Drainage Reports

Abbreveated Water & Sewer Need Reports

Water Study

Wastewater Study

Stormwater Waiver Application

Preliminary Drainage Report
For
Salad and Go - Scottsdale

2323 N. Scottsdale Road
Scottsdale, AZ 85257

Prepared for:
Southwest General Development, LLC
10229 N. Scottsdale Road, Suite F
Scottsdale, AZ 85253
(646) 734-2654
Mr. Beau Woodring

Prepared by:
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409 S. El Dorado
Mesa, AZ 85202
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Mr. Jeff Wimmer, PE

December 12, 2016

Standage Project 161010

PRELIMINARY ONSITE DRAINAGE REPORT
FOR
SALAD AND GO - SCOTTSDALE

Table of Contents

APPENDICES

Salad And Go

1. Project Description

The project is a new building and site improvements for a restaurant in an existing retail center. The site is located at 2323 N. Scottsdale Road. The site is approximately 0.54 net acres on the northern approximately 92 feet of Parcel 303-40-990. The remaining southern approximately 59 feet is being split from the parcel and purchased by the property owners to the south. The site is bound to the south by Discount Tire, to the east by an alley way followed by a residential neighborhood, to the north by Smart & Final and to the west by Scottsdale Road.

2. Existing Conditions

The site is located on the Scottsdale Road is and its storm water runoff does not affect he site. The Smart & Final site to the north drains northward and appears to retain its own storm water retention. The site and the alley to the east are separated by a block retaining wall with a 6 ft CMU wall on top. The ground east of the wall is about 2 feet lower than the existing ground on our side of the wall. The Discount Tire to the south drains storm to the south and is collected by the Discount Tire drainage system. The southern portion of the current parcel boundary is being sold to the Discount Tire parcel owners. The site itself is covered with granite and a section of single curb, which will be removed. The site is not known to be affected by any offsite flows.

The site does not currently retain any offsite storm water runoff. The project site is located within FEMA Flood Zone 'X' as per FEMA FIRM Panel 04013C2235L, revised October 16, 2013 (see, FEMA FIRMette, Appendix).

> Flood Zone X includes: "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths less than 1 foot of with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood."

3. Proposed Site Drainage

The site is mostly dirt currently, after the previous building and site improvements were removed. Per City of Scottsdale Design Standage & Policy Manual, the site is required to only retain additional storm water runoff generated from any increase in surface runoff potentially generated by the new improvements over the old. See Drainage Exhibit in Appendix.

3.1. Storm Water Retention

The site was evaluated and compared with the previous development improvements. It was determined that storm water runoff from the new development would be less than that created by the previous improvements because the proposed site has less impervious surface area. Therefor no storm water runoff is required. At the developer's choice, small amount of storm water retention is provided for in Basins 1, 2 and 3. The basins will pond up to 6".

A summary of the storm water retention provided is below in Table 2:

Total Retention Volume =		
Basin 1	*722*	*Ft^3*
Basin 2	*207*	*Ft^3*
Basin 3	*130*	*Ft^3*
Provided Retention Volume=	***1,059***	***ft^3***
Total Required =	***0***	***ft^3***

3.2. Basin Percolation

Each basin is only 6" deep and it is assumed that will drain within 36 hours. Other means may be needed to assist in their drainage based on post construction field conditions.

3.3. Drainage Structures

Pavement and curb will convey storm water from the site through curb openings to the basins.

4. Finish Floor Elevation & Project Outfall

The proposed finish floor elevation for the main building is 1236.0. Basin 1 storm water outfalls to the existing basin to the south at approximately 1234.5 and then eventually out to E. Oak Street. Basins 2 and 3 outfall to the north to a small existing basin, then out to Scottsdale Road to the existing catch basin. The outfall for the project (lowest elevation of site at project perimeter) is at the northwest corner of the site at a ground elevation of 1234.37. The finish floor elevation is 1.55 feet higher than the retention basin outfall and 1.63 feet higher than the project outfall elevation respectively. See Drainage Exhibit.

5. Summary and Conclusions

The site has been designed per the City of Scottsdale requirements and is not required to retain storm water runoff as a redevelopment project of about half and acre. The project has been designed to retain some storm water runoff in on-site retention basins to minimize the

effects on adjacent parcels. The basins are six inches deep and are anticipated to drain within 36 hours.

The site is not in a FEMA designated floodplain and the finish floor elevations are 1-foot above the basin and site outfalls and are therefore considered to be reasonably protected from flooding.

6. References

- Design Standards & Policies Manual. City of Scottsdale, Arizona. January 2010. http://www.scottsdaleaz.gov/design/DSPM
- Federal Emergency Management Agency, Flood Insurance Rate Map (FIRM): Maricopa County, Arizona and Incorporated Areas, Panel 04013C2235L, revised October 16, 2013.

APPENDIX

AERIAL MAP

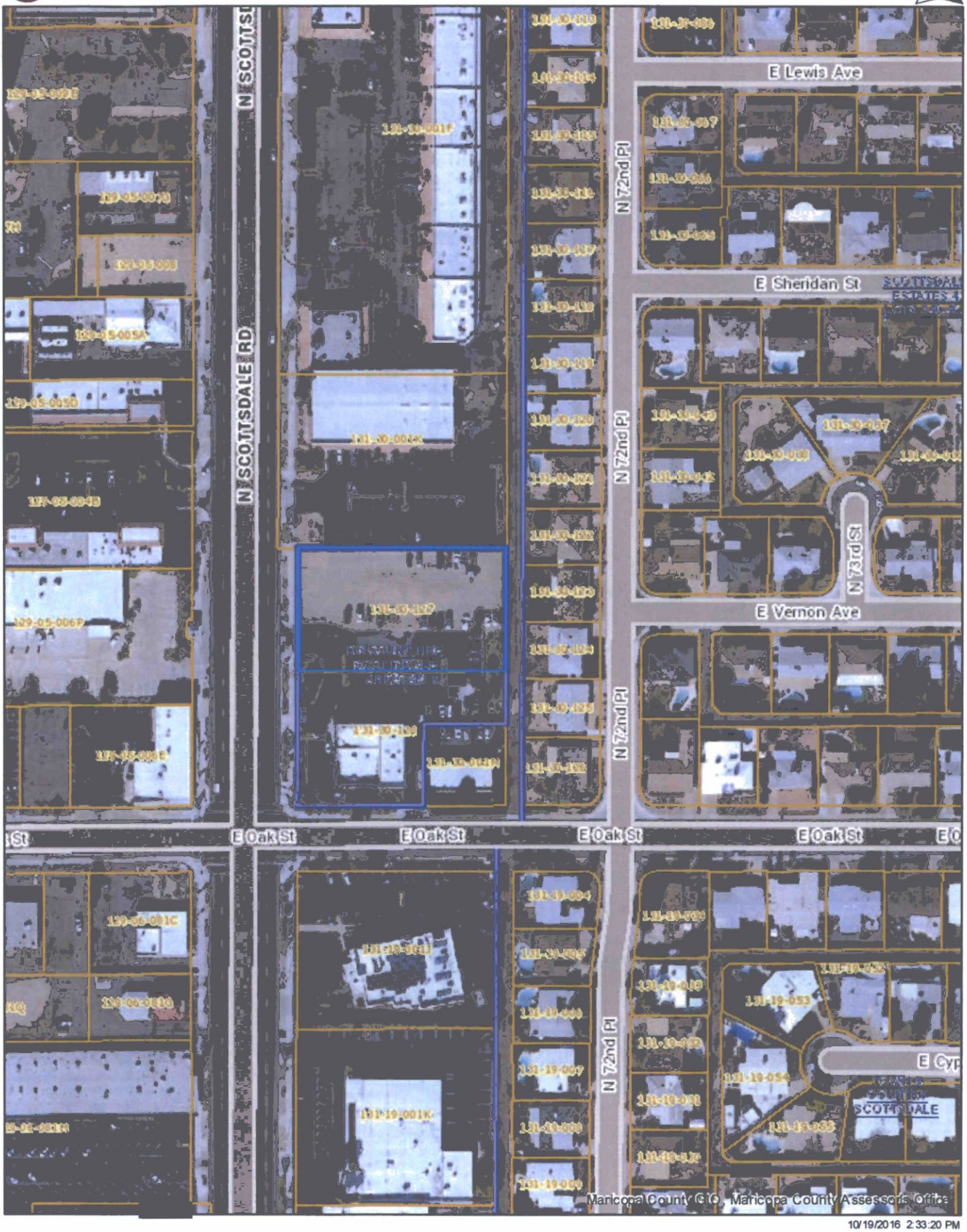
FEMA FIRM MAP

RETENTION CALCULATIONS

DRAINAGE EXHIBIT

TOPOGRAPHIC SURVEY

Map



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MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METE

PANEL 2235L

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA

AND INCORPORATED AREAS

PANEL 2235 OF 4425

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

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

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

MAP NUMBER
04013C2235L

MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

Salad N Go

REQUIRED RETENTION VOLUME

Weighted Run-off Coefficient On-Site (PRE)

Surface	'C'	Area (A)	C*A(ft²)
Roof/Concrete/Asphalt	0.95	17,993	17,093
Desert Landscape	0.45	5,510	2,480
Totals =		23,503 ft²	19,573 ft²
Average =	**0.83**		

Pre - Required Retention Volume

*On-Site Retention Area

Design Storm: 100 yr, 2 hr; d= 0.183

A_{ONSITE} = 23,503 ft²

$V_{req(100\ yr,\ 2\ hr)} = C_{ON} \times d \times A$ =

0.83 x (0.183) x 23,503 =

Retention Required (PRE) = 3,570 ft³

Weighted Run-off Coefficient On-Site (POST)

Surface	'C'	Area (A)	C*A(ft²)
Roof/Concrete/Asphalt	0.95	14,337	13,620
Desert Landscape	0.45	9,166	4,125
Totals		23,503 ft²	17,745 ft²
Average =	**0.76**		

Post - Required Retention Volume

*On-Site Retention Area

Design Storm: 100 yr, 2 hr; d= 0.183

A_{ONSITE} = 23,503 ft²

$V_{req(100\ yr,\ 2\ hr)} = C_{ON} \times d \times A$ =

0.83 x (0.183) x 23,503 =

Retention Required (POST) = 3,269 ft³

Salad N Go - Scottsdale

Provided Retention Volumes

Basin '1'

Contour Elevation	Area	Volume
1233.5	1,713	
		722
1233	1,174	
Volume=		722 ft^3

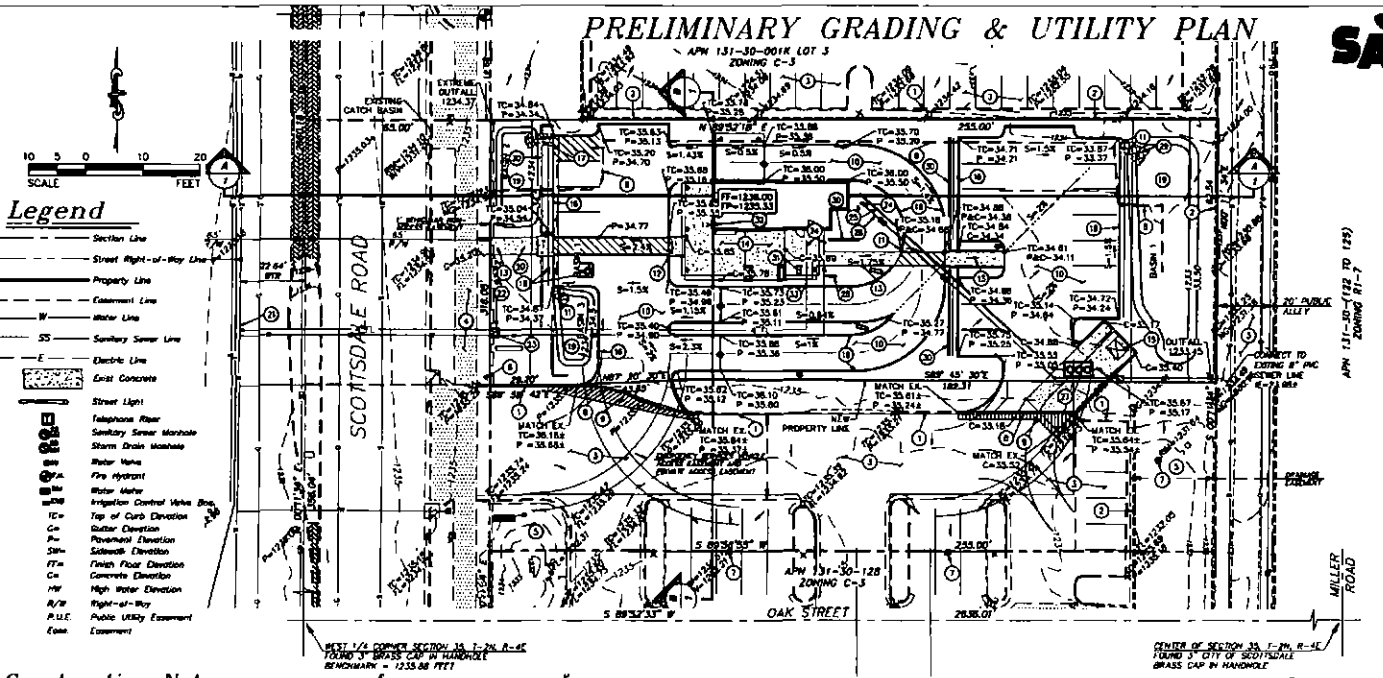
Basin '2'

Contour Elevation	Area	Volume
1234.5	500	
		207
1234	326	
Volume=		207 ft^3

Basin '3'

Contour Elevation	Area	Volume
1234.5	328	
		130
1234	193	
Volume=		130 ft^3

PRELIMINARY GRADING & UTILITY PLAN



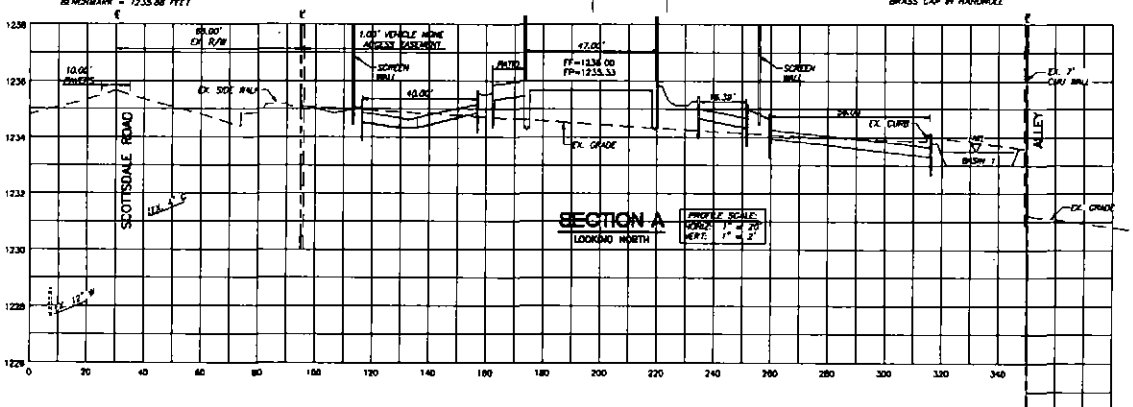
SCALE 10 5 0 10 20 FEET

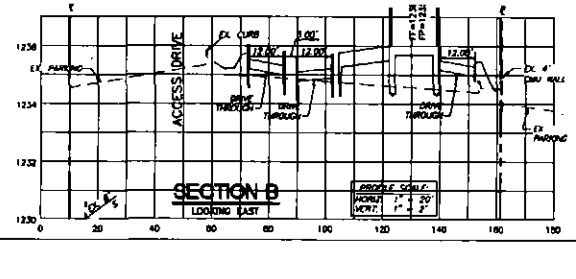
Legend

- Section Line
- Street Right-of-Way Line
- Property Line
- Easement Line
- W — Water Line
- SS — Sanitary Sewer Line
- E — Electric Line
- Exist Concrete
- Street Light
- Telephone Riser
- Sanitary Sewer Manhole
- Storm Drain Manhole
- Water Valve
- F.H. Fire Hydrant
- W.M. Water Meter
- I.C.B. Irrigation Control Valve Box
- TC= Top of Curb Elevation
- Gu= Gutter Elevation
- P= Pavement Elevation
- SW= Sidewalk Elevation
- FF= Finish Floor Elevation
- Co= Concrete Elevation
- HW High Water Elevation
- R/W Right-of-Way
- P.U.E. Public Utility Easement
- Ease. Easement

Construction Notes

1. EXISTING CURB OR CURB & GUTTER TO REMAIN.
2. EXISTING CMU WALL TO REMAIN.
3. EXISTING PAVEMENT TO REMAIN.
4. EXISTING SIDEWALK TO REMAIN.
5. EXISTING BASIN TO REMAIN.
6. EXISTING STOP SIGN TO REMAIN.
7. EXISTING CATCH BASIN TO REMAIN.
8. SAWCUT AND REMOVE EXISTING CURB.
9. SAWCUT AND REMOVE EXISTING PAVEMENT.
10. CONSTRUCT PAVEMENT PER SOILS REPORT.
11. CONSTRUCT 3' CURB OPENING.
12. CONSTRUCT SIDEWALK RAMP PER ADA REQUIREMENTS 12:1 MAX SLOPE.
13. CONSTRUCT SIDEWALK PER MAG STD DTL 230.
14. CONSTRUCT CONCRETE PATIO.
15. CONSTRUCT TRASH ENCLOSURE WITH GREASE CONTAINMENT AREA PER C.O.S. STD DTL 2146-2.
16. CONSTRUCT 6" SINGLE CURB
17. CONSTRUCT WALL OPENING
18. CONSTRUCT ADA PARKING STALL WITH ADA STRIPING AND PARKING SIGN.
19. CONSTRUCT RETENTION BASIN WITH MAX 4:1 SIDE SLOPE
20. INSTALL 3' WIDE SIDEWALK SCUPPER PER MAG STD DTL 203
21. INSTALL SLEEVING SLEEVE AND VALVE FOR 4" FIRE LINE PER C.O.S. STD DTL 2382-3
22. INSTALL 4" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.S. STD DTL 2351
23. INSTALL 1 ½" WATER METER, BOX AND SERVICE LINE PER C.O.S. STD DTL 2330
24. CONNECT TO BUILDING PER PLUMBING MEP PLANS
25. 4" GREASE LINE
26. 6" SEWER LINE
27. GREASE INTERCEPTOR PER ARCHITECT PLANS
28. INSTALL ¾" REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY AND LANDSCAPE SERVICE LINE PER C.O.S. STD DTL 2351
29. INSTALL RIPRAP
30. SCREEN WALL
31. BIKE RACK
32. INSTALL BUILDING MOUNTED FDC





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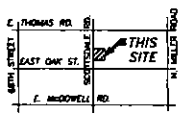


Vicinity Map

Legal Description:

A PORTION OF: LOT 1, OF MINOR SUBDIVISION PLAT DESCOUNT TIRE SCOTTSDALE & OAK, SCOTTSDALE, ARIZONA, ACCORDING TO BOOK 1083 OF MAPS, PAGE 48, RECORDS OF MARICOPA COUNTY, ARIZONA.

Owner

SALAD & GO BY AND GO CONCEPTS
898 WEST JUANITA AVENUE
GILBERT, ARIZONA 85233

Developer

SOUTHWEST GENERAL DEVELOPMENT
10228 N. SCOTTSDALE RD., SUITE F
SCOTTSDALE, ARIZONA 85253
PHONE: (844) 734-2534
CONTACT: BEAU WOODBRIDGE
E-MAIL: BEAU@GENERALDEVELOP.COM

Architect

BRISSETTE ARCHITECTS, INC.
10225 N. SCOTTSDALE RD., SUITE F
SCOTTSDALE, ARIZONA 85253
CONTACT: JEFF KANTZ
PHONE: (480) 596-3882
E-MAIL: JEFF@BRISSETTEARCHITECTS

Areas:

GROSS AREA: 0.679 Ac. (29,582 S.F.±)
NET AREA: 0.540 Ac. (23,503 S.F.±)
(Excludes 53' R/W for SCOTTSDALE rd Ave.)

FEMA Flood Zone:

THIS SITE IS LOCATED IN FLOOD ZONE "X" AS DESIGNATED IN FEMA FLOOD MAP# 04013C2230L, DATED OCTOBER 16, 2013. ZONE "X" IS DEFINED AS: "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS 1.0% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH AREAS LESS THAN 1 SQUARE MILE; AREAS PROTECTED BY LEVEES FROM 1.0% FLOOD CHANCE."

Benchmark

The Benchmark used for this survey is the West quarter corner of Section 33, Maricopa County GDACS point 34610-1, being marked by a 3" brass cap in handhole located at the intersection of Scottsdale Road & Oak Street, having an elevation of 1,235.88 feet (NAVD88).

Drainage Statement

THIS PROJECT IS A REDEVELOPMENT PROJECT ON APPROXIMATELY 1/2 ACRE. THE NEW IMPROVEMENTS HAVE MORE IMPERVIOUS AREA THAN THE OLD SITE (BO BASED ON AERIAL PHOTOS). BECAUSE OF THIS AND THE SIZE OF THE SITE, NO STORM WATER RETENTION IS REQUIRED FOR THE PROJECT. THREE SMALL 6" DCDP BASINS ARE PROVIDED TO COLLECT SOME STORM WATER. THE REAR BASIN WILL OUTFALL TO THE EXISTING BASIN TO THE SOUTH, AND THERE ARE TWO SHALLOW PONDING AREAS IN THE FRONT OF THE SITE THAT WILL COLLECT NUISANCE WATER FROM THE PARKING SPACES. THEIR OUTFALL TO A SMALL EXISTING BASIN TO THE NORTH, THEN OUT THE STREET. THESE COMBINED CAPACITY IS 1,069 C.F. OFFSITE STORM WATER RUNOFF IS COLLECTED IN A CITY CATCH BASIN IN FRONT OF THE SITE.

Retention Calculations

REVISIONS:

PRELIMINARY GRADING & UTILITY PLAN

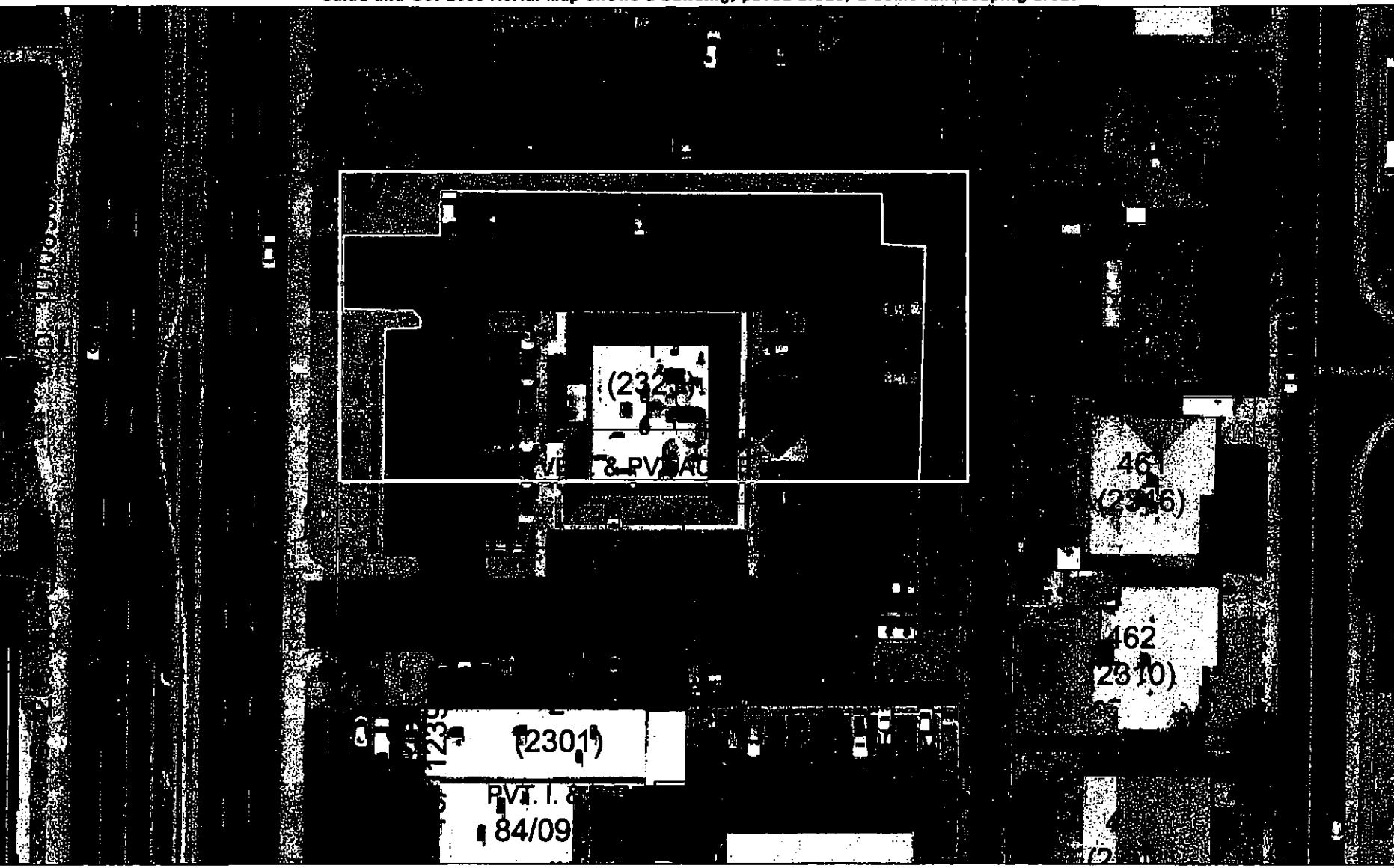
NOT FOR CONSTRUCTION

Standage & Associates, Ltd.
Consulting Engineers

SHEET: 1 OF: 1

161010

Salad and Go: 2005 Aerial Map shows a building, paved areas, & some landscaping areas



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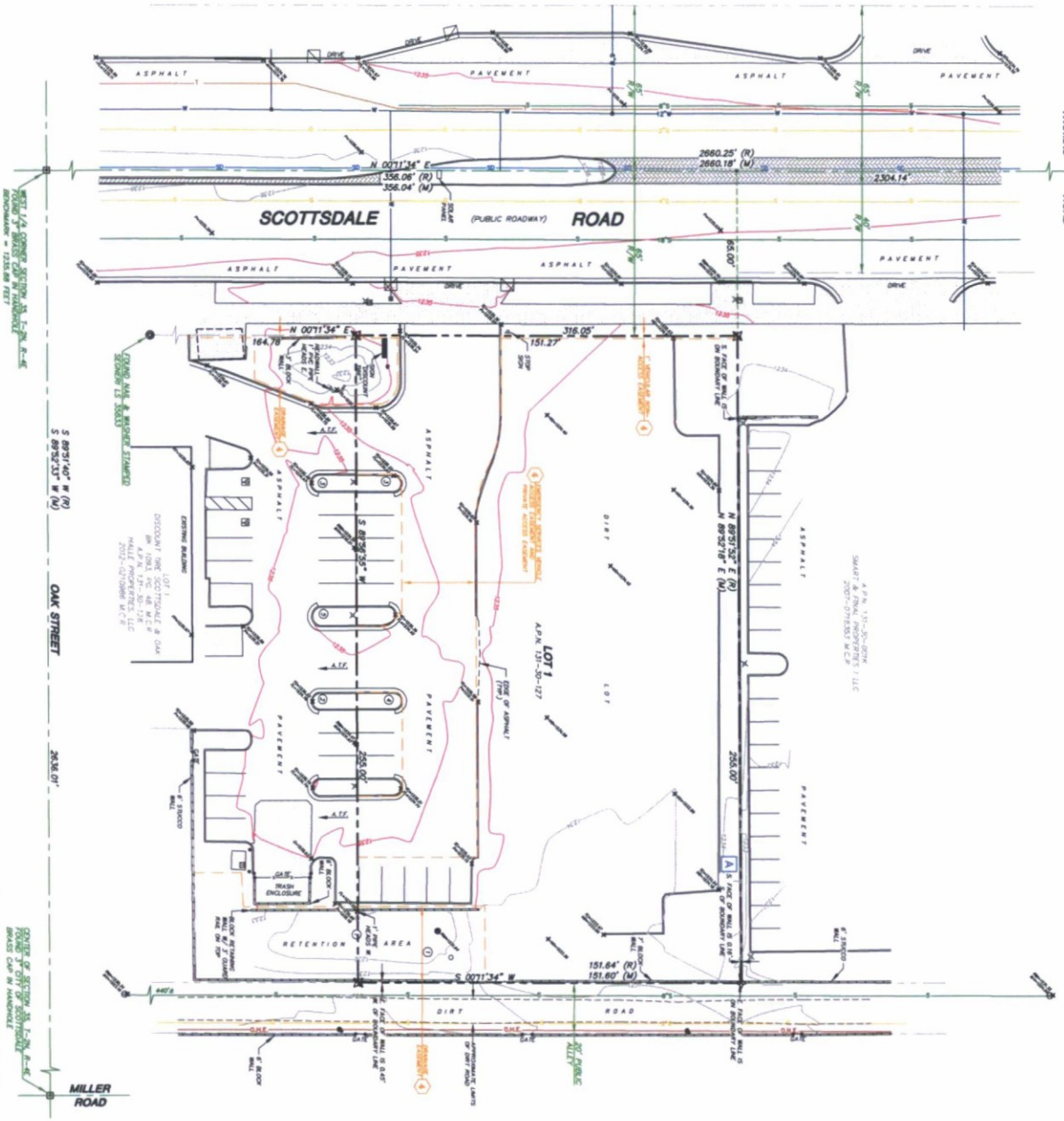

LEGEND

- BOUNDARY LINE
- CENTER LINE OR MONUMENT LINE
- CONCRETE SURFACE
- BRICK PAVERS
- 6" HIGH CONCRETE CURB & GUTTER
- 6" HIGH CONCRETE CURB (MEANS OF ACCESS)
- WALL
- FENCE
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND SEWER LINE
- UNDERGROUND STORM SEWER LINE
- UNDERGROUND WATER LINE
- UNDERGROUND TELECOMMUNICATIONS LINE
- FOUND 1/2" CAPPED REBAR
- FOUND 3/4" PIPE
- SCHEDULE B ITEM
- ELECTRIC METER/METER
- ELECTRIC PULL BOX/METER
- ELECTRIC TRANSFORMER
- GUARD POST OR GATE POST
- MONUMENT (AS NOTED)
- METAL GRATE (RECTANGULAR)
- METAL COVER (CIRCULAR)
- POWER POLE W/ OVERHEAD ELECTRIC SERVICE WARNING
- LIGHT POLE
- STREET SIGN
- WATER METER
- WATER VALVE
- ASSESSOR PARCEL NUMBER
- MARICOPA COUNTY RECORDS
- RIGHT OF WAY
- PLAT
- PLAT AND MEASURED
- (TYP.) TYPICAL
- (R) RECORD PER BK. 1093, PG. 48, M.C.R.
- (M) MEASURED
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- N.G. NATURAL GRADE
- PAVEMENT
- TOP OF CURB
- TOP OF DIKE
- FINISHED FLOOR
- INVERT ELEVATION
- TOP OF WALL
- A.P.N. ASSESSOR PARCEL NUMBER
- M.C.R. MARICOPA COUNTY RECORDER
- R/W RIGHT OF WAY
- P.L. PROPERTY LINE
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- (TYP.) TYPICAL
- (R) RECORD PER BK. 1093, PG. 48, M.C.R.
- (M) MEASURED
- P.A.P. PLAT AND MEASURED PROPERTY
- A.T.C. ASPHALT TO CONCRETE

SCALE IN FEET
SCALE : 1" = 20'

TREE TABLE		
TREE NO.	TREE TYPE	SIZE
(1)	MESQUITE	0.5'Ø
(2)	PALO VERDE	0.3'Ø
(3)	PALO VERDE	1.0'Ø
(4)	PALO VERDE	0.4'Ø
(5)	TREE	0.4'Ø
(6)	TREE	1.0'Ø

CERTIFIED 3/29/17

SURVEYOR	SUPERIOR
ADDRESS	21415 N. 23rd Avenue, Phoenix, AZ 85027
PHONE	623-587-2500
FAX	623-587-2501
JOB NO.	1703-01
DATE	3/29/17
SHEET	1 OF 1

ALTA / NSPS LAND TITLE SURVEY

REVISIONS	
DATE	DESCRIPTION
05/16/18	revised name in certification