CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

March 11, 2020

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

RE: Tract 3A Coors Village
4500 Quaker Heights NW
Grading & Drainage Plan
Engineer's Stamp Date: 02/19/20
Hydrology File: F11D019A

Dear Mr. Bohannan:

Based upon the information provided in your submittal received 03/04/2020, the Grading & Drainage Plan is approved for Building Permit.

Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter. Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

Also as a reminder, please provide Drainage Covenant for the stormwater quality ponds per Chapter 17 of the DPM prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A $25 fee will be required.

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

Sincerely,

Renée C. Brissette

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

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Coors & Western Trail Tract 3A Building Permit #: _____ Hydrology File #: _____

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

Legal Description: TRACT 3 PLAT OF TRACTS 1 THRU 4 COORS VILLAGE BEING A REPLAT OF TRACT A-1-A UNIVERSITY OF ALBUQUERQUE URBAN CENTER

City Address: Quaker Heights Pl NW Albuquerque, NM 87120

Applicant: Tierra West, LLC Contact: Richard Stevenson

Address: 5571 Midway Park Place NE Albuquerque NM 87109

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 _____ DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL? X Yes _____ No

DEPARTMENT _____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
X CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE REPORT
____ DRAINAGE MASTER PLAN
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ STREET LIGHT LAYOUT
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

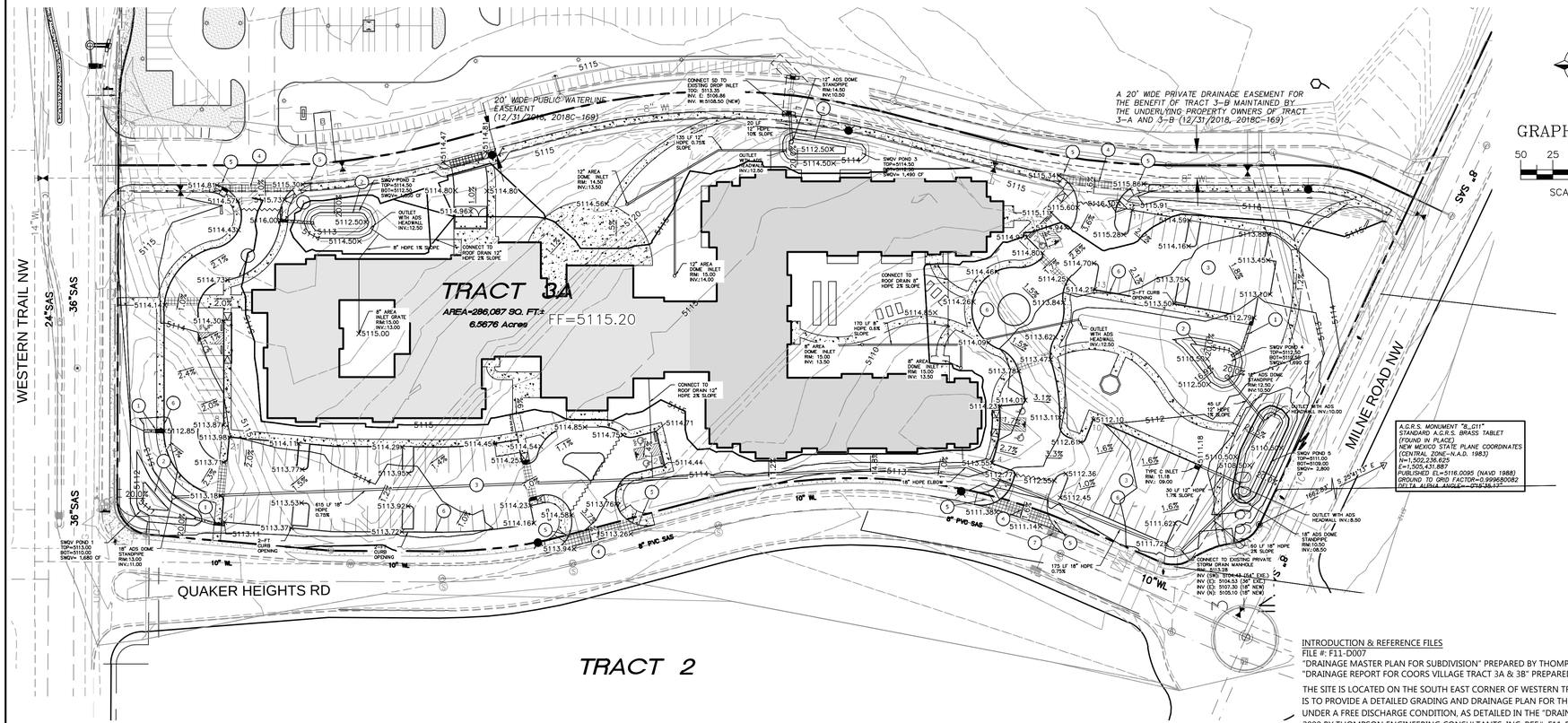
____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
X SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL

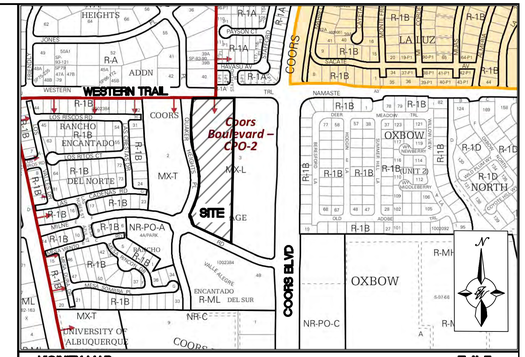
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

DATE SUBMITTED: 3/3/2020 By: Richard Stevenson

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____





VICINITY MAP: F-11-Z

FIRM MAP: 35001C0114H DATE 08/16/2012

LEGAL DESCRIPTION: TRACT 3-A-1 COORS VILLAGE

Proposed Conditions

Basin ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year, 6-Hr Weighted E (in)	100-Year, 6-Hr Volume (ac-ft)	100-Year, 6-Hr Flow cfs	10-Year, 6-Hr Weighted E (in)	10-Year, 6-Hr Volume (ac-ft)	10-Year, 6-Hr Flow cfs	SWQV Vol Required (cf)	SWQV Provided (cf)
B1	roadway	15,317	0.35	0.00055	0%	0.000	0%	0.000	15%	0.053	85%	0.299	1.823	0.053	1.46	1.120	0.033	0.94	N/A	0
B2	3A	63,798	1.46	0.00229	0%	0.000	35%	0.513	0%	0.000	65%	0.952	1.515	0.185	5.20	0.883	0.108	3.14	1,451	1,680
B3	3A	13,188	0.30	0.00047	0%	0.000	100%	0.303	0%	0.000	0%	0.000	0.670	0.017	0.61	0.220	0.006	0.23	0	1,850
B4	3A	25,343	0.58	0.00091	0%	0.000	0%	0.000	0%	0.000	100%	0.582	1.970	0.096	2.54	1.240	0.060	1.68	887	
B5	3A	10,331	0.24	0.00037	0%	0.000	0%	0.000	0%	0.000	100%	0.237	1.970	0.039	1.04	1.240	0.025	0.69	362	1,490
B6	3A	26,911	0.62	0.00097	0%	0.000	82%	0.507	0%	0.000	18%	0.111	0.904	0.047	1.51	0.404	0.021	0.71	170	
B7	3A	15,135	0.35	0.00054	0%	0.000	0%	0.000	0%	0.000	100%	0.347	1.970	0.057	1.52	1.240	0.036	1.00	530	1,690
B8	3A	15,273	0.35	0.00055	0%	0.000	0%	0.000	0%	0.000	100%	0.351	1.970	0.058	1.53	1.240	0.036	1.01	535	
B9	3A	60,815	1.40	0.00218	0%	0.000	68%	0.949	0%	0.000	32%	0.447	1.086	0.126	3.88	0.546	0.064	2.01	681	
B10	3A	27,224	0.62	0.00098	0%	0.000	55%	0.344	0%	0.000	45%	0.281	1.255	0.065	1.93	0.679	0.035	1.07	429	2,800
B11	3A	12,752	0.29	0.00046	0%	0.000	92%	0.269	0%	0.000	8%	0.023	0.774	0.019	0.65	0.302	0.007	0.27	36	0
Total		**286,087**	**6.57**	**0.01026**		**0.000**		**2.884**		**0.053**		**3.631**		**0.761**	**21.872**		**0.430**	**12.763**	**5,079**	**9,510**

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed

Volume = Weighted E * Total Area

Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad

D (in)	Slope (%)	Area (ft^2)	R	Q Provided (cfs)	Velocity (ft/s)
12	0.50	0.79	0.250	2.53	3.22
12	1.00	0.79	0.250	3.57	4.55
12	1.70	0.79	0.250	4.66	5.93
18	0.75	1.77	0.375	9.12	5.16
18	2.00	1.77	0.375	14.90	8.43

Excess Precipitation, E (in.)		
Zone 1	100-Year	10-Year
Ea	0.44	0.08
Eb	0.67	0.22
Ec	0.99	0.44
Ed	1.97	1.24

Peak Discharge (cfs/acre)		
Zone 1	100-Year	10-Year
Qa	1.29	0.24
Qb	2.03	0.76
Qc	2.87	1.49
Qd	4.37	2.89

SWQP	Area At Mid Depth	Depth	Volume
1	840	2	1,680
2	925	2	1,850
3	745	2	1,490
4	845	2	1,690
5	1400	2	2,800

Stormwater Quality Volume

Total Impervious Area = ΣArea in "Treatment D"

Retainage depth = 0.42" Per DPM Pg. 272 0.035 foot

Retention Volume = **=0.035 x area** CF

INTRODUCTION & REFERENCE FILES

FILE #: F11-D007

"DRAINAGE MASTER PLAN FOR SUBDIVISION" PREPARED BY THOMPSON ENGINEERING CONSULTANTS, INC. DATED 2/2000

"DRAINAGE REPORT FOR COORS VILLAGE TRACT 3A & 3B" PREPARED BY TIERRA WEST LLC. DATED 2/2019

THE SITE IS LOCATED ON THE SOUTH EAST CORNER OF WESTERN TRAIL NW AND QUAKER HEIGHTS RD. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DETAILED GRADING AND DRAINAGE PLAN FOR THE PROPOSED AGE RESTRICTED FACILITY. THE ENTIRE SUBDIVISION IS UNDER A FREE DISCHARGE CONDITION, AS DETAILED IN THE "DRAINAGE MASTER PLAN FOR COORS VILLAGE SUBDIVISION", FEBRUARY 2000 BY THOMPSON ENGINEERING CONSULTANTS, INC. REF#: F11-D007.

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 THIS PAGE. THE MAP INDICATES THE SITE LIES WITHIN FLOOD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD.

EXISTING DRAINAGE:

TRACT 3-A-1 IS A 6.57 ACRE UNDEVELOPED PARCEL. IN 2018 A MASTER DRAINAGE PLAN WAS PREPARED FOR THE DEVELOPMENT OF THIS TRACT AND THE ADJACENT TRACT 3B. TRACT 3B IS A PRESBYTERIAN URGENT CLINIC AND HALF OF THE PARCEL WAS DEVELOPED IN 2019. A COMMON STORMDRAIN WAS INSTALLED IN 2020 TO PROVIDE DRAINAGE FOR BOTH PARCELS IN THE DEVELOPED STATE PER THE DRAINAGE MASTERPLAN. A PRIVATE STORM DRAIN EASEMENT IS DETAILED ON THE RECORDED PLAT 2018 FOR TRACT 3-A AND 3-B. THE STORMDRAIN CONNECTED TO AN EXISTING 54-INCH STORM DRAIN STUB AT THE SOUTH WEST CORNER OF TRACT 3A, WHICH CONNECTS TO THE EXISTING SYSTEM EXISTS WITHIN QUAKER HEIGHTS PL, AS DETAILED ON THE PLANS FOR THE RANCHO ENCANTADO OFF-SITE IMPROVEMENTS FROM 2003. THE STORMWATER RUNOFF EVENTUALLY DRAINS TO THE LADERA DETENTION POND. PER THE 2019 DRAINAGE MASTERPLAN AN 85% IMPERVIOUS LAND TREATMENT WAS PROVIDED FOR THE DEVELOPED CONDITION OF TRACT 3A WITH A TOTAL RUNOFF OF 25.8 CFS FOR THE PARCEL. THIS EXCLUDES THE COMMON PRIVATE ROADWAY.

PROPOSED DRAINAGE:

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 TABLES ARE SHOWN ON THIS PAGE. THE SITE WAS DIVIDED INTO 11 BASINS WITH THE APPROPRIATE LAND TREATMENT DETERMINED AS SHOWN IN THE DRAINAGE TABLE. THE MAJORITY OF THE SITE WILL SHEET FLOW AND BE DIRECTED TO CONCRETE RUNDOWNS OR INLETS VIA CURB AND GUTTER WHICH SHALL FLOW INTO THE STORMWATER QUALITY VOLUME PONDS. THERE IS NO OFFSITE DRAINAGE ENTERING THE SITE. THE STORMDRAIN CONVEYS FLOWS FROM TRACT 3B THROUGH TRACT 3A PROPERTY.

NEW DEVELOPMENT SITES ARE REQUIRED TO CAPTURE AND INFILTRATE THE "STORMWATER QUALITY VOLUME" FROM THE 90TH PERCENTILE STORM. THE METHODOLOGY USED IN THE EPA REPORT "ESTIMATING PREDEVELOPMENT HYDROLOGY IN THE MIDDLE RIO GRANDE WATERSHED" APRIL 2014, YIELDS A RUNOFF VALUE OF 0.42 INCHES FOR THE 90TH PERCENTILE STORM. THEREFORE THE REQUIRED STORMWATER QUALITY VOLUME TO BE CAPTURED AND INFILTRATED IS THE PRODUCT OF THE IMPERVIOUS AREA MULTIPLIED BY 0.42 INCHES FOR NEW DEVELOPMENT SITES.

THE PEAK DISCHARGE FOR THE ENTIRE SITE IS 21.8 CFS WHICH IS LESS THAN THE FLOWS CALCULATED IN THE APPROVED DRAINAGE MASTERPLAN. ONCE THE SWQV PONDS ARE FULL THEY WILL FLOW INTO THE EXISTING STORMDRAIN VIA INLETS AND PIPE CONNECTING TO THE EXISTING DRAIN. BASIN 11 HAS MINIMAL OPPORTUNITY TO ACHIEVE THE REQUIRED STORM WATER QUALITY VOLUME AND IS 8% IMPERVIOUS.

ENTITLEMENT PROCESS FOR THIS SITE

THE SITE WAS PREVIOUSLY APPROVED BY DRB AND HYDROLOGY FOR CONCEPTUAL GRADING & DRAINAGE WITH ENGINEERS STAMP DATE 08/22/18. AN ADMINISTRATIVE AMENDMENT TO THE PRIOR APPROVAL IS PROPOSED. THIS PLAN IS BEING SUBMITTED TO HYDROLOGY FOR APPROVAL FOR SITE PLAN FOR BUILDING PERMIT.

KEYED NOTES

1. 2-FT CURB CUT AND 2-FT CONCRETE RUNDOWN W/ SIDEWALK CULVERT
2. SWQV POND - SEE PLAN FOR NUMBER AND VOLUME THIS SHEET
3. ASPHALT PAVING (SEE GEOTECTH REPORT)
4. BUILD NEW DRIVEWAY (CURB, GUTTER & SW) AND REPLACE WITH COA STD. CURB, GUTTER & SW. MATCH EXISTING FL AT GUTTER.
5. NEW HC RAMP PER COA STD. DETAIL
6. ONSITE CURB AND GUTTER
7. MODIFY EXISTING CURB INLET TO BE FLUSH WITH FLOWLINE OF DRIVEWAY
8. SURVEY PROVIDED BY PRECISION SURVEYS, INC. SEE SURVEY MONUMENT TIE THIS SHEET.
9. A CROSS LOT DRAINAGE EASEMENT FOR THE BENEFIT OF TRACTS 3-A AND 3-B, TO BE MAINTAINED BY THE OWNERS OF EACH TRACT (12/31/2018, 2018C-169)

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- CONCRETE / SIDEWALK
- GRADE BREAK
- RETAINING WALL
- 5010 CONTOUR MAJOR
- 5011 CONTOUR MINOR
- x 5048.25 SPOT ELEVATION
- FLOW ARROW
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- 5010 EXISTING CONTOUR MAJOR
- 5011 EXISTING CONTOUR MINOR
- x 5048.25 EXISTING SPOT ELEVATION
- CURB INLET
- GRADE BREAK AT ENTRANCE

ENGINEER'S SEAL

RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER

2/19/2020

RONALD R. BOHANNAN P.E. #7868

TRACT 3A COORS VILLAGE

4500 QUAKER HEIGHTS ABQ NM 87120

GRADING & DRAINAGE PLAN

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY RS

DATE 2/19/2020

2019064_GR

SHEET # C2

JOB # 2019064

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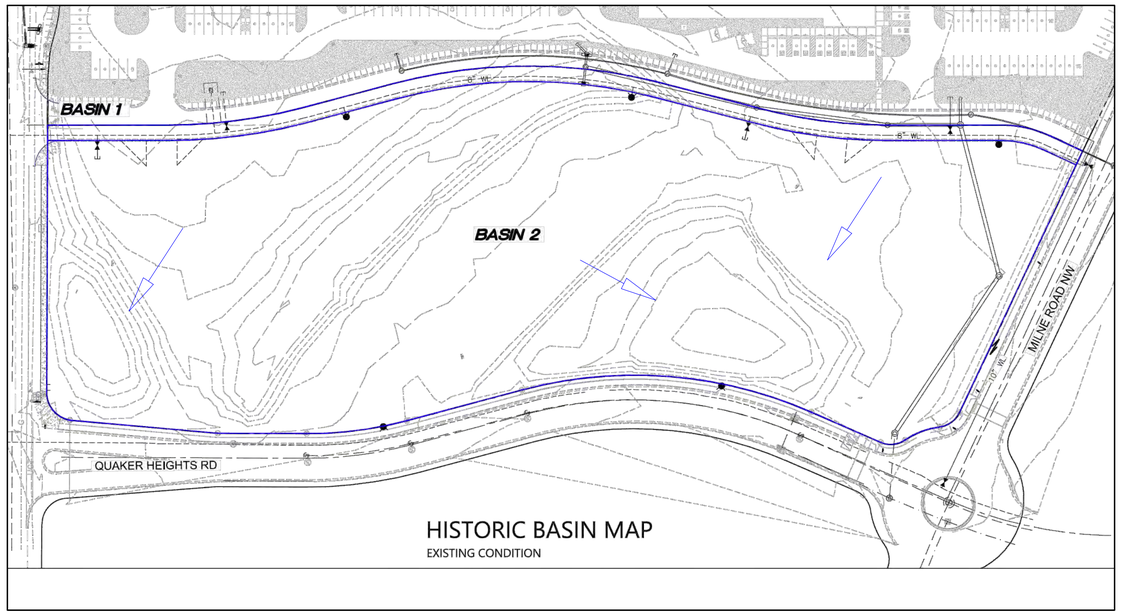
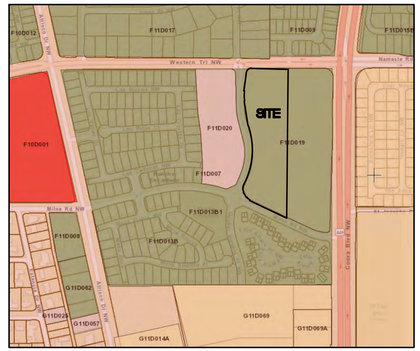
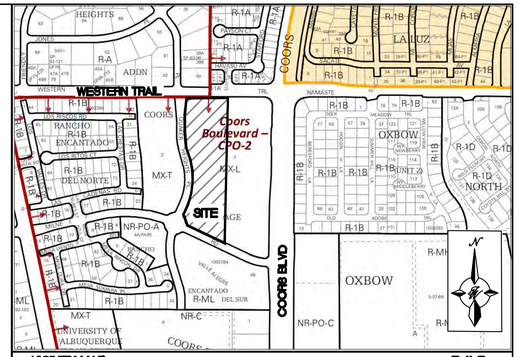


HISTORIC BASIN MAP

EXISTING CONDITION

COA HYDRONUM FILES NO. ON RECORD IN SITE VICINITY

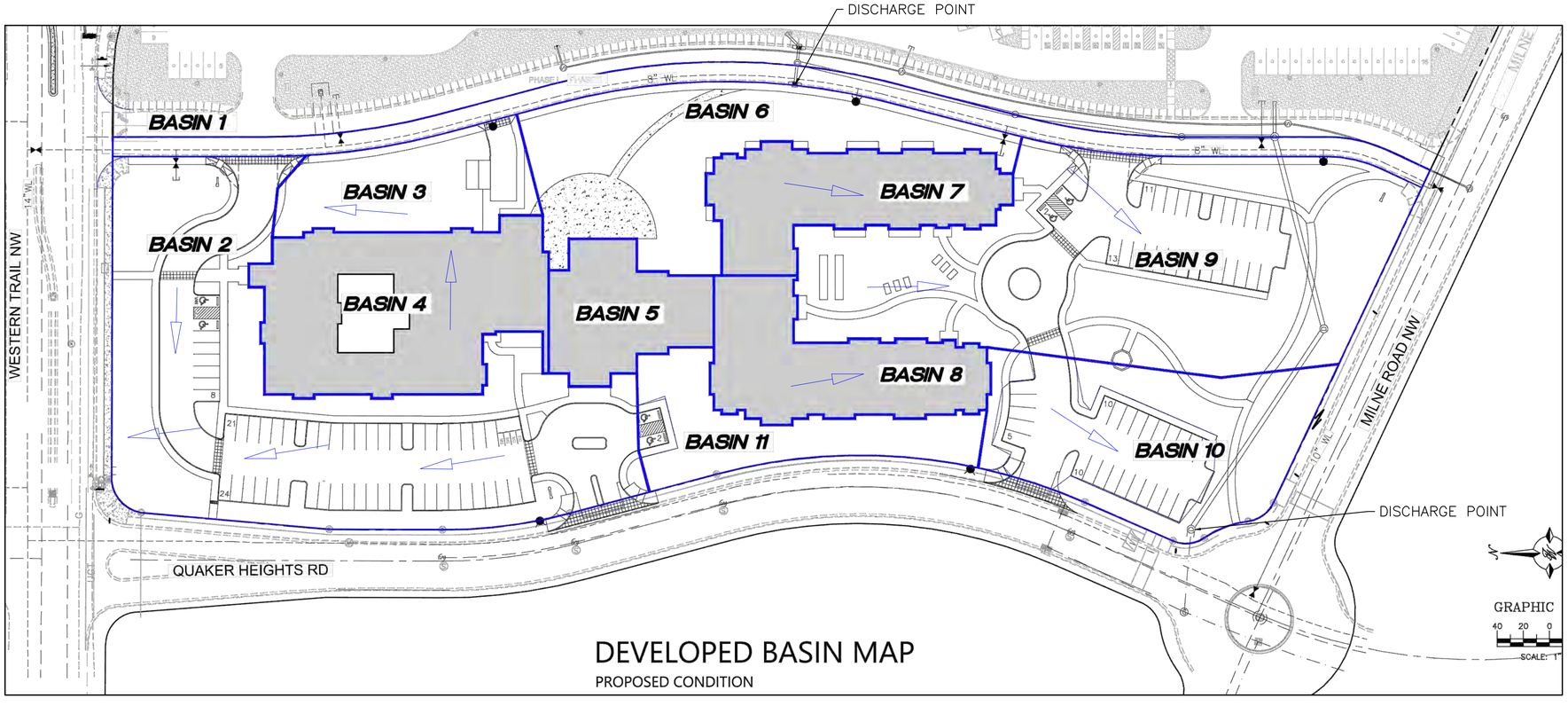




VICINITY MAP: F-11-Z

FIRM MAP: 35001C0114H DATE 08/16/2012

LEGAL DESCRIPTION: TRACT 3-A-1 COORS VILLAGE



DEVELOPED BASIN MAP

PROPOSED CONDITION

ENGINEER'S SEAL RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER 2/19/2020 RONALD R. BOHANNAN P.E. #7868	TRACT 3A COORS VILLAGE 4500 QUAKER HEIGHTS ABQ NM 87120 **BASIN MAP** TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	DRAWN BY RS DATE 2/19/2020 2019064_GR SHEET # **C2-A** JOB # 2019064