Revisiting Trench Cost

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These are my personal opinions, not necessarily those of XCAP or the City of Palo Alto
Construction Costs

- Last week, staff stated that Bay Area construction costs are 20% higher than Los Angeles
  - This (currently) is true for buildings, but not for general construction
- Engineering News-Record (ENR) publishes two well-regarded cost indexes that track construction costs, updated monthly
  - Building Cost Index (BCI) tracks costs for buildings (which require skilled laborers such as carpenters)
  - Construction Cost Index (CCI) tracks costs for general construction (which uses less-skilled labor)

- SF vs LA Building Costs (per ENR BCI index)
  - Sept 2020: Bay Area is currently 21% higher than Los Angeles
  - Five year average: Bay Area is 12.4% higher than Los Angeles
- SF vs LA Construction Cost (per ENR CCI index)
  - Sept 2020: Bay Area is currently 7.8% higher than Los Angeles
  - Three-year average: Bay Area averaged 2.8% higher than Los Angeles
  - Five-year average: Bay Area averaged 2.2% higher than Los Angeles
- Construction Cost escalation
  - Over the past three years, the Bay Area ENR CCI has increased 3.16% per year
Carlsbad/Palo Alto Trench Comparison

- The Carlsbad Short Trench is the same length at the Charleston/Meadow trench
  - Note Carlsbad Trench is 1.5 feet deeper and 10 feet wider (increasing Carlsbad costs)

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<thead>
<tr>
<th></th>
<th>Minimum cost (millions $)</th>
<th>Maximum cost (millions $)</th>
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</thead>
<tbody>
<tr>
<td>Estimate of Total Cost</td>
<td>165</td>
<td>180</td>
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<tr>
<td>30% Contingency</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Escalation from 2016 to 2023</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>260</strong></td>
<td><strong>285</strong></td>
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- LA/SF construction-cost adjustment
  - 20 / 22
  - 7.8% (per Sept 2020 ENR CCI)
  - **Subtotal** 280 / 307

- Escalation from 2023 to 2025
  - 18 / 20
  - 3.16% (ENR CCI 3-year mean)
  - **Final Adjusted Cost for Carlsbad** 298 / 327

- AECOM estimate for Palo Alto
  - 800 / 950
  - 2025 dollars

- Ratio (Palo Alto/Carlsbad)
  - 268.5% / 290.5%

- Yearly cost escalation and LA/SF differential do not fully explain cost discrepancies
  - Doubtful that site-specific costs can explain 268% cost ratio

Cost discrepancies necessitate additional trench analysis