

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

January 20, 2023

David Thompson, PE  
Thompson Engineering Consultants, Inc.  
PO Box 65760  
Albuquerque, NM 87193

**RE: 1407 4<sup>th</sup> St. SW**  
**Grading & Drainage Plans**  
**Engineer's Stamp Date: 12/15/22**  
**Hydrology File: L14D063A**

Dear Mr. Thompson:

Based upon the information provided in your submittal received 01/06/2023, the Grading & Drainage Plans are approved for Building Permit and Grading 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 CERTIFICATE OF OCCUPANCY:**

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is 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 (Dough Hughes, PE, [jhughes@cabq.gov](mailto:jhughes@cabq.gov), 924-3420) 14 days prior to any earth disturbance.

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

Sincerely,

*Renée C. Brissette*

Renée 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 11/2018)

**Project Title:** \_\_\_\_\_ **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_

**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_

**Legal Description:** \_\_\_\_\_

**City Address:** \_\_\_\_\_

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Owner:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**TYPE OF SUBMITTAL:** \_\_\_\_\_ PLAT (\_\_\_\_# OF LOTS) \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE \_\_\_\_\_ ADMIN SITE

**IS THIS A RESUBMITTAL?:** \_\_\_\_\_ Yes \_\_\_\_\_ No

**DEPARTMENT:** \_\_\_\_\_ TRAFFIC/ TRANSPORTATION \_\_\_\_\_ HYDROLOGY/ DRAINAGE

Check all that Apply:

### TYPE OF SUBMITTAL:

- \_\_\_\_\_ ENGINEER/ARCHITECT CERTIFICATION
- \_\_\_\_\_ PAD CERTIFICATION
- \_\_\_\_\_ CONCEPTUAL G & D PLAN
- \_\_\_\_\_ GRADING PLAN
- \_\_\_\_\_ DRAINAGE MASTER PLAN
- \_\_\_\_\_ DRAINAGE REPORT
- \_\_\_\_\_ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- \_\_\_\_\_ ELEVATION CERTIFICATE
- \_\_\_\_\_ CLOMR/LOMR
- \_\_\_\_\_ TRAFFIC CIRCULATION LAYOUT (TCL)
- \_\_\_\_\_ TRAFFIC IMPACT STUDY (TIS)
- \_\_\_\_\_ 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
- \_\_\_\_\_ 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) \_\_\_\_\_

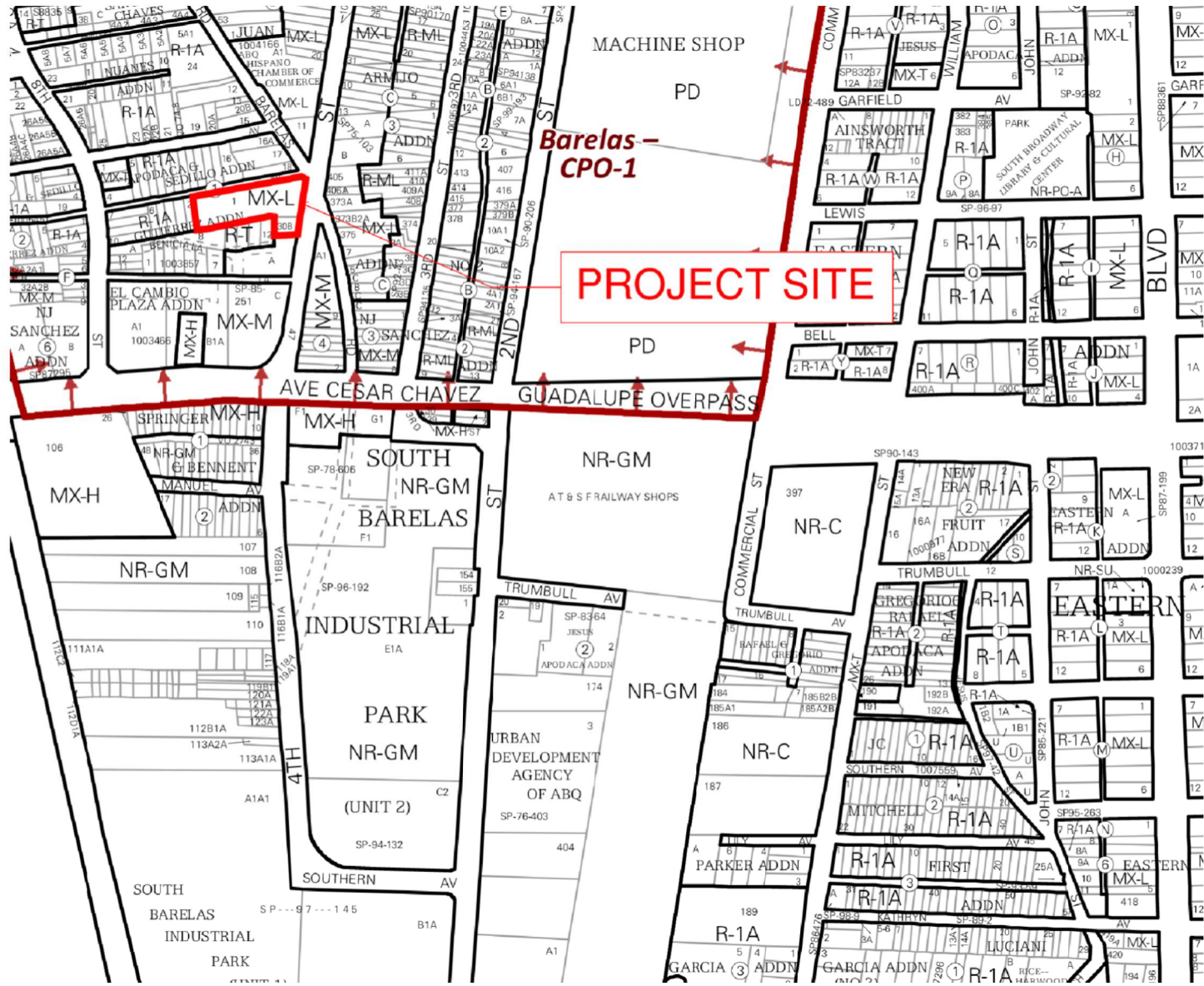
**DATE SUBMITTED:** \_\_\_\_\_ **By:** \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

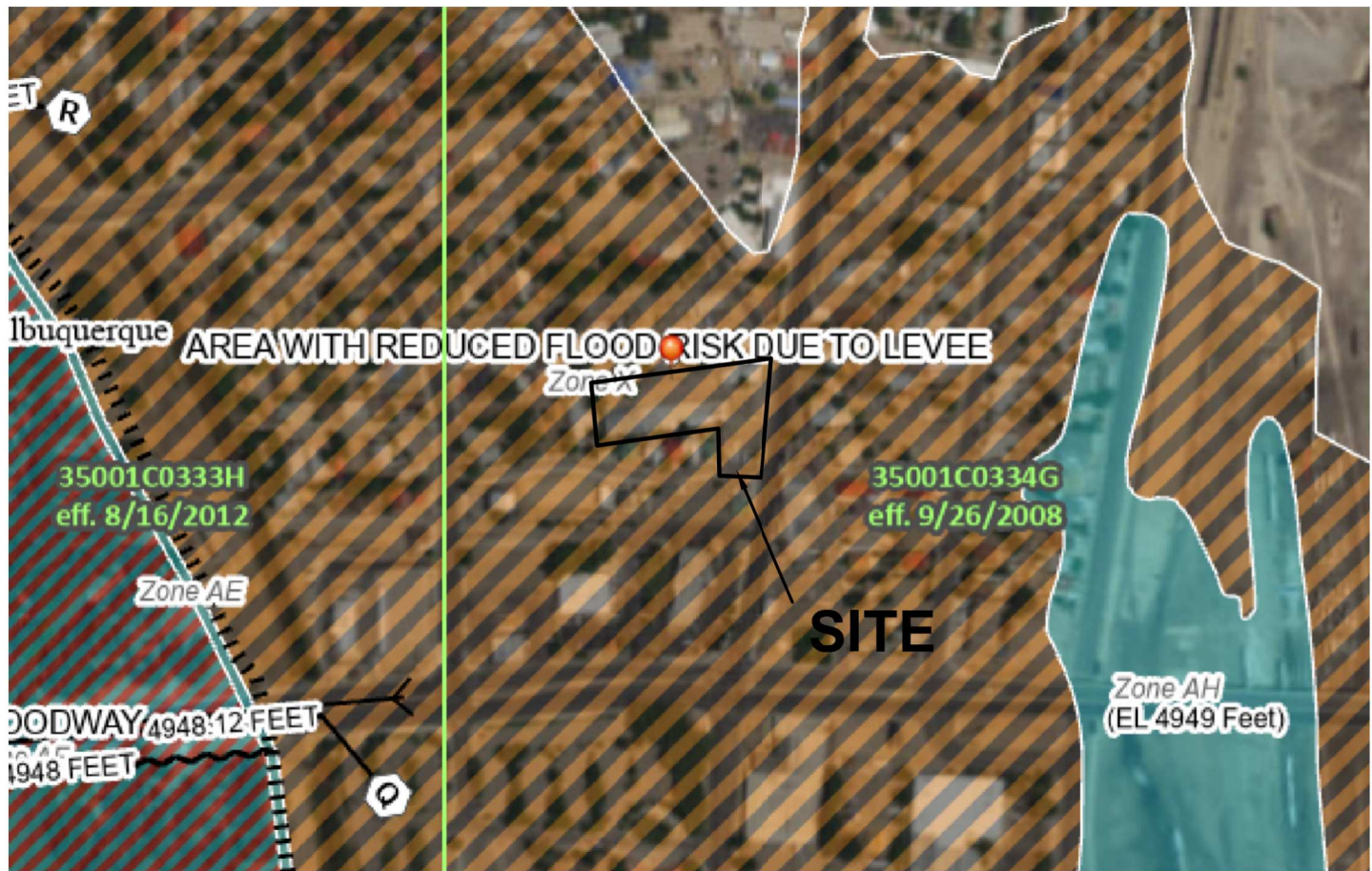
FEE PAID: \_\_\_\_\_





D1 ZONE ATLAS PAGE L-14-Z  
NOT TO SCALE

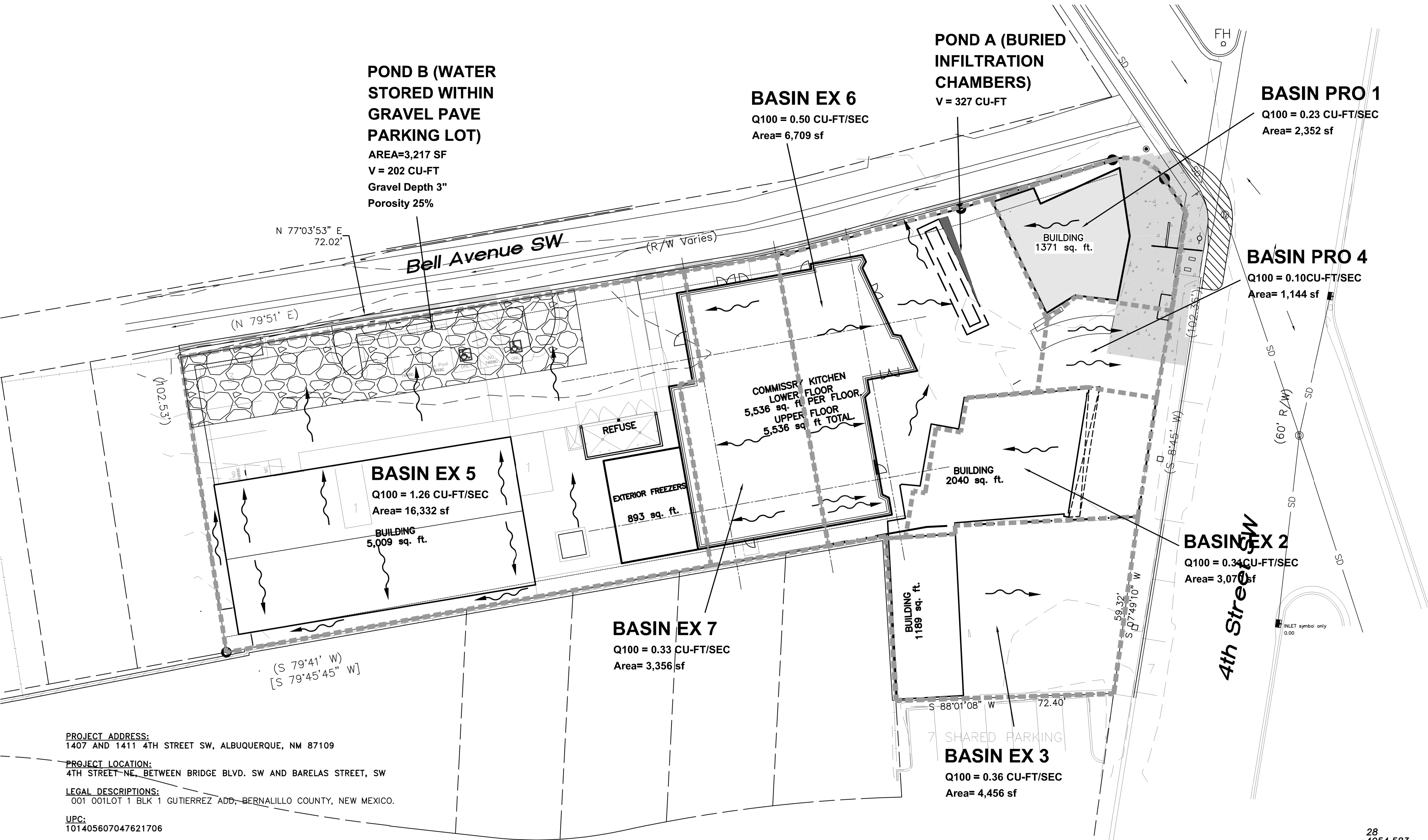
Drainage Summary							
Project:	HOMEWISE 1407 4th Street SW.						
Project Number:	2028 (Scout Architecture and Design)_						
Date:	11/13/22						
By:	Dave T.						
Site Location							
Precipitation Zone	2 Per COA DPM Chapter 6						
Existing summary							
Basin Name	Ex Basin 1	Ex Basin 2	Ex Basin 3	Ex Basin 4	Ex Basin 5	Ex Basin 6	
Area (sf)	2352	3070	4456	1144	24120	6709	
Area (acres)	0.05	0.07	0.10	0.03	0.55	0.15	
%A Land treatment	0	0	0	0	0	0	
%B Land treatment	0	0	0	5	5	50	
%C Land treatment	0	0	65	0	50	0	
%D Land treatment	100	100	35	100	45	50	
Soil Treatment (acres)							
Area "A"	0.00	0.00	0.00	0.00	0.00	0.00	
Area "B"	0.00	0.00	0.00	0.00	0.03	0.08	
Area "C"	0.00	0.00	0.07	0.00	0.28	0.00	
Area "D"	0.05	0.07	0.04	0.03	0.25	0.08	
Excess Runoff (acre-feet)							
100yr. 6hr.	0.0105	0.0137	0.0127	0.0052	0.0740	0.0201	
10yr. 6hr.	0.0068	0.0089	0.0072	0.0033	0.0431	0.0116	
2yr. 6hr.	0.0045	0.0058	0.0038	0.0022	0.0243	0.0065	
100yr. 24hr.	0.0118	0.0154	0.0136	0.0058	0.0802	0.0220	
Peak Discharge (cfs)							
100 yr.	0.23	0.31	0.36	0.12	1.99	0.52	
10yr.	0.15	0.19	0.20	0.07	1.14	0.28	
2yr.	0.09	0.12	0.10	0.04	0.58	0.13	



D5 FLOOD INSURANCE RATE MAP  
NOT TO SCALE

### FLOOD ZONE DETERMINATION

The surveyed area, as shown hereon, appears to lie within "ZONE X" (areas determined to be outside the 0.2% annual chance floodplain), shown on National Flood Insurance Program Flood Insurance Rate Map 35001C0334G REVISED 09/26/2008.



PROJECT ADDRESS:  
1407 AND 1411 4TH STREET SW, ALBUQUERQUE, NM 87109

PROJECT LOCATION:  
4TH STREET NE, BETWEEN BRIDGE BLVD. SW AND BARELAS STREET, SW

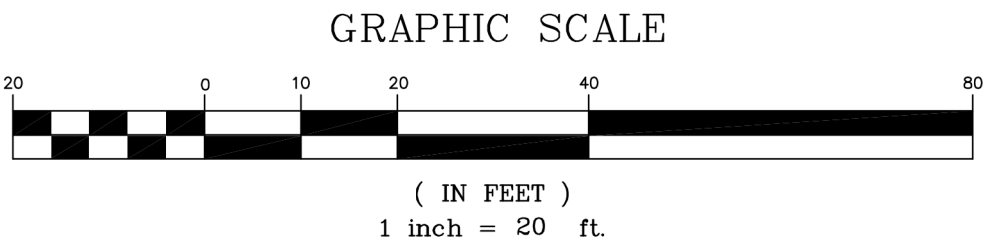
LEGAL DESCRIPTIONS:  
001 001 LOT 1 BLK 1 GUTIERREZ ADD, BERNALILLO COUNTY, NEW MEXICO.

UPC:  
101405607047621706

ZONING: MX-M (MIZED USE MEDIUM DENSITY)

ZONE ATLAS PAGES: K-17-Z

A1 OVERALL EXISTING DRAINAGE PLAN  
1" = 50'-0"



28  
4954.583  
ACS MON 10-114 SYMBOL ONLY

## I. PURPOSE AND SCOPE

THE PURPOSE OF THIS DRAINAGE PLAN IS TO PRESENT THE EXISTING AND PROPOSED DRAINAGE CONDITIONS FOR REPLACEMENT OF THE BUILDING LOCATED AT THE NE CORNER OF THE PROJECT SITE. THE NEW BUILDING IS LOCATED AT 1407 4TH STREET SW, IN ALBUQUERQUE. THE ZONE ATLAS PAGE FOR THE SITE IS L-14-Z.

## II. SITE DESCRIPTION AND HISTORY

THE PROJECT SITE IS LOCATED ON THE WEST SIDE OF 4TH STREET SW, BETWEEN BELL AVENUE SW, AND BRIDGE BOULEVARD SW. THE SITE IS CURRENTLY UNDER CONSTRUCTION FOR THE COMMISSARY KITCHEN LOCATED AT 1411 4TH STREET SW. DURING A REMODEL PROJECT FOR 1407 4TH STREET, STRUCTURAL DEFICIENCIES WERE IDENTIFIED, WARRANTING THE DEMOLITION OF THE STRUCTURE.

## III. COMPUTATIONAL PROCEDURES

HYDROLOGIC ANALYSIS WAS PERFORMED UTILIZING THE DESIGN CRITERIA BASED ON CHAPTER 6, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL RELEASED 2020. TABLES WITHIN CHAPTER 6, WERE USED TO AID IN THE STUDY OF THE SITE HYDROLOGY.

## IV. PRECIPITATION

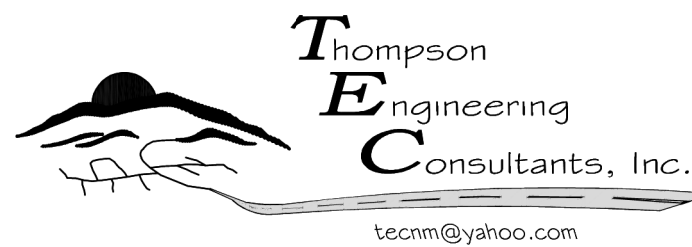
THE STORM EVENT USED FOR THE FOLLOWING CALCULATIONS IS THE 100YR-6HR STORM. THE PROJECT SITE IS LOCATED IN ZONE 2 (EAST OF RIO GRANDE, AND WEST OF SAN MATEO).

## V. EXISTING DRAINAGE CONDITIONS

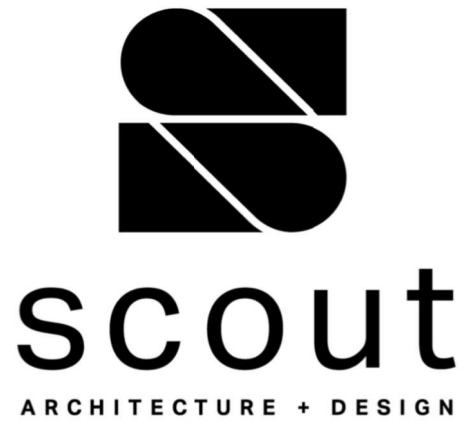
CURRENTLY THE SITE IS BEING REDEVELOPED TO INCLUDE A NEW 10,000 SF COMMISSARY KITCHEN FACILITY FOR HOMEWISE. OTHER MODIFICATIONS TO THE SITE WERE INCLUDED IN THE COMMISSARY KITCHEN PROJECT, THAT INCLUDED NEW PARKING AREAS, REFUSE COLLECTION, AND PEDESTRIAN CIRCULATION. THIS DRAINAGE STUDY IS A MODIFICATION OF THE ONE PREPARED BY THE HARTMAN + MAJEWSKI DESIGN GROUP (COA HYDROTRANS NUMBER L14D063).

PER THE PRIOR REPORT THE ALLOWABLE DISCHARGE FROM THE SITE IS AS FOLLOWS: NORTHERN PARCEL 2.65 CFS AND THE SOUTHERN PARCEL 0.36 CFS.

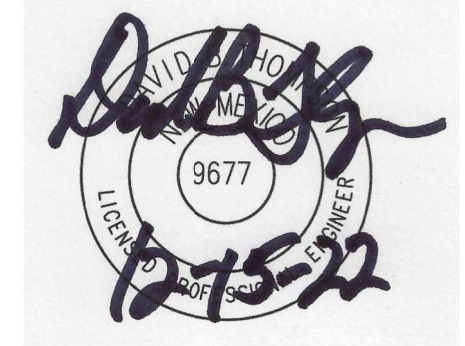
WE HAVE NUMBERED THE BASINS TO MATCH THE PRIOR REPORT. ONLY BASINS EX BASIN #1, AND #4 ARE AFFECTED BY THIS PROJECT.



P.O. BOX 65760  
ALBUQUERQUE, NM 87193  
PHONE: (505) 271-2199  
FAX: (505) 630-9248



ARCHITECT/ENGINEER



1407 WARM SHELL

1407 4TH STREET SW  
ALBUQUERQUE, NM 87102

## PERMIT SET

REVISION	DATE
DATE	12.15.22
PROJECT NO	2028

EXISTING  
DRAINAGE  
PLAN

SHEET NO.

CD1



## Drainage Summary

Project: HOMEWISE 1407 4th Street SW.  
Project Number: 2703  
Date: 11/13/22  
By: Dave T.

### Site Location

**Precipitaion Zone** 2 Per COA DPM Chapter 6

### Proposed summary

Basin Name		Pro Basin 1	Pro Basin 2	Pro Basin 3	Pro Basin 4	Pro Basin 5	Pro Basin 6	Pro Basin 7
Area (acres)	Area (sf)	2619	3070	4456	472	16332	6916	3356
		0.060	0.070	0.102	0.011	0.375	0.16	0.077
%A Land treatment		0	0	0	0	0	0	0
%B Land treatment		5	0	35	0	50	50	0
%C Land treatment		0	0	10	60	0	0	0
%D Land treatment		95	100	55	40	50	50	100

## Soil Treatment (acres)

Area "A"	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area "B"	0.00	0.00	0.04	0.00	0.19	0.08	0.00
Area "C"	0.00	0.00	0.01	0.01	0.00	0.00	0.00
Area "D"	0.06	0.07	0.06	0.00	0.19	0.08	0.08

**Excess Runoff (acre-feet)**

100yr. 6hr.	0.0113	0.0137	0.0142	0.0014	0.0489	0.0207	0.0150	acre-ft.
10yr. 6hr.	0.0073	0.0089	0.0084	0.0008	0.0283	0.0120	0.0097	acre-ft.
2yr. 6hr.	0.0047	0.0058	0.0048	0.0004	0.0158	0.0067	0.0063	acre-ft.
100yr. 24hr.	0.0127	0.0154	0.0156	0.0015	0.0536	0.0227	0.0169	acre-ft.

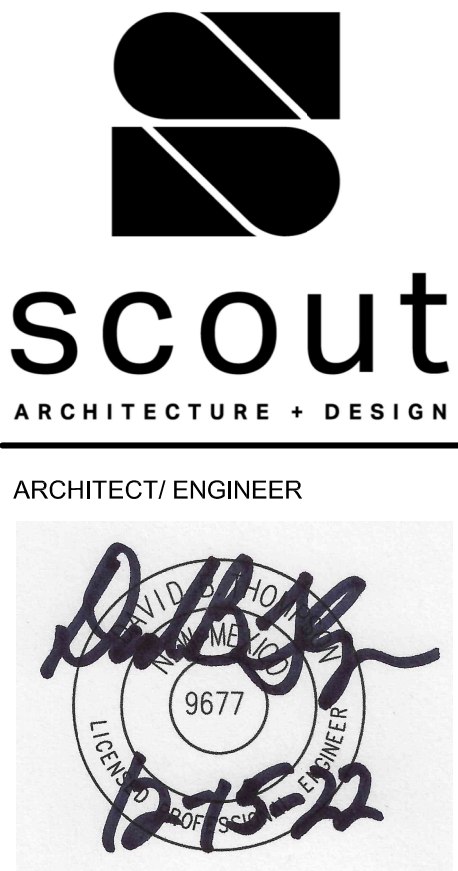
## Peak Discharge (cfs)

100 yr.	0.25	0.31	0.36	0.04	1.26	0.53	0.33	cf
10yr.	0.16	0.19	0.20	0.02	0.69	0.29	0.21	cf
2yr.	0.10	0.12	0.10	0.01	0.33	0.14	0.13	cf

Water Quality Ponding Volume (cf)	53.9	0.0	27.3	4.1	68.4	74.9	72.7 cf
Water Quality Acre Feet	0.0012	0.0000	0.0006	0.0001	0.0016	0.0017	0.0017 acre-ft

## Pond Routing and Volumes

		Basin 1	
Incoming Flow Rate	Qin	1.05	cfs
Allowable Discharge Rate	Qout	0.15	1.2 Total discharge
Hyrdology Zone		2	per Figure A-1
Area Total	At	0.060	acres
Area Type A	Aa	0	%
Area Type B	Ab	40	%
Area Type C	Ac	0	%
Area Type D Impervious	Ad	60	%
Excess runoff rates	A	0.53	
	B	0.78	
	C	1.13	
	D	2.12	
Weighted E (Exces Runoff)		1.58	
Time of Concentration		0.2	hours
Time to Peak		0.223	hours
$=0.7 \cdot T_c + ((1.6 - (Ad/At)/12)$			
Time of Base		0.041	hours
$=2.107 \cdot E \cdot At / Q_p - (25 \cdot Ad/At)$			
Duration of Peak		0.150	hours
Time for end of peak		0.373	hours
Time when storage begins		0.032	hours
Time incoming is less that discharge		0.089	hours
Volume Required during storm	acre-inch	0.093	acre inch
Volume Required during storm	cf	338	cubic feet
Volume Available in Basin	cf	327	Total Stored



## VI. PROPOSED DRAINAGE CONDITIONS

THE NEW BUILDING WILL REPLACE THE PRIOR BUILDING AT SOUTHWEST CORNER OF BELL AVENUE, AND 4TH STREET SW.

THIS STUDY IS REFLECTING THE MINOR CHANGES FROM THE PRIOR DRAINAGE STUDY THAT WAS PREPARED BY THE HARTMAN + MAJEWSKI DESIGN GROUP. AN UNDERGROUND INFILTRATION GALLERY WAS ALREADY SIZED FOR THE SITE AND THE PROPOSED REVISIONS WILL NOT SIGNIFICANTLY ALTER THE PEAK DISCHARGE RATE.

BASINS PRO 1, 4 AND 6 WILL BE SLIGHTLY ALTERED BY THIS PROJECT.

PROPOSED BASIN PRO 1 WILL HAVE A PEAK RUNOFF RATE OF 0.25 CFS, AND WILL DRAIN TOWARD THE WEST WHERE IT WILL BE INTERCEPTED BY THE BURIED INFILTRATION CHAMBERS. CURRENT CONDITIONS REFLECTED A PEAK RUNOFF RATE OF 0.23 CFS FOR EXISTING BASIN 1.

PROPOSED BASIN PRO 4 WILL HAVE THE HIGH POINT ADJUSTED. THIS REDUCES THE SIZE OF THE BASIN THAT DISCHARGES DIRECTLY INTO 4TH STREET SW. THE NEW PEAK FLOW RATE INTO 4TH STREET IS NOW 0.04 CFS (IN COMPARISON TO THE CURRENT CONDITIONS OF 0.10 CFS).

PROPOSED BASIN PRO 6 WILL STILL DRAIN TOWARD THE UNDERGROUND INFILTRATION GALLERY. PROPOSED CONDITIONS WILL GENERATE A PEAK DISCHARGE OF 0.53 CFS. CURRENT CONDITIONS GENERATE 0.50 CFS. THE DIFFERENCE IS THAT A PORTION OF BASIN 4 IS NOW LOCATED WITHIN BASIN 6.

THE TOTAL DISCHARGE FROM BASINS 1, 2, AND 6 COMBINE TO GENERATE A PEAK OF 1.06 CFS THAT WILL DRAIN INTO THE UNDERGROUND INFILTRATION GALLERY.

THE PRIOR DESIGN CALLED FOR 1.01 CFS AS THE PEAK FLOWRATE INTO THE INFILTRATION GALLERY. REDUCTION IN DISCHARGE DIRECTLY TO 4TH STREET CAN BE USED TO INCREASE THE ALLOWABLE DISCHARGE FROM THE INFILTRATION GALLERY. THE SIDE OF THE INFILTRATION GALLERY WILL NEED TO BE INCREASE CO CONTAIN AN ADDITIONAL 11 CUBIC FEET OF WATER. THIS CAN BE ACCOMPLISHED BY PROVIDING AN ADDITIONAL 44 CUBIC FEET OF PEA GRAVEL SURROUNDING THE CHAMBERS. THIS CAN BE ACCOMPLISHED BY WIDENING THE GRAVEL SURROUND ON THE EAST SIDE OF THE CHAMBERS AS SHOWN.

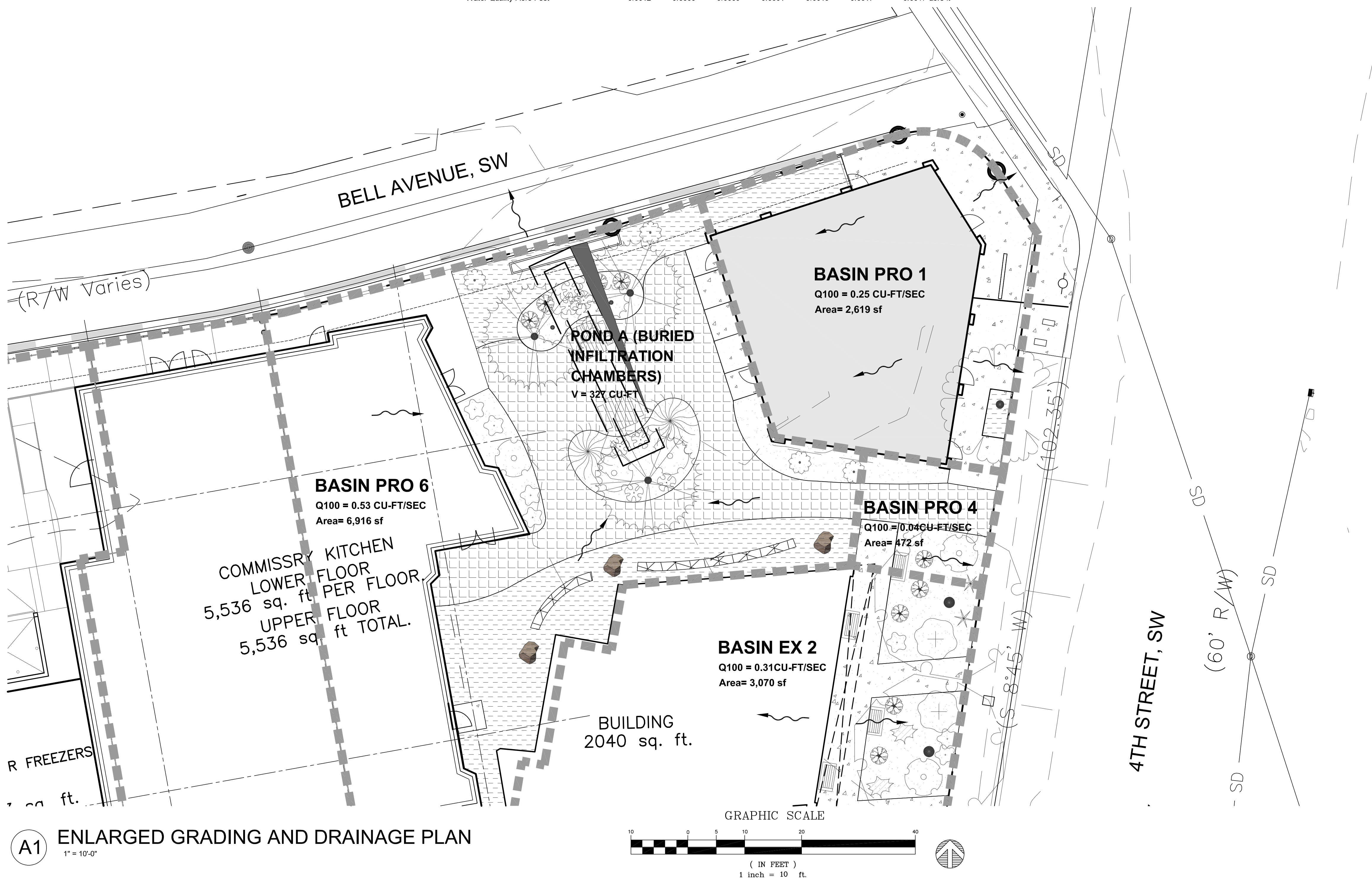
PLEASE NOTE THAT AN INCREASE OF ALLOWABLE DISCHARGE INTO BELL HAS NOT BEEN USED.

## VII. CONCLUSIONS

THE PRIOR PROPOSED DEVELOPMENT (AS DEFINED BY THE HARTMAN + MAJEWSKI DESIGN GROUP) WILL REDUCE THE EXCESS RUNOFF FROM THE NORTHERN PARCEL FROM 2.65 CFS TO 1.1 CFS. THE SOUTHERN PARCEL WILL REMAIN AS EXISTING AT 0.36 CFS.

THIS PROJECT FURTHER REDUCES THE FLOW INTO 4TH STREET BY 0.06 AND MAINTAINS THE OTHER DISCHARGE POINTS AND FLOW RATES FROM THE PRIOR DRAINAGE STUDY.

THE SITE WILL DISCHARGE LESS EXCESS RUNOFF IN THE REDEVELOPED CONDITION THAT IT DOES IN THE CURRENT CONDITION.



**1407 WARM SHELL**  
1407 4TH STREET SW  
ALBUQUERQUE, NM 87102

## PERMIT SET

REVISION	DATE
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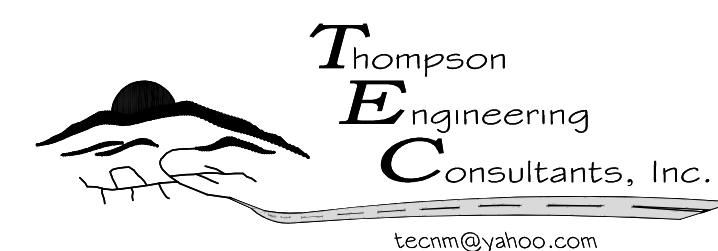
DATE 12.15.22

PROJECT NO	2028
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# PROPOSED DRAINAGE PLAN

SHEET NO.

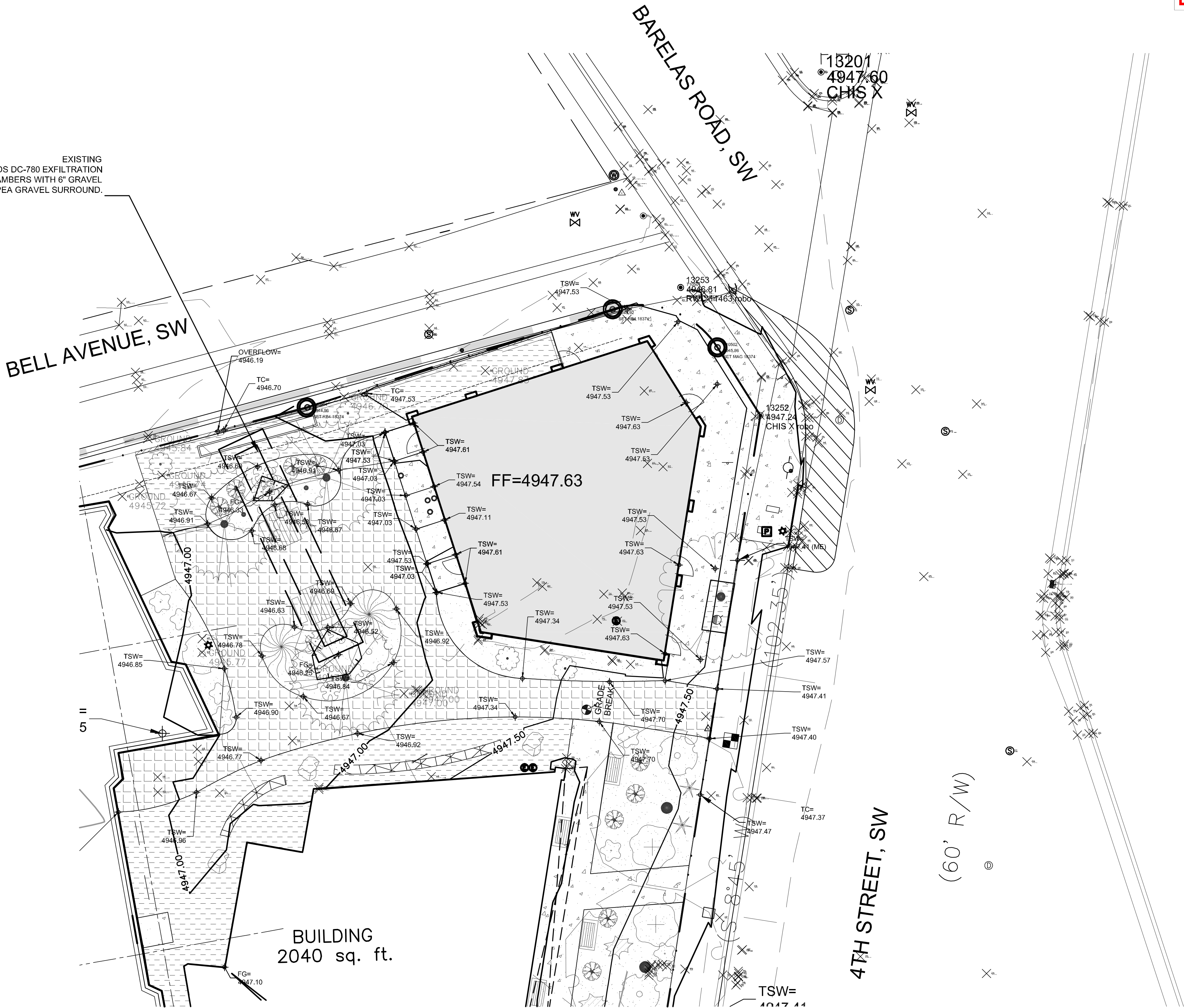
# CD2



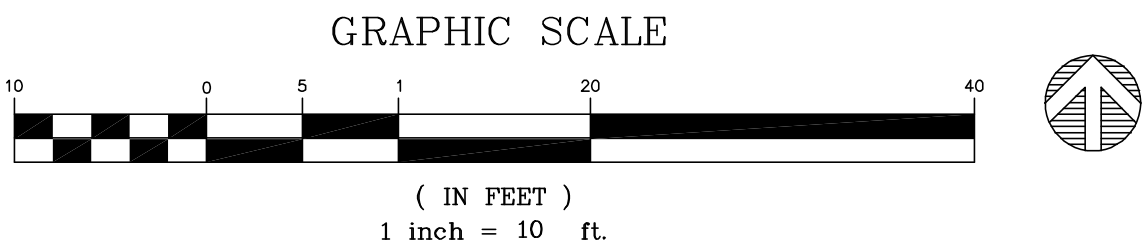
P.O. BOX 65760      PHONE: (505) 271-2199  
ALBUQUERQUE, NM 87193      FAX: (505) 830-9248



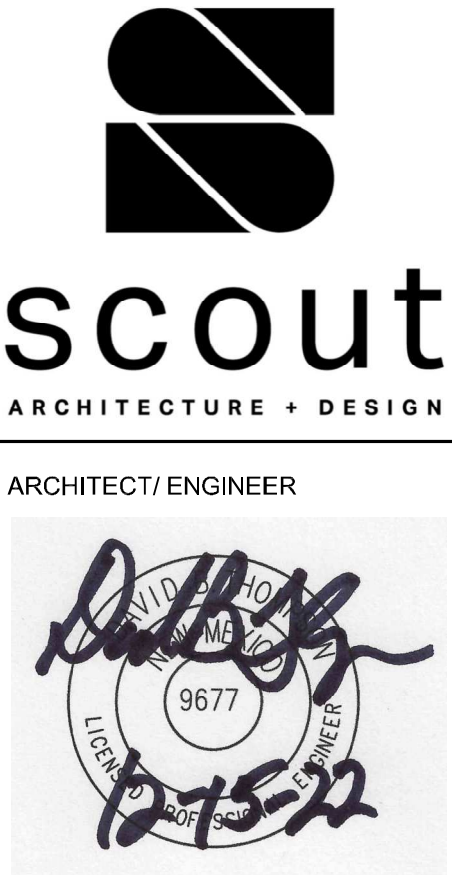
EXISTING  
(4) ADS DC-780 EXFILTRATION  
CHAMBERS WITH 6" GRAVEL  
BASE AND PEA GRAVEL SURROUND.



**A1 SITE GRADING PLAN**  
1" = 10'-0"



City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 01/20/23  
BY: *Reale Smith*  
HydroTeam # L14D063A  
THE APPROVAL OF THESE PLANS BY THE CITY OF ALBUQUERQUE DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREON.



**1407 WARM SHELL**  
1407 4TH STREET SW  
ALBUQUERQUE, NM 87102

**PERMIT SET**

REVISION DATE

DATE 12.15.22

PROJECT NO 2028

**SITE  
GRADING  
PLAN**

SHEET NO.

**C201**

