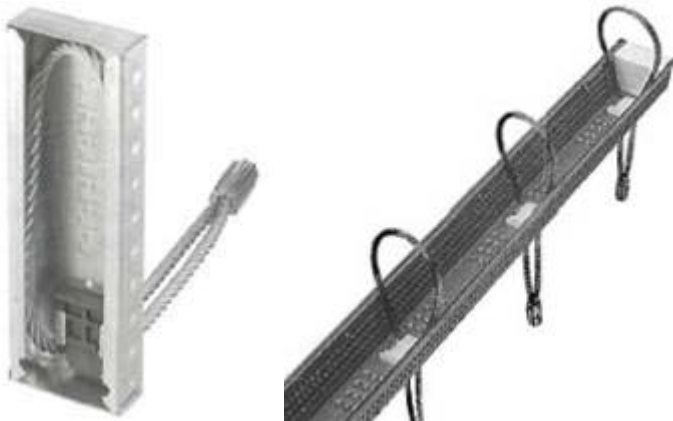


Wall to wall connections

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Precast concrete walls are often connected to each other to form part of the structure. The usual way of achieving this is to use an insitu stitch. It is possible to provide projecting reinforcement loops that interlock with similar bars in the adjacent unit. However, these cause difficulty in formwork and are normally replaced by commercial systems using flexible wire loops. These loops are contained in a box which is attached to the inside of the formwork. The depth of the box is normally shallow enough to allow fitting within the reinforcement cover zone. After casting and stripping, the cover is removed from the box and the wire loops pulled out.

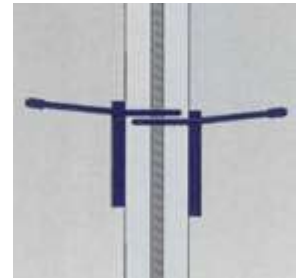


There are several suppliers of such systems, and the profiles vary. Some systems are in the form of individual 'boxes', and some are in the form of a long 'rail'. Profiles also vary, with some types creating a shear key to transfer forces across the joint. The amount of concrete outside the shear key profile is important also.

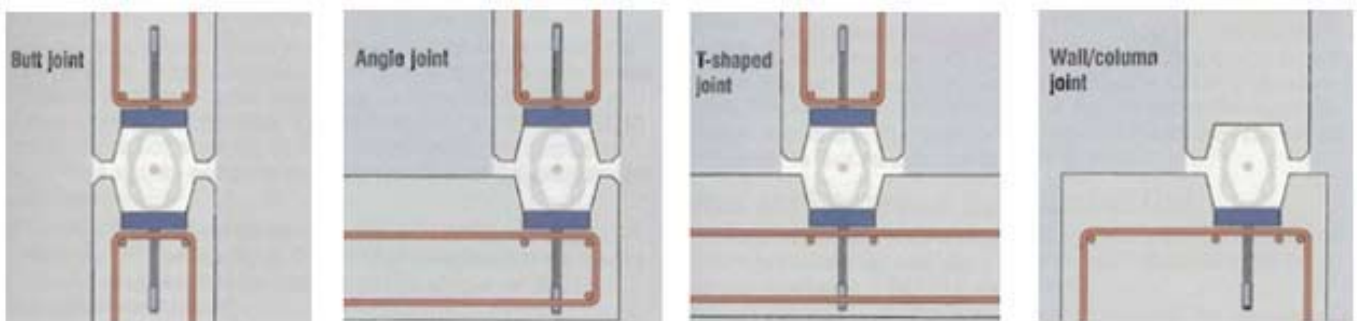
Once positioned, the loops overlap each other. It is important that the loops are set out so that they overlap as shown rather than clash with each other.

A reinforcing bar is then introduced through both sets of loops, and the void is grouted.

Since the loops and reinforcing bar are fully embedded in grout, then they are protected from fire.



Loop systems can be used to form joints in a variety of configurations as shown in the examples below.



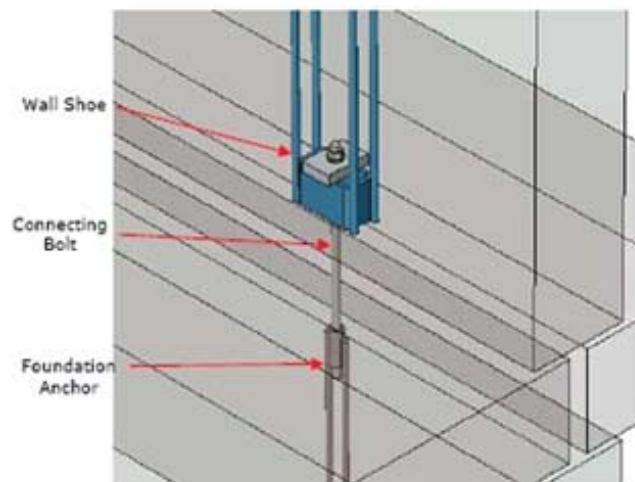
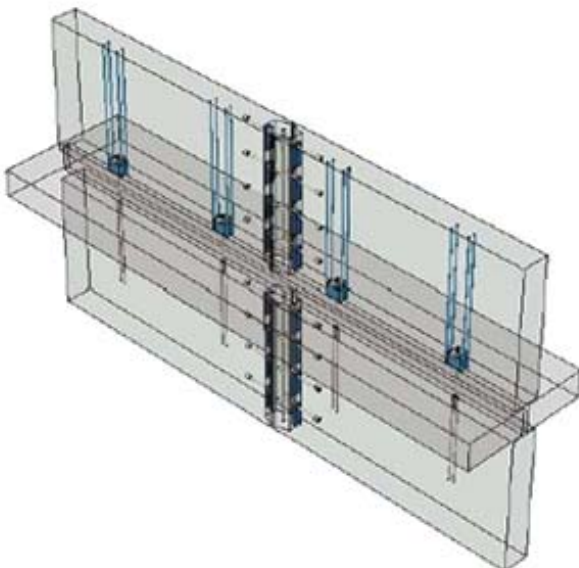
Wall to wall connections

Published Date: 02/07/2009



Apart from their use in traditional walls, the wire loop system may be used to connect unusual precast components, especially large elements.

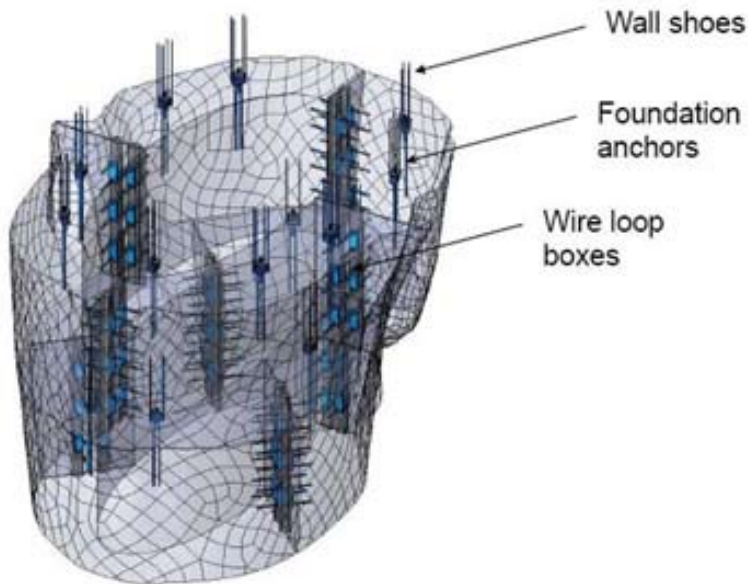
For connecting wall elements together at the top and bottom, wall shoes may be used. This is very common in cross wall construction and may be used in conjunction with wire loop systems.



Wall to wall connections

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Again, the combination of wall shoes and wire loops can be used for large or unusual elements such as this 20m high statue.



For locating wall against each other without direct tension, inserts used for stair/landing supports also perform very efficiently. They will provide restraint horizontally and vertically in the plane of the supporting wall. Once grouted, the connection is effectively invisible, and fully protected.

