City of
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DATE: January 2, 2013

TO: Bellevue Transportation Commission

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SUBJECT: 2014 Comprehensive Plan Update - Mobility Management Area 11

INTRODUCTION

In the scope of the 2014 Comprehensive Plan Update is a proposal to modify Mobility Management Area (MMA) 11 to add intersections and adjust boundaries so that some intersections are reassigned to adjacent MMAs. This proposal reflects changed circumstances with respect to land development, roadway infrastructure projects completed, alignment of corridor travel patterns, and annexations/urban incorporations. At the Commission meeting on January 9, 2014, staff will review the proposed changes and the rationale, and will seek a preliminary recommendation.

Background

Mobility Management Areas are established in the Bellevue Comprehensive Plan and in the City Code (Attachment 2) to quantify and manage vehicular traffic. Vehicular level of service standards are established for each of the 14 MMAs in the city (Attachment 1) in accordance with the nature of the land use and the availability of mobility options. Level of service is quantified in terms of the volume to capacity ratio of "system" intersections located within the MMA. MMA boundaries, system intersections and/or level of service may be changed through the Comprehensive Plan, and subsequently adopted in Bellevue City Code, upon demonstration of changed circumstances.

In MMA 11 "Newcastle" several circumstances have changed as follows:

- Land Development

The Newcastle Subarea, largely included within the boundaries of MMA 11 has grown in terms of residential and commercial development since the adoption of the current version of the Comprehensive Plan in 2004. The eastern portion of the Factoria Subarea as well, also within MMA 11, is now nearly fully built-out. At this time MMA 11 is substantially developed consistent with the Comprehensive Plan and the zoning. Some small infill projects and redevelopment are expected, but these are unlikely to substantially change traffic volumes or travel patterns.

- Roadway Infrastructure Projects

New and planned infrastructure projects influence travel patterns and the functioning of the transportation system that serves MMA 11. For example, Lakemont Boulevard has been extended and new traffic signals have been added (at Village Park Drive and the Lakemont Shopping Center at 171st Avenue SE) or are imminent (at SE Cougar Mountain Way). Improvements along SE Newport Way include the reconfigured intersection at 150th Avenue SE and the modified signal operations at SE Allan Road and Somerset Boulevard SE to account for the offset roadways. New turn lanes, paving and signal operations have been added to the intersection of Coal Creek Parkway and Forest Drive. Some planned intersection projects (Lakemont Boulevard @ Forest Drive) will not be built because the anticipated traffic volume did not materialize and is not expected to warrant future signalization.

- Alignment of Corridor Travel Patterns

Both Coal Creek Parkway and SE Newport Way serve as arterials that provide access to neighborhoods and also corridors for thru trips that have neither an origin nor a destination in MMA 11. Traffic movement along these corridors and to neighborhoods is managed by a series of new and upgraded traffic signals at major intersections; serving the predominantly north-south traffic movement along Coal Creek Parkway (serves MMA 13 “Factoria”, and is a conduit for travel between I-405/I-90 and the city of Newcastle) and the predominantly east-west traffic movement along SE Newport Way (serves MMA 11 “Newcastle”). 150th Avenue SE south of the I-90 interchange is an upgraded arterial that serves primarily MMA 11 “Newcastle”.

- Annexation and Urban Incorporations

The name of the Newcastle Subarea Plan and MMA 11 “Newcastle” were established when the land area was significantly undeveloped and was broadly known as Newcastle. The Newcastle name originated from coal mining days beginning in the 1870s and is echoed in the Newcastle Community Plan adopted by King County in 1983. Annexations to Bellevue in this area are complete and unincorporated land areas are allocated to jurisdictions through “Potential Annexation Area” agreements. The 2012 “Eastgate/Horizon View/Hilltop” annexations resulted in the last blocks of unincorporated King County being annexed to Bellevue. To the south of Bellevue, the city of Newcastle – part of the original Newcastle Community Plan area - incorporated in 1994. MMA 11 “Newcastle” is in the SE corner of the city and encompasses neighborhoods such Lakemont, Somerset, Cougar Mountain, and Eastgate.

Staff Recommendation

In light of the changed circumstances described above, staff recommends the following changes to MMA 11 as described in Table 2 and shown in Figure 1:

- Change MMA 11 name from "Newcastle" to "S.E. Bellevue"
- Move intersection # 98 on Coal Creek Parkway from MMA 11 to MMA 13. Requires a MMA boundary adjustment.
- Move intersection # 174 on SE 38th Street at 150th Avenue SE from MMA 10 to MMA 11. Requires a MMA boundary adjustment.
- Add intersection # 313 to MMA 11: Somerset Drive/Allan Road at SE Newport Way
- Add intersection # 274 to MMA 11: Lakemont Boulevard SE at Village Park Drive

Calculated Level of Service Resulting from Staff Proposal

Staff conducted a level of service analysis of the proposed changes to MMA 10, MMA 11 and MMA 13. While the change in level of service would be minimal – as shown in Table 1 below - the representation of system intersections within the MMAs is better aligned with land use, infrastructure and mobility patterns/travel corridors, as noted in Table 2.

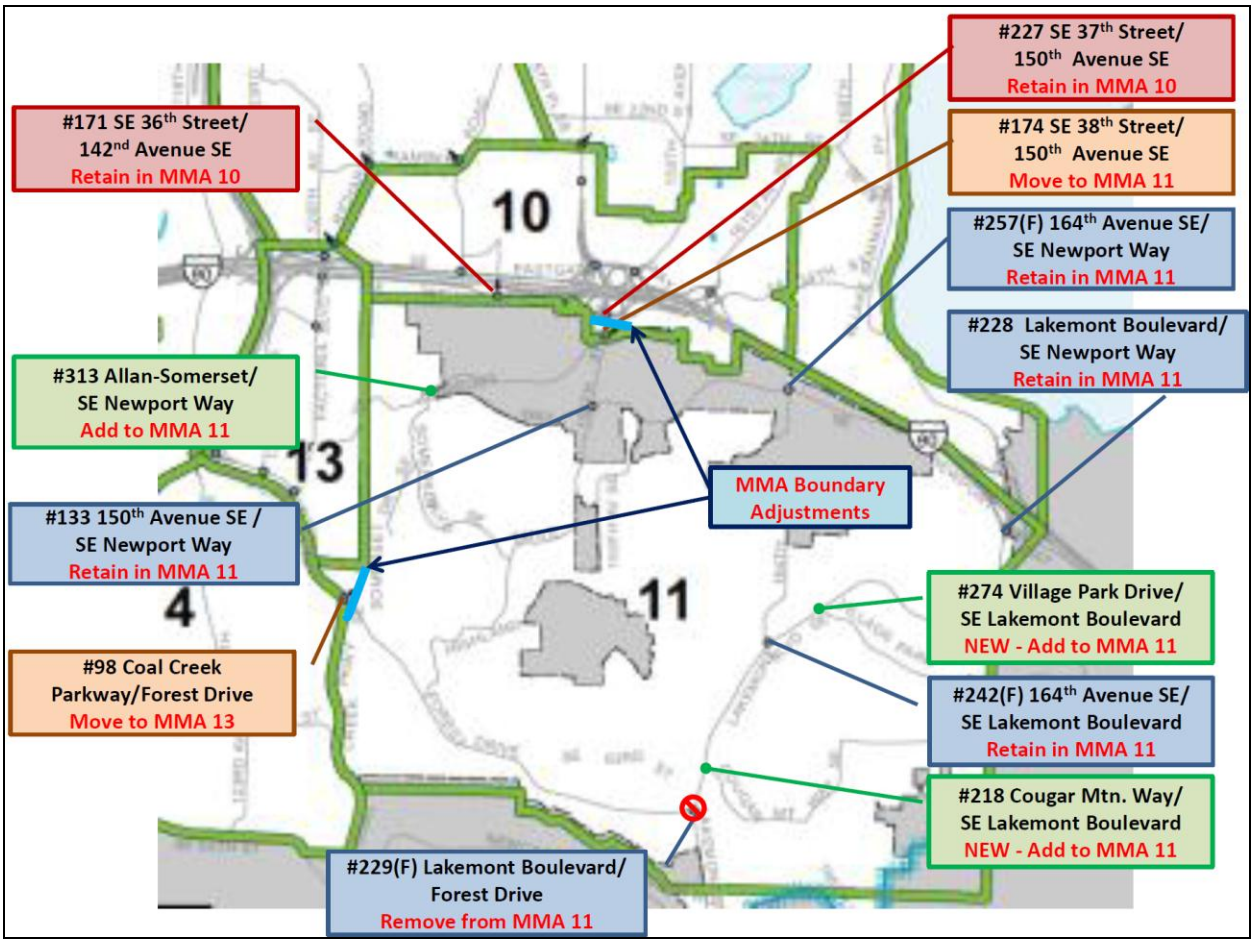
Table 1

MMA Levels of Service			
MMA	**Adopted LOS**	**Existing LOS**	**Calculated LOS with proposed changes**
MMA 10: Eastgate	0.900	0.655	0.635
MMA 11: Newcastle	0.800	0.686	0.623
MMA 13: Factoria	0.950	0.784	0.788

Table 2

Mobility Management Area 11: Newcastle			
Current Adopted: <u>Newcastle</u>			**Staff Proposal: <u>S.E. Bellevue</u>**
Int. #	**North-South Street**	**East-West Street**	
98	Coal Creek Parkway	Forest Drive	Move to MMA 13 "Factoria". Adjust boundary between MMA 11 and MMA 13. *(Intersection related to Coal Creek Parkway corridor, serves Factoria)*
133	150th Avenue SE	SE Newport Way	Retain in MMA 11
228 (F)	SR-901/Lakemont Boulevard Extension	SE Newport Way	~~(F) Extension~~ *(Intersection signalized, extension completed)*
229 (F)	Lakemont Boulevard	Forest Drive	Remove intersection from system – will remain unsignalized
242 (F)	164th Avenue SE	Lakemont Blvd/ Lakemont Extension	~~(F) Lakemont Extension~~ *(Extension completed, intersection signalized)*
257 (F)	164th Avenue SE	SE Newport Way	Retain in MMA 11 *(Future signalization when warranted)*
			Add intersection 313 to MMA 11 Somerset Dr/Allan Rd at SE Newport Way *(New signal operation)*
			Add intersection 274 to MMA 11 Lakemont Boulevard SE/ Village Park Drive *(New signal)*
			Move intersection 174 from MMA 10 "Eastgate" to MMA 11 "Newcastle" SE 38th Street/150th Avenue SE Adjust boundary between MMA 10 and MMA 11. *(Intersection related to SE Newport Way corridor, serves Newcastle)*

Figure 1. Proposed Changes to MMA 10, 11 and 13 System Intersections



Attachment 1
Citywide MMA Map

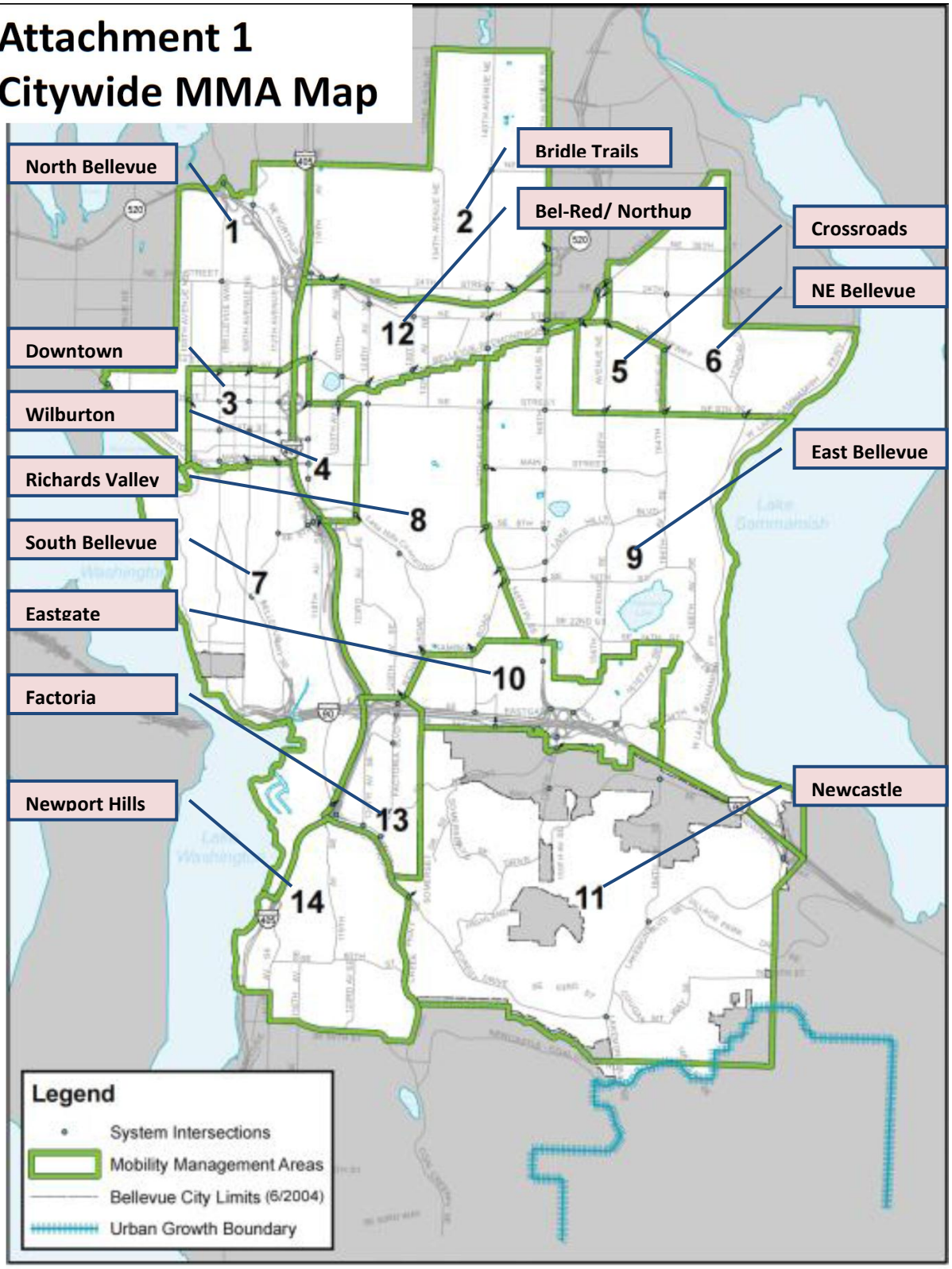


FIGURE TR.1

Mobility Management Areas

ATTACHMENT 2

Relevant Policies and Codes

The Transportation Element of the Comprehensive Plan provides policy guidance with respect to the establishment and intent of the Mobility Management Area system. Relevant policies are as follows:

- **Transportation Element**

TR-21. Manage the transportation system through the Mobility Management Areas shown in Figure TR.1, the boundaries of which reflect street patterns, transit serviceability, topography, development patterns, and land use objectives.

TR-22. Implement the level of service standards and other mobility targets for major transportation modes within each Mobility Management Area, as shown in Table TR.1, recognizing each area's needs as well as its relationship with other areas. Monitor the adopted mobility targets and adjust programs and resources as necessary to achieve scheduled progress on all modes.

TR-35. Evaluate the adequacy of the arterial street system by calculating the level of service of those intersections within each Mobility Management Area that contribute to system function

TR-36. Observe the following guidelines in adopting and revising arterial level of service standards by Mobility Management Area:

1. Reflect the availability of alternative travel options and community goals that may be as important as managing congestion, such as goals for land use, neighborhood protection from wider streets, or economic vitality. For example, allow more congestion in some areas of the city under the following conditions:
    a. In return for stronger emphasis on transit, walking, and other alternatives to the single-occupant vehicle, and
    b. Where the impacts of wider streets are judged to be worse than the congestion they are designed to solve.
2. Establish roadway levels of service adequate to prevent system failure and to protect residential neighborhoods from cut-through traffic.

TR-37. Review proposed developments and require mitigation of traffic impacts where necessary. Prohibit development approval if the development will cause the area level of service in one or more Mobility Management Areas to fall below the adopted standard, unless demand management or other system improvements are provided to mitigate the transportation impacts.

- **Traffic Standards Code**

Adopted policies related to Mobility Management Areas are implemented through the Traffic Standards Code (BCC 14.10). The code establishes the MMA boundaries, the intersections that are considered to be part of the mobility system and the level of service for the MMA as a whole expressed in terms of volume/capacity. Relevant code provisions are as follows:

14.10.005 Purpose

The purpose of this chapter is to set forth specific standards providing for city compliance with the concurrency requirements of the state Growth Management Act (GMA) and for consistency between city and countywide planning policies under the GMA. GMA requires that transportation improvements or strategies to accommodate the traffic impacts of development be provided concurrently with development to handle the increased traffic projected to result from growth and development in the city and region. Responding to the changing framework of the future of transportation, these standards ensure compliance through the inclusion of:

A. Roadway standards that balance congestion management with land use and urban design objectives;

B. Mobility management areas with long-range objectives and shorter-term standards tailored to each area's characteristics and needs;

C. Level-of-service standards for each mobility management area, to include: reflection of other available mobility options; adjustment of level of service standards where appropriate; interim standards for specific areas until completion of interlocal negotiations; consideration of trips crossing mobility management area boundaries; use of area-average method of evaluating roadway system adequacy, and use of an averaged two-hour p.m. peak period representing extended high trip volume periods. (Ord. 5883 § 1, 2009; Ord. 5081 § 1, 1998; Ord. 4606 § 2, 1993.)

Relevant Definitions

C. "Area-average level of service" means the sum of the critical volumes of the signalized system intersections within a mobility management area divided by the sum of the capacity of the signalized system intersections within that mobility management area.

F. "Congestion allowance" means the number of signalized system intersections allowed to exceed the level-of-service standard adopted for a mobility management area.

L. "Mobility management areas" means distinct areas with boundaries based on factors such as area-specific mobility targets. Mobility management areas are shown mapped in BCC 14.10.060. Some mobility management areas include intersections outside the city's jurisdiction; see Transportation Element policies TR-33.

M. “P.M. peak period” means the two hours between 4:00 p.m. and 6:00 p.m.

N. “P.M. peak period (averaged) level of service” means the v/c ratio of a system intersection calculated using the P.M. peak period average trips

P. “System intersection” means an intersection which contributes to the system function within each mobility management area. System intersections within the mobility management areas are listed and mapped in BCC 14.10.060.

S. “Volume/capacity ratio (v/c ratio)” means the flow ratio for a lane group as defined in the Transportation Research Board Highway Capacity Manual 2000, now or as hereafter amended, using the operational analysis method where “v” equals the actual or projected demand flow rate for a lane group in vehicles per hour, and “c” equals the capacity of a lane group in vehicles per hour. (Ord. 5883 §§ 2 – 7, 2009; Ord. 5309 § 1, 2001; Ord. 5081 § 2, 1998; Ord. 4823 § 1, 1995; Ord. 4606 § 2, 1993.)

14.10.030 Level-of-Service standard

A. Area-Average Level-of-Service Standards. P.M. peak period (averaged) level-of-service standards are tailored for each mobility management area, reflecting distinct conditions and multiple community objectives, with an area-average approach used to measure system adequacy. In this approach, the average level-of-service of the system intersections within each area is calculated. The congestion allowance specified for each mobility management area is the maximum number of system intersections allowed to exceed the area-average level-of-service standard set for a mobility management area. The area-average level-of-service standard and the congestion allowance for each mobility management area are:

Residential Group 2	**V/C - 0.800 (Note: This is categorized as LOS D)**
(Bridle Trails/Area #2)	4
(NE Bellevue/Area #6)	2
(Newcastle/Area #11)	3
(Newport/Area #14)	*