

FILE COPY

ABBREVIATED WATER & SEWER NEED REPORT

Non-Residential Water & Wastewater Development Fees

When applying for a Development Review Board Hearing, the Developer submits one report for each Non-Residential Development to the assigned City Project Coordinator. Project Coordinator submits this report to Water Resources.

1. PROJECT INFORMATION:

Project Name: Asante of Scottsdale		Date: April 8, 2010
Project Address: 17490 N. 93rd Street; Scottsdale, AZ 85255		City Pre-Application #: 733 - PA - 2009
Target Date to Submit Final Plans (Construction Documents): November, 2010	GPD/SF Bldg:	Building Size: 52,616 Square Feet
Type of Project: Transitional Rehabilitation Center		Landscape Plants & Trees Area: 13,333 Square Feet
Number & Sizes of Domestic Water Meters: Two 2" water meters	No. & Sizes Landscape Meters: One 3/4" for irrigation; One 3/4" for water feature	Landscape Turf Area: Square Feet

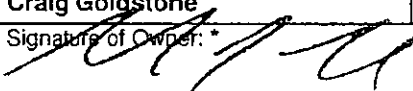
2. NON-RESIDENTIAL DEVELOPMENT FEES:

Effective January 5, 2009	WATER Dev. Fee	RESOURCE Dev. Fee	WASTEWATER Dev. Fee	TOTAL Dev. Fees
COST PER GALLON	\$9.36	\$2.41	\$18.26	\$30.03

3. FEE CALCULATION TABLE: (Multiply Cost per Gallon above x Gallons per Day below)

TYPE OF WATER DEMAND	Gallons/Day (GPY / 365)	WATER Dev. Fee	RESOURCE Dev. Fee	WASTEWATER Dev. Fee	TOTAL Dev. Fees
Domestic - TO SEWER	5,184	\$48,522.24	\$12,493.44	\$94,659.84	\$155,675.52
Domestic - NOT to Sewer	41	\$383.76	\$98.81	- None -	\$482.57
Landscape - PLANTS & TREES	800	\$7,488.00	\$1,928.00	- None -	\$9,416.00
Landscape - TURF				- None -	
Credit for pre-existing water meter					
SUB-TOTALS	6,025	\$56,394.00	\$14,520.25	\$94,659.84	\$165,574.09
ADMINISTRATION FEE	2.04%	\$1,150.44	\$296.21	\$1,931.06	\$3,377.71
TOTAL DEVELOPMENT FEES		\$57,544.44	\$14,816.46	\$96,590.90	\$168,951.80
WATER METER FEE (5/8"=\$70, 3/4"=\$95, 1"=\$140, 1.5"=\$270, 2"=\$350, 3"=\$1,905, 4"=\$3,135)					\$890.00
TOTAL FEES					\$169,841.80

4. CONTACT INFORMATION & CITY APPROVAL:

Printed Name of Owner: Dick Lund	E-mail Address: rjlund@biltmoreholdings.com	Phone #: 602-324-5340	Cell Phone #: N/A
Printed Name of Preparer: Craig Goldstone	E-mail Address: cgoldstone@todassoc.com	Phone #: 602-952-8280	Cell Phone #: N/A
Signature of Owner: * 		Date: 4/7/10	
		CITY USE ONLY: Water Resources Approval: _____ Date: _____	

* By signing above, I acknowledge that I am aware that a Financial Obligation Agreement and complete Exhibit "C" Water & Sewer Need Report(s) must be submitted upon the first submittal of Construction Documents for Building Plan Review & Permits. I am aware that development fees and a 2.04% administration fee must be paid prior to obtaining a Building Permit. I am aware of the fees and penalties that will be enforced after three (3) years if the average annual water and/or wastewater demand exceeds the estimated demand by twenty percent (20%) or more. Water Resources does not attest to or validate the accuracy of the Owner's estimates or computations.

Water & Sewer Use Limit - Gallons per Month:	183,260
gpd/sf - Domestic <input type="text" value="0.099"/>	gpd/sf Plants <input type="text" value="0.060"/>

Gallons per Year:	2,199,125
gpd/sf Turf <input type="text" value="#DIV/0!"/>	

**Preliminary Drainage Report
For
Asante' of Scottsdale
17490 North 93rd Street
Scottsdale, Arizona**

Stormwater Review By:

Richard Anderson

Phone 480-312-2729

FAX 480-312-9202

E-MAIL rianderson@ScottsdaleAZ.gov

Review Cycle _____ Date 4/22/10*Approved***April 2010**

Prepared by:
Hunter Engineering, P.C.
10450 N 74th Street, Suite 200
Scottsdale, AZ 85258



Drainage 4113

11078-10

PRELIMINARY DRAINAGE REPORT
FOR
ASANTE' OF SCOTTSDALE
17490 NORTH 93RD STREET
SCOTTSDALE, AZ.

PREPARED FOR

TODD & ASSOCIATES
4019 NORTH 44TH STREET
PHOENIX, AZ 85018

PREPARED BY

LARRY TALBOTT, P.E.
HUNTER ENGINEERING, P.C.
10450 N 74th STREET, SUITE 200
SCOTTSDALE, AZ 85258
(480) 991-3985

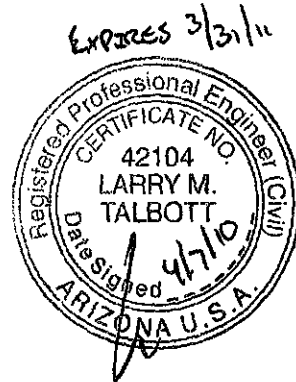
H.E. PROJECT NO. TODD001

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B	Drainage Calculation

<u>FIGURES</u>	<u>TITLE</u>	<u>LOCATION</u>
1	Vicinity Map.....	Appendix A
2	FEMA Flood Map.....	Appendix A



1.0 INTRODUCTION

This preliminary drainage report has been prepared under a contract from Todd & Associates architect of the Asante' of Scottsdale project. The purpose of this report is to provide a preliminary drainage analysis, required by the City of Scottsdale, to support this development. Preparation of this report has been done according to the procedures detailed in the City of Scottsdale's *Design Standards and Policy Manual*, (Reference 1).

This development project is located in the northwest corner of 93rd Street and East Hidden Spur Trail in the City of Scottsdale, Maricopa County, Arizona. It encompasses Lot 16 of the Corporate Center at DC Ranch. The site is more generally located in a portion of the north half of the south half of section 31, Township 4 North, Range 5 East of the Gila and Salt River Base and Meridian Maricopa County Arizona. Figure 1, in Appendix A, illustrates the location of the project site in relation to the City of Scottsdale street system. Access to the proposed lots is provided from the private 93rd Street, East Verde Grove View and East Hidden Spur Trail.

The subject development proposes improvements to lot 16 which is approximately 3.52 acres. The development will include a single building with associated parking, landscape and utility services. Exhibit A, located in the back pocket, illustrates the proposed improvements for the project.

2.0 EXISTING DRAINAGE CONDITIONS

In its current condition, the subject lot lies within an undeveloped parcel within the Corporate Center at DC Ranch. The existing terrain includes natural vegetation including cacti, shrubs and short grasses. The project site drains primarily from the northeast to the southwest at an average slope of 1.75%. See the Conceptual Grading and Drainage Plan within the pocket at the back of this report.

The site is included in the "*Master Drainage Plan for Corporate Center at DC Ranch*". Pursuant to the Corporate Center at DC Ranch report the majority of storm water runoff for Lot 16 shall be conveyed towards the existing channel along the west side of the property. Another portion of the site will overland flow into Hidden Spur Trail to the south. The remainder of the stormwater will outfall to an existing stub from the existing catch basin located at the southeast corner of the site. No on-site retention is required for this site. This project shall meet all of the requirements of the overall master drainage report.

The current FEMA Flood Insurance Rate Map (FIRM) for this area, map number 04013C1245H (Effective date Sept 30, 2005) shows the project site is in a flood hazard Zone AO. Zone AO is defined as, "*Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined*" (Depth = 1ft. Velocity = 4 ft/sec). A copy of the current FIRM panel is provided in Figure 2, Appendix A.

3.0 PROPOSED DRAINAGE CONCEPT

The proposed drainage concept is presented in three parts: on-site drainage conveyance, off-site drainage conveyance, and storm water retention. These three sections make up sections 3.1, 3.2, and 3.3 respectively.

3.1 On-site Drainage Conveyance

The majority of the on-site storm water runoff for this project will be conveyed via overland flow, curb openings and scuppers to the existing natural channel on the west side of the property. Per the master drainage report this channel will convey the stormwater to the south through the existing culvert under hidden spur trail then south to its historic overall site outfall.

This area resulted in 1.45 acres of land which is 0.3 acres less than the 1.75 acres shown on the overall drainage report. Further investigation of the overall drainage report found that the overall report contained a typo and that the combined areas for this property added up to more acreage than the parcel. The other drainage areas matched more closely.

Additional stormwater will be conveyed via overland flow to Hidden Spur Trail where it will continue within the roadway curb and gutter to the existing catch basin as originally intended. Per the master drainage report this stormwater will be further conveyed via storm drain and channels to its historic outfall.

The remaining stormwater will be conveyed via overland flow, catch basins and storm pipe to an existing stub from the existing catch basin in 93rd Street. This stub was provided by the overall infrastructure improvements for this site. Per the master drainage report this stormwater will be further conveyed via storm drain and channels to its historic outfall.

The established finish floor elevation of 1595.25 has been set at an elevation, which is a minimum of 12-inches above the existing high point elevation within the building envelope area. Due to the site characteristics and flood zone requirements the building finish floor is considerably higher than the existing grades along the south side of the building.

No retention will be required for this development since provisions for retention and runoff have been accommodated within the Corporate Center at D.C. Ranch. The master drainage report for the Corporate Center at D.C. Ranch has noted that the Q_{100} developed flow to the channel along the west to be 18.3 cfs. The Q_{100} developed flow to Hidden Spur Trail shall be 13.15 cfs and the Q_{100} developed flow to 93rd Street is 8.70 cfs.

As mentioned previously in this report the outfall to the existing wash on the west was called out incorrectly in the master drainage report, therefore the actual Q_{100} developed flow should be 14.8 cfs.

It has been requested by the city during previous reviews of other projects within the Corporate Center at DC Ranch that the master drainage report not be included as an appendix to the individual project reports. The master report is on file at the city and that copy would be used for the review of the individual projects.

3.2 Off-site Drainage Conveyance

No off-site drainage affects this site. East Verde Grove View to the north, 93rd Street to the east and the existing channel to the west of the subject development collect and convey water around the site per the master drainage report.

3.3 Storm Water Retention

Per the Corporate Center at DC Ranch master drainage report all storm water shall be conveyed to the outfall locations at the existing channel, 93rd Street and Hidden Spur Trail. From there it will be conveyed per the master drainage report. No on-site retention is required for this project.

4.0 CONCLUSIONS

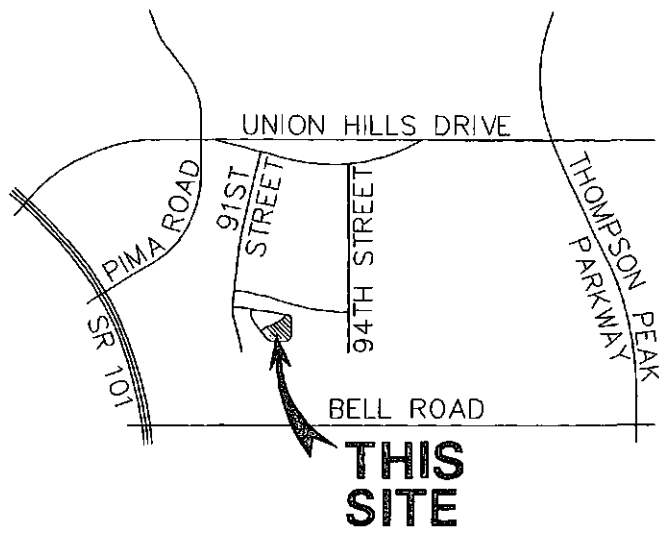
Based on the results of this study, it can be concluded that:

- The drainage improvements have been designed in accordance with requirements put forth in the Corporate Center at DC Ranch Drainage Report.
- The drainage improvements have been designed according to requirements put forth in the City of Scottsdale's *Design Standards and Policy Manual*.

5.0 REFERENCES

- 1) City of Scottsdale's *Design Standards and Policy Manual* as accessed from the City of Scottsdale website at <http://www.ci.scottsdale.az.us.dspm>.
- 2) Drainage Design Manual for Maricopa County, Arizona, Volume I, Hydrology, 1992.
- 3) Drainage Design Manual for Maricopa County, Arizona, Volume II, Hydraulics, 1991.
- 4) Master Drainage Report for the Corporate Center at DC Ranch prepared by Hunter Engineering P.C. dated June 2007.

APPENDIX A
FIGURES



VICINITY MAP
FIGURE 1

LEGEND



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



1% annual chance floodplain boundary



0.2% annual chance floodplain boundary



Floodway boundary



Zone D boundary



CBRS and OPA boundary

MAP LEGEND

NFIP

PANEL 1245H

FIRM FLOOD INSURANCE RATE MAP MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1245 OF 4350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	1245	H
PHOENIX, CITY OF	040051	1245	H
SCOTTSDALE, CITY OF	048012	1245	H

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

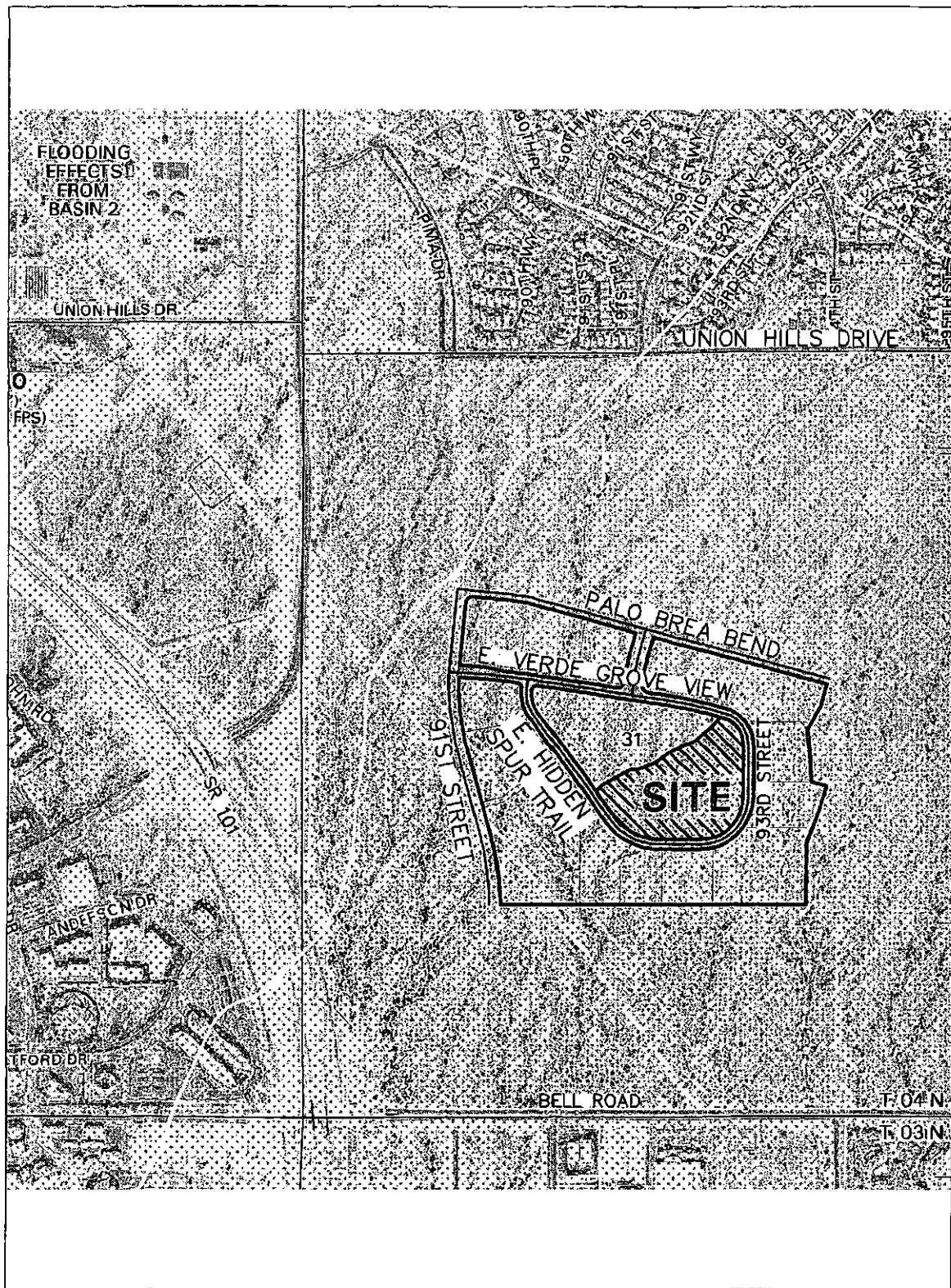


**MAP NUMBER
04013C1245H
MAP REVISED**

SEPTEMBER 30, 2005

Federal Emergency Management Agency

FIRM PANEL



PORTION OF PANEL SHOWING SITE
FIGURE 2

APPENDIX B
DRAINAGE CALCULATIONS

Hydrologic Design Data Record

Rational Method

LOCATION DATA

Project: Asante' of Scottsdale

Concentration Point: BA2

Contributory areas _____

DESIGN DATA

Drainage Area (LF) 0.84 Acres

Drainage Length 140.00 Feet

Elevation

Top of Drainage Area 1597.75 Feet

At Structure 1593.25 Feet

Drainage Area Slope 3.214 Percent

Velocity (V) 2.65 Ft / Sec

DESIGN COMPUTATIONS

Runoff Coefficient 0.90

Time of Concentration, Tc 5 Minutes

Frequency	2	5	10	25	50	100	Years
Rainfall Intensity	3.75		6.1		8.1	9.25	Inches/Hr
Peak Discharge	2.8		4.6		7.3	8.7	Ft ³ / Sec

Computed By: LMT Date: 4/5/2010

Checked By: LMT Date: 4/5/2010

TIME OF CONCENTRATION

$$T_c = 0.479 \cdot L^{0.77} \cdot S^{-0.385}$$

Tc= 0.8805
If < 5 minutes, use 5

LF= 140.00
V= 2.65



Section 404 Certification

Before the City issues development permits for a project, the developer's Engineer or the property owner must certify that it complies with, or is exempt from, Section 404 of the Clean Water Act of the United States. Section 404, administered by the U.S. Army Corps of Engineers (COE), regulates the discharge of dredged or fill material into a wetland, lake, (including dry lakes), river, stream (including intermittent streams, ephemeral washes, and arroyos), or other waters of the United States.

Prior to submittal of improvement plans to Project Review the form below must be completed (and submitted with the improvement plans) as evidence of compliance

Certification of Section 404 Permit Status

Owner's Name: SANTE PARTNERS, INC.

Phone No. 480-626-2272 x115

Project Name/Description: ASANTE OF SCOTTSDALE

Case No. 733-PA-2009

Project Location/Address: 17490 W. 93RD STREET, SCOTTSDALE AZ

A registered Engineer or the property Owner must check the applicable condition and certify by signing below that:

1. Section 404 does apply to the project because there will be a discharge of dredged or fill material to waters of the U.S., and:

☐ A Section 404 Permit has already been obtained for this project.

-or-

☐ This project qualifies for a "Nationwide Permit," and this project will meet all terms and conditions of the applicable nationwide permit.

2. Section 404 does not apply to the project because:

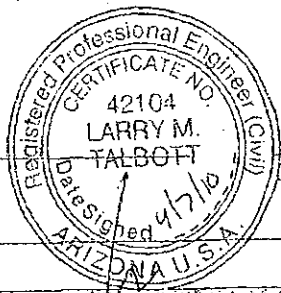
☐ No watercourses or other waters of the U.S. exist on the property.

☐ No jurisdictional waters of the U.S. exist on the property. Attached is a copy of the COE's Jurisdictional Determination.

☒ Watercourses or other waters of the U.S. do exist on the property, but the project will not involve the discharge of dredged or fill material into any of these waters.

I certify that the above statement is true.

Engineer's Signature and Seal, or Owner's Signature



Date

Title Company

Planning & Development Services Department

7447 E Indian School Road, Suite 100, Scottsdale, AZ 85251 • Phone: 480-312-2500 • Fax: 480-312-7088