

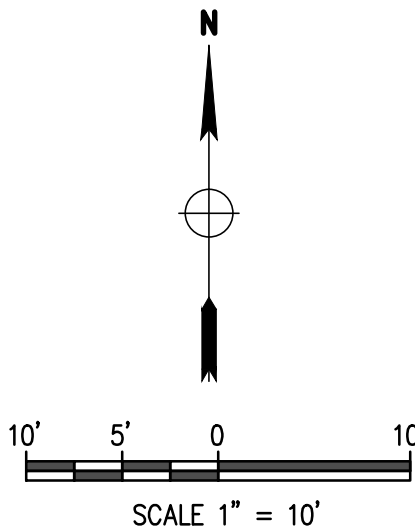
LINCOLN DRIVE

S89°52'10"E (R) 1655.41' (R)
1163.41' (R)

STONE IN HANDHOLE
NE 1/4 COR. W 1/2, NE
1/4, SW 1/4 SEC. 9,
T.2N., R.4E.

STONE IN
HANDHOLE
S89°52'10"E (R)
490.00' (R)

56TH STREET



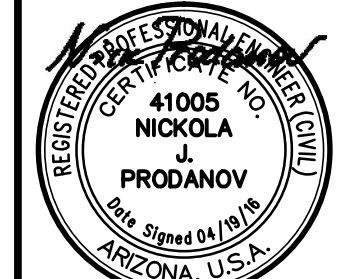
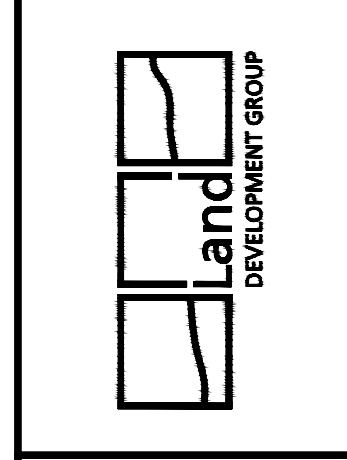
DATE: 04/19/16
JOB: 14193
VERSION: 4.4
PLOT DATE: 04/19/16

REVISIONS:	SCALE: 1"=10'
DATE:	DESIGNED BY: NP
	DRAWN BY: DW
	CHECKED BY: JJ

**GRADING & DRAINAGE PLAN
IMPROVEMENT PLAN**

**MOUNTAIN SHADOW RESORT
EAST GUARD HOUSE
5635 E LINCOLN DRIVE
PARADISE VALLEY, AZ 85253**

P. 602.889.1984 | F. 602.445.9482
8800 N. CENTRAL AVE., SUITE 288
PHOENIX, AZ 85020
phoenix@igeng.com



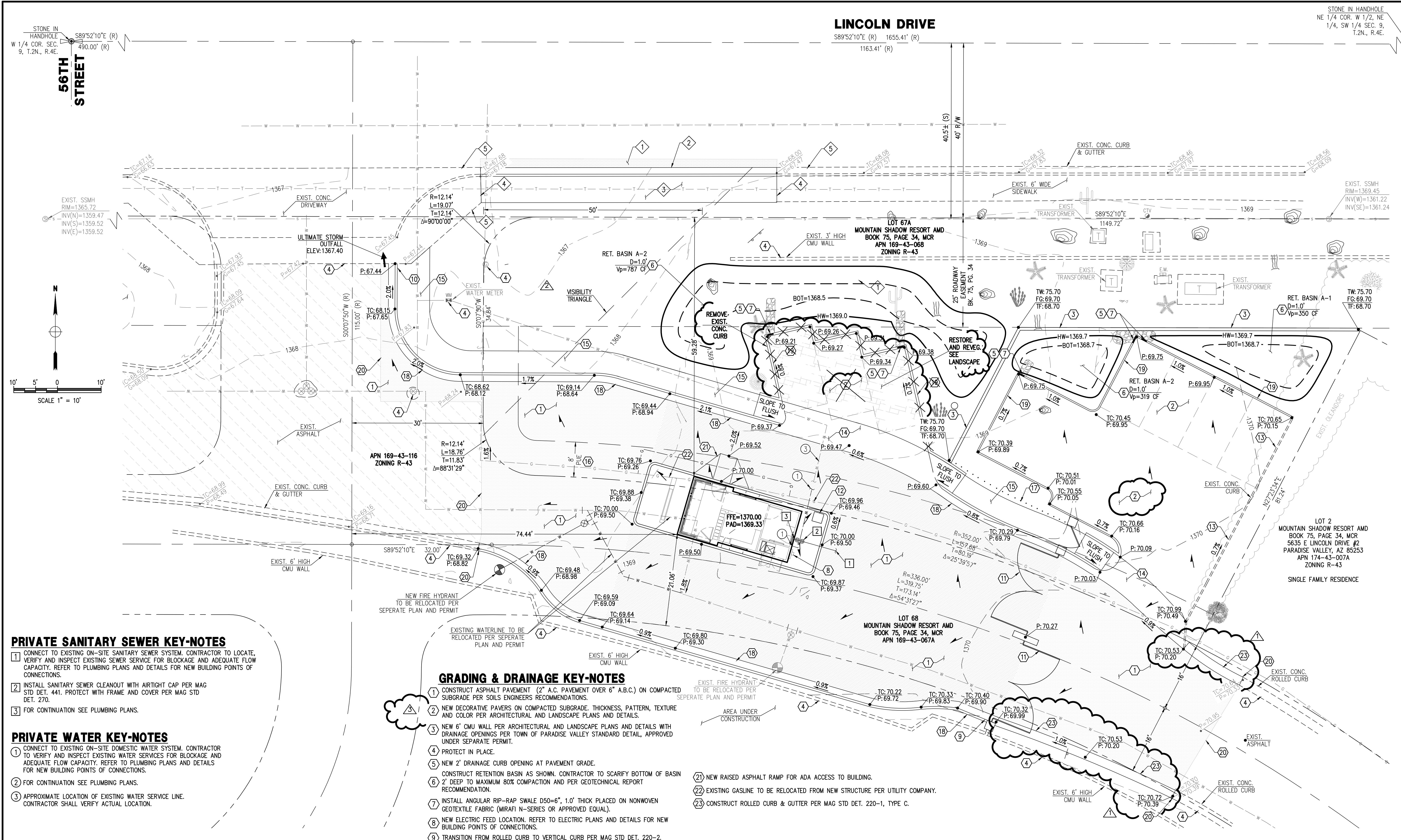
DEMOLITION KEY-NOTES

- 1 SAWCUT AND REMOVE 2' MIN. OF EXISTING A.C. PAVEMENT. PROVIDE A CLEAN STRAIGHT EDGE WHEN ADJACENT TO EXISTING PAVEMENT TO REMAIN. (45 S.Y.)
- 2 SAWCUT AND REMOVE EXISTING CONCRETE CURBING. (538 L.F.)
- 3 SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK. (93 S.F.)
- 4 RELOCATE EXISTING MAIL BOX, SEE SHEET C-3 AND ARCHITECTURAL PLANS FOR NEW LOCATION.
- 5 REFER TO ARCHITECTURAL AND LANDSCAPE PLANS FOR NATIVE TREES AND PLANTS REMOVAL/RELOCATION AND INSTALLATION OF NEW TREES AND LANDSCAPING.
- 6 REMOVAL OF EXISTING ELECTRIC EQUIPMENT PER OTHERS.
- 7 REMOVE EXISTING WALL.
- 8 EXISTING BUILDING REMOVAL BY OTHERS.
- 9 PROTECT IN PLACE.

NOTE:

1. SEE LANDSCAPE PLANS FOR ADDITIONAL LANDSCAPE DEMOLITION.

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BEFORE YOU DIG
(602) 263 1100
BLUE STAKE CENTER



PRIVATE SANITARY SEWER KEY-NOTES

- CONNECT TO EXISTING ON-SITE SANITARY SEWER SYSTEM. CONTRACTOR TO LOCATE, VERIFY AND INSPECT EXISTING SEWER SERVICE FOR BLOCKAGE AND ADEQUATE FLOW CAPACITY. REFER TO PLUMBING PLANS AND DETAILS FOR NEW BUILDING POINTS OF CONNECTIONS.
- INSTALL SANITARY SEWER CLEANOUT WITH AIRTIGHT CAP PER MAG STD DET. 441. PROTECT WITH FRAME AND COVER PER MAG STD DET. 270.
- FOR CONTINUATION SEE PLUMBING PLANS.

PRIVATE WATER KEY-NOTES

- CONNECT TO EXISTING ON-SITE DOMESTIC WATER SYSTEM. CONTRACTOR TO VERIFY AND INSPECT EXISTING WATER SERVICES FOR BLOCKAGE AND ADEQUATE FLOW CAPACITY. REFER TO PLUMBING PLANS AND DETAILS FOR NEW BUILDING POINTS OF CONNECTIONS.
- FOR CONTINUATION SEE PLUMBING PLANS.
- APPROXIMATE LOCATION OF EXISTING WATER SERVICE LINE. CONTRACTOR SHALL VERIFY ACTUAL LOCATION.

OFFSITE PAVING KEY-NOTES

- CONSTRUCT 2" A.C. PAVEMENT OVER 6" A.B.C. OR MATCH EXISTING STREET SECTION, WHICHEVER IS GREATER PER MAG STANDARD SPECIFICATIONS. (15 S.Y.)
- CONSTRUCT 6" VERTICAL CURB AND GUTTER PER MAG STD DET 220-1, TYPE 'A' (68 L.F.)
- CONSTRUCT CONCRETE SIDEWALK PER MAG STD DET 2301. (404 S.F.)
- MATCH EXISTING GRADE.
- PROTECT IN PLACE.

GRADING & DRAINAGE KEY-NOTES

- CONSTRUCT ASPHALT PAVEMENT (2" A.C. PAVEMENT OVER 6" A.B.C.) ON COMPACTED SUBGRADE PER SOILS ENGINEERS RECOMMENDATIONS.
- NEW DECORATIVE PAVERS ON COMPACTED SUBGRADE. THICKNESS, PATTERN, TEXTURE AND COLOR PER ARCHITECTURAL AND LANDSCAPE PLANS AND DETAILS.
- NEW 6" CMU WALL PER ARCHITECTURAL AND LANDSCAPE PLANS AND DETAILS WITH DRAINAGE OPENINGS PER TOWN OF PARADISE VALLEY STANDARD DETAIL, APPROVED UNDER SEPARATE PERMIT.
- PROTECT IN PLACE.
- NEW 2" DRAINAGE CURB OPENING AT PAVEMENT GRADE.
- CONSTRUCT RETENTION BASIN AS SHOWN. CONTRACTOR TO SCARIFY BOTTOM OF BASIN 2" DEEP TO MAXIMUM 80% COMPACTION AND PER GEOTECHNICAL REPORT RECOMMENDATION.
- INSTALL ANGULAR RIP-RAP SWALE D50=6", 1.0' THICK PLACED ON NONWOVEN GEOTEXTILE FABRIC (MIRAFI N-SERIES OR APPROVED EQUAL).
- NEW ELECTRIC FEED LOCATION. REFER TO ELECTRIC PLANS AND DETAILS FOR NEW BUILDING POINTS OF CONNECTIONS.
- TRANSITION FROM ROLLED CURB TO VERTICAL CURB PER MAG STD DET. 220-2.
- NEW CURB TERMINATION PER MAG STD DET. 222.
- NEW GATE PER ARCHITECTURAL PLANS AND DETAILS, APPROVED BY FIRE DEPARTMENT UNDER SEPARATE PERMIT.
- NEW RELOCATED MAILBOX PER ARCHITECTURAL PLANS AND DETAILS.
- REPAIR EXISTING EXTRUDED CURB AS NEEDED.
- CONSTRUCT 6" THICK CONCRETE APRON. PATTERN, TEXTURE AND COLOR PER ARCHITECTURAL AND LANDSCAPE PLANS AND DETAILS.
- NEW CONCRETE SIDEWALK. THICKNESS, PATTERN, TEXTURE AND COLOR PER ARCHITECTURAL AND LANDSCAPE PLANS AND DETAILS.
- CONTRACTOR TO CONTACT UTILITY COMPANIES FOR RELEASE OF EASEMENT.
- NEW 6" WROUGHT IRON FENCE PER ARCHITECTURAL AND LANDSCAPE PLANS AND DETAILS. APPROVED UNDER SEPARATE PERMIT.
- CONSTRUCT 6" VERTICAL CURB & GUTTER PER MAG STD DET. 220-1, TYPE A.
- CONSTRUCT 6" SINGLE CURB PER MAG STD DET. 222, TYPE A.
- MATCH EXISTING
- NEW RAISED ASPHALT RAMP FOR ADA ACCESS TO BUILDING.
- EXISTING GASLINE TO BE RELOCATED FROM NEW STRUCTURE PER UTILITY COMPANY.
- CONSTRUCT ROLLED CURB & GUTTER PER MAG STD DET. 220-1, TYPE C.

ON-SITE RETENTION FOR THE PRE VS. POST DEVELOPMENT RUNOFF FROM 100-YEAR, 2-HOUR STORM EVENT

$V = D \times A \times (C_w - 0.35) / 12$

DRAINAGE AREA	AREA S.F.	RUNOFF COEFFICIENT C _w	VOLUME REQUIRED C.F.	RETENTION BASIN ID	CONTOUR ELEVATION			VOLUME PROVIDED C.F.
					HW	BOTTOM	DEPTH FT	
A	16,609	0.72	1,444	A1	1,369.70	454	1.00	350
					1,368.70	246		
				A2	1,369.70	456	1.00	319
					1,368.70	182		
				A3	1,369.00	1,107	1.00	787
TOTAL			1,444				1,456	

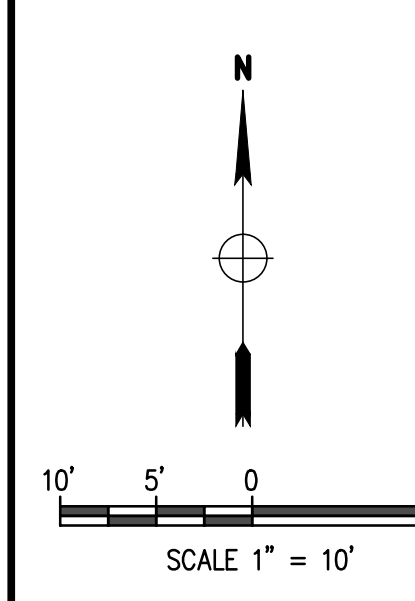
WEIGHTED RUNOFF COEFFICIENT, C_w

SURFACE TYPE	RUNOFF COEFFICIENT C	AREA SF	C*AREA
ROOF	0.95	352	334
CONCRETE PAVEMENT	0.95	10,007	9,507
LANDSCAPE	0.35	6,250	2,188
TOTAL		16,609	12,029
$C_w = C * AREA / TOTAL AREA$			0.72

LINCOLN DRIVE
S89°52'10"E (R) 1655.41' (R)
1163.41' (R)

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NE 1/4 COR. W 1/2, NE 1/4, SW 1/4 SEC. 9, T.2N., R.4E.

56TH STREET
S89°52'10"E (R) 490.00' (R)



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DRAWN BY: DW
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REVISIONS:
1. REVISED ELEVATIONS
2. ADDED VISIBILITY TRIANGLE
3. REPLACE DG WITH PAVERS

GRADING & DRAINAGE PLAN IMPROVEMENT PLAN

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5635 E LINCOLN DRIVE
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P. 602.889.1984 | F. 602.445.9482
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phoenix@lgeng.com

land DEVELOPMENT GROUP

REGISTERED PROFESSIONAL ENGINEER
41005 NICKOLA J. PRODANOV
AZ State #17108
ARIZONA U.S.A.
Expires 08/31/2016

CALL TWO MORNING HOURS BEFORE YOU DIG
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C-3 R2
3 OF 3