Mayors’s 2030 Transportation Task Force
Current & Near Term Transportation Plans

04 | 09 | 2013
SAN FRANCISCO, CALIFORNIA
Multimodal Transportation Agency
Overview

- A well-functioning transportation system is foundational to the City’s health and economic vitality

- Today’s transportation system does not adequately meet current demand

- With expected growth, it is critical to improve the existing system and to make changes which move more people to transit, bicycling, walking and vehicle sharing

- Our focus is on:
  - Increasing operational efficiencies
  - Restructuring the transportation system to be better, faster, more reliable and more complete for transit, bicycling, walking, and vehicle sharing
Transportation is vital to our City

Strategic Transportation System

- Land Use & Travel Demand Management
- Rapid Transit Network
- Complete Bicycle Network
- Safer Walkable Streets
- Vehicle Sharing Partners
Current Transportation System Opportunities

- **High ridership ratio (on par with NYC); want to use the system**

- **Cost effective mode that is growing rapidly**

- **One of the most walkable cities (city of short trips)**

- **Congested segments hamper transit’s reliability**
Current Transportation System Challenges

Network, fleets and facilities in urgent need of upgrading

Fragmented network is perceived as unsafe by new users

High rate of collisions in northeast San Francisco

Need for transit & bicycle lanes; traffic calming for pedestrian safety
Mode Share Goals – 2018 & 2035 Scenario*

Estimated Total Daily Trips (to, from and within SF):
- **2010**: 3,970,000 trips
- **2018 Goal**: 4,319,370 trips
- **2035 Scenario**: 4,756,000 trips

*Source: SFCTA Transportation Model (SF-CHAMP) output, 2010; 2018 numbers extrapolated from the difference between 2018 and 2035 projections*
CURRENT LEVEL OF SERVICE

- Operating Structural Deficit
- Capital Structural Deficit & State of Good Repair
SFMTA Operating Structural Deficit

• Gap between what is available (operating budget) and resources needed to fully and properly execute service plan and maintain assets

• Caused by budget shortfalls over time as costs rose faster than revenues
  – Reduced positions that support transit service (mechanics, car cleaners, custodians, etc.)
  – Reduced positions that maintain assets (signals, overhead lines, striping, etc.)
  – Reliance on grant/project money that doesn’t fully meet our needs

• Inhibits delivery of quantity of service (charter requires 98.5%) and quality of service (e.g., clean, reliable vehicles)
Transit Service: Annual Operating Structural Deficit - $50M

For every 100 Transit Operators, we have…

<table>
<thead>
<tr>
<th>Position</th>
<th>Current Ratio</th>
<th>Needed Ratio</th>
<th>Gap</th>
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</thead>
<tbody>
<tr>
<td>Mechanics</td>
<td>31</td>
<td>37</td>
<td>6</td>
</tr>
<tr>
<td>Dispatchers</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>On-Street Supervisors</td>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Station Agents</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Track &amp; Overhead Power Workers</td>
<td>1</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Car Cleaners</td>
<td>5</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Custodians &amp; Groundskeepers</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Trainers</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Total: 27

Scaled for 2,000 Operators, we’re short ~ $50 million required to properly deliver our current service plan
Other Key Services:
Annual Operating Structural Deficit - $20M

<table>
<thead>
<tr>
<th>Programs &amp; Positions</th>
<th>Total Cost</th>
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</thead>
<tbody>
<tr>
<td>Complete Streets Programs</td>
<td>$4,777,000</td>
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<tr>
<td>Traffic Signals - Preventive Maintenance Program</td>
<td>$4,274,700</td>
</tr>
<tr>
<td>Transportation System Safety</td>
<td>$2,110,160</td>
</tr>
<tr>
<td>Maintenance &amp; Operating Support for Implemented Capital Projects</td>
<td>$6,828,000</td>
</tr>
<tr>
<td>Non-Operating Support Functions</td>
<td>$2,612,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>$20,601,860</strong></td>
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</tbody>
</table>
Shoring up the gap allows for expected level of service delivery but does not serve potential demand

→ Less than a 10% increase in the operating budget will:
  - Deliver higher quality scheduled transit service
  - Institute preventative maintenance programs & project planning for the Traffic, Pedestrian and Bicycle Programs
  - Fund needed safety, maintenance and support across the agency

Delivered Service – $828.2 million

Structural Deficit: $70 million

{Other Key Services: $20M
  Transit: $50 M

Basic Services; Declining Infrastructure
Higher Quality Services; Maintain What We Have
Reliable, Quality Services that Meet Growing Demand
Several Million in Operating Efficiencies Reinvested to Improve Service Delivery

- All Door Boarding
- Scheduling Efficiencies
- Rehabilitation & Replacement
- Dynamic Supervision
- Customer-focused initiatives
- Safety & Security Initiatives

Ongoing personnel & administrative efficiencies to reduce overtime
Vehicle Maintenance - Lifecycle of a Trolley Bus

Miles between In-Service Breakdowns

- **Recommended Maintenance Program**
- **Muni Maintenance, Rehabilitation, and Maintenance Program**

**New Bus!**

**Complete mid-life rehabilitation**

**Bus replaced on schedule at end of useful life**

**Bus breaks down in service every 5 days**

**6,000**

**500**
CURRENT LEVEL OF SERVICE

• Operating Structural Deficit
• Capital Structural Deficit & State of Good Repair
SFMTA Capital Programs

- Accessibility
- Bicycle
- Central Subway
- Facility
- Fleet
- Parking
- Pedestrian
- Information Technology/Communication

- Safety
- School
- Security
- Taxi
- Traffic Calming
- Traffic/Signals
- Transit Fixed Guideway
- Transit Optimization/Expansion
Total Current Value of SFMTA Assets = $13.4 B

- Overhead Wires, $3,993, 30%
- Track, $830, 6%
- Light Rail Vehicle, $1,025, 8%
- Other Systems & Vehicles, $760, 6%
- Facilities, $1,669, 12%
- Stations, $2,075, 15%
- Train Control & Comms, $661, 5%
- Parking & Traffic, $1,267, 9%
- Trolley Coach, $473, 4%
- Motor Coach, $635, 5%

$ millions
20-year Unconstrained Total Needs = $10.2 B

<table>
<thead>
<tr>
<th>Category</th>
<th>20-Year Need</th>
<th>State of Good Repair Backlog (as of 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead Wires</td>
<td>$1,866</td>
<td>$312</td>
</tr>
<tr>
<td>Stations</td>
<td>$1,174</td>
<td>$601</td>
</tr>
<tr>
<td>Track</td>
<td>$594</td>
<td>$131</td>
</tr>
<tr>
<td>Light Rail Vehicle</td>
<td>$1,144</td>
<td>$20</td>
</tr>
<tr>
<td>Motor Coach</td>
<td>$1,147</td>
<td>$21</td>
</tr>
<tr>
<td>Trolley Coach</td>
<td>$636</td>
<td>$106</td>
</tr>
<tr>
<td>Facilities</td>
<td>$1,024</td>
<td>$288</td>
</tr>
<tr>
<td>Train Control &amp; Communication</td>
<td>$967</td>
<td>$90</td>
</tr>
<tr>
<td>Parking &amp; Traffic</td>
<td>$1,162</td>
<td>$358</td>
</tr>
<tr>
<td>Other Systems &amp; Vehicles</td>
<td>$475</td>
<td>$264</td>
</tr>
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</table>

$ millions
Asset Maintenance Currently Funded at ~50%

• A total of $510M per year needed to maintain a State of Good Repair (SOGR) for all assets

• Less than half ($250M per year) of the needed funding is projected
  - Ideally: $260M additional funding per year for capital projects required to replace all assets based on scheduled life
  - Alternatively: $116M additional funding to maintain the backlog at current levels
NEAR TERM TRANSIT PROJECTS:
BUILDING A RAPID NETWORK

• Transit Effectiveness Project (TEP)
• Central Subway
• Van Ness Bus Rapid Transit
Existing Muni Transit Network
Congested, unreliable, under capacity

- Slow speeds and unreliable service shift some customers to driving, which increases congestion
- Existing transit network does not meet SF’s evolving employment and housing needs
Average Transit System Operating Speed

Traffic protection, route design, crowding, fleet types major factors of travel speed
Muni’s Challenges

- Missing 3-5% of scheduled service daily or 250-500 daily trips
- Systemwide on-time performance is 60%
- Multiple subfleets
- Aging fleet and infrastructure
- Increasing demand & development but limited funding
Service changes throughout the system provides more service where needed

**Systemwide Improvements**
- All door boarding
- Vehicle replacement & rehabilitation
- Real-time supervision
- Route performance audits
- Scheduling efficiencies

**Customer Amenities**
- Clipper
- New shelters
- NextMuni
- Customer First grants

**Transit Effectiveness Proposals**
- Establish Rapid Network
- Route restructuring and increased service on crowded routes
- Travel time reduction proposals on Rapid Network
Customer-First Grants (8X, N, 14/14L, 49)

$28M grants awarded for customer and travel time improvements to be delivered by 2014
Customer First Grant Features

- Colorized Transit Lanes
- Transit Signal Priority
- Stop Enhancements including NextMuni
- Vehicle Branding
- Transit-Only Lane Enforcement (TOLE) Cameras
Transit Effectiveness Project (TEP)

• First comprehensive review of Muni in a generation, aims to transform Muni service to better meet customer needs

• TEP objectives:
  – Improve service reliability
  – Reduce transit travel time
  – Improve customer experience
  – Deliver more efficient service

• Recommendations based on unprecedented data analysis and extensive community outreach
Customers want reliable service

Survey Results: How important is it to improve...

TEP Rider Survey
Spring 2007 (3000 responses)
TEP Service Improvements

• Increase total service up to 10% to better meet existing and near-term demand
• Redesign routes to better match travel patterns
• Modify or discontinuing low ridership routes or segments of routes
• Increase service frequency on busy routes
• Expand limited-stop service
TEP Vision for Muni Rapid Network

- Customer oriented & easy to use
- Easily connects communities & other modes
- Everyday part of the city’s way of life
Rapid & Frequent Routes

Rapid:
- J
- K
- L
- M
- N
- T
- 5L (new)
- 9L
- 14L
- 38L
- 49L (new)
- 71L (new)

Frequent:
- F
- 1
- 5
- 8X
- 9
- 14
- 22
- 28
- 30
- 38
Rapid Network - TEP Improvements

• Stop Consolidation
• Transit Stop Changes
• Transit Only Lanes
• Lane Modifications
Stop Consolidation

Transit Boarding Islands

Note: The above conceptual figure is not to scale and is for illustrative purposes only.
Transit Only Lanes

Importance of Lane Widths

Note: The above conceptual figure is not to scale and is for illustrative purposes only.
TEP Pilot - Transit Only Lane
J Church and 22 Fillmore

- One transit lane and one mixed traffic lane in each direction – no parking impacts
- Transit-only 24/7 (taxis allowed)
76X Marin Headlands Express

- Extension to Point Bonita Lighthouse
- Service south of Market discontinued

Transportation System

- Muni Rapid
- Bicycle
- Walking
- Vehicle Sharing
TEP Next Steps

• Continue near-term reliability initiatives
• Implement Church Street red lane pilot in Spring 2013
• Draft EIR expected in Summer 2013 and Final EIR in January 2014
• Begin dialogue about service as part of FY2015 budget discussions Fall 2013
• Implement Customer First projects by July 2014
NEAR TERM TRANSIT PROJECTS: BUILDING A RAPID NETWORK

- Transit Effectiveness Project (TEP)
- Central Subway
- Van Ness Bus Rapid Transit
T–Third Phase 2: Central Subway
Opens in 2019; $1.578B, Fully Funded
Projected Improvements in Operations:

• **Service Capacity:**
  – By 2030, T Third line projected to have 65,000 customers per day; 35,000 projected daily boardings in the Central Subway segment

• **Service Efficiencies:**
  – Reduce the 20-minute peak-hour trip from Stockton & Washington to 4th & King to less than 8 minutes
  – Connects to regional transit hubs

• **Operational Costs:**
  – Increase the overall operating budget by $1.76 million; less than 0.25 percent
  – By 2030, the cost of operating the subway is projected to be $6.89 million
NEAR TERM TRANSIT PROJECTS

- Transit Effectiveness Project (TEP)
- Central Subway
- Van Ness Bus Rapid Transit
Van Ness Bus Rapid Transit

Opens in 2018

- Dedicated bus lane
- All door, level boarding
- Pedestrian safety enhancements
- Transit Signal Priority
- Traffic Signal Optimization

Source: San Francisco County Transportation Authority
Projected Improvements in Operations:

• **Service Capacity:**
  – Increased transit ridership on Muni 47 and 49 lines by up to 35%

• **Service Efficiencies:**
  – Reduced transit travel time by as much as 33%
  – Routes 47 and 49 will be as much as 50% more reliable
  – Decrease in delays of more than 40%

• **Operational Savings:**
  – Reduced Muni operating costs of up to 30% for Van Ness Avenue service
NEAR TERM BICYCLE STRATEGY: UPGRADING & CLOSING GAPS
Bicycling in San Francisco

- Cost effective mode that is growing rapidly
- Network is fragmented, not legible and perceived as unsafe by new users
- Transit and bicycling synergies that increase public transit's peak-period performance
- 15.7 miles (7%) of the network has the facilities that meet the 8 to 80 principle.
Key Travel Patterns
Emerging Bicycle Core Area

Bicycle Commute Mode Share (2010)

- **Hayes Valley**: +275%
- **Civic Center**: +250%
- **Mission**: +113%
- **Inner Richmond**: +157%
- **Inner Sunset**: +200%
- **Outer Mission/Bernal**: +175%

**2010 Commute Mode Share**

- **0% - 1%**
- **1% - 4.9%**
- **5% - 9.9%**
- **10% - 14.9%**
- **≥15%**

Areas with commute mode share ≥ 3.5% (city average)

Destination Land Uses

- **LOW Employment Density**
- **HIGH Neighborhood Commercial**

**CITYWIDE**
- Potential 8-10% mode share by 2020

**CORE BICYCLE AREA**
- Potential 20% mode share by 2020
Bicycle Network Toolkit
Example of Upgrade Analysis
System Comfort & Connectivity Upgrades

Example of upgrade at Valencia and Market Intersection
Bicycle Network Upgrade Needs

>26 Miles to remove hotspots in network
>130 Miles to upgrade remainder of network
Bicycle Strategy Scenarios

**Bicycle Plan Plus**
Complete Bicycle Plan-Pilot Bike Share
Install bicycle parking and upgrade 10 intersections

**Strategic Plan**
Upgrade 50 miles to premium facilities
12 new miles of premium bicycle facilities
Bicycle Parking, bike share system program
Upgrade 50 intersections, marketing/wayfinding

**System Build Out**
Upgrade 200 miles to premium facilities
35 new miles of premium bicycle facilities
Bicycle Parking, bike share system program
Upgrade 200 intersections, marketing/wayfinding
$170M Funding Gap to Meet Strategic Plan Investment Scenario

- **“Bicycle Plan Plus” Scenario:**
  - Total of $60 million through 2018

- **Strategic Plan Scenario:**
  - Total of $190 million through 2018

- **System Build-out Scenario:**
  - $500 million for infrastructure
  - $4 million/year for bicycle sharing
  - 10 million/year for support programs
Next Steps to Grow Bicycle Mode Share

• Complete Needs Assessment
• Identify and prioritize upgrade projects for inclusion in the 5-Year Capital Improvement Program
• Identify funding plan for capital investments and maintenance needs
NEAR TERM PEDESTRIAN STRATEGY: IMPROVING SAFETY & WALKABILITY
Walking in San Francisco

One of the most walkable cities (city of short trips)

Walking is increasing as city changes form

Too many distracted people driving, walking

Vehicle to pedestrian collisions increasing
Pedestrian Strategy Background

Mayor’s Executive Directive 10-03 (Dec 2010)

- Reduce fatal and severe injuries by 25% by 2016 and by 50% by 2021 and increase walking trips
- Complete near term pedestrian safety and walkability action items and develop Pedestrian Strategy with mid and long term action items
Slowing Down Arterial Traffic is Key

Vehicle Speed & Risk of Serious injury

If hit by a vehicle going:

- 20 mph: 90% survives, 10% sustains fatal injuries
- 30 mph: 60% survives, 40% sustains fatal injuries
- 40 mph: 20% survives, 80% sustains fatal injuries
Arterial Traffic Calming Toolkit

1. Signal Timing to Control Auto Speeds
2. Narrow Lane Widths
3. Traffic Calming Devices (e.g. speed tables)
4. Sidewalk Extensions, Bulbouts, Parklets
5. On-Street Parking
6. Bicycle Paths to Mix Traffic
7. Trees & Landscaping Treatments
8. Buildings with Activated Storefronts
9. Speed Enforcement Cameras
10. Posted Speed Limit Signs

pedestrian scaled lighting
buffered bike lane
wider medians for landscaping bioswales
plazas & parklets
bike corrals
activated storefronts
Pedestrian Taskforce Major Findings

- Upgrade 44 miles of streets, 5 miles annually through 2021
- In the next 10 years: upgrade 13,000 curb ramps and re-open 2+ crosswalks per year
- Targeted enforcement of high-risk corridors and intersections
- Extra crossing time at 800 intersections, countdown signals at 184 intersections
Leverage Funds with Complete Streets Planning Process:
Overlay of 44 miles of High Priority Streets with City Projects

High Priority Streets (HPS) that overlap with Streetscape Program and Transit Projects, funded, includes pedestrian treatments—5 miles

HPS that overlap with Repaving Projects, funded but will require local/state/federal funds to include pedestrian treatments—3 miles

HPS that overlap with Transit Projects, partial funding identified, will require local/state/federal funds to complete and include pedestrian treatments—but would require additional funding to include pedestrian treatments—27 miles

Remaining HPS will require local/state/federal funds for design and implementation of pedestrian treatments, possibly with Traffic Calming—8.7 miles

Pedestrian Treatments Completed—0.4 miles

0.4 miles completed, 34.9 miles have some analysis, 8.7 miles have no planned analysis.
10-year Pedestrian Safety Investment Needs by Type

- **Legislation & Policy**: $500,000
- **Capital Plans & Programs**: $9,733,333
- **Education & Outreach**: $1,790,000
- **Enforcement**: $390,000
- **Infrastructure**: $49,159,400
- **Signals**: $4,150,000
- **Striping & Signage**: $1,830,000

*Up to $330 million shortfall to meet Pedestrian Safety Needs*
VEHICLE SHARING PARTNERSHIPS

- Muni Partners Program
- Bicycle Sharing
- Car Sharing
Virtuous Cycle of Transportation Demand Management

*Project Investment*

- investments in demand management and vehicle sharing programs
- investments in transit reliability and frequency programs
- investments in bicycling infrastructure, facilities & programs
- investments in walking infrastructure, facilities & programs

*Mode Shift Effect*

- Car/bike/scooter sharing, taxi demand grows
- More comfortable bicycle facilities = more peak period transit capacity
- More transit and bicycle trips = more walking = more community & economic development

*Integration is key to our transportation network’s success*
Muni Partners Program

Goal: Develop policies to integrate the private shuttles into transportation network

Pilot: Assess impacts of shuttles on Muni & safety for non-motorized street users

Findings: Decrease single occupancy vehicle trips & encourage walking & transit use

Next Steps: Partner with shuttle sponsors develop clear, operational guidelines
Bicycle Sharing Program

Bicycle Sharing is a membership-based system of short-term bicycle rental

Summer 2013 launch of the pilot: 1,000 in 100 stations in the Bay Area

Benefit: Increases accessibility to transit and relieves overburdened transit

Conducting suitability analysis for program expansion next year and beyond
Phase 1: August 2013

- Funding for 35 stations and 350 bikes available now
- Additional $1.3M shortfall for SF (capital & operations) to achieve 50 stations and 500 bikes
- Sponsorship and Grant Funds needed to fill funding gap
Vehicle Sharing is a membership-based system of short-term car rental.

SFMTA completed an on-street parking space pilot project.

On-street spaces make car sharing highly visible and easy to use.

Expanded pilot to evaluate solutions to policy and administrative issues.
<table>
<thead>
<tr>
<th>Transportation System</th>
<th>Muni Rapid</th>
<th>Bicycle</th>
<th>Walking</th>
<th>Vehicle Sharing</th>
</tr>
</thead>
</table>

IN SUMMARY
Transportation System Needs Investment...

• A well-functioning transportation system is foundational to the City’s health and economic vitality

• Today’s system is under-resourced for current and future needs, despite ongoing efficiency improvements

• We need to change the infrastructure to make it possible to move faster and more reliably

• We need to make it safer and easier for people to use other forms of transportation
...And Support

• We need the support of this group, stakeholders, and the public to help us fund and achieve meaningful progress

• We have the vision; we need help to make it a reality
LOOKING AHEAD
Bus Facilities Site Visit: April 26, 2013

- **8:00 AM** - Pick up at SFMTA Headquarters, 1 South Van Ness at Market St.
- **8:15 AM** - Woods Division tour – New buses, rehab buses, and old buses
- **9:15 AM** - Transport to Potrero Division via Islais Creek
- **9:20 AM** - Brief Stop in front of Islais Creek
- **9:45 AM** - Arrive at Potrero Division – New buses, rehab buses, and old buses
- **10:45 AM** - Transport back to 1 South Van Ness
- **11:00 AM** - Tour ends at 1 South Van Ness
Rail Facilities Site Visit: May 17, 2013

- **8:00 AM** - Pick up at SFMTA Headquarters, 1 South Van Ness at Market St.
- **8:15 AM** - Green Division and Cameron Beach Yard Tour
- **9:30 AM** - Transport to Muni Metro East
- **9:45 AM** - Muni Metro East Tour,
- **10:45 AM** - Transport back to 1 South Van Ness via Overhead Lines Division
- **11:15-11:30 AM** - Tour ends at 1 South Van Ness
- **12:00 PM** - Arrive at Cable Car for a facility tour (lunch TBD)
- **1:30 PM** - transport back to 1 SVN