Appendix H

Water Resources Technical Report

PSOMAS

Belmont Village – Westwood Presbyterian Project
Water Resources Technical Report

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1.0 Introduction

1.1 Project Description

The Belmont Village – Westwood Presbyterian project involves the development of a new 12-story eldercare facility over three levels of subterranean parking, a new two-story church preschool and administrative offices, and associated site improvements (Project) on a 1.6-acre site that currently includes a surface parking lot, church sanctuary, church fellowship hall, church preschool buildings, and single-family residence. The existing church sanctuary building would be retained, and all other existing improvements would be removed to allow development of the project. The development site is located at 10822 Wilshire Boulevard and 10812 Ashton Avenue (Project Site), and is bounded by Wilshire Boulevard on the north, existing residential buildings to the east and south, and commercial buildings and a cemetery to the west.

1.2 Scope of Work

This report provides a description of the existing surface water hydrology, and water quality at the Project Site and an analysis of the Project's potential impacts related to surface water hydrology and water quality.

SKA Consulting, L.P. (SKA) was retained by Belmont Village, L.P. to perform a Phase I Environmental Site Assessment for the Project. Part of their scope was to assess groundwater characteristics. No contamination was mentioned in conjunction with soils evaluation. A Soils Report was performed by Wood for the Project. Groundwater was not encountered in the borings within the soils reports to a maximum depth of 61.5 feet below existing grade. According to the California Geological Survey (CGS), the historic-high groundwater level is about 25 feet below the existing grade.

2.0 Regulatory Framework

2.1 Surface Water Hydrology

County of Los Angeles Hydrology Manual

Per the City of Los Angeles (City)'s Special Order No. 007-1299, December 3, 1999, the City has adopted the Los Angeles County (County) Department of Public Works Hydrology Manual as its basis of design for storm drainage facilities. The Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain, and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow front a 50-year storm event. The County also limits the allowable discharge into existing storm drain facilities based on the MS4 Permit which is enforced on all new developments that discharge directly into the County's storm drain system. Any proposed drainage improvements of County owned storm drain facilities such as catch basins and storm drain lines requires the approval/review from the County Flood Control District department.

Los Angeles Municipal Code

Any proposed drainage improvements within the street right of way or any other property owned by, to be owned by or under the control of the City requires the approval of a B-permit (Section 62.105, LAMC). Under the B-permit process, storm drain installation plans are subject to review and approval by the City of Los Angeles Department of Public Works Bureau of Engineering. Additionally, any connections to the City's storm drain system from a property line to a catch basin or a storm drain pipe requires a storm drain permit from the City of Los Angeles Department of Public Works, Bureau of Engineering.

2.2 Surface Water Quality

Clean Water Act

The Clean Water Act was first introduced in 1948 as the Water Pollution Control Act. The Clean Water Act authorizes Federal, state, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. The primary goals of the Clean Water Act are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. As such, the Clean Water Act forms the basic national framework for the management of water quality and the control of pollutant discharges. The Clean Water Act also sets forth several objectives in order to achieve the above-mentioned goals. These objectives include regulating pollutant and toxic pollutant discharges; providing for water quality that protects and fosters the propagation of fish, shellfish and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources of pollution.

Since its introduction, major amendments to the Clean Water Act have been enacted (e.g., 1961, 1966, 1970, 1972, 1977, and 1987). Amendments enacted in 1970 created the U.S. Environmental Protection Agency (USEPA), while amendments enacted in 1972 deemed the discharge of pollutants into waters of the United States from any point source unlawful unless authorized by a USEPA National Pollutant Discharge Elimination System (NPDES) permit. Amendments enacted in 1977 mandated development of a "Best Management Practices" Program at the state level and provided the Water Pollution Control Act with the common name of "Clean Water Act," which is universally used today. Amendments enacted in 1987 required the USEPA to create specific requirements for discharges.

In response to the 1987 amendments to the Clean Water Act and as part of Phase I of its NPDES permit program, the USEPA began requiring NPDES permits for: (1) municipal separate storm sewer systems (MS4) generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs five acres or more of land. Phase II of the USEPA's NPDES permit program, which went into effect in early 2003, extended the requirements for NPDES permits to: (1) numerous small municipal separate storm sewer systems, (2) construction sites of one to five acres, and (3) industrial facilities owned or operated by small municipal separate storm sewer systems. The NPDES permit program is typically administered by individual authorized states.

In 2008, the USEPA published draft Effluent Limitation Guidelines (ELGs) for the construction and development industry. On December 1, 2009 the EPA finalized its 2008 Effluent Guidelines Program Plan.

In California, the NPDES stormwater permitting program is administered by the State Water Resources Control Board (SWRCB). The SWRCB was created by the Legislature in 1967. The joint authority of water distribution and water quality protection allows the Board to provide protection for the State's waters, through its nine Regional Water Quality Control Boards (RWQCBs). The RWQCBs develop and enforce water quality objectives and implement plans that will best protect California's waters, acknowledging areas of different climate, topography, geology, and Hydrology. The RWQCBs develop "basin plans" for their hydrologic areas, issue waste discharge requirements, enforce action against stormwater discharge violators, and monitor water quality.

Federal Anti-Degradation Policy

The Federal Antidegradation Policy (40 Code of Federal Regulations 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state antidegradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control. The California Water Code authorizes the SWRCB to implement the provisions of the CWA, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants.

As discussed above, under the California Water Code (CWC), the State of California is divided into nine RWQCBs, governing the implementation and enforcement of the CWC and CWA. The Project Site is located within Region 4, also known as the Los Angeles Region. Each RWQCB is required to formulate and adopt a Basin Plan for its region. This Plan must adhere to the policies set forth in the CWC and established by the SWRCB. The RWQCB is also given authority to include within its regional plan water discharge prohibitions applicable to conditions, areas, or types of waste.

California Anti-Degradation Policy

The California Antidegradation Policy, otherwise known as the *Statement of Policy with Respect to Maintaining High Quality Water in California* was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the State, not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

California Toxic Rule

In 2000, the EPA promulgated the California Toxic Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State. The EPA promulgated this rule based on the EPA's determination that the numeric criteria are necessary in the State to protect human health and the environment. The California Toxic Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the LARWQCB as having beneficial uses protective of aquatic life or human health.

Board Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the California Water Code, the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

The Basin Plan is a resource for the RWQCB and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

NPDES Permit Program

The NPDES permit program was first established under authority of the CWA to control the discharge of pollutants from any point source into the waters of the United States. As indicated above, in California, the NPDES stormwater permitting program is administered by the SWRCB through its nine RWQCBs.

The General Permit

SWRCB Order No. 2009-0009-DWQ known as "The General Permit" was adopted on September 2, 2009. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

1. Reduce erosion
2. Minimize or eliminate sediment in stormwater discharges
3. Prevent materials used at a construction site from contacting stormwater
4. Implement a sampling and analysis program
5. Eliminate unauthorized non-stormwater- discharges from construction sites
6. Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
7. Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement Stormwater Pollution Prevention Plans (SWPPP). The SWPPP documents the selection and implementation of Best Management Practices for a specific construction project, charging Owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit

As described above, USEPA regulations require that MS4 permittees implement a program to monitor and control pollutants being discharged to the municipal system from both industrial and commercial projects that contribute a substantial pollutant load to the MS4.

On December 13, 2001, the LARWQCB adopted Order No. 01-182 under the CWA and the Porter-Cologne Act. This Order is the NPDES Permit or MS4 permit for municipal stormwater and urban runoff discharges within Los Angeles County. The requirements of this Order (the "Permit") cover 84 cities and most of the unincorporated areas of Los Angeles County. Under the Permit, the Los Angeles County Flood Control District (LACFCD) is designated as the Principal Permittee. The Permittees are the 84 Los Angeles County cities (including the City of Los Angeles) and Los Angeles County. Collectively, these are the "Co-Permittees". The Principal Permittee helps to facilitate activities necessary to comply with the requirements outlined in the Permit but is not responsible for ensuring compliance of any of the Permittees.

Stormwater Quality Management Program (SQMP)

In compliance with the Los Angeles County MS4 Permit, the Co-Permittees are required to implement a stormwater quality management program (SQMP) with the goal of accomplishing the requirements of the Permit and reducing the amount of pollutants in stormwater runoff. The SQMP requires the County of Los Angeles and the 84 incorporated cities to:

- Implement a public information and participation program to conduct outreach on storm water pollution;
- Control discharges at commercial/industrial facilities through tracking, inspecting, and ensuring compliance at facilities that are critical sources of pollutants;
- Implement a development planning program for specified development projects;

- Implement a program to control construction runoff from construction activity at all construction sites within the relevant jurisdictions;
- Implement a public agency activities program to minimize storm water pollution impacts from public agency activities; and
- Implement a program to document, track, and report illicit connections and discharges to the storm drain system.

The MS4 Permit contains the following provisions for implementation of the SQMP by the Co-Permittees:

1. General Requirements:

   - Each permittee is required to implement the SQMP in order to comply with applicable stormwater program requirements.
   - The SQMP shall be implemented and each permittee shall implement additional controls so that discharge of pollutants is reduced.

2. Best Management Practice Implementation:

   - Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control. This should result in the reduction of storm water runoff.

3. Revision of the SQMP:

   - Permittees are required to revise the SQMP in order to comply with requirements of the RWQCB while complying with regional watershed requirements and/or waste load allocations for implementation of TMDLs for impaired waterbodies.

4. Designation and Responsibilities of the Principal Permittee:

   The Los Angeles County Flood Control District is designated as the Principal Permittee who is responsible for:

   - Coordinating activities that comply with requirements outlined in the NPDES Permit;
   - Coordinating activities among Permittees;
   - Providing personnel and fiscal resources for necessary updates to the SQMP;
   - Providing technical support for committees required to implement the SQMP; and
   - Implementing the Countywide Monitoring Program required under this Order and assessing the results of the monitoring program,

5. Responsibilities of Co-Permittees:

   Each co-permittee is required to comply with the requirements of the SQMP as applicable to the discharges within its geographical boundaries. These requirements include:

   - Coordinating among internal departments to facilitate the implementation of the SQMP requirements in an efficient way;
   - Participating in coordination with other internal agencies as necessary to

successfully implement the requirements of the SQMP; and

- Preparing an annual Budget Summary of expenditures for the storm water management program by providing an estimated breakdown of expenditures for different areas of concern, including budget projections foil the following year.

6. Watershed Management Committees (WMCs):

- Each WMC shall be comprised of a voting representative from each Permittee in the Watershed Management Area (WMA).
- Each WMCs is required to facilitate exchange of information between co-Permittees, establish goals and deadlines for WMAs, prioritize pollution control measures, develop and update adequate information, and recommend appropriate revisions to the SQMP.

7. Legal Authority:

- Co-permittees are granted the legal authority to prohibit non-storm water discharges to the storm drain system including discharge to the MS4 from various development types.

Standard Urban Stormwater Mitigation Plan (SUSMP)

Under the Los Angeles County Municipal NPDES Permit, permittees are required to implement a development planning program to address storm water pollution. These programs require project applicants for certain types of projects to implement Standard Urban Stormwater Mitigation Plans (SUSMP) throughout the operational life of their projects. The purpose of SUSMP is to reduce the discharge of pollutants in storm water by outlining BMPs which must be incorporated into the design plans of new development and redevelopment. A project is subject to SUSMP if it falls under one of the categories listed below:

1. Single-family hillside homes
2. Ten or more unit homes (including single family homes, multifamily homes, condominiums, and apartments).
3. Automotive service facilities
4. Restaurants
5. 100,000 or more square feet of impervious surface in industrial/commercial development.
6. Retail gasoline outlet
7. Parking lots with 5,000 square feet or more of surface area or with 25 or more parking spaces
8. Redevelopment projects in subject categories that meet redevelopment thresholds
9. Location within or directly adjacent to or discharging directly to an environmentally sensitive area if the discharge is likely to impact a sensitive biological species or habitat and the development creates 2,500 square feet or more of impervious surface.

Permittees are required to adopt the requirements set herein in their own SUSMP. Additional BMPs may be required by ordinance or code adopted by the Permittee and applied in a general way to all projects or on a case by case basis.

City of Los Angeles Water Quality Compliance Master Plan for Urban Runoff

On March 2, 2007, City Council Motion 07-0663 was introduced by the City of Los Angeles City Council to develop a water-quality master plan with strategic directions for planning, budgeting and funding to reduce pollution from urban runoff in the City of Los Angeles. The Water Quality Compliance Master Plan for Urban Runoff was developed by the Bureau of Sanitation, Watershed Protection Division in collaboration with stakeholders to address the requirements of this Council Motion. The primary goal of the Water Quality Compliance Master Plan for Urban Runoff is to help meet water quality regulations. Implementation of the Water Quality Compliance Master Plan for Urban Runoff is intended over the next 20 to 30 years to result in cleaner neighborhoods, rivers, lakes and bays, augmented local water supply, reduced flood risk, more open space, and beaches that are safe for swimming. The Water Quality Compliance Master Plan for Urban Runoff also supports the Mayor and Council's efforts to make Los Angeles the greenest major city in the nation.

The Water Quality Compliance Master Plan for Urban Runoff identifies and describes the various watersheds in the City, summarizes the water quality conditions of the City's waters, identifies known sources of pollutants, describes the governing regulations for water quality, describes the BMPs that are being implemented by the City, discusses existing TMDL Implementation Plans and Watershed Management Plans. Additionally, the Water Quality Compliance Master Plan for Urban Runoff provides an implementation strategy that includes the following three initiatives to achieve water quality goals:

- Water Quality Management Initiative, which describes how Water Quality Management Plans for each of the City's watershed and TMDL-specific Implementation Plans will be developed to ensure compliance with water quality regulations.
- The Citywide Collaboration Initiative, which recognizes that urban runoff management and urban (re)development are closely linked, requiring collaborations of many City agencies. This initiative requires the development of City policies, guidelines, and ordinances for green and sustainable approaches for urban runoff management.
- The Outreach Initiative, which promotes public education and community engagement with a focus on preventing urban runoff pollution.

The Water Quality Compliance Master Plan for Urban Runoff includes a financial plan that provides a review of current sources of revenue, estimates costs for water quality compliance, and identifies new potential sources of revenue.

City of Los Angeles Stormwater Program

The City of Los Angeles supports the policies of the Construction General Permit through the Development Best Management Practices Handbook, Part A Construction Activities, 3rd Edition, and associated ordinances which the City of Los Angeles adopted in September 2004. The handbook and ordinances also have specific minimum BMP requirements for all construction activities and require dischargers whose construction projects disturb one acre or more of soil to prepare a SWPPP and file a Notice of Intent (NOI) with the SWRCB. The NOI informs the SWRCB of a particular project and results in the issuance of a Waste Discharge Identification (WDID) number, which is needed to demonstrate compliance with the General Permit.

The City of Los Angeles supports the requirements of the Los Angeles County Municipal NPDES permit through the City of Los Angeles's Development Best Management Practices Handbook, Part B Planning Activities, 3rd Edition, which the City of Los Angeles Department of Public Works adopted in June 2004. The Handbook provides guidance for developers in complying with the requirements of the Development Planning Program regulations of the City's Stormwater Program. Compliance with the requirements of this manual is required by City of Los Angeles Ordinance No. 173,494.

The City of Los Angeles implements the requirement to incorporate stormwater BMPs into the SUSMP through the City's plan review and approval process. During the review process, project plans are reviewed

for compliance with the City's General Plans, zoning ordinances, and other applicable local ordinances and codes, including storm water requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address storm water pollution prevention goals. The SUSMP provisions that are applicable to new residential and commercial developments include, but are not limited to, the following:

- Peak Storm Water Runoff Discharge Rate: Post-development peak storm water runoff discharges shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion;
- Provide storm drain system Stenciling and Signage (only applicable if a catch basin is built on-site);
- Properly design outdoor material storage areas to provide secondary containment to prevent spills;
- Properly design trash storage areas to prevent off-site transport of trash;
- Provide proof of ongoing BMP Maintenance of any structural BMPs installed;
- Design Standards for Structural or Treatment control BMPs:
    - Conserve natural and landscaped areas;
    - Provide planter boxes and/or landscaped areas in yard/courtyard spaces;
    - Properly design trash storage areas to provide screens or walls to prevent off-site transport of trash;
    - Provide proof on ongoing BMP maintenance of any structural BMPs installed;
- Design Standards for Structural or Treatment Control BMPs:
    - Post-construction treatment control BMPs are required to incorporate, at minimum, either a volumetric or flow-based treatment control design or both, to mitigate (infiltrate, filter or treat) storm water runoff.

In addition, project applicants subject to the SUSMP requirements must select source control and, in most cases, treatment control BMPs from the list approved by the RWQCB. The BMPs must control peak flow discharge to provide stream channel and over bank flood protection, based on flow design criteria selected by the local agency. Further, the source and treatment control BMPs must be sufficiently designed and constructed to collectively treat, infiltrate, or filter stormwater runoff from one of the following:

- The 85"' percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998);*
- The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook—Industrial/Commercial, (1993);*
- The volume of runoff produced from a 0.75-inch storm event, prior to its discharge to a stormwater conveyance system; or
- The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75-inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85"' percentile 24-hour runoff event.

Los Angeles Municipal Code

Section 64.70 of the LAMC sets forth the City's Stormwater and Urban Runoff Pollution Control Ordinance. The ordinance prohibits the discharge of the following into any storm drain system:

- Any liquids, solids, or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive, or radioactive, or by interaction with other materials could result in fire, explosion or injury.
- Any solid or viscous materials, which could cause obstruction to the flow or operation of the storm drain system.
- Any pollutant that injures or constitutes a hazard to human, animal, plant, or fish life, or creates a public nuisance.
- Any noxious or malodorous liquid, gas, or solid in sufficient quantity, either singly or by interaction with other materials, which creates a public nuisance, hazard to life, or inhibits authorized entry of any person into the storm drain system.
- Any medical, infectious, toxic or hazardous material or waste.

Additionally, unless otherwise permitted by a NPDES permit, the ordinance prohibits industrial and commercial developments from discharging untreated wastewater or untreated runoff into the storm drain system. Furthermore, the ordinance prohibits trash or any other abandoned objects/materials from being deposited such that they could be carried into the storm drains. Lastly, the ordinance not only makes it a crime to discharge pollutants into the storm drain system and imposes fines on violators, but also gives City public officers the authority to issue citations or arrest business owners or residents who deliberately and knowingly dump or discharge hazardous chemicals or debris into the storm drain system.

Earthwork activities, including grading, are governed by the Los Angeles Building Code, which is contained in Los Angeles Municipal Code (LAMC), Chapter IX, Article 1. Specifically, Section 91.7013 includes regulations pertaining to erosion control and drainage devices, and Section 91.7014 includes general construction requirements, as well as requirements regarding flood and mudflow protection.

Low Impact Development (LID)

In October 2011, the City of Los Angeles passed an ordinance (Ordinance No. 181899) amending City of Los Angeles Municipal Code Chapter VI, Article 4.4, Sections 64.70.01and 64.72 to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan requirements by imposing rainwater Low Impact Development (LID) strategies on projects that require building permits.

LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Using various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff may be used.

The intent of the City of Los Angeles LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce offsite runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The City of Los Angeles Bureau of Sanitation, Watershed Protection Division will adopt the Low Impact Development (LID) standards as issued by the LARWQCB and the City of Los Angeles Department of Public Works. The LID Ordinance will conform to the regulations outlined in the NPDES Permit and SUSMP.

2.3. Groundwater

Board Basin Plan for the Coastal Watersheds of Los Angeles anal Ventura Counties

As required by the California Water Code, the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

The Basin Plan is a resource for the Regional Board and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

Safe Drinking Water Act (SDWA)

The Federal Safe Drinking Act, established in 1974, sets drinking water standards throughout the country and is administered by the USEPA. The drinking water standards established in the SDWA, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR Part 141) and the National Secondary Drinking Water Regulations (Second Standards, 40 CFR Part 143). California passed its own Safe Drinking Water Act in 1986 that authorizes the State's Department of Health Services (DHS) to protect the public from contaminants in drinking water by establishing maximum contaminants levels (MCLs), as set forth in the CCR, Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the USEPA, as required by the federal Safe Drinking Water Act.

California Water Plan

The California Water Plan (The Plan) provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The Plan, which is updated every five years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the State's water needs.

The goal for the California Water Plan Update is to meet Water Code requirements, receive broad support among those participating in California's water planning, and be a useful document for the public, water planners throughout the state, legislators and other decision-makers.

3.0 Surface Water Hydrology

3.1 General Approach

The Project site is located within the City therefore, drainage collection, treatment and conveyance are regulated by the City. Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The LACDPW Hydrology Manual requires projects to have drainage facilities that meet the Urban Flood level of protection. The Urban Flood is runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any year. The City's CEQA Threshold Guide, however, establishes the 50-year frequency design storm event as the threshold to analyze potential impacts on surface water hydrology as a result of development. To provide a more conservative analysis, this report analyzed the larger storm event threshold, the 50-year frequency design storm event.

The Modified Rational Method was used to calculate storm water runoff. The "peak" (maximum value) runoff for a drainage area is calculated using the formula, **Q=CIA**

Where,

Q = Volumetric flow rate (cfs)

C = Runoff coefficient (dimensionless)

I = Rainfall Intensity at a given point in time (in/hr)
A = Basin area (acres)

The Modified Rational Method assumes that a steady, uniform rainfall rate will produce maximum runoff when all parts of the basin area are contributing to outflow. This occurs when the storm event lasts longer than the time of concentration. The time of concentration (Tc) is the time it takes for rain in the most hydrologically remote part of the basin area to reach the outlet.

The method assumes that the runoff coefficient (C) remains constant during a storm. The runoff coefficient is a function of both the soil characteristics and the percentage of impervious surfaces in the drainage area.

LACDPW developed a time of concentration calculator, Tc Calculator (TC_calc_depth.xls, July 2006), to automate time of concentration calculations as well as the peak runoff rates and volumes using the Modified Rational Method design criteria as outlined in the Hydrology Manual. The data input requirements include the following: sub-area size, soil type, land use, flow path length, flow path slope and rainfall isohyet. The LACDPW has produced Isohyetal maps that provide the Project Site's soil type and the rainfall isohyet value based on the location of the project. Once all values were known, the Tc Calculator was used to calculate the storm water peak runoff flow rate for the Existing and Proposed Project conditions by evaluating an individual sub-area independent of all adjacent subareas. See Table 1 for the Tc Calculator Peak Runoff Flow results. Results for the 5-, 10-, 25-, 50-, and 100-year events were all included for information.

3.2 Data Sources

The primary sources of data are the *LACDPW Hydrology / Sedimentation Manual and Appendices* (LACDPW 2006), and the Los Angeles County *Standard Urban Stormwater Mitigation Plan* (September 2002).

Rainfall and soil characteristics for the Project Site are given in Isohyetal Map Figure LACDPW 1-HI.18 (Section 4). A copy of the map is provided in Section 7.0. The 50-year (24-hour) rainfall isohyet nearest the Project area is approximately 6.60-inches. The isohyets for all the storm events, based on factors from the LA County Hydrology Manual in Table 5.3.1, are as listed:

- 5-Year 24-Hour: 3.85-inches

- 10-Year 24-Hour: 4.71-inches
- 25-Year 24-Hour: 5.79-inches
- 50-Year 24-Hour: 6.60-inches
- 100-Year 24-Hour: 7.41-inches

As shown on the Isohyetal Map, the soil classification of the Project Site falls predominantly into Soil Type 013. The Project Site area to be disturbed in connection with construction of the Project is approximately 1.60 acres.

3.3 Existing Site Conditions

The existing Project Site is currently improved with a surface parking lot, church sanctuary, church fellowship hall, church preschool buildings, and a single-family residence. The Project Site totals approximately 1.60 acres with an average imperviousness of 90%.

Stormwater runoff from the existing Project Site drains via surface runoff towards Ashton Avenue. There are two concrete v-gutter paths that collect the site runoff and directs it to outlet to Ashton Avenue. The v-gutter that starts at the northerly end of the Project Site directs runoff southerly and outlets through two existing drains that go through the southerly concrete wall and exit to the street surface on Ashton Avenue. The v-gutter that starts at the southerly end of the Project Site directs runoff northerly and is collected through an area drain which connects to an existing parkway culvert that outlets through the curb face on Ashton Avenue. The storm water runoff from the existing single-family residence also sheet flows onto the street gutter system in Ashton Avenue. The runoff from all three outlets and the sheet flow from the residential unit, continue through the street's gutter system until it reaches the existing City of LA storm drain catch basin on the northeast corner of Holman Ave and Glendon Ave. This catch basin ultimately connects to an existing City of LA 39" storm drain main line in Glendon Ave.

The Project Site is not located within a FEMA or City of Los Angeles designation 100- or 500- year flood plain, nor is it located within a potential inundation area as designed by the City of Los Angeles General Plan Safety Element. The Project Site is located on FEMA FIRM Panel 06037C1590F and identified as Flood Zone "X".

3.4 Proposed Project Site Conditions

The proposed Project will consist of a 12-story eldercare facility with three levels of sub-grade parking. In addition, there will also be a 2-story church preschool and administrative building and preschool play area at the southernmost portion of the Project Site. The existing church sanctuary building will be retained. The assumed average imperviousness of the Project Site will remain approximately 90% once all Project improvements, landscaping, and amenities are installed. The proposed stormwater flows will continue to drain to Ashton Avenue and will not change the existing drainage pattern. However, as described below, the Project's compliance with existing Low Impact Development (LID) requirements will create reductions in the stormwater flows to the City's stormwater system.

3.5 Hydrology Results

Table 1 below summarizes the hydrology results demonstrating the peak stormwater runoff flows for the 5-, 10-, 25-, 50- and 100-year storm events under existing conditions and following construction of the Project:

Table 1. Existing and Proposed Peak Runoff Flows

	Existing	Proposed*	
Storm Event	Q_{Total} [cfs]	Q_{Total} [cfs]	% Reduction
5-Yr	2.80	2.34	**-16%**
10-Yr	3.71	3.25	**-12%**
25-Yr	4.59	4.13	**-10%**
50-Yr	5.71	5.25	**-8%**
100-Yr	6.41	5.95	**-7%**

* Includes reduction from LID implementation (subtracting the 85th Percentile storm flow of 0.46 cfs)

The Project Site was reviewed as one hydrology area since the runoff all flows southeast to the same confluence point at Ashton Ave. This review demonstrates that the Project will not exceed the existing stormwater flows when compared to a common tributary point at the dead-end at Ashton Ave. It considers the Project's required Low Impact Development (LID) reductions which are needed to manage post construction stormwater runoff. The Project will include the installation of private catch basins, planter drains, and roof downspouts throughout the Project Site to collect roof and site runoff, and direct stormwater to the LID system through a series of underground storm drain pipes. This onsite stormwater conveyance system would serve to prevent onsite flooding and nuisance water build-up on the Project Site. With implementation of a stormwater capture and use system (i.e. harvesting system for on-site irrigation use), the volume of stormwater leaving the Project Site will be reduced from the existing flows.

4.0 Surface Water Quality

4.1 General Approach

Construction Best Management Practices (BMP's) will be designed and maintained as part of the implementation of the SWPPP in compliance with the General Permit. The SWPPP shall begin when construction commences, before any site clearing and grubbing of demolition activity. During construction, the SWPPP will be referred to regulatory standards, and amended as changes occur throughout the construction process. The Notice of Intent (NOI), Amendments to the SWPPP, Annual Reports, Rain Event Action Plans (REAPs),

and Non-Compliance Reporting will be posted to the State's SMARTS website in compliance with the requirements of the General Permit.

The Project falls under the jurisdiction of the City of Los Angeles Department of Public Works, which follows the 2009 Low Impact Development (LID) Manual design guidelines. The purpose of this surface water quality report is:

- To meet City of Los Angeles Department of Public Works requirements;
- To document that the Los Angeles County LID requirements will be met;
- To determine the proposed development's impact on existing hydrologic conditions;
- To identify the pollutants of concern and provide BMPs that will mitigate those pollutants of concern; and
- To provide enough detailed information to support detailed hydraulic design of stormwater treatment systems.

The LID requirements, approved by the Regional Water Quality Control Board, call for the treatment of the peak mitigation flow rate or volume of runoff produced either by a 0.75" 24-hr rainfall event or the 85th

percentile rainfall event, whichever is greater. Under section 3.1.2 of the LID Manual, this post-construction stormwater runoff from the new development shall be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMP's onsite. The rainfall intensity of the 85th percentile rainfall for the Project Site's location is 1.1 inches; therefore, the 85th percentile rainfall event governs.

4.2 Site Characterization for Water Quality Review

Current Property Use: A 2-story church sanctuary building (in the northern portion of the site) to remain. All other structures (church fellowship hall, preschool buildings, single-family residence) and at grade parking lot to be demolished. There are no known existing BMPs serving the Project Site.

Proposed Property Use: Eldercare facility over subterranean parking, retained church sanctuary building, new church preschool and administrative building.

Soils: The soil of the watershed is classified as Type 013, as shown in the Hydrology Map from the Los Angeles County Department of Public Works (LACDPW) website as well as the LACDPW Isohyet Map 1-H1.17 (see section 7.0 for maps).

Receiving Waters: The Project Site is tributary to the Ballona Creek.

The Ballona Creek is listed on the 2012 CWA Section 303(d) list (approved by SWRCB June 30, 2015) as impaired due to the prevalence of the pollutants shown in Table 2, which is excerpted from the State Water Resources Control Board, "Quality Limited Segments" article dated June 9, 2016. Currently, this waterway's existing beneficial uses include ground water recharge, warm freshwater habitat, water contact recreation, and non-contact water recreation; potential uses include municipal and domestic supply, industrial service supply, and wildlife habitat.

Table 2: Receiving Waters for Urban Runoff from Site[1]

Receiving Waters	303(d) List Impairments[2]	Designated Beneficial Uses	Proximity to RARE Uses
Ballona Creek	Cadmium (sediment), Coliform (bacteria), Copper, Cyanide, Lead, Selenium, Toxicity, Trash, Viruses, Zinc	Existing/Intermittent: WILD Potential: MUN, WARM	No

4.3 Pollutants of Concern

Table 3 lists the pollutants anticipated to be generated by the Project's proposed land uses. According to the City of Los Angeles Department of City Planning's Summary of Zoning Regulations, the Project falls under the category residential and commercial development. Therefore, the following pollutants could potentially be generated: sediment/turbidity, nutrients, trash and debris, oxygen demanding substances, bacteria and viruses, oil and grease and pesticides.

[1] State Water Resources Control Board, Los Angeles Region. *Water Quality Control Plan Los Angeles Region*. June 13, 1994.

[2] Los Angeles Regional Water Quality Control Board. 2010 CWA Section 303(d) *List of Water Quality Limited Segments*. October 11, 2011.

Table 3: Potential Pollutants Generated by Land Use Type[3]

Type of Development (Land Use)	Sediment /Turbidity	Nutrients	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Bacteria & Viruses	Oil & Grease	Pesticides	Metals
Commercial Development	P(1)	P(1)	P(4)	P	P(4)	P(3)	P	P(1)	N
Residential	P	P	N	P	P(1)	P	P(2)	P	N

Abbreviations: P=Potential N=Not expected

Notes:

(1) A potential pollutant if landscaping or open area exists on the Project site
(2) A potential pollutant if land use involves animal waste
(3) Specifically, petroleum hydrocarbons
(4) Bacterial indicators are routinely detected in pavement runoff.

A comparison of the pollutants existing in the Ballona Creek based on the State 303(d) list and pollutants associated with the planned land use activities on the Project Site show an overlap of **sediment**, **trash, and bacteria & viruses** as pollutants. These common pollutants are considered the pollutants of concern. Stormwater best management practices (BMP) implemented for the Project in conformance with applicable regulatory requirements will be designed to address these pollutants of concern. Table 4 summarizes the efficiency of general categories of BMPs in treating different types of pollutants.

The City of Los Angeles requires LID compliance for all new development projects. As noted above, the LID concept for this Project is a stormwater capture and use system. The runoff within the cistern will be pumped up for irrigation of the landscape around the Project Site. High flow outlets for the rainwater harvesting cistern will be routed to discharge into the City's storm drain system as per proposed conditions, as described in section 2.4, above.

Table 4: Treatment Control BMP Selection Matrix[4]

Ballona Creek Pollutant of Concern (Yes/No)	**Treatment Control BMP Categories**							
	Veg. Swale /Veg. Filter Strips	Detention Basins	**Planter Box / Harvesting /Infiltration Basins & Trenches**	Wet Ponds or Wetlands	Sand Filter or Filtration	**Water Quality Inlets**	Hydro-dynamic Separator Systems	Manufactured / Proprietary Devices
Sediment/Turbidity	H/M	M	H/M	H/M	H/M	L	H/M (L for turbidity)	U
Yes			✓			✓		
Nutrients	L	M	H/M	H/M	L/M	L	L	U
No								

[3] Riverside County Flood Control and Conservation District, Riverside County Water Quality Management Plan for Urban Runoff, July 24, 2006. Note: This source is utilized because the Los Angeles County Flood Control District has not established a table that outlines pollutants of concern; however, the Riverside County plan accurately represents pollutant types typically occurring in Los Angeles County.

[4] Riverside County Flood Control and Conservation District, Riverside County Water Quality Management Plan for Urban Runoff, July 24, 2006. Note: This table is utilized because the Los Angeles County Flood Control District has not established a table that summarizes each BMP's efficiency for treating pollutants of concern.

Organic Compounds	U	U	U	U	H/M	L	L	U
No								
Trash & Debris	L	M	U	U	H/M	M	H/M	U
Yes			✓			✓		
Oxygen Demanding Substances	L	M	H/M	H/M	H/M	L	L	U
No								
Bacteria & Viruses	U	U	H/M	U	H/M	L	L	U
Yes			✓			✓		
Oils & Grease	H/M	M	U	U	H/M	M	L/M	U
No								
Pesticides (non-soil bound)	U	U	U	U	U	L	L	U
No								
Metals	H/M	M	H	H	H	L	L	U
No								

Abbreviations:
L: Low removal efficiency H/M: High or medium removal efficiency U: Unknown removal efficiency

4.4 Best Management Practices

Source and Treatment Control Best Management Practices (BMPs) are required for this Project under the LA County Standard Urban Stormwater Mitigation Plan (SUSMP) and City of Los Angeles Low Impact Development (LID) Standards Manual.

4.4.1 Site Design BMPs

4.4.1.1 Minimize Stormwater Pollutants of Concern

The Project will minimize pollutants of concern from impacting surface water quality by maximizing the reduction of pollutant loadings per LID standards. The pollutants of concern – namely, sediment, trash, and bacteria & viruses– will be addressed through a pre-treatment settlement device connected to the harvesting tank within the Project Site. Building roof run-off, which comprises of most of the site, will be collected via roof drains and routed internally through the buildings and directed into the harvesting tank. Prior to connection to the harvesting tank, downspout filters will be installed to remove any debris that enters the on-site piping system. In addition, permeable pavement is proposed on-site to reduce the overall stormwater runoff. All other stormwater runoff will be collected via private on-site catch basins or trench drains fitted with an insert to collect debris and sediment and routed to the harvesting tank.

4.4.1.2 Conserve Natural Areas

The existing Project Site consists of a surface parking lot, church sanctuary, church fellowship hall, church preschool buildings, and a single-family residence. There is minimal existing landscape within the Project Site. Following development of the Project, the Project Site will include additional landscaped open areas, and as discussed above, will provide water quality treatment to meet the LID requirements of the City of Los Angeles.

4.4.2 Source Control BMPs

4.4.2.1 Protect Slopes and Channels

There are no unprotected slopes or unlined channels onsite. The entire area to be developed will be either vegetated or hardscaped.

4.4.2.2 Provide Storm Drain System Stenciling and Signage

Stenciling will be provided for public storm drains near the vicinity of the Project.

4.4.3 Treatment Control BMPs

4.4.3.1 Mitigation Design (Volumetric or Flow based)

The LID calculation methodology was used to calculate the required treatment volumes for each of the discharge points from the Project Site. Volume-based criteria are used in the sizing of the cistern. LID calculations are provided in section 7.0. The results are summarized in the tables below.

Table 5. Proposed Condition SUSMP Results

Project Site Area [ac]	BMP Type	85th percentile *V_M [ft^3]
1.60	Stormwater Capture and Use	5,298

*The total volume (Vm) of stormwater runoff to be mitigated was calculated by analyzing the Project area as one area. Using this Vm and the appropriate BMP calculation from the City of LA LID manual, Table 6 shows the requirements for the area.

Table 6. Summary SUSMP / LID Mitigation BMPs

Area	Area [ac]	Impervious Area [ac]	Required Storage Tank V_M [ft^3]	BMP Type	Provided Treatment V_M [ft^3]	% Treated	Impervious Area Untreated [ac]
1[5]	1.60	1.45	5,298	Harvesting Tank	5,655	100	0
Total Percent Treatment						**100%**	

The proposed BMP will provide full treatment of the 85th percentile storm event. The selected BMP for the Project Site has a larger volume capacity to capture more than the required baseline volume of 5,298 ft^3. The total provided treatment volume is 5,655 ft^3 or 42,300 gallons.

[5] BMP required calculation based on City of LA LID manual.

5.0 Significance Thresholds

5.1 Surface Water Hydrology

With respect to surface water hydrology, the State CEQA Guidelines (Appendix G) inquire whether the Project would:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - Impede or redirect flood flows?

In the context of these questions from Appendix G, the L.A. CEQA Thresholds Guide identifies the following criteria to evaluate surface water hydrology impacts:

- Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;

- Substantially reduce or increase the amount of surface water in a water body; or

- Result in permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

5.2 Surface Water Quality

With respect to surface water quality, the State CEQA Guidelines (Appendix G) inquire whether the Project would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would:
    - result in substantial erosion or siltation on- or off site;
    - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

In the context of these questions from Appendix G, the L.A. CEQA Thresholds Guide states that a project would normally have a significant impact on surface water quality if discharges associated with the project would create pollution, contamination or nuisance, as defined in Section 13050 of the California Water Code (CWC) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body. The L.A. CEQA Thresholds Guide and CWC include the following definitions:

“Pollution” means an alteration of the quality of waters of the state to a degree which unreasonably affects either the following: 1) the waters for beneficial uses or 2) facilities which serve these beneficial uses. “Pollution” may include “Contamination”.

“Contamination” means an impairment of the quality of the waters of the state by waste to a degree, which creates a hazard to the public health through poisoning or through the spread of disease. “Contamination” includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

“Nuisance” means anything which meets all of the following requirements: 1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; 2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extend of the annoyance or damage inflicted upon individuals may be unequal; and 3) occurs during, or as a result of the treatment or disposal of wastes.

6.0 Project Impact Analysis

6.1 Surface Water Hydrology

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
b. Substantially alter the existing drainage pattern of the site or area including through the alteration of the course of a stream or river, in a manner which would:				
i. Result in substantial erosion or siltation on or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;	☐	☐	☒	☐
iii. Create or combine runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
v. Place housing within a 100-year flood hazard area as mapped on a federal flood hazard Boundary or flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
c. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
d. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. As discussed above, construction activities for the Project would include the construction of a 12-story Belmont Village Tower, a new church office/preschool building, a plaza, and three levels of subterranean parking. Historic groundwater levels are located 25 to 35 feet below the existing grade according to the California Geological Survey (CGS). However, per the geology report, groundwater was not encountered in recent borings to the maximum depth of 61 ½ feet below the existing grade. Excavation of the basement is anticipated to extend to depths ranging from 30 to 43 feet below existing grade. Although the excavation is not below the current groundwater level, it is still possible that groundwater could be encountered during excavation. Per the geology report, some minor seepage should be anticipated in the excavation, and minor dewatering consisting of gravel-filled trenches installed where necessary, should be anticipated. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. Therefore, through compliance with regulatory requirements, potential impacts would be less than significant.

Regarding groundwater recharge, the Project Site is currently mostly impervious with approximately 90-percent impervious surfaces. Therefore, there is currently low groundwater recharge potential. While operation of the Project would not change the amount of impervious surface, the underground footprint of the Project's improvements and landscaping would span property line to property line, and therefore the groundwater recharge potential would remain minimal. As stated above, the volume greater than the first flush of stormwater, which bypasses the BMP systems, would discharge to an approved discharge point in the public right-of-way and would not result in infiltration of a large amount of rainfall that would affect groundwater hydrology, including the direction of groundwater flow. As such, the Project would not interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the West Coast Groundwater Basin.

Therefore, the Project's potential impact on groundwater supplies and groundwater recharge would be less than significant, and no mitigation measures are required.

b. Would the project substantially alter the existing drainage pattern of the site or area including through the alteration of the course of a stream or river, in a manner which would:

i. result in substantial erosion or siltation on or off-site;

Less Than Significant Impact. Construction activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Also, exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. However, as discussed above, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to permit regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. As such, construction-related impacts to hydrology would be less than significant, and no mitigation measures are required.

The Project Site is comprised of approximately 90-percent impervious surfaces under existing conditions. With implementation of the Project, the amount of impervious area would not increase. As such, there would be a limited potential for erosion or siltation to occur from exposed soils or large expenses of pervious areas. Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or surrounding area such that substantial erosion or siltation on-site or off-site would occur. Operational impacts to hydrology would be less than significant, and no mitigation measures are required.

Impacts are not likely to occur, because as the Regional Water Quality Control Board (RWQCB) dictates, we must provide a Low Impact Development (LID) system which will capture and use all the rainwater from the 85th percentile storm. As Table 1 demonstrates, a decrease in runoff is expected due to the development even when the impervious area increases. Therefore, no impact is expected.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site

Less Than Significant Impact. There are no streams or rivers within or immediately surrounding the Project Site. Construction activities for the Project would involve removal of the existing structures and associated hardscape as well as the excavation and removal of soil. These activities have the potential to temporarily alter existing drainage patterns on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Project Construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion. Thus, through compliance with applicable City grading permit regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in flooding on- or off-site. As such, construction-related impacts to hydrology would be less than significant, and no mitigation measures are required.

As previously discussed, under the City's LID Ordinance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs on-site for the volume of water produced by the greater of the 85th percentile storm event or the 0.75-inch storm event (i.e., "first flush"). Consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation BMP systems would be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. Therefore, while the Project would not increase impervious surfaces compared to existing conditions, with implementation of BMP's the Project would not increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Operational impacts to hydrology would be less than significant, and no mitigation measures are required.

iii. create or combine runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted;

Less Than Significant Impact. The Project Site is currently developed and generally consists of impervious surface parking, buildings, impervious pavement for pedestrian and vehicular circulation, and landscaped areas. The Project Site is 90-percent impervious and is not crossed by any water courses or rivers. Currently, stormwater runoff from the Project Site is conveyed by sheet flow from North to South to Ashton Avenue and is collected in a catch basin on Wilshire Blvd or Holman Avenue at Glendon Avenue. Based on available record data and visual observations, there are no storm drain lines in the vicinity of the project.

As previously discussed, operation of the Project would keep the impervious surface area within the Project Site at a constant 90-percent. The Project would include the installation of building roof drain downspouts, area drain, and planter drains to collect roof and site runoff. The Project would also direct stormwater away from buildings through a series of storm drain pipes. Furthermore, based on the volumetric flow rate analysis, a comparison of the pre- and post-Project peak flow rate indicated that there would be a decrease in stormwater runoff. In addition, the implementation of BMP's required by the City's LID Ordinance would target runoff pollutants that could potentially be carried in stormwater runoff due to the collection of water to meet the regional LID guidelines. Therefore, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation measures are required.

iv. impede or redirect flood flows?

Less Than Significant Impact. The Project Site is located outside Zone X in the Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA). In addition to the low risk of flooding, the Project would implement a capture and use and/or biofiltration system BMPs and a stormwater conveyance system. Thus, the Project would not alter the existing drainage pattern of the Project Site in a manner that would impede or redirect flood flows. As such, no impacts would occur.

v. place housing within a 100-year flood hazard area as mapped on a federal flood hazard Boundary or flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to the Federal Emergency Management Agency (FEMA) Flood Map Service Center, the project will not be placed within a 100-year flood hazard area.

c. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less Than Significant Impact. Earthquake-induced flooding can result from the failure of dams or other water-retaining structures resulting from earthquakes. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as a tectonic displacement associated with large, shallow earthquakes.

According to the City of Los Angeles General Plan Safety Element, the Project Site is not located in an area potentially impacted by a tsunami but is in the potential dam inundation area of Lower Franklin Reservoir. The reservoir is located 2.5 miles away from the Project and has a 200 acre-feet capacity. The reservoir can be drained to half-capacity in 72 hours and can be drained completely in 216 hours. Therefore, as described in this report, in the event of a breach, the released water would significantly dissipate by the time it reached the Project Site. Moreover, the risk of a breach is very low. Dam safety regulations are the primary means of reducing damage or injury due to inundation occurring from dam failure. The California Division of Safety of Dams regulates the siting, design, construction, and periodic review of all dams in the State. The Division's inspectors may require dam owners to perform work, maintenance, or implement controls if issues are found with the safety of the dam. These dams are under continuous monitoring for safety against failure. In addition, the LADWQP operates the Lower Franklin Reservoir and other dams in the Project area and mitigates the potential for overflow and seiche hazards through control of water levels and dam wall height. These measures include seismic retrofits and other related dam improvements completed under the requirements of the 1972 State Dam Safety Act. The City's Local Hazard mitigate Plan, adopted in 2011 and updated in 201, evaluates dam failure vulnerability and classifies dam failure as a moderate risk rating. However, this Local Hazard Mitigation Plan also describes existing programs, proposed activities and specific projects that assist the City in reducing the risk and preventing loss of life and property damage from natural and human-caused hazards, including dam failure. For these reasons, the risk of release of pollutants due to project flooding form inundation by a seiche or dam failure is considered very low. Moreover, even if water from the reservoir reached the Project Site, given the relatively small size of the Project Site and the contemplated new residential use, any pollutants released are not anticipated to be substantial.

As previously described, the Project Site is located outside Zone X in the Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA). In addition to the low risk of flooding, the Project includes capture and use and/or biofiltration system BMP and a stormwater conveyance system, which would be improved upon the existing site devoid of treatment and on-site detention. Therefore, the Project would not risk release of pollutant due to inundation by flood hazards.

Based on the above, impacts related to the release of pollutants from the Project due to inundation would be less than significant, and no mitigation measures are required.

No Impact. There are no levees or dams close enough to the project site to incur a significant loss, injury, or death due to flooding.

d. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. Under Section 303(d) of the Clean Water Act, states are required to identify water bodies that do not meet their water quality standards. Biennially, the Los Angeles Regional Water Quality Control Board (LARWQCB) prepares a list of impaired waterbodies in the region, referred to as the 3030(d) list. The 303(d) list are subject to the development of a Total Maximum Daily Load (TMDL). As discussed in this report, the Project Site is located within the Ballona Creek Watershed. Constituents of concern listed for Ballona Creek under California's Clean Water Act Section 303(d) List include Cadmium (sediment), Chlordane (Tissue & Sediment), Coliform Bacteria, Copper (Dissolved), Cyanide, DDT, lead, PAHs, PCBs, Selenium, Sediment Toxicity, Shellfish Harvesting Advisory, Silver, Toxicity, Trash, Viruses (Enteric), and Zinc. No Total Maximum Daily Load (TMDL) data have been recorded by EPA for this waterbody.

As described above, based on observation of existing conditions, stormwater currently discharges from the Project Site without treatment or on-site detention. Thus, the Project's implementation of capture and use and/or biofiltration system BMP's would minimize the release of anticipated and potential pollutants generated by the Project (e.g., sediment, nutrients, pesticides, metals, pathogens, and oil and grease). As the project would not increase the amount of impervious area, implementation of the LID BMP measures on the Project Site would result in an improvement in surface water quality runoff when compared to existing conditions.

As such, the Project would not conflict with or obstruct any water quality control plans. With compliance with existing regulatory requirements and implementation of LID BMP's, the Project would no conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Surface Water Hydrology During Construction

During construction of the project, a SWPPP written by a Qualified SWPPP Developer will be prepared to implement temporary control measures throughout the construction phase. The SWPPP is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended in 2010 and 2012 (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). In accordance with the General Permit, Section XIV, the SWPPP is designed to address the following:

- Sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;

Surface Water Hydrology During Operation

Per LAMC Guidelines, required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

1. Notice of Intent (NOI);
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Map;
4. Annual Fee;

5. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
6. SWPPP.
    a. Post-construction water balance calculation;
    b. Active Treatment System (ATS) plan; and
    c. Dischargers proposing an alternate soil erodibility factor must submit justification (documentation of methods used [e.g. soil particle size analysis].

With compliance with the above regulatory requirements, the Project will have less than significant impact on the surface water hydrology. Specifically, based on the above, the Project would not result in an incremental impact for flooding on either on-site or off-site areas during a 50-year storm event, it would not substantially increase the amount of surface water in a water body, and it will not result in a permanent adverse change to the movement of surface water that would result in an incremental effect on the capacity of the existing storm drain system. As demonstrated in Section 3.5, the Project would also not require significant new stormwater infrastructure since there will be a reduction in stormwater flows due to the Project's required LID reductions. Therefore, the development of the Project would result in less than significant impact on surface water hydrology.

Cumulative Impact Analysis

The geographic context for the cumulative impact analysis on surface water hydrology is the Ballona Creek Watershed. The Project in conjunction with forecasted growth in the Ballona Creek Watershed could cumulatively increase stormwater runoff flows. However, as noted above, the Project would have no net impact on stormwater flows. Also, in accordance with City requirements, related projects and other future development projects would be required to implement BMPs to manage stormwater in accordance with LID guidelines. Furthermore, the City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure enough local and regional infrastructure is available to accommodate stormwater runoff. Therefore, potential cumulative impacts associated with the Project on surface water hydrology would be less than significant.

6.2 Surface Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b. Otherwise substantially degrade water quality?	☐	☐	☒	☐

a. violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. As discussed in the following analysis, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface of groundwater quality.

Surface Water Quality During Construction

During Project construction, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. As Project construction would disturb less than one acre of soil, the Project would not be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. However, the Project would be required to implement Best Management Practices (BMP's) as part of the City's grading permit requirements. BMP's would include, but would not necessarily be limited to, erosion control, sediment control, non-stormwater management, and materials management BMP's (e.g., sandbags, storm drain inlets protection, stabilized construction entrance/exit, wind erosion control, and stockpile management) to minimize the discharge of pollutants in stormwater runoff during construction. In addition, Project construction activities would occur in accordance with City grading permit regulations (LAMC Chapter IX, Division 70), such as the preparation of an Erosion Control Plan, to reduce the effects of sediment and erosion.

As discussed above, construction activities for the Project would include the construction of a 12-story Belmont Village Tower, a new church office/preschool building, a plaza, and three levels of subterranean parking. Historic groundwater levels are located 25 to 35 feet below the existing grade according to the California Geological Survey (CGS). However, per the geology report, groundwater was not encountered in recent borings to the maximum depth of 61 ½ feet below the existing grade. Excavation of the basement is anticipated to extend to depths ranging from 30 to 43 feet below existing grade. Although the excavation is not below the current groundwater level, it is still possible that groundwater could be encountered during excavation. Per the geology report, some minor seepage should be anticipated in the excavation, and minor dewatering consisting of gravel-filled trenches installed where necessary, should be anticipated. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. Therefore, through compliance with regulatory requirements, potential impacts would be less than significant.

Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location and discharged into the storm drain system to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all relevant NPDES requirements related to construction and discharges from dewatering operations. Furthermore, if dewatering is required, the treatment and disposal of the dewatered water would occur in accordance with the Los Angeles Regional Water Quality Control Board (LARWQCB) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.

With the implementation of site-specific BMP's included as part of the Erosion Control Plan required to comply with the City grading permit regulations, the Project would significantly reduce or eliminate the discharge of potential pollutants from the stormwater runoff. Therefore, with compliance with NPDES requirements and City grading regulations, construction of the Project would not violate any water quality standard or waste discharge requirements or otherwise substantially degrade surface water quality. Furthermore, construction of the Project would not result in discharges that would cause regulatory standards to be violated. Thus, temporary construction-related impacts on surface water quality would be less than significant, and no mitigation measures are required.

Surface Water Quality During Operation

Under the City's Low Impact Development (LID) Ordinance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high

efficiency BMP's on-site for the volume of water produced by the greater of the 85th percentile storm event or the 0.75-inch storm event (i.e., "first flush"). Consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of capture and use and/or biofiltration system BMP's as established by the LID Manual. The installed BMP systems would be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. As most potential contaminants are anticipated to be contained within the "first flush" storm event, major storms are not anticipated to cause an exceedance of regulatory standards.

As detailed in Section 3.0, a comparison between the potential pollutant based on land use and the 303(d) list for Ballona Creek indicates that the pollutants of concern are **sediment**, **trash, and bacteria & viruses.** These three pollutants of concern will be addressed through the proposed stormwater BMPs in order to comply with Los Angeles County's Standard Urban Stormwater Mitigation Plan (SUSMP) and City of Los Angeles' Low Impact Development Ordinance. These BMPs include elements such as permeable pavement, rainwater harvesting, and an increase of landscape area. Based on the analysis contained in this report, there are no significant impacts for surface water quality as a result of the Project.

With compliance under the SWPPP, SUSMP, and the City's LID Ordinance, construction and operational water quality impacts would be less than significant.

Groundwater Quality During Construction

As discussed above, construction activities for the Project would include the construction of a 12-story Belmont Village Tower, a new church office/preschool building, a plaza, and three levels of subterranean parking. Historic groundwater levels are located 25 to 35 feet below the existing grade according to the California Geological Survey (CGS). However, per the geology report, groundwater was not encountered in recent borings to the maximum depth of 61 ½ feet below the existing grade. Excavation of the basement is anticipated to extend to depths ranging from 30 to 43 feet below existing grade. Although the excavation is not below the current groundwater level, it is still possible that groundwater could be encountered during excavation. Per the geology report, some minor seepage should be anticipated in the excavation, and minor dewatering consisting of gravel-filled trenches installed where necessary, should be anticipated. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. Therefore, through compliance with regulatory requirements, potential impacts would be less than significant.

If dewatering is required, the treatment and disposal of the dewatered water would occur in accordance with the Los Angeles Regional Water Quality Control Board (LARWQCB) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. Therefore, Project construction could potentially improve the existing condition by removing impacted groundwater. In addition, the proposed construction activities would be typical of a residential project and would not involve activities that could further impact the underlying groundwater quality.

Other potential effects to groundwater quality could result from the presence of an underground storage tank (UST) or during the removal of an UST. As previously described, however, no existing UST's are anticipated to be found beneath the Project Site. Therefore, the removal of UST's would not pose a significant hazard on groundwater.

Based on the above, construction of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements. Therefore, construction-related impacts on groundwater quality would be less than significant, and no mitigation measures are required.

Groundwater Quality During Operation

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking UST's. Surface spills from the handling of hazardous materials most often involve small

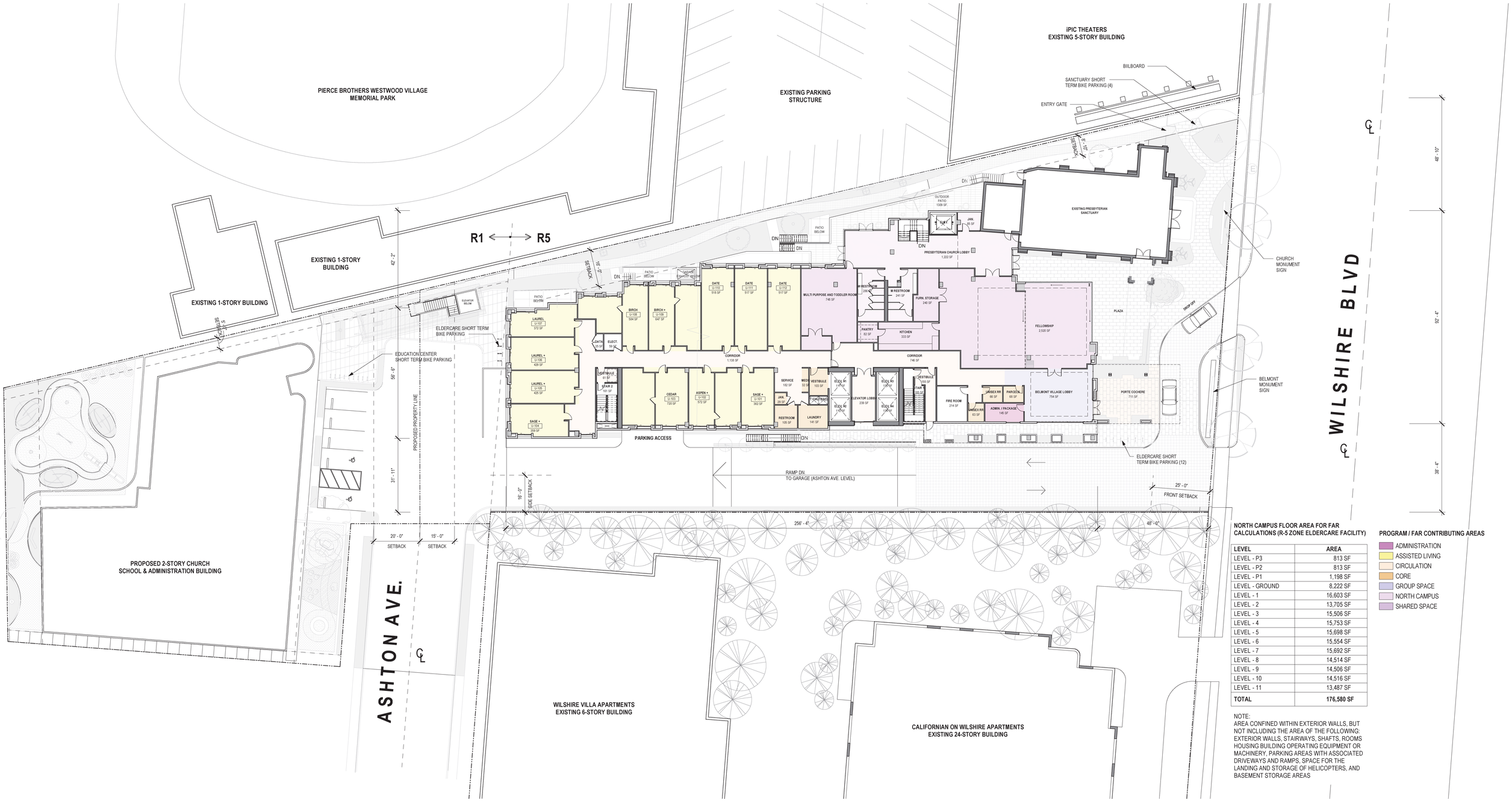
quantities and are cleaned up in a timely manner, thereby resulting in little threat to groundwater. Other types of risks such as leaking underground storage have a greater potential to affect groundwater. However, as discussed above, the Project would not include any new UST's that would have the potential to expose groundwater to contaminants. In addition, while the Project would introduce more density and an additional land use (residential) to the project site which would slightly increase the use of potentially hazardous materials as described above, the Project would comply with all applicable existing regulations that would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. The Project also does not include the installation or operation of water wells, or any extraction or recharge system near the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well, or a spreading ground facility.

In addition, the Project includes the installation of a capture and use and/or biofiltration system as a means of treatment and disposal of the volume of water produced by the greater of the 85th percentile storm or the 0.750-inch storm event, which would allow for treatment of the on-site stormwater. Therefore, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade ground water quality. The Project's potential impact on groundwater quality during operation would be less than significant, and no mitigation measures are required.

b. Otherwise substantially degrade water quality?

Less Than Significant Impact. As discussed in response to question 6.2.a, the project would not otherwise substantially degrade water quality, following reasons provided in that answer.

7.0 Calculations and Site Plan



NORTH CAMPUS FLOOR AREA FOR FAR CALCULATIONS (R-5 ZONE ELDERCARE FACILITY)

LEVEL	AREA
LEVEL - P3	813 SF
LEVEL - P2	813 SF
LEVEL - P1	1,198 SF
LEVEL - GROUND	8,222 SF
LEVEL - 1	16,603 SF
LEVEL - 2	13,705 SF
LEVEL - 3	15,506 SF
LEVEL - 4	15,753 SF
LEVEL - 5	15,698 SF
LEVEL - 6	15,554 SF
LEVEL - 7	15,692 SF
LEVEL - 8	14,514 SF
LEVEL - 9	14,506 SF
LEVEL - 10	14,516 SF
LEVEL - 11	13,487 SF
TOTAL	**176,580 SF**

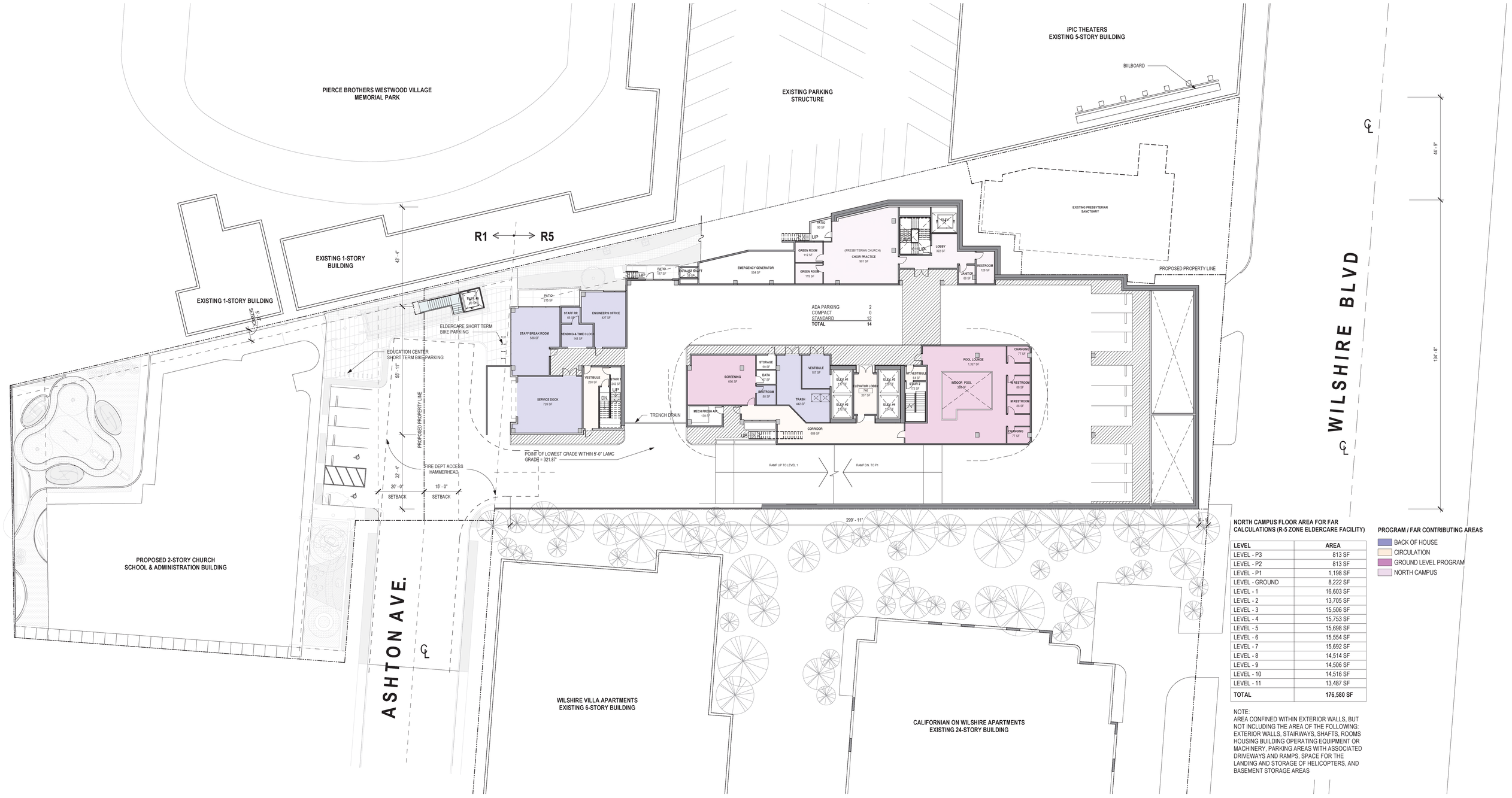
NOTE:
AREA CONFINED WITHIN EXTERIOR WALLS, BUT NOT INCLUDING THE AREA OF THE FOLLOWING: EXTERIOR WALLS, STAIRWAYS, SHAFTS, ROOMS HOUSING BUILDING OPERATING EQUIPMENT OR MACHINERY, PARKING AREAS WITH ASSOCIATED DRIVEWAYS AND RAMPS, SPACE FOR THE LANDING AND STORAGE OF HELICOPTERS, AND BASEMENT STORAGE AREAS

PROGRAM / FAR CONTRIBUTING AREAS

- ADMINISTRATION
- ASSISTED LIVING
- CIRCULATION
- CORE
- GROUP SPACE
- NORTH CAMPUS
- SHARED SPACE

SCALE: 1/16"=1'0"

FLOOR PLAN - FIRST FLOOR (WILSHIRE BLVD.)



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NOTE:
AREA CONFINED WITHIN EXTERIOR WALLS, BUT NOT INCLUDING THE AREA OF THE FOLLOWING: EXTERIOR WALLS, STAIRWAYS, SHAFTS, ROOMS HOUSING BUILDING OPERATING EQUIPMENT OR MACHINERY, PARKING AREAS WITH ASSOCIATED DRIVEWAYS AND RAMPS, SPACE FOR THE LANDING AND STORAGE OF HELICOPTERS, AND BASEMENT STORAGE AREAS

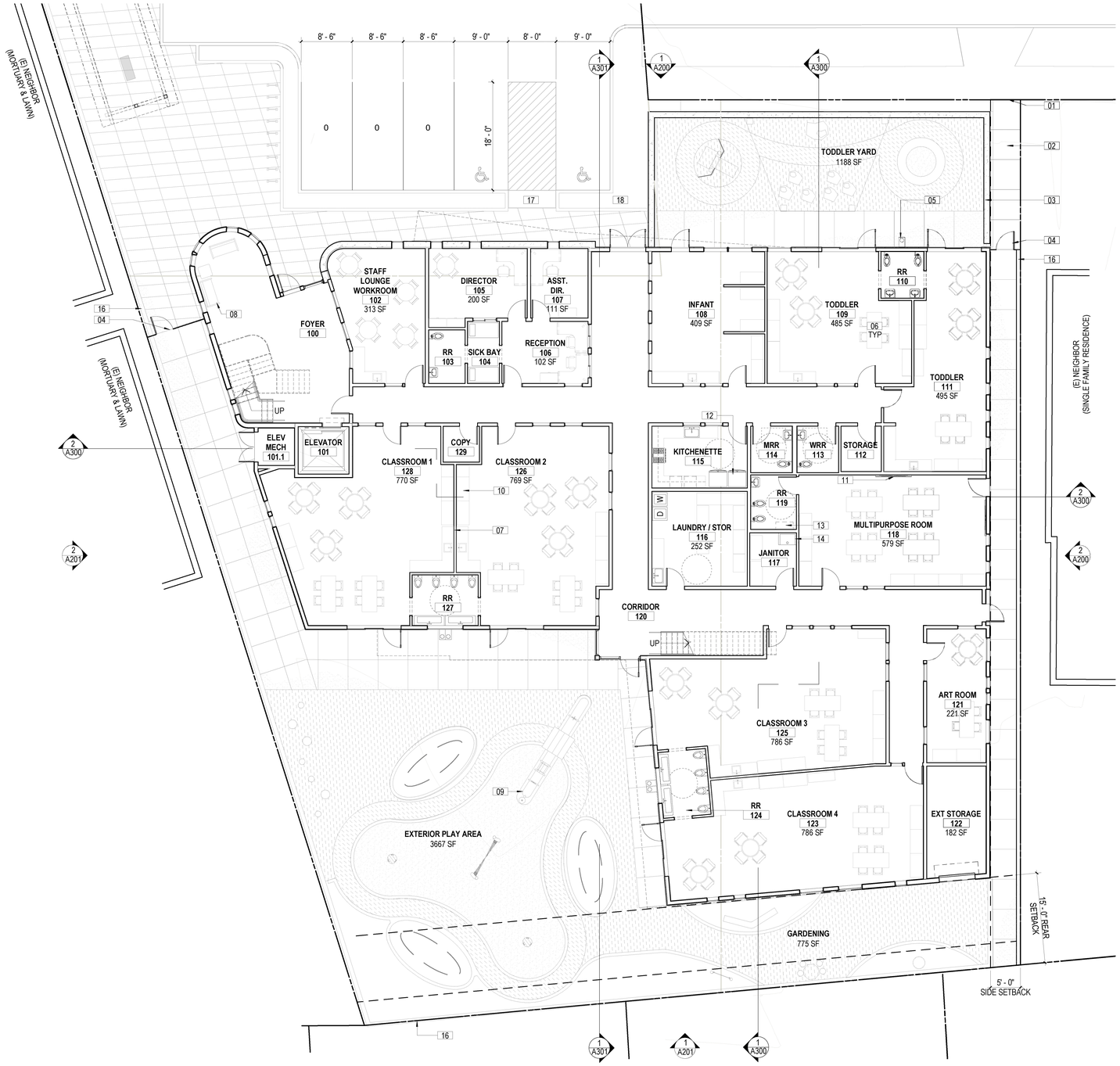
PROGRAM / FAR CONTRIBUTING AREAS

- BACK OF HOUSE
- CIRCULATION
- GROUND LEVEL PROGRAM
- NORTH CAMPUS

SCALE: 1/16"=1'0"

FLOOR PLAN - GROUND FLOOR (ASHTON AVE.)

NOTE: THIS CONCEPTUAL DESIGN/CAPACITY STUDY IS PRELIMINARY IN NATURE AND SUBJECT TO VERIFICATION OF ALL CITY REGULATIONS, DEDICATIONS & REQUIREMENTS, INPUT FROM STRUCTURAL & OTHER DESIGN CONSULTANTS & IS SUBJECT TO CHANGE.



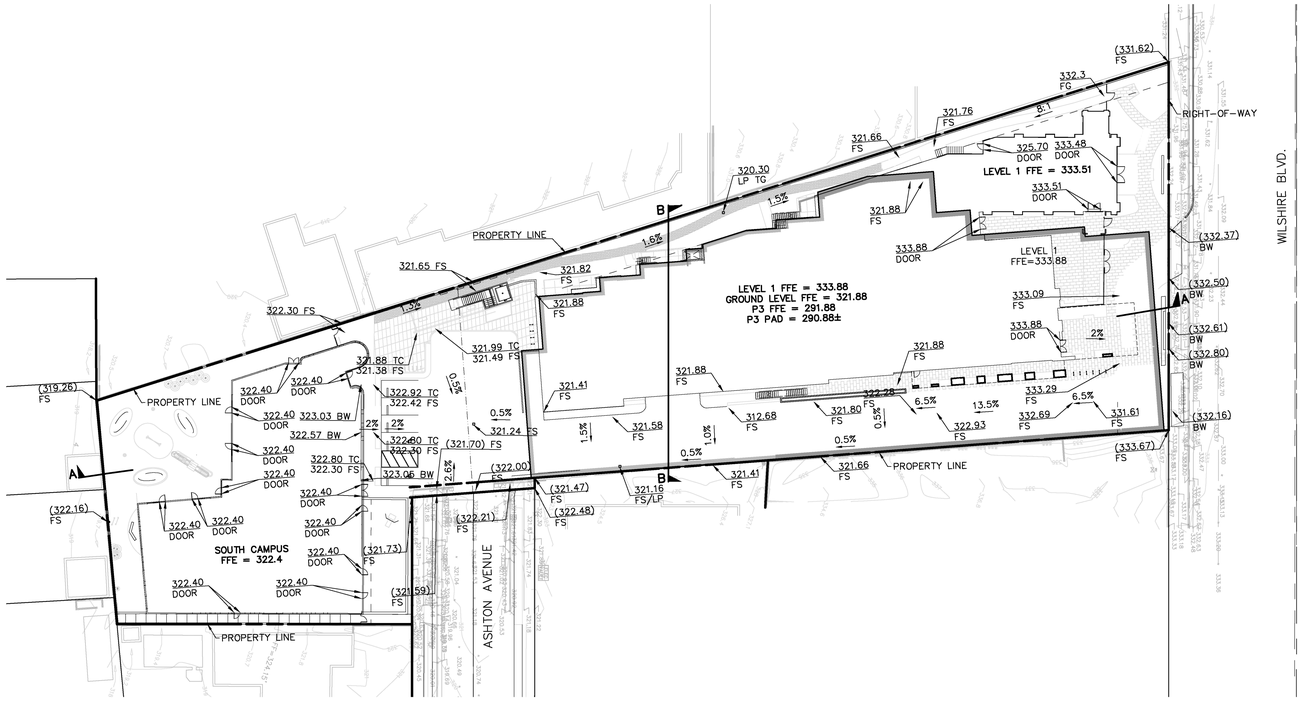
FIRST FLOOR PLAN
1/8" = 1'-0"

NOTES

01 PROPERTY LINE
02 CONCRETE PAVERS
03 SECURITY WALL, 6'-0" ABOVE FINISH GRADE
04 DECORATIVE METAL FENCE & GATE
05 DRINKING FOUNTAIN
06 CLASSROOM FURNITURE
07 24" COUNTERTOP, 30" ABOVE FINISH FLOOR
08 FURNITURE BY OWNER
09 PLAY EQUIPMENT PER LANDSCAPE
10 STORAGE SHELVES
11 WALL-MOUNTED TV, PROVIDE 8" WALL BLOCKING
12 REFRIGERATOR
13 RECESSED FOLDING CHANGING TABLE
14 MOP SINK
16 6'-0" CMU WALL AT PROPERTY LINE
17 DETECTABLE WARNING SURFACE
18 PLANTING BED PER LANDSCAPE

LEGEND

NEW WALL
30" X 48" CLEAR SPACE
60" TURNING RADIUS



LEGEND AND ABBREVIATIONS:

BW	BACK OF SIDEWALK
EG	EDGE OF GUTTER
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
HP	HIGH POINT
INV	INVERT
LP	LOW POINT
TC	TOP OF CURB
TG	TOP OF GRATE
(100.1)	EXISTING ELEVATION
100.00	PROPOSED ELEVATION
BOW	BOTTOM OF WALL
	LIMIT OF BASEMENT BELOW GRADE
	LIMIT OF BUILDING WALL
	STANDARD LA FIRE DEPARTMENT HAMMER-HEAD TURN-AROUND ZONE

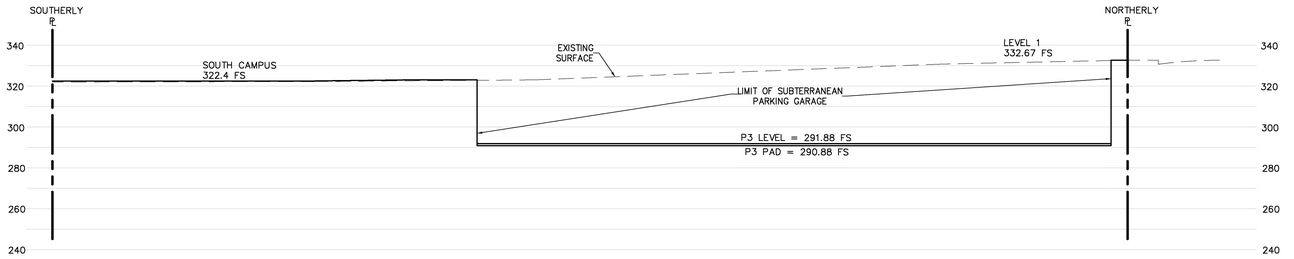
ESTIMATED EARTHWORK QUANTITIES:

FILL CALCULATION:	
RAW FILL	1,000 CY
CUT CALCULATION:	
RAW CUT	55,000 CY
BALANCE CALCULATION:	
TOTAL CUT	55,000 CY (CUT)
TOTAL FILL	– 1,000 CY (FILL)
RAW EXPORT	54,000 CY
5 FT REMOVE AND RECOMPACT	4,000 CY
90% COMPACTION FROM R&R	-400 CY
15% CONTINGENCY	8,000 CY
	62,000 CY EXPORT (ROUNDED)

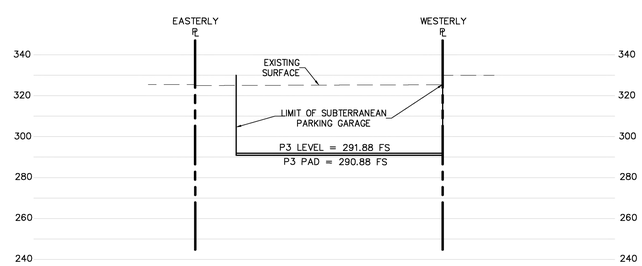
THE ABOVE LISTED QUANTITIES REFLECT THE ENGINEER'S ESTIMATE OF THE EARTHWORK VOLUMES. 10% BULKING IS ASSUMED.

THESE QUANTITIES ARE FOR DESIGN AND BONDING PURPOSES ONLY, AND NOT FOR CONTRACT PURPOSES.

THE CONTRACTOR IS RESPONSIBLE FOR COMPUTING HIS OWN QUANTITIES



SECTION A–A (1)
SCALE: H 1"=30'
W 1"=30'



SECTION B–B (2)
SCALE: H 1"=30'
W 1"=30'

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA

30 15 0 30 60
GRAPHIC SCALE: 1"=30'

SEAL

DATE: 11/28/2017
SCALE: 1"=1"=30'
PROJECT NUMBER: 18EL010200

BELMONT VILLAGE

BELMONT VILLAGE WESTWOOD PRESBYTERIAN

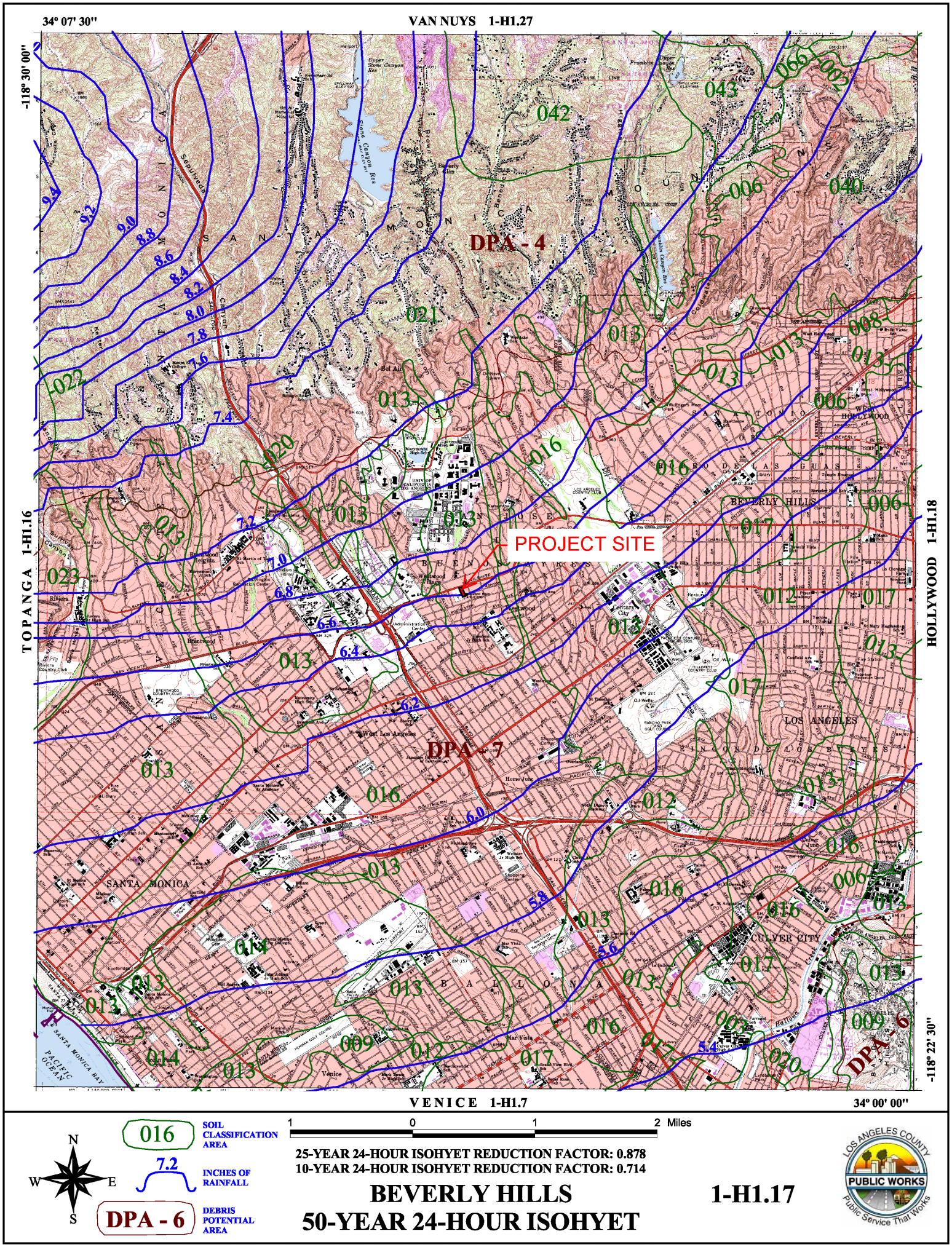
PSOMAS
555 South Flower Street, Suite 4400
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 fax
www.psomas.com

REV	DATE	DESCRIPTION	BY	APP'D

DESIGNED DC
DRAFTED AB
CHECKED DC

SHEET

OF



016	SOIL CLASSIFICATION AREA
7.2	INCHES OF RAINFALL
DPA - 6	DEBRIS POTENTIAL AREA

N W E S

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

BEVERLY HILLS
50-YEAR 24-HOUR ISOHYET

1-H1.17

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

Hydrology Map

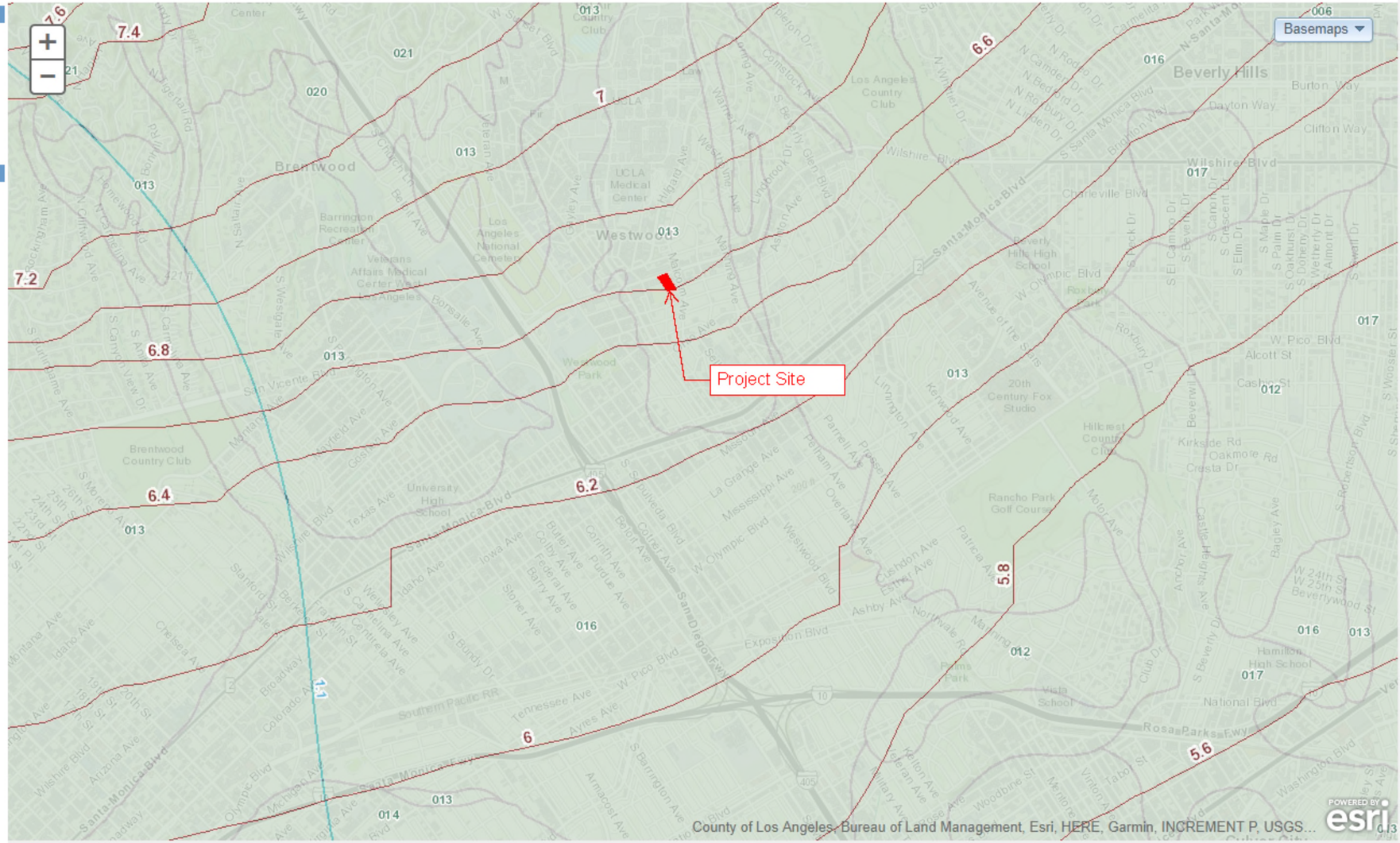
A GIS viewer application to view the data for the hydrology manual.

LAYERS

- [x] 50yr Two Tenths (Rainfall)
- [ ] DPA Zones
- [x] Soils 2004
- [x] Final 85th Percentile, 24-hr Rainfall
- [ ] Final 95th Percentile, 24-hr Rainfall
- [ ] 1-year, 1-hour Rainfall Intensity

SEARCH

Enter Address, Cross Street, or Parcel No.:
(ex: 900 S. Fremont Ave., Fremont@Valley, 5342005904) Search



Map Tips

Volume Calculations:

Givens: Inputs

Areas =

Breakdown	sqft	acre	%	
Area Total	70,469	1.618	100%	
Impervious, Ai	63,422	1.456	90%	
Pervious, Ap	7,047	0.162	10%	
Undeveloped Area, Au	0	0	0%	
Exempt Area	0	0	0%	
TOTAL	**70,469**	**1.618**		
Landscaped Areas Counted Towards Mitigation Volume*				*Note these are landscaped areas exposed to the sky.
Landscaped Area	7,047	0.162		
TOTAL Pervious	**7,047**	**0.162**		
Landscaped Areas Counted Towards ETWU**				**Note these are additional landscaped areas NOT EXPOSED to the sky.
Additional Landscaped Area	0	0		
TOTAL Additional Pervious	**0**	**0**		
Exempt Area***				***Note these are water features exposed to the sky.
Water Feature/Pool	0	0		
TOTAL Exempt	**0**	**0.00**		

Soil media infiltration rate:	5	in/hr	(Table 4.5)
T_{Fill} =	3	hrs	(Table 4.5)
Drawdown time, T (hr) =	48	hrs	(Table 4.5)
$K_{sat,Design}$ Factor of Safety, FS =	2		
$V_{design\ Planter}$ Factor of Safety =	1.5		
Design Storm =	85th Percentile		(Per City of LA requirement)
Design Storm Intensity =	1.1	in	(Per LA County Hydrology GIS)
Planting Factor =	0.42		(Per Landscape Architect)
7 Month Evapotranspiration, ET_7	21.7		(Per City of LA Irrigation Guidelines, App C)

Determine the Mitigation Volume (V_M):

V_M (ft^3) = 85th Percentile Intensity (in) * Catchment Area (acres) * (3630 cuft/1ac-in)

i. where Catchment Area (acres) = (Impervious Area * 0.9) + [(Pervious area + Undeveloped area) * 0.1]

V_M (ft^3) = 1.1*[(1.456*0.9)+[(0.162+0)*0.1]] * 3630 ft^3

V_M (ft^3) = 5298 ft^3 or 39,632 Gallons **(If Design is Capture and Use i.e. Rainwater Harvesting)**

When using a Biofiltration as the BMP, the mitigated volume is 150% of the V_M:

$V_{M\ Biofiltration}$ (ft^3) = 1.5 * VM

$V_{M\ Biofiltration}$ (ft^3) = 1.5 * 5298

$V_{M\ Biofiltration}$ (ft^3) = 7,947 ft^3 or 59,448 Gallons **(If Design is Biofiltration i.e. BMP Planter Boxes)**

The design will be a rainwater harvesting system, therefore,

V_M (ft^3) =	5298	ft^3	or	39,632	Gallons

Determine planting area (ft^2):

Planting Area (ft^2) = 7046.9 + 0 ft^2

ii. Planting Area (ft^2) = 7,047 ft^2

Determine Planter Factor, PF, (ft^2)

Planter Factor (ft^2) = Planting Factor x Planting Area

iii. Planter Factor (ft^2) = 0.42 x 7046.9 ft2

Planter Factor (ft^2) = **2959.698** **ft^2**

Determine the 7-month (Oct 1-April 30) Estimated Total Water Use (ETWU):

ETWU $_{(7\text{-month})}$ = ET_7 x 0.62 x PF

iv. ETWU $_{(7\text{-month})}$ = 21.7 x 0.62 x 2959.698

ETWU $_{(7\text{-month})}$ = **39820** **gal**

Verify $ETWU_{(7\text{-month})}$ is greater than or equal to V_{WQDV}:

	$ETWU_{(7\text{-month})}$	≥	$V_{(Design)}$ (gal)
v.	*39,820*	≥	*39,632*

CAPTURE AND USE IS FEASIABLE

Peak Flow Hydrologic Analysis

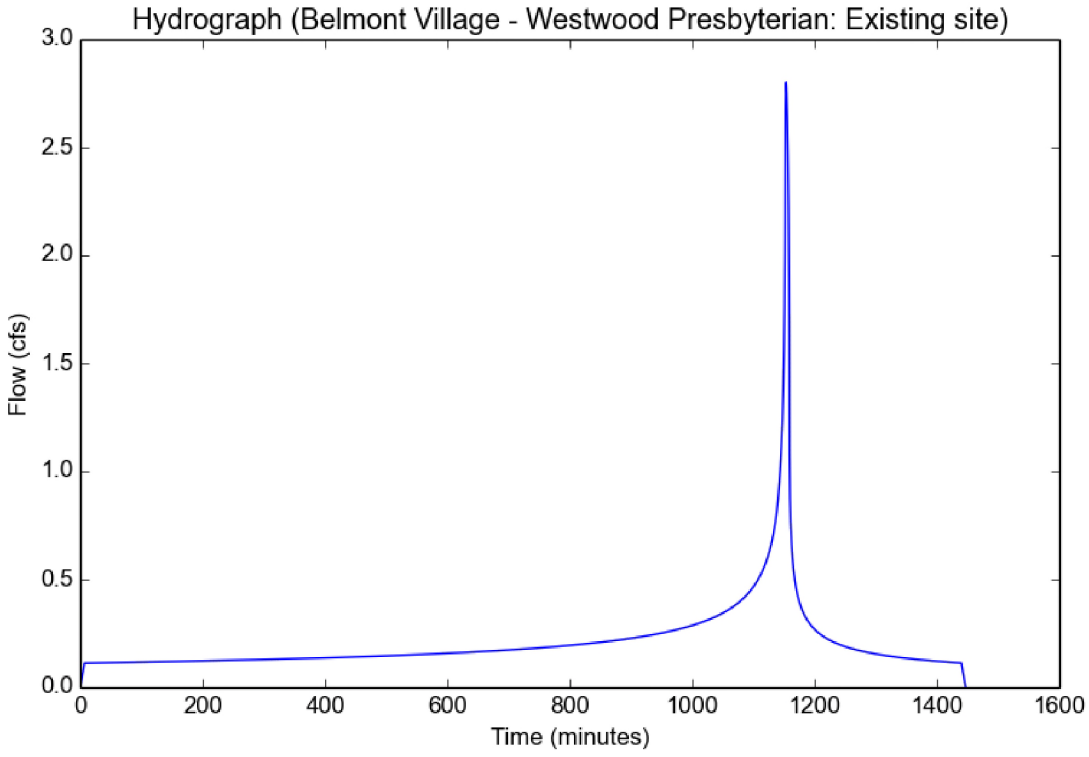
File location: W:/1BEL010200/ENGR/DESIGN/HYDR/Belmont Village - Westwood Presbyterian - Existing site.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Belmont Village - Westwood Presbyterian
Subarea ID	Existing site
Area (ac)	1.6
Flow Path Length (ft)	440.0
Flow Path Slope (vft/hft)	0.023
50-yr Rainfall Depth (in)	6.6
Percent Impervious	0.9
Soil Type	13
Design Storm Frequency	5-yr
Fire Factor	0
LID	False

Output Results

Modeled (5-yr) Rainfall Depth (in)	3.8544
Peak Intensity (in/hr)	1.9633
Undeveloped Runoff Coefficient (Cu)	0.8159
Developed Runoff Coefficient (Cd)	0.8916
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	2.8007
Burned Peak Flow Rate (cfs)	2.8007
24-Hr Clear Runoff Volume (ac-ft)	0.4205
24-Hr Clear Runoff Volume (cu-ft)	18318.0931



Peak Flow Hydrologic Analysis

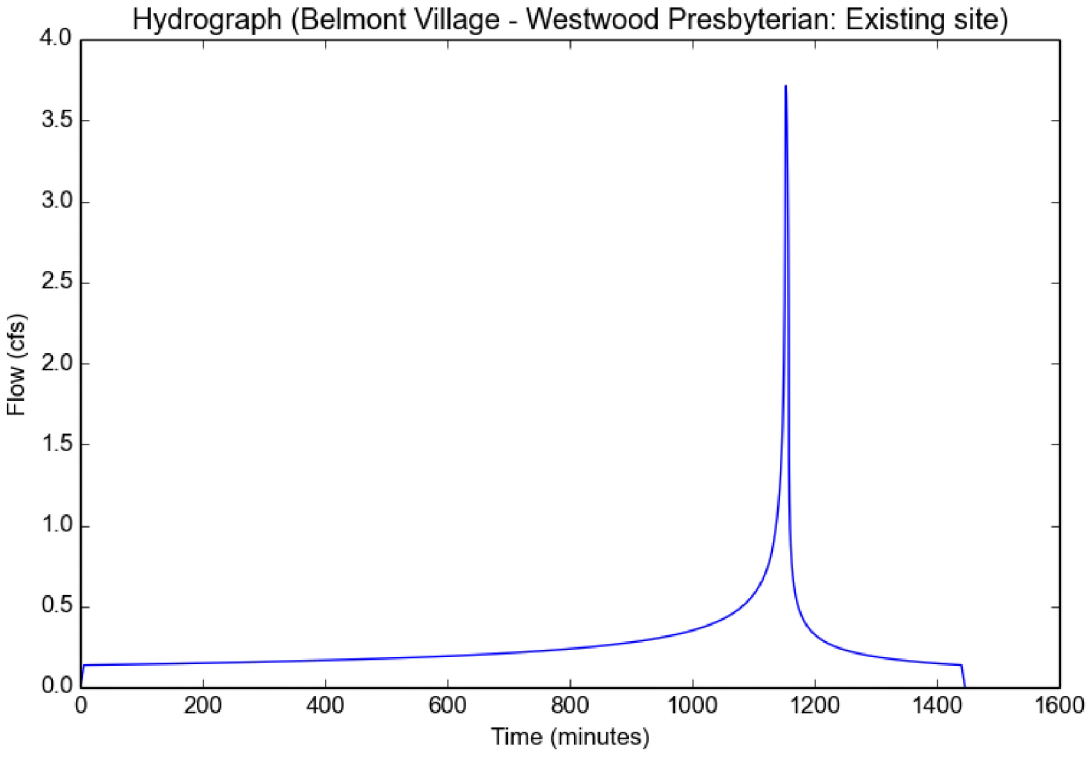
File location: W:/1BEL010200/ENGR/DESIGN/HYDR/Belmont Village - Westwood Presbyterian - Existing site10.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Belmont Village - Westwood Presbyterian
Subarea ID	Existing site
Area (ac)	1.6
Flow Path Length (ft)	440.0
Flow Path Slope (vft/hft)	0.023
50-yr Rainfall Depth (in)	6.6
Percent Impervious	0.9
Soil Type	13
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	4.7124
Peak Intensity (in/hr)	2.5807
Undeveloped Runoff Coefficient (Cu)	0.8967
Developed Runoff Coefficient (Cd)	0.8997
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	3.7148
Burned Peak Flow Rate (cfs)	3.7148
24-Hr Clear Runoff Volume (ac-ft)	0.515
24-Hr Clear Runoff Volume (cu-ft)	22433.9693



Peak Flow Hydrologic Analysis

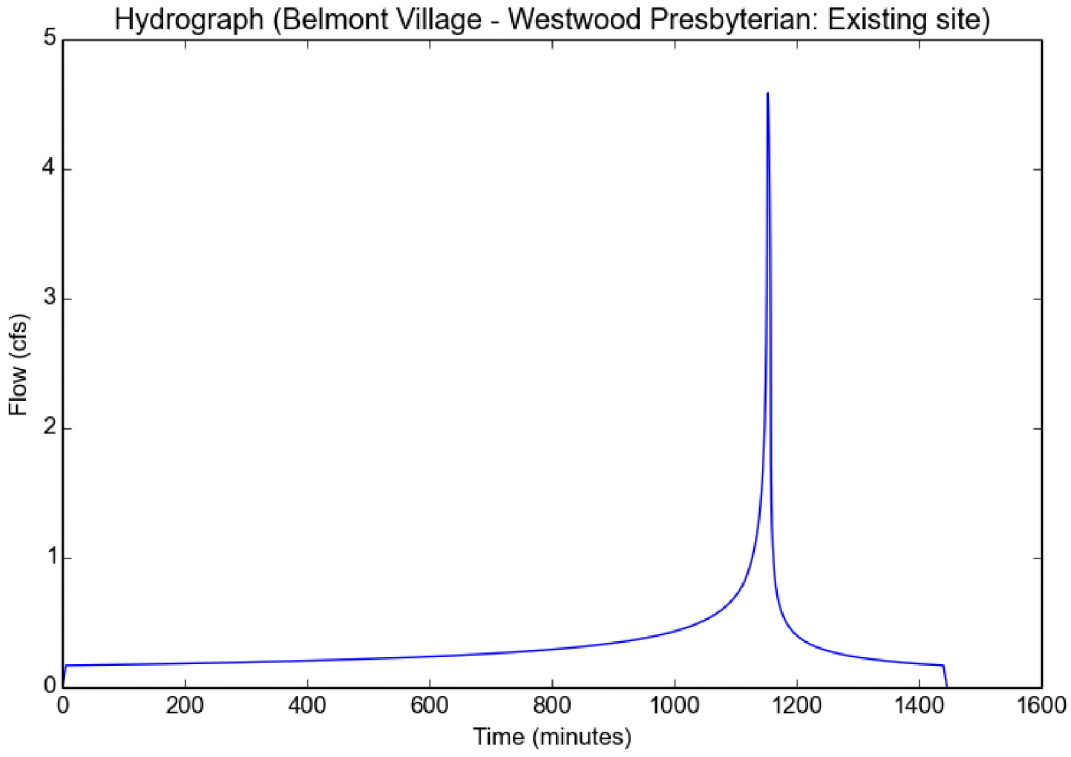
File location: W:/1BEL010200/ENGR/DESIGN/HYDR/Belmont Village - Westwood Presbyterian - Existing site25.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Belmont Village - Westwood Presbyterian
Subarea ID	Existing site
Area (ac)	1.6
Flow Path Length (ft)	440.0
Flow Path Slope (vft/hft)	0.023
50-yr Rainfall Depth (in)	6.6
Percent Impervious	0.9
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.7948
Peak Intensity (in/hr)	3.1734
Undeveloped Runoff Coefficient (Cu)	0.9341
Developed Runoff Coefficient (Cd)	0.9034
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	4.587
Burned Peak Flow Rate (cfs)	4.587
24-Hr Clear Runoff Volume (ac-ft)	0.6346
24-Hr Clear Runoff Volume (cu-ft)	27643.2592



Peak Flow Hydrologic Analysis

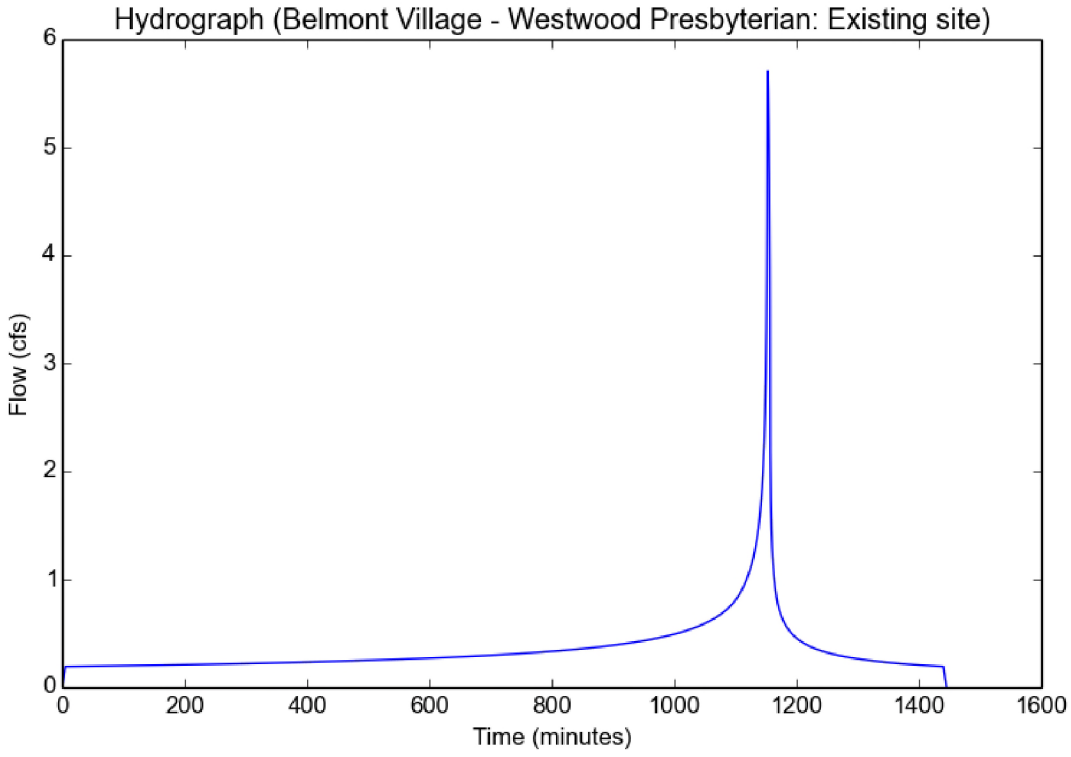
File location: W:/1BEL010200/ENGR/DESIGN/HYDR/Belmont Village - Westwood Presbyterian - Existing site.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Belmont Village - Westwood Presbyterian
Subarea ID	Existing site
Area (ac)	1.6
Flow Path Length (ft)	440.0
Flow Path Slope (vft/hft)	0.023
50-yr Rainfall Depth (in)	6.6
Percent Impervious	0.9
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.6
Peak Intensity (in/hr)	3.9377
Undeveloped Runoff Coefficient (Cu)	0.9558
Developed Runoff Coefficient (Cd)	0.9056
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	5.7055
Burned Peak Flow Rate (cfs)	5.7055
24-Hr Clear Runoff Volume (ac-ft)	0.7239
24-Hr Clear Runoff Volume (cu-ft)	31531.2568



Peak Flow Hydrologic Analysis

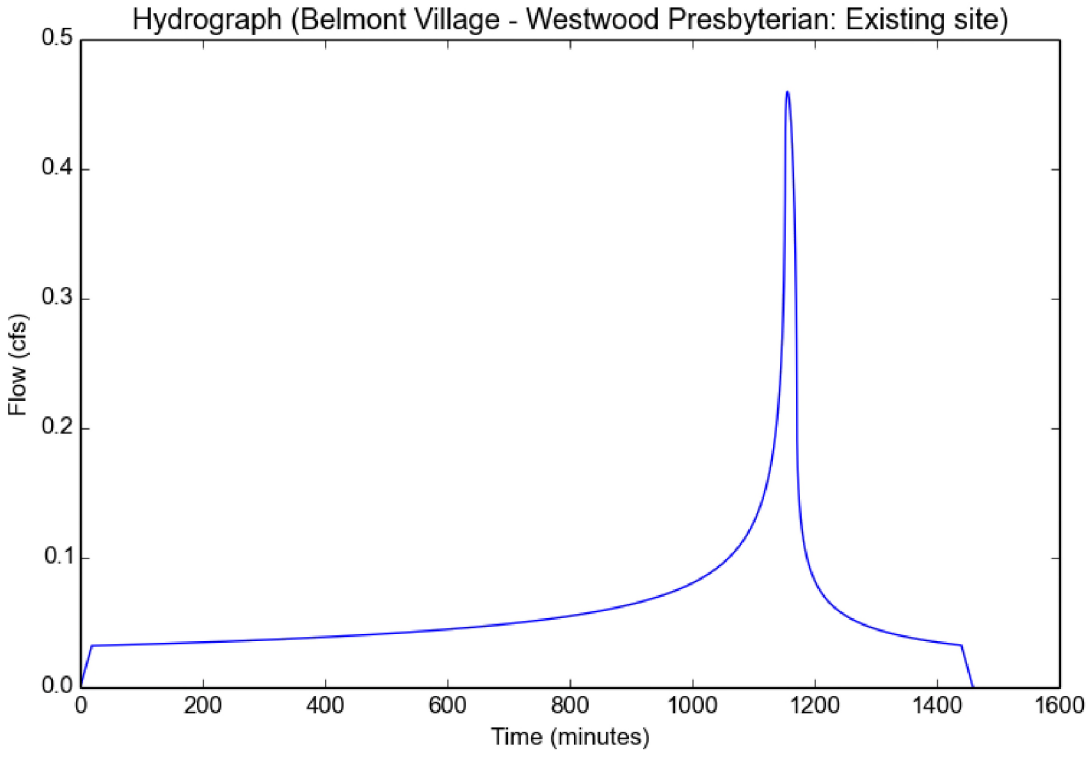
File location: W:/1BEL010200/ENGR/DESIGN/HYDR/85th percentile storm.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Belmont Village - Westwood Presbyterian
Subarea ID	Existing site
Area (ac)	1.6
Flow Path Length (ft)	440.0
Flow Path Slope (vft/hft)	0.023
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.9
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.1
Peak Intensity (in/hr)	0.3504
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.82
Time of Concentration (min)	19.0
Clear Peak Flow Rate (cfs)	0.4598
Burned Peak Flow Rate (cfs)	0.4598
24-Hr Clear Runoff Volume (ac-ft)	0.1193
24-Hr Clear Runoff Volume (cu-ft)	5195.5438



Peak Flow Hydrologic Analysis

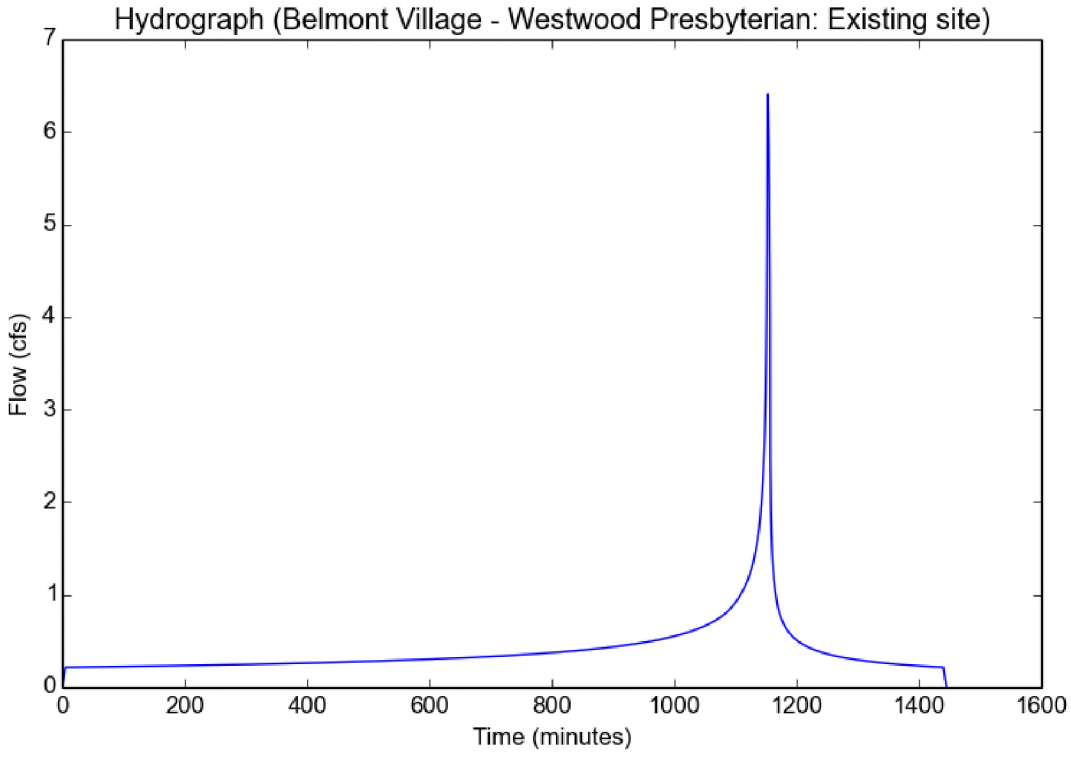
File location: W:/1BEL010200/ENGR/DESIGN/HYDR/Belmont Village - Westwood Presbyterian - Existing site100.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Belmont Village - Westwood Presbyterian
Subarea ID	Existing site
Area (ac)	1.6
Flow Path Length (ft)	440.0
Flow Path Slope (vft/hft)	0.023
50-yr Rainfall Depth (in)	6.6
Percent Impervious	0.9
Soil Type	13
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	7.4052
Peak Intensity (in/hr)	4.4181
Undeveloped Runoff Coefficient (Cu)	0.9645
Developed Runoff Coefficient (Cd)	0.9064
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	6.4077
Burned Peak Flow Rate (cfs)	6.4077
24-Hr Clear Runoff Volume (ac-ft)	0.8134
24-Hr Clear Runoff Volume (cu-ft)	35432.2822



CATEGORY 5
2012 CALIFORNIA 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS*

Category 5 criteria: 1) A water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment.

* USGS HUC = US Geological Survey Hydrologic Unit Code. Calwater = State Water Resources Control Board hydrological subunit area or even smaller planning watershed.

** TMDL requirement status definitions for listed pollutants are: A= TMDL still required, B= being addressed by USEPA approved TMDL, C= being addressed by action other than a TMDL

*** Dates relate to the TMDL requirement status, so a date for A= TMDL scheduled completion date, B= Date USEPA approved TMDL, and C= Completion date for action other than a TMDL

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ◦ POTENTIAL SOURCES *Relevant Notes*	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	TMDL REQUIREMENT DATE***
1	Big River Beach at Mendocino Bay	Coastal & Bay Shoreline	1113.300405 / 18010108	• Indicator Bacteria ◦ Source Unknown	3.9 Miles	2010	5A	2025
1	Bodega HU, Bodega Harbor HA	Bay & Harbor	11522000 / 18010111	• Invasive Species ◦ Source Unknown	810 Acres	2006	5A	2025
1	Bodega HU, Estero Americano HA, Americano Creek	River & Stream	11530000 / 18010111	• Nutrients ◦ Source Unknown	38 Miles	1996	5A	2025
1	Bodega HU, Estero Americano HA, estuary	Estuary	11530012 / 18010111	• Nutrients ◦ Source Unknown	199 Acres	1996	5A	2025
				• Sedimentation/Siltation ◦ Source Unknown	199 Acres	1992	5A	2025
1	Bodega HU, Estero de San Antonio HA, Stemple Creek/Estero de San Antonio	River & Stream	1115.400001,1115.400002,1115.400003 / 18010111	• Nutrients ◦ Source Unknown	87 Miles	2012	5A	2025
				• Sediment ◦ Source Unknown	87 Miles	2006	5A	2025
1	Campbell Cove	Coastal & Bay Shoreline	1115.210000,1115.220000 / 18010111	• Indicator Bacteria ◦ Source Unknown	0.24 Miles	2006	5A	2019
1	Caspar Headlands State Beach	Coastal & Bay Shoreline	1113.300404,1113.300405 / 18010108	• Indicator Bacteria ◦ Source Unknown	0.19 Miles	2010	5A	2025
1	Clam Beach (near Mad River mouth)	Coastal & Bay Shoreline	1109.100101 / 18010102	• Indicator Bacteria ◦ Source Unknown	1.5 Miles	2012	5A	2025
1	Clam Beach (near Strawberry Creek)	Coastal & Bay Shoreline	1108.200002,1109.100200,1109.100300 / 18010102	• Indicator Bacteria ◦ Source Unknown	1.3 Miles	2006	5A	2019

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ◦ POTENTIAL SOURCES *Relevant Notes*	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	DATE***
4	Amarillo Beach	Coastal & Bay Shoreline	40431000 / 18070104	• DDT (Dichlorodiphenyltrichloroethane) ◦ Source Unknown *Fish Consumption Advisory for DDT.*	0.64 Miles	1998	5A	2019
				• PCBs (Polychlorinated biphenyls) ◦ Source Unknown *Fish Consumption Advisory for PCBs.*	0.64 Miles	1998	5A	2019
4	Arroyo Seco Reach 1 (LA River to West Holly Ave.)	River & Stream	40515010 / 18070104	• Benthic-Macroinvertebrate Bioassessments ◦ Source Unknown	5.2 Miles	2010	5A	2021
				• Coliform Bacteria ◦ Source Unknown	5.2 Miles	2002	5A	2009
				• Trash ◦ Nonpoint Source ◦ Surface Runoff ◦ Urban Runoff/Storm Sewers	5.2 Miles	2002	5B	2008
4	Arroyo Seco Reach 2 (West Holly Ave to Devils Gate Dam)	River & Stream	40515010 / 18070104	• Coliform Bacteria ◦ Source Unknown	4.4 Miles	2002	5A	2009
				• Trash ◦ Nonpoint Source ◦ Surface Runoff ◦ Urban Runoff/Storm Sewers	4.4 Miles	1996	5B	2008
4	Artesia-Norwalk Drain	River & Stream	40515010 / 18070104	• Indicator Bacteria ◦ Source Unknown	2.5 Miles	2010	5A	2021
				• Selenium ◦ Source Unknown	2.5 Miles	2010	5A	2021
4	Avalon Beach	Coastal & Bay Shoreline	40511000 / 18070107	• Indicator Bacteria ◦ Source Unknown *Area affected is between Pier and BB restaurant (2/3), between Pier and BB restaurant (1/3), between storm drain and Pier (1/3). and between BB restaurant and the Tuna Club.*	0.67 Miles	2002	5A	2019
4	Ballona Creek	River & Stream	40513000 / 18070104	• Cadmium (sediment) ◦ Source Unknown *A USEPA-approved TMDL has made a finding of non-impairment for this pollutant.*	6.5 Miles	1996	5A	2005
				• Coliform Bacteria ◦ Nonpoint Source	6.5 Miles	2002	5B	2007

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ◦ POTENTIAL SOURCES *Relevant Notes*	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	DATE***
				◦ Point Source				
				• Copper, Dissolved ◦ Nonpoint Source	6.5 Miles	2006	5B	2005
				• Cyanide ◦ Source Unknown	6.5 Miles	1996	5A	2019
				• Lead ◦ Source Unknown	6.5 Miles	2002	5B	2005
				• Selenium ◦ Source Unknown	6.5 Miles	2006	5B	2005
				• Toxicity ◦ Source Unknown	6.5 Miles	1996	5B	2005
				• Trash ◦ Source Unknown	6.5 Miles	1996	5B	2001
				• Viruses (enteric) ◦ Nonpoint Source ◦ Point Source	6.5 Miles	1996	5B	2007
				• Zinc ◦ Source Unknown	6.5 Miles	1996	5B	2005
4	Ballona Creek Estuary	River & Stream	40513000 / 18070104	• Cadmium ◦ Source Unknown	2.3 Miles	1992	5B	2005
				• Chlordane (tissue & sediment) ◦ Nonpoint Source ◦ Point Source	2.3 Miles	1998	5B	2005
				• Coliform Bacteria ◦ Nonpoint Source ◦ Point Source	2.3 Miles	1998	5B	2007
				• Copper ◦ Source Unknown	2.3 Miles	1992	5B	2005
				• DDT (tissue & sediment) ◦ Nonpoint Source ◦ Point Source	2.3 Miles	2006	5B	2005
				• Lead (sediment) ◦ Nonpoint Source ◦ Point Source	2.3 Miles	1992	5B	2005
				• PAHs (Polycyclic Aromatic Hydrocarbons) (sediment) ◦ Nonpoint Source ◦ Point Source	2.3 Miles	1998	5B	2005
				• PCBs (Polychlorinated biphenyls) (tissue & sediment)	2.3 Miles	1998	5B	2005

Table 2-1. Beneficial Uses of Inland Surface Waters (Continued).

WATERSHED[a]	WBD No.	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
MALIBU CREEK WATERSHED																							
Malibu Lagoon [c]	180701040104							E							E	E	E		Ee	Ef	Ef		E
Malibu Creek	180701040104	P*										E	E				E		E	E	E		E
Cold Creek	180701040104	P*											P				E		E		P		E
Las Virgenes Creek	180701040103	P*										E	P				E		E	P	P		E
Century Reservoir	180701040104	P*										E					E						E
Malibou Lake	180701040104	P*						E				E					E		E				E
Medea Creek Reach 1 (Malibou Lake to Lindero Creek Reach 1)	180701040102	P*				I						I	P				E		E				E
Medea Creek Reach 2 (above Lindero Creek Reach 1)	180701040102	I*				I						E					E						E
Lindero Creek Reach 1 (Medea Creek Reach 1 to Lake Lindero)	180701040102	P*										I					E						
Lindero Creek Reach 2 (above Lake Lindero)	180701040102	P*										I					E						
Triunfo Creek Reach 1 (Malibou Lake to Lobo Canyon)	180701040104	P*										I					E						
Triunfo Creek Reach 2 (Lobo Canyon to Westlake Lake)	180701040101	P*				I						I					E		E				
Westlake Lake	180701040101	P*						E				E					E						
Potrero Valley Creek	180701040101	P*				I						P					E						
Lake Eleanor Creek	180701040101	P*				I						I					E						
Lake Eleanor	180701040101	P*				E						E					E		E				E
Las Virgenes (Westlake) Reservoir	180701040101	E	E	E	E							P					E						
Hidden Valley Creek	180701040101	I*				I						I					E						
Lake Sherwood	180701040101	P*				E		E				E					E						E
BALLONA CREEK WATERSHED																							
Ballona Creek Estuary (ends at Centinela Creek) [c,w]	*180701040300*							E		E					E	E	E		Ee	Ef	Ef	E	
Ballona Lagoon/ Venice Canals [c]	*180701040403*							E		E					E	E	E		Ee	Ef	Ef	E	E
Ballona Wetlands [c]	*180701040300*														E		E		Ee	Ef	Ef		E
Del Rey Lagoon [c]	*180701040500*							E		E					E		E		Ee	Ef	Ef		E
Ballona Creek Reach 2 (Estuary to National Blvd.)	*180701040300*	P*										P					P						
Ballona Creek Reach 1 (above National Blvd.)	*180701040300*	P*										P					E						
LOS CERRITOS CHANNEL WATERSHED																							
Los Cerritos Wetlands [c]	*180701040702*							E		E					E		E		Ee	Pf	Pf	E	E
Los Cerritos Channel Estuary (Ends at Anaheim Rd.) [c]	*180701040702*		E					E		E					E	E	E		Ee	Ef	Ef	E	
Sims Pond	*180701040702*	P*										P					E						E
Los Cerritos Channel	*180701040702*	P*										I					E						
Colorado Lagoon	*180701040702*									E		P					E					E	

E: Existing beneficial use
P: Potential beneficial use
I: Intermittent beneficial use
E,P, and I: shall be protected as required.
* Asterisked MUN designations are designated under SB 88-63 and RB 89-03. Some designations may be considered for exemption at a later date (See pages 2-3, 4 for more details).
au: The REC-1 use designation does not apply to recreational activities associated with the swimmable goal as expressed in the Federal Clean Water Act section 101(a)(2) and regulated under the REC-1 use in the Basin Plan, or the associated bacteriological objectives set to protect those activities. However, water quality objectives set to protect other REC-1uses associated with the fishable goal as expressed in the Federal Clean Water Act section 1010(a)(2) shall remain in effect for waters where the ~~(ac)~~ (au) footnote appears.
av: The High Flow Suspension only applies to water contact recreational activities associated with the swimmable goal as expressed in the federal Clean Water Act section 101(a)(2) and regulated under the REC-1 use, non-contact water recreation involving incidental water contact regulated under the REC-2 use, and the associated bacteriological objectives set to protect those activities. Water quality objectives set to protect (1) other recreational uses associated with the fishable goal as expressed in the federal Clean Water Act section 101(a)(2) and regulated under the REC-1 use and (2) other REC-2 uses (e.g., uses involving the aesthetic aspects of water) shall remain in effect at all times for waters where the ~~(ad)~~ (av) footnote appears.
** The dividing line between "Ballona Creek" and "Ballona Creek to Estuary" is the point at which the vertical channel walls transition to sloping walls.

Footnotes are consistent for all beneficial use tables.
a: Waterbodies are listed multiple times if they cross hydrologic area or subarea boundaries. Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
b: Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
c: Coastal waterbodies which are also listed in Coastal Features Table (2-3) or in Wetlands Table (2-4).
e: One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
f: Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.
w: These areas are engineered channels. All references to Tidal Prisms in Regional Board documents are functionally equivalent to estuaries.