Summary of Alternative Plan Evaluation Results

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Advisory Committees on Regional Land Use and Transportation System Planning

September 23, 2015

#228009

Alternative Plans – Evaluation Overview

- Introduction to Evaluation Results
  - Summarized in Chapter III of Volume II, with detailed evaluation results in Appendix F
  - 50 evaluation criteria, measuring extent to which each alternative meets each plan objective
  - Four themes: Healthy Communities, Equitable Access, Costs & Financial Sustainability, and Mobility
  - Secondary evaluation of Alternatives I and II with and without highway expansion for key criteria

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Overview of Trend Evaluation

- Advantages
  - Lowest transportation-related public expenditures
  - Improvements to bicycle network result in higher bicycle level of service and improved bicycle network connectivity
  - Lower congestion and automobile travel times than Alt II
- Disadvantages
  - Greatest negative impacts on environment and natural resources
  - Does not address existing disparities between whites and minorities—decline in transit service, reduction in proportion of households with affordable housing + transportation costs, and continuation of job-worker mismatches
  - Highest cost to provide services for local governments
  - Further decline in transit service results in lowest transit service quality and fewest jobs accessible via transit
  - Highest out-of-pocket transportation costs for residents

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Overview of Alternative I Evaluation

- Advantages
  - Fewer impacts on farmland, natural resources, and environment
  - Even larger improvements to bicycle network, resulting in higher bicycle level of service and improved bicycle network connectivity
  - Lowest congestion and automobile travel times
  - Greatly improved transit service, resulting in reduced travel times via transit, significantly increased jobs accessible via transit, and lower out-of-pocket transportation costs for residents
  - Improvements in accessibility for minority and low-income populations
  - Lower costs to provide services for local governments
- Disadvantages
  - Higher public costs due to increased transportation investment

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Overview of Alternative II Evaluation

- Advantages
  - Fewest impacts on farmland, natural resources, and environment
  - Even larger improvements to bicycle network, resulting in higher bicycle level of service and improved bicycle network connectivity
  - Highest level of transit service, resulting in lowest travel times via transit, greatest number of jobs accessible via transit, and lowest out-of-pocket transportation costs for residents
  - Greatest improvements in accessibility for minority and low-income populations
  - Lowest costs to provide services for local governments
- Disadvantages
  - Highest public costs due to increased transportation investment
  - Highest level of congestion, resulting in slightly higher travel times by automobile

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Evaluation Without Highway Improvements

- Advantages
  - Approximately $45 million less in annual transportation-related public expenditures under Alternatives I and II
  - Less than half as many homes and businesses relocated, and approximately 90% fewer acres of parkland lost
  - Significantly fewer acres of natural resource areas impacted
- Disadvantages
  - Increased congestion, resulting in higher travel times by automobile

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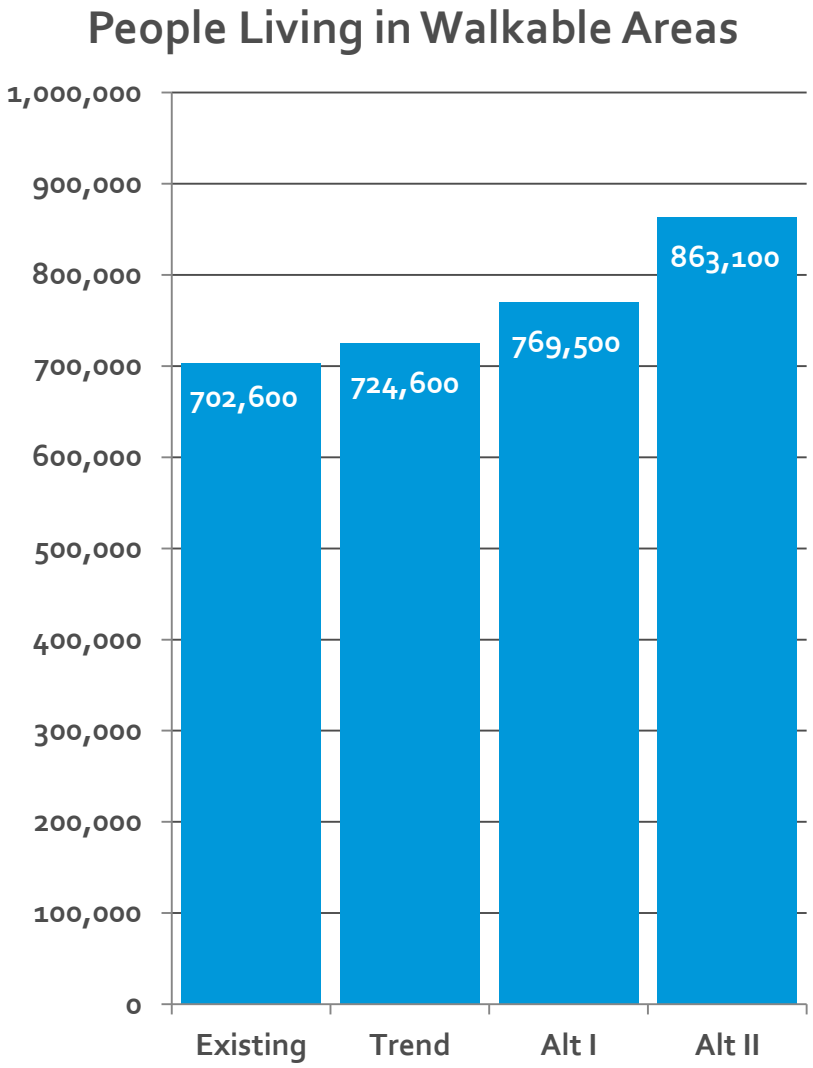
Healthy Communities

- Achieving Walkable Neighborhoods
  - More compact development pattern tends to be more walkable
  - Overall population density would decline by 10% under Trend, not change under Alt I, and increase by 2% under Alt II



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Healthy Communities

- Improving Connections and Access
  - Trend would improve on existing bike conditions, but Alts I and II would perform better: overall bicycle level of service grade of B compared to C for Trend

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Healthy Communities

- Open Space and Farmland Impacts
  - Trend would consume 2-3 times more farmland (77 sq. mi.) than Alternative I (32 sq. mi.) and Alternative II (26 sq. mi.)
  - National Prime Farmlands impacted similarly
- Natural Resource Base Impacts
  - Greater impacts under Trend due to arterial capacity expansion, although only 0.1 percent or less of each resource type's existing total area would be impacted regardless of alternative

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Healthy Communities

- Reducing Air Pollution
  - Modest differences in transportation air pollutant emissions between alternatives—generally not more than 2% lower under Alts I and II than Trend
  - However, transportation emissions under all three alternatives are projected to significantly decline from current levels due to Federal fuel and vehicle fuel economy standards, even with forecast increases in regional travel and traffic

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Equitable Access

- Improving Access to Jobs and Activity Centers
  - Decline in transit under Trend would result in reduced transit access to jobs and activity centers—less than 3% of minorities would be within 30 minutes of 100,000 or more jobs
  - Significant improvement in transit access to jobs and activity centers under Alts I and II—14% and 19%, respectively, within 30 minutes of at least 100,000 jobs
  - Similar results for families in poverty

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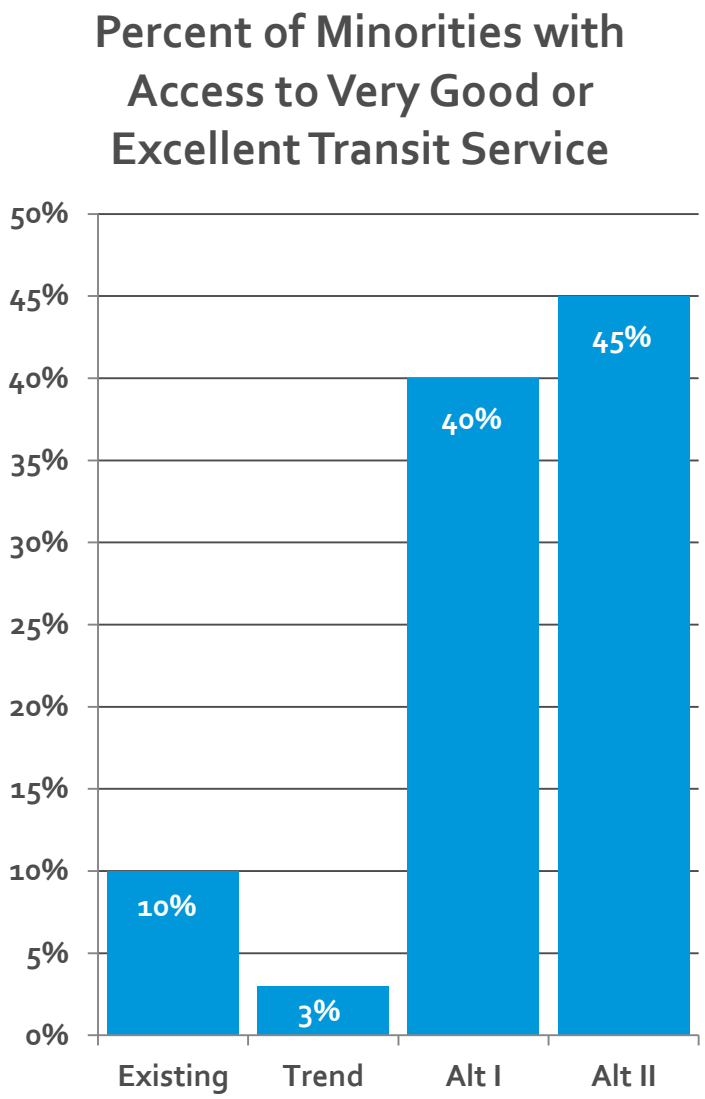
Equitable Access

- Improving Transit Service Access and Quality
  - All three alternative transit systems would serve principal concentrations of minority and low-income populations
  - Under Alts I and II, greater proportion would be served and service quality would be significantly improved



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Equitable Access

- Arterial Street and Highway Benefits
  - Automobile is dominant mode of travel in Region for all population groups
  - Freeway widenings under alternatives would directly serve areas with concentrations of minorities and families in poverty, with majority experiencing benefits:
    - Improved auto accessibility to jobs and activity centers
    - Reduced traffic congestion
    - Improved safety through crash reduction

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Equitable Access

- Arterial Street and Highway Impacts
  - Slightly more minorities reside near a freeway (20%) than non-minorities (15%), but vast majority of freeway system and future widenings under alternatives not located adjacent to minority and low-income concentrations
    - Fewer minorities and families in poverty reside near widening under Alt II (27,000 people and 2,800 families) than Trend and Alt I (81,800 people and 7,500 families)
  - Significant decline in transportation air pollutant impacts on minorities and families in poverty

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Equitable Access

- Accommodating Demographic Shifts
  - Number of residents in Region age 65 and older projected to double by 2050
    - Access to community amenities and accessible housing increasingly important, and would be improved by more compact, mixed-use development under Alts I and II
  - Variety of housing and transportation options under Alts I and II would meet needs of a diverse population, and may appeal to young workers needed to replenish workforce

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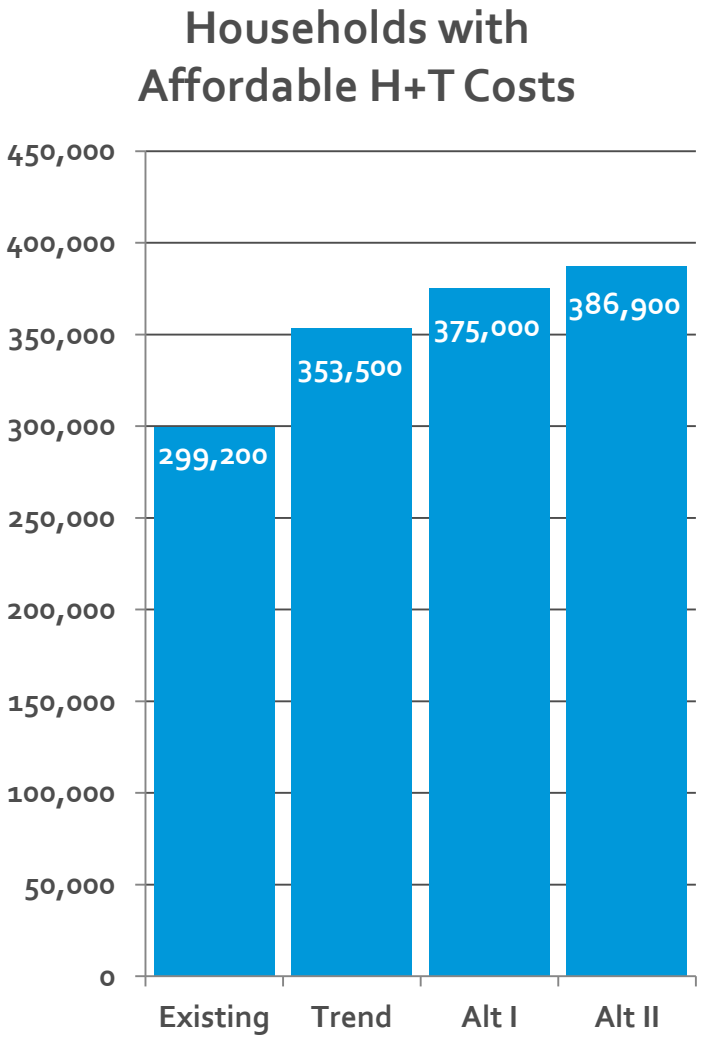
Equitable Access

- Affordable Housing and Transportation
  - Alts I and II would have better match of workers in proximity to jobs and more areas where combined housing + transportation cost would be affordable (45% or less of median household income) than Trend



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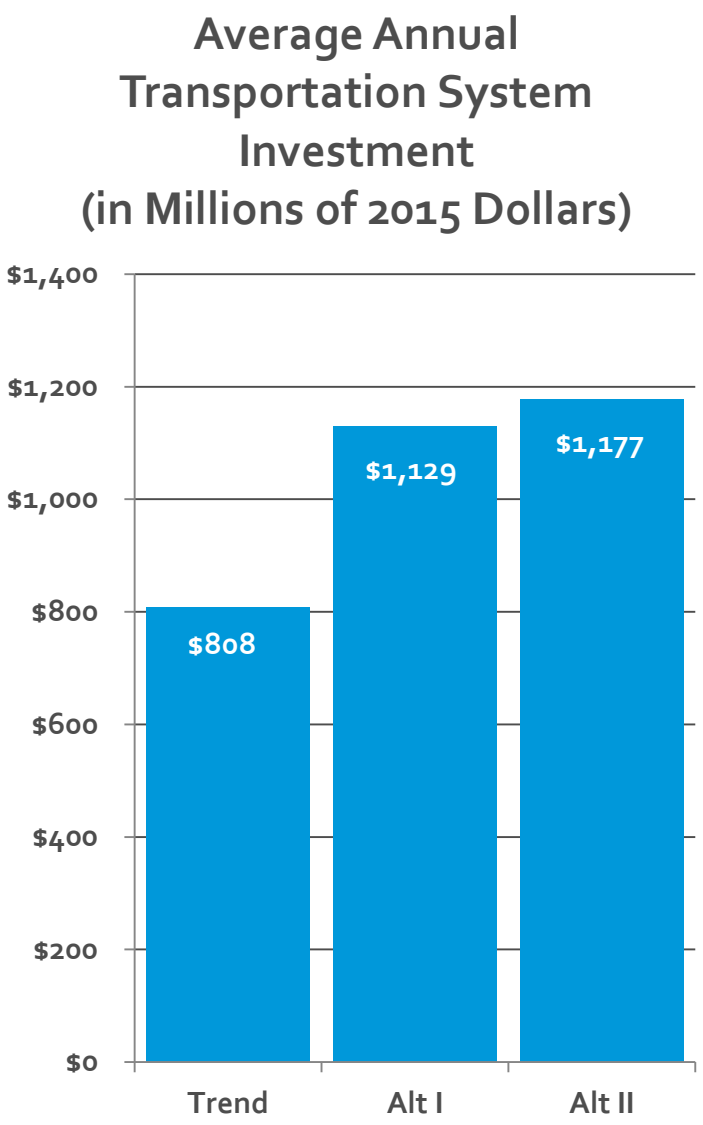
Costs and Financial Sustainability

- Minimizing Public Transportation Investment Levels
  - Trend would result in lowest transportation-related taxes, requiring $320-$370 million less annually by 2050 in public money



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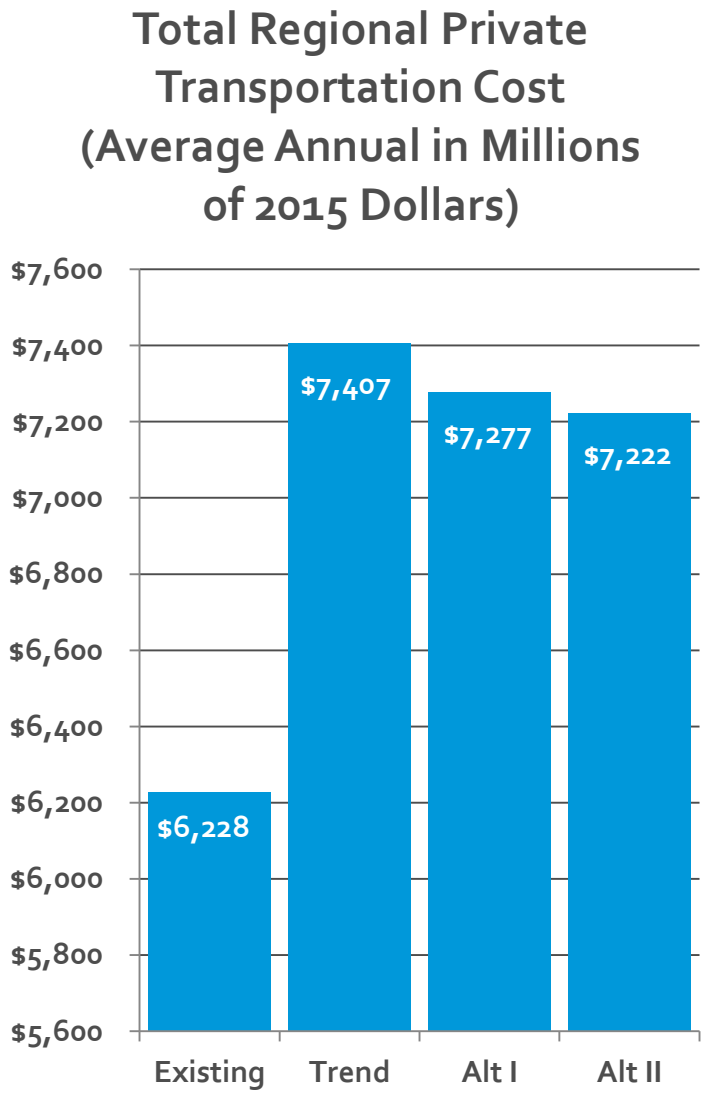
Costs and Financial Sustainability

- Minimizing Private Out-of-Pocket Transportation Costs
  - Reduced VMT and mode shift from auto to other modes under Alts I and II would reduce out-of-pocket transportation costs for Region's residents



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Costs and Financial Sustainability

- Efficiently Providing Public Services
  - More compact development pattern in Alts I and II would result in:
    - Lower per capita costs of maintaining roads/water mains/sewer pipes and providing fire protection/school transportation/solid waste collection
    - Greater property tax revenue per acre for local municipalities
  - Building sewer systems, water mains, and local roads to serve each land development pattern would cost:
    - $1.9 billion less under Alt II than under Trend
    - $1.4 billion less under Alt I than under Trend

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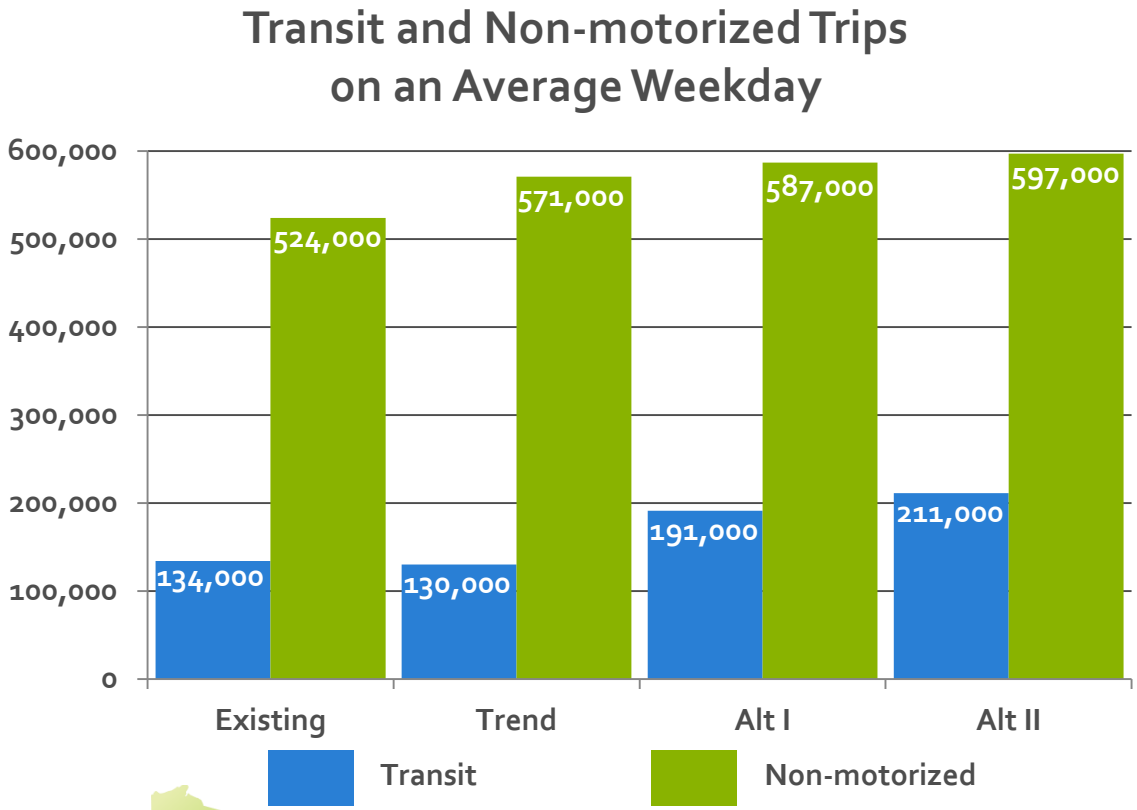
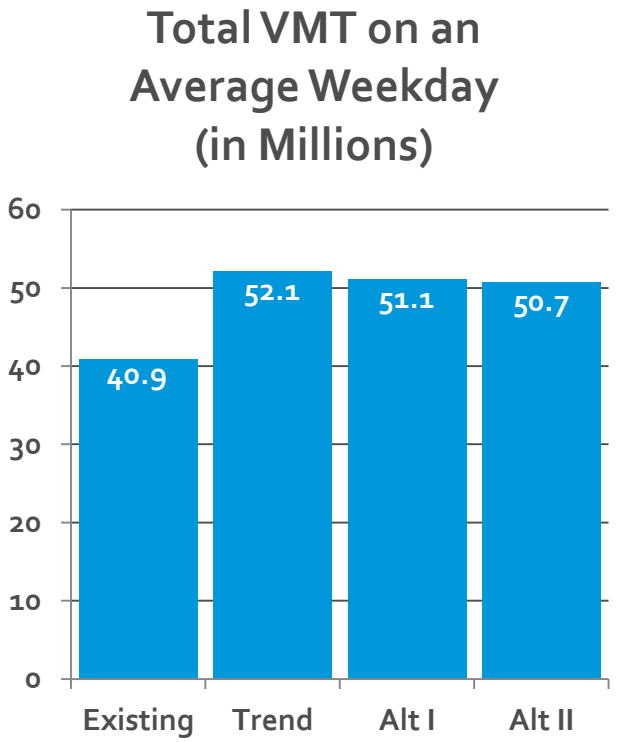
Mobility

- Balanced Transportation System Providing Mode Choice





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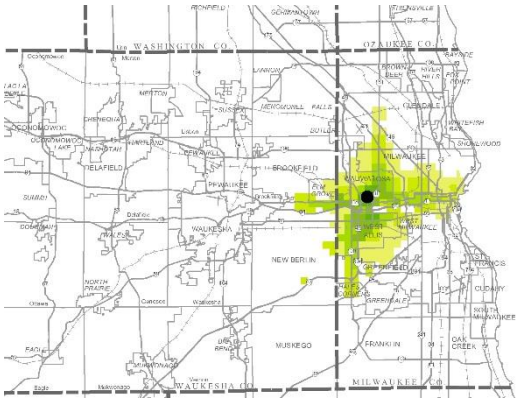
Mobility

Improving Travel Time to Important Places

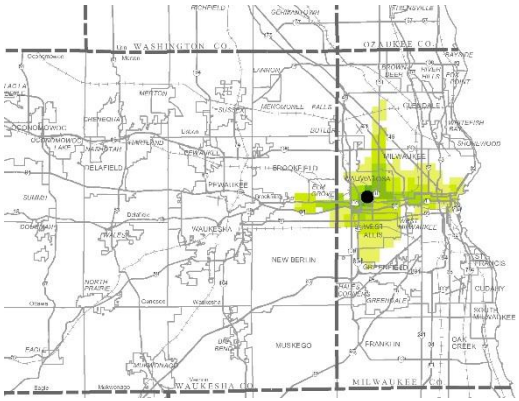
- Proportion of residents within reasonable travel time by auto to each place would remain about the same under each alternative
- Alts I and II would significantly increase proportion within reasonable travel time by transit to each place

EXAMPLE COMPARISON: AVERAGE PEAK TRAVEL TIME TO MILWAUKEE REGIONAL MEDICAL CENTER VIA TRANSIT

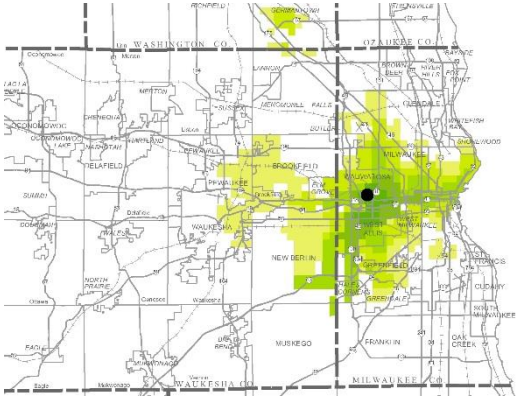
Existing



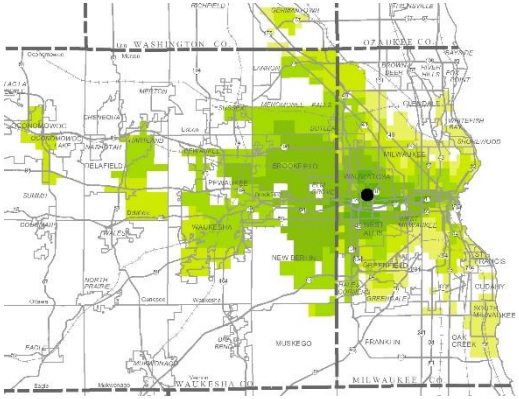
Trend



Alternative I



Alternative II



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Mobility

- Maintaining an Acceptable Level of Service on Arterial Streets and Highways
  - Trend: 6.7% of system at moderate or worse congestion (244.5 miles)
  - Alt I: 6.6% (242.3 miles)
  - Alt II: 7.3% (264.7 miles)
- Reliably and Efficiently Moving Goods
  - Alt I would result in lowest level of congestion on regional freight network and highest level of reliability, followed by Trend, then Alt II

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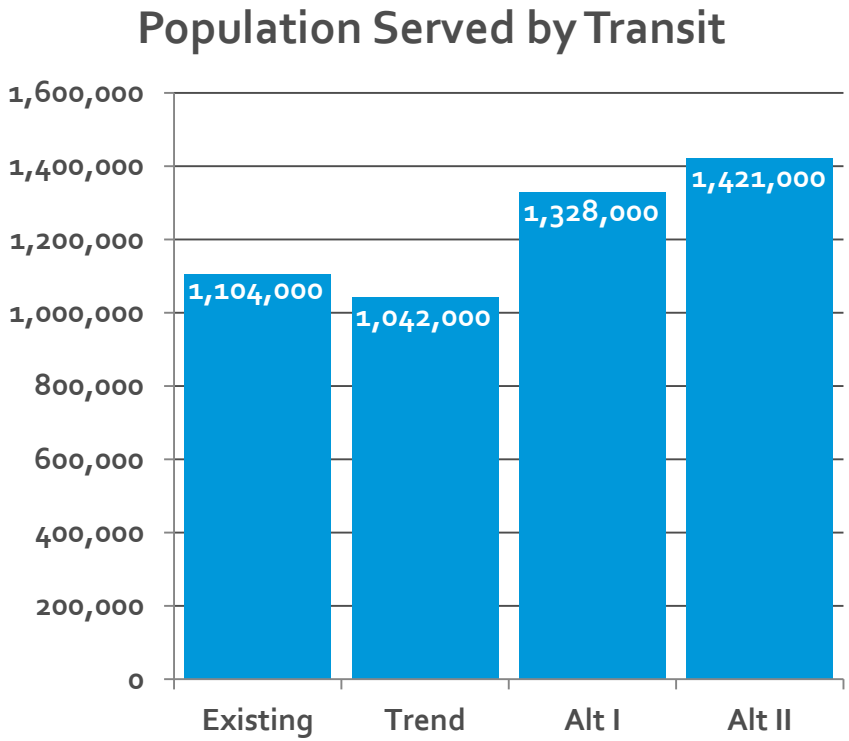
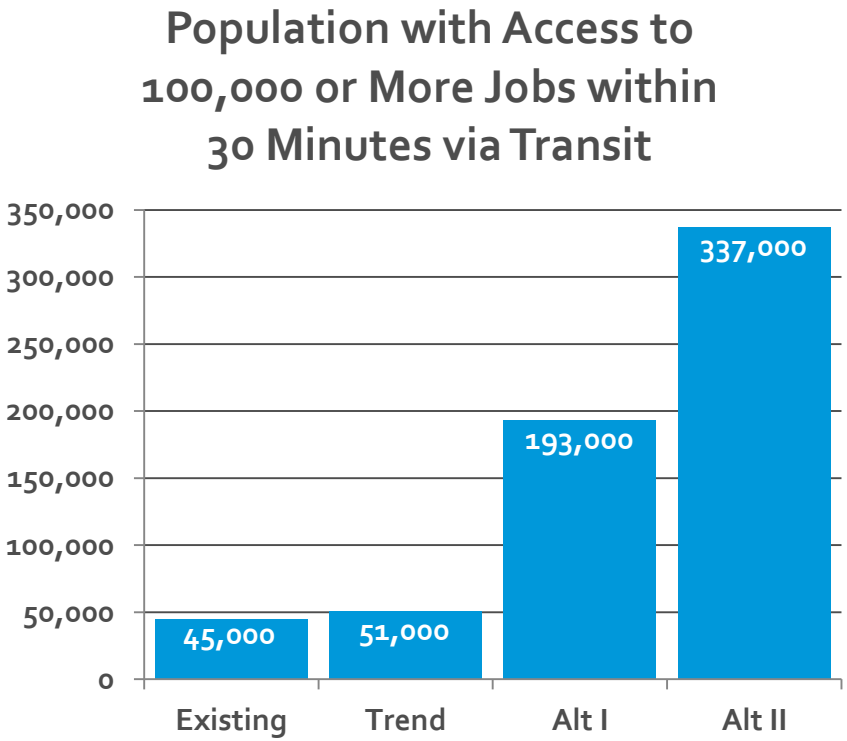
Mobility

- Maximizing People and Jobs Served by a High-Quality Transit System





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