EASE
EQUIPMENT ANCHORAGE & SEISMIC ENGINEERING
www.equipmentanchorage.com

PATTERSON-KELLEY CO.	DES. **J. ROBERSON**	SHEET **1**
	JOB NO. **11-1166**	
COMPACT WATER HEATER - PK10D	DATE **8/22/11**	OF **1** SHEET

SEISMIC ANCHORAGE   SLAB ON GRADE
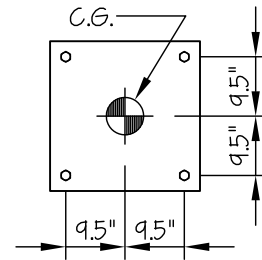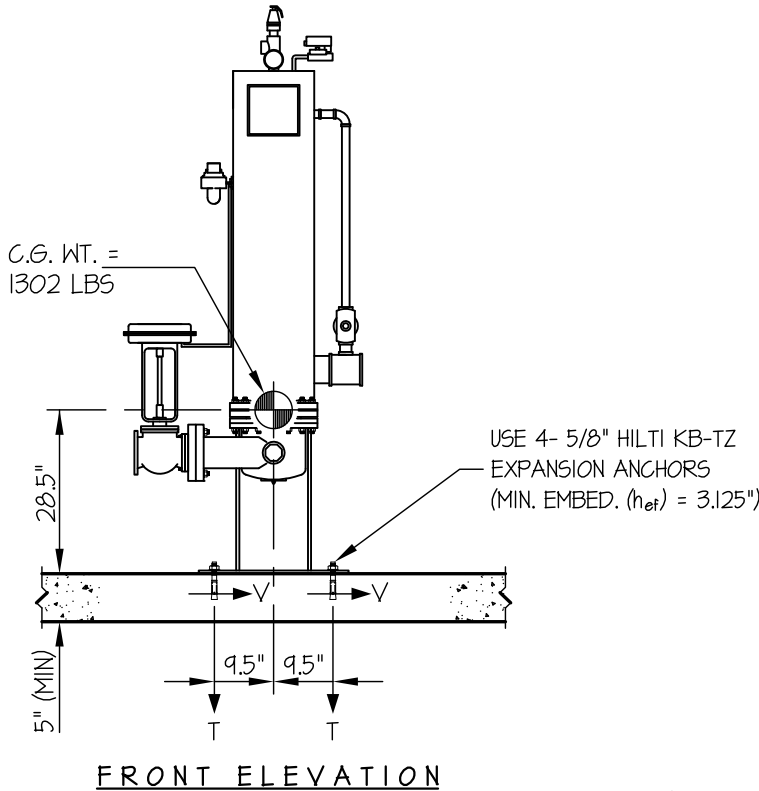
C.G. WT. = 1302 LBS

USE 4- 5/8" HILTI KB-TZ EXPANSION ANCHORS (MIN. EMBED. (h_{ef}) = 3.125")

28.5"

5" (MIN)

9.5"   9.5"

T   T

V   V

FRONT ELEVATION

PLAN AT BASE

C.G.

9.5"   9.5"

9.5"   9.5"

$T_{MAX} = 980$ LBS/BOLT
$V_{MAX} = 293$ LBS/BOLT

LOADS: PER 2010 CALIFORNIA BUILDING CODE SECTION 1613A AND ASCE 7-05 SECTIONS 12 AND 13.
WEIGHT = 1302 LBS
HORIZONTAL FORCE (E_h) = 0.90W_p = 1172 LBS
VERTICAL FORCE (E_v) = 0.40W_p = 521 LBS

BOLT FORCES:

TENSION (T)

$$T_{MAXIMUM} = \left[\frac{1172\#(28.5")}{2_{BOLTS}(19")} \times (0.3) \right] + \frac{1172\#(28.5")}{2_{BOLTS}(19")} - \frac{1302\#(0.9) - 521\#}{4_{BOLTS}} = 980 \text{ LBS/BOLT (MAX)}$$

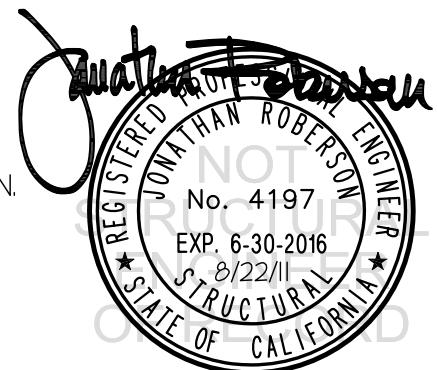(HORIZ.- FRONT TO BACK)   (HORIZ.- SIDE TO SIDE)   (WEIGHT (0.9) - E_v)

SHEAR (V)

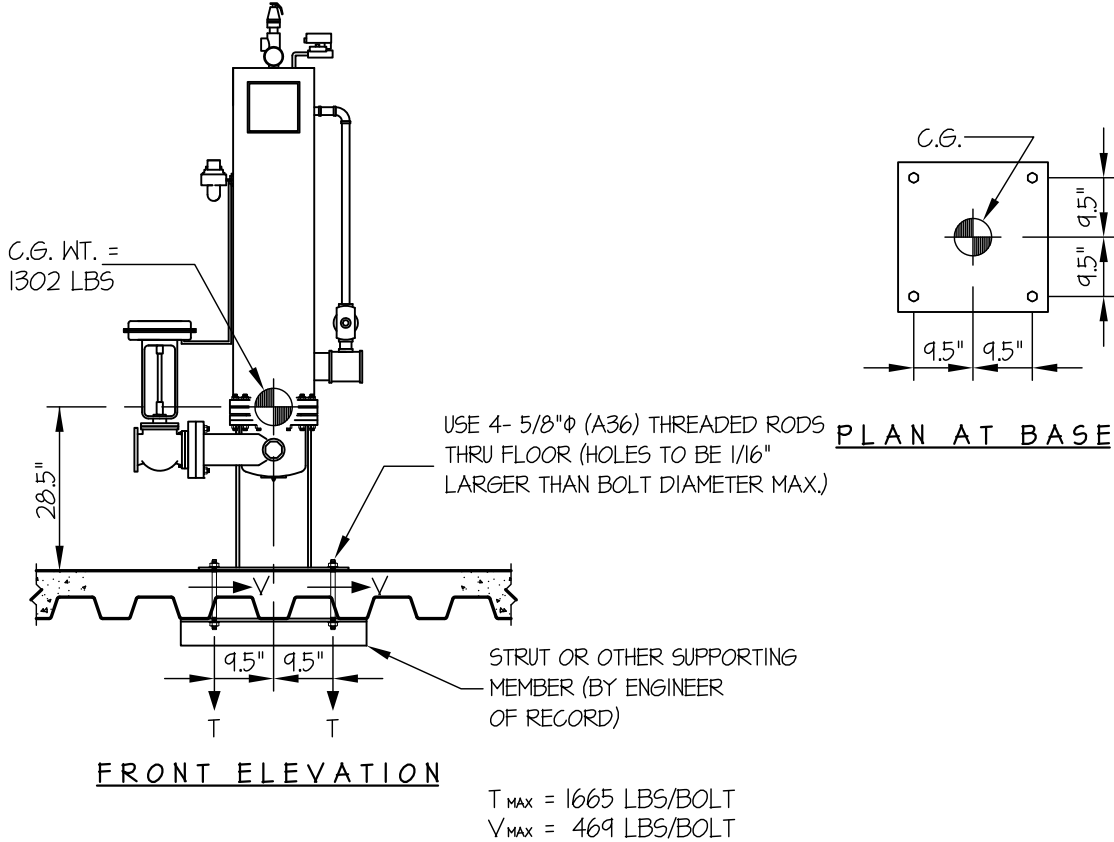$$V_{MAXIMUM} = \frac{1172\#}{4_{BOLTS}} = 293 \text{ LBS/BOLT (MAX)}$$

NOTE:
PROVIDE FLOOR STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN.
(BY ENGINEER OF RECORD FOR THE BUILDING)

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SEISMIC ANCHORAGE   ELEVATED FLOOR

C.G. WT. = 1302 LBS

28.5"

USE 4- 5/8"⌀ (A36) THREADED RODS THRU FLOOR (HOLES TO BE 1/16" LARGER THAN BOLT DIAMETER MAX.)

9.5" 9.5"

STRUT OR OTHER SUPPORTING MEMBER (BY ENGINEER OF RECORD)

FRONT ELEVATION

PLAN AT BASE

C.G.

9.5" 9.5"

9.5" 9.5"

T_{MAX} = 1665 LBS/BOLT
V_{MAX} = 469 LBS/BOLT

LOADS: PER 2010 CALIFORNIA BUILDING CODE SECTION 1613A AND ASCE 7-05 SECTIONS 12 AND 13.
WEIGHT = 1302 LBS
HORIZONTAL FORCE (E_h) = 1.44W_p = 1875 LBS
VERTICAL FORCE (E_v) = 0.40W_p = 521 LBS

BOLT FORCES:

TENSION (T)

$$T_{MAXIMUM} = \left[\frac{1875\#(28.5")}{2_{BOLTS}(19")} \times (0.3) \right] + \frac{1875\#(28.5")}{2_{BOLTS}(19")} - \frac{1302\#(0.9) - 521\#}{4_{BOLTS}} = 1665 \text{ LBS/BOLT (MAX)}$$

(HORIZ.- FRONT TO BACK)   (HORIZ.- SIDE TO SIDE)   (WEIGHT (0.9) - E_v)

SHEAR (V)

$$V_{MAXIMUM} = \frac{1875\#}{4_{BOLTS}} = 469 \text{ LBS/BOLT (MAX)}$$

NOTE:
PROVIDE FLOOR STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN.
(BY ENGINEER OF RECORD FOR THE BUILDING)