Appendix I

Water Memorandum

6080 Center Drive, Suite 700 Los Angeles, CA 90045 310.665.2800 kpff.com

MEMO

DATE: June 16, 2016

TO: City of West Hollywood

FROM: Frank LaRocca, PE

RE: 8920 Sunset – Water Infrastructure

This memo describes the results of the existing and proposed water infrastructure analysis and identifies and identifies and existing and future constraints with the existing water infrastructure for the Arts Club project at 8920 Sunset Boulevard in West Hollywood, CA.

Existing Water Infrastructure – Domestic and Fire Water for this site is served by the Beverly Hills Water Department (BHWD) through an existing 6" water line in Hilldale Avenue and an existing 8" water line in Sunset Boulevard. See Appendix A for the existing water infrastructure.

Flow testing was performed by BHWD on fire hydrants nearby the project site to determine the available water flow in their water system adjacent to the site. Fire Hydrant No. 9002, located at the corner of Sunset Boulevard and Hilldale Avenue and Fire Hydrant No. 5039 located on Hilldale Avenue just south of the project site were two of the hydrants chosen. The results of the test show that the available water flow from FH# 9002 and FH# 5039 are **4,638 GPM** and **5,733 GPM** respectively at 20 PSI. See Appendix B for the BHWD Flow Test.

Proposed Water Infrastructure – Proposed water infrastructure will include new water meters and lateral connections to the existing water system in Hilldale Avenue and/or Sunset Boulevard to provide domestic water, fire water and irrigation water to the proposed project.

Existing/Future Water Infrastructure Constraints - To determine the constraints on the existing water infrastructure as a result of the proposed project, water flow requirements for the proposed project were measured against the available water flow from the existing infrastructure. If the existing infrastructure is sufficient to serve the future demand, then there should be no constraints or significant impacts to the existing or future water infrastructure.

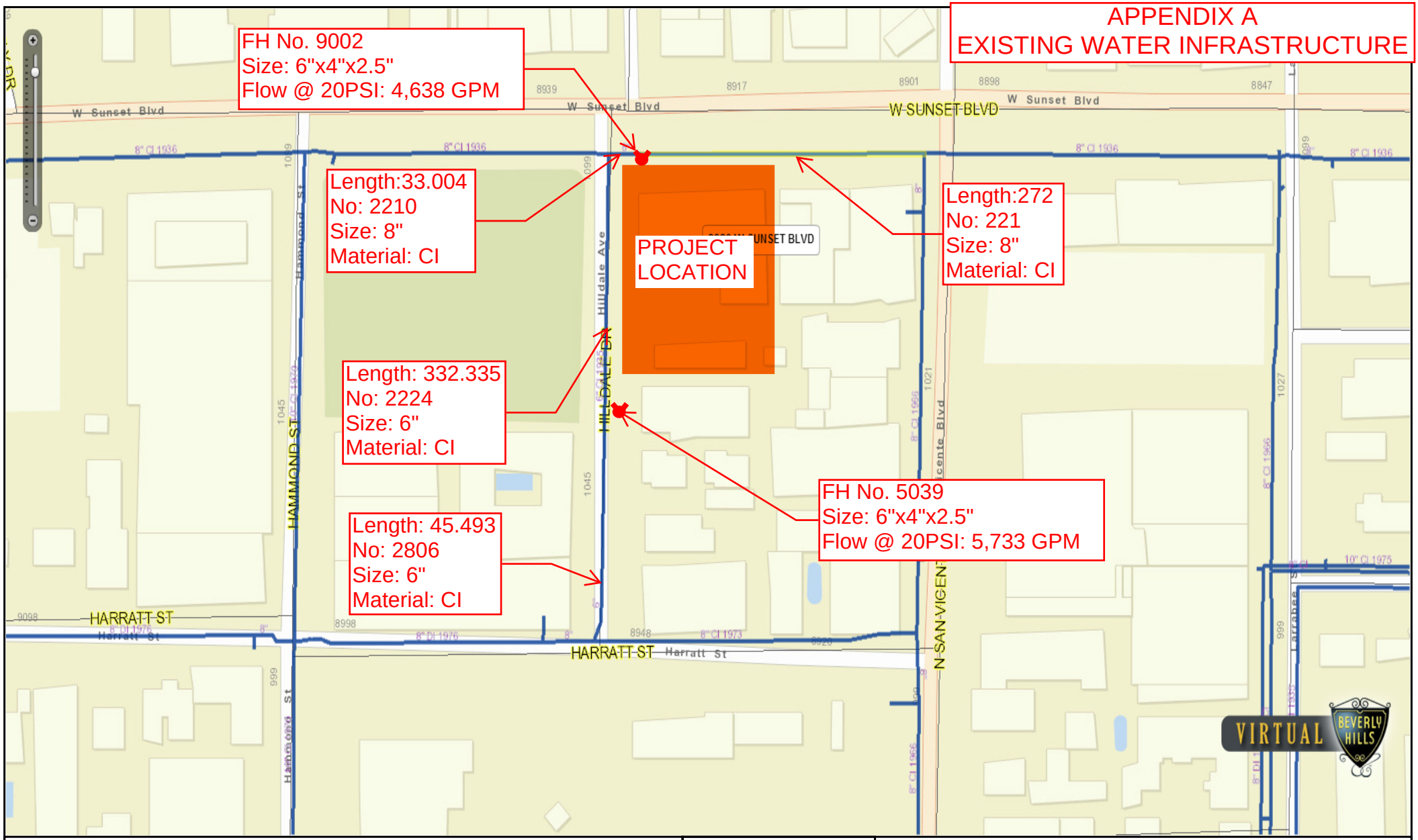
The water flow requirement for the proposed project is equal to the fire water demand, as this is much larger than the domestic water an irrigation water demand. Fire flow requirements for the project are set by the Los Angeles County Fire Department (LACFD) and are described in The Los Angeles County Fire Code, Appendix B (LAFC). The proposed project includes approximately 130,000-sf of fully-sprinklered Type 1 construction. Per Table B105.1 of the LAFC with the

allowable 50% reduction for fully-sprinklered buildings, the fire flow requirement for the proposed project will be **2,000 GPM**.

Since the flow test performed on hydrants on both Hilldale Avenue and Sunset Boulevard are greater that the anticipated fire flow requirement for the building, there should be no constraints on the existing water infrastructure and, therefore, no constraints or significant impact.

Attachments:
Appendix A – Existing Water Infrastructure
Appendix B – Beverly Hills Water Department (BHWD) Flow Test

APPENDIX A
EXISTING WATER INFRASTRUCTURE



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Projection: Web Mercator

Author:

Date: 20 October 2015

8920 Sunset-Water Lines

APPENDIX B
FIRE FLOW TEST

PART II-A **INFORMATION ON FIRE FLOW AVAILABILITY**
(To be completed by Water Purveyor)

Location Doheny Drive & Sunset Blvd

Hydrant Number 9001

Distance from Nearest Property Line 200' Size of Hydrant 6"x4"2.5" Size of Water main 8"

Static PSI 45 Residual PSI 40 Orifice size 4" Pitot 22

Fire Flow at 20 PSI 4,351 gpm Duration 3mins Flow Test Date / Time 11.18.15 5:45pm

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Location 1024 Hilldale Ave @ Sunset

Hydrant Number 5039

Distance from Nearest Property Line 100' Size of Hydrant 6"x4" 2.5" Size of Water main 8"

Static PSI _____ Residual PSI _____ Orifice size _____ Pitot 22

Fire Flow at 20 PSI 5,733 gpm Duration 3mins Flow Test Date / Time 11.19.15 6:20AM

Location ~~San Vicente Blvd~~ Hilldale Ave @ Sunset Blvd

Hydrant Number 9002

Distance from Nearest Property Line 3(x)' Size of Hydrant 6"x4x2.5" Size of Water main 8"

Static PSI 45 Residual PSI 40 Orifice size _____ Pitot 25

Fire Flow at 20 PSI 4,638 gpm Duration 2mins Flow Test Date / Time 11.19.15 6AM

PART II-B **SPRINKLERED BUILDINGS/PRIVATE FIRE HYDRANTS ONLY**

Detector Location (check one) ☐ Above Grade ☐ Below Grade ☐ Either

Backflow Protection Required (Fire Sprinklers/Private Hydrant) (check one) ☐ Yes ☐ No

Minimum Type of Protection Required (check one) ☐ Single Check Detector Assembly

☐ Double Check Detector Assembly ☐ Reduced Pressure Principle Detector Assembly

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City of Beverly Hills
Water Purveyor

[signature]
Signature

11.24.15
Date

Water Systems Tech
Title

This Information is Considered Valid for Twelve Months

Fire Department approval of building plans shall be required prior to the issuance of a Building Permit by the jurisdictional Building Department. Any deficiencies in water systems will need to be resolved by the Fire Prevention Division only prior to this department's approval of building plans.

Public Works Transportation
345 Foothill Road
Beverly Hills, CA 90210

Tel. No. (310) 285-2467
Fax No. (310) 278-1838

Capacity Test Report

Hydrant #5039

Residual Hydrant Information

Residual Hydrant ID: 9002 Feature ID: Owner: Beverly Hills, CA
Address: Street: Hilldale Avenue
Cross Street / Intersection: Sunset Boulevard
Location: Sidewalk Sect: 41 Qrtr Sect:
Make: Rich Model: 550 Date stamped: 1973 GPS: 06/08/11
Main size: 8 # of Pumper Nozzles: 1 Pumper Nozzle size: 4 Easting: 6444623.0621
Elevation: # of Hose Nozzles: 1 Hose Nozzle size: 2.5 Northing: 1855546.2573

Flow Hydrant Information

Flow Hydrant ID: 5039 Feature ID Owner: Beverly Hills, CA
Address: 1024 Street: Hilldale Avenue
Cross Street / Intersection:
Location: Parkway Sect.: Qrtr Sect:
Make: Model: Date stamped: GPS:
Main size: # of Pumper Nozzles: Pumper Nozzle size: Easting:
Elevation: # of Hose Nozzles: Hose Nozzle size: Northing:

Capacity Test Results

Test Date: 11/19/2015 **Time of Day:** 6:20 **Technicians:** BH/
Static Pressure: 45 **Residual Pressure:** 42 **GPM Obtained:** 1828
Static HGL: **Residual HGL:** **Pressure Zone:** 5 West Hollywood
Class: AA **Bonnet Color:** Blue

Flow Hydrant	Diameter	Coefficient	Pitot Reading	GPM	Minutes Flowed	Estimated Usage
5039	3.81	0.9	22.00	1,828	3	5,484
			Total GPM	1,828	Usage:	5,484

Available Flow at 20 PSI: ***5,733.79***
Available Flow at 30 PSI: 4,351.54

Test Comment:

Public Works Transportation
345 Foothill Road
Beverly Hills, CA 90210

Tel. No. (310) 285-2467
Fax No. (310) 278-1838

Capacity Test Report

Hydrant #9002

Residual Hydrant Information

Residual Hydrant ID: 9003 Feature ID: Owner: Beverly Hills, CA
Address: Street: San Vicente Boulevard
Cross Street / Intersection: Sunset Boulevard
Location: Sidewalk Sect: 41 Qrtr Sect:
Make: Rich Model: 550 Date stamped: 1973 GPS: 06/08/11
Main size: 8 # of Pumper Nozzles: 1 Pumper Nozzle size: 4 Easting: 6444899.7553
Elevation: # of Hose Nozzles: 1 Hose Nozzle size: 2.5 Northing: 1855519.1929

Flow Hydrant Information

Flow Hydrant ID: 9002 Feature ID Owner: Beverly Hills, CA
Address: Street: Hilldale Avenue
Cross Street / Intersection: Sunset Boulevard
Location: Sidewalk Sect.: 41 Qrtr Sect:
Make: Rich Model: 550 Date stamped: 1973 GPS: 06/08/11
Main size: 8 # of Pumper Nozzles: 1 Pumper Nozzle size: 4 Easting: 6444623.0621
Elevation: # of Hose Nozzles: 1 Hose Nozzle size: 2.5 Northing: 1855546.2573

Capacity Test Results

Test Date: 11/19/2015 Time of Day: 6:00 Technicians: BH/
Static Pressure: 45 Residual Pressure: 40 GPM Obtained: 1949
Static HGL: Residual HGL: Pressure Zone: 5 West Hollywood
Class: AA Bonnet Color: Blue

Flow Hydrant	Diameter	Coefficient	Pitot Reading	GPM	Minutes Flowed	Estimated Usage
9002	3.81	0.9	25.00	1,949	2	3,897
			Total GPM	1,949	Usage:	3,897

Available Flow at 20 PSI: ***4,638.76***
Available Flow at 30 PSI: 3,520.49

Test Comment: