SAN FRANCISCO
URBAN PARTNERSHIP AGREEMENT

NATIONAL EVALUATION:
EXOGENOUS FACTORS TEST PLAN

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EXOGENOUS FACTORS TEST PLAN

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16. Abstract

This report presents the test plan for collecting and analyzing exogenous factors data for the San Francisco Urban Partnership Agreement (UPA) under the United States Department of Transportation (U.S. DOT) UPA Program. The San Francisco UPA projects focus on reducing congestion by employing strategies consisting of combinations of tolling, transit, telecommuting/travel demand management (TDM), and technology, also known as the 4 Ts. The national evaluation focuses on the San Francisco UPA projects that deal with parking pricing in downtown San Francisco and supporting technology and telecommuting/TDM projects. The SF*park* parking pricing pilot will implement variable pricing in on-street and garage parking in selected parking zones. Information on parking availability and price will be available by phone, websites, and variable message signs. Outreach events for alternate commute programs will inform the public about the parking pricing and information projects. The Exogenous Factors Test Plan is based on the San Francisco UPA National Evaluation Plan. This test plan describes the exogenous factors data sources, data availability, and possible risks associated with the data. The methods for analyzing the exogenous factors data are discussed. The schedule and responsibilities for collecting, analyzing, and reporting the data are presented.

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LIST OF ABBREVIATIONS

4Ts	Tolling, transit, telecommuting/travel demand management, and technology
CRD	Congestion Reduction Demonstration
CVO	Commercial vehicle operator
DOE	Department of Environment
FHWA	Federal Highway Administration
ISP	Information service provider
ITS	Intelligent transportation systems
MOE	Measure of effectiveness
MTC	Metropolitan Transportation Commission
PMZ	Parking management zone
SFCTA	San Francisco County Transportation Authority
SFMTA	San Francisco Municipal Transportation Agency
TDM	Travel demand management
UPA	Urban Partnership Agreement
U.S. DOT	United States Department of Transportation

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1.0 INTRODUCTION

This report presents the test plan for collecting and analyzing exogenous factors data for the national evaluation of the San Francisco Urban Partnership Agreement (UPA) under the United States Department of Transportation (U.S. DOT) UPA program. The San Francisco UPA is one of several large field deployments around the United States that are receiving U.S. DOT funding and which are intended to demonstrate congestion pricing and supporting strategies. The San Francisco UPA national evaluation will address the four primary U.S. DOT UPA evaluation questions shown in Table 1-1.

Table 1-1. U.S. DOT National Evaluation "Objective Questions"

Objective Question #1	How much was congestion reduced in the area impacted by the implementation of the tolling, transit, technology, and telecommuting strategies? It is anticipated that congestion reduction could be measured by one of the following measures, and will vary by site and implementation strategy: • reductions in vehicle trips made during peak/congested periods; • reductions in travel times during peak/congested periods; • reductions in congestion delay during peak/congested periods; and • reductions in the duration of congested periods.
Objective Question #2	What are the associated impacts of implementing the congestion reduction strategies? It is anticipated that impacts will vary by site and that the following measures may be used: • increases in facility throughput during peak/congested periods; • increases in transit ridership during peak/congested periods; • modal shifts to transit and carpools/vanpools; • traveler behavior change (e.g., shifts in time of travel, mode, route, destination, or forgoing trips); • operational impacts on parallel systems/routes; • equity impacts; • environmental impacts; • impacts on goods movement; and • effects on businesses.
Objective Question #3	What are the non-technical success factors with respect to the impacts of outreach, political and community support, and institutional arrangements implemented to manage and guide the implementation?
Objective Question #4	What are the overall costs and benefits of the deployed set of strategies?

The questions shown in Table 1-1 will be addressed by carrying out the following ten "evaluation analyses" described in the San Francisco UPA National Evaluation Plan: congestion, pricing, telecommuting/travel demand management (TDM), technology, equity, environmental, goods movement, business impacts, non-technical success factors, and cost-benefit. Each of these 10 analyses relies upon various evaluation measures of effectiveness.

"Test plans" are the evaluation planning documents that describe how specific data will be collected and processed to yield the evaluation measures of effectiveness required for the various analyses. Whereas evaluation analyses are categorized according to related evaluation questions

or types of impacts, for example all equity-related impacts are addressed in the equity analysis, test plans are categorized according to common data types or sources. For example, the Traffic System Data Test Plan collects and processes all of the traffic data required for the national evaluation. In addition to this Exogenous Factors Test Plan, the other nine test plans focus on the following types of data: traffic, parking, transit, telecommuting/TDM, traveler information, surveys and interviews, environmental, content analysis, and cost benefit analysis.

The relationship between test plans and evaluation analyses is discussed in Section 1.2. In short, analyses describe the evaluation questions and hypotheses to be investigated and the test plans describe how the data and measures of effectiveness needed to support the evaluation will be collected and processed. Most test plans collect data and provide measures of effectiveness that will be used in multiple analyses and most analyses rely upon data and measures developed through several different test plans.

The remainder of this introduction chapter identifies the San Francisco UPA deployments and elaborates on the relationship between test plans and evaluation analyses. The remainder of the report is divided into three sections. Chapter 2.0 presents the data sources, data availability, and risks associated with the exogenous factors data collected through this test plan. Chapter 3.0 discusses how all of the various exogenous factors data will be analyzed and used in the national evaluation. Chapter 4.0 presents the schedule and responsibilities for collecting and analyzing the exogenous factors data.

1.1 The San Francisco UPA

San Francisco was selected by the U.S. DOT as an Urban Partner to implement projects aimed at reducing congestion based on four complementary strategies known as the 4Ts: tolling, transit, telecommuting/TDM, and technology. Under contract to the U.S. DOT, a national evaluation team led by Battelle is assessing the impacts of the projects in a comprehensive and systematic manner in San Francisco and other sites. The national evaluation will generate information and produce technology transfer materials to support deployment of the strategies in other metropolitan areas. The national evaluation will also generate findings for use in future Federal policy and program development related to mobility, congestion, and facility pricing.

The San Francisco local UPA partners for the national evaluation consist of three public agencies. Two of the partners represent the City of San Francisco--the San Francisco County Transportation Authority (SFCTA) and the San Francisco Municipal Transportation Agency (SFMTA). The third partner is the Metropolitan Transportation Commission (MTC), the metropolitan planning organization for the Bay Area.

The San Francisco projects are focused on reducing traffic congestion related to parking in downtown San Francisco. Intelligent transportation systems (ITS) technologies underlie many of the San Francisco UPA projects, including those utilizing parking sensors and real-time parking

information. The San Francisco UPA projects that will be evaluated[1] are described briefly below.

SF*park* Variable Pricing. SF*park* is the name given to the parking pricing system to be implemented by SFMTA. The primary goal of SF*park* is to use intelligent parking management technology and techniques, in particular demand-responsive pricing, to manage the on-street and off-street parking supply and demand. SFMTA expects this approach to increase parking availability, reduce the number and duration of vehicle trips and reduce double parking and, thereby, reduce congestion. The parking technologies to be tested include networked parking meters, parking occupancy sensors, and parking information systems. Pricing policies may change over the course of the evaluation period, as SF*park* managers adjust rates in response to demand. Some extensions in times of day/week that meters are operable are also possible pending SFMTA Board actions.

The pilot areas for SF*park* are highlighted in red (or dark lines) in Figure 1-1. The new system will consist of approximately 6,000 metered on-street parking spaces (about one-quarter of the city's total supply) and 12,250 parking spaces in fourteen city-operated garages and one lot. Control areas, highlighted in yellow (or light lines) in Figure 1-1, will be equipped with traffic sensors for monitoring use of the parking supply where variable pricing is not implemented.

To assist travelers in making choices about parking pre-trip and en-route, SFMTA will disseminate parking information in various ways. Strategically placed variable message signs[2] will show parking availability in city-operated garages, and parking availability and pricing information will also be displayed on SFMTA's website and by text messaging to mobile devices.

511 Upgrades. The 511 phone and website in the San Francisco Bay Area, operated by MTC, is one of the most advanced in the country, including a variety of multi-modal information. However, at the present time, the parking information on 511 is limited to static information about park and ride lots and rail stations (on the web) and airport parking (on the phone). The planned upgrades will provide parking space availability and pricing information for selected parking facilities in downtown San Francisco by 511 phone and web and by information service providers (ISPs) in the region who receive a feed of 511 data from MTC. MTC will receive a real-time data feed of parking availability for parking facilities managed by SFMTA and pricing data for those SFMTA garages, lots, and on-street parking. The user interfaces on 511 phone and website will be enhanced to disseminate the parking information to 511 customers.

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[1] The Clipper[SM] electronic payment card (formerly known as TransLink[®]) that was to be piloted for parking payment at five SFMTA garages was removed from the national evaluation owing to uncertainty about when it would be deployed.

[2] The deployment of the variable message signs has been delayed to December 2011, placing them several months behind the other UPA projects. Rather than delay evaluation of the rest of the projects, the decision was made not to include them in the national evaluation.
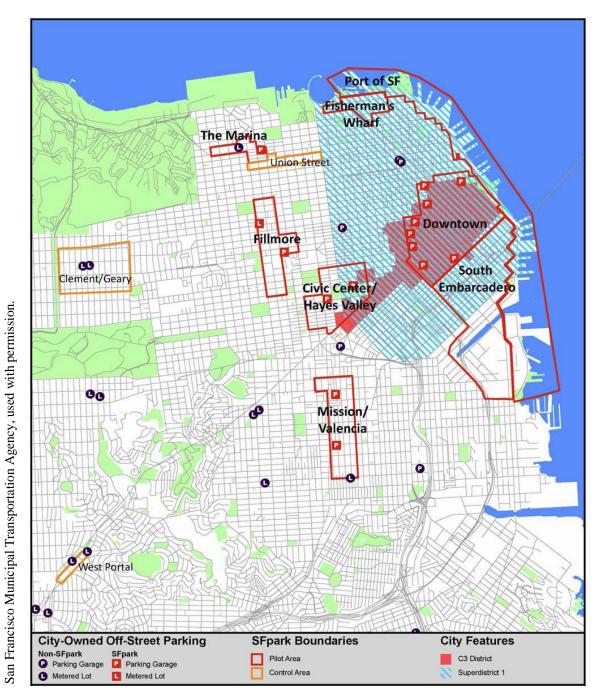
San Francisco Municipal Transportation Agency, used with permission.

Figure 1-1. SF*park* Pilot and Control Zones

Expansion of San Francisco Telecommuting and Alternate Commute Programs. Under the direction of the SFCTA, the telecommuting and alternate commute programs will be undertaken by the City of San Francisco's Department of the Environment (DOE). In support of the SF*park* and 511 enhancements, DOE and SFCTA plans include three activities: promotion of SF*park* at DOE outreach events and promotion of 511 enhancements at outreach events. Through the outreach efforts, downtown workers will be better informed about the UPA initiatives and can better use the parking, bike-sharing and information resources available to them.

Schedule for the San Francisco UPA Projects. The projects to be evaluated will go into operation between in mid-2011 and late 2011. SFMTA will be implementing variable pricing in SF*park* zones in mid-2011. Also in mid-2011, real-time parking information will become available via SFMTA's website and text messaging and the MTC 511 phone system. In late 2011 parking information will be available on the 511 website. As the SFMTA and MTC projects are deployed, SFCTA will conduct its expanded outreach and alternate commute program.

1.2 San Francisco UPA National Evaluation Plan and the Use of Exogenous Factors Data

Table 1-2 shows which of the various San Francisco UPA test plans will contribute data to each of the evaluation analyses. The "flow" between test plans is "one way" in the sense that test plans feed data and measures to the analyses rather than the reverse. The solid circles show where data from a given test plan constitutes a major input to an analysis; the open circles show where data from a given test plan constitutes a supporting input to an analysis. Data from the Exogenous Factors Test Plan will be used for all of the evaluation analyses.

Table 1-2. Relationship Among Test Plans and Evaluation Analysis

San Francisco UPA Test Plans	Congestion Analysis	Pricing Analysis	Telecommuting/ TDM Analysis	Technology Analysis	Equity Analysis	Environmental Analysis	Goods Movement Analysis	Business Impact Analysis	Non-Technical Success Factors Analysis	Cost Benefit Analysis
Traffic System Data Test Plan	●				○		○			○
Parking Data Test Plan		●		○	○	○	●	○		
Transit System Data Test Plan	○	●				○				○
Telecommuting/TDM Data Test Plan			●							
Traveler Information Data Test Plan				●						
Surveys and Interviews Test Plan	●	●	●	●	●	○		○	●	○
Environmental Data Test Plan					○	●				○
Content Analysis Test Plan									●	
Cost Benefit Analysis Test Plan										●
Exogenous Factors Test Plan	○	○	○	○	○	○	○	○	○	○

● — Major Input   ○ — Supporting Input

2.0   DATA SOURCES, AVAILABILITY, AND RISKS

This section provides specific information on the exogenous data including sources and collection frequency, the schedule and responsibility for this data collecting, and potential risk associated with obtaining this data.

2.1   Data Sources

Elements included in the Exogenous Factors Test Plan are gasoline prices, employment, general system impacts, and construction events affecting the UPA project implementation area, which consists primarily of the area included in the SF*park* project. In addition, control areas will be used to provide a comparison to changes in the UPA implementation areas. These data will be provided by SFMTA and will be made available to the national evaluation team primarily through the SFMTA data warehouse that will be accessible through the Internet. Table 2-1 summarizes the individual data elements that will be collected in the Exogenous Factors Test Plan.

Energy Information Administration Gasoline Prices. The Energy Information Administration of the U.S. DOE monitors gasoline prices by the nation, selected states, and regions, including San Francisco. Historical data on weekly retail gasoline prices is available from 1995 or 2000, depending on the grade, from the following website: http://tonto.eia.doe.gov/dnav/pet/pet_pri_gnd_dcus_nus_w.htm. This data will be downloaded manually on a monthly basis by SFMTA and the following information will provided in the data warehouse: date data collected and retail gasoline price by grade (regular, middle, and premium) and formulations. Examples of the data are provided in Table 2-2 and Figure 2-1.

Table 2-1. Exogenous Factors Data Summary

Data Element	Location	Data Collection Frequency	Historical Data	Baseline Data/Pre-Deployment Data	Post-Deployment Data	Data Source	Responsible Agency	Access Location
Gasoline Prices	San Francisco Bay Area Region	Monthly	2006 – Late 2009	Mid-2010 – Mid-2011	Mid-2011 – Mid-2012	Energy Information Administration	SFMTA	Internet "Data Warehouse" Site
Unemployment Rates	San Francisco-Oakland-Fremont area	Monthly	2006 – Late 2009	Mid-2010 – Mid-2011	Mid-2011 – Mid-2012	Bureau of Labor Statistics	SFMTA	Internet "Data Warehouse" Site
General/ System	San Francisco Bay Area Region	Upon Occurrence	Not Applicable	Mid-2010 – Mid-2011	Mid-2011 – Mid-2012	SFMTA	SFMTA	Manually-kept Log
Construction	SF*park* Pilot and Control Sites	Daily	Not Applicable	Mid-2010 – Mid-2011	Mid-2011 – Mid-2012	Street Closure Database	SFMTA	Internet "Data Warehouse" Site

**Table 2-2. San Francisco Weekly All Grades
All Formulations Retail Gasoline Prices**

Date	Price Per Gallon
Jun 05, 2000	$1.76
Jun 04, 2001	$2.03
Jun 03, 2002	$1.63
Jun 02, 2003	$1.80
Jun 07, 2004	$2.35
Jun 06, 2005	$2.39
Jun 05, 2006	$3.25
Jun 04, 2007	$3.49
Jun 02, 2008	$4.24
Jun 01, 2009	$2.77

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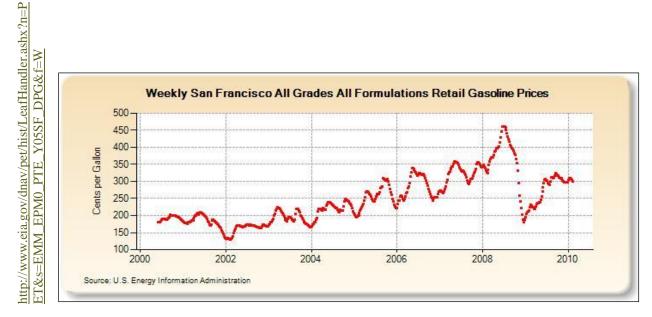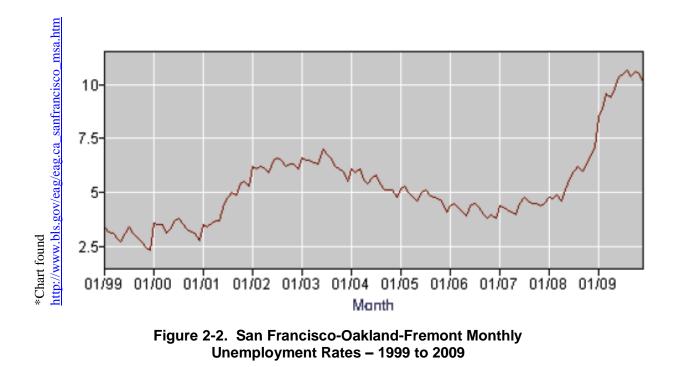http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=P ET&s=EMM_EPM0_PTE_Y05SF_DPG&f=W

Figure 2-1. San Francisco Historical Gas Price Chart – 2000 to 2009

Employment Factors. The Bureau of Labor Statistics tracks employment rates for the San Francisco-Oakland-Fremont metropolitan area. The information is posted on the following website: http://www.bls.gov/eag/eag.ca_sanfrancisco_msa.htm. The following data from this website will be manually downloaded monthly by the SFMTA and stored in the data warehouse: calendar year, time period (annual and monthly), total labor force, total employed, total unemployed, and unemployment rates. Data is currently available from 1999 to 2009 from the Bureau of Labor Statistics website. Figure 2-2 graphs monthly unemployment rates for this time period.

**Figure 2-2. San Francisco-Oakland-Fremont Monthly
Unemployment Rates – 1999 to 2009**

General or System Impacts. General or system impacts will be monitored throughout the pilot project, such as significant change in the regional roadway and transit systems. Such activity will be tracked throughout the pilot to assess any impacts on travel behavior that could result from major system changes. SFMTA will record general and system impact data qualitatively in a log for the duration of the project and will share this log with the national evaluation team as needed for analysis of exogenous factors.

Construction Events. In downtown areas, traffic patterns can be significantly impacted by on-roadway and off-roadway construction activities. Off-roadway construction sites frequently remove on-street parking to accommodate construction equipment and/or pedestrian movements. Construction activities can sometimes infringe on travel lanes and impede traffic flow. For evaluation purposes, it will be important for the national evaluation team to know when and where major roadway construction is occurring in the various parking management zones (PMZs) so that unusual or atypical changes in traffic patterns can be observed. SFMTA will track construction events for control and pilot areas. These events will be available through the SFMTA data warehouse. Street closure data will be recorded nightly by SFMTA and stored in the data warehouse. Table 2-3 shows the data elements provided for street closures in the data warehouse.

Control Areas. There are three SF*park* control areas that will be used to compare changes due to parking pricing in the seven pilot areas. The three control areas are Inner Richmond, West Portal, and Union Street. These areas are shown in Figure 1-1 in section 1.1. Most data collected in the pilot area will also be collected in the control areas. The exceptions are as follows: parking search, motorcycle, and shopper visitor survey data will be collected in the Inner Richmond and Union Street but not in West Portal and the disabled placard and double parking survey data will only be collected in Union Street. In addition, region-wide data on

transit ridership and traffic trends will also be collected as part of the Traffic and Transit System Data Test Plans.

Table 2-3. Street Closure Data by Type

Data
New Job Number
Date Record Entered into Street Closure Database
Customer
Permit ID
Indicates if Permit was Faxed
Range of Street Numbers (e.g., 400-500)
Street Name (e.g., Folsom)
Indicates if Closure is Set for Both Sides of Street
Number of Metered Spaces to be Closed
Date Closure Begins
Date Closure Ends
Time Closure Begins
Time Closure Ends
Linear Feet of Street Closure
Number of Days Street Closure Lasts (if less than 24 hours, field is blank)
Indicates if Street Closure Includes a Saturday
Indicates if Street Closure Includes a Sunday
Category of Closure (e.g., Utilities)
Additional Descriptive Comments (e.g., "parking sensor installation")

2.2   Data Availability

As Table 2-4 highlights, pre-deployment and post-deployment data are available for all exogenous factors data elements. Historical data, three years prior to the UPA deployments, is available for gasoline prices and unemployment rates, but such data is not needed for general/system and construction events. The SF*park* data warehouse will serve as a repository for the data elements in this test plan, and the data will be added to the warehouse in late 2011.

**Table 2-4. Historical, Pre-Deployment, and Post-Deployment
Exogenous Factors Data Availability**

Data Source	Historical Data	Pre-Deployment Data	Post-Deployment Data
Gasoline Prices	✔	✔	✔
Unemployment Rates	✔	✔	✔
General/System Impacts	Not Needed	✔	✔
Construction	Not Needed	✔	✔

2.3   Potential Risks

There do not appear to be any significant risks associated with obtaining information from the sources outlined previously. Potential issues may arise during the data collection process, however. Examples of possible concerns include delays in gathering data, inconsistency, and errors in the data. To address these potential problems, national evaluation team members will work with partnership agency staff to initiate the data request early in the evaluation process and follow up with any specific questions.

3.0   DATA ANALYSIS

The overall approach to addressing exogenous factors in the national evaluation consists of the following six strategies:

1. **Control Group.** Utilizing a sample location as a "control group," where UPA treatments, such as pricing, will not be applied during the evaluation period, and, therefore, assumed to be mostly or entirely unaffected by the UPA projects.

2. **Traveler Surveys.** Surveying travelers regarding the influence of the UPA projects and exogenous factors on their pre- vs. post-deployment travel behavior.

3. **Isolation of Non-Typical Travel Condition Data.** Identifying the specific time periods and locations within the evaluation area where construction, traffic incidents, special events and/or adverse weather conditions may have significantly influenced evaluation measures of effectiveness (MOEs) (e.g., traffic volumes, transit ridership) and eliminating and/or separately analyzing evaluation data associated with those locations and periods.

4. **Non-UPA Transportation System Changes.** Documenting non-UPA related transportation projects or policies such as regional transit fare increases throughout the evaluation period.

5. **Economic Conditions.** Document changes in employment levels and gasoline prices throughout the evaluation period.

6. **Historic Transportation Data.** Document the long-term trends (three to five years before UPA deployment) in key evaluation MOEs such as traffic volumes and transit ridership within the expected UPA impact area.

This overall approach to exogenous factors will be adapted to the San Francisco UPA evaluation. For example, adverse weather conditions are unlikely to be a factor in San Francisco compared to other UPA or Congestion Reduction Demonstration (CRD) sites, but construction in downtown San Francisco could have a major impact on travel in some parking zones.

Within each of the ten evaluation analysis areas identified earlier in Table 1-2, examination of the potential role that exogenous factors play on the observed data will be integrated into the analysis. Exogenous factor data collected in this test plan and in other test plans (e.g., the Survey and Interview, the Traffic System Data, and the Transit System Data Test Plans) may reveal non-UPA related transportation system changes such as transit fare increases or travelers' decisions about parking unrelated to pricing from the visitor/shopper survey that can help explain the observed MOEs. Thus, information on the exogenous factors will assist in identifying elements that may influence and explain changes in parking availability, travel patterns, traffic conditions, and modal changes that are not due to the UPA strategies by themselves. Examples of the types of questions which may be examined are highlighted below.

- Were there significant changes in unemployment rates and how might these changes have influenced performance of the San Francisco UPA projects?

- Were there significant changes in gasoline prices and how might these changes have influenced performance of the San Francisco UPA projects?

- Were there significant changes in parking supply in the pilot and control areas and how might these changes have influenced performance of the San Francisco UPA projects?

- Were there any major transportation system changes in the region, such as major transit price increases, and how might these changes have influenced performance of the San Francisco UPA projects?

Standard analysis techniques, such as trend lines, will be used to compare exogenous factors with data from other analyses. As needed, statistical models, such as structural equations and time series, will be used to control for the effects of one or more exogenous factors in the analyses.

4.0   SCHEDULE AND RESPONSIBILITY

The data collection schedule for exogenous factors is based on the overall San Francisco UPA project schedule. As noted in section 2.2, exogenous factors data will be added to the warehouse in late 2011. Thereafter, it is expected that SFMTA will update the data in the warehouse on a regular basis as new data become come available. The national evaluation team will have access to the data in the warehouse to query the system for reports and expects to examine the data on a quarterly basis.

SFMTA is responsible for collecting and storing the exogenous factors data in the data warehouse, with the exception of the general or system data which will be collected manually as a log of events by SFMTA. The national evaluation team is responsible for the analysis and reporting of the exogenous factors data in conjunction with data collected in other test plans.

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APPENDIX A – COMPILATION OF HYPOTHESIS/QUESTIONS FROM THE SAN FRANCISCO UPA NATIONAL EVALUATION PLAN

Evaluation Analysis	Hypothesis/ Question Number	Hypothesis/Question
Congestion	SFCong-1	The deployment of SF*park* and the 511 improvements will reduce traffic congestion on selected travel routes in the downtown area
	SFCong-2	Travelers will perceive that congestion has been reduced
Pricing	SFPricing-1	Parking pricing will increase parking availability
	SFPricing-2	Parking pricing will lead to reduced search time and variability
	SFPricing-3	Parking pricing will reduce double parking
	SFPricing-4	Parking pricing will shorten the duration of the average on-street parking session
	SFPricing-5	Parking pricing will improve reliability and speed of public transit
	SFPricing-6	Parking pricing will cause a shift to other routes, modes, and other parking garages
Telecommuting/ TDM	SFTele/TDM-1	TDM events will increase the demand for information about SF*park* and 511 enhancements
	SFTele/TDM-2	SF*park* and 511 enhancements will increase effectiveness of TDM program
	SFTele/TDM-3	Distribution of UPA-related information at events will influence parking program awareness and behavior change
Technology	SFTech-1	Implementing advance parking technology will improve agency ability to manage parking
	SFTech-2	Improving the dissemination of parking information via 511 phone, websites, and text messaging, will reduce parking search times

Evaluation Analysis	Hypothesis/ Question Number	Hypothesis/Question
Equity	SFEquity-1	What are the direct social effects (parking fees, travel times, adaptation costs) for various transportation system user groups?
	SFEquity-2	What is the spatial distribution of aggregate out-of-pocket and inconvenience costs, and travel-time and mobility benefits?
	SFEquity-3	Are there any differential impacts on certain socioeconomic groups?
	SFEquity-4	How does reinvestment of parking pricing revenues impact various transportation system users?
Environmental	SFEnv-1	SF*park* will improve air quality by reducing parking search times and shifting trips from car to transit
	SFEnv-2	The public will perceive an improvement in air quality resulting from SF*park*
	SFEnv-3	SF*park* will reduce fuel consumption by reducing parking search times and shifting trips from car to transit
Goods Movement	SFGoods-1	Commercial vehicle operator (CVO) double parking will decrease in the SF*park* areas.
	SFGoods-2	CVO double parking fines will decrease in the SF*park* areas.
	SFGoods-3	Parking availability, including loading and freight zones, will increase in the SF*park* areas.
	SFGoods-4	Travel times will decrease in the SF*park* areas for CVOs and other vehicles.
Business	SFBusiness-1	Sales will increase in the SF*park* areas.
	SFBusiness-2	Overall travel to access retail and similar businesses will increase in the SF*park* areas.

Evaluation Analysis	Hypothesis/ Question Number	Hypothesis/Question
Non-Technical	SFNonTech-1	What role did factors related to "people" play in the success of the deployment? People (sponsors, champions, policy entrepreneurs, neutral conveners)
	SFNonTech-2	What role did factors related to "process" play in the success of the deployment? Process (forums including stakeholder outreach, meetings, alignment of policy ideas with favorable politics, and agreement on nature of the problem)
	SFNonTech-3	What role did factors related to "structures" play in the success of the deployment? Structures (networks, connections and partnerships, concentration of power and decision-making authority, conflict-management mechanisms, communications strategies, supportive rules and procedures)
	SFNonTech-4	What role did factors related to "media" play in the success of the deployment? Media (media coverage, public education)
	SFNonTech-5	What role did factors related to "competencies" play in the success of the deployment? Competencies (cutting across the preceding areas: persuasion, getting grants, doing research, technical/technological competencies; ability to be policy entrepreneurs; knowing how to use markets)
	SFNonTech-6	Does the public support the UPA/CRD strategies as effective and appropriate ways to reduce congestion?
Cost Benefit	SFCBA-1	What is the net benefit (benefits minus costs) of the UPA/CRD strategies?

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