

Section 4 - Infrastructure and Services

4.1 Master Plan of Circulation

The proposed circulation plan for The Avenue Specific Plan provides for safe and efficient movement of vehicular traffic through the project, while also providing a safe environment for pedestrian movement and bicycle traffic, reducing the reliance on the automobile as a means of travel.

Access to The Avenue Specific Plan from surrounding areas is provided by Archibald Avenue bisecting the site in a north and south direction; also running in a north to south direction is Haven Avenue on the eastern boundary and Carpenter Avenue on the western boundary; running in an east to west direction is Ontario Ranch Road on the southern boundary and Schaefer Avenue on the northern boundary. Hellman Avenue bisects the site in a north to south direction between Archibald and Carpenter in the western portion of the plan area. Bus turnouts will be provided on Ontario Ranch Road, Schaefer Avenue, Haven Avenue, and Archibald Avenue to the satisfaction of the City Engineer and Omnitrans.

A primary interior circulation element for The Avenue Specific Plan is the central “La Avenida Drive” which features enhanced setbacks and travel lanes to allow for vehicle, bicycle, and pedestrian access linking residential areas with retail and commercial, recreational, and the school sites within the plan area. Improvements to non-NMC streets will be made by the developer/applicant based on the data from the Environmental Impact Report and traffic study. The traffic study will also determine the additional right of way that may be needed at critical intersections to accommodate additional right and left turn lanes. The “Circulation Plan”, Exhibit 15, establishes the hierarchy and general location of these roadways within the plan area.

Streetscapes within The Avenue are critical in maintaining the perception of community theming, unification and quality. These common landscape areas link vehicular and pedestrian traffic to neighborhoods and community elements.

The streetscapes in The Avenue are treated as critical community spaces providing quality pedestrian and vehicular circulation ways including jogging and bicycle paths and well-buffered pedestrian walks. For pedestrian and vehicle safety, reflective street signs will be provided on all proposed streets within the City. Shrubs and low groundcovers from the New Model Colony Streetscape Master Plan will be used to the greatest extent feasible to reduce maintenance, conserve resources and provide a buffered separation between pedestrian and vehicular traffic. The 8' expanded sidewalks, at an enlarged width, are designed to provide a better travel way along La Avenida Drive.

Streetscape landscape treatments were developed to form a hierarchy of community importance and use characteristics. Landscaped parkways are enlarged beyond the city street right-of-way to reinforce this hierarchy consistent with the pathway system, residential orientation, and traffic volumes. These “landscape edges” are indicated on the streetscape sections.

La Avenida Drive's design concept is focused on the use of earth tone materials and colors, meandering drifts and groves of plant material and trees and the limited but appropriate use of turf. Soldiered trees are at a uniform spacing reinforcing the linear design of the vehicular circulation system to provide a welcoming feel to those entering the community.

The unique and vital streetscape concept for La Avenida Drive is focused on the treatment of the divided collector streetscape cross section. The design of the streetscape provides a strong and significant landscape while providing pedestrian pathway choices for residents.

Although The Avenue is designed for maximum benefit of the community residents, the overall plan provides convenient access points to allow vehicles to maximize road travel on the perimeter urban arterials and neighborhood collectors instead of La Avenida Drive. This is intended to reduce interior traffic and maximize resident, pedestrian, and bicycle enjoyment of the streetscapes.

Ontario Ranch Road, Schaefer Avenue, Haven Avenue, and Archibald Avenue streetscapes are designed to provide additional landscape area beyond the street right-of-way. The Avenue is planned to focus internally. These perimeter streetscapes will allow reasonable buffering along with the appropriate landscape treatments to properly introduce the community while maintaining consistency along the overall arterial streetscape.

Carpenter Avenue and Hellman Avenues are north/south trending collectors while Turner Avenue is a north/ south trending divided collector all which contain relatively balanced landscape zones beyond their respective right-of-ways. These collectors provide access to community facilities, recreation areas, school sites, the retail center and the arterial avenues of Schaefer, Ontario Ranch Road, Haven, and Archibald.

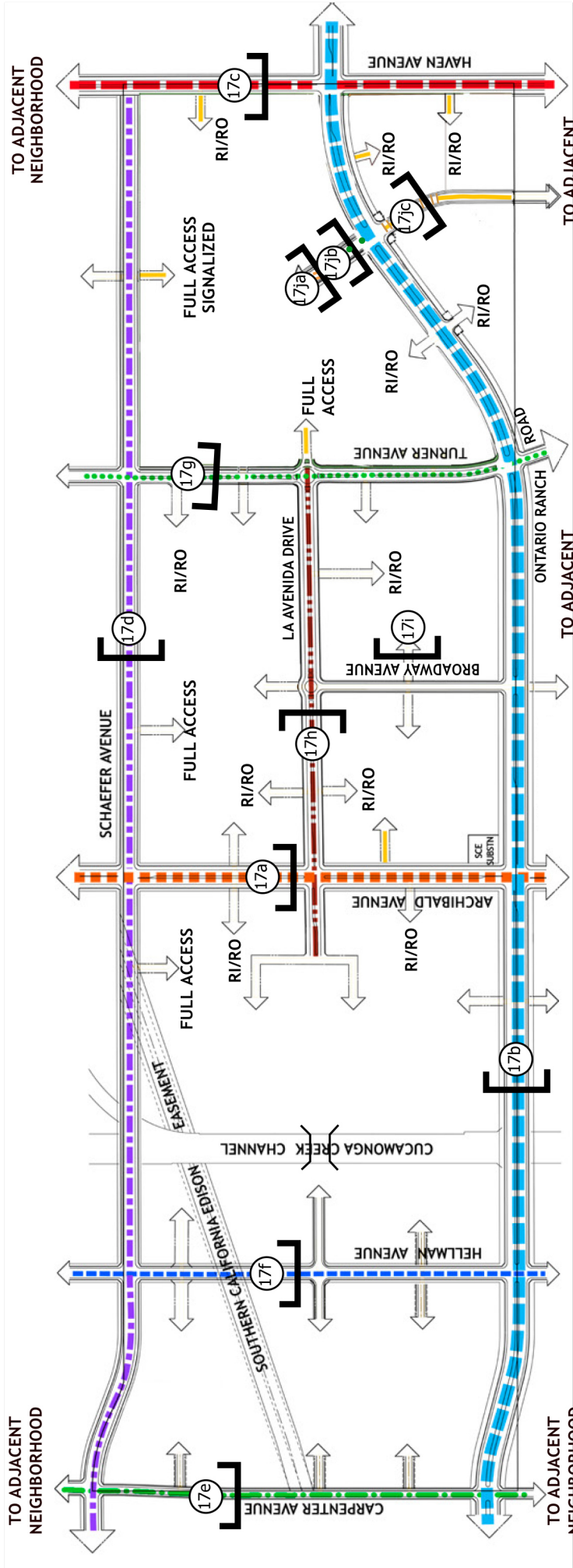
4.1.1 Street Plans and Sections

Primary access to The Avenue Specific Plan is provided by seven (7) major Avenues: Ontario Ranch Road, Haven, Schaefer, Turner, Hellman, Carpenter and Archibald Avenues. Within the plan area public streets of varying design will provide access to the residential, commercial, school, and park areas.



Pedestrians on The Avenue

Infrastructure and Services



LEGEND

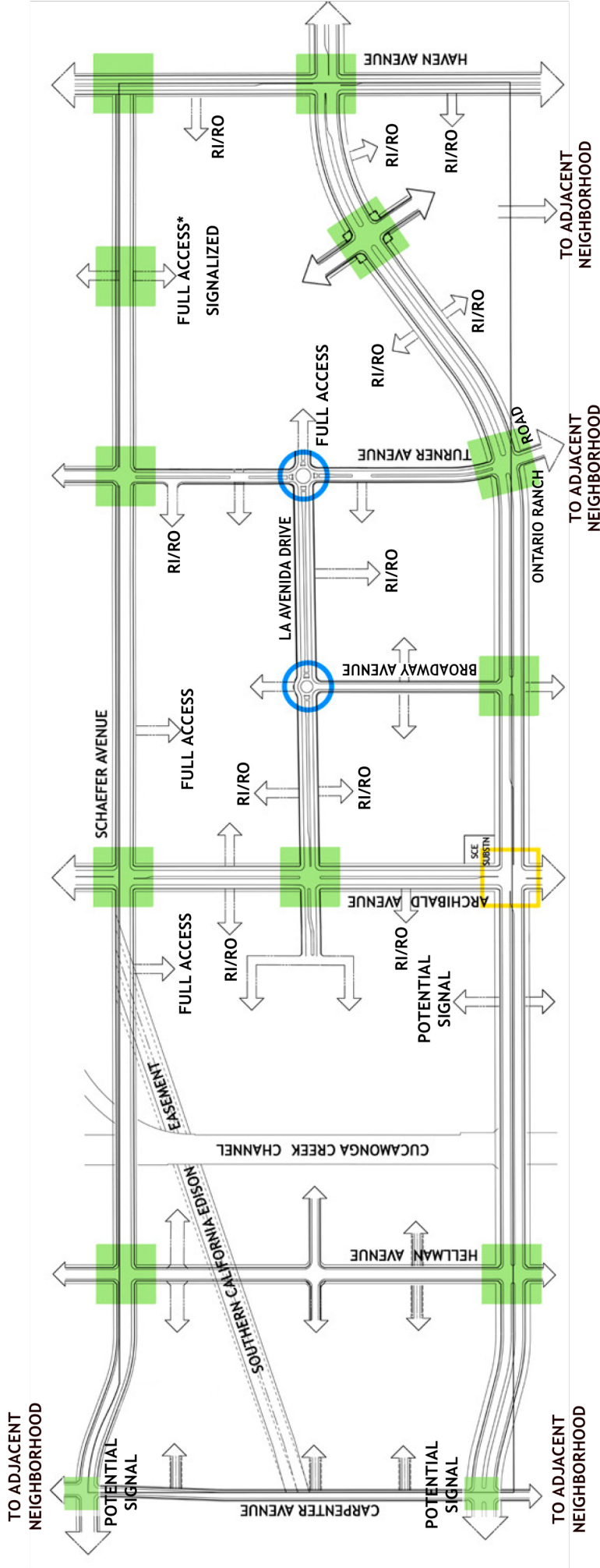
- 17a ARCHIBALD AVENUE (40' + 16' + 40' C-C, 148' R.O.W.)
- 17b EDISON AVENUE (52' + 26' + 52' C-C, 160' R.O.W.)
- 17c HAVEN AVENUE (28' + 16' + 28' C-C, 124' R.O.W.)
- 17d SCHAEFER AVENUE (84' C-C, 108' R.O.W.)
- 17e CARPENTER AVENUE (40' C-C, 66' R.O.W.)
- 17f HELLMAN AVENUE (64' C-C, 88' R.O.W.)
- 17g TURNER AVENUE (21' + 14' + 21' C-C, 80' R.O.W.)
- 17h THE AVENUE (28' + 16' + 28' C-C, 124' R.O.W.)
- 17i NEIGHBORHOOD ENTRY STREET (36' C-C, 60' MIN R.O.W.)
- 17j NEIGHBORHOOD ENTRY STREET W/ MEDIAN (50' C-C, 74' MIN R.O.W.)
- 17j NEIGHBORHOOD ENTRY STREET W/ MEDIAN (60' C-C, 84' MIN R.O.W.)
- 17j NEIGHBORHOOD ENTRY STREET W/ MEDIAN (60' C-C, 84' MIN R.O.W.)

NOTE: C-C = Curb-to-Curb; R.O.W. = Right-of-Way; The location of access points is conceptual. Precise locations will be determined as part of the tract map process. The Neighborhood Entry Streets at the westerly termination of the Avenue adjacent to the school site shall be 40' C-C, 66' R.O.W. While the alignment of roads is conceptual, The Avenue shall maintain the straight, linear configuration. *The intersection legs to the north and south of Schaefer Avenue shall be aligned. Final location of the intersection shall be determined with approval of the maps for developments on the north and south of Schaefer Avenue. No sidewalk improvements on the north side of Schaefer Avenue between Haven Avenue and Hellman Avenue.

The Avenue

SPECIFIC PLAN

Circulation Plan



LEGEND



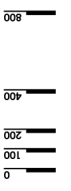
ROUNDABOUT

NEW SIGNALIZED INTERSECTION

EXISTING SIGNALIZED INTERSECTION (TO BE MODIFIED)



NORTH



NOTE: The locations of entry points is conceptual. Precise locations will be determined as part of the tract map process.

*The intersection legs to the north and south of Schaefer Avenue shall be aligned. Final location of the intersection shall be determined with approval of the maps for developments on the north and south of Schaefer Avenue.

The Avenue

SPECIFIC PLAN

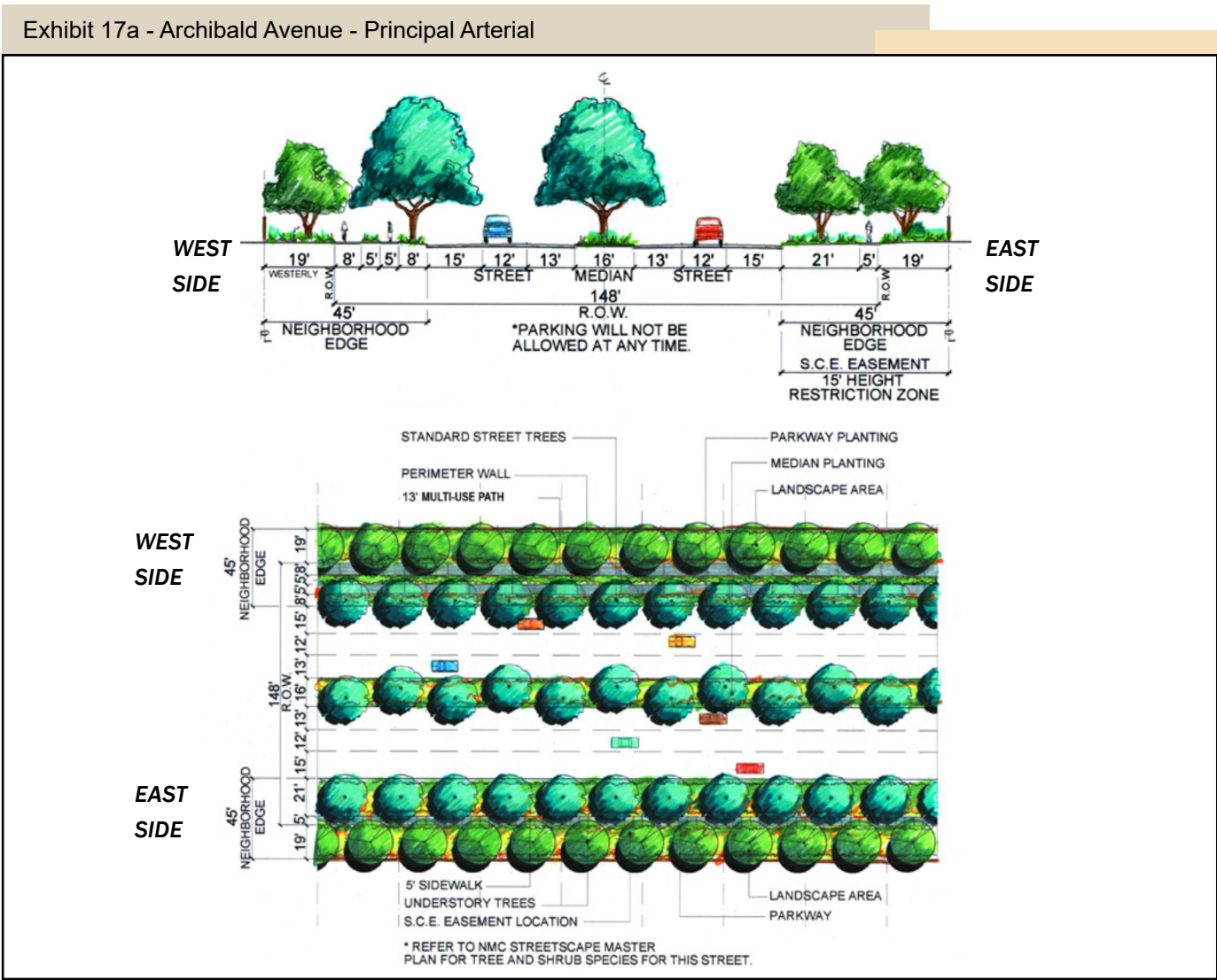
The New Model Colony - Ontario, California

Exhibit 16 - Entries and Signalization

Entries and Signalization

Archibald Avenue

Archibald Avenue bisects The Avenue Specific Plan in a north/south direction in the central portion of the plan area. Archibald Avenue is designated as a “Principal Arterial” with a total right of way of 148 feet with 80 feet of paved travel area separated by a 16-foot wide raised median. There are 19-foot wide landscape lots on both sides of the street serving as a buffer between homes and the right-of-way. The west side of the street has a 13-foot multi-use path (5’ sidewalk may be divided from the 8’ expanded sidewalk at the discretion of the City) separated from the street by a 13-foot landscaped parkway. The east side of the street has a 5-foot sidewalk separated from the street by a 21-foot landscaped parkway. Along Archibald Avenue, bus turnouts will be located to the satisfaction of the City Engineer and Omnitrans. The developer will be responsible for those improvements to Archibald Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Archibald Avenue cross-section is illustrated below:

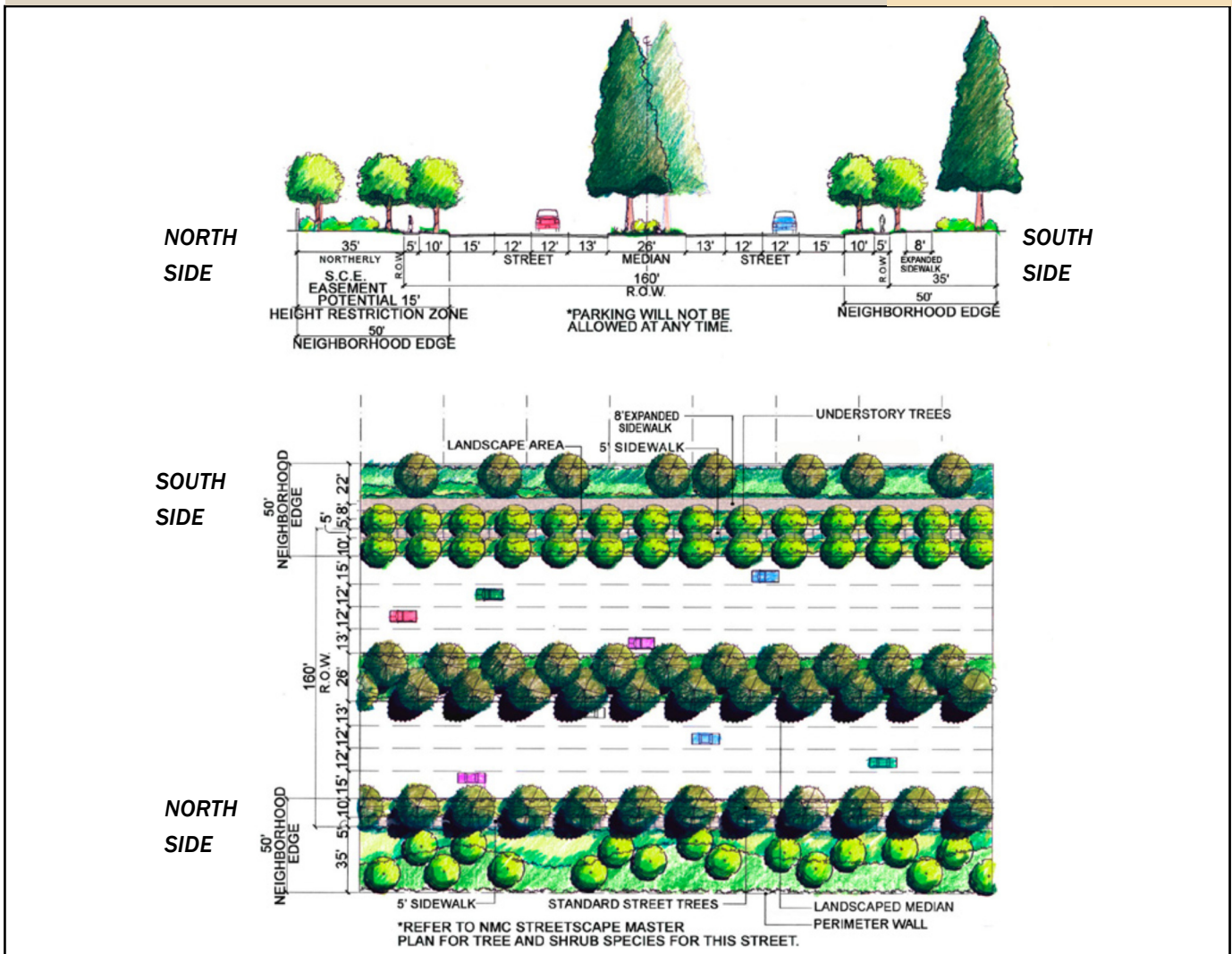


Ontario Ranch Road

Ontario Ranch Road is designated as "Principal Arterial" and borders the plan area on the south. Ontario Ranch Road has a total right-of-way of 160 feet with 104 feet of paved travel area separated by a 26-foot wide raised median.

Along Ontario Ranch Road, bus turnouts will be located to the satisfaction of the City Engineer and Omnitrans. A 50-foot landscape edge on both sides of the street contains a 35-foot landscape buffer with a 5-foot sidewalk separated from the street by a 10-foot landscaped parkway and a multi-use path on the south. The S.C.E. Easement exists within the northerly 50-foot Landscape Edge and may be relocated within the Landscape Edge in the future. The developer will be responsible for those improvements to Ontario Ranch Road as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Ontario Ranch Road cross-section is illustrated below:

Exhibit 17b - Ontario Ranch Road - Principal Arterial

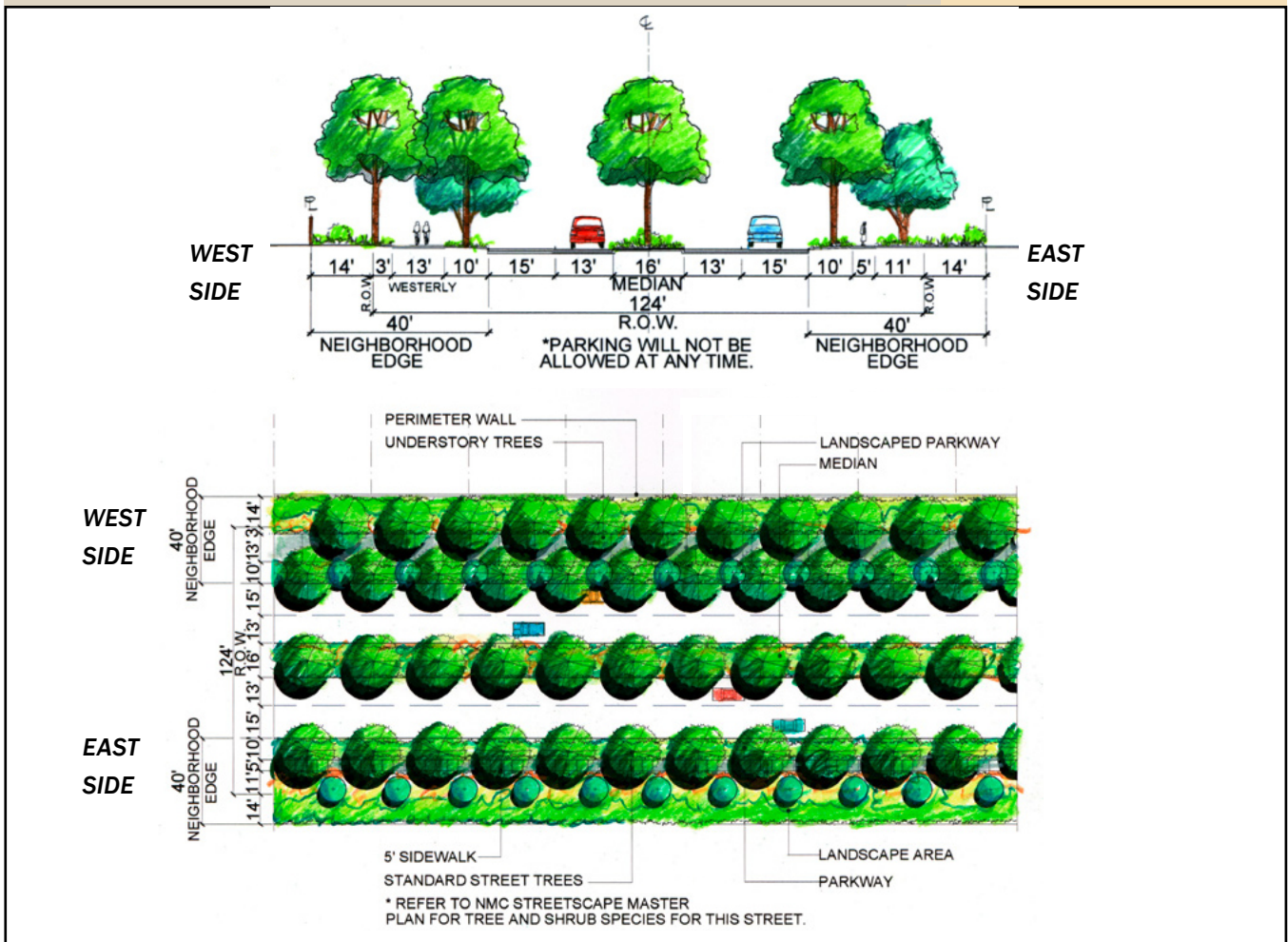


Haven Avenue

Haven Avenue is designated as “Principal Arterial” and borders the plan area on the east. Haven Avenue has a total right-of-way of 124 feet, with 56 feet of paved travel area separated by a 16-foot wide raised median.

The west side of the street has a 40-foot Neighborhood Edge with 14 feet of landscape buffer between the property line and the right-of-way. Along Haven Avenue, bus turnouts will be located to the satisfaction of the City Engineer and Omnitrans. A 13-foot multi-use path (5’ sidewalk may be divided from the 8’ expanded sidewalk at the discretion of the City) that is separated from the street by a 10-foot parkway and an additional 3 feet of landscape to the right-of-way edge. The east side of the street also has a 40-foot landscape edge with 14 feet of landscape buffer to the right-of-way. A 5-foot sidewalk is separated from the street by a 10-foot parkway and the right-of-way by an additional 11 feet of landscape. The developer will be responsible for those improvements to Haven Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Haven Avenue cross-section is illustrated below:

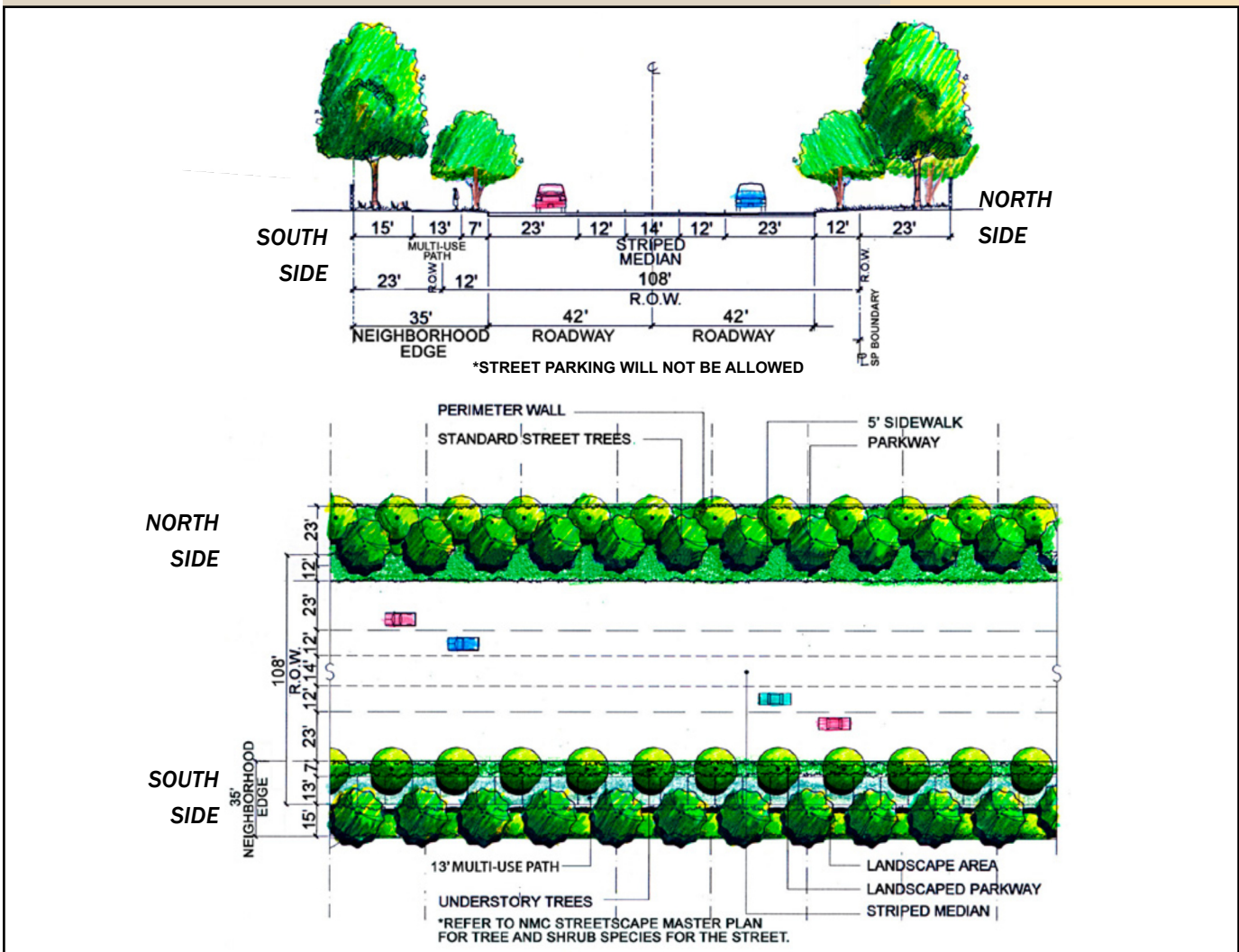
Exhibit 17c - Haven Avenue - Principal Arterial



Schaefer Avenue

Schaefer Avenue is designated as “Collector” and borders the plan area on the north. Schaefer Avenue has a total right-of-way of 108 feet with 84 feet of paved travel area. Along Schaefer Avenue, bus pads will be located to the satisfaction of the City Engineer and Omnitrans. The south side of Schaefer has a 35-foot neighborhood edge. The Neighborhood Edge is comprised of 12 feet of street right-of-way and an adjacent 23-foot wide landscape lot. The Neighborhood Edge includes a 13-foot multi-use path, including 5-foot sidewalk, separated from the street by a 7-foot parkway. The north side of Schaefer will have a 23 -foot wide landscape lot adjacent to a 12-foot parkway. The dedication and improvements of the 23 -foot wide landscape lot to the north of the Project boundary is not a part of The Avenue Specific Plan Requirements .The developer will be responsible for those improvements to Schaefer Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Schaefer Avenue cross-section is illustrated below:

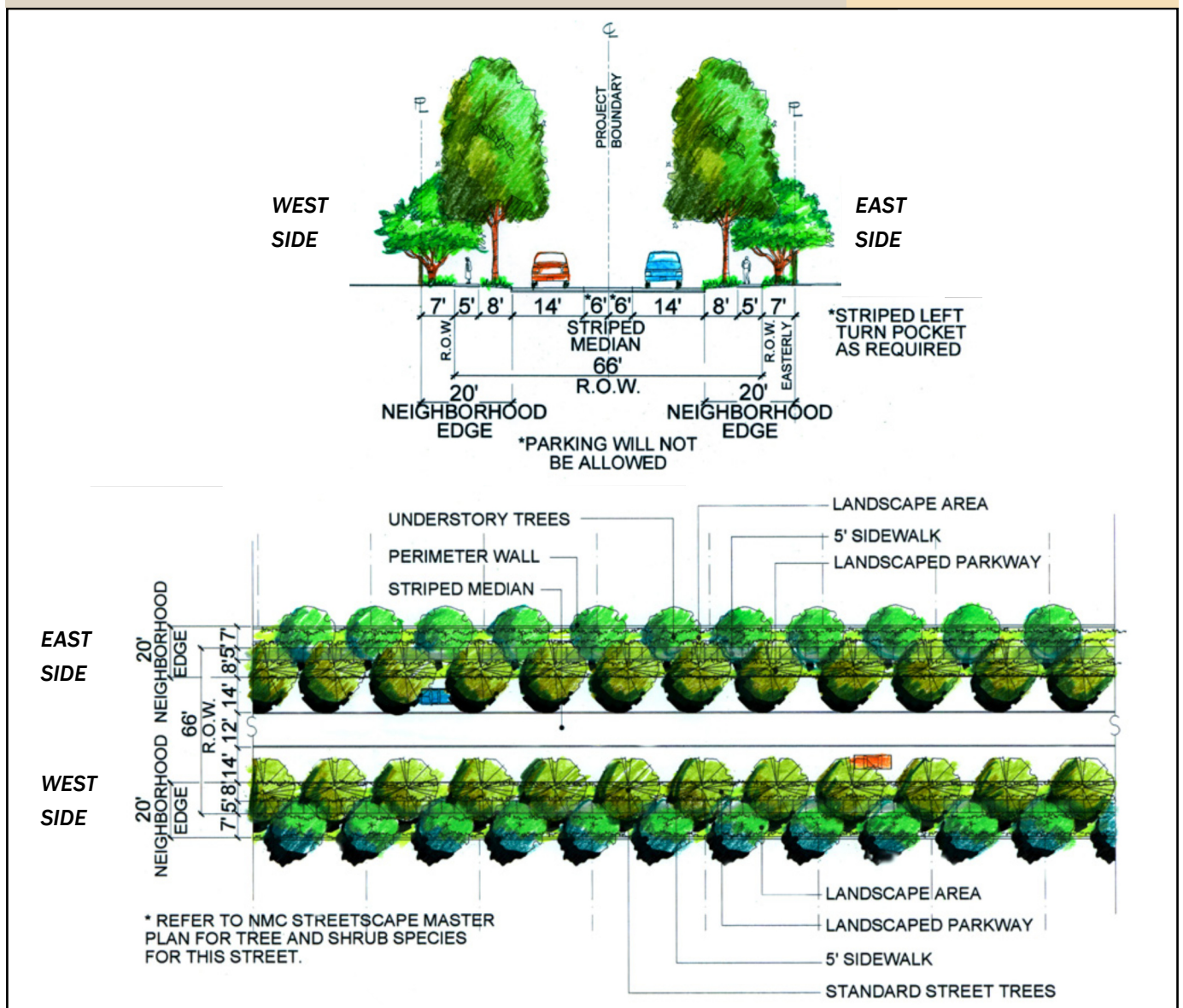
Exhibit 17d - Schaefer Avenue - Collector



Carpenter Avenue

Carpenter Avenue is designated as a “Primary Local Street” running in a north/south direction whose centerline forms the western project boundary. It has a total right-of-way of 66 feet with 40 feet of paved travel area. There is a 5-foot sidewalk separated from the street by a 8-foot landscaped parkway on each side of the street. In addition, there is an 7-foot wide landscape lot adjacent to both sides of the street. The developer will be responsible for those improvements to Carpenter Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Carpenter Avenue cross-section is illustrated below:

Exhibit 17e - Carpenter Avenue - Primary Local Street

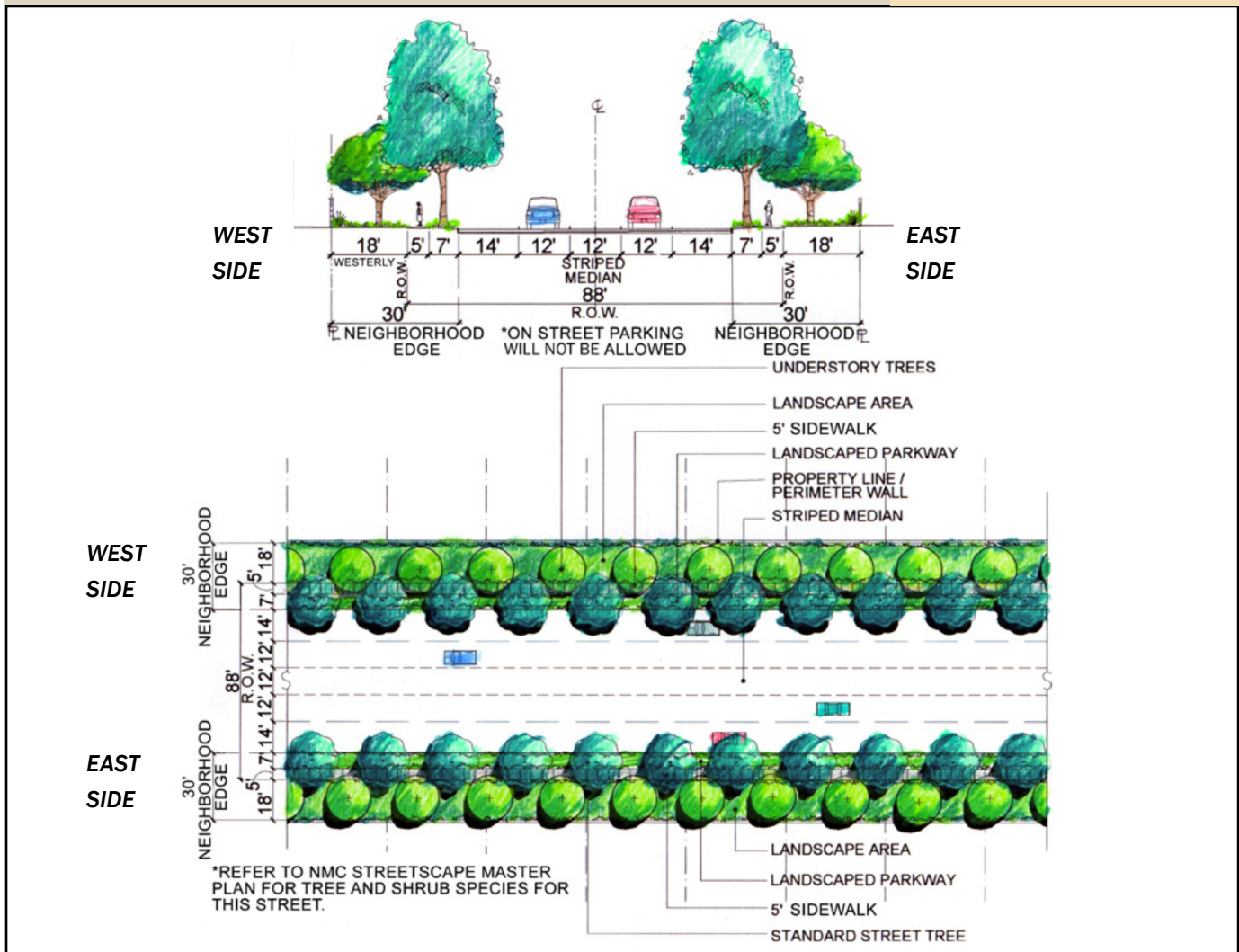


Hellman Avenue

Hellman Avenue is designated as “Collector” and bisects the plan area in a north/south direction in the western portion. Hellman Avenue has a total right-of-way of 88 feet with 64 feet of paved travel area. There is a 12-foot parkway on each side of the street which includes a 5-foot sidewalk separated from the street by a 7-foot landscaped parkway. In addition, there is an 18-foot wide “landscaped lot” adjacent to both sides of the street.

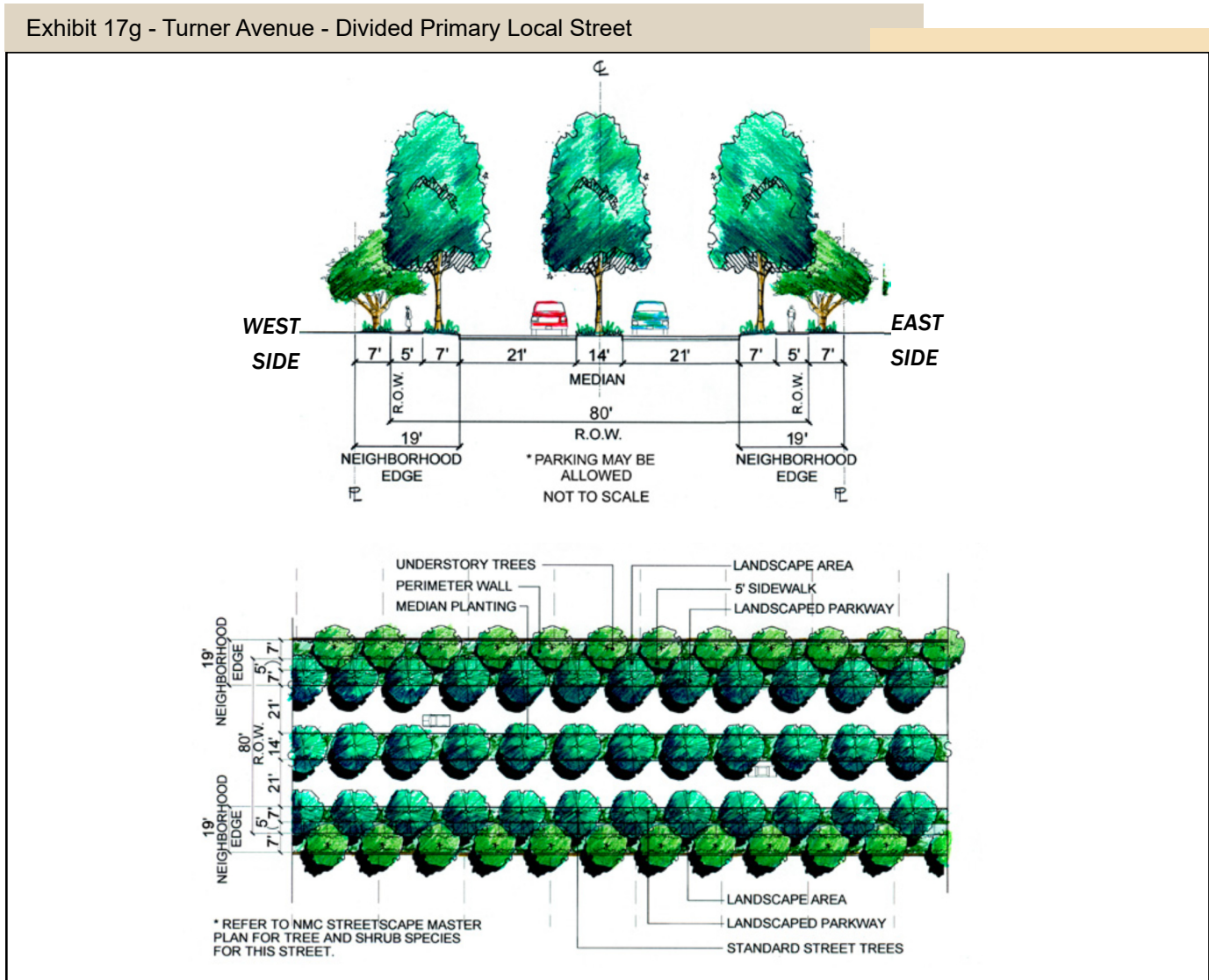
The developer will be responsible for those improvements to Hellman Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The developer will be responsible for those improvements to Hellman Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Hellman Avenue cross-section is illustrated below:

Exhibit 17f - Hellman Avenue - Collector



Turner Avenue

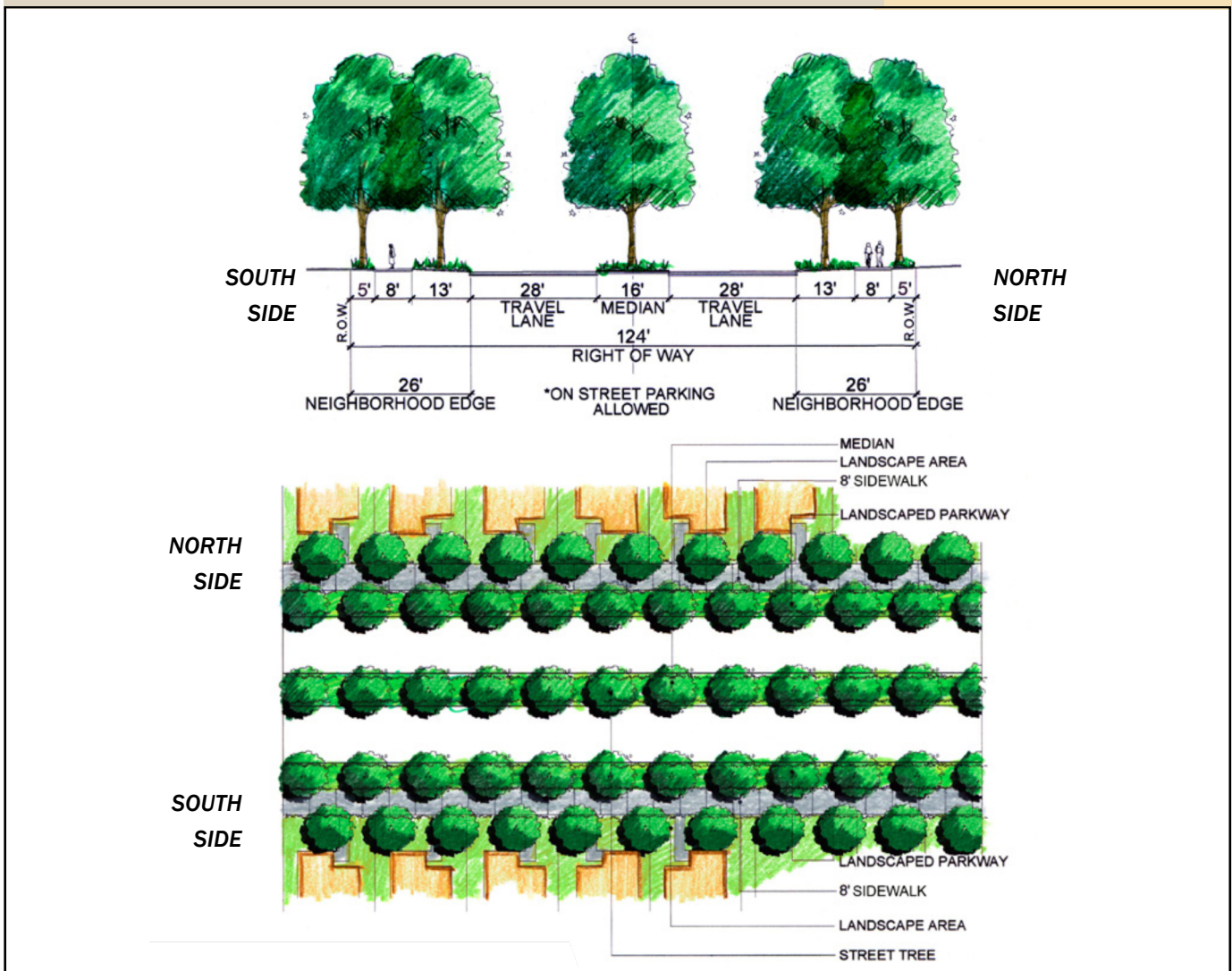
Turner Avenue is designated as “Divided Primary Local Street” and bisects the plan area in a north/south direction in the eastern portion. Turner Avenue has a total right-of-way of 80 feet through the Specific Plan Area, with a 14-foot landscaped median separating two paved 21-foot travel lanes. The east and west sides of the street includes a 5-foot sidewalk separated from the street by a 7-foot landscaped parkway. The final roadway section will be determined by the City Engineer. The developer will be responsible for those improvements to Turner Avenue as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. Turner Avenue shall be constructed such that the westerly curb and gutter shall be located completely off Assessor’s Parcel Number 218-201-19 with the parkway and neighborhood edge on the west side to be deferred until such time APN: 218-201-19 develops in accordance with The Avenue Specific Plan.



La Avenida Drive

La Avenida Drive, designated as a “Divided Primary Local Street”, is a centrally-located avenue connecting community amenities to the residential neighborhoods. La Avenida Drive has a total right-of-way of 124 feet with two 28-foot one-way avenues with on-street parking, separated by a 16-foot wide raised median. This pedestrian oriented street, with generously landscaped median and parkways, links the recreation areas, schools and parks. La Avenida Drive presents a strong image, emphasizing homes fronting along the street with an 8-foot expanded sidewalk on both sides of the street separated by 13-foot landscaped parkways and 5-foot landscape lots. The developer will be responsible for those improvements to La Avenida Drive as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. No portion of La Avenida Drive right of way or neighborhood edge shall be located on the property identified as Assessor’s Parcel Number 218-201-19.

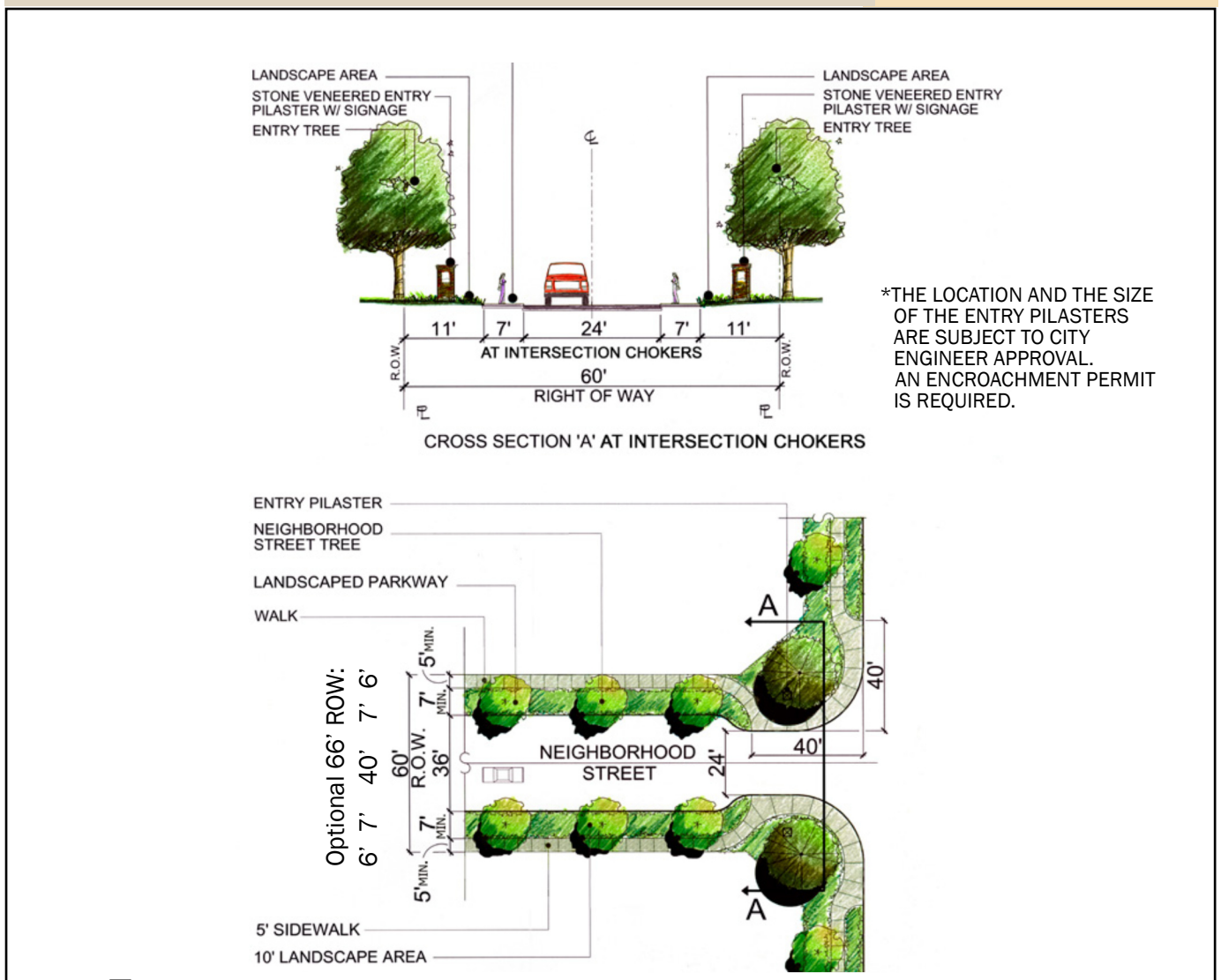
Exhibit 17h - La Avenida Drive - Divided Primary Local Street



Neighborhood Entry Street

Neighborhood Entry Streets are designed to distribute vehicular traffic from the arterial and collector streets into the residential neighborhoods. These streets have a 60 foot minimum total right-of-way with 36 feet of paved travel area. There is a 12-foot wide parkway within the right-of-way which provides for a minimum 5-foot wide sidewalk separated from the street by a minimum 7-foot wide landscaped area. The developer will be responsible for those improvements to Neighborhood Entry Streets as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Neighborhood Entry Street cross-section is illustrated below:

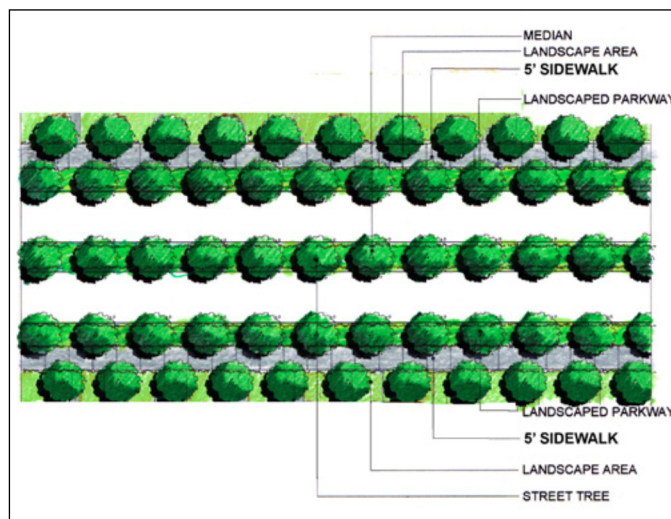
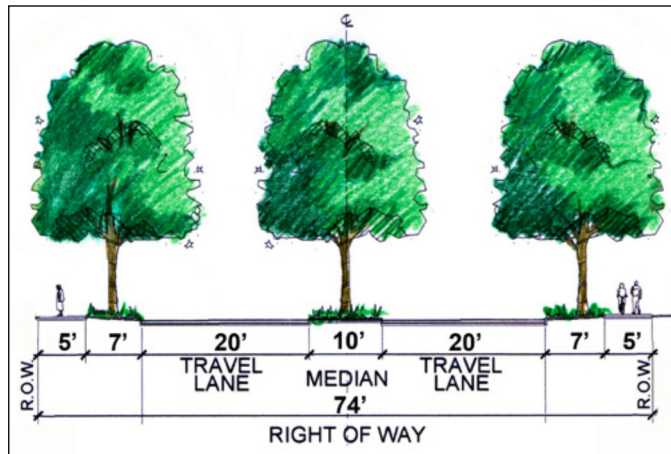
Exhibit 17i - Neighborhood Entry Street



Neighborhood Entry Street With Median

The Neighborhood Entry Street With Median is designed to distribute vehicular traffic from Ontario Ranch Road into the residential neighborhood. Section 17ja has a 74 foot minimum total right-of-way with 40 feet of paved travel area split by a 10-foot landscaped median. There is a 12-foot wide parkway within the right-of-way which provides for a 5-foot wide sidewalk separated from the street by a 7-foot wide landscaped area. Section 17jb has an 84-foot right-of-way with two 20 foot travel lanes, split by a 10' landscaped median and 10 foot turn lane for southbound motorists wishing to turn left onto Ontario Ranch Road. Each side of Section 17jb contains a 5 foot sidewalk and 7 foot parkway. Section 17jc also has an 84 foot right-of-way containing two 20 foot travel lanes. There is a 10 foot turn lane for northbound motorist wishing to turn left onto Ontario Ranch Road. This 10 foot turn lane is flanked by a 4 foot landscape median and a 6 foot striped zone. Each side of Section 17jc also contains a 5 foot sidewalk and 7 foot parkway.

Exhibit 17ja - Neighborhood Entry Street with Median



The final roadway section widths will be determined by the City Engineer based on the need for intersection left and/or right turn lanes. The developer will be responsible for those improvements to Neighborhood Entries as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. The Neighborhood Entry Street with Median cross-section is illustrated below:

Exhibit 17jb - Neighborhood Entry Street with Median - Southbound

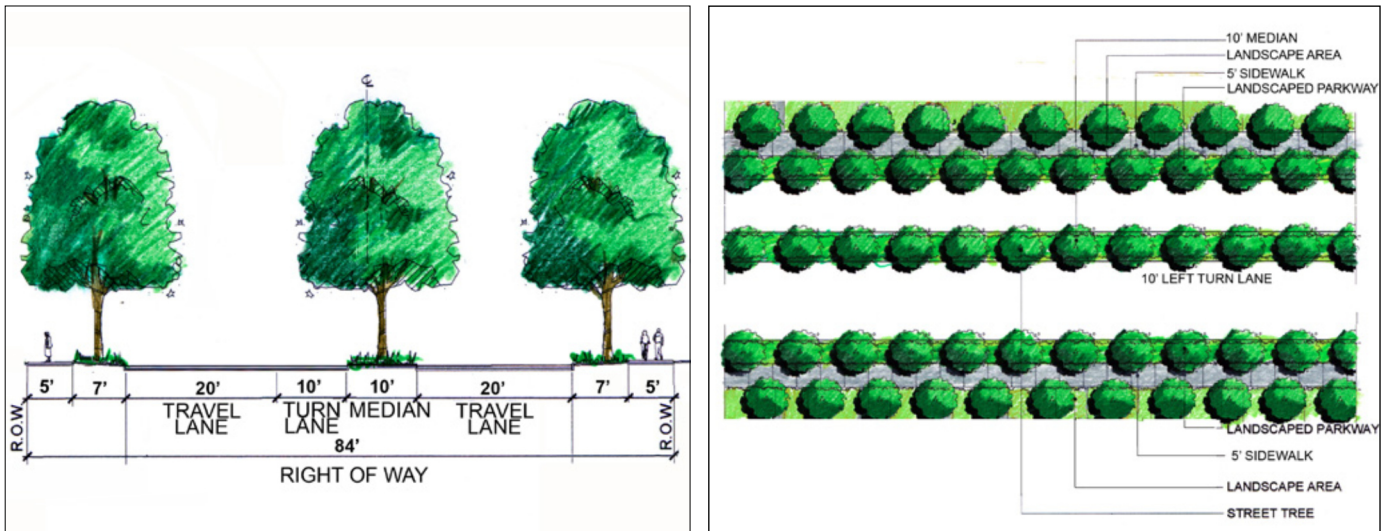
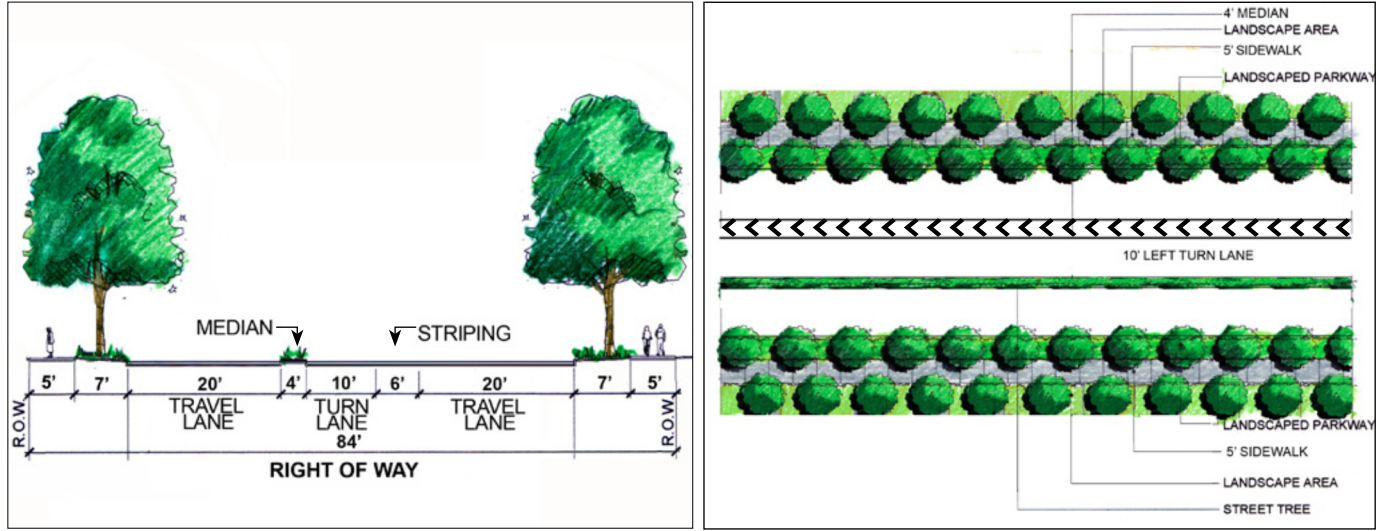


Exhibit 17jc - Neighborhood Entry Street with Median - Northbound (South of Ontario Ranch Road)

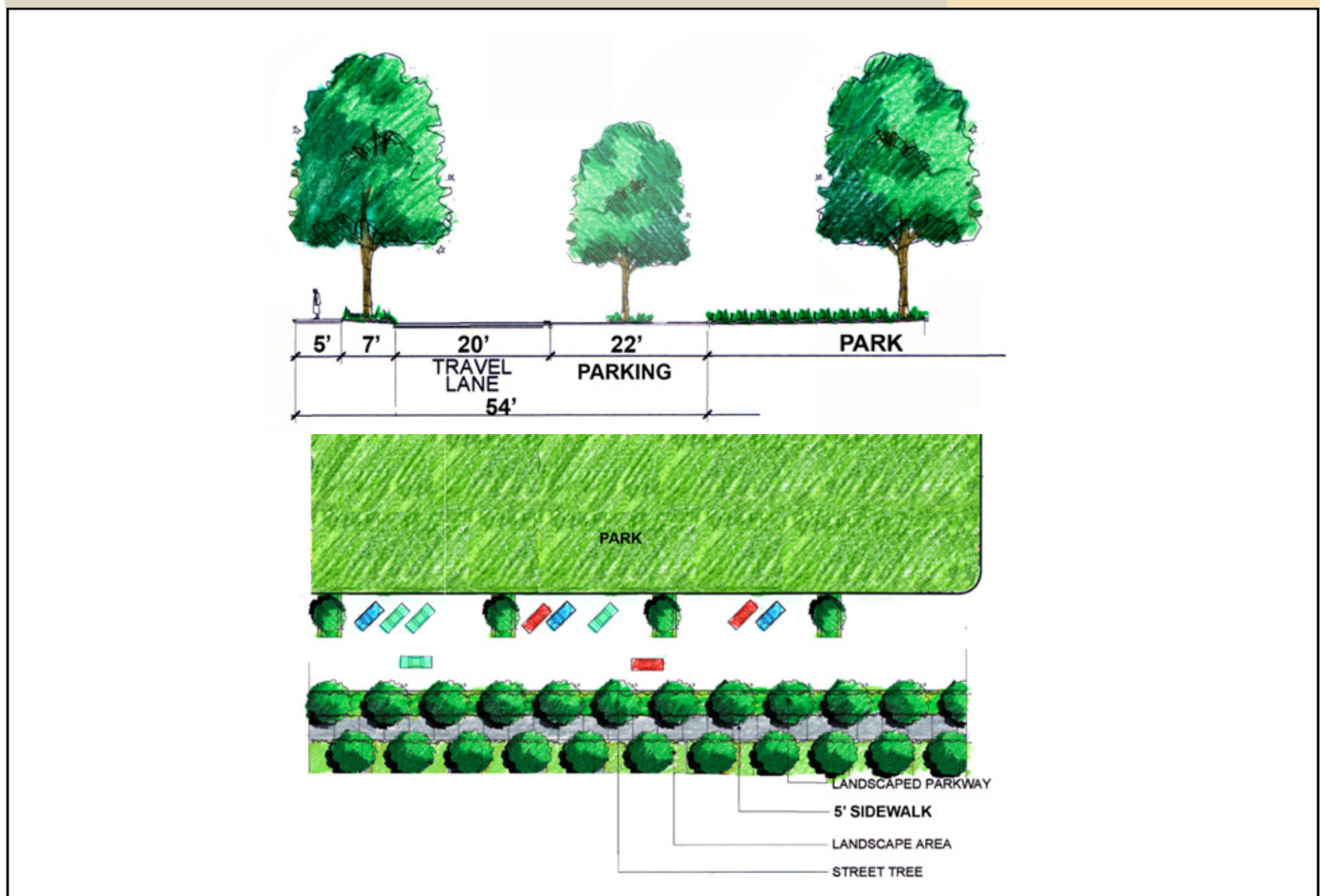


Neighborhood Park Adjacent Street

The Park adjacent street is a 20-foot clear paveway and 3-foot concrete gutter for one-way circulation around the park. This narrow section does not allow on-street parking in order to allow a clearer view from the homes to the park, better visibility of pedestrians and a minimum 20-foot clear for emergency vehicles. On the park side of the street angled parking is provided outside of the 20-foot right of way between the corners of the park.

Within each row of parking spaces, landscape islands shall be placed to prevent more than 10 vehicles from being parked side-by-side in an abutting configuration. Planter islands for a single row of parking spaces shall be landscaped with at least one (1) tree and vegetative groundcover. The side of the street adjacent to homes will have a 7-foot landscaped area and 5-foot sidewalk as indicated below and the developer will be responsible for those improvements to Neighborhood Streets as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project. This street type applies to Planning Area 10A only. The Neighborhood Park Adjacent Street is illustrated below:

Exhibit 17k - Neighborhood Park Adjacent Street

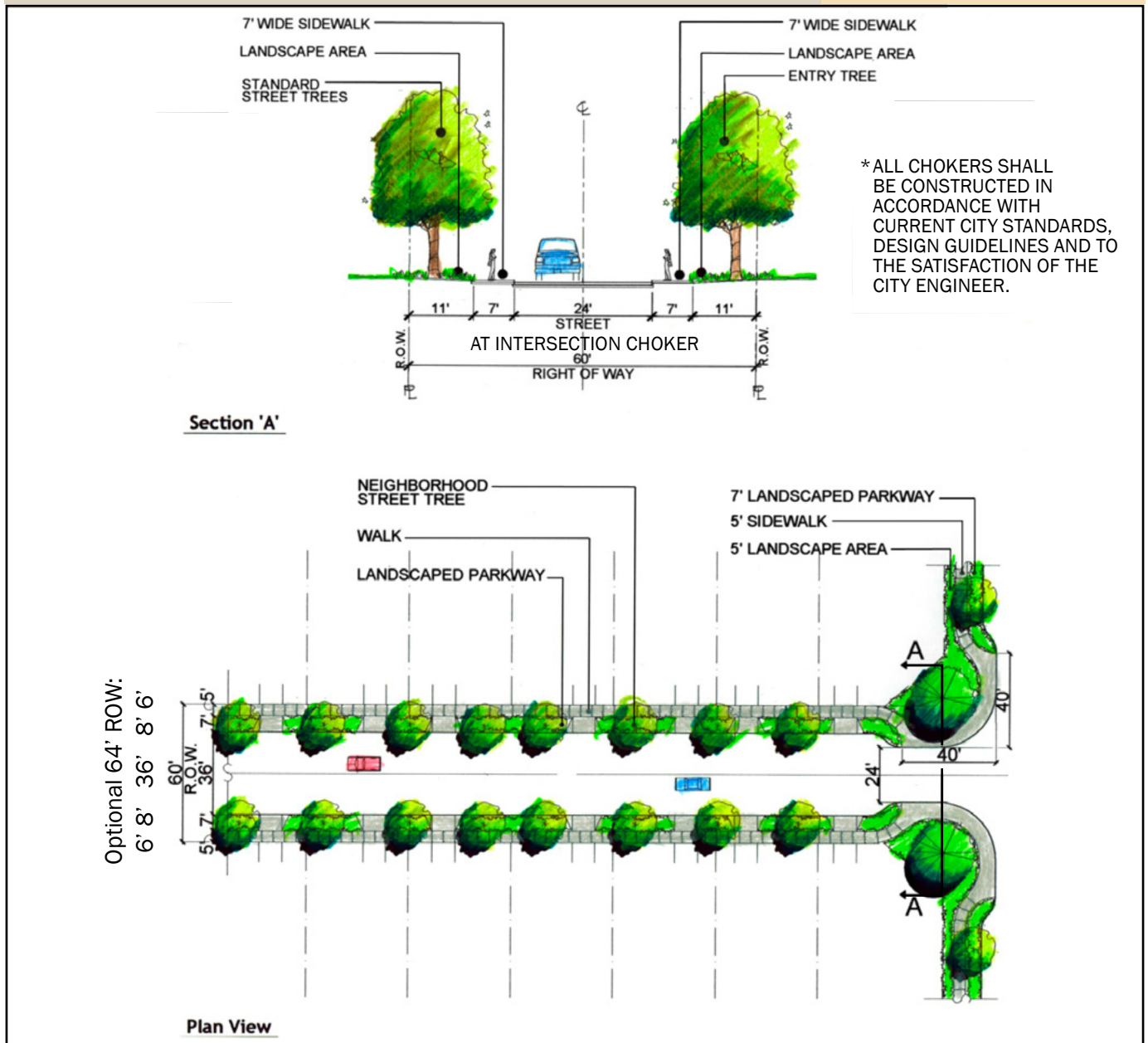


NOTE: This concept applies to PA 10A only.

Neighborhood Streets With Intersection Chokers

Neighborhood intersection chokers are traffic calming devices to slow down vehicles when they reach the neighborhood street level. They also facilitate pedestrian crossings by shortening the crossing distance and make them safer. The developer will be responsible for those improvements to Neighborhood intersection chokers as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project.

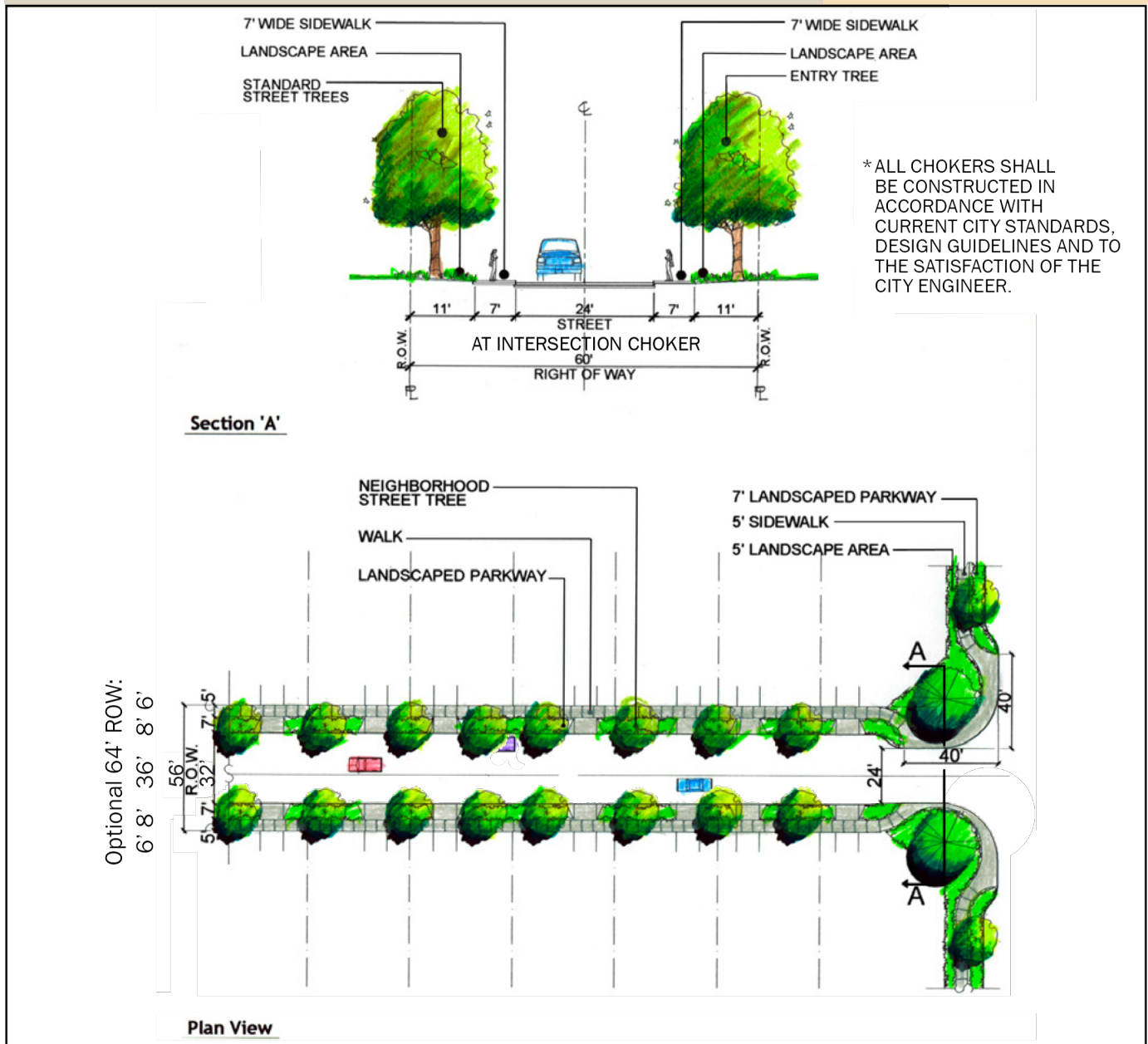
Exhibit 171-1 - Neighborhood Streets With Intersection Chokers



Private Streets With Intersection Chokers

Private Street intersection chokers are traffic calming devices to slow down vehicles when they reach the neighborhood street level. They also facilitate pedestrian crossings by shortening the crossing distance and make them safer. The developer will be responsible for those improvements to private Street intersection chokers as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project.

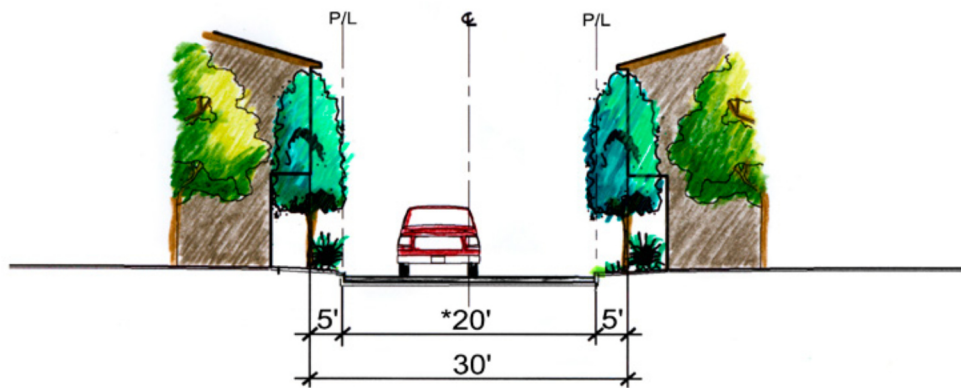
Exhibit 171-2 - Private Streets With Intersection Chokers



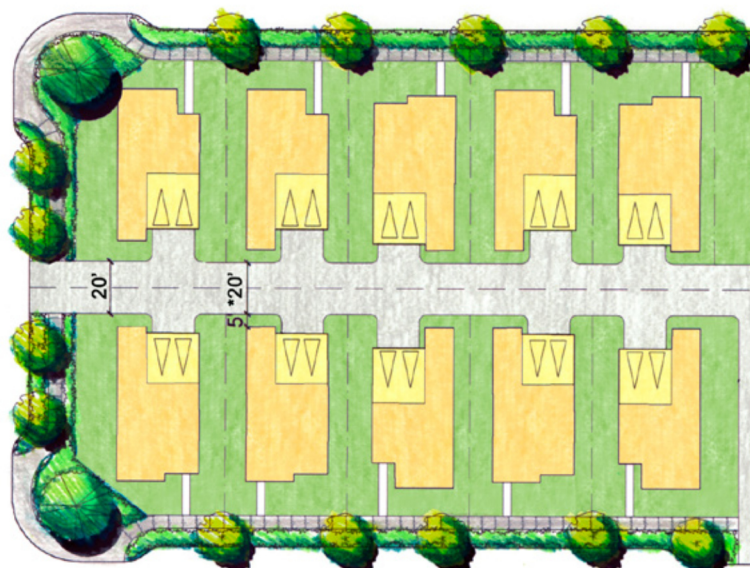
Alley

Alleys within the plan area will consist of 20 feet of paved travel area with 5 feet of landscape and apron on each side. The alleys will incorporate tapers at the entrance to alleys to slow traffic in these areas and to provide a visual element to discourage drivers from using alleys as a through street. Pavement may expand to 24 feet for Fire use with 3' landscape and apron on each side to maintain a 30' building separation. Final alley design shall be subject to review and approval by the Planning, Engineering, and Fire Departments. The developer will be responsible for those improvements to alleys as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project.

Exhibit 17m-1 - Alley (Cross-Section and Plan)



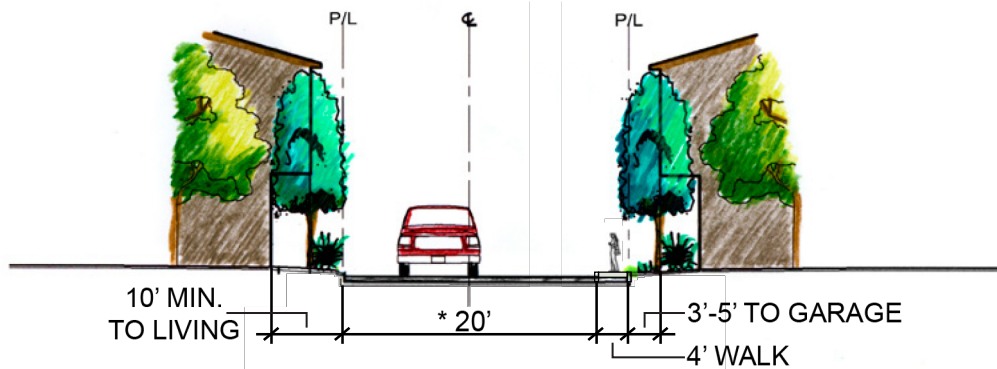
*PAVEMENT MAY EXPAND TO 24' FOR FIRE USES WITH 3' LANDSCAPE AND APRON EDGES ON BOTH SIDES TO MAINTAIN 30' BUILDING SEPARATION. FINAL PRIVATE DRIVE DESIGN SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE PLANNING, ENGINEERING AND FIRE DEPARTMENTS.



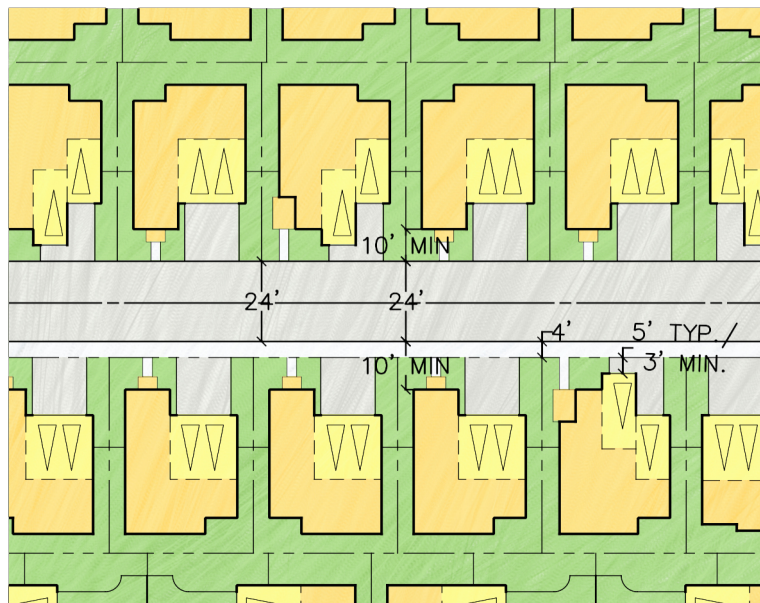
Private Alley

Private alleys within the plan area will consist of 20 feet of paved travel area with 5 feet minimum driveway aprons on each side. The private alleys will be paved per City Standards to encourage a street-like character. Pavement may expand to 24 feet for Fire use with 3' landscape and apron on each side. Final private alley design shall be subject to review and approval by the Planning, Engineering, and Fire Departments. The developer will be responsible for those improvements to Private Alleys as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project.

Exhibit 17m-2 - Private Drive (Cross-Section and Plan)



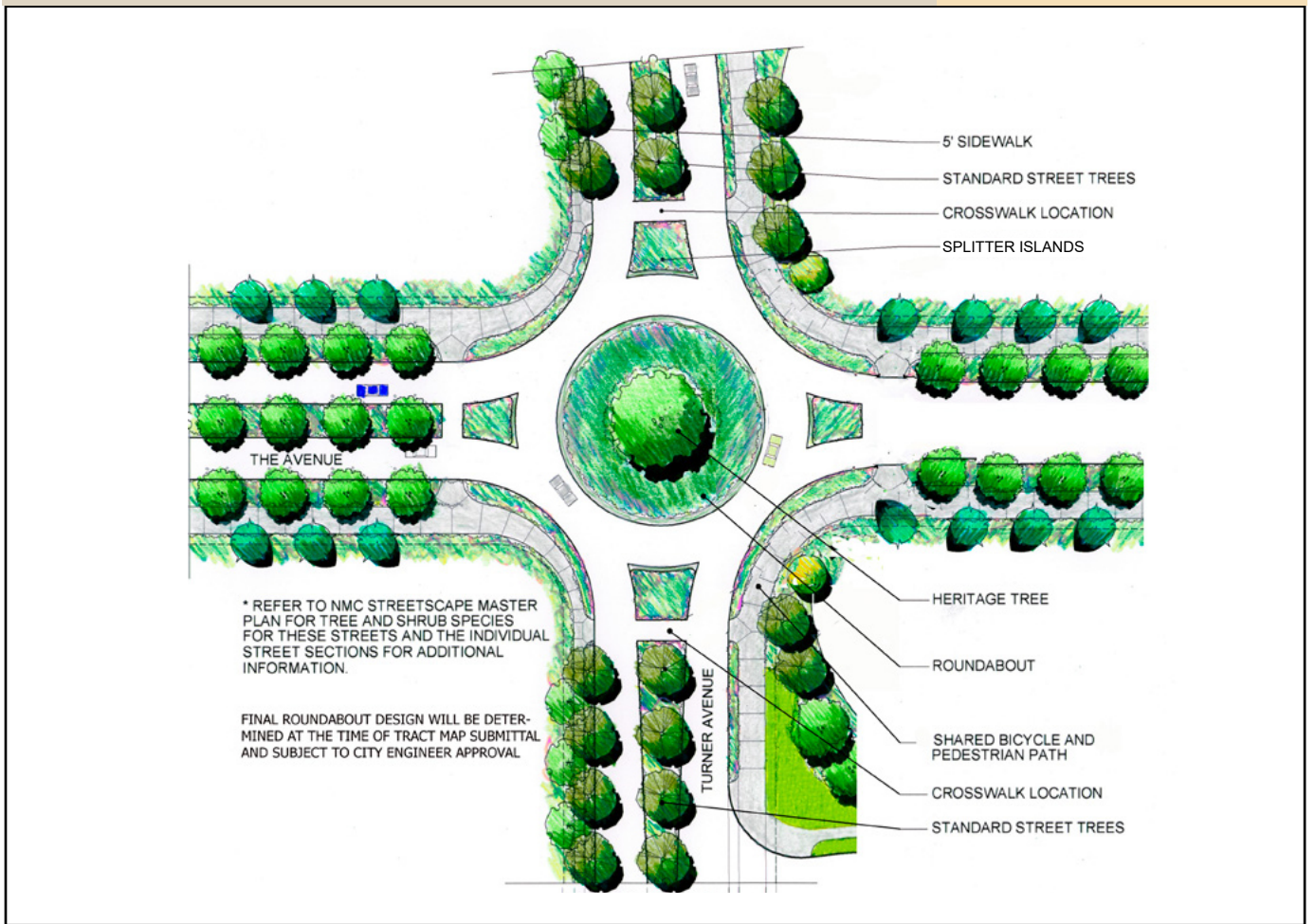
*PAVEMENT MAY EXPAND TO 24' FOR FIRE USES WITH 3' LANDSCAPE AND APRON EDGES ON BOTH SIDES TO MAINTAIN 30' BUILDING SEPARATION. FINAL PRIVATE DRIVE DESIGN SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE PLANNING, ENGINEERING AND FIRE DEPARTMENTS.



Typical Roundabout

Roundabouts have been strategically located throughout the plan to calm traffic through the center of the project, facilitate traffic movement and reduce air pollution by avoiding mandatory stops from all directions at the conceptual locations shown in Exhibit 17n, "Typical Roundabout". These roundabouts will follow the City adopted guidelines/standards and their final design will require City planning and engineering department approval as part of the tentative tract map review process. Utilities shall not be located under roundabouts. The developer will be responsible for those improvements to Roundabouts as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or the Conditions of Approval established on the approved tentative maps for the project.

Exhibit 17n - Typical Roundabout (La Avenida Drive and Turner Avenue)



* ROUNDABOUTS ARE ONLY ALLOWED ON SINGLE LANE APPROACHES.
IF IT IS INTENDED THAT LA AVENIDA DRIVE OR TURNER AVENUE EVER BECOME A 4 LANE ROADWAY
(2 APPROACH LANES) THE PROPOSED ROUNDABOUT AT THIS LOCATION SHALL BE REMOVED.

4.1.2 Traffic Calming

The Avenue Specific Plan provides for traffic calming within residential neighborhoods to contribute to safer and more livable neighborhoods in which to walk, bike and drive. According to the Federal Highway Administration (FHWA) document FHWA-HRT-06-047 HRTC-01/01-06(1M)E, Roundabouts Safety and Design, 2006 some of the benefits of roundabouts are:

- Crashes are less severe than other intersection crashes.
- Safer than traditional intersections.
- Cost-effective way to improve intersection safety.
- Increased traffic capacity and improved traffic flow.
- No signal equipment to maintain.
- Aesthetic benefits.



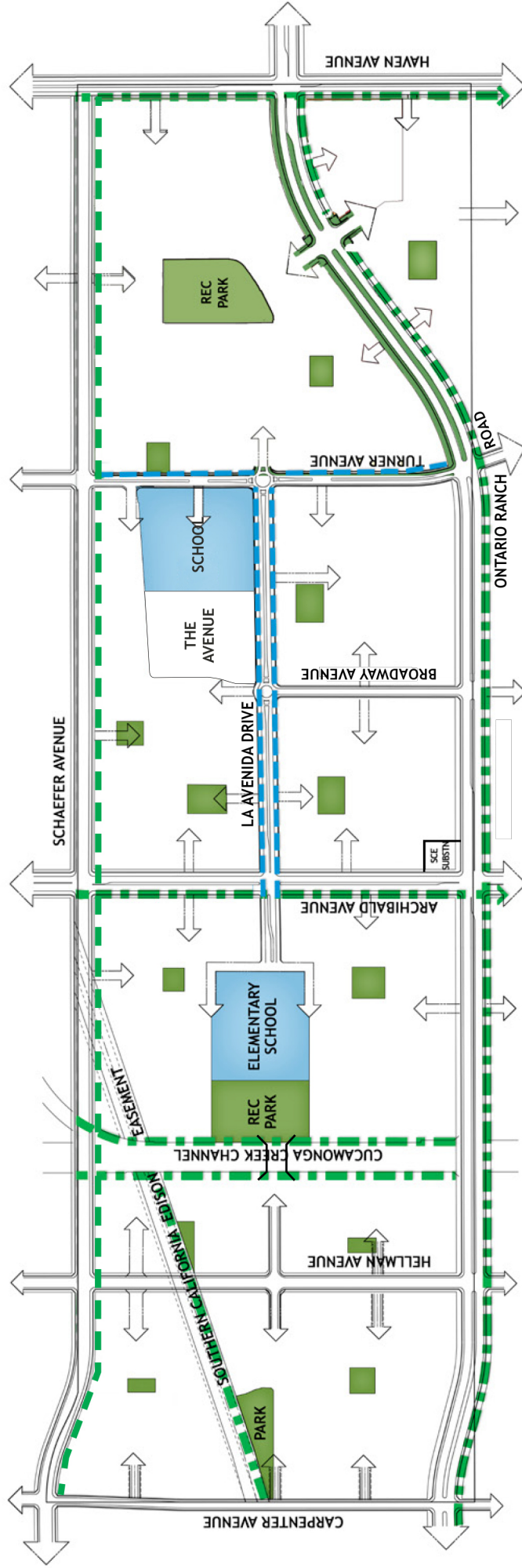
There are also environmental benefits to roundabouts. The FHWA Publication FHWA-RD-00-067 Roundabouts, An Informational Guide, June 2000 states that “The environmental benefits of a project are most readily quantified in terms of reduced fuel consumption and improved air quality. Of these, reductions in fuel consumption and the benefits associated with those reductions are typically the simplest to determine.”

4.1.3 Pedestrian/Bicycle Trails and Connectivity


A primary recreational trail will be provided through the improvement of a portion of the SCE owned property (SCE Corridor) within the plan area as shown on Exhibit 18b, “SCE Easement Trail”. The developers of the Specific Plan Area will be responsible for the construction of this trail. These improvements represent a part of the City’s Master Planned multi-use path system planned for the New Model Colony. This SCE trail will extend from Vineyard Avenue, located west of the plan area to the Cucamonga Creek Channel. The trail will then head north along the west side of the Channel, where it will meet the Multi-Use path on Schaefer Avenue. This series of trails will provide access to Archibald Avenue and the trail on the East side of the Channel, which also runs north-south within the flood control right of way connecting Schaefer to Ontario Ranch Road. The trail also provides points of connection to parks, La Avenida Drive corridor, residential neighborhoods and the retail center.

The Specific Plan proposes a steel truss bicycle/pedestrian bridge crossing over the Cucamonga Creek Channel to connect the east and west sides of the channel and encourage school children west of the Channel to walk or bike to school. The developer will be required to pay for the bridge and its construction. An encroachment permit will be needed from San Bernardino County Flood Control to construct the bridge crossing. A minimum 12-foot easement will need to be recorded to the City of Ontario in order to maintain the pedestrian bridge and provide public access across the channel. The SCE and flood control channel trails are important components in the overall trail system design of the New Model Colony and are an important component of the city’s master plan trail system. The residential users will find that the trail is useful in reaching many of The Avenue’s amenities, as well as the surrounding community. The improved trails will be landscaped with approved evergreen, deciduous, and flowering plant material. There will be several points in the trail system linking to secondary paths that will lead to The Avenue’s retail/commercial areas, as well as to the neighborhoods.

The Avenue



LEGEND

- - - NMC MASTER PLAN MULTI-USE PATH
-  PROPOSED MULTI-USE BRIDGE ACROSS CHANNEL
- - - ENHANCED PEDESTRIAN SIDEWALK PER SPECIFIC PLAN (SEE SECTIONS 17G AND 17H)

NOTE: The precise locations of the trails are conceptual and will be determined as part of the tract map approval process. The location of the proposed multi-purpose bridge is shown as conceptual and subject to Planning Department and Traffic Engineering Department review and approval.

The Avenue

SPECIFIC PLAN

Trail Master Plan

The New Model Colony • Ontario, California

Exhibit 18 - Trail Master Plan

Multi-use paths are provided within the plan area along Archibald, Haven, Ontario Ranch Road and Schaefer Avenues. These paths are provided adjacent to the major drainage easement, along Hellman Avenue, and along the spine road (The "Avenue") which traverses the center of the plan area in an east-west direction.

Multi-use paths shall provide benches/seatwalls along path at appropriate locations with adequate lighting and trash receptacles at seating areas. In addition, these paths should provide clear directional signage (subject to Engineering and Planning Department approval) to facilitate movement to and from crosswalks and entry points.

Bike racks at destination locations serving as a point of departure to and from bike path will also be available on Class I bike paths. The bicycle trail system provides access and connectivity to the various land use components of the plan area (parks, schools, retail and commercial center, and residential neighborhoods) as shown in Exhibit 18, "Trail Master Plan". Class II on-street striped bike lanes shall be provided on roadways within The Avenue Specific Plan area as determined by the City Engineer.

Exhibit 18a - Cucamonga Creek Channel Trail

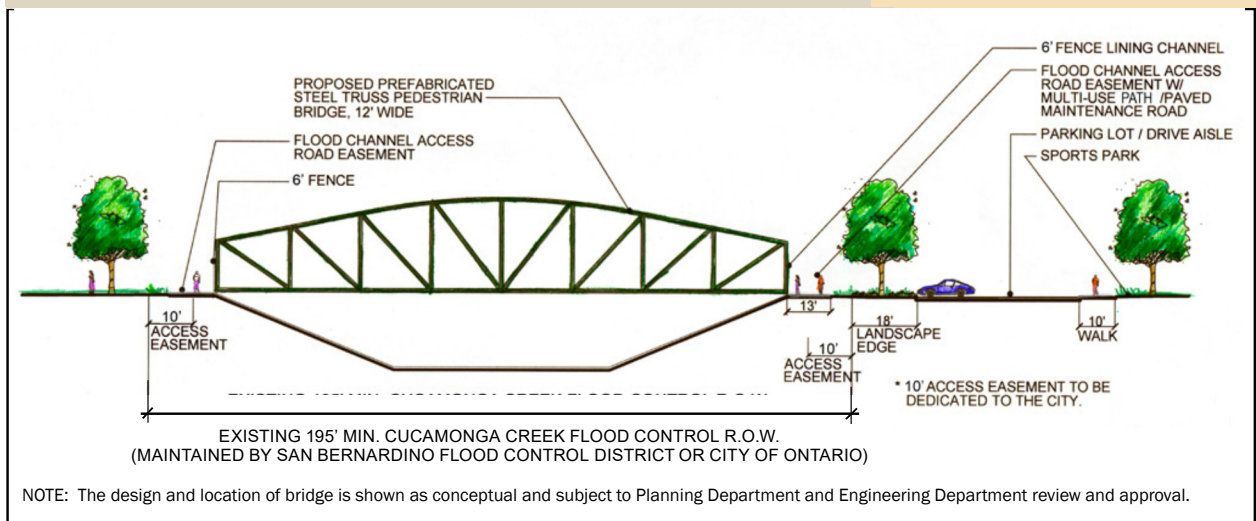
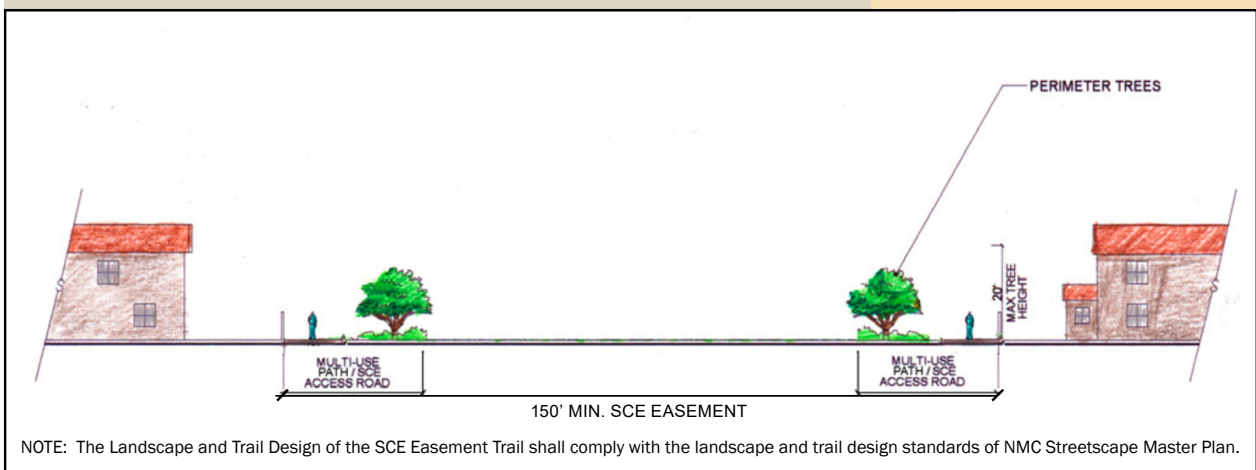


Exhibit 18b - SCE Easement Trail



4.2 Infrastructure Plans

The improvement plans for the various infrastructure facilities, including water, recycled water, sewer, and storm drainage are intended to provide The Avenue Specific Plan with essential services in a safe and efficient manner. Infrastructure facilities shall comply with the latest approved Master Plans. The current 2012 Master Plans shall be referenced for design standards, sizing, alignment, etc.

Water, recycled water and sewer utilities may be designated as “public utilities” if located within public or private streets. All public utilities within private streets shall be designed and constructed per City standards and contained within easements acceptable to the City. The CC&RS shall contain language that requires all proposed work by the HOA within said easements to be plan checked and inspected by the City, including applicable fees. Generally, utilities will not be accepted as public within alleys, parking areas or driveways.

Utilities within commercial and industrial parking lots and loading areas shall be designated as private. The extent to which said utilities will be accepted as public utilities for maintenance shall be determined, at the full discretion of the City, during final design plan review. The following sections describe each of the infrastructure facilities in detail.

4.2.1 Water

Domestic water will be provided by the City of Ontario. The Master Planned (MP) programs new potable water facilities to include: 30 and 24-inch Francis loop main extension from existing Zone 925 reservoir facilities within Milliken, Eucalyptus, Archibald and Ontario Ranch Road Streets. The remainder of The Avenue will be served by a series of new Master Planned 12-inch mains as follows: Ontario Ranch Road extending to Haven, Schaefer from Carpenter to Haven, Haven from Eucalyptus to Schaefer, Turner from Ontario Ranch Road to Schaefer and Hellman from Ontario Ranch Road to Schaefer. Construction of the Master Planned water mains service network improvements is required prior to issuance of project related building permits for The Avenue. Master Planned domestic and recycled water main lines serving, surrounding and within the Specific Plan, as identified in the 2012 Water Master Plan, shall be constructed prior to issuance of first occupancy. Sizing of non-master planned facilities is subject to City review and approval of the required Hydraulic Analysis.

New domestic water mains to be constructed as part of the development of The Avenue will include: 12-inch mains within Turner Avenue from Ontario Ranch Road to Schaefer and within La Avenida Drive street from the proposed Elementary school site easterly of Archibald extending to Turner Avenue. These two 12-inch mains form the interior backbone loops connecting to Master Planned potable water facilities. The remainder of all interior streets within The Avenue project, including Carpenter and “A” Street located between Archibald and Turner will have 8-inch domestic mains. The construction on dead end water mains shall be avoided.

Higher fire flow demands for medium to high density residential and non-residential projects should be identified in accordance with the 2012 Water Master Plan. Fire flow demands in excess of 1500 gpm for single family residential may require upsizing certain distribution to 12-inch pipelines as shown in Exhibit 20, “Domestic Water Master Plan”. A hydraulic modeling analysis report is required to demonstrate that the proposed water system will meet peak demands including maximum day plus fire demand and peak hour demand.

4.2.2 Recycled Water

The ultimate sizing and alignment shall follow the most currently approved Master Plan. In order to assure conformance with Master Plan Design Criteria during the Implementation process: a Conceptual Technical Study shall be prepared and approved by the City prior to or concurrently with the entitlement submittal; and, a Final Technical Study shall be prepared and approved by the City prior to approval of Construction Drawings and Permits.

All new Master Planned recycled water mains will have the potential to interconnect to the proposed future 48-inch transmission facility within Carpenter. New recycled water facilities to be constructed as part of The Avenue will include: a 8-inch main within Turner from Ontario Ranch Road to Schaefer; a 8-inch main within La Avenida Drive from Archibald westerly to the Elementary school site and from Archibald to Turner. All remaining interior streets built with The Avenue project will connect to the Master Planned recycled water facilities and The Avenue backbone facilities to serve the project landscape edges, parkways, neighborhood, parks, street medians, etc. via 8-inch mains within the interior streets, as required, and irrigation sleeving at intersections and appropriate mid-block crossings to serve The Avenue landscaping improvements irrigation needs. Sizing of non-master planned facilities is subject to review and approval of the required Hydraulic Analysis. An initial Master Plan construction of recycled water improvements will be the construction of the 930 pressure zone (PZ) recycled water system in Archibald Avenue from southerly project limits to Riverside Drive, the Pressure Reducing Station (PRS) at Archibald & Chino Avenue, 1050 PZ pipes in Archibald, 1050 PZ pipes in Riverside Drive and on into RP-1. This above mentioned series of piping will tie into The Avenue via Schaefer, Ontario Ranch Road, etc. A recycled water loop must also be constructed in Haven Ave. from the southerly project limits to Riverside Dr. and in Riverside Dr. from Haven Ave, to RP-1 including the PRS stations per the Recycled Water Master Plan.

The Avenue (Subarea 18) Specific Plan shall comply with City Ordinance 2689 and make use of recycled water for all approved uses, including but not limited to irrigation of parks, schools, street landscaping, recreational trails, HOA maintained on-site common areas and commercial/industrial landscaping. An Engineering Report approved by the City and the California Department of Public Health is required prior to the use of recycled water.

4.2.3 Sewer

The ultimate sizing and alignment shall follow the most currently approved Master Plan. In order to assure conformance with Master Plan Design Criteria during the Implementation process: a Conceptual Technical Study shall be prepared and approved by the City prior to or concurrently with the entitlement submittal; and, a Final Technical Study shall be prepared and approved by the City prior to approval of Construction Drawings and Permits.

The 21-inch Haven Avenue Trunk Sewer line runs in Haven Avenue begins north of the Ontario Ranch Road intersection. The Ontario Ranch Road Trunk Sewer line (27-inch and 30-inch) runs in Ontario Ranch Road between Archibald Avenue and Haven Avenue. There is also a sewer line (21-inch and 24-inch) to be located within Carpenter Avenue which will connect to the Kimball Interceptor at the County line. The Carpenter Avenue Trunk Sewer will extend northerly to Schaefer Avenue and will serve the Avenue project development area westerly of Cucamonga Channel and easterly of Vineyard Avenue.

New sewer facilities to be constructed as part of The Avenue will include: 12-inch sewer in La Avenida Drive from Archibald easterly to Turner; 10-inch sewer in La Avenida Drive from Archibald westerly to the Elementary school site; 10 inch sewer in Broadway Avenue from Ontario Ranch Road terminating near La Avenida Drive intersection; 12-inch sewer in Turner from La Avenida Drive intersection northerly to Schaefer.

A 12-inch sewer will be constructed in Ontario Ranch Road from Hellman westerly to join the master plan sewer in Carpenter Avenue. All remaining interior streets within The Avenue, when developed, will have 8-inch minimum sewer main lines as shown in Exhibit 23, "Sewer Master Plan." Master planned sewer main lines serving and surrounding the development shall be constructed prior to issuance of first occupancy. Initial sewer improvements shall be constructed between IEUA's Archibald Trunk and the development limits, including constructing that portion of Ontario Ranch Road sewer between Archibald and Haven.

4.2.4 Drainage

The New Model Colony Master Plan of Storm Drains report, prepared by LD King Engineers and updated NMC Improvements Hydrology Analysis provided by Stantec Engineers considered the entire Master Plan zoning area drainage analysis of which The Avenue (Planning Area 18) is included. The City of Ontario will be the maintenance agency for Master Planned and The Avenue storm drainage system facilities.

All Avenue drainage will eventually discharge into the existing Bellegrave County Line Drainage Channel facility located approximately 7,000-feet south of La Avenida Drive. The Master Planned improvements will utilize the existing Cucamonga Channel County of San Bernardino Flood Control facility, which drains north to south and joins the east-west Bellegrave County Line Drainage Channel. The Master Planned Storm Drain Improvements will construct a new network of storm drain lines within existing and proposed north-south streets extending northerly from the Bellegrave County Line Flood Control facility. Also, east-west storm drain lines will be built periodically joining the existing Cucamonga Channel Flood Channel facility. The Master Planned Storm Drain Improvements will include the following: an 84-inch storm drain

within Haven fronting the easterly edge of La Avenida Drive and extending southerly joining the Bellegrave Flood Channel with a 96-inch line; a 66-inch storm drain within Turner, the Turner storm drain will extend southerly eventually joining the Bellegrave Flood Channel with a 96-inch line; Archibald Avenue accepts flows from a 36-inch line within Schaefer easterly of the Archibald intersection.

The Archibald main extends southerly eventually joining the Bellegrave Flood Channel with a 96-inch line. The Hellman storm drain accepts flows from a 42-inch line north of Schaefer.

The Hellman storm drain extends southerly through The Avenue as an 42-inch line and joins an 84-inch line within Ontario Ranch Road. The Hellman storm drain extends southerly to future Eucalyptus Street as a 96-inch line, then travels easterly on Eucalyptus as a 6' x 11' box culvert to join the existing Cucamonga Flood Channel. Ontario Ranch Road west of the Cucamonga Flood Channel has an 84-inch storm drain easterly of the Hellman intersection and 72-inch lines extending from west to east from Vineyard to Hellman. Ontario Ranch Road, between Archibald Avenue and Turner Avenue, contains 60-inch, 54-inch and 48-inch storm drain. A 48-inch storm drain extends easterly from the existing Cucamonga Channel within Ontario Ranch Road terminating mid-block between the channel and Archibald intersection.



Cucamonga Creek Channel

Storm drain facilities to be constructed as part of The Avenue will include: a 30-inch line in Carpenter from Ontario Ranch Road northerly to mid-block between Schaefer; a 36-inch line paralleling the easterly side of the existing Cucamonga Flood Channel to serve the Park/Elementary school sites and extending northerly to serve the future retail site adjacent and southerly of Schaefer; a 30-inch line within La Avenida Drive— between Archibald and Turner to provide service to the 10 acre School site; the individual planning areas within The Avenue will have storm drain pick-up laterals (18-inch minimum) joining Master Planned Improvements and The Avenue backbone storm drain facilities.

Ultimate development of The Avenue requires construction of all proposed Master Planned Storm Drain Improvements. The existing Avenue site generally sheet flows from north to south. It is not anticipated that Grading of individual planning areas will be permitted, prior to completion of Master Planned Storm Drain Improvements due to the fact that the City of Ontario will not allow temporary stormwater runoff detention basins to be constructed for individual planning areas in The Avenue until downstream Master Planned storm drain facilities are constructed and functioning to provide necessary flood control for that tract map area.

4.2.5 Grading

The Avenue existing topography may be described as flatland terrain which gently slopes to the south varying from 0.6% to 1.1% across the site as shown in Exhibit 5, "Existing Topography". The high elevation is elevation 750 at the northeast corner of the site. The low elevation is 706 located at the intersection of Archibald and Ontario Ranch Road Streets. Existing land uses vary from vacant land to agricultural with the majority of land being existing or vacated dairy farm operation. The dairy farm operations contain many ponding areas for acceptance/filtration of dairy livestock excrement runoff. The dairy farms on the site have varying thickness layers of manure which will require off-site disposal from The Avenue project. Due to the varied number of development ownership of The Avenue planning areas, it is anticipated that mass grading of the entire site will not occur. Individual planning area owners will be responsible for obtaining any rough grading and precise grading permits along with remedial grading, removal of manure deposits and dairy bog pond sediments disposal. If the Developer proposes temporary use of an existing agricultural well for purposes other than agriculture, such as grading, dust control, etc., the developer shall make a formal request to the City of Ontario for such use prior to issuance of permits for any construction activity. Upon approval, the Developer shall enter into an agreement with the City of Ontario and pay any applicable fees as set forth by the agreement.



Landscape Setback Swale System

4.2.6 NPDES Compliance

The grading and drainage of The Avenue Specific Plan area shall be designed to detain, filter and treat surface runoff, in a manner and combination which is practical, to comply with the most recent requirements of the San Bernardino County NPDES Stormwater Program's Water Quality Management (WQMP) for significant new development projects. The objective of the WQMP for this project is to minimize the detrimental effects of urbanization on the beneficial uses of receiving waters, including effects caused by increased pollutants and changes in hydrology. These effects may be minimized through the implementation of site designs that reduce runoff and pollutant transport by minimizing impervious surfaces and maximizing on-site infiltration, Source Control Best Management Practices (BMP's) and/or either on-site structural Treatment Control BMP's, or participation in regional or watershed-based Treatment Control BMP's. An alternative to the implementation of on-site Low Impact Development (LID) BMPs to retain/infiltrate and treat stormwater runoff is the utilization of the off-site, regional Mill Creek Wetland facility for accomplishing water quality improvements in residential project runoff from this master planned community. All non-residential planning area projects within The Avenue will incorporate all required on-site LID BMPs, pursuant to the requirements of the current San Bernardino County Water Quality Management Plan.

Prior to the issuance of a grading or construction permit, all projects greater than 1 acre in size shall apply for coverage under the California General Permit To Discharge Storm Water Associated with Construction

Activity, obtain a WDID# from the State Water Resources Control Board and prepare a Stormwater Pollution Prevention Plan (SWPPP) on the CASQA 2009 Template form and upload it to the State's SMART database system. A copy of each SWPPP document and WDID# Certification shall also be provided to the City of Ontario, prior to any construction permit issuance. The SWPPP will identify and detail all appropriate Best Management Practices (BMPs) to be implemented or installed during construction of the project.

In addition to the preparation of a SWPPP for construction-related activities, and as part of the approval of any grading plans within the Specific Plan Area, the applicant will be required to submit a Water Quality Management Plan (WQMP) on the regional model form provided by the City. The WQMP shall identify and detail all Site Design BMPs, Source Control BMPs and Treatment Control BMPs to be implemented or installed at this site in order to reduce storm water pollutants and site runoff.

The Mill Creek Wetland facility has been constructed and will be on line and functioning in June, 2014. The facility will serve as an alternative to on-site LID BMP implementation for residential tract developers that are members of the NMC Builders, LLC consortium and which have adequate reserved capacity in the regional facility for those planning areas. Out of a proposed 425 acres of residential development in The Avenue, 288 acres will be developed by NMC Builders members, 20 acres of land will be utilized for public schools and 107 acres will developed by non-members, who will be required to make other arrangements or utilize another, future regional water quality facility, downstream of the project area. All non-residential planning area projects within The Avenue, including Public Schools, will incorporate on-site LID BMPs, in accordance with the regional NPDES Permit and the current San Bernardino County Water Quality Management Plan, and shall not rely on the regional wetlands facility for retention and treatment of runoff water.

All Priority Land Use (PLU) areas within the Specific Plan Area shall comply with the statewide Trash Provisions adopted by the State Water Resources Control Board (SWRCB) and trash requirements in the most current San Bernardino County Area-Wide MS4 Permit.

4.2.7 Solid Waste

The City of Ontario will provide solid waste collection services to The Avenue Specific Plan area. The following addresses additional solid waste issues:

- An integrated waste management plan is required and shall be submitted prior to DAB approval of each subdivision.
- Commercial – Developer shall comply with Municipal Code Sec. 6-3.314 Commercial Storage Standards, and Sec. 6-3.601 Business Recycling Plan.
- Apartment – For apartments using commercial bin service developer shall comply with Municipal Code Sec. 6-3.314 Commercial Storage Standards and Sec. 6-3.601 Business Recycling Plan.
- Residential – For curbside automated container service developer shall comply with Municipal Code Sec. 6-3.308.9(a) and (d), Residential Receptacles, Placement.

- Recycling Requirements – Developer shall comply with Municipal Code Article 6. Recycling Requirements for Specified Business Activity, Sec. 6-3.601 Business Recycling Plan, and Sec. 6-3.602 Construction and Demolition Recycling Plan.
- All project sites shall be designed to meet all the Integrated Waste Department’s requirements, including the requirements for Sizing of Storage, Location of Collection Area, Accessibility for Collection Vehicles, and Collection of Sorted/Diverted Waste Types.
- Project shall follow the City of Ontario’s latest “Solid Waste Department Refuse and Recycling Planning Manual”.

4.2.8 Gas

The Gas Company will provide natural gas to the Project Site. Gas mains will be installed to the Project Site by the Gas Company, as necessary.

4.2.9 Electric

Southern California Edison will provide electricity to the plan area from existing facilities in the vicinity. Proposed new facilities to serve the project will be owned and operated by the City of Ontario and located underground.

4.2.10 Telephone

Verizon will provide telephone service to the plan area. The City will provide a fiberoptic network to the home, accommodating voice mail data, cable and video on demand. Proposed on-site facilities will be placed underground.

4.2.11 Cable Television

Adelphia will provide cable television service to the plan area. The City will provide coaxial/fiber cable to the home, accommodating cable television, internet services, voice mail data, cable and video on demand. Proposed on-site facilities will be placed underground.

4.2.12 Fiber Optics

Proposed Fiber Optics (conduits and fiber) will be placed underground within a duct and structure system to be installed by the Developer, as illustrated in Exhibit 19. The fiber and conduits along the backbone streets shall be installed in a joint trench by each Developer as the last lane improvements are completed. In-tract fiber and conduit shall be installed by the Developer in joint trenches where possible. Maintenance of the installed system will be the responsibility of the City/Special District. Development of the Project requires the installation by the Developer of all fiber optic infrastructure necessary to service the Project as a standalone Development.

4.3 Community Facilities

4.3.1 Schools

The Mountain View School District serves the K-8 school's needs of the proposed The Avenue Specific Plan. The Chaffey Etiwanda Joint Union School District serves the school needs of grades 9-12 within the plan area. Colony High School is located to the north of the plan, for the high school students living in the plan area. In addition, the proposed The Avenue Specific Plan is providing sites for ~~both~~ a ten (10) acre elementary school and an additional ten (10) acre school.

4.3.2 Library

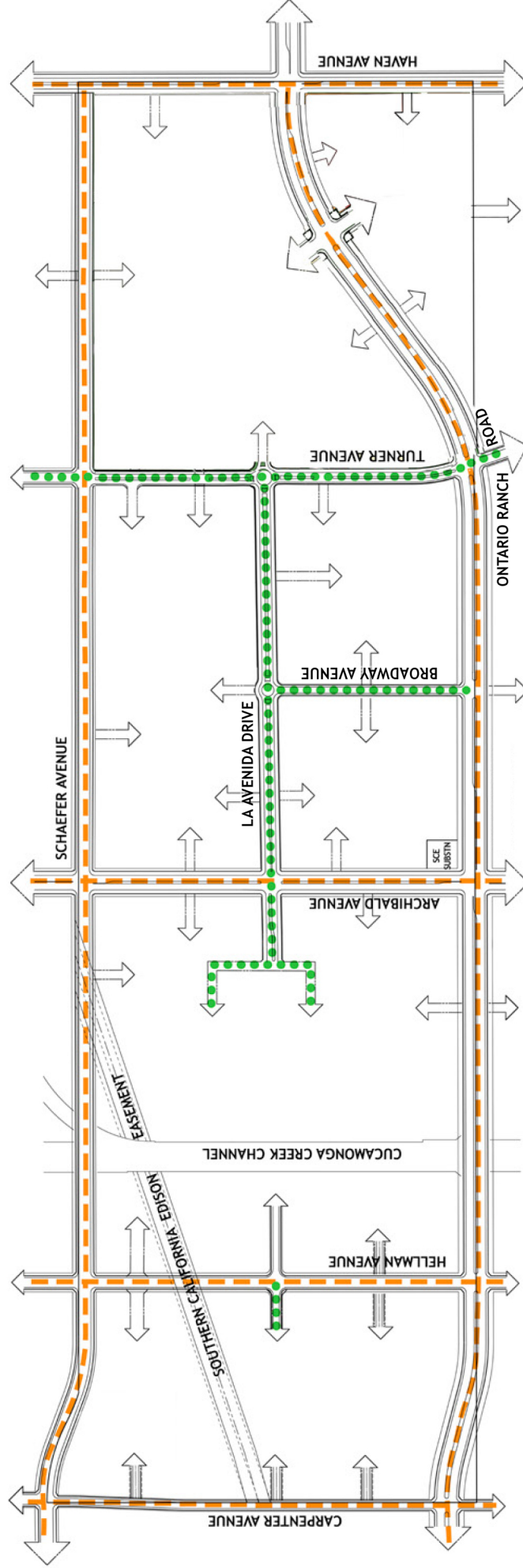
The City of Ontario will provide library services to The Avenue Specific Plan area.

4.3.3 Fire

The City of Ontario will provide fire protection services to The Avenue Specific Plan area.

4.3.4 Police

The City of Ontario will provide police services to The Avenue Specific Plan area.



LEGEND

 MASTER PLANNED (MP) INFRASTRUCTURE

 CONSTRUCTED BY DEVELOPERS

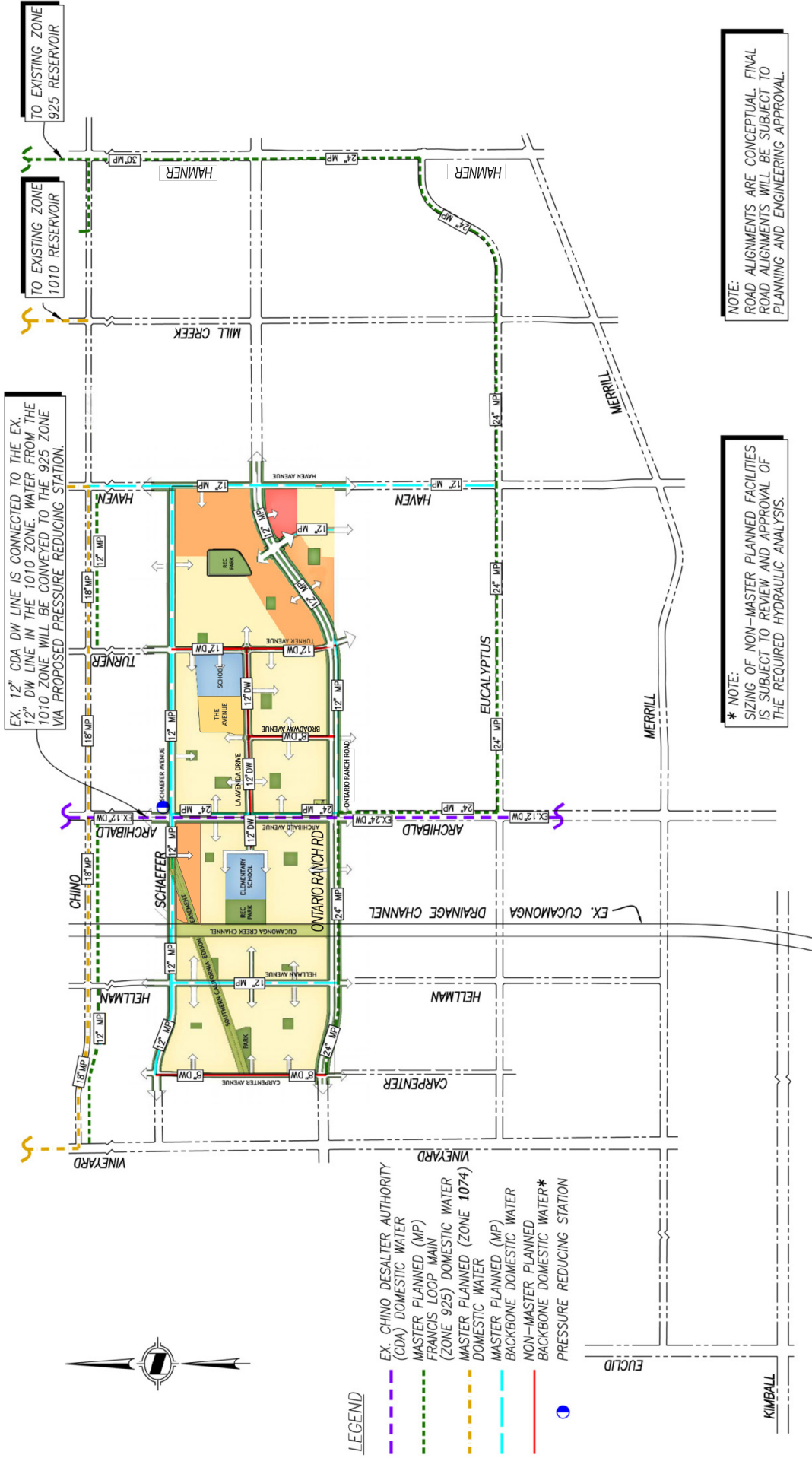
The Avenue

SPECIFIC PLAN

Fiber Optics

The New Model Colony • Ontario, California

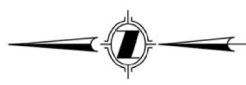
Exhibit 19 - Fiber Optics



The Avenue

SPECIFIC PLAN

Domestic Water Master Plan



LEGEND

- EX. INLAND EMPIRE UTILITY AGENCY RECYCLED WATER (ZONE 930)
- PROPOSED INLAND EMPIRE UTILITY AGENCY RECYCLED WATER (ZONE 930)
- MASTER PLANNED (MP) BACKBONE RECYCLED WATER
- NON-MASTER PLANNED BACKBONE RECYCLED WATER*

Note: An initial Master Plan construction of recycled water improvements will be the construction of the 930 pressure zone (PZ) recycled water system in Archibald Avenue from southerly project limits to Riverside Drive, the Pressure Reducing Station (PRS) at Archibald & Chino Avenue, 1050 PZ pipes in Archibald, 1050 PZ pipes in Riverside Drive and on into RP-1. This above mentioned series of piping will tie into The Avenue via Schaefer, Edison, etc. A recycled water loop must also be constructed in Haven Ave. from the southerly project limits to Riverside Dr. and in Riverside Dr. from Haven Ave. to RP-1, including the PRS stations per the Recycled Water Master Plan.

* NOTE: SIZING OF NON-MASTER PLANNED FACILITIES IS SUBJECT TO REVIEW AND APPROVAL OF THE REQUIRED HYDRAULIC ANALYSIS.

NOTE: THE AVENUE (SUB-AREA 18) WILL BE SERVED FROM THE 930 ZONE RECYCLED WATER SYSTEM. REFER TO THE SPECIFIC PLAN GUIDELINES 1050 AND 930 ZONE RECYCLED WATER EXHIBIT FOR ADDITIONAL DETAILS.

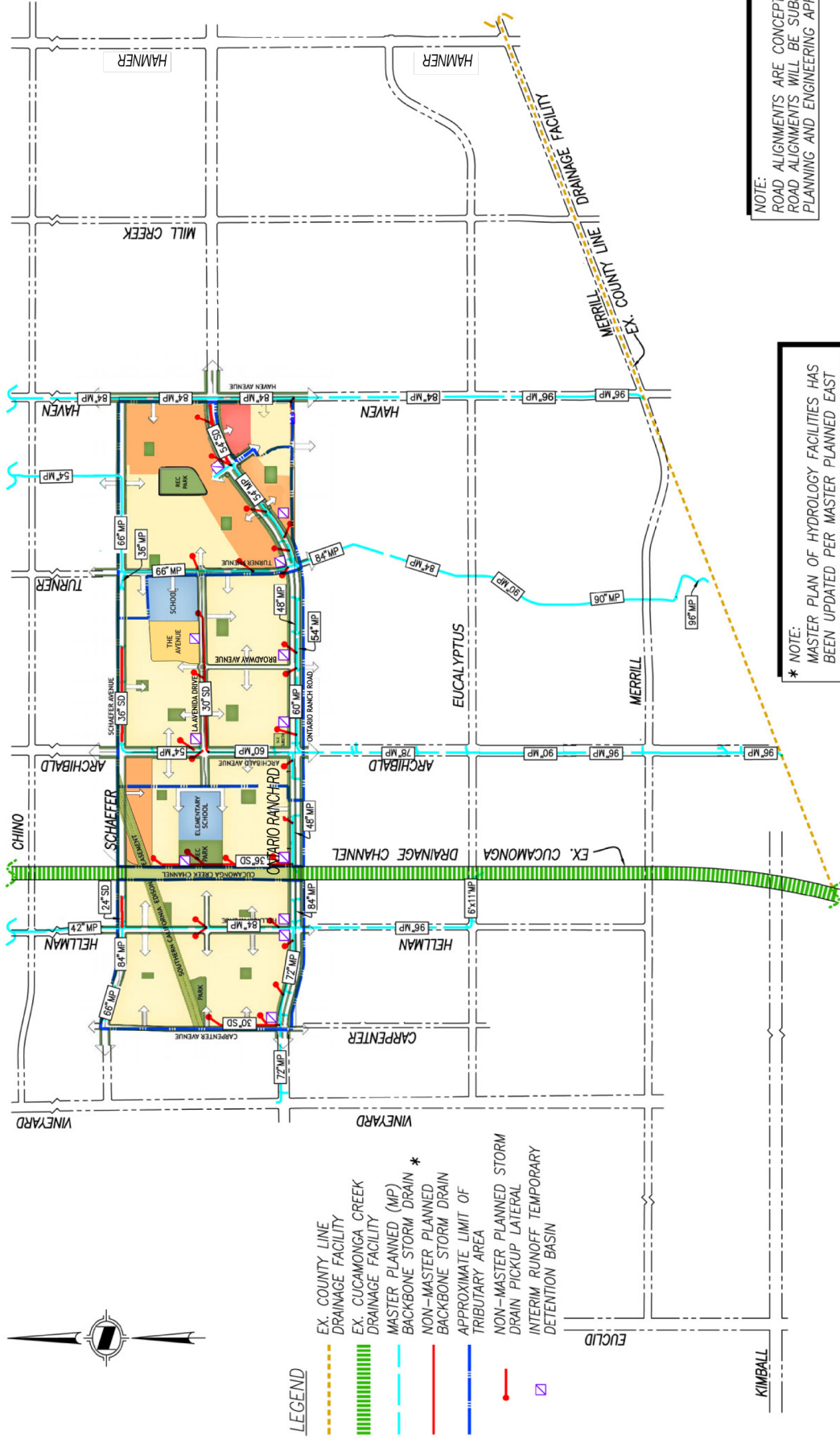
NOTE: ROAD ALIGNMENTS ARE CONCEPTUAL. FINAL ROAD ALIGNMENTS WILL BE SUBJECT TO PLANNING AND ENGINEERING APPROVAL.

The Avenue

SPECIFIC PLAN

Recycled Water Master Plan

The New Model Colony • Ontario, California Exhibit 21 - Recycled Water Master Plan



NOTE:
 ROAD ALIGNMENTS ARE CONCEPTUAL. FINAL
 ROAD ALIGNMENTS WILL BE SUBJECT TO
 PLANNING AND ENGINEERING APPROVAL.

* NOTE:
 MASTER PLAN OF HYDROLOGY FACILITIES HAS
 BEEN UPDATED PER MASTER PLANNED EAST
 BACKBONE IMPROVEMENTS HYDROLOGY REPORT

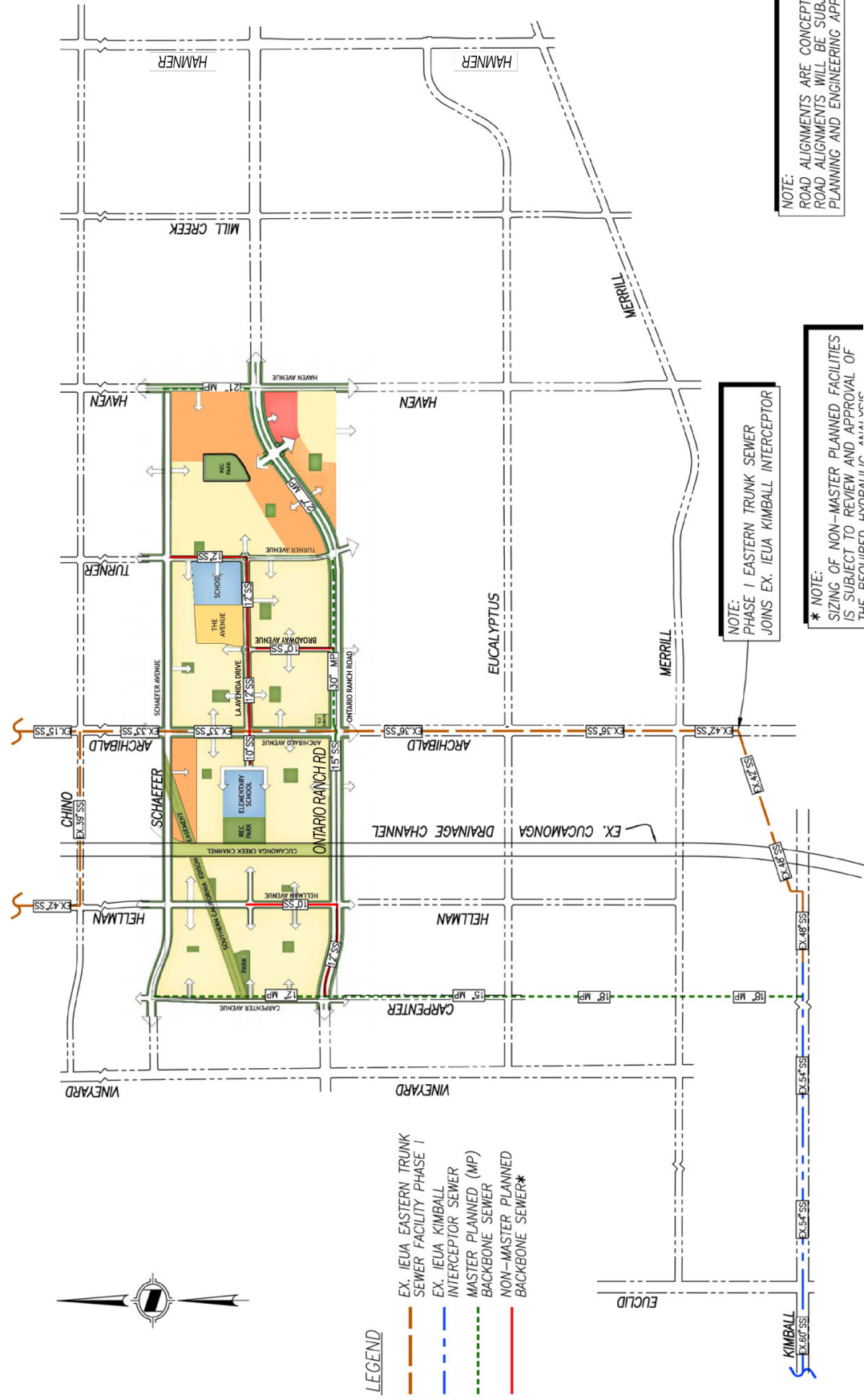
The Avenue

SPECIFIC PLAN

Storm Drain Master Plan

The New Model Colony - Ontario, California

Exhibit 22 - Storm Drain Master Plan



NOTE:
ROAD ALIGNMENTS ARE CONCEPTUAL. FINAL ROAD ALIGNMENTS WILL BE SUBJECT TO PLANNING AND ENGINEERING APPROVAL.

NOTE:
PHASE I EASTERN TRUNK SEWER JOINS EX. IEUA KIMBALL INTERCEPTOR

* NOTE:
SIZING OF NON-MASTER PLANNED FACILITIES IS SUBJECT TO REVIEW AND APPROVAL OF THE REQUIRED HYDRAULIC ANALYST.

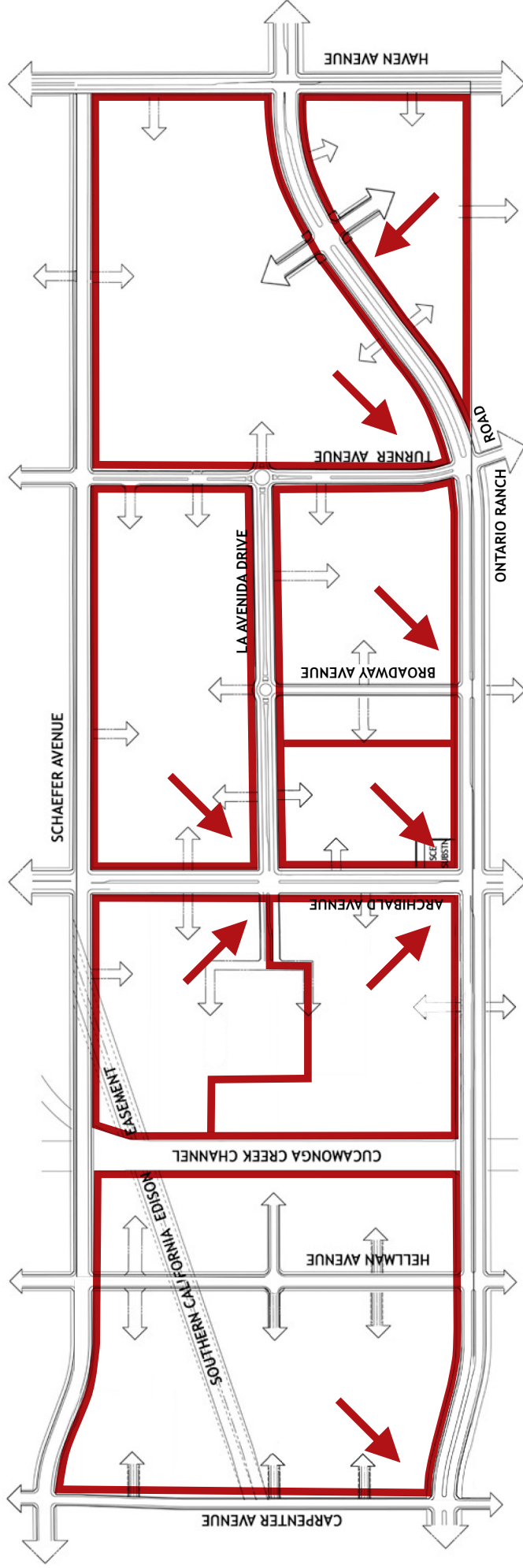
Sewer Master Plan

The Avenue


SPECIFIC PLAN

The New Model Colony - Ontario, California

Exhibit 23 - Sewer Master Plan



LEGEND

 SEWER TRIBUTARY AREAS

 DIRECTION OF FLOW

The Avenue

SPECIFIC PLAN

Sewer Tributary Areas

The New Model Colony • Ontario, California

Exhibit 24 - Sewer Tributary Areas



The Avenue

SPECIFIC PLAN

The New Model Colony • Ontario, California

Existing Wells

Exhibit 25 - Existing Wells

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