

Assembly/Installation Instructions

Hollaender
Your Handrail Source.

10285 Wayne Ave. • Cincinnati, OH 45215-6399
(p) 800.772.8800 • (f) 800.772.8806
www.hollaender.com

ADA Handrail



Hollaender's component systems, easily assembled on-site, meet all ADA guidelines for structural strength and usability. An ADA #85 bracket can be rotated to any angle for stairs or ramps. Smooth, continuous top rail with required grip diameter has no sharp edges or projections. Stainless steel and anodized aluminum provides long term low maintenance. Hollaender ADA systems can be easily updated or renovated.

Tools Needed:

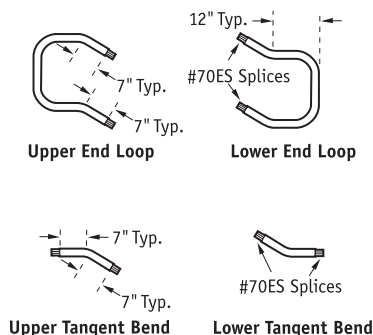
Tape Measure
Chalk Line
Level
3/16" Allen Wrench
3/8" Ratchet
Drill with #3 and 3/8" Drill Bits
Clear Plastic/Urethane Hammer

Getting Familiar with Hollaender ADA Railing Systems

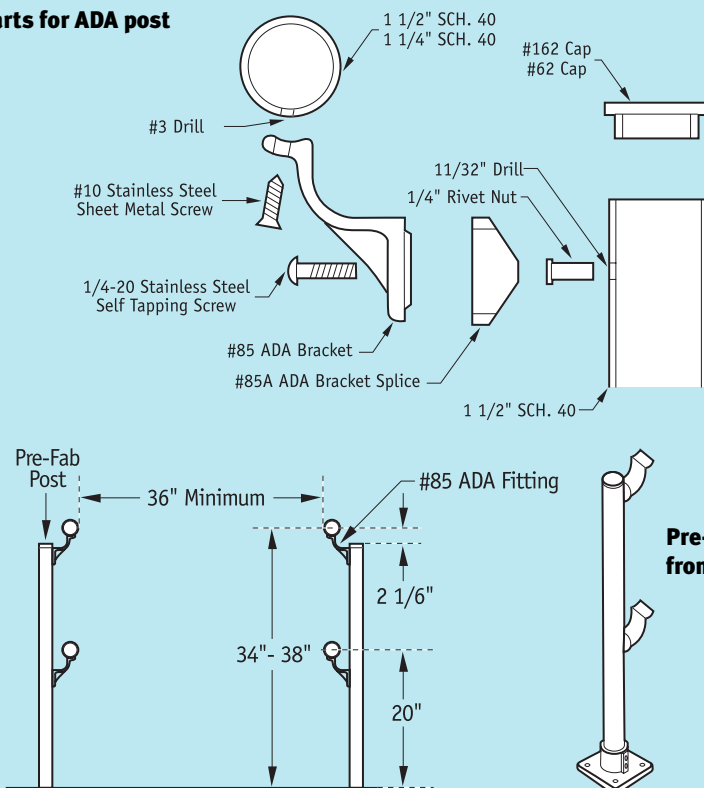
Getting familiar with the parts that you will be working with is very important. It will help you understand how each piece works together to become a standard section of ADA handrail.

ADA posts purchased from Hollaender will come preassembled, so less assembly is required. Shown here are the pieces that make up a standard ADA post.

Hollaender ADA Railing



Parts for ADA post



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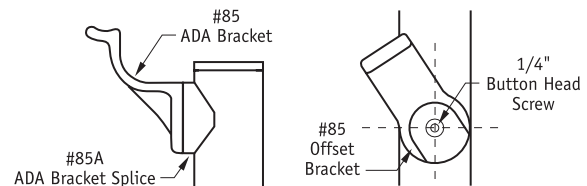
ADA Handrail

How to Layout ADA Railing

- Review any project drawings noting the locations of railing ends and corners as well as any other critical post locations. Unless noted to the contrary, the dimensions on the drawings are to the **centerline** of the rail and posts.
- Snap chalk line as needed to determine the centerline of the railing.
- Locate and mark center of an end post or corner post to mark the start of the railing installation.

How to Install ADA Railing

1. Place each pre-assembled ADA post into position and secure into place.
2. To determine each of the angles of your ramps and/or your walking surfaces, refer to the Handrail Angle Chart below.
3. Adjust the #85 ADA Brackets that are attached to the posts, to the degree that was found in the Handrail Angle Chart.
4. Tighten the #85 ADA Brackets to the correct degree.



RISE IN INCHES	Handrail Angle Chart																		
	RUN IN INCHES																		
	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0
1	9.5°	8.7°	8.1°	7.6°	7.1°	6.7°	6.3°	6.0°	5.7°	5.4°	5.2°	5.0°	4.8°	4.6°	4.4°	4.2°	4.1°	3.9°	3.8°
1.5	14.0°	13.0°	12.1°	11.3°	10.6°	10.0°	9.5°	9.0°	8.5°	8.1°	7.8°	7.4°	7.1°	6.8°	6.6°	6.3°	6.1°	5.9°	5.7°
2	18.4°	17.1°	15.9°	14.9°	14.0°	13.2°	12.5°	11.9°	11.3°	10.8°	10.3°	9.9°	9.5°	9.1°	8.7°	8.4°	8.1°	7.9°	7.6°
2.5	22.6°	21.0°	19.7°	18.4°	17.4°	16.4°	15.5°	14.7°	14.0°	13.4°	12.8°	12.3°	11.8°	11.3°	10.9°	10.5°	10.1°	9.8°	9.5°
3	26.6°	24.8°	23.2°	21.8°	20.6°	19.4°	18.4°	17.5°	16.7°	15.9°	15.3°	14.6°	14.0°	13.5°	13.0°	12.5°	12.1°	11.7°	11.3°
3.5	30.3°	28.3°	26.6°	25.0°	23.6°	22.4°	21.3°	20.2°	19.3°	18.4°	17.7°	16.9°	16.3°	15.6°	15.1°	14.5°	14.0°	13.6°	13.1°
4	33.7°	31.6°	29.7°	28.1°	26.6°	25.2°	24.0°	22.8°	21.8°	20.9°	20.0°	19.2°	18.4°	17.7°	17.1°	16.5°	15.9°	15.4°	14.9°
4.5	36.9°	34.7°	32.7°	31.0°	29.4°	27.9°	26.6°	25.3°	24.2°	23.2°	22.2°	21.4°	20.6°	19.8°	19.1°	18.4°	17.8°	17.2°	16.7°
5	39.8°	37.6°	35.5°	33.7°	32.0°	30.5°	29.1°	27.8°	26.6°	25.5°	24.4°	23.5°	22.6°	21.8°	21.0°	20.3°	19.7°	19.0°	18.4°
5.5	42.5°	40.2°	38.2°	36.3°	34.5°	32.9°	31.4°	30.1°	28.8°	27.6°	26.6°	25.6°	24.6°	23.7°	22.9°	22.2°	21.4°	20.8°	20.1°
6	45.0°	42.7°	40.6°	38.7°	36.9°	35.2°	33.7°	32.3°	31.0°	29.7°	28.6°	27.6°	26.6°	25.6°	24.8°	24.1°	23.2°	22.5°	21.8°
6.5	47.3°	45.0°	42.9°	40.9°	39.1°	37.4°	35.8°	34.4°	33.0°	31.8°	30.6°	29.5°	28.4°	27.5°	26.6°	25.7°	24.9°	24.1°	23.4°
7	49.4°	47.1°	45.0°	43.0°	41.2°	39.5°	37.9°	36.4°	35.0°	33.7°	32.5°	31.3°	30.3°	29.2°	28.3°	27.4°	26.6°	25.8°	25.0°
7.5	51.3°	49.1°	47.0°	45.0°	43.2°	41.4°	39.8°	38.3°	36.9°	35.5°	34.3°	33.1°	32.0°	31.0°	30.0°	29.1°	28.2°	27.3°	26.6°
8	53.1°	50.9°	48.8°	46.8°	45.0°	43.3°	41.6°	40.1°	38.7°	37.3°	36.0°	34.8°	33.7°	32.6°	31.6°	30.7°	29.7°	28.9°	28.1°
8.5	54.8°	52.6°	50.5°	48.6°	46.7°	45.0°	43.4°	41.8°	40.4°	39.0°	37.7°	36.5°	35.3°	34.2°	33.2°	32.2°	31.3°	30.4°	29.5°
9	56.3°	54.2°	52.1°	50.2°	48.4°	46.6°	45.0°	43.5°	42.0°	40.6°	39.3°	38.0°	36.9°	35.8°	34.7°	33.7°	32.7°	31.8°	31.0°
9.5	57.7°	55.6°	53.6°	51.7°	49.9°	48.2°	46.5°	45.0°	43.5°	42.1°	40.8°	39.6°	38.4°	37.2°	36.2°	35.1°	34.2°	33.2°	32.3°
10	59.0°	57.0°	55.0°	53.1°	51.3°	49.6°	48.0°	46.5°	45.0°	43.6°	42.3°	41.0°	39.8°	38.7°	37.6°	36.5°	35.5°	34.6°	33.7°
ANGLE CALCULATED IN DEGREES																			

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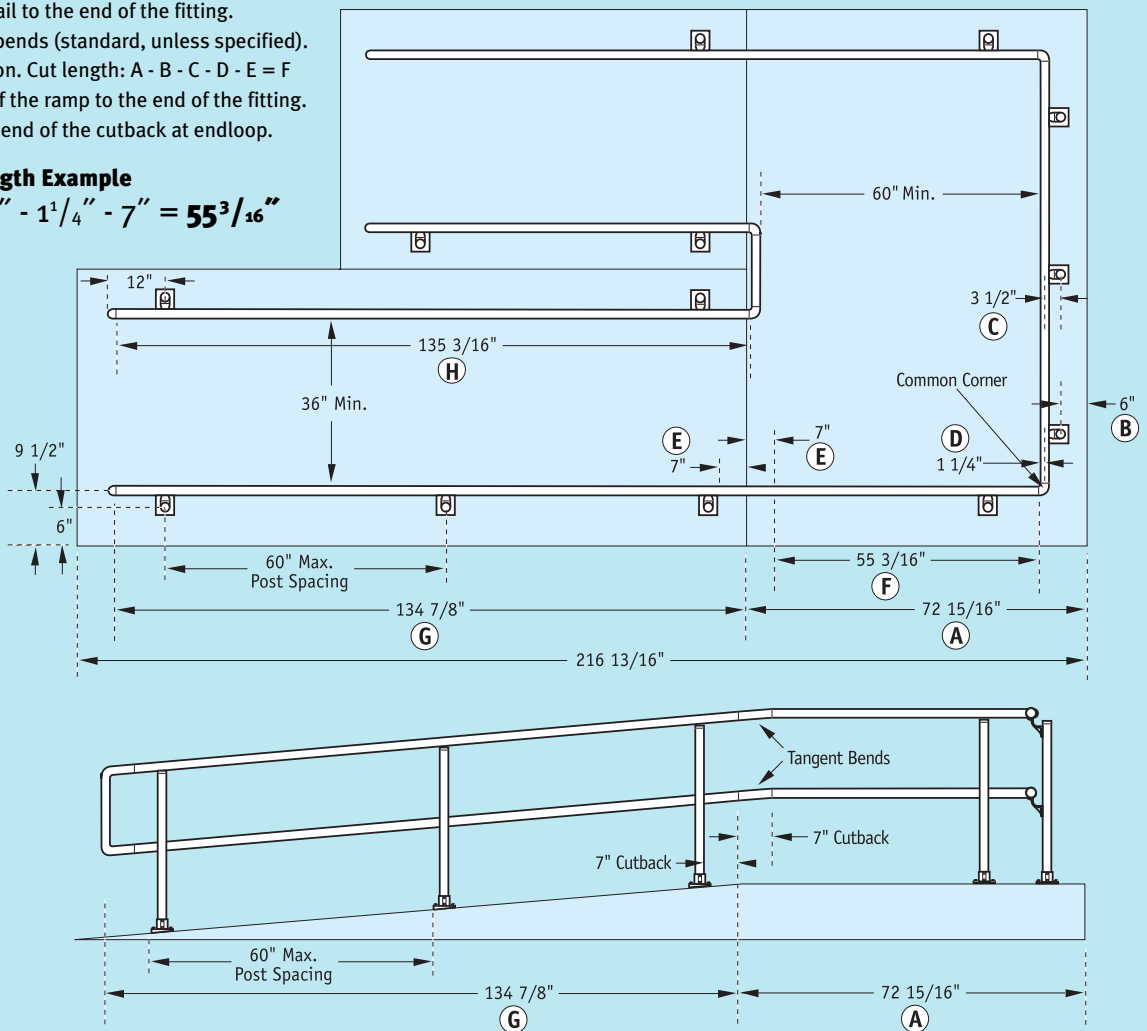
How to Install ADA Railing (cont.)

5. Begin measuring your handrail cuts at a common corner.
6. To cut the handrailing to the appropriate lengths, dimensions from each section of the ramp need to be determined. Follow the equations below to determine cut lengths. **Note:** both the top rail and midrail will be cut to the same lengths. Continue to cut hand railing for each individual area, by measuring each surface area section. **Note:** Handrail may need to be modified in the field for any minor adjustments to cut lengths.

A = Linear dimension of the selected area.
B = Edge of concrete to the centerline of the post.
C = Centerline of the post to the centerline of the handrail.
D = Centerline of the handrail to the end of the fitting.
E = 7" Cutback for tangent bends (standard, unless specified).
F = Cut length for this section. Cut length: $A - B - C - D - E = F$
G = Measure from the top of the ramp to the end of the fitting.
H = End of the fitting to the end of the cutback at endloop.

Cut Length Example

$$72^{15/16} - 6 - 3^{1/2} - 1^{1/4} - 7 = 55^{3/16}$$



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How to Install ADA Railing (cont.)

7. Test fit each handrail section and connect any fittings at the corners and ends.
8. Secure the handrail to the #85 brackets by placing a mark on the underside of the handrail through each of the brackets, to indicate where the holes need to be drilled.
9. Drill a #3 hole into each of the marked areas on the handrailing.
10. Secure the handrail to each of the #85 brackets with the 1/4" self-tapping screws (see illustration below).

Note: Each end post will be located 12" from the centerline of the fitting/end loop at the end of the railing section.

