EASE
EQUIPMENT ANCHORAGE & SEISMIC ENGINEERING
www.equipmentanchorage.com

PATTERSON-KELLEY CO.	DES. **J. ROBERSON**	SHEET **1**
	JOB NO. **11-1166**	
COMPACT WATER HEATER - PK06D	DATE **8/22/11**	OF **1** SHEET

SEISMIC ANCHORAGE   SLAB ON GRADE

C.G. WT. = 800 LBS

USE 4- 3/8" HILTI KB-TZ EXPANSION ANCHORS (MIN. EMBED. (h_{ef}) = 2")

28"

4" (MIN)

7.5" 7.5"

T   T

FRONT ELEVATION

C.G.

7.5"
7.5"

7.5" 7.5"

PLAN AT BASE
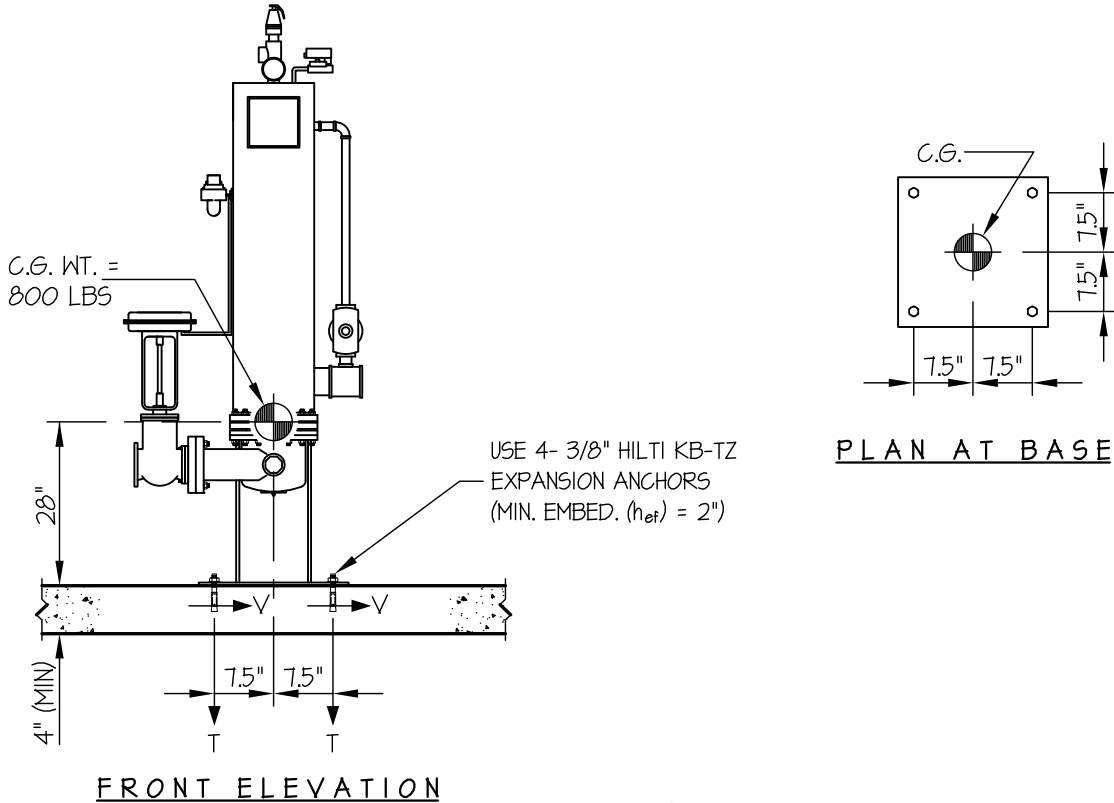
T_{MAX} = 774 LBS/BOLT
V_{MAX} = 180 LBS/BOLT

<u>LOADS:</u> PER 2010 CALIFORNIA BUILDING CODE SECTION 1613A AND ASCE 7-05 SECTIONS 12 AND 13.
WEIGHT = 800 LBS
HORIZONTAL FORCE (E_h) = 0.90W_p = 720 LBS
VERTICAL FORCE (E_v) = 0.40W_p = 320 LBS

<u>BOLT FORCES:</u>

TENSION (T)

$$T_{MAXIMUM} = \left[\frac{720\#(28")}{2_{BOLTS}(15")} \times (0.3) \right] + \frac{720\#(28")}{2_{BOLTS}(15")} - \frac{800\#(0.9) - 320\#}{4_{BOLTS}} = 774 \text{ LBS/BOLT (MAX)}$$

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

SHEAR (V)

$$V_{MAXIMUM} = \frac{720\#}{4_{BOLTS}} = 180 \text{ LBS/BOLT (MAX)}$$
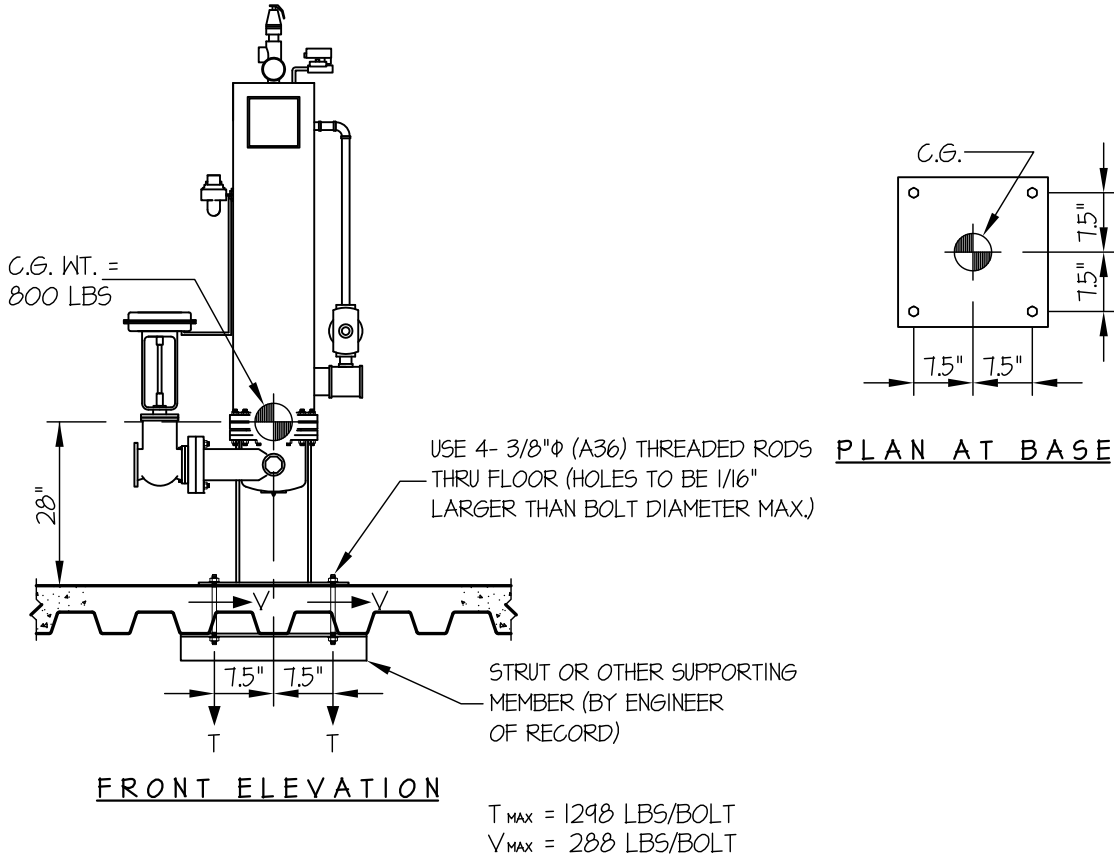
<u>NOTE:</u>
PROVIDE FLOOR STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN.
(BY ENGINEER OF RECORD FOR THE BUILDING)

E A S E
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w w w . e q u i p m e n t a n c h o r a g e . c o m

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COMPACT WATER HEATER - PK06D	DATE **8/22/11**	OF **1** SHEET

SEISMIC ANCHORAGE   ELEVATED FLOOR

C.G. WT. = 800 LBS

USE 4- 3/8"⌀ (A36) THREADED RODS THRU FLOOR (HOLES TO BE 1/16" LARGER THAN BOLT DIAMETER MAX.)

28"

STRUT OR OTHER SUPPORTING MEMBER (BY ENGINEER OF RECORD)

7.5"   7.5"

T   T

F R O N T   E L E V A T I O N

P L A N   A T   B A S E

C.G.

7.5"   7.5"

7.5"   7.5"

T_{MAX} = 1298 LBS/BOLT

V_{MAX} = 288 LBS/BOLT

<u>LOADS:</u> PER 2010 CALIFORNIA BUILDING CODE SECTION 1613A AND ASCE 7-05 SECTIONS 12 AND 13.

WEIGHT = 800 LBS

HORIZONTAL FORCE (E_h) = 1.44W_p= 1152 LBS

VERTICAL FORCE (E_v) = 0.40W_p= 320 LBS

<u>BOLT FORCES:</u>

TENSION (T)

$$T_{MAXIMUM} = \left[\frac{1152\#(28")}{2_{BOLTS}(15")} \times (0.3) \right] + \frac{1152\#(28")}{2_{BOLTS}(15")} - \frac{800\#(0.9) - 320\#}{4_{BOLTS}} = 1298 \text{ LBS/BOLT (MAX)}$$

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

SHEAR (V)

$$V_{MAXIMUM} = \frac{1152\#}{4_{BOLTS}} = 288 \text{ LBS/BOLT (MAX)}$$

<u>NOTE:</u>

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

REGISTERED PROFESSIONAL ENGINEER

JONATHAN ROBERSON

No. 4197

EXP. 6-30-2016

8/22/11

STRUCTURAL

STATE OF CALIFORNIA

NOT STRUCTURAL ENGINEER OF RECORD