

## عنوان مقاله:

An Investigation into the Effect of Connections zone on the Seismic Behavior of All Steel Buckling Restrained Braces:  
Discussion on projection length

## محل انتشار:

هفتمین کنفرانس ملی و دومین کنفرانس بین المللی سازه و فولاد (سال: 1395)

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## نویسندگان:

Mohammad Amin Hodaei - *Faculty of Civil engineering, Sahand University of Technology, Tabriz, Iran*

Behzad Rafezy - *Faculty of Civil engineering, Sahand University of Technology, Tabriz, Iran*

Karim Abedi - *Faculty of Civil engineering, Sahand University of Technology, Tabriz, Iran*

## خلاصه مقاله:

Conventional buckling restrained braces used in concentrically braced frames are expected to yield in both tension and compression without significant degradation of capacity under severe seismic ground motions. However, the buckling of connection zone i.e. end connection and projection length (the length of the core that is out of the Buckling Restrained Mechanism (BRM)), may occur before the brace reaches its maximum capacity. This paper presents a finite element approach to investigate the effect of connection zone (projection zone) on the seismic behavior of all-steel buckling restrained braces (all-steel BRBs). Longer projection length allows the brace core to move easily through the casing but as the projection length increases, the buckling probability of the connection zone is increased, too. This might cause unexpected behavior, resulting in an incorrect prediction of their seismic behavior during the earthquakes. In this paper, it is aimed to conduct an analytical study of BRBs with different amounts of projection length in order to optimize the projection length depending on the critical parameters of all-steel BRBs.

## کلمات کلیدی:

BRBs, all-steel buckling restrained braces, projection length, end condition effects

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/610109>

