

## Vertical Clearance Policy Clarification and Refocus

The current Oregon roadway system has been built over the last 100+ years, incorporating evolving design standards. The life span of a highway structure is typically 50-75 years. During that time, it may undergo routine and major maintenance and repairs such as deck or rail replacement. The pavement, with an average 15 year life span, will need to be overlaid or replaced several times during the life of the structure. Industry freight needs and options also change over time.

Optimizing system mobility requires collaboration between all system users, seeking:

- agreement on future mobility expectations of the system,
- agreement on current mobility expectations of the system, and
- agreement on how to efficiently manage the system to meet all expectations.

Initial mobility clearances were established which focused on maintaining existing vertical clearance wherever possible and building new structures to provide a minimum of 17 feet of vertical clearance. These expectations were then translated into system, program and project management policy and direction.

These documents have been valuable in framing up and working the vertical clearance issue, however, they have not covered all situations and some have been subject to conflicting interpretations. In particular, more work has been needed to fully understand the mobility needs of over dimensional height loads and how to manage the transportation system to best meet those needs.

In 2007, Motor Carrier Transportation Division completed a study on the frequency of permitted loads that were over dimensional for height. The result of this study was that there is a significant decrease in loads over 17' 0". To accommodate these loads with a 4" buffer, the actual measured height of the bridges needs to be at least 17' 4". The Motor Carrier Transportation Division then worked with stakeholders to determine the routes that are most important when high loads are moved. These "High Routes" are primarily on the NHS, but there are portions that are on highways other than NHS. Some of these routes are in rural portions of the state where there are no overpasses, so high loads can move without restriction. However, some "High Routes", such as Interstate 5 require the use of detours, including "up and over's" for high vehicle to use the route.

Since 17' 4" is the important break point in desired actual vertical clearance, any clearance in excess of 17' 4" is considered to be immaterial. So, for "High Routes", 17' 4" is the definition of "materiality". Portions of the NHS that are not "High Routes" will have 17' 0" as the definition of "materiality". All other routes will have 16' 0" as the definition of "materiality".

Based on this new understanding of how the system is being used ODOT is proposing to refine the current vertical clearance requirements.

**System Management Goal and Objectives:**

**Goal: Optimize mobility and manage the system cost effectively**

**Objectives:**

**1) Maintain current system mobility**

- a. No reduction in existing vertical height clearance below the level of "materiality".

**2) Manage future system mobility**

- a. Strategically seek opportunities to increase vertical clearances to "materiality thresholds":
  - 17' 4" on High Routes
  - 17' 0" on NHS (not on High Routes)
  - 16' 0" on non-NHS (not on High Routes)
- b. All new construction shall provide vertical clearance that meets the "materiality threshold" for the defined route. Proposed new construction that reduces vertical clearance regardless of materiality shall require consultation with MCTD to ensure understanding of the impact of the proposed decrease to the user.

**3) Deviations from Vertical Clearance thresholds will be fully discussed and coordinated with stakeholders.**

Note: All dimensions are actual measured heights

These objectives translate to a commitment to not lose any material usage of the system during maintenance and preservation activities. As well as to actively seek opportunities to increase mobility by mitigating existing vertical clearance limitations in a programmatic manner. These clear thresholds help manage future expectations for users, as well as allowing ODOT options to optimize pavement and structure system management strategies.

This strategy also requires active, continual communication and collaboration between ODOT and system users to ensure a shared vision and understanding of system requirements.

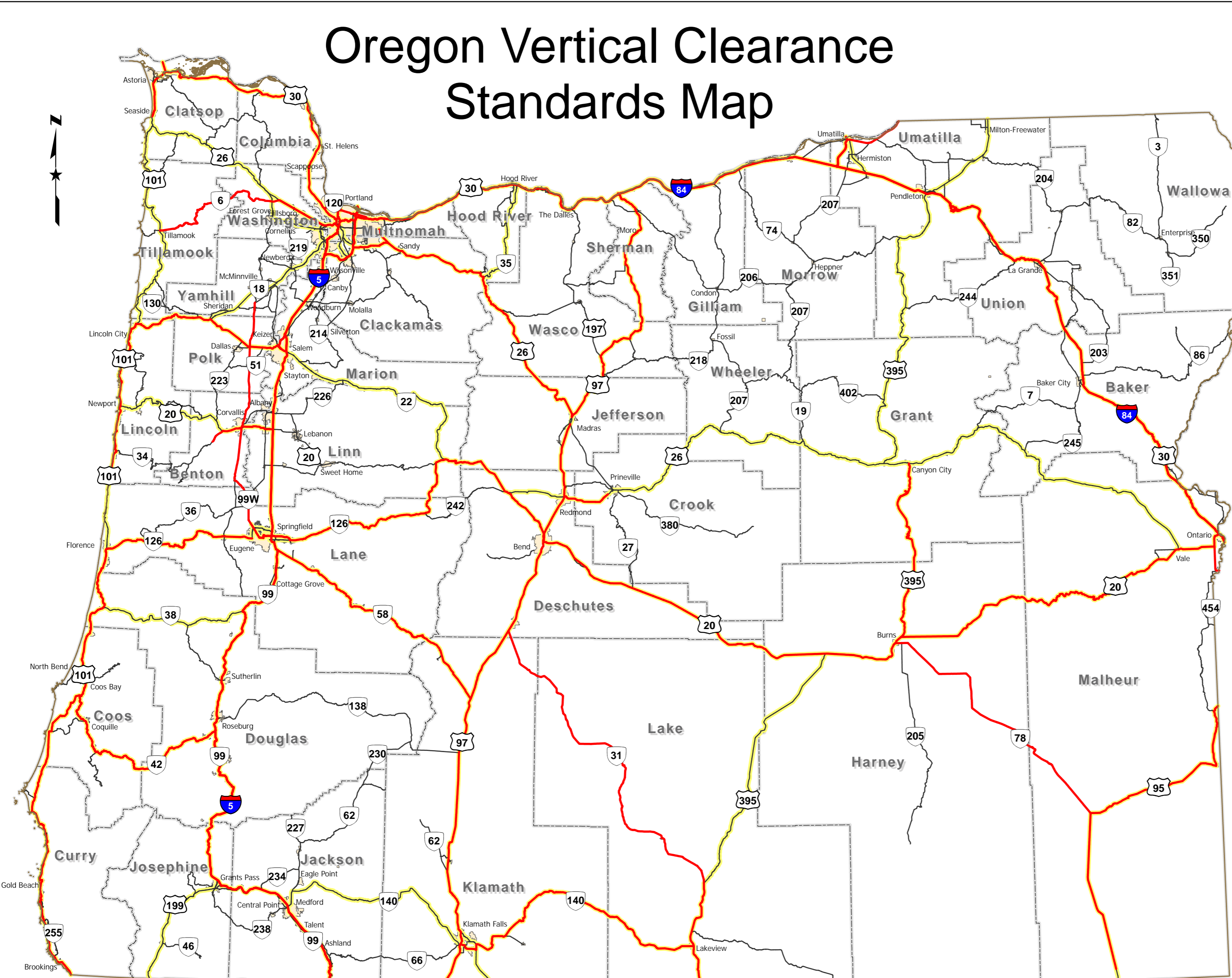
Guidance will be reviewed and updated to eliminate conflicting information and areas open to widely differing interpretation. All of our guidance documents and training will continue to emphasize the importance of contacting MCTD to determine how a route is being used. Is the route being used by over-height permit loads, or is it a pinch-point in a route, that if alleviated would facilitate its use as an over-height permit route? Is there a short, easy detour for over-height loads, or is significant out of direction travel required? This information coupled with an understanding of the project costs associated with meeting or mitigating mobility objectives will enable the project team to determine how to appropriately address the vertical clearance system goals within their project.

Any decrease in existing vertical clearance that is below the level of “materiality” or any proposed decrease in vertical clearance in new construction regardless of materiality requires consultation with MCTD to ensure understanding of the impact of the proposed decrease to the user. MCTD will then involve industry stakeholders in the consultation process as necessary to fully evaluate user impacts and project construction and design options.

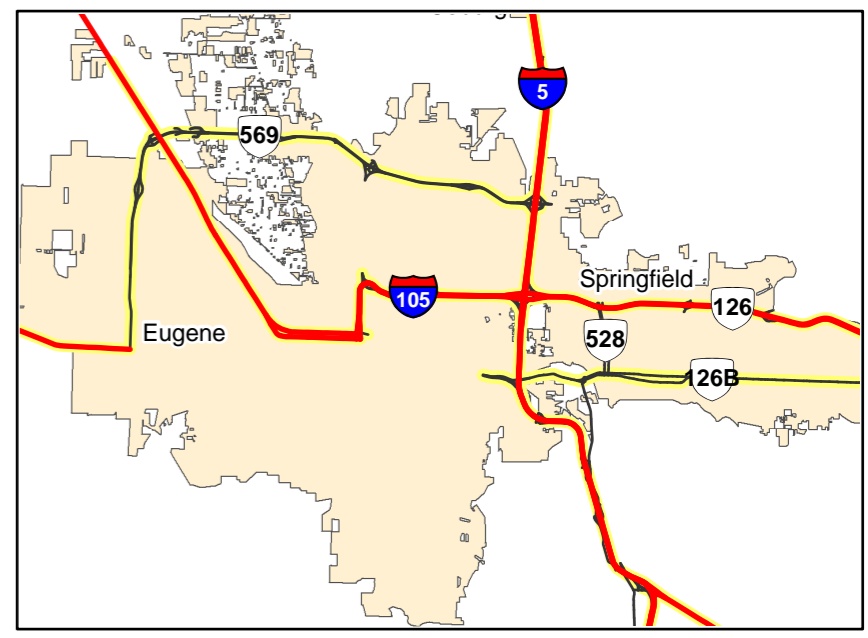
# Oregon Vertical Clearance Standards Map

**Legend**

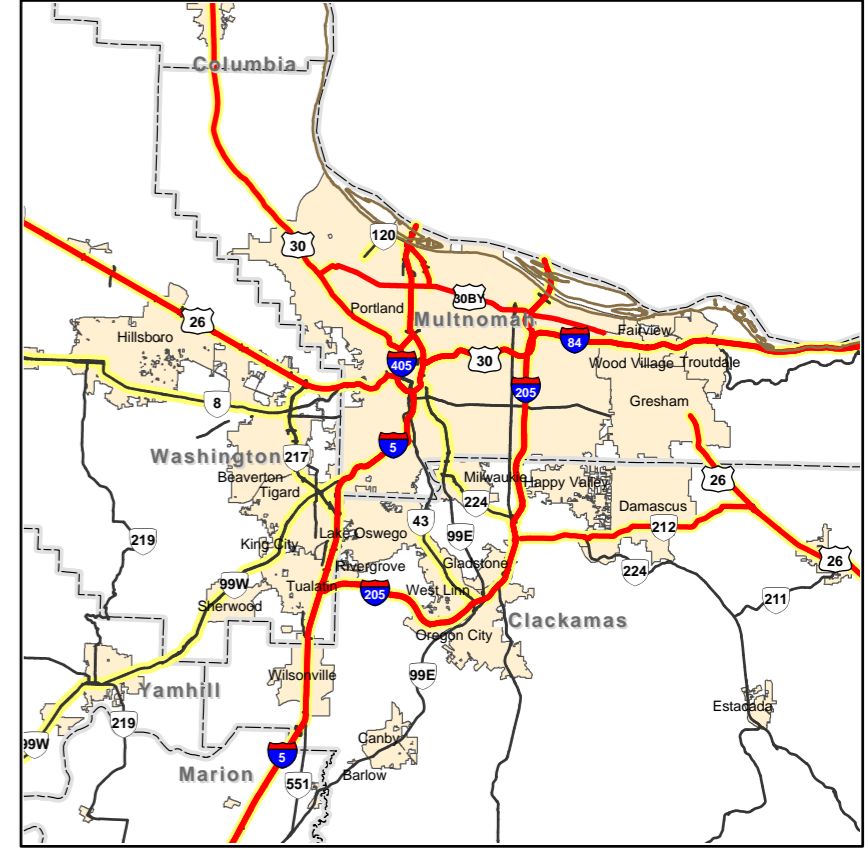
- High Routes
- NHS Routes
- Other Highways



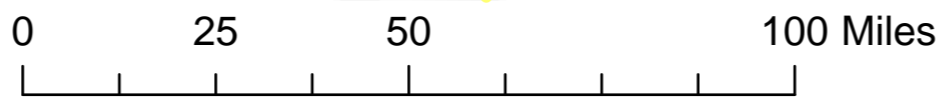
Eugene Inset



Portland Inset



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