

CITY OF ALBUQUERQUE



April 10, 2018

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

RE: **715, 719, 721 14th St NW**
Grading and Drainage Plan
Engineer's Stamp Date: 4/5/18
Drainage File: J13D208

Dear Mr. Soule:

Based on the information provided in your submittal received 4/9/18, the grading and drainage plan is approved for plat and grading permit.

Prior to Building Permit:

1. Pad Certifications will be required prior to Hydrology approving the residential Building Permits.

Prior to Certificate of Occupancy:

2. Engineer's Certification, per the DPM Checklist, will be required to ensure the ponds remained intact following home construction.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

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:** _____

Other Contact: _____ **Contact:** _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ ARCHITECT CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

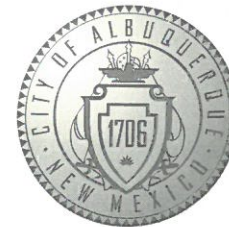
- ☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
- ☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
- ☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: _____ By: DAVID SOULE

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

CITY OF ALBUQUERQUE



March 29, 2018

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

RE: **715, 719, 721 14th St NW**
Grading and Drainage Plan
Engineer's Stamp Date: 3/20/18
Drainage File: J13D208

Dear Mr. Soule:

Based on the information provided in your submittal received 3/21/18, the grading and drainage plan cannot be approved until the following are addressed:

Prior to Preliminary Plat/Grading Permit:

1. Provide onsite ponding volume on each lot for the 100-yr, 6hr volume. **UPDATED**
2. Remove the language relating to first flush. Minor residential subdivisions (less than 10 units) and single residences are exempt from the requirement. **REVISED**
3. Provide all calculations on a stamped plan sheet or in a bound and stamped report; loose calculations cannot be accepted. **PROVIDED STAMPED CALCULATION SHEET**

Prior to Building Permit:

4. Pad Certifications will be required prior to Hydrology approving the residential Building Permits. **ACKNOWLEDGED**

Prior to Certificate of Occupancy:

5. Engineer's Certification, per the DPM Checklist, will be required to ensure the ponds remained intact following home construction.
ACKNOWLEDGED

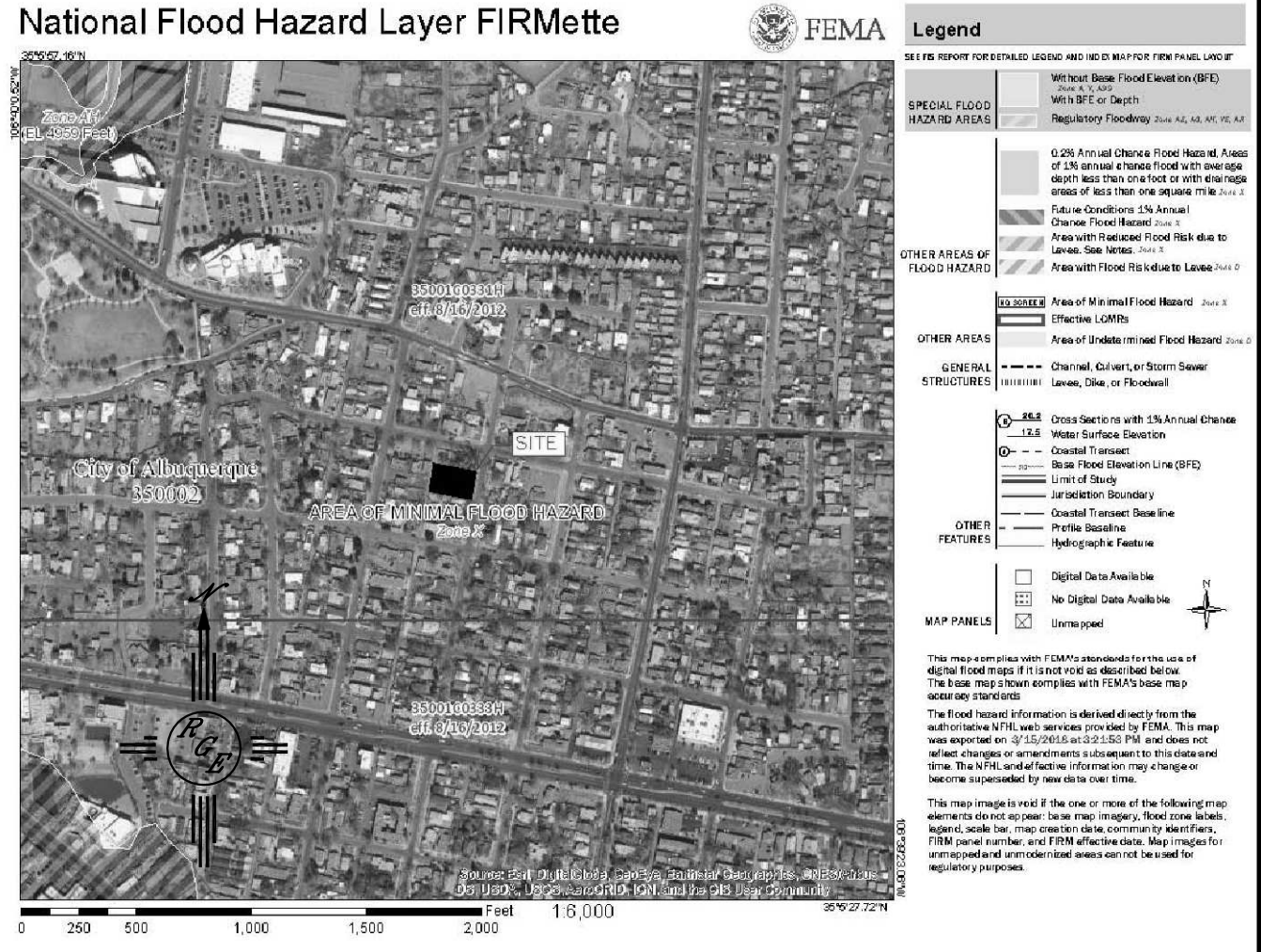
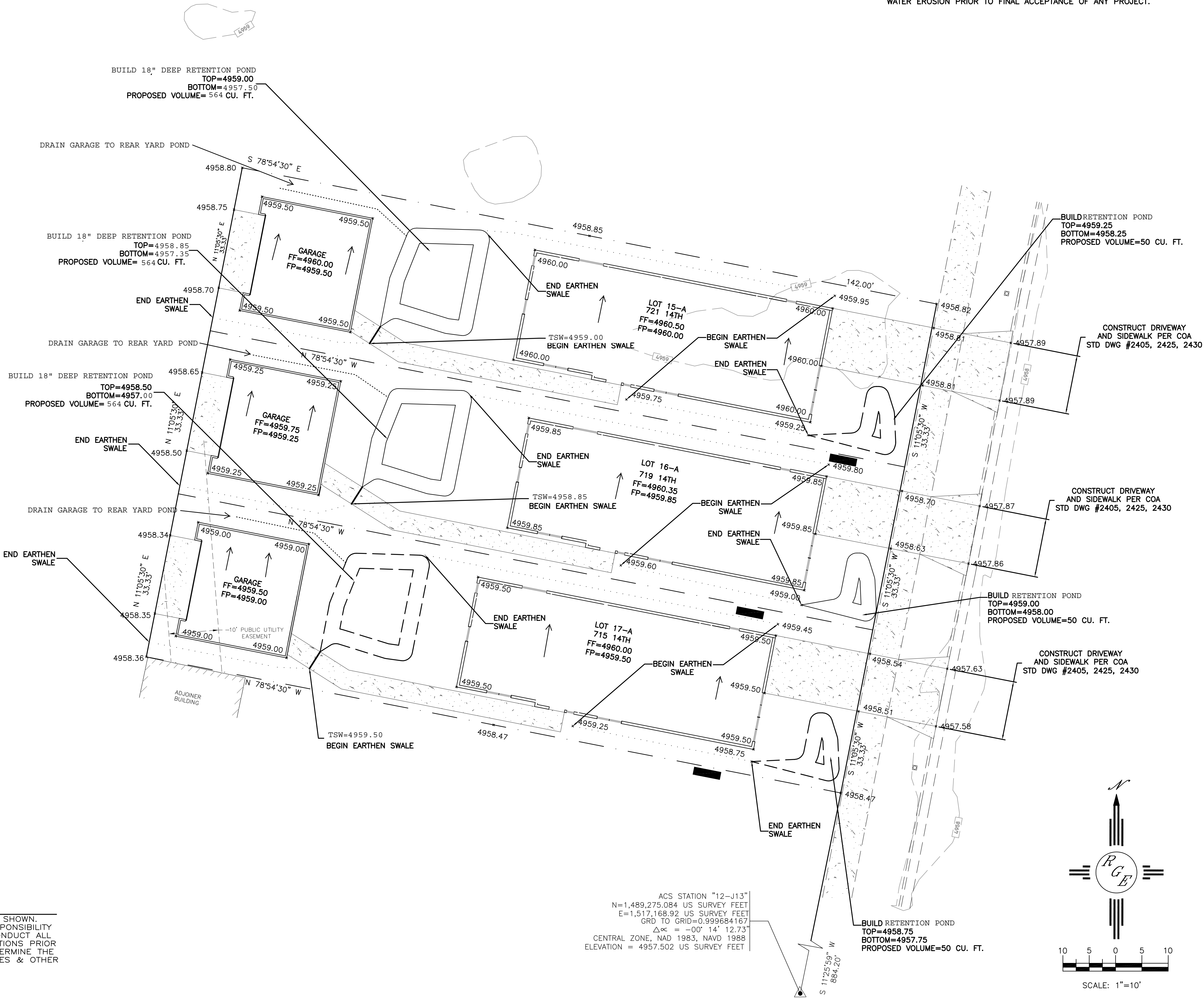
If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



LEGAL DESCRIPTION:

LOTS 15-A, 16-A & 17-A, BLOCK 41, PEREA ADDITION

- NOTES:
1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR NATIVE SEEDING PRIOR TO CO.
3. ANY PERIMETER WALLS MUST BE PERMITTED SEPARATELY. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.

LEGEND	
---	EXISTING CONTOUR
----	EXISTING INDEX CONTOUR
----	PROPOSED CONTOUR
----	PROPOSED INDEX CONTOUR
----	SLOPE TIE
• XXXX	EXISTING SPOT ELEVATION
• XXXX	PROPOSED SPOT ELEVATION
---	BOUNDARY
---	CENTERLINE
---	RIGHT-OF-WAY
====	EXISTING CURB AND GUTTER
----	PROPOSED CMU RETAINING WALL 1'-4.50' MAX RETAINAGE (DESIGN BY OTHERS)

ENGINEER'S SEAL DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER	715, 719, 721 14TH STREET	DRAWN BY: WCMJ
	GRADING AND DRAINAGE PLAN	DATE: 3-20-17
4/5/18 DAVID SOULE P.E. #14522	 Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	21875-LAYOUT-3-20-18
		SHEET # JOB # 21875

Weighted E Method
LOT 15A

											100-Year, 6-hr.		10-day	
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
BASIN 15A	3529.00	0.081	0%	0	20%	0.016	21%	0.017	59%	0.048	1.644	0.011	0.32	0.017
BASIN 15B	550.00	0.013	0%	0	50%	0.006	50%	0.0063	0%	0.000	0.955	0.001	0.03	0.001
REMAINING 15	709.00	0.016	0%	0	25%	0.004	37%	0.006	38%	0.006	1.419	0.002	0.06	0.003
TOTAL	4788.00	0.11	0%	0.000	24%	0.027	27%	0.029	49%	0.054		0.014	0.406	0.021

ALOOWED 2.75 CFS PER ACRE = 0.3023 CFS

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
Ea= 0.53 Qa= 1.56 761.1171
Eb= 0.78 Qb= 2.28
Ec= 1.13 Qc= 3.14
Ed= 2.12 Qd= 4.7

Developed Conditons

FLOOD CONTROL 10-DAY 6-HOUR 564 PROVIDED
BASIN A 761 CF
BASIN B 44 CF

NARRATIVE

SITE IS LOCATED IN THE VALLEY DRAINAGE AREA.THE SITE IS ALLOWED TO RETAIN ONSITE THE 100-YEAR, 6- HOUR VOLUME. TH RETAINS IN EXCESS OF THE REQUIRED. THE SITE CONTAINS 3 DRAINAGE BASINS. BASIN A CONTAINS THE MAJORITY OF THE LOT AND BOTH THIS BASIN DRAINS TO A RETENTION/DETENTION POND. THE OUTFALL IS OVER THE PRIVATE SIDEWALK AND RETAINS 564 CF, WHICH IS GRE THE REQUIRED VOLUME OF 484 CF. BASIN B CONTAINS THE FRONT YARD AND THE TOTAL FLOW GENERATED IS RETAINED. THE REMAINING OF THE LOT IS THE DRIVEWAY WHICH DISCHARGES TO THE ADJACENT STREETS AT A PEAK FLOW OF .06 CFS. THIS BASIN CAN NOT BE CAPTI THE 0.06 CFS IS NEGLIGABLE

Weighted E Method
LOT 16A

											100-Year, 6-hr.		10-day	
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
BASIN 15A	3792.00	0.087	0%	0	20%	0.017	24%	0.0209	56%	0.049	1.614	0.012	0.33	0.018
BASIN 15B	550.00	0.013	0%	0	50%	0.006	50%	0.0063	0%	0.000	0.955	0.001	0.03	0.001
REMAINING 15	446.00	0.010	0%	0	25%	0.003	37%	0.0038	38%	0.004	1.419	0.001	0.04	0.002
TOTAL	4788.00	0.11	0%	0.000	24%	0.026	28%	0.031	48%	0.053		0.014	0.405	0.021

ALOOWED 2.75 CFS PER ACRE = 0.3023 CFS

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
Ea= 0.53 Qa= 1.56 793.2864
Eb= 0.78 Qb= 2.28
Ec= 1.13 Qc= 3.14
Ed= 2.12 Qd= 4.7

Developed Conditions

FLOOD CONTROL 10-DAY 6-HOUR 564 PROVIDED
BASIN A 793 CF
BASIN B 44 CF

NARRATIVE

SITE IS LOCATED IN THE VALLEY DRAINAGE AREA.THE SITE IS ALLOWED TO RETAIN ONSITE THE 100-YEAR, 6- HOUR VOLUME. THIS SITE IS RETAINS IN EXCESS OF THE REQUIRED. THE SITE CONTAINS 3 DRAINAGE BASINS. BASIN A CONTAINS THE MAJORITY OF THE LOT AND BOTH BUILDINGS THIS BASIN DRAINS TO A RETENTION/DETENTION POND. THE OUTFALL IS OVER THE PRIVATE SIDEWALK AND RETAINS 564 CF, WHICH IS GREATER THAN THE REQUIRED VOLUME OF 510 CF. BASIN B CONTAINS THE FRONT YARD AND THE TOTAL FLOW GENERATED IS RETAINED. THE REMAINING PORTION OF THE LOT IS THE DRIVEWAY WHICH DISCHARGES TO THE ADJACENT STREETS AT A PEAK FLOW OF .04 CFS. THIS BASIN CAN NOT BE CAPTURED. THE 0.04 CFS IS NEGLIGABLE

Weighted E Method
LOT 17A

											100-Year, 6-hr.		10-day	
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
BASIN 15A	3523.00	0.081	0%	0	20%	0.016	20%	0.0162	60%	0.049	1.654	0.011	0.32	0.018
BASIN 15B	550.00	0.013	0%	0	50%	0.006	50%	0.0063	0%	0.000	0.955	0.001	0.03	0.001
REMAINING 15	715.00	0.016	0%	0	25%	0.004	37%	0.0061	38%	0.006	1.419	0.002	0.06	0.003
TOTAL	4788.00	0.11	0%	0.000	24%	0.027	26%	0.029	50%	0.055		0.014	0.408	0.021

ALOOWED 2.75 CFS PER ACRE = 0.3023 CFS

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


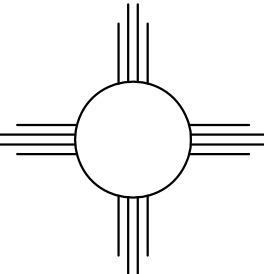
Where for 100-year, 6-hour storm
Ea= 0.53 Qa= 1.56
Eb= 0.78 Qb= 2.28
Ec= 1.13 Qc= 3.14
Ed= 2.12 Qd= 4.7

Developed Conditions

FLOOD CONTROL 10-DAY 6-HOUR 564 PROVIDED
BASIN A 767 CF
BASIN B 44 CF

NARRATIVE

SITE IS LOCATED IN THE VALLEY DRAINAGE AREA.THE SITE IS ALLOWED TO RETAIN ONSITE THE 100-YEAR, 6- HOUR VOLUME. THIS SITE IS RETAINS IN EXCESS OF THE REQUIRED. THE SITE CONTAINS 3 DRAINAGE BASINS. BASIN A CONTAINS THE MAJORITY OF THE LOT AND BOTH BUILDINGS. THIS BASIN DRAINS TO A RETENTION/DETENTION POND. THE OUTFALL IS OVER THE PRIVATE SIDEWALK AND RETAINS 564 CF, WHICH IS GREATER THAN THE REQUIRED VOLUME OF 486 CF. BASIN B CONTAINS THE FRONT YARD AND THE TOTAL FLOW GENERATED IS RETAINED. THE REMAINING PORTION OF THE LOT IS THE DRIVEWAY WHICH DISCHARGES TO THE ADJACENT STREETS AT A PEAK FLOW OF .06 CFS. THIS BASIN CAN NOT BE CAPTURED. THE 0.06 CFS IS NEGLIGABLE

<div>ENGINEER'S SEAL</div> <div></div> <div>4/5/18</div> <div>DAVID SOULE P.E. #14522</div>	715, 719, 721 14TH STREET	DRAWN BY WCVWJ
	DRAINAGE CALCULATION SHEET	DATE 3-20-17
	 <div>Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999</div>	21875-LAYOUT-3-20-18
		SHEET # —
		JOB # 21875