Community Advisory Committee

June 30, 2015
Today’s Topics

• Summary of June 24 CMC Meeting
• Potential Cost Reduction Discussion/CAC Recommendation
• Construction Cost Estimate Review
• Transit Options Review
Summary of June 24 CMC Meeting
What We Heard at June 3 CMC

• Little support for scenarios A or B
  ▪ A: Ending at Southwest Station required too many cuts along rest of line to maintain a viable level of ridership
  ▪ B: Ending at Golden Triangle considered “draconian;” requires Eden Prairie to bear brunt of cuts

• Discussion centered around scenarios C and D which end at Town Center
Criteria for Evaluating Cost Reductions

• Must identify cost reductions totaling at least $341M to keep the project budget at $1.65B
• Must have forecasted average weekday ridership of 29,000 to 30,000
• Must achieve consensus by all communities along the line
Coordination Since June 3 CMC Meeting

- City Specific Work Sessions
- CAC (6/9) and BAC (6/17)
- Met Council briefing (6/10)
- Eden Prairie City Council Workshop (6/16)
- Twin West and Eden Prairie Chambers (6/5 and 6/19)
- Four Project Partner Work Sessions
Researching New Funding Sources

• Working with project partners to develop a matrix of other funding sources for elements that may be eliminated from the project

• Discussing with project partners the potential to use local funds to leverage federal New Starts match
New Cost Reductions Identified

• Reduced finance charge from 3% to 2%: $10M cost reduction
• Additional design refinements to the OMF: $6.5M-$7.5M cost reduction
• Reduced LRV fleet by 3 more vehicles: $15M cost reduction
Scenarios Under Consideration

A: End at Southwest Station
C: End at EP Town Center (PE Plan)
B: End at Golden Triangle Station
D: End at EP Town Center Station (Flying Cloud)
Alt C: End at EP Town Center Station (Eden Rd)
Scenario A: No Further Analysis

- **A: End at Southwest Station**
  - Eliminated all park and rides and 4 stations
  - Ridership of 26,700 (2040) too low; doesn’t achieve New Starts rating
  - Cost reduction of $300M - $334M does not achieve necessary reduction of $341M

- **Alternate A: End at Southwest Station as proposed by City of Eden Prairie**
  - Eliminated 2 park and rides, deleted 1 station and deferred 1 station
  - Ridership of 32,700 (2040); achieves New Starts Rating
  - Cost reduction of $281M - $311M does not achieve necessary reduction of $341M
Scenarios B and D: No Further Analysis

• B: End at Golden Triangle
  ▪ Eliminated 3 of 5 stations in Eden Prairie
  ▪ CMC feedback too “draconian”

• D: End at Town Center (Flying Cloud Dr.)
  ▪ Eliminated potential for future extension
  ▪ Eliminated 2 and deferred 1 station; reduced most park and rides
D: End at Town Center Station (Flying Cloud)
C Scenarios:

- Two Town Center options
  - C: End at Town Center (PE Plan)
  - Alternate C: End at Town Center (Eden Road)
- Include same corridor wide and stakeholder options in proposed cost reductions
- Only difference is Alternate C (Eden Rd) station location is 750 feet east of the C (PE Plan) station
C: End at Town Center Station (PE Plan)
Scenario C and Alt C

- Decrease PnR, Convert Ramp to Surface Lot
- Decrease PnR, Locate Adjacent to OMF
- Delete Mitchell and Southwest Stations
- Delete Trail/Ped Structures
- Increase PnR
- Decrease PnR
- Increase PnR, Convert Surface Lot to Ramp
- Defer Penn Station
## Scenario C and Alt C: Summary

<table>
<thead>
<tr>
<th></th>
<th>C: Town Center (PE Plan)</th>
<th>Alt C: Town Center (Eden Rd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western End Station</td>
<td>EP Town Center</td>
<td>EP Town Center @ Eden Rd</td>
</tr>
<tr>
<td>Stations</td>
<td>Defer Penn, Delete Mitchell and Southwest Stations</td>
<td></td>
</tr>
<tr>
<td>Park and Rides</td>
<td>Decrease, Convert to Surface Lots: Beltline, Blake Decrease DT Hopkins, Shady Oak, Opus, City West Increase Louisiana, Golden Triangle (convert to ramp)</td>
<td></td>
</tr>
<tr>
<td>Park and Ride Spaces</td>
<td>1,939 spaces (reduction of 1,711 spaces)</td>
<td></td>
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<tr>
<td>Ridership (2040)</td>
<td></td>
<td>31,450</td>
</tr>
<tr>
<td>Scenario Cost Estimate</td>
<td>$1.630B</td>
<td>$1.617B</td>
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<tr>
<td>Potential Cost Reduction</td>
<td>$364M - $394M</td>
<td>$377M - $406M</td>
</tr>
<tr>
<td>Cost Effectiveness Index</td>
<td>$9.92 Medium</td>
<td>$9.86 Medium</td>
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<tr>
<td>Potential for Adding Elements Back</td>
<td>$23M - $53M</td>
<td>$36M - $66M</td>
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</tbody>
</table>
## Elements Not in C or Alt C

<table>
<thead>
<tr>
<th>Project</th>
<th>Project Cost</th>
<th>Enrichment *</th>
<th>Other Federal Funding</th>
<th>Adds Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beltline Trail Bridge</td>
<td>$13-14M</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Beltline PnR Ramp</td>
<td>$10M</td>
<td>Yes (if JD)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Shady Oak PnR (Tech Center)</td>
<td>$24-26M</td>
<td>No</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Penn Station and Ped Improvements</td>
<td>$12-14M</td>
<td>No (Station)</td>
<td>Yes (Ped)</td>
<td></td>
</tr>
<tr>
<td>Site furnishing (50%)</td>
<td>$0.5-0.6M</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Art (100%)</td>
<td>$4.5M</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaping (75%)</td>
<td>$11-13M</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N Cedar Lake Trail Bridge</td>
<td>$12-14M</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trail Underpass at Louisiana</td>
<td>$0.6M</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Ped Underpasses at Opus</td>
<td>$1-2M</td>
<td>Yes</td>
<td></td>
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</tr>
</tbody>
</table>

* Enrichments are not charged against Cost Effectiveness Index
### Scenario C and Alt C: “Add-backs”

<table>
<thead>
<tr>
<th>Project Cost</th>
<th>Project</th>
<th>Enrichment *</th>
<th>Adds Ridership</th>
<th>CEI Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>$13-14M</td>
<td>Beltline Trail Bridge</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>$10M</td>
<td>Beltline PnR Ramp (2020)</td>
<td>Yes (if JD)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>$24-26M</td>
<td>Shady Oak PnR (2020 Tech Center)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>$4.6-5.6M</td>
<td>Blake PnR (2020)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>$12-14M</td>
<td>Penn Station and Ped Improvements</td>
<td>No and Yes</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>$0.5-0.6M</td>
<td>Site furnishing</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>$2.5-4M</td>
<td>Public Art</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<td>$8-13M</td>
<td>Landscaping</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>$12-14M</td>
<td>N Cedar Lake Trail Bridge</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>$0.6M</td>
<td>Trail Underpass at Louisiana</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>$1-2M</td>
<td>2 Ped Underpasses at Opus</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>$10-12M</td>
<td>Light rail vehicles (2)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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</tbody>
</table>

* Enrichments are not charged against Cost Effectiveness Index
Potential Cost Reduction
Deliberation
Construction Cost Estimate Review
Construction Cost Estimation Review

• Perform evaluation of current construction cost estimate using existing Peer Review Consultant (PRC)
• Review project budget quantities and unit costs compared with LRT projects nationally, industry standards and PRC’s professional experience implementing similar LRT projects
Cost Review: Scope

• PRC evaluated construction cost estimates against FTA Capital Cost Database for Standard Cost Categories (SCC):
  ▪ Guideway, track
  ▪ Stations, stops, terminals, intermodal
  ▪ Support facilities, yards, shops, admin buildings
  ▪ Sitework, special conditions
  ▪ Systems

• Identified project components with higher levels of construction risk
# Construction Cost Estimate Comparison

<table>
<thead>
<tr>
<th>Element</th>
<th>FTA Capital Cost Database Range</th>
<th>SWLRT Construction PE Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideway and Track</td>
<td>$550 – 600</td>
<td>$414</td>
</tr>
<tr>
<td>Stations, Stops, Terminal, Intermodal</td>
<td>$96 – 114</td>
<td>$103</td>
</tr>
<tr>
<td>Sitework, Special Conditions</td>
<td>$143 – 189</td>
<td>$169</td>
</tr>
<tr>
<td>Systems</td>
<td>$159 – 194</td>
<td>$187</td>
</tr>
<tr>
<td>Construction Subtotal (SCC 10-50)</td>
<td>$1,020 - 1,170</td>
<td>$965</td>
</tr>
<tr>
<td>Unallocated Contingency (SCC 10-50)</td>
<td>NA</td>
<td>$96.5</td>
</tr>
<tr>
<td>Construction Total</td>
<td>$1,020 - 1,170</td>
<td>$1,060</td>
</tr>
</tbody>
</table>
Recommendations

• Bridges: 15% of estimated construction costs
  ▪ Identify design refinements that result in construction efficiencies
• Tunnels: 8% of estimated construction costs
  ▪ Consider longer construction segments
• Retaining walls: 11% of estimated construction costs
  ▪ Review retaining wall design approach for construction efficiencies
• Market conditions
  ▪ Monitor local construction market
Summary

• Construction cost estimate is developed to an adequate level of detail with all major elements of the project accounted for
• Cost estimate’s level of accuracy is appropriate for this phase of project development, and is within range of cost for similar LRT projects
• Elements of market risk remain in unit price and quantity cost estimate in areas of bridges, tunnels and retaining walls
Transit Options Review
Transit Options Review: Methodology

- Compared corridor transit options including:
  - Light Rail Transit (LRT)
  - No Build (No significant capital investment in transit)
  - Enhanced Bus
  - Bus Rapid Transit (BRT)
- Reviewed transit options from previous analysis with updated data using the following metrics:
  - Cost
  - Ridership
  - Travel time and reliability
  - Economic development
Transit Options Review: Route by Mode

Map showing various transit stations and routes in the Minneapolis area, including Edin Prairie, Golden Triangle Station, Mitchell Road Station, and others. The map also indicates different transit options such as SWLRT, Green Line, 3 Enhanced Bus, 4a BRT Target Field, and 4b BRT Downtown East.

Data Source: Metro Transit, Mn/DOT, U.S. Census
## Transit Options Review: Assumptions

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Length (miles)</td>
<td>15.7</td>
<td>N/A</td>
<td>21.1</td>
<td>16.7</td>
<td>18.2</td>
</tr>
<tr>
<td>Stations/Stops</td>
<td>17 new</td>
<td>N/A</td>
<td>19 new</td>
<td>18 new</td>
<td>28 new</td>
</tr>
<tr>
<td>Park and Ride</td>
<td>3,800 new</td>
<td>N/A</td>
<td>2,000</td>
<td>3,800 new</td>
<td></td>
</tr>
<tr>
<td>Frequency: Peak</td>
<td>10 min.</td>
<td>N/A</td>
<td>10 min. E. of Shady Oak</td>
<td>10 min.</td>
<td></td>
</tr>
<tr>
<td>Frequency: Off Peak</td>
<td>20 min.</td>
<td></td>
<td>15 min. E. of Shady Oak</td>
<td>20 min.</td>
<td></td>
</tr>
<tr>
<td>Guideway</td>
<td>Exclusive</td>
<td>N/A</td>
<td></td>
<td>Exclusive for 15 miles</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Connecting bus service</td>
<td>Background regional bus service growth</td>
<td>Enhanced shelters, Ticket vending machines, signal priority</td>
<td>Connecting bus service</td>
<td></td>
</tr>
</tbody>
</table>
## Summary

<table>
<thead>
<tr>
<th></th>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
</table>
| **LRT**  | Shortest transit travel time  
Highest ridership  
Highest reduction to annual VMT | Highest capital cost  
Highest annual operational costs                                               |
| **No Build** | No capital cost or increase in annual operating costs | No change in transit improvement, VMT                                          |
| **Enhanced Bus** | Lowest capital  
Lowest annual operating costs | Longest travel time  
Lowest ridership  
Lowest increase to access for transit dependent riders  
Least reduction to annual VMT                                                   |
| **BRT**  | Slightly lower capital cost than LRT  
Annual operating cost comparable to Enhance Bus option  
Higher ridership than Enhanced Bus | Half the ridership of LRT  
39%-43% of LRT congestion relief  
Schedule impacts due to restarting New Starts, Environmental and LPA processes |
Next Steps
Next Steps

- June 30: Community Advisory Committee
  - Input on project scope reductions
- July 1: Corridor Management Committee
  - Recommendation on project scope and budget
- July 1: Met Council Committee of the Whole
  - Recommendation on project scope and budget
- July 7: Hennepin County Regional Railroad Authority
  - Recommendation on project scope and budget
- July 8: Met Council
  - Action on project scope and budget
Member and Committee Reports/Public Forum
Next Meeting

• Tuesday, July 28, 2015 at 6:00 PM
More Information

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Twitter:
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