USEFUL OR REQUIRED TOOLS

COMPONENT IDENTIFICATION

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle Frames/Rails</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EPS Former</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Rebar U-Leg</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Leg Bracket</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Assembly Screw - Ø1/4&quot; x 3/8&quot; Steel, Hex Head, Thread Forming</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Rebar Leg Lock Screw - Ø5/16&quot; x 3/4&quot; Steel, Hex Head, Thread Forming</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Cross Tie Wire Form</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>End Rail</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Grate</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Grate Retainer Toggle</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Grate Retainer Screw and Washer - Ø5/16&quot; UNC</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Grate Retainer Nut - Ø5/16&quot; Square Nut</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
1. EXCAVATION
T = per Structural Specifications

2. FORMER PREPARATION
Remove Nails, Break Glue Spots, and Slide Former Dunnage Off Shallow End

Deep (Label) End

Separate Rails SLIGHTLY to Lower Former into Position. Flush Former and Rail Ends

3. LEG ATTACH

4. FORMER / RAIL ASSEMBLY

5. SUPPORT LUMBER ATTACH

6. DISCHARGE PLACE & ALIGN
Locate and Align Outlet Channel First, Start at Deep End and Work to Shallow End
7. SECTION PLACE & ALIGN

Anchor slab concrete specs same or better than encapsulation concrete.

Anchor slab pour to achieve 70+% strength before encapsulation pour.

Anchor slab shall run full excavation width and trench length.

8. RAIL CONNECTION

Verify Trench Elevation and Alignment

Cut Excess Length from U-Legs

10. FINAL ALIGN & U-LEG TRIM

Use Vibrator to Consolidate Concrete

Use Teepee or Alternatives to Place Concrete Evenly Both Sides

9. PLACE ANCHOR SLAB

See Step 1 for Dimensions.

Remove Cross Ties Before Concrete Finishing

Batter Boards as Required

11. ENCAPSULATION CONCRETE PLACEMENT AND CONSOLIDATION
12. FLOOR CONCRETE PLACEMENT

First Use Digging Bar to Extract Core from Former

Expansion Joint Material per Structural Specifications

Then Use Bar to Break Former from Side Wall. Remove Shell from Trench

13. FORMER REMOVAL

14. GRATE INSTALLATION

Nut Nubs on Bottom

Rotate Toggle to Clear Angle Rails During Grate Placement

Tighten Screw Until Toggle Bottoms on Grate
**AUXILIARY RAIL USAGE**

- **EXPLODED VIEW**
  - STANDARD FORMER
  - THREAD FORMING SCREWS TO SECURE LOAD BAR (2 PLACES) CAN BE RETRACTED OR REMOVED DURING GRATE PLACEMENT
  - LOAD BAR
  - FILLER FORMER
  - REMOVE CONCRETE ANCHOR(S) AS REQUIRED
  - THREAD FORMING SCREWS TO SECURE RAILS (4 PLACES)

- **TEE DETAIL**
  - STANDARD FORMER
  - THREAD FORMING SCREWS TO SECURE LOAD BAR (2 PLACES)
  - LOAD BAR

- **ELL DETAIL**
  - THREAD FORMING SCREWS TO SECURE RAILS (4 PLACES)
  - LOAD BAR
  - FILLER FORMER
  - REMOVE CONCRETE ANCHOR(S) AS REQUIRED

- **ASSEMBLED VIEW**
  - TO CREATE TURN IN OTHER DIRECTION, SIMPLY INSTALL LOAD BAR AND RAILS ON THE OTHER SIDE OF ELL AUXILLARY RAIL

**SWEEP DETAIL**

- GAP AS REQUIRED FOR CURVE
- AUX. RAIL (TYP)
- 5/16 UNC BOLT LENGTH AS REQ'D
- 5/16 UNC NUT
- NO GAP
- WASHER(S) OR OTHER SPACER REQUIRED

**NOTES:**
1. INSTALL ANGLE ASSEMBLIES AS OFTEN AS REQUIRED TO PREVENT TRENCH RAILS FROM DEVIATING BEYOND DESIRED AMOUNT FROM TRUE RADIUS.
2. FILL ANY GAP AT END OF FORMER WITH FOAM-IN-PLACE FOAM OR COVER GAP WITH TAPE PRIOR TO FORMER RELASPE APPLICATION.
3. CALCULATE GAP PER ASSEMBLY AS FOLLOWS:
   - GAP (INCH) = SPACING BETWEEN ANGLE ASSEMBLIES (INCH) * RAIL SPACING (INCH) / CURVE RADIUS (INCH).
AUXILIARY RAIL USAGE

NOTES:
1. COORDINATE BREAK POINT OF SLOPE WITH POSSIBLE LOCATIONS OF AUXILIARY RAILS IN TRENCH RUN.
2. ADD OR REMOVE ESP FOAM AT END OF SECTIONS AT SLOPE BREAK AS REQUIRED.

SLOPE BREAK DETAIL

<table>
<thead>
<tr>
<th>TRENCH WIDTH (12&quot; AND UNDER)</th>
<th>PREFERRED</th>
<th>ACCEPTABLE</th>
<th>TRENCH WIDTH (OVER 12&quot;)</th>
<th>PREFERRED</th>
<th>ACCEPTABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot; = 1.02 M</td>
<td>4&quot; = 1.02 M</td>
<td>6&quot; = 1.52 M</td>
<td>12&quot; = 3.05 M</td>
<td>12&quot; = 3.05 M</td>
<td>14&quot; = 3.55 M</td>
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<td>8&quot; = 2.03 M</td>
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<td>10&quot; = 2.54 M</td>
<td>16&quot; = 4.06 M</td>
<td>16&quot; = 4.06 M</td>
<td>18&quot; = 4.57 M</td>
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<tr>
<td>12&quot; = 3.05 M</td>
<td>12&quot; = 3.05 M</td>
<td>14&quot; = 3.55 M</td>
<td>20&quot; = 5.08 M</td>
<td>20&quot; = 5.08 M</td>
<td>22&quot; = 5.59 M</td>
</tr>
</tbody>
</table>

BOLT AUX. RAILS TO FORM BOARD FOR FIRST POUR. REMOVE AFTER CONCRETE SETS. (TYP)

STANDARD RAILS

FIRST POUR

FORM BOARD

EXPANSION JOINT

SECOND POUR

STANDARD RAILS TO ACHIEVE REQUIRED LENGTH (TYP ALL)

USE BOLTS TO ALIGN TRENCH ACROSS JOINT IN SECOND POUR. REMOVE AFTER CONCRETE SETS.

CONTROL JOINT DETAIL

BOLT AUX. RAILS TO ALIGN TRENCH. REMOVE AFTER CONCRETE SETS.

INERT SPACERS BETWEEN END FLATS AS REQ'D

STANDARD RAILS TO ACHIEVE REQUIRED LENGTH (TYP. ALL)

AUX. RAILS

CONTROL JOINT

END OF RUN DETAIL
Trench Former® TFX® Toggle Lock

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NOTES