

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



October 2, 2014

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

Richard J. Berry, Mayor

**RE: Hurt Residence, Lot 11, Block 5 Unser Cliffs
Grading and Drainage Plan
Engineer's Stamp Date 10-1-14 (File: E10D025)**

Dear Mr. Soule:

Development in SAD 227 is to comply with the SAD 227, Unser Boulevard Middle Section Drainage Report (Wilson & Co, 2003) which states: "an architectural review committee for the property owners association will control and monitor the lot development". Therefore the SAD 227 Development Guidelines are enforced by the architectural review committee, and includes the Grading and Drainage guidelines. In general, the Guidelines allow for cross-lot drainage and the downstream properties are to carry the flow to the street. Cut and fill is to be kept to a minimum.

PO Box 1293

Grading and Drainage Plans and a formal review from hydrology will generally not be required for SAD 227 unless there is potential for upstream or downstream properties to be adversely affected. Nonetheless, the architectural review committee should be reviewing all lots for adherence to the guidelines.

Albuquerque

New Mexico 87103

Based upon the information provided in your submittal received 9-30-14, this lot discharges runoff to public ROW/easements and not into adjacent lots, and does not require a formal review from hydrology. Since a Grading and Drainage plan has been submitted, Hydrology has reviewed the submittal anyhow. Based upon our review, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan in the construction sets when submitting for a building permit.

www.cabq.gov

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf: via Email: Recipient, Monica Ortiz



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: _____ Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: _____

City Address: _____

Engineering Firm: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Owner: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- _____ DRAINAGE REPORT
- _____ DRAINAGE PLAN 1st SUBMITTAL
- _____ DRAINAGE PLAN RESUBMITTAL
- _____ CONCEPTUAL G & D PLAN
- _____ GRADING PLAN
- _____ EROSION & SEDIMENT CONTROL PLAN (ESC)
- _____ ENGINEER'S CERT (HYDROLOGY)
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ ENGINEER'S CERT (TCL)
- _____ ENGINEER'S CERT (DRB SITE PLAN)
- _____ ENGINEER'S CERT (ESC)
- _____ SO-19
- _____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- _____ SIA/FINANCIAL GUARANTEE RELEASE
- _____ PRELIMINARY PLAT APPROVAL
- _____ S. DEV. PLAN FOR SUB'D APPROVAL
- _____ S. DEV. FOR BLDG. PERMIT APPROVAL
- _____ SECTOR PLAN APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY (PERM)
- _____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- _____ FOUNDATION PERMIT APPROVAL
- _____ BUILDING PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ WORK ORDER APPROVAL
- _____ GRADING CERTIFICATION
- _____ SO-19 APPROVAL
- _____ ESC PERMIT APPROVAL
- _____ ESC CERT. ACCEPTANCE
- _____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: _____ By: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

RIO GRANDE ENGINEERING OF NEW MEXICO, LLC

September 30, 2014

Ms. Rita Harmon
Hydrology Department
Public Works Department
City of Albuquerque

**RE: Drainage Resubmittal
Hurt Residence Lot 11, block 5 Unser Cliffs
E10-D025**

Dear Ms Harman:

The purpose of this letter is to accompany the revised plan. The plan has been revised to address your written comments dated July 30, 2014. The following is a summary of your comments and the corrections we have done to address.

1. Existing contours too light
We have darkened
2. Indicate zone page
We have added
3. provide existing and proposed drainage calcs
We have added
4. Provide drainage narrative
We have added
5. quantify offsite flows
We have added on the calculation chart
6. indicate contributing area
We have attached the map, the limits based upon city 2' contours, but we were not able to print out that for format, so we drew on google earth print out.
7. Show easements.
All easements are shown
8. Turn blocks only on the northeast side. Prove rundown
We have added the turned blocks only on northeast side. We have added narrative regarding how offsite flow is handled. The total flow leaving the site is less than existing
9. Consider draining to marigold
Due to roof height restrictions, We are not able to raise the finished floor enough to drain over the top of curb.

Should you have any questions regarding this submittal, please do not hesitate to call me.

Sincerely,

David Soule, PE
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199
505-321-9099

BENCHMARKS				
Point #	Elevation	Northing	Easting	Description
2069	5316.97	1512795.13	1498746.63	3/4INRB
2118	5318.88	1512627.96	1499059.86	E310
2120	5319.19	1512744.25	1498971.08	BC
2121	5318.69	1512764.36	1498959.90	RBCAP14733

COORDINATES SYSTEM IS NEW MEXICO
STATE PLANE CENTRAL ZONE NAD 1983/NAVD 1988
AND ARE REFERENCED TO THE ALBUQUERQUE
GEODETIC REFERENCE SYSTEM AS DETERMINED BY
GPS OBSERVATIONS OBTAINED USING THE
ALBUQUERQUE REAL TIME GNSS NETWORK (ARTGN).
DISTANCES ARE GROUND. THESE VALUES WERE
PROVIDED BY CONSTRUCTION SURVEY TECHNOLOGIES
NMLP5 8911

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	93.29	1564.50	3.42	554° 52' 43"E	93.28
C2	34.41	25.00	78.85	N9° 18' 30"E	31.75

TURN BLOCK AT GRADE EVERY 12' TO ALLOW FOR
CROSS LOT DRAINAGE FROM ADJACENT LOT

OPEN SPACE CALCULATION
GROSS LOT AREA=12994 SF
REQUIRED OPENSACE
VISIBLE FROM STREET=3894 SF
OPEN SPACE PROVIDED=4098 SF

WATER QUALITY POND
BOTTOM, 14.75
TOP 16.00
REQUIRED VOLUME (0.42"/5F)= 370 CF
PROVIDED VOLUME (0.42"/5F)= 608 CF

LOT 10
UNSER CLIFFS SUBDIVISION
BK. 2004C, PG. 238

LOT 6
UNSER CLIFFS SUBDIVISION
BK. 2004C, PG. 238

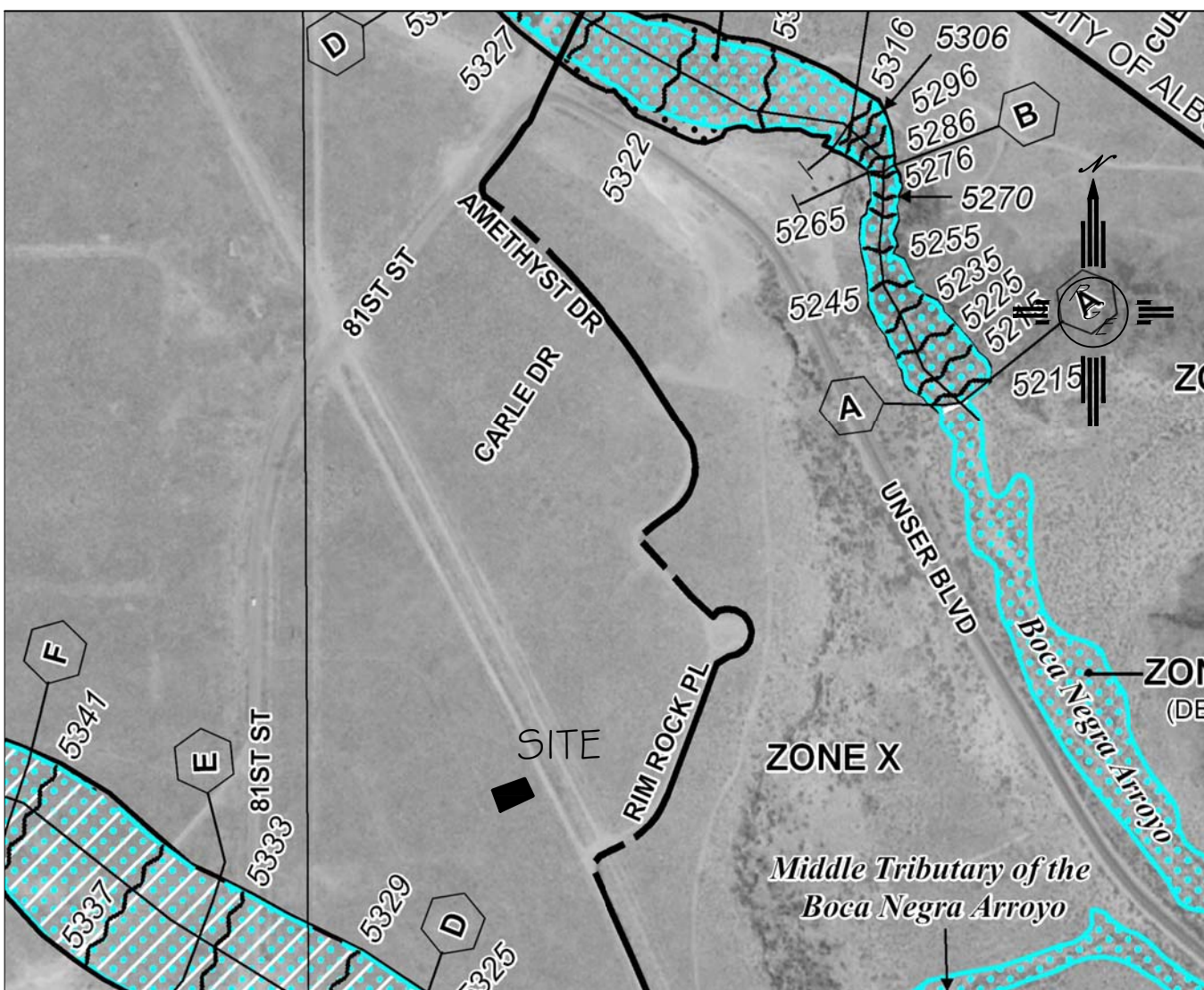
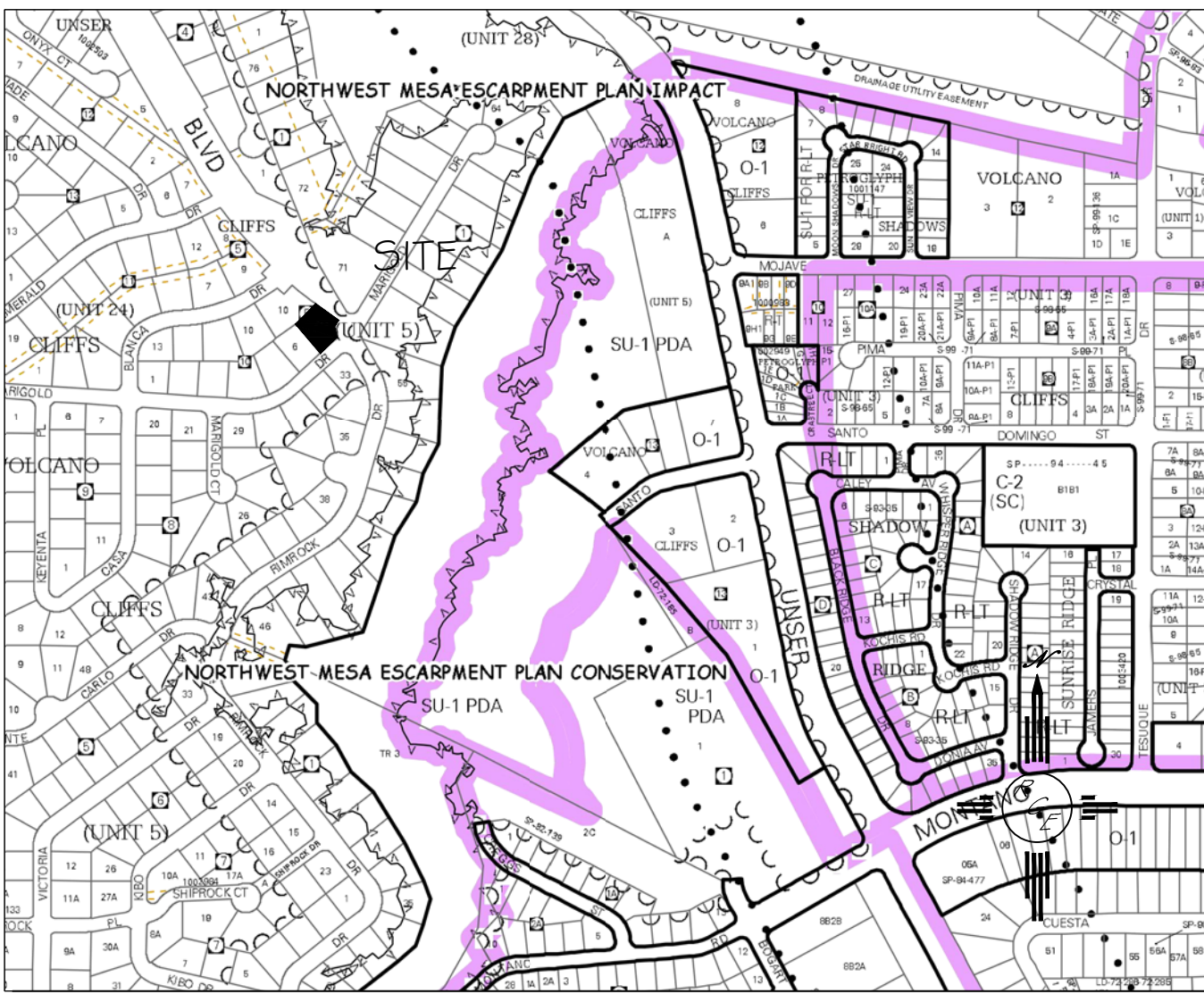
FLOW LEAVES THE SITE AS SHEET FLOW. FLOW CONTINUES PARTIALLY WITHIN A
POORLY DEFINED EARTHAN SWALE AND PARTIALLY AS SHEET FLOW TO THE NORTH
EAST. FLOW DRAINS TO RETAININ WALL ADJACENT TO UNSER ROADWAY AND
SPILLS OVER WALL. SPACE BETWEEN WALL AND ROADWAY CONTAINS RIPRAP.
FLOW CONTINUES DOWN UNSER AND IS COLLECTED BY DOWNSTREAM INLETS.

TURN 1 BLOCK EVERY 10'
AT 5315.00-NE WALL ONLY

Weighted E Method														
Existing Developed Basins														
Basin	Area (sf)	Area (acres)	Treatment A (% (acres))	Treatment B (% (acres))	Treatment C (% (acres))	Treatment D (% (acres))	100-Year 6-hr Weighted E (ac-ft)	Volume (ac-ft)	Flow (cfs)	10-day Volume (ac-ft)				
PROPOSED	13036.6	0.299	0%	0	30.0%	0.090	34.0%	0.1075	34%	0.102	1.207	0.030	0.92	0.044
UPLAND FLOW	6842	0.157	0%	0	30.0%	0.047	34.0%	0.0534	34%	0.053	0.987	0.013	0.37	0.020
EXISTING	13036.6	0.299	70%	0.209	0.0%	0.000	0.0%	0	30%	0.000	0.899	0.022	0.68	0.004
ALLOWED PER DMP	13036.6	0.299	0%	0	30.0%	0.090	40.0%	0.11971	25%	0.075	1.090	0.027	0.85	
<u>Equations:</u>														
Weighted E = Ea'Aa + Eb'Ab + Ec'Ac + Ed'Ad / (Total Area)														
Volume = Weighted D * Total Area														
Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad														
Where for 100-year, 6-hour storm (zone 1)														
	Ea= 0.44			Qa= 1.29										
	Eb= 0.67			Qb= 2.03										
	Ec= 0.99			Qc= 2.87										
	Ed= 1.97			Qd= 4.37										
FLOW SUMMARY														
LEAVING SITE							1.29	CFS						
WATER HARVEST REQUIREMENT							369.37	CUBICFEET						
PONDING PROVIDED							710.00							
TOTAL FLOW DISCHARGING TO RIGHT OF WAY IS														
TOTAL VOLUME GENERATED ON SITE							1.29	CFS						
TOTAL VOLUME LEAVING SITE							1308.69							
HISTORICAL VOLUME LEAVING SITE							976.659							
SITE IS LOCATED WITHIN BASIN 11 OF THE DRAINAGE PLAN FOR THE S4D 227 (D-10) THE LOT IS LOCATED BELOW THE ROADWAY AND NOT ABLE TO GET TO DRAIN TO INLET DUE TO RIGHT RESTRICTIONS. THE SITE CURRENTLY HAS SIGNIFICANT ROCK OUT CROPPINGS AND THE INCREASE DISCHARGE IS DENIMIOUS. THE TOTAL FLOW LEAVING 1 IS LESS THAN HISTORICAL AND IN CONFORMANCE TO THE APPROVED GRADING PLAN														

HARVEST POND
TOP=16.75
BOTTOM=15.75
VOLUME=102 CF

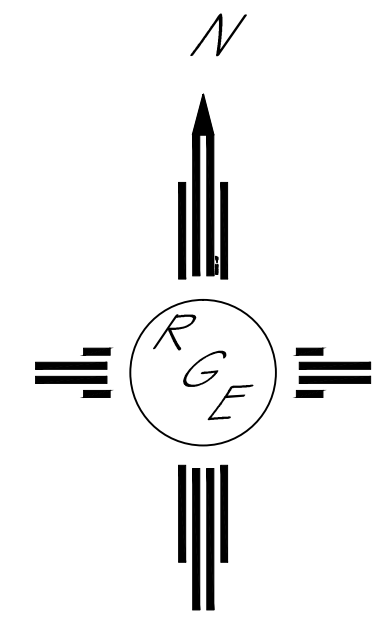
REMOVE EXISTING CURB AND
GUTTER. CONSTRUCT NEW
DRIVEPAD PER COA STD DWG#2425

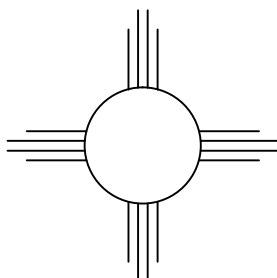


- NOTES:
- ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
 - TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS PLAN WAS OBTAINED BY
CONSTRUCTION SURVEY TECHNOLOGIES, DAVID VIGIL NMLP5#8911 ON JUNE 25, 2014
 - ALL SPOT ELEVATIONS ARE FLOW-LINE UNLESS OTHERWISE NOTED

LEGAL DESCRIPTION:
LOT 11, BLOCK 5, UNSER CLIFFS

LEGEND	
---	EXISTING STORM DRAIN
=====	EXISTING CURB & GUTTER
-----	PROPOSED EDGE OF PAVING
-----	EXISTING CONTOUR
-----	EXISTING INDEX CONTOUR
-----	PROPOSED CONTOUR
-----	PROPOSED INDEX CONTOUR
-----	LOT LINES



ENGINEER'S SEAL DAVID SOULE NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 14522	LOT 11, BLOCK 5 UNSER CLIFFS SUBDIVISION	DRAWN BY JDG
	GRADING AND DRAINAGE PLAN	DATE 07-06-2014
10/01/14 DAVID SOULE P.E. #14522	 Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	SHEET # 1 OF 1
		JOB #