Today’s Topics

• Project Budget and Schedule Update
• Project Options Work Plan
• Upcoming Meeting Schedule
Project Budget and Schedule Update
Project Updates:

• Budget: Updated cost estimate above $1.653 billion
• Schedule: Updated revenue service beyond 2019

Questions to be Addressed:

• What are the primary reasons for the cost estimate increase?
• What are the primary reasons for the schedule delay?
Cost Uncertainty By Project Development Phase

% Design Complete | Cost Uncertainty
--- | ---
DEIS | 1% | 20% | 40% | 60% | 100%
Municipal Consent | 20% | 40% | 60% | 100%
Mid-Project Development | 40% | 60% | 100%
Engineering | 60% | 100%
Construction | 100%
## Project Delivery Process

<table>
<thead>
<tr>
<th></th>
<th>DEIS</th>
<th>Municipal Consent</th>
<th>Preliminary Engineering</th>
<th>Engineering Bid Packages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>% Design</strong></td>
<td>1%</td>
<td>15-20%</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Level of Design</strong></td>
<td>General station locations, route and cost allowances</td>
<td>Station footprints, general track location and grade and facilities</td>
<td>Stations, track, facilities and structure dimensions</td>
<td>Station types, track, facilities and structure detail</td>
</tr>
<tr>
<td><strong>Detail</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Survey Work</strong></td>
<td>None</td>
<td>Phase I: Desk review and field observations</td>
<td>Phase II: Technical field work including surveying, soil sampling, wetland delineations, archaeological</td>
<td>Archaeological recovery, mitigation measures</td>
</tr>
</tbody>
</table>
Updated Project Budget Overview

• Updated cost estimate: $1.994 billion
• Contributing factors include:
  ▪ Refined design:
    • Environmental requirements (wetlands, floodplains)
    • Engineering requirements (soft soil conditions and contamination)
    • Operational and safety requirements (light rail, freight rail)
  ▪ Identified additional property acquisitions and relocations
  ▪ Added retaining walls, bridges and connecting roads
  ▪ Delayed revenue service date
## Updated Project Budget

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>Approved Budget 7/2014</th>
<th>Updated Est. 4/2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideway and Track</td>
<td>$418</td>
<td>$462</td>
<td>$44</td>
</tr>
<tr>
<td>Stations, stops, terminals</td>
<td>$82</td>
<td>$116</td>
<td>$34</td>
</tr>
<tr>
<td>Support facilities</td>
<td>$62</td>
<td>$104</td>
<td>$42</td>
</tr>
<tr>
<td>Sitework, special conditions</td>
<td>$146</td>
<td>$190</td>
<td>$44</td>
</tr>
<tr>
<td>Systems</td>
<td>$173</td>
<td>$216</td>
<td>$43</td>
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<tr>
<td><strong>Construction Subtotal</strong></td>
<td><strong>$881</strong></td>
<td><strong>$1,088</strong></td>
<td><strong>$207</strong></td>
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<tr>
<td>ROW, land, existing improvements</td>
<td>$176</td>
<td>$209</td>
<td>$33</td>
</tr>
<tr>
<td>Vehicles</td>
<td>$127</td>
<td>$145</td>
<td>$18</td>
</tr>
<tr>
<td>Soft Costs $^1$</td>
<td>$469</td>
<td>$552</td>
<td>$83</td>
</tr>
<tr>
<td><strong>Total Project Costs</strong></td>
<td><strong>$1,653</strong></td>
<td><strong>$1,994</strong></td>
<td><strong>$341</strong></td>
</tr>
</tbody>
</table>

$^1$ Professional Services, Unallocated Contingency and Finance Charges
Primary Cost Drivers: Guideway and Track

• Over 80% more required retaining wall area and associated piles, excavation
• Kenilworth tunnel foundation, waterproofing, and systems/ventilation
• Different track design on longer bridges and land bridges
• Required special trackwork
Primary Cost Drivers: Stations

- Joint Development at Blake Station
  - Non CTIB/HCRRA funded
- Required indoor LRT and bus passenger waiting area at SouthWest Station
- Required additional geotechnical mitigation at SouthWest Station
- Increased costs for stairs and elevators at West Lake, Penn and Van White stations
Primary Cost Drivers: OMF

- Increased building size to accommodate refined maintenance requirements and additional light rail vehicles
- Required additional geotechnical mitigation
- Identified additional hazardous materials and contaminated soils by Phase II Environmental Site Assessment
- Increased cost of required maintenance equipment
- Required vapor mitigation system
- Required culvert to control surface water movement across site
- Required embedded track for access roadway
Primary Cost Drivers: Site Work

• Required additional vehicle and freight traffic control during construction
• Refined drainage to meet watershed requirements
• Required additional roadway work to address LRT impacts
• Refined wetland mitigation to meet local requirements
• Required bridge pier protection under I-394 and I-94 adjacent LRT
• Identified additional hazardous materials/contaminated soils by Phase II Environmental Site Assessments
• Required pile supported boardwalk across Purgatory Creek
Primary Cost Drivers: Systems

- Refined operational requirements for train control/ductbank/interlocking
- Added 5 gated LRT crossings
  - 4 on Technology Drive and 1 on Eden Road
- Refined design of 5 shared LRT/freight crossings to meet FRA requirements
- Added one Traction Power Substation
- Increased capacity at existing Rail Control Center for expanded operations
Primary Cost Drivers: Non Construction

- Established construction limits; identified additional 11 acres of property acquisition
  - 126 to 137 acres
- Confirmed building occupancy; increased relocations by 99
  - 47 to 146 relocations (43 are mini-storage units)
- Added 3 light rail vehicles to meet operational requirements
  - 29 to 32 vehicles
- Updated professional services
- Delayed revenue service date
Updated Project Schedule Overview

• Revised revenue service date 2020

• Contributing factors include:
  ▪ Additional studies followed by more public meetings on study results
  ▪ Extension of municipal consent process
  ▪ Additional time to prepare the SDEIS to incorporate changes as a result of additional studies, tests and comments on municipal consent plans
  ▪ Addition of more detailed park impact analysis into the SDEIS
### Updated Project Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Schedule as of 7/2014</th>
<th>Schedule as of 4/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publish SDEIS</td>
<td>Nov 2014</td>
<td>May 2015</td>
</tr>
<tr>
<td>Publish FEIS and Issue ROD</td>
<td>Q4 2015</td>
<td>Q1/Q2 2016</td>
</tr>
<tr>
<td>Entry into Engineering</td>
<td>Q4 2015</td>
<td>Q2 2016</td>
</tr>
<tr>
<td>Full Funding Grant Agmt.</td>
<td>Q3 2016</td>
<td>Q4 2016</td>
</tr>
<tr>
<td>Heavy Construction</td>
<td>2016-2018</td>
<td>2017-2019</td>
</tr>
<tr>
<td>Revenue Service Date</td>
<td>2019</td>
<td>2020</td>
</tr>
</tbody>
</table>
Project Options Work Plan
Project Options Work Plan

- Conduct transit options review
- Complete construction cost estimation review
- Conduct technical capacity review
- Identify potential cost reductions
Transit Options Review

• Description

- Compare transit options including:
  - No Build (status quo)
  - Enhanced Bus
  - Bus Rapid Transit (BRT)
  - Light Rail Transit (LRT)

- Review these transit options from previous analysis but supplemented with updated data
Transit Options Review

- **Metrics**
  - Cost
  - Ridership
  - Travel time and reliability
  - Access to jobs
  - Economic development

- **Tentative Schedule**
  - Presentation to CMC: **June 3**
  - CMC deliberation: **June 24**
Construction Cost Estimation Review

• Description
  - Peer Review Consultant (PRC) performing evaluation of current construction cost estimate
  - Review quantities and unit costs compared with industry standards and PRC’s professional experience implementing similar LRT projects

• Tentative Schedule
  - Presentation to CMC: June 3
Technical Capacity Review

• Description
  - Independent review of the Southwest Project Office management structure and project management systems

• Tentative Schedule
  - Review team convenes: **May**
  - Results: **June**
  - Presentation to CMC: **June 24**
Identify Potential Cost Reductions

• Description
  - Invite project partners to offer cost reduction ideas
  - Continue review of design plans for cost reduction opportunities
  - Evaluate proposed refinements and associated cost savings to share with project partners and Met Council for consideration

• Tentative Schedule
  - Identify cost reductions: In process
  - Present evaluation to CMC and Met Council: May 20
Cost Reduction Approach

• Identify potential cost reductions through design refinement of current scope
• Seek further cost reduction ideas from project partners
• Evaluate all potential cost reductions against SWLRT Scoping Principles
SWLRT Scoping Principles

• March 2013: CMC recommended and Met Council adopted SWLRT Scoping Principles

• Purpose
  ▪ Provide clear and transparent process for making project scope refinements
  ▪ Use to evaluate alternatives
  ▪ Make informed decisions on project scope refinements
SWLRT Scoping Principles

• Follow SWLRT Design Criteria, including criteria for safety & security
• Positively impact (increase) FTA project rating, ridership, equity, environmental benefits and multimodal connections
• Minimal or no adverse impact to project schedule, capital cost and operating cost
• Actively engage and encourage input from interested and impacted stakeholders
New Starts Rating Components

Summary Rating

Project Justification Rating (50%)

Financial Rating (50%)
New Starts Rating Components

Summary Rating

Project Justification Rating (50%)
  - Economic Development (16.66%)
  - Mobility Improvements (16.66%)
  - Environmental Benefits (16.66%)
  - Congestion Relief (16.66%)
  - Cost Effectiveness (16.66%)
  - Land Use (16.66%)

Financial Rating (50%)
New Starts Rating Components

Summary Rating

- Project Justification Rating (50%)
- Financial Rating (50%)
  - Current Capital/Operating Condition (25%)
  - Commitment of Capital/Operating Funds (25%)
  - Reasonableness of Capital/Operating Cost Estimates (50%)
## New Starts Project Rating

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<thead>
<tr>
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<td>Project Justification Rating</td>
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<tr>
<td>Local Commitment Financial Rating</td>
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<td>Overall Project Rating</td>
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<td>Mobility Improvements</td>
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<td>Operating Effectiveness</td>
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<td>Congestion Relief</td>
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<td><strong>Local Commitment Financial Rating</strong></td>
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<td><strong>Overall Project Rating</strong></td>
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<td>Scope Item</td>
<td>Cost Savings</td>
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Discussion:
Cost Reduction Suggestions
Upcoming Meeting Schedule
Corridor Management Committee

• May 20 (Special Meeting)
  ▪ Potential cost reduction evaluation
• June 3
  ▪ Transit options review
  ▪ Construction cost estimate review
• June 24 (Special Meeting)
  ▪ Technical capacity review
  ▪ Deliberation on project scope and budget
• July 1
  ▪ Project scope and budget recommendation
Counties Transit Improvement Board

• May 6
  ▪ Project schedule and budget update
  ▪ Project options work plan

• June 17  (*Tentative*)
  ▪ Potential cost reduction evaluation
  ▪ Transit options review
  ▪ Construction cost estimate review
Hennepin County Regional Railroad Authority

- April 28 (Complete)
  - Project schedule and budget update

- May 19 (Tentative)
  - Project options work plan

- June 16 (Tentative)
  - Potential cost reduction evaluation
  - Transit options review
  - Construction cost estimate review
Met Council

• May 6 Committee of the Whole
  ▪ Project schedule and budget update
  ▪ Project options work plan
• May 20 Committee of the Whole
  ▪ Potential cost reduction evaluation
• July 1 Committee of the Whole
  ▪ Technical capacity review
  ▪ Transit options review
  ▪ Construction cost estimate review
  ▪ Project scope and budget recommendation
• July 8
  ▪ Project scope and budget approval
More Information

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SWLRT@metrotransit.org

Twitter:
www.twitter.com/southwestlrt