CITY OF ALBUQUERQUE

August 28, 2014

Mr. David Thompson
Thompson Engineering Consultants
PO Box 65760
Albuquerque, NM 87193

Re: La Vista Subdivision
**   Grading and Drainage Plan**
**   Engineer's Stamp Date 8-28-14 (C19D042A)**

Dear Mr. Thompson,

Based upon the information provided in your submittal received 8-28-14, the above referenced plan is approved for Grading Permit for Lot 17 of La Vista Subdivision. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Building Permit approval, Engineer Certification per the DPM checklist will be required.
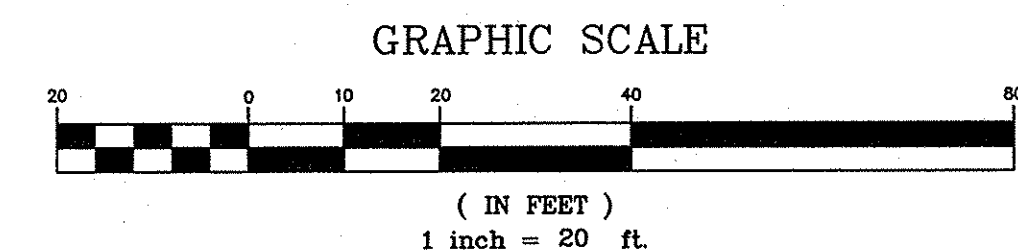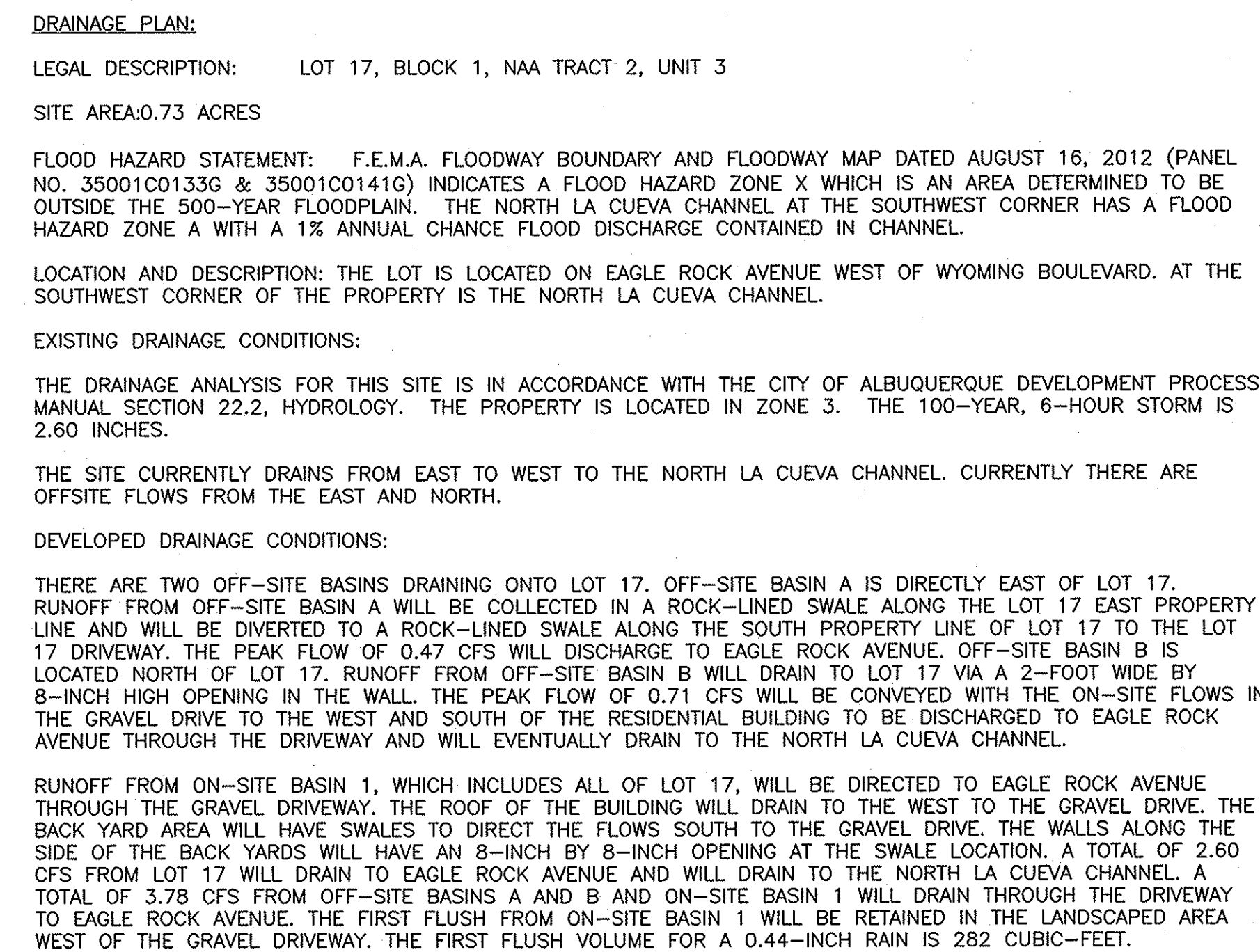
If you have any questions, you can contact me at 924-3994.

Sincerely,

Amy L. D. Niese, P.E.
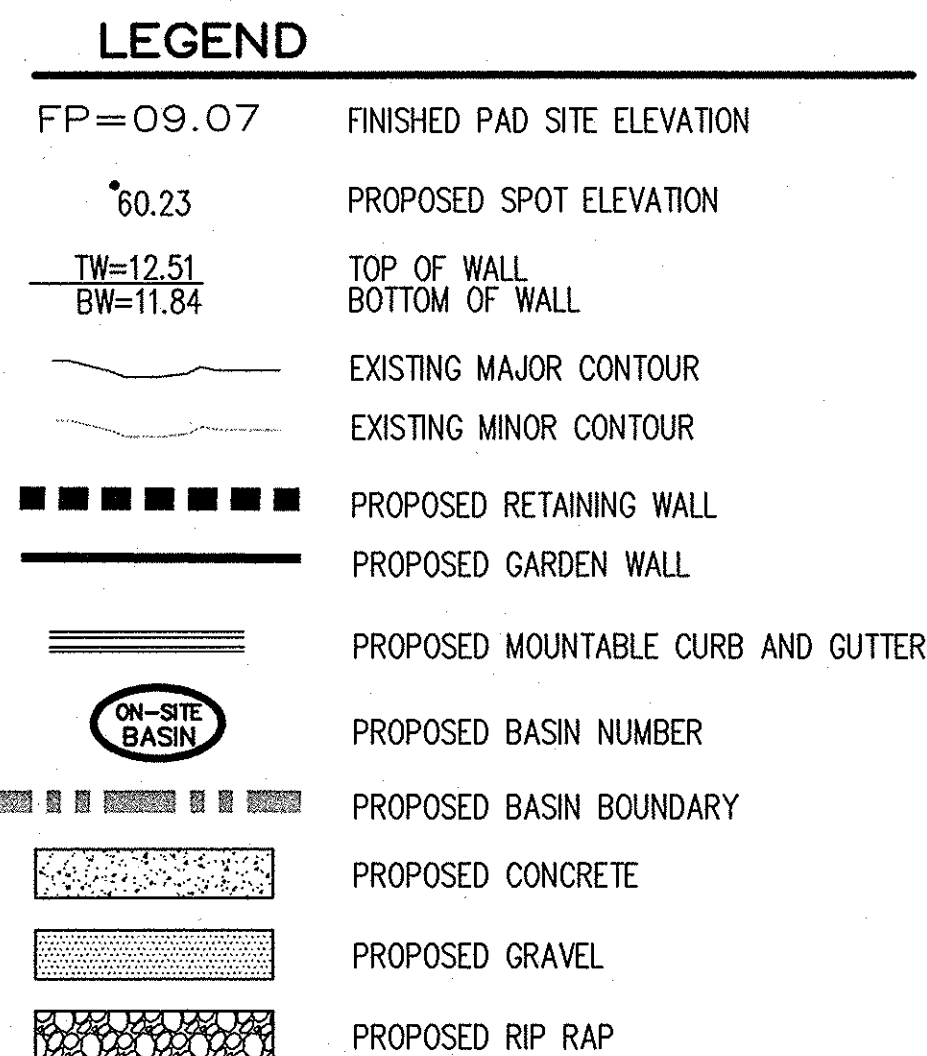Senior Engineer, Hydrology
Planning Department

C: e-mail

ZONE ATLAS: C–19–Z

DRAINAGE PLAN:

LEGAL DESCRIPTION: LOT 17, BLOCK 1, NAA TRACT 2, UNIT 3

SITE AREA: 0.73 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35001C0133G & 35001C0141G) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN. THE NORTH LA CUEVA CHANNEL AT THE SOUTHWEST CORNER HAS A FLOOD HAZARD ZONE A WITH A 1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CHANNEL.

LOCATION AND DESCRIPTION: THE LOT IS LOCATED ON EAGLE ROCK AVENUE WEST OF WYOMING BOULEVARD. AT THE SOUTHWEST CORNER OF THE PROPERTY IS THE NORTH LA CUEVA CHANNEL.

EXISTING DRAINAGE CONDITIONS:

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL SECTION 22.2, HYDROLOGY. THE PROPERTY IS LOCATED IN ZONE 3. THE 100-YEAR, 6-HOUR STORM IS 2.60 INCHES.

THE SITE CURRENTLY DRAINS FROM EAST TO WEST TO THE NORTH LA CUEVA CHANNEL. CURRENTLY THERE ARE OFFSITE FLOWS FROM THE EAST AND NORTH.

DEVELOPED DRAINAGE CONDITIONS:

THERE ARE TWO OFF-SITE BASINS DRAINING ONTO LOT 17. OFF-SITE BASIN A IS DIRECTLY EAST OF LOT 17. RUNOFF FROM OFF-SITE BASIN A WILL BE COLLECTED IN A ROCK-LINED SWALE ALONG THE LOT 17 EAST PROPERTY LINE AND WILL BE DIVERTED TO A ROCK-LINED SWALE ALONG THE SOUTH PROPERTY LINE OF LOT 17 TO THE LOT 17 DRIVEWAY. THE PEAK FLOW OF 0.47 CFS WILL DISCHARGE TO EAGLE ROCK AVENUE. OFF-SITE BASIN B IS LOCATED NORTH OF LOT 17. RUNOFF FROM OFF-SITE BASIN B WILL DRAIN TO LOT 17 VIA A 2-FOOT WIDE BY 8-INCH HIGH OPENING IN THE WALL. THE PEAK FLOW OF 0.71 CFS WILL BE CONVEYED WITH THE ON-SITE FLOWS IN THE GRAVEL DRIVE TO THE WEST AND SOUTH OF THE RESIDENTIAL BUILDING TO BE DISCHARGED TO EAGLE ROCK AVENUE THROUGH THE DRIVEWAY AND WILL EVENTUALLY DRAIN TO THE NORTH LA CUEVA CHANNEL.

RUNOFF FROM ON-SITE BASIN 1, WHICH INCLUDES ALL OF LOT 17, WILL BE DIRECTED TO EAGLE ROCK AVENUE THROUGH THE GRAVEL DRIVEWAY. THE ROOF OF THE BUILDING WILL DRAIN TO THE WEST TO THE GRAVEL DRIVE. THE BACK YARD AREA WILL HAVE SWALES TO DIRECT THE FLOWS SOUTH TO THE GRAVEL DRIVE. THE WALLS ALONG THE SIDE OF THE BACK YARDS WILL HAVE AN 8-INCH BY 8-INCH OPENING AT THE SWALE LOCATION. A TOTAL OF 2.60 CFS FROM LOT 17 WILL DRAIN TO EAGLE ROCK AVENUE AND WILL DRAIN TO THE NORTH LA CUEVA CHANNEL. A TOTAL OF 3.78 CFS FROM OFF-SITE BASINS A AND B AND ON-SITE BASIN 1 WILL DRAIN THROUGH THE DRIVEWAY TO EAGLE ROCK AVENUE. THE FIRST FLUSH FROM ON-SITE BASIN 1 WILL BE RETAINED IN THE LANDSCAPED AREA WEST OF THE GRAVEL DRIVEWAY. THE FIRST FLUSH VOLUME FOR A 0.44-INCH RAIN IS 282 CUBIC-FEET.

Site Plan Labels

Wyoming Blvd., NE

78' R/W + 30' Roadway Easement

Northern La Cueva Channel (100' R/W)

EAGLE ROCK AVE (30' Roadway Easement)

EXISTING RETAINING WALLS

ON-SITE BASIN 1

FIRST FLUSH POND V=282 CF

2' WIDE X 8" HIGH OPENING IN WALL

ROCK LINED SWALE

8"x8" OPENING

Garage 91.07 / FP=89.15
Entrance 88.82
Garage 88.82 / FP=89.15
Entrance 88.82
Garage 88.82 / FP=89.15
Entrance 88.82
Garage 88.82 / FP=89.15
Entrance 88.82
Garage 88.82 / FP=89.15
Entrance 88.82

LOT 17

TW=90.00 / BW=88.50
TW=89.00 / BW=85.00
TW=88.80 / BW=84.80
TW=87.60 / BW=84.00
TW=87.50 / BW=86.00
TW=87.15 / BW=86.00
TW=93.40 / BW=90.00

PROPOSED 4' SIDEWALK

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

ROCK-LINED SWALE (NTS)

WIDTH VARIES (2' MIN. / 4' MAX.)
NOTE: WIDTH TO VARY TO ACHIEVE NATURAL APPEARANCE

FINISHED GRADE
2' | 2'
6" MIN.

3"+ CLEAN RIVER ROCK (VARY SIZE)
INSTALL FILTER FABRIC

LEGEND

Symbol	Description
FP=09.07	FINISHED PAD SITE ELEVATION
60.23	PROPOSED SPOT ELEVATION
TW=12.51 / BW=11.84	TOP OF WALL / BOTTOM OF WALL
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED RETAINING WALL
	PROPOSED GARDEN WALL
	PROPOSED MOUNTABLE CURB AND GUTTER
ON-SITE BASIN	PROPOSED BASIN NUMBER
	PROPOSED BASIN BOUNDARY
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	PROPOSED RIP RAP

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	A (%)	B (%)	C (%)	D (%)	WEIGHTED E (in)	V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(24-hr) (acre-ft)	V(24-hr) (cu-ft)	Q (cfs)
							LAND TREATMENT		100-YEAR PRECIPITATION		
EXISTING CONDITIONS											
OFF-SITE A	0.2535	100.00	0.00	0.00	0.00	0.66	0.01	607	0.01	607	0.47
OFF-SITE B	0.3790	100.00	0.00	0.00	0.00	0.66	0.02	908	0.02	908	0.71
ON-SITE 1	0.7277	100.00	0.00	0.00	0.00	0.66	0.04	1,743	0.04	1,743	1.36
TOTAL RUNOFF	1.36						0.07	3,259	0.07	3,259	2.54
PROPOSED CONDITIONS											
ON-SITE 1	0.7277	0.00	43.50	25.20	31.30	1.46	0.09	3,867	0.10	4,281	2.60
TOTAL RUNOFF	0.73						0.09	3,867	0.10	4,281	2.60

	A	B	C	D	
EXCESS PRECIP		0.66	0.92	1.29	2.36	E₁ (in)
PEAK DISCHARGE		1.87	2.6	3.45	5.02	Q₁₀₀ (cfs)

ZONE = 3
P₆ₕₘ (in.) = 2.60
P₆ₕᵣ (in.) = 3.10
P₂₄ₐᵥ (in.) = 4.90

$$\text{WEIGHTED } E \text{ (in)} = (E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$$
$$V_{6hr} \text{ (acre-ft)} = (\text{WEIGHTED } E)(\text{AREA})/12$$
$$V_{24day} \text{ (acre-ft)} = V_{6hr} + (A_D)(P_{24day} - P_{6HR})/12$$
$$Q \text{ (cfs)} = (Q_{BN})(A_A) + (Q_{PG})(A_B) + (Q_{PD})(A_C) + (Q_{PD})(A_D)$$

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
TRANSPORTATION DEVELOPMENT

LOT 17, BLOCK 1, NAA TRACTS 2, UNIT 3
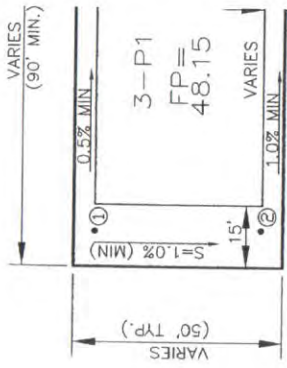**GRADING AND DRAINAGE PLAN FOR LOT 17**

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.

City Project No. XXXXXX	Zone Map No. C-19-Z	Sheet 1	Of 1

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT				WEIGHTED E (in)	100-YEAR PRECIPITATION				Q (cfs)
		A (%)	B (%)	C (%)	D (%)		V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(24-hr) (acre-ft)	V(24-hr) (cu-ft)	
					EXISTING CONDITIONS						
OFF-SITE A	0.0507	100.00	0.00	0.00	0.00	0.66	0.00	121	0.00	121	0.09
OFF-SITE B	0.1562	100.00	0.00	0.00	0.00	0.66	0.01	374	0.01	374	0.29
TOTAL RUNOFF	0.21						0.01	496	0.01	496	0.39

EXCESS PRECIP		0.66	0.92	1.29	2.38	E_i (in)
PEAK DISCHARGE		1.87	2.6	3.45	5.02	Q_m (cfs)

WEIGHTED E (in) = $(E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$
V_{6HR} (acre-ft) = (WEIGHTED E)(AREA)/12
V_{100HR} (acre-ft) = $V_{6HR} + (A_D)(P_{100HR} - P_{6HR})/12$
Q (cfs) = $(Q_{mA})(A_A) + (Q_{mB})(A_B) + (Q_{mC})(A_C) + (Q_{mD})(A_D)$

ZONE = 3
P_{6HR} (in.) = 2.60
P_{24HR} (in.) = 3.10
P_{100HR} (in.) = 4.90

ZONE ATLAS: C-19-Z

SITE
EAGLE ROCK

OFF-SITE BASIN A

OFF-SITE BASIN B

EAGLE ROCK AVE.

FUTURE 6' SIDEWALK
FUTURE SOUTH BOUND LANES
FUTURE MEDIAN
EXIST. C&G
EXISTING LANES
WYOMING BLVD.

EXISTING EDGE OF PVMT
EXISTING EDGE OF PVMT

71.4108'

LEGEND

FP=09.07	FINISHED PAD SITE ELEVATION
•60.23	PROPOSED SPOT ELEVATION
TW=12.51 / BW=11.84	TOP OF WALL / BOTTOM OF WALL
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
▪▪▪▪▪▪	PROPOSED RETAINING WALL
	PROPOSED MOUNTABLE CURB AND GUTTER
(ON-SITE BASIN)	PROPOSED BASIN NUMBER
	PROPOSED BASIN BOUNDARY
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	PROPOSED RIP RAP

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
TRANSPORTATION DEVELOPMENT

LOT 17, BLOCK 1, NAA TRACTS 2, UNIT 3
WYOMING IMPROVEMENT LAYOUT

DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL

DESIGNED BY DBT	DATE 8-2014
DRAWN BY DEM	DATE 8-2014
CHECKED BY DBT	DATE 8-2014

City Project No. XXXXXX | Zone Map No. C-19-Z | Sheet 1 | Of 1

AS BUILT INFORMATION
MICRO-FILM INFORMATION
BENCH MARKS
SURVEY INFORMATION
FIELD NOTES
ENGINEER'S SEAL
REMARKS
DESIGN

TYPICAL LOT GR

3-P1
FP=
48.15

TO SET SPOT ① - SUBTRACT 0.25'
TO SET SPOT ② - SUBTRACT LENGT
TO SET SPOT ③ - SUBTRACT LENGT
TO SET SPOT ④ - SUBTRACT LENGT
TO SET SPOT ⑤ - MULTIPLY D1 BY

VARIES (90' MIN.)
0.5% MIN
S=1.0% (MIN)
15'
1.0% MIN
VARIES (50' TYP.)
VARIES

DRAINAGE PLAN:

LEGAL DESCRIPTION: L(
                     NORTH ALB(

SITE AREA: 1.92 ACRES

FLOOD HAZARD STATEMENT
35001C0133G & 35001C014
FLOODPLAIN. THE NORTH (
CHANCE FLOOD DISCHARGE

LOCATION AND DESCRIPTION
EAGLE ROCK AVENUE. AT T

EXISTING DRAINAGE CONDITI

THE DRAINAGE ANALYSIS F(
22.2, HYDROLOGY. THE PR

THE SITE CURRENTLY DRAIN
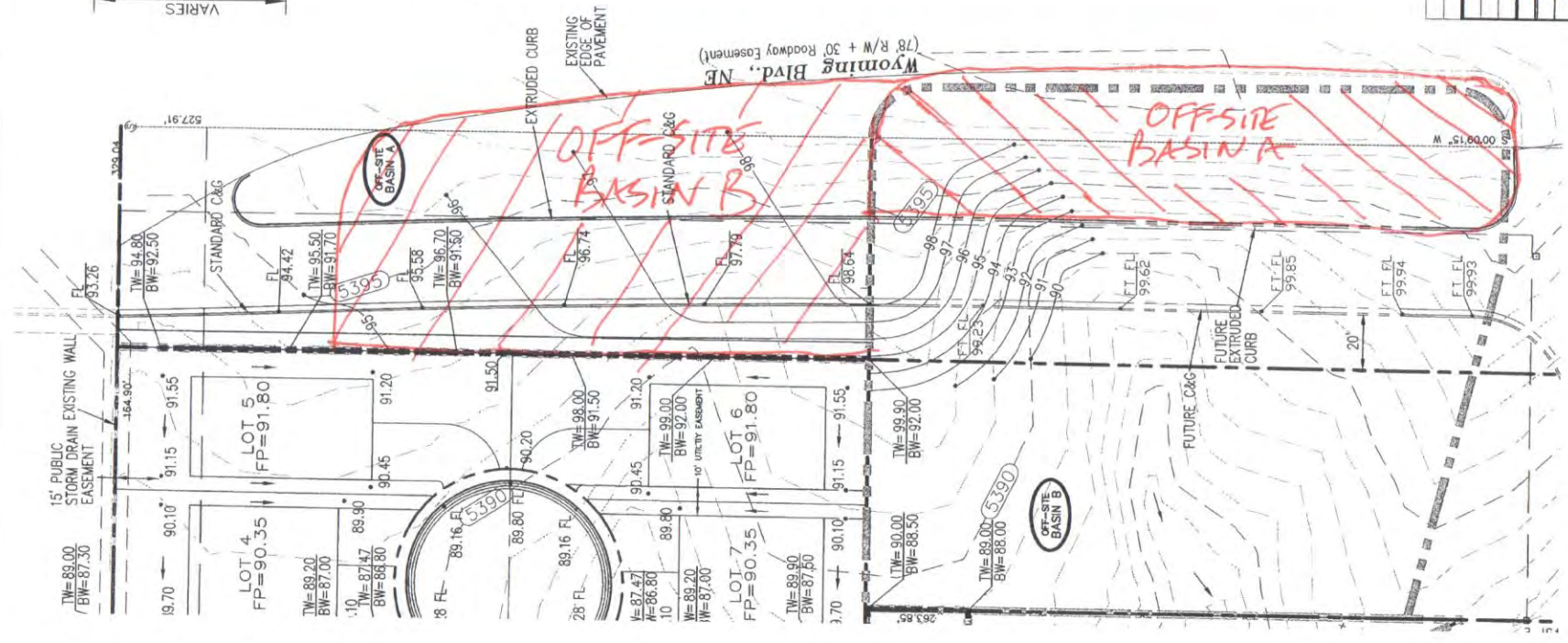THERE ARE OFFSITE FLOWS
EXISTING 108 INCH RCP ST(

DEVELOPED DRAINAGE CON(

THE PROPERTY HAS BEEN (
PORTION OF WYOMING BOUL
IN A TEMPORARY RETENTION
1,126 CUBIC FEET. THE PON
CONSTRUCTED TO ACCOMO(
FLOWS WILL BE DIRECTED N
REACHING THE SUBDIVISION.
CUEVA CHANNEL.

RUN-OFF FROM ON-SITE B
TOWARD THE CUL-DE-SAC,
DISCHARGED TO THE LA CU
COURT. RUNOFF FROM ON-
CHANNEL. TOTAL RUNOFF F

N(

100-Y(		LAND TREA	
		A	B
BASIN #	AREA (acre)	(%)	(%)
OFF-SITE A	0.4700	0.00	0.00
OFF-SITE B	1.0000	0.00	0.00
ON-SITE 1	1.5500	0.00	0.00
ON-SITE 2	0.3700	0.00	0.00
TOTAL RUNOFF	3.39		
ON-SITE 1	1.5500	0.00	0.00
ON-SITE 2	0.3700	0.00	0.00
TOTAL RUNOFF	1.92		

Wyoming Blvd., NE
(78' R/W + 30' Roadway Easement)

EXISTING EDGE OF PAVEMENT
EXTRUDED CURB
STANDARD C&G

OFF-SITE BASIN B

OFF-SITE BASIN A

OFF-SITE BASIN A

OFF-SITE BASIN B

LOT 5 FP=91.80
LOT 4 FP=90.35
LOT 6 FP=91.80
LOT 7 FP=90.35

15' PUBLIC STORM DRAIN EASEMENT
EXISTING WALL

FUTURE C&G
FUTURE EXTRUDED CURB

TOOL ALL CORNERS
4 GAUGE 6"x6" WWF

LOT 17 BASIN EXHIBIT