



## INFORMATION SHEET

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**NO. S-08**

**DATE** : February 12, 2015

**SUBJECT** : Structural

**TITLE** : Miscellaneous Clarification of AB-107 on Engineering Criteria in SFBC Chapter 34B

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**PURPOSE** : The purpose of this Information Sheet is to clarify the interpretation of AB-107 on horizontal diaphragms

**REFERENCES** : 2013 San Francisco Building Code  
AB-107 Application of Engineering Criteria in SFBC Chapter 34B

**DISCUSSION** :

### Notes on Horizontal Diaphragms:

1. Where new vertical elements are added or existing vertical elements are strengthened, completion of the load path requires demonstration that the expected forces in the vertical elements can be transferred to and developed into the diaphragm above.
2. The engineer is required to locally evaluate the adequacy of this part of the load path.
3. The force in the vertical element(s) being connected to the diaphragm is divided by the length of the vertical element(s), or by the length of the vertical element plus collector if a collector is provided, to derive the unit shear demand.
4. The shear demand is then compared to the unit shear capacity of the diaphragm.
5. Where demand is greater than capacity, either the diaphragm is strengthened or the length of the collector is increased.
6. The engineer is not required to check the diaphragm capacity at existing vertical elements that are not strengthened as it is assumed that the unit capacities of the existing vertical elements and diaphragm are comparable.
7. Shear transfer capacity between existing vertical elements and the horizontal diaphragm must be evaluated and provided if inadequate.

Approved by the Structural Subcommittee on February 10, 2015.

*Tom C. Hui*

*2/12/15*

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Date

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