

FY 2006 OVERALL WORK PROGRAM

**Approved by the OMPO Policy Committee on
May 26, 2005**

FTA Section 5303 Metropolitan Planning Program HI-80-X014
FTA Section 5313(b) State Planning & Research Grant HI-80-X014
FHWA Project PL-052(28)

Prepared by

OAHU METROPOLITAN PLANNING ORGANIZATION

In Cooperation with
Its Participating Agencies

State Department of Transportation
State Department of Business, Economic Development, and Tourism
City and County Department of Transportation Services
City and County Department of Planning and Permitting

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GLOSSARY OF ABBREVIATIONS

Abbreviation	Definition
AVL	Automatic Vehicle Location
BMS	Bridge Management System
CAC	Citizen Advisory Committee (OMPO)
CFR	Code of Federal Regulations
CIP	Capital Improvement Programs
CMAQ	Congestion Mitigation and Air Quality
CMS	Congestion Management System
COA	Comprehensive Operations Analysis
DBE	Disadvantaged Business Enterprise
DBEDT	Department of Business, Economic Development, and Tourism (State)
DEIS	Draft Environmental Impact Statement
DOT	Department of Transportation (State)
DP	Development Plan
DPP	Department of Planning and Permitting (City)
DTS	Department of Transportation Services (City)
DUI	Driving Under the Influence
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJ	Environmental Justice
EPA	Environmental Protection Agency
E911	Enhanced 911
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDOT	Florida Department of Transportation
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FMS	Freeway Management System
FONSI	Finding of No Significant Impact

FTA	Federal Transit Administration
FY	Fiscal Year (July 1st through June 30th)
GIS	Geographical Information System
GISAT	Geographic Information Systems Analysis Tool
GPI	OMPO Guide to Public Involvement in the Metropolitan Transportation Planning Process
HNL	Honolulu International Airport
HOV	High Occupancy Vehicle
HPMS	Highway Performance Maintenance System
HRS	Hawaii Revised Statutes
HSS	Highway Safety Staff (DOT)
IMS	Intermodal Management System
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	Intelligent Transportation Systems
LPR	License Plate Readers
Local M	Local funds (City and/or State funds) used to match federal funds
Local S	Local funds (City and/or State funds) used to supplement work activity
LOTMA	Leeward Oahu Transportation Management Association
MCS	Motor Carrier Staff (DOT)
MIS	Major Investment Study
MPO	Metropolitan Planning Organization
NHS	National Highway System
NMS	Noise Monitoring System
OMB	Office of Management and Budget
OMPO	Oahu Metropolitan Planning Organization
ORTP	Oahu Regional Transportation Plan
OP	Office of Planning (State)
OTS	Oahu Transit Services, Inc. (City bus management contractor)
OWP	Overall Work Program
PBQD	Parsons, Brinckerhoff, Quade & Douglas, Inc.
PCTS	Primary Corridor Transportation Study
PIP	Public Involvement Plan

PL	Planning Funds (Federal Highway Administration)
PMS	Pavement Management System
PTMS	Public Transportation Management System
PUC	Primary Urban Center
ROW	Right-of-way
SASP	State Airport System Plan
SHD	State Highways Division (DOT)
SMA	Special Management Area
SMS	Highway Safety Management System
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program (FHWA)
T6/EJ	Title VI and Environmental Justice
TAC	Technical Advisory Committee (OMPO)
TAZ	Traffic Analysis Zone
TCSP	Transportation and Community and System Preservation Program
TDM	Transportation Demand Management
TEA21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TMC	Traffic Management Center
TMS	Traffic Monitoring System
TSM	Transportation Systems Management
US	United States (of America)
USC	United States Code
USDOT	United States Department of Transportation
WE	Work Element
WHA	Wildlife Hazard Assessments
3-C	Continuing, Cooperative, Comprehensive
§	Section

EXECUTIVE SUMMARY

The Overall Work Program (OWP) serves as the key management tool for monitoring State and City transportation planning activities on Oahu. The OWP defines project objectives and tasks and identifies budgetary and staff requirements needed to carry out the projects. In addressing current transportation issues and problems, the OWP responds to local planning requirements and priorities, and federal requirements. The process of developing the annual OWP reflects a closely coordinated effort among the Oahu Metropolitan Planning Organization (OMPO), the State Departments of Transportation (DOT) and Business, Economic Development, and Tourism (DBEDT), and the City and County of Honolulu Departments of Transportation Services (DTS) and Planning and Permitting (DPP).

Funding Summary

The fiscal year (FY) 2006 OWP (July 1, 2005 – June 30, 2006) covers 36 planning studies or work elements (WE) listed in Sections II and III with a total budget of \$16,071,071. All of these work elements are to receive funding assistance from the U.S. Department of Transportation (USDOT) through either the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA). Non-federal funds are provided by the State and City. Federal funds programmed for the FY 2006 work elements (found in Section II) total \$9,095,177. The remaining funding is from local matching sources totaling \$3,006,795.

The work elements in Section IV are funded entirely with funds that do not have to be identified in the OWP or with local sources. They are included for informational purposes, as the importance of these projects can influence and benefit transportation on Oahu.

Transportation Planning

Transportation planning for Oahu is an integral part of the overall planning process of the State and the City. The OWP reflects this relationship through the inclusion of locally funded programs, processes, and projects. The OWP is organized into five broad planning areas listed here and described below:

1. Hawaii State Plan (Category 101)
2. Statewide Transportation Planning (Category 102)
3. Comprehensive Planning and Coordination (Category 103)
4. Transportation (Category 200)
5. Coordination of the Planning Program (Category 300)

The 100 series of planning efforts focuses on overall planning – within the State, through the Hawaii State Plan (Category 101); and within the City, through its General Plan and the Development and Sustainable Community Plans (Category 103). It also includes the development of a statewide transportation plan to guide the efficient movement of people and goods (Category 102). These categories are presented for informational purposes only.

The 200 series is devoted to supporting transportation planning. From Safety (Subcategory 200) to Regional Transportation Monitoring and Analysis (Subcategory 201.0), Long-Range Planning (Subcategory 202.0) to Short-Range Planning (Subcategory 203.0), Air Transportation (Subcategory 205.0) to Maritime Transportation (Subcategory 206.0) – this series describes the work elements that comprise transportation planning efforts underway on Oahu. Specific work elements are developed to support this holistic approach in a comprehensive and intermodal fashion. As expected, some of these work elements are broad in scope – such as the development of the Transportation Improvement Program (WE 202.07-06). While others – such as the Simulation of Westbound Interstate H-1 Freeway (WE 201.33-04) – are executed by individual State and City departments and agencies, sometimes using only local funds.

The 300 series of the OWP, Coordination of the Planning Program, recognizes the coordination requirements of transportation planning as well as the importance of public participation within the planning process. The various work elements provide staff support for the OMPO Policy Committee, Technical Advisory Committee (TAC), and Citizen Advisory Committee (CAC), the fiscal services required for federal participation in OWP activities, and OMPO's affirmative action for disadvantaged business enterprises. All of these work elements are funded with current funds and are in Section II.

Work Element Highlights

Subcategory 201.0 generally reflects ongoing regional transportation monitoring and analysis activities. An annual effort under this category is identified in WE 201.10 Population Employment Monitoring and Analysis, which provides relevant data and statistical tables depicting current population estimates, employment, and other socioeconomic data. This work element is funded entirely with State funds and can be found in Section IV.

Subcategory 202.0 includes activities that support regional and long-range planning efforts. These efforts included the development of the three-year programming document – the Transportation Improvement Program. Also included is an update of the regional transportation plan (202.06-04). This required update will be a major undertaking using the resources of OMPO and all of its participating agencies. The work element will span two years.

This year, the City will begin a multimodal alternatives analysis of major transit improvements for the Primary Urban Corridor with the intention of producing a study report and supporting documents for an alternatives analysis and draft environmental impact statement needed to select a locally preferred transit alternative (WE 202.60-06). This work element can be found in Section II.

Studies identified in the Short-Range Transportation Systems Management (TSM) Category 203.0 strive to improve the efficiency of our transportation system. A number of studies for this category appear in Section III.

Many projects undertaken by OMPO and its participating agencies are multi-year activities and work will continue on several major planning efforts that were initiated in previous OWPs. Of interest, this year, will be a work element to study waterborne transit options (WE 206.20-06).

Public Participation

OMPO has always placed strong emphasis on public participation. Early involvement of a broad cross-section of the community is an essential element in planning Oahu's surface transportation system. Using the CAC as the foundation, input is solicited from various interest groups on documents and issues that are the responsibility of OMPO.

The CAC, with the help of OMPO's participating agencies, developed a Public Involvement Program that emphasizes early involvement of the community in the planning process. The Public Involvement Program was updated and renamed *OMPO Guide to Public Involvement in the Metropolitan Transportation Planning Process* (GPI). OMPO updates the GPI regularly, relying heavily on the CAC for input. The current update of the GPI was approved by the Policy Committee in October 2002.

An extensive public involvement process has been developed for the Oahu Regional Transportation Plan (ORTP) update to 2030. The Community Outreach Program (COP) provides the guidelines for a multi-pronged approach for obtaining public input to assist in the decision-making process. This approach includes the use of regional meetings, public opinion surveys, stakeholder interviews, and other outreach techniques described in the COP. The COP also provides for information dissemination to the public through various media, including newspaper print advertisements and the Internet.

A CAC COP Task Force was heavily involved in the development of the COP – meeting with the ORTP consultants and OMPO staff to provide input and discuss the COP elements. Currently, three elements of the COP have been implemented – the ORTP website, a transportation telephone survey, and a news bureau.

PLANNING PRIORITIES

The transportation goal for Oahu has been to develop and maintain our islandwide transportation system to ensure the efficient, safe, convenient, and economical movement of people and goods. Although air quality and other environmental concerns are very important to island residents and transportation planners, air quality issues do not drive Oahu's transportation planning process.¹ Rather, Oahu's transportation programs are more influenced by the need to provide increased mobility and congestion relief.

Oahu Regional Transportation Plan

The *Transportation for Oahu Plan 2025 (TOP 2025)*, endorsed by the OMPO Policy Committee in April 2001, identified a multipronged approach for providing for future travel demand. It acknowledged that there is no single solution that will solve the congestion problem given the limited resources and the diverse needs of the community. The approaches identified in the *TOP 2025* included highway and transit construction and improvements; and TSM and transportation demand management (TDM) strategies.

OMPO began efforts to update the *TOP 2025* regional transportation plan to 2030 in FY 2004. It is expected that the 2030 ORTP update will continue in FY 2006, with adoption of the updated plan anticipated in the spring of 2006. OMPO is committed to completing the update by April 2006.

Transportation Forecasting Models

A major OMPO planning priority has been the development of new regional travel forecasting models. Because the previous models lacked some features that OMPO felt were important, and there was a need to have a tool to more confidently evaluate proposed policies and programs, OMPO led a major effort to revise and update the models. The revised models were used in the *Primary Corridor Transportation Study (PCTS)* and the most recent ORTP. The forecasting tool, in conjunction with the congestion management system, will establish a strong planning foundation whereby transportation programs and projects can be evaluated and selected for funding and implementation.

Public Participation

Public participation has been a strong emphasis of OMPO since its inception. Using the CAC as the foundation for OMPO public involvement, input from various interest groups is encouraged for major plans generated through the transportation planning process. The GPI was approved by the Policy Committee in 2001. This document includes OMPO's public involvement program.

The CAC was a major contributor to the 2025 ORTP. A CAC Task Force was formed to help develop the COP, which is the public participation element for the upcoming 2030 ORTP. The COP outlines an extensive public involvement program that includes two transportation telephone surveys, a questionnaire, three regional meetings, four non-traditional events (e.g.,

¹Oahu has not been designated as either a non-attainment or maintenance area for transportation-related pollutants under the Clean Air Act Amendments of 1990.

handing out questionnaires at a football game), 30 stakeholder interviews, a news bureau (sends out press releases and monitors various media coverage), print advertisements, a dedicated website, and a final islandwide meeting.

Title VI and Environmental Justice (T6/EJ) is also an emphasis area for OMPO. OMPO evaluates each of its program areas using designated performance measures and a geographical information system analysis tool (GISAT). With the assistance of the DPP and a consultant, OMPO refined its methodology for designating EJ block groups and the accessibility and mobility performance measures. OMPO will apply the resulting methodology to its T6/EJ analysis in FY 2006.

Other Areas of Interest

Recognizing the need to squeeze the maximum efficiency out of Oahu's transportation system, limited right-of-ways, funding constraints, and the long lead-time associated in getting a major roadway or transit project built, Oahu has and will continue to actively pursue and implement TSM/TDM measures

Oahu Regional Intelligent Transportation System (ITS) Architecture

Oahu Metropolitan Planning Organization

With the consultation and cooperation of the City and State planning, transportation, and emergency response agencies, OMPO developed a regional architecture for Oahu in April 2003. As part of the *Oahu Regional ITS Architecture (ORITSA)*, OMPO has established an interagency agreement on interoperability, ITS standards, and routine operations – a by-product of which was the Signal Timing Operations Committee. The Signal Timing Operations Committee is comprised of City and State transportation representatives that meet monthly to discuss traffic signal operations.

OMPO maintains the ORITSA using the guidelines outlined in the *ORITSA Procedures and Responsibilities Report*. Part of this process includes the routine evaluation of proposed City and State projects for consistency with the ORITSA with every TIP and TIP non-administrative amendment.

City & County of Honolulu

Traffic Control Center

The City's Traffic Control Center (TCC) monitors Oahu's roadway conditions through the use of cameras (closed-circuit televisions (CCTV)) and controls Oahu's traffic signal systems. In 2002, the TCC Annex was completed, which serves as a centralized transportation communications hub having extensive broadband capacity. It provides the necessary space to house the expansion equipment for the next phases of ITS projects.

Concept of Operations

The City has embarked on preparation of a concept of operations for its arterial operations. Also included in this project is how the City, State, and other agencies involved in freeway and arterial management and emergency response will work together to enhance regional transportation operations. The City has recently completed the baseline assessment for its arterial operations; the project is anticipated to be completed in FY 2005.

CCTV and Traffic Signal Control

There are currently 145 color video cameras installed at various locations around Oahu. Traffic cameras are a prime and vital tool towards optimizing traffic signal timings, collecting traffic data, and providing traveler information. Most recent expansion has included cameras in the Kunia area. The City plans to expand its centralized computerized traffic control systems to Mililani and Wahiawa. Currently the City is upgrading its CCTV and traffic signal control infrastructure.

State of Hawaii

Freeway Management System

DOT has programmed funds to construct a freeway management system (FMS) using ITS technologies and interagency coordination. The FMS will expand the ITS systems currently found on the H-3 Freeway installation and will include the ITS technologies of vehicle detectors, CCTV, and dynamic message signs along the Moanalua, H-1, and H-2 Freeways. The FMS improvements will assist in monitoring and managing traffic operations and incidents.

Freeway Service Patrol

DOT has programmed funds to deploy freeway service patrols like those that have been successful in numerous U.S. jurisdictions. DOT will use the funds to procure services to provide minor assistance to motorists (e.g., flat tire repairs, fuel, rides/tows off of the freeway, etc.), and assist emergency response agencies with managing and clearing freeway incidents.

Management Systems

Federal transportation legislation requires metropolitan planning organizations to develop and implement Congestion Management Systems (CMS) as part of the metropolitan planning process (23 CFR 500). OMPO is responsible for Oahu's CMS. Therefore, OMPO developed a CMS Procedures and Responsibilities Report (PRR) in April 2001.

The PRR identifies a CMS Technical Committee that is responsible for evaluating and prioritizing CMS-related transportation projects that are being considered for inclusion in Oahu's TIP. The PRR also identifies the evaluation of implemented CMS-related projects that will have corridor, subarea, or regional impacts; are designed to affect travel patterns, behavior, and mode choice; or represent controversial actions.

The National Highway System (NHS) Designation Act 1995 eliminated the federal requirement for most of the management systems. However, transportation management areas (TMAs) (of which Oahu is one) are still required to have a congestion management system in place. Work on the CMS has been underway for a number of years.

Other Studies

Recognizing the need to squeeze the maximum efficiency out of Oahu's transportation system, limited right-of-ways, funding constraints, and the long lead-time associated in getting a major roadway or transit project built, Oahu has and will continue to actively pursue and implement TSM/TDM measures.

Work Element Highlights

Subcategory 201.0 generally reflects ongoing regional transportation monitoring and analysis activities. An annual effort under this category is identified in WE 201.10 Population Employment Monitoring and Analysis, which provides relevant data and statistical tables depicting current population estimates, employment, and other socioeconomic data. This work element is funded entirely with State funds and can be found in Section IV.

Subcategory 202.0 includes activities that support regional and long-range planning efforts. These efforts included the development of the three-year programming document – the Transportation Improvement Program. Also included is an update of the regional transportation plan (WE 202.06-04). This required update will be a major undertaking using the resources of OMPO and all of its participating agencies. The work element will span two years. Of interest, this year, will be a work element to study waterborne transit options (WE 206.20-06).

This year, the City will begin a multimodal alternatives analysis of major transit improvements for the Primary Urban Corridor with the intention of producing a study report and supporting documents for an alternatives analysis and draft environmental impact statement needed to select a locally preferred transit alternative (WE 202.60-06).

INTRODUCTION

The fiscal year (FY) 2006 OWP identifies transportation planning activities on Oahu programmed by OMPO and its participating agencies for FY 2006. It includes new and ongoing data collection and monitoring efforts, special studies, and support for the metropolitan transportation planning process. It serves as a management tool for monitoring State and City transportation planning activities.

Transportation planning activities using FHWA and FTA planning funds must be identified in this document. The OWP is then used as a support document for the application of these federal funds. Planning studies funded by other sources need not be identified in the OWP but may be included for informational purposes. For example, airport and harbor planning studies, which have been funded from dedicated funds and/or other federal funding sources, are only described in general terms under Subcategories 205.0 and 206.0, respectively.

The development of the OWP begins with the drafting of potential studies or work elements by OMPO, its participating agencies, and the public through input from the CAC. Agencies participating in this process for FY 2006 were the State DOT, State DBEDT, City DTS, and City DPP.

Work elements suggested by the public are forwarded to the appropriate State and City agencies for their consideration as to whether or not the work fits into their planning program and/or funding is available. If the agency determines that they will be able to do the work, a draft work element is submitted to OMPO for inclusion in the OWP.

Draft work elements reflecting the planning needs of each participating agency are submitted to OMPO for coordination. These work elements may respond to requests made by the public, State Legislature, City Council, or a federal agency; provide guidance for capital improvement projects; or be used to develop/promote transportation programs/policies.

OMPO coordinates the review of the draft work elements by staff members of the participating agencies, CAC, transportation management association, providers of private transportation services, TAC, federal agencies (FTA, FHWA, Federal Aviation Administration (FAA), Maritime Administration, and Environmental Protection Agency), and intergovernmental review. (The comments received during the public review process and OMPO's responses to the substantive comments are included in Appendix A.) The document is then submitted to the OMPO Policy Committee for its endorsement.

The OWP is organized to show which work elements are new or newly funded for the current year (Section II); which work elements were previously approved and are either not completed or have not started (Section III); and which work elements have been included in the OWP for informational purposes only (Section IV). The work elements in this final group are funded entirely with local and/or other funds that do not have to be identified in the OWP, but are included because of their potential relationship to funded work elements of OMPO's participating agencies.

All of the work element numbers include a suffix indicating the fiscal year in which the work element was funded. Work elements from previous OWPs have been approved and funding has been secured. During the review process, comments are directed to those work elements being proposed for the current year (those with the suffix "06").

This document describes the planning priorities of the metropolitan planning area; and the organizational and management structures established to carry out the transportation planning program, the technical work program, and budget tables.

Federal law requires that the metropolitan planning process provide for consideration of projects and strategies that will address planning factors. These factors provide a framework to evaluate Oahu's planning program. Studies and projects should be considered in light of how they address these factors. As listed in the Transportation Equity Act for the 21st Century (TEA21), these planning factors are:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety and security of the transportation system for motorized and non-motorized users.
3. Increase the accessibility and mobility options available to people and for freight.
4. Protect and enhance the environment, promote energy conservation, and improve quality of life.
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
6. Promote efficient system management and operation.
7. Emphasize the preservation of the existing transportation system.

Federal Planning Emphasis Areas

The FTA and FHWA identify Planning Emphasis Areas (PEAs) annually to promote priority themes for consideration, as appropriate, in metropolitan and statewide work programs proposed for FTA and FHWA funding. The PEAs for FY 2006 are:

- *Safety and Security in the Transportation Planning Process*: This is a national priority under TEA-21, and calls for transportation projects and strategies to "increase the safety and security of the transportation systems".
- *Integrated Planning and Environmental Processes*: TEA-21 mandated the elimination of Major Investment Study as a stand-alone requirement, while integrating the concept within the planning and project development/environmental review processes.

- *Consideration of Management and Operations within the Planning Processes:* FHWA and FTA wish to focus on the need to improve the way transportation systems are managed and operated.
- *State DOT Consultation with Non-Metropolitan Local Officials:* The federal planning regulations require that each State have a documented process(es) that implements consultation with non-metropolitan local officials in the statewide planning process and development of the statewide transportation improvement process (STIP). This documented process must be separate from the State's public involvement process.
- *Enhancing the Technical Capacity of Planning Processes:* FHWA and FTA encourage the local state and county transportation agencies to devote appropriate resources to enhance and maintain their technical capacity.
- *Coordination of Human Service Transportation.* In communities across the United States – whether urban, suburban, or rural – many citizens rely on transportation services to access work, medical services, schools, or community activities. *Human Service Transportation* refers to programs that provide for the basic mobility needs of certain groups.

A chart showing how the FY 2006 work elements relate to these PEAs can be found in Appendix B.

OMPO ORGANIZATION AND MANAGEMENT

OMPO Organization

Federal regulations require the establishment of a metropolitan planning organization (MPO) for urbanized areas with a population of 50,000 or more as the vehicle for developing a 3-C (continuing, cooperative, and comprehensive) transportation planning process. Although OMPO has been designated the metropolitan planning organization for the urbanized areas of Honolulu and Kailua-Kaneohe, OMPO's planning and programming activities involve the entire island of Oahu.

Under the TEA21, an urbanized area with a population greater than 200,000 is designated a Transportation Management Area (TMA). These areas, which can be expanded upon joint agreement between the Governor and MPO, are given additional planning responsibilities. In this context, the entire island of Oahu has been designated a TMA.

The Policy Committee is the decision-making body of OMPO. This thirteen-member body consists of three State senators including the chair of the Senate committee on transportation, three State representatives including the chair of the House committee on transportation, five City Council members, the DOT Director, and the DTS Director.

The TAC advises the Policy Committee on technical matters. The membership of the TAC consists of technical staff members representing the State and City transportation and planning departments (DOT, DTS, DPP, and DBEDT); and includes, serving as non-voting members, the Managing Director of the Hawaii Transportation Association, a faculty member of the University of Hawaii with background in transportation or city planning, and a staff representative each from the FHWA, FTA, and FAA. The Comprehensive Agreement, describing the specific roles and responsibilities of the TAC and the CAC, was signed by the Governor, City Council Chair, and OMPO Chair in 2001, and reflects the changes outlined in TEA21 and the OMPO Certification Review completed in April 2003.

The CAC is the foundation of OMPO's public involvement process. The CAC was established as a vehicle for citizens to provide public input to the Policy Committee on Oahu's transportation planning process. The CAC consists of representatives from community associations, neighborhood boards, professional associations, businesses, private transportation providers, a transportation management association, developers, and other special interest groups.

OWP Funding

The OWP is a product of the transportation planning process that responds to current transportation issues and problems. The following federal and local monies are used to fund the various studies identified in the OWP:

49USC Section 5303 and Section 5313(b) - These federal funds from FTA are used for planning purposes and often involve transit-related issues. The federal-local matching ratio is 80-20 and activities using these funds must be programmed in the OWP. The State DOT is the recipient of these monies but OMPO is the expending agency.

49USC Section 5307 - These federal funds from FTA can be used for planning, capital, and operating and maintenance costs of mass transit projects. If these monies are used for planning purposes, the federal-local matching ratio is 80-20 and the associated planning activities must be programmed in the OWP. The City DTS is the designated recipient of funds apportioned to the Honolulu and Kailua-Kaneohe urbanized areas.

23USC 104(f) FHWA-PL - These federal funds from the FHWA can only be used for planning purposes. They are used to address intermodal and transportation planning issues which generally have a highway orientation. The federal-local matching ratio is 80-20; and activities using these funds must be programmed in the OWP. The State DOT is the recipient of these monies, but OMPO is the expending agency. FHWA funds itemized in the *Estimated Cost by Funding Source* section of each work element refers to FHWA-PL money unless otherwise noted.

Other Federal Funds - There are two broad funding categories – National Highway System (NHS) and Surface Transportation Program (STP) – which may be used to accomplish metropolitan transportation planning. STP funds are a funding source in several OWP work elements. Activities using these funds must be programmed in the TIP, unless otherwise agreed to by the State and MPO. The planning study activities must appear in the OWP.

CMAQ - FHWA's Congestion Mitigation and Air Quality Improvement Program directs funds toward transportation projects in Clean Air Act non-attainment areas for ozone and carbon monoxide. Since the State of Hawaii is not considered either a non-attainment area or a maintenance area for either ozone or carbon monoxide, these funds may be used as if they were STP funds. Activities using these funds must be programmed in the TIP, unless otherwise agreed to by the State and MPO. The planning study activities must appear in the OWP.

Local - The State and the City provide the local matching funds for federally-assisted activities.

Some studies or work elements identified in the OWP may involve more than one agency. In these cases, a task force or technical resource committee is formed, and OMPO takes the responsibility of coordinating the work tasks with the affected agencies. The Policy Committee and TAC provide the policy and technical directions when needed. OMPO's Public Involvement Program insures that the public is involved early in the planning process. These studies, as well as studies conducted by individual agencies, are monitored by OMPO through review of selected work products and through quarterly progress reports submitted by OMPO's participating agencies.

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SECTION I

CATEGORIES AND SUBCATEGORIES

The 100 series of planning efforts focuses on overall planning within the State, through the Hawaii State Plan (Category 101), and the City, through its General Plan and the Development and Sustainable Community Plans (Category 103). It also includes the development of a statewide transportation plan to guide the efficient movement of people and goods (Category 102). These categories are presented for informational purposes only, as they are programmed separately.

The 200 series is devoted to supporting transportation planning. From Safety (Subcategory 200) to Regional Transportation Monitoring and Analysis (Subcategory 201.0), Long-Range Planning (Subcategory 202.0) to Short-Range Planning (Subcategory 203.0), Air Transportation (Subcategory 205.0) to Maritime Transportation (Subcategory 206.0) – this series describes the transportation planning efforts underway on Oahu. Specific work elements are developed to support this holistic approach in a comprehensive and intermodal fashion. As expected, some of these work elements are broad in scope, while others are executed by individual State and City departments and agencies – sometimes using only local funds.

The 300 series of the OWP, Coordination of the Planning Program, recognizes the coordination requirements of transportation planning as well as the importance of public participation within the planning process. The various work elements provide staff support for the OMPO Policy Committee, Technical Advisory Committee (TAC), and Citizen Advisory Committee (CAC), the fiscal services required for federal participation in OWP activities; and OMPO's affirmative action for disadvantaged business enterprises. All of these work elements are funded with current funds and are in Section II.

The work elements are categorized and sub-categorized according to their focus. This section contains a brief summary of the category and subcategory emphasis areas.

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CATEGORY 101: HAWAII STATE PLAN (CHAPTER 226, HAWAII REVISED STATUTES, AS AMENDED)

Objective(s):

To improve the State's planning process; increase effectiveness of public and private actions; improve coordination among different agencies and levels of government; provide for the wise use of Hawaii's resources; and guide the future development of the State.

To identify goals, policies, and priorities for the State; determine priorities for allocating limited resources; and maximize coordination and integration of major state and county activities.

Product(s):

1. Coordination with transportation agencies, among others, for resolution of conflicts.
2. Establishment of a statewide planning process to assure that transportation plans and actions conform to the Hawaii State Plan and statewide priorities, are consistent with related state and county plans and programs, and support desired directions for growth and development of the State.

Previous and Ongoing Related Work:

The Hawaii State Plan is a long-range comprehensive plan to guide the future development of the State. It was adopted in 1978 and has been periodically updated. Work tasks undertaken in the development and review of the Hawaii State Plan provide useful data related to transportation planning. These work tasks include technical studies, issue papers, statewide household surveys, and public meetings.

The Office of Planning (OP) assisted the State DOT in the revision of the State Transportation Functional Plan. Public informational meetings on the Functional Plans were held in July-August 1990. The Governor approved the Transportation Functional Plan on May 22, 1991.

The OP has been promoting Smart Growth principles. "Smart Growth" refers to integrated strategies and policies to manage growth and development in ways which improve the quality of life, economic vitality, and environmental health. A Smart Growth Conference was held on September 22, 2000 and was sponsored by the OP in collaboration with the American Planning Association, American Planning Association-Hawaii Chapter, and the State Land Use Commission.

Impact of Work Element:

These work tasks are designed to assure that transportation plans and actions are in conformance with statewide goals, objectives, policies, and priorities; are coordinated with other State plans and programs to avoid conflicts; and utilize limited public resources in an effective manner. They are also designed to promote greater awareness of "Smart Growth" principles.

Task(s):

1. Work with County planning departments to assure that County General Plans further define the Hawaii State Plan.

2. Monitor State programs, processes, and actions.
3. Identify and analyze conflicts; and work with other agencies to resolve conflicts.
4. Promote awareness, understanding, and use of “Smart Growth” principles in state and county plans and planning processes.

Source of Funds: State of Hawaii

Responsible Agencies: Office of Planning, Department of Business, Economic Development & Tourism

CATEGORY 102: STATEWIDE TRANSPORTATION PLANNING

Issues, Problems, and Opportunities:

Growth in transportation demand and increasing mobility requirements necessitates a need for innovative and improved transportation systems that are integrated on a statewide basis. To this end, a comprehensive, multi-modal statewide transportation planning process is required, involving all levels of government, stakeholders, and the public to cooperatively develop transportation plans.

Through the existing County-wide Transportation Planning Process for the neighbor islands and the continuing efforts of the OMPO on Oahu, the State will be able to address the development of a transportation system that provides for the safe, economic, efficient, and convenient movement of people and goods for Hawaii. The Hawaii Statewide Transportation Plan has been prepared to provide the framework to be used in planning our State's transportation system.

Goal Statements:

1. Achieve an integrated multi-modal transportation system that provides mobility and accessibility for people and goods.
2. Ensure the safety and security of the air, land, and water transportation systems.
3. Protect and enhance Hawaii's unique environment and improve the quality of life.
4. Support Hawaii's economic vitality.
5. Implement a statewide planning process that is comprehensive, cooperative, and continuing.

Objective(s):

1. To preserve, maintain, and improve the air, land, and water transportation systems' infrastructure, programs, and operations with regard to each community's unique characteristics, as well as promote alternative mode choices.
2. To enhance the safety of the various transportation systems and ensure the secure operation and use of the various modes and facilities.
3. To provide air, land, and water transportation systems that are environmentally compatible, sensitive to cultural, historic, and natural resources; and supportive of comprehensive land use policies and livability throughout the State.
4. To provide and operate a total transportation system that accommodates existing and emerging economic development and opportunities while complementing and preserving Hawaii's unique, natural environment as an asset for economic and quality of life issues.
5. To improve coordination and cooperation among all government, private sector, and public entities effected by and interested in transportation, with added emphasis on the involvement of the public and stakeholders; and to strive to provide adequate and dependable financial, manpower, and other necessary resources for Hawaii's transportation system.

Product(s):

Policies, plans, programs, and strategies that effectuate the goals and objectives contained in the Hawaii Statewide Transportation Plan and the application of the organization, structure, procedures under the statewide transportation planning process.

Previous and Ongoing Related Work:

DOT is required under Hawaii Revised Statutes (HRS) Chapters 270A and 226, as well as the federal TEA-21, to have a statewide transportation plan and maintain a statewide transportation planning process. A Hawaii Statewide Transportation Plan was prepared and published in September 2002 and approved by the Governor in October 2002.

Responsible Agencies: State Department of Transportation in cooperation with the Counties' planning and transportation agencies.

CATEGORY 103: COMPREHENSIVE PLANNING AND COORDINATION

Issues, Problems, and Opportunities:

The City Charter mandates the preparation of a General Plan and Development Plans for Oahu.

The General Plan is reviewed whenever the State issues new population projections for Oahu, and is reviewed and revised when the State projections are extended to a new time horizon. In addition, under the City Charter, the City DPP Director is required to do a comprehensive review of the General Plan at least once every 10 years. A revision of the General Plan population distribution policies, as a result of the most recent State 2025 projections, was adopted by the City Council on September 25, 2002.

A major revision of the Development Plans (DPs), based on a 1992 City Charter change, was completed in 2004. The revised plans are visionary, conceptual plans without the parcel specific detail of the preceding Development Plans. Eight new plans have been adopted: Ewa (1997), East Honolulu (1999), Koolauloa (1999), North Shore (2000), Waianae (2000), Koolaupoko (2000), Central Oahu (2002), and Primary Urban Center (PUC) (2004).

Under the revised DPs, land use and infrastructure policies from the DPs are used to evaluate the desirability or appropriateness of specific residential and economic projects when zone change applications and other land use permits are being reviewed. In addition, the policies from the new DPs provide guidance for transportation functional planning and for the assessment of individual transportation projects, proposed for identification on the Public Infrastructure Map and/or for inclusion in the Capital Improvements Program budget.

The revised DPs can be used, in conjunction with neighborhood-level plans, to evaluate specific development projects for their effect on public services and facilities and consistency with land use policies. Some of these neighborhood-level plans have been completed (and may need updating), some are currently in progress, and some must yet be initiated.

There is a periodic review every five years of each Development Plan to assess the vision and implementing policies of the Development Plan and propose any appropriate revisions. The five-year reviews of the Ewa Development Plan and the East Honolulu Sustainable Communities Plan are underway; and the reviews for Waianae, North Shore, Koolauloa, and Koolaupoko are expected to begin in 2005.

Goal Statements:

1. Ensure that General Plan objectives and policies promote the welfare of the community by accurately reflecting the changing needs, concerns, and priorities of the people of Oahu.
2. Ensure the efficient utilization of community resources in attaining General Plan objectives.

The subcategories on the following pages describe the objectives and individual work elements.

Source of Funds: City and County of Honolulu

Responsible Agencies: City Department of Planning and Permitting

SUBCATEGORY 103.1: COORDINATE PLANS

Objective(s):

Ensure that the plans for each agency are in accordance with the overall goals and objectives of the City and State, and meet Federal guidelines; and, where more than one agency is involved in a program, ensure that the plans are compatible.

Work Elements:

- 103.11 Coordinate preparation of comprehensive planning elements submitted to the OMPO as input to the OWP.

- 103.12 Review the Capital Improvements Program (CIP) and Executive Operating Budgets for conformance with the General Plan and the Development Plans. This action provides the necessary coordination of planning and budgeting activities. The City DPP Director prepares a report for the Mayor and City Council on the relationship of the budget to the General Plan and its supporting documents.

- 103.13 Review, evaluate, and assist in the preparation of agency programs and functional plans. This is an ongoing technical assistance activity which is intended to assist other City agencies in developing planning products and programs which are consistent with and implement the broad policies contained in the General Plan and Development Plans.

Source of Funds: City and County of Honolulu

Responsible Agencies: City Department of Planning and Permitting

SUBCATEGORY 103.2: POLICY DEVELOPMENT

Objective(s):

Develop, maintain, and improve the objectives and policies expressed in the General Plan.

Work Elements:

103.21 Identify and evaluate issues and problems which have a bearing on the objectives, policies, and programs of the City. The product can be either a proposal to revise the General Plan or Development Plans to incorporate improved objectives and policies, or a work program to undertake the necessary analysis leading to a proposal for improved objectives and policies. The product will have an impact on the content of the General Plan and Development Plans, and the nature of programs carried out by the City.

Source of Funds: City and County of Honolulu

Responsible Agencies: City Department of Planning and Permitting

SUBCATEGORY 103.3: DEVELOPMENT PLANS

Objective(s):

In accordance with the provisions of the City Charter, the City has adopted Development Plans (DPs) for eight areas of Oahu. The City has completed revising its DPs, as described below, to implement new City Charter provisions adopted in 1992. The revised DPs are conceptual schemes for implementing and accomplishing the objectives and policies of the General Plan throughout the island of Oahu.

The DPs implement the General Plan objectives and policies, and provide guidance for zoning and infrastructure functional plans – which, in turn, provide direction for capital and operating budget decisions. They also state the desirable sequence for development consistent with the orderly implementation of the General Plan.

The multi-year Development Plan Revision Program was intended to accomplish two purposes: (1) to change the form and content of the plans to carry out the Charter mandate to create conceptual plans providing a vision for the future development of each DP area, and (2) to review the plans' existing policy content in light of current regional and community problems and opportunities, and to propose policy changes and revisions as appropriate.

The new DPs include:

1. a discussion of each DP area's role in implementing the Oahu General Plan;
2. a vision statement describing the desired future development for the DP area;
3. land use and infrastructure policies needed to realize that vision; and
4. a chapter providing the implementation measures for the vision and policies.

The focus of the new DPs is on the text. Maps provided with the text and in an appendix are meant to illustrate the vision and policies of the revised DP, in contrast to the preceding DP maps which have taken on a de facto regulatory status comparable to zoning maps.

The new DPs offer a better framework for integrating land use and transportation in planning and analyzing possible future scenarios.

Work Elements:

- 1.1 Perform a five-year review of the DPs.
- 1.2 Prepare revised Ewa DP and Central Oahu Sustainable Community Plan (SCP).
 - The new Ewa DP was adopted August 1997. The 5-year review of the Ewa DP is in progress.
 - The Central Oahu SCP was adopted in December 2002.

- 1.3 Prepare revised PUC DP and East Honolulu SCP
- The revised PUC DP was adopted in June 2004.
 - The East Honolulu SCP was adopted in May 1999. The 5-year review is in progress.
- 1.4 Prepare Revised Waianae and North Shore SCPs.
- The North Shore SCP was adopted in April 2000.
 - The Waianae SCP was adopted in April 2000.
 - The 5-year review of both the North Shore and Waianae SCPs is scheduled to begin in 2005.
- 103.35 Prepare Revised Koolaupoko and Koolauloa SCPs.
- The Koolaupoko SCP was adopted in August 2000.
 - The Koolauloa SCP was adopted in December 1999. The five-year review of both the Koolaupoko and Koolauloa SCP is scheduled to begin in 2005.

Source of Funds: City and County of Honolulu

Responsible Agencies: City Department of Planning and Permitting

CATEGORY 200: TRANSPORTATION

Issues, Problems, and Opportunities:

Each workday, Honolulu motorists face high levels of congestion on the major travel corridors that converge into the downtown area. Growing pressures from housing, development, and limited rights-of-way have highlighted the limitations of our transportation system.

A regional transportation plan was endorsed by the Policy Committee in 2001. This plan received input from government agencies, elected officials, citizen groups, private transportation carriers, developers, and the public. The endorsed regional transportation plan identifies Oahu's transportation strategies through the year 2025. The strategies developed for the ORTP will be incorporated into the Statewide Transportation Plan. The five-year update is underway and is expected to be endorsed in the Spring of 2006.

TSM strategies are part of Honolulu's transportation plan. Honolulu has implemented measures such as one-way streets, conversion of shoulder lanes for additional roadway capacity, contraflow lanes, high-occupancy vehicle (HOV) lanes, parking restrictions, park-and-ride lots, and computerized traffic signal synchronization. The computerized traffic signal synchronization program has been expanded to include additional intersections. The City estimates the system saves the motoring public approximately \$3.5 million a year.

With respect to federal TEA21 regulations, congestion mitigation programs are required for the island of Oahu. These programs will incorporate TSM/TDM measures implemented and studied in the past.

Goal Statements:

Continue development of an efficient, effective, affordable transportation system that offers reasonable choices among public and private transportation modes for people and goods, and is consistent with social, economic, and environmental goals of the community.

SUBCATEGORY 200.0: SAFETY

Issues, Problems, and Opportunities:

The Highway Safety Improvement and Motor Carrier Safety Improvement Programs collect important information and data on highway facilities. These programs were created under Federal legislation and have their own monitoring and reporting system. The information available through these programs is valuable input for systems planning. Some of this data will be incorporated into the pavement, bridge, and safety management systems.

Goal Statements:

To coordinate safety planning with short- and long-range systems planning.

Source of Funds: State of Hawaii

Responsible Agencies: State Department of Transportation

SUBCATEGORY 201.0: REGIONAL TRANSPORTATION MONITORING AND ANALYSIS

Issues, Problems, and Opportunities:

Fiscal constraints have reinforced the current transportation emphasis on maximizing the use of existing facilities and more prudent planning for new facilities. Oahu needs a system for collecting and analyzing data on existing conditions to determine where they should concentrate short-term transportation efforts, to measure the effectiveness of implemented projects, and to evaluate and adjust the long-range component of the regional transportation plan. To develop a system that provides the needed information, a coordinated effort has been made to ensure that the information collected will be used.

The work elements in this subcategory either gather data or analyze existing data to give users the information they need to plan for a more efficient transportation system.

Monitoring and analysis of certain types of data will be used to measure how well regional transportation goals and objectives are being achieved. It will also evaluate both implemented and planned projects, and aid in identifying potential trouble areas where we can concentrate our transportation efforts.

Goal Statements:

To achieve an efficient, coordinated, and useful monitoring system to allow the analysis and evaluation of transportation plans and projects.

SUBCATEGORY 202.0: REGIONAL TRANSPORTATION FORECASTING AND LONG-RANGE PLANNING

Issues, Problems, and Opportunities:

Transportation forecasting is an integral component of the transportation planning process. For Oahu, long-range and, to some extent, short-range forecasting is accomplished through a series of transportation sub-models which require initial inputs from economic and land use models. The outputs of forecasting form the basis for evaluating alternative transportation plans and projects.

OMPO and its participating agencies have striven to improve their transportation forecasting capabilities. The trip generation and mode split models were updated in FYs 1982 and 1983; the traffic analysis zones (TAZ) system was increased from 159 to 190 zones; and the trip distribution model was reviewed. In FY 1994, OMPO undertook a major effort to develop a new set of forecasting models. This effort included revisions to the highway and transit networks, and the development of a finer TAZ system of 762 zones.

MINUTP, a microcomputer forecasting software package, is currently being used by OMPO and its participating agencies. The consultant calibrated and validated the models using data collected by DOT as part of the Highway Performance Maintenance System (HPMS). The training of staff and the integration of the models is a continuing effort.

A regional transportation plan was updated and approved by the OMPO Policy Committee in FY 2001. The regional transportation plan provides a guide for future transportation development. The Transportation Improvement Program (TIP) will follow the direction provided by the regional transportation plan. An update of the 2001 plan began in FY 2004.

In FY 1999, the City began work on a Major Investment Study/Draft Environmental Impact Statement (MIS/DEIS) to examine mobility alternatives for the City's primary transportation corridor from Ewa to East Honolulu (WE 202.20-99). The MIS/DEIS was released for public review, which ended on November 6, 2000. On November 29, 2000, the Honolulu City Council selected the Bus Rapid Transit (BRT) as the Locally Preferred Alternative (LPA). A Supplemental DEIS (SDEIS) was undertaken to address environmental impacts raised by the refinement of the LPA. The SDEIS was released for public review in March of 2002. A Final Environmental Impact Statement (FEIS), prepared pursuant to Chapter 343, Hawaii Revised Statutes, was accepted by Governor Benjamin Cayetano in November 2002. The Federal FEIS was accepted on July 25, 2003. The Record of Decision was made on October 23, 2003. The contracts for these studies are currently in the process of being closed.

This fiscal year the City will begin an a multimodal alternatives analysis of major transit improvements for the Primary Urban Corridor with the intention of producing a study report and supporting documents for an alternatives analysis and draft environmental impact statement needed to select a locally preferred transit alternative.

Goal Statements:

To develop a current and usable set of transportation tools and plans which will guide a balanced, efficient, and socially, economically, and environmentally acceptable transportation system for Oahu.

SUBCATEGORY 203.0: SHORT-RANGE TSM/TDM PLANNING

Issues, Problems, and Opportunities:

In order to bridge the gap between long-range solutions and the existing congestion, a series of short-range Transportation Systems Management and Transportation Demand Management (TSM/TDM) strategies are developed. TSM and TDM make sense, given the funding constraints and limited right-of-way in the PUC.

Short-range, low-cost options that maximize the efficient use of existing transportation facilities are the basis of TSM. These strategies have been promoted on Oahu for some time. Some of the more basic TSM strategies such as one-way streets and parking bans are now taken for granted in the downtown area. Other TSM strategies that have been implemented include park-and-ride lots, placing over 300 traffic signals under the control of a central computer, HOV lanes, and contraflow lanes.

TDM incorporates strategies that reduce demand for automobiles on the transportation system. These strategies include programs to promote telecommuting, flextime, and ridesharing.

These types of strategies can be quickly implemented and provide some relief until long-range solutions are realized.

Goal Statements:

Ensure the orderly and balanced development of short-range improvements to the ground transportation system that promote the effective and efficient movement of people and goods on Oahu.

SUBCATEGORY 205.0: AIR TRANSPORTATION

Issues, Problems, and Opportunities:

In calendar year 2004, the number of Statewide total passengers increased by 2.5% compared to 2003. Honolulu International Airport, the State's busiest airport, saw an increase of 3.2% in passengers. Aircraft operations at the five major airports, Honolulu, Kahului, Kona, Lihue and Hilo, increased by 8.9% over 2003. Aircraft operations at Honolulu International Airport were 6.2% higher than 2003. Statewide international passenger arrivals increased by 8.9%.

The trend for more direct flights to the neighbor islands continues, especially to Kahului, Kona and Lihue airports. Aloha and Hawaiian Airlines continued with reduced schedules for the interisland market. Consequently, the interisland passenger totals decreased in 2004.

Airport security measures mandated by the Transportation Security Administration (TSA) remain a priority. TSA required a 100% baggage screening by the end of 2003.

Previous and Ongoing Work :

A Noise Monitoring System (NMS) for Honolulu International Airport (HNL) was updated and expanded in 2003. The NMS provides a real time display of aircraft noise from fourteen (14) remote sites located from Ewa Beach to Diamond Head. Aircraft flight tracks will be provided by the Federal Aviation Administration (FAA) to correlate aircraft noise with actual flight events. This will help the Airports to better answer noise complaints from the public.

The first phase of the HNL Master Plan and FAA Part 150 Noise Compatibility Program was completed in 2004. The first phase consisted of inventory, aviation forecasts update and noise exposure maps. The second phase will commence in early 2005. The Lihue Airport Environmental Impact Statement will be amended to add to the scope of work and will be completed in 2005.

The Wildlife Hazard Assessments (WHA) are ongoing. The WHA for Lihue Airport will be completed in 2005. The WHA for Kahului, Kapalua and Lanai Airports will be completed in 2005. The assessments will be used to identify and evaluate wildlife hazards to the airports.

A Special Management Area (SMA) permit was submitted to the County of Maui in 2004. The SMA includes: fuel storage areas; an air cargo building; an alien species inspection building; helicopter expansion; lease lots; and rental car expansion. The SMA permit must be approved by the County of Maui before the Airports Division can initiate their construction projects.

The Hilo International Airport (ITO) Noise Monitoring System project will be initiated in 2004 and completed in 2005. The project will install up to six (6) noise monitoring stations at various locations in proximity to ITO. Aircraft noise will be monitored and recorded continuously 24-hours a day. The noise data will be transmitted to a computer work station at ITO and to a server at Honolulu International Airport for analysis.

Goal Statements :

Continue to update airport master plans, FAA Part 150 noise compatibility programs, environmental documents, and airport layout plans on a timely basis to meet current and forecast

demand by providing the necessary infrastructure for passenger and cargo service. The Airport Division will strive for a self-sustaining enterprise system with defined capital formation strategies. DOT will promote and solicit new markets and services for air service to Hawaii. DOT will take a more active role in tourism generation to increase net revenues. DOT will insure that the airport infrastructure is sufficient to meet passenger demand.

Source of Funds: Airport Special Funds, FAA grants-in-aid, and Passenger Facility Charges

Responsible Agencies: Hawaii Department of Transportation, Airports Division

SUBCATEGORY 206.0: MARITIME TRANSPORTATION

Issues, Problems, and Opportunities:

Hawaii, as an island state in the Pacific Basin, is dependent on shipping for sustenance. Approximately 80 percent of the goods consumed by the people of Hawaii must be imported, 98 percent of these by water. The availability and proximity of adequate harbor facilities and services for maritime, industrial, and commercial activities have a significant impact on the economy of the State and the well-being of its people.

To meet this need, ship operations are expected to increase as the general public's cargo requirements increase. Since 1960, increases in vessel size and cargo capacity have been in consonance with increases in volume of cargo – enabling shipping costs to remain relatively stable. But advancements in shipping technology also require improved harbor facilities to service ships and cargo. Inadequate facilities create delays, which in turn increase shipping costs. These increases are passed on to the consumer in the form of increased cost of goods. Future studies are needed to update required improvements for each commercial harbor and the various access roads that service vital State harbor cargo terminals on each island.

Previous and Ongoing Related Work:

A Statewide Harbor System Plan was developed several years ago as part of an integrated statewide transportation plan. In 1978, the Hawaii Cooperative Port Planning Study was initiated to define existing and potential cargo flows; estimate the capacity of the total transportation system of the State; prepare marketing and planning strategies; investigate an interisland ferry network; and plan and implement exchanges with the public, transportation consumer, and other agencies.

Phase A of this study consisted of an inventory of harbor facilities, cargo projects, and the development of a computerized capacity model for harbor facilities. Phase B consisted of updating the harbor system using the data and information from Phase A.

The long-range *1995 Master Plan for Honolulu Harbor* was approved by the Governor in 1976. This plan has served as the foundation for the modernization of Honolulu Harbor.

In 1986, the *1995 Master Plan for Honolulu Harbor* was updated to the year 2010 to meet the future needs. Discussion groups made up of users and potential users of the Honolulu Harbor facilities participated in setting the guidelines for future development.

On October 22, 1986, the Maritime Affairs Committee of the Hawaii Chamber of Commerce unanimously endorsed the *2010 Master Plan for Honolulu Harbor* as a long-range guide. Governor George R. Ariyoshi approved the plan on October 30, 1986.

In 1988, the Office of State Planning – in cooperation with maritime, business, and community groups and Federal, State, and County agencies – undertook preparation of a comprehensive long-range master plan and development program for the Honolulu waterfront. The *Honolulu Waterfront Master Plan*, completed in October of 1989, was intended to guide the future development of lands and near-shore waters makai of Nimitz Highway and Ala Moana Boulevard from the Ala Wai Yacht Harbor to Honolulu International Airport. A primary goal of

the master plan was to increase public access to the waterfront, and meet the recreational, cultural, and economic needs of Honolulu's growing population, while at the same time providing sufficient space and facilities to meet long-range harbor and maritime needs. The master plan proposed a series of improvements for Honolulu Harbor that were intended to enhance the port's capability to handle anticipated harbor and maritime needs. These improvements included expansion of the Sand Island container yard; redevelopment of the Kapalama Military Reservation and adjacent lands as a full-scale, modern, containerized cargo terminal; creation of additional berthing facilities; development of new maritime bunkering facilities; and general wharf improvements.

Separate 2010 Master Plans were prepared for Hilo Harbor, Kawaihae Harbor, Kahului Harbor, Kaunakakai Wharf, Nawiliwili Harbor, and Port Allen Harbor with the participation of the community, private businesses, and government agencies.

In 1995, the State DOT Harbors Division began the development of the *Oahu Commercial Harbors 2020 Master Plan*. Terminal operators, tourist-related boating interests, commercial fishermen, ocean-based navigational interests, and other user groups participated in task force meetings to develop this Master Plan. The Oahu Master Plan, approved by Governor Benjamin Cayetano on May 6, 1997, is a systematic, long-range guide for the development and improvement of Honolulu Harbor, Kewalo Basin, and Kalaeloa Barbers Point Harbor. The Oahu Master Plan's recommendations are substantiated by studies that correlate historical cargo data with socio-economic factors and establish valid projections of various 2020 cargo quantities. As these projections are based on the economic and operational factors in place at that time, the Oahu Master Plan will be updated periodically to incorporate emerging technologies and shifts in the State's economy.

The *Hawaii Commercial Harbors 2020 Master Plan* was prepared using the same formula employed in the development of the *Oahu Commercial Harbors 2020 Master Plan*. The Hawaii Master Plan was approved by Governor Cayetano on August 7, 1998. Subsequent to this, the *Kahului Commercial Harbor 2025 Master Plan* (dated September 14, 2000) and the *Kauai Commercial Harbors 2025 Master Plan* (dated September 24, 2001) were completed.

With regards to the environmental review process, the Harbors Division has completed the *Oahu Commercial Harbors 2020 Master Plan Environmental Impact Statement (EIS)* and the *Hawaii Commercial Harbors 2020 Master Plan EIS*, and is embarking on the *Kahului Commercial Harbor 2025 Master Plan Environmental Assessment (EA)* and the *Kauai Commercial Harbors 2025 Master Plan EIS* process. With completion and approval of the EA or EIS, master planned initiatives are implemented.

The Harbors Division, with the assistance of the U.S. Army Corps of Engineers, has completed the analysis of the effects of ocean surge on the Kahului Harbor Master Plan's proposal. The recommended improvements do not appear to be impacted by ocean surges. The Harbors Division also entered into an agreement with the U.S. Army Corps of Engineers to investigate navigational improvements at Nawiliwili Harbor.

Goal Statements:

To facilitate the rapid, safe, and economical movement of people and goods into, within, and out of the State by providing and operating harbor facilities and supporting services through expenditures from the Harbor Special Fund.

Source of Funds: State of Hawaii

Responsible Agencies: Hawaii Department of Transportation

CATEGORY 300: COORDINATION OF THE PLANNING PROGRAM

Issues, Problems, and Opportunities:

OMPO was created by the Hawaii State Legislature in 1975 for the purpose of ensuring a cooperative, comprehensive, and continuing (3-C) transportation planning process on Oahu. A comprehensive agreement detailing responsibilities under the 3-C process was modified in 1986 and 1992 and revised in FY 2001. These revisions include restructuring the membership of TAC, and also reflect changes from TEA21 and the recommendations from the Certification Review completed in September 2000.

The Policy Committee is supported by a small administrative staff that carries out its policies and directives. The Policy Committee has two advisory groups to provide input to the decision-making process. The first, the Technical Advisory Committee (TAC), is comprised of technical staff members representing the State and City transportation and planning departments (DOT, DTS, DPP, and DBEDT) and includes, serving as non-voting members, the Managing Director of the Hawaii Transportation Association, a faculty member of the University of Hawaii with background in transportation or city planning, and a staff representative each from the FHWA, FTA, and FAA. The TAC provides technical and professional guidance to the OMPO Policy Committee and the Executive Director.

The second advisory committee, the Citizen Advisory Committee (CAC), is comprised of representatives from business and professional organizations, neighborhood boards, and special interest groups. The primary responsibility of the CAC is to provide citizen input on the general activities of OMPO and the 3-C planning process to the OMPO Policy Committee.

The OMPO Policy Committee is responsible for overseeing the regional transportation plan, the TIP, and the OWP. These plans and other special transportation studies are coordinated through OMPO.

Goal Statements:

To improve and strengthen the cooperative, continuing, and comprehensive planning process on Oahu.

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SECTION II
WORK ELEMENTS FUNDED DURING THE
CURRENT FISCAL YEAR 2006

The work elements in this section have been programmed using FY 2006 federal appropriations. This section may also include work elements programmed in previous years but receiving additional funding in FY 2006.

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WORK ELEMENT 201.11-06 FEDERAL PLANNING REQUIREMENTS

Objective(s):

To ensure that Oahu's transportation planning process complies with the various provisions of current and future Federal surface transportation programs.

Product(s):

1. Guidelines and procedures for implementing federal planning requirements.
2. Participation in workshops and seminars.
3. Integration of Federally mandated programs, such as Congestion Management Systems (CMS), Title VI/Environmental Justice, and other transportation plans into the OMPO planning process.

Previous and Ongoing Related Work:

On June 9, 1998, President Clinton signed the TEA21, which succeeds the ISTEA (which expired in September of 1997). This act reauthorized and redefined the Federal surface transportation program. Several modifications to the metropolitan planning requirements were made.

The current authorization expired in September 2003 and has been extended by Congress. Any changes to the planning requirements that are made in the new authorization will be addressed in the OMPO planning process. The process of modifying the OMPO programs and processes will be similar to those efforts when ISTEA and TEA21 were passed. For example, as a result of ISTEA, OMPO established procedures to account for major investment studies, developed a CMS proposal through a DOT-lead effort, and strengthened its public involvement program.

In 1997, OMPO established procedures to prioritize enhancement projects. These procedures were then included into the State's enhancement program. Under TEA21, some provisions of the enhancement program have been modified.

In FY 2003, OMPO underwent a triennial certification review of its planning process. No corrective actions were given. The recommendations of the review panel will be addressed and incorporated into the planning process where possible.

In FYs 2000 and 2001, OMPO coordinated the development of an ITS structure within the OMPO process to deal with related City-State policy issues (see Planning Priorities). The ITS Regional Architecture was accepted by the Policy Committee in 2003.

A CMS structure, which is now led by DOT, was also incorporated into the OMPO process in FY 2001.

An update of OMPO's Comprehensive Agreement to reflect TEA21 requirements was also undertaken. The new Comprehensive Agreement was signed in FY 2001.

With the approval of the regional transportation plan (in April), the CMS process, and the ITS Regional Architecture, OMPO was certified as being in compliance with the transportation planning process. Maintenance of the Title VI and Environmental Justice process and ITS process continues.

Identification of Need:

This work element will be used to continue to ensure that the federal planning requirements are met. These requirements must be satisfied in order for the planning process to be certified.

Impact of Work Element:

If OMPO is not certified, Federal surface transportation funding and project approval for Oahu could be affected.

Task(s):

1. Discuss options with participating agencies and federal officials regarding local implementation of federal planning regulations and certification recommendations.
2. Identify freight movement concerns and advance through the planning process.
3. Participate in workshops, seminars, and presentations.
4. Review, modify, and/or establish procedures and guidelines for incorporating federal planning requirements and guidelines into the OMPO, City, and State plans, programs, and structure.
5. Represent OMPO on task forces formed to review various transportation plans.
6. Coordinate the efforts to integrate transportation plans and new and/or modified planning requirements into the OMPO planning process.
7. Coordinate CMS, Title VI and Environmental Justice, and ITS activities for the metropolitan planning process.
8. Review federal regulations implementing planning requirements.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
23,000	18,400 ²			4,600	

² HI-80-X014

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Planners	3.5	18,900
	Support Staff	0.2	800
OMPO	<u>Other</u> Overhead		3,300
		Total:	23,000

WORK ELEMENT 201.60-06 TRAVEL DEMAND FORECASTING MODEL

Objective(s):

To support the transportation planning process through the use of mathematical modeling.

Product(s):

1. Analysis of travel times and trips using the travel demand forecasting model (TDFM).
2. Documentation of changes and analysis.

Previous and Ongoing Related Work:

OMPO's current TDFM was recently completed. OMPO uses the TDFM results for evaluations of projects in the ORTP and TIP.

Identification of Need:

Mathematical modeling is a valuable tool in the analysis of transportation and land-use plan alternatives at the regional and project level.

Impact of Work Element:

This work element will allow OMPO to run the TDFM, do analysis as requested, and provide the Policy Committee and others with the technical analysis needed to make transportation decisions.

Task(s):

1. OMPO to run the TDFM and analyze the results as necessary.
2. OMPO to update the model networks as necessary.
3. OMPO to document any modification to user's manual.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
28,805		23,044		5,761	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-STP	Planners/Engineers	1.5	7,500
DPP	Planners/Engineers	0.75	3,905
DTS	Planners/Engineers	1.0	5,000
OMPO	Planners/Engineers	2.1	10,600
OMPO	<u>Other</u> Overhead		1,800
		Total:	28,805

Objective(s):

To update the regional transportation plan to ensure that it addresses Oahu's transportation needs through 2030.

Product(s):

Development of the Oahu Regional Transportation Plan (ORTP).

Previous and Ongoing Related Work:

Metropolitan planning regulations jointly issued by FHWA and FTA require metropolitan planning organizations such as OMPO to develop a transportation plan that includes both long-range and short-range strategies and actions that lead towards the development of an integrated intermodal transportation system. This plan must have at least a 20-year time horizon and, in OMPO's situation, must also be updated at least every five years.

Impact of Work Element:

The updated ORTP will serve as a blueprint for identifying and prioritizing the development of future surface transportation improvements and strategies on Oahu. This will result in an integrated, intermodal transportation system capable of facilitating efficient and effective movement of people and goods. As part of the ORTP effort OMPO will investigate project prioritizing tools such as time bins.

The update is anticipated to take two years from the time a consultant is brought on board. This work element will continue the update of the ORTP that began in FY 2004 and continued in FY 2005. This work element identifies costs to FY 2006 and reflects activities related to the update of the ORTP. The endorsement of the ORTP is anticipated by April 2006.

Task(s):

1. Administer related contract.
2. Provide guidance and support in the update of the ORTP.
3. Consultant to work with OMPO, agencies, and public to update the ORTP.
4. OMPO to attend meetings; make presentations to organizations, agencies, and individuals requiring information or briefings on the ORTP process, products, or related activities; and solicit input.
5. OMPO to coordinate ORTP effort with agencies, TAC, CAC, and the Policy Committee.
6. OMPO and agencies to assist in the development of needed data and participate in the review of work products.
7. Evaluate the 2030 ORTP, associated administrative amendments, and non-administrative amendments to the 2030 ORTP, as needed, for compliance with Title VI and Environmental Justice regulations.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
189,100		151,280		37,820	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planners/Engineers	2.0	10,000
DOT-HWY-P	Planners/Engineers	2.0	10,000
DOT-STP	Planners/Engineers	2.0	10,000
DPP	Planners/Engineers	2.0	10,000
DTS	Planners/Engineers	2.0	10,000
OMPO	Planners/Engineers	15.9	112,900
	Support Staff	2.3	6,200
OMPO	<u>Other</u> Overhead		20,000
		Total:	189,100

WORK ELEMENT 202.07-06 TRANSPORTATION IMPROVEMENT PROGRAM

Objective(s):

To ensure that the Transportation Improvement Program (TIP) reflects current directions as identified in Oahu's Regional Transportation Plan, Highway Safety Program, Short-Range Transportation Plan (SRTP), land use plans, congestion management system, and other planning studies; and complies with applicable federal requirements.

Product(s):

A TIP for the FYs 2006-2008 program period and amendments as necessary.

Previous and Ongoing Related Work:

The Oahu TIP is the short-term, three-year implementation program for federally-assisted surface transportation projects that support the long-term ORTP. The TIP describes and prioritizes federally-assisted and major locally-funded transportation programs and projects selected by the OMPO Policy Committee for implementation during the program period. The TIP is closely related to the State and City Capital Improvement Programs.

The CAC typically develops TIP recommendations early in the process to help identify their project priorities. The recommendations are sent to the Policy Committee, and State and City transportation departments.

Under OMPO's TIP procedures, an annual review and major biennial update of the TIP are scheduled, with off-schedule amendments considered as needed.

The TIP is approved by the OMPO Policy Committee and the Governor. Upon these approvals, the TIP is incorporated as the Oahu element of the Statewide TIP (STIP). The STIP is the document upon which the U.S. Department of Transportation bases its obligation of federal transportation funds for projects in Hawaii.

The OMPO Policy Committee was provided with technical project evaluations before selecting projects for the FYs 2004-2006 TIP. OMPO and its participating agencies will provide the Policy Committee with project evaluations for the FYs 2006-2008 TIP and any future non-administrative TIP amendments. The project evaluation tool will be continuously updated based on information available and the needs of the OMPO Policy Committee.

The FYs 2006-2008 TIP will be developed to position projects for funds and implementation during the program period. It is expected to be endorsed by the OMPO Policy Committee in federal FY 2005.

The FYs 2004-2006 TIP will be monitored and amended, as necessary, during the program period.

Identification of Need:

The production of a financially-constrained TIP is a federal requirement of the 3-C planning process.

Impact of Work Element:

A current TIP, based upon cooperatively developed criteria and reviewed and recommended by Oahu's policy makers, provides the basis for funding and implementing transportation improvement projects.

Once approved by the Policy Committee and the Governor, the Oahu TIP is incorporated, without modification, into DOT's STIP. The approved STIP is the foundation for scheduling and implementing projects utilizing federal funds.

Task(s):

1. OMPO and its participating agencies to cooperatively develop a financially-constrained TIP for FYs 2006-2008.
2. OMPO and its participating agencies to cooperatively monitor and update the FYs 2006-2008 TIP as necessary, to identify any changes in project priorities, and ensure its financial viability.
3. OMPO and its participating agencies to evaluate projects proposed for the TIP and any future non-administrative TIP amendments. The project evaluation tool will be continuously updated based on information available and the needs of the OMPO Policy Committee.
4. OMPO to ensure that proposed projects in the TIP are consistent with the current regional transportation plan.
5. OMPO to ensure that proposed ITS projects in the TIP are consistent with the ORITSA. Based on the procedures in the ORITSA Procedures and Responsibilities Report, amend the ORITSA as necessary and document any changes to the ORITSA.
6. OMPO to evaluate the TIP and associated non-administrative amendments, as needed, for compliance with Title VI and Environmental Justice regulations.
7. OMPO to coordinate and process the TIP and any TIP amendments through the TAC, CAC, and Policy Committee, as appropriate.
8. OMPO to follow Public Involvement Program procedures for review and update of the TIP.
9. OMPO and its participating agencies to review proposed TIP projects to ensure their consistency with federal, State, and local criteria.
10. OMPO and its participating agencies to cooperatively review and update, as necessary, the metropolitan TIP development process.
11. DTS to identify any changes to the transit priorities for Oahu.
12. DTS to identify any changes to roadway improvements and the City's financial plan for TIP projects.

13. DOT to identify any changes to State highway and water transit improvements.
14. DOT to continue to develop a database program for use in developing the STIP. OMPO and its participating agencies will use this database program once it is completed.
15. DPP to review the TIP to ensure its consistency with the City's Development/Sustainable Communities Plans.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
55,100		44,080		11,020	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planners	0.1	500
DOT-HWY-P	Planners	1.0	5,000
DPP	Planner	0.1	500
DTS	Planners	2.0	10,000
OMPO	Planners	4.9	26,800
	Support Staff	1.5	6,700
	<u>Other</u>		
OMPO	Overhead		5,600
		Total:	55,100

WORK ELEMENT 202.60-06 HONOLULU ALTERNATIVES ANALYSIS STUDY³

Objective(s):

To undertake a multimodal alternatives analysis of major transit improvements for the Primary Urban Corridor.

Product(s):

A study report and supporting documents for an alternatives analysis and draft environmental impact statement needed to select a locally preferred alternative.

Previous and Ongoing Related Work:

In 1976, Honolulu Area Rapid Transit Alternatives Analysis was accepted by the USDOT Urban Mass Transportation Administration. In 1990, the Honolulu Rapid Transit Project's Alternatives Analysis was submitted and approved by FTA.

Identification of Need:

Significant growth over the last 20 years has been contained largely within the boundaries of the Primary Urban Core and in the planned second city of Kapolei. This growth has led to the increased traffic congestion on the existing transportation network.

Impact of Work Element:

This study will analyze and develop the information necessary to aid in the selection of a locally preferred alternative that will address the growing regional mobility requirements through the year 2030.

Task(s):

1. Review prior relevant planning studies and documents.
2. Prepare detailed work plan and develop goals and objectives for alternatives to be studied.
3. Develop a comprehensive community-based public involvement and outreach program.
4. Develop alternatives: Identify and describe alternatives to be studied.
5. Evaluate each alternative based on the prescribed procedure according to the FTA guidelines on alternatives analysis. Collect data; develop financial and implementation scenarios, and trip forecasts for each alternative; and analyze their economic and environmental impacts.
6. Prepare an Alternatives Analysis Report per FTA guidelines. Distribute report within the guidelines of the public involvement process.
7. Prepare a Draft Environmental Impact Statement in accordance with federal and State guidelines.
8. Prepare a Locally Preferred Alternative report.

³ Funded with FTA section 5307 money, and managed by DTS.

Estimated Completion Date: December 2006

Estimated DBE Opportunity: 9%

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
10,733,000	8,000,000 ⁴			2,000,000	733,000

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DTS	Planners/Engineers	60.0	513,500
	Support Staff	5.0	19,500
DTS	<u>Other</u> Consultant		10,000,000 200,000
		Total:	10,733,000

⁴ FTA Section 5307.

Objective(s):

To upgrade the current OMPO Travel Demand Forecasting Model (TDFM) to the Windows environment and convert the model network to conform to a standard Geographic Information System (GIS)-based coordinate system.

Product(s):

1. A calibrated and validated TDFM that can be used in the Windows environment.
2. A travel demand forecasting model network that can be viewed and used in a GIS mapping application.

Previous and Ongoing Related Work:

OMPO uses the TDFM for evaluations of projects in the ORTP and TIP. A land use simulation model that is integrated with the TDFM has recently been completed. Furthermore, Work Element 201.50-05 in the FY 2005 OWP was developed to allow the DPP to enhance the land use simulation model by improving the spatial representations used in the land use model and to demonstrate the capabilities of the model in land use and transportation planning.

Identification of Need:

The current OMPO TDFM uses MINUTP, a DOS-based travel demand modeling software. OMPO will need to convert the TDFM to a Windows environment because:

- Support for Microsoft DOS and MINUTP will soon come to an end.
- The TDFM currently takes approximately fourteen hours longer to run using the DOS application on a computer with Windows XP versus a Windows 98 computer, due to the changing versions of DOS.
- OMPO currently uses ArcGIS to map and analyze projects for Title VI/Environmental Justice and other purposes. The nodes in the TDFM network are currently based on MINUTP x and y coordinates that do not correspond to other more standardized and extensive networks that use other coordinates.

Impact of Work Element:

Upgrading the TDFM to a Windows-based program is expected to shorten the model's run time. In addition, it would be advantageous for OMPO to convert to another software program before support for MINUTP ends. Converting the nodes in the TDFM network to standardized coordinates will allow OMPO to more efficiently map and analyze model results.

Task(s):

1. Consultant to assist OMPO in selecting a Windows-based travel forecasting software application package.
2. Consultant to convert the current OMPO TDFM from MINUTP to the selected Windows-based application.

3. Consultant to revise and update the current User's Guide – documenting the steps involved in accessing and changing model inputs, running the application(s), and accessing the results.
4. Consultant and OMPO staff to convert the transportation networks to a GIS-based format based on a standard coordinate system (i.e., City street center-line).
5. Consultant to run the model for the base year using the converted model in the new software, verify the existing calibration and validation of the model, and ensure that it remains integrated with the land use model.
6. OMPO and its participating agencies to review and comment on Consultant deliverables.
7. OMPO and its participating agencies to purchase recommended travel forecasting software.

Estimated Completion Date: 12 months from notice to proceed

Estimated DBE Opportunity: none

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
213,700		170,960		42,740	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-STP	Planners/Engineers	1.5	7,534
DPP	Planners	1.5	7,533
DTS	Planners	1.5	7,533
OMPO	Planners	7.0	36,100
OMPO	<u>Other</u> Consultant and Software Purchase		150,000
	Overhead		5,000
Total:			213,700

WORK ELEMENT 206.20-06 WATERBORNE TRANSIT FEASIBILITY STUDY

Objective(s):

To study the use of Oahu’s waterways for transit use.

Product(s):

Report detailing waterborne options available for transit use.

Previous and Ongoing Related Work:

In 1997, a preliminary investigation of ferry systems for the State of Hawaii was conducted by DOT. In 1999, DOT followed this preliminary effort with a year-long commuter ferry demonstration project

Identification of Need:

The Leeward plain has grown rapidly in recent years; and more growth is projected for the future. This has led to increased levels of traffic congestion and longer commuting times during the peak hours. There is a need to explore all travel options for the Leeward coast – which include investigating the use of our waterways as a mode of travel.

Impact of Work Element:

The study will analyze and develop a waterborne transit system recommendation that will provide commuters an option to the land-based transit that is affected by traffic congestion.

Task(s):

1. DTS Consultant to review all pertinent studies and documents associated with local and mainland waterborne transit.
2. DTS Consultant to develop a stakeholder-based public involvement and outreach program in accordance to established OMPO PIP guidelines.
3. DTS Consultant to evaluate waterborne system options – including collecting data, and developing financial, implementation, and travel forecasts for each option. Economic and environmental impacts of each option need to be analyzed and documented.
4. DTS Consultant to prepare a final report along with all of its supporting findings and documentation.

Estimated Completion Date: July 2006

Estimated DBE Opportunity: 9% of consultant contract

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
500,000		400,000		100,000	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DTS	<u>Other</u> Consultant		500,000
		Total:	500,000

WORK ELEMENT 301.01-06 PROGRAM SUPPORT AND ADMINISTRATION

Objective(s):

To administer the appropriate federal planning grants and the transportation planning program they support.

Product(s):

Effective management of the transportation planning program.

Previous and Ongoing Related Work:

Since 1975, OMPO has been responsible for the management and coordination of the transportation planning process on Oahu. OMPO submits the necessary support documents to obtain Federal planning funds for the transportation planning program as well as monitoring federal grants, supporting various aspects of the program, and providing interagency coordination.

In the past, OMPO staff and/or a Policy Committee member have traveled to the mainland to meet with federal officials and/or peers to discuss federal regulations and processes. Efforts under this work element have also been used to sponsor workshops on transportation planning matters.

The Policy Committee is the decision-making body of the OMPO. It is also an advisory body to the Honolulu City Council and the State Legislature. The Policy Committee is assisted by an administrative staff and is advised by its TAC and CAC. Through this structure, Oahu's transportation planning efforts are integrated into a continuing, comprehensive, and coordinated element.

Impact of Work Element:

Successful implementation of this work element will ensure that Oahu has a cooperative, comprehensive, and continuing (3-C) transportation planning process. In addition, effective program management and coordination is required to provide the basis for decision-making by the Policy Committee and to assure both the Policy Committee and the public that Oahu has an effective, integrated transportation planning program.

Task(s):

1. Provide the administrative support necessary to serve the Policy Committee, TAC, and OMPO office.
2. Represent OMPO at Intermodal Planning Group or other 3-C planning-related meetings, workshops, and conferences; and communicate with federal representatives as required. Participate in the triennial federal certification review.
3. Coordinate the 3-C transportation planning process with OMPO's participating agencies.
4. Manage and oversee selected work elements and assist agencies with project management services.

5. Provide the necessary grant support functions.
6. Research, purchase, install, and maintain computer-related equipment and software for OMPO operations; replace computers as needed; and upgrade and add software applications as needed.
7. Travel to attend conference/meetings, scanning tours, and training sessions for OMPO-related matters.

Estimated Completion Date: Ongoing work element

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
176,944	141,555 ⁵			35,389	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Planners	9.4	69,700
	Support Staff	12.1	55,000
OMPO	<u>Other</u>		
	Overhead		19,244
	Travel		6,000
	Computer-related Equipment and Software		
	Computers/Equipment		8,000
	Software (present application upgrades)		10,000
	Software (additional software)		9,000
		Total:	176,944

⁵ HI-80-X014.

WORK ELEMENT 301.02-06 PLANNING RESOURCE

Objective(s):

To provide government agencies and other organizations with information and resources relating to the 3-C planning process.

Product(s):

An effective and accessible transportation planning process.

Previous and Ongoing Related Work:

OMPO is a member of the Chamber of Commerce Transportation Committee, Leeward Oahu Transportation Management Association (LOTMA), DTS Committee on Accessible Transportation, Energy Functional Plan Advisory Committee, and the Institute of Transportation Engineers. These committees meet on a regular basis to discuss transportation issues and recommend a position to their organizations. OMPO has provided information and resources to aid them and other interested organizations and individuals in their decision-making process.

OMPO has provided testimony and acted as a resource body to various transportation committees of the Honolulu City Council and the State Legislature. OMPO participated in the development of the Waikiki Regional Traffic Impact Plan, the Barbers Point Naval Air Station Reuse Committee, the Hawaii Commercial Harbors 2020 Master Plan Committee, the Ewa Region Highway Transportation Master Plan, and the City Council Committee on Transportation task force on TSM/TDM strategies.

OMPO also reviews the transportation plans and programs from other agencies and organizations, such as the Neighborhood Commission and Transportation Commission.

Impact of Work Element:

Successful implementation of this work element will ensure that information developed as part of the 3-C planning process is made available to the various transportation decision-making bodies, government agencies, and other organizations. The success of the 3-C transportation planning process requires this type of interaction.

Task(s):

1. Represent OMPO at appropriate transportation-related organizations and committees.
2. Submit appropriate testimonies, documents, and responses to the Honolulu City Council and the State Legislature.
3. Review the transportation planning aspects of transportation reports and materials for agencies and organizations.
4. Provide transportation presentations, materials, and information to organizations and the public.

5. Participate in the State, City, and private sector transportation planning activities such as preliminary review of public/private cost-sharing alternatives for transportation services and facility improvements which directly benefit private developments.

Estimated Completion Date: Ongoing work element

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
34,300	27,440 ⁶			6,860	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Planners	5.7	26,200
	Support Staff	1.3	3,200
OMPO	<u>Other</u>		
	Overhead		4,900
Total:			34,300

⁶ HI-80-X014

WORK ELEMENT 301.03-06 OVERALL WORK PROGRAM

Objective(s):

To develop an Overall Work Program (OWP) for FY 2007 within which planning priorities for the metropolitan area are addressed and to document the progress of the still active work elements from previous years.

Product(s):

1. A transportation planning work program defining the work to be performed in FY 2007.
2. Documentation of the progress of the still active work elements from previous years.

Previous and Ongoing Related Work:

The OWP serves as the key management tool for monitoring State and City transportation activities on Oahu. It describes transportation-related planning studies to be conducted in a given year. The OWP defines project objectives and tasks and identifies budgetary and staff requirements needed to carry out the projects. In addressing current transportation issues and problems, the OWP responds to local planning requirements, federal transportation priorities, and Federal planning requirements. The OWP also includes land use studies as they relate to transportation needs.

OMPO is responsible for coordinating the preparation of the OWP. The OWP is prepared with the active involvement and assistance of the State and City transportation and planning departments, FHWA, FTA, TAC, and CAC.

Previous OWPs include several ongoing planning tasks, as well as directing planning efforts in new directions. Many annual tasks provide necessary input to planning, such as those that relate to monitoring and forecasting. Other work elements seek to analyze the existing transportation system to improve its efficiency.

To ensure that interested agencies and individuals can be kept abreast of the activities identified in the OWP, many work elements include task forces or technical advisory committees – comprised of agency staff. These committees assist in work element development. Also, annual progress reports are developed.

Impact of Work Element:

The OWP sets forth the transportation planning activities of the OMPO and its participating agencies for the upcoming year. It includes transportation and transportation-related planning activities, and may include those not federally funded. Moreover, the OWP identifies individual planning projects or work elements; and provides a record of objective, anticipated products, related work, tasks, and costs. As a result, it allows coordinated, interrelated review of the proposed transportation planning activities on Oahu by federal officials, policy makers and the general public. Specifically, it is designed to achieve the following:

- Eliminate duplication of transportation-related planning studies.

- Develop interrelationships among transportation planning, land use planning, urban design/beautification, and environmental and other elements of the metropolitan planning process.
- Ensure coordinated phasing and implementation of State and City transportation planning activities.
- Provide the technical basis for future transportation projects and programs through planning studies conducted as part of the OWP.
- Qualify applicable planning activities for federal reimbursement.

Task(s):

1. State and City agencies and OMPO will identify planning needs, approaches, and funding requirements for the FY 2007 OWP.
2. OMPO will follow the Public Involvement Program procedures in the development of the OWP.
3. OMPO will analyze the FY 2006 OWP for compliance with the Environmental Justice/Title VI regulations as set forth in the Environmental Justice/Title VI Program.
4. OMPO will obtain and coordinate the necessary approvals for the OWP and any subsequent amendments.
5. OMPO will provide the necessary support and coordination for OWP work elements.
6. OMPO and its participating agencies will monitor and document progress of all OWP activities.

Estimated Completion Date: Ongoing work element

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
56,123	44,898 ⁷			11,225	

⁷ HI-80-X014.

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planner	0.2	1,023
DOT-STP	Planner/Engineer	1.1	6,000
DPP	Planner	0.2	1,000
DTS	Planner/Engineer	1.3	6,000
OMPO	Planners	3.2	22,300
	Support Staff	3.0	13,700
OMPO	<u>Other</u> Overhead		6,100
		Total:	56,123

WORK ELEMENT 301.04-06**SUPPORT FOR CITIZEN ADVISORY COMMITTEE
AND ADDITIONAL PUBLIC OUTREACH****Objective(s):**

To ensure effective citizen participation in the 3-C transportation planning process on Oahu.

Product(s):

1. An established Citizen Advisory Committee (CAC) that reviews transportation planning issues and reports its recommendations to the OMPO Policy Committee.
2. A current mailing list of all CAC member representatives, alternates, and chairs – as well as others interested in transportation, including organizations that represent traditionally underserved populations.
3. An up-to-date website.

Previous and Ongoing Related Work:

The OMPO CAC was created by the OMPO Policy Committee in July 1977 to ensure effective public input into Oahu's transportation planning process. As of December 15, 2004, the CAC consisted of 41 member organizations representing various interests on Oahu. Since its formation, the CAC has heard and discussed various transportation issues on Oahu; has become a vehicle for public input; and has made recommendations to the Policy Committee on OMPO documents and transportation projects and issues.

The CAC Chair usually prepares agendas for CAC meetings. However, agenda items may be proposed by any CAC member. The meetings provide an opportunity for member organizations to hear about transportation issues and programs from the people involved in their development and/or implementation. Ad hoc committees are formed as needed to review specific transportation documents or to discuss transportation issues. These subcommittees present their recommendations to the full CAC for further discussion and/or approval.

In FY 2005, the CAC emphasized early involvement of and information dissemination to its members, both in OMPO activities and City and State activities as well. The CAC formed a subcommittee to review and recommend projects to the FYs 2006-2008 TIP; provided input to the Transportation Enhancement Program; and maintained a task force to provide input to the ORTP consultant on the implementation of the ORTP Community Outreach Program.

In addition to the CAC, OMPO has always strived to achieve broad public involvement of citizens for all of OMPO's plans and programs. The current *Guide to Public Involvement* (GPI) states that the goal of OMPO's Public Involvement Program is to "ensure that the products of OMPO's metropolitan transportation planning process reflect the needs and concerns of the public".

In order to help achieve this goal, several mailing lists have been developed which OMPO uses to disseminate information. The mailing lists include: CAC member organization representatives, alternates, and chairs; persons interested in planning who have requested to be on the mailing list; environmental justice organizations as suggested in the *Environmental*

Justice in the OMPO Planning Process report; and an e-mail list for persons wishing to receive information electronically. OMPO has also developed a *Public Involvement Policy for Draft Documents* that identifies what information on draft documents should be sent to the various mailing lists.

In addition to using mail outs as a way of disseminating information, the OMPO website includes information on OMPO, its plans and programs, and current issues. A website for the 2030 ORTP update was developed as part of the 2030 ORTP contract and is part of the existing OMPO website.

The CAC members and general public may respond to OMPO's request for input (such as, during public review periods) with comments through various means – including phone, mail, e-mail, fax, and hand-delivery. OMPO makes every effort to respond, in a timely manner, to comments received.

Impact of Work Element:

Successful implementation of this work element will provide necessary citizen input for decision-making by the Policy Committee and will promote improved public information about transportation planning issues.

Task(s):

OMPO staff to:

1. Attend committee and subcommittee meetings, and provide available technical support for the CAC and its subcommittees.
2. Provide effective coordination with other citizen groups on Oahu concerned with transportation planning – such as the Committee on Accessible Transportation, neighborhood boards, areawide planning forums, and transportation management associations.
3. Coordinate the CAC's participation in the timely review of activities identified in the public involvement program.
4. Review and update, if appropriate, OMPO's proactive public involvement program.
5. Design and carry out public information programs on transportation planning for the general public as required by the 3-C planning process.
6. Brief new and interested members/organizations on the metropolitan planning process.
7. Maintain a mailing list of CAC member organizations, organizations that represent traditionally underserved populations, and others interested in transportation.
8. Develop an in-house public involvement/outreach plan at the beginning of a project (e.g., ORTP, TIP, and OWP). This plan should be consistent with the *Guide to Public Involvement* and the *Public Involvement Policy for Draft Documents*.
9. Maintain the OMPO Website.

10. As needed, provide documents and/or other related material in various languages to non-English speaking citizens who submit a request for this service.
11. As needed, provide services to those who require and request special assistance at public meetings (e.g., sign language interpreter).
12. As needed, provide documents and/or other related material in various forms to those who require and request special assistance (e.g., format and e-mail text to the visually impaired who use text readers).
13. Update the *Public Involvement Policy for Draft Documents* periodically.
14. Utilize the list of organizations that represent traditionally underserved populations when disseminating information to the public for plans and programs in accordance with the *Public Involvement Policy for Draft Documents*.
15. Identify, measure, and evaluate trends, as needed, for compliance with Title VI and Environmental Justice regulations.
16. Measure and document the changes in the level of participation of traditionally underserved populations (e.g., minority and low-income) in the transportation planning process.

Estimated Completion Date: Ongoing work element

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
53,100	42,480 ⁸			10,620	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Planners	6.3	35,800
	Support Staff	0.9	4,000
OMPO	<u>Other</u>		
	Overhead		6,700
	Special Services for the Disabled		6,600
Total:			53,100

⁸ HI-80-X014.

WORK ELEMENT 301.05-06 SINGLE AUDIT

Objective(s):

To ensure that the financial operations of OMPO and its subgrantees are in compliance with applicable federal laws and regulations pursuant to the Single Audit Act of 1984 and the amendments of 1996.

Product(s):

1. An independent auditor's report on compliance and on internal control over financial reporting based on an audit of the financial statements of OMPO and its subgrantees satisfying the requirements of Office of Management and Budget (OMB) Circular A-133 for FY 2005.
2. Annual financial and progress reports on OWP work elements are prepared by OMPO and submitted to FTA and FHWA. Semi-annual Disadvantaged Business Enterprises participation reports are also prepared and submitted to the appropriate federal agencies.

Previous and Ongoing Related Work:

Financial audits of OMPO and its subgrantees are conducted annually in accordance with the Single Audit Act of 1984 and OMB Circular A-133. The audit contract for FYs 2004, 2005, and 2006 was awarded to Egami & Ichikawa CPA's, Inc. in accordance with the State's procurement laws. The audit for FY 2004 was conducted in December 2004. The final report was completed in March 2005 and distributed to the appropriate Federal, State, and City agencies.

Impact of Work Element:

The audit will determine and report whether:

1. The financial statements of OMPO present fairly OMPO's financial position and the results of OMPO's financial operations in accordance with generally accepted accounting principles;
2. OMPO has internal accounting and other control systems to provide reasonable assurance that OMPO manages federal financial assistance programs in compliance with applicable laws and regulations; and
3. OMPO has complied with laws and regulations that may have material effects on its financial statements and on each major federal assistance program.

Task(s):

1. Consultant to audit OMPO and its subgrantees consistent with OMB Circular A-133 requirements.
2. OMPO to provide the necessary administrative and liaison support.
3. OMPO to prepare and maintain records suitable for audit.
4. OMPO to comply with federal financial management and reporting requirements.

Estimated Completion Date: Ongoing work element

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
31,200	24,960 ⁹			6,240	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Financial Specialist/Planners	1.1	10,700
	Support Staff	0.6	2,700
	<u>Other</u>		
OMPO	Overhead		2,300
	Audit Contract		15,500
		Total:	31,200

⁹ HI-80-X014.

WORK ELEMENT 301.08-06**DISADVANTAGED BUSINESS ENTERPRISE PROGRAM****Objective(s):**

To give minority-owned, women-owned, and other disadvantaged small business enterprises an opportunity to compete for federally-assisted planning projects; and to involve the private sector in the planning and programming phases of project development.

Product(s):

1. OMPO Annual Disadvantaged Business Enterprise (DBE) goals and supporting documentation.
2. List of DBE certified firms.
3. Revised OMPO DBE Goals, if necessary.
4. Semi-annual Uniform Report of DBE Awards or Commitments and Payments.

Previous and Ongoing Related Work:

The USDOT has encouraged full consideration of the potential services that could be provided by DBE firms in the development of transportation plans and programs and the provision of transit services.

OMPO, for DBE program purposes, is considered a sub-recipient of the State DOT federal assistance funds, and adopted the State DOT's DBE Program on September 14, 1999.

As OMPO advertises and awards its own contracts, separate goals for both FTA and FHWA must be established for OMPO projects. OMPO and its participating agencies have established DBE goals since 1980. OMPO's present DBE goal for work efforts undertaken as part of the FY 2005 OWP is 13.4% for FHWA funds.

The threshold requirements for FTA recipients to establish DBE Programs and to submit overall goals were changed to \$250,000 in contracting opportunities. FTA recipients who reasonably anticipate awarding \$250,000 or less in prime contracts in a fiscal year are not required to submit a DBE plan and will not have to submit a DBE overall goal that year. OMPO receives an average of \$250,000 in FTA grants annually. We anticipate contracting opportunities of less than \$20,000 and, as such, will not be setting a DBE goal for FY 2006 FTA funds.

Impact of Work Element:

The certification and use of DBE firms in contracting opportunities will aid in achieving OMPO's goals regarding its program for disadvantaged small businesses. This work element also strives to provide early involvement of private operators in the planning of transportation services.

Task(s):

1. OMPO to identify potential DBE firms and encourage them to apply for State DOT DBE certification.

2. OMPO to monitor DBE goals to ensure that only the percentage projected to be unattainable through race neutral methods be set as a goal in new contracts awarded.
3. OMPO to monitor all payments made to consultants to ensure that DBE participation is reflected on all invoices submitted.
4. OMPO to document DBE activities to FTA and FHWA through the State DOT.
5. OMPO to develop annual DBE goals.
6. OMPO to attend semi-annual DBE coordinators meeting sponsored by the State DOT.

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
7,600	6,080 ¹⁰			1,520	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Financial Specialist/Engineers	1.1	6,200
	Support Staff	0.2	300
OMPO	<u>Other</u> Overhead		1,100
		Total:	7,600

¹⁰ HI-80-X014

SECTION III
WORK ELEMENTS PROGRAMMED IN PREVIOUS OWPS
FISCAL YEARS 1995-2005

The work elements in this section have been programmed and approved in previous years and are included for the information of the reader.

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**WORK ELEMENT 201.01-01 INVESTIGATION OF ITS TECHNOLOGY FOR USE
IN COLLECTING CMS DATA (as amended)¹¹**

Objective(s):

To implement the OMPO congestion management system (CMS).

Product(s):

1. CMS Performance Monitoring and Evaluation Procedures report
2. CMS Effectiveness Evaluation report

Previous and Ongoing Related Work:

Under federal regulations, transportation management areas, such as Oahu, must develop a CMS as part of their metropolitan transportation planning process. The CMS is a system to monitor and analyze the magnitude of congestion and to plan and implement actions that alleviate congestion and enhance the performance of the transportation system.

The initial development of such a system was undertaken by the State Department of Transportation in 1994 through a consultant contract with Austin Tsutsumi & Associates, Inc. (ATA). As part of the contract agreement with ATA, the collection of travel time/running speed data was collected to establish baseline conditions on the major regional roadway system. Although major work on various CMS components has been completed, work was still needed to fully integrate the CMS into the metropolitan planning process.

In FY 2000, OMPO and its participating agencies began finalizing the necessary steps to establish such a system into its planning process. The foundation of Oahu's CMS would be based upon work completed under the ATA contract and processes used by the State Department of Transportation and City Department of Transportation Services in monitoring the transportation system and evaluating transportation strategies. The public would continue to be given the opportunity to comment on proposed strategies as part of the metropolitan transportation planning process. The CMS is expected to evolve with time and as new resources become available.

A CMS procedures and responsibilities report has been developed which contains schedules for implementation, a description of how the CMS is structured, and identification of agencies' responsibilities.

Since the development of the CMS, certain strategies and projects have been implemented. Data to measure their effectiveness are being collected on the H-1 Freeway (zipper lane), H-3 Freeway, Pali Highway, Likelike Highway, and Moanalua Freeway. Travel time/running speed data will be collected using the same methodology (average-car technique) as previously done by ATA.

¹¹As amended by the OMPO Policy Committee on March 23, 2004.

In 2001, DOT applied the methodology used by ATA to collect data on Oahu. OMPO and its participating agencies have continued to investigate more cost-effective ways of collecting travel time data.

Identification of Need:

A fully implemented CMS will provide decision-makers and the public with a better understanding of existing and projected traffic congestion and better information on the effectiveness of transportation strategies. This will also result in more consistent and systematic procedures for analyzing and comparing traffic mitigation measures. The CMS is also a federal requirement for Oahu.

However, the existing method of collecting travel time/running speed via the average-car technique is generally understood as being very labor intensive. The manpower limitations of this methodology severely restrict the amount of data collected for the CMS. Research needs to be conducted to identify other types of technologies which would ease the burden of collecting travel time/running speed data.

Impact of Work Element:

This work element will carry out the tasks identified in the CMS procedures and responsibilities report.

Task(s):

1. CMS Technical Committee to document data collection and analysis procedures.
2. DOT to collect data to measure the effectiveness of certain strategies and projects that have been implemented since the development of the CMS.
3. CMS Technical Committee to evaluate and document the effectiveness of strategies that were implemented by DOT and DTS.

Estimated Completion Date: December 2004

Estimated DBE Opportunity: No DBE percentage specified

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
171,600		137,280		34,320	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planners	0.5	2,500
DOT-HWY-T	Planners/Engineers	22.5	102,100
DPP	Planners	0.5	2,500
DTS	Planners/Engineers	1.0	5,000
OMPO	Planners/Engineers	4.0	23,000
	Support Staff	0.9	3,600
	<u>Other</u>		
DOT-HWY-T	Software and Equipment		25,000
OMPO	Overhead		7,900
		Total:	171,600

WORK ELEMENT 201.05-02 2000 CENSUS DATA

Objective(s):

To ensure that the 2000 Census data is utilized to its fullest potential.

Product(s):

1. Integration of 2000 census data into the planning process.
2. Dissemination of census data information to the public and participating agencies.

Previous and Ongoing Related Work:

In the late 1980's, OMPO became an affiliate member of the State Data Center. This enabled OMPO to participate in the receipt and dissemination of census data. This membership carried with it the responsibility for helping to disseminate census information to the public and other State and City agencies.

During FY 2000, OMPO assisted the U.S. Bureau of the Census in collecting data on work places and locations of major employers in the urbanized areas of Oahu. This work included geocoding and verifying workplace locations. The purpose of this effort was to improve the quality of the place-of-work data gathered during the 2000 census and packaged by the census for each state.

The 2000 Census will begin release of its primary data in FY 2001. This information will be valuable in the development of socio-economic input for transportation planning and in the analysis of Title VI and EJ impacts.

Impact of Work Element:

Updated census information will be valuable in the development of updated socio-economic data for the planning process.

Identification of Need:

Census data is an important source of socio-economic information. It is important that OMPO staff be familiar with this data and be able to integrate it into the planning process. The U.S. Census Bureau has informed the users of its information that much of the data will be released on DVD discs since they provide higher storage capabilities.

Task(s):

1. OMPO to review and analyze of the 2000 census data.
2. OMPO to assist in the integration of 2000 census data into the planning process.
3. OMPO to purchase two DVD players to assist in the use of Census data.
4. OMPO to correspond when necessary with U.S. Census Bureau to resolve discrepancies.

5. OMPO to participate in the activities of the State Data Center and assist in the dissemination of census information to the public and other agencies.

Estimated Completion Date: December 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
23,600		18,880		4,720	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
OMPO	Planners	1.4	17,100
	Support Staff	0.2	700
OMPO	<u>Other</u>		
	Overhead		4,400
	DVD players		1,400
		Total:	23,600

**WORK ELEMENT 201.20-02 TITLE VI AND ENVIRONMENTAL JUSTICE
MONITORING¹²**

Objective(s):

1. To assess the quality and level of participation of the populations covered by Title VI of the Civil Rights Act of 1964 and the requirements of the Environmental Justice Order 12898 in the metropolitan planning process.
2. To analyze and evaluate the benefits and impacts of transportation projects on the populations covered by Title VI and Environmental Justice regulations.
3. To enable the GIS Analysis Tool to be used by OMPO's participating agencies over the Internet.

Product(s):

1. Update of the Title VI and Environmental Justice database to incorporate data from the 2000 Census and other available sources.
2. Analysis of the OWP and associated amendments, TIP and associated amendments, the public involvement program, and ORTP amendments using the GIS Analysis Tool.
3. Documentation of changes and analysis.
4. An Internet friendly GIS Analysis Tool.

Previous and Ongoing Related Work:

The Proposed Rules for the Federal Register Volume 65, Number 102, released on May 25, 2000, state that, "Transportation plan development and plans shall be consistent with Title VI of the Civil Rights Action of 1964, as amended and implementing regulations ... which ensure that no person shall, on the grounds of race, color, sex, national origin, age, or physical handicap, be excluded from the participation in, be denied benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal assistance from the United States Department of Transportation" (23 CFR §1410.316(c)). The Executive Order on Environmental Justice further amplifies Title VI by providing that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

OMPO has developed an Interim Title VI & Environmental Justice Plan that has been used to evaluate the distribution of transportation investments as part of the FYs 2000-2002 TIP

¹² Responsibility for the work in Task 4, 5 and 6 has been transferred to the Department of Planning and Permitting.

Amendment #3. In FY 2001, the consultant developed the 2025 ORTP evaluated projects proposed in the ORTP for compliance with Title VI and Environmental Justice populations.

OMPO developed a Title VI and Environmental Justice Monitoring Plan, comprised of a GIS Analysis Tool, procedures for using the tool to analyze OMPO's existing programs (OWP, TIP, ORTP, and public involvement process), and evaluation of these programs. The OMPO Policy Committee endorsed the final report in September 2001.

Identification of Need:

OMPO has incorporated Title VI and Environmental Justice concerns into its programs and has identified opportunities to enhance the Title VI and Environmental Justice efforts and analysis capabilities. Refinement and update of the GIS Analysis Tool is necessary to address time constraints and other issues that have been found as part of implementing the methodology in the September 2001 report

Impact of Work Element:

This work element will be implemented over a period of three years. It will evaluate projects in the FYs 2002-2004 TIP, FY 2004 OWP, FY 2005 OWP, and associated amendments, for impacts on the Title VI and Environmental Justice populations. If necessary, this work element will evaluate amendments to the ORTP and the public involvement process.

OMPO's participating agencies will be involved in this effort, and their metropolitan planning needs will be incorporated where appropriate and feasible. In addition, the work element will enable OMPO staff to continue to implement and maintain the Title VI and Environmental Justice procedures and program for the metropolitan planning process.

It will refine performance measures as appropriate to evaluate the effectiveness in engaging the participation of Title VI and Environmental Justice populations as well as the impact of proposed projects and programs on these populations. As a result, it will identify barriers to participation and ways to eliminate them, and examine the distribution of benefits and burdens of transportation investments to these populations.

Task(s):

1. Evaluate projects in the FYs 2002-2004 TIP, FY 2004 OWP, FY 2005 OWP, and associated amendments, for compliance with Title VI and Environmental Justice regulations.
2. Refine performance measures as appropriate to evaluate the effectiveness in engaging the participation of Title VI & Environmental Justice populations.
3. Implement these strategies as needed, and monitor the activities of the participating agencies during the OMPO planning process.
4. Consultant to assist in necessary hardware and software installation related to deployment of the web-based Title VI and Environmental Justice GIS Analysis Tool.
5. Consultant to provide technical support to OMPO, including system maintenance and system administration services.

6. Consultant to assist in updating the database used for the Title VI and Environmental Justice GIS Analysis Tool.
7. Administer related contract(s).
8. Include OMPO's participating agencies in the development and implementation of the review procedures as they relate to Title VI and Environmental Justice requirements for the metropolitan planning process.
9. Document Title VI and Environmental Justice accomplishments.

Milestones

Evaluation of FYs 2002-2004 TIP	December 2001
Evaluation of FYs 2004-2006 TIP	December 2003
Evaluation of TIP/OWP Amendments	As needed
Evaluation of ORTP Amendments	As needed
Evaluation of Public Involvement Program	As needed
Update of GIS Analysis Tool	July 2004
Contract Advertisement	Spring 2005
Contractor Selection	Summer 2005
Contractor Start Work	Fall 2005
Equipment Purchase	February 2004
Installation of Equipment	April 2004
System Administration and Maintenance	Ongoing, once equipment is installed

Estimated Completion Date: July 2006

Estimated DBE Opportunity: 10%

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
401,400		321,120		80,280	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planners	1.0	5,000
DOT-STP	Planners	1.0	5,000
DPP	Planners	1.0	5,000
DTS	Planners	1.0	5,000
OMPO	Planners/Engineers	10.4	60,300
	Support Staff	1.3	10,500
	<u>Other</u>		
DPP	Equipment: Server (e.g., Dell PowerEdge)		30,000
	Equipment: Internet Software (e.g., ArcIMS)		10,000
	Equipment: Operating System (e.g., WindowsNT)		5,000
	Consultant		250,000
OMPO	Overhead		15,600
Total:			401,400

Estimated Costs by Fiscal Year:

	<u>2002</u>	<u>2003</u>	<u>2006</u>	<u>Total</u>
Agencies	6,667	6,667	6,666	20,000
OMPO	22,200	25,400	23,200	70,800
Overhead	5,000	5,500	5,100	15,600
Consultant/Equipment		170,000 ¹³	125,000	295,000
Total:	33,867	207,567	159,966	401,400

¹³ The amounts previously designated as consultant (\$125,000) and equipment (\$45,000) have been combined (\$170,000).

**WORK ELEMENT 201.21-05 TITLE VI AND ENVIRONMENTAL JUSTICE
MONITORING**

Objective(s):

1. To assess the quality and level of participation of the populations covered by Title VI of the Civil Rights Act of 1964 and the requirements of the Environmental Justice Order 12898 in the metropolitan planning process.
2. To analyze and evaluate the benefits and impacts of transportation projects on the populations covered by Title VI and Environmental Justice regulations.

Product(s):

1. Analysis of the OWP and associated amendments, TIP and associated amendments, the public involvement program, and ORTP amendments using the GIS Analysis Tool.
2. Documentation of changes and analysis.

Previous and Ongoing Related Work:

OMPO developed a Title VI and Environmental Justice Monitoring Plan, comprised of a GIS Analysis Tool, procedures for using the tool to analyze OMPO's existing programs (OWP, TIP, ORTP, and public involvement process), and evaluation of these programs. The final report was endorsed by the OMPO Policy Committee in September 2001.

In early 2004, OMPO refined the designation of EJ block groups to include income data from the 2000 Census. OMPO also updated the safety performance measure with 2000 and 2001 crash data; and refined the methodology for applying accessibility and mobility performance measures to the Oahu Regional Transportation Plan.

Identification of Need:

This work element will continue efforts to analyze and evaluate OMPO's programs with respect to Title VI and Environmental Justice.

Impact of Work Element:

Successful implementation of this work element will enable OMPO staff to continue to implement and maintain the Title VI and Environmental Justice procedures and program for the metropolitan planning process.

It will apply performance measures as appropriate to evaluate the effectiveness in engaging the participation of Title VI and Environmental Justice populations as well as the impact of proposed projects and programs on these populations. As a result, it will identify barriers to participation and ways to eliminate them, and examine the distribution of benefits and burdens of transportation investments to these populations.

Task(s):

1. Evaluate the FY 2006 OWP, FY 2005 public involvement program, associated amendments to the FYs 2004-2006 TIP and FY 2005 OWP, and other OMPO projects for compliance with Title VI and Environmental Justice regulations.
2. Attend training sessions and workshops to enhance Title VI and Environmental Justice capabilities.
3. Sponsor workshops and/or training opportunities for agency staff.
4. Document Title VI and Environmental Justice accomplishments.

Milestones:

Evaluation of FY 2006 OWP	Spring 2005
Evaluation of TIP/OWP Amendments	As needed
Evaluation of ORTP Amendments	As needed
Evaluation of PIP	As needed

Estimated Completion Date: June 2005

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
51,905	41,524 ¹⁴			10,381	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DPP	Planners/Engineers	3.0	16,405
OMPO	Planners/Engineers	5.5	29,200
	Support Staff	0.2	1,000
OMPO	<u>Other</u> Overhead		5,300
		Total:	51,905

¹⁴HI-80-X013

**WORK ELEMENT 201.30-03 DEMONSTRATION OF ITS TECHNOLOGY FOR
USE IN COLLECTING CMS DATA (as amended)¹⁵**

Objective(s):

To demonstrate and evaluate an alternative Congestion Management System (CMS) data collection methodology as recommended in WE 201.01-01, Investigation of ITS Technology for Use in Collecting CMS Data.

Product(s):

Evaluation Report of Demonstrative ITS Technology

Previous and Ongoing Related Work:

The State of Hawaii Department of Transportation (DOT) completed the *Development of the State of Hawaii Congestion Management System* report in December 1999. Travel time/running speed data was collected to establish baseline conditions on the major regional roadway system.

In April 2001, a CMS Procedures and Responsibilities report was endorsed, which contained schedules for implementation, a description of how the CMS is structured, and identification of agencies' responsibilities. The foundation of Oahu's CMS was based upon processes used by the State Department of Transportation and City Department of Transportation Services in monitoring the transportation system and evaluating transportation strategies.

Since the development of the CMS, certain strategies and projects have been implemented. In 2001, DOT collected travel time/running speed data on the H-1 Freeway (zipper lane), Pali Highway, and Likelike Highway using the average-car technique to measure the effectiveness of some of these strategies.

However, the existing method of collecting travel time/running speed via the average-car technique using the Jamar Traffic Data Collectors (TDC-I) is very labor intensive. The manpower limitations of this methodology severely restrict the amount of data collected for the CMS. As such, research has been conducted to identify other types of technologies, which would ease the burden of collecting travel time/running speed data.

Discussions with the Florida Department of Transportation (FDOT) have resulted in the discovery that FDOT has evaluated an assortment of innovative traffic data collection technologies based on their potential benefits, within a Florida-specific context. Although available traffic-monitoring infrastructure has the capacity to provide much of the data necessary to support the FDOT's traffic management and traveler information needs, gaps persist with regard to geographic coverage, accuracy, and dependability. Based on what has been learned about probe-oriented traffic data collection solutions, it is widely believed that significant opportunities may exist for these technologies to cost effectively complement, and in some cases replace, traditional traffic data collection resources. The research focused on the following innovative data collection methods and recommendations for their implementation: In-Vehicle

¹⁵ As amended by the OMPO Policy Committee on March 23, 2004.

Transponders; License Plate Readers; Cellular Probes; Transit Automatic Vehicle Location (AVL); Private Fleet AVL and Management; and Telematics.

For the purpose of that study, innovative data collection methods were defined as those that facilitate the direct measurement of segment – “link” – travel times or average speeds along a roadway. This is in contrast to “point” sensors such as loop detectors, video image detectors (VIDs), and infrared and acoustic detectors, which characterize traffic flow at a specific location along the roadway.

- *In-Vehicle Transponders* - Several public entities across the country are currently using automatic vehicle identification (AVI) transponder-based technology to determine travel times and speeds on their roads. With 650,000 to 700,000 SunPass (Florida Turnpike) and E-PASS (Orlando Orange County Expressway Authority) transponders operating statewide, Florida is a logical candidate for this data collection method.

While invasion of privacy could become an issue, existing systems have successfully overcome this potential problem by scrambling the transponder number and/or deleting user identification information once a travel time has been calculated.

- *License Plate Readers (LPR)* – This technology uses optical character recognition technology to identify license plate numbers and convert them to electronic identifiers. This method has essentially the same functionality as transponders-based systems, but does not require that the vehicle be equipped with a transponder. As a result, it has the potential to operate successfully even in areas where transponder penetration is low, as could very well be the case in Northern Florida. Applied extensively in the United Kingdom and undergoing testing in Oregon, the use of license plate readers to determine travel times is a data collection method that should be given careful consideration.

As with transponder-based systems, invasion of privacy is an issue that could impact implementation of this data collection method. However, this problem can be addressed by eliminating the first and last character from the electronic identifier of the plate, thereby preventing exact correlation between the identifier and the actual plate.

- *Cellular Probes* - In the United States, deployment of technologies for wireless handset location has been driven by regulatory mandates related to E911 (Enhanced 911). On June 12, 1996, the Federal Communications Commission (FCC) established a timetable within which mobile phone companies were required to be able to locate wireless callers' physical locations when the caller dials 911.

Several vendors developing location solutions to satisfy the FCC's E911 mandate have also indicated that aside from providing latitude and longitude information for individual phones, their technologies can also provide velocity and direction for significant numbers of phones being transported in vehicles, and therefore real-time traffic information.

Consequently, once wireless carriers have deployed an E911 location system for use, it might also be utilized as a platform for the provision of other location-based applications, including the provision of traffic information to government agencies and private entities.

However, due to the great degree of uncertainty concerning available cellular phone tracking techniques and technologies, results of our research lead us to conclude that FDOT should not engage in any specific projects or initiatives at this time. Rather, FDOT should continue to monitor the evolution of E911 and consider conducting such activities in the future as appropriate.

- *Transit Automatic Vehicle Location (AVL)* - As there are many transit fleets currently operating in Florida, a potentially cost-effective method for assessing traffic conditions would be to use buses equipped with AVL (e.g., GPS devices) as probe vehicles. However, no such systems are currently in operation anywhere in the country. Research identified a test of this concept in Orange County, California, where the Orange County Transportation Authority used 15 AVL-equipped buses as probe vehicles. However, Orange County Transportation Authority's analysis found little correlation between speed estimates determined by the transit probe algorithm and recorded automobile speeds. Problems with the analysis of project data were related to the fact that the algorithm failed to distinguish between actual congestion and normal stopping delays, especially when buses ran ahead of schedule.

Results of this analysis indicate that, due to problems related to the collection of accurate data from such systems, FDOT should, for the time being, simply monitor progress in this area in order to determine whether new applications have been developed that can overcome the inherent complexity of using transit vehicles as probes.

- *Private Fleet Automatic Vehicle Location (AVL)* - Given the widespread deployment of fleet management systems such as Qualcomm's OmniTRACS (currently installed on approximately 300,000 long-haul tractors in North America), it appears that it might be possible to employ vehicular location and speed data from these systems to develop aggregate representations of traffic conditions on roads nationwide. Aside from benefits to drivers in general, the development of accurate, real-time traffic information on inter-city highways would likely provide significantly greater benefits to the operators of commercial vehicles themselves. However, at this time, Qualcomm is not interested in utilizing their data for traffic monitoring purposes.
- *Telematics* – Automobile manufacturers around the world are working to develop systems and applications that will allow them to interact with their vehicles via wireless communications for purposes related to safety, security, convenience, and vehicle maintenance. These systems, collectively known as "telematics" systems, may also facilitate the use of vehicles as traffic probes; with the telematics system acting much like transit or private fleet AVL systems. As penetration of telematics devices in automobiles and other vehicles increases during the next decade, real opportunities will arise for telematics service providers to collect and aggregate traffic data based on the movement of their subscriber base. However, it is highly probable that, for the time being, any traffic data collected from in-vehicle telematics devices will simply be used to supplement traffic data purchased from aggregators/disseminators of traffic content such as Westwood One and Mobility Technologies. In the interim, FDOT should make an effort to continue monitoring developments in the telematics field.

Results of the initial transponder-based data collection field test indicate that, although several viable options likely exist for assessing travel times along the Florida Interstate Highway System, not all are appropriate to conditions in different portions of Florida. As a result, multiple program delivery options will likely be needed for data collection in different areas.

Identification of Need:

The current work element, as previously amended, proposed to research and identify other types of technologies that would ease the burden of collecting travel time data. The existing method of collecting travel time/running speed via the average-car technique is generally understood as being very labor intensive. The manpower limitations of this methodology severely restrict the amount of data collected for the CMS.

Based on discussions with FDOT involving the collection of travel time data, it appears that LPR offer great promise for collecting travel time data in Hawaii. LPR, which offer data similar to that collected via the tracking of transponders but without the need for toll tags, offer great promise for collecting travel time data, especially in areas with low penetrations of transponders. LPR, due to their ability to monitor a larger percentage of traffic, have the potential to monitor travel times even more effectively. Additionally, as LPR-based systems do not require that monitored vehicles be equipped with any type of supplemental equipment, this technology may offer a solution in areas where transponder-based systems are not well established, like Hawaii.

A demonstration project is needed to evaluate the LPR in Hawaii. Field tests will allow an evaluation of the recommended technology under local conditions. The report by FDOT also indicates that the Oregon Department of Transportation is also carrying out a traffic data collection project using license plate scanning technology.

Impact of Work Element:

This work element will enable agency staff to apply the ITS-related travel time data collection methodology that was selected as part of WE 201.01-01, Investigation of ITS Technology for use in Collecting CMS Data.

Task(s):

1. Contractor to apply selected ITS-related travel time data collection methodology to a travel corridor as determined by the HDOT. Contractor will collect, extract, analyze, and document travel time data. Contractor to provide software, equipment, installation, and ancillary services for demonstration project.
2. Prepare an Effectiveness Evaluation Report for the analyzed travel corridor.
3. Agency staff to review Effectiveness Evaluation Report in meeting the OMPO CMS requirements.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
471,000		376,800		94,200	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-HWY-T	Planners/Engineers	12.0	110,000
DTS	Planners/Engineers	2.0	15,000
OMPO	Planners/Engineers	2.2	12,400
	Support Staff	0.3	1,300
	<u>Other</u>		
DOT-HWY-T	Contractor for Travel Time Data Collection Demonstration		330,000
OMPO	Overhead		2,300
		Total:	471,000

**WORK ELEMENT 201.33-04 SIMULATION OF WESTBOUND INTERSTATE H-1
FREEWAY BETWEEN THE AIRPORT AND
WAIKELE DURING THE WEEKDAY AFTERNOON
PEAK**

Objective(s):

To use computer simulation to evaluate potentially beneficial westbound freeway improvements between the Honolulu International Airport and Waikēle.

Product(s):

1. Interim memoranda summarizing preliminary findings.
2. Final technical report evaluating and making recommendations about various options in terms of vehicle delay and average speed. Cost, feasibility, and environmental impacts will not be addressed.

Previous and Ongoing Related Work:

In February 2002, the DOT collected most of the westbound afternoon traffic data required for the proposed computer simulation model. DOT also has collected much of the required information on westbound freeway geometrics.

Similar models have been developed for Interstate H-1 between Middle Street and Koko Head Avenue. Recommendations from these earlier models were incorporated as part of OMPO's *TOP 2025*.

Identification of Need:

There are numerous proposals to modify the westbound H-1 in the study area. Improvements that allow additional traffic to rush past upstream bottlenecks may create new or worsen existing downstream bottlenecks. Traffic simulation by computer is an appropriate tool to separately evaluate each proposed improvement and to determine the most effective combination of options.

8 westbound lanes (4 from H-1, 2 from Moanalua Freeway, 1 from H-3, and 1 from Aiea/Halawa) currently merge down to 5 westbound freeway lanes by the Kaonohi Street bridge. A planned additional westbound lane (on the Waimalu viaduct) between Kaonohi Street bridge and the high-volume Pearl City off-ramp should substantially improve the existing afternoon bottleneck. Simulation of this committed project will help DOT determine the need for other westbound freeway improvements.

Impact of Work Element:

Although it may not be desirable to implement all project recommendations, estimates and comparisons of traffic delay are essential for effective planning and prioritizing of freeway improvements. This study will evaluate clearly defined alternatives for westbound freeway improvements in terms of each alternative's potential for reducing total westbound traffic delay

and congestion. Once a reliable KRONOS Version 8 simulation model of existing afternoon conditions has been developed, the model will be used to analyze:

- Traffic impacts of the planned additional westbound lane on the Waimalu Viaduct.
- The need for and benefits of adding a second lane to off-ramp 8-B to Waipahu (after a westbound lane is added on the Waimalu Viaduct).
- The need for and benefits of adding a fourth lane to westbound H-1 through the Waiawa Interchange (after a westbound lane is added on the Waimalu Viaduct).
- Traffic impacts of modifying high-occupancy vehicle (HOV) lane requirements.
- Benefits and drawbacks of adding a westbound afternoon contraflow lane which merges into the northbound H-2, westbound H-1, or both at the Waiawa Interchange.
- Benefits and drawbacks of metering access to the westbound H-1 from the Aiea/Halawa on-ramp, H-3 on-ramp, or both.
- Other “what if” ideas selected by an oversight committee.
- Combinations of various scenarios selected by an oversight committee. For example, if State and City policy makers propose transit or highway improvements outside the H-1 corridor, the project model can be used to evaluate how diversion of traffic will reduce traffic delay on the westbound H-1.

Task(s):

1. Acquisition, evaluation, and summary of input data including traffic volume on all ramps, traffic speed, and freeway geometrics.
2. Multiple simulations using different parameter settings (model calibration) to determine the settings which most reliably replicate actual freeway traffic congestion (base case).
3. Simulations of various alternative scenarios and combinations of scenarios.
4. Summary of simulation results.
5. Comparisons and recommendations.
6. Written technical report.

Estimated Completion Date: November 2005

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
97,500		78,000		19,500	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-HWY-P	Planners/Engineers	1.5	10,000
	<u>Other</u>		
DOT-HWY-P	Consultant		87,500
Total:			97,500

Estimated Costs by Fiscal Year:

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>Total</u>
Agencies	0	7,000	3,000	10,000
Consultant	734	76,266	10,500	87,500

WORK ELEMENT 201.35-04 FORECASTING MODEL SUPPORT

Objective(s):

To support the ability of the OMPO participating agencies to run the OMPO travel forecasting model.

Product(s):

1. Transportation modeling-related software
2. Maintenance of purchased software

Previous and Ongoing Related Work:

OMPO has developed a revised travel forecasting model to be used for planning and forecasting travel patterns. These models are based on commercial software applications. OMPO and its participating agencies have purchased some of this software.

Identification of Need:

As part of the modeling effort, the agencies have asked OMPO to help finance the additional software and tools needed to run the models. This work element will help to purchase and maintain these tools.

Impact of Work Element:

This work element will allow OMPO and its participating agencies to run the travel forecasting model, do analysis as requested, and provide the Policy Committee and others with the technical analysis needed to make transportation decisions.

Task(s):

1. OMPO and its participating agencies to purchase needed software.
2. OMPO and its participating agencies to maintain the contracts on software needed to run the OMPO travel forecasting model.

Estimated Completion Date: June 2005

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
40,150		32,120		8,030	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-STP	Planners/Engineers	0.5	2,750
OMPO	Planners	0.2	1,100
	Support Staff	0.2	800
	<u>Other</u>		
DOT-STP	Software Purchase		
	VIPER		10,000
	Maintenance Cost		
	VIPER		12,000
	MINUTP		600
OMPO	Overhead		300
	Maintenance Cost		
	VIPER		12,000
	MINUTP		600
		Total:	40,150

**WORK ELEMENT 201.37-04 SPECIAL TABULATION OF 2000 CENSUS DATA
TO REVISED OAHU TAZS**

Objective(s):

To tabulate the 2000 Census data by Traffic Analysis Zone (TAZ).

Product(s):

2000 Census Transportation Planning Package Data tabulated by TAZ.

Previous and Ongoing Related Work:

The Census Transportation Planning Package (CTPP) is a set of special tabulations from the decennial census designed for transportation planners. The CTPP contains tabulations by place of residence, by place of work, and for flows between home and work.

For the 1990 census, Oahu had 320 TAZs and received the census data tabulated to these zones. This data was used in the development of the transportation models and to respond to queries from the public, legislators, and private consultants.

During the development of the OMPO forecasting models, a new TAZ system was developed that utilized 762 TAZs. The boundaries of these TAZs had to be reconciled with the revised 2000 census block groups. This work was done as part of Work Element 201.25-03. Because this reconciliation was completed after the deadline established by the U.S. Census Bureau, a special tabulation is needed in order to receive CTPP data by TAZs.

Identification of Need:

The OMPO travel forecasting model uses worker flows and vehicle ownership developed from the census data in the CTPP. Census data by TAZ is also an integral part of the Title VI and EJ monitoring system.

Impact of Work Element:

This work element will allow OMPO to integrate 2000 census data into the OMPO travel forecasting models and to continue it's monitoring of the Title VI and EJ planning process.

Task(s):

1. Contract with the U.S. Census Bureau to do a special tabulation of the 2000 census data by OMPO's revised TAZ system.
2. Prepare boundaries and other information for submittal to the U.S. Census Bureau.
3. Review results of the tabulation and integrate into the planning process.

Estimated Completion Date: December 2004

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
30,200	24,160 ¹⁶			6,040	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planners	0.25	1,300
DOT-STP	Planners/Engineers	0.25	1,300
DPP	Planners	0.5	2,500
DTS	Planner	0.25	1,300
OMPO	Planners	0.4	2,000
	Support Staff	0.1	400
DBEDT	<u>Other</u> Software: ArcView		6,000
OMPO	Overhead		400
	Contractor (U.S. Census Bureau)		15,000
		Total:	30,200

¹⁶ FTA funded HI-80-X012.

WORK ELEMENT 201.39-04 LAND USE FILE UPDATE SYSTEM

Objective(s):

To establish Land Use File (LUF) update capabilities in order that the land use data is responsive to the needs of the transportation planning process.

Product(s):

1. An online system for updating DPP's LUF, based on the City's GIS structure and the POSSE work management system.
2. Digital maps that depict existing land use based data in the LUF in relation to transportation facilities.

Previous and Ongoing Related Work:

The City's LUF is the source of all land use data that provide input to the transportation planning process. The file not only describes existing conditions, it provides the data that serves as the basis for land use forecasting, which is essential to the preparation of transportation plans and in particular to travel demand forecasting.

Created in the mid-1960's during the Oahu Transportation Study, the LUF had been updated annually by the City since 1973. The file was updated using an online system developed by the City's Department of Information Technology (DIT). The update system tracked data dealing with land subdivisions, building permits, zoning, ownership, and various geographic and statistical boundaries.

In 1999 the DPP converted to a new permit management software, POSSE. An update system has not been fully developed within the POSSE environment. Improvements to the procedures developed to date are needed to effectively update the LUF in order to benefit transportation planning.

Identification of Need:

Up-to-date land use data is needed to support the long-range transportation planning functions of the City. It will enable OMPO, the City, and the State to meet the Federal requirements to be eligible for Federal funding to carry out transportation improvements. Valid and updated data is especially critical to the preparation of land use forecasts on which transportation plans are based.

Impact of Work Element:

Improvement to the existing update system needs to be developed within the POSSE environment. This work element will enable the LUF to be updated in a timely and consistent way. The resultant land use data will be current and valid in terms of capturing land use trends and development policies.

Task(s):

1. Consultant to identify data update needs relative to transportation needs.

2. Consultant to review the functions of the DIT update system and the resources available in the City's GIS structure and POSSE work management system.
3. Consultant and DPP to design and develop new update system to optimize benefits to transportation planning.
4. DPP and consultant to test and validate new update system.
5. Consultant to generate new hard copy maps depicting existing land use using data in the LUF.
6. OMPO and its participating agencies will use the land use data in the transportation planning process.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
202,750		162,200		40,550	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-STP	Planners/Engineers	0.5	2,750
DPP	Planner	8.0	40,000
	<u>Other</u> Consultant		160,000
		Total:	202,750

WORK ELEMENT 201.40-04 MAINTENANCE OF THE OAHU ITS REGIONAL ARCHITECTURE

Objective(s):

1. To establish a method for maintaining the Oahu Regional Intelligent Transportation Systems (ITS) Architecture.
2. To enhance the ITS capabilities of Oahu's transportation planning process.

Product(s):

1. Methodology and procedures to maintain the Oahu Regional ITS Architecture.
2. Enhanced documentation on the Oahu Regional ITS Architecture.
3. Procedures to amend the Oahu Regional ITS Architecture.
4. Up-to-date Oahu Regional ITS Architecture.

Previous and Ongoing Related Work:

OMPO began development of the Oahu Regional ITS Architecture in 2001 and completed the architecture in April 2003, with its endorsement by the OMPO Policy Committee.

USDOT Rule 940 on regional ITS architectures, Section 940.9(F), states that "agencies and other stakeholders participating in the development of the regional ITS architecture shall develop and implement procedures and responsibilities for maintaining it (the architecture) as needs evolve within the region".

A policy was developed that pertained specifically to ITS Architecture Maintenance: "Policy A.5: The region will establish a method for maintain the ITS Architecture to ensure that eligibility for Federal transportation funding is maintained." The policy on ITS architecture maintenance for Oahu suggests an approach to comply with USDOT Rule 940. This will ensure that the region can continue to use Federal funds for ITS projects, and will ensure that the Oahu Regional ITS Architecture does not become obsolete.

Identification of Need:

This work element will provide a framework for updating and maintaining the Oahu Regional ITS Architecture.

Impact of Work Element:

Successful implementation of this work element will ensure that the Oahu Regional ITS Architecture is maintained. As a result of this ongoing maintenance, it will ensure that Oahu continues to receive federal funds for ITS efforts.

Task(s):

1. Utilize the existing ITS Organizational Structure ad hoc Task Force (see document endorsed by the OMPO Policy Committee on November 17, 2000) to act as the ITS Architecture Maintenance Stakeholder group.
2. Attend training sessions and workshops to enhance ITS capabilities.
3. Sponsor workshops and/or training opportunities for agency staff.
4. Ensure that proposed ITS projects in the Transportation Improvement Program (TIP) are consistent with the Oahu Regional ITS Architecture.
5. Develop procedures to amend the Oahu Regional ITS Architecture.
6. Amend the Oahu Regional ITS Architecture as necessary.
7. Document changes to the Oahu Regional ITS Architecture.

Estimated Completion Date: June 2004

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
33,600		26,880		6,720	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-HWY-T	Planners/Engineers	2.4	12,000
DTS	Planners/Engineers	1.0	5,000
OMPO	Planners/Engineers	1.9	10,900
	Support Staff	0.4	1,500
	<u>Other</u>		
DOT-HWY-T	Software (Turbo Architecture)		1,400
DTS	Software (Turbo Architecture)		600
OMPO	Overhead		2,200
		Total:	33,600

**WORK ELEMENT 201.41-05 MAINTENANCE OF THE OAHU REGIONAL
INTELLIGENT TRANSPORTATION SYSTEMS
ARCHITECTURE**

Objective(s):

1. To implement procedures for maintaining the Oahu Regional Intelligent Transportation Systems (ITS) Architecture.
2. To enhance the ITS capabilities of Oahu's transportation planning process.

Product(s):

1. Enhanced documentation on the Oahu Regional ITS Architecture.
2. Up-to-date Oahu Regional ITS Architecture.

Previous and Ongoing Related Work:

OMPO began development of the Oahu Regional ITS Architecture in 2001 and completed the architecture in April 2003, with its endorsement by the OMPO Policy Committee.

U.S. Department of Transportation (USDOT) Rule 940 on regional ITS architectures, Section 940.9(F), states that "agencies and other stakeholders participating in the development of the regional ITS architecture shall develop and implement procedures and responsibilities for maintaining it (the architecture) as needs evolve within the region".

A policy was developed that pertained specifically to ITS Architecture Maintenance: "Policy A.5: The region will establish a method for maintaining the ITS Architecture to ensure that eligibility for Federal transportation funding is maintained." The policy on ITS architecture maintenance for Oahu suggests an approach to comply with USDOT Rule 940. This will ensure that the region can continue to use Federal funds for ITS projects, and will ensure that the Oahu Regional ITS Architecture does not become obsolete.

The OMPO Policy Committee endorsed the ITS Procedures and Responsibilities Report on September 29, 2003.

Identification of Need:

This work element will continue efforts updating and maintaining the Oahu Regional ITS Architecture.

Impact of Work Element:

Successful implementation of this work element will ensure that the Oahu Regional ITS Architecture is maintained. As a result of this ongoing maintenance, it will ensure that Oahu continues to receive federal funds for ITS efforts.

Task(s):

1. Utilize the existing ITS Organizational Structure ad hoc Task Force (see document endorsed by the OMPO Policy Committee on November 17, 2000) to act as the ITS Architecture Maintenance Stakeholder group.
2. Attend training sessions and workshops to enhance ITS capabilities.
3. Sponsor workshops and/or training opportunities for agency staff.
4. Ensure that proposed ITS projects in the TIP are consistent with the Oahu Regional ITS Architecture.
5. Amend the Oahu Regional ITS Architecture as necessary.
6. Document changes to the Oahu Regional ITS Architecture.

Estimated Completion Date: June 2005

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
34,500		27,600		6,900	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-HWY-T	Planners/Engineers	2.0	11,300
DTS	Planners/Engineers	2.0	11,300
OMPO	Planners/Engineers	1.6	9,100
	Support Staff	0.3	1,000
OMPO	<u>Other</u> Overhead		1,800
		Total:	34,500

**WORK ELEMENT 201.50-05 LAND USE MODEL ENHANCEMENT AND
DEMONSTRATION**

Objective(s):

To enhance the DPP's land use simulation model by improving the definition and spatial representation of land use in the model and to demonstrate the capabilities of the model in land use and transportation planning.

Product(s):

This work element will produce an updated land use simulation model, based on the UrbanSim framework, capable of realistically representing the full range of land use activities encountered in land use and transportation planning, including residential and specific non-residential uses such as hotel, office, retail, industrial, public, military and agriculture. The updated model will include a revised database, organized around smaller spatial units of analysis (called grid cells) than are currently implemented. The model will also include re-specified and re-estimated models for the prediction of land values, household and employment location choices, and developer decisions.

Previous and Ongoing Related Work:

An experimental land use model has been in the works for DPP as part of the larger OMPO Model Development project, intended to replace DPP's current model, which was developed in-house almost 20 years ago. The new model is based on UrbanSim, a land use modeling program developed by researchers at the University of Washington that simulates the dynamics of the real estate market, taking into account the actions of households, employers and developers. A consultant team is in the process of completing the model, using data provided by DPP. Ongoing work includes integration and testing of the land use model with the OMPO travel demand model. It is in its final stages of evaluation, to be concluded in February 2004.

Identification of Need:

Land use and demographics reflect the spatial patterns of the regional economy and are essential inputs to the OMPO regional travel demand model. DPP supplies OMPO with both base-year and forecast-year land use and demographic data, summarized at the level of the traffic analysis zone (TAZ), of which there are 762 covering Oahu. DPP's current model produces forecasts based on aggregate zonal data, using the gravity model construct to capture the observed historical development trends. The development of the experimental land use simulation model based on UrbanSim was intended to explore the possibility of producing forecasts at the disaggregate level, capturing the locational behavior of the individual household and firm, in a construct that is consistent with economic theory. Part of this theory is the notion of accessibility between households and businesses, as represented by the regional transportation network.

The UrbanSim-based model developed to date accomplishes these general goals; however, there are at least two structural improvements that must be made in order for the model to provide the desired analysis capabilities. In its current form, the simulation utilizes generalized definitions of "development types" based solely on the number of residential units and non-residential square footage within a 150-meter square grid cell. In other words, each cell can have only one

land use, and that use is classified only on the basis of the number of residential units and non-residential floor area. These generalized development types are insufficient for representing the myriad of land uses that characterize the island, such as resort areas, mixed-use corridors, military installations, and agricultural lands. Moreover, 150-meter grid cells (approximately 5.6 acres) have proved to be too coarse to represent development within the Honolulu urban core. Revising the definition of these development types and the use of smaller grid cells are needed to provide the resolution needed to analyze development patterns in Honolulu.

Impact of Work Element:

Redefinition of development types and the use of smaller grid cells are necessary in order to analyze current and alternative future development policies. Once these enhancements have been made, the land use model will be able to address such issues as:

- Impacts of alternative transportation plans on local land uses;
- Impacts of land development plans on the transportation system;
- Analysis of alternative land use restrictions and growth management policies.

Task(s):

1. Redefinition of development types based on residential densities and non-residential building types and floor area, including but not limited to hotel/resort, office, retail, industrial, public, agricultural, and military facilities.
2. Re-specification, re-estimation and re-calibration of UrbanSim sub-models that use development types, including the land price model, household location choice model, employment location choice model and developer model. An essential sub-task under this is preparation of estimation/calibration data sets, if needed to augment what was used previously.
3. Re-creation of model data base tables that define/restrict or use development types, including tables related to allowable transitions, development constraints, space requirements for jobs, and committed development events.
4. Conversion of the existing 150-meter square grid cell system to a smaller grid cell system, possibly as small as 65 meters (roughly one acre).
5. Re-allocation of base-year grid cell attributes to the smaller grid cell system, including the placement of base-year housing units, non-residential square footage, household locations, job locations, land value, improvement value, and environmental attributes such as presence of open space, steep slopes, water courses, wetlands, flood plains, and roadways.
6. Demonstration of the capabilities of the enhanced model by generating year 2030 land use forecasts based on alternative growth assumptions.

Estimated Completion Date: June 2006

WORK ELEMENT 202.06-04 OAHU REGIONAL TRANSPORTATION PLAN

Objective(s):

To update the regional transportation plan to ensure that it addresses Oahu's transportation needs through 2030.

Product(s):

1. Negotiated contract for the update of the Oahu Regional Transportation Plan (ORTP).
2. Development of the ORTP.

Previous and Ongoing Related Work:

Metropolitan planning regulations jointly issued by FHWA and FTA require metropolitan planning organizations such as OMPO to develop a transportation plan that includes both long-range and short-range strategies and actions that lead towards the development of an integrated intermodal transportation system. This plan must have at least a 20-year time horizon and, in OMPO's situation, must also be updated at least every five years.

After more than a year of public review, the OMPO Policy Committee approved a 2020 regional transportation plan on November 7, 1995. The public review process included six public information meetings (which were broadcasted on public access television), a two-page newspaper ad describing the plan with a mail-back survey, letters/flyers soliciting public comments, involvement of the OMPO Citizen Advisory Committee (CAC), and numerous presentations to community groups and interested organizations.

In March 2000, OMPO began an update of the 2020 regional transportation plan in compliance with the federal requirements. An extensive public outreach program was also undertaken as part of this update effort. New public involvement strategies implemented during this update effort included special interest focus group sessions, Internet interactions, and a random scientific telephone survey. The Policy Committee approved the 2025 ORTP on April 6, 2001.

Impact of Work Element:

The updated ORTP will serve as a blueprint for identifying and prioritizing the development of future surface transportation improvements and strategies on Oahu. This will result in an integrated, intermodal transportation system capable of facilitating efficient and effective movement of people and goods. As part of the ORTP effort OMPO will investigate project prioritizing tools such as time bins.

The update is anticipated to take two years from the time a consultant is brought on board. This work element will initiate the update of the ORTP by providing for the development of the contract scope; advertising, selecting, negotiating, and awarding the contract; and establishing the early components to the ORTP update effort. This work element identifies costs to FY 2004 and reflects initial activities related to the update of the ORTP. The endorsement of the ORTP is anticipated by April 2006. The cost of the consultant contract is through the completion of the

ORTP (commitment of funds for the consultant contract must be secured before the contract is executed).

Major work on the ORTP is anticipated in FYs 2005 and 2006. Endorsement of the ORTP by the Policy Committee is expected by April 2006.

Task(s):

1. OMPO and agencies to develop contract scope.
2. Agencies and OMPO to develop and review social-economic projections.
3. OMPO to advertise, negotiate, award, and administer the contract.
4. Consultant to update the ORTP.
5. OMPO to attend meetings; make presentations to organizations, agencies, and individuals requiring information or briefings on the ORTP process, products, or related activities; and solicit input.
6. OMPO to coordinate ORTP effort with agencies, TAC, CAC, and the Policy Committee.
7. OMPO and agencies to assist in the development of needed data and participate in the review of work products.

Estimated Completion Date: June 2006

Estimated DBE Opportunity: 10.5%

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
999,900		799,920		199,980	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Planners/Engineers	2.0	10,000
DOT-HWY-P	Planners/Engineers	2.0	10,000
DOT-STP	Planners/Engineers	2.0	10,000
DPP	Planners/Engineers	2.0	10,000
DTS	Planners/Engineers	2.0	10,000
OMPO	Planners/Engineers	12.8	78,600
	Support Staff	1.5	6,400
OMPO	<u>Other</u>		
	Overhead		14,900
	Consultant		850,000
		Total:	999,900

WORK ELEMENT 202.30-02 FORECASTING MODEL APPLICATION

Objective(s):

To enhance the technical linkage between the recently-developed travel demand forecasting model and the traditional analytical techniques for transit and traffic operation.

Product(s):

User's Guide and work examples to clearly document the applicability of the model and its by-products for analysis and evaluation of transportation policies and facilities.

Previous and Ongoing Related Work:

OMPO's travel demand model is in its final stages of completion and documentation by the consultant. The City and County of Honolulu has utilized an early version of the model for its PCTS. An updated version of the model is currently being used for the ORTP update.

OMPO and agency staffs have been orienting themselves with the new model and anticipate using it for analysis of several planning projects including the Congestion Management System (CMS) and the Title VI and Environmental Justice Monitoring Plan.

Identification of Need:

The new model has been developed to address the critical planning requirement to forecast long-range regional transportation demand in response to the future land use and socio-demographic change and growth of the region. The model is capable of producing other useful information in addition to the regional travel demand in terms of the total trips by mode of travel. However, the information is often not located clearly or easily retrievable. Therefore, as part of this work element, OMPO and agency staff will investigate the modeling details for enhanced use of the model.

Impact of Work Element:

The completion of this work element will give staff a higher level of confidence in the application of transportation demand forecasts.

Task(s):

1. Consultant to provide technical support to OMPO and agency staff in applying the model for various transportation needs and purposes. These needs and purposes could include adjusting the model inputs for CMS, Title VI and Environmental Justice, Transportation Demand Management (TDM), and air conformity analysis.
2. OMPO and agency staff to run the model for various purposes and analyze the results.
3. Consultant to develop a detailed User's Guide documenting the steps involved in accessing and changing the appropriate model inputs, running the appropriate application(s), and accessing the results needed to analyze and evaluate transportation policies and facilities.
4. OMPO and agency staff to review the Consultant products.

Estimated Completion Date: December 2005

Estimated DBE Opportunity: 1% of consultant contract

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
119,900		95,920		23,980	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DOT-HWY-P	Planners/Engineers	2.25	11,250
DOT-STP	Planners/Engineers	2.25	11,250
DTS	Planners/Engineers	4.0	20,000
OMPO	Planners/Engineers	6.5	36,000 ¹⁷
	Support Staff	1.0	4,500 ¹⁶
OMPO	<u>Other</u>		
	Overhead		6,900 ¹⁶
	Consultant		30,000
		Total:	119,900

¹⁷ Administrative Amendment made in May 2002.

WORK ELEMENT 202.35-03 SELECTION OF ENHANCEMENT PROJECTS FOR OAHU

Objective(s):

To enable the City and the State transportation departments to program federal funds allocated for transportation enhancement activities under 23 U.S.C., Section 133(d)(2).

Product(s):

A list of activities to be programmed in the TIP and STIP using federal funds allocated for transportation enhancement activities.

Previous and Ongoing Related Work:

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and later the Transportation Efficiency Act for the 21st Century (TEA-21) established the transportation enhancement program which strives to strengthen the cultural, aesthetic, and environmental aspects of the intermodal transportation system. Enhancement activities must be over and above normal expenditures for transportation improvements and have a direct relationship to the intermodal transportation system.

In 1996, HDOT developed the criteria and process for selecting the projects and activities that will use federal enhancement funds. Under this process, HDOT has the primary responsibility for the enhancement program, and OMPO, in cooperation with the State and the transit operators, prioritizes the enhancement projects for Oahu.

In 1997 and 1998, OMPO took the lead in developing the list of enhancement projects for Oahu. Many of the projects on this list have been included in past TIPs and been completed. OMPO feels that it is time to review the remaining projects and consider additional projects that may be found to be of a higher priority given the number of years that have passed since the original list was developed.

Identification of Need:

It is necessary to develop a prioritized list of projects that has been approved by the Policy Committee in order to include these projects in the TIP to qualify for federal enhancement funds.

Impact of Work Element:

Ten percent of the funds apportioned to the State of Hawaii under FHWA's Surface Transportation Program are available only for transportation enhancement activities. This work element will allow OMPO to objectively rank the projects proposed to use enhancement funds.

Task(s):

1. DOT to issue a call for enhancement projects.
2. DOT to determine the eligibility of the submitted projects.

3. OMPO Policy Committee to agree that the projects are not inconsistent with the TOP 2025 and should be considered for possible inclusion in the OMPO TIP.
4. OMPO to follow the public involvement procedures outlined in the OMPO GPI.
5. OMPO to form an evaluation panel to assist the Policy Committee in reviewing and prioritizing all eligible Oahu projects.
6. OMPO TAC and CAC to review and comment on the Evaluation Panel's prioritized list of projects.
7. OMPO Policy Committee to finalize the prioritized list of projects.

Estimated Completion Date: July 2005

Estimated DBE Opportunity: None

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
51,800		41,440		10,360	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT-OP	Planners/Engineers	1.0	5,000
DOT-HWY-P	Planners/Engineers	2.0	10,000
DPP	Planners/Engineers	1.0	5,000
DTS	Planners/Engineers	2.0	10,000
OMPO	Planners/Engineers	2.7	16,000
	Support Staff	0.6	2,600
OMPO	<u>Other</u> Overhead		3,200
Total:			51,800

**WORK ELEMENT 203.30-00 KANEOHE TOWN TRAFFIC CIRCULATION
STUDY**

Objective(s):

To conduct an area-wide traffic circulation study to identify and quantify existing deficiencies in traffic circulation in the Kaneohe town area. Identify and develop a traffic engineering plan including traffic management and operational programs, conceptual designs, and cost estimates of infrastructure improvements as part of the scope of a larger Kaneohe Town community study.

Product(s):

1. Traffic circulation and operational analysis and evaluation.
2. List of recommended improvements, their associated cost estimates, and potential sources of funds.
3. Public involvement/participation via meetings/hearings.

Previous and Ongoing Related Work:

The project would review prior studies, including, but not limited to, the ORTP, November 1995.

Identification of Need:

There are two parallel arterial roadways, Kamehameha Highway and Kahekili Highway, that run through all or a portion of Kaneohe Town. Limited neighborhood access exists for travel within or between the various neighborhoods. Therefore, a traffic circulation study needs to be conducted to ascertain what could be done to mitigate the current situation.

Impact of Work Element:

This traffic circulation study will identify and quantify existing deficiencies in traffic circulation in the Kaneohe town area and develop a traffic engineering plan.

Task(s):

1. Preparation of detailed work plan and schedule and development of goals and objectives.
2. Evaluation of existing data and compilation of additional information including accident reports, complaints. The development and implementation of a public involvement program that, in addition to the general public, seeks to involve the area businesses, police, fire, and emergency medical response agencies.
3. Evaluation and analysis of actions and measures to resolve the deficiencies in traffic circulation.
4. Development of a traffic engineering plan including traffic management and operational programs.

5. Preparation of preliminary cost estimates, implementation schedules, and potential funding sources.
6. Preparation of the final report documenting study methodology, evaluation criteria, and recommendations of projects by priority for implementation.
7. Identification of environmental clearance approvals and documentation requirements.

Estimated Completion Date: Fall 2005

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
131,000		104,800		26,200	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DPP ¹⁸	Planners/Engineers	6.0	30,000
DPP	<u>Other</u> Consultant		100,000
	Other Direct Costs		1,000
		Total:	131,000

¹⁸DTS had oversight of this work element as it was originally written. However, oversight of this work element was transferred to the DPP in 1999.

**WORK ELEMENT 203.44-01 LIVABLE WAIKIKI: LINKING
TRANSPORTATION, LAND USE, AND
ENVIRONMENT**

Objective(s):

The Transportation and Community and System Preservation Pilot Program (TCSP) is part of the national "Livability Initiative" aimed to help citizens and communities preserve green spaces, ease traffic congestion, restore a sense of community, promote collaboration among neighboring communities, and enhance economic competitiveness. The objective of the plan is to advance the TCSP objectives of: 1) improve the efficiency of the transportation system, 2) reduce the need for costly future infrastructure investments, 3) ensure efficient access to jobs, services, and centers of trade, and 4) examine private sector development patterns and investments that support these goals. The TCSP will help further the transportation- and pedestrian-oriented policy introduced by the Joint Waikiki Task Force in 1999. The joint task force, which was established pursuant to the 1998 Legislature Senate Concurrent Resolution No. 191, S.D.2, H.D.1, C.D.1, was to be a forum for the coordination of plans and proposals for both public and private investment and actions needed to encourage revitalization of Waikiki. The task force recommended that, in order to enhance and recapture the magic of Waikiki, Waikiki must become a wonderful place to walk and stroll. Therefore, the task force emphasized the need to adopt and implement "A Pedestrian First Policy for Waikiki". As the initial steps in implementing the policy, the task force recommended the development of implementation plans as the tools to guide and coordinate the various elements of the policy. DTS was identified by the task force as the implementing agency, whose responsibilities include "securing the cooperation of the many other players critical to making the new Waikiki a pedestrian paradise".

Product(s):

1. Waikiki: Community Livability and Mobility Plan
2. Project Evaluation report

Previous and Ongoing Related Work:

The program will review prior studies, including, but not limited to the following:

- Primary Corridor Transportation Project Draft Environmental Impact Statement, August 2000
- Restoring the Magic of Waikiki, Report of the Joint Waikiki Task Force, December, 1999
- Honolulu Bicycle Master Plan, April, 1999
- Islandwide Mobility Concept Plan, March 1999
- Waikiki Regional Traffic Impact Plan, December 1995

- Oahu Regional Transportation Plan, November 1995
- Bike Plan Hawaii, A State Master Plan, April 1994
- Primary Urban Corridor Development Plan, currently awaiting adoption
- Island-Wide Traffic Calming Program, ongoing

The efforts of the ongoing Oahu Trans2K, Waikiki Vision team, Waikiki Improvement Association, Waikiki Neighborhood Board, and the Joint Waikiki Task Force have resulted in a number of projects that need to be coordinated with and made part of the analysis. Some of the projects arising out of the preceding include “Waikiki Comprehensive Landscape Plan”, “Waikiki Historic Trail Markers”, and the “Kapahulu Master Plan”. Additionally, coordination with the ongoing Primary Corridor Transportation Project and the public transit system's reconfiguration efforts needs to be conducted.

Identification of Need:

Waikiki has more than 20,000 residents and, in 1999, hosted 5 million visitors. Waikiki has the majority of Oahu's approximately 31,000 visitor accommodations. Waikiki is also a major employment center, employing approximately 36,000 people. The Joint Waikiki Task Force, recognizing the growing conflict between the pedestrian and vehicular traffic, recommended that a pedestrian-first policy for Waikiki be developed and implemented. The national “Livability Initiative”, of which the TCSP is part of, is focused to help citizens and communities preserve green spaces, ease traffic congestion, restore a sense of community, promote collaboration among neighboring communities, and enhance economic competitiveness. This work element would advance those recommendations.

Impact of Work Element:

The plan will advance the recommendations of the TCSP and Joint Waikiki Task Force to the next step towards implementation.

Task(s):

1. Prepare a work plan setting forth project management objectives, critical milestones, and submittal schedules. The work plan shall include a Public and Agency Involvement Plan identifying objectives, procedures, and a schedule.
2. Develop a community-based public involvement program. Community outreach programs like design charrettes, citizens training workshops, and public meetings will be used to gather/disseminate the various strategies and ideas for discussion and consensus. Coordination with ongoing efforts by the Primary Corridor Transportation Project/Oahu Trans2K, Waikiki Vision Team, Waikiki Neighborhood Board, Waikiki Improvement Association, and the Joint Waikiki Task Force is required to avoid duplicative efforts and ensure consistency with any completed plan and/or implementation. This community-based program will also be used to gain consensus during the formulation and preparation of the agreed upon strategies.

3. Identify and seek to create partnerships with the affected stakeholders. These stakeholders include but are not limited to the business community, hotel groups, transportation operators, public and safety agencies, and private developers. Outreach to and creation of partnerships with these stakeholders will help integrate their needs with transportation and community concerns.
4. Develop a vision and a series of goal statements to reflect the needs and desires of the stakeholders and the public received through community outreach. The specific objectives and strategies will then be identified. Develop a project evaluation plan that describes roles, responsibilities, project objectives, performance measures, evaluation methodologies, data sources, and schedule milestones. The evaluation plan will focus on the following three aspect of the project:
 - a. Process Evaluation: Building partnerships are an important objective of the project. New partners bring with them additional concerns and ideas regarding community preservation, economic development, and land development planning issues to name a few. As the project focuses to the project outcomes, partnership commitment and buy-in become important to forwarding ideas out of the planning phase and into implementation.
 - b. Product Evaluation: How successful was this project in achieving the objectives defined in the vision and goals statement, and in carrying out the desired TCSP outcome.
 - c. Outcome Evaluation: The goal to increase efficiency of the transportation system is an important objective for the Waikiki study area. An evaluation using forecasted performance measures such as modal split, time and cost savings will be utilized. Of specific interest would be to measure the shift to the alternative modes of travel, namely that of walking and bicycling.
5. Review prior reports, studies, and documents related to the plan.
6. Evaluate existing transportation and land use data and identify the critical issues related to pedestrian, bicyclist, transit, general vehicular, and commercial vehicle traffic. Develop road/street classification system, which identifies and establishes the roles of major streets and of mauka-makai streets in terms of preferential treatments for specific modes of travel such as pedestrian, bicycles, transit, commercial vehicles, and general traffic. Conduct the necessary technical analyses to develop the following components:
 - a. Plan and design pedestrian and bikeway facilities and supporting amenities/policies that encourage those activities in conjunction with the development of other livability enhancements. Recommended policy changes and proposed improvements need to be on a prioritized implementation schedule. Develop the appropriate evaluation criteria.
 - b. Prepare a transit component that would incorporate appropriate community service and/or multi-modal facilities. Defines convenient and practical pedestrian and vehicular access design and connection improvements; accommodates local transit riders and visitors with convenient opportunities to retail and service facilities in the area. Integration of transit

as a key component in enhancing Waikiki livability and its influence in community development should be emphasized.

- c. Review and identify traffic circulation and use of streets to establish priority usage of streets. The focus will be to facilitate travel for visitors, local residents, and area employers – including access to/from the residential areas and within the resort/commercial areas – while discouraging through traffic. This task will develop a critical element in supporting the establishment of Waikiki as a livable sustainable community. Recommendation of any policy changes and a classification of proposed improvements into a prioritized schedule. Develop the appropriate evaluation criteria.
 - d. Prepare a commercial vehicle movement and loading/unloading requirements plan. Identification and quantification of vehicular and pedestrian traffic issues at loading zones with input from the affected stakeholder(s) as well as area residents who may be affected by the proposed changes. Recommendation of facilitating alternatives, policy changes, and classification of proposed improvements into a prioritized implementation listing. Develop the appropriate evaluation criteria.
 - e. Develop a road/street classification system which identifies and establishes the roles of major streets such as Kalakaua Avenue, Kuhio Avenue, and Ala Moana Boulevard, and mauka-makai streets in terms of preferential treatments for specific modes of travel such as pedestrian, bicycles, transit, commercial vehicles, and/or general traffic that contributes toward achieving the livability goals.
 - f. An overall plan and standards for unified signs and markings to signify historic, cultural, as well as other features unique to Waikiki. Maps on sidewalks to aid the pedestrian should also conform to the unified designs standards.
 - g. A parking management plan that includes the development of a central parking facility to reduce the vehicular traffic within Waikiki will be prepared
7. Reconcile all the specific projects arising out of the foregoing analysis on transportation system performance, infrastructure cost, economic needs, and environmental impacts. The land use and community impacts of the transportation alternatives need to be considered. Conceptual design for transportation facilities and landscape elements will be prepared. Develop prioritization criteria, and use the criteria to identify a prioritized master schedule of projects.
 8. Prepare a project evaluation report that addresses the following three areas: 1) the process by which this project is implemented; 2) the products that result from this project; and 3) the outcomes in terms of either projected or actual benefits and costs.
 9. Develop and prepare a draft/final report.

Estimated Completion Date: June 2003

Estimated DBE Opportunity: 10% of the consultant contract

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>TCSP</u>	<u>Local M</u>	<u>Local S</u>
700,000		300,000	300,000	75,000	25,000

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DTS	Planners/Engineers	5.0	25,000

DTS	<u>Other</u> Consultant		669,000
	Other Direct Costs		6,000

Total: 700,000

WORK ELEMENT 203.46-02 THEBUS SYSTEMWIDE SURVEY AND DATA COLLECTION PROGRAM

Objective(s):

The objective is to establish an extensive database of the transit travel and socioeconomic characteristics of TheBus passengers.

Product(s):

The passenger survey will result in a detailed systemwide ridership database that details travel information for all trips by route, stop, and time-period.

Previous and Ongoing Related Work:

Many transportation planning projects have been recently completed or are underway that will achieve Oahu's transportation goal to develop and maintain the islandwide transportation system to ensure the efficient, safe, convenient, and economical movement of people and goods. Increased mobility and congestion relief are paramount to many of Oahu's transportation programs as well as air quality and other environmental and social concerns. These programs and projects include Oahu Trans2K, the Primary Corridor Project, and the Transit Service Plan (Phase I) and (Phase II) Projects. Under the Transit Service Plan (Phase I) project passenger surveys were conducted on Route 51 (no longer in existence) and on Routes 2 and 13. These surveys provided a successful test of the proposed survey instrument, procedures, and analysis methodology. The data collected showed many passengers had transportation needs beyond those that were met by the current route. As a consequence, new Route 40 was instituted with the first 24-hour service on Oahu. This 'owl' service has been well received and continues to grow. The data received from the Route 2 and 13 survey provided the information necessary to implement the successful CityExpress! Route B. The benefits derived from the use of these surveys demonstrated the need for a systemwide survey of all Oahu Transit Services, Inc. (OTS) fixed routes. Routes being surveyed in the Transit Service Plan (Phase II) project will not be re-surveyed in this work element project.

Identification of Need:

Many of the transportation projects and programs look for public transit to increase its mode or market share. However, no detailed current database of transit ridership exists to define the current market. This data is needed for planning efforts to identify the needs of current riders and to serve as a benchmark to measure the effectiveness of service changes. The project will provide this needed database on all OTS' fixed-routes.

Impact of Work Element:

Identifying the needs and travel patterns of current transit users is vital to developing new services to make public transit a more viable transportation alternative. The information provided will be used when determining where and what types of changes are needed.

Task(s):

1. Collect passenger survey data. The passenger survey will collect data by route, direction, and time period for all runs systemwide. The survey instrument will be compatible with the

survey conducted for Routes 2 and 13 and will be printed on cardstock and serial- numbered. Data to be collected will include:

- a. Trip origin and destination
 - b. Trip purpose
 - c. Access and egress mode to and from bus stops
 - d. Transfer connection
 - e. Fare paid
 - f. Length of bus use
 - g. Frequency of bus use
 - h. Age of passenger
 - i. Average trip length
 - j. Gender
 - k. Household income
 - l. Customer comments
2. Prepare control sheets to provide schedule adherence and overall running times for each route.
 3. Hire and train survey personnel to maximize survey participation and to ensure sensitivity to special needs passengers.
 4. Perform data coding and entry on returned surveys and control sheets. The data file will be provided in SPSS format.
 5. Consolidate data file with survey data received from the Transit Service Plan survey of Routes 2 and 13 and the data received from the survey conducted in Transit Service Plan (Phase II).
 6. Develop and implement a passenger outreach and marketing plan to promote participation in the survey and to report results back to passengers.
 7. Develop and implement a driver outreach plan to inform and encourage drivers to participate in the project.
 8. Prepare report of project results.

Estimated Completion Date: The project is expected to take four months to complete.

Estimated DBE Opportunity: 10% of the consultant contract

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
300,000		240,000		60,000	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DTS	Planners	8.0	60,000

DTS	<u>Other</u> Consultant		240,000
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Total: 300,000

WORK ELEMENT 203.50-03 TRANSIT SERVICE PLAN, PHASE III

Objective(s):

To develop and prepare a bus service operations plan for the Downtown area and adjoining neighborhoods. The plan would incorporate streamlining bus services along the major transit corridors and initiate livable communities principles for neighborhoods that are connected by community shuttle services and circulator services.

Product(s):

A report documenting a bus service plan that will serve as a guide to making operational improvements designed to streamline bus operations and make transit a more viable transportation alternative while maintaining the integrity and livability of Honolulu's neighborhoods.

Previous and Ongoing Related Work:

Previous bus operations studies The Comprehensive Operations Analysis, August, 1993; Weekend Bus Study, May, 1994; and Transit Operations Analysis, June, 1997 focused on efficiencies in transit operations and data collection. The Transit in the Neighborhood, December 1996, a community-based planning effort was initiated for only the Central, Leeward and Windward areas. These forerunners to this study envision integration of results from operations analysis, community-based planning efforts, and intelligent transportation systems (ITS) guidelines. A Transit Service Plan study has been conducted in the Leeward area of the island and the resulting implementation plan improved the efficiencies of transit operations by converting the existing Leeward service to a hub and spoke transit operation. A Transit Service Plan, Phase II is currently being conducted for Central Oahu.

Identification of Need:

The existing Downtown area bus routes, while they provide ample service to the community, are not operating at peak efficiency. The routes were designed over thirty years ago and do not provide intra-neighborhood shuttle service. Since the implementation of these routes over thirty years ago, neighborhoods in the urban center have undergone significant demographic and economic changes.

The express routes to and from the outlying areas run mainly in the morning and evening peak periods – requiring patrons traveling at other times to ride local lines, making multiple stops. Service must be made more efficient to provide on time, frequent and fast travel times to make transit the mode of choice.

Impact of Work Element:

This plan is to provide the City with a guide for making operational changes in the existing route bus system in order to emphasize:

- a. That transit service design must go above and beyond existing levels of service to entice single-occupant vehicle drivers to use transit by improving the frequency and speed of most service.

- b. That neighborhoods can be connected by efficient and frequent shuttle services that provide linkage to express buses and/or area circulator buses.
- c. That express buses that operate throughout the day will provide more incentive for the single-occupant vehicle drivers to use transit as an alternative of choice.

Task(s):

1. Review and become familiar with the current bus operations. Review the existing databases and identify additional data requirements.
2. Collect data and conduct passenger and route surveys as needed.
3. Develop and prepare a public participation and community involvement program for this work effort. The development and implementation of this community involvement program that seeks to involve the appropriate emergency response agencies affected constituent groups such as the occasional bus rider and the affected residents, in addition to the general public.
4. Develop, prepare, and describe service standards and guidelines to be followed in evaluation of alternative service scenarios.
5. Develop, prepare, and analyze alternative service delivery scenarios in concert with the public participating and community involvement program for this project.
6. Prepare operation plans for the major transit corridors that contribute positively to Oahu's sense of place.
7. Document, produce, and submit draft and final reports.

Estimated Completion Date: July 2003

Estimated DBE Opportunity: 10% of the consultant contract

Estimated Cost By Funding Source:

<u>Total</u> 600,000	<u>FTA</u>	<u>FHWA</u> 480,000	<u>STP</u>	<u>Local M</u> 120,000	<u>Local S</u>
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Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DTS	Planners/Engineers	6.0	50,000
DTS	<u>Other</u> Consultant		500,000
	Other Direct Costs		50,000
Total:			600,000

**WORK ELEMENT 203.52-03 KAMEHAMEHA HIGHWAY TRANSIT
IMPROVEMENTS STUDY**

Objective(s):

Develop and prepare a concept design of transit alignment, transit center site, and operational plan for transit-only contra-flow lanes on Kamehameha Highway between Pearl City/Aiea to Aloha Stadium.

Product(s):

A report that documents the analysis of routing alternatives, alternative transit center sites, and the traffic impacts associated with each alternative. This report will include conceptual engineering necessary to support alternative analysis. An assessment of environmental clearance and the supporting documentation will also be part of the report.

Previous and Ongoing Related Work:

1. The recently completed traffic studies for the Pearl City Bus Facility and the Manana Spine Road.
2. The ongoing Manana Sub-Area Traffic Study.
3. The ongoing Bus Rapid Transit effort.
4. The ongoing Primary Corridor Transportation Study.
5. The Aiea-Pearl City Livable Communities Initiative Study.
6. Kamehameha Highway Improvements from Waihona Street to Center Drive.

Identification of Need:

The continuing development and re-development along the identified segment of Kamehameha Highway has led to an increase in traffic. There is a need to increase the people carrying capacity of the highway through improved transit facilities. Several alternatives to improve transit services were evaluated during an earlier public involvement process and the community has concluded that the contra-flow transit-only lane is the preferred system with three alternative transit center sites identified in Pearl City. This study is necessary to advance the concept forward.

Impact of Work Element:

This study would advance the identified transit-only contra-flow alignment and transit center site toward implementation.

Task(s):

1. Review and evaluation of existing data.

2. The development and implementation of a community-based public involvement program that builds upon the work that already is implemented.
3. Collect data; develop and analyze alternative contra-flow alignments and transit center site alternatives; develop and prepare transit contra-flow plan; develop and prepare transit center site plans. Analyze the traffic impacts of each alternative along the study segment. Coordinate above task effort with State of Hawaii Department of Transportation.
4. Prepare conceptual plans, preliminary cost estimates, and implementation schedules.
5. Review of possible environmental impacts and determination of documentation requirements.
6. Prepare final report documenting the study findings and recommendations.

Estimated Completion Date: June 2003

Estimated DBE Opportunity: 10% of Consultant Contract

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
250,000		200,000		50,000	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Other</u>	<u>Person Months</u>	<u>Cost</u>
DTS	Consultant		250,000
		Total:	250,000

WORK ELEMENT 203.62-05 PARATRANSIT SERVICE STUDY

Objective(s):

Conduct a comprehensive study of the City and County of Honolulu's paratransit service operations (TheHandi-Van Service), to include a trip purpose and origin/destination survey of paratransit passengers, design and development of service delivery and alternative service strategies, including use of taxicab services, subscription service program, human services transportation coordination which encompasses a cost sharing plan, and design and development of TheHandi-Van service ADA monitoring strategies and techniques.

Product(s):

1. TheHandi-Van service monitoring program.
2. Service plan using taxis.
3. Subscription service plan and program.
4. Human service transportation coordination plan and program.

Previous and Ongoing Related Work:

Operational Review of TheHandi-Van Operations (1994) – A Review of Dispatch Operations.

Identification of Need:

FTA's recent triennial review indicated a need for City to better document monitoring of its paratransit service delivery operations (TheHandi-Van Service) for compliance with ADA regulations. A comprehensive review of City's paratransit service operations can lead to greater efficiency, transportation cost sharing with state subsidized human service agencies, and overall service improvement.

Impact of Work Element:

Better documentation of City's paratransit service operation monitoring efforts, better human service transportation coordination, and more efficient and effective paratransit service operations.

Task(s):

1. Review current paratransit service operations.
2. Conduct trip purpose and origin/destination survey of paratransit passengers.
3. Design and develop TheHandi-Van service ADA monitoring strategies and techniques.
4. Design and develop service delivery and alternative service strategies.
5. Develop a taxicab service plan.

6. Develop a subscription service plan and program.
7. Develop a human services transportation coordination plan and program, including cost sharing plan with state subsidized agencies.

Estimated Completion Date: This study is expected to be completed one and one-half years following notice to proceed.

Estimated DBE Opportunity: 10%

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
300,000		240,000		60,000	

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
	<u>Other</u>		
DTS	Consultant		300,000
		Total:	300,000

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SECTION IV
INDEPENDENTLY-FUNDED WORK ELEMENTS

The work elements in this section have been funded entirely with funding sources that need not be included in the OWP or with local funds. They are included for the information of the reader.

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**WORK ELEMENT 102.01 UPDATE OF THE STATEWIDE
TRANSPORTATION IMPROVEMENT PROGRAM**

Objective(s):

To ensure that the Statewide Transportation Improvement Program (STIP) reflects current directives and priorities in the Statewide Transportation Plan, related transportation and land use plans and studies, and applicable TEA-21 reauthorization requirements.

Product(s):

A current STIP document which identifies and integrates transportation projects statewide and programs projects for implementation during the program period.

Previous and Ongoing Related Work:

The STIP reflects a three-year program. The present cycle of the STIP has been developed for FYs 2004-2006. STIP Amendments 1 through 6 have been processed.

Amendments will continue to be processed for FY 2005. Development of the new FY 2006-2008 STIP will commence shortly.

Identification of Need:

The STIP is a document required to facilitate the release and use of federal highway and transit funds. The STIP is a three-year document that must be renewed every two years.

Impact of Work Element:

A current STIP developed through the coordination and cooperation of the various transportation and planning agencies and organizations will provide an equitable and integrated basis for funding transportation improvement projects.

Task(s):

1. OMPO will coordinate their TIP through their established process.
2. The DOT will coordinate the neighbor island transportation program with the respective district offices and neighbor island county agencies.
3. Proposed projects will be reviewed to ensure their consistency with Federal, State, and County requirements.

Source of Funds: State of Hawaii

Responsible Agencies: State Department of Transportation

WORK ELEMENT 200.01 HIGHWAY SAFETY IMPROVEMENT PROGRAM

Objective(s):

To reduce the number and severity of traffic accidents through engineering improvements at hazardous highway locations.

Product(s):

An annual program of high priority safety improvement projects.

Previous and Ongoing Related Work:

The State Highways Division (SHD) conducts a Highway Safety Improvement Program for streets and highways under their jurisdiction as part of the State highway/traffic engineering programs.

The Traffic Branch of the SHD is responsible for coordinating and assisting all affected SHD units and County highway/traffic engineering agencies to implement a program of, and to continuously improve the processes of, (1) identification, prioritization, and analysis of high accident location; (2) development and selection of alternative engineering countermeasures (safety improvement projects) at these accident locations; and (3) prioritization, scheduling, implementation, and evaluation of safety improvement projects.

The CIP for highway safety construction consists of two parts. They are (1) mandated Federal-aid programs established or continued by the Highway Safety Act of 1973, also known as Title II Safety Programs, and (2) safety improvement projects utilizing all other available sources of funds, Federal-aid or entirely with State or County funds, initiated by the State or County on a voluntary basis.

Safety related minor traffic operations improvements are usually implemented by State and County highway/traffic operations and maintenance forces with informal work orders when countermeasures are identified to rectify the hazardous conditions.

Source of Funds: State of Hawaii

Responsible Agencies: State Department of Transportation

WORK ELEMENT 200.02 MOTOR CARRIER AND HIGHWAY SAFETY PROGRAMS

Objective(s):

To improve highway safety by a reduction in property damage, injuries, and fatalities from traffic collisions.

Functions/Programs/Funds:

The Motor Vehicle Safety Office is part of the State DOT. It has two parts: (1) Motor Carrier Staff (MCS) and (2) the Highway Safety Staff (HSS). The MCS administers rules and regulations that govern motor vehicles engaged in the transportation of persons or property on public highways in the furtherance of any commercial, industrial, or educational enterprise. The HSS administers a Federally-funded highway safety program and coordinates highway safety efforts relating to motor vehicle registration, driver licensing, motor vehicle safety equipment, and motor vehicle inspection.

During FY 2006, the HSS will obligate federal funds to the state and local level for the continuation or initiation of countermeasures addressing six of the seven National Highway Safety priority areas and other identified problems as shown below:

1. Police traffic services training and speed limit enforcement.
2. Driving under the influence of alcohol (DUI) public awareness campaigns, DUI enforcement, DUI enforcement training, and DUI education in public schools.
3. A Traffic Records project to improve the data analysis capability of agencies performing highway safety studies.
4. An Emergency Medical Services project to improve the extrication of crash victims.
5. Projects to promote the use of safety belts and child safety seats.
6. Projects to improve engineering capabilities through traffic control device inventories, engineering analysis of high accident locations, and other engineering studies in the area of highway design, construction, and maintenance.

During FY 2006, the MCS will continue focusing on regulating school bus operations, enforcing commercial motor vehicle regulations, and enforcing motor vehicle weight regulations.

Source of Funds: State of Hawaii Special Funds

Responsible Agencies: State Department of Transportation

WORK ELEMENT 201.10

POPULATION EMPLOYMENT MONITORING AND ANALYSIS ¹⁹

Objective(s):

To maintain on an annual basis, relevant data and statistical tables that depict current population estimates, components of change in population, employment, labor force, and unemployment data, and other socioeconomic data to allow analysis of existing conditions. Analyses of current data will provide the means to monitor short- and long-range forecasts of population and employment.

Product(s):

1. Annual estimates of population, employment, and unemployment for the island of Oahu.
2. Annual estimates of visitor arrivals; average daily census of visitors present.
3. Annual estimates of de facto population.
4. Other related socio-economic data which describe current socio-economic conditions.

Previous and Ongoing Related Work:

A series of statistical reports are issued annually by the State DBEDT. The following are relevant to the 3-C transportation planning process:

1. Population estimates for the City and County of Honolulu.
2. Estimates of military personnel and dependents.
3. Birth and death data.
4. Net migration estimates.
5. Visitor arrivals.
6. Annual labor force, employment, and unemployment estimates.
7. Per capita personal income.
8. Expenditures of State and County governments.
9. Other related statistics published in the State of Hawaii Data Book each year.

These statistics are now available on DBEDT's World Wide Web site (<http://hawaii.gov/dbedt/>) as well as in the Data Book.

¹⁹ This work element number has been changed; formerly numbered Work Element 201.01.

Impact of Work Element:

Enables the 3-C transportation planning process to assess the assumptions and forecasts made previously and to facilitate the verification of forecasting models.

Task(s):

DBEDT is a recipient of official statistical information from many government and private agencies. Using these current data, the department will prepare annual estimates of population, and report employment and other socioeconomic conditions. The following annual estimates will be compiled to cover the Honolulu standard metropolitan area:

1. The resident population of the City and County of Honolulu.
2. The military and military dependents.
3. Visitors present (annual average).
4. De facto population.
5. Civilian labor force, employment, and unemployment.
6. Per capita personal income.
7. Net migration estimates.
8. Total annual number of visitors.
9. Other data prepared each year for the State of Hawaii Data Book.

Estimated Completion Date: Data Book will be published annually. (Ongoing program)

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
50,000					50,000

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DBEDT	Statisticians	10.0	50,000
		Total:	50,000

WORK ELEMENT 201.12

**INFORMATION MANAGEMENT SYSTEMS –
HIGHWAYS DIVISION**

Objective(s):

To develop and implement information management systems; and to provide information concerning both the condition and the performance of the existing and future highway system, that addresses the requirements of ISTEA.

Product(s):

Coordinated information systems which would be compatible and provide for efficient data access and manipulation within the State Highways Division (SHD) of the Department of Transportation (DOT) and also be compatible and linkable with the other information management systems required by ISTEA, such as the Transportation Congestion Management System (CMS), Public Transportation Facilities and Systems Management System and the Intermodal Facilities and Systems Management System. The following are the information systems to be developed by the SHD of DOT:

1. Pavement Management System (PMS)
2. Bridge Management System (BMS)
3. Traffic Monitoring System (TMS)

The Department of Transportation will be retaining a consultant to assist them in coordinating and providing oversight on the development of the management systems. Upon preparation and completion of the individual plans for each of the management systems, the consultant will assist in establishing the data base criteria and standards, the data collection, and implementation of the systems.

Previous and Ongoing Related Work:

The Materials Testing and Research Branch is responsible for surveying and maintaining records of the condition of the highway pavement section and, also, for recommending improvement strategies. The PMS information system has been implemented and the condition information for the historic condition survey data entered into the database. The Materials Testing and Research Branch is in the process of reviving the pavement condition evaluation criteria which will require additional database programming to implement because the process for the new evaluation criteria is substantially different from that currently in the database.

The Design Branch is responsible for the Bridge Management System. Presently, the Design Branch maintains inventory and appraisal information of all bridges, including bridges on the County system under the National Bridge Inventory System and submits reports to the FHWA. The BMS data, including construction cost and deterioration models, are currently being refined. The BMS will eventually be capable of assisting in prioritizing bridge maintenance work, rehabilitation, and replacement projects on a more objective basis.

The Planning Branch is responsible for the Traffic Monitoring System, as well as the overall coordination of the development of the information management systems in the SHD. Presently, traffic data is maintained in hard copy and microcomputer files and includes a variety of traffic information, including data from continuous count stations polled daily by computer. Information on vehicle volumes and limited vehicle type and vehicle speed is maintained for continuous research count stations on a statewide basis. Coverage counts, including vehicle volume, vehicle type, and limited vehicle occupancy information are obtained using portable recorders and manual (visual) surveys.

The SHD is also pursuing the development and integration of databases at all of the offices for better access and compatibility of data for Division-wide requirements. This effort is being pursued under the project titled, Coordinated Data System.

Impact of Work Element:

The management systems will provide an integrated data base for planning and policy development, and evaluating strategies to improve transportation systems and programs.

Source of Funds: State of Hawaii (\$400,000) and ISTEA STP (\$1,600,000) funds

Responsible Agencies: State Department of Transportation, Highways Division

WORK ELEMENT 202.12-96 NORTH-SOUTH ROAD

Objective(s):

To prepare a transportation demand forecast, conduct planning and preliminary engineering studies, and acquire rights-of-way for a new North-South Road in the Ewa region. The new road and interchange would increase capacity, improve access to Interstate Route H-1, and connect Ewa and new residential developments with employment in the Kapolei area.

Product(s):

1. Travel demand forecast of the region.
2. Technical reports and drawings to develop and evaluate alternative alignments and interchange proposals for the North-South Road Project.
3. Preliminary cost estimates for rights-of-way and construction.
4. Environmental review documentation in the form of an environmental assessment and Finding of No Significant Impact (FONSI).
5. Final plans for the proposed North-South Road and its interchange at Interstate Route H-1.

Previous and Ongoing Related Work:

Previous transportation studies identified a new North-South Road as one mitigation measure to alleviate the overcapacity condition in the area. Upon reviewing these studies and with requests from the area residents, the State Legislature appropriated State funds for the design of a North-South Road in 1991.

In April 1994, DTS agreed to accept responsibility for the planning and engineering of a new North-South Road, subject to the encumbering of funds for the project and the execution of the intergovernmental agreement between the City and the State.

An intergovernmental agreement between DTS and DOT was entered into effective June 1994. Notice to proceed with the contract was issued in January 1995. In September 1995, DTS engaged the services of consultant a firm, Parsons, Brinckerhoff, Quade & Douglas, Inc. (PBQD), to conduct the studies for this project.

In mid 1996, a rare and endangered plant, the *Abutilon Menziesii*, was discovered in the area of the proposed highway and discussions with appropriate governmental agencies were initiated. Traffic, hazardous material, botanical, zoological, historical, and archaeological studies were essentially completed.

In August 1997, the design stage for this project was initiated by the DOT.

In April 1998, DTS submitted a request to transfer their project management responsibilities to the DOT; they indicate “substantial completion of the draft environmental assessment” and “the

end of technical efforts relating to the federal planning requirements” for this project. In a letter to DTS, dated December 15, 1998, the DOT accepted management responsibilities for this project.

In September 1998, it was determined that a new traffic study was needed due to revised “absorption rates” and build-out dates for developments in the Ewa region. A regional study consistent with the Oahu Regional Transportation Plan was developed by Kaku and Associates for the Statewide Transportation Planning Office. PBQD did a traffic study for the North-South Road that was used in the Environmental Assessments.

The Draft Environmental Assessment was filed with the Office of Environmental Quality Control on December 8, 1998. In February 1999, the Housing and Community Development Corporation of Hawaii informed the DOT that they would be unable to fund drainage improvements for this project and consequently the DOT would be required to construct similar improvements.

A “Habitat Conservation Plan” was developed for the endangered species, the *Abutilon Menziesii*. Because of the drainage and endangered species concerns, a revised Draft Environmental Assessment (DEA) was prepared in accordance with Chapter 343, Hawaii Revised Statutes. A State Finding of No Significant Impact (FONSI) was issued on September 27, 2004. DOT’s improvements were planned in conformance with the City and County of Honolulu’s Interim Drainage Plan Technical Memorandum and Addendum, which was dated May 24, 2002 and accepted by the City on June 2, 2002. A revised draft federal EA was also prepared pursuant to the National Environmental Policy Act, 42 USC 4332(2)(c). The federal EA, which includes a draft Flood Risk Analysis Report and a draft Interstate Access Modification report, was completed and approval of a FONSI is anticipated early in 2005. To provide connectivity, DOT included a segment of Kapolei Parkway between Renton Road and the North-South Road in both EAs.

Impact of Work Element:

The consultant identified regional transportation infrastructure improvements and provided information for financing strategies. These financing strategies will assist City planners and developers in negotiating their share of the transportation infrastructure cost in the Ewa region.

The planning and preliminary engineering of a new North-South Road and planning of the segment of Kapolei Parkway has identified a preferred alignment alternative. The preliminary cost estimate will provide information to budget funds for the next phase. The environmental clearance approvals, documentation, and interstate access approval from the FHWA would allow the project to proceed into the next phase of Final Design and Construction.

Task(s):

1. Develop traffic demand forecasts for the Ewa region and identify regional transportation improvements, magnitude of costs, and financing strategies (5%).
2. Conduct and complete environmental studies, conceptual design, cost estimates, financial analysis, and coordination with OMPO and appropriate governmental agencies (30%).

3. Obtain environmental clearances and documentation (5%).
4. Conduct and complete conceptual engineering on the preferred alternative for the proposed interchange, including final environmental studies and analysis, financial analysis, and coordination with the FHWA (10%).
5. Prepare final plans for the proposed North-South Road and its interchange at Interstate Route H-1 (50%).

Estimated Completion Date: February 2010

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
9,010,000			9,010,000		

Estimated Staff/Other Costs:

<u>Staff</u>	Approximate <u>Amounts</u> <u>Expended</u>	Future <u>Expenditures</u>	<u>Total</u>
DOT-HWY	270,000	200,000	470,000
DTS	110,000		110,000
<u>Other</u>			
Consultants – Design	2,000,000	150,000	2,150,000
Consultants – Planning	3,000,000	2,280,000	5,280,000
Land Acquisition		1,000,000	1,000,000
Total:	5,380,000	3,630,000	9,010,000

WORK ELEMENT 203.04-93 SHORT-RANGE TRANSPORTATION PLAN

Objective(s):

To develop a new comprehensive short-range transportation plan (SRTP) and program for the City and County of Honolulu.

Product(s):

An SRTP which covers a 7- to 10-year period and "bridges the gap" between the City's programs and projects contained in the federally-required 20-year metropolitan transportation plan and the 3-year transportation improvement program. The product will address the City's transportation system, including streets and highways; the bus system; the paratransit system; possible integration to a high-capacity transit system and the related feeder bus fleet development program; possible jitney system; bicycle programs; and intermodal connections. In addressing the City's transportation system and its intermodal connections, the product will also include appropriate financing plans.

Previous and Ongoing Related Work:

The previous short-range plans focused only on the transit element because the plans were requested by the USDOT Urban Mass Transportation Administration. The initial short-range transit plan, TheBus Plan, was completed in 1973. The Plan, and subsequent updates through 1979, provided a sound base for the continuous improvement of the bus system. The Bus System Development Program, completed in 1980, provided a plan for transit development. Updates to this plan were made through 1987. The Comprehensive Island-wide Transit System Planning Study (1987) established priorities for short- and intermediate-range periods. Updates to the 1987 study have incorporated multimodal transportation programs, such as regular and express bus service, demand responsive paratransit service, rail rapid transit, and intra-island ferry system.

The HPTA completed the Comprehensive Operations Analysis (COA) of TheBus System in August 1993. HPTA also completed a Weekend Bus Study and a Facilities Study.

Impact of Work Element:

The joint FHWA/FTA statewide and metropolitan planning regulations promulgated at 23 CFR Part 450 and 49 CFR Part 613, delineate the requirements for states and metropolitan planning organizations in developing their respective 20-year transportation plans and 3-year transportation improvement programs. The Work Element will enable the City to develop an intermediary plan that will serve as a guideline in establishing the City's multimodal transportation priorities, appropriations, and programs and projects to be proposed for inclusion in the metropolitan transportation improvement program.

Estimated Completion Date: This project has been temporarily stopped.

Task(s):

1. DTS to review 23 CFR Part 450, and funding programs under 23 USC and the Federal Transit Act (5%).

2. Using the Metropolitan Transportation Planning and Programming requirements detailed in 23 CFR Part 450 Subpart C, DTS to develop a set of factors to be considered and analyzed (5%).
3. DTS to develop the appropriate procurement documents, including scope of work, and procure the necessary services (10%).
4. Under the direction of DTS, Consultant to develop an SRTP for the City (70%). The Plan will include the following aspects:
 - a. Current City transportation system:
 - i. Public transit system, including intermodal connections
 - ii. Paratransit system
 - iii. Bikeway system
 - iv. Connectivity of major urban City streets to State highways and Interstate highways.
 - b. Assessment of a possible integration to a high-capacity transit system and the related feeder bus fleet development program.
 - c. Assessment of possible enhancements to transit system, including jitney.
 - d. Proposed 7- to 10-year enhancements/improvements to the current transportation system that could be used as TIP projects.
 - e. Proposed 7- to 10-year operating financial plan for the public transit and paratransit systems.
 - f. Proposed 7- to 10-year capital financial plan for improvements to the current transportation system.
5. DTS to administer consultant contract (5%).
6. DTS to coordinate with appropriate City agencies (5%).

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
592,000	400,000 ²⁰			100,000	55,000 ²¹
					37,000 ²²

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DTS	Planners	13.0	65,000
	<u>Other</u>		
DTS	Consultant		522,000
	Other Direct Costs		5,000
		Total:	592,000

²⁰FTA FY 1993 – Section 5307 funds.

²¹To the extent that unobligated federal funds remain available, the City will seek reimbursement for its pro rata share of eligible costs exceeding \$500,000.

²²June 1997 contract amendment increased local match by \$37,000.

WORK ELEMENT 203.29-00 LIVABLE COMMUNITIES INITIATIVE II

Objective(s):

To integrate the planning and development of pedestrian-oriented, transit services and facilities in the formulation and implementation of special area plans for older towns and communities. Promotion of these actions will also serve to increase social, recreational/entertainment, and economic activities and functions within the communities; to result in a lessening of an auto-dominated orientation; to improve traffic-congested, circulation systems; and to revitalize the livability and social character of older towns.

Product(s):

1. A Regional Traffic Study for Aiea-Pearl City that analyzes traffic counts and direction of travel. The major origin and destination points of traffic through Aiea-Pearl City will be used to identify traffic bottlenecks, problem areas, causes, and alternative solutions.
2. An innovative transportation plan which:
 - a. Provides elements such as a transportation center or hub in Aiea, internal circulator systems, pedestrian and bicycle improvements, improved bus and transit schedules and routes, intersection and other roadway improvements to enhance Aiea-Pearl City's socio-economic vitality as pedestrian-oriented, livable, mixed-use (business, entertaining, residential) communities; and
 - b. Improves public transit mobility from nearby residential neighborhoods and more distant communities so as to become less dependent on the automobile.
3. Urban design guidelines that define pedestrian- and transit-oriented measures and other transportation actions to promote greater mobility and accessibility for residents and pedestrians to enhance the livability and attractiveness of Aiea-Pearl City.

Previous and Ongoing Related Work:

DPP is currently in the process of revising the Development Plan for the PUC in which the communities of Aiea-Pearl City are situated. The proposed livable communities initiative effort is generally consistent with themes of the current Development Plan effort such as “The City of Livable Neighborhoods” and “the City for People; Not Cars”.

Oahu Trans2K

DTS and DOT are currently working together on Oahu Trans2K, which is the transportation component of the 21st Century Oahu Vision. With regard to the Pearl City to Salt Lake area, mobility concepts identified include major topics such as regional transportation/transit concepts; major roadway enhancements; neighborhood enhancements; and pedestrian and bicycle improvements.

Vision for the 21st Century

The proposed livable communities initiative for Aiea is also generally consistent with the vision for the 21st Century that is a "work-in-progress" guide for Oahu for the next 50 years. It attempts to incorporate efforts of the Development Plan, Oahu Trans2K and other planning efforts.

Identification of Need:

Aiea-Pearl City are established communities that are experiencing major traffic congestion during normal rush hours, and because of periodic accidents, sporting events, and the shopping. Aiea-Pearl City need improvements to their internal circulator and pedestrian/bicycle systems; an update to the bus and transit schedules and routes; and improvements to intersections and other roadways to revitalize and enhance their vitality as pedestrian-oriented, livable, mixed-use (business, entertaining, residential) communities.

Impact of Work Element:

Those pedestrian- and transit-oriented work elements serve as important mechanisms by which to merge the livable communities concept into the communities of Aiea-Pearl City. This work element responds in a positive manner to the socio-economic concerns expressed by businesses and residents of Aiea-Pearl City.

It provides an opportunity to implement transportation improvements in Aiea-Pearl City to renew its economic vitality and attractiveness.

Task(s):

1. Promote active participation of a task force consisting of a balanced representation of residents, businesses, landowners, and community leaders to work with DPP and other city agencies throughout this planning project.
2. Obtain consultant services and develop a work program for a transportation component for the Aiea-Pearl City Special Area Plan C one that includes a transit/pedestrian-oriented approach in a complementary manner, resulting in the identification of tangible, transit-oriented enhancements for Aiea-Pearl City.
3. Conduct the following surveys of residents and businesses in Aiea-Pearl City:
 - a. Survey residents in these communities to assess whether increased accessibility to transit, bikeways, and safe pedestrian walkways would increase usage of these transportation modes.
 - b. Survey the business community's needs and interest in the location of a transit center in Aiea and/or Pearl City that could facilitate use of mass transit by transit riders. This should yield information on how businesses believe they could benefit from improved availability and accessibility to transit.
 - c. Identify social and economic services and activities, such as convenience stores, medical services, banking and other services, within proximity of a transit center that could enhance resident opportunities for retail shopping and obtaining needed services.

- d. Assess the significance of improved transit facilities and services in attracting residents, tourists and sports fans to the Aloha Stadium, town nodes, shopping centers, and other community facilities unique to and available in Aiea-Pearl City.
4. Conduct public informational meetings to obtain community input and feedback throughout this planning process.
5. Review the concept of establishing a transit station in Aiea with the LOTMA, DTS, and the State DOT to assess its short and long-term implications.
6. Analyze the potential application of urban design principles to enhance transit-oriented measures that also remedy deficiencies in Aiea-Pearl City.
7. Develop a transit plan component for Aiea-Pearl City which identifies enhancements to transit stations and transfer points incorporating community service facilities; defines safe, convenient and practical pedestrian and vehicular access improvements; and provides transit riders and visitors with convenient opportunities to retail, wholesale and service facilities within these communities.
8. Develop an implementation program that identifies the objectives and strategies to be initiated in three phases: short-term (within 2 years); mid-term (2-5 years); and long-term (beyond 6 years). This should include projects or activities that should be initiated by the public sector (city or State), private sector, or non-profit organizations in the community, as well as joint public-private sector sponsorship.
9. Prepare final reports and publish design guidelines in easily readable brochure format for community wide dissemination.
10. Encourage continued community involvement in pursuing implementation of projects and activities.

Estimated Completion Date:

Depending on issues encountered, project is expected to require 8-12 months to complete.

Estimated project time frames are: January 2001-September 2002

Estimated Completion Date: September 2002

Estimated Cost By Funding Source:

<u>Total</u>	<u>FTA</u>	<u>FHWA</u>	<u>STP</u>	<u>Local M</u>	<u>Local S</u>
400,000	320,000 ²³			80,000	

²³Section 5307.

Estimated Staff/Other Costs:

<u>Agency</u>	<u>Staff</u>	<u>Person Months</u>	<u>Cost</u>
DPP	Planner	6.0	36,000
	Planner	6.0	24,000
DTS	Planners	1.0	4,000
DPP	<u>Other</u>		
	Consultant		320,000
	Administration		16,000
		Total:	400,000

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SECTION V
TABLES AND APPENDICES

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TABLE 1

FY 2005 OWP ACCOMPLISHMENTS AND PROJECT STATUS

(as of May 23, 2005)

	Work Element	Status
200.01	Highway Safety Improvement Program	Ongoing program.
200.02	Motor Carrier and Highway Safety Programs	Ongoing program.
201.01-01	Investigation of ITS Technology for Use in Collecting CMS Data	The Traffic Branch is currently reviewing and analyzing existing data and is waiting for additional data that will result from WE 201.30-03. <i>Expended: \$102,600 of \$171,600</i>
201.05-02	2000 Census Data	This is an ongoing work element. OMPO reviewed data from the 2000 Census, responded to inquiries from internal and external sources. Attended State Data Center affiliate meetings. <i>Expended: \$13,600 of \$23,600</i>
201.10	Population and Employment Monitoring and Analysis	Ongoing State-funded program. Data Book is published annually. These statistics are available on CD-ROM and on DBEDT's web page.
201.11	TEA21 Planning Requirements	This is an ongoing work element. OMPO representatives have attended and sponsored a number of workshops and training sessions, and assisted participating agencies with reviews and planning assistance elaborating on TEA21 requirements.
201.12	Information Management Systems B Highways Division	This is an ongoing DOT project.

	Work Element	Status
201.20-02	Title VI and Environmental Justice (T6/EJ) Monitoring	<p>Work is ongoing. DPP, OMPO, and its consultant have updated the T6/EJ geographic information systems analysis tool (GISAT) to include the income data from the 2000 Census data, refine the methodology for selecting EJ block groups, and incorporate results from the OMPO transportation demand forecast model for in the accessibility and mobility performance measures. OMPO will not be making the GISAT internet-friendly, as described in the work element. OMPO has also completed T6/EJ self-evaluations for numerous amendments to the FYs 2002-2004 TIP, FYs 2004-2006 TIP, Guide to Public Involvement Update, FY 2004 OWP, and the ORITSA. Responsibility for the work in Tasks 4, 5, and 6 has been transferred to DPP.</p> <p><i>Expended: \$248,400 of \$410,400</i></p>
201.21-05	Title VI and Environmental Justice (T6/EJ)	This is an ongoing work element.
201.30-03	Demonstration of ITS Technology for Use in Collecting CMS Data	<p>The Traffic Branch is currently developing a Request for Proposal.</p> <p><i>Expended: \$0 of \$471,000</i></p>
201.33-04	Simulation of Westbound Interstate H-1 Freeway between the airport and Waialele During the Weekday Afternoon Peak	<p>Contract executed 1/23/04. Notice to proceed was issued February 11, 2004. The consultant developed four computer simulation models of the existing "base case" on the westbound afternoon H-1 between the airport and Waialele. As of November 2004, the computer models were calibrated and used to simulate traffic impacts of the planned additional westbound lane on the Waimalu viaduct. Estimated completion date is November 2005.</p> <p><i>Expended: \$32,046 of \$97,500</i></p>
201.35-04	Forecasting Model Support	<p>Work continues on the review of the integration of the travel forecasting model and the draft land use model.</p> <p><i>Expended: \$682 of \$40,150</i></p>

	Work Element	Status
201.37-04	Special Tabulation of 2000 Census Data to Revised Oahu TAZs	The Census Bureau has completed work on the special tabulation. There was no charge for the work. Budget will be transferred to WE 301.03. <i>Expended: \$0 of \$30,200</i>
201.39-04	Land Use File Update System	Work has begun on contract. <i>Expended: \$0 of \$202,750</i>
201.40-04	Maintenance of the Oahu Regional Intelligent Transportation System Architecture	This work element has been completed. Further maintenance of the ITS will be included in other work elements. <i>Expended: \$4200 of \$33,600</i>
201.41-05	ITS Monitoring	Work continues on this work element. TIP and ORTP projects will be reviewed for compliance with the ORITSA. <i>Expended: \$0 of \$34,500</i>
201.50-05	Land Use Model Enhancement and Demonstration	Work on this work element will begin in the Summer of 2005. <i>Expended: \$000 of \$ 200,000</i>
202.06	Oahu Regional Transportation Plan	Work is ongoing. The existing and baseline networks have been analyzed. A preliminary list of projects is being developed. A new work element has been included for FY 2006 and will become an ongoing work element. Additional amounts will be budgeted each year.
202.07	Transportation Improvement Program	This is an ongoing work element. The current TIP has eleven amendments. T6/EJ analysis has been done and will continue to be done for the non-administrative amendments. OMPO is working with DOT to implement a data base program for the development of the TIP.
202.12-96	North-South Road	The planning is almost complete. FHWA approved the Finding of No Significant Impact (FONSI) on January 4, 2005. FHWA also approved the plans, specifications, and estimates (PS&E) on January 4, 2005. The bid opening, award, and groundbreaking took place in February. <i>This project is funded entirely with STP funds.</i>

	Work Element	Status
202.20-99	Primary Corridor Transportation Study	The project is completed. The project closeout is expected to be complete by June, 2005. <i>Expended: \$0 of \$8,000 (FHWA-PL)</i> <i>Other funding: \$2,728,000 (FTA Sect. 5307)</i> <i>\$2,977,660 (FTA Sect. 5309)</i> <i>\$1,000,000 (FTA Sect. 5314(a))</i> <i>\$1,678,415 (Local Match)</i>
202.30-02	Forecasting Model Application	OMPO has begun review of the OMPO models and is developing information based on the model output. <i>Expended: \$10,155 of \$119,900</i>
202.35-03	Selection of Enhancement Projects	The Policy Committee approved a prioritized list of projects. DOT developed a statewide prioritized list of projects. The enhancement project process will continue to be monitored. <i>Expended \$13,050 of \$51,800</i>
203.04-93	Short-Range Transportation Plan (SRTP)	This project is on hold pending decision for final tasking. <i>Funded with FTA Section 5307 funds</i>
203.29-00	Livable Communities Initiative II	The project is completed. <i>Funded: \$320,000 (FTA Section 5307)</i> <i>\$ 80,000 (Local Match)</i> <i>Expended: \$ 400,000 of \$400,000 (Expect final invoice and payment by June, 2005)</i>
203.30-00	Kaneohe Town Traffic Circulation Study	Analysis of the preferred Town Center location is complete. Location to be selected. <i>Expended: \$35,151 of \$131,000</i>
203.34-00	Manana Sub-Area Traffic Study	Work is completed and project has been closed out. <i>Expended: \$80,000 of \$80,000</i>
203.42-01	Transit Service Plan, Phase II	Work is completed and project has been closed out. <i>Expended: \$439,699 of \$560,000</i>

	Work Element	Status
203.44-01	Livable Waikiki: Linking Transportation, Land Use, and Environment	<p>The technical tasks are completed and are currently undergoing City Review. A draft final report has been submitted and is also under City review.</p> <p><i>Expended: \$199,000 of 300,000 (FHWA-PL)</i> <i>\$45,608 of \$75,000 (Local Match)</i> <i>Other funds: \$300,000 (TCSP)</i> <i>\$ 25,000 (Local Supplement)</i></p>
203.46-02	The Bus Systemwide Survey	<p>Consultant selection made. Notice to proceed issued December 2003.</p> <p><i>Expended: \$173,199 of \$300,000</i></p>
203.50-03	Transit Service Plan Phase III	<p>Established Task Force. Community input format completed. Conducted community meetings. Survey of bus operators started.</p> <p><i>Expended \$85,778 of \$600,000</i></p>
203.52-03	Kamehameha Highway Transit Improvements Study	<p>Project on hold.</p> <p><i>Expended \$53,750 of \$250,000</i></p>
203.62-05	Paratransit Service Study	<p>No status provided</p> <p><i>Expended: \$0 of \$300,000</i></p>
301.01	Program Support and Administration	<p>Ongoing work element to support 3-C planning process.</p>
301.02	Planning Resource	<p>Ongoing work element to provide transportation planning resources on OMPO-related matters.</p>
301.03	Overall Work Program	<p>Ongoing work element. A final draft of the 2005 OWP was sent for IPG, agency, and public review. The Policy Committee approved the FY 2005 OWP in May 2004.</p>
301.04	Support for the Citizen Advisory Committee	<p>Ongoing work element to provide support for the OMPO CAC and public participation program.</p>
301.05	Single Audit	<p>Ongoing work element. The FY 2004 audit of OMPO was completed.</p>

	Work Element	Status
301.07	Public Outreach	Documents and amendments sent for public review and comment. Website maintained. The tasks from this work element have been combined with work element 301.04 in FY 2006.
301.08	Disadvantaged Business Enterprise	Ongoing work element. Semi-annual reports of DBE activities were submitted to the DOT. FY 2006 DBE goals for FHWA-PL funds will be developed.

**TABLE 2
SOURCES OF WORK ELEMENT FUNDING**

Work Elements	FTA S5313(b)-04 to -05	FTA S5313(b)-06	FTA S5303-06	FTA S5307-06	FHWA PL-00 to PL-01	FHWA PL-02 to PL-05	FHWA PL-06	Local Match	Funding Total
FY 2006 WORK ELEMENTS (SECTION II)									
201.11-06		18,400						4,600	23,000
201.60-06							23,044	5,761	28,805
202.06-06							151,280	37,820	189,100
202.07-06							44,080	11,020	55,100
202.60-06*				8,000,000				2,733,000	10,733,000
202.62-06							170,960	42,740	213,700
206.20-06							400,000	100,000	500,000
301.01-06			141,555					35,389	176,944
301.02-06			27,440					6,860	34,300
301.03-06		44,898						11,225	56,123
301.04-06			42,480					10,620	53,100
301.05-06			24,960					6,240	31,200
301.08-06			6,080					1,520	7,600
FY 2006 TOTALS	0	63,298	242,515	8,000,000	0	0	789,364	3,006,795	12,101,972
PREVIOUS YEARS' WORK ELEMENTS (Estimated Balances)									
201.01-01					55,200			13,800	69,000
201.05-02						8,000		2,000	10,000
201.11						72,292		18,073	90,365
201.20-02						129,600		32,400	162,000
201.21-05	41,524							10,381	51,905
201.30-03						376,800		94,200	471,000
201.33-04						52,363		13,091	65,454
201.35-04						31,574		7,894	39,468
201.37-04	24,160							6,040	30,200
201.39-04						162,200		40,550	202,750
201.40-04						23,521		5,880	29,401
201.41-05						27,600		6,900	34,500
201.50-05						160,000		40,000	200,000
202.06						721,903		180,476	902,379
202.07						102,400		25,600	128,000
202.30-02						87,796		21,949	109,745
202.35-03						31,000		7,750	38,750
203.30-00					76,679			19,170	95,849
203.44-01					80,800			20,200	101,000
203.46-02						101,489		25,372	126,861
203.50-03						411,378		102,844	514,222
203.52-03						157,000		39,250	196,250
203.62-05						240,000		60,000	300,000
PREVIOUS YRS' TOTALS	65,684	0	0	0	212,679	2,896,916	0	793,820	3,969,099
TOTALS	65,684	63,298	242,515	8,000,000	212,679	2,896,916	789,364	3,800,615	16,071,071

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**TABLE 3
EXPENDITURE BY PARTICIPATING AGENCIES**

WORK ELEMENTS	DBEDT/OP	DOT-STP	DOT-HWY	DPP	DTS	OMPO	CONSULTANT	Agency	TOTAL
FY 2006 WORK ELEMENTS (SECTION II)									
201.11-06						23,000			23,000
201.60-06		7,500		3,905	5,000	12,400			28,805
202.06-06	10,000	10,000	10,000	10,000	10,000	139,100			189,100
202.07-06	500		5,000	500	10,000	39,100			55,100
202.60-06*					533,000		10,200,000	DTS	10,733,000
202.62-06		7,534		7,533	7,533	41,100	150,000	OMPO	213,700
206.20-06							500,000	DTS	500,000
301.01-06						176,944			176,944
301.02-06						34,300			34,300
301.03-06	1,023	6,000		1,000	6,000	42,100			56,123
301.04-06						53,100			53,100
301.05-06						15,700	15,500	OMPO	31,200
301.08-06						7,600			7,600
TOTALS	11,523	31,034	15,000	22,938	571,533	584,444	10,865,500		12,101,972
PREVIOUS YEARS' ACTIVE WORK ELEMENTS Estimated Balance									
201.01-01	2,500		33,000	2,500	5,000	26,000			69,000
201.05-02						10,000			10,000
201.11						90,365			90,365
201.20-02				20,000		17,000	125,000	DPP	162,000
201.21-05						51,905			51,905
201.30-03			110,000		15,000	16,000	330,000	DOT	471,000
201.33-04			10,000				55,454	DOT	65,454
201.35-04		25,350				14,118			39,468
201.37-04	7,300	1,300		2,500	1,300	2,800	15,000	OMPO	30,200
201.39-04		2,750		40,000			160,000	DPP	202,750
201.40-04			12,700		5,600	11,101			29,401
201.41-05			11,300		11,300	11,900			34,500
201.50-05				40,000			160,000	DPP	200,000
202.06	21,000	30,000	20,000	25,000	30,000	131,123	645,256	OMPO	902,379
202.07						128,000			128,000
202.30-02						79,745	30,000	OMPO	109,745
202.35-03	5,000		10,000	5,000	10,000	8,750			38,750
203.30-00				15,849			80,000	DPP	95,849
203.44-01							101,000	DTS	101,000
203.46-02							126,861	DTS	126,861
203.50-03					54,998		459,224	DTS	514,222
203.52-03							196,250	DTS	196,250
203.62-05							300,000	DTS	300,000
PREVIOUS YRS' TOTALS	35,800	59,400	207,000	150,849	133,198	598,807	2,784,045		3,969,099
TOTALS	47,323	90,434	222,000	173,787	704,731	1,183,251	13,649,545		16,071,071

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APPENDIX A

Public Review Process – Comments and Responses

[No comments were received from the public.]

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APPENDIX B

Consideration of the 7 Planning Factors

Consideration of the Planning Emphasis Areas

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CONSIDERATION OF THE SEVEN TEA21 PLANNING FACTORS

Work Element	Economic Vitality	Safety and Security	Accessibility & Mobility Options	Protect Environment & Improve Quality of Life	Intermodal Transportation System	Efficient System Management & Operation	Preservation of Existing System
201.11-06						X	
201.60-06						X	
202.06-06	X	X	X	X	X	X	X
202.07-06	X	X	X	X	X	X	X
202.60-06	X		X	X	X		
202.62-06						X	
206.20-06	X		X		X	X	

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CONSIDERATION OF THE PLANNING EMPHASIS AREAS

Work Element	Safety and Security	Integrated Planning and Environmental Process	Management and Operations	Consultation with Local Officials	Enhancing Technical Capabilities	Coordination of Human Service Transportation
201.11-06		X	X	X		
201.60-06					X	
202.06-06	X	X	X	X		X
202.07-06	X	X	X	X		
202.60-06		X		X		
202.62-06					X	
206.20-06			X			

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