CITY OF ALBUQUERQUE



Timothy M. Keller, Mayor

January 8, 2018

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

RE: Marble Townhomes Grading Plan and Drainage Report Engineer's Stamp Date: 12/29/17 Hydrology File: J18D046

Dear Mr. Soule:

PO Box 1293 Based upon the information provided in your submittal received 01/02/2018, the Grading Plan **is not** approved for Building Permit and Grading Permit. The following comments need to be addressed for approval of the above referenced project:

Albuquerque Drainage Report:

NM 87103

www.cabq.gov

2. Provide a drainage map for the Existing Conditions and update the existing drainage calculations.

Cardenas Drive and about half of the site drains to Cagua Drive with a small portion draining directly to Marble Ave. Please take another look at the existing conditions.

3. Under the Proposed Conditions, why not keep the drainage as per the appeared drainage conditions as outlined in #1 above?

1. Under the Existing Conditions, it appears that about half of the site drains to

4. Since this is a redevelopment site, you can use the redevelopment first flush volume that will be outlined in the new DPM once it is published. The storm water quality volume is calculated based on the 0.48 inch storm. To calculate the required storm water quality volume to be captured, multiply the impervious area by 0.28 inches for the 80th percentile storm.

CITY OF ALBUQUERQUE



Timothy M. Keller, Mayor

Grading Plan:

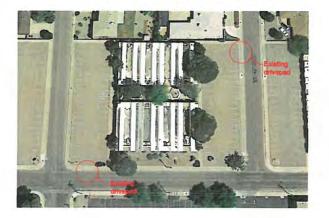
- The site currently shows more than 1 acre of disturbance is being proposed. An Erosion and Sediment Control Plan is required and has to be submitted to the storm water quality engineer (Curtis Cherne, PE, <u>ccherne@cabq.gov</u>). Hydrology's approval for Grading or Building Permit will not be given until the submittal of the ESC Plans.
- 2. Please provide a note showing the first flush required volume and the first flush provided volume.
- 3. Please provide a typical detail for the turned CMU block. This block needs to be at least four (4) inches above the proposed grade to avoid clogging.
- 4. There are two missing remove drivepad & replace with curb & gutter note as outlined in the following photo.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



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

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM Senior Engineer, Hydrology Planning Department



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: | CHECK TYPE OF APPROV | AL/ACCEPTANCE SOUGHT: |
| DRAINAGE REPORT | SIA/FINANCIAL GUARAN | TEE RELEASE |
| DRAINAGE PLAN 1st SUBMITTAL | PRELIMINARY PLAT APPI | ROVAL |
| DRAINAGE PLAN RESUBMITTAL | S. DEV. PLAN FOR SUB'D | APPROVAL |
| CONCEPTUAL G & D PLAN | S. DEV. FOR BLDG. PERMI | IT APPROVAL |
| GRADING PLAN | SECTOR PLAN APPROVAL | _ |
| EROSION & SEDIMENT CONTROL PLAN (ESC) | FINAL PLAT APPROVAL | |
| ENGINEER'S CERT (HYDROLOGY) | CERTIFICATE OF OCCUPA | ANCY (PERM) |
| CLOMR/LOMR | CERTIFICATE OF OCCUPA | ANCY (TCL TEMP) |
| TRAFFIC CIRCULATION LAYOUT (TCL) | FOUNDATION PERMIT AP | PROVAL |
| ENGINEER'S CERT (TCL) | BUILDING PERMIT APPRO | DVAL |
| ENGINEER'S CERT (DRB SITE PLAN) | GRADING PERMIT APPRO | VAL SO-19 APPROVAL |
| ENGINEER'S CERT (ESC) | PAVING PERMIT APPROV | AL ESC PERMIT APPROVAL |
| SO-19 | WORK ORDER APPROVAL | ESC CERT. ACCEPTANCE |
| OTHER (SPECIFY) | GRADING CERTIFICATION | N OTHER (SPECIFY) |
| WAS A PRE-DESIGN CONFERENCE ATTENDED: | Yes No Co | ppy 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

DRAINAGE REPORT

For

MARBLE TOWNHOMES 6001 MARBLE NE

Albuquerque, New Mexico

Prepared by

Rio Grande Engineering PO Box 93924 Albuquerque, New Mexico 87199

JANUARY 2018



David Soule P.E. No. 14522

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| Introduction | |
| Existing Conditions | |
| Exhibit A-Vicinity Map | |
| Proposed Conditions | |
| Summary | |

<u>Appendix</u>

| Site Hydrology | . A |
|------------------------|-----|
| Hydraulic Calculations | . B |

Map Pocket Site Grading and Drainage Plan

PURPOSE

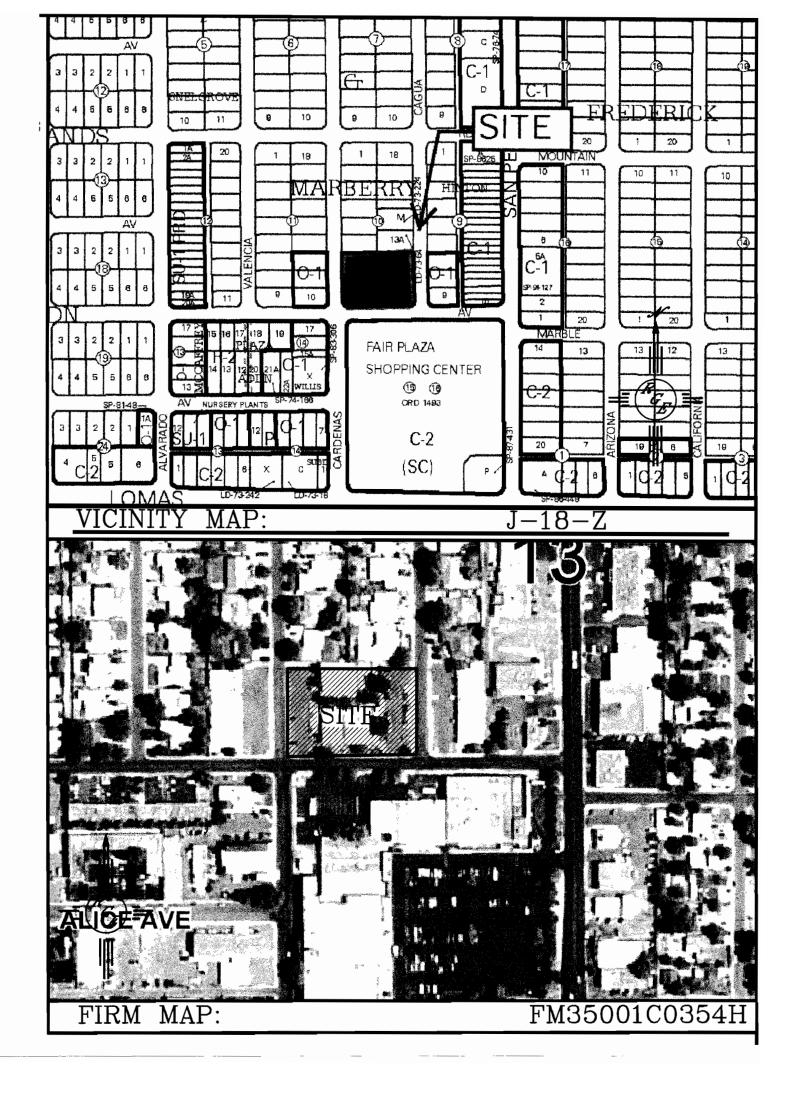
The purpose of this report is to provide the Drainage Management Plan for four approximately 5400 square foot apartment buildings, located on the north side of Marble, between Cardenas and Cagua NE. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is one parcel containing an area of 1.23 acres of land located on Marble between Cardenas and Cagua NE. The legal description of this site is tract 2 Marble Town homes, formerly lots 7-12, Block 10 Swearingen-Mabry Subdivision. The site was recently replatted into one singe tract. As shown on FIRM map35013C0354H, the entire property is located within Flood Zone X. This site is surrounded by fully developed parcels. This site has been completely developed for several decades, but the buildings were recently removed. Appendix A shows a current survey and 2010 areal with the buildings and existing parking lots, which we consider historical conditions. This is consistent with the maps of the area within the Albuquerque Master Drainage Study Volume II. The buildings have recently been removed. Based on the site location and the area characteristics of the adjacent drainage infrastructure this development shall be designed to match existing drainage patterns, and shall provide shallow water quality ponds for harvesting of rainwater for the first .44" of rainfall

EXISTING CONDITIONS

The site is currently developed. The site has historically included two large buildings with the remainder of the site paved, with very little gravel mulch landscape areas. The site is in fully developed condition. The site drains from southeast to south west, historically discharging 5.88 cfs to Cardenas right of way where it is conveyed north to the city storm drain.



. The site is not impacted by any offsite flows, and is surrounded by curb and gutter on the upland basin. The discharge leaves the site mainly as sheet flow.

PROPOSED CONDITIONS

The proposed improvements consist of four apartment buildings and associated parking. As shown in appendix A, the site will be graded to drain to Cardenas via sheet flow out the driveway. The site contains 3 basins, with Basins A and C being the rear half of the buildings and rear yards, with basin being the fronts and parking area. The site has multiple depressed landscape areas that will capture the first flush, before discharging at a peak rate of 5.69 cfs. The harvest ponds contain 1527 cubic feet which are greater than the 1195 cubic feet required to contain the first .44" of a storm.

SUMMARY AND RECOMMENDATIONS

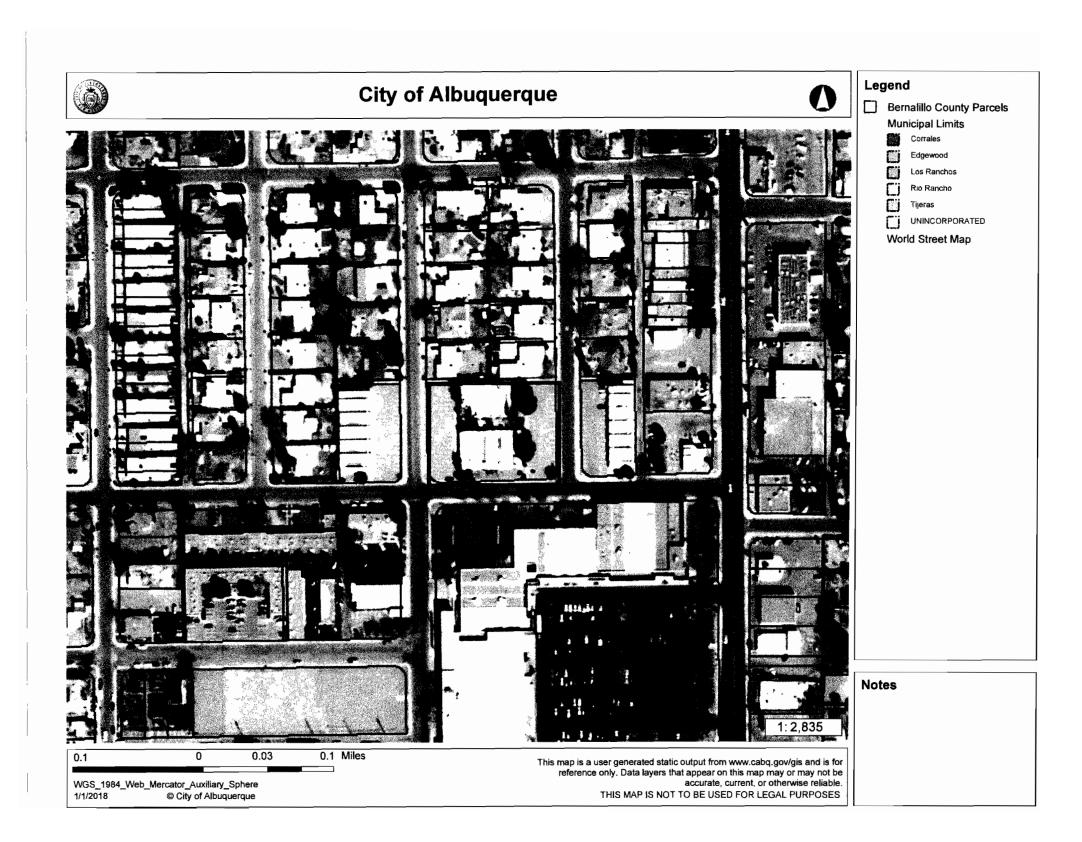
This project is a redevelopment project within a completely developed area of northeast Albuquerque. The site historically discharges 5.88 cfs to the Cardenas Street. The proposed drainage plan will allow for harvesting ponds which overflow to internal driveway and discharge to Cardenas. The developed conditions will discharge 5.69 cfs. The proposed decrease of .19 cfs is minimal but with the inclusion of the harvesting ponds the flow leaving site will be less and shall have no negative impact on surrounding drainage structures. Since this site encompasses more than 1 acre, a NPDES permit and SWPPP will be required prior to any construction activity.

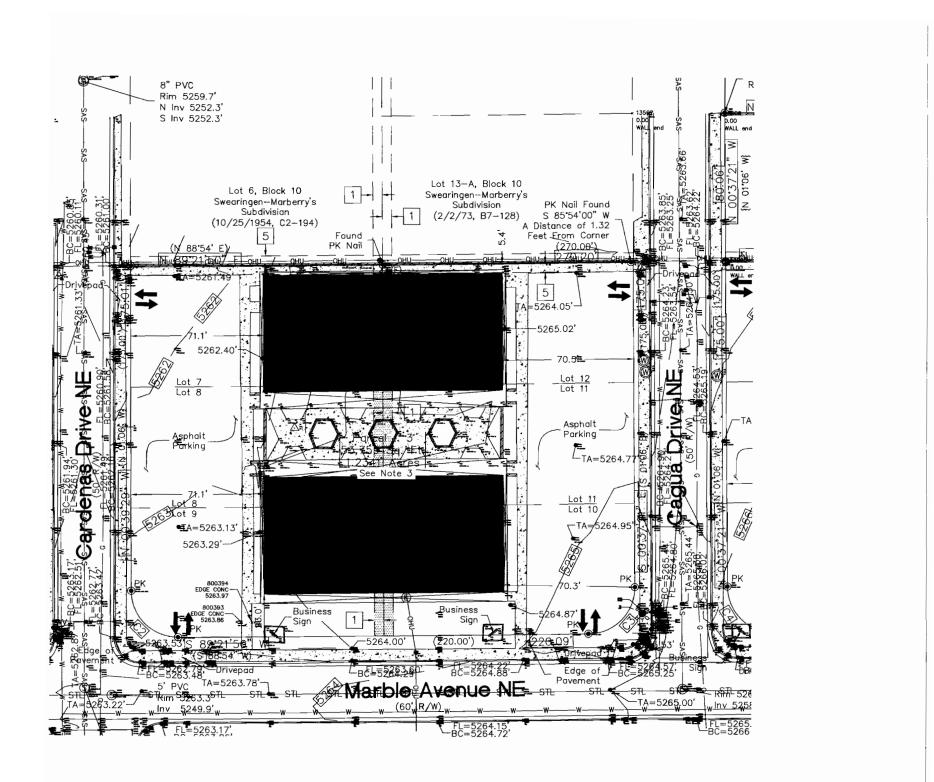
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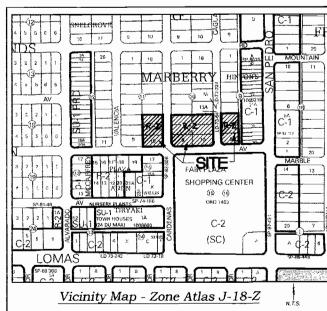
APPENDIX A

SITE HYDROLOGY

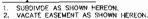
6







Purpose of Plat



Notes

Legal Description

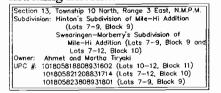
LOTS NUMBERED TEN (10), ELEVEN (11) AND TWELVE (12) IN BLOCK NUMBERED ELEVEN (11) OF SWEARINGEN-MARBERRY'S SUBDIVISION OF TRACTS 10 AND 11 OF MIE-HI ADDITION TO THE CITY OF ALBUQUEROUE, NEW MEXICO, AS THE SAME ARE SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNAULLO COUNTY, NEW MEXICO, ON OCTOBER 25, 1954, IN PLAT BOOK C2, PAGE 194.

LOTS NUMBERED SEVEN (7), EIGHT (8) AND NINE (9) IN BLOCK NUMBERED NINE (9) OF HINTON'S SUBDIVISION OF TRACT 9, MILE-HI ADDITION TO THE CITY OF ALBUQUERCUE. NEW MEXICO, AS THE SAME ARE SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY GLERK OF BERNAULLO COUNTY, NEW MEXICO, ON DECEMBER 10, 1954, IN PLAT BOOK B2, PAGE 176, AND

AND

LOTS NUMBERED SEVEN (7) THROUGH TWELVE (12), INCLUSIVE, IN BLOCK NUMBERED TEN (10) OF SWEARINGEN-MARBERRYS SUBDIVISION OF TRACTS 10 AND 11 OF MILE-HI ADDITION TO THE CITY OF ALBIQUERCUE, NEW MEXICO, AS THE SAME ARE SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY, NEW MEXICO, ON OCTOBER 25, 1954, IN PLAT BOOK C2, PAGE 194.

Indexing Information



Treasurer's Certificate

THIS IS TO CERTIFY THAT THE TAKES ARE CURRENT AND 1018-058-188-031 31602- 5 1018-058-238-089-31801 PAID DN UPC #: _____008-058-218-088-31714 PROPERTY OWNER OF RECORD Tinyati ahmet Matthe BERNALILLO COUNTY TREASURER'S OFFICE

Subdivision Data

Solar Collection Note

PER SECTION 14-14-4-7 OF THE SUBDIVISION ORDINANCE:

NO PROPERTY WITHIN THE AREA OF REQUESTED FINAL ACTION SHALL AT ANY TIME (SUBJECT TO A DEED RESTRICTION, COVENANT, OR BUILDING AGREEMENT PROHIBITING SOLAR COLLECTORS FROM BEING INSTALLED ON BUILDINGS OR ERECTED ON THE LOT PARCELS WITHIN THE AREA OF PROPOSED PLAT, THE FOREGOING REQUIREMENT SHAL A CONDITION TO APPROVAL OF THIS PLAT

Free Consent

THE SUBDIVISION HEREON DESCRIBED IS WITH THE FREE CONSENT AND IN ACCORDANC WITH THE DESIRES OF THE UNDERSIGNED OWNER(S) AND/OR PROPRIETOR(S) THEREOF HEREBY GRANT THE RICHT TO CONSTRUCT, OPERATE, INSPECT, MAINTAIN FACILITES THEREIN; AND ALL PUBLIC UTILITES EASEMENTS SHOWN HEREON FOR THE COMMON JOINT USE OF GAS, ELECTRICAL POWER AND COMMUNICATION SERVICE FOR BURIED DISTRIBUTION LINES, CONDUITS AND PIPES FOR UNDERGROUND UTILITES WHERE SHOW NOICATED, AND INCLUDING THEIR RIGHT OF INGRESS AND GRESS FOR CONSTRUCTION MAINTENANCE, AND THE RIGHT TO TRIM INTERFERING TREES AND SHEWES. SAD OWNER AND/OR PROPRIETOR(S) DO HEREBY CONSENT TO ALL OF THE FOREGOING AND DOES HEREBY CERTIFY THAT THIS SUBDIVISION IS THEIR FREE ACT AND DEED. SAD OWNER AND/OR PROPRIETOR(S) WARRANT THAT THEY HOLD AMONG THEM COMPLET AND INDEFASIBLE TITLE IN FEE SIMPLE TO THE LAND SUBDIVIDED.

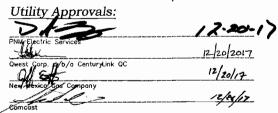
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THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON 12.9 2011 BY: AHMET AND MARTHA TIRYAKI

By: Un an

MY COMMISSION EXPIRES _______ 11, 2018_____

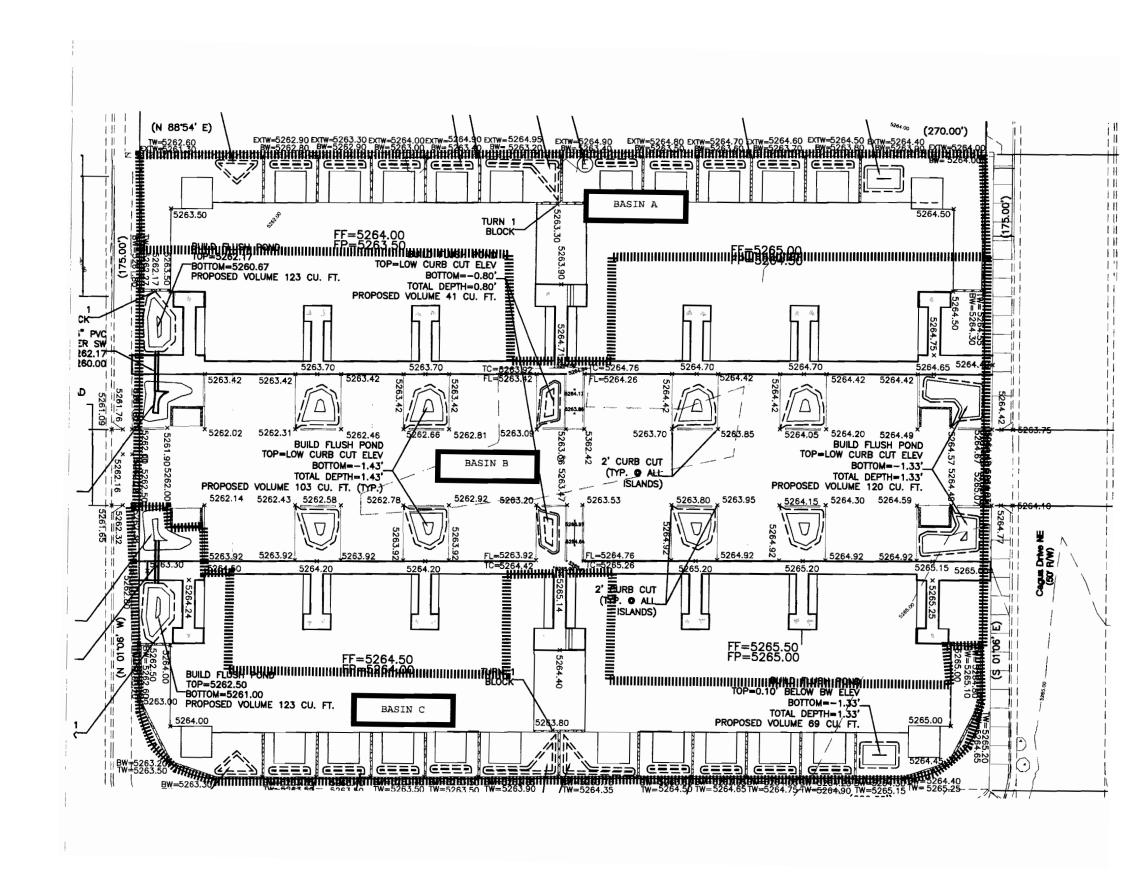


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| | Plat for | | | | |
|----------------------------------|--|--|--|--|--|
| | Marble Townhomes Comprised of Lots 10-12, Block 11 and Lots 7-12, Block 10, Swearingen-Mayberry's Subdivision and Lots 7-9, Block 9, Hinton's Subdivision of Tract 9, Mile-Hi Addition City of Albuquerque Bernalillo County, New Mexico December 2017 | | | | |
| | Approved and Accepted by: Approval and conditional acceptance as specified by the Albuquerque subdivision ordinance, chapter 14 Article 14 of the Revised ordinances of Albuquerque, New Mexico, 1994. | | | | |
| / | Project Number: 1011448 Application Number: 1018-036 | | | | |
| BE 3 TS OR LL BE | City Approvals: | | | | |
| NCE XF DO | Toren M. Richhover P.S. 12/8/2017 City Surveyor MUMIL 12/20/17 | | | | |
| AND WN OR XN AND IER(S) | Tratill Engineer In Entragoard ABGWUA 12/20/17 12/20/17 12/20/17 | | | | |
| s (s) | Partis and Recreation Department 12/20/17 Default 20/17 AMAFCA 12/20/17 | | | | |
| *** | I2/23/17 City Engineer I2.29.7 DRB Chairperson, Planning Department | | | | |
| | SURVEYOR'S CERTIficate ", MILL PLOTNER JR., A REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERNFY THAT THIS PLAT AND DESCRIPTION WERE PREPARED BY ME OR UNDER RECORD OR MADE KNOWN TO ME BY THE OWNERS AND/OR PROPRIETORS OF THE SUBDIVISION SHOWS ALL EASEMENTS AS SHOWN ON THE PLAT OF RECORD OR MADE KNOWN TO ME BY THE OWNERS AND/OR PROPRIETORS OF THE SUBDIVISION SHOWN HEREON, THE UTLITY COMPANES OR OTHER INTERESTED PARTIES AND MEETS THE MINIMUM REQUIREMENTS FOR MONUMENTATION AND SURVEYS OF THE ALBUQUEROUE SUBDIVISION ORDINANCE, AND FUTTHER MEETS THE MINIMUM STANDAROS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF." WIII PIDTNER JF. N.M.R.P.S. NO. 14271 CSI-CARTESIAN SUBJECTS INC. | | | | |

P.O. BOX 44414 RIO RANCHO, N.M. 87174 Phone (505) 896 - 3050 Fax (505) 891 - 0244

Sheet 1 of 2



Weighted E Method MARBLE APARTMENTS

Existing Developed Basins

| | | | | | | | | | | | 100-Year, 6-h | r. | |
|---------------------------|-------|---------|-----------|---------|----------|---------|---------|---------|---------|---------|---------------|---------|------|
| Basin | Area | Area | Treatment | Α | Treatmen | nt B | Treatme | nt C | Treatme | nt D | Weighted E | Volume | Flow |
| | (sf) | (acres) | % | (acres) | % | (acres) | % | (acres) | % | (acres) | (ac-ft) | (ac-ft) | cfs |
| Historic (office complex) | 53730 | 1.233 | 0% | 0 | 0.0% | 0.000 | 16.0% | 0.19736 | 84% | 1.036 | 2.189 | 0.225 | 5.88 |
| BASIN A | 9834 | 0.226 | 0% | 0 | 6.0% | 0.014 | 31.0% | 0.06998 | 63% | 0.142 | 1.942 | 0.037 | 0.99 |
| BASIN B | 32886 | 0.755 | 0% | 0 | 5.0% | 0.038 | 6.0% | 0.0453 | 88% | 0.664 | 2.200 | 0.138 | 3.59 |
| BASIN C | 11010 | 0.253 | 0% | 0 | 7.0% | 0.018 | 29.0% | 0.0733 | 64% | 0.162 | 1.949 | 0.041 | 1.11 |
| TOTAL PROPOSED | 53730 | 1.233 | 0% | 0.000 | 5.6% | 0.069 | 15.3% | 0.189 | 79% | 0.968 | 2.101 | 0.216 | 5.69 |

Equations:

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 3)

| where for too-year, o-nour storn | | |
|----------------------------------|----------|------------|
| | Ea= 0.66 | Qa= 1.87 |
| | Eb= 0.92 | Qb= 2.6 |
| | Ec= 1.29 | Qc= 3.45 |
| | Ed= 2.36 | Qd= 5.02 |
| | | |
| DISCHARGE PROPOSED | | 5.69 CFS |
| EXISTING DISCHARGE | | 5.88 CFS |
| FIRST FLUSH REQUIREMENT | | 1195.14 CF |
| FIRST FLUSH RETAINED | | 1527.00 CF |
| | | |

Narrative

This project is a redevelopment of and existing office complex. The complex is in the process of being demolished. The proposed development is a multifamily residential project The existing site discharges 5.88 cfs to the existing roadways. The flow drains west in Marble to the city storm drain system. The proposed development will continue to discharg the adjacent roadways and will retain onsite 1527 cubic feet of water which exceeds the first flush requirement of 1195 cubic feet. The site is not impaced by upland flows.

APPENDIX B

HYDRAULIC CALCULATIONS

7

sidewalk culvert

Weir Equation:

 $Q = CLH^{3/2}$

West drainage under sidewalk

Q= 1.94 cfsC = 2.95 H = 0.5 ft L = Length of weir

$$Q = 2.95 * 2 * ((0.5)^{(3/2)})$$

Each sidwalk culvert has a capacity of 2.08 cfs

TURNED BLOCKS

Weir Equation:

 $Q = CLH^{3/2}$

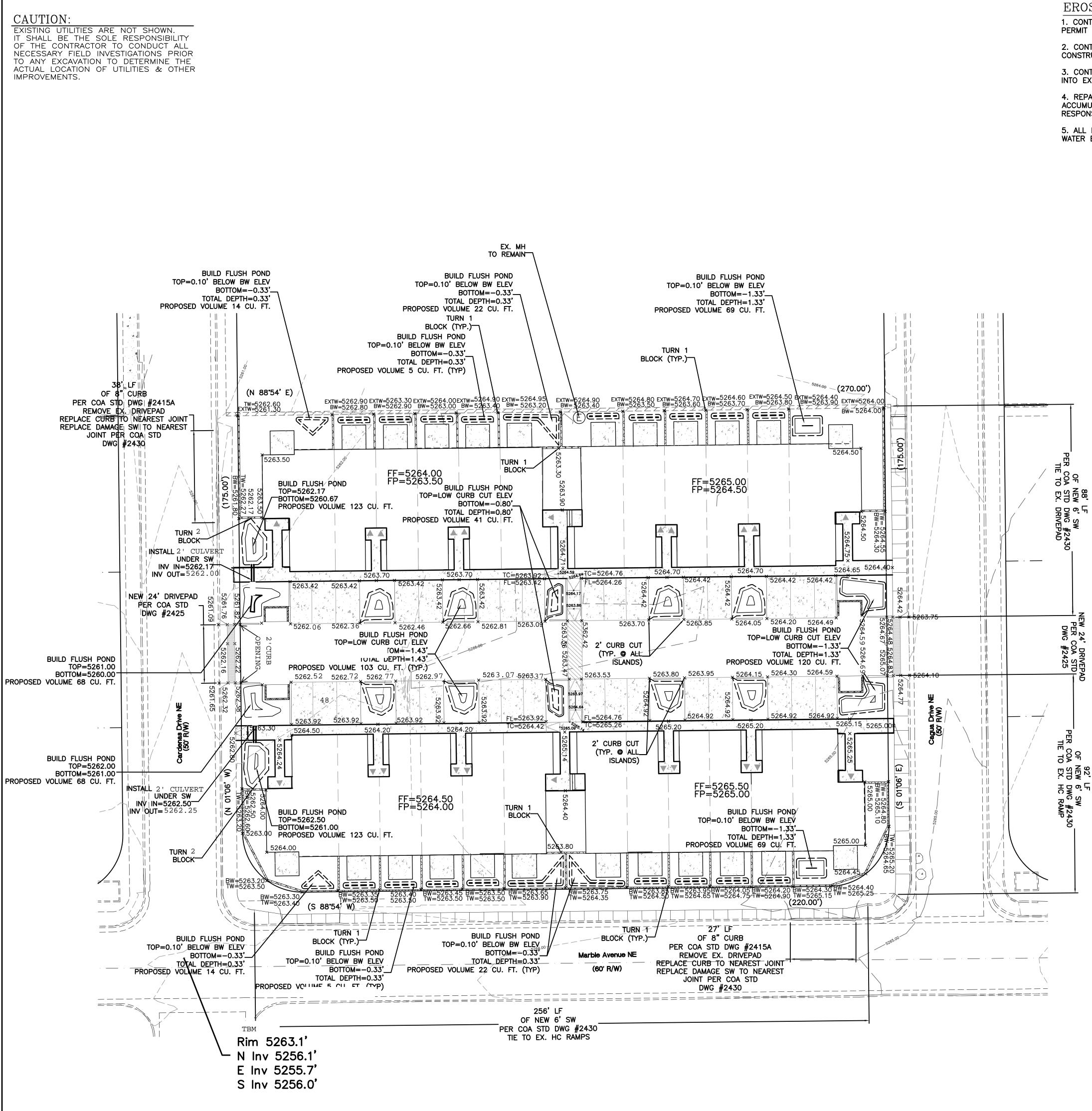
West drainage swale thru walls

Q= 2.92 cfsC = 2.95 H = 0.5 ft L = Length of weir

 $Q = 2.95 * .5 * ((0.5)^{(3/2)})$

Each opening is 6"x6" Each block has two openings Each opening has .52 cfs capacity

Therefore 1.95 cfs requires 4 openings or 2 turned blocks



EROSION CONTROL NOTES: 1. CONTRACTOR IS RESPONSIBLE FOR OBTAIN PERMIT PRIOR TO BEGINNING WORK.

2. CONTRACTOR IS RESPONSIBL CONSTRUCTION.

3. CONTRACTOR IS RESPONSIBL INTO EXISTING RIGHT-OF-WAY.

4. REPAIR OF DAMAGED FACILITI ACCUMULATIONS ON ADJACENT RESPONSIBILITY OF THE CONTRA

5. ALL EXPOSED EARTH SURFACE WATER EROSION PRIOR TO FINAL

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| | SUBDIVISION | | DIVISION AND LOTS 7-9, BLC | |
| | NOTES: | | VLINE ELEVATION UNLESS O | THERWISE |
| 1 | NOTED. | | | |
| | 2. ALL CURB AND GUT NOTED. | ITER TO 6" HEADEI | R UNLESS OTHERWISE | |
| : | 3. ALL RETAINING WALL | DESIGN SHALL BE | BY OTHERS. | |
| | 4. ALL NEW PAVING SH | | ER 8" SUBGRADE PREPARA | TION IN |
| | | | LY IMPACTED BY CONSTRUC | CTION ACTIVITY |
| | SHALL BE REPLACED TO | | | |
| | 3. ALL SITE WORK SHA PUBLIC WORKS CONSTRU | | CITY OF ALBUQUERQUE STAI | NDARDS FOR |
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| | AVID SOL | | | DATE 12–29–17 |
| | | GRADING | | |
| ' ' | | DRAINAGI | E PLAN | 21835-LAYOUT-12-12-17 |
| GRAPHIC SCALE | PROFESSIONNL | | Rio Grande | SHEET # |
| | | | Engineering | - |
| | 10/00/17 | | | • |
| | 12/29/17 = | | 1606 CENTRAL AVENUE SE SUITE 201 | |
| | 12/29/17 = DAVID SOULE P.E. #14522 | | <i>1606 CENTRAL AVENUE SE</i> | JOB # 21835 |
| | DAVID SOULE | | 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 | |