

# Lake Havasu MPO

METROPOLITAN PLANNING ORGANIZATION

## Executive Board (EB) Meeting

Tuesday, April 11, 2023



900 N. London Bridge Rd., Bldg. B  
Lake Havasu, AZ 86404  
(928)-453-2824

Disclaimer: This is not a legal document. Although much care was taken to ensure the accuracy of the information presented in this document, The Lake Havasu Metropolitan Planning Organization does not guarantee the accuracy of this information.

Cal Sheehy, Chairman  
Buster Johnson, Vice Chairman  
Nancy Campbell, Secretary/Treasurer  
Jeni Coke, Board Member  
Gary Knight, Board Member



[www.LHMPO.org](http://www.LHMPO.org)  
Lake Havasu City Police Facility  
Meeting Room  
2360 McCulloch Blvd. N  
Lake Havasu Cit, AZ 86403

**Lake Havasu Metropolitan Planning Organization (LHMPO)  
Executive Board Meeting Agenda  
Tuesday, April 11, 2023, 10:00 A.M.**

All Action items highlighted in gray

The Lake Havasu MPO Executive Board may vote to hold an Executive Session for the purposes of obtaining legal advice from the Attorney on any matter listed on the agenda under A.R.S §38-431.03(A)(3)

**1. Call to Order-** (Cal Sheehy)

**2. Pledge of Allegiance-** (Cal Sheehy)

**3. Roll Call-**(Sarah Lojewski)

**4. Call to the Public**

This item is to provide an opportunity for citizens wishing to address the Executive Board on issues within the jurisdiction of the LHMPO planning area that are not on the Agenda. Comments SHALL be limited to five (5) minutes or less.

**5. Meeting Minutes: February 14, 2023**

*Cal Sheehy, Chairman*

**6. FY2023 TIP Amendment #1**

*Justin Hembree, LHMPO Director*

**7. Draft 2023 TIP Update**

*Justin Hembree, LHMPO Director*

**8. FY2023 Loan**

*Justin Hembree, LHMPO Director*

**9. Scope of Work/RFP - Traffic Signal Optimization & Enhancement Study**

*Justin Hembree, LHMPO Director*

**10. Rural Transportation Advocacy Council (RTAC) Report (Information Only)**

*Kevin Adam, RTAC Executive Director*

**11. ADOT District Report (Information Only)**

*Todd Steinberger, ADOT NW District Engineer*

**12. Arizona Transportation Board Report (Information Only)**

*Gary Knight, District Representative*

**13. Future Agenda Items**

**14. Upcoming Meetings Schedule**

LHMPO TAC Meeting: **May 23, 2023, 10:00 AM**

LHMPO Executive Board Meeting: **June 13, 2023, 10:00 AM**

**Adjournment**

*Pursuant to Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act (ADA), and other nondiscrimination laws and authorities, LHMPO does not discriminate on the basis of race, color, national origin, sex, age, or disability. Persons that require a reasonable accommodation based on language or disability should contact LHMPO's Title VI Coordinator at [hembreej@lhcaz.gov](mailto:hembreej@lhcaz.gov). Requests should be made as early as possible to ensure LHMPO has an opportunity to address the accommodation.*

*De acuerdo con el Título VI de la Ley de Derechos Civiles de 1964, la Ley de Estadounidenses con Discapacidades (ADA por sus siglas en inglés) y otras normas y leyes antidiscriminatorias, la Organización de Planificación Metropolitana de Lake Havasu (LHMPO por sus siglas en inglés) no discrimina por motivos de raza, color, origen nacional, sexo, edad o discapacidad. Las personas que requieran asistencia (dentro de lo razonable) ya sea por el idioma o discapacidad deben ponerse en contacto con el Director Ejecutivo de la Organización de Planificación Metropolitana de Lake Havasu (LHMPO por sus siglas en inglés) en [hembreej@lhcaz.gov](mailto:hembreej@lhcaz.gov). Las solicitudes deben hacerse lo antes posible para asegurar que la Organización de Planificación Metropolitana de Lake Havasu (LHMPO por sus siglas en inglés) tenga la oportunidad de hacer los arreglos necesarios.*

*The following link provides access to a voluntary but highly important survey; by completing this survey, the Lake Havasu MPO will be able to determine who attends our public meetings and how we can improve participation:*

[https://docs.google.com/forms/d/e/1FAIpQLSfcVaS6fU1kTF\\_So2QoPfOsFDZjqlBpbTwqsl6HLwFxl5Xy-Q/viewform](https://docs.google.com/forms/d/e/1FAIpQLSfcVaS6fU1kTF_So2QoPfOsFDZjqlBpbTwqsl6HLwFxl5Xy-Q/viewform)

*El siguiente enlace proporciona acceso a una encuesta voluntaria pero muy importante; al completar esta encuesta, la MPO del lago Havasu podrá determinar quién asiste a nuestras reuniones públicas y cómo podemos mejorar la participación:*

<https://docs.google.com/forms/d/e/1FAIpQLSe6l7IM8eKfcf9mxiJcUmuLMbpLfnQ3vWCNKbigDMW4CQXb0g/viewform>

Item #5

***ACTION ITEM***

***Meeting Minutes of February 14, 2023***

*Cal Sheehy, Chairman*

Agenda Item # 5

**LAKE HAVASU MPO  
REQUEST FOR ACTION  
April 11, 2023**

**SUBJECT:** Action to Approve the Consent Agenda

**SUBMITTED BY:** Justin Hembree, MPO Director

**AGENDA TYPE:** Public Hearing – Discussion / Possible Action

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**ATTACHMENTS:**

Executive Board meeting minutes of February 14, 2023

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**SUMMARY/BACKGROUND:**

Approve the minutes from the Executive Board meeting held February 14, 2023

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**ACTION OPTION:**

Motion to approve the Executive Board meeting minutes of February 14, 2023

**OR**

Motion to approve the Executive Board meeting minutes of February 14, 2023, with the noted changes

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**RECOMMENDATION:**

Motion to approve the Executive Board meeting minutes of February 14, 2023.



## Lake Havasu Metropolitan Planning Organization (LHMPO) Executive Board Meeting Minutes

**Tuesday, February 14, 2023, 10:00 A.M.**

All Action items highlighted in gray

The Lake Havasu MPO Executive Board may vote to hold an Executive Session for the purposes of obtaining legal advice from the Attorney on any matter listed on the agenda under A.R.S §38-431.03(A)(3)

### 1. Call to Order

Chairman Sheehy called the meeting to order at 10:00 am.

### 2. Pledge of Allegiance

Chairman Sheehy led in the Pledge of Allegiance.

### 3. Roll Call

The Roll Call was performed by Sarah Lojewski

Present: Chairman; Cal Sheehy, Vice Chairman; Buster Johnson, Secretary/Treasurer; Nancy Campbell, and Board members Gary Knight.

### 4. Call to the Public

There was no request to address the Board.

### 5. Meeting Minutes: December 13, 2022

Secretary/Treasurer Nancy Campbell motioned to approve the December 13, 2022, Meeting Minutes. The motion was seconded by Board member Buster Johnson.

### 6. Draft Scope of Work for the proposed Traffic Signal Analysis & Modeling Study

Justin Hembree, LHMPO Director updated the Executive Board on the Draft scope of work for the Traffic signal analysis & Modeling study. Through a formal procurement process (RFP) tentatively scheduled for FY 2024, the LHMPO would hire a consultant to develop a plan for the implementation of Adaptive Signal Control Technology (ASCT) or Alternative traffic signal improvements to increase the overall efficiency and operations of the three corridors. Mr. Hembree asked the Executive Board to review the scope of work and schedule and provide comments or additional tasks by March 2023.

### 7. FY25/26 HSIP Award Announcements

Justin Hembree, LHMPO Director updated the Executive Board on the FY25/26 HSIP awards. The LHMPO was awarded 4 out of the 5 applications that were submitted. As a result, the total awarded funding for the region is roughly \$5.6 Million.

### 8. Rural Transportation Advocacy Council (RTAC) Report (Information Only)

Kevin Adam, RTAC Executive Director – Mr. Adam was absent and did not provide state and federal legislative updates.

**9. ADOT District Report (Information Only)**

Todd Steinberger, ADOT NW District Engineer-Mr. Steinberger was absent and did not provide a district report.

**10. Arizona Transportation Board Report (Information Only)**

Gary Knight, District Representative provided an update from the State Transportation Board meeting with the approval of the upcoming projects outside of the region.

**11. Future Agenda Items**

No future agenda items were discussed.

**12. Upcoming Meetings Schedule**

LHMPO TAC Meeting: **March 28, 2023, 10:00 AM**

LHMPO Executive Board Meeting: **April 11, 2023, 10:00 AM**

**Adjournment**

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# Item #6

## **FY2023 TIP Amendment #1**

*Justin Hembree, LHMPO Director*



Agenda Item # 6

**LAKE HAVASU MPO  
REQUEST FOR ACTION**

**SUBJECT:** Discussion and Possible Action to Approve Fiscal Year 2023 TIP Amendment #1

**SUBMITTED BY:** Justin Hembree, MPO Director

**AGENDA TYPE:** Discussion/Action

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**ATTACHMENTS:**

- Memo/Summary
- FY 2023 TIP Amendment #1

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**SUMMARY/BACKGROUND:**

See attachments

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**ACTION OPTION:**

Motion to approve the FY2023 TIP Amendment #1

**OR**

Action as a result of the discussion

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**RECOMMENDATION:**

Motion to approve the FY2023 TIP Amendment #1



This memo outlines the amendments necessary to the FY2021-2026 LHMPO Transportation Improvement Program (TIP) for **FY2023 – Amendment # 1**  
(Consolidated amendment including formal changes to the TIP - Subsections 1.1 – 1.2)

**FY2023 – Amendment # 1.1 – Formal.**

The following outlines changes made to the TIP:

**Recommendation:**

Reprogram HURF Exchange Project " [LHM 22-112](#)" from FY23 to FY 26 in the TIP:

Due to high unknown variables between the ADOT and Local Traffic Signal System, Lake Havasu City Staff and the MPO have agreed to postpone the Joint Signal ITS project until in-depth Engineering Analysis/Modeling can be done to determine exactly what improvements need to be made along the Lake Havasu Ave, McCulloch Blvd, and State Route 95 Corridors.

Description of Change:	Project Information:
<b>Reprogram Project</b> (Reschedule project from FY23 to FY26 in LHMPO TIP)	<b>Name:</b> Traffic Signals ITS <b>Sponsor:</b> Lake Havasu City <b>TIP ID:</b> <a href="#">LHM 22-112</a> <b>Funding Source:</b> HURF Ex / STBG <b>Funding Level:</b> \$1,139,919.38 (90% - \$1,025,927.44, 10% Match/ADOT fee - \$113,991.94)

**FY2023 – Amendment # 1.2 – Formal.**

The following outlines necessary/proposed changes to the TIP:

**Recommendation:**

Add STBG Project " [LHM-24-101](#)" to the TIP in FY24:

Lake Havasu MPO has agreed to hire a consultant to conduct a "Traffic Signal Analysis & Modeling Study," which includes performing engineering analysis & signal modeling.

Through a formal procurement process (RFP) scheduled for FY 2024, the LHMPO would hire a consultant to develop a plan for implementation of Adaptive Signal Control Technology (ASCT) or alternative traffic signal improvements to increase the overall efficiency and operations of three (3) main corridors (McCulloch Blvd, Lake Havasu Ave. & State Route 95). The final plan will include evaluation, analysis, need, and benefit of all existing and all necessary future improvements; including but not limited to, interim improvements, traffic signal timings, ASCT related improvements, hardware, servers, communications equipment, switches, system software and system integration services. The plan will also identify agency roles and responsibilities related to the installation and operation of fully-functioning ASCT or alternative systems for each roadway segment and individual traffic signal locations.

Description of Change:	Project Information:
<b>Add Project</b> (Program into LHMPO TIP)	<b>Name:</b> Traffic Signal Analysis & Modeling Study <b>Sponsor:</b> MPO <b>TIP ID:</b> <a href="#">LHM-24-101</a> <b>Funding Source:</b> STBG <b>Funding Level:</b> \$318,133.62 (\$300,00 Federal, \$18,133.62 In-Kind Match)

Surface Transportaton Block Grant (STBG) Projects																	
TIP ID #	ADOT ID # (E-STIP)	Project Phase	Project Sponsor	Project Name	Project Location	Length	Functional Classifications	Lanes Before	Lanes After	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	HURF Exchange	Total Cost
2021																	
						-	-	-	-	STBG	FHWA		\$ -		\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2022																	
										STBG	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2023																	
LHM 22-112	102318	Installation	Lake Havasu City	Traffic Signals ITS	Various Intersections -- SR95, Lake Havasu Ave, & Other Intersections	-	Varies	-	-	HURF X-STBG	FHWA	<del>\$ -</del>	<del>\$ -</del>	<del>\$ -</del>	<del>\$ 113,991.94</del>	<del>\$ 1,025,927.44</del>	<del>\$ 1,139,919.38</del>
TOTALS												\$ -	\$ -	\$ -	\$ 113,991.94	\$ 1,025,927.44	\$ 1,139,919.38
2024																	
LHM-24-101		Planning & Analysis	LHMPO	Traffic Signal Analysis & Modeling Study	McCulloch Blvd, Lake Havasu Ave, & State Route 95	-				STBG	FHWA	\$ 300,000.00	\$ -	\$ 18,133.62	\$ -	\$ -	\$ 318,133.62
TOTALS												\$ 300,000.00	\$ -	\$ 18,133.62	\$ -	\$ -	\$ 318,133.62
2025																	
										STBG	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2026																	
LHM 22-112	102318	Installation	Lake Havasu City	Traffic Signals ITS	Various Intersections - SR95, Lake Havasu Ave, & Other Intersections	-	Varies	-	-	HURF X-STBG	FHWA	\$ -	\$ -	\$ -	\$ 113,991.94	\$ 1,025,927.44	\$ 1,139,919.38
TOTALS												\$ -	\$ -	\$ -	\$ 113,991.94	\$ 1,025,927.44	\$ 1,139,919.38

- Notes:
1. "STBG" funded programs are selected by LHMPPO; projects with other funding sources are required to be included, but are selected through various grant applications

2. Projects labeled with "Not Approved" or "Not Awarded" and highlighted in \*\*Blue\*\* are considered to be in "Parking Lot" status and waiting for eligibility determination from ADOT, FHWA and or approval by LHMPPO TAC & Executive Board. They are included in this summary list because approvals are expected.

3. Projects highlighted in "Yellow" show an amended change in this updated summary

Note: This is an overall listing of all Lake Havasu MPO projects that have been preliminarily approved by the TAC, by year, for 2021 to 2026. Some projects will need to be moved or reprogrammed due to funding availability.

Terms:

"STBG" : Surface Transportation Block Grant

# Item #7

## **Draft 2023 TIP Update**

*Justin Hembree, LHMPO Director*

Agenda Item # 7

**LAKE HAVASU MPO  
REQUEST FOR ACTION**

**SUBJECT:** Discussion and Possible Action to Approve Fiscal Year 2023 TIP Update

**SUBMITTED BY:** Justin Hembree, MPO Director

**AGENDA TYPE:** Discussion/Action

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**ATTACHMENTS:**

- Memo/Summary
- FY 2023 TIP Update

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**SUMMARY/BACKGROUND:**

See attachments, The FY2023 TIP Update includes all formal and administrative amendments made during FY23

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**ACTION OPTION:**

Motion to approve the FY2023 TIP Update

**OR**

Action as a result of the discussion

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**RECOMMENDATION:**

Motion to approve the FY2023 TIP Update



The following memos outline the administrative modifications made to the FY2021-2026 LHMPO Transportation Improvement Program (TIP) for **FY2023 – Amendments #2-4 (Administrative)**

***FY2023 – Amendment # 2 – Administrative Modification.***

The following outlines changes made to the TIP:

***Action Taken:***

Added HSIP Projects into the TIP:

State HSIP grant applications require that MPOs list the projects on our regional TIPs under a "Parking-Lot" status (indicating unapproved/unawarded) as part of the grant application submittal process. In coordination with Greenlight TE and local agencies, Lake Havasu MPO submitted several competitive HSIP grant applications to ADOT for the FY25/26 Call for Projects. As a result, the LHMPO was awarded four (4) HSIP grants. Therefore, the parking-lot projects listed on the TIP for FY25/26 were revised accordingly with the eligibility award letters.

Competitive HSIP projects have no impact on the LHMPO fiscal constraint or other regional funding; Any changes made to the HSIP section of the TIP are considered Administrative.

The following are HSIP project amendments that have already taken place and are for informational purposes only:

**Projects Revised**

**1. State Route 95 - Raised Median:**

- TIP ID - [LHM-H25-101](#)
- S. Palo Verde to Industrial Blvd (0.8 miles),
- N. Palo Verde to Price Drive (2.6 miles)
- Total Awarded Funding: \$ 3,704,839
- Design: FY24
- Construction: FY26
- Sponsor: ADOT Northwest District

**2. Swanson Ave Intersections (Wing Loop, Mariposa Dr., and Wing Loop):**

- TIP ID - [LHM-H25-102](#)
- Rectangular Rapid Flash Beacons, High Visibility Crosswalks
- Total Awarded Funding: \$ 379,992
- Design: FY24
- Construction: FY26
- Sponsor: Lake Havasu City

**3. Horizon 6 – Gold Springs Rd, Blue Canyon Rd:**

- TIP ID - [LHM-H25-103](#)
- Widen 3 Feet, Restripe for 10' Lanes
- Total Awarded Funding: \$ 554,571.
- Design: FY24
- Construction: FY26
- Sponsor: Mohave County

#### **4. Systemic Speed Feedback Signs**

- TIP ID - [LHM-H25-104](#)
- LED Speed Feedback signs along Major Routes: SR 95, Acoma Blvd, McCulloch Blvd, Palo Verde Blvd, Lake Havasu Ave, Kiowa Blvd, Jamaica Blvd, Beachcomber Blvd, Mesquite Ave, Swanson Ave - 40 Signs total.
- Total Awarded Funding: \$ 1,014,856
- Design: FY24
- Construction: FY25
- Sponsor: Lake Havasu City

#### ***FY2023 – Amendment # 3 – Administrative Modification***

The following outlines changes made to the TIP:

##### ***Action Taken:***

Non-Profit transit projects (specifically for Seniors or the Disabled) are funded with 5310 FTA federal dollars and must be listed in the LHMPO's TIP. However, these projects have no impact on LHMPO fiscal constraint or other regional funding; Any changes made to the 5310 Transit section of the TIP are considered Administrative.

The following are 5310 Non-Profit Transit project amendments that have already taken place and are for informational purposes only:

##### **Projects Added**

1. [LHM-M22-101](#) - New Horizons Center Inc. - Preventative Maintenance
2. [LHM-M22-102](#) - New Horizons Center Inc. - Cutaway with Lift (9 Passenger)
3. [LHM-M22-103](#) - New Horizons Center Inc. - Maxivan w/ lift Transit Connect
4. [LHM-M22-104](#) - New Horizons Center Inc. - Minivan with Ramp
5. [LHM-M22-105](#) - New Horizons Disability Empowerment Center - Preventative Maintenance
6. [LHM-M22-106](#) - WACOG - Regional Mobility Management

### ***FY2023 – Amendment # 4 – Administrative Modification***

The following outlines changes made to the TIP:

#### ***Action Taken:***

Local public/city transit projects are funded with 5307 FTA federal dollars and must be listed in the LHMPO's TIP. However, these projects have no impact on LHMPO fiscal constraint or other regional funding; Any changes made to the 5307 Transit section of the TIP are considered Administrative.

The following are 5307 Public Transit project amendments that have already taken place and are for informational purposes only:

#### **Projects Removed**

1. ~~LHT-23-304~~; ADOT ID 102380; Transit Building Upgrades
2. ~~LHT-24-306~~; Electric Charging Station

#### **Projects Added**

1. ~~LHT-24-307~~; Maintenance for Vehicle/Building Maintenance FFY2019 Funds of \$42,000 with a match of \$8,400
2. ~~LHT-27-301~~; Operating Expenses \$300,000 with a match of \$300,000
3. ~~LHT-27-302~~; Capital FTA Vehicle \$150,000 with a match of \$26,471
4. ~~LHT-27-303~~; Capital FTA Vehicle \$150,000 with a match of \$26,471
5. ~~LHT-27-304~~; Maintenance for Vehicle/Building Maintenance \$100,000 with a \$20,000 match.

#### **Project Funding Decrease / Increase**

1. LHT-24-304; Capital FTA Vehicle Increase from \$85,000 to \$150,000.

#### **Other / Misc:**

1. LHT22-301D; Revised funding year from FFY2019/FFY2020 to FFY2020/FFY2021 for correct tracking/reporting purposes.





# LAKE HAVASU METROPOLITAN PLANNING ORGANIZATION

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## Transportation Improvement Program

**Fiscal Year 2021 – 2026**

900 London Bridge Road, Building B  
Lake Havasu City, AZ 86404

Telephone (928) 453-2823

[www.LHMPO.org](http://www.LHMPO.org)

*"This report was funded in part through grant[s] from the Federal Highway Administration and/or Federal Transit Administration, U.S. Department of Transportation. The contents of this report reflect the views and opinions of the author(s) who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily state or reflect the official views or policies of the U.S. Department of Transportation, the Arizona Department of Transportation, or any other State or Federal Agency. This report does not constitute a standard, specification or regulation".*

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## I. INTRODUCTION

In 2010, the United States Census reflected that Lake Havasu City population surpassed the 50,000 threshold; thus, requiring the establishment of a Metropolitan Planning Organization (MPO).

The Lake Havasu Metropolitan Planning Organization (LHMPO) planning area boundary encompasses all areas within the Lake Havasu City limits, the Mohave County area north of the City limits known as Desert Hills, Havasu Gardens, Crystal Beach and the Mohave County area southeast of the City known as Horizon Six. The planning boundary of the LHMPO is approximately 100 square miles.

### **Mission Statement**

The mission of the Lake Havasu Metropolitan Planning Organization (LHMPO) is to provide open leadership and guidance for regional transportation planning through a cooperative effort that will result in a practical and positive growth model beneficial to residents, visitors and businesses.

### **Executive Board**

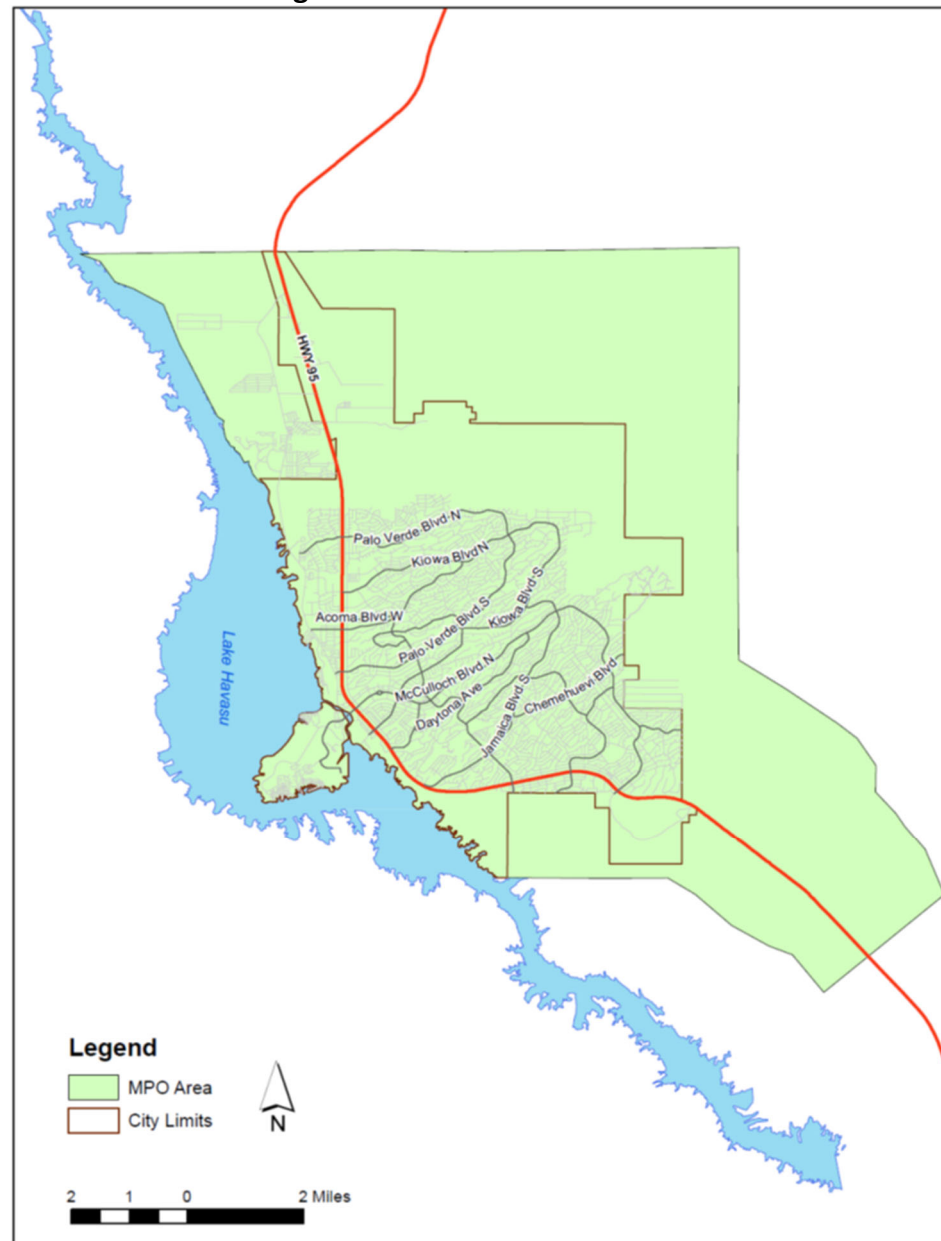
The Executive Board is the policy body of the LHMPO coordinating the transportation planning activities. The Executive Board consists of elected officials from Lake Havasu City, Mohave County; one member from Arizona Department of Transportation State Transportation Board (appointed by the Governor of the State of Arizona).

### **Technical Advisory Committee (TAC)**

The TAC consists of eight (8) technical and managerial representatives from: Lake Havasu City (3); Mohave County (2); Western Arizona Council of Governments (WACOG) (1); the Arizona Department of Transportation (ADOT) (2) as members.

The primary responsibility of the TAC is to perform technical reviews and analysis regarding project related activities of the TIP and make recommendations to the Executive Board.

Figure 1: LHMP Urbanized Area



## Geographic Area

The LHMPO is responsible for the continuous, cooperative and comprehensive transportation planning process for the Lake Havasu Metropolitan Planning Organization Urbanized Area.

## Requirements

The TIP is a multi-year (4 year) program of transportation projects that is consistent with and implements the goals and objectives described in the **2045 Regional Transportation Plan**. The TIP is required to be prepared in complete detail identifying projects, assign projects in appropriate periods, and to identify costs associated with each project as well as funding source. The TIP needs to be reviewed annually and revised as necessary. Years 1 – 4 **must** be fiscally constraint.

## II. PUBLIC INVOLVEMENT PROCESS

Federal legislation requires a public involvement process that provides comprehensive information, timely public notice, and full public access to key decisions and is supportive of early and continuing involvement of the public in all areas of the transportation planning process.

The Public Involvement Plan adopted by the Executive Board July 8, 2014 and last amended on June 7, 2022 contains background material, guidelines, and commitments that LHMPO is undertaking to incorporate an effective public process into future plans, projects, and programs. Specifically, LHMPO is committed to:

- Inclusive and meaningful public involvement.
- Open and honest communications with all individuals and entities.
- Timely public notice.
- Full public access to information and key decisions.
- Creating a sense of shared responsibility and ownership for regional transportation/congestion problems and a shared sense of pride in the development of solutions to those problems.
- Helping form partnerships between member entities, and the private and public sectors to plan and implement transportation/congestion solutions.
- Establishing policies and prioritizing needs based on valid data and using objective, fair and consistent processes.
- Providing information and gathering input so that decision makers will be able to make informed decisions.

## Public Process

The LHMPO will update the TIP on a regular basis and will strive to include as much public input as possible. Annually the TAC will submit projects for inclusion in the TIP. The review of the projects will occur by the TAC in a public meeting; and, each project submitted must be fiscally constrained. The draft document will be available for public comment for not less than 30-days and will be available at the LHMPO Office and LHMPO web site.

After the public comment period has ended the draft document will be presented to the TAC for approval and forwarded to the Executive Board for final approval. The Executive Board has the option of continuing with the approval process or move to a future date to allow for additional comments or discussion.

The LHMPO follows and adheres to the approved Title VI Plan and the Public Involvement Plan (PIP) to ensure the greatest amount of public participation is received during the TIP development process.

The Lake Havasu MPO public participation process for the TIP is being used to satisfy section 5307 Public Outreach requirement for Lake Havasu City Transit.

## The Public Involvement Process:

All Lake Havasu MPO TAC and Executive Board Meetings are open to the public agenda items for public comment. Brown columns highlighted in the table below indicate opportunities for the public to provide comments and feedback.

Projects Identified & Submitted to the MPO	TAC Project Evaluation & Approval	Executive Board Draft TIP Approval	Public Comment Period	TAC Final TIP Approval	Executive Board Final TIP Approval	Repeat Process
Local agencies identify and submit projects to the MPO that are eligible for federal/state funding provided by the MPO	<p>The MPO Technical Advisory Committee (TAC) evaluates and approves the projects creating a Draft TIP</p> <p><i>*Open for Public Comment</i></p>	<p>The Draft TIP is submitted to the Executive Board for review and approval. Once approved by the Executive Board, the draft TIP is sent out for 30-day public comment period.</p> <p><i>*Open for Public Comment</i></p>	<p>30-Day Public Comment Period. The Public Notice is posted to the Newspaper, Website, &amp; Social Media Sites. The TIP is posted on the LHMPPO Website and available in hard-copy.</p> <p><i>*Public Comment Period</i></p>	<p>Public Comments are reviewed and Necessary Changes made to create Final TIP. The TAC reviews and approves the Final TIP to the Executive Board.</p> <p><i>*Open for Public Comment</i></p>	<p>Executive Board Approves Final TIP. Once Approved, the MPO submits the Final TIP and ADOT and the FHWA/FTA.</p> <p><i>*Open for Public Comment</i></p>	

### III. FUNDING SOURCE AND BUDGET

The LHMPO is dependent on federal funding for the operation of the MPO; and, to perform planning activities used to deliver a variety of projects in the Urbanized Area. Below is a detailed list of the types of funding the LHMPO receives as well as what the funding is utilized for.

#### Planning Funds (PL) and State Planning & Research Funds (SPR)

**The Arizona Department of Transportation (ADOT)** is the designated recipient of the **Federal-Aid Highway Funds** used for planning and research purposes. ADOT receives State Planning and Research (SPR) funds **from Federal Highways Administration (FHWA)** and utilizes some of these funds with planning agencies to conduct transportation planning activities. Planning Funds (PL) is apportioned to states on the basis of population in urbanized areas and relative to the amount of highway construction funds the state receives.

SPR funds are discretionary and are typically administered by ADOT to carry out specific technical activities. In the LHMPO region SPR funds will be used to conduct transportation planning activities and administration of the program. SPR funds require a 20% local match and PL funds require a 5.7% local match. The below amounts reflect the annual apportionments and not the Obligation Authority amounts, see Unified Planning Work Program (UPWP) for the exact operating budget for the LHMPO.

Total Estimated PL Funding Annual	\$157,477
Total Estimated SPR Funding Annually	\$125,000

#### Surface Transportation Block Grant Program Funds (STBGP)

STBGP is a federal-aid highway flexible funding program that funds a broad range of surface transportation capital needs including roads, transit, airport access, vanpool, and bicycle and pedestrian facilities. Transit related planning; research and development activities are also eligible for the use of STBGP funds. These funds require a 5.7% local match. The below amounts reflect the Obligation Authority amounts, not apportionments.

Total Estimated STBGP Funding Annually	\$288,529
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### Highway Safety Improvement Program Funds (HSIP)

HSIP funds are a federal funding source dedicated to safety improvements and are distributed within the State on a competitive basis. The main purpose of the HSIP funding is to achieve a reduction in fatalities and serious injuries on public roads.

#### HSIP Match

5.7% match typically provided through the use of in-kind / hard dollars by the MPO member agencies; however, in some projects the match can be as low as 0%.

0.0% match reference, 23 U.S.C. 120(c) and 130 address the local match waiver on HSIP funded projects. Section 120(c) allows certain types of highway safety improvement projects to be funded at 100 percent (i.e., traffic control signalization, traffic circles, safety rest areas, pavement marking, commuter carpooling and vanpooling, rail-highway crossing closure, or installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatments, breakaway utility poles, or priority control systems for emergency vehicles or transit vehicles at signalized intersections).

Total Estimated HSIP Funding Annually	\$ Competitive
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### Carbon Reduction Program Funding (CRP)

The CRP funding is a federal-aid highway funding program that funds projects designed to reduce transportation emissions, defined as carbon dioxide (CO2) emissions from on-road highway sources. These funds require a 20% local match. The below amounts reflect the Obligation Authority amounts, not apportionments.

Total Estimated CRP Funding Annually	\$118,565
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### Transportation Alternatives Funding (TA)

The Transportation Alternatives (TA) Program is a State competitive grant program that provides funding for a variety of generally smaller-scale transportation projects such as pedestrian and bicycle facilities; construction of turnouts; overlooks, and viewing areas; community improvements such as historic preservation and vegetation management; environmental mitigation related to stormwater and habitat connectivity. These funds require a 5.7% local match.

Total Estimated TA Funding Annually	\$Competitive
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### Federal Transit Administration Funding (FTA) – Section 5305d

These funds are utilized for MPO operations, salaries, and transit planning purposes in the LHMPPO region. The use of these funds is allowed for planning and technical studies related to transit. FTA provides funding to ADOT for the regional planning agencies with the State. These funds require a 5.7% local match. The below amount reflects the Apportionment.

Total Estimated FTA Section 5305d Funding Annually	\$64,826
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### Federal Transit Administration Funding (FTA) – Section 5304 & 5305e

The FTA Section 5304 & 5305e funding is provided to ADOT via FTA for transit planning. The funding became available with Federal Fiscal Year 2018 and is available on a competitive basis.

Total Estimated FTA Section 5305e Funding Annually	\$ Competitive
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### FTA Section 5307 – Urbanized Areas

The FTA Section 5307 funding is also filtered through the ADOT Multimodal Planning Division (MPD) - Transit Section. This program provides grants to urbanized areas (over 50,000 in population) for public transportation, capital, planning, job access, and reverse commute projects, as well as operation expenses in certain circumstances. These funds require a 20% local match for capital projects

Total Estimated FTA Section 5307 Funding Annually	\$800,000
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### Highway User Revenue Funds (HURF) Exchange Program

Annually, ADOT provides federal Surface Transportation Block Grant Program (STBGP) funding on a discretionary basis to Arizona Councils of Governments (COG) and Metropolitan Planning Organizations (MPO), which then program the funds for specific local projects in the applicable region. The use of federal funding also requires compliance with certain federal environmental, procurement and other regulations. These requirements typically result in longer project duration and higher costs than if the project were built with non-federal funds. The HURF Exchange program is targeted to cities / towns / counties with population of 200,000 or less. It enables local public agencies (LPAs) to build projects using state funding, avoiding expensive and time-consuming federal regulatory requirements. Because the HURF Exchange results in reduced costs and administrative burden for participating LPAs and transfers that burden to ADOT, the statute allows ADOT to pay \$.90 cents in State Highway Fund (SHF) for each \$1 of federal funding exchanged.

## IV. TRANSIT

### **FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities grant program:**

ADOT refers to this program as the “Coordinated Mobility Program.” The Coordinated Mobility Program, FTA Section 5310, is a grant program that provides funding to assist with costs for mobility management activities, the purchase of capital equipment, and operations to meet the mobility needs of seniors (sixty five years and over) and individuals with disabilities of any age. The goal of the Section 5310 Program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation services and expanding the transportation mobility options available.

The FTA Section 5310 funding is filtered through ADOT Transit Division to those not for profit and profit human service transit providers who qualify. To qualify for the funding, the organizations must be listed in the Western Arizona Council of Governments (WACOG) Human Service Transportation Coordination Plan prepared and provided by (WACOG). The funding amount available is provided by ADOT at the beginning of the grant cycle. Any Awarded amounts will be included into the LHMPO TIP.

### **FTA 5307 Urbanized Public Transit:**

The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census.

Lake Havasu City Transit is the 5307 Public Transit provider in the Lake Havasu MPO region. The Lake MPO and City Transit coordinate to share data, information, and to establish public transit related performance measures.

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

Surface Transportaton Block Grant (STBG) Projects																	
TIP ID #	ADOT ID # (E-STIP)	Project Phase	Project Sponsor	Project Name	Project Location	Length	Functional Classifications	Lanes Before	Lanes After	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	HURF Exchange	Total Cost
2021																	
						-	-	-	-	STBG	FHWA		\$ -		\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2022																	
										STBG	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2023																	
LHM 22-112	102318	Installation	Lake Havasu City	Traffic Signals ITS	Various Intersections -- SR95, Lake Havasu Ave, & Other Intersections	-	Varies	-	-	HURF X-STBG	FHWA	<del>\$ -</del>	<del>\$ -</del>	<del>\$ -</del>	<del>\$ 113,991.94</del>	<del>\$ 1,025,927.44</del>	<del>\$ 1,139,919.38</del>
TOTALS												\$ -	\$ -	\$ -	\$ 113,991.94	\$ 1,025,927.44	\$ 1,139,919.38
2024																	
LHM-24-101		Planning & Analysis	LHMPO	Traffic Signal Analysis & Modeling Study	McCulloch Blvd, Lake Havasu Ave, & State Route 95	-				STBG	FHWA	\$ 300,000.00	\$ -	\$ 18,133.62	\$ -	\$ -	\$ 318,133.62
TOTALS												\$ 300,000.00	\$ -	\$ 18,133.62	\$ -	\$ -	\$ 318,133.62
2025																	
										STBG	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2026																	
LHM 22-112	102318	Installation	Lake Havasu City	Traffic Signals ITS	Various Intersections - SR95, Lake Havasu Ave, & Other Intersections	-	Varies	-	-	HURF X-STBG	FHWA	\$ -	\$ -	\$ -	\$ 113,991.94	\$ 1,025,927.44	\$ 1,139,919.38
TOTALS												\$ -	\$ -	\$ -	\$ 113,991.94	\$ 1,025,927.44	\$ 1,139,919.38

- Notes:
1. "STBG" funded programs are selected by LHMPPO; projects with other funding sources are required to be included, but are selected through various grant applications

2. Projects labeled with "Not Approved" or "Not Awarded" and highlighted in \*\*Blue\*\* are considered to be in "Parking Lot" status and waiting for eligibility determination from ADOT, FHWA and or approval by LHMPPO TAC & Executive Board. They are included in this summary list because approvals are expected.

3. Projects highlighted in "Yellow" show an amended change in this updated summary

*Note: This is an overall listing of all Lake Havasu MPO projects that have been preliminarily approved by the TAC, by year, for 2021 to 2026. Some projects will need to be moved or reprogrammed due to funding availability.*

Terms: "STBG" : Surface Transportation Block Grant

Carbon Reduction Program (CRP) Projects																	
TIP ID #	ADOT ID # (E-STIP)	Project Phase	Project Sponsor	Project Name	Project Location	Length	Functional Classifications	Lanes Before	Lanes After	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	HURF Exchange	Total Cost
2021																	
										CRP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2022																	
										CRP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2023																	
										CRP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2024																	
										CRP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2025																	
										CRP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2026																	
										CRP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Notes:

1. "CRP" funded programs are selected by LHMPPO; projects with other funding sources are required to be included, but are selected through various grant applications

2. Projects labeled with "Not Approved" or "Not Awarded" and highlighted in **\*\*Blue\*\*** are considered to be in "Parking Lot" status and waiting for eligibility determination from ADOT, FHWA and or approval by LHMPPO TAC & Executive Board. They are included in this summary list because approvals are expected.

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Terms:

"CRP" : Carbon Reduction Program

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

Highway Safety Improvement Program (HSIP) Projects																
TIP ID #	ADOT ID # (E-STIP)	Project Phase	Project Sponsor	Project Name	Project Location	Length	Functional Classifications	Lanes Before	Lanes After	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	Total Cost
2021																
-	-	-	-	-	-	-	-	-	-	HSIP	FHWA	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS												\$ -	\$ -	\$ -	\$ -	\$ -
2022																
LHM23-104D	101553	Design	Lake Havasu City	London Bridge Road Safety Improvements	255' North of Reimer Dr. to State Route 95 (South)		Urban Major Collector			HSIP	FHWA	\$ 199,500	\$ -	\$ -	\$ -	\$ 199,500
TOTALS												\$ 199,500.00	\$ -	\$ -	\$ -	\$ 199,500.00
2023																
LHM23-104C	101553	Construction	Lake Havasu City	London Bridge Road Safety Improvements	255' North of Reimer Dr. to State Route 95 (South)		Urban Major Collector			HSIP	FHWA	\$ 406,786	\$ -	\$ -	\$ -	\$ 406,786
LHM-H23-101	-	Design	Lake Havasu City	McCulloch Blvd & Jamaica Blvd Traffic Signal	Improvements at: Acoma Boulevard, Swanson Ave to Wood Ln, McCulloch Blvd at El Dorado Ave, and the intersection of McCulloch Boulevard and Jamaica Boulevard		Urban Major Collector			HSIP	FHWA	\$ 244,025	\$ -	\$ -	\$ -	\$ 244,025
TOTALS												\$406,786	\$0	\$0	\$0	\$650,811
2024																
LHM-H23-101	-	Construction	Lake Havasu City	McCulloch Blvd & Jamaica Blvd Traffic Signal	Improvements at: Acoma Boulevard, Swanson Ave to Wood Ln, McCulloch Blvd at El Dorado Ave, and the intersection of McCulloch Boulevard and Jamaica Boulevard		Urban Major Collector			HSIP	FHWA	\$ 805,065.00	\$ -	\$ -	\$ -	\$ 805,065.00
LHM-H25-101		Design	ADOT Northwest Dist.	State Route 95 - Raised Median	S. Palo Verde to Industrial Blvd (0.8 miles), N. Palo Verde to North of Chenoweth (2.2 miles), S. Acoma to Oro Grande (1.0 miles)	4 Miles	Urban Principal Arterial	4	4	HSIP	FHWA	\$ 212,884	\$ -	\$ 12,868	\$ -	\$ 225,752
LHM-H25-102		Design	Lake Havasu City	Swanson Ave Intersections Rectangular Rapid Flash Beacons, High Visibility Crosswalks	Swanson Ave Intersections (Wing Loop, Mariposa Dr, and Wing Loop):	-	Urban Major Collector	2	2	HSIP	FHWA	\$ 192,950	\$ -	\$ -	\$ -	\$ 192,950
LHM-H25-103		Design	Mohave County	Horizon 6 – Gold Springs Rd, Blue Canyon Rd: Widen 3 Feet (Shoulders), Restripe for 10' Lanes	Horizon 6 – Gold Springs Rd, Blue Canyon Rd:	1.1 Miles	Rural Minor Collector	2	2	HSIP	FHWA	\$ 235,735	\$ -	\$ 14,249	\$ -	\$ 249,984
LHM-H25-104		Design	Lake Havasu City	Systemic Speed Feedback Signs	Various Locations	N/A	N/A			HSIP	FHWA	\$ 272,400	\$ -	\$ -	\$ -	\$ 272,400
TOTALS												\$1,719,034	\$0	\$27,117	\$0	\$1,746,151

Highway Safety Improvement Program (HSIP) Projects																
TIP ID #	ADOT ID # (E-STIP)	Project Phase	Project Sponsor	Project Name	Project Location	Length	Functional Classifications	Lanes Before	Lanes After	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	Total Cost
2025																
LHM-H25-104		Construction	Lake Havasu City	Systemic Speed Feedback Signs	Various Locations	N/A	N/A			HSIP	FHWA	\$742,456	\$-	\$-	\$-	\$742,456
TOTALS												\$913,969	\$0	\$27,117	\$0	\$941,086
2026																
LHM-H25-101		Construction	ADOT Northwest Dist.	State Route 95 - Raised Median	S. Palo Verde to Industrial Blvd (0.8 miles), N. Palo Verde to North of Chenoweth (2.2 miles), S. Acoma to Oro Grande (1.0 miles)	4 Miles	Urban Principal Arterial	4	4	HSIP	FHWA	\$3,079,723	\$-	\$186,155	\$-	\$3,265,878
LHM-H25-102		Construction	Lake Havasu City	Swanson Ave Intersections Rectangular Rapid Flash Beacons, High Visibility Crosswalks	Swanson Ave Intersections (Wing Loop, Mariposa Dr, and Wing Loop):	-	Urban Major Collector	2	2	HSIP	FHWA	\$215,598	\$-	\$-	\$-	\$215,598
LHM-H25-103		Construction	Mohave County	Horizon 6 – Gold Springs Rd, Blue Canyon Rd: Widen 3 Feet (Shoulders), Restripe for 10' Lanes	Horizon 6 – Gold Springs Rd, Blue Canyon Rd:	1.1 Miles	Rural Minor Collector	2	2	HSIP	FHWA	\$287,226	\$-	\$17,361	\$-	\$304,587
TOTALS												\$3,582,547	\$0	\$203,516	\$0	\$3,786,063

Notes:

1. Only "STBG" funded programs are selected by LHMPPO; projects with other funding sources, such as HSIP, are required to be included, but are selected through various grant applications

2. Projects labeled with "Not Approved" or "Not Awarded" and highlighted in \*\*Blue\*\* are considered to be in "Parking Lot" status and waiting for eligibility determination from ADOT, FHWA and or approval by LHMPPO TAC & Executive Board. They are included in this summary list because approvals are expected.

3. Projects highlighted in "Yellow" show an amended change in this updated summary

Terms: "HSIP" : Highway Safety Improvement Program

Prepared: 1/17/23 by Justin Hembree, LHMPPO Director (hembreej@lhcaz.gov; 928-453-2824)

*Note: This is an overall listing of all Lake Havasu MPO projects that have been preliminarily approved by the TAC, by year, for 2021 to 2026. Some projects will need to be moved or reprogrammed due to funding availability.*

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

State Legislative / Congressional Projects													
TIP ID #	ADOT ID # (E-STIP)	Project Phase	Project Sponsor	Project Name	Project Location	Length	Functional Classifications	Lanes Before	Lanes After	Funds Source	State/Federal Funds	Other Funds - Local Contributions	Total Cost
2022													
LHM-LS22-101		Planning & Analysis	Lake Havasu City	Second Bridge Impact Study	Lake Havasu City - Between the Island and London Bridge Rd.	-	-	-	-	State General Funds - Surplus	\$ 200,000.00	\$ -	\$ 200,000.00
2023													
LHM-LS23-101		Construction	Lake Havasu City	McCulloch Blvd. Improvements	Lake Havasu Ave. to Smoketree Ave.	0.8 Miles	Urban Minor Collector	-	-	State General Funds - Surplus	\$ 1,992,698	\$ 498,175	\$ 2,490,873
LHM-LS23-102		Construction	Lake Havasu City	Lake Havasu Ave. Improvements	Mesquite Blvd. to Palo Verde Blvd. S. Acoma Blvd. to Industrial Blvd.	0.75 Miles	Urban Minor Collector	-	-	State General Funds - Surplus	\$ 2,095,644	\$ 523,911	\$ 2,619,555
LHM-LS23-103		Construction	Lake Havasu City	Industrial Ave. Improvements	Lake Havasu Ave. to London Bridge Rd.	0.64 Miles	Urban Major Collector	-	-	State General Funds - Surplus	\$ 1,690,593	\$ 422,648	\$ 2,113,241
LHM-LS23-104		Construction	Lake Havasu City	Mesquite Ave. Improvements	Lake Havasu Ave. to Acoma: (Riviera Blvd. to Capri Blvd), (Del Rio Ln. to Lake Havasu Ave), (Acoma Blvd. to Querio Dr.)	1.4 Miles	Urban Major Collector	-	-	State General Funds - Surplus	\$ 1,768,477	\$ 442,119	\$ 2,210,596
LHM-LS23-105		Construction	Lake Havasu City	Swanson Ave. Improvements	State Route 95. to Smoketree Ave.	0.75 Miles	Urban Major Collector	-	-	State General Funds - Surplus	\$ 1,585,822	\$ 396,456	\$ 1,982,278
LHM-LS23-106		Construction	Lake Havasu City	Palo Verde (S). Improvements	Lake Havasu Ave. to London Bridge Rd.	0.25 Miles	Urban Major Collector	-	-	State General Funds - Surplus	\$ 693,418	\$ 173,355	\$ 866,773
LHM-LS23-107		Design & Construction	Mohave County	London Bridge Road Improvements	Rubber Chip Seal MP 4.5 City Limits to Mile 7.88 City Limits	3.38 Miles	Urban Major Collector	-	-	State General Funds - Surplus	\$ 300,000	\$ -	\$ 300,000
											\$ 10,126,652	\$ 2,456,664	\$ 12,583,316
2024													
LHM-CDS24-101		Construction	Lake Havasu City	El Dorado Ave. Low Water Crossing Improvements	El Dorado Ave. at El Dorado Wash Crossing	-	Urban Major Collector	2	2	Congressionally Directed Spending	\$ 2,846,571	\$ 172,062.00	\$3,018,633
											\$2,846,571	\$172,062	\$3,018,633
2025													
			Lake Havasu City							State General Funds - Surplus	\$ -	\$ -	\$0
TOTALS											\$0	\$0	\$0

Notes:

Projects highlighted in "BLUE" show UNAWARDED/UNFUNDED Lake Havasu MPO Regional Projects - Proposed State Legislative Appropriations/ or Congressinoally Directed Funds. To ensure regional planning coordination and regional support, these projects have been requested to be placed on the local MPO TIP prior to submission for state legislation or congressional directed spending consideration. If projects are awarded, those highlighted in "BLUE" will be unhighlighted indicating the approval and award of the project. If one of the proposed projects listed is not awarded for the year, it will be removed from the TIP.



Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

Lake Havasu City Transit - 5307 / CARES Act / Transit STBG

TIP ID #	Project Phase / Description	ADOT ID	Project Sponsor	Project Name / Location	Fed Aid Type	Fed Aid Funding Year	Federal Funds Source	Federal Funds	Local Match	Other Funds Local	Total Cost
2021											
LHT21-301A	FTA Vehicle	102245	Lake Havasu City Transit	FTA Vehicle	CARES	FFY2020	FTA	\$ 130,000	\$ -	\$ -	\$ 130,000
LHT-21-307	FTA Vehicle	102327	Lake Havasu City Transit	FTA Vehicle	5307	FFY2019	FTA	\$ 86,000	\$ 15,176	\$ -	\$ 101,176
LHT-21-308	FTA Vehicle	102328	Lake Havasu City Transit	FTA Vehicle	5307	FFY2019	FTA	\$ 86,000	\$ 15,176	\$ -	\$ 101,176
LHT-21-309	FTA Vehicle	102329	Lake Havasu City Transit	FTA Vehicle	5307	FFY2019	FTA	\$ 86,000	\$ 15,176	\$ -	\$ 101,176
TOTALS								\$ 258,000	\$ 45,529	\$ -	\$ 303,529.41
2022											
LHT-22-302	Capital	102247	Lake Havasu City Transit	Bus Signage	5307	FFY2019	FTA	\$ 17,000	\$ 4,250	\$ -	\$ 21,250
LHT-22-303	Capital	102248	Lake Havasu City Transit	Bus Shelters	5307	FFY2019	FTA	\$ 33,000	\$ 8,250	\$ -	\$ 41,250
TOTALS								\$ 50,000	\$ 12,500	\$ -	\$ 62,500.00
2023											
LHT-22-301D	Design	102320	Lake Havasu City Transit	Transit Hub with ADA Restrooms	STBG	FFY2020	FTA	\$ 38,896	\$ 2,351	\$ -	\$ 41,247
LHT22-301D	Design	102320	Lake Havasu City Transit	Transit Hub with ADA Restrooms	5307	FFY2020/FFY 2021	FTA	\$ 125,000	\$ 31,250	\$ -	\$ 156,250
LHT-23-301	FTA Vehicle	102341	Lake Havasu City Transit	FTA Vehicle	5307	FFY2020/FFY 2021	FTA	\$ 150,000	\$ 26,471	\$ -	\$ 176,471
LHT-23-302	FTA Vehicle	102344	Lake Havasu City Transit	FTA Vehicle	5307	FFY2021	FTA	\$ 85,000	\$ 15,000	\$ -	\$ 100,000
TOTALS								\$398,896	\$75,072	\$0	\$473,967.67

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

Lake Havasu City Transit - 5307 / CARES Act / Transit STBG

TIP ID #	Project Phase / Description	ADOT ID	Project Sponsor	Project Name / Location	Fed Aid Type	Fed Aid Funding Year	Federal Funds Source	Federal Funds	Local Match	Other Funds Local	Total Cost
2024											
LHT-21-305	Capital	102325	Lake Havasu City Transit	Shade Cover Pima Wash for Vehicles	5307	FFY2019	FTA	\$ 50,000	\$ 12,500	\$ -	\$ 62,500
LHT-22-301C	Construction	102320	Lake Havasu City Transit	Transit Hub with ADA Restrooms	5307	FFY2021	FTA	\$ 400,000	\$ 100,000	\$ 80,000	\$ 580,000
LHT-23-304	Capital	102380	Lake Havasu City Transit	Transit Building Upgrades	5307	FFY2022	FTA	<del>\$ 50,000</del>	<del>\$ 12,500</del>	<del>\$ -</del>	<del>\$ 62,500</del>
LHT-24-303	Capital		Lake Havasu City Transit	FTA Vehicle	5307	FFY2022	FTA	\$ 150,000	\$ 26,471	\$ -	\$ 176,471
LHT-24-304	Capital		Lake Havasu City Transit	FTA Vehicle	5307	FFY2022	FTA	\$ 150,000	\$ 26,471	\$ -	\$ 176,471
LHT-23-303	Capital		Lake Havasu City Transit	Vehicle Wireless Camera Technology	STBG	FFY2021 / FFY2022	FTA	\$ 77,792	\$ 2,351	\$ -	\$ 80,143
LHT-24-306	Capital		Lake Havasu City Transit	Electric Charging Station	5307	FFY2023	FTA	<del>\$ 150,000</del>	<del>\$ 37,500</del>	<del>\$ -</del>	<del>\$ 187,500</del>
LHT-24-307	Maintenance		Lake Havasu City Transit	Vehicle/Building Maintenance	5307	FFY2019	FTA	\$ 42,000	\$ 8,400	\$ -	\$ 50,400
TOTALS								\$1,069,792	\$226,192	\$80,000	\$1,375,984.18
2025											
LHT-25-301	Operating		Lake Havasu City Transit	Operating Expenses	5307	FFY2023	FTA	\$ 250,000	\$ 250,000	\$ -	\$500,000
LHT-25-302	Capital		Lake Havasu City Transit	Electric Charging Station	5307	FFY2023	FTA	\$ 150,000	\$ 37,500	\$ -	\$187,500
LHT-25-303	Capital		Lake Havasu City Transit	FTA Vehicle	5307	FFY2023	FTA	\$ 150,000	\$ 26,470.59	\$ -	\$176,471
TOTALS								\$550,000	\$313,971	\$0	\$863,970.59

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

Lake Havasu City Transit - 5307 / CARES Act / Transit STBG

TIP ID #	Project Phase / Description	ADOT ID	Project Sponsor	Project Name / Location	Fed Aid Type	Fed Aid Funding Year	Federal Funds Source	Federal Funds	Local Match	Other Funds Local	Total Cost
2026											
LHT-26-301	Operating		Lake Havasu City Transit	Operating Expenses	5307	FFY2023 / FFY2024	FTA	\$300,000	\$300,000	\$ -	\$600,000
LHT-26-302	Capital		Lake Havasu City Transit	Electric Charging Station	5307	FFY2024	FTA	\$150,000	\$37,500	\$ -	\$187,500
TOTALS								\$300,000	\$300,000	\$0	\$600,000.00
2027											
LHT-27-301	Operating		Lake Havasu City Transit	Operating Expenses	5307	FFY2023 / FFY2024	FTA	\$300,000	\$300,000		\$600,000
LHT-27-302	Capital		Lake Havasu City Transit	FTA Vehicle	5307	FFY2023	FTA	\$150,000	\$26,471		\$176,471
LHT-27-303	Capital		Lake Havasu City Transit	FTA Vehicle	5307	FFY2025	FTA	\$150,000	\$26,471		\$176,471
LHT-27-304	Maintenance		Lake Havasu City Transit	Vehicle/Building Maintenance	5307	FFY2023	FTA	\$100,000	\$20,000		\$120,000
TOTALS								\$700,000	\$372,941	\$0	\$1,072,941.18

Notes:

Projects highlighted in "Yellow" show an amended change in this updated summary

Terms:

5307 Funding - Allocated funding for transit  
CARES Act- One time funding source no expiration date  
STBG Funding - Allocated funding for transit

*Note: This is an overall listing of all Lake Havasu Transit projects that have been preliminarily approved by Lake Havasu City, by year, for 2021 to 2026. Some projects will need to be moved or reprogrammed due to funding availability.*

Prepared: 3/8/2022 by Jeanette Buckley, Lake Havasu City Transit

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

5310 - Mobility Management / Non-Profit Transit											
TIP ID #	Project Phase / Description	COG/MPO	Project Name / Location	Project Name Description	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	Total Cost
2021											
LHM-20-102	Awarded	LHMPO	New Horizons Center for People w/Special Needs - Small Urban Capital per FFY 2020 Section 5310 Awards	Minivan with Ramp (7 passenger)	5310	FTA	\$ 49,300	\$ -	\$ 8,700	\$ -	\$ 58,000
LHM-20-103	Awarded	LHMPO	New Horizons Center for People w/Special Needs - Small Urban Capital per FFY 2020 Section 5310 Awards	Minivan with Ramp (7 passenger)	5310	FTA	\$ 49,300	\$ -	\$ 8,700	\$ -	\$ 58,000
LHM-20-104	Awarded	LHMPO	New Horizons Center for People w/Special Needs - Small Urban Capital per FFY 2020 Section 5310 Awards	4x4 SUV	5310	FTA	\$ 38,250	\$ -	\$ 6,750	\$ -	\$ 45,000
LHM-20-105	Awarded	LHMPO	New Horizons Center for People w/Special Needs - Small Urban Capital per FFY 2020 Section 5310 Awards	Preventative Maintenance	5310	FTA	\$ 20,000	\$ -	\$ 5,000	\$ -	\$ 25,000
LHM-20-106	Awarded	LHMPO	Rise Inc. - Small Urban Capital per FFY 2020 Section 5310 Awards	Cutaway with Lift (9 passenger)	5310	FTA	\$ 63,750	\$ -	\$ 11,250	\$ -	\$ 75,000
LHM-20-107	Awarded	LHMPO	Rise Inc. - Small Urban Capital per FFY 2020 Section 5310 Awards	Cutaway with Lift (9 passenger)	5310	FTA	\$ 63,750	\$ -	\$ 11,250	\$ -	\$ 75,000
LHM-20-118	Awarded	LHMPO	Rise Inc. - Small Urban Capital per FFY 2020 Section 5310 Awards	Cutaway with Lift (9 passenger)	5310	FTA	\$ 63,750	\$ -	\$ 11,250	\$ -	\$ 75,000
LHM-20/119	Awarded	LHMPO	NAU - Senior Companion Program - Small Urban Operating per FFY 2020 Section 5310 Awards	Operating Funds	5310	FTA	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ 50,000
LHM-20-120	Awarded	LHMPO	New Horizons Disability Empowerment Center - Small Urban Operating per FFY 2020 Section 5310 Awards	Operating Funds	5310	FTA	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 40,000
WACOG-T21-18	Awarded	LHMPO	Town of Quartzsite - Bus Expansion - Section 5339 Awards	Expansion - Bus <30 FT.	5310	FTA	\$ 115,920	\$ -	\$ 20,456	\$ -	\$ 136,376
TOTALS							\$ 509,020.00	\$ -	\$ 128,356.00	\$ -	\$ 637,376.00
2022											
LHM -M21-101	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Capital per FFY 2021 Section 5310 Awards	Preventative Maintenance	5310	FTA	\$ 20,000	\$ -	\$ 5,000	\$ -	\$ 25,000
LHM -M21-102	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Capital per FFY 2021 Section 5310 Awards	4x4 SUV	5310	FTA	\$ 38,774	\$ -	\$ 10,663	\$ -	\$ 49,437
LHM -M21-103	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Capital per FFY 2021 Section 5310 Awards	Minivan with Ramp (7 passenger)	5310	FTA	\$ 51,488	\$ -	\$ 5,721	\$ -	\$ 57,209
LHM -M21-104	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Capital per FFY 2021 Section 5310 Awards	Minivan with Ramp (7 passenger)	5310	FTA	\$ 51,488	\$ -	\$ 5,721	\$ -	\$ 57,209
TOTALS							\$161,750	\$0	\$27,105	\$0	\$188,855

Lake Havasu Metropolitan Planning Organization (MPO)  
FY 2021-2026 Transportation Improvement Program

2023 UPDATE

5310 - Mobility Management / Non-Profit Transit											
TIP ID #	Project Phase / Description	COG/MPO	Project Name / Location	Project Name Description	Fed Aid Type	Federal Funds Source	Federal Funds	Other Fed Funds	Local Match	Other Funds Local	Total Cost
2023											
LHM-M22-101	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Captial per FFY 2022 Section 5310 Awards	Preventative Maintenance	5310	FTA	\$ 20,000	\$ -	\$ 5,000.00	\$ -	\$ 25,000.00
LHM-M22-102	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Captial per FFY 2022 Section 5310 Awards	Cutaway with Lift (9 passenger)	5310	FTA	\$ 116,875	\$ -	\$ 20,625.00	\$ -	\$ 137,500.00
LHM-M22-103	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Captial per FFY 2022 Section 5310 Awards	Maxivan w/ lift Transit Connect - Replacement 2950	5310	FTA	\$ 90,695	\$ -	\$ 16,005.00	\$ -	\$ 106,700.00
LHM-M22-104	Awarded	LHMPO	New Horizons Center Inc. for People with Special Needs - Small Urban Captial per FFY 2022 Section 5310 Awards	Minivan with Ramp - Replacement 3898	5310	FTA	\$ 62,645	\$ -	\$ 11,055.00	\$ -	\$ 73,700.00
LHM-M22-105	Awarded	LHMPO	New Horizons Disability Empowerment Center - Small Urban Captial per FFY 2022 Section 5310 Awards	Preventative Maintenance	5310	FTA	\$ 20,000	\$ -	\$ 5,000.00	\$ -	\$ 25,000.00
LHM-M22-106	Awarded	WACOG / LHMPO	Regional Mobility Management	Mobility Management - Small Urban	5310	FTA	\$ 57,400	\$ -	\$ 14,350.00	\$ -	\$ 71,750.00
TOTALS							\$367,615	\$0	\$72,035	\$0	\$439,650
2024											
											\$0
TOTALS							\$0	\$0	\$0	\$0	\$0
2025											
											\$0
TOTALS							\$0	\$0	\$0	\$0	\$0

Notes:

1. Projects labeled with "Not Approved" or "Not Awarded" and highlighted in **\*\*Blue\*\*** are considered to be in "Parking Lot" status and waiting for eligibility determination from ADOT, FTA and or approval by WACOG Coordination Council. They are included in this summary list because approvals are expected.
2. FTA Grant Awards are announced annually. Once grants are awarded, projects highlighted in "BLUE" will be unhighlighted indicating the projects approval and award. If one the proposed projects listed is not awarded for the year it will be removed from the TIP.

Terms:

"FTA": Federal Transit Administration

# Item #8

## **FY2023 Loan**

*Justin Hembree, LHMPO Director*

Agenda Item # 8

**LAKE HAVASU MPO  
REQUEST FOR ACTION**

**SUBJECT:** Discussion and Possible Action to Approve Fiscal Year 2023 Loan #1

**SUBMITTED BY:** Justin Hembree, MPO Director

**AGENDA TYPE:** Discussion/Action

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**ATTACHMENTS: FY 2023 Loan #1**

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**SUMMARY/BACKGROUND:**

Surface Transportation Block Grant (STBG), and Carbon Reduction Program (CRP) funds are the federal funds allocated to the LHMPO for transportation-related projects every fiscal year. Any funds not directly tied to a project are considered unencumbered or lapsing if not expended (i.e., STBG/CRP funds are considered “use it, or lose it” each fiscal year). Any lapsing funds at the end of the fiscal year risk being swept by ADOT. In order for the LHMPO to carry forward lapsing or unencumbered federal funds, we must “Loan-Out” the funds to ADOT or another COG/MPO in the fiscal year the funds are scheduled to expire. We then receive “Repayment” in the following fiscal year or future fiscal years.

The following is the proposed loan for FY23:

<i>Loan #</i>	<i>Loan Description</i>
23L1	<b>LHMPO LOAN TO ADOT</b> <ul style="list-style-type: none"><li>• <b>FY2023 LOAN OUT</b> of <b>ALL lapsing funds</b> (expected \$1,167,866 in STBG; \$234,805 in CRP; and \$2,930 in PL; all totaling \$1,405,601 - amounts subject to change before June 30, 2023), with <b>REPAYMENT in FY2024</b> (OA –STBG/CRP/PL) – Loan will aid in maintaining a fiscally constraint TIP and is necessary to fund the, Signal Analysis and Modeling Study, and the Signal ITS HURF Exchange Project.</li></ul>

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**ACTION OPTION:**

Motion to approve the FY2023 Loan #1

**OR**

Action as a result of the discussion

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**RECOMMENDATION:**

Motion to approve the FY2023 Loan #1

**Arizona Department of Transportation**  
**COG/MPO Federal-Aid Funding Transfer or Loan Request Form**

Transferring Agency Lake Havasu MPO

Funding Type	Federal Fiscal Year	Amount		Loaned or Transferred To	Project/Purpose	Transfer or Loan?	Repayment Terms/ Schedule (loans only)
		Apportionments	Obligation Authority (OA)				
STBG	FY23	\$1,167,866	\$1,167,866	ADOT	Traffic Signal ITS - LHM22-112	Loan	Loan Out FY23 - Repayment FY24
CRP	FY23	\$234,805.37	\$234,805.37	ADOT	Future CRP Project TBD	Loan	Loan Out FY23 - Repayment FY23
PL	FY23	\$2,929.56	\$2,929.56	ADOT	UPWP FY24/25	Loan	Loan Out FY23 - Repayment FY24
<b>TOTAL</b>		<b>\$1,405,601</b>	<b>\$1,405,601</b>				

**Transferring Agency Approval:**

The undersigned authorizes the transfer of funds identified above.

  
Signature

Justin Hembree

Printed Name

Executive Director

Title

3/31/2023

Date

**Receiving Agency Approval:**

The undersigned approves the receipt of the funds and agrees to the repayment terms, if any, identified above.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**ADOT Acknowledgement or Approval:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**Email completed form to Arizona Department of Transportation Financial Management Services at [mprogramfinance@azdot.gov](mailto:mprogramfinance@azdot.gov). Approved transfer/loan requests must be received by June 15th each year; allow two weeks for approval. Transfers generally will appear on the next ledger, depending on the date of receipt.**

This request will be processed based on the amount of apportionments and obligation authority available to the loaning/transferring agency at the time of receipt, which may be different than the amount shown on the most recent ledger. Loans are to be repaid; transfers will not be repaid.

**Loans of apportionments and/or obligation authority to ADOT** - these loans are not guaranteed; are capped at a total, maximum of \$10 million annually; are limited to greater Arizona STP projects in a TIP which exceed the region's available STP allocation; will be on a first come, first served basis if available; require advance approval. Every effort should be made to reprogram federal funds on projects ready to authorize by June 30th annually or to loan to other regional entities before approaching ADOT about a loan. Loans to ADOT must be approved and executed by March 31st annually.

Loans/transfers from MAG or PAG to Greater Arizona have certain restrictions, depending on the type of funding and population in the area of the project to which the loan is related. Contact Financial Management Services at 602-712-7441 for further information.



## Item #9

### **Scope of work/RFP Traffic Signal Optimization & Enhancement Study**

*Justin Hembree, LHMPO Director*

**LAKE HAVASU MPO  
REQUEST FOR ACTION**

**SUBJECT:**               **Discussion and Possible Action to Approve the Final Scope of Work for the proposed Traffic Signal Analysis & Modeling Study**

**SUBMITTED BY:**     Justin Hembree, MPO Director

**AGENDA TYPE:**     Discussion/Action

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**ATTACHMENTS:**

- Final Scope of Work – Traffic Signal Analysis & Modeling Study
- Tentative schedule for RFP/Procurement

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**SUMMARY/BACKGROUND:**

Through a formal procurement process (RFP) tentatively scheduled for FY 2024, the LHMPO would hire a consultant to develop a plan for the implementation of Adaptive Signal Control Technology (ASCT) or Alternative traffic signal improvements to increase the overall efficiency and operations of the three (3) corridors (McCulloch Blvd, Lake Havasu Ave. & State Route 95). The final plan would include a comprehensive evaluation and inventory of existing infrastructure and detailed analysis/modeling required for future signal improvements; the plan will also identify agency roles and responsibilities related to installing and operating fully-functioning ASCT or alternative systems for each roadway segment and individual traffic signal locations.

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**ACTION OPTION:**

Motion to approve the Final Scope of Work for the Traffic Signal and Analysis Study and for the Lake Havasu MPO to begin the RFP solicitation process.

**OR**

Action as a result of the discussion

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**RECOMMENDATION:**

Motion to approve the the Final Scope of Work for the Traffic Signal and Analysis Study and for the Lake Havasu MPO to begin the RFP solicitation process.

# SCOPE OF WORK

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The Lake Havasu Metropolitan Planning Organization (LHMPO) **Traffic Signal Analysis and Modeling Study** aims to increase the overall efficiency and operations of three (3) corridors (State Route 95, Lake Havasu Ave., and McCulloch Blvd.) for the safe and efficient movement of people, goods, and services within the LHMPO region. This study will focus on the following:

## **Phase I**

- Conduct an inventory of existing traffic signal equipment and infrastructure.
- Conduct traffic counts and data collection
- Perform signal systems analysis, develop/model a new signal timing plan for existing signals and proposed signal improvements, and perform in-field signal retiming necessary to update the existing system.

## **Phase II**

- Develop an implementation plan (including cost estimates & project priority list) for future installation of **Adaptive Signal Control Technology (ASCT) or Alternative Improvements**

The study shall include an evaluation, analysis, need, and benefit of all existing and future signal improvements. Improvements include but are not limited to interim improvements, traffic signal timings, ASCT or alternative related improvements, hardware, servers, communications equipment, detection equipment, switches, system software, management system, and system integration services, as well as identifying agency roles and responsibilities related to the installation and operation of fully-functioning ASCT systems for each roadway segment and at individual traffic signal locations.

Existing signal retiming and planning of adaptive capability or other identified alternative improvements shall be provided for all the traffic signals (**See Appendix A**) within the three (3) corridors which are currently independently operated by the Arizona Department of Transportation (ADOT), and the City of Lake Havasu

The final implementation plan will provide the planning necessary to install, operate, and program adaptable signal timings or alternative recommended improvements for the regional traffic signals for each participating agency.

The scope of work for the **Traffic Signal Analysis & Modeling Study** includes **Consultant** review and incorporation of all applicable information, data, and provisions of previously completed local and regional planning studies within the LHMPO transportation planning boundaries; or Mohave County and any others that may have an impact on the implementation plan that are outside the LHMPO transportation planning boundaries.

This Scope of Work is a rough guide to the anticipated work involved with this planning project. As part of the RFP response, proposers are encouraged to provide innovative approaches and concepts that could be included as part of the final plan and should keep in mind that the technical considerations listed in the following tasks are not exhaustive and other elements that may be needed can be added to the evaluation and final plan to support a successful project. **Proposers are highly encouraged to offer refinements to this Scope of Work in their proposal, highlighting the suggested refinements.**

The LHMPO Traffic Signal Analysis & Modeling Study shall include the following tasks, each of which shall include the development and provision of a summary working paper with its overview, key points, findings, and recommendations incorporated into final reports and plans.

## Task 1 – Project Management & Coordination

The **Consultant** shall provide project management and coordination with LHMPO staff, the Technical Advisory Committee (TAC), and all Maintaining/Government Agencies (i.e., ADOT and Lake Havasu City). The Prime Consultant shall also manage and coordinate closely with team sub-consultants to ensure on-time delivery and responsive performance.

Upon notice to proceed, the **Consultant** shall develop a refined project scope with input from the LHMPO Project Manager (Director) and the TAC.

The **Consultant** shall prepare a GANTT-type (bar chart) project schedule that includes the following:

- Study milestones
- Deliverables
- Technical Advisory Committee (TAC), Stakeholder, LHMPO Executive Board, and Public Outreach meetings
- Key public outreach points

This task is continuous throughout the length of the Project/Plan development period.

### Deliverable:

The **Consultant** shall prepare and provide the TAC with a Project Management Plan, including a refined scope of work and schedule for the LHMPO Traffic Signal Analysis & Modeling Study. In addition, the Project Management Plan will identify proposed dates of TAC meetings and tentative discussion topics.

## Task 2 – LEP Four-Factor Analysis

The **Consultant** will conduct a Limited English Proficiency (LEP) Four Factor Analysis for the project study area. Section Five of the US Department of Transportation guidance on LEP requires a Four Factor Analysis to determine the need for translation services to ensure LEP populations can receive information about and participate in the planning process in the language they best understand.

The Consultant is encouraged to use American Fact Finder (<https://factfinder.census.gov/>) or the most recently available census data to conduct the Analysis. The Analysis will determine if LEP population(s) exist in the study area and ensure public outreach materials are available to the LEP population(s). The process and results of the Analysis will be documented in the final product.

### Deliverable:

- LEP Four-Factor Analysis
- Documentation of process and results in Final Document (Implementation Plan)

## Task 3 – Public Outreach and Involvement

LHMPO is seeking an **innovative public outreach program** that will be highly effective in gaining public input and acceptance of the final implementation plan. The **Consultant** shall involve the use of web-based tools, social media programs, and traditional public meetings. The **Consultant** is encouraged to propose an outreach program that will increase collaboration and provide better information and input to inform the study team enabling an effective system design and successful result.

The **Consultant** shall use social media and innovative internet-based survey and outreach mechanisms (e.g., MetroQuest, 76 engage, etc.) and strategies to strengthen outreach efforts to reach a larger audience.

The **Consultant** shall conduct at least **one (1) public meeting** or public open house (A virtual meeting is acceptable) to provide an overview and explanation of the system alternatives and gather public comments and other helpful input.

The **Consultant** shall be responsible for the following:

- Preparation of all presentation and informational materials for the LHMPO TAC, LHMPO Executive Board meetings, general public meetings, and stakeholder meetings.
- Preparation of materials and cost of advertisements and outreach activities.
- Preparation of contact lists, public notices, and documentation of the public involvement process and input received in the plan.
- Prepare public meeting notifications through news releases and advertising in the local newspaper. News releases and advertising materials will be provided in all languages identified as necessary as a result of the Four Factor Analysis.
- Draft, design, and place black and white ad (size: 4 col. x 10 in.). In addition, advertising materials will be provided in all languages identified as necessary as a result of the Four Factor Analysis.
- Distribute email invitations to compiled stakeholder list.
- Coordinate public meeting dates, times, and set-up.
- Locate, review and procure meeting facilities; ensure Americans with Disabilities Act (ADA) compliance; provide rider of insurance on client's behalf, if needed.
- Prepare basic logistical meeting materials such as directional signage, sign-in sheets, and comment cards.
- Provide meeting supplies.
- Provide sufficient staff to facilitate a meeting.
- Prepare a summary of the meeting and attach written comments.
- Provide fact sheets, PowerPoint presentations, and displays.
- Provide necessary translation services for all public meetings (with 48 hours advance notice) for any languages identified as necessary as part of the Four Factor Analysis.

The **Consultant** shall also present a Draft Plan and the Final Plan to the LHMPO TAC and LHMPO Executive Board.

### Deliverable:

The **Consultant** shall prepare and provide the following:

- Public Involvement Plan
- 3 Stakeholder/TAC Meetings (milestones)
- Presentations to Executive Board and to Lake Havasu City Council (if necessary)
- Public Open House/Virtual Public Meeting
- Public Survey (if necessary)

# Phase I

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## Task 4 – Inventory of Existing Equipment and System Infrastructure Assessment

The **Consultant** shall collect, compile, and evaluate information on the current traffic signal systems and existing conditions.

The **Consultant** shall review and document the type, age, condition, and capability of the existing equipment at each intersection along all three corridors (See **Appendix A** for a list of all intersections & corridors).

This task will include but not limited to:

- Review of existing traffic signal plans (to be provided by Maintaining Agency)
- Review of existing signal communications plans (to be provided by Maintaining Agency)
- Review of existing Street name signs, including type (i.e., mast-arm or pole mounted) and illumination type
- Field investigation of existing traffic signal infrastructure, including but not limited to:
  - Controller hardware and firmware, including firmware version numbers
  - Vehicle detection type, including manufacturer name and model
  - Battery backup system type, including manufacturer name, model, and battery expiration dates
  - Signal cabinet type
  - Number and size of vehicle signal heads, including phase and direction
  - Number of pedestrian signal heads, including type, phase, and direction
  - Number of pedestrian push buttons, including type, phase, and direction
  - Safety lights, including type and wattage
  - Photos of the above equipment
- Field investigation of existing intersection signal communications infrastructure, including but not limited to:
  - Communications type and manufacturer (i.e., copper signal interconnect, fiber optic cable, wireless connection, etc.)
    - Include the number of Signal Interconnect (SIC) pairs or Single Mode Fiber Optics (SMFO) strands
  - Fiber distribution unit manufacturer and model, including the number of panels and connector type
  - Ethernet switch manufacturer and model
  - SIC landing type
  - Location of any existing SIC and fiber optic splice kits
  - Wireless connection manufacturer and model
  - Intersection connectivity
  - Photos of the above equipment

The **Consultant** shall provide a comprehensive GIS Database and Inventory Report (Excel and PDF formats) to the Project Manager and Maintaining Agencies.

### **Deliverable:**

The **Consultant** shall provide the existing traffic signal and signal communications infrastructure in a GIS database compatible with Lake Havasu City's current GIS database. The database should be formatted to provide the above-listed information per intersection. Photos should be numbered per the City's traffic signal numbering system and delivered in an electronic format. Additionally, an excel spreadsheet (inventory report), PDF maps, and intersection sketches of lanes & signal configurations showing the various types of communications infrastructure and connectivity shall be provided.

## **Task 5 – Traffic Counts & Data Collection**

The **Consultant** shall collect Traffic, Bicycle & Pedestrian Count Data on each approach to every intersection along all three (3) corridors. In conducting the counts, the **Consultant** shall utilize an automatic traffic counter which produces a written record of the traffic volumes and the time of day.

The count data shall be presented in a form showing 15-minute interval volumes and hourly summaries. The traffic count periods shall not include a holiday unless otherwise directed by the Project Manager.

The **Consultant** may obtain traffic count data from the Maintaining Agencies and/or the Lake Havasu MPO if the data is available and less than 18 months old from the time this "Traffic Signal Analysis & Modeling Study" takes place. If traffic data is not current, the **Consultant** shall be responsible for collecting new data for existing signal retiming purposes and to identify the need for future signal improvements.

### **Deliverable:**

The **Consultant** shall collect and provide the following data at each leg of each intersection:

- Turning Movement Counts
- Bi-Directional Speed & Classification Counts
- Queue Study – One (1) minute increments
- Gap Study (Left Turn Phasing and Pedestrian)

The **Consultant** shall collect and provide data for the following durations:

- 4-Hour – with Hourly Summaries
- 6-Hour – with Hourly Summaries
- 8-Hour – with Hourly Summaries
- 24-Hour – with Hourly Summaries
- 7-Day Continuous Count – with Daily & Hourly Summaries.

The **Consultant** shall collect and provide the following traffic accident/crash data at each leg of each intersection:

- 5-year Fatality Accident Volumes & Rates
- 5-year Serious Injury Accident Volumes & Rates
- 5-year Pedestrian & Bicycle (non-motorized) Accident Volumes & Rates

In addition to Excel and/or PDF formatted reports, and coordination with other tasks, the **Consultant** shall provide traffic counts and other data collected in a GIS database compatible with Lake Havasu City's existing GIS database. The database should be formatted such that the above-listed information will be provided per intersection

**Note:** As of 12/1/2022, the Lake Havasu MPO has 24-Hour Movement, Speed, & Classification Counts; and Queue and Gap Studies for thirteen (13) intersections along Lake Havasu Ave. and State Route 95 in hand and available for use in this study.

## Task 6 – Signal Retiming & Optimization

**Note:** IMSA Level II certification & ADOT certification is required to complete this task.

The **Maintaining Agency** and the **Consultant** are ultimately responsible for approving and implementing all signal timing changes and improvements; the Lake Havasu MPO will not be responsible or liable for approving or implementing signal timing changes, signal modeling, or signal infrastructure improvements.

The **Consultant** shall determine the optimum system timing pattern(s) and signal coordination for the existing & future signal infrastructure and communications equipment for the optimum cycle length during different times of the day/week. When a system analysis (modeling) is performed, the necessary settings to be developed will include but not limited to the following:

- Cycle Length
- Splits
- Offsets
- Force-offs
- Permissives
- Time-of-Day Plan
- Day-of-Week Plan

These parameters will be developed for the following timing plan periods:

- Day Plan: Inbound & Outbound Peak Hour(s) and Off-Peak Hour(s)
- Week Plan: Day plan to be implemented for each day of the week.

For the purpose of this task, the following definitions apply:

- A traffic control timing pattern is a set of cycle length(s), splits, and offsets for a section.
- A section is a portion of a traffic control system that can be controlled by a single set of timing parameters.

An analysis shall consist of at least the following steps:

1. Analyze and design local intersection timings for each intersection. Local timings to include all clearance intervals (yellow, all-red, and pedestrian clearance intervals, etc.).
2. Analyze and design coordinated intersection (system) timings with similar or compatible design tools/software or a format approved by the Maintaining Agency with Existing Phasing.

The **Consultant, in coordination with the Maintaining Agency**, is responsible for selecting all input values required for the analysis.



The **Consultant** must use their own computer for all analyses to be performed under this study (the software or format used must be approved by the Maintaining Agency). The **Consultant** shall submit a USB thumb drive of all input/output timing development runs and data files (i.e., initial and final runs), along with any link/node diagrams to each Maintaining Agency. The format of the timing charts will be approved by Maintaining Agency.

All traffic count data required for this study will either be provided by or obtained by the **Consultant** under additional tasks (i.e., Task 4).

The **Consultant** will obtain existing controller timings from the Maintaining Agency.

### **Deliverable:**

The **Consultant** shall provide the Project Manager and Maintaining Agency two copies of the documentation for each of the timing patterns in an acceptable format. The report shall contain, but not be limited to, the following information:

1. Executive Summary
2. Optimum controller and coordination timing that can be implemented on existing hardware.
3. Master Clock Chart (Hardwire, TBC, UTCS, CLS)
4. Link/node diagrams
5. Data files on a USB thumb drive(s)
6. Corridor analysis and documentation.

After the Maintaining Agency accepts the initial timings and patterns, this task includes the **Consultant** or **Sub-Consultant** entering the intersection, system timings into the controller units, coordination units, and master units by an **IMSA - Level II signal technician**.

The **Consultant** shall notify the Maintaining Agency prior to implementation and request their authorization during the implementation. *Any timing patterns or changes recommended along SR95 **MUST** be approved by ADOT and made by a technician certified to work on ADOT's signals/system (alternatively, Alternatively, ADOT may choose to implement changes with their own in-house technicians).*

The **Consultant** shall also perform fine-tuning of implemented timing(s) for each corridor based on field observation of the traffic operation during all developed peak hour patterns. The traffic engineer shall observe the operation of the corridor for each timing pattern.

*The traffic engineer and signal technician shall be available to investigate and fine-tune any adjustments for a period of 60-90 days after the submittal of the final report and final implemented timing changes.*

Should an existing controller, coordination unit, or master unit be inoperative or additional hardware or cabinet modifications be required at an intersection to maintain current operations, the **Consultant** will notify the Maintaining Agency verbally within the same day. Document in the report the nature, extent, and probable solution(s) to the problem(s) within one week.

As part of additional tasks of this study, the **Consultant** shall document whether signal coordination is possible with the existing signal infrastructure and communications equipment. If additional hardware, software, or communications equipment is needed to coordinate signals, the **Consultant** shall document the recommended intersection/corridor improvements per instructions under Phase II, Tasks 7 & 8 of this study.

The **Consultant** shall provide the Project Manager and Maintaining Agency each two (2) copies of the final documentation for each of the timing patterns in an acceptable format. The report shall contain, but not be limited to, the following information:

- Final Implemented Timings
- Day Plans
- Week Plan

At the completion of the analysis, the **Consultant** shall submit to the Project Manager and Maintaining Agency two (2) copies of a report (in an acceptable format) containing the following information:

1. Analysis/Study Summary
2. Final Intersection and System Timings
3. A table summarizing intersection delay

*A Professional Engineer shall sign, seal, and date all Final Signal Analyses, Timings, & Reports.*

In coordination with other tasks, the **Consultant** shall provide the signal timing plans and reports in a GIS database compatible with Lake Havasu City's existing GIS database. This can be as simple as a link within GIS to the plans and reports. The database should be formatted such that the above-listed information will be provided per intersection

# Phase II – ASCT / Alternatives Implementation Plan

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## Task 7 – ASCT/Alternative Improvement Analysis

This task includes the identification of adaptive or alternative traffic signal upgrade needs and signal communications gaps and opportunities.

In coordination with analyzing existing traffic signal systems infrastructure (Task 4-6), the **Consultant** shall perform an adaptive/alternative need and benefit analysis.

The improvement analysis shall evaluate the type and level of improvements required for each intersection; this may include, but is not limited to, the need and effectiveness of adaptive/alternative technology – coordination, detection, timings, system management, communications, etc.

Each traffic signal location analysis will identify the resulting benefit of the recommended level of improvements and the impact on travel time, congestion mitigation, overall efficiency of the location, efficiency of the corridor, and cost versus overall benefit.

Several key traffic signal priorities that should be used to help guide the improvement analysis include implementing strategies to reduce collisions where patterns are identified, replacing out-of-date traffic signal controllers, updating signal heads, installing pedestrian signal heads, and replacing any damaged/failed equipment. Other mid- and long-term priorities include updating traffic signal detection systems with camera, radar, or hybrid detection systems, replacing pedestrian push buttons with accessible pedestrian signal (APS) systems, reconstructing aging traffic signal infrastructure such as poles and mast arms, replacing aging traffic signal cabinets, and installing battery backup systems.

Key signal communications priorities include closing gaps in communications infrastructure and connecting traffic signal equipment to the existing and/or recommended communications infrastructure. In addition, mid and long-term signal communications priorities may include replacing and adding fiber optic cables where signal interconnect currently exists, connecting various traffic signal components to the network for remote monitoring, and establishing communications to remote traffic signal locations.

The **Consultant** shall perform a need and benefit analysis that includes, but is not limited to, the following:

### I. System Coordination & Management

Determination of the location and operations of the required ASCT system operations software, potentially either through a partnership or individually by each agency, shall be identified in the final plan as part of the proposed ASCT and other identified solutions. The analysis shall identify and recommend System Coordination & Management solutions to synchronize multiple intersections and enhance overall operations.

**Note:** Each participating agency has existing methods to manage the traffic signals included in this project. Therefore, the current methods shall remain in place if desired. Each agency shall retain the ability to control the signals at their discretion and whether to enable or disable ASCT or other recommended improvements for any reason within their jurisdiction; however, all recommendations shall be made with agency-to-agency coordination in mind.

## **2. Communications**

Any necessary additional system requirements, expansion, or modifications to the existing system shall be identified in the final plan for each corridor by individual traffic signal location and affected controlling agency. Proposed ASCT systems or other identified solutions may utilize the existing communications networks as applicable for each agency if they currently exist.

## **3. Travel Time and Delay**

An evaluation of current and projected travel times, delays, level of service, and frequency of vehicles stopping at red lights shall be identified in the final plan for each corridor. Performance targets for future evaluation of the recommended system improvements shall be developed for review and analysis on a short, medium, and long-term timeframe

## **4. Safety Performance**

The traffic signal improvement analysis shall also include reviewing signalized intersection collision/crash data (Task 5) for the past five years and recommendations to improve safety at each intersection.

## **5. Detection**

An evaluation and development of a plan for each roadway segment and the individual traffic signal locations shall be provided for any modification or additional detection equipment needs and whether any of the existing detection schemes and equipment will work with a proposed ASCT system "as-is" or alternative improvement options, and whether certain additional capabilities or operational advantages can be gained from modification to existing, or addition of detection. The final plan shall clearly identify any system capability limitations, if any, as a consequence of using existing detection and determine whether additional or upgraded detection would be an advantage and why.

## **6. Agency Technical Capacity**

An analysis of local/state public agency technical abilities shall be provided and identify any training needs or technical assistance services that may be required in order to implement the final plan and recommended ASCT/Alternative improvements.

## 7. Specifications and Technical Requirements

Prepare detailed specifications and technical requirements enabling procurement of ASCT hardware, software, network, and communications components as well as installation and training services necessary for full and complete ASCT implementation. The **Consultant** shall provide:

- Mandatory Requirements Defining Overarching System Performance Goals. These include but are not limited to:
  - ASCT shall alter the adaptive operation to achieve required objectives in user-specified conditions. For example, provide smooth flow along coordinated routes, manage queues, and optimize operation by minimizing phase failures.
  - ASCT shall alter the state of signal controllers, preventing queues from exceeding the storage capacity.
  - ASCT shall provide coordination along route/s
  - ASCT shall calculate a cycle length for each cycle based on its optimization objectives.
  - ASCT shall calculate optimum phase lengths, based on current measured traffic conditions.
  - When a large change in traffic demand is detected, the ASCT shall respond more quickly than normal operation, subject to user-specified limits.
  - ASCT shall integrate to user-specified legacy equipment.
- Desired ASCT operating requirements.
  - Cycle, phasing, and timing.
  - Adaptive versus nonadaptive operation.
  - Operation as per user-defined conditions.
  - Local and remote access.
  - Monitoring.
  - Data collection.
  - Access, administration, security.
- Maintenance, Support, and Training
- Good and Services for Implementation

## 8. Cost estimate(s)

Each proposed ASCT or alternative system improvement shall have a cost estimate provided and be identified on a per traffic signal location and totaled for each of the corridors for potential phased implementation indicating required hardware, servers, communications equipment, detection equipment, switches, system software, signal timings, system integration services, training, etc.

The **Consultant** shall provide planning-level budgetary cost estimates for each of the ACST/alternative approaches. The budgetary cost estimates shall include, but not limited to:

- Operating costs
- Capital costs
- Improvement costs – Per location and as a systemic project, must include labor, mobilization, subsurface utility work (trenching/potholing/fiber optic install), and inflation pricing.
- Preventative maintenance costs
- Reasonable and appropriate administrative oversight costs for the sponsoring agency and cosponsor agencies
- All other required costs to implement, operate and maintain the proposed system.

### **Deliverable:**

The findings and conclusions of the ASCT/Alternative Improvement Analysis completed for this task shall be included in the final implementation plan.

ASCT or alternative related improvement recommendations (i.e., hardware, servers, communications equipment, detection equipment, switches, system software, management systems, battery systems, etc.) shall include detailed descriptions/specifications of the make, model, and manufacture.

All signal timing/modeling/design/analysis performed under previous tasks shall be re-evaluated to ensure timing plans are programmable and relevant to the ASCT/Alternative recommendations made in the final implementation plan.

In coordination with deliverables of other tasks, the **Consultant** shall provide the above-listed information in a GIS database compatible with Lake Havasu City's existing GIS database. The database should be formatted to provide the above-listed information per intersection.

## Task 8 – Implementation Plan & Project Prioritization

The **Consultant** shall develop an implementation plan that identifies all the necessary steps to plan, design, equip, install, and maintain needed ASCT/Alternative infrastructure, carry out the plan, continually evaluate, and provide for future extension of services. Information provided shall be in non-technical language whenever possible, and the use of tables, graphs, and pictures in lieu of text is highly encouraged.

This task requires developing an implementation strategy that includes cost, scheduling, timing/modeling, and funding details. The strategy should outline short-term, mid-term, and long-term projects and rank and phase the recommendations. Cost estimates should be provided for each project identified, and potential matching and major funding sources (i.e., MPO funds, City general funds, state and federal grants) should be identified. Based on the information available, a financial plan shall be developed.

The **Consultant** will prepare a draft final implementation plan based on the results of the previous tasks and considerations, balancing the need, cost, and priority with available and anticipated funding. The draft plan will consist of a long-range plan as well as an implementation program that identifies the schedule and responsibilities for implementing the proposed improvements/projects.

### Deliverables:

The **Consultant** shall provide a detailed final Implementation Plan with fundable, priority projects detailed by short-term (1-2 years), mid-term (3-5 years), and long-term (5-10 years) time ranges, including identification of high impact, low-cost projects that the City can immediately accomplish. The Plan should also detail a non-constrained implementation plan for the next 10-15 years following the high-priority projects.

The **Consultant** shall provide a draft final Implementation Plan and Executive Summary for review by the LHMPO Director, LHMPO TAC, and LHMPO Executive Board. In addition, a meeting will be held with the LHMPO TAC and Executive Board to receive input on the draft plan. Finally, the **Consultant** shall incorporate any approved changes by the TAC and Executive Board into the final plan.

**The Consultant shall provide six (6) printed and bound hard copies of the final Implementation Plan, a digital copy, and original program/data files on a USB drive.**

All materials and data used for this study are the property of the Lake Havasu Metropolitan Planning Organization (LHMPO)

# **APPENDIX A**

List of Corridors, Intersections, and Maps



## **Corridor List**

### **1. State Route 95**

- Limits: Industrial Blvd. to Mulberry Ave.

### **2. Lake Havasu Avenue**

- Limits: Industrial Blvd. to Mulberry Ave.

### **3. McCulloch Boulevard (North)**

- Limits: Lake Havasu Ave. to Acoma Blvd (South).

## **Intersection List**

### **State Route 95 at:**

1. Mulberry Ave.
2. Smoketree Ave.
3. Swanson Ave.
4. Mesquite Ave.
5. Palo Verde Blvd.
6. Industrial Blvd.

### **Lake Havasu Avenue at:**

1. Mulberry Ave.
2. Smoketree Ave.
3. Swanson Ave.
4. McCulloch Blvd.
5. Mesquite Ave.
6. Palo Verde Blvd.
7. Industrial Blvd.

### **McCulloch Boulevard (North) at:**

1. Capri Blvd.
2. Riveria Blvd.
3. Smoketree Ave.
4. Acoma Blvd (South).

**\*Seventeen (17) intersections in total**

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# Item #10

## **Rural Transportation Advocacy Council (RTAC) Report *(Information Only)***

*Kevin Adam, RTAC Executive Director*

# Item #11

## **ADOT District Report** ***(Information Only)***

*Todd Steinberger, ADOT NW District Engineer*



# Item #12

## ***Discussion and Update of the Arizona State Transportation Board Activities.***

*Gary Knight, District Representative*