

CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

July 11, 2017

Jean J. Bordenave, PE
PO Box 91194
Albuquerque, NM, 87199

**RE: Lead Ave. SW Condominiums
Grading Plan
Stamp Date: 7/10/17
Hydrology File: K13D075**

Dear Mr. Bordenave:

Based upon the information provided in your re-submittal received 7/7/2017, the Grading Plan is approved for Building Permit.

As a reminder this will need a Hydrology approval for Pad Certification for Building Permit. Once this lot is ready, please submit the Drainage Info Sheet along with the Engineering Certification from you for the pad grading. Then just email me a field photo(s) of the pad and I will write a hydrology pad certification letter.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Reneé C. Brissette

Reneé C. Brissette, P.E.
Senior Engineer, Hydrology
Planning Department

July 8, 2017

City of Albuquerque
Hydrology, Planning Dept.
PO Box 1293
Albuquerque, NM 87103

Attn: Renee C. Brissette, PE
Re: K13/D075

The following is written in response to your comments (dated 04/06/17) on the subject project. First let me explain that the Architect had asked me to send him a drawing of the vehicular access from the site to Lead Ave. It was not my intent for the progress drawing to be used for any other purpose. I have been swamped for months and am finally submitting a response. The responses are in the same order as your comments.

1. The Vicinity Map and the FEMA FIRM map have been added to sheet C1-1
2. The Keyed Notes are completely rewritten.
3. The Keyed Notes are completely rewritten.
4. The drainage data is shown on C1-2.
5. Since the existing conditions have no impact on the project on the design it is requested that the calculations be accepted as they are. Basin A discharges to the alley.
6. See response on comment 4.
7. Arrows have been added.
8. Front yard ponds are noted on sheet C1-1.
9. It is located at the south end of Basin B.
10. This was a previous drainage scheme designed in 2014 for a different site plan for the same site..



I truly apologize for this situation.

Sincerely,



Jean J.(Jake) Bordenave

[illegible]

GRADING NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE NEW MEXICO ONE CALL SYSTEM AT 260-1990 FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY THE CONSTRUCTION OF TEMPORARY SOIL BERMS OR SILT FENCES AT PROPERTY LINES AND WETTING SOIL TO PREVENT IT FROM BLOWING. IF THE SITE IS CONTROLLED BY A SWPPP PLAN, EROSION CONTROL SHALL BE ACCOMPLISHED ACCORDING TO THE PLAN.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. THE CONTRACTOR SHALL SECURE THE APPROPRIATE BARRICADING, TOP SOIL DISTURBANCE AND EXCAVATION PERMITS FROM THE CITY PRIOR TO BEGINNING CONSTRUCTION.

1. THE SITE WAS PREVIOUSLY DEVELOPED. ALL BUT ONE OF THE ORIGINAL STRUCTURES WERE RAZED. THE REMAINING STRUCTURE (BUILDING A) HAS BEEN COMPLETELY REMODELED UNDER A PREVIOUS BUILDING PERMIT. THE GARAGES SOUTH OF BUILDING A WERE CONSTRUCTED UNDER THAT SAME BUILDING PERMIT. THE BALANCE OF THE SITE IS VACANT.
2. THE SITE IS LOCATED IN RAINFALL ZONE 2. DUE TO INADEQUATE STORM DRAINAGE FACILITIES IN THE AREA THE SITE HAS AN ALLOWABLE PEAK DISCHARGE RATE OF 2.75 CFS/ACRE PER COA HYDROLOGY PRE DESIGN MEETING. THE EXCESS FLOW WILL BE OBTAINED IN SURFACE PONDS WITH CONTROLLED DISCHARGES TO PUBLIC RIGHTS-OF-WAY. RUNOFF FROM BASIN 'A' WAS ALLOWED TO DIRECT DISCHARGE TO THE ALLEY IN THE PREVIOUS BUILDING PERMIT AS AN EXISTING CONDITION. RUNOFF FROM BASIN 'B' IS ROUTED THROUGH A RETENTION POND WHICH RETAINS WATER HARVESTED FLOWS. RUNOFF FROM BASINS 'C' AND 'D' IS ROUTED TO PONDS WITH CONTROLLED DISCHARGE OUTLETS. RETENTION OF WATER HARVESTING (0.44" FROM IMPERVIOUS AREAS) IS PROVIDED IN THE BASE OF THESE PONDS. BASIN 'E' IS DIRECT DISCHARGED TO THE ALLEY DUE TO GRADE RESTRAINTS. BASIN 'F' WATER HARVESTED FLOW WILL BE RETAINED IN SHALLOW FRONT YARD PONDS.
3. TOPO SURVEY DATA SHOWN ON THIS DRAWING WAS OBTAINED BY HARRIS SURVEYING, INC. DATED OCTOBER, 2013.

[illegible]

The diagram illustrates the cross-section of a valley gutter installation. The gutter is a trapezoidal channel with a depth of 6 inches. The top width of the gutter is 12 inches minimum, and the bottom width is 2 feet 0 inches. The side slopes are 1 1/2 inches vertical to 6 inches horizontal. The gutter is filled with 3000 PSI Portland Cement Concrete. Below the gutter is a 6-inch layer of subgrade preparation (95% modified proctor), and below that is a compacted subgrade (90% modified proctor). The diagram also shows the gutter's position relative to the subgrade and the compacted subgrade.

12" MIN.

2'-0"

1 1/2"

6"

VALLEY GUTTER (3000 PSI PORTLAND CEMENT CONCRETE)

6" SUBGRADE PREPARATION (95% MODIFIED PROCTOR)

COMPACTED SUBGRADE (90% MODIFIED PROCTOR)

SEE SITE PLAN
FOR WIDTH

6"

SLOPE AT 1/4"
PER FOOT UNLESS
OTHERWISE SHOWN

4" PORTLAND CEMENT CONCRETE SIDEWALK
(4000 PSI CONCRETE)

6" SUBGRADE PREPARATION (95%
MODIFIED PROCTOR)

COMPACTED SUBGRADE (90%
MODIFIED PROCTOR)

The diagram illustrates a cross-section of a pavement structure. It consists of four distinct layers, each with a different texture or pattern. From top to bottom, the layers are:

- 3" ASPHALT SURFACE COURSE:** The top layer, shown with a diagonal hatching pattern.
- 4" AGGREGATE BASE COURSE:** The second layer, shown with a coarse aggregate pattern.
- 6" SUBGRADE PREPARATION (95% MODIFIED PROCTOR):** The third layer, shown with a fine aggregate or sand pattern.
- COMPACTED SUBGRADE (90% MODIFIED PROCTOR):** The bottom layer, shown with a brick-like or interlocking pattern.

Four vertical lines with circular markers at the top and bottom of each layer indicate the thickness of each course. Labels with leader lines point to each layer from the right side of the diagram.

1. ASPHALT MIX DESIGN TO USE CITY OF ALBUQUERQUE AGGREGATE CLASS TYPE 'C' AND HAVE A MARSHALL STABILITY GREATER THAN 1800 LBS.
2. ASPHALT CONCRETE COURSES GREATER THAN 3" IN THICKNESS SHALL BE PLACED WITH MULTIPLE LIFTS. MINIMUM LIFT THICKNESS SHALL BE 1-1/2".

3'-6"

2'-6"

1

3

100

CONCRETE CHANNEL

LANDSCAPING
FILTER FABRIC

4'x4'x8" EROSION CONTROL
PAD, UNIFORMLY GRADED,
1"-4" ROCK COBBLE.

BOTTOM OF POND

CONDITION	B A S I N	STORM RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	UNFLOW VOLUME	UNFLOW RATE
		- year	(table 4)	- sq. ft.	(table 8) in.	(table 9) cfs/acre	cu. ft.	cfs
EXISTING	S I T E	10	A	28400	0.13	0.38	308	0.25
			B	0	0.28	0.95	0	0.00
			C	0	0.52	1.71	0	0.00
			D	0	1.34	3.14	0	0.00
			TOTAL	28400			308	0.25
		100	A	28400	0.53	1.56	1254	1.02
			B	0	0.78	2.28	0	0.00
			C	0	1.13	3.14	0	0.00
			D	0	2.12	4.7	0	0.00
			TOTAL	28400			1254	1.02
DEVELOPED	S I T E	10	A	0	0.13	0.38	0	0.00
			B	6236	0.28	0.95	146	0.14
			C	1025	0.52	1.71	44	0.04
			D	21139	1.34	3.14	2361	1.52
			TOTAL	28400			2550	1.70
		100	A	0	0.53	1.56	0	0.00
			B	6236	0.78	2.28	405	0.33
			C	1025	1.13	3.14	97	0.07
			D	21139	2.12	4.7	3735	2.28
			TOTAL	28400			4236	2.68
	A	100	A	0	0.53	1.56	0	0.00
			B	1329	0.78	2.28	86	0.07
			C	0	1.13	3.14	0	0.00
			D	5879	2.12	4.7	1039	0.63
			TOTAL	7208			1125	0.70
	B	100	A	0	0.53	1.56	0	0.00
			B	1028	0.78	2.28	67	0.05
			C	0	1.13	3.14	0	0.00
			D	974	2.12	4.7	172	0.11
			TOTAL	2002			239	0.16
	C	100	A	0	0.53	1.56	0	0.00
			B	1913	0.78	2.28	124	0.10
			C	0	1.13	3.14	0	0.00
			D	8536	2.12	4.7	1508	0.92
			TOTAL	10449			1632	1.02
	D	100	A	0	0.53	1.56	0	0.00
			B	905	0.78	2.28	59	0.05
			C	0	1.13	3.14	0	0.00
			D	5050	2.12	4.7	892	0.54
			TOTAL	5955			951	0.59
	E	100	A	0	0.53	1.56	0	0.00
			B	0	0.78	2.28	0	0.00
			C	1025	1.13	3.14	97	0.07
			D	390	2.12	4.7	69	0.04
			TOTAL	1415			165	0.12
	F	100	A	0	0.53	1.56	0	0.00
			B	1061	0.78	2.28	69	0.06
			C	0	1.13	3.14	0	0.00
			D	310	2.12	4.7	55	0.03
			TOTAL	1371			124	0.09

WATER HARVESTING CALCULATIONS:

BASIN A
Not Applicable- existing site

BASIN B
(0.44-0.10)(974)/12 = 24.4 cfs.
Provide 3" deep pond w/ minimum volume of 30 cfs.
Volume shown is for the entire basin (construct a communal pond near alley).

BASIN C
(0.44-0.10)(8536)/12= 213.4 cfs.
Provide 1" uncrushed aggregate filled pond w/ a minimum bulk aggregate volume of 640 cfs.

BASIN D
(0.44-0.10)(5050)/12= 126.3 cfs.
Provide 1" uncrushed aggregate filled pond w/ minimum bulk aggregate volume of 380 cfs.

BASIN E
(0.44-0.10)(390)/12= 9.7 cfs.
No type A or B surface available for ponds.

BASIN F
(0.44-0.10)(310)/12= 7.8 cfs.
area shown in calculation is for each unit each unit to have a front yard pond
Provide 4-3" deep ponds with minimum volume 8.6 cfs. each

EMERGENCY OVERFLOW CALCULATIONS:
Sized as a Broad Crested Weir

BASIN B
Peak Discharge = 0.16 cfs (from table at left)
Q = CLH^{0.5}, assume C=2.8, H=0.25'
Therefore L=0.45', use 6"

BASIN C
Peak Discharge = 1.02 cfs (from table at left)
Q = CLH^{0.5}, assume C=2.8, H=0.25'
Therefore L=2.91', use 36"

BASIN D
Peak Discharge = 0.59 cfs (from table at left)
Q = CLH^{0.5}, assume C=2.8, H=0.25'
Therefore L=1.68', use 20"</

Diagram illustrating the construction of a detention storage pond, showing the layers and components:

- EXTERIOR WALL OF RESIDENTIAL UNIT.
- IMPERMEABLE MEMBRANE
- DETENTION STORAGE
- 2" LAYER OF COARSE SAND OR PEA GRAVEL
- FILTER FABRIC (MIRAFI 140N OR APPROVED EQUAL), FULLY ENCLOSE GRAVEL LAYER. MINIMUM 12" LAPS AT JOINTS.
- LAYER OF 1" CLEAN, UNCRUSHED GRAVEL (RETENTION STORAGE)
- NATIVE SOIL

NOTE: LENGTH OF RETENTION STORAGE LAYER TO MATCH BOTTOM LENGTH OF DETENTION POND. SEE KEYED NOTES 11, 12, & 13 SHT C1-2 FOR RETENTION STORAGE LAYER THICKNESS.

TBM	TEMPORARY BENCHMARK	GM	GAS METER
G	GROUND	GV	GAS VALVE
FF	FINISH FLOOR	LP	LIGHT POLE
FG	FINISH GRADE	PP	POWER POLE
FL	FLOWLINE	GW	GUY WIRE
TA	TOP OF ASPHALT	PED	ELEC. OR TEL. PEDESTAL
TC	TOP OF CONCRETE	RD ►	SCUPPER OR CANALE
BC	TOP OF CURB	---	EXISTING TOPO OBJECT
TP	TOP OF EARTH PAD	—	PROPOSED TOPO OBJECT
TS	TOP OF SIDEWALK		
TW	TOP OF WALL		
FH	FIRE HYDRANT		
WM	WATER METER		
WV	WATER VALVE		
MH	MANHOLE		
CB	CATCH BASIN GRATE		

	EXISTING 1' CONTOUR
	EXISTING 0.5' CONTOUR
	EXISTING SPOT ELEVATION
● XX.XX	PROPOSED SPOT ELEVATION
<u>XX.XX</u> XX.XX	RECORD SPOT ELEVATION
	INDICATES RECORD WITHIN CONSTRUCTION TOLERANCE

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		07/07/17	
design JUB	drawn METO	SHEET C2-2	