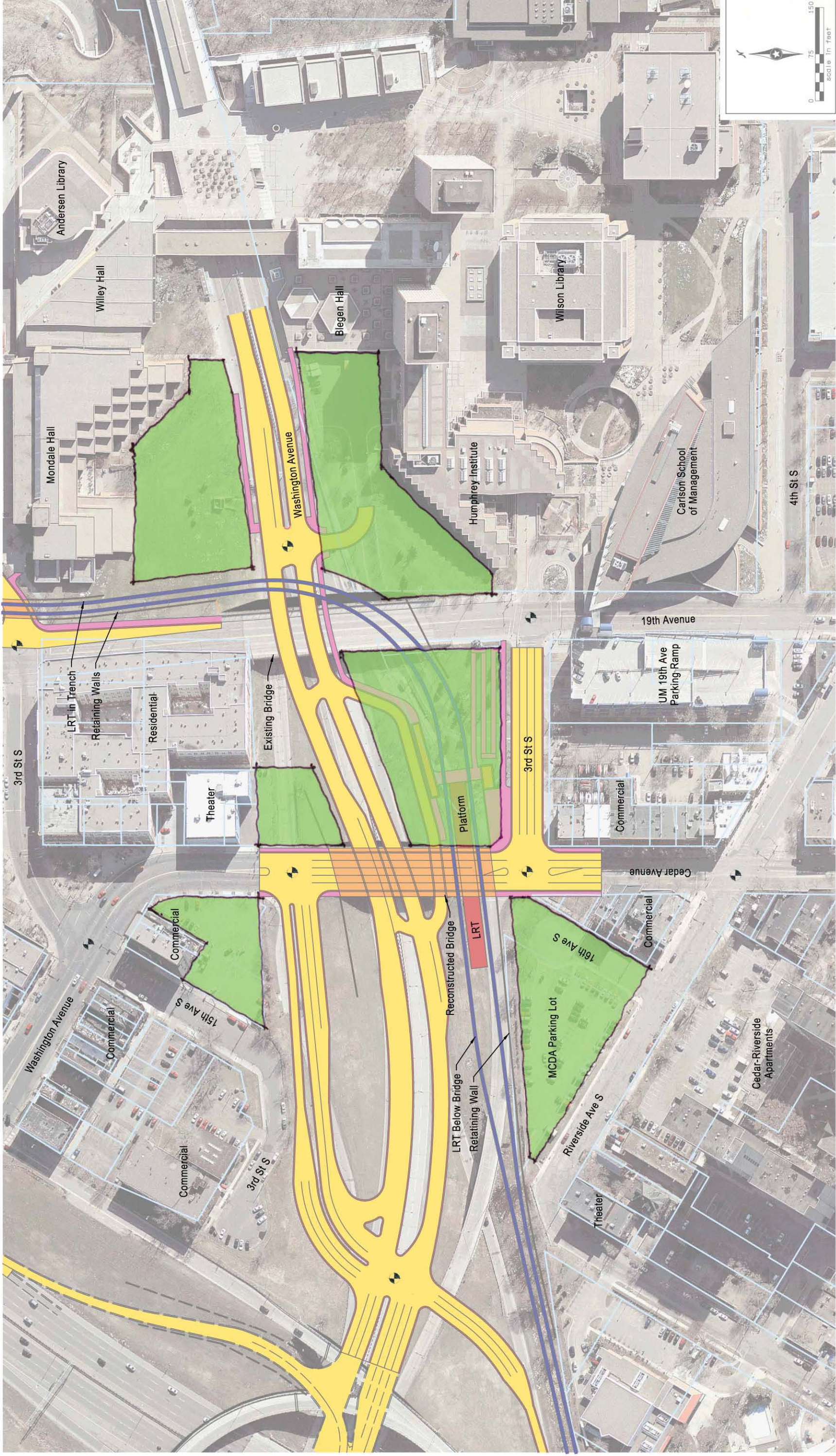
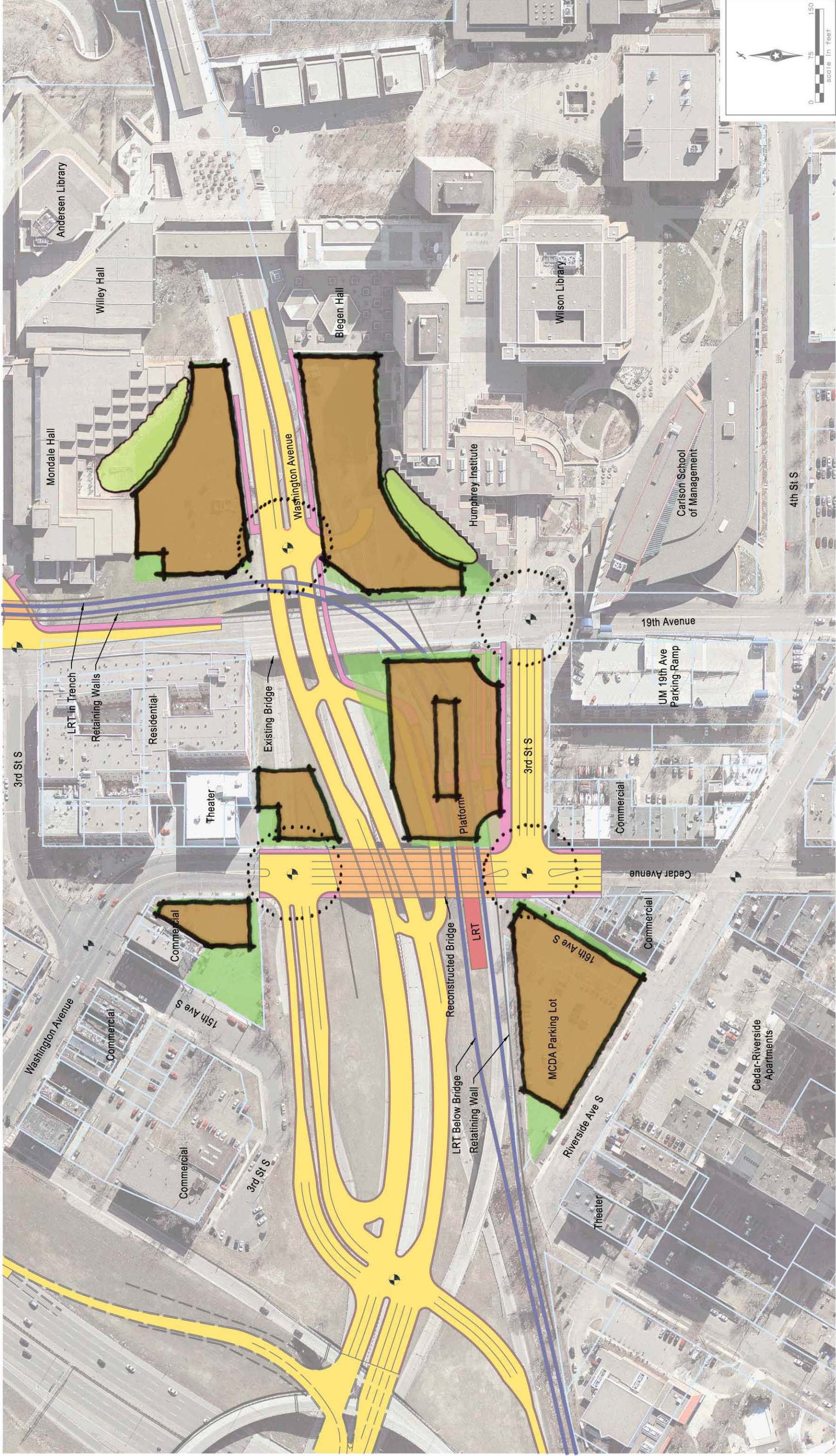
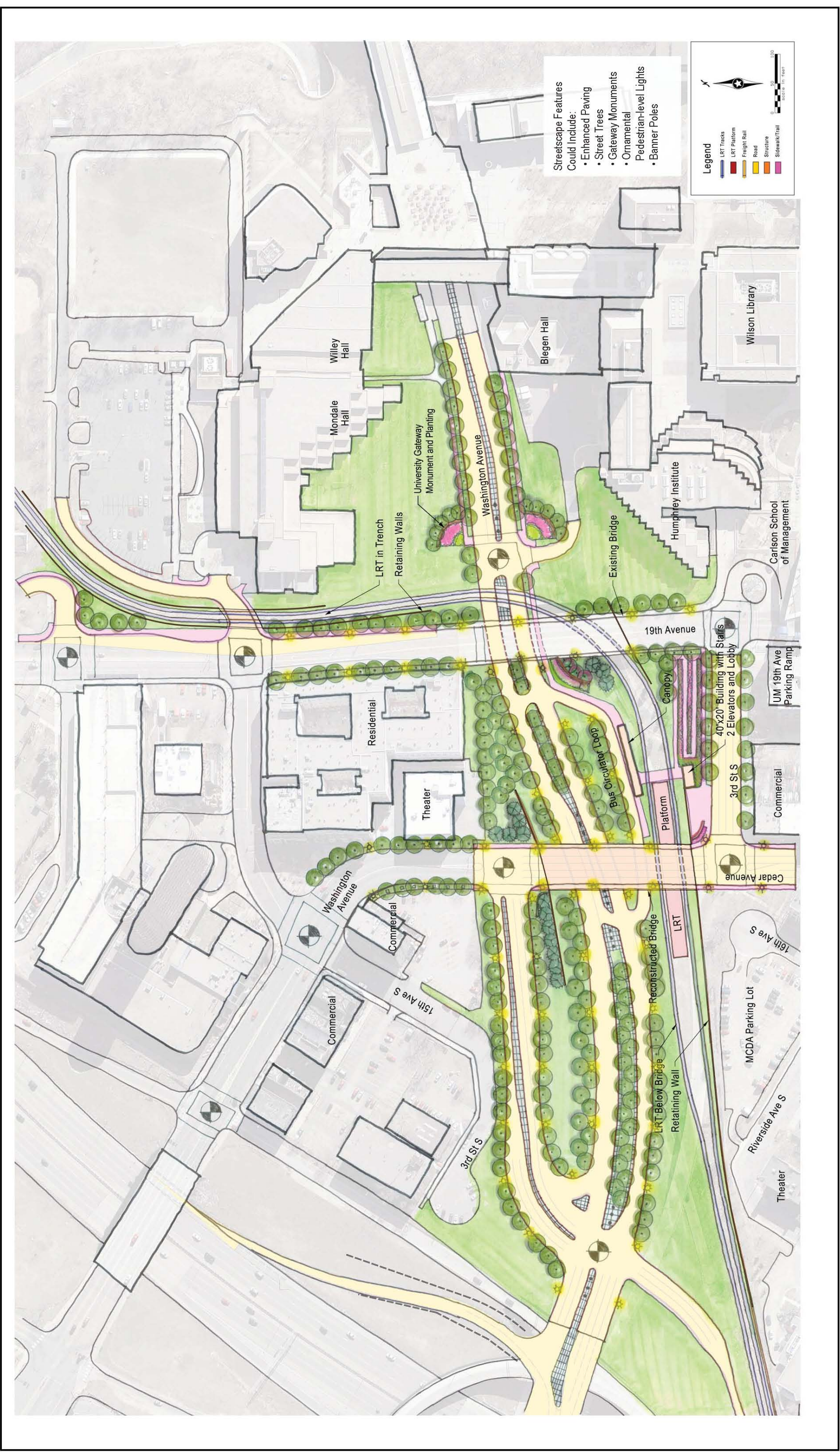


**APPENDIX C:**  
**POTENTIAL FOR WEST BANK**  
**DEVELOPMENT ILLUSTRATIVE DRAWINGS**









Streetscape Features  
Could Include:

- Enhanced Paving
- Street Trees
- Gateway Monuments
- Ornamental
- Pedestrian-level Lights
- Banner Poles

**Legend**

- LRT Tracks
- LRT Platform
- Freight Rail
- Road
- Structure
- Sidewalk/Trail

Scale: 0 50 100  
FOOT (1" = 100')

DRAFT

**West Bank Station Area Enhancements**  
Central Corridor LRT/Northern Alignment Alternative  
University of Minnesota



SRF #6399  
5/13/08

# **Transit Ridership Tech Memo**

SRF 0086399

## MEMORANDUM

TO: Bob Baker, Executive Director  
University Of Minnesota Parking and Transportation Services

FROM: Steve Wilson, Principal  
Mike Monahan, Principal.

DATE: May 19, 2008

SUBJECT: CENTRAL CORRIDOR NORTHERN ALIGNMENT COST EFFECTIVENESS INDEX (CEI)

The University of Minnesota, using the Central Corridor projects travel forecasting consultant, AECOM, has tested several transit ridership models as part of developing the federal Cost Effectiveness Index (CEI) for the northern alignment. The analysis has produced a range of ridership forecasts and CEIS between \$28.44 and \$24.58. It is our opinion that the Central Corridor project should pursue FTA concurrence on ridership forecasts using the "enhanced access" transit forecast of \$24.58 for the following reasons:

- The University of Minnesota campus area is an important generator of transit trips in the corridor and region, which warrants specific consideration of the unique and demonstrable characteristics of its travel behavior in the travel forecasting model.
- The University of Minnesota Campus shuttle system is an important part of the transit and egress within the campus area, effectively increasing the accessibility of all areas of the campus to the regional transit system. This system is not included in the standard travel forecasting model used by the Central Corridor project.
- AECOM developed a method to mimic the effects of the shuttle system on campus access.
- The objective of transit ridership forecasts in project development is to provide the most reasonable set of estimates and impacts from which to compare alternatives. The impacts of the Northern Alignment cannot be measured reasonably and without bias unless the "enhanced access" forecasts are used.

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OVER

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# Central Corridor LRT CEI

5/14/2008

Incremental Change vs. Baseline Alternative	Northern Alignment		Northern Alignment "Enhanced Access"	
	894M Capital Cost	889M Capital Cost	894M Capital Cost	889M Capital Cost
Annualized Capital Cost	\$60,483,290	\$60,072,658	\$60,483,290	\$60,072,658
Annual Operating and Maintenance Cost	\$1,277,310	\$1,277,310	\$1,277,310	\$1,277,310
Total Annualized Cost	\$61,760,600	\$61,349,968	\$61,760,600	\$61,349,968
Weekday User Benefits (Hours)	6561	6561	7542	7542
CEI (Annualization factor 331)	\$28.44	\$28.25	\$24.74	\$24.58
CEI (Annualization factor 319)	\$29.51	\$29.31	\$25.67	\$25.50
<b>Weekday Ridership</b>	35,240	35,240	36,560	36,560

## Definitions

Cost Effectiveness Index (CEI)	A type of benefit-cost measure developed by the Federal Transit Administration to determine a project's investment-worthiness. The CEI measures the cost for each hour of user benefit. This measure currently needs to be no higher than \$24 to be considered viable.
• Baseline Alternative	The measure of comparison for the CEI is the best transit system possible in the corridor without making significant capital investments. In the Northern alignment's case this Baseline model had to be modified to model correctly for the CEI; this would need to be cleared with FTA at some point
"Enhanced Access"	The ridership model was adjusted to reflect the presence of the U of M shuttle service in providing access to the regional transit system (LRT and bus).
Annualized Capital Cost	The difference in capital costs between the "baseline" bus and Northern Alignment LRT, converted to an annual equivalent. The conversion is based on the "useful life" of each part of the capital cost, with long-lasting components (such as bridges) having a lower factor than components that wear out quickly (such as buses)
Annual Operating and Maintenance Cost	The difference in operating costs between the "baseline" bus and Northern Alignment LRT. This cost occurs every year.
Total Annualized Cost	The sum of the above capital and operating cost differences
Weekday User Benefits	The estimated hours of time savings for transportation system users
Annualization Factor	Ridership forecasts are based on weekday estimates. This factor accounts for weekend/holiday service. A higher number such as 331 reflects strong weekend service and ridership, such as is found in the Central Corridor.
Weekday Ridership	Central Corridor LRT ridership



**Central Corridor Project Office  
Response to Feasibility Study**

May 29, 2008

Marisol Simón  
Regional Administrator  
FTA Region 5 - Chicago  
200 West Adams Street, Suite 320  
Chicago, IL 60606

Dear Ms. Simón:

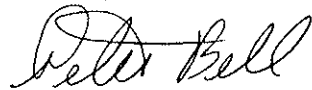
The Metropolitan Council, project sponsor for the Central Corridor Light Rail Transit Project, is transmitting the Draft Northern Alignment Alternative Feasibility Study (Feasibility Study) to the Federal Transit Administration (FTA) per FTA's request. The Feasibility Study was completed by the University of Minnesota (U of M) and submitted to the Central Corridor Project Office on May 19, 2008. This Feasibility Study was commissioned by the University of Minnesota, at its sole expense, as documented in a letter to Peter Bell, Chair of the Metropolitan Council, dated November 26, 2007.

It is our hope, as the Chair of the Metropolitan Council and the Director of the Central Corridor LRT project, that the Northern Alignment Alternative Feasibility Study enclosed with this transmittal, the associated technical memorandum from the U of M's consultant highlighting ridership, user benefits and CEI (dated May 19, 2008 from Mr. Steve Wilson of SRF Consulting), the recommendation of the Central Corridor Management Committee, and the action taken by the Metropolitan Council, together with the concerns regarding the Northern Alignment's risks and uncertainties highlighted here, eliminates the need for any further review or consideration of the Northern Alignment.

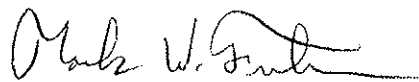
The Metropolitan Council's Resolution 2008-11 adopted on May 28, 2008, clearly reaffirms its decision of February 27, 2008 selecting the Washington Avenue at-grade alignment, and directs Central Corridor Project Office staff to proceed accordingly.

We look forward to a quick resolution with FTA as to the adequate level disclosure of the Northern Alignment Feasibility Study in the Supplemental Draft Environmental Impact Statement to enable FTA to provide their final comments to the SDEIS and publish the document as soon as possible.

Sincerely,



Peter Bell  
Metropolitan Council Chair



Mark W. Fuhrmann  
CCLRT Project Director

cc: James Simpson, FTA Administrator  
John Hogan, Jacobs Civil

Attachment A: CCPO Overview of U of M's Northern Alignment Alternative Feasibility Study  
Attachment B: Summary Table of Northern Alignment Feasibility Study  
Attachment C: Met Council Resolution 2006-15  
Attachment D: Met Council Business Item 2008-64  
Attachment E: Met Council Resolution 2008-11

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## **Central Corridor Project Office Overview of U of M's Northern Alignment Alternative Feasibility Study**

The CCPO has reviewed the Feasibility Study using the following criteria:

1. Travel Demand and Cost Effectiveness
2. Design and Constructability Issues
3. Capital Cost Estimates
4. Environmental and Land Use Impacts

This overview intends to briefly summarize the history of the Northern Alignment in the Central Corridor LRT project development process, the results of the Feasibility Study, and the outstanding risks and uncertainties that this alternative alignment presents relative to the current locally preferred alternative, identified as LRT operating on University and Washington avenues (Metropolitan Council Resolution No. 2006-15).

### **Northern Alignment as Part of CCLRT Project Development**

Early stages of the project development process for the Central Corridor involved scoping of many alternative alignments as well as alternative modes. One of the alternative alignments analyzed was a northerly alignment through the U of M campus, using what is known as the “Dinkytown Trench” and crossing the Mississippi River on Bridge 9 (identical attributes to the current Northern Alignment). This alignment alternative was screened from further analysis during Scoping in 2001 because it was determined that it did not best meet the project purpose and need. Key evaluating criteria used in this determination, as set forth in the public decision making record, included ridership, cost, bus network connectivity, community impacts and right-of-way impacts.

The Feasibility Study completed by the U of M documents the efforts of the U of M to define a “feasible northerly Light Rail Transit alignment.”

The results of the Feasibility Study demonstrates the Northern Alignment serves significantly fewer riders with a significantly higher Cost Effectiveness Index than the at-grade Washington Avenue alignment. The Central Corridor Management Committee and Metropolitan Council carefully considered the information provided in the Feasibility Study and provided in Attachment A when they positively reaffirmed the Central Corridor LRT alignment through the University of Minnesota Minneapolis Campus to be a Transit Mall at-grade on Washington Avenue.

### **Northern Alignment Alternative Feasibility Study – Project Definition and Findings (University of Minnesota, May 2008)**

The Northern Alignment, as defined in the Feasibility Study, “is an alternative to the current CCLRT Alignment from I-35W to the U of M Transitway” through the University of Minnesota’s Minneapolis campus. Characteristics of the Northern Alignment, as described in the Feasibility Study, are briefly summarized as follows.

- The Northern Alignment interlines with Hiawatha LRT at the same location as the CCLRT alignment, but departs significantly from the LPA alignment from this point east to the U of M Transitway.
- The West Bank station would be located below a reconstructed Cedar Avenue Bridge.

- Upon leaving the West Bank Station, the alignment departs from the existing Washington Avenue right-of-way to enter what would be a 30-foot wide cut, approximately 20-25-feet-deep, with retaining walls on each side, passing between 19<sup>th</sup> Avenue S. and the U of M's Law School.
- Four of 30 Riverbluff HUD subsidized dwelling units would be demolished to accommodate the Northern Alignment in the vicinity of 1<sup>st</sup> Street S. and 22<sup>nd</sup> Avenue S. Access to the remaining units and a nearby high-rise residential tower would be reconfigured using a new local road constructed in this area.
- The Northern Alignment would cross the Mississippi River at the site of an existing bridge, known as Bridge 9, which is a former freight rail bridge currently used for bicycle/pedestrian-only traffic. This bridge is not structurally sufficient to accommodate LRT operations and would therefore be demolished and a new bridge constructed. The proposed design assumes the reuse of the existing cofferdam.
- Upon crossing the Mississippi River on a reconstructed Bridge 9, the Northern Alignment would be situated within the right-of-way of the U of M and Burlington Northern Santa Fe (BNSF) Railroad.
- The Minnesota Commercial Railroad operates an industrial spur track within this right-of-way that connects to the east to the BNSF at Union Yard.
- Although still being used on a regular basis, there is a proposal to use part of this right-of-way to construct a parkway known as Granary Road. Construction of Granary Road is part of adopted local plans (City of Minneapolis). A portion of it is currently programmed for construction by the city, from approximately 25<sup>th</sup> Avenue east to the Minneapolis city limit.
- Bridge 9 was re-decked using federal Surface Transportation Program (STP) funds and opened to bicycle / pedestrian-only use in 2000. In 2006, a Project Memorandum was prepared by the Minnesota Department of Transportation and the City of Minneapolis proposing construction of a bituminous trail and bikeway from Bridge 9 to Oak Street using a portion of the Dinkytown Trench. This trail will provide a direct connection from the existing University Transitway bike facility to Bridge 9 facility and into the Minneapolis Central Business District via W. River Parkway. In 2007, federal funds were granted to construct this improvement through the Non-Motorized Transportation Pilot Program (NTP) and construction is planned for 2009.
- The proposed design of the Northern Alignment presumes the continuation of freight service in the corridor while accommodating Granary Road as well as a reconstructed bicycle / pedestrian trail replacing the one planned for construction in 2009 (discussed above).
- The East Bank station identified in the AA/DEIS would become a Dinkytown station located at University Avenue SE and 14<sup>th</sup> Street SE. This station would be one-level below street grade in the Dinkytown Trench.
- The Northern Alignment would continue to follow the railroad alignment to 21<sup>st</sup> Avenue SE.
- At 21<sup>st</sup> Avenue SE, the Northern Alignment would depart from Railroad right-of-way and then turn 90-degrees south to parallel 23<sup>rd</sup> Avenue SE on the west side of the street.
- At the U of M Transitway, the alignment would turn 90-degrees east and parallel the Transitway. From this point, the Northern Alignment would join the current DEIS LPA alignment.
- The Stadium Village station would be in a slightly different location from that proposed under a revised DEIS LPA (revision required to accommodate the U of M's football stadium construction). It would be located between 23<sup>rd</sup> Avenue SE and 25<sup>th</sup> Avenue SE on the south side of the U of M Transitway.

Using the four criteria as defined by the U of M to determine feasibility of the Northern Alignment (as outlined above), the Feasibility Study concluded that the Northern Alignment was feasible with respect to

engineering, safety, accessibility, light rail operations, roadway network operation, environmental impacts and compatibility with land uses in proximity to the corridor.

The Metropolitan Council, as the federal grantee, is charged with looking beyond technical feasibility to ascertain whether an alternative is a prudent and ultimately practicable means of addressing a project’s defined purpose and need. As part of establishing the practicability of the Northern Alignment alternative, a thorough discussion of its risks and uncertainties was developed and is summarized in the following section of this overview.

**Northern Alignment – Risks and Uncertainties**

**1. Travel Demand and Cost Effectiveness**

*Travel Demand Results and Proposed U of M Model Modifications*

**Table 1: Weekday Ridership and User Benefits**

	<b>Washington Avenue At- Grade<sup>(1)</sup></b>	<b>Northern Alignment (using FTA-Accepted Model)</b>	<i>Northern Alignment (using non-FTA-Accepted Model)</i>
<b>Weekday Ridership</b>	<b>41,790</b>	<b>35,240</b>	<i>36,560</i>
<b>Weekday User Benefits</b>	<b>8,057</b>	<b>6,561</b>	<i>7,542</i>

<sup>(1)</sup> Ridership and user benefits presented here based on project definition as resolved by Met Council action taken February 27, 2008.

The travel demand runs for the Northern Alignment included two model runs – one using the model reviewed and accepted by FTA for entering in PE in 2006, and one using modifications to the FTA-accepted model. Both model runs result in significantly fewer boardings than for the Washington Avenue at-grade model run: approximately 35-36,000 average daily boardings, compared with approximately 42,000 average daily boardings for the Washington Avenue at-grade alternative.

The non FTA-accepted run was prepared by making changes to the model intended to approximate the effect of rerouted U of M circulator buses, which are not included in the current model. These travel demand runs do not result in a significant number of new boardings, but do result in higher user benefits - nearly 1,000 hours more than with the FTA-accepted model runs for the Northern Alignment. The CCPO’s concerns with the modified model runs are outlined as follows:

- Effects of the proposed model adjustments on the Project Baseline have not been estimated, since no new Baseline alternative was prepared or run. It is not clear how these changes would be accommodated in the Baseline and what effect they would have on the results.
- Effects of the proposed model adjustments on the Washington Avenue at-grade alternative have not been estimated. It is not clear what effect these changes may have on the Washington Avenue at-grade alternative, but some improvements in user benefits may accrue to the Washington Avenue at-grade alternative with the proposed model modifications.
- Although the travel demand runs have been adjusted to simulate the U of M circulators and gain the user benefits, it is not clear what level of change in bus service this represents over existing service and how this will impact system operating costs. According to the U of M, the cost for the proposed bus circulators have not been estimated or included in the CEI calculations.

***LRT Run Times***

The Feasibility Study indicates the Northern Alignment run time is faster than the Washington Avenue at-grade alternative. This is untrue; the Washington Avenue alignment is slightly faster than the Northern Alignment.

The run times for the Northern Alignment appear reasonable and comparable to the run time methodology used for other alternatives. However, two issues of concern remain to be resolved:

- The run times assume an operating speed of up to 40 mph in the Dinkytown Trench. Given the ultimate proximity of LRT to freight rail under the Northern Alignment alternative, decreased operating speeds and increased run times could result once Granary Road is built and the freight rail is relocated to within 17 feet of the LRT.
- The University’s consultant provided a revised alignment to avoid impacts in the West Bank area (as depicted in Figure 30, Proposed West Bank Alignment with Enhancements, in the Feasibility Study). These revisions resulted in significant additional horizontal curvature in the alignment. Correspondence between the CCPO and the University’s consultant indicates that Northern Alignment run times were not adjusted for these changes.

***CEI Results***

**Table 2: Northern Alignment CEI Results**

<b>Northern Alignment</b>		<b>Northern Alignment “Enhanced Access”<sup>(1)</sup></b>	
<b>\$894MM Capital Cost</b>	<b>\$889 MM Capital Cost</b>	<b>\$894MM Capital Cost</b>	<b>\$889 MM Capital Cost</b>
<b>\$28.44</b>	<b>\$28.25</b>	<b>\$24.74</b>	<b>\$24.58</b>

<sup>(1)</sup>Using Non-FTA Accepted Model

Four CEI results were provided by the University for the Northern Alignment alternative – one for each of the two different travel demand runs described above, each with two different cost estimates (see Table 2, above).

Based on the costs provided, it appears that the CEI calculations for the Northern Alignment include only slightly higher O&M costs, which may not be sufficient to account for the longer LRT length of this alternative. The University has confirmed that no additional bus service costs were included to account for the proposed campus circulator service to the Northern Alignment stations that would be provided under the “Enhanced Access” scenario (using the non-FTA accepted model). Since, under this scenario, the model has been adjusted to include the benefits of this U of M bus service, some accounting of the operating costs (and capital costs, if new buses are required) must be made to capture the full impact to the CEI.

It is also likely that the capital costs of the Northern Alignment have been underestimated. An increase in the capital costs of the Northern Alignment would result in a higher CEI for this alternative. (See further discussion under Capital Cost Estimates, below.) No costs have been included for additional railroad liability insurance that would likely be required to operate LRT in close proximity to freight rail as proposed with the Northern Alignment. These costs should be included as part of the O&M costs in the CEI calculation.

Finally, the Washington Avenue alignment CEI, as presented to the Metropolitan Council on February 27, 2008 and as presented to FTA is \$23.80. Depending on whether an “enhanced access” or FTA-accepted model of forecasting ridership is used, the Northern Alignment CEI exceeds the Washington Avenue CEI by an amount ranging from \$0.78 to \$4.64. Regardless of whether the “enhanced access” ridership model forecasts are used or whether the FTA-accepted ridership model is used, the Northern Alignment results in a CEI that is in excess of that currently required by FTA to enter into final design.

## **2. Design and Constructability Issues**

### ***Bridge 9 Replacement***

Two significant Design and Constructability concerns regarding the Northern Alignment’s need to reconstruct the Bridge 9 are highlighted as follows:

- Requirements for navigation channel. The University has indicated that they have received verbal approval from the Army Corps of Engineers for the proposed bridge plans and to reconstruct the existing mid-channel pier in its current position. However, experience from other recent Mississippi River crossing projects in Minneapolis and St. Paul, including Mn/DOT’s Lafayette Bridge replacement project, indicates that the US Coast Guard may request a broader navigation channel under the bridge, particularly in an area near the Saint Anthony’s Falls’ lock. A longer span would increase the cost of this structure.
- Re-use of existing cofferdam. The University has indicated that they intend to reuse the existing cofferdam for the center pier of the bridge. The condition of this structure is unknown and it is likely that it may not be sufficient for reuse. A more prudent design would be to assume full substructure replacement. Construction of a substructure in a navigable waterway is difficult and expensive.

### ***West Bank Trench***

As defined in the Feasibility Study, the Northern Alignment would be constructed in a long, deep trench adjacent to 19<sup>th</sup> Avenue and the U of M Law School. There remain concerns at the CCPO about the ability to construct a very deep LRT alignment adjacent to an active roadway (19<sup>th</sup> Avenue) and an existing building. This is particularly concerning given that the Feasibility Study calls for the use of Mechanically Stabilized Earth (MSE) retaining walls in a cut section (proposed as a cost-savings measure). This proposed technique is likely to require substantial space to accommodate the temporary cut slopes and is an unusual technique to use in a cut section of this depth and length.

### ***General Alignment Concerns***

The CCPO has significant concerns with the proposed alignment engineering. We understand that the level of engineering completed is at a level of detail appropriate for a feasibility study. For example, it appears that conceptual layouts developed were based on aerial photography without the benefit of any survey data. However, the University has represented that the design is at the 15- to 20-percent completion level. This assertion is not supported by the plans that the CCPO has received and reviewed.

- There are issues with the proposed Northern Alignment meeting design standards. Although the report indicates that the design meets FTA standards, no such standards exist and the LRT alignment should have been prepared with CCLRT design criteria which were provided to the University’s consultant. The alignment appears to have been designed without the inclusion of spirals nor appropriate tangent lengths. It is likely that the inclusion of spirals will have profound impacts on the alignment in critical areas, including the Gopher Stadium, the West Bank and the

Washington Avenue crossing. The West Bank alignment modifications (Figure 30 in the Feasibility Study), received by the CCPO after design reviews were completed, appear to include back-to-back horizontal curves which is a violation of CCLRT Design Criteria. Without the inclusion of spirals and conformance with other CCLRT Design Criteria requirements, the proposed alignment cannot be accepted as feasible.

- The alignment appears to be extremely close to or possibly extends into the plaza area of the new Gopher Stadium with no pedestrian control. The impact would likely be more severe with further design refinement. This could be a serious safety issue.

### ***Utility Impacts***

The Feasibility Study reported that the Northern Alignment has very minimal utility impacts and could save an entire construction season. This assertion is not supported in the report; there is no utility information presented comparable to the utility investigation work done for the Washington Avenue at-grade alternative.

### ***Railroad Alignment***

The Feasibility Study indicates that the Northern Alignment will run in the “Dinkytown Trench” and relocate the existing freight rail to a single track in the middle of the trench to accommodate LRT, future Granary Road, and the City of Minneapolis Bike/ Pedestrian trail. The CCPO has many concerns with this proposal:

- The alignment is in conflict with a transload rail yard now under construction at the eastern end of the Dinkytown Trench. There does not appear to be sufficient space in the existing trench to accommodate LRT, the new freight rail facility, Granary Road and the bike/ pedestrian trail (typical section as illustrated in Figure 12 of the Feasibility Study).
- No agreement has been reached with the owner of the right-of-way within the Dinkytown Trench (BNSF) or the operator of the rail service (Minnesota Commercial Railroad (MNNR)).
- The University’s proposal locates freight rail within 17’ of the LRT; this is less than the absolute minimum track separation standard commonly demanded by freight railroads. The proposed freight rail track location in the middle of the LRT and Granary road provides no opportunity for freight rail maintenance. This is likely to be unacceptable to the Railroad.
- The proposed location of the westbound LRT track does not provide sufficient clearance for LRT maintenance at the bridge piers.
- The Bike / Pedestrian trail in the Dinkytown Trench is proposed to be 10’ wide and within 2 feet of the dynamic envelope of LRT. This width appears inadequate for the trail and the proximity to LRT may be a safety concern.
- The University’s proposal assumes that all costs for freight rail relocation, including any required protection for LRT, would be borne by others funding the construction of Granary Road.

### **3. Capital Cost Estimates**

The CCPO has a number of concerns with the Capital Cost Estimate prepared for the Northern Alignment

#### ***Use of CCLRT Unit Pricing***



The Northern Alignment conceptual cost estimate was prepared using unit prices from the CCLRT estimate developed in October 2007. While the use of CCLRT unit prices was agreed to in principal by the CCPO, the use of parametric extension of unit pricing is only valid where the scope of work is similar. The Northern Alignment contains several work items which differ from the planned Washington Avenue at-grade alignment, including a new 500 – 800-foot-long and 25-foot-deep trench on the West Bank, MSE retaining walls in cut sections and construction within a trench adjacent to an active railroad line. These work operations exist only on the Northern Alignment and new unit prices were not developed by the University to cover this type of work. Cost assumptions listed in the Northern Alignment estimate lack foundation to be considered reliable, even for a conceptual level of design, resulting in uncertainty and risk.

### ***Cost Risks***

Significant cost risks identified in the Northern Alignment conceptual estimate raised by the CCPO have not been addressed. These risks include railroad right-of-way costs, contaminated soil along the entire alignment, Bridge 9 Mississippi River crossing costs (assumes reuse of cofferdam and placement of pier in navigable waterway), and existing Bridge 9 demolition costs. It is prudent to assign additional costs where there is uncertainty and risk in an estimate. This is typically handled through the use of an allowance or a higher contingency. The Northern Alignment estimate assumed the same level of contingency as the Washington Avenue alignment with significantly less detail of design.

### ***Future Costs***

In planning for the Northern Alignment, it is important to consider the costs that future projects might bear as a result of this alignment. Construction of Granary Road is a planned project in the City of Minneapolis' Comprehensive Plan. The proposed Northern Alignment will run adjacent to the proposed Granary Road alignment, the City of Minneapolis bike / pedestrian trail and BNSF freight rail tracks. The coexistence of these facilities will add significant costs to the Granary Road project. Additional costs could include items such as relocation of freight rail tracks to accommodate Granary Road within the limited right-of-way; crash walls as a physical separation of LRT, Granary Road and freight rail tracks; future at-grade signalized and gated crossings for LRT and freight rail; and curbing to retain LRT ballast. These costs are not accounted for in the current Northern Alignment cost estimate.

## **4. Environmental and Land Use Impacts**

### ***Cultural Resources***

The Feasibility Study provides an outline of the Section 106 and 4(f) processes. Additionally, the impact section is inclusive of the key risk areas that the CCPO has identified associated with the Northern Alignment. These include – Bridge 9 as an NRHP-eligible resource, historic retaining wall on the East Bank, the Old Campus Historic District, and West River Parkway as a contributing element to the NRHP-eligible Grand Rounds. The Feasibility Study identifies both potential direct and indirect impacts to these resources.

What is lacking in the Feasibility Study is the link of the Section 106 and 4(f) processes as it pertains to the historic resources. Specifically, the statement “[t]he feasibility of the Northern Alignment for LRT at the University depends on the replacement of the NRHP eligible Northern Pacific Rail Bridge 9 with a bridge suitable for LRT...” does not provide the complete picture to the required decision making. ***The question is not “whether or not a bridge for LRT can be constructed” in the location, but rather, as required by Section 4(f), does the Northern Alignment first meet the prudent and feasible test, and second, is there another alternative that has “lesser” impacts to identified 4(f) resources.***

The Feasibility Study accurately reflects the steps required to bring the northern alignment up to speed under the Section 106 process (Phase I and II evaluations). The risk inherent in this is the ability to successfully process them through the reviewing agencies (Mn/DOT and the State Historic Preservation Office (SHPO)).

### ***Parks and Recreational Resources***

The Feasibility Study is comprehensive in its identification of potential resources to be impacted by the Northern Alignment. However, the Feasibility Study does not present the complete “magnitude of the impact(s)” associated with the resources. Specifically, the closure of the City of Minneapolis bicycle / pedestrian trail, currently on Bridge 9, is referenced as temporary, with this trail being replaced with reconstruction of the Bridge 9 to facilitate the Northern Alignment. Based on the general assumption that the construction of the bridge would take up to two construction seasons, closure of this trail could indeed be considered significant enough to result in a temporary use, as defined under Section 4(f). Since this is a City of Minneapolis resource, they would be a key stakeholder in the determination of the significance and the appropriate mitigation for any resultant impacts.

***Similar to the Cultural Resource section, the broader decision making picture is not addressed in the Feasibility Study, as it relates to the 4(f) process (described above).*** The potential impacts in the Feasibility Study assume that the proposed City trail (programmed for construction in 2009) on the east bank and within the Dinkytown Trench can be accommodated under the Northern Alignment alternative. Uncertainties regarding this provision have been outlined above, as it relates to interoperability of all proposed modes in the trench. If the design changes, based on these considerations, such that the bicycle trail to the east can no longer be accommodated with the Northern Alignment, then findings and conclusions would need to be changed in this area.

### ***Environmental Justice***

The Feasibility Study includes appropriate demographic data pertaining to low income and minority populations. It also identifies the RiverBluff community and potential direct impacts to four (4) dwelling units here and associated impacts due to the proximity of the proposed LRT alignment (noise, vibration, visual, change in physical landscape and character). The *Concerns for Alignment Feasibility* section states that “while it is unlikely that this impact would be identified as a fatal flaw with regard to project feasibility, any EJ impacts would need to be mitigated.” ***This impact is of concern, as it would disrupt and directly impact this EJ community, without seeming to provide a direct benefit to the RiverBluff neighborhood (a station location is not proximate to the townhomes). Hence, mitigation for this impact could indeed be an alternative that first avoids a disproportionate impact to these residents.*** Additionally, HUD would be a key stakeholder in the evaluation of impacts and mitigation strategies to this Section 8 housing.

### ***Hazardous Materials***

Specific comments in the Feasibility Study on this subject are limited to the potential cost to complete required remediation, as well as the requirements for complete Phase I and II environmental site assessments (ESAs).

It must be noted that the CCPO has significant concerns regarding the presence of contaminated soils and hazardous materials in proximity to the proposed Northern Alignment alternative. The alignment is in proximity to a Minnesota Superfund site (former site of the Minneapolis Gas Works, aka, Minnegasco) along the west Mississippi riverbank. In addition, the Northern Alignment bisects a Minnesota voluntary investigation and cleanup (VIC) site, known as Former Gas Holder #4 (FGH4), which is presently used for recreational purposes (U of M ball fields).

The following is a summary of **other potential Northern Alignment issues associated with contaminated soils/hazardous materials**.

- There is a site along the **west Mississippi riverbank, underneath Bridge 9** that is generally known as Gas Holder #5. This site has never been thoroughly investigated. The **likelihood of encountering contaminated soils and hazardous waste is quite high** based on its former use as a gas holder and as a dumping ground for materials associated with Minnegasco operations and as a site to store coal.
- Based on information from the Minnesota Pollution Control Agency (MPCA), the following are known sources of contamination at other sites along the Northern Alignment.
  - There was a **pesticide manufacturer** located just north of the tennis courts that are presently located at 17<sup>th</sup> Avenue and 5<sup>th</sup> Street (McLaughlin Gormley King). Since this site was serviced by rail, it is likely that contaminants could be encountered in the railroad ROW in which the Northern Alignment would be constructed.
  - There was a **chemical manufacturer** located just north of the storage tanks demolished by the U of M (23<sup>rd</sup> Avenue) as part of Gophers Stadium construction, (Reichold Manufacturing). Materials of concern manufactured and/or stored here include linseed oil and paint. Similar to the pesticide manufacturer, it may be assumed that there have been spills associated with transporting raw and/or finished materials found within the railroad corridor.

The CCPO's final comment pertains to what is not included under discussion of environmental impacts in the Feasibility Study. Specifically, potential impacts to the Mississippi River, the riverbluffs and floodplains are not discussed. Even if the reconstructed Bridge 9 utilizes existing piers, there would be construction related activity in the river that would need to be addressed. Additionally, if the engineering assumptions change, direct and indirect impacts assumed to the river would also likely change. The National Park Service (NPS) will be stakeholder in the design and decision-making process, as the area surrounding Bridge 9 is designated as part of the Mississippi National River and Recreation Area (MNRRA).

### *Summary of Environmental and Land Use Impacts*

In general, the Feasibility Study identifies the resources and potential impacts for each of the four key environmental areas selected (cultural resources, park and recreational resources, environmental justice, and hazardous/regulated materials). The most important consideration is that the impacts identified (direct impacts to a historic resource, 4(f) trail, and Section 8 housing ) can be avoided under the Washington Avenue at-grade alternative. Additionally, impacts identified in the Feasibility Study assume that the design proposed for the Northern Alignment is feasible. The CCPO has not been able to confirm that the design is feasible, and changes to the design that would impact right-of-way requirements and construction techniques could significantly alter the extent and type of impacts under this alignment (e.g. trails, river related impacts, etc). Since significant concerns have been raised regarding engineering and design assumptions used for developing the Northern Alignment, it would be reasonable to presume that design changes would occur should this alternative be included as part of the PE project development process.

### **In Conclusion**

The Feasibility Study commissioned and published by the University of Minnesota determined that the Northern Alignment was feasible with respect to engineering, safety, accessibility, light rail operations, roadway network operation, environmental impacts and compatibility with land uses in proximity to the corridor.

The CCPO takes exception to this finding based on engineering and environmental considerations, as described in this overview. Furthermore, based on an assessment of the risks and uncertainties that are present with the Northern Alignment, it is not likely to be a prudent or practicable solution that can be accommodated within federal cost-effectiveness considerations. A summary of Northern Alignment Alternative Feasibility Study findings as well as CCPO-identified risks and uncertainties can be found in the attachments to this overview (Table A-1, Summary Table of Northern Alignment Feasibility Study Findings and Associated Risks and Uncertainties).

Upon consideration of the Northern Alignment and following distribution of the Feasibility Study as well as several presentations including opportunities for asking questions of technical staff, the Central Corridor Management Committee passed a resolution at their meeting of May 28, 2008 recommending the Metropolitan Council refine its action of February 27, 2008 and direct the CCPO to **“proceed with Preliminary Engineering and make application to the Federal Transit Administration to move the CCLRT Project into Final Design with, among other features, a University of Minnesota at-grade Transit/Pedestrian Mall on Washington Avenue.”** The CCMC also recommended that the Metropolitan Council **“discontinue all work related to the Northern Alignment”** and that project partners **“continue to work toward the development of a Memorandum of Understanding (MOU) focused on mitigation measures in the University area.”**

The Metropolitan Council acted upon the CCMC recommendation at their meeting, also of May 28, 2008. The Council unanimously passed a resolution adopting the **“recommendations of the Central Corridor Management Committee embodied in that committee’s resolution adopted on May 28, 2008.”** A copy of this resolution is attached as a reference.

### Summary Table of Northern Alignment Feasibility Study Findings and Associated Risks and Uncertainties

	Northern Alignment Feasibility Study Findings	Risk/Uncertainty
<b>Physical Characteristics</b>		
Running time/patronage	40 minutes and 26 seconds, terminal to terminal  35,240 per FTA-accepted model 36,560 using U of M proposed "Enhanced Access" model	May be aggressive given LRT train speed assumptions, which would be operating alongside active freight rail and with additional horizontal curves. Conformity and concurrence an "Enhanced Access" ridership model with FTA has not been achieved for the CCLRT project.
Station Locations	Preliminary station locations were developed for 3 stations.	Public and agency involvement in the siting of these stations has not been undertaken
ROW	4 of the 30 RiverBluff HUD subsidized units would be acquired. Cuts across U of M-owned baseball fields. City of Mpls Bridge 9, and acquisition of 15,000 sq ft from BNSF.	Cost and required coordination for acquisitions. Uncertainty exists around final ROW requirements and ability to secure require ROW from BNSF.
Capital Cost	\$894MM - \$889MM	Uncertainty with cost of New Bridge 9, replacement of Cedar Ave Bridge, freight rail ROW, contaminated sites and other PE issues.
O & M Cost	\$1,277,310 incremental Baseline vs. Build costs	O&M costs under "Enhanced Access" scenario did not account for additional costs of U of M circulators, nor does it capture significantly reduced rail operating revenue. Other O&M costs (e.g., railroad liability insurance) not included.
CEI	\$28.25 to \$28.44 per the FTA-accepted ridership forecast model \$24.39 to \$24.58 generated by applying an "Enhanced Access" method of modeling proposed by the U of M	Conformity and concurrence an "Enhanced Access" ridership model with FTA has not been achieved for the CCLRT project.
<b>Potential Social, Economic, Environmental and Transportation Impacts/Risks</b>		
Study Purpose and Need	The Feasibility Study found the alternative to meet stated project Purpose and Need.	The degree to which this alternative meets stated Purpose and Need goals is less than with the DEIS LPA or proposed changes reflected in the SDEIS

	<b>Northern Alignment Feasibility Study Findings</b>	<b>Risk/Uncertainty</b>
<b>Potential Social, Economic, Environmental and Transportation Impacts/Risks</b>		
Land Use	The Feasibility Study found land use to be consistent with the proposed alternative.	Public and community engagement in these findings has not yet been undertaken.
Neighborhoods	Low potential for impacts.	Public and community engagement in these findings has not yet been undertaken.
Acquisitions and Displacements/Relocations	The Feasibility Study identifies acquisitions of 4 residential properties in a Section 8, subsidized housing development.	Additional ROW will be required from BNSF. The residential properties directly impacted receive Section 8 assistance and demolition, as suggested in the Feasibility Study, will require additional consultation with HUD. Other ROW may be required based on design refinements (e.g., trench section on east bank near the U of M law school).
Cultural Resources	Preliminary findings suggest one direct use of an historic resource (NPRR Bridge 9). The bridge is currently used as a pedestrian/bike crossing. The Feasibility Study identifies other potential impacts to historic resources that will require coordination for determination	Use or demolition of Bridge 9 will likely trigger Section 4(f) as the alignment requires demolition of an historic structure. An avoidance alternative will be required. Additional Section 106 coordination will be required to determine potential impacts to other resources and properties.
Parklands and Recreation Areas	Preliminary findings identify potential impacts to parkland. Temporary construction impacts are anticipated. The elimination of the U of M Ball Field is required.	Coordination will be required for determination of extent of impacts either temporary and/or permanent. Issues to be resolved include duration of closure of Bridge 9 bicycle/pedestrian trail and impacts at the U of M Ball Field site.
Visual Quality and Aesthetics	The Feasibility Study identifies potential visual impacts to a historic district, views along the river and the Cedar-Riverside neighborhood.	Continued Section 106 coordination will be required for a determination of effects.
Section 4(f) Evaluation	Recommends coordination	Use or demolition of Bridge 9 will likely trigger Section 4(f) due to its historical as well as its use as a bicycle/pedestrian trail. An avoidance alternative will be required. Additional Section 106 coordination will be required to determine potential impacts to resources and properties. A determination on impact to parkland will be needed.
Secondary and Cumulative Effects	Unknown	Unknown. Secondary and cumulative effects should be investigated.

	<b>Northern Alignment Feasibility Study Findings</b>	<b>Risk/Uncertainty</b>
<b>Potential Social, Economic, Environmental and Transportation Impacts/Risks</b>		
Safety and Security	Preliminary findings suggest no impacts to safety or security.	Further investigation would be required for a determination. Below-grade station may have added security concerns. Additional safety requirements may be required by FTA.
Environmental Justice	Potential impacts to low-income populations.	Environmental justice impacts are likely. Feasibility Study identifies 4 subsidized residential properties for acquisition. Additional analysis of noise and vibration impacts, change in land use/neighborhood setting, safety and security, and visual impacts will need to be conducted. Federal coordination will be required for removal of these properties (HUD).
Water Resources	Will result in increase of impervious surfaces.  Areas of steep slopes exist along river bluff and are highly erodible.	Storm water management needs analysis. Additional ROW may be needed for BMPs.  Potential impacts to Mississippi River, particularly during construction.
Biota and Habitat	Potential impacts to aquatic habitat due to Bridge 9 demolition/reconstruction	Minnesota DNR consultation needed to verify preliminary findings.
Threatened and Endangered Species	Low potential for impacts	Minnesota DNR and USFWS consultation needed to verify preliminary findings.
Noise	Potential impacts to residences on west bank.	Additional noise analysis. EJ impacts are possible.
Vibration	Potential impacts to residences on west bank.	Additional vibration analysis. EJ impacts are possible. Potential for vibration-sensitive facilities/uses would require further investigation.
Hazardous/Regulated Materials	The Feasibility Study identified likely contamination on BNSF property and U of M Ball Fields.	Feasibility Study very likely underestimates potential cost implications of contamination issues. Phase I site investigations will be required. Responsible party may not want to assume six or seven-figure costs for investigation and disposal, particularly when that cost may not be incurred without the proposed changes. Additional legal costs and potential delays could result.
Electromagnetic Fields/Utilities	Unknown EMF impacts.  Preliminary investigation of utility impacts was disclosed.	Properties have been identified along the alignment that may be impacted by EMF.  Further utility investigation during PE will be required to assess impacts.

	Northern Alignment Feasibility Study Findings	Risk/Uncertainty
<b>Potential Social, Economic, Environmental and Transportation Impacts/Risks</b>		
Transit Effects	Overall decrease anticipated in average weekday CCLRT ridership	Alterations of the Baseline Alternative and approval by FTA will be required.
Effects on Roadways	Impacts were disclosed.	The Feasibility Study assumed the construction of Granary Road; however, significant future costs to this project could ensue from constructing the Northern Alignment in the meantime. Improvements to roadways as mitigation need to be investigated.
Freight Rail Facilities	The Feasibility Study identifies the need to use BNSF ROW.	Acquisition/negotiation with BNSF needs to be undertaken and this will impact schedule and budget. FRA's participation as a coordinating/cooperating agency would be required.
Effects on Other Transportation Facilities and Services	Minor impacts to pedestrian and bike systems.	Impacts to pedestrian and bike systems are anticipated on Bridge 9 and in the Dinkytown trench. Assessing the scope of these impacts will need to be done in coordination and consultation with affected agencies and stakeholders
Agency Consultation / Review / Approval Authority		This will need investigation depending on coordination and potential impacts. Approvals/Permits/Agreements from the following agencies anticipated: FTA, FRA, HUD, EPA, ACHP, NPS, FEMA, Coast Guard, and USACE, MnDOT, MnDNR, MnSHPO, Minneapolis Park Board, counties & municipalities (municipal consent). No public outreach conducted to date on defining the Northern Alignment project, issues or opportunities.



Metropolitan Council  
390 North Robert Street, St. Paul, MN 55101

**RESOLUTION No. 2006-15**

**SELECTING THE CENTRAL CORRIDOR  
LOCALLY PREFERRED ALTERNATIVE**

**WHEREAS**, the Twin Cities Metropolitan Area is expected to grow by about 1,000,000 new residents and 580,000 new jobs between 2000 and 2030; and

**WHEREAS**, the Metropolitan Council has established a goal to increase transit ridership by 50 percent by 2020 to help address future transportation challenges and mitigate traffic congestion increases generated by this projected population and employment growth; and

**WHEREAS**, the Central Corridor is identified in the Metropolitan Council's 2030 Transportation Policy Plan as one of five dedicated transitways needed to achieve the 2020 transit ridership goal; and

**WHEREAS**, a Central Corridor Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) has been completed, released for public comments and comments received including at four hearings held in May, 2006; and

**WHEREAS**, the Central Corridor Coordinating Committee (CCCC), made up of local elected officials and agency representatives, has recommended Light Rail Transit (LRT) along University and Washington avenues as the Locally Preferred Alternative, based upon the results of the AA/DEIS and the overwhelming public support expressed through the public comment process; and

**WHEREAS**, options to expand highway capacity in the I-94/University Avenue corridor are limited by severe right-of-way constraints, large community impacts and prohibitive costs; and

**WHEREAS**, the LRT alternative carries the largest number of transit riders and is the only alternative that provides adequate long-term passenger-carrying capacity and service reliability; and

**WHEREAS**, implementation of the Central Corridor LRT line will require a 50 percent financial contribution from the Federal New Starts program for the construction costs, as well as a contribution from Ramsey and Hennepin counties of one-third of the non-federal share of the construction costs and one-half of the net operating subsidy; and

**WHEREAS**, the Federal Transit Administration (FTA) requests the submittal of a New Starts application seeking permission to enter into Preliminary Engineering by June 30, 2006; and

**WHEREAS**, total project costs and budget to be developed during the Preliminary Engineering phase will be critical factors in meeting the FTA cost-effectiveness index requirements to qualify for New Starts funding; and

**WHEREAS**, the Metropolitan Council considers the Central Corridor project primarily as a transportation project, but also recognizes that good land use and economic development decisions, which

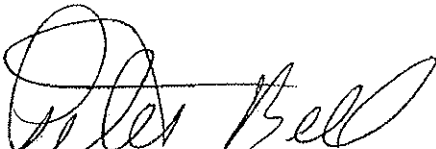
are the responsibilities of the affected local entities (Minneapolis, St Paul and the University of Minnesota), can enhance the viability and success of the project; and

**WHEREAS**, the Metropolitan Council is deeply committed to active public involvement throughout project design, construction and start up phases;

**NOW, THEREFORE, BE IT RESOLVED BY THE METROPOLITAN COUNCIL that:**

- 1) The LRT mode on Washington and University avenues is selected as the Locally Preferred Alternative for the Central Corridor; and
- 2) Staff is directed to submit to the Federal Transit Administration an application requesting permission to enter into Preliminary Engineering; and
- 3) The Council shall establish a project development process that provides for active public involvement in all phases of the project, specifically the Council will work to identify and include interested communities in choosing members of the project's Community Advisory Committee. The Council will also ensure that the project meets the FTA requirements for New Starts funding - and in particular yields a cost effectiveness index at or below the FTA's applicable threshold; and
- 4) The Metropolitan Council's support for the Central Corridor LRT is expressly contingent upon the execution of a Memorandum of Understanding with the Hennepin and Ramsey County Regional Rail authorities, no later than September 1, 2006, that provides as follows:
  - a) The Hennepin and Ramsey County Regional Rail Authorities shall be responsible for contributing a combined total of no less than one-sixth (1/3 of the 50% local match) of the total project capital cost, and
  - b) The Hennepin and Ramsey County Regional Rail Authorities shall be responsible for contributing a combined total of one-half of the annual operating subsidy for the Central Corridor LRT line; and
- 5) The Metropolitan Council commits to delivering this project on time, and on budget.

Adopted this 28<sup>th</sup> day of June, 2006.

  
\_\_\_\_\_  
Peter Bell, Chair

  
\_\_\_\_\_  
Pat Curtiss, Recording Secretary

# Metropolitan Council

**Meeting date: February 27, 2008**

## **ADVISORY INFORMATION**

<b>Date:</b>	February 27, 2008
<b>Subject:</b>	Central Corridor LRT Scope Decisions
<b>District(s), Member(s):</b>	All
<b>Policy/Legal Reference:</b>	
<b>Staff Prepared/Presented:</b>	Mark W. Fuhrmann, Deputy General Manager, 651-602-1942
<b>Division/Department:</b>	Metro Transit/CCPO

### **Proposed Action**

That the Metropolitan Council adopt the proposed Central Corridor Action as attached directing the Central Corridor Project Office to:

Proceed with preliminary engineering and make application to the Federal Transit Administration to move the Central Corridor Light Rail Transit project to final design with the features as itemized in the attachment; and

Continue to work with project stakeholders on mitigation measures, and other unresolved issues, throughout the balance of preliminary engineering.

### **Background**

The Metropolitan Council approved the Locally Preferred Alternative for the Central Corridor to be light rail transit on June 28, 2006. This action was the culmination of a multi-year effort to conduct an Alternatives Analysis and Draft Environmental Impact Statement as required by the Federal Transit Administration (FTA). Subsequently, Metropolitan Council submitted a New Starts application to FTA to move the project into preliminary engineering. FTA authorized the project to enter preliminary engineering on December 13, 2006.

FTA recommended re-estimating the project budget to include a higher inflation factor, additional contingency and finance costs while at the same time achieving a Cost Effectiveness Index (CEI) rating of "medium." Current FTA guidelines require New Starts projects achieve a "medium" or higher rating which requires a CEI value of less than or equal to \$23.99.

The Central Corridor Project Office was created, engineering and environmental consultants were contracted and preliminary engineering was initiated in 2007. The purpose of preliminary engineering is to more precisely define the scope elements and corresponding cost estimates working from the Draft Environmental Impact Statement identified scope. Numerous scope elements have been evaluated in more detail with a dozen items requiring policy direction from the Council.

## **Rationale**

Staff has created a number of scope scenarios with different combinations of scope elements and evaluated them with stakeholder staff. Evaluation has included design, cost and impact to the Cost Effectiveness Index. Examples of key scope elements include at-grade or tunnel along Washington Avenue in the East Bank area of the University of Minnesota, potential infill stations along University Avenue and the alignment through downtown St. Paul connecting with the St. Paul Union Depot. Each scope element required cost estimates which were bundled in unique scope scenarios. Ridership forecasts and Cost Effectiveness Index calculations were generated for each scenario. Due to the FTA requirement of achieving a CEI value less than or equal to \$23.99 to be eligible to advance the project into final design and to secure 50% of the funding from FTA, Scenario B satisfies the CEI requirement with a value of \$23.80 at a capital cost of \$909.1 million.

This scenario features at-grade trains along Washington Avenue through the East Bank, infrastructure for three future infill stations and trains that serve the eastern terminus of the LRT line at the front of St. Paul Union Depot.

Council approval of Scope Scenario B will provide specific direction to staff to proceed with more detailed preliminary engineering that will serve as the basis for a Supplemental Draft Environmental Impact Statement (SDEIS) and local stakeholder hearings and approvals of the plans through summer 2008. Met Council will need to approve the SDEIS document and amend the Locally Preferred Alternative in August 2008 as the basis to apply to FTA to advance the project in to the final design stage of project development.

## **Funding**

Scenario B is estimated to cost \$909.1 million in year of expenditure dollars. This action does not directly require a funding commitment from the Council or state and county funding partners at this time. It must be stressed that FTA will expect firm funding commitments totaling at least one half of the required local match, \$227.275 million, by August 2008 to demonstrate the local partners' funding commitments to the project.

## **Known Support / Opposition**

Project partners Minnesota Department of Transportation, Ramsey County, Hennepin County, city of St. Paul, city of Minneapolis and the University of Minnesota generally support Scope Scenario B. The Council is committed to working with project stakeholders to further develop mitigation measures and other unresolved issues as preliminary engineering moves forward.

Local public input has demonstrated a strong desire to fully construct three infill stations on University Avenue. Scope Scenario B provides for the below-grade infrastructure for future build-out of the three stations.

### Central Corridor Action

The Central Corridor Management Committee recommends to the Metropolitan Council that the Project Office proceed with preliminary engineering and make application to the Federal Transit Administration to move the Central Corridor Light Rail Transit (CCLRT) project to final design, with the following features:

- Fifteen new stations along approximately 11 (eleven) miles of track, with a western terminus at the Minnesota Twins Ballpark, and an eastern terminus in front of the St. Paul Union Depot;
- a vehicle maintenance facility will be constructed under the Lafayette Bridge, connected by double tracks to the eastern terminal station in front of the Union Depot;
- three stations in downtown St. Paul including 10<sup>th</sup> Street, front of Union Depot and a station on the diagonal connecting Cedar Street / 5<sup>th</sup> Street with Minnesota / 4<sup>th</sup> Street;
- three-car platforms;
- infrastructure below grade for three infill stations at Hamline, Victoria and Western avenues;
- Washington Avenue Bridge modifications;
- University of Minnesota at-grade Transit Mall;
- Improved Hiawatha LRT connection placing CCLRT on structure over 35 W and interlining with Hiawatha south of 11<sup>th</sup> Avenue;
- Mill and overlay of University Avenue travel lanes including reconstruction of approximately 85% of the curb, gutter and sidewalks;
- total Project mitigation costs of approximately \$39 million;
- total Project cost of approximately \$909,100,000 with a CEI  $\leq$  \$23.99;

Furthermore, the CCMC recommends that the Project Office continue to work with project stakeholders on mitigation measures, and other unresolved issues, throughout the balance of preliminary engineering.

**METROPOLITAN COUNCIL**  
**390 North Robert Street, St. Paul, Minnesota 55101-1634**  
**Phone (651) 602-1000 TDD (651) 291-0904 FAX (651) 602-1550 Metro Info (651)**  
**602-1888**

**RESOLUTION NO. 2008-11**

**RESOLUTION WITH RESPECT TO**  
**THE CENTRAL CORRIDOR LIGHT RAIL TRANSIT PROJECT**

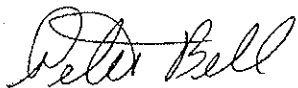
**WHEREAS:**

1. The Central Corridor Management Committee recommended and the Metropolitan Council on February 27, 2008 directed that the Central Corridor Project Office proceed with Preliminary Engineering and make a New Starts application to the Federal Transit Administration to move the Central Corridor Light Rail Transit (CCLRT) Project into Final Design with, among other features, a University of Minnesota at-grade Transit Mall on Washington Avenue.
2. The University of Minnesota, the City of Minneapolis, and the Hennepin County Regional Railroad Authority have requested further definition and planning of a Washington Avenue at-grade Transit/Pedestrian Mall, with special emphasis on design and operation of the Mall, mitigation measures, and bus operations in the University Area, which includes the nearby neighborhoods.
3. The University of Minnesota has conducted a Feasibility Analysis of the Northern Alignment as a possible alternative to the Washington Avenue at-grade Transit/Pedestrian Alignment.
4. The results of the Northern Alignment Feasibility Analysis show a lower ridership and a higher estimated Cost Effectiveness Index (CEI).
5. A number of significant outstanding issues have been identified relating to environmental (including contaminated soils), design, construction, operations and maintenance, railroad-related matters and project schedule of the Northern Alignment, which create additional uncertainty and risks.
6. Great progress has been made in the definition of a mitigation package for the Washington Avenue at-grade alignment in the University Area by all affected parties.
7. The Central Corridor Management Committee, by resolution adopted on May 28, 2008, has made certain recommendations to the Metropolitan Council.

**NOW, THEREFORE, BE IT RESOLVED**, by the Metropolitan Council as follows:

1. The recommendations of the Central Corridor Management Committee embodied in that committee's resolution adopted on May 28, 2008 are hereby adopted by the Metropolitan Council.
2. The Metropolitan Council hereby reaffirms its action of February 27, 2008 and directs the Central Corridor Project Office to proceed with Preliminary Engineering and make application to the Federal Transit Administration to move the CCLRT Project into Final Design with, among other features, a University of Minnesota at-grade Transit/Pedestrian Mall on Washington Avenue with no vehicular traffic except emergency vehicles, light rail vehicles and buses.
3. The Metropolitan Council directs the Project Office to discontinue all work related to the Northern Alignment, effective immediately.
4. The Metropolitan Council expresses its intent to continue to work toward the development of (i) a Memorandum of Understanding (MOU) with the University of Minnesota, the Hennepin County Regional Railroad Authority, and City of Minneapolis, focused on mitigation measures in the University Area and (ii) a second MOU regarding design, construction, ownership, right-of-way, operational and maintenance issues, in the University area.
5. The Metropolitan Council expresses its intent to work cooperatively with the parties represented in the Central Corridor Management Committee in order to (i) submit a New Starts application in early September, 2008, (ii) advocate timely federal approval of the New Starts application, and (iii) take all the necessary actions with the FTA to maintain the project on its current schedule, with entrance into Final Design in Spring, 2009.

Adopted on May 28, 2008.



Peter Bell  
Chair



Pat Curtiss  
Recording Secretary

## Correspondence



# UNIVERSITY OF MINNESOTA

*Twin Cities Campus*

*Office of the President*

202 Morrill Hall  
100 Church Street S.E.  
Minneapolis, MN 55455-0110  
612-626-1616  
Fax: 612-625-3875

November 28, 2007

Peter Bell, Chair  
Metropolitan Council  
390 Robert Street N  
St. Paul MN 55101-1805

Dear Peter:

Comprehensive, multi-modal transportation is an essential component of an economically vibrant, safe and healthy metropolitan region. It is in support of this goal that I write with a request to study a University Avenue alignment on the Minneapolis east bank of the University of Minnesota Twin Cities Campus as part of the Central Corridor LRT preliminary engineering studies:

The Central Corridor LRT DEIS envisions an alignment through the University along Washington Avenue with a tunnel under the east bank campus. As we pursue preliminary engineering, I appreciate your appointment of University staff to the Central Corridor LRT project committees and work teams. I understand from them, that it is the intention of the Metropolitan Council Central Corridor LRT project staff to seek a supplemental EIS (SDEIS) for several project components including the study of an at-grade alignment on Washington Avenue through campus.

The University of Minnesota Board of Regents position on the Central Corridor LRT alignment through campus and the DEIS is the Washington Avenue alignment only if it is below grade in a tunnel on the east bank of the University campus. If the tunnel is not a component of the Central Corridor, the Board of Regents supports a northern alignment from Washington Avenue on the west bank of the Mississippi River along 19<sup>th</sup> Avenue South over either Bridge #9 or the 10<sup>th</sup> Avenue Southeast bridge and on either a University Avenue or University Avenue/4<sup>th</sup> Street Southeast pair to the east end of campus. The Board of Regents has supported an under ground alignment for transit on the east bank of the University Twin Cities campus since the 1930s. The University of Minnesota requests that the northern University Avenue alignment be studied and be added as a component of the SDEIS (supplemental environmental impact statement). The University believes our request is comparable to the request of other partners included in the SDEIS request; such as the revised alignment from the Humphrey Metrodome to Cedar-Riverside/West Bank. It is not the University's intention to interfere with the project, but rather to ensure options that will provide an optimally operating Central Corridor LRT line and, in fact, optimally operating metropolitan transportation system. The University is a strong supporter of metro transit and of the aspirations for the Central Corridor.

The University Twin Cities campus is one of the top "trip" generators in the state—currently ranked number three. 80,000 (eighty thousand) people come to the campus daily either as University faculty, staff and students, as patients of the University clinics and hospital or as visitors to University events. Daily, through the east bank campus, Washington Avenue carries 25,000 vehicles, 1,500 buses and experiences pedestrian counts of 10,000 people, ten times a day. Many are patients visiting the University clinics or emergency vehicles on the way to the hospital. For the past decade, the University has championed the use of transit. As a result,

Letter to Peter Bell  
November 28, 2007  
Page 2

68% (sixty eight percent) of the trips to campus are by a means other than single occupancy vehicle. More than 20,000 students hold a UPass card and more than 2000 faculty and staff have a Metro pass. In response to the I35 bridge collapse, Metro Transit recognized the University as a Commuter Choice award winner. The University is a transit-oriented community. The University contributes to the success of Metro Transit today. In the future, the University riders on the Central Corridor line are estimated as 25 to 30% of the line ridership. The successful operation of the line through the University community is essential to the success of the Central Corridor.

The University of Minnesota's position on the Central Corridor alignment is guided by these principles. The Central Corridor LRT must be:

- An optimally operating and functional LRT line—the line must not be bottlenecked on the University campus
- Safe—the transit line must be safe for riders and pedestrians
- Enhance community and economic development—transit should support communities along the line and within the University community connect both districts of the University with each other and the University with neighboring communities
- Preserve a functional and beautiful campus—transit should not interfere with the University's mission of teaching, research and service nor detract from the beautiful campus that is the University of Minnesota.

Based on the reality of the congestion on Washington Avenue and our principles, the University believes the study of northern alignment on University Avenue is essential to sound decision making regarding viable alternatives on the line. It is our judgment that Washington Avenue cannot handle both vehicular traffic and LRT within the available right-of-way. In 2001, the University of Minnesota asked that the northern University Avenue alignment be studied. We believe this study has potential to produce an alternative with better results at lower costs. Now we, as a metropolitan region, are in engineering design for the transit system that will serve us for years to come—undoubtedly we are making decisions with impacts that will last more than 100 years.

University staff assigned to the Central Corridor LRT project will be in contact with the project staff to provide the necessary information and support for this study. Thank you for your leadership of the Metropolitan Council, your efforts to achieve a comprehensive transportation system and your consideration of this request from the University of Minnesota.

Sincerely,



Robert H. Bruininks  
President

Cc: Central Corridor Management Steering Committee



# Metropolitan Council

December 5, 2007

Robert H. Bruininks  
President, University of Minnesota  
202 Morrill Hall  
100 Church Street SE  
Minneapolis, MN 55455

Dear Bob:

I am writing in response to your November 28 letter requesting that the Metropolitan Council submit a supplemental EIS (SDEIS) to study a new alignment of the Central Corridor through the University of Minnesota campus. It is my understanding that this new alignment would travel from Washington Avenue on the west bank of the Mississippi River along 19<sup>th</sup> Avenue South over either Bridge #9 or the 10<sup>th</sup> Avenue Southeast bridge and on either a University Avenue or University Avenue/4<sup>th</sup> Street Southeast pair to the east end of the campus.

I have had extensive conversations with Metropolitan Council Transit staff regarding your request. The main concern I have is that the scope of your request which is significantly greater than the other SDEIS, would result in an extensive delay of between one-two years. This potential delay would significantly increase the cost of the project by up to \$40 million. In addition, it is also possible that the proposed new alignment would increase travel time and decrease ridership, thereby negatively impacting the CEI.

My concerns notwithstanding, I believe the issues you raised are legitimate and merit consideration. Therefore, I have asked Transit staff to outline the specific tasks required to meet your request, at which time a final decision can be made.

Finally, it should be understood that decisions regarding alignment at the University of Minnesota and concourses in downtown St. Paul need to be made in the next couple of months.

While a final decision has not been made, given current information and budget constraints and FTA timeline, I have come to believe that the best alignment through the University of Minnesota is at grade on Washington Avenue. To that end, I have asked your staff to explore reasonable mitigation efforts that would make this alignment more acceptable to the University.

I will remain in close contact with members of your staff regarding this important question. If you would like to discuss this matter further, please advise.

Sincerely,

A handwritten signature in black ink that reads "Peter Bell". The signature is written in a cursive style with a large, looped initial 'P'.

Peter Bell  
Chair

Cc: Central Corridor Management Committee

[www.metrocouncil.org](http://www.metrocouncil.org)

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APPENDIX H  
PROGRAMMATIC AGREEMENT

**DRAFT PROGRAMMATIC AGREEMENT  
AMONG  
THE FEDERAL TRANSIT ADMINISTRATION,  
THE MINNESOTA DEPARTMENT OF TRANSPORTATION, METROPOLITAN COUNCIL,  
AND THE MINNESOTA STATE HISTORIC PRESERVATION OFFICE  
REGARDING THE CONSTRUCTION OF  
THE CENTRAL CORRIDOR LIGHT RAIL TRANSIT PROJECT  
BETWEEN MINNEAPOLIS AND ST. PAUL, MN**

**WHEREAS**, the Minnesota Department of Transportation (MnDOT) and Metropolitan Council (MC) have applied for financial assistance from the Federal Transit Administration (FTA) to construct the Central Corridor Light Rail Transit Project located between Minneapolis and St. Paul, Minnesota as more fully described in the Draft Environmental Impact Statement (DEIS) of June 2006 and the Supplemental Draft Environmental Impact Statement (SDEIS) of June 2008; and

**WHEREAS**, the FTA has determined that the Central Corridor Project (PROJECT) is an undertaking that may have an adverse effect upon properties included, or eligible for inclusion, in the National Register of Historic Places, and has consulted with the Minnesota State Historic Preservation Officer (MnSHPO) pursuant to federal regulations at 36 CFR Part 800 implementing Section 106 of the National Historic Preservation Act (16 U.S.C. Section 470f), as amended; and

**WHEREAS**, the FTA will be responsible for ensuring that all aspects of project implementation meet the terms of this agreement (AGREEMENT); and

**WHEREAS**, the Ramsey County Regional Rail Authority and the Hennepin County Regional Rail Authority will be providing local funding for the PROJECT; and

**WHEREAS**, the Minnesota Department of Transportation Cultural Resources Unit (CRU) has been designated by FTA to coordinate the Section 106 process; and

**WHEREAS**, MnDOT and MC will administer the implementation of the PROJECT; and

**WHEREAS**, MnDOT and MC will complete the stipulations of this agreement; and

**WHEREAS**, CRU is identifying and evaluating historic properties in the project's area of potential effect; and

**WHEREAS**, the MnDOT and MC have consulted with the MnSHPO and are all signatories to this AGREEMENT; and

**WHEREAS**, the St. Paul Heritage Preservation Commission, Historic St. Paul and the Prospect Park and East River Road Improvement Association have elected to participate as consulting parties in the consultation process for this PROJECT; and

**NOW THEREFORE**, the Parties agree that, upon execution of this agreement, FTA shall ensure that the following stipulations are implemented in order to take into account the effect of the undertaking on historic properties and to satisfy the FTA's Section 106 responsibility for all aspects of the PROJECT.

## ATTACHMENT B

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### STIPULATIONS

The FTA will ensure that the following measures are carried out:

- I. DESIGN CONSULTATION and EFFECT ASSESSMENT
  - A. Historic architectural resources are being identified for the PROJECT and are detailed in Table 1 of the Appendix. The CRU shall apply Criteria of Adverse Effect [36 CFR Section 800.5(a)] to the historic architectural resources in Table 1, and shall prepare a Determination of Effect Report (REPORT) on these resources.
    1. The CRU will submit the REPORT to the FTA, the MnSHPO and other consulting parties. MnSHPO will review and provide comments on the Report within 30 days, indicating concurrence with the effect determination, or requesting additional information to complete review, or disagreeing with the effect determination. FTA may also provide comments.
    2. The Consulting Parties may also provide comments to the CRU during this 30-day review period. Any comments or views of consulting parties regarding the CRU's evaluation of eligibility and effect shall also be provided to the MnSHPO within 7 days of receipt. MnSHPO may request an additional 15 days to respond in order to fully consider views of consulting parties regarding conclusions of this REPORT.
  - B. The MnDOT and MC have and will continue to develop design documents, in consultation with the FTA and the MnSHPO. These design submittals will serve as the baseline for the PROJECT. Aspects of the project design that may affect historic properties will be the subject of consultation among the CRU, FTA and the MnSHPO prior to the adoption of a final design. To facilitate this consultation, MnDOT and MC may hold review meetings with FTA, MnSHPO and consulting parties.
  - C. FTA, MnSHPO and consulting parties will be afforded the opportunity to review and comment on the 30% Design Drawings and REPORT. The MnSHPO and consulting parties shall respond within 30 calendar days to this design submittal pursuant to this AGREEMENT. Project design will continue and MnSHPO comments will be considered.
  - D. FTA, MnSHPO and consulting parties will be afforded the opportunity to review and comment on the 60% Design Drawings. CRU will prepare an updated Determination of Effects Report, if needed, to document whether conclusions regarding effects to historic resources changed after the 30% Design Stage. MnSHPO and consulting parties shall respond within 30 calendar days to this design submittal pursuant to this AGREEMENT. Project design will continue and MnSHPO comments will be considered.
  - E. If necessary to resolve outstanding issues regarding effects to historic properties, FTA, MnSHPO and consulting parties will be afforded the opportunity to review and comment on the 90% Design Drawings and Determination of Effects Report. The MnSHPO and consulting parties shall respond

## ATTACHMENT B

within 30 calendar days to this design submittal pursuant to this AGREEMENT. Project design will continue and MnSHPO comments will be considered.

- F. The FTA, the CRU, and the MnSHPO shall consult until concurrence has been reached regarding the effect determination. Additional Consulting Parties, as currently identified in this AGREEMENT or as subsequently identified by FTA, will also be offered meaningful opportunities to participate in this consultation. Any dispute regarding the effect determination shall be resolved consistent with the dispute resolution process of Section III.
- G. If adverse effects occur, the CRU shall propose mitigation measures for adverse effects to historic properties. Mitigation measures will be determined based on the type and level of impact. MnDOT, MC, FTA, MnSHPO, and the consulting parties will consult to reach agreement on mitigation measures. Agreement on mitigation measures may occur through letter agreement among FTA, MnDOT, MC and MnSHPO. MnDOT and MC agree to take into account the views and concerns of additional consulting parties in the resolution of adverse effects.
- H. The MnDOT and MC will make a good faith effort to ensure that the design of the PROJECT will minimize effects to historic properties and conform to the guidance in the Secretary of the Interior's Standard for the Treatment of Historic Properties (STANDARDS).
- I. CRU will retain and use the services of cultural resource professionals meeting the Secretary of the Interior's Professional Qualifications Standards for Architectural History and Archaeology in carrying out the Stipulations of this AGREEMENT.

### II. PROJECT MODIFICATIONS

Should changes be proposed to the PROJECT after consultation has been completed and a 90% design has been prepared, MnDOT and MC shall submit revised project drawings and a revised Determination of Effect to the MnSHPO. Consultation on the effects resulting from such changes shall occur in accordance with the steps identified in the DESIGN CONSULTATION and EFFECT ASSESSMENT section of this AGREEMENT.

### III. DISPUTE RESOLUTION

- A. If at any time during the implementation of this AGREEMENT, the MnDOT, MC, the MnSHPO, or a Consulting Party objects within 30 days to any action proposed, or any failure to act pursuant to this AGREEMENT, they may file written objections with the FTA. However, prior to filing such objections, parties to this AGREEMENT shall attempt to resolve the dispute with the MnDOT and MC before involving the FTA. The FTA shall notify the parties to this AGREEMENT of the objection, and then take the objection into account, consulting with the objector and at the objector's request, with any of the parties to this AGREEMENT, in order to resolve the objection. The FTA will facilitate resolution with any of the parties involved.
- B. If the FTA determines that the objection cannot be resolved, then the FTA shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (COUNCIL). According to the COUNCIL's regulations, the COUNCIL will either:

## ATTACHMENT B

1. Provide the FTA with recommendations, which the FTA will evaluate in reaching a final decision regarding the dispute; or
2. Notify the FTA that it will comment pursuant to 36 CFR Section 800.7(b) and Section 110(1) of the National Historic Preservation Act and then proceed to comment. Any COUNCIL comment provided in response to such a request will be taken into account by the FTA in accordance with 36 CFR Section 800.6(a)(1)(i) with respect to the subject of the dispute.

C. Any recommendation or comment provided by the COUNCIL will be understood to pertain only to the subject of the dispute; FTA's responsibility to carry out all actions under this AGREEMENT that are not the subject of the dispute will remain unchanged.

### IV. MONITORING

MnSHPO may elect to monitor activities carried out pursuant to this AGREEMENT, and the COUNCIL may be asked to review such activities if so requested by any signatory to this AGREEMENT.

### V. DISCOVERY

In the event archaeological or historic properties are discovered or unanticipated effects on historic properties occur during construction, the following steps will be taken to avoid, minimize or mitigate adverse effects to such properties. Steps established in 36 CFR §800.13 shall guide the CRU and the MnSHPO.

1. CRU will have a project archaeologist available to consult in the event of the discovery of historic properties or unanticipated effects on historic properties.
2. Project construction contractors will be advised of those areas of the project site which have a greater potential for undiscovered historic resources based on the previous analysis of historic properties.
3. Project construction contractors will be advised to notify the MnDOT and MC Project Manager in the event of the discovery of historic properties or an unanticipated effect upon a historic property. Work in the immediate area of the discovery shall be suspended to allow MnDOT and MC staff to visit the site, take photographs of the area and make a threshold determination if the CRU archaeologist should visit the site.
4. In the event the MnDOT and MC staff determine the discovered historic property or unanticipated effect upon a historic property to be significant, the CRU archaeologist will examine the site within 48 hours, compare it to sites found during the testing phase, record, document, and photograph the site, and assess the site's eligibility for the National Register.
5. In the event that the MnDOT and MC archaeologist determines that the site is eligible for the National Register, then the MnDOT and MC Project Manager shall



## ATTACHMENT B

notify the MnSHPO with recommendations regarding the site's eligibility and various treatment options. MnDOT and MC may also notify other consulting parties as appropriate.

6. MnSHPO may visit the site and will respond to information from MnDOT and MC Project Manager with an opinion on treatment recommendations within 48 hours.
7. In the event the site is determined to be eligible for the National Register, the agreed upon treatment recommendations will be carried out before construction in the immediate area of the discovery of the historic property or the unanticipated effect upon the historic property will be addressed. The CRU archaeologist will submit a report detailing the significance of the site, describing its features and the results of the treatment carried out. This report will be submitted to MnSHPO within 30 days of completion of treatment.

### VI. AMENDMENTS

Any party to this AGREEMENT may request that it be amended. Any amendments shall be in writing and signed by all signatory parties. This AGREEMENT is in accordance with the regulations in effect at the time of its execution. If the regulations change from the time of execution, MnDOT and MC may consult with all parties regarding an amendment of this AGREEMENT, but will first seek opinions from FTA and MnSHPO regarding the most appropriate way to implement its terms.

### VIII. TERMINATION OF AGREEMENT

Any signatory to this AGREEMENT may terminate it by providing thirty (30) days notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the FTA will comply with 36 CFR §§800.3 through 800.13 with regard to the undertaking covered by this AGREEMENT.

### IX. DURATION OF AGREEMENT

In the event that construction of the PROJECT has not begun within five (5) years of the date of this AGREEMENT, MnDOT and MC will consult with the MnSHPO to extend or amend this Programmatic Agreement.

Execution of this AGREEMENT and implementation of its terms evidences that the FTA has afforded the COUNCIL a reasonable opportunity to comment on the PROJECT and that the FTA has taken into account the effects of the PROJECT on historic properties.

FEDERAL TRANSIT ADMINISTRATION

ATTACHMENT B

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Marisol Simon, Region V Administrator

MINNESOTA STATE HISTORIC PRESERVATION OFFICE

By: \_\_\_\_\_ Date: \_\_\_\_\_

MINNESOTA DEPARTMENT OF TRANSPORTATION

By: \_\_\_\_\_ Date: \_\_\_\_\_

METROPOLITAN COUNCIL

By: \_\_\_\_\_ Date: \_\_\_\_\_