

University of Mohamed Khider-Biskra

Architecture Department

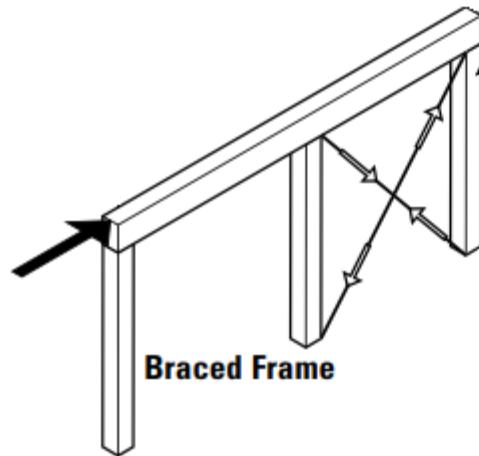
Module: Structure 2
“Lecture”

Semester 2
(2023/2024)

3rd year Bachelor
(Architecture)

II.1. Definition:

In general, there are three basic mechanisms commonly used, alone or in combination, for assuring **the lateral stability of a building**. They are **braced frames**, moment frames, and shear walls. Note that all of these lateral force-resisting mechanisms are only effective against in-plane lateral forces. They cannot be expected to resist lateral forces perpendicular to their planes.

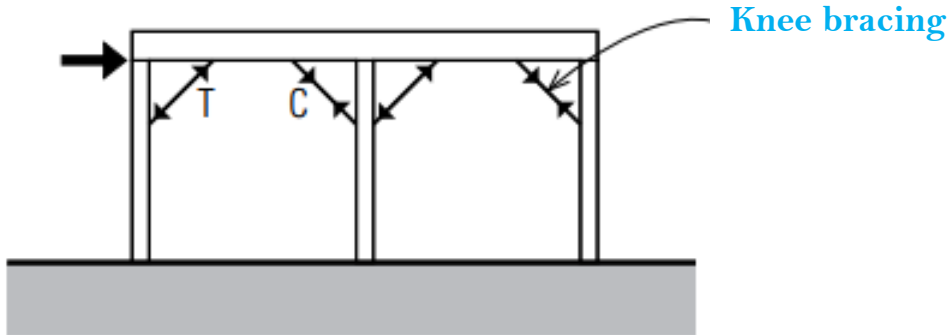


• Braced frames consist of linear timber or steel members made rigid by various systems of diagonal members.

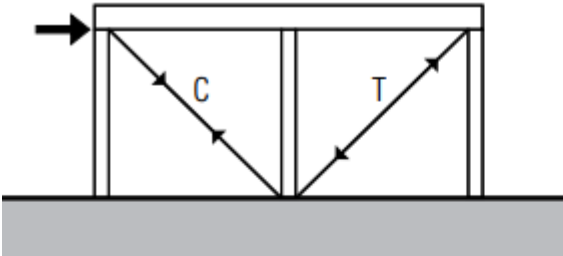
Braced frames consist of column-and-beam frames made rigid with a system of diagonal members that create stable triangular configurations..

II.2.Types of braced frames:

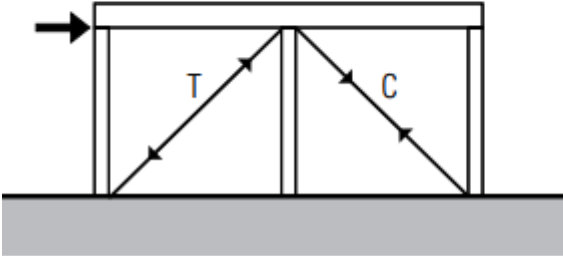
Examples of the great variety of bracing systems in use are:



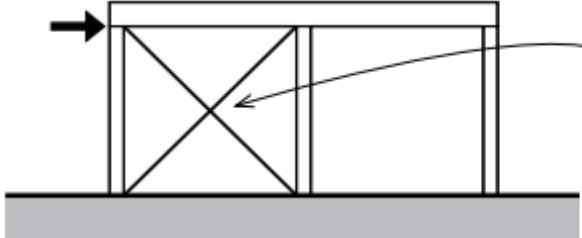
Diagonal bracing



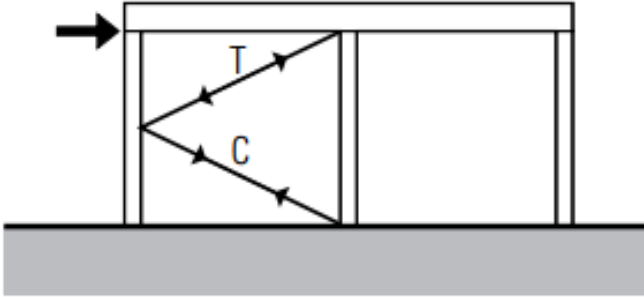
Single Diagonal bracing



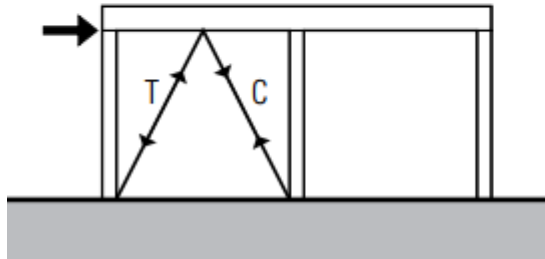
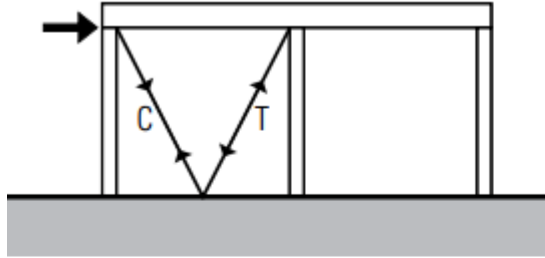
The addition of a diagonal bracing



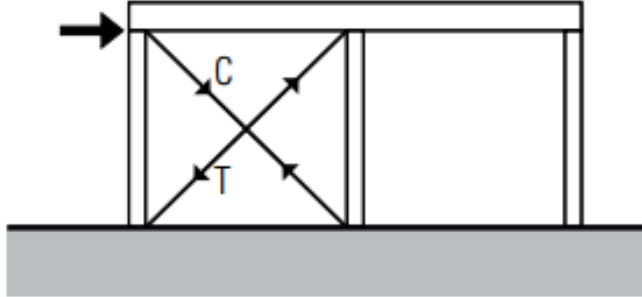
K- bracing



V- bracing



Cross bracing



References

1. Francis, D K C. Onouye, B. Zuberbuhle, D. 2014. **Building Structures Illustrated**. Second Edition, John Wiley & Sons, New Jersey.