination of Non-Significance (MDNS) from the City on August 31, 2012. That MDNS was the subject of a SEPA Appeal by citizens before the HE in November 2012. The PP1A Plat Application also was the subject of Public Hearings before the HE. Several conditions were attached to the Plat Application.

A concern exists the MDNS was issued prematurely *before* City Staff had all needed information to support its decision. Specifically, the following transportation documents were received by the City's Community Development office and the SEPA Responsible Official *after* the MDNS was issued and, thus, did not *inform* its MDNS decision:

***Technical Memorandum, The Villages Master Planned Development--Phase 1A Comparison to Conditions of Approval John Perlic, Parametrix, Sept. 12, 2012***

***Traffic Impacts to Green Valley Road, Transpo Group, Sept. 20, 2012***

***Memorandum, The Villages Master-Planned Development Preliminary Plat Application Phase 1A Construction-Related Vehicle Trips, Yarrow Bay, September 28, 2012 and Construction Trip Analysis Report, Transpo Group, Sept. 28, 2012***

***Memorandum, Construction Trip Analysis, John Perlic, Parametrix, Oct. 8, 2012***

***Memorandum, The Villages Master-Planned Development Preliminary Plat Application Phase 1A--Response to Sept. 21, 2012 Transportation Comments, Transpo Group, Oct. 24, 2012 (first seen by the City at the Hearings on Nov. 2, 2012)***

In February 2011 the Transpo Group submitted the *TV MPD--Phase 1A Traffic Impact Study (TIS)*. [***The Villages MPD PP1A Traffic Impact Study, Transpo Group , February 2011***] In May 2012 the *TIS* was updated (*TIS Update*) [***The Villages Master Planned Development Phase 1A Traffic Impact Study Update, Transpo Group, May 15, 2012***].



The TIS and subsequent analyses were reasonably adequate and used the same traffic-demand model, assumptions, and analysis techniques approved by both the Hearing Examiner (in finding the FEIS adequate) and the Black Diamond City Council (in approving the MPD Application and enacting the MPD Ordinance). The “incremental” PP1A for ~800 units does not cause excessive traffic problems.

PP1A does not trigger MPD Ordinance COAs 17-25, because less than the 850-building-permit-issued threshold will not be exceeded. COA 25’s Traffic Monitoring Plan technically is triggered, but using the *old* model: “*the TIS serves as both the Traffic Study for PP1A and initial traffic monitoring plan for this Phase 1A.*” [**Memorandum, Villages MPD PP1A--Response to Comments, The Transpo Group, June 28, 2012, p. 2**]

***Trip Generation and Distribution.*** The TIS determination of 1,225 “*net new trips*” was reduced to 1,192 in the TIS Update due to a reduction of 36 residential units and 3,000 sq ft of office space. Institute of Transportation Engineers’ (ITE’s) methods were used which include *standard* rates to calculate “*total trips*” for number of units (Single-Family {S-F}: 0.91/unit and Multi-Family {M-F}: 0.6/unit) and square footage of retail (5.45 per k sq ft) and office space (1.66 per k sq ft), and ~0.1 per Elementary School student.

In addition the TIS and the TIS Update uses an assumption from the Development Agreements that each travel lane *internal* to the development will provide a *capacity* of 600 vehicle trips/hr (10 vehicle trips/min) in *both* directions. One concern here is that during peak commuting hours (i.e., “*rush hour*”), the vast majority of traffic is moving in only *one* direction. Nevertheless, the studies conclude there is “*capacity*” for 2,400 vehicle trips/hr (i.e., two 2-lane access roads: 600 vehicles trips/hr/lane x 2 lanes x 2 roads = 2,400 vehicle trips/hr), more than covering the predicted 1,192 vehicle trips/hr to be generated by the development. However, what about intersection throughput?

Nearly half (45%) the *new* PM peak-hour traffic generated by PP1A along the Auburn-Black Diamond Rd was distributed to/from Lake Sawyer Rd. There is little distribution to/from SR-169 (15%) and the Black Diamond-Ravensdale Rd (5%). This *apparently* assumes most new commuters will work in the southeast King County cities of Kent or

Auburn, not in cities north or northeast of the City of Black Diamond, such as: Renton, Bellevue, Seattle, or Redmond.

An Internal Capture Rate (ICR) of 18% at full occupancy was assumed, which is consistent with the *ITE Trip Generation Handbook*. However, it is not known how such a “standard” applies to the City of Black Diamond and the surrounding southeast King County vicinity.

As discussed earlier (see [sect. 3. MPD Ordinance COAs, COA 14](#) and [sect. 5. Technical Issues, ICRs](#)), ICR assumptions are critical to identifying traffic distribution and volumes. For example, for PP1A it was assumed 80% of retail trips will be *new* traffic to the area generated *outside* the MPD [***Technical Memorandum to Andy Williamson, Re: The Villages MPD Traffic Impact Study (TIS), John Perlic, Parametrix, June 1, 2012***].

When looking over the “*frontage queues*” [***Memorandum, The Villages MPD--PP1A--Response to Comments, The Transpo Group, June 28, 2012, p. 4, Table 2***], it is clear the trip distribution is *primarily* SE Auburn-Black Diamond Rd (west--AM and east--PM) and Lake Sawyer Rd (north--AM and south--PM) and not SR-169 and Black Diamond-Ravensdale Rd. This also is the presupposition used in the *overall* MPD traffic analyses. However, such a presupposition appears to conflict with that experienced by everyday commuters.

<p><b>RECOMMENDATION:</b> <b>Revisit trip distribution through the Traffic Monitoring Plan during periodic updates.</b></p>
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***Triggers for Improvements.*** Equivalent Residential Units (ERUs) are used to “*identify the actual timing or trigger for commencing transportation improvements to support anticipated development within Phase 1A.*” [***Memorandum, The Villages MPD--PP1A--Response to Comments, The Transpo Group, June 28, 2012, p. 1***] The ERU numbers, which assume one S-F unit generates one trip during the PM peak hour, approximately extrapolate to one ERU being equivalent to two M-F units, 150 sq ft of Retail space, and 600 sq ft of Office space.

Six intersections were identified as needing improvement to meet LOS standards:

**SE 288th St/216th Ave SE**--Add Refuge/Merge Lane prior to final plat approval of any PP1A division.

**SE Auburn BD Rd/Main St**--Install Traffic Signal prior to issuance of certificates of occupancy for the 327th ERU. This is a new intersection, thus there is no *existing* LOS.

**SE Auburn BD Rd/Lake Sawyer Rd**--Construct a One-Lane Roundabout as an interim fix prior to issuance of certificates of occupancy for the 726th ERU with a Two-Lane Roundabout as long-term improvement.

**SE Auburn BD Rd/Community Connector A**--Construct One-Lane Roundabout as an interim fix prior to the issuance of certificates of occupancy for the 1,128th ERU with a Two-Lane Roundabout as long-term improvement. This is a new intersection, thus there is no *existing* LOS.

**SR-169/BD-Ravensdale Rd**--Install a Traffic Signal as an interim fix through the end of Phase 2 (e.g., ~3,000 ERUs) with a Two-Lane Roundabout as long-term improvement.

**SR-169/Roberts Dr**--Install a Traffic Signal as an interim fix through the end of Phase 2 (e.g., ~3,000 ERUs) with a Two-Lane Roundabout as long-term improvement.

PP1A is required to undergo a “*phase-midpoint*” Traffic Monitoring when 596 net new PM peak-hour trips ( $1,192 / 2 = 596$ ) are generated (i.e., 596 ERUs are occupied). Such traffic monitoring coupled with the City’s Transportation Concurrency requirements are intended to ensure mitigation keeps pace with MPD Development.

***Intersection Queue Lengths.*** The *TIS* showed that Queue Lengths at all intersections studied will not impact the adjacent intersections. “*Storage*” capacity at each intersection was identified, then delay times and queue lengths calculated. The *TIS* includes detailed computation spreadsheets for all 17 intersections studied [***Memorandum, TV MPD--PP1A--Response to Comments, Attachment 5--Queueing Summary and Worksheets, SYNCHRO 7 Reports, The Transpo Group, June 28, 2012***]

For two intersections the Worksheets are abbreviated and certain legs are flagged as follows: “*95th percentile volume exceeds capacity, queue may be longer.*”: *SE Covington*

*Rd/216th Ave SE*: Northbound-through (252 ft) and Southbound-through (507 ft) and *SE Auburn BD Rd/Main St*: Westbound-left-turn (140 ft--literally queued back to the adjacent *SE Auburn BD Rd/Lake Sawyer Rd* intersection).

In addition, for two other intersections long queues are not flagged: *SR-169/BD-Ravensdale Rd*: Southbound-left-turn/through (262 ft) and *SR-169/Roberts Dr*: Eastbound-left-turn/right-turn (208 ft) and Southbound-through (205 ft). Even with some planned realignment of Roberts Dr, these appear to be too close together such that the two proposed traffic signals essentially will be consecutive.

**RECOMMENDATION:**  
**Re-evaluate queue lengths for closely spaced SR-169 intersections during Traffic Monitoring Plan periodic reviews.**

Although all four of these intersections possess legs with long queue lengths, but it was determined that: *“proposed mitigation measures would adequately accommodate the anticipated queuing.”* [*Memorandum, TV MPD--PP1A--Response to Comments, June 28, 2012, p. 4*]

Of particular concern is the *SE Covington Rd/216th Ave S* intersection with Queue Lengths of 252 ft for Northbound-through and 507 ft for Southbound-through. This is one of the intersections where individual legs possess LOS of “D”--well below the overall intersection LOS “A” or “B.” Although an *“averaging”* approach (e.g., 3 legs with LOS “A” offset one leg of LOS “D” to result in an overall LOS “A”) is common practice, when one of the legs of an intersection is uncharacteristically long (as is the case for *SE Covington Rd/216th Ave SE* described above), other mitigation measures could be evaluated, such as changing the length of time different legs are signal delayed.

**Traffic Safety.** There was no specific safety analysis conducted for PP1A save for reviewing recent three-year high-accident areas and rates in the local area. However, because current traffic volumes are relatively low, such a review of historic accident rates does not necessarily suffice for the much higher volumes predicted as a result of PP1A.

The Applicant also stated that proposed transportation improvements for PP1A include elements that will improve safety. There is little doubt the improvements listed for

the six intersections subject to mitigation would improve safety at *today's* traffic volumes. However, there was no assessment conducted to show their effectiveness in addressing safety at the much higher traffic volumes anticipated with a ~50% increase in the City's population resulting from just PP1A *buildout*. Also, there is no safety assessment of any of the other eleven intersections studied [***The Villages MPD PP1A Traffic Impact Study, Transpo Group , February 2011***], presumably because past history shows they are not "*high-accident*" locations, but that again is at *today's* much lower level of traffic.

In addressing Traffic Safety for both vehicles and pedestrians the Institute of Transportation Engineers (ITE) calls for the following [***Transportation Safety, Institute of Transportation Engineers*** <http://www.ite.org/safety/default.asp>]:

1. Analyze reasons for intersection traffic conflicts using multidisciplinary teams;
2. Balance the requirement for efficient traffic movement and the need to protect vehicle occupants and pedestrians from the consequences of dangerous vehicle maneuvers and unwise pedestrian behavior;
3. Modify the intersection design and operations based on engineering analysis;
4. Identify the safety benefits of reconstruction or construction projects and/or operational changes that are planned at intersections and select alternatives that have the greatest safety benefit; and
5. Integrate safety evaluations of projects into the planning and design processes.

None of this was done to support PP1A, nor the City's PP1A MDNS decision.

***Construction Traffic.*** The two major haul routes identified for PP1A are *SE Auburn-BD Rd* (also identified as the primary east-west commuter route) and *SR-169*. [***Memorandum, PP1A Construction-Related Vehicle Trips, Yarrow Bay, September 28, 2012 and attached Construction Trip Analysis Report, The Transpo Group, September 28, 2012***] However, *SR-169* is considered by many commuters to be the primary north-south commuter route.

**RECOMMENDATION:**  
**The Traffic Monitoring Plan should also evaluate construction traffic impacts, especially during the overlap times with the AM commute.**

### **Traffic Monitoring Plan**

The TMP's purpose is: *"To assure ... mitigation keeps pace with MPD Development and appropriate improvements are constructed at the appropriate time..." [DA, Exhibit F--Traffic Monitoring Plan]*

The TMP describes: (1) Modeling/Analyses, (2) Monitoring, and (3) Mitigation Triggers. Prior to each Phase and at the midpoint (based on ERUs) of each Phase, the Master Developer is to model and monitor traffic to identify the expected traffic impacts of that Phase. The modeling need only take into account the number of new homes and commercial buildings that are actually *occupied* and generating traffic. Traffic modeling and monitoring findings are to be documented in reports to the City.

The findings are to address both existing conditions and a forecast of future traffic volumes based on the next Phase's (or the remaining portion of the Phase's) projected level of development. The City can use the information to determine whether to request the Master Developer to update its proposed timing for construction of any new roadway alignments or intersection improvements described COA 10.

For any Phase's future traffic impact the following is to be included in the traffic-demand model and monitored:

1. All projects listed in Development Agreement *Table 11-5-1. Transportation Intersection Improvements* and *Table 11-5-2. Transportation Roadway Improvements*. These can be modified based on the COA 17 periodic review process.
2. Existing facilities in the City where the MPD LOS impacts may be addressed by building new roadway segments or intersection improvements per COA 10.
3. In cases of Transportation Mitigation Agreements with outside jurisdictions, such as the Cities of Covington and Maple Valley all projects are exempt from later modeling or monitoring. However, the Maple Valley Mitigation Agreement provides for no modeling,

no monitoring, and is *exempt* from all MPD COAs, plus, for a majority of the projects, the Master Developer will contribute less than 50%, possibly contributing to time and cost risk. **[Maple Valley Transportation Mitigation Agreement, October 6, 2010 (later included as DA, Exhibit Q)]** Another concern is the apparent conflicting language between COA 15 and COA 17b regarding mitigation *outside* the City.

4. The model and monitoring are not required to evaluate a specific improvement after it has been constructed.

**RECOMMENDATION:**

**Keep the option open to evaluate a specific improvement after it has been constructed.**

The Mitigation Trigger for intersection improvements is when the PM peak-hour LOS: (1) no longer meets the adopted LOS (see [Vesting](#) below for potential conflicts) or (2), traffic volumes from the new MPD Phase begin to increase delay at an intersection (whose LOS already is below the applicable threshold) that causes an additional impact.

The Mitigation Trigger for roadway improvements is when MPD traffic increases delay or impacts LOS at any existing intersection to a point at which the new roadway would be warranted. Both of these Mitigation Triggers could be subject to question, especially in defining terms like “*delay*” or “*impact*.” Also, the “*trigger*” methodology is reactive--whereby The Master Developer only is required to build an improvement if the applicable threshold is triggered--rather than pro-active. The attendant time lags could be large.

**RECOMMENDATION:**

**Revisit language (i.e., “*delay*” and “*impact*”) for mitigation triggers, since a reactive protocol is being used.**

There is an apparent conflict in the language of the Traffic Monitoring Plan:

*“The specific construction timing shall be set in each report, based on the results of the required monitoring and modeling. For City of Black Diamond projects, by execution of the Development Agreement, the City commits to prompt permit review, such that the Master Developer’s prompt construction of transportation improvements shall commence before the impacted street or intersection falls below the applicable level of service.”*

***[DA, Exhibit F--Traffic Monitoring Plan, Para. D--Triggers and Timing for Construction of Transportation Projects, p. 3]***

How, will the Master Developer “promptly” construct needed transportation improvements if such decisions solely are based on monitoring actual traffic conditions? For example, for intersection improvements, as described above, the Mitigation Trigger is when the LOS standard is violated.

**RECOMMENDATION:**  
**Revisit language to ensure improvements are started *before* LOS standards are violated and are *not* dependent on the City’s “prompt permit review.”**

Timing of Mitigation also is governed by:

1. Within the City and within the State right-of-way (ROW) the TMP is to specify when engineering and design is to begin, not construction.
2. Within the City, if additional public ROW is needed, the Master Developer is to attempt to acquire the ROW needed. If unsuccessful, the City is responsible to acquire needed ROW. This could result in the use of Eminent Domain to secure private property.
3. Outside the City the TMP is to specify when permitting and/or engineering and design is to begin, not construction.

**New Traffic Demand Model**

The MPD Ordinance COAs address the new model in detail:

*“At the point where building permits have been issued for 850 dwelling units at the Villages and Lawson Hills together, and again at such phase or interval determined by the City Council..., the City shall validate and calibrate the new transportation demand model...for the then-existing traffic from the Villages and Lawson Hills together....The City shall then run the model to estimate the trip distribution percentages that will result from the next upcoming phase or interval of*



***MPD development...” [The Villages MPD Ordinance 10-946, September, 2010, COA 17a]***

Consequently, the new traffic-demand model will not be used for the Villages MPD Phase 1A, but must be validated, checked, and ready to use for all *subsequent* phases.

A new model is under development (as required by [COA 11](#)). The HE detailed the many deficiencies in the model used to support the FEIS (see [sect. 2. Past Hearings/Decisions](#)). ***[HE FEIS SEPA Decision and HE MPD Application Recommendations]***

Parametrix provided a detailed status on the new model in late 2011. ***[Technical Memorandum to Seth Boettcher, Re: MPD COAs--Condition 10/11, John Perlic, Parametrix, September 21, 2011]*** Parametrix later updated that status in early 2012. ***[Memorandum to Seth Boettcher, Re: Demand Model Update, Peter Chen, Parametrix, February 23, 2012]*** Changes completed to make the new model viable and meet the COAs are listed below:

1. Identified principal arterial (SR-169) and minor arterials (Roberts Dr, Lake Sawyer Rd, Black Diamond-Ravensdale Rd, etc.) and redefined geographic extent to meet COAs 10 and 11.
2. Integrated roadway links and intersection nodes between demand models of Black Diamond, Maple Valley, Covington, and King County to ensure all are included in the new model.
3. Added specific roadways and intersections that were omitted.
4. Added planned and fully/partially funded projects within the TIPs.
5. Link and node attribute data such as turn restrictions and volume delay functions.

However, Parametrix's Chen stated the new model *“should not be used in its current state because the zonal attributes need to be updated and the model needs to be calibrated.”* Zonal attributes (i.e., land-use data, connectors, and size/shape of Traffic Analysis Zones--typically consistent with census tracts) will not be reconciled with the

affected jurisdictions (and their respective models) until the 850 dwelling unit permits-issued threshold had been met.

Mr. Chen also stated:

*“(C)alibration and validation entails revising the model such that the traffic volumes predicted by the model are reasonably consistent with traffic volumes collected in the field. This effort requires a substantial amount of data collection and also represents the most costly portion of developing a regional traffic demand model (roughly 60% to 80% of the cost to develop a demand model is likely spent on calibration and validation).”*

There is a concern that has never been addressed in any of the Hearings. While it is acknowledged the 850-permit threshold *exempts* PP1A from use of the *new* TDM, this exemption could affect the *next* phase as well, since it will not be exceeded until the *next* phase has already *started*. In other words, the plat application for the next phase could be approved based on traffic analyses using the *old* TDM and assumptions.

**RECOMMENDATION:**

**Review 850-permit threshold for validation and use of the *new* model to determine if, besides exempting The Villages MPD Phase 1A, it *also* exempts the *next* phase, as its plat application could be approved based on traffic analyses using the *old* model and assumptions.**

### **Phase and Mid-Phase Traffic Analyses and Monitoring**

The *timing* of traffic analyses is defined as follows:

*“...the City shall validate and calibrate the new transportation demand model...(A)t the point where building permits have been issued for 850 dwelling units..., and again at such phase or interval determined by the City Council...” [COA 17a]*

*“...model the traffic impacts of a development phase before submitting land use applications for that phase...” [COA 25]*

*“...monitor traffic levels midway through each phase...” [COA 25]*

These provide the City with *multiple* evaluation points to ensure traffic impacts are assessed periodically. In addition, they represent *decision points*--times at which the City will be able to evaluate both current and future traffic impacts and make adjustments as appropriate to ensure civic and economic vitality.

## Traffic Monitoring Reports

The **Traffic Monitoring Plan (TMP)** [DA, Exhibit F--Traffic Monitoring Plan], called for by [COA 20](#), was detailed above. As described in [COA 25](#), the TMP calls for all traffic modeling and monitoring to be documented in written Reports. Results to be documented will include an evaluation of both *existing* conditions and a forecast of *future* traffic volumes based on the remainder of an *existing* Phase or the *next* Phase's planned development.

Details will include both: (1) Peak-Hour Turning Movement counts for intersections and Two-Direction counts for roadway segments and (2) Level of Service (LOS). For intersection improvements, comparisons will be made to LOS thresholds to determine whether and when any improvement is required.

The City may use the results to determine whether to "*request*" the Master Developer to alter its proposed timing for construction of mitigation described in [COA 10](#):

*"The City, in its reasonable discretion, may use the report to determine whether to request that the Master Developer [the word "alter" was inadvertently omitted] its proposed timing for construction of any new roadway alignments or intersection improvements...." [DA, Exhibit F--Traffic Monitoring Plan, B. Reporting Requirements, p. 2]*

As shown in the excerpt above, the language of Exhibit F uses the word "*request*."

**RECOMMENDATION:**  
**Determine the means necessary--and what leverage the City would have on a Master Developer--to *alter timing of any mitigation* to meet needs identified by traffic monitoring.**

## Transportation Concurrency Testing

The key to proper Transportation mitigation is Transportation Concurrency testing--a mandate of the State's Growth Management Act (GMA) and part of all jurisdictional Comprehensive Plans including the Black Diamond Comprehensive Plan (BDCP) **[BDCP, Policy T-13, p. 7-51]**.

In general, such testing ensures transportation improvements or strategies are constructed or financed concurrent with development. (Note: Highways of Statewide Significance--such as SR-169--are not *required* to be concurrency tested, but jurisdictions can choose to do so, as does King County, and, *now*, Black Diamond through adoption of its Concurrency Amendment to the BDCP in 2012.)

As part of the GMA, concurrency is one of the goals local governments must consider in land-use planning. The concurrency goal is intended to ensure public facilities and services (such as sewer, water, roads, parks and schools) are adequate to serve new development at the time of occupancy without decreasing service levels below locally established minimum standards. Transportation Concurrency has far-reaching impact on land use. The State describes the Transportation Concurrency requirements as follows (emphasis added) **[Concurrency, Land Use, and the State Transportation System, Washington State Department of Transportation, May 2007]**:

*"The GMA also defines a specific transportation concurrency requirement. First, local governments must set level of service (LOS) standards, or minimum benchmarks of performance, for transportation facilities and services. Once the LOS standard is established, the local government must adopt an ordinance to deny proposed developments if they cause the LOS on a locally-owned transportation facility to decline below the adopted standard, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with development [RCW 36.70A.070(6)]. Concurrent with development means improvements or strategies are in place at the time of development, or a financial commitment has been made to complete them within six years. Local governments may accommodate development impacts by changing the phasing or timing of new development, improving transportation*

*facilities or services to serve the new development, reducing the LOS standard, or revising their land use policies.”*

*“Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.” [RCW 36.70A.020(12)]*

*“A common misconception is that concurrency guarantees some uniform minimum level of governmental services. The state has not specified any such minimums. Local governments have the authority and responsibility to provide acceptable levels of service for their communities resulting in a wide variety of methodologies and standards. This discretion is constrained by the growth management hearings board finding that local governments cannot avoid the concurrency requirement entirely by manipulating the standards to allow uncontrolled development despite identified deficiencies [Eugene Butler et al. v. Lewis County, 99-2-0027c, WWGMHB (June 20, 2000)]. Neither can local governments avoid the concurrency requirement by crafting exemptions of any kind [Bennett et al. v. City of Bellevue, 49852-5-1, 119 Wn. App. 405 (December 15, 2003)].”*

Transportation Concurrency is possibly the most powerful tool at the City’s disposal to ensure built transportation infrastructure meets needs to adequately and economically move both people and freight. Concurrency rules are flexible (emphasis added):

*“To ensure that future development will not cause the City’s transportation system performance to fall below the adopted LOS, the jurisdiction must do one or a combination of the following: modifying the land use element, limiting or “phasing” development, requiring appropriate mitigation, or changing the adopted standard.” [BDCP, 7.2.2 LOS and Concurrency]*

The Hearing Examiner provided an excellent review (not repeated here) of the purpose and needs of concurrency testing, as well as the pitfalls in the DA Traffic Monitoring Plan with respect to concurrency testing, in his DA Recommendations and ADDENDUM. **[HE DA Recommendations, September 2011, pp. 82-86; HE DA Recommendations ADDENDUM, B. Recommendations, September 2011, pp. 4-5]**

The Transportation Monitoring Plan called for in COA 20 is the *mechanism* under which Transportation Concurrency testing would occur.

## Funding

Future decisions on scope and timing of traffic mitigation will be based on available funding sources and amounts. At this time, and for the foreseeable future, budgets are tight: locally, regionally, statewide, and nationally. The availability of grants is poor.

For example, the Puget Sound Regional Council's (PSRC's) *Transportation 2040*, an action plan for transportation in the central Puget Sound region for the next 30 years, shows only one funded project in the immediate area: MV-5: SR-169/SE 271st Place Intersection Improvements. ***[Transportation 2040, 2013-2016 Regional Transportation Improvement Program (TIP), January 2013 (amended)]***

The full Transportation 2040 capacity list shows only two projects, *both unfunded*, in the immediate area out to 2040 ***[Transportation 2040, Appendix M: Metropolitan Transportation System Capacity Improvements List]***:

Route	To and From	Description	Sponsor	Estimated Cost (\$ '08)	Status
SR 169	SR 516 to SE 231st St	Widen to 4 lanes with turn lanes where warranted	WSDOT	\$120,000,000	Can only program & obligate study funds
SR 169	SE 270th St to SE 290th St	Widening to 4 lanes, center turn lanes or LT pockets & bike lanes	Maple Valley	\$5,000,000	Can only program & obligate study funds

The aforementioned projects are *outside* the Black Diamond City limits, so funds will have to be found for *all* the proposed in-city mitigation improvements.

Should traffic mitigation funding shortfalls occur needed mitigation could be delayed. In fact, the Maple Valley Traffic Mitigation Agreement is based on the availability of Grant funding, which could be in short supply for some time. ***[Maple Valley Transportation Mitigation Agreement, October 6, 2010 (later included as DA, Exhibit Q)]*** The Master Developer's contribution is based on percentages, not dollar levels. Should Grant funding fall short, planned mitigations could be scaled back. In many cases the Master

Developer's contributions are small with more than half <40%; consequently, the City of Maple Valley must secure the remainder of funding to make most of the projects viable. Securing adequate funding for the full palette of proposed mitigation improvements in a timely manner to meet Transportation Concurrency requirements will be a challenge.

## **Vesting**

The standards that apply for Transportation Concurrency testing and intersection Level of Service (LOS) analyses are important in ensuring adequate traffic mitigation. In the **MPD Ordinance Conditions of Approval (COAs)** and the **Development Agreements (DAs)** the terminology "*then-applicable*" or "*then-existing*" LOS standards is used throughout. Such potentially *conflicting* terminology must be clarified to determine *what* standards apply and *when* they apply, especially since Transportation Concurrency testing is conducted to ensure transportation improvements or strategies are constructed or financed *concurrent* with development.

The "*then-applicable*" adopted LOS means that *changes* to the City's Comprehensive Plan LOS assumptions, methodologies, and standards will govern:

*"For intersection improvements, the threshold trigger is when the intersection LOS...would...no longer meet the City's then-applicable, adopted LOS standard..." [DA, Exhibit F--Traffic Monitoring Plan, Para. D--Triggers and Timing for Construction of Transportation Projects, p. 4]*

The Hearing Examiner made strong recommendations regarding the Traffic Monitoring Plans and Transportation Concurrency which were not included, nor clarified, in the final DA Ordinances approved by the City Council (see [sect. 2. Past Hearings/ Decisions, Development Agreement Hearings](#)). However, the MPD Ordinance COAs are conflicting when addressing *vesting* of transportation standards. This should be rectified, as it could become a major problem and legal concern later.

COAs 10 and 17b imply transportation standards are *not* vested (emphasis added):

**COA 10.** *Over the course of project build out, construct any new roadway*

alignment or intersection improvement that is:

- (a) depicted in the 2025 Transportation Element of the adopted 2009 City Comprehensive Plan and in the City's reasonable discretion is
  - (i) necessary to maintain the City's then-applicable, adopted levels of service to the extent that project traffic would cause or contribute to any level of service deficiency as determined by the City's adopted level of service standard, or
  - (ii) to provide access to or circulation within the project;
- (b) functionally equivalent to any said alignment or improvement; or
- (c) otherwise necessary to maintain the City's then-applicable, adopted levels of service to the extent that project traffic would cause or contribute to any level of service failure as determined by the City's adopted level of service standard,....

**COA 17b.** Using the trip distribution and trip assignment yielded by the transportation demand model validation and calibration required in subsection (a) above, the City shall conduct an intersection operations analysis of the transportation levels of service (LOS) for the intersections identified in Condition 11 above, and shall issue findings, conclusions and a recommendation as provided below. The intersection operations analysis shall determine whether then-existing, adopted PM peak hour intersection levels of service are met, and whether the then-existing, adopted PM peak hour intersection levels of service are projected to be met by the time of the next validation/calibration/operations analysis identified by the City Council pursuant to subsection (a) above. The intersection operations analysis for existing conditions must take into account the then-existing peak hour factor; the analysis for the next identified phase or interval of development must be based on 'a reasonable assumption (justified by reasonable traffic engineering practice) as to the future peak hour factor, and contain a sensitivity analysis to identify the effect of such peak hour factor assumption. If the findings and conclusions determine that the then-existing, adopted PM peak hour LOS will not be met, they shall also determine whether the projects set forth in Conditions 15 and 16 above adequately mitigate the impacts resulting from the failure to meet the adopted LOS. If the findings and conclusions determine that failure to meet adopted transportation LOS will not be adequately mitigated, they shall also recommend such additional measures necessary to adequately mitigate the impacts reasonably attributable to the MPD projects' failure to meet the adopted LOS.

It is not clear what the exact distinction is between COA 10's "then-applicable, adopted levels of service" and COA 17b's "then-existing, adopted PM peak hour LOS." Although these could be construed as equivalent, it should be explored.



In addition, COAs 17f and 25 imply that past transportation standards may be vested:

*17f. The City's demand model validation and calibration called for by subsection (a) above, and the intersection operations analysis called for by subsection (b) above, (the "periodic review analysis") shall result in written findings and conclusions plus a recommendation for new future permit conditions and mitigations for the Villages and/or Lawson Hills, as required. Proposed conditions and mitigations applicable to future permits and associated mitigation within either or both projects shall be revised if the City finds that the conditions or mitigation measures imposed pursuant to the City's standards in effect at the time of MPD approval have resulted in an unsatisfactory level of mitigation, either because the degree of mitigation is inadequate or the quantity of impact demonstrated to be attributable to MPD development exceeds levels predicted. New permit conditions and mitigations imposed for cumulative impacts through the periodic review process shall comply with the following standards and limitations:*

- i. No new standards or requirements shall be imposed upon property in any plat recorded within 60 months of MPD approval to the extent that such standards or requirements would affect infrastructure serving said property also constructed within the 60-month timeframe.*
- ii. Performance standards more stringent than those contained in the original MPD permit shall not be imposed.*

*25. The monitoring plan required by these conditions shall require the applicant to model the traffic impacts of a development phase before submitting land use applications for that phase, in order to determine at what point a street or intersection is likely to drop below the City's adopted level of service. The monitoring plan shall provide for the timing of commencement of construction of projects identified in Condition 15, as well as the amendments to the scope of said projects and/or additions to Condition 15's project list as determined by the City in its reasonable discretion as necessary to maintain the City's adopted levels of service in effect at the time of the modeling, to the extent that project traffic would cause or contribute to any level of service failure as determined by the City's adopted level of service standard. In the event of a disagreement between the applicant and the City about the timing of construction of a transportation project under the monitoring plan, and if the monitoring plan does not already include period modeling, the applicant shall also monitor traffic levels midway through each phase to determine if the traffic generation, trip distribution and assignment patterns are developing as expected.*

In conclusion, the MPD Ordinance COAs and the DAs use the terminology “*then-applicable*” or “*then-existing*” throughout with the exception of COA 17f’s “*in effect at the time of MPD approval.*” However, Transportation Concurrency is a State GMA requirement to which one cannot be vested. Clearly, COA 10 and 17b’s use of “*then-applicable*” and “*then existing*” LOSs imply the 2009 BDCP, LOSs are not sacrosanct. Another consideration is the 2012-adopted Transportation Concurrency on SR-169 BDCP Amendment *allows* the City to not only conduct such concurrency testing on SR-169, but also *allows* it to establish different LOS standards in consultation with WSDOT. As is the case in many of the MPD and DA documents, potentially conflicting language could lead to difficulties between the parties in the future and possible lawsuits.

**RECOMMENDATION:**

**Explore apparent conflicting language in COAs 10, 17b, 17f, and 25 as to applicable Level of Service standards for all Traffic Impact Analyses and Transportation Concurrency testing.**

## **7. Conclusions**

### ***What has been learned?***

This document has provided a review of issues and decisions related to MPD transportation analysis, planning, and mitigation. Although many concerns have been identified and discussed, it is concluded that there also exists a framework for MPD transportation issues to be solved and for final mitigation to work as designed:

1. Transportation will be subjected to periodic evaluation and update. Since the Master Developer is not vested to the 2009 Black Diamond Comprehensive Plan Level of Service standards, future stronger standards could apply.
2. The MPD Permits (through [MPD Ordinance COA 17](#)) have strong language and, if adhered to, ensure proper traffic analyses.
3. The *new* Traffic-Demand Model, assumptions, and analyses should result in a much better evaluation of traffic impacts than the original analyses that supported the EISs.
4. Traffic analyses are required to precede each phase.
5. Traffic analyses are required at each mid-phase.
6. Traffic analyses could be triggered at any time at the discretion of the BDCC: *“At such phase or interval determined by the City Council following completion of the review called for by this condition....” “...the City shall validate and calibrate the new transportation demand model created pursuant to Condition 11 above for the then-existing traffic from the Villages and Lawson Hills together.”* ([MPD Ordinance, COA 17a](#))
7. The Amendment now added to the Black Diamond Comprehensive Plan will allow transportation concurrency testing on SR-169 and could lead to a change in Level of Service and/or denial of future permits to ensure mitigation is adequate and timely.

Throughout this document many concerns have been discussed. Recommendations to address those concerns are provided in the next section.

## 8. Recommendations

### *What should be done?*

#### Overall Recommendations

Throughout this document background and rationale have been provided related to issues of concern, often followed by Recommendations identified in boxed **boldface** font. All Recommendations are collected below and grouped into four categories: Transportation Management, Transportation Concurrency, Traffic Monitoring Plan, and Traffic-Demand Model.

Each Recommendation includes a suggested responsible individual (e.g., *Mayor, City Attorney*) or group (e.g., *City Council, City Staff*) and is followed by a [hyperlinked reference](#) to the section in the document that provides detailed background rationale.

#### Transportation Management

1. Separate out the transportation function from the Public Works Department to create a stand-alone Transportation Department reporting to the City Administrator. *Responsibility: Mayor. (see [sect. 6. Future Decision Points, Overall Concerns](#))*
2. Ensure Master Development Review Team members have not performed past (or current) MPD traffic work for the Master Developer or the City to avoid any potential conflicts of interest. *Responsibility: City Council and Master Developer. (see [sect. 4. Development Agreements, Exhibits](#))*
3. Develop and implement a MPD Transportation Strategic Plan to include timing of key milestones: model validation; model simulation through full build-out; sensitivity analyses of key assumptions; continuous model adjustments; traffic analyses; and mitigation evaluation. It should include a Model Validation Plan (including COA 11) and a Sensitivity Analysis Plan (COA 17b *only* addresses Peak-Hour Factor). Sensitivity analyses of key assumptions will identify risks involved with traffic volume prediction. Higher sensitivity=greater risk. Greater risks could deleteriously impact mitigation timing and costs. *Responsibility: City Council--can assign to City Staff. (see [sect. 6. Future Decision Points, Overall Concerns](#))*

4. Develop a Flow Chart of all 25 Transportation COAs, especially COA 17 and its 10 subsections and share same with affected cities, KCDOT, and WSDOT. *Responsibility: City Staff. (see [sect. 3. MPD COAs](#))*
5. Establish a City Council Transportation Committee to consider matters related to transportation planning, traffic data, traffic impacts, project financing, and infrastructure implementation. *Responsibility: City Council. (see [sect. 6. Future Decision Points, Overall Concerns](#))*
6. Establish a Citizens' Transportation Panel to review periodic analysis results and impacts. *Responsibility: City Council. (see [sect. 6. Future Decision Points, Overall Concerns](#))* -- In addition, an Amendment to address *Road Citizen Review Committees* is outlined below under [Amendments to Development Agreements](#).
7. Explore apparent conflicting language in COAs 10, 17b, 17f, and 25 as to applicable Level of Service standards for all Traffic Impact Analyses and Transportation Concurrency testing. *Responsibility: City Attorney. (see [sect. 6. Future Decision Points, Vesting](#))*

### Transportation Concurrency

1. Address Project-Level Concurrency by conducting Transportation Concurrency testing for *each* implementing project (in conjunction with review of Traffic Monitoring results) to better align the timing of needed traffic mitigation. *Responsibility: City Staff. (see [sect. 2. Past Hearings/Decisions, Development Agreement Hearings](#))* -- In addition, an Amendment to address *Transportation Concurrency Plans* is outlined below under [Amendments to Development Agreements](#).
2. Rigorously enforce Transportation Concurrency--possibly the most valuable tool at the City's disposal--to ensure traffic mitigation is both timely and adequate. *Responsibility: City Staff. (see [sect. 2. Past Hearings/Decisions, Black Diamond Comprehensive Plan](#))*
3. Review COA 17f (i. thru v.) and Development Agreement 11.3B language calling for the City to prove MPDs are causing future traffic problems, as well as triggers for new standards, requirements, modifications, conditions, and mitigations. *Responsibility: City Attorney. (see [sect. 3. MPD COAs, COA 17f](#) and [sect. 4. DAs, 11.3B](#))*

### Traffic Monitoring Plan

1. Revisit trip distributions as traffic is monitored and volumes evaluated. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, The Villages PP1A, Trip Generation and Distribution](#))
2. Re-evaluate queue lengths for closely spaced SR-169 intersections. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, The Villages PP1A, Intersection Queue Lengths](#))
3. Evaluate construction traffic impacts during overlap times with the AM commute. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, The Villages PP1A, Construction Traffic](#))
4. Keep option open to evaluate an improvement after its construction. *Responsibility: City Staff.* (see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#))
5. Revisit language (i.e., “*delay*” and “*impact*”) for mitigation triggers, since a *reactive* protocol is being used. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#))
6. Revisit language to ensure improvements start before Level of Service standards are violated and are not dependent on the City’s “*prompt permit review.*” *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Traffic Monitoring Plan](#)) -- In addition, an Amendment to address *Transportation Plans* is outlined below under [Amendments to Development Agreements](#).
7. Determine the means necessary--and what leverage the City would have on a Master Developer--to alter timing of any mitigation to meet needs identified by traffic monitoring. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, Traffic Monitoring Reports](#))

### Traffic-Demand Model

1. Review 850-permit threshold for validation and use of the *new* model to determine if, besides exempting PP1A (i.e., threshold was *not* reached), it *also* exempts the *next* phase, as its plat application could be approved based on traffic analyses using the *old* model and assumptions. *Responsibility: City Attorney.* (see [sect. 6. Future Decision Points, New Traffic Demand Model](#))

2. Establish a Traffic-Demand Model Advisory Board comprised of representatives from all affected entities--Black Diamond, Maple Valley, Covington, the Master Developer, KCDOT, and WSDOT--to periodically review progress on the new model and make final recommendations on its suitability. *Responsibility: City Council. (see [sect. 3. MPD COAs, COA 11](#))*
3. Conduct Internal Capture Rate (ICR) Sensitivity Analyses to ensure the fidelity of assumptions as traffic distribution and volume fluctuate. *Responsibility: City Staff. (see [sect. 3. MPD COAs, COA 14](#))*
4. Determine legal means to affect the Maple Valley Traffic Mitigation Agreement should Peak-Hour Factor sensitivity analyses result in recommendations to modify mitigation. *Responsibility: City Attorney. (see [sect. 3. MPD COAs, COA 17b](#))*

### **Amendments to the Development Agreements**

In addition to the Recommendations listed above, there are three Amendments to the Development Agreements (DAs) that should be considered. The purpose of the first two are to reduce risk and cost to the City and the Region's citizens, as well as ensure "Growth Pays for Growth" by holding the Master Developer accountable. The purpose of the third is to address impacts on King County roads and facilitate Public involvement.

1. **Transportation Concurrency Plan.** A viable and executable *Transportation Concurrency Plan* is not provided in the DAs, as required by the **BD Municipal Code (BDMC) [Black Diamond Municipal Code, Codified through Ordinance No. 981, October 4, 2012]** and **BD Comprehensive Plan (BDCP)**. With respect to Transportation Concurrency testing, the DAs do not specify *how* it will be done, *when* it will be done, or *if* it will be done. Consequently, such a Plan should be incorporated into the DAs through a Major Amendment. The HE recognized such deficiencies in the DAs and provided remedies in his Recommendations accordingly. A *compendium* of his concerns (some of which were previously cited) are listed below [**HE DA Recommendations, pp. 82-86**]:

- *“The DA traffic modeling [HE typo, should have been “monitoring”] plan lacks assurances traffic mitigation will comply with GMA mandated concurrency...”*
- *“Nothing in the monitoring plan requires concurrency review for implementing projects. Nothing requires that the City deny any implementing project applications that fail to meet concurrency.”*
- *“The Applicant and the City did not directly address the legal requirements for concurrency.”*
- *“The City is approving a concurrency program that hasn’t been developed yet....It has no idea at MPD/DA review whether the timing of the traffic improvements will actually comply with concurrency.”*
- *“It could take several years beyond the GMA six year maximum before improvements are actually completed to remedy LOS deficiencies caused by large development projects. It is unlikely that the City could be found to have satisfied its due diligence in assessing concurrency when it only approves a conceptual framework with a huge margin of error where most details are left to the control and discretion of the Applicant.”*
- *“The City’s concurrency decision making is limited to MPD/DA approval because the MPD conditions and monitoring plan do not subject the traffic modeling [HE typo, should have been “monitoring”] reports for each phase to City approval.”*
- *“The timing required in the monitoring plan only requires modifications to be considered midway through each MPD phase....the Applicant and City ... have not referenced project level concurrency as a remedy to the traffic concerns raised by the public....the plan should be required to be updated to accommodate any changes necessitated by implementing project concurrency.”*
- *“It is recommended the DA contain a requirement that no implementing project shall be approved unless it complies with the City’s concurrency requirements.”*
- *“Adherence to GMA concurrency could require a reconsideration of the approved densities for the project if funding doesn’t become available to complete necessary improvements beyond those made available by the developer....”*
- *“The only methodology available to the City to correct project-created impacts to the LOS of state-owned facilities is to limit the density of the MPDs.”*



## **Recommended DA Amendment--*Transportation Concurrency Plan***

A Transportation Concurrency Plan shall be developed that specifies when and how concurrency testing will be done and evaluated. Transportation Concurrency testing shall be periodically conducted for each implementing project and at the beginning, midpoint, and end of each Phase to ensure traffic mitigation is both timely and will comply with the State Growth Management Act-mandated concurrency. The Plan should be based on the premise that no implementing project be approved unless it complies with the City's concurrency requirements. The Transportation Monitoring Plan should be updated periodically to accommodate any changes necessitated by implementing project concurrency.

2. **Transportation Plans.** A complete set of Transportation Plans should be developed that include, at a minimum, project descriptions, project impacts, mitigations proposed, estimated costs, cost shares, funding mechanisms, risks of potential revenue sources, and cost-benefit-risk analyses. Planning should cover both route and intersection improvements that fully mitigate all transportation-related impacts on all geographic areas. Such Plans could build upon the Black Diamond Comprehensive Plan. There are at least three **Black Diamond Municipal Code (BDMC)** sections which require transportation planning be done and describe when it should be done:

**BDMC 18.98.010** states the purposes for an MPD and includes under **Paragraph I:**

*“Provide needed services and facilities in an orderly, fiscally responsible manner.”*

This includes all transportation-related improvements.

**BDMC 18.98.020** states, in part, the Public Benefits to be derived and includes under **Paragraph G:**

*“Timely provision of all necessary ... infrastructure ... equal to or exceeding the more stringent of either existing or adopted levels of service, as the MPD develops.”*

Thus, all transportation-related infrastructure, must be provided in a “*timely*” matter to avoid even *worse* traffic congestion than *already* experienced by the region’s commuters.

**BDMC 18.98.080** states, in part, as conditions of approval of any future MPD permits under **Paragraph A.4.a**, that there be a:

*“...phasing plan and timeline for the construction of improvements ... so that: Prior to or concurrent with final plat approval ... the improvements have been constructed and accepted ....”*

The required transportation improvements should be in place, at least, at final plat approval. However, the City’s *Six-Year Transportation Improvement Plan (TIP)* contains projects that might not mitigate the MPD impacts and do not have funding sources or any risks identified with financing, securing Right-of-Ways, nor construction. This could be an issue when decisions are made on key mitigation and the Master Developer’s financial responsibility. In the end the City’s goal should be adhered to: “*Growth pays for growth.*”

In addition, the mitigations proposed for the Cities of Maple Valley and Covington also should be addressed in an overall **Transportation Plan**. Those proposed mitigations (out to ~2030) should not be frozen in time based on the 2009 flawed traffic analyses.

**Transportation Plans** must, at a *minimum*, define the needs, routes, concepts, schedules, cost estimates, funding sources, risks, cost-benefit-risk analyses, and potential impacts related to each risk factor.

### **Recommended DA Amendment--*Transportation Plans***

A complete set of Transportation Plans shall be developed that include, at a minimum, project descriptions, project impacts, mitigations proposed, estimated costs, cost shares, identified funding mechanisms, and risks of potential revenue sources for both route and intersection improvements to fully mitigate all transportation-related impacts on all geographic areas (including Cities of Maple Valley and Covington and the surrounding unincorporated areas of King County) studied before each Phase begins. Cost-Benefit-Risk Analyses shall be conducted for each mitigation proposed to provide specific details for decision-makers and assess potential impacts associated with slips in schedule, not securing adequate funding, and traffic pattern changes. Such Plans shall be submitted to the City for review and approval 180 days before a Phase is scheduled to begin.

**3. Road Citizen Review Committees.** Many King County Rural Area roads--primarily windy 2-lane country roads--will directly be impacted by the MPDs. Green Valley Road, through the dogged work and perseverance of its residents, became the subject of several COAs, including the establishment of a Citizens Review Committee (COA 33). However, residents along other King County roads do not have any say in how their homes and property, safety, commutes, and quality of life will be forever altered. There should be additional Road Citizen Review Committees established to address these needs and provide local and regional citizens with a voice to help shape any final mitigation.

**Recommended DA Amendment--Road Citizen Review Committees**

Separate Citizen Review Committees shall be established for the following King County roads: Issaquah-Hobart-Ravensdale-Black Diamond Rd., Auburn-Black Diamond Rd., Kent-Black Diamond Rd., Lake Holm Rd., Thomas Rd., and Covington-Sawyer Rd. Some may be combined should the citizens agree. Each of these Committees will be comprised of five members. The Chair shall be an employee designated by the King County Department of Transportation (KCDOT), who, at the discretion of KCDOT, can chair multiple committees. The other members will include three citizens along the road in question and one representative of the Master Developer. The City of Black Diamond can send a *non-voting* representative to participate in Committee meetings. The Committees will be responsible for setting their goals and agendas. The express intent of the Committees is to provide the Public a direct voice on potential impacts that could affect them, their property, and their quality of life. The Committees, at their own discretion, can develop and submit reports to the City on the type and timing of mitigations proposed by the Master Developer. The City will be the ultimate arbiter through the DAs, while KCDOT will be the ultimate permitting agency for any mitigation.

## 9. References

### General Documents

*Concurrency, Land Use, and the State Transportation System*, Washington State Department of Transportation, May 2007 <http://www.wsdot.wa.gov/NR/rdonlyres/AF9B9041-167E-4277-B3CF-EAC0A5F44603/0/LandUseConcurrencyFolio.pdf>

*Land Use and Travel Demand Forecasting Models: Puget Sound Regional Council Model User's Guide* [http://www.psrc.org/assets/1512/model\\_usersguide2007.pdf](http://www.psrc.org/assets/1512/model_usersguide2007.pdf)

*Transportation 2040, Appendix M: Metropolitan Transportation System Capacity Improvements List*, May 20, 2010

*King County Tiered Service Levels* <http://www.kingcounty.gov/transportation/kcdot/Roads/NewServiceLevels.aspx>, 2012

*Black Diamond Municipal Code*, Codified through Ordinance No. 981, October 4, 2012

*Black Diamond Comprehensive Plan*, June 2009 as Amended through December 2012

*Institute of Transportation Engineers Trip Generation Manual, 9th Edition*, 2012

*Transportation Safety, Institute of Transportation Engineers* <http://www.ite.org/safety/default.asp>

*RCW 36.70 Local Project Review, 36.70B.170 through 36.70B.210, "Development Agreements"*

*Transportation 2040, 2013-2016 Regional Transportation Improvement Program, Transportation 2040, Puget Sound Regional Council, January 2013 (amended)*

## **MPD Documents**

### **2009**

*The Villages Master Planned Development Final Environmental Impact Statement, December 2009*

### **2010**

*Final Environmental Impact Statements State Environmental Policy Act Appeals Testimony Transcript, March 2010*

*Hearing Examiner Final Environmental Impact Statements State Environmental Policy Act Decision, April 2010*

*Hearing Examiner Master-Planned Development Application Recommendations, May 2010*

*The Villages Master-Planned Development Ordinance 10-946, September, 2010*

*Maple Valley Transportation Mitigation Agreement, October 6, 2010 (later included as Development Agreement, Exhibit Q)*

*Covington Transportation Mitigation Agreement, December 14, 2010 (later included as Development Agreement, Exhibit R)*

## **2011**

*The Villages Master Planned Development Phase 1A Traffic Impact Study*, Transpo Group , February 2011

*Hearing Examiner Development Agreement Recommendations*, September 2011

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*Technical Memorandum to Seth Boettcher, Re: Master-Planned Development Conditions of Approval--Condition 10/11*, John Perlic, Parametrix, September 21, 2011

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*The Villages Master-Planned Development Development Agreement, Exhibit F--Traffic Monitoring Plan*, November 2011

*The Villages Master-Planned Development Development Agreement, Exhibit N--Funding Agreement*, November 2011

## **2012**

*Memorandum to Seth Boettcher, Re: Demand Model Update*, Peter Chen, Parametrix,  
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Transpo Group, May 15, 2012

Technical Memorandum to Andy Williamson, *Re: The Villages Master-Planned Development Development Traffic Impact Study*, John Perlic, Parametrix, June 1, 2012

Memorandum, *The Villages Master-Planned Development Preliminary Plat Application Phase 1A--Response to Comments*, The Transpo Group, June 28, 2012

Memorandum, *The Villages Master-Planned Development Preliminary Plat Application Phase 1A Response to Comments, Attachment 5--Queueing Summary and Worksheets, SYNCHRO 7 Reports*, The Transpo Group, June 28, 2012

*Interim Improvements Along SR-169 at Roberts Dr & Black Diamond-Ravensdale Rd Intersections*, The Transpo Group, August 28, 2012

*Mitigated Determination of Non-Significance, The Villages Master-Planned Development Preliminary Plat Application Phase 1A*, Black Diamond City Staff, August 31, 2012

*Technical Memorandum, The Villages Master Planned Development--Phase 1A Comparison to Conditions of Approval*, John Perlic, Parametrix, September 12, 2012

*Traffic Impacts to Green Valley Road*, The Transpo Group, September 20, 2012

Memorandum, *The Villages Master-Planned Development Preliminary Plat Application Phase 1A Construction-Related Vehicle Trips*, Yarrow Bay, September 28, 2012 and attached *Construction Trip Analysis Report*, The Transpo Group, September 28, 2012

Memorandum, *Construction Trip Analysis*, John Perlic, Parametrix, October 8, 2012

*City of Black Diamond Villages Master-Planned Development Preliminary Plat Application Phase 1A Staff Report*, October 12, 2012

Memorandum, *The Villages Master-Planned Development Preliminary Plat Application Phase 1A--Response to September 21, 2012 Transportation Comments*, Transpo Group, October 24, 2012

*Hearing Examiner The Villages Master-Planned Development Preliminary Plat Application Phase 1A Decision*, December 2012