PRELIMINARY GRADING AND DRAINAGE PLAN

SWD URETHANE TENANT IMPROVEMENT/EXPANSION

536 SOUTH DREW STREET
MESA, ARIZONA 85201

PRELIMINARY DRAINAGE CALCULATIONS

Required Retention Volume

Design Storm: 100-yr, 2 hr;
$V_{required}$ = C x D/12 x A; Per City of Mesa 2012 Engineering and Design Standards, Section 806.13.1;
D = 2.2 in. per Drainage Design Manual for Maricopa County, Figure A.56.

Pre-development Weighted Coefficient[1]

Surface	C	Area (ft²)	C x Area
Concrete/Rooftop	0.95	6149	5842
Compacted Aggregate Base[2]	0.70	17643	12350
Desert Landscaping (No Liner	0.50	1360	680
		$C_{W\ PRE}$ =	0.75

Post-development Weighted Coefficient[1]

Surface	C	Area (ft²)	C x Area
Concrete/Rooftop	0.95	6937	6590
Asphalt Paving	0.85	16161	13737
Desert Landscaping (No Liner	0.50	2053.54	1027
		$C_{W\ POST}$ =	0.85

Pre vs Post Runoff Volume

Description	C_W	Area (acre)	D(in)	Volume (acre-ft)	Volume (ft³)
Pre-Development	0.75	0.5774	2.2	0.0794	3460
Post-Development	0.85	0.5774	2.2	0.0899	3915
				Difference:	455

Provided Retention Volume

Retention Method	Diameter (ft)	Length (ft)	Volume (ft³)
Corrugated Metal Pipe	6	20	565

Stormwater Disposal

Method	Disposal Rate[3]	Disposal Rate	Time for Disposal (hr)
Drywell	19440	0.15	1.0

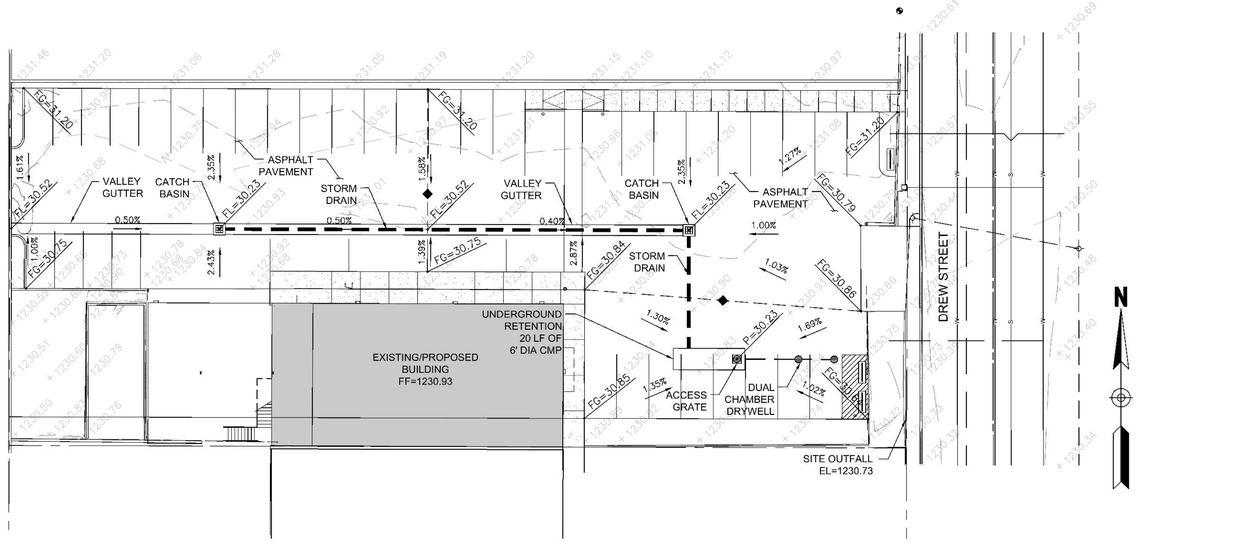
Notes:
1) Weighted Coefficient calculation per City of Mesa 2012 Engineering and Design Standards, Section 806.8 and Table 8.1.
2) Assumed to be equivalent to Composite Runoff Coefficient for Desert Landscaping with Impervious Liner provided in City of Mesa 2012 Engineering and Design Standards Table 8.1.
3) Drywell disposal rate provided in City of Mesa 2012 Engineering and Design Standards Table, Section 806.21.5.2.

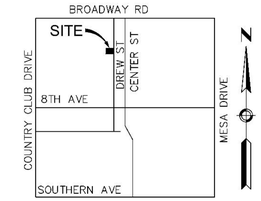
FLOOD INSURANCE RATE MAP INFORMATION

COMMUNITY NUMBER	PANEL #	SUFFIX	PANEL DATE	FIRM ZONE
04013C	2264	M	11-04-2015	X

EXISTING FINISHED FLOOR CONSTRAINTS

THIS PROJECT IS AN IMPROVEMENT TO AN EXISTING BUILDING AND SITE. THE FINISHED FLOOR AND DRAINAGE OUTFALL OF THE SITE ARE EXISTING CONSTRAINTS THAT CANNOT BE CHANGED. THE EXISTING FINISHED FLOOR IS AT AN ELEVATION OF 1230.93. THE EXISTING DRAINAGE OUTFALL FOR THE SITE IS 1230.73. THE FINISHED FLOOR IS 0.20 FOOT HIGHER THAN THE SITE OUTFALL. THIS ELEVATION DIFFERENCE IS LESS THAN THE TYPICAL RECOMMENDATION OF 1 FOOT OR MORE.





VICINITY MAP
NOT TO SCALE

ENGINEER

STORMWATER PROS, LLC
916 E. IMPALA AVENUE, STE. 101
MESA, AZ 85234
CONTACT: GABE LECHEMINANT, P.E.
TEL: 480-926-1003

LOT DATA

APN: #139-38-113J

GROSS/NET AREA: 25,102 SF

ZONING: GI

LEGEND

- MONUMENT LINE
- BUILDING SETBACK
- RIGHT OF WAY
- PROPERTY LINE
- FLOWLINE
- OVERHEAD UTILITY
- STORM DRAIN
- FENCE LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING CURB
- EXISTING POWER POLE
- CATV EXISTING PULL BOX
- EXISTING 1/2" IRON PIPE
- SET REBAR & CAP, RLS #57279
- EXISTING FIRE HYDRANT
- (S) EXISTING SEWER MANHOLE

FL = FLOWLINE ELEVATION
FG = FINISHED GRADE ELEVATION
FF = FINISHED FLOOR ELEVATION
EG = EXISTING GUTTER ELEVATION

REV. NO.	DESCRIPTION

StormWater Pros, LLC
916 E. IMPALA AVENUE, STE. 101 (480) 926-1003 TEL
MESA, AZ 85204 (480) 813-9612 FAX

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CALL 2 WORKING DAYS BEFORE YOU DIG! STATEWIDE - 11-ONE-CALL-IT MARICOPA COUNTY 602-263-1100
1-800-STAKE-IT
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DESIGN: GL
DRAWN: GL

PROJECT NO.
#1116-64

DATE: 12/16/16

SHEET
GD01
1 OF 1