

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
-	2	ISSUED FOR USE (10 YEAR UPDATE)	11/12/2023	APG

GENERAL NOTES

The installation contractor is solely responsible for site safety. Site visits by Engineered Supply do not include review of the contractor's safety precautions. Installation drawings documenting the base materials and anchor bolts shall be provided by others and shall be reviewed by an experienced licensed engineer for all tieback and rope descent systems, or by a competent qualified person for all fall protection systems.

BASE MATERIALS Base material shall be capable of supporting the loads shown in accordance with the current applicable codes for the project location.

ANCHOR BOLTS

All anchors shall be installed in strict accordance with the anchor manufacturer's instruction.

Anchor fasteners shall be torqued with a calibrated wrench in accordance to the anchor manufacturer's literature.

INSPECTION AND TRAINING All fall protection and suspended maintenance equipment shall be selected or designed by others.

Usage shall comply with the current version of the ANSI IWCA I14.1. Systems users to inspect all equipment prior to each use, including all visible attachment points, locks, and pins to ensure all equipment is in safe working order. All users shall be trained on proper use of the equipment, as well as knowing and complying with OSHA, ANSI and other pertinent life safety regulations.

Equipment for rope descent and tie back use shall be initially load tested under the direction of a licensed engineer and annually inspected by a competent qualified person. Equipment shall be re-certified within 5 years.

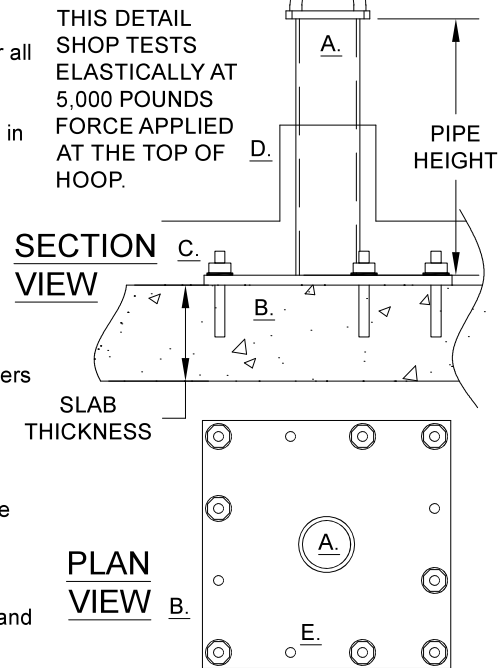
BUILDING ENVELOPE Installation and materials surrounding the anchor shall be designed by others in compliance with the applicable manufacturer's instructions and shall maintain the existing building warrantee as applicable.

Flexible boots shall be provided at all roofing penetrations in accordance with the roofing manufacturer's instruction.

KEYED NOTES

- A.** ENGINEERED SUPPLY STRONGTOP UNIVERSAL PIPE ANCHOR.
- B.** CONCRETE SLAB, 4,000 PSI MINIMUM COMPRESSIVE STRENGTH (ASSUMED CRACKED CONCRETE).
- C.** 1/2" DIAMETER HILTI TZ 304 STAINLESS STEEL EXPANSION BOLT WITH LOCTITE. SEE HILTI DATA FOR ADDITIONAL INSTALLATION REQUIREMENTS. SUPPLY BY ES WITH ANCHOR UNLESS NOTED OTHERWISE.
- D.** ROOFING FLASHING PER ROOFING MANUFACTURER'S INSTRUCTION. SUPPLY BY INSTALLER UNLESS NOTED OTHERWISE.
- E.** ACCEPTABLE TO LEAVE REMAINING HOLES OPEN.

LOAD TO HOOP, ANY DIRECTION
5,000 POUND ULTIMATE



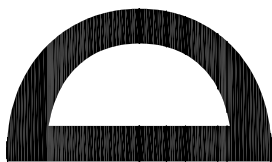
THIS DETAIL SHOP TESTS ELASTICALLY AT 5,000 POUNDS FORCE APPLIED AT THE TOP OF HOOP.

THIS DETAIL IS COMPLIANT WITH ANSI Z359.18-T, IBC, AISC, AWS, ACI, IWCA I-14.1, OSHA, AND CAL-OSHA.

GROUND PENETRATING RADAR SCANNING IS REQUIRED AT PRE AND POST TENSIONED STRUCTURES, RECOMMENDED AT ALL INSTALLATION LOCATIONS.

PIPE HEIGHT	MINIMUM SLAB THICKNESS FOR HILTI BOLTS	TOTAL NUMBER OF BOLTS	BOLTS EACH SIDE	MINIMUM HOLE DEPTH	MINIMUM BOLT LENGTH
14"	5.0"	4	2	3.25"	4.5"
18"	5.5"	4	2	4.25"	5.5"
	5.0"	8	3	3.25"	4.5"
24"	5.0"	12	4	3.25"	4.5"

SPECIFICALLY NOTE THAT THE MINIMUM SLAB THICKNESS INDICATES NECESSARY SLAB THICKNESS FOR THE GIVEN HILTI TZ EXPANSION BOLT DRILLED HOLE. THIS BASE MATERIAL IS REQUIRED TO BE FURTHER VERIFIED FOR THE APPLICABLE LOADS BY THE PROJECT ENGINEER FOR ROPE DESCENT AND TIEBACK, OR BY THE COMPETENT QUALIFIED PERSON FOR FALL PROTECTION.



ENGINEERED SUPPLY

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STRONGTOP®

Permanent Suspended Maintenance

ES P/N 901002-511

GENERAL INSTALLATION DETAIL,
CONCRETE SLAB ATTACHMENT,
UNIVERSAL PIPE ANCHOR

SIZE	PATENT NO.	DWG NO.
8.5x11	D772040	901002-511

THIS DRAWING AND THE DESIGN SHOWN IS THE SOLE PROPERTY OF ENGINEERED SUPPLY.

SCALE 1" = 1'-0" SHEET 1 of 1