

CITY OF HUNTINGTON BEACH

LOCAL SIGNAL SYNCHRONIZATION PLAN



May 19, 2026

CITY OF HUNTINGTON BEACH

LOCAL SIGNAL SYNCHRONIZATION PLAN



City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

Prepared by:
William F. Janusz, P.E., PTOE
Principal Civil Engineer
(714) 374-1628
May 19, 2026



CITY OF
HUNTINGTON BEACH

Chau Vu | Director of Public Works

May 19, 2026

Ms. Alicia Yang
Orange County Transportation Authority
Regional Modeling and Traffic Operations
Planning Division
P.O. Box 14184
Orange, CA 92863-1584

Subject: Local Signal Synchronization Plan Submittal as Part of the Measure M2 Eligibility Process

Dear Ms. Yang:


The City of Huntington Beach is pleased to submit its Local Signal Synchronization Plan as part of the Measure M2 eligibility process. The submittal includes the following components:

1. A completed "Local Signal Synchronization Plan Consistency Review Checklist" form establishing consistency between the Local Signal Synchronization Plan and the Regional Traffic Signal Synchronization Master Plan.
2. An updated Local Signal Synchronization Plan for Fiscal Years 2026/2027 to 2028/2029 including all required elements as identified in the *Guidelines for the Preparation of Local Signal Synchronization Plans*.
3. Update of GIS-based online signal inventory.

The City looks forward to continuing the implementation of the beneficial programs and construction projects made possible by Measure M2.

If you have any questions, please contact me at (714) 374-1628.

Sincerely,


William F. Janusz, P.E., PTOE
Principal Civil Engineer

Enclosures
Local Signal Synchronization Plan Consistency Review Checklist
Local Signal Synchronization Plan

LOCAL SIGNAL SYNCHRONIZATION PLAN CONSISTENCY REVIEW CHECKLIST

The Local Agency Name: City of Huntington Beach Plan Date: 5/19/26

Local agencies must submit a copy of the Local Signal Synchronization Plan, a completed consistency review checklist, and any supporting documentation. Complete the table below.

Local Agency Statement	Page #s in LSSP	Provided or N/A
1. Signal synchronization goals of the agency are consistent with those outlined as part of the Regional Traffic Signal Synchronization Master Plan.	1,2,18,19	Yes
2. Traffic signal synchronization street routes are identified, including all corridors along the regional signal synchronization network located within the local agency.	3 - 4	Yes
3. Traffic signal inventory for all traffic signal synchronization street routes.	5 - 9	Yes
4. Three-year plan separately showing costs, available funding, and phasing for capital, operations, and maintenance of signal synchronization along the traffic signal synchronization street routes and traffic signals which may include unconstrained and build-out scenarios.	10 -14	Yes
5. Signal synchronization review, revision, and assessment of synchronization activities along the traffic signal synchronization street routes and traffic signals.	15 -19	Yes

I certify that the above statements are true to the best of my knowledge.

William F. Janusz
Signature

5/19/26
Date

William F. Janusz, P.E., PTOE Principal Civil Engineer

Printed Name, Title

TABLE OF CONTENTS

SECTION 1	Traffic Signal Synchronization Goals, Policies and Objectives	1
SECTION 2	Traffic Signal Synchronization Street Routes	3
SECTION 3	Traffic Signal Inventory	5
SECTION 4	Traffic Signal Synchronization System and Three Year Plan	10
SECTION 5	Traffic Signal Synchronization Assessment Review and revise, as may be Necessary, the Timing of Traffic Signals	15

LIST OF FIGURES

FIGURE 1	Signal Synchronization Routes	4
----------	-------------------------------	---

LIST OF TABLES

TABLE 1	Traffic Synchronization Inventory	6
TABLE 2	3-Year Outlook Traffic Signal Synchronization (Constrained)	12
TABLE 3	3-Year Outlook Traffic Signal Synchronization (Unconstrained)	13
TABLE 4	LSSP Implementation – Candidate Signal Synchronization Projects With Estimated Costs	14
TABLE 5	Traffic Signal Synchronization Assessment, Review and Revision	20
TABLE 6	Signal Timing Revisions	21
TABLE 7	Orange County Corridor Operational Performance	22

SECTION ONE

TRAFFIC SIGNAL SYNCHRONIZATION GOALS, POLICIES AND OBJECTIVES

Eligibility requirements included in the Renewed Measure M specify that each local jurisdiction must adopt a Local Signal Synchronization Plan (LSSP) and renew it on a three-year cycle. The initial LSSP was adopted by the City of Huntington Beach City Council on December 20, 2010, and was subsequently updated in 2014, 2017, 2020 and 2023. This document is the City of Huntington Beach's three-year update of the LSSP which is required to be submitted to the Orange County Transportation Authority (OCTA) by June 30, 2026. This plan includes the following:

- Traffic signal synchronization street routes;
- Traffic signal inventory;
- Three-year plan showing costs, available funding and phasing for capital, operations, and maintenance of traffic signal synchronization street routes and traffic signals;
- Information on local signal synchronization policies, including how street routes and traffic signals may be synchronized with traffic signals on street routes in adjoining jurisdictions.

It is the City of Huntington Beach's goal to have in-place traffic signal coordination on all major arterial roadways and to have the communication and monitoring capabilities to remotely control the traffic signals from the City's Traffic Management Center (TMC) located at City Hall. The City has an additional long term objective to establish inter-agency communication with the traffic signal systems maintained by Caltrans and the adjacent local agencies.

Working toward these goals, the City maintains its coordinated traffic signal operations and continually monitors the operation for areas where operational improvements may be warranted. Over the past three years, the City has installed over three miles of new conduit and fiber optic cable. In addition, the City upgraded approximately four miles of its existing network of copper interconnect cable to fiber optic cable. The upgrade to fiber optic cable increases monitoring and communication capabilities and provides the infrastructure for the City to install closed circuit television cameras as funding opportunities arise in order to monitor traffic from the TMC. The City is constantly looking for opportunities to further expand and upgrade its traffic signal system such as pursuing grant funds to achieve this objective. Ultimately, the City strives for a completely interconnected system of traffic

signals, which can be remotely monitored and maintained. While several arterials are coordinated across city boundaries, no actual inter-agency real time communication exists.

This document also acknowledges that the City of Huntington Beach supports a multi-agency, corridor-based approach that optimizes traffic signals based on existing traffic patterns. The City supports local agency responsibility for signal timing and working with neighboring agencies to develop synchronization timing.

This plan will require periodic updating on a three-year cycle throughout the duration of Renewed Measure M. The next update will be due to OCTA by June 30, 2029.

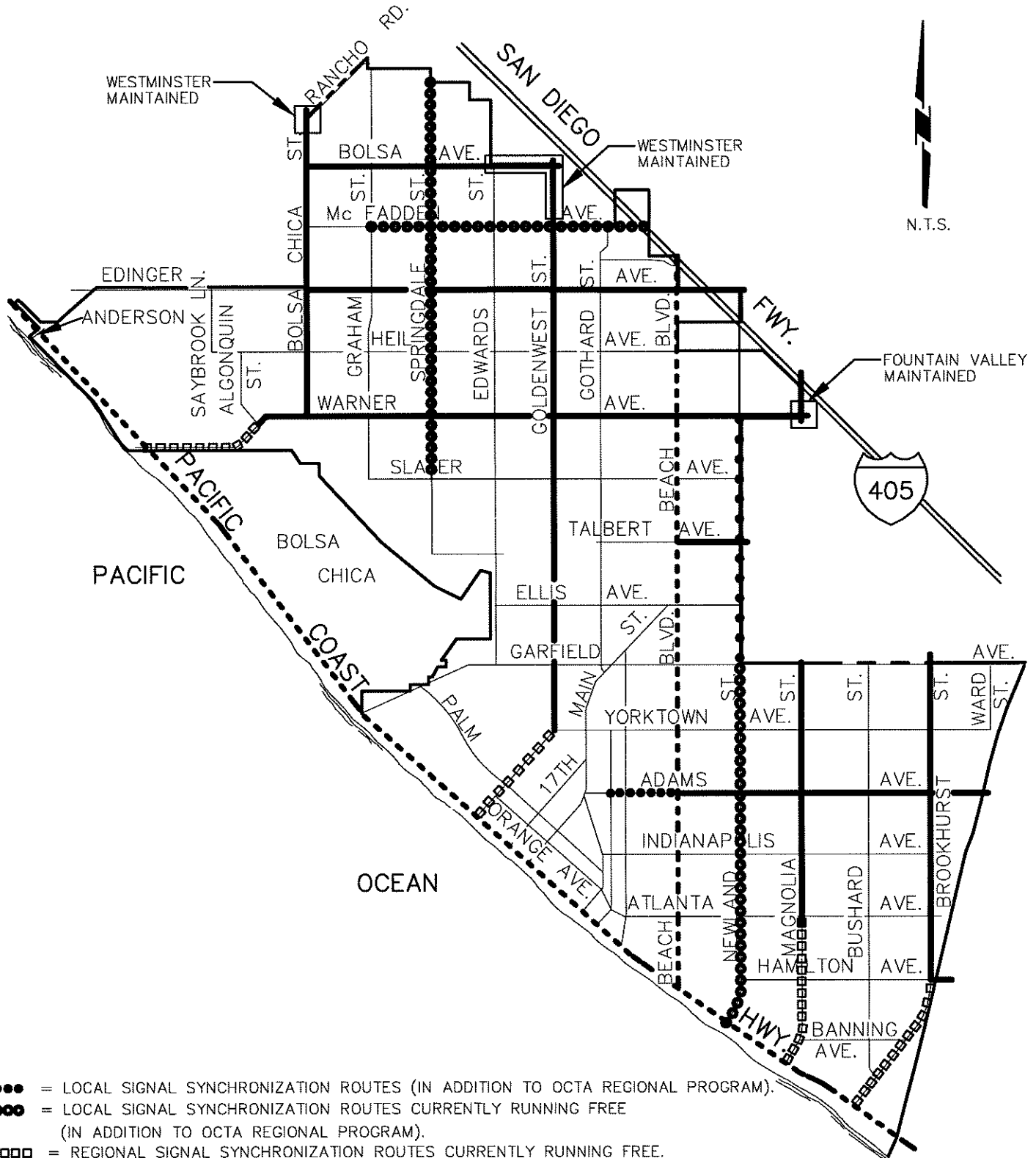
SECTION TWO

TRAFFIC SIGNAL SYNCHRONIZATION STREET ROUTES (EXISTING AND PLANNED)

Figure 1 illustrates the Traffic Signal Synchronization Street Routes within the City of Huntington Beach. These include the routes contained in OCTA's Regional Traffic Signal Synchronization Master Plan. As indicated on the Traffic Synchronization List, Table 1, and the Map of Signal Synchronization Routes, Figure 1, not all signal controlled intersections on these routes currently operate under coordination.

The primary factor for not operating the traffic signals under coordination is low traffic volumes. While most of the arterial streets are under coordination continuously from approximately 6:30 a.m. until approximately 8:00 p.m., there are several segments where, due to low off-peak traffic volumes, the signals operate free in the midmorning and mid-afternoon periods. There are also some segments, primarily on the far south and west sides of the City where traffic volumes approaching the ocean are so low (less than 20,000 vehicles per day), that cross street delay does not warrant operating the signals under coordination at any time of the day.

There are four roadway segments shown on Figure 1 which are not included in OCTA's Regional Traffic Signal Synchronization Master Plan.



- = LOCAL SIGNAL SYNCHRONIZATION ROUTES (IN ADDITION TO OCTA REGIONAL PROGRAM).
- = LOCAL SIGNAL SYNCHRONIZATION ROUTES CURRENTLY RUNNING FREE (IN ADDITION TO OCTA REGIONAL PROGRAM).
- = REGIONAL SIGNAL SYNCHRONIZATION ROUTES CURRENTLY RUNNING FREE.
- = REGIONAL SIGNAL SYNCHRONIZATION ROUTES CURRENTLY UNDER COORDINATION (CONSISTENT WITH OCTA).
- - - - = REGIONAL SIGNAL SYNCHRONIZATION ROUTES (CALTRANS ROUTE CONSISTENT WITH OCTA).

OCTA Coordination Vicmap.dwg

CITY OF HUNTINGTON BEACH * PUBLIC WORKS * TRAFFIC ENGINEERING



SIGNAL SYNCHRONIZATION ROUTES

FIGURE

1

SECTION THREE

TRAFFIC SIGNAL INVENTORY

Table 1 lists the corridors and intersections within the City that are included in the Local Signal Synchronization Plan and the present coordination status of each of these intersections.

Table 1
Traffic Synchronization Inventory
 City of Huntington Beach

Corridor	Cross Street Intersection	Cycle Length				Maintenance Responsibility	Operations			Equipment										
		AM	MID	PM	WKND		Left	Right	Other	Cabinet	Type	Software	Detection	Bike Detection	CCTV	Power Backup	Comm	Other ITS	ATMS	Status
Adams Avenue	Lake Street	80	65	70	65	Huntington Beach	Permissive	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	N/A	BBS	Fiber		Transparity	Online
	Delaware Street	80	65	70	65	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	N/A	N/A	Wireless		Transparity	Online
	Beach Boulevard	150	150	150	150	Caltrans	Protected	Perm/Overlap		332	2070	C8	Loops	Yes	Cohu	BBS	Copper		Other	State
	Coldwater Lane	Free	140	140	Free	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	N/A	Fiber		Transparity	Online
	Newland Street	130	130	140	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	Magnolia Street	130	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	Cohu	BBS	Fiber		Transparity	Online
	Bushard Street	130	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	Target Driveway	130	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	Brookhurst Street	130	130	140	130	Huntington Beach	Protected	Permissive		332	2070	BI Tran 200/233	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online
	Ranger Lane	130	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Copper		Transparity	Online
Beach Boulevard	Center Avenue	150	150	150	150	Caltrans	Other	Permissive		Other	2070	TSCP	Video	No	Other	BBS	Copper			State
	Edinger Avenue	150	150	150	150	Caltrans	Protected	Perm/Overlap		Other	2070	TSCP	Video	No	Other	BBS	Copper			State
	Stark Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	MacDonald Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Heil Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	N/A	Copper			State
	Terry Drive	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Warner Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	Cohu	BBS	Copper			State
	Slater Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Newman Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Talbert Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	Cohu	BBS	Copper			State
	Ellis Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	Cohu	BBS	Copper			State
	Garfield Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Yorktown Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Utica Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Adams Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	Cohu	BBS	Copper			State
Indianapolis Avenue	150	150	150	150	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State	
Atlanta Avenue	Free	Free	Free	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State	
Pacific View Drive	Free	Free	Free	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State	
Pacific Coast Highway	140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	C8	Loops	Yes	N/A	BBS	Copper			State	
Bolsa Avenue	Bolsa Chica Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Copper		Transparity	Online
	Amazon Driveway	140	130	140	130	Huntington Beach	Permissive	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Copper		Transparity	Online
	Graham Street / Delta Lane	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Copper		Transparity	Online
	Able Lane/ Dan Lane	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Copper		Transparity	Online
	Springdale Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Copper		Transparity	Online
Bolsa Chica Street	Bolsa Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Axis	BBS	Fiber		Transparity	Online
	Argosy Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	McFadden Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Axis	BBS	Fiber		Transparity	Online
	Robinwood Drive	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	Edinger Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online
	Heil Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Axis	BBS	Fiber		Transparity	Online
	Pearce Drive	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	Warner Avenue	140	130	140	130	Huntington Beach	Protected	Perm/Overlap		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online

Corridor	Cross Street Intersection	Cycle Length				Maintenance Responsibility	Operations			Equipment										
		AM	MID	PM	WKND		Left	Right	Other	Cabinet	Type	Software	Detection	Bike Detection	CCTV	Power Backup	Comm	Other ITS	ATMS	Status
Brookhurst Street	Garfield Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Yorktown Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Beachmont Plaza	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Adams Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Indianapolis Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Atlanta Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Hamilton Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Cohu	BBS	Fiber		Transparency	Online
	Banning Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Bushard Street	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Pacific Coast Highway	140	140	140	140	Caltrans	Protected	Permissive		332	2070	C8	Loops	No	N/A	BBS	Copper			State
Edinger Avenue	Bolsa Chica Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Graham Street	70	65	70	65	Huntington Beach	Permissive	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Springdale Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Edwards Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Goldenwest Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Golden West College	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Gothard Street	140	140	140	140	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Fortuna Lane	140	140	140	140	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Sher Lane	140	140	140	140	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Parkside Lane	140	140	140	140	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
Beach Boulevard	150	150	150	150	Caltrans	Protected	Permissive		332	2070	C8	Loops	No	N/A	BBS	Copper			State	
Newland Street	130	140	130	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online	
Goldenwest Street	McFadden Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Wireless		Transparency	Offline
	Rustler (Golden West College)	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Wireless		Transparency	Offline
	Edinger Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Heil Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Norma Dr/ Lydia Dr	140	130	140	130	Huntington Beach	Permissive	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Warner Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Slater Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Rio Vista Drive	140	130	140	130	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Library/Senior Center (Talbert)	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Ellis Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Garfield Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	Bosch	BBS	Fiber		Transparency	Online
	Summit Drive	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	N/A	BBS	Fiber		Transparency	Online
	Yorktown Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	Bosch	BBS	Fiber		Transparency	Online
	Palm Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	N/A	BBS	Copper		Transparency	Online
Orange Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	N/A	BBS	Copper		Transparency	Offline	
Pacific Coast Highway	140	Free	140	Free	Caltrans	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Copper			State	
Magnolia Street	Garfield Avenue	140	130	140	130	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Home Depot	140	130	140	130	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Yorktown Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Adams Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	Cohu	BBS	Fiber		Transparency	Online
	Indianapolis Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Atlanta Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Edison H.S.	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	N/A	Fiber		Transparency	Online
Hamilton Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	Cohu	BBS	Fiber		Transparency	Online	

Corridor	Cross Street Intersection	Cycle Length				Maintenance Responsibility	Operations			Equipment										
		AM	MID	PM	WKND		Left	Right	Other	Cabinet	Type	Software	Detection	Bike Detection	CCTV	Power Backup	Comm	Other ITS	ATMS	Status
	Banning Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Fiber		Transparity	Online
	Pacific Coast Highway	140	Free	140	Free	Caltrans	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	No	N/A	BBS	Copper			State
McFadden Avenue	Graham Street	Free	Free	Free	Free	Huntington Beach	Permissive	Permissive		332	170/170E	BI Tran 200/233	Video	Yes	N/A	BBS				Offline
	Springdale Street	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS				Offline
	Edwards Street	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		N/A				Offline
	Goldenwest Street	140	130	140	130	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS			Transparity	Offline
	Gothard Street	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Copper		Transparity	Online
Newland Street	Sugar Lane	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes		BBS				Offline
	Edinger Avenue	130	130	130	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes		BBS	Fiber		Transparity	Online
	Heil Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS			Transparity	Offline
	Warner Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes		BBS	Fiber		Transparity	Online
	Slater Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS	Fiber		Transparity	Online
	Talbert Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online
	Ellis Avenue	140	130	140	130	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS	Fiber		Transparity	Online
	Garfield Avenue	140	130	140	130	Huntington Beach	Permissive	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS	Fiber		Transparity	Online
	Yorktown Avenue	Free	Free	Free	Free	Huntington Beach	Permissive	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS				Offline
	Adams Avenue	130	130	140	Free	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS	Fiber		Transparity	Online
	Indianapolis Avenue	Free	Free	Free	Free	Huntington Beach	Permissive	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS				Offline
	Atlanta Avenue	Free	Free	Free	Free	Huntington Beach	Protected	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS				Offline
	Hamilton Avenue	Free	Free	Free	Free	Huntington Beach	PPLT	Permissive		332	170/170E	BI Tran 200/233	Loops	Yes		BBS				Offline
	Pacific Coast Highway	140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
	Pacific Coast Highway	Anderson Street	Free	Free	Free	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper		
Admiralty Lane / 18th Street		130	Free	150	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Broadway		130	Free	150	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Corral Cay Lane/ 5th Street		130	Free	150	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Warner Avenue		130	Free	150	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	Yes	N/A	BBS	Copper			State
Bolsa Chica State Beach		Free	Free	Free	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Seapoint Avenue		Free	Free	Free	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Goldenwest Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	Yes	N/A	BBS	Copper			State
Seventeenth Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Ninth Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Sixth Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Main Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
First Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	Yes	N/A	BBS	Copper			State
Huntington Street		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	Yes	N/A	BBS	Copper			State
Twin Dolphin Drive		140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State
Beach Boulevard	140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State	
Newland Street	140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	Yes	N/A	BBS	Copper			State	
Magnolia Street	140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State	
Brookhurst Street	140	Free	140	Free	Caltrans	Protected	Permissive		332	2070	TSCP	Loops	No	N/A	BBS	Copper			State	
Talbert Avenue	Beach Boulevard	150	150	150	150	Caltrans	Protected	Permissive		332	2070	C8	Loops	No	N/A	BBS	Copper			State
	Walmart Driveway	140	130	140	140	Huntington Beach	Protected	Permissive		332	2070	Omni	Video	Yes	Bosch	N/A	Fiber		Transparity	Online
	Newland Street	140	130	140	140	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online
Warner Avenue	Pacific Coast Highway	130	Free	150	Free	Caltrans	Protected	Perm/Overlap		332	170/170E	BI Tran 200/233	Loops	Yes	N/A	BBS	Copper			State
	Fire Signal / Warner Dock	Free	Free	Free	Free	Huntington Beach	Permissive	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online
	Algonquin Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparity	Online

Corridor	Cross Street Intersection	Cycle Length				Maintenance Responsibility	Operations			Equipment										
		AM	MID	PM	WKND		Left	Right	Other	Cabinet	Type	Software	Detection	Bike Detection	CCTV	Power Backup	Comm	Other ITS	ATMS	Status
	Bolsa Chica Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Greentree Lane/ Plaza Lane	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Graham Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Springdale Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Edwards Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Goldenwest Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Home Depot	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Gothard Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	Bosch	BBS	Fiber		Transparency	Online
	Nichols Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Ash Lane	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Beach Boulevard	140	140	140	140	Caltrans	Protected	Permissive		332	2070	C8	Loops	No	N/A	BBS	Fiber			State
	Rotterdam Lane	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online
	Newland Street	140	130	140	130	Huntington Beach	Protected	Permissive		332	2070	Omni	Loops	Yes	N/A	BBS	Fiber		Transparency	Online

Intersections designated as offline but running coordination are operating under time-based coordination.

With upgrades to the TMC underway, intersections designated as "online" may be offline while work is in progress. Time-based coordination is maintained during this period.

SECTION FOUR

TRAFFIC SIGNAL SYNCHRONIZATION SYSTEM AND THREE YEAR PLAN

The City of Huntington Beach utilizes in-house staff for the maintenance and operations of the traffic signal system. The traffic signal system maintenance and operations are only one of numerous duties that these staff members perform, so there is no exact dollar amount that is dedicated to traffic signal synchronization.

The City of Huntington Beach has several traffic signal communication construction projects that have either been completed within the past three years or are currently underway.

Three current projects are under the Orange County Transportation Authority's Regional Traffic Signal Synchronization Program (RTSSP). Construction is complete on all three projects and the projects are currently in the operations and maintenance phase. These projects included conduit and fiber optic installation along segments of Edinger Avenue and Bolsa Chica Street and the upgrading of communication, utilizing the existing twisted pair copper cable along Bolsa Avenue. All three of these RTSSP projects included the installation of updated coordinated traffic signal timing. The projects along Edinger Avenue and Bolsa Chica Street included the installation of new closed circuit television cameras.

City funded projects completed within the past three years include installation of fiber optic cable and conduit along Gothard Street (approximately one mile) and along Garfield Avenue (approximately 0.9 mile). These two projects not only provided communication to additional traffic signals, but also provided for redundancy in communication routing, from the TMC in City Hall to the northern area of the City.

The installation of fiber optic conduit and cable is currently under design along Bushard street from Yorktown Avenue to Adams Avenue. Construction funding has been requested in the Fiscal Year 2026/2027 Capital Improvement Program.

The Traffic Signal Synchronization Reporting Forms as provided in the guidelines are included as Tables 2 and 3. These projects are located on the Regional Traffic Signal Synchronization Master Plan roadway network or on arterials that the City has designated as coordinated arterials. Table 4 lists candidate signal synchronization projects. These projects, while not funded at this time, have been identified in the City's Traffic Signal System Master Plan.

For purposes of the unconstrained three year outlook of Table 3, two projects from Table 4 have been identified as candidate projects; the changeout of remaining Type 170 controllers to Type 2070 and the Goldenwest Street Fiber Optic installation. Actual project selection will be based on funding opportunities and limitations.

**Table 2
3-YEAR OUTLOOK
TRAFFIC SIGNAL SYNCHRONIZATION**

Funding Needs for Synchronized Operation (Constrained)

Reporting Jurisdiction Expenditures: City of Huntington Beach

**Type of Traffic Signal Synchronization Expenditures in Year of Expenditure
Dollars**

MAINTENANCE

PROJECT	FY 26/27	FY 27/28	FY 28/29	TOTAL
Communication and Software Maintenance	20,000	60,000	20,000	100,000
Subtotal Maintenance	20,000	60,000	20,000	100,000

CONSTRUCTION

PROJECT	FY 26/27	FY 27/28	FY 28/29	TOTAL
Bushard Street Fiber Optic Installation (a)	200,000			200,000
Subtotal Construction	200,000			200,000

OPERATIONS

PROJECT	FY 26/27	FY 27/28	FY 28/29	TOTAL
Citywide Signal Timing Maintenance	15,000	15,000	15,000	45,000
Subtotal Operations	15,000	15,000	15,000	45,000
	235,000	75,000	35,000	345,000

(a) Project includes the installation of a new fire station traffic signal. The traffic signal work is not reflected in this estimate.

**Table 3
3-YEAR OUTLOOK
TRAFFIC SIGNAL SYNCHRONIZATION**

Funding Needs for Synchronized Operation (Unconstrained)

Reporting Jurisdiction Expenditures: City of Huntington Beach

**Type of Traffic Signal Synchronization Expenditures in Year of Expenditure
Dollars**

MAINTENANCE

PROJECT	FY 23/24	FY 24/25	FY 25/26	TOTAL
Communication and Software Maintenance	80,000	80,000	80,000	240,000
Subtotal Maintenance	80,000	80,000	80,000	240,000

CONSTRUCTION

PROJECT	FY 23/24	FY 24/25	FY 25/26	TOTAL
Citywide Signal Synchronization (a)				
DESIGN		10,000	50,000	60,000
CONSTRUCTION		775,000	950,000	1,725,000
Carryover from table 2	760,000			760,000
Subtotal Construction	760,000	785,000	1,000,000	2,450,000

OPERATIONS

PROJECT	FY 22/24	FY 24/25	FY 25/26	TOTAL
Citywide Signal Timing Maintenance	90,000	90,000	90,000	270,000
Consultant Services – Signal Timing		150,000	150,000	300,000
Subtotal Operations	90,000	240,000	240,000	570,000
	930,000	1,145,000	1,270,000	3,345,000

(a) For illustrative purposes, projects include the Citywide 170 Controller Changeout project and the Goldenwest Street Fiber Optic Installation (as shown in table 4). Actual candidate projects are contained in Table 4 and project selection will depend upon funding opportunities and restrictions.

Table 4
LSSP IMPLEMENTATION – CANDIDATE SIGNAL
SYNCHORNIZATION PROJECTS WITH ESTIMATED COSTS

Reporting Jurisdiction Expenditures: City of Huntington Beach

The following projects, while not funded at this time, have been identified in the City's Traffic Signal System Master Plan. These projects will be considered as funding opportunities are identified.

CORRIDOR	IMPROVEMENT SUMMARY	ESTIMATED COST
Magnolia Street	Install interconnect conduit and fiber optic cable from Hamilton Avenue to Pacific Coast Highway.	\$650,000
Goldenwest Street	Install interconnect conduit and fiber optic cable from Bolsa Avenue to Heil Avenue. Install fiber optic cable in existing conduit from Yorktown Avenue to Pacific Coast Highway	\$950,000
Newland Street	Install interconnect conduit and fiber optic cable from Heil Avenue to Warner Avenue and from Garfield Avenue to Pacific Coast Highway.	\$1,110,000
McFadden Avenue	Install interconnect conduit and fiber optic cable from Graham Street to Sugar Lane.	\$900,000
Springdale Street	Install interconnect conduit and fiber optic cable from Bolsa Avenue to Slater Avenue. Install fiber optic cable in existing conduit from Croupier Drive to Bolsa Avenue.	\$950,000
South Backbone Completion	Install interconnect conduit and fiber optic cable on Main Street from Utica Avenue to Orange Avenue/Atlanta Avenue, along Orange Avenue/Atlanta Avenue to Newland Street, along Newland Street from Atlanta Avenue to Hamilton Avenue and along Hamilton Avenue from Newland Street to Brookhurst Street. Install 1.5 miles of fiber in existing conduit. (Newland Street segment is estimated separately above and not included with this estimate)	\$3,500,000
Citywide	Change out of existing 170 controllers to new 2070 ATC controllers	\$775,000
Total Estimated Cost		\$8,835,000

SECTION FIVE

TRAFFIC SIGNAL SYNCHRONIZATION ASSESSMENT REVIEW AND REVISE, AS MAY BE NECESSARY, THE TIMING OF TRAFFIC SIGNALS

Significant timing plan updates and projects completed FY 2023/2024 through 2025/2026

Over the past three years, the City of Huntington Beach has undertaken traffic signal retiming efforts on four of the routes within the City that are included in OCTA's Regional Traffic Signal Synchronization Master Plan. These projects along Bolsa Chica Street, Edinger Avenue, Warner Avenue, and Bolsa Avenue were undertaken as part of OCTA's Regional Traffic Signal Synchronization Program (RTSSP). Smaller scale retiming efforts were performed at various locations as changing traffic patterns or opportunities for improvement were identified.

Table 7 is the Orange County Operational Performance for March 2026. This summarizes percentage of free flow traffic and Level of Service (LOS) as determined by Iteris' *ClearGuide* software.

Adams Avenue

The timings on Adams Avenue were updated in 2016 as part of the Adams Avenue RTSSP project and have not been significantly revised since that time. Adams Avenue operates at a cycle length of 130 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening. This provides for continuous coordination from Newland Street to Ranger Lane.

Beach Boulevard

Beach Boulevard is a state highway, operated and maintained by Caltrans. Modifications to the timing have been made over the past three years, most significantly eliminating the 120 (AM period) and 130 second (midday period) cycle lengths and running Beach Boulevard initially at a 140 second cycle throughout the day, increasing the cycle length to 150 seconds throughout the day in March 2026.

Bolsa Avenue

Revised traffic signal timing was implemented in 2026 as part of an OCTA Regional Traffic Signal Synchronization Program (RTSSP) project. The current cycle lengths are 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening. The project changed out the existing type 170 controllers to Type 2070 ATC controllers and also upgraded the communication equipment.

As the new timing has been recently implemented, the after-analysis is not complete, and it can be anticipated that there may be fine tuning adjustments.

Bolsa Chica Street

Bolsa Chica Street from Bolsa Avenue to Warner Avenue was retimed in 2026 as part of an RTSSP project. Coordinated traffic signal timings operate at a cycle lengths of 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening.

Included with the RTSSP project is the change out of the existing 170 controllers to 2070 ATC controllers, the replacement of the existing twisted pair interconnect cable with fiber optic cable and the installation of five CCTV cameras.

As the new timing has been recently implemented, the after-analysis is not complete, and it can be anticipated that there may be fine tuning adjustments.

Brookhurst Street

The current traffic signal timing was implemented in 2020 as part of an OCTA Regional Traffic Signal Synchronization Program (RTSSP). The existing cycle lengths are 130 seconds in the morning and midday and 140 seconds in the evening.

Edinger Avenue

The timings on Edinger Avenue were updated in 2026 as part of the Edinger Avenue RTSSP project. Currently the Edinger Avenue signals operate on cycle lengths of 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening for the segment from Bolsa Chica Street to the traffic signal at Golden West College (east of Goldenwest Street). From Gothard Street to Parkside Lane, the signals run at a constant cycle length of 140 seconds from 6:30 a.m. to 8 p.m. This was initially done to maintain consistency with Caltrans at Beach Boulevard, however in March 2026, Caltrans revised their cycle lengths to 150 seconds throughout the day. The segment of Edinger Avenue from Gothard Street to Parkside Lane will require timing modifications to regain consistency with Beach Boulevard.

Edinger Avenue from Newland Street eastward into Westminster runs at a cycle length of 130 seconds during peak periods with a free operation during the mid-morning and mid-afternoon periods.

The RTSSP project included the replacement of the existing twisted pair copper interconnect cable with fiber optic cable. New 2070 ATC controllers were installed along with seven new CCTV cameras.

Goldenwest Street

The timings on Goldenwest Street were last updated in 2016 as part of the Goldenwest Street RTSSP project. The current cycle lengths are 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening.

Magnolia Street

Revised traffic signal timing was implemented in 2020 as part of an OCTA Regional Traffic Signal Synchronization Program (RTSSP) project. The cycle lengths are 130 seconds in the morning and midday and 140 seconds in the evening, maintaining crossing arterial coordination with Adams Avenue.

McFadden Avenue

While not included as an OCTA Regional Signal Synchronization Route, McFadden Avenue is a secondary arterial which parallels both Bolsa Avenue and Edinger Avenue, one-half mile to the north and south respectively. McFadden Avenue intersects with Goldenwest Street, a coordinated arterial, however there is currently no coordination in place along McFadden Avenue.

Newland Street

While not included as an OCTA Regional Signal Synchronization Route, Newland Street is a secondary arterial which parallels both Beach Boulevard and Magnolia Street, one-half mile to the west and east respectively. The current cycle lengths, from Warner Avenue to Garfield Avenue (implemented in 2025) are 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening. Edinger Avenue and Adams Avenue operate with a background cycle length of either 130 or 140 seconds, however the traffic signals are only timed for east-west coordination at this time.

The other intersections along Newland Street run free.

Pacific Coast Highway

Pacific Coast Highway is a state highway, operated and maintained by Caltrans. The state indicates that there are no immediate plans for retiming.

Springdale Street

While not included as an OCTA Regional Signal Synchronization Route, Springdale Street is a north-south primary arterial. Springdale Street intersects with coordinated arterials at Bolsa Avenue, Edinger Avenue and Warner Avenue, however there is currently no coordination in place along Springdale Street.

Talbert Avenue

Revised traffic signal timing was implemented in 2023 as part of an OCTA Regional Traffic Signal Synchronization Program (RTSSP) project. The current cycle lengths are 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening.

The RTSSP project installed approximately 1500 feet of new conduit and fiber optic cable from the traffic signal at the Walmart driveway to Newland Street. New 2070 ATC controllers were installed along with two new CCTV cameras.

Warner Avenue

Warner Avenue from Algonquin Street to Newland Street was retimed in 2023 as part of an RTSSP project. Coordinated traffic signal timings operate at a cycle lengths of 140 seconds in the morning, 130 seconds in the midday and 140 seconds in the evening. This was initially done to maintain consistency with Caltrans at Beach Boulevard, however in March 2026, Caltrans revised their cycle lengths to 150 seconds throughout the day. The traffic signals nearest Beach Boulevard will require timing modifications to regain consistency with Beach Boulevard. This will create coordination gaps in Warner Avenue at locations that will be determined during the timing analysis.

The RTSSP project installed approximately 1.5 miles of new conduit and fiber optic cable from Algonquin Street to the Fire Station/Wetlands Visitor Center traffic signal east of Pacific Coast Highway. New 2070 ATC controllers were installed throughout the corridor along with eight new CCTV cameras.

General Signal Timing Practice

It is typically the City's practice to coordinate its major arterials at 140 seconds in the morning and evening periods and at 130 seconds in the midday. In the past, this ensured consistency with Caltrans at Beach Boulevard. In 2024, Caltrans revised their timing along Beach Boulevard, eliminating 130 second cycles in favor of 140 second cycles throughout the day. In March 2026, Caltrans once again modified their cycle lengths to 150 second cycles throughout the day. This creates coordination break points on the east-west arterials in the vicinity of Beach Boulevard. The City will review this crossing arterial coordination as opportunities are identified.

Coordination Equipment

In 2011, the city completed a Traffic Signal System Master Plan (TSSMP) which planned out a communication system for the City. Principal elements in this plan include establishing hardwire communications to almost all signalized intersections

and creating a fiber optic backbone for system reliability and redundancy. The RTSSP projects on Goldenwest Street, Edinger Avenue, Warner Avenue, Magnolia Street, Brookhurst Street, Adams Avenue, Talbert Avenue and Bolsa Chica Street placed fiber optic cable and conduit along these corridors, consistent with the TSSMP. These corridors are connected with the City's traffic management center located in City Hall. The TSSMP identified two fiber optic backbones and additional conduit and cable links to ensure a comprehensive traffic signal system operation.

Over the past three years, the City has upgraded approximately six miles of its existing network of copper interconnect cable to fiber optic cable. In addition, approximately two and one-half miles of new communication conduit and fiber optic cable has been installed. The northern fiber backbone identified in the TSSMP has been completed.

A component of the Traffic Signal System Master Plan is to identify opportunities to communicate with the traffic signal systems in the adjacent cities and with Caltrans. Although no formal projects have been programmed, intertie opportunities have been identified with Westminster at the intersection of Bolsa Chica Street and Rancho Road, Fountain Valley at the intersection of Warner Avenue and Magnolia Street and with Costa Mesa at the intersection of Adams Avenue and Shantar Drive.

The City continues to make progress towards its goal of interconnecting virtually every City traffic signal and providing the gateway for interagency communication.

Table 5
TRAFFIC SIGNAL SYNCHRONIZATION ASSESSMENT, REVIEW, AND REVISION

LOCAL AGENCY CORRIDOR	TIMING REVIEWED (Past 3 Years)	DID TIMING REQUIRE AN UPDATE?	TIMING UPDATE RESULTS (if available)							
			Speed Travel		Stops per mile		Greens per red		CSPI Score*	
			Before	After	Before	After	Before	After	Before	After
Adams Avenue	No	(c)	No Significant Timing Modifications							
Beach Boulevard (CALTRANS)	(b)	By Caltrans	Studies not available.							
Bolsa Avenue	Yes	Yes	Current TSSP Corridor – Revised Timing Implemented 2026 (a)							
Bolsa Chica Street	Yes	Yes	Current TSSP Corridor – Revised Timing Implemented 2026 (a)							
Brookhurst Street	No	(c)	No Significant Timing Modifications							
Edinger Avenue	Yes	Yes	22.0	21.6	1.3	0.7	1.8	4.4	60	85
Goldenwest Street	No	(c)	No Significant Timing Modifications							
Magnolia Street	No	(c)	No Significant Timing Modifications							
McFadden Avenue (d)	No	(c)	Studies not available							
Newland Street (d)	Yes	Yes (d)	Studies not available							
Pacific Coast Hwy. (CALTRANS)	(b)	(c)	Studies not available							
Springdale Street (d)	No	(c)	Studies not available							
Talbert Avenue	Yes	Yes	23.1	27.1	1.2	1.0	2.6	4.0	64	78
Warner Avenue	Yes	Yes	24.4	27.1	1.2	0.9	2.2	3.0	67	81

* Optional

(a)- TSSP corridor. Final analysis not complete

(b)- Information not available

(c)- No significant modifications (Cycles and offsets unchanged)

(d)- Not included as an OCTA Regional Signal Synchronization Route

Table 6
SIGNAL TIMING REVISIONS

PROJECT CORRIDOR	CROSS STREET	CYCLE LENGTH (sec)(a)
Beach Boulevard	Center Avenue	150/150/150
	Pacific View Drive	
Bolsa Avenue	Bolsa Chica Street	140/130/140 (b)
	Springdale Street	
Bolsa Chica Street	Bolsa Avenue	140/130/140 (b)
	Warner Avenue	
Edinger Avenue	Bolsa Chica Street	140/130/140 (Bolsa Chica to G.W. College) 140/140/140 (Gothard to Newland) (b)
	Newland Street	
Newland Street	Warner Avenue	140/130/140
	Garfield Avenue	
Talbert Avenue	Walmart Driveway	140/130/140
	Newland Street	
Warner Avenue	Algonquin Street	140/130/140 (Beach Bl. at 150 midday)
	Newland Street	

(a) Indicates AM/MIDDAY/PM

(b) Fine tuning/modifications still in progress

Orange County Corridor Operational Performance
March 2026

TABLE 7

Route Number	Route Name	Average Percent of FreeFlow (%) *			Adjusted Level-of-Service (LOS)**			Route Length (mile)
		AM	MD	PM	AM	MD	PM	
334	BOLSA AVE (E) Between BOLSA CHICA ST and BOLSA CHICA ST to E 1ST ST (E)	73.7	70.4	68.2	C	C	D	11.591
335	E 1ST ST (W) From CABRILLO PARK DR to BOLSA AVE (W) Between BOLSA CHICA ST and BOLSA CHICA ST	76.5	72.2	67.5	C	C	D	11.589
336	EDINGER AVE (E) Between BOLSA CHICA ST and BOLSA CHICA ST to EDINGER AVE (SE)	71.1	68.5	65.8	C	D	D	14.624
337	EDINGER AVE (NW) From IRVINE CENTER DR to EDINGER AVE (W) Between BOLSA CHICA ST and BOLSA CHICA ST	74.6	71.1	64.4	C	C	D	14.634
338	WARNER AVE (E) Between PACIFIC COAST HWY and PACIFIC COAST HWY to WARNER AVE (SE) To RED HILL AVE	67.9	65.2	64.0	D	D	D	13.290
339	WARNER AVE (NW) From RED HILL AVE to WARNER AVE (W) Between PACIFIC COAST HWY and PACIFIC COAST HWY	70.8	66.1	61.9	C	D	D	13.296
342	TALBERT AVE (SE) Between BEACH BLVD and BEACH BLVD to MACARTHUR BLVD (SW) To E COAST HWY	69.5	66.3	64.8	D	D	D	14.623
343	MACARTHUR BLVD (NE) to TALBERT AVE (W) Between BEACH BLVD and BEACH BLVD	72.0	65.1	61.6	C	D	D	14.624
344	BAKER ST (E) Between HARBOR BLVD and HARBOR BLVD to BAKER ST E (SE) To RED HILL AVE	76.7	74.5	71.6	C	C	C	2.548
345	BAKER ST E (NW) From RED HILL AVE to BAKER ST (W) Between HARBOR BLVD and HARBOR BLVD	81.7	73.1	68.8	B	C	D	2.548
346	ADAMS AVE (E) Between BEACH BLVD and BEACH BLVD to ADAMS AVE (NE)	80.4	74.6	75.7	B	C	C	4.717
347	ADAMS AVE (SW) to ADAMS AVE (W) Between BEACH BLVD and BEACH BLVD	81.2	73.8	70.0	B	C	C	4.715
350	HAMILTON AVE (E) Between BROOKHURST ST and BROOKHURST ST to VICTORIA ST (SE) To NEWPORT BLVD	77.8	77.0	77.0	C	C	C	2.624
351	VICTORIA ST (NW) From NEWPORT BLVD to HAMILTON AVE (W) Between BROOKHURST ST and BROOKHURST ST	83.3	74.9	66.4	B	C	D	2.625
352	N BERKELEY AVE (E) From N HARBOR BLVD to N BERKELEY AVE (E) To N LEMON ST	72.0	71.0	67.9	C	C	D	0.261
353	N BERKELEY AVE (W) From N LEMON ST to N BERKELEY AVE (W) To N HARBOR BLVD	77.2	72.9	70.1	C	C	C	0.261
354	SEAL BEACH BLVD (NE) From PACIFIC COAST HWY to N NORWALK BLVD (N) To E WARDLOW RD	78.0	72.0	67.4	C	C	D	5.807
355	N NORWALK BLVD (S) From E WARDLOW RD to SEAL BEACH BLVD (SW) To PACIFIC COAST HWY	76.1	72.9	74.1	C	C	C	5.796
356	BOLSA CHICA ST (NE) Between WARNER AVE and WARNER AVE to VALLEY VIEW ST (N) To VALLEY VIEW AVE	69.3	63.5	60.1	D	D	D	11.204
357	VALLEY VIEW ST (S) From VALLEY VIEW AVE to BOLSA CHICA ST (SE) Between WARNER AVE and WARNER AVE	70.2	67.3	66.5	C	D	D	11.197
358	GOLDENWEST ST (NE) Between PACIFIC COAST HWY and PACIFIC COAST HWY to KNOTT AVE (N) To EXIT: 117	73.2	69.1	64.9	C	D	D	14.470
359	KNOTT AVE (S) From EXIT: 117 to GOLDENWEST ST (SW) Between PACIFIC COAST HWY and PACIFIC COAST HWY	74.1	71.4	69.4	C	C	D	14.462
360	BEACH BLVD (N) Between PACIFIC COAST HWY and PACIFIC COAST HWY to N BEACH BLVD (N) To W WHITTIER BLVD	72.3	64.6	59.3	C	D	E	20.726
361	N BEACH BLVD (S) From W WHITTIER BLVD to BEACH BLVD (S) Between PACIFIC COAST HWY and PACIFIC COAST HWY	70.5	67.8	65.1	C	D	D	20.718
362	MAGNOLIA ST (NE) From PACIFIC COAST HWY to MAGNOLIA AVE (N) To W COMMONWEALTH AVE	70.6	66.1	61.5	C	D	D	15.989
363	MAGNOLIA AVE (S) From W COMMONWEALTH AVE to MAGNOLIA ST (SW) To PACIFIC COAST HWY	70.5	69.7	66.7	C	D	D	15.989
364	BROOKHURST ST (NE) From PACIFIC COAST HWY to S BROOKHURST RD (N) To W COMMONWEALTH AVE	69.2	63.3	59.0	D	D	E	16.451
365	S BROOKHURST RD (S) From W COMMONWEALTH AVE to BROOKHURST ST (SW) To PACIFIC COAST HWY	70.0	66.3	63.6	C	D	D	16.445
366	EUCLID ST (NE) to S EUCLID ST (N) To W IMPERIAL HWY	69.6	64.9	59.5	D	D	E	15.871
367	S EUCLID ST (S) From W IMPERIAL HWY to EUCLID ST (SW)	69.4	67.7	65.4	D	D	D	15.862
368	HARBOR BLVD (NW) Between NEWPORT BLVD and NEWPORT BLVD to N HARBOR BLVD (NE) To PEPPERTREE DR	69.4	63.4	56.9	D	D	E	21.561
369	N HARBOR BLVD (N) to HARBOR BLVD (NW) Between NEWPORT BLVD and NEWPORT BLVD	67.9	64.5	62.9	D	D	D	21.729
372	FAIRVIEW RD (N) From NEWPORT BLVD to FAIRVIEW ST (N) To GARDEN GROVE BLVD	70.1	66.6	57.2	C	D	E	8.440
373	FAIRVIEW ST (S) From GARDEN GROVE BLVD to FAIRVIEW RD (S) To NEWPORT BLVD	69.3	70.5	67.7	D	C	D	8.442
378	BRISTOL ST N (NW) to N BRISTOL ST (N)	70.3	66.8	56.5	C	D	E	9.124
379	N BRISTOL ST (N) to BRISTOL ST S (SE)	69.5	67.8	62.9	D	D	D	9.211
392	PACIFIC COAST HWY (SE) To MARINA DR to W COAST HWY (E)	79.9	74.9	74.5	C	C	C	13.541
393	W COAST HWY (W) From NEWPORT AVE to PACIFIC COAST HWY (NW) From MARINA DR	82.8	72.1	63.3	B	C	D	13.566

* Source: Itegis ClearGuide

** Adjusted Level-of-Service (LOS) Definition

TABLE 7 (Continued)

Orange County Corridor Operational Performance
 March 2026

To evaluate performance across these corridors, the City uses a data-driven methodology based on probe-vehicle speed data. Average operation speed is compared with the corridor’s free-flow speed to calculate an Adjusted Level of Service (LOS). This metric provides a high-level indication of corridor performance, capturing the effects of travel time, progression quality, and the frequency of stops. Average travel speed also indirectly reflects fuel consumption and emissions, offering an additional indicator of operational efficiency. Corridors operating at speeds closer to free-flow conditions receive higher LOS ratings, while those operating at lower speeds indicate reduced coordination efficiency and may warrant timing updates or additional review.

LOS	Desirable Speed
A	Average Travel Speed exceeds 90% of the base free-flow speed
B	Average Travel Speed is between 80% and 90% of the base free-flow speed
C	Average Travel Speed is between 70% and 80% of the base free-flow speed
D	Average Travel Speed is between 60% and 70% of the base free-flow speed
E	Average Travel Speed is between 50% and 60% of the base free-flow speed
F	Average Travel Speed is less than 50% of the base free-flow speed