

# CITY OF ALBUQUERQUE



June 27, 2017

Jeffery Wooten, P.E.  
Wooten Engineering  
1005 21<sup>st</sup> St SE, Suite A5  
Rio Rancho, NM, 87124

RE: **Heritage Marketplace Tract C3**  
**1720 Unser Blvd**  
**Conceptual Grading and Drainage Plan**  
**Engineer's Stamp Date 6/26/17 (File: H09D027)**

Dear Mr. Wooten:

Based on the information provided in your submittal received 6/27/17, the Grading and Drainage Plan is approved for Site Plan for Building Permit.

This conceptual Grading and Drainage Plan is not approved for Building Permit. The following comments will need to be addressed in the detailed Grading and Drainage Plan submitted for Building Permit. Additional comments may also be raised at the time of Building Permit depending on the information received:

1. This work requires an Erosion and Sediment Control Plan to be submitted to the storm water quality engineer (Curtis Cherne, PE, [ccherne@cabq.gov](mailto:ccherne@cabq.gov)).
2. A private facility drainage covenant is required on the ponds.
3. According to the Heritage Marketplace Drainage Report, the entire development is allowed 2.4cfs/ac. However tract C-3 (referred to as Basin B-1 in the Drainage Report) is only allowed 2.1cfs in total. Other areas, such as roads are allowed to discharge greater amounts. Detention times and pond sizes will need to be increased to account for this.
4. The dumpster areas must be contained plumbed through a grease trap, and into the sanitary sewer. Include the utility plan if this information is located there.

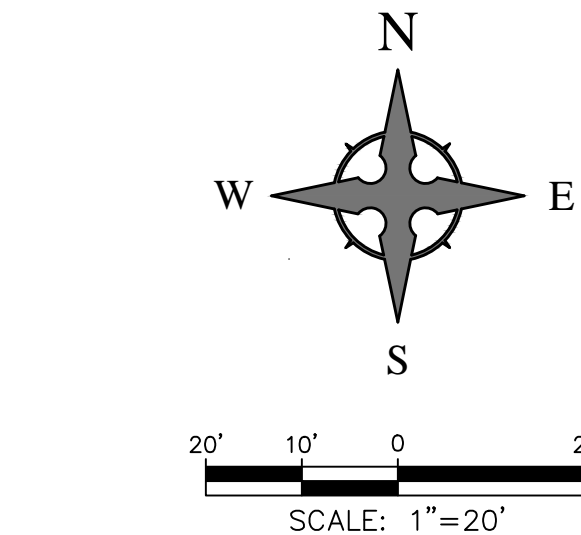
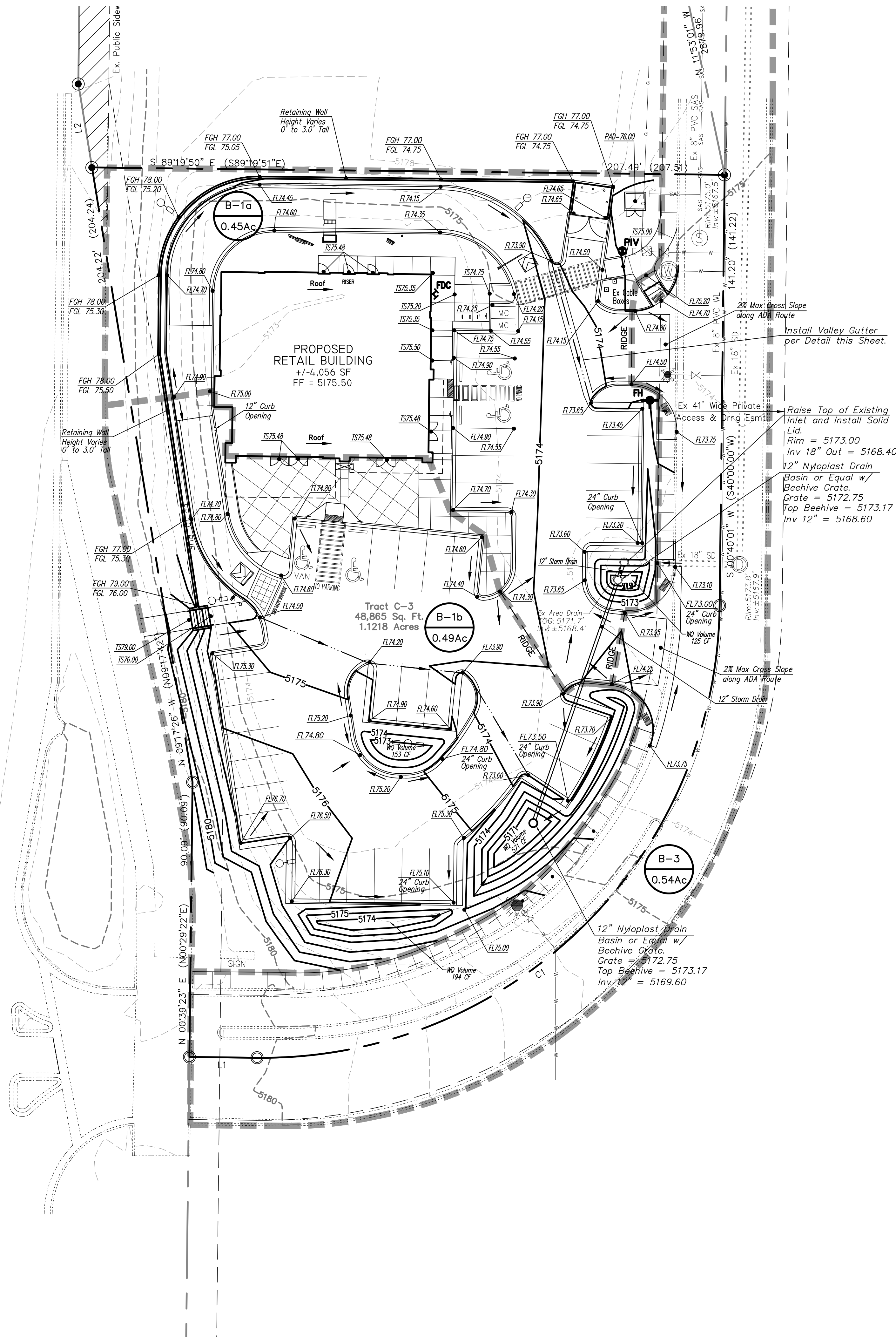
If you have any questions, please contact me at 924-3695 or [dpeterson@cabq.gov](mailto:dpeterson@cabq.gov).

Sincerely,

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



1720 Unser Boulevard NW  
(175' R/W)



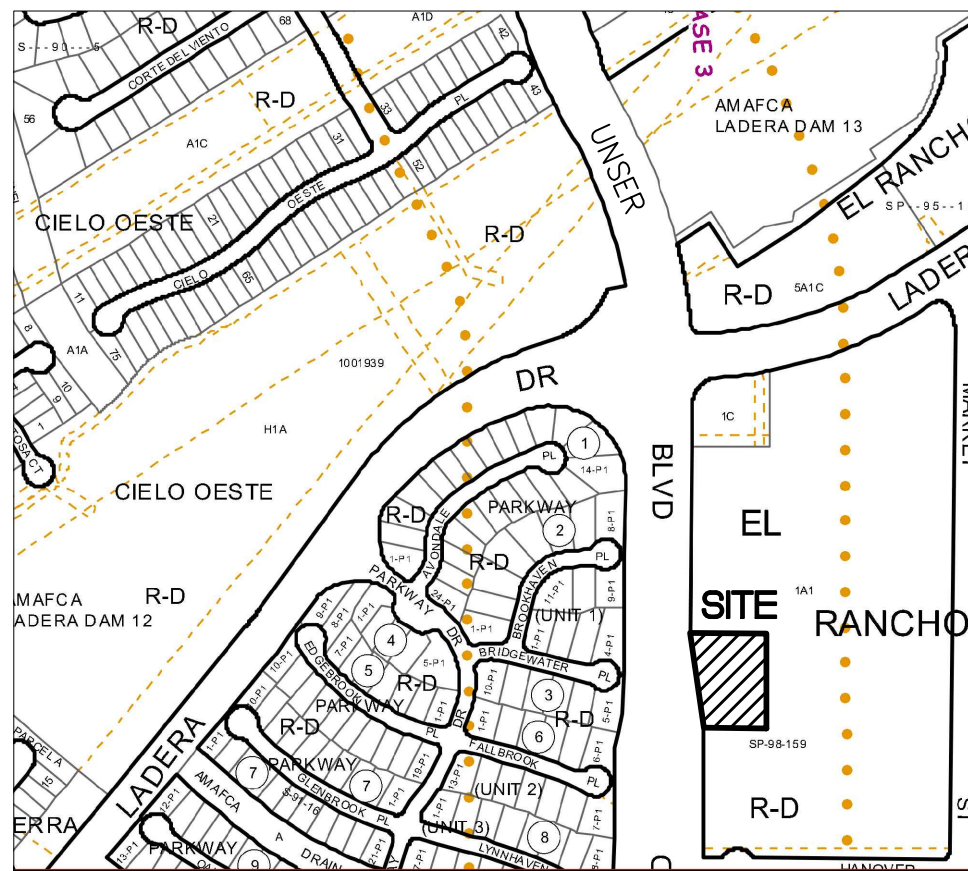
CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL NEW MEXICO ONE CALL (811) AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

LEGEND

- ← FLOW ARROW
- 27.8 PROPOSED TOP OF GRADE/PVMT ELEVATIONS
- FL27.8 PROPOSED FLOW LINE/GUTTER ELEVATIONS
- TC27.8 PROPOSED TOP OF CURB ELEVATIONS
- TS27.8 PROPOSED TOP OF SIDEWALK ELEVATIONS
- FGH27.8 PROPOSED GRADE AT TOP OF WALL
- FGL27.8 PROPOSED GRADE AT BOTTOM OF WALL
- 515 — EXISTING CONTOUR
- 515 — PROPOSED CONTOUR
- — EXISTING STORM DRAIN
- — FLOW LINE
- - - RIDGE LINE

Not For  
Construction



VICINITY MAP - Zone Atlas Page H-9-Z

NTS  
Legal Desc: Tract C-3, Heritage Marketplace

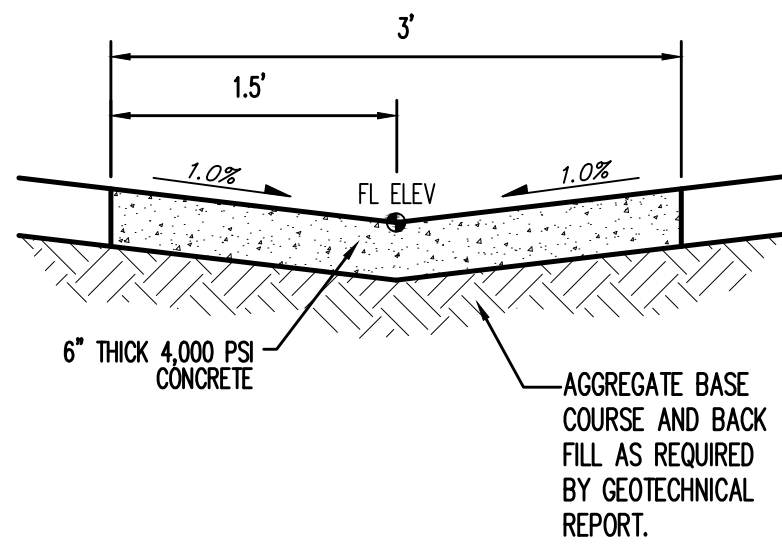


FIRM MAP 35001C0326J

Per FIRM Map 35001C0326J, dated November 4, 2016, the site is not located outside of the 0.2% Annual Chance Floodplain.

GRADING NOTES

- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
- THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- 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).
- EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
- 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.
- 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.
- 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.
- PAVING AND ROADWAY GRADES SHALL BE +/- 0.05' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR PAVEMENT, MEDIANS, AND ISLANDS.
- VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION (IF APPLICABLE) PRIOR TO BEGINNING CONSTRUCTION.
- 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.



Valley Gutter Detail

NTS

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

REV	DATE	BY	REVISION
6			
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3			
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**MODULUS ARCHITECTS**  
100 SUN AVENUE N.E., Ste 305  
ALBUQUERQUE, NEW MEXICO 87109  
PHONE (505) 338-1499 FAX (505) 338-1498

JEFFREY TODD WOOTEN  
NEW MEXICO  
16892  
PROFESSIONAL ENGINEER  
6/26/2017

PROJECT TITLE HERITAGE MARKET PLACE - TRACT C-3 1720 UNSER BLVD NW ALBUQUERQUE, NEW MEXICO 87120	DRAWN BY: JEFF WOOTEN
PROJECT MANAGER JEFF WOOTEN	JOB NO. 2016029
SHEET TITLE Grading Plan	SHEET NO. 2

DATE: 6/26/2017  
SCALE: AS NOTED



Existing Drainage Calculations											
This table is based on the COA DPM Section 22.2, Zone:1											
BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100) <sub>360</sub> (CF)	V(100) <sub>1440</sub> (CF)
B-1a	19694	0.45	0.0%	0.0%	100.0%	0.0%	2.87	1.30	0.99	1625	1625
B-1b	21297	0.49	0.0%	0.0%	100.0%	0.0%	2.87	1.40	0.99	1757	1757
B-3	23728	0.54	0.0%	0.0%	100.0%	0.0%	4.37	2.38	1.97	3895	7059
TOTAL	64719	1.49						5.08		7277	8068
										10441	
Proposed Drainage Calculations											
Ultimate Development Conditions Basin Data Table											
This table is based on the COA DPM Section 22.2, Zone:1											
BASIN	Area (SQ. FT)	Area (AC.)	A	B	C	D	Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100) <sub>360</sub> (CF)	V(100) <sub>1440</sub> (CF)
B-1a	19694	0.45	0.0%	0.0%	25.0%	75.0%	4.00	1.81	1.73	2831	3323
B-1b	21297	0.49	0.0%	0.0%	29.0%	71.0%	3.94*	1.92	1.69	2992	3496
B-3	23728	0.54	0.0%	0.0%	100.0%	0.0%	4.37*	2.38	1.97	3895	4686
TOTAL	64719	1.49						6.11		9718	11506
										16867	

\* MAXIMUM ALLOWABLE DISCHARGE PER THE HERITAGE MARKETPLACE DRAINAGE REPORT = 2.4 CFS/ACRE. (3.58 CFS TOTAL)

IMPERVIOUS AREA CALCULATIONS

PROPOSED SITE CONDITIONS

TOTAL SITE AREA: 40,991 SF

IMPERVIOUS AREA (86.41%): 35,420 SF

FIRST FLUSH CALCULATION

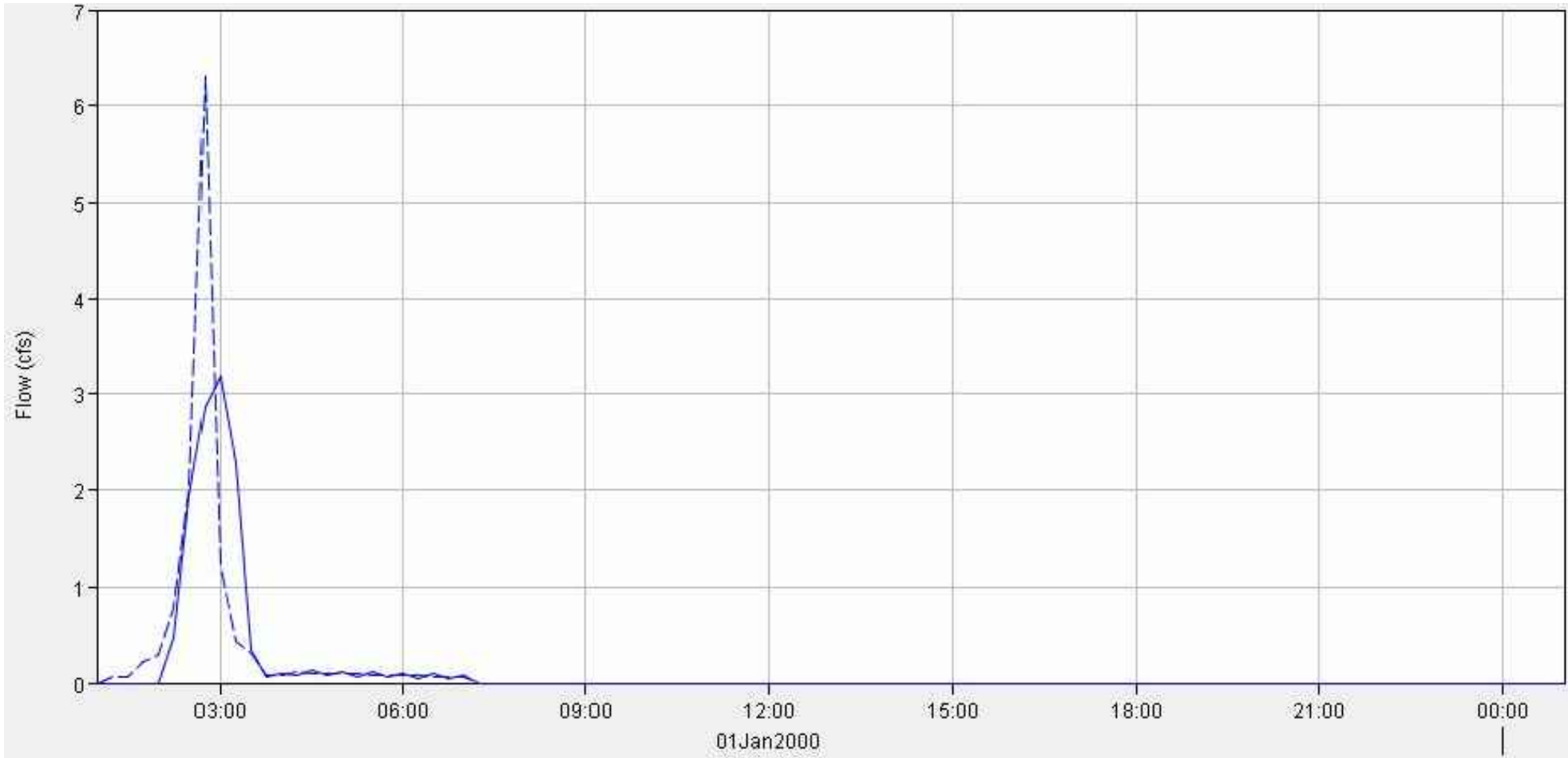
TOTAL IMPERVIOUS AREA = 35,420 SF

FIRST FLUSH = 35,420 \* 0.34" / 12 = 1,004 CF

TOTAL VOLUME PROVIDED = 1,043 CF

Detention Pond Volume Calculations

Elevation (ft)	Area (sq.ft)	Volume (cu-ft)	Volume Sum (cu-ft)
5168.6	1	0.0	0.0
5169.0	4	2.5	2.5
5170.0	4	4.0	6.5
5171.0	134	69.0	75.5
5172.0	326	230.0	305.5
5173.0	788	557.0	862.5
5174.0	11278	6033.0	6895.5
		(0.232 acre-ft)	



POND HYDROGRAPHS

100 YEAR (6 HOUR) POND ROUTING SUMMARY

HEC-HMS used for Pond Analysis

No Infiltration assumed in Calculations

INITIAL CONDITIONS

Starting WS Elev = 5068.60 ft  
Starting Volume = 0.00 ac-ft  
Starting Outflow = 0.00 cfs

MAXIMUM STORAGE

Tp, min	Elev, ft	Vol, ac-ft
120.00	5173.5	0.10

ACTUAL TOP OF POND ELEVATION = 5174.0  
FREEBOARD PROVIDED = 0.5'

FORWARD FLOW PEAKS

	Tp, min	Qp, cfs
Pond Inflow.....	105.00	6.30
Pond Outflow.....	120.00	3.20

DRAINAGE MANAGEMENT PLAN

INTRODUCTION

The purpose of this submittal is to provide a grading plan and drainage management plan for the development of Tract C-3, Heritage Marketplace addition. The site is located at 1720 Unser Blvd NW in Albuquerque, NM. The site contains approximately 1.12 acres. The proposed development consists of a new Retail Building containing a Starbucks with a Drive-Thru window with associated parking lot and landscaping. The City Drainage File Number of the prior drainage report by Tierra West dated 2/20/2015 is H09/D024.

EXISTING HYDROLOGIC CONDITIONS

The site was previously mass graded to allow for future development and generally slopes from west to east to an existing 24" diameter inlet that drains via an 18" SD pipe northward into the drainage system installed for the Heritage Marketplace development. Per the Heritage Marketplace drainage report, the maximum allowable discharge from the development is 2.4cfs/acre. Since the total basin area draining to the existing inlet is 1.49 acres, the maximum discharge from the site is 3.58cfs.

PROPOSED HYDROLOGIC CONDITIONS

The site will continue to drain from west to east through a series of water quality ponds and into two new 12" drain basins with 12" dome grates. The 12" drain basins are located in ponding areas that comprise a new detention facility. The ponds are controlled via a 12" orifice pipe at the outlet of the drain located in Basin B-1a. Reference calculations this sheet.

According to the Basin Calculations table this sheet, there is approximately 6.11cfs (9,718 CF) generated from the developed site during the 100-Yr, 6-Hr Storm that will drain to the new detention pond. This also takes into account the drainage from the existing access road to the south and east of the site per the Heritage Marketplace Drainage Report. Although the Tierra West report showed a new inlet to capture the flows from the access road, this inlet was not actually installed. These flows have been taken into account into our calculations. Per the Pond Routing Summary this sheet, the maximum water surface elevation of the proposed pond is 5173.50 allowing for 0.5' of freeboard to an elevation of 5074.00. These calculations do not take into account the routing of flows through the water quality ponds; therefore, the actual volume of stormwater being routed through the detention pond will be 1,043 CF less than the flows shown providing additional freeboard in the main pond. Refer to the First Flush Calculations below.

FIRST FLUSH CALCULATIONS

Per the Impervious Area Calculations Table this sheet, we are required to provide a Water Quality Pond with a volume of 1,004 CF. The volume of the Water Quality Ponds as designed is 1,043 CF, which is more than the required volume.

CONCLUSION

This drainage management plan provides for grading and drainage elements which are capable of safely passing the 100 year storm, contains the First Flush, and meets city requirements. The proposed improvements for the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting approval of the Site Plan for Building Permit and the Building Permit.

Project: Heritage Starbucks      Simulation Run: Run 1

Reservoir: Reservoir-1

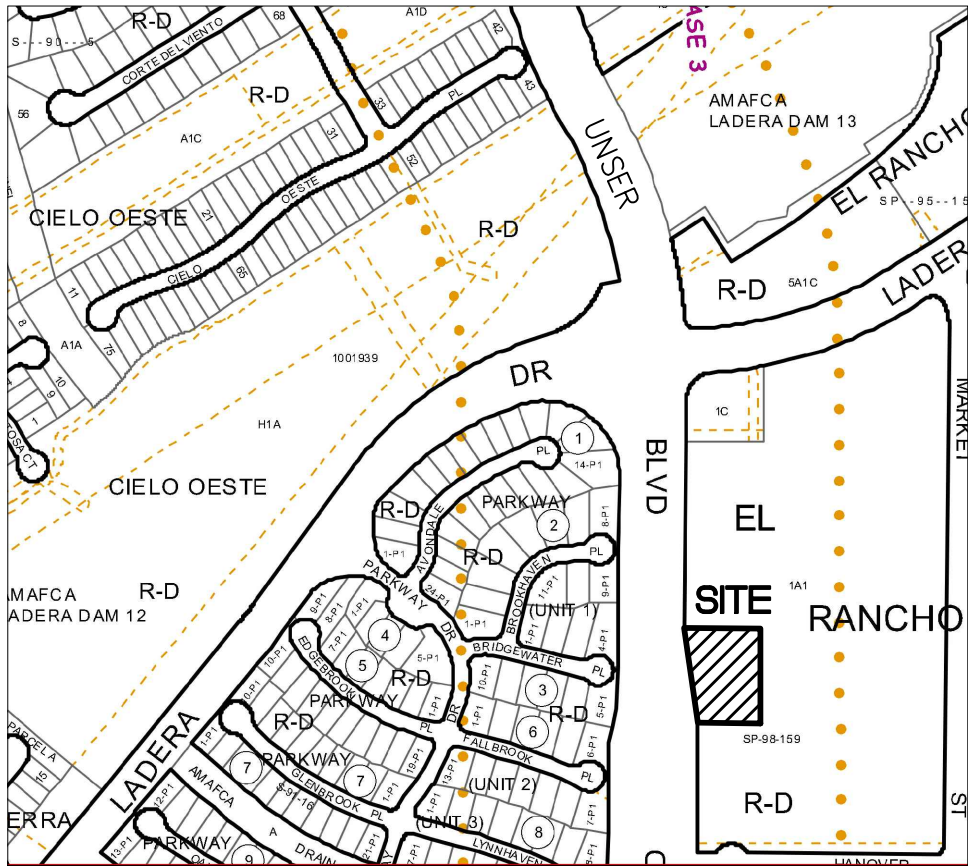
Start of Run: 01Jan2000, 01:00      Basin Model:      Basin 1

End of Run: 02Jan2000, 01:00      Meteorologic Model: Met 1

Compute Time: 23May2017, 15:47:05      Control Specifications: Control 1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	01:00	0.0	0.0	5168.6	0.0
01Jan2000	01:15	0.1	0.0	5170.2	0.0
01Jan2000	01:30	0.1	0.0	5171.0	0.0
01Jan2000	01:45	0.2	0.0	5171.6	0.0
01Jan2000	02:00	0.3	0.0	5172.3	0.0
01Jan2000	02:15	0.8	0.0	5172.8	0.5
01Jan2000	02:30	2.0	0.0	5173.0	1.9
01Jan2000	02:45	6.3	0.1	5173.3	2.9
01Jan2000	03:00	1.2	0.1	5173.5	3.2
01Jan2000	03:15	0.4	0.0	5173.1	2.3
01Jan2000	03:30	0.3	0.0	5172.8	0.4
01Jan2000	03:45	0.1	0.0	5172.8	0.1
01Jan2000	04:00	0.1	0.0	5172.8	0.1
01Jan2000	04:15	0.1	0.0	5172.8	0.1
01Jan2000	04:30	0.1	0.0	5172.8	0.1
01Jan2000	04:45	0.1	0.0	5172.8	0.1
01Jan2000	05:00	0.1	0.0	5172.8	0.1
01Jan2000	05:15	0.1	0.0	5172.8	0.1
01Jan2000	05:30	0.1	0.0	5172.8	0.1
01Jan2000	05:45	0.1	0.0	5172.8	0.1
01Jan2000	06:00	0.1	0.0	5172.8	0.1
01Jan2000	06:15	0.1	0.0	5172.8	0.1
01Jan2000	06:30	0.1	0.0	5172.8	0.1
01Jan2000	06:45	0.1	0.0	5172.8	0.0
01Jan2000	07:00	0.1	0.0	5172.8	0.1
01Jan2000	07:15	0.0	0.0	5172.7	0.0
01Jan2000	07:30	0.0	0.0	5172.7	0.0
01Jan2000	07:45	0.0	0.0	5172.7	0.0
01Jan2000	08:00	0.0	0.0	5172.7	0.0
01Jan2000	08:15	0.0	0.0	5172.7	0.0
01Jan2000	08:30	0.0	0.0	5172.7	0.0
01Jan2000	08:45	0.0	0.0	5172.7	0.0

POND TIME-STEP RESULTS



VICINITY MAP - Zone Atlas Page H-9-Z

NTS

Legal Desc: Tract C-3, Heritage Marketplace



FIRM MAP 35001C0326J

Per FIRM Map 35001C0326J, dated November 4, 2016, the site is not located outside of the 0.2% Annual Chance Floodplain.

Not For  
Construction

WE

Wooten Engineering

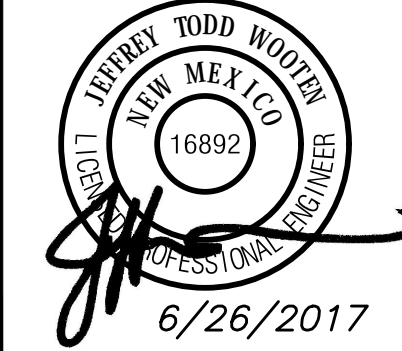
1005 21st St SE, Suite 13

Rio Rancho, N.M. 87124

Phone: (505) 980-3560

REV	DATE	BY	REVISION
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MODULUS ARCHITECTS



PROJECT TITLE HERITAGE MARKET PLACE – TRACT C-3 1720 UNSER BLVD. NW ALBUQUERQUE, NEW MEXICO 87120		JOB NO. 2016029		DRAWN BY: JEFF WOOTEN	
PROJECT MANAGER JEFF WOOTEN		SHEET TITLE		Drainage Management Plan	
DATE: 6/26/2017		sheet: C1.2			
SCALE: AS NOTED		of: 2			