PRELIMINARY DRAINAGE REPORT

McDowell

Scottsdale, AZ 85257

Case #: 2-ZN-2022

Review Cycle: 2

Status: Accepted

Reviewed By: GA

Date: 06/21/2022

Prepared For:

HOH INVESTMENT GROUP

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Project Number: 210929
1st Submittal Date: December 1, 2021
Revision Date: May 24, 2022

Case No.: 2-ZN-2022 **Plan Check No.: TBD**

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1. INTRODUCTION

This Preliminary Drainage Report represents the storm water analysis for a fast food restaurant proposed in Scottsdale, Arizona. The purpose of this report is to provide the hydrologic and hydraulic analysis, required by the City of Scottsdale, to support the proposed site plan for said development. This report includes discussions and calculations defining the storm water management concepts for the collection and conveyance necessary to comply with the drainage requirements of the City of Scottsdale and Maricopa County. Preparation of this report has been done in accordance with the requirements of the City of Scottsdale Design Standards & Policies Manual (DS&PM) 2018 [1], and the Drainage Design Manuals for Maricopa County, Arizona, Volumes I[2] and Volume II[3].

2. LOCATION AND PROJECT DESCRIPTION

2.1 LOCATION:

The subject property consists of land located in a portion of the Southwest Quarter of Section 36, Township 2 North, Range 4 East of the Gila and Salt River Meridian, Maricopa County, Arizona:

- Parcel ID: Parcel 131-04-087H; Zoning is PNC
- Address: 8010 E McDowell Road, Scottsdale 85257

Refer to **FIGURE 1** - **Vicinity Map** for the project's location with respect to major cross streets

2.2 EXISTING AND PROPOSED DEVELOPMENTS SURROUNDING THE SITE:

Existing site context related to surrounding developments is as follows:

- North: Parcel 131-04-087F; Parking lot; Zoning PNC.
- West: Parcel 131-04-087J; Two story office and retail center; PNC.
- South: Across McDowell Road, Parcel 131-09-002N; Vacant lot; Zoning C-3.
- East: Across Almeria Road, Parcel 131-04-125; Blue Fox Group; Zoning C-2.

2.3 EXISTING SITE DESCRIPTION:

The project area includes approximately 16,615 sq. ft. (0.38) acres of land and is designated with zoning PNC. The site is currently developed as a parking lot.

Per Topographic Survey prepared by AW Land Surveying, LLC., the site generally slopes from west to east at approximately 1%. As shown on **FIGURE 7 - Existing Conditions Drainage Area Map** in **APPENDIX** II, drainage areas EX-B1 and EX-B2 drain east into an existing open retention basin, drainage areas EX-A1 and OFF-1 drain north onto the parking lot on Parcel 131-05-098F, and drainage area EX-C1 drains south onto McDowell Road.

Refer to **FIGURE 2 - AERIAL** attached for an aerial of the site.

2.4 PROPOSED SITE DEVELOPMENT:

Site development includes the demolition of the parking lot for the construction of a new fast-food restaurant with associated landscape and drive thru. The existing access on McDowell Road will be closed. Entrance to the site will be through Almeria Drive, east of the property.

Refer to **APPENDIX III** – Grading and Drainage Plan for site layout.

2.5 FLOOD HAZARD ZONE:

FIRM Map Number 04013C2235M dated September 18, 2020, indicates the site is designated as Zone "X". As such, it is defined as areas determined to be outside the 0.2% annual chance floodplain and therefore is not in a special flood hazard area.
Refer to **FIGURE 3** for the FIRM.

3. EXISTING DRAINAGE CONDITIONS

3.1 OFF-SITE DRAINAGE PATTERNS

The topographic survey provides the following information for offsite drainage (Refer to Appendix II for **FIGURE 7 - Existing Conditions Drainage Area Map** and **FIGURE 4** for **FLO-2D Map**):

- *North*: Runoff from the parking lot north of the proposed project site flows northerly and is captured by an existing catch basin in the parking lot. No flows from the north affect the site.
- *East*: Half of the runoff from Almeria Road is conveyed via curb and gutter into existing catch basin near the intersection of Almeria Road and McDowell Road. Across Almeria Road, flows from Blue Fox Group is captured by an existing catch basin located near the southwest corner of the Blue Fox Group's parking lot. No flows from the east affect the site.
- *West*: Flows from the existing two-story building flow northerly and is conveyed into existing catch basins in the parking lot. Flows from OFF-1 combine with onsite flows from EX-A1 and drain north to CP-1.
- *South*: **FIGURE** 4 indicates runoff from half of McDowell Road is conveyed via curb and gutter into the existing catch basin located near the intersection of Almeria Road and McDowell Road.

3.2 ON-SITE DRAINAGE

Based on the topographic information, the existing onsite drainage pattern is as follows (refer to **APPENDIX II** for **FIGURE 7 - Existing Conditions Drainage Area Map** and **FIGURE 4** for **FLO-2D Map**):

- Stormwater from drainage area EX-A1, in addition to offsite area OFF-1, flows overland northerly towards control point (CP-1) .
- Flows from existing drainage area EX-B1 flow into existing curb opening EX-CO-1 and is collected by existing open retention EX-Basin 1.
- Flows from existing drainage area EX-B2 drain into Ex-Basin 1 via overland flow. Once Ex-Basin 1 is full, excess stormwater drains into EX-CB-2 on Almeria Road.
- Flows from existing drainage area EX-C1 drain into McDowell Road, south of the site.

Table 1 below is a summary of existing conditions runoff calculations:

TABLE 1:

EXISTING SITE DISCHARGES										
	TOTAL AREA	Cwt 10	Intensity 10 yr 5-min	Q 10	Cwt 100	Intensity 100 yr 5-min	Q 100	Control Point	Total flows Q10	Total flows Q100
	(ac)	(-)	(in/hr)	(cfs)	(-)	(in/hr)	(cfs)	CP#	(cfs)	(cfs)
	0.48		4.67	-		7.42	-	-	-	-
EX-A1	0.12	0.86	4.67	0.49	0.91	7.42	0.82	CP-1	1.72	2.93
OFF-1	0.03	0.90	4.67	0.13	0.95	7.42	0.21			
EX-B1	0.16	0.86	4.67	0.65	0.91	7.42	1.10	Ex-Basin 1		
EX-B2	0.10	0.37	4.67	0.18	0.45	7.42	0.35			
EX-C1	0.07	0.90	4.67	0.28	0.95	7.42	0.46	McDowell Road		

Refer to **APPENDIX II** for the **FIGURE 5 - Existing Cwt Exhibit** for applicable Cwt per surface type.

4. PROPOSED STORM WATER MANAGEMENT

4.1 DESIGN INTENT:

In order to preserve existing drainage patterns, most of the on-site drainage will discharge to the pre-developed discharge points. Refer to **APPENDIX II** for **FIGURE 8 - Proposed Conditions Drainage Area Map**. Proposed drainage patterns are as follows:

- Drainage area DA-A1 will flow via overland to CP-1 north of the site, maintaining pre-development drainage patterns. Flows from OFF-1 will combine with flows from DA-A1.
- Offsite flows from drainage area OFF-2 will combine with flows from drainage area DA-B1 and convey via curb and gutter into curb opening CO-1, where the flows travel into EX-Basin 1 via a riprap lined spillway. Stormwater from drainage area DA-B2 is collected by EX-Basin 1 via overland flow along with the combined flows going into CO-1 from OFF-2 and DA-B1

4.2 STORMWATER STORAGE REQUIREMENTS:

In accordance with City of Scottsdale requirements for lots that are already developed, stormwater storage for the is required based on the pre vs. post development runoff from the 100-year 2-hour storm event if increased or first flush, whichever is greater, in addition to maintaining any existing retention volume.

Since the project site is less than one acre in size and is not likely to contribute stormwater contaminants to the city's municipal separate storm sewer system or waters of the U.S., first flush is not required for the proposed development site.

4.3 LAND CHARACTERISTICS:

The proposed project site consists of a multi-family residential building with a main drive and landscape areas along the perimeter of the structure. Based on the DS&PM, runoff coefficients for the 100-year and 10-year storm events used are as follows:

- C=0.95 for building or concrete (C=0.90 for 10-year event)
- C=0.95 for paved surface (C=0.90 for 10-year event)
- C=0.45 for undisturbed natural desert or desert landscape (C=0.37 for 10-year event)

HYDROLOGIC ANALYSIS: The hydrologic analysis is determined using the procedures in the City of Scottsdale Design Standards & Policies Manual and the Drainage Design Manual for Maricopa County, Arizona, Volume I.

Table 2 below is a summary of proposed conditions runoff calculations:

TABLE 2:

PROPOSED SITE DISCHARGES										
	TOTAL AREA	Cwt 10	Intensity 10 yr 5-min	Q 10	Cwt 100	Intensity 100 yr 5-min	Q 100	Control Point	Total flows Q10	Total flows Q100
	(ac)	(-)	(in/hr)	(cfs)	(-)	(in/hr)	(cfs)	CP#	(cfs)	(cfs)
	0.43		4.67	-		7.42	-	-	-	-
DA-A1	0.13	0.77	4.67	0.47	0.83	7.42	0.81	CP-1	1.50	2.72
OFF-1	0.01	0.63	4.67	0.03	0.71	7.42	0.16			
DA-B1	0.11	0.90	4.67	0.45	0.95	7.42	0.75	EX-Basin 1		
DA-B2	0.16	0.37	4.67	0.27	0.45	7.42	0.53			
OFF-2	0.02	0.45	4.67	0.04	0.52	7.42	0.08			
DA-C1	0.06	0.90	4.67	0.24	0.95	7.42	0.40	McDowell Road		

Refer to **APPENDIX II** for **FIGURE 6 - Proposed Cwt Exhibit** for applicable Cwt per surface type.

4.4 STORMWATER RETENTION:

100-YR, 2-HR STORM: Per City of Scottsdale DSPM 4-1.201, development storage requirements for the 100-yr, 2-hr storm event are calculated as follows:

$$V_r = \Delta C \left(\frac{R}{12}\right) A$$

where:

$V_r =$ Required storage (cf)

$R =$ Precipitation amount =2.16 in per NOAA Atlas 14 Precipitation Frequency Estimates

$A =$ Total area of site (sf)

$\Delta C = C_{post} - C_{pre}$

$$V_r = (0.73 - 0.81)\left(\frac{2.15}{12}\right)(19{,}720) = -282.65\ cf$$

Since the pre vs post stormwater storage show negative requirements, first flush is not applicable, and the existing basin capacity is planned to be maintained, no additional stormwater storage is required. Stormwater retention will consist of the existing volume from existing basin, Ex-Basin 1 (1,312 cf).

4.6 STORMWATER DISCHARGE

Since the existing basin will be maintained as is, no draining time calculation is required.

Pre vs post discharges

Proposed conditions will ultimately reduce site flow towards CP-1 (north of the site) and McDowell Road (south of the site). Table 3 below summarizes the project discharges per outfall for the 10-year and 100-year storm events, providing the differences between existing and proposed peak flows for each case. Refer to **FIGURE 7 - Existing Conditions Drainage Area Map** and **FIGURE 8 - Proposed Conditions Drainage Area Map** in **APPENDIX II**.

TABLE 3:

	Q10 (cfs)			Q100 (cfs)		
Outfall	Existing	Proposed	Δ	Existing	Proposed	Δ
CP-1	0.62	0.50	-0.12	1.03	0.97	-0.06
Ex-Basin 1	0.83	0.76	-0.07	1.44	1.36	-0.08
McDowell Road	0.28	0.24	-0.04	0.46	0.40	-0.07

4.7 ADEQ WATER QUALITY REQUIREMENTS

The Arizona Department of Environmental Quality requires that any site disturbance over an acre is required to submit an NOI. The total disturbed area of this site is approximately 0.45 acres; therefore a NOI is not required.

5. FLOOD SAFETY FOR DWELLINGS

5.1 FINISHED FLOOR ELEVATIONS

This project lies in an "X" Flood Zone. Therefore, the proposed building finished floor elevation will be set a minimum of 6 inches above the highest adjacent grade, located at the south of the site at an elevation of 1221.73'. The finished floor elevation will be set to 1222.50 and will be safe from flooding for up to the 100-year design storm.

6. CONCLUSIONS

6.1 OVERALL PROJECT:

1. The finish floor elevations will be designed a minimum of 6 inches above the highest adjacent grade. The building will be safe from flooding for up to the 100-year design storm.
2. The peak flows at discharge points will be reduced for proposed conditions.
3. On-site storage facilities will maintain existing conditions. No additional storage is required.

6.2 PROJECT PHASING:

This project will be constructed in a single phase.

7. WARNING AND DISCLAIMER OF LIABILITY

RE: following page.

8. REFERENCES

1. *Design Standards & Policies Manual, City of Scottsdale – January 2018*
2. *Drainage Design Manual for Maricopa County, Arizona, Volume I, Hydrology, Flood Control District of Maricopa County, Fourth Edition, December 14, 2018*
3. *Drainage Design Manual for Maricopa County, Arizona, Volume II, Hydraulics, Flood Control District of Maricopa County, December 14, 2018*

GRADING & DRAINAGE LANGUAGE

WARNING AND DISCLAIMER OF LIABILITY

The City's Stormwater and Floodplain Management Ordinance is intended to minimize the occurrence of losses, hazards and conditions adversely affecting the public health, safety and general welfare which might result from flooding.

The Stormwater and Floodplain Management Ordinance identifies floodplains, floodways, flood fringes and special flood hazard areas. However, a property outside these areas could be inundated by floods. Also, much of the city is a dynamic flood area; floodways, floodplains, flood fringes and special flood hazard areas may shift from one location to another, over time, due to natural processes.

WARNING AND DISCLAIMER OF LIABILITY

The flood protection provided by the Stormwater and Floodplain Management Ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Floods larger than the base flood can and will occur on rare occasions. Floodwater heights may be increased by constructed or natural causes. The Stormwater and Floodplain Management Ordinance does not create liability on the part of the city, any officer or employee thereof, or the federal, state or county government for any flood damages that result from reliance on the Ordinance or any administrative decision lawfully made thereunder.

Compliance with the Stormwater and Floodplain Management Ordinance does not ensure complete protection from flooding. Flood-related problems such as natural erosion, streambed meander, or constructed obstructions and diversions may occur and have an adverse effect in the event of a flood. You are advised to consult your own engineer or other expert regarding these considerations.

I have read and understand the above.

_____ _____ _____

Plan Check # Owner Date

FIGURES

10/19/2021 4:08:23 PM

FIGURE 1. VICINITY MAP

2-ZN-2022
6/6/2022

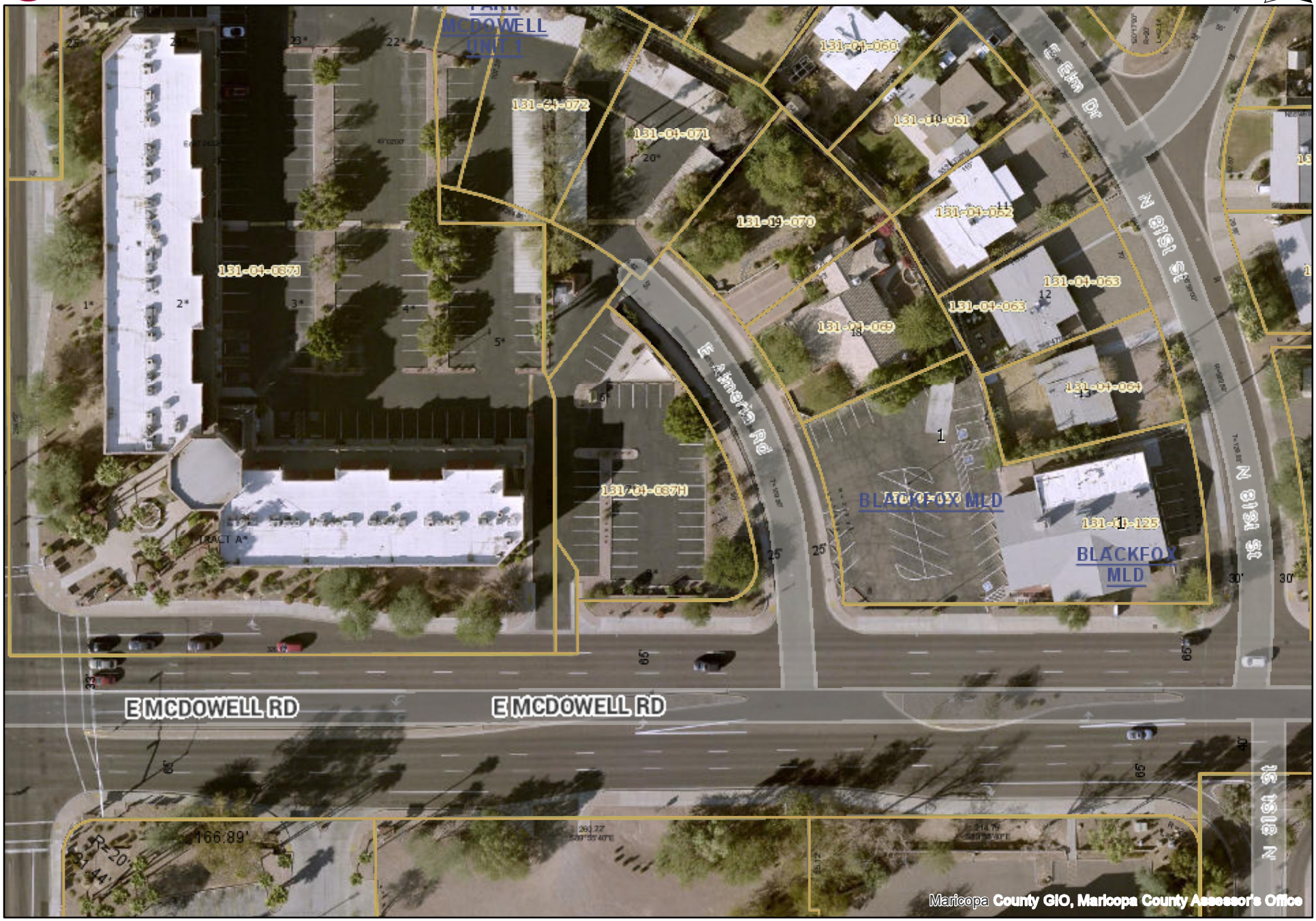

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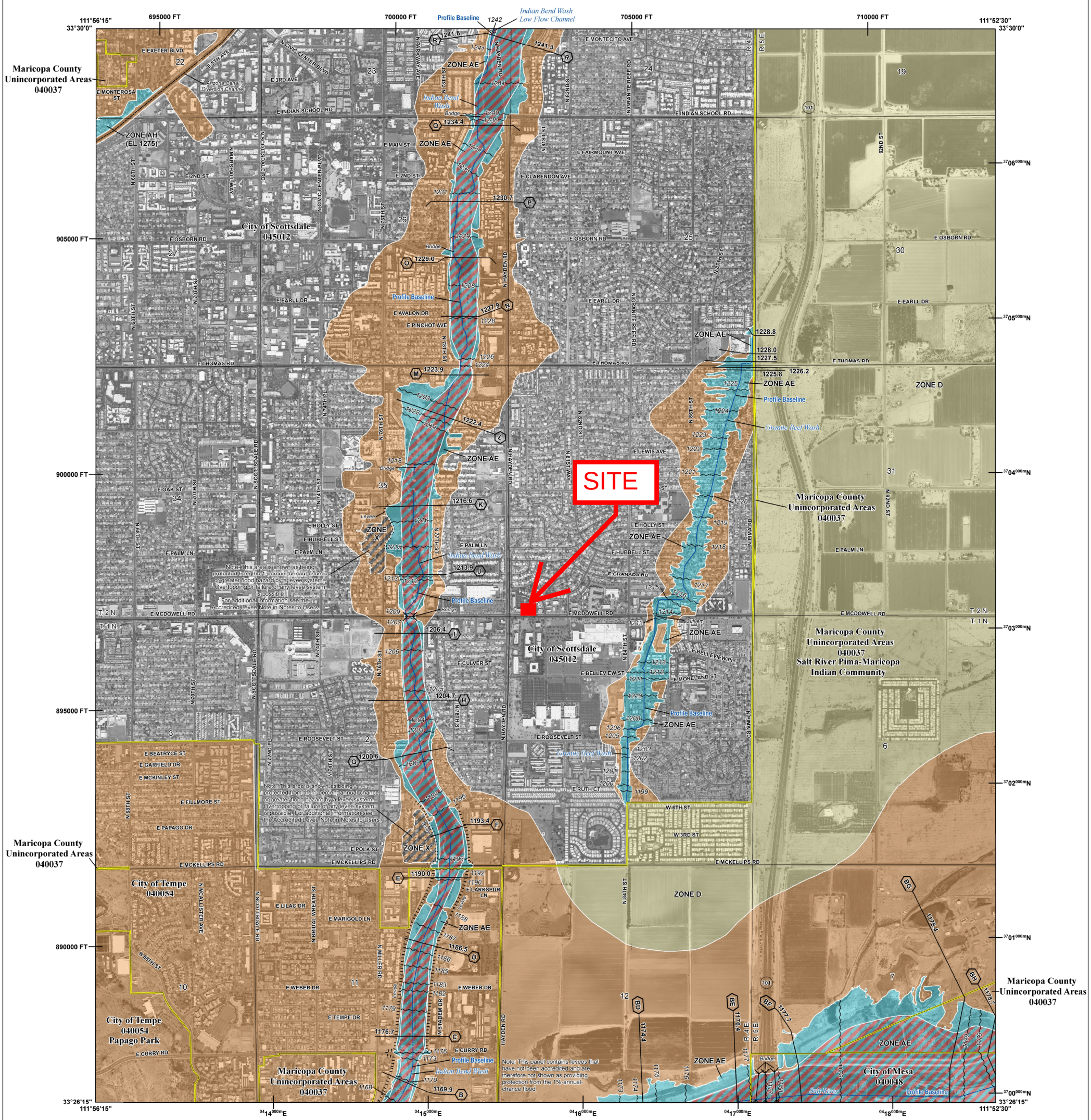
FIGURE 2. AERIAL

2-ZN-2022
6/6/2022



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A,V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- E 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from U.S. Census Bureau TIGER files, dated 2014, and digital data provided by the Flood Control District of Maricopa County. Digital orthophotography was provided by the Flood Control District of Maricopa County. The imagery was flown in Fall 2013 and was produced with a 0.8 foot ground sample distance.

ACCREDITED LEVEE NOTES TO USERS: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/national-flood-insurance-program.

SCALE

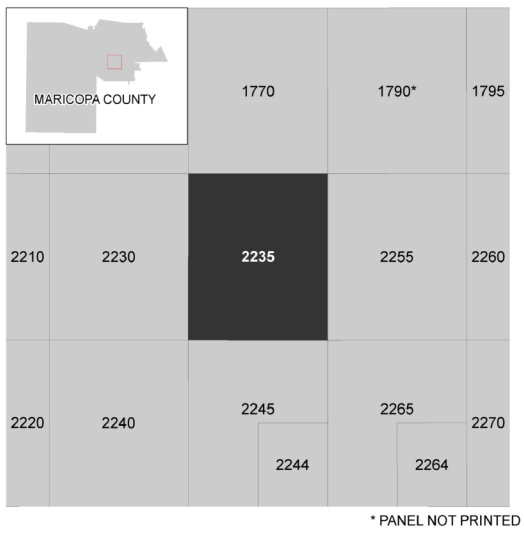
Map Projection:
NAD 1983 HARN StatePlane Arizona Central FIPS 0202 Feet Intl.
Western Hemisphere; Vertical Datum: NAVD88

1 inch = 1,000 feet 1:12,000

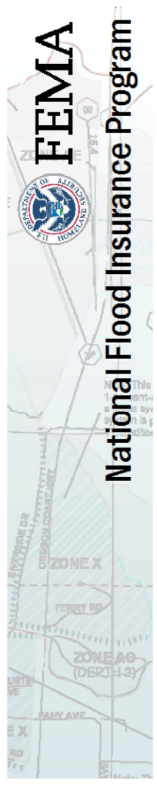
0 1,000 2,000 4,000 feet

0 250 500 1,000 meters

PANEL LOCATOR



* PANEL NOT PRINTED



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA
and Incorporated Areas

PANEL 2235 OF 4425

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	2235	M
MESA, CITY OF	040048	2235	M
SCOTTSDALE, CITY OF	045012	2235	M
TEMPE, CITY OF	040054	2235	M

FIGURE 3.
FIRM

VERSION NUMBER
2.3.3.2

MAP NUMBER
04013C2235M

MAP REVISED
September 18, 2020

2-ZN-2022
6/6/2022

October 20, 2021

1:600

0 37.5 75 150 ft

0 10 20 40 m

FIGURE 4. FLO 2D MAP

2-ZN-2022
6/6/2022

APPENDIX I

RAINFALL DATA

NOAA Atlas 14, Volume 1, Version 5
Location name: Scottsdale, Arizona, USA*
Latitude: 33.4666°, Longitude: -111.9085°
Elevation: 1215.99 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**2.18** (1.84-2.65)	**2.86** (2.41-3.47)	**3.88** (3.25-4.70)	**4.67** (3.89-5.63)	**5.74** (4.70-6.88)	**6.58** (5.32-7.84)	**7.42** (5.89-8.82)	**8.28** (6.47-9.84)	**9.44** (7.18-11.2)	**10.3** (7.69-12.3)
10-min	**1.66** (1.40-2.02)	**2.17** (1.84-2.64)	**2.95** (2.48-3.58)	**3.55** (2.96-4.28)	**4.37** (3.58-5.24)	**5.00** (4.04-5.97)	**5.64** (4.48-6.71)	**6.30** (4.92-7.49)	**7.18** (5.46-8.54)	**7.85** (5.86-9.36)
15-min	**1.37** (1.15-1.67)	**1.79** (1.52-2.18)	**2.44** (2.05-2.96)	**2.94** (2.45-3.54)	**3.61** (2.96-4.33)	**4.13** (3.34-4.93)	**4.66** (3.70-5.55)	**5.21** (4.07-6.19)	**5.93** (4.51-7.06)	**6.49** (4.84-7.74)
30-min	**0.924** (0.776-1.12)	**1.21** (1.02-1.47)	**1.64** (1.38-1.99)	**1.98** (1.65-2.38)	**2.43** (1.99-2.91)	**2.78** (2.25-3.32)	**3.14** (2.49-3.73)	**3.51** (2.74-4.17)	**4.00** (3.04-4.75)	**4.37** (3.26-5.21)
60-min	**0.572** (0.480-0.695)	**0.747** (0.632-0.909)	**1.02** (0.853-1.23)	**1.22** (1.02-1.47)	**1.50** (1.23-1.80)	**1.72** (1.39-2.06)	**1.94** (1.54-2.31)	**2.17** (1.69-2.58)	**2.47** (1.88-2.94)	**2.71** (2.02-3.22)
2-hr	**0.332** (0.283-0.395)	**0.430** (0.367-0.513)	**0.576** (0.490-0.684)	**0.687** (0.578-0.814)	**0.839** (0.697-0.988)	**0.956** (0.784-1.12)	**1.08** (0.869-1.26)	**1.20** (0.950-1.41)	**1.36** (1.05-1.60)	**1.49** (1.13-1.76)
3-hr	**0.240** (0.204-0.288)	**0.307** (0.263-0.371)	**0.405** (0.343-0.485)	**0.481** (0.405-0.574)	**0.589** (0.488-0.699)	**0.675** (0.551-0.798)	**0.765** (0.613-0.903)	**0.858** (0.677-1.01)	**0.987** (0.755-1.17)	**1.09** (0.815-1.29)
6-hr	**0.144** (0.125-0.170)	**0.183** (0.160-0.215)	**0.235** (0.204-0.276)	**0.277** (0.238-0.322)	**0.333** (0.282-0.386)	**0.377** (0.315-0.436)	**0.424** (0.348-0.489)	**0.471** (0.379-0.545)	**0.536** (0.421-0.621)	**0.587** (0.450-0.683)
12-hr	**0.080** (0.071-0.093)	**0.102** (0.089-0.118)	**0.129** (0.113-0.149)	**0.150** (0.130-0.173)	**0.179** (0.154-0.206)	**0.201** (0.171-0.231)	**0.224** (0.187-0.257)	**0.247** (0.204-0.284)	**0.278** (0.224-0.321)	**0.303** (0.239-0.352)
24-hr	**0.048** (0.043-0.054)	**0.061** (0.055-0.068)	**0.079** (0.071-0.088)	**0.093** (0.084-0.104)	**0.113** (0.101-0.126)	**0.129** (0.114-0.143)	**0.145** (0.127-0.161)	**0.162** (0.141-0.180)	**0.185** (0.159-0.206)	**0.203** (0.173-0.227)
2-day	**0.026** (0.023-0.029)	**0.033** (0.030-0.037)	**0.044** (0.039-0.049)	**0.052** (0.046-0.058)	**0.063** (0.056-0.071)	**0.073** (0.064-0.081)	**0.082** (0.072-0.092)	**0.092** (0.081-0.103)	**0.107** (0.092-0.119)	**0.118** (0.101-0.133)
3-day	**0.018** (0.016-0.020)	**0.023** (0.021-0.026)	**0.031** (0.028-0.034)	**0.037** (0.033-0.041)	**0.045** (0.040-0.050)	**0.052** (0.046-0.058)	**0.059** (0.052-0.066)	**0.066** (0.058-0.074)	**0.077** (0.066-0.086)	**0.085** (0.073-0.096)
4-day	**0.014** (0.013-0.016)	**0.019** (0.017-0.021)	**0.024** (0.022-0.027)	**0.029** (0.026-0.032)	**0.036** (0.032-0.040)	**0.041** (0.037-0.046)	**0.047** (0.041-0.052)	**0.053** (0.046-0.059)	**0.062** (0.053-0.069)	**0.069** (0.059-0.077)
7-day	**0.009** (0.008-0.010)	**0.012** (0.011-0.013)	**0.015** (0.014-0.017)	**0.018** (0.016-0.021)	**0.023** (0.020-0.025)	**0.026** (0.023-0.029)	**0.030** (0.026-0.033)	**0.034** (0.029-0.037)	**0.039** (0.034-0.044)	**0.044** (0.037-0.049)
10-day	**0.007** (0.006-0.008)	**0.009** (0.008-0.010)	**0.012** (0.011-0.013)	**0.014** (0.013-0.016)	**0.017** (0.015-0.019)	**0.020** (0.018-0.022)	**0.023** (0.020-0.025)	**0.025** (0.022-0.028)	**0.029** (0.025-0.033)	**0.033** (0.028-0.036)
20-day	**0.004** (0.004-0.005)	**0.005** (0.005-0.006)	**0.007** (0.007-0.008)	**0.009** (0.008-0.010)	**0.010** (0.009-0.011)	**0.012** (0.010-0.013)	**0.013** (0.012-0.015)	**0.015** (0.013-0.016)	**0.016** (0.014-0.018)	**0.018** (0.016-0.020)
30-day	**0.003** (0.003-0.004)	**0.004** (0.004-0.005)	**0.006** (0.005-0.006)	**0.007** (0.006-0.007)	**0.008** (0.007-0.009)	**0.009** (0.008-0.010)	**0.010** (0.009-0.011)	**0.011** (0.010-0.012)	**0.013** (0.011-0.014)	**0.014** (0.012-0.015)
45-day	**0.003** (0.002-0.003)	**0.003** (0.003-0.004)	**0.004** (0.004-0.005)	**0.005** (0.005-0.006)	**0.006** (0.006-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.008** (0.008-0.009)	**0.010** (0.008-0.011)	**0.010** (0.009-0.011)
60-day	**0.002** (0.002-0.002)	**0.003** (0.002-0.003)	**0.004** (0.003-0.004)	**0.004** (0.004-0.005)	**0.005** (0.005-0.006)	**0.006** (0.005-0.006)	**0.006** (0.006-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.008** (0.007-0.009)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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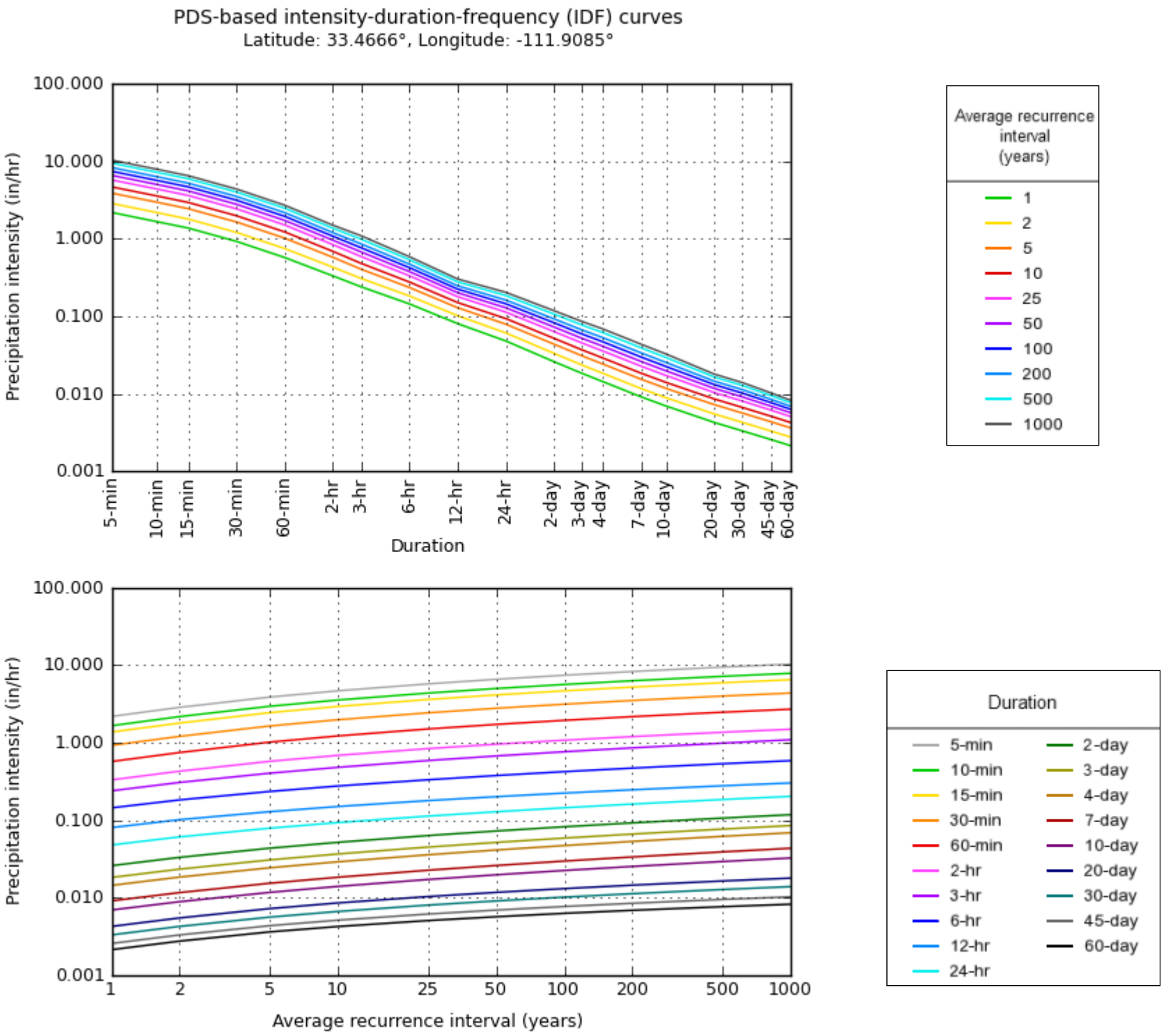
PF graphical

2-ZN-2022
6/6/2022



NOAA Atlas 14, Volume 1, Version 5

Created (GMT): Wed Oct 20 20:45:57 2021

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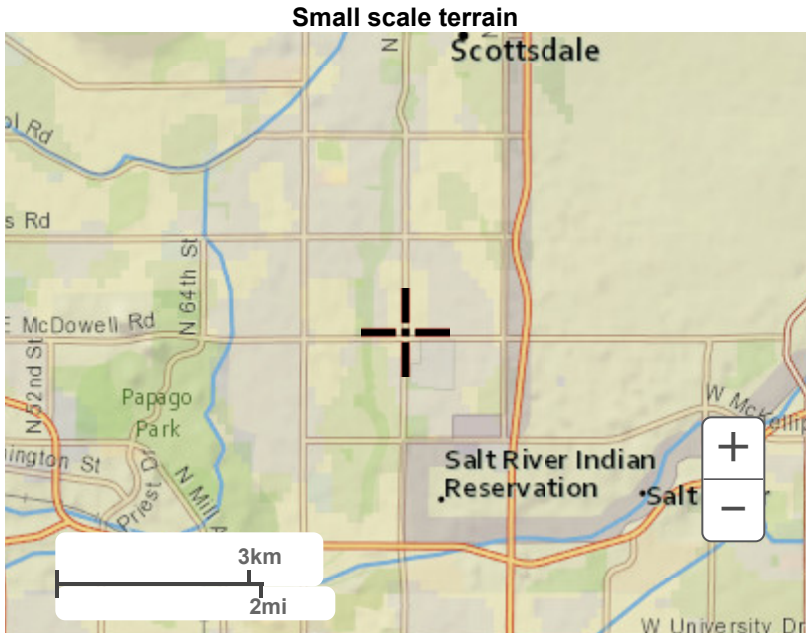
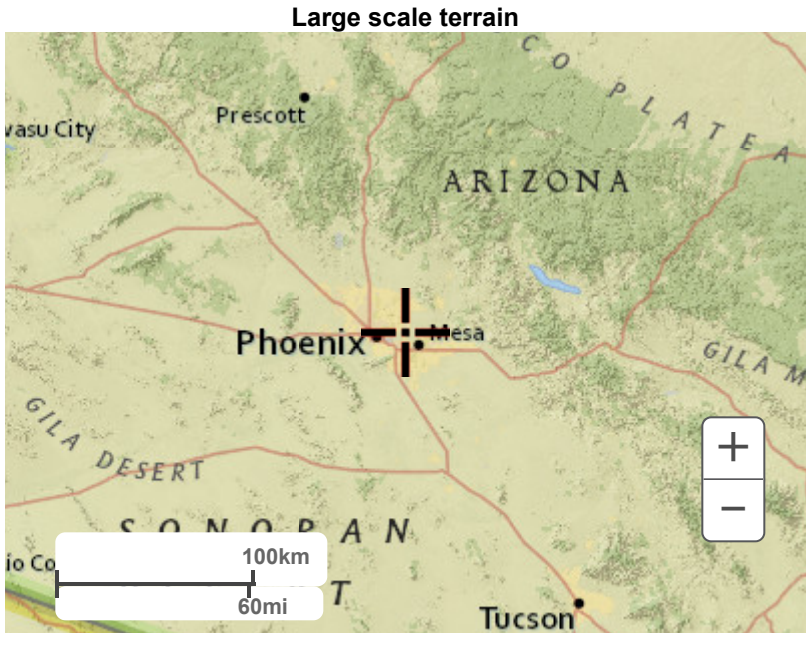
Maps & aerials

Small scale terrain



Large scale terrain



NOAA Atlas 14, Volume 1, Version 5
Location name: Scottsdale, Arizona, USA*
Latitude: 33.4666°, Longitude: -111.9085°
Elevation: 1215.99 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.182** (0.153-0.221)	**0.238** (0.201-0.289)	**0.323** (0.271-0.392)	**0.389** (0.324-0.469)	**0.478** (0.392-0.573)	**0.548** (0.443-0.653)	**0.618** (0.491-0.735)	**0.690** (0.539-0.820)	**0.787** (0.598-0.935)	**0.860** (0.641-1.02)
10-min	**0.276** (0.233-0.337)	**0.362** (0.306-0.440)	**0.492** (0.413-0.596)	**0.592** (0.494-0.714)	**0.728** (0.597-0.873)	**0.833** (0.674-0.995)	**0.940** (0.746-1.12)	**1.05** (0.820-1.25)	**1.20** (0.910-1.42)	**1.31** (0.976-1.56)
15-min	**0.343** (0.288-0.417)	**0.448** (0.379-0.545)	**0.610** (0.512-0.739)	**0.734** (0.612-0.884)	**0.902** (0.740-1.08)	**1.03** (0.836-1.23)	**1.17** (0.925-1.39)	**1.30** (1.02-1.55)	**1.48** (1.13-1.77)	**1.62** (1.21-1.93)
30-min	**0.462** (0.388-0.562)	**0.604** (0.510-0.734)	**0.822** (0.689-0.995)	**0.989** (0.824-1.19)	**1.22** (0.996-1.46)	**1.39** (1.13-1.66)	**1.57** (1.25-1.87)	**1.75** (1.37-2.08)	**2.00** (1.52-2.38)	**2.19** (1.63-2.61)
60-min	**0.572** (0.480-0.695)	**0.747** (0.632-0.909)	**1.02** (0.853-1.23)	**1.22** (1.02-1.47)	**1.50** (1.23-1.80)	**1.72** (1.39-2.06)	**1.94** (1.54-2.31)	**2.17** (1.69-2.58)	**2.47** (1.88-2.94)	**2.71** (2.02-3.22)
2-hr	**0.663** (0.566-0.790)	**0.859** (0.734-1.03)	**1.15** (0.979-1.37)	**1.37** (1.16-1.63)	**1.68** (1.39-1.98)	**1.91** (1.57-2.25)	**2.15** (1.74-2.53)	**2.40** (1.90-2.81)	**2.73** (2.11-3.21)	**2.99** (2.26-3.53)
3-hr	**0.720** (0.612-0.864)	**0.923** (0.789-1.11)	**1.22** (1.03-1.46)	**1.45** (1.22-1.73)	**1.77** (1.47-2.10)	**2.03** (1.66-2.40)	**2.30** (1.84-2.71)	**2.58** (2.03-3.04)	**2.96** (2.27-3.50)	**3.28** (2.45-3.89)
6-hr	**0.865** (0.751-1.02)	**1.10** (0.956-1.29)	**1.41** (1.22-1.65)	**1.66** (1.42-1.93)	**1.99** (1.69-2.31)	**2.26** (1.89-2.61)	**2.54** (2.08-2.93)	**2.82** (2.27-3.26)	**3.21** (2.52-3.72)	**3.51** (2.69-4.09)
12-hr	**0.969** (0.850-1.12)	**1.23** (1.07-1.42)	**1.55** (1.36-1.79)	**1.81** (1.57-2.08)	**2.16** (1.85-2.48)	**2.43** (2.06-2.78)	**2.70** (2.26-3.10)	**2.98** (2.45-3.42)	**3.35** (2.69-3.87)	**3.65** (2.88-4.24)
24-hr	**1.15** (1.04-1.29)	**1.46** (1.32-1.64)	**1.90** (1.70-2.12)	**2.24** (2.00-2.50)	**2.72** (2.41-3.02)	**3.09** (2.73-3.43)	**3.48** (3.05-3.86)	**3.88** (3.38-4.31)	**4.44** (3.82-4.94)	**4.88** (4.16-5.44)
2-day	**1.25** (1.12-1.40)	**1.60** (1.44-1.79)	**2.09** (1.88-2.34)	**2.49** (2.23-2.78)	**3.05** (2.71-3.40)	**3.49** (3.08-3.89)	**3.96** (3.47-4.42)	**4.44** (3.87-4.96)	**5.12** (4.41-5.73)	**5.66** (4.83-6.37)
3-day	**1.32** (1.19-1.47)	**1.69** (1.52-1.89)	**2.22** (1.99-2.47)	**2.65** (2.36-2.95)	**3.25** (2.89-3.61)	**3.73** (3.29-4.15)	**4.24** (3.72-4.72)	**4.78** (4.16-5.33)	**5.54** (4.76-6.18)	**6.15** (5.23-6.88)
4-day	**1.39** (1.25-1.55)	**1.78** (1.60-1.99)	**2.34** (2.10-2.61)	**2.80** (2.50-3.11)	**3.45** (3.06-3.83)	**3.97** (3.51-4.41)	**4.53** (3.97-5.03)	**5.12** (4.45-5.69)	**5.95** (5.11-6.63)	**6.63** (5.63-7.40)
7-day	**1.53** (1.38-1.71)	**1.96** (1.77-2.19)	**2.59** (2.32-2.89)	**3.09** (2.77-3.45)	**3.81** (3.39-4.24)	**4.39** (3.88-4.87)	**5.00** (4.39-5.56)	**5.65** (4.92-6.29)	**6.57** (5.64-7.32)	**7.31** (6.21-8.16)
10-day	**1.67** (1.50-1.86)	**2.14** (1.92-2.38)	**2.82** (2.53-3.13)	**3.37** (3.01-3.74)	**4.13** (3.68-4.58)	**4.75** (4.20-5.26)	**5.40** (4.75-5.99)	**6.09** (5.31-6.76)	**7.05** (6.07-7.83)	**7.82** (6.67-8.70)
20-day	**2.05** (1.85-2.28)	**2.64** (2.38-2.93)	**3.48** (3.13-3.86)	**4.12** (3.70-4.57)	**4.98** (4.45-5.52)	**5.64** (5.02-6.25)	**6.31** (5.59-7.00)	**6.99** (6.16-7.76)	**7.91** (6.90-8.80)	**8.61** (7.46-9.60)
30-day	**2.39** (2.16-2.66)	**3.08** (2.78-3.42)	**4.06** (3.65-4.49)	**4.80** (4.31-5.31)	**5.80** (5.19-6.41)	**6.56** (5.85-7.24)	**7.35** (6.52-8.11)	**8.14** (7.18-9.00)	**9.22** (8.07-10.2)	**10.0** (8.71-11.1)
45-day	**2.78** (2.51-3.08)	**3.58** (3.24-3.97)	**4.72** (4.26-5.23)	**5.56** (5.01-6.15)	**6.67** (5.98-7.37)	**7.50** (6.71-8.30)	**8.34** (7.43-9.23)	**9.18** (8.13-10.2)	**10.3** (9.04-11.4)	**11.1** (9.71-12.4)
60-day	**3.08** (2.79-3.41)	**3.98** (3.60-4.40)	**5.23** (4.73-5.78)	**6.14** (5.53-6.78)	**7.33** (6.59-8.08)	**8.20** (7.35-9.05)	**9.08** (8.10-10.0)	**9.94** (8.83-11.0)	**11.1** (9.77-12.3)	**11.9** (10.4-13.2)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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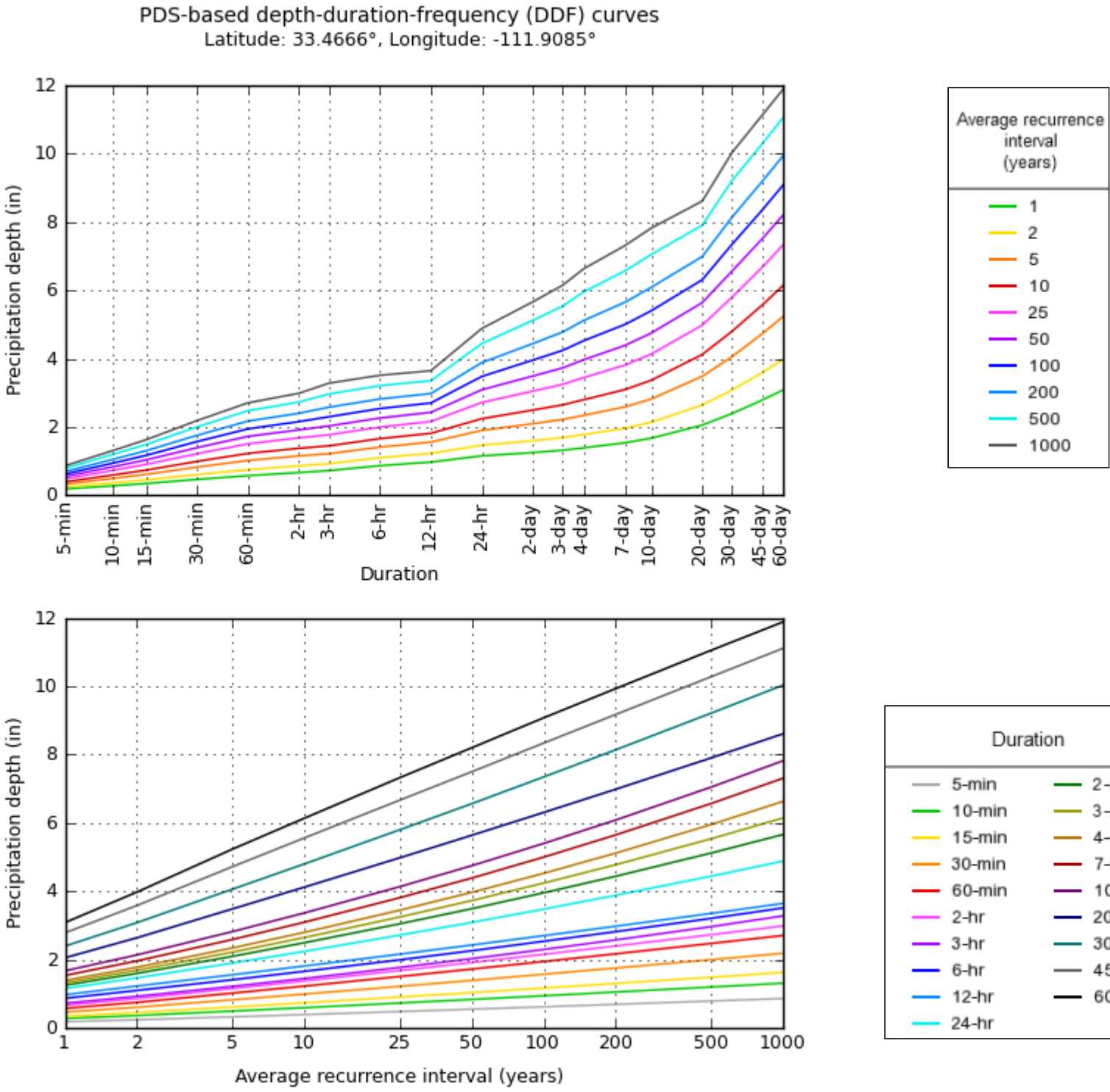
PF graphical

2-ZN-2022
6/6/2022



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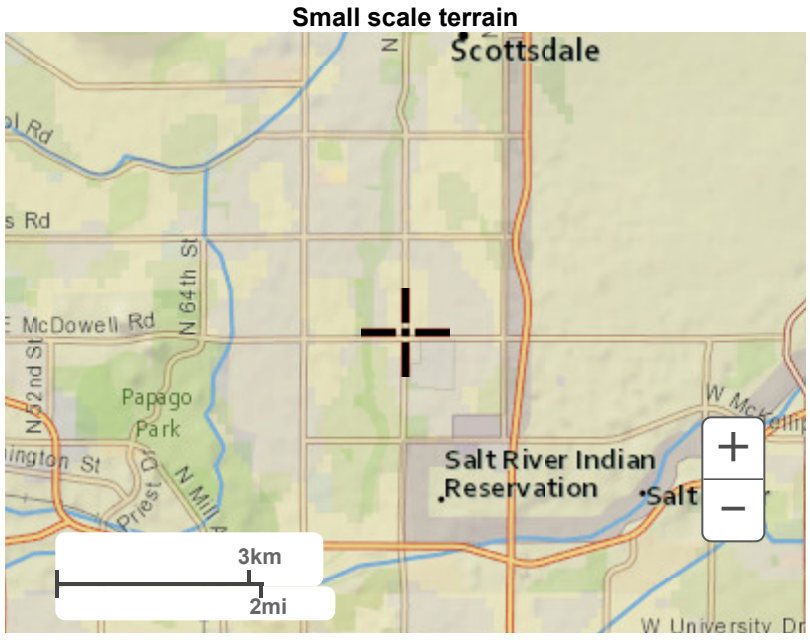
Maps & aerials

Small scale terrain



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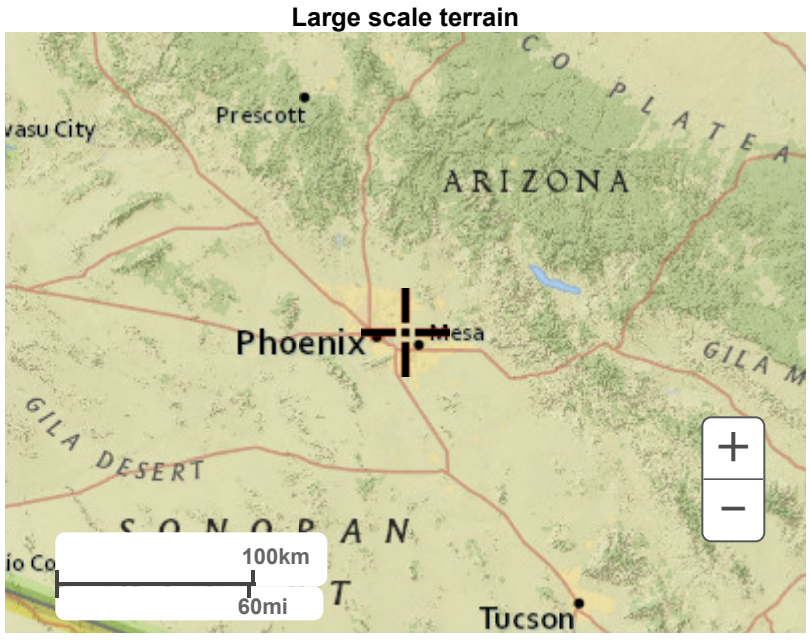


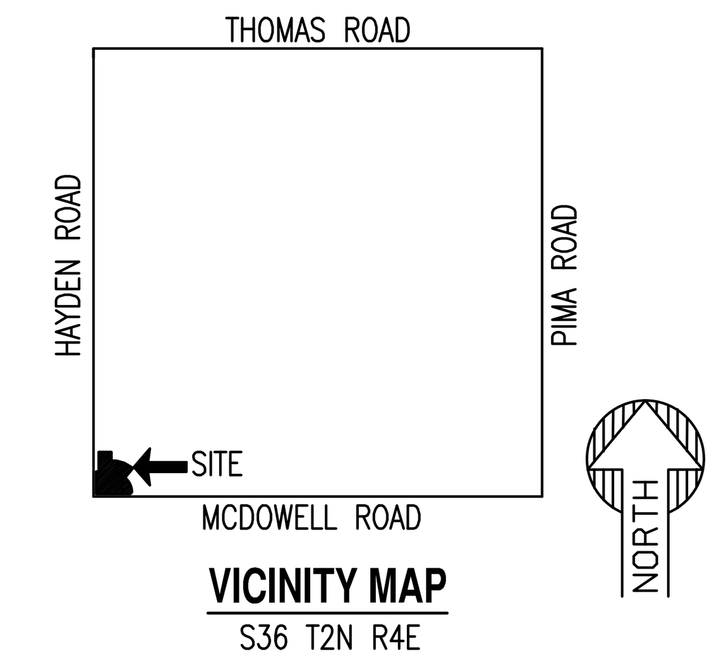
APPENDIX II

CALCULATIONS

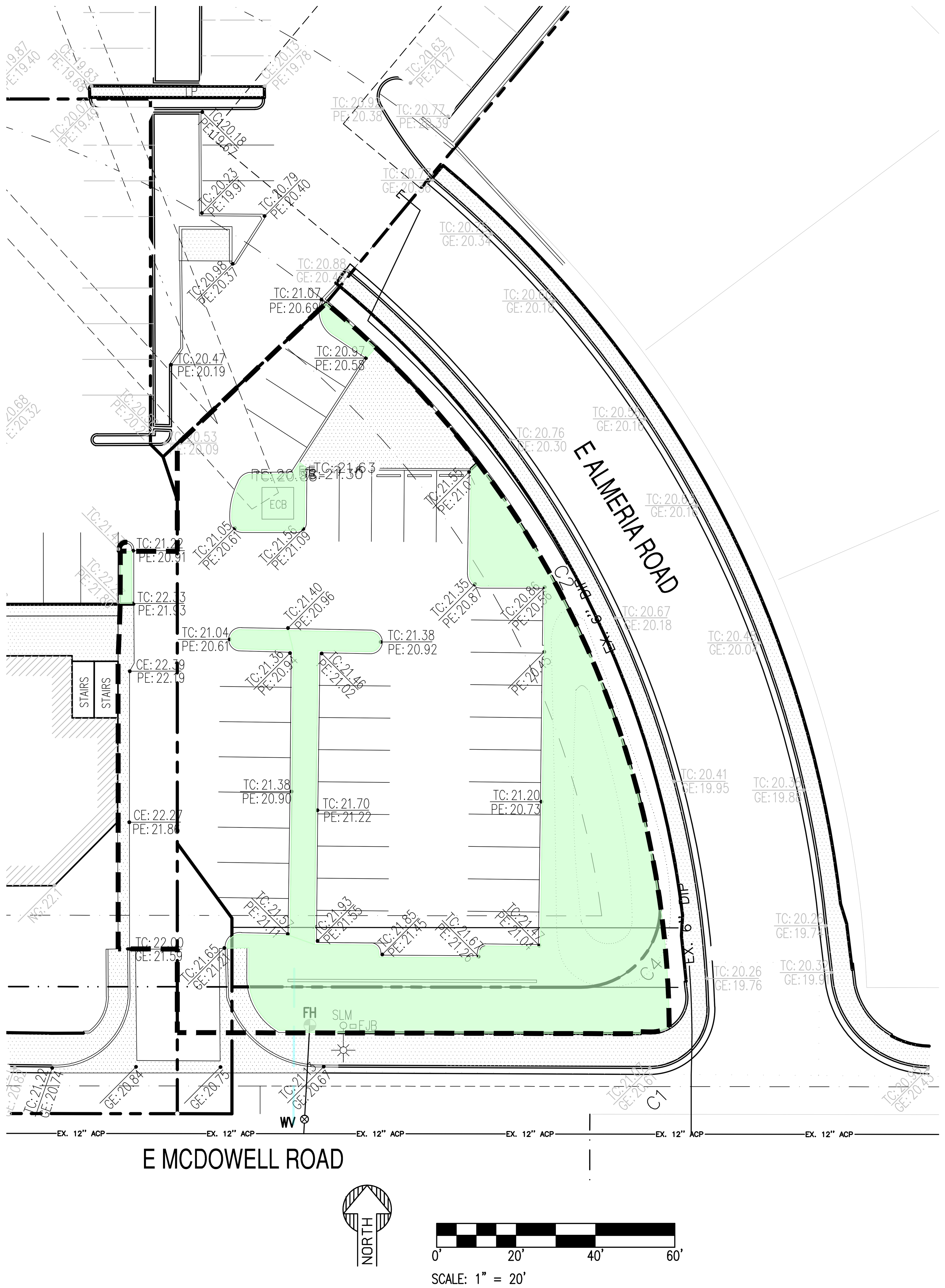
MCDOWELL

EXISTING CONDITIONS C_{WT}

8010 E. MCDOWELL ROAD, SCOTTSDALE, AZ 85257



VICINITY MAP
S36 T2N R4E
NTS



100-YEAR EVENT

DISTURBED AREA			
BUILDING/PAVED SURFACE =	14,260 SF (0.33 AC)	@ CWT=0.95	
NATURAL DESERT =	5,460 SF (0.12 AC)	@ CWT=0.45	
TOTAL ON-SITE CWT =	19720 SF (0.45 AC)	@ CWT=0.81	

10-YEAR EVENT

DISTURBED AREA			
BUILDING/PAVED SURFACE =	14,260 SF (0.33 AC)	@ CWT=0.90	
NATURAL DESERT =	5,460 SF (0.12 AC)	@ CWT=0.37	
TOTAL ON-SITE CWT =	19720 SF (0.45 AC)	@ CWT=0.75	

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW. AZSEG.COM TEL. 480.588.7226 FAX 480.259.3534

HOH INVESTMENT GROUP

PROJECT: MCDOWELL

LOCATION: 8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	05/24/2022
DESIGNED	JC	05/24/2022
QC	SC	05/06/2022
FINAL QC		
PROJ. MGR.	AF	05/24/2022

DATE: 05/09/2022

ISSUED FOR: ZONING

REVISION NO.:		DATE:
1		
2		
3		
4		

JOB NO.: 210929

SHEET TITLE: X-C_{WT}

PAGE NO.: 1 OF 1

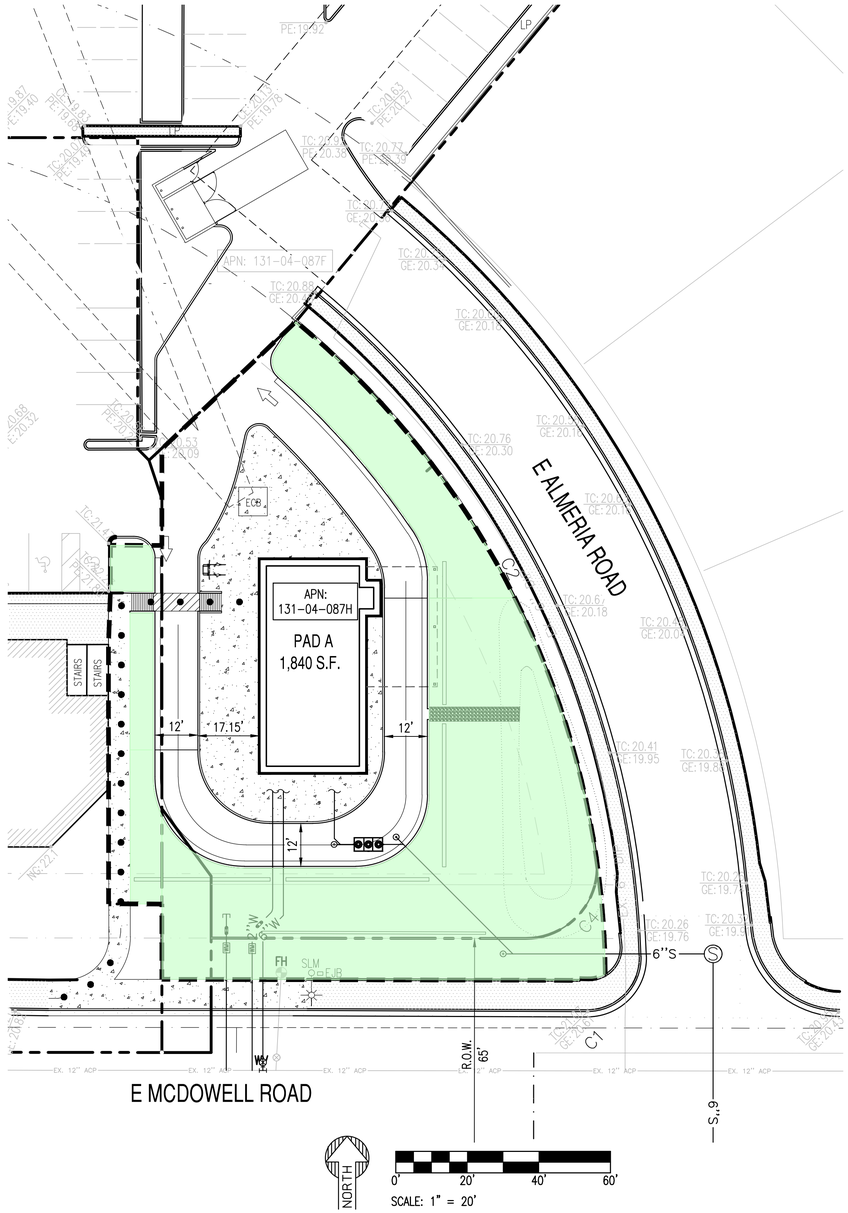
SHEET NO.: X-C_{WT}

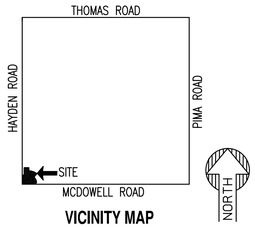
2-ZN-2022
6/6/2022

MCDOWELL

PROPOSED CONDITIONS C_{WT}

8010 E. MCDOWELL ROAD, SCOTTSDALE, AZ 85257





VICINITY MAP
S36 T2N R4E
NTS

100-YEAR EVENT
DISTURBED AREA
BUILDING/PAVED SURFACE = 8,291 SF (0.19 AC) @ CWT=0.95
NATURAL DESERT = 11,429 SF (0.26 AC) @ CWT=0.45

TOTAL ON-SITE CWT = 19720 SF (0.45 AC) @ CWT=0.73

10-YEAR EVENT
DISTURBED AREA
BUILDING/PAVED SURFACE = 8,291 SF (0.19 AC) @ CWT=0.90
NATURAL DESERT = 11,429 SF (0.26 AC) @ CWT=0.37

TOTAL ON-SITE CWT = 19720 SF (0.45 AC) @ CWT=0.67

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

HH HOH INVESTMENT GROUP

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 Call 811 or click Arizona811.com

PROJECT: MCDOWELL
LOCATION: 8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	05/24/2022
DESIGNED	JC	05/24/2022
QC	SC	05/06/2022
FINAL QC		
PROJ. MGR.	AF	05/24/2022

DATE: 05/09/2022
ISSUED FOR: ZONING

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.: 210929
SHEET TITLE: P-C_{WT}
PAGE NO.: 1 OF 1
SHEET NO.: P-C_{WT}

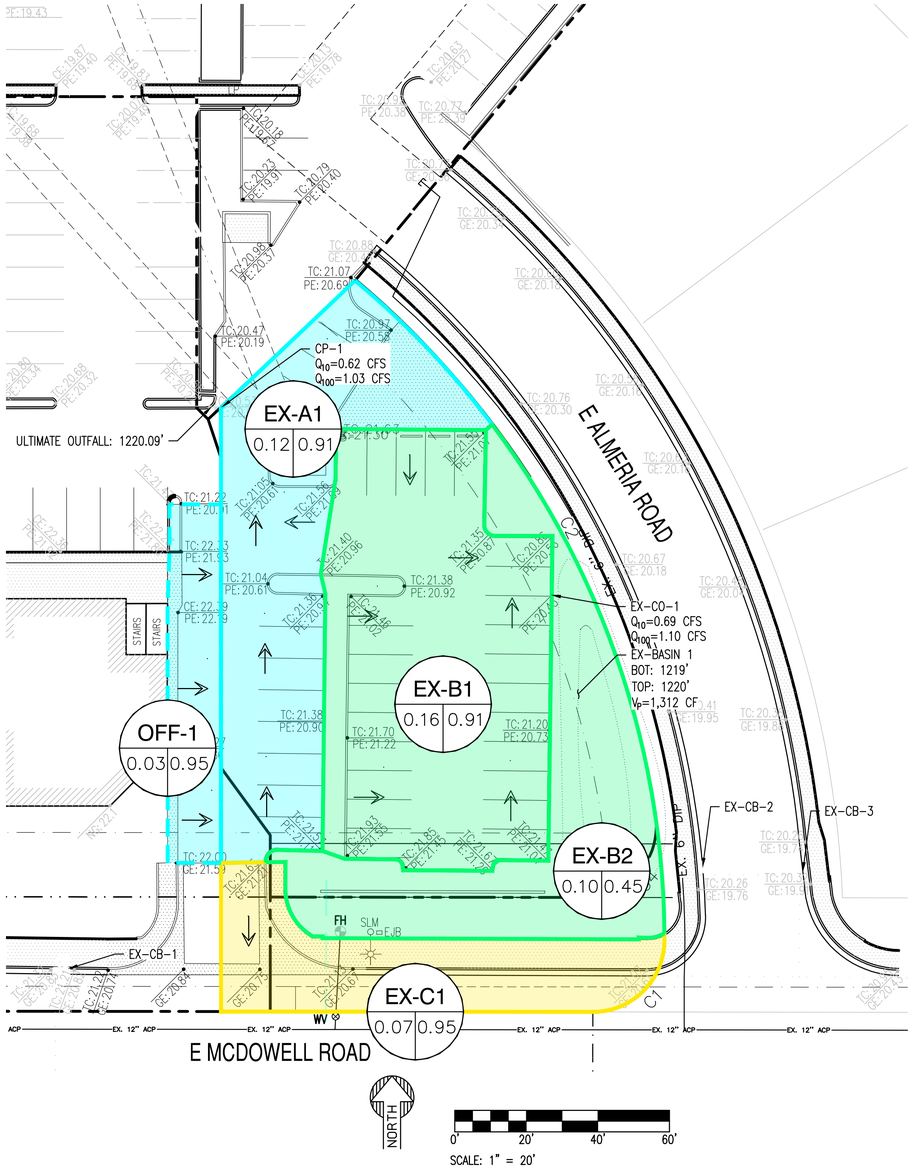
LOCATION: Z:\SHARED\PROJECTS\HOA\SCOTTSDALE - NEC MCDOWELL RD & HAYDEN RD - 210929\11 CAD (SEG)\11.4 ENTITLEMENT-PLANNING\210929-PCWT.DWG SAVED BY: JUANCARLOSCHACON DATE: 5/24/2022

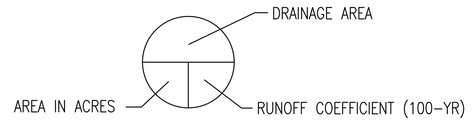
2-ZN-2022
6/6/2022

MCDOWELL

EXISTING CONDITIONS DRAINAGE AREA MAP

8010 E. MCDOWELL ROAD, SCOTTSDALE, AZ 85257

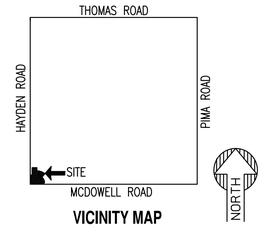




DRAINAGE AREA KEY

EXISTING LEGEND

- DRAINAGE AREAS DRAINING TO CONTROL POINT CP-1
- DRAINAGE AREASS DRAINING TO EX-BASIN 1
- DRAINAGE AREAS DRAINING TO MCDOWELL ROAD
- FLOW ARROW
- OFF-SITE DRAINAGE AREA



VICINITY MAP
S36 T2N R4E
NTS

EXISTING OVERALL SITE C_w 10 YR

	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.90	0.37		
AREA (ac)	0.33	0.13	**0.45**	0.81
EX-A1	0.11	0.01	0.12	0.86
EX-B1	0.15	0.01	0.16	0.86
EX-B2	0.00	0.10	0.10	0.37
EX-C1	0.07	0.00	0.07	0.90

EXISTING OFFSITE SITE C_w 10 YR

	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.9	0.37		
AREA (ac)	0.03	0.00	**0.03**	**0.90**
OFF-1	0.03	0.00	0.03	0.90

EXISTING OVERALL SITE C_w 100 YR

	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.45		
AREA (ac)	0.33	0.13	**0.45**	0.81
EX-A1	0.11	0.01	0.12	0.91
EX-B1	0.15	0.01	0.16	0.91
EX-B2	0.00	0.10	0.10	0.45
EX-C1	0.07	0.00	0.07	0.95

EXISTING OFFSITE SITE C_w 100 YR

	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.50		
AREA (ac)	0.03	0.00	**0.03**	**0.95**
OFF-1	0.03	0.00	0.03	0.95

EXISTING SITE DISCHARGES

	TOTAL AREA	Cwt 10	Intensity 10 yr 5-min	Q 10	Cwt 100	Intensity 100 yr 5-min	Q 100	Control Point	Total flows Q10	Total flows Q100
	(ac)	(-)	(in/hr)	(cfs)	(-)	(in/hr)	(cfs)	CP#	(cfs)	(cfs)
	0.48		4.67	-		7.42	-	-	-	-
EX-A1	0.12	0.86	4.67	0.49	0.91	7.42	0.82	CP-1	1.72	2.93
OFF-1	0.03	0.90	4.67	0.13	0.95	7.42	0.21			
EX-B1	0.16	0.86	4.67	0.65	0.91	7.42	1.10	Ex-Basin 1		
EX-B2	0.10	0.37	4.67	0.18	0.45	7.42	0.35			
EX-C1	0.07	0.90	4.67	0.28	0.95	7.42	0.46	McDowell Road		

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

HH HOH INVESTMENT GROUP

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PROJECT: MCDOWELL
LOCATION: 8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	05/24/2022
DESIGNED	JC	05/24/2022
QC	SC	05/06/2022
FINAL QC		
PROJ. MGR.	AF	05/24/2022

DATE: 05/09/2022
ISSUED FOR: ZONING

REVISION NO.:	DATE:
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JOB NO.: 210929
SHEET TITLE: X-DAM
PAGE NO.: 1 OF 1
SHEET NO.: X-DAM

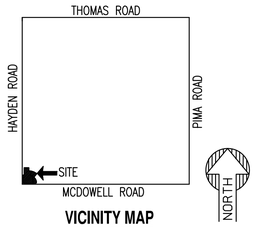
2-ZN-2022
6/6/2022

LOCATION: Z:\SHARED\PROJECTS\HOH\SCOTTSDALE - NEC MCDOWELL RD & HAYDEN RD - 210929\11 CAD (SEG)\11.4 ENTITLEMENT-PLANNING\210929-XDAM.DWG SAVED BY: JUANCARLOSCHACON DATE: 5/24/2022

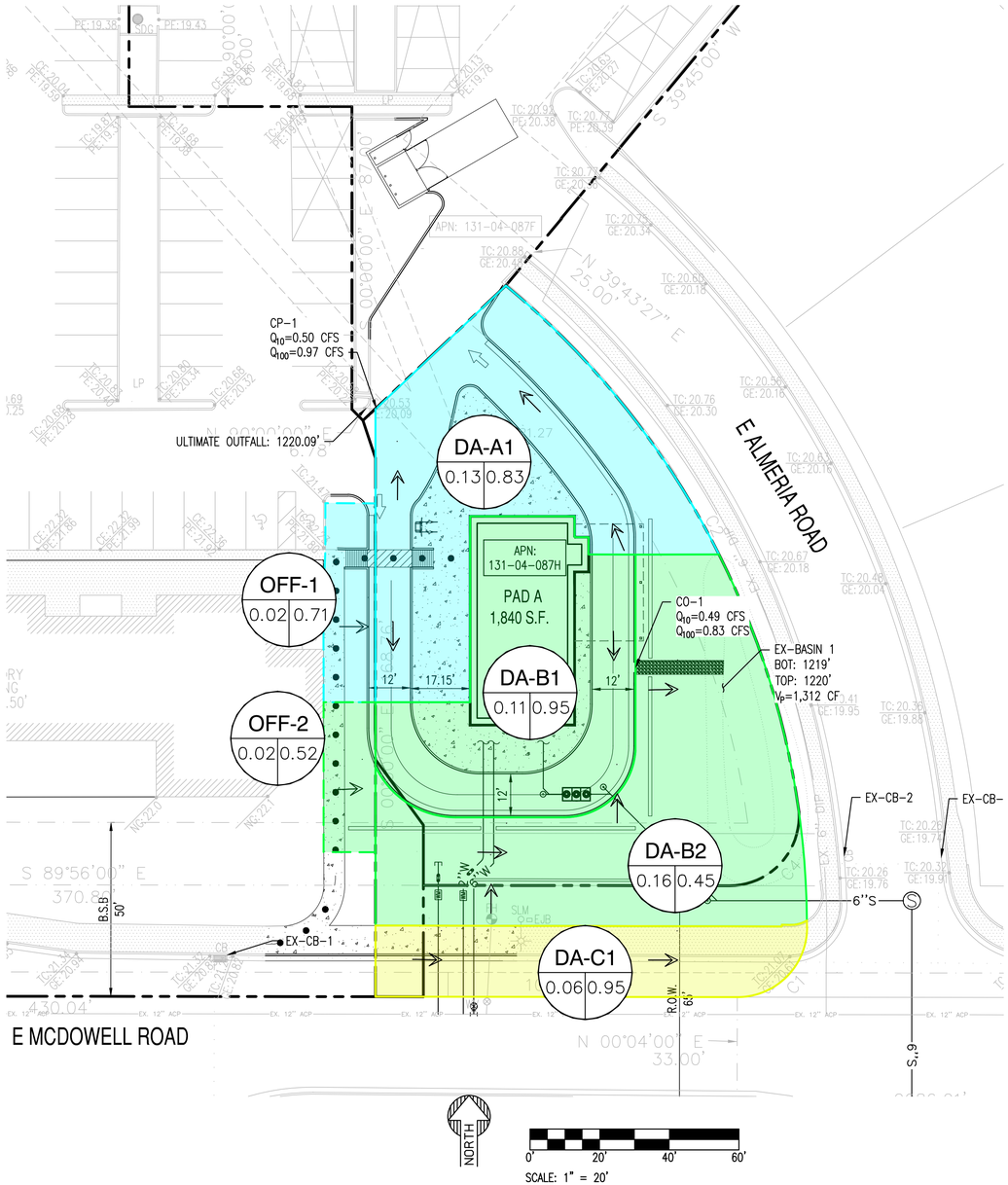
MCDOWELL

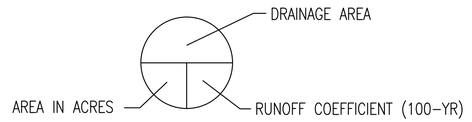
PROPOSED CONDITIONS DRAINAGE AREA MAP

8010 E. MCDOWELL ROAD, SCOTTSDALE, AZ 85257



VICINITY MAP
S36 T2N R4E
NTS





DRAINAGE AREA KEY

PROPOSED LEGEND

- DRAINAGE AREAS DRAINING TO CONTROL POINT CP-1
- DRAINAGE AREASS DRAINING TO EX-BASIN 1
- DRAINAGE AREAS DRAINING TO MCDOWELL ROAD
- FLOW ARROW
- OFF-SITE DRAINAGE AREA

PROPOSED OVERALL SITE C_w 100 YR

	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.45		
AREA (ac)	0.26	0.19	**0.45**	**0.73**
DA-A1	0.10	0.03	0.13	0.83
DA-B1	0.11	0.00	0.11	0.95
DA-B2	0.00	0.16	0.16	0.45
DA-C1	0.06	0.00	0.06	0.95

PROPOSED OFFSITE SITE C_w 100 YR

	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.50		
AREA (ac)	0.02	0.02	**0.04**	**0.62**
OFF-1	0.01	0.01	0.02	0.71
OFF-2	0.01	0.01	0.02	0.52

PROPOSED OVERALL SITE C_w 10 YR

	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.9	0.37		
AREA (ac)	0.26	0.19	**0.45**	**0.67**
DA-A1	0.10	0.03	0.13	0.77
DA-B1	0.11	0.00	0.11	0.90
DA-B2	0.00	0.16	0.16	0.37
DA-C1	0.06	0.00	0.06	0.90

PROPOSED OFFSITE SITE C_w 10 YR

	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.90	0.37		
AREA (ac)	0.02	0.02	**0.04**	**0.54**
OFF-1	0.01	0.01	0.02	0.63
OFF-2	0.01	0.01	0.02	0.45

PROPOSED SITE DISCHARGES

	TOTAL AREA	Cwt 10	Intensity 10 yr 5-min	Q 10	Cwt 100	Intensity 100 yr 5-min	Q 100	Control Point	Total flows Q10	Total flows Q100
	(ac)	(-)	(in/hr)	(cfs)	(-)	(in/hr)	(cfs)	CP#	(cfs)	(cfs)
	0.43		4.67	-		7.42	-	-	-	-
DA-A1	0.13	0.77	4.67	0.47	0.83	7.42	0.81	CP-1	1.50	2.72
OFF-1	0.01	0.63	4.67	0.03	0.71	7.42	0.16			
DA-B1	0.11	0.90	4.67	0.45	0.95	7.42	0.75	EX-Basin 1		
DA-B2	0.16	0.37	4.67	0.27	0.45	7.42	0.53			
OFF-2	0.02	0.45	4.67	0.04	0.52	7.42	0.08			
DA-C1	0.06	0.90	4.67	0.24	0.95	7.42	0.40	McDowell Road		

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

HOH INVESTMENT GROUP

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 Call 811 or click Arizona811.com

PROJECT: MCDOWELL
LOCATION: 8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	05/24/2022
DESIGNED	JC	05/24/2022
QC	SC	05/06/2022
FINAL QC		
PROJ. MGR.	AF	05/24/2022

DATE: 05/09/2022
ISSUED FOR: ZONING

REVISION NO.:	DATE:
1	
2	
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JOB NO.: 210929

SHEET TITLE: **PROPOSED CONDITIONS DRAINAGE AREA MAP**

PAGE NO.: 1 OF 1
SHEET NO.: **P-DAM**

LOCATION: Z:\SHARED\PROJECTS\HOH\SCOTTSDALE - NEC MCDOWELL RD & HAYDEN RD - 210929\11 CAD (SEG)\11.4 ENTITLEMENT-PLANNING\210929-PDAM.DWG SAVED BY: JUANCARLOSCHACON DATE: 5/24/2022

2-ZN-2022
6/6/2022

EXISTING OVERALL SITE C_w 100 YR				
	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.45		
AREA (ac)	0.33	0.13	**0.45**	0.81
EX-A1	0.11	0.01	0.12	0.91
EX-B1	0.15	0.01	0.16	0.91
EX-B2	0.00	0.10	0.10	0.45
EX-C1	0.07	0.00	0.07	0.95
EXISTING OFFSITE SITE C_w 100 YR				
	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.50		
AREA (ac)	0.03	0.00	**0.03**	**0.95**
OFF-1	0.03	0.00	0.03	0.95

EXISTING OVERALL SITE C_w 10 YR				
	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.90	0.37		
AREA (ac)	0.33	0.13	**0.45**	0.75
EX-A1	0.11	0.01	0.12	0.86
EX-B1	0.15	0.01	0.16	0.86
EX-B2	0.00	0.10	0.10	0.37
EX-C1	0.07	0.00	0.07	0.90
EXISTING OFFSITE SITE C_w 10 YR				
	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.9	0.37		
AREA (ac)	0.03	0.00	**0.03**	**0.90**
OFF-1	0.03	0.00	0.03	0.90

PROPOSED OVERALL SITE C_w 100 YR				
	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.45		
AREA (ac)	0.26	0.19	**0.45**	**0.73**
DA-A1	0.10	0.03	0.13	0.83
DA-B1	0.11	0.00	0.11	0.95
DA-B2	0.00	0.16	0.16	0.45
DA-C1	0.06	0.00	0.06	0.95
PROPOSED OFFSITE SITE C_w 100 YR				
	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.95	0.50		
AREA (ac)	0.02	0.02	**0.04**	**0.62**
OFF-1	0.01	0.01	0.02	0.71
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PROPOSED OVERALL SITE C_w 10 YR				
	BUILDING/ PAVEMENT	DESERT LANDSCAPE	TOTAL AREA	Cwt
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AREA (ac)	0.26	0.19	**0.45**	**0.67**
DA-A1	0.10	0.03	0.13	0.77
DA-B1	0.11	0.00	0.11	0.90
DA-B2	0.00	0.16	0.16	0.37
DA-C1	0.06	0.00	0.06	0.90
PROPOSED OFFSITE SITE C_w 10 YR				
	Pavement	DESERT LANDSCAPE	TOTAL AREA	Cwt
C-VALUE	0.90	0.37		
AREA (ac)	0.02	0.02	**0.04**	**0.54**
OFF-1	0.01	0.01	0.02	0.63
OFF-2	0.01	0.01	0.02	0.45

APPENDIX III

PRELIMINARY GRADING PLAN

CIVIL ENGINEER
SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DR., SUITE 101
SCOTTSDALE, ARIZONA 85260
PHONE: 480-588-7226
ATTN: ALI FAKIH
EMAIL: ALI@AZSEG.COM

OWNER:
HOH MCDOWELL LLC
11811 N. TATUM BLVD #1051
PHOENIX, ARIZONA 85028

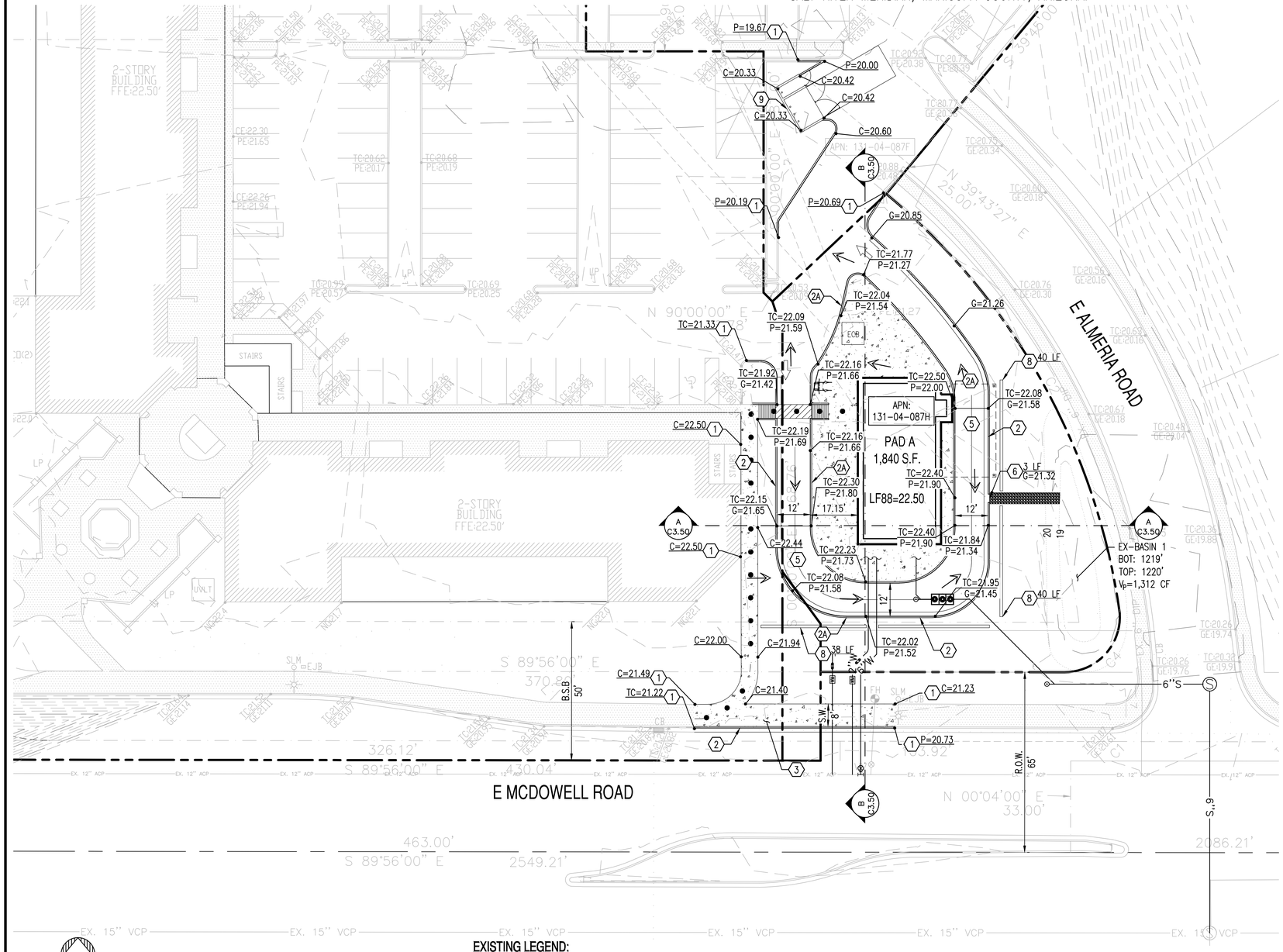
SURVEYOR
AW LAND SURVEYING, LLC
P.O. BOX 2170
CHANDLER, ARIZONA 85244
PHONE: 480-244-7630
ATTN: DANIEL ARMIJO

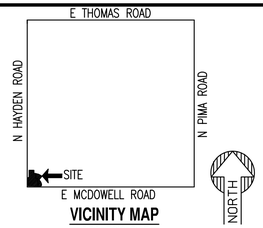
MCDOWELL

PRELIMINARY GRADING PLAN

8010 E MCDOWELL ROAD, SCOTTSDALE AZ 85257

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.





VICINITY MAP
S36 T2N R4E
NTS

PRELIMINARY GRADING NOTES

1. MATCH EXISTING GRADE.
2. 6" VERTICAL CURB AND GUTTER.
2A. 6" VERTICAL CURB.
3. CONSTRUCT CONCRETE SIDEWALK. WIDTH PER PLAN.
4. CONSTRUCT ADA RAMP.
5. LIGHT DUTY PAVEMENT.
6. CONSTRUCT CURB OPENING; LENGTH PER PLAN.
7. FURNISH AND INSTALL RIP-RAP; D50 = 6", 12" DEPTH. DIMENSIONS PER PLAN.
8. CONSTRUCT SCREEN WALL; LENGTH PER PLAN.
9. CONSTRUCT TRASH ENCLOSURE.

C.O.S. GENERAL NOTES FOR PUBLIC WORKS CONSTRUCTION

1. ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MAG UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE CITY'S SUPPLEMENTAL STANDARD DETAILS WILL GOVERN.
2. THE CITY ONLY APPROVES THE SCOPE, NOT THE DETAIL, OF ENGINEERING DESIGNS; THEREFORE, IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF A RIGHT-OF-WAY PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
4. A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY RIGHTS-OF-WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING 480-312-5750.
5. WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 811, TWO WORKING DAYS BEFORE EXCAVATION BEGINS. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT.
6. RIGHT-OF-WAY PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. A RIGHT-OF-WAY PERMIT WILL BE ISSUED BY THE CITY ONLY AFTER THE REGISTRANT HAS PAID A BASE FEE PLUS A FEE FOR INSPECTION SERVICES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING THAT IS NOT IN THE PUBLIC RIGHTS-OF-WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO APPENDIX J, GRADING, OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE CITY.

NORTH

0' 20' 40' 60'
SCALE: 1" = 20'

EXISTING LEGEND:

- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- TC:XX.XX / GE:XX.XX — EX. SPOT ELEVATION
- EASEMENT LINE AS NOTED
- EX. S — SEWER LINE
- SEWER MANHOLE
- EX. W — WATER LINE
- WV — WATER VALVE
- FIRE HYDRANT
- STORM DRAIN LINE
- CB — STORM CATCH BASIN
- STORM MANHOLE
- GAS — GAS LINE
- X X — FENCE
- SIGN
- STREET LIGHT
- TREE
- ROAD CENTERLINE

PROPOSED GRADING LEGEND:

- G=XX.XX / P=XX.XX / C=XX.XX / TC=XX.XX — GUTTER ELEVATION, PAVEMENT ELEVATION, CONCRETE ELEVATION, TOP OF CURB
- RIGHT OF WAY
- SINGLE CURB
- CURB AND GUTTER
- RL — RIDGELINE
- SETBACK
- BUILDING OVERHANG
- FLOW ARROW
- WM — WATER METER
- GATE VALVE
- SEWER MANHOLE
- CONCRETE PAVEMENT
- LIGHT DUTY PAVEMENT
- ACCESSIBLE PEDESTRIAN PATH

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

HOH INVESTMENT GROUP

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ARIZONA811
Call 811 or click Arizona811.com

PROJECT: MCDOWELL
LOCATION: 8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	05/24/2022
DESIGNED	JC	05/24/2022
QC	SC	05/06/2022
FINAL QC		
PROJ. MGR.	AF	05/24/2022

DATE: 05/09/2022
ISSUED FOR: ZONING

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.: 210929

SHEET TITLE: **PRELIMINARY GRADING & DRAINAGE PLAN**

PAGE NO.: 1 OF 3
SHEET NO.: **C3.10**

LOCATION: Z:\SHARED\PROJECTS\HOH\SCOTTSDALE - NEC MCDOWELL RD & HAYDEN RD - 210929\11 CAD (SEG)\11.4 ENTITLEMENT-PLANNING\210929-C3.00.DWG SAVED BY: JUANCARLOSCHACON DATE: 5/24/2022

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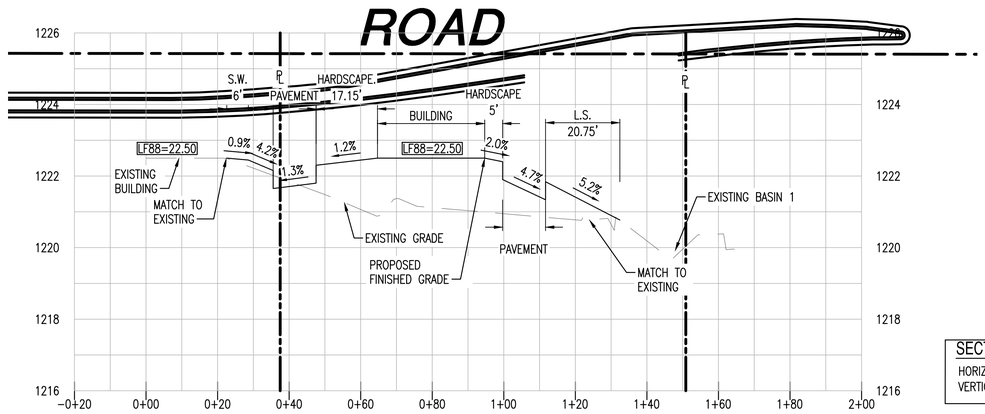
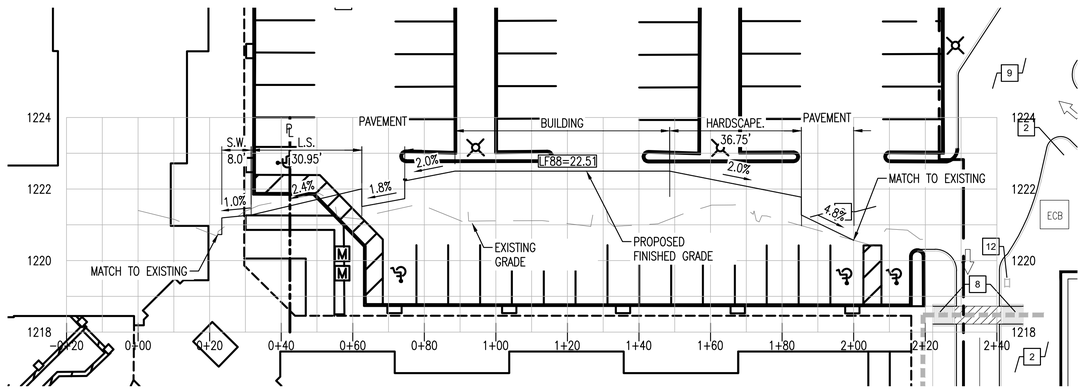
6/6/2022



SECTION A-A C3.10
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'



SECTION B-B C3.10
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

HOH INVESTMENT GROUP

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PROJECT
MCDOWELL

LOCATION
8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	05/24/2022
DESIGNED	JC	05/24/2022
QC	SC	05/06/2022
FINAL QC		
PROJ. MGR.	AF	05/24/2022

DATE:
05/09/2022

ISSUED FOR:
ZONING

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.:
210929

SHEET TITLE:
PRELIMINARY GRADING & DRAINAGE CROSS SECTIONS

PAGE NO.:	SHEET NO.:
2 OF 3	**C3.50**

2-ZN-2022
6/6/2022

LOCATION: Z:\SHARED\PROJECTS\HOH\SCOTTSDALE - NEC MCDOWELL RD & HAYDEN RD - 210929\11 CAD (SEG)\11.4 ENTITLEMENT-PLANNING\210929-C3.00.DWG SAVED BY: JUANCARLOSCHACON DATE: 5/24/2022