



# WIDE FLANGE



Wide Flange beams can be used for **cross bracing**, which is utilized to reinforce building structures when diagonal supports intersect. The common uses for cross bracing include bridges (for side supports) along with structural foundations. This method maximizes the weight of the load a structure is able to support.

Wide Flange beams can also be used for **waler systems**, which are designed for soil conditions that are less stable, such as C-60 and C-80 Soil Types, requiring tight or intermittent Sheet Piling. They offer protection and system flexibility needed to work around crossing utilities and repair points in addition to producing trenches.



Wide Flange beams may also be used for **earth retention systems (retaining walls)**, which are structures designed and constructed to resist the lateral pressure of the soil when there is a desired change in ground elevation that exceeds the angle at which the soil rests.

Retaining walls are built to hold back soil which would otherwise move. Their purpose is to stabilize slopes so that areas of different elevations can co-exist. Common examples of these areas are surrounding highways, buildings, and railways.

When Wide Flange is used for retaining walls, the piling is drilled rather than driven. The process removes soil from the ground and the resulting round hole is filled with concrete around the Wide Flange.

Generally (whether driven with H-Pile or drilled with Wide Flange), the design of these wall systems require the piling to have 2/3 of its length below the ground, leaving 1/3 of the beam above ground. But this may vary depending on environmental conditions, and the specific requirements deemed necessary by the engineers developing the plans.

*In this section of the catalog, along with specifications for Wide Flange, you'll also find information on Wide Flange accessories such as:*

## CONNECTORS

Connectors are made to highly stringent standards that form precise, seamless connections between steel Sheet Pile, and other support systems, such as H-Piles, Wide Flange and Pipe Piling.



## WIDE FLANGE & H-PILE: HOW ARE THEY DIFFERENT?

*While Wide Flange and H-Pile look almost identical in shape, some key differences to consider make them both better for certain applications.*

*Wide Flanges are doubly-symmetric shapes with parallel inside flange surfaces. While Wide Flanges can be nearly square in shape, usually they are rectangular in shape and can range from lightweight, (as little as, 14 lbs per foot) to heavyweight, (over 400 lbs per foot.)*

*H-piles have parallel flange surfaces, as well as equal web and flange thicknesses. They are always square, meaning their depth and flange thickness are always equal or nearly equal in measurement.*



Wide Flange



H-Pile