CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

July 10, 2017

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM, 87108

RE: Ladera Crossing Self Storage
Grading Plan
Stamp Date: No Stamp Date
Hydrology File: J09D026

Dear Mr. Arfman:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Based upon the information provided in your submittal received 6/30/2017, the Grading Plan **is not** approved for Building Permit. The following comments need to be addressed for approval of the above referenced project:

1. 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, ccherne@cabq.gov). An approval for this must be given prior to Hydrology's approval for Building Permit.
2. Please provide an engineer's stamp with a signature and date.
3. Please remove the word "Conceptual" from the sheet title. A grading and drainage plan is needed for a building permit.
4. This site was included in a drainage study entitled, "Ladera Drive Improvements Gavin Road to Coors Boulevard – Drainage Anaysis Memo" by Parsons Brinckerhoff dated August 10, 2015. Please reference this study on the sheet.
5. Please provide the first flush calculations and show each pond volume on the plan at each pond.
6. Please provide the calculation for the sizing of the sedimentation pond at the northeast corner of the site.

Orig: Drainage File

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7. Please provide the calculation for the sizing of the temp sedimentation/future detention pond.

8. Please provide the weir calculations for the curb cuts.

9. Please provide the pipe size and pipe slope of the proposed drain pipe that connects the sedimentation pond at the northeast corner of the site to the first flush pond in the southeast corner of the site.

10. Please provide the proposed grades at the retaining wall along the south section of the first flush pond in the southeast corner of the site.

11. 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.

12. Please provide a Private Facility Drainage Covenant per Chapter 17 of the DPM.

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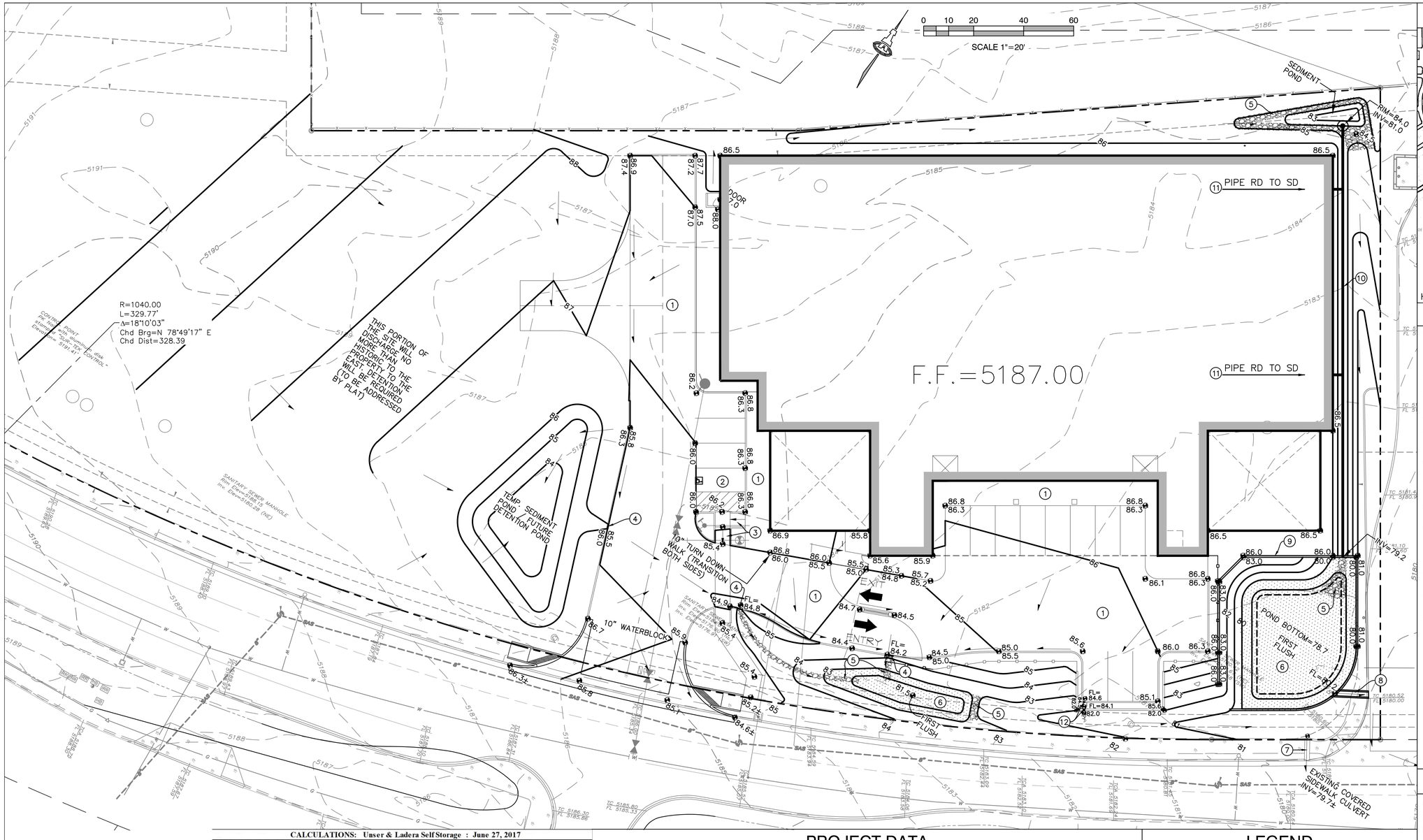
If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Reneé C. Brissette

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

Orig: Drainage File



VICINITY MAP

KEYED NOTES

1. CONSTRUCT PROPOSED PAVING / WALKS / CURB AND GUTTER TO ELEVATIONS SHOWN. SEE PAVING PLAN FOR PAVEMENT MATERIAL, EXTENTS, SECTIONS, PARKING LAYOUT, DIMENSIONS, STRIPING, ETC. PROVIDE SMOOTH TRANSITION TO EXISTING.
2. CONSTRUCT HC PARKING AREA TO ADA STANDARDS. MAX. 2% SLOPE IN ANY DIRECTION.
3. CONSTRUCT ADA COMPLIANT HANDICAP ACCESS RAMP AT ELEVATIONS SHOWN. MAX. 2% CROSS-SLOPE.
4. PROVIDE 24" WIDE CURB OPENING AT FLOWLINE SHOWN.
5. INSTALL ROCK EROSION PROTECTION AT CURB OPENING, WITHIN FLOWLINES CARRYING CONCENTRATED FLOW (3'WIDE) AND LIMITS HATCHED PER LEGEND.
6. DOT HATCHED AREA REPRESENTS EXTENTS OF 'FIRST FLUSH' RETENTION PONDING. CONSTRUCT TO ELEVATIONS SHOWN.
7. EXISTING COVERED SIDEWALK CULVERT. CONTRACTOR TO CLEAN AND REMOVE ANY MATERIAL BLOCKING ACCESS TO FLOW.
8. CONSTRUCT 24" WIDE (BOTTOM WIDTH) CONCRETE RUNDOWN COVERED.
9. CONSTRUCT RETAINING WALL TO ACHIEVE GRADE TRANSITIONS SHOWN. GRADES PROVIDED EACH SIDE REFLECT FINISH GRADES. SEE ARCHITECTURAL FOR INFORMATION RE: STRUCTURAL DESIGN, ADDITIONAL WALL HEIGHT, CONSTRUCTION DETAILS, WEEPHOLES, ETC.
10. INSTALL PRIVATE STORM DRAIN SYSTEM TO DELIVER ROOF DISCARGE TO SOUTHEAST POND. SEE CG-2.
11. ROOF DISCHARGE TO BE PIPED DIRECTLY TO STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR CONTINUATION.
12. PROVIDE 12" WIDE CURB OPENING AT FLOWLINE SHOWN. PROVIDE TURNED BLOCK IN WALL AT FLOWLINE SHOWN TO PASS MINOR BASIN FLOW.

CONSTRUCTION STAKING

UPON WRITTEN REQUEST COORDINATED THROUGH THE PROJECT ARCHITECT, THE ELECTRONIC FILE OF THE GRADING AND DRAINAGE WILL BE PROVIDED TO THE CONTRACTOR FOR VERTICAL CONTROL. DO NOT USE THIS PLAN FOR PROJECT STAKING.

SITE CONSTRUCTION LAYOUT / STAKING SHALL BE COORDINATED WITH THE ARCHITECT USING THE ARCHITECT PROVIDED SITE PLAN.

DRAINAGE PLAN CONCEPT: FLOW FROM THE UNDEVELOPED PORTION OF THE PROPERTY TO THE WEST WILL PASS THROUGH A SEDIMENT CONTROL POND. EXCESS WILL OVERFLOW TO THE PAVEMENT TO CONTINUE ALONG THE HISTORIC FLOWPATH.

THE AREA TO BE DEVELOPED CONSISTS OF TWO DRAINAGE BASINS. FLOW FROM IMPERVIOUS AREA WILL PASS THROUGH FIRST FLUSH RETENTION PONDS AS REQUIRED. EXCESS WILL DISCHARGE TO LADERA BLVD. VIA THE EXISTING COVERED SIDEWALK CULVERT OR THE PROPOSED CONCRETE RUNDOWN.

CALCULATIONS: Unser & Ladera Self Storage : June 27, 2017

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 71866.1 SF = 1.6

100-year, 6-hour

ALLOWABLE DISCHARGE:		Treatment SF	%	DEVELOPED FLOWS:		Treatment SF	%	EXCESS PRECIP:	
Area A	=	0	0%	Area A	=	0	0%	Precip. Zone	1
Area B	=	48868.948	68%	Area B	=	11499	16%	E_A = 0.44	
Area C	=	21559.83	30%	Area C	=	7187	10%	E_B = 0.67	
Area D	=	1437.322	2%	Area D	=	53181	74%	E_C = 0.99	
Total Area	=	71866.1	100%	Total Area	=	71866.1	100%	E_D = 1.97	

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted $E = \frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$

Allowable E = 0.79 in.	Developed E = 1.66 in.

On-Site Volume of Runoff: $V360 = E^*A / 12$

Allowable V_{360} = 4743 CF	Developed V_{360} = 9965 CF

On-Site Peak Discharge Rate: $Qp = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D / 43{,}560$

For Precipitation Zone 1

Q_{pA} = 1.29		Q_{pC} = 2.87	
Q_{pB} = 2.03		Q_{pD} = 4.37	
Allowable Q_p = 3.8 CFS		Developed Q_p = 6.3 CFS	

811 Know what's below. Call before you dig.

PROJECT DATA

PROPERTY: THE SITE IS A PORTION OF AN UNDEVELOPED COMMERCIAL PROPERTY WITHIN C.O.A. VICINITY MAP H-9/10. THE SITE IS BOUND TO THE WEST BY UNSER BLVD., TO THE EAST BY DEVELOPED MULTI-FAMILY, TO THE NORTH BY AMAFCA REGIONAL PONDS AND TO THE SOUTH BY LADERA BLVD.

SITE AREA: TOTAL SITE = 3.2 ACRES. PORTION TO BE DEVELOPED = 1.7± ACRES.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A MULTI-STORY SELF STORAGE FACILITY WITH ASSOCIATED PAVED PARKING, PEDESTRIAN WALKS, DRAINAGE IMPROVEMENTS AND LANDSCAPING.

LEGAL: TRACT 5-A-1C EL RANCHO ATRISCO PHASE III CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW MEXICO

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY BENCHMARK "3-H10", ELEVATION = 5196.15 (NAVD 1988)

OFF-SITE: A SMALL STRIP OF OPEN SPACE ALONG THE NORTH PROPERTY LINE WILL CONTINUE TO DRAIN INTO THIS PROPERTY. THIS FLOW WILL BE DIRECTED TO A SHALLOW SEDIMENT POND AT THE NORTHEAST CORNER OF THE PROPERTY. A STORM DRAIN INLET WILL BE CONSTRUCTED 1' ABOVE POND BOTTOM TO ACCEPT FLOW IN EXCESS OF POND CAPACITY.

FLOOD HAZARD: THE SUBJECT PROPERTY (AS SHOWN HEREON) APPEARS TO LIE WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 35001C0326 J, EFFECTIVE DATE 11-04-2016.

FIRST FLUSH: STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION] OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM.

FIRST FLUSH RETENTION PONDS WILL BE CONSTRUCTED WITHIN THE LANDSCAPE AREAS AS DESIGNATED BY DOT HATCH. STORM WATER FROM THE IMPERVIOUS AREAS SHALL BE DIRECTED TO THESE PONDS. STORMWATER WILL THEN DISCHARGE TO LADERA BLVD. TO FOLLOW THE HISTORIC FLOWPATHS.

ENGINEER: FRED C. ARFMAN, NMPE 7322
ISAACSON & ARFMAN, PA
128 MONROE NE, 87111
TELEPHONE: (505) 268-8828

SURVEYOR: RUSS P. HUGG, NMPS NO. 9750
SURV-TEK, INC.
9384 VALLEY VIEW DR. NW, 87114
TELEPHONE: (505) 897-3366

LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR (1' INCREMENT)
- PROPOSED SPOT ELEVATION
- FLOW ARROW
- FINISH FLOOR ELEVATION
- GRADE BREAK
- PROPOSED FIRST FLUSH RETENTION PONDING AREA
- PERCOLATION TRENCH
- LIMITS OF EROSION CONTROL

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

2228 CG-101.dwg Jun 27,2017

LADERA CROSSING SELF STORAGE

CONCEPTUAL GRADING AND DRAINAGE PLAN

Date:	No.	Revision:	Date:	Job No.
JUNE '17				2228
Drawn By: BJB				CG-101
Ckd By: FCA				SH. OF