

OFFICE MEMORANDUM

TO : J. L. Warren, H-7
Margaret A Rogers, H-8

DATE: Nov. 9, 1977

FROM : M. Salazar, H-7 *MS*

SUBJECT : Permanent monuments for the shafts and pits.

SYMBOL : H-7

MATERIALS

Concrete used shall have a compressive strength of 3000 psi at a 28 day break and contain 4 to 6% entrained air to protect it from the freeze-thaw cycle.

Brass markers to be placed in concrete shall be provided by LASL and marked before setting in concrete.

INSTALLATION

The shafts will have one marked brass cap with all pertinent data as to the contents of the shaft and another survey brass cap with the survey coordinates. The marked brass caps will be set at the time of final plugging with concrete.

The pits will have two concrete monuments set on the far east corners or the far north corners depending on where the longest side lies. Locations of the concrete pit monuments will be staked by a survey crew. A bell shaped hole shall be dug to prevent the monument from being removed. A second concrete plug (6 inches high- 10 inch dia) 4 inches below the top concrete plug shall be set.

The top of the concrete shall be sloped to drain moisture. Two brass caps containing information about the pit contents and survey coordinates shall be set on the concrete plug.

ADDITIONAL

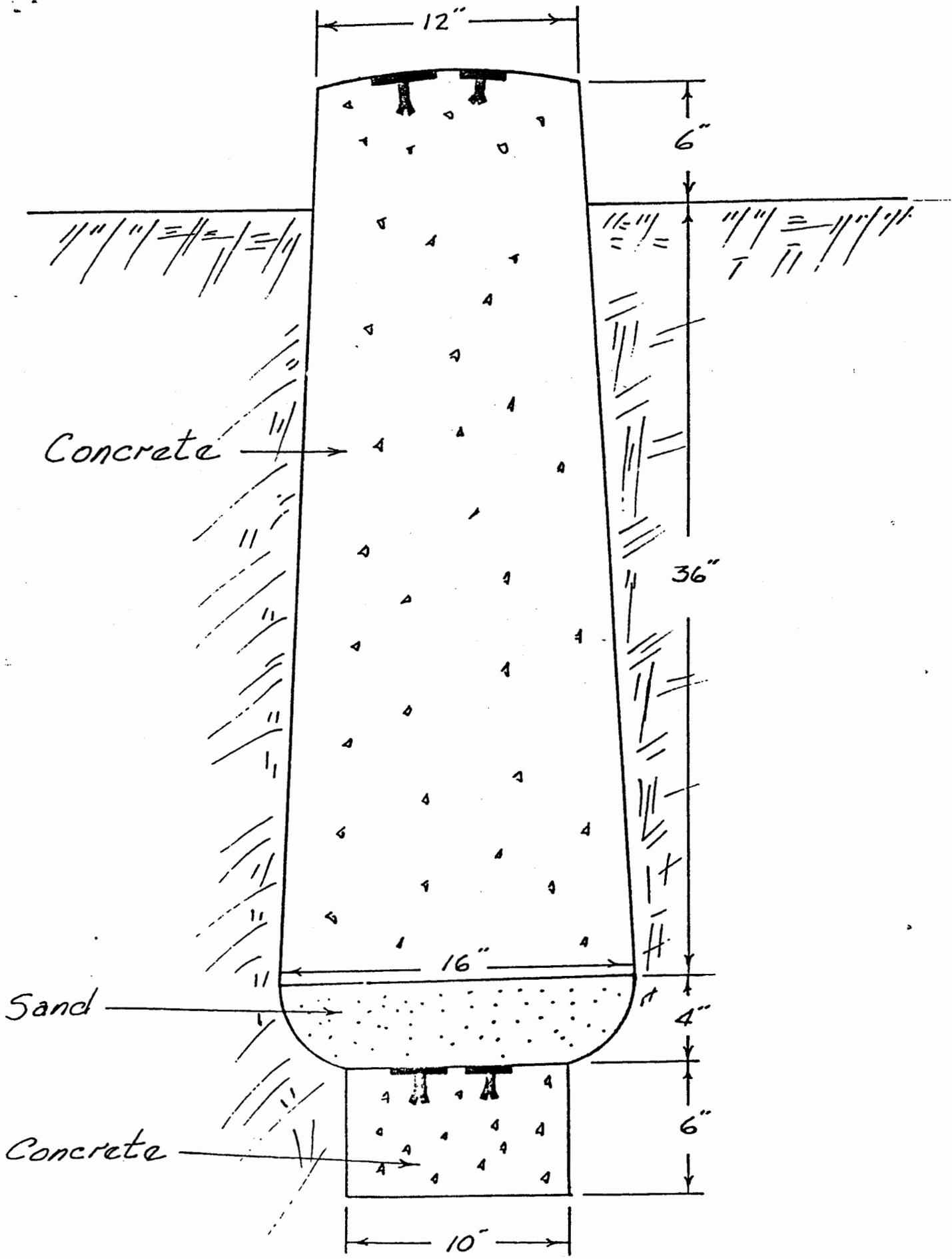
A six foot long angle iron (3"X3"X1/2") could also be set with the brass markers to provide more visibility. However if we do this we will be providing easy means for the removal of the concrete monuments. The metal angle provides a good lifting handle. If a prominent point is desired a fence post set close to the monument with a sign attached to the post could easily be installed.

Enclosures: Drawing of the Concrete Monument
reference material on monumentation by the USC&G, N. Mex, others



12130

0705 General
~~Reference~~



Typical Monument Installation