

## Attachment A-1

### **Equipment and Vehicle Load Restrictions** **On City and County of San Francisco (City) Pipeline Right-Of-Way**

To prevent damage to City's underground pipelines, Permittee's use of vehicles and equipment within twenty feet (20') of each side of the centerline of City's pipelines (measured on the surface) shall be subject to the following restrictions:

- (i) The depth of soil cover the tops of City's pipelines must be at least three feet (3') for steel cylinder pipe and four feet (4') for reinforced pre-stressed concrete cylinder pipe to accommodate the loading as defined below in item (ii). If any equipment or vehicle with axle loading exceeds the loads stated in item (ii) below or if the depth of the soil cover is less than stated above, Permittee shall submit to City's Public Utilities Commission, Water Supply and Treatment Division (SFPUC) for review and approval, in SFPUC's sole discretion, engineering calculations prepared by a licensed Professional Engineer showing that City's pipelines will not be adversely affected by Permittee's proposed activities. In the event that City's pipelines may be adversely affected, Permittee shall submit remedial measures for City's approval to ensure that no adverse effect will occur.
- (ii) The effects of vehicle and equipment loads to the pipe must not exceed the effects of the "AASHTO Standard H-10 Loading." H-10 loading is defined as loading caused by a two-axle truck with a gross weight of ten tons (20,000 lbs.), axles fourteen feet (14') apart, and rear axle carrying 8-tons (16,000 lbs.). Permittee shall be responsible to provide SFPUC adequate evidence that its equipment and vehicles meet the foregoing requirements.
- (iii) Permittee shall not use vibrating compaction equipment without SFPUC's prior written approval, which approval may be withheld in SFPUC's sole discretion.
- (iv) If the depth of the soil cover over the pipeline (determined by potholing or other proven procedure) is less than the minimum stated in (i) above, unless an alternate method is approved by SFPUC in writing, all excavation and grading over the pipeline shall be performed manually. For any machinery equipment excavation and grading over and within twenty feet (20') on each side of the centerline of the pipeline (measured on the surface), Permittee shall submit a written proposal together with all supporting calculations and data to SFPUC for review and approval. In any case, the two feet (2') of soil around the pipeline shall be removed manually or by other methods approved by SFPUC.