CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

May 26, 2017

Jeffrey T. Wooten, P.E. Wooten Engineering 1005 21st Street SE, Suite 13 Rio Rancho, NM, 87124

RE: Nuestros Valores Charter High School

Grading Plan

Stamp Date: 5/25/17 Hydrology File: L10D007

Dear Mr. Wooten:

PO Box 1293

Based upon the information provided in your resubmittal received 5/25/2017, the Drainage Report and Grading and Drainage Plan is approved for Building and Grading Permit.

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

Albuquerque

Sincerely,

New Mexico 87103

Renee C. Brissett

www.cabq.gov

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



COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: ____

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title:	ject Title:		City Drainage #:				
P.P.P. "	Building Permit EPC#:		k Order#:				
Legal Description:							
City Address:							
Engineering Firm:		Cont	act:				
Address:							
Phone#:	Fax#:	E-ma	ail:				
Owner:		Cont	act:				
Address:							
Phone#:	Fax#:	E-ma	ail:				
Architect:		Cont	act:				
Address:							
Phone#:	Fax#:	E-ma	ail:				
Other Contact:		Cont	act:				
Address:							
Phone#:	Fax#:	E-ma	ail:				
Check all that Apply: DEPARTMENT: HYDROLOGY/ DRAINAGE			ROVAL/ACCEPTANCE SOUGHT:				
TRAFFIC/ TRANSPORTATION			BUILDING PERMIT APPROVAL				
MS4/ EROSION & SEDIMENT CO	NTROL	CERTIFICATE OF	OCCUPANCY				
TYPE OF SUBMITTAL:		PRELIMINARY PI	AT APPROVAL				
ENGINEER/ ARCHITECT CERTIFIC	CATION	SITE PLAN FOR S					
		SITE PLAN FOR B	LDG. PERMIT APPROVAL				
CONCEPTUAL G & D PLAN		FINAL PLAT APP	FINAL PLAT APPROVAL				
GRADING PLAN		SIA/ RELEASE OF	SIA/ RELEASE OF FINANCIAL GUARANTEE				
DRAINAGE MASTER PLAN		FOUNDATION PE	FOUNDATION PERMIT APPROVAL				
DRAINAGE REPORT		GRADING PERMI	GRADING PERMIT APPROVAL				
CLOMR/LOMR		SO-19 APPROVAL	SO-19 APPROVAL				
		PAVING PERMIT					
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Wooten Engineering
1005 21st Street SE, Suite 13

Rio Rancho, NM 87124 505-980-3560 jeffwooten.pe@gmail.com

May 25, 2017

Ms. Renee C. Brissette, PE Senior Engineer, Hydrology City of Albuquerque PO Box 1293 Albuquerque, NM 87103

VIA E-Mail: rbrissette@cabq.gov

RE: Nuestros Valores Charter High School (Hydrology File L10/D007)
Grading Plan Resubmittal, Revised 5/25/2017

Renee,

We are in receipt of your comments dated May 12, 2017 regarding the subject project. The revised plans are included with this resubmittal. Below are responses to the comments.

- 1. The benchmark information has been added under the Zone Atlas Page.
- 2. Per our prior email correspondence, Pond 'B' has been revised to capture the 100-Yr, 10-day storm.
- 3. AHYMO routing is not typically required for retention ponds. The calculation of the 100-Yr, 10-day storm is a direct calculation per the DPM and is reflected on the Drainage Calculations table on Sheet C102.
- 4. Per our prior email correspondence, Pond 'A' is to remain as existing per the prior design by Applied Engineering and Surveying, Inc. Pond 'B' has been revised to capture the 100-Yr, 10-day storm.
- 5. Per our prior email correspondence, Pond 'A' is to remain as existing per the prior design by Applied Engineering and Surveying, Inc. Pond 'B' has been revised to capture the 100-Yr, 10-day storm.
- 6. The Basin Map has been added per your request.

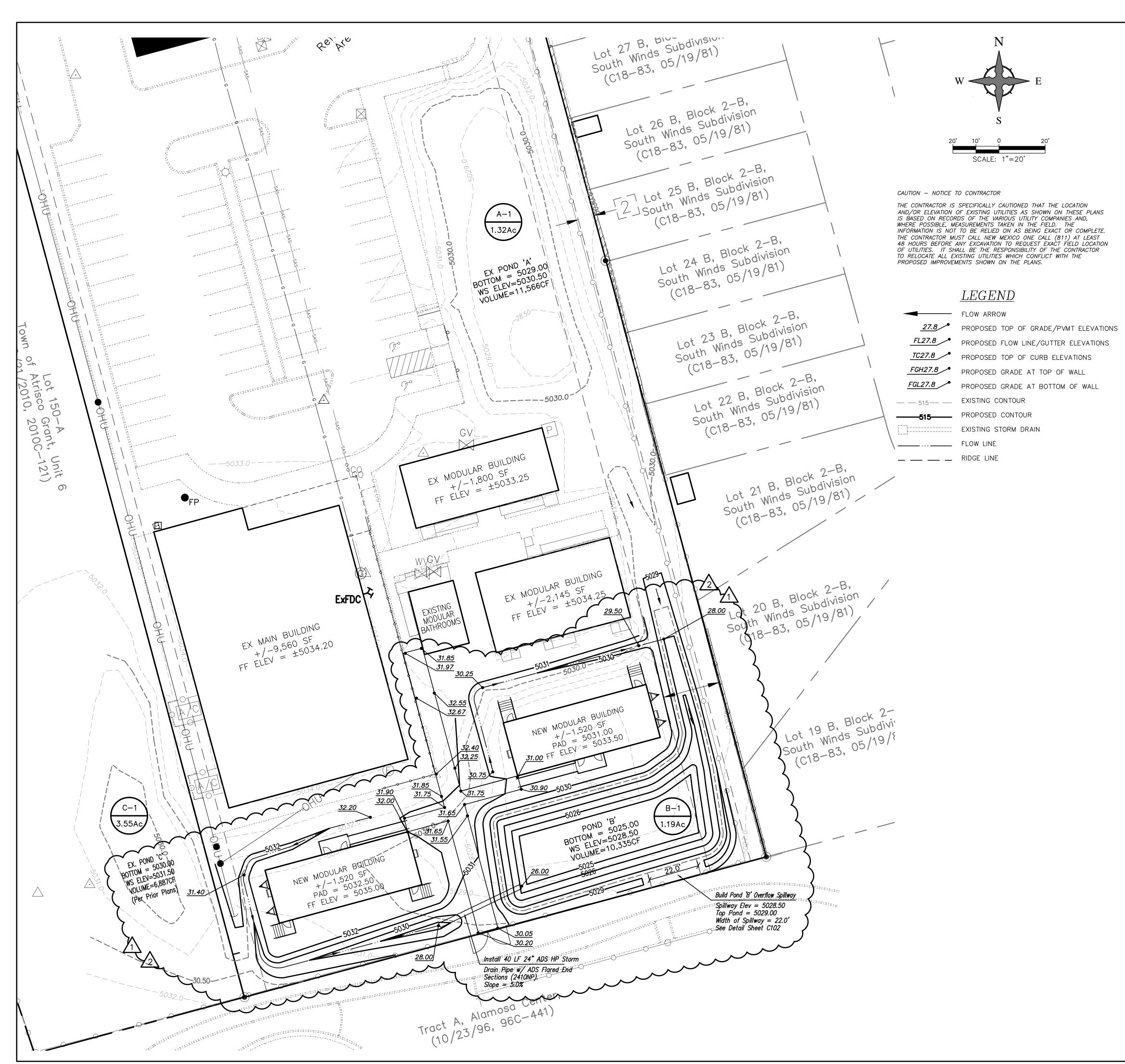
We believe we have addressed all engineering related comments on the plans. Please feel free to call if you have any further questions or comments concerning the revised plans.

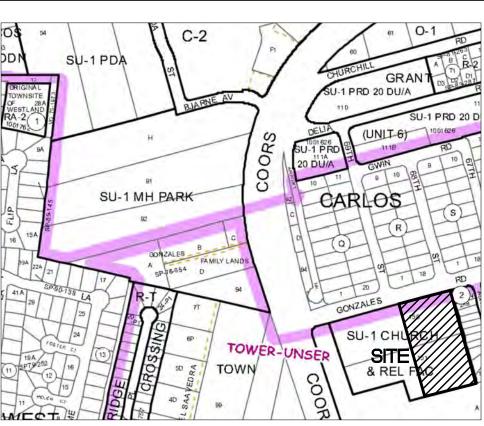
Respectfully submitted,

WOOTEN ENGINEERING

Jeffrey T. Wooten, P.E.

Owner

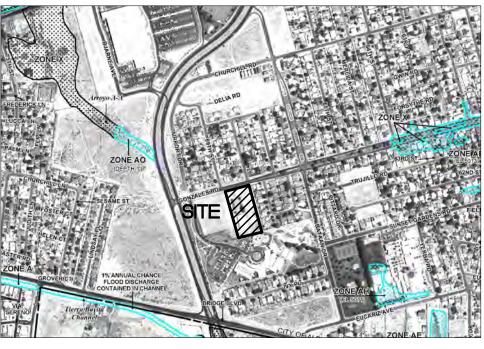




VICINITY MAP Zone Atlas K-10

Legal Description: Lot 150-B, Town of Atrisco Grant, Unit 6 Benchmark -NAVD 88

ACS MONUMENT "11-K10" HAVING AN ELEVATION OF 5046.073.



FIRM MAP 35001C0143G

Per FIRM Map 35001C0143G, dated September 26, 2008, the site is not located in the 'Zone X Floodplain' and determined to be within the 0.2% chance Annual Floodplain area with depths of less than 1 foot.

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

4. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

5. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

6. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS OR SILT FENCE AT THE PROPERTY LINES AND WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.

7. A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

8. PAVING AND ROADWAY GRADES SHALL BE +/- 0.05' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN

9. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR PAVEMENT, MEDIANS, AND ISLANDS.

10. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION (IF APPLICABLE) PRIOR TO BEGINNING CONSTRUCTION.

11. THE CONTRACTOR SHALL PROVIDE THE SWPPP DOCUMENT (IF NECESSARY) AND SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

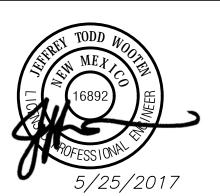


STUDIO CONSULTANTS, INC PO BOX 1515 CEDAR CREST NM, 87008 DANIEL@ARIASCINC.COM (505) 506-2314



NUESTROS VALORES CHARTER HIGH SCHOOL

6800 Gonzales Road SW Albuquerque, NM 87121



Architect/Engineer

4/28/2017 Revisions per Architect

2	5/25/2017	Revisions per City			
	•				
MARK	DATE	DESCRIPTION			
REVISIO	DNS				
ISSUE		PERMIT			
PROJE	CT NO	2017008			
CAD DWG FILE					
DRAWN	BY	JTW			
CHECK	CHECKED BY JTW				
DATE		4/12/2017			
	•				

SITE GRADING PLAN

C101

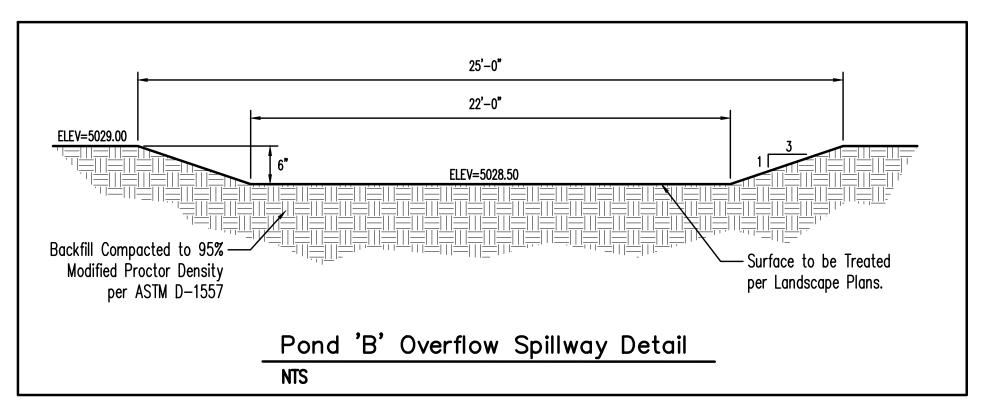
Wooten Engineering 1005 21st Street SE, Suite 13 Rio Rancho, N.M. 87124 Phone: (505) 980-3560

			EXIST	ing NVC	HS Dra	ainage	Caicuia	tions				
	This	table is based o	on the COA DP	M Section 2	22.2, Zone:	1						
BASIN	Area	Area Land Treatment Percentages			Q(100)	Q(100)	WTE	V(100) ₃₆₀	V(100) ₁₄₄₀	V(100) _{10d}		
	(SQ. FT)	(AC.)	A	В	С	D	(cfs/ac.)	(CFS)	(inches)	(CF)	(CF)	(CF)
A-1	57568	1.32	0.0%	25.0%	23.0%	52.0%	3.44	4.55	1.42	6810	7808	10802
B-1	51748	1.19	0.0%	31.0%	31.0%	38.0%	3.18	3.78	1.26	5447	6103	8069
C-1	154702	3.55	85.0%	0.0%	15.0%	0.0%	1.53	5.42	0.52	6736	6736	6736
TOTAL	264018	6.06		11 11 11 11	777			13.75		18994	20647	25607
		Proposed (Future) NVCHS Drainag						lations				
		Proposed (Future) NVCHS Drainas						lations	-			
		Ultimate Development Conditions Basin				A STATE OF THE PARTY OF THE PAR						
			Ultimate	Developme	nt Conditio	ons Basin L	Data Table					
	This	table is based o	11 (12 / 72)	V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		271 777 204	Data Table					
BASIN	This	table is based o	n the COA DP	V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22.2, Zone:	1	Q(100)	Q(100)	WTE	V(100) ₃₆₀	V(100) ₁₄₄₀	V(100) ₁₀₀
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BASIN A-1	Area	Area	on the COA DP	M Section 2 d Treatment	22.2, Zone: Percentage	1 es	Q(100)	100000000000000000000000000000000000000	1 17 11 11			
(-1.12-th)	Area (SQ. FT)	Area (AC.)	on the COA DP Lan	M Section 2 d Treatment B	Percentage	1 es D	Q(100) (cfs/ac.)	(CFS)	(inches)	(CF)	(CF)	(CF)
A-1	Area (SQ. FT) 57568	Area (AC.) 1.32	Lan A 0.0%	M Section 2 d Treatment B 25.0%	22.2, Zone: Percentage C 23.0%	1 es D 52.0%	Q(100) (cfs/ac.) 3.44	(CFS) 4.55	(inches) 1.42	(CF) 6810	(CF) 7808	(CF) 10802

RETENTION POND VOLUME CALCULATIONS CONTOUR ELEVATION AREA (SF) VOLUME (CF) POND 'A' 5029.00 6,620 SF BASED ON PRIOR PLANS 5030.00 1,059.0 CF 8,128 SF — 4,797.0 CF 8,643 SF 5030.50 3,172.0 CF TOTAL 11,566.0 CF REQ'D 10,802.0 CF POND 'B' 5025.00 1,606 SF 1,930.0 CF BASED ON DESIGN 5026.00 2,254 SF - 2,645.0 CF 5027.00 3,036 SF - 3,543.0 CF 4,050 SF 5028.00 - 2,217.0 CF 4,818 SF 5028.50 TOTAL 10,335.0 CF REQ'D 9,832.0 CF POND 'C' 5030.00 2,589 SF BASED ON PRIOR PLANS 5031.00 3,896.0 CF — 2,991.0 CF 5031.50 TOTAL 6,887.0 CF REQ'D 6,736.0 CF

28,788.0 CF

GRAND TOTAL



DRAINAGE MANAGEMENT PLAN

The purpose of this submittal is to provide a final grading plan and drainage management plan for the addition of two new modular classroom buildings to the existing NVCHS site located at 6800 Gonzales Road SW. The existing Pond 'B' will be regraded per the grading plan (Sheet C101) to accomadate the required storage volume as discussed below.

Existing information referenced below was obtained from a Drainage Management Plan prepared by Applied Engineering and Surveying, Inc dated September 7, 2010.

EXISTING HYDROLOGIC CONDITIONS

Both Lots 150-A and 150-B sheet flow from west to east and into three existing retention ponds, A, B, and C. Existing Pond A captures the nothern two-thirds of Lot 150-B, Pond 'C' captures the entire Lot 150-A, and Pond 'B' captures the southern one—third of Lot 150—B in addition to the overflows from both Ponds 'A' and 'C'. Existing runoff rates and volumes are shown in the Drainage Calculations Table this sheet.

PROPOSED HYDROLOGIC CONDITIONS

The proposed drainage patterns and basins will generally remain the same as they are today; however, Basin B has some minor increased flows due to the addition of the two new modular buildings and the associated sidewalks.

Proposed runoff rates and volumes can be found in the Drainage Calculations Table this sheet.

Pond 'A' will remain unchanged and per the original design plans by Applied Engineering and Surveying, Inc., the pond has adequate volume to contain the current runoff. The pond is sized to capture the 100-Yr, 10-day storm Volume. The pond will overflow to Pond 'B'.

POND C

This pond is existing and we are assuming that the Pond Volume matches that of the original design by Applied Engineering and Surveying. Per the pond volume calculations table this sheet, the existing capacity of this pond is 6,887 CF. Pond 'C' overflows to Pond 'B'. Upon future build—out of Lot 150-A, this pond will need to be redesigned and reconstructed based on developed conditions at that time.

Pond 'B' is being reconfigured as part of this project as shown on the grading plan. The proposed capacity of the pond is 10,335 CF which will adequately capture the required 100-Yr, 10-day volume of 9,832 CF. The spillway for Pond 'B' has been redesigned to allow for the future emergency spillway flows from both Ponds 'A' and 'C'. Reference the detail this sheet for the new spillway design.

FIRST FLUSH CALCULATIONS

Since the ponds located on site are retention ponds, they are capturing all required First Flush flows generated by the site.

This drainage management plan provides for grading and drainage elements which are capable of safely capturing the 100Yr, 10—day storm, do not burden downstream systems, and meet city requirements. The proposed improvements to the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting Drainage Management Plan and Building Permit approval.

OVERFLOW SPILLWAY CALCULATIONS POND 'A'

WEIR EQUATION; $Q = C*L*(H^1.5)$

- C = 3.0 (Weir Coefficient)
- L = 6 feet (Width of Flow)
- H = 0.5 feet (Depth of Flow)
- $Q = 3.0*6*(0.5^1.5)$

Qcap = 12.0 cfs

Qregd = 4.55cfs CHECK

POND 'B' (Based on Future Developed Flows from Basin'C')

WEIR EQUATION; $Q = C*L*(H^1.5)$

- C = 3.0 (Weir Coefficient)
- L = 22 feet (Width of Flow) H = 0.5 feet (Depth of Flow)

 $Q = 3.0*22*(0.5^1.5)$ $Qcap = 23.3\overset{\circ}{3} cfs$

Qreqd = 21.71cfs CHECK

EXISTING; NOT ON PROPERTY

24" STORM DRAIN CALCULATIONS

ORIFICE EQUATION; $Q = C*A*(2gH)^0.5$

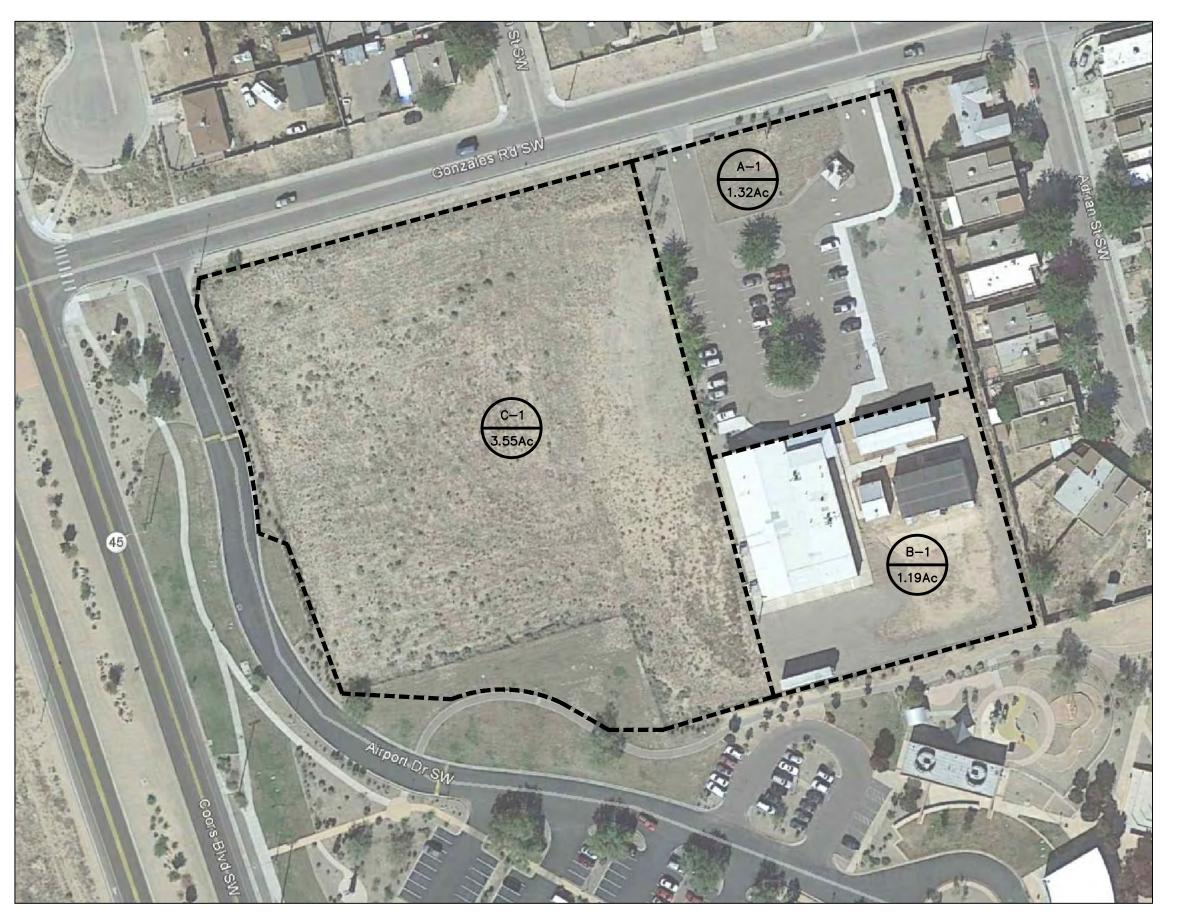
- C = 0.6 (Orifice Coefficient)
- A = 3.14 sqft (Area of Opening) 2g = 64.4
- H = 1.50 ft (Depth of Flow)

Q = 18.51cfs

MANNING'S EQUATION (Gravity Flow) $Q = A*(1.486/n)*(S)^0.5*(R)^0.67$

- Given: A = 3.14 sqft
- n = 0.010S = 0.050
- R = 3.14/6.28 = 0.50
- Q = 65.72cfs

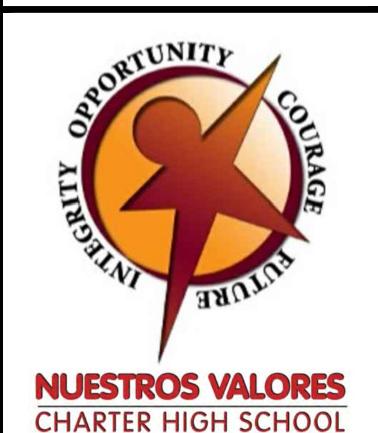
PIPE IS INLET CONTROLLED



Basin Map



STUDIO CONSULTANTS, INC PO BOX 1515 CEDAR CREST NM, 87008 DANIEL@ARIASCINC.COM (505) 506-2314



6800 Gonzales Road SW Albuquerque, NM 87121



Architect/Engineer

5/25/2017 Revisions per City

MARK	DATE	DESCRIPTION		
REVISIO	ONS			
ISSUE		PERMIT		
PROJE	CT NO	2017008		
CAD DWG FILE				
DRAWN	BY	JTW		
CHECK	ED BY	JTW		
DATE		4/12/2017		

DRAINAGE MANANGEMENT PLAN AND DRAINAGE DETAILS

C102

X/ooten 1005 21st Street SE, Suite 13 Rio Rancho, N.M. 87124

Phone: (505) 980-3560