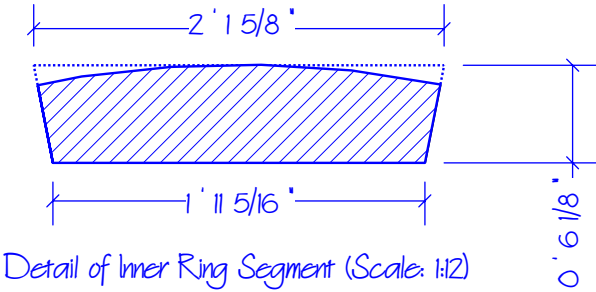
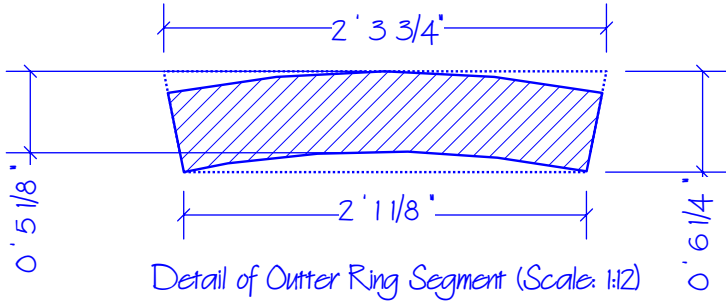
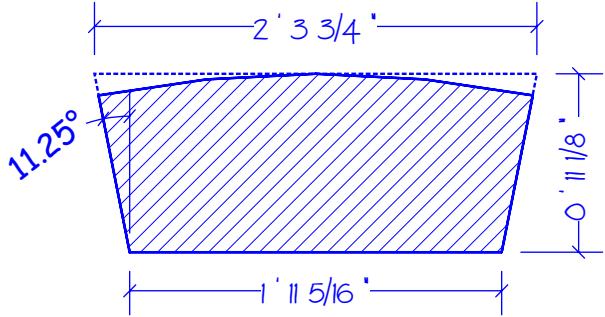
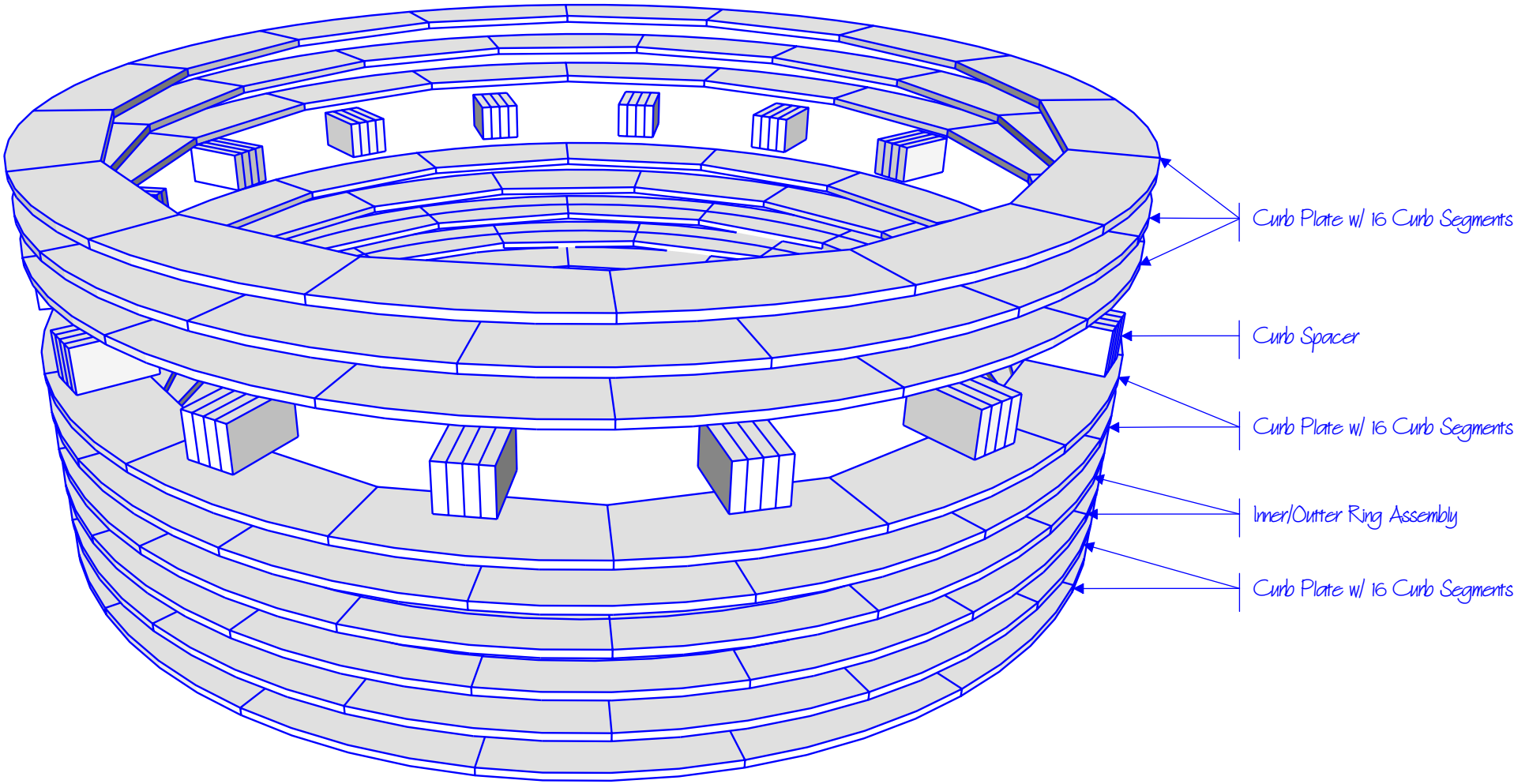


The Dead Curb Assembly of the Yorktown Windmill



Exploded Isometric of the Dead Curb Assembly (Not to Scale)

The windmill's curb is a pair of plates that are installed between the tower and the cap. The cap is rotated on these plates to allow its sails to face into the wind. If wheels are installed in the curb to facilitate the rotation, then the curb is considered a 'live curb'. If there are no wheels and the rotation of the assembly depends on lubricant that is applied between the plates, then it is considered a 'dead curb'. In the case of the Yorktown Windmill, because the need to rotate the cap will be rare, we will use a dead curb design.

Like the other major gears in the Yorktown Windmill, the dead curb design consists of layered plates that are affixed with screws and adhesive. Each curb plate has 16 segments cut from 5/4 oak with edges beveled at 11.25 degrees. When the 16 plates are combined and rounded, they should produce a ring that is 11 7-1/2" in diameter and 1" thick. A total of seven of these curb plates will be required.

The segments for two additional curb plates will be constructed, but these will be parted into an inner and outer ring assembly that will provide a 'curb ring' that holds the upper curb and the lower curb in alignment. The inner curb ring will be attached to the upper curb assembly and the outer curb ring will be attached to the lower curb assembly. These plates will be lubricated with wax and graphite to provide a low friction surface.

The upper curb has 16 spacers that are installed. These spacers provide a 6 inch installation area for the 'crown tree' (to which the upper end of the main shaft is affixed) and the 'thrust block' (to which the rear of the wind shaft is affixed).

