ABC Ramps
Transportation Options Implementation Plan

Prepared for:
Minnesota Department of Transportation

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In partnership with
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# ABC Ramps Transportation Options Implementation Plan

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Executive Summary

Introduction

The transportation options presented in this implementation plan were developed as part of a broader research effort conducted for the ABC Ramps. This was performed to understand how these facilities came to exist as they are today and to identify opportunities for them to remain productive in the future. Within the context of a rapidly changing transportation landscape, this work aims to position the ramps to be an example of embracing changes in technology and behavior. Findings of this work were significantly informed through engagement with partners including agencies, business community, and users of the facilities.

Purpose

The goals of the ABC Ramps are to reduce congestion, improve air quality, and help commuters drive alone less often – themes that frequently referenced throughout this implementation plan. The primary means of supporting these goals historically has been through the carpool contract program. While this program provides deeply discounted parking for eligible carpoolers, participation has declined dramatically in past decade. Thus, there was a clear need to develop new programs that respond to the desires of commuters by providing flexibility, leveraging technology, and envisioning new ways for the facilities to support transportation.

Approach

MnDOT contracted the University of Minnesota and a consultant team conduct research, facilitate stakeholder engagement, and develop recommendations for innovative programs at the ABC Ramps. The University of Minnesota team was comprised of faculty and student researchers from the Hubert H. Humphrey School of Public Affairs and undertook an extensive review of historical and legal characteristics of the ramps, as well as looking ahead at possible futures for them. The consultant team led by SRF Consulting Group and including Zan Associates and Alta Planning + Design, assisted with program refinement and stakeholder engagement to develop recommendations for program implementation and marketing and outreach techniques.

This Implementation Plan presents the recommendations from the consultant team for development and execution of new program offerings at the ABC Ramps. It outlines the methods used to develop the recommendations, specific steps for MnDOT and its partners to take towards implementation and weighs the costs and benefits of each program idea. MnDOT will use these recommendations to take action on implementation of new programs in cooperation with its partners. The details of ultimate Implementation strategies will be sensitive to changing conditions in the travel landscape and must align with sound financial management of the ABC Ramps.

The development of new programs and implementation recommendations for the ABC Ramps involved several steps, which included University of Minnesota research, University research engagement, program refinement, and marketing and outreach. All of these were performed under the guidance of a technical advisory panel (TAP) comprised of university and partner agency staff and subject matter experts whose input helped strike a balance between aspirational visions and attainable short-term opportunities. A list of TAP members is provided in Appendix A.
Stakeholder engagement, conducted by both the U of M and Zan, was a core feature of the effort and included public agency involvement, a downtown business leader roundtable, and listening sessions and surveys to gather input from commuters and employers. These activities helped to provide an understanding of users’ current commute modes versus their desired modes, along with barriers to change and direct feedback on proposed program ideas. The key findings were a desire for flexibility, the need for programs to qualify for tax savings, and improving their feelings of safety and security in the ramp facilities.

The program refinement stage was performed by SRF and Alta based on engagement with stakeholders and in coordination with partners. Program ideas were refined to be attainable within the bounds of technology, market demand, and agency coordination. This stage also featured a look toward peer regions and industry trends to help shape the programs.

Finally, marketing and outreach recommendations from Alta were developed to support successful implementation. These strategies utilize the stages of change model, which outlines the steps for an individual’s process to enact behavior change. From there, a series of marketing and outreach programs were identified for each program category. These are designed to align with the characteristics of the distinct programs and to address the needs of prospective participants at the appropriate level within their stage of change.

During the period this study was underway, the Shared Use Mobility Center (SUMC) published the Twin Cities Shared Mobility Action Plan. This document provides a series of ten recommended strategies to increase regional access through shared-use modes and improvements. The goals and strategies are very similar to those established for the ABC Ramps including single-occupant vehicle (SOV) trip reduction goals, travel demand management (TDM) improvements, support of transit, support of car share, and implementing mobility hubs. In addition, the plan identifies the ABC Ramps as an opportunity to pilot new approaches that have potential for regional deployment.

Following publication, the Twin Cities Shared Mobility Collaborative (SMC) was established with a mission of advancing shared mobility across the region through implementing the Shared Mobility Action Plan. This association has over 100 members representing agencies and interest groups from the metropolitan area. Steering committee members the following organizations:

- Metropolitan Council
- Move Minnesota
- African Career Education & Resource (ACER)
- City of Minneapolis
- City of Saint Paul
- East Metro Strong
- Metro Cities
- Metro Transit
- Minnesota Department of Transportation
- Move Minneapolis
- Nice Ride Minnesota
- University of Minnesota Center for Transportation Studies
Contents

The recommendations from SRF in this implementation plan are organized by categories of programs that are designed to support aligning outcomes. The contents of each category section begin with program highlighting the key elements. Next, the ultimate expectations for complete implementation of each category is program vision. This is followed by short term and long-term implementation recommendations, that prioritize specific actions to be initiated now and later to begin working towards the full implementation.

Each program category is considered through an effectiveness evaluation, which presents a cost effectiveness evaluation. Similar to benefit-cost analysis, this evaluation compares the costs of implementing the programs to the desired outcomes, defined in this case as the cost per reduced single-occupant vehicle (SOV) trip. The effectiveness section also provides recommendations for program measurement approaches, such that ongoing assessment can be conducted during and after implementation. Finally, a series of potential risk and opportunities are included to help consider a range of issues that may affect implementation.

Recommendations

Recommendations begin with a review of the existing carpool program as a baseline for future programs considered for the ABC Ramps. The current program provides discounted monthly parking contracts to registered carpoolers throughout the metro area. In addition, it provides heavily discounted monthly contract rates ($20 as compared to $99) for selected areas west of downtown Minneapolis. This geographic restriction recommended to be eliminated to encourage more carpool use and reduce the inequity of this limitation. This program’s cost effectiveness is estimated for comparison to other potential investments. A series of suggested improvements to the program are offered, most notably removing the geographic boundary. Others included in that discussion focus on making the program easier to use, which in turn would increase the number of carpoolers, improve the cost effectiveness of the program, and support the goals of the ramps.

The new program categories include the daily carpool, flexible commuter programs, and mobility hub. The flow chart in 0 shows the individual programs within these categories and outline short term and long-term implementation recommendations.
The daily carpool rate and ride matching mobile app aims to make it easier for commuters to carpool on days it makes sense for them. This would simplify carpooling by eliminating registration, allowing for daily decision making, and promoting technology to support carpools. The daily carpool program can be implemented with modest technology upgrades and minimal changes to staffing levels at the ABC Ramps. In addition, the market for mobile ride matching apps is changing rapidly, which will help to advance this program in the future.

Flexible commuter programs include the Parking FlexPass, employer programs, and transportation options app. Parking FlexPass is an innovative program idea that offers pre-tax purchase of a single monthly contract that provides both parking and transit passes. This would supply the flexibility that commuters desire while preserving the pre-tax benefit they currently receive for parking alone. Implementation will involve working with employers and benefit administrators to make the program available to downtown workers. The initial effort will be to conduct a pilot with a downtown employer to refine program in advance of full implementation.
Mobility hub improvements leverage the unique position of the ABC Ramps serving and connecting many modes including intracity bus, light rail, commuter rail, parking, bicycling, ride hailing, shuttles, intercity bus, walking and skyway connections to downtown. Recommendations in this category enhance and expand this multimodal connectivity through wayfinding, branding and providing additional traveler information. These initiatives should position the ramps for the future by incorporating shared modes (car, bike, scooter), activating the space through new uses, and improving connections to nearby land uses.

**Product Pricing**

A crucial element of consideration in the implementation of programs at the ABC Ramps is the overall approach to pricing. While each program or product will need to be assigned a customer price, it is crucial that these fit within an overarching framework to ensure that they align with the goals for the ramps. Under principles of market economics, theory holds that lower prices will result in increased consumption, whereas higher prices will decrease consumption. This principle is applied to the programs presented in this plan. Specifically, this is achieved by encouraging use of the programs that best align with the goals of the ramps through lower prices and assigning higher prices to programs that do not align as fully.

In practice, this results in a hierarchy of pricing among the various modes that would be served under each program. Transit trips are generally seen to serve the goals best and are therefore assigned the lowest travel cost per trip. On the other end of the spectrum, programs that facilitate drive-alone trips are least aligned with the goals and can be viewed as a premium product with the highest price. In between, carpools are assigned prices that are in the middle, as this mode achieves the goals better than driving alone but not as well as transit.

As the individual program recommendations are presented in this implementation plan, the pricing of products is discussed in greater detail. These recommendations were developed in a concerted effort reflecting these principles.

**Next Steps for Daily Carpool Rate and Ridematching System**

Several immediate steps can be initiated to begin working towards the deployment of short-term recommendations for the daily carpool rate and ridematching mobile app programs.

- Develop a program to offer discounted daily carpool rates to carpoolers arriving from across the metropolitan area.
- At the same time, perform technology upgrades to the hardware and software at ramp entry and exit gates. These should be reconfigured to enable authorization of daily carpool arrivals during approved periods and trigger the appropriate parking ticket to be dispensed.
- One barrier to carpooling is to find a carpool partner. In order to increase participation in carpooling, once the Metro Transit ridematching app has been released, ABC Ramps can assist by aggressively marketing this resource to existing and prospective ramp users. Ideally heightened marketing efforts can coincide with a partial or full implementation of the daily carpool rate.
- Finally, partner with large employers near the ramps to encourage large numbers of employees to register for carpooling in order to increase the change of people finding a carpool partner. Most
people would prefer to carpool with someone they know or work with. These results can be used to execute more specific marketing and outreach efforts towards employers with meaningful numbers of employees interested in carpooling.

**Next Steps for Parking FlexPass, Employer Programs, and Transportation Options App**

Several next steps for the Parking FlexPass program include pricing, coordination with employers and updating technology.

- Coordinate with potential employers and benefits administrators to establish a pilot implementation program. Several enthusiastic employers were engaged throughout the process and may make for productive partners to help implement the program and facilitate feedback from employees.
- Work with Metro Transit to determine how the GoTo Card and/or the Metro Transit App can be integrated to facilitate payment for the transit-parking contract. The electronic chip in the Metro Transit card is understood to be readable by the SKIDATA parking gate equipment in the ramps. The Metro Transit app has an API that could be integrated to generate bar codes that can be read by the SKIDATA system. Experimentation together with Metro Transit, the parking operator and Skidata representatives will help to clarify these capabilities.
- Develop a scope of services for procurement of contractor to execute and initial pilot of employer programs. These services could be performed by a TMO, consultant, or another fulfillment service. Soliciting for these services will help identify innovative implementation approaches that offer value to the program and lessons learned for ongoing employer program support in the future.

**Next Steps for Mobility Hub**

Next steps for Mobility Hubs includes steps that work towards improving wayfinding, traveler information and activating the space.

- Convene a Technical Assistance Panel (TAP) conducted by the Urban Land Institute (ULI) to explore opportunities for the spaces at the ABC Ramps, including developing and activating public spaces and exploring commercial uses.
- Perform a wayfinding study for the ramps to assess existing customer experience and facilities condition, and to develop recommendations for signing improvements and uniform branding.
- Develop a secure bike storage amenity to provide a desirable option for bicycle commuters.
- Identify solutions to activate the space through programming and retail services to promote safety and security. More people and activity in the facilities will provide a sense of place and offer a pleasant and dignified experience for travelers.
- Provide pedestrian friendly connections to nearby destinations to make the ABC Ramps mobility hub the obvious choice for accessing points of interest via any of the modes serving the area.
Conclusion

The program recommendations presented in this implementation plan are designed to provide direction for MnDOT and its partners to pursue deployment moving forward. The program ideas and characteristics were developed collaboratively with input from project partners at the University of Minnesota, technical advisory panel representatives, and the consultant team. They were also extensively informed through the stakeholder engagement process that involved commuters, employers, and business and downtown leaders.

This process identified programs that can effectively reduce SOV trips by providing alternative options and incentives. The recommendations outline the features of these programs, considerations for implementation, and pricing guidelines that will allow them to function as a suite of related products. For each program, short and long-term implementation steps are provided to guide future actions and investments by MnDOT and its partners.
Introduction

This implementation planning study was undertaken to investigate and address several issues and opportunities for the ABC Ramps. Among the many issues recognized, one is that the ramps are nearly 30 years old, just past the halfway point of their original functional life of 50 years. The original intent of the ramps was to reduce congestion, improve air quality, and help people drive alone less often. These goals have historically been addressed by promoting HOV programs through discounted monthly carpool contracts. The traditional program, however, has experienced rapidly declining participation over the past decade.

Figure 1. Monthly Contract Subscription Trend

This trend has eroded the ability of the ABC Ramps to serve their original intent of reducing congestion and drive-alone trips. It is also emblematic of other broad trends in transportation. Travel behavior is changing with more shared mobility, in which consumers expect readily accessible information and flexibility among travel choices. To confront these challenges, MnDOT and its partners have conducted a thorough investigation of new program opportunities for the ABC Ramps in downtown Minneapolis.

The detailed investigation revealed more context surrounding these issues. Initial customer feedback showed that customers don’t want to always drive alone and desire flexibility. Technology is changing with mobile apps and parking revenue control equipment. Locally, Ramps B and C are reaching capacity on a regular basis, so there is a need to manage parking supply more effectively. Collectively, these changing travel behaviors and new technologies trigger a need to design and implement programs that will provide flexibility for commuters.
MnDOT partnered with the University of Minnesota and a consultant team to conduct this comprehensive study of the ABC Ramps. The University researchers examined what was done in the past, identified any legal limitations, and completed a scan of best practices. The consultant team – comprised of SRF Consulting Group along with Zan Associates and Alta Planning + Design – gathered more detailed commuter and employer input, narrowed down the program ideas, and developed a detailed implementation plan for new programs including updated marketing and outreach strategies.

MnDOT and its partners have conducted a thorough investigation of new program opportunities for the ABC Ramps in downtown Minneapolis. In recognition of changing travel behaviors and new technologies, the intent is to design and implement programs that will provide flexibility for commuters. The goals of these programs align the original intent of the ABC Ramps, namely to reduce congestion, improve air quality, and help people drive alone less often.

While rapid deployment of short-term strategies will spur progress towards these goals, it is understood that more comprehensive change will require additional time to realize. This implementation plan outlines the specific steps and proposed sequencing of deployment for several promising program ideas. MnDOT and its partners should utilize this document as guidance in working towards full implementation of new program offerings for the ABC Ramps.

The document is organized around groups of inter-related programs that help build towards the goals of the Ramps. Within each program category, the ultimate vision is laid out to provide an aspirational illustration of the characteristics of a fully implemented program. It then breaks the program down into short- and long-term components based on the investigation and engagement completed throughout the study effort. The considerations and action steps required of MnDOT and its partners for the short and long-term deployments are discussed in detail in the core of each program section. Finally, an economic evaluation of the programs, and recommendations about future evaluations, risks, and opportunities are provided.

As MnDOT and its partners utilize this resource in working towards exciting new opportunities for the ABC Ramps, there will be numerous technological and regulatory hurdles that must be overcome. In addition, it must be emphasized that the key to success of new programs will hinge on communication and outreach with partners, stakeholders, and customers. The programs will entail significant coordination and cooperation among several government units and jurisdictions, requiring frequent and effective communication. Other stakeholders in the downtown community, including business and resident groups, should be engaged in the process and provided an opportunity to help shape programs and outcomes. And not least customers, or users of the ABC Ramps and associated programs, must receive targeted outreach to learn about, access, and utilize these new opportunities.

During the period this study was underway, the Shared Use Mobility Center (SUMC) published the Twin Cities Shared Mobility Action Plan. This document provides a series of ten recommended strategies to increase regional access through shared-use modes and improvements. The goals and strategies are very similar to those established for the ABC Ramps including single-occupant vehicle (SOV) trip reduction goals, travel demand management (TDM) improvements, support of transit, support of car share, and implementing mobility hubs. In addition, the plan identifies the ABC Ramps as an opportunity to pilot new approaches that have potential for regional deployment.
Following publication, the Twin Cities Shared Mobility Collaborative (SMC) was established with a mission of advancing shared mobility across the region through implementing the Shared Mobility Action Plan. This association has over 100 members representing agencies and interest groups from the metropolitan area. Steering committee members the following organizations:

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- City of Minneapolis
- City of Saint Paul
- East Metro Strong
- Metro Cities
- Metro Transit
- Minnesota Department of Transportation
- Move Minneapolis
- Nice Ride Minnesota
- University of Minnesota Center for Transportation Studies

**Implementation Overview**

The implementation plan prepared by SRF recommends new multimodal programs at the ABC Ramps outlines a series of recommended steps to achieve the program vision and outcomes. Each program is delineated into a set of short-term and long-term recommendations, such that implementation can be phased over time to work towards these goals. Several components investigated throughout the ABC Ramps study have been considered in establishing the implementation recommendations. These include engagement findings, anticipated agency coordination, and assessments of market demand and technology readiness. The following discussion briefly summarizes the considerations of each element and its influence on the implementation plan.

**Engagement**

A series of stakeholder engagement activities were conducted by the University of Minnesota and Zan Associates as part of the development of the ABC Ramps Transportation Options Implementation Plan. Engagement activities included stakeholder meetings, interviews with employers and commuters, skyway intercept surveys, and an electronic survey. Target audiences included representatives from key downtown organizations, downtown employers, and general commuters, summarized in Figure 2.
The stakeholder engagement process produced extensive feedback on the proposed program ideas. Participants were asked to discuss barriers that prevent people from choosing something other than single occupancy vehicle (SOV) travel for their daily commute. They were also prompted to provide general improvement ideas for ABC Ramp operations and facilities. Finally, they were given an opportunity to review and evaluate a range of potential program ideas intended to help the ramps better achieve their multimodal transportation goals.

The following are key findings resulting from the stakeholder engagement activities. The sections that follow include additional detail on each stakeholder engagement event and detailed meeting notes from each event are included as appendixes.
Figure 3. Key Findings from Stakeholder Engagement

- Nearly half of respondents reported driving alone as their most common commute, and many would like to try other options.
- People more interested in programs that provide flexibility to choose desired transportation options daily.
- 70% of employers provide a subsidy for or allow pre-tax purchase of parking spaces as part of a benefit program.
- People are interested in new transportation program ideas, particularly those leveraging new technology.
- Perceived safety and security issues at the ramps and along the routes connecting to the surrounding neighborhoods.
- Commuters indicated they must choose either a transit MetroPass or a monthly parking contract in their employee benefits.
- 80% of survey respondents indicated that their employer offers MetroPass as part of their benefits package.
In addition to these major findings there were a number of other common themes gathered from the feedback. These are also taken into account in the refinement and implementation of new programs.

- **People want flexibility and options:** Flexibility, payment challenges, timing/scheduling, and safety at ramp facilities were some common challenges or barriers to using the ABC Ramps and/or non-SOV transportation options, cited by both commuters and employer representatives. People are willing to try another mode of commute but varying schedules (e.g., mid-day appointments, afterschool child pick-up, weekend work, etc.), a lack of convenience (e.g., mobile app, online payment, etc.) as a barrier.

- **People want independence:** Driving alone offers the most independence. Transit also feels independent because you can leave or arrive when you want to and decide the destinations. Carpooling is the least independent as you need to match another person’s schedule.

- **People are often forced to choose either transit or parking:** People would choose an alternative commute mode (such as transit), but because they need to drive sometimes they pay (or their employer pays) for contract parking. Because they already have a parking contract, the additional cost related to transit is a barrier (e.g., people don’t want to pay twice). There are currently no ‘parking and transit’ options.

- **People are open to new program ideas:** People are generally supportive of the program ideas/strategies, such as flexible monthly parking contracts, contract option that bundle parking and transit services, and “day of” parking reservations. New programs must be compatible with employer benefit packages.

- **Employers care about their employee’s commutes:** It is important to employers to help employees find reliable, affordable, and convenient commute options. Driving an automobile is by far the most common employee commute mode reported by employers (100% have employees who drive), but most employers also have employees who use transit, bike, or walk to work.

- **Parking availability:** There is a perceived lack of parking, particularly in the North Loop Neighborhood. Many people expressed frustrations with parking availability for guests, employees, and customers.

The feedback that was gathered has been carefully reviewed to capture interest and views on the program ideas. The implementation plan responds to this feedback by staging program recommendations to deliver the desired features as quickly as possible. It also presents refined descriptions that reflect opportunities for the programs to provide improved flexibility and customer experience.

**Agency Coordination**

The coordination with partner agencies and stakeholders was a critical element in developing the implementation plan and will continue to be essential as the implementation is carried out. The programs will require substantial communication, contributions, and synchronization among the various partners to achieve the multifaceted components of each.
There are several realms that require attention within agency coordination through the implementation process. For example, numerous programs require a range of technology enhancements – both to physical systems installed in the ramps and to development of new mobile applications. There are also roles for marketing and advertising. Finally, a variety of policy and regulatory adjustments will need to be made for some programs, and project partners must move in step to keep progress on track. The implementation recommendations that follow outline the numerous and varied roles of the partners.

Another important facet to coordination is with the Twin Cities’ newly-formed Shared Mobility Collaborative (SMC). As noted above, this group is made up of transportation agencies and interest groups that have a stake in the region’s mobility future. The ABC Ramps have an important role to play as they can serve as a test bed for new shared mobility solutions that may be considered for the region. MnDOT and its ABC Ramps partners should continue to engage with this organization to coordinate efforts and identify future implementation opportunities.

**Market Demand**

Owing to the varied nature of the programs, some are fairly minor changes to the customer experience and some represent more fundamental change from a consumer and commuter perspective. These relative differences were taken into account for short- and long-term recommendations in an attempt to offer commuters with easily understood choices immediately, while building a market for more dramatic modifications in later stages. This is intended to position the programs for success as they can achieve some early wins before overcommitting to enduring investments.

**Technology Readiness**

Many of the programs hinge on development and deployment of new technologies to facilitate ramp access and customer information. Each of the technological components currently exists at varying levels of maturity, and thus requires differing degrees of investment to make ready for deployment. The implementation recommendations reflect an understanding of technology upgrades that can be readily implemented and targets these towards the short-term program investments. Longer term solutions should continue to be pursued through initial steps to work towards technology readiness and eventual full development.

**Product Pricing**

A crucial element of consideration in the implementation of programs at the ABC Ramps is the overall approach to pricing. While each program or product will need to be assigned a customer price, it is crucial that these fit within an overarching framework to ensure that they align with the goals for the ramps. Under principles of market economics, theory holds that lower prices will result in increased consumption, whereas higher prices will decrease consumption. This principle is applied to the programs presented in this plan. Specifically, this is achieved by encouraging use of the programs that best align with the goals of the ramps through lower prices and assigning higher prices to programs that do not align as fully.

In practice, this results in a hierarchy of pricing among the various modes that would be served under each program. Transit trips are generally seen to serve the goals best and are therefore assigned the lowest travel cost per trip. On the other end of the spectrum, programs that facilitate drive-alone trips
are least aligned with the goals and can be viewed as a premium product with the highest price. In between, carpools are assigned prices that are in the middle, as this mode achieves the goals better than driving alone but not as well as transit.

As the individual program recommendations are presented in this implementation plan, the pricing of products is discussed in greater detail. These recommendations were developed in a concerted effort reflecting these principles.

**Marketing & Outreach**

The implementation plan also provides a series of recommendations prepared by Alta for marketing and outreach strategies promote for each of the program categories that support the goals of ABC Ramps. These summarize the more detailed descriptions documented in the accompanying Marketing and Outreach Plan prepared for the ABC Ramps Transportation Options study. That document dives into methods for encouraging behavior change through three primary suggested marketing strategies:

- Employer-focused Promotions
- Pilot Employer Champions Program
- Pilot Individualized Marketing Campaign

In addition to the marketing and outreach recommendations for each program category, two overarching institutional recommendations were identified through the investigation. It is strongly suggested that these should be enacted prior to the marketing strategies:

1. Change existing policy to allow enhanced communication with ramp patrons
2. Hire additional support to enact programs and marketing strategies

**Desired outcomes**

As an initial step in screening potential multimodal programs for the ABC Ramps, a qualitative effectiveness evaluation was conducted for each product. Five categories, described below, were identified to capture the desired characteristics for successful programs. These outcomes, and how they pertain to the ABC Ramps program ideas, include:

*Ability to reduce SOV trips to the ABC Ramps* – one of the three original goals established for the ABC Ramps was to help commuters drive alone less often. Specifically, there is a desire for the programs to provide options for other modes to help reduce SOV trips. A description in the desired outcomes section is provided to connect how the program is designed to accomplish this.

*Increasing equity and access* – as a public investment in the regional transportation infrastructure, the ABC Ramps play a role in providing access to destinations for travelers. New programs should attempt to maximize this function by providing access to as many users as possible. Furthermore, that access should be made as equitable as possible to share these mobility benefits to travelers of all backgrounds.

*Increasing HOV travel* – as a parallel to reducing SOV trips the ABC Ramps must facilitate alternate travel options to continue to provide mobility options to downtown Minneapolis. High-occupancy vehicles (HOV) in this context captures several modes including transit, vanpools, as well as traditional carpools.
Flexibility – the engagement demonstrated that today’s commuters need flexible options to meet their day-to-day needs, whereas most current programs are based on a monthly subscription that provides limited or no flexibility. New program ideas are intended to reverse this approach and provide the desired flexibility.

Simplicity – commuters also want simplicity in their transportation options. Programs are assessed by the extent to which they are intuitive for users to purchase and utilize, both key drivers of successful implementation.

Implementation Plan Summary

The results of the implementation plan provide recommendations for a series of new programs for the ABC Ramps. The new program categories include the daily carpool, flexible commuter programs, and mobility hub. The flow chart in Figure 4 shows the individual programs within these categories and outline short term and long-term implementation recommendations.
The daily carpool rate and ride matching mobile app aims to make it easier for commuters to carpool on days it makes sense for them. This would simplify carpooling by eliminating registration, allowing for daily decision making, and promoting technology to support carpools. The daily carpool program can be implemented with modest technology upgrades and minimal changes to staffing levels at the ABC Ramps. In addition, the market for mobile ride matching apps is changing rapidly, which will help to advance this program in the future.

Flexible commuter programs include the Parking FlexPass, employer programs, and transportation options app. Parking FlexPass is an innovative program idea that offers pre-tax purchase of a single monthly contract that provides both parking and transit passes. This would supply the flexibility that commuters desire while preserving the pre-tax benefit they currently receive for parking alone. Implementation will involve working with employers and benefit administrators to make the program available to downtown workers. The initial effort will be to conduct a pilot with a downtown employer to refine program in advance of full implementation.

Mobility hub improvements leverage the unique position of the ABC Ramps serving and connecting many modes including intracity bus, light rail, commuter rail, parking, bicycling, ride hailing, shuttles, intercity bus, walking and skyway connections to downtown. Recommendations in this category enhance and expand this multimodal connectivity through wayfinding, branding and providing additional traveler information. These initiatives should position the ramps for the future by incorporating shared modes (car, bike, scooter), activating the space through new uses, and improving connections to nearby land uses.
Existing Carpool Contract Program

Program Description

The ABC Ramps currently incentivize carpooling by offering a discounted monthly carpool contract. This contract is less expensive than a standard single-occupant vehicle (SOV) contract and is offered to downtown commuters meeting various criteria. The first criterion is verification that formation of a carpool will reduce vehicle miles traveled (VMT) compared to each carpooler driving alone. Second, carpoolers from communities in the western part of the Twin Cities metropolitan area are able to purchase the monthly carpool contract at a more deeply discounted rate; $20 per month compared to $99 per month for carpools from elsewhere in the region.

There are a couple additional benefits that make both SOV and carpool parking contracts at the ABC Ramps attractive. First, contracts provide a guaranteed space in the ramps. This is an increasingly attractive feature as downtown parking capacity has declined while demand has increased. Second, contacts provide in/out privileges for contract holders at all times of day. This is attractive compared to daily parking rates which vary by time of day and must be paid each trip in and out of the ramps.

Despite the discount price for carpooling and the benefits of having a contract, participation in the monthly carpool program has declined dramatically, particularly over the past decade. Recent comparisons of ABC Ramps contract holders show that today there are four SOV contracts for each carpool contract, whereas this ratio was two to one just ten years ago. Through surveys and engagement of existing carpoolers, a recurring theme is that the registration process for the existing carpool contract program can be onerous and that a monthly contract limits flexibility to commute using other modes when the need arises.

Cost Effectiveness

Program Costs

Several categories of costs are considered in the cost effectiveness evaluation. These include investments in new technologies and infrastructure to implement the programs, as well as ongoing staffing, marketing, and outreach needed to maintain the program. In addition, reductions in parking revenues are estimated to capture the full impacts to ABC Ramps finances anticipated to support this program.

Technology and Infrastructure

Owing to the maturity of the existing carpool contract program, there are not direct costs associated with technology investments. The physical components that are part of the ramp payment and access systems are not highly advanced and have been in place long enough that they do not reflect any ongoing cost commitments. For the purposes of this evaluation no technology or infrastructure costs are assumed.

Management and Staffing

There are several components to management and staffing that facilitate the existing carpool contract program, and elements of the program are administered by several partners. The registration of program participants is performed by Move Minneapolis and incurs a per-registration cost to the program. ABM administers the contracts which is similarly charged on a per contract basis.
On the management side, the City of Minneapolis staff commitment is estimated to be approximately 0.2 full-time equivalent staff. Finally, the most significant staffing cost is for ramp attendants that verify carpools at entry, requiring a total of over 9,000 staff hours per year.

**Marketing & Outreach**

There are a number of marketing and outreach investments each year to support the carpool contract program. These include two advertising contracts, both to provide advertising media in the ramps and skyways, as well as broader marketing efforts including social media, downtown journal, and other printed formats. The program also utilizes direct outreach through Move Minneapolis to promote the program to employers and commuters.

**Reduced Parking Revenue**

The largest cost factor in the evaluation is the lost revenue from current parking fees. This is reduced both because the carpool contract price is lower than other rates, as well as that there are only one-half as many vehicles entering the ramps for the same numbers of commuters. The total reduction in parking revenues is a function of the total number of carpools utilizing the daily rate, which is discussed further in the paragraph below. The distribution of reductions in other parking categories – SOV contracts, carpool contracts, standard daily rates – is allocated based on the current distribution of ramp users.

**Reduced SOV Trips**

The desired outcome estimated for the cost effectiveness evaluation is to reduce the number of daily SOV trips to downtown Minneapolis. While it cannot be known for certain how participants in the carpool contract program would commute to downtown Minneapolis without the program, regional percentages of transit versus auto use suggest that the vast majority of trips are made using private vehicles.

In addition, it is understood that not all HOV permit holders commute downtown as carpools every day. A recent data collection effort titled *ABC Parking Ramp Study* (Kimley-Horn, 2016) monitored vehicle entrances to the ramps to assess the number and user types of entering vehicles. This included those with HOV permits and the occupancy of their vehicles. The graphic in 0 shows illustrates the average proportion of two-person, three-plus-person, and unused permits each day.
These findings show that between one-half and three quarters of permit holders enter Ramps A, B, or C as carpools each day. Aggregating these results shows that 949 commuters arrive by carpool each day given the 771 carpool permits held at the time this data was collected. The cost-effectiveness results below utilize these values to estimate the cost per reduced SOV trip.

**Cost Effectiveness Results**

The cost effectiveness evaluation is completed by adding up all the costs anticipated for implementation and dividing by the number of SOV trips reduced. This results in an approximate per-trip cost for this program to produce the desired outcome. 0 below summarizes the costs in each of the categories discussed in the cost section above. It also highlights the anticipated number of reduced SOV trips and the resulting cost effectiveness of the program per reduced SOV trip.

The cost effectiveness results are presented for two conditions. The first excludes consideration of reduced parking revenue from SOV contracts and daily parking fees. This approach emphasizes the hard costs associated with providing the carpool contract program. The second includes the estimate of reduced parking revenue. This is a less conservative approach but is intended to demonstrate the possible impact on financial performance of the ramps. In reality, the actual result likely falls between these two levels, as a portion of existing carpool contract holders would choose to carpool even in the absence of the carpool contract program.
Table 1. Cost Effectiveness Summary for Existing Monthly Carpool Contract

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Reduced SOV Trips (daily)</td>
</tr>
<tr>
<td>Management &amp; Staffing</td>
<td>Reduced SOV Trips (annual)</td>
</tr>
<tr>
<td>Marketing &amp; Outreach</td>
<td>Direct Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td><strong>Direct Costs</strong></td>
<td><strong>Total Cost per Reduced SOV Trip</strong></td>
</tr>
<tr>
<td>Net Change in Revenue</td>
<td></td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td></td>
</tr>
</tbody>
</table>

Recommended Changes to Monthly Carpool Contract Program

Several opportunities have emerged to enhance the current carpool program. These are based on engagement with stakeholders as well as the availability of new technologies to enable the changes. Most of these ideas can be accomplished with minimal policy and regulatory modifications and should therefore be considered for deployment in the immediate term as funding and personnel resources permit.

Eliminate the Geographic Boundary

The current geographic boundary in place for the most highly discounted carpool contracts is highly inequitable. At the least it is geographically inequitable, and in addition, the western suburbs included in the discount parking area have largely high incomes and low diversity making it economically and racially inequitable as well. Eliminating the geographic restriction is a step in the right direction to create more equitable programs.

This change should be straightforward to implement as there are no federal laws, state statutes, city statutes or agreements that prevent the monthly carpool contract from being offered to all commuters into downtown.

In the past there have been concerns that offering the carpool rate to all commuters would create more traffic in the core of downtown coming from the east. However, investigation of traffic patterns to the ABC Ramps show 50% of ABC Ramps users already drive through the core of downtown to get to the ramps. Turning some of these commuters into carpoolers could reduce congestion in the core. Finally, it is understood that commuters tend to park near where they work. Virtually all ABC Ramps customers work west of 3rd Avenue South, so it is unlikely that the $20 discount carpool parking rate would generate more trips through downtown since commuters are likely already driving to park near their work location.

Simplify the Registration Process

If the geographic restriction is lifted, the onerous registration process would be made much easier. Instead of both carpoolers needing to prove they qualify for the discount price, they can simply sign up for a carpool contract. The current sign-up process has been defined by participants as onerous, requiring a detailed registration form, verification review, and recurring re-registration, all to be able to access a monthly carpool subscription.
**Use Metro Transit’s Ride Matching and Carpool Permit System**

Currently Metro Transit and the City of Minneapolis each have a carpool registration and permit system. The City could utilize the Metro Transit system, which would help to eliminate confusion in the region from having two carpool permit systems.

**Add Preferred Parking Stalls for Carpool Contract Holders**

Preferred parking stalls for carpool contract holders could provide a further incentive through shorter walking distances, easier to find parking space in locations that are perceived to be safer near the higher traffic elevator lobbies. These highly visible spaces would also serve as a marketing tool to educate other users about the carpool program. A dashboard placard could be displayed to demonstrate eligibility and could be provided to carpool contract holders monthly.

**Pricing Adjustments**

Adjustments to the existing carpool contract program should also incorporate updates to the pricing for this product. The current pricing structure was established over 15 years ago and has not been recently updated. This structure includes $99 monthly contracts for all users and a discounted rate of $20 for selected geographic areas west of downtown Minneapolis. As part of the elimination of this geographic boundary for discounted contracts recommended in this plan, the discounted rate should also be revisited.

The updated cost for the non-geographically limited carpool contract should be established using the market pricing principles presented in the introduction. As a carpool program, this product should be priced higher than transit but lower than driving alone. To achieve this, an increase to at least $30 is recommended, potentially reaching up to $50 per contract. This modification will not only align with the other programs, but also reflects the current utilization of carpool contracts of approximately 60 percent of the time demonstrated by the 2016 ABC Parking Ramp Study.

**Carpool Contract Enforcement**

Another change to the program is to consider changing some of the enforcement procedures and policies. The city of Minneapolis and their operator should develop new procedures and policies for carpool enforcement that can be easily administered. Currently the lanes are monitored with staff during the morning peak period, and most carpools enter during this time. About five percent of people who are carpooling compliantly enter at other times. There are also about ten percent of carpool contract holders that enter alone at non-peak times. Ramp staff occasionally observe vehicles waiting outside the ramp until they see the staff leave the gate in the morning. Some of these suspected carpool contract offenders may not, in fact, actually carpool. The priority for enforcement is to identify carpool contract holders that may be abusing the incentive in this fashion. It should be noted, however, that re-entry to the ramps as an SOV is allowed as long as the first entry of the day includes a carpool partner.

One example of a new enforcement procedure would be to install a motion sensor camera at each carpool entry gate. The video could be periodically monitored to review the image of the vehicles entering with carpool contracts at non-peak travel times. In addition, a policy should be developed that outlines steps for notifying and warning offenders, with eventual termination of the contract if the behavior continues.
Desired Outcomes

These additional program enhancements for the carpool contract program align with the overall goals of the transportation options developed for the ABC Ramps. Expanding upon the descriptions of the recommended changes, these include:

Table 2. Desired Outcomes for Changes to Monthly Carpool Contract Program

<table>
<thead>
<tr>
<th>Desired Outcome</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce SOV Trips to the ABC Ramps</td>
<td>Changes to enhance the carpool contract program should make it more attractive and accessible. This is expected to result in current SOV drivers choosing to use the program and reducing their commuting trips as SOVs.</td>
</tr>
<tr>
<td>Increase Equity and Access</td>
<td>The recommended change to remove the geographic boundary improves the equity of this program. It is also intended to make it more accessible by increasing the market of eligible users to access downtown Minneapolis at the discounted rate.</td>
</tr>
<tr>
<td>Increasing HOV Travel</td>
<td>Additional participation in the carpool contract program will directly increase the amount of HOV travel to downtown Minneapolis. This is accomplished through removing the geographic boundary, easing the registration process, and making the program more attractive.</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Improvements to the registration process, both directly and through eliminating the geographic boundary will help make it simpler for commuters to utilize this program.</td>
</tr>
</tbody>
</table>

Estimated Participation

Currently there are 759 carpool contracts in the ABC Ramps. Virtually all of these are coming from the west, with about half entering through the I-394 and I-94 direct ramp entrances. The incentivized contract cost and convenient access are viewed as important factors in program participation, and should be considered in estimating future participation if the geographic limitation is lifted.

One perspective is to consider is the regional population distribution that would become eligible for reduced cost contract. Chapter 3: Corridor Evaluation of the University of Minnesota research report referenced INRIX GPS travel pattern data to find that just over half of overall ramp arrivals are coming from the west. Expanding to the entire metro would increase the eligible population by a factor of two to three times, significantly increasing the potential market of carpool contract holders.

On the other hand, discounted carpool contracts of $20 were recently extended to commuters from the south metro as part of the I-35W construction congestion management. Only 10 carpools had registered for the discounted program after three months (September 2018) despite extensive marketing and communications efforts. It remains unclear whether this will continue to increase as the construction work continues, or if the program is not as attractive due to the temporary nature of the project.

These contrasting indicators underscore the difficulty in estimating participation in the proposed program. At the very least, ramp managers should have realistic expectations about a longer timeframe for program participation to mature to equilibrium. Nonetheless, combining the elimination of the geographic boundary with the other program enhancements should increase the attractiveness and participation in the program. An approximate estimate combining these various elements suggest a potential increase of 50 percent over existing carpool contracts at the ramps, or 380 more, for a total of 1,140 carpool contracts.
Reduced SOV Trips

To estimate the number of reduced SOV trips based on program participation, the *ABC Parking Ramp Study* – summarized in the cost-effectiveness evaluation of the existing carpool program – was again referenced. For evaluation of removing the geographic boundary and other future carpool programs, the carpool arrivals (949) are divided by the number of permits (771) resulting in a ratio of 1.23 reduced daily SOV trips per permit. A rounded estimate of 1.2 is used for the cost-effectiveness of future ABC Ramps carpool programs based on projected participation. Applying this ratio to the 1,140 of total projected carpool contracts (existing plus future) yields a daily reduction of 1,368 trips.

Cost Effectiveness

The cost effectiveness estimated for the existing carpool contract program have been updated to reflect the impact of removing the geographic boundary for carpool contracts. The costs associated with this program are not assumed to change significantly compared to the existing program. The marketing, outreach, and staffing costs would be expected to remain comparable to current levels. The account registration and contract administration components would be anticipated to increase with participation, as these are charged on a per-contract basis. As a result, the cost effectiveness of the program is reduced compared to the existing carpool contract program.

Table 3. Cost Effectiveness Summary for Removing the Geographic Boundary

<table>
<thead>
<tr>
<th>Program Costs</th>
<th></th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>-</td>
<td>Reduced SOV Trips (daily)</td>
</tr>
<tr>
<td>Management &amp; Staffing</td>
<td>$200,000</td>
<td>Reduced SOV Trips (annual)</td>
</tr>
<tr>
<td>Marketing &amp; Outreach</td>
<td>$250,000</td>
<td>Direct Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td>Direct Costs</td>
<td>$450,000</td>
<td>Total Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td>Net Change in Revenue</td>
<td>$2,960,000</td>
<td></td>
</tr>
<tr>
<td>Total Costs</td>
<td>$3,410,000</td>
<td></td>
</tr>
</tbody>
</table>

The management and staffing cost category includes registration costs paid to Move Minneapolis for each registrant, program management staff, the ramp attendants to monitor entries, and contract administration costs paid to ABM.

The marketing and outreach cost category includes lump sum estimates for marketing across several channels including skyway, social media, downtown journal, and printing, along with direct outreach efforts contracted to support the program.

The direct costs per reduced trip was calculated by dividing the sum of direct cost categories by the estimate number of annual reductions in SOV trips.

The net change in revenue was calculated by considering the potential revenue generation if parking spaces were utilized with higher-cost fees. These higher-cost options were distributed across daily fees and SOV contracts proportional to existing distributions. The total cost per reduced SOV trip was calculated by dividing the sum of direct costs and net change in parking revenue by the annual number of reduced SOV trips.
ABC Ramps Transportation Options Implementation Plan

Daily Carpool Rate and Ridematching Systems

Program Features at a Glance

➢ Discounted daily parking rates offered to carpools without registration requirements or geographic restrictions.

➢ Marketed as Early Bird Carpool to demonstrate availability for entrants 6-9 am to have an impact on peak period travel and to simplify the discounted fees.

➢ Modest technology upgrades and minimal staffing adjustments are required for short term implementation.

➢ Daily carpool rate accompanied by new regional ride matching system to provide improved opportunities to connect compatible carpoolers.

➢ Longer term deployment will leverage emerging technologies by using private sector mobile apps to connect more carpoolers, split payments, verify carpools, and reserve parking.

Program Vision

Background and Program Need

Because the monthly carpool contract is declining, and customers report they want flexible transportation options, this set of programs will make carpooling more flexible and easier to access for more users than the current monthly carpool contract.

Daily Carpool Rate

Creating a reduced price daily carpool rate would provide an incentive to carpool and eliminate requirements for advance registration and a monthly commitment. For example, a driver who enters the ramp with two or more people during the peak period would receive a reduced daily rate for parking. The current daily rate is about $8 a day; the carpool rate could be $4.

Discounted parking rates for carpools at the ABC Ramps align with other investments in the regional transportation system. Carpools are able to utilize MnPASS lanes at no additional cost, providing a congestion free option on several freeways serving downtown Minneapolis. I-394 and I-35W to the south currently feature MnPASS lanes providing a less congested option that is available to carpools. Planning efforts are also underway to add MnPASS lanes to I-35W to the north, and potential I-94 both to the east and west. Taken together, these facilities combined with discounted daily parking at ABC Ramps should make carpooling to downtown an increasingly attractive option in the future.

Ridematching Systems

Commuters report that finding a carpool partner is one of the barriers for not carpooling. This is especially true for occasional or transient carpoolers. A robust ridematching mobile application with the ability to sort on criteria such as same employer, gender, or neighborhood could help people find compatible carpoolers. As travel behaviors have changed with the use of ride hailing services from transportation
networking companies (TNC), people have become more accustomed to riding in a car with a stranger, especially if there are features in the app that log the users, allow users to rate drivers and riders, and track the trip. Additional features like splitting the travel and parking costs could even encourage more carpooling. Parking operation could be simplified if the ride matching app had features to verify occupancy of the vehicle for enforcement purposes.

**Desired Outcomes**

Table 4. Desired Outcomes for Daily Carpool Rate and Ridematching Systems

<table>
<thead>
<tr>
<th>Desired Outcome</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce SOV trips to the ABC Ramps</td>
<td>Encouraging occasional carpools is an important tool in the travel demand management (TDM) toolbox and provides flexibility for commuters to carpool when it works for them.</td>
</tr>
<tr>
<td>Increase equity and access</td>
<td>By removing the geographic restriction on carpool discounts, it makes carpooling a more attractive option for commuters from across the metro area. In turn, the discounted rates will more affordable to more commuters, particularly when costs are shared among a driver and one or more passengers.</td>
</tr>
<tr>
<td>Increasing HOV travel</td>
<td>Offering more ways to get benefits for carpooling will increase the number of carpoolers.</td>
</tr>
<tr>
<td>Flexibility</td>
<td>This program would allow these commuters to choose to carpool when it is convenient for them, without being committed to it for every day of the month.</td>
</tr>
<tr>
<td>Simplicity</td>
<td>The daily rate would eliminate the registration process. Two or more commuters entering the ramp during the morning peak would receive the discounted rate. This significantly simpler process should make this option much more attractive to a wider spectrum of downtown commuters.</td>
</tr>
</tbody>
</table>

**Detailed Implementation – Short Term**

**Program Features**

**Daily Carpool Rate**

The daily carpool rate would be available to carpools from 6am – 9am. This it supports the purpose of the ramps to reduce congestion during peak travel times. In addition, limiting entry to peak period addresses two challenges associated with this program. First, carpool entry booths are currently staffed during weekday morning peaks to manually verify contract carpools entering the ramps and could be used at current staffing levels to facilitate verification of daily carpool arrivals. Second, this would simplify the rate structure to apply a single daily rate, rather than a confusing array of discounted hourly rates.

This program would be marketed as the “Early Bird Carpool” product. This would help to demonstrate that it is available only to peak period commuters but can be utilized on a “drive up” basis. The requirements are simply that there must be two or more persons in the car. They would utilize carpool entry, provided there is an attendant present. The attendant would then confirm that the vehicle contains two or more people and activate a ticket for the discounted carpool rate.
Ridematching System

The new Metro Transit ridematching system helps commuters find compatible carpoolers. It is being built to support the region’s existing ridematching database. To help commuters find a carpool partner, commuters could be encouraged to use the Metro Transit ride matching system to find a carpool partner. ABC Ramps can help to publicize and cross-market this product in the same materials prepared to advertise the daily carpool rate. The Metro Transit ride matching system allows users to sort on criteria such as gender, neighborhood and employer. Commuters are more comfortable riding with people they know or work with. It would be prudent to partner with large employers to market the ride matching system in their work place to build a large pool of potential carpool partners from one company.

Changes Needed to Implement

Technological

Modifications to the revenue control system are the primary step required to facilitate offering a daily carpool rate at the ABC Ramps. The components needed to support this program include:

1. A new rate offering for the daily carpool rate incorporated into the ticketing and payment software,
2. Enforcement of carpools by booth attendants, and
3. Ability for booth attendants to activate a ticket reflecting the daily carpool rate.

The new rate will need to be added to the existing payment program in the Skidata software utilized at the ABC Ramps. This rate must be associated with the price and time of day constraints that are ultimately selected for the program.

Enforcement must be performed to make sure people are carpooling to receive the discounted daily rate. This would be accomplished through manual observation by ramp staff during the morning peak travel period. Parking attendants will then need a means to activate a carpool daily rate ticket to be provided to entering carpools. Based on discussions with ramp operator and equipment vendor, this could be accomplished through reprogramming of equipment currently installed in the carpool entry booths.

Current equipment could be modified slightly to use same button as is now needed for carpool contracts. When a carpool contract enters while staff is there, staff pushes a button to allow the key card to work. New Skidata equipment could be programmed so that the existing “push button” could have a dual purpose. This will require some rewiring to allow it to be used for carpoolers to pull a reduced rate ticket. The level of effort required will potentially include a few days of work for an engineer to reprogram this in the system software.

Engineering & Infrastructure

Significant engineering and infrastructure work is not anticipated to be needed to support short term implementation of the daily carpool rate and ridematching mobile app programs.

It is expected that daily carpools will enter the ramps through existing dedicated carpool lanes. Vehicle arrival capacity at carpool entry lanes is not currently seen as an issue. The ramps should be able to continue with same number of gates and attendants until capacity and delay problems emerge.
Policy/Regulatory

Daily Carpool Rate:
The specific rate offered for the daily carpool rate should be determined using the principles established for all the travel demand management programs under development for the ABC Ramps. This reflects the view that pricing for flexible programs should be bound on the low end by transit fares and on the high end by SOV parking rates. As a result, daily carpooling should be priced between these two modal options.

Marketing/Outreach

Marketing

City of Minneapolis and ABM marketing staff were engaged to identify promising marketing approaches to promote the daily carpool program. Preliminary recommendations feature a three-month kick-off campaign. As a way to promote the program among non-transit riders, bus advertising is viewed as a good fit for this promotion, since the objective is to change behaviors of individuals driving their cars. The potential channels for marketing include:

- Pay-Per-Click Social Media Campaign using geographic and keyword targeting
- Targeted Display Campaign
- Facebook\Instagram Targeted Advertising, and additional social media posts on the MPLS Parking and Move Minneapolis pages
- Skyway advertising
- Print – including Star Tribune, The Business Journal, and Downtown Journal
- Radio – specifically traffic Sponsorship on two stations
- Email marketing to current customers
- Minneapolis Parking and ABC Ramp website promotion

Outreach

Appropriate outreach programs to promote the Early Bird Carpool program include employer-based promotions, the pilot employer champions program, and the pilot individualized marketing campaign.

Key marketing considerations include:

- Reiterate the program’s simplicity. Commuters can access the product by arriving during early bird hours and by commuting with at least one other person.

- The new regional ride matching system should be marketed in tandem with Early Bird Carpool as complementary offerings.

- Work with large employers to beta test the ride matching system. Set goals for the employer to register a specific percentage of their employees (i.e., 10% to 20%) within the product’s first year of operation.
ABC Ramps Transportation Options Implementation Plan

- Work with employers to publicize Early Bird Carpool and the ridematching system through internal communication channels.
- Work with suburban communities to publicize the new program.
- Publicize the program to MnPASS HOV users.
- Provide program information within pilot individualized marketing (IM) program resource kits. Evaluation questions used to evaluate the IM pilot program can ask participants about their awareness of and experience using Early Bird Carpool.

Offer **FREE carpools** during initial marketing period to incentivize and text demand. The timing of this could further coincide with continued construction traffic on I-35W and provide additional incentives to give carpooling a try.

**Agency Coordination**

Modifications and updates to current practices to successfully implement these programs will be required on the part of several partner agencies and organizations. This section summarizes those changes for each partner and identifies where interagency coordination will be needed.

**MnDOT**

MnDOT will authorize the City of Minneapolis to offer an additional parking option for the daily carpool rate. As a new program this is not currently offered in the menu of parking prices and will need to be created and added to the list.

MnDOT will develop and approve a new rate for Carpool Early Bird price with input from the city of Minneapolis.

MnDOT can promote the Early Bird Carpool parking special in coordination with MnPASS. The dual benefits of travel time advantages from MnPASS and discounted parking should make this an attractive program for commuters.

**City of Minneapolis**

Upon authorization from MnDOT, the City will:

- Get city council approval for the new rate.
- Develop access instruction and other information for users. It should detail the times of day it is available and how carpoolers should enter the ramps to receive the discounted rate. Provide information about the Metro Transit ridematching system.
- Create collateral material and add the information to relevant websites including ABC Ramps, Minneapolis Parking, and Move Minneapolis.
- Coordinate public announcement and marketing of the daily carpool rate program.

**ABM**

The ramp operator, ABM, must make both physical and human resources changes to support the daily carpool rate.
ABC Ramps Transportation Options Implementation Plan

**Signage**
ABM will modify ramp signage to reflect daily carpool rate. This includes signs over the entrance lanes for carpool entry to show that they are to be used by daily carpool arrivals as well as carpool contract holders. In addition, the daily carpool rate should be advertised on scrolling signs surrounding the ramps to help raise awareness of the program.

**Training**
ABM will need to provide training for booth attendants on the procedure to authorize daily carpool rate for carpools entering the ramps. This will cover the timeframe when the program is offered, e.g. from 6 to 9 am on weekday mornings, and the updates to the ticketing hardware and software to activate the daily rate ticket issued to daily carpools.

**Skidata**
Skidata will perform software and hardware modifications to enable a daily carpool rate. It is anticipated this will be accomplished by reprogramming the existing HOV contract push button to also be able to produce a carpool rate ticket for daily carpoolers. Once the software has been configured, physical hardware updates must be performed in each booth used for HOV entrances.

**Metro Transit**
The agency will provide support for the regional ridematching system.

**Schedule**
The daily carpool rate and ridematching mobile app should be implemented as soon as reasonably possible. As described previously in the short-term implementation section, one major step to support these programs includes updating ticketing software and hardware to include the daily carpool rate.

Upon agreement to pursue these programs, partners should begin working towards this step immediately, and establish a mutually agreeable completion date targeted for program roll-out.

**Option to Phase or Pilot**
A number of intermediate levels of implementation are also identified as opportunities for the ABC Ramps to begin to offer a daily carpool rate in advance of full-scale deployment.

A large employer near the ramps could be engaged as a project champion for pilot testing. Several organizations reached through the engagement process currently have employees parking Ramps A, B, and C. These organizations are seeking opportunities to help their employees improve the commute to work, and to save their business and employees money on transportation costs.

Another phasing approach could be to pilot one ramp at a time. Such a pilot period would likely be fairly short, perhaps about two months, with the intent to quickly roll out to additional ramps. Ramp operators have expressed different views on which ramp(s) would be most suitable for an initial pilot implementation. For example, Ramp C serves I-94 and could broaden market to other users in north metro communities, whereas a pilot project could focus more on the I-394 entrances by using Ramps A and/or B. Finally, Ramp A is where additional capacity is available making this most attractive to minimize displacement of other users in Ramps B and C.
Implementation – Long Term

Program Features

Over the long term a number of enhancements can be explored to further improve the daily carpool and ridematching programs. Program administrators should continue to monitor participation and interest to assess the long-term viability of carpooling programs to rationalize further investments. If the market demand remains steady or growing, other features that should be considered would include:

- Payment splitting is a feature of some commercially available mobile apps to help commuters split the cost of gas and parking fees between the driver and the carpool passenger.
- Parking reservations could be added to help guarantee a parking space.
- Tracking the route would provide a measure of safety for passengers, whereby family members could observe the location of the vehicle during the trip.
- Ratings for drivers and passengers would be another safety and comfort feature. These would function similar to ratings on many sharing economy platforms like Uber and Airbnb.
- More advanced mobile applications would potentially offer the additional feature of scheduling the time and location of carpool trips. If this could be made available to program administrators, it would offer very accurate information on participation in the program and where the commuters were coming from. This would allow for excellent evaluation of the program and identification of further improvements and marketing strategies.
- Incentivizing drivers is another feature that could be added to encourage more people to drive since in most ridematching systems there are far more people looking for rides that drivers looking for riders. Incentivizing drivers is also a way to provide more equity in the ABC Ramps programs. People looking for rides are more likely to be lower income or have a disability.
- Features to facilitate finding compatible carpoolers on demand would help people choose carpooling for one-direction commutes or find different carpools to and from their destination.
- Tools to verify carpooling would help automate enforcement. Mobile device connectivity and technology can also help verify the carpool by using near-field communication (NFC), Bluetooth, or other proximity detection to confirm the shared ride. This, in turn, can be presented when entering the parking facility to gain access to the discounted carpool rate. These features open up exciting possibilities of offering the discounted carpool rates even when the rider(s) are not present, as they may have been dropped off at their workplace elsewhere downtown before the driver accesses the ABC Ramps.
- Integration with a trip planning mobile app that helps commuters find routes with a variety of modes and is a single point of payment.
- Mobile apps could also be used for marketing with push notifications and reminders about carpooling or alerting drivers and riders when there are people looking for a carpool.

Many of these features are currently available in commercially available ride matching systems such as Scoop. The ABC Ramps Carpool program could integrate with these systems. The Metro Transit System could add also investigate adding some of these features if their platform is sustained over the long term.
Effectiveness Evaluation

This section outlines quantitative methods to evaluate the proposed programs for the ABC Ramps. First, a cost effectiveness evaluation is presented, providing an estimate for the return on investment for the program in terms of reduced SOV trips. Next, funding mechanisms are discussed in regard to allocation of resources towards implementation of the programs. Last, a series of performance measurement approaches are offered to facilitate tracking and evaluation of program success following implementation.

Cost Effectiveness

A cost effectiveness evaluation is similar to a benefit-cost analysis, however rather than monetizing the benefits of a public investment, the costs are compared directly to the quantity of a desired outcome expected from the project. In this case, the desired outcome is the number of SOV trips to downtown Minneapolis reduced by each program implemented through the ABC Ramps. This is weighed against the costs required to implement it including technology, staffing, marketing and outreach, and reduced parking revenues.

Program Costs

Several categories of costs are considered in the cost effectiveness evaluation. These include investments in new technologies and infrastructure to implement the programs, as well as ongoing staffing, marketing, and outreach needed to maintain the program. In addition, reductions in parking revenues are estimated to capture the full impacts to ABC Ramps finances anticipated to implement these programs.

Technology and Infrastructure

Ramp ticketing hardware and software upgrades must be implemented to support the short-term implementation of a daily carpool rate. These updates would be performed by Skidata under the direction of City of Minneapolis parking officials. Specifically, software systems must be updated to support the new daily carpool rate and hardware updates are needed to allow parking attendants to trigger the daily carpool rate. It is estimated that the updates would incur a one-time cost of $50,000 for the software updates and a cost of $2,000 per entry gate to deploy the hardware and software upgrades. For short term implementation, this would be implemented in the existing seven gates configured for carpool entry.

Staffing Needs

Daily Carpool Rate:

Entry booths are currently staffed for five hours per day at seven locations (four in Ramp A, two in Ramp B, and one in Ramp C). This results in a total of about 35 hours of ramp attendant staff time per day required to support the existing carpool contract program. Many of these entry gates are not heavily utilized by existing carpool contracts and have reserve capacity to accommodate additional carpool arrivals using the daily rate program. Therefore, no additional staffing cost is assumed for the short-term implementation of the daily carpool rate.
Mobile Application:
Metro Transit is currently underway with development of the ride matching mobile app to support the regional carpooling database. It is anticipated that Metro Transit staff will continue to support the app after deployment. No direct costs are assigned to the cost effectiveness evaluation for short term implementation of the mobile ride matching app.

Marketing & Outreach
Marketing and outreach are expected to constitute the largest direct costs of implementing the daily carpool rate and ridematching system in the short term. These will be part of an intensive marketing effort to raise awareness and interest in the programs and to conduct targeted outreach to commuters that are identified as strong candidates to utilize the daily carpool rate. Total costs for these activities are estimated to be up to $175,000 per year. For this single program this would be a stand-alone cost, with increases above current marketing expenditures bring attributable to the implementation of the daily carpool rate program. As additional programs from this implementation plan are developed, it is expected that some efficiency and economy of scale can be achieved as costs are shared among programs for similar types of marketing and outreach.

Reduced Parking Revenue
The largest cost factor in the evaluation is the possible lost revenue from current parking fees. These would be reduced both because the daily carpool rate is lower than the standard rate as well as that now there would only be one-half as many vehicles entering the ramps for the same numbers of commuters. The total reduction in parking revenues is a function of the total number of carpools utilizing the daily rate, which is discussed further in the paragraph below. The distribution of reductions in other parking categories – SOV contracts, carpool contracts, standard daily rates – is allocated based on the current distribution of ramp users.

Reduced SOV Trips
A reduction in SOV trips is the desired outcome used to estimate the cost effectiveness of the daily carpool rate. The ability of these programs to increase carpooling cannot be estimated precisely given limited similar programs offered in the region that can be used for comparison. However, current and historical parking utilization at the ABC Ramps can be used to establish a likely range of carpools that would use the program once it has been implemented and reached an established level of maturity.

On the low end, the total number of carpools parking in the ABC Ramps should achieve levels similar to peak participation in the carpool contract program. This was approximately 1,200 monthly contracts, or roughly 450 more than there are today. On the high end, daily carpools may reach the same level as the existing daily entries of monthly carpool contracts of about 400. For the purpose of this cost effectiveness evaluation, an estimate of 400 carpools would be expected to participate in the program. Among these, a daily arrival rate comparable to the current monthly carpool contract program is assumed. This results in an average of 480 reduced SOV trips per day. The 2016 ABC Ramps Parking Study showed that the ratio of number of commuters arriving by carpool to the number of contracts is about 1.2. In other words, roughly 60 percent of the contracts are used on any given day.
In addition, some people who hold a monthly carpool contract and are infrequent users will likely cancel their carpool contract and switch to using the daily carpool rate for ease and simplicity. As a result, the number of reduced SOV trips is estimated to be lower than the total number of commuters utilizing the daily carpool contract program. While these estimates help to provide an indication of the cost effectiveness of the daily carpool program, the uncertainty and assumptions required underscore the challenge associated with predicting the program participation rate.

Cost Effectiveness Results

The cost effectiveness evaluation is completed by adding up all the costs anticipated for implementation and dividing by the number of SOV trips reduced. This results in an approximate per-trip cost for this program to produce the desired outcome. Table 5 below summarizes the costs in each of the categories discussed in the cost section above. It also highlights the anticipated number of reduced SOV trips and the resulting cost effectiveness of the program per reduced SOV trip.

Table 5. Cost Effectiveness Summary for Daily Carpool Rate and Ridematching Mobile App

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Reduced SOV Trips (daily) 422</td>
</tr>
<tr>
<td>Management &amp; Staffing</td>
<td>Reduced SOV Trips (annual) 109,604</td>
</tr>
<tr>
<td>Marketing &amp; Outreach</td>
<td>Direct Cost per Reduced SOV Trip $2.18</td>
</tr>
<tr>
<td>Direct Costs $239,000</td>
<td>Total Cost per Reduced SOV Trip $4.01</td>
</tr>
<tr>
<td>Net Change in Revenue $200,000</td>
<td></td>
</tr>
<tr>
<td>Total Costs $439,000</td>
<td></td>
</tr>
</tbody>
</table>

Technology costs include hardware and software upgrades to the entry gate attendant booths and ticketing system. As described in the technology updates for this program, the daily carpool fee must be added to the product list. The manual push button in the attendant booths must also be reprogrammed to facilitate approval of carpool arrivals.

No ongoing management and staffing costs are assumed for this program, as the attendant currently monitoring for carpool contract arrivals are expected to be able to serve daily carpool arrivals as well.

Marketing and outreach costs include basic estimates for marketing across several channels including skyway, social media, downtown journal, and printing, along with direct outreach efforts to commuters and employers. As noted elsewhere in the implementation plan, some economy of scale could be achieved by advertising multiple programs concurrently.

Net change in revenue was calculated by considering the potential revenue generation if parking spaces were utilized with higher-cost fees. These higher-cost options were distributed across daily fees and SOV contracts proportional to existing distributions. For this program, some positive revenue effects are also assumed, as a number spaces freed by carpool formation may be utilized by additional customers.

The cost effectiveness results are calculated by dividing the cost totals by the number of reduced SOV trips. The direct costs per reduced trip utilizes the direct cost estimate of $239,000, whereas the total cost estimate including net change in revenue was $439,000.
ABC Ramps Transportation Options Implementation Plan

The results showing a cost range of $2.18 to $4.01 per reduced SOV trip are competitive with removing the geographic boundary, and lower than the existing carpool contract program. While this is a planning-level estimate, the result suggests that this program is worth pursuing among the efforts to better achieve the goals of the ABC Ramps.

It should be noted that while these estimates are presented as a one-year snapshot of costs and benefits, the program will likely have a longer life cycle to reach maturity. The initial year of implementation will have higher costs as the technology investments are made and heavy marketing and outreach is performed. In addition, participation is likely to be lower in the first year as commuters begin to learn about the program. It would be expected that over a five-year period, the program would reach an equilibrium where the technology investments have been absorbed and the marketing and outreach actions are incorporated into current initiatives. Thus, the cost effectiveness estimate presented in this section is intended to provide an annualized five-year outlook reflecting both initial investments and participation growth as the program grows to maturity.

Program Measurement and Evaluation

New program options offered at the ABC Ramps will need to be evaluated to determine their effectiveness. Providing new programs beyond those currently available is anticipated to increase costs compared to the status quo. These increased costs will in turn need to be compared to increased benefits in terms of helping to achieve the goals of the ABC Ramps, which are to reduce congestion, improve air quality, and help people drive alone less often. This section describes the recommended steps to measure progress towards these goals.

Daily Carpool Rate

The daily carpool rate should be measured on three variables including the number of daily carpools entering the ramp each day, the percent of total entries compared to other user types and impact on other products. Customer surveys should be conducted to evaluate customer demographics and satisfaction in the program.

The monthly ABC Ramps report should have a new customer type of daily carpools in order to track the participation in this program.

The number of daily carpools should be compared by percent to other user types including daily SOVs, carpool contracts and SOV contracts. It will be interesting to track over time if having a daily carpool rate increases the total number of carpoolers and if there is a shift from contracts to daily carpooling. If there is a shift for carpool contracts to daily carpool, it will save a lot of time and money on administering carpool contracts.

Customer surveys should be conducted annually of all customer types. Daily carpool customers can be giving a survey as they enter the ramps. Monthly carpool and SOV contract customers can be emailed a survey. One important question to ask the daily carpool customers is what their most common commute mode was before using the daily carpool rate. It will be important to understand the impact on transit use, carpool monthly contracts and daily SOV use. The survey to monthly carpool contract holders should ask if they and/or their carpool partner were SOV contract holders before, so there is data to show how many SOV contracts converted to carpool after the geographic restriction was removed. Carpool contract holders should also be asked if they are in the same household, and if their carpool partner is a child.
Finally, a survey of all ABC Ramp users with contracts would help to determine awareness, interest, and participation in HOV programs. Surveys will help to inform not just the profiles of those utilizing the daily carpool rate, but also the reach of marketing and outreach activities.

**Ride matching System**

Metro Transit tracks the number of people who sign-up for the ride matching system. This will provide a leading indicator of trends if interest in carpooling is increasing, decreasing, or staying constant over time.

Several questions about the ride matching system should be incorporated into any larger ramp user survey conducted for the daily carpool rate or other ABC Ramps programs. Similar to the desired survey outcomes noted above for the daily carpool rate feedback should be elicited for awareness, interest, and participation in the ride matching system. And interest in additional features such as payment slitting, driver and passenger ratings, incentivizing drivers etc.

**Risks & Opportunities**

Several risks and opportunities are identified for the programs described in this section. These include factors that could influence the success of the programs or result in unintended consequences but are sufficiently unknown that they were not explicitly considered in the detailed implementation plan. While this is not intended to be an exhaustive list, it is intended to provide a range of elements that agency staff and decision makers should be thoughtful about during program implementation.

**Risks**

A potential risk of any transient parking rate is limited parking capacity on days the ramps are full. This would be a significant negative for those commuters, as they have already invested in forming a carpool and are now unable to reap the benefit of the discounted daily rate. It is not uncommon for the ramps, particularly B and C, to fill occasionally on weekdays. Since Ramp A is rarely full, the daily carpoolers could almost always have a space in the ABC Ramps system, but may not in their preferred ramp. Furthermore, if more people are carpooling, there will be more spaces available and the ramps will fill up less often. Lastly, having no space for a daily carpooler could be remedied by integrating parking reservations with the daily carpool rate, however this entails additional technological development beyond the short-term vision. It could also be remedied by setting a policy to close the ramp to SOV daily rate customers while always leaving a few spaces for any carpool daily customers.

There is a small risk of abuse of the daily carpool rate by users that are not carpooling. For example, an SOV traveling downtown could pick up a stranger on a city street near the ramp, enter the ramp to receive the discounted rate, pay their passenger a nominal fee, and leave again to commute home as an SOV. This is similar to a phenomenon that occurs in the Washington, D.C. region where unknown passengers will ride along with commuters enabling the drivers to utilize HOV facilities for a fee. It is unlikely that this would occur at the ABC Raps since the savings is relatively nominal for an SOV, and the driver would have to pay the stranger for the service. The savings would have to be very significant in order to overcome the fear of picking up a stranger. If it did occur at a level that would be a concern to the ABC Ramps, additional steps for verification may need to be explored.
Another risk that could impact the ramps and surrounding roadways is that arrivals of daily carpoolers may exceed entry capacity of designated entry gates. This is unlikely because carpool trends nationally are fairly low no matter how good the incentive is. But if it happened, it would be problematic both due to safety and operational risks on the roadways leading to the ramp entries, as well as imposing delays on carpoolers entering the ramps that may discourage them from continuing to use this program. If this were to occur, the countermeasure would be to furnish and staff additional entry gates with staff or equipment needed to facilitate carpool entries. It is anticipated that the return on investment for this additional cost would be justified as a response to strong program utilization.

**Opportunities**

While it is a significant burden for commuters from the southern metropolitan area to downtown Minneapolis, the I-35W construction work between Highway 62 and I-94 could help to attract new carpoolers to the daily rate program. These commuters are likely looking for additional transportation options they may not have explored previously. Carpooling would allow them to park at discounted rates in the ABC Ramps while also achieving travel time advantages by using MnPASS lanes on I-35W and I-394.

MnDOT is currently developing potential future MnPASS projects that would serve downtown Minneapolis. These would complement existing MnPASS facilities on I-394 and I-35W to the south by implementing new MnPASS lanes on I-35W to the north and on I-94 to the east and west. MnPASS lanes provide travel time advantages to carpools, thereby enhancing the incentive to carpool along with discounted daily rates at the ABC Ramps.

Finally, a commercial carpooling mobile app could enter the Twin Cities market. This would indicate that these entrepreneurs have identified this market as a promising investment in carpooling. While coordination should be quickly undertaken to incorporate ABC Ramps products into any new platform(s), this situation would serve as a catalyst for transition from the short term to long term recommendations described in this implementation plan.
ABC Ramps Transportation Options Implementation Plan

Parking FlexPass, Employer Programs, Transportation Options App

Program Features at a Glance

➢ A flexible contract marketed as Parking FlexPass that provides discounted access to parking and transit for a specified number of days each month.
➢ Coordination with employers and benefits administrators to offer the program through tax-advantaged payroll deductions.
➢ Outreach programs for employers to help employees make efficient transportation choices and recognize individuals and organizations achieving high levels of participation.
➢ Development of a multi-modal transportation mobile app that provides seamless access to and promotion of alternative commuting options.

Program Vision

Background and Program Need

Engagement conducted through the study revealed that there is a significant need and desire among commuters for increased flexibility in their transportation choices. The program recommendations presented in this section are designed to help SOV contract holders make transportation choices other than driving alone when it works for them. This is a reflection of the engagement feedback received stating that flexibility was needed for commuters to accommodate family and work responsibilities. The program is specifically designed to provide flexibility and discourage commuters from “falling back” on driving alone all the time when they only need to do so occasionally.

Current SOV contract holders are locked in by restrictive monthly contracts. Since the contract cost has been paid up front, they are generally unwilling to consider using other modes that would incur additional out-of-pocket expenses giving these users the ability to select a set number of days for parking and other options like transit on other days would reduce the total number of SOV trips to the ABC Ramps.

Currently, employer benefits programs typically present employees with a binary choice between parking and transit. These are generally established between the employer and benefits administrators and reflect the transportation products and services available in the local market. Benefits administrators are actively increasing their partnerships and offerings, but individual employers need to request the programs to be offered to their employees.

Promotion and support of new programs will be best achieved with employers as the conduit to reach commuters, since many procure their transportation services through work. Employers will need additional support to navigate the increasing number of options available to offer their employees, and to provide the resources and expertise to help employees make the optimal choices for their situations.

Parking FlexPass

The short-term implementation for the Parking FlexPass will be to facilitate a combined program that is as seamless as possible for the customer.
The Parking FlexPass program will be developed to combine parking and transit. Commuters will be able to choose how many parking days they want per month and how many transit days they want per month. They will have the freedom to change the allocation each month, and unused parking or transit credit will carry over to the next month. The pricing strategy will reflect a savings from driving alone every day, but a higher cost than using transit every day.

This program will be most effectively implemented by integrating it as an option in employer benefits packages. Many commuters buy their parking or transit with IRS pre-tax dollars through their employer’s benefit system. IRS rules state that you can have a parking pre-tax benefit and a transit pre-tax benefit, and that these need to be accounted for and reported separately. The maximum deduction for each category is $260 per month in 2018. In addition, some employers subsidize either parking, transit or both.

An additional benefit to ramp operations is to manage parking supply more efficiently. Ramps B and C are currently at or approaching capacity due to the increased development in the area around the ramps. If current SOV contract holders switch to parking only on some days, it will free up parking spaces in the ramps allowing more people to access downtown Minneapolis. The promotion of reservations for Parking FlexPass users will further ensure parking is available on days they choose to drive.

This document lays out the current vision for the Parking FlexPass and asks the specific questions that need to be addressed to deploy this program.

**Employer Programs**

Employer programs would help employers offer employees flexible transportation options instead of paying for their parking. Currently, some employers offer subsidized parking OR a discounted Metropass. This program would help employers offer flexible transportation options, so commuters can park on days they need to drive and take transit, telework, carpool and bike on other days.

User surveys have shown that many commuters to downtown Minneapolis obtain their transportation services through benefits at work. Many employers, and/or their benefits administrators, do not currently offer or actively promote options that help employees drive alone less often. The employer programs would advance this by helping to both design benefits programs that encourage non-SOV travel, as well as more hands-on support for commuters to change their mode and stick with it.

**Transportation Options App**

A longer-term goal is to have a mobile phone transportation app could combine trip planning with transportation choices integrated payment and gamification. The app could have an incentive program that tracks which days a customer drives and parks alone, carpools, rides transit, bikes, walks, or some combination of modes. Customers would accrue points for using options besides driving alone. Points could be used to pay for parking on days a customer needs to drive, or redeem for other transportation services including MnPASS, carshare, bikeshare, transit, and guaranteed ride home.

The mobile app would also provide one mobile place to access and pay for all of these transportation purchases (e.g., parking, transit, carshare, and bikeshare). Integration would be required with the different providers. The benefit of this app to the user would be to have a one-stop shop where they can
directly compare the trade-offs between travel time and monetary costs. Further, the app would recommend alternative modes and options to users based on their typical commuting patterns.

It is important to also ensure this program is accessible to users that may not have a bank account, a data plan on their smart phone, and/or a smart phone. To accomplish this, the product should have an option with a transit and parking key card. This would function similar to how Metro Transit’s GoTo Card currently provides options for commuters that are unbanked or without mobile phones or data plans.

**Desired Outcomes**

**Table 6. Desired Outcomes for Parking FlexPass, Employer Programs, and Transportation Options App**

<table>
<thead>
<tr>
<th>Desired Outcome</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce SOV trips to the ABC Ramps</strong></td>
<td>Letting people who currently drive alone everyday use transit on some days would reduce the number of SOV Trips. Employers must offer the Parking FlexPass as part of their benefits package in order to achieve wide participation in the program. Providing information from a single source for many transportation options will make it easier for commuters to reduce SOV trips.</td>
</tr>
<tr>
<td><strong>Increase equity and access</strong></td>
<td>The cost of the Parking FlexPass is anticipated to be less expensive than an SOV monthly contract. It will also be available to all commuters. The product will be offered on a key card access for commuters who are unbanked or do not have access to a smart phone with a data plan. Additional funds can be loaded on a card at a retail center. Offering the program through pre-tax dollars and/or subsidies reduces the cost and provides more equity and access. The mobile app will improve access by informing users of additional transportation options, including those that may face mobility limitations.</td>
</tr>
<tr>
<td><strong>Increasing HOV travel</strong></td>
<td>The Parking FlexPass will allow commuters to select parking and transit for specific number of days each month. Because they are using transit on some days instead of driving alone every day, it will increase HOV use in the form of transit. Helping employers to foster a culture that supports and encourages HOV travel, would be expected to result in an increase in the use of this mode. Providing more information in a single source will make it easier for commuters to choose HOV modes.</td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td>The Parking FlexPass provides flexibility to park some days and take transit other days. The transportation options app is focused on adding flexibility for travelers, by providing them with multiple mode options on-the-fly.</td>
</tr>
<tr>
<td><strong>Simplicity</strong></td>
<td>By offering the Parking FlexPass as a single product, it simplifies the process of selecting transportation benefits for downtown commuters. A single monthly cost will allow them to access both the transit and parking components without engaging in separate transactions. Employer programs will help make it simple for employers to offer transportation options and for their employees to take advantage of them. Finding and paying for various modes of travel will be simpler in a mobile app.</td>
</tr>
</tbody>
</table>
Detailed Implementation – Short Term

Program Features

Parking FlexPass

MnDOT and the City of Minneapolis will develop the Parking FlexPass for the ABC Ramps, a new type of contract that allows commuters to elect their preferred number of days of parking per month and access to transit, in a single monthly selection. Each month the contract will renew, and unused parking and transit credit will rollover for future use of these services.

The Parking FlexPass product would allow users to choose their payment method for transit service through a GoTo Card, the Metro Transit app, or both. This will help to facilitate the rollover program by loading unused funds onto a GoTo Card, rather than distributing parking vouchers. Maintaining the distinction between parking and transit funds is important in order to maintain the IRS tax benefit eligibility associated with these elections.

Withholdings are loaded directly onto benefits card with proper amounts for both parking and transit. Initial implementation could be a GoTo Card with specified amount of transit fares and then parking passes for the remaining number of days.

Benefit elections can be changed on a monthly basis. Unlike a health savings account (HSA) or flexible spending account (FSA) there are no restrictions from changing mid-way through the year. This would allow users to change their election amounts based on actual utilization, in response to life changes, or to suspend for a month if enough rollover credits were available.

Tax-Advantaged Elections

A key feature expected to contribute to the success of the Parking FlexPass program is facilitating commuters funding their transportation accounts with IRS pre-tax dollars through their employer’s benefit system. One of the pre-tax benefits providers many employers use is Wage Works. Company representatives have expressed interest in developing new products like the Parking FlexPass to expand their offerings to customers.

One scenario of how this may be implemented is for a modified WageWorks interface to allow users to customize their elections for parking and transit. As noted, employees would be allowed to change their elections monthly, and any unused credit in either the parking or transit accounts would roll over to subsequent months.

WageWorks would separate and track the employee elections separately for parking and transit accounts behind the scenes. This will provide a seamless process for users, so they are not required to take any action to fund accounts for the separate modes and services.

The employee’s WageWorks account will show the remaining balance for each mode. If WageWorks does not track this directly, this may entail a data extraction process similar to personal finance websites like Mynt. In this scenario, the user would enter login credentials for each of their accounts – Metro Transit and Minneapolis Parking – and the WageWorks summary would query the balance information on a routine basis.
Another critical consideration to ensure compliance with IRS rules requiring separate parking and transit pre-tax benefits. Funds allocated to each mode must be accounted for and reported separately. The product development process should include investigation of IRS Code Section 132 for commuter benefits. This describes the expenses eligible for income tax benefits and should be consulted to ensure product compliance with these requirements. Generally, this states that parking is in a specific category for benefits. All other transportation services will typically fall into the transit category. Each category has a limit of $260 per month.

ABC Ramps staff will work with WageWorks and other benefits providers to outline a program that is eligible for federal tax savings. This organization has experience facilitating similar programs in cities including New York Transit Authority. It is also comparable to a website they provide called transitchek.com and is frequently used in New York, Los Angeles, Chicago, San Francisco, and Atlanta. This allows employees to elect their parking and/or transit benefits and access these funds using a single card to pay for transportation services.

Other benefits administrators include ADP and Paychex. Eventually the Parking FlexPass product should be offered to all benefits administrators serving organizations in downtown Minneapolis. This will maximize the number of commuters the program is able to reach.

**Employer Subsidies**

The Parking FlexPass program should also be developed to allow employers to be able to subsidize or pay for it if they choose. Indeed, it would help to advance enrollment in the program for marketing efforts to encourage employers to subsidize the Parking FlexPass at a greater rate than parking alone. This would be mutually beneficial as it would represent a cost savings for the employer while offering an attractive benefit built around flexibility for the employees.

**Reservations**

Parking reservations are a critical component to making the Parking FlexPass program successful and user friendly. At a minimum, the product should be designed to work with one or more parking reservation system. This could be accomplished through the existing Skidata API reservation system, which avoids costly mark-ups on parking costs levied by commercial parking reservation apps.

There are several potentially significant benefits of exclusively using the parking reservation system for the FlexPass program. The first would be to have a single payment channel for parking payments. This would be the easiest way to facilitate parking payments from the WageWorks account and ensure that payments incurred by users are verified as eligible. Second, reservations guarantee space availability for customers wishing to park. This aligns with the overall premise of the program which is to allow commuters to drive occasionally when the need to. If they were unable to access the ramps on the days, they need to drive it would undermine the objectives of the program. Parking reservations will ensure that a space is available when they need it, leading to higher customer satisfaction.

Reservations could also serve as a conduit to offering the Parking FlexPass program to all downtown commuters, not simply those employed by the largest organizations. In addition to helping the program succeed by guaranteeing parking availability, it would allow commuters to purchase their parking through an approved vendor even if it is not offered through their employer’s benefits administrator.
Pricing

The price of the Parking FlexPass products should follow the principle that it is more expensive than just a monthly transit pass but less than a monthly SOV contract. Currently Metropass is offered at a cost of $83 per month to employees through their employers. Monthly SOV contracts at ABC Ramps currently range between $130 and $150 per month. Current market conditions suggest that price increases for monthly SOV contracts are warranted in the near future. Increasing these rates would provide additional pricing flexibility for the Parking FlexPass program. It would also be beneficial to coordinate increases in the monthly SOV contract prices with roll-out of the Parking FlexPass product, which may further incentivize commuters to choose this new product.

The balance of pricing of the Parking FlexPass should follow a curve between Metropass and monthly SOV contracts. This approach further incentivizes commuters to choose transit more often and limit parking to days it is most essential. This would potentially follow a breakdown similar to the illustrative example in Figure 1.

Figure 6. Illustrative Monthly Transportation Costs for Parking FlexPass

![Figure 6 Illustrative Monthly Transportation Costs for Parking FlexPass](image)

At the bottom of the graph, we can see that a commuter primarily using transit has a very low parking cost on a per-use basis. Conversely, when parking usage approaches every day of the month, the price increases toward the level of a monthly SOV contract.

Resources

Resources to help develop the Parking FlexPass product include contacts at FHWA and WageWorks.
Employer Programs

To build participation in the program outreach efforts should begin with the largest employers. This will provide the greatest return on investment by encouraging those employers to request that WageWorks make this program available in the suite of products offered to their workforce. Eventually, the goal is to offer the Parking FlexPass program to all downtown commuters. Working with employers should utilize a largest-to-smallest approach, capturing the greatest gains through largest employers first and then working through progressively smaller organizations.

Move Minneapolis recently announced a merger with the Minneapolis Regional Chamber of Commerce. This could potentially offer significant benefits to the employer outreach efforts. The Chamber of Commerce has an extensive network of business contacts and carries important influence with their members. Move Minneapolis has historically been successful and effective at promoting multimodal commuter programs to downtown Minneapolis. Implementation of Parking FlexPass should seek opportunities to work with these important partners and leverage their assistance in achieving program goals.

Transportation Options App

Initial implementation of a transportation options app will allow users to be able to see tradeoffs between time and cost among several options. This would represent a useful first step towards the more fully integrated app described in the long-term recommendations. More advanced services can even learn from users’ preferences and even add encouragement to use various modes.

As a pilot implementation, an app would present the user with transportation options and tracks participant behaviors. While this falls short of more visionary features such as allowing smart phones to access ramp and integration with current apps (Minneapolis Parking, Metro Transit), it can yield significant benefits for the ABC Ramps. Specifically, the data collection sample that is produced would prove highly valuable towards evaluating future programs developed by understanding users’ travel patterns, modal preferences, and behavioral trade-offs between transportation options.

Changes Needed to Implement

Technological

Most of the technological changes necessary to effectively deploy the Parking FlexPass program happen outside of the ABC Ramps immediate purview, and generally fall to the benefits administrators or other third party to implement. As noted in the program features, however, one major challenge will be to guarantee parking for program users. Parking reservations are expected to be a solution to help alleviate these issues. Parking reservations can potentially also help to facilitate payment processing, since some components of the infrastructure are already in place for this. Ramp operators can help by providing support for program administrators to access the reservation API and supply customers with a portal to make reservations as part of the Parking FlexPass subscription.
Another area for technology solutions is a way to split the “purse”, or direct the payments for parking and transit to the right institution. The IRS requirement to not co-mingle these types of funds helps on the front end. Integration with the benefits provider, Metro Transit and the ABC Ramps will need to be coordinated to make the usage seamless for the commuter, and easy to administer.

**Engineering & Infrastructure**

Negligible engineering or infrastructure changes are expected to be required on the part of the ABC Ramps to facilitate the Parking FlexPass program and associated features. While most of the significant changes are on the payment and account sides, customer access to the ramps would be expected to fall within current technological approaches, e.g. using passes and prepaid cards to enter the ramps through the Skidata gate arm equipment.

**Policy/Regulatory**

The characteristics, policies, and pricing encompassing the Parking FlexPass program will require approval from Metro Transit management. Special negotiation may be required to allow the reduced transit parking rates and to finalize the means of payment riders will use as they board.

The other major regulatory change would be to potentially charter a new organization to administer the program. The scope of services performed by this body will depend on the breakdown of roles provided by the benefits administrators, but they may include:

- Establishing rates
- Marketing the program to employers and commuters
- Negotiating with benefits administrators
- Processing payments and tracking balances

**Marketing/Outreach**

Outreach is already underway to understand nearby employers’ options for incorporating improved transportation options within existing benefits packages. Marketing strategies including employer-based promotions, the pilot employer champions program, and the pilot individualized marketing campaign are natural fits with the Parking FlexPass idea. These marketing strategies focus resources on commuters’ destinations (workplaces) to deliver customized resources. Key marketing considerations include:

- Launching the product will require close collaboration with WageWorks and area employers to create a functional and attractive product.
- Employer-based promotions and the employer champions program will help ABC Ramps develop deeper relationships with employers in the area. These relationships will help find new partners for product and technology testing.
- Customize short-term pilots to meet the needs of WageWorks and employers.
- When communicating the product to employers and commuters, emphasize that users can change the amount elected to the FlexPass whenever is convenient for them. They are not tied to certain time periods like they would be when changing elected amounts associated with other accounts (i.e., health savings accounts, flexible spending accounts).
Agency Coordination

Agency coordination for the Parking FlexPass and companion programs should be overseen by a policy advisory group that monitors progress and provides guidance and direction. If successful, the Parking FlexPass could be rolled out in other parts of Minneapolis or the region. An advisory group made up of regional parking experts would ensure program elements are relevant in other markets. This group should, at a minimum, include representatives from City of Minneapolis Parking, U of M Parking and Transportation Services, Capitol Area Architectural and Planning Board, and the Shared Mobility Collaborative.

Partner Roles and Responsibilities

Implementation for Parking FlexPass features a high level of complexity and therefore will involve many partners to achieve. Foremost among them, MnDOT will drive development of the program and support the activities of the other agencies and organizations.

Metro Transit is indispensable as the provider of the transit component that makes up one-half of the program’s transportation services. As noted in the regulatory discussion above, the agency must be active in shaping the operation of the program by establishing transit rates and facilitating fare payment via integration with their methods including the Metro Transit app, Metropass, and GoTo Card.

The City of Minneapolis will also spearhead important features of the program. City officials will provide direction to ramp operator ABM and coordinate with app development to facilitate parking reservations. These organizations will also be the point of contact for Skidata, the ramp payment equipment providers, should any hardware or software changes be required.

The Parking FlexPass also introduces partnerships with additional organizations not traditionally referenced in transportation programs. For this effort, third party benefit administrators have been identified as a critical link to offer the program as a pre-tax transportation option to downtown employees. Wage Works has been identified as a promising partner in this regard. Program champions should forge formal arrangements with WageWorks, or comparable benefits administrators, to actively participate in the development of the Parking FlexPass program to ensure it can satisfy IRS requirement for pre-tax savings.

Finally, downtown employers and business organizations must be engaged to reach a meaningful number of eligible commuters. Program implementation should feature outreach to the Minneapolis Regional Chamber of Commerce and large downtown employers. Early adopters of the program should further be enlisted as champions to help publicize and promote the program to other potential users.

Schedule

The University of Minnesota submitted a Metropolitan Council Congestion Management and Air Quality regional solicitation grant application under the Travel Demand Management (TDM) category to provide support for this program. If successful, the program would be anticipated to begin October 2019.

If awarded, the University of Minnesota will pay an important role in initial deployment of a transportation options app using Daynamica, a product developed by the university. Researchers can assist by deploying the app to pilot program volunteers and gathering data from their transportation experiences. They will then use the data to assess behaviors and identify areas for improvements and new programs.
If the grant application is not successful, the Parking FlexPass will still be developed as a product, but the mobile app pilot and evaluation efforts will be scaled back. In addition, the launch of the product will likely be slower.

**Program Implementation**

The customer experience would begin by registering with the transit-parking pay-as-you-go product. This is something their employers could elect to subsidize, just like they currently can with Metropass. Under this scenario customers would be offered a monthly contract at a fixed price, offering a combination of prepaid days of parking and transit fares. In total, this product should deliver monthly transportation costs that is less than a monthly parking contract but more than a transit pass.

A pilot implementation of a monthly contract product can be accomplished using Metro Transit’s existing GoTo Card. The transit component of this product will be achieved through the low-tech mechanism of loading the GoTo Cards with a set number of rides or a monthly Metropass to allow users to access the transit trips they need.

A partner will be needed to facilitate loading the cards with the transit fares and paying for the parking. This could, for example, be contracted with ABM, Move Minneapolis, or a dedicated third-party provider created for this purpose.

The partner agencies also have roles to realize this program. Additional development must be performed on the Metro Transit app to activate the reduced transit fare prices. Subsidies would be required to offset the reduced transit fares offered to users, which can potentially be covered through ABC Ramps revenues.

The parking access requires additional intervention, however the technology to accomplish this is not expected to be prohibitively challenging. Existing gate arm equipment in the ABC Ramps has the ability to read the electronic identification chips currently embedded in GoTo Cards. The ramp payment systems must simply be programmed to recognize these cards and relate each unique ID to the associated user account.

**Pilot Employer**

A large downtown employer could potentially participate as a pilot site. Preliminary discussions suggest that the human resources department is the appropriate conduit to begin working with a partner organization. The pilot should be initiated through an employee commuter focus group listening session to further vet the program ideas. A three to six-month pilot would follow, allowing interested commuters to test out the program. Additional feedback would be gathered from participants to understand program strengths and areas where improvement is needed.

This may be a very manual process in the early stages of implementation. A pilot would involve directly purchasing a large number of GoTo Cards from Metro Transit and filling them with a specified balance to be used towards transit rides. Similarly, a bundle of pre-paid parking vouchers would be purchased and distributed to voluntary participants at the sponsoring employer organization. This would be subsidized to be available to participants at a reduced rate, that would be made available in addition to – or in lieu of – their traditional pre-paid transportation products selected through the employer or a third-party benefits administrator.
As the program expands, the GoTo Card approach could continue to be used as a low-barrier pilot to offer the program beyond the pilot employer organization.

**Pricing Sensitivity Assessment**

Following an initial pilot period, review the success rate relative to the pricing offered for the program. Analyze the sensitivities of users to the pricing models relative to the amount of transit and parking provided in each. The data of points accrued through the incentive program should also be collected and analyzed to evaluate the effectiveness of this component, particular for previous SOV parking contract holders.

**Implementation – Long Term**

*Program Features*

The long-term aspiration to improve flexible transportation options is through a comprehensive mobile phone app. This would combine trip planning with transportation choices accompanied by an incentive programs. The “trifecta” of features in a transportation options app would be to select service, authorize payment, and track incentives all in one platform.

A potential scenario is for the user to be prompted to select transportation mode the night before or the morning of their commute downtown. When the user selects the option to “park today” the app would automatically generate a parking reservation in the desired ramp. Similarly, selecting the option for “ride transit” would lead the user to a menu of available transit options and fare choices tailored to their available payment methods.

As a one-stop shop, the mobile app would serve as a single portal to purchase any potential transportation services the commuter might demand. Furthermore, selection of parking (SOV or HOV) would generate a parking reservation in the designated ramp. This would then supply a QR code in the app providing access upon arrival to the ramp.

The incentive component of the app would track the travel behavior of the participants. By recording which days, the commuter carpool, rides transit, bikes, or walks, they would be rewarded for choosing options other than driving alone. Accrued points would be redeemed for other transportation services such as parking, MnPASS, carshare, and more.

Another essential feature is to design this program to be accessible for those without bank accounts, data plans, or smart phones. Potential means to accomplish this is to provide pricing through a payment aggregator to facilitate a single payment portal for customers. This would function similar to the how Metro Transit’s GoTo Card currently provides options for commuters that are unbanked or without mobile phones or data plans.
Effectiveness Evaluation

Cost Effectiveness

The cost effectiveness evaluation for the Parking FlexPass program is considered in three distinct phases. The first is the pilot program that would be undertaken in partnership with a downtown employer. The second is the formal roll out of the full program, and the third is the ongoing maintenance of that program.

Pilot Program

During the Pilot phase the cost assessments will not be based on cost effectiveness, but rather considered a development cost. Several categories of costs are considered in the development cost assessment. These include investments in subsidies staffing, marketing, and outreach anticipated for the pilot program. In addition, reductions in parking revenues are estimated to capture the full impacts to ABC Ramps finances anticipated to implement these programs.

One of the unique costs associated with the pilot implementation of the Parking FlexPass program is the need to subsidize transit passes. These will need to be paid up front as a result of the intentionally low-tech approach to the pilot. The cost of this transit pass is assumed to be $65 per user per month. This is based on loading prepaid value onto GoTo Cards that would accommodate 10 days per month (approximately half of workdays) of round trip travel at the $3.25 rate per ride.

Other significant cost categories for the pilot program are the management and outreach efforts. These can be focused and short-lived in the context of the pilot, but have a meaningful impact on the overall cost expectations.

Participation in the pilot program is concurrently anticipated to be low since it will be available on a limited basis. For the purposes of the development cost assessment evaluation, 50 initial participants are assumed. The participation levels affect the evaluation through the reduced parking revenue and the number of SOV trips reduced. For the Parking FlexPass program, the daily SOV trip reductions are less than the number of participants, since the design of the program is to allow them to drive alone a portion of the time.

Table 7. Development Cost Summary for Parking FlexPass Pilot Program

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot Support</td>
<td>Reduced SOV Trips (daily)</td>
</tr>
<tr>
<td>Management &amp; Staffing</td>
<td>Reduced SOV Trips (annual)</td>
</tr>
<tr>
<td>Marketing &amp; Outreach</td>
<td>Direct Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td><strong>Direct Costs</strong></td>
<td><strong>Total Cost per Reduced SOV Trip</strong></td>
</tr>
<tr>
<td>$160,000</td>
<td>$160,000</td>
</tr>
<tr>
<td>Net Change in Revenue</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td><strong>$160,000</strong></td>
</tr>
</tbody>
</table>

Pilot support costs assume direct expense for purchasing pre-paid transit passes for pilot program participants. A total of 50 transit passes were assumed over a period of one year.

Management includes anticipated staffing requirements at the City of Minneapolis and a contracted third party to administer the program.
Marketing and outreach includes a variety of advertising costs. For the pilot program, however, much of the direct outreach work would be performed by the contracted third party and is rolled into the management and staffing cost.

No change in revenue is projected for the Parking FlexPass pilot program as the number of participants is small and lost revenue from parking contracts is expected to be backfilled with daily parking fees.

The anticipated cost per reduced SOV trip is high for the Parking FlexPass pilot program. This is typical for a pilot program, where substantial facilitation effort is required but the target market is limited. Nonetheless, the pilot program represents a good investment for the ABC Ramps to test and refine the Parking FlexPass program concept before committing to more sustained implementation.

Initial Deployment

At the time that the Parking FlexPass program is rolled out in its entirety, a larger expenditure is anticipated reflecting its complexity and multifaceted design.

Technology and Infrastructure

Costs are assumed for development and installation of parking technologies to support new payment mechanisms for the Parking FlexPass.

Management and Staffing

Contractor services are included to facilitate implementation of the program. These would support Parking FlexPass by working with employers and benefits administrators to make the program available and administer the relationship with ABC Ramps. As the program is developed further and the roles of the partners comes into focus, the management would also potentially facilitate back-end accounting to set up commuter accounts and allocate paycheck withholdings to be directed to accounts associated with transit and parking benefits.

Marketing & Outreach

Costs are allocated to fund contractor services to prepare advertising materials. These would particularly intensive during initial implementation to publicize the program. Marketing would be directed to channels including web, skyway, social media, and more.

Reduced Parking Revenue

Current revenue would be reduced as current SOV contract holders switch to the transit-parking contract. This will cost less than their current SOV contract, resulting in lower monthly revenues to ABC Ramps.

Reduced SOV Trips

Of the more than 6,500 parking spaces in the ABC Ramps, 3,350 are contracted to single occupancy vehicle drivers. Initial implementation of these programs is assumed to attract a twenty percent (20%) participation rate in the program among these SOV contract holders, which equates to just over 600 program participants. If it is successful, the Parking FlexPass could be scaled to other city of Minneapolis parking facilities without any additional development costs. In addition, this pilot may help other parking facilities in the region consider offering similar programs such as Saint Paul, the Capitol Complex, or the University of Minnesota.
In addition, there is currently a waiting list for SOV contracts at the ABC Ramps. As a result, a combined contract would be attractive to those who do not currently have a monthly parking subscription.

In outreach conducted as part of the ABC Ramps Transportation Options Implementation Plan, more than 70% of downtown commuter online survey respondents said they would support a program that allows flexible monthly parking contract that allows commuters to choose between parking and transit usage on a daily basis. Assuming less than half of these supporters choose to participate in the program or are supported by their employer, we conservatively estimate that twenty percent (20%) of current SOV contract holders in ABC ramps will participate in Parking FlexPass at ABC Ramps.

Cost Effectiveness Results

Table 8. Cost Effectiveness Summary for Parking FlexPass Initial Implementation

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Reduced SOV Trips (daily)</td>
</tr>
<tr>
<td>Management &amp; Staffing</td>
<td>Reduced SOV Trips (annual)</td>
</tr>
<tr>
<td>Marketing &amp; Outreach</td>
<td>Direct Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td><strong>Direct Costs</strong></td>
<td>Total Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td>Net Change in Revenue</td>
<td>$37,000</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td>$401,000</td>
</tr>
</tbody>
</table>

Technology costs include hardware and software upgrades at the entry and exit gates to allow access using GoTo Cards or other payment mechanisms utilized for the Parking FlexPass program.

Management and staffing costs provide an estimate for additional staffing resources required at the City of Minneapolis to manage the program.

The marketing and outreach category includes an array of public advertising as well as costs for direct outreach through employer-focused programs.

Net change in revenue is a reduction, however the magnitude is estimated to be small as parking spaces freed by program participate will be backfilled by new parking customers.

The cost effectiveness of the initial implementation of the Parking FlexPass program begins to come more in line with other programs outlined for the ABC Ramps. It is still somewhat more costly – specifically for the direct cost per reduced SOV trip – than other programs, which is largely a reflection of its departure from traditional programs and approaches. The program was designed in response to customer feedback looking for increased flexibility while preserving tax savings benefits.

Ongoing Program

In the ongoing program phase, residual costs borne after the initial setup and rollout stage should be lower in magnitude and more constant from year to year. Participation is also expected to grow throughout this period as the program matures and becomes a mainstream choice for downtown commuters. To reflect this longer-term effectiveness, startup costs are included by amortizing over five years when added to the annual maintenance costs and reduced SOV trips at the five-year mark.
Table 9. Cost Effectiveness Summary for Parking FlexPass Ongoing Maintenance

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Reduced SOV Trips (daily)</td>
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</tr>
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<td>Direct Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td>Direct Costs</td>
<td>Total Cost per Reduced SOV Trip</td>
</tr>
<tr>
<td>Net Change in Revenue</td>
<td>$200,000</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$237,000</td>
</tr>
<tr>
<td></td>
<td>$37,000</td>
</tr>
<tr>
<td></td>
<td>$2.51</td>
</tr>
<tr>
<td></td>
<td>$2.97</td>
</tr>
</tbody>
</table>

Management and staffing costs are consistent with those projected for the initial implementation of the Parking FlexPass program.

Marketing and outreach would be expected to decline as the program reaches maturity and the need for broad public advertising is reduced. Direct outreach to employers would be expected to continue.

As the Parking FlexPass program reaches maturity, the cost effectiveness is expected to be in line with other ABC Ramps programs. Indeed, success of the program should be characterized by streamlining the management and marketing efforts with overall approaches used for the ramps. Provided the pilot and initial implementation phases are effective, the long-term prospect for Parking FlexPass are anticipated to be cost effective at advancing the goals of the ABC Ramps.

Other Considerations

As these programs mature from the short term to long term deployment recommendations there are a number of additional cost considerations that are likely to be encountered. For example, a financial partnership or underwriting relationship may be entered into for a commercial transportation options app to enter the Twin Cities market.

Another potential cost would be to fund or subsidize the incentives offered to commuters in reward for making desirable transportation choices. As described in the long-term recommendations this could be accomplished in a variety of ways, such as points accrual or random drawings. In either case, financial resources would likely be needed to pay for the products and services offered through the rewards program.

Not least of the investments in the long-term implementation will be additional resources for mobile app integration. Components to this may include, but not be limited to, Metro Transit app, parking reservation app(s), and payment aggregator services. Route planning mobile apps with multimodal options are being deployed in other markets and include apps like GoLA, Mooval, FordPass, MYCOLUMBUS and more. Watching the development of these solutions will be an important next step for a long term mobile app solution in the Twin Cities. In addition to upfront programming and development costs, these programs will inevitably require ongoing maintenance and support to address issues that may arise over time.

Another app-based resource is Daynamica, a multimodal transportation app developed by researchers at the University of Minnesota. This tool provides travelers with comparisons and suggestions about different modes that can be selected for their trips, while providing valuable data on travel behavior back
to the researchers. MnDOT partnered with the University of Minnesota to submit a grant application for the Congestion Mitigation and Air Quality (CMAQ) program to advance the Parking FlexPass program at the ABC Ramps. If successful, the Daynamica app may be a useful resource to provide voluntary participants with additional travel information and track their choices and behaviors to facilitate program refinement.

**Funding**

The ABC Ramps can provide resources from parking revenues for app development, either in Metro Transit’s app or with a commercial app developer. Funds can also be used to provide budget to help pay for any transit subsidy to demonstrate pricing of transit-parking program. Discretionary funds generated through ABC Ramps parking revenue, less operations and maintenance expenses, must meet a set of criteria demonstrating that expenditures contribute to the goals of the ramps. It is expected that the programs described in this implementation would meet those criteria by decreasing congestion, improving air quality, and helping commuters drive alone less often.

**Program Measurement and Evaluation**

SOV and carpool contracts should continue to be monitored over time as these programs are implemented. This will be an important indicator of how travel behaviors respond to the new programs and their effects on existing programs.

Similar to monitoring the parking contracts, the number of transit passes should also be tracked to see if any effects are observed among transit subscriptions. And not least, the direct success of the program should be monitored by the number of transit-parking contracts purchased. If multiple permutations of the contracts are available, the proportion in each category should also be monitored to observe trends over time. Ideally this could be done longitudinally by tracking individuals’ elections and understand more about user characteristics and demographic factors that lead to lower and higher levels of parking versus transit use.

The final measure of the program itself would be tracking the average funds remaining on transit and parking elements of users’ accounts per month. In addition to monitoring user trends this would also help to fine tune the costs and withholdings assigned for each contract level.

User surveys should be conducted occasionally to determine if customers of the new programs were previously SOV or carpool contracts or whether they shifted from other modes all together. The intent of the programs, particularly the transit-parking contract, is to attract existing SOV parking contract holders to shift at least a portion of their trips to other modes.

In addition, a recurring survey of all ABC Ramp users should be undertaken to assess overall awareness of program. This would help to inform the advertising and marketing for the transit-parking contract and how it could be improved to reach more potential customers.
Risks & Opportunities

Several risks and opportunities are identified for the programs described in this section. These include factors that could influence the success of the programs or result in unintended consequences but are sufficiently unknown that they were not explicitly considered in the detailed implementation plan. While this is not intended to be an exhaustive list, it is intended to provide a range of elements that agency staff and decision makers should be thoughtful about during program implementation.

Risks

There is a concern that people shift to the transit-parking contract from a monthly transit pass, resulting in additional SOV trips and lower transit ridership. The pricing and marketing for the product will ideally be designed to avoid this, however the flexibility offered by this program may be appealing for those currently choosing a transit only option. If the overall increase in SOVs now taking transit half the time outweighs a smaller number of transit users who switch to driving sometimes, the net gain to transit could be significant.

There is a challenge in guaranteeing the availability of parking spaces with this type of program. While there may be different types of implementation – fixed number of days per month, pay-as-you-go, etc. – it adds a layer of complexity to accurately predicting ramp utilization and guaranteeing parking availability.

Risks faced by the employer programs are that it encounters resistance from employers to engage with support providers, perhaps if they feel this interferes with core business operations. In addition, the program itself could become too expensive and hands-on over time as more organizations are engaged over time, or that it no longer delivers the desired return on investment.

Opportunities

These programs are anticipated to help uncover many opportunities for success in meeting the ABC Ramps’ goals. The transit-parking contract is off to a good start as employers have expressed initial enthusiasm about offering more flexibility to their employees. Benefits administrator WageWorks has also acknowledged interest in serving their customers with flexible programs.

There are also many opportunities for the transportation options app, as more and more apps are entering the market that attempt to stitch together multi-modal options. Potentially one with the right mix of features will enter the Twin Cities market and be in position to partner with ABC Ramps to deliver the program features identified through this investigation and implementation plan.

Finally, the opportunities for the employer programs are likely to outweigh the risks. The study demonstrated that many employees get their transportation services through work. Employers want to take advantage of any resources available to maintain happy, healthy, and productive employees. If these programs help employees to be more satisfied with their commuting choices employers can look forward to reduced turnover and improved performance.
ABC Ramps Transportation Options Implementation Plan

Mobility Hub

Program Features at a Glance

➢ Provide traveler information to facilitate flexible transportation choices.
➢ Enable seamless transfer between modes, including transit, parking, biking, walking, and shared mobility options.
➢ Offer improved wayfinding and consistent signage to establish cohesive branding.
➢ Activate the space through programming and retail services to promote safety and security.
➢ Provide pedestrian friendly connections to nearby destinations.

Program Vision

Background and Program Need

The ABC Ramps were originally designed as “intermodal transfer facilities” as defined in federal US Code with connections between modes including transit, express busses, local buses, driving and carpooling. Over the years bicycling and EV charging stations and other transit modes have been added in or near the ABC Ramps.

An emerging transportation concept in the United States is the mobility hub, and is very similar to the ABC Ramps original concept of an intermodal transfer facility. Mobility hubs are defined as a center that seamlessly connects different modes of travel, with emphasis on shared modes including transit, carshare, walking, biking, transportation networking companies, vanpool, microtransit, taxi, shuttles, and circulators, and intercity connections.

Mobility hubs also provide a focus on the resources available to help users make informed travel decisions. This can be accomplished through in-person travel information, electronic kiosks, or some combination or variation of both. This results in increased transportation choices for residents, employees, visitors, and those who choose or are unable to own a vehicle.

Additional features may include flexible space for programming of activities, secure bike parking, and other customer convenience features. In sum, the elements of a mobility hub should make it a welcoming and inviting space that serves users by connecting them to a wide array of transportation choices and provides flexibility and simplicity as the make their daily journeys.

In response to customer feedback gathered through the study, enhancing the ABC Ramps to become a more modern mobility hub addresses several facets including safety and security, simplifying access to additional modes, and providing good connections to nearby destinations. In many ways the mobility hub program is the physical side that supports other program investments outlined in this implementation plan and will be an essential lynchpin in helping the ABC Ramps to achieve their goals.
ABC Ramps Transportation Options Implementation Plan

Mobility Hub

The ABC Ramps mobility hub will serve an important transportation function in regional system as the origin, destination, or transfer point of a significant portion of trips. To accomplish this, it must provide seamless connectivity between modes, with extensive signing to direct people to desired services.

The mobility hub should also be surrounded by intensive concentration of working, living, shopping, and/or playing. Fortunately, the ABC Ramps are located where these characteristics are already present, which should position the facilities for success as a mobility hub.

Providing a strong sense of place is a crucial element for a mobility hub, so that it is a welcoming environment. Elements to achieve this begin with providing priority for pedestrian movements within and through the space both at street level and skyway level in and around the ABC Ramps. Second, it must provide traveler information and wayfinding consisting of visual cues, signage and technology. This can be accomplished by leveraging technology, however traditional methods can also be effective.

Ultimately a successful mobility hub will support economic vitality, leading to significant development potential. This reflects the several characteristics of mobility hub improvements working together, providing mobility, placemaking, and future implementation opportunities.

Mobility

The underlying foundation of a mobility hub is the integration of modes surrounding rapid transit service. A high-quality transit user experience should be provided making the services comfortable and efficient. The agglomeration of services at the facility should also be leveraged to facilitate fare payment and other transit elements, which are discussed in more detail in the implementation section.

In the case of ABC Ramps, vehicle parking is also a core mode served by the facility. Strategic parking management should be a touchstone of the mobility hub, which both recognizes the importance of this mode, but also acknowledges that growth of other modes may result in competition for space currently dedicated to parking uses.

The mobility hub must also provide for the safe and efficient movement of people with priority for pedestrians. Owing to that underlying principal this component supports mobility and accessibility for people of all means to desired and productive destinations. This aligns with current practices in the City of Minneapolis, along with broader efforts in the transportation industry, to prioritize pedestrians and users of all abilities.

Placemaking

Mobility hubs are envisioned as elements of vibrant mixed used development and high land use density in urban areas. This implementation plan outlines several considerations for transforming the ABC Ramps into an attractive public realm that features activity programming and commercial opportunities, working in concert with efforts to improve users’ perception of safety their surroundings.
**Implementation**

One of the most exciting features of the mobility hub is the flexibility it affords to accommodating future growth and change. The transportation industry is on the verge of unprecedented transitions, applying a mobility hub lens will position the ABC Ramps to remain relevant. While exact outcomes of the transition cannot be fully predicted, components of the mobility hub program will provide experimental opportunities to assess approaches effectiveness in serving users across modes and help make better decisions as future needs arrive.

A mobility hub also positions the ABC Ramps to leverage partnerships and incentives for public and private investment. In addition to the transportation purposes, the facilities could also consider incorporating other services and amenities. The transportation industry is also seeing a shift toward private investment and public-private partnerships, so this similarly serves to keep the Ramps relevant in that regard.

**Desired Outcomes**

The program components are expected to work together to better serve the goals of the ABC Ramps. It represents the physical co-location side to several technological efforts underway, ranging from payment systems that combine transit with other modes, transportation options apps, and mobility-as-a-service products.

The mobility hub should also provide opportunities for users to choose several forms or shared mobility across multiple trips types. And it will increase visibility of shared mobility products and services leading to higher utilization.

As with all the recommended programs for the ABC Ramps, flexibility is at the core of the plan. This program should provide abundant options allow for different choices on different legs or direction of travel. For example, a commuter arriving by express bus in the morning could access a car share vehicle for a mid-day meeting or use a TNC for their journey home to reach children’s activities.

**Table 10. Desired Outcomes for Daily Carpool Rate and Ridematching Systems**

<table>
<thead>
<tr>
<th>Desired Outcomes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce SOV Trips to the ABC Ramps</strong></td>
<td>A mobility hub will facilitate, promote, and mainstream non-SOV tripmaking by increasing the focus of the ABC Ramps to serving shared modes. This will be done by allocating space and directing travelers to these services within the facilities.</td>
</tr>
<tr>
<td><strong>Increase Equity and Access</strong></td>
<td>Key components of the mobility hub are enhanced traveler information and seamless transfer between modes. Both of these elements will provide additional opportunity to access transportation services and reduce barriers to making trips at the urban, regional, and intercity scales.</td>
</tr>
<tr>
<td><strong>Increasing HOV Travel</strong></td>
<td>The mobility hub will establish a focus on shared modes by providing preferential locations for them. This will increase the attractiveness and visibility of using these modes.</td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td>An expected benefit of a fully functioning mobility hub is a degree of redundancy among the co-located transportation services. For example, a user may choose to make the same trip by transit, bikeshare, or TNC at different times depending on their travel needs – but all trips can be initiated from the same point.</td>
</tr>
<tr>
<td><strong>Simplicity</strong></td>
<td>The mobility hub will be well signed and provide abundant traveler information to aid in the simplicity of the user experience. Through wayfinding and customer assistance there should be minimal barriers to identify a user’s desired services.</td>
</tr>
</tbody>
</table>
ABC Ramps Transportation Options Implementation Plan

Program Features

The ABC Ramps Mobility Hub should serve the principles outlined above. This section describes the features envisioned for the facilities to work towards those outcomes.

Wayfinding

The first category of features includes elements of wayfinding, signing, and branding to facilitate logical movements through the facilities and provide a cohesive experience for users.

There are many modes of transportation that are served in the five-block area surrounding the ABC Ramps. These include metro transit local and express buses, soon to be added rapid bus service. Warehouse and target field LRT stations are a block away from Ramp B. Greyhound and Jefferson run out of the Hawthorne Transportation Center adjacent to Ramp A. Megabus runs out of Ramp C. Nice Ride bike share stations are adjacent to Ramps A and B. North start passenger rail runs out of Target Center. SW Transit has curb side stops in the area too. This is in addition to the SOV and HOV parking provided in the ramps themselves. There is also the opportunity to connect to the airport using the METRO Blue Line. Lastly, freeway entrances and connections to major bike routes are also provided near the ABC Ramps.

Locating these modes can be challenging for travelers and the connections between them are not intuitive. The first and most direct approach for the ABC Ramps to address this is to provide improved information, wayfinding, and connectivity between all these modes.

Wayfinding is at the forefront of the users’ experiences and is critical to the success of all the other features. There are already numerous transportation options served at or near the ABC Ramps, and more are anticipated as part of the Mobility Hub and other programs. Attention to wayfinding will be an ongoing effort as additional elements are added. Efforts are already underway to conduct a wayfinding study for the ABC Ramps. This should continue to be revisited over time, recognizing that users’ wayfinding needs will be dynamic as the transportation landscape rapidly evolves.

Abundant signing and visual cues should be provided in and around ABC Ramps mobility hub facilities. This will be the backbone of the wayfinding element. Signing will be branded with custom styling developed for the mobility hub to provide cohesiveness and emphasize the connections between the features.

Finally, the location of the facilities should be easy to find from outside their boundaries as well. Plans should ensure the ABC Ramps are will signed and advertised. Entry points should be clearly marked at both street and skyway levels using the same branding as the interior wayfinding.

Traveler Information and Amenities

Travel information is another essential element of the mobility hub. This can be provided through various means, including both human and electronic. For example, interactive kiosks can be offered that provide directions to nearby points of interest and mobility options. This could be built on the same platform as the transportation options app, providing information to travelers that may not have access to a smartphone.
On the human side, a customer service window could be provided to facilitate regional traveler information. Attendants could answer questions about the various modes available and connectivity to other areas in the region. In locations without kiosks or travel information, static maps could be near all entrances from street, skyway, parking, and transit areas. Other amenities provided in the ABC Ramps include passenger waiting areas for a variety of transit services and public restrooms.

**Pedestrian Connections**

Connections to nearby destinations are another essential feature in the emerging understanding of mobility hubs. Walkability will be emphasized to provide walkable and accessible routes to nearby land uses. These amenities should focus on providing a high level of user experience, promoting safety as well as efficiency.

Specifically, these features will incorporate strong lighting, pavement in good repair, and strive to include additional amenities such as landscaping. The pedestrian connections should also integrate with the signing and branding efforts, such that they continue beyond the mobility hub and direct travelers to and from nearby points of interest.

**Improvements to Existing Pedestrian Connection**

The existing pedestrian connection to North Loop follows the 3rd Street entrance to westbound I-94. Located adjacent to vehicle lanes and separated by a concrete barrier, this connection provides a bridge over the I-394 and NorthStar rail facilities. A number of enhancement opportunities have been identified to improve the aesthetics and sense of safety and security of this connection. These elements include lighting, emergency call box, landscaping/plantings, decorative railing, and trash receptacles.

Cost estimates for these items have been developed based on typical unit costs for these landscape features in the public realm. These items are categorized as capital costs when summarized in the cost effectiveness section of this chapter.

**Table 11. Cost Estimate for Improvements to Existing Pedestrian Connection**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting</td>
<td>$7,000 each, 60-foot spacing</td>
<td>27</td>
<td>each</td>
<td>$7,000</td>
<td>$189,000</td>
</tr>
<tr>
<td>Emergency Call Box</td>
<td>$2,000 each, 500-foot spacing</td>
<td>4</td>
<td>each</td>
<td>$2,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Landscaping/Planting</td>
<td>$20 per linear foot</td>
<td>1,600</td>
<td>lin ft</td>
<td>$20</td>
<td>$32,000</td>
</tr>
<tr>
<td>Decorative Railing</td>
<td>$50 per linear foot</td>
<td>1,600</td>
<td>lin ft</td>
<td>$50</td>
<td>$80,000</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>$500 each, 500-foot spacing</td>
<td>4</td>
<td>each</td>
<td>$500</td>
<td>$2,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$311,000</strong></td>
</tr>
</tbody>
</table>

**New Connection to North Loop**

Providing a pedestrian connection to the North Loop neighborhood is a specific implementation need identified for the ABC Ramps as part of the Mobility Hub program. MnDOT received a letter from 2020 Partners regarding this issue in spring of 2018. It outlines concerns with the current connection (along the 3rd Street entrance to I-94) with respect safety and security issues. The letter highlights the need for better lighting and an emergency call station, among other elements.
The ABC Ramps should continue to coordinate with 2020 Partners, City of Minneapolis, North Loop Neighborhood Association, and Warehouse Business District Association to find solutions to these issues.

A potential connection opportunity would be to reconnect 3rd Street over the Cedar Lake Trail and Northstar Commuter Rail line. The existing pedestrian connection that runs along the 3rd Street entrance ramp to westbound I-94 could be intercepted at 3rd Avenue N to provide a vertical connection to street level. Travelers parking at Ramp C would also be able to access this point from Ramp C by existing through the bus lobby along 3rd Avenue.

From there, an attractively landscaped pedestrian route would pass between buildings on the 3rd Street alignment. At the Cedar Lake trail a bicycle and pedestrian bridge would be provided over the trench containing the Northstar and freight train tracks and connect at the cul-de-sac of North 3rd Street on the west side of the trench. Access and connections to and from the Cedar Lake Trail would also be provided.

Figure 7. Pedestrian Connections to North Loop
The cost estimate for this connection was developed based on typical bridge, pavement, and landscape costs for pedestrian facilities in a developed urban environment. The specific items included in this estimate are the new trail pavement, structural cost for bridge over rail trench, and landscaping amenities such as lighting and street furniture.

Table 12. Cost Estimate for Potential North 3rd Street Pedestrian Connection

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trail Paving</td>
<td>$5 per square foot</td>
<td>120,000</td>
<td>sqft</td>
<td>$5</td>
<td>$600,000</td>
</tr>
<tr>
<td>Pedestrian Bridge</td>
<td>$275 per square foot</td>
<td>2,000</td>
<td>sqft</td>
<td>$275</td>
<td>$550,000</td>
</tr>
<tr>
<td>Contingency</td>
<td>30% of construction cost</td>
<td>30%</td>
<td>percent</td>
<td>$1,150,000</td>
<td>$345,000</td>
</tr>
<tr>
<td>Lighting</td>
<td>$7,000 each, 60-foot spacing</td>
<td>20</td>
<td>each</td>
<td>$7,000</td>
<td>$140,000</td>
</tr>
<tr>
<td>Emergency Call Box</td>
<td>$2,000 each, 500-foot spacing</td>
<td>3</td>
<td>each</td>
<td>$2,000</td>
<td>$6,000</td>
</tr>
<tr>
<td>Landscaping/Planting</td>
<td>$20 per linear foot</td>
<td>1,200</td>
<td>lin ft</td>
<td>$20</td>
<td>$24,000</td>
</tr>
<tr>
<td>Decorative Railing</td>
<td>$50 per linear foot</td>
<td>600</td>
<td>lin ft</td>
<td>$50</td>
<td>$30,000</td>
</tr>
<tr>
<td>Bike Rack</td>
<td>$300 each, at connections</td>
<td>3</td>
<td>each</td>
<td>$300</td>
<td>$900</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>$500 each, 500-foot spacing</td>
<td>3</td>
<td>each</td>
<td>$500</td>
<td>$1,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$1,697,400</strong></td>
</tr>
</tbody>
</table>

Transportation Features

The mobility hub will be successful in its mobility function only insofar as it serves the transportation needs of users. A number of considerations have been identified for mobility hubs regarding how they assist transportation. First, users should expect a level of predictability. This means travelers know they can count on access to the wide variety of transportation options.

Next, there is a degree of redundancy in the modes present. This is important to travelers, particularly as they utilize options other than driving their own vehicles, to know they have options to complete their trip. For example, the presence of numerous modes provides a safety net such that if a user misses a bus connection they have access to a TNC trip to complete their journey.

The mobility hub should also provide travel advantages to desired modes to improve their efficiency and attractiveness to travelers. This may include dedicated bus lanes or transit signal priority for routes in and out of mobility hub. In addition, it will facilitate transfer between modes, including parking for people who drive alone. In one sense, the mobility hub can potentially be viewed as a park-and-ride, but in the case of the ABC Ramps it should be viewed as a much higher-level park and ride, with access to many additional modes and destinations.

In service to the underlying goals of the ABC Ramps, the Mobility Hub will also serve a congestion management purpose. This is accomplished by supporting first and last mile connections with other modes. To this end the mobility hub can potentially function as a resource for areas that are not well served by transit and provide additional services to these locations. Similarly, it can be a central location to support access to lower-hierarchy modes, such as vanpool, paratransit, and related services.
A number of the mode-specific investments to improve the transportation features of the ABC Ramps Mobility Hub program are discussed below.

**EV Charging**

Electric vehicle charging is widely considered a core element of mobility hubs and are a feature that the ABC Ramps already contain. The mobility hub would enhance this feature by expanding it and making it more publicized. EV chargers come in different levels and selections for installation vary based on their intended use. While Level 1 chargers are primarily for home use and are becoming obsolete for institutional use, Level 2 chargers are the industry standard for daily parking applications. A good starting point for expanding EV parking in the ramps would be to increase the number of Level 2 chargers by 20 spaces per ramp.

Level 3 chargers provide rapid recharging, providing up to 80 percent change in as little as 20 minutes. The application for these chargers is quick recharging for travelers on the go. Rather than daily parking, these chargers should be located at sites with easy access, as well as on-site amenities such as waiting lobbies or coffee shops for drivers while vehicles charge. The surface lots northwest of the ramps could provide a suitable location for this application. To complement the charging facilities, unused space in the ramps could be converted into comfortable waiting areas for drivers charging their vehicles. Costs for charger installation are shown in the following table, including capital costs for building out unused warehouse space for a waiting area lobby.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2 Charger</td>
<td>$700 per unit, $1,800 install</td>
<td>60</td>
<td>each</td>
<td>$2,500</td>
<td>$150,000</td>
</tr>
<tr>
<td>Level 3 Charger</td>
<td>$50,000 per installation</td>
<td>10</td>
<td>each</td>
<td>$50,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>Lobby/Waiting Area</td>
<td>$200 per square foot</td>
<td>500</td>
<td>sqft</td>
<td>$200</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$750,000</strong></td>
</tr>
</tbody>
</table>

**Secure Bicycle Parking**

The mobility hub should provide one or more facilities where bicycles can be parked or stored while travelers visit their destinations or transfer to other modes. Security for the bicycles is the most essential element, providing protection both from theft and vandalism as well as from the elements. Historically this has been accomplished through the use of bike lockers, however a number of shortcomings have been observed with this approach, namely that it is challenging to manage their use and the quantity of bike storage provided is an inefficient use of space.

The revised approach envisioned for the ABC Ramps is a communal parking facility that protects the bicycles through controlled access and monitoring. For example, interested individuals would register to join and be granted a key card for access. Then they would enter a large single room for bicycle storage where rows of hooks or racks are provided for bicycle storage. The space would be protected from the weather, perhaps even fully climate controlled. Security features would include CCTV video monitoring in addition to the electronic records of key card entry.
A “bike cage” concept plan, as depicted in the rendering, is currently under development in partnership with Metro Transit. It is anticipated that ABC Ramps funds would support construction and fund ongoing maintenance and security expenses. Metro Transit would manage access with their key card system. A capital expenditure of $60,000 is budgeted for implementation of this feature.

Several other amenities can be considered for the ABC Ramps mobility hub to improve options for bicycling. These include providing showers for bicyclists to use after their journey downtown. Nice Ride bike share locations adjacent to Ramps A and B. Finally, see opportunities to improve connections to bicycle routes, trails, and protected bike lanes.

**Transit**

The mobility hub focuses on connecting more modes in general, especially transit, and encompasses both urban and intercity connections. Some ways that the facilities can support high quality transit connections are through off-board fare payment and real-time signage. Mobility Hub development should include coordination with Metro Transit to identify other routes and services stopping within or near the ABC Ramps that should be highlighted. Already, additional service is anticipated via future transit improvements, specifically the C-Line and D-Line rapid bus routes, which are expected to serve Ramp A at the 7th Street Transit Center.
In addition to metro area bus service, the ABC Ramps are also in very near proximity several other transit modes. This includes the light rail transit stations along 5th Street between Ramps B and C, which currently serve the existing Blue and Green Lines to the southeast and east, and eventually their extensions to the northwest and southwest. The Northstar Commuter Rail terminates at the Target Field Station on the other side of Target Field from Ramp B. SouthWest Transit operate bus service that utilizes the freeway level lobbies and platforms. In addition, intercity bus service is provided nearby, with Jefferson Lines and Greyhound operating out of the Hawthorne Transportation Center and Megabus stopping at the street-level stop on North 3rd Ave at Ramp C.

Shared Mobility

Shared mobility is rapidly becoming a meaningful component of urban transportation. This category of modes includes shared bikes, cars, scooters, taxis, TNC, and lift-equipped vehicles. Broadly, these modes align with the goals of the ABC Ramps by providing travel options other than driving alone.

The mobility hub can facilitate these modes by providing dedicated or managed curb space for taxis, TNCs, and other users. This can be explored further, provided it is accomplished to not take away from current non-SOV modes. Priority for TNCs providing first/last mile connections or trips during times when not served well by transit such as late night.

Additional ridesharing opportunities could include partnerships with Lyft Line or other operators. Current understanding is that this organization is considering entry into the Twin Cities market. Perhaps the ABC Ramps could serve as a pilot for them to test the downtown market.

Allocation of curb space could be a leverage feature for the ABC Ramps, and the City of Minneapolis more broadly, where it is used as an incentive with TNCs to encourage other desired behaviors such as data sharing or use of dedicated pickup and drop-off locations.

The ABC Ramps mobility hub will also incorporate other shared modes as a central location for car sharing and bike sharing termini. Parking spaces can be allocated to car share providers and offer privileged access to the ramps for users. Bike share stations are already accommodated alongside the structures. This could be further strengthened if the central office and/or customer service centers were located in the ABC Ramps.

The cost of providing “store-front” staff at the ABC Ramps has been estimated for the purpose of planning for implementation. This estimate assumes two full-time equivalent staff.

Another emerging opportunity to improve shared mobility options at the ABC Ramps is through increased car sharing. Initial discussions underway with HourCar are helping to define the needs for an effective car share station. These have been identified as including, at a minimum, charging stations, parking spaces, signage, storefront staff, traveler information, and a points reward program. An initial grant amount of $100,000 is recommended for initial implementation of a car share program.
Table 14. Cost Estimate for Shared Mobility Store Front

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store Front Staff</td>
<td>2 staff, $20/hr, 40 hrs/wk</td>
<td>52</td>
<td>weeks</td>
<td>$1,600</td>
<td>$83,200</td>
</tr>
<tr>
<td>Car Share Program</td>
<td>One-Time Grant Funding</td>
<td>1</td>
<td>each</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$183,200</strong></td>
</tr>
</tbody>
</table>

**Placemaking**

Mobility hubs also have an emphasis on placemaking – or the proactive practice of designing an environment to deliver a particular feel and experience for users. A core element of placemaking for the ABC Ramps is to promote a sense of safety and security. There should also be provisions for the space to be activated, perhaps even generating opportunities for commercial uses or pop events. Ultimately these measures must all serve to develop a space where there is dignity in the experience of using it.

**Safety & Security**

Stakeholder feedback shows strong customer demand for improving perceptions of safety and security in the ramp facilities. In order to achieve this safety should be self-sustaining based on the design and activity of the public spaces. The objective is to provide a strong sense of security through the presence of more people in the space; the activation of space discussion below demonstrates that more activity and people present contributes to perceptions of safety among users.

The City of Minneapolis currently uses Securitas and a large contingent of off-duty police. ABM is an extension of the City to provide on-demand service and response.

Improvements completed as part of the mobility hub need to address the underlying issues to help people in this space and create a space that allows all users to feel comfortable and safe. Potential elements may include increased use of cameras to monitor the facilities; an effort that is already underway by the City and ramp management.

**Activation of Space**

Increasing activity levels in a mobility hub accomplishes several objectives of this program. It supports efforts to improve safety and security, it makes the space more inviting and instills a sense of place and draws in additional people that will also utilize the transportation services. To advance programming ideas, program developers should coordinate with the Downtown Improvement District (DID), 2020 Partners or other organizations to coordinate efforts.

Other ideas for programming can include any number of individual or combined activities. These may be as diverse as live performances, and pop-up events such as flower sales, farmers’ market, or a coffee cart. Initially these could be done on an occasional or recurring basis using temporary infrastructure. Successful programs may eventually wish to inhabit more permanent fixtures in the mobility hub.
Finally roaming ambassadors may be an effective way to contribute to activity in the space. This approach was utilized during Super Bowl LII, receiving a very positive response by providing resources for people to ask questions and improving perceptions of security. It additionally serves the traveler information and wayfinding objectives by helping users that may be in need of assistance. Cost estimates are presented below to illustrate potential program expenses for roaming ambassadors.

Finally, unused or underused spaces within the ramps can be improved to support more active uses. Commercial and public space has been identified in each of the ramps for capital improvements to enhance the quality of the space and make it a more enjoyable and pleasant place to be. Cost estimates of approximately $50 per square foot were developed to support improvements to flooring, walls, ceilings, and lighting. Cost estimates for available space in each ramp are shown in the cost table below.

Table 15. Cost Estimates for Placemaking

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pop-Up Placemaking</td>
<td>One-time implementation</td>
<td>1</td>
<td>each</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Roaming Ambassadors</td>
<td>5 staff, $20/hr, 20 hrs/wk</td>
<td>52</td>
<td>weeks</td>
<td>$2,000</td>
<td>$104,000</td>
</tr>
<tr>
<td>Ramp A Enhancement</td>
<td>Floor, ceiling, walls, lights</td>
<td>5,500</td>
<td>sqft</td>
<td>$50</td>
<td>$275,000</td>
</tr>
<tr>
<td>Ramp B Enhancement</td>
<td>Floor, ceiling, walls, lights</td>
<td>12,500</td>
<td>sqft</td>
<td>$50</td>
<td>$625,000</td>
</tr>
<tr>
<td>Ramp C Enhancement</td>
<td>Floor, ceiling, walls, lights</td>
<td>2,000</td>
<td>sqft</td>
<td>$50</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$1,204,000</strong></td>
</tr>
</tbody>
</table>

Commercial Partnerships

The final component of placemaking is to explore the potential for public-private partnership with developers. As mobility hubs gain in popularity around the country there could conceivably be private mobility hub developers that specialize in these facilities. Such an organization would be a great opportunity for partnership with the ABC Ramps.

As noted in the shared mobility section, the ABC Ramps Mobility Hub may also make a suitable venue for offices and/or customer information centers for providers. For example, shared mobility providers might have interest in locating operations to the ABC Ramps. It would be mutually beneficial by providing a central location for employees and customers to access, while also contributing to the activity levels in the space.

Investigation into ramp operations provides program implementation with useful background information for this approach. Lessons can be learned from contracts for commercial space in city-owned ramps that are handled by Minneapolis Community Planning & Economic Development (CPED). Maintenance is performed by ABM Facility Services. Currently, other city-owned ramps have leased space including a restaurant, and office space. The State of Minnesota legislation requires that state charge fair market value for leased space. The development process will need to explore this further to identify potential rent levels, then target business that provide services aligning both with those rates and serving the program objectives.
Public Artwork

A solution to helping distinguish meaningful public spaces that can be applied to the ABC Ramps is public artwork. Specific pieces can be commissioned to suit the dimensions of a space and to contribute a desired look and feel experienced by people in the space. Several such spaces existing at the ABC Ramps and development of custom pieces by public artists could be explored. Typical costs for large public art installations can range from $20,000 up to $100,000 depending on size and complexity. A middle estimate of $50,000 is used to estimate costs for the ABC Ramps.

Table 16. Cost Estimate for Public Artwork

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Artwork</td>
<td>Commission, Installation</td>
<td>4</td>
<td>each</td>
<td>$50,000</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

Streetscaping

The ABC Ramps can also play a role in improving the public realm immediately outside of the ramp facilities. Modest streetscaping improvements can provide a more attractive and enjoyable experience for sidewalk users bordering the ramps and skyways throughout the mobility hub district. A combination of features that are recommended for these spaces include new street trees, special soils, tree grates, basic bike racks, concrete sidewalk pavement, and minor additional landscaping. Six blocks have been identified as candidates for this, namely:

- N 9th St from Hawthorne to N 7th St
- Rod Carew Dr from N 7th St to N 6th St
- N 2nd Ave from N 6th St to N 3rd St (3 blocks)
- N 5th St from N 2nd Ave to N 3rd Ave

In addition, special attention should be paid to the extended sidewalk space on the east side of Ramp A, bounded by N 9th Street, N 7th Street, and Glenwood Avenue/Rod Carew Drive. This space could be outfitted with additional street furniture and placemaking amenities to encourage a variety of uses. A cumulative cost estimate for these improvements was estimated to be $150,000 per block.

Table 17. Cost Estimate for Streetscaping

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Basis</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streetscaping</td>
<td>Trees, bike racks, landscaping</td>
<td>6</td>
<td>blocks</td>
<td>$150,000</td>
<td>$900,000</td>
</tr>
</tbody>
</table>
Detailed Implementation – Short Term

ULI Panel

The Urban Land Institute (ULI) is a network with members representing real estate, land use, and other experts from diverse industries. Their stated mission includes “creating thriving communities.” As part of their work, the ULI conducts technical assistance panel (TAP) events to provide input from multi-disciplinary experts to help optimize projects under development. A ULI TAP is recommended as part of the ABC Ramps Mobility Hub program.

Contact Information

<table>
<thead>
<tr>
<th>Cathy Capone Bennett</th>
</tr>
</thead>
<tbody>
<tr>
<td>(612) 338-1332</td>
</tr>
<tr>
<td><a href="mailto:Cathy.Bennett@ULI.org">Cathy.Bennett@ULI.org</a></td>
</tr>
</tbody>
</table>

Initial discussions with ULI staff members suggest that a one-and-a-half-day technical assistance panel would be appropriate to respond to the questions posed for the ABC Ramps. The estimated cost for this event is $15,000 and is categorized as a one-time cost.

Discussions with ULI staff and past TAP participants emphasize that preparing for the event is the most essential element to ensuring a productive event. Steps to prepare include define goals and objectives for the project. Those outlined in the introduction to the mobility hub section of the implementation plan should be referenced in this regard.

One of the first steps is for organizers to lay out several concise questions that panelists should address during the event. This is probably the most important step to first have applicable ULI member experts assigned to the panel, and second to give those panelists an opportunity to prepare their input. Draft questions prepared for the ULI TAP include the following:
### Transportation Connections

- How can the ramps facilitate more seamless connections between modes in five-block area (including inter- and intra-city buses, passenger rail, light rail, buses, charter buses, carpooling and driving alone), and provide mobility advantages that allow shared options to compete with driving alone? Including wayfinding, kiosks, ambassadors and other services to assist travelers.
- What other transportation options and mobility services should be part of the ABC Ramps. Car share, bike share, scooter share, shuttles, microtransit, TNCs pickup and drop off?
- How do we improve pedestrian connections to nearby destination? Both at street level and skyway level, in and around the ramps. What can specifically be done to improve pedestrian connectivity to North Loop – including the pedestrian bridge adjacent to the I-94 highway entrance and the pedestrian route through the Ramp B transit area?

### Activation of Space

- Why would we want to activate the vacant, unused and empty spaces? In and around the ramps. Street level and skyway level and lower I-394 level. How does this make it a more viable mobility hub?
- How do we encourage private interest and investment, using available tools such as financial incentives or changes to the physical space? Remodeling, better lighting, build out offices or better use of empty spaces.
- What types of programming could be conducted that would effectively activate the space to make it an attractive place to be and support the safety and security objectives? Rent out empty office space? Improve street level with ground floor retail, or open spaces with public art? For example, pop-up events and other place-making activities.
- What opportunities could be pursued regarding commercial space in the ABC Ramps? Are there particular retail or office uses, transportation services that could be pursued that would improve the usefulness of the facilities and activate the space?

### Safety and Security

- What can be done to make the ABC Ramps a safe and inviting space that encourages a sense of dignity and security?
- How does this help to promote safety and security? Can some of the current security budget be reallocated to other placemaking investments? What can be done with these resources?
- How do we honor and support other neighborhood residents that may be disadvantaged, or experience other challenges such as homelessness, substance abuse, or mental health issues?

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The ULI TAP will help program implementers and stakeholders gain expertise from developers and national experts on the subject matter. Desired disciplines for panelist include public/private development, multimodal travel, placemaking/programming, and safety/security design, energy provider (Xcel), car share, homeless/addiction treatment experts, parking and mobility hubs. As this effort gets underway, implementers should work directly with ULI staff to solidify the plan.
Wayfinding Study

MnDOT and partner agencies have initiated steps to conduct a wayfinding study for the ABC Ramps. This should continue to move forward as part of the Mobility Hub program development. This aligns with the overarching objective of the study to define how the area around Target Field and the ABC Ramps function as a mobility hub.

The scope of work anticipated for the study begins with articulating the layers of government involved and the interests of each. It will feature a review of the current wayfinding experience and provide recommendations for static and/or dynamic signing and additional capital improvements. The signing envisioned can be flexible in the sense that it can be specific to stakeholders but should also fit a unifying vision. Capital improvements should complement the signing improvements to facilitate wayfinding and be consistent with signing improvements.

Specific steps outlined for the study include:

- Existing customer experience – how do they use the space, how do they feel about it, gaps in knowing where they’re going (points of confusion), collection of supporting data like transit passenger counts and bike counts
- Facilities assessment – pavement quality, ADA compliance, transit waiting areas
- Current signage treatment – Target Field LRT Station and Northstar, ABC Ramps, Skyway, Hawthorne Transportation Center and Intercity Bus Depot, general wayfinding
- Deliverables – existing conditions report, signage improvement report with recommendations and implementation
- Scenario development for signing improvements and evaluation of scenarios
- Branding to provide uniform and recognizable signage

The outcomes of the study will demonstrably clarify the vision for the mobility hub and serve as an integral complement to the ULI TAP.

The cost of improved wayfinding includes two elements. The first is to conduct the study; a one-time expenditure of $175,000 has been identified for this effort. Secondly are the implementation of capital improvements as recommended by the study. While a specific estimate for this cannot be developed until the conclusion of the study, a working budget of $1,000,000 is recommended at the planning stage. This would cover installation of static signs and rebranding features, as well as electronic kiosks to provide traveler information.

Marketing/Outreach

All recommended marketing strategies (employer-focused promotions, employer champions program, pilot IM program) will promote the mobility hub programs at ABC Ramps. In the future, direct outreach to employers and commuters will emphasize new amenities such as activity programming, space improvements, and expanded car / bike share.
Key marketing considerations include:

- Lessons learned as other program ideas are implemented (i.e., flexible commuter programs) and outreach is performed, should inform how the ramps develop as mobility hubs and how these services are marketed to consumers. For example, activation ideas could continue to be developed based on commuters’ ideas for services, events, products, and experiences that would add value to their busy lives.
- Ramp activation events double as marketing opportunities because they introduce commuters to the ramps in a fun, light-hearted manner. Example events include “pop-up” markets, coffee shops, and similar. Similarly, activating the ramps by improving lighting and pedestrian connections would improve the ABC Ramps’ marketing as a valuable transportation amenity.
- Consider hosting a contest to solicit ideas for activation events.

**Agency Coordination**

Modifications and updates to current practices to successfully implement these programs will be required on the part of several partner agencies and organizations. An important asset to the mobility hub program is coordination with the Shared Mobility Collaborative (SMC) Mobility Hub subcommittee. This group of local professionals is focused on defining the characteristics of these facilities as the emerge through region, and can help guide progress toward successful deployment.

**Implementation – Long Term**

**Other mobility hub enhancements**

Program implementation should consider recommendations from the ULI TAP to select additional features that would be appropriate and helpful for the ABC Ramps mobility hub. For those selected, individual planning and design work should be undertaken to fully determine the scope and characteristics of the improvements. Potential components may include:

- Designated curb space for pickup and drop off
- Car and bike share terminals
- Roaming ambassadors
- Office space
- Remodeling/art/lighting
- North Loop pedestrian connection

**RFI for Innovative Solutions**

Another potential approach to generating innovative solutions is to establish a request for ideas (RFI) process for mobility at the ABC Ramps. Ideas would be welcome from the public, private, and academic sectors and may lead to further investigation or investment.
Effectiveness Evaluation

Cost Effectiveness

Mobility hub investments will involve several coordinated projects to implement the components of the plan. Each of these will have a series of hard and soft costs in terms of staff time, planning, engineering, and construction. As planning continues these costs will come in to focus, and should be continually reviewed to ensure they represent responsible investments for the ramps relative to the stated goals.

The cost effectiveness of the mobility hub programs are similarly difficult to isolate, as improvements to traveler information and space activation, for example, do not translate directly to reductions in SOV trips. A successful mobility hub at the ABC Ramps, however, should ultimately result in reduced SOV trips, as commuters gain easy access to multimodal options and information to make their daily journeys.

Throughout this chapter, cost estimates are presented for components of the mobility hub vision. These are designated into one of three categories based on the type of expenditure. One-time costs are for specific activities that will help to clarify direction for future improvements or support initial implementation steps. Capital improvements are major expenditures for procurement, installation, and construction of physical features identified for the ramps. Finally, program costs are ongoing commitments that will recur on an annual basis for the duration of the program life. The cost estimates for the mobility hub program are shown in the table below.

Table 19. Mobility Hub Cost Estimate Summary

<table>
<thead>
<tr>
<th>Mobility Hub Component</th>
<th>One-Time</th>
<th>Capital</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements to Existing Pedestrian Connection</td>
<td>-</td>
<td>$311,000</td>
<td>-</td>
</tr>
<tr>
<td>Potential North 3rd Street Pedestrian Connection</td>
<td>-</td>
<td>$1,697,400</td>
<td>-</td>
</tr>
<tr>
<td>EV Charging</td>
<td>-</td>
<td>$750,000</td>
<td>-</td>
</tr>
<tr>
<td>Secure Bicycle Parking</td>
<td>-</td>
<td>$60,000</td>
<td>-</td>
</tr>
<tr>
<td>Shared Mobility - Car Share and Store Front</td>
<td>$100,000</td>
<td>-</td>
<td>$83,200</td>
</tr>
<tr>
<td>Placemaking, Remodeling, and Activation</td>
<td>$100,000</td>
<td>$1,000,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Urban Land Institute Technical Assistance Panel</td>
<td>$15,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wayfinding - Study and Capital Improvements</td>
<td>$175,000</td>
<td>$1,000,000</td>
<td>-</td>
</tr>
<tr>
<td>Public Artwork</td>
<td>-</td>
<td>$200,000</td>
<td>-</td>
</tr>
<tr>
<td>Streetscaping</td>
<td>-</td>
<td>$900,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$390,000</strong></td>
<td><strong>$5,918,400</strong></td>
<td><strong>$183,200</strong></td>
</tr>
</tbody>
</table>

Funding

Consistent with other programs presented in this plan, funding for mobility hub investments can be funded using parking revenue generated by the ABC Ramps. The mobility hub program may have unique financial opportunities, as some of the program features could generate additional revenue. These would include rent for commercial space. Eventually it is also possible that dedicated curb space within the ramps for TNC or other uses could also generate revenue from service providers.
**Program Measurement and Evaluation**

A series of performance measures are proposed to assess the degree that mobility hub investments achieve the outcomes set for the program ideas. These measures are adapted from an emerging understanding of the role of mobility hubs in 21st century transportation systems. Their specific application to the ABC Ramps and the Twin Cities region more broadly should continue to be vetted based on input from project partners and the availability of suitable data sources.

The first measure is an evaluation of the activity present throughout the day. The presence of people in the mobility hub is desired both as an indicator of its transportation uses as well as fostering a welcoming space. This measure can be enumerated by sampling a count of the number of people present in the facilities throughout the day, perhaps for each hour over a 24-hour period. Supplemental measures may further characterize the activities undertaken by people present at each time point, such as walking through, waiting for transit, or patronizing commercial establishments. Finally, specialized counts during special events may also be desired to assess the surge capacity of the mobility hub.

A second measure should provide an indication of the reduction in SOV trips to the ABC Ramps and to downtown Minneapolis more broadly. Data sources required to evaluate this would at least include transit ridership from automated passenger counters (APC), number of TNC pickups and drop-offs, and bike/car/scooter share endpoints. Vehicle probe data sets, such as those available through StreetLight Data or INRIX, would provide a useful resource to show how many cars are coming downtown or to the area near the ABC Ramps. This would provide an indication of the share of auto trips to downtown Minneapolis that are parking in the ABC Ramps relative to other facilities. In turn, this could be used with parking entry/exit data to gauge the total share of trips driving and parking downtown.

Survey data collection of downtown commuters should also be performed to incorporate the impacts across multiple modes. This could be a specific survey conducted by and for the ABC Ramps, or it could involve incorporating additional questions into the Metropolitan Council’s Travel Behavior Inventory (TBI). For the survey approach, an annual commuter survey is recommended that would reach all businesses downtown Minneapolis. This could be implemented as part of future enhancements to the TDM ordinance or purely as an outreach activity. Moreover, this would be beneficial for measuring all of programs implemented at the ABC Ramps, in addition to the mobility hub. Under the TBI method, a custom set of questions could be incorporated for downtown commuters that captures specific travel behavior trends such as mode share, parking/access locations, and last mile connections.

The mobility hub should also be assessed whether it helps in reducing vehicle-miles traveled (VMT). This measure takes on several dimensions and can include contributions from increasing shared modes (e.g. carpool, transit), reducing motor vehicle trips (through bicycling, walking, and scooter use), and reducing the mileage of vehicle trips. Another facet of reducing VMT would include minimizing TNC deadhead mileage, which would hopefully be accomplished by providing curb space to facilitate drop-off and pickup in a designated location rather than drivers circulating downtown for rides. The reduction in VMT could be broadly measured by reviewing AADT traffic counts on roadways serving the ramps, however to capture more specific trip characteristics of ramp users occasional sampling through a user survey or assessment of GPS travel patterns would be appropriate.
In addition to an overall reduction in VMT among mobility hub users, reduction of congestion near the ABC Ramps should also be monitored. Some concerns have been raised that even as a mobility hub is successful in reducing SOV trips, it could still trigger additional congestion with high levels of traffic from shared modes including TNC, transit, and biking. Congestion can be measured using a variety of sources, for example reviewing traffic signal data from the City of Minneapolis to estimate queuing and delays at intersections. Also, GPS data is increasingly available that provides a broad look at traffic conditions and allows performance to be tracked over time down to the individual street and block level.

Finally, the mobility hub should be scored for its walkability to nearby destinations. The elements of this measure should speak to both the quantity and quality of walking opportunities connecting to the mobility hub. The quantity component could reflect the number of jobs, housing units, and other destinations accessible within specified walking lengths, such as 5, 10, and 15 thresholds. While the ABC Ramps have little control over the development of nearby properties that affect the quantity of destinations, it can address the quality component. This element can be measured and expressed by the characterizing the connecting pedestrian facilities by those that feature good lighting, are off-street, are climate controlled, and other similar amenities.

**Risks & Opportunities**

Several risks and opportunities are identified for the programs described in this section. These include factors that could influence the success of the programs or result in unintended consequences but are sufficiently unknown that they were not explicitly considered in the detailed implementation plan. While this is not intended to be an exhaustive list, it is intended to provide a range of elements that agency staff and decision makers should be thoughtful about during program implementation.

**Risks**

Safety and security could continue to be a concern if steps taken as part of mobility hub implementation are not effective at alleviating users’ perceptions of these issues. There is an expectation that the space in the mobility hub will be comfortable and dignified for all users, so shortcomings in this regard will be a limitation for program success.

Users may find that the ABC Ramps are located too far away from core downtown activity centers to be attractive as multi-modal centers. While parking here is often attractive due to rates and availability, they are not as attractive to ridehailing and bike/scooter sharing that provides access right to the doorstep of their destination.

The use of the space for commercial purposes and activity programming does not generate a sustainable level of utilization. There is an expectation that success will produce a virtuous cycle where more activity attracts more people and further activity. Should this fail to materialize the activation component of the mobility hub will be difficult to perpetuate.

**Opportunities**

The mobility hub can help the ABC Ramps build towards future transportation enhancements. By thinking ahead and experimenting with multimodalism, shared mobility, and designated curb space, it will position the ramps to remain at the forefront of changes in the industry landscape.
As one of the most complete mobility hubs already, the ABC Ramps will set an example of mobility hubs for the region and nationally. They will offer a test bed and best practices for features and amenities that are attractive and effective to serve travelers’ needs.

As the ramps generate more non-parking-oriented activity, this will set the stage to explore other future uses of the ramp structures. Numerous uses have been proposed for the ramps, and as part of future mobility hub investment further investigation and experimentation can be explored.
Conclusion

The recommendations presented in this implementation plan are intended to be complementary. This means that they can all be implemented and should not only avoid dilution of participants, but in fact increase the profile and effectiveness of the ABC Ramps to better serve multimodal transportation uses. Together they will help achieve the original goals of reducing congestion, improving air quality, and helping commuters drive alone less often.

Overall Cost Effectiveness

This overview provides an overall financial summary of estimated expenditures and trip reduction goals. Together these provide an indication of the cost effectiveness of the recommended programs. Program cost estimates were combined for the programs eliminating the geographic boundary, offering a daily carpool rate, and the Parking FlexPass implementation. The aggregate implementation costs for these were not purely additive, however. It is assumed that there would be substantial economies of scale if all of these programs were implemented in coordination. Specifically, additional management staff and expenses for marketing and outreach would be shared between the programs resulting in lower total costs. The cost effectiveness summary is shown in the table below.

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Reduced SOV Trips (daily) 2,097</td>
</tr>
<tr>
<td>Management &amp; Staffing</td>
<td>Reduced SOV Trips (annual) 545,104</td>
</tr>
<tr>
<td>Marketing &amp; Outreach</td>
<td>Direct Cost per Reduced SOV Trip $1.45</td>
</tr>
<tr>
<td><strong>Direct Costs</strong></td>
<td><strong>Total Cost per Reduced SOV Trip</strong> $5.93</td>
</tr>
<tr>
<td>Net Change in Revenue</td>
<td>$2,447,000</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td><strong>$3,235,000</strong></td>
</tr>
</tbody>
</table>

The total cost effectiveness of the combined programs is estimated to be just over one dollar per reduced SOV trip versus direct costs and between five and six dollars when accounting for net change in revenue due to reduced parking fees. These figures compare favorably to the current monthly carpool contract program with an estimated cost effectiveness of $1.82 and $13.82, respectively. In sum, it can be concluded that additional expenditure on the program recommendations should be at least as cost effective as the existing carpool program.

Total Cost

Additional programs are recommended in this implementation plan beyond those accounted for in the cumulative cost effectiveness evaluation. In particular, the mobility hub program components include a number of potential investments but were not directly evaluated for cost effectiveness. To provide a snapshot of potential expenditures over a reasonable implementation timeframe, these aggregate costs are distributed over a five-year window.
In the first year, the one-time costs are included for elements like the ULI Technical Assistance Panel, Wayfinding Study, and Parking FlexPass pilot program. In subsequent years, the costs transition to the ongoing program expenses of maintaining these activities. Finally, total capital improvements costs identified for the mobility hub are divided evenly over the five-year period to represent a tractable volume of work that could be tackled over time.

Table 21. Summary of Five-Year Implementation Cost Estimates

<table>
<thead>
<tr>
<th>Program Category</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Carpool Enhancements</td>
<td>$470,000</td>
<td>$470,000</td>
<td>$470,000</td>
<td>$470,000</td>
<td>$470,000</td>
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<tr>
<td>Daily Carpool Rate</td>
<td>One-Time</td>
<td>$64,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Program</td>
<td>$175,000</td>
<td>$175,000</td>
<td>$175,000</td>
<td>$175,000</td>
</tr>
<tr>
<td>Parking FlexPass</td>
<td>Pilot Program</td>
<td>$160,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>Initial Implementation</td>
<td>-</td>
<td>$364,000</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>Ongoing Program</td>
<td>-</td>
<td>-</td>
<td>$200,000</td>
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<tr>
<td>Mobility Hub</td>
<td>One-Time</td>
<td>$390,000</td>
<td>-</td>
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<td></td>
<td>Program</td>
<td>$183,200</td>
<td>$183,200</td>
<td>$183,200</td>
<td>$183,200</td>
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<tr>
<td></td>
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<td>Total</td>
<td></td>
<td>$2,625,880</td>
<td>$2,375,880</td>
<td>$2,211,880</td>
<td>$2,211,880</td>
</tr>
</tbody>
</table>

As shown in the summary table, higher costs are concentrated earlier in the five-year program. This reflects start-up expenses associated with technology upgrades and one-time costs to further develop program plans. Over time, the expenses level out to an estimate of just over $2 million annually.

**Budget Impact**

The recommendations described in this implementation plan are intended to help the ABC Ramps achieve their goals. While all of the program opportunities are desirable, MnDOT will need to consider impacts to budgetary constraints with implementation. As described in this section, there are a variety of one-time, capital, and programmatic investments needed to deploy each program element. In addition, many of the programs that provide incentive pricing will also have a revenue impact resulting in lower fees collected. In light of this, decisions to implement will impact costs and revenues must be taken into consideration to determine whether they are affordable. Ultimately sufficient revenue must be maintained to sustainably fund maintenance and operations of the ramp facilities.
# Appendix A

## Technical Advisory Panel Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lisa Austin</td>
<td>MnDOT</td>
</tr>
<tr>
<td>Ken Buckeye</td>
<td>MnDOT</td>
</tr>
<tr>
<td>Theresa Cain</td>
<td>Metro Transit</td>
</tr>
<tr>
<td>Jason Cao</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Michael Clough</td>
<td>ABM</td>
</tr>
<tr>
<td>Rachel Dame</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Bill Dossett</td>
<td>Nice Ride MN</td>
</tr>
<tr>
<td>Frank Douma</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Tim Drew</td>
<td>City of Minneapolis</td>
</tr>
<tr>
<td>Dan Edgerton</td>
<td>Zan Associates</td>
</tr>
<tr>
<td>Erin Evenhouse</td>
<td>Shared Use Mobility Center</td>
</tr>
<tr>
<td>Yingling Fan</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Matt Fyten</td>
<td>SouthWest Transit</td>
</tr>
<tr>
<td>Abbi Ginsberg</td>
<td>FHWA</td>
</tr>
<tr>
<td>Jim Henricksen</td>
<td>MnDOT</td>
</tr>
<tr>
<td>Dave Jacobson</td>
<td>SouthWest Transit</td>
</tr>
<tr>
<td>Brian Kary</td>
<td>MnDOT</td>
</tr>
<tr>
<td>Adeel Lari</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>John Levin</td>
<td>Metropolitan Council</td>
</tr>
<tr>
<td>Bill Lohr</td>
<td>FHWA</td>
</tr>
<tr>
<td>Kathleen Mayell</td>
<td>City of Minneapolis</td>
</tr>
<tr>
<td>Tim Mitchell</td>
<td>MnDOT</td>
</tr>
<tr>
<td>Paul Morris</td>
<td>SRF Consulting Group</td>
</tr>
<tr>
<td>Mary Morse Marti</td>
<td>Move Minneapolis</td>
</tr>
<tr>
<td>Victoria Nill</td>
<td>MnDOT</td>
</tr>
<tr>
<td>Kristen O'Toole</td>
<td>Alta Planning + Design</td>
</tr>
<tr>
<td>Mark Read</td>
<td>City of Minneapolis</td>
</tr>
<tr>
<td>Kris Riesenber</td>
<td>FHWA</td>
</tr>
<tr>
<td>Barbara Rohde</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Ben Shardlow</td>
<td>Minneapolis Downtown Improvement District</td>
</tr>
<tr>
<td>Emily Stern</td>
<td>City of Minneapolis</td>
</tr>
<tr>
<td>Greg Stumpf</td>
<td>City of Minneapolis</td>
</tr>
<tr>
<td>Jessica Treat</td>
<td>Transit for Livable Communities</td>
</tr>
<tr>
<td>Mary Walker</td>
<td>FHWA</td>
</tr>
<tr>
<td>Katie White</td>
<td>Metropolitan Council</td>
</tr>
</tbody>
</table>