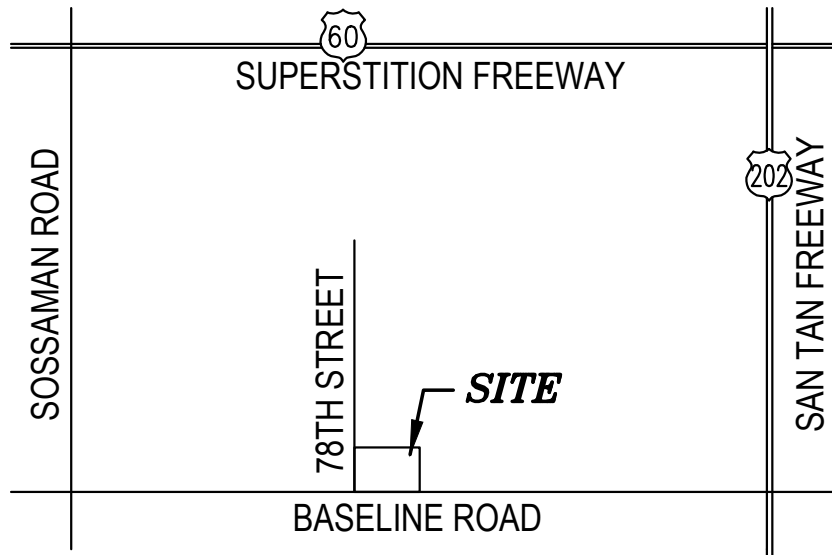


PRELIMINARY GRADING & DRAINAGE PLAN
VILLA RIALTO PHASE II
CONDOMINIUM SUBDIVISION
7820 E. BASELINE ROAD

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 32, TOWNSHIP 1 NORTH, RANGE 7 EAST
OF THE GILA AND SALT RIVER BASE AND MERIDIAN – MARICOPA COUNTY, ARIZONA.

SHEET INDEX

1	COVER SHEET
2	PRELIMINARY GRADING & DRAINAGE PLAN
3	SECTIONS



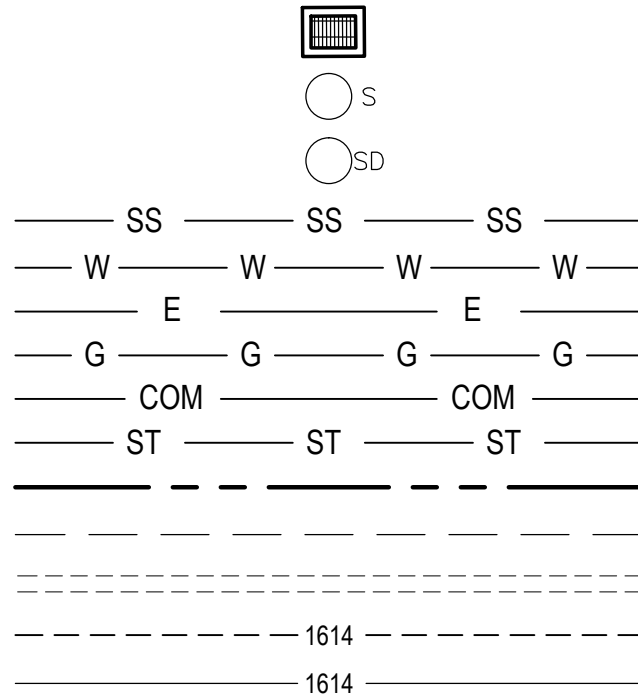
VICINITY MAP

N.T.S.

ABBREVIATIONS

M.C.R.	MARICOPA COUNTY RECORDER
A.P.N.	ASSESSOR'S PARCEL NUMBER
EX.	EXISTING
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT-OF-WAY
DKT	DOCKET
BK	BOOK
PG	PAGE
CONC. OR C	CONCRETE
SF	SQUARE FEET
AC	ACRES
ESMT	EASEMENT
LS	LAND SURVEYOR
D/W	DRIVEWAY
S/W OR SW	SIDEWALK
TYP	TYPICAL
PP	POWER POLE
TC	TOP OF CURB ELEVATION
P	PAVEMENT ELEVATION
G	GUTTER ELEVATION
TRW	TOP OF RETAINING WALL ELEVATION
BRW	BOTTOM OF RETAINING WALL ELEVATION
FG	FINISH GRADE ELEVATION
INV	INVERT ELEVATION
GR	GRATE ELEVATION
FF	FINISH FLOOR ELEVATION
HWE	HIGH WATER ELEVATION
BOT	BASIN BOTTOM ELEVATION
TOP	BASIN TOP ELEVATION
(XX.XX)	EXISTING ELEVATION - TYPE AS NOTED
Vp	VOLUME PROVIDED
Vr	VOLUME REQUIRED
VG	VALLEY GUTTER
GB	GRADE BREAK

LEGEND



PROPOSED CATCH BASIN
EXISTING SEWER MANHOLE
EXISTING STORM DRAIN MANHOLE
EXISTING SANITARY SEWER
EXISTING WATER LINE
EXISTING UNDERGROUND ELECTRIC
EXISTING NATURAL GAS
EXISTING TELECOMMUNICATION LINE
EXISTING STORM DRAIN
EXISTING PROPERTY LINE
PROPOSED HIGH WATER LINE (HWE)
EXISTING CMU WALL
EXISTING CONTOUR
PROPOSED CONTOUR

RETENTION CALCULATIONS

CHURCH PARCEL

EXISTING CHURCH PARCEL AREA: 197,762 SF
AREA OF CHURCH PARCEL TO BE SOLD: 40,400 SF

NEW CHURCH PROPERTY AREA: 157,362 SF

CALCULATE NEW Cw FOR CHURCH PROPERTY
METAL ROOF (C=1.00): 0.32 AC ~ 13,939 SF
DESERT
LANDSCAPE (C=0.50): 1.56 AC ~ 64,792 SF
PAVEMENT (C=0.85): 1.80 AC ~ 78,630 SF

$$Cw = \frac{1.00 \times 13,939}{157,362} + \frac{0.85 \times 78,630}{157,362} + \frac{0.50 \times 64,792}{157,362}$$

$$Cw = 0.72$$

RETENTION VOLUME REQUIRED (Vr) FOR CHURCH PROPERTY

$$Vr = Cw \times (P/12) \times A$$
$$Cw = 0.72$$
$$P = 2.2 \text{ INCHES}$$
$$A = 157,362 \text{ SF}$$

$$Vr = 0.72 \times (2.2/12) \text{ FT} \times 157,362 \text{ SF}$$

$$Vr = 20,772 \text{ CF}$$

NOTE: CHURCH PROPERTY RETENTION VOLUME WILL
UTILIZE UNDERGROUND RETENTION AND WILL BE
INDEPENDENT FROM VILLA RIALTO PHASE II.

VILLA RIALTO PHASE II

NET AREA: 85,069 SF

CALCULATE Cw FOR VILLA RIALTO PHASE II
CONCRETE & TILE ROOF (C=0.95): 0.85 AC ~ 36,901 SF
PAVEMENT (C=0.85): 0.32 AC ~ 13,854 SF
DESERT LANDSCAPE (C=0.50): 0.71 AC ~ 30,814 SF
TURF (C=0.15): 0.08 AC ~ 3,500 SF

$$Cw = \frac{0.95 \times 36,901}{85,069} + \frac{0.85 \times 13,854}{85,069} + \frac{0.50 \times 30,814}{85,069} + \frac{0.15 \times 3,500}{85,069}$$

$$Cw = 0.74$$

RETENTION VOLUME REQUIRED (Vr) FOR VILLA RIALTO PHASE II

$$Vr = Cw \times (P/12) \times A$$
$$Cw = 0.74$$
$$P = 2.2 \text{ INCHES}$$
$$A = 85,069 \text{ SF}$$

$$Vr = 0.74 \times (2.2/12) \text{ FT} \times 85,069 \text{ SF}$$

$$Vr = 11,541 \text{ CF}$$

TOTAL RETENTION PROVIDED (Vp)

RETENTION BASIN #1 Vp = 1,509 CF
RETENTION BASIN #2 Vp = 3,804 CF
RETENTION BASIN #3 Vp = 6,431 CF

$$\text{TOTAL } Vp = 11,744 \text{ CF} > 11,541 \text{ CF}$$

SITE DATA

TAX ASSESSOR'S PARCEL NUMBERS: 218-57-978 & 218-57-987

PROPOSED ZONING: RM-3 (MULTIPLE RESIDENCE DISTRICT)

PROPOSED TOTAL NUMBER OF BUILDINGS: 5
PROPOSED TOTAL NUMBER OF UNITS: 30
PROJECTED POPULATION: 60

PROPOSED GROSS SITE AREA: 117,413 SF OR 2.70 ACRES
PROPOSED GROSS DENSITY: 11.1 DU/ACRE

PROPOSED NET SITE AREA: 85,069 SF OR 1.95 ACRES
PROPOSED NET DENSITY: 15.38 DU/AC

DEVELOPER

BELA FLOR COMMUNITIES, LLC
1635 N. GREENFIELD ROAD
SUITE 115
MESA, ARIZONA 85205
CONTACT: HUDD HASSELL
T. 602-525-0000

ENGINEER

E & A CONSULTING GROUP, INC.
2001 W. CAMELBACK ROAD
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T. 602-242-0020
F. 602-242-5722

ARCHITECT/PLANNER

E-PROJECT, LLC
917 W. KATHLEEN ROAD
PHOENIX, AZ 85023
T. 602-481-9282
F. 480-359-4407

BENCHMARK

BRASS TAG IN THE TOP OF CURB AT THE NORTHEAST CORNER OF THE INTERSECTION OF
BASELINE ROAD AND SOSSAMAN ROAD.
ELEVATION = 1388.32 (CITY OF MESA DATUM)

BASIS OF BEARING

SOUTH 89 DEGREES 58 MINUTES 30 SECONDS WEST, BEING THE MONUMENT LINE OF
BASELINE ROAD, ALSO BEING THE SOUTH LINE OF THE SOUTHWEST QUARTER OF
SECTION 32, PER THE FINAL PLAT OF VILLA RIALTO, A CONDOMINIUM, RECORDED IN
BOOK 681 OF MAPS, PAGE 29, MARICOPA COUNTY RECORDS.

FLOOD ZONE INFORMATION

THIS PROJECT IS LOCATED WITHIN ZONE "X" PER MAP NUMBER: 04013C2295L.
DATED OCTOBER 16, 2013.
ZONE "X" IS DEFINED AS:
AREAS OF 0.2% ANNUAL CHANCE 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.

E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

2001 West Camelback Road, Suite 200 Phoenix, AZ 85015
Phone: 602.242.0020 Fax: 602.242.5722
www.eaeg.com



VILLA RIALTO PHASE II
7820 E. BASELINE ROAD
MESA, AZ

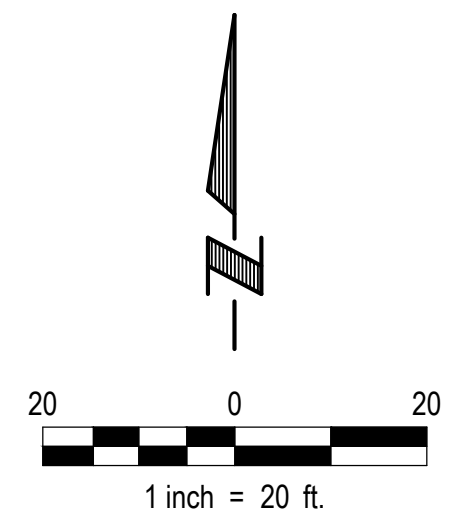
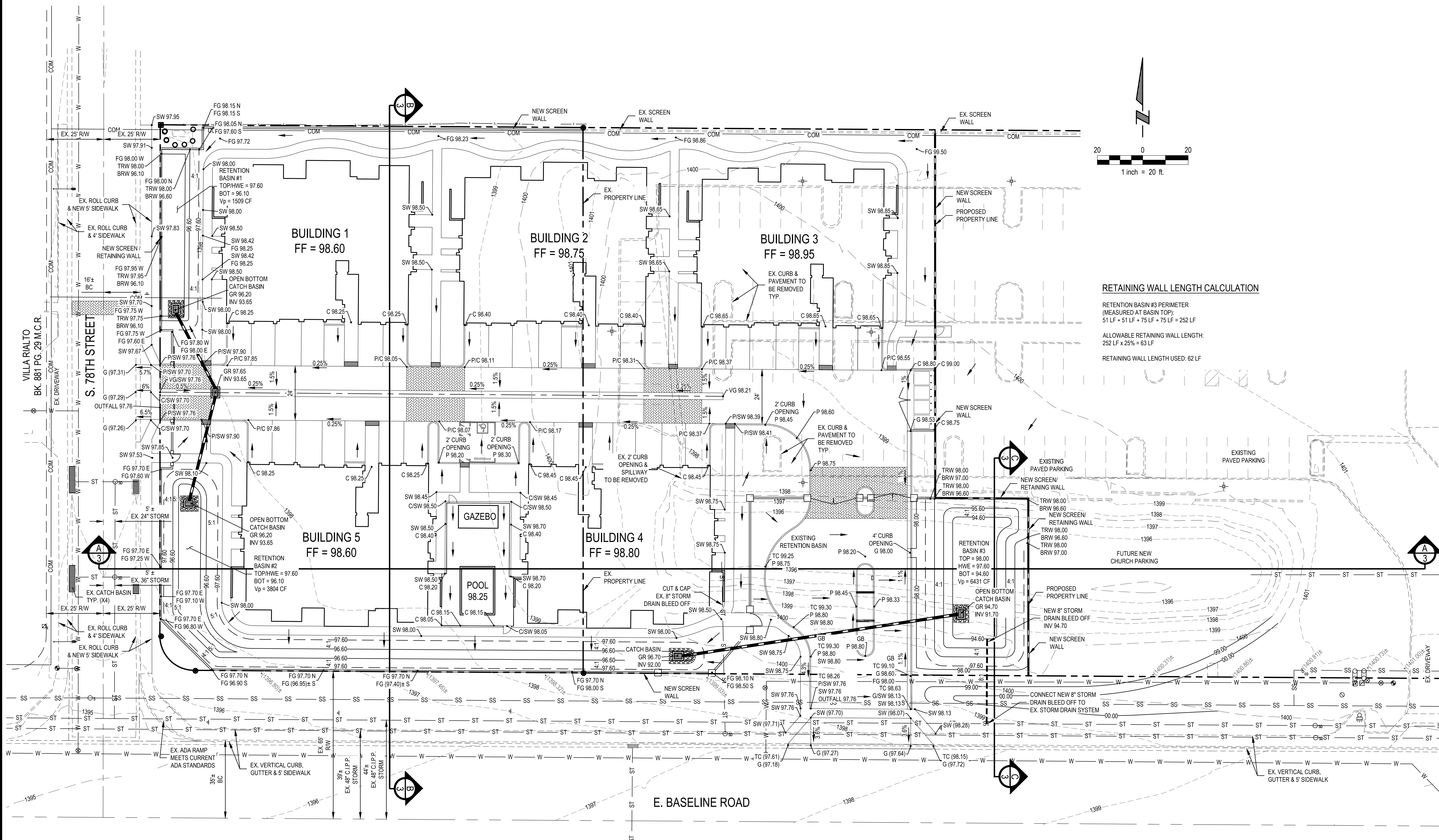
COVER SHEET



Revision	Description	Date
No		
1	08/03/16	M.L.
2		M.L.
3		NONE
4		

Proj No: 2013.110.004
Date: 08/03/16
Designed By: M.L.
Drawn By: M.L.
Scale: NONE
Sheet: 1 of 3





RETAINING WALL LENGTH CALCULATION

RETENTION BASIN #3 PERIMETER
(MEASURED AT BASIN TOP):
51 LF + 51 LF + 75 LF + 75 LF = 252 LF

ALLOWABLE RETAINING WALL LENGTH:
252 LF x 25% = 63 LF

RETAINING WALL LENGTH USED: 62 LF

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www.eag.com

E & A CONSULTING GROUP, INC.
Engineering Answers

VILLA RIALTO PHASE II
7820 E. BASELINE ROAD
MESA, AZ

PRELIMINARY
GRADING & DRAINAGE PLAN

Revision	Description	Date
No		

Proj No: 2013.110.004

Date: 08/03/16

Designed By: MLL

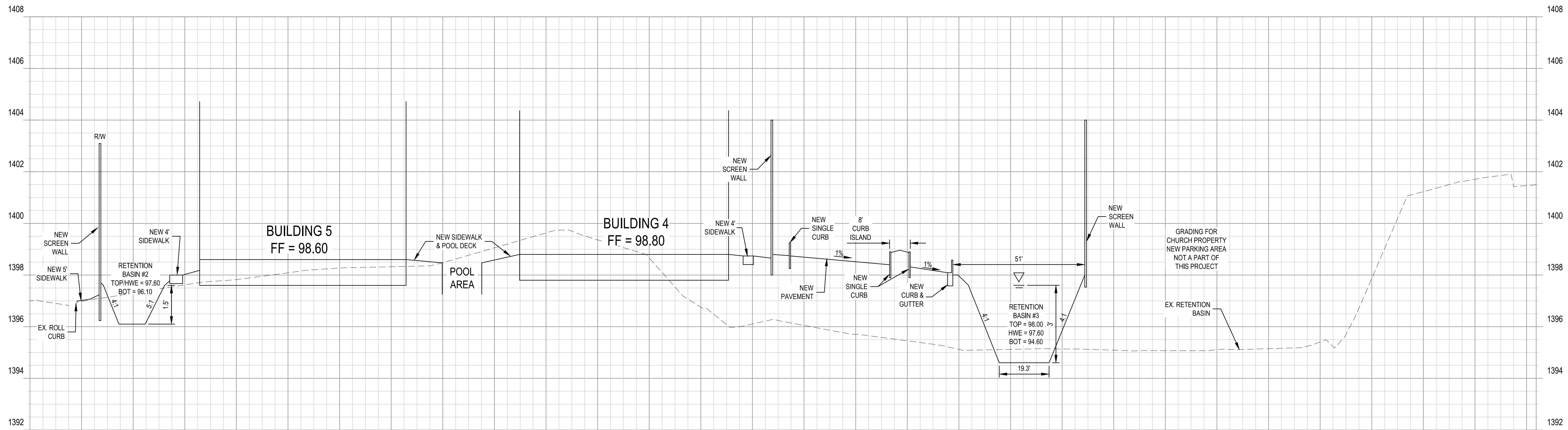
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Scale: 1" = 20'

Sheet: 2 of 3

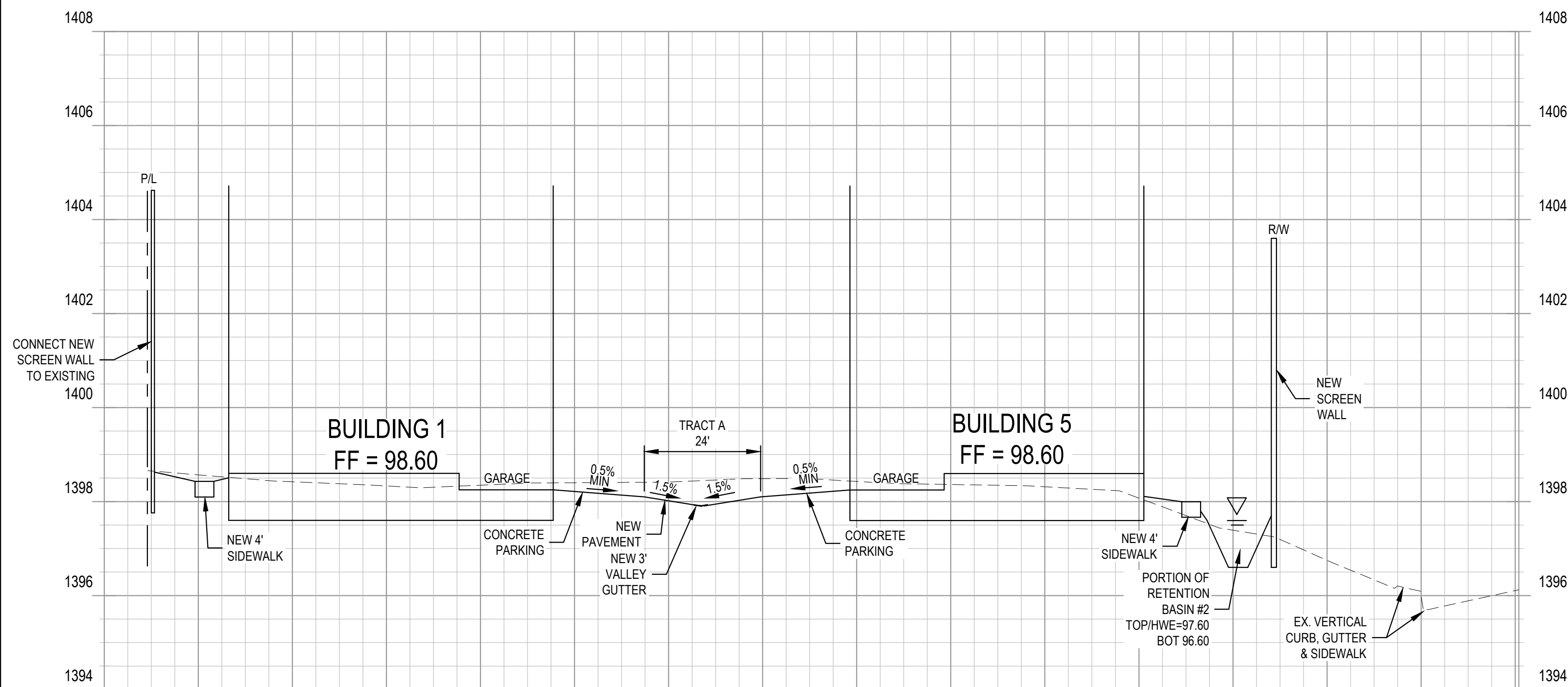
ARIZONA BLUE STAKE
CALL THE STAKE
BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
(except within county)

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Matt Lundberg



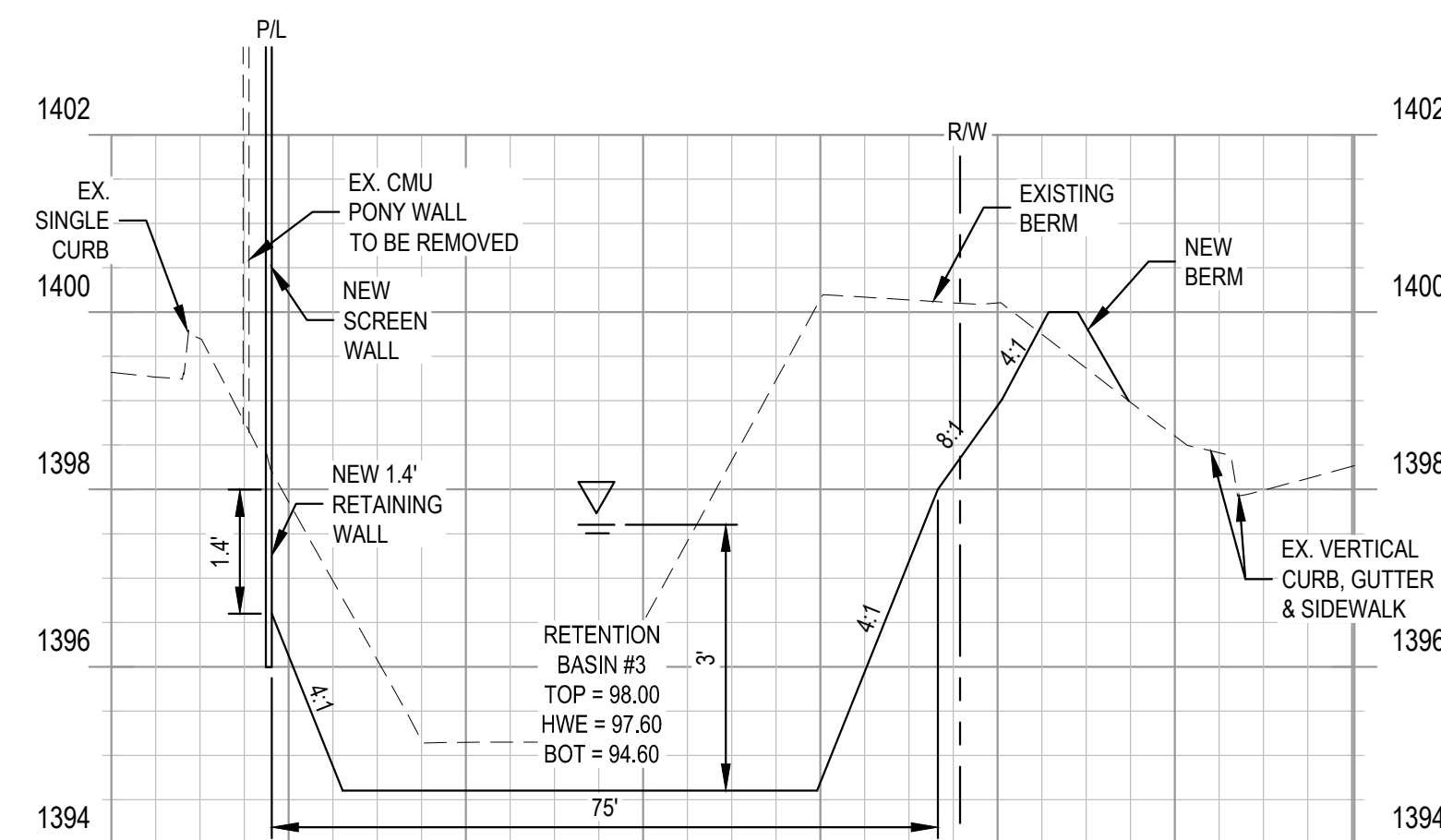
SECTION A-A

1" = 20' (HORIZ)
1" = 2' (VERT)



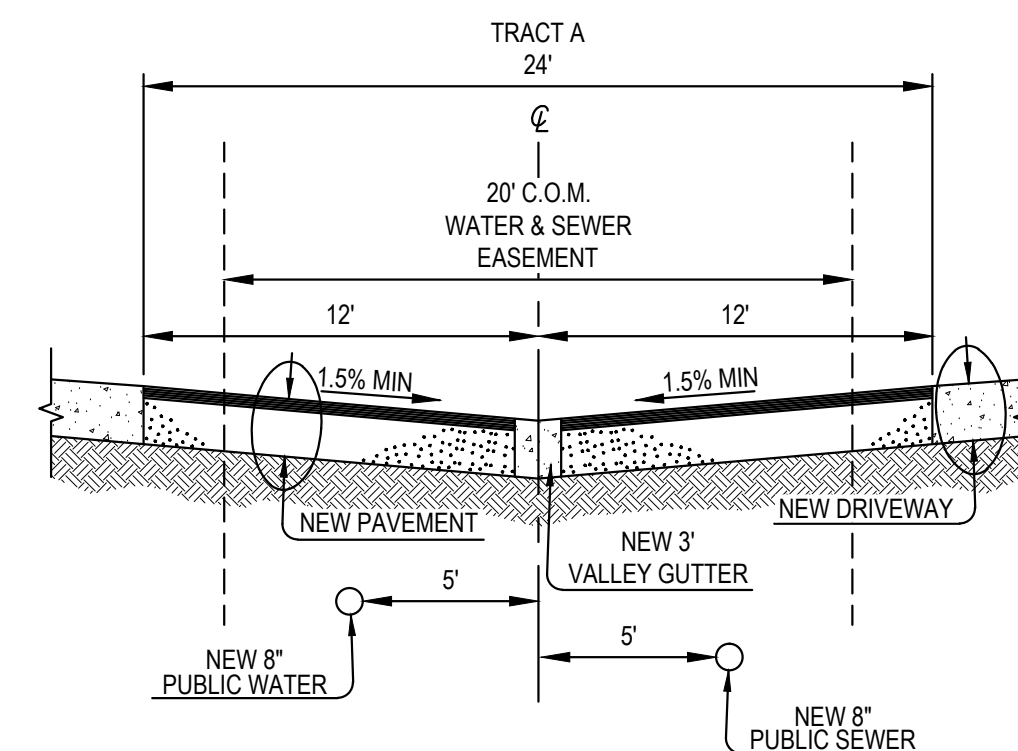
SECTION B-B

1" = 20' (HORIZ)
1" = 2' (VERT)



SECTION C-C

1" = 20' (HORIZ)
1" = 2' (VERT)



**TYPICAL SECTION
PRIVATE STREET
LOOKING EAST**

N.T.S.



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VILLA RIALTO PHASE II
7820 E. BASELINE ROAD
MESA, AZ

SECTIONS



Revision	Description	Date
1	Initial Design	08/03/16
2	Final Design	08/03/16
3	Final Design	08/03/16

Proj No: 2013.110.004
Date: 08/03/16
Designed By: MLL
Drawn By: MLL
Scale: 1" = 20'
Sheet: 3 of 3

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