CITY OF ALBUQUERQUE

October 3, 2017

Åsa Nilsson-Weber, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

RE: **Campbell Compound**
Drainage Report and Grading Plan
Engineer's Stamp Date 9/26/17
Hydrology File: G13D032

Dear Ms. Nilsson-Weber:

Based on the information provided in the submittal received on 9/26/17 the above-referenced submittal cannot be approved for Preliminary Plat or Grading Permit until the following are addressed:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Prior to Preliminary Plat:

1. Subbasin A needs to include the Campbell Rd half street area and the ponds on tract B & C need to be sized to include this volume.
2. Section E-E on sheet 2/2 shows the retaining wall/privacy wall encroaching across the property line. Correct to show on only Campbell Compound's property.
3. Separate Section F-F into two viewports for the different cases. Clearly show that the footer stays off the adjacent property.
4. Modifying an existing privacy wall into a floodwall is not an acceptable course. If a floodwall is desired, a new one will need to be designed and built (Section Y-Y).
5. Modifying an existing privacy wall into a retaining wall is not an acceptable course. A new wall will need to be designed and built (Section G-G).
6. Written permission from Campbell Farms HOA will need to be obtained, authorizing any modifications to the common wall. If portions of the wall are owned/maintained by Campbell Farms Lot 11, written permission from that homeowner will be needed as well.
7. the rear-yard retaining wall needs to be 4" (minimum) above the high point of the rear-yard swale invert to promote drainage away from the rear wall and to the front yard (Section B-B and G-G).

Orig: Drainage file

CITY OF ALBUQUERQUE

8. The Infrastructure list will need to include the Tract B and Tract C ponds with agreement and covenant.

9. Provide a drainage easement over the Tract B and Tract C ponds on the preliminary plat.

Prior to Grading Permit:

10. This project will require an ESC plan prior to grading permit approval.

Prior to DRC Sign-off:

11. A Drainage Covenant is required for the commons area pond and an Agreement and Covenant is required for the Tract B and C Ponds. The original notarized forms, pond exhibits, and recording fees ($25/ea., payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.

Prior to Hydrology approval for Release of Financial Guarantee, the Drainage Covenants must be recorded with Bernalillo County and a copy included with the drainage certification. If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Sincerely,

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

Orig: Drainage file

SEPTEMBER 26, 2017

DRAINAGE REPORT

FOR

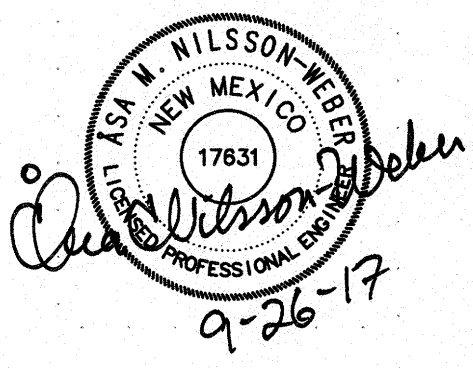
CAMPBELL COMPOUND

A 7-DWELLING UNIT SINGLE-DETACHED RESIDENTIAL PRIVATE COMMONS DEVELOPMENT

ALBUQUERQUE, NEW MEXICO

.

BY

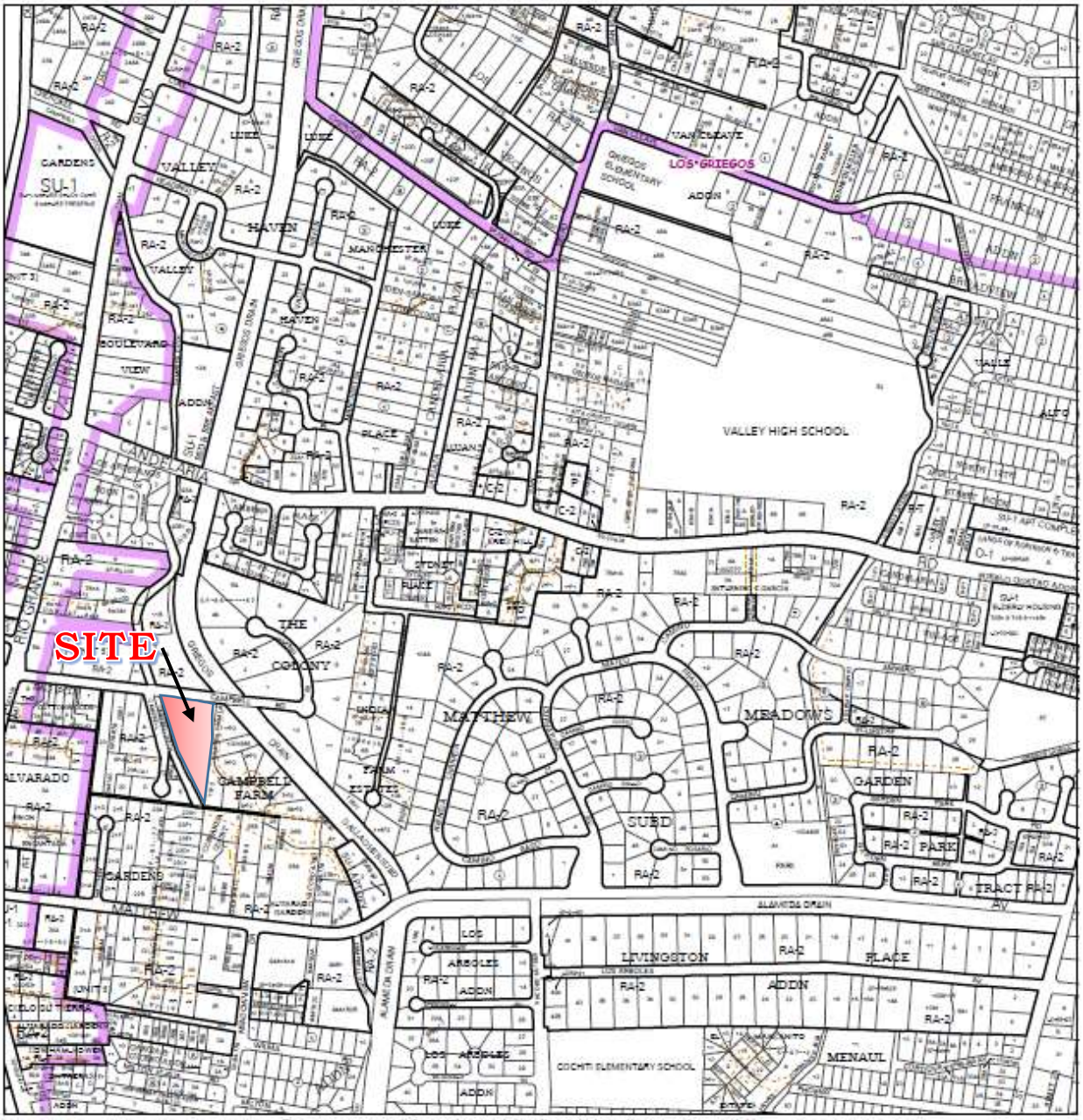


ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates

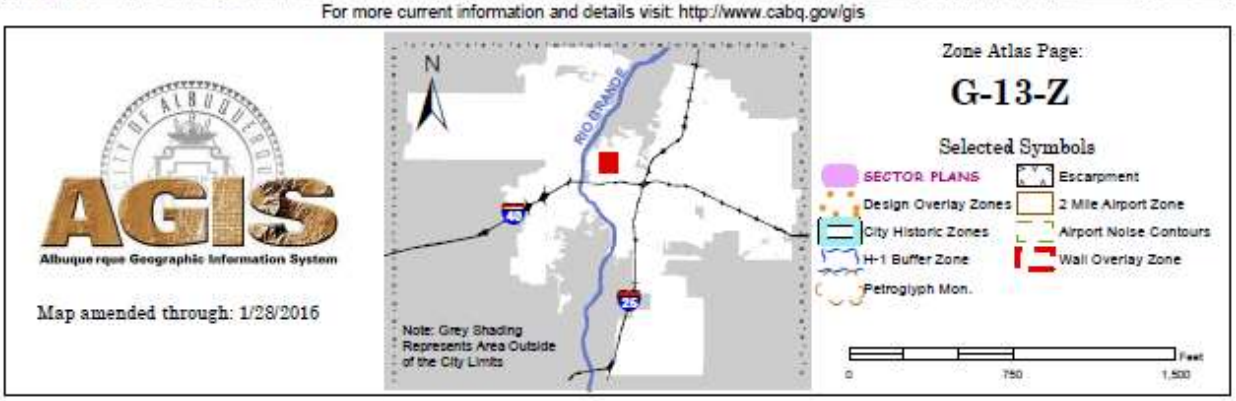
Thomas O. Isaacson, PE & LS
Fred C. Arfman, PE
Åsa Nilsson-Weber, PE

I&A Project No. 2224

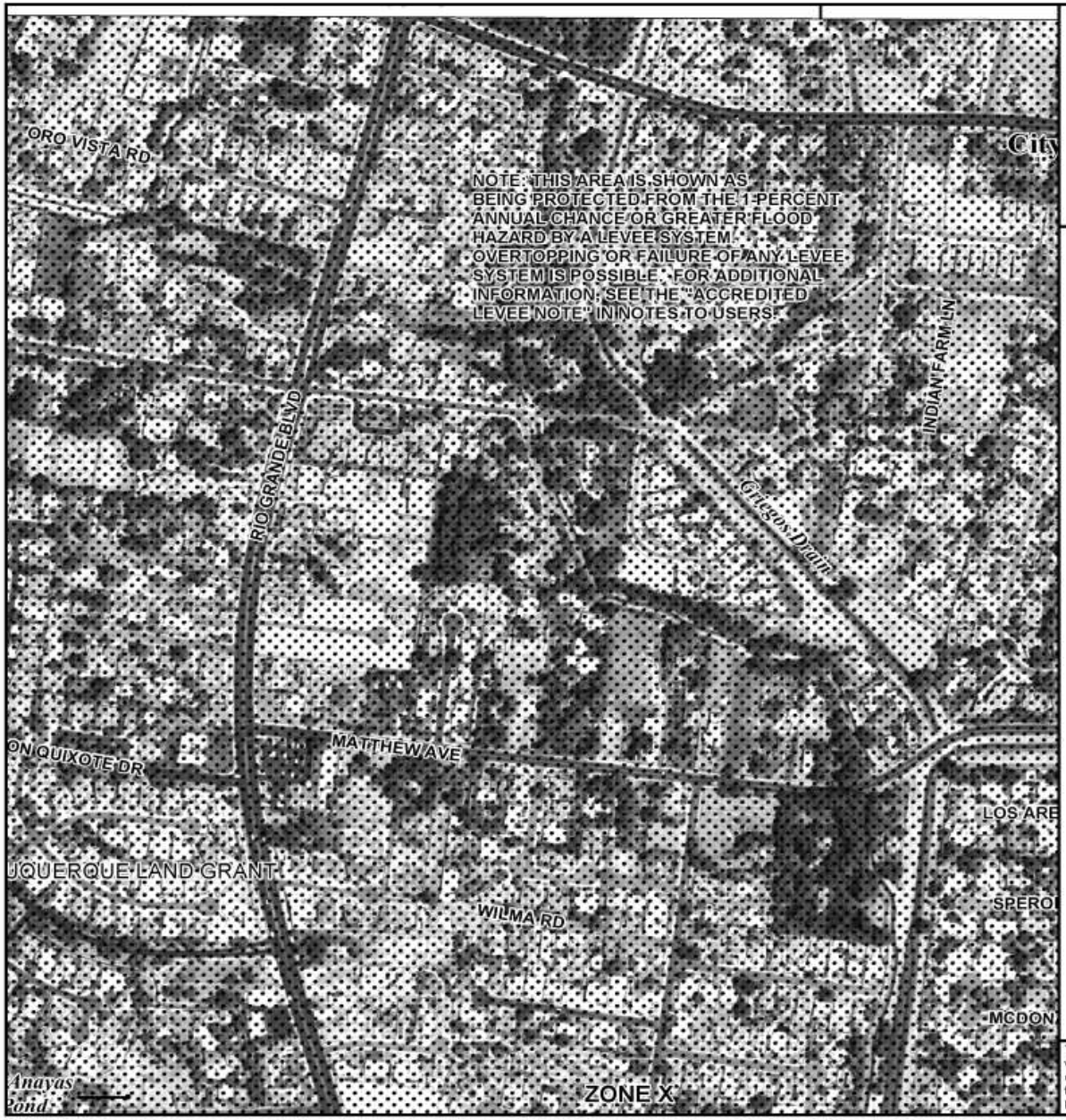
TABLE OF CONTENTS



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



VICINITY MAP G-13-Z



MAP SCALE 1" = 500'

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0331H

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 331 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0331	H
BERNALILLO COUNTY UNINCORPORATED AREAS	350001	0331	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
35001C0331H

MAP REVISED
AUGUST 16, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

FIRM MAP

I. PROJECT INFORMATION

PROPOSED LEGAL DESCRIPTION:
Campbell Compound

EXISTING LEGAL DESCRIPTION:
A portion of Lots 18 & 19, Alvarado Gardens, Unit 3

ENGINEER: Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828
Attn: Åsa Nilsson-Weber

SURVEYOR: Cartesian Surveys, Inc.
(505) 896-3050
Attn: Will Plotner, Jr., NMPLS No. 14271

DEVELOPER: Las Ventanas, NM, Inc.
Attn: Scott Ashcraft

NUMBER OF PROPOSED DWELLING UNITS: 7

TOTAL AREA: 2.0808 Ac.

FLOOD PLAIN: This property lies within flood Zone X which is defined as areas of 0.2% annual chance; area of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual change flood. As determined by FEMA and shown on Flood Insurance Rate Map dated August 16, 2012, Map No. 35001C0331H.

II. INTRODUCTION

This site is a private residential lot located east of Rio Grande Blvd and south of Campbell Rd. and is bound on the west by the Campbell Ditch and on the east by Campbell Farm, a private, gated residential development. The site will be re-developed as a private commons development with seven detached residential homes with the south one-third of the site remaining undeveloped and dedicated as an open space area. There are also two open space tracts along Campbell Rd.

III. EXISTING CONDITIONS

The upper two thirds of the site is developed with a private residence and a couple of outbuildings. The lower one third of the site is undeveloped and encumbered by large trees and native vegetation. The site is flat and drainage ponds on the property.

Campbell Rd. slopes to the east at approximately 0.1-0.4 percent and drainage is carried to the east in a swale within the shoulder. The road has no curb and gutter or sidewalks east of Campbell Ct., which is located west of the Campbell Ditch. There are shoulders on both sides of the street that are used by pedestrians and bicyclists.

There is a walking path on top of the berm between the site and the Campbell Ditch that is elevated approximately six feet above the site. A pipe is located under the existing drive to the residence that provides irrigation water to a ditch along the frontage of the property and the site. The ditch is blocked by the entrance to Campbell Farm, so no irrigation water enters this subdivision.

IV. PROPOSED CONDITIONS

The site will be developed as a gated residential private commons development. The upper two thirds of the site will be developed with seven detached residential homes and the lower one third, Tract A, will remain undeveloped and be designated as open space (private commons area). Kayla Ln. will slope to the south and direct the flows to the south open space tract which will serve as a retention pond. A water block at the north end of Kayla Ln. will prevent water from Campbell Rd. to enter the site. There will be onsite 4-foot sidewalks along Kayla Ln. extending to the driveways at lots 4 and 5, and a connection to the Campbell Rd. sidewalk via a pedestrian gate on the west side of the Kayla Ln. entrance.

Campbell Rd. will remain as a rural-type road with no curb and gutter and a crusher fine sidewalk to preserve and complement the surrounding neighborhood aesthetics. The existing culvert

from the Campbell Ditch will be capped, and the existing water meter shall be used to irrigate the trees in the front landscape areas (Tracts B & C).

The grading & drainage plan is included in the back pockets of this report.

LAND TREATMENTS & BASIN AREAS

Land treatment percent D was calculated for the developed area based on the building pad areas and roadway areas, and the remaining area was split between land treatments B and C. See Appendix A for land treatment calculations and basin area table and Appendix C for a drainage basin exhibit.

HYDROLOGY

Appendix B includes the 100-year, 6-hour flows calculations using the equations from the Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993. The Drainage Basin Exhibit in Appendix C shows the flow rates for each basin.

Flows from Basins B & C (6.3 cfs) will be ponded in the south open space tract, Tract A, and Basin A will discharge 0.4 cfs to Tracts B & C adjacent to Campbell Rd.

STREET CAPACITY

Kayla Ln. will be a private, paved 24-foot wide road and will have an inverted crown with an alley gutter and mountable estate curb defining the edges. The entrance will be gated and the paving width will accommodate a turnaround for vehicles. Appendix D shows the street flow depth at the south end of the street at the hammerhead where the flows enter the open space in Tract A. Erosion protection shall be installed at the south end of the hammerhead as shown on plan.

PONDING IN TRACT A--PRIVATE COMMONS AREA

The private commons area has an existing ponding capacity of 15,980 cf at an elevation of 4966.2, which exceeds the required 10-day storm volume of 13,915 cf (Appendix B). The private commons area ponding capacity was calculated using AutoCAD Civil 3D by creating a composite comparison surface with the existing ground surface and a top-of-pond surface at elevation 4966.2. The block wall along the east edge of the private commons area shall be concrete filled to provide a water proof barrier and prevent water from entering the adjacent Campbell Farms development. Concrete shall be filled to elevation 4967.3, which is one foot higher than the finish floor of the adjacent residence in Campbell Farms.

PONDING IN TRACTS B & C

Flows from Basin A (0.4 cfs) shall pond in Tracts B & C. The required 10-day volume for storage in Tract B pond is 225 cf and ponding provided is 244 cf; required volume for Tract C pond is 419 cf and ponding provided is 452 cf.

CAMPBELL ROAD DRAINAGE

Campbell Road shall be regraded to eliminate the existing swale along the edge of asphalt and drain toward the south. The drainage from the south half of Campbell Road from the Campbell ditch (east of Campbell Ct.) where there is a highpoint in the road shall be allowed to drain to the ditch/tree area along the property line.

FIRST FLUSH REQUIREMENTS

The first flush requirement will be met by directing flows to the pond areas in Tracts A-C.

V. SUMMARY & CONCLUSIONS

The site will be developed with seven detached residential homes and a private road. Tract A will be designated as a private commons area and will remain undeveloped and utilized as a private ponding area for flows from the subdivision. Flows from Basin A shall pond in Tracts B & C, and flows from Campbell Rd. shall drain into the ditch/tree area along the property line. Agreements and covenants shall be recorded for the ponding in all tracts.

Based on this report, it is recommended that the following improvements be constructed:

- Paved street with inverted crown, alley gutter and mountable estate curb
- Four-foot wide sidewalks along Kayla Ln. and along the south side of Campbell Road.
- Retaining walls as shown on plans
- Erosion protection at south end of Kayla Ln. where water enters Tract A
- Agreements and covenants shall be recorded for the ponding areas in Tract A (private drainage easement) and Tracts B & C (public drainage easement).

APPENDIX A

Basin Area and Land Treatment Table

CAMPBELL COMPOUND

BASIN AREA AND LAND TREATMENT TABLE-- PROPOSED CONDITIONS

BASIN	*AREA*		*LAND TREATMENT (%)*				Q100, cfs
	SF	*AC.*	*A*	*B*	*C*	*D*	
A	5244	0.1204	0	50	30	20	0.4
B	56073	1.2873	0	19	19	62	5.1
C	29321	0.6731	90	0	10	0	1.2
TOTAL	90638	2.0808					6.7

IMPERVIOUS AREA CALCULATION BASINS B

7 BUILDING FOOTPRINTS (45X73)=	22995	SF
7 DRIVEWAYS @ 15X20 =	2100	SF
ROADWAY =	9836	SF
	34931	SF

%D = 34931/(50515)= 62%

APPENDIX B

Drainage Calculations

BASIN NO.	A			DESCRIPTION		Drains to ponds along Campbell Rd			
Area of basin flows =		5244	SF		=	0.1	Ac.		
The following calculations are based on Treatment areas as shown in table to the right							LAND TREATMENT		
		Sub-basin Weighted Excess Precipitation (see formula above)					A =	0%	
		Weighted E	=	1.15	in.		B =	50%	
		Sub-basin Volume of Runoff (see formula above)					C =	30%	
		V_{360}	=	504	CF		D =	20%	
		Sub-basin Peak Discharge Rate: (see formula above)							
		Q_P	=	0.4	cfs				
BASIN NO.	B			DESCRIPTION		Drains to pond in open space			
Area of basin flows =		56073	SF		=	1.3	Ac.		
The following calculations are based on Treatment areas as shown in table to the right							LAND TREATMENT		
		Sub-basin Weighted Excess Precipitation (see formula above)					A =	0%	
		Weighted E	=	1.68	in.		B =	19%	
		Sub-basin Volume of Runoff (see formula above)					C =	19%	
		V_{360}	=	7838	CF		D =	62%	
		Sub-basin Peak Discharge Rate: (see formula above)							
		Q_P	=	5.1	cfs				
BASIN NO.	C			DESCRIPTION		Open Space Area			
Area of basin flows =		29321	SF		=	0.7	Ac.		
The following calculations are based on Treatment areas as shown in table to the right							LAND TREATMENT		
		Sub-basin Weighted Excess Precipitation (see formula above)					A =	90%	
		Weighted E	=	0.59	in.		B =	0%	
		Sub-basin Volume of Runoff (see formula above)					C =	10%	
		V_{360}	=	1442	CF		D =	0%	
		Sub-basin Peak Discharge Rate: (see formula above)							
		Q_P	=	1.2	cfs				

POND IN OPEN SPACE AREA (TRACT A)

Note: For ponds which hold water for longer than 6 hours, longer duration storms are required to establish runoff volumes. Since the additional precipitation is assumed to occur over a long period, the additional volume is based on the runoff from the impervious areas only.

V_{360}	9279
Area Treatment D (SF)	34765
Zone	2

For 10 Day Storms:

$V_{10day} = V_{360} + A_D * (P_{10day} - P_{360})*43560$ SF/AC

V_{360}	=	9279
A_D (SF)	=	34765
Zone	=	2
P_{10day}	=	3.95
P_{360}	=	2.35

V_{360}	=	9279
+ imp. area	=	4635

Total Pond Volume ($V_{10\ day}$)	=	13915

P_{360}	
Zone	D
1	2.20
2	2.35
3	2.60
4	2.90

P_{10day}	
Zone	D
1	3.67
2	3.95
3	4.90
4	5.95

from Table A-2
Depth (inches) at
100-yr Storm

PONDING ADJACENT TO CAMPBELL

Note: For ponds which hold water for longer than 6 hours, longer duration storms are required to establish runoff volumes. Since the additional precipitation is assumed to occur over a long period, the additional volume is based on the runoff from the impervious areas only.

V_{360}	504
Area Treatment D (SF)	1049
Zone	2

For 10 Day Storms:

$V_{10day} = V_{360} + A_D * (P_{10day} - P_{360})*43560$ SF/AC

V_{360}	=	504
A_D (SF)	=	1049
Zone	=	2
P_{10day}	=	3.95
P_{360}	=	2.35

V_{360}	=	504
+ imp. area	=	140

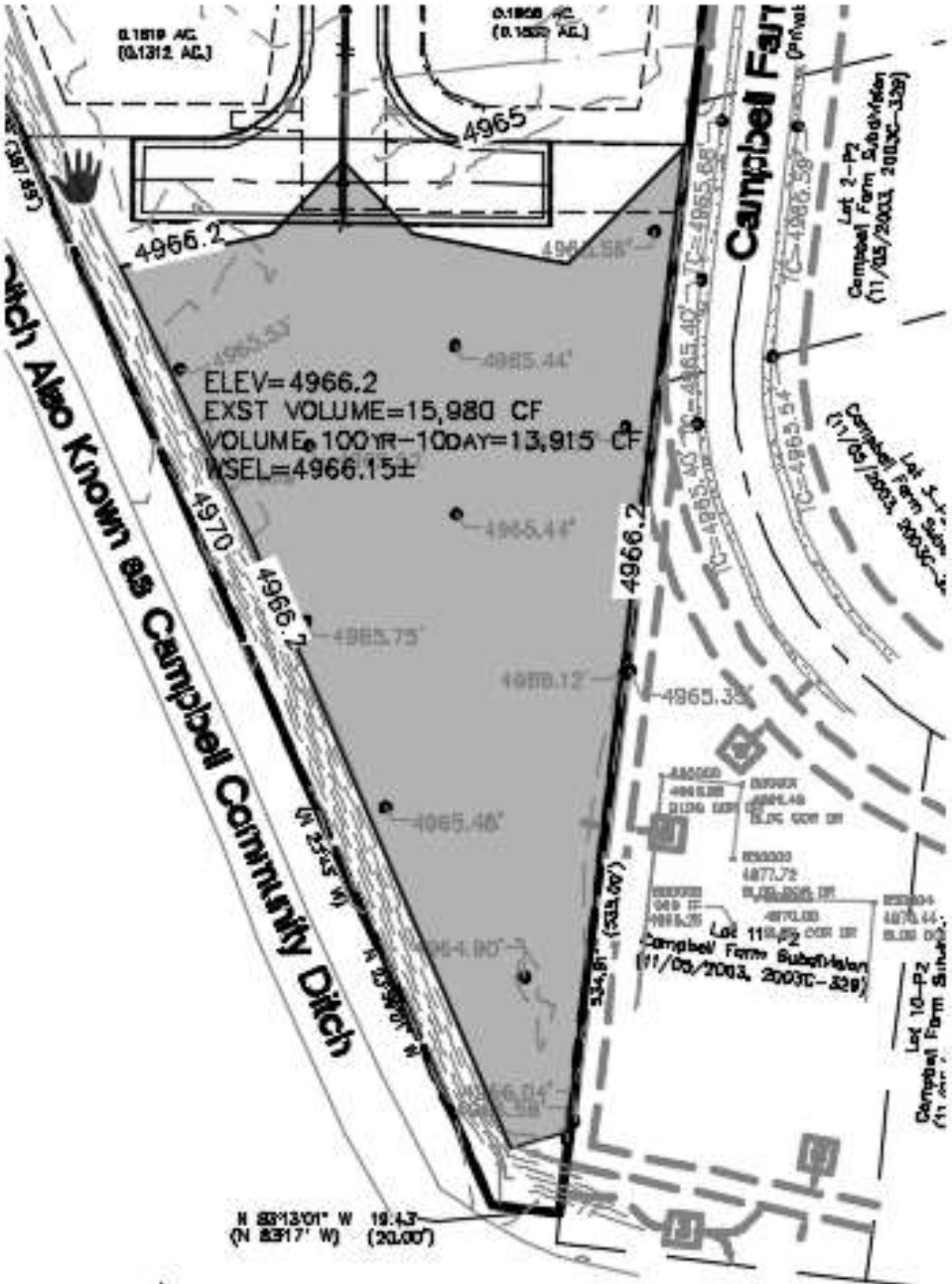
Total Pond Volume ($V_{10\ day}$)	=	644	CF

35% Tract B pond (225 cf); 65% Tract C pond (419 cf)

P_{360}	
Zone	D
1	2.20
2	2.35
3	2.60
4	2.90

P_{10day}	
Zone	D
1	3.67
2	3.95
3	4.90
4	5.95

from Table A-2
Depth (inches) at 100-yr Storm



PONDING VOLUME CALCULATIONS
TRACT A - PRIVATE COMMONS AREA

POND VOLUME WAS CALCULATED IN AUTODESK AUTOCAD CIVIL 3D WITH A COMPOSITE SURFACE COMPRISED OF THE EXISTING GROUND SURFACE AND THE TOP OF PONDING ELEVATION OF 4966.2. TOTAL VOLUME IS 592 CY – 15984 CF

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
POND VOLUME	1.00	1.00	24069.36 Sq. Ft.	2.99 Cu. Yd.	594.69 Cu. Yd.	591.71 Cu. Yd.<Fill>
Totals			24069.36 Sq. Ft.	2.99 Cu. Yd.	594.69 Cu. Yd.	591.71 Cu. Yd.<Fill>

PROPOSED POND CALCULATIONS

TRACT C POND

POND VOLUME

CONTOUR	*AREA*	*VOL (CF)*
65.9	611	
64.9	293	452

Pond Volume	452

Pond Volume Required	419	CF	OK
Pond Volume Proposed	452	CF	

PROPOSED POND CALCULATIONS

TRACT B POND

POND VOLUME

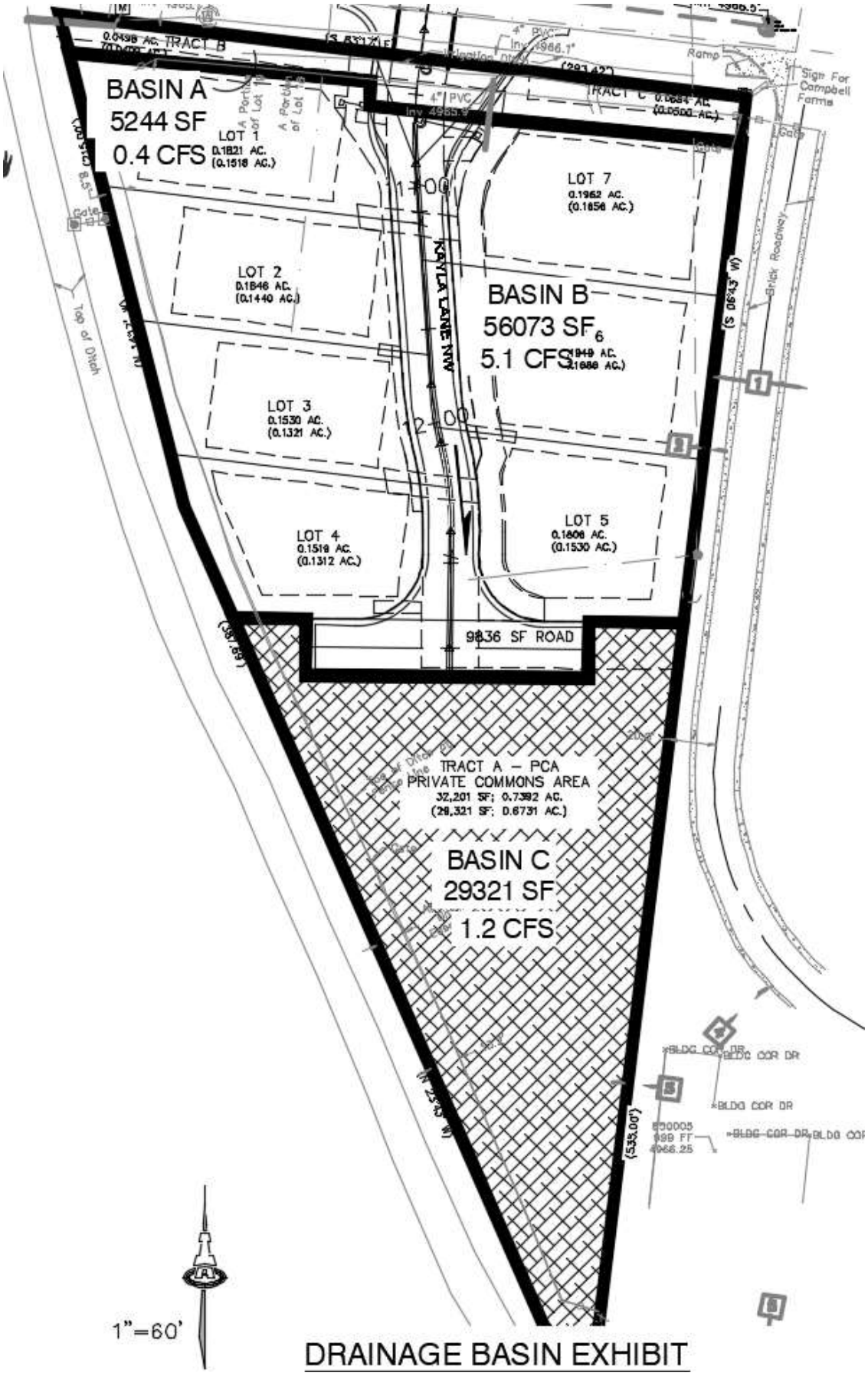
CONTOUR	*AREA*	*VOL (CF)*
66.5	354	
65.5	134	244

Pond Volume	244

Pond Volume Required	225	CF	OK
Pond Volume Proposed	244	CF	

APPENDIX C

Drainage Basin Exhibit



DRAINAGE BASIN EXHIBIT

APPENDIX D

Street Flow Capacity Calculations

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Sep 26 2017

KAYLA LANE

User-defined

Invert Elev (ft)	= 100.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

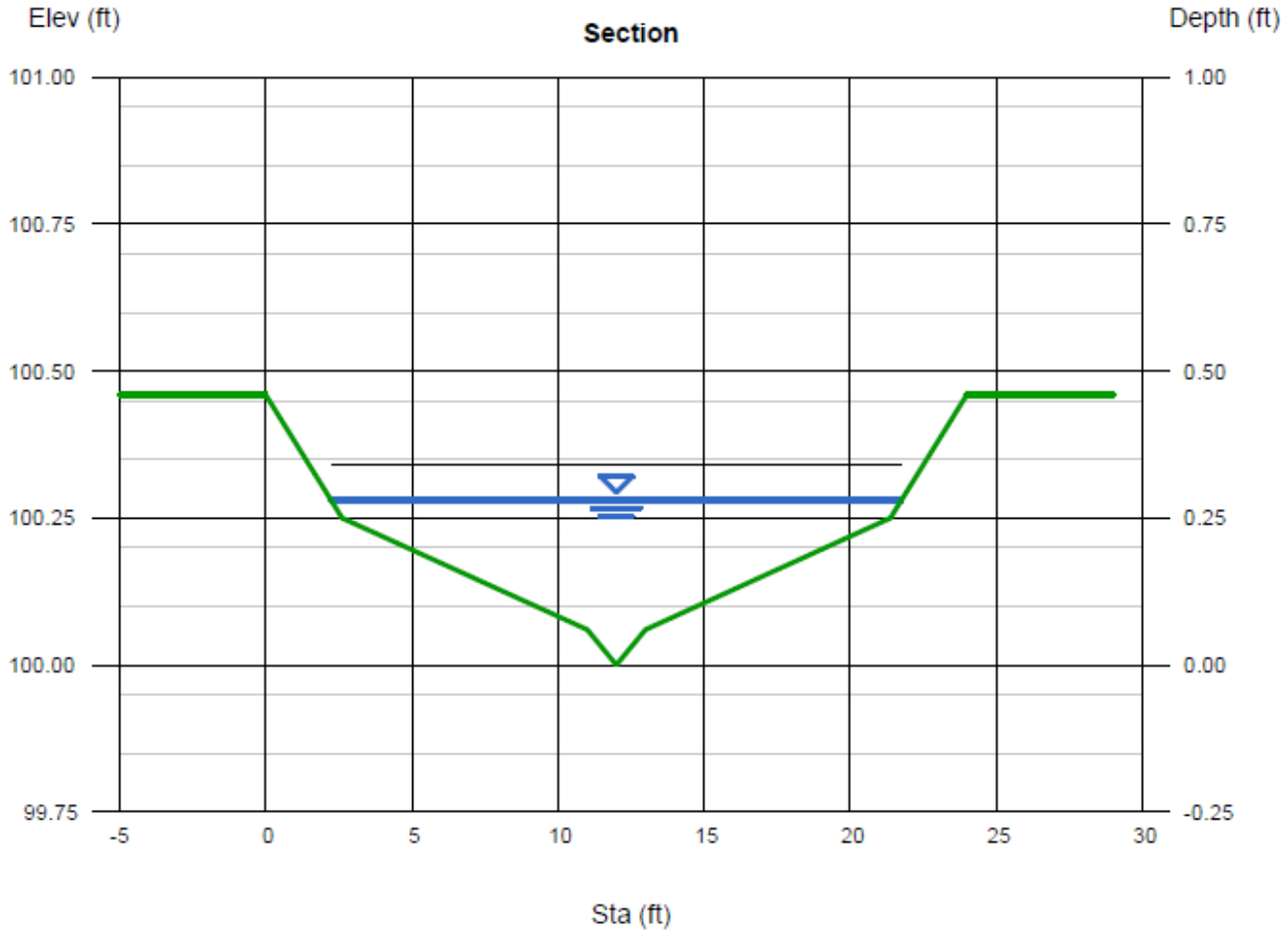
Compute by:	Known Q
Known Q (cfs)	= 5.10

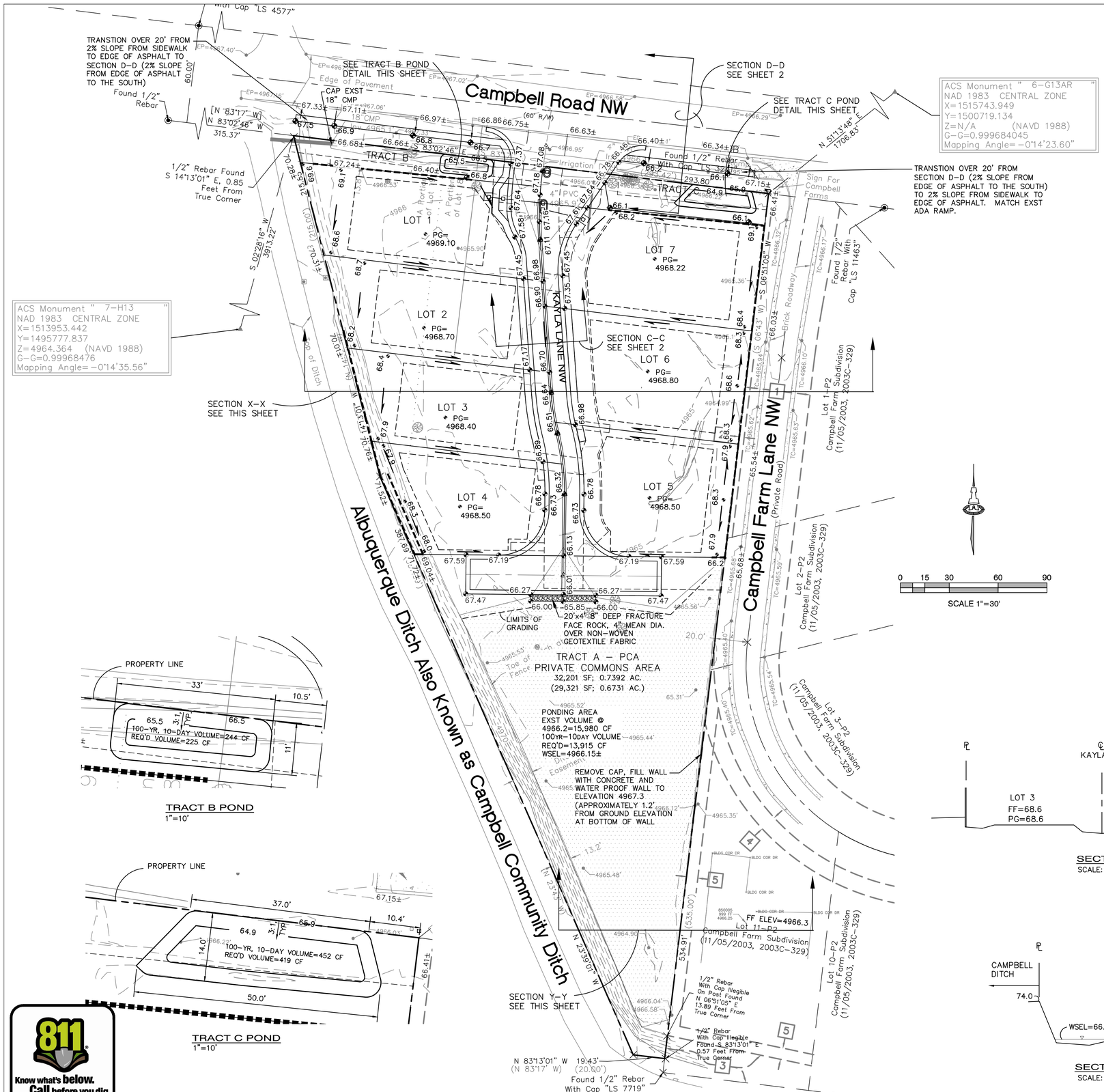
Highlighted

Depth (ft)	= 0.28
Q (cfs)	= 5.100
Area (sqft)	= 2.61
Velocity (ft/s)	= 1.96
Wetted Perim (ft)	= 19.52
Crit Depth, Yc (ft)	= 0.28
Top Width (ft)	= 19.51
EGL (ft)	= 0.34

(Sta, El, n)-(Sta, El, n)...

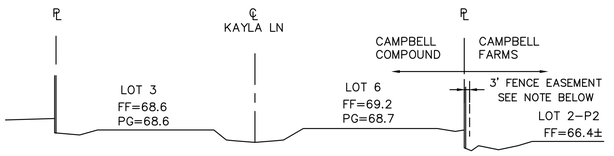
(0.00, 100.46)-(2.62, 100.25, 0.017)-(11.00, 100.06, 0.013)-(12.00, 100.00, 0.013)-(13.00, 100.06, 0.017)-(21.38, 100.25, 0.013)-(24.00, 100.46, 0.017)





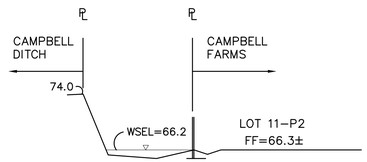
TRACT B POND
1"=10'

TRACT C POND
1"=10'



SECTION X–X
SCALE: 1"=40' HOR.
1"=10' VERT.

EASEMENT NOTE:
EXISTING PRIVATE 3' FENCE EASEMENT BENEFITING & MAINTAINED BY THE OWNERS OF LOTS 1–P2 AND 2–P2, CAMPBELL FARM, AND LOT 18, ALVARADO GARDENS (11/05/2003, 2003C–329)



SECTION Y–Y
SCALE: 1"=40' HOR.
1"=10' VERT.

Know what's below. Call before you dig.

GRADING GENERAL NOTES

A. GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

B. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.

C. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

D. THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE CITY OF ALBUQUERQUE REQUIRE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), AN NDPES PERMIT, AND AN EROSION AND SEDIMENT CONTROL (ESC) PERMIT FOR PROJECTS WHERE CONSTRUCTION ACTIVITIES MEET THE EPA THRESHOLD. A CURRENT CITY–APPROVED ESC PERMIT MUST BE INCLUDED WITH THE CONTRACTOR'S SUBMITTAL FOR A ROUGH GRADING, GRADING, PAVING, BUILDING, OR WORK ORDER PERMIT. CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE WHO WILL PREPARE SWPPP AND INSPECT REQUIRED ELEMENTS.

E. ALL NEW PAVEMENT SURFACES SHALL BE CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM BUILDINGS AND POSITIVE SLOPE TOWARD EXISTING AND/OR PROPOSED DRAINAGE PATHS. PAVING AND ROADWAY GRADES SHALL BE ±0.1' FROM PLAN ELEVATIONS. BUILDING PAD ELEVATION SHALL BE ±0.1' FROM PLAN ELEVATION.

F. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.

G. POND DESIGN PARAMETERS AND STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN (TOP OF POND, BOTTOM OF POND, SIZE OF ORIFICE, AREA OF POND, ETC.) TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES. SEE DETAIL SHEET FOR ADDITIONAL INFORMATION.

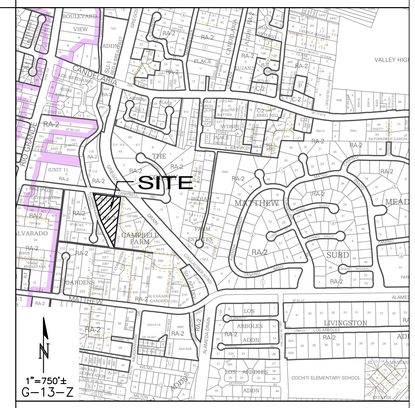
H. POST–CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBLITY OF THE FACILITIES OWNER. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.

I. FOR ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE (FOR CERTIFICATE OF OCCUPANCY) CONTRACTOR SHALL PROVIDE AN AUTOCAD FORMAT AS–BUILT SURVEY PREPARED BY A LICENSED SURVEYOR WHICH INCLUDES:

- AS–BUILT PAD GRADE
- SPOT ELEVATIONS AT EACH DESIGN SPOT ELEVATION SHOWN ON THE APPROVED PLAN;
- ALL CONSTRUCTION SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN IN ORDER TO RECEIVE ENGINEER'S CERTIFICATION.

NOTE:
SEE SHEET 2 FOR DETAILS AND RETAINING WALL PLAN

VICINITY MAP



PROJECT DATA

LEGAL DESCRIPTION: CAMPBELL COMPOUND BEING A RE–PLAT OF PORTION OF LOTS 18 & 19, ALVARADO GARDENS, UNIT 3

SITE AREA: 2.0808 AC.

DISTURBED AREA: 1.30 AC.±

BENCHMARK: ACS MONUMENT "7–H13"
ELEVATION: 4964.364 (NAVD 1988)

ENGINEER: ASA NILSSON–WEBER
ISAACSON & ARFMAN, P.A.
128 MONROE ST NE, ABQ. NM 87108
PHONE: (505) 268–8828

SURVEYOR: BRIAN MARTINEZ
CARTESIAN SURVEYS, INC.
PO BOX 44414
RIO RANCHO, NM 87174
PHONE: (505) 896–3050.

FLOOD ZONE: BASED UPON SCALING, THIS PROPERTY LIES WITHIN FLOOD ZONE X WHICH IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE; AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANGE FLOOD. AS DETERMINED BY F.E.M.A. AND SHOWN ON FLOOD INSURANCE RATE MAP DATE AUGUST 16, 2012, MAP NO. 35001C0331H.

LEGEND

4966	EXISTING CONTOUR
◆78.3	PROPOSED ELEVATION
PG=4968.5	PAD GRADE ELEVATION
– – – – – –	PROPOSED RETAINING WALL (DESIGN BY OTHERS)
— · — · —	PROPOSED GARDEN RETAINING WALL
➤	FLOW ARROW

ASA M. NILSSON–WEBER NEW MEXICO 17831 LICENSED PROFESSIONAL ENGINEER
9–26–17

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iaciviil.com

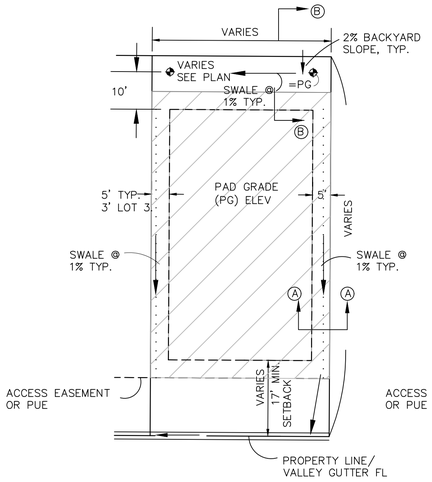
2224 CG–101.dwg Sep 27,2017

CAMBELL SUBDIVISION

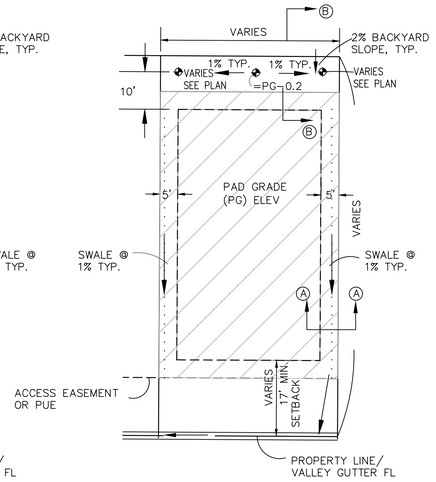
LAS VENTANAS NM, INC.

GRADING & DRAINAGE PLAN

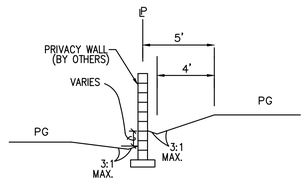
Date:	No.	Revision:	Date:	Job No.
Sept 2017				2224
Drawn By: ANW				G–13
Ckd By: .				SH.1 OF 2



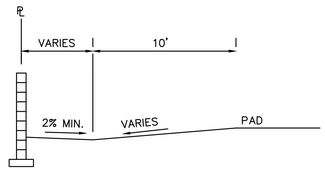
TYPICAL LOT GRADING DETAIL
LOTS 1-3 & 7
SCALE: 1"=20'



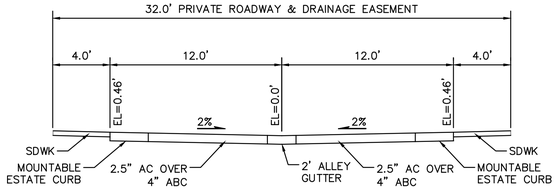
TYPICAL LOT GRADING DETAIL
LOTS 4-6
SCALE: 1"=20'



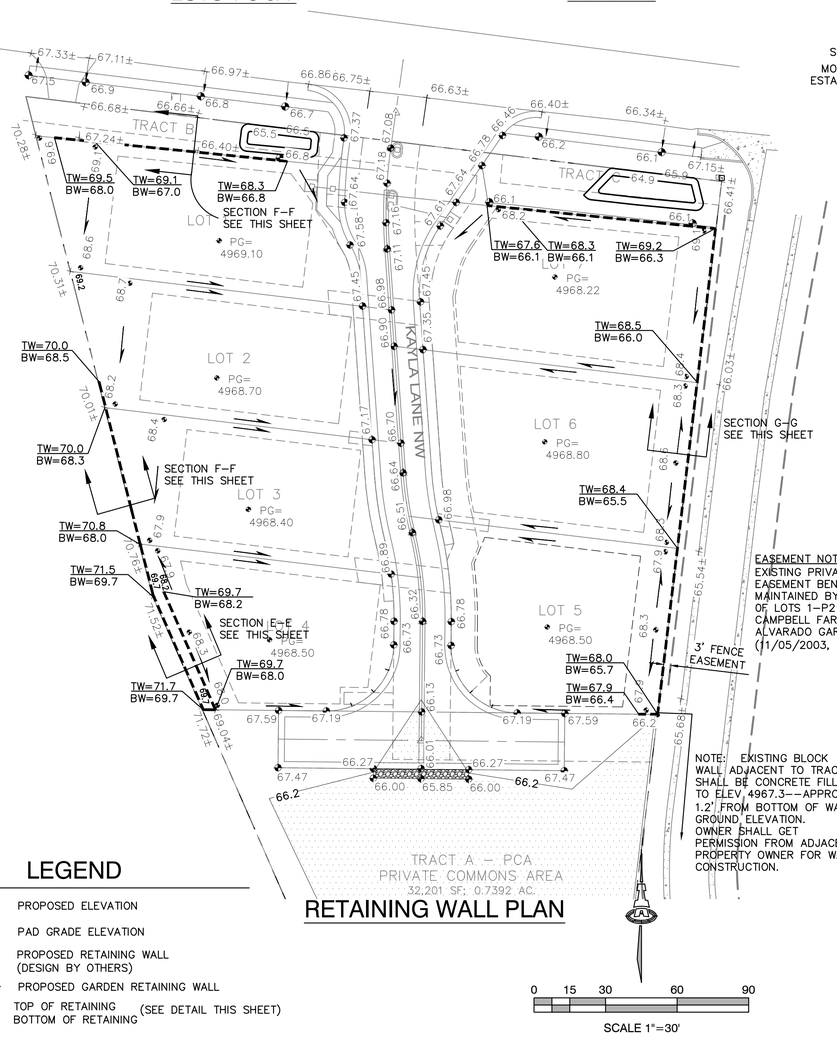
SECTION A-A
TYPICAL SIDEYARD GRADING
SCALE: 1"=5'



SECTION B-B
TYPICAL BACKYARD GRADING
SCALE: 1"=5'



KAYLA LANE
SECTION C-C
SCALE: 1"=5'



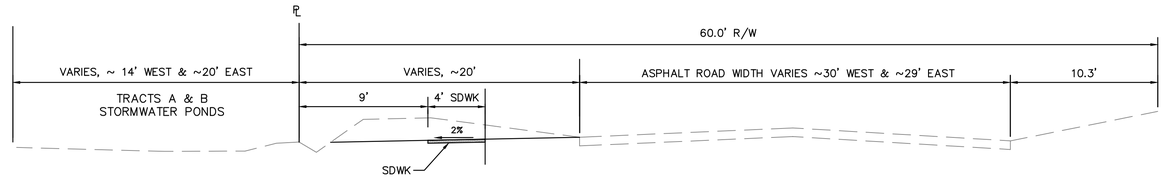
RETAINING WALL PLAN

EASEMENT NOTE:
EXISTING PRIVATE 3' FENCE EASEMENT BENEFITING & MAINTAINED BY THE OWNERS OF LOTS 1-P2 AND 2-P2, CAMPBELL FARM, AND LOT 18, ALVARADO GARDENS (11/05/2003, 2003C-329)

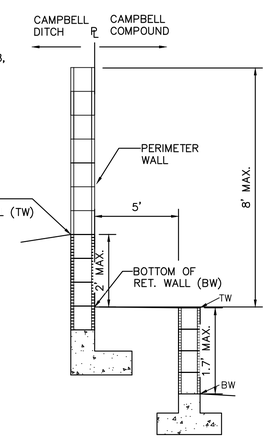
NOTE: EXISTING BLOCK WALL ADJACENT TO TRACT A SHALL BE CONCRETE FILLED TO ELEV. 4967.3--APPROX. 1.2' FROM BOTTOM OF WALL GROUND ELEVATION. OWNER SHALL GET PERMISSION FROM ADJACENT PROPERTY OWNER FOR WALL CONSTRUCTION.

LEGEND

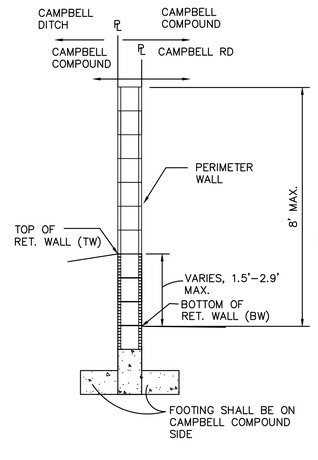
78.3	PROPOSED ELEVATION
PG=4968.5	PAD GRADE ELEVATION
- - - - - - - -	PROPOSED RETAINING WALL (DESIGN BY OTHERS)
— · — · —	PROPOSED GARDEN RETAINING WALL
TW=70.5 BW=68.3	TOP OF RETAINING BOTTOM OF RETAINING (SEE DETAIL THIS SHEET)
	FLOW ARROW



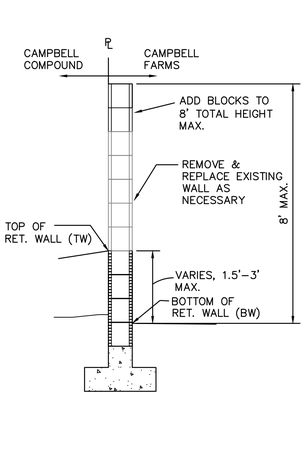
CAMPBELL ROAD
SECTION D-D
SCALE: 1"=5'



DOUBLE RETAINING WALL
SECTION E-E
SCALE: 1"=5'-0"



SINGLE RETAINING WALL
SECTION F-F
SCALE: 1"=5'-0"



SINGLE RETAINING WALL
SECTION G-G
SCALE: 1"=5'-0"

CIVIL GENERAL NOTES

A. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.

B. ALL SITE PREPARATION, GRADING OPERATIONS, FOUNDATION CONSTRUCTION, AND PAVEMENT INSTALLATION WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, WHICH WILL BE PROVIDED BY THE OWNER OR ARCHITECT. ALL OTHER WORK SHALL, UNLESS OTHERWISE NOTED IN THE PLANS, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

C. NO WORK SHALL BE PERFORMED WITHOUT THE APPROPRIATE PERMITS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION, OR PRIOR TO OCCUPANCY, AS APPROPRIATE. IF PERMITS ARE DELAYED OR ISSUED WITH CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.

D. COORDINATE WORK WITH SITE PLAN, UTILITY PLAN, DEMOLITION PLAN, AND LANDSCAPE PLAN.

E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE ENGINEER AND VERIFY THE ENGINEER'S INTENT BEFORE PROCEEDING.

F. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SAFETY.

G. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES. THE CONTRACTOR SHALL NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS OR KEYED NOTES SHALL BE USED.

H. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

I. CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS. EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL IN THE RIGHT-OF-WAY.

J. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN THAT CONFORMS TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN BARRICADING PERMITS FROM THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

K. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

L. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS FIVE WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.

M. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.

N. VIBRATORY COMPACTION SHALL NOT BE USED OVER IN-PLACE UTILITIES.

O. SOIL TESTING AND INSPECTION SERVICES DURING SITE OPERATIONS ARE REQUIRED. CONTRACTOR SHALL ALLOW TESTING LABS TO INSPECT AND APPROVE COMPACTED SUBGRADES, BACKFILL, AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS DONE. SHOULD COMPACTION TESTS INDICATE INADEQUATE DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL COMPACTION AND TESTING AT THE CONTRACTOR'S SOLE EXPENSE.

P. CONTRACTOR SHALL LOCATE AND PRESERVE ALL BOUNDARY CORNERS AND REPLACE ANY LOST OR DISTURBED CORNERS AT CONTRACTOR'S SOLE EXPENSE. PROPERTY CORNERS SHALL ONLY BE RESET BY A REGISTERED LAND SURVEYOR.

Q. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING. TO FACILITATE ACCURACY IN CONSTRUCTION STAKING, UPON WRITTEN REQUEST FROM THE CONTRACTOR, A FILE CONTAINING THE ELECTRONIC DATA COMPRISING THE SITE CIVIL DRAWINGS WILL BE FORWARDED TO THE LICENSED LAND SURVEYOR TO PERFORM CONSTRUCTION STAKING. ALL SITE CONSTRUCTION LAYOUT MUST BE PERFORMED BY A LICENSED SURVEYOR USING ELECTRONIC DATA PROVIDED IN AUTOCAD *.DWG (CURRENT VERSION) BY ISAACSON & ARFMAN, P.A. CONTACT PROJECT CIVIL ENGINEER, ÅSA NILSSON-WEBER, PE AT (505)-266-1688.

R. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.

S. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS.

ÅSA M. NILSSON-WEBER NEW MEXICO 17831 LICENSED PROFESSIONAL ENGINEER
9-26-17

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com

2224 CG-101.dwg Sep 27,2017

CAMBELL SUBDIVISION

LAS VENTANAS NM, INC.

DETAILS & RETAINING WALL PLAN

Date:	No.	Revision:	Date:	Job No.
Sept 2017				2224
Drawn By: ANW				G-13
Ckd By:				SH.2 OF 2

ISAACSON & ARFMAN, P.A. *Consulting Engineering Associates*
Thomas O. Isaacson, PE(RET.) & LS(RET.) . Fred C. Arfman, PE . Åsa Nilsson-Weber, PE

September 26, 2017

Mr. Dana Peterson, P.E.
Senior Engineer, Planning Dept.
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87103

RE: G13D032 - Campbell Compound
Grading Plan & Drainage Report
Zone Atlas Map: G-13

Dear Mr. Peterson:

Please see attached for a revised grading plan and drainage report addressing your comments dated August 4, 2017 (attached). Please see below for responses to your comments.

1. The water surface elevation is approximately 1.1 feet higher than the adjacent lot on Campbell Farms. In lieu of excavating the open space tract, the block wall shall be concrete filled and water proofed to 4967.3—one foot above the finish floor elevation of the adjacent lot, which is 4966.3 per the survey. A section view through the pond and the adjacent Campbell Farms property has been provided.
2. A section through Campbell Rd. has been added showing that half of Campbell Rd. will graded to flow to the ditch/tree area. Basin A was reduced and will pond in Tracts B and C. 100-yr, 10-day volumes required are provided in the ponds. Valley gutter across Kayla Ln. was eliminated.
3. There appear to be no offsite flows from the walkway at the ditch berm. The basin extends to the top of the berm, then the walkway slopes west.
4. Since no additional grading will occur in Tract A, land treatment A was not adjusted.
5. The narrative has been changed to reflect that sidewalks will be constructed along Kayla Ln. and Campbell Rd. No curb will be constructed along Campbell Rd.—Racquel Michel, COA Transportation concurs. The flows off the pavement is minor sheet flow, so curb would not be necessary.
6. No drainage will be directed to the adjacent subdivision. All lots drain to Kayla Ln. A section view between Campbell Compound and Campbell Farms lots has been added. Wall footings are shown to be contained within the property, except adjacent to Campbell Farms where the existing wall shall be utilized. There is a fence easement adjacent to lots 5-7, but not to the south adjacent to Tract A. The Owner will need to

ask permission from the adjacent owner/home owners' association for concrete filling the existing wall. Wall dimensions have been added to the wall section details. The backyards slope at 2% typical from the wall to the backyard swale that is located 10' from the building pad. This is a standard grading scheme that most homebuilders request so that the backyards are not too steep. The flow arrows on the typical lot grading detail and Section A-A indicates that each lot shall drain via separate sideyard swales. Flow arrows have also been added to the grading plan.

7. There are no easements for the ditch on the property, and there are no conflicts with the pad or wall locations. The existing fence along Tract A adjacent to the ditch will remain.
8. An ESC plan will be provided.
9. A private drainage covenant will be provided for Tract A and a public drainage covenant will be provided for Tracts B & C. These forms will be submitted with the DRC submittal, and once the plat is filed, the recording information will be added and the covenants recorded.

If you have questions regarding this submittal, please call me at 266-1688 or email at asaw@iacivil.com

Thank you.

Sincerely,

ISAACSON & ARFMAN, P.A.

Åsa Nilsson-Weber, P.E.

Attachments

CITY OF ALBUQUERQUE

August 4, 2017

Åsa Nilsson-Weber, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

RE: **Campbell Compound**
Drainage Report and Grading Plan
Engineer's Stamp Date 7/21/17
Hydrology File: G13D032

Dear Ms. Nilsson-Weber:

Based on the information provided in the submittal received on 7/25/17 the above-referenced submittal cannot be approved for Preliminary Plat or Grading Permit until the following are addressed:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Prior to Preliminary Plat:

1. It appears that the Maximum Water Surface Elevation (MWSE) in the commons area pond will be higher than the adjacent Campbell Farm subdivision:

   1.1. Extend topography into the Campbell Farm subdivision and include Campbell Farm Lane, Lot 11 topo and finished floor.

   1.2. Provide a section view through the pond (including the MWSE), property line and onto lot 11 of Campbell Farm subdivision.

   1.3. The pond will need to be excavated to contain the MWSE below the adjacent subdivision with freeboard (1ft below the Campbell Farm Lot 11 finished floor).

2. Existing and proposed drainage along Campbell Rd.

   2.1. The existing drainage appears to sheet flow off the south half of Campbell into a roadside swale that ponds until eventually infiltrating. The existing farmstead is lower now and does not drain at all into the Campbell Rd ROW.

   2.2. Provide a ponding area along the cottonwood row capable of maintaining the 10day, 100yr MWSE below the sidewalk and at least 1ft below the finished floors on lot 1 and lot 7.

Orig: Drainage file

2.3. The proposed drainage from Basin A can be held in the cottonwood row ponding area or be diverted south to the commons area pond. The south half-street of Campbell Rd should be able to sheet flow into the cottonwood row. Attempting to convey flows east on Campbell Rd in curb and gutter would lead to more ponding on the road between the entrance of Campbell Farm Ln and the Griegos Drain.

2.4. Provide a proposed road section for Campbell Rd and tract B/C. This should also incorporate the traffic requirements for frontage improvements.

2.5. The valley gutter in across the Kayla Lane entrance likely won't convey flows with this scheme and can be removed.

2.6. A 10' transition section will be needed to connect to the Campbell Farm frontage that lays down the standard curb and gutter and lowers the sidewalk to suit this project's frontage.

3. Offsite Flows. Runoff and volume calculations need to anticipate flows entering this site from the Conservancy berm and its access road along the east side of the Campbell Community Ditch. It is difficult to tell from the basin map if this area was included.

PO Box 1293

4. Selection of land treatment A for most of the commons area is acceptable, however if any grading or landscaping is required in this area, the land treatment will need to be adjusted to treatment B.

Albuquerque

5. Update the Chapter IV narrative to reflect the sidewalk requirements. Estate curb will also be needed along the Campbell Rd frontage.

New Mexico 87103

6. Grading Plan remarks.

6.1. Raising the grade in this subdivision will put it several feet above the Campbell Farms subdivision. Ensure no drainage will exit this project site and impact this adjoining subdivision.

www.cabq.gov

6.2. Include a section view though the property line between Campbell Farm Rd and the Campbell Compound east lots.

6.3. The backyard walls and footers (Section B-B) will need to be wholly contained on this project's property, unless written concurrence can be provided by the adjoining property owners for common walls.

6.4. Show the property line, section cut, and dimensional data for the double retaining wall.

6.5. Provide additional dimensions on the wall sections: max height retained, max privacy wall heights, and offsets.

Orig: Drainage file

CITY OF ALBUQUERQUE

6.6. Increase the slope and specify a minimum depth at flowline along the backyard walls; clarify the typical lot grading detail to show the backyard drains to the front (Kayla Ln) and no cross lot drainage or drainage though the backyard wall occurs.

7. Are any easements required for the ditch and will they conflict with the pad or wall locations?

Prior to Grading Permit:

8. This project will require an ESC plan prior to grading permit approval.

9. A private facility drainage covenant is required for the commons area pond. Once filled out, this document will need to be turned in to Madeline Carruthers (mtafoya@cabq.gov, 4th floor, Plaza del Sol) for signature routing.

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

Sincerely,

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

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

Orig: Drainage file

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Campbell Compound Building Permit #: _____ City Drainage #: G13D032

DRB#: 1011223 EPC#: _____ Work Order#: _____

Legal Description: Portion of Lots 18 & 19, Unit 3, Alvarado Gardens

City Address: _____

Engineering Firm: Isaacson & Arfman, P.A. Contact: Asa Nilsson-Weber

Address: 128 Monroe Street NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: _____ E-mail: asaw@iacivil.com

Owner: Las Ventanas NM, Inc. Contact: Scott Ashcraft

Address: 6501 Wyoming Blvd. NE, Bldg. C - Suite 200 - Albuquerque, NM 87109

Phone#: (505) 362-6824 Fax#: _____ E-mail: _____

Architect: _____ Contact: _____

Address: _____

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

Other Contact: _____ Contact: _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE

_____ TRAFFIC/ TRANSPORTATION

_____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

_____ ENGINEER/ ARCHITECT CERTIFICATION

_____ CONCEPTUAL G & D PLAN

X GRADING PLAN

_____ DRAINAGE MASTER PLAN

X DRAINAGE REPORT

_____ CLOMR/LOMR

_____ TRAFFIC CIRCULATION LAYOUT (TCL)

_____ TRAFFIC IMPACT STUDY (TIS)

_____ EROSION & SEDIMENT CONTROL PLAN (ESC)

_____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: X Yes _____ No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_____ BUILDING PERMIT APPROVAL

_____ CERTIFICATE OF OCCUPANCY

X 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

X GRADING PERMIT APPROVAL

_____ SO-19 APPROVAL

_____ PAVING PERMIT APPROVAL

_____ GRADING/ PAD CERTIFICATION

_____ WORK ORDER APPROVAL

_____ CLOMR/LOMR

_____ PRE-DESIGN MEETING

_____ OTHER (SPECIFY) _____

DATE SUBMITTED: September 26, 2017 By: Åsa Nilsson-Weber

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___