Attachment D
Water Quality Memorandum

ESA

HYDROLOGY AND WATER QUALITY TECHNICAL MEMORANDUM

Date: May 4, 2021

To: LPC West

From: Kimley-Horn and Associates, Inc.

CC: Jamie McLaughlin

Subject: 3855 Watseka – Hydrology and Water Quality Technical Memorandum

Introduction

Kimley-Horn & Associates, Inc. is providing this Hydrology and Water Quality Technical Memorandum as a supplement to the CEQA Document. The purpose of this memorandum is to analyze the potential impact of the project to the existing storm drain infrastructure system, and to provide a description of proposed water quality features to meet Low Impact Development (LID) requirements.

The project site is approximately 1.13 acres and is bounded by Watseka Avenue to the west, a commercial building to the south, Southern California Hospital to the east, and an Alley to the north. The project proposes to construct a multi-story office building with multi-level subterranean parking. To provide for the new use, the existing surface parking lot and two existing commercial buildings will be demolished.

Hydrology

Existing Conditions

The existing project site is currently developed and is comprised of a surface parking lot and two existing commercial buildings. The majority of the site is impervious, including the existing buildings, concrete hardscape areas, and asphalt concrete paving for the surface parking lots. The remaining pervious areas are limited to landscaped parking islands and small landscaped planters adjacent to the existing commercial buildings.

- Existing Impervious Area = 1.05 AC (93%)
- Existing 50-Year Runoff = 3.36 CFS

The existing site elevations range from approximately 100-104 feet above mean sea level (AMSL). The existing site gradient and stormwater runoff generally flow generally northerly towards the Alley or southeasterly towards Watseka Avenue. Within Lots 16 & 17, as shown in Figure 1, site drainage either sheet flows offsite directly to the gutter within the Alley or is captured by an existing drainage inlet. The outlet of this existing drainage inlet and of the existing building roof drainage are undetermined at this time and require further study but are assumed to ultimately discharge into the Alley as well. Within Lots 18-28, as shown in Figure 1, site drainage sheet flows towards and along

the parking islands, across the sidewalk, and into Watseka Avenue. See Figure 1 below for Existing Drainage Conditions.

Once runoff has left the site and is in the public right-of-way, it is directed via concrete gutter easterly along the Alley, then southerly along Watseka Avenue, until it enters the County storm drain system through a curb opening catch basin at the intersection of Watseka Avenue and Washington Blvd. The storm drain system ultimately discharges into Ballona Creek. See Figure 2 below for LA County Storm Drain System Map.

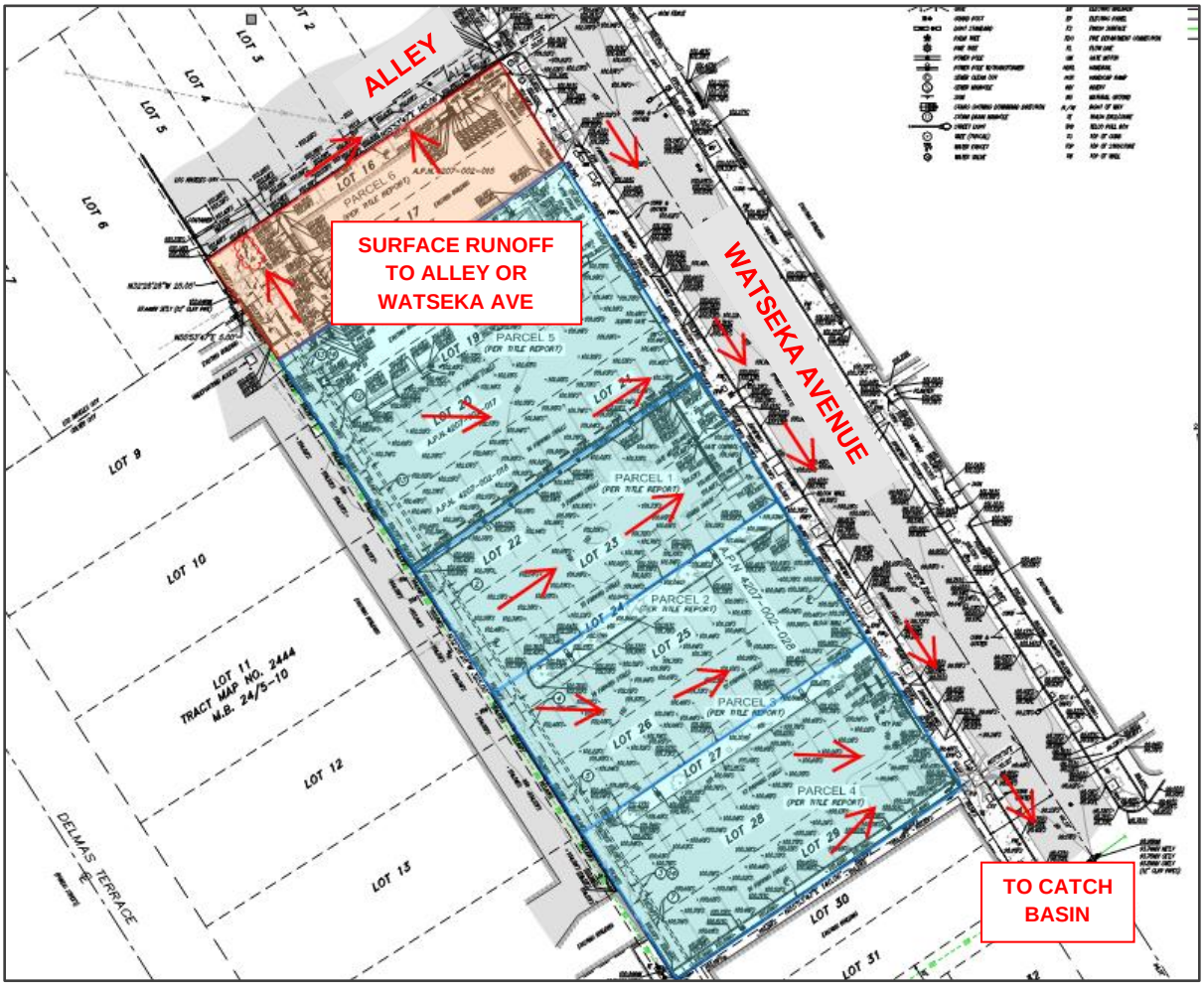

Figure 1. Existing Drainage Conditions.

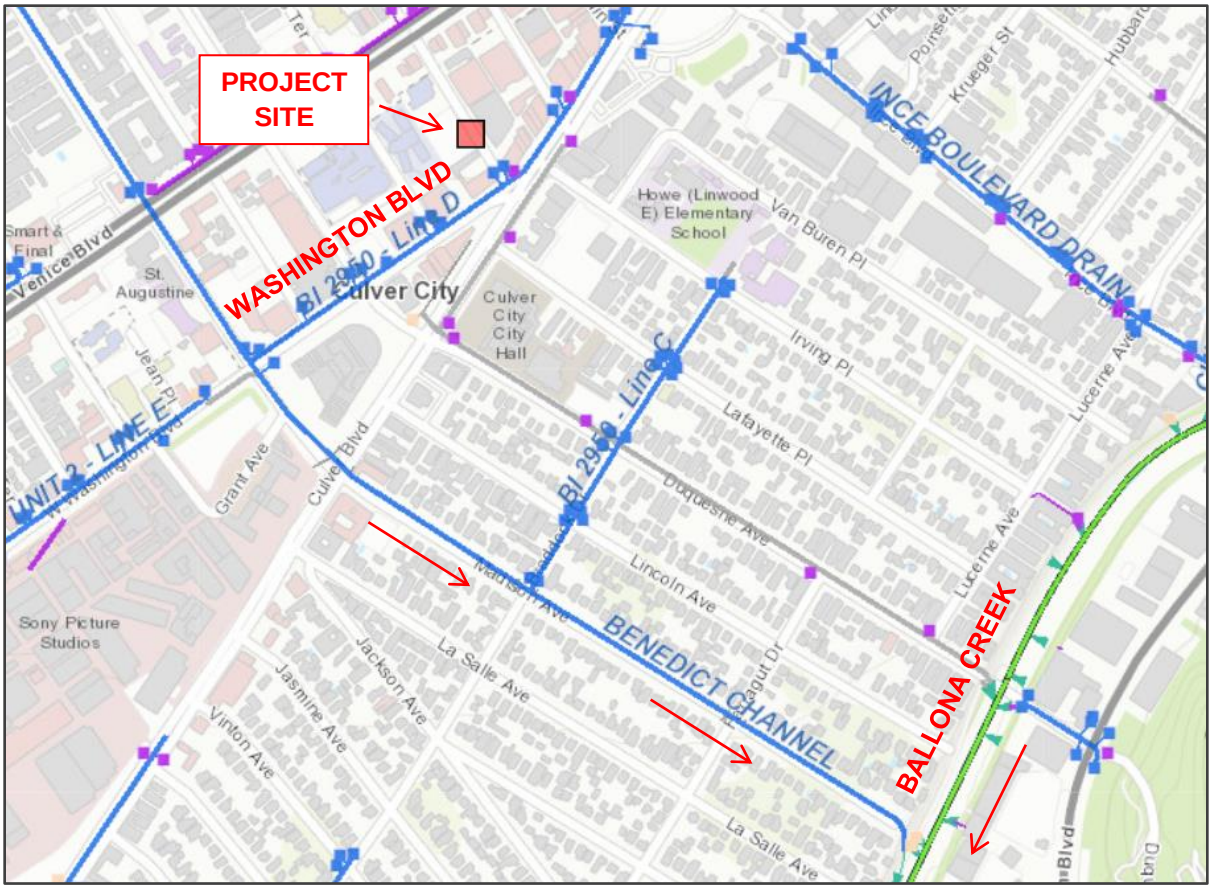

Figure 2. LA County Storm Drain Map.

Proposed Conditions

The project proposes to construct a multi-story office building with multiple levels of subterranean parking. The majority of the site will be impervious, comprised of the new building. Perimeter site areas will be pervious and comprised of landscaped drainage swales.

- Proposed Impervious Area = 0.99 AC (89%)
- Proposed 50-year Runoff = 3.35 CFS

Stormwater runoff from the proposed site will be entirely captured and treated by an LID system (further discussed in the Water Quality section of this report). Building roof drainage will be captured by roof drains and routed via plumbing to the LID system within the building. Site drainage will be captured by drainage swales and inlets, then routed to the LID system within the building as well. Prior to entering the building, the drainage swales flow easterly (north of the building) and southwesterly (west and south of the building). Any overflow stormwater runoff beyond the required volume will be discharged via two curb drains along Watseka Avenue. As described in the Existing

Conditions section of this report, once within Watseka Avenue drainage flows southerly via gutter until it enters the County storm drain system at the intersection of Watseka Avenue and Washington Blvd. See Figure 3 below for Preliminary Grading and Drainage.

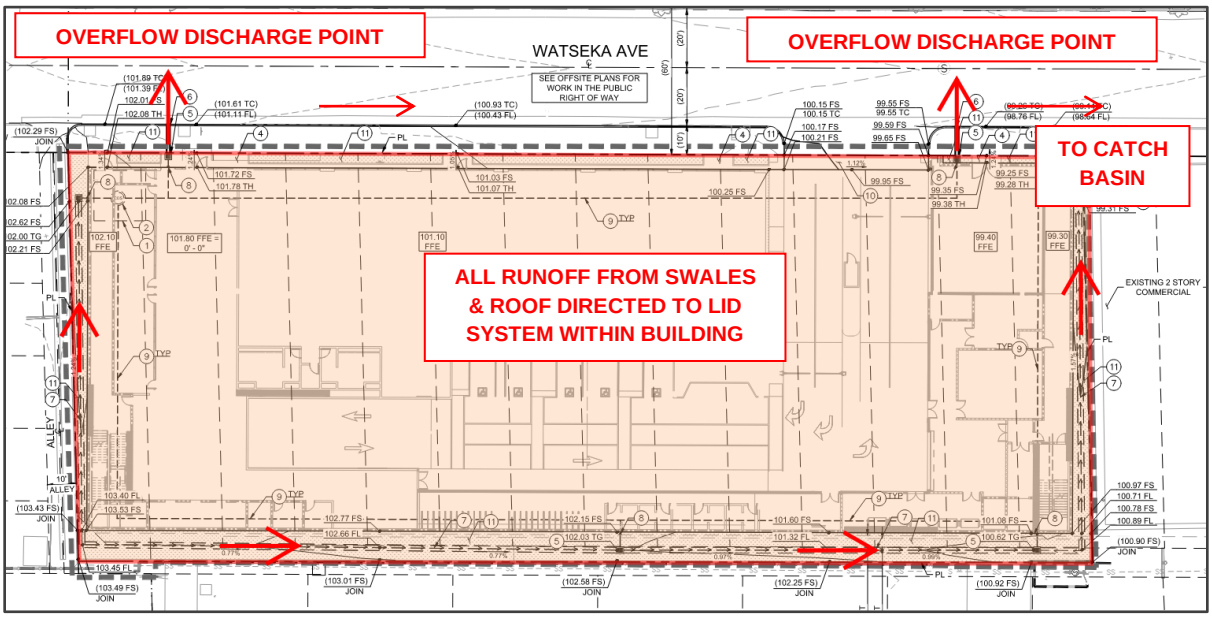

Figure 3. Preliminary Grading and Drainage.

Water Quality

The project is required to comply with County and City LID requirements, which require implementation of a stormwater treatment system that captures the 85th percentile runoff volume for treatment. The stormwater treatment system must be selected in the following order as approved by the City: infiltration, rainwater capture and reuse, or combination / alternative compliance systems.

Based on the project geotechnical investigation, infiltration is infeasible for the project due to high groundwater table relative to the proposed subterranean parking garage. The historic groundwater depth for the project site was noted to be between 42 to 44 feet, and the excavation depth for the subterranean parking was proposed at a maximum of 45 feet. Therefore, the project proposes to implement a capture and reuse system. In order to conserve potable water, the irrigation system will make use of captured rainwater contained within a cistern located in the subterranean levels of the project. The irrigation system will include weather and/or soil moisture-based controllers that automatically adjust irrigation in response to changes in plant watering needs as weather or soil conditions change. See Figure 4 for a Sample Rainwater Harvesting System.

As described in the Proposed Hydrology section of this report, all site and building runoff will be captured and directed to the rainwater harvesting system. The project proposes a slightly larger cistern than required, approximately 4,500 CF, with a required mitigated volume of approximately

3,700 CF. The cistern will be located on level P3, and a pre-treatment unit for debris will be located on level P2. See Figure 5 for Preliminary LID.

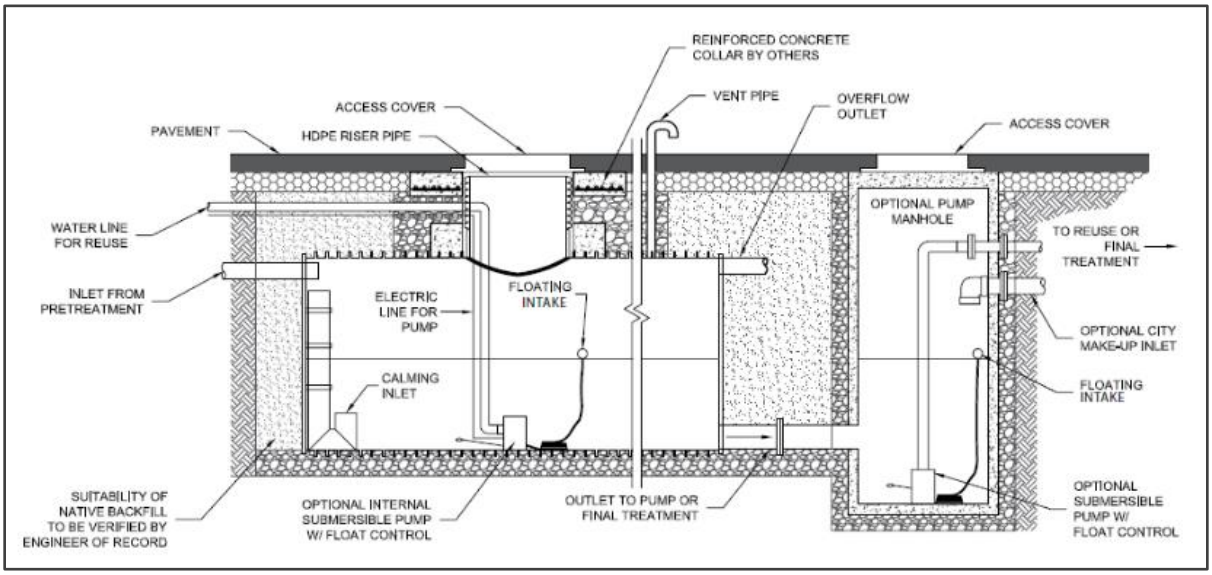

Figure 4. Sample Rainwater Harvesting System.

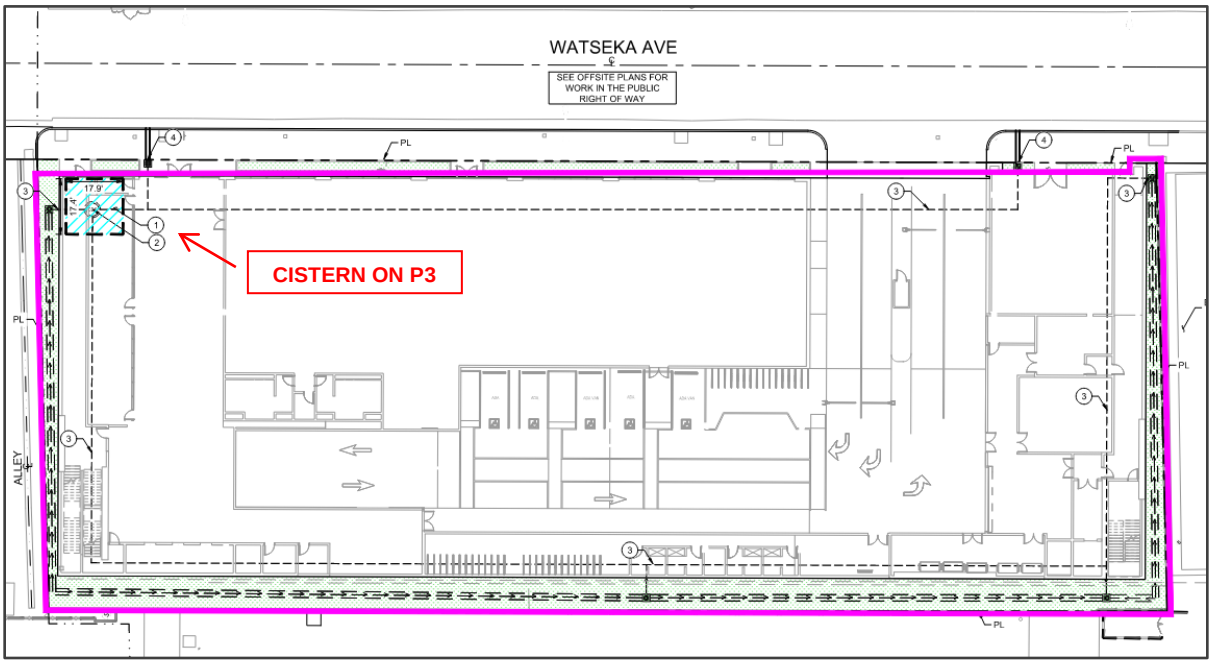

Figure 5. Preliminary LID.

Conclusion

No significant impacts to hydrology or water quality are anticipated as a result of this project. The existing site is already developed with majority impervious area, and the proposed project will decrease the amount of impervious area resulting in a reduction of stormwater runoff as well. In addition, while there are currently no existing drainage features or water quality measures on site, the project proposes to introduce both which would improve the current condition.

- Existing Impervious Area = 1.05 AC (93%)
- Proposed Impervious Area = 0.99 AC (89%)

- Existing 50-Year Runoff = 3.36 CFS
- Proposed Runoff Volume = 3.35 CFS

- No existing water quality measures
- Proposed rainwater harvesting system for LID requirement