PRELIMINARY DRAINAGE REPORT

FOR

US BANK

14900 NORTH PIMA ROAD

SCOTTSDALE, ARIZONA

Prepared for:

AVALON MAMMOUTH LLC

7333 East Doubletree Ranch Rd., Suite 140
Scottsdale, Arizona 85258

Prepared By:

1600 North Desert Drive
Suite 210
Tempe, Arizona 85288
480-629-8830

June 2, 2023
Bowman Project No. 051355-01-001

Bowman

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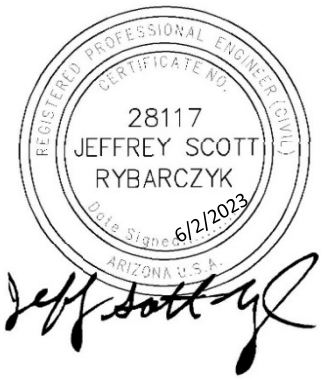

1. INTRODUCTION

1.1. PROJECT NAME

The proposed development is called US Bank (The Project).

1.2. PROJECT LOCATION

The Project site is assessor parcel number (APN) 215-52-039D, located within the northeast quarter of Section 12, Township 3 North, Range 4 East, Gila and Salt River Meridian, Maricopa County, Arizona. More specifically, the project is located north of the northwest corner of the intersection of E Raintree Drive and Pima Road. The subject property is part of parcel 6 of "Northsight II" and is located at 14900 N Pima Rd. Scottsdale, AZ 85260. The site is 1.11 acres. Vicinity maps are in **Appendix A, figures 1 and 2.**

1.3. PROJECT DESCRIPTION

The proposed Project includes the redevelopment of a commercial site on 1.11 acres of developed land. There is an existing building (one suite is leased by a sandwich shop and other suites are empty) and parking lot on this site. The existing building and parking will be demolished and replaced with a new building and parking. Redevelopment includes a new 4,445 square-foot, one story bank building, parking lot, utilities, and landscaping. The site is bounded by the following land uses: (south) existing commercial retail sites; (east) Pima Road (Frontage); (north) existing Chick-Fil-A; and (west) 87th Street.

1.4. PREVIOUS DRAINAGE STUDIES

The drainage design for the existing project site was provided in the preliminary drainage report by JMA Engineering Corporation dated September 10, 2003 **(Appendix C)** and grading, drainage, and utility plans by JMA Engineering Corporation for Northsight Parcel B dated January 2004 **(Appendix D)**. We have reviewed these documents and believe that no changes have since occurred in the project watershed that may change the drainage conditions at the site and that the drainage analysis provided in this document is still valid.

1.5. PURPOSE AND OBJECTIVES FOR SUBMITTING A DRAINAGE REPORT

This report is prepared in support of the drainage design for the project.

The site is located within the City of Scottsdale. All proposed drainage infrastructure shall be constructed per the city's development regulations and approved material list.

2. EXISTING FLOOD ZONE

2.1. FLOOD ZONE DESCRIPTION

As shown on the Federal Emergency Management Agency (FEMA) Flood Insurance rate Map (FIRM), map number 04013C1760L with a current effective date of 10/16/2013 (**Appendix A, Figure 3**), the project site is within an effective flood Zone X. Zone X is classified as:

> Areas outside the 100-year floodplains, areas of 100-year sheet flow flooding where average depths are less than 1 foot, areas of 100-year stream flooding where the contributing drainage areas is less than one square mile, or areas protected from the 100-year flood by levees. No BFE's or depths are shown within this zone.

2.2. TOPOGRAPHIC MAP

A topographic survey of the site was performed that shows the existing building to be the highest point on the site and stormwater drains to the north, south, and west from the building.

3. EXISTING DRAINAGE CONDITIONS

Offsite drainage does not impact this site. The previously prepared preliminary drainage report by JMA Engineering Corporation dated September 10, 2003 **(Appendix C)** notes that offsite drainage is eliminated from the adjacent private streets and the associated storm drain system. The project was constructed in accordance with the Master Drainage Report for Northsight Commercial Development as noted in the JMA report.

4. PROPOSED DRAINAGE PLAN

4.1. BASIS OF DESIGN

The Project is designed using the guidelines set in the City of Scottsdale Design Standards and Policies Manual (2018) and the Maricopa County Drainage Design Manual (MCDDM), as supplement.

4.2. PRE- AND POST-PROJECT DRAINAGE PATTERN

The previous drainage report for the site **(Appendix C)** notes that no onsite stormwater retention is required. Per City of Scottsdale design requirements, stormwater storage will be provided for the first flush which consists of one half inch of rainfall. The drainage pattern for the proposed improvements will generally maintain the overall existing drainage pattern of the existing site. Onsite drainage will remain largely the same with the exception that a greater portion of the drainage will be captured onsite in order to provide storage for the first flush storm. Stormwater runoff in tributary area A is divided into four drainage areas A1, A2, A3 and A4 (**Appendix A, Figure 4**). Area A1 will drain to

the west side of the site to a catch basin and then be piped to the underground storage. Area A2 is the building runoff and will be collected in roof drains and then piped to the underground storage. Areas A3 and A4 will drain to the south side of the site to catch basins and then be piped to the underground storage. The underground storage will be drained by a drywell. In the event of a large storm, the catch basin on the west side of the site will have an overflow pipe connecting to the existing 18-inch storm drain which then connects to the existing 48-inch storm drain in 87th Street. The site is not impacted by offsite flows.

4.3. BASIS FOR SELECTION OF FINISHED FLOOR ELEVATION

The finish floor elevation was established as located 3.5-feet above the existing adjacent low top of curb and 0.9 feet above the existing adjacent high top of curb.

5. SPECIAL CONDITIONS

There are no special conditions for this site.

6. DATA ANALYSIS METHODS

Peak flows and inlet capacities will be provided in the final drainage report to be submitted with the improvement plans for the site. Peak flows will be calculated using the rational method and Microsoft software, and the storm drain capacity will be calculated using Bentley StormCAD. All the calculations and analysis are based on the methods outlined in the City of Scottsdale Design Standards and Policies Manual. The City of Scottsdale Design Standards and Policies Manual uses a minimum time of concentration of 5 minutes. Storm rainfall depths and intensities are taken from the NOAA Atlas 14. The rainfall depths and intensities used for this project are attached at **Appendix A, figure 5**.

7. FIRST FLUSH STORAGE

The site will provide first flush storage per City of Scottsdale requirement of containing the first one half inch of runoff. Storage will be provided in a 96" pipe which will be drained by a dual chamber drywell. Calculations are provided in **Appendix B.** In the event of a large storm, the catch basin on the west side of the site will have an overflow pipe connecting to the existing 18-inch storm drain which then connects to the existing 48-inch storm drain in 87th Street.

8. STORM WATER POLLUTION PREVENTION PLAN

A storm water pollution prevention plan will be prepared and submitted with the civil improvement plans. This plan will show the sediment control measures to be installed at the start of construction.

9. CONCLUSIONS

The proposed improvements will not change existing drainage patterns at the site. There will be no increase in storm runoff from existing conditions to proposed conditions.

10. REFERENCES

1) City of Scottsdale Design Standards and Policies Manual, 2018 Edition
2) Drainage Design Manual for Maricopa County (Hydrology and Hydraulics), 2018 Edition

APPENDIX A

FIGURES

1. Vicinity Map A
2. Vicinity Map B
3. FIRM Map
4. Drainage Map
5. NOAA Atlas 14 Rainfall Data

Bowman

1600 N. Desert Drive Ste 210
Tempe, Arizona 85288

Phone: (480) 629-8830
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US Bank

SCOTTSDAE, ARIZONA

VICINITY MAP

JOB #	051355-01-001
DATE	FEB 2023
SCALE	N.T.S.
DRAWN	JMB
SHT	1 OF 1

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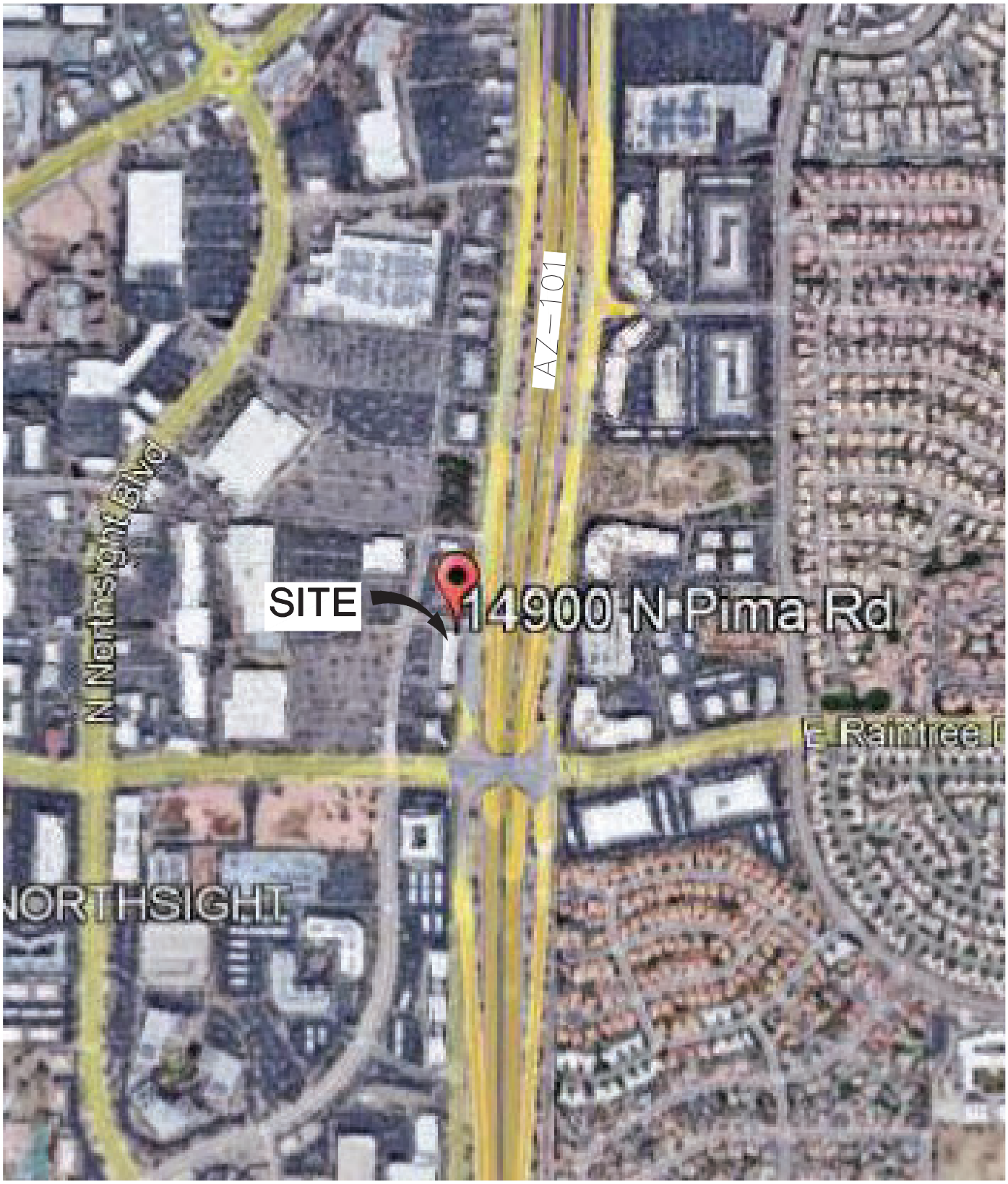
FIGURE 1



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SCOTTSDALE, ARIZONA

VICINITY MAP

JOB #	051355-01-001
DATE	FEB 2023
SCALE	N.T.S.
DRAWN	JMB
SHT	1 OF 1

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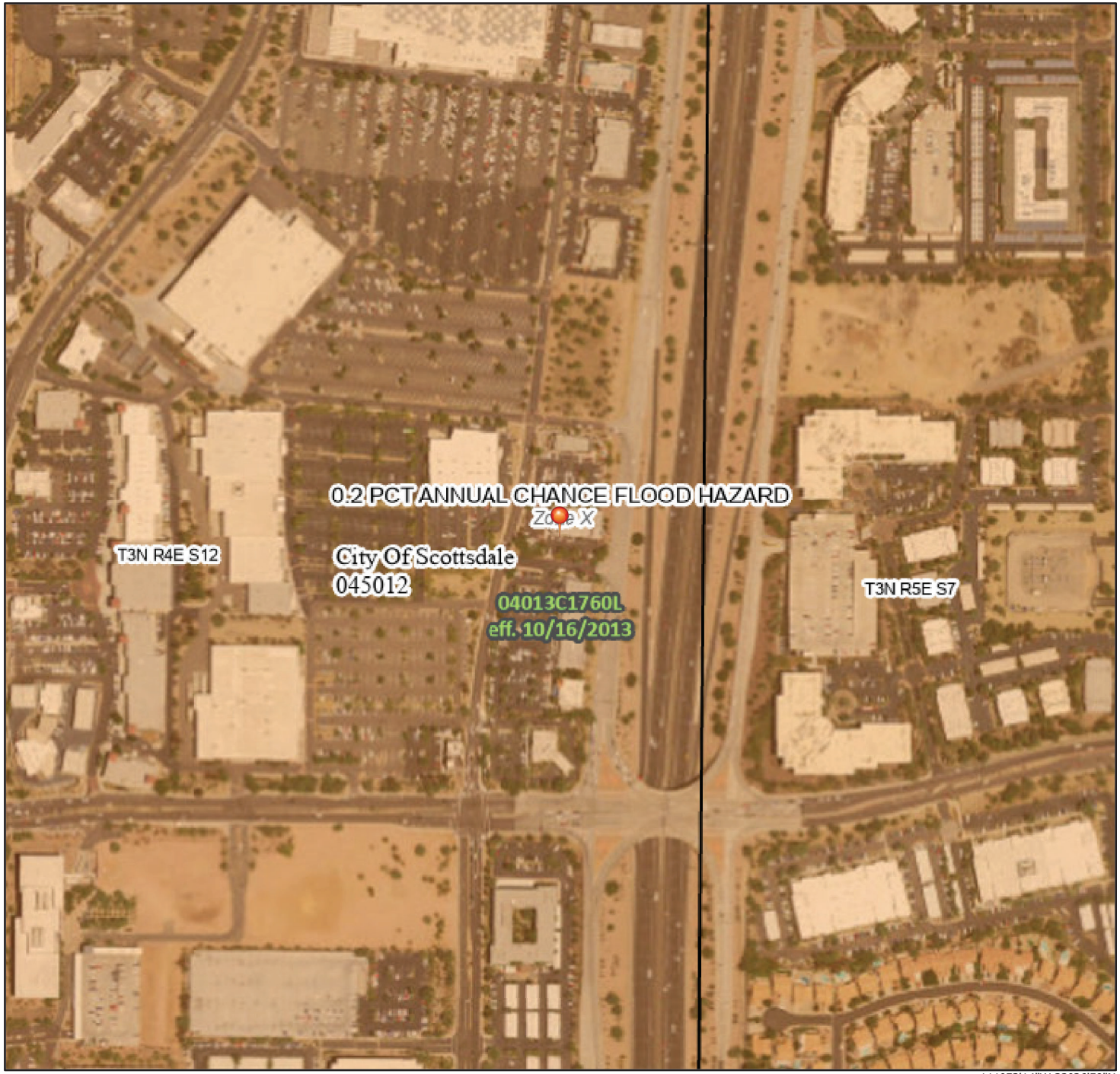
FIGURE 2

National Flood Hazard Layer FIRMette

FEMA

111°53'51"W 33°37'29"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

111°53'14"W 33°36'59"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

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*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

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

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

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

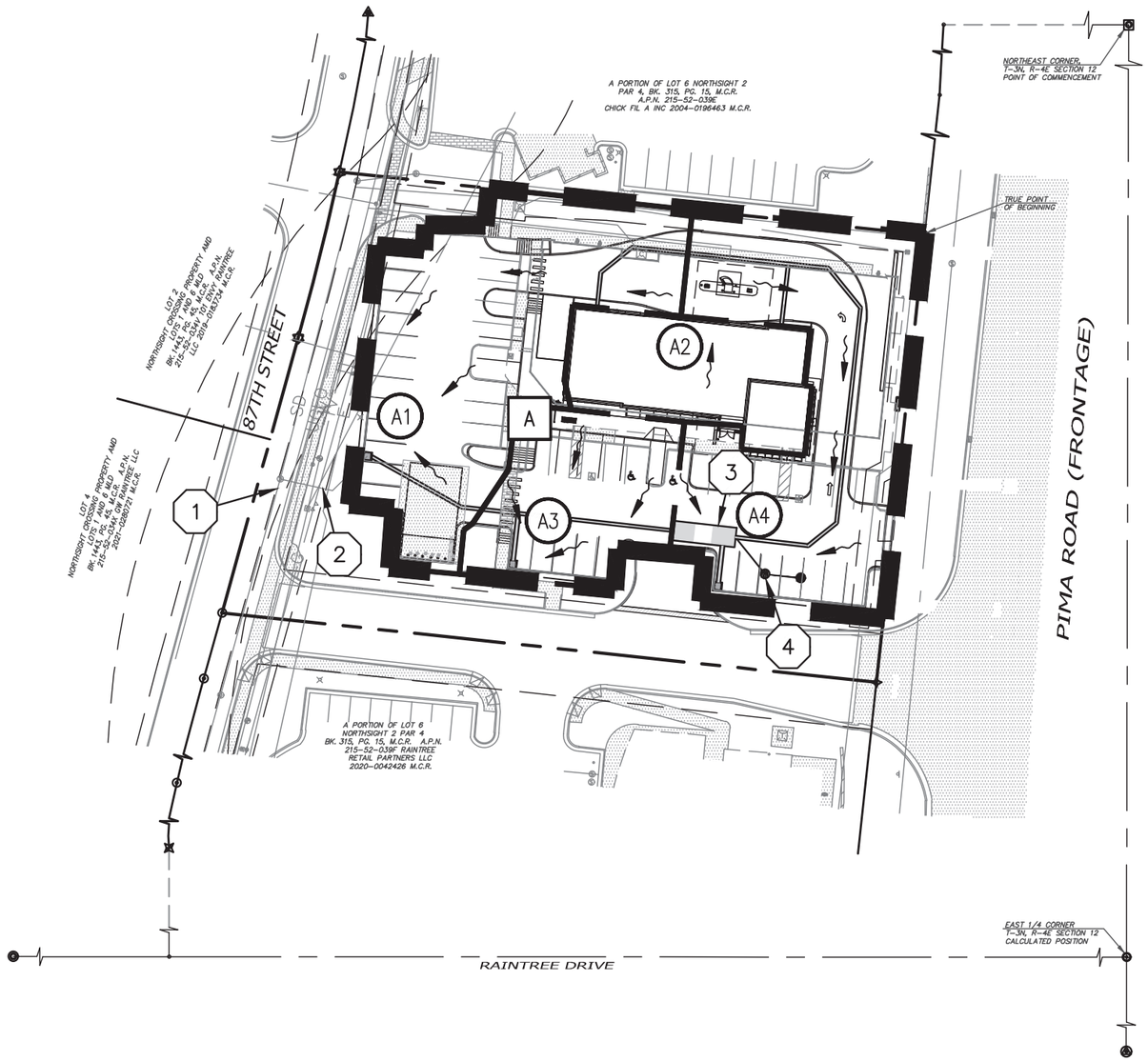
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/2/2023 at 1:09 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FIGURE 3



FLOW DIRECTION

DRAINAGE BOUNDARY

A — DRAINAGE AREA ID

SUB BASIN

A1 — CONCENTRATION POINT

NOTES:

1. EXISTING 48–INCH STORM DRAIN
2. EXISTING 18–INCH STORM DRAIN TO BE USED AS OVERFLOW PIPE
3. PROPOSED 96" FIRST FLUSH STORAGE PIPE
4. PROPOSED DUAL CHAMBER DRYWELL

N

80 40 0 80

GRAPHIC SCALE
1" = 80'

US BANK

SCOTTSDALE, AZ

DRAINAGE EXHIBIT

1600 N. Desert Drive Ste 210
Tempe, Arizona 85288
Phone: (480) 629-8830
www.bowman.com

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JOB #	051355
DATE	6/02/23
SCALE	1" = 60'
DRAWN	DLR
SHT 1	OF 1

CAD FILE NAME: P:\051355 – Northsight II Lot 6\051355-01-001 (ENG)\Engineering\Exhibits\051355 – Drainage Exhibit.dwg 06/08/2023

FIGURE 4

NOAA Atlas 14, Volume 1, Version 5
Location name: Scottsdale, Arizona, USA*
Latitude: 33.6206°, Longitude: -111.8923°
Elevation: m/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	0.193 (0.160-0.236)	0.252 (0.211-0.309)	0.340 (0.281-0.415)	0.407 (0.336-0.495)	0.498 (0.404-0.604)	0.568 (0.456-0.683)	0.640 (0.504-0.769)	0.711 (0.551-0.852)	0.808 (0.611-0.970)	0.882 (0.653-1.06)
10-min	0.293 (0.243-0.360)	0.383 (0.320-0.470)	0.517 (0.428-0.631)	0.620 (0.511-0.754)	0.758 (0.615-0.920)	0.864 (0.693-1.04)	0.974 (0.768-1.17)	1.08 (0.839-1.30)	1.23 (0.929-1.48)	1.34 (0.994-1.61)
15-min	0.364 (0.302-0.445)	0.475 (0.397-0.582)	0.641 (0.531-0.782)	0.768 (0.634-0.935)	0.940 (0.763-1.14)	1.07 (0.860-1.29)	1.21 (0.952-1.45)	1.34 (1.04-1.61)	1.53 (1.15-1.83)	1.66 (1.23-2.00)
30-min	0.490 (0.406-0.600)	0.640 (0.535-0.784)	0.863 (0.715-1.05)	1.03 (0.854-1.26)	1.27 (1.03-1.54)	1.44 (1.16-1.74)	1.63 (1.28-1.95)	1.81 (1.40-2.17)	2.05 (1.55-2.46)	2.24 (1.66-2.69)
60-min	0.606 (0.503-0.742)	0.792 (0.662-0.970)	1.07 (0.885-1.30)	1.28 (1.06-1.56)	1.57 (1.27-1.90)	1.79 (1.43-2.15)	2.01 (1.59-2.42)	2.24 (1.73-2.68)	2.54 (1.92-3.05)	2.77 (2.05-3.33)
2-hr	0.709 (0.596-0.847)	0.917 (0.775-1.10)	1.22 (1.02-1.45)	1.45 (1.21-1.73)	1.77 (1.46-2.10)	2.01 (1.63-2.37)	2.26 (1.80-2.65)	2.51 (1.97-2.95)	2.84 (2.18-3.34)	3.10 (2.33-3.66)
3-hr	0.786 (0.662-0.964)	1.01 (0.851-1.24)	1.32 (1.11-1.61)	1.56 (1.30-1.90)	1.90 (1.56-2.30)	2.17 (1.76-2.61)	2.46 (1.95-2.95)	2.75 (2.15-3.30)	3.16 (2.39-3.78)	3.48 (2.58-4.18)
6-hr	0.949 (0.814-1.13)	1.20 (1.03-1.43)	1.53 (1.30-1.81)	1.79 (1.51-2.11)	2.15 (1.79-2.52)	2.43 (1.99-2.84)	2.72 (2.20-3.17)	3.02 (2.40-3.53)	3.42 (2.65-3.99)	3.74 (2.82-4.37)
12-hr	1.06 (0.914-1.25)	1.34 (1.15-1.58)	1.69 (1.45-1.98)	1.96 (1.67-2.30)	2.33 (1.96-2.73)	2.62 (2.18-3.05)	2.91 (2.38-3.39)	3.21 (2.60-3.73)	3.60 (2.84-4.21)	3.91 (3.03-4.60)
24-hr	1.24 (1.09-1.43)	1.57 (1.39-1.82)	2.03 (1.78-2.34)	2.39 (2.09-2.76)	2.90 (2.51-3.33)	3.30 (2.83-3.78)	3.71 (3.16-4.26)	4.14 (3.49-4.75)	4.74 (3.93-5.45)	5.22 (4.26-6.02)
2-day	1.34 (1.17-1.54)	1.71 (1.49-1.97)	2.23 (1.94-2.57)	2.65 (2.30-3.04)	3.23 (2.78-3.71)	3.69 (3.15-4.24)	4.18 (3.53-4.80)	4.68 (3.93-5.40)	5.38 (4.44-6.22)	5.95 (4.84-6.89)
3-day	1.44 (1.26-1.65)	1.84 (1.61-2.11)	2.42 (2.12-2.77)	2.89 (2.52-3.30)	3.54 (3.07-4.05)	4.07 (3.50-4.65)	4.64 (3.96-5.30)	5.23 (4.42-6.00)	6.06 (5.05-6.97)	6.74 (5.54-7.78)
4-day	1.54 (1.36-1.76)	1.97 (1.74-2.25)	2.61 (2.29-2.96)	3.12 (2.74-3.55)	3.86 (3.36-4.38)	4.45 (3.86-5.06)	5.10 (4.38-5.80)	5.78 (4.91-6.60)	6.74 (5.65-7.71)	7.53 (6.24-8.66)
7-day	1.73 (1.52-1.99)	2.22 (1.95-2.54)	2.94 (2.57-3.37)	3.53 (3.08-4.03)	4.36 (3.78-4.98)	5.04 (4.34-5.76)	5.77 (4.92-6.59)	6.54 (5.53-7.51)	7.64 (6.37-8.79)	8.54 (7.03-9.87)
10-day	1.88 (1.65-2.15)	2.41 (2.12-2.75)	3.19 (2.80-3.64)	3.82 (3.34-4.34)	4.71 (4.09-5.35)	5.43 (4.68-6.16)	6.19 (5.30-7.05)	7.00 (5.94-7.99)	8.15 (6.82-9.32)	9.08 (7.50-10.4)
20-day	2.33 (2.05-2.65)	3.00 (2.64-3.41)	3.96 (3.49-4.50)	4.70 (4.12-5.33)	5.69 (4.98-6.46)	6.46 (5.62-7.34)	7.26 (6.28-8.26)	8.07 (6.93-9.20)	9.16 (7.79-10.5)	10.0 (8.44-11.5)
30-day	2.73 (2.41-3.10)	3.52 (3.11-3.99)	4.64 (4.09-5.26)	5.50 (4.84-6.22)	6.66 (5.83-7.54)	7.56 (6.58-8.55)	8.49 (7.34-9.59)	9.43 (8.11-10.7)	10.7 (9.12-12.2)	11.7 (9.87-13.3)
45-day	3.18 (2.82-3.61)	4.11 (3.64-4.65)	5.42 (4.79-6.12)	6.40 (5.64-7.23)	7.70 (6.76-8.70)	8.68 (7.60-9.82)	9.69 (8.42-11.0)	10.7 (9.25-12.2)	12.1 (10.3-13.8)	13.1 (11.1-15.0)
60-day	3.53 (3.14-3.99)	4.57 (4.06-5.15)	6.02 (5.34-6.78)	7.08 (6.26-7.98)	8.47 (7.46-9.54)	9.51 (8.34-10.7)	10.6 (9.21-11.9)	11.6 (10.1-13.1)	13.0 (11.2-14.7)	14.0 (12.0-16.0)

[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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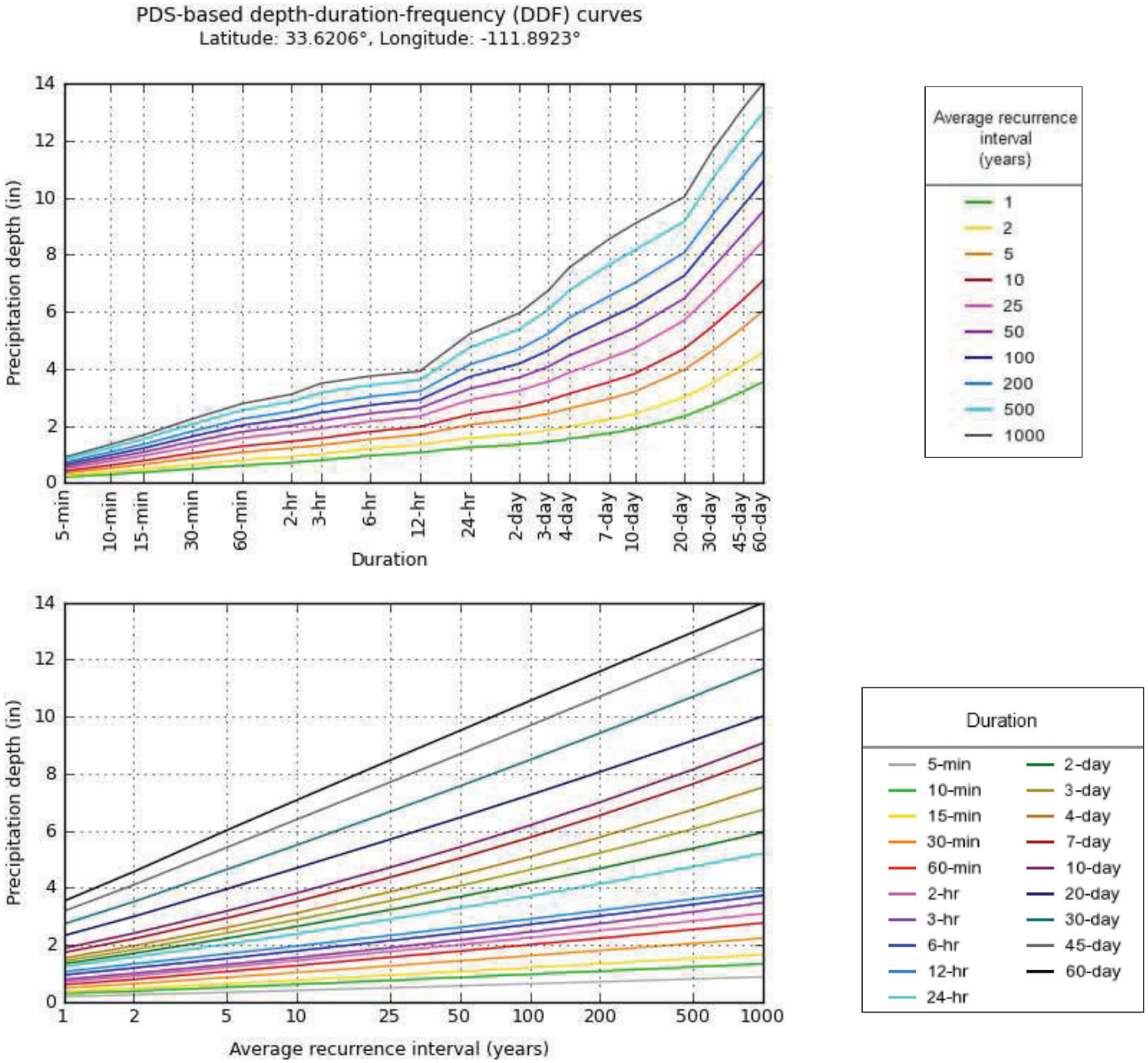
PF graphical

FIGURE 5



NOAA Atlas 14, Volume 1, Version 5

Created (GMT): Thu Mar 2 17:59:34 2023

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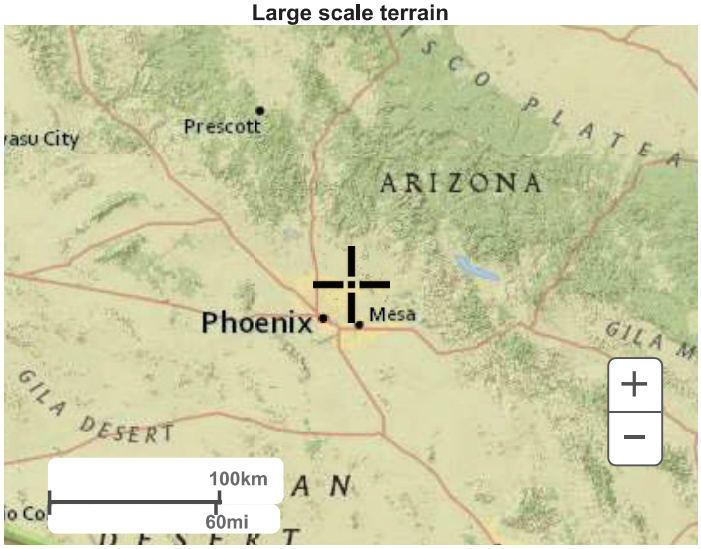
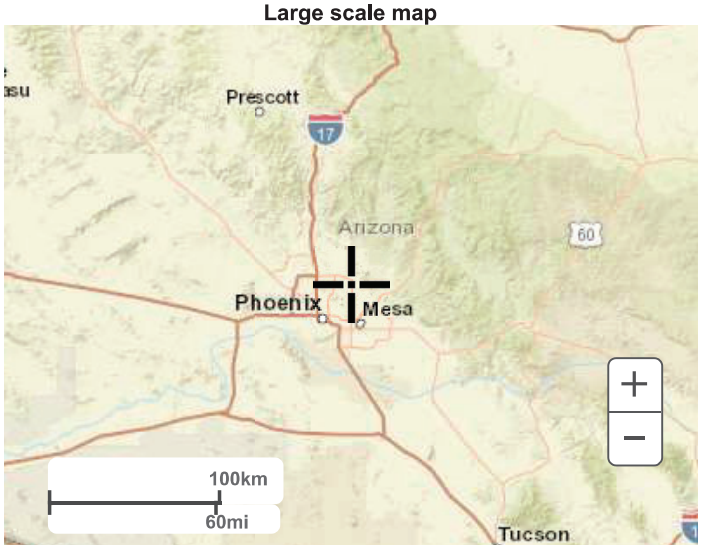
Maps & aerials

Small scale terrain

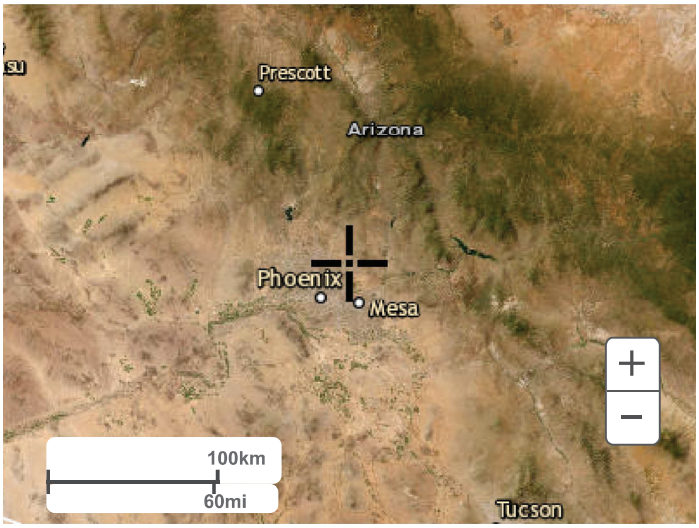
Large scale terrain



Large scale map



Large scale aerial



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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

Disclaimer

APPENDIX B

FIRST FLUSH AND DEWATERING CALCULATIONS

RETENTION WORKSHEET FOR 100-YR, 2-HR EVENT

Project: 051355-01-001
Description: US Bank
Prepared by: JR DATE: 6/8/2023

Basin A Summary

Extra Provided		Required Drywells
48 cf	**0.00 Ac-ft**	**1.0**

Volume Required:

Vr= 0.5/12 x A x C

D = 100yr, 2hr Rainfall, 0.50 in.
A = Area in Square Feet
C = Coefficient of Runoff

Sub Area Type	Area (Sq. Ft.)	Runoff Coefficient	Retention Required (cf)	Retention Required (ac-ft)
Commercial Area	33,057	0.95	1,309 cf	0.03 Ac-ft
Totals	33,057		1,309 cf	0.03 Ac-ft
		Total Retention Required	**1,309 cf**	**0.03 Ac-ft**

Volume Provided:

$V=L*\pi*r^2$	L (ft)	D (ft)	V (cf)	V (ac-ft)
	27	8	1,356	0.03
TOTALS	**27**		**1,356**	**0.03**
			TOTAL VOLUME PROVIDED	**1,357**

Dissipation Calculations for Surface Percolation

Retention Required (cf)	Derated Surface Percolation Rate (cf/hr/sf)	Basin Bottom Area (sf)	Surface Percolation in 36hrs (cf)	Volume to be Drained Through Drywells (cf)
1,309	0.00	0	0	1,309

Dissipation Calculations for Drywells

Volume to be drain Through Drywells (cf)	Drywell Percolation Rate (cf/36hr)	Number of Drywells Required
1,309	12,960	1.0

Time to Drain: 3.6 hrs

APPENDIX C

JMA DRAINAGE REPORT

JMA ENGINEERING CORPORATION

531 East Bethany Home Road, Garden Suite
Phoenix, Arizona 85012
jma@jmaengineering.com
FAX 602.248.0976
VOICE 602.248.0286

PRELIMINARY DRAINAGE REPORT

PROPOSED RETAIL AND RESTAURANT DEVELOPMENT Near NWC of Raintree Drive & Loop 101 Scottsdale, Arizona

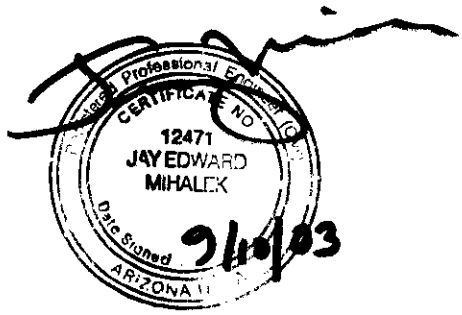
September 10, 2003

67-DR-2003

9-8-03

Prepared For:
City of Scottsdale
Development Services Department

Prepared By:
JMA Engineering Corporation
531 East Bethany Home Road, Garden Suite
Phoenix, Arizona 85012
(602) 248-0286
Contact: Jake Earley, Project Engineer



JMA 0312.1
September 10, 2003

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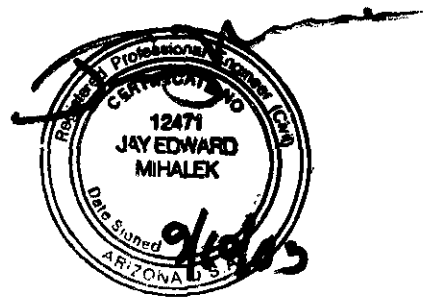

PROJECT LOCATION AND DESCRIPTION

This project consists of a new single building retail and restaurant development with associated drives and parking located on 1.11 gross acres located adjacent to the west edge of the southbound frontage road for the Loop 101 Freeway (Pima Road) and approximately 700 feet north of Raintree Drive, see enclosed Exhibit A. The site is described as a portion of Parcel 6 of Map of Dedication for Northsight II recorded Book 315, Page 15, Maricopa County Records. Presently, the site is undeveloped desert and is bordered by the freeway and other pending commercial developments.

The west 20 feet of the site is dedicated as right-of-way for existing 87th Street, a private street. The south 20 feet of the site is dedicated as right-of-way for an additional private street connecting to the southbound frontage road. Undeveloped desert borders to the north.

FLOOD PLAIN CLASSIFICATION

The site is located within Zone X as shown on FEMA Flood Insurance Rate Map (Firm) No. 04013C, Panel 1685, Suffix G, dated 7/19/01. Zone X is defined as areas outside the 500-year floodplain limits.

EXISTING TOPOGRAPHY AND HYDROLOGY

The site is undeveloped natural desert without well-defined drainage features. The site slopes from north to south at approximately one-percent, see enclosed Exhibit B.

PROPOSED ONSITE STORMWATER MANAGEMENT

STORMWATER RETENTION

A master drainage report for the 330-acre Northsight region was prepared by Gilbertson and Associates, Inc. dated January 17, 2002 and revised January 28, 2002. "Northsight" is a masterplanned commercial development bounded by Thunderbird Road to the south, Frank Lloyd Wright Boulevard to the north, the Pima Freeway to the east, and a line west of Northsight Boulevard. This latest issue amends the original master drainage report prepared in 1986. The amended report was approved by the Stormwater Management Division, City of Scottsdale, on July 23, 2002. The subject development is completely within the report's study area and utilizes the amended report as its basis of drainage design.

The site is divided into two drainage areas in the report; "JPRT" on the west two-thirds and "IPRT" on the east third. There are unusual retention requirements for the area due to the development sequence of the area with the construction of the new Pima Freeway to the east. The result is that some portions of the Northsight region's properties already have retention provided by a regional basin.

The east area, named IPRT, can discharge into the proposed 87th Street stormdrain system without any stormwater retention. The existing 48-inch 87th Street stormdrain system will convey approximately 104-cfs which includes the 70-cfs discharge from Sam's Club plus the fully developed IPRT area runoff. This site and the remainder out-parcels east of 87th Street have this direct discharge privilege and do not require stormwater retention. The waiver process will be required because of the pre-versus post approach and the IPRT direct discharge.

ONSITE HYDROLOGY

Onsite drainage is divided into two tributary areas labeled A and B on the enclosed Drainage Exhibit D. Stormwater runoff in tributary area A is divided into two job areas A and A_2. Area A is the new parking area located west of the proposed building. This area will draw through the proposed driveway and into 87th Street. Area A2 will collect runoff from the building and direct flows into a proposed 18-inch stormdrain connecting to the existing 98-inch stormdrain in 87th Street.

Tributary Area B will drain the balance of the site through the proposed driveway and into the private drive along the south side of the project.

FINISH FLOOR

The finish floor elevation is located 3.5-feet above the existing adjacent low top of curb and 0.9 feet above the existing adjacent high top of curb.

OFFSITE DRAINAGE

Offsite drainage is eliminated from the existing adjacent private streets and their associated stormdrain piping system. This project will be constructed in accordance with the Master Drainage Report for Northsight Commercial Development prepared be Gilbertson Associates, Inc. and dated January 17, 2002 and revised January 28, 2002. This site's stormdrain management requires these improvements.

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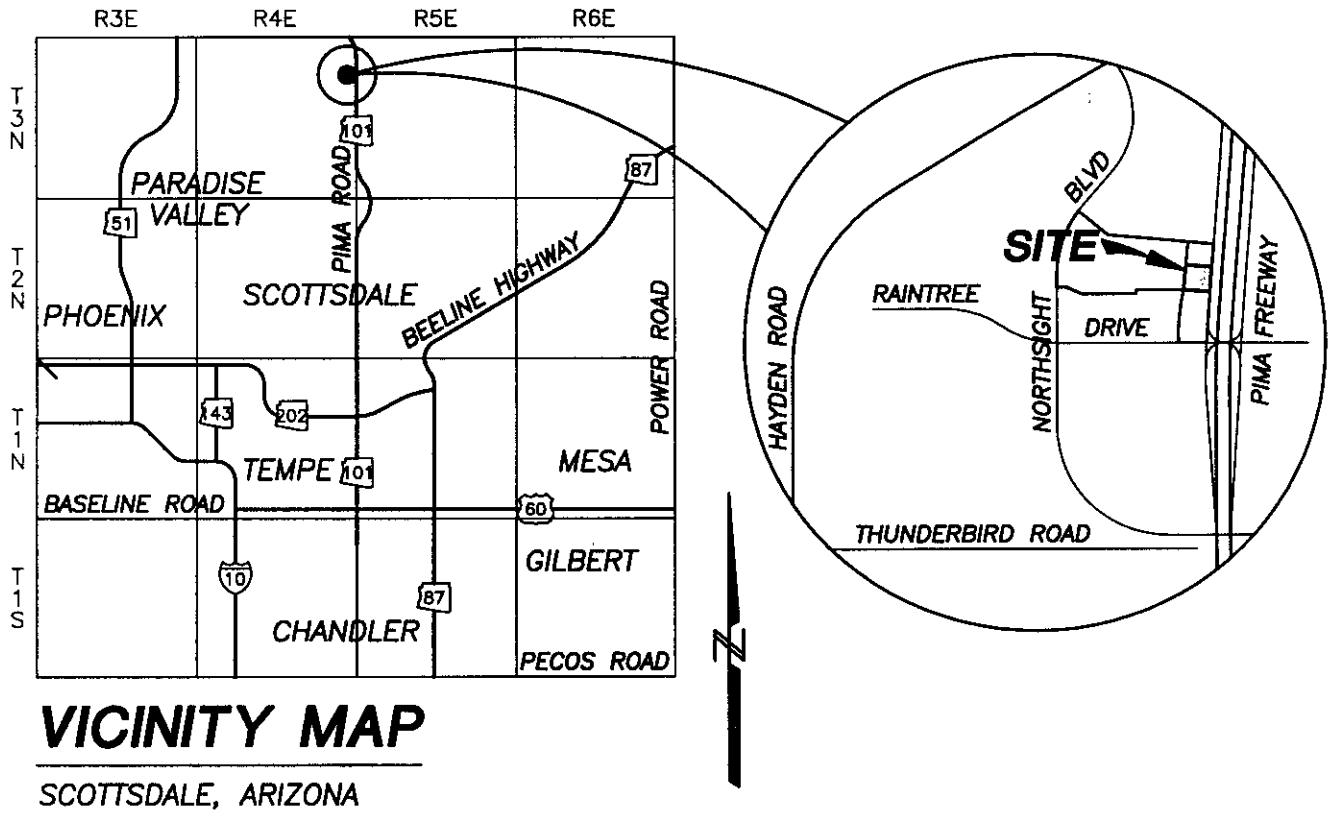

VICINITY MAP

SCOTTSDALE, ARIZONA

SCOTTSDALE, ARIZONA

JMA ENGINEERING CORPORATION
531 E. Bethany Home Road, Garden Suite
Phoenix, Arizona 85012

EXHIBIT A
VICINITY MAP
FAT BURGER

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9/03

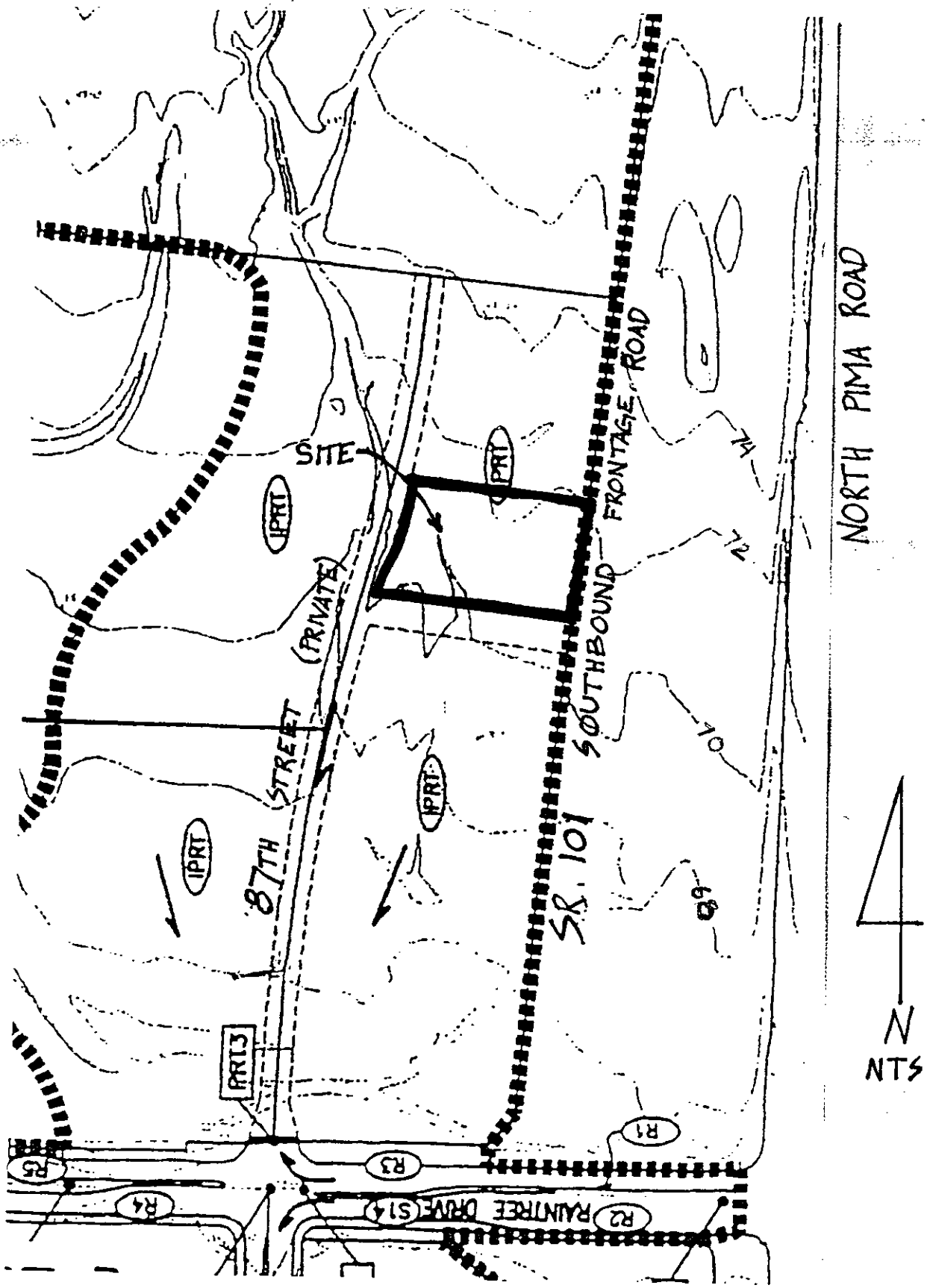
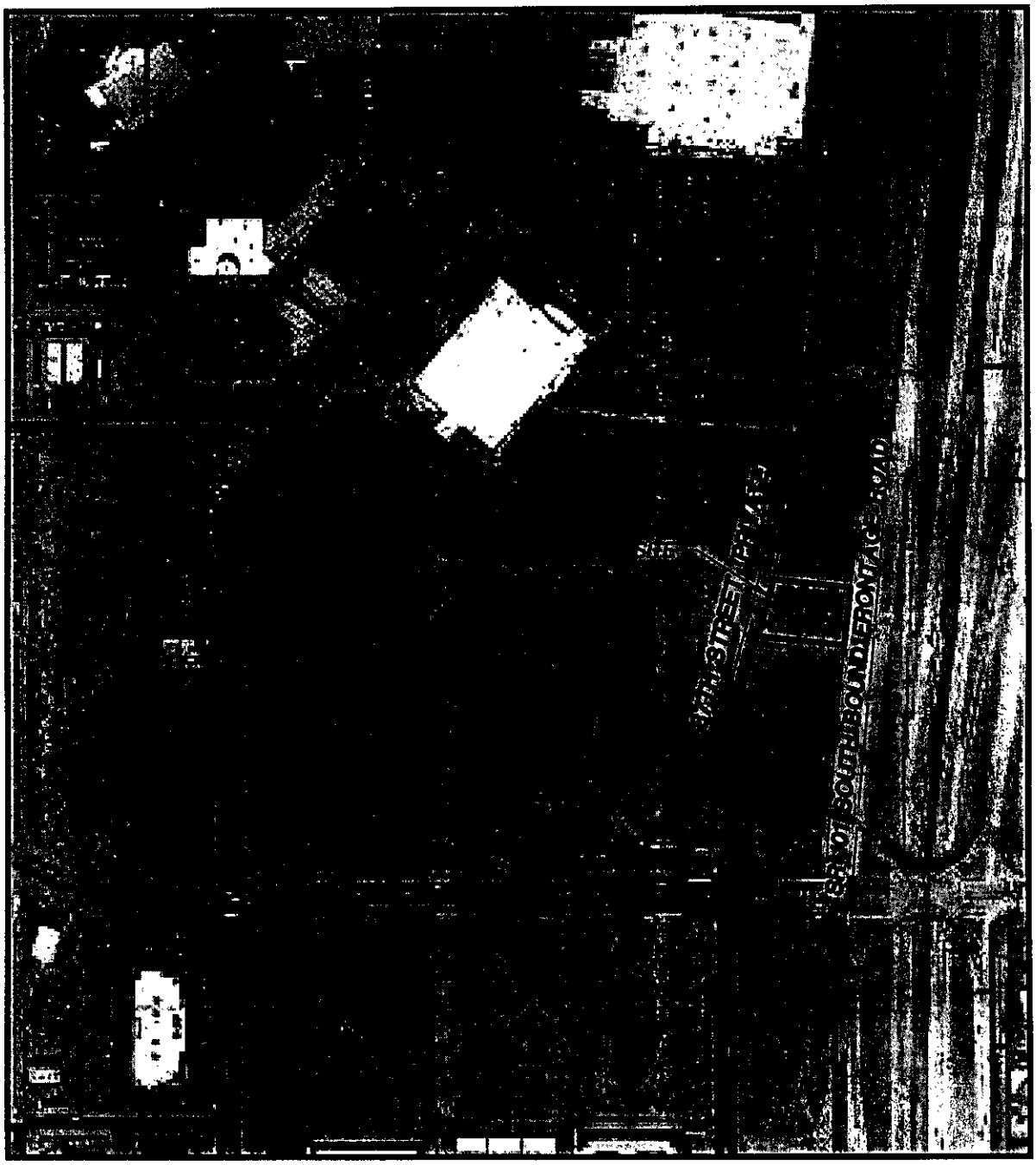

NORTH PIMA ROAD
SITE
(PRIVATE)
87TH STREET
SR. 101 SOUTHBOUND FRONTAGE ROAD
PRT
PRT13
R1
R2
R3
R4
R5
S1
RAINTREE DRIVE
N
NTS

EXHIBIT B



SCOTTSDALE, ARIZONA

JMA ENGINEERING CORPORATION
531 E. Bethany Home Road, Garden Suite
Phoenix, Arizona 85012

EXHIBIT C
AERIAL PHOTO
FAT BURGER

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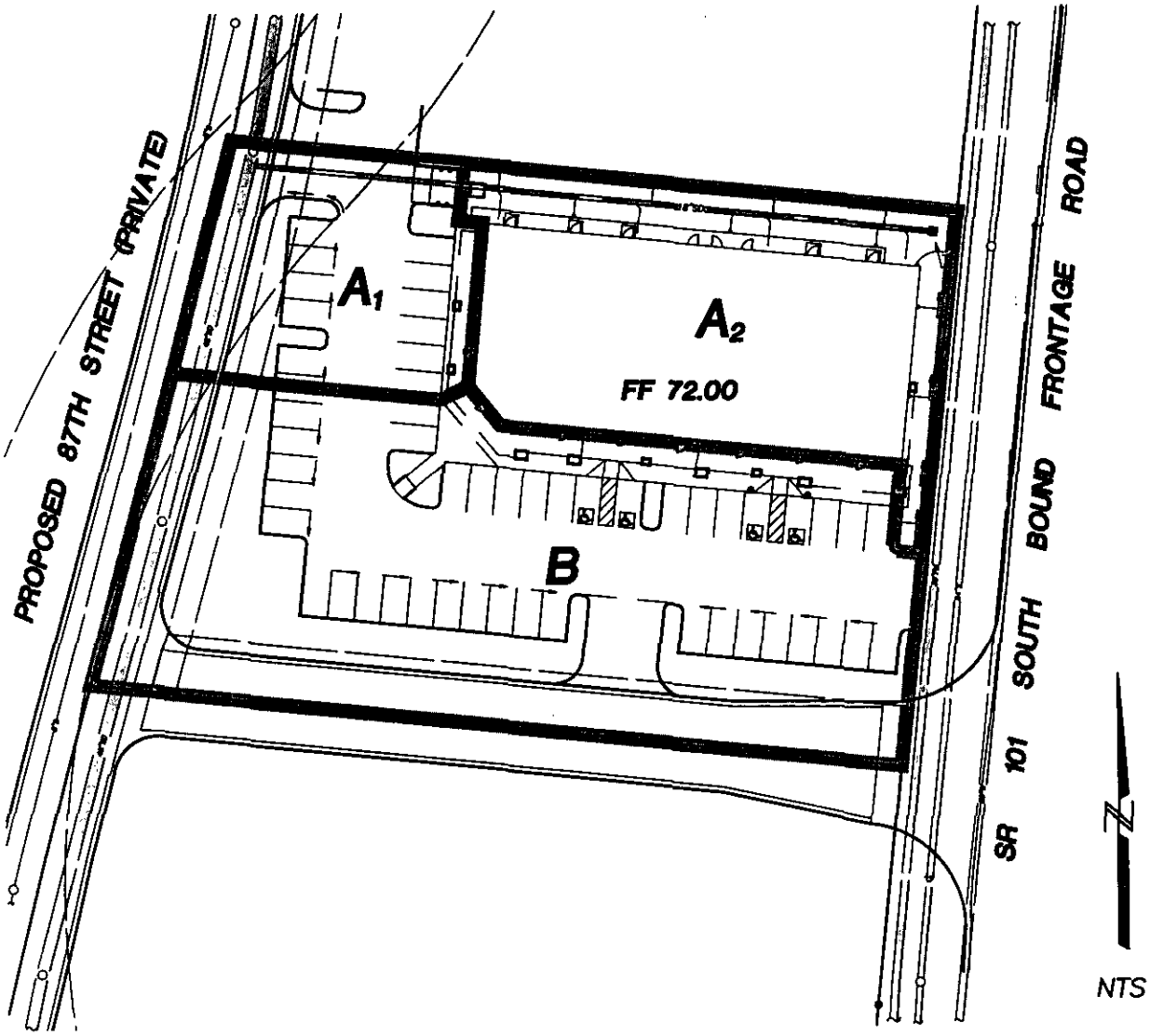


LEGEND

DRAINAGE AREA BOUNDARY

SCOTTSDALE, ARIZONA

JMA ENGINEERING CORPORATION
531 E. Bethany Home Road, Garden Suite
Phoenix, Arizona 85012

EXHIBIT D
DRAINAGE EXHIBIT
FAT BURGER

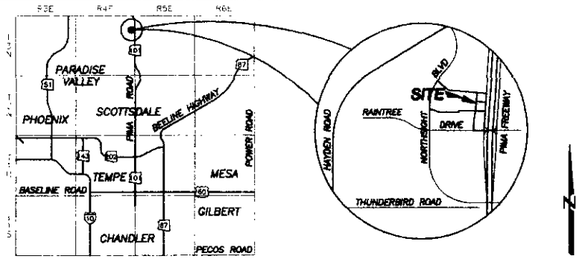
0312x_de.dwg

9/03

APPENDIX D

JMA CIVIL IMPROVEMENT PLANS

GRADING, DRAINAGE AND UTILITY PLANS
FOR
NORTHSIGHT PARCEL B
SCOTTSDALE, ARIZONA



VICINITY MAP
SCOTTSDALE, ARIZONA

GENERAL NOTES

1. ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE (COS) SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE LATTER SHALL GOVERN.
2. THE ENGINEERING DESIGNS ON THESE PLANS ARE ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF AN ENCROACHMENT PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS SHALL BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
4. A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE RIGHTS-OF-WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO STARTING OF CONSTRUCTION (TELEPHONE 480-312-5750).
5. WHENEVER EXCAVATION IS TO BE DONE, CALL THE "BLUE STAKE CENTER," 602-263- 1100, TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT. CALL "COLLECT" IF NECESSARY.
6. ENCROACHMENT PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. AN ENCROACHMENT PERMIT WILL BE ISSUED BY THE CITY UPON RECEIPT OF PAYMENT OF A BASE FEE PLUS A FEE FOR INSPECTION SERVICES TO BE PROVIDED BY THE CITY. COPIES OF ALL PERMITS SHALL BE RETAINED ON SITE AND SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE WORK STOPPAGE UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING WHICH IS NOT IN THE PUBLIC RIGHTS-OF-WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO CHAPTER 70, "EXCAVATION AND GRADING," OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE PREPARED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE UNIFORM BUILDING CODE.
8. SIGNS REQUIRE SEPARATE APPROVALS AND PERMITS.
9. PRIOR TO THE START OF GRADING, A DUST CONTROL PERMIT MUST BE OBTAINED FROM MARICOPA COUNTY DIVISION OF AIR POLLUTION CONTROL (CALL 480-507-6727).
10. STORAGE BASIN VOLUME SHALL BE CERTIFIED BY THE DESIGN ENGINEER. THE VOLUME PROVIDED SHALL MEET OR EXCEED THE REQUIRED VOLUME PER THE APPROVED PLANS AND CITY ORDINANCE.
12. DRAINAGE STRUCTURES AND FACILITIES ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER.
13. ONSITE SEWER AND WATER UTILITIES ARE PRIVATE AND ARE TO BE CONSTRUCTED PER UNIFORM PLUMBING CODE (UPC). MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
14. UNDERGROUND STORMWATER STORAGE FACILITIES ARE PRIVATE. OWNER IS RESPONSIBLE FOR OBTAINING ALL REQUIRED GOVERNMENTAL AGENCY PERMITS FOR UNDERGROUND STORAGE FACILITIES CONSTRUCTION AND OPERATION. MAINTENANCE OF UNDERGROUND STORMWATER STORAGE FACILITIES IS THE IS THE RESPONSIBILITY OF THE OWNER IN PERPETUITY
15. "IN ACCORDANCE WITH AAC R18-4-119, ALL MATERIALS ADDED AFTER JANUARY 1, 1993 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION STANDARDS 60 AND 61."

NOTE
THE ENGINEER OF RECORD ON THESE PLANS HAS RECEIVED A COPY OF THE APPROVED STIPULATIONS FOR THIS PROJECT AND HAS DESIGNED THESE PLANS IN CONFORMANCE WITH THE APPROVED STIPULATIONS.

UTILITY NOTE
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. JMA MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. JMA FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY DO CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. JMA HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

NO CONFLICT SIGNATURE BLOCK

UTILITY	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER	DATE RECEIVED
IRRIGATION	SRP	BOB MAURER	(602)236-2962	N/A
WATER	CITY OF SCOTTSDALE			
SANITARY SEWER	CITY OF SCOTTSDALE			
ELECTRIC	APS	CHRISTINE WIESTLING	(602)493-4473	2/24/04
TELEPHONE	QWEST	LINDA COCKRELL	(602)630-3710	4/05/04
NATURAL GAS	SOUTHWEST GAS	MARTIN MARCH	(480)768-8600	2/27/04
CABLE TV	COX COMMUNICATIONS	ROB RUSSELL	(623)322-7215	3/12/04
NATURAL GAS	EL PASO GAS	RON BROWN	(602)438-4221	2/18/04
TELEPHONE	AT&T	JOHNNY G. GONZALES	(480)827-6048	2/18/04

ENGINEER'S CERTIFICATION:

I, JAY MIHALEK, BEING THE PERSON RESPONSIBLE FOR DESIGNING THE FACILITIES NECESSARY TO SERVE THIS DEVELOPMENT, HEREBY CERTIFY THAT ALL THE UTILITY COMPANIES LISTED ABOVE, HAVE REVIEWED THIS PROJECT PROPOSAL AND ALL CONFLICTS HAVE BEEN RESOLVED AT THIS POINT. "NO CONFLICT" FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS SUBMITTAL. I ALSO CERTIFY THAT ALL ONSITE TRANSFORMERS, CABLE BOXES AND ANY OTHER PUBLIC/PRIVATE UTILITY APPURTENANCES ARE PLACED SUCH THAT THEY DO NOT NEGATIVELY IMPACT THE USE OR INTENDED USE OF ANY DEDICATED EASEMENTS OR FACILITIES DEVELOPED WITH THIS PROJECT INCLUDING BUT NOT LIMITED TO STORMWATER STORAGE BASINS, SIGHT DISTANCE EASEMENTS AND NAOS OR OTHER OPEN SPACE EASEMENTS.

SIGNATURE DATE

FLOOD INSURANCE RATE MAP INFORMATION

COMMUNITY NUMBER	PANEL DATE	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
045012	1685 7/19/01	E	7/19/01	X	N/A

ENGINEER'S CERTIFICATION:
THE LOWEST FINISH FLOOR ELEVATION(S) AND OR FLOODPROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE CHAPTER 37 -- FLOODWAYS & FLOODPLAINS ORDINANCE.

DRAINAGE STATEMENT
A MASTER DRAINAGE REPORT FOR THE 330-ACRE NORTHSIGHT REGION WAS PREPARED BY GILBERTSON AND ASSOCIATES, INC. DATED JANUARY 17, 2002 AND REVISED JANUARY 28, 2002. "NORTHSIGHT" IS A MASTERPLANNED COMMERCIAL DEVELOPMENT BOUNDED BY THUNDERBIRD ROAD TO THE SOUTH, FRANK LLOYD WRIGHT BOULEVARD TO THE NORTH, THE PIMA FREEWAY TO THE EAST, AND A LINE WEST OF NORTHSIGHT BOULEVARD. THIS LATEST ISSUE AMENDS THE ORIGINAL MASTER DRAINAGE REPORT PREPARED IN 1986. THE AMENDED REPORT WAS APPROVED BY THE STORMWATER MANAGEMENT DIVISION, CITY OF SCOTTSDALE, ON JULY 23, 2002. THE SUBJECT DEVELOPMENT IS COMPLETELY WITHIN THE REPORT'S STUDY AREA AND UTILIZES THE AMENDED REPORT AS ITS BASIS OF DRAINAGE DESIGN.

THE DEVELOPMENT IS DIVIDED INTO TWO DRAINAGE AREAS IN THE REPORT; "IPRT" ON THE WEST TWO-THIRDS AND "IPRT" ON THE EAST THIRD. THERE ARE UNUSUAL RETENTION REQUIREMENTS FOR THE DEVELOPMENT DUE TO THE DEVELOPMENT SEQUENCE OF THE AREA WITH THE CONSTRUCTION OF THE NEW PIMA FREEWAY TO THE EAST. THE RESULT IS THAT THE EAST PORTION OF THE NORTHSIGHT REGION'S PROPERTIES ALREADY HAS RETENTION PROVIDED BY A REGIONAL BASIN.

THE EAST AREA, NAMED IPRT, CAN DISCHARGE INTO THE PROPOSED 87TH STREET STORMDRAIN SYSTEM WITHOUT ANY STORMWATER RETENTION. THE EXISTING 48--INCH 87TH STREET STORMDRAIN SYSTEM WILL CONVEY APPROXIMATELY 104--CFS WHICH INCLUDES THE 70--CFS DISCHARGE FROM SAM'S CLUB PLUS THE FULLY DEVELOPED IPRT AREA RUNOFF. THIS SITE AND THE REMAINDER OUT--PARCELS EAST OF 87TH STREET HAVE THIS DIRECT DISCHARGE PRIVILEGE AND DO NOT REQUIRE STORMWATER RETENTION. THE WAIVER PROCESS WILL BE REQUIRED BECAUSE OF THE PRE--VERSUS POST APPROACH AND THE IPRT DIRECT DISCHARGE.

CITY OF SCOTTSDALE
REVIEW AND RECOMMENDED APPROVAL BY:

PAVING	NA	TRAFFIC	NA
G & D	Joseph D. Morris for S.M. 8/12/04	PLANNING	8/12/04
W & S	Joseph D. Morris for S.M. 8/12/04	FIRE	8-12-04
RETAINING WALLS	NA		

Joseph D. Morris — 8/12/04
ENGINEERING COORDINATION MANAGER (OR DESIGNEE) DATE

ARCHITECT
ANDREWS DESIGN GROUP INC.
1425 W. SOUTHERN AVE. STE. 10-A
TEMPE, ARIZONA 85282
PHONE: (480) 894-3344
FAX: (480) 894-6444
CONTACT: ERIC WELZIEN

ENGINEER
JMA ENGINEERING CORPORATION
531 EAST BETHANY HOME ROAD, GARDEN SUITE
PHOENIX, ARIZONA 85012
PHONE: (602) 248-0286
CONTACT: JAKE EARLEY, EIT

PUBLIC QUANTITIES

WATER METER	1 EA
WATER VALVES	2 EA
FIRE HYDRANT	1 EA
5"x6" TSVB&C	1 EA

ZONING
C-2

OWNER
J. WALTERS CONSTRUCTION CO., INC
2842 ROE LANE SUITE 200
KANSAS CITY, KANSAS 66103
PHONE: (913) 262-6685
FAX: (913) 262-1633
CONTACT: JOE WALTERS

SHEET INDEX

EARTHWORK ESTIMATE

CUT	678 CY
FILL	61 CY

NOTE: QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY. CONTRACTOR TO DETERMINE HIS OWN QUANTITIES.

BENCHMARK
CITY OF SCOTTSDALE BRASS CAP FLUSH AT INTERSECTION OF FRANK LLOYD WRIGHT BOULEVARD AND HAYDEN ROAD. ELEVATION 1510.86 (NAVD '88 DATUM)

ADD 1400 TO ALL ELEVATIONS TO EQUAL CITY DATUM.

LEGAL DESCRIPTION (PARCEL B)
THAT PORTION OF PARCEL 6, ACCORDING TO THE MAP OF DEDICATION FOR NORTHSIGHT II, RECORDED IN BOOK 315 OF MAPS, PAGE 15 AND THE AFFIDAVIT OF CORRECTION RECORDED IN DOCUMENT NUMBER 88-312697, RECORDS OF MARICOPA COUNTY, ARIZONA; AND GLO LOT 17, SECTION 12, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 12;

THENCE NORTH 89° 57' 13" WEST ALONG SAID NORTH LINE, A DISTANCE OF 99.22 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE HIGHWAY 117 AS RECORDED I DOCUMENT NUMBER 98-0656667, RECORDS OF MARICOPA COUNTY, ARIZONA, SAID POINT LYING ON A CURVE, THE RADIUS OF WHICH BEARS NORTH 87° 00' 27" WEST A DISTANCE OF 11258.53 FEET;

THENCE SOUTHERLY ALONG SAID WEST LINE AND THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 00° 26' 46", A DISTANCE OF 87.67 FEET TO A POINT OF NON-TANGENCY;

THENCE SOUTH 06° 06' 51" WEST ALONG SAID WEST LINE, A DISTANCE OF 1693.00 FEET TO THE TRUE POINT OF BEGINNING;

THENCE CONTINUING SOUTH 06° 06' 51" WEST ALONG SAID WEST LINE, A DISTANCE OF 187.25 FEET;

THENCE NORTH 83° 53' 09" WEST LEAVING SAID WEST LINE, A DISTANCE OF 273.54 FEET;

THENCE NORTH 15° 24' 50" EAST A DISTANCE OF 118.54 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 1422.50 FEET;

THENCE NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 02° 51' 28", A DISTANCE OF 70.95 FEET;

THENCE SOUTH 83° 53' 09" EAST LEAVING SAID CURVE A DISTANCE OF 244.67 FEET TO THE TRUE POINT OF BEGINNING;

EXCEPT ALL COAL, OIL, GAS, AND OTHER MINERAL DEPOSITS AS RESERVED IN THE PATENT; AND EXCEPT ALL URANIUM, THORIUM OR OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS, WHETHER OR NOT OF COMMERCIAL VALUE, PURSUANT TO THE PROVISIONS OF THE ACT OF AUGUST 1, 1946 (60 STAT. 755) AS SET FORTH IN THE PATENT TO SAID LAND.

SAID PARCEL CONTAINS 48,391 SQUARE FEET OR 1.1109 ACRES MORE LESS.

COVER SHEET
NORTHSIGHT PARCEL B
NEAR NWC RAINTREE DRIVE & STATE ROUTE 101
SCOTTSDALE, ARIZONA

THESE DOCUMENTS ARE NOT FOR CONSTRUCTION UNLESS REVIEWED AND APPROVED BY ALL GOVERNING AGENCIES.

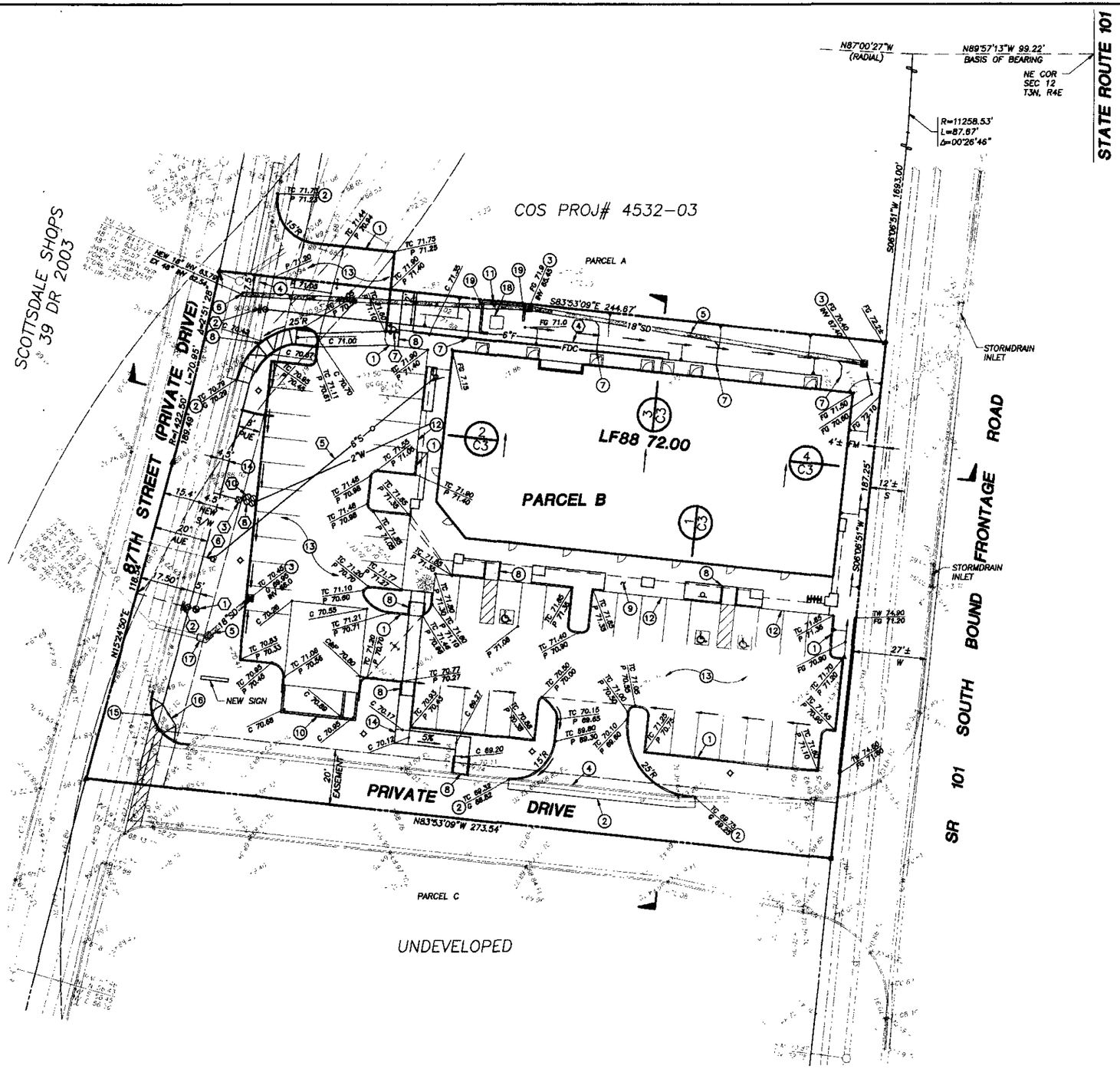
TWO WORKING DAYS BEFORE YOU DIG CALL FOR THE BLUE STAKES 602-263-1100 BLUE STAKE CENTER

JMA ENGINEERING CORPORATION
531 E. Bethany Home Road, Garden Suite
Phoenix, Arizona 85012
Voice 602.248.0286
Fax 602.248.0976

DESIGN	JE
CAD	WC
Checked	JM
Date	01/04
Job No.	0312.1
Sheet	C1 of 3

Registered Professional Engineer — 12471 — JAY EDWARD MIHALEK — Arizona U.S.A.

COS• 1250-03-2 DRB• 67-DR-2003 NATIVE PLANT •57-NP-2004 NORTHSIGHT PARCEL B JMA 0312



CONSTRUCTION KEY NOTES - GRADING AND DRAINAGE

1. NEW EXTRUDED CURB PER DETAIL , SHEET C3.
2. SAWCUT NEAT LINE AND MATCH EXISTING PAVEMENT.
3. NEW CATCH BASIN PER MAG STANDARD DETAIL 537.
4. SAWCUT AND REMOVE EXISTING CURB.
5. NEW CORRUGATED HDPE STORMDRAIN, SIZE PER PLAN.
6. NEW STORMDRAIN LATERAL PIPE CONNECTION PER MAG STANDARD DETAIL 524.
7. NEW ROOF DRAIN CONNECTION TO STORMDRAIN.
8. NEW ADA ACCESSIBLE SIDEWALK RAMP PER MAG STANDARD DETAIL 232.
9. NEW CONCRETE SIDEWALK PER ARCHITECTURAL PLANS, DETAIL 8 AND 16, SHEET SP-2.
10. NEW REFUSE ENCLOSURE PER CITY OF SCOTTSDALE STANDARD DETAIL #2147-2.
11. NEW SCREEN WALL PER ARCHITECTURAL PLANS, DETAIL 14, SHEET SP-2.
12. NEW SIDEWALK TURNDOWN PER DETAIL 6, SHEET C3.
13. NEW AC PAVEMENT PER DETAIL 7, SHEET C3
14. NEW 4.5-FOOT SIDEWALK PER MAG STANDARD DETIAL 230.
15. CONTRACTOR TO GRIND EXISTING CURB FLUSH WITH CONCRETE APRON AS REQUIRED FOR RAMP CONSTRUCTION.
16. NEW SIDEWALK RAMP PER MAG STANDARD DETAIL 231.
17. LOCATE AND VERIFY STUBOUT. CONNECT WITH NEW PIPE COLLAR PER MAG STANDARD DETAIL 505.
18. PROPOSED TRANSFORMER.
19. CONTRACTOR TO PROVIDE BRIDGE IN FOOTING OVER PROPOSED 18-INCH STORMDRAIN.

CONSTRUCTION KEY NOTES - UTILITIES

1. NEW FIRE HYDRANT ASSEMBLY PER MAG STANDARD DETAIL 360.
2. NEW 8-INCH x 6-INCH TSVB&C PER MAG STANDARD DETAIL 340 AND 391 "C".
3. NEW 2-INCH DOMESTIC WATER LINE WITH 36-INCH MINIMUM COVER. CONSTRUCT FROM MAIN TO METER PER CITY OF SCOTTSDALE STANDARD DETAIL 2330. CONSTRUCT PER UPC BEYOND METER. SIZE METER PER BUILDING PLANS. SEE PLUMBING PLANS FOR CONTINUATION INTO BUILDING.
4. NEW 6-INCH DIP CL-350 FIRE LINE (MINIMUM 3-FOOT COVER). REFER TO FIRE SPRINKLER PLANS FOR CONTINUATION.
5. NEW 6-INCH SDR 35 PVC SEWER LINE. PROVIDE CLEANOUTS AND SLOPE PER UPC. SEE PLUMBING PLANS FOR CONTINUATION.
6. CONNECT TO EXISTING SEWER STUB. CONTRACTOR TO VERIFY INVERT, LOCATION AND SIZE PRIOR TO CONSTRUCTION.
7. REMOTE FDC - 2½-INCH x 2½-INCH x 4-INCH NST WITH CITY OF SCOTTSDALE DETAIL 2363, SEE DETAIL 8, SHEET C3.
8. NEW 2-INCH REDUCED PERSSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY PER CITY OF SCOTTSDALE STANDARD DETAIL 2354.
9. NEW BEND
10. NEW 1-INCH LANDSCAPE REDUCED PERSSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY PER CITY OF SCOTTSDALE STANDARD DETAIL 2354.

LEGEND

	CENTERLINE	◎	BRASS CAP FLUSH
	RIGHT-OF-WAY		EXISTING CONCRETE
	PROPERTY LINE	○	EXISTING MANHOLE
	EASEMENT	⊕	EXISTING WATER VALVE
	EXISTING CURB AND GUTTER	▽	EXISTING SIGN
	EXISTING PAVEMENT		EXISTING MESQUITE
	EXISTING STORM DRAIN		EXISTING TREE
-S-	EXISTING SEWER		EXISTING PALO VERDE
-FM-	EXISTING FORCE MAIN		PROPOSED NEW CURB
-W-	EXISTING WATER	AUE	ACCESS AND UTILITY EASEMENT

SCALE 1"=20'
20' 10' 0 20' 40'

THESE DOCUMENTS ARE NOT FOR CONSTRUCTION UNLESS REVIEWED AND APPROVED BY ALL GOVERNING AGENCIES.

TWO WORKING DAYS BEFORE YOU DIG CALL FOR THE BLUE STAKES
602-263-1100
BLUE STAKE CENTER

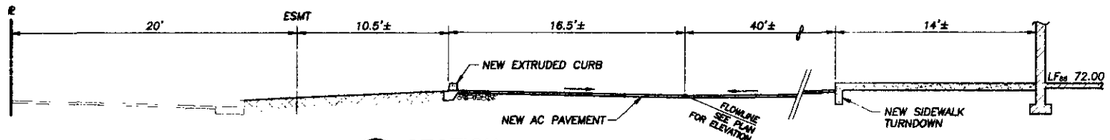
GRADING, DRAINAGE, WATER, AND SEWER PLAN
NORTHSIGHT PARCEL B
NEAR NWC RAINTREE DRIVE & STATE ROUTE 101
SCOTTSDALE, ARIZONA

JMA ENGINEERING CORPORATION
531 E. Bethany Home Road, Garden Suite
Phoenix, Arizona 85012
Voice 602.248.0286
Fax 602.248.0976

DESIGN	JE
CAD	WC
Checked	JM
Date	01/04
Job No.	0312.1
Sheet	C2 of 3

CONTRACTOR TO GRIND EXISTING CURB FLUSH WITH CONCRETE APRON AS REQUIRED FOR RAMP CONSTRUCTION.

JMA 0312 NORTHSIGHT PARCEL B DRB# 67-DR-2003 NATIVE PLANT #57-NP-2004 COS# 1250-03-2



1 SECTION
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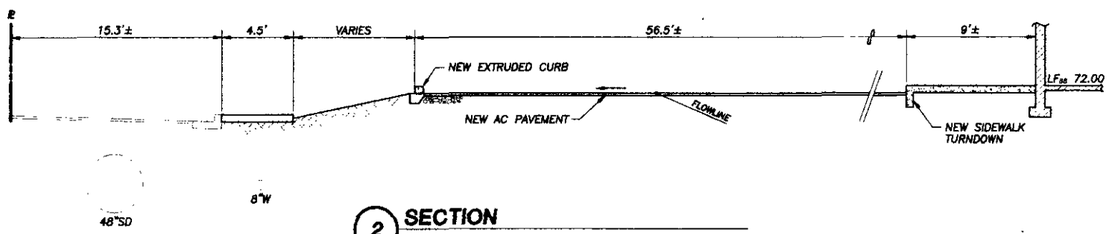

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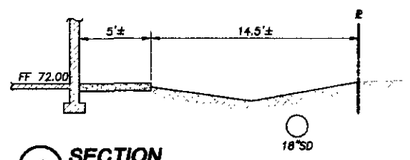

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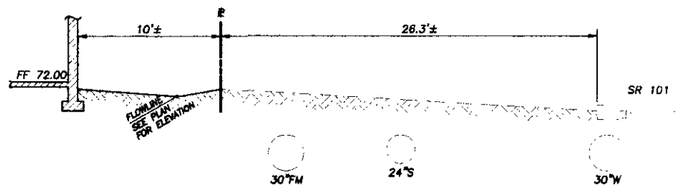
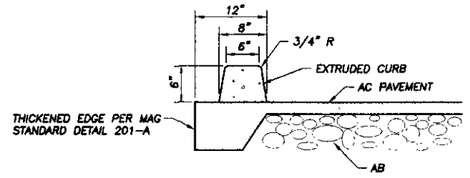
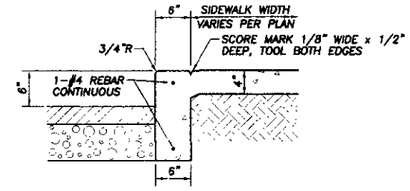


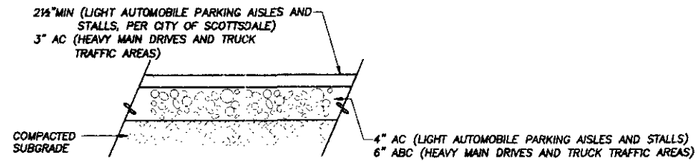
4 SECTION
SCALE: NTS



5 EXTRUDED CURB DETAIL
SCALE: NTS



6 SIDEWALK TURNDOWN DETAIL
SCALE: NTS



7 TYPICAL PAVEMENT SECTION
SCALE: NTS

NOTE: PAVEMENT RECOMMENDATIONS PER GEOTECHNICAL REPORT PREPARED BY ACURA ENGINEERING, PROJECT NO A04-0006G, DATED MARCH 8, 2004.

FIRE LINE NOTES:

#1. REMOTE FDC - 2½" x 2½" x 4" NST WITH COS STANDARD DETAIL 2363. FIRE LINE WITH 3 FOOT MINIMUM OF COVER TO TOP OF PIPE.

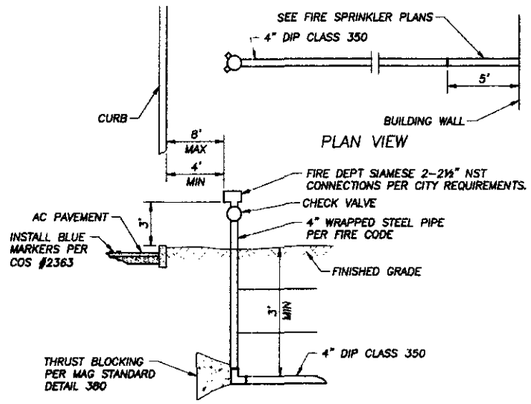
2. PROVIDE AN APPROVED VERTICAL BACKFLOW ASSEMBLY IN THE FIRE SPRINKLER RISER.

3. THE FIRE SPRINKLER RISER SHALL BE NO GREATER THAN 3'-0" INTO THE BUILDING.

4. NO TREES, BUSHES, OR WALLS WITHIN 5.0' RADIUS OF FDC.

5. PROVIDE BUILDING IDENTIFICATION ON EACH REMOTE FIRE DEPARTMENT CONNECTION.

#NOTE: IF FIRE SPRINKLER DESIGN INDICATES DEMAND OF 1000 GPM OR MORE. REMOTE FDC LINE MAY BE INCREASED TO BE 6" DIAMETER WITH A THREE WAY 2½" FDC HOSE CONNECTION.



8 FIRE DEPT SIAMESE CONNECTION
SCALE: NTS

DETAIL AND SECTIONS
NORTHSIGHT PARCEL B
NEAR NWC RAINTREE DRIVE & STATE ROUTE 101
SCOTTSDALE, ARIZONA

THESE DOCUMENTS ARE NOT FOR CONSTRUCTION UNLESS REVIEWED AND APPROVED BY ALL GOVERNING AGENCIES.

602-263-1100

JMA ENGINEERING CORPORATION
331 E. Bethany Home Road, Garden Suite
Phoenix, Arizona 85012
Voice 602.248.0286
Fax 602.248.0976

DESIGN	JE
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Date	01/04
Job No.	0312.1
Sheet	C3 of 3

COS# 1250-03-2 DRB# 67-DR-2003 NATIVE PLANT #67-NP-2004 JMA 0312 NORTHSIGHT PARCEL B