

# CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

September 26, 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: 9/20/17  
Hydrology File: J09D026**

Dear Mr. Arfman:

PO Box 1293

Based upon the information provided in your submittal received 9/21/17, the Conceptual Grading and Drainage Plan is approved for action by the DRB on the Site Plan for Building Permit and Site Plan for Subdivision.

Albuquerque

If you have any questions, please contact me at 924-3995 or [rbrissette@cabq.gov](mailto:rbrissette@cabq.gov).

NM 87103

Sincerely,

*Reneé C. Brissette*

[www.cabq.gov](http://www.cabq.gov)

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



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Ladera Crossing Self Storage Building Permit #: \_\_\_\_\_ City Drainage #: H9  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_  
Legal Description: Tract 5-A-1C, El Rancho Atrisco Phase III  
City Address: City of Albuquerque

Engineering Firm: Isaacson & Arfman, P.A. Contact: Fred C. Arfman or Bryan J. Bobrick  
Address: 128 Monroe Street NE - Albuquerque, NM 87108  
Phone#: (505) 268-8828 Fax#: \_\_\_\_\_ E-mail: freda@iacivil.com  
bryanb@iacivil.com

Owner: Titan Development Company 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:

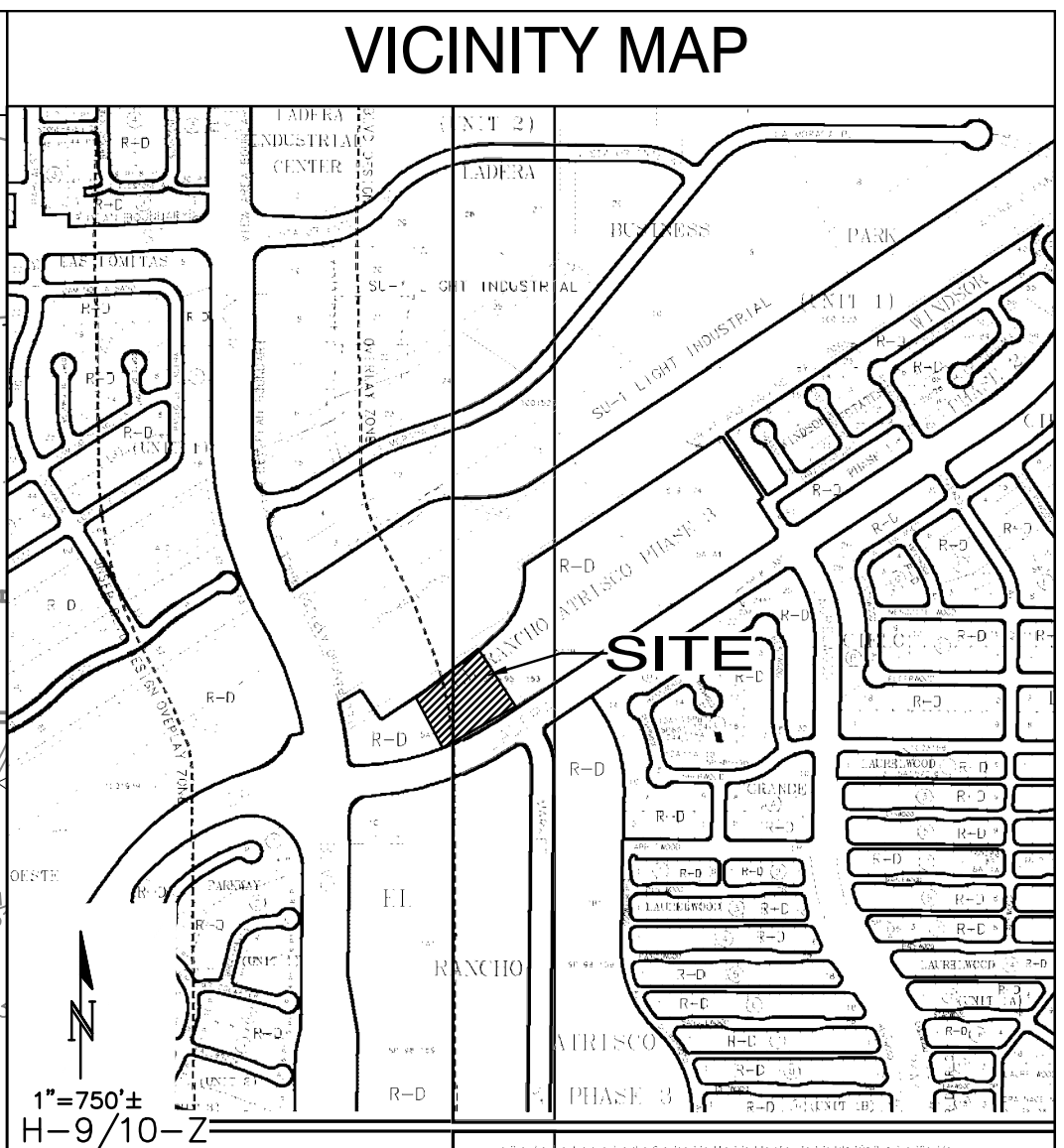
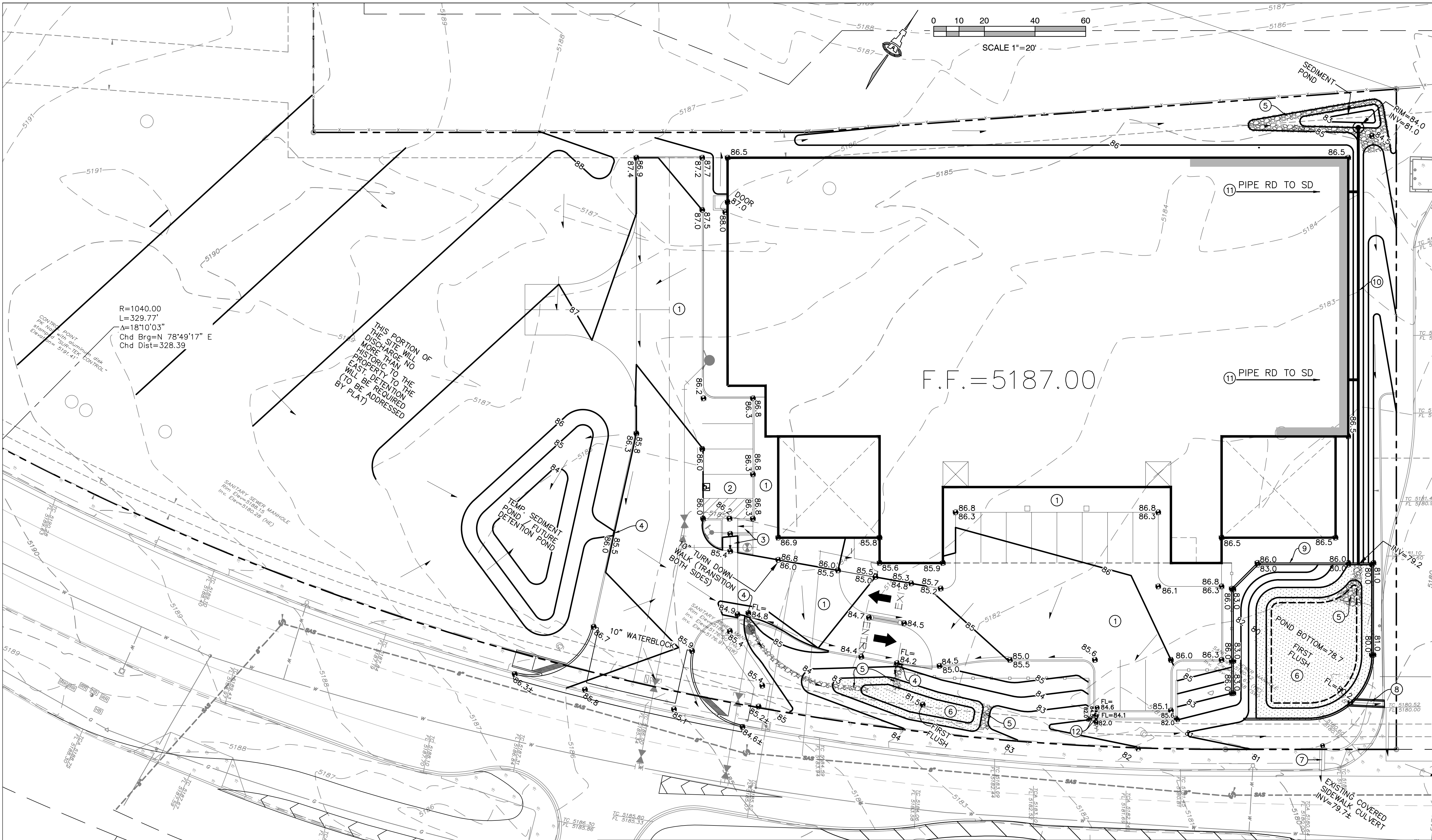
☐ BUILDING PERMIT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY  
☐ PRELIMINARY PLAT APPROVAL  
☒ SITE PLAN FOR SUB'D APPROVAL  
☒ SITE PLAN FOR BLDG. PERMIT APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE  
☐ FOUNDATION PERMIT APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ SO-19 APPROVAL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

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: September 20, 2017 By: Fred C. Arfman

COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_





- ### 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 DISCHARGE 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.

**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:			DEVELOPED FLOWS:			EXCESS PRECIP:			
	Treatment SF	%		Treatment SF	%	Precip. Zone			
Area A	=	0	0%	Area A	=	0	0%	E <sub>A</sub>	= 0.44
Area B	=	48868.948	68%	Area B	=	11499	16%	E <sub>B</sub>	= 0.67
Area C	=	21559.83	30%	Area C	=	7187	10%	E <sub>C</sub>	= 0.99
Area D	=	1437.322	2%	Area D	=	53181	74%	E <sub>D</sub>	= 1.97
Total Area	=	71866.1	100%	Total Area	=	71866.1	100%		
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: V <sub>360</sub> = E*A / 12									
Allowable V <sub>360</sub>	=	4743 CF	Developed V <sub>360</sub>	=	9965 CF				
On-Site Peak Discharge Rate: Q <sub>p</sub> = Q <sub>pA</sub> A <sub>A</sub> +Q <sub>pB</sub> A <sub>B</sub> +Q <sub>pC</sub> A <sub>C</sub> +Q <sub>pD</sub> A <sub>D</sub> / 43,560									
For Precipitation Zone 1									
Q <sub>pA</sub>	=	1.29	Q <sub>pC</sub>	=	2.87				
Q <sub>pB</sub>	=	2.03	Q <sub>pD</sub>	=	4.37				
Allowable Q <sub>p</sub>	=	3.8 CFS	Developed Q <sub>p</sub>	=	6.3 CFS				

### 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 = 1.74 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

### 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.

2228 CG-101.dwg Jun 27, 2017

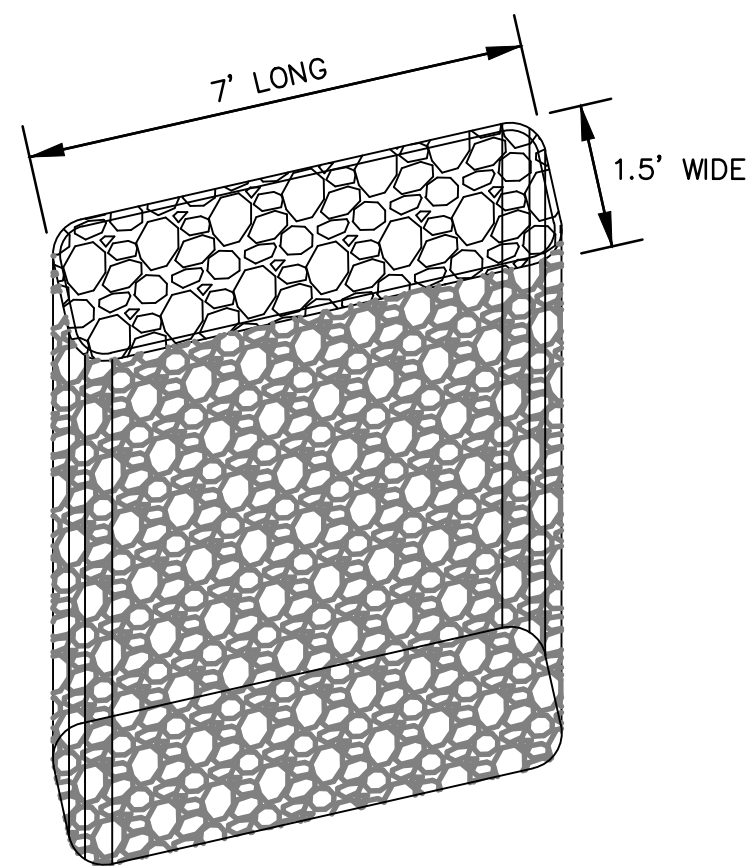
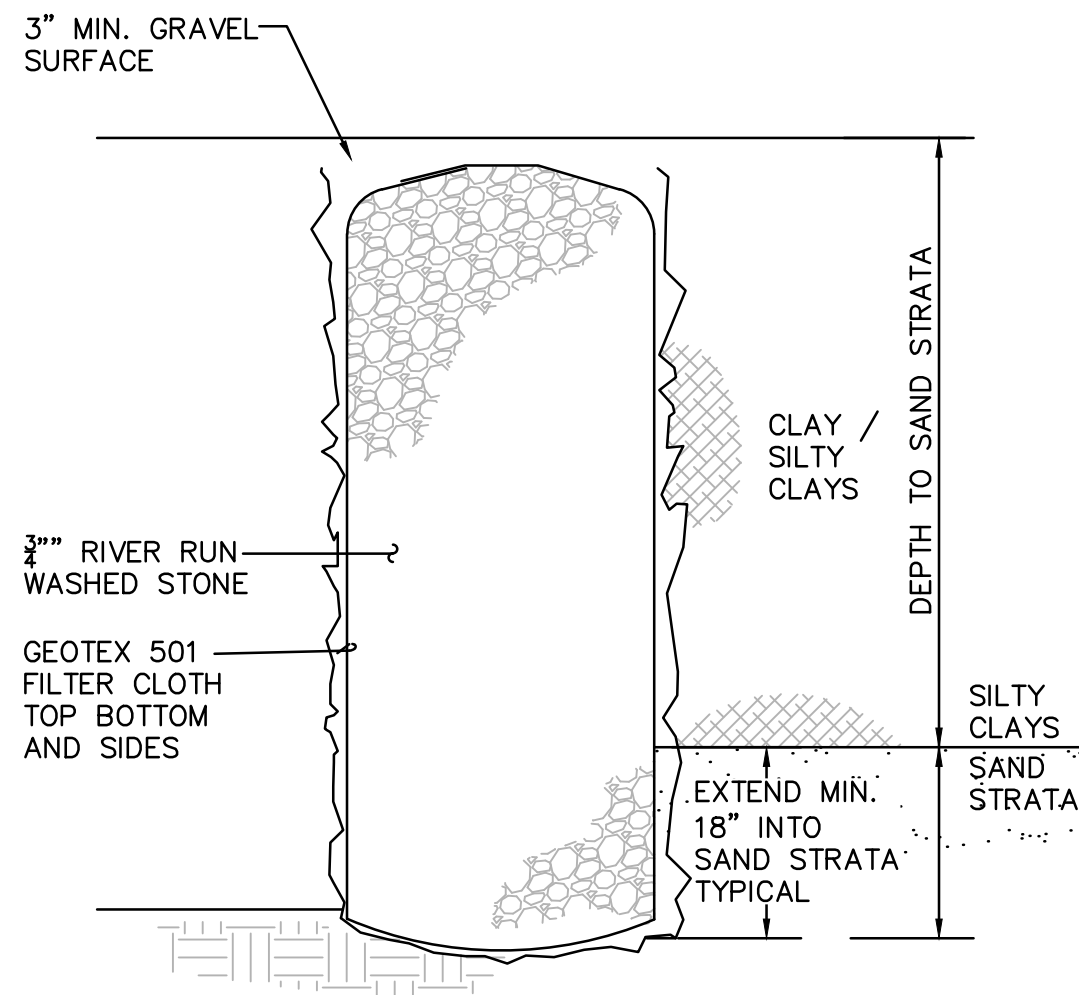
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### LADERA CROSSING SELF STORAGE

### CONCEPTUAL GRADING AND DRAINAGE PLAN

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



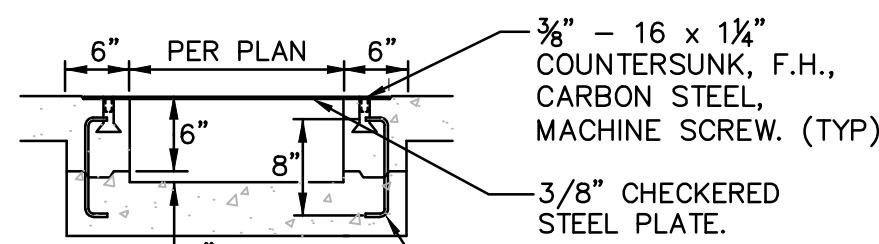


TYPICAL DIMENSIONS

**PERCOLATION TRENCH**  
1.5' WIDE X 7.0' LONG X DEPTH (TYPICAL) SCALE: N.T.S.  
LOCATE CLAY LAYER BELOW SURFACE GRADE. MAY VARY  
BASED ON LOCATION OF INFILTRATION PIT.

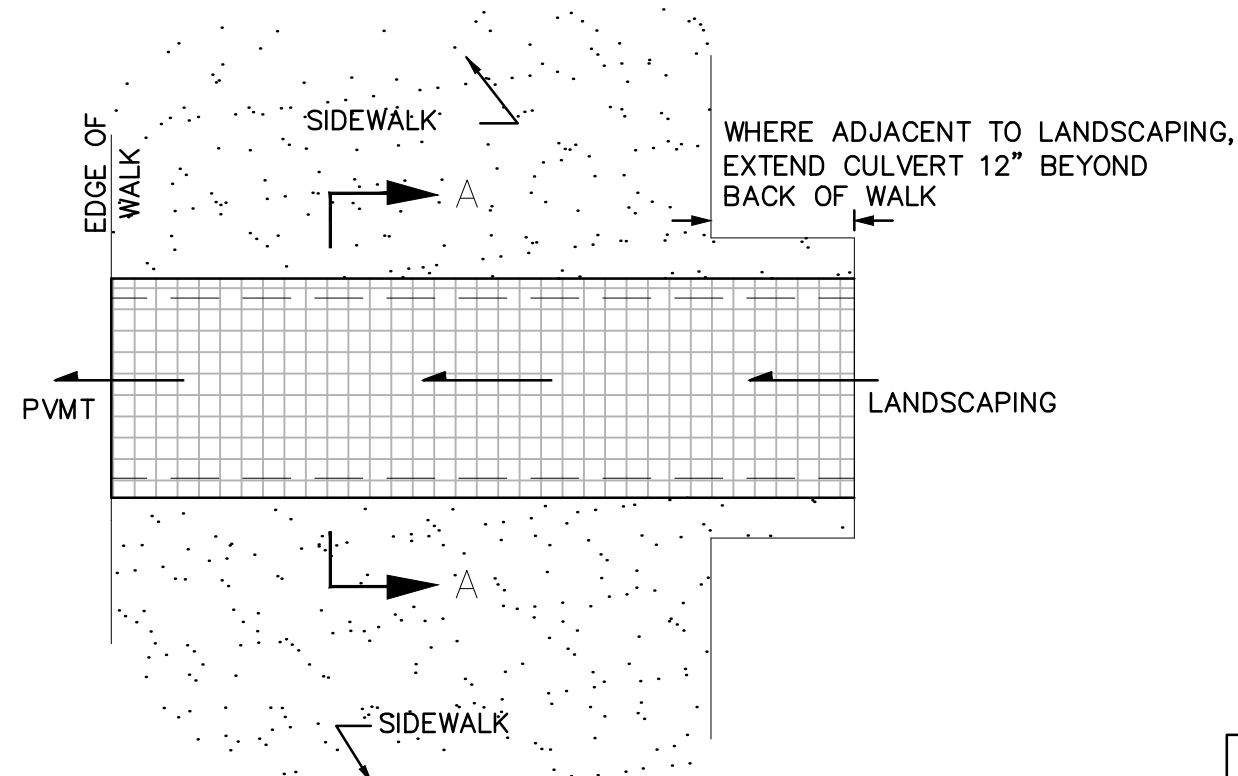
WELD  $\frac{1}{8}$ " THICK,  $\frac{3}{16}$ " MIN.  
DIAMETER OVER ALL SCREWS.  
COMPLETELY COVER SCREW  
HEADS. GRIND EDGES SMOOTH.

FOR SECURING PLATE USE 1"x5" S.S. ROD ANCHOR,  
"RED HEAD MULTI-SET II SRM-38 ANCHOR" OR  
APPROVED EQUAL. INSTALL PER MANUFACTURER'S  
INSTRUCTIONS AT MAX. 24" O.C., A MINIMUM OF 2  
PER SIDE AND ONE WITHIN 6" OF EACH END.



USE NO. 3 DEFORMED BAR  
DOWELS. SPACE DOWELS AT 18"  
O.C. MAXIMUM. 1-1/2" MINIMUM  
FROM FACE OF CONCRETE

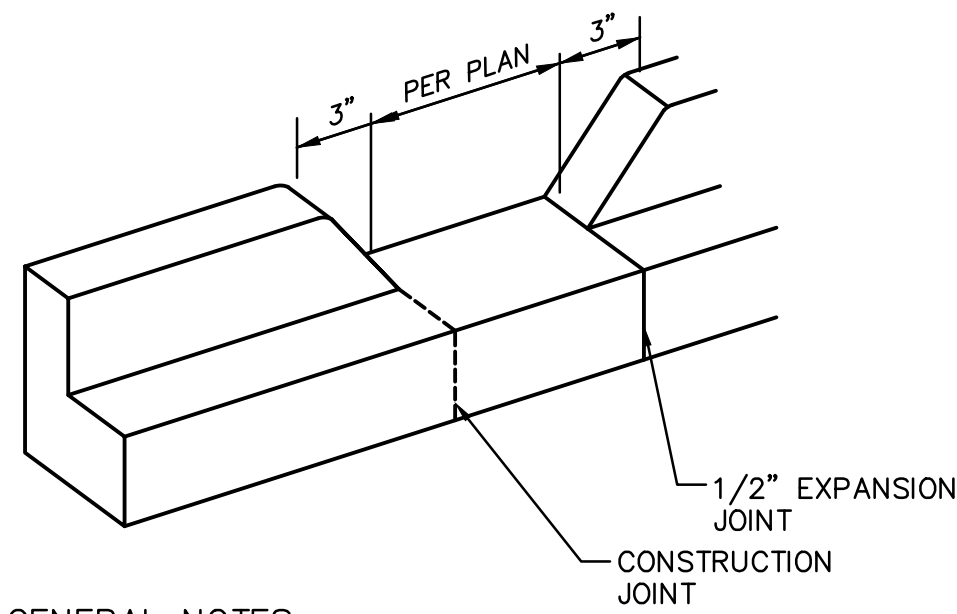
SECTION A-A



PLAN

CONSTRUCT PER C.O.A. STD. DWG.  
2236 WITH MODIFICATIONS AS  
SHOWN ON THIS DETAIL

**COVERED SIDEWALK CULVERT**  
SCALE: N.T.S.

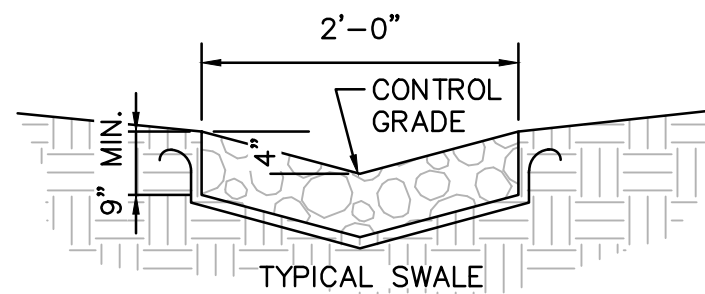


GENERAL NOTES

- EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH  
A  $\frac{3}{8}$ " EDGING TOOL.

**CURB OPENING**  
SCALE: N.T.S.

- VARY ANGULAR FACE ROCK SIZE BETWEEN 2" AND  
4" DIA. (AVG.=3")
- PLACE GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.)  
BENEATH ALL EROSION PROTECTION
- CONSTRUCT ALL EROSION PROTECTION INSET INTO  
(NOT ON TOP OF) GRADE TO ENSURE RUNOFF CAN  
BE CAPTURED AND CONVEYED PROPERLY



TYPICAL SWALE

**ROCK EROSION PROTECTION**  
SCALE: N.T.S.

FRED C. ARFMAN  
NEW MEXICO  
7322  
LICENSED PROFESSIONAL ENGINEER  
FOR CONSTRUCTION  
NO. 08-20-17

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LADERA CROSSING SELF STORAGE				
GRADING AND DRAINAGE DETAILS				
Date:	No.	Revision:	Date:	Job No.
.	.	.	.	2228
Drawn By:	.	.	.	CG-501
Chd By:	.	.	.	SH. OF