

Hanella Estates

12481 E SHEA BLVD.
SCOTTSDALE, AZ 85259

Water Basis of Design Report

September 10, 2017

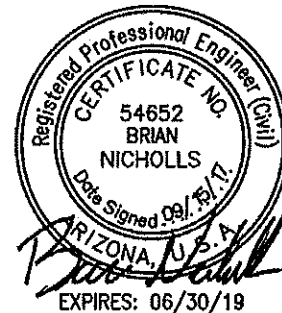
EPS Job #16-345

Owner/Developer

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CONSULTANT

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A. Introduction

The proposed Hanella Estates consists of 4 single-family residential units covering 4.5 acres of vacant desert land located in Scottsdale, Arizona. The Hanella Estates development has a gross density of 0.9 du/ac the site is located on the northwest corner of N.125th Street and E. Cochise Drive. the site is within section 26, Township 3 North, Range 5 East of the Gila and Salt River base and meridian, City of Scottsdale, Maricopa County, Arizona. (Refer to the Vicinity Map in Appendix A for the project location.

B. Design Documentation

The infrastructure water lines and unit daily demands requirements for this project have been determined using the City of Scottsdale Design Standards & Policies Manual (DS&PM).

C. Existing Conditions

The site is currently zoned R-43 with the intent to be rezone to R-43 PRD. The Hanella Estates development is located within the City of Scottsdale Zone 4 water pressure zone. (See Appendix C - City of Scottsdale Pressure Zone Map) The site is currently vacant the site is located within an Environmental Sensitive Land overlay (ESL) and will remain as such. The site is bounded by single family residences and local roadways. The proposed development has been designed to be compatible with the existing surrounding developments:

North: Wash and Shea Blvd.
South: E. Cochise Drive

East: Vacant (R1-43)
West: Residential (R1-43)

E. Cochise Drive will provide ingress and egress to the site. The existing infrastructure has provided adequate domestic water and fire protection for the surrounding development, it is assumed that the existing infrastructure will be adequate for this development.

D. Proposed Conditions

A 6" water main will serve potable water to the 4 proposed lots. The lots will have individual water meters. The site will have a single water line connection onto an existing 6" VCP line located along E. Cochise Drive. The proposed 6" water line will dead end inside the development with a fire hydrant in the cul-de-sac. The water line is approximately 368 linear feet from the point of connection.

Fire Hydrant Locations

Two existing fire hydrants are located near the property at the intersections of 124th Street and 125th Street at E. Cochise Drive. A proposed fire hydrant will be provided at the end of the proposed cul-de-sac. The existing and proposed hydrants will provide fire protection for the Hanella Estates development. The existing fire hydrants and the proposed development are within the allowed 700 feet spacing of fire hydrants as defined in section 6-1.502 of the City of Scottsdale DS&PM. See Appendix 'B' – Hanella Estates Utility Site Map for further detail

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E. Computations

According to the City of Scottsdale DS&PM, Residential Demand per dwelling units based on dwelling units per acres (Hanella Estates 0.9 DU/ac) assume 485.6 gpd per lot. The City of Scottsdale requires water lines to be designed to account for Average Day (ADD), Max Day (MDD) and Peak hour (PH) demands. Please see the table below for water demand calculations.

** Per City of Scottsdale DS&PM 6-1.404: The peaking factors are 2 times the average day for maximum day, and 3 1/2 times the average day for peak hour*

Development	Dwelling Units (du)	Average Day Demand (ADD) 485.6 gpd X 4 du (gpd)	Max Day Demand ADD X 2 (gpd)	Peak Hour Demand ADD X 3.5 (gpd)
Hanella Estates	4	1,942.4	3,884.8	6,798.4

F. Summary

- ❖ Single water line Connection onto E. Cochise Drive (6" x 6" T.S.&V.)
- ❖ Approx. 368 LF of 6" DIP water line located within C.O.S. Right of Way
- ❖ Individual water meter and service line connections to each lot
- ❖ 1 new fire hydrant located at the cul-de-sac. Existing Fire hydrant within 700' of the proposed development at the intersections of 125th, 124th street at Cochise.

G. References

- ❖ City of Scottsdale Design Standards & Policies Manual (DS&PM).
- ❖ City of Scottsdale Geographic Information Systems Quarter Section Maps 28-58
- ❖ City of Scottsdale Geographic Information Systems Zoning Map 4
- ❖ C.O.S. Water Pressure Zone Map / Water Service Area Map

H. Appendices

Appendix 'A' – Vicinity Map & Site Plan

Appendix 'B' – Hanella Estates Utility Site Map

Appendix 'C' – C.O.S. Water Pressure Zone Map / Water Service Area Map

Appendix A - Vicinity Map



Appendix B - Hanella Estates Utility Site Map

(See attached)

Appendix C- C.O.S. Water Pressure Zone Map / Water Service Area Map

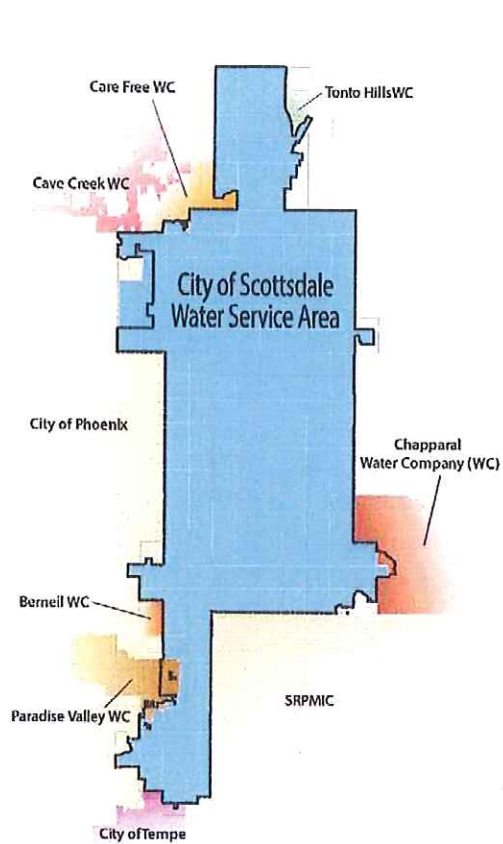


FIGURE 6.1-1 WATER SERVICE AREAS

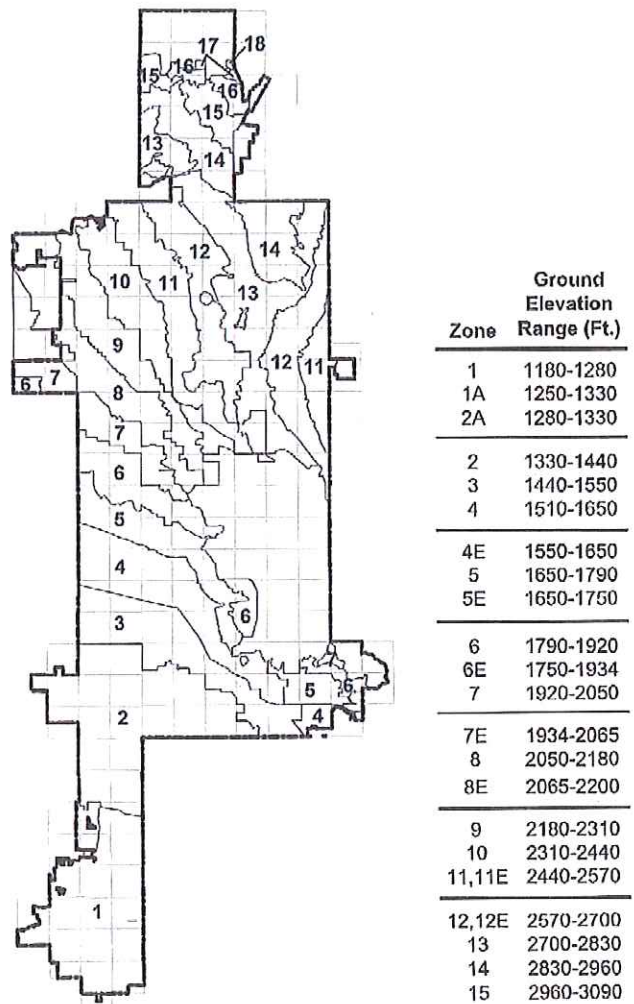


FIGURE 6.1-3 PRESSURE ZONE MAP

I6-345 - HANELLA ESTATES

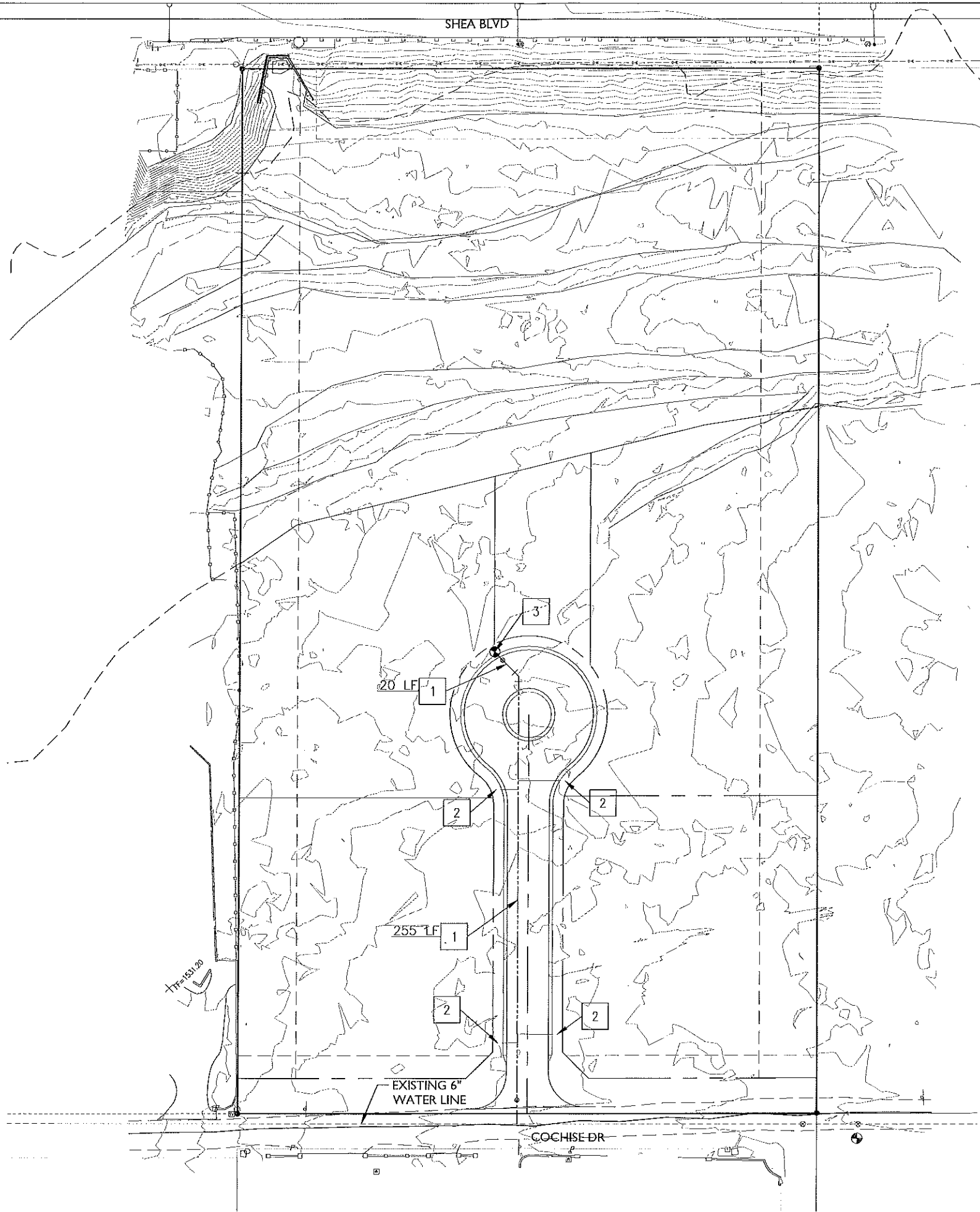
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Construction Notes

WATER NOTES

1	6" DIP WATERLINE	275 LF
2	WATER SERVICE CONNECTION PER C.O.S. STD DTL 2330	4 EA
3	FIRE HYDRANT ASSEMBLY PER M.A.G. STD DTL 360-1	1 EA



Hanelle Estates
Scottsdale, Arizona

Utility Plan

Project:

Revisions:



Designer: XXX
Drawn by: XXX



Job No.
16-345

Sheet No.

of 1



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