Problem Statement

The Campanile Carillon Model requires redesigns to fix the issues in the previous designs of the scissor lift. A façade panel mounting method must also be designed and implemented, both done while meeting engineering and end-user requirements.

Customer Requirements

<table>
<thead>
<tr>
<th>Scissor Lift:</th>
<th>Façade:</th>
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</thead>
<tbody>
<tr>
<td>- Safe</td>
<td>- Sturdy Mounting</td>
</tr>
<tr>
<td>- Maintain Vertical Height</td>
<td>- Reduce Gaps</td>
</tr>
<tr>
<td>- Level Frames</td>
<td>- Between Panels</td>
</tr>
<tr>
<td>- Reduced Weight</td>
<td>- Easy Installation</td>
</tr>
<tr>
<td>- Cost Effective</td>
<td>- Compatible Materials</td>
</tr>
</tbody>
</table>

Estimated Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum C-Channel</td>
<td>$881.04 (per lift)</td>
</tr>
<tr>
<td>Spring Assist Hardware (12)</td>
<td>$68.72</td>
</tr>
<tr>
<td>Cam Followers (8)</td>
<td>$242.32</td>
</tr>
<tr>
<td>L-Brackets &amp; Misc. Hardware</td>
<td>$295.21</td>
</tr>
<tr>
<td>Façade Mounting Hardware</td>
<td>$109.31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,477.64</strong></td>
</tr>
</tbody>
</table>

Final Design

Future Work

- Purchasing of raw material
- Start fabrication of new scissor lift design
- Finalize drive mechanism of lift (impact vs actuator)
- Implement corner gap solution