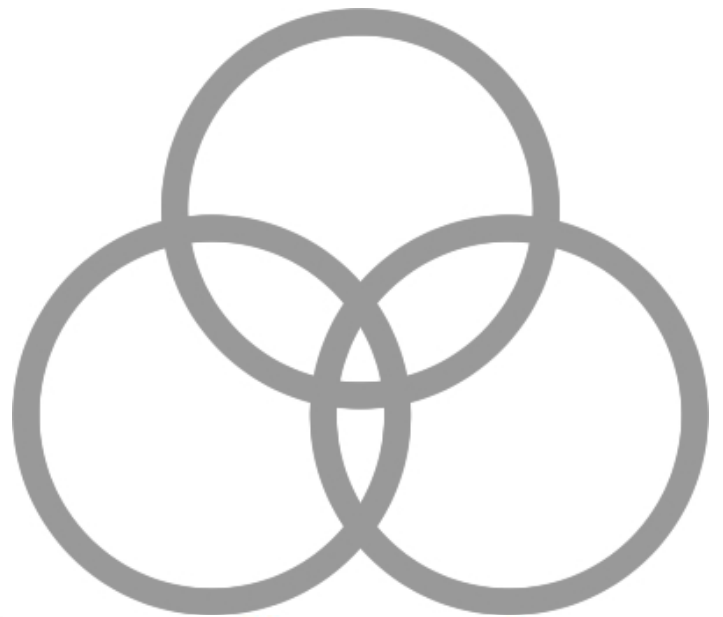
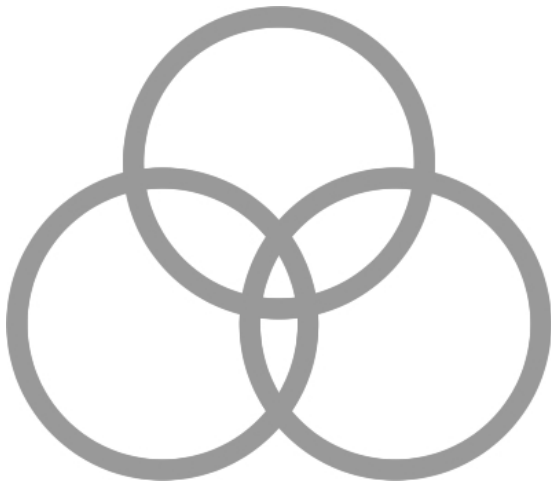
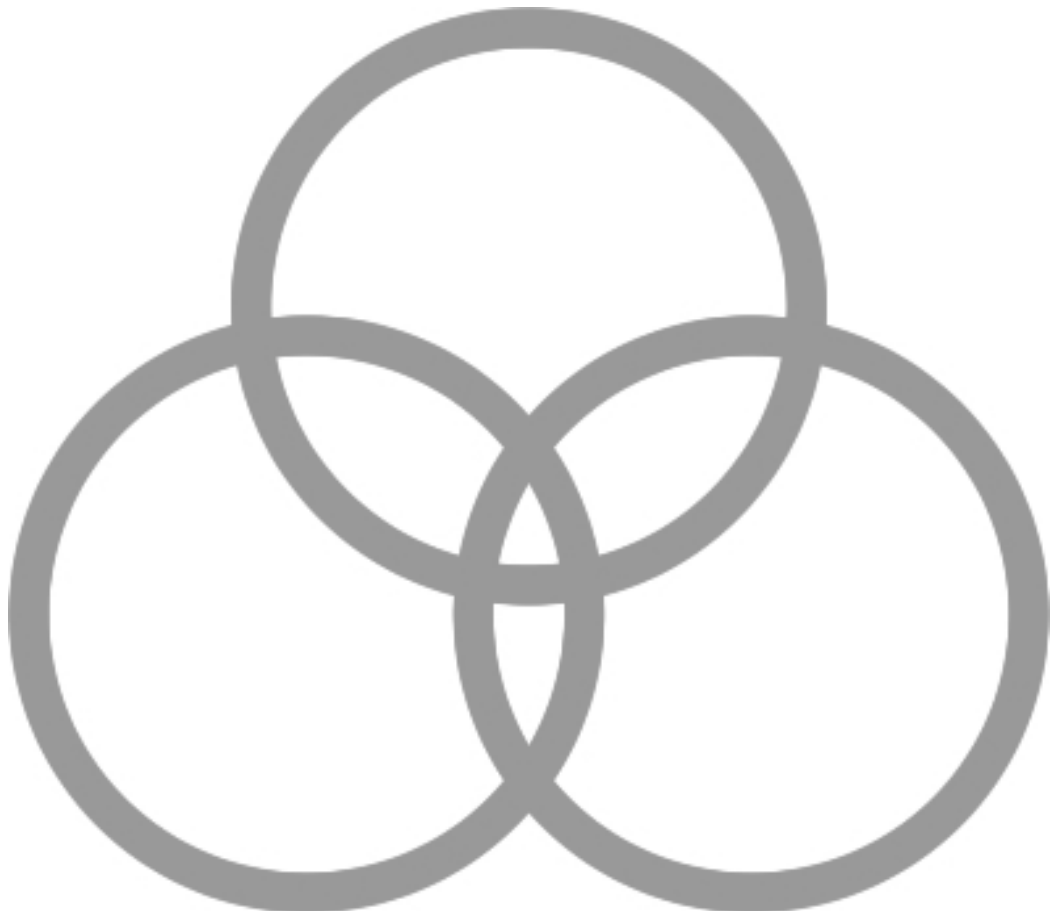




One Scottsdale
Water Design Report
3 engineering Job #: 5246
September 6, 2022
COS# 555-PA-2022



ONE SCOTTSDALE

WATER DESIGN REPORT

Prepared for:

Augusta Development
34522 N. Scottsdale Road, Suite 120-638
Scottsdale, Arizona 85266
Contact: Bo Nickoloff
Phone: (651) 324-9492



Expires 12/31/2024

Matthew J. Mancini, P.E.

September 6, 2022

Submittal to:

City of Scottsdale
7447 E. Indian School Road, Suite 105
Scottsdale, Arizona 85251

Prepared by:

3 engineering, L.L.C.
6370 E. Thomas Road, Suite 200
Scottsdale, Arizona 85251
Contact: Matthew J. Mancini, P.E.

Job Number 5246

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Water Exhibit.....	WE1
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1. Introduction

The purpose of this water report is to present the existing and proposed water plan for the project, One Scottsdale (Site). It is our opinion the proposed water concept is in accordance with the City of Scottsdale's Design Standards & Policies Manual (Ref. 1).

The Site, is located in Section 26, Township 4 North, Range 4 East of the Gila and Salt River Meridian, Maricopa County, Arizona within the City of Scottsdale, Arizona. The Site is located North of Henkel Way, and East of Scottsdale Road, Scottsdale, Arizona 85255 (Portion of APN 215-05-004A & 215-05-006). The Site is bound on the south by Henkel Way and Henkel Building, the east by a vacant parcel, on the north by a vacant parcel, and on the west by a vacant parcel. See Appendix A for a Vicinity Map.

The Site is zoned PRC. The Site currently exists as a vacant un-developed parcel. The intent of this project is to construct an approximate 187,000 SF Senior Living Center, including new site utility, drainage, and circulatory infrastructure. The building will be sprinklered.

2. Design Documentation

Demands were calculated using the City of Scottsdale Design Standards and Policies Manual, which will serve as the basis of design for this project, and using Table 6.1-2 Average Day Demands. The site is in accordance with the City of Scottsdale design standards for water design.

3. Existing Conditions

The Site currently exists as a vacant un-developed parcel. See Appendix A for a vicinity map. The existing topography slopes from north to south at approximately 3.0% percent.

The Site is bound on the south by Henkel Way and Henkel Building and on the east, west, and north by vacant parcels. There is an existing 12" water line in Henkel Way. In addition, there is a proposed 12" waterline along the north side of the Site and at the Site's NE Corner that is being installed as part of the One Scottsdale Infrastructure. This is being installed by the Master Developer, will be installed prior to this development site, and is based on the Water Report completed by Wood Patel (Excerpts in Appendix C).. These two 12" water lines will be used to service the proposed project. See Exhibit WE1 for water design.

4. Proposed Conditions

The project consists of a Senior Living Center, including new site utility, drainage, and circulatory infrastructure. The on-site water system will be private and will connect to the existing infrastructure adjacent to the Site. The site proposes 6-inch fire line building connections. Fire Service will be provided by the City of Scottsdale, and is covered by the existing hydrants and proposed hydrants. See WE1 for the water design. The fire flow demand for the site is 1,937.50 gpm (7,750 gpm w/ 75% sprinkler reduction based on Section B105.1 of the International Fire Code at Type V-A construction for 187,000 SF), which is also greater than the City's 1,500 gpm fire flow requirement.

5. Computations

The following demand criteria was used in determining the system demands for the proposed site.

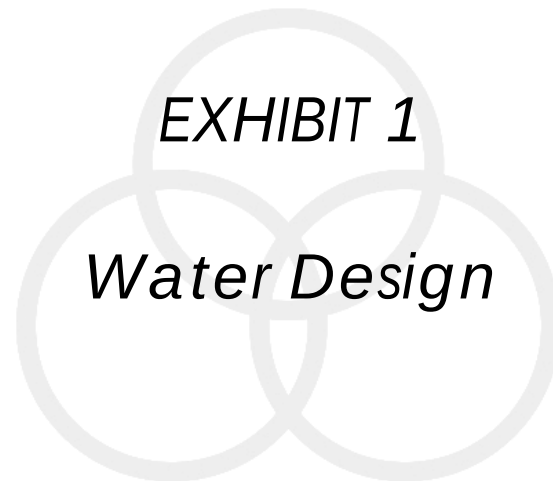
1. Domestic Demand (Resort Hotel) = 0.63 gallons/minute per room = $0.63 \times 120 = 75.6$ gal/min or 108,864 gal/day
2. Max Day Demand = $2.0 \times 75.6 \text{ gpm} = 151.20 \text{ gpm}$
3. Peak Hour Demand = $3.5 \times 75.6 \text{ gpm} = 264.60 \text{ gpm}$

TABLE 1: ON-SITE WATER DEMANDS	
Number of Rooms	120
Fire flow (7,750 gpm – 187,000 SF (largest building) x 0.75 for sprinkler = 1,937.50 gpm)	1,937.50 gpm
Max Day Demand	151.20 gpm
Fire flow + Max Day Demand	2,088.70 gpm

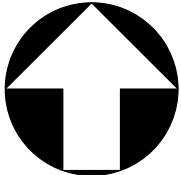
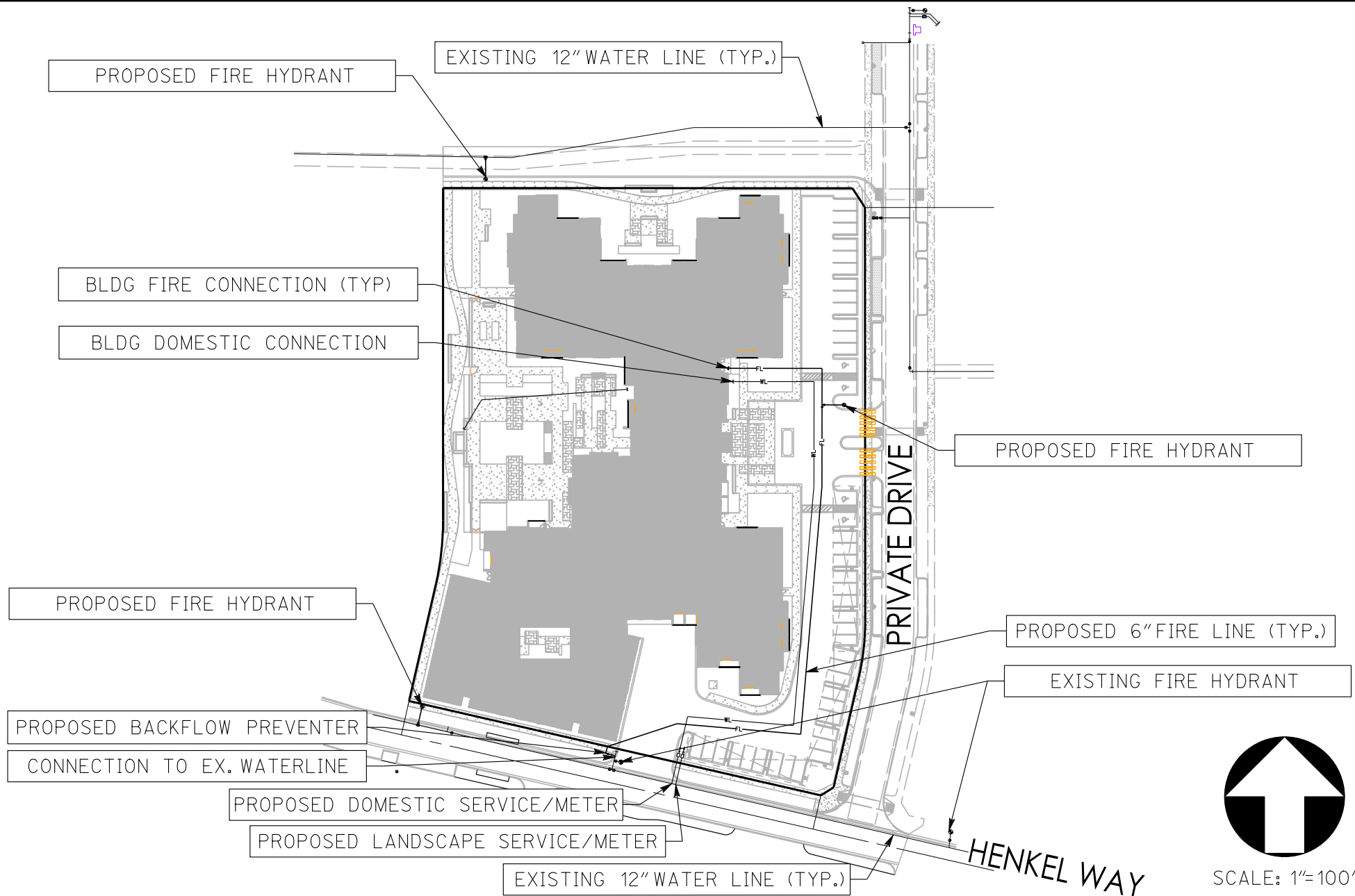
A fire flow test was completed on the existing hydrants adjacent to the site, and show, with safety factors, and flow rate of 3,740 gpm at 20-psi. See Appendix B for the fire flow test results

6. Summary

The Max Day Plus Fire Flow demand for the proposed site is 2,088.70 gpm. Per the fire flow test, the existing system provides adequate flow and pressure for the anticipated project demands. Therefore, this site meets the requirements for fire flow.



C:\My Secur\Syn\Projects_5000\5246_One Scottsdale\Reports\Water Report\5246_exb_WE01.dgn



SCALE: 1"=100'

WE1

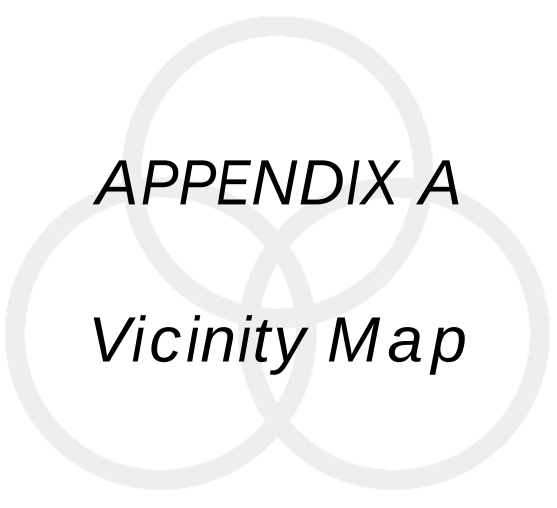
ONE SCOTTSDALE
SCOTTSDALE AZ

WATER EXHIBIT - WE1

3e engineering
planning civil engineering surveying

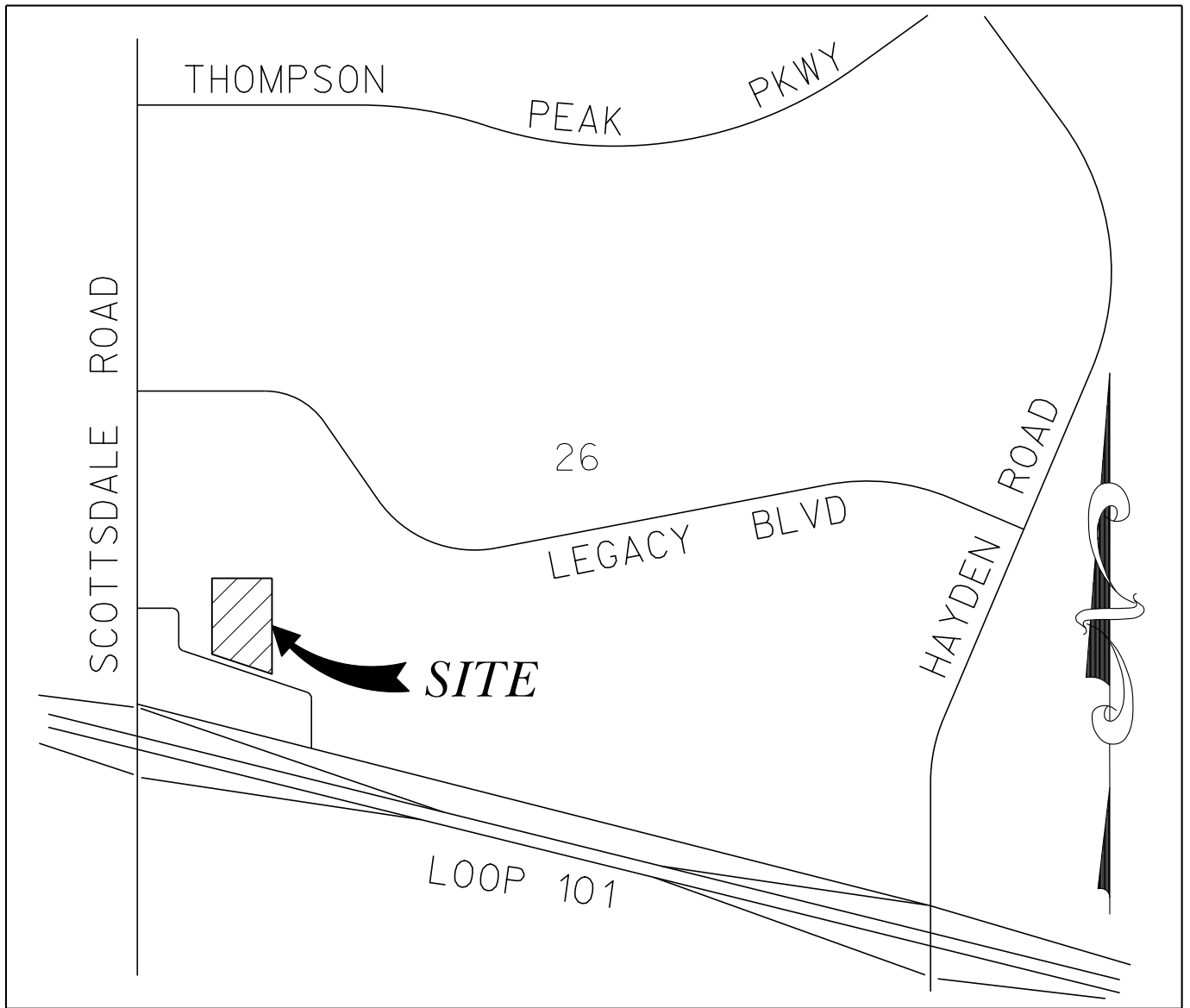
3 ENGINEERING, LLC
6370 E. THOMAS ROAD SUITE 200 SCOTTSDALE, ARIZONA 85251
PHONE: (602) 334-4387 - FAX: (602) 490-3230
WWW.3ENGINEERING.COM

DATE:	PROJECT NO.
8/19/22	5246



APPENDIX A

Vicinity Map



VICINITY MAP

N.T.S.

APPENDIX B

Fire Flow Test

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	101 & Scottsdale
Project Address:	101 & Scottsdale Road (NEC), Scottsdale, Arizona 85255
Client Project No.:	3E# 5246
Arizona Flow Testing Project No.:	22516
Flow Test Permit No.:	C69570
Date and time flow test conducted:	July 21, 2022 at 7:00 AM
Data is current and reliable until:	January 21, 2023
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Sonny Schreiner –City of Scottsdale-Inspector (602-819-7718)

Raw Test Data

Static Pressure: **54.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **43.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **27.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,233 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **4,107 GPM**

Data with 10% Safety Factor

Static Pressure: **48.6 PSI**
(Measured in pounds per square inch)

Residual Pressure: **37.6 PSI**
(Measured in pounds per square inch)

Distance between hydrants: Approx. 220 Feet

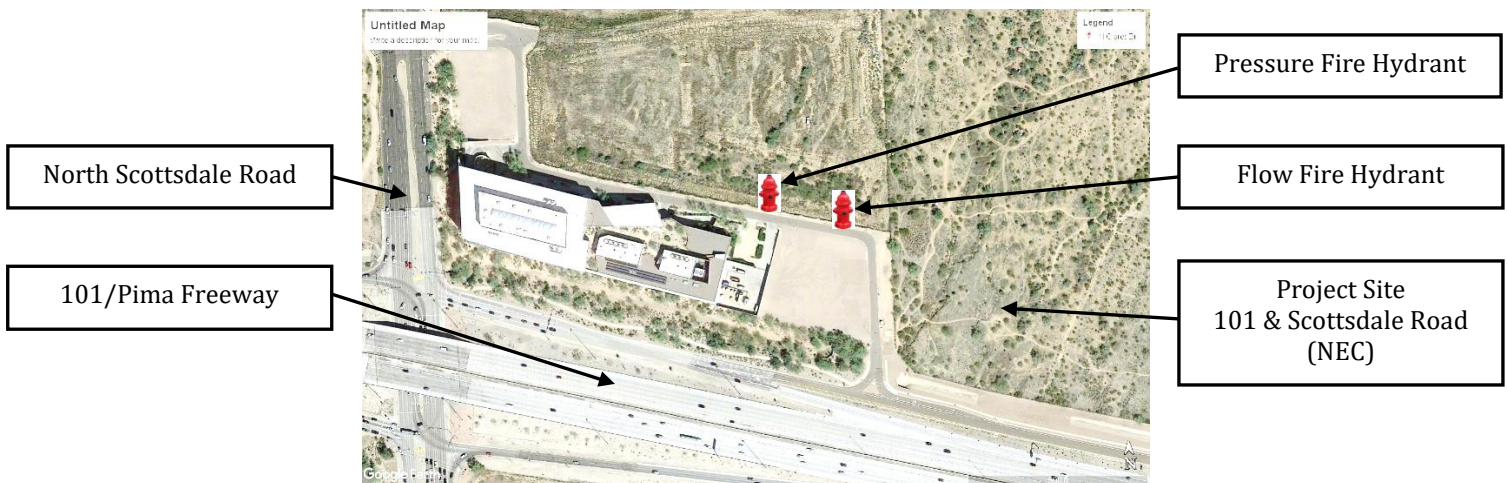
Main size: Not Provided

Flowing GPM: **2,233 GPM**

GPM @ 20 PSI: **3,740 GPM**

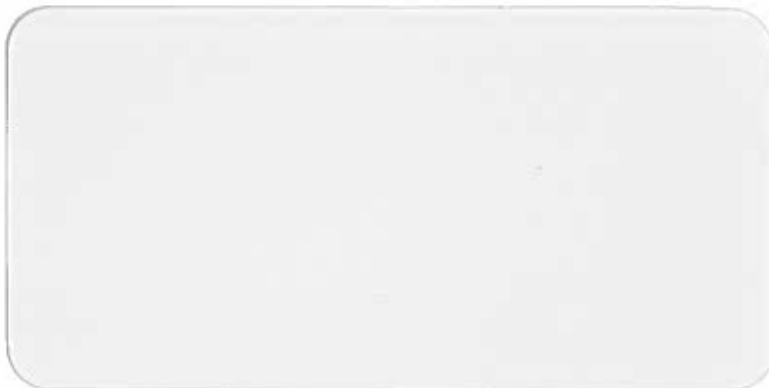
Flow Test Location

North ↑



APPENDIX C

*Excerpt from Water Report by Wood
Patel*



Accepted For:
City of Scottsdale
Water Resources Department
9379 E. San Salvador
Scottsdale, Arizona

By: Doug Mann
Date: 3.3.2016

20-ZN-2002#3
2/12/2016

WOOD/PATEL
MISSION: CLIENT SERVICE™

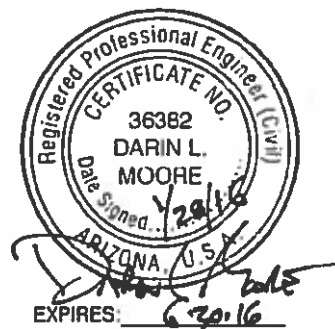
**ONE SCOTTSDALE
(Stacked 40s)
MASTER ON-SITE WATER PLAN**

Revised January 28, 2016
Revised February 10, 2012
Revised April 16, 2009
August 25, 2005
WP# 154391

Submitted to: **City of Scottsdale**
7447 East Indian School Road
Suite 205
Scottsdale, AZ 85251

Prepared for: **One Scottsdale Holdings, LLC**
7600 East Doubletree Ranch Road
Suite 300
Scottsdale, AZ 85258
Phone: (480) 367-7000
Fax: (480) 367-9788
Contact: Mr. Michael Burke

Prepared by: **Wood, Patel & Associates, Inc.**
2051 West Northern Avenue
Suite 100
Phoenix, AZ 85021
Phone: (602) 335-8500
Fax: (602) 335-8580
Contact: Mr. Darin L. Moore, P.E.



WOOD/PATEL
MISSION: CLIENT SERVICE[®]

EAST THOMPSON PEAK PARKWAY



N.T.S.

PLANNING
UNIT III

LEGACY BLVD

SCOTTSDALE ROAD

PLANNING
UNIT II

OUTER LOOP 101 FREEWAY

PLANNING
UNIT I
(NOT A PART)

3 PHASE AREA IN PLANNING UNIT III

1 PHASE AREA IN PLANNING UNIT II

--- PLANNING UNIT LINE

PLATE 2

JANUARY 2016

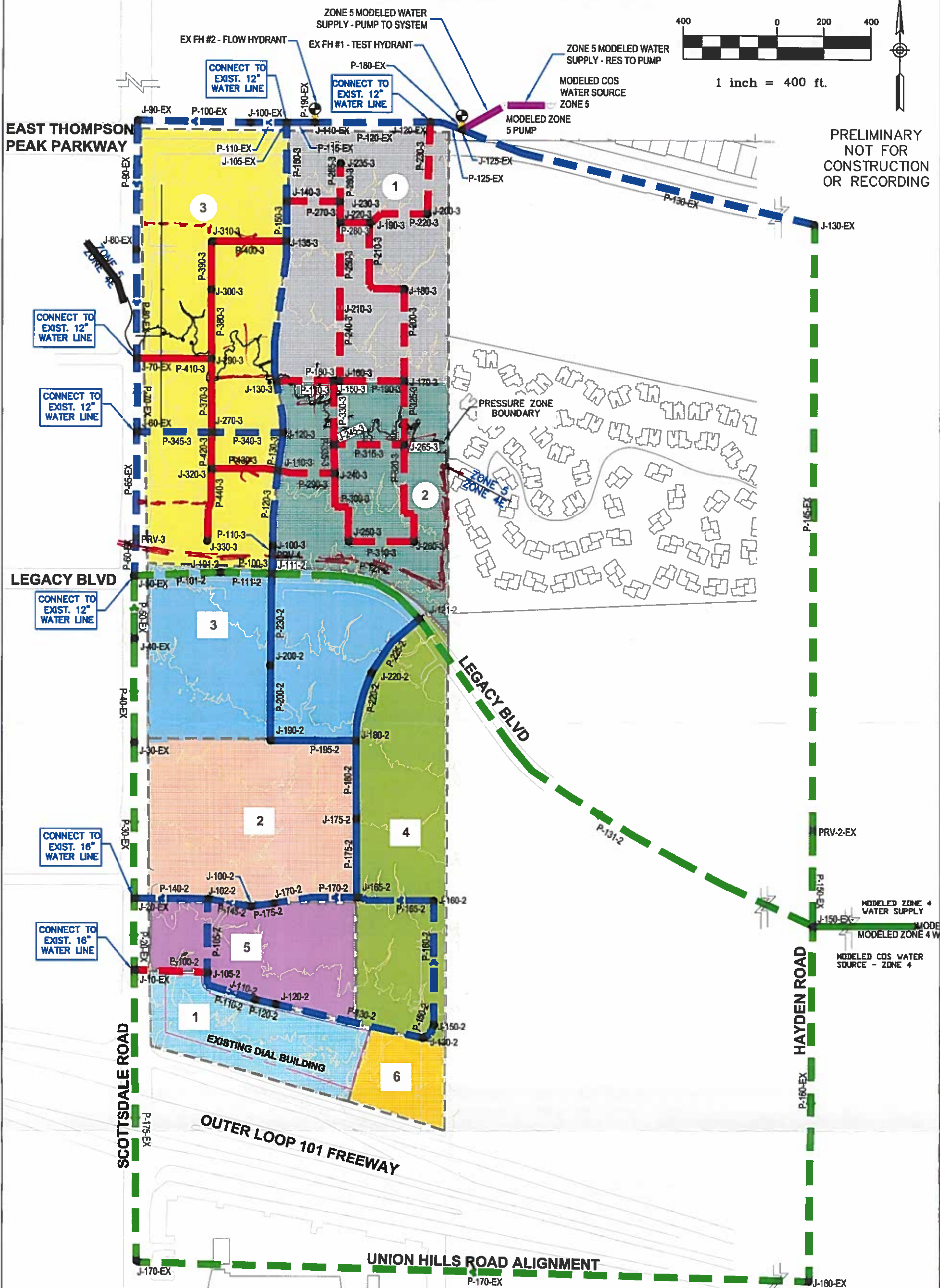
ONE SCOTTSDALE
MODELED ON-SITE
LAND USE PLAN

WOOD/PATEL
ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
Construction Managers
(602) 955-9500



1 inch = 400 ft.

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING



LEGEND

- JXXX-EX JUNCTION NODE ALONG EXIST. PIPE
- JXXX-2 JUNCTION NODE - PLANNING UNIT II
- JXXX-3 JUNCTION NODE - PLANNING UNIT III
- PXXX-EX EXISTING PIPE
- PXXX-2 PROPOSED PIPE - PLANNING UNIT II
- PXXX-3 PROPOSED PIPE - PLANNING UNIT III
- ⌵ PRESSURE REDUCING VALVE

DIAMETER
(IN)

8
12
16

EXISTING
PIPE

PROPOSED
PIPE

1

PHASE AREA IN
PLANNING UNIT III

2

PHASE AREA IN
PLANNING UNIT II

PLATE 3

January 2016

ONE SCOTTSDALE
MASTER ON-SITE
WATER PLAN EXHIBIT

WOOD/PATEL
ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
Construction Managers
(602) 336-8600