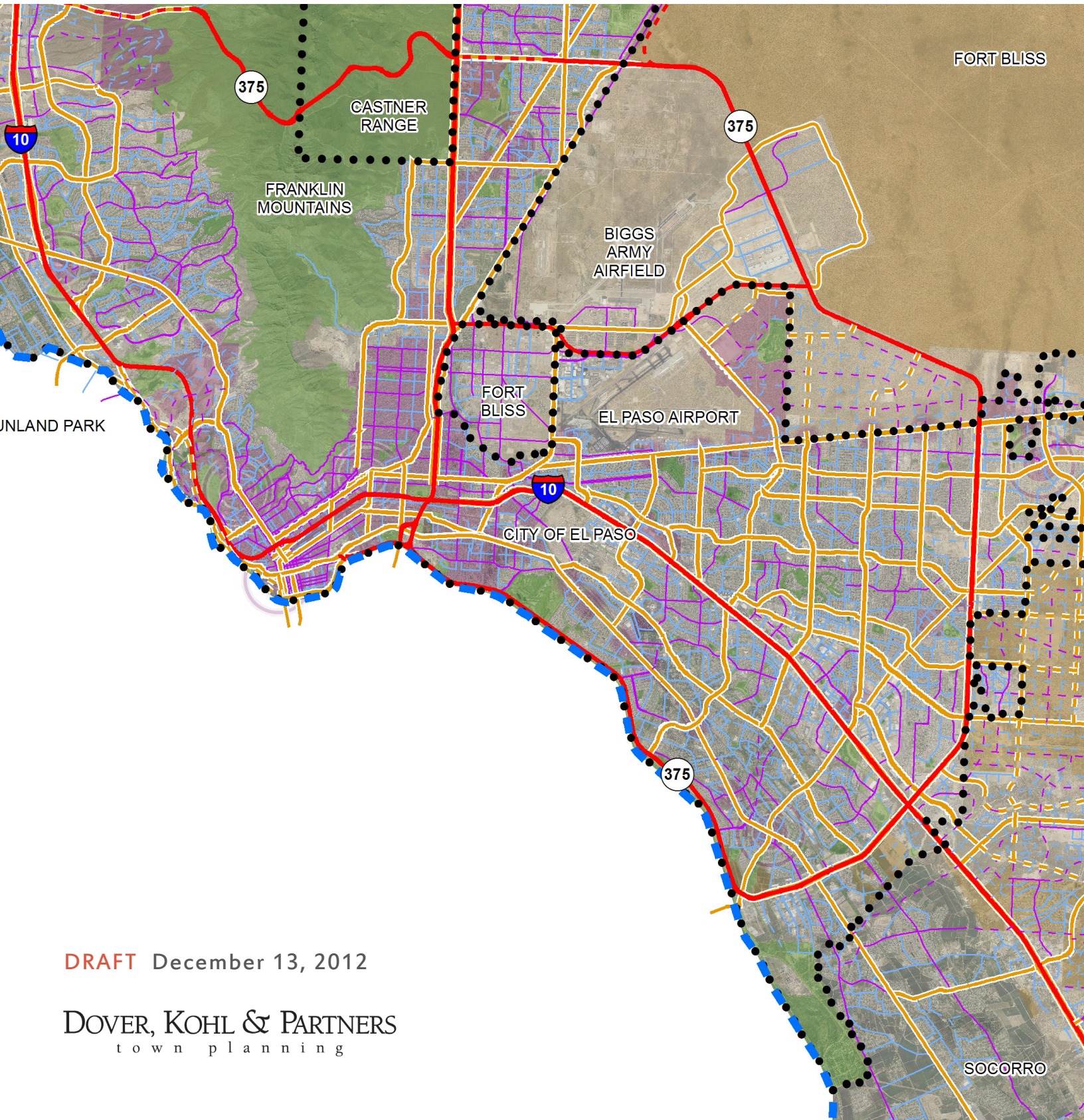


EL PASO THOROUGHFARE PLAN

2013 UPDATE



DRAFT December 13, 2012

DOVER, KOHL & PARTNERS
town planning



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EL PASO THOROUGHFARE PLAN

2013 UPDATE

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PREFACE

ABOUT THE THOROUGHFARE PLAN UPDATE

Plan El Paso, the City of El Paso’s Comprehensive Plan adopted in 2012, provides the basis for El Paso’s regulations and policies that guide its physical and economic development.

Plan El Paso was created in El Paso, and the best ideas came from El Pasoans. The plan vision was created through a series of hands-on public design charrettes which included over eight weeks of intense community exercises and policy discussion. This process was followed by over a year of regular meetings with a City Plan Advisory Committee (CPAC) to refine the draft plan. A project website received over 40,000 visitors and provided an online forum for plan discussions; in addition, the process received bilingual coverage in local and national media. Plan drafts were made available to the public, and special presentations and meetings were held to discuss the plan before the formal adoption process. Through this extensive outreach and public involvement, the greater El Paso community has become invested in the plan and its implementation.

Throughout the *Plan El Paso* planning process, numerous comments and input on transportation-related topics were gathered. These were analyzed to develop the following major community concerns and priorities:

- *Expand Transportation Choices & Options*
- *Invest in Transit*
- *Expand Safe Walking & Bicycling Environments*
- *Create Safe & Complete Streets*
- *Revitalize Major Corridors, Especially Alameda*
- *Address Congestion & Traffic Flow*
- *Make Reinvestment & Smart Growth the Priority*
- *Invest in the Airport Area as a Major Gateway*
- *Recognize El Paso’s Auto Orientation*

This *Thoroughfare Plan Update* implements several of the above concepts, such as expanding choices and options, expanding safe walking and bicycling environments, and creating safe and complete streets. The report contains recommended street cross-sections and maps them in their appropriate location in the City and beyond. The information and recommendations in this report should be used to update the Transportation Element of the Comprehensive Plan, to update various titles of the City’s land development regulations (especially Title 19), and to guide the planning and design of streets in the City and its extraterritorial jurisdiction.

INTRODUCTION

PURPOSE OF EL PASO'S THOROUGHFARE PLAN

The City of El Paso's Thoroughfare Plan is a vital component of the Comprehensive Plan. The Thoroughfare Plan is primarily a map of the existing and proposed network of streets and roads that shows the approximate location, alignment, and functional classification of collectors, arterials, and expressways throughout El Paso County. Local streets are not included.

The Thoroughfare Plan map shapes El Paso's transportation network and travel patterns, which in turn affects the patterns of growth. Although comprehensive plans in Texas are mostly advisory in legal status, the city's Thoroughfare Plan (sometimes referred to as the Major Thoroughfare Plan) is "regulatory" (legally enforceable) by being referenced in Title 19 of El Paso's land development regulations. The Thoroughfare Plan is the basis for requiring new development to connect to and help build the future street network to offset the traffic impacts of new development.

The Thoroughfare Plan provides public officials a strong tool to preserve corridors for future streets and roads while overcoming significant barriers, including topographical and environmental conditions, existing development, and vested development rights.

UPDATING THE THOROUGHFARE PLAN

Objectives of this update to El Paso's Thoroughfare Plan (TP) include:

- Broaden and refine the TP to include bicycle and pedestrian facilities.
- Refine the TP's thoroughfare classification systems to reflect the concepts in the Transportation Element of *Plan El Paso*.
- Update the previous TP network to reflect the land-use policies in *Plan El Paso* and best practices for the design of regional transportation networks.
- Update the cross-sections of proposed thoroughfares to carry out the principles in the Transportation Element.

Each objective is explained below.

- *Broaden and Refine TP to Include a Multimodal Network*
To carry out Plan El Paso's overall vision, the City needs to broaden its TP to include bicycle and pedestrian facilities. These travel modes can usually be accommodated within the same rights-of-way used by private vehicles.
- *Refine TP Functional Classification*
The TP's functional classification categories should be more consistent with those used by the El Paso MPO and TxDOT. This will help obtain state and federal funding while still being consistent with the new "area types" and improved functional classification described in this report. The objective is to maximize regional and state funding while serving the City's objectives of integrating land use character,

thoroughfare design, and expanded transit opportunities. "Compact Urban" areas will be served by walkable complete streets, while "Drivable Suburban" and "Rural" areas will be served by upgraded versions of conventional street and road designs.

- *Update TP Network to Reflect Latest Land-Use Policies and Network Design Principles*
The current TP network was nominally for the year 2025 but would accommodate growth in a vastly larger area. The updated network continues to identify corridors in other municipalities and in unincorporated El Paso County even where the City does not control growth patterns. The TP network reflects the proposed location and character of future growth with appropriate street spacing, character, and regional connectivity. Preliminary best practices for network design were provided under Goal 4.5 of the Transportation Element.
- *Update Thoroughfare Cross-Sections*
The City of El Paso currently has three sets of thoroughfare design standards: *Design Standards for Construction* referenced in Title 19 of the city's land development regulations; *Thoroughfare Assemblies* in Title 21; and the ITE recommended practice, *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*. These standards need to be organized according to the functional classification and area types described in this report. Proposed cross-sections are presented in this report to replace those currently in Title 19.

The updated Thoroughfare Plan maps will be incorporated into *Plan El Paso* through a Comprehensive Plan amendment. At the same time, pages 4.43–4.45 of the plan's Transportation Element will also be updated, as will Goals 4.4 and 4.5 and their related policies. Amendments will then be made to El Paso's land development regulations, primarily in Title 19.

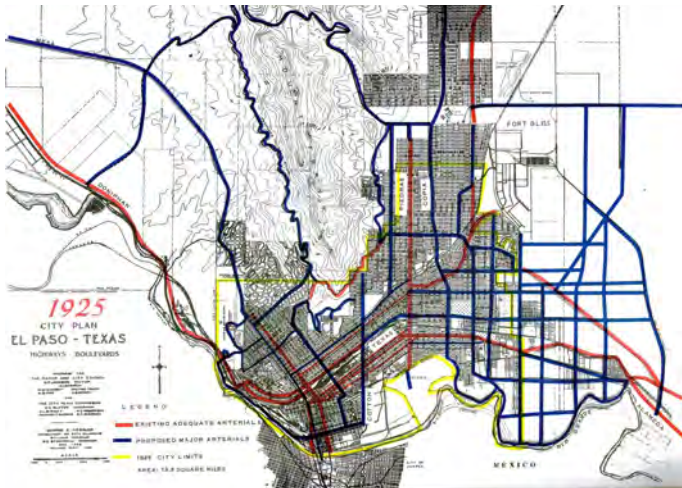
Goal 4.4 of *Plan El Paso* had originally anticipated the expansion of the Thoroughfare Plan into a broader Sustainable Mobility Plan (SMP). Those broader objectives will instead become part of a future Transportation Master Plan, as described under Goal 4.6 of *Plan El Paso* (see Appendix B).

ORGANIZATION OF THIS REPORT

The main body of this report describes the Thoroughfare Plan update in detail and presents the proposed cross-sections. Appendix A contains the proposed TP maps. Appendix B contains the proposed replacement pages for *Plan El Paso* to incorporate the TP update.

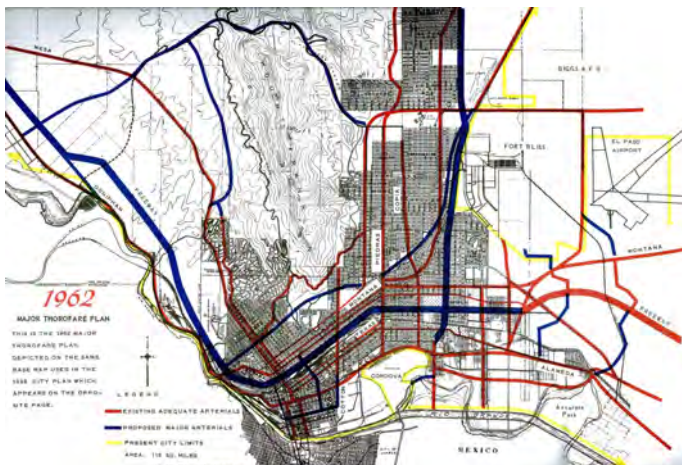
THOROUGHFARE PLAN HISTORY & USE
HISTORY OF EL PASO'S THOROUGHFARE PLAN

El Paso's earliest formal thoroughfare plan was part of the 1925 City Plan of El Paso, often referred to as the Kessler Plan for its primary author, renowned city planner George E. Kessler. This thoroughfare plan was a single map that showed all streets that had been platted up to that time. The map below is from the 1925 City Plan and has been enhanced with red bands indicating "existing adequate arterials" and dark blue bands indicating "proposed major arterials." Many of these "major arterials" would today be considered minor arterials or collector streets.



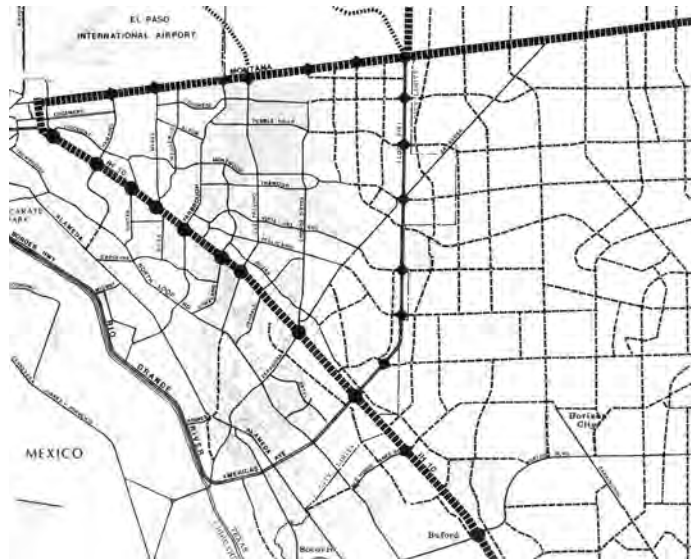
1925

The 1962 City Plan of El Paso updated the 1925 map and renamed it the "Major Thoroughfare Plan." The 1962 map is reproduced below, with dark blue lines still indicating "proposed major arterials."



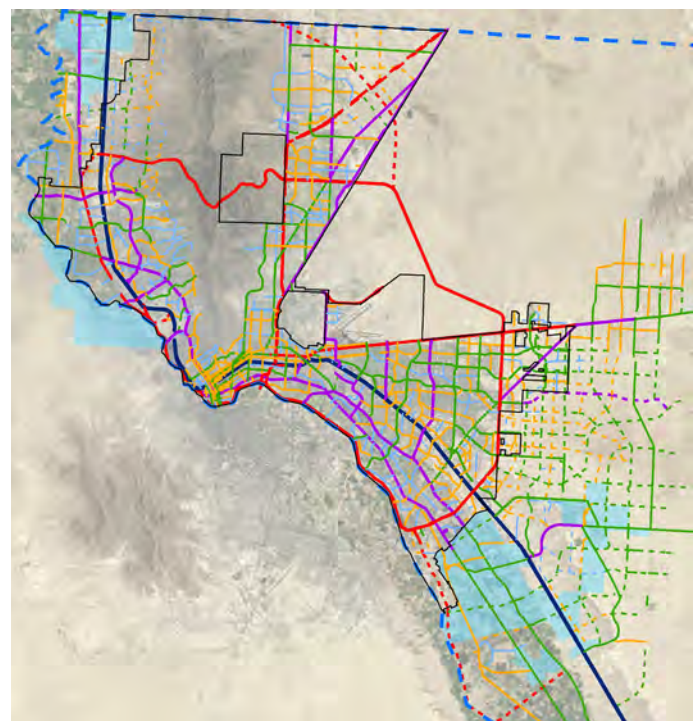
1962

In 1988, City officials adopted The Plan for El Paso. The 1988 plan contained thoroughfare maps for each planning area that delineated existing and proposed arterials and freeways. Minor arterials and collector streets were rarely shown on this map.



1988 (east planning area only)

The 1999 Plan for El Paso included a thoroughfare plan in its Map Atlas, labeled as "Proposed Thoroughfare System." That map was modified 30 times since between 1999 and 2012 through comprehensive plan amendments. The current version has been maintained as a computer-based map on the City's Geographic Information System (GIS). The then-current TP map, as shown below, was readopted into *Plan El Paso* in March 2012 on an interim basis and is now being updated as described in this report.



1999 Thoroughfare Plan, as amended through Ordinance 17599 in 2012

THOROUGHFARE PLAN TERMINOLOGY

The City of El Paso's Thoroughfare Plan can easily be confused with other transportation plans. This is unavoidable in part because the cities, MPOs, and state DOTs have interconnected roles in transportation planning. However, some confusion has been introduced by different plans sharing similar names or abbreviations. The City's Thoroughfare Plan has often been referred to as its Major Thoroughfare Plan (MTP), but the El Paso MPO has a similarly abbreviated MTP, its Mission 2035 Metropolitan Transportation Plan, which is now being updated to 2040. The El Paso MPO also publishes on its website its own Major Thoroughfare Plan, a map that resembles the city's thoroughfare plan in many respects.

Title 19 of El Paso's land development regulations uses the simple term "Thoroughfare Plan," which is also the standard term across Texas for a map of this type. Therefore this plan update will be referred to as El Paso's Thoroughfare Plan in an attempt to minimize confusion with MPO plans and to indicate that the City's plan includes minor arterials and collector streets, not just principal arterials and expressways.

APPLICATION OF THOROUGHFARE PLAN

The City of El Paso currently has several sets of adopted thoroughfare design standards:

- *Design Standards for Construction* (DSC), administrative standards that are referenced in Title 19 (the City's subdivision regulations). The DSC manual contains conventional suburban cross-sections and some walkable cross-sections. (In 2011 the City Council directed that the DSC be revised to include the ITE Practice standards for walkable areas, a complex effort that will be facilitated by this Thoroughfare Plan update.)
- Thoroughfare Assemblies (part of the SmartCode), which are in Title 21 of the City's land development regulations.
- Design Parameters for Walkable Urban Thoroughfares, which are contained in the ITE Practice.

As described on the next page, *Plan El Paso* distinguishes between two types of urban areas, "Compact Urban" and "Drivable Suburban."

In Compact Urban areas, the ITE Practice's design parameters for walkable urban thoroughfares are now being applied on an interim basis. They provide for both automobile and pedestrian efficiency, with narrower lane widths, lower target speeds, on-street parking, and shorter curb radii.

In Drivable Suburban areas, the DSC manual will continue to be applied as it is at present, but the manual will be expanded to include cross-sections for Rural and Compact Urban areas as well, as described later in this report.

The thoroughfare assemblies in Title 21 are used in developments that meet high standards of compact form and diversity and which take advantage of the expedited approval procedures in El Paso's SmartCode.

DEDICATION & CONSTRUCTION REQUIREMENTS

The City's subdivision regulations are found in Title 19. Proposed subdivisions and developments must be platted before ground is broken. Phased developments begin with a "land study" that proposes a conceptual thoroughfare network and designates land that would remain undeveloped.

During the platting process, a prospective developer must demonstrate the adequacy of public facilities to serve the development and compliance with all regulations, including zoning, the DSC manual, utility master plans, and the Thoroughfare Plan. A developer may construct a collector or arterial street along slightly different alignments than those shown on the Thoroughfare Plan, but if a developer wishes to avoid making a connection, an amendment must be sought to the Thoroughfare Plan.

Developers must donate the right-of-way and construct these streets. Because this requirement could result in an individual developer paying a disproportionate share of the cost, Title 19 contains several procedures to ensure fairness. These include city participation in construction costs; credits against other fees to compensate for excess contributions by a developer; and relief from obligations that would constitute a disproportionate burden. Additional mitigating measures may be added in the future.

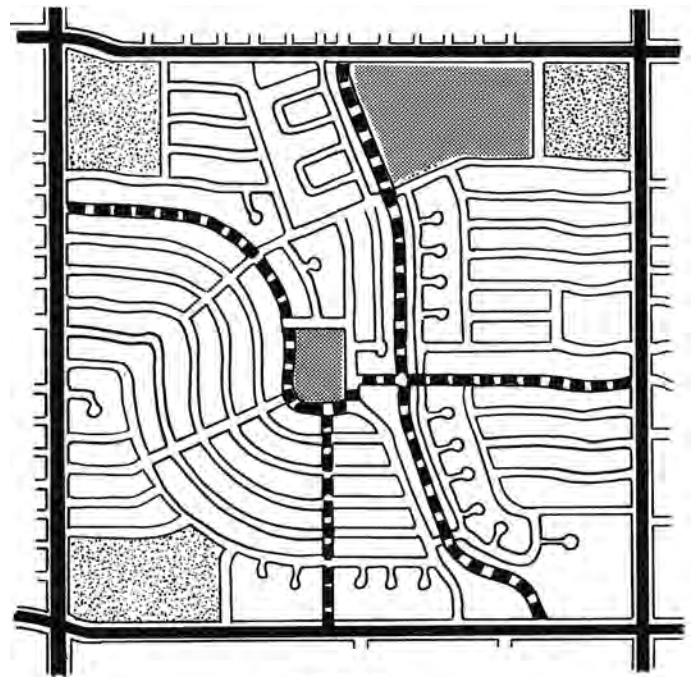
When an arterial or collector street on the Thoroughfare Plan runs along a subdivision boundary, the developer must donate half the required right-of-way. Future developers will be required to donate the other half at the time their land is platted.

THOROUGHFARE AREA TYPES

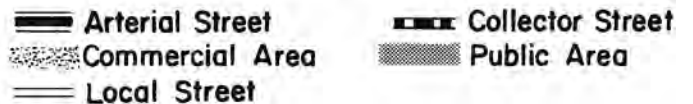
The physical layout of modern America is overwhelmingly influenced by its transportation system, yet when today's thoroughfare design standards were being established, little thought was given to the neighborhood patterns they would produce.

For instance, thoroughfares designated as "arterial streets" change little as they approach intensely developed areas. In transportation engineering terms, the surrounding context changes, but thoroughfare designs change very little. Speeds generally drop from 55 to 45/35 mph, but on-street parking is rarely allowed in emerging areas and is often removed from older areas. In recent decades, arterial streets are excluding most intersections with side streets, leading to longer block sizes (600 to 1,000 feet and longer) and higher speeds, which both cause difficulties for pedestrians. Without context-sensitive designs, streets can overwhelm the communities they should be designed to serve.

The "arterial" term appeared in 1919 in the "American Highway Engineers' Handbook." The arterial function described there clearly anticipated that 60-foot-wide commercial streets would be more successful than those 80 or 100 feet wide. The early planners never intended arterial streets to have "access to adjoining land" limited by future design manuals. As recently as 1990, the diagram to the right showed traditional arterials that were well-connected to the local street network.



LEGEND



Classic "Green Book" Illustration of Functional Classification Hierarchy

"COMPACT URBAN" AND "DRIVABLE SUBURBAN" AREA TYPES

Plan El Paso establishes a distinction between two distinct types of urban areas, described as "Compact Urban" and "Drivable Suburban." In Compact Urban areas, multimodal transportation design will become the norm; character and function will be more important than capacity, and the street network will provide smaller blocks with greater "people moving" capacity. Most Drivable Suburban areas will maintain a predominately automobile-dependent development pattern; thoroughfares will still have sidewalks, and where travel speeds are higher, separate bike lanes.

Three groups of neighborhoods have been assigned as Compact Urban, based on designations from the Future Land Use Map:

- **Existing Walkable Neighborhoods**

The first group includes neighborhoods where the original development pattern was laid out in eras when walking was commonplace or during the streetcar era when public transit was more common than private automobiles. These neighborhoods are designated as G-1 "Downtown" and G-2 "Traditional Neighborhood" on the Future Land Use Map. These areas are well-suited for continued evolution with a mix of uses and transportation options.

- **Planned Walkable Communities**

The City of El Paso owns large tracts of developable land that are within the city limits and are being master-planned for potential urban expansion using Smart Growth principles. One tract adjoins the El Paso International Airport and two others are on land managed by the Public Service Board on opposite sides of the Franklin Mountains. These lands will be served with walkable streets to match the planned character of the development. These tracts are designated as O-7 "Urban Expansion" on the Future Land Use Map.

- **Future Redeveloped and Infill Neighborhoods**

Plan El Paso has identified numerous other areas in El Paso with strong potential for infill development and for redevelopment, including land near RTS stops and Sun Metro transfer stations. Other elements of *Plan El Paso* provide conceptual physical designs for many of these areas. They are identified as overlays on the Future Land Use Map: "Local Transfer Centers," "RTS Stops," and "Future Compact Neighborhoods."

Thoroughfare Area Types

"RURAL" AND "OPEN SPACE" AREA TYPES

Regional transportation planning distinguishes between two "area types" where thoroughfares are expected to have fundamentally different characteristics: Urban and Rural.

Urban areas are defined in Federal-aid highway law to mean urbanized areas as designated by the Census Bureau. Rural areas comprise everything outside the boundaries of urban areas. The upper map on this page shows the latest urban/rural distinction, based on the 2010 U.S. Census. Federal guidelines allow considerable latitude to state and local officials in adjusting this boundary for transportation purposes.

The Urban/Rural distinction is essential for designing thoroughfares, yet the Census designations are so broad that they encompass vastly different types of land development – different physical contexts that need to be respected when thoroughfares are designed or redesigned. Also, the Census Bureau's designations are based on condition during the previous decennial census, whereas *Plan El Paso* is based on desired conditions for the future.

To improve on the conventional Urban/Rural distinction, the new Thoroughfare Plan includes the following enhancements:

- The Rural area type is based on *Plan El Paso's* Future Land Use Map instead of the U.S. Census.
- A new Open Space area type is provided for lands that won't be developed.
- The Urban area type is subdivided as described earlier.

COMPOSITE MAP OF NEW AREA TYPES

These new "area type" designations will help implement the land-use vision in *Plan El Paso*, which is presented spatially on the Future Land Use Map in the Regional Land Use Patterns Element. These four new area types are based on the following assignments from the Future Land Use Map:

RURAL:

- G-6 – Rural Settlement
- O-3 – Agriculture
- O-4 – Military Reserve
- O-5 – Remote
- O-6 – Potential Annexation

COMPACT URBAN:

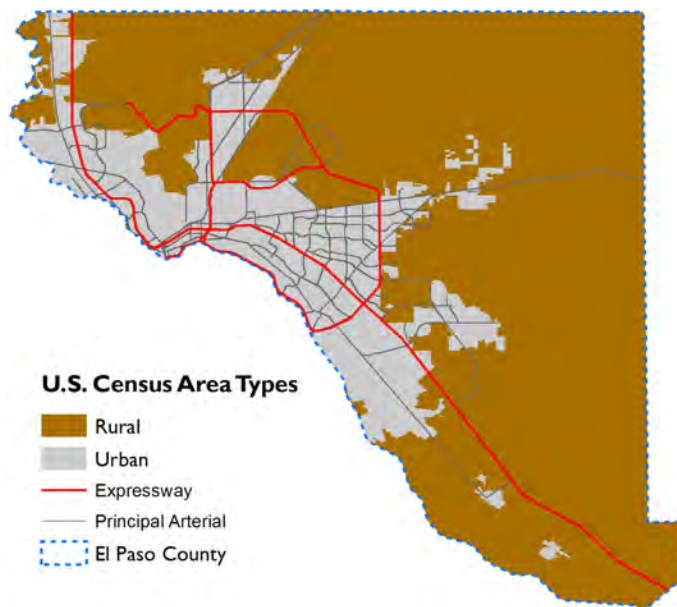
- G-1 – Downtown
- G-2 – Traditional Neighborhood
- O-7 – Urban Expansion
- Local Transfer Centers
- RTS Stops
- Future Compact Neighborhoods

DRIVABLE SUBURBAN:

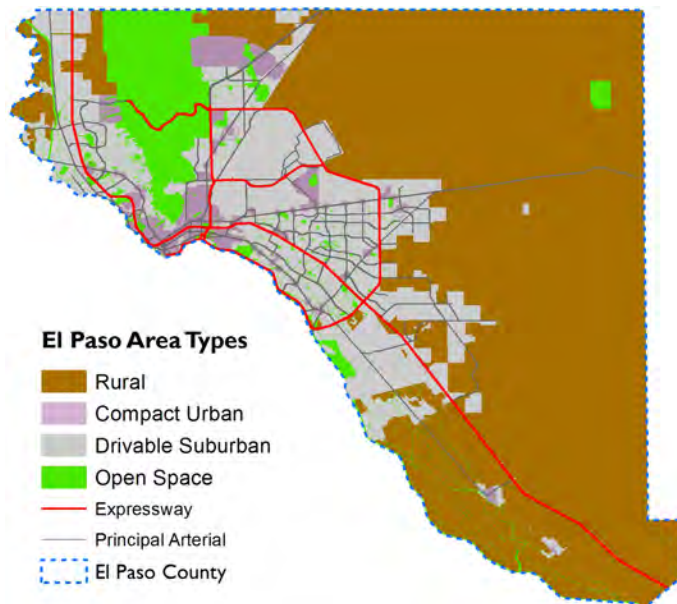
- G-3 – Post-War
- G-4 – Suburban
- G-5 – Independent City
- G-7 – Industrial
- G-8 – Fort Bliss Mixed Use
- G-9 – Fort Bliss Military

OPEN SPACE

- O-1 – Preserve
- O-2 – Natural



Urban/Rural distinction for El Paso County from 2010 U.S. Census



New area-type distinctions for El Paso County based on *Plan El Paso*

These new area types are shown on the map above and will be displayed as an underlay on El Paso's new Thoroughfare Plan map. These area types will help city officials coordinate the city's land-use planning with thoroughfare designs that are appropriate to their context.

The Rural area shown here should also be used by the El Paso MPO and TxDOT in their upcoming decennial adjustment of the urban/rural delineation for state highways.

THOROUGHFARE CLASSIFICATIONS

CONVENTIONAL FUNCTIONAL CLASSIFICATION

Conventional traffic engineering assigns all thoroughfares into a “functional classification” hierarchy that defines a thoroughfare’s role in the overall network. This hierarchy is based on the desired operation of the thoroughfare, which then governs certain design criteria such as design speed, travel lane width, and amount of access from adjoining land.

El Paso’s post-WW II transportation network is comprised mostly of these three types, as defined in *A Policy on the Geometric Design of Highways and Streets* (the “Green Book” by AASHTO, 2004):

- Arterials are intended to provide the highest level of service at suburban speeds for the longest uninterrupted distance with some degree of access control. Arterials, therefore, provide higher levels of vehicle mobility and lower levels of land access.
- Collectors provide a less highly developed level of service at a lower speed for shorter distances than arterials, by collecting traffic from local streets and connecting them with arterials. Collectors specifically balance vehicle mobility and land access.
- Local streets primarily provide access to land, with little or no through movement.

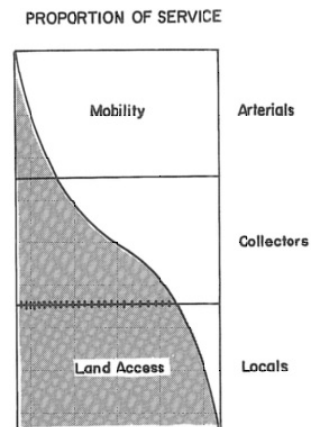
IMPROVING FUNCTIONAL CLASSIFICATION

The following assumptions are implicit in the conventional automobile-dependent functional classification system:

- Meaningful trips are made only by car or truck; walking, biking, and transit are inconsequential.
- A street with a certain function in the regional network should have the same characteristics in the city as in the suburbs.
- Limiting access to adjoining land is essential for arterials and desirable for collectors.

The first assumption can be resolved by re-casting the network as multi-modal public spaces rather than conduits for private vehicles. The second assumption can be partly resolved through the area-type distinctions discussed on the previous page.

The third assumption is the most problematic. Limiting access to adjoining land is obvious for expressways, but when access control is extended to arterials and even collectors, profound changes can be forced on these important corridors. The conventional classification system, typically illustrated using this diagram, simply ignores those effects.



Limiting access is accomplished through techniques such as:

- Installing continuous medians that block left turns.
- Closing intersecting streets and forbidding new ones from being constructed.
- Eliminating parallel parking in the right-of-way

A local example will illustrate the problems this approach can cause. Alameda Avenue extends from Texas Avenue in central El Paso east into Hudspeth County. West of Patriot Freeway, Alameda is a vital commercial corridor lined with street-facing restaurants, stores, and services, many in historic buildings. This pattern was closely related to the streetcar that ran along Alameda from downtown.

Further east, the continuous canopy of street trees along Alameda has given way to used car lots and businesses that cater to drivers more than nearby residents. Much traffic that once traveled Alameda Avenue has shifted to I-10, causing further disinvestment along Alameda.

Because of its historic direct route into El Paso from the east, Alameda Avenue must be considered a principal arterial street. Public policies that would limit access to adjoining property along Alameda because it is designated as an “arterial” would be profoundly damaging to Alameda’s historic role in the community and its proposed revitalization.

Adjusting the physical design of the street is one of the first steps in revitalizing Alameda Avenue and its adjoining neighborhoods, yet many of these adjustments conflict with the conventional engineering goal of limiting access to land along arterials. One of Sun Metro’s new Rapid Transit System (RTS) routes will run along Alameda Avenue beginning in 2014. Over time, Alameda can be converted back into a neighborhood-friendly street. Sidewalks should be widened; parallel parking lanes should be added near RTS stops to slow traffic and help local businesses thrive at those locations; and one lane each direction could be converted into dedicated transit lanes. *Plan El Paso* explicitly calls for these improvements; potential impediments caused by obsolete functional classification need to be removed.

Thoroughfare Classifications

El Paso is in a better position than most communities to step back from the paradigm of limiting access along arterials and collectors.

In Compact Urban areas, there are already multiple continuous routes in most directions. Because drivers can choose less congested routes, public officials don't need to limit access along occasional arterials to maintain traffic flow.

In Drivable Suburban areas, El Paso has provided a reasonably continuous network of arterials along with a lesser number of collectors. Although congestion often occurs during peak periods, the network does provide alternate travel paths for most drivers.

The updated Thoroughfare Plan ensures that the future network will contain a reasonably dense network of continuous routes. The new plan still identifies arterials and collectors; those designations will now be based on the intended network function of each type rather than the intention of limiting access to adjoining land. Individual arterials and collectors will always be able to provide access to adjoining land; expressways of course will not.

Under the updated functional classification system, "principal arterials" will provide for longer trips on relatively straight paths. Principal arterials often connect to expressways and provide direct routes for high-capacity transit. This classification combines the City's previous classifications of "super arterials" and "major arterials" to match the "principal arterial" terminology used by the El Paso MPO, TxDOT, and the Federal Highway Administration.

"Minor arterials" are typically found between principal arterials and provide continuous paths to intermediate destinations and alternate routes for longer trips. Minor arterials can follow less direct routes than principal arterials. Minor arterials typically have only two lanes, but may have four lanes if necessary.

"Collectors" are typically found between minor arterials to provide for frequent interconnections between neighborhoods. Collectors can follow less direct routes than minor arterials. In many cases collectors may be indistinguishable from local streets except that they are part of a larger network that provides multiple continuous paths.

Local streets are not shown on the Thoroughfare Plan map. Ideally they are completely interconnected within each neighborhood and to adjoining neighborhoods; however, local streets can be designed to slow or discourage (though not block) through traffic. Limitations on through movements is possible only because the network of collectors and arterials is sufficient to provide for most traffic flow.

The design of individual thoroughfares will still be correlated to functional classification, but more choices will be provided than at present. Because of the variety of physical and social contexts that each type will traverse, a one-to-one correlation between thoroughfare types and street cross-sections is not desirable.

In Drivable Suburban areas, an important thoroughfare design determinant is the expected amount of traffic to be accommodated. In Compact Urban areas, however, the most important design determinant is managing traffic speeds to levels that are compatible with walking, bicycling, and transit use; this factor is much more important that accommodating expected traffic volumes on any given arterial or collector.

Table 1 below compares the updated functional classification system with existing plans.

Table 2 on the next page summarizes the essential characteristics of the updated system, which will serve local needs as well as improving consistency with state and federal standards.

TABLE 1 - UPDATED FUNCTIONAL CLASSIFICATION FOR THOROUGHFARE PLAN

Existing City Thoroughfare Plan	Updated City Thoroughfare Plan	Existing MPO Functional Classification
Interstate / Highways Freeways / Expressways	Expressway	Freeways & Expressways Interstate (Rural) Interstate (Urban)
Super Arterials Major Arterials	Principal Arterial	Principal Arterial (Rural) Principal Arterial (Urban)
Minor Arterials	Minor Arterial	Minor Arterial (Rural) Minor Arterial (Urban)
Collectors	Collector	Collector (Urban) Major Collector (Rural) Minor collector (Rural)

TABLE 2 - MATRIX SUMMARIZING UPDATED FUNCTIONAL CLASSIFICATION CHARACTERISTICS & DESIGN CRITERIA

	Expressway	Principal Arterial	Minor Arterial	Collector	Local
TYPICAL THOROUGHFARE CHARACTERISTICS					
Network Function	high-speed travel to regional destinations	straight paths to distant destinations; connects to freeways	continuous paths to intermediate destinations; alternate routes for longer trips	continuous paths to arterial network; allows local trips to avoid the arterial network	provides access to all parcels not on the arterial / collector network
Direct Route	yes	yes	yes, but may include minor deflections	yes, but may include deflections & minor jogs	not critical; but are highly interconnected in Compact Urban areas
Spacing	not applicable	1 mile	mid-way between principal arterials	between arterials	as needed to provide access to all parcels
Maintenance	state	state or municipality	municipality or county	municipality or county	municipality, county, or private
Transit	express bus routes	high-capacity transit, major bus routes	minor bus routes	para-transit, occasional minor bus routes	para-transit
DESIGN CRITERIA FOR NEW & RECONFIGURED THOROUGHFARES					
Number of Travel Lanes					
Compact Urban	4 - 8 lanes	4 lanes typical; 6 lanes in boulevard	2 lanes typical; 4 lanes if necessary	2 lanes	2 lanes
Drivable Suburban		4 lanes typical; 6 lanes if necessary	2 lanes typical; 4 lanes if necessary	2 lanes	2 lanes
Rural		2 lanes typical; 4 lanes if necessary	2 lanes	2 lanes	2 lanes
Target Speed					
Compact Urban	65 mph	30–35 mph	25–30 mph	20–25 mph	20–25 mph
Drivable Suburban		45 mph	40 mph	20–30 mph	20–25 mph
Rural		55 mph	50 mph	45 mph	20–25 mph
Bicycle Facilities					
Compact Urban	none	wide sidewalks, cycle tracks, or boulevard access lane	sidewalks, cycle tracks, or sharrows	cycle tracks or sharrows	with traffic
Drivable Suburban		wide sidewalks	cycle tracks or sharrows	bike lanes; share travel lanes	with traffic
Rural		separated path	separated path	separated path	with traffic
Pedestrian Facilities					
Compact Urban	none	wide sidewalks	sidewalks	sidewalks	sidewalks
Drivable Suburban		wide sidewalks	sidewalks	sidewalks	sidewalks
Rural		separated path	separated path	separated path	separated path
On-street Parking					
Compact Urban	none	yes (not at bus stops)	yes (not at bus stops)	yes	yes
Drivable Suburban		no	occasionally	occasionally	occasionally
Rural		no	no	no	no

THOROUGHFARE MAPPING CRITERIA

A number of criteria were used to prepare the updated Thoroughfare Plan maps. The overarching network design principles were provided under Goal 4.5 of *Plan El Paso* (right).

El Paso's major thoroughfare network needs to serve the urban pattern proposed in the Comprehensive Plan, not dictate the pattern. The character of new streets on the network will correspond with anticipated development patterns, based on *Plan El Paso's* Future Land Use Map and the improved functional classification system described in this report.

The network needs to be complete and contiguous and conveniently spaced to serve the entire urban area. New development must connect to existing development and allow future development to connect as well. Collector streets generally terminate at other collectors and at arterials. Arterial streets provide greater continuity over long distances and generally terminate at other arterials and at expressways.

The network should avoid loops and severe direction changes, except where required by topography, in order to maintain the network's legibility for future users. The network must be sensitive to natural features, historic travel routes, the character of existing communities, and the street pattern established by obsolete yet not-vacated subdivisions northeast of Horizon City.

Streets are important public spaces as well as movement channels – the common thread that ties together old and new neighborhoods while providing convenient access to jobs, commerce, education, entertainment, and open spaces.

The basic thoroughfare network will remain intact over time, but the Thoroughfare Plan map will get modified as acceptable alternative patterns and alignments are approved as formal amendments to the map or as authorized minor adjustments.

Goal 4.5: *El Paso's network of major thoroughfares will become the "Great Streets" of tomorrow. They will be integral parts of the communities that surround them, allowing easy movement and providing physical space for social, civic, and commercial activities.*

Policy 4.5.1: *El Paso's future transportation network will shape the City and its inhabitants. The network must meld all viable modes of transportation and carry out the goals of Plan El Paso.*

Policy 4.5.2: *Capacity and redundancy should be created by a densely interconnected network rather than by achieving high capacities on individual arterial streets.*

Policy 4.5.3: *More narrow thoroughfares are better than fewer wide ones. When major thoroughfares are spaced too far apart, these consequences are unavoidable:*

- a. *The remaining major thoroughfares must be too wide, eroding their placemaking capacity and making them inhospitable to pedestrians and bicyclists.*
- b. *Motorized traffic may encroach on neighborhood streets designed for lighter traffic volumes.*
- c. *Transit routes along the remaining thoroughfares become inefficient to provide and unpleasant to use.*
- d. *Intersections with other wide roads will inevitably restrict the theoretical capacity of wide roads.*

This restriction cannot be solved with grade-separated intersections because they are too expensive to construct and maintain and too damaging to surrounding land uses.

Policy 4.5.4: *Economically vital cities require multiple transportation modes and cannot hope to maintain free flowing traffic during all peak periods.*

Policy 4.5.5: *The character of each thoroughfare should be based on the physical context the thoroughfare is passing through in addition to its role in the larger network.*

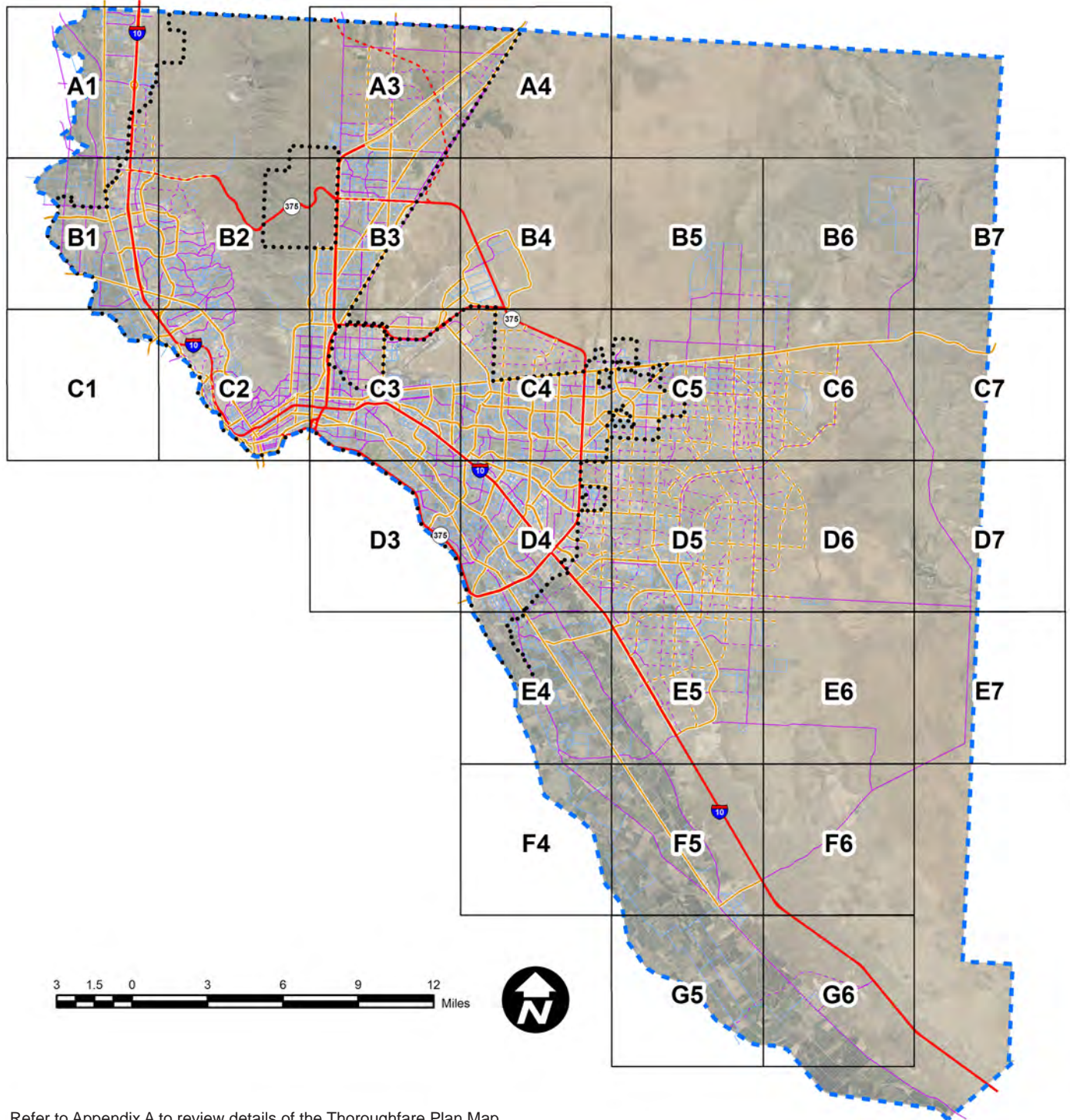
Policy 4.5.6: *Limited-access freeways disrupt the healthy functioning of cities and should be the thoroughfare type of last resort when planning an urban network.*

Policy 4.5.7: *When essential freeways or railroads will present insurmountable barriers to cross movement, they should be depressed rather than elevated in order to minimize the disruption to surrounding communities and to avoid the excessive costs of building and replacing long bridges.*

Policy 4.5.8: *The regional transportation network must respect the human and natural environment and minimize or eliminate negative impacts such as bisecting or isolating communities, inducing suburban sprawl, or interfering with arroyos and other natural systems.*

Policy 4.5.9: *The regional transportation network is larger than El Paso County, including New Mexico, Chihuahua and beyond....*

UPDATED THOROUGHFARE PLAN MAP



Refer to Appendix A to review details of the Thoroughfare Plan Map.

EL PASO THOROUGHFARE PLAN UPDATE -- Draft December 2012		
PROPOSED THOROUGHFARES:	EXISTING THOROUGHFARES:	
Expressway	Expressway	Grid of Map Pages
Principal Arterial	Principal Arterial	El Paso County
Minor Arterial	Minor Arterial	City of El Paso
Collector	Collector	

THOROUGHFARE CROSS-SECTIONS

INTRODUCTION

This section of the Thoroughfare Plan update presents cross-sections for new and improved thoroughfares, using the revised functional classifications of streets and the revised “area types” as described earlier.

A basic cross-section is provided for each category, followed by options (such as additional lanes or bicycle facilities) for each cross-section.

Table 3 summarizes the new cross-sections, which are then presented in detail on the following pages.

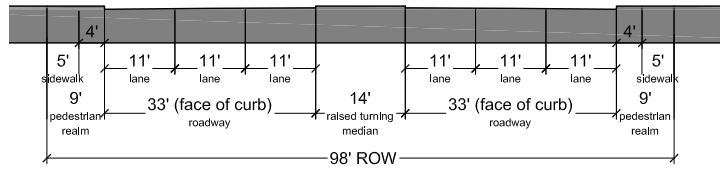
These cross-sections will not become part of the Comprehensive Plan; they will be incorporated into the subdivision regulations (Title 19) to replace the existing cross-sections that are described there and detailed in the city’s *Design Standards for Construction* manual.

TABLE 3 - SUMMARY OF BASIC AND OPTIONAL CROSS-SECTIONS FOR EL PASO THOROUGHFARES

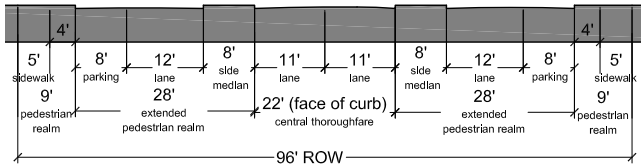
Street Type Area Type	Principal Arterial	Minor Arterial	Collector	Local
BASIC & OPTIONAL CROSS-SECTIONS				
Compact Urban	<p><u>Basic Cross-Section:</u> Four lanes without median, with parking, sidewalk, and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add Safety Strip • Add Cycle Track • Substitute Multiway Blvd. • Substitute Multiway Blvd. with bike/hike path • Substitute SmartCode assemblies that match physical context • Substitute parkway/tree well 	<p><u>Basic Cross-Section:</u> Two lanes without median, with parking, sidewalk, and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add Safety Strip • Add Cycle Track • Substitute SmartCode assemblies that match physical context • Substitute parkway/tree well 	<p><u>Basic Cross-Section:</u> Two lanes without median, with parking, sidewalk, and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add Cycle Track • Substitute SmartCode assemblies that match physical context • Substitute parkway/tree well 	<p><u>Basic Cross-Section:</u> Two lanes, with curb, parking, wider sidewalk, and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Substitute SmartCode assemblies that match physical context • Substitute parkway/tree well
Drivable Suburban	<p><u>Basic Cross-Section:</u> Four lanes with median, with bike/hike path and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add two more lanes 	<p><u>Basic Cross-Section:</u> Two lanes without median, with bike/hike path and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add two more lanes • Add median (continuous or at major intersections only) 	<p><u>Basic Cross-Section:</u> Two lanes without median, with sidewalk and parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add occasional medians 	<p><u>Basic Cross-Section:</u> Two lanes, with curb, sidewalk, and wider parkway with trees</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Substitute bike/hike path for sidewalk
Rural	<p><u>Basic Cross-Section:</u> Two lanes without median, with bike/hike path and equestrian trail and swales</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add two more lanes • Add occasional medians 	<p><u>Basic Cross-Section:</u> Two lanes without median, with bike/hike path and equestrian trail and swales</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add occasional medians 	<p><u>Basic Cross-Section:</u> Two lanes without median, with bike/hike path and equestrian trail and swales</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • Add occasional medians 	<p><u>Basic Cross-Section:</u> Two lanes without curbs, with equestrian trail (optional) and swales</p> <p><u>Potential Options:</u></p> <ul style="list-style-type: none"> • none

PRINCIPAL ARTERIALS

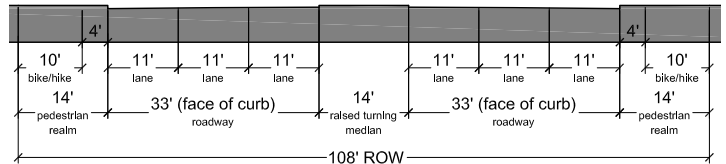
Title 19 currently provides two options for principal arterial streets (referred to as major arterials in Title 19). One is a six lane arterial with a raised median, with or without a bike/hike path (illustrated at right); the other is a two lane boulevard with 2 additional lanes in service roads on each side (illustrated below). The principal arterial network is highlighted on the map below.



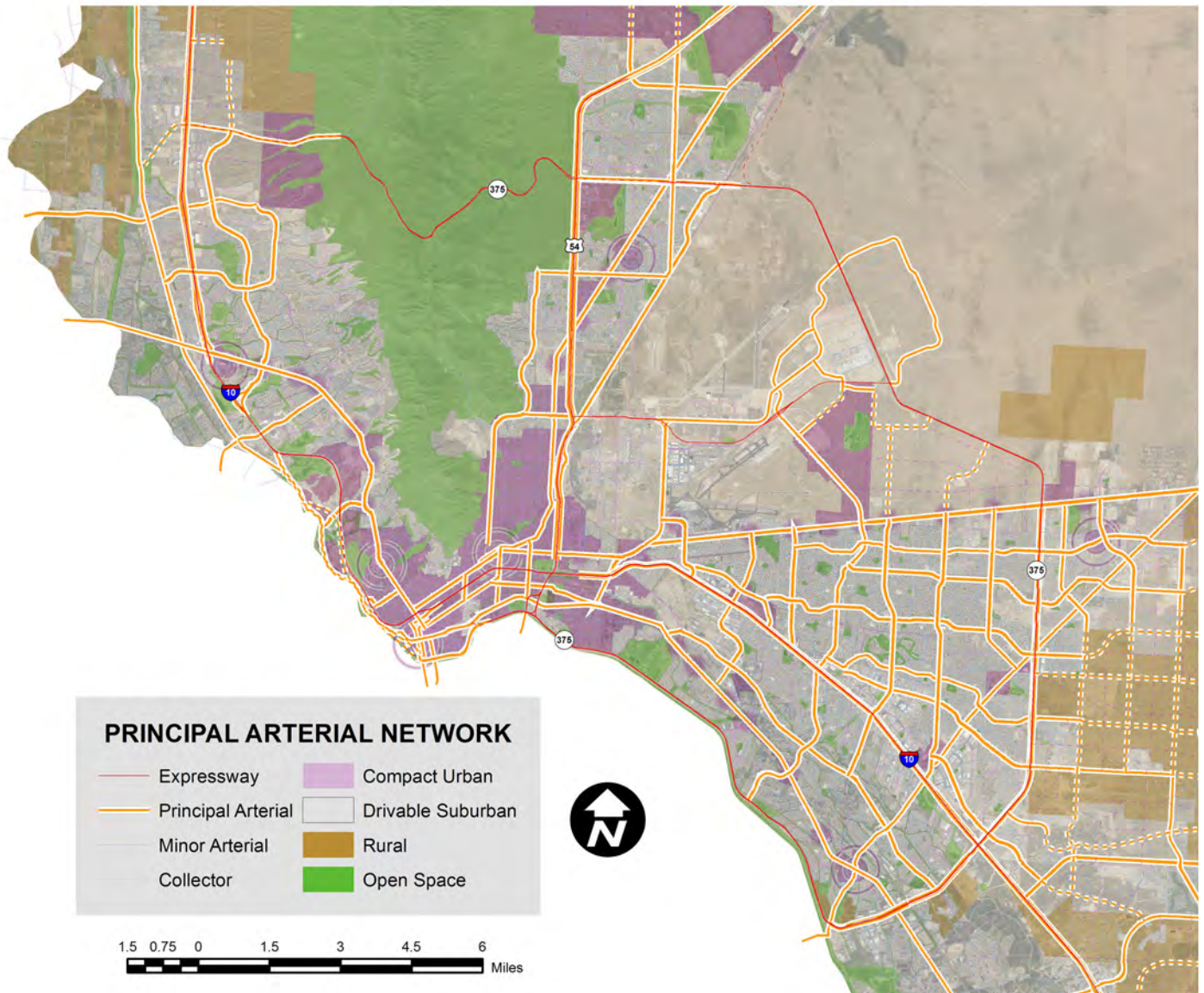
Major Arterial Street, 6 Lanes, as exists in Title 19
(to be replaced by Principal Arterial, pages 14 and 15)



Boulevard, as exists in Title 19
(to be replaced by Principal Arterial, pages 14 and 15)



Major Arterial Street, 6 Lanes with Bike/Hike, as exists in Title 19
(to be replaced by Principal Arterial, pages 14 and 15)



Principal Arterials are shown above in relation to Area Types.

Thoroughfare Cross-sections

In place of the existing Title 19 cross-sections for principal arterials, the next two pages present three principal arterial cross-sections, which vary based on area types that describe the surrounding urban context (Compact Urban, Drivable Suburban, or Rural).

These basic sections may be modified by using the potential options identified below.

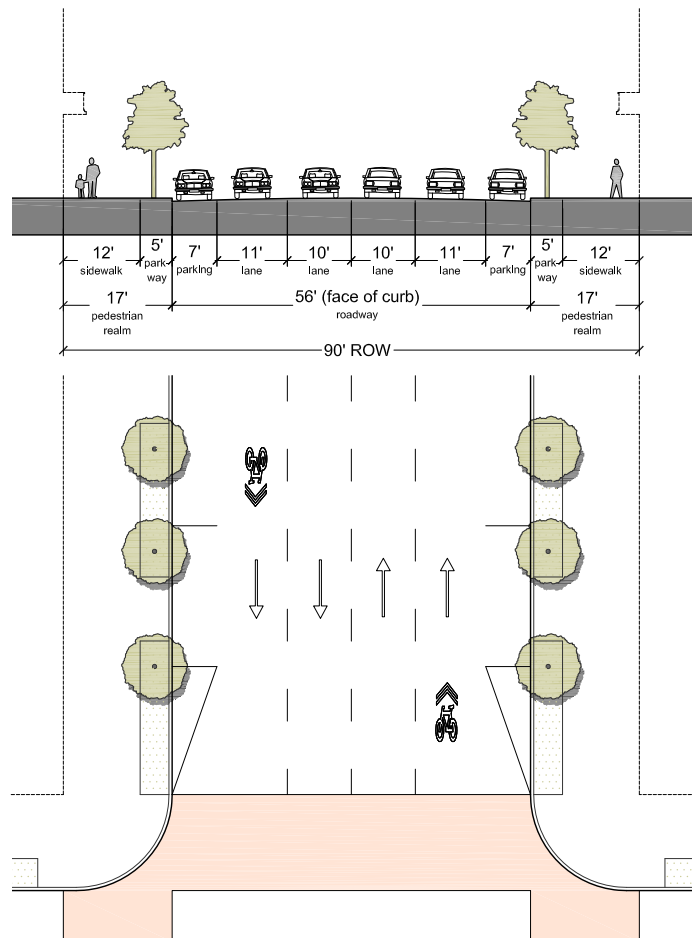
PRINCIPAL ARTERIAL - POTENTIAL OPTIONS			
	Compact Urban	Drivable Suburban	Rural
Add 2 More Lanes (see pg 25)		•	•
Add Median (see pg 26)			•
Add Safety Strip (see pg 26)	•		
Add Cycle Track (see pg 27)	•		
Substitute Multiway Boulevard (see pg 28)	•		
Substitute Multiway Boulevard with Bike/Hike Path (see pg 29)	•		
Substitute SmartCode Assemblies (see pg 30)	•		
Substitute Parkway / Tree Well (see pg 30)	•		
Substitute Bike/Hike Path for Sidewalk (see pg 30)			
“•” = permitted			

The Potential Options shown in this chart are modifications available for the cross-sections.

PRINCIPAL ARTERIAL - COMPACT URBAN

The Compact Urban section has the slowest design speed (compared to the suburban and rural sections) to provide a better balance between pedestrians, vehicles, and bicyclists in walkable urban areas. Four travel lanes are provided in the basic section, with an option to add two additional lanes if warranted by traffic demand. There is no central median, and interior travel lanes are narrowed to 10'; a sharrow is introduced in the outermost lanes, as bicyclists should be encouraged to share the roadway in this multimodal environment.

On-street parking produces traffic calming, and provides a buffer between pedestrians and moving vehicles. The street gutter pan should be located within the prescribed parking lane dimension. Where left turn lanes are needed, parking may be eliminated closest to intersections to provide needed width.



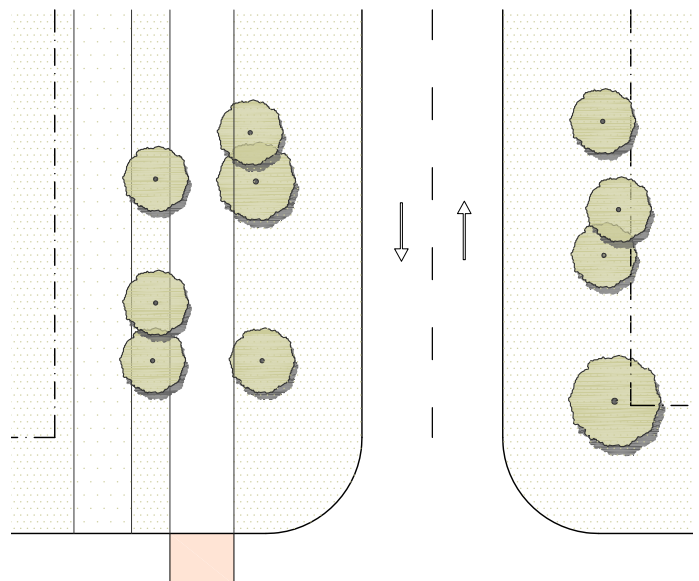
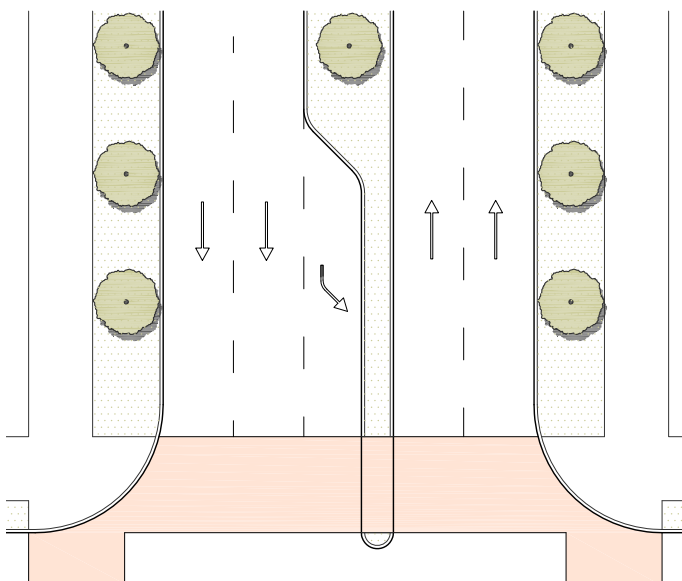
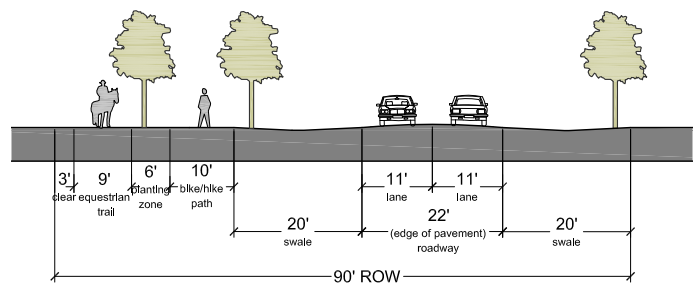
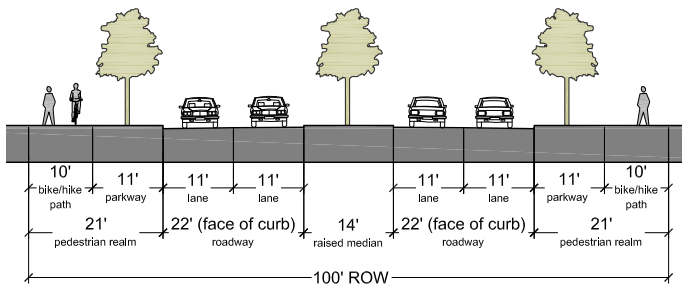
Principal Arterial, Compact Urban

PRINCIPAL ARTERIAL - SUBURBAN

The Suburban section is the most similar to the existing permitted section. Four travel lanes are provided in the basic section, with an option to add two additional lanes if warranted by traffic demand. The vehicular lanes are 11' in width, and a raised central median remains in this auto-dominant environment. A 5' Pedestrian Refuge is provided where the central median enters the crosswalk. The pedestrian realm is widened to enhance walking and biking opportunities. The tree-lined parkway provides separation between pedestrians, bicyclists, and moving vehicles.

PRINCIPAL ARTERIAL - RURAL

The Rural section provides two lanes, with an option to add two additional lanes if warranted by traffic demand. A wide swale provides separation between pedestrians, bicyclists, equestrians, and moving vehicles. Trees in swales are typically clustered organically.



Principal Arterial, Suburban

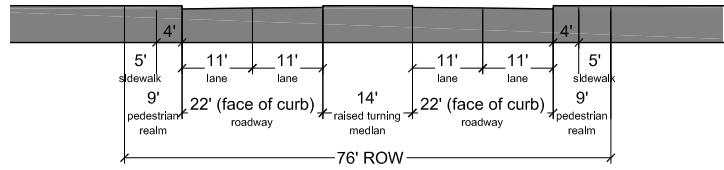
Principal Arterial, Rural

Thoroughfare Cross-sections

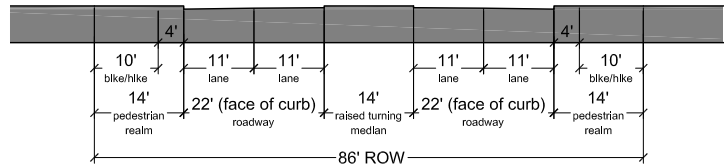
MINOR ARTERIALS

Title 19 currently provides only a single option for minor arterial streets, as illustrated to the right: a four lane street with a raised median, with or without a bike/hike path.

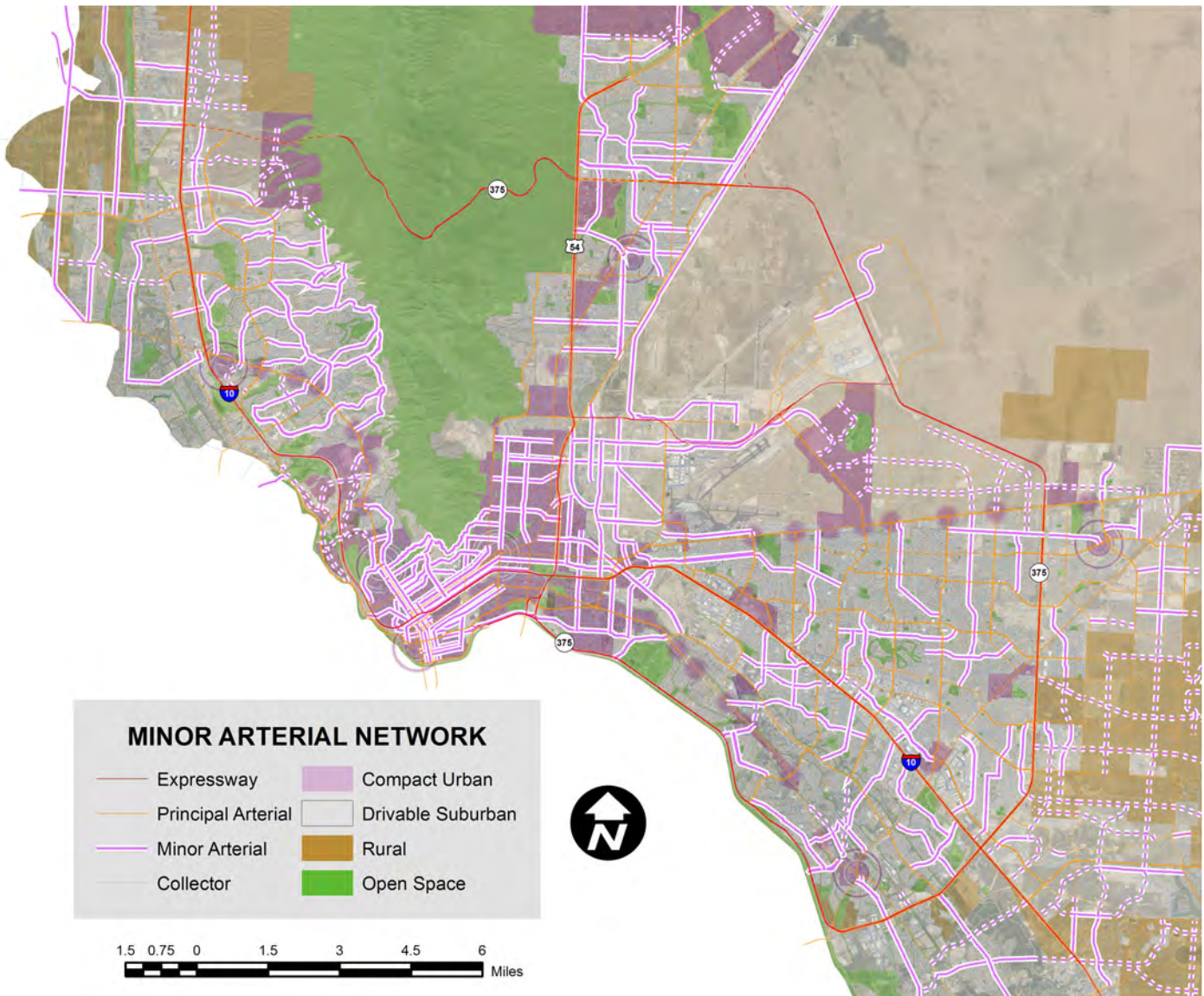
The minor arterial network is highlighted on the map below.



Minor Arterial Street, 4 Lanes, as exists in Title 19 (to be replaced by Principal Arterial, pages 17 and 18)



Minor Arterial Street, 4 Lanes with Bike/Hike, as exists in Title 19 (to be replaced by Principal Arterial, pages 17 and 18)



Minor Arterials are shown above in relation to Area Types.

In place of the existing Title 19 cross-section for minor arterials, the next two pages present three minor arterial cross-sections, which vary based on area types that describe the surrounding urban context (Compact Urban, Drivable Suburban, or Rural).

These basic sections may be modified by using the potential options identified below.

MINOR ARTERIAL - COMPACT URBAN

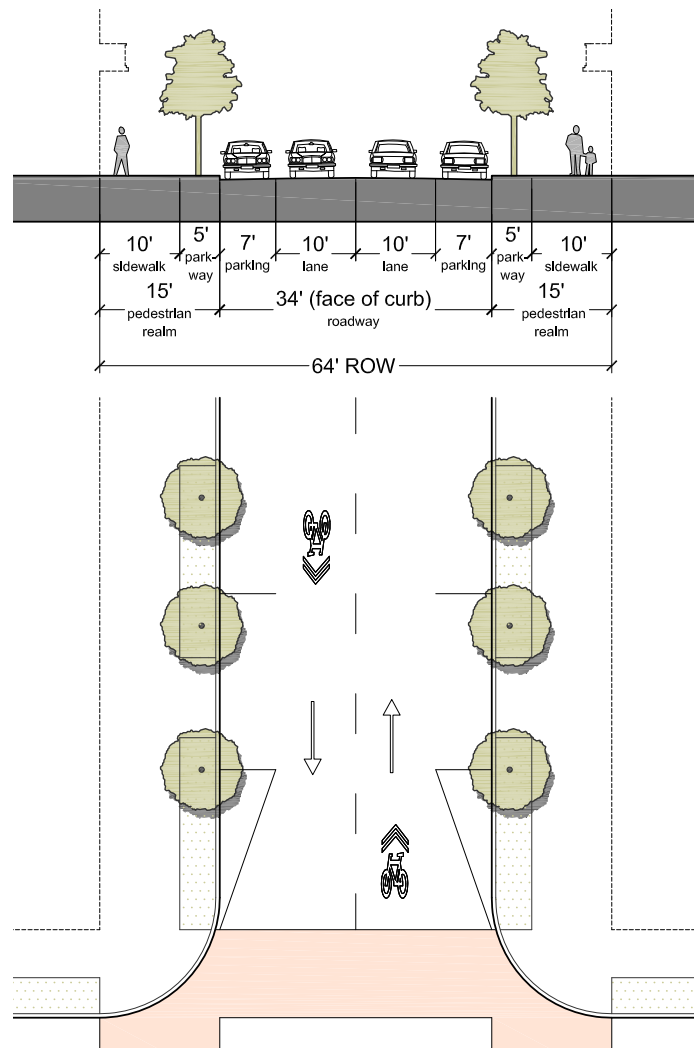
In the Compact Urban context, two travel lanes are provided in the basic section, with an option to add two additional lanes if warranted by traffic demand. Vehicular lanes are reduced to 10' in width and sharrow markings are provided to slow the vehicular design speeds and provide a better balance between all modes of travel (vehicle, pedestrian, and bike).

On-street parking produces further traffic calming, and provides a buffer between pedestrians and moving vehicles. The street gutter pan should be located within the prescribed parking lane dimension. Where left turn lanes are needed, parking may be eliminated closest to intersections to provide needed width.

Note: One travel lane each direction should be increased to 11' in width on streets designated for transit.

MINOR ARTERIAL - POTENTIAL OPTIONS			
	Compact Urban	Drivable Suburban	Rural
Add 2 More Lanes (see pg 25)		•	
Add Median (see pg 26)		•	•
Add Safety Strip (see pg 26)	•		
Add Cycle Track (see pg 27)	•		
Substitute Multiway Boulevard (see pg 28)			
Substitute Multiway Boulevard with Bike/Hike Path (see pg 29)			
Substitute SmartCode Assemblies (see pg 30)	•		
Substitute Parkway / Tree Well (see pg 30)	•		
Substitute Bike/Hike Path for Sidewalk (see pg 30)			
"•" = permitted			

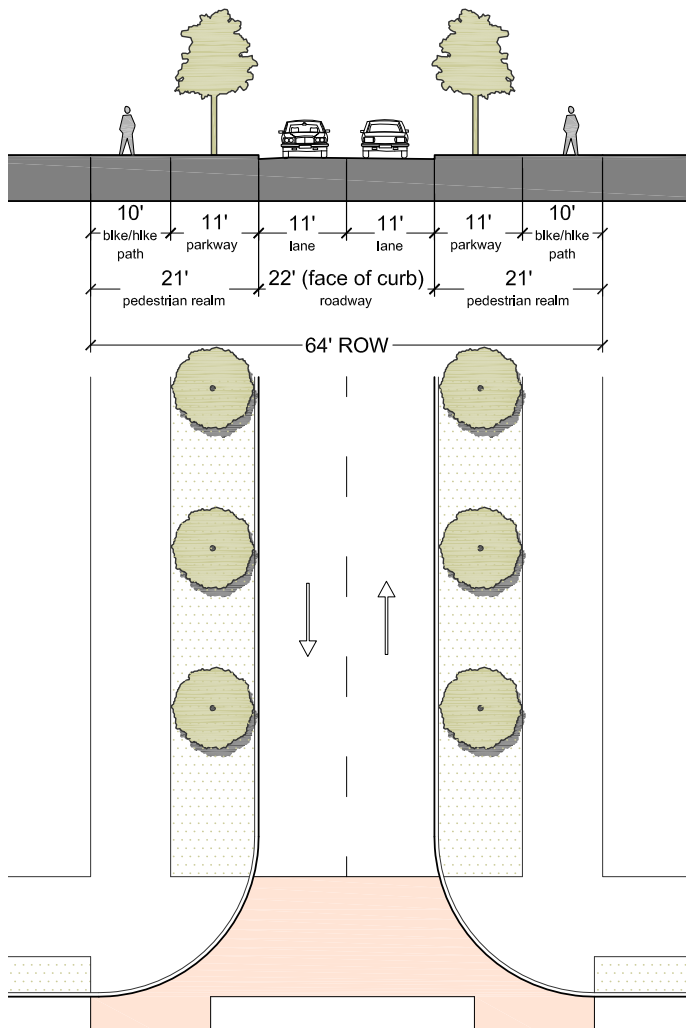
The Potential Options shown in this chart are modifications available for the cross-sections.



Minor Arterial, Compact Urban

MINOR ARTERIAL - SUBURBAN

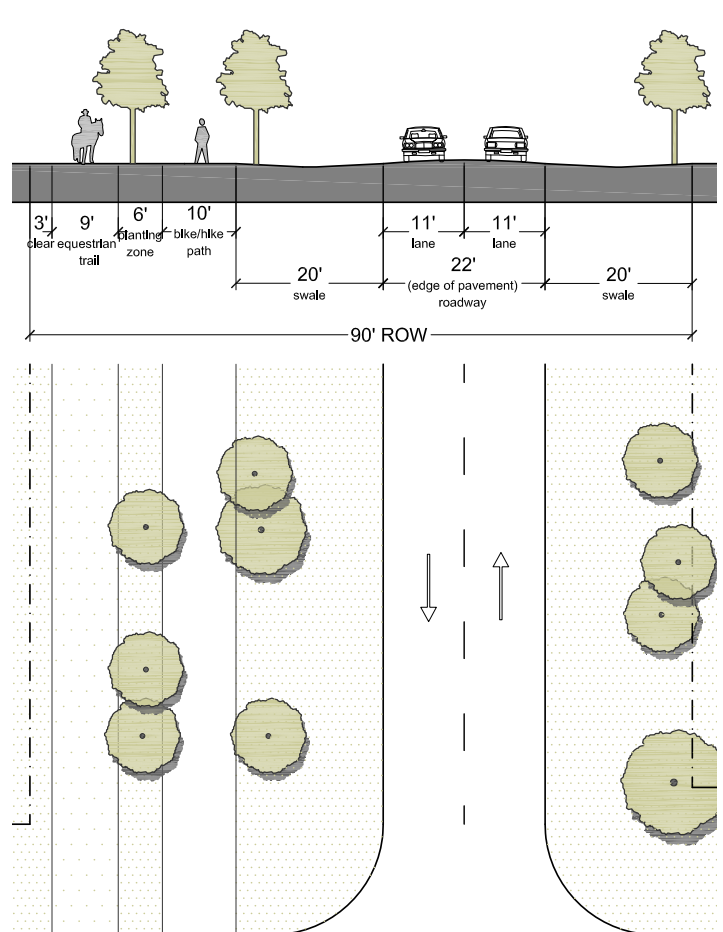
The Suburban section is the most similar to the existing permitted minor arterial section. Two travel lanes are provided in the basic section, with an option to add two additional lanes if warranted by traffic demand. The vehicular lanes are 11' width in this auto-dominant environment. The pedestrian realm is widened to enhance walking and biking opportunities. The tree-lined parkway provides separation between pedestrians, bicyclists, and moving vehicles.



Minor Arterial, Suburban

MINOR ARTERIAL - RURAL

The Rural section provides two 11' travel lanes. A wide swale provides separation between pedestrians, bicyclists, equestrians, and moving vehicles. Trees in swales are typically clustered organically.



Minor Arterial, Rural

COLLECTOR STREETS

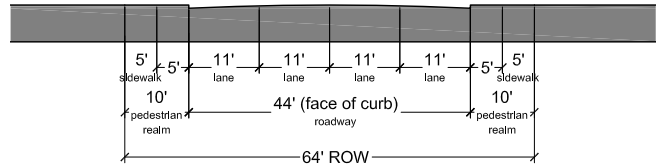
Title 19 provides several options for non-residential and residential collector streets as illustrated to the right.

The existing non-residential collectors include:

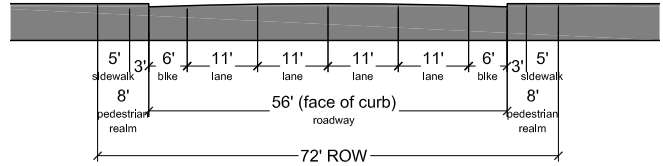
- Four lanes, with and without bike lanes
- Two lanes, with on-street parking and a median, with and without bike lanes

The existing residential collectors include:

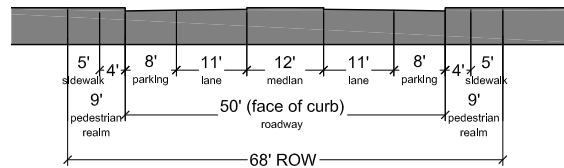
- Two lanes, with on-street parking
- Two lanes, with raised median



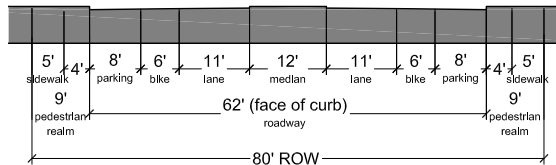
Non-residential 4 Lane Collector, as exists in Title 19
(to be replaced by Collector Street, pages 20 and 21)



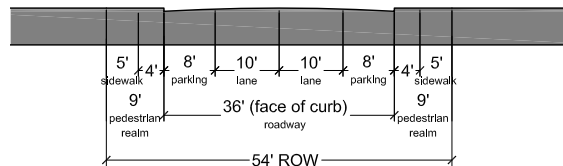
Non-residential 4 Lane Collector with Bike Lanes, as exists in Title 19
(to be replaced by Collector Street, pages 20 and 21)



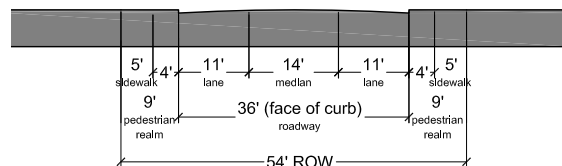
Non-residential Collector, as exists in Title 19
(to be replaced by Collector Street, pages 20 and 21)



Non-residential Collector with Bike Lanes, as exists in Title 19
(to be replaced by Collector Street, pages 20 and 21)



Residential Collector, as exists in Title 19
(to be replaced by Collector Street, pages 20 and 21)



Residential Collector, Two Lanes, as exists in Title 19
(to be replaced by Collector Street, pages 20 and 21)

Thoroughfare Cross-sections

In place of the existing Title 19 cross-sections for collector streets, the next two pages present three collector street cross-sections, which vary based on area types that describe the surrounding urban context (Compact Urban, Drivable Suburban, or Rural).

These basic sections may be modified by using the potential options identified below.

COLLECTOR STREET - POTENTIAL OPTIONS			
	Compact Urban	Drivable Suburban	Rural
Add 2 More Lanes (see pg 25)			
Add Median (see pg 26)		•	•
Add Safety Strip (see pg 26)			
Add Cycle Track (see pg 27)	•		
Substitute Multiway Boulevard (see pg 28)			
Substitute Multiway Boulevard with Bike/Hike Path (see pg 29)			
Substitute SmartCode Assemblies (see pg 30)	•		
Substitute Parkway / Tree Well (see pg 30)	•		
Substitute Bike/Hike Path for Sidewalk (see pg 30)			
"•" = permitted			

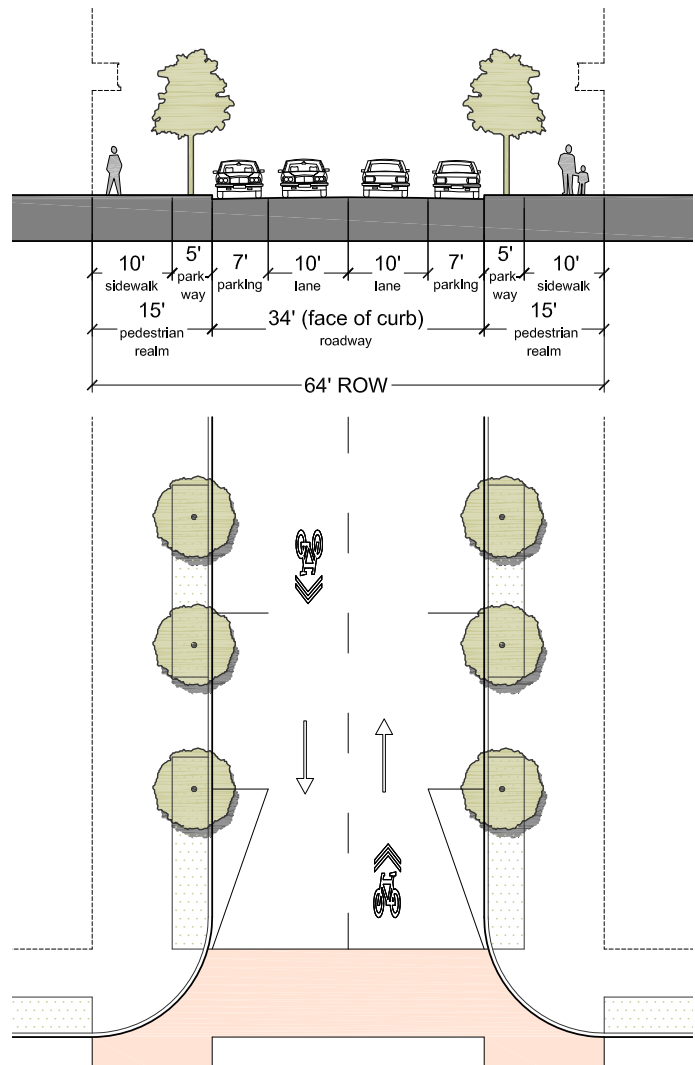
The Potential Options shown in this chart are modifications available for the cross-sections.

COLLECTOR - COMPACT URBAN

In the Compact Urban context, vehicular lanes are reduced to ten feet in width and sharrow markings are provided to slow the vehicular design speeds and provide a better balance between all modes of travel (vehicle, pedestrian, and bike).

On-street parking produces further traffic calming, and provides a buffer between pedestrians and moving vehicles. The street gutter pan should be located within the prescribed parking lane dimension. Where left turn lanes are needed, parking may be eliminated closest to intersections to provide needed width.

Note: One travel lane each direction should be increased to 11' in width on streets designated for transit.

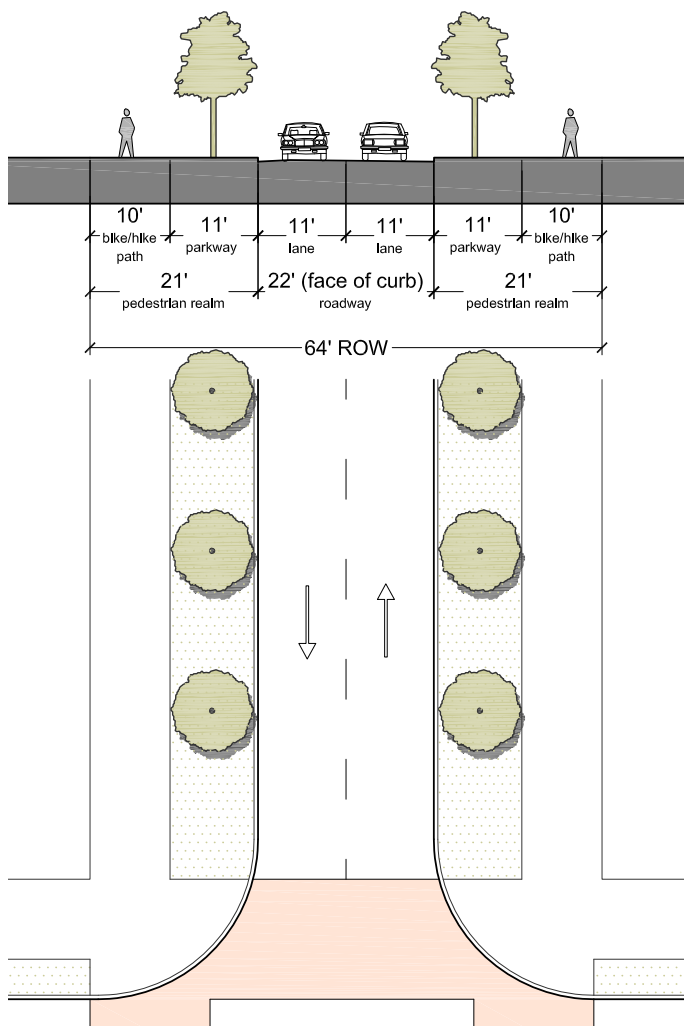


Collector, Compact Urban

COLLECTOR - SUBURBAN

The Suburban section is the most similar to the existing permitted sections. The vehicular lanes are 11' width in this auto-dominant environment. The pedestrian realm is widened to enhance walking and biking opportunities. The tree-lined parkway provides separation between pedestrians, bicyclists, and moving vehicles.

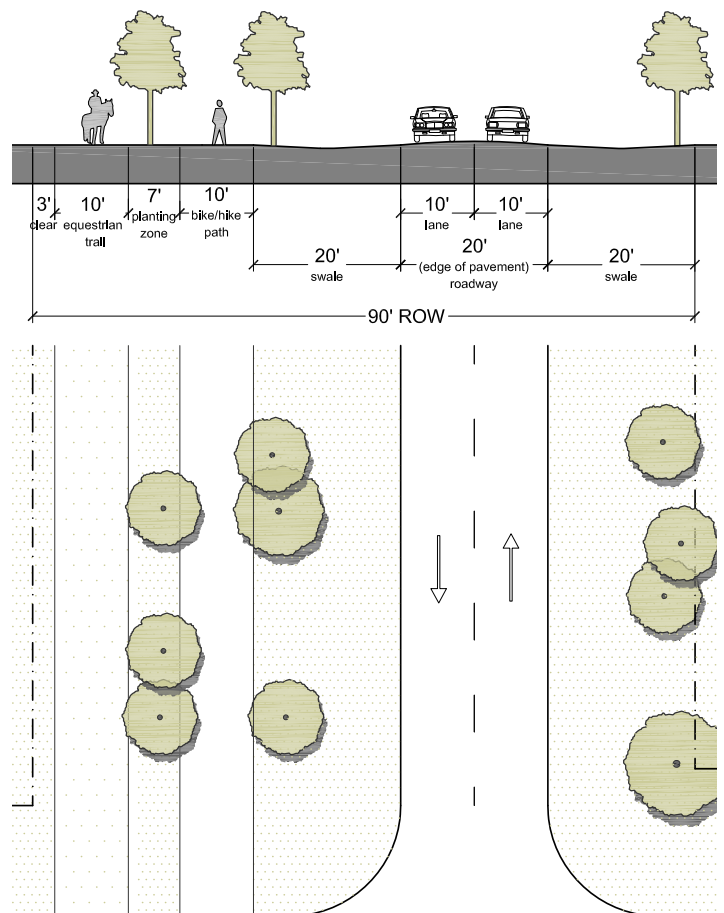
Note: Travel lanes may be increased to 12' in width in industrial zones.



Collector, Suburban

COLLECTOR - RURAL

The Rural section provides two vehicular lanes. A wide swale provides separation between pedestrians, bicyclists, equestrians, and moving vehicles. Trees in swales are typically clustered organically.



Collector, Rural

Thoroughfare Cross-sections

LOCAL STREETS

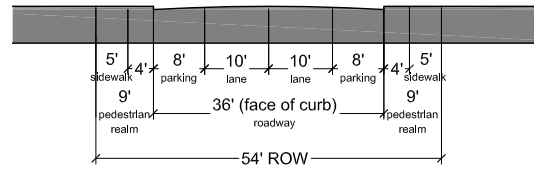
Title 19 provides several options for multi-family and commercial/industrial and residential local streets as illustrated to the right.

The existing residential local streets include:

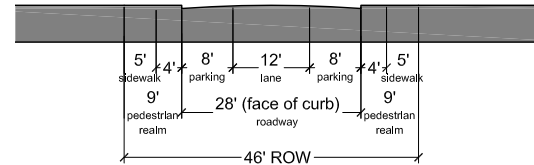
- Two 10' lanes, with and without on-street parking
- Two 9' lanes, with on-street parking
- One yield lane, with on-street parking

The multi-family and commercial/industrial local streets include:

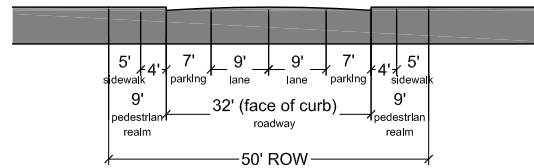
- Two 14' lanes, with on-street parking
- Two 18' lanes



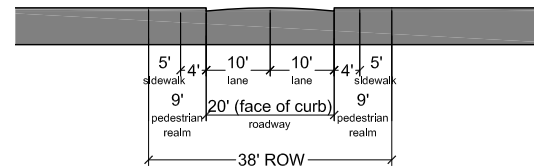
36' Local Residential 1, as exists in Title 19;
(to be replaced by Local Street, pages 23 and 24)



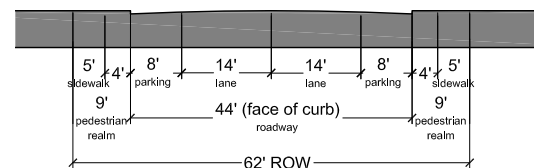
28' Local Residential 2, as exists in Title 19
(to be replaced by Local Street, pages 23 and 24)



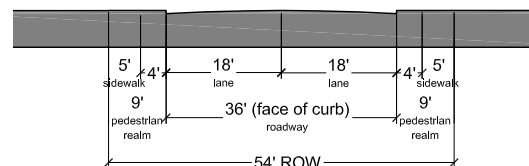
32' Local Residential 3, as exists in Title 19
(to be replaced by Local Street, pages 23 and 24)



20' Residential Lane, as exists in Title 19
(to be replaced by Local Street, pages 23 and 24)



Multi-Family & Commercial/Industrial Local Street 1, as exists in Title 19
(to be replaced by Local Street, pages 23 and 24)



Multi-Family & Commercial/Industrial Local Street 2, as exists in Title 19
(to be replaced by Local Street, pages 23 and 24)

In place of the existing Title 19 cross-sections for local streets, the next two pages present three local street cross-sections, which vary based on area types that describe the surrounding urban context (Compact Urban, Drivable Suburban, or Rural).

These basic sections may be modified by using the potential options identified below.

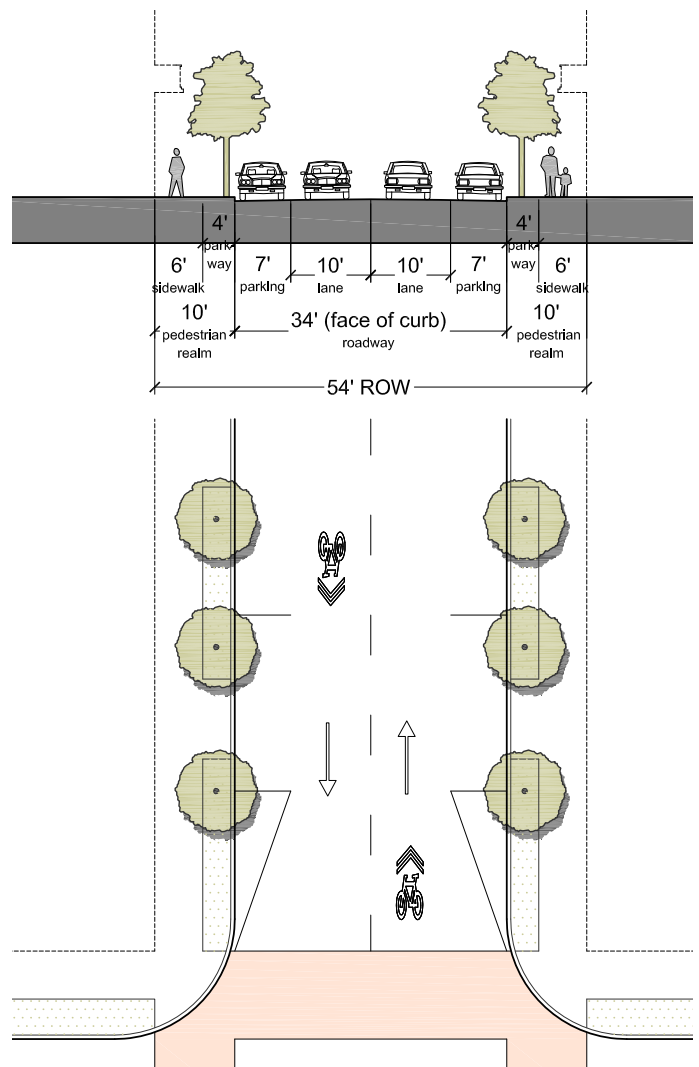
LOCAL STREET - COMPACT URBAN

In the Compact Urban context, vehicular lanes are reduced to ten feet in width and sharrow markings are provided to slow the vehicular design speeds and provide a better balance between all modes of travel (vehicle, pedestrian, and bike).

On-street parking produces further traffic calming, and provides a buffer between pedestrians and moving vehicles. The street gutter pan should be located within the prescribed parking lane dimension. Where left turn lanes are needed, parking may be eliminated closest to intersections to provide needed width.

LOCAL STREET - POTENTIAL OPTIONS			
	Compact Urban	Drivable Suburban	Rural
Add 2 More Lanes (see pg 25)			
Add Median (see pg 26)			
Add Safety Strip (see pg 26)			
Add Cycle Track (see pg 27)			
Substitute Multiway Boulevard (see pg 28)			
Substitute Multiway Boulevard with Bike/Hike Path (see pg 29)			
Substitute SmartCode Assemblies (see pg 30)	•		
Substitute Parkway / Tree Well (see pg 30)	•		
Substitute Bike/Hike Path for Sidewalk (see pg 30)		•	
“•” = permitted			

The Potential Options shown in this chart are modifications available for the cross-sections.

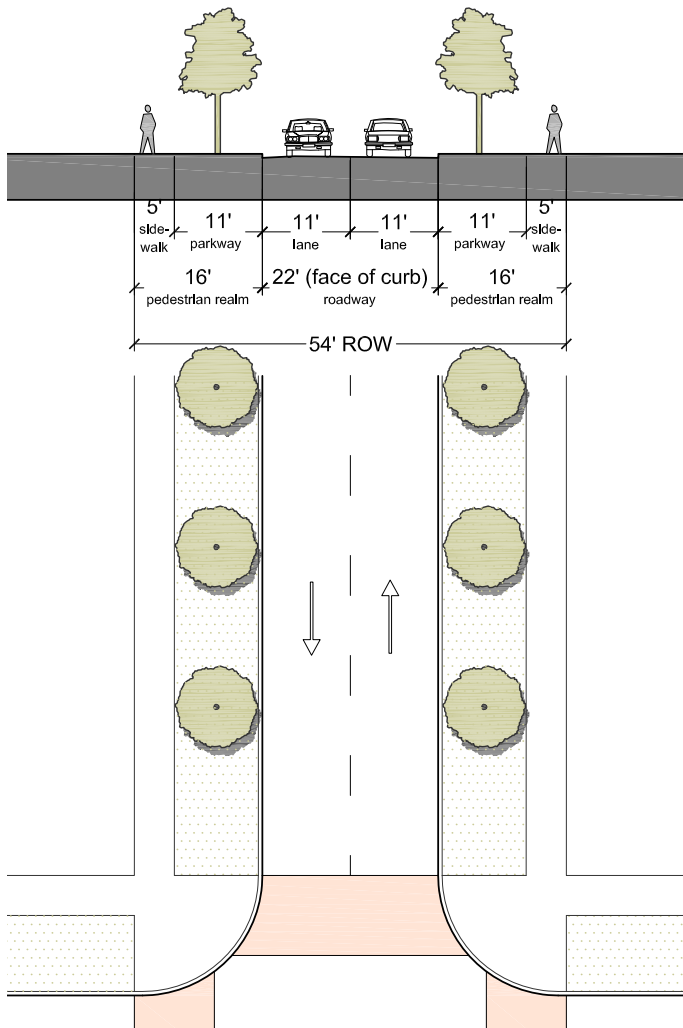


Local Street, Compact Urban

LOCAL STREET - SUBURBAN

The Suburban section is the most similar to the existing permitted sections. Bicyclists and vehicles share the travel lanes in the local street setting. The tree-lined parkway provides separation between pedestrians, bicyclists, and moving vehicles.

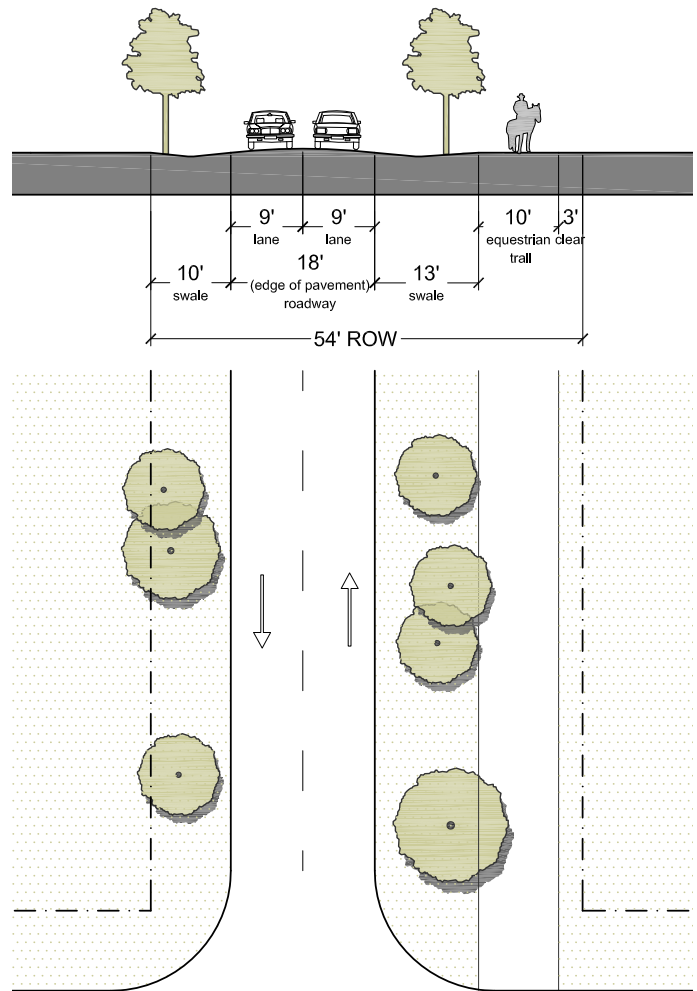
Note: Travel lanes may be increased to 12' in width in industrial zones.



Local Street, Suburban

LOCAL STREET - RURAL

The Rural section provides two vehicular lanes and a wide swale. Bicyclists and vehicles share the travel lanes in the local street setting. A path may optionally be provided for equestrians, separated from travel lanes by a 13' swale. Trees in swales are typically clustered organically.



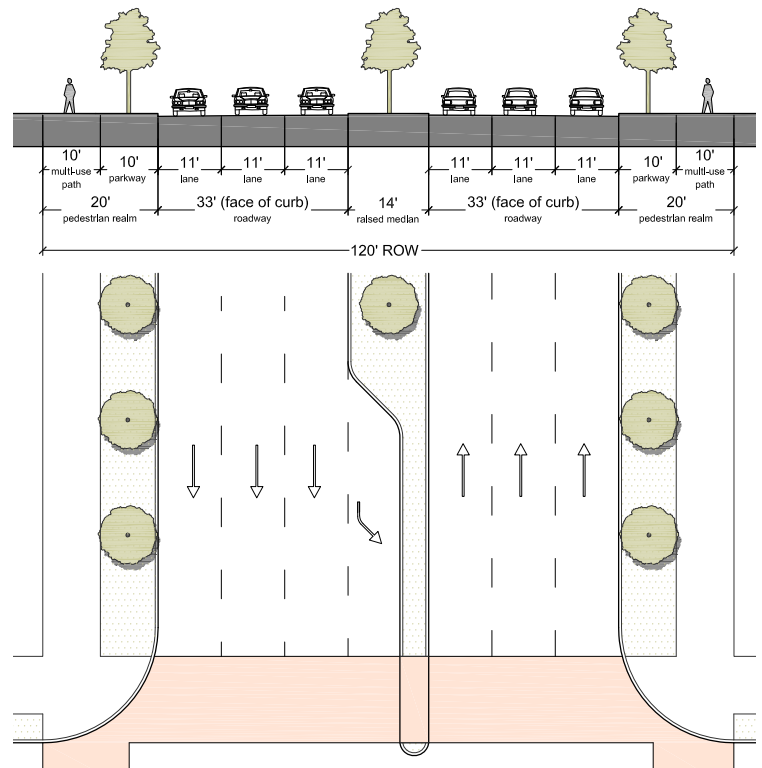
Local Street, Rural

POTENTIAL OPTIONS

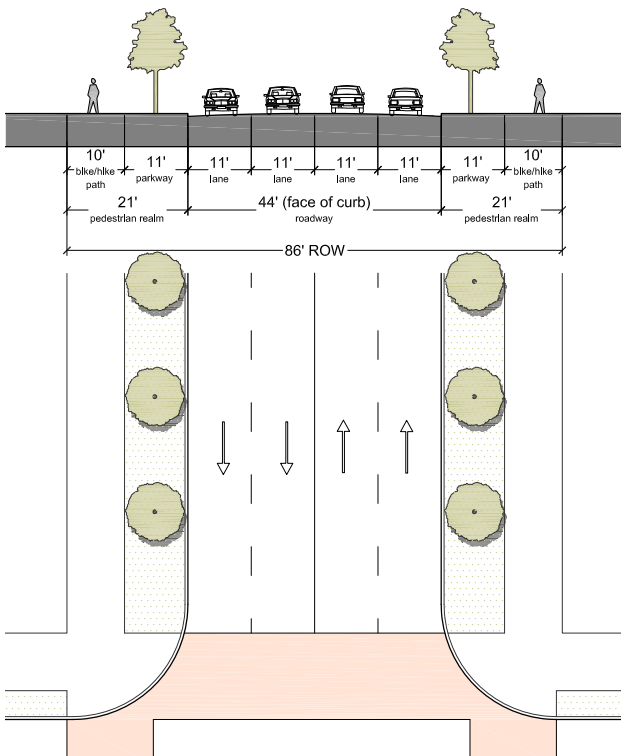
OPTIONS: ADD TWO MORE LANES

Two additional lanes may be added to the certain Suburban and Rural arterial streets (see Table 3), if warranted by traffic demand. The widened cross sections are illustrated on this page; they include:

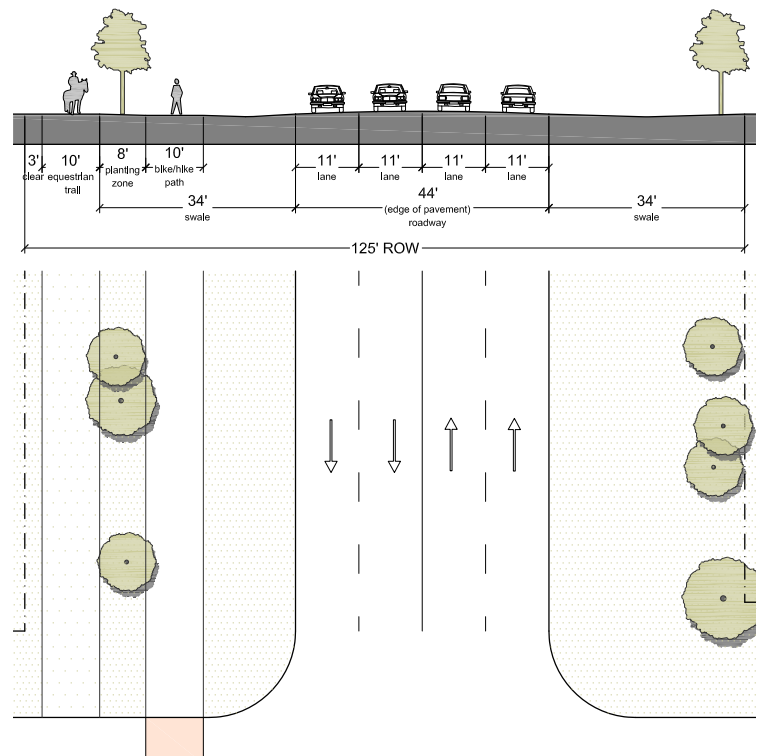
- 6 Lane Principal Arterial, Suburban
- 4 Lane Minor Arterial, Suburban
- 4 Lane Principal Arterial, Rural



6 Lane Principal Arterial, Suburban (proposed)



4 Lane Minor Arterial, Suburban



4 Lane Principal Arterial, Rural

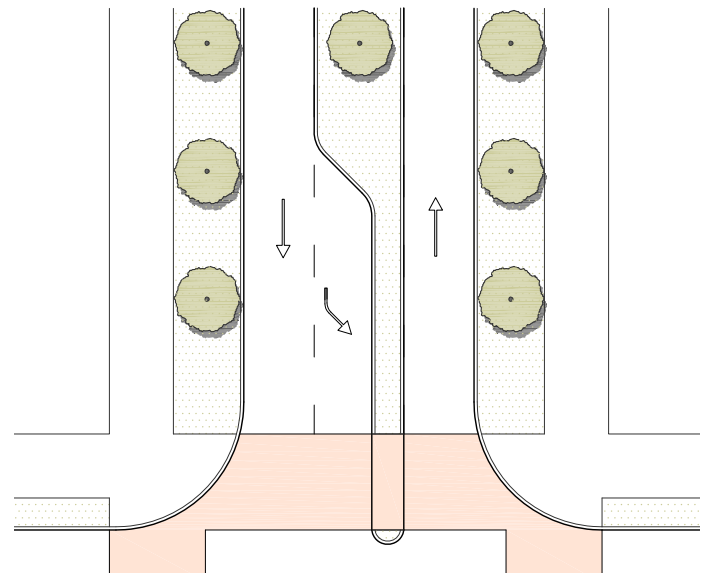
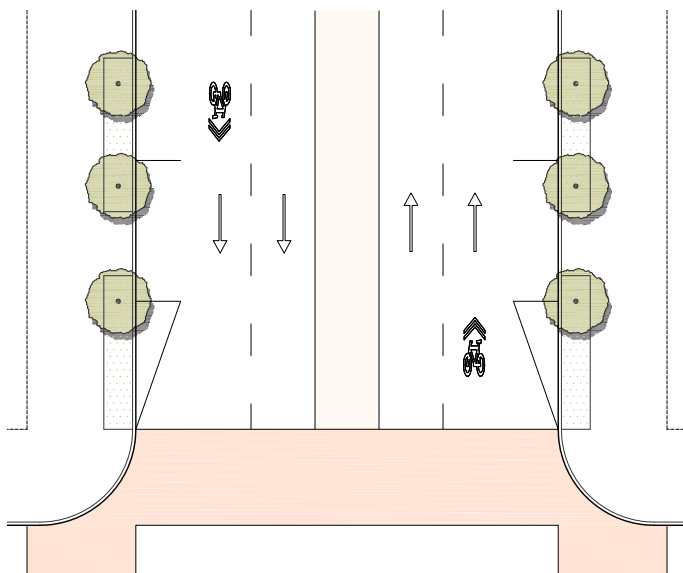
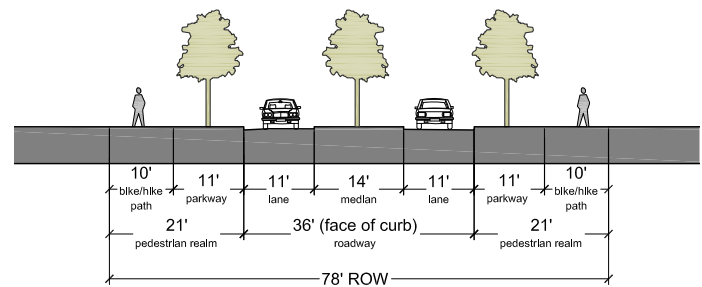
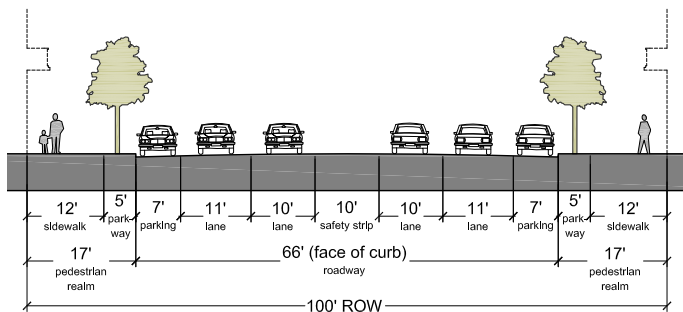
OPTIONS: ADD SAFETY STRIP

In Compact Urban contexts, a safety strip may be used instead of a median. The safety strip is typically 10' in width, and of a different color and/or material (for example, cobblestone) than the travel lanes. The safety strip can provide space for turning vehicles, eliminating the need for a turn lane; the use of the safety strip also slows vehicular speeds, which is essential in the multi-modal Compact Urban setting.

OPTIONS: ADD MEDIAN

In Suburban and Rural contexts, a median may optionally be added as indicated on Table 3. The width of the median shall be 14' minimum; adding a median to the street section will result in a wider right-of-way. At the intersection, the median width can be used for a turn lane and a minimum 5' wide pedestrian refuge space.

Medians are not typically found in Compact Urban settings, as they create a wider street space (distance from building face to building face) and faster vehicular speeds than desired.



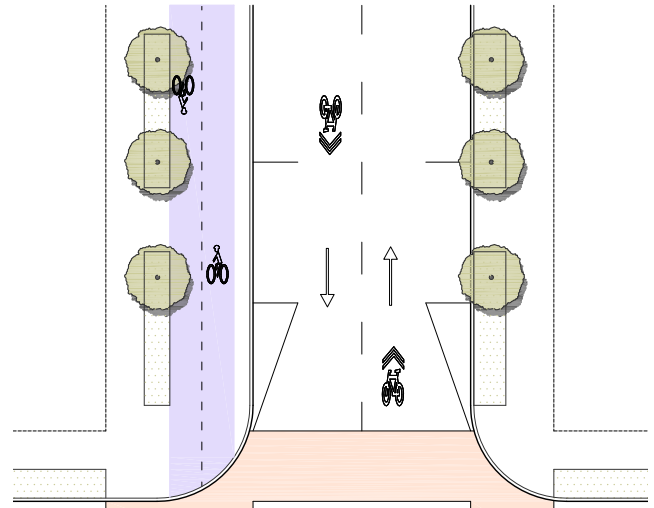
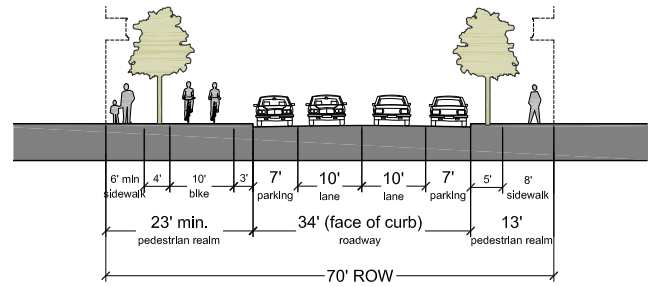
Principal Arterial, Compact Urban, with Safety Strip

Minor Arterial, Suburban, with Median

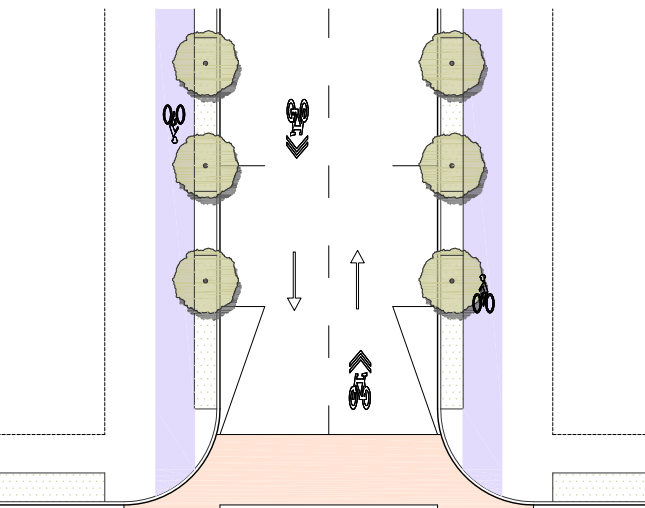
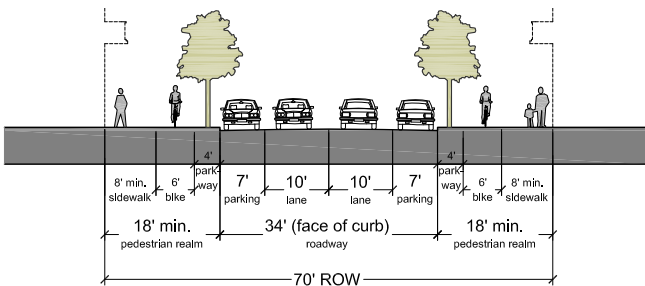
OPTIONS: ADD CYCLE TRACK

In Compact Urban contexts, a cycle track may be added to the cross-section to provide further enhancement of bicycle facilities. Experienced cyclists will prefer to travel in sharrow lanes, and these should continue to be provided; however, novice bicyclists may feel more comfortable using the cycle track as an alternative. Cycle tracks provide heightened awareness, and promote the use of bicycling as a mode of transit. Cycle tracks are typically best implemented in areas where block lengths are long (equal to or greater than 800') for a more continuous flow.

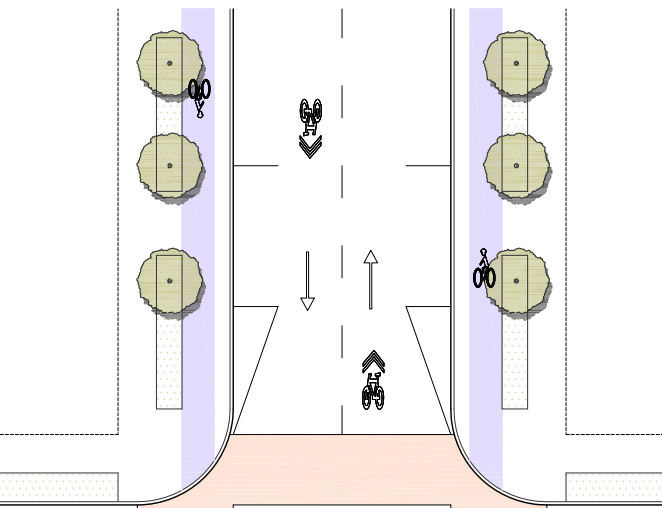
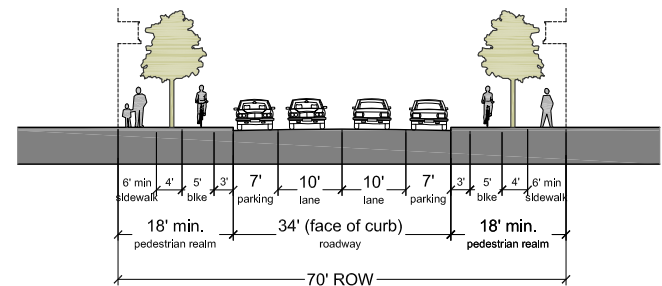
On this page, options for one-way or two-way cycle track configuration are illustrated. The cycle track and planter width shall be as illustrated; the sidewalk width may vary, and thus only a minimum dimension is specified.



Two-way Cycle Track



One-way Cycle Track, Adjacent to Sidewalk

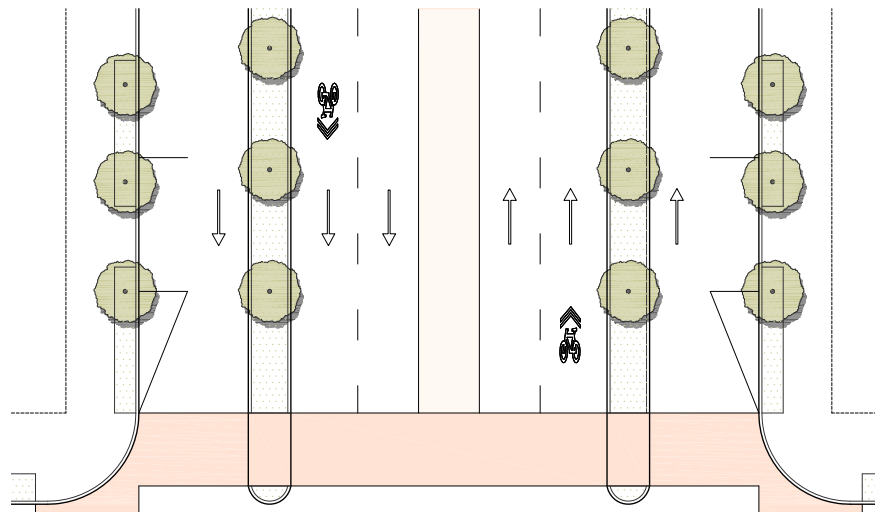
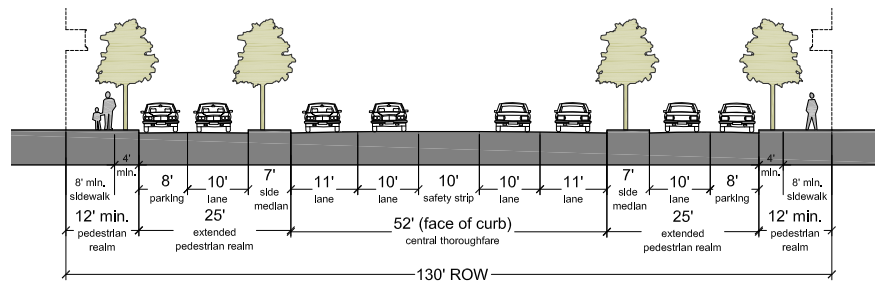


One-way Cycle Track, Adjacent to Parking

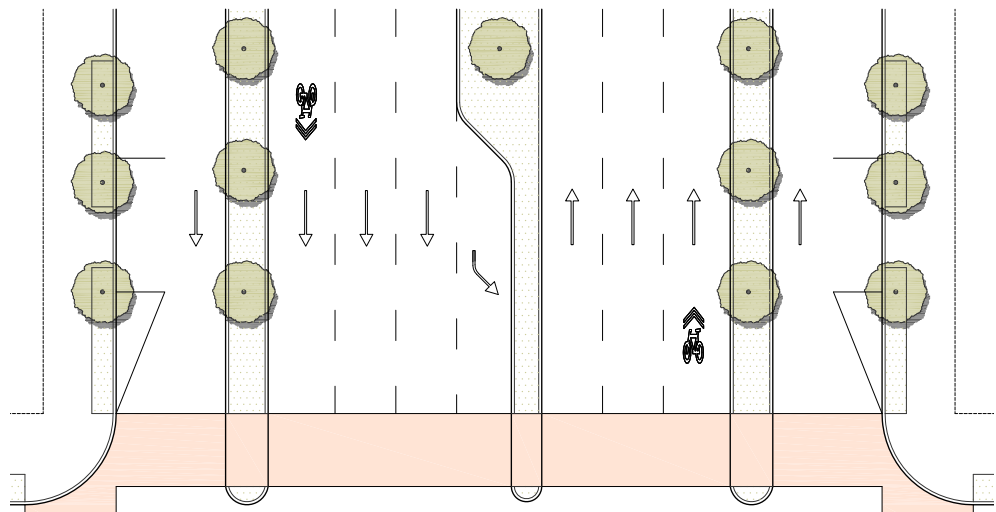
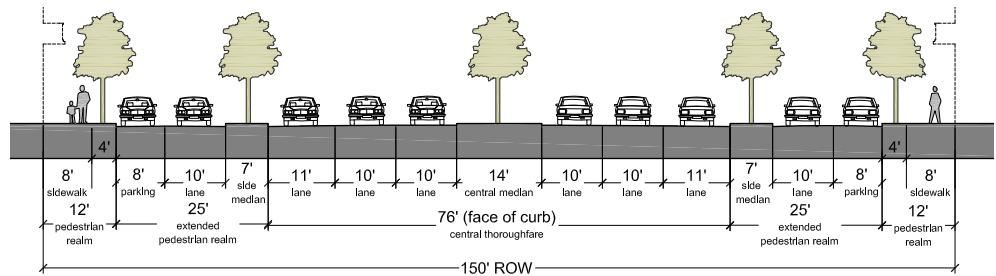
OPTIONS: SUBSTITUTE MULTIWAY BOULEVARD

The Multiway Boulevard option provides a blending of faster-moving through lanes in a central thoroughfare, and slower-moving lanes in the extended pedestrian realm, separated by a side median. This section can be used in place of principal arterial streets in Compact Urban areas, where sufficient right-of-way is available.

The central thoroughfare may be 4 or 6 lanes, dependant on traffic demand. A median or safety strip may optionally be provided as part of the central thoroughfare in 4 lane sections. A median shall be provided as part of the central thoroughfare in 6 lane sections..



Principal Arterial (4 Lane) Multiway Boulevard with Safety Strip

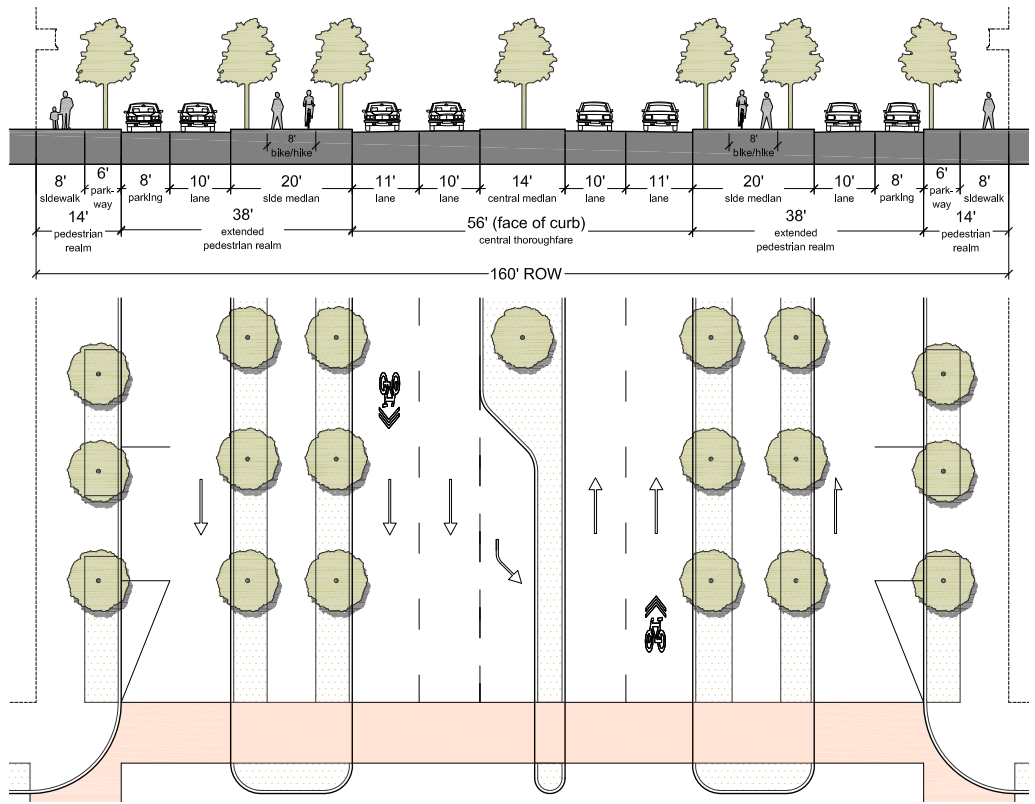


Principal Arterial (6 Lane) Multiway Boulevard with Median

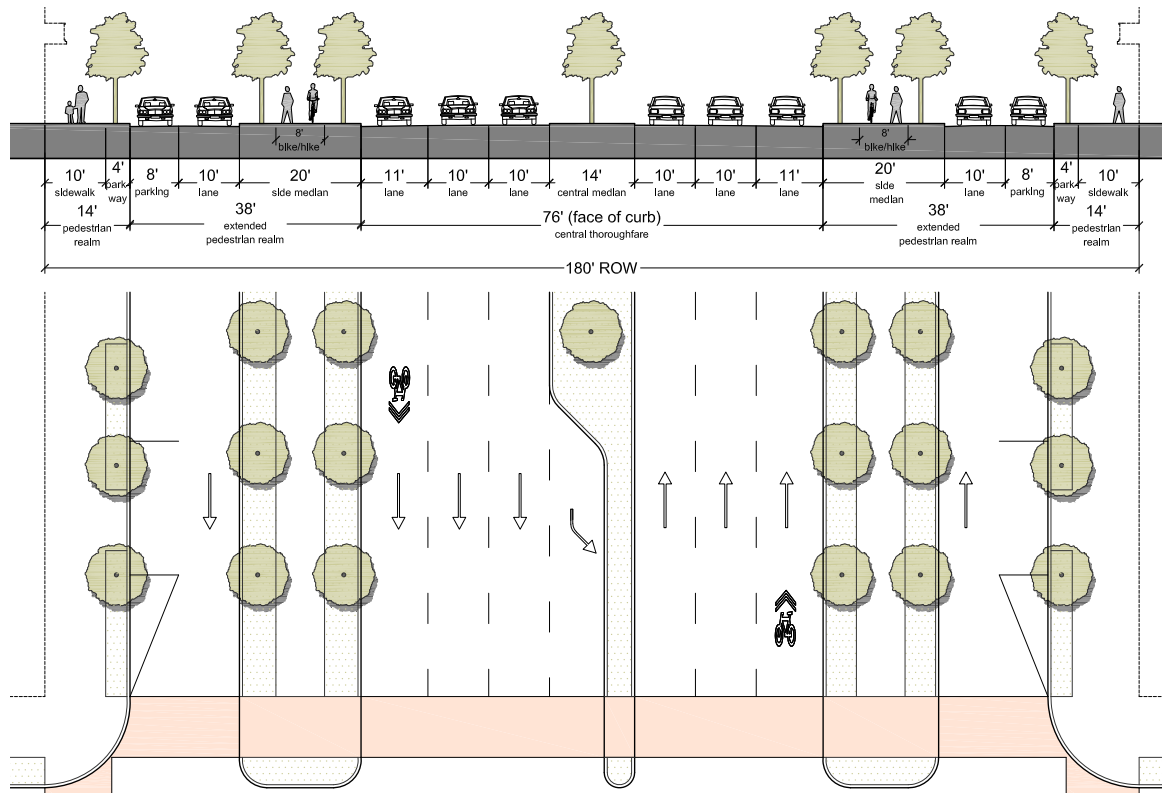
OPTIONS: SUBSTITUTE MULTIWAY BOULEVARD WITH BIKE/HIKE

The Multiway Boulevard with bike/hike is an alternative to the previous sections, providing further enhancement of bicycle facilities. Experienced cyclists may prefer to travel in sharrow lanes, and these should continue to be provided; however all bicyclists (including novices) will feel comfortable using the bike/hike path in the side median. This section should be used for key linkages in the bicycle network, provided sufficient right-of-way is available.

The central thoroughfare may be 4 or 6 lanes, dependant on traffic demand. A median or safety strip may optionally be provided as part of the central thoroughfare in 4 lane sections. A median shall be provided as part of the central thoroughfare in 6 lane sections..



Principal Arterial (4 Lane) Multiway Boulevard with Bike Hike



Principal Arterial (6 Lane) Multiway Boulevard with Bike/Hike

OPTIONS: SUBSTITUTE SMARTCODE ASSEMBLIES

The Smartcode (Title 21) provides an assortment of approved multi-modal street options that are appropriate for Compact Urban settings. Any cross-section approved for use in the T4, T5, and/or T6 Transect Zone under Title 21 shall be available for use in Compact Urban areas.

OPTIONS: SUBSTITUTE PARKWAY/ TREE WELL

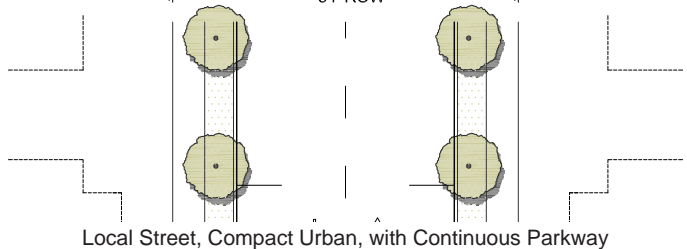
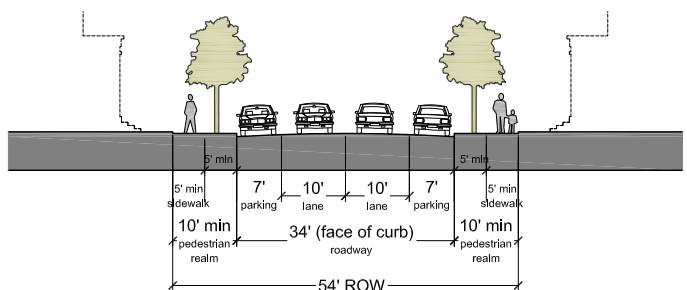
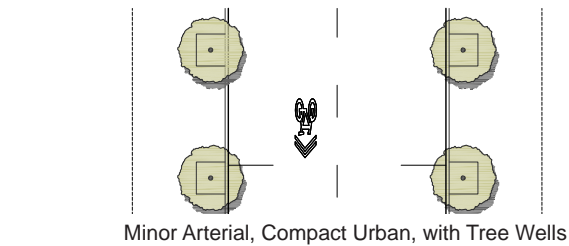
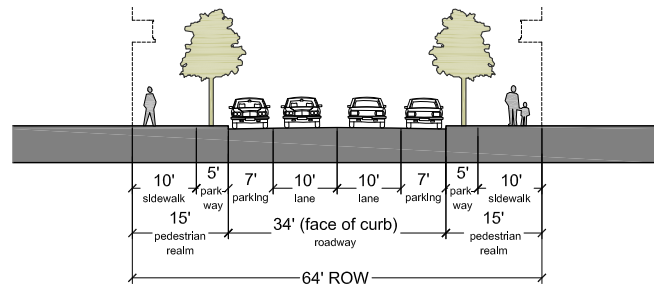
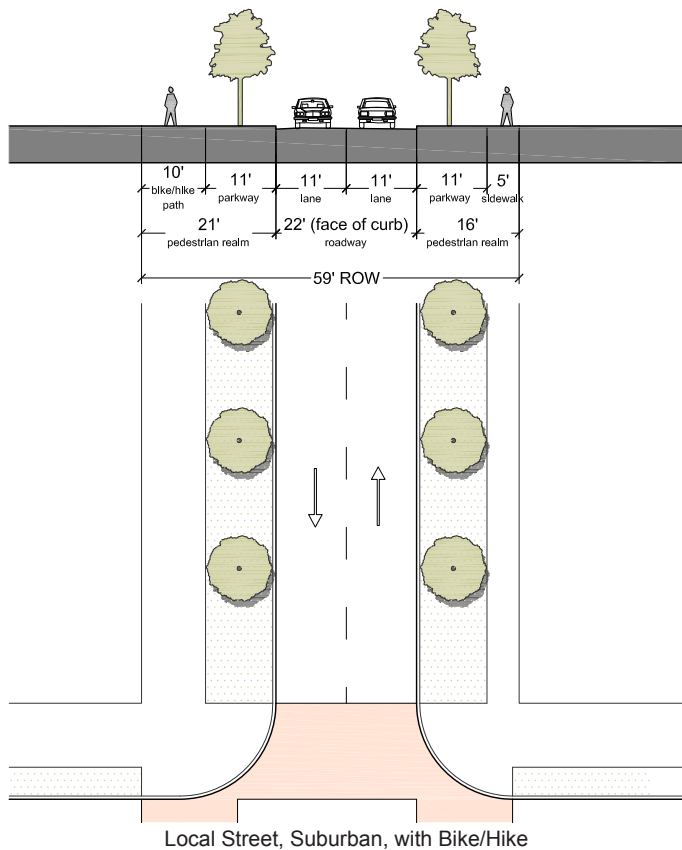
In Compact Urban areas, plantings should be calibrated to the unique urban setting. The basic Compact Urban cross-sections illustrate plantings in long planters (of at least four feet in width and twelve feet in length); these planters are intended to maximize percolation to root systems. These may be substituted for tree wells in areas of greater pedestrian activity, mix of uses and intensity (such as near shopfronts); or for continuous parkways (planting strips) in primarily residential settings.

The minimum size for a tree well shall be 4' x 4'. Grates that are flush with the sidewalk are preferred to accommodate overflow pedestrian activity.

The width of a continuous parkway shall be 5' minimum. A minimum sidewalk of 5' in width shall be provided adjacent to the parkway. Use of the continuous parkway option can result in a narrower overall right-of-way in residential settings, where a wider sidewalk (as illustrated in the basic section) is not needed.

OPTIONS: SUBSTITUTE BIKE/HIKE FOR SIDEWALK

On Suburban local streets, a bike/hike path may be substituted for the sidewalk on one or both sides of the street.



LAND DEVELOPMENT REGULATIONS

Once city officials have amended *Plan El Paso* to include the updated Thoroughfare Plan (see Appendix B for details), the subdivision regulations in Title 19 will need to be amended to reflect the new TP map, to summarize the essential characteristics of the new thoroughfare cross-sections, and to implement other policies of *Plan El Paso* relating to the City's subdivision regulations. At the same time, the *Design Standards for Construction* manual will need to be updated to include the new cross-sections.

The following list summarizes the required amendments and updates.

TITLE 19

IN CHAPTER 9:

- 19.09.030, update and clarify sections A and B

IN CHAPTER 15:

- 19.15.010.D, update section D about bike & hike pathways
- 19.15.020.A, update TP terminology
- 19.15.040, update vacation language to reflect *Plan El Paso* Policy 3.1.3
- 19.15.050.A, decrease size of subdivisions not requiring two points of vehicular access
- 19.15.050.B, increase the connectivity index score as called for in *Plan El Paso* Policy 2.3.3.a
- 19.15.060.F, clarify to reflect to the two categories of arterial streets
- 19.15.060.H, clarify to accurately depict the relationship between the TP map and the allowable cross-sections for each thoroughfare type and area type
- 19.15.060, add requirement for installation of a concrete landing strip and base for bus shelter at future bus stop locations, which will be determined by Sun Metro
- 19.15.060, add requirement that curbs in no-parking zones be painted yellow to advise the public of space needed for fire trucks to maneuver around corners
- 19.15.080.A, adjust language to reflect *Plan El Paso* Policy 2.3.5 regarding block perimeters
- 19.15.110.A, update Table 19.15-3 to reflect updated functional classifications and cross-sections and to reference Title 21 thoroughfare assemblies that can be used without requiring SmartCode zoning
- 19.15.110.B, revise text to reflect updated functional classifications

- 19.15.120, revise footnote *** to clarify that signal spacing limitations apply to freeway frontage roads but not to boulevard access lanes

- 19.15.160, update language on alleys to reflect *Plan El Paso* Policies 2.3.5.c, 4.2.2, and 4.2.4.f

IN CHAPTER 18:

- 19.18.020.B, exempt development and redevelopment in Compact Urban areas from minimum acceptable levels of service

IN CHAPTER 21:

- 19.21.020.C, update sidewalk language to reflect new thoroughfare cross-sections

IN CHAPTER 23:

- 19.23.040.B.3, update language on lots that front on arterial streets

IN CHAPTER 50:

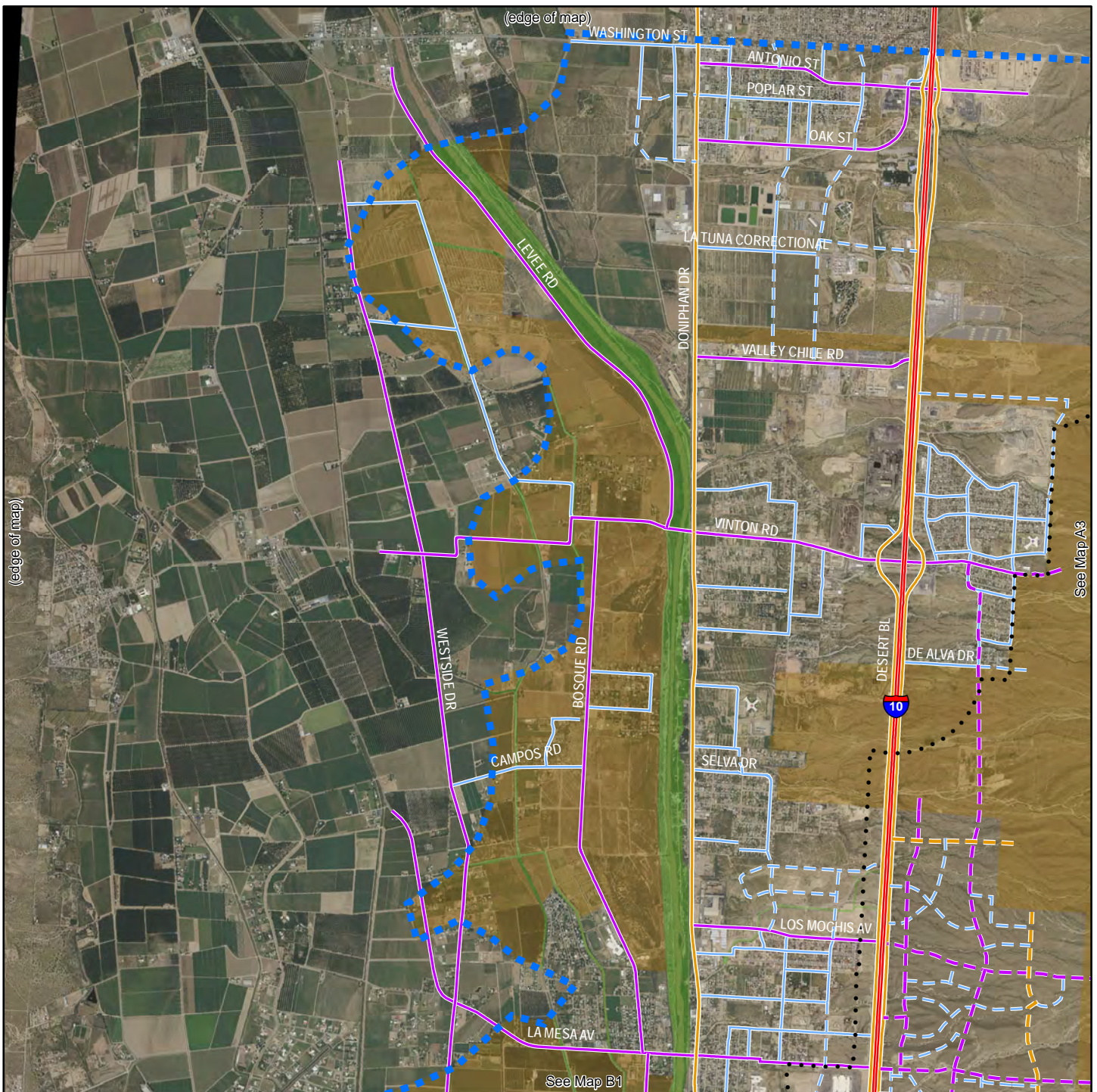
- Update definition of "Comprehensive Plan" to reflect the current *Plan El Paso*
- Update definition of "Street" to reflect new thoroughfare classification system
- Update definition of "Thoroughfare Plan" to reflect current terminology

DESIGN STANDARDS FOR CONSTRUCTION

- Update Pages 3-1 through 3-9 to reflect the revised thoroughfare cross-sections presented in this report
- Update other sections as needed to reflect the ITE Recommended Practice, *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*.

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APPENDIX A - MAP ATLAS



EL PASO THOROUGHFARE PLAN UPDATE -- Map A1

EXISTING THOROUGHFARES:

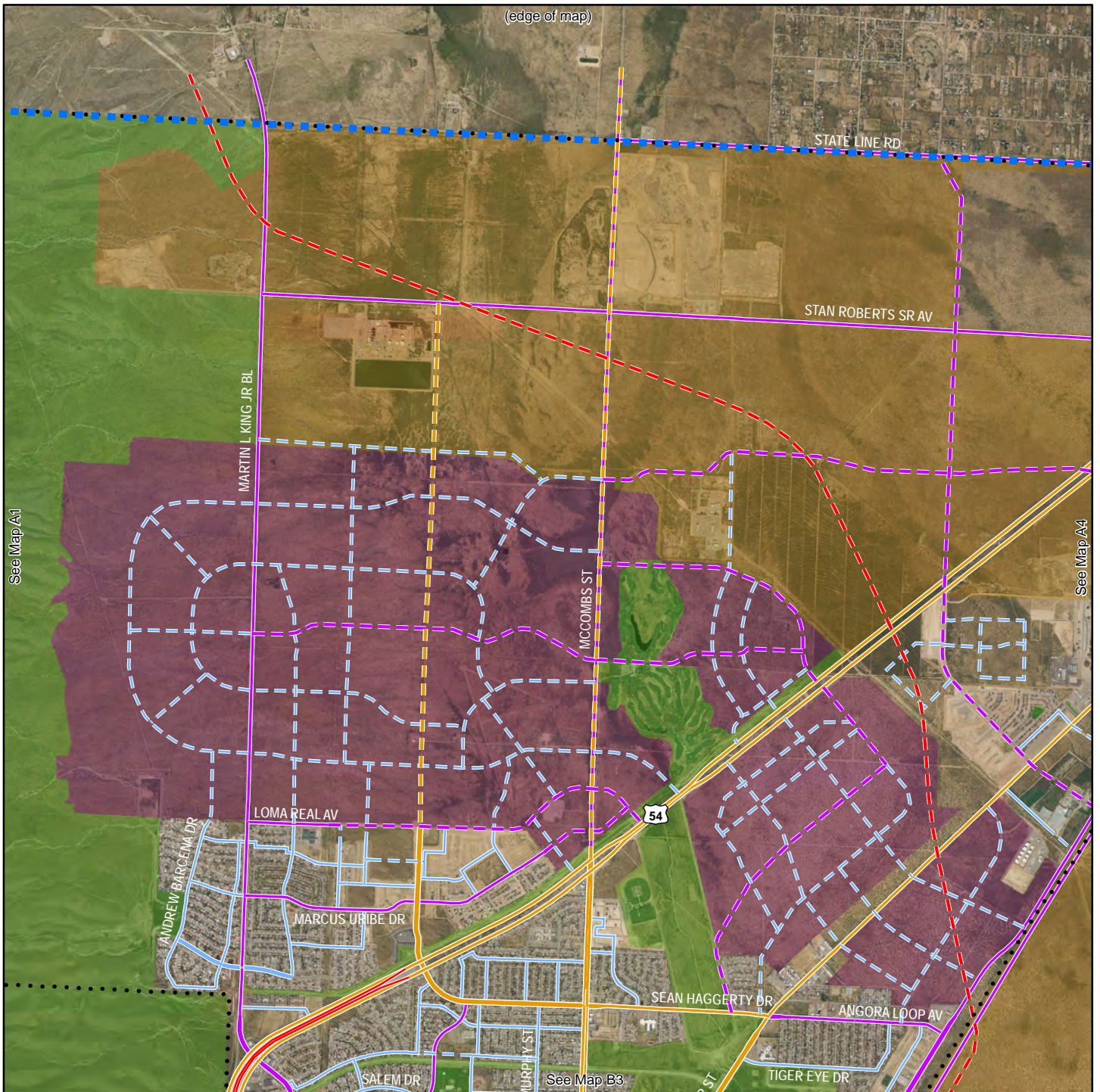
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector

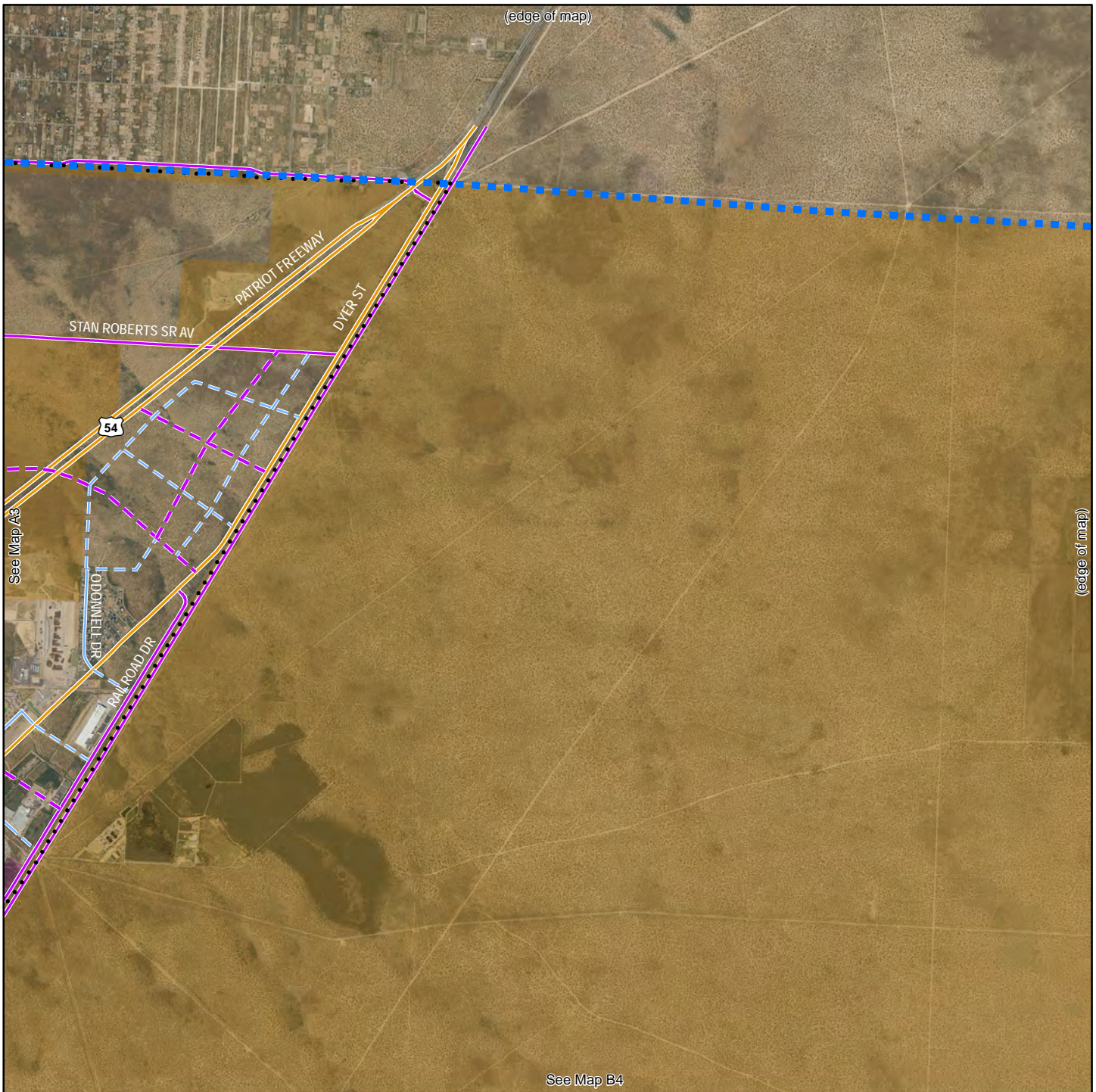
- Compact Urban
- Drivable Suburban
- Rural *
- Open Space
- El Paso County
- City of El Paso





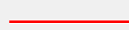
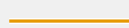
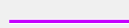
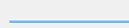
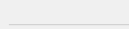
EL PASO THOROUGHFARE PLAN UPDATE -- Map A3

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso




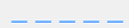


EL PASO THOROUGHFARE PLAN UPDATE -- Map A4


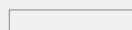




EXISTING THOROUGHFARES:

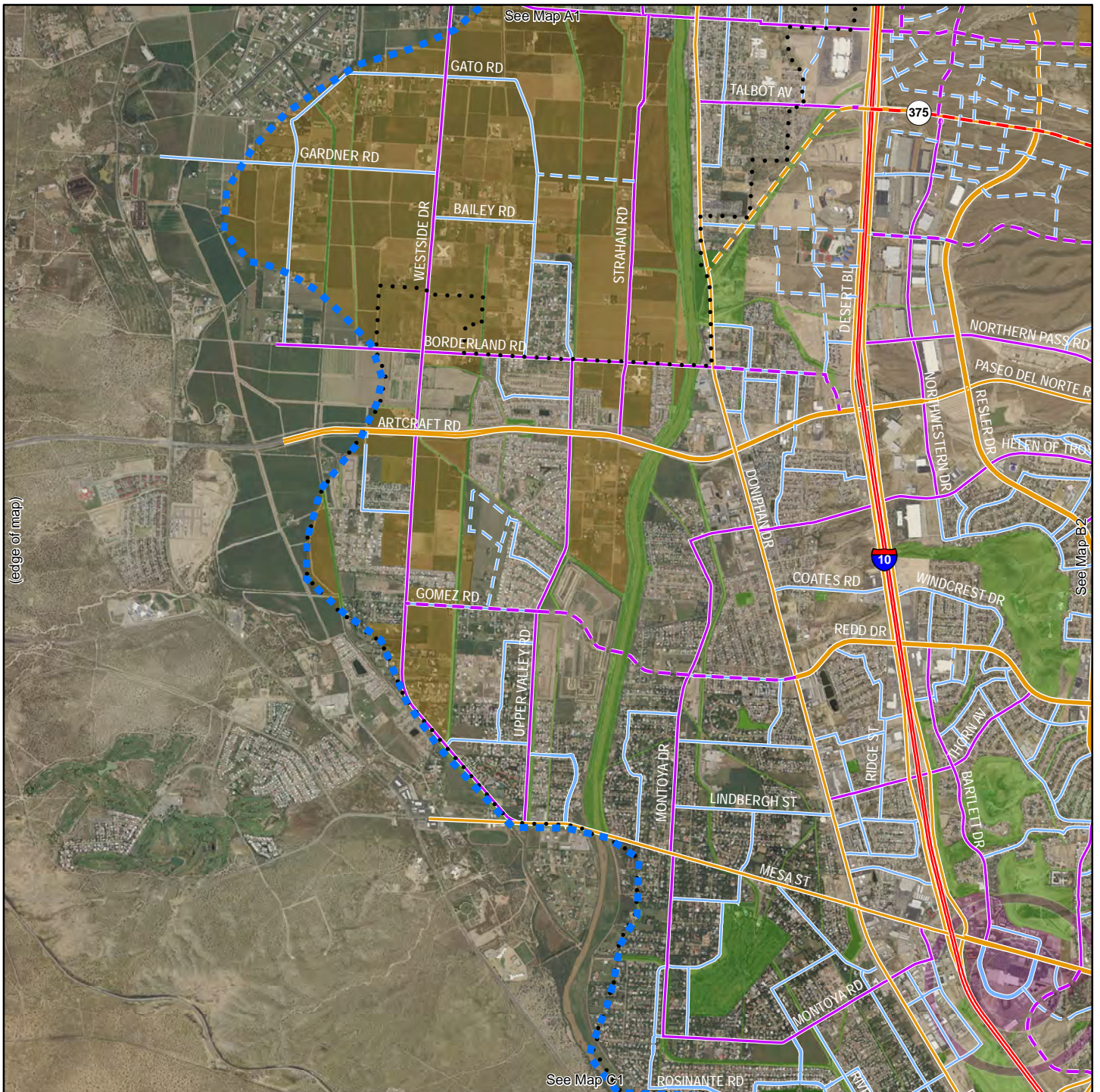
-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector
-  Local

PROPOSED THOROUGHFARES:

-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector



-  Compact Urban
-  Drivable Suburban
-  Rural
-  Open Space
-  El Paso County
-  City of El Paso



(edge of map)

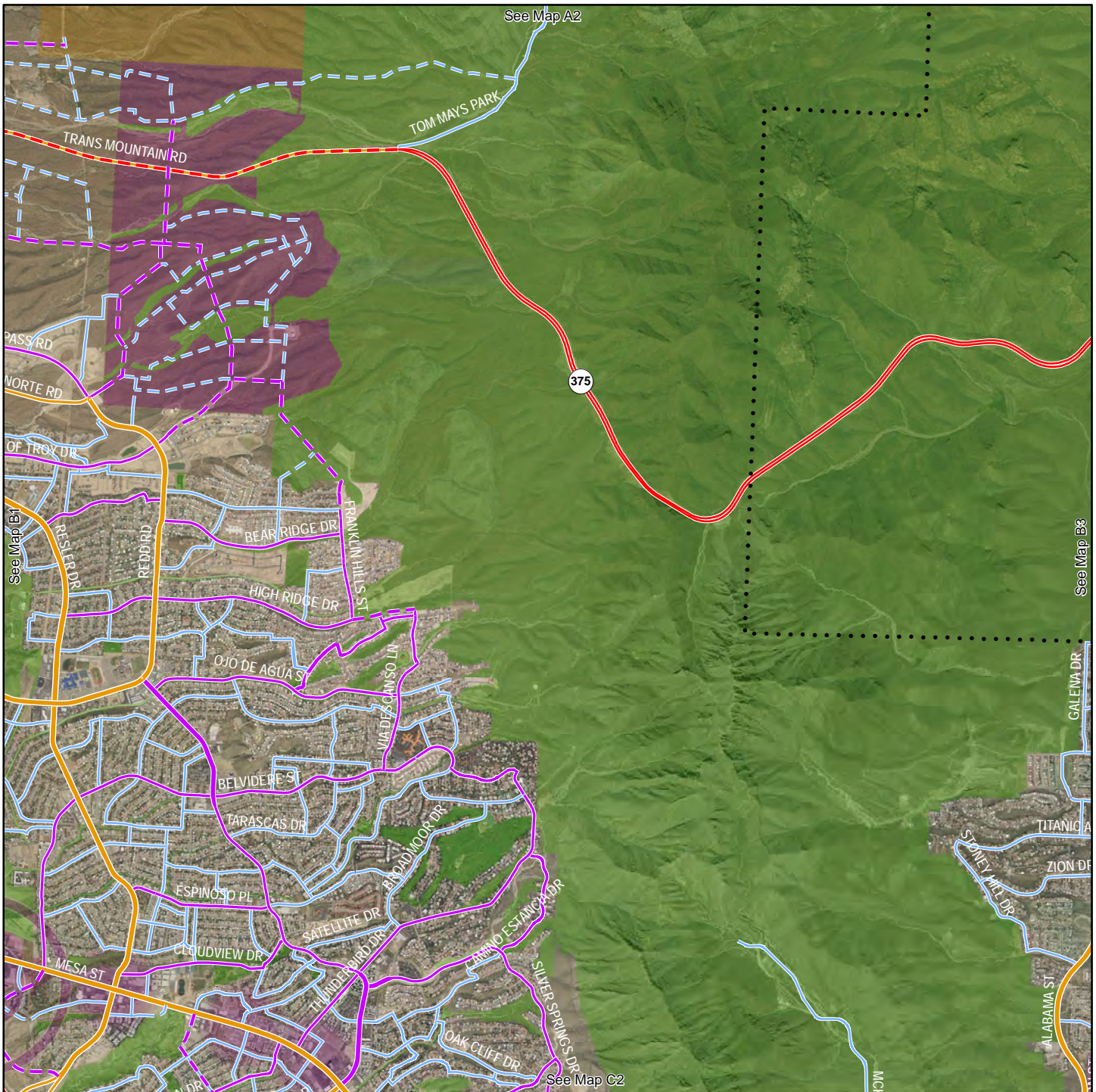
See Map B2

See Map A1

See Map C1

EL PASO THOROUGHFARE PLAN UPDATE -- Map B1

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map B2

EXISTING THOROUGHFARES:

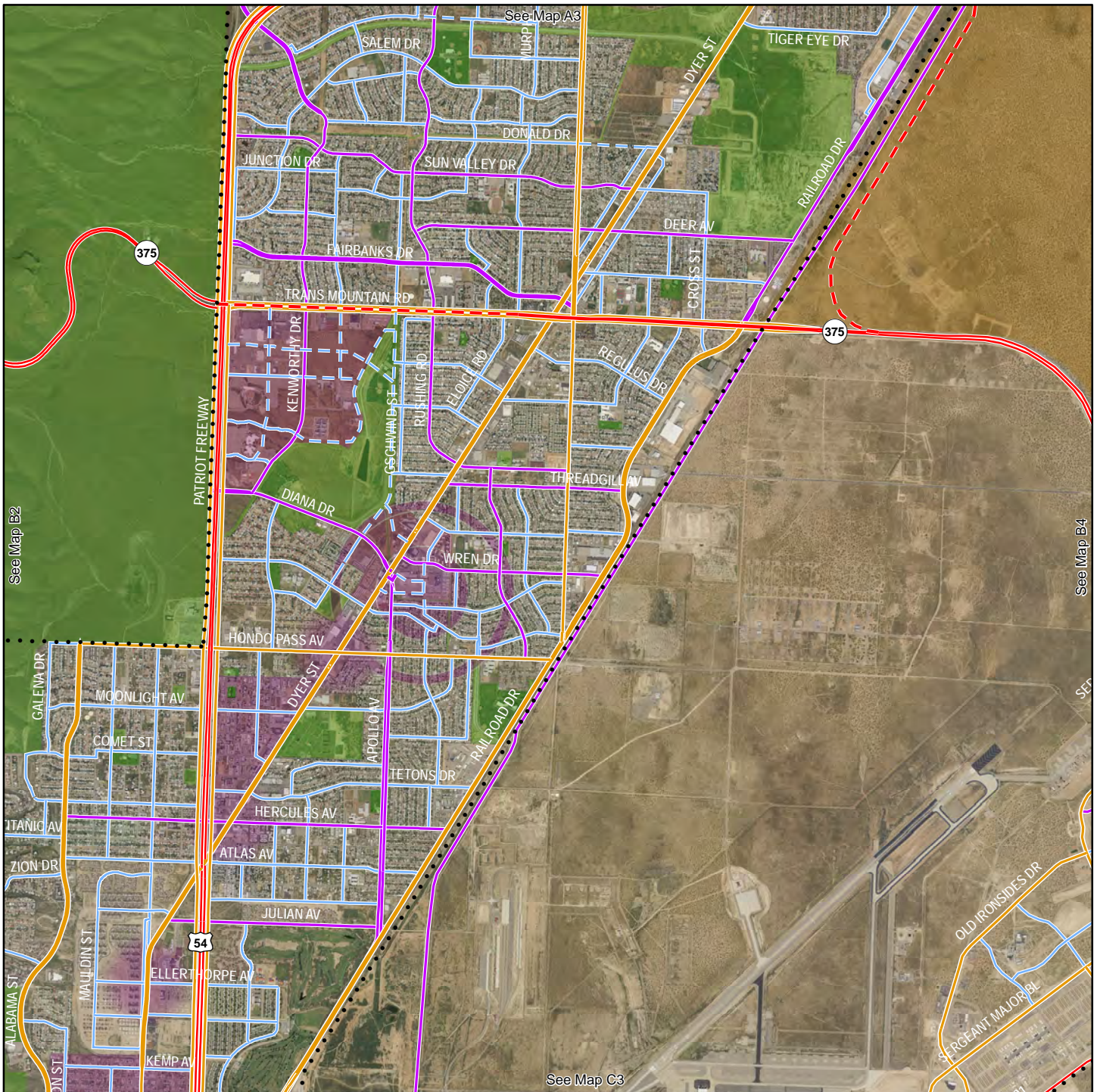
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector


- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso

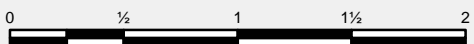




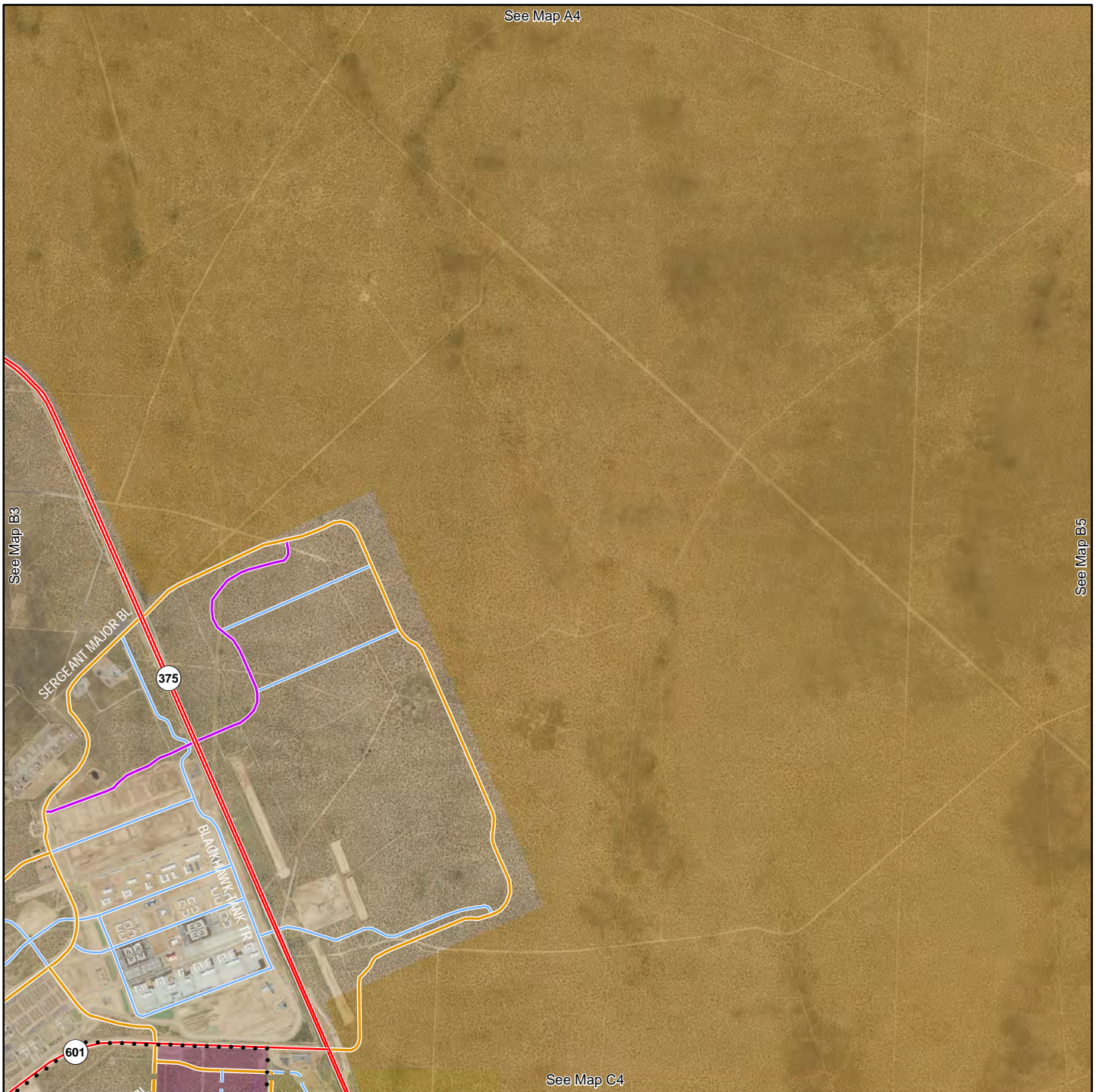
EL PASO THOROUGHFARE PLAN UPDATE -- Map B3

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso



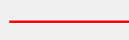

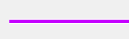
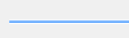
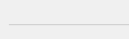


0 1/2 1 1 1/2 2
Miles




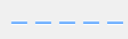


EL PASO THOROUGHFARE PLAN UPDATE -- Map B4


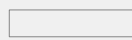




EXISTING THOROUGHFARES:

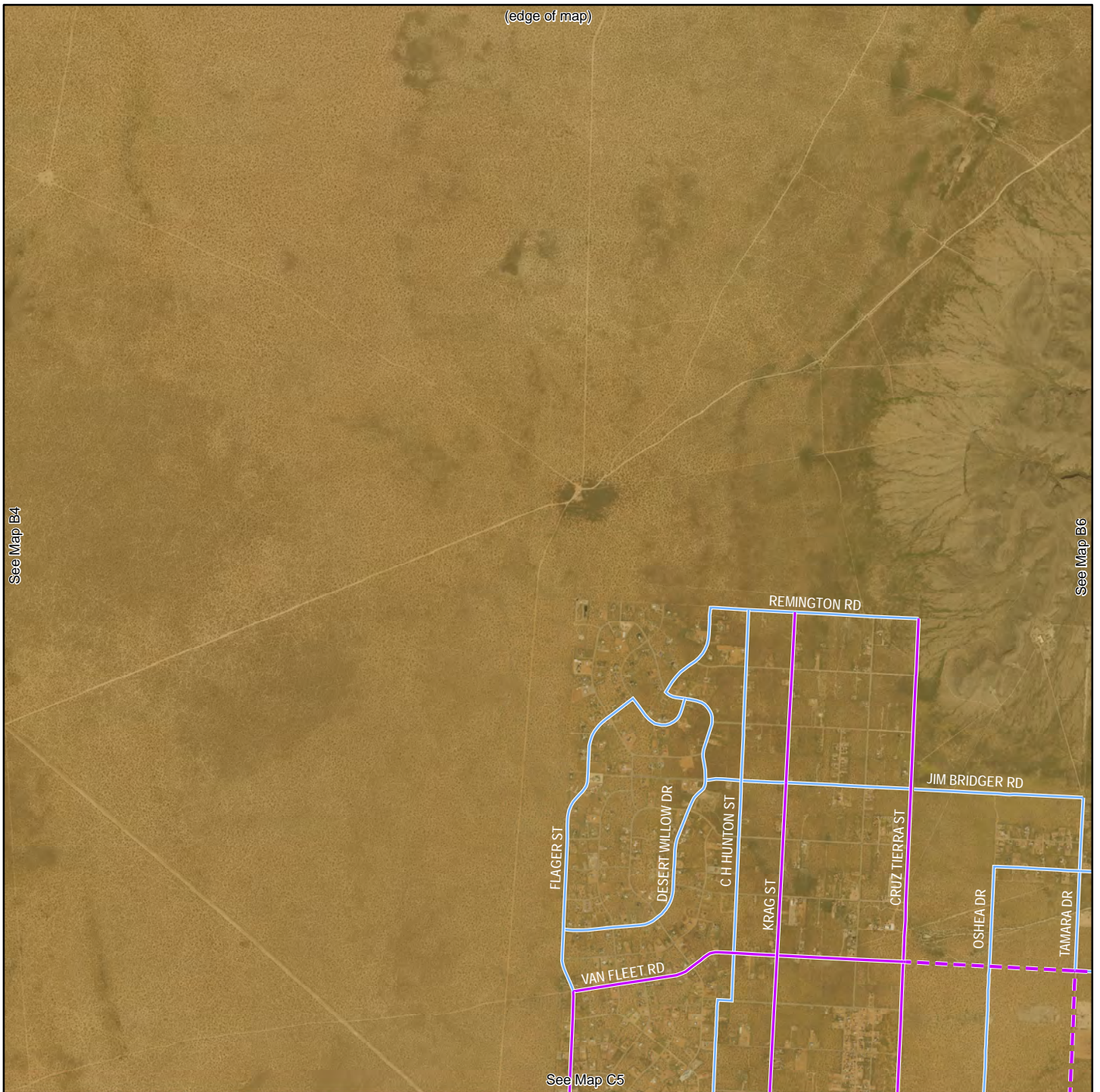
-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector
-  Local

PROPOSED THOROUGHFARES:

-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector



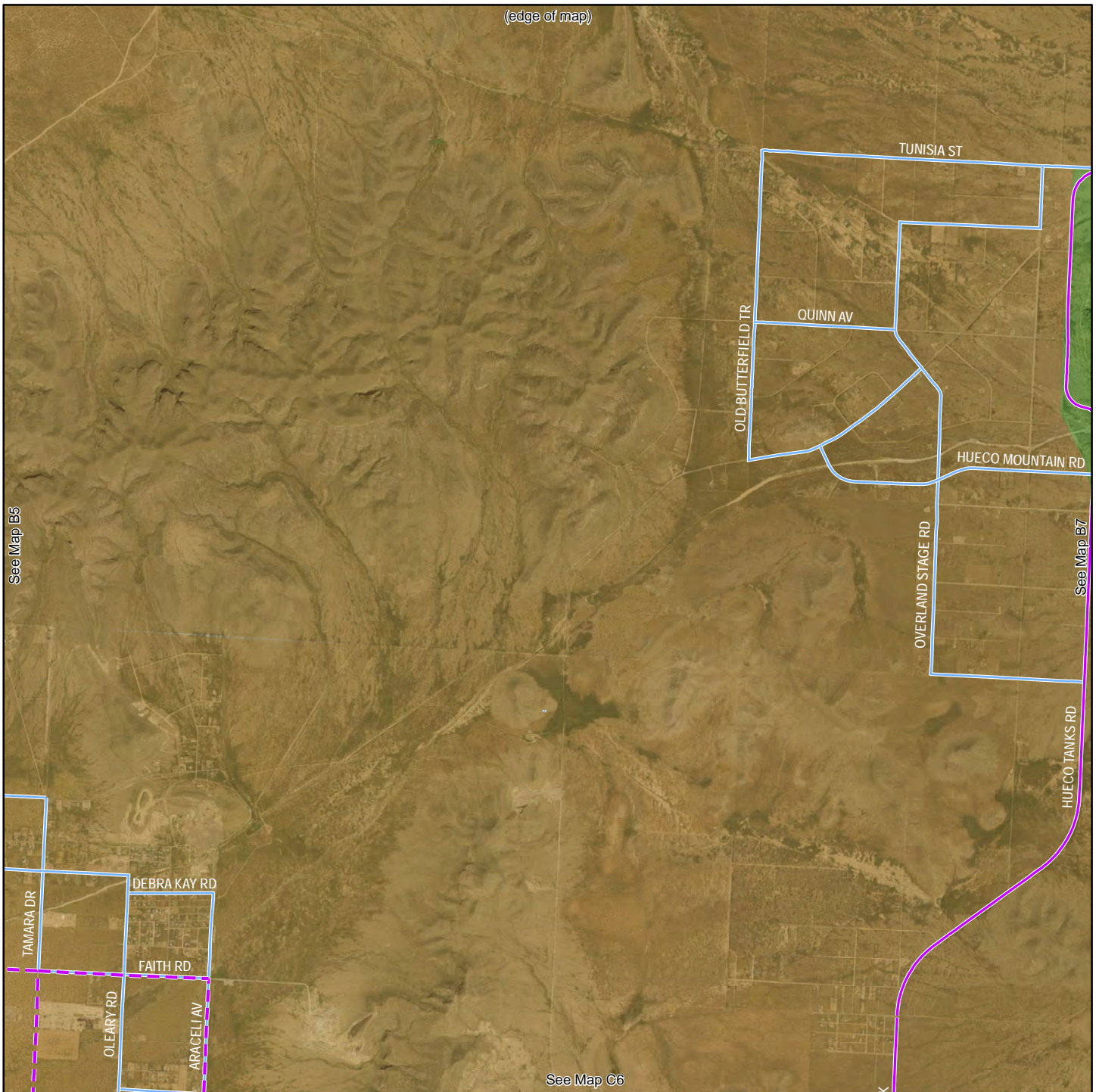
-  Compact Urban
-  Drivable Suburban
-  Rural
-  Open Space
-  El Paso County
-  City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map B5

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso

0 1/2 1 1 1/2 2
Miles



EL PASO THOROUGHFARE PLAN UPDATE -- Map B6

EXISTING THOROUGHFARES:

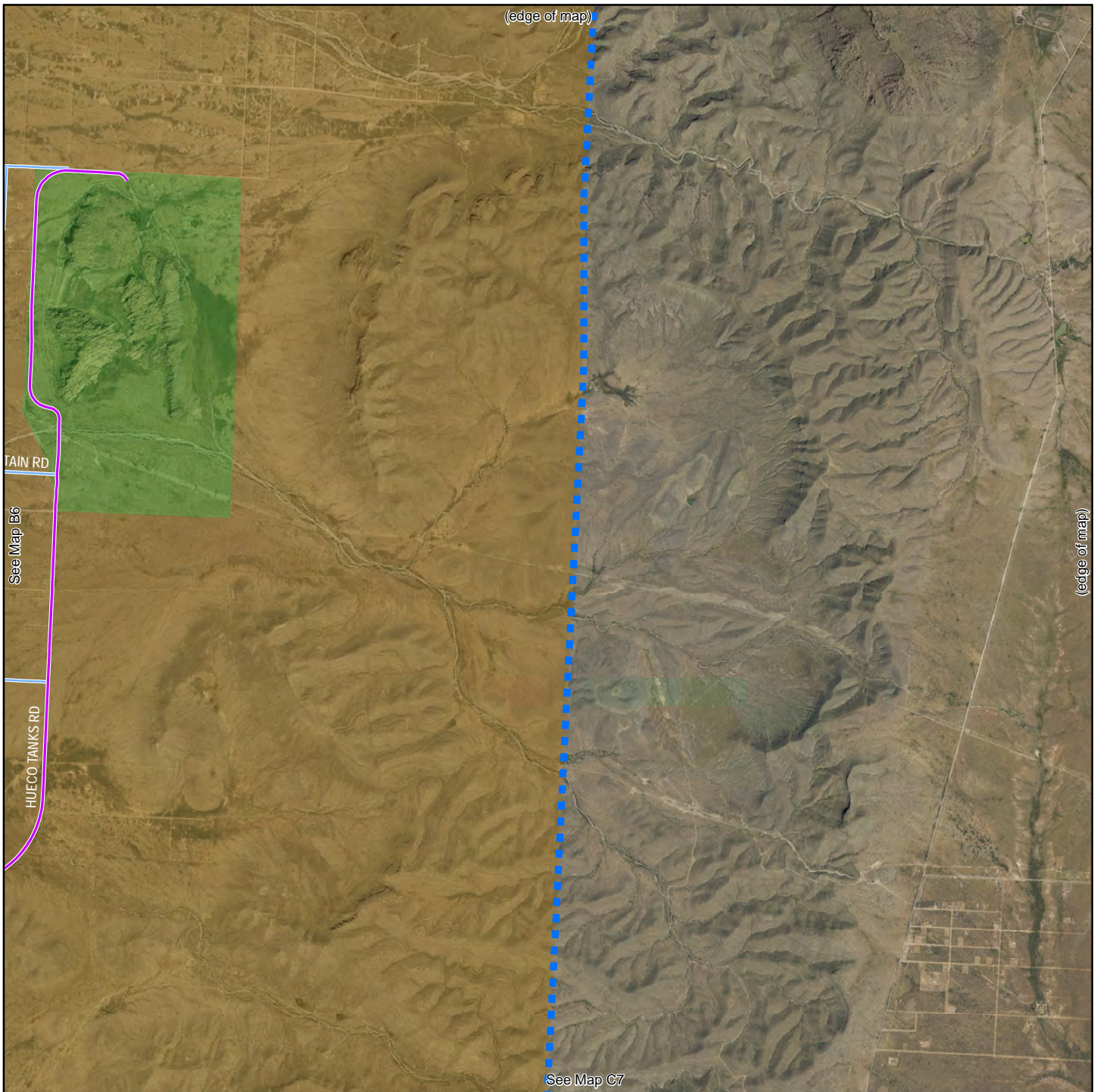
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:


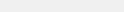
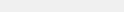
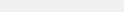
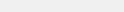
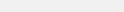
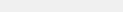
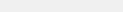
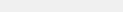
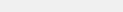
- Expressway
- Principal Arterial
- Minor Arterial
- Collector

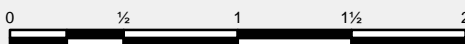


- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso


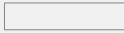






EL PASO THOROUGHFARE PLAN UPDATE -- Map B7

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
<ul style="list-style-type: none">  Expressway  Principal Arterial  Minor Arterial  Collector  Local 	<ul style="list-style-type: none">  Expressway  Principal Arterial  Minor Arterial  Collector 	



0 1/2 1 1 1/2 2
Miles

-  Compact Urban
-  Drivable Suburban
-  Rural
-  Open Space
-  El Paso County
-  City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map C1

EXISTING THOROUGHFARES:

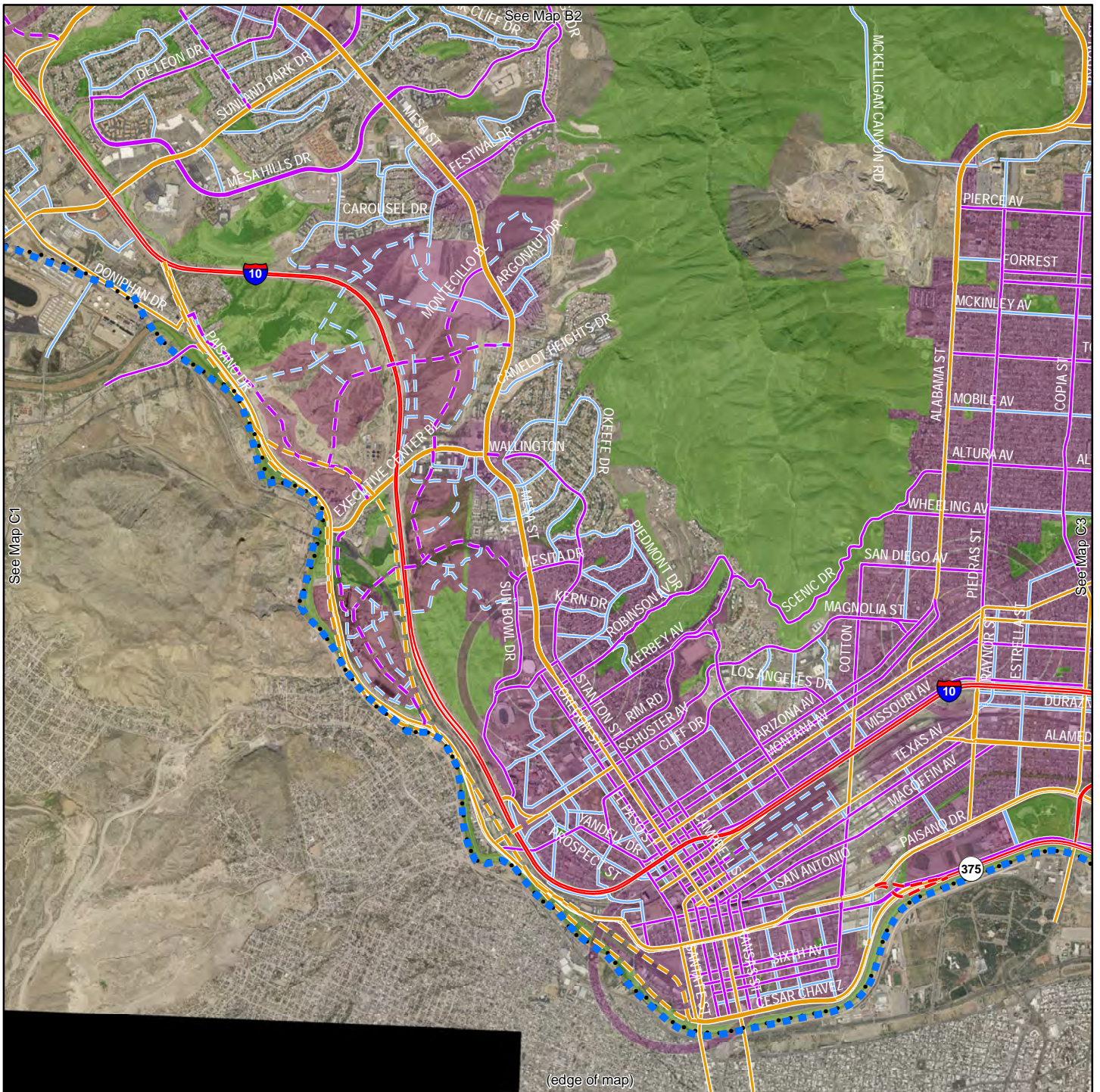
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector



- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso



See Map C1

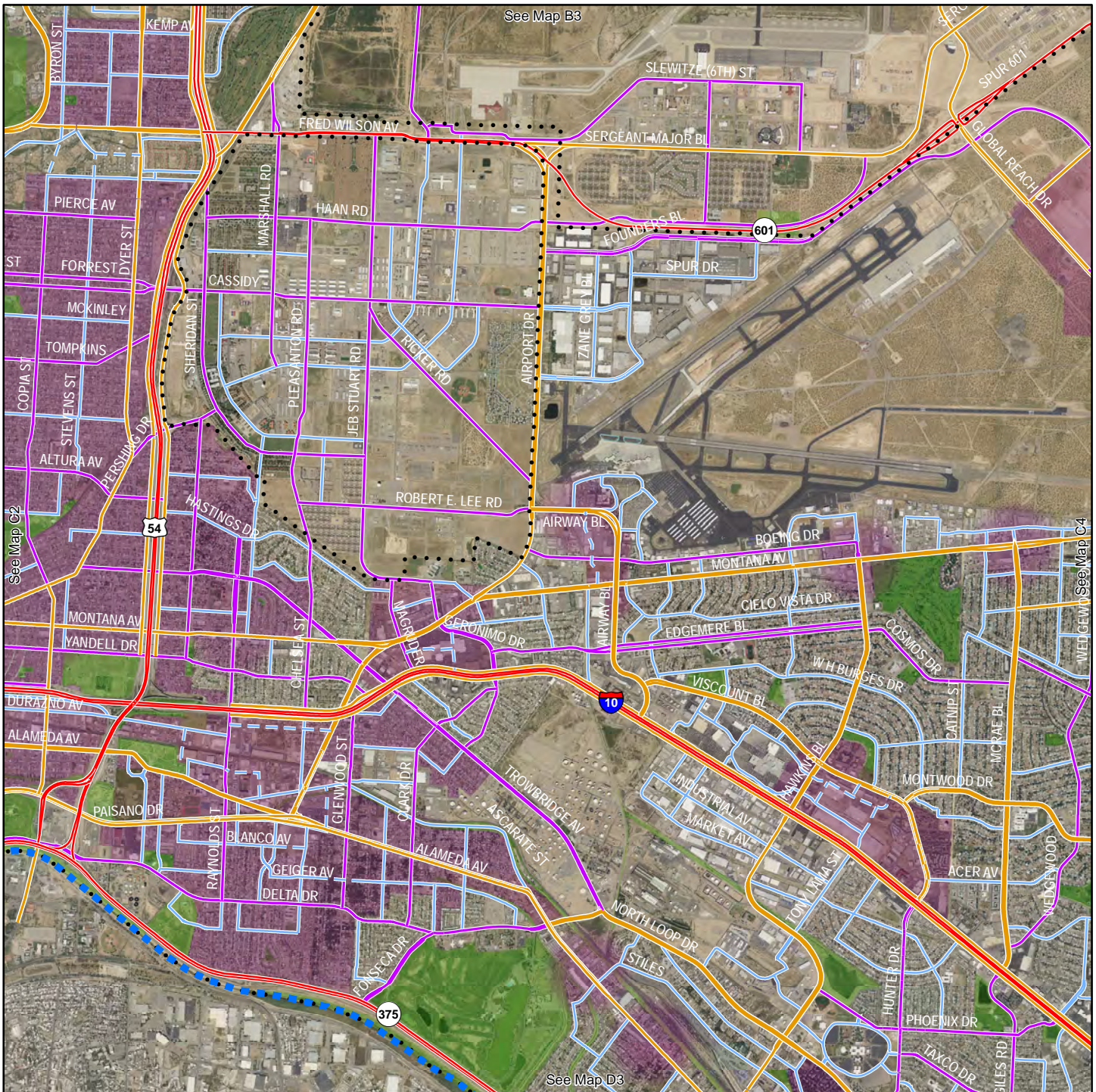
See Map B2

See Map C3

(edge of map)

EL PASO THOROUGHFARE PLAN UPDATE -- Map C2

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map C3

EXISTING THOROUGHFARES:

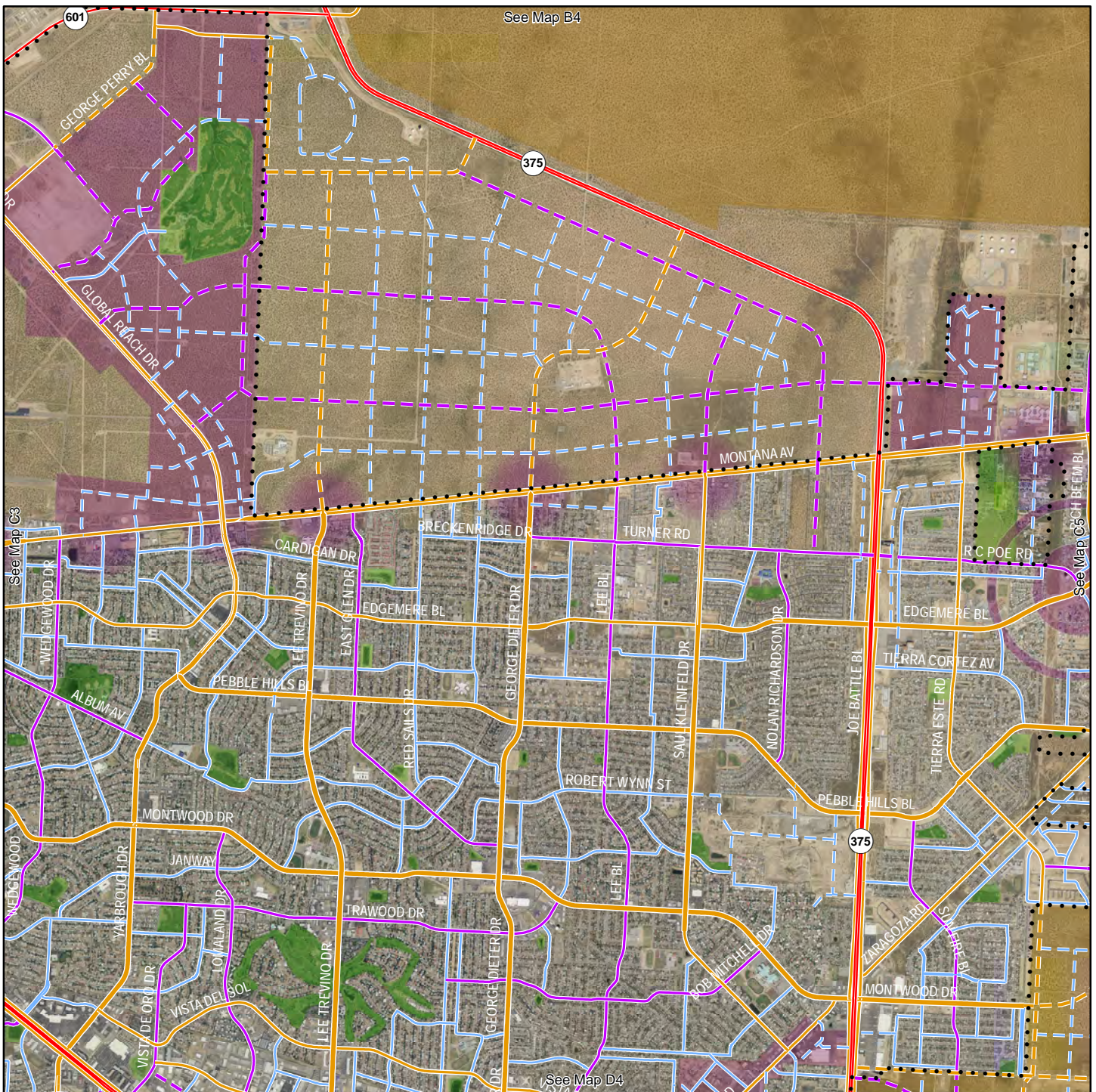
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- - - Expressway
- - - Principal Arterial
- - - Minor Arterial
- - - Collector

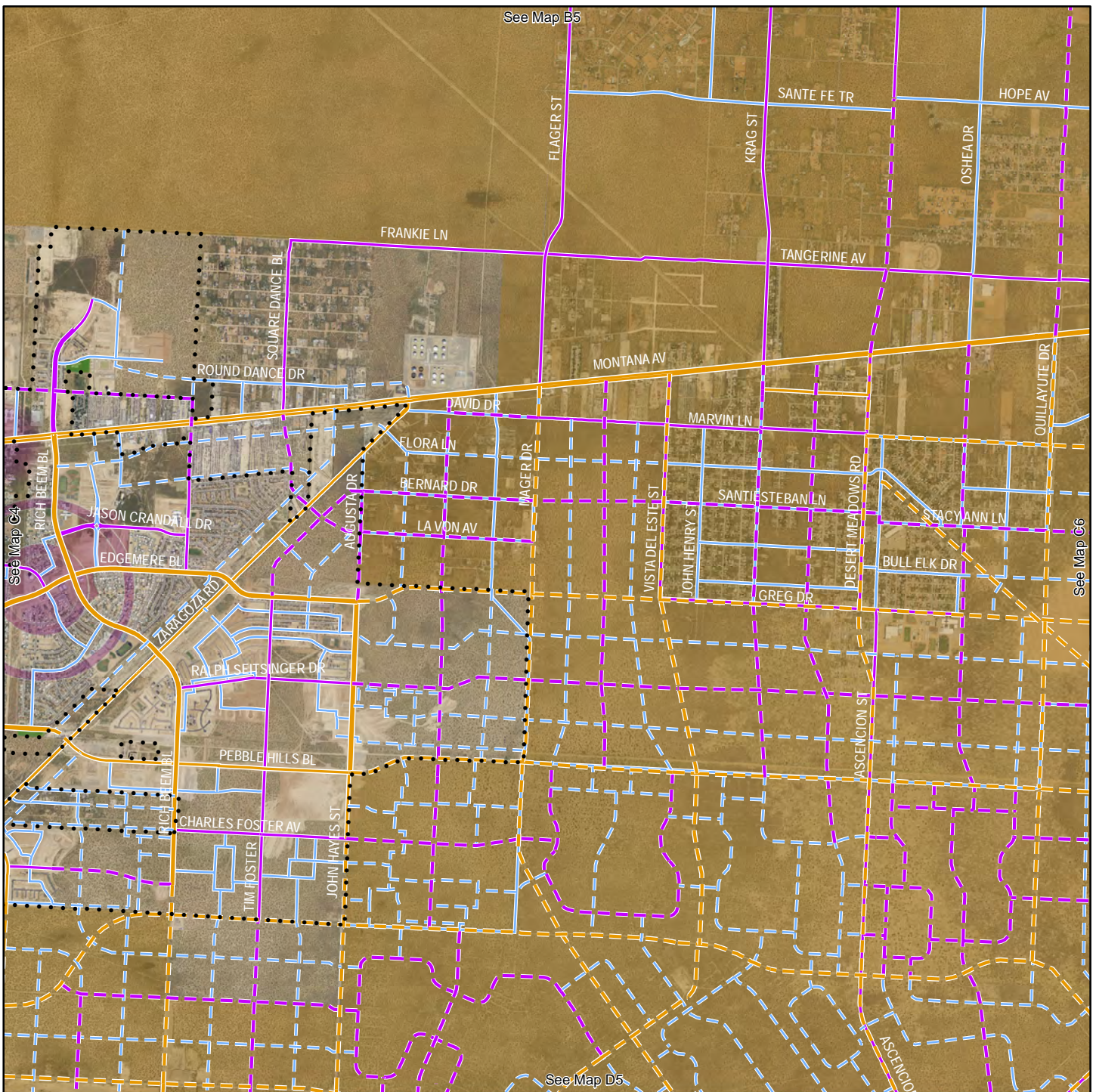
- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso





EL PASO THOROUGHFARE PLAN UPDATE -- Map C4

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	Compact Urban
Expressway	Expressway	Drivable Suburban
Principal Arterial	Principal Arterial	Rural*
Minor Arterial	Minor Arterial	Open Space
Collector	Collector	El Paso County
Local		City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map C5

EXISTING THOROUGHFARES:

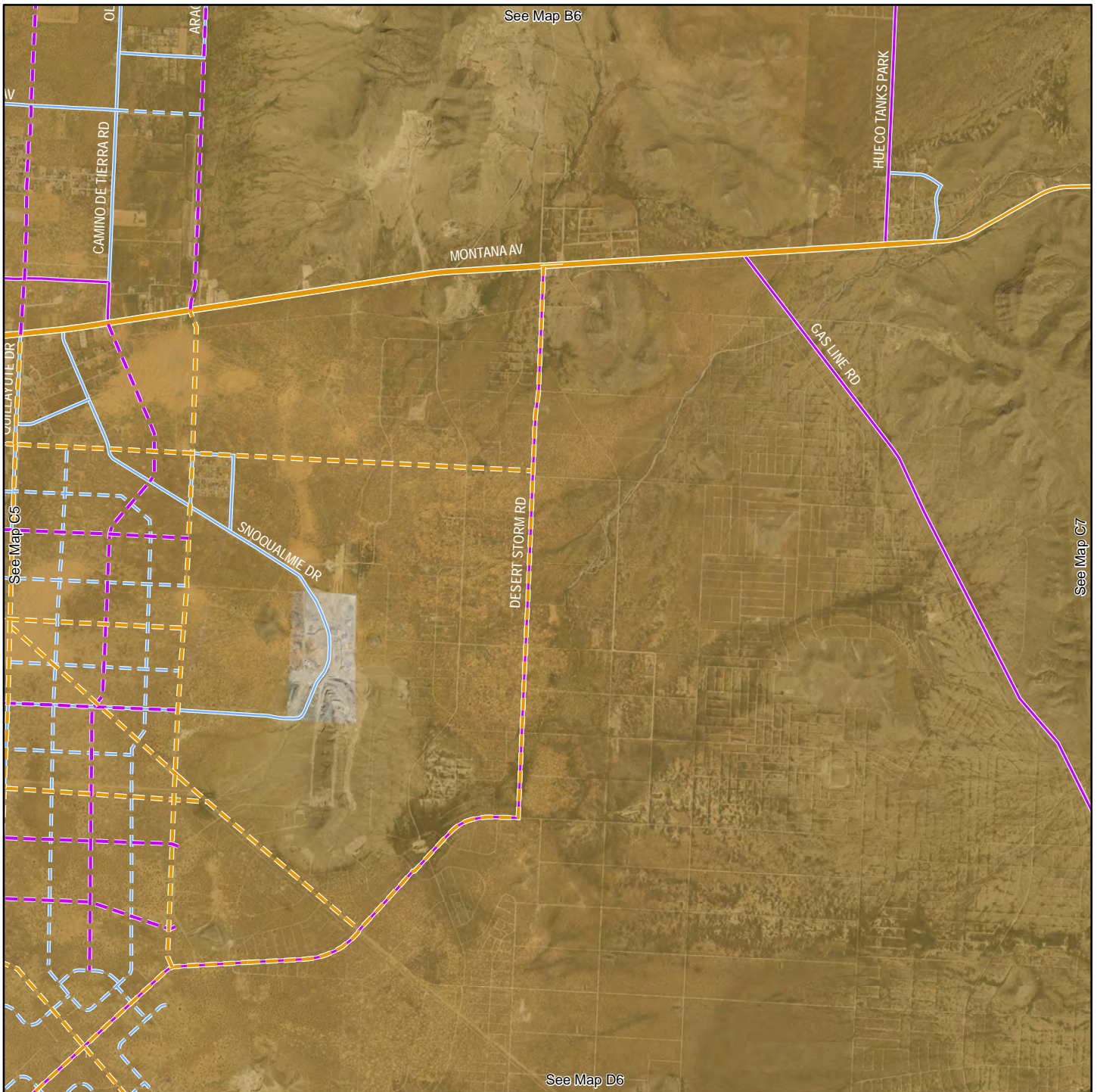
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector

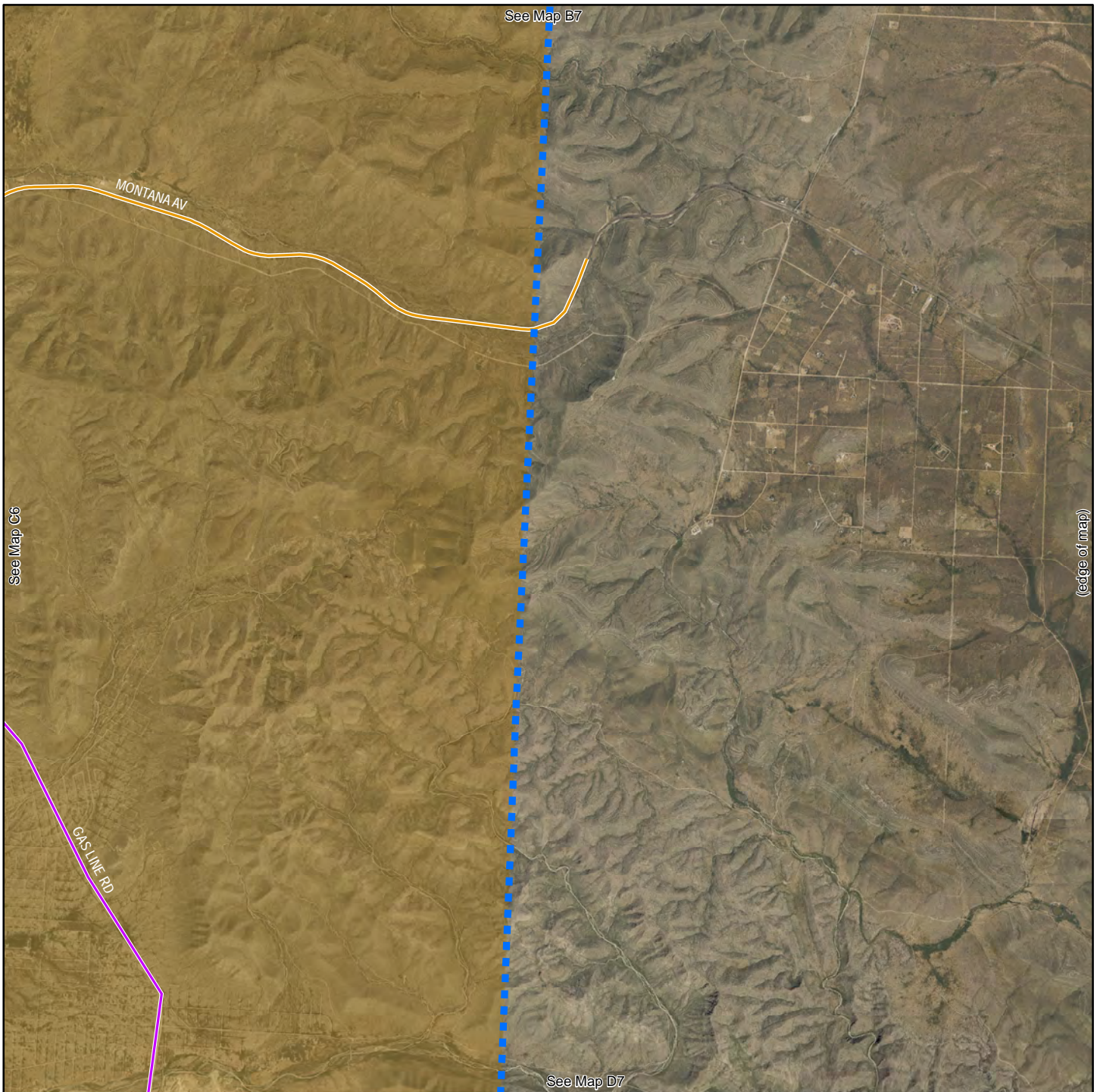
- Compact Urban
- Drivable Suburban
- Rural *
- Open Space
- El Paso County
- City of El Paso





EL PASO THOROUGHFARE PLAN UPDATE -- Map C6

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural*
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map C7

EXISTING THOROUGHFARES:

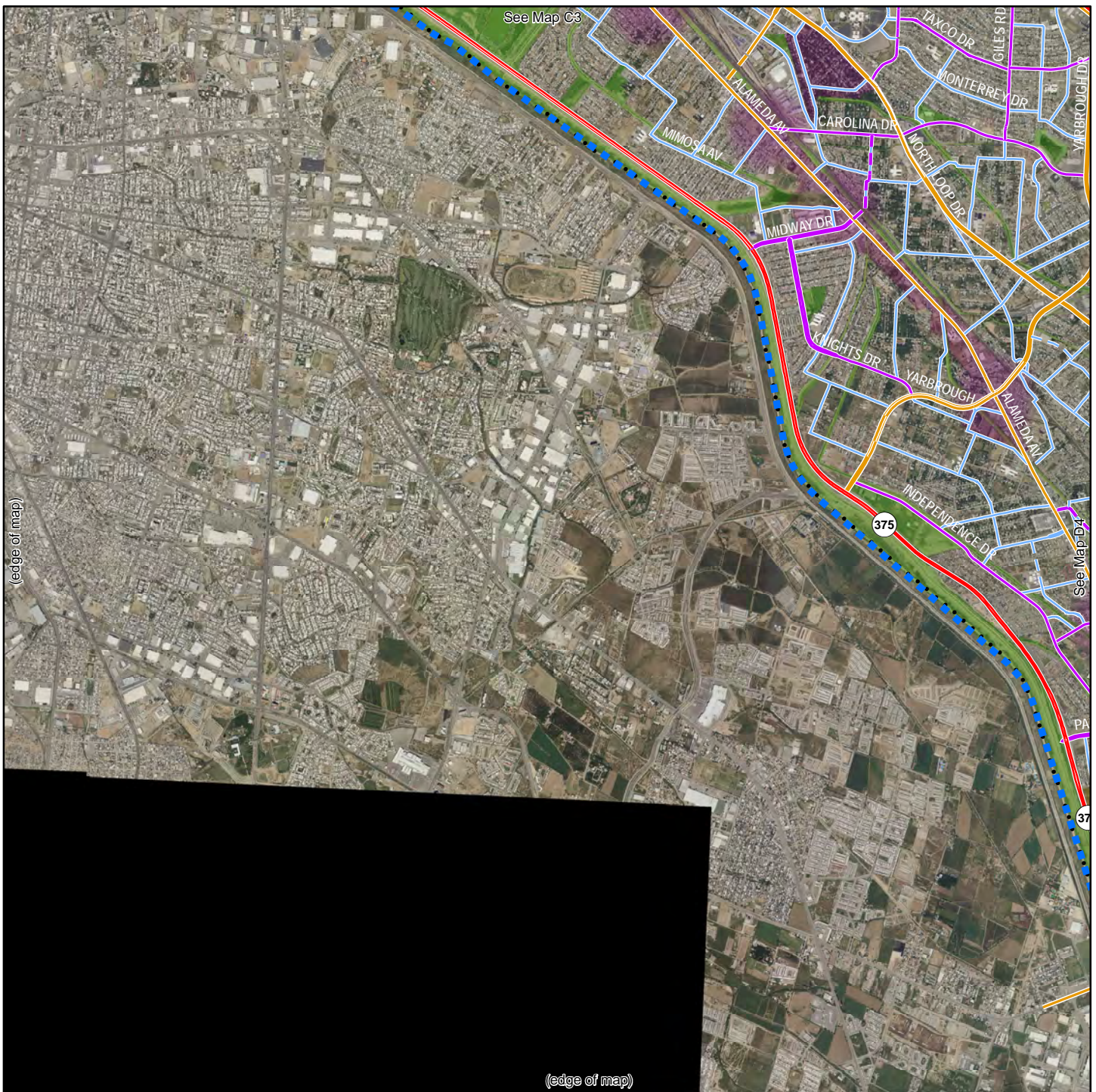
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector

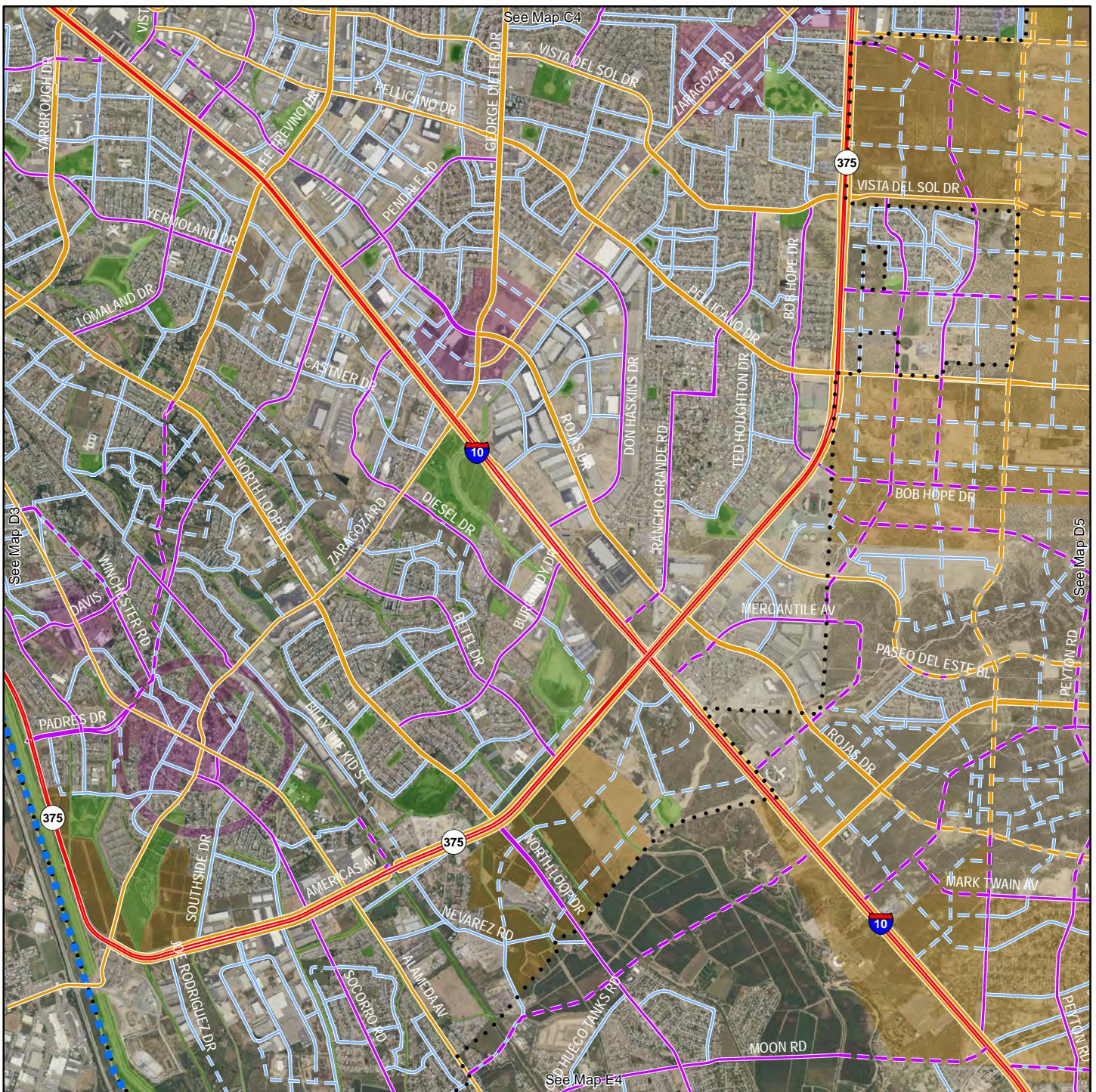


- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map D3

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map D4

EXISTING THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector

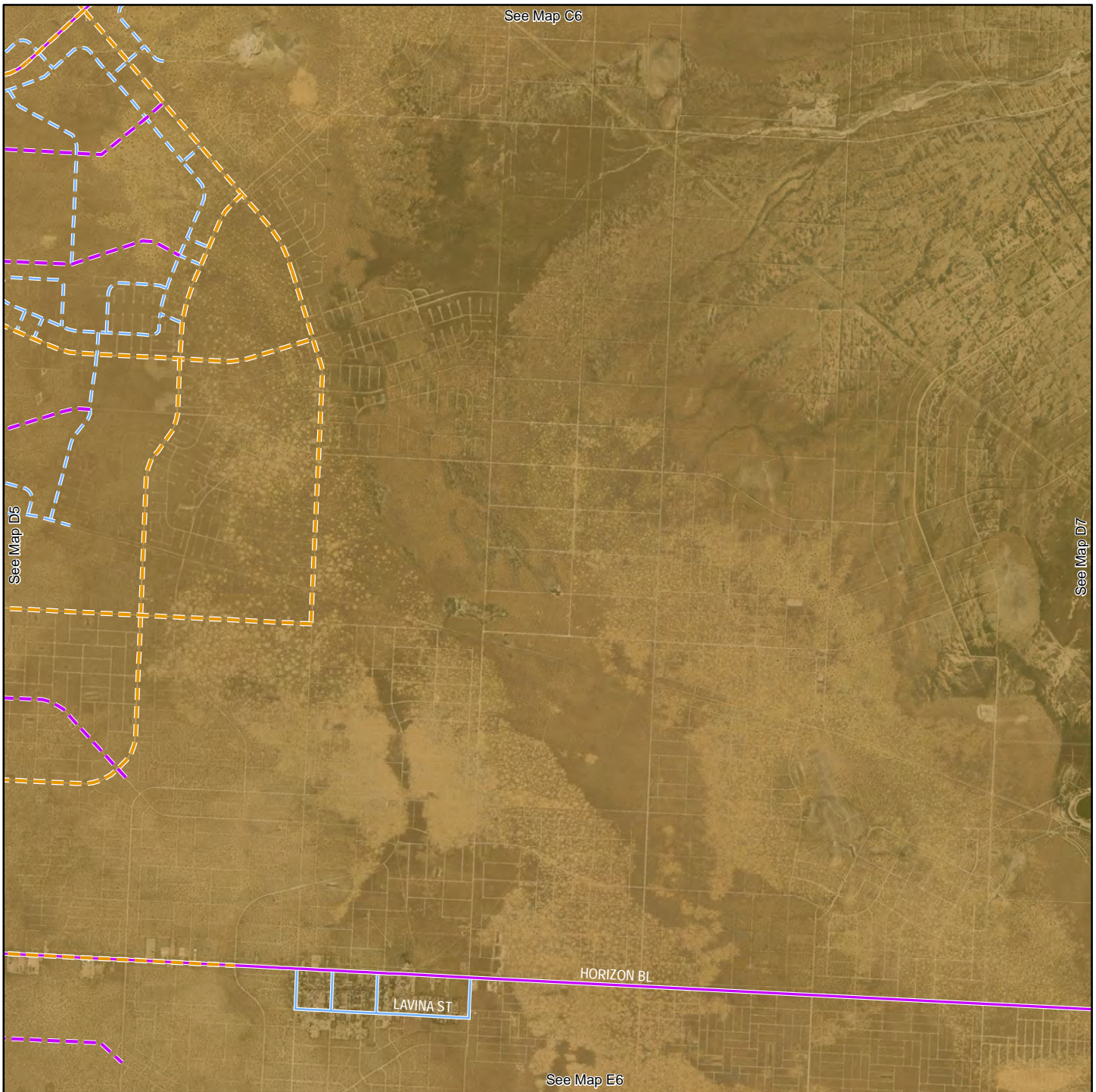
- Compact Urban
- Drivable Suburban
- Rural *
- Open Space
- El Paso County
- City of El Paso





EL PASO THOROUGHFARE PLAN UPDATE -- Map D5

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	Compact Urban
Expressway	Expressway	Drivable Suburban
Principal Arterial	Principal Arterial	Rural*
Minor Arterial	Minor Arterial	Open Space
Collector	Collector	El Paso County
Local		City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map D6

EXISTING THOROUGHFARES:

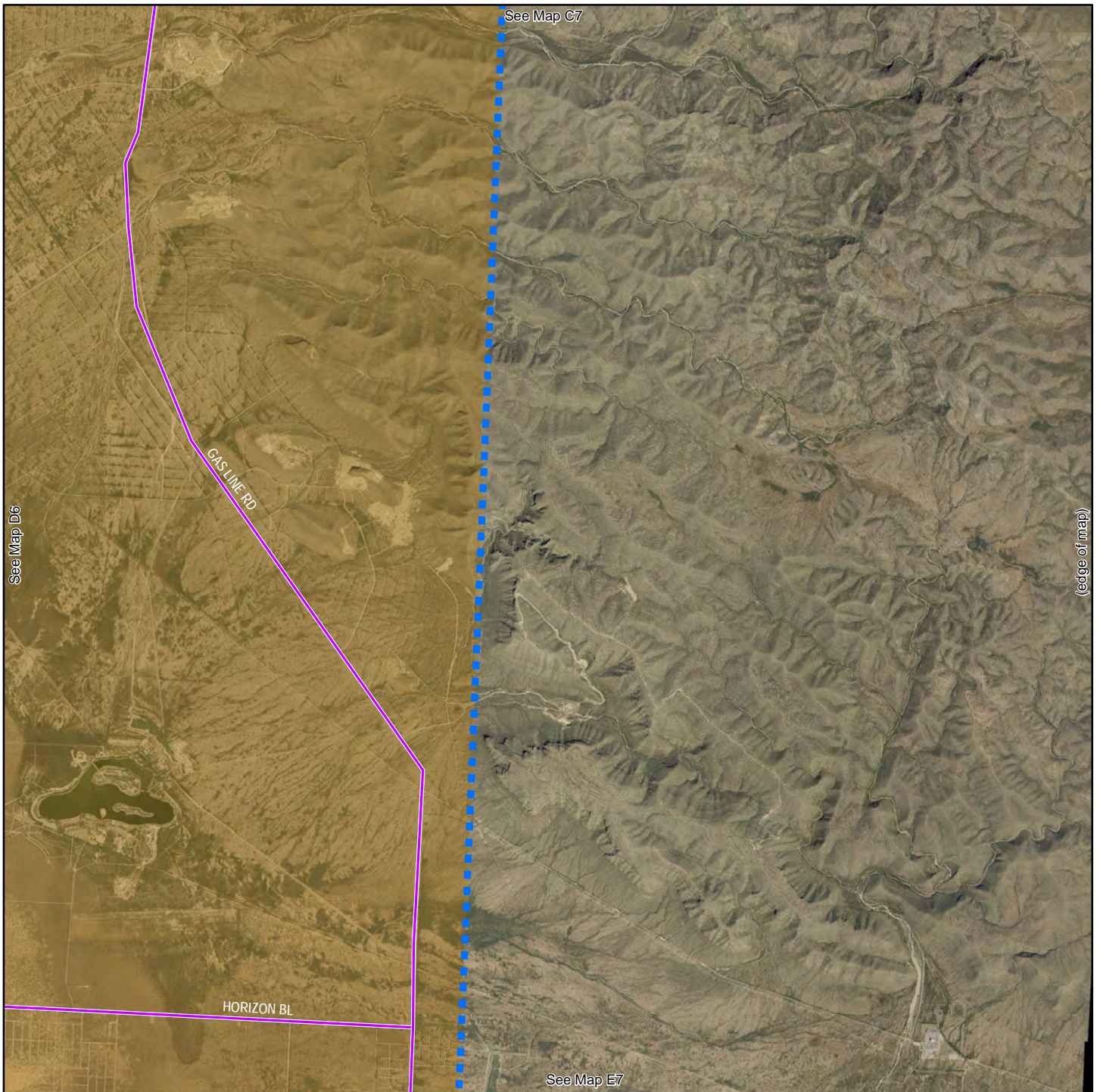
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:


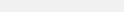
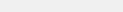
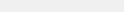
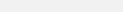
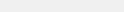
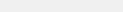
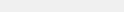
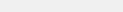
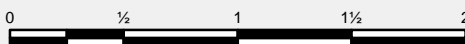
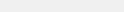
- Expressway
- Principal Arterial
- Minor Arterial
- Collector


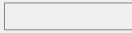






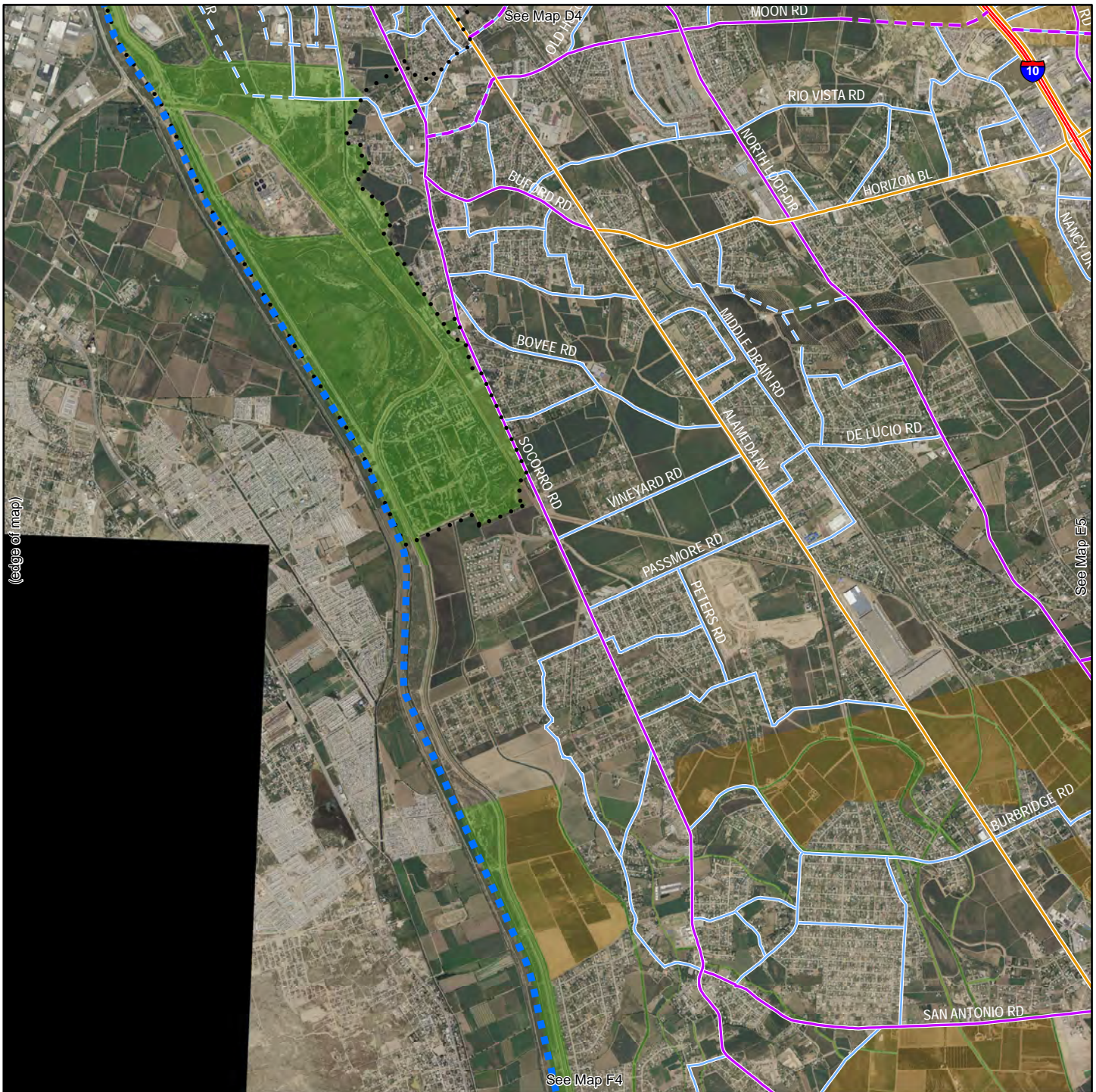
- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map D7

EXISTING THOROUGHFARES:		PROPOSED THOROUGHFARES:		
	Expressway		Expressway	
	Principal Arterial		Principal Arterial	
	Minor Arterial		Minor Arterial	
	Collector		Collector	
	Local			

	Compact Urban
	Drivable Suburban
	Rural
	Open Space
	El Paso County
	City of El Paso



(edge of map)

See Map E5

See Map F4

EL PASO THOROUGHFARE PLAN UPDATE -- Map E4

EXISTING THOROUGHFARES:

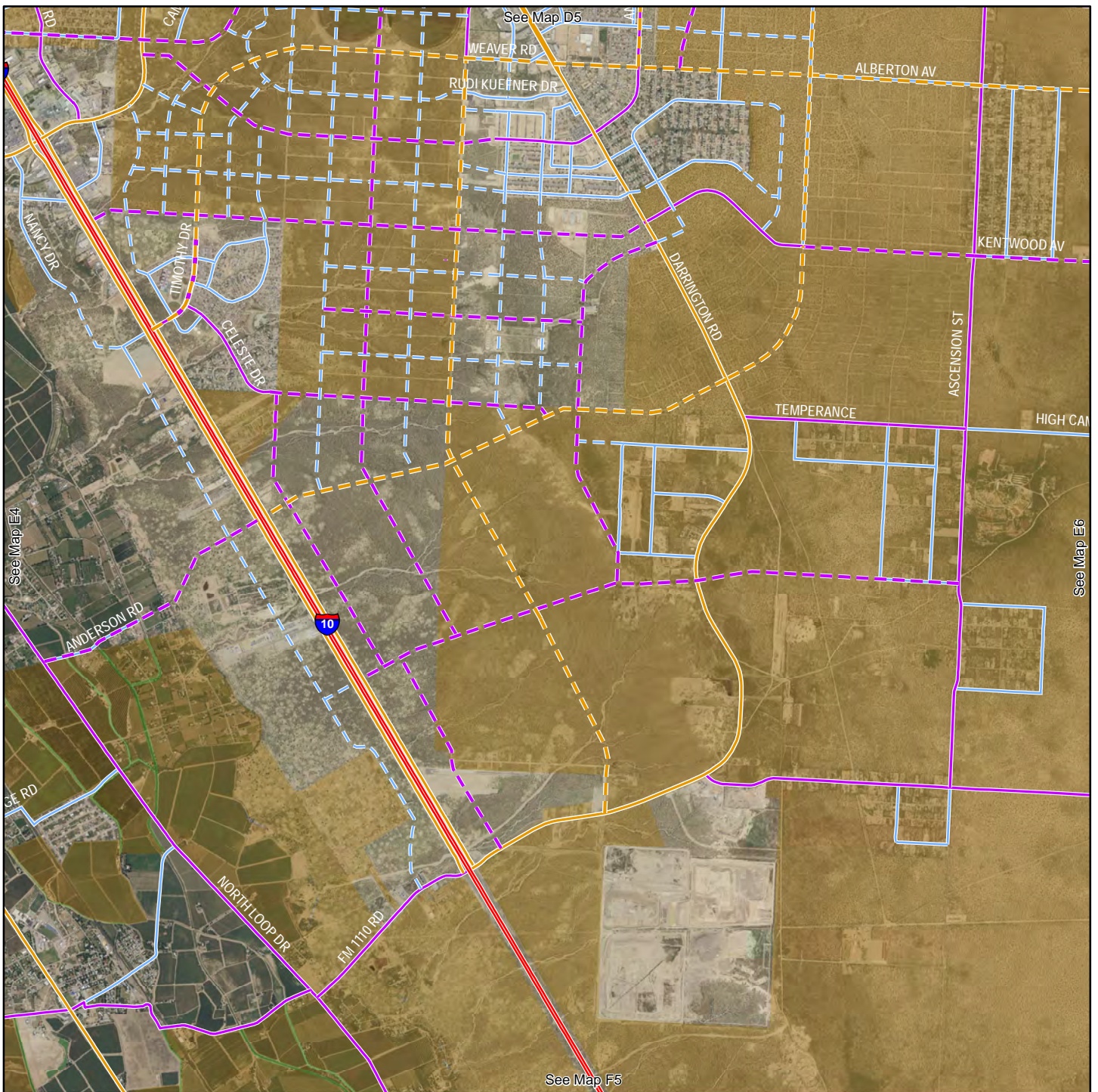
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector

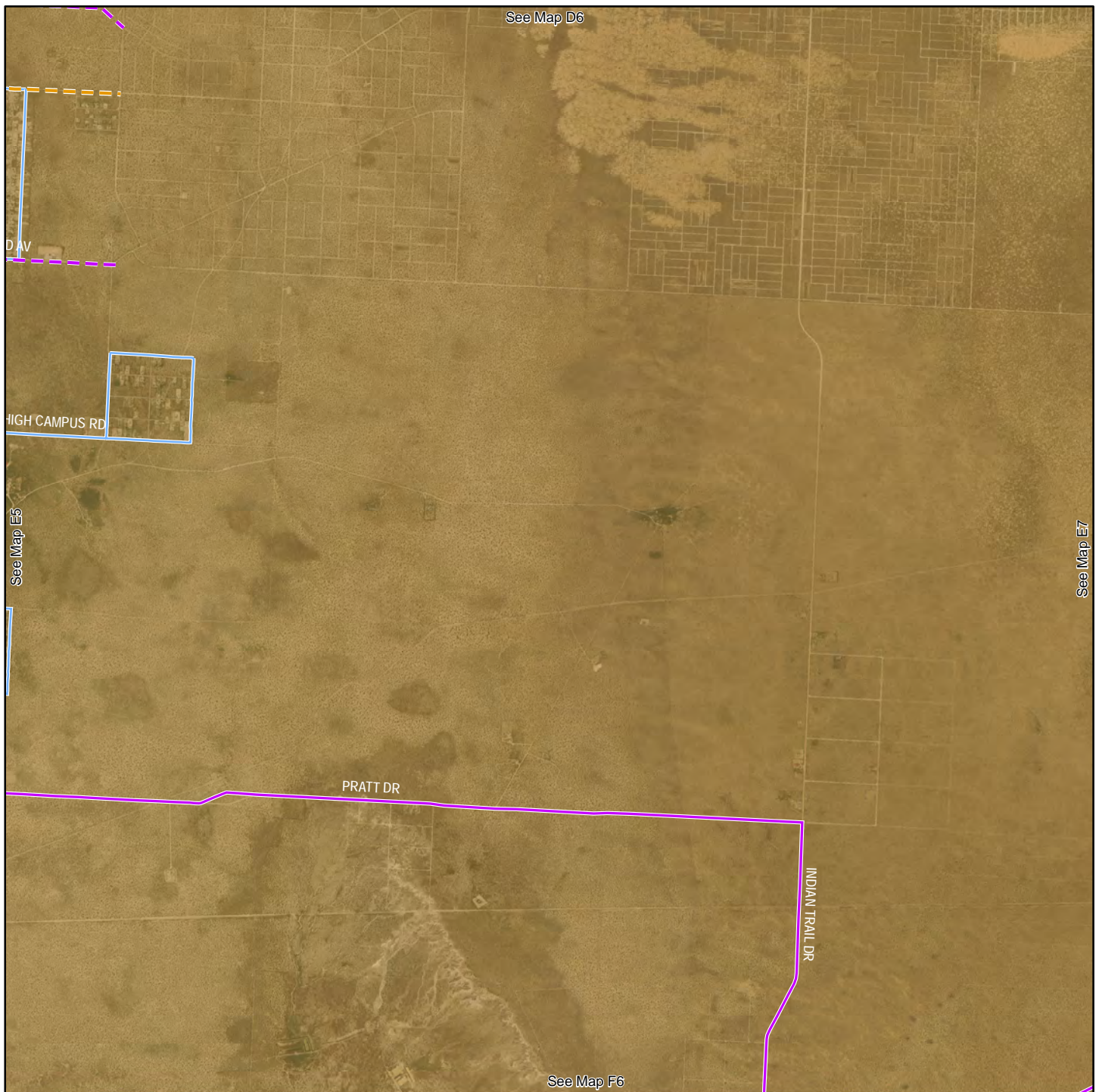
- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso





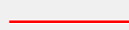
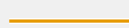
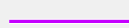
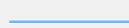
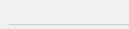
EL PASO THOROUGHFARE PLAN UPDATE -- Map E5

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso

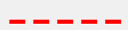


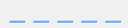


EL PASO THOROUGHFARE PLAN UPDATE -- Map E6


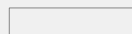




EXISTING THOROUGHFARES:

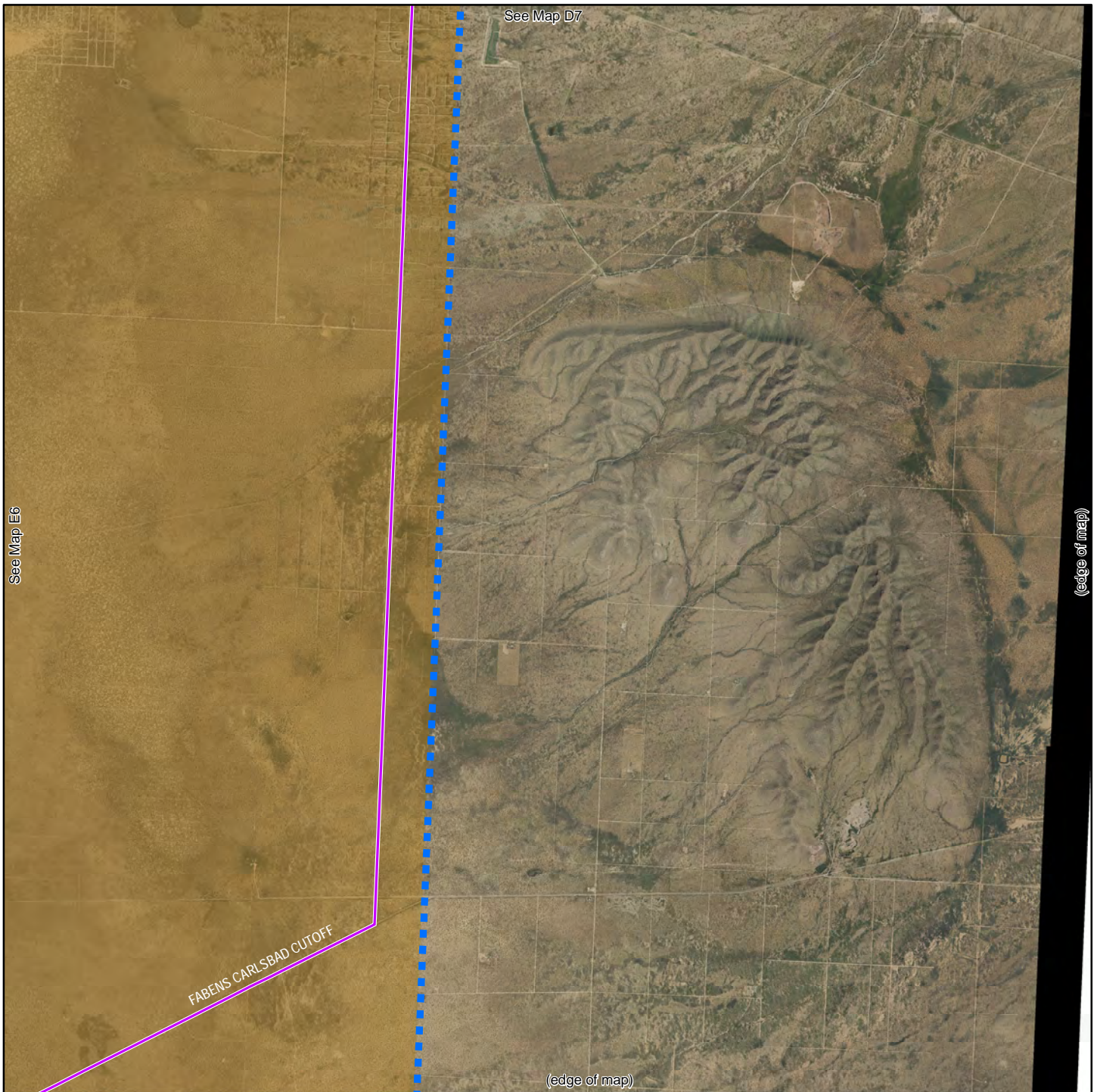
-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector
-  Local

PROPOSED THOROUGHFARES:


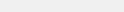
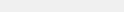
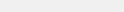
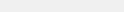
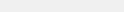
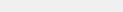
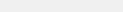
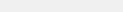
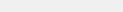
-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector

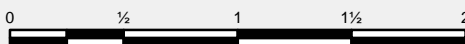


-  Compact Urban
-  Drivable Suburban
-  Rural
-  Open Space
-  El Paso County
-  City of El Paso


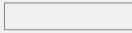






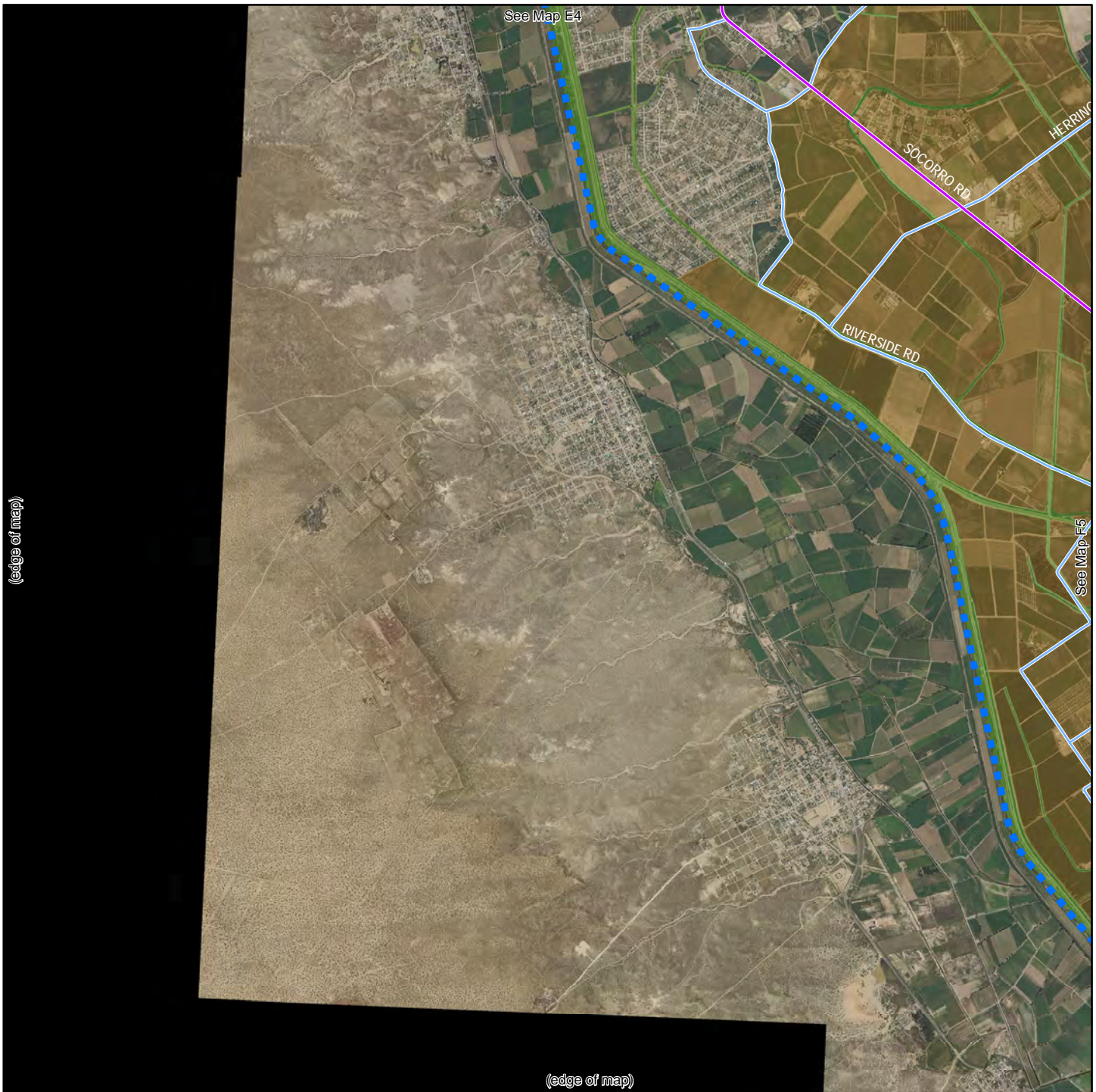
EL PASO THOROUGHFARE PLAN UPDATE -- Map E7

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
<ul style="list-style-type: none">  Expressway  Principal Arterial  Minor Arterial  Collector  Local 	<ul style="list-style-type: none">  Expressway  Principal Arterial  Minor Arterial  Collector 	



0 1/2 1 1 1/2 2
Miles

-  Compact Urban
-  Drivable Suburban
-  Rural
-  Open Space
-  El Paso County
-  City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map F4

EXISTING THOROUGHFARES:

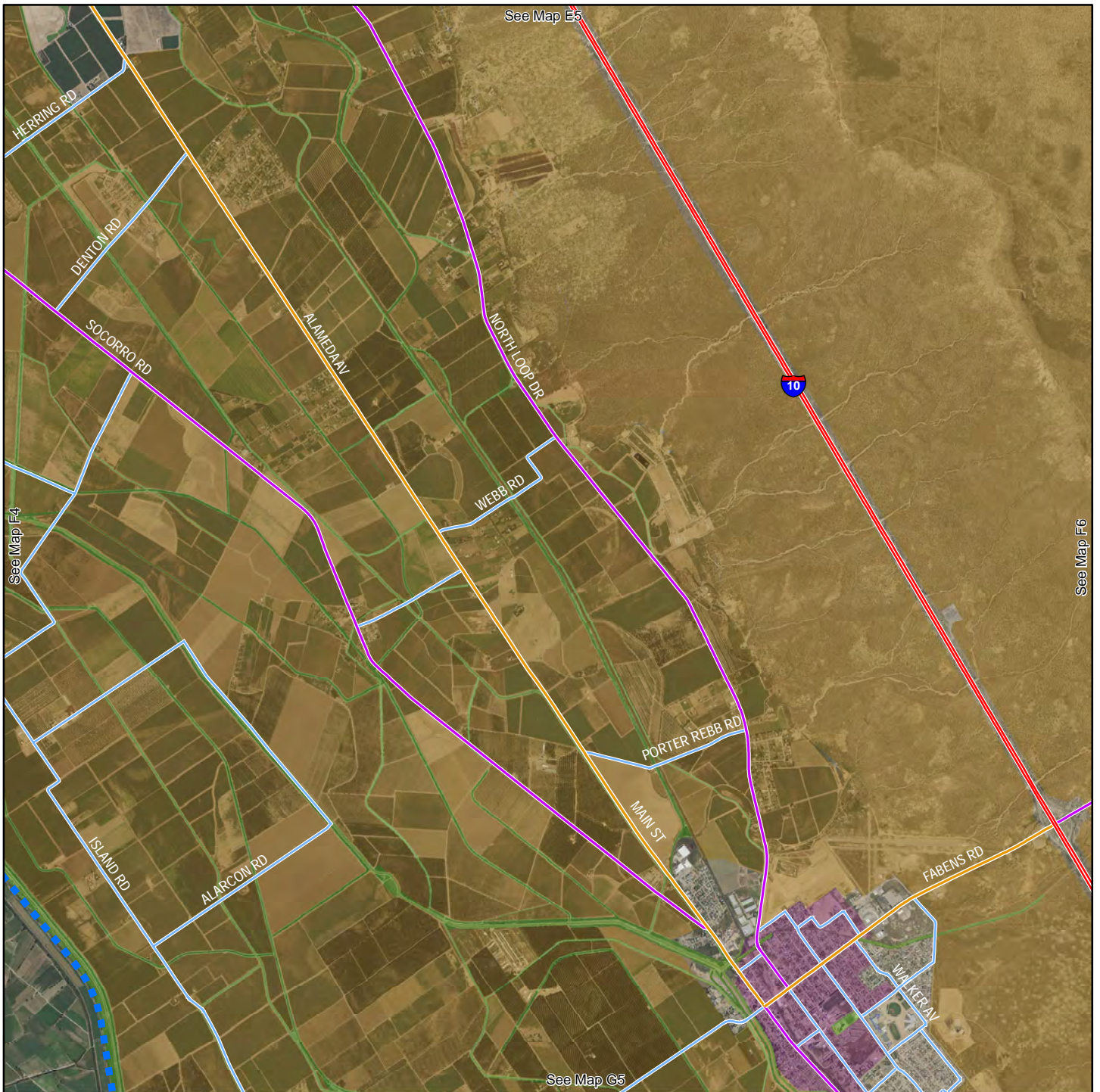
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector



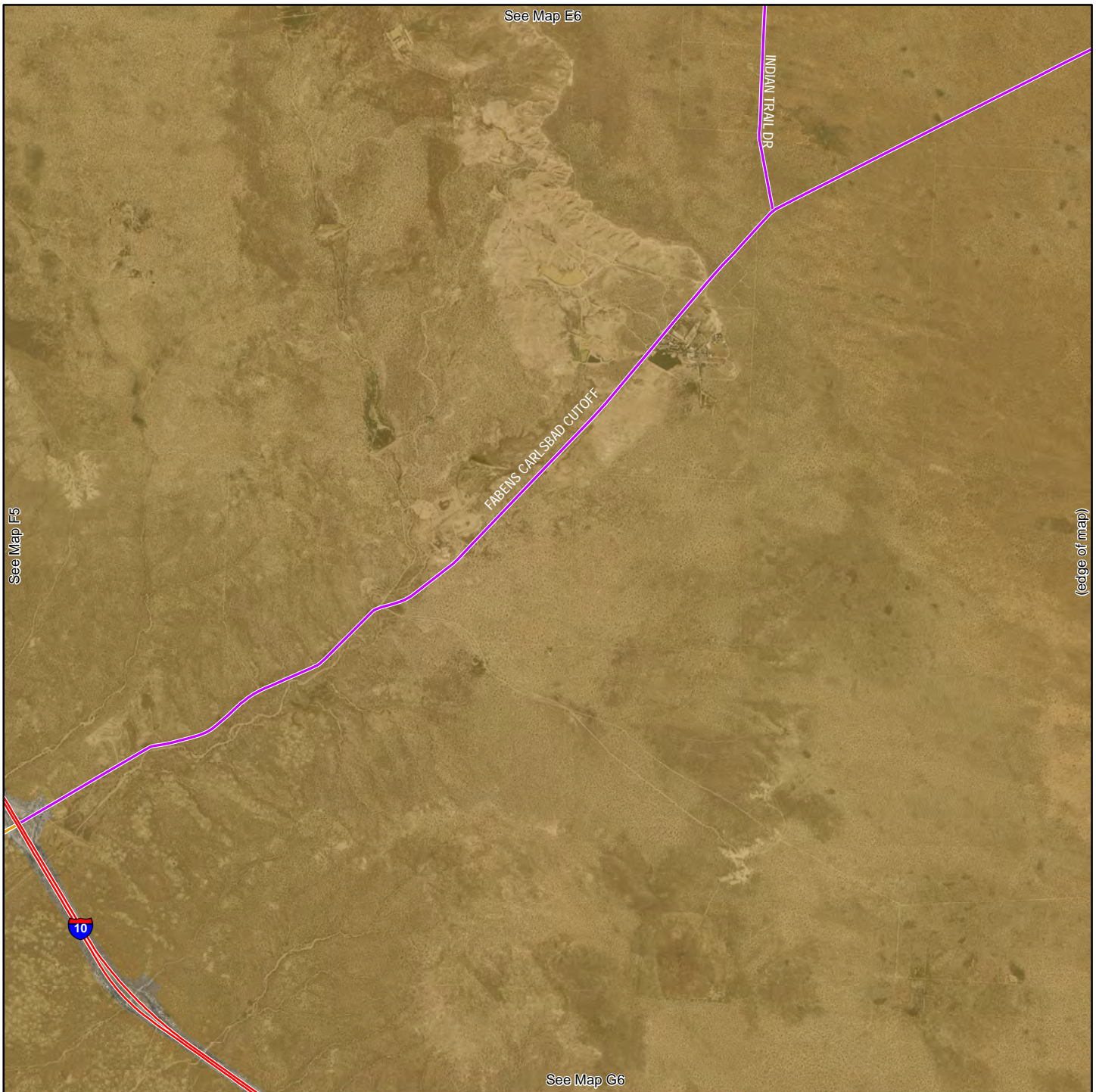
- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso



EL PASO THOROUGHFARE PLAN UPDATE -- Map F5

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso

0 1/2 1 1 1/2 2
Miles



EL PASO THOROUGHFARE PLAN UPDATE -- Map F6

EXISTING THOROUGHFARES:

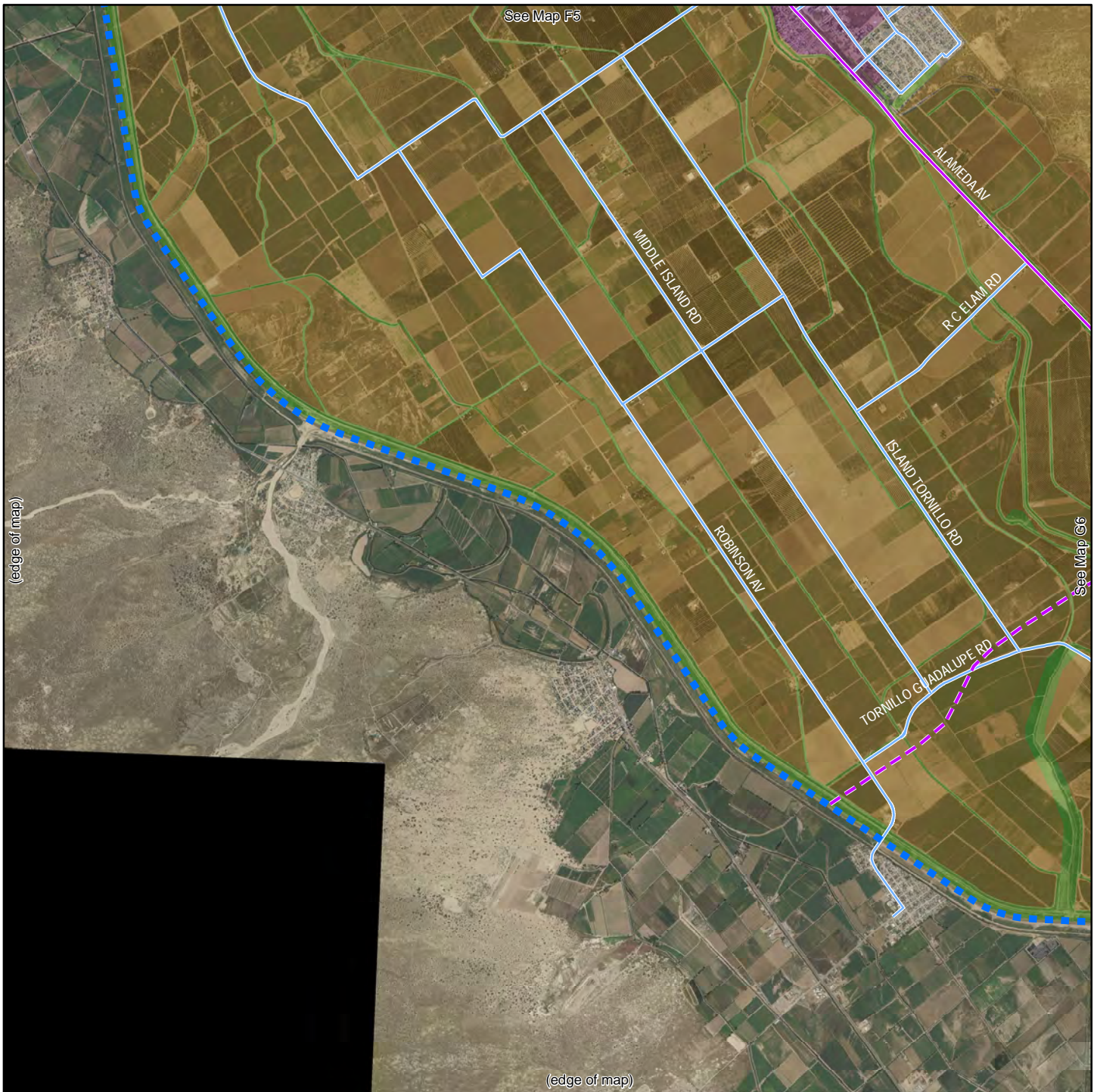
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

PROPOSED THOROUGHFARES:

- Expressway
- Principal Arterial
- Minor Arterial
- Collector

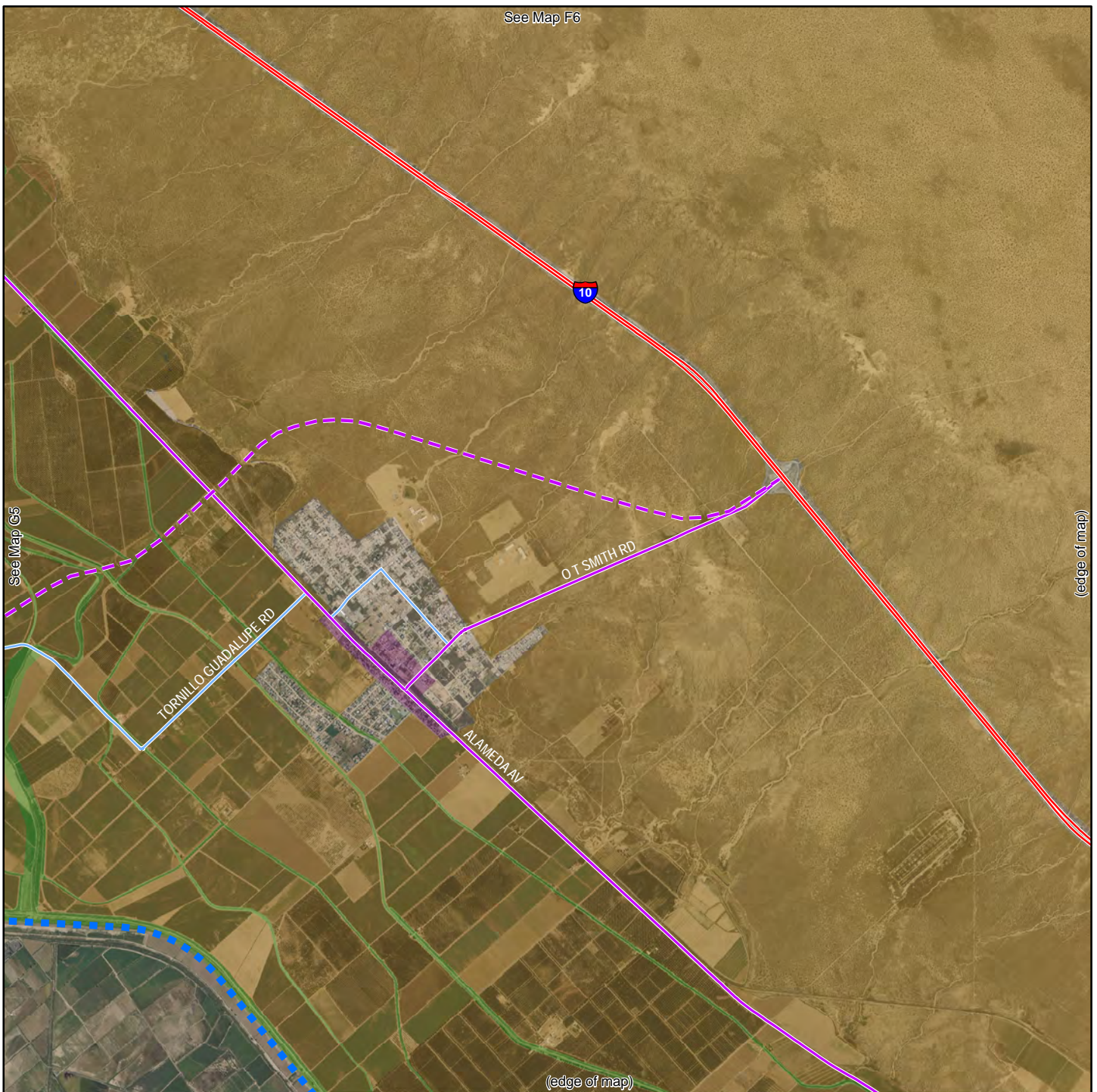


- Compact Urban
- Drivable Suburban
- Rural
- Open Space
- El Paso County
- City of El Paso



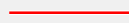
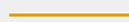
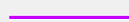
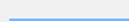
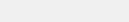
EL PASO THOROUGHFARE PLAN UPDATE -- Map G5

EXISTING THOROUGHFARES:	PROPOSED THOROUGHFARES:	
Expressway	Expressway	Compact Urban
Principal Arterial	Principal Arterial	Drivable Suburban
Minor Arterial	Minor Arterial	Rural
Collector	Collector	Open Space
Local		El Paso County
		City of El Paso




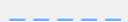


EL PASO THOROUGHFARE PLAN UPDATE -- Map G6


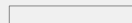


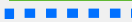

EXISTING THOROUGHFARES:

-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector
-  Local

PROPOSED THOROUGHFARES:

-  Expressway
-  Principal Arterial
-  Minor Arterial
-  Collector



-  Compact Urban
-  Drivable Suburban
-  Rural
-  Open Space
-  El Paso County
-  City of El Paso

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APPENDIX B - COMPREHENSIVE PLAN AMENDMENTS
EL PASO THOROUGHFARE PLAN

Purpose of the Thoroughfare Plan

The City of El Paso’s Thoroughfare Plan is a vital component of *Plan El Paso*. The Thoroughfare Plan is primarily a map of the existing and proposed network of streets and roads, showing the approximate location, alignment, and functional classification of collectors, arterials, and expressways throughout El Paso County.

The Thoroughfare Plan map shapes El Paso’s transportation network and travel patterns, which in turn affects the patterns of growth. Although comprehensive plans in Texas are mostly advisory in legal status, the city’s Thoroughfare Plan (sometimes referred to as the Major Thoroughfare Plan) is “regulatory” (legally enforceable) by being referenced in Title 19 of El Paso’s land development regulations. The Thoroughfare Plan is the basis for requiring new development to connect to and help build the future street network to offset the traffic impacts of new development.

The Thoroughfare Plan provides public officials a strong tool to preserve corridors for future streets and roads while overcoming significant barriers, including topographical and environmental conditions, existing development, and vested development rights.

The Thoroughfare Plan has important differences but also considerable overlap with other regional transportation plans, which include the El Paso MPO’s *Mission 2035 Metropolitan Transportation Plan*, TxDOT’s STIP (*Statewide Transportation Improvement Program*), and the CRRMA’s 2008 *Comprehensive Mobility Plan*. These other plans all include lists of specific projects, costs, and funding to be implemented within a specified timeframe.

In contrast, the City’s Thoroughfare Plan is a conceptual geographic road network at presumed “buildout” of the urbanized area. It does not schedule or program specific road improvements or contain financial details about how the network will be completed over time.

This conceptual approach for the Thoroughfare Plan minimizes conflict with the MPO plan, which is the region’s official projects-based transportation plan for purposes of receiving state and federal transportation funding and for demonstrating regional air quality conformity. The MPO plan is limited to regionally-significant transportation facilities, while the Thoroughfare Plan contains a more complete network of major streets and roads.

History of El Paso’s Thoroughfare Plan

El Paso’s earliest formal thoroughfare plan was part of the 1925 City Plan of El Paso. The 1962 City Plan updated the 1925 map. The 1988 plan contained thoroughfare maps for each planning area that delineated existing and proposed freeways and arterials, with a few collectors also shown.

The 1999 Plan for El Paso included a map labeled as “Proposed Thoroughfare System.” That map was regularly updated through comprehensive plan amendments and has been maintained as a computer-based map on the City’s Geographic Information System (GIS). The then-current Thoroughfare Plan map was readopted into *Plan El Paso* in March 2012 on an interim basis while an extensive updating process was undertaken.

Thoroughfare Plan Update Objectives

Objectives of the 2012 update to the Thoroughfare Plan included:

- Broaden and refine the Thoroughfare Plan to include bicycle and pedestrian facilities, which can usually be accommodated within the same rights-of-way.
- Refine the functional classification system to be more consistent with El Paso MPO and TxDOT.
- Update and expand the previous thoroughfare network by reflecting the proposed location and character of future growth from *Plan El Paso* with appropriate street spacing, character, and regional connectivity.
- Prepare cross-sections for new thoroughfares that would be suitable for replacing the cross-sections currently in Title 19.

The result of this update was presented in the report, *El Paso Thoroughfare Plan 2012 Update*. A single-page summary of the new Thoroughfare Plan map was adopted into *Plan El Paso* in 2013 (see page 4.44). Major changes to the map and network are summarized here.

New “Area Types”

New “area types” are now shown as an underlay on the Thoroughfare Plan. Area types are discussed on pages 4.32 and 4.33 of this Transportation Element. The Rural area type is now based on *Plan El Paso*’s Future Land Use Map instead of the U.S. Census, and a new Open Space area type is applied to land that won’t be developed. The four area types on the Thoroughfare Plan are based on the following sector and overlay assignments from the Future Land Use Map:

RURAL:

- | | |
|------------------------|----------------------------|
| G-6 – Rural Settlement | O-5 – Remote |
| O-3 – Agriculture | O-6 – Potential Annexation |
| O-4 – Military Reserve | |

COMPACT URBAN:

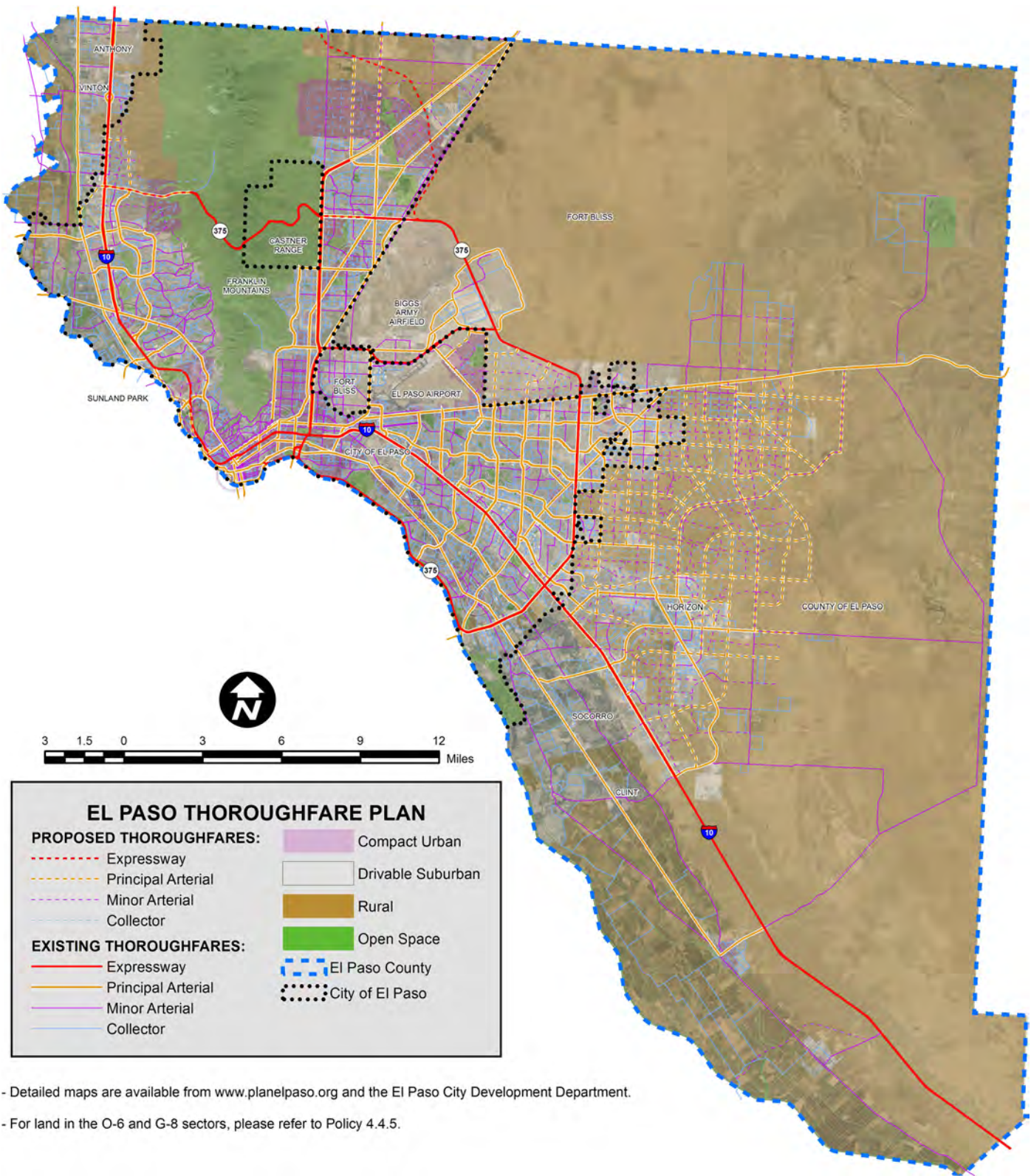
- | | |
|--------------------------------|------------------------------|
| G-1 – Downtown | Local Transfer Centers |
| G-2 – Traditional Neighborhood | RTS Stops |
| O-7 – Urban Expansion | Future Compact Neighborhoods |

DRIVABLE SUBURBAN:

- | | |
|------------------------|----------------------------|
| G-3 – Post-War | G-7 – Industrial |
| G-4 – Suburban | G-8 – Fort Bliss Mixed Use |
| G-5 – Independent City | G-9 – Fort Bliss Military |

OPEN SPACE

- | | |
|----------------|---------------|
| O-1 – Preserve | O-2 – Natural |
|----------------|---------------|



- Detailed maps are available from www.planelpaso.org and the El Paso City Development Department.

- For land in the O-6 and G-8 sectors, please refer to Policy 4.4.5.

Thoroughfare Plan, as amended in 2013 by Ordinance _____

In Drivable Suburban areas, an important thoroughfare design determinant is the expected amount of traffic to be accommodated. In Compact Urban areas, the most important design determinant is managing traffic speeds to levels that are compatible with walking, bicycling, and transit use; this factor is much more important than accommodating expected traffic volumes on any given arterial or collector.

When *Plan El Paso's* Future Land Use Map is formally amended, the corresponding area types shown on the Thoroughfare Plan will be automatically adjusted. When land in the O-6 and G-8 sectors is annexed, the sector designations should be changed at the same time to indicate the character of future development. Any changes to the Thoroughfare Plan network should be made at the same time.

Updated Functional Classification

“Principal arterials” provide for longer trips on relatively straight paths, often connecting to expressways. “Minor arterials” are typically found between principal arterials and provide continuous paths to intermediate destinations and alternate routes for longer trips. “Collectors” are typically found between minor arterials to provide for frequent interconnections between neighborhoods; collectors may be indistinguishable from local streets except that they are part of a larger thoroughfare network. Local streets are not shown on the Thoroughfare Plan.

Expanded Network

The overarching network design principles are provided under Goal 4.5. The thoroughfare network needs to serve the urban pattern described in *Plan El Paso*, not dictate the pattern. The character of new streets on the network corresponds with anticipated development patterns.

The network needs to be complete and contiguous and conveniently spaced to serve the entire urban area. New development must connect to existing development and allow future development to connect as well. Collector streets generally terminate at other collectors and at arterials. Arterial streets provide greater continuity over long distances and generally terminate at other arterials and at expressways.

The network avoids loops and severe direction changes, except where required by topography, in order to maintain the network's legibility for future users. The network is sensitive to natural features, historic travel routes, the character of existing communities, and the street pattern established by obsolete yet not-vacated subdivisions northeast of Horizon City.

Streets are important public spaces as well as movement channels – the common thread that ties together old and new neighborhoods while providing convenient access to jobs, commerce, education, entertainment, and open spaces.

The basic thoroughfare network will remain intact over time, but the Thoroughfare Plan map will get modified as acceptable alternative patterns and alignments are approved as formal amendments to the map or as authorized minor adjustments.

Land Development Regulations

El Paso's subdivision regulations (Title 19) will need to be amended to reflect the new Thoroughfare Plan, to summarize the essential characteristics of the new thoroughfare cross-sections, and to implement other policies of *Plan El Paso* relating to the City's subdivision regulations. The *Design Standards for Construction* manual will also need to be updated to include the new cross-sections. The *El Paso Thoroughfare Plan 2012 Update* report includes a tentative list of Title 19 amendments.

TRANSPORTATION MASTER PLAN (TMP)

The City of El Paso should take the lead in establishing a regional multimodal project-based transportation and land-use planning “compact.”

Rather than separate agencies planning and implementing travel improvements, the City would collaborate with its regional transportation partners – MPO, TxDOT, CRRMA, El Paso County, and others – to create a Transportation Master Plan (TMP).

The TMP would be similar in some aspects with the MPO's *Mission 2035 Metropolitan Transportation Plan*, but the two efforts would coexist as the MPO and CRRMA plans have. Because the MPO is now in the process of updating its long-range plan to the year 2040, the two efforts could be integrated. The TMP would provide project, location, design, and implementation clarity for complete street networks, RTS and other high-capacity transit corridors, walkable streets, and pedestrian and bicycle corridors and facilities.

The City has the authority to focus on regionally-significant transportation improvements that respect the conformity process and other requirements the MPO must operate within. The City also has the authority to focus on non-regionally significant transportation such as streets it maintains, as well as multi-modal travel options that prioritize walkability, person-based travel choices, and balanced transportation networks.

Many municipalities have separate Comprehensive Plans and Transportation Master Plans, with the former providing the policy foundation and the latter containing the technical analysis and project lists. These plans are closely integrated, but the TMP is more flexible so that the Comprehensive Plan doesn't have to be amended every time a project detail changes.

GOALS & POLICIES

Thoroughfare Sustainable Mobility Plan

Goal 4.4: Transform the Major El Paso's Thoroughfare Plan (MTP) into a Sustainable Mobility Plan (SMP) will result in a dense network of thoroughfares throughout the urbanized area that will integrate all major travel modes and carries out the other goals and policies of *Plan El Paso*.

Policy 4.4.1: The City of El Paso completed a major update of its Thoroughfare Plan in 2012, as described in the report *El Paso Thoroughfare Plan 2012 Update*. In 2013, the City adopted the revised Thoroughfare Plan map shown on page 4.44; detailed map pages are available from www.planelpaso.org or the El Paso City Development Department. The Thoroughfare Plan will be amended from time to time as acceptable alternative thoroughfare patterns and alignments are approved as formal amendments to *Plan El Paso*. The City of El Paso will continue to use the MTP that appears in *Plan El Paso* as the City's official Thoroughfare Plan until the following policies have been implemented.

Policy 4.4.2: The City of El Paso intends to update and refine the MTP and then readopt it into *Plan El Paso* as the City's new SMP. The Thoroughfare Plan makes the following distinctions:

- a. Proposed thoroughfares are distinguished from existing thoroughfares.
- b. Streets and roads are functionally classified as expressways, principal arterials, minor arterials, or collectors; local streets are not shown.
- c. In addition to the location and classification of thoroughfares, the Thoroughfare Plan reflects the following area types:
 - i. Urban areas are divided into Compact Urban and Drivable Suburban, as described under Goal 4.1.
 - ii. Rural areas are defined as the following sectors from the Future Land Use Map: O-3 (Agriculture); O-4 (Military Reserve); O-5 (Remote); O-6 (Potential Annexation); and G-6 (Rural Settlement).
 - iii. Open space areas are defined as the following sectors: O-1 (Preserve) and O-2 (Natural).
 - iv. When Future Land Use Map sectors are formally amended, the area types shown on the Thoroughfare Plan will be deemed to have been adjusted accordingly.

Policy 4.4.3: The SMP will include the following refinements to the MTP:

- a. Broaden and refine the MTP to include a multi-modal transportation network to supplement the road network now shown.
- b. Review and update the current MTP road network to reflect the growth forecasts and other policies in Plan El Paso.
- c. Refine the MTP's thoroughfare classification system to reflect the concepts in this Transportation Element while maintaining compatibility with the MPO's federally mandated system.
- d. Update thoroughfare cross-sections to reflect the concepts in this Transportation Element.
- e. Use today's best practices for network design principles as described under Goal 4.4.

Policy 4.4.3: The *El Paso Thoroughfare Plan 2012 Update* contained new thoroughfare cross-sections that reflect the policies of this Transportation Element.

- a. These cross-sections will be integrated into Title 19 of El Paso's land development regulations to replace the existing cross-sections and standards.
- b. Title 19 will also be amended to specify the standards and processes for allowing variations to the adopted cross-sections and to provide additional updates to Title 19 as proposed in the *El Paso Thoroughfare Plan 2012 Update*.

Policy 4.4.5: When land in the O-6 and G-8 sectors on the Future Land Use Map is annexed into the City of El Paso, the sector designations should be changed at the same time to indicate the character of future development. The Thoroughfare Plan network should also be modified if needed to reflect a corresponding road network in accordance with the principles in *Plan El Paso*.

Network Principles

Goal 4.5: El Paso’s network of major thoroughfares will become the “Great Streets” of tomorrow. They will be integral parts of the communities that surround them, important public spaces that allowing easy movement and providing physical space for social, civic, and commercial activities.

Policy 4.5.1: Thoroughfares are the common thread that ties together old and new neighborhoods while providing convenient access to jobs, commerce, education, entertainment, and open spaces. El Paso’s future transportation network will shape the City and its inhabitants. The network must meld all viable modes of transportation and carry out the goals of *Plan El Paso*.

Policy 4.5.2: Capacity and redundancy should be created by a densely interconnected network rather than by achieving high capacities on individual arterial streets.

a. The network needs to be complete and contiguous and conveniently spaced to serve the entire urban area.

b. New development must connect to existing development and allow future development to connect as well.

c. To maintain the network’s legibility for future users, the network should avoid loops and severe direction changes, except where required by topography.

Policy 4.5.3: More narrow thoroughfares are better than fewer wide ones. When major thoroughfares are spaced too far apart, these consequences are unavoidable:

a. The remaining major thoroughfares must be too wide, eroding their placemaking capacity and making them inhospitable to pedestrians and bicyclists.

b. Motorized traffic may encroach on neighborhood streets designed for lighter traffic volumes.

c. Transit routes along the remaining thoroughfares become inefficient to provide and unpleasant to use.

d. Intersections with other wide roads will inevitably restrict the theoretical capacity of wide roads.

This restriction cannot be solved with grade-separated intersections because they are too expensive to construct and maintain and too damaging to surrounding land uses.

Policy 4.5.4: Economically vital cities require multiple transportation modes and cannot hope to maintain free flowing traffic during all peak periods.

Policy 4.5.5: In addition to serving its role in the larger network, tThe character of each thoroughfare should be based on the existing or anticipated physical context the thoroughfare is passing through, as described in Policy 4.4.2, in addition to its role in the larger network.

Policy 4.5.6: Limited-access freeways disrupt the healthy functioning of cities and should be the thoroughfare type of last resort when planning an urban network.

Policy 4.5.7: When essential freeways or railroads will present insurmountable barriers to cross movement, they should be depressed rather than elevated in order to minimize the disruption to surrounding communities and to avoid the excessive costs of building and replacing long bridges.

Policy 4.5.8: The regional transportation network must respect the human and natural environment and minimize or eliminate negative impacts such as bisecting or isolating communities, inducing suburban sprawl, or interfering with arroyos and other natural systems.

Policy 4.5.9: The regional transportation network is larger than El Paso County, including New Mexico, Chihuahua and beyond. The potential relocation of regional freight rail lines around the El Paso / Ciudad Juárez metropolitan area offers opportunities for better traffic flow and critical drainage improvements in El Paso, safer communities on both sides of the border, fewer interruptions for transcontinental freight trains, and an international light rail corridor.

Transportation Master Plan

Goal 4.6: Coordinate the region’s planning for thoroughfares, public transit, freight, aviation, and border crossing through better collaboration with regional transportation planning partners.

Policy 4.6.1: The City of El Paso will take the lead in establishing a regional, multimodal project-based transportation and land-use planning compact. The policies of *Plan El Paso* and the updated road network in the *Sustainability Mobility Thoroughfare Plan* can be the basis for a regional Transportation Master Plan (TMP) that implements *Plan El Paso* using a multimodal approach.

Policy 4.6.2: The TMP would be an integrated, project-based multimodal transportation plan that becomes a regional transportation planning, project, and priority compact, similar to the role served by the 2008 *Comprehensive Mobility Plan*.

Policy 4.6.3: ~~Plan El Paso and its Sustainable Mobility Plan~~ would provide the policy foundation for the TMP's technical analyses, project lists, and funding proposals. The TMP would provide project, location, design, and implementation clarity for complete street networks, RTS and other high-capacity transit corridors, walkable streets, pedestrian and bicycle corridors and facilities, and other travel modes.

Policy 4.6.4: The City will explore the use of alternative funding sources to continue to support transportation options throughout the City.

APPENDIX C - SOUTHERN CONNECTOR
ENHANCED NETWORK ALTERNATIVE

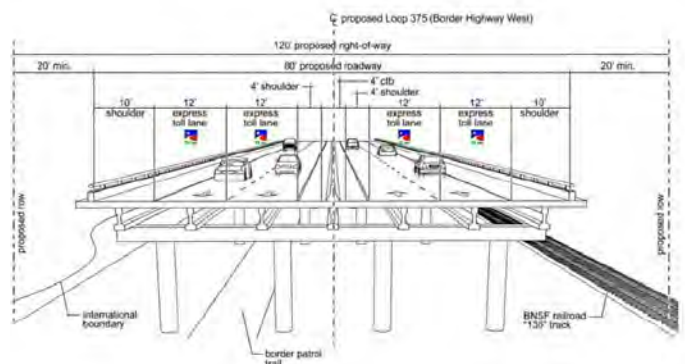
Purpose

The Border Highway West Extension Project (often referred to as the “Southern Connector”) is the name for several projects that would together create a new highway facility along the Rio Grande. While highways through rural areas are an accepted transportation practice with few negative externalities save for the facility’s tremendous cost and maintenance, much of the Southern Connector would travel through existing urban fabric and result in severe effects to historic structures, property values, walkability, multi-modal potential, and quality-of-life for surrounding residents. Several residences and many Downtown commercial structures would be razed to construct the elevated highway.

Mobility is essential to the prosperity of every City, yet at the same time, various City policy documents including *Plan El Paso* require “context-sensitive” alternatives to all transportation projects. The principal and minor arterials described in the El Paso Thoroughfare Plan Update are at-grade, multi-modal, safe for pedestrians and cyclists, and add to the real estate value of fronting properties. In this Appendix, these design concepts have been applied to create an alternative network to the Southern Connector to increase citywide vehicular mobility without the negative effects which communities must contend with for new freeways.

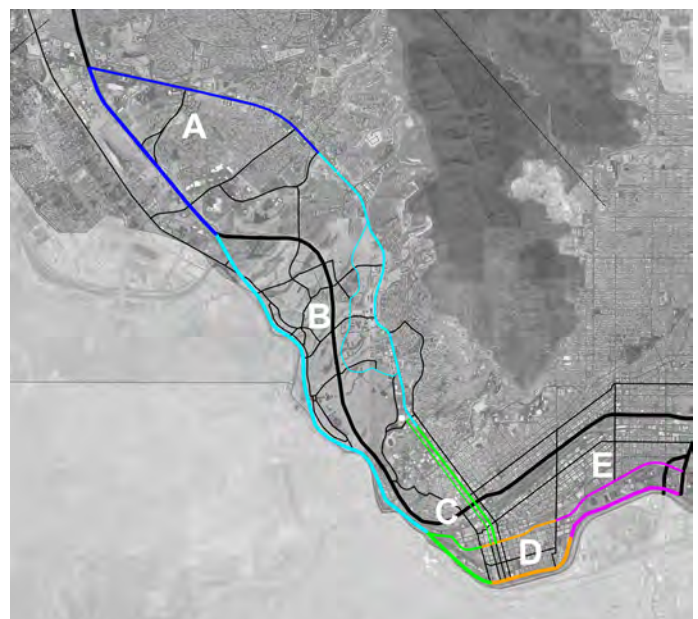


One alternative alignment for the “Southern Connector”



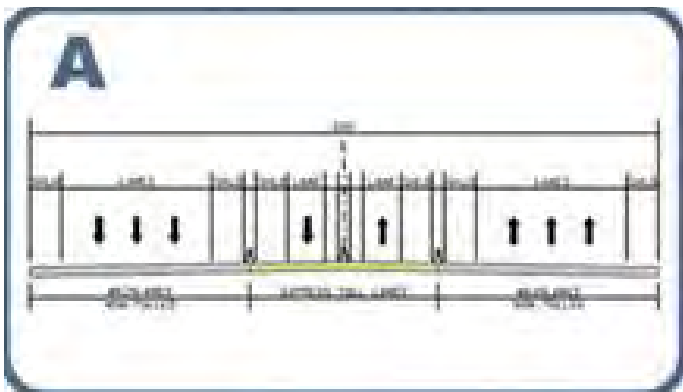
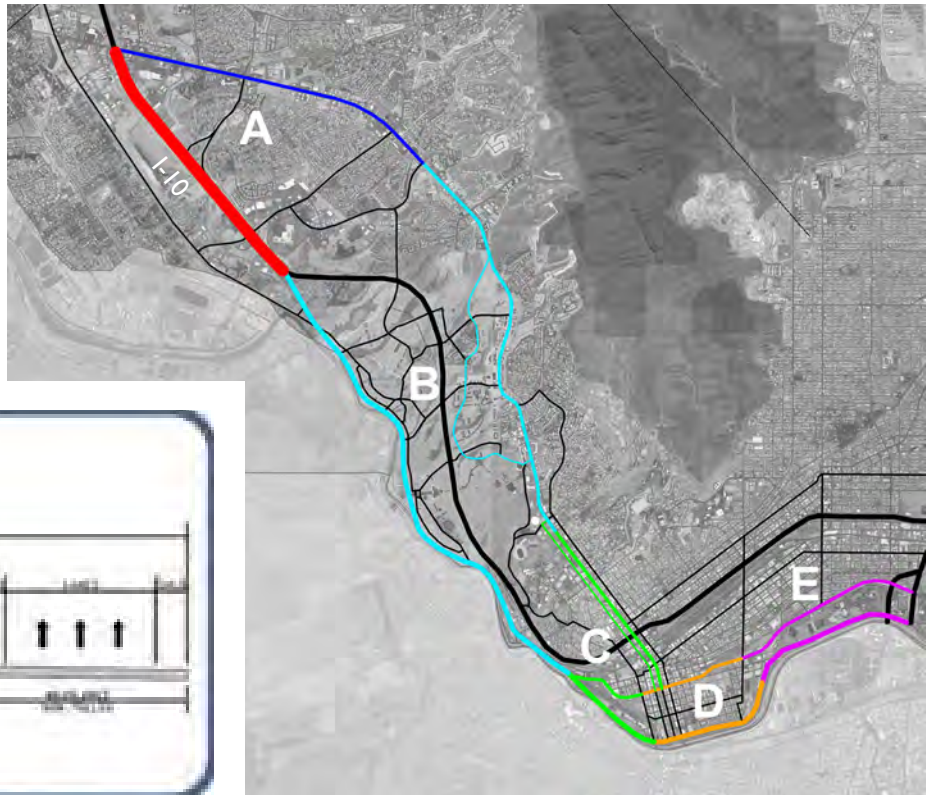
The Southern Connector is proposed as an elevated toll highway.

Network of Street Improvements as an alternative to the Southern Connector (right): An enhanced network of higher-capacity but still context-sensitive thoroughfares is detailed in this section. Together they enhance overall system capacity while not relying on a single massive facility. The letters above show segments which correspond to the segments in the “Southern Connector” Preliminary Alternatives Concept.



Segment A: I-10

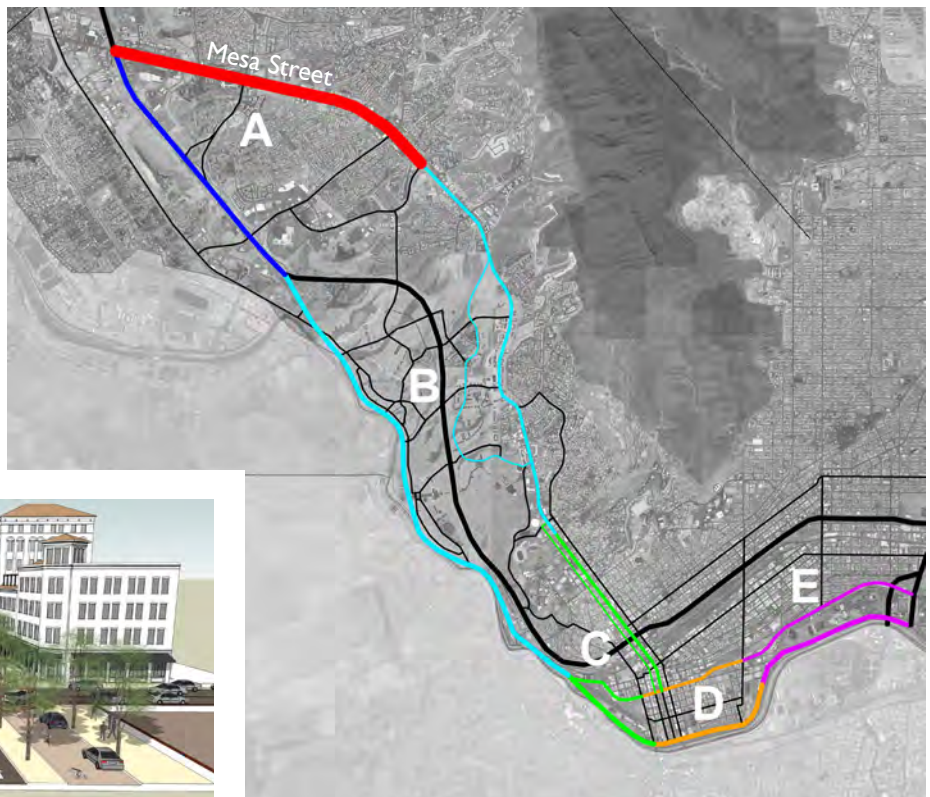
Currently a limited-access highway, this segment of I-10 has enough room in its right-of-way to add capacity by building express lanes in the middle of the highway.



I-10

Segment A: Mesa Street

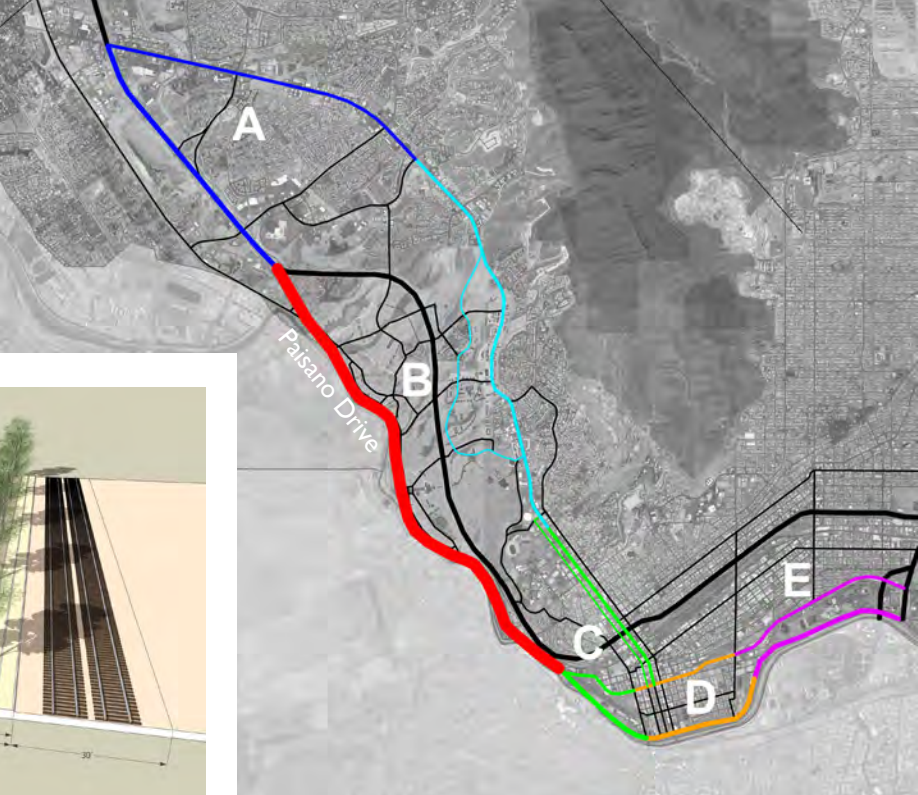
Mesa Street is one of the City's major transportation corridors, and is slated to become one of the new Rapid Transit Corridors. This segment of Mesa Street can become a high-capacity, context-sensitive multi-way boulevard. Its 150' right-of-way allows for up to 6 through-going travel lanes in addition to side access lanes and center turn lanes. This street can accommodate multiple forms of transportation in a functional, yet elegant manner.



Mesa Street - Segment A

Segment B: Paisano Drive

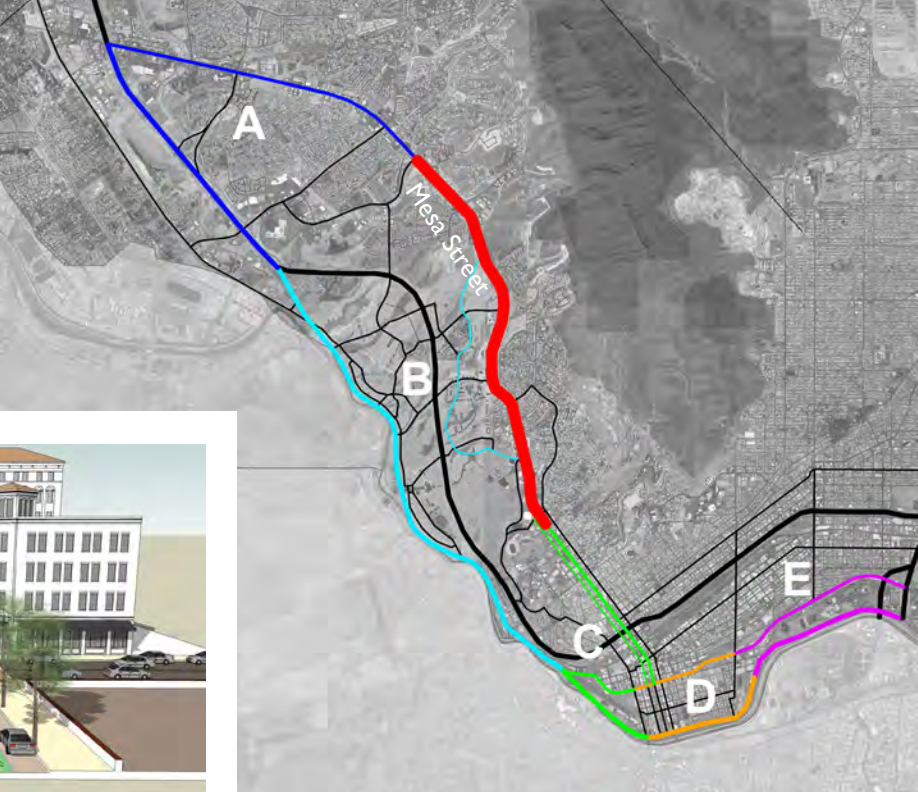
Paisano Drive is an important connection that can be further enhanced by adding express lanes for transit as well as a multi-use path to allow long distance bicycle connections.



Paisano Drive - Segment B

Segment B: Mesa Street

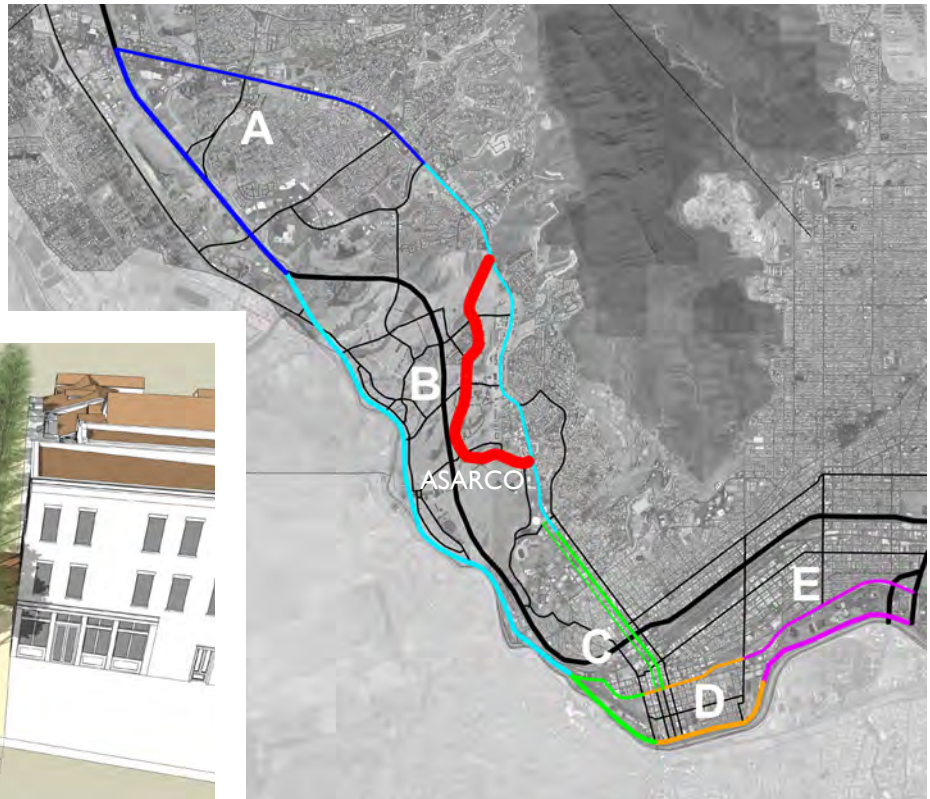
Along this segment of Mesa Street, the right-of-way narrows to 110'. A context-sensitive solution can still be achieved by providing bicycle and transit infrastructure, adding on-street parking and expanding sidewalks to provide a safe, comfortable environment for all users.



Mesa Street - Segment B

Segment B: ASARCO Streets

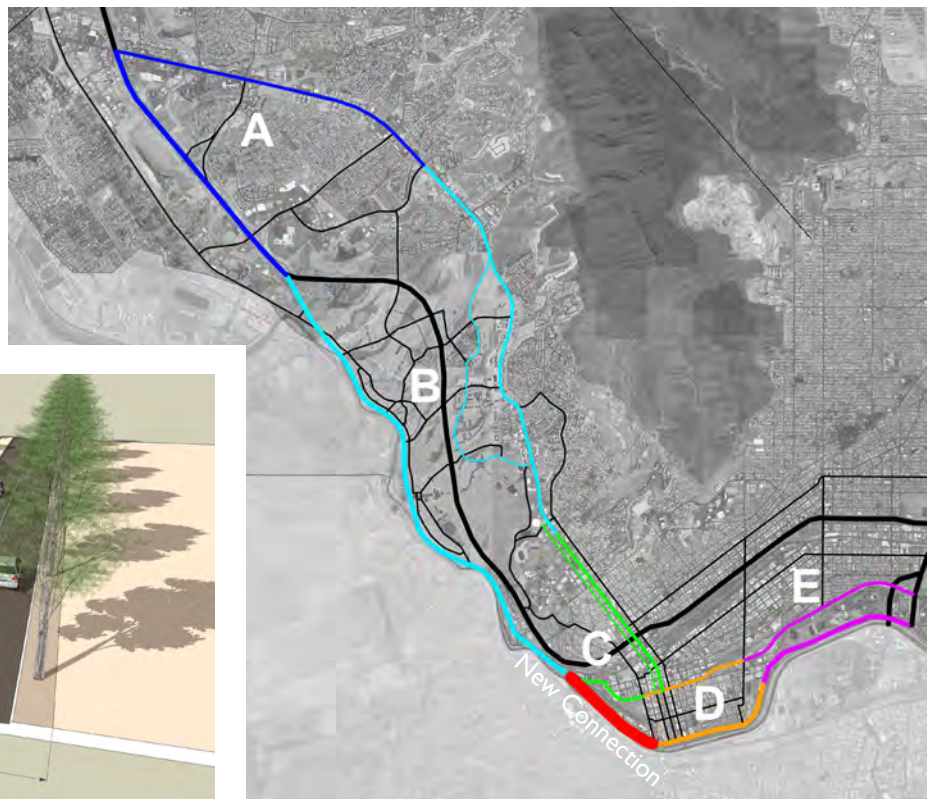
The redevelopment of the ASARCO site provides an important opportunity to increase connectivity by building a network of walkable streets. At least some of these, such as the one pictured below would have connections through the entire neighborhood providing another parallel route for automobile and transit.



Network of Streets through ASARCO redevelopment

Segment C: Connection to Cesar Chavez Border Highway

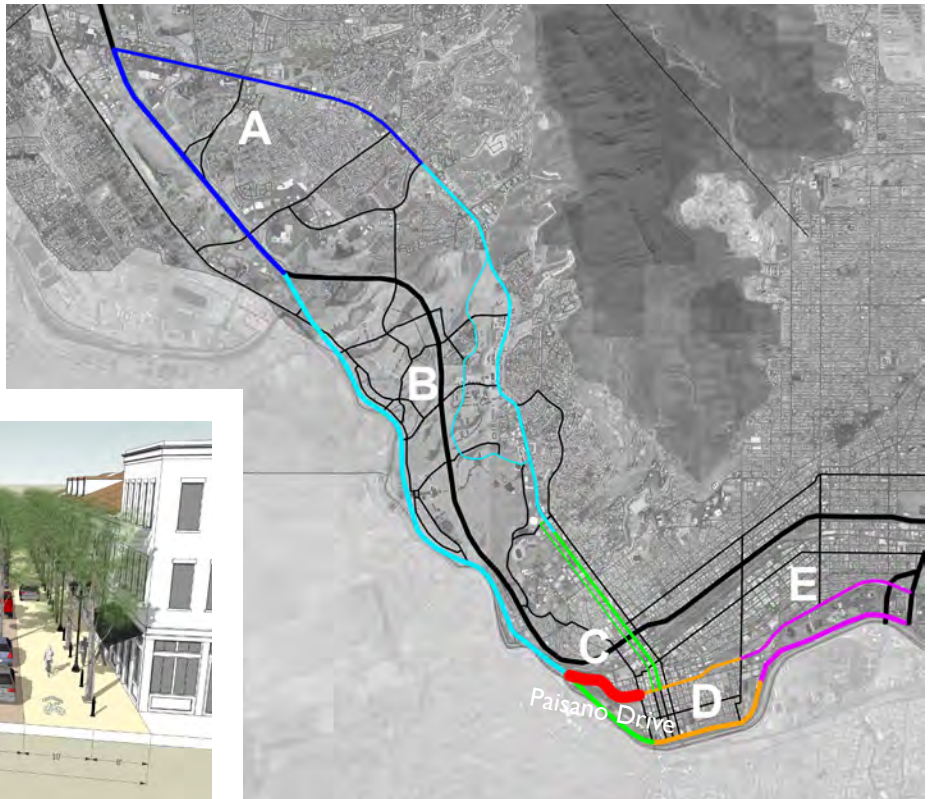
A new connection from Paisano Drive to the Cesar Chavez Border Highway would help alleviate congestion at this choke point in the City. This connection does not need an expensive highway-scaled solution. A simple, appropriately-scaled road can provide the necessary relief for traffic.



New Connection to Cesar Chavez Border Highway

Segment C: Paisano Drive

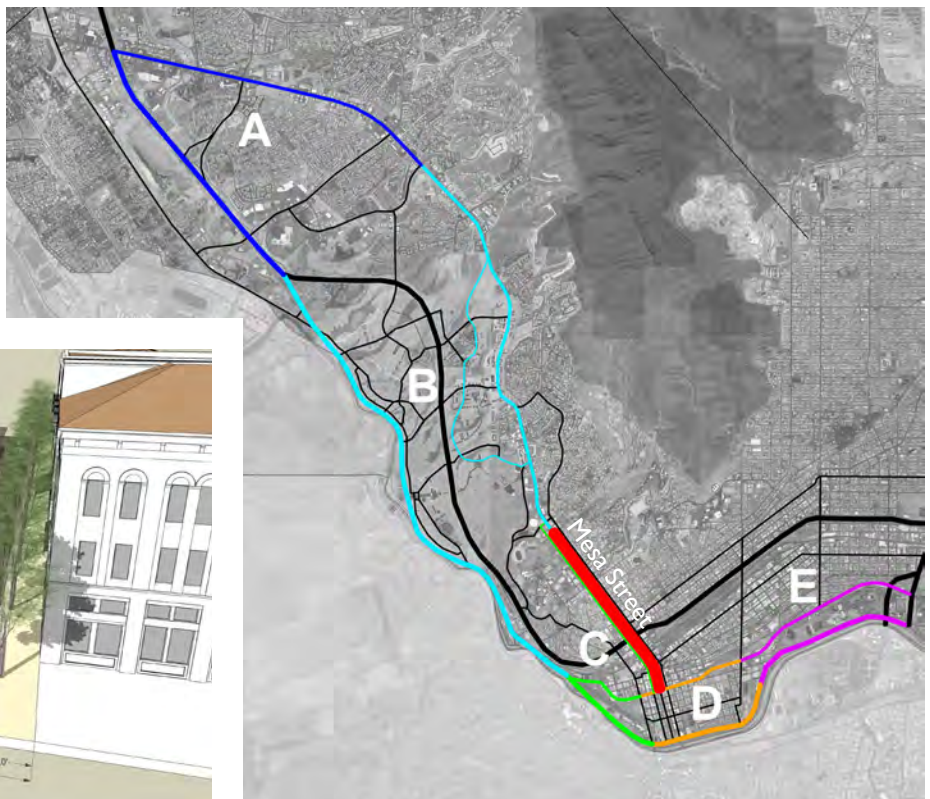
Once Paisano Drive reaches the urbanized portion of El Paso, a context-sensitive solution is required. A compact multi-way boulevard can be achieved on this segment to provide the maximum benefit for all road users within the constraints of a limited right-of-way.



Paisano Drive - Segment C

Segment C: Mesa Street

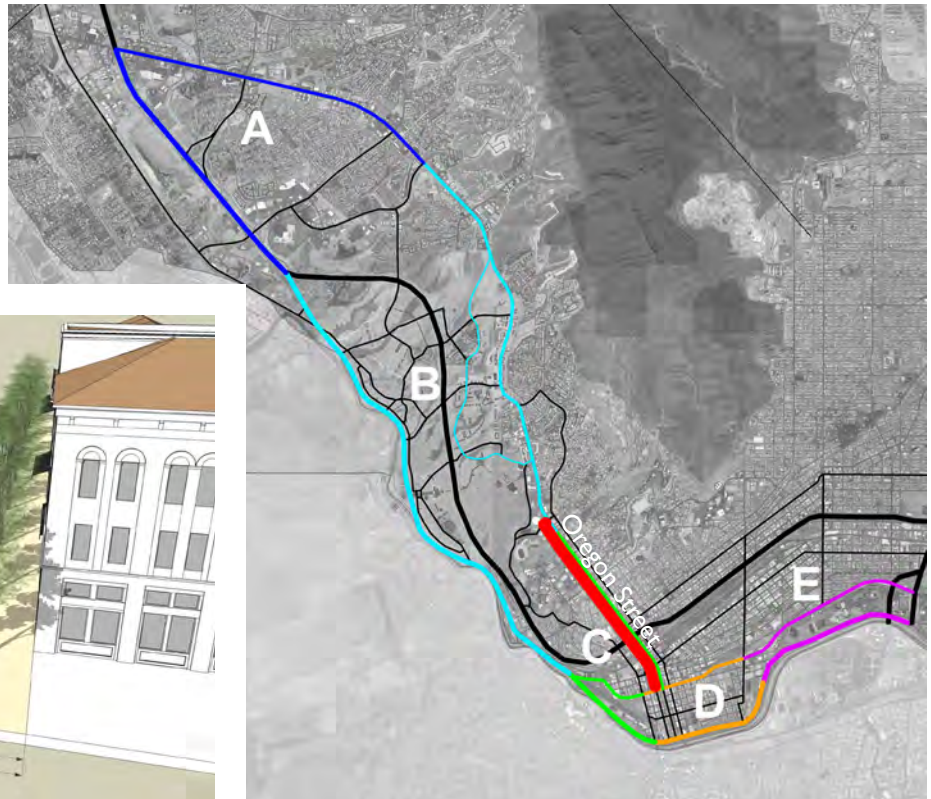
This critical segment of Mesa Street is an important part of the City's transportation corridors. Within its limited right-of-way, transit and vehicular capacity can be preserved, while providing a more pedestrian-friendly environment with lower speeds, street trees and wide sidewalks.



Mesa Street - Segment C

Segment C: Oregon Street

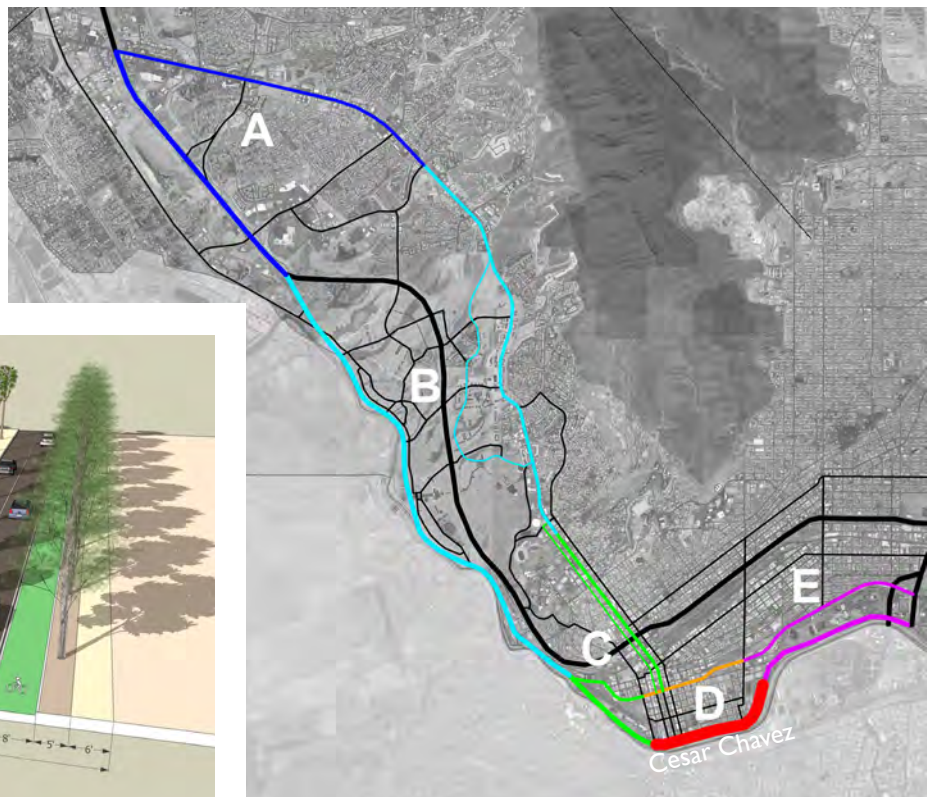
The Oregon Street corridor has the opportunity to become an important driver of urban growth in this part of the City. Dedicated bus lanes provide a direct connection between UTEP and Downtown El Paso and can help spur new pedestrian-friendly development.



Oregon Street

Segment D: Cesar Chavez Border Highway

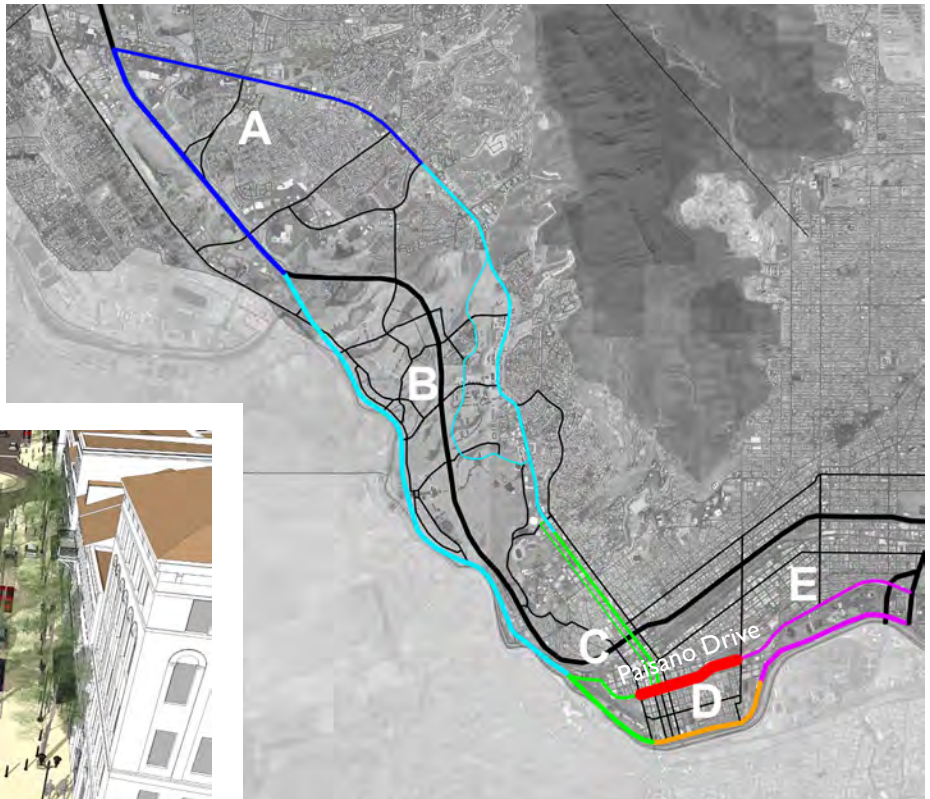
Though this road provides an important relief for traffic moving through Downtown, it also borders dense neighborhoods, and should respond in a context-sensitive way. Keeping the road at-grade and adding bike lanes and sidewalks can add value to downtown El Paso.



Cesar Chavez Border Highway - Segment D

Segment D: Paisano Drive

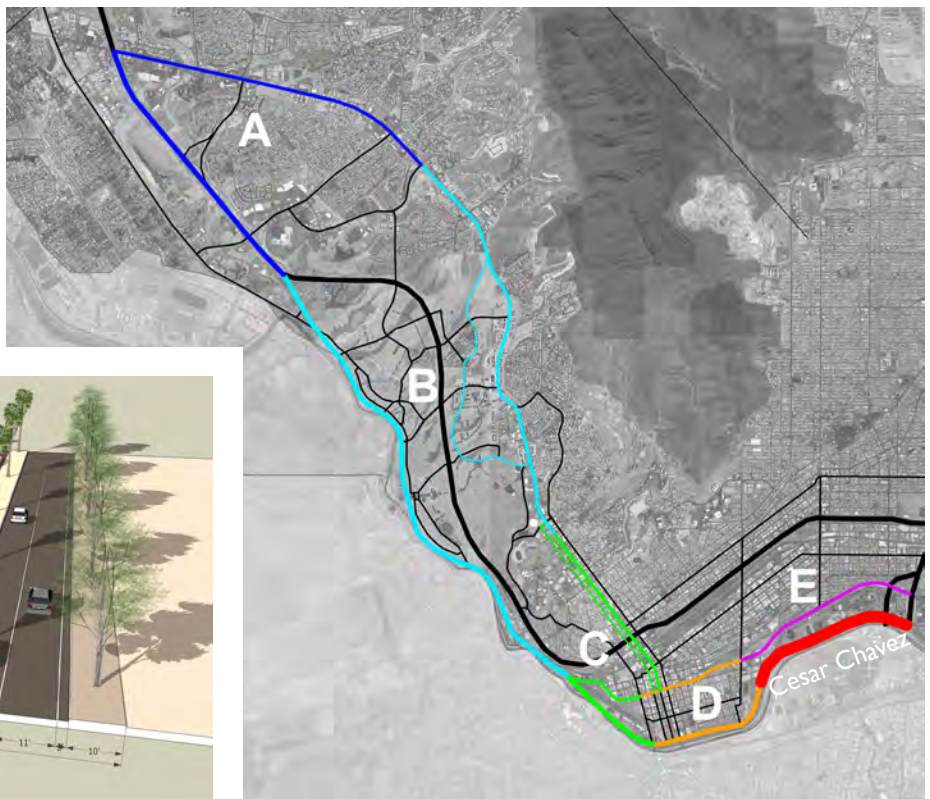
As Paisano Drive travels through the heart of Downtown El Paso, a context-sensitive solution is required that can support robust urbanism and enhance economic value. A very compact multi-way boulevard can be achieved on this segment, that supports an active pedestrian environment, while roundabouts help maintain capacity and flow for vehicular traffic.



Paisano Drive - Segment D

Segment E: Cesar Chavez Border Highway

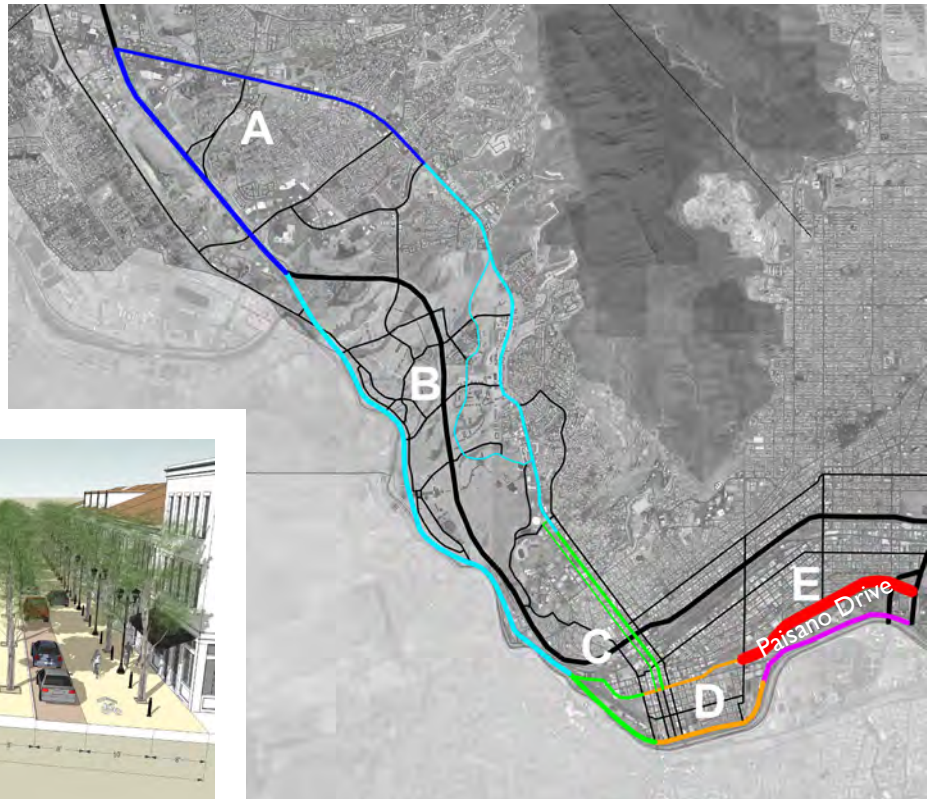
As the Cesar Chavez Border Highway moves away from downtown El Paso, there is additional room to add express lanes while maintaining a welcoming design that maintains value for surrounding neighborhoods and supports the development of a park along the national border.



Cesar Chavez - Segment E

Segment E: Paisano Drive

A compact multi-way boulevard along this segment of Paisano Drive can maintain vehicular capacity while supporting an healthy urban environment for all road users. Four lanes of traffic maintain through-movement for automobile and transit, while slow-speed access lanes create a pedestrian-friendly shared space environment for cars, bikes, and pedestrians.

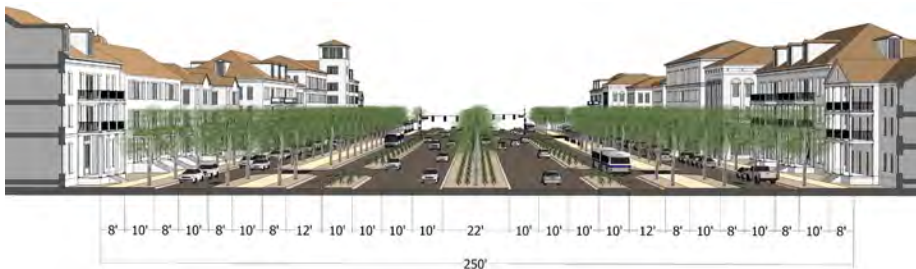


Paisano Drive - Segment E

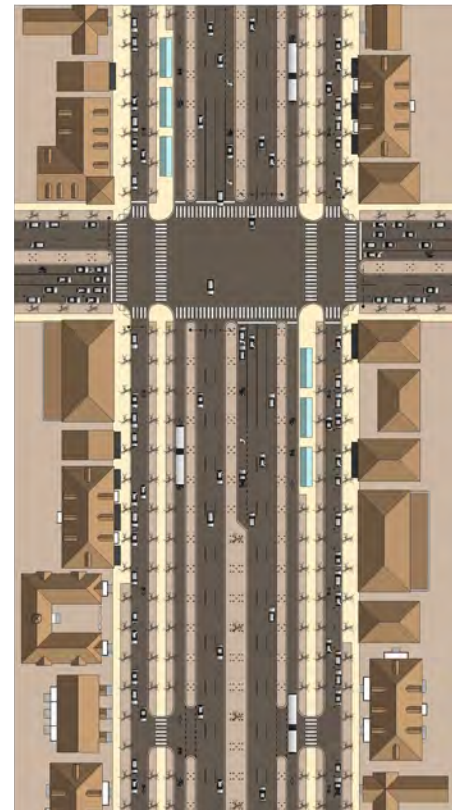
APPENDIX D - MONTANA TRANSIT EXPRESSWAY

The Montana Corridor is a critical part of the transportation network for El Paso, and is poised to become a major driver of future growth in the region. Major investments are being made in the Rapid Transit Lines that connect the city together. To support the future viability of transit and urban development along Montana, every effort should be made to support a context sensitive approach to balancing the needs of all road users. Adding 50' to the 200' right-of-way currently under control creates a high-capacity corridor for automobile traffic, in addition to separate dedicated bus lanes, multi-use paths, slow-speed access lanes with parking and generous sidewalks.

This method of street design creates value for enfronting properties by supporting compact, urban development along the corridor. This form of development, in turn, supports the rapid transit system, and thus reduces the burden on limited roadway capacity.



250' Transit Expressway - Section View



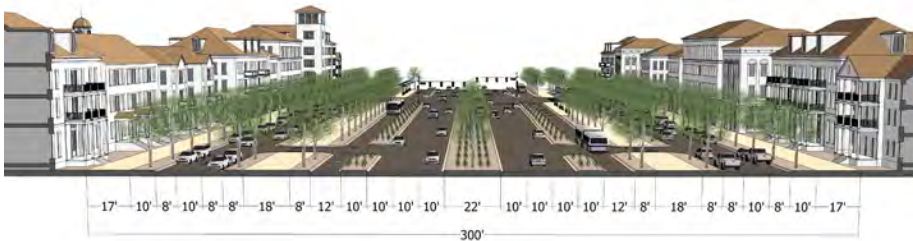
250' Transit Expressway - Plan View



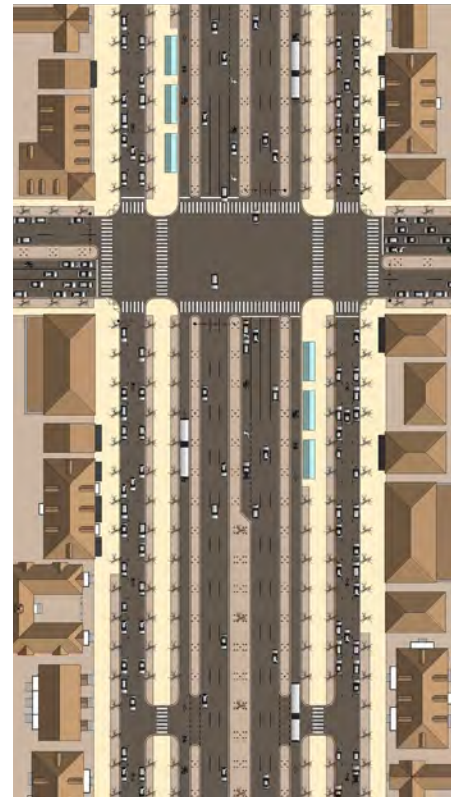
250' Transit Expressway - Overhead View

300' Right-of-Way Option

Although not necessary for the creation of a successful multi-modal corridor along Montana Avenue, an additional 100' of Right-of-Way (300' total) could give extra room for a more generous pedestrian-friendly environment. Additional parking on the access lanes support more businesses and higher residential densities. More generous sidewalks and pathways support a vibrant pedestrian environment and make enfronting properties more attractive for urban development.



300' Transit Expressway - Section View



300' Transit Expressway - Plan View



300' Transit Expressway - Overhead View