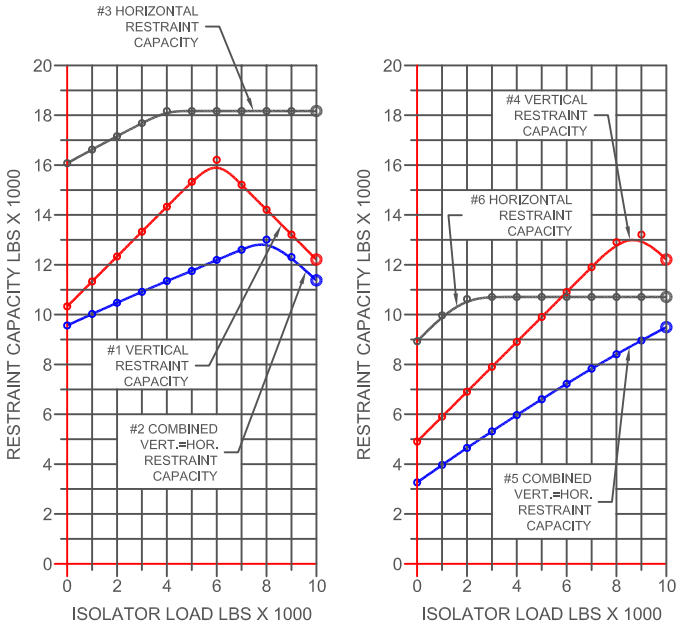
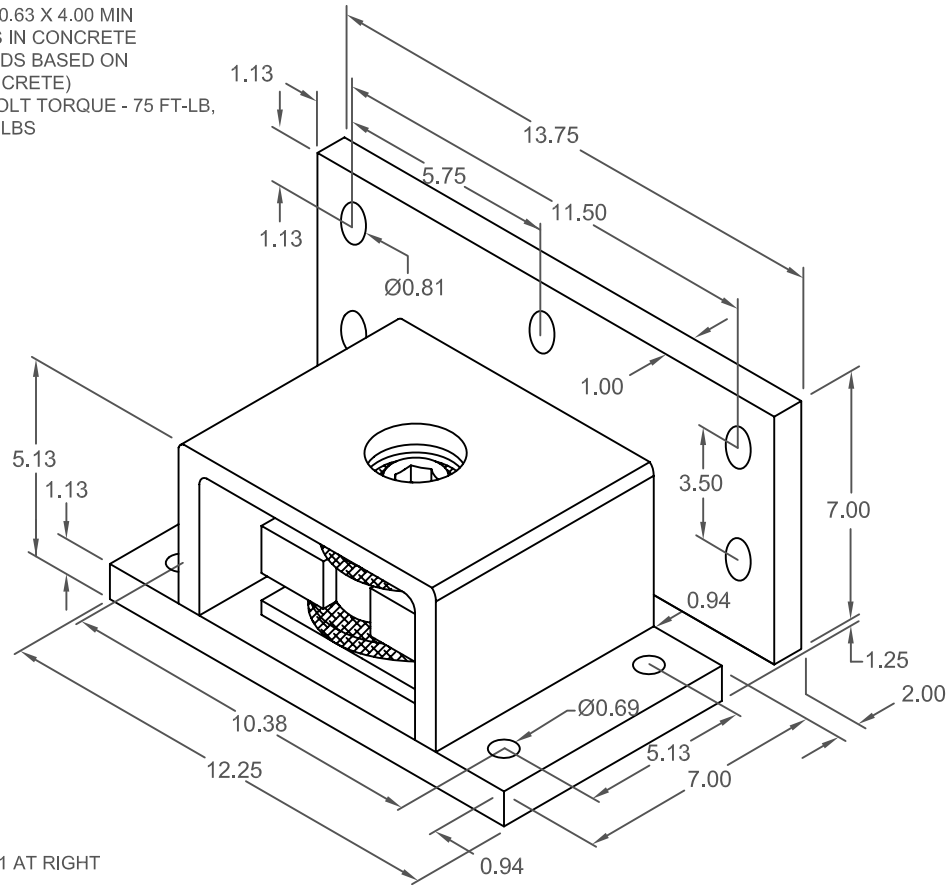



FIGURE 2
STEEL ATTACHMENT




FIGURE 3
CONCRETE ATTACHMENT

FMSD REQUIRES 0.63 X 4.00 MIN EMBED ANCHORS IN CONCRETE (ALLOWABLE LOADS BASED ON 3000 PSI MIN CONCRETE)
FMSD ANCHOR BOLT TORQUE - 75 FT-LB, PULL TEST - 2670 LBS




## RESTRAINT CAPACITY ENVELOPE GENERATION

### RESTRAINT ONLY (NO SPRING ELEMENT)

1) READ THE ANCHORED (CONCRETE) OR BOLTED (STEEL) ENVELOPES DIRECTLY FROM FIGURE 1 AT RIGHT

### RESTRAINT WITH SPRING SUPPORT ELEMENT (ISOLATOR/RESTRAINT)

1) DETERMINE THE MAXIMUM EQUIPMENT LOAD SUPPORTED BY THE ISOLATOR(S)
2) IF THROUGH-BOLTED (STEEL), REFER TO FIGURE 3. IF ANCHORED (CONCRETE), REFER TO FIGURE 2.
3) PLOT THE VERTICAL RESTRAINT CAPACITY FROM CURVE #1 (FIGURE 2) OR #4 (FIGURE 3) ON THE VERTICAL AXIS OF FIGURE 1.
4) PLOT THE HORIZONTAL RESTRAINT CAPACITY FROM CURVE #3 (FIGURE 2) OR #6 (FIGURE 3) ON THE HORIZONTAL AXIS OF FIGURE 1.
5) PLOT THE COMBINED RESTRAINT CAPACITY FROM CURVE #2 (FIGURE 2) OR #5 (FIGURE 3) AT THE POINT ON FIGURE 1 WHERE THE VERTICAL AND HORIZONTAL FORCES BOTH MATCH THIS VALUE.
6) CONNECTING THESE POINTS CREATES AN ENVELOPE THAT SHOWS THE RESTRAINT'S CAPACITY WHEN SUBJECTED TO EQUIPMENT SUPPORT AND SEISMIC LOADS SIMULTANEOUSLY.
7) FOR THE RESTRAINT TO BE ADEQUATE, ALL WORST CASE SEISMIC LOADS MUST FALL WITHIN THE ENVELOPE.

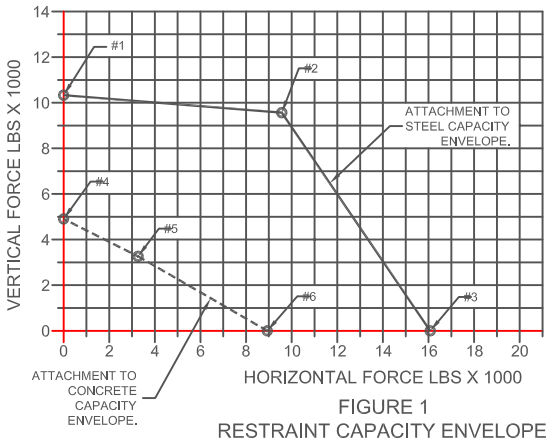



FIGURE 1
RESTRAINT CAPACITY ENVELOPE

## SPECIFICATIONS:

- 3 AXIS RESTRAINT WITH REPLACEABLE NEOPRENE SNUBBING ELEMENTS
- HOT DIPPED GALVANIZED
- HOUSINGS MAY BE USED FOR BLOCKING DURING EQUIPMENT ERECTION
- CAN BE USED WITH OR WITHOUT SPRING COIL

KINETICS Noise Control

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Model: FMSD RESTRAINT

By: JMJ
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Revised: /

Drawing No: S-01-40.400