

ABSTRAK

Building behavior refers to the characteristics exhibited by a structure when subjected to loading and analysis based on the forces designed according to the needs of the building's users. To determine the behavior of a building, an equivalent static lateral force analysis is conducted, which refers to the influence of seismic load combinations as stipulated in the seismic design code for building and non-building structures. Due to the issuance of the new decree No. 693/KEP/BSN/12/2019 regarding the enactment of the Indonesian National Standard 1726-2019 (SNI 1726-2019) as a revision of SNI 1726-2012, this thesis studies the behavior of buildings under the influence of changes in earthquake load combinations from SNI 1726-2012 to SNI 1726-2019. The analysis was carried out on a six-story structural model using SAP2000 v.14 software to obtain the base shear and the maximum story displacement from the top to the bottom joint of each floor level of the designed building. The revision of SNI 1726 from the 2012 to the 2019 edition has a significant impact on seismic load calculations in structural design. In this context, the equivalent static method is used as one approach to determine base shear and story drift. SNI 1726-2019 introduces new parameters and revised values aimed at enhancing the earthquake resilience of buildings. This study compares the two SNI editions, focusing on changes in seismic load calculation and their implications for structural design. The main finding of this research indicates that the use of the earthquake load combination based on SNI 1726-2019 results in a 30.235% higher value compared to that based on SNI 1726-2012. The analysis shows that the implementation of SNI 1726-2019 can yield more accurate base shear values and reduce the risk of building damage during earthquakes.

Keywords : Building Behavior, SNI Changes, SNI 1726-2012, SNI 1726-2019, Earthquake Loads, Equivalent Static, Base Shear, Story Drift.