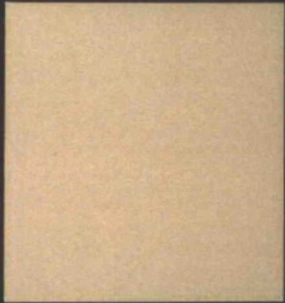
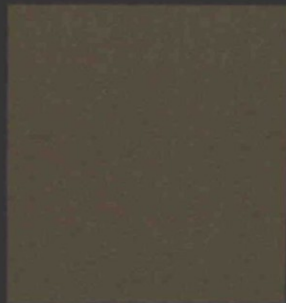


Exterior Building Color & Material Samples
Color Drawdowns
Archaeological Resources
Airport Vicinity Development Checklist
Parking Study
Trip Generation Comparison
Parking Master Plan

PAINT - PRACTICAL TAN DE6115
LRV 58 [DUNN EDWARDS]



PAINT - BARREL STOVE DE6216
LRV 21 [DUNN EDWARDS]



PAINT - LYNX DE6035
LRV 8 [DUNN EDWARDS]



STUCCO - SAND FINISH
BASE LIGHT [PAREX]



GLASS - FLOAT GLASS
ULTRA WHITE [VIRACON]

WOOD - AMERICAN MAHOGANY (AML)
LAMINATE FINISH [OFFICES TO GO]



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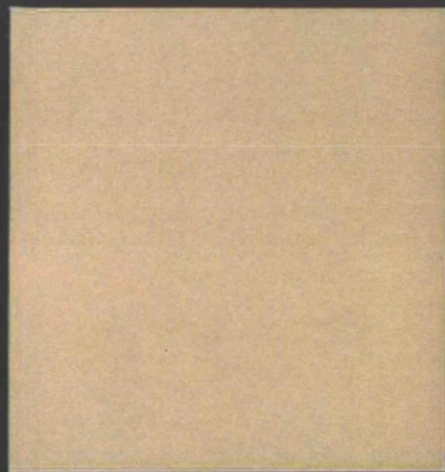
Float Glass

STEEL - AGED BRONZE
(WEATHERED COPPER COLOR) [BERRIDGE]



5-UP-2016
5/19/16

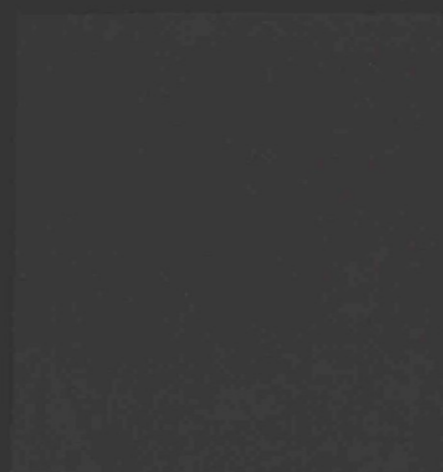
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800-533-2080 507-451-9555

Float Glass

STEEL - AGED BRONZE
(WEATHERED COPPER COLOR) [BERRIDGE]



5-UP-2016
5/19/16



FILE COPY

J2 Engineering and Environmental Design, LLC
4649 E. Cotton Gin Loop
Suite B2
Phoenix, Arizona 85040
Phone: 602.438.2221
Fax: 602.438.2225

To: Bob Machen
From: Jamie Blakeman, PE, PTOE
Job Number: 16.0904.001
RE: Phoenix Seminary
Traffic Impact & Mitigation Analysis
Location: 7901 E. Shea Boulevard

Date: April 21, 2016



INTRODUCTION

J2 Engineering and Environmental Design (J2) has prepared a Traffic Impact and Mitigation Analysis for the proposed Phoenix Seminary (7901 E. Shea Boulevard) on Shea Boulevard, located approximately an eighth of a mile west of Hayden Road, in Scottsdale, Arizona, see **Figure 1**. See **Attachment A** and **Figure 2** for the proposed site plan.

The objective of this Traffic Impact and Mitigation Analysis is to analyze the traffic related impacts of the proposed development to the adjacent roadway network.

EXISTING CONDITIONS

Currently, the property is occupied by a chapel that is used by the Scottsdale Bible Church. The main campus of the Scottsdale Bible Church (7601 E. Shea Boulevard) is located on Shea Boulevard approximately a quarter of a mile west of this site. The chapel is used for various church activities including counseling, classes, and occasionally for hosting weddings and funerals.

The proposed Phoenix Seminary site is bordered by a residential community to the east, south, and west. Immediately north of the

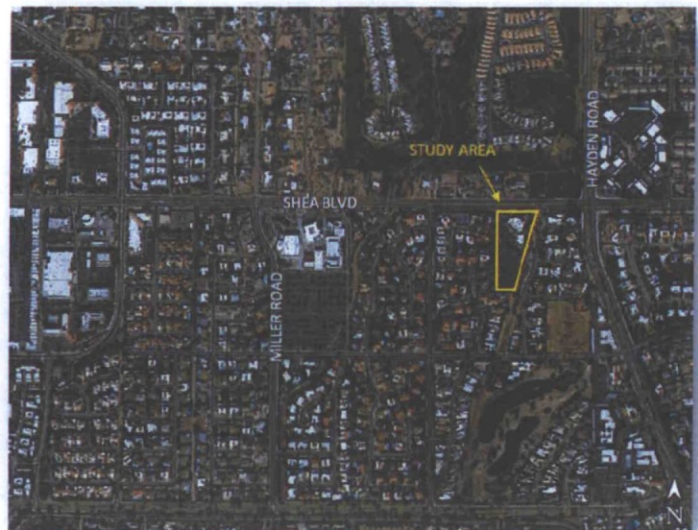


Figure 1- Vicinity Map



site is Shea Boulevard, which is an east-west roadway. Shea Boulevard provides three (3) through lanes in each direction of travel, a center two-way left turn lane, and a dedicated right turn lane into the site. There is a posted speed limit of 45 mph. The 2014 Average Daily Traffic (ADT) volume along Shea Boulevard between Scottsdale Road and Hayden Road is 38,700 vehicles per day. The 2008 City of Scottsdale Street Classification map shows Shea Boulevard categorized as a suburban major arterial.



Figure 2- Proposed Site Plan

PROPOSED DEVELOPMENT

The proposed Phoenix Seminary development will consist of the existing chapel where one of the two class rooms will be converted to a student lounge. The administrative building will remain. Adjacent to the administrative building will be three (3) new classrooms. To the west of these classrooms, a library building is being added to the site. The existing right-in and right-out driveway off of Shea Boulevard will remain in place for this proposed development. This driveway is located approximately an eighth of a mile west of Hayden Road.

TRIP GENERATION (EXISTING USE)

Typically, the traffic volumes generated by a proposed development would be calculated utilizing the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation Manual, 9th Edition*. The ITE trip rates and equations are based on studies that measured the trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type. This publication is considered the standard for the transportation engineering profession.

This publication provides data for churches; however, it does not include data for an off-site chapel. Therefore, information was gathered from Scottsdale Bible.





Trips generated by the existing Scottsdale Bible off-site chapel varies from day to day, and are often linked to activities occurring at the main Scottsdale Bible Church campus. Multiple activities often occur each day with a typical week day shown below:

Table 1 – Existing Scottsdale Bible Chapel Weekly Activities

Day	Services	Counseling	Hearty Souls	Evening Classes
	8:00 am to 1:00 pm	8:00 am to 8:00 pm	9:30 to 11:30 am	6:00 to 9:00 pm
Sunday	60 to 80 people			
Monday		10 - 15 people		35 to 40 people
Tuesday		10 - 15 people		20 to 30 people
Wednesday		10 - 15 people	45 - 50 people	30 to 50 people
Thursday		10 - 15 people		35 to 50 people
Friday		10 - 15 people		

In addition, the site will occasionally host large events such as weddings and funerals. The trips generated from these events can be upwards of 200 to 300 attendees per event. These events occur at least twice a month, however, they can occasionally occur up to three (3) times in a single week.

Wednesday was shown to have the highest activity at this campus, therefore the Wednesday activities were used to generate the approximate trip generation during a typical weekday for this site. It is assumed each person drives a vehicle to and from the site.

Counseling

Counseling occurs one on one or in small groups. Sessions are somewhat distributed over the 12 hours from 8:00 am to 8:00 pm. Assuming counseling session are between 30 minutes and 1 hour, a total of 5 vehicles were assumed to arrive during both the AM (7:00 to 9:00 am) and PM (4:00 to 6:00) peak hours, with the same number of vehicles leaving during each peak hour.

Hearty Souls

With a 9:30 am start time, it is assumed half of the attendees arrive during the AM peak hour and leaves at 11:30 pm, when the activity concludes.





Evening Classes

With a 6:00 pm start time, it is assumed all of the attendees arrive during the PM peak hour. A total of 10 vehicles were assumed to leave during the PM peak hour for those being dropped off.

Large Events

With the unpredictability of days and times of large events, a minimal amount of trips were assigned to both the AM and PM peak hours. With these events ranging between 200 and 300 attendees, for average weekday trip generation purposes, the AM and PM peak hour inbound and outbound trips were assumed to be 50 for a 200 attendee event. It is unlikely two events will occur in the day spanning both the AM and PM hours. However, due to the unknown attendance and times of these events, 50 trips were assigned to each peak hour to see the potential effect it has to the total peak hour trips.

See **Table 2**.

Table 2 – Trip Generation for Existing Scottsdale Bible Chapel

Activity	Weekday Total	AM Peak			PM Peak		
		Total	In	Out	Total	In	Out
Counseling	30	10	5	5	10	5	5
Hearty Souls	100	25	25	0			
Evening Classes	100				60	50	10
Large Events	400	100	50	50	100	50	50
TOTAL	630	135	80	55	170	105	65



TRIP GENERATION (PROPOSED DEVELOPMENT)

The proposed Phoenix Seminary is a graduate level theological school offering degree programs for Master’s and Doctorate degrees. It is anticipated to have an enrollment of 190 students.

The Institute of Transportation Engineers (ITE) publication entitled *Trip Generation, 9th Edition* provides formulas for calculating trip generation. The ITE rates are based on studies that measured the trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type. This publication is considered to be the standard for the transportation engineering profession.

The closest comparable land uses provided in the *Trip Generation, 9th Edition* include the following:

- Land Use 540 Junior/Community College
This land use includes two-year junior, community, or technical colleges. These typically have sizable evening programs and the average number of students is over 10,000.
- Land Use 550 Junior/Community College
This land use includes four-year universities or colleges that may or may not offer graduate programs. The average number of students hover around 10,000.

Utilizing these two land use codes, the trip generation for the proposed Phoenix Seminary was calculated for 190 students. See **Table 3** and **Table 4** below. See **Attachment B** for detailed trip generation calculations.

Table 3 - Trip Generation for Phoenix Seminary - LU 540

Land Use	ITE Code	Qty	Unit	Weekday Total	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Junior/Community College	540	190	Students	234	23	19	4	23	14	8
TOTAL				234	23	19	4	23	14	8

Table 4 - Trip Generation for Phoenix Seminary - LU 550

Land Use	ITE Code	Qty	Unit	Weekday Total	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
University/College	550	190	Students	325	32	25	7	32	10	22
TOTAL				325	32	25	7	32	10	22



Phoenix Seminary is a school specifically for graduate programs with an anticipated of 190 students. However, the two land uses above are for much larger schools with an attendance of around 10,000 students and the degree programs are not focused on Master’s and Doctorate degrees. Therefore, specific information about the operations of Phoenix Seminary was gathered. Classes occur Monday through Thursday at various times during the day.

Table 5 – Proposed Phoenix Seminary Weekly Activities

Day	Staff and Faculty	Classes					
	7:00 to 9:00 am	11:00 am to 1:00 pm	1:00 to 3:00 pm	2:00 to 3:00 pm	3:00 to 4:00 pm	4:00 to 5:00 pm	5:00 to 6:00 pm
Monday	25 staff	30 students		35 students		10 students	50 students
Tuesday	25 staff				10 students	20 students	50 students
Wednesday	25 staff		15 students			20 students	15 students
Thursday	25 staff						35 students

It is assumed each staff and student drives a vehicle to and from the site. Based on the above information provided, weekday and peak hour trips were generated for the proposed Phoenix Seminary.

Table 6 – Trip Generation for the Phoenix Seminary – School Data

Land Use	Weekday Total	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
Phoenix Seminary	610	30	25	5	90	70	30
TOTAL	610	30	25	5	90	70	30



TRIP GENERATION COMPARISON

A comparison between the trips generated by the existing Scottsdale Bible Chapel and the proposed Phoenix Seminary, using the trip generation from the school data, is shown in **Table 7** below.

Table 7 - Trip Generation Comparison (Existing Chapel vs. Phoenix Seminary)

Land Use	Weekday Total	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
Scottsdale Bible Chapel	630	135	80	55	170	105	65
Phoenix Seminary	610	30	25	5	90	70	30
TOTAL	-20	-105	-55	-50	-80	-35	-35

SUMMARY

The proposed Phoenix Seminary is anticipated to generate less weekday trips as well as AM and PM peak hour trips. The trips shown for the existing Scottsdale Bible Chapel is also somewhat conservative as it doesn't take into account a 200 to 300 attendee event occurring during the peak hour. These special events occur at a minimum every other week to as often as three times a week. Therefore, the Scottsdale Bible Chapel trips may be much larger than what is shown above.

Additionally, the trip generation derived from the school data for Phoenix Seminary results in higher trips than the trip generation calculations using ITE Land Use 540 and 550. A trip generation comparison using the ITE trip generation would show an even greater reduction in trips with the proposed Phoenix Seminary.

The proposed Phoenix Seminary is anticipated to have a total of 190 students with a **more consistent weekly travel pattern**. With class times starting at 11:00 am, there are very **minimal trips during the AM peak hour**. AM peak hour trips would just be Phoenix Seminary staff arriving to prepare for class and attend meetings. Tuesday are anticipated to have the highest number of students starting class during the PM peak hour of 4:00 to 6:00 pm. This is a total of 70 students.

In conclusion, the proposed Phoenix Seminary will have a significantly less impact to the traffic operations along the adjacent roadway network in comparison to the existing Scottsdale Bible Chapel.



Attachment A
Proposed Site Plan





SITE PLAN



TOTAL PARKING SPACES 239





Attachment B
ITE Trip Generation Calculations





Phoenix Seminary
Wood Partners

engineering and
environmental design

Trip Generation Calculations

Phoenix Seminary

Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Weekday			AM Peak Hour			PM Peak Hour		
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out
Junior/Community College	540	190	Students	1.23	50%	50%	0.12	84%	16%	0.12	63%	37%	234	117	117	23	19	4	23	14	8
TOTAL													234	117	117	23	19	4	23	14	8

Phoenix Seminary

Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Weekday			AM Peak Hour			PM Peak Hour		
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out
University/College	550	190	Students	1.71	50%	50%	0.17	78%	22%	0.17	32%	68%	325	162	162	32	25	7	32	10	22
TOTAL													325	162	162	32	25	7	32	10	22

PRELIMINARY DRAINAGE REPORT

Phoenix Seminary Campus Addition / Renovation

7901 E. Shea Blvd.
Scottsdale, AZ 85260

Prepared For:



(602) 429-4975

Prepared by:



EXPIRES 12-31-17

Sustainability Engineering Group

8280 E. Gelding Drive, Suite 101
Scottsdale, AZ 85260
480.588.7226 www.azSEG.com

Project Number: 160303
Submittal Date: May 17, 2016
Resubmittal Date: September 1, 2016

Case No.: 5-UP-2016, 22-DR-2016

Plan Check No.: TBD

TABLE OF CONTENTS:

COVER SHEET	1
TABLE OF CONTENTS	2
1. INTRODUCTION	4
2. LOCATION AND PROJECT DESCRIPTION	
2.1. LOCATION:	4
2.2. EXISTING AND PROPOSED DEVELOPMENTS SURROUNDING THE SITE:	4
2.3. EXISTING SITE DESCRIPTION:	4
2.4. PROPOSED SITE DEVELOPMENT:	5
2.5. FLOOD HAZARD ZONE:	5
3. EXISTING DRAINAGE CONDITIONS	
3.1. OFF-SITE DRAINAGE:	5
3.2. ON-SITE DRAINAGE:	5
3.3. EXISTING STORM SEWER SYSTEMS:	5
4. PROPOSED STORM WATER MANAGEMENT	
4.1. DESIGN INTENT:	5
4.2. CHARACTERISTICS OF BASINS:	6
4.3. OFF-SITE FLOW:	7
4.4. STORMWATER RETENTION:	7
4.5. STREET CAPACITY CALCULATIONS:	7
4.6. STORM DRAIN INLET CALCULATIONS:	7
5. FLOOD SAFETY FOR DWELLING UNITS	
5.1. FINISHED FLOOR ELEVATIONS:	7
6. CONCLUSIONS	
6.1. OVERALL PROJECT:	7
6.2. PROJECT PHASING:	7
7. WARNING AND DISCLAIMER OF LIABILITY	
8. REFERENCES	





LIST OF FIGURES:

- FIGURE 1 - Vicinity Map
- FIGURE 2 - Aerial
- FIGURE 3 - FIRM
- FIGURE 4 - Proposed Site Layout

APPENDIX:

- APPENDIX I - Rainfall Data
- APPENDIX II - Calculations
- APPENDIX III - Preliminary Grading Plan
- APPENDIX IV - ALTA/Topographic Survey

1. INTRODUCTION

This 50% Preliminary Drainage Report is being provided in conjunction with a Development Review request, case number TBD. This report represents the storm water analysis for the proposed disturbed area (expansion) for an existing chapel being expanded with 3 classrooms and a stand-alone library. The purpose of this report is to provide the hydrologic and hydraulic analyses, 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 collection, conveyance, and detention systems 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) 2010¹, and the Drainage Design Manuals for Maricopa County, Arizona, Volumes I² and Volume II³.

2. LOCATION AND PROJECT DESCRIPTION

2.1 LOCATION:

The project property consists of a parcel of land located on the south side of Shea Boulevard approximately 550' west of Hayden Road. It is located in a portion of Section 26, Township 3 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County,

- Arizona Parcel ID numbers APN: 175-47-008
- Street address is 7901 E. Shea Blvd.

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: To the north there are two single family residential parcels zoned R1-35 and one commercial parcel zoned O-S belonging to Scottsdale County Club.
- West: The west side is bound by multiple residential single family homes. These homes are part of the La Cuesta Neighborhood.
- South: To south there is one residential single family home part of the La Cuesta Neighborhood and a parcel owned by the City of Scottsdale that is part of a wash to the east.
- East: Directly east of the site is a wash that is owned by the City of Scottsdale. This wash is part of the Fox Hollow Neighborhood.

2.3 EXISTING SITE DESCRIPTION:

Land ownership, as defined by ALTA/ACSM Land Title Survey by AW Land Surveying, LLC dated 05/18/16 includes 205,850.8 square feet or 4.726+/- acres of commercially developed land. City of Scottsdale zoning map designates this parcel as R1-35.

This site is fully developed as a chapel. The topography generally slopes from the north to the southwest corner at approximately one percent with a change in elevation of approximately seven (7) feet. Typical desert landscaping exists at the perimeter of the site. Refer to **FIGURE 2** for an aerial of the overall project existing conditions. Refer to **APPENDIX IV** for the ALTA / Topographic Survey.

2.4 PROPOSED SITE DEVELOPMENT:

The project is proposing an addition of buildings. Development will include new classrooms adjacent to the south of the administration building and a stand-alone library. Parking lot islands will be revised to reflect new building locations. Refer to **FIGURE 5** for proposed site layout.

2.5 FLOOD HAZARD ZONE:

As defined by the Flood Insurance Rate Map (FIRM) for Maricopa County, Arizona, and incorporated areas, Community number 045012, Panel number 1760 of 4425, as shown on Map Number 04013C1760L dated October 16, 2013 this site is designated as **Zone "X" shaded**. As such, it is defined as areas of 0.2-percent-annual-chance (or 500-year) flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and area protected by levees from the 100 year flood. Refer to **FIGURE 3** for the FIRM.

3. EXISTING DRAINAGE CONDITIONS

3.1 OFF-SITE DRAINAGE PATTERNS:

This site is bound as follows:

- Screen walls exist to the west and south, protecting the site from runoff from the residential subdivisions.
- To the east by a wash. This wash flows from the north to the south.
- To the north by Shea Boulevard. The flows in the street area conveyed to east in curb and gutters / valley gutters to an existing catch basin that outlets into the wash.

No off-site flows impact the subject parcel. Refer to **FIGURE 4** for the ALTA/topo Map indicating existing conditions.

3.2 ON-SITE DRAINAGE:

This site is fully developed as a chapel. The topography generally slopes from the northeast to the southwest corner at approximately one percent with a change in elevation of approximately seven (7) feet. Typical desert landscaping exists at the perimeter of the site. Runoff from the parcel generally flows overland to the south and west where curb cuts convey all flows from the parking field to retention areas along the perimeter of the site. Ultimately, the runoff is released through a weir structure with an outlet orifice located near the southeast corner of the site, into the adjacent wash.

3.3 EXISTING STORM SEWER SYSTEMS:

There are no apparent storm sewers existing on the parcel. Runoff is conveyed by overland flow to existing ditch / retention areas.

4. PROPOSED STORM WATER MANAGEMENT

4.1 DESIGN INTENT:

On-site drainage will be conveyed by sheet flow through the parking field to existing retention basins and swales located at the perimeter of site. This is an addition to existing buildings and a new building to be constructed within the existing paved parking lot. Therefore, the City of Scottsdale specifies that on-site retention shall be provided to store the difference between the pre vs. post development runoff from the

100-year 2-hour storm event while maintaining existing storage, if any. For this project, City of Scottsdale staff determined no stormwater storage is required since change in runoff is negligible (less than 1%).

The proposed buildings will be constructed with consistent finish floor elevations. The surrounding parking area will be graded in the way that flows will go west and south through existing and proposed curb cuts, into the existing retention areas, and ultimately flow into the wash to the east.

The existing City of Scottsdale wash adjacent along the easterly property line will not be impacted by construction efforts.

Refer to Section 5 below for a discussion on proposed finished floor elevations. Refer to **Appendix III** for the Preliminary Grading & Drainage Plan.

4.2 CHARACTERISTICS OF BASINS:

The proposed drainage areas are comprised of mixed use buildings and associated parking areas, drives and landscape areas. Based on Figure 4.1-4 of the DS&PM, runoff coefficients for the 100 year storm event used are as follows:

- C=0.30 for grassed areas
- C=0.45 for desert landscaping
- C=0.95 for impervious areas.

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. The Rational Method was utilized to compute the on-site peak discharges. The following established the Rational Method equation and the basic input data required:

$$Q=C_{wt}IA$$

Where: C_{wt} = The runoff coefficient relating runoff to rainfall
 I = Average rainfall intensity in inches/hour, lasting for T_c (5.70 in/hr)
 T_c = The time of concentration (minutes)- Use 10 minutes
 A = The contributing drainage area in acres

C_{wt} CALCULATIONS:

- Pre-development (Refer to EXHIBIT "A" in Appendix II)
 - Landscape area (Desert): 1.633 Ac. @ $C_{wt}=0.45$
 - Impervious areas (Roof / Pavement): 3.093 Ac. @ $C_{wt}=0.95$
 - C_{wt} : 4.726 Ac. @ $C_{wt} = 0.777$
- Post-development (Refer to EXHIBIT "B" in Appendix II)
 - Landscape area (Desert): 1.606 Ac. @ $C_{wt}=0.45$
 - Impervious Ares (Roof / Pavement): 3.120 Ac. @ $C_{wt}=0.95$
 - C_{wt} : 4.726 Ac. @ $C_{wt} = 0.781$

RUNOFF RATE:

$$Q_{100} \text{ PRE} = 0.777 * 5.70 \text{ in/hr} * 4.726 \text{ ac} = \mathbf{20.93 \text{ CFS}}$$

$$Q_{100} \text{ POST} = 0.781 * 5.70 \text{ in/hr} * 4.726 \text{ ac} = \mathbf{21.04 \text{ CFS}}$$

Proposed development increases runoff by $21.04 - 20.93 = 0.11 \text{ CFS}$ or 0.5%.

4.3 OFF-SITE FLOW:

No off-site flows contribute to this site.

4.4 STORMWATER RETENTION:

Stormwater retention is not required on this project, the increase in runoff is less than 1%.

4.5 STREET CAPACITY CALCULATIONS:

No streets are part of this site.

4.6 STORM DRAIN INLET CALCULATIONS:

There are no inlets associated with this project.

5. FLOOD SAFETY FOR DWELLINGS

5.1 FINISHED FLOOR ELEVATIONS

The ultimate outfall for this project is located at the southwest corner of the parking lot at an elevation of approximately 1351.88. The finished floor of the classrooms attached to the administration building will match the existing building at 1357.32. The library will have a finished floor of 1357.30. All building finished floor elevations will be set a minimum of 14 inches above emergency overflow points, and a minimum of 12 inches above the 100-year high-water elevation of any adjacent streets and drainage paths. This will ensure that each building will be well above the 100-year water level.

6. CONCLUSIONS

6.1 OVERALL PROJECT:

1. Off-site storm water does not impact this project
2. The finish floor elevations will be designed a minimum of 12 inches above the 100-year water surface in adjacent streets and drainage paths and a minimum of 14 inches above the historical outlet of the lot.

6.2 PROJECT PHASING:

This development is anticipated to be constructed in a single phase.

7. WARNING AND DISCLAIMER OF LIABILITY

RE: following page.



WARNING & DISCLAIMER OF LIABILITY

The Drainage and Floodplain Regulations and Ordinances of the City of Scottsdale are intended to “minimize the occurrence of losses, hazards and conditions adversely affecting the public health, safety and general welfare which might result from flooding caused by the surface runoff of rainfall” (Scottsdale Revised Code §37-16).

As defined in S.R.C. §37-17, a flood plain or “*Special flood hazard area* means an area having flood and/or flood related erosion hazards as shown on a FHBM or FIRM as zone A, AO, A1-30, AE, A99, AH, or E, and those areas identified as such by the floodplain administrator, delineated in accordance with subsection 37-18(b) and adopted by the floodplain board.” It is possible that a property could be inundated by greater frequency flood events or by a flood greater in magnitude than a 100-year flood. Additionally, much of the Scottsdale area is a dynamic flood area; that is, the floodplains may shift from one location to another, over time, due to natural processes.

WARNING AND DISCLAIMER OF LIABILITY PURSUANT TO S.R.C §37-22

“The degree of flood protection provided by the requirements in this article 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 man-made or natural causes. This article (Chapter 37, Article II) shall not create liability on the part of the city, any officer or employee thereof, or the federal government for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.”

Compliance with Drainage and Floodplain Regulations and Ordinances does not insure complete protection from flooding. The Floodplain Regulations and Ordinances meet established local and federal standards for floodplain management, but neither this review nor the Regulations and Ordinances take into account such flood related problems as natural erosion, streambed meander or man-made obstructions and diversions, all of which may have an adverse affect 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. If I am an agent for an owner I have made the owner aware of and explained this disclaimer.

_____ _____ _____
Plan Check No. Owner or Agent Date

8. REFERENCES

1. *Design Standards & Policies Manual, City of Scottsdale – January 2010*
2. *Drainage Design Manual for Maricopa County, Arizona, Volume I, Hydrology, Flood Control District of Maricopa County, Fourth Edition, November 18, 2009 amended through February 10, 2011*
3. *Drainage Design Manual for Maricopa County, Arizona, Volume II, Hydraulics, Flood Control District of Maricopa County, January 28, 1996*

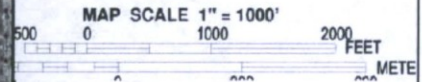
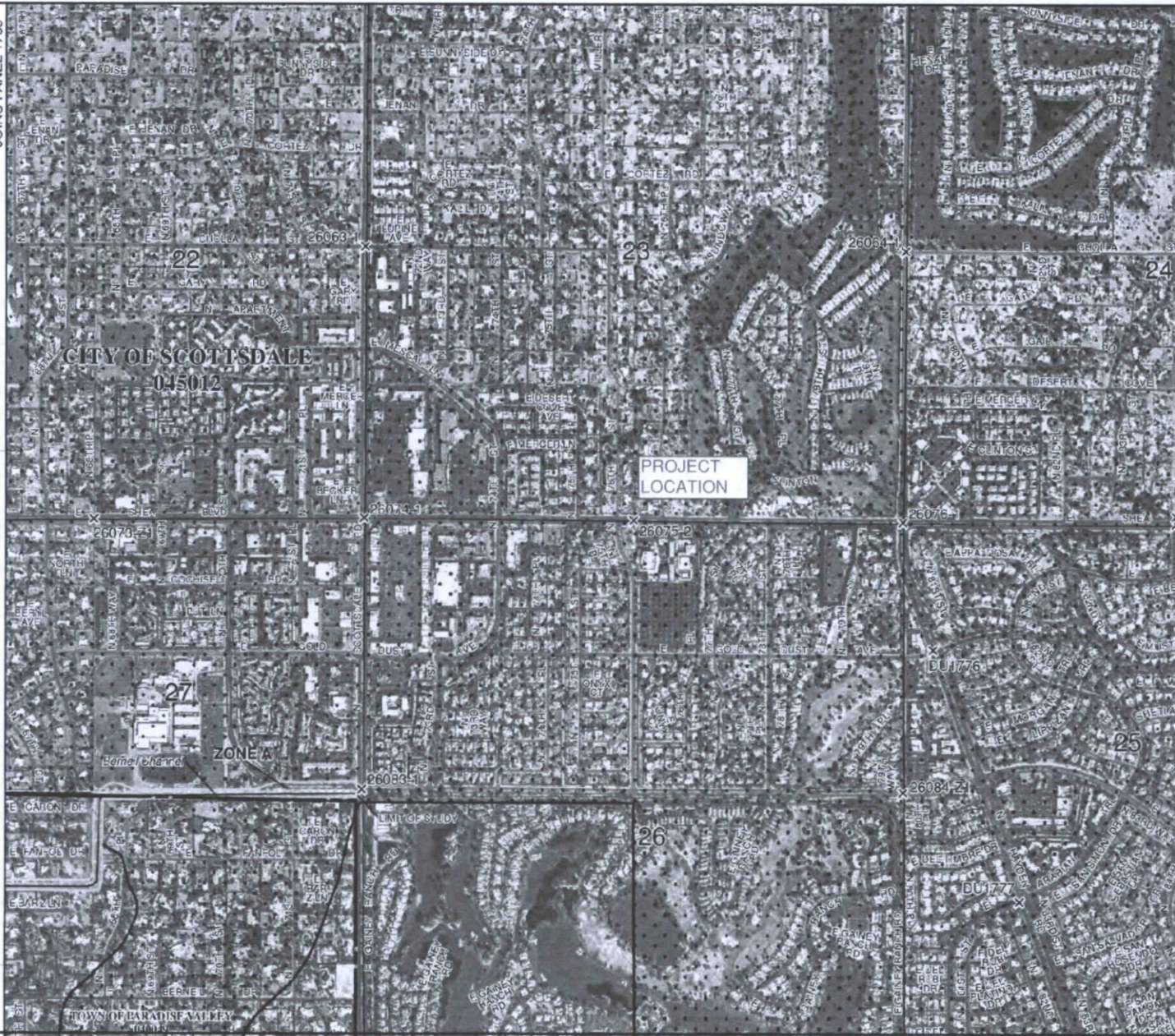


FIGURE 1
VICINITY MAP

JOINS PANEL 1755

940000 FT

935000 FT



NFIP PANEL 1760L

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

PANEL 1760 OF 4425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	045012	1760	-
PARADISE VALLEY TOWN OF	045013	1760	-
PHOENIX CITY OF	045015	1760	-
SCOTTSDALE CITY OF	045016	1760	-

Notice to User: This Map Number (shown above) should be used when placing map orders. The Community Number shown above should be used on insurance applications or the subject property.

MAP NUMBER
D4013C1760L
MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

FIGURE 3

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

PROJECT DATA

PROJECT CONTACTS	OWNER SCOTTSDALE BIBLE CHURCH 7901 E. Shea Blvd Scottsdale, AZ 85260
ARCHITECT	CCBG ARCHITECTS 102 E. Buchanan St. Phoenix, AZ 85004 602.258.2211 CONTACT: Paul Ledemack
PROJECT ADDRESS	7901 E. Shea Blvd Scottsdale, AZ 85260
PROJECT DESCRIPTION	THE EXPANSION WILL INCLUDE A ONE STORY ADDITION TO THE EXISTING ADMINISTRATION BUILDING AND A NEW 10,500 SF ONE STORY LIBRARY. THE EXISTING ADMINISTRATION BUILDING WILL RECEIVE NEW INTERIOR FINISHES. A NEW CENTRAL DROP OFF AREA WILL BE INCORPORATED INTO THE EXISTING PARKING CONFIGURATION. THE ARCHITECTURE OF THE NEW LIBRARY BLENDS WITH THE EXISTING BUILDINGS BOTH IN MASSING AND FORM.
GOVERNING	ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING
BUILDING CODES	CODES AND AMENDMENTS PER THEIR ADOPTING ORDINANCES 2012 Scottsdale Building Safety Administrative Code 2012 International Energy Conservation Code (IECC) 2012 International Residential Code (IRC) 2012 International Existing Building Code (IEBC) 2012 International Building Code (IBC) 2012 International Mechanical Code (IMC) 2011 National Electrical Code (NEC) 2012 International Plumbing Code (IPC) 2012 International Fire Code (IFC) Current Zoning Ordinance
ZONING & APN	175-47-008 (R1-35) & FOOTHILLS OVERLAY
OCCUPANCY	EXISTING CHAPEL BLDG A-3 EXISTING ADMIN BLDG B NEW LIBRARY BLDG A-3 NEW CLASSROOM BLDG E

SITE AREA/COVERAGE	175-47-008 205,851 SF, 4.73 ACRES (NET) 228,449 SF, 5.24 ACRES (GROSS)
EXISTING CHAPEL BLDG	13,392 SF
EXISTING ADMIN BLDG	4,838 SF
NEW LIBRARY BLDG	10,520 SF
NEW CLASSROOM BLDG	3,430 SF
TOTAL	31,978 SF
SITE COVERAGE - 25% ALLOWED	7,994 SF
ACTUAL: 31.978/205,851 = 15.5%	
LIBRARY BLDG HEIGHT:	MAX PER ORDINANCE FOR R1-35: 30'-0" F.F. ELEVATION 1357.32' + 25'-10" = 1382.42' T.O.C. @ MIDPOINT OF SHEA: -1357.62' TOTAL: 24'-80"
ACTUAL NORTH PARAPET:	29'-10"
OCCUPIED SPACE:	29'-10"
CLASSROOM BLDG HEIGHT:	MAX PER ORDINANCE FOR R1-35: 30'-0" F.F. ELEVATION 1357.32' + 23'-4" = 1380.72' T.O.C. @ MIDPOINT OF SHEA: -1357.62' TOTAL: 23'-10"
ACTUAL NORTH PARAPET:	23'-0"
OCCUPIED SPACE:	23'-0"
CONSTRUCTION TYPE:	EXISTING CHAPEL BLDG V-8 EXISTING ADMIN BLDG V-8 NEW LIBRARY BLDG V-8 NEW CLASSROOM BLDG V-8
SPRINKLER SYSTEM:	EXISTING CHAPEL BLDG FULLY SPRINKLERED EXISTING ADMIN BLDG FULLY SPRINKLERED NEW LIBRARY BLDG FULLY SPRINKLERED NEW CLASSROOM BLDG FULLY SPRINKLERED
BUILDING AREA:	EXISTING CHAPEL BLDG 13,392 SF EXISTING ADMIN BLDG 4,838 SF NEW LIBRARY BLDG 10,520 SF NEW CLASSROOM BLDG 3,430 SF

SETBACKS:	175-47-008 SHEA BLVD 42'-0" SETBACK SIDE YARD (EAST) 15'-0" SETBACK SIDE YARD (WEST) 15'-0" SETBACK REAR YARD 30'-0" SETBACK
PARKING:	EXISTING CHAPEL BLDG SANCTUARY @ 1 FOR 4 SEATS 800 SEATS TOTAL = 208 SPACES REQ'D EXISTING ADMIN BLDG OFFICES @ 1/200 SQ FT 2,048 SQ FT TOTAL = 9 SPACES REQ'D + 269 TOTAL PARKING SPACES REQUIRED + 214 TOTAL PARKING SPACES PROVIDED
NEW LIBRARY BLDG:	LIBRARY @ 1/300 SQ FT 4,905 SQ FT CONFERENCE RMS @ 1/100 SQ FT 986 SQ FT OFFICE/STUDY RMS @ 1/200 SQ FT 7,358 SQ FT TOTAL = 36 SPACES REQ'D
NEW CLASSROOM BLDG:	CLASSROOMS @ 1/12 EMPLOYEES 4 EMPLOYEES @ 1/14 STUDENTS 180 STUDENTS TOTAL = 38 SPACES REQ'D + 88 TOTAL PARKING SPACES REQUIRED + 214 TOTAL PARKING SPACES PROVIDED
ACCESSIBLE PARKING:	214 STALLS + 0.04 ADA = 9 SPACES REQ'D 10 SPACES PROVIDED
BICYCLE PARKING:	@ 1/10 PARKING SPACES 208 SPACES TOTAL = 21 SPACES REQ'D 28 SPACES PROVIDED

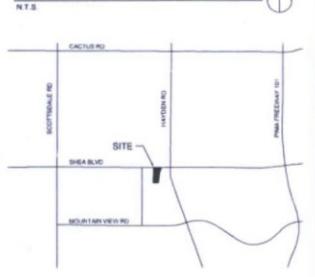
SENSITIVE BUILDING DESIGN CONCEPT PLAN AND PROPOSED DESIGN GUIDELINES

- NO REFLECTIVE BUILDING MATERIALS WILL BE USED.
- PANT COLORS THAT ARE USED FOR THE NEW BUILDINGS WILL NOT EXCEED A LIGHT REFLECTIVE VALUE (LRV) GREATER THAN 40%.
- EXTERIOR PAINT AND MATERIAL COLORS WILL NOT EXCEED A VALUE OF 6 AS INDICATED IN THE MUNSIELL BOOK OF COLOR.
- THE VEGETATION PALETTE WILL CONSIST OF DESERT PLANTS THAT ARE NATIVE TO THE SONORAN DESERT SPECIES.
- THE USE OF TURF WILL NOT BE INCORPORATED INTO THE SITE.
- ALL PARKING AND STAGING AREAS WILL BE SCREENED FROM THE STREET AND NEIGHBORING PROPERTIES BY WALLS AND VEGETATION.

CONSERVATION AREA, SCENIC CORRIDOR, VISTA CORRIDOR PLAN

- THE OBJECTIVE FOR THE NEW DESIGN IS TO PRESERVE THE SCENIC CORRIDOR BY PROTECTING THE CHARACTER OF THE NATURAL SONORAN DESERT LANDSCAPE ALONG SHEA BLVD AND THE WASH AREA CURRENTLY IN EXCELLENT CONDITION AND THE GOAL IS TO KEEP THESE AREAS UNDISTURBED.
- THE TWO (2) NEW ACCESSORY BUILDINGS ARE POSITIONED ON THE SITE WITH A GREATER SETBACK WHICH CONTROLS THE VISUAL IMPACT OF THE BUILDINGS HEIGHT AND SIZE FROM THE CORRIDOR.
- THE DESIGN WILL STRENGTHEN THE PEDESTRIAN SCALE ALONG THE CORRIDOR BY PRESERVING THE EXISTING MULTI-USE PATH WITHIN THE SCENIC EASEMENT.
- THE EXISTING WASH WILL REMAIN IN A NATURAL STATE AND OPEN FOR WILDLIFE EGRESS AND VISUAL ACCESS.
- ALL NEW PLANTING WILL BE LOW WATER USE PLANT MATERIAL AND IT WILL MATCH THE SURROUNDING NATIVE VEGETATION.

VICINITY MAP



CCBG

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+602.258.2211 F. 602.255.09

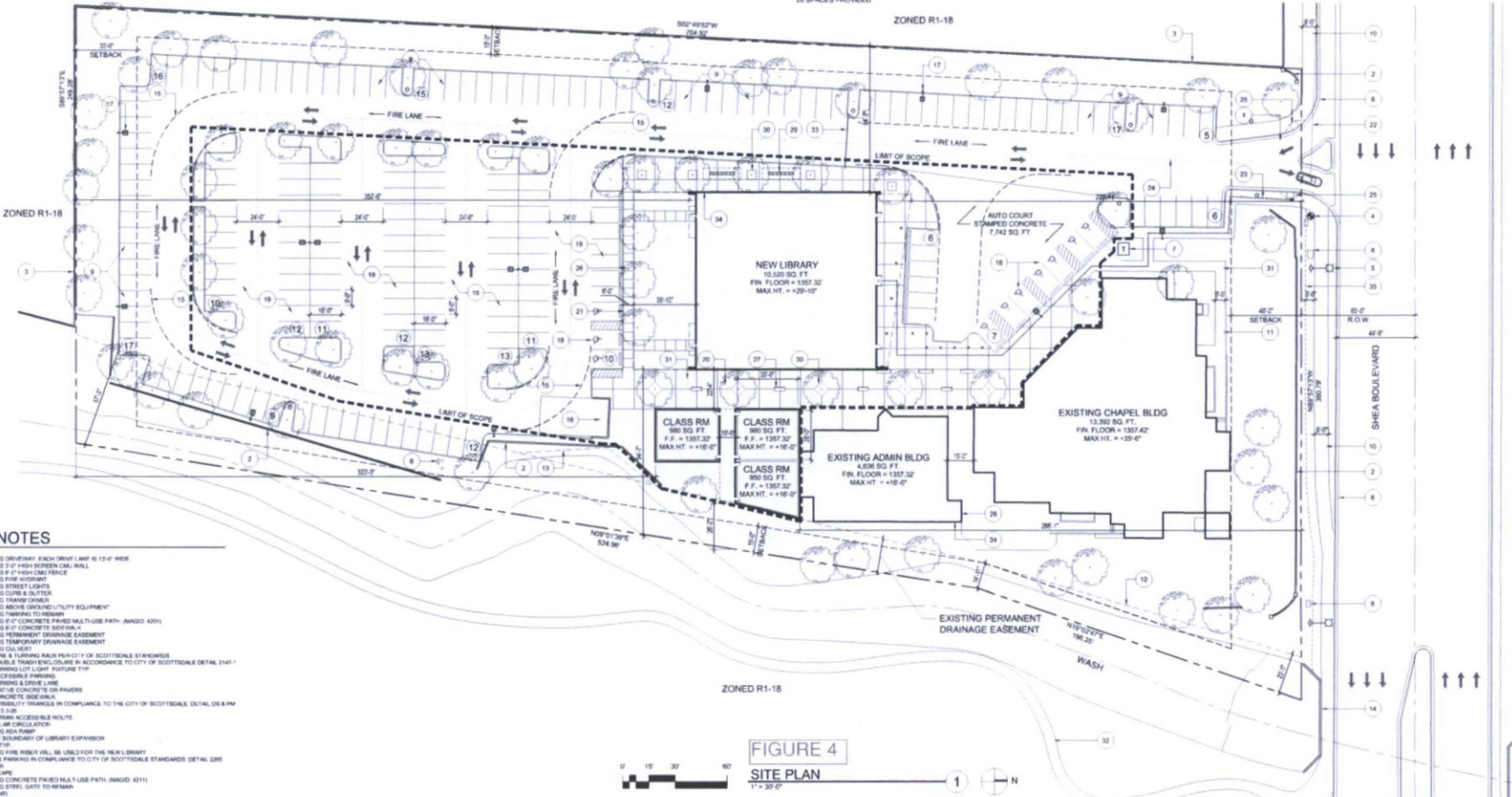


FIGURE 4
SITE PLAN
1" = 30'-0"

KEYNOTES

- EXISTING DRIVEWAY, EACH DRIVE LANE IS 13'-0" WIDE
- EXISTING 3'-0" HIGH SCREEN WALL
- EXISTING 4'-0" HIGH CMU FENCE
- EXISTING FIRE HYDRANT
- EXISTING STREET LIGHTS
- EXISTING CURB & GUTTER
- EXISTING TRANSIT CANALS
- EXISTING ABOVE GROUND UTILITY EQUIPMENT
- EXISTING PARKING TO REMAIN
- EXISTING 6" CONCRETE PAVED MULTI-USE PATH (MAGD 4211)
- EXISTING 8" CONCRETE SIDEWALK
- EXISTING PERMANENT DRAINAGE EASEMENT
- EXISTING TEMPORARY DRAINAGE EASEMENT
- EXISTING TIE-IN
- FIRE LANE & TURNING MAIN FOR CITY OF SCOTTSDALE STANDARDS
- NEW DOUBLE TRANSIT ENCLOSURE IN ACCORDANCE TO CITY OF SCOTTSDALE DETAIL 2147-1
- NEW ACCESSIBLE PARKING
- NEW PARKING & DRIVE LANE
- DECORATIVE CONCRETE OR PAVES
- NEW CONCRETE SIDEWALK
- SOFT VISIBILITY TRANSIT IN COMPLIANCE TO THE CITY OF SCOTTSDALE DETAIL 08 & PM FIGURE 3.3.3
- PEDESTRIAN ACCESSIBLE ROUTE
- WINDUCC AIR CIRCULATOR
- EXISTING ADA RAMP
- FUTURE BOUNDARY OF LIBRARY EXPANSION
- BENCH TOP
- EXISTING FIRE RISER VALVE, BE USED FOR THE NEW LIBRARY
- BICYCLE PARKING IN COMPLIANCE TO CITY OF SCOTTSDALE STANDARDS DETAIL 2205
- PLAN TER
- LANDSCAPE
- EXISTING CONCRETE PAVED MULTI-USE PATH (MAGD 4211)
- EXISTING STREET GATE TO REMAIN
- SEE PLAN
- 1'-0" NON-MOTORIZED PUBLIC ACCESS EASEMENT

A REMODEL AND ADDITION FOR
PHOENIX SEMINARY

7901 EAST SHEA BLVD
SCOTTSDALE, AZ 85260

ISSUE		
DATE	REV	FOR
7.3.18		

Drawn	RL
Checked	P.J.L
Job Number	1605
Drawing	SITE PLAN

Sheet
A1.1

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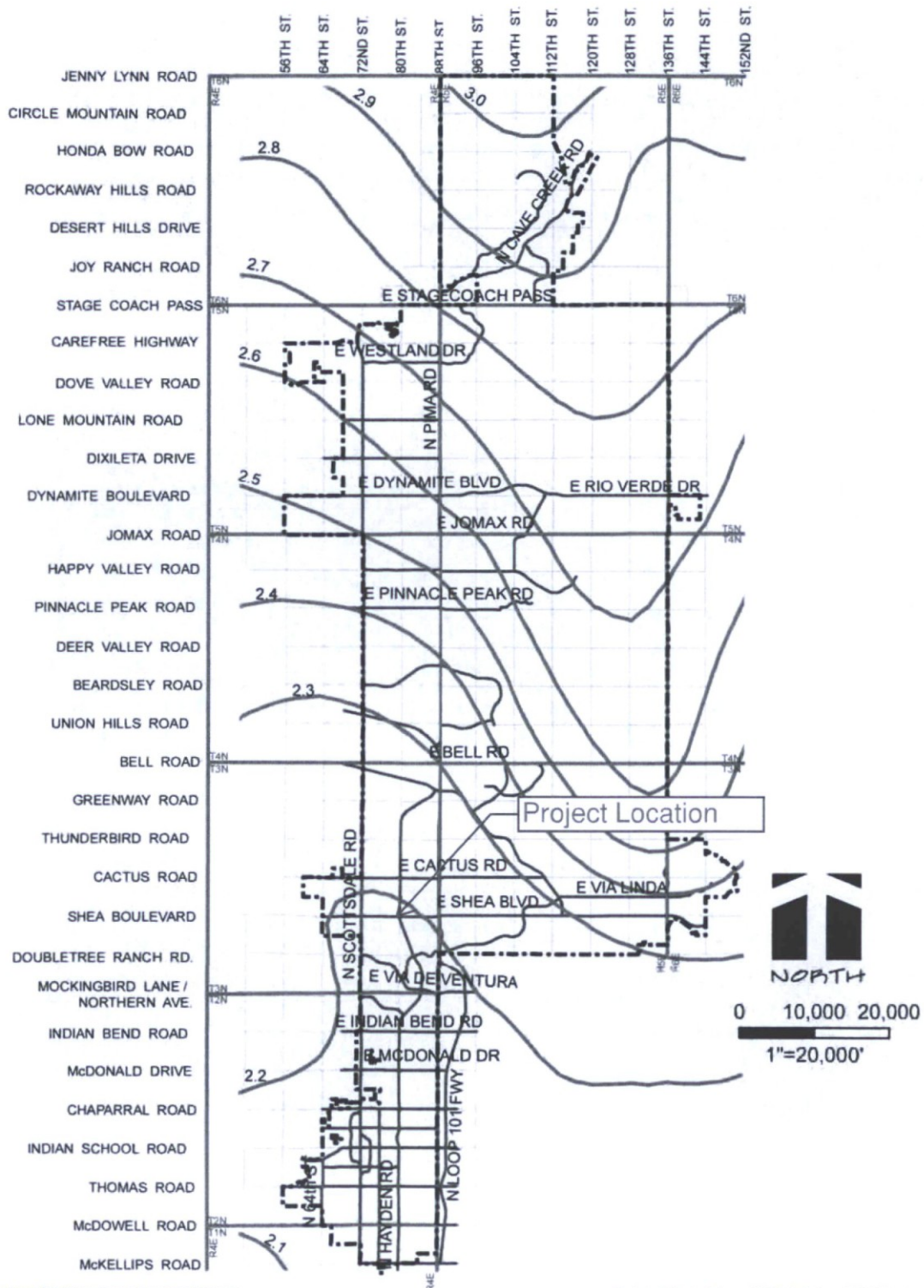
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APPENDIX I

Rainfall Data

8280 E. Gelding Dr., Suite 101
Scottsdale, AZ 85260

100 Year 2 Hour Precipitation in Inches



Map Produced By Geographic Information Systems
04/03/2009

Rainfall Data From NOAA Atlas 14 Vol. 1



NOAA Atlas 14, Volume 1, Version 5
 Location name: Scottsdale, Arizona, US*
 Latitude: 33.5803°, Longitude: -111.9103°
 Elevation: 1353 ft*
 * source: Google Maps



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

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PF tabular

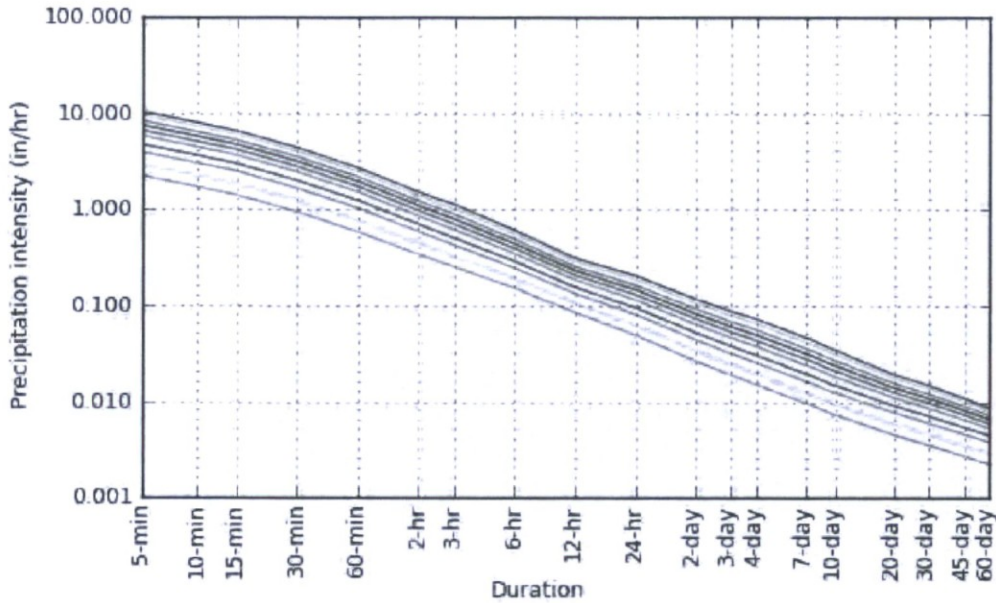
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	2.24 (1.86-2.74)	2.93 (2.45-3.58)	3.95 (3.28-4.81)	4.74 (3.91-5.76)	5.82 (4.72-7.03)	6.64 (5.33-7.98)	7.49 (5.90-8.99)	8.34 (6.46-9.98)	9.49 (7.16-11.4)	10.4 (7.67-12.5)
10-min	1.70 (1.42-2.08)	2.23 (1.86-2.72)	3.01 (2.49-3.67)	3.61 (2.98-4.39)	4.43 (3.59-5.36)	5.05 (4.06-6.07)	5.70 (4.49-6.84)	6.35 (4.91-7.60)	7.22 (5.45-8.67)	7.89 (5.84-9.47)
15-min	1.41 (1.17-1.72)	1.84 (1.54-2.25)	2.48 (2.06-3.03)	2.98 (2.46-3.63)	3.66 (2.97-4.43)	4.17 (3.35-5.02)	4.71 (3.71-5.65)	5.24 (4.06-6.28)	5.97 (4.51-7.16)	6.52 (4.82-7.83)
30-min	0.948 (0.788-1.16)	1.24 (1.04-1.52)	1.67 (1.39-2.04)	2.01 (1.66-2.44)	2.46 (2.00-2.98)	2.81 (2.25-3.38)	3.17 (2.50-3.81)	3.53 (2.73-4.23)	4.02 (3.03-4.82)	4.39 (3.25-5.27)
60-min	0.587 (0.487-0.717)	0.766 (0.641-0.937)	1.03 (0.858-1.26)	1.24 (1.03-1.51)	1.52 (1.24-1.84)	1.74 (1.40-2.09)	1.96 (1.55-2.35)	2.19 (1.69-2.62)	2.49 (1.88-2.98)	2.72 (2.01-3.26)
2-hr	0.343 (0.289-0.410)	0.444 (0.376-0.532)	0.592 (0.498-0.704)	0.704 (0.586-0.838)	0.860 (0.710-1.02)	0.976 (0.794-1.15)	1.10 (0.878-1.29)	1.22 (0.960-1.44)	1.39 (1.07-1.63)	1.52 (1.14-1.79)
3-hr	0.255 (0.215-0.312)	0.327 (0.277-0.401)	0.427 (0.360-0.521)	0.506 (0.422-0.614)	0.618 (0.507-0.745)	0.707 (0.572-0.847)	0.799 (0.635-0.957)	0.896 (0.700-1.07)	1.03 (0.780-1.23)	1.14 (0.841-1.36)
6-hr	0.154 (0.132-0.183)	0.194 (0.167-0.231)	0.248 (0.212-0.293)	0.292 (0.247-0.343)	0.350 (0.293-0.410)	0.396 (0.325-0.462)	0.444 (0.360-0.516)	0.492 (0.392-0.574)	0.559 (0.433-0.651)	0.611 (0.463-0.713)
12-hr	0.085 (0.073-0.100)	0.107 (0.092-0.126)	0.135 (0.116-0.158)	0.157 (0.134-0.183)	0.187 (0.157-0.217)	0.209 (0.175-0.243)	0.233 (0.191-0.270)	0.257 (0.208-0.298)	0.288 (0.228-0.337)	0.313 (0.243-0.368)
24-hr	0.050 (0.044-0.058)	0.063 (0.055-0.073)	0.081 (0.071-0.094)	0.096 (0.083-0.111)	0.116 (0.100-0.134)	0.132 (0.113-0.152)	0.148 (0.126-0.171)	0.165 (0.139-0.191)	0.189 (0.157-0.218)	0.208 (0.170-0.241)
2-day	0.027 (0.023-0.031)	0.034 (0.030-0.039)	0.044 (0.039-0.051)	0.053 (0.046-0.061)	0.064 (0.055-0.074)	0.073 (0.063-0.084)	0.083 (0.070-0.096)	0.093 (0.078-0.107)	0.107 (0.088-0.123)	0.118 (0.096-0.137)
3-day	0.019 (0.017-0.022)	0.024 (0.021-0.028)	0.032 (0.028-0.037)	0.038 (0.033-0.044)	0.047 (0.040-0.053)	0.053 (0.046-0.061)	0.061 (0.052-0.070)	0.068 (0.058-0.079)	0.079 (0.066-0.091)	0.088 (0.072-0.101)
4-day	0.015 (0.013-0.017)	0.019 (0.017-0.022)	0.026 (0.022-0.029)	0.031 (0.027-0.035)	0.038 (0.033-0.043)	0.043 (0.037-0.050)	0.050 (0.042-0.057)	0.056 (0.048-0.064)	0.065 (0.055-0.075)	0.073 (0.060-0.083)
7-day	0.010 (0.009-0.011)	0.012 (0.011-0.014)	0.016 (0.014-0.019)	0.020 (0.017-0.023)	0.024 (0.021-0.028)	0.028 (0.024-0.032)	0.032 (0.027-0.037)	0.036 (0.031-0.042)	0.042 (0.035-0.048)	0.047 (0.039-0.054)
10-day	0.007 (0.006-0.008)	0.009 (0.008-0.011)	0.012 (0.011-0.014)	0.015 (0.013-0.017)	0.018 (0.016-0.021)	0.021 (0.018-0.024)	0.024 (0.020-0.027)	0.027 (0.023-0.031)	0.031 (0.026-0.036)	0.035 (0.029-0.040)
20-day	0.005 (0.004-0.005)	0.006 (0.005-0.007)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.011 (0.010-0.013)	0.013 (0.011-0.014)	0.014 (0.012-0.016)	0.016 (0.013-0.018)	0.018 (0.015-0.020)	0.019 (0.016-0.022)
30-day	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.009 (0.007-0.010)	0.010 (0.008-0.011)	0.011 (0.009-0.012)	0.012 (0.010-0.014)	0.014 (0.012-0.016)	0.015 (0.013-0.017)
45-day	0.003 (0.002-0.003)	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.005 (0.005-0.006)	0.007 (0.006-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.012)	0.011 (0.009-0.012)
60-day	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.007-0.010)

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.

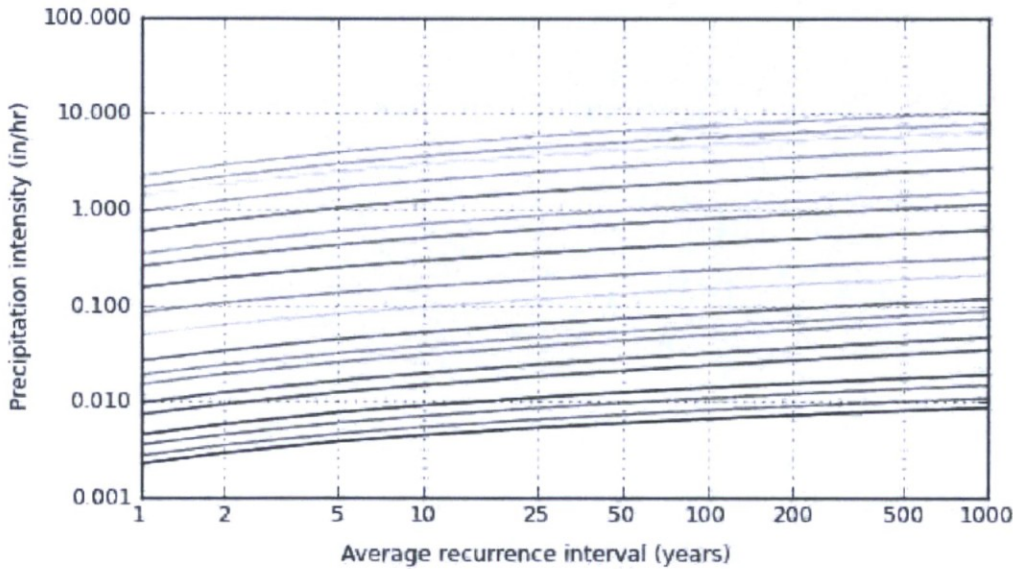
[Back to Top](#)

PF graphical

PDS-based intensity-duration-frequency (IDF) curves Latitude: 33.5803°, Longitude: -111.9103°



Average recurrence interval (years)	
—	1
—	2
—	5
—	10
—	25
—	50
—	100
—	200
—	500
—	1000



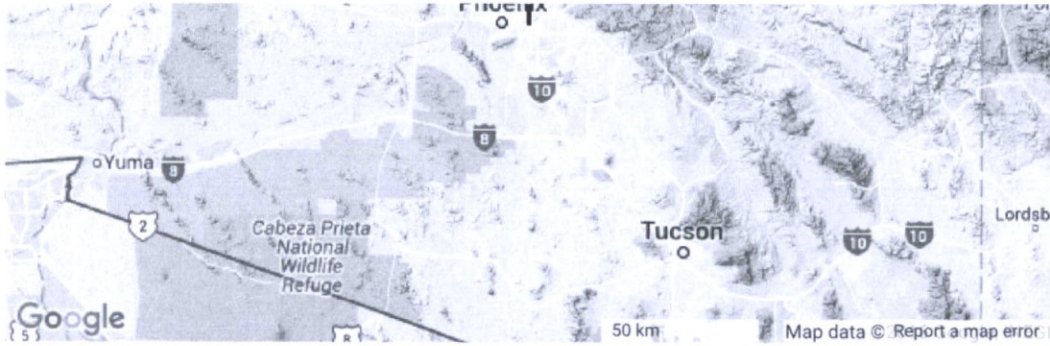
Duration	
—	5-min
—	10-min
—	15-min
—	30-min
—	60-min
—	2-hr
—	3-hr
—	6-hr
—	12-hr
—	24-hr
—	2-day
—	3-day
—	4-day
—	7-day
—	10-day
—	20-day
—	30-day
—	45-day
—	60-day

[Back to Top](#)

Maps & aeriels

Small scale terrain





Large scale terrain



Large scale map



Large scale aerial





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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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NOAA Atlas 14, Volume 1, Version 5
 Location name: Scottsdale, Arizona, US*
 Latitude: 33.5803°, Longitude: -111.9103°
 Elevation: 1353 ft*
 * source: Google Maps



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

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PF tabular

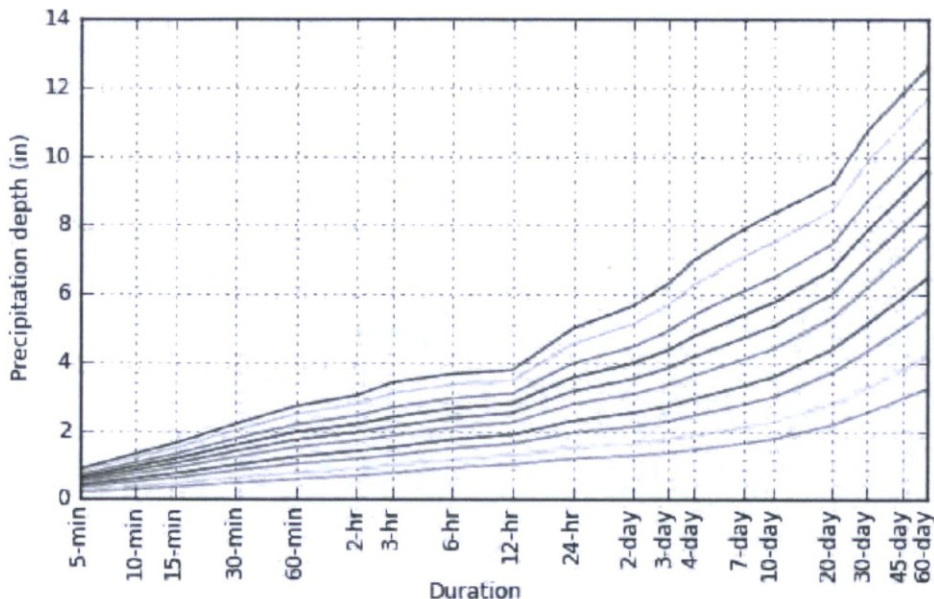
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.187 (0.155-0.228)	0.244 (0.204-0.298)	0.329 (0.273-0.401)	0.395 (0.326-0.480)	0.485 (0.393-0.586)	0.553 (0.444-0.665)	0.624 (0.492-0.749)	0.695 (0.538-0.832)	0.791 (0.597-0.949)	0.864 (0.639-1.04)
10-min	0.284 (0.236-0.347)	0.371 (0.310-0.454)	0.501 (0.415-0.611)	0.602 (0.497-0.731)	0.738 (0.599-0.893)	0.841 (0.676-1.01)	0.950 (0.748-1.14)	1.06 (0.819-1.27)	1.20 (0.909-1.45)	1.31 (0.973-1.58)
15-min	0.352 (0.293-0.430)	0.459 (0.385-0.562)	0.621 (0.515-0.757)	0.745 (0.615-0.907)	0.914 (0.742-1.11)	1.04 (0.837-1.25)	1.18 (0.927-1.41)	1.31 (1.01-1.57)	1.49 (1.13-1.79)	1.63 (1.21-1.96)
30-min	0.474 (0.394-0.580)	0.619 (0.518-0.758)	0.836 (0.693-1.02)	1.00 (0.829-1.22)	1.23 (0.999-1.49)	1.40 (1.13-1.69)	1.58 (1.25-1.90)	1.76 (1.37-2.12)	2.01 (1.52-2.41)	2.19 (1.62-2.64)
60-min	0.587 (0.487-0.717)	0.766 (0.641-0.937)	1.03 (0.858-1.26)	1.24 (1.03-1.51)	1.52 (1.24-1.84)	1.74 (1.40-2.09)	1.96 (1.55-2.35)	2.19 (1.69-2.62)	2.49 (1.88-2.98)	2.72 (2.01-3.26)
2-hr	0.686 (0.578-0.820)	0.887 (0.752-1.06)	1.18 (0.995-1.41)	1.41 (1.17-1.68)	1.72 (1.42-2.03)	1.95 (1.59-2.30)	2.20 (1.75-2.58)	2.44 (1.92-2.87)	2.77 (2.13-3.26)	3.03 (2.28-3.58)
3-hr	0.766 (0.646-0.936)	0.981 (0.831-1.20)	1.28 (1.08-1.56)	1.52 (1.27-1.84)	1.86 (1.52-2.24)	2.12 (1.72-2.54)	2.40 (1.91-2.87)	2.69 (2.10-3.21)	3.09 (2.34-3.69)	3.41 (2.53-4.08)
6-hr	0.922 (0.793-1.09)	1.16 (1.00-1.38)	1.49 (1.27-1.76)	1.75 (1.48-2.05)	2.10 (1.75-2.46)	2.37 (1.95-2.77)	2.66 (2.15-3.09)	2.95 (2.35-3.44)	3.35 (2.59-3.90)	3.66 (2.77-4.27)
12-hr	1.02 (0.881-1.20)	1.29 (1.11-1.51)	1.63 (1.40-1.90)	1.89 (1.61-2.21)	2.25 (1.90-2.62)	2.52 (2.10-2.93)	2.81 (2.31-3.26)	3.09 (2.51-3.59)	3.48 (2.75-4.05)	3.77 (2.93-4.43)
24-hr	1.19 (1.04-1.38)	1.51 (1.33-1.76)	1.95 (1.70-2.27)	2.30 (2.00-2.67)	2.78 (2.40-3.22)	3.16 (2.71-3.65)	3.56 (3.02-4.11)	3.97 (3.34-4.58)	4.54 (3.76-5.23)	4.99 (4.08-5.77)
2-day	1.28 (1.12-1.48)	1.63 (1.42-1.89)	2.13 (1.85-2.46)	2.53 (2.19-2.92)	3.08 (2.65-3.55)	3.52 (3.00-4.05)	3.98 (3.37-4.59)	4.46 (3.74-5.15)	5.12 (4.24-5.92)	5.65 (4.62-6.56)
3-day	1.37 (1.20-1.57)	1.75 (1.53-2.01)	2.29 (2.00-2.64)	2.73 (2.38-3.14)	3.35 (2.90-3.85)	3.84 (3.30-4.41)	4.37 (3.72-5.01)	4.92 (4.16-5.66)	5.69 (4.75-6.55)	6.31 (5.21-7.28)
4-day	1.46 (1.28-1.67)	1.86 (1.64-2.13)	2.46 (2.15-2.81)	2.94 (2.56-3.36)	3.62 (3.14-4.14)	4.17 (3.60-4.77)	4.76 (4.08-5.44)	5.38 (4.57-6.17)	6.26 (5.25-7.17)	6.98 (5.79-8.01)
7-day	1.64 (1.43-1.89)	2.09 (1.83-2.41)	2.77 (2.41-3.19)	3.32 (2.88-3.81)	4.09 (3.53-4.69)	4.71 (4.05-5.40)	5.38 (4.58-6.16)	6.08 (5.14-6.98)	7.08 (5.91-8.12)	7.88 (6.51-9.06)
10-day	1.77 (1.55-2.03)	2.26 (1.98-2.60)	2.99 (2.61-3.42)	3.57 (3.11-4.08)	4.38 (3.80-5.00)	5.04 (4.34-5.74)	5.74 (4.91-6.54)	6.47 (5.49-7.38)	7.49 (6.29-8.56)	8.32 (6.91-9.52)
20-day	2.18 (1.92-2.49)	2.81 (2.47-3.20)	3.71 (3.26-4.22)	4.39 (3.84-4.99)	5.31 (4.63-6.03)	6.01 (5.22-6.83)	6.73 (5.82-7.66)	7.46 (6.41-8.50)	8.44 (7.20-9.64)	9.20 (7.79-10.5)
30-day	2.55 (2.24-2.91)	3.28 (2.89-3.74)	4.33 (3.80-4.92)	5.13 (4.49-5.82)	6.19 (5.40-7.03)	7.01 (6.09-7.95)	7.86 (6.79-8.90)	8.71 (7.49-9.86)	9.87 (8.42-11.2)	10.8 (9.11-12.2)
45-day	2.94 (2.60-3.35)	3.80 (3.35-4.31)	5.00 (4.41-5.67)	5.89 (5.19-6.68)	7.07 (6.20-8.01)	7.96 (6.95-9.01)	8.85 (7.70-10.0)	9.75 (8.44-11.1)	10.9 (9.39-12.4)	11.8 (10.1-13.5)
60-day	3.25 (2.88-3.67)	4.20 (3.72-4.74)	5.51 (4.88-6.23)	6.48 (5.72-7.31)	7.73 (6.80-8.72)	8.65 (7.59-9.77)	9.58 (8.37-10.8)	10.5 (9.13-11.9)	11.7 (10.1-13.2)	12.6 (10.8-14.3)

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.

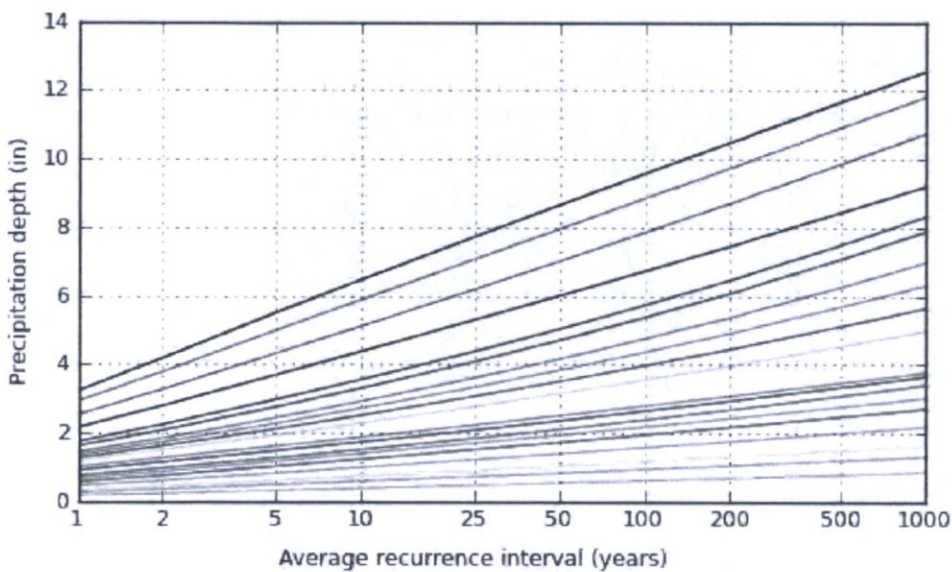
[Back to Top](#)

PF graphical

PDS-based depth-duration-frequency (DDF) curves
 Latitude: 33.5803°, Longitude: -111.9103°



Average recurrence interval (years)
1
2
5
10
25
50
100
200
500
1000



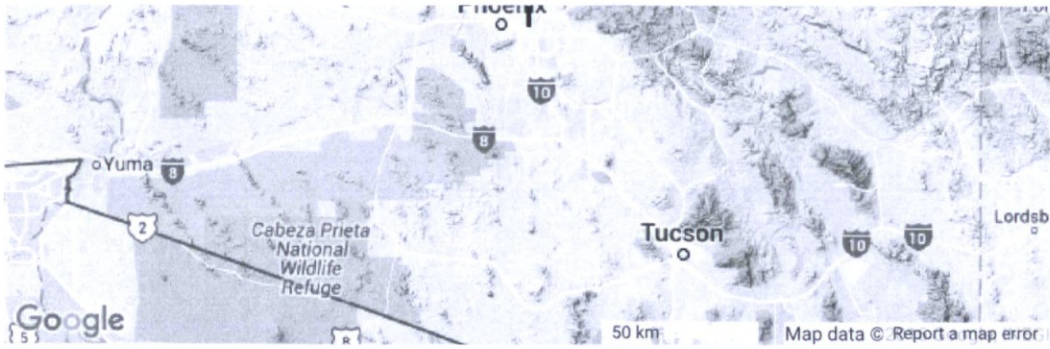
Duration	
5-min	2-day
10-min	3-day
15-min	4-day
30-min	7-day
60-min	10-day
2-hr	20-day
3-hr	30-day
6-hr	45-day
12-hr	60-day
24-hr	

[Back to Top](#)

Maps & aerials

Small scale terrain





Large scale terrain



Large scale map



Large scale aerial





[Back to Top](#)

[US Department of Commerce](#)
[National Oceanic and Atmospheric Administration](#)
[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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APPENDIX II

Calculations

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Scottsdale, AZ 85260

2. Time of Concentration

Time of concentration "Tc" is the total time of travel from the most hydraulically remote part of the watershed to the concentration point of interest. The calculation of "Tc" must follow FCDMC Hydrology Manual procedures.

***Note: Do not add a standard set amount of time to the estimated "Tc" for lot runoff delay (such as 5 or 10 minutes).** Natural land slopes are too variable in Scottsdale to add a set amount of time for lot runoff.

3. Runoff Coefficients

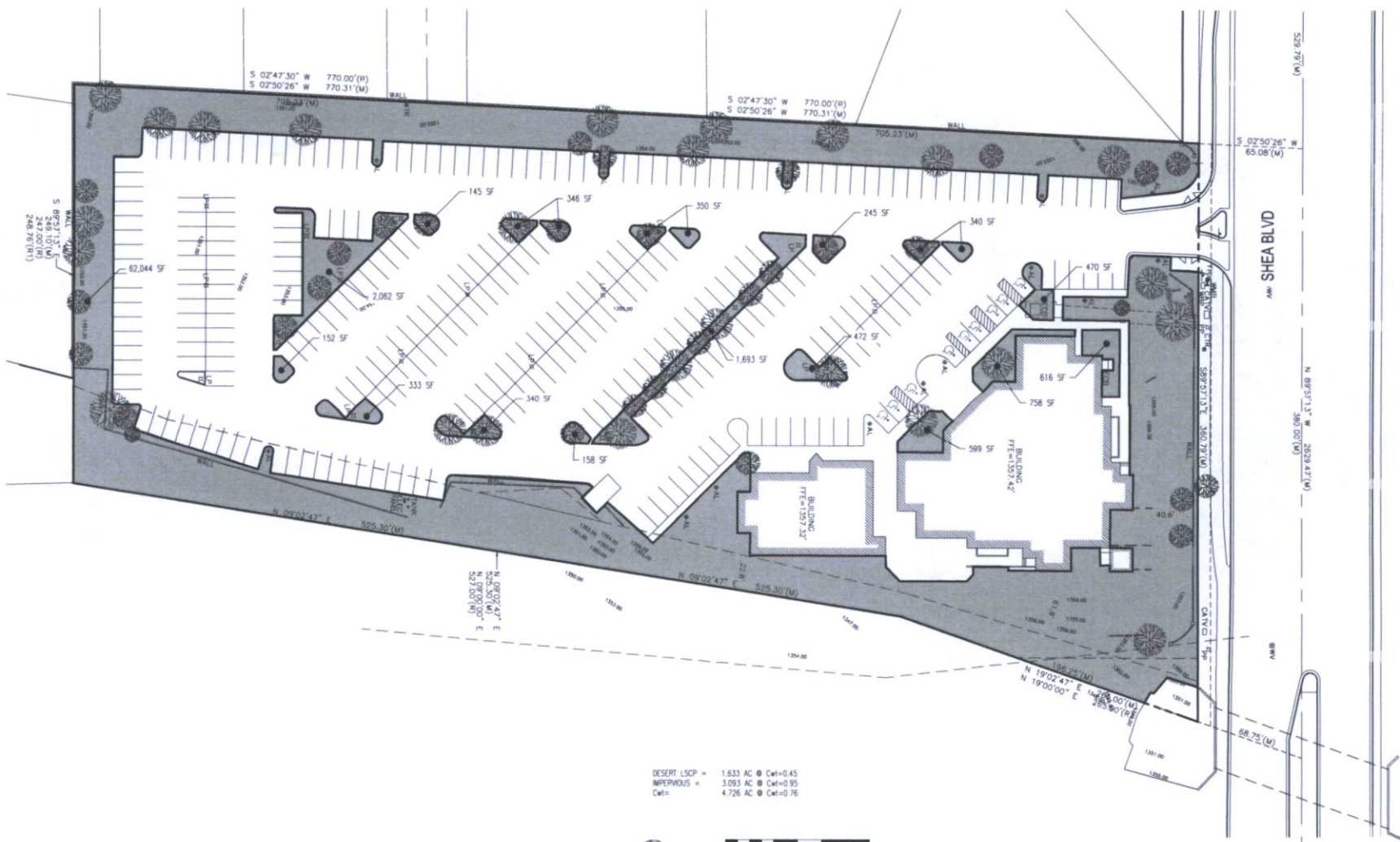
Use [Figure 4.1-4](#) or equivalent to obtain the runoff coefficients or "C" values. Composite "C" values for the appropriate zoning category or weighted average values calculated for the specific site are both acceptable approaches.

RUNOFF COEFFICIENTS - "C" VALUE			
Land Use	Storm Frequency		
	2-25 Year	50 Year	100 Year
Composite Area-wide Values			
Commercial & Industrial Areas	0.80	0.83	0.86
Residential Areas-Single Family (average lot size)			
R1-1-1901	0.33	0.50	0.53
R1-130	0.35	0.51	0.59
R1-70	0.37	0.52	0.60
R1-43	0.38	0.55	0.61
R1-35 (35,000 square feet/lot)	0.40	0.56	0.62
R1-18 (18,000 square feet/lot)	0.43	0.58	0.64
R1-10 (10,000 square feet/lot)	0.47	0.62	0.67
R1-7 (7,000 square feet/lot)	0.51	0.64	0.94
Townhouses (R-2, R-4)	0.63	0.74	0.94
Apartments & Condominiums (R-3, R-5)	0.76	0.83	0.94
Specific Surface Type Values			
Paved streets, parking lots (concrete or asphalt), roofs, drive-ways, etc.	0.90	0.93	0.95
Lawns, golf courses, & parks (grassed areas)	0.20	0.25	0.30
Undisturbed natural desert or desert landscaping (no impervious weed barrier)	0.37	0.42	0.45
Desert landscaping (with impervious weed barrier)	0.63	0.73	0.83
Mountain terrain – slopes greater than 10%	0.60	0.70	0.80
Agricultural areas (flood-irrigated fields)	0.16	0.18	0.20

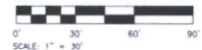
FIGURE 4.1-4 RUNOFF COEFFICIENTS FOR USE WITH RATIONAL METHOD

PRE DEVELOPMENT DRAINAGE MAP

PHOENIX SEMINARY
7901 E. SHEA BLVD., SCOTTSDALE, AZ 85260



DESERT LSCP = 1.633 AC @ Cwt=0.45
 IMPERVIOUS = 3.093 AC @ Cwt=0.95
 Cwt= 4.726 AC @ Cwt=0.76



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SEG
 SUSTAINABILITY
 ENGINEERING
 GROUP

9001 E. GARDEN DR #100, SCOTTSDALE, ARIZONA 85260
 WWW.AZSEG.COM TEL: 480.588.2228

PROJECT: PHOENIX SEMINARY
 LOCATION: 7901 E. SHEA BLVD, SCOTTSDALE, AZ 85260

DESIGNED BY: POUNDS
 CHECKED BY: POUNDS
 PROJECT NO: COUNSELL
 DATE: 04/19/2016

REVISIONS:
 NO. REVISION DATE
 1. REVIEW

PROJECT NO: 160303
 SHEET NO: PRE-DAW

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**POST DEVELOPMENT
DRAINAGE MAP**
PHOENIX SEMINARY
7901 E. SHEA BLVD., SCOTTSDALE, AZ 85260

SEAL

DPMS 12-31-17
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF ARIZONA
 LICENSE NO. 12345
 EXPIRES 12/31/2017

**SUSTAINABILITY
ENGINEERING
GROUP**



1800 E. GILBERT DR. SUITE 100
SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.948.3225

PROJECT
PHOENIX SEMINARY CAMPUS
ADDITION/RENOVATION

LOCATION
7901 E. SHEA BLVD.
SCOTTSDALE, AZ 85260

OWNER
POUNDS
POLUNDS
COUNSELL
FARM

DATE
07/15/2016

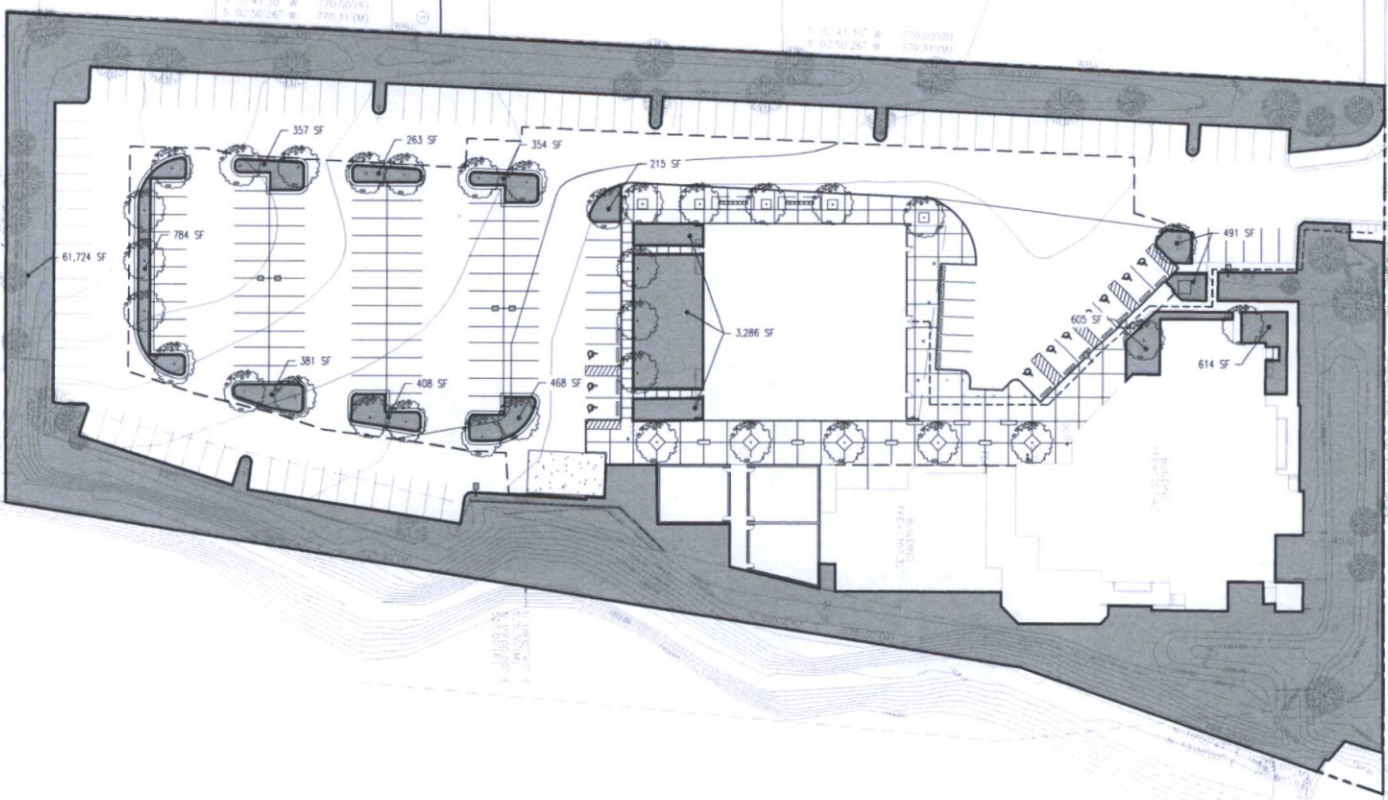
PROJECT FIRM
DRB

PROJECT NO.
160303

SHEET TITLE
POST DEVELOPMENT
DRAINAGE MAP

POST DAM

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S: 02°47'30" W 770.50 (M)
S: 02°50'06" W 770.51 (M)

S: 02°47'30" W 770.50 (M)
S: 02°50'06" W 770.51 (M)

DESERT LSCP = 1.806 AC @ Cwt=0.45
 IMPERVIOUS = 3.120 AC @ Cwt=0.95
 Cwt= 4.726 AC @ Cwt=0.78



ARIZONA
 STATE SEAL
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF ARIZONA
 LICENSE NO. 12345
 EXPIRES 12/31/2017



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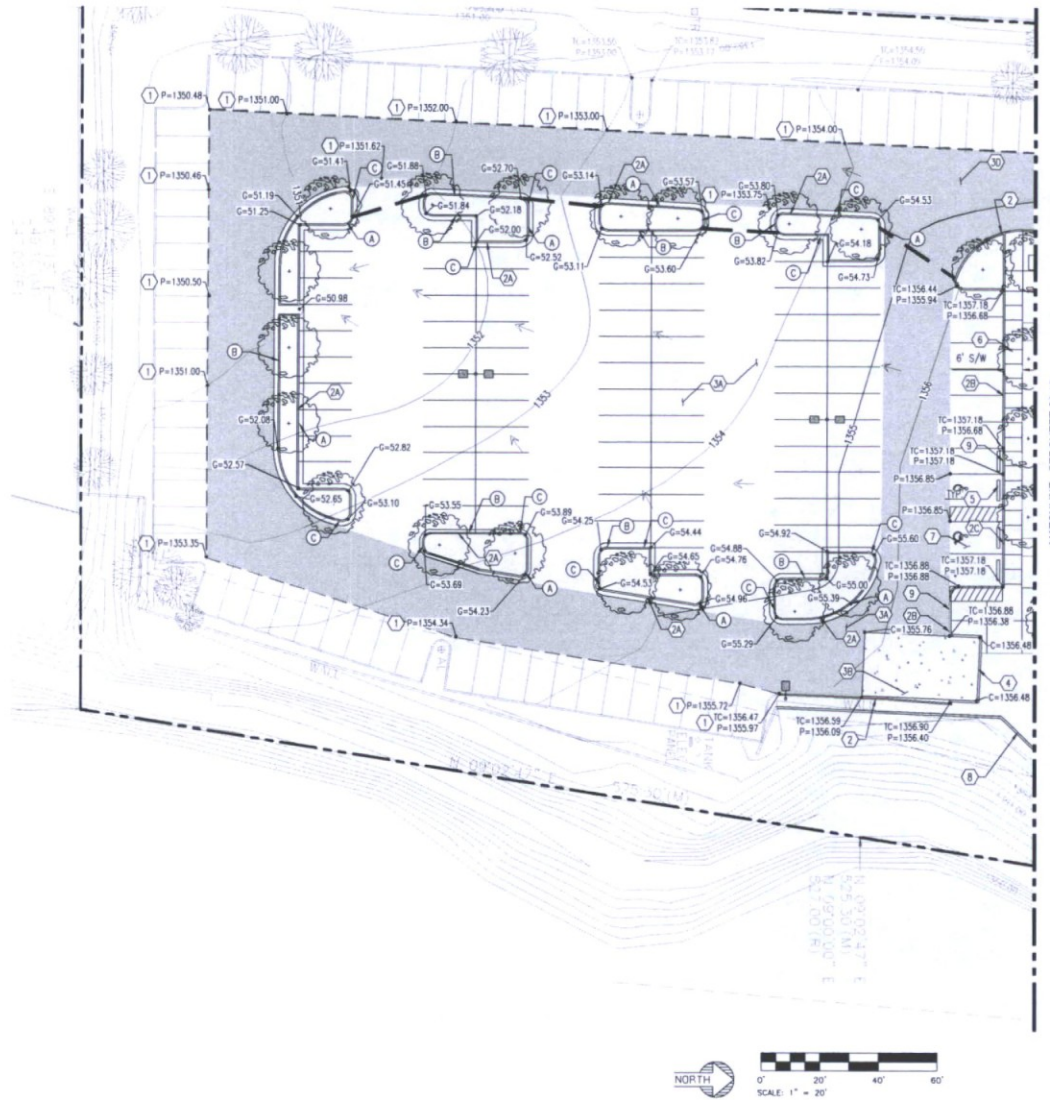
APPENDIX III

Preliminary Grading Plan

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Scottsdale, AZ 85260

GRADING AND DRAINAGE PLAN

PHOENIX SEMINARY
7901 E. SHEA BLVD., SCOTTSDALE, AZ 85260



PROPOSED LEGEND

- PROPERTY LINE
- - - SAWCUT LINE
- C=XXXX CONCRETE ELEVATION
- P=XXXX PAVEMENT ELEVATION
- TC=XXXX TOP OF CURB ELEVATION
- G=XXXX GUTTER ELEVATION TC=G+0.5
- DRAINAGE ARROW
- FLOW LINE
- RIDGE LINE
- CONCRETE CURB & GUTTER
- HEAVY DUTY PAVEMENT
- CONCRETE PAVEMENT
- A STANDARD GUTTER SLOPE
- B REVERSE GUTTER SLOPE
- C 6' TRANSITION OF GUTTER SLOPE

KEYNOTES:

- 1 MATCH EXISTING GRADE: CONTRACTOR TO VERIFY IN FIELD ALL GRADES PRIOR TO ANY CONSTRUCTION ACTIVITIES AND TO CONTACT ENGINEER IN CASE OF DISCREPANCIES.
- 2A CONSTRUCT 6" CURB/GUTTER PER MAG STD DET 220-1 TYPE 'A'.
- 2B CONSTRUCT 6" CURB PER MAG STD DET 222 TYPE 'B' WITH TURNDOWN SLAB.
- 2C CONSTRUCT FLUSH CURB.
- 3A CONSTRUCT LIGHT DUTY PAVEMENT.
- 3B CONSTRUCT CONCRETE PAD.
- 3C CONSTRUCT HEAVY DUTY PAVEMENT TO MEET A MINIMUM BEARING CAPACITY AS REQUIRED BY THE CITY OF SCOTTSDALE (83,000 LB/CY) COORDINATE WITH WANN ENGINEERING PROJECT #7273 FOR SOILS INFORMATION AND DRIVE LANE MIX DESIGNS.
- 4 TRASH ENCLOSURE, REFER TO ARCHITECTURAL PLANS.
- 5 CONSTRUCT WHEEL STOP.
- 6 CONSTRUCT SIDEWALK PER MAG STD DET 230, WIDTH PER PLAN.
- 7 2% MAXIMUM SLOPE IN ANY DIRECTION AT ACCESSIBLE PARKING STALLS AND 2% MAXIMUM CROSS SLOPE AT ADA ACCESSIBLE ROUTE.
- 8 CONSTRUCT SCREEN WALL PER ARCHITECTURAL PLANS.
- 9 TRANSITION FROM FLUSH CURB TO 6" CURB.



SUSTAINABILITY ENGINEERING GROUP
SEG
1801 E. GILBERT DR. #311, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL: 480.949.7228



PROJECT: PHOENIX SEMINARY CAMPUS ADDITION/RENOVATION
LOCATION: 7901 E. SHEA BLVD. SCOTTSDALE, AZ 85260

DESIGNED: POUNDS
CHECKED: POUNDS
PROJECT: FAKH

DATE: 08/29/2016
PROJECT: DRB

REVISION NO.	DATE

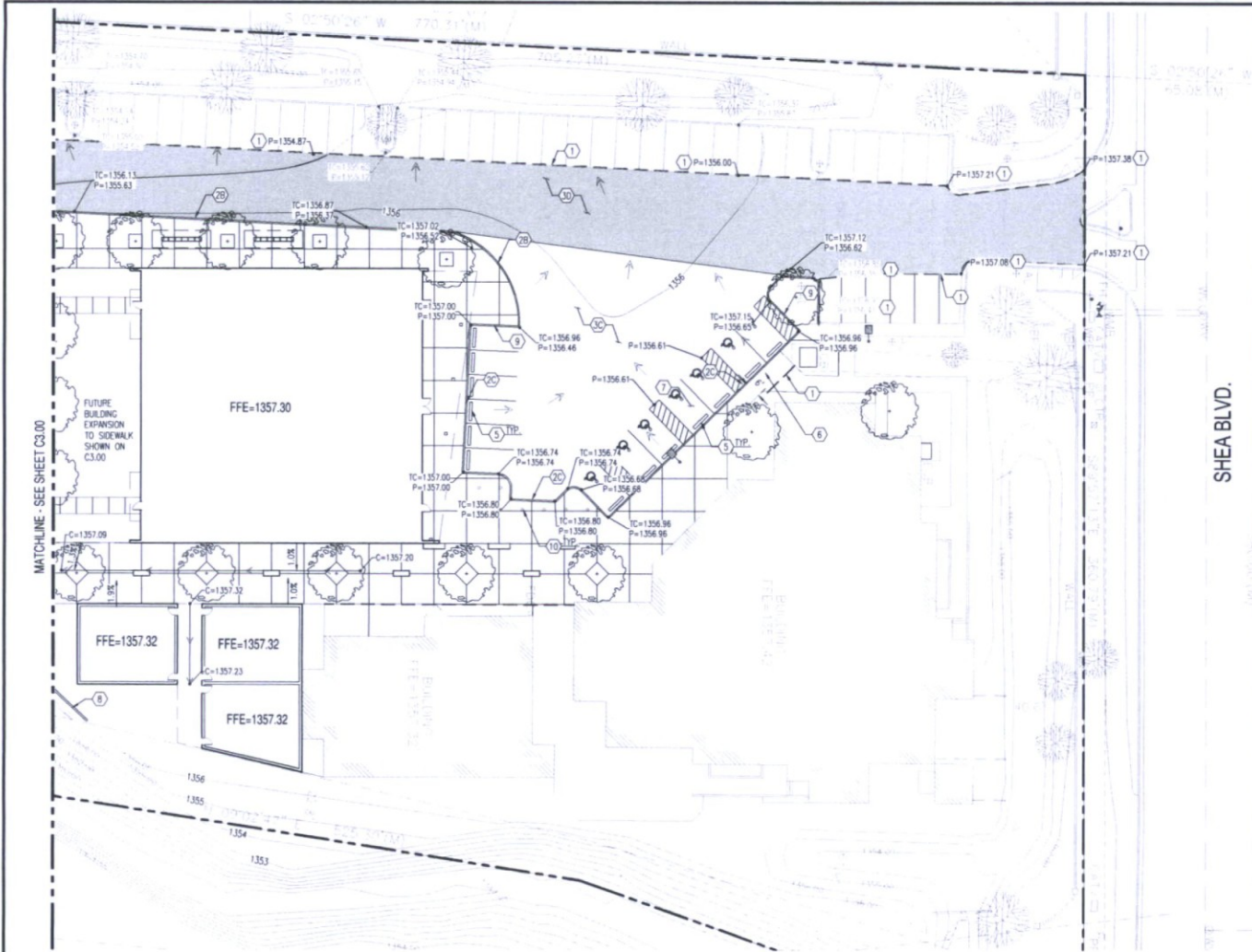
FIG. NO.: 160303
SHEET TITLE: PRELIMINARY GRADING AND DRAINAGE PLAN

SHEET NO.: C3.00

PRELIMINARY NOT FOR CONSTRUCTION



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MATCHLINE - SEE SHEET C3.00

SHEA BLVD.

PROPOSED LEGEND

- PROPERTY LINE
- - - SAWCUT LINE
- C=XXXXX CONCRETE ELEVATION
- P=XXXXX PAVEMENT ELEVATION
- TC=XXXXX TOP OF CURB ELEVATION
- G=XXXXX GUTTER ELEVATION TC=G+0.5
- DRAINAGE ARROW
- FLOW LINE
- - - RIDGE LINE
- CONCRETE CURB & GUTTER
- HEAVY DUTY PAVEMENT
- CONCRETE PAVEMENT
- (A) STANDARD GUTTER SLOPE
- (B) REVERSE GUTTER SLOPE
- (C) 6" TRANSITION OF GUTTER SLOPE

KEYNOTES:

- (1) MATCH EXISTING GRADE. CONTRACTOR TO VERIFY IN FIELD ALL GRADES PRIOR TO ANY CONSTRUCTION ACTIVITIES AND TO CONTACT ENGINEER IN CASE OF DISCREPANCIES.
- (2B) CONSTRUCT 6" CURB PER MAG STD DET 222 TYPE 'B' WITH TURNDOWN SLAB.
- (2C) CONSTRUCT FLUSH CURB.
- (3A) CONSTRUCT LIGHT DUTY PAVEMENT.
- (3C) CONSTRUCT STAMPED CONCRETE.
- (3D) CONSTRUCT HEAVY DUTY PAVEMENT TO MEET A MINIMUM BEARING CAPACITY AS REQUIRED BY THE CITY OF SCOTTSDALE (83,000 LBS C/W). COORDINATE WITH VANN ENGINEERING PROJECT #7273 FOR SOILS INFORMATION AND DRIVE LANE MIX DESIGNS.
- (5) CONSTRUCT WHEEL STOP.
- (6) CONSTRUCT SIDEWALK PER MAG STD DET 230, WIDTH PER PLAN.
- (7) 2% MAXIMUM SLOPE IN ANY DIRECTION AT ACCESSIBLE PARKING STALLS AND 2% MAXIMUM CROSS SLOPE AT ADA ACCESSIBLE ROUTE.
- (8) CONSTRUCT SCREEN WALL PER ARCHITECTURAL PLANS.
- (9) TRANSITION FROM FLUSH CURB TO 6" CURB.
- (10) INSTALL CONCRETE FILLED PIPE BOLLARD.



**PRELIMINARY
NOT FOR CONSTRUCTION**



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GROUP**

SEG

1701 E SHEA BLVD
SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL: 480.308.7234

PROJECT: POLKINS ELEMENTARY CAMPUS ADDITION/RENOVATION	LOCATION: 7901 E SHEA BLVD SCOTTSDALE, AZ 85260
DRAWN BY: POLKINS	CHECKED BY: POLKINS
DATE: 08/29/2016	PROJECT NO: DRB
SHEET NO: 160303	SHEET TITLE: PRELIMINARY GRADING AND DRAINAGE PLAN
SHEET NO: C3.10	

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APPENDIX III

ALTA / Topographic Survey

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Scottsdale, AZ 85260

ALTA/ACSM LAND TITLE SURVEY

OF A PORTION OF THE NORTHEAST QUARTER OF SECTION 26,
TOWNSHIP 3 NORTH, RANGE 4 EAST,
OF THE GILA AND SALT RIVER BASE AND MERIDIAN,
MARICOPA COUNTY, ARIZONA.



PARCEL DESCRIPTION

THAT PART OF THE NORTHEAST QUARTER OF SECTION TWENTY-SIX (26), TOWNSHIP THREE (3) NORTH, RANGE FOUR (4) EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 26 AND RUNNING THENCE WEST (ASSUMED BEARING) ALONG THE NORTH LINE OF SAID SECTION 26 A DISTANCE OF 404.85 FEET TO THE NORTHEAST CORNER OF THE PREMISES HEREBY DESCRIBED, SAID POINT BEING IN THE CENTER LINE OF THAT CERTAIN COUNTY ROAD COMMONLY KNOWN AS SHEA BOULEVARD, AND ALSO BEING THE TRUE POINT OF BEGINNING;

THENCE CONTINUING WEST ALONG THE NORTH LINE OF SAID SECTION 26 A DISTANCE OF 380 FEET;

THENCE SOUTH 2 DEGREES 47 MINUTES 30 SECONDS WEST A DISTANCE OF 770 FEET;

THENCE EAST PARALLEL TO THE NORTH LINE OF SAID SECTION 26 A DISTANCE OF 247 FEET TO A POINT;

THENCE NORTH 9 DEGREES 00 MINUTES 00 SECONDS EAST A DISTANCE OF 527 FEET TO A POINT;

THENCE NORTH 19 DEGREES 00 MINUTES 00 SECONDS EAST A DISTANCE OF 285 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPT THAT PART CONVEYED TO THE CITY OF SCOTTSDALE IN DEED RECORDED IN DOCKET 16462, PAGE 213, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS: THE SOUTH 32 FEET OF THE NORTH 85 FEET OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, LYING EAST OF AND ADJOINING A LINE DRAWN AT AN ANGLE OF 87 DEGREES 12 MINUTES 30 SECONDS, AS MEASURED FROM WEST TO SOUTH, FROM THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 26, AT A POINT ON SAID NORTH LINE BEING 794.8 FEET WEST OF THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER LYING WEST OF AND ADJOINING A LINE DRAWN AT AN ANGLE OF 71 DEGREES, AS MEASURED FROM WEST TO SOUTH, FROM THE NORTH LINE OF SAID NORTHEAST QUARTER, AT A POINT ON SAID NORTH LINE BEING 404.8 FEET WEST OF THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER.

NOTES: (Table "A" Items)

- SET A 1/2" REBAR W/CAP "AWLS 45377" AT PROPERTY CORNERS AS SHOWN HEREON UNLESS OTHERWISE NOTED.
- AREA IS 205,850.8 SQUARE FEET OR 4.726 ACRES, MORE OR LESS.
- THIS SURVEY SHOWS ABOVE GROUND UTILITIES. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITY LINES SHOWN HEREON ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CLIENT IS HEREBY ADVISED THAT EXCAVATION MAY BE NECESSARY TO EXPOSE UNDERGROUND UTILITIES TO CONFIRM EXACT LOCATION.
- THERE ARE 298 REGULAR PARKING SPACES AND 9 HANDICAP PARKING SPACES.
- ADJOINER INFORMATION IS PER MARICOPA COUNTY ASSESSOR WEBSITE.

SCHEDULE "B" ITEMS

- TAXES WHICH MAY BE ASSESSED OR LEVIED SUBSEQUENT TO THE EFFECTIVE DATE HEREIN, AND SUBSEQUENT YEARS. TAX IDENTIFICATION NO.: 175-47-058
- WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
- RESERVATIONS CONTAINED IN THE PATENT

FROM THE UNITED STATES OF AMERICA
TO: CLARENCE E. HOVER
RECORDING DATE: MARCH 10, 1917
RECORDING NO: BOOK 120 OF DEEDS, PAGE 490

WHICH AMONG OTHER THINGS RECITES AS FOLLOWS:

SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING, OR OTHER PURPOSES AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF THE COURTS, AND THE RESERVATION FROM THE LANDS HEREBY GRANTED, A RIGHT OF WAY THEREON FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES.

- RIGHTS OF THE PUBLIC IN AND TO THAT PORTION OF THE HEREIN DESCRIBED LAND AS SHOWN ON THE MAP
RECORDING NO: BOOK 5 OF ROAD MAPS, PAGE 28
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: ELECTRIC LINES
RECORDING NO: DOCKET 1444, PAGE 127
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: ELECTRIC LINES
RECORDING NO: DOCKET 11674, PAGE 12
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: LEVEES, DIKES, CHANNELS AND OTHER WORKS OF DRAINAGE
RECORDING NO: DOCKET 10462, PAGE 215
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: DRAINAGE
RECORDING NO: 95-47780
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: DRAINAGE
RECORDING NO: 95-47781
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: ELECTRIC LINES
RECORDING NO: 95-506994
- MATTERS (INCLUDING, BUT NOT LIMITED TO, A REVERSION RIGHT) CONTAINED IN THAT CERTAIN DOCUMENT

ENTITLED: GENERAL WARRANTY DEED
DATED: DECEMBER 01, 2007
RECORDING DATE: DECEMBER 03, 2007
RECORDING NO: 20071274697

REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

- AN UNRECORDED LEASE WITH CERTAIN TERMS, COVENANTS, CONDITIONS AND PROVISIONS SET FORTH THEREIN AS DISCLOSED BY THE DOCUMENT

ENTITLED: MEMORANDUM OF LEASE
LESSOR: SHEA CHAPEL, LLC
LESSEE: SCOTTSDALE BIBLE CHURCH, AN ARIZONA NONPROFIT CORPORATION
RECORDING DATE: DECEMBER 03, 2007
RECORDING NO: 20071275158

- MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION AND/OR BY A CORRECT ALTA/ACSM LAND TITLE SURVEY OF SAID LAND THAT IS SATISFACTORY TO THE COMPANY, AND/OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.
- ANY RIGHTS OF THE PARTIES IN POSSESSION OF A PORTION OF, OR ALL OF, SAID LAND, WHICH RIGHTS ARE NOT DISCLOSED BY THE PUBLIC RECORDS.

BASIS OF BEARING

THE BASIS OF BEARING AND ALL MONUMENTATION SHOWN HEREON IS BASED ON THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST, USING A BEARING OF NORTH 89°57'13" WEST AS SHOWN ON THE FINAL PLAT OF LA CUESTA II, RECORDED IN BOOK 233, PAGE 1, MARICOPA COUNTY RECORDS.

BENCHMARK

BENCHMARK IS A CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE, BEING THE NORTH QUARTER CORNER OF SECTION 26, T.3N., R.4E.
ELEVATION = 1355.17 NAVD 88.

FLOOD ZONE DESIGNATION

SUBJECT PROPERTY IS LOCATED WITHIN ZONE "X" (DOTTED) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP NO. 16013C1768L, DATED OCTOBER 16, 2013. ZONE "X" IS DEFINED AS AREAS OF 0.2% ANNUAL 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.

GENERAL NOTES

- ALL TITLE INFORMATION IS BASED ON A COMMITMENT FOR TITLE INSURANCE PREPARED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY, COMMITMENT NO. 01841980-003-170, WITH AN EFFECTIVE DATE OF DECEMBER 9, 2015.
- A.R.S. 32-151 STATES THAT THE USE OF THE WORD "CERTIFY" OR "CERTIFICATION" BY A PERSON OR FIRM THAT IS REGISTERED OR CERTIFIED BY THE BOARD IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OR FINDINGS THAT ARE SUBJECT TO THE CERTIFICATION AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE.
- SURVEY FIELD WORK WAS COMPLETED ON APRIL 8, 2016.
- THIS SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP, TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

CERTIFICATION

TO: PHOENIX SEMINARY, INC., AN ARIZONA NONPROFIT CORPORATION
SHEA CHAPEL, LLC, AN ARIZONA NONPROFIT LIMITED LIABILITY COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2016, AND INCLUDES TABLE ITEMS 1-4, 8, 9, 11(A)(B), AND 13 THEREOF, PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION. UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF ARIZONA, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.



ALTA/ACSM LAND TITLE SURVEY
SECTION 26
TOWNSHIP 3 NORTH, RANGE 4 EAST
OF THE G.S.R.B. & M.
MARICOPA COUNTY, ARIZONA

AW
LAND
SURVEYING, INC.
P.O. BOX 2170, CHANDLER, AZ 85244
(480) 244-7630 (480) 243-4287

DRAWN BY: [initials] CHECKED BY: [initials] DATE: 5/18/16 JOB NO: 16-027 SHEET NO. 1 OF 3

N 1/4 CORNER
SECTION 26
T.3N., R.4E.
FD COS BCHH

FD COS BCF

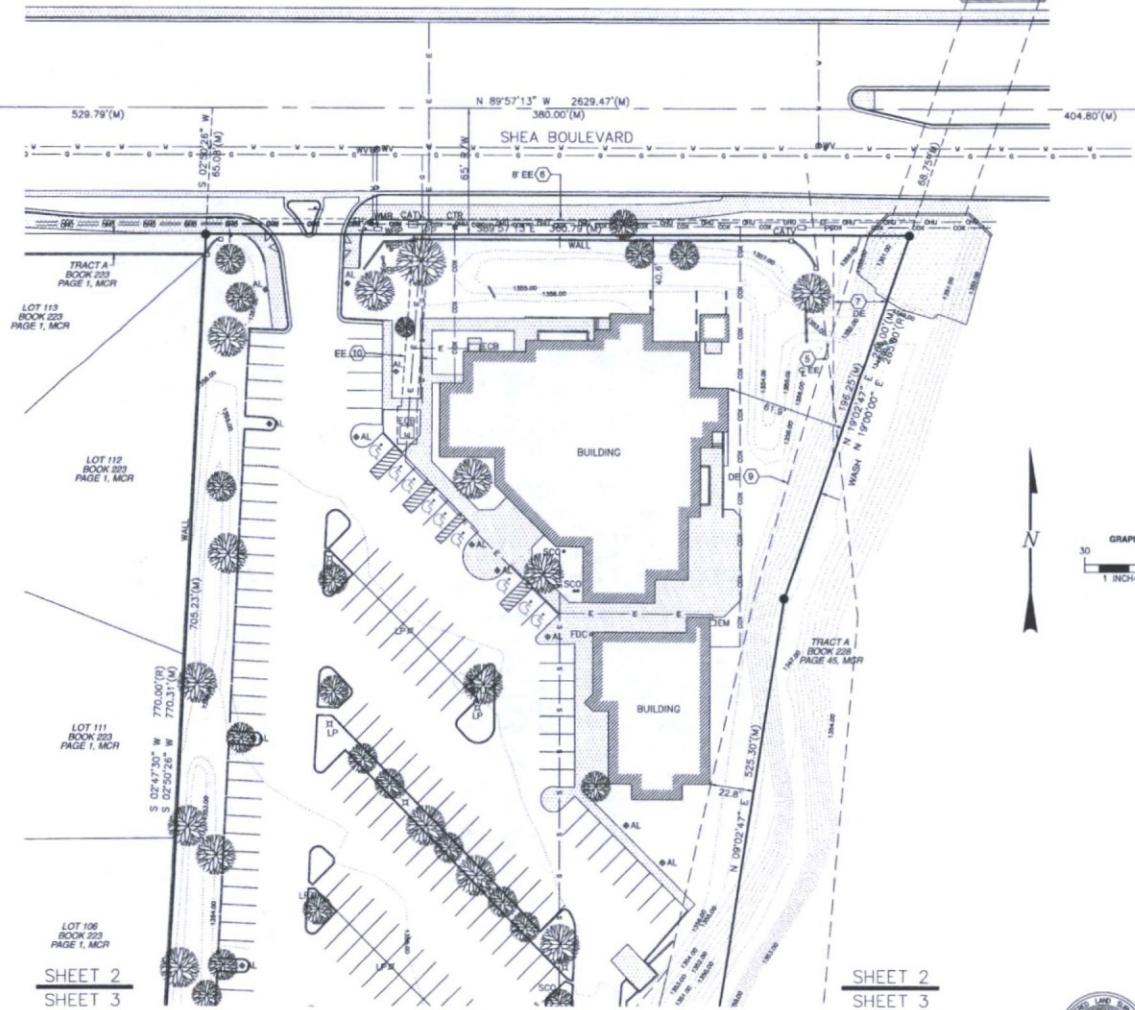
1314.88'(M)

78TH STREET

N 02°26'17" W 1317.80'(M)
N 02°26'17" W 1317.56'(M)

GOLD DUST AVENUE

FD COS BCF



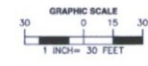
SHEET 2
SHEET 3

SHEET 2
SHEET 3

NE CORNER
SECTION 26
T.3N., R.4E.
FD COS BCHH

LEGEND

- MCR MARICOPA COUNTY RECORDS
- COS CITY OF SCOTTSDALE
- BCHH BRASS CAP IN HANDHOLE
- BCF BRASS CAP FLUSH
- FD FOUND
- ID IDENTIFICATION
- DE DRAINAGE EASEMENT
- EE ELECTRIC EASEMENT
- C EE CENTERLINE OF ELECTRIC EASEMENT
- (M) MEASURED DATA
- (R) RECORD DATA (TITLE REPORT)
- (R1) RECORD DATA BOOK 228, PAGE 45
- (R2) RECORD DATA BOOK 223, PAGE 1
- WV WATER VALVE
- PP POWER POLE
- CATV CABLE TV VAULT
- CTR CABLE TV RISER
- FH FIRE HYDRANT
- WMB WATER METER BOX
- AL WATER BACKFLOW PREVENTOR
- ECB AREA LIGHT
- LP LIGHT POLE
- TR TELEPHONE RISER
- SCO SEWER CLEANOUT
- ⊙ SEWER MANHOLE
- PROPERTY LINE
- ADJOINER LINE
- CENTER LINE
- - - EASEMENT LINE (AS NOTED)
- CONCRETE
- TREE OR BUSH
- PROPERTY CORNER
SET 1/2" REBAR WCAP
*AWLS 45377"



ALTA/ACSM LAND TITLE SURVEY
SECTION 26
TOWNSHIP 3 NORTH, RANGE 4 EAST
OF THE G. S. R. & M.
MARICOPA COUNTY, ARIZONA

AW LAND SURVEYING, Inc.
P.O. BOX 2170, CHANDLER, AZ 85244
(480) 244-7630 (480) 243-4287

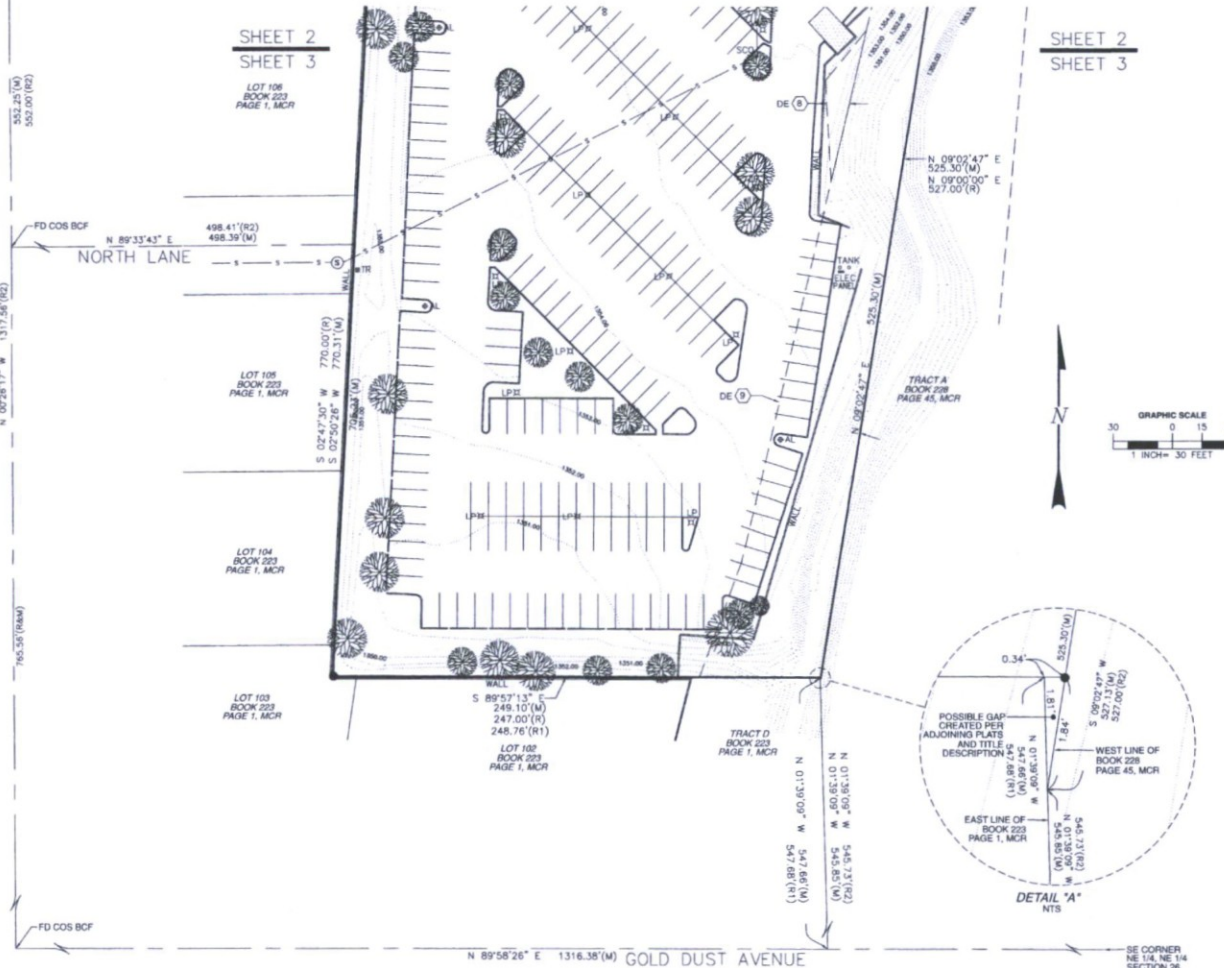
FD COS BCF
SHEA BOULEVARD

78TH STREET

N 00°28'11" W 1317.80'(M)
W 10°28'11" E 1317.80'(M)

780.58'(198M)

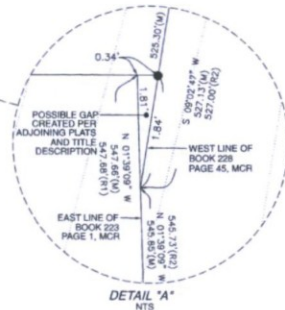
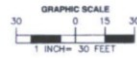
FD COS BCF



SHEET 2
SHEET 3
LOT 108
BOOK 223
PAGE 1, MCR

SHEET 2
SHEET 3

- LEGEND**
- MCR MARICOPA COUNTY RECORDS
 - COS CITY OF SCOTTSDALE
 - BCHH BRASS CAP IN HANDHOLE
 - BCF BRASS CAP FLUSH
 - FO LINE FOUNE
 - ID. IDENTIFICATION
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 - WMB WATER METER BOX
 - WSP WATER BACKFLOW PREVENTOR
 - AL AREA LIGHT
 - ECB ELECTRIC CABINET
 - LP LIGHT POLE
 - TR TELEPHONE RISER
 - SOO SEWER CLEANOUT
 - ⊙ SEWER MANHOLE
 - PROPERTY LINE
 - ADJOINER LINE
 - CENTER LINE
 - - - EASEMENT LINE (AS NOTED)
 - CONCRETE
 - TREE OR BUSH
 - PROPERTY CORNER SET 1/2" REBAR W/ CAP "M/L.S. 45377"



ALTA/ACSM LAND TITLE SURVEY
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