

**Guidance for Administration
of the Orange County
Master Plan of Arterial Highways**



Effective Date: August 14, 2017
Effective Date of MPAH Map: July 14, 2017

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INTRODUCTION¹

The Master Plan of Arterial Highways (MPAH) was established in 1956 to ensure that a regional arterial highway network would be planned, developed, and preserved, in order to supplement the County's developing freeway system. This vision has withstood the test of time, and is consistent with the U.S. Department of Transportation's view today "that multi-agency collaboration is a critical element in developing 21st century solutions for 21st century transportation challenges, such as reducing traffic congestion."²

The MPAH has often been looked to as a model of coordinated planning, requiring the cities of Orange County (cities) and the County of Orange (County) to work cooperatively in implementing a regional transportation system. The MPAH map is a critical element of overall transportation planning and operations in Orange County, because it defines a countywide circulation system in response to existing and planned land uses. As the administrator of the MPAH, the Orange County Transportation Authority (OCTA) is responsible for maintaining the integrity of the MPAH system through its coordination with cities and the County and determinations of cities' and County consistency with the MPAH map.³ In order to be eligible for all Measure M2 Net Revenues as well as programs—including the Orange County Comprehensive Transportation Funding Program (CTFP), a jurisdictions' General Plan circulation element must be consistent with the MPAH. For these purposes, "consistency" means that local general plans maintain an equivalent number of minimum through lanes on each arterial highway shown on the MPAH. OCTA, however, does not have land use authority. A local agency may freely determine whether to maintain consistency with the MPAH.

Because OCTA now administers the MPAH, it is no longer a part of the County's General Plan document. However, in order to provide a mechanism to communicate MPAH policies and procedures, this *Guidance for the Administration of the Master Plan of Arterial Highways (Guidance)* has been updated from its original 1995 version, to assist OCTA, cities, and the County in maintaining the MPAH as a vital component of transportation planning in Orange County. Much of the text used in this updated version of the *Guidance* is based on or reflects previous planning documents which have supported OCTA administration of the MPAH since the early 1990s.⁴

¹ This Guidance Update becomes effective upon adoption by the Board. In addition to applying prospectively, this Guidance Update also applies to any proposed MPAH amendment pending at the time the Guidance Update was adopted.

² FHWA Executive Director Jeffrey Paniati, MOVING THE AMERICAN ECONOMY, February 28, 2008.

³ OCTA assumed MPAH administrative responsibility in 1995, through a transfer agreement with the County of Orange. The MPAH was formerly a part of the County of Orange Advance Planning Program (General Plan) Transportation Element, with administration by the Orange County Environmental Management Agency Transportation Planning Division. The County had been responsible for the MPAH since its 1956 inception.

⁴ County of Orange Transportation Element (April, 1994); Measure M1 Growth Management Program Preparation Manual (February, 1993); MPAH Strategic Plan (2002); Renewed Measure M (M2) Transportation Ordinance and Investment Plan (July, 2006); Congestion Management Program (December 2009); OCTA Comprehensive Transportation Funding Program 2010 Guidelines (February, 2011).

1.0 OVERVIEW

Measure M2 Ordinance 3, dated July 24, 2006, defines the MPAH as a:

“Countywide transportation plan administered by the Authority defining the ultimate number of through lanes of arterial streets, and designating the traffic signal synchronization street routes in Orange County.”

Further, the Orange County MPAH map establishes a system of countywide arterial highways, and is a key factor in defining Orange County's long-range transportation planning and policy objectives. The MPAH map is depicted in **Appendix 1**. OCTA's role as the administrator of the MPAH is to coordinate with cities and the County to develop a consensus-based, consistent, and inter-community arterial highway system that effectively balances regional mobility and local access for existing and future land uses.

1.1 BACKGROUND

The MPAH was first adopted by the County in 1956. The MPAH became the cornerstone of the first County Circulation Element initially adopted in 1974. Since that time, the MPAH has been amended on a regular basis, generally in response to land use policy changes within both incorporated and unincorporated areas of the County. These policy changes have routinely been reviewed for impacts on the vehicular-serving arterial highway system in order to maintain a balance between land use and transportation plans, and to achieve the MPAH Goals and Policies documented in Chapter 2.0.

Since 1956 the MPAH map has depicted a network of major thoroughfares comprising freeways⁵, transportation corridors, and arterial highway classifications. Arterial highway classifications have historically included Principal, Major, Primary, Secondary, Collector, and Smart Street facilities.

In order to be more reflective of current planning realities, this *Guidance* update expands the classification system with additional arterial highway classifications and special designations available for the MPAH, if supported by appropriate traffic documentation, and approved by the OCTA Board of Directors (Board). These expanded classifications/special designations include Divided Collectors, Right of Way Reserve, Asymmetric Lanes, Landmark Streets, and Multimodal Transportation Arterials.

The MPAH network also plays a major role in regional travel by connecting to and complementing the County's freeways and multi-modal transportation corridors. It also provides travel time incentives through the traffic signal synchronization program, to retain through traffic on the MPAH system and discourage cut-through traffic onto the local street network. The Principal, Major, Primary, and Smart Street arterial classifications

⁵ **Note:** State/Interstate freeway facilities are depicted on the MPAH map for reference purposes.

predominantly serve long distance through travel, and typically have an automobile emphasis. These arterials in some cases may be supplemented in “person-trip” capacity by inclusion of High Frequency Transit service and/or by Master Plan of Bikeway facilities, where multimodal emphases are appropriate.

Secondary, Divided Collector, and Collector arterial highways function as collectors funneling traffic from local streets to Primary, Major, and Principal arterials. These arterials in some cases may be supplemented in “person-trip” capacity, by Master Plan of Bikeway facilities, where appropriate.

The overall network of thoroughfares is generally designed to accommodate existing and projected traffic, with potential consideration for alternative modes as appropriate. The MPAH classifications are a statement of policy intended to reserve adequate rights of way for future improvements. Recommended design guidelines and criteria for each arterial classification are described in Chapter 3.0.

1.2 PURPOSE

The MPAH depicts a countywide roadway network intended to ensure coordinated transportation system development among local jurisdictions in Orange County. The main purpose of the MPAH is to describe an arterial highway system that effectively serves existing and adopted future land uses in both incorporated and unincorporated areas of Orange County. Extensive coordination with the transportation and land use planning and implementation processes conducted by the cities, the County, and adjacent jurisdictions is essential for the MPAH to provide its intended service for goods movement and for travelers across all modes. Given existing right of way limitations, the MPAH also encourages recognition of operations techniques, primarily signal synchronization, within the MPAH planning process. Recognition of this component of the arterial highway network is to emphasize that operational strategies work best as part of a systematic, region wide application of programs and projects aimed at improving system wide efficiency. The Traffic Light Signal Synchronization Program (TLSSP) network is included in **Appendix 2**⁶.

1.3 MPAH CONSISTENCY CONCEPT

As the administrator of the MPAH, OCTA is responsible for maintaining the integrity of the MPAH map through coordination with cities and the County, including determination of cities and County consistency with the MPAH map. Consistency with the MPAH is essential to the integrity of a functional regional highway network. It ensures that cities and the County implement their share of the regional transportation network using similar

⁶ **Note:** The TLSSP network is a component of the MPAH. However, updates to the TLSSP Master Plan are administered through periodic updates to the TLSSP Master Plan and not as part of MPAH amendment processes.

standards and assumptions. OCTA, however, does not have land use authority. Local jurisdictions are free to determine that they do not wish to maintain consistency with the MPAH. Consistency with the MPAH is a prerequisite, however, for local agencies to be eligible for all Measure M2 Net Revenues as well as programs—including the Orange County CTFP.

To aid in establishing consistency among plans, all jurisdictions are encouraged to use common land use assumptions and travel demand projections. OCTA facilitates the use of these common assumptions through administration of the Orange County Transportation Analysis Model (OCTAM)⁷.

Streets that serve predominantly as local collectors are generally not shown on the MPAH because they do not contribute to regional circulation. Such roads, however, may be locally significant and, therefore, may be reflected on a local agency's Circulation Element. Local agency plans reflecting such arterials are not considered inconsistent with the MPAH for purposes of Measure M2 Net Revenues as well as programs—including the CTFP eligibility because a local agency's General Plan is expected to include more detail about local needs. However, those collector arterials that are currently shown on the MPAH represent vital components of the circulation system. Local agency plans are expected to include these roadways as well as the other roadway classifications included on the MPAH in order to be eligible for Measure M2 Net Revenues as well as programs—including the CTFP.

The cities' and County Circulation Elements are reviewed for consistency every two years. The goal is to encourage compatible networks that demonstrate adequate carrying capacity of the circulation system, and to detect possible inconsistencies resulting from General Plan amendments. The MPAH amendment process is defined in Chapter 4.0. The consistency review process is described in Chapter 5.0⁸.

⁷ OCTAM, like the MPAH, was previously maintained by the County of Orange.

⁸ It is important to note that the MPAH represents a capacity minimum for countywide regional mobility. As such, jurisdictions, on their General Plan circulation elements, may depict facilities with higher capacity classifications than those identified on the MPAH.

2.0 GOALS AND POLICIES

The following goals and policies are intended to serve as recommended countywide guidelines and to provide direction to local agencies that opt to implement the MPAH. A goal is a general expression of countywide values and sets the long range vision for the relationship among transportation and land use. A policy is a specific statement that facilitates decision making regarding issues, process, and constraints.

1. Goal: Provide a Countywide Circulation (Arterial Highway) System to Accommodate Regional Travel Demand

Policies:

- 1.1 OCTA will review the circulation plans of the cities and the County bi-annually to determine consistency with the MPAH in order to determine eligibility for Measure M2 Net Revenues as well as programs—including the CTFP.
- 1.2 OCTA will coordinate with various regional agencies (i.e., Caltrans (State), the Southern California Association of Governments (SCAG), the Transportation Corridor Agencies, etc.) on various studies relating to freeway, toll way and transportation corridor planning, construction, and improvement in order to facilitate the planning and implementation of an integrated regional circulation system.
- 1.3 OCTA will coordinate planning of the arterial highway system cooperatively with cities, the County, SCAG, neighboring counties and neighboring cities in adjacent counties to works towards the consistency of regional transportation networks.
- 1.4 OCTA will coordinate with local agencies on their respective safety efforts, to encourage a balanced approach to providing for regional travel demand and addressing the needs of all users of the road.

2. Goal: Provide an Arterial Highway System that Supports Land Use Policies of the County and Cities

Policies:

- 2.1 The MPAH will encourage a coordinated arterial highway system that is in balance with the General Plan Land Use Elements of the cities and County.
- 2.2 The MPAH will encourage an arterial highway system designed to serve as part of a balanced transportation system (auto, rail, transit, bus, truck, bicycle, pedestrian, etc.).
- 2.3 OCTA will encourage local jurisdictions to consider and evaluate all mobility needs when requesting modifications to the MPAH⁹.

⁹ Policy approved OCTA Board on April 11, 2011.

- 2.4 OCTA will encourage and assist all local jurisdictions to adopt comprehensive transportation improvements, phasing and financing plans, in order to assist in countywide implementation of the MPAH.
- 2.5 OCTA will work with the cities and County through the Orange County CTFP to implement the MPAH and foster interagency cooperation toward anticipating and effectively meeting the regional transportation needs of Orange County.
- 2.6 OCTA will monitor local agencies to ensure that the arterial highway system is implemented in a manner that supports the implementation of adopted overall land use policies and that is consistent with financing capabilities.
- 2.7 OCTA prefers the use of analytical methods, in conformance with the Congestion Management Program (CMP), to aid in transportation planning and impact evaluation and encourage the development and utilization of sub-area models to address detailed transportation issues.

For amendments contemplating Complete Streets implementation, multi-modal analysis of peak period person-trip capacity can potentially be accommodated as an acceptable form of analysis, so long as it:

- is consistent with the latest peer-reviewed and professionally accepted state of practice;
 - includes ongoing commitment and performance measurement to enable effective ongoing utilization of Complete Streets capacity enhancements such as transit and bike facilities;
 - is approved by OCTA prior to conducting MPAH related analyses; and satisfies OCTA's need for technical justification in support of an MPAH amendment.
- 2.8 OCTA will use the most recently adopted Orange County Projections (OCP) forecasts for projections of future year population, housing, and employment.
 - 2.9 OCTA will use the Orange County Transportation Analysis Model (OCTAM) forecasts as the regional traffic forecasts for vehicle and transit ridership along the MPAH, and require local agencies to use OCTAM as a basis for data required in local and sub-area studies conducted by local agencies. The OCTAM must be consistent with SCAG's regional model as required by the CMP.
 - 2.10 OCTA will provide guidance for the development of subarea traffic models used by local jurisdictions to determine the quantitative impacts of land use decisions on the circulation system, so as to be consistent with the OCTAM.
 - 2.11 OCTA will establish roadway classification definitions based on the number of through lanes.

2.12 OCTA will review and potentially revise this Guidance document upon major updates to the Highway Capacity Manual (HCM), as necessary.

2.13 OCTA will adhere to the recommended processes identified in these Guidelines. However, the OCTA Board has discretion to amend, modify, and/or waive components of these Guidelines, as may be determined by the OCTA Board to be appropriate to address unique concerns¹⁰.

¹⁰ These concerns may include, without limitation, documentation of impasse with respect to achieving consensus on a proposed amendment, documentation of severe environmental impacts, regional mobility concerns, or significant and sustained public opposition.

3.0 ROADWAY CLASSIFICATIONS

Arterial highways are shown on the MPAH map in the following two forms:

- established alignments depicted by solid lines on the map, including existing highways where the centerline is the precise centerline, and future highways where the Board of Supervisors, a City Council, or the subdivision process has established a precise alignment; and
- conceptually proposed alignments, defined by intermittent lines indicating future facilities whose precise alignment has not yet been determined.

Arterial highways have been divided into eight (8) classifications to address travel demand in terms of number of through lanes, and to aid in setting consistent design standards countywide for various highway types.

Planning criteria used for determining arterial highway classifications are provided in **Appendix 3**. Consistency in the number of through lanes is the key objective of the MPAH to ensure compatibility across jurisdictional boundaries. A matrix showing the MPAH's nomenclature for arterial highways along with local jurisdictional functionally equivalent designations (as compared to MPAH classifications) in cities is contained in **Appendix 4**.

The basic cross sections for arterial highways are illustrated in **Appendix 5** and are referenced below under each classification. These cross sections are based on the arterial highway design standards for MPAH roadways contained in the County of Orange Highway Design Manual. In addition, special intersection approaches for Principal, Major, Primary, and Secondary arterials have been identified to help address congestion problems. These cross sections are provided as a guideline for arterial highway right-of-way requirements.

The "Maximum Feasible Intersection" (MFI) is a guideline for intersection enhancement that is compatible with vehicle travel demand requirements and operational capabilities of the highway system. Additional right of way beyond the typical sections shown in **Appendix 5** may be required to implement the MFI. In local agency review and approval of subdivisions, the objective shall be to reserve adequate right of way to permit future implementation of the MFI as warranted. The MFI for each classification is defined in the classification description.

Arterial Classifications

The typical sections depicted on Charts I-1 through I-5 in **Appendix 5** are simplified diagrams based upon adopted Orange County Standard Plans and are provided as a general guideline for arterial highway right-of-way requirements¹¹. Additional right of way beyond the typical sections may be required for any classification when an arterial highway coincides with an adopted route for an additional public facility (e.g., special transit facilities, bikeways, wider landscaped parkways, wider sidewalks, or riding and hiking trails), or a scenic highway.

3.1 TRANSPORTATION CORRIDOR

A Transportation Corridor is a limited-access multi-modal facility of six to 10 lanes, depending on projected traffic volumes, and a median of sufficient width to accommodate future modal options such as fixed rail or high occupancy vehicles. Three designated corridors are the Foothill Corridor (SR-241), the San Joaquin Hills Corridors (SR-73), and the Eastern Corridor (SR-231/SR-261). These facilities were approved as Federal toll road pilot projects in the Surface Transportation and Uniform Relocation Assistance Act passed by Congress in 1987. Additionally, these corridors were authorized by State legislation as the State's first toll roads and will remain as pilot "toll" facilities until the bonding is paid. These corridors are operated by demand management to ensure efficient levels of operation, and tolls are the implementation mechanism to maintain free flow.



3.2 PRINCIPAL ARTERIAL

A Principal arterial is an eight-lane divided (raised or painted) roadway, with a typical right of way width of 144 feet (Chart 1-1 in **Appendix 5**). A Principal arterial may be designed with emphasis for automobile, goods movement, and/or transit, and is designed to accommodate approximately 60,000 vehicle trips per day at Level of Service 'C'. Major arterials carry a large volume of regional through traffic not handled by the freeway system.

The standard MFI for a Principal arterial may consist of four through lanes, two left-turn lanes and a dedicated right-turn lane. An optional free right-right-turn lane may be allowed if warranted by traffic demand. Alternative geometries, such as a grade separation, median pedestrian refuge areas, transit signal priority and/or bus queue jumps along segments with High Frequency Transit Routes, or other special treatment, may be

¹¹ **Note:** City right of way design standards may vary.

considered for approval by OCTA if they are determined to be operationally equivalent to the standard MFI.

3.3 MAJOR ARTERIAL

A Major arterial highway is a six-lane divided (raised or painted) roadway, with a typical right of way width of 120 feet (Chart 1-2 in **Appendix 5**). A Major arterial may be designed with emphasis for automobile, goods movement, and/or transit, and is designed to accommodate approximately 45,000 vehicle trips per day at Level of Service 'C'. Major arterials carry a large volume of regional through traffic not handled by the freeway system.

The standard MFI for a Major arterial may consist of three through lanes, two left turn lanes and a dedicated right turn lane. An optional free right-turn lane may be allowed if warranted by traffic demand. Alternative geometries such as a grade separation, median pedestrian refuge areas, transit signal priority and/or bus queue jumps along segments with High Frequency Transit Routes, or other special treatment may be considered for approval by OCTA if they are determined to be operationally equivalent to the standard MFI.

3.4 PRIMARY ARTERIAL

A Primary arterial highway is a four-lane divided (raised or painted median) roadway, with a typical right of way width of 100 feet (Chart 1-3 in **Appendix 5**). A Primary arterial may be designed with emphasis for automobile, goods movement, transit, and/or bicycle, and is designed to accommodate approximately 30,000 vehicle trips per day at Level of Service 'C'. A Primary arterial's function is similar to that of a Major arterial. The principal difference between the two classifications is capacity.

The standard MFI for a Primary arterial may consist of two through lanes, one left turn lane and a dedicated right turn lane. An additional left-turn lane or optional free right turn lane may be allowed if warranted by traffic demand. Alternative geometries such as a grade separation, median pedestrian refuge areas, transit signal priority and/or bus queue jumps along segments with High Frequency Transit Routes, or other special treatment may be considered for approval by OCTA if they are determined to be operationally equivalent to the standard MFI.

3.5 SECONDARY ARTERIAL

A Secondary arterial highway is a four-lane undivided (no median) roadway, with a typical right of way width of 80 feet (Chart 1-4 in **Appendix 5**). A Secondary arterial may be designed with emphasis for automobile and/or bicycle, and is designed to accommodate approximately 20,000 vehicle trips per day at Level of Service 'C'. A Secondary arterial serves as a collector, distributing traffic between local streets and Principal, Major, and Primary arterials. Although some secondary arterials serve as through routes, most provide more direct access to surrounding land uses.

The standard MFI for a Secondary arterial may consist of two through lanes, one left turn lane and an optional right-turn-only lane. An optional free right turn lane may be allowed if warranted by traffic demand. Alternative geometries or other special treatment may be considered for approval by OCTA if they are determined to be operationally equivalent to the standard MFI.

3.6 DIVIDED COLLECTOR ARTERIAL

A Divided Collector arterial highway is a Secondary Arterial with a reallocation of pavement width to emphasize bicycle and pedestrian use¹² (Chart 1-5 in **Appendix 5**). It provides one bicycle lane per direction, one through vehicle lane per direction, and a continuous two-way left turn lane. It is designed to accommodate approximately 15,000 vehicles per day at Level of Service 'C'.

The MFI for a Divided Collector arterial may consist of one through lane, one left turn lane, and an optional right-turn-only lane. Alternative geometrics or other special treatment may be considered for approval by OCTA if they are determined to be operationally equivalent to the standard MFI.

3.7 COLLECTOR ARTERIAL

A Collector arterial highway (formerly designated as a "Commuter" arterial) is a two lane undivided (no median), unrestricted access roadway, with a typical right of way width of 56 feet (Chart 1-5 in **Appendix 5**). A Collector arterial is provided to accommodate up to approximately 10,000 vehicle trips per day at Level of Service 'C'. Collector arterial differs from a local collector street in its ability to handle through traffic movements between two arterials. It is shown on the MPAH because it provides network continuity, or may serve through traffic demand where projected volumes do not warrant a Secondary. As such, it is included on the MPAH only when it is generally of regional significance and meets the threshold criteria defined above.

3.8 RIGHT OF WAY RESERVE

For facilities where there is lack of consensus amongst affected jurisdictions, as to whether or not a facility should remain on the MPAH, the Right of Way (ROW) Reserve classification is provided.

When a facility is classified as ROW Reserve the roadway will be depicted on the MPAH as ROW Reserve status for a fixed period of time¹³, thus ensuring the preservation of the

¹² Typical right of way width and roadway width from curb to curb would generally be consistent with that of a Secondary arterial.

¹³ **Note:** The fixed period of time would be determined when an application to place a facility in ROW reserve is made.

ROW, until an ultimate decision is made. However, ROW reserve precludes assuming the facility in traffic or land use planning models, during the reserve period.

Designation of ROW reserve status requires an MPAH traffic study (consistent with the process identified in Chapter 4.0). The traffic study will generally need to document that placing the facility in ROW reserve status will not significantly impact the rest of the MPAH or neighboring jurisdictions during the span of the ROW Reserve period. Impacts and mitigations may be suggested during the ROW reserve period if significant impacts are identified in the traffic study.

3.9 SPECIAL DESIGNATIONS

Consistent with legislative initiatives such as Senate Bill (SB) 375 and Assembly Bill (AB) 1358, and consistent with OCTA's Long Range Transportation Plan (LRTP) goals of expanding travel options across all modes and improving travel times for all forms of transportation, there is a need for the MPAH to provide flexibility in assisting jurisdictions to provide greater travel options for all modes.

As a result, the following MPAH arterial highway special designations are available contingent upon reclassification request by jurisdictions, appropriate technical documentation, and OCTA Board approval.

3.9.1 Landmark Streets

For MPAH facilities that are physically precluded from being widened, by virtue of their immediate proximity to numerous contiguous parcels located in historic corridors, a Landmark Streets designation is provided. This designation would allow jurisdictions to retain Landmark Streets on the MPAH at existing lower classifications, once downgraded through the MPAH Amendment process, and ensure that qualifying facilities would generally not be upgraded in the future, due to their historic nature.

Qualification for this designation would also be contingent upon the following criteria:

- Immediately adjacent parcels would need to be on a historic register, including but not limited to The California List of Historic Landmarks (http://ohp.parks.ca.gov/?page_id=21445) or the National Register of Historic Places (http://ohp.parks.ca.gov/?page_id=214450).

3.9.2 Multi-Modal Transportation Arterial

A Multi-Modal Transportation Arterial is a four to eight-lane arterial facility, with emphasis on high-frequency bus service (i.e., either shared lane or bus only lane service, with minimum 15 minute headways during peak periods) and/or rail service (i.e., fixed rail within the MPAH facility as either a shared lane or rail only lane), in addition to serving automobile traffic.

MPAH facilities qualifying for the Multi-Modal Transportation Arterial designation require the following components in order to be considered by OCTA for approval.

- Transit service would need to be implemented in the near-term.
- Transit service would need to have credible commitments to ongoing operations and maintenance at minimum headways.
- Transit service would need to have credible ridership projections that are subject to OCTA approval and productivity standards.
- Transit service must be identified in a financially constrained planning document, primarily the OCTA Long Range Transportation Plan (LRTP).
 - For bus service, the facility would need to be identified in OCTA's LRTP-High Frequency Bus Corridors and Planned BRT Routes, as shown in **Appendix 6.**

3.9.3 Smart Streets

The MPAH also recognizes Smart Streets as arterials with enhanced traffic-carrying capacity. These augmentations in capacity are achieved by a variety of measures, including, but not limited to:

- Preferential and acceptably maintained traffic signal timing and synchronization
- Prohibition of on-street parking
- Intersection grade separations of critical through and/or turn movements
- Addition of at-grade through or turn lanes at intersections
- Access limitation to right turns only, or no access (street and/or driveways)
- Access consolidation
- Frontage roads
- Pedestrian grade separations
- Other elements that may be documented to be useful

The intent of these measures is to minimize conflicts with cross traffic. These measures improve traffic carrying capacity and facilitate improved traffic flow along an arterial. Hence, the terms "High Flow Arterial," "Continuous Flow Boulevard," or "Signal Synchronization Corridors" can also be used to describe a "Smart Street." This designation is intended to represent a roadway of a Primary, Major or a Principal arterial classification.

3.9.4 Asymmetric Lanes

Capacity augmentation may be needed that creates more lanes in one direction than the other (asymmetric lanes) along some Smart Streets, Principal, Major

and/or Primary arterials. The most typical application would be for arterial segments adjacent to major freeway interchanges and/or where area land uses result in a more peaked demand in one of the peak periods. Where such demand creates the need for an added lane to accommodate the peak surge of traffic, the addition of through lane(s) in one (asymmetric) rather than both directions of travel may be considered. This would require supporting peak period analyses.

3.10 SPECIAL CONSIDERATIONS

Across all Arterial Classifications and Special Designations defined above, special considerations may arise that require MPAH guidance. Some of these considerations are detailed below.

3.10.1 Intersection Condition

Intersection performance is the most critical factor in determining vehicular traffic conditions along arterials. Intersection conditions should be considered in the planning process to reduce congestion via improved traffic flow conditions on the arterial highway system.

3.10.2 Arterial Continuity

Arterials should be continuous between two connecting arterials. However, the classification may vary between the connecting arterials if actual and projected traffic volumes vary significantly and support different classifications¹⁴.

3.10.3 Transitions Between Two Classifications

A transition in arterial classification of a roadway from one side of an intersection to the other should be made by transitioning the higher classification to the lower classification over a specified section beyond the intersection where feasible. Specifications for the required transition length are contained in the Caltrans Highway Design Manual.

3.10.4 Other Facilities and Considerations

State/Interstate freeways are shown on the MPAH map for reference. Although maintained and operated by Caltrans, these facilities are an integral part of the countywide transportation system. Coordination among Caltrans, TCA, OCTA, cities and the County concerning planning and improvements to these facilities is essential to meeting regional traffic needs.

¹⁴ Policy approved OCTA Board on April 13, 1998.

4.0 MPAH AMENDMENT POLICIES¹⁵

1. A roadway on the MPAH that has been unilaterally removed from or downgraded on the local agency's Circulation Element, and/or does not meet the capacity criteria, will result in the local agency becoming ineligible to participate in Measure M2 Net Revenues as well as programs—including the Orange County CTFP.
2. Amendments to the MPAH should not result in significant adverse impacts to the MPAH system (in terms of capacity and level of service), and this should be documented prior to consideration of the proposed changes.
3. MPAH deletions and downgrades may be allowed if the increased traffic volume in the affected agencies does not result in the unmitigated peak hour intersection level of service¹⁶ (LOS) “D” or the General Plan standard adopted by the respective agency¹⁷.
4. OCTA staff shall attempt to achieve consensus by the affected agencies¹⁸ on a proposed amendment, which may include an agency(ies) that does not agree with the proposed amendment. Thereafter, OCTA staff will initiate the formal amendment approval process (i.e. processing the amendment request through appropriate OCTA Board Committee and the Board of Directors (Board)).

OCTA staff may request OCTA Board conditionally approve the proposed amendment, with the proposed amendment only becoming final upon OCTA receiving appropriate documentation that the agency(ies) specified by the Board as part of the conditional approval have complied with the requirements of the California Environmental Quality Act (CEQA) and have amended their respective general plans.

¹⁵ It should be noted that the agency that proposes an amendment to the MPAH will be responsible for acting as the Lead Agency to fund and prepare any cooperative study that may be required for the proposed amendment. For example, local agencies will be required to bear the costs of preparing any cooperative study that may be required for MPAH amendments they propose. Likewise, OCTA will bear the cost for any cooperative study that may be required for MPAH amendments proposed by OCTA. OCTA will provide technical assistance (staff and modeling support) for MPAH amendments proposed by local agencies as mutually agreed by both parties during an initial staff conference.

¹⁶ Level of Service (LOS) is to be calculated using the methodology in the latest Congestion Management Program (CMP) Intersection Capacity Utilization (ICU) standard. Use of other analytical methods can potentially be considered in unique or special cases so long as these methods are consistent with the latest peer-reviewed and professionally accepted state of practice; approved by OCTA prior to use in MPAH amendment processes, and satisfy OCTA's need for technical justification in support of an MPAH amendment.

¹⁷Policy approved by OCTA Board on April 13, 1998.

¹⁸ An affected agency is a neighboring agency or any agency where an appreciable impact (such as a change in the Level of Service or an increase in the ICU value of 0.01) is likely to occur due to the proposed deletion or downgrade.

If impacts to the MPAH system are identified as a result of the proposed amendment, approval of the amendment may also be subject to execution of a Memorandum of Understanding (MOU) between OCTA and affected agency(ies), specifying roles and responsibilities for implementation of any identified mitigation.

5. Immediately following the OCTA Board's conditional approval of the proposed amendment OCTA staff will file a Notice of Exemption (NOE) from CEQA in support of the Board's action to conditionally amend the MPAH.
6. Once OCTA has received documentation that the specified agencies have completed appropriate CEQA processes and formally approved changes to their respective General Plan Circulation Element(s), the MPAH map will be updated accordingly. If the originally proposed MPAH amendment is modified as a result of the CEQA and/or General Plan amendment processes, the modified MPAH amendment shall be returned to the Board for approval.

4.1 MPAH AMENDMENT PROCESS

1. *Proposal to Amend the MPAH*

To initiate the MPAH amendment process, a local agency must submit a written request to OCTA describing the amendment requested, and provide appropriate documentation to support the basis for the request. A copy of the request should be submitted concurrently to the City Managers/Public Works Directors of affected jurisdictions (or the Director of Orange County Public Works, where an unincorporated portion of the County is involved), if impacted by the amendment request.

2. Local Agency/OCTA Staff Conference

Upon receiving an MPAH amendment request:

OCTA will convene a staff conference with the agency(ies) requesting the amendment, including representatives from affected agencies, if determined necessary by OCTA, based on the potential impact of the proposed amendment. The staff conference will determine whether there is mutual agreement on the proposed amendment.

"Mutual agreement" is defined as OCTA and affected agencies concurring with the technical merits of the proposed amendment, and that it is consistent with OCTA's adopted MPAH Guidelines.

If there is mutual agreement, OCTA will provide a response to this effect, stating its intent to process an amendment request through the appropriate OCTA Board Committee and Board of Directors for conditional approval.

OCTA desires and makes every attempt to achieve mutual agreement by affected agencies on MPAH amendments. However, in the event that mutual agreement cannot be achieved, OCTA staff may attempt to achieve consensus by affected agencies through a cooperative study process.

OCTA has determined that the following types of amendments are administrative in nature, and **would not** require a cooperative study:

A. Changes of a roadway alignment from "Conceptually Proposed" to "Established Alignment."

B. Changes in roadway alignment where the new alignment still serves the roadway's basic intent.

3. Cooperative Study Process

A. Overview

If OCTA staff determines that the MPAH Cooperative Study Process is desirable, it may proceed as follows. The lead agency and OCTA will execute a cooperative study agreement, if determined necessary based upon potential funding commitments. The Lead agency, in consultation with OCTA, will determine whether other agencies should be involved in the technical study, and develop a plan for building consensus for the proposed amendment. The Lead agency then prepares and presents technical data to OCTA and other potentially impacted agencies. For amendments involving the TAC,¹⁹ the TAC may take a position on the proposed MPAH amendment (i.e., recommend approval or denial). The OCTA staff would then forward its recommendation to the appropriate OCTA Board Committee.²⁰ The appropriate OCTA Board Committee would take a position on the proposed MPAH amendment, and forward that recommendation to the OCTA Board. The Board then acts on the proposed MPAH amendment.

B. Cooperative Study Process and Agreement

To initiate the Cooperative Study process, the sponsoring agency shall develop a scope of work, to be reviewed and approved by OCTA staff and other participating agencies. If the study effort will be jointly funded by agencies other than a lead agency, a Cooperative Study Agreement will be required. The Cooperative Study Agreement with OCTA, will need to be approved by the governing bodies of participating agencies. Agreements for cooperative studies addressing regional or sub-regional issues may involve more than one local agency.

The Cooperative Study Agreement will define the roles and responsibilities of each agency, including funding and preparation of the study, the study schedule, and work program. The parties to the agreement shall determine a reasonable schedule for the cooperative study, and shall commit to that schedule as part of the agreement. The agreement will include a provision for time extensions by mutual consent.

In order to avoid duplication of planning efforts, if a lead agency's request to amend the MPAH is based on an Environmental Impact Report (EIR), and the EIR

¹⁹ In some cases, proposed MPAH amendment concerns are more localized, and involvement of the TAC may not be appropriate. In these cases, OCTA reserves the right to advance a proposed MPAH amendment directly through the appropriate OCTA Board Committee and Board.

²⁰ In the event that it is determined that TAC involvement is not necessary, for the proposed MPAH amendment, the proposed MPAH amendment may be advanced directly to the appropriate OCTA Board Committee and subsequently the Board.

contains sufficient technical data to justify the amendment, then the traffic study for the EIR may be substituted for the Cooperative Study. However, for the lead agency to be able to use this alternative process, other affected agencies must be included in the development of the traffic study. The traffic analysis should also include a separate comparison of the existing MPAH versus the proposed change to the MPAH, and also identify impacts and mitigation associated with the change to the MPAH (as opposed to impacts and mitigation associated with the project evaluated by the EIR).

C. Cooperative Study Work Program

The Cooperative Study Work Program may include, but not be limited to, the following elements:

- Initial scoping sessions.
- Methodology/technical analysis framework, including:
 - Defining and obtaining consensus on analysis area (i.e., the area that could be affected by the amendment)
 - Defining and obtaining consensus on appropriate analytical tools (i.e., OCTAM model, local agency sub-area model, other “unique” consideration factors)²¹
 - Confirming applicable level of service standards and methodology for determining LOS
 - Identifying special factors to be considered in the analysis and LOS evaluation (e.g., lack of cross-streets and/or access rights to prohibit driveways may allow for higher volume of traffic on an arterial, adjoining land uses, presence of wetlands or other sensitive natural resources, immediate proximity to historic structures, high frequency transit service ridership, complete streets components, bikeway facilities, etc.)
- Final scoping sessions to review and obtain consensus on study results.
- If mitigation is required, develop consensus on mitigation plan/implementation framework²².
- TAC meetings for Cooperative Studies with TAC involvement (where appropriate).
- Once consensus is achieved, OCTA will initiate the formal amendment approval process.

²¹ **Note:** If unique consideration factors such as multi-modal levels of service are anticipated to be utilized in support of an MPAH amendment request, they need to be approved in advance by both OCTA staff and immediately adjacent jurisdictions, if impacted. They may also need to be consistent with the latest peer-review and professionally accepted state of practice, and satisfy OCTA’s need for technical justification in support of an MPAH amendment.

²² This is typically done through execution of a Memorandum of Understanding.

4. Local Agency General Plan Amendment (Including Environmental Documentation)

Local agencies must prepare CEQA documentation to ensure proper disclosure of any environmental impacts associated with the proposed amendment as well as ensuring consistency with other General Plan elements. Following approval of the General Plan amendment and CEQA document by the local agency governing body, the MPAH map will be updated accordingly. If the originally proposed MPAH amendment is modified as a result of CEQA and/or General Plan amendment processes, the modified MPAH amendment shall be returned to the Board for approval.

5. Timing of OCTA Board Approval of the MPAH Amendment

Since the MPAH is not a General Plan, the MPAH may be amended more frequently than the four times per year allowed under the State of California General Plan Guidelines. However, to efficiently utilize OCTA staff and Board resources, OCTA maintains the policy of amending the MPAH no more than four times each year (once each quarter). Exceptions may be made on a case by case basis, where a local agency demonstrates a compelling need to have an amendment approved by OCTA prior to the next regularly scheduled OCTA Board consideration of an MPAH amendment.

5.0 MPAH CONSISTENCY REVIEW PROCESS

For a local agency to be eligible for participation in Measure M2 Net Revenues , as well as programs—including the CTFP, the agency's General Plan circulation element must be consistent with the MPAH. MPAH consistency policies are described below, followed by a description of the procedural steps OCTA will utilize in reviewing MPAH consistency. The MPAH consistency policies are based on the "Renewed Measure M Eligibility Guidelines" Section 3.4 dated (April, 2011), and included in this *MPAH Guidance* as **Appendix 7**.

5.1 MPAH CONSISTENCY POLICIES

1. For an agency's Circulation Element to be consistent with the MPAH, it shall have the minimum planned carrying capacity equivalent to the MPAH for all MPAH links within the agency's jurisdiction. "Planned carrying capacity" shall be measured by the number of through-lanes on each arterial highway as shown on the local Circulation Element.
2. Agencies are not considered inconsistent as a result of existing capacity limitations on arterials not yet constructed to the ultimate capacity shown on the MPAH.
3. Every two years each local agency must submit a resolution adopted by the governing body attesting that no unilateral reduction in lanes has been made on any MPAH arterial.
4. A roadway on the MPAH that has been unilaterally removed from or downgraded on the local agency's circulation element and/or does not meet the minimum capacity criteria may result in the local agency becoming ineligible to participate in Measure M2 Net Revenues as well as programs—including the CTFP. A local agency's eligibility status may be reinstated upon completion of a cooperative study to resolve the inconsistency. Additionally, the local agency can also re-establish eligibility upon restoring its Circulation Element to its previous state of MPAH consistency.
5. A local agency that unilaterally reduces the number of existing and/or planned through-lanes on an MPAH arterial built to its ultimate configuration to less than the ultimate capacity shown on the MPAH, shall be inconsistent with the MPAH from the date the governing body action is taken. Unilateral action shall mean physical actions such as striping, signing, or physical restrictions executed by the local agency.²³

²³ The MPAH does not specify minimum lane widths. Narrowing of travel lanes is not restricted provided the number of through lanes is maintained.

6. A temporary reduction of existing through lanes is permitted if, prior to taking this action, a local agency can demonstrate to OCTA that such action is temporary and can be justified for operational reasons and the agency enters into a binding agreement to restore capacity upon demand by OCTA. OCTA may also determine that the local agency remain eligible on a conditional basis. If the local agency is found ineligible, it shall regain eligibility upon physical restoration of the arterial to its original state, consistent with the MPAH.
7. Traffic calming on regional arterials can most efficiently be achieved through lane narrowings and roundabouts. These are not restricted on MPAH facilities (as long as the number of through lanes are maintained).²⁴

The use of other types of traffic calming measures on MPAH facilities shall be administered per the following:

- a. For Collectors and Divided Collectors, vertical speed control measures (e.g. speed humps) and horizontal speed control measures (e.g. chicanes) are permitted.
- b. For Secondary and higher arterials, vertical speed control measures are prohibited. For Secondary and Primary arterials, horizontal speed control measures may be conditionally permitted.
 - i. Prior to implementation, a local agency must demonstrate to OCTA that the horizontal speed control measures will not be a detriment to traffic operations for actual and projected traffic volumes. Multi-modal traffic operations, including safety analysis, shall be considered. Existing and long-range roadway segment analysis shall be considered, along with intersection level of service standards, if applicable. OCTA approvals will remain contingent upon the local agency subsequently satisfying the requirements of the California Environmental Quality Act.
- c. For all MPAH facilities, volume control measures (e.g. street closures and diverters) are typically implemented to discourage or eliminate through traffic and are therefore prohibited.²⁵

See **Appendix 8** for additional detail.

²⁴ Definitions:

- Lane narrowings - achieve speed reductions by narrowing the roadway, usually accompanied by plantings, street furniture, or other vertical elements to draw attention to the constriction and visually bound the space. Includes neckdowns/bulbouts, center island narrowings, and chokers.
- Roundabouts – similar to traffic circles but typically used on higher volume arterials as a form of intersection control; often in replacement of traffic signals or all-way STOP signs.

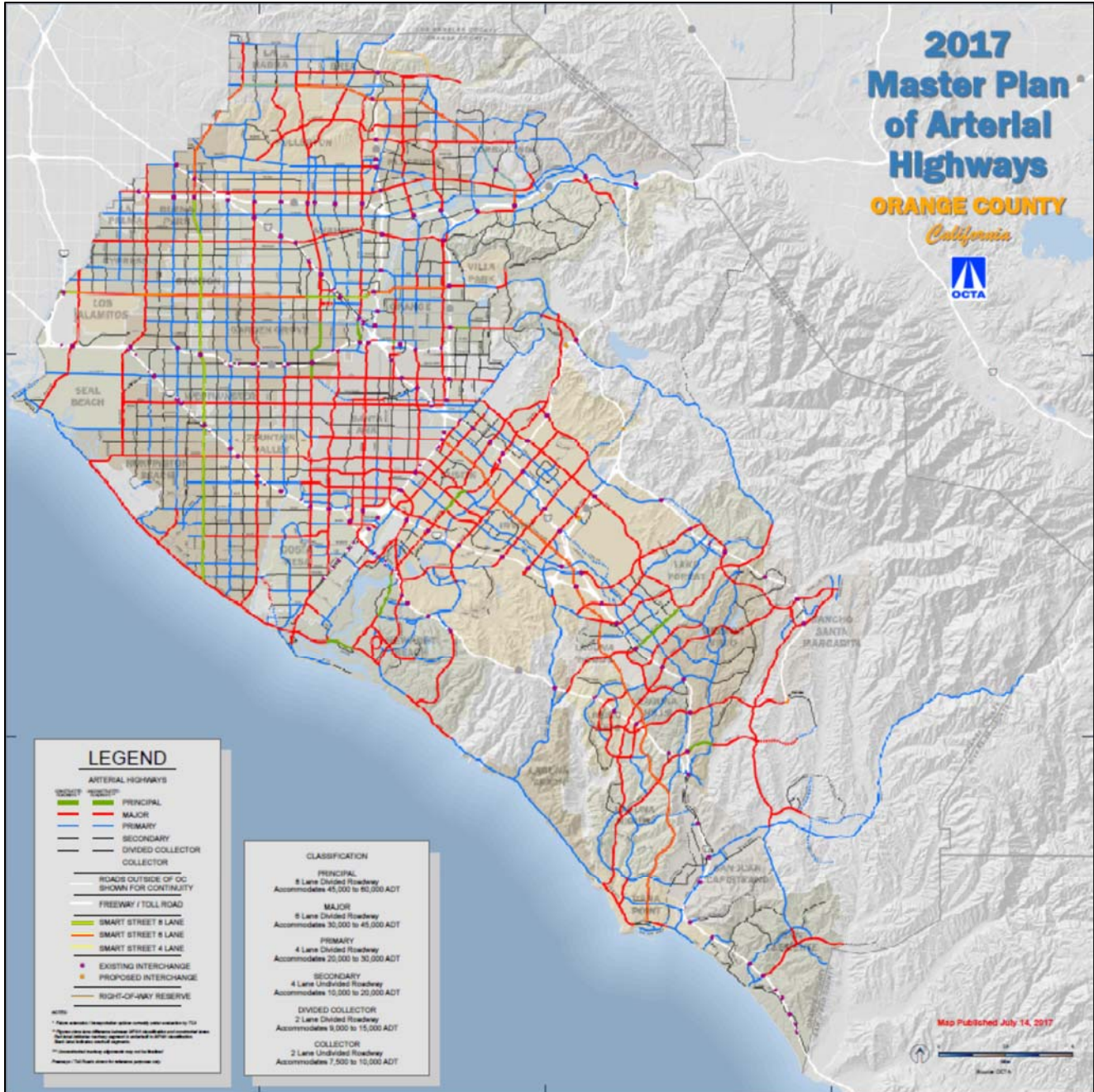
²⁵ The MPAH does not restrict the use of volume control measures on non-MPAH streets and driveways that connect to/from the MPAH network.

8. To be eligible for Measure M2 “fair share” funds, a local agency must adopt a General Plan Circulation Element that does not preclude implementation of the MPAH.
9. A local agency shall be considered conditionally consistent if it requests a change to the MPAH and enters into a Cooperative Study to analyze the request. No change shall be made to the local agency's Circulation Element until after the Cooperative Study is complete and agreement is reached on the proposed amendment.

5.2 MPAH CONSISTENCY REVIEW PROCEDURES

1. On June 30 of every odd year, a local agency wishing to establish eligibility for Measure M2 Net Revenues as well as programs—including the CTFP shall submit to the OCTA Manager of Local Programming the following:
 - A. A resolution in a format consistent with **Appendix 8** adopted by the governing body of the local agency.
 - B. A copy of the local agency's current Circulation Element that shows all arterial highways and their individual arterial designations. Any proposed changes and/or requests for changes to the MPAH should also be included.
2. OCTA shall review the materials submitted, and determine whether the local agency Circulation Elements are consistent with the MPAH, meaning they have a minimum planned carrying capacity equivalent to the MPAH for all MPAH links within the local agency's jurisdiction.
3. Upon completion of the review, OCTA shall prepare a report to OCTA Board for approval, including recommendations on consistency findings and funding eligibility determinations.

APPENDIX 1 MASTER PLAN OF ARTERIAL HIGHWAYS MAP



APPENDIX 2 REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROGRAM



APPENDIX 3 PLANNING CRITERIA FOR DETERMINING ARTERIAL HIGHWAY CLASSIFICATIONS

(Sources: 2010 Highway Capacity Manual; County of Orange, Advance Planning Program, Transportation Element, Appendix 4; April, 1994)

PLANNING CRITERIA FOR DETERMINING ARTERIAL HIGHWAY CLASSIFICATIONS

In order to evaluate the arterial classifications needed to serve current and future traffic conditions, certain criteria and assumptions are made regarding roadway capacities. The concept of capacity, and the relationship between capacity and traffic volumes is expressed by means of "levels of service" (LOS). These recognize that, while there is an absolute limit to the amount of traffic that can travel through a given corridor (the "capacity"), conditions rapidly deteriorate as traffic reaches that level. As traffic approaches capacity, congested conditions are experienced. There is general instability in the traffic flow whereby small disruptions can cause considerable fluctuations in speeds and delays. Planning level analyses are intended to provide an estimate of the LOS for either a proposed facility or an existing facility in a future year. This level of analysis may also be used to size the overall geometrics of a proposed facility. The level of precision inherent in planning analyses is typically lower than for operational analyses.

Levels of Service (LOS) are Performance Measures used to define categories, 'A' through 'F'. Beyond LOS 'E', capacity has been exceeded, and arriving traffic will exceed the ability of a given street to accommodate it. A description of the meaning of the six Levels of Service follows:²⁶

- LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
- LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
- LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
- LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal

²⁶ HCM 2010 Volume 3 / Interrupted Flow (Transportation Research Board of the National Academies), p. 16-7.

timing at boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.

LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.

LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.

Table A-4-1 shows the roadway capacity volumes OCTA utilizes for its circulation analysis for each type of Arterial Facility. Freeways are not considered a part of the MPAH and associated capacities are not shown. The data shown in the table is intended to apply to General Plan level Arterial link volumes. (A link is the portion of the roadway between two arterial intersections.) Intersection capacities usually control overall roadway capacities; therefore, the MPAH Guidance uses LOS 'C' for General Plan analysis purposes. Although LOS 'D' is more consistent with urban land uses, it has been found that using it uniformly tends to overload intersections (usually resulting in LOS 'E' or LOS 'F' at the intersections themselves). Therefore, the practice when planning the arterial system is to use LOS 'C' for link capacities, with the intent of maintaining LOS 'D' through intersections.

Table A-4-1: Arterial Highways MPAH Capacity Values

Type of Arterial		Level of Service						Assymmetric Capacity / Added Lane			
		A	B	C	D	E	F	C	D	E	F
8	Lanes Divided	45,000	52,500	60,000	67,500	75,000	--	7,500	8,400	9,400	--
6	Lanes Divided	33,900	39,400	45,000	50,600	56,300	--	7,500	8,400	9,400	--
4	Lanes Divided	22,500	26,300	30,000	33,800	37,500	--	7,500	8,400	9,400	--
2	Lanes Divided	9,000	12,000	15,000	20,000	22,000	--	--	--	--	--
4	Lanes Undivided	15,000	17,500	20,000	22,500	25,000	--	5,000	5,600	6,300	--
2	Lanes Undivided	7,500	8,800	10,000	11,300	12,500	--	5,000	5,600	6,300	--
Assymmetric lane capacities are calculated by dividing ADT values by the number of lanes per arterial type.											

These roadway capacities are approximate figures only, for use at the General Plan level. They are affected by such factors as intersections (numbers, spacing & configuration), degree of access control, roadway grades, design geometries (horizontal & vertical

alignment standards), sight distance, level of truck and bus traffic, and level of pedestrian and bicycle traffic. Average daily traffic (ADT) has historically been used by the County as a long range planning tool to assist in determining arterial highway classification (number of through lanes) needed to meet traffic demand.

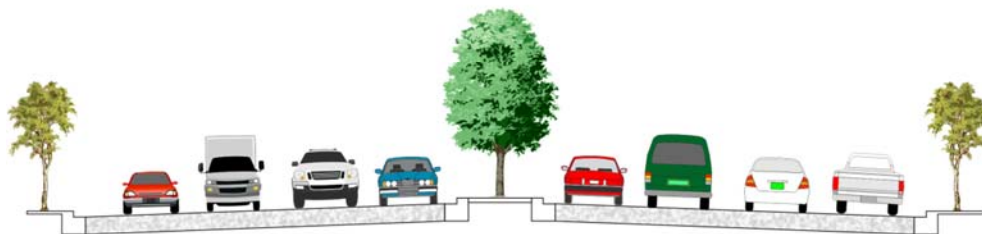
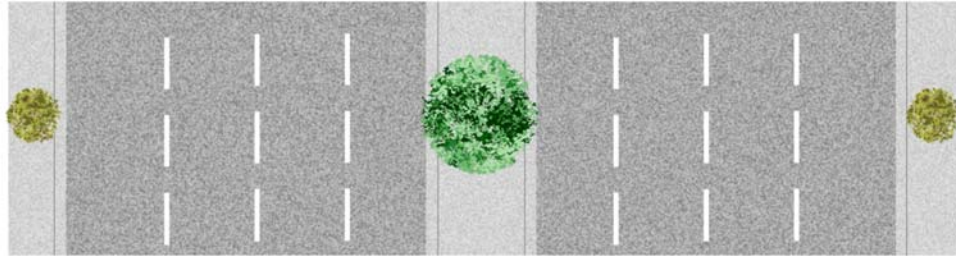
APPENDIX 4 CITY/COUNTY NOMENCLATURE FOR ARTERIAL HIGHWAYS

TAC members are requested to submit this information for ROW widths and ADT capacity assumptions used for each Arterial classification.

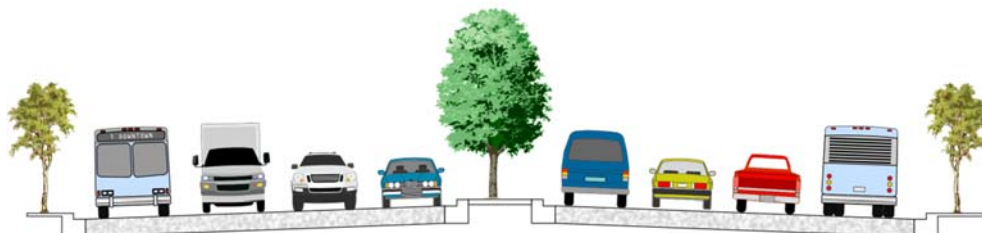
APPENDIX 5 MPAH CROSS SECTIONS

Complete Streets components on arterial cross-sections are evolving and it may be necessary to revisit ROW widths, cross-sections, operational and capacity assumptions as relevant information on best practices becomes available. Note: emphasis designations provide recognition of multi-modalism on MPAH facilities.

Chart 1-1 Principal Arterials

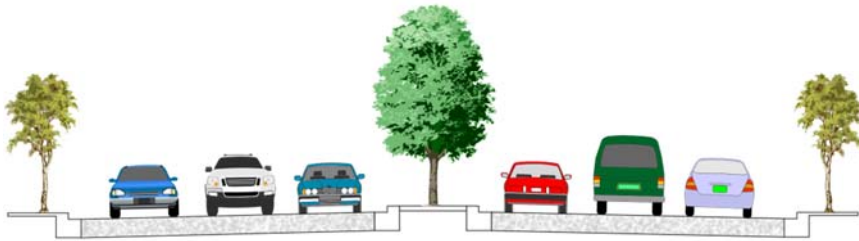
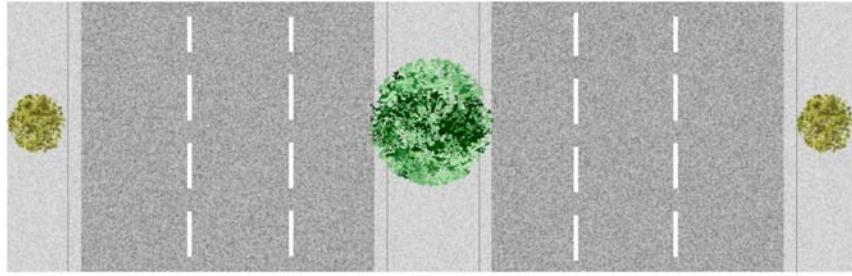


PRINCIPAL
144 FT
(8 LANES, DIVIDED)
VEHICLE EMPHASIS

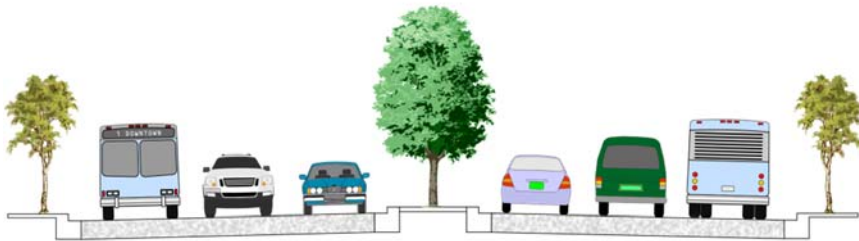


PRINCIPAL
144 FT
(8 LANES, DIVIDED)
TRANSIT EMPHASIS

Chart 1-2 Major Arterials

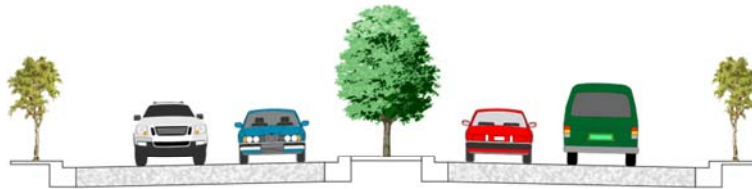
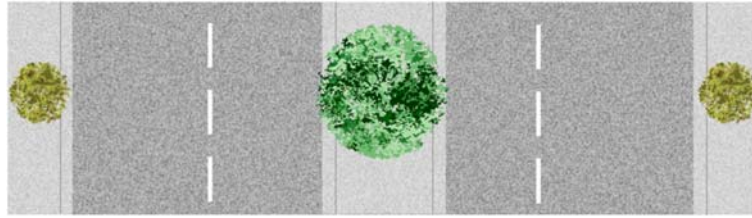


MAJOR
120FT
(6 LANES, DIVIDED)
VEHICLE EMPHASIS

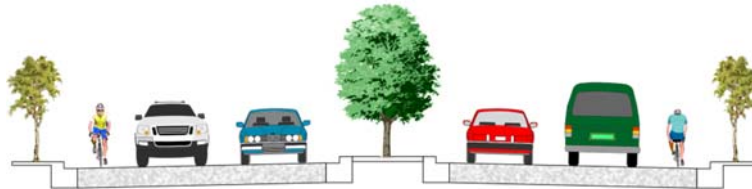
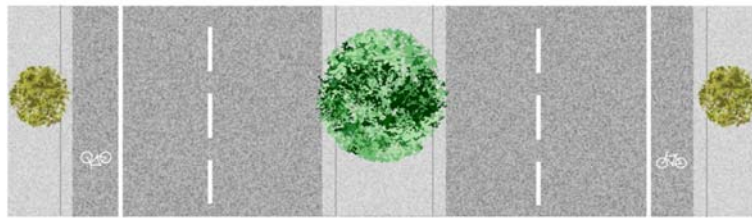


MAJOR
120FT
(6 LANES, DIVIDED)
TRANSIT EMPHASIS

Chart 1-3 Primary Arterials

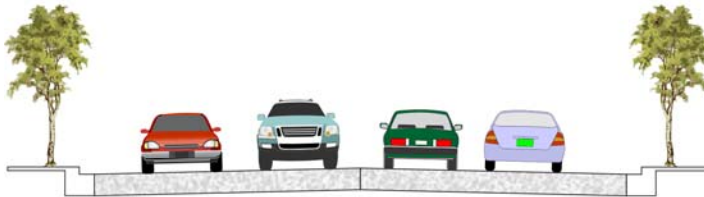
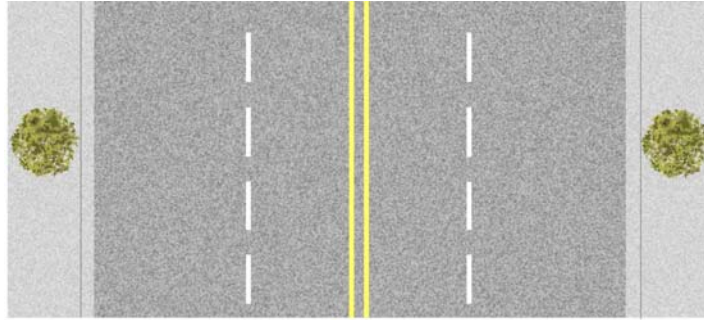


PRIMARY
100 FT
(4 LANES, DIVIDED)
VEHICLE EMPHASIS

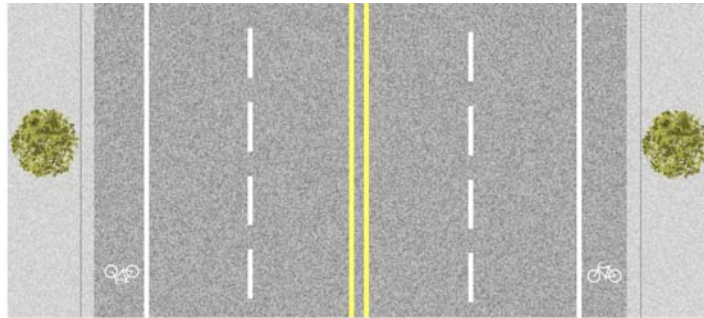


PRIMARY
100 FT
(4 LANES, DIVIDED)
BICYCLE EMPHASIS

Chart 1-4 Secondary Arterials

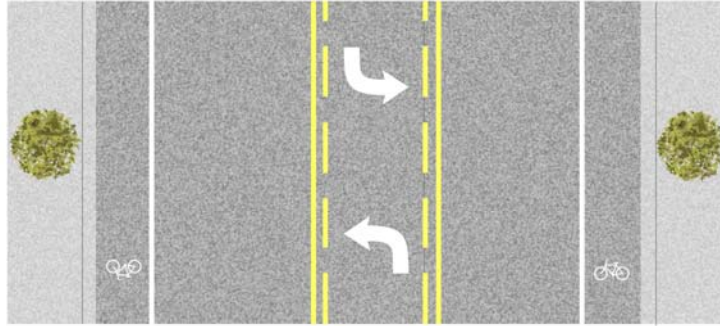


SECONDARY
80 FT
(4 LANES, UNDIVIDED)
VEHICLE EMPHASIS

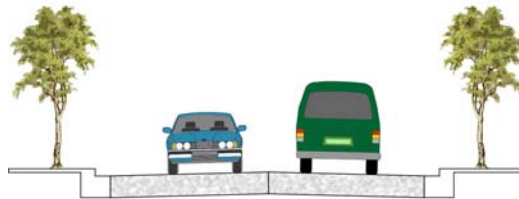
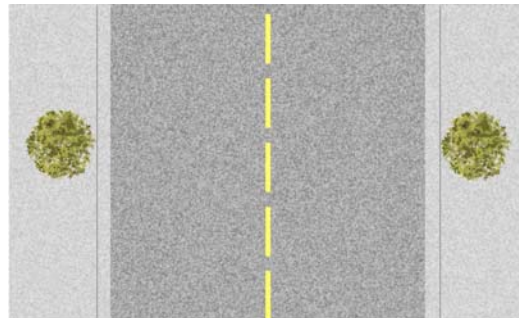


SECONDARY
80 FT
(4 LANES, UNDIVIDED)
BICYCLE EMPHASIS

Chart 1-5 Collector Arterials

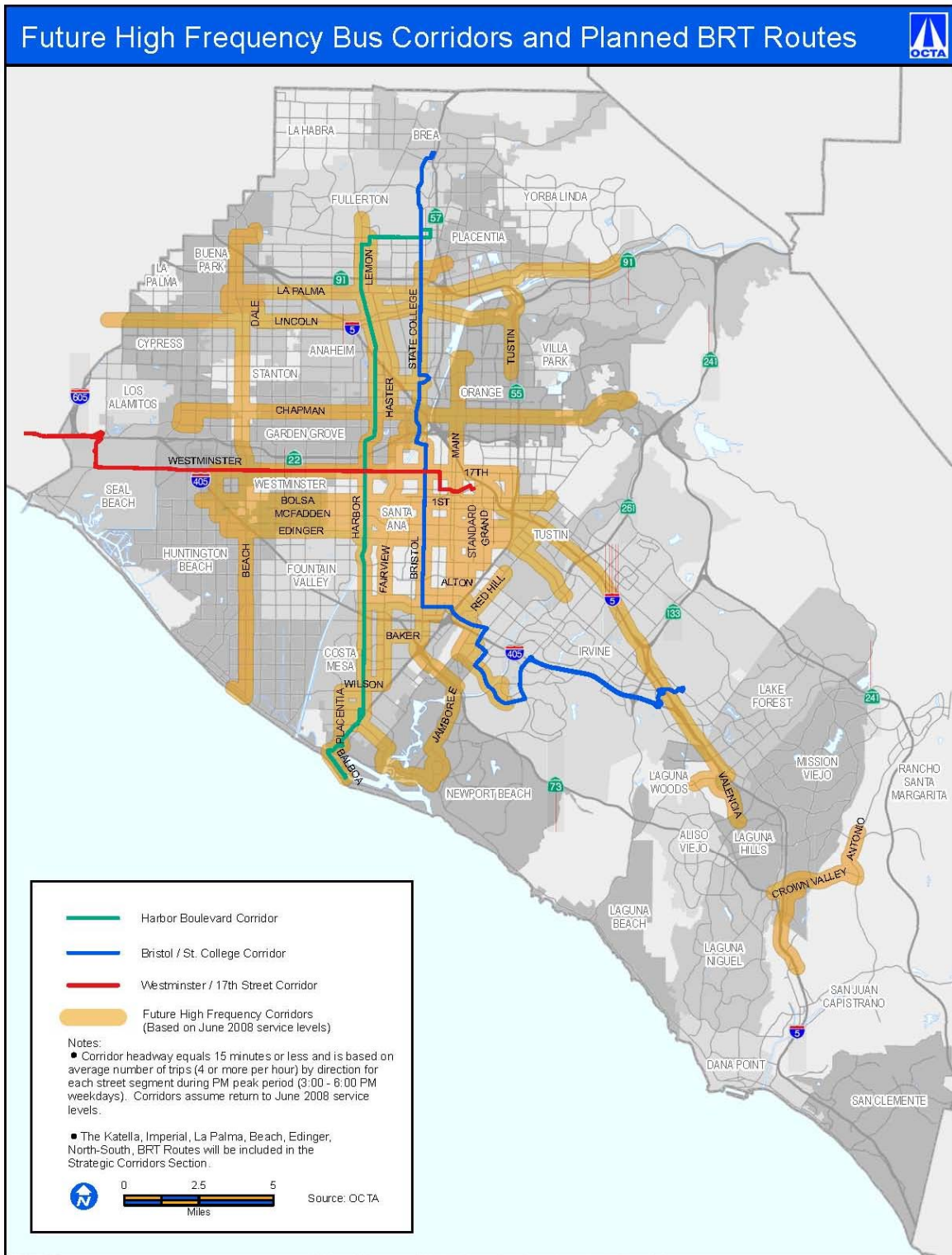


DIVIDED COLLECTOR
80 FT
(2 LANES, DIVIDED)



COLLECTOR
56 FT
(2 LANES, UNDIVIDED)

APPENDIX 6 FUTURE HIGH FREQUENCY BUS CORRIDORS AND PLANNED BRT ROUTES²⁷



²⁷ Subject to revision based upon adopted LRTP.

APPENDIX 7 MEASURE M2 REGIONAL FUNDING PROGRAM CONSISTENCY AND ELIGIBILITY CRITERIA

1 III. REQUIREMENTS FOR ELIGIBLE JURISDICTIONS.

2 A. In order to be eligible to receive Net Revenues, a jurisdiction shall
3 satisfy and continue to satisfy the following requirements.

4 1. Congestion Management Program. Comply with the conditions
5 and requirements of the Orange County Congestion Management Program (CMP)
6 pursuant to the provisions of Government Code Section 65089.

7 2. Mitigation Fee Program. Assess traffic impacts of new
8 development and require new development to pay a fair share of necessary transportation
9 improvements attributable to the new development.

10 3. Circulation Element. Adopt and maintain a Circulation Element
11 of the jurisdiction's General Plan consistent with the MPAH.

12 4. Capital Improvement Program. Adopt and update biennially a
13 six-year Capital Improvement Program (CIP). The CIP shall include all capital
14 transportation projects, including projects funded by Net Revenues, and shall include
15 transportation projects required to demonstrate compliance with signal synchronization and
16 pavement management requirements.

17 5. Traffic Forums.

18 Participate in Traffic Forums to facilitate the planning of traffic
19 signal synchronization programs and projects. Eligible Jurisdictions and Caltrans, in
20 participation with the County of Orange and the Orange County Division of League of
21 Cities, will establish the boundaries for Traffic Forums. The following will be considered
22 when establishing boundaries:

- 23 a. Regional traffic routes and traffic patterns;
- 24 b. Inter-jurisdictional coordination efforts; and
- 25 c. Total number of Traffic Forums.

26 6. Local Traffic Signal Synchronization Plan. Adopt and maintain a
27 Local Traffic Signal Synchronization Plan which shall identify traffic signal synchronization
28 street routes and traffic signals; include a three-year plan showing costs, available funding

1 and phasing of capital, operations and maintenance of the street routes and traffic signals;
2 and include information on how the street routes and traffic signals may be synchronized
3 with traffic signals on the street routes in adjoining jurisdictions. The Local Traffic Signal
4 Synchronization Plan shall be consistent with the Traffic Signal Synchronization Master
5 Plan.

6 7. Pavement Management Plan. Adopt and update biennially a
7 Pavement Management Plan, and issue, using a common format approved by the
8 Authority, a report every two years regarding the status of road pavement conditions and
9 implementation of the Pavement Management Plan.

10 a. Authority, in consultation with the Eligible Jurisdictions,
11 shall define a countywide management method to inventory, analyze and evaluate road
12 pavement conditions, and a common method to measure improvement of road pavement
13 conditions.

14 b. The Pavement Management Plan shall be based on:
15 either the Authority's countywide pavement management method or a comparable
16 management method approved by the Authority, and the Authority's method to measure
17 improvement of road pavement conditions.

18 c. The Pavement Management Plan shall include:
19 (i) Current status of pavement on roads;
20 (ii) A six-year plan for road maintenance and
21 rehabilitation, including projects and funding;
22 (iii) The projected road pavement conditions resulting
23 from the maintenance and rehabilitation plan; and
24 (iv) Alternative strategies and costs necessary to
25 improve road pavement conditions.

26 8. Expenditure Report. Adopt an annual Expenditure Report to
27 account for Net Revenues, developer/traffic impact fees, and funds expended by the
28 Eligible Jurisdiction which satisfy the Maintenance of Effort requirements. The Expenditure

- 1 Report shall be submitted by the end of six (6) months following the end of the jurisdiction's
2 fiscal year and include the following:
- 3 a. All Net Revenue fund balances and interest earned.
 - 4 b. Expenditures identified by type (i.e., capital, operations,
5 administration, etc.), and program or project .
- 6 9. Project Final Report. Provide Authority with a Project Final
7 Report within six months following completion of a project funded with Net Revenues.
- 8 10. Time Limits for Use of Net Revenues.
- 9 a. Agree that Net Revenues for Regional Capacity Program
10 projects and Regional Traffic Signal Synchronization Program projects shall be expended
11 or encumbered no later than the end of the fiscal year for which the Net Revenues are
12 programmed. A request for extension of the encumbrance deadline for no more than
13 twenty-four months may be submitted to the Authority no less than ninety days prior to the
14 deadline. The Authority may approve one or more requests for extension of the
15 encumbrance deadline.
 - 16 b. Agree that Net Revenues allocated for any program or
17 project, other than a Regional Capacity Program project or a Regional Traffic Signal
18 Synchronization Program project, shall be expended or encumbered within three years of
19 receipt. The Authority may grant an extension to the three-year limit, but extensions shall
20 not be granted beyond a total of five years from the date of the initial funding allocation.
 - 21 c. In the event the time limits for use of Net Revenues are
22 not satisfied then any retained Net Revenues that were allocated to an Eligible Jurisdiction
23 and interest earned thereon shall be returned to the Authority and these Net Revenues and
24 interest earned thereon shall be available for allocation to any project within the same
25 source program.
- 26 11. Maintenance of Effort. Annual certification that the Maintenance
27 of Effort requirements of Section 6 of the Ordinance have been satisfied.
- 28 12. No Supplanting of Funds. Agree that Net Revenues shall not be

1 used to supplant developer funding which has been or will be committed for any
2 transportation project.

3 13. Consider, as part of the Eligible Jurisdiction's General Plan, land
4 use planning strategies that accommodate transit and non-motorized transportation.

5 B. Determination of Non-Eligibility

6 A determination of non-eligibility of a jurisdiction shall be made only
7 after a hearing has been conducted and a determination has been made by the Authority's
8 Board of Directors that the jurisdiction is not an Eligible Jurisdiction as provided
9 hereinabove.

10 IV. ALLOCATION OF NET REVENUES; GENERAL PROVISIONS.

11 A. Subject to the provisions of the Ordinance, including Section II above,
12 use of the Revenues shall be as follows:

13 1. First, the Authority shall pay the State Board of Equalization for
14 the services and functions;

15 2. Second, the Authority shall pay the administration expenses of
16 the Authority;

17 3. Third, the Authority shall satisfy the annual allocation
18 requirement of two percent (2%) of Revenues for Environmental Cleanup; and

19 4. Fourth, the Authority shall satisfy the debt service requirements
20 of all bonds issued pursuant to the Ordinance that are not satisfied out of separate
21 allocations.

22 B. After providing for the use of Revenues described in Section A above,
23 and subject to the averaging provisions of Section D below, the Authority shall allocate the
24 Net Revenues as follows:

25 1. Forty-three percent (43%) for Freeway Projects;

26 2. Thirty-two percent (32%) for Street and Road Projects; and

27 3. Twenty-five percent (25%) for Transit Projects.

28 C. The allocation of thirty-two percent (32%) of the Net Revenues for

COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM (CTFP) AND ELIGIBILITY CRITERIA

CONSISTENCY DEFINITION

Consistency with the Master Plan of Arterial Highways (MPAH) is the primary criterion for determining city and county commitment to maintaining the integrity of the regional transportation system. For agencies circulation element to be consistent with the MPAH, for purposes of Measure M2 Net Revenues as well as programs—including CTFP eligibility, it shall have an equivalent planned traffic-carrying capacity for all MPAH links within the city's jurisdiction.

“Planned capacity” shall be measured by the number of through lanes on each arterial highway as shown on the local circulation element. Agencies shall not be inconsistent as a result of existing capacity limitations on arterials which are not yet constructed to the circulation element designation. However, any agencies which unilaterally reduce the number of through lanes on MPAH arterial highways on their circulation elements to less than shown on MPAH without OCTA Board approval shall be inconsistent with the MPAH on the date city council action is taken and is ineligible for Measure M2 Net Revenues as well as programs—including CTFP until consistency is re-established.

PROGRAM ELIGIBILITY

Local Agency Responsibility

Eligibility requirements shall be verified annually as follows:

1. For Renewed Measure M "Local Fair Share Program ("fairshare") funds, cities shall adopt a General Plan circulation element that is consistent with the MPAH and shall take no action to preclude implementation of the MPAH.
2. For all competitive regional funding programs cities shall adopt:
 - a. a General Plan Circulation Element which is consistent with the MPAH; and
 - b. a City Council resolution attesting that no unilateral reduction in lanes has been made on any MPAH arterials.

Biennial Review Process

Every other year, OCTA shall determine if agencies circulation elements provide equal numbers of through lanes for each highway shown on the MPAH. OCTA shall also ensure that local agencies have not unilaterally reduced the number of lanes on any existing arterial highway (effective April 1, 2011).

Approval Process

Upon completion of the Eligibility Review, recommendations shall be reviewed and formally approved by OCTA and the Board.

RE-ESTABLISHING PROGRAM ELIGIBILITY

Once a city has been determined to be ineligible for Measure M2 Net Revenues as well as programs—including the CTFP, it may seek to re-establish eligibility by requesting a cooperative study be undertaken with OCTA. The study will be designed to do the following:

- 1) ascertain the regional transportation system need;
- 2) make provisions to meet those needs in the city General Plan; and
- 3) re-establish consistency with the MPAH.

Any changes to the agencies' General Plan or the MPAH shall be mutually acceptable to the city and OCTA. Until such a study has been completed, agencies shall be ineligible to receive applicable funds.

MUTUAL CHANGES TO CIRCULATION ELEMENT AND MPAH

Agencies may mutually revise their respective circulation elements through the cooperative process outlined previously. Agencies shall continue to be eligible to receive funds while the cooperative study process is underway, so long as their general plans remain unchanged until such time as the cooperative study process is complete.

APPENDIX 8 TRAFFIC CALMING MEASURES

Traffic calming on regional arterials can most efficiently be achieved through *lane narrowings* and *roundabouts*. These types of traffic calming measures are not restricted on MPAH facilities (as long as the number of through lanes are maintained).²⁸

The following table illustrates how the use of other types of traffic calming measures are administered on MPAH facilities.

	Collector (two-lane, undivided)	Divided Collector (two-lane, divided)	Secondary (four-lane, undivided)	Primary (four-lane, divided)	Major (six-lane, divided)	Principal (eight-lane, divided)
Speed Control Measures (horizontal)	Permitted		Conditionally Permitted		Prohibited	
Speed control Measures (vertical)			Prohibited			
Volume Control Measures	Prohibited					

²⁸ Definitions:

- Lane narrowings: achieve speed reductions by narrowing the roadway, usually accompanied by plantings, street furniture, or other vertical elements to draw attention to the constriction and visually bound the space. Includes neckdowns/bulbouts, center island narrowings, and chokers.
- Roundabouts: similar to traffic circles but typically used on higher volume arterials as a form of intersection control; often in replacement of traffic signals or all-way STOP signs.

The tables below list various examples of each type of traffic calming measure in order of increasing restriction of their use on MPAH facilities. The consideration of traffic calming measures on MPAH facilities remain subject to the MPAH Consistency Policies and local agency sponsorship.

HORIZONTAL SPEED CONTROL MEASURES		
Traffic circles	Raised islands, placed in intersections, around which traffic circulates. They are sometimes called intersection islands. They are usually circular in shape and landscaped in their center islands, though not always. They are typically controlled by YIELD signs on all approaches.	<ul style="list-style-type: none"> • Permitted on Collectors & Divided Collectors • Conditionally permitted on Secondary & Primary Arterials • Prohibited on Major & Principal Arterials
Chicanes	Curb extensions that alternate from one side of the street to the other, forming S-shaped curves. They are also referred to as deviations, serpentine, reversing curves, or twists. European manuals recommend shifts in alignment of at least one lane width, deflection angles of at least 45 degrees, and center islands to prevent drivers from taking a straight “racing line” through the feature.	
Lateral Shifts	Curb extensions on otherwise straight streets that cause travel lanes to bend one way and then bend back the other way to the original direction of travel. They are occasionally referred to as axial shifts, staggerings, or jogs.	
Realigned Intersections	Changes in alignment that convert T-intersections with straight approaches into curving streets that meet at right angles. A former “straight through” movement along the top of the T becomes a turning movement. Realigned intersections are sometimes called modified intersections.	

VERTICAL SPEED CONTROL MEASURES		
Speed humps	Rounded raised areas placed across the road. They are also referred to as road humps and undulations.	<ul style="list-style-type: none"> • Permitted on Collectors & Divided Collectors • Prohibited on Secondary & Higher Arterials
Speed tables	Flat-topped speed humps often constructed with brick or other textured materials on the flat section. They are also called trapezoidal humps, speed platforms, and, if marked for pedestrian crossing, raised crosswalks or raised crossings. Speed tables are typically long enough for the entire wheelbase of a passenger car to rest on top.	
Raised intersections	Flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section. They are also called raised junctions, intersection humps, or plateaus. They usually rise to sidewalk level, or slightly below to provide a “lip” for the visually impaired.	

VOLUME CONTROL MEASURES²⁹		
Full Street Closures	Barriers placed across a street to close the street completely to through traffic, usually leaving only sidewalks or bicycle paths open. They are also called cul-de-sacs or dead ends. The barriers may consist of landscaped islands, walls, gates, side-by-side bollards, or any other obstructions that leave an opening smaller than the width of a passenger car.	<ul style="list-style-type: none"> • Prohibited on MPAH facilities
Half Street Closures	Barriers that block travel in one direction for a short distance on otherwise two-way streets. They are also sometimes called partial closures or one-way closures.	
Diverters	Barriers placed diagonally across an intersection, blocking through movement. They are also called full diverters or diagonal road closures. Diverters are usually staggered to create circuitous routes through neighborhoods.	
Median Barriers	Raised islands located along the centerline of a street and continuing through an intersection so as to block through movement at a cross street. They are also referred to as median diverters or occasionally as island diverters.	
Forced Turn Islands	Raised islands that block through movements on approaches to an intersection and direct traffic to turn through the intersection.	

²⁹ The MPAH does not restrict the use of volume control measures on non-MPAH roadways and driveways that connect to/from the MPAH network.

APPENDIX 9 SAMPLE RESOLUTION

SAMPLE RESOLUTION A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CONCERNING THE STATUS OF THE CIRCULATION ELEMENT FOR THE CITY OF

WHEREAS, the City of desires to maintain and improve the streets within its jurisdiction, including those arterials contained in the Master Plan of Arterial Highways (MPAH), and

WHEREAS, the City of has endorsed a definition of and a process for, determining consistency of the City's Traffic Circulation Plan with the MPAH, and

WHEREAS, the City has adopted a General Plan Circulation Element which does not preclude implementation of the MPAH within its jurisdiction, and

WHEREAS, the City has adopted a resolution informing the Orange County Transportation Authority (OCTA) that the City's Circulation Element is in conformance with the County's Master Plan of Arterial Highways and whether any changes to any arterial highways of said Circulation Element have been adopted by the City during Fiscal Year 20__-__, and

WHEREAS, the City is required to send annually to the OCTA all recommended changes to the City Circulation Element and the County Master Plan of Arterial Highways for the purpose of re-qualifying for participation in the Arterial Highway Financing Program and Measure M's Streets and Roads Programs.

NOW, THEREFORE, BE IT RESOLVED that the City of , does hereby inform the OCTA that:

- a) The arterial highway portion of the City Circulation Element of the City is in conformance with the County Master Plan of Arterial Highways.
- b) The City attests that no unilateral reduction in through lanes has been made on any MPAH arterials during Fiscal Year 20__-__.
- c) The City has adopted a uniform setback ordinance providing for the preservation of rights-of-way consistent with the MPAH arterial highway classification.
- d) The City has adopted provisions for the limitation of access to arterial highways in order to protect the integrity of the system.