

Project Benefit Analysis

Traffic Light Synchronization Program (TLSP)

Project Self-Certification Closeout Form

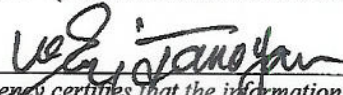
Agency: City of Los Angeles, Department of Transportation

Contact Information:

Contact Person:	Jim Williams
Address:	City of Los Angeles, Department of Transportation Caltrans Building, 9 th Floor 100 South Main Street
City, State, ZIP:	Los Angeles, CA 90012
Phone:	213.972.5039
Email:	Jim.williams@lacity.org

Project Name: **ATSAC – Platt Ranch**

4 Digit Project Number: 6774 (Can be found in LA-ODIS)

Certification Signature: 

By signing this document your agency certifies that the information presented below is correct.

Name: Verej Janoyan, Acting Principal Transportation Engineer

Date: 5-15-12

Caltrans Verification: 

A representative from the California Department of Transportation has reviewed the information contained in this document and has verified that the information presented below is correct.

All documentation related to this project will need to be kept and maintained by the submitting agency for auditing purposes.

PROJECT DATA COLLECTION

Box 1: Is the finished product different from what was planned? If the finished product is different, why is it different?

No

Box 2: How long did the system need to be monitored in order to properly collect data to determine the benefits that were achieved by the TLSP project?

One (1) month

Project Benefit Analysis

Box 3: Describe the methodology used to obtain and analyze traffic data.

Upon completion of the project, before and after travel time/speed studies were performed using an automated form of the floating car method during AM and PM peak travel periods. The results of these studies showed a 1 to 13% reduction in travel times, with corresponding improvements in travel speeds, delay reduction and air emissions.

Box 4: Describe the methodology used to obtain and analyze collision data.

N/A

PROJECT BENEFITS

Box 5: Was there a noticeable change in the collision rate?

No

Box 6: Is there a reduction in the number of complaints from the public after the project implementation? If so, what are the numbers of public complaints before and after the project implementation?

No

Box 7: What were the peak hour (PH) volumes and travel times before and after implementation of the project?

The implementation of ATSAC facilities does not increase traffic volumes. Therefore, no traffic volumes were collected. There was a 1 to 13% reduction in travel times as a result of this project.

Box 7A: Were the results what you expected? Why or why not?

Yes. ATSAC evaluation studies have previously been completed for other areas of the City. The implementation of the same ATSAC/ATCS technologies would lead us to expect similar results.

Project Benefit Analysis

Box 8: What effect did the project have on air quality?

Using existing independent air emission analysis estimating procedures and the City of Los Angeles' previously conducted ATSAC Evaluation Study, this project's reduction in travel time results in the following annual reduction in air emissions: Carbon Monoxide (84 tons), Reactive Organic Gases (14 tons), Nitrogen Oxides (20 tons) and Carbon Dioxide (9,790 tons).

SYSTEM DEPLOYMENT

Box 9: Describe the communication, system and operational improvements made in the TLSP project. Identify hardware, software and communication systems that were deployed. What was the effect on the traffic operations in the corridor or project area?

The project replaced obsolete traffic signal controllers, installed intersection to intersection interconnect conduit (where none existed before), new communication equipment (multiplexors, etc.), closed-circuit television cameras for traffic surveillance, central computer hardware to control field collected traffic data. Data communication at each signalized intersection is done through twisted pair copper wire. Each signalized intersection is connected through fiber optic cabling, with data being collected for a number of intersections at logical hub locations. Data from each of the projects' hub locations is sent via the main fiber trunk line to the ATSAC Control Center, where it is used to optimize the system-wide movement of traffic. This second-to-second signal timing capability was not possible with the previous traffic control system.

Box 10: Describe the methodology and operational improvements made in the TLSP project.

The fiber optic intersection to intersection signal interconnect never existed prior to the installation of the ATSAC project. Without the communication between individual traffic signal intersections, various hub locations and eventually to the ATSAC Control Center, the process of remotely installing / controlling adaptive signal timing plans in response to planned and unplanned events would be impossible.

Box 11: Describe the communication system used between the critical field elements and the central traffic management system.

See Box 10

Project Benefit Analysis

CONTINUED OPERATION AND MAINTENANCE OF THE SYSTEM

Box 12: Provide or describe plans to continue to operate and maintain the system at the same level of service achieved by the TLSP implementation. Include systems and strategies for the safe and efficient operations of the signalized intersections and arterials.

Once implemented, each ATSAC Project has a functional life of approximately 15 years. However, significant advances will occur with regard to the software and hardware used in the signal synchronization process. This situation is apparent when you analyze the initial ATSAC - Coliseum Area project being implemented in 1984 and the most recent ATCS software implemented with this Project. Through on-going maintenance contracts, communication and computer hardware are constantly being evaluated and upgraded at no additional cost to the Project.

The City of Los Angeles seeks to conserve and enhance our local and global natural resources; promote and support a vibrant, diverse, and equitable economy; safeguard human health and the environment; and improve the livability of the City's neighborhoods without compromising the ability of future generations to do the same.

In July 2007, Mayor Villaraigosa put forth Executive Directive 10 that instructed the City's departments to create department sustainability plans with Environmental Affairs Department (EAD) to guide their efforts. EAD worked with City departments to develop sustainable plans by assessing its current operations including internal policies, procedures, programs and initiatives to identify and then create departmental sustainability plans. The citywide sustainability plan is a long term document that will guide the City of Los Angeles for the next decade in sustainability practices. It will help the City integrate environmentally sustainable practices into City policies, procedures, operations, and foster collaboration across City government.

Project Benefit Analysis

COST AND SCHEDULE

Box 13: Identify cost and schedule variances for project.

FINANCIAL INFORMATION		
	Construction Support	Construction
Originally Programmed		
Bond		4,358,000.00
Match Funds		0.00
Total Cost		4,358,000.00
Current Approved		
Bond		4,358,000.00
Match Funds		0.00
Total Cost		4,358,000.00
Actual Expended		
Bond		4,358,000.00
Match Funds		1,613,530.38
Total Cost		5,971,530.38
Net Difference		
Bond	\$ -	\$ 0.00
Match Funds	\$ -	\$ 1,613,530.38
Total Cost	\$ -	\$ 1,613,530.38
SCHEDULE INFORMATION		
	Current Approved	Actual
Begin Environmental:	November 25, 2008	November 25, 2008
End Environmental Phase:	November 25, 2008	November 25, 2008
Begin Design Phase:	June 2008	June 1, 2008
End Design Phase:	December 2008	December 1, 2008
Begin Construction:	December 2009	November 19, 2009
End Construction:	January 2013	August 26, 2011
<p>Discussion of differences (if any) between approved cost, schedule and scope and actual</p> <p>There were no changes to the project's scope. The number of working days required to complete the contract increased due weather delays and contract change orders. The contract administration time (inspection) was greater than originally estimated, which resulted in additional labor costs that are solely the responsibility of the City of Los Angeles.</p>		

Project Benefit Analysis

FUNDING VERIFICATION

Box 14: Supply a scope of work for your project and the final invoice showing a complete history of the project billing. Describe how the items in the scope of work correspond to the items shown in the invoice.

The Platt Ranch project installed, through a competitively bid construction contract, ATSAC / ATCS improvements at 37 signalized intersections and provided transit priority infrastructure, replaced obsolete traffic signal controllers, installed interconnect conduit and cable, new communication equipment, traffic surveillance cameras, central computer equipment, and other peripheral hardware.

There have been three invoices submitted that total a State project share of \$4,358,000.00. The total Platt Ranch construction cost was \$5,971,530.38 which was comprised of contractual payments for items of work, city furnished materials, contingencies (change orders) and construction engineering labor (inspection). There were no contract-related liquidated damages.

CITY OF LOS ANGELES

CALIFORNIA

Jaime de la Vega
GENERAL MANAGER



ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF TRANSPORTATION

100 S. Main St., 10th Floor
LOS ANGELES, CA 90012
(213) 972-8470
FAX (213) 972-8410

Mr. Michael Miles
Director, District 7
State of California
Department of Transportation
100 South Main Street
Los Angeles, CA 90012

April 18, 2012
Project No.: TLSPL-5006(564)
ATSAC – Platt Ranch Project
City of Los Angeles
Los Angeles County
Assembly District: 37, 40
Senate District: 17, 23

Attention: Mr. Kirk Cessna, Chief
Office of Local Assistance and Alameda Corridors

Dear Mr. Miles:

FINAL DELIVERY REPORT TRAFFIC LIGHT SYNCHRONIZATION PROGRAM (TLSP)

Enclosed is the Final Delivery Report for the ATSAC – Platt Ranch Project. This Report includes a summary of project expenditures and the Project Benefit Analysis.

Project Information

Project:	ATSAC – Platt Ranch
Project No.:	TLSPL-5006(564)
LA-ODIS No.:	6774
Expenditure Authorization No.:	07-404264L
State-Local Agency Agreement No.:	00152S

Contact Information

Contact Person:	Jim Williams
Mailing Address:	City of Los Angeles, Department of Transportation Caltrans Building, 9 th Floor 100 South Main Street Los Angeles, CA 90012
Phone No.:	213.972.5039
E-mail Address:	Jim.williams@lacity.org

Background / Scope of Work

On May 28, 2008, the California Transportation Commission (CTC) approved 21 traffic light synchronization projects totaling \$147 million for the City of Los Angeles. The traffic light synchronization projects will be implemented using Automated Traffic Surveillance and Control (ATSAC) / Adaptive Traffic Control System (ATCS) System technologies developed by the City of Los Angeles. The implementation of these technologies provide the flexibility to remotely install adaptive signal timing plans in response to planned and unplanned events that disrupt traffic flow and cause excessive congestion.

Project Development

The Platt Ranch Project installed ATSAC / ATCS improvements at 37 signalized intersections and provided transit priority infrastructure, replaced obsolete traffic signal controllers, installed interconnect conduit and cable, new communication equipment, traffic surveillance cameras, central computer equipment, and other peripheral hardware. All installed project features were in compliance with the CTC-approved scope of work.

Project Schedule / Duration

	As Currently Approved by CTC	<u>Actual</u>
Environmental Phase:	November 25, 2008	November 25, 2008
Design Phase (<i>begin</i>)	June 2008	June 1, 2008
Design Phase (<i>end</i>)	December 2008	December 1, 2008
Construction Phase (<i>begin</i>)	December 2009	November 19, 2009
Construction Phase (<i>end</i>)	January 2013	June 28, 2011
Project Becomes Operable (Contract Accepted by City)	-----	August 26, 2011

Project Cost

Total Construction Cost:	\$ 4,358,000.00	\$ 5,971,530.38
State Funds Allocated:	\$ 4,358,000.00	\$ 4,358,000.00
Additional City Funds Required	\$ 0.00	\$ 1,613,530.38
Source of Additional Funding	ATSAC relevant Developer Fees / Proposition C Funds	

Project Benefits

The ATSAC Program Proposal approved by the CTC in May 2008, noted that ATSAC projects on an average provide congestion relief by improving travel times, travel speeds, delay reduction and air emissions. Upon completion of the Project, before and after travel time/speed studies were performed using an automated form of the floating car method during AM and PM peak travel periods. The results of these studies showed a 1 to 13% reduction in travel times.

Differences / Variances

The scope of the project did not change from that noted in the most recently approved baseline agreement. The project was completed earlier than noted in the baseline agreement with a project overrun attributable to increased inspection costs. These costs are funded entirely by the City. This project resulted in an additional reduction in travel times as compared to that originally programmed.


Lessons Learned / Best Practices

Upon completion of the **Platt Ranch** project, 3,860 (87.77%) of the City's 4,398 signalized intersections have received the ATSAC signal synchronization technology. The installation of the first ATSAC system was completed in 1984. We are currently funded to completely synchronize the City's 4,398 signalized intersections by January 2013. The ATSAC signal synchronization scope of work has remained essentially unchanged since the beginning of the program. Over the years, technological advancements have been made relative to hardware and software installations with the end product remaining the same - the synchronization of all City traffic signals.

CERTIFICATION SIGNATURE

LOCAL AGENCY


I hereby certify to the best of my knowledge and belief, the information in this report is a true and accurate record of project costs. The work was performed in accordance with the CTC approved scope, cost, schedules, and benefit information in the baseline agreement or amendment for the bond funded project.


Verej Janoyan, Acting Principal Transportation Engineer
City of Los Angeles, Department of Transportation

April 18, 2012
Date

CALTRANS

A representative from the California Department of Transportation has reviewed the information in this report and has verified that the information presented were correct.


Program Coordinator

11/4/2014
Date

Attachments:

Project Benefits Analysis
Final Construction Invoice

FINAL DELIVERY REPORT TRAFFIC LIGHT SYNCHORNIZATION PROGRAM

The submitting agency will be responsible for maintaining documentation of the information entered on this report. See separate tab for instructions on form completion. **(Please type your response, handwritten reports will not be accepted)**

A. Project Information

Date: 5/15/2014

Project Title: ATSAC - Platt Ranch

LA-ODIS Project ID: 6774

County: Los Angeles County

City: LOS ANGELES Zip Code: 90012

B. Contact Information

Local Agency: Los Angeles

Caltrans
District Number: 07

Contact Person: Verej Janoyan

Phone Number: 213.972.5050

Email Address: Verej.janoyan@lacity.org

C. Cost		Adopted Program Amount (\$)	Current Approved Amount (\$)	Actual Expended Amount (\$)	Net Difference (Dollars)
Bond Funding:					
Environmental		\$0	\$0	\$0	\$0
Design		\$0	\$0	\$0	\$0
Right of Way		\$0	\$0	\$0	\$0
Construction		\$4,358,000	\$4,358,600	\$4,358,000	\$600
Non-Bond Funding:					
State					
Environmental		\$0	\$0	\$0	\$0
Design		\$0	\$0	\$0	\$0
Right of Way		\$0	\$0	\$0	\$0
Construction		\$0	\$0	\$0	\$0
Federal					
Environmental		\$0	\$0	\$0	\$0
Design		\$0	\$0	\$0	\$0
Right of Way		\$0	\$0	\$0	\$0
Construction		\$0	\$0	\$0	\$0
Local					
Environmental		\$0	\$0	\$0	\$0
Design		\$547,000	\$2,458,400	\$547,000	\$1,911,400
Right of Way		\$0	\$0	\$0	\$0
Construction		\$0	\$0	\$0	\$0
Totals		\$4,905,000	\$6,817,000	\$4,905,000	\$1,912,000

D. Schedule		Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
Environmental Phase					
Begin		01/17/08	01/17/08	11/03/08	7
End		01/17/08	01/17/08	11/25/08	7
Design (PS&E) Phase					
Begin		06/30/08	06/30/08	06/02/08	-1
End		12/30/08	12/30/08	12/01/08	-1
Right of Way Phase					
Begin		NULL	NULL	NULL	0
End		NULL	NULL	NULL	0
Const./Acquisition Phase					
Begin		03/30/09	12/01/09	11/19/09	0
End		04/30/12	01/01/13	12/19/12	0
Closeout Date					
Begin		04/30/12	01/01/13	12/19/12	0
End		10/30/12	07/01/13	06/19/13	0

E. Amendments**List approved amendment reference numbers (Month and year) if applicable**

Not applicable.

F. Project Benefits**Describe and compare project benefits with those included in the approved Baseline Agreement.**

See Final Delivery Report.

G. Differences/Variations**Describe differences/variances (if any) between approved scope, cost, schedule, and actual.**

See Final Delivery Report.

H. Lessons-Learned/Best Practices**Describe lessons-learned and best practices for future projects.**

See Final Delivery Report.

I. Certification Signature

Local Agency

I hereby certify to the best of my knowledge the information in this report is true and accurate. The work was performed in accordance with the California Transportation Commission (CTC) approved scope, cost, schedules, and benefit information in the baseline agreement or amendment.

See Final Delivery Report.

(Print name) Project Manager

See Final Delivery Report.

(Signature) Project Manager

See Final Delivery Report.

Date

Caltrans

The Program Coordinator from the California Department of Transportation has reviewed the information contained in this report and has verified the information presented is correct.

See Final Delivery Report.

(Signature) Program Coordinator

See Final Delivery Report.

Date

Distribution: 1) Division of Local Assistance 2) Local Agency 3) Program Coordinator 4) CTC