City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Noah's Event Center **Building Permit #:** _____ **City Drainage #:** _____

DRB#: 1003445 **EPC#:** _____ **Work Order#:** _____

Legal Description: Tract A-1, Fountain Hills Subdivision

City Address: 4591 Vista Fuente Road, NW

Engineering Firm: RHD Engineering, LLC **Contact:** Richard Dourte

Address: 4305 Purple Sage Ave. NW, Albuquerque, NM, 87120

Phone#: 505-288-1621 **Fax#:** _____ **E-mail:** rhdengineering@outlook.com

Owner: Noah's Event Center **Contact:** _____

Address: _____

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

Architect: _____ **Contact:** _____

Address: _____

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

Surveyor: Construction Survey Technologies, Inc **Contact:** John Gallegos

Address: _____

Phone#: 505-917-8721 **Fax#:** _____ **E-mail:** _____

Contractor: _____ **Contact:** _____

Address: _____

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

TYPE OF SUBMITTAL:

- ___ DRAINAGE REPORT
- X 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
- X 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 X No ___ Copy Provided

DATE SUBMITTED: June 15, 2015 **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 followin

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

Drainage Report

For

Noah's Event Center
8700 sf Building
4591 Vista Fuente Road NW
Albuquerque, New Mexico

Prepared by

RHD Engineering, LLC
Albuquerque, New Mexico

June 2015

Table of Contents

Purpose: The purpose of this drainage report is provide updated information regarding the Noah's Event Center. The drainage report approved by the City on May 20, 2015 (copy of letter enclosed) provided by Mr. David Soule, PE, stamp dated 4-15-15 included a 10,000 sf building. Recently and prior to the construction of this building, the owners decided to reduce the square footage of the building to 8700sf. Minor changes to the building area were also included in this revision, please see the building area comparison exhibit (enclosed), thus the reason for this drainage report.

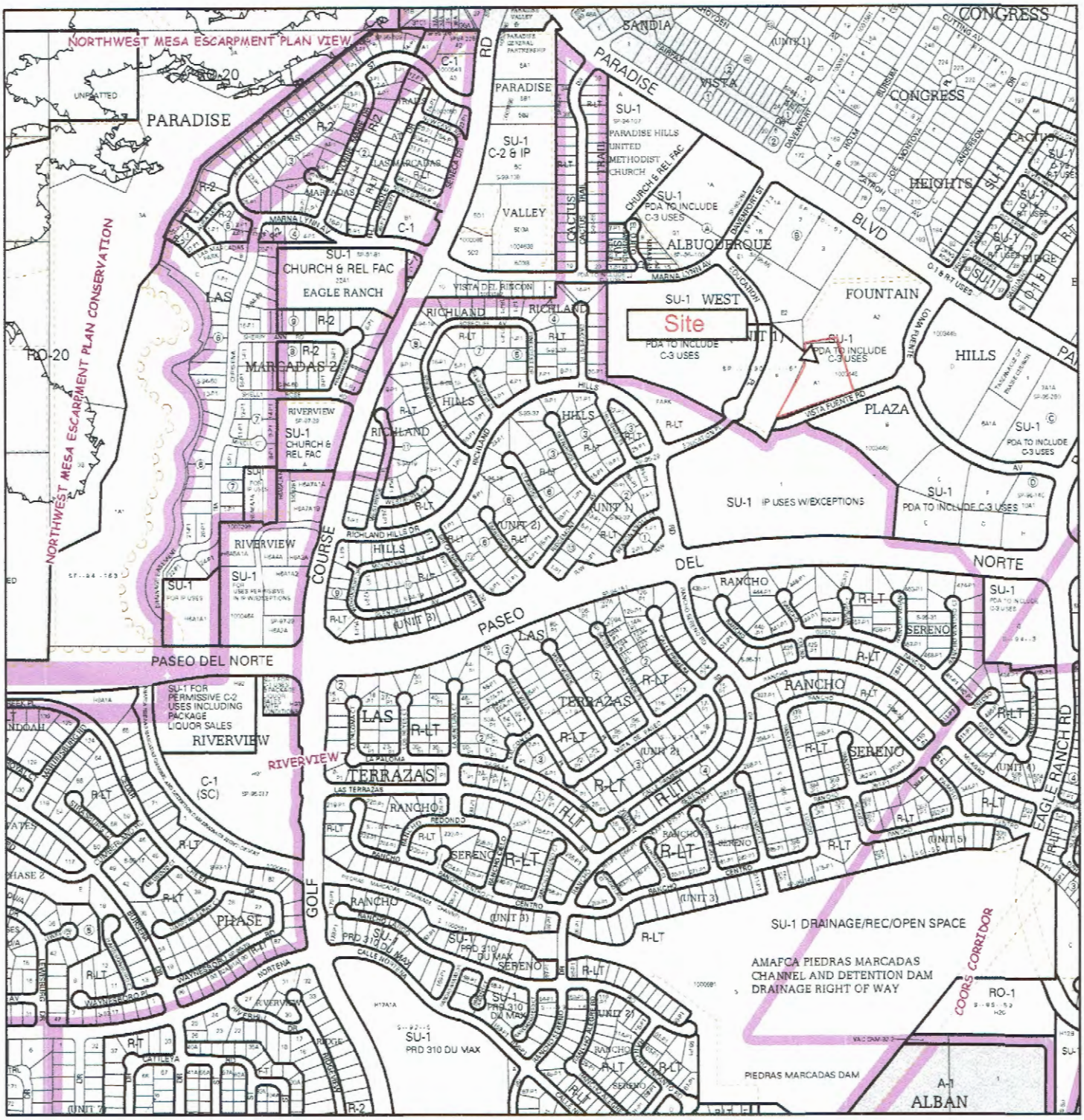
Introduction: The project site is located between Paseo del Norte, Paradise blvd., Eagle Ranch Road and Golf Course Road on zone atlas C-12 (enclosed). This site is located in a Zone X, as shown on the FEMA firm Map 3501C0116G. This site is part of the Fountain Hills Plaza drainage masterplan.

Existing Conditions: Presently the site is undeveloped and the runoff generated by this site flows in a southeastern direction. The site to the west of this site is developed, the flows from that site are managed onsite, thus no flows from that site enter the project site. The slopes are in a southeast direction.

Proposed Conditions: The original 10,000 sf building as shown on the approved drainage report by Mr. David Soule, PE referenced above is being replaced with an 8700 sf building. The building area as shown on the enclosure is also being altered. This change is minor, and the supporting information/calculation will show that the overall change, with respect to drainage is negligible.

Summary:

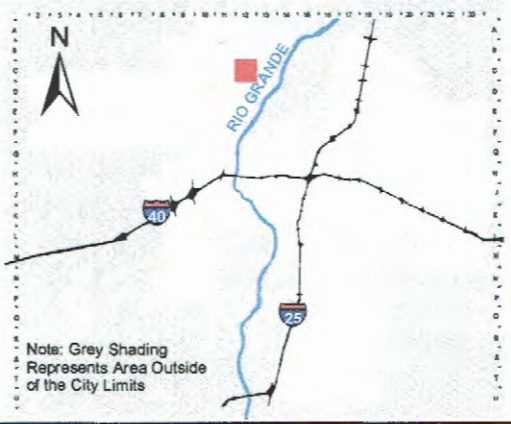
In conclusion, the changes to the flows with respect for the 100 year, 6 hour event and this site are approximately 0.11 cfs less and .004 ac-ft less than the original plan that incorporated the 10,000 sf building. The first flush calculations show that the capacity of the first flush ponds (3132 cf) are greater than the required volume for the first flush (2435cf) requirements. Thus the revisions generate a little less than the originally approved drainage plan for the 10,000 sf building.



For more current information and details visit: http://www.cabq.gov/gis

AGIS
Albuquerque Geographic Information System

Map amended through: 9/2/2014



Zone Atlas Page:

C-12-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

Appendix A
Hydraulic Calculations

Existing Conditions for the 10,000 sf building area (refer to Appendix C)….

Basin B(a) – Impervious area
Roof area = 2025 sf
Sidewalk = 1110 sf
Pavers = 520 sf
Total = 3655 sf

Basin C(a) – Impervious area
Roof area = 1575 sf
Sidewalk = 330 sf
Pavers = 0 sf
Total = 1905 sf

Basin D(a) – Impervious area
Roof area = 2025 sf
Sidewalk = 360 sf
Pavers = 260 sf
Total = 2645 sf

Basin E(a) – Impervious area
Roof area = 4425 sf
Sidewalk = 750 sf
Pavers = 2235 sf
Total = 7410 sf

Proposed Conditions for the 8700 sf building area (refer to Appendix C)….

Basin B(b) – Impervious area
Roof area = 1800 sf
Sidewalk = 1080 sf
Pavers = 875 sf
Total = 3755 sf

Basin C(b) – Impervious area
Roof area = 1400 sf
Sidewalk = 390 sf
Pavers = 0 sf
Total = 1790 sf

Basin D(b) – Impervious area
Roof area = 1800 sf
Sidewalk = 330 sf
Pavers = 220 sf
Total = 2350 sf

Basin E(b) – Impervious area
Roof area = 3825 sf
Sidewalk = 1290 sf
Pavers = 1500 sf
Total = 6615 sf

Comparison of basins
B(a) vs B(b) = 3655 sf - 3755 sf = -100 sf (.002 ac) (increase in impervious area)
C(a) vs C(b) = 1905 sf - 1790 sf = 115 sf (.003 ac)
D(a) vs D(b) = 2645 sf - 2350 sf = 295 sf (.007 ac)
E(a) vs E(b) = 7410 sf - 6615 sf = 795 sf (.018 ac)
Total **1105 sf less impervious area for the site**

Approved flows from Mr. David Soule's drainage report as previously indicated above:
100yr 6hr event

Basin A = 1.12 cfs .039 ac-ft
Basin B = 2.43 cfs .087 ac-ft
Basin C = 0.60 cfs .021 ac-ft
Basin D = 1.05 cfs .039 ac-ft
Basin E = 1.46 cfs .049 ac-ft
Basin F = 0.71 cfs .022 ac-ft
Basin G = 0.15 cfs .006 ac-ft

The required first flush volume – 2466 cf

This site is located in Zone 1, Q100, 6 hr
Land treatment A = 1.29 cfs/ac .44 in
Land treatment B = 2.03 cfs/ac .67 in
Land treatment C = 2.67 cfs/ac .99 in
Land treatment D = 4.37 cfs/ac 1.97 in

Change in flows from the original drainage plan that incorporated the 10,000 sf building

Basin B
There is an increase in flows .002 ac x 4.37 cfs/ac = .01 cfs
100 sf x 1.97in x 1ft/12 in = 16cf <.001ac-ft

Basin C
There is a decrease in flows .003 ac x 4.37 cfs/ac = .01 cfs
115 sf x 1.97in x 1ft/12 in = 19cf <.001ac-ft

Basin D
There is a decrease in flows .007 ac x 4.37 cfs/ac = .03 cfs
295 sf x 1.97in x 1ft/12 in = 16cf =.001ac-ft

Basin E
There is a decrease in flows .018 ac x 4.37 cfs/ac = .08 cfs
795 sf x 1.97in x 1ft/12 in = 16cf = .003ac-ft

Summary of flows in Basins:

Basin A = 1.12 cfs	.039 ac-ft (no change)
Basin B = 2.43 cfs +.01 cfs = 2.44 cfs	.087 ac-ft (no significant change)
Basin C = 0.60 cfs - .01 cfs = 0.59 cfs	.021 ac-ft (no significant change)
Basin D = 1.05 cfs - .03 cfs = 1.02 cfs	.039 ac-ft - .001 ac-ft = .038 ac-ft
Basin E = 1.46 cfs - .08 cfs = 1.38 cfs	.049 ac-ft - .003 ac-ft = .046 ac-ft
Basin F = 0.71 cfs	.022 ac-ft (no change)
Basin G = 0.15 cfs	.006 ac-ft (no change)

Total change = -0.11 cfs and -0.004 ac-ft

In conclusion, the changes to the flows with respect to this site are approximately 0.11 cfs less and .004 ac-ft less than the original plan that incorporated the 10,000 sf building.

First flush requirements:

Since there is a decrease in the overall impervious areas by approximately 1105sf, the reduction in the amount of flows required to be retained onsite is:
1105 sf x 0.34 in x 1 ft/12 in = 31 cf.
Thus the required first flush requirement is 2466 cf – 31 cf = 2435 cf.

The first flush pond capacity:
Pond A = 1024cf
Pond B = 380 cf
Pond C = 684 cf
Pond D = 26 cf
Pond E = 1018 cf
Total = 3132 cf

Thus the capacity of the first flush pond are greater than the required volume for the first flush requirements.

CITY OF ALBUQUERQUE

May 20, 2015

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

RE: **Noah's Event Center**
Vista Fuentes Rd NW
Grading and Drainage Plan
Engineers Stamp Date 4/14/15 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received 4/15/15, this plan is approved for Grading Permit and Building Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File

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