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CIRCULATION, INFRASTRUCTURE AND PUBLIC SERVICES

The infrastructure, utilities, and public services to be provided as part of the development of the Colony Commerce Center East Specific Plan are discussed in this section.

5.1 Circulation

The circulation plan for Colony Commerce Center East reinforces the objective of moving vehicles, pedestrians, cyclists, and public transit safely and efficiently through and around the project. Exhibit 5.1, Circulation Plan establishes the hierarchy and general location of roadways within Colony Commerce Center East.

The minimum design speeds to be used for center line curve radii, super elevation, corner and approach site distances, vertical and horizontal alignment, and sight distances for the Master Plan of Streets will comply with City Standards below:

- » Merrill Avenue: 45 mph
- » Archibald Avenue: 50 mph

5.1.1 Master Plan Roadways

The project site is bounded on the north by Merrill Avenue, a City of Ontario Collector Roadway as identified in Exhibit 5.2, Functional Roadway Classification Plan, providing access to and from the site.

Archibald Avenue bounds the project site on the east.

The Cucamonga Creek Channel, a non-vehicle open space area bounds the project site to the west.

A traffic study prepared as part of the project's EIR may identify the need for additional access point traffic controls, and/or additional rights-of-way at critical intersections and access points to accommodate lanes for left or right turn movements.

The developer shall be responsible for those improvements as determined by the City Engineer and pursuant to the mitigation measures identified in the EIR and/or Conditions of Approval established on the approved tentative maps for the project.

Phasing and construction of the improvements shall be implemented as required by the City Engineer and pursuant to the mitigation measures identified in the EIR and the conditions of approval adopted with the approval of tentative maps for the project. The locations and construction of bus turnouts may be required within the project to the satisfaction of the City of Ontario and Omnitrans.

5.1.2 Merrill Avenue

The Mobility Element of the Policy Plan (Figure M-2 Functional Roadway Classification Plan) designates Merrill Avenue as a 4-Lane Collector Street with a Class II bikeway and multipurpose trail. Merrill Avenue will provide east/west access to Colony Commerce Center East at the

northern boundary of the project site. The proposed improvement to Merrill Avenue are illustrated in Exhibit 5.3a, Merrill Avenue. Parking is prohibited along Merrill Avenue.

The existing Merrill Avenue bridge crossing over Cucamonga Creek will be designed and constructed in accordance to the Ontario Master Plan of Streets and Highways.

5.1.3 Archibald Avenue

Archibald Avenue bounds the project site to the east and will provide north/south access to and from the Colony Commerce Center East Specific Plan area. Archibald Avenue is designated as a 6-Lane Divided Arterial. Exhibit 5.3b, illustrates the ultimate improvements to Archibald Avenue.

There is a multipurpose trail on the west side of Archibald Avenue along the specific plan frontage. On-street parking is not allowed on Archibald Avenue. Intersections and driveways shall be shown/designed in accordance to the Ontario Master Plan of Streets and Highways, the Traffic and Transportation Design Guidelines and coordinated with the City of Eastvale if necessary.

5.1.4 Pedestrian Circulation

In addition to vehicular circulation, a pedestrian circulation system utilizing the sidewalks will be provided within the Colony Commerce Center East Specific Plan.

Sidewalks will be provided along all streets abutting the Specific Plan area, and will be a minimum of five (5') feet in width. Sidewalks shall be constructed of concrete as part of the adjacent roadway improvements.

5.1.5 Bicycle Circulation

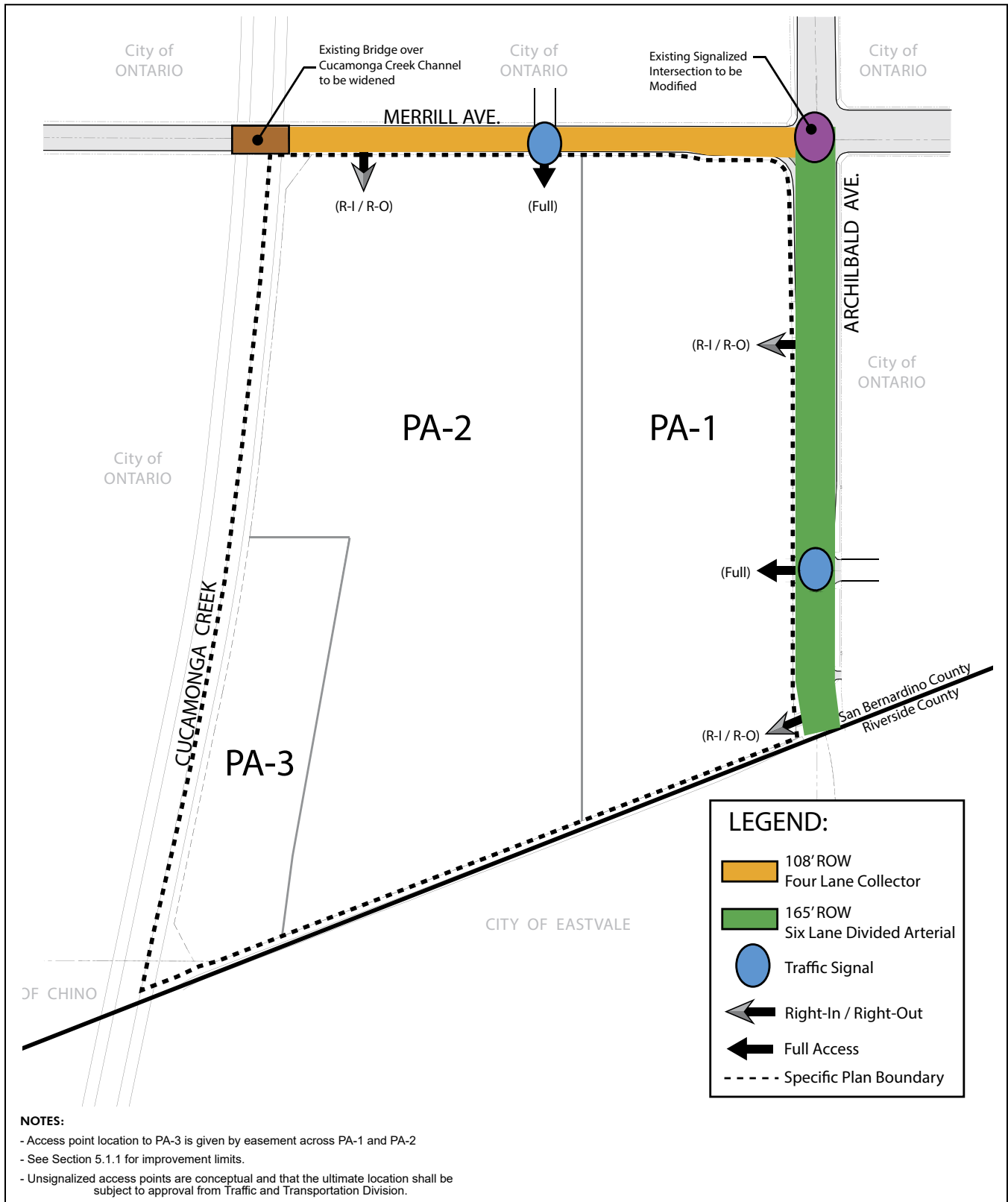
Bicycle trails are an integral element in creating accessibility and mobility within the Specific Plan. A Class I bicycle bikeway will be provided within the Cucamonga Creek Channel as illustrated in Exhibit 5.3c. The Specific Plan will construct trail connections to link

the bikeway along Cucamonga Creek Channel with the on-street bicycle system.

The Mobility Element of the Policy Plan (Figure M-1 Mobility Element System) designates a Class II Bikeway & Multi-purpose Trail along Merrill Avenue. These bike paths will provide linkages to the City's master planned bike paths system. General timing and responsibility will be discussed in the Development Agreement.

Refer to Exhibit 5.4, Pedestrian and Bicycle Circulation Plan, for locations of these paths and trails. Refer to Exhibit 5.5, City of Ontario Trails & Bikeway Plan to see how the Specific Plan connects to the larger network.

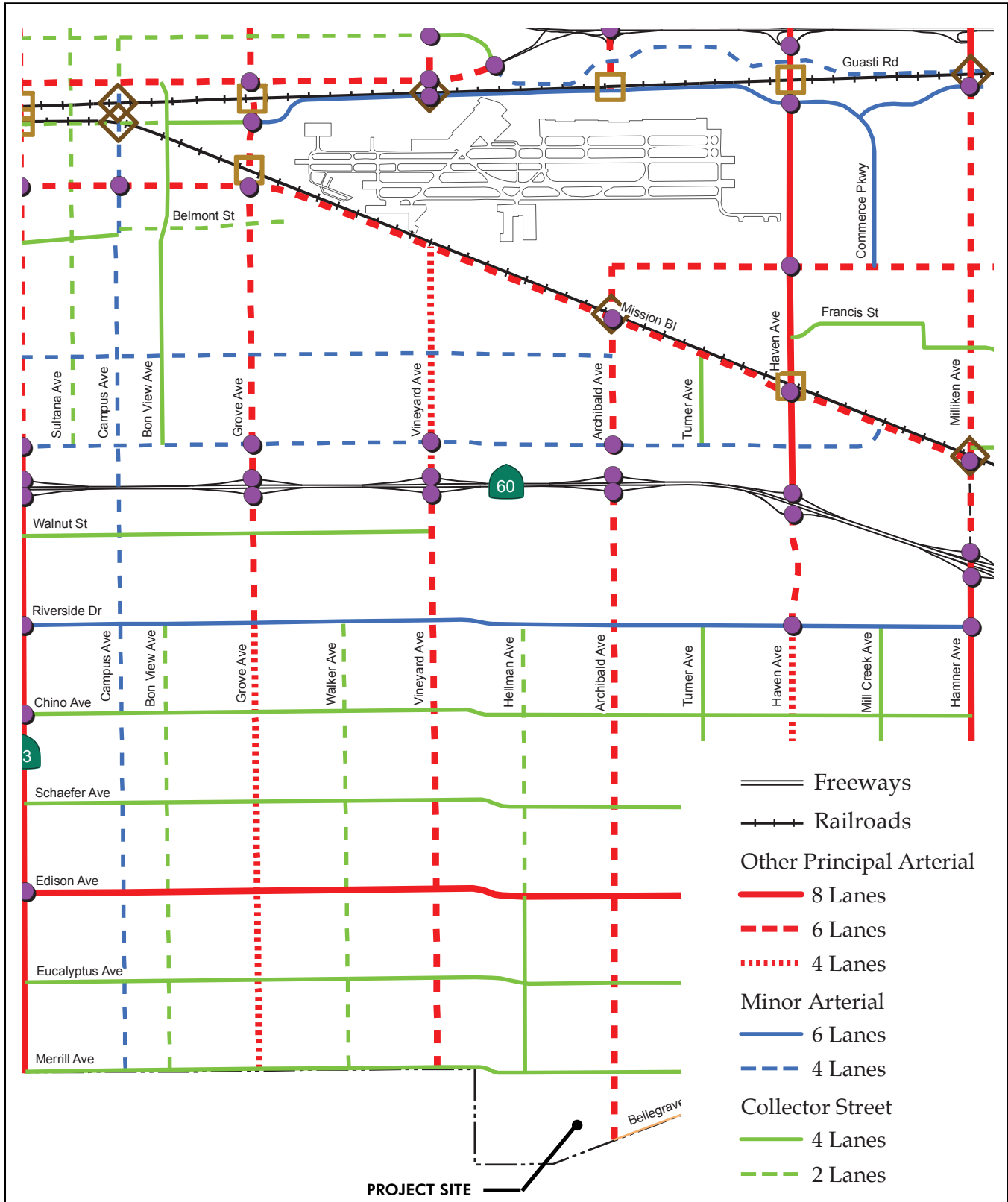
Exhibit 5.1, Circulation Plan



Source: KTG Group
 NOTE: Reference the City's most current Master Plan for sizing/alignment.



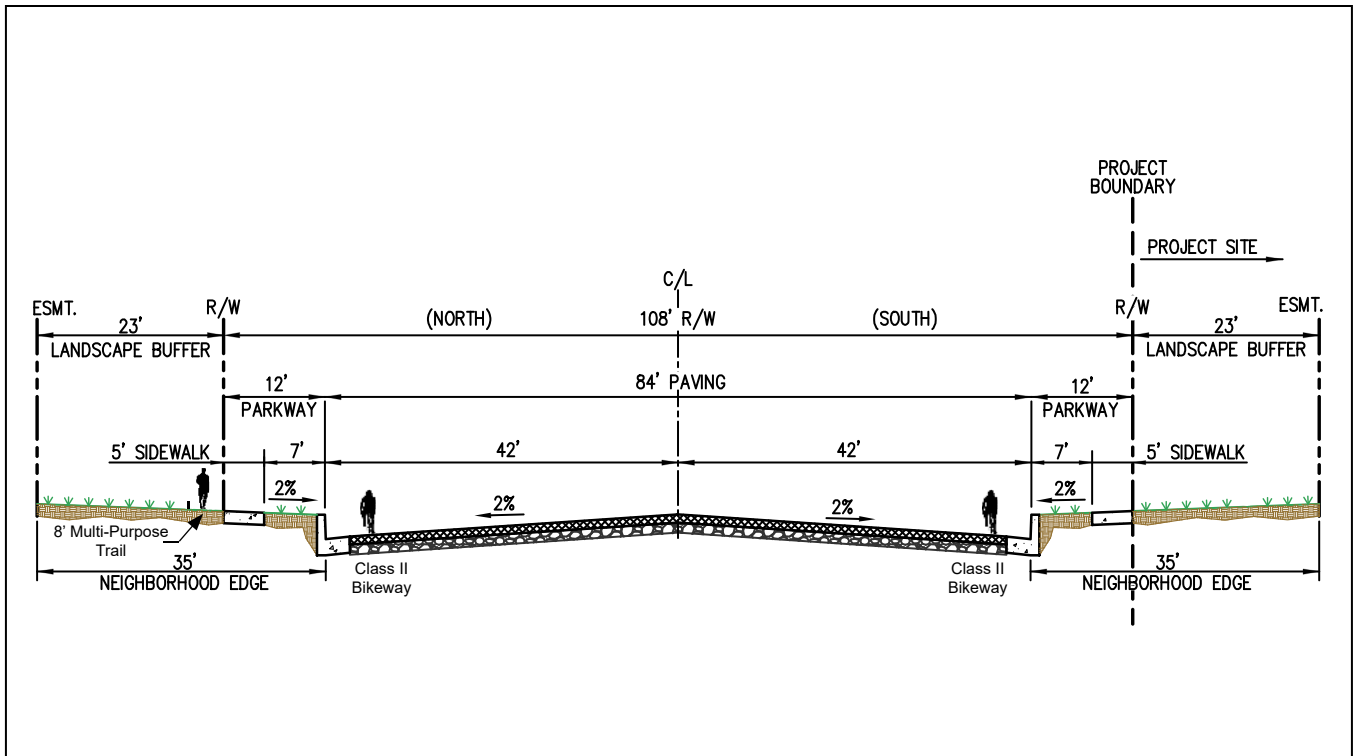
Exhibit 5.2, City of Ontario Roadway Classification Plan



Source: City of Ontario, Figure M-2 Functional Roadway Classification Plan
 NOTE: Reference the City's most current Master Plan for sizing/alignment.

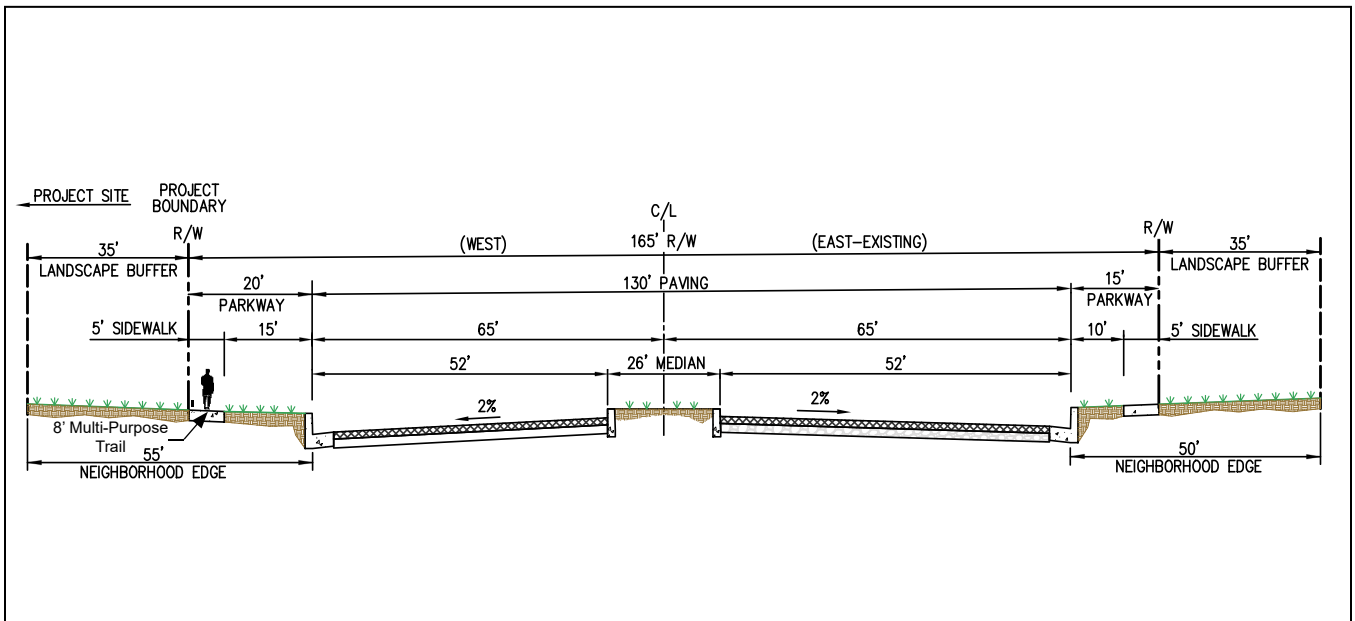


Exhibit 5.3a, Typical Street Cross Section - Merrill Avenue (108' ROW)



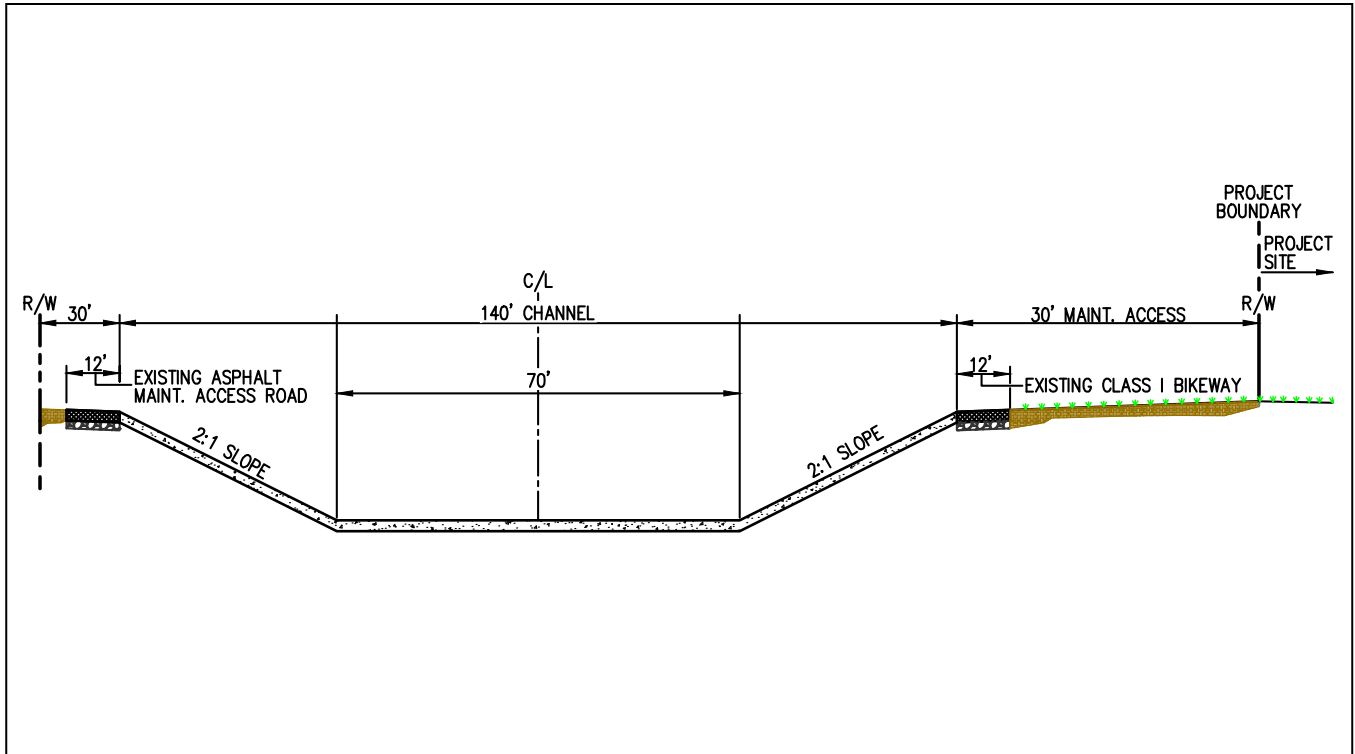
Source: David Evans & Associates

Exhibit 5.3b, Typical Street Cross Section - Archibald Avenue (165' ROW)



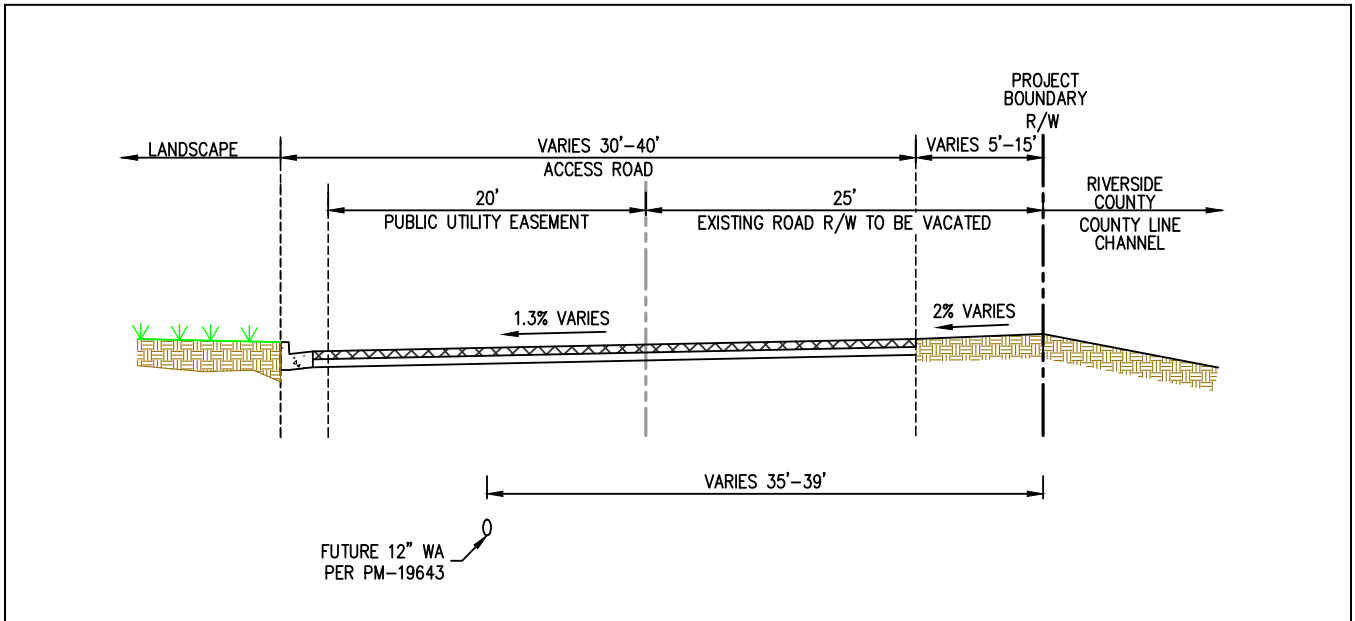
Source: David Evans & Associates

Exhibit 5.3c, Cucamonga Creek Channel



Source: David Evans & Associates

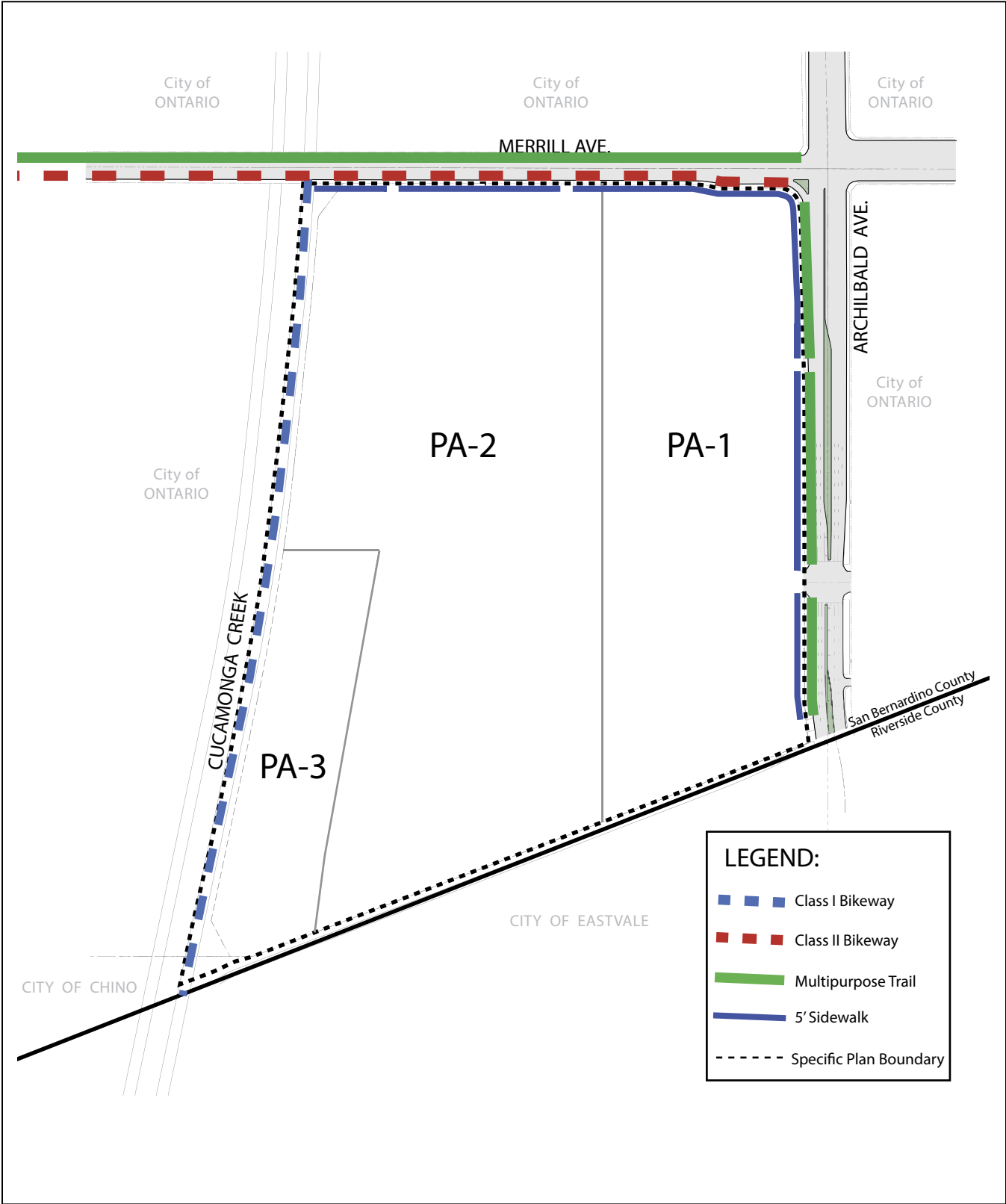
Exhibit 5.3d, Southerly Project Boundary



Source: David Evans & Associates

N. T. S.

Exhibit 5.4, Pedestrian and Bicycle Circulation



Source: KTG Group
 NOTE: Reference the City's most current Master Plan for sizing/alignment.



Exhibit 5.5, City of Ontario Trails & Bikeway Plan

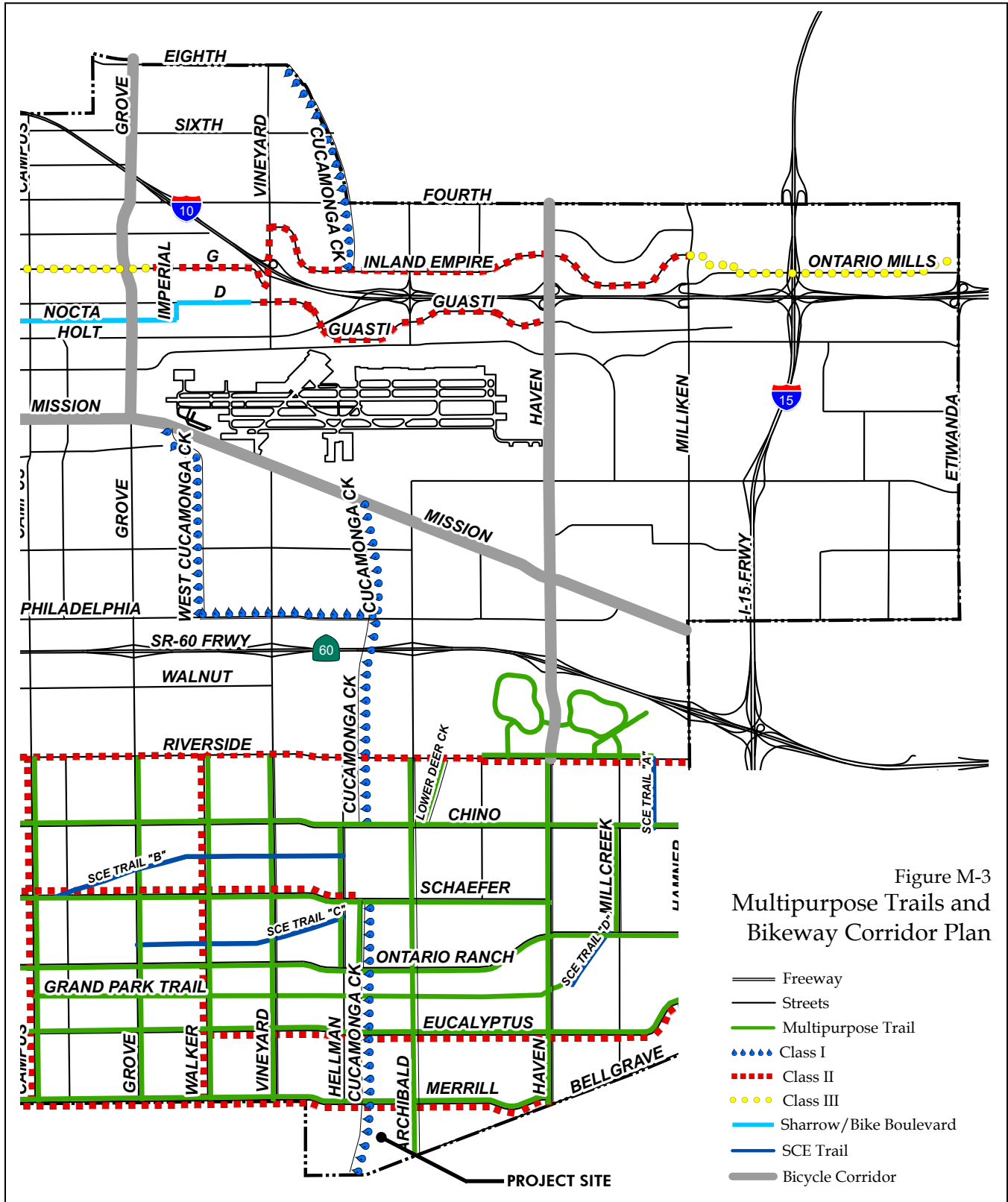


Figure M-3
Multipurpose Trails and
Bikeway Corridor Plan

- Freeway
- Streets
- Multipurpose Trail
- ◆ Class I
- - - Class II
- ... Class III
- Sharrow/Bike Boulevard
- SCE Trail
- Bicycle Corridor

Source: City of Ontario, Figure M-3 Multipurpose Trails and Bikeway Corridor Plan
NOTE: Reference the City's most current Master Plan for sizing/alignment.



5.2 Water Master Plan

Domestic water will be provided by the City of Ontario. The City's Water Master Plan identifies new water facilities to serve the Ontario Ranch area, which will need to be constructed prior to or concurrent with on-site water improvements.

All private agricultural wells located within each Parcel shall be destroyed per Cal Department of Water Resources prior to the issuance of a certificate of occupancy for any construction activity. Well destruction requires a permit from County Health Department. A copy of such permit shall be provided to Engineering and OMUC prior to issuance of certificate of occupancy.

Note: Reference the City's most current Master Plan for sizing/alignment.

5.2.1 Master Planned Domestic Water System

The project site lies within the 925' Pressure Zone as depicted on Exhibit 5.6, City of Ontario Ultimate Water System. The ultimate improvements for domestic water will include a new 12" Master Plan water main in Merrill Avenue, from Archibald Avenue to Cucamonga Creek Channel, an existing 12" water main in Archibald Avenue, and a new 12" water main along the southerly property line, parallel to the County Line Channel, to the Cucamonga Creek Channel where it feeds Colony Commerce West as depicted on Exhibit 5.7, Domestic Water System. The new southerly water main will be in a new Public Utility Easement (PUE) granted by the Specific Plan Properties to the City.

Within the project site, a network of 8" and 10" water lines will be installed for the private fire system. The on-site water system includes connections to the main in Archibald Avenue and the main in Merrill Avenue.

The proposed on-site water system sizing is subject to the recommendations of the City Building Department.

5.2.2 Master Planned Recycled Water System

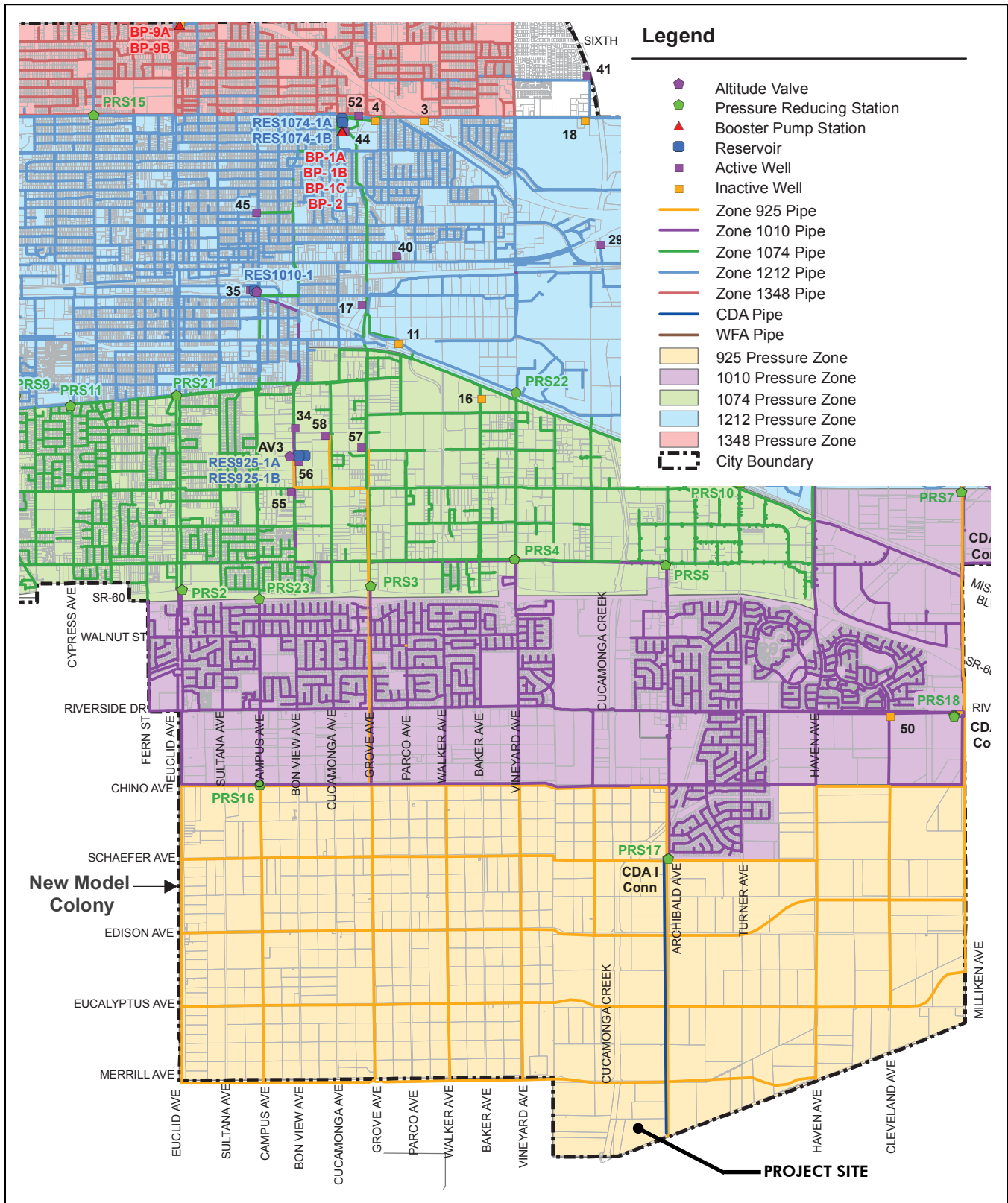
The City of Ontario will ultimately provide recycled water from IEUA's RP-1 and RP-1 outfall parallel located in Archibald Avenue and via City of Ontario recycled water improvements as presented in the City's Recycled Water Master Plan.

The project site lies within the 930' Pressure Zone as depicted on Exhibit 5.8, City of Ontario Ultimate Recycled Water System. The ultimate improvements for recycled water includes a new 12" Master Plan recycled water main in Merrill Avenue, from Archibald Avenue to Cucamonga Creek Channel, as depicted in Exhibit 5.8. Access for Recycled Water service to PA-3 is given by easement across PA-1 and PA-2.

The developer shall prepare and secure approval of an Engineering Report from the City of Ontario and State Water Resources Control Board (SWRCB) prior to the use of recycled water. Sizing of the on-site system is subject to the City Ordinance 2689 and make use of recycled water for all approved uses, including but not limited to landscaping irrigation. Interim connection to potable water is not allowed.

Note: Reference the City's most current Master Plan for sizing/alignment.

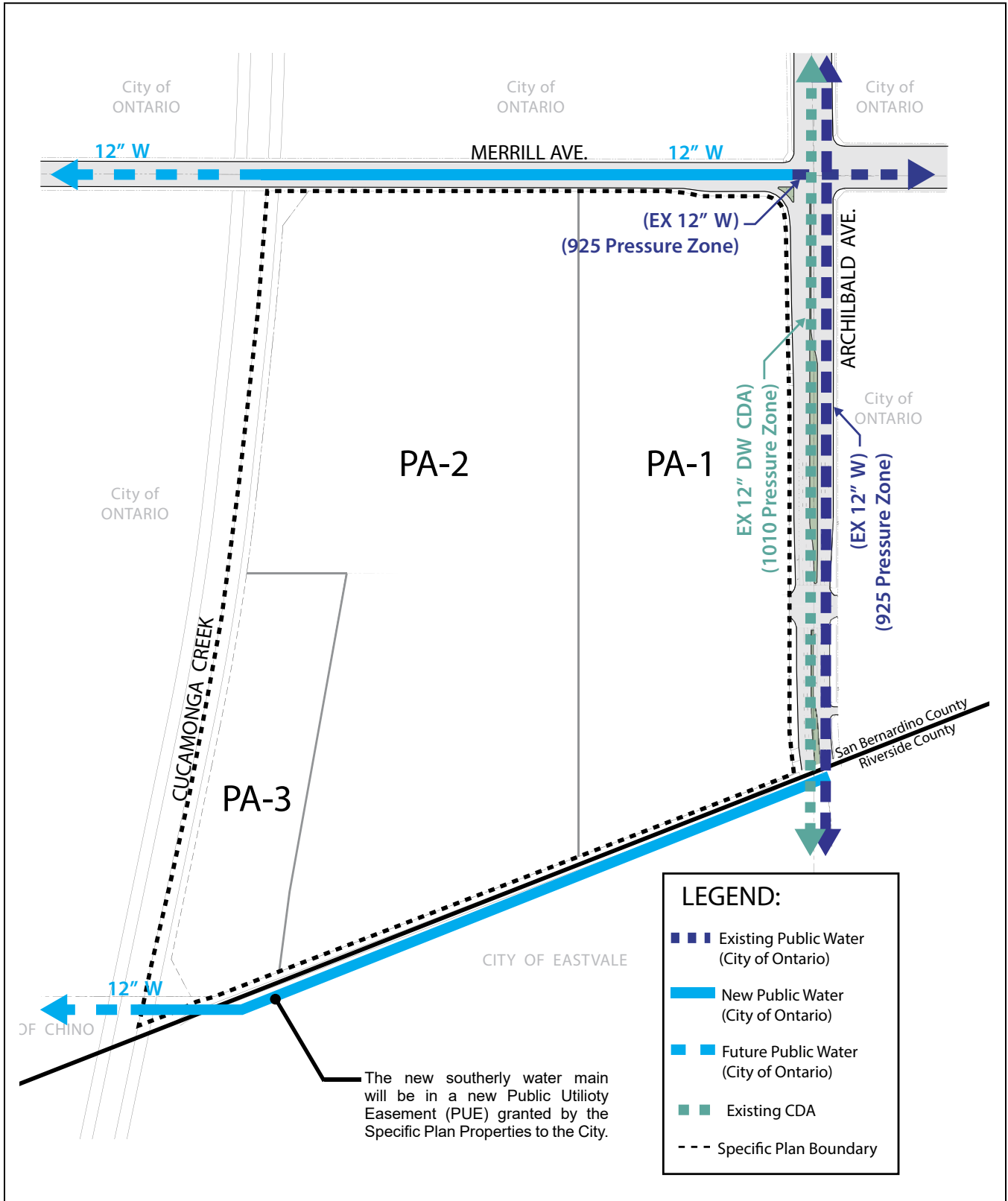
Exhibit 5.6, City of Ontario Ultimate Water System



Source: City of Ontario, Ultimate Water System (Figure 10-1) October 2011
 NOTE: Reference the most current Master Plan for sizing/alignment.



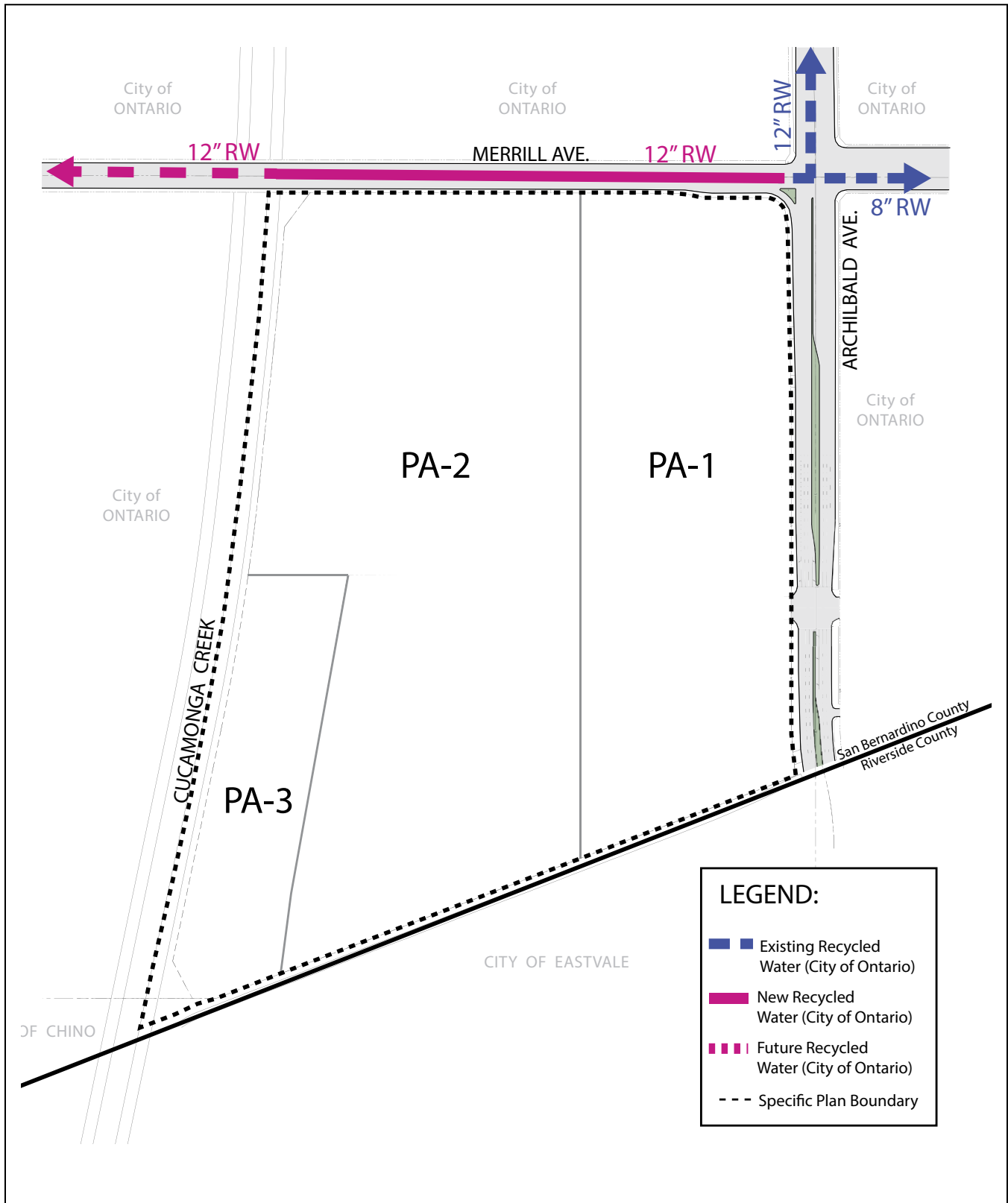
Exhibit 5.7, Domestic Water System



Source: David Evans & Associates
 NOTE: Reference the City's most current Master Plan for sizing/alignment.



Exhibit 5.8, Recycled Water System



Source: David Evans & Associates
 NOTE: Reference the City's most current Master Plan for sizing/alignment.
 Access for Recycled Water service to PA-3 is given by easement across PA-1 and PA-2



5.3 Sewer Master Plan

Sewer service for Colony Commerce Center East will be provided by the City of Ontario. The City of Ontario Master Plan of Sewer as depicted on Exhibit 5.9, shows an existing 42” sewer main in Archibald Avenue joining the existing 42” IEUA Eastern Trunk Sewer at the intersection of Archibald Avenue and the County Line Channel and continues southwest along our southerly property line, parallel to the County Line Channel where it crosses Cucamonga Creek Channel.

The size and location of the on-site private sewer system required to service the buildings will be engineered during preparation of the final on-site construction documents. Onsite private sewer system and the site will be designed in such to minimize the number of new connection points to the 42-inch IEUA Eastern Trunk Sewer to as few as possible.

Note: Reference the City’s most current Master Plan for sizing/alignment.

5.4 Drainage

The City of Ontario Storm Drain Master Plan identifies storm drain improvements to serve the project site. Completion of these Master Plan improvements will provide storm water drainage for the properties within this specific plan.

The runoff that leaves the site drains to the lower reach of Cucamonga Creek a tributary of the Santa Ana River at Prado Reservoir. The site is a part of the 74 square mile drainage area that is tributary to the Creek. The total drainage area is bounded by the San Gabriel Mountains on the north, San Antonio Creek drainage area on the west, Day Canyon drainage area on the east and Prado Reservoir on the south. The channel has an approximate gradient of 40 feet per mile and is designed to carry 45,000 cfs at the Confluence with the County Line Channel just downstream of the project site.

The existing Storm Drain Master Plan indicates the properties within this specific plan as tributary to the

County Line Channel, running south of the property which confluences with the Cucamonga Creek.

The Master Plan of drainage for Colony Commerce Center East is illustrated in Exhibit 5.12 Drainage / Hydrology.

5.4.1 NPDES Compliance

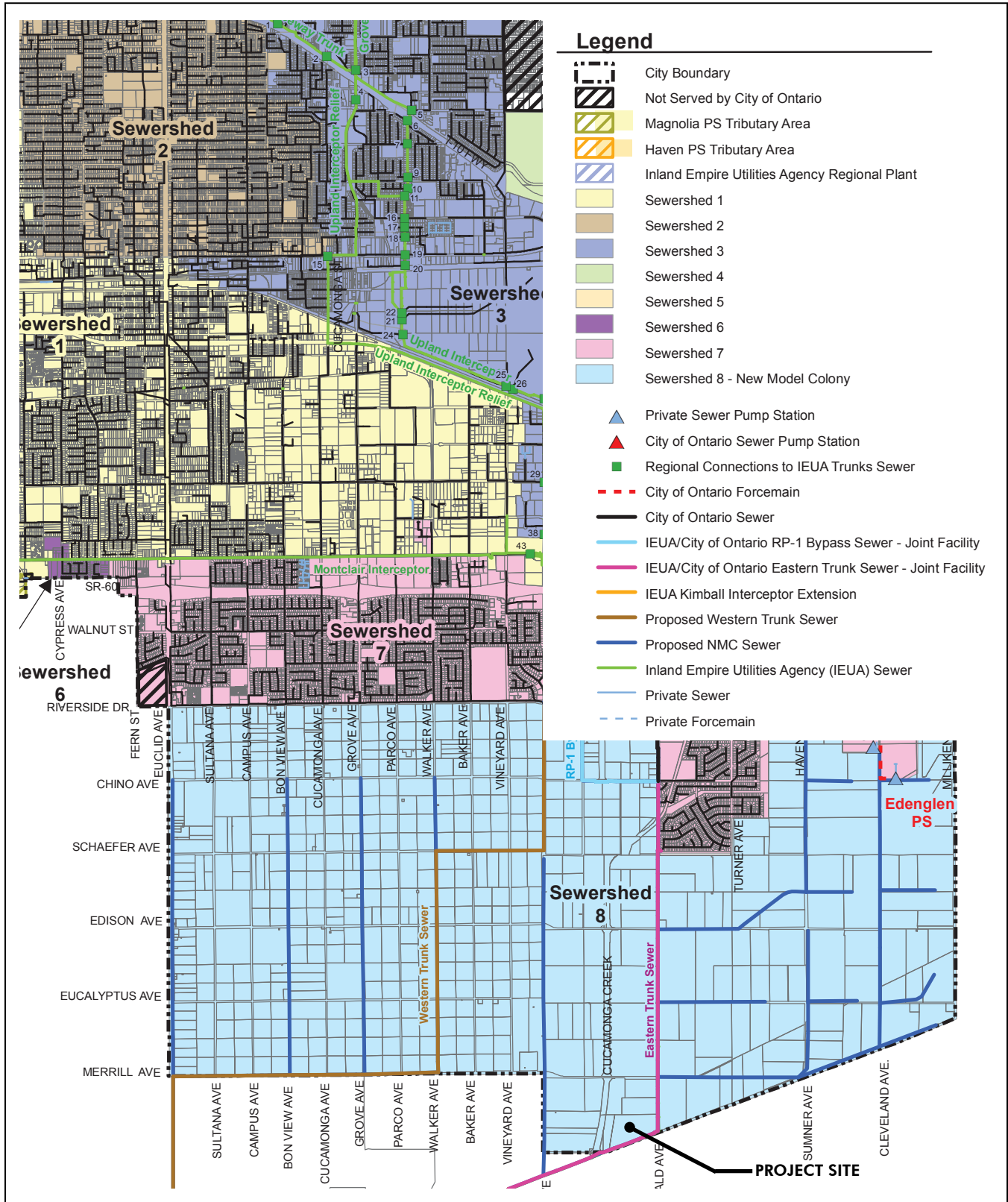
The grading and drainage of the Specific Plan Area shall be designed to retain/infiltrate or bio-treat surface runoff from 85th percentile storm events, in order to comply with the requirements of the San Bernardino County NPDES Storm Water Program’s current Water Quality Management Plan (WQMP) for new development projects.

The objective of the WQMP for the project is to minimize the detrimental effects of urbanization on the beneficial uses of receiving waters, including effects caused by increased pollutant loading and changes in hydrology due to increased stormwater runoff from new development projects. These effects shall be minimized through the implementation of on-site and off-site Low Impact Development (LID) Best Management Practices (BMP’s) which retain/infiltrate or biotreat the average 2-year, 24-hour storm runoff volume (85th percentile storm event) from the project.

In addition, non structural and structural Source Control BMP’s shall also be implemented and documented in the projects approved Water Quality Management Plan(s) to reduce pollutant generation and transport from the project site.

Prior to the issuance of grading or construction permits for any development project that disturbs 1 acre or more of land, within the Colony Commerce Center East Specific Plan area, project applicants shall be required to obtain coverage under the California General Permit for Stormwater Discharges Associated With Construction And Land Disturbance Activities (CGP) and prepare Erosion/Sediment Control Plans and Storm Water Pollution Prevention Plans (SWPPP). The SWPPP shall

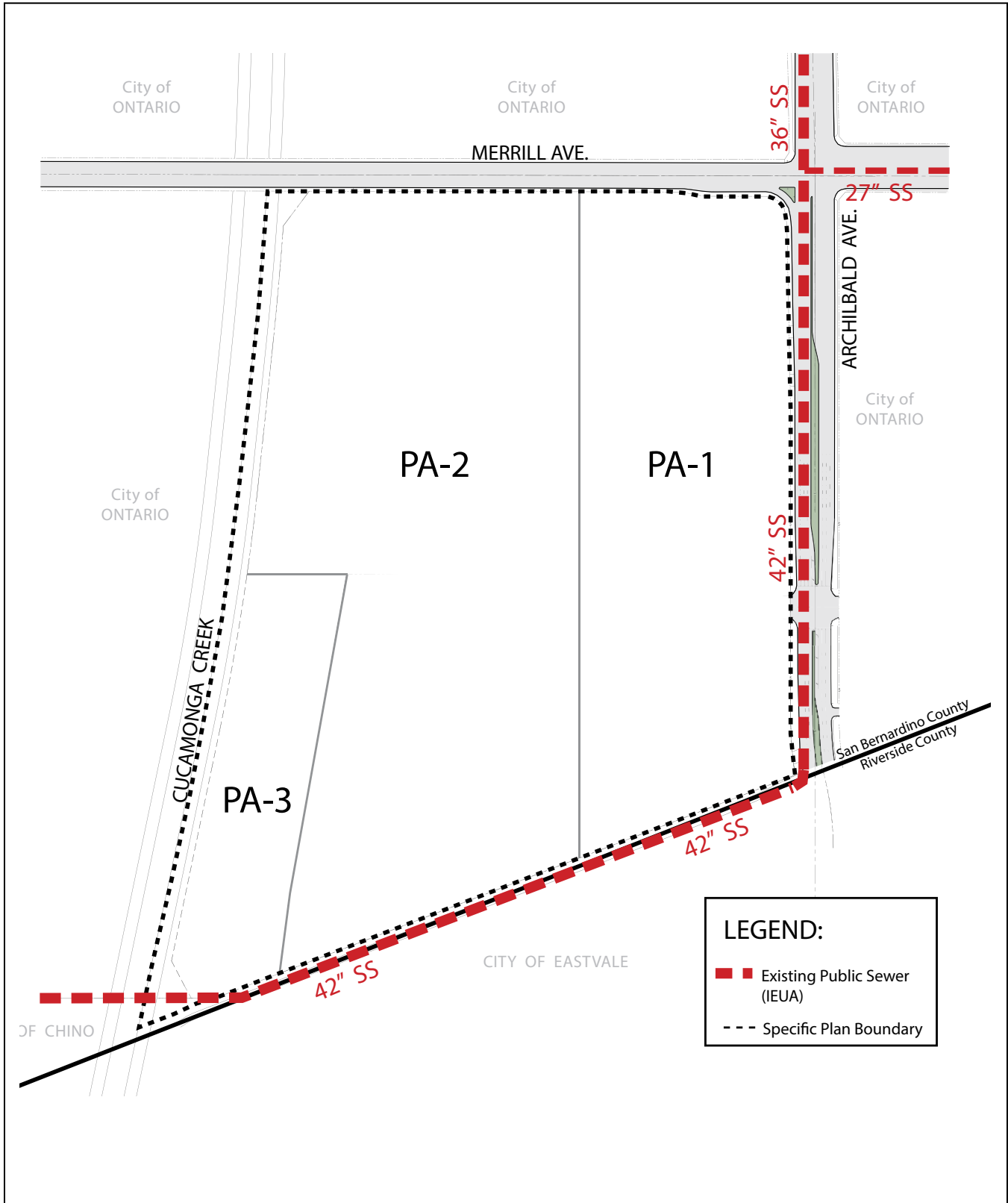
Exhibit 5.9, City of Ontario Ultimate Sewer System



Source: City of Ontario, Ultimate Sewer System (Figure 6-1) October 2011
 NOTE: Reference the most current Master Plan for sizing/alignment.



Exhibit 5.10, Sewer Master Plan



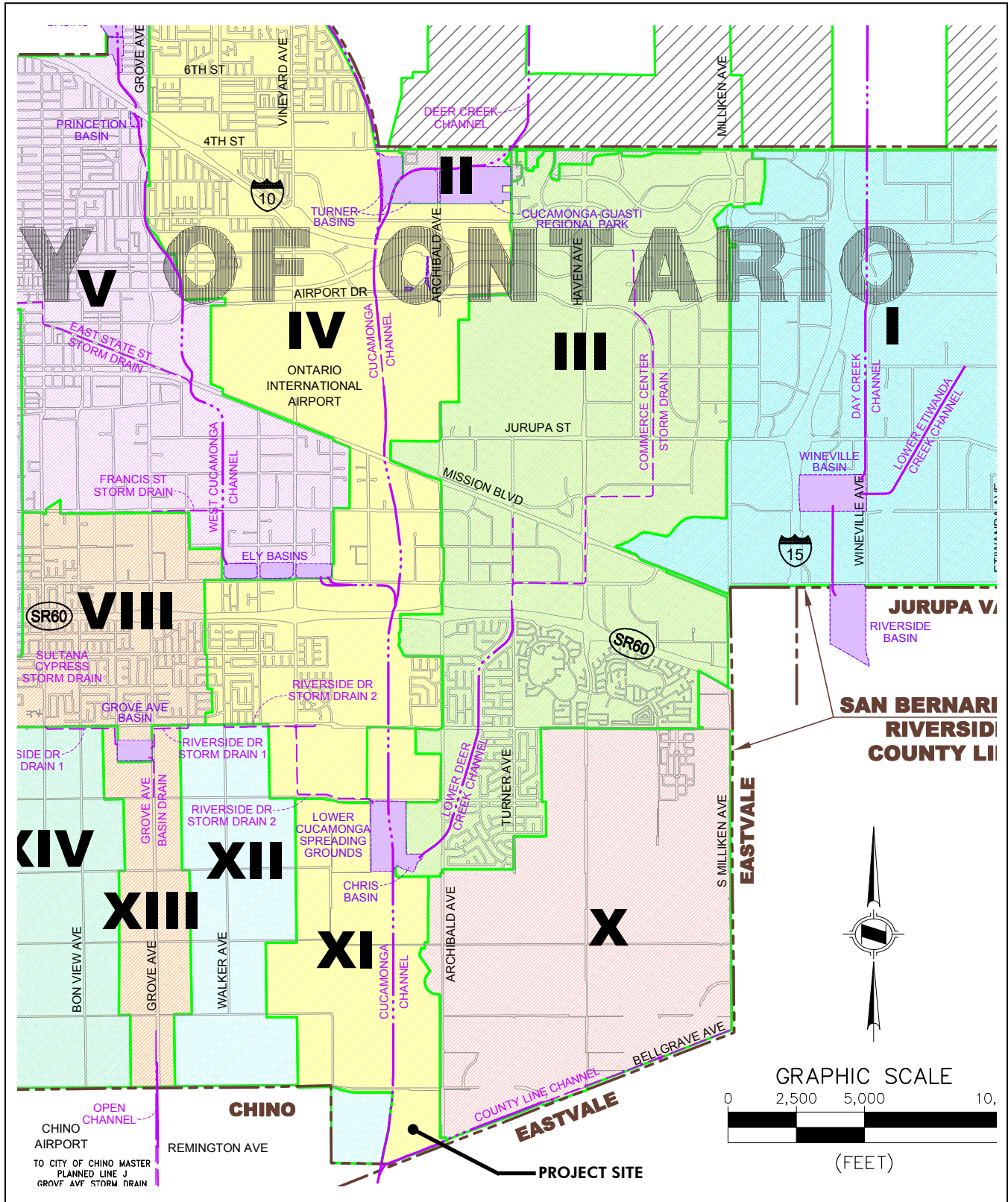
Source: David Evans & Associates

NOTE: Reference the City's most current Master Plan for sizing/alignment.



PA-1 and PA-2 will be served by an onsite private sewer system. The Onsite private sewer system and PA-1 and PA-2 will be designed in such to minimize the number of new connection points to the 42-inch IEUA Eastern Trunk Sewer to as few as possible.

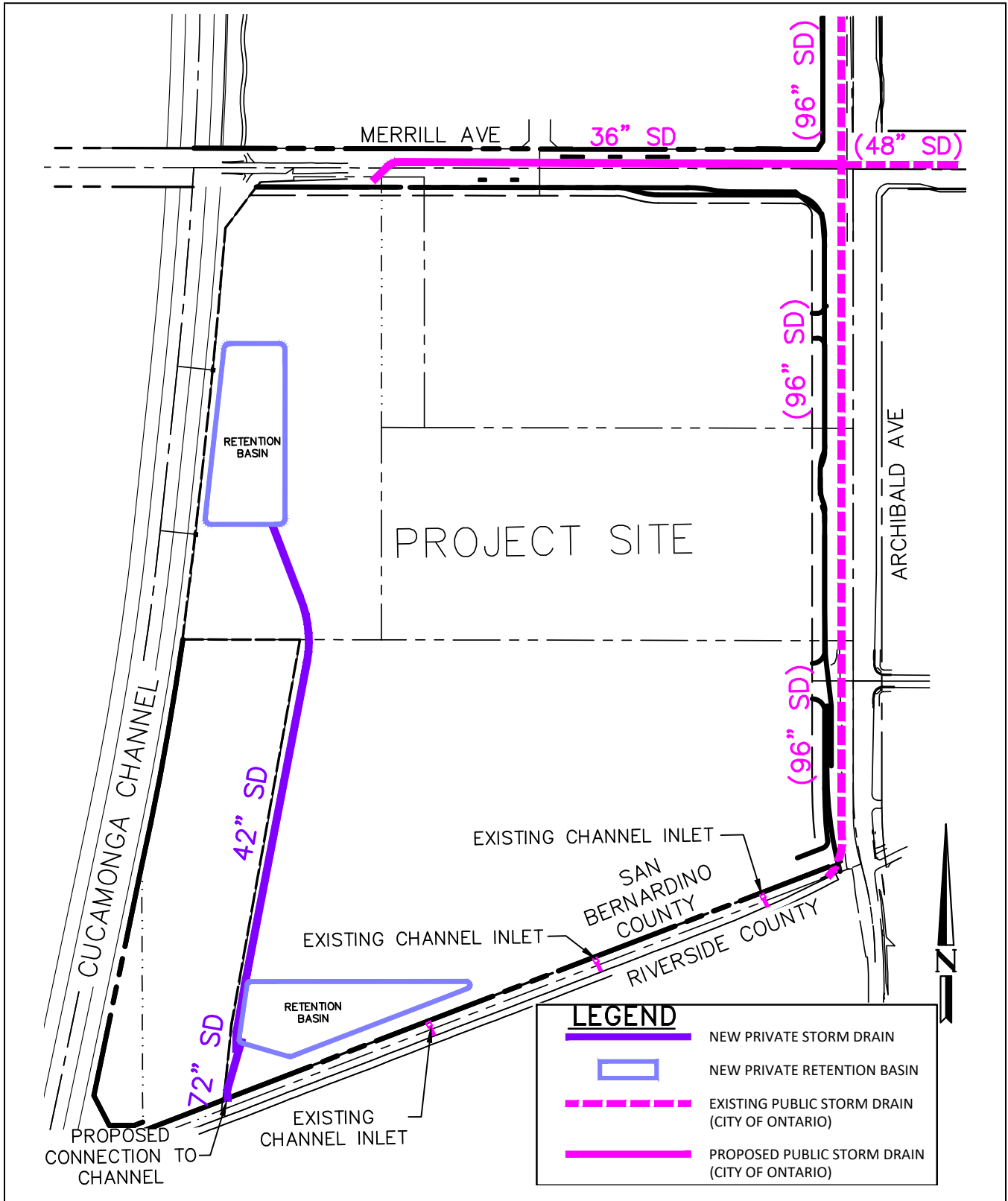
Exhibit 5.11, City of Ontario Drainage Area Map



Source: City of Ontario's Drainage Area Map (Exhibit 7), March 10, 2012
 NOTE: Reference the most current Master Plan for sizing/alignment.

N. T. S.

Exhibit 5.12, Drainage Plan / Hydrology



Source: David Evans & Associates
 NOTE: Reference the City's most current Master Plan for sizing/alignment.

N. T. S.

be prepared to comply with California State Water Resources Control Board's (State Water Board) current CGP and current "Area Wide Urban Storm Water Runoff (Regional NPDES) Permit."

The SWPPP shall identify and detail all appropriate Best Management Practices (BMP's) to be implemented or installed during construction of the project.

5.5 Grading Concept

The project site generally slopes to the south at approximately 1.0% to 2.0%. The grading activities for Colony Commerce Center East will generally consist of clearing and grubbing, demolition of existing structures, and moving surface soils to construct building pads and streets. Where slope conditions are present, the project lot line shall be located at the top of a slope.

The Conceptual Grading Plan, as illustrated in Exhibit 5.13, Conceptual Grading Plan, provides a balance of cut/fills for the project. Grading plans for each tract within the project shall be reviewed and approved by the City of Ontario Building, Planning, and Engineering Departments prior to the issuance of grading permits. All grading plans and activities shall conform to the City's grading ordinance and dust and erosion control requirements.

All landscape areas, adjacent to streets, including medians, parkways and neighborhood edges, in the Specific Plan Area, shall be finish graded, at a minimum of 1 ½" below top-of-curb or sidewalk finish surface, for conservation of irrigation water and increased retention of rainwater runoff.

Wherever practicable, landscaped areas within the project shall be graded as swales and designed to accept runoff water from impervious surfaces. Where necessary, a 5' wide level pad area shall be provided for utilities adjacent to slopes, at each side of detention basins or swales adjacent to paving for pedestrian safety and for screening shrubs.

5.6 Dry Utilities

Utility services provided to the site consist of natural gas, electricity, and communications systems. Utility lines will be installed underground in accordance with City of Ontario guidelines.

5.6.1 Communication Systems

Proposed on-site facilities will be placed underground within a duct and structure system to be installed by the developer. Maintenance of the installed system will be the responsibility of the City and/or Special District fiber optic entity and not that of the developer. Development of the project requires the installation by the developer of all fiber optic infrastructure necessary to service the project as a standalone development. The Colony Commerce Center East Specific Plan will connect to the network as shown on Exhibit 5.14, Fiber Optic Master Plan.

5.6.2 Natural Gas

The Gas Company will provide natural gas to the Specific Plan area. The Gas Company will install gas mains to the Specific Plan area as necessary.

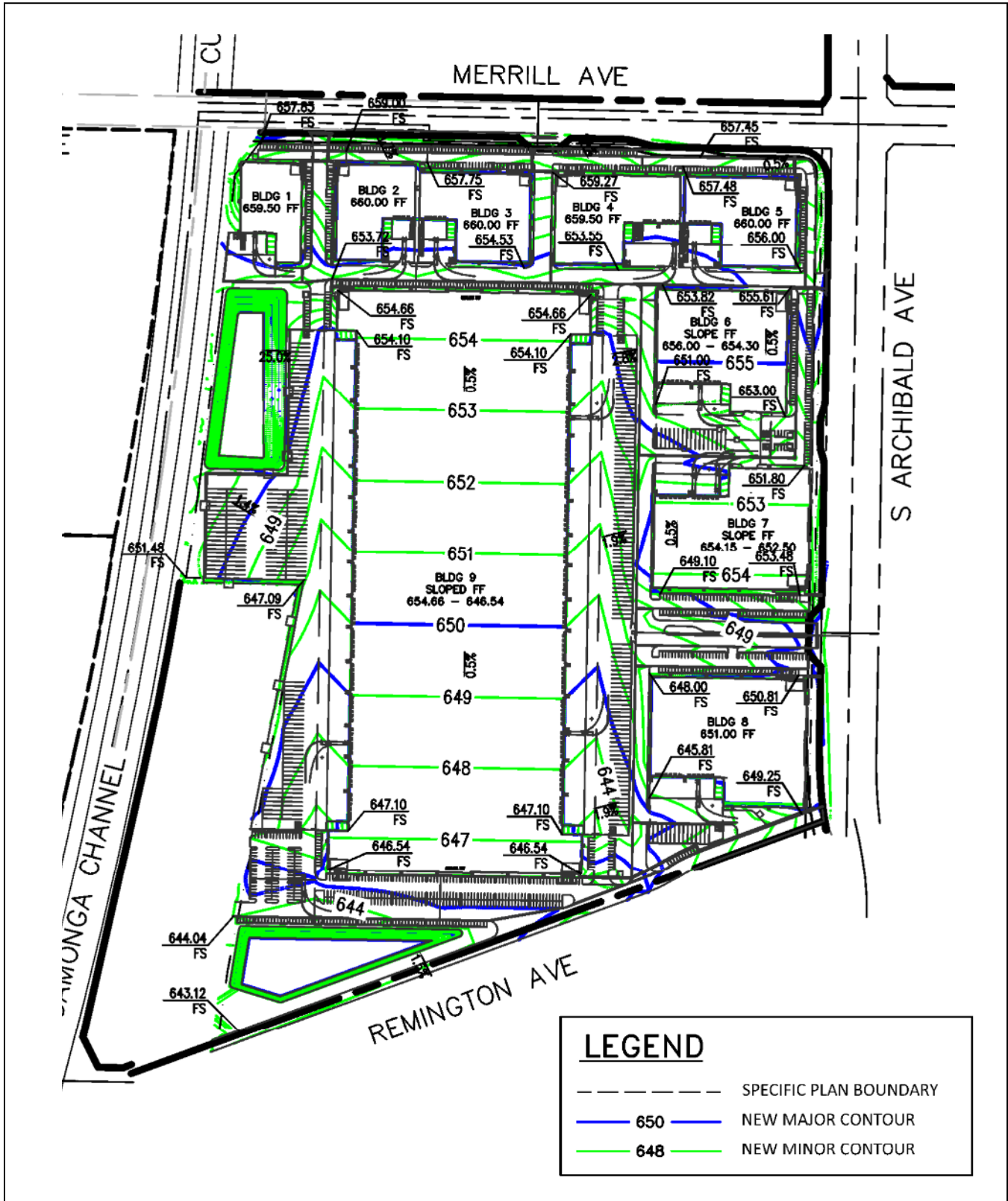
5.6.3 Electricity

Southern California Edison Company (SCE) currently provides electrical service in the area. All new lines and all existing lines within the Specific Plan area shall be installed according to City of Ontario requirements.

There are existing power poles that run along the east side of Archibald Avenue from the Riverside/San Bernardino County Line in the south to Merrill Avenue in the north. There are overhead lines on the project site that branch off from the poles along Archibald Avenue and run west, parallel (roughly 200' south) of Merrill Avenue. These onsite poles will be relocated underground per the City's Municipal Code.

In addition, there are existing overhead lines on the north side of Merrill Avenue that run from Archibald Avenue to the Cucamonga Creek Channel.

Exhibit 5.13, Conceptual Grading Plan



Source: David Evans & Associates



5.7 Public Facilities and Services

Public services and facilities play an essential role in providing support services to create viable, sustainable, healthy and cohesive communities.

5.7.1 Police

The Ontario Police Department will provide law enforcement to the Colony Commerce Center East area. The Ontario Police Department's mission statement is as follows: "The mission of the Ontario Police Department is to protect life and property, solve neighborhood problems, and enhance the quality of life in our community. We do this by providing superior police services while fostering successful community partnerships."

5.7.2 Fire

The Ontario Fire Department will provide fire protection, paramedic, and emergency response services to the Specific Plan Area. The closest operational fire station is Station 6 located at 2931 E. Philadelphia Avenue. The Ontario Fire Department currently has eight stations, which are comprised of eight 4-man paramedic engine companies and two 4-man truck companies.

The City is in the process of developing 13 square miles in the Ontario Ranch where the Ontario Fire Department will shortly begin construction of Fire Station Number Nine located at 2661 E. Park Vista Drive.

5.7.3 Solid Waste Disposal

The City of Ontario Solid Waste Department is committed to providing reliable, timely, safe, and affordable refuse collection services to the residents and businesses in the city limits. Solid waste requirements shall follow the approved "Solid Waste Department Refuse and Recycling Planning Manual."

5.8 Infrastructure Phasing Plan

The primary intent of the phasing of the project is to ensure that complete and adequate public facilities and

services are in place and available to the Specific Plan area as needed.

The phasing program for Colony Commerce Center East will be executed to provide the services and infrastructure required for each of the development planning areas. The phasing set forth in this Specific Plan shall be conditioned on the approval of tentative tract maps. It should be noted that the ultimate pace and phasing of the development is dependent on a number of internal and external factors and is subject to change. See Exhibit 5.15, Conceptual Phasing Plan.

Not all planned development within a given phase may be completed prior to the initiation of the next phase. In cases where development within a new phase is to begin prior to the completion of a phase in progress, all infrastructure improvements shall be funded and designed for the phase in progress before any new phase may begin.

The project will be developed in two phases. These phases may occur sequentially or concurrently with one another. Build out of the project is undetermined at this time.

5.8.1 Planning Areas and Streets

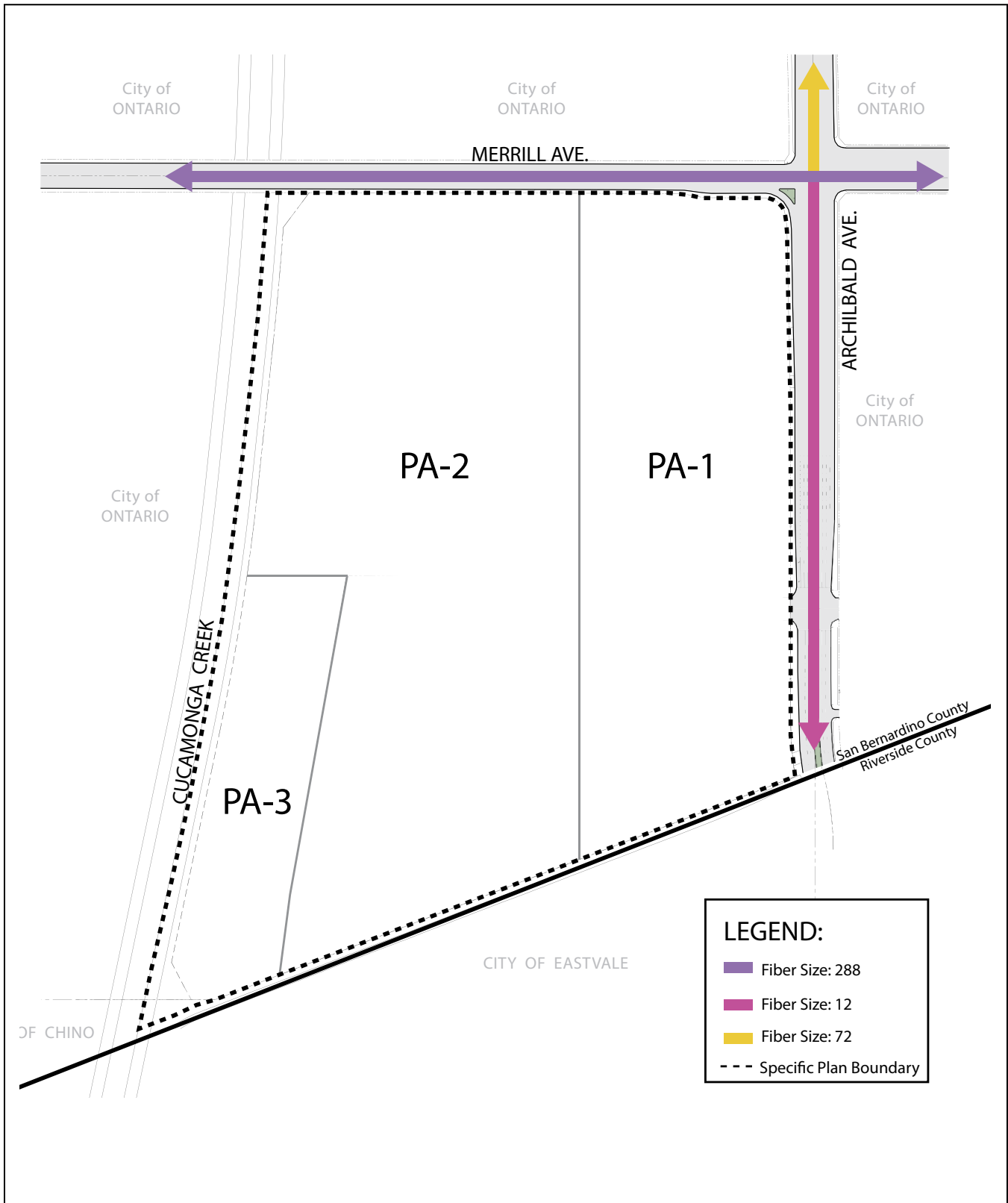
Public streets within and abutting the Specific Plan area shall be improved in accordance with the approved development agreement. Traffic Impact Analysis may recommend additional improvements, including those potentially outside the limits of the Specific Plan Area, prior to or concurrent with specific development milestones.

5.8.2 Water, Sewer and Recycled Water

Water and sewer services will be provided for each of the planning areas.

Phase 1 requires the construction of the 12" Master Plan water main in Merrill Avenue from Archibald Avenue to the Cucamonga Creek Channel and the 12" water main

Exhibit 5.14, Fiber Optic Master Plan



Source: City of Ontario, Figure 7 (Fiber Size and Footages)
 NOTE: Reference the most current Master Plan for sizing/alignment.



along the southerly property line, parallel to the County Line Channel where it will feed Colony Commerce West. Due to the location of Phase 1, the 12" water line will be able to serve Phase 2.

Recycled water: Phase 1 requires the construction of the 12" Master Plan reclaimed water main in Merrill Avenue from Archibald Avenue to the Cucamonga Creek Channel.

No phasing is required for sewer since the existing 42" sewer main exists in Archibald Avenue and along the southerly property line, running parallel to the County Line Channel.

5.8.3 Drainage

No phasing is required for storm drain since the site is tributary to the County Line Channel that runs parallel to the southerly property line.

It should be noted that the ultimate phasing of the development is dependent on a number of internal and external factors. Not all planned development within a given phase may be completed prior to the initiation of the next phase.

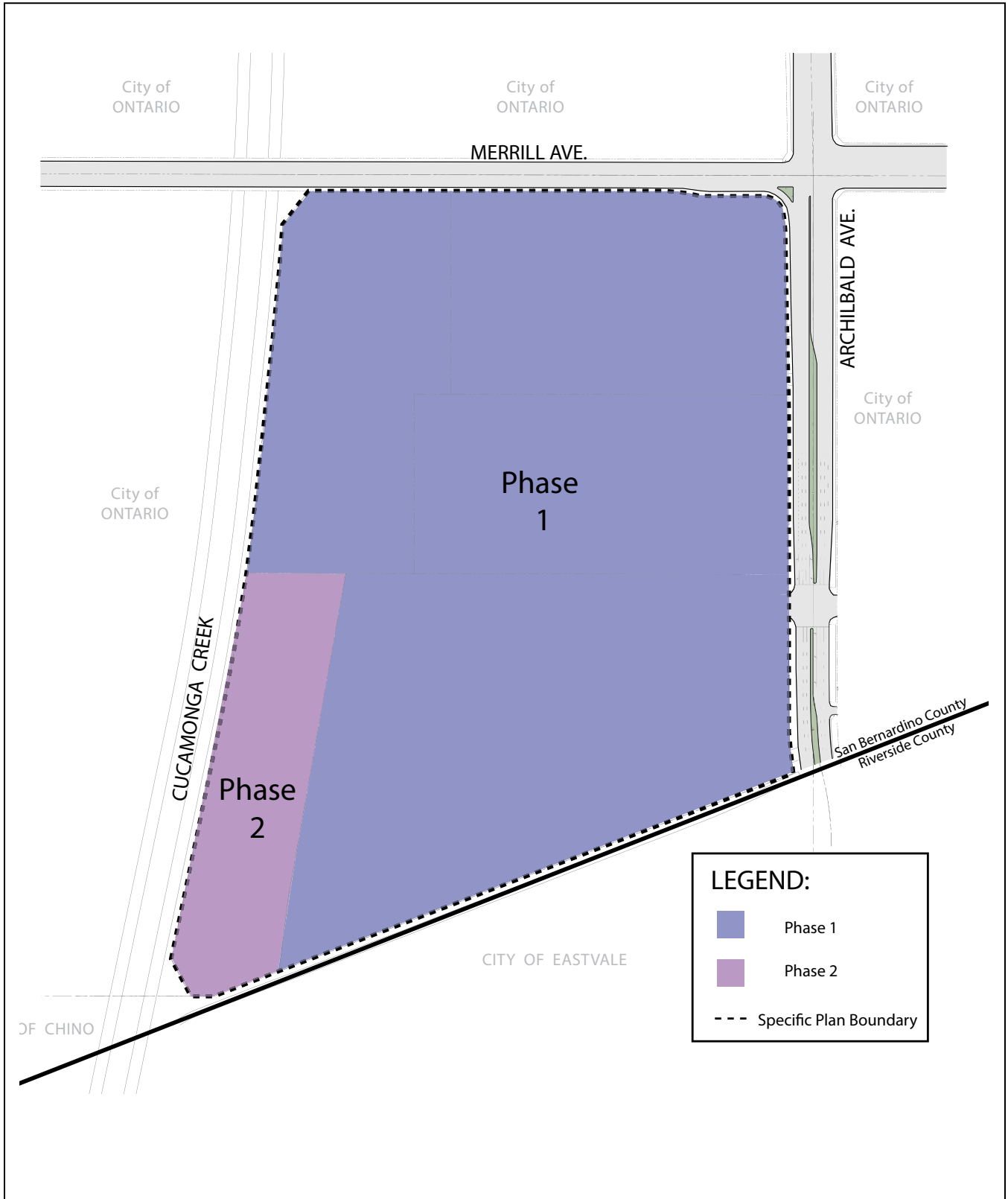
5.9 Infrastructure Plan and Phasing Adjustments

The Development Advisory Board (DAB) and Planning Commission (PC) shall have the authority to hear and decide applications for modifications to the infrastructure phasing plans. The DAB and PC shall be required to make the following findings:

- » That modification is consistent with the General Plan;
- » That the proposed changes will not adversely affect the implementation of the Specific Plan;
- » That it will not be detrimental to the public health, safety, and general welfare; and

- » That the proposed modification will not delay the construction of the master plan improvements necessary to serve the development.

Exhibit 5.15, Conceptual Phasing Plan



Source: KTG Group



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