Turning Radius Templates

Longest Vehicle: Ladder 7
Specifications:
Inside to Inside = 24' 5"
Curb to Curb = 40' 2"
Wall to Wall = 47' 7"
Turning Performance Analysis

Bid Number: Concord Fire Department
Department: 1399

Chassis: Dash-2000, Chassis, PAP/SkyArm/Midmount
Body: Aerial, Platform 100', Alum Body

Parameters:
- Inside Cramp Angle: 40°
- Axle Track: 82.92 in.
- Wheel Offset: 5.30 in.
- Tread Width: 17.80 in.
- Chassis Overhang: 65.99 in.
- Additional Bumper Depth: 26.00 in.
- Front Overhang: 145.60 in.
- Wheelbase: 258.00 in.

Calculated Turning Radii:
- Inside Turn: 24 ft. 5 in.
- Curb to Curb: 40 ft. 2 in.
- Wall to Wall: 47 ft. 7 in.

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>PRIDE #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bumpers</td>
<td>0022248</td>
<td>Bumper, 26&quot; extended - “All Custom Chassis”</td>
</tr>
<tr>
<td>Aerial Devices</td>
<td>0022160</td>
<td>Aerial, 100' Pierce Platform</td>
</tr>
<tr>
<td>Wheels, Front</td>
<td>0019618</td>
<td>Wheels, Frt, Alum, Alcoa, 22.50” x 13.00” (425/445)</td>
</tr>
<tr>
<td>Axle, Front, Custom</td>
<td>0090913</td>
<td>Axle, Front, Oshkosh TAK-4, Non Drive, 24,000 lb, DLX/Qtm/AXT</td>
</tr>
<tr>
<td>Tires, Front</td>
<td>0078245</td>
<td>Tires, Michelin, 445/65R22.50 20 ply XZY 3 tread (24,000 TAK 4)</td>
</tr>
</tbody>
</table>

Notes:
- Actual Inside Cramp Angle may be less due to highly specialized options.
- Curb to Curb turning radius calculated for a 9.00 inch curb.
<table>
<thead>
<tr>
<th>Definitions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside Cramp Angle</td>
<td>Maximum turning angle of the front inside tire.</td>
</tr>
<tr>
<td>Axle Track</td>
<td>King-pin to king-pin distance of the front axle.</td>
</tr>
<tr>
<td>Wheel Offset</td>
<td>Offset from the center-line of the wheel to the king-pin.</td>
</tr>
<tr>
<td>Tread Width</td>
<td>Width of the tire tread.</td>
</tr>
<tr>
<td>Chassis Overhang</td>
<td>Distance from the center-line of the front axle to the front edge of the cab. This does not include the bumper depth.</td>
</tr>
<tr>
<td>Additional Bumper Depth</td>
<td>Depth that the bumper assembly adds to the front overhang.</td>
</tr>
<tr>
<td>Wheelbase</td>
<td>Distance between the center lines of the vehicle's front and rear axles.</td>
</tr>
<tr>
<td>Inside Turning Radius</td>
<td>Radius of the smallest circle around which the vehicle can turn.</td>
</tr>
<tr>
<td>Curb to Curb Turning Radius</td>
<td>Radius of the smallest circle inside of which the vehicle's tires can turn. This measurement assumes a curb height of 9 inches.</td>
</tr>
<tr>
<td>Wall to Wall Turning Radius</td>
<td>Radius of the smallest circle inside of which the entire vehicle can turn. This measurement takes into account any front overhang due to the chassis, bumper extensions and/or aerial devices.</td>
</tr>
</tbody>
</table>
\[ R = 40' - 2'' \quad \text{SCALE} \quad 1'' = 20' \]
$R = 40' - 2''$

SCALE
1'' = 30'
$R = 40' - 2''$

SCALE

$1'' = 40'$
R = 40' - 2"

SCALE
1" = 60'

[Diagram of a circular curve with annotations and measurements]
$R = 40' - 2''$

SCALE

1'' = 80'
\[ R = 40' - 2'' \]  

**SCALE**  
\[ 1'' = 100' \]