

## N – Additional Items Requested in Work Session

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# Memorandum

**TO:** Margaret Middleton, City of Beaverton

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**DATE:** December 31, 2009

**SUBJECT:** Supplemental Materials to Address Beaverton Planning Commission Comments  
P06097-014-004

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The purpose of this memorandum is to summarize additional materials for the Beaverton Transportation System Plan (TSP) that were presented to the Beaverton Planning Commission.<sup>1</sup> The materials address a request<sup>2</sup> following the previous joint work session<sup>3</sup> with the Beaverton City Council and Beaverton Planning Commission. These supplemental materials consist of an assessment of potential right turn lane locations, and a comparison of the financially constrained Beaverton TSP (Action Plan) project list with the projects that were previously identified as having the highest priority with the prior 2020 TSP update.

An assessment of potential future locations for right turn lanes was prioritized on the potential to reduce delay at the intersection. First, approaches to each study intersection were filtered for several criteria to determine suitable locations for consideration:

- Right turn movement shares lane with through traffic
- Projected 2035 PM peak hour vehicle right turn movement > 100
- Projected 2035 PM peak hour right turn movement Volume to Capacity (V/C) Ratio > 0.8
- Constructing right turn lane is generally feasible (no major environmental or right of way impacts that would escalate costs).

Intersection approaches that met the identified criteria were examined to determine the general benefits of constructing a right turn lane. The potential benefit for adding a right turn lane was ranked by an index of potential benefit calculated for each location<sup>4</sup>. These locations and resulting index ranking is included with the attached list.

The proposed 2035 TSP high priority (financially constrained) project list was compared to the previously identified priorities from the 2020 TSP projects. The proposed 2035 project list includes many of the same projects previously identified, with minimal changes to the priorities.

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<sup>1</sup> City of Beaverton Planning Commission Meeting, December 9, 2009.

<sup>2</sup> Letter from Dan Maks, Beaverton Planning Commission, October 27, 2009.

<sup>3</sup> Beaverton TSP Joint Work Session with City Council and Planning Commission, October 12, 2009.

<sup>4</sup> The index was calculated as the product of the 2035 right turn volume multiplied by the 2035 right turn V/C ratio

Some projects that were previously identified as high priority are no longer considered high priority. Likewise, several projects (generally intersection improvements with lower project costs) have been added to the high priority project list.

| N/S              | E/W                | Approach   | hroug | Right | R V/C | Vol*VC | Order (orig Rank | Shared  | Comment  |
|------------------|--------------------|------------|-------|-------|-------|--------|------------------|---------|--|
| Greenway Road    | Hall Blvd          | Eastbound  | 840   | 460   | 1.01  | 465    | 285              | 24 yes  | Building located 25' from Edge of Pavement           |
| 170th Ave        | Farmington Road    | Southbound | 1120  | 370   | 1.24  | 459    | 103              | 25 yes  | <b>Clear</b>   |
| Nimbus Ave       | Hall Blvd          | Northbound | 410   | 320   | 1.21  | 387    | 92               | 35 yes  | Building located 35' from edge of pavement           |
| Cedar Hills Blvd | Barnes Road        | Westbound  | 960   | 340   | 1.05  | 357    | 351              | 38 yes  | Existing Channalized RT not storage lane, clear      |
| Hall Blvd        | Scholls Ferry Road | Westbound  | 1110  | 270   | 1.24  | 335    | 336              | 45 yes  | Take part of a parking lot                           |
| 158th Ave        | Walker Road        | Westbound  | 1450  | 270   | 1.16  | 313    | 307              | 47 yes  | THPRD property                                       |
| 158th Ave        | Jenkins Road       | Westbound  | 1060  | 280   | 1.11  | 311    | 309              | 49 yes  | <b>Clear</b>   |
| 173rd Ave        | Walker Road        | Southbound | 460   | 250   | 1.19  | 298    | 99               | 50 yes  | <b>Clear</b>   |
| Hocken Ave       | Farmington Road    | Southbound | 0     | 300   | 0.90  | 270    | 175              | 55 yes  | Take part of a parking lot                           |
| Cedar Hills Blvd | Walker Road        | Eastbound  | 910   | 190   | 1.30  | 247    | 258              | 60 yes  | Take part of a parking lot                           |
| Center Street    | Hall Blvd          | Southbound | 60    | 270   | 0.89  | 240    | 187              | 63 yes  | Take part of a parking lot                           |
| Hall Blvd        | Allen Blvd         | Eastbound  | 810   | 260   | 0.87  | 226    | 250              | 68 yes  | <b>22' clear space,</b>                              |
| Nimbus Ave       | Hall Blvd          | Eastbound  | 1120  | 180   | 1.21  | 218    | 286              | 71 yes  | <b>Clear,</b> Existing turn pocket, add storage lane |
| Hocken Ave       | Canyon Road        | Eastbound  | 1490  | 190   | 1.02  | 194    | 262              | 83 yes  | <b>Clear</b> 25' to rail tracks                      |
| Cascade Ave      | Scholls Ferry Road | Northbound | 180   | 190   | 0.83  | 158    | 41               | 97 yes  | <b>Clear</b>   |
| Murray Blvd      | Allen Blvd         | Southbound | 1600  | 150   | 1.05  | 158    | 126              | 98 yes  | Take part of a parking lot                           |
| Cornell Road     | Hwy 26 EB Ramps    | Eastbound  | 310   | 160   | 0.96  | 154    | 207              | 100 yes | <b>Clear,</b> backfill required                      |
| Hwy 217 SB Ramps | Hall Blvd          | Southbound | 110   | 160   | 0.88  | 141    | 190              | 109 yes | Utility pole conflict                                |
| Cedar Hills Blvd | Walker Road        | Westbound  | 670   | 140   | 0.82  | 115    | 355              | 130 yes | Clear, 35' to gas station                            |
| 170th Ave        | Bany Blvd          | Eastbound  | 310   | 110   | 0.99  | 109    | 202              | 132 yes | <b>Clear,</b> planter 25'                            |
| Center Street    | Hall Blvd          | Westbound  | 710   | 100   | 0.89  | 89     | 381              | 156 yes | Planter and part of a parking lot                    |

## Comparison of Proposed High Priority TSP Motor Vehicle Projects with Previous High Priority Projects

| RTP Reference | Location  | Project Description   | Proposed 2035 TSP Phasing | Previous 2020 TSP Phasing |
|---------------|---|---|---------------------------|---------------------------|
|               | 170th Ave/173rd Ave: Baseline Rd to Walker Rd               | Widen to 3 lanes with bike lanes and sidewalks.   | 2009-2010                 | NOT HIGH PRIORITY         |
| 10617         | Farmington Road, Murray to Hocken                           | Farmington Rd: Murray Blvd. to Hocken Ave: Safety, turn lanes, bicycle, and pedestrian improvements. Construct turn lanes and intersection improvements; signalize where warranted; add bike lanes and sidewalks in gaps.   | 2011-2015                 | 2009-2010                 |
| 10635         | 125 <sup>th</sup> extension Brockman to Hall                | 125th Ave. multimodal extension Brockman to Hall Blvd. from Brockman St. to Hall Blvd.: Construct new multimodal street with bike lanes and sidewalks.  | 2011-2015                 | 2008-2017                 |
|               | Murray/Farmington   | Double left turn lanes on all approaches, SB, EB, and WB right turn lanes   | 2011-2015                 | NOT HIGH PRIORITY         |
| 10642         | ATS on Allen CHB, Hall, Farmington Rd                       | Adaptive Traffic Signal Systems: Allen Blvd., Cedar Hills Blvd., Hall Blvd., Farmington Road: New signals and signal upgrades.  | 2016-2020                 | 2008-2017                 |
| 10631         | 141st, 142nd, 144th street, bike, sidewalk connections      | 141st/142nd/144th multimodal street extension connections: Connect streets, add bikeways, sidewalks, turn lanes and signalize as warranted.   | 2016-2020                 | 2008-2017                 |
| 10636         | Millikan  | Millikan Way safety, bike and pedestrian improvements from 141st Ave. to Hocken Ave.: Add turn lanes as needed, bike lanes and sidewalks, signalize as warranted.   | 2016-2020                 | 2018-2025                 |
|               | Hall/Greenway   | Signal phase change to permitted/protected phasing for EB and WB approaches, overlap NB right turn  | 2016-2020                 | NOT HIGH PRIORITY         |
|               | Hall/Nimbus   | Signal phase change to protected/permitted phasing for NB and SB approaches   | 2016-2020                 | NOT HIGH PRIORITY         |
|               | Allen/Scholls Ferry   | Widen Allen to 5 lanes; restripe WB approach; signal phase change for all approaches to permitted/protected phasing   | 2016-2020                 | NOT HIGH PRIORITY         |
| 10616         | Rose Biggi extension to Hall                                | Rose Biggi Ave: Crescent Street to Hall Blvd. Complete right-of-way and construction of multimodal street extension with Boulevard Design from. Extend 2-lane Rose Biggi Ave. to Hall Blvd. (via Westgate Drive) to fill a gap; boulevard design; add sidewalks, bikeway (PE funded STIP Key #14400). | 2016-2020                 | 2009-2010                 |
| 10618         | Dawson/Westgate   | Dawson/Westgate multimodal extension from Rose Biggi Avenue to Hocken Ave. via Dawson to Westgate at Rose Biggi: Extend 2 lane street from Hocken via Dawson and Westgate at Rose Biggi to fill a gap; realign Dawson/Westgate at Cedar Hills; add turn lanes at intersections, sidewalks, bikeway.   | 2021-2025                 | 2008-2017                 |
|               | Canyon/Cedar Hills  | Add NB left turn lane; add SB left turn lane  | 2021-2025                 | NOT HIGH PRIORITY         |
| 10626         | 114 <sup>th</sup> /115 <sup>th</sup>                        | 114th Ave./115th Ave. 2 lane multimodal street from LRT to Beaverton Hillsdale Hwy/Griffith Drive: Construct 2 lane street with bike and pedestrian improvements.   | 2026-2030                 | 2008-2017                 |
| 10620         | Millikan Way extension to 114 <sup>th</sup>                 | Millikan Way multimodal extension from Watson Ave. to 114th Ave: Extend 2 lane Millikan Way to 114th to fill a gap; add turn lanes at intersections, sidewalks, bikeway.  | 2026-2030                 | 2018-2025                 |
| 10634         | CHB   | Cedar Hills Blvd. safety, bicycle and pedestrian improvements from Farmington Rd. to Walker Rd.: Add turn lanes, bike lanes and sidewalks.  | 2026-2030                 | 2018-2025                 |
| 10663         | Hall  | Hall Blvd. bike lanes & turn lanes from Farmington Road to Cedar Hills Blvd.: Construct bike lanes and turn lanes.  | 2026-2030                 | 2018-2025                 |
|               | Cornell/173rd   | SB RT lane  | 2026-2030                 | NOT HIGH PRIORITY         |
| 10628         | Center and 113 <sup>th</sup> sidewalks bikelanes turn lanes | Center Street and 113th Ave. safety, bike, and pedestrian improvements from Hall Blvd. to Cabot Street: Add sidewalks and bikelanes; add turn lanes where needed.   | 2031-2035                 | 2008-2017                 |
| 10638         | Davie Rd extension  | Davies Rd. multimodal street extension from Scholls Ferry Rd. to Barrows Rd: Extend 2 lane street with turn lanes, bike lanes and sidewalks.  | 2031-2035                 | 2008-2017                 |
| 10619         | Crescent Street extension                                   | Crescent St. multimodal extension to Cedar Hills Blvd. from Rose Biggi Ave. to Cedar Hills Blvd.: Extend 2 lane Crescent from Cedar Hills to Rose Biggi Ave. to fill a gap; add sidewalks, bikeway.   | 2031-2035                 | 2008-2017                 |
|               | New street connection: Broadway to 115th Ave.               | Construct new 2 lane street with bikeway and sidewalks.   | 2031-2035                 | NOT HIGH PRIORITY         |
|               | Scholls Ferry/125th   | Add SB right turn lane  | 2031-2035                 | NOT HIGH PRIORITY         |
|               | Various   | Addition of 50 traffic signals per plan   | ongoing                   | NOT HIGH PRIORITY         |
| 10625         | Rose Biggi  | Rose Biggi Ave.: 2 lane multimodal street extension from Tualatin Valley Hwy to Broadway: Construct 2 lane boulevard extension with bikeways and sidewalks.   | NOT HIGH PRIORITY         | 2008-2017                 |
| 10640         | Nimbus extension  | Nimbus Ave. 2 lane multimodal street extension from Hall Blvd. to Denney Road: Extend 2 lane street with turn lanes, bikelanes and sidewalks.   | NOT HIGH PRIORITY         | 2018-2025                 |
| 10627         | Tualaway  | Tualaway 2 lane multimodal street extension from Electric to Millikan: Extend existing street to Millikan with bikeways and sidewalks.  | NOT HIGH PRIORITY         | 2018-2025                 |
| 10633         | Allen: 217 to Western                                       | Allen Blvd. safety, bicycle and pedestrian improvements from Highway 217 to Western Ave.: Widen street to 4/5 lanes adding turn lanes and signals where needed, construct bike lanes and sidewalks.   | NOT HIGH PRIORITY         | 2018-2025                 |
| 10639         | Weir  | Weir Rd. safety, bicycle and pedestrian improvements from 155th Ave. to 175th Ave.: Add turn lanes, bikelanes and sidewalks in gaps, turn lanes.  | NOT HIGH PRIORITY         | 2018-2025                 |
| 10653         | Sexton Mtn  | Sexton Mountain Drive multimodal street extension from 155th Ave. to Sexton Mtn. across the Powerline: Extend 2 lane street with bikelanes and sidewalks  | NOT HIGH PRIORITY         | 2018-2025                 |
| 10669         | Hall  | Hall Blvd. bike lanes & turn lanes from 12th St. to s/o Allen Blvd.: Construct bike lanes and turn lanes.   | NOT HIGH PRIORITY         | 2018-2025                 |

| High Priority Project Phasing | PHASING KEY       |                   |
|-------------------------------|-------------------|-------------------|
|                               | 2035 TSP          | 2020 TSP          |
| Short Term                    | 2009-2010         | 2009-2010         |
| Medium Term                   | 2011-2020         | 2008-2017         |
| Long Term                     | 2021-2035         | 2018-2025         |
| Not Included                  | Not High Priority | Not High Priority |