

**Challenge:**

How to fabricate one-of-a-kind spiral staircase rails, which are tricky to form flawlessly?

**TSM Solution:**

Most spiral staircase manufacturers are limited in scope to only making rails that will fit a prepackaged stair measurement or forming the spiral rails at the jobsite. TSM does not make stairs, only the rails themselves, but we can make them to fit any unusual application. These beautiful ellipses were made in our factory strictly from plans supplied by the contractor, and they fit perfectly when they arrived.



**Westin Maui**

Maui, Hawaii  
Architect: Lawton Umemura Architects  
Bright Finish Brass 2" O.D. One-Line Floor Mounted Rail (51mm)  
Model # U-200-1/BB



**Civic Center Station**

Los Angeles, California  
Architect: Arthur Erickson  
Satin Finish Type 304 Stainless Steel  
Barrier Railing 12" O.D. x .25" (305x6.4mm), Posts 2" x 6" x .120" (51x152x3mm)  
Model #GRD-842



**Challenge:**

How to produce a consistent finish on 12" diameter stainless steel tubing?

**TSM Solution:**

It's a well-known fact that the larger diameter of the tubing, the more difficult it is to produce a consistent finish. Furthermore, the bending and handling of this extraordinarily heavy tube had produced many noticeable indentations in the tubing surface. TSM solved this by filling the dents with welding. The weld buildup was then ground smooth and polished, using state-of-the-art equipment and tooling designed and manufactured by the TSM staff. Upon completion, the entire rail had a beautiful finish that was so consistent that even the workers who had done it could not detect where the original surface defects had been.

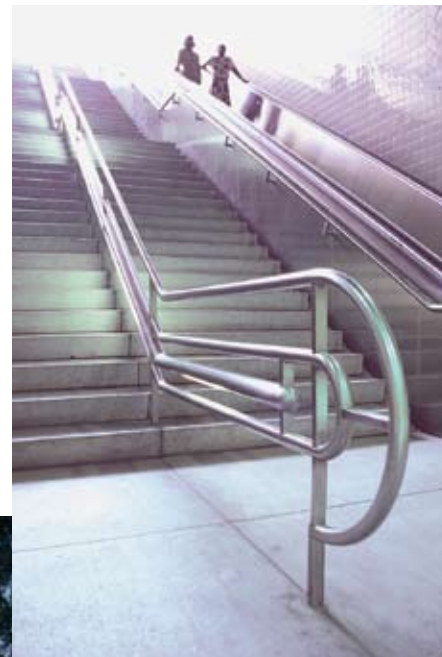


**Challenge:**

How to attach the heavy, 7' long (2134mm) gates to the posts?

**TSM Solution:**

The length of these custom gates required heavy-duty hinges that were not commercially available and had to be designed and fabricated by TSM. TSM has since then provided these hinges for several other projects.



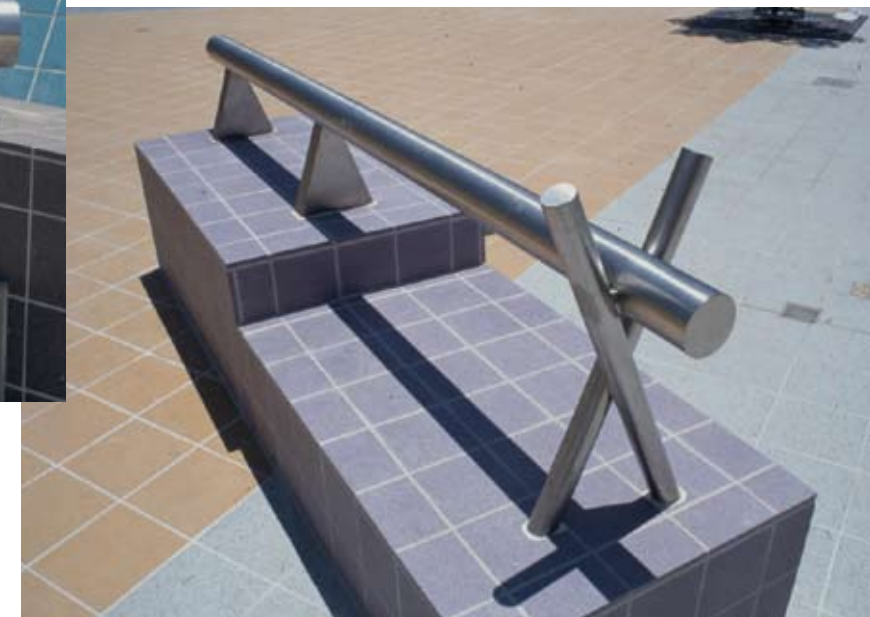
**Civic Center Subway Station**

Los Angeles, California  
Architect: Arthur Erickson  
Satin Finish Type 304 Stainless Steel  
Railing Top Line and Half-Circle End, 1.9" O.D (48mm)  
Posts 1 1/2" x 1" (38x25mm);  
Centerline Rail 3" O.D. (76mm) with Light Housing Welded to Posts and Welded Dome Cap  
Model # GRD-896



**Wilshire & Vermont Subway Station**

Los Angeles, California  
Architect: Aziz Kohan  
Satin Finish Type 304 Stainless Steel  
Bench at Left: Tubing 8" O.D. x .120" (203x3mm), Posts 2 1/2" x .120" (64x3mm) Curved Ladder 1" O.D. x .120" (25x3mm)  
Bench at Right: Tubing 6" O.D. x .120" (152x3mm) and 3" O.D. x .120" (76x3mm) Triangle Posts 1/8" Plate (3mm)  
Left, Model #GRD-822  
Right, Model #GRD-827



**Fundadores Station**

Monterrey, Mexico  
Architect: Albuerne & Associates  
Satin Finish Type 304 Stainless Steel  
Parapet Rail: 1.9" O.D. (48mm) with Welded Dome Cap  
Side Mounted Handrail 1.9" (48mm) with Welded Dome Cap Brackets & Posts 2" x 1/4" Flat Bar (51x6.4mm)  
Gate: Frame 2" O.D. x .120" (51x3mm)  
End Post 4" O.D. x .120" (102x3mm) with Welded Dome Cap  
Crosspieces 5/8" O.D. (16mm); Barrel Hinges  
Parapet Rail Model # GRD-156  
Gate Model # GRD-604

