

2018

ODOT STRUCTURE NUMBERING RULES
FOR MAJOR/CRITICAL STRUCTURES



Oregon Department of Transportation

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ODOT STRUCTURE NUMBERING RULES FOR MAJOR/CRITICAL STRUCTURES

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REVISIONS

October 10, 2018

Retaining Walls – removed criteria for single structure number “Constructed at the same time as part of the same project” and for separate structure numbers “Constructed at different times.

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Introduction

The AASHTOWare Bridge Management software (BrM) was created so that ODOT could manage and report on the bridge assets located throughout the State of Oregon. The bridge inventory contains data that is associated with a variety of structures types that are located on, under, over, or immediately adjacent to a state highway. The structure inventory only contains structure types that carry a higher level of importance due to the potential impacts to the traveling general public, if a structural failure were to occur.

Each structure in BrM is assigned a unique structure number using the Bridge Data System (BDS).

Structure Types and Numbering Rules

To maintain consistency in structure numbering, the following business rules have been established. Resolution to situations not addressed will be reviewed for consistency with these guidelines, by ODOT Bridge Headquarters. Final resolution will be added to this document to provide future guidance.

Some structures are also part of the Federal Highway Administration (FHWA) National Bridge Inventory (NBI). See Item 112, NBI Bridge Length, of the [*Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, December 1995*](#).

Those structures meet the following criteria:

A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

Bridges

- All bridge type structures that span 6 feet or more.
- Pedestrian bridges, not attached to a bridge. Structure number not required for non-public pedestrian structures.
- Railroad structures over-crossing a state highway.
- When a structure number is assigned to a given structure it is considered to be all inclusive. A separate structure number will not be assigned to different components of an existing structure.
- When an existing structure is demolished and replaced, the new structure will be given a unique structure number.
- When two structures are located immediately adjacent to each other but each separate superstructure is supported by a separate foundation, each will be given a unique structure number.
- When an approach ramp is attached to a main thru structure, each approach ramp will be given a unique structure number. The points of demarcation will generally be an identifiable deck joint.

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Bridges, continued

- When four lines meet above grade at a self-supporting center structure (like SW Denny Rd or SW Allen Blvd), the center structure will be considered a bent to the main thru structure and each side approach ramp will be given a separate unique structure number.
- When an existing superstructure or any portion thereof, is moved to another location and set on a new foundation, that structure will be given a new structure number.
- Temporary structures will not be given a unique structure number.
- If a structure is separated by sections of roadway fill or embankment, each separate section will be given a unique structure number.
- Features added to an existing structure, will have no effect on the assigned structure number.
- The existing structure number will remain to be used when transferring ownership to another public agency. The “new” number (if any) assigned by the new owner will be added to BDS as an “Alias Number”.
- Changing the classification of the highway will have no effect on the existing structure numbers.
- Work performed on a structure will have no effect on the existing structure number, including but not limited to:
 - Structural rehabilitation or strengthening
 - Widening
 - Raising
 - Paving or deck overlays
 - Pedestrian fencing
 - Painting
 - Maintenance contracts
 - Special studies
 - New railing
 - Changing electrical or mechanical systems
 - Seismic retrofit
 - Scour protection
 - Installation of a Cathodic Protection System
 - Installation of a Pier Fender System
 - Modification of sign supports
 - Other minor medications or repairs

Culverts

- Singular or multiple barreled culverts that are 6 feet or larger. If the spacing between each barrel of a multiple-barrel culvert is within $\frac{1}{2}$ the smallest diameter, a single unique structure number will be assigned. If the distance between the barrels is greater than that dimension, each barrel will be given a separate unique structure number.

Illumination Structures (Pending)

- Luminaire support structures, not attached to a bridge:
 - High Mast Towers.

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Retaining Walls

- Higher than 4' not attached to a bridge (e.g. MSE Retaining Walls).
- Use a single structure number for:
 - A continuous wall; may contain construction joints, expansion/contraction joints, slip joints, angle points, and steps.
 - A single retaining wall system type.
- Use separate structure numbers for:
 - Walls separated by gaps (except joints, etc., as noted above).
 - Different wall system types.
 - Proprietary walls, not part of the same proprietary retaining wall system.

Sound Walls (aka Noise Barriers)

- All.

Traffic Structures

- Major sign support structures, not attached to a bridge, including:
 - Truss sign and VMS bridges.
 - Monotube sign and signal bridges.
 - Monotube sign cantilevers.
 - Pipe sign and butterfly VMS structures.

Tunnels/Viaducts

- Every tunnel that carries traffic will be given a unique structure number.
- A single unique number will be given to each Viaduct structure and will be considered all inclusive. A separate number will not be given to retaining walls or other components if they are attached to the structure.
- Tunnels (including rigid frames).

Miscellaneous Structures

- A separate structure number will be given to structures that are not attached to an existing structure.
- Flumes over-crossing a route.

Structures Not Included in BrM

Structure types that will not be assigned a structure number, as they are managed by other entities within ODOT, include but are not limited to:

- Buildings – responsibility has been assigned to region.
- Other structure types:
 - Signal Poles
 - Pump Stations

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Structure Number Format

Each structure in the inventory is assigned a single unique 6 digit number. The 6-place number recorded in BDS can include leading zeros and trailing blanks or alphas. These assigned numbers are permanently fixed “serial numbers” for the structures. Typical examples of the format are:

Position	1	2	3	4	5	6
	0	0	3	3	2	A
	0	7	9	4	9	
	2	6	8	8	3	3

All new structure numbers will consist of numbers only, no alphas are permitted. The format will be consistent with the example shown above.

Note: Structure numbers prior to the introduction of BDS may have an alpha character. Historically, this character had various meanings:

- Distinguish the approach ramps from the main structure in an interchange.
- Work done after the structure was built, such as widening.
- Uniquely identify each structure of “twin” structures, such as “N” and “S” for northbound and southbound.
- Group by span type on very long structures.
- Replaced the structure.

Structure Number Assignment Process

Structure numbers can be obtained through BDS. Groups without access to BDS will need to contact the Region Office where the work is to occur. The person trained in using BDS will determine whether or not a new structure number is required. The structural designer assigned to the project will provide information about what type of work is being performed for a given project.