



## 15-14 LOADS FOR TEMPORARY HIGHWAY STRUCTURES

This memo addresses temporary structures built for use during the construction of transportation projects that are NOT accessible to the public. This memo does not address falsework. “Temporary” shall imply structures with no more than five years of anticipated service, as defined in the *AASHTO LRFD Specifications*, 2nd Edition 1998, Article 3.10.10. The appropriate design loads and load combinations for elastic analysis are listed in Attachment 1. Note that the design loads vary, depending on whether the structure spans over vehicular and/or pedestrian traffic, and whether the structure carries pedestrian or vehicular traffic. The seismic load requirements herein can be waived if the criteria in MTD 20-12 are met.

Not covered herein are those temporary structures, or temporary structural conditions, carrying public vehicular traffic. For such situations—including but not limited to

- partial demolition such as when widening existing structures
- staged construction involving existing or new structures

normal factored vehicular load combinations plus MTD 20-12 applies.

Deviation(s) from the requirements in this memo requires approval from the responsible Office Chief.

*Original signed by Richard D. Land*

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Richard D. Land  
Deputy Division Chief  
Engineering Services, Structure Design



ATTACHMENT 1

# 15-14 LOADS FOR TEMPORARY HIGHWAY STRUCTURES

	OVER VEHICULAR AND/OR PEDESTRIAN TRAFFIC	NOT OVER VEHICULAR OR PEDESTRIAN TRAFFIC
<b>STRUCTURES CARRYING NON-VEHICULAR LOADS ONLY</b>	<ol style="list-style-type: none"> <li>1. Vertical loads--same as for pedestrian overcrossings plus any special equipment loads requested by the Contractor.</li> <li>2. Lateral loads in both the longitudinal and transverse direction--the larger of:               <ol style="list-style-type: none"> <li>a. Construction staging</li> <li>b. Load combinations listed in the Department's Falsework Manual</li> <li>c. Seismic--25% dead load, factored by 1.0 and applied at the center of gravity</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Vertical loads--same as for pedestrian overcrossings plus any special equipment loads requested by the Contractor.</li> <li>2. Lateral loads in both the longitudinal and transverse direction--the larger of:               <ol style="list-style-type: none"> <li>a. Construction staging</li> <li>b. Load combinations listed in the Department's Falsework Manual</li> <li>c. Seismic--10% dead load, factored by 1.0 and applied at the center of gravity</li> </ol> </li> </ol>
<b>HAUL BRIDGES (STRUCTURES SUPPORTING CONSTRUCTION EQUIPMENT)</b>	<ol style="list-style-type: none"> <li>1. Vertical--dead loads with anticipated vehicular load combinations, including any special equipment loads. See MTD 15-15 on Material Hauling Equipment loads, or MTD 15-16 on construction equipment loads.</li> <li>2. Lateral loads in the longitudinal direction (parallel to the centerline of structure)--the larger of:               <ol style="list-style-type: none"> <li>a. Braking force--15% LL applied 6 ft above deck surface</li> <li>b. Seismic--25% dead load, factored by 1.0 and applied at the center of gravity</li> </ol> </li> <li>3. Lateral loads in the transverse direction (perpendicular to centerline of the structure)--the larger of:               <ol style="list-style-type: none"> <li>a. Seismic--25% dead load, factored by 1.0 and applied at the center of gravity</li> <li>b. Load combinations listed in the Department's Falsework Manual.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Vertical--dead loads with anticipated vehicular load combinations, including any special equipment loads. See MTD 15-15 on Material Hauling Equipment loads, or MTD 15-16 on construction equipment loads.</li> <li>2. Lateral loads in the longitudinal direction (parallel to the centerline of structure)--the larger of:               <ol style="list-style-type: none"> <li>a. Braking force--15% LL applied 6 ft above deck surface</li> <li>b. Seismic--10% dead load, factored by 1.0 and applied at the center of gravity</li> </ol> </li> <li>3. Lateral loads in the transverse direction (perpendicular to centerline of the structure)--the larger of:               <ol style="list-style-type: none"> <li>a. Seismic--10% dead load, factored by 1.0 and applied at the center of gravity</li> <li>b. Load combinations listed in the Department's Falsework Manual.</li> </ol> </li> </ol>