CITY OF ALBUQUERQUE

Planning Department David Campbell, Director



Mayor Timothy M. Keller

March 1, 2019

Ronald Bohannan, P.E. Tierra West, LLC 5571 Midway Park Place NE Albuquerque, NM, 87109

RE: Coors & Western Trail Tract 3A & 3B Revised Grading &Drainage Plan and Drainage Report Engineer's Stamp Date: 02/26/19 Hydrology File: F11D007

Dear Mr. Bohannan:

PO Box 1293 Based upon the information provided in your submittal received 02/26/2019, the revised Grading & Drainage Plan and Drainage Report is approved for action by the DRB on Site Plan for Subdivision and for DRC Work Order.

Albuquerque

Just a reminder, this 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, <u>ccherne@cabq.gov</u>). Hydrology's approval for Grading or Building Permit will not be given until the submittal of the ESC Plan.

^{www.cabq.gov} Also prior to Hydrology's approval for DRC Work Order Plans, a paper easement for revised 20' private drainage easement must be recorded.

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

Sincerely,

Renée C. Brissette

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

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City of Albuquerque

Planning Department Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Coors and Western Trail	Building	Permit #:	Hydrology File #:
DRB#:	EPC#:	1000032	Work Order#:
Legal Description: <u>Tract 3A & 3B</u>			
City Address: 4500 Quaker Heights PL NW	/ Albuquero	que NM 87120	
Applicant: Tlerra West, LLC			Contact: Richard Stevenson
Address: 5571 Midway Park Place NE Albuquero	que NM 87	109	
Phone#: 505-858-3100	Fax#:	505-858-1118	E-mail: rstevenson@tierrawestllc.com
Other Contact:			Contact:
Address:			
Phone#:	Fax#:		_E-mail:
TYPE OF DEVELOPMENT: PLAT (# of lots)	RESIDENCE X	DRB SITEADMIN SITE
IS THIS A RESUBMITTAL? X Yes]	No	
DEPARTMENT TRANSPORTATION	<u> </u>	HYDROLOGY/DRAINAGE	
Check all that Apply: TYPE OF SUBMITTAL: ENGINEER/ARCHITECT CERTIFICATION PAD CERTIFICATION XCONCEPTUAL G & D PLAN GRADING PLAN XDRAINAGE REPORT XDRAINAGE MASTER PLAN FLOODPLAIN DEVELOPMENT PERMIT A ELEVATION CERTIFICATE CLOMR/LOMR TRAFFIC CIRCULATION LAYOUT (TCL) TRAFFIC IMPACT STUDY (TIS) STREET LIGHT LAYOUT OTHER (SPECIFY) PRE-DESIGN MEETING?	J JPPLIC	TYPE OF APPROVA BUILDING PER CERTIFICATE O PRELIMINARY X SITE PLAN FO SITE PLAN FO FINAL PLAT A SIA/ RELEASE FOUNDATION X GRADING PER SO-19 APPROV PAVING PERM GRADING/ PAI WORK ORDER A CLOMR/LOMR FLOODPLAIN I OTHER (SPECI	AL/ACCEPTANCE SOUGHT: MIT APPROVAL OF OCCUPANCY PLAT APPROVAL R SUB'D APPROVAL R BLDG. PERMIT APPROVAL .PPROVAL OF FINANCIAL GUARANTEE PERMIT APPROVAL MIT APPROVAL /AL IIT APPROVAL O CERTIFICATION APPROVAL DEVELOPMENT PERMIT IFY)
DATE SUBMITTED: 2/26/2019	By:	Richard Stevenson	
COA STAFF:	ELECTRO FEE PAII	DNIC SUBMITTAL RECEIVED:	

DRAINAGE REPORT REVISION 1 For

Coors Village Tract 3A & 3B 4501 Coors Blvd. NW Albuquerque, NM 87120

Prepared by:

Tierra West, LLC 5571 Midway Park Place NE Albuquerque, New Mexico 87109

February, 2019

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the State of New Mexico in good standing.



Job No. 2017017

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Drainage Basin Maps & Hydrology Tables/Calculations	APPENDIX B

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Purpose

The purpose of this report is to provide an update to the Drainage Management Plan which covers Tracts 3-A and 3-B of the Coors Village Subdivision. A new independent age restricted living facility consisting of $\pm 175,500$ square-foot three story building is proposed for Tract 3-A and with an medical Urgent Care Facility and medical offices being proposed for Tract 3-B. The proposed development falls within the existing undeveloped ± 13.5 acre tract at 4501 Coors Blvd. NW.

In developing the drainage master plan for Tracts 3-A and 3-B a developed condition was assigned to both parcels to ensure the size of the downstream stormdrain can convey the developed runoff from the entire ± 13.3 acres subdivision.

The entire subdivision is under a free discharge condition, as detailed in the "Drainage Master Plan for Coors Village Subdivision", February 2000. As such this report outlines the proposed grading scheme and stormwater management to accommodate the 100 yr 6 hr developed flows. This report is being submitting in conjunction with a conceptual grading and drainage plan for Tract 3-A.

The shared drainage infrastructure needed to convey the developed runoff from both parcels shall be installed during the development of either tract, which ever tract is developed first.

Location

The site is located on the northeast corner of Quaker Heights PI. and Milne Rd. The assigned address of the parcel is 4501 Coors Blvd. and 4500 Quaker Heights PI, NW 87120. To the east the site is bounded by Coors Boulevard and Western Trail to the North. The entire site is currently undeveloped with areas of scrub and small vegetation.

Exhibit A – Vicinity Map



Exhibit B – Site Aerial Image



Existing (Pre-Developed) Conditions

The entire ± 13.3 acres is currently undeveloped and in its natural state and surface drains to various depressions throughout the site, as the elevation of the road network

surrounding the parcel is generally higher. No offsite flows are conveyed into the property. A storm drain system exists within Quaker Heights PI with a 54-inch RCP storm drain stubbed into the southwest portion of the property as detailed on the plans for the Rancho Encantado Off-Site Improvements from 2003.

The total undeveloped 100 yr. 6 hr. storm runoff for Tracts 3A and 3B is 17.5 cfs. The hydrology calculations/table and existing basin map is included in Appendix B.

Flood Plain

The project area is included on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 35001C0114H dated August 16, 2012 and is shown on the following page. The map indicates the site lies within Flood Zone X, an area of minimal flood hazard.

Review of Drainage Master Plan for Coors Village Subdivision

A review of the "Drainage Master Plan for Subdivision" prepared by Thompson Engineering Consultants, Inc. dated 2000 was completed to ensure the criteria established in the Master Plan is still current, the coefficients applied to the drainage basins were suitable, and the developed flows for this parcel were adequately considered during the design of the storm drain conveyance system that discharges runoff to the Ladera Pond west of the project site. The review included walking the basin boundaries, review of the basin conditions and completing and verifying all of the flows in the Master Plan. We have verified the flows and basin discharge points that are used in this report. Based on the available 2ft 2010 contour World Street Map downloaded from the COA GIS, the boundary areas were recreated and using the coefficients listed in the DPM, the 100 yr. 24 hr. peak flow and volumes were calculated and compared with the approved Coors Village Masterplan Report.

In review, the 100 yr. 24 hr. storm even for peak flow and runoff volumes was used in accordance with the DPM to determine the peak flows to adequately size the storm drain conveyance system. A AHYMO97 model was used for the pond modelling in the Coors Village Masterplan Report. No offsite flows reach the site boundary which is

consistent with the overall watershed today. The Masterplan adequately designed for the developed and full buildout of the watershed areas and sized the storm drain to adequately convey the peak flows. In the Master Plan report for this parcel the Q100 for the 24 hr storm was calculated to be 57.1 cfs, and in comparison with the runoff determined based on the present day review, was slightly higher than the 55.0 cfs calculated.

Included in appendix A is the detailed review calculations and basin map created to review the runoff volumes and peak flows of the approved Coors Village Masterplan. In a summery, the acreage average difference between the Masterplan and this review was -1.2%. The difference of the peak flow in the Masterplan was on average -3.3% less than the calculated, a difference of 4.76 cfs. The difference of the volume in the Masterplan was on average -3.0% less than the calculated, a difference of 0.026 ac-ft. Given this review the approved Masterplan is acceptable and will safely convey the proposed flows for the parcel to be developed.

Exhibit C – FIRM Map



Proposed Conditions

The proposed grading for Tract 3-A details the internal roadway along the boundary line separating both lots. The revision to the site from the previously approved Master Drainage Plan detailed a traffic circle in the center of the development. This has been removed and the grading updated to reflect the change. Specific to Tract 3-A at the time of development an updated grading and drainage plan will be prepared detailing the stormwater improvements associated with a site specific development and grading plan, and the connection to the proposed storm drain. Similarly for Tract 3-B, at the time of development a grading and drainage plan will be submitted to the City for approval.

The design of the storm drain that will serve both lots was completed based on a full developed buildout across the subdivision. The excess flows are to be drained by private storm drain which shall tie to the existing 54-inch stub at the south west corner of the site. The storm drain was sized based on the anticipated developed runoff from Basins 1, 2 and 3. The private stormdrain is designed using High-density polyethylene (HDPE) stormdrain pipes. Two storm drain stubs are detailed for the development of Tract 3B, with Tract 3A having the opportunity to connect at either the road inlet or at the downstream manholes located at the southern end of the property. The size of the stormdrain varies, with the largest pipe being a 36-inch stormdrain along the downstream section. The stormdrain pipe size and the associated carrying capacity is detailed in the appendix.

Type C Curb inlets are proposed at the low point of the private street to capture all sheet flow along the roadway. The total flow for Basin 2 is 3.19 cfs which the inlets can sufficiently handle. Included in the appendix is the street carrying capacity calculations, and the review calculations for the Type C inlet capacity.

Exhibit D – Drainage Basin Map



Storm Water Quality Management

All site specific storm water quality ponding required to meet the drainage ordinance shall be detailed at the time of site specific grading and drainage plan submission.

Calculations

The Weighted E Method from the "City of Albuquerque Development Process Manual Volume I – Design Criteria, 2006 Revision" was used to calculate the runoff and volume for the site, the hydrology table can be found in Appendix B. Storm drain capacities can be found in Appendix B.

Storm Drain Easement

As the storm drain is required for Tract 3-B and crosses into Tract 3-a, a 20 foot wide private drainage easement for the benefit of Tract 3-B was granted by the Coors Village Plat (recorded 12/31/2018) with maintenance responsible by the underlying property owners each Tract 3-A and 3-B. The extent of the storm drain easement was updated with this revision and will be revised by document or by platting action to outline the modified storm drain infrastructure. Included in the appendix is the recorded Plat with the full description of the Storm Drain Easement.

Summary

The conceptual drainage design for Tract 3A details two retention ponds to as an interim drainage solution. Once Tract 3A has an approved site plan the drainage solution shall be updated. Future connection to the proposed storm drain will be allowed and has been considered in the design. Similarly for Tract 3B, two connection stubs are detailed on the design to allow the connection for any onsite subsurface drainage infrastructure.

Both site specific grading and drainage plans will need to provide the required storm water quality ponding retention onsite.

The developed flows will freely discharge as allowed and detailed in the "Drainage Master Plan for Coors Village Subdivision" prepared by Thompson Engineering Consultants, Inc. dated February 2000. The historic flow patterns are maintained and there is no historical drainage being accepted by the parcel to be managed. The calculations show the design storm can be safely conveyed through the proposed storm drain to the existing storm drain network within Quaker Heights Place.

A review of the Drainage Master Plan for Coors Village Subdivision was completed and found the criteria established in the Master Plan is still current and the developed flows for this parcel were adequately considered during the design of the conveyance system and discharge to Ladera Pond.

A storm drain easement is detailed on the recorded plat for Tract 3-A and 3-B and will be updated for the revised storm drain layout.

APPENDIX A



Contour 2ft - 2010 World Street Map Legend



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City of Albuquerque - Coors Village Drainage Masterplan Review 2018



DPM Weighted E Method Precipitation Zone 1 Coors Village Masterplan - Review 2018

8/21/2018 Date

		,																				
					Basin Desc	criptions							100-Year,	6-Hr	100-	-Year, 24-Hr			Masterplan F	Report		
Basin	Area	Area	Area	Treatmen	t A	Treatme	ent B	Treatme	nt C	Treatm	tent D	Weighted E	Volume	Flow**	Volume*	Flow**	Area Difi	erence 100v	rr 24hr Volume	Difference '	00vr 24hr Peak D	ifference
Q	(sf)	(acres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(in)	(ac-ft)	cfs (rational method)	(ac-ft)	cfs (rational method)	Acres /	vcres	ac-ft	Volume	Flow cfs P	eak Flow
100	589,960	13.54	0.02116	%0	0.000	10%	1.354	5%	0.677	85%	11.512	1.791	2.021	35.28	2.463	55.00	13.87 -	2.4%	2.431	1.3%	57.13	-3.9%
110	269,140	6.18	0.00965	%0	0.000	35%	2.163	15%	0.927	50%	3.089	1.368	0.704	11.92	0.823	20.53	6.04	2.2%	0.976	-18.6%	23.45	-14.2%
120	37,778	0.87	0.00136	%0	0.000	5%	0.043	5%	0.043	%06	0.781	1.856	0.134	2.35	0.164	3.62	0.83	4 [.] 3%	0.146	11.0%	3.44	5.1%
130	25,855	0.59	0.00093	95%	0.564	5%	0.030	5%	0.030	%06	0.534	2.274	0.112	1.75	0.133	3.20	0.72 -2	:1.3%	0.127	4.5%	2.99	6.4%
140	50,369	1.16	0.00181	%0	0.000	5%	0.058	5%	0.058	%06	1.041	1.856	0.179	3.14	0.219	4.83	1.03 1	%6.0	0.181	17.3%	4.26	11.8%
150	77,278	1.77	0.00277	%0	0.000	60%	1.064	20%	0.355	20%	0.355	0.994	0.147	2.35	0.161	4.72	1.83 -	3.2%	0.163	-1.5%	4.93	-4.5%
160	227,915	5.23	0.00818	%0	0.000	35%	1.831	15%	0.785	50%	2.616	1.368	0.596	10.10	0.697	17.39	2	4.4%	0.807	-15.8%	19.40	-11.6%
170	70,788	1.63	0.00254	100%	1.625	5%	0.081	5%	0.081	%06	1.463	2.296	0.311	4.81	0.367	8.85	1.57	3.4%	0.275	25.1%	6.47	26.9%
180	500,654	11.49	0.01796	100%	11.493	35%	4.023	15%	1.724	50%	5.747	1.808	1.732	25.06	1.952	52.78	10.6	.8%	1.711	12.3%	41.12	22.1%
200	760,486	17.46	0.02728	%0	0.000	35%	6.110	15%	2.619	50%	8.729	1.368	1.990	33.69	2.325	58.01	16.37 (5.2%	2.459	-5.8%	60.09	-5.1%
Total	2,610,223	59.92	0.09363		13.68		16.76		7.30		35.87		7.927	130.45	9.302	228.93	57.86	.2%	9.276	3.0%	224.18	3.3%
																	Ave	age	1	Average	A	rerage
Equation	ls:																		-0.026		-4 746	

	Zone	Qa	9 B	ð	рд
n, E (in.)	10-Year	0.08	0.22	0.44	1.24
Precipitatio	100-Year	0.44	0.67	66.0	1.97
kcess I	ne 1	ä	Eb	Ec.	Ed

charge

		Peak Intensity (in./hr)	
	Zone	100-Year	10-Year
	1	4.7	3.14
	Rat	ional Method Cofficer	it,C
	Treatment	100-Year	10-Year
1	A	0.27	0.08
	В	0.43	0.24
	O	0.61	0.47
	D	0.93	0.92



TWLLC

Proposed Conditions

Equations: Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area) Volume = Weighted E * Total Area Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad For 24hr Storms:

 $\label{eq:constraint} \begin{array}{l} \hline \mbox{Equations 100vr, 24hr:} \\ 1440 = V_{360} + A_{D} (P_{1440} - P_{360}) / 12 in/ft \\ ** C=CIA \\ \end{array}$



BASINS	Area (acres)	24hr Peak Flow (cfs)	100yr-24hr Runoff Volume (acre-ft)	Land Treatment
100	13.87	18.42	0.519	100%A
110	6.04	8.03	0.226	100%A
120	0.83	1.11	0.031	100%A
130	0.72	0.97	0.027	100%A
140	1.03	1.37	0.039	100%A
150	1.83	2.44	0.069	100%A
160	5.00	6.64	0.187	100%A
170	1.57	2.09	0.059	100%A
180	10.60	14.08	0.397	100%A
200	16.37	21.74	0.613	100%A

Table 1 Existing Drainage Conditions

DEVELOPED DRAINAGE CONDITIONS

DRAINAGE BASIN DELINEATION

Plate 1 shows that the site is divided into ten drainage basins, basins 100-180 and 200. It is proposed that all of the peak flows from the site will be routed in a storm sewer to Ladera Pond 16B. The eventual outfall for the Ladera Pond 16B is the San Antonio Arroyo. The LOMR request from the City of Albuquerque for the Unser Boulevard South, Rinconada Arroyo, and Ponds 16A and 16B, prepared by URS Greiner (see Appendix C) indicates that the Ladera Pond 16B has the capacity to accept the runoff from Coors Village with minimal impact.

HYDROLOGIC ANALYSIS

To determine the peak flows of each basin a hydrologic analysis was performed in accordance to section 22.2 of the Development Process Manual (DPM) using AHYMO 97. The analysis included the 100-year 24-hour storm. The 100-year 24-hour storm was the basis for determining peak flows to size the storm sewer collection system and was used to determine the required capacity of the detention ponds. The design storm values are based on Tables C-1, C-2, and C-3 of the DPM's section 22.2. The Coors Village Subdivision is contained within section F-11-Z of the City of Albuquerque Zone Atlas Map. The location of the site results in the following design storms:

100-year 1-hour event -- 1.90 inches,

100-year 6-hour event -- 2.20 inches, 100-year 24-hour event -- 2.65 inches.

Basins were assigned land treatment values in accordance with Tables A-4 and A-5 of the DPM's section 22.2. Table 1 shows the land treatments and areas for each drainage basin.

The time of concentration for all basins was calculated using the SCS Upland Method Calculated outlined in subsection B.2 of DPM section 22.2 within the AHYMO 97 model.

Because the Unser HEC-1 model was not available, an AHYMO model of the inflows to the Ladera Pond 16B and the stage-storage relationship for the pond was developed following the hydrograph parameters given in the output of the HEC-1 model for the LOMR submittal. Some trial and error was required to match the peak flow of the incoming flows and the stage-storage characteristics of Ladera Pond 16B as shown in the HEC-1 output. The AHYMO model resulted in a 100-year water surface elevation of 5102.63 with a volume of 18.42 acre-feet and a peak flow out of 32.5 cfs. This compares favorably to the values given in the HEC-1 model, which are 5102.63 water surface elevation, a volume of 18.5 acre-feet, and a peak flow of 33 cfs. Then, the revised volumes of the pond for each stage as calculated by URS Greiner was input to the AHYMO model and run to determine the 100-year water surface elevation. With the revised volumes, the 100-year water surface elevation is 5101.76 and the detained volume and peak flow out are 19.85 acre-feet and 28.8 cfs, respectively.

Table 2 Developed Drainage Conditions

BASINS	Area (acres)	100yr- 24hr Peak Flow (cfs)	100yr-24hr Runoff Volume (acre-ft)	Land Treatment
100	13.87	57.13	2.431	10%B,5%C,85%D
110	6.04	23.45	0.976	20%B,5%C,85%D
120	0.83	3.44	0.146	10%B,5%C,85%D
130	0.72	. 2.99	0.127	10%B,5%C,85%D
140	1.03	4.26	0.181	10%B,5%C,85%D
150	1.83	4.93	0.163	60%B,20%C,20%D
160	5.00	19.40	0.807	20%B,5%C,75%D
170	1.57	6.47	0.275	10%B,5%C,85%D
180	10.60	41.12	1.711	20%B,5%C,75%D
200	16.37	60.99	2.459	25%B,10%C,65%D

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APPENDIX B

RECORDING STAMP DOCH 2018112094 12/31/2018 12.01 PM Page: 1 of 2 12/31 R:\$25 00 B: 20180 P: 0169 Linda Stover Bernalillo County	Lots 3-A and 3-B	
	Town of Albuquerque Grant, Projected	
AT OF TRACTS 1 THRU 4, COORS VILLAGE (BEING A JF ALBUQUERQUE URBAN CENTER), WITHIN THE TOWN STION 35, TOWNSHIP 11 NORTH, RANGE 2 EAST, NEW BUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE LE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY HE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY STICO, ON JUNE 13, 2000, IN PLAT BOOK 2000C, PAGE NS OUT TO RIGHT OF WAY TO THE CITY OF N.W. AND WESTERN TRAIL, N.W., NOW COMPRISING OF	Section 35, Township 11, Range 2, N.M.P.M. Albuquerque, Bernalillo County, New Mexico August 2018 Project No. PR-2018- 0015 24	
	Application No. SD-2018-00084 Utility Approvals	
23.201 21.16 21.16	MENTICO EN COMPANY MENTICO EN COMPANY UNULA COMPANY MENTICO EN COMPANY OMESTICO DIRECTOR COMENSTI COMENSTICO DIRECTOR COMPANS CITY Approvals CITY Approvals	
JESTED FINAL ACTION SHALL AT ANY TIME BE SUBJECT TO DING AGREEMENT PROHIBITING SOLAR COLLECTORS FROM TED ON THE LOTS OF PARCELS WITHIN THE AREA OF THIS	CITY SURVEYOR CITY SURVEYOR RAFINE ENGINEERING, IRANSPORTATION DEPARTMENT DATE A.B.C.W.U.A. PARKS AND RECREATION DEPARTMENT PARKS AND RECREATION DEPARTMENT DATE DATE DATE DATE	
Dedication Free consent and in accordance with the desires ubluc utility easements shown hereon for the acal power and communication services for buried acal power and pipes for underground utilities where acal power and pipes for underground utilities where conduits, and pipes for underground utilities where is their free act and shrubs, said owner dogs is their free act and shrubs, said owner dogs is their free act and beed, said owner dogs is their free act and beed, said owner dogs is their free act and beed, said owner dogs and interfering the in fee simple to the land asements as shown hereon with listed beneficiaries th warranty covenants.	NA AMAFCA AMAFCA Renée Brueete Chy Encineer Chy Encineer Dref Chairperson, PLANNING DEPARTMENT DREJ CHAIRPERSON, PLANNING DEPARTMENT DREJ CHAIRPERSON, PLANNING DEPARTMENT DREJ CHAIRPERSON, PLANNING DEPARTMENT CODE ENFORCEMENT CODE ENFORCEMENT DATE DATE DATE DATE DATE DATE DATE DAT	
FORE ME THIS 244M DAY OF AUGUST 2018 BY	Surveyor's Certificate I. Larry W. Medrano, a registered New Mexico Professional Land Surveyor under the Larry W. Medrano, a registered New Mexico Professional Land Surveyor under the Lang of the State of New Mexico, Hereby Certify That This Plat was prepared from takes of the State of New Mexico, Hereby Certify The Minimum Requirements for Monutation and Surveys of the City of Albuquerous Subdivision ordinance and of the Minimum standards for Land Surveys as adopted by the N.M. Board of Licensure for Engineers and Surveyors and is the And Correct to the Best of My Knomedica and Bellef, and that no encroachments exist except as Noted Boundaries as Marovements are shown in their correct location relative to record Boundaries as	to State 6
S ROAD, LLC MY COMMISSION EXPIRES: 3.11.2022 TRACY ANTHONY NAME PUBLE STATIO OF ALTONIC MARCOM TRACY ANTHONY MARCOM 11.2022 MARCH 11.2022	LOCATED BY THIS SURVEY. LOCATED BY THIS SURVEY. LARRY W. MEDRAND DATE WILLER DATE OF THE TOP OF TOP OF THE TOP OF TOP	
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GROSS SUBDIVISION ACREAGE: 13.5437 ACRES± ZONE ATLAS INDEX NO: F-11-Z NO: OF TRACTS CREATED: 2 NO: OF LOTS CREATED: 2 NO: OF LOTS CREATED: 0 MILES OF FULL-WDTH STREETS CREATED: 0 DATE OF SURVEY: AUGUST 0B, 2018

Purpose of Plat

THE PURPOSE OF THIS PLAT IS TO SUBDYIDE THE EXISTING ONE TRACT INTO TWO NEW TRACTS, TO GRANT EASEMENTS, AND TO DEDICATE ADDITIONAL RIGHT OF WAY

Notes.

PLAT SHOWS ALL EASEMENTS OF RECORD. 44

2. EASEMENT BEARINGS AND DISTANCES SHOWN HEREON ARE RECORD AND EASEMENTS HAVE BEEN ROTATED TO MATCH BASIS OF BEARINGS AND BOUNDARY UNLESS OTHERWISE INDICATED.

Public Utility Easements

PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT ARE GRANTED FOR THE COMMON JOINT USE OF. A <u>BUBLIC STRUCT CONDANT OF MEN MENCO</u> ("PMM"), A NEW MEXICO CORPORATION, ("PMM ELECTRIC) FOR INSTALLATION, MAINTENANCE AND SERVECE OF ONERHEAD AND UNDERGROUND ELECTRICAL LINES, TRANSFORMERS, AND OTHER EQUIPMENT AND RELATED FACILITIES REASONABLY NECESSARY TO PROVIDE ELECTRICAL SERVICES.

B. <u>HEN NEXICO GAS CONPANT FOR INSTALLATION MAINTENANCE,</u> AND SERVICE OF NATURAL GAS LINES, VALVES AND OTHER EQUIPMENT AND FACILITIES REASINABLY NECESSARY TO PROVIDE NATIONAL GAS SERVICES.

C. ONEST COPOORATION D. B. A. CENTRENTING OF FOR THE INSTALLATION MAINTENANCE, AND SERVICE OF SUCH LINES, CABLE, AND OTHER RELATED COURMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE COMMUNICATION SERVICES.

d. <u>Cable IV</u> FOR THE INSTALLATION, MAINTENANCE, AND SERVICE OF SUCH LINES, CABLE, AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE CABLE SERVICES.

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easenewis for electric transformer/suftcheears, as installed, shall, extend ten (10) feet in front of transformer/switchgear doors and five (5) reet on each sde.

Disclaimer

IN APPROVING THIS PLAT, PUBLIC SERVICE COMPANY OF NEW MEXICO (FNM), QMEST CORPORATION D/B/A CENTURYLINK QC AND NEW MEXICO GAS COMPANY (NMGC) DID NOT CONDUCT A THLE SEARCH OF THE PROPERTIES SHOWN HEREON. CONSEQUENTLY, PNM. QMEST CORPORATION D/B/A CENTURYLINK QC AND NMGC DO NOT WAVE OR RELEASE ANY EASEMENT OR EASEMENT RICHTS WHICH HAVE BEEN GRANTED BY PRIOR PLAT, REPLAT OR OTHER DOCUMENT AND WHICH ARE NOT SHOWN SPECIFICALLY DESCRIBED AND ON THIS PLAT.

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Solar Note:

NO PROPERTY WITHIN THE AREA A DEED RESTRICTION, COVENAN BEING INSTALLED ON BUILDINGS PLAT.

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Free Consent and

THE REPLAT SHOWN HEREON IS W OF THE UNDERSIGNED OWNER. EXI COMMON AND JOINT USE OF GAS, AND/OR OVERHEAD DISTRIBUTION SHOWN OR INDICATED, AND INCLU AND MAINTENANCE, AND THE RICH HEREBY CERTIFY THAT THIS SUBD THAT THEY HOLD AMONG THEM CI SUBDIVIDED.

SAID OWNER DOES HEREBY GRANT ALI AND STIPULATIONS.

SAID OWNER DOES HEREBY DEDICATE CITY OF ALBUQUERQUE IN FEE SIMPLE

COORS ROAD, LLC 28 JACK N. MANAGER UNIVEST-

Acknowledgme STATE OF CENTERIADO SS COUNTY OF MILLOND SS

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THIS INSTRUMENT WAS ACKNOM JACK N. ROSS, MANAGER, UNIVE

LEDGED

BY ...

COORDINATE AND DIMENSION IN	FORMATION	PLSS INFORMATION	والمحافظة		INDEXING INFORMATION FOR COUN
STATE PLANE ZONE GRID ARROUND COOT NUM-C GRID	ROINATES TYPE	LAND GRANT TOWN OF ALBUQUERON	JE GRANT		PROPERTY OWNER UNIVEST-COORS ROAD, LLC
HORIZONTAL DATUME VERTICAL DATUME	ROTATION ANGLE: WATCHES DRAWING LINITS			*******	
NAD83 NAVD88	0° 00' 00.00° YES				
CONTROL USED	BASE POINT FOR SCALING AND/OR ROTATION	SECTION FOWNSHIP	HANGE	EHICHAN	CUBUCK NAME
ALBUQUERQUE GEODETIC REFEI	RENCE SYSTEM N = 0	35 11 NORTH	2 EAST N	MPM	COORS VILLAGE
COMBINED SCALEFACTOR	DISTANCE ANNOTATION				
COMPTON CONTINUE 1 NON360300	GROUND E U	Ł	COUNTY	STATE	UPC
GROUND TO GRID: 0.99968078	GRID 140.00' ELEVATION TRANSLATION ELEVATIONS VALID	ALBUQUERQUE	BERNALILLO	MN	10110612108821201





^{//}NAS01/ZDrive/2017/2017/20017 Coors and Western Trail NW/dwg/Construction/2017017-Road & Storm Sewer Construction.dwg Feb 26, 2019 - 11:31am

			lary line separating Plan detailed a traffic updated to reflect the a drainage plan will ic development and 3-B, at the time of wal. full developed rm drain which shall in vas sized based in is designed using etailed for the er the road inlet or at of the stormdrain cction. The stormdrain in s for the Type C	DRAWN BY BJF	DA/E 1/30/19 2017017-ROAD & STORM SEWER CONSTRUCTION	SHEET # C5	10B #
	ARE AT FLOWLINE UNLESS ED.	CURB & GUTTER CENTERLINE ECENTERLINE BOUNDARY LINE EASEMENT PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK PROPOSED SIDEWALK EXISTING CONTOUR EXISTING CURB & GUTTER EXISTING SPOT ELEVATION EXISTING SPOT ELEVATION	act 3-A details the internal roadway along the bound site from the previously approved Master Drainage I elopment. This has been removed and the grading u at the time of development an updated grading and rumwater improvements associated with a site specific tion to the proposed storm drain. Similarly for Tract drainage plan will be submitted to the City for appro n that will serve both lots was completed based on a on. The excess flows are to be drained by private stor that the south west corner of the site. The storm drain drainage plan will be submitted to the City for appro- tion to the proposed storm drain stubs are de h Tract 3A having the opportunity to connect at eith or that will serve both lots was completed based on a contact at the southern end of the property. The size of the act the southern end of the property. The size of second at the low point of the private street to capture a or Basin 2 is 3.19 cfs which the inlets can sufficiently rying capacity calculations, and the review calculation right capacity calculations, and the review calculation or the provint of the private street to capture a	COORS VILLAGE TRACTS 3-A AND 3-B	GRADING AND DRAINAGE PLAN	TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109	
NOTES	1. SPOT ELEVATIONS / OTHERWISE NOTE		Proposed Conditions The proposed grading for Traboth lots. The revision to the circle in the center of the dev change. Specific to Tract 3-A be prepared detailing the stome development a grading plan, and the connec development a grading the storm drain buildout across the subdivisic tie to the existing 54-inch stu on the anticipated development of Tract 3B, with the largest pipe bipe size and the associated of Type C Curb inlets are proposite the roadway. The total flow for the appendix is the street carrine to the active.	ENGINEER'S			RONALD R. BOHANNAN
		EL 1°=50 EL 1°=50 EL 1°=50 EL 1°=50 EL 1°=50 EL 1°=50 EL 1°=50 CPETISJOOR EL 1°=50 CPETISJOOR					IMINARY NOT FOR CONSTRUCTION





///NAS01/ZDrive/2017/2017/2017/Coors and Western Trail NW/dwg/Construction/2017017-Road & Storm Sewer Construction.dwg Feb 26, 2019 - 11:32am

DPM Weighted E Method Precipitation Zone 1 NE Corner of Quaker Heights PI and Milne Rd 4606 Quaker Heights PI NW, Albuquerque, NM 87120

TWLLC

2/26/2019 Date

Existing Conditions

Basin Tract Area Area Area Treatment A Treatment B Treatment C Treatment D Weighted E Volume Flow Weighted E Noime Flow Meighted E Noime Flow Meighted E Noime Flow Meighted E Noime Flow Meighted E Noime						Basin I	Description	s						100-1	/ear, 6-Hr		10-Y	ear, 6-Hr	
ID Hat (sf) (acres) % (acres) % (acres) % (acres) % (acres) % (arres) %	Basin	Twoot	Area	Area	Area	Treatmen	t A	Treatm	ent B	Treatmo	ent C	Treatm	lent D	Weighted E	Volume	Flow	Weighted E	Volume	Flow
3A 3A 282,937 6.50 0.01015 100% 6.495 0% 0.000 0% 0.000 0.440 0.238 8.38 0.080 3B 3B 307,023 7.05 0.01101 100% 7.048 0% 0.000 0% 0.000 0.440 0.238 8.38 0.080 3B 3B 307,023 7.05 0.01101 100% 7.048 0% 0.000 0% 0.000 0.440 0.258 9.09 0.080 7 total 589,960 13.54 0.02116 13.544 0.000 0.000 0.000 0.400 0.497 17.47	D	וומרו	(sf)	(acres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(in)	(ac-ft)	cfs	(in)	(ac-ft)	cfs
3B 3B 307,023 7.05 0.01101 100% 7.048 0% 0.000 0% 0.000 0% 0.000 0.440 0.258 9.09 0.080 Total 589,960 13.54 0.02116 13.544 0.000 0.000 0.000 0.000 0.000 0.440 0.497 17.47	3A	3A	282,937	6.50	0.01015	100%	6.495	%0	0.000	%0	0.000	%0	0.000	0.440	0.238	8.38	0.080	0.043	1.56
Total 589,960 13.54 0.02116 13.544 0.214 0.000 0.000 0.000 0.000 0.000 0.497 17.47	3B	3B	307,023	7.05	0.01101	100%	7.048	%0	0.000	%0	0.000	%0	0.000	0.440	0.258	9.09	0.080	0.047	1.69
	Total		589,960	13.54	0.02116		13.544		0.000		0.000		0.000		0.497	17.47		0.090	3.25

Proposed Conditions

					Basin D	escription	IS						100-Y	ear, 6-Hr		10-Y€	ear, 6-Hr	
Basin	Tract	Area	Area	Area	Treatment	A :	Treatm	ient B	Treatm	ent C	Treatm	nent D	Weighted E	Volume	Flow	Weighted E	Volume	Flow
٩	וומכר	(sf)	(acres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(in)	(ac-ft)	cfs	(in)	(ac-ft)	cfs
B1	3A	270,937	6.22	0.00972	%0	0.000	%0	0.000	15%	0.933	85%	5.287	1.823	0.945	25.78	1.120	0.581	16.67
B2	roadway	31,828	0.73	0.00114	%0	0.000	%0	0.000	%0	0.000	100%	0.731	1.970	0.120	3.19	1.240	0.076	2.11
B3	3B	280,712	6.44	0.01007	%0	0.000	%0	0.000	15%	0.967	85%	5.478	1.823	0.979	26.71	1.120	0.601	17.27
Total		583,477	13.39	0.02093		0.000		0.000		1.900		11.495		2.044	55.686		1.257	36.051

Equations: Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area) Volume = Weighted E * Total Area Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad

n, E (in.)	10-Year	0.08	0.22	0.44	1 24
Precipitatic	100-Year	0.44	0.67	0.99	1 97
Excess	Zone 1	Ea	Eb	Ec	ЪЦ

e (cfs/acre)	10-Year	0.24	0.76	1.49	2.89	
Discharg	100-Year	1.29	2.03	2.87	4.37	
Peak	Zone 1	Qa	9 Q	Qc	Qd	

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		Basin	Descriptio	su						100-	'ear, 6-Hr		10-Y	ear, 6-Hr	
lrea	Area	Treatme	nt A	Treatr	nent B	Treatm	ent C	Treatn	nent D	Weighted E	Volume	Flow	Weighted E	Volume	Flow
cres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(in)	(ac-ft)	cfs	(in)	(ac-ft)	cfs
3.22	0.00972	%0	0.000	%0	0.000	15%	0.933	85%	5.287	1.823	0.945	25.78	1.120	0.581	16.67
.73	0.00114	%0	0.000	%0	0.000	%0	0.000	100%	0.731	1.970	0.120	3.19	1.240	0.076	2.11
3.44	0.01007	%0	0.000	%0	0.000	15%	0.967	85%	5.478	1.823	0.979	26.71	1.120	0.601	17.27
3.39	0.02093		0.000		0.000		1.900		11.495		2.044	55.686		1.257	36.051

13 0 0 0 **a A** Equations: Weighted E = Ea*Aa + E Volume = Weighted E * Flow = Qa*Aa + Qb*Ab Tract 3B 3B Basin ID B1 B3 B3 Total

Ipitation, E (in.) Peak Discharg JYear 10-Year JYear 0.08 0.44 0.08 0.67 0.22 0.99 0.44 0.39 0.44 0.74 0.22 0.97 1.24 0.97 0.44 0.97 0.44 0.44 0.44 0.44 0.44	Precipitation, E (in.) Peak Discharg 100-Year 10-Year 0.44 0.08 0.44 0.08 0.67 0.22 0.99 0.44 0.99 0.44 1.97 1.24
ipitation, E (in.) Peak JYear 10-Year Zone 1 J44 0.08 Qa .67 0.22 Qb .99 0.44 Oc .97 1.24 Oc	Precipitation, E (in.) Peak 100-Year 10-Year Zone 1 0.44 0.08 Qa 0.67 0.22 Qb 0.99 0.44 Qc 1.97 1.24 Qc
ipitation, E (in.) -Year 10-Year 0.44 0.08 0.67 0.22 0.99 0.44 .97 1.24	Precipitation, E (in.) 100-Year 10-Year 0.44 0.08 0.67 0.22 0.99 0.44 1.97 1.24
ipitation, E (in.) -Year 10-Year 0.44 0.08 0.67 0.22 0.99 0.44 .97 1.24	Precipitation, E (in.) 100-Year 10-Year 0.44 0.08 0.67 0.22 0.99 0.44 1.97 1.24
ipitation, E (in 2 Year 10-Ye 3.44 0.06 1.67 0.22 1.99 0.44 .97 1.24	Precipitation, E (in 100-Year 10-Ye 100-Year 10-Ye 0.44 0.06 0.67 0.22 0.99 0.44 1.97 1.24
ipitatio - Year 	Precipitatio 100-Year 0.44 0.67 0.99 1.97
	Pre

1		_				
	le (cfs/acre)	10-Year	0.24	0.76	1.49	2 89
	Discharg	100-Year	1.29	2.03	2.87	4.37
	Peak	Zone 1	Qa	Qb	ос	PC

e (cfs/acre)	10-Year	0.24	0.76	1.49	2.89
Discharg	100-Year	1.29	2.03	2.87	4.37
Peak	one 1	Qa	Qb	Qc	PO

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DRAWN BY RS		2/26/19	2010-X_DRE_E	SHEET #	Č	5	
COORS VILLAGE	IHACI 3A ANU 3B	DRAINAGE BASINS MAP			TIERRA WEST, LLC	T 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109	(505) 858-3100 www.tierrawestllc.com
ENGINEER'S SEAL							RONALD R. BOHANNAN

BASIN

i ipe cupacity

Pipe Number	D	Slope	Area	R	Q Provided	Q Required	Velocity	Invert	Invert	HGL	HGL
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)	Start (ft)	Stop (ft)	In (ft)	Out (ft)
1	36	1	7.1	0.75	66.9	55.7	7.9	5101.82	5101.65	5104.17	5104.05
2	36	0.71	7.1	0.75	56.4	55.7	7.9	5103.32	5101.82	5105.09	5104.17
3	36	0.71	7.1	0.75	56.4	55.7	7.9	5104.50	5103.32	5106.27	5104.83
4	30	0.74	4.9	0.625	35.4	26.7	5.4	5105.70	5104.50	5106.91	5106.27
5	30	0.62	4.9	0.625	32.4	16.5	3.4	5104.94	5104.50	5106.32	5106.27
6	30	0.7	4.9	0.625	34.4	16.5	3.4	5105.94	5104.94	5107.32	5106.13
7	30	0.43	4.9	0.625	27.0	16.5	3.4	5106.87	5105.94	5108.25	5107.27
8	18	1	1.8	0.375	10.5	3.2	1.8	5107.50	5106.87	5108.21	5108.25
9	18	1.92	1.8	0.375	14.6	13.4	7.6	5107.12	5106.87	5108.53	5108.21
10	18	1.13	1.8	0.375	11.2	13.4	7.6	5107.38	5107.12	5108.75	5108.53

Manhole / Inlet

	Elevation	Hydraulic Grade Line	Hydraulic Grade Line	Elevation	Flow (Total
	(Rim)	(ln)	(Out)	Invert	Out)
	(ft)	(ft)	(ft)	(ft)	(cfs)
SDMH-1	5112.13	5104.17	5104.17	5101.82	54.70
SDMH-2	5114.76	5105.09	5105.09	5103.32	29.70
SDMH-3	5116.49	5106.27	5106.27	5104.50	29.70
SDMH-4	5115.85	5106.32	5106.32	5104.94	16.70
SDMH-5	5114.74	5107.32	5107.32	5105.94	16.70
SDMH-6	5113.50	5108.25	5108.25	5106.87	16.70
SDMH-22	5109.95	5104.05	5104.05	5101.65	54.70
SDMH-20	5109.80	5105.50	5105.50	5101.45	88.60
CB-1	5113.18	5108.21	5108.21	5107.50	1.60
CB-2	5113.75	5108.53	5108.53	5107.12	15.10

Cross Section for 0.5% Roadway Crowned Section

Project Description		
Friction Method Solve For	Manning Formula Discharge	
Input Data		
Channel Slope	0.00050	ft/ft
Normal Depth	0.50	ft
Discharge	13.04	ft³/s
Cross Section Image		

Capacity of a Single 'C' Storm Drop Inlet

Capacity of the grate:

L = 40" - 2(2"_{ends}) - 7($\frac{1}{2}$ " middle bars) = 32 1/2" = 2.7083' W = 25" - 13($\frac{1}{2}$ " middle bars) = 18.5" = 1.54' Area = 2.7083' x 1.54' = 4.18 ft² Effective Area = 4.18- 4.18 (0.5 clogging factor) = 2.09 ft² at the grate

Orifice Equation

Q = CA sqrt(2gH) Q = 0.6*2.09*sqrt(2*32.2*0.67) Q = 8.24 cfs

Capacity of the Throat:

L = 4.00'

H = $10 \frac{3}{4}$ " - $4 \frac{1}{2}$ " = $6 \frac{1}{4}$ " = 0.5208'

Area = $4.00' \times 0.5208'$ = 2.08 ft^2 at the throat

Weir Equation

Q = CLH^(3/2) Q = 2.95 * 2.08 * 0.67^(3/2) Q = 3.37 cfs

Total Capacity:

 $\label{eq:Q} \begin{aligned} \mathsf{Q} &= 8.24_{\text{grate}} + 3.37_{\text{throat}} \\ \mathsf{Q} &= 11.61 \text{ cfs} \end{aligned}$

AS-BOILT TINFORMATION CONTRACTOR SALLS DATE OF STRED BY SURV-TER DATE 1003 MICRO-FILM INFORMATION MICRO-FILM INFORMATION READ BY SURV-TER DATE 1003 MICRO-FILM INFORMATION READ MICRO-FILM INFORMATION MICRO-FILM INFORMATION MICROFILM BY SURV-TER DATE 2003 MICRO-FILM INFORMATION MICRO-FILM INFORMATION MICRO-FILM INFORMATION MICRO-FILM INFORMATION MICRO-FILM INFORMATION MICRO-FILM INFORMATION MICROFILM BY SURV-TER DATE 2004 MICRO-FILM INFORMATION MICRO-FILM I	ION BENCH MARKS ALBUQUERQUE CONTROL SURVEY MONUMENT "JOSEPH". DATE NEW MEXICO STATE PLANE COORDINATE SYSTEM, X = 366,686.82 X = 5113.852' X = 5113.852' CENTRAL ZONE (NAD27) COORDINATE SYSTEM, X = 566,686.82 X = 566,686.82 CENTRAL ZONE (NAD27) S = 5113.852' CENTRAL SONE TO CRIDINATE SYSTEM,	ENGINEER'S SEAL SORVEY INFORMATI	REMARKS By PESIGN DATE: 01/08/03 DESIGN DATE: 01/08/03 SUS DATE: 01/08/03	Checked By: 5 Drawn By: 5 Drawn By: 5 Drawn By: 5	ROUE LENT MPROVEMENTS	Mo./Day/Yr. Mo./Day/Yr. Sheet Of
 General Notes that field verify all existing utility locations and notify the engineer immediately of any discrepancies. 1. The contractor shall field verify all existing utility locations and notify the engineer immediately of any discrepancies. 2. All curve data and dimensions are calculated from centerline of pipe or manhole. All sas & so slopes are calculated for the pipe dimensions from invert to invert. (Pay items are shown in parenthesis) dimensions from invert to invert. (Pay items are shown in parenthesis) 3. Grade elevations, where noted, are for flowline of curb unless otherwise specified. 4. Contractor is to install a 4" x 4" x 5" post and emb at the end of each sanitary sewer service. 5. contractor is responsible for repair and/or replacement of all 	 UTILITY CONDUITS AND EXISTING LINES. CONTRACTOR SHALL PROVDE THE INSPECTORS WITH THE PROPOSED TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE. ANY DAMAGE TO THE EXISTING FACILITIES (CURB & GUTTER, PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS' EXPENSE. MH RIMS & CATCH BASIN INLET ELEVATIONS, VALVE BOXES, ARV, FIRE HYDRANT & FLANGE ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIEY AND ADJUST TO FINAL PAVEMENT GRADES. MH RIMS & CATCH BASIN INLET ELEVATIONS, VALVE BOXES, ARV, FIRE HYDRANT & FLANGE ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIEY AND ADJUST TO FINAL PAVEMENT GRADES. MH RIMS & CATCH BASIN INLET ELEVATIONS, VALVE BOXES, ARV, FIRE HYDRANT & FLANGE ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIEY AND ADJUST TO FINAL PAVEMENT GRADES. ANT FIRELINE APPURTENANCES SHALL UNCES OTHERWISE NOTED. FOR STANDARD CURB TO MIDDLE OF DOWNHILL GRATE. ALL WATERLINE APPURTENANCES SHALL USE RESTRAINED JOINTS, REFER TO TABLES LISTED ON OVERALL UTILITY SHEET 12. FOR STORM DRAIN CONSTRUCTION: ALL RCP JOINTS SHALL NOT BE GROUTED PRIOR TO FINAL INSPECTION. FINAL INSPECTION SHALL DETERMINE WHICH JOINTS ARE TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION. ARE TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION. 	Image: Decent of the state	Image: Standard Class Steel Casing From STA 28+00 TO STA 29+25 PER DETAIL SHEET 19. INSTALL 10' PVC WL w/ RESTRAINED JOINTS. Image: Standard Class Steel Casing From STA 28+00 TO STA 29+25 PER DETAIL SHEET 19. INSTALL 10' PVC WL w/ RESTRAINED JOINTS. Image: Standard Class Steel Casing From STA 28+00 TO STA 29+25 PER DETAIL SHEET 19. INSTALL 10' PVC WL w/ RESTRAINED JOINTS. Image: Standard Class Steel Casing From Steel Casing From STA 28+00 TO STA 29+25 PER DETAIL SHEET 19. INSTALL 10' PVC WL w/ RESTRAINED JOINTS. Image: Standard Class Steel Casing From Steel C	BOHANNAN A HUSTON Ston Stores NN 87109-4335 Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335 ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES	CITY OF ALBUOUE PUBLIC WORKS DEPARTN PUBLIC WORKS DEPARTN PUBLIC WORKS DEPARTN PUBLIC WORKS DEPARTN PUBLIC WORKS DEPARTN	City Project No.
ML Curve Table SAS Curve Table RADIUS DELTA TANGENT 820.322' 37'26'52" 278.05' 1198.55' 00'57'23" 10.00' 352.21' 09'39'17" 29.75' 10 ARC RADIUS DELTA 7726'52" 278.05' 10.00' 198.55' 00'57'23" 10.00' 352.21' 09'39'17" 29.75' 10 ARC RADIUS DELTA 7 ARC RADIUS DELTA 1095.552" 29.75' 10.00' 15'19'05" 107.56'	00' LT. . GAP	RE IN NGVD 29 5130 5130				29 29

SCANNED BY

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	Line Table: Alignments					
Line #	Length	Direction	Start Point	End Point		
L2	110.68	N0°00'00.00"E	(1505471.89,1504174.47)	(1505471.89,1504285.15)		
L3	103.28	N14°27'43.89"E	(1505488.92,1504412.74)	(1505514.72,1504512.75)		
L4	92.02	N14°55'09.69"W	(1505512.01,1504767.50)	(1505488.32,1504856.42)		
L5	137.88	N0°00'00.00"E	(1505471.89,1504985.52)	(1505471.89,1505123.40)		

	Curve Table: Alignments					
Curve	e #	Radius	Length	Chord Direction	Start Point	End Point
C.	1	115.00	50.00	N12°27'19.09"E	(1505461.19,1504126.03)	(1505471.89,1504174.47)
C2	2	487.61	129.10	N7° 36' 18.38"E	(1505471.89,1504285.15)	(1505488.92,1504412.74)
C3	3	515.72	257.43	NO° 36' 31.83"W	(1505514.72,1504512.75)	(1505512.01,1504767.50)
C2	1	515.81	130.49	N7° 15' 12.16"W	(1505488.32,1504856.42)	(1505471.89,1504985.52)

	CURB & GUTTER CENTERLINE BOUNDARY LINE
	EASEMENT
	PROPOSED SIDEWALK
5011	PROPOSED CONTOUR
	PROPOSED INDEX CONTOUR
x 5048.25	PROPOSED SPOT ELEVATION
	FLOW ARROW
=========	EXISTING CURB & GUTTER
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
× 5048.25	EXISTING SPOT ELEVATION