



MEMORANDUM

Technical Memorandum #7: Regulatory Solutions Molalla Transportation System Update

DATE 2/14/2018
TO Molalla TSP Project Management Team
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CC Matt Bell and Nick Gross, Kittelson & Associates, Inc.

INTRODUCTION

This memorandum provides regulatory solutions to address recommendations from Technical Memorandum #1: Plans and Policy Review. Identified deficiencies from Memorandum #1 are included in the table below.

The Molalla Municipal Code was updated in 2017. Article 17 contains zoning regulations, design standards, application requirements, and review procedures. The development code contains several sets of requirements that address the relationship between land use development and transportation system development, and are important in implementing the Transportation System Plan. Transportation-related requirements can be found in the following code sections:

- Article 17-2.2 – Establishes zoning districts and use regulations therein (including transportation facilities)
- 17-3.5 Parking and Loading
- 17-3.6 Public Facilities
- 17-4 Application Review

REGULATORY SOLUTIONS

The table below lists recommendations from Technical Memorandum #1: Plans and Policy Review, along with the relevant development code reference. Draft recommended code revisions shown in underline/strike-through adoption-ready format is provided after the table for each recommendation.

	Recommendation	Development Code Reference	Reference
1	<p>Recommendation: Section 17-3.6.020(A)(4) states that its purpose is to explain, among other items, “the required contents of a Traffic Impact Analysis” and additional TIA requirements are found in sections 17-3.3.030 (C), 17-3.6.020 (A)(4), 17-4.2.040 (A), 17-4.2.040 (B)(8), 17-4.3.060 (A)(2), and 17-5.1 of the draft code. Further requirements for preparation of a TIA will be considered as part of this process and applicable code amendments may be identified as part of the TSP update process.</p>	17-3.6-020.(A)(4) Traffic Impact Analysis	See reference 1 for draft language to update TIA requirements.
2	<p>Recommendation: If the TSP identifies the need for transit transfer stations and/or park-and-ride lots, consider adding those uses to Table 17-3.5.040.A specifically.</p>	17-3.5.040 Bicycle Parking	See reference 2 for draft amendments to Table 17-3.5.040A.
3	<p>Recommendation: Update the code to include block-length regulations for new developments in 17.3.6.020.D. Minimum and maximum block length standards in the model code are 200 feet and 400-600 feet, respectively, varying by land use. Maximum block perimeter standards in the model code are 1,200 to 1,400 feet.</p> <p>Consider updating this section to include the TPR language under (E) as reasons for infeasibility of an accessway.</p>	17-3.6-020 Transportation Standards	See reference 3 for draft language.
4	<p>Recommendation: Identify design requirements of transit routes and transit facilities through the TSP update process; update development code requirements as necessary to require developments to include or accommodate needed transit facilities in the future. Dimensional or design standards for required facilities may be include in the TSP or updated public works standards.</p>	17-3.6.020 (B) Street Location, Alignment, Extension, and Grades ; 17-3.6.020 (C) Rights-of-Way and Street Section Widths	There have been no major transit facilities identified in the TSP update, and new standards for transit facilities are not required.
5	<p>Recommendation: Consider updating the list of required connections in Section 17-3.3.040 to include transit stops.</p> <p>If the TSP identifies “major transit stops” within Molalla, the City could update section 17.33 to include the requirements for building orientation, pedestrian access, and transit amenities.</p> <p>Consider making the transit-oriented provisions in (17-3.5.030.B(3)) mandatory, rather than optional. Design standards for transit facilities may be included in the City’s public works standards.</p>	17-3.3.040 Pedestrian Access and Circulation	<p>See reference 5 for draft amendments.</p> <p>No major transit stops identified in TSP update.</p> <p>Mandatory provisions for reduced parking near transit stops may not be appropriate at this time – allowing them through a Type II procedure is sufficient.</p>

	Recommendation	Development Code Reference	Reference
6	Recommendation: If “major transit stops” or routes are identified in the TSP update, consider adopting a pedestrian district along major transit routes that complies with 4(a)(C) as a means to implement 4(b)(A) –(B).	-	No major transit stops identified in the TSP update.
7	Recommendation: The City should update the code to require that new developments with planned designated employee parking areas provide preferential parking for employee carpools and vanpools, in addition to or separate from the current parking reduction allowance in Section (17-3.5.030.B(3)). A typical local code requirement is to require employers with more than a specific number of employees to dedicate a percentage of the required parking spaces for car/vanpools. For example, some local jurisdictions impose this requirement for businesses with 50 or more employees and typically include the carpool/vanpool spaces within the total number of spaces already required by the code.	17-3.5.030 Automobile Parking	See Reference 7 for draft parking language.
8	Recommendation: Broaden this section to include other items mentioned in (e) – pullouts, park-and-ride areas, and other facilities. Add a provision in the Parking and Loading section (17-3.5.030) that provides for some flexibility in required parking spaces when repurposing the space for a transit-oriented use.	17-3.5.030 Automobile Parking	See Reference 8 for draft language.
9	Recommendation: The Vehicle Access and Circulation section of the code should be amended to require that new development provide pedestrian access to existing and planned future transit routes.	17-3.3.030 Pedestrian Access and Circulation	Pedestrian access to existing and planned future transit routes is adequately addressed by Recommendation 5 and draft language in Reference 5.
10	Recommendation: When updating the transit element of the TSP, review existing land uses and consider future land use changes that would support the viability of transit on existing or planned routes.	-	No land use changes identified in TSP update.
11	Recommendation: Through the TSP update process, the City will evaluate functional classifications and cross sections of these streets and will incorporate designs that minimize pavement widths and associated impacts.		No draft language included in this memorandum – updated cross-sections will be provided as needed.
12	Recommendation: Update the transportation goals and policies (Goal 12) section of the Comprehensive Plan to include the updated TSP goals and policies.	Comprehensive Plan Goal 12	Transportation goals and policies are found in Technical Memorandum 2B. As an alternative to including these policies in

	Recommendation	Development Code Reference	Reference
			the comprehensive plan, the TSP can simply be referenced (requiring no changes to the current Comprehensive Plan).

Reference 1

Traffic Impact Analysis is addressed in the Molalla Development Code (17-3.6.020(A)(4)) as well as in the Public Works standards (2.1.4 Traffic Analysis). These standards seem to be different from one another. For comparison, the table below also includes the traffic impact analysis requirements from Oregon City and St. Helens.

	Threshold Requirements	Analysis Preparation/Contents
Molalla Development Code	<ul style="list-style-type: none"> • Zone or plan amendment • Known concerns • 300 Avg. Daily Trips (ADT) • 20% increase in peak hour volume for a particular movement • Increase in use of adjacent streets by freight • Existing or proposed connections that have spacing/sight distance issues • A change in traffic patterns that may cause safety concerns • Required by ODOT 	<ul style="list-style-type: none"> • Must be prepared by a professional engineer. No other requirements listed.
Molalla Public Works	<ul style="list-style-type: none"> • 1,000 Vehicle Trips per weekday or more • When development "could affect safety, access management, street capacity, or know traffic problems..." • Residential development of 4+ units 	Detailed requirements listed. <ul style="list-style-type: none"> • Purpose of report and study objectives • Executive summary • Description of site and study area roadways • On-site Traffic Evaluation • Recommendations for Public Improvements • Access Management • Review of alternative access points
Oregon City, OR	Two levels of analysis:	TAL:

	Threshold Requirements	Analysis Preparation/Contents
<p>development code</p>	<p>Transportation Analysis Letter (TAL) required for smaller developments. Required when (At the discretion of the City Engineer):</p> <ul style="list-style-type: none"> • Development generates fewer than 24 peak hour trips and fewer than 250 daily trips. • Development not expected to impact failing intersections. • Development not expected to impact adjacent roadways that are high accident areas, identified safety concerns, or have high concentrations of pedestrians and bicyclists. <p>Transportation Impact Study (TIS) required for larger developments that do not meet all of the TAL requirements.</p>	<ul style="list-style-type: none"> • Expected trip generation information • Site plan showing access and neighboring properties • Documentation regarding driveway width, intersection spacing, AASHTO sight distance guidelines, compliance with TSP. <p>TIS:</p> <ul style="list-style-type: none"> • Existing Conditions • Detailed growth assumptions, traffic volumes, and operational analysis for: <ul style="list-style-type: none"> • Background conditions (without proposed development) • Full buildout conditions (with proposed development) • Conclusions and recommendations
<p>St. Helens, OR development code</p>	<p>TIA required when:</p> <ul style="list-style-type: none"> • Change in zoning or comp plan • Access on Highway 30 • 250 ADT or 25 additional peak hour trips • Affects known problematic intersections • An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day; • Driveway does not meet minimum sight distance, spacing requirements or is otherwise hazardous <p>Cites latest edition of the ITE trip generation manual.</p>	<p>Detailed list of contents, including:</p> <ul style="list-style-type: none"> • Pre-app conference • Study area, can be modified by City engineer • Existing Conditions, Background Conditions, Full Buildout, Phased Years of Completion, and 20-year or TSP horizon year • Peak hour analysis • Listed approval criteria

Overall recommendation for TIA process:

- The requirements within the Public Works Standards and the Development Code should match.
- 1,000 trips per day (listed in the public works standards) is a high threshold compared to other jurisdictions. We recommend a two-tier approach similar to Oregon City, using the additional trigger related to heavy vehicle traffic from St. Helens:
 - **Tier 1:** Traffic Assessment Letter, would be required of all developments that generate less than 25 trips during the peak hour. The TAL could include a site access review (sight distance, access spacing, access width, safety); trip generation; frontage improvements; and other desired analysis.
 - **Tier 2:** Traffic Impact Analysis, would be required of all development that generate 25 or more trips during the peak hour or will increase the heavy vehicle percentage along a given roadway by 10% or more; heavy vehicles are defined as 20,000 lbs. gross weight. A TIA also would be required of any project that involves a zone change, and the TIA must meet the requirements of the Transportation Planning Rule.
- Study intersections should be defined by site frontage (anything within 600 feet of the site frontage) OR the intersection of two streets classified as a collector or higher where 20 additional trips will be added during the peak hour as a result of the development.
- The code should reference the Latest Edition of ITE Trip Generation and Highway Capacity Manuals.
- The analysis and its components will be at the discretion of the city public work direction/traffic engineer

Draft language that would replace 17-3.6.020(A)(4) is provided below.

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(4) The purpose of this subsection is coordinate the review of land use applications with roadway authorities and to implement Section 660-012-0045(2)(e) of the State Transportation Planning Rule, which requires the City to adopt a process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities. The following provisions also establish when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Letter (TIL) or Traffic Impact Analysis (TIA) must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; the required contents of a TIL/TIA Traffic Impact Analysis; and who is qualified to prepare the analysis.

- a. ~~**When a Traffic Impact Analysis is Required.** The City or other road authority with jurisdiction may require a Traffic Impact Analysis (TIA) as part of an application for development, a change in use, or a change in access. A TIA shall be required where a change of use or a development would involve one or more of the following:~~
- ~~(1) A change in zoning or a plan amendment designation;~~
 - ~~(2) Operational or safety concerns documented in writing by a road authority;~~
 - ~~(3) An increase in site traffic volume generation by 300 Average Daily Trips (ADT) or more;~~
 - ~~(4) An increase in peak hour volume of a particular movement to and from a street or highway by 20 percent or more;~~

~~(5) An increase in the use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day;~~

~~(6) Existing or proposed approaches or access connections that do not meet minimum spacing or sight distance requirements or are located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, creating a safety hazard;~~

~~(7) A change in internal traffic patterns that may cause safety concerns; or~~

~~(8) A TIA required by ODOT pursuant to OAR 734-051.~~

b. Determining the required level of Transportation Analysis and Documentation. A

Transportation Impact Analysis (TIA) is required for developments that are expected to have an impact on the transportation system. The analysis shall be based upon the latest edition of the ITE Trip Generation Manual or an agreed-upon alternative methodology where credible data is available to support the alternative methodology. When specific criteria generally associated with small developments are met, a Transportation Analysis Letter (TAL) may be substituted for the required TIA. At the discretion of the City Engineer, a TAL may satisfy the City's transportation analysis requirements, in lieu of a TIA, when a development meets all of the following criteria:

1. The development generates fewer than 25 peak hour trips during either the AM or PM peak hour. (Two examples of common developments generating fewer trips than these threshold levels are: a subdivision containing 25 or fewer single-family residences or a general office building less than 15,000 square feet.)
2. The development is not expected to impact intersections that currently fail to meet the City's level of service standards or intersections that are operating near the limits of the acceptable level of service thresholds during a peak operating hour.
3. The development is not expected to significantly impact adjacent roadways and intersections that are high accident locations, areas that contain an identified safety concern, or high concentration of pedestrians or bicyclists such as school zones
4. The development generates an increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by less than 10 vehicles per day;

c. Transportation Analysis Letter Contents. If the City determines based on information provided by the applicant and in accordance with the criteria specified in Section 3.1 that a TAL is the appropriate document to submit, the following requirements shall apply.

1. The TAL shall be prepared by or prepared under the direct supervision of a Registered Professional Engineer who shall sign and stamp the TAL.
2. The TAL shall include the following:
 - i. The expected trip generation of the proposed development including the AM peak hour, the PM peak hour, daily traffic, and other germane periods as may be appropriate, together with appropriate documentation and references.
 - ii. Site plan showing the location of all access driveways or private streets where they intersect with public streets plus driveways of abutting properties and driveways on the opposite side of the street from the proposed development.
 - iii. Documentation that all site access driveways meet Oregon City Private Access Driveway Width Standards.
 - iv. Documentation that all site access driveways meet Oregon City's Minimum City Street Intersection Spacing Standards.

- v. Documentation that all new site accesses and/or public street intersections meet AASHTO intersection sight distance guidelines.
 - vi. Documentation that there are no inherent safety issues associated with the design and location of the site access driveways.
 - vii. Documentation that the applicant has reviewed the City's TSP and that proposed streets and frontage improvements do or will comply with any applicable standards regarding the functional classification, typical sections, access management, traffic calming and other attributes as appropriate.
- d. **Transportation Impact Analysis Contents.** The following information shall be included in each TIA submitted to the City. Additional information specified by the City in the scoping summary or through the pre-application meeting or other project meetings shall also be included.
- 1. Completed TIA checklist signed by the Professional Engineer responsible for the preparation of the TIA.
 - 2. Table of Contents – Listings of all sections, figures, and tables included in the report.
 - 3. Executive Summary – A summary of key points, findings, conclusions, and recommendation including a mitigation plan.
 - 4. Introduction, including:
 - i. Proposed land use action including site location, zoning, building size, and project scope
 - ii. Map showing the proposed site, building footprint, access driveways, and parking facilities.
 - iii. Map of the study area that shows site location and surrounding roadway facilities.
 - 5. Existing Conditions:
 - i. Existing site conditions and adjacent land uses.
 - ii. Roadway characteristics of important transportation facilities and modal opportunities located within the study area, including roadway functional classifications, street cross-section, posted speeds, bicycle and pedestrian facilities, on-street parking, and transit facilities.
 - iii. Existing lane configurations and traffic control devices at the study area intersections.
 - iv. Existing traffic volumes and operational analysis of the study area roadways and intersections.
 - v. Roadway and intersection crash history analysis.
 - vi. Intersection and stopping sight distance related to new and impacted driveways and intersections.
 - 6. Background Conditions (without the proposed land use action):
 - i. Approved in-process developments and funded transportation improvements in the study area.
 - ii. Traffic growth assumptions.
 - iii. Addition of traffic from other planned developments.
 - iv. Background traffic volumes and operational analysis.
 - 7. Full Buildout Traffic Conditions (with the proposed land use action):
 - i. Description of the proposed development plans.

- ii. Trip generation characteristics of proposed project (including trip reduction documentation).
 - iii. Trip distribution assumptions.
 - iv. Full buildout traffic volumes and intersection operational analysis.
 - v. Site circulation and parking.
 - vi. Intersection and site-access driveway queuing analysis.
 - vii. Recommended roadway and intersection mitigation measures (if necessary).
8. Conclusions and recommendations
9. Appendix- With dividers or tabs
- i. Traffic count summary sheets.
 - ii. Crash analysis summary sheets.
 - iii. Existing, Background, and Full Buildout traffic operational analysis worksheets with detail to review capacity calculations.
 - iv. Signal, left-turn, and right-turn lane warrant evaluation calculations.
 - v. Signal timing sheets depicting the timing and phasing used in analysis.
 - vi. Other analysis summary sheets such as queuing.
10. To present the information required to analyze the transportation impacts of development, the following figures shall be included in the TIS:
- i. Vicinity Map
 - ii. Existing Lane Configurations and Traffic Control Devices
 - iii. Existing Traffic Volumes and Levels of Service for each required time period
 - iv. Future Year Background Traffic Volumes and Levels of Service for each required time period
 - v. Proposed Site Plan, including access points for abutting parcels and for those across the street from the proposed development
 - vi. Future Year Assumed Lane Configurations and Traffic Control Devices
 - vii. Estimated Trip Distribution/Assignment Pattern
 - viii. Trip reductions (pass-by trips at site access (es))
 - ix. Site-Generated Traffic Volumes for each required time period
 - x. Full Buildout Traffic Volumes and Levels of Service for each required time period

Reference 2

Table 17-3.5.040.A Minimum Required Bicycle Parking Spaces

Use	Minimum Number of Spaces
Multifamily Residential (not required for parcels with fewer than 4 dwelling units)	2 bike spaces per 4 dwelling units
Commercial	2 bike spaces per primary use or 1 per 5 vehicle spaces, whichever is greater
Industrial	2 bike spaces per primary use or 1 per 10 vehicle spaces,

Use	Minimum Number of Spaces
	whichever is greater
Community Service	2 bike spaces
Parks (active recreation areas only)	4 bike spaces
Schools (all types)	2 bike spaces per classroom
Institutional Uses and Places of Worship	2 bike spaces per primary use or 1 per 10 vehicle spaces, whichever is greater
Transit Transfer Stations and Park and Ride lots	<u>5 bike spaces per acre</u>
Other Uses	2 bike spaces per primary use or 1 per 10 vehicle spaces, whichever is greater

Reference 3

4. Street Connectivity and Formation of Blocks.

A. In order to promote efficient vehicular and pedestrian circulation throughout the City, subdivisions and site developments shall be served by an interconnected street network, pursuant to the current version of the Public Works Design Standards and Transportation System Plan. standards in subsections (i) through (iv) below. Distances are measured from the edge of street rights-of-way. Where a street connection cannot be made due to physical site constraints, approach spacing requirements, access management requirements, or similar restrictions; where practicable, a pedestrian access way connection shall be provided pursuant to Chapter 17-3.3.

i. Residential Districts: Minimum of [200]-foot block length and maximum of [600]-foot length; maximum [1,400]-foot block perimeter;

ii. Commercial Districts: Minimum of [100]-foot length and maximum of [600]-foot length; maximum [1,400]-foot perimeter;

iii. General Commercial zone and Light Industrial zone: Minimum of [100]-foot length and maximum of [600]-foot length; maximum [1,400]-foot perimeter; and

iv. Not applicable to Industrial Districts or the Public Facilities, Semi-Public District

A. Where a street connection cannot be made due to physical site constraints, approach spacing requirements, access management requirements, or similar restrictions; where practicable, a pedestrian access way connection shall be provided pursuant to Chapter 17-3.3. Streets and accessways need not be required where one or more of the following conditions exist:

(i) Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided;

(ii) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or

(iii) Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.

Reference 5

17-3.3.040 Pedestrian Access and Circulation

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2. **Safe, Direct, and Convenient.** Walkways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas, playgrounds, ~~and~~ public rights-of-way, and existing and planned future transit facilities, conforming to the following standards:

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17-3.5.030 Automobile Parking

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B. Exceptions and Reductions to Off-Street Parking.

1. Sites containing or adjacent to a bus stop with frequent transit service, whose frontage is improved with a bus stop waiting shelter consistent with the standards of the applicable transit provider, are allowed a 20 percent reduction to the standard number of automobile parking spaces.

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Reference 7

Carpool and Vanpool Parking Requirements.

B. Carpool and vanpool parking spaces shall be identified for the following uses:

- a. New commercial and industrial developments with seventy-five (50) or more parking spaces,
- b. New institutional or public assembly uses, and
- c. Transit park-and-ride facilities with fifty (50) or more parking spaces.

B. Of the total spaces available for employee, student, and commuter parking, at least five percent, but not fewer than two, shall be designated for exclusive carpool and vanpool parking.

C. Carpool and vanpool parking spaces shall be located closer to the main employee, student or commuter entrance than all other parking spaces with the exception of ADA parking spaces.

D. Required carpool/vanpool spaces shall be clearly marked "Reserved - Carpool/Vanpool Only."

Reference 8

3. The Planning Official, through a Type II procedure, may reduce the off-street parking standards of Table 17-3.5.030.A for sites with one or more of the following features:

- a. Site has a bus stop with frequent transit service located adjacent to it, and the site's frontage is improved with a bus stop waiting shelter, consistent with the standards of the applicable transit service provider: Allow up to a 20 percent reduction to the standard number of automobile parking spaces.
- b. Space is being dedicated for a transit facility such as a park and ride, bus pull-out, or other transit facility: Allow up to a 10 percent reduction in the number of automobile parking spaces.

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6. The Planning Official, through a Type I procedure, may allow property owners of existing nonresidential development to replace up to 10% of existing parking spaces with bus shelters and other pedestrian and transit amenities located adjacent to streets with existing or planned transit routes.

Reference 9

See Reference 5 for language regarding safe, reasonably direct, and convenient pedestrian access to transit facilities.