7. Public Services and Utilities

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7.1 PUBLIC SERVICES AND UTILITIES CONCEPT

The Riolo Vineyard Specific Plan includes a variety of public services and utilities intended to support the needs of community residents. These services include water, wastewater, recycled water, drainage, solid waste disposal, fire and police protection, schools, libraries, and utilities. This section outlines the provisions of public services and utilities within the Plan Area.

The Specific Plan conceptually defines how and where services are to be provided within the Plan Area. These layouts in no way represent all of the improvements required to make the area developable. The proposed improvements shown are considered tentative and additional infrastructure may be required to develop the properties. The exact sizing and location of proposed utilities will be determined during Improvement Plan and Final Map stages. However, final infrastructure improvements shall closely follow the designs illustrated in the water, recycled water, wastewater, and drainage plans provided in this section. These services have been planned so that they become available with each new phase of development.

Table 7.1 lists the service providers for the Plan Area.

7.2 PUBLIC SERVICES AND UTILITIES GOALS AND POLICIES

Public Services and Utilities Goal #1
Create a comprehensive system of public services and utilities that accommodates the needs of residents within the Plan Area.

Public Services and Utilities Goal #2
Conserve resources through the use and implementation of energy efficient utility system designs and technologies.

Public Services and Utilities Policies

1. Build the necessary water, recycled water, wastewater and drainage infrastructure to serve the Plan Area in a timely manner.
2. Encourage the use of available recycled water in an efficient manner.
3. Promote and encourage recycling of consumer and business waste in order to reduce landfill requirements and lengthen service of existing landfills.
4. Provide for fire, police, and other community services adequate to serve the needs of the Plan Area.

7.3 PLACER COUNTY CAPITAL FACILITIES FEE

The Placer County Capital Facilities Fee is a development impact fee used to fund the expansion of capital facilities. These include public works, libraries, health and welfare, administration, and law enforcement. The proposed fee is in addition to other fees collected during map recordation or the building permit process. New development within the Plan Area will contribute to the expansion of these facilities.

7.4 PUBLIC UTILITIES

Water Supply and Distribution Facilities

The Riolo Vineyard Specific Plan Area will be annexed into the service area of Placer County Water Agency (PCWA) Zone 1. PCWA will provide wholesale water and California-American Water Company (Cal-Am) will retail water to the Plan Area. The Plan Area is located within Cal-Am's service area.

Recycled water will be supplied by the City of Roseville's Dry Creek Wastewater Treatment Plant. The project will connect to the existing recycled water distribution system transmission line which terminates at Dry Creek Community Park, adjacent to and east of the Planning Area.

Water Supply Planning

PCWA has determined that it has sufficient water rights to meet the projected demands of projects likely to develop in western Placer County through 2030, including the Riolo Vineyard Specific Plan Area. PCWA prepared a Water Supply Assessment for the Riolo Vineyard Specific Plan Area as required by Senate Bill 610. In this document PCWA concluded that its remaining surface water entitlements are adequate to meet the build-out of the General Plans of the cities and unincorporated area in western Placer County, including the proposed Riolo Vineyard Specific Plan Area.

The City of Roseville will provide recycled water supplies to the Plan Area. The supplies will be made available on a wholesale basis. The retailer of the recycled water supply has not been determined and is under negotiations between the City of Roseville, Cal Am, PCWA, and Placer County.

Water Supply and Distribution

PCWA will initially supply water to the project through its Foothill Water Treatment Plant. Treated water will be delivered through the City of Roseville's system under a cooperative agreement between the City of Roseville and PCWA. PCWA has a contract with the City of Roseville that allows PCWA to wheel up to 10 MGD through the City's distribution system to serve areas south of Baseline Road and west of Walerga Road. This water source can supply approximately 8700 EDU's. This source is expected to meet approximately 40% of the project's overall water demands. The remaining 60% of the projects water demands are associated with irrigation and are planned to be supplied by the recycled water system.

Cal-Am will retail potable water to the plan area via two points of connection. The first point of connection will be from an existing 16-inch water main in Walerga Road, which has a terminus just south of Dry Creek at the north end of the Specific Plan boundary. The second point of connection is a planned 24-inch main that will be extended to the plan area from the terminus of the existing 24-inch line located on PFE Road near Duffy Road, approximately 6200 feet east of the intersection of PFE Road/Walerga Road. The 24-inch line is a regional improvement and is proposed to be constructed by others. If this regional improvement is not constructed prior to development of the Riolo Vineyard Specific Plan Area, the secondary water source will be the 12" line in Walerga Road south of PFE Road. This will be considered as an emergency connection only prior to the construction of the 24" line, and will not be constructed if the 24-inch line is available for use by the Riolo Vineyard Specific Plan Area. The Riolo Vineyard Specific Plan Area will be served by an internal distribution system.

The Water system is shown on Figure 7.1.

Water Storage
Cal-Am's master plan for the Dry Creek Community Plan Area includes a storage tank to store water for peak day plus fire flows for the region. A 2.5 MG storage tank has been constructed east of Walerga Road and north of PFE Road adjacent to the proposed Dry Creek Community Park site. This storage tank is sized to provide the required water storage for tthe Riolo Vineyard Specific Plan Area.

Water Demand
The project plans to make extensive use of recycled water to minimize it's potable water needs. Irrigation within the Plan Area will be provided by the recycled water system. The potable water use factors are based on the factors developed by the American Water Works Association (AWWA) and reflects the effects of the California Green Building Code (mandatory water conservation measures) adopted by the State of California in 2008. Average daily demands on the potable water system are estimated to be approximately 150,000 gallons per day (GPD), with maximum day demands anticipated to be approximately 180,000 GPD.

For more detailed information regarding the proposed water system refer to the Riolo Vineyards Draft Potable Water Master Plan (WJM C&E 2013), which is subject to review and approval by Placer County, Department of Facility Services.

Recycled Water Distribution Facilities

The Riolo Vineyards Water Master Plan outlines several recycled water distribution system options for the recycled water distribution system. The recycled water will come from the City of Roseville's Dry Creek Wastewater Treatment Facility located east of the Plan Area. An existing 24" gravity-fed transmission line conveys the water to the northeast corner of the planning area, terminating in the County's Dry Creek Community Park.

The preferred option is to put the storage (approximately 1.0 million gallons) for the system at the terminus of the existing 24" pipe and then expand the distribution system from this point into the Plan Area.

Recycled Water system is shown in Figure 7.2.

For more detailed information regarding the proposed water system refer to the Riolo Vineyards Draft Potable Water Master Plan (WJM C&E 2013), which is subject to review and approval by Placer County, Department of Facility Services.

Wastewater Collection and Treatment

The Riolo Vineyard Specific Plan Area lies within the sewer service area of the Dry Creek Wastewater Treatment Plant (DCWWTP), which is owned and operated by the City of Roseville on behalf of the South Placer Wastewater Authority (City of Roseville, Placer County and South Placer Municipal Utility District).

ALTERNATE 1

Gravity sewer lines within the roadway network will serve the Plan Area. The eastern half of the Plan Area will gravity feed directly to the existing Dry Creek/West Placer CFD #1 lift station, located across Walerga Road approximately 1,300 feet to the east of the Plan Area within the County's Dry Creek Park. The remaining portion of the Plan Area pipes will generally flow from west to east. A pump station and force main will be constructed at the north west corner of Park Site 3, and will directly flow to the east along Dry Creek trail, tying into an existing 16" force main near the existing Dry Creek/West Placer CFD #1 lift station. The existing 16" force main pipe runs east along the Dry Creek Corridor to the DCWWTP.

The Wastewater system Alternative 1 is shown on Figure 7.3.

For more detailed information regarding the proposed water system refer to the Riolo Vineyards Draft Potable Water Master Plan (WJM C&E 2013), which is subject to review and approval by Placer County, Department of Facility Services.

ALTERNATE 2

Gravity sewer lines within the roadway network will serve the Plan Area. These pipes will generally flow from east to west. The eastern portion of the Plan Area will gravity feed directly to the existing Dry Creek/West Placer CFD #1 lift station, located within the Dry Creek Community Park. A pump station and force main will be constructed in the westerly portion of the Plan Area that will direct flows to the east along the Dry Creek trail, tying in to an existing 16" force main near the existing Dry Creek/ West Placer CFD #1 lift station, located across Walerga Road approximately 1,300 feet to the east of the project. The existing 16" force main pipe runs east along the Dry Creek Corridor to the DCWWTP.

The Wastewater system Alternative 2 is shown on Figure 7.4.

For more detailed information regarding the proposed water system refer to the Riolo Vineyards Draft Potable Water Master Plan (WJM C&E 2013), which is subject to review and approval by Placer County, Department of Facility Services.

Grading

The Riolo Vineyard community has been carefully designed to merge into the natural terrain of the site. Streets alignments run parallel to existing contours and lot configurations take advantage of expansive views. A master grading plan has been prepared for the site and is designed to balance cut and fill over the developable portions. The plan recognizes the distinct topographical features of the site and preserves these significant resources to the extent practical. Any grading that extends into the 100-year floodplain is balanced by volumetric storage areas designed to create an equivalent volume which may be needed during a large storm event.

The east and west portions of the Plan Area can be graded separately without relying on the other portion to balance. Both sections are proposed to be individually mass graded. Volumetric storage construction will occur as each neighborhood is constructed.

The Grading plan is shown on Figure 7.6.

Drainage and Flood Control

The following section summarizes more detailed drainage information contained in the Riolo Vineyard Preliminary Drainage Master Plan prepared by Civil Engineering Solutions. Requirements for the design and construction of drainage facilities are found in the Placer County Land Development Manual and the Placer County Storm Water Management Manual. The Community Development Resource Agency's Engineering and Surveying Division establishes the criteria for the construction and maintenance of drainage facilities.

The proposed Riolo Vineyard development is wholly contained within the Dry Creek watershed. This watershed is characterized as containing both developed and non-urbanized areas upstream of the project site. Near the Plan Area and downstream the watershed is mostly agricultural lands with some actively farmed row crops and grazing. Along the northern boundary of the project at Dry Creek, a forested riparian corridor exists. A seasonal stream enters the project area from the north (the Walerga Tributary), and another seasonal stream with some perennial features caused by upstream development dry season runoff enters the site from the south (the Southern Tributary).

Development within the Plan Area will introduce impervious surfaces, which result in increased local runoff from the site to Dry Creek. Preliminary analysis indicates that the increased runoff will not significantly impact the peak flows of Dry Creek west of Watt Avenue

as most runoff from the Plan Area has exited the site and local reach of Dry Creek before the peak Dry Creek hydrographs pass through the project areas. It was determined in the Preliminary Drainage Master Plan analysis that detention of local flows may result in an increase of peak flow rates within the downstream reaches of Dry Creek.

The project will collect runoff within drainage systems that will discharge into existing channels to Dry Creek. New facilities will generally be placed along the natural drainage courses within the project area. The conceptual storm drainage system has been designed to convey both the 10-year and 100-year storm events per the Placer County Stormwater Management Manual.

Storm drain pipe discharge points will convey runoff across the Dry Creek overbank floodplain area to the creek via low-flow ditches. When Dry Creek overtops its banks and flows in the overbank areas, discharges from the pipes will join the overbank flows. The proposed overland ditches are to be low velocity, grass lined, and designed to transport the 100-year flows from the storm drain system to the creek's main channel. If necessary, flexible or rock armoring of the ditches will be provided to prevent erosion. Storm water quality benefits will be derived from these ditches and will become a part of the treatment approach.

Minor grading encroachment into the existing 100-year floodplain will occur with this project, and sufficient volumetric storage will be added to Open Space and Agriculture lots in order to fully compensate for this encroachment. A CLOMR/ LOMR will be processed with this project for modifications to the mapped FEMA 100-year floodplain limits.

Low Impact Development (LID)

Low Impact Development (LID) is a storm water quality management approach to manage rainfall at the source using decentralized minor improvements. The goal of LID is to reduce development impacts to storm water runoff by increasing retention and infiltration at the source of the runoff production. LID measures are an alternative to centralized storm water management practices at the lower end of the drainage system, such as sediment basins. LID treats storm water in small onsite landscape or other features located at each source parcel. Areas of a development where LID can generally be incorporated include: open space, landscape corridors, front yards, streetscapes, parking lots, sidewalks, and medians. LID improvements reduce pollution from development by targeting pollution removal and infiltration of runoff in smaller, more frequent storm events.

For the Riolo Vineyard project, Low Impact Development (LID) measures are proposed to substantially reduce the amount of runoff, then treat remaining runoff prior to entering the storm drainage system. Ultimately, LID measures can reduce the size of system treatment facilities. A list of the proposed LID measures to be used, along with computations for their effectiveness will be provided in a Storm Water Quality Plan with the improvement plan submittal to support the sizing of the system and discharge components. LID measures which may be used in Riolo Vineyards may include: stream buffers, buffer strips, disconnected sidewalks, disconnected roof drains, bioretention, biofiltration swales, tree plantings, porous pavements, and soil amendments.

Best Management Practices (BMP)

To comply with the requirements of the local Mosquito/Vector Abatement District, all BMP's will be required to be designed to discharge all waters within 72-hours of the completion of runoff from a storm event. All graded areas must drain so that no standing water could accumulate for more than 72-hours.

The applicability of BMP's to various areas of the development shall be as follows:

Low and Medium Density Residential

•Low Impact Development design measures that reduce the amount of impervious surface within the development shall be encouraged. These types of measures may include but are not limited to: disconnection of roof drainage system to planted areas, pervious driveways, porous pavement areas, separated sidewalks, and tree plantings that will develop large canopies.

• Storm water treatment of Low and Medium Density site runoff after all site design, source control, and LID measures have been incorporated shall be treated by bioretention facilities.

Commercial

• Low Impact Development design measures that reduce the amount of impervious surface within the development shall be encouraged. These types of facilities may include but are not limited to: disconnection of roof drainage system to planted areas, pervious driveways, porous pavement areas, turf stone, separated sidewalks, tree plantings which will develop large canopies, trench drains, sheet flow to parking area landscaping, and sand/oil separators.

• A pre-treatment screening device to separate trash and other debris may be required upstream of discharge into the storm drain system.

Parks

• Park sites generally include inherent Low Impact Development design measures, and the park plans should be reviewed by an engineer or storm water quality design professional to determine if additional treatment of runoff is necessary.

Agricultural Lands

• The Agricultural lands proposed with this development will not include the impervious surface areas which are generally associated with requiring permanent treatment. However, following the sale of these lands, their
management may require additional private Best Management Practices to mitigate their issues such as the application of pesticides or fertilizers. As a source control measure, buyers should be directed to refer to the California Storm Water Quality Association (CASQA) or another qualified source for appropriate information.

Refer to the Riolo Vineyard Preliminary Drainage Master Plan (Civil Engineering Solutions, January 2014) for more detailed information regarding the overall proposed drainage system.

The Drainage system is shown on Figure 7.6.

7.5 PUBLIC SERVICES

Schools

The Plan Area is served by the Center Unified School District for grades K-12. At buildout, the Plan Area is projected to generate a total of 530 students. Required statutory school fees generated by the Riolo Vineyard project will support provision of educational services and resources for the Plan Area.

Table 7.2 lists estimated student generation rates based on the Riolo Vineyard land uses and the Center Unified School District's Justification Report (December 2013).

Currently, the school district is at capacity for elementary schools. A new elementary school, Rex Fortune Elementary School, is proposed and will service the Riolo Vineyard Plan Area. Enrollment capacity at Rex Fortune will be 650 for grades K-6. Middle School students will attend Wilson C. Riles Middle School, located just south of the Plan Area. Center High School will service high school students. Wilson C. Riles Middle School is a newly built school, located immediately south of the Plan Area, across PFE Road. Center High School is located in Antelope.

Law Enforcement

Both the Placer County Sheriff's Department and the California Highway Patrol (CHP) serve the Plan Area. The Sheriff's Department provides general law enforcement services, while the CHP enforces traffic-related incidents.

The South Placer Substation located in Loomis at the intersection of Horseshoe Bar Road and Interstate 80 serves the Plan Area. This substation is staffed with 27 sworn patrol deputies, four sergeants and a lieutenant, as well as several non-sworn officers. There is a part time Sheriff substation located on Cook-Riolo Road in the Dry Creek Fire District Station. Volunteers staff this substation.

Fire Protection

The Placer County Fire Department, which is managed by the California Department of Forestry and Fire Protection, has responsibility for both wildland and structural fire protection for the entire Plan Area. Placer County Fire Station 100 responds to emergencies within Riolo Vineyard and is located on Cook-Riolo Road.

Medical Services

The closest full-service emergency medical facilities are available at Sutter Roseville Hospital, located approximately 10.5 miles from the Plan Area. Emergency medical response and ambulance services will be provided by AMR Ambulance.

Solid Waste Collection

The Western Regional Sanitary Landfill is located approximately three miles north of the Plan Area. The Class III facility is owned by the Western Regional Landfill Authority, which is comprised of the Cities of Lincoln, Roseville and Rocklin, as well as Placer County. In 2003, the facility was expanded to a larger capacity, with a life expectancy projected into the year 2058. The County anticipates additional expansion of the facility in order to accommodate future growth in western Placer County. In addition, the Western Placer Materials Recovery Facility (also located at the landfill) receives, separates, processes and markets all recyclable materials.

The Plan Area will generate short-term construction debris and long-term solid waste. These materials will be collected by Auburn Placer Disposal, a private collection firm, and transported to the landfill for disposal. Collection will be in sufficient frequency to prevent overflow and accumulation.

Libraries

Placer County library facilities are available to serve Plan Area residents. Libraries in closest proximity to the Plan Area are located at 5460 Fifth Street in Rocklin; 6050 Library Drive in Loomis; 350 Nevada Street in Auburn; and 6475 Douglas Boulevard in Granite Bay. These libraries are all located between 11 and 15 miles away. Other nearby library locations can be found in the cities of Roseville and Rocklin. A new library facility is also being planned northwest of the Plan Area in the Placer Vineyards Specific Plan Area.

7.6 DRY UTILITIES

Natural gas, telephone, electric and cable television services will be extended in joint trenches along all roads, making these services available to all parcels in the Plan Area. Joint trenches will be placed in franchise or in public utility easements (PUE's) or multi-purpose easements (MPE's) parallel and adjacent to the road rights of way. To accommodate the joint trench, boxes, transformers, switches and other pedestals, MPEs along both sides of public roadways should be a minimum of 12.5' wide. All new distribution facilities will be underground, with the exception of transformers, switches, telephone cabinets and other pedestals and pad-mounted equipment.

Natural Gas

Natural gas will be provided by Pacific Gas & Electric (PG&E) -- upon request and in accordance with the tariffs on file with the California Public Utilities Commission (CPUC). PG&E operates natural gas lines in three locations and natural gas service will be extended to the Plan Area via an off-site line extension. PG&E has no existing natural gas facilities directly adjacent to the Plan Area, but has distribution facilities in the vicinity on Walerga Road and Watt Avenue.

Electrical Service

The Sacramento Municipal Utility District (SMUD) will provide electric service to the Plan Area. An electric substation is planned in the southeast portion of the Plan Area, north of the commercial site.

The Sacramento Municipal Utility District (SMUD) will provide electric service to the Plan Area from its proposed new substation in Parcel J, in the southeast portion of the Plan Area. SMUD has 12 kV distribution facilities adjacent to the site on Walerga Road, PFE Road and Watt Avenue. A SMUD single circuit overhead 69 kV (subtransmission) line runs along the north side of PFE Road and will require relocation upon road improvements.

Existing overhead lines within the Plan Area will be relocated, converted to underground and/or removed as the project develops.

Communications

Both Consolidated Communications and Comcast will provide telecommunications services (dial tone, video & internet) to the Plan Area. Services will be extended by connecting to existing systems on Walerga Road, PFE Road, and/or Watt Avenue.

Refer to the Riolo Vineyard Utilities Master Plan (Capital Utilities Specialists, 8/22/13) for more detailed information regarding the proposed dry utilities system.

Table 7.1 Service Providers

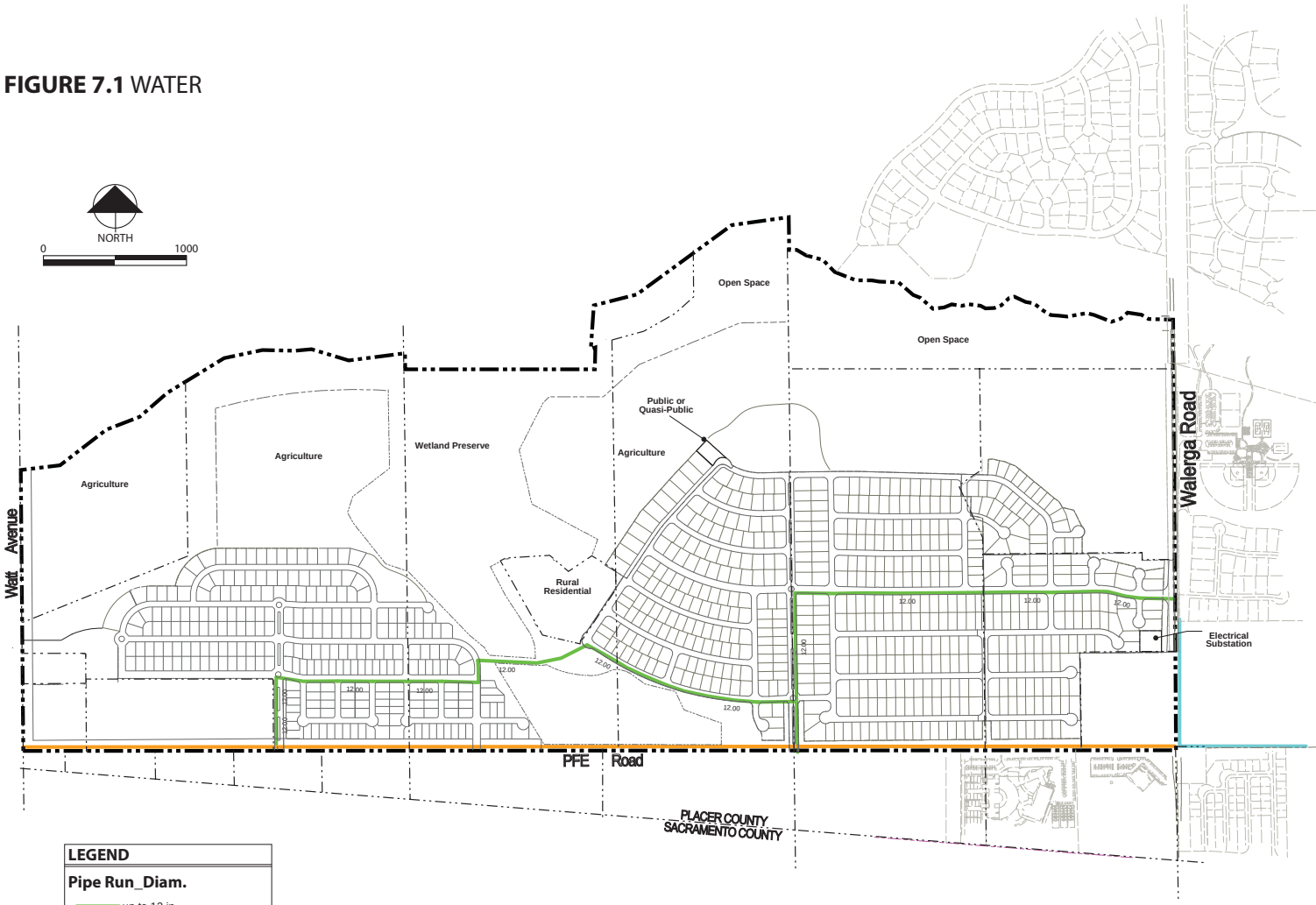
Service	Provider
Public Utilities	
Water	Placer County Water Agency (PCWA) - wholesaler
	California-American Water Company (Cal-Am) - retailer
Recycled Water (to be determined)	City of Roseville - wholesaler
	Placer County Facility Service - retailer
Wastewater	CSA 28, Zone 173 - collection
	City of Roseville - treatment
Drainage	Placer County
Public Services	
Public Schools (K-12)	Center Unified School District
Law Enforcement	Placer County Sheriff's Department (PCSD)
	California Highway Patrol (CHP)
Fire Protection	California Department of Forestry and Fire Protection (CDF)
	Placer County Fire Department
Solid Waste Collection	Recology Auburn Placer
Libraries	Placer County
County Services	Placer County
Dry Utilities	
Natural Gas	Pacific Gas and Electric (PG&E)
Electrical Service	Sacramento Municipal Utility District (SMUD)
Telecommunications	Consolidated Communications or Private Provider
Cable/Internet	Private Provider

Table 7.2 Estimated Student Generation Rate

Land Use Designation	Dwelling Units (DU)	K-5 Students/DU	K-5 Students	6-8 Students/DU	6-8 Students	9-12 Students/DU	9-12 Students	Total Student Generation
Agriculture-10	0	0.249	0	0.138	0	0.181	0	0
Low Density Residential	711	0.249	177	0.138	98	0.181	129	404
Medium Density Residential	222	0.249	55	0.138	31	0.181	40	126
Total	**933**		**232**		**129**		**169**	**530 Students**

Source: Center Unified School District, 2013

FIGURE 7.1 WATER



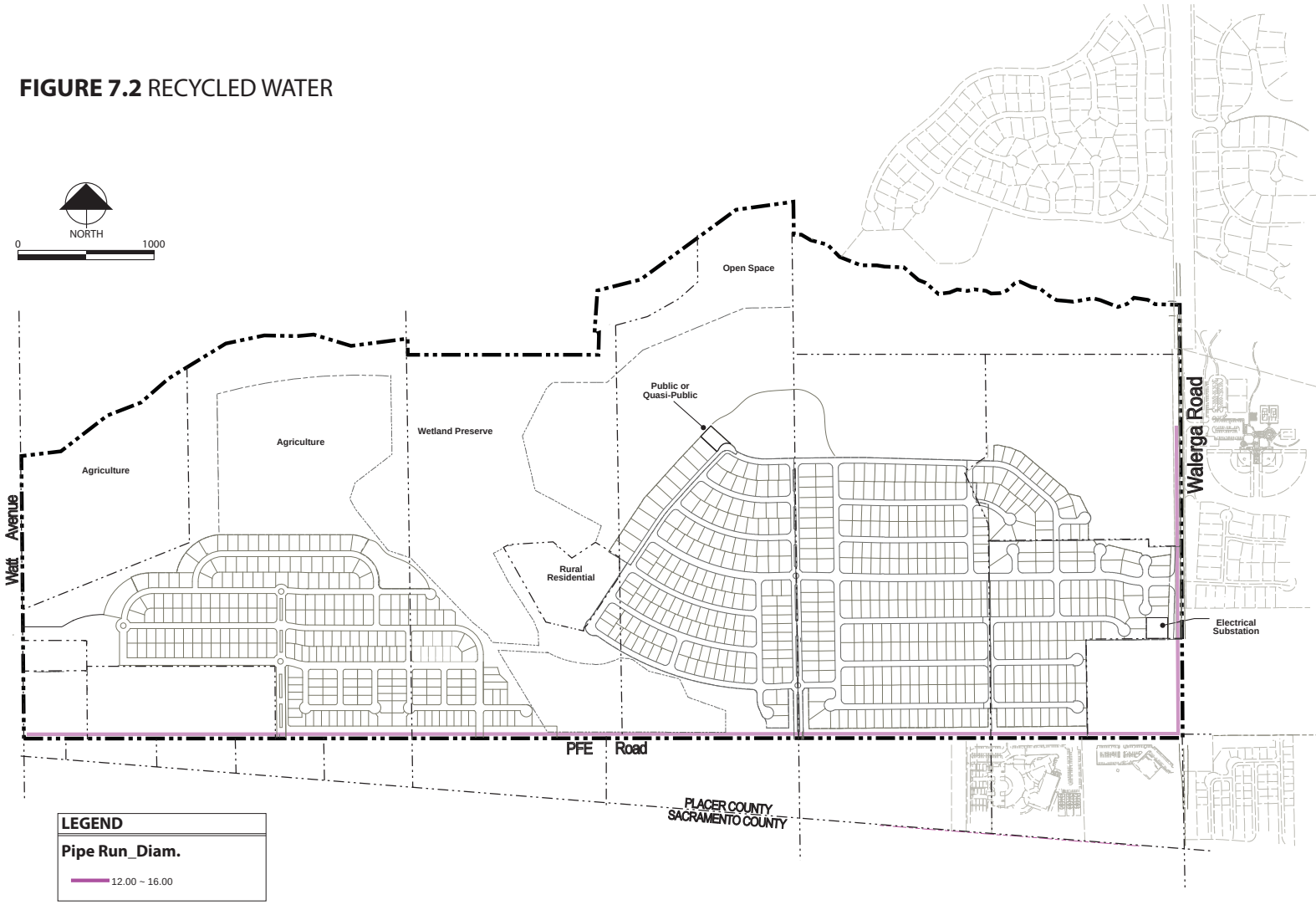
LEGEND

Pipe Run_Diam.

- up to 12 in.
- 16 in. Line
- 24 in. Line

Note: All infrastructure shown is conceptual and subject to change with small lot studies.

FIGURE 7.2 RECYCLED WATER



Note: All infrastructure shown is conceptual and subject to change with small lot studies.

FIGURE 7.3 WASTEWATER ALTERNATIVE 1

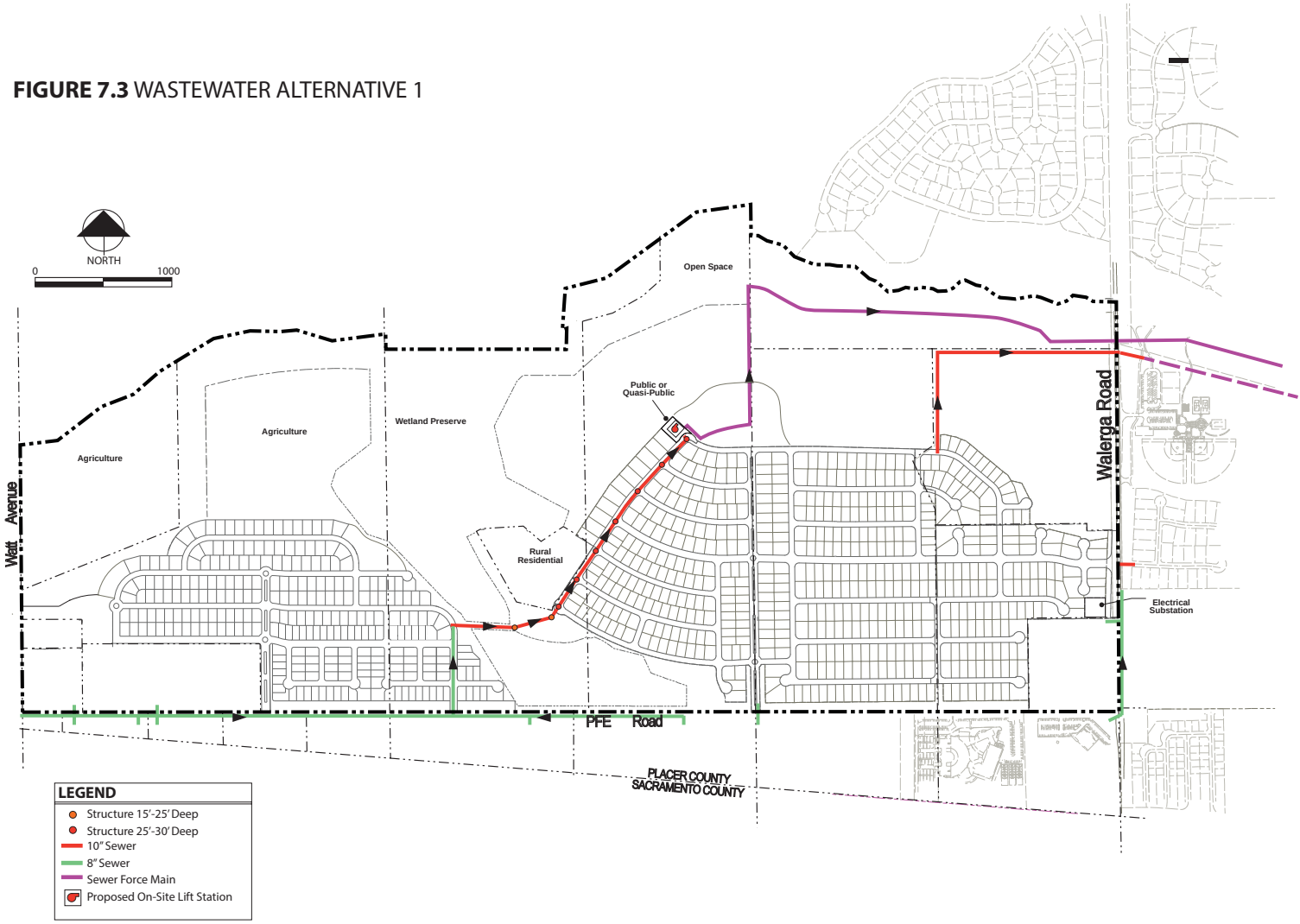


FIGURE 7.4 WASTEWATER ALTERNATIVE 2

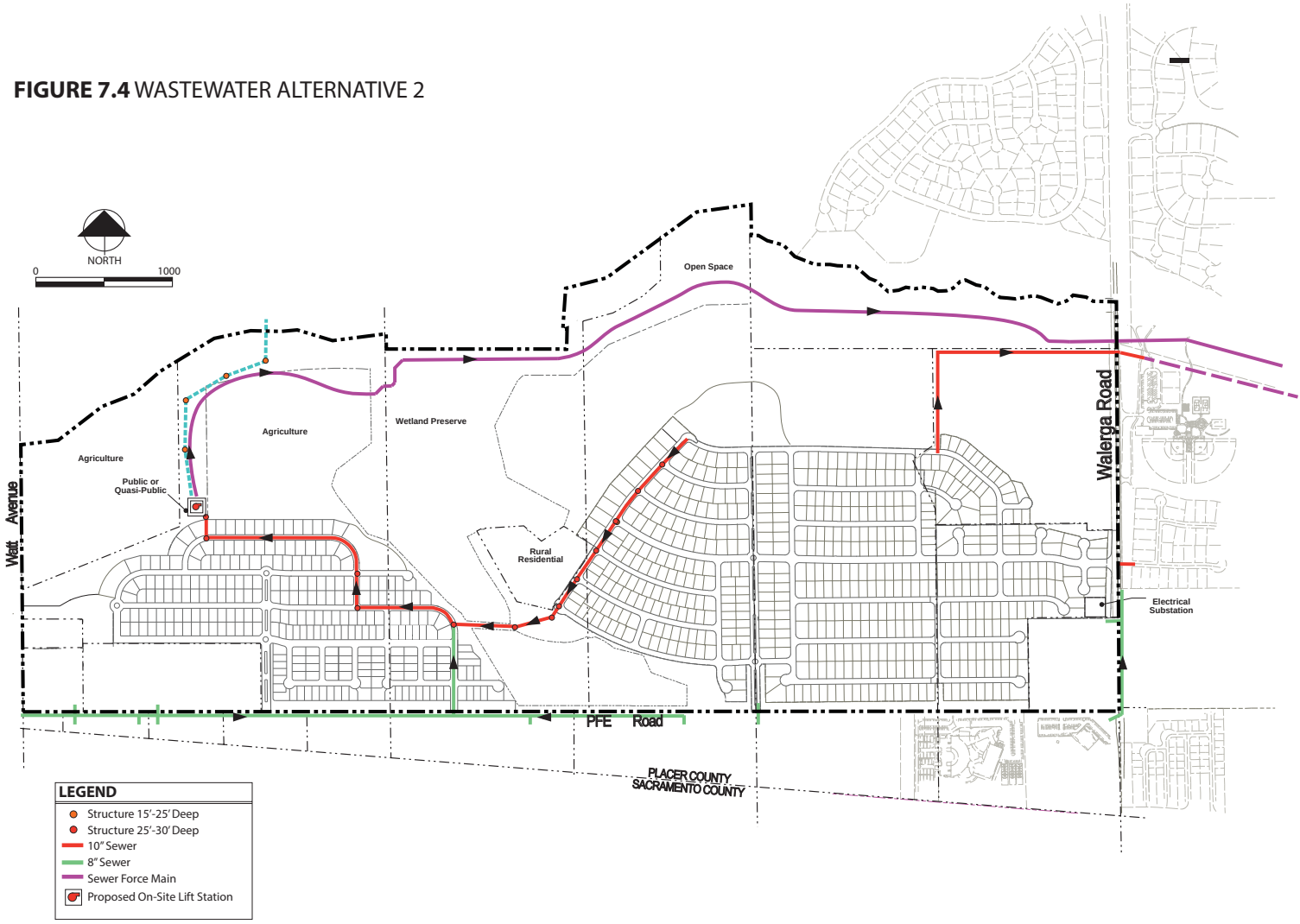
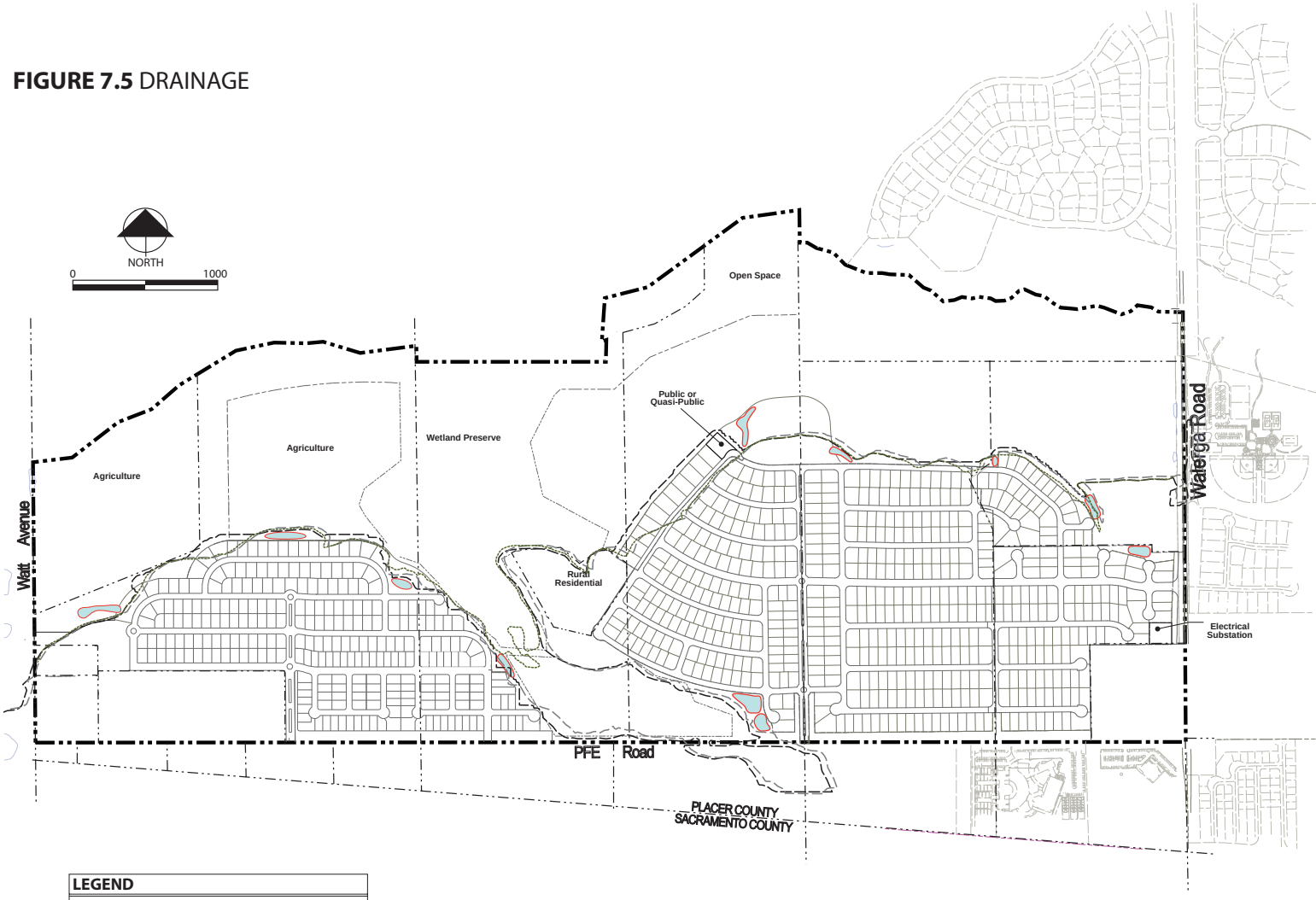


FIGURE 7.5 DRAINAGE



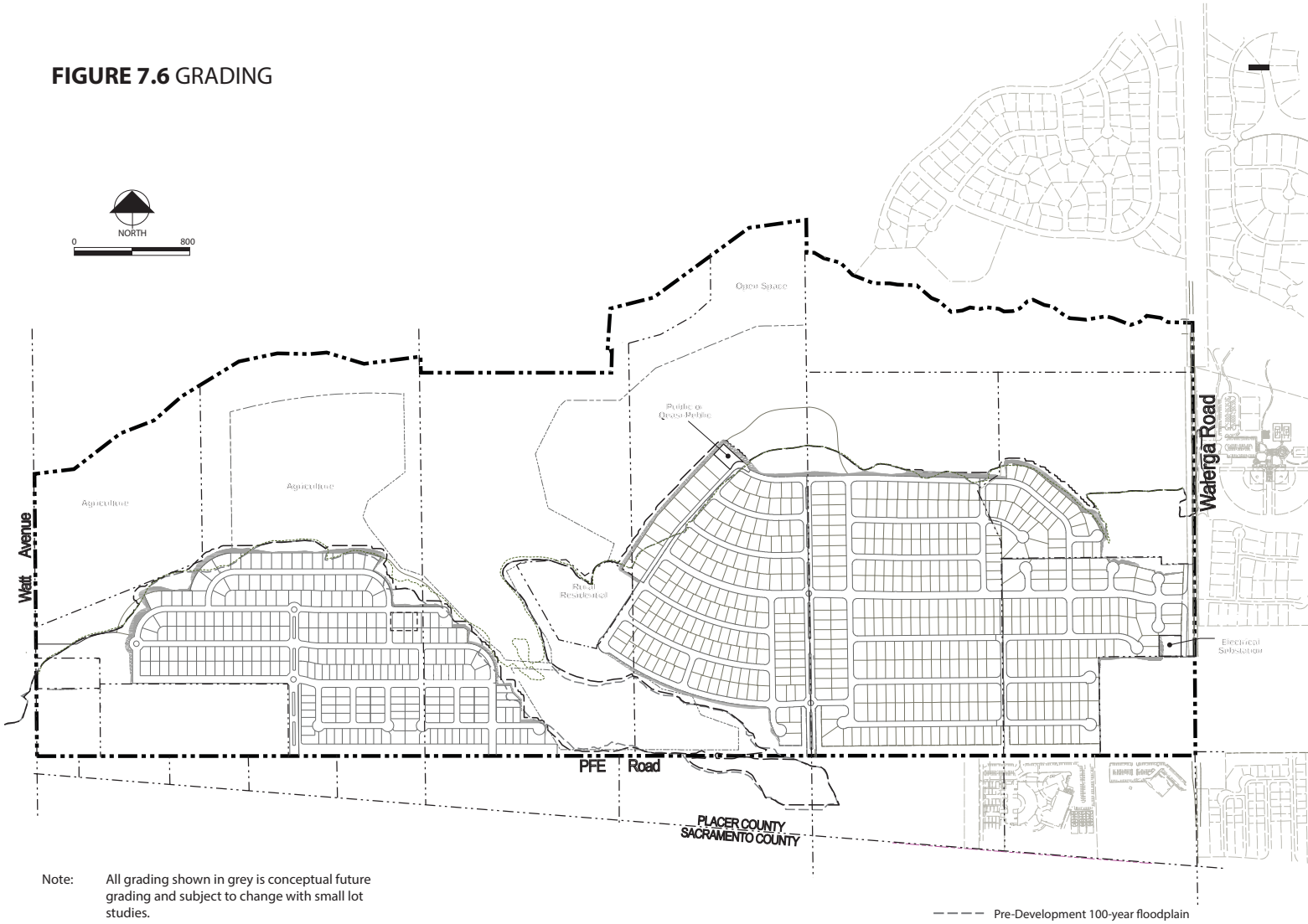
LEGEND

Water Quality Basin

Pre-Development 100-year floodplain
Post-Development 100-year floodplain
Pre-Development 200-year floodplain

Note: All infrastructure shown is conceptual and subject to change with small lot studies.

FIGURE 7.6 GRADING



Note: All grading shown in grey is conceptual future grading and subject to change with small lot studies.

Pre-Development 100-year floodplain
Post-Development 100-year floodplain
Pre-Development 200-year floodplain

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