

# Memorandum

**To:** Committee for Mass Transportation

**Date:** April 30, 2003

**From:** Robert Chung, Deputy Director

**File No:**

**Ref:** Presentation of Transit Baseline Information and Methodology

**Issue:** Does the Committee concur with the source data, criteria, and proposed methodology that will be used to develop baseline transit information for the Committee's White Paper for Mass Transportation (see White Paper outline attached)? Should other types of data, sources, or performance criteria be considered? Should the methodology be revised?

**Discussion:** Commission staff has developed a DRAFT technical paper regarding transit by using the US Federal Transit Administration's (FTA) National Transit Database Program. The data collected by FTA represents the most current national information and captures the 5-year period between 1997 and 2001. All transit operators that benefit from federal funds must provide FTA with information regarding their financial and operating data. FTA requires the information to be provided in a uniform manner in terms of categories and definition of terms. The resulting FTA database provides interested parties a way at looking at uniform information across the nation and for the State of California.

Commission staff is seeking Committee agreement on the category of data selected, the criteria selected for judging performance, and the proposed methodology. The information will be tailored to look generally at national information and to look specifically at California's 15 largest public transit operators. Staff intends to extract information regarding transit revenues, transit expenses, non-financial operating data, and performance indicators for efficiency (e.g., operating cost/revenue vehicle hour) and effectiveness (e.g., farebox ratios). The selected categories of data will provide information on a single operator over time, comparable operators over selected time frames, and in terms of size and or geography. The different transit modes will also be broken out. Rail transit information will be provided at a subsequent meeting.

The proposed methodology will be to use the performance criteria selected to extract the information from FTA's National Transit Database Program for the 15 largest California public transit agencies, based on passenger trips. The resulting information will help provide the Committee a deeper understanding of transit operators' finances and operations in California.

**Action:** Provide guidance and approval of the direction that staff is proceeding in terms of the categories of data to be collected, the performance criteria selected, and the methodology to be used.

## Attachments

Transit White Paper Outline  
Draft Technical Paper

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## **What Data Source Will be Used to Complete the Commission's White Paper Report on Mass Transportation?**

### **FTA Data Tables**

The Data Tables for the 2001 National Transit Database (NTD) Report Year is one of three publications comprising the National Transit Database Program's Annual Report. It provides detailed summaries of financial and operating data submitted to the Federal Transit Administration (FTA) by the nation's mass transit agencies for the Report Year ending on or between January 1 and December 31, 2001. FTA administers the NTD Program through a professional services support contract under the guidance of FTA's Office of Oversight in the Office of Program Management. This is the 22nd Annual Report published.

Two additional publications complete the Annual Report:

1. The National Transit Summaries and Trends
2. The Transit Profiles presented in two volumes: The Top Thirty Agencies and Transit Profiles

For the 2001 Report Year, 601 transit agencies submitted data. Of that, 68 agencies received waivers from detailed reporting (Nine or Fewer Vehicles Waivers), and 2 were deleted because their report was incomplete. Thus, 534 agencies are included in the database. Agencies granted waivers are listed in Appendix B — Transit Agencies Receiving Nine or Fewer Vehicles Waivers; and deleted agencies are listed in Appendix C — Transit Agencies Deleted from 2001 Annual Publications. Appendix D lists agencies that had a mode/type of service deleted. Appendix E lists agencies by name with Appendix F listing agencies by UZA name.

49 USC 5335 requires the establishment of a uniform system of accounts and records, plus a reporting system for the collection and dissemination of public mass transportation financial and operating data by uniform categories. All applicants and direct beneficiaries

of Federal assistance under 49 USC 5307 are subject to the reporting system and the uniform system of accounts and records. The NTD Reporting System assists FTA in meeting the need for information on which to base planning for public transportation services and in making public-sector investment decisions at all levels of government. Definitions for transit terminology used in the 2001 NTD Annual Report publications may be found in the 2001 NTD Reporting Manual or on the NTD web site at <http://www.NTDProgram.com>.

## **National Transit Database 2001 Data Tables 1-2**

### **Data Tables Organization**

The Data Tables in Chapter 2 are organized into four major groups:

1. Transit revenues
2. Transit expenses
3. Non-financial operating data
4. Performance indicators.

### Chapter 1

#### Understanding and Using this Report

The first three groups of tables (transit revenues, expenses, and non-financial operating data) contain summaries of the data required by NTD. The fourth group displays performance indicators comprised of selected statistics derived from data in the first three groups. Typically, these indicators are computed as ratios, relating measures of input to measures of output (e.g., operating expenses per vehicle revenue hour), or measures of output to measures of service consumption (e.g., unlinked passenger trips per vehicle revenue hour).

## What Information do the FTA Data Tables Provide With Respect to Transit Operations in California?

### Data

- For all transit operators in the State with over 10 vehicles.
- By individual transit agencies.
- By individual transit modes.
- Statewide Averages – mode, number of vehicles operated in maximum service and population of urbanized area (Are Calculable).
- National Averages – mode, number of vehicles operated in maximum service and population of urbanized area.
- Over a five-year period (1997-2001).

### Expenses

- Operating - The expenses associated with the operation of the transit agency, and classified by function or activity and the goods and services purchased.
- Capital - The expenses related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than 1 year and an acquisition cost which equals the lesser of a) the capitalization level established by the government unit for financial statement purposes or b) \$5,000. Capital expenses do not include operating expenses that are eligible to use capital funds.

### Service

- Supplied - The amount of service scheduled or actually operated. Service supplied is measured in vehicles, miles and/or hours that were operated.
- Consumed - The amount of service actually used by passengers that is measured by unlinked passenger trips and passenger miles.

## Performance Measures

- Efficiency - a measure of the ratio of resource inputs to service outputs, (e.g. cost / vehicle-hour or vehicle-hour / employee), with the desired goal being to minimize input and maximize output.
- Effectiveness - a measure of how well goals are met by the provision of service (e.g. passengers / vehicle hour or revenue / expense).

## How Can FTA Data be Analyzed?

### Understanding Transit System Operations

- One operator over time
- Different “comparable” operators at one time.
- Different “comparable” operators over time.
  - ⇒ Comparability is the key issue!
    - Size
      - Urban area (population & physical)
      - Transit provider (vehicles & passenger trips)
    - Geography

### Modes

- MB – Bus
- TB – Trolley Bus
- CRT – Commuter Rail Transit
- LRT - Light Rail Transit
- HRT – Heavy Rail Transit

### Types of Service

- Directly Operated - Transportation service provided directly by a transit agency, using their employees to supply the necessary labor to operate the revenue vehicles. This includes instances where an agency’s employees provide purchased transportation services to the agency through a contractual agreement.
- Purchased - Transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. The provider is obligated in advance to operate public transportation services for a public transit agency or governmental unit for a specific monetary consideration. Purchased transportation does not include franchising, licensing operations, management services, cooperative agreements or private conventional bus service.

## **How Were the Transit Systems and Operators Selected?**

### Bus Transit Operations

- Approximately 68 directly operated and purchased bus systems in the State.
- Approximately 35 directly operated bus systems in the State.
- 15 largest directly operated systems in the state (including SF Muni's Trolley Bus) based on 2001 annual unlinked passenger trips. The 15 systems represent nearly 90% of all of Bus service consumed in California.

### Rail Transit Operations

- All local and regional rail transit systems are included.
  - Heavy Rail (HRT) – 2 systems
  - Light Rail (LRT) – 5 systems
  - Commuter Rail (CRT) – 5 systems

**Largest 15 Bus and Trolley Bus Transit Systems in California  
by Total Annual Unlinked Passenger Trips 2001**

FTA Data Tables		
		Transit Service Consumed (in Thousands)
Transit Agency Name	Mode	Annual Unlinked Passenger Trips
Los Angeles County Metro	MB	326,234.05
San Francisco Muni	MB	96,032.01
San Francisco Muni	TB	80,868.53
Alameda-Contra Costa TD	MB	70,572.83
Orange County Transp Auth	MB	57,328.33
Santa Clara Valley TA	MB	47,237.75
San Diego Transit Corp	MB	41,832.06
Long Beach Publ Transp	MB	25,838.36
Santa Monica Muni Bus	MB	22,816.72
Sacramento RTD	MB	19,115.29
OMNITRANS-Riverside	MB	15,208.16
Fresno Area Express	MB	13,178.50
San Mateo Cnty TransitDst	MB	12,330.11
N San Diego Cnty Transit	MB	10,905.92
GoldenGateBridge-Hwy&TD	MB	9,522.66

Annual Unlinked Passenger Trips (in Thousands)								
Total (DO) (MB & TB)	Top 15 (DO) (MB & TB)	Percentage of Total Bus Passengers (DO, MB & TB) carried by top 15	Total Purchased Bus Service Only (MBp)	Percentage of Total Bus Passengers (DO, MBp & TB) Carried by MBp	Percentage of Total Bus Passengers (DO, MB, MBp & TB) carried by top 15	Total Bus (DO, MBp & TB)	All Modes (Total)	Percentage of Total Passengers (All Modes) Carried by Bus (DO, MB, MBp & TB)
944,126.39	849,021.28	89.93%	95,798.00	9.21%	81.64%	1,039,924.38	1,113,867.2	93.36%

P = purchased

DO = Directly Operated

TB = Trolley Bus

MB = Bus

MBp = Purchased Bus Service

Source: FTA Data Tables Publication 2001 - Table #28

## Definitions

### Modes

#### *National Transit Database - Data Tables*

##### Mode Codes

MB Bus

DR Demand Response

LR Light Rail

##### Mode Codes

TB Trolleybus

CR Commuter Rail

HR Heavy Rail

#### Mode Descriptions –

**Bus (MB)** - A transit mode comprised of rubber tired passenger vehicles operating on fixed routes and schedules over roadways. Vehicles are powered by diesel, gasoline, battery or alternative fuel engines contained within the vehicle.

**Trolleybus (TB)** - A transit mode comprised of electric rubber tired passenger vehicles, manually steered and operating singly on city streets. Vehicles are propelled by a motor drawing current through overhead wires via trolleys, from a central power source not on board the vehicle.

**Demand Response (DR)** - A transit mode comprised of passenger cars, vans or class C buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand response operation is characterized by the following: a) the vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need; and, b) typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions

provided they are not on a scheduled fixed route basis: many origins – many destinations, many origins – 1 destination, 1 origin – many destinations and 1 origin – 1 destination.

**Commuter Rail (CR)** - A transit mode that is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas, or between urbanized areas and outlying areas. Such rail service, using either locomotive hauled or self propelled railroad passenger cars, is generally characterized by multi-trip tickets, specific station to station fares, railroad employment practices and usually only 1 or 2 stations in the central business district. It does not include heavy rail rapid transit or light rail/street car transit service. Inter city rail service is excluded, except for that portion of such service that is operated by or under contract with a public transit agency for predominantly commuter services. Predominantly commuter services means that for any given trip segment (i.e., distance between any 2 stations), more than 50% of the average daily ridership travels on the train at least 3 times a week. Only the predominantly commuter service portion of an inter-city route is eligible for inclusion when determining commuter rail route miles.

**Light Rail (LR)** - A transit mode that typically is an electric railway with a light volume traffic capacity compared to heavy rail. Light rail is characterized by passenger rail cars operating on fixed rails in shared or exclusive right-of-way, low or high platform loading, and vehicle power drawn from an overhead electric line via a trolley or a pantograph.

**Heavy Rail (HR)** - A transit mode that is an electric railway with the capacity for a heavy volume of traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating singly or in multi-car trains on fixed rails; separate rights-of-way from which all other vehicular and foot traffic are excluded; sophisticated signaling, and high platform loading.

## **Type of Service Descriptions –**

**Directly Operated (DO)** - Transportation service provided directly by a transit agency, using their employees to supply the necessary labor to operate the revenue vehicles. This includes instances where an agency's employees provide purchased transportation services to the agency through a contractual agreement.

**Purchased Transportation (PT)** - Transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. The provider is obligated in advance to operate public transportation services for a public transit agency or governmental unit for a specific monetary consideration. Purchased transportation does not include franchising, licensing operations, management services, cooperative agreements or private conventional bus service.

### **“Contractual Relationship”**

A contractual relationship exists only if the following criteria are met:

- The seller is obligated in advance of the time the service is furnished to provide the operations for which the operating statistics are being reported, for a specific monetary consideration.
- A written agreement exists that specifies the contractual relationship for the time period and the specific service generating the operating statistics included in the National Transit Database (NTD) report
- The written agreement is signed by authorized representatives of both the buyer and the seller, detailing the services to be provided and the nature and amount of the monetary consideration.