



PLANNING BUSINESS LINE TEAM

OPERATIONAL NOTICE

NUMBER	REVISION #	SUPERSEDES	EFFECTIVE DATE	VALIDATION DATE	RESCINDED DATE
PB-02	NEW	N/A	5/2/13	N/A	N/A
SUBJECT			TOPIC/PROGRAM		
Alternative Mobility Targets			Oregon Highway Plan Implementation		

PURPOSE: The purpose of this Operational Notice is to provide guidance for implementing Oregon Highway Plan (OHP) Policy 1F, Action 1F.3.

DIRECTION/GUIDANCE: OHP Action 1F.3 identifies situations where it may be appropriate to consider an alternative mobility target and/or methodology for measuring mobility. The Action establishes the general procedures and considerations for pursuing and adopting an alternative mobility target on a state facility which are further explained in this document. ODOT staff and other interested parties should refer to the adopted OHP policy, this Operational Notice and referenced materials for recommendations to implement alternative mobility targets. This Operational Notice will be reviewed and updated in the future as experience is gained.

BACKGROUND/RATIONALE: Many segments of the state highway system currently exceed OHP highway mobility targets. Due to several factors such as transportation funding not keeping pace with growing needs on state facilities, concerns on the impacts of expanded transportation facilities and the need to balance other state and local policy objectives, many more segments are unlikely to meet mobility targets in the future. With significant capacity investments becoming less frequent, there is a growing need statewide for tools that balance mobility with other state and local policy objectives and the need to document these agreements.

Policy 1F was amended in 2011 to provide flexibility and enhance options for adopting alternative mobility targets. Alternative mobility targets are an option where it is infeasible or impractical to meet the adopted mobility targets for a state facility, when approaches are taken to best manage the transportation system in the area, and where ODOT and local jurisdictions wish to consider mobility broadly – through multimodal objectives and potential measures or within the context of regional or local land use and economic objectives. The policy requires balancing multiple transportation system objectives such as maintaining safety and considering the need for mobility on OHP Freight Routes to support statewide economic development objectives. Additional information is available on the project website at: <https://www.oregon.gov/ODOT/Planning/Pages/Plans.aspx#OHP>

As established in OHP Policy 1F, OHP mobility targets are used for identifying state highway motor vehicle mobility performance expectations for planning and implementation purposes, including for evaluating impacts on state facilities from plan amendments and changes to land use regulations under the Transportation Planning Rule (TPR) Section 0060. Other implementation activities include considerations in development permit applications and potential mitigation, guidance for access management decisions, and considerations for state highway operational improvements. Alternative mobility targets are developed through long range system and facility planning, where the state and local jurisdictions jointly take a comprehensive look at transportation solutions for a system or large planning area. OHP Policy 1F establishes that mobility targets defined in OHP Tables 6 and 7, or those otherwise adopted by the Oregon Transportation Commission (OTC), are considered the highway system performance standards for compliance with the TPR. In order for OHP mobility targets to be used as baseline standards for future project design, the alternative must be established in coordination with the Federal Highway Administration (FHWA) pursuant to the Memorandum of Understanding (MOU) between ODOT and FHWA as provided as an attachment to this Operational Notice. While this process can set general mobility expectations for project design, project details and elements unrelated to mobility are not impacted by adoption of an

alternative mobility target. Following completion of a local transportation system plan (TSP) or ODOT facility plan where future performance expectations are established based on the existing OHP mobility target tables or where the performance expectations are established through development of alternative mobility targets adopted by the OTC, the targets can be considered and treated as standards overall.

DEFINITIONS:

- Alternative Mobility Target: OTC adoption of a mobility target, methodology or measure for a state facility or network of facilities different than those currently adopted in the OHP typically as a result of a system or facility planning process considering the elements in OHP Action 1F.3.
- ACT: Area Commission on Transportation. An advisory body chartered by the OTC that address all aspects of transportation with primary focus on the state transportation system in a given area.
- Facility Plan: State, regional or local plan for an individual transportation facility such as a corridor plan, transportation system plan that applies to specific areas or facilities, or a refinement plan.
- HDM: Highway Design Manual. ODOT Technical Manual that provides uniform standards and procedures for many project design elements on the state highway system.
- MOU: Memorandum of Understanding. A document describing a bilateral or multilateral agreement between parties.
- MPO: Metropolitan Planning Organization. A planning body in an urbanized area over 50,000 in population which has responsibility for developing transportation plans for the area.
- OHP: Oregon Highway Plan. 1999 OHP as adopted and amended by the OTC, which serves as ODOT's modal system plan for highways as set forth in OAR chapter 731, division 15, consistent with OAR 660-012-0015(1).
- TPR: Transportation Planning Rule. A Land Conservation and Development Commission administrative rule governing transportation planning set out at OAR chapter 660, division 12.
- TSP: Transportation System Plan. A plan for one or more transportation facilities that is planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and between geographic and jurisdictional areas.
- v/c: Volume to capacity ratio. A measure of roadway congestion, calculated by dividing the number of vehicles passing through a section of highway during the peak hour by the capacity of the section.

PROCESS/ACTION REQUIRED:

An assessment of whether it is feasible to meet current OHP mobility targets is the first step in determining whether an alternative mobility target may be needed through long range, system or facility planning work. In general, a determination of feasibility may involve an assessment of whether the costs, benefits or impacts of meeting current mobility targets are reasonable given state and local circumstances. Considerations in this determination include anticipated funding for, or the ability to implement, a given solution, whether costs of the solution are acceptable relative to the anticipated

benefits, and whether the physical impacts of potential solutions or the impacts on other modes are acceptable given conditions in the area. Establishing an alternative mobility target will impact what is identified as acceptable performance for the impacted state transportation facility or facilities in the area.

When to Consider Alternative Mobility Targets

When determining the appropriateness of developing an alternative mobility target or measure, consider the following:

- As a general rule alternative targets are developed as part of a long-range, system or facility planning process. This process should explore a variety of transportation-related solutions, including a number of system and demand management activities to maximize the efficiency of transportation movements and to identify solutions that are realistic to implement and have the potential to be effective.
- Alternative mobility targets should not be developed directly through a development review action or to mitigate impacts from proposals subject to TPR Section 0060.¹
- Alternative mobility targets may be more restrictive to protect capacity and mobility in an identified area. More restrictive targets can be an effective tool where it is desirable to further protect an investment in capacity, such as in the vicinity of an interchange.
- ODOT's policy is to first analyze the performance of the state highway compared to the adopted OHP mobility target. Where it can be shown that improvements to meet the adopted OHP mobility target are not feasible or do not meet broader community policies and objectives, other volume to capacity (v/c)-based targets or non v/c-based measures that establish more realistic future performance expectations should be developed.²
 - Adjustments to the traditional v/c-based targets may include changing the v/c ratio target (increase or decrease), changing the analysis methodology (e.g., from 30th highest hour to average annual traffic volumes or adjusting peak hour factors), and/or acknowledging that a facility will likely operate at capacity for more than just a single peak hour. Alternative (non v/c-based) performance measures may involve other analysis methods that address safety performance, travel time reliability and delay.
- Consider the availability of the data and analysis tools necessary to conduct the proposed alternative target analysis. Data needed to support a proposed alternative analysis should be relatively easy to obtain and to apply to the specific circumstances and result in a measure that is understandable to decision-makers (technical and policy). For example, travel demand models should be taken advantage of where available, as this tool can provide a variety of system performance measures. Also, look for opportunities to develop consistent measures, with consistent data needs, using consistent analysis methods throughout a corridor, study area or region.

Developing Alternative Mobility Targets

While the OTC has sole authority to adopt mobility targets for state highways, affected jurisdictions will need to participate in the planning process and acknowledge the need for the alternative mobility target for the state highway facility as part of a local transportation system plan and regional plan (Metropolitan Planning Organization or MPO) as applicable. Local and regional jurisdictions should demonstrate what local objectives or circumstances are being met or accommodated through the OTC adoption of the alternative mobility target. Jurisdictions should acknowledge that the OTC's adoption of alternative mobility targets reflects a mutual state and local agreement that, after balancing technical and policy factors and determining what improvements are feasible to implement over the 20-year planning horizon, the lower facility performance (below the OHP targets in Policy 1F Tables 6 and 7) is the expected and

¹ Development applications that are considered under Oregon Administrative Rule (OAR) 731-017 are one exception. The OTC approved OAR 731-017 implementing House Bill (HB) 3379 from the 2009 Legislative Session at their December 15, 2010 Meeting. The rule addresses economic development projects unable to meet TPR requirements for state highways. Guidelines are available to help staff consider potential applications that may come in under OAR 731-017. See <https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx>. Other legislatively driven actions at the state level could tie development of alternative mobility targets with parcel-specific activities.

² *Alternatives Mobility Targets: Performance Measures and Analysis Tools Synthesis* provides additional considerations regarding alternative mobility target methodologies and potential alternative performance measures for state highways.

planned future condition. Under most circumstances, local jurisdictions must adopt appropriate local policies, codes and ordinances that are necessary to help support and implement the alternative mobility target and achieve other policy and performance objectives.

The alternative mobility target development process must result in a plan (or proposed amendments to an adopted plan) that addresses the requirements of Action 1F.3 and documents that the resulting management strategy and actions will help manage access and traffic operations to provide for safe facility performance. Where feasible and appropriate, the plan should consider strategies both to increase person throughput and reduce vehicle demand on the highway. (For more information on plan development, refer to the Transportation System Plan (TSP) Guidelines <https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx> and the attached checklist.) The steps in plan development that may precede establishing an alternative mobility target include:

- Identify the study area, including specific locations of state highway segments or facilities where it is infeasible or not practical to meet current targets.
- Coordinate technical and policy analysis related to establishing alternative mobility targets with affected neighboring jurisdictions.
- Establish baseline conditions for current facilities and services available for each mode of travel.
- Document projected performance compared to current OHP v/c-based mobility targets.
- Describe existing and future performance including factors such as:
 - Geographic limits
 - Corridor and system level implications
 - Number of hours of the day that performance thresholds may be exceeded
 - Number of months of the year when capacity issues are identified
 - Time of year of capacity issues
 - Traffic conditions on weekdays vs. weekends
 - Crash data
 - Gaps and deficiencies for all modes
- Describe the general level of improvements that would likely be needed to meet current targets.
- Describe anticipated community and environmental impacts associated with meeting current OHP mobility targets, including environmental, equity, economic and land use impacts and estimate the costs of meeting the current OHP mobility targets.
- Identify reasonable and feasible strategies that best accomplish existing and future mobility, safety and operational needs for all modes (see attached checklist). Examples include improving an alternative route to the impacted state facility on the local road network, Transportation Demand Management (TDM) measures and Transportation System Management (TSM) improvements at intersections to alleviate operational or safety issues.
- If appropriate, use supplemental performance measures in addition to v/c, such as pedestrian, or transit measurements to identify needs and evaluate alternatives; establish performance targets to monitor those supplemental measures. Supplemental measures are not considered alternative mobility targets.
- Identify and prioritize the management strategies and improvements that are financially feasible and acceptable for inclusion in policy and the project list for adoption into the facility plan or TSP/Regional Plan as applicable.

Facility plans that are likely to result in recommended alternative mobility targets must be of a scope and scale to adequately consider and address items established in OHP Action 1F.3. A planning process that focuses on only one aspect or a few aspects of the transportation system (e.g. only access management or a focused geographic scale) will typically not be broad enough in scope to fully address all the considerations necessary to justify establishment and OTC adoption of alternative mobility targets. The planning process needs to include identification of the mobility issues in the planning area, as well as those of the highway system, and the planned improvements and management strategies that are feasible. If alternative mobility targets are pursued and ultimately recommended for OTC adoption as part of plan implementation, both ODOT and the local jurisdiction(s) must mutually agree on the recommended course of action. ODOT Procedure PLA 01 - ODOT Transportation Facility Plan Adoption Process establishes steps for approval of these plans

http://intranet.odot.state.or.us/ssb/BSS/documents/p&p/PLA_01_PROCEDURE.pdf).

Local governments may lead facility planning efforts on ODOT facilities at the discretion of ODOT Region staff. The level of coordination needs to be sufficiently high to secure ODOT support and potential OTC adoption of the requested changes in the mobility target(s).

Alternative Mobility Target Methodology

Action 1F.3 establishes that a plan that identifies an alternative mobility target must include feasible³ actions and improvements related to local connectivity, safety and operations, TDM, multiple modes, and land use. Attachment A to this Operational Notice provides examples of the types of actions that may be included in the plan and/or adopted locally to support the establishment of an alternative mobility target.

The following v/c-based methodology is recommended as a first option when developing alternative mobility targets for state highways.⁴ Any alternative mobility target, including new methodology, will not be final until adopted by the OTC.

1. **In cases where v/c is forecasted to be greater than the OHP mobility target but less than capacity (v/c = 1.0) during the design hour using standard analysis procedures**, establish the proposed alternative target consistent with the v/c values used in the OHP (0.75, 0.80, 0.85, 0.90, etc.).
2. **In cases where v/c is forecasted to be greater than or equal to capacity during the design hour using the standard analysis procedures** evaluate the actual peak hour traffic volume for future year design hour projections rather than expanding the peak 15 minutes to be the design hour traffic volume (e.g. peak hour factor) for projection purposes. If v/c is less than 1.0, establish the proposed alternative target.
3. **In cases where v/c is forecasted to be greater than or equal to capacity during the design hour using the actual peak hour projection of traffic** and in areas where design hours are affected by high seasonal traffic volumes, evaluate the Annual Average Weekday PM Peak as the future year design hour rather than the 30th highest hour. If v/c is then <1.0, establish the proposed alternative target.
4. **In cases where v/c is forecasted to be ≥ 1.0 using the Annual Average Weekday PM Peak as the future design hour**, determine the duration of the period during which the future Annual Average Weekday PM Peak hour will have a v/c ≥ 1.0 . Establish the proposed alternative target by increasing the number of hours that v/c can be ≥ 1.0 (i.e., v/c ≥ 1.0 for not more than 1 hour, or not more than 2 hours, etc.).

If a v/c-based mobility measure does not by itself meet the needs of the jurisdiction, the state or the particular facility under consideration, then it is reasonable to explore non v/c-based measures for defining mobility on the state highway system. At a minimum, all non v/c-based measures must:

1. Be consistent with OHP Policy 1F, with particular attention to Actions 1F.1 and 1F.3;
2. Follow the attached checklist; and

³ “Feasibility” is based on reasonable expectations of funding likely through the planning horizon as established within an MPO’s constrained financial plan. Outside an MPO, expectations of funding require consent from the Region Planning and Development Manager. Feasibility can also refer to other physical or environmental opportunities or constraints within a particular study area.

⁴ OHP policy and current analysis practices use a v/c-based methodology as the initial measure to standardize and simplify implementation through a quantifiable, consistent and reproducible measure. Where v/c-based approaches may not meet all needs and objectives, developing alternative mobility targets using non v/c-based measures may also be pursued.

3. Develop a measurable and defensible target value, with defined geographic limits and a defined analysis methodology that can be compared between alternatives, recognizes data needs, availability and quality, and considers requirements for implementation including the availability of analysis tools, staff responsibilities and associated costs.

Recognize that, even when exploring non v/c-based measures, there may still be advantages to keeping v/c measures as well.⁵

ROLES & RESPONSIBILITIES:

ODOT Regions: The ODOT Region Planning staff will typically lead ODOT's involvement in developing alternative mobility targets through various planning activities and projects. Region staff are responsible for:

- Leading the planning coordination with local jurisdictions, stakeholders, Area Commissions on Transportation (ACTs), FHWA and other interested parties, as well as internal coordination with the Transportation Development Division (TDD), the Region Tech Center, ODOT Technical Services, and other affected disciplines.
- Coordinating with, and providing assistance to, MPOs where alternative mobility targets are proposed and where planning outcomes will include amendments to the Regional Transportation System Plan to support the alternative mobility target and recognize the planned level of system performance.
- Coordinating with, and providing assistance to, local jurisdictions in project scoping and as technical advisors during a planning process that includes alternative mobility targets as a possible outcome.
- Managing consultant or internal technical staff conducting the technical analysis and preparing the plan document.
- Ensuring Oregon Transportation Plan (OTP) and OHP policies, particularly OHP Policy 1F, are met when developing the alternative mobility target.
- Ensuring this Operational Notice and checklist are followed, as applicable to each situation.
- Ensuring the integrity and documentation of the planning process, including meeting public involvement and Title VI requirements.
- Following the requirements and expectations contained in the MOU with FHWA, including obtaining Chief Engineer approval of the proposed alternative mobility target as an amendment to the Highway Design Manual (HDM) if the intent is for the alternative mobility targets to also be a basis for design. See the August 2012 Memorandum of Understanding between the Federal Highway Administration Oregon Division and ODOT attached to this Operational Notice.
- Preparing the OHP amendment materials for the OTC in accordance with this Operational Notice and attachments.

ODOT Transportation Development Division: TDD staff are available to provide resources and a statewide perspective for Region Planning Staff in the preparation of the alternative mobility target and required documentation. TDD staff is responsible for:

- Maintaining this Operational Notice through the Planning Business Line Team.
- Maintaining and updating guidance documents, research and best practices in support of establishing alternative mobility targets.
- Providing expertise in analysis methodologies, options and the preparation of findings necessary to support adoption of an alternative mobility target.
- Maintaining the OHP Amendment Registry and Transportation Planning On-Line Database (TPOD) to track adopted alternative mobility targets.
- Helping the Regions ensure that legal requirements for OHP plan amendments are met, including notice requirements.

⁵ See *Alternative Mobility Targets: Performance Measures and Analysis Tools Synthesis* for additional information on potential performance measures.

- Assisting the Regions in preparing the OTC adoption packet and presentation materials, when requested.

ODOT Technical Services: Provide Technical Services staff as a technical resource in the development of alternative mobility targets. Technical Services staff provide assistance by:

- Serving on planning, leadership and technical teams and reviewing proposals to meet obligations contained in the MOU on alternative mobility targets established with FHWA.
- Ensuring that design considerations and/or implications are included in the alternative mobility target planning process appropriate at a plan level.
- Ensuring that practical design principles, including a corridor context and systems approach, are used when developing alternative mobility targets.
- Working with FHWA in amending the HDM design mobility standards as appropriate regarding alternative mobility targets.

Area Commissions on Transportation. The ACTs are a key stakeholder group that must be kept informed about potential changes in mobility expectations and provide critical regional perspective regarding the potential effect of proposed alternative mobility targets. The ACTs should provide:

- Informal input regarding the need to pursue an alternative mobility target.
- Assistance in identifying factors to consider on the regional and local transportation system and how the potential improvements (or lack of improvements) that create the need for the alternative mobility target may affect the regional and local transportation systems and community concerns.
- Input to the OTC, often through ODOT Region staff, about any alternative mobility target being proposed within their area.

Oregon Transportation Commission: The OTC has the statutory authority to establish performance expectations on the state highway system.

- The OTC will make the final decision to approve or deny the alternative mobility target and the findings supporting the change.
- The alternative mobility target will be adopted by the OTC as an amendment to the OHP.

REFERENCES:

- Analysis Procedures Manual
<https://www.oregon.gov/ODOT/Planning/Pages/APM.aspx>
- Alternative Mobility Targets: Performance Measures and Analysis Tool Synthesis
<http://transact.odot.state.or.us/tdd/OHPMob/default.aspx>
- Development Review Guidelines
<https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx>
- Federal Highway MOU on Alternative Mobility Targets
<https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx>
- Guidelines for Implementing ORS 366.215
<https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx>
- OAR 731, Division 17: Economic Development Projects Unable to Meet TPR Requirements for State Highways
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3276>
<https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx>.
- OHP/TPR Implementation SharePoint Site (Staff Resource)
<http://transact.odot.state.or.us/tdd/OHPMob/default.aspx>
- OHP Mobility Policy Revisions – 2011 Website (External Resource)
<https://www.oregon.gov/ODOT/Planning/Pages/Plans.aspx#OHP>
- OTC Public Involvement Policy
https://www.oregon.gov/ODOT/Get-Involved/OTC/OTCpolicy11_pip.pdf
- Procedure PLA 01 – ODOT Transportation Facility Plan Adoption Process
http://intranet.odot.state.or.us/ssb/BSS/documents/p&p/PLA_01_PROCEDURE.pdf

- State Agency Coordination Agreement
<https://secure.sos.state.or.us/oard/displayChapterRules.action?selectedChapter=102>.
- Transportation Planning Rule
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3062>
- TSP Guidelines
<https://www.oregon.gov/ODOT/Planning/Pages/Guidance.aspx>

Contact Information

ODOT Transportation Development Division, Planning Section

<https://www.oregon.gov/ODOT/Planning/Pages/default.aspx>

503-986-4121

ATTACHMENT A: Checklist of Items for Alternative Mobility Target Consideration

The following checklist includes selected items to help guide transportation system or facility planning processes that are considering alternative mobility targets or methodologies. Included are items that will help guide activities required under Oregon Highway Plan (OHP) Action 1F.3, stakeholder and public involvement, and Oregon Transportation Commission (OTC) consideration of alternative mobility targets. Required elements include outlining alternative mobility target consideration and development, describing the level of congestion and specifications for an alternative target, and documenting the planning and analysis processes used in these applications. The checklist items do not represent the full range of potential items for these topic areas, but do provide an overview for reference and discussion.

Parties developing alternative mobility targets should explain how they considered or addressed each of the following items as applicable.

Stakeholder and Public Involvement Process

Stakeholder involvement is imperative to the discussion of alternative mobility targets and, ultimately, for their adoption. Each situation involving mobility target issues is unique and the stakeholder involvement process must be inclusive of all individuals, groups and agencies with an interest or stake in the outcome.

Items to consider when scoping an ODOT project or when advising jurisdictions engaging in a local planning process that will involve alternative mobility targets include:

- ❑ Base stakeholder processes on existing public involvement requirements, guidance and best practices for plan development.
- ❑ Take advantage of local public involvement processes and opportunities when available.
- ❑ Anticipate a higher level of agency coordination and a need for early involvement from key agencies, including the Department of Land Conservation and Development (DLCD) and the Federal Highway Administration (FHWA).
- ❑ Obtain Chief Engineer approval of the proposed alternative mobility target as an amendment to the Highway Design Manual (HDM) when warranted.
- ❑ Use the Area Commissions on Transportation (ACTs) as a regional discussion forum and conduit through which affected jurisdictions can provide feedback on the proposal or items being considered.
- ❑ Engage stakeholder groups who are uniquely interested in congestion and capacity issues including the freight community and emergency service providers.
- ❑ Document and plan for local and state adoption timelines; consider both the local public adoption process, as well as the OHP amendment process that typically follows the local action. (See ODOT's Procedure PLA 01 – ODOT Transportation Facility Plan Adoption Process, http://intranet.odot.state.or.us/ssb/BSS/documents/p&p/PLA_01_PROCEDURE.p)

[df](#)). Note that public notice and/or comment periods for the local and state processes may be run concurrently to use time most efficiently.

- ❑ Inform Agency leadership and the OTC prior to seeking approval of the alternative mobility target. This is recommended when an alternative mobility target may be non v/c-based, or if the process through which it was recommended was complex or controversial. ODOT Region staff should work with the Transportation Development Division (TDD) Division Administrator and the Chief of Staff to determine whether alternative mobility target proposals should go before the OTC for review and guidance prior to adoption. As a best practice, the ODOT Planning Business Line Team (PBLT) should review and provide guidance on alternative mobility target proposals. The Department of Justice may also be consulted on potential alternative mobility target proposals as a best practice.
- ❑ Provide a 45-day public review comment period for the OTC action adopting alternative mobility standards per ODOT’s public involvement policy, Transportation Commission Policy – 11, https://www.oregon.gov/ODOT/Get-Involved/OTC/OTCpolicy11_pip.pdf.

OHP Action 1F.3 Items

Local System and Pedestrian and Bicycle Ways

“Providing a network of local streets, collectors and arterials to relieve traffic demand on state highways and to provide convenient pedestrian and bicycle ways;”

Elements that address this statement may include:

- ❑ Expanded local street system enabling alternative travel routes capable of relieving traffic demand on state highways
- ❑ Parallel street facilities
- ❑ Grid pattern local street network to disperse travel and alternative routes off the highway; subdivision design requirements for improved connectivity; added bicycle and pedestrian routes
- ❑ Sidewalks
- ❑ Bicycle ways (on street and/or separated paths)
- ❑ Multi-use paths, trails, etc.

Safety and Operations, Including Access Management

“Managing access and traffic operations to minimize traffic accidents, avoid traffic backups on ramps, accommodate freight vehicles and make the most efficient use of existing and planned highway capacity;”

Managing access and traffic operations may include:

- ❑ Safety improvements to reduce crashes, including modifying off-ramps to preventing queue spillbacks onto a freeway
- ❑ Ramp metering

- ❑ Signal timing, optimization, interconnection, coordination and adaptive control
- ❑ Access management, including developing access management plans or strategies, reduction in conflicts, etc.
- ❑ Incident management, traveler information systems, highway advisory radio, dynamic message signs, etc.
- ❑ Freight considerations, such as adequate access to industrial areas, provision of adequate truck geometrics, truck only lanes, truck signal priority, etc.
- ❑ Railroad grade crossing improvements or closures
- ❑ Traffic Management Centers
- ❑ Event management
- ❑ Other Intelligent Transportation System (ITS) deployments

Transportation Demand and System Management

“Managing traffic demand and incorporating transportation system management tools and information, where feasible, to manage peak hour traffic loads on state highways;”

Managing traffic demand may include:

- ❑ Transportation Systems Management (TSM) measures to improve efficiency and safety at relatively low cost, including traffic control devices, channelization, etc.
- ❑ Public and employer based programs, including Transportation Management Associations (TMAs), that implement:
 - Staggered work shifts
 - Flex time programs
 - Compressed work weeks
 - Telecommuting
 - Transit subsidies
 - Ridesharing
 - Vanpool programs
 - Parking management, fees

Alternative Modes

“Providing and enhancing multiple modes of transportation;”

Providing alternative modes of transportation may include:

- ❑ Expanded pedestrian/bike connections and facilities, bike lanes, bike paths, sidewalks, curb extensions, lighting, etc.
- ❑ Expanded transit services, route coverage, service frequency, paratransit, and related facilities such as bus stops, shelters, benches, etc.
- ❑ Bus only lanes, transit or High Occupancy Vehicle (HOV) bypass lanes such as at ramp meters
- ❑ Transit vehicle signal priority
- ❑ Inter-city bus, bus rapid transit, or rail service
- ❑ Park and ride facilities/programs
- ❑ HOV lanes on mainline segments

- ❑ Private transit services available in the area

Land Use

“Managing land use to limit vehicular demand on state highways consistent with Policy 1B (Land Use and Transportation Policy.)”

Land use actions may include:

- ❑ Encourage compact land use and infill in centers, along main streets, etc.
- ❑ Transit oriented development
- ❑ Mixed use and higher density land use patterns that encourage pedestrian and bicycle trips and shorter trip distances
- ❑ Land use patterns amenable to pedestrian, bicycle and transit usage and connectivity in street layout
- ❑ Policies and goals at the local level to discourage certain types of development around interchanges and urban fringe areas
- ❑ Protect resource lands and ensure that urban growth boundary (UGB) expansions adequately consider transportation issues
- ❑ Trip budget and monitoring provisions
- ❑ Zoning or overlay zone provisions
- ❑ Provisions for System Development Charges (SDCs), Local Improvement Districts (LIDs) or similar revenue options
- ❑ Site design requirements/incentives that manage impact on the transportation system

Description of Congestion

The description of congestion should include factors such as:

- ❑ Geographic extent
- ❑ Number of hours of the day
- ❑ Number of months of the year
- ❑ Time of year
- ❑ Weekdays vs. weekends
- ❑ Crash data
- ❑ Access conditions
- ❑ Truck, auto and modal information

Specifying an Alternative Mobility Target

The alternative mobility target provides a new definition of adequate and anticipated performance for areas unable to meet current mobility targets. This new benchmark shall be based on the analysis and plan recommendations. The definition of performance should consider the following items.

- ❑ Defining specific corridors, segments or intersection locations where the target applies

- ❑ Defining specific hour(s) or other time periods to be measured
- ❑ Defining the aggregation and/or level of detail to be measured
- ❑ Specifying default factors to be used where data is unavailable
- ❑ Specifying credits or exceptions to be applied, if any
- ❑ Providing clear standardized procedures to ensure consistent computation of the selected measure
- ❑ Specifying target levels
- ❑ Other measures to supplement or substitute for the volume to capacity (v/c) ratio (Note: OHP policy requires that a v/c or v/c-related methodology be used to initially determine the feasibility of achieving the adopted OHP mobility target.)

Documentation

The proposal shall clearly document the need for the alternative mobility target and how the area or jurisdiction meets the general criteria described in Action 1F.3. The proposal should also provide:

- ❑ Verification that applicable traffic analysis work was performed by, or under the direct supervision of, an Oregon registered professional engineer with expertise in traffic engineering and is consistent with applicable Agency recommendations or subsequent Agency review.
- ❑ A description of operational and safety conditions and the extent to which the current mobility targets are exceeded. This may include the scale to which the targets are exceeded (e.g. a v/c ratio of 0.95 in an area where the target is 0.75), the geographic extent of the mobility issues, and the number of hours of the day the targets are exceeded. In some areas of the state (e.g. recreational routes) other factors may be important as well, such as the number of months and the time of year the targets are exceeded, and whether the issues occur on weekdays, on weekends or occur during any day of the week.
- ❑ Description of the general level of improvements that would likely be needed to meet current targets. Note: OHP policy conveys that alternative methodology must be v/c or v/c-related when initially determining the feasibility of achieving the adopted OHP mobility target.
- ❑ A discussion of what factors make it infeasible to meet the existing targets. This may include documentation of the environmental, land use and other impacts that would occur if current mobility targets are met (e.g. environmental, land use or financial constraints or consistency with other OHP goals such as Policy 1B, Land Use and Transportation).
- ❑ Documentation of the proposed target's consistency with other OHP goals that establish general mobility objectives and approaches for maintaining mobility. This documentation should include discussion of Policy 1A (State Highway Classification System), Policy 1B (Land Use and Transportation), Policy 1C (State Highway Freight System) and Policy 1G (Major Improvements).
- ❑ The proposal should describe what was considered or implemented prior to pursuing an alternative target (e.g. describe how pursuing an alternative target was not a default option).

- ❑ A discussion of the environmental, land use, economic development or other impacts that may occur if current mobility targets are not met and an alternative mobility target is not adopted.
- ❑ A discussion of consideration of corridor and system level context as appropriate for the alternative target.
- ❑ Documentation of how the State Traffic/Roadway Engineer was involved in the application of traffic signal operations and safety standards during the development of the alternative mobility targets.
- ❑ Document that the proposed alternative mobility target has Chief Engineer approval as an amendment to the Highway Design Manual (HDM) when warranted.

The documentation must include the proposed alternative mobility target (both specific measure (e.g. v/c) and target (e.g. 0.95)) for OTC consideration. The proposal also must include, as applicable:

- ❑ Corridors, segments or intersection locations to which the alternative target applies (this may best be shown on a map, with milepoints delineating the specific highway locations).
- ❑ Specific hour(s) or other time periods to be measured.
- ❑ Level of detail to be measured or aggregation of the measure along the facility.
- ❑ Default factors to be used where data is unavailable, if different from accepted ODOT values.
- ❑ Justification and specifications for any credits or exceptions to be applied (in addition to those identified in the TPR), if any are defined.
- ❑ Clear standardized procedures to ensure consistent computation of the selected measure, if different from accepted ODOT procedures.
- ❑ Other measures as needed to supplement or substitute for v/c ratio. (OHP policy establishes that that alternative methodology must be v/c or v/c-related when initially determining the feasibility of achieving the adopted OHP mobility target).¹
- ❑ Documentation of the operational and safety conditions anticipated with the alternative mobility target and plan provisions in place. This should include performance measures easily conveyed to a non-technical audience.

Proposals for OTC Adoption of OHP Amendment

- ❑ The adoption of alternative mobility targets is interpreted as a major amendment to the OHP and as such ODOT must follow the requirements for amending the OHP in the State Agency Coordination (SAC) Program under “Coordination Procedures for Adopting Final Modal System Plans.”
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3275>.

¹Additional information on potential performance measures is compiled in the *Alternatives Mobility Targets: Performance Measures and Analysis Tools Synthesis* (<http://transact.odot.state.or.us/tdd/OHPMob/default.aspx>).

- ❑ When the proposed OHP amendment that establishes an alternative mobility target is a recommendation of an ODOT facility plan, coordination procedures for facility plans under Division 15 will also apply.
- ❑ If the proposed alternative targets are developed as part of a facility plan, ODOT's Procedure PLA 01 – ODOT Transportation Facility Plan Adoption Process (http://intranet.odot.state.or.us/ssb/BSS/documents/p&p/PLA_01_PROCEDURE.pdf) should be consulted for additional detail on facility plan approval and documentation.
- ❑ Place proposed changes to mobility targets on the OTC agenda as a regular meeting item to ensure time for sufficient discussion.
- ❑ The suggested OTC packet includes:
 - A cover memo that summarizes the issues and includes the requested action and motion language that amends the OHP;
 - A staff report that includes a summary of what is proposed to be adopted outlining the proposed alternative mobility target and methodology, and a summary of the draft findings, including those that indicate how OHP Action 1F.3 has been met;
 - A map and mileposts for the affected state highway segments and a map of major affected local arterials and collectors;
 - Findings that support the adoption of the alternative mobility targets;
 - Supportive findings of statewide planning goal compliance; and
 - The facility plan (if applicable).

MEMORANDUM OF UNDERSTANDING

Between

FEDERAL HIGHWAY ADMINISTRATION OREGON DIVISION

And

STATE OF OREGON DEPARTMENT OF TRANSPORTATION

August 2012

This Memorandum of Understanding (MOU) is hereby entered into by and between the Federal Highway Administration Oregon Division hereafter referred to as FHWA and the State of Oregon acting through its Department of Transportation, hereafter referred to as ODOT.

Purpose

The purpose of this MOU is to provide a framework for mutual recognition of alternative mobility standards/targets for segments of state highways that are developed through adopted state transportation facility plans and local transportation plans developed in coordination with ODOT. Currently ODOT is obligated to apply two different highway performance standards/targets, those in the Highway Design Manual (HDM) and those in the 1999 Oregon Highway Plan (OHP). Each standard/target is used for different purposes and confusion often occurs when they are both applied at the same time to the same transportation facility or area. This MOU is intended to minimize the confusion over the simultaneous application of these two standards/targets and eliminate the need for exceptions to mobility standards at the project level where the planned level of performance is in line with the adopted alternative mobility target in the OHP.

Background

The HDM mobility standards are used primarily when designing specific highway projects that impact capacity. These standards are slightly more stringent than the OHP targets, thereby tolerating less congestion. Designers use these standards to determine what the capacity of the roadway needs to be to accommodate projected growth in traffic for 20 years beyond project completion. Mobility analysis should be a normal part of the project development process and should be incorporated into the purpose and need statement for the project. Where it is determined during project development activities that these standards cannot or should not be met, a design exception may be allowed to use an alternative standard.

The OHP targets are applied to system and facility planning activities to identify the need for solutions to achieve acceptable system performance for the planning period (typically 20 years). These targets are applied primarily in making decisions about state highway performance objectives to be included in state transportation facility plans and local government Transportation System Plans (TSPs). The OHP establishes state policy targets for needs identification on state highways. The OHP provides for the use of alternative mobility targets where there is an appropriate analysis completed and a decision process to meet the long term mobility needs for the highway segments being considered.

This MOU is intended to establish a mutual agreement between state and federal transportation authorities to recognize planning efforts that adequately demonstrate and document justification for applying alternative mobility standards/targets to a given highway segment. This agreement recognizes that the planning efforts are an appropriate means to meet the intent of both HDM and OHP highway performance needs for a given area. With this memo ODOT and FHWA acknowledge that the analysis used in the processes of developing transportation system and facility plans is an acceptable process for establishing alternative mobility standards/targets on a given segment of state highway. Commensurate with the AASHTO Design Standards for the Interstate System, mobility performance targets/standards would require an analysis that begins with established minimums and supports lower thresholds through application of the social, environmental and economic analysis on a corridor or regional basis, which incorporates and is consistent with the Congestion Management System, where such systems are required under federal regulations. Both ODOT and FHWA also acknowledge the importance of system mobility on the National Highway System (NHS) and will incorporate measures or methods that evaluate route and system mobility impacts and mitigations for analysis on NHS facilities. It is also jointly acknowledged that establishment of alternative mobility standards/targets are in alignment with ODOT's Practical Design Strategy which promotes a broader corridor context to developing transportation solutions. With this understanding both parties recognize and accept the establishment of alternative mobility targets that are developed consistent with criteria and direction established in the OHP and subsequent mobility guidance developed by ODOT.

ODOT Shall:

1. Follow the criteria in OHP Policy 1F when proposing alternative mobility targets in TSPs and transportation facility plans.
2. Apply best practices outlined in applicable OHP mobility guidance when proposing alternative mobility targets developed in state transportation facility plans and working with local jurisdictions in developing alternative mobility targets in TSPs. In applying best practices, ODOT will consider mobility decisions for NHS routes from a strategic corridor perspective.
3. Work with FHWA, ODOT Technical Services, ODOT Transportation Planning Analysis Unit, Region Tech Center, local governments and other stakeholders to determine acceptable and appropriate mobility objectives and analysis methods in the development of TSPs and state transportation facility plans.

4. Involve the State Traffic/Roadway Engineer in the application of traffic signal operations and safety standards when developing alternative mobility targets for an area.
5. Obtain Chief Engineer approval of proposed alternative mobility standard/target as an amendment to the HDM.
6. Obtain Oregon Transportation Commission approval of proposed alternative mobility targets through their adoption of transportation facility plans or other OHP amendment actions.
7. Apply mobility standards/targets agreed upon and documented in state transportation facility plans and TSPs to future planning activities and improvement projects.

FHWA Shall:

1. Work with ODOT in the development of alternative mobility targets, including the analysis of mitigations, when they are proposed in state transportation facility plans and local government TSPs.
2. Recognize the alternative mobility targets established in state transportation facility plans and TSPs as the acceptable measure of performance for planning and future projects in those areas, thereby eliminating the need for project level exceptions for mobility.
3. Approve alternative mobility standards/targets proposed in a TSP or transportation facility plan as an amendment to the HDM.

Manager Signature Jerri Bohard Date 9/5/12

Position Title: **Jerri Bohard, ODOT Transportation Development Division Administrator**

Manager Signature Cathy Nelson Date 9-6-12

Position Title: **Cathy Nelson, ODOT Technical Services Manager**

Manager Signature Paul Mather Date 9/6/12

Position Title: **Paul Mather, ODOT Highway Division Administrator**

Manager Signature Phil Ditzler Date 9/28/2012

Position Title: **Phil Ditzler, Federal Highway Administration Division Administrator**