Task 1: Review and Assessment of Past Cost Estimates and Trends
  » Draft Report – March 2021
  » Final Report – April 2021

Task 2: Estimating Methodology Review and Recommendations
  » Draft Report – June 2021
  » Final Report – June 2021

Task 3: Management Methodology Review and Recommendations
  » Draft Report – July 2021
  » Final Report – After Receiving Board Comments
Focus of This Report

Task 2 Final: Estimating Methodology Review and Recommendations

» Why
» Methodology
» Recommendations
» Next Steps
» Cost Estimating Responsibility Matrix
» Rank of each Driver’s impact to the change in cost estimates
» Amount each Driver contributed toward the change in cost estimates
» Sound Transit & WSDOT Estimating Workshop
Drivers impacting changes to cost estimates:

Construction cost estimating:
» Prescriptive process with little flexibility.
» Unit costs were updated.
» Some original design assumptions were inaccurate.
» Second opinions were not utilized.

Right of Way (ROW) cost estimating:
» Buffer method underestimated right of way needs.
» Changes to the formula approach.
» Unpredictable market conditions.
» Unclear ownership for early estimates.
## Drivers Impacting Changes to Cost Estimates

<table>
<thead>
<tr>
<th>No.</th>
<th>Category</th>
<th>Driver</th>
<th>Estimate Impact (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Construction</td>
<td>Inaccurate Original Assumptions</td>
<td>40%</td>
</tr>
<tr>
<td>2</td>
<td>ROW</td>
<td>Right Of Way (ROW) Formula (including contingency)</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>ROW</td>
<td>Right Of Way (ROW) Quantities (buffer method)</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>ROW</td>
<td>Market conditions (as pertains to real estate)</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Construction</td>
<td>Unit Cost Library Updates</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>Construction</td>
<td>Prescriptive Estimating Practices*</td>
<td>N/A</td>
</tr>
<tr>
<td>7</td>
<td>Construction</td>
<td>Second Opinions*</td>
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<tr>
<td>8</td>
<td>ROW</td>
<td>Right Of Way (ROW) Estimating Ownership *</td>
<td>N/A</td>
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</table>

* Driver is not quantifiable.
RECOMMENDATIONS

» Right Of Way (ROW) Estimating Methodology
  » Involve ROW specialists early in the process.
  » Identify when deviations from methodology in estimating ROW are necessary and appropriate.

» Sound Transit Policies and Procedures
  » Procure an independent opinion to validate early cost estimates.
  » Active use of a Responsibility matrix.
  » Include a program level management reserve in addition to project level contingency.
RECOMMENDATIONS

» Internal Communication
  » Portfolio Services Office involvement in Program level process oversight.
  » Involve Subject Matter Experts early and often.
  » Develop and maintain a fully developed risk register with associated cost implications.

» Tools to Communicate with the Board
  » Annual Program Evaluation to share yearly project status with the Board.
  » Dashboard for project status update.

» Communication to the Public
  » Use of ranges with initial cost estimates.
NEXT STEPS

» Estimating 101 Workshop
  » Schedule: TBD
  » Scope development in progress

» Task 3 Draft Report – Management Methodology
  » Due July 19th – week of monthly Board meeting