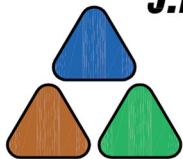
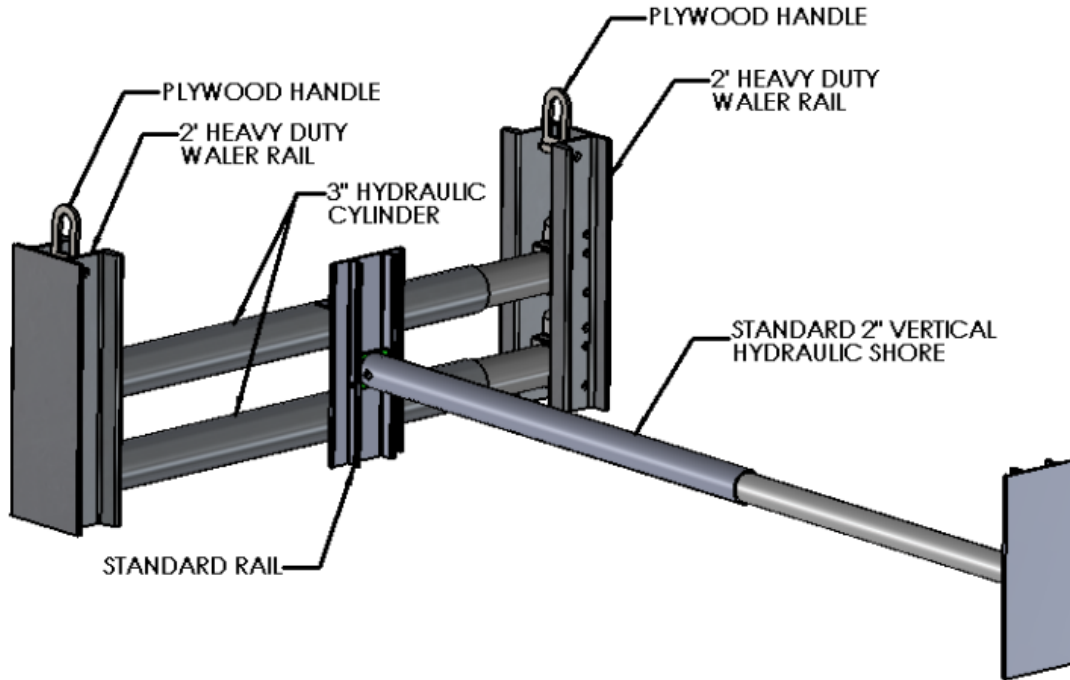


**3" HYDRAULIC CORNER STRUT**

**TABULATED DATA**  
**Effective May 8, 2020**



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JMT# 16260-7

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**Description**

The Pacific Shoring Hydraulic Strut is a 3” aluminum hydraulic cylinder mounted on 18” to 24” long heavy-duty waler rails. Lift brackets are attached to the assembly for the purpose of setting the strut and providing vertical safety support so that the strut cannot fall into the excavation. In all situations, a competent person should determine that the strut is properly set and fixed into position.

**General Information for use of Pacific Shoring 3” Hydraulic Strut**

1. The Pacific Shoring Hydraulic Strut tabulated here is based on requirements of Federal OSHA 29CFR, Part 1926, Subpart P-Excavations and Trenches

**1926.652(c)(2)**-Option (2) - Designs Using Manufacturer's Tabulated Data.  
 1926.652(c)(2)(i) -Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.

All provisions of Subpart P apply when utilizing this tabulated data. The contractor’s competent person shall use this data to select allowable loading, allowable trench width and strut configuration. The competent person utilizing this tabulated data shall be experienced and knowledgeable of all requirements of Subpart P, and trained in the use and safety procedures for shoring applications.

2. Strut loading shall be determined by an engineer using acceptable excavation support design principals or a competent person that has determined the soil type and condition in accordance with OSHA Appendix A, Soil Classification. Classification shall be just prior to installing the strut. Soil conditions may change at a later date and require reevaluation of the strength and allowable depth.
3. After strut loads are determined, the engineer or competent person shall decide how to install the hydraulic shore so that the tabulated loads and trench widths for the strut are not exceeded.
4. The depth and spacing given in **Table 1** governs the use of Pacific Shoring Hydraulic Struts and not tabulations given by other manufacturers. This Tabulated data applies exclusively to Hydraulic Struts manufactured by Pacific Shoring LLC. Any alterations to the Hydraulic Struts or variance from this tabulated data shall be indicated in a site-specific plan prepared and approved by a registered engineer.

5. When used in excavations the faces of excavations shall be vertical so that the shoring piles and wales are vertical and horizontal to the strut.
6. The strut shall always be secured so that it cannot fall down vertically due to gravity forces. A tie off cable or chain shall be used to prevent it from falling on workers below.

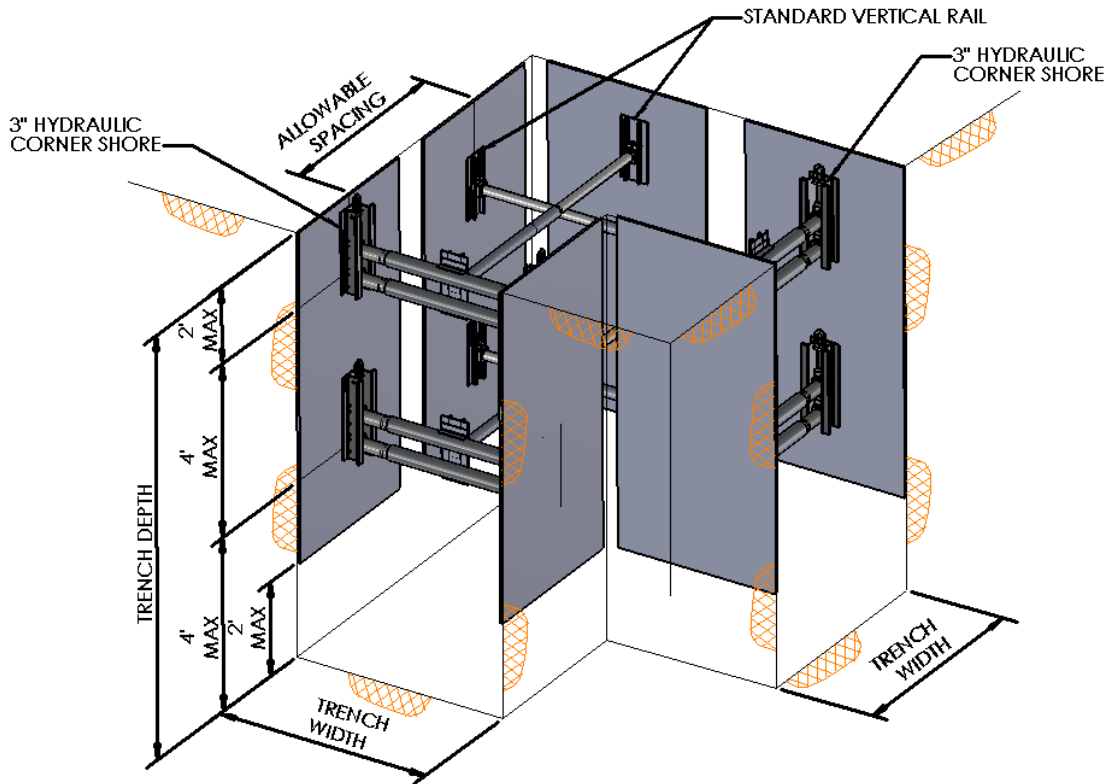
## **Classification of Soil Types**

1. Soil classification shall be in accordance with OSHA Appendix A and classified just prior to installing hydraulic shores. Soil conditions may change at a later date and require hydraulic vertical shores to be reset at a different spacing.
2. The equivalent weight of OSHA soil types\* is assumed to be as follows:
  - OSHA Type "A" Soil                      25 PSF per ft of depth
  - OSHA Type "B" Soil                      45 PSF per ft of depth
  - Type "C-60" Soil                         60 PSF per ft of depth\*\*
  - OSHA Type "C" Soil                      80 PSF per ft of depth

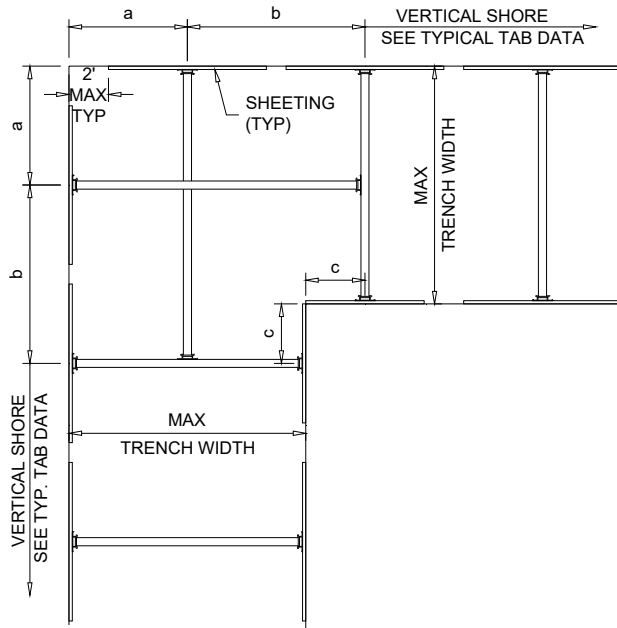
\* These equivalent weights were adapted from OSHA 1926 Subpart P App C, Timber Shoring for Trenches, Tables C-1.1, C-1.2, and C-1.3

\*\* Type C-60 soil is not identified or classified in OSHA Appendix A3. Type C-60 soil is soil that does not qualify as OSHA Type A, or Type B, can be cut with vertical walls and will stand up long enough to safely insert and pressurize the hydraulic shore.

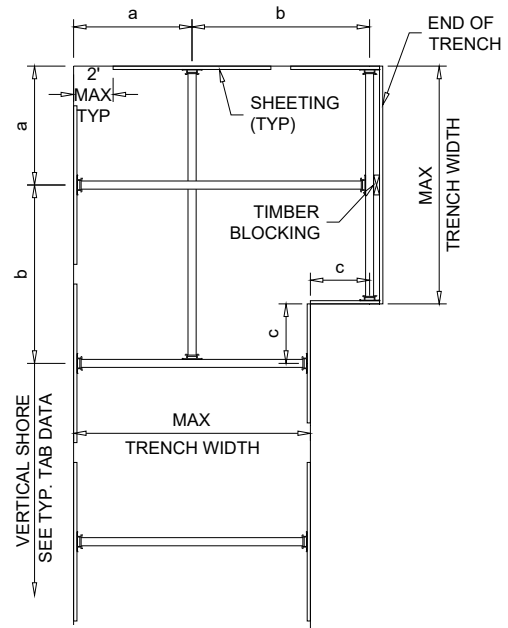
### Hydraulic Strut Allowable Loading



**Typical Hydraulic Strut Applications**



**CONTINUOUS TRENCH OPTION**



**TRENCH END OPTION**

Trench Width (ft)	Outside Corner Dimension (a) (ft)	Corner Jack Spacing (b) (ft)	Inside Corner Dimension (c) (ft)	Allowable Depth (ft)			
				A-25	B-45	C-60 <sup>2,3</sup>	C-80
3	1.5	3.5	2	20	20	20	20
4	2	4	2	20	20	20	15
5	2.5	4.5	2	20	18	14	10
6	3	5	2	20	13	10	7
7	3.5	5.5	2	18	10	7	6
8	4	6	2	14	8	6	4

- The timber blocking in the trench end option must be located at the same location as the strut.
- The timber blocking is only necessary if there is a gap between the end of the trench sheeting and the end shore.
- In lieu of timber blocking at the end of the trench it is acceptable to hang sheeting from the hydraulic strut.