Regional Transit Master Plan

TMP Technical Advisory Committee

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Regional Transit

1. Transit Service Standards in context

- Transit Master Plan (TMP) - a 30-year plan
- TMP Vision Statement
- TMP Objectives
  - A safe and secure transit system
  - An efficient and cost-effective transit system
  - An integrated transit system that is linked to transit-oriented land use policies
  - A fully accessible transit system that maximizes passenger convenience
  - Reduce the impact on the environment
  - Support the economy by improving access to opportunity areas by transit
- TMP Service Philosophy
  - "*Core high speed, high frequency, high capacity transit network serving the key demand corridors and destinations supported by a network of community and neighborhood shuttle and circulator services*"
- Transit Service Standards – provide RT with the tools to assess, monitor and target resources to the delivery of TMP outcomes

2. Developing the Transit Service Standards

- **Existing approach needs to expanded to link to TMP objectives**
- **Developing a new approach to fit with the TMP**
  - Service Standards – short- medium- and long-term
  - From lifeline to lifestyle - needs comprehensive approach
  - Service Standards need to link to integrated land use policies
  - Service Standards for all modes (Bus, HiBus, BRT, Streetcar, European Street Tram, LRT, Paratransit)
  - Three stage categories – transit-only (qualitative), transit-only (quantitative) and supporting analyses (working with partners)
- **The following four standards/guidelines are addressed in this presentation:**
  - Transit services standards by transit service and frequency levels
  - Lifeline transit service standards
  - Transit service productivity/performance measures
  - Bus stop/station spacing standards
- **The remaining three being developed are:**
  - Transit Oriented Development guidelines
  - Guidelines to help assess the socio-economic benefits of public transit
  - Transit opportunity guidelines

3. Transit Service Standards - Catchment

- Ease of access to transit services a key service measure
- Availability of sidewalk (lit) and directness of route need to be considered
- Population catchments model data:

Walk Catchment	2035 All Services			2035 High Frequency Services		
	Scenario A	Scenario B	Scenario C	Scenario A	Scenario B	Scenario C
5-minute	49%	46%	46%	2%	3%	27%
10-minute	66%	76%	77%	8%	9%	54%
15-minute	72%	84%	86%	14%	17%	70%

3. Transit Service Standards - Catchment (cont)

> **Proposed standards are based on Scenario B/C model data**

> **Existing and proposed standards:**

Walk Catchment	Existing Standards		Proposed TMP Standards	
	All Services	High Frequency	All Services	High Frequency
5-minute	-	-	50% (population) 65% (jobs)	25% (population) 50% (jobs)
10-minute	95% (population)	80% (population)	75% (population) 85% (jobs)	50% (population) 70% (jobs)
15-minute	-	-	90% (population) 90% (jobs)	70% (population) 80% (jobs)

3. Transit Service Standards - Frequency

Mode	PK Frequency	OP Frequency	ME Frequency	Night Service
Regional Rail	15-min	30-min	60-min	-
Light Rail / European Street Tram	5-min	10-min	15-min	30-min
Hi-Bus / BRT	5-min	10-min	15-min	30-min
Streetcar (if implemented 'Portland-style')	10-min	15-min	20-min	30-min
Community based Services	10-min	15-min	20-min	30-min

- Achievement of frequencies subject to TMP capital investment, increased operating costs, and implementation of complementary TDM measures
- Achievement of standards subject to detailed project design

3. Transit Service Standards – Travel Time Competitiveness

> **Standards set for transit travel time/speed as a function of comparable (corridor) vehicle travel times/speeds**

Mode	Multiple of Corridor Vehicle Operating Speed
Regional Rail / Existing Light Rail	Runs fully segregated from traffic on railway ROW -- no specific standards
European Street Tram / BRT	1.3x
Hi-Bus	1.6x
Streetcar (if implemented 'Portland-style') and Community-based Services	2.0x

> **Services/Routes that do not make standards require review to see if, at selected locations, re-routing or more priority is needed**

4. Lifeline Transit Services Standards

- No existing standard - currently use 50%+ disadvantaged area for Title VI
- Lifeline service standards are not meant as a replacement to Title VI assessment/requirement
- RT service/investment would focus on areas of highest potential ridership (e.g. lower income households, students, seniors, high density areas)
- Access to Major Activity Centers (medical centers, educational facilities etc.) also to be assessed
- Lifeline standards to be used to identify and 'protect' underperforming routes from normal service review processes
- Disadvantaged areas
  - Determined by calculating an index of household income and car ownership levels
- Lifeline route defined as a service with a catchment of 50%+ disadvantaged households in line with current standard

5. Transit Service Productivity/Performance Measures

- **The following Productivity Indicators to be used:**
  - Farebox recovery
  - Passengers per revenue mile
  - Passengers per revenue hour
  - Passengers per seat mile
- **Targets for Productivity Indicators will include:**
  - Mode-based targets for 2035
  - Milestone targets (at 5-year intervals) from 2010 to 2035
- **Productivity Review Process to identify the 'problems'**
  - High costs - is the route too long (shorten/reroute) or is it too slow (transit priority needed)?
  - Low revenues linked to low ridership - are densities too low (GIS assessment of parallel corridors/streets) or are stops in the wrong place (poor access)?
  - Provision of Transit Service information
  - Other "external" factors

5. Transit Service Productivity/Performance Measures (cont)

> Threshold(s) needs to be set to determine when a service (or group of services) gets 'assessed'

> Not a justification to make decisions to amend or cut services - but a tool to the start the review process

> Services will then be subject to three level analysis (quantitative, qualitative and supporting analyses)

> Analysis will monitor trends and performance over time

> Services will be assessed against each other (individually) as well as by corridor, community and network-wide

6. Bus Stop/Station Spacing Standards

- Current standards do not provide for specific stop spacings by mode
- Existing and proposed standards:

Mode of Transit	Existing Minimums	Proposed Minimum	Proposed Maximum	Proposed Exceptions
Regional Rail	-	2 miles	20 miles	Major Interchanges
Light Rail	Ex-urb: 2 mi Suburb: 1 mi Urban: ½ mi Core: ¼ mi	½ mile	1½ miles	Major Interchanges, Attractors, Low Density Areas
European Street Tram	-	½ mile	1 mile	Major Interchanges, Attractors
Hi-Bus	-	¼ mile	½ mile	Major Interchanges, Attractors
Streetcar (if implemented 'Portland-style')	-	¼ mile	½ mile	Appropriate Station Locations
Community-Based Bus Services	Suburb: ¼ mi Urban: 880 ft Core: 440 ft	⅛ mile (500 ft)	¼ mile	Housing/ Employment Density

- Note: exceptions for Light/Regional Rail usually occur in Downtown core areas and have resulted in station spacing as low as ½ mile in some US cities
- Note: RT serves multiple city centers so station spacing should reflect inter- and intra-community service

Conclusions and Next Steps

- **Development of a more integrated approach to Service Standards that are linked to "whole trip" assessment**
  - Assess transit quantity (walk lengths, wait times, frequencies, journey times etc.)
  - Assess transit quality (customer satisfaction, transit stop/station facilities, quality of transit mode)
  - Supporting analyses working with Partners (availability of sidewalks, monitoring land use changes, traffic and congestion monitoring)
- **All of these are components of the TMP…but all have a cost to implement**

- **Next steps: develop the "delivery trajectory" – 5 year phasing of TMP components and related Service Standards to meet TMP Vision/Objectives and outputs/outcomes**