

COOPERATIVE AGREEMENT FOR HARBOR BOULEVARD CORRIDOR TRAFFIC SIGNAL
SYNCHRONIZATION PROJECT
January 27, 2015
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RECOMMENDATION

It is recommended that the City Council:

- Approve the attached Cooperative Agreement among the City of Garden Grove and the cities of Santa Ana, Costa Mesa, and Fountain Valley for the Harbor Boulevard Corridor Traffic Signal Synchronization Project; and
- Authorize the Interim City Manager to execute the Cooperative Agreement on behalf of the City, and to make minor modifications as appropriate thereto.



WILLIAM E. MURRAY, P.E.
Director of Public Works



By: Dai C. Vu, P.E.
Associate Engineer

Attachment: Cooperative Agreement

Recommended for Approval



Allan L. Roeder
Interim City Manager

COOPERATIVE AGREEMENT BY AND BETWEEN THE CITIES
OF SANTA ANA, GARDEN GROVE, FOUNTAIN VALLEY, AND
COSTA MESA FOR THE HARBOR BOULEVARD CORRIDOR
TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

This Cooperative Agreement ("Agreement") is made and entered into this _____ day of _____, 2015, by and between the CITY OF SANTA ANA, a charter city ("SANTA ANA"), the CITY OF GARDEN GROVE, a municipal corporation ("GARDEN GROVE"), the CITY OF FOUNTAIN VALLEY, a municipal corporation ("FOUNTAIN VALLEY"), and the CITY OF COSTA MESA, a municipal corporation ("COSTA MESA").

RECITALS:

- A. Santa Ana, with cooperation from Garden Grove, Fountain Valley and Costa Mesa, applied for a grant from the Orange County Transportation Authority ("OCTA") Measure M2 Regional Traffic Signal Synchronization Program ("RTSSP"), aimed to coordinate traffic signals across multiple jurisdictions to enhance countywide traffic flow and reduce congestion.
- B. The Harbor Boulevard Corridor Traffic Signal Synchronization Project was selected by OCTA as one of the RTSSP Projects to be funded in OCTA Fiscal Year 2014-2015. The project will include timing implementation and improvements at traffic signals along Harbor Boulevard, from Chapman Avenue in Garden Grove to Newport Boulevard in Costa Mesa, as listed in the Project Application attached hereto as Exhibit B and incorporated herein by this reference.
- C. The total budget for the project is \$2,315,100. 80% (\$1,852,080) is funded by the OCTA Regional Traffic Signal Synchronization Program and 20% (\$463,020) is local agencies matching funds. The breakdown is shown in Exhibit A attached hereto and incorporated herein by this reference.
- D. Santa Ana, Garden Grove, Fountain Valley and Costa Mesa agree to provide twenty percent (20%) matching funds for the total project cost. Matching funds can be a combination of cash and in-kind match as defined by the RTSSP grant.
- E. OCTA and Santa Ana have entered into a Master Funding Agreement "Cooperative Agreement No. C-1-2783" defining the terms and conditions for approved Measure M2 projects that will be implemented by Santa Ana.
- F. Santa Ana agrees to serve as the lead agency to oversee the design and implementation of the project.
- G. Santa Ana, Garden Grove, Fountain Valley and Costa Mesa desire to enter into this Cooperative Agreement to demonstrate their commitment to implement the project and improve inter-jurisdiction traffic signal synchronization on Harbor Boulevard.
- H. This cooperative agreement defines the specific terms, conditions and funding responsibilities between Santa Ana, Garden Grove, Fountain Valley and Costa Mesa for the implementation of the project.

NOW, THEREFORE, it is mutually understood and agreed by and between SANTA ANA, GARDEN GROVE, FOUNTAIN VALLEY and COSTA MESA as follows:

I. SCOPE:

This Agreement specifies the roles and responsibilities of the cities as they pertain to the subjects and projects addressed herein. The project is specifically detailed in the Project Application attached hereto as Exhibit B and incorporated herein by this reference. All of the cities agree that each will cooperate and coordinate with the other in all activities covered by this Agreement and any other supplemental agreements that may be required to facilitate purposes thereof.

II. MUTUAL RESPONSIBILITIES:

Santa Ana, Garden Grove, Fountain Valley and Costa Mesa mutually agree to:

- a. Designate a lead staff to act as the liaison for the project. The liaison and any other project personnel, if necessary, will attend and participate in all related project meetings.
- b. Participate, cooperate and coordinate with contractors, consultants, vendors and staff in good faith using reasonable efforts to resolve any unforeseen issues and disputes arising out of the project to the extent practicable with respect to the performance of the project.
- c. Maintain project related traffic signals and telecommunications equipment with high priority during the project, and be responsible for repair of their own signal control systems in each of their respective jurisdictions.
- d. Provide on-site support for signal control systems, timing plans, detection systems and related equipment during construction, installation and integration, and be available to change or make adjustments to timing plans when necessitated by the project.
- e. Document in-kind match or dollar match funding as identified in the project application, and provide verification of such expenditures as part of any review or audit process, which may include payroll records, contracts and purchase orders.
- f. Monitor and operate the project traffic signals and improvements within its jurisdiction for a period of two (2) years following the completion of the Primary Implementation Phase of the project, as required by the program funding.
- g. Coordinate the inclusion of other improvements and in-kind services, where necessary, that the owning agency requires for the implementation of the project, but are not included in the project application. The owning agency shall be responsible for the inclusion of such elements within reason and at its own costs.
- h. Unused project funds for improvements from one City can be used by another City (with matching fund responsibility) upon mutual consent of the involved parties.

III. RESPONSIBILITIES OF SANTA ANA:

Santa Ana agrees to the following responsibilities:

- a. Santa Ana shall serve as lead agency for design, construction and construction management of the project, and shall provide oversight by establishing milestones and overseeing the project development to ensure that all standards and requirements set forth by the agreement is adhered to.
- b. Santa Ana shall be responsible for completing the project in accordance with the funding guidelines and any and all other OCTA requirements related to these funding programs. Santa Ana shall maintain coordination with all participating agencies throughout the duration of the project.
- c. Santa Ana shall provide staff, consultants, and contractors deemed necessary and appropriate to manage, administer, coordinate, and oversee timing implementation, engineering design, bid and award, and construction management of the project.
- d. Santa Ana shall coordinate the work effort of this Project, provide the day to day management of the consultant and manage all consultant administration and contracting. Santa Ana shall review the consultant's invoices and pay them accordingly after ensuring that the work has been adequately performed by the consultant.
- e. Santa Ana shall provide its share of matching fund as shown in Exhibit A attached hereto and incorporated herein by this reference. The final amount may vary and will be based on the 20% of actual cost of implementing all timing, improvements and maintenance, as identified in the project application.
- f. Upon issuance of a Notice to Proceed to the Consultant, Santa Ana can issue invoices to Garden Grove, Fountain Valley and Costa Mesa for up to 80% of the cash match amount identified in Exhibit A. The remaining cash match amount will be invoiced after completion of the Primary Implementation Phase of the project.
- g. Santa Ana shall comply with all of the terms and conditions of the Cooperative Agreement with OCTA, including the Project Reporting and Audit Requirements contained therein.

IV. RESPONSIBILITIES OF GARDEN GROVE:

Garden Grove agrees to the following responsibilities:

- a. Garden Grove shall provide its share of matching funds as shown in Exhibit A. The final amount may vary and will be based on the 20% of actual cost of implementing all timing, improvements and maintenance, as identified in the project application.
- b. Garden Grove shall provide Construction Inspection on all improvements within its jurisdiction. Costs of such inspection services shall be part of the in-kind labor services provided within the matching fund. No additional compensation from the project is provided for providing inspection services.

- c. Garden Grove shall waive all costs and fees related to any and all permits, if such permits are required to perform any project related work within its jurisdiction.

V. RESPONSIBILITIES OF FOUNTAIN VALLEY:

Fountain Valley agrees to the following responsibilities:

- a. Fountain Valley shall provide its share of matching funds as shown in Exhibit A. The final amount may vary and will be based on the 20% of actual cost of implementing all timing, improvements and maintenance, as identified in the project application.
- b. If necessary, Fountain Valley shall provide Construction Inspection on all improvements within its jurisdiction. Costs of such inspection services shall be part of the in-kind labor services provided within the matching fund. No additional compensation from the project is provided for providing inspection services.
- c. Fountain Valley shall waive all costs and fees related to any and all permits, if such permits are required to perform any project related work within its jurisdiction.

VI. RESPONSIBILITIES OF COSTA MESA:

Costa Mesa agrees to the following responsibilities:

- a. Costa Mesa shall provide its share of matching funds as shown in Exhibit A. The final amount may vary and will be based on the 20% of actual cost of implementing all timing, improvements and maintenance, as identified in the project application.
- b. Costa Mesa shall provide Construction Inspection on all improvements within its jurisdiction. Costs of such inspection services shall be part of the in-kind labor services provided within the matching fund. No additional compensation from the project is provided for providing inspection services.
- c. Costa Mesa shall waive all costs and fees related to any and all permits, if such permits are required to perform any project related work within its jurisdiction.

VII. COMPLETE AGREEMENT:

- a. This Agreement, including any attachments incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the terms and conditions of this Agreement between SANTA ANA, GARDEN GROVE, FOUNTAIN VALLEY and COSTA MESA and it supersedes all prior representations, understandings and communications between the parties. The invalidity in whole or in part of any term or condition of this Agreement shall not affect the validity of other term(s) or condition(s) of this Agreement. The above referenced Recitals are true and correct and are incorporated by reference herein.
- b. Any modification of this Agreement shall only be by amendment upon written mutual consent of all cities. All modifications, amendments, changes and revisions of this Agreement in whole or in part, and from time to time, shall be binding upon the cities so long as the same shall be in writing and executed by each agency.

- c. A party's failure to insist on any instance(s) of any other party's performance of any term(s) or condition(s) of this Agreement shall not be construed as a waiver of the non-enforcing party's right to such performance or to future performance of such term(s) or condition(s), and the nonperforming party's obligation in respect thereto shall continue in full force and effect. Changes to any portion of this Agreement shall not be binding upon either party except when specifically confirmed in writing by way of a written amendment to this Agreement between the parties and issued in accordance with the provisions of this Agreement.

VIII. INSURANCE AND INDEMNIFICATION:

- a. Each city shall jointly and severally indemnify, defend and hold harmless every other city, its officers, directors, employees and agents from and against any and all claims for any loss or damages, bodily injuries, damage to, or loss of property caused by the negligent acts, omissions or willful misconduct by that city, its officers, directors, employees or agents in connection with or arising out of the performance of this Agreement.
- b. Each city shall maintain adequate levels of insurance, or self-insurance to assure full indemnification of every other city.

IX. ADDITIONAL PROVISIONS:

- a. Term of Agreement: This Agreement shall continue in full force and effect until December 31, 2018. This Agreement may be extended at the mutual consent of all parties in writing.
- b. SANTA ANA, GARDEN GROVE, FOUNTAIN VALLEY and COSTA MESA hereto affirm that they are authorized to execute this Agreement on behalf of said parties and that, by so executing this agreement, the parties hereto are formally bound to the provisions of this Agreement.
- c. Severability: If any term, provision, covenant or condition of this Agreement is held to be invalid, void or otherwise unenforceable, to any extent, by any court of competent jurisdiction, the remainder of this Agreement shall not be affected thereby, and each term, provision, covenant or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law.
- d. Counterparts of Agreement: This Agreement may be executed and delivered in any number of counterparts, each of which, when executed and delivered shall be deemed an original and all of which together shall constitute the same agreement. Facsimile and electronic signatures will be permitted.
- e. In the event that the project costs exceed the estimates submitted in the Project Application as prepared, all parties agree to meet and determine project revisions to meet the budget, or a revised funding proposal by the cities that shall be documented and submitted in writing as a revision to the Agreement.

- f. The parties shall comply with all applicable federal, state and local laws, statutes, ordinances and regulations of any governmental agency having jurisdiction over the project.
- g. Force Majeure: Any party shall be excused from performing its obligations under this Agreement during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including, but not limited to: any incidence of fire, flood; acts of God; commandeering of material, products, plants or facilities by the federal, state or local government; national fuel shortage; or, a material act or omission by the other party; when satisfactory evidence of such cause is presented to the other parties, and provided further that such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.
- h. Assignment: Neither this Agreement, nor any of the parties' rights, obligations, or duties hereunder may be assigned in whole or in part by any party without the prior written consent of all the other parties in their sole and absolute discretion. Any such attempt of assignment shall be deemed void and of no force and effect. Consent to one assignment shall not be deemed consent to any subsequent assignment, nor the waiver of any right to consent to such subsequent assignment.
- i. Obligations To Comply with Law: Nothing herein shall be deemed nor construed to authorize or require any party to issue bonds, notes or other evidences of indebtedness under the terms, in amounts, or for purposes other than as authorized by local, state or federal law.
- j. Governing Law: The laws of the State of California and applicable local and federal laws, regulations and guidelines shall govern this Agreement.
- k. Litigation fees: Should litigation arise out of this Agreement for the performance thereof, the court shall award costs and expenses, including attorney's fees, to the prevailing party.
- l. Notices: Any notices, requests, or demands made between the parties pursuant to this Agreement are to be directed as follows:

City of Santa Ana
Public Works Agency
20 Civic Center Plaza, M-43
Santa Ana, CA 92701
Vinh Nguyen
Sr. Civil Engineer
(714) 647-5612
(714) 647-5616 Fax

City of Garden Grove
Public Works Department
11222 Acacia Parkway
Garden Grove, CA 92842
Tony Aquino
Acting City Engineer

(714) 741-5193
(714) 741-5578 Fax

City of Fountain Valley
Public Works
10200 Slater Avenue
Fountain Valley, CA 92708
Temo Galvez
Deputy City Engineer
(714) 593-4517
(714) 593-4554 Fax

City of Costa Mesa
Transportation Services
77 Fair Drive
Costa Mesa, CA 92628
Pritam Deshmukh
Associate Civil Engineer
(714) 754-5183
(714) 754-5028 Fax

X. DELAGATED AUTHORITY:

The actions required to be taken by the cities in the implementation of this Agreement are delegated to its City Manager or equivalent designee.

[SIGNATURES ON SUBSEQUENT PAGES]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written:

CITY OF SANTA ANA:

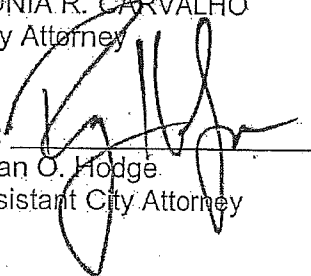
DAVID CAVAZOS
City Manager

ATTEST:

MARIA D. HUIZAR
Clerk of the Council

APPROVED AS TO FORM:

SONIA R. CARVALHO
City Attorney

By: 

Ryan O. Hodge
Assistant City Attorney

RECOMMENDED FOR APPROVAL:

FRED MOUSAVIPOUR
Executive Director - PWA

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written:

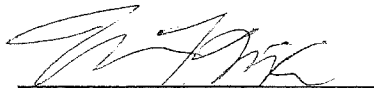
CITY OF GARDEN GROVE:

City Manager

ATTEST:

KATHLEEN BAILOR
City Clerk

APPROVED AS TO FORM:



THOMAS F. NIXON
City Attorney

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written:

CITY OF FOUNTAIN VALLEY:

MICHAEL VO
Mayor

ATTEST:

SYLVIA VERMUDEZ
City Clerk

APPROVED AS TO FORM:

ALAN R. BURNS
City Attorney

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written:

CITY OF COSTA MESA:

TOM HATCH
Chief Executive Officer

ATTEST:

BRENDA GREEN
City Clerk

APPROVED AS TO FORM:

TOM DUARTE
City Attorney

EXHIBIT A

Harbor Blvd Corridor TSSP

Project Funds Breakdown

Agency		Project Funds by Agency*	M2 Grant (80%)	Local Match (20%)		
				Total Match**	Match Type	
					Cash	In-kind
1	Garden Grove	\$437,575	\$350,060	\$87,515	\$75,446	\$12,069
2	Santa Ana	\$702,300	\$561,840	\$140,460	\$91,028	\$49,432
3	Fountain Valley	\$28,200	\$22,560	\$5,640	\$5,640	\$0
4	Costa Mesa	\$1,147,025	\$917,620	\$229,405	\$179,594	\$49,811
Total		\$2,315,100	\$1,852,080	\$463,020	\$351,708	\$111,312

*: Unused project funds from one Agency can be transferred to another Agency with mutual consent.

**: Total match amount may vary; the final match amount will be based on the actual project implementation costs, to be determined at completion of the Primary Implementation Phase of the project.

EXHIBIT B
PROJECT APPLICATION

(Attached)

CITY OF SANTA ANA
FY 2014 Call for Projects
Regional Traffic Signal Synchronization Program
Project P

Harbor Boulevard Corridor
Traffic Signal Synchronization Project

Supplemental Application Documentation
Revised Jan 6, 2014

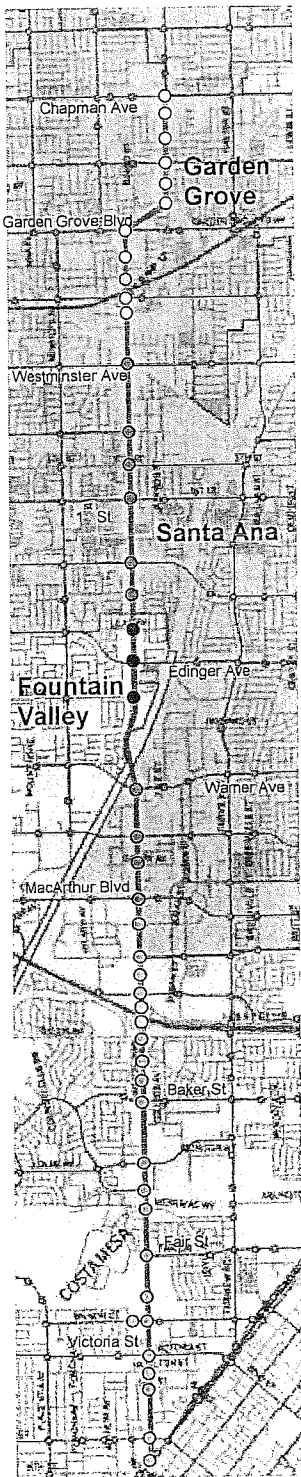
Submitted by:

City of Santa Ana
With the cooperation of the following Agencies:
City of Garden Grove
Caltrans D12
City of Fountain Valley
City of Costa Mesa

Contact:
Vinh Nguyen
714-647-5612
vnguyen@santa-ana.org

Project P Regional Traffic Signal Synchronization Program Application Checklist

Project P Application Checklist	Included
RTSSP Online Application – submitted through OCFundTracker 1. Vehicle Miles Traveled 2. Benefit Cost Ratio 3. Project Characteristics 4. Transportation Significance 5. Maintenance of Effort 6. Project Scale 7. Number of Jurisdictions 8. Current Project Readiness 9. Funding Over-Match	Online
Section 1: Key Technical Information a. Project limits of the corridor to synchronize b. Designation of the corridor to synchronize: priority corridor, signal synchronization network corridor, or master plan of arterial highways corridor c. Project start date and end date, including any commitment to operate signal synchronization beyond the three year grant period d. Signalized intersections that are part of the project e. Traffic Forum members	Pg. 2 Pg. 2 Pg. 2 Pg. 3 Pg. 4
Section 2: Lead agency	Pg. 4
Section 3: Resolutions of Support From the Project's Traffic Forum members	Appendix A
Section 4: Preliminary Plans for the Proposed Project <u>Primary Implementation</u> a. Project Administration b. Developing and implementing optimized signal synchronization timing c. Producing a Before and After Study for the proposed project d. Engineering design of signal system improvements e. Proposed signal improvements <u>Ongoing Maintenance and Operation</u> a. Monitoring and improving optimized signal timing b. Communications and detection support c. Project final report	Pp. 5-7 Pg. 7
Section 5: Total Proposed Project Cost by Task	Pp. 8-12
Section 6: Project Schedule by Task for the 3 Year Grant Period	Pp. 13
Section 7: Matching Funds	Pg. 14-15
Section 8: Environmental clearances and other permits	Pg. 16
Section 9: Calculations used to Develop Selection Criteria Inputs	Pp. 16-17
Section 10: Any additional information deemed relevant by the applicant	Pg. 17
Appendices	



NORTH

LEGEND

Harbor Blvd Corridor

- City of Garden Grove
- Caltrans
- City of Santa Ana
- City of Fountain Valley
- City of Costa Mesa

Section 1: Key Technical Information

a. The network of Harbor Boulevard is being proposed for traffic signal synchronization. According to Figure 1, the project limits are from Chapman Ave in the City of Garden Grove to Newport Blvd in the City of Costa Mesa, which will have inter-agency coordination among five jurisdictions.

b. Designation of the corridor to synchronize:

- Priority Corridor
- Signal Synchronization Network Corridor
- Master Plan of Arterial Highways Corridor

c. Project start date: May 1, 2015

Project end date: May 1, 2018

All agencies commit to operate signal synchronization beyond the three year grant period for:

- 0 years
- 1 year
- 2 years
- 3 years
- Other _____

Figure 1: Signalized intersection and Proposed Project limits

d. Signalized intersections that are part of the project: see Table 1

**Table 1: Project Traffic Signals for the Harbor Boulevard
Signal Synchronization Project**

Intersection Name		Jurisdiction
1.	Chapman Ave @ Harbor Blvd	Garden Grove
2.	Resort Way/ Target Ctr @ Harbor Blvd	
3.	Twintree Ave @ Harbor Blvd	
4.	Lampson Ave @ Harbor Blvd	
5.	Water Park @ Harbor Blvd	
6.	Palm St @ Harbor Blvd	
7.	Garden Grove Blvd @ Harbor Blvd	
8.	Harbor Pl @ Harbor Blvd	
9.	SR-22 WB Ramp/ Banner St @ Harbor Blvd	Caltrans
10.	Trask Ave @ Harbor Blvd	Garden Grove
11.	Cardinal St @ Harbor Blvd	
12.	Westminster Ave @ Harbor Blvd	Santa Ana
13.	Hazard Ave @ Harbor Blvd	
14.	5th St @ Harbor Blvd	
15.	1st St @ Harbor Blvd	
16.	McFadden Ave @ Harbor Blvd	
17.	Kent Ave @ Harbor Blvd	
18.	Lilac Ave @ Harbor Blvd	Fountain Valley
19.	Edinger Ave @ Harbor Blvd	
20.	Heil Ave @ Harbor Blvd	
21.	Warner Ave @ Harbor Blvd	Santa Ana
22.	Segerstrom Ave @ Harbor Blvd	
23.	Garry Ave @ Harbor Blvd	
24.	MacArthur Blvd @ Harbor Blvd	
25.	Scenic Ave @ Harbor Blvd	
26.	Sunflower Ave @ Harbor Blvd	Costa Mesa
27.	Law Court @ Harbor Blvd	
28.	South Coast Dr @ Harbor Blvd	
29.	I-405 NB Ramp @ Harbor Blvd	Caltrans
30.	I-405 SB Ramp @ Harbor Blvd	
31.	Gilser Ave @ Harbor Blvd	Costa Mesa
32.	Date Pl @ Harbor Blvd	
33.	Nutmeg Pl @ Harbor Blvd	
34.	Baker St @ Harbor Blvd	
35.	Adams Ave @ Harbor Blvd	
36.	Mesa Verde/ Peterson Pl @ Harbor Blvd	
37.	Merrimac Wy @ Harbor Blvd	
38.	Fair Dr @ Harbor Blvd	
39.	Harbor Ctr @ Harbor Blvd	
40.	Wilson St @ Harbor Blvd	
41.	Victoria St @ Harbor Blvd	
42.	Hamilton St @ Harbor Blvd	
43.	Bay St @ Harbor Blvd	
44.	19th St @ Harbor Blvd	
45.	Newport Blvd @ Harbor Blvd	
46.	Wilson St @ Center Wy	

e. Traffic Forum members:

Garden Grove

California Department of Transportation

Santa Ana

Fountain Valley

Costa Mesa

Section 2: Lead Agency

- City of City of Santa Ana will be the lead agency
- OCTA agency is requested to be the lead
- County of Orange will be the lead agency

Section 3: Resolutions of Support

Resolutions of support from Traffic Forum members are provided on Appendix A.

Section 4: Preliminary Plans for the Proposed Project

1. Primary Implementation

a. Project Administration

The multi-jurisdiction project of Harbor Boulevard will be led by City of Santa Ana. Project Administration services will include but not limited to administration, engineering, design, coordination, presentation and other related responsibilities to ensure the timely implementation of the project.

b. Developing and implementing optimized signal synchronization timing

In accordance with the Traffic Signal Synchronization Master Plan, the proposed synchronization of Harbor Boulevard will involve the Traffic Forum members to design and implement signal timing synchronization *across jurisdictional boundaries* to mitigate traffic and improve volume throughput along the corridor. Coordination parameters for peak traffic periods will be dependent upon existing field conditions, traffic patterns and maintaining cross-coordination. Timing plans for Caltrans intersections will be prepared and provided to Caltrans for implementation.

The project will take into account of Harbor Blvd timing at Hotel Way in the City of Anaheim. Effort will be provided, to the extent feasible, to maintain cross-jurisdiction synchronization on Harbor Blvd into the City of Anaheim.

c. Producing a Before and After Study for the project

The Before and After Study for Harbor Boulevard will be conducted as defined by Regional Traffic Signal Synchronization Program guidelines. The studies will collect empirical data before and after the Primary Implementation. With proposed installations of Bluetooth monitoring stations at selected major intersections, accurate, real-time travel time will be measured along with staff test drives. The data will then be compared for the effectiveness and differences in the performance of the new traffic synchronization.

d. Engineering Design of Signal Improvements for the Project

The City of Santa Ana will be performing the engineering design in-house for all signal improvements within its City limits. City staff will field verify and design the upgraded infrastructure along with new equipment to implement and maintain the new traffic synchronization. For improvements in City of Garden Grove, Fountain Valley, Costa Mesa and Caltrans where and if engineering design is

needed, the agency's staff will provide existing/as-built information and assist the project consultant to prepare the plans.

e. Proposed Signal Improvements

Garden Grove

The City is proposing to upgrade existing detection to Video Detection, replace pedestrian heads with countdown types, upgrades and install Emergency Vehicle Preemption at eight intersections. In addition, the City will upgrade the traffic signal cabinet at Cardinal St.

Caltrans

No proposed improvements.

City of Santa Ana

All of the traffic signals along Harbor Blvd within the City are proposed to have Ethernet communications, which will enable various locations to have Bluetooth travel time measuring systems and digital closed-circuit television camera systems for real-time monitoring, evaluation and fine tuning of the new synchronization plans. Approximately 3,200 feet of new conduit and 9,500 feet of new fiber optic cable will be installed. Four locations are being designed to have System Detection upgrades. In addition, the City is proposing to replace pedestrian heads with countdown types at four intersections. The City is also proposing upgrades to the Video Management System and Central System at the Traffic Management Center (TMC). The TMC improvements include upgrade of video display software and associated workstation/hardware, additional CCTV licensing, upgrade of display from analog to digital monitors. These TMC improvements will enhance the ability of the City to monitor and maintain traffic synchronization on the corridors.

Fountain Valley

No proposed improvements.

Costa Mesa

The City is proposing the installation of interconnect conduit with fiber optic cable along with Ethernet Communication equipment and CCTV camera system at various locations. The City is also proposing traffic signal cabinet & foundation upgrades at nine intersections. In addition, the City is proposing installation of Uninterruptible Power Source, Emergency Vehicle Preemption and replace pedestrian heads with countdown types at several locations. The City is also proposing upgrades to the existing Traffic Management Center.

2. Ongoing Maintenance and Operation

Ongoing maintenance and operation period will start after signal timing is implemented and last for a period of two years. It will consist both of (1) monitoring and improving optimized signal timing and (2) communications and detection support. Ongoing Maintenance will not be provided for Caltrans intersections. Descriptions of both are provided below:

a. Monitoring and improving optimized signal timing

After the Primary Implementation of the new coordination parameters, the corridor will be monitored and fine tuned monthly or as needed for the duration of two years. Improvements to the signal synchronization will be made according to the test drives and changing field conditions.

b. Communications and detection support

The communication and detection systems will be monitored and repaired as necessary to maintain efficient corridor synchronization throughout the project schedule.

c. Final report

After the three year grant period, a final report for the project will be developed and will include before and after studies, updates of the results from the ongoing maintenance and operations phase and will establish completion of all CTFP Guideline requirements.

Section 5: Total Proposed Project Cost by Task

Primary Implementation

The Primary Implementation will include the following elements.

Table 2. Estimated Cost of Proposed Signal Improvements for Harbor Boulevard by Agency							Total	Match	
								Cash	In-Kind
a. Project Administration							\$86,000	\$1,200	\$16,000
b. Developing and Implementing Optimized Signal Synchronization Timing							\$178,000	\$15,200	\$20,400
c. Producing a Before and After Study for the proposed project							\$46,000	\$9,200	\$0
Total 1 – Project Admin, Developing/Implement Timing, Final Report, and Engineering Design							\$310,000	\$25,600	\$36,400
e. Proposed Signal System Improvements									
Agency	Harbor @	Description of Work at This Location	Unit Price *	Unit	Design	Material, Tax, & Labor	Total	Match	
								Cash	In-Kind
Garden Grove	Chapman Ave	Video Detection Upgrade, EVP, Ped Upgrade	\$29,500	1	\$1,000	\$29,500	\$30,500	\$6,100	\$0
Garden Grove	Resort Way/Target Ctr	Video Detection Upgrade, EVP, Ped Upgrade	\$29,000	1	\$1,000	\$29,000	\$30,000	\$6,000	\$0
Garden Grove	Twintree Ave								
Garden Grove	Lampson Ave	Video Detection Upgrade, EVP, Ped Upgrade	\$33,700	1	\$1,000	\$33,700	\$34,700	\$6,940	\$0
Garden Grove	Water Park								
Garden Grove	Palm St	Video Detection Upgrade, EVP, Ped Upgrade	\$29,000	1	\$1,000	\$29,000	\$30,000	\$6,000	\$0
Garden Grove	Garden Grove Blvd	Video Detection Upgrade, EVP, Ped Upgrade	\$33,700	1	\$1,000	\$33,700	\$34,700	\$6,940	\$0
Garden Grove	Harbor Pl	Video Detection Upgrade, EVP, Ped Upgrade	\$32,000	1	\$1,000	\$32,000	\$33,000	\$6,600	\$0
Caltrans	SR-22 WB Off Ramp								
Garden Grove	Trask Ave	Video Detection Upgrade, EVP, Ped Upgrade	\$29,000	1	\$1,000	\$29,000	\$30,000	\$6,000	\$0
Garden Grove	Cardinal St	Video Detection Upgrade, EVP, Ped Upgrade, Cabinet Upgrade	\$46,400	1	\$1,000	\$46,400	\$47,400	\$9,480	\$0
Garden Grove/ Santa Ana	Westminster Ave	System Detection, CCTV Camera System, Bluetooth Travel Time	\$20,000	1	\$2,000	\$20,000	\$22,000	2400	\$2,000
Santa Ana	Hazard Ave	Install Fiber in Existing Conduit, System Detection, Ethernet Communication, Bluetooth Travel Time, Ped Upgrade	\$14,200	1	\$3,000	\$14,200	\$17,200	\$440	\$3,000

Santa Ana	5th St	Install Fiber in Existing Conduit, System Detection, CCTV Cabinet Install, Ethernet Communication, PPLT Phasing, Ped Upgrade	\$39,200	1	\$4,000	\$39,200	\$43,200	\$4,640	\$4,000
Santa Ana	1st St	Install Fiber in Existing Conduit	\$10,000	1	\$3,000	\$10,000	\$13,000	\$0	\$2,600
Santa Ana	McFadden Ave	Install Fiber in Existing Conduit, Bluetooth Travel Time	\$17,000	1	\$3,000	\$17,000	\$20,000	\$1,000	\$3,000
Santa Ana	Kent Ave	CCTV System, Ethernet Communication	\$12,000	1	\$0	\$12,000	\$12,000	\$2,400	\$0
Fountain Valley/Santa Ana	Lilac Ave								
Fountain Valley/Santa Ana	Edinger Ave	Bluetooth Travel Time	\$5,000	1	\$0	\$5,000	\$5,000	\$1,000	\$0
Fountain Valley/Santa Ana	Heil Ave								
Santa Ana	Warner Ave	Install Conduit & Fiber, System Detection, Ethernet Communication, CCTV Camera System, Wireless	\$85,000	1	\$3,000	\$85,000	\$88,000	\$14,600	\$3,000
Santa Ana	Segerstrom Ave	Install Conduit & Fiber, Ethernet Communication, CCTV Camera System, Ped Upgrade	\$57,000	1	\$3,000	\$57,000	\$60,000	\$9,000	\$3,000
Santa Ana	Garry Ave	Install Conduit & Fiber, Ethernet Communication, Ped Upgrade	\$50,200	1	\$3,000	\$50,200	\$53,200	\$7,640	\$3,000
Santa Ana	MacArthur Blvd	Install Conduit & Fiber, Ethernet Communication,	\$59,200	1	\$3,000	\$59,200	\$62,200	\$9,440	\$3,000
Santa Ana	TMC	TMC Upgrade, Motorist Information System, Video System Upgrade	\$100,000	1	\$0	\$100,000	\$100,000	\$20,000	\$0
Costa Mesa	Scenic Ave	Install Conduit & Fiber, Ethernet Communication, EVP, Ped Upgrade	\$15,800	1	\$700	\$15,800	\$16,500	\$3,300	\$0
Costa Mesa	Sunflower Ave	Install Conduit & Fiber, CCTV Camera System, Ethernet Communication, Cabinet Upgrade, Battery Backup, EVP	\$52,500	1	\$2,200	\$52,500	\$54,700	\$10,940	\$0

Costa Mesa	Law Court	Install Conduit & Fiber, Ethernet Communication, Cabinet Upgrade, Battery Backup, EVP	\$41,500	1	\$1,700	\$41,500	\$43,200	\$8,640	\$0
Costa Mesa	South Coast Dr	Install Conduit & Fiber, CCTV Camera System, EVP, Ped Upgrade	\$24,800	1	\$1,100	\$24,800	\$25,900	\$5,180	\$0
Caltrans	I-405 NB Off Ramp	Controller Upgrade, GPS Unit							
Caltrans	I-405 SB Off Ramp	Controller Upgrade							
Costa Mesa	Gisler Ave	Install Conduit & Fiber, CCTV Camera System, EVP, Ped Upgrade	\$23,600	1	\$1,000	\$23,600	\$24,600	\$4,920	\$0
Costa Mesa	Date Pl	CCTV Camera System, EVP	\$16,500	1	\$700	\$16,500	\$17,200	\$3,440	\$0
Costa Mesa	Nutmeg Pl	Install Conduit & Fiber, EVP, Ped Upgrade	\$11,600	1	\$500	\$11,600	\$12,100	\$2,420	\$0
Costa Mesa	Baker St	Install Conduit & Fiber, CCTV Camera System, Cabinet Upgrade, Battery Backup, EVP, Ped Upgrade	\$61,300	1	\$2,500	\$61,300	\$63,800	\$12,760	\$0
Costa Mesa	Adams Ave	Install Conduit & Fiber, EVP	\$8,000	1	\$400	\$8,000	\$8,400	\$1,680	\$0
Costa Mesa	Mesa Verde/Peterson Pl	EVP, Ped Upgrade	\$9,300	1	\$400	\$9,300	\$9,700	\$1,940	\$0
Costa Mesa	Merimac Wy	Cabinet Upgrade, Battery Backup, EVP, Ped Upgrade	\$45,800	1	\$1,900	\$45,800	\$47,700	\$9,540	\$0
Costa Mesa	Fair Dr	Install Conduit & Fiber, CCTV Camera System, Cabinet Upgrade, Battery Backup, EVP, Ped Upgrade	\$60,100	1	\$2,500	\$60,100	\$62,600	\$12,520	\$0
Costa Mesa	Harbor Ctr	EVP, Ped Upgrade	\$8,100	1	\$400	\$8,100	\$8,500	\$1,700	\$0
Costa Mesa	Wilson St	CCTV Camera System, Cabinet Upgrade, EVP, Ped Upgrade	\$41,300	1	\$1,700	\$41,300	\$43,000	\$8,600	\$0
Costa Mesa	Victoria St	CCTV Camera System, Cabinet Upgrade, EVP, Ped Upgrade	\$41,300	1	\$1,700	\$41,300	\$43,000	\$8,600	\$0
Costa Mesa	Hamilton St	Install Conduit & Fiber, Ethernet Communication, EVP, Ped Upgrade	\$48,300	1	\$2,000	\$48,300	\$50,300	\$10,060	\$0
Costa Mesa	Bay St	Install Conduit & Fiber, CCTV Camera System, Ethernet Communication, EVP, Ped Upgrade	\$87,600	1	\$3,600	\$87,600	\$91,200	\$18,240	\$0

Costa Mesa	19th St	Install Conduit & Fiber, CCTV Camera System, Ethernet Communication, Cabinet Upgrade, Battery Backup, EVP, Ped Upgrade	\$74,300	1	\$3,100	\$74,300	\$77,400	\$15,480	\$0
Costa Mesa	Newport Blvd								
Costa Mesa	Wilson St & Center Way	Ethernet Communication, Controller Upgrade	\$8,000	1	\$1,400	\$8,000	\$9,400	\$1,880	\$0
Costa Mesa	TMC	Ethernet Communication, TMC Upgrade	\$58,000	1	\$1,400	\$58,000	\$59,400	\$11,880	\$0
<i>Subtotal: Estimated cost of "Proposed Signal System Improvements" (total combined)</i>					\$65,900	\$1,468,800	\$1,534,700	\$280,340	\$26,600
g. Contingency (up to 10% of the estimated costs of "Proposed Signal System Improvements")						\$146,880		\$29,376	\$0
h. Construction management (up to 15% of the estimated costs of "Proposed Signal System Improvements" for support and inspection costs)						\$220,320		\$0	\$44,064
Total 2- Signal System Improvements, Construction Support/Inspection, and Contingency Costs						\$1,901,900		\$309,716	\$70,664
Totals 1+2						\$2,211,900		\$442,380	

*: Details of improvement and cost are listed in the Appendix B

Ongoing Maintenance and Operation

a. Monitoring and improving optimized signal timing

Estimated Cost: \$72,240

b. Communications and detection support

Estimated Cost: \$30,960

Table 3: Estimated Cost of Proposed Ongoing Maintenance and Operation

Description of Work	Description	Unit Price	Cost
Monitoring and improving optimized signal timing	Drive monthly and improve timing parameters along 43(*) signals for 24 months after signal timing is implemented	\$70 per signal per month	\$72,240
Communications and detection support	Monitor, maintain and repair communication and detection along 43(*) signals for 24 months after signal timing is implemented	\$30 per signal per month	\$30,960
Project final report	Project team will develop a final report for the project. This report will be completed after the three year grant period.	Negligible	Negligible
Proposed Ongoing Maintenance and Operation			\$103,200

(*): Ongoing Maintenance and Operation will not be provided for three (3) Caltrans intersections.

Total Project Cost Including Primary Implementation and Ongoing Maintenance and Operation for Three Year Grant Period

Total Estimated Cost: \$2,315,100 (Table 2 + Table 3 = \$2,211,900 + \$103,200)

Comments (if any): _____

Section 6: Project Schedule by Task for the 3 Year Grant Period

Project start date: May 1, 2015

Project end date: May 1, 2018

Primary Implementation

Task	Starting Date	Ending Date
a. Project Administration	May 1, 2015	May 1, 2018
b. Developing and implementing optimized signal synchronization timing	May 1, 2015	May 1, 2016
c. Producing a Before and After Study	May 1, 2015	June 1, 2016
d. Engineering design of Signal System Improvements	May 1, 2015	Sept 30, 2015
e. Proposed Signal Improvements, Construction Support/ Inspection and Contingency Costs	Sept 30, 2015	May 31, 2016
f. Contingency	Sept 30, 2015	May 31, 2016
g. Construction Management	May 30, 2015	May 31, 2016

Ongoing Maintenance and Operation

Task	Starting Date	Ending Date
a. Monitoring and improving optimized signal timing	June 1, 2016	May 1, 2018
b. Communications and detection support	June 1, 2016	May 1, 2018
c. Producing a Final Report	April 1, 2017	May 1, 2018

Section 7: Matching Funds

Table 2 (Implementation): M2 Funds Requested	\$1,769,520
Phase Match Amount	\$442,380
<i>In-kind match amount</i>	\$107,064
<i>Cash match amount</i>	\$335,316
Total Phase Cost	\$2,211,900

Table 3 (Ongoing Activities): M2 Funds Requested	\$82,560
Phase Match Amount	\$20,640
<i>In-kind match amount</i>	\$4,248
<i>Cash match amount</i>	\$16,392
Total Phase Cost	\$103,200

Project Total: M2 Funds Requested	\$1,852,080
Total Match Amount (min 20%)	\$463,020
<i>In-kind match amount (max 20%)</i>	\$111,312
<i>Cash match amount</i>	\$351,708
Total Project Cost	\$2,315,100

Total Match Ratio (to total project cost)	\$463,020 / \$2,315,100 = 20%
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AGENCY TOTAL MATCH SUMMARY

Agency	Cash	In-Kind	Total Match
Garden Grove	\$75,446	\$12,069	\$87,515
Santa Ana	\$91,028	\$49,432	\$140,460
Fountain Valley	\$5,640	\$0	\$5,640
Costa Mesa	\$179,594	\$49,811	\$229,405
Caltrans	\$0	\$0	\$0
TOTAL	\$351,708	\$111,312	\$463,020

Note: No improvements are proposed for Caltrans locations; only timing plans will be prepared and given to Caltrans for implementation. Cost for timing is included in Cities of Garden Grove & Costa Mesa.

MATCH BREAKDOWN (CASH VS IN-KIND SERVICES)

A. Cash Match

Agency	Funding Source	Amount of Cash Contribution
Garden Grove	M2 Fairshare	\$75,446
Santa Ana	M2 Fairshare	\$91,028
Fountain Valley	M2 Fairshare	\$5,640
Costa Mesa	AQMD	\$179,594
Caltrans		\$0
TOTAL		\$351,708

B. In-Kind Services

i. Specific Improvements (List items and Cost):

Agency	Improvement	Date of Construction	Expenditure
N/A			\$
TOTAL			\$0.00

ii. Staffing Commitment:

Agency	Staff Position	Type of Service to Project	No. of Hours*	Fully Burdened Hr Rate*	Total*
Garden Grove	Associate Engineer	Design/Implementation/Review	40.00	\$95.00	\$3,800
	Sr. Traffic Signal Electrician	Implementation/Constr. Engrng	30.00	\$75.00	\$2,250
	Traffic Signal Electrician	Implementation/Constr. Engrng	40.00	\$50.00	\$2,000
	Construction Inspector	Constr. Engrng	34.95	\$115.00	\$4,019
	Sub Total for Garden Grove				
Santa Ana	Sr. Civil Engineer	Admin/Review	32.00	\$233.00	\$7,456
	Assistant Engineer II	Design/Implement/Constr Engrng	70.00	\$213.00	\$14,910
	Assistant Traffic Oper Engineer	Design/Implement/Constr Engrng	70.00	\$213.00	\$14,910
	Construction Inspector	Constr Engrng	40.00	\$187.00	\$7,480
	Engineering Interns	Design/Implement/Constr Engrng	114.04	\$41.00	\$4,776
Subtotal for Santa Ana					\$49,432
Costa Mesa	Transportation Services Manager	Oversight	36.00	\$200.00	\$72,000
	Associate Engineer	Project Manager	120.00	\$150.00	\$18,500
	Assistant Engineer	Signal Timing	95.00	\$140.00	\$13,300
	Engineering Tech	Technical Field Support	94.26	\$120.00	\$11,311
Subtotal for Costa Mesa					\$49,811
TOTAL IN-KIND MATCH					\$111,312

*: Estimate, subject to change

Section 8: Environmental clearances and other permits

“A categorical exemption will be obtained for this project upon project award.”

Section 9: Calculations used to Develop Selection Criteria Inputs:

1. Vehicle Miles Traveled (VMT):

Segment	Current Average Daily Traffic	Distance (mi)	VMT = ADT*D
Chapman Ave to Lampson Ave	28,000	0.5	14000
Lampson Ave to Garden Grove Blvd	33,000	0.66	21780
Garden Grove Blvd to Trask Ave	39,000	0.5	19500
Trask Ave to Westminster Ave	53,000	0.5	26500
Westminster Ave to Hazard Ave	48,000	0.5	24000
Hazard Ave to 1st St	48,000	0.5	24000
1st St to McFadden Ave	45,000	0.48	21600
McFadden Ave to Edinger Ave	45,000	0.75	33750
Edinger Ave to Heil Ave	42,000	0.25	10500
Heil Ave to Warner Ave	42,000	0.71	29820
Warner Ave to Segerstrom Ave	42,000	0.36	15120
Segerstrom Ave to MacArthur Blvd	42,000	0.46	19320
MacArthur Blvd to Sunflower Ave	44,000	0.44	19360
Sunflower Ave to South Coast Dr	44,000	0.28	12320
South Coast Dr to Gilser Ave	59,000	0.32	18880
Gilser Ave to Baker St	59,000	0.48	28320
Baker St to Village Wy	62,000	0.17	10540
Village Wy to Adams Ave	55,000	0.3	16500
Adams Ave to Fair Dr	43,000	0.7	30100
Fair Dr to Wilson St	40,000	0.5	20000
Wilson St to Victoria St	39,000	0.25	9750
Victoria St to Bay St	34,000	0.25	8500
Bay St to Newport Blvd	27,000	0.55	14850
Total Project VMT			449,010

Source of ADT are from OCTA 2012 Traffic Flow map

Calculation and Estimated Points	
Criteria	Estimated Points
1. Vehicle Miles Traveled (VMT) (20 Points) <u>VMT=449,010 (See Above Table)</u>	20
2. Cost Benefit Ratio: (15 Points) <u>Calculation for Total Project Cost/ VMT= 2,330,450 /449,010= 5.2</u>	13
3. Project Characteristics: (10 Points) <u>Signal Coordination; Communications and detection support; New or upgraded communication systems and detection; Intersection/field system modernization and replacement, New Protective/Permissive signals, TMC Upgrades</u>	10
4. Transportation Significance: (10 Points) <u>Priority Corridor</u>	10
5. Maintenance of Effort: (5 Points) <u>0 years beyond 3 year grant period</u>	0
6. Project Scale: (10 points) a. <u>Number of signals = 46</u> b. <u>Number of signals being synchronization/ Total number of corridor signals= 46/ 97= 47%</u>	4
7. Number of Jurisdictions: (20 Points) <u>5 jurisdictions</u>	20
8. Current Project Readiness: (5 Points) <u>Project start date: May 1, 2015</u>	5
9. Funding Match: (5 Points) <u>\$466,090 / \$2,330,450 = 20%</u>	0
Total Points	82

Section 10: Include any additional information or documentation deemed relevant by the applicant

Project Summary

All guidelines were met for this project

Not all qualifications were met, provide an explanation below of why the guidelines were not met for this project.

APPENDIX A
Resolutions of Support

APPENDIX B
Improvements Detail Costs

No	Agency	Intersection	Project Administration	Design & Implement	Signal Timing Before & After Study	Outgoing Maintenance*	Project Cost		Improvements Total	Design	Impr & Design Total	Impr & Design Match	
							Cash	In-Kind				Cash	In-Kind
1	Fountain Valley	Harbor Blvd	\$2,000	\$4,000	\$1,000	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Fountain Valley	Harbor Blvd	\$2,000	\$4,000	\$1,000	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Fountain Valley	Harbor Blvd	\$2,000	\$4,000	\$1,000	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total							\$6,000	\$11,000	\$3,000	\$0	\$0	\$0	\$0

* Outgoing Maintenance per signal per month: \$10
Outgoing Comm & Out Support per signal per month: \$50

COSTS SUMMARY

Phase	Tasks	Costs	MD Grant	Total Match		Total Match (2020)		Fund Source	
				Cash	In-Kind	Cash	In-Kind	MD	MT
Primary Implement	Project Administration	\$6,000	\$1,000	\$1,000	\$0	\$1,000	\$0	MD	MT
	Design & Implement	\$12,000	\$2,000	\$2,000	\$0	\$2,000	\$0	MD	MT
	Signal Design	\$1,000	\$0	\$0	\$0	\$0	\$0	MD	MT
	System Improvements	\$0	\$0	\$0	\$0	\$0	\$0	MD	MT
	Contingency	\$0	\$0	\$0	\$0	\$0	\$0	MD	MT
Outgoing Oper	Outgoing Maintenance - Comm	\$3,000	\$1,000	\$1,000	\$0	\$1,000	\$0	MD	MT
	Outgoing Maintenance - Oper	\$1,000	\$1,728	\$432	\$0	\$432	\$0	MD	MT
	Phase Total	\$7,000	\$2,728	\$2,432	\$0	\$2,432	\$0	MD	MT
Total		\$13,000	\$3,728	\$3,432	\$0	\$3,432	\$0	MD	MT

Staffing Commitment for In-Kind Match

Agency	Staff Position	Type of Service	No. of Hours*	Hourly Rate*	Amount
Fountain Valley			30	\$0	\$0
			30	\$0	\$0
			30	\$0	\$0
Total					\$0

* Estimated, subject to change

Phase	No	Agency	Interaction	Project Administration	Develop & Implement	Design	CCTV	IP Communication	Type P Cabinet & Foundation	AC/3 Computer	UPS/Service Cab	Premises	Signal Planning (Mod)	TMC Upgrade**	Paid Upgrade	Improvements Total	Design	Ingr & Design Total	Ingr & Design Match	In-Kind
Priority Implementation	1	Costa Mesa	Scenic Area	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	2	Costa Mesa	Scenic Area	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	3	Costa Mesa	Scenic Area	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	4	Costa Mesa	South Coast Dr	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	5	Costa Mesa	Left NB Ramp	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	6	Costa Mesa	Left NB Ramp	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	7	Costa Mesa	Left NB Ramp	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	8	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	9	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	10	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	11	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
	12	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
13	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
14	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
15	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
16	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
17	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
18	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
19	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
20	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
21	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
22	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
23	Costa Mesa	Harbor Blvd	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
Total				\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000

* Ongoing Maintenance per signal per month: \$70
 * Ongoing Comm & Dnt Support per signal per month: \$30

COSTA MESA

Phase	Tasks	Costs	M2 Effort	Match Type	
				Cash	Point-to-Point
Priority Implementation	Project Administration	\$40,000	\$3,000	\$40,000	\$3,000
	Develop & Implement	\$4,000	\$1,000	\$4,000	\$1,000
	Design & After Study	\$1,000	\$1,000	\$1,000	\$1,000
	System Improvements	\$1,000	\$1,000	\$1,000	\$1,000
	Commissioning	\$1,000	\$1,000	\$1,000	\$1,000
	Construction	\$1,000	\$1,000	\$1,000	\$1,000
	Ongoing Maintenance	\$1,000	\$1,000	\$1,000	\$1,000
	Ongoing Comm & Dnt Support	\$1,000	\$1,000	\$1,000	\$1,000
	Phase 1	\$1,000	\$1,000	\$1,000	\$1,000
	Phase 2	\$1,000	\$1,000	\$1,000	\$1,000
	Phase 3	\$1,000	\$1,000	\$1,000	\$1,000
	Total	\$1,147,875	\$1,147,875	\$1,147,875	\$1,147,875

* Estimated, subject to change

Agency	Staff Position	Type of Service	No. of Hours*	Hourly Rate*	Amount
Costa Mesa	Transportation	Overnight	36.00	\$72.00	\$2,592.00
	Security Manager	Project Manager	130.00	\$160.00	\$20,800.00
	Assistant Engineer	Signal Timing	95.00	\$140.00	\$13,300.00
	Engineering Tech	Treatment Field Support	94.16	\$110.00	\$10,357.60
				\$0	\$0
				\$0	\$0
Total					\$47,049.60

* Estimated, subject to change

