STAR Line Alternatives Analysis

Final Alternatives Analysis Study Report

Document 9

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Metra

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June 2012

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1.0. INTRODUCTION

1.1. Purpose of Document

This document continues the series of technical reports describing the identification, definition, and evaluation of alternative transportation improvements in the STAR Line corridor in northeastern Illinois. The previous documents in this series defined and screened an extensive inventory of potential modes and technologies, to identify those feasible to consider as conceptual alternatives. Later documents described and then evaluated the alternatives determined to be feasible when compared against the goals and objectives.

The purpose of this report is to describe the Long Term Vision (LTV) for the STAR Line Corridor. This report is organized as follows:

- In addition to the purpose and organization of this report, Section 1.0 provides study background including the study area, purpose and need for improvements, goals and objectives developed from the project purpose, and a summary of the methodology used to evaluate alternatives.
- Section 2.0 provides a summary of the process for the entire study including early definitions of alternatives and screening, description of feasible alternatives, and a summary of the final screening leading to selection of a recommended LTV.
- Section 3.0 documents public involvement for the study, including Technical Advisory Committee meetings and public meetings.
- Section 4.0 provides a detailed description of the LTV, including new infrastructure, proposed operations, and rolling stock requirements.
- Section 5.0 provides estimates of both capital and operating costs.
- Section 6.0 documents the ridership projections, including the transportation system user benefits.
- Section 7.0 summarizes the next steps for implementation.

1.2. Background

The STAR Line study area includes some of the fastest-growing communities in the northwest, west, and southwest suburbs of Chicago. The largest and fastest-growing work travel market in northeastern Illinois is the suburb-to-suburb and city-to-suburb commute market. Work travel within the STAR Line corridor is comparable to work travel from the corridor to central Chicago. However, developing these markets has been limited by the lack of high-capacity north-south roads and the lack of non-radial transit service. To address this issue, the STAR Line Alternatives Analysis was initiated by Metra and its planning partners in 2005.

Metra initiated this Alternatives Analysis to identify, evaluate, and ultimately select a preferred transit solution for the STAR Line study area. The goal of an Alternatives Analysis is to move from system-wide planning activities (where general needs have been identified) to specific corridor- or project-level improvements. An Alternatives Analysis is focused on developing and evaluating (according to a set of defined criteria at the outset), a set of reasonable alternatives with the purpose of recommending one alternative for further environmental documentation and preliminary engineering analyses. This recommended alternative is generally known as the *Locally Preferred Alternative*, or the *LPA*.

As this study neared completion, Metra was facing the need to implement fare increases to address current capital and operating needs, including $7.3 billion of capital needs over the next ten years for the existing commuter rail system. The significant capital and operating costs that were estimated for all the alternatives under consideration in this study meant that moving forward on any of these alternatives would be a long term proposition. Therefore, instead of this AA study resulting in an LPA, this study identifies a Long Term Vision (LTV) for the corridor. Metra will continue to work with other study partners and stakeholders to implement short- and medium-term solutions that support the ultimate implementation of the LTV.

1.3 Study Area

The 55-mile study corridor extends from the Joliet area to the O'Hare International Airport area (Exhibit 1), linking nearly 100 cities, villages, and townships in five counties of northeastern Illinois. The study area is generally centered on the Canadian National/Elgin, Joliet and Eastern (CN/EJ&E) Railway in the north-south direction, and on the I-90/Northwest Tollway in the east-west direction.

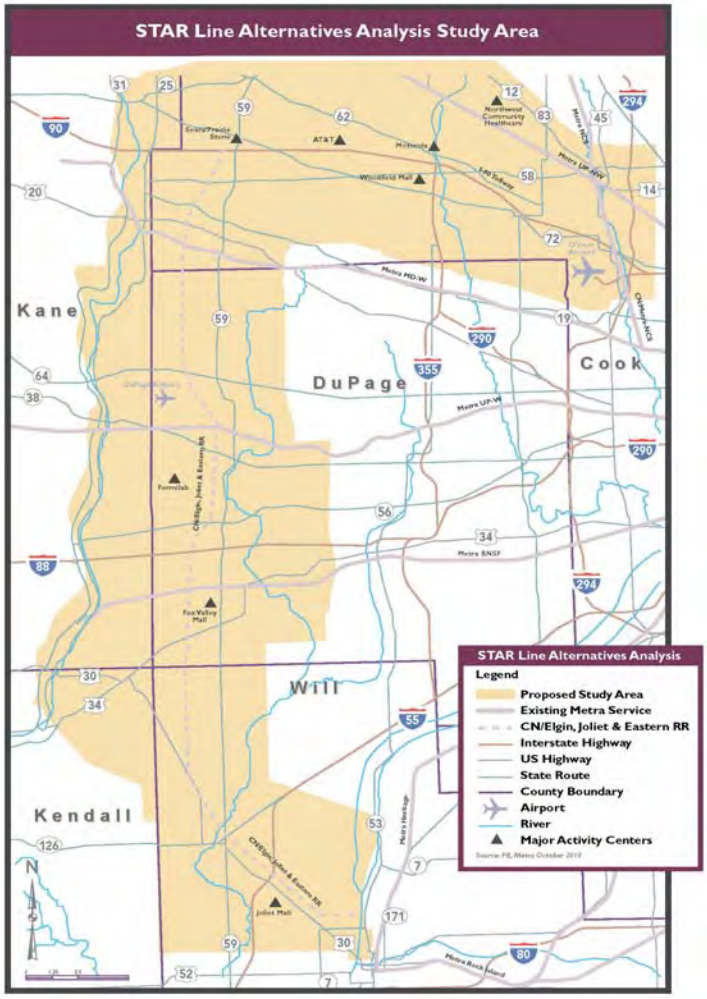


Exhibit 1 STAR Line Corridor Study Area

1.4 Purpose and Need for Improvements

The STAR Line Corridor Alternatives Analysis is intended to respond to changes in metropolitan development and travel patterns that have occurred over the preceding decades in northeastern Illinois. Given that congestion is and will remain a fact of life, the goal of the STAR Line is to provide an alternative way of getting around in spite of congestion. The purpose of this Alternatives Analysis is to identify, evaluate and recommend transportation improvements that accomplish this goal by improving connectivity between activity centers while avoiding or minimizing adverse community and environmental impacts. *Document 2 – Purpose and Need* provides an in-depth discussion of the study area needs, as summarized below.

The study area covers nearly 100 cities, villages, and townships in five counties, including some of the fastest growing communities in northeastern Illinois. The surface transportation network in the STAR Line study area has been placed under increasing strain by the changes in travel patterns. Although travel markets currently exist that could support a major transit improvement

in the STAR Line Corridor, these markets are not fully developed, because options are limited by the lack of high capacity function north-south roads and lack of non-radial transit service.

Continued residential and employment growth, underway and projected to continue, will exacerbate current conditions, as will the distribution of forecast growth in the study area corridor. The southern portions of the study area will have the highest population growth, approaching 50% of the total study area population by 2030. Significant employment growth is forecast for most parts of the STAR Line corridor, but even so the northeastern portion will have slightly more than 50% of total study area employment in 2030. With more residents drawn to housing in the southern portions, and jobs concentrated in the central and northeastern portions, north-south travel within the corridor will become increasingly problematic. The corridor's increasingly transit supportive densities, and the need to improve linkages between concentrations of jobs and housing in different parts of the corridor, further support a major transit improvement.

Analysis of work travel from the 2000 Census Transportation Planning Package (CTPP) shows that within the STAR Line study corridor, existing work travel flows are comparable to existing work travel flows from the corridor to the Central Chicago area. This comparison is significant because it demonstrates that potential transit work travel markets already are present in the corridor that are equivalent to an accepted transit work travel market. Coupled with the continued growth expected in this part of the region, both the need and the potential for a major transit facility in this corridor are well supported.

About 1.1 million residents live and nearly a million employees work in the STAR Line Corridor. Major activity and employment centers include Sears Holdings, Fermilab, Alcatel-Lucent, Tellabs, Nicor, Navistar, IKEA, Pfizer, Siemens, and Motorola Solutions. O'Hare International Airport, a key economic engine for the region and the corridor, anchors the eastern end. Several corporate, research and development, and light industrial parks are located within the corridor, along with satellite campuses of universities and junior colleges, medical centers, and regional shopping malls. The Sears Centre Arena, a multipurpose family entertainment, cultural and sports center at the Prairie Stone Business Park is located in Hoffman Estates. The Business Park is also the site of the major retail store Cabela's. The Schaumburg Convention Center at Meacham provides 100,000 sq ft of meeting space, including a 500 room hotel.

The study area is rich in transit service to downtown Chicago, primarily through five Metra lines crossing through or adjacent to the study area, and Pace express bus routes between O'Hare and Prairie Stone. The CTA Blue Line from downtown Chicago to O'Hare International Airport serves as a critical regional link to the employment hubs in and around the airport. However, non-radial service is limited. Local and express bus service provided by Pace operates on a chronically congested roadway network. The transit provider's ability to offer competitive, reliable service is severely limited, which has resulted in a decreased role for roadway-based bus transit service in the area.

A number of roadway capacity enhancements are programmed in the region's Transportation Improvement Program or identified in the 2030 Regional Transportation Plan. This added capacity may improve conditions locally and in the near term; but it is universally agreed that

new development will far outpace the region's ability, or desire, to expand the roadway network. Without the availability of competitive non-auto modes, increasing congestion will continue to characterize the study area roadway network even with planned improvements.

Regional travel patterns in northeastern Illinois have changed significantly over time. As compared to the traditional suburb to center city (Loop area) travel market, the travel market not related to center city trips became dominant in 1980 and has grown more dominant every decade since. This market includes the suburb-to-suburb market as well as the city-to-suburb reverse commuter market. This largest and fastest growing work travel market is not well served by the region's existing transit system. Nowhere is this more apparent than in the unique, circumferential STAR Line corridor. A transit investment in the STAR Line Corridor has emerged from the regional planning process as the preferred way to serve this unmet need.

1.5 Goals and Evaluation Measures

STAR Line evaluation criteria were developed as appropriate to the level of screening that reflects FTA criteria and STAR Line goals. In several cases, the evaluation criteria are the same, for example, ridership projected in the study year (2030) and jobs and population within ½ mile of stations. In other cases the local evaluation measures are more detailed and relevant to the goals established specifically for the STAR Line. The STAR Line AA goals and evaluation measures for the screening of feasible alternatives are shown in Table 1.

Table 1: STAR Line Goals and Evaluation Measures

Goal	Objective	Evaluation Measures
1	Improve mobility in the study area	• 2030 forecast transit • Impact on study area highways • Multimodal integration • Transit-dependent population served • Environmental Justice considerations
2	Provide a reliable, competitive travel choice	• Travel time competitiveness • Availability of new travel service • Consistency with regional planning
3	Connect population and employment concentrations	• Linkage between residential and employment densities • Station planning initiatives • Jobs within ½ mile, 1 mile, and 2 miles of access point/station • Low income population within ½ mile, 1 mile, and 2 miles of stations
4	Support economic development	• Linkage to area employment • Linkage to O'Hare Airport • Linkage to DuPage Airport • Permanence of infrastructure investment in support of development
5	Preserve and protect the environment	• Potentially affected environmental resources within 200' of alignment • Reduction in vehicles miles of travel • Community support for Transit Oriented Development (TOD) • Implementation of transit oriented development

6	Provide a feasible, cost-effective transportation investment	• Estimated annualized total costs (annualized capital, annual O&M, and finance cost) • Transportation system user benefits • 2030 incremental cost per transportation system user benefits (CEI) • Degree of local financial commitment
7	Provide an invest-ment consistent with stakeholder consensus	• Consistency with right-of-way owner's policies and/or operations Consistency with modal operator's policies • Expressed local community support

1.6 Evaluation Methodology

The purpose of the evaluation process is to identify key benefits, costs and impacts of each feasible alternative to identify the alternative most likely to successfully address the STAR Line AA goals. The STAR Line evaluation process, defined in Document 4*: Evaluation Methodology*, was an interactive process that was expected to evolve, as alternatives were refined throughout the study process. The STAR Line AA employed a three-phase process, initially in a modal analysis to identify the appropriateness of initial types of modes or technologies for the corridor. Second, following the identification of modes to retain, alternatives were defined and more detailed criteria used in the second screening. The third, and last, was the screening of feasible alternatives. The second and third screenings assessed the effectiveness of the specific candidate alternatives in meeting the project goals. The three-phase process is described in more detail below. Section 2.0 summarizes the key inputs, outcomes, and decisions made using this methodology.

2.0 SUMMARY OF ALTERNATIVES ANALYSIS

The Alternatives Analysis study began with an initial range of conceptual alternatives, including transit and highway options. This initial range focused on modes and broad "families" of potential infrastructure improvements. The differences between alternatives/modes are sometimes minor, and reflect continuums of options rather than discrete, uniformly grouped characteristics. Advanced technology systems, for example, generally represent rail transit engineering achievements which have come to fruition since the 1960s. This section provides a summary of the process and results of each step of the AA.

2.1 Definition and Screening of Initial Alternatives, Part I

Under Part I of the Definition and Screening, initial alternatives were developed. The conceptual modes/technologies described in Document 3 – *Initial Alternatives, Part 1: Modes & Technologies* are listed below.

- *Bus Technologies*
  - Conventional Bus and Enhanced Bus
  - Bus Rapid Transit (BRT)
- *Rail Transit Technologies*
  - Streetcar
  - Intercity Rail
  - Light Rail Transit (LRT)
  - Heavy Rail Transit (HRT)
  - Locomotive-Powered Commuter Rail
  - Electric Commuter Rail
  - Diesel Multiple Unit (DMU) Commuter Rail

- *Advanced Rail Technologies*
  - Automated Guideway Transit (AGT)
  - Personal Rapid Transit (PRT)
  - High Speed Rail
  - Magnetic Levitation
- *Highway Improvements*
  - New Roadways
  - High Occupancy Vehicle (HOV) Lanes
  - High Occupancy Toll (HOT) Lanes
  - Bus Shoulder Lanes

These modes were evaluated based on goals and objectives stated in the Purpose and Need document and criteria defined in Document 4: *Evaluation Criteria*. This initial evaluation screened a broad list of conceptual alternatives to determine their physical and financial feasibility for the region and the corridor. An alternative that failed in a significant way to meet one or more of these criteria was eliminated from consideration. For this initial screening, the following evaluation criteria were applied:

- *Proven Technology*
- *Operating Environment*
- *Potential Adverse Community Impact*
- *Implementation Feasibility*
- *Identification in the Regional Transportation Plan*
- *Typical Capital Costs*
- *Typical Operating Costs*

Ratings were applied to each mode/technology. Four conceptual modes were recommended to be carried forward for additional consideration: conventional bus, bus rapid transit (BRT), commuter rail (diesel locomotive push-pull or diesel multiple unit, DMU), and high occupancy vehicle (HOV) lanes. These modes offered the maximum opportunity for feasible implementation and consistency with the region's transportation plans. Of the seven evaluation criteria, the key features of each mode/technology relevant to the STAR Line corridor conditions are summarized below, along with the related rating symbol (previously defined) and recommendation for each mode.

For each of the evaluation criteria, levels of "ratings" were developed, using the following indicators:

N/A	Not available
○	Most adverse impacts or least appropriate
◑	Moderate impacts or appropriateness
●	Minimal adverse impacts or most appropriate

Proven Technology in Corridor Application

○	Not implemented in a similar corridor application
●	Implemented in a similar corridor application

Operating Environment

○	Most affected by roadway congestion
◑	Moderately affected by roadway congestion
●	Least affected by roadway congestion

Potential Adverse Community Impact

○	Significant adverse impacts
◑	Moderate impacts

- ● Minimal impacts

Implementation Feasibility
- ○ Right of way unavailable or substantial conflicts with existing developments or other constraints, or does not meet FRA guidelines for shared r/w operations
- ◑ Right of way acquisition difficult but may be possible, or could meet FRA guidelines for shared r/w operations
- ● Right of way appears to be available, or meets FRA guidelines for shared r/w operations

Identified in the Regional Transportation Plan
- ○ Not identified in the Regional Transportation Plan
- ◑ Identified as an "optional mode" in the Regional Transportation Plan
- ● Identified in the Regional Transportation Plan

Typical Capital Costs (2005 $)
- ○ Greater than $75 million/mile
- ◑ $25 - $75 million/mile
- ● Less than $25 million/mile

Typical Operating Costs (2005 $)
- ○ Greater than $16/vehicle revenue mile
- ◑ $11 - $15/vehicle revenue mile
- ● Less than $10/vehicle revenue mile

Table 2 presents the ratings for each mode/technology.

2.1.1 Initial Screening Part I Results

Based on the results of the initial mode/technology screening, four alternative modes and the No Build Alternative were recommended to be carried forward to the Definition of Alternatives. These modes included: Conventional Bus, Bus Rapid Transit (BRT), Commuter Rail, and High Occupancy Vehicle (HOV) / High Occupancy Toll (HOT) Lanes. These modes appeared to meet the evaluation criteria, receiving high ratings in terms of ROW availability, positive economic impacts, minimal environmental impacts, inclusion in regional plans, and costs.

2.1.2 Modes Carried Forward to Part II Conceptual Design and Screening

No Build

The No-Build alternative provides the baseline for establishing the environmental impacts of the alternatives, the financial condition of the transit operator, and the cost-effectiveness of the TSM alternative. It includes those transportation facilities and services that are likely to exist in the forecast year.

Conventional/Base Bus (including Enhanced Express Bus)

Conventional bus alternative(s) optimized transportation facilities and services in the corridor, but generally without major capital expenditures in guideway construction. This alternative is usually a component of a TSM approach, which represents the best that can be done for mobility without constructing a new guideway.

An enhancement to conventional bus service, express bus service is a flexible, rubber-tired transit mode intended to run faster than normal line-haul bus routes. Express buses often run between the downtown sections of cities or major shopping and employment destinations and the more residential suburban or outer areas. Express buses provide faster service to a destination by not making as many stops as regular bus routes and often operate on routes that regular line-haul buses usually do not, such as along freeways. In many areas express bus operations are considered a low-cost form of BRT, but for these discussions, BRT and express bus are treated separately.

For the purposes of the AA, the following constituent elements were assumed to be a necessary part of any express bus service: limited stop service, mixed traffic running or limited access right-of-way, and on-vehicle fare collection. Optional constituent elements could include: specialized vehicles, service branding, bus stops that could include small park-n-ride locations, traffic signal priority, and queue jumping to allow buses to advance ahead of other vehicles in the queue at an intersection.

Bus Rapid Transit (BRT)

BRT combines the flexibility of buses with the frequency and travel time advantages of rail transit. BRT combines stations, vehicles, services, running ways, and Intelligent Transportation System (ITS) elements into an integrated system with a strong positive identity that evokes a unique image. BRT applications are designed to be appropriate to the market they serve and their physical surroundings, and they can be incrementally implemented in a variety of environments. A typical bus rapid transit guideway is a two-lane, bus-only roadway a minimum of 28 feet in width. BRT can also operate in bus-only lanes within limited-access highways, and can also serve locations not on the dedicated guideway to provide additional flexibility. BRT systems typically offer high frequency, limited-stop bus operations in primarily exclusive right-of-way. The use of exclusive right-of-way, limited-stop operations, and on-line stations provides passengers with quick and reliable service.

Commuter Rail (Diesel Locomotive and DMU)

Commuter rail technology can encompass a range of rail services, differentiated by operating plans, station spacing, and type of equipment. The commuter rail services proposed as alternatives are FRA compliant - being capable of operating on the tracks of the existing national railroad network - but not primarily focusing on trips between suburbs and city centers. Instead, to address the Purpose and Need, the service would be more geared to trips between suburbs and from the city to the suburbs. The spacing of stations when utilizing DMUs is closer than for conventional commuter rail, even approaching the spacing of stations on urban light rail systems.

Table 2: Summary Matrix - Screening of Initial Alternatives

Modes/Technologies	Proven Technology in Similar Corridor Application	Operating Environment	Potential Adverse Community Impact	Implementation Feasibility	Identified in RTP	Typical Capital Costs (excludes r/w)	Typical Operating Costs	Recommendation
Bus Technologies								
Conventional Bus (including Enhanced Express Bus)	●	○	●	●	●	●	●	Retain
Bus Rapid Transit	●	●	◑	◑	●	◑	●	Retain
Rail Transit Technologies								
Streetcar	○	○	◑	◑	◑	◑	◑	Eliminate
Light Rail Transit	◑	◑	◑	◑	◑	◑	◑	Eliminate
Heavy Rail Transit	●	●	○	◑	●	○	◑	Eliminate
Commuter Rail (Diesel push-pull)	●	●	◑	●	●	●	◑	Retain
Commuter Rail (Electrified)	●	●	◑	●	●	◑	◑	Eliminate
Commuter Rail (DMU)	●	●	◑	●	●	●	●	Retain
Intercity Rail	○	●	◑	●	○	◑	○	Eliminate
Advanced Rail Technologies								
High Speed Rail	○	●	○	○	○	○	○	Eliminate
Magnetic Levitation	○	●	○	○	○	○	●	Eliminate
Automated Guideway	○	●	○	○	○	○	○	Eliminate
Personal Rapid Transit	○	●	○	○	○	○	N/A	Eliminate
Highway Improvements								
New Roadway(s)	●	◑	○	○	●	◑	N/A	Eliminate
HOV Lanes	●	●	◑	◑	●	●	N/A	Retain
HOT Lanes	●	●	◑	○	○	●	●	Eliminate
Bus Shoulder Lanes	●	◑	◑	◑	○	●	N/A	Consider as part of other alternatives

Both conventional push-pull and DMU service were included in the AA process. Neither requires electrification, facilitating their implementation on existing railroad trackage. Diesel-powered push-pull commuter rail is consistent with current Metra lines through the study area. The use of DMU equipment would simplify adjusting train lengths to add or remove cars, enhance cost-effectiveness by matching ridership to frequency of operation and passenger capacity of the trains, and have other advantages that will be explored in more detail in later phases of this project.

High Occupancy Vehicle (HOV) Lanes

HOV lanes provide a travel advantage to carpools, vanpools, and express bus routes, freeing them from competing with general traffic while using existing transportation right-of-way. A STAR Line HOV alternative could use the I-90 right-of-way in the east-west segment of the corridor, and a new roadway adjacent to the CN/EJ&E railroad in the north-south segment. Although this alternative is envisioned to be an HOV improvement, in the east-west segment on the Tollway, it could more accurately be considered a hybrid HOV/HOT, since it was not proposed that the HOV lanes would avoid tolls. HOV users would pay normal tolls to use the highway, but an additional toll for single-occupant users to use available capacity in the HOV lane – the purpose of a HOT lane - is not proposed. The segment between Prairie Stone and Joliet would be constructed as a two-lane facility, one lane in each direction, for the sole and exclusive use of multiple occupant vehicles. This segment would not be tolled. Construction within the CN/EJ&E right-of-way would require a buffer and separation wall, but does appear feasible.

2.2 Definition and Screening of Initial Alternatives, Part II

A summary of the conceptual alternatives is presented below, as defined in detail in Document 5: *Initial Alternatives Part I Screening and Part II Conceptual Design.* Conceptual alternatives were designed at a similar level of detail to ensure a fair evaluation. The Part II screening was comparative – each alternative was compared to the others under consideration. A measure common to all alternatives – for example, access to the four Metra rail lines which traverse the study area, shared by all alternatives – was not a differentiating factor and thus not an evaluation measure. Evaluation criteria were directly tied to STAR Line goals and objectives and listed below. The asterisk (*) indicates an FTA- required measure.

- Goal 1 – Improve Mobility in the Study Area
  - Multimodal integration – defined as connections to rail, bus, and park-and-ride facilities, and proximity to bicycle trails, at stations.
  - Transit-dependent population within ½ mile*, 1 mile and 2 miles of access point/stations – defined as the number of persons below 16 and over 65, households with no automobile, and low income persons.

- Goal 2 – Provide a reliable, competitive travel choice
  - New travel choice – defined as service for travel to the Chicago CBD, reverse-commute, and/or suburb-to-suburb
  - Operating environment – defined as operating in a facility most, moderately, or least affected by roadway congestion

- Reported on-time performance by mode – defined as reported by Pace for bus operations, Metra for commuter rail operations, and an FTA summary of variability in schedule adherence for representative national BRT systems
- Consistency with regional planning – defined as in the Regional Transportation Plan (RTP) and in the STAR Corridor, in the RTP but not in the STAR corridor, or not in the RTP but in the STAR Corridor

- Goal 3 – Connect Population and Employment Concentrations
  - Linkage from 2030 preliminary market analysis – defined as qualitative assessment of population and employment within 1 mile of principal alignments, from preliminary 2030 market analysis using NIPC forecasts
  - Station planning initiatives – defined as local planning activities for station area planning and development
  - 2030 population within ½ mile*, 1 mile and 2 miles of station
  - 2030 employment within 1/2 mile *, 1 mile, and 2 miles of station

- Goal 4 – Support Economic Development
  - Provide access that supports area businesses and local economies – defined as linkage to employment/jobs within ½ mile, 1 mile and 2 miles of stations; qualitative review of location of major employers
  - Linkage to O'Hare Airport
  - Linkage to DuPage Airport
  - Permanence of infrastructure investment in support of development

- Goal 5 – Preserve and Protect the Environment
  - Areas of potential environmental impacts within 200 feet of assumed center line of alignment – defined as acres of parkland, natural areas/preserves, landfills, flood zones, wetlands, and areas with threatened or endangered species (negatives); also proximity to community facilities (positives) Note: Noise and air quality impacts will be assessed as part of a detailed environmental analysis in a subsequent phase of project development.
  - Community support for Transit Oriented Development (TOD)* - defined as the number of communities under each alternative, with planning and/or policy initiatives in support for transit

- Goal 6 – Provide a Feasible, Cost Effective Transportation Investment
  - Estimated capital cost – defined as estimated preliminary capital costs including right-of-way and vehicles
  - Estimated operating and maintenance cost – defined as estimated preliminary operating costs based on assumed service plan

- Goal 7 – Provide an Investment Consistent with Stakeholder Consensus
  - Consistency with right-of-way owner's policies and/or operations
  - Consistency with modal operator's policies
  - Expressed local community support – defined as stated support for mode and/or alignment

This second round screening assessed the effectiveness of the specific candidate alternatives in meeting the project goals and objectives. For each goal, two levels of screening were conducted. The first level compiled and compared raw data for each evaluation measure. The second round then ranked each goal into comparative categories, for example, high-medium-low, to permit a comparison of alternatives against each other. The screening results were then summarized together by project goal.

The screening results were used to recommend whether each alternative should be retained or dismissed. The more limited number of retained alternatives were then further developed and evaluated in the next phase of the Alternatives Analysis. The assessment presented in Table 3 used the following indicators:

N/A		not applicable (used for some HOV ratings)
LOW	○	least appropriate/least attractive/most adverse impacts
LOW/MEDIUM	◔	moderate to low attractiveness/moderate to high adverse impacts
MEDIUM	◑	moderately appropriate or attractive/moderate adverse impacts
MEDIUM HIGH	◕	moderate to high attractiveness/moderate to low adverse impacts
HIGH	●	most attractive/most appropriate/least adverse impacts

2.3 Summary of Feasible Alternatives

Specific details such as an operating plan, infrastructure changes required, station locations and features, and other relevant details were presented in Document 7 – *Feasible Alternatives: Detailed Descriptions*. As noted in Document 7 – *Feasible Alternatives: Detailed Descriptions*, refinements were made to Commuter Rail and Bus Build alternatives, as described below. This section provides a summary of the retained alternatives. There are five alternatives in addition to the required No Build Alternative. The feasible alternatives remaining after initial screening part II were defined in greater detail to allow for preliminary estimates of ridership and costs.

Stakeholder feedback suggested additional options be considered for the recommended commuter rail alternative described in Document 6: *Screening of Initial Alternatives, Part II*. The FTA also requested consideration of shorter segments (minimum operable segment, or MOS) as viable alternatives. To address these concerns, the commuter rail alternative was broadened to offer two multimodal options:

- Multimodal Alternative A (MMA): Commuter rail on I-90 (east-west segment) and conventional bus on IL 59 (north-south segment)
- Multimodal Alternative B (MMB): Conventional bus on I-90 (east-west segment) and commuter rail on CN/EJ&E (north-south segment)

Both options were composed of previously evaluated elements of recommended alternatives, combined in new ways to leverage the advantages of commuter rail and the characteristics of the corridor.

Table 3: Summary Matrix - Part II Alternatives Screening

Alternatives	Route Description	Goal 1 Mobility	Goal 2 Reliable, Competitive	Goal 3 Connect Pop, Emp	Goal 4 Economic Development	Goal 5 Environmental Impacts	Goal 7 Stakeholder Consensus	Recommendation
TSM #1	IL 72 & IL 59	◑	◕	◑	◑	◕	◕	**Retain**
TSM #2	I-90 & IL 59	◑	◑	◑	◑	●	◑	**Dismiss**
Enhanced Express Bus #1	I-90 & IL 59	◑	◑	◑	◑	●	◑	**Retain**
Enhanced Express Bus #2	I-90 & IL 59	○	◑	◔	◔	◕	◑	**Dismiss**
Bus Rapid Transit (BRT) #1	I-90 & CN/EJ&E	●	◕	◕	◕	○	◑	**Dismiss**
BRT #2	I-90, CN/EJ&E & WiKaDuKe	◕	◕	◕	◕	◑	◑	**Dismiss**
BRT #3	IL 72 & IL 59	◑	◕	◑	◕	◑	◕	**Dismiss**
BRT #4	IL 72 & CN/ EJ&E	●	◕	◑	◕	○	◑	**Dismiss**
BRT #5	I-90 & IL 59	◕	◕	◑	◕	●	◕	**Retain**
Commuter Rail #1 (Basic)	I-90 & CN/EJ&E	◑	●	◕	◕	◔	◑	**Dismiss**
Commuter Rail #2 (Enhanced)	I-90 & CN/EJ&E	◑	●	◕	◕	◔	●	**Retain**
Commuter Rail #3 (Dedicated)	I-90 & CN/EJ&E	◑	●	◕	◕	◔	◕	**Dismiss**
HOV Lane	I-90 & CN/EJ&E	○	◕	◑	◑	○	◔	**Dismiss**

Additionally, on-going communications between Metra, Pace, the RTA, and the Illinois State Toll Highway Authority (Tollway) resulted in a third bus build alternative. This alternative, the Express Bus with Stations (EBS) alternative, was a "hybrid" of both the EEB and BRT alternatives. The EBS Alternative was then further developed from an initial Tollway concept to become the primary bus build alternative. EBS would operate on I-90 in the east-west segment and along IL59 in the north-south segment. On I-90, EBS would operate in a combined express bus/managed lane (HOT lane), with dedicated access lanes to median station locations. Based on the extensive inter-agency coordination process, including input from Pace, the RTA, and the Tollway, the EBS Alternative was selected as the primary bus build alternative.

All alternatives shared:

1. Terminal stations in the same general locations: Rosemont/River Road near O'Hare Airport, Prairie Stone in Hoffman Estates, and Renwick Road north of Joliet.
2. Consistent headways (15/30 minute headways in peak/off-peak-periods in the east-west segment and 30/60 minute headways in the peak/off-peak-periods in the north-south segment). Weekend service headways are the same as for off-peak service.
3. Assumed that existing regional transit operators of Pace (bus) and Metra (commuter rail) will continue to be the operators of the proposed new services. Existing fare policy for Pace is assumed for non-rail options such as well as all proposed new feeder services. For the EBS alternative a premium fare ($4) is assumed. Existing Metra fare structure is assumed for the CR Alternative and the rail-segments of the multimodal alternatives.
4. Assumptions for service days are roughly consistent across all alternatives. For CR and the multimodal alternatives, the first trains or buses will start between 4:30AM and 5:00AM with service continuing until just before midnight. For the TSM and EBS alternatives, the service day is assumed to be similar but somewhat less extensive. Refinement of these schedules is expected to continue through the project development process.
5. Generally, a total of 25 new dedicated feeder bus routes were identified on a preliminary basis to be necessary to link the STAR Line alternatives to area major employers, institutions of higher education and major activity centers. While final implementation of new feeder bus service and modifications of connecting service may have slight variations depending on the alternative, all alternatives (except the no-build) were compared to one another with a common set of feeder buses. The exception to this is that the TSM and EBS alternatives have one fewer feeder buses than other routes due to minor variations in station locations at the Devon, Barrington Road, and Prairie Stone stations.

2.3.1 No-Build

The No-Build alternative provides the comparison point for establishing the environmental impacts of the alternatives, the financial condition of the transit operator, and the cost-effectiveness of the TSM alternative. It incorporates planned improvements to the existing system that were included in the fiscally constrained long-range plan (RTP). These include projects for which need, commitment, financing, and public and political support were identified and reasonably expected to be implemented by 2030. Lists of conformed projects from the CMAP 2030 RTP and the FY2005-2009 TIP that are in or proximate to the STAR study area were included in Document 5: *Initial Alternatives, Part I Screening and Part II Conceptual Design*.

2.3.2 Transportation System Management Alternative: IL 72 & IL 59

The TSM alternative provides conventional bus service on existing IL 72 (Higgins Rd.) and IL 59, while avoiding the need for new guideway. The alternative makes use of applicable relatively low-cost TSM features, similar to Pace's "Arterial Rapid Transit" concept included in the agency's Vision 2020 Plan. This alternative would operate via existing roadway lanes. The approximate route length from O'Hare Airport to Joliet is 57 miles with 18 proposed stations along the route.

The east-west route would extend from the Rosemont/River Road Station near O'Hare Airport via River Road to IL 72, then via IL 72 to Trillium Boulevard and into the existing Prairie Stone bus facility at Trillium. Buses on the north-south segment would leave the Prairie Stone Transportation Center bus facility by operating via Pratum Avenue to Columbine Boulevard to IL 59, and then on IL 59 from I-90 to Joliet Road; and finally, on Joliet Road to Renwick Road near I-55. The terminal station for the Joliet area was assumed to be on Renwick Road in the vicinity of the CN/EJ&E right-of-way and I-55.

2.3.3 Express Bus with Stations Alternative: I-90 & IL 59

The EBS alternative builds on the concept of the TSM Alternative by adding a new "high occupancy toll" (HOT)/Bus lane to provide a lower-cost but improved express bus operation which avoids congestions on the I-90. The HOT/Bus lanes, which would be managed to reduce congestion, are presumed to be located in the median of the highway, consistent with the conceptual design for rail alternatives. On IL 59, service would operate via existing roadway lanes. The route would extend from the O'Hare Airport vicinity to Prairie Stone along I-90 in the east-west direction, and from Prairie Stone to the terminal station at Renwick Road near Joliet along IL 59 and a portion of Joliet Road in the north-south direction. The approximate route length from O'Hare Airport to Joliet is 55 miles and there are a total of 19 stations along the route.

The terminal station for the O'Hare Airport vicinity, the proposed Rosemont/River Road Station, would be located north of and adjacent to the existing CTA Blue Line Rosemont Station. STAR Line buses would leave the I-90 median and enter the station area via a new aerial approach structure. Convenient connections between the STAR Line and Pace and CTA services would be provided by pedestrian walkways with vertical circulation. Stations along the I-90 HOT/Bus segment are assumed to be configured such that buses will pull out of the HOT/Bus lane onto dedicated bus lanes to access the station platforms. The Prairie Stone terminal could support the through operation of buses between the I-90 and IL 59 corridor segments. Off-street bus facilities may be provided to facilitate local bus access at some stations.

2.3.4 Commuter Rail Alternative: I-90 and CN/EJ&E

The CR alternative would include a new commuter rail service over the length of the STAR Line corridor. The east-west segment extends about 20 miles west from the Rosemont/River Road Station to Prairie Stone along I-90, and the north-south segment extends 35 miles from Prairie Stone to the terminal station at Renwick Road near Joliet and Plainfield near I-55, along the CN/EJ&E Railway. The approximate route length from O'Hare Airport to Joliet is 55 miles with 19 proposed stations.

The east-west segment was proposed to include a new passenger-only, double-track rail line constructed in the median of I-90. Based on considerations to date, this median location appeared preferable to a shoulder location because it would reduce impacts on roadway entrance and exit ramps and roadways that cross overhead. Further evaluation of utility and other construction issues would be appropriate in future engineering phases of the project. On the north-south CN/EJ&E segment (Prairie Stone to Joliet), rail freight and commuter operations would share trackage. An additional main track was proposed to augment the existing CN/EJ&E single track and sidings. Additional infrastructure would also be provided on the CN/EJ&E right-of-way sufficient to increase capacity, improve reliability, and permit the additional service levels to be operated without impacting current and anticipated future growth in CN/EJ&E and other railroad trackage rights freight services.

The terminal station for the O'Hare Airport vicinity, the proposed Rosemont/River Road Station, would be located north of and adjacent to the existing CTA Blue Line Rosemont Station. STAR Line trains would leave the Tollway median and enter the station area via a new aerial approach structure. Convenient connections between the STAR Line and Pace and CTA services would be provided by pedestrian walkways. Rail stations along the I-90 segment were assumed to be a center island configuration, allowing for a single platform to serve trains operating in either direction and be sufficiently wide to minimize conflicts between passenger flows from trains simultaneously stopped at the platform. The Prairie Stone terminal could support the through operation of trains between the Tollway and CN/EJ&E corridor segments. In the north-south segment, stations would use dual platforms, one located on each side of the double-track rail right-of-way.

The rail service is proposed to be operated by high-performance Diesel Multiple Unit (DMU) equipment. The service frequency proposed for STAR Line is higher than for most commuter rail services, lending economic advantage to a DMU's ability to form shorter and more flexible train consists compared to push-pull equipment.

2.3.5 Multimodal Alternative A: I-90 Commuter Rail & IL 59 Conventional Bus

This alternative would provide new commuter rail service in the east-west portion of the STAR Line corridor, and new bus service in the north-south portion of the corridor. Similar to the full rail alternative, the commuter rail portion would use high performance, DMU vehicles. Conventional bus service would be provided on existing IL 59, similar to the TSM alternative and making use of applicable relatively low-cost conventional bus features, similar to the "Arterial Rapid Transit" (ART) concept included in the Pace Vision 2020 Plan. The east-west segment of the route would extend about 20 miles from a new Rosemont/River Road Station near O'Hare Airport to Prairie Stone along I-90. The approximate route length from O'Hare Airport to Joliet is 55 miles with 19 proposed stations.

In the east-west segment, this alternative is as described previously in the Commuter Rail alternative: a new passenger-only, double-track rail line assumed to be constructed in the median of I-90. Rail stations along the I-90 segment would be a center island platform configuration to serve trains operating in either direction. Platforms would be sufficiently wide to minimize conflicts between passenger flows from trains simultaneously stopped at the platform. In the north-south segment, this alternative is as described previously in the TSM

alternative: conventional bus service from Prairie Stone to Renwick Road on IL 59. For those stops not tied to existing Metra station locations, the stops along IL 59 were proposed to be located on improved shoulder sections of the roadway.

2.3.6 Multimodal Alternative B: I-90 Conventional Bus & Commuter Rail on CN/EJ&E

This alternative would provide conventional bus service on I-90 between the Rosemont/River Road Station and Prairie Stone, and commuter rail service on the CN/EJ&E rail line between Prairie Stone and the Renwick Road station. In the east-west segment, this alternative would operate on existing roadway lanes to avoid the need for new guideway/infrastructure, with applicable relatively low-cost TSM features. The approximate route length from O'Hare Airport to Joliet is 55 miles with 19 proposed stations.

Bus stops along I-90 were proposed to be located on pull-offs from existing outside through-highway lanes beyond the shoulder. A passenger shelter and vertical circulation elements would be provided where required to access road/street level. Separate platforms by direction would be provided at each stop location, with separate vertical circulation elements to street level where required. In the north-south segment, this alternative is as described previously in the Commuter Rail alternative. A new commuter rail service would operate in the CN/EJ&E corridor using high-performance, DMU vehicles. This segment would extend about 35 miles from Prairie Stone to the terminal station at Renwick Road. Additional infrastructure generally including a second main track would be provided on the CN/EJ&E right-of-way to increase capacity, improve reliability, and permit the additional service levels to be operated without impacting CN/EJ&E (and trackage rights-provided) freight services. In the north-south segment, stations would use dual platforms located on each side of the double-track rail right-of-way.

2.4 Detailed/Final Screening of Alternatives

This section provides the quantitative and qualitative summary evaluation for the remaining alternatives. The evaluation presented in Document 8: *Screening of Feasible Alternatives,* represented a refinement of the previous screening of alternatives against project goals, described in Document 6, *Screening of Initial Alternatives, Part II*. While the STAR Line goals did not change, several of the evaluation measures were specific to this third evaluation process and appeared for the first time, such as ridership and cost estimates. Other criteria were carried over from the previous screening, such as environmental resources. Some data that was previously presented on a corridor level was now presented at a station level. The parameters in this third-level screening were again targeted to identify the effectiveness of each feasible alternative in meeting project goals.

2.4.1 Detailed Screening Results by Goal

This section describes the results of the evaluation of feasible alternatives. The evaluation criteria reflect the values of study area communities, and incorporate critical evaluation measures of the FTA New Starts process. Table 4 illustrates the overall evaluation summary. For this table, the following indicators were developed:

LOW (L) – least appropriate / least attractive / most adverse impacts
MEDIUM (M) – moderately appropriate or attractive/moderate adverse impacts
HIGH (H) – most attractive / most appropriate / least adverse impacts

Table 4: Summary Matrix – Screening of Feasible Alternatives

	ALTERNATIVES				
	TSM	**Express Bus with Stations**	**Commuter Rail**	**Multimodal A**	**Multimodal B**
GOALS	IL 72 & IL 59	I-90 & IL 59	I-90 & CN/EJ&E	I-90 CR / IL 59 Bus	I-90 Bus/CN/EJ&E CR
GOAL 1 – Mobility	**L**	**M**	**M/H**	**M**	**M**
GOAL 2 – Reliable, Competitive	**M**	**M**	**H**	**M**	**M**
GOAL 3 – Connect Pop & Emp	**L**	**M**	**M/H**	**M/H**	**M**
GOAL 4- Economic Development	**M**	**M**	**H**	**M**	**M**
GOAL 5 – Environmental Impacts	**M**	**H**	**M**	**M**	**M**
GOAL 6 – Cost Effectiveness	**L**	**L**	**H**	**M**	**M**
GOAL 7 – Stakeholder Consensus	**M**	**M**	**H**	**M**	**M**
OVERALL RATING	**L/M**	**M**	**H**	**M**	**M**
RECOMMENDATION	**Dismiss**	**Dismiss**	**Retain**	**Dismiss**	**Dismiss**

Note: Detailed information supporting the summary assessment of performance against goals is included in Document 8: *Screening of Feasible Alternatives and Appendix A,* with data tables describing the individual screenings and raw data by goal.

3.0 PUBLIC INVOLVEMENT

3.1 Summary of Meetings

Public involvement proceeded throughout the AA process from initial review of the project purpose and need throughout the recommended LPA. Metra held meetings with individual stakeholders and with the general public to receive input and gain consensus. Comments were incorporated at each step of the study. Public involvement included the following meetings:

Municipal Task Force Steering Committee

- Sept. 16, 2004
- Oct. 28, 2004
- Oct. 28, 2005
- Jan. 17, 2006
- March 16, 2006
- Feb. 14, 2008
- Sept. 18, 2008
- October 19, 2009
- July 13, 2010
- June 9, 2011
- November 3, 2011

Technical Advisory Committee

- Feb. 28, 2006
- June 20, 2006
- December 5, 2011

Counties

- DuPage County/DuPage Mayors & Managers – Aug. 22, 2005
- Will County – Aug. 23, 2005
- Kane County – Aug. 30, 2005
- Cook County/Northwest Municipal Conference – Sept. 12, 2006

Communities

- Joliet – April 10, 2006
- Bartlett – April 10, 2006
- Rolling Meadows – April 12, 2006
- Schaumburg – April 13, 2006
- Aurora – April 17, 2006
- Plainfield – April 19, 2006
- Naperville – April 20, 2006
- Warrenville – May 3, 2006
- Hoffman Estates – May 3, 2006
- Des Plaines – May 3, 2006
- Arlington Heights – May 9, 2006
- South Barrington – May 12, 2006
- Rosemont – May 15, 2006
- Mount Prospect – May 18, 2006
- Elk Grove Village – May 26, 2006
- West Chicago – May 30, 2006
- Elgin – June 9, 2009

Other Meetings

- Business Alliance
  - » June 9, 2005
  - » May 4, 2006

- Pace
  - » May 1, 2006
  - » November 9, 2009
  - » July 13, 2010
  - » August 24, 2010

- Illinois Dept. of Transportation (IDOT) – Aug. 25, 2005

- EJ&E – May 1, 2006

- Illinois State Toll Highway Authority ("Tollway")
  - » April 8, 205
  - » November 9, 2005
  - » January 25, 2006
  - » May 16, 2006
  - » June 7, 2007
  - » August 2, 2007
  - » October 4, 2007
  - » January 10, 2008
  - » April 14, 2008
  - » September 12, 2008
  - » May 13, 2009
  - » July 20, 2009
  - » October 16, 2009
  - » October 21, 2009
  - » October 27, 2009
  - » October 29, 2009
  - » November 6, 2009
  - » November 10, 2009
  - » November 12, 2009
  - » November 18, 2009
  - » November 24, 2009
  - » December 7, 2009
  - » December 23, 2009
  - » December 29, 2009
  - » January 6, 2010
  - » January 13, 2010
  - » February 19, 2010
  - » June 29, 2010
  - » June 7, 2011 *VPG*
  - » June 23, 2011 *CPC*
  - » July 11, 2011 *VPG*
  - » July 13, 2011 *CPC*
  - » July 26, 2011 *CPC*
  - » August 19, 2011 *CPC*
  - » November 2, 2011, VPG
  - » November 14, 2011, CPC

  V*PG: I-90 Value Planning Group*
  CPC: I-90 Corridor Planning Council
- Prairie Stone – June 27, 2006
- DuPage Airport – July 14, 2006
- O'Hare Modernization Project Meeting, July 7, 2009
- CN (for US 30 & US 34 at EJ&E/CN Railroad project) August 27, 2010
- STAR Line Legislative Update Meetings
  - » December 8, 2009
  - » May 4, 2010

Public Meetings

- July 10, 2006 (Elgin)
- July 11, 2006 (Arlington Heights)
- July 20, 2006 (Naperville)
- January 10, 2012 (Naperville)
- January 19, 2012 (Arlington Heights)

In addition to the variety of meetings attended by Metra and consulting staff, the Metra Connects website (http://metraconnects.metrarail.com/star.php) provided information on the study progress and schedule, and provided a method for public comments. Following each round of meetings, comments that were received were addressed and incorporated into the study where appropriate. Meeting comments are summarized in the following sections.

3.2 Summary of Public Meeting Comments Regarding Conceptual Alternatives

A series of three public informational meetings were held on July 10, 11, and 20, 2006 to present information developed to date regarding the STAR Line Alternatives Analysis. The public meetings also provided an opportunity for the public to offer feedback on the alternatives and indicate a preference for any of the proposed alternatives. Meetings were held in an open house format. A PowerPoint Presentation was given at about 6:15 pm. The introductory slides were presented by Metra staff, followed by a presentation of the process and alternatives by the Corridor Consultant. Display boards were arranged around the room for public viewing. A summary of each meeting is presented below.

City of Elgin: The first public meeting was held on July 10, 2006 in the City of Elgin. Twelve attendees signed in, including citizens, representatives from the local press, chamber of commerce, municipalities, and government agencies. No public comments were received at this meeting. Articles reporting on the meeting appeared in the local press.

Village of Arlington Heights: The second public meeting was held on July 11, 2006. Sixteen attendees signed in, including citizens, representatives the local press, chamber of commerce, municipalities, and government agencies. Public comments were all in support of the STAR Line commuter rail option. Bus service was not supported. Several communities in attendance have initiated planning activities for STAR Line stations. Articles reporting on the meeting appeared in the local press.

City of Naperville: The final public meeting was held in the City of Naperville on July 20, 2006. This meeting had the largest attendance, with 31 attendees signed the attendance list. The attendees included citizens, representatives from the local press, chamber of commerce, businesses, municipalities, and government agencies. Twelve comments were received, all in support of the commuter rail option. Many comments addressed a dislike for any bus option, and several addressed congestion problems along IL 59. One community requested assistance to get local businesses involved in the STAR Line Business Alliance. Several communities in attendance have initiated planning activities for STAR Line stations. Articles reporting on the meeting appeared in the local press.

3.3 Technical Advisory Committee (TAC) and Public Review of Proposed Long Term Vision (LTV)

A Technical Advisory Committee meeting was held on December 5, 2011 at the Village of Hoffman Estates. Via PowerPoint, Metra presented the AA process and study background, including work completed, study goals and objectives, and public involvement activities. Following the background information, Metra summarized the alternatives considered, preliminary findings, and the recommended alternative as the Long Term Vision for the corridor. Finally, next steps in the AA, study schedule, and public meeting schedule was presented. TAC members expressed their support for commuter rail option and supported the coordination and cooperation between Metra and the Tollway. Questions and comments from TAC members included:

A. Further information on the bus options considered and the development of the EBS alternative.

B. FTA cost effectiveness criteria and how this relates to projects that exceed the medium threshold of $24.99.
C. With the development of the Long Term Vision, future work that may be completed by the Tollway should be considered as capital costs are updated.

3.4 Summary of Public Review Comments Regarding the Proposed LTV

Public information meetings were held on January10, 2012 in Naperville, IL and on January 19, 2012 in Arlington Heights, IL to explain the STAR Line study and AA process, describe the alternatives being considered, and take public comments on those alternatives and the study findings. Eighteen individuals attended the meeting at the Naperville Municipal Center and thirty-two individuals attended the meeting at the Arlington Heights Village Hall.

Metra reviewed the steps being followed in the STAR Line AA process via a PowerPoint presentation. This presentation summarized the alternatives considered, preliminary findings, and the recommended alternative as the Long Term Vision for the corridor. Following the presentation, attendees were asked to comment on the alternatives and recommendation of commuter rail on both the I-90 east/west segment and the CN/EJ&E north/south segment as the Long Term Vision. Attendees received a handout on the STAR Line AA process and the recommended Long Term Vision. Displays and maps of all alternatives were provided for public review. A question/answer session followed the presentation. Comments were invited via comment cards available at the meetings as well as via the Metra web site at www.metraconnects.metrarail.com.

The majority of attendees who expressed their opinion favored the commuter rail option and would like it to be built soon. Most attendees stated that transit improvements in the STAR Line corridor are needed and expressed that the commuter rail alternative would be the alternative to attract the most riders. Generally, the issues identified by the public at the meetings and by individuals who commented on the web site to date can be grouped as follows:

A. Support for transit improvements in the STAR Line corridor.
B. Support for the commuter rail alternative.
C. Environmental and station location concerns including noise and traffic impacts.
D. Consideration should be given to direct access to O'Hare Airport and Joliet.
E. Station location and connectivity was considered essential to generating ridership. Stations located in suburban downtowns and the inclusion of new, connecting circulators and transit routes were suggested.

These concerns are being addressed as follows:

A. While the STAR Line is the recommended Long Term Vision for the STAR Line corridor, interim steps will likely be taken to build and expand the transit market. As these steps move forward, including Pace I-90 bus expansion, station locations and connecting services will continue to be evaluated.
B. Metra will continue to work with partner agencies, municipalities, and the Northwest Municipal Conference to support short- and medium-term solutions to build the corridor's transit market and continue station area studies.

C. Metra will continue to work with the Illinois Tollway and the CN to move forward to implementing the Long Term Vision along I-90 and in the EJ&E corridor.
D. Environmental factors will be considered with any future environmental and preliminary engineering studies, although financial resources are not currently available for these studies.
E. Once the O'Hare Western Access project becomes an official "committed project" in the region, future STAR Line planning will work to include a direct connection to O'Hare.
F. Future STAR Line expansion plans have been identified that could include further north and south connections.

4.0 LONG TERM VISION

This section provides a detailed description of the selected LTV – the Commuter Rail (CR) alternative.

4.1 General Description

The CR alternative would provide a new commuter rail service in the STAR Line corridor using high-performance DMU vehicles. In the east-west segment, the route would extend about 20 miles from the Rosemont/River Road Station near O'Hare Airport to Prairie Stone along I-90. In the north-south segment, the route would extend 35 miles from Prairie Stone to the terminal station at Renwick Road near Joliet near I-55, along the CN/EJ&E Railway. The approximate route length from O'Hare Airport to Joliet is 55 miles and there are total of 19 proposed rail stations along the route. Characteristics of the LTV alternative is described in Table 5 and shown in Exhibit 2.

Table 5: LTV (Commuter Rail) Characteristics

Project Definition	Length (miles)	New: 55 miles
	Mode/Technology	Commuter Rail
	Number of Stations	New: 18
	Number of vehicles / rolling stock	Proposed New DMU cab cars: 28 Proposed New DMU non-cab cars: 28 Proposed New Van-Type Feeder Buses: 86

4.2 Operations

For the 20 miles between O'Hare Airport and Prairie Stone, the one-way travel time for the trains is projected to be 36 minutes, which equates to an average speed of about 33 mph. On the CN/EJ&E segment between Prairie Stone and Joliet (35 miles), it was projected that trains could maintain a 44 mph average speed and a travel time of 48 minutes for the Prairie Stone-Joliet segment, including intermediate stops. Average speed on this segment is projected to be higher than the east-west segment because of the longer distance between stations.

On the I-90 segment, a dedicated, double-track passenger-only line would be constructed that could support speeds up to 79 mph wherever safe/practical. On the CN/EJ&E segment, trains would operate over both new track and upgraded existing CN/EJ&E track, also with speeds of up to 79 mph wherever safe and practical. Most north-south segment trains are assumed to operate through the Prairie Stone terminal onto the east-west segment. Table 6 presents operating characteristics, including schedule and headways.

Exhibit 2: Long Term Vision – Commuter Rail

Table 6: Operating Characteristics of the Commuter Rail Alternative

# of Stops	Headway (min) (Peak/Off-Peak)		Running Time (min)		Route Length (miles)		Average Speed (mph)		Span of Service	
	I-90	IL 59/EJ&E	I-90	IL59/ CN/ EJ&E	I-90	IL 59/CN/ EJ&E	I-90	IL 59/CN/ EJ&E	1-90	IL 59/ CN/EJ&E
19	15/30	30/60	36	48	20	35	33	44	1st trip from River Rd. at 4:40 am, last trip departs at 11:40 pm. 1st trip from Prairie Stone at 4:25 am, last trip departs at 11:25 pm	1st trip from Prairie Stone at 5:23 am, last trip departs at 11:53pm. 1st trip from Renwick Rd. at 5:00 am last trip departs at 12 midnight.

4.3 Vehicles

A new fleet of DMU type vehicles would be used for rail service on both segments. On the I-90 segment, peak-period service would require six trainsets to cover the scheduled service, plus two spare trainsets for maintenance purposes. The schedule would provide reasonable layovers at each end of the line in order to recover from delays en route, etc. On the CN/EJ&E segment, peak-period service would also require four trainsets, with two spare trainsets for maintenance and including reasonable layovers.

The DMU fleet size for the CR alternative is projected to be 56 cars (28 each cab cars and trailers) with four-car consists. A total of 32 cars would be required in the east-west segment and 24 cars would be required in the north-south segment. This includes provision for two complete spare trains serving each segment (i.e. 16 spare cars have been provided). All trainsets, including the spares, follow the same consist configuration.

4.4 Infrastructure

4.4.1 Railroad Infrastructure

East-West Segment on I-90

Construction of a dedicated, double-track passenger-only rail line is proposed over the 20-mile distance from Hoffman Estates/Prairie Stone to the Rosemont/River Road terminal. On the I-90 segment, a significant infrastructure improvement is proposed to carry trains from the Rosemont/River Road terminal, and then gain access to I-90 at a point east of the I-90/I-294 interchange via a new overhead bridge structure. Potential alignments for this structure have been developed that are conceptually suitable for both the proposed EBS and commuter rail alternatives. Clearances and loadings for this and other structures and facilities are assumed to be sufficient to accommodate the proposed DMU equipment and maintenance equipment.

Sidings for the storage of additional/spare trains would be provided on the approach to the Rosemont/River Road terminal. This is necessary for layover of trains at night, and to provide a location for basic maintenance of the equipment. It is not envisioned that all trains would return to the proposed maintenance and storage facility (MSF) site, which is currently proposed to be located in the vicinity of Spaulding Road. A new, middle-platform, two-track rail terminal is assumed to be constructed at Prairie Stone to serve both the I-90 and CN/EJ&E segment commuter trains. An affiliated bus interchange facility is also assumed.

Universal crossovers are proposed on a frequent spacing of approximately every four miles due to peak-period frequencies that are half that of the north-south segment, which uses the Metra suggested standard of seven mile spacing between crossovers. This closer spacing on the east-west segment would facilitate maintenance and exceptional operating needs, increasing the flexibility of the physical plant. Provisions for switches and switch heaters are based on Metra standards and policies.

Given the frequency of train operation, the entire east-west corridor would be equipped with Centralized Train Control (CTC) for safety and to provide operational flexibility and reliability. Interlockings are included at the Rosemont/River Road lay-up sidings, at the terminal approach crossovers and at the intermediate crossovers. Wayside signal bridges have been assumed for the approach to either end of interlockings, but the actual method of handling wayside signals (using masts, overhead) may change as this project advances.

North-South Segment on CN/EJ&E

The distance from Hoffman Estates/Prairie Stone to the Renwick Road terminal near Joliet is about 35 miles. Passenger services would operate over a combination of new and upgraded existing trackage owned by the CN. The existing line is primarily single-track, with several passing sidings, and has seen increased freight train movements over the entire segment since the STAR Line Feasibility Study was conducted.

Potential options for adding commuter rail on the CN/EJ&E were explored, including:

- Fully dedicated passenger rail facility
- Shared freight and passenger rail facility with passing sidings

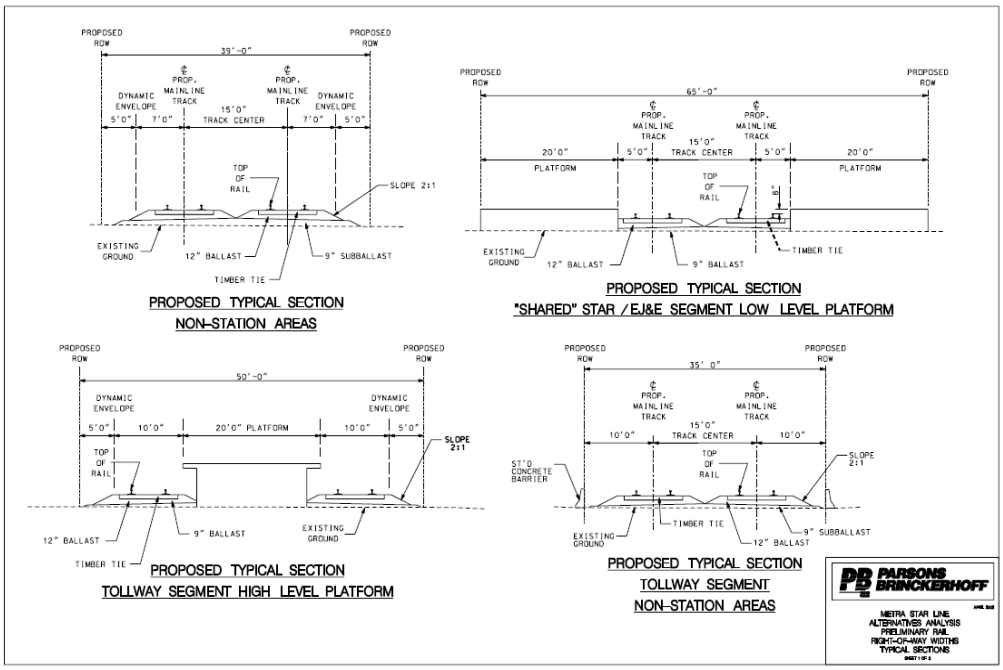
Based on operational evaluations, and initial coordination with the CN, it was determined that a shared freight/passenger rail facility with passing sidings would be preferred. An additional main track could be constructed over almost the entire line to provide two main tracks, for joint use of passenger and freight services, along with additional sidings for staging of freight trains, interchange, and local freight services. Both a shared freight and passenger facility and the fully dedicated passenger facility options will be carried forward with the final decision being made during future studies of the project. This decision will be based on resulting coordination with the host railroad and other stakeholders. An exception is West Chicago, where a new single track section is proposed to provide a grade separated crossing over the existing Metra UP-West line and nearby roadways. The crossing would be single-track, with relatively steep grades suitable for DMU equipment but not freight operations to minimize construction costs.

Almost all new track would be suitable for use by either freight or passenger trains, and all existing track (both mainline and sidings) would be upgraded to allow higher train speeds. The total miles of new track on the mainline is estimated to approach 35 miles, while 43 miles of existing main and siding track would be upgraded to FRA Class 4 suitable for 79 mph operation. Additional trackage would be provided at key stations:

- About one mile of passenger-only track would be provided at both the Renwick Road and Rosemont/River Road terminals for platform tracks and lay-up sidings.
- A new, median platform, two-track rail terminal is assumed to be constructed at Prairie Stone to serve both the I-90 and CN/EJ&E segment commuter trains. An affiliated bus interchange facility is also assumed. to accommodate movements and layovers for both the east-west and north-south corridor trains.

Universal crossovers are proposed on a spacing of about seven miles over the length of the north-south corridor as suggested by Metra standards. This spacing would facilitate maintenance and exceptional operating needs, increasing the flexibility of the physical plant. Existing switches at the ends of sidings would be rehabilitated, as would switches leading to industrial or team tracks. Upgrade of these other switches would ensure safe operation, particularly where higher-speed operations are provided. New interlockings are assumed for the new siding and at the Renwick Road terminal junction with the CN/EJ&E mainline. Wayside signal bridges have been included on approach to either end of interlockings, but the actual method of handling wayside signals (using masts, overhead) may change as this project advances. Cross section views of typical I-90 and CN/EJ&E segments are shown in Exhibit 3.

Exhibit 3: Typical Rail Cross Section for I-90 and CN/EJ&E Segments



4.4.2 Roadway Components

East-West Segment on I-90

Currently, I-90 consists of three or more lanes in each direction over the STAR Line corridor. The Tollway, owner of the infrastructure, has included adding a fourth through lane in each direction in their Long Term Plan. The STAR Line infrastructure assumptions are based on the development of a design that integrates the needs of the additional lane and of the transit improvement, at least to the extent possible. Coordination with the Tollway on these planning phase issues is ongoing.

The rail trackage is proposed to be located in the median of the highway, minimizing impact on roadway entrance and exit ramps, and providing the ability for one station facility to service operations in both directions at each station location. It is also expected to minimize impacts on crossing roadways, as compared to a configuration locating the trackage in the shoulders of I-90. At the east end of the segment, an aerial approach structure at the Rosemont/River Road terminal is proposed to be located to the south of the I-90 right-of-way, beginning east of the I-294/I-190 interchange. At the west end of this segment in Hoffman Estates, while still in the highway median, the rail line would begin to descend in a westward direction after crossing over the CN/EJ&E Railway west of IL 59. Retaining structures would be constructed to minimize the width of the combined roadway/rail cross-section and stay within the available I-90 right-of-way. After reaching a sufficient depth to provide clearance for the rail vehicles, the line would curve to the north and pass under the westbound lanes of I-90 and enter the vicinity of the proposed Prairie Stone station.

At station locations, a wider overall combined highway/rail line facility width would be required. In effect, the outermost lanes would require being located farther away from the overall roadway centerline. Since the existing roadway is largely elevated with respect to adjacent property grades, additional measures would likely be required to support the roadway by means of additional earthen fill and retaining walls, as compared to that needed for the highway alone. In addition, it is possible that a significant utility relocation (one mile of high-tension towers adjacent to I-90 could be required. Further investigations will be necessary to determine the extent of these improvements over and above what would be required for the highway widening project alone. At 14 locations where the I-90 currently crosses over features such as arterial roadways, railroads, and waterways, double-track bridges suitable for DMU rail vehicle loadings would be constructed to support the rail line.

The construction of the rail line would also have impacts on intersecting roads and I-90 interchanges. These include the potential need to reconstruct existing over-crossing bridges to accommodate the revised geometry of I-90 as it passes under bridges and at stations. At Roselle Road station changes to the existing crossing roadway may be needed to provide access to feeder buses serving this location. No toll plaza or oasis modification is proposed as part of the STAR Line project.

North-South Segment on CN/EJ&E

New grade crossing surfaces and related warning equipment (estimated to total 31 locations) would be provided on the sections where an additional main track is proposed to be constructed. In addition, an upgrade of two crossing surfaces at existing crossings (to be determined) may be needed. These crossings would also be programmed for receiving new warning equipment. New bridges would be required at more than 17 locations along the north-south corridor, including those for new main track, on new sidings or totally new grade separations (at intersecting rail lines or major road crossings).

4.4.3 Maintenance Facilities

Since the commuter rail alternatives involve the introduction of a totally new fleet of DMU cars as compared to the rest of the Metra system, a totally new dedicated maintenance and shop facility (MSF) is proposed. The preliminary location selected for the MSF is near the CN/EJ&E crossing of the Metra MD-West line at Spaulding Road, subject to further investigation. Additionally, minor daily maintenance and fueling would be performed at the layover track locations at Renwick Road and Rosemont/River Road. Conceptual development of a size and layout for the maintenance facility was performed. To accommodate a fleet of just under 60 cars, the overall facility (including all access and circulation roads, parking, outbuildings, etc.) would be expected to require about 38 acres. Regardless of the active fleet size, it is presumed that the full 38–acre site would be required, to allow for future expansion, should one or more rail segments be implemented.

4.5 Stations

4.5.1 Terminal Station Features

A new terminal station for the O'Hare Airport vicinity, Rosemont/River Road, is proposed to be constructed just north of the CTA Rosemont Blue Line Station, immediately south of I-90 and east of River Road. Connections to CTA Blue Line rail service and Pace buses currently serving the site would be made via the existing facilities. The Rosemont/River Road terminal is assumed to have an aerial configuration and location, with connections to the existing Pace bus and CTA bus/rail facilities. Yet to be determined, based on travel demand forecasts, is the extent of the existing surface lot parking that may be displaced because of the new rail terminal. Replacement of the lost capacity by structured parking would likely be required.

The Prairie Stone station is assumed to be a new, middle platform, two-track rail station at Prairie Stone to serve both the I-90 and CN/EJ&E segment commuter trains. An affiliated bus interchange facility is also assumed, potentially to include seven bus bays, with three for Prairie Stone vicinity shuttles, and the balance for use by fixed-route bus services. This terminal would also include kiss-and-ride and park-and-ride facilities. The station would be configured to be compatible with potential future expansion to handle increases in train service on the proposed routing or on the potential commuter rail service to the west from Prairie Stone. The station could potentially share parking with the adjacent Sears Centre arena.

The Prairie Stone terminal is based on the tracks/platforms being below-grade level since the tracks must pass underneath the I-90 westbound traffic lanes to access the development which lies to the north of the I-90. This also minimizes the impact on the valuable real estate and road network within the development. This facility would be required to accommodate trains of the

east-west and north-south corridors. Vehicles could be through-routed at the Prairie Stone terminal. East of the station, a junction between the east-west and north-south lines will include crossovers to facilitate movements between tracks. Station house facilities and the bus interchange are included at grade level. Other design concepts for this facility are broadly assumed to be the same as those in the intermediate stations.

A new terminal station at Renwick Road near Joliet is proposed to be constructed. It is envisioned to be a double-track station with island-type platform, with station trackage located off of the main line. The configuration would have provisions to extend service further along the CN/EJ&E in the future. The station would provide for bus layover facilities, as well as kiss-and-ride and park-and-ride facilities.

4.5.2 Intermediate Rail Stations

All station facilities are proposed to be ADA-compliant, and have canopies on all platforms, similar to traditional Metra rail stations. Each station would have suitable windbreaks, active signage, normal and emergency communications facilities, lighting and vertical circulation elements to tie the station to grade level (where required), and be sufficiently wide to minimize conflicts between passenger flows from trains. Bus interchange, kiss-and-ride and park-and-ride facilities would be provided adjacent to the station. Due to the undeveloped land-use in the area, the surrounding station areas would be suitable to support transit oriented development.

On the east-west segment, all nine intermediate stations will be configured with an island platform. The station design would have provisions for variable message signage and public address systems, as well as heated windbreaks, benches, lighting and other typical commuter rail station amenities. Vertical circulation elements (to cross-roads, etc.) would include stairs and elevators/escalators. Pedestrian bridge access would be needed at all the stations to gain access to remote parking and adjoining land uses. Sidewalks would be constructed to provide access to the platforms from the cross streets or nearby developments. These typical station area features are shown in Exhibit 4.

On the north-south segment, most of the intermediate stations are assumed to include two low-level platforms, one located on each side of the double-track CN/EJ&E rail line. Center platforms were considered, but preliminary discussions with the CN/EJ&E and Metra indicated the need to avoid the potential for passenger access to be blocked by standing or moving freight trains. It is assumed that grade separated pedestrian access for side platforms would be provided for safety reasons. Because of the need to jointly operate freight and passenger service on both tracks, full height level boarding provisions are not possible. The North Avenue and Northwest Naperville (BNSF) Stations would be grade-separated and would require vertical circulation elements, including stairs and elevators/escalators. Exhibit 5 shows typical station area features on CN/EJ&E for the commuter rail alternative.

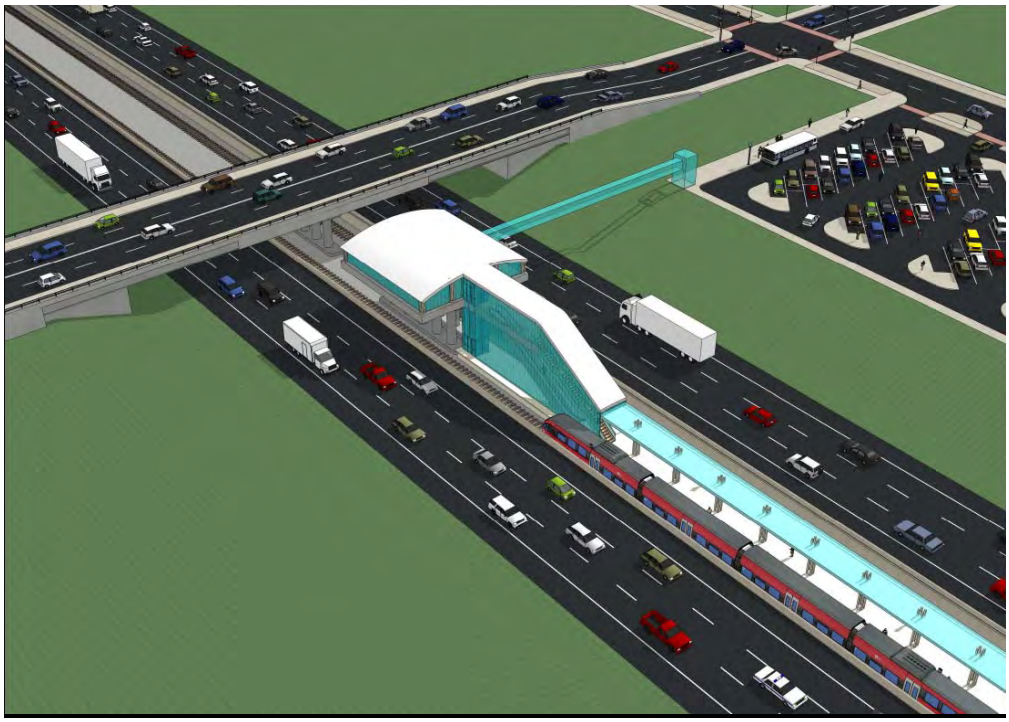


Exhibit 4: Typical Station Area Features on I-90

Exhibit 5: Typical Station Area Features on CN/EJ&E

4.6 Connecting Services

The proposed connecting services to the STAR Line have been further refined based on their feasibility and consistency with modal operators' (Pace bus) policies. This is also the result of continued coordination with the area transit operators, a process that will continue as the project advances. The initial investigations considered providing improved links to nearby hospitals, learning centers and major employers, as well as to other transit services (airports and rail lines).

A total of 25 new dedicated feeder bus routes were identified on a preliminary basis as being necessary to link the commuter rail line to area major employers, higher learning institutions and major activity centers. The 25 routes would require 72 accessible, van-type vehicles to provide peak-period service. With spare buses, a total of 88 accessible vehicles would be required.

5.0 COST ESTIMATES

Project costs involve two elements: capital costs and operating costs. Capital costs include costs to build the project whereas operating costs include the annual operating and maintenance costs when the alternative enters revenue service. Details of each are outlined below.

5.1 Capital Costs

Capital costs include costs to build the project. The projected capital costs are expressed in 2010 dollars. Major elements of the capital costs include:

- Infrastructure costs for east-west running way including signaling and systems, and an allocation for environmental mitigation, utility relocation/protection and other special site conditions
- Infrastructure costs for north-south running way assuming shared trackage with CN/EJ&E including signaling and systems, and an allocation for environmental mitigation, utility relocation/protection and other special site conditions
- Additional highway related infrastructure costs relating to I-90 reconstruction, relocation of major, specialized utilities and land acquisitions
- Special infrastructure items such as Tri-State Tollway Structure/River Road flyover, connection at Prairie Stone fly-under structure, West Chicago flyover
- Station costs including vertical circulation elements, station access bridges and bus interchange facility costs
- Maintenance Facility costs
- Rail vehicle costs for DMU cab car and non-driving car
- Van type bus costs for connecting feeder buses, and an allocation for bus maintenance facility
- Professional services costs including but not limited to design, construction administration, permits, survey, testing, etc. are defined as a percentage of the construction costs and are included as soft costs under each of the major standard cost categories

In 2010 dollars, the capital cost estimate for the LTV is $2.737 billion, as shown in Table 7.

Table 7: Capital Cost Estimate by Project Element – 2010 $M

Construction Item	Base Cost	Contingency	Professional Services	COST
EAST / WEST TOLLWAY SEGMENT ROW PREPARATION				
Construction of Highway-Related Improvements	$380.0	$95.0	$109.3	$584.3
Right-of-Way Acquisition	$15.7	$3.9	$4.5	$24.1
Wetland Mitigation	$0.0	$0.0	$0.0	$0.0
Utility Relocation	$97.2	$24.3	$27.9	$149.4
Fiber Optic Relocation	$0.0	$0.0	$0.0	$0.0
Assumed Variance for Tollway Master Plan Design & Const Mgmt Costs		$52.2		$52.2
Subtotal	**$493**	**$175**	**$142**	**$810**
EAST / WEST SEGMENT TRANSIT BUILD				
East / West Infrastructure Build	$257.3	$115.2	$58.4	$431.0
Stations (East / West)	$165.1	$74.0	$37.5	$276.6
Tri-State Tollway / River Road Flyover	$76.9	$34.4	$17.5	$128.8
Prairie Stone Connection	$32.1	$14.4	$7.3	$53.8
Rolling Stock – Rail Vehicles	$100.2	$21.0	$1.0	$122.3
Rolling Stock – bus Vehicles	$12.6	$5.6	$0.3	$18.4
Maintenance & Storage Facility	$51.8	$16.9	$8.6	$77.3
Subtotal	**$696**	**$282**	**$130**	**$1,108**
NORTH / SOUTH SEGMENT				
North / South Infrastructure Build	$293.7	$113.1	$66.7	$473.5
Stations (North / South)	$56.5	$25.3	$12.8	$94.7
West Chicago Flyover	$57.1	$25.6	$13.0	$95.6
Rolling Stock – Rail Vehicles	$75.2	$15.8	$0.8	$91.7
Rolling Stock – Bus Vehicles	$6.1	$2.7	$0.1	$8.9
Maintenance & Storage Facility	$35.1	$12.7	$6.4	$54.2
Subtotal	**$524**	**$195**	**$100**	**$819**
TOTAL FOR CR DEDICATED				**$2,737**

5.2 Operating Costs

Annual operating and maintenance costs were calculated using an operating cost model based on revenue miles and a unit price for cost per vehicle mile which was provided by Metra and based on experiences from recent, local projects, generally similar in nature and scale. The O&M cost for the commuter rail option was derived to be $52.2 million, as presented in Table 8. Operations statistics were prepared for the east-west and north-south segments, according to the most recent versions of the schedules. Four-car trains are presumed to operate on all trips. A 10% non-revenue/deadhead factor was built into all estimates. Weekday schedules (15 minute peaks and 30-minute off-peak periods) were presumed to be in effect for 256 days of the year, with the other 109 days being Saturdays, Sundays or Holidays (30-minute headways on a shorter operating day).

Table 8: Annual O&M Costs for Commuter Rail Alternative

Cost Item	Cost ($M)
Mainline Operating Cost	$52.2
Feeder Bus Operating Cost	$30.9
Total Annual Operating Costs	$83.1
Incremental Annual Operating costs	$41.8

Additional analysis of operating plans will be carried out during future studies to refine this estimate.

6.0 PROJECTED RIDERSHIP

Projected ridership and transportation system user benefits for the recommended LTV are presented below.

6.1 Ridership Projections

Ridership is expressed in weekday boardings, based on travel demand model results (version April 16, 2009). Note that details regarding travel demand forecasting and the ridership modeling process can be found in a separate report titled *Chicago Area New Starts Ridership Forecasting Methods Report DRAFT: Chicago Transit Authority Circle Line Alternatives Analysis & Metra New Starts Corridor Alternatives Analysis*, prepared for CTA and Metra by AECOM Consult in July of 2006. For the 2030 design year, the project average weekday boardings for the CR alternative are estimated at 21,700. As shown in Table 9, The CR alternative generates the highest ridership estimates of all alternatives, and results in an increase of 16,700 over the TSM alternative.

Table 9: Projected Ridership by Alternative

ALTERNATIVE	AVG. WEEKDAY RIDERS (2030)
TSM	5,000
EBS	15,700
CR	21,700
MMA	16,800
MMB	10,100

6.2 Transportation System User Benefits

The Cost Effectiveness Index for the recommended LTV is $63. Table 10 provides a breakdown of the inputs to the user benefit calculation.

Table 10: Estimated Transportation System User Benefits – Commuter Rail Alternative

Performance Measures	Commuter Rail
Average Weekday User Benefit (hours)	11,034
Average Weekday Riders (2030)	21,700
Annualized User Benefits (hours)	3,310,200
Annualized Capital Costs (2010 $M)	$2,737
Annual Operating Costs (2010 $M)	$83.1
Cost Effectiveness Index (2010 $)	$63

7.0 NEXT STEPS

The Alternative Analysis process fully evaluated a range of alternatives, leading to a determination of the Commuter Rail alternative as the Long Term Vision for the STAR Line Corridor. However, while the Commuter Rail alternative has been selected as the LTV, the need for a short-to-mid term option has been determined to provide a means to both continue to build a transit market in the corridor and continue to move forward with the long-term vision.

Further need for a short-to-mid term east-west option is based on the condition of I-90. With the I-90 pavement nearing the end of its useful life, the Tollway Board determined that the reconstruction and widening project for I-90 should be accelerated and is now scheduled to begin in 2012. The Illinois Tollway created the I-90 Corridor Planning Council (CPC) to achieve consensus on a plan for the I-90 Corridor from Chicago to Rockford, including the Kennedy Expressway and the Jane Addams Memorial Tollway. The I-90 CPC, chaired by the Tollway, brought together executives from numerous partners including the Tollway, IDOT, RTA, Metra, Pace, CMAP, CTA, MPC, counties of Boone, Cook, Kane, McHenry, and Winnebago, along with other transportation and planning related agencies, business groups, environmental groups, and legislators.

As presented in Exhibit 6, The I-90 CPC recommended a short-to-mid term option for the I-90 corridor, while keeping in mind the long term vision of commuter rail. The short-to-mid term option for I-90 is implementation of express bus service initially using off-line stations. The express bus service would use a new 14-foot congestion-priced lane, or "managed lane" located within the Tollway's existing right-of-way. This option would allow for the building of the transit market in the I-90 corridor and while continuing to move forward with the Long Term Vision of commuter rail for the entire STAR Line Corridor. It should be noted that the express bus service proposed by Pace and the Tollway is a much more modest way to build the market than the EBS option evaluated in the STAR Line Alternatives Analysis study as it does not initially include any on-line stations and limited new connecting service.

The alternatives of express bus service as the short-to-mid term option and commuter rail as the Long Term Vision for the STAR Line corridor have been fully evaluated in the Alternatives Analysis process. Implementing a short-to-mid term option will allow for the further development of the transit market in the STAR Line corridor, while continuing development of the Long Term Vision of commuter rail. The LTV is consistent with Pace, RTA, and Tollway plans for the short and/or medium term.

This LTV will not preclude interim short and/or medium term steps to build the transit rider market in segments of this corridor, but the LTV will represent the long-term goal for the corridor that can be implemented as additional funding becomes available.

Exhibit 6
I-90 Corridor Planning Council Cross-Sections