REINFORCED ANCHORAGE (RA)

<table>
<thead>
<tr>
<th>Model</th>
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<th>Edge Distance</th>
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<th>Embedment Depth</th>
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</thead>
<tbody>
<tr>
<td>HFX-9</td>
<td>STD</td>
<td>5-1/4</td>
<td>1-1/8</td>
<td>2-5/8</td>
</tr>
<tr>
<td>HFX-12</td>
<td>STD</td>
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</tr>
<tr>
<td>HFX-15x</td>
<td>STD</td>
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<td>2-5/8</td>
</tr>
</tbody>
</table>

UNREINFORCED ANCHORAGE (UA)

<table>
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<tr>
<th>Model</th>
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<tbody>
<tr>
<td>HFX-9</td>
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<tr>
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<tr>
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<td>STD</td>
<td>5-1/4</td>
<td>1-1/8</td>
<td>2-5/8</td>
</tr>
</tbody>
</table>

NOTE:
1. DESIGNS ARE TO RESIST LOADING PER ACI 318-14, SECTION 17.2.3.4.3.
2. STD INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7 WITH A 1-1/2x6.5x30MM (HPW) PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE-back face.
3. HFX INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7 WITH A 1-1/2x7.0x30MM (HPW) PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE-back face.
4. LE - LENGTH OF EMBEDMENT FROM THE TOP OF FOOTING OR GRADE BEAM TO THE TOP OF THE EMBEDDED HPFW BOLT. (TOP OF THE EMBEDDED HPFW BOLT PLATE WASHER @ (HFX ANCHORS)
5. CAL - DISTANCE FROM THE CENTERLINE TO THE END OF THE FOOTING OR GRADE BEAM.
6. PARALLEL CENTERLINE TO BOTH THE FRONT AND THE BACK FACE OF THE FOOTING OR GRADE BEAM.
7. SHEAR TIES ARE GRADE 60 (MIN) REBAR AND REQUIRED FOR NEAR EDGE DISTANCE CONDITIONS PER ACI 318-14, FC # 2,000 PSI CURB AND STEM WALLS MUST BE 6 INCH (MIN) WIDTH FOR UA AND R/A, 12 INCH (MIN) WIDTH FOR BB-RRA.
8. FOR UA APPLICATIONS, ADDITIONAL TIES MAY BE REQUIRED AT STEM WALLS. SHEAR TIES ARE REQUIRED TO INSTALLATION AWAY FROM EDGE (SEE DETAIL 1A), INSTALLATION ON WOOD FRAMING. OR FOR RC BRACED WALL PANEL.
9. 9 STRIPS ARE GRADE 60 (MIN) REBAR. SEE TABLE FOR SIZE AND SPACING FOR "SHEAR TIE INSTALLATION" AND "REINFORCEMENT DIAMETERS" FOR LAYOUT PATTERNS.
10. CONCRETE EDGE DISTANCES MUST COMPLY WITH ACI 318-14, SECTION 17.1.1.
HFX-12,15,18,21 & 24x9
HFX-9x79.5

INSTALLATION ON 2x PLATE

D. FIELD INSTALLED WOOD BACKING AS NEEDED.

2. 3-1/2 "WS SCREWS IS PERMITTED.

3. FIELD INSTALLED WOOD BACKING AS NEEDED.

NOTE:
1. STEEL BEAM BEYOND PLANS
2. ALL THREAD RADIUS BOLTED TO STEEL BAR BY BUILDING DESIGN PROFESSIONAL.
3. ADJACENT FRAME STACKING WASHERS REQUIRED TO BE WELDED INSIDE THE TOP CHANNEL BY MAKERS.

WOOD WALL INSTALLATION

1. WOOD FILLER WITH USS MIP CONNECTORS BOTH SIDES, QUANTITY BY BUILDING DESIGN PROFESSIONAL.
2. 1/4" x 2" (MIN) WS SCREWS, QUANTITY PER TABLES.
3. ADJACENT FRAME WITH 1/4" DIAMETER SCREWS INSTALLED THROUGH PREPUNCHED HOLES IN PANEL EDGES REQUIRED WHEN INSTALLING A FILLER GREATER THAN 1-1/2" OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.
4. PRE-DRILL 3/16" O.A. HOLES IN PANEL EDGES, 4" FACE PER PANEL (MIN) LESS THAN 1-1/2" OF INSTALL. 1/4" O.D. WOOD SCREWS INTO 2x (MIN) WOOD WASHERS IN PANEL CAVITY.
5. CONNECTOR AND ATTACHMENT BY BUILDING DESIGN PROFESSIONAL.

FILLER GREATER THAN 1-1/2 IN.

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAME WITH 1/4" DIAMETER SCREWS INSTALLED AT THE PANEL EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2" OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

RAISED FLOOR HEAD-OUT

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

INSTALLATION ON CONCRETE

1. ALL THREAD RADIUS BOLTED TO STEEL BAR BY BUILDING DESIGN PROFESSIONAL.
2. 3-1/2 "WS SCREWS IS PERMITTED.

NOTE:
1. STEEL BEAM BEYOND PLANS
2. ALL THREAD RADIUS BOLTED TO STEEL BAR BY BUILDING DESIGN PROFESSIONAL.
3. ADJACENT FRAME STACKING WASHERS REQUIRED TO BE WELDED INSIDE THE TOP CHANNEL BY MAKERS.

INSTALLATION ON 2x PLATE

1. CAVITY ORIENTED FOR CONNECTION ACCESS.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. NOMINAL 1 1/2" FILLING FRAME AS NEEDED.
4. A 2x FILLER WITH 1/4" x 4" MINIMUM "WS SCREWS IS PERMITTED.

FIELD INSTALLED WOOD BACKING AS NEEDED.

INSTALLATION ON NUTS & WASHERS

1. STEEL BEAM BEYOND PLANS
2. ALL THREAD RADIUS BOLTED TO STEEL BAR BY BUILDING DESIGN PROFESSIONAL.
3. ADJACENT FRAME STACKING WASHERS REQUIRED TO BE WELDED INSIDE THE TOP CHANNEL BY MAKERS.

NOTE:
1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAME OPTIONAL. (U A.O. BY BUILDING DESIGN PROFESSIONAL.

INSTALLATION ON CURB

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAME OPTIONAL. (U A.O. BY BUILDING DESIGN PROFESSIONAL.

BOLTED CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.

ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. 3-1/2 "WS SCREWS IS PERMITTED.
3. FIELD INSTALLED WOOD BACKING AS NEEDED.

INSTALLATION ON 2x PLATE

1. INSTALLATION ON 2x PLATE
2. INSTALLATION ON NUTS & WASHERS
3. INSTALLATION ON CURB

STEEL BEAM ABOVE THRU-BOLT

1. 1/4" x 1" MINIMUM "WS SCREWS, QUANTITY PER TABLES.
2. 1/4" x 1/4" MINIMUM "WS SCREWS, QUANTITY PER TABLES.
3. 3x WOOD FILLER.

NOTE:
1. PREVAC DRILLING ADDITIONAL HOLES OR ORIENT THE PANEL CAVITY TOWARDS THE FUTURE BEING INSTALLED.
2. SIDE DRILLING ADDITIONAL HOLES OR ORIENT THE PANEL CAVITY TOWARDS THE FUTURE BEING INSTALLED.

TOP PLATE CONNECTIONS

1. 1-5/8" 3/4" MINIMUM "WS SCREWS, QUANTITY PER TABLES.
2. 1/4" x 1/4" MINIMUM "WS SCREWS, QUANTITY PER TABLES.
3. 3x WOOD FILLER.

NOTE:
1. PREVAC DRILLING ADDITIONAL HOLES OR ORIENT THE PANEL CAVITY TOWARDS THE FUTURE BEING INSTALLED.
2. SIDE DRILLING ADDITIONAL HOLES OR ORIENT THE PANEL CAVITY TOWARDS THE FUTURE BEING INSTALLED.

TOP CONNECTION TO HEADER

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAME OPTIONAL. (U A.O. BY BUILDING DESIGN PROFESSIONAL.

NOTE:
1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAME OPTIONAL. (U A.O. BY BUILDING DESIGN PROFESSIONAL.

INSTALLATION INSTRUCTIONS

1. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER BELOW (1 EA) HARDENED ROUND WASHER BELOW WHEN SECURITY CONELESS WASHERS (RECOMMENDED) ARE LOCATED, DRILL TIGHT. ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.
2. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER, ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.
3. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER, ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.
4. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER, ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.

BOLTED CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.

ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

BOLTED CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.

ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.