

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

August 26, 2021

Don Briggs, P.E.
Don Briggs Engineering, LLC
5324 Oakledge Ct. NW
Albuquerque, NM 87120

RE: Viva Paradise - Phase II
5516 Buglo NW
3rd Revised Grading and Drainage Plans
Engineer's Stamp Date: 07/25/21
Hydrology File: B11D010A

Dear Mr. Briggs:

PO Box 1293

Based upon the information provided in your submittal received 07/25/2021, the 3rd Revised Grading & Drainage Plans are approved for Building Permit, Grading Permit, and for action by the DRB on Site Plan for Building Permit.

Albuquerque

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.

NM 87103

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.

www.cabq.gov

Please provide the Drainage Covenant with Exhibit A for the stormwater quality ponds per Article 6-15(C) of the DPM prior to Permanent Release of Occupancy. Please submit the original copies along with the \$ 25.00 recording fee check made payable to Bernalillo County to Marion G. Velasquez (mgvelasquez@cabq.gov) on the 4th floor of Plaza de Sol. Please note that Hydrology will need a pdf copy of the recorded Drainage Covenant prior to Hydrology's approval of Permanent Release of Occupancy.

CITY OF ALBUQUERQUE

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Mayor Timothy M. Keller

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 11/2018)

Project Title: Viva Paradise Phase II **Building Permit #:** _____ **Hydrology File #:** B11D010A

DRB#: PR-2019-2333 **EPC#:** _____ **Work Order#:** _____

Legal Description: TR A PLAT OF TRACT A VIVA PARADISE TOWNHOMES (A REPLAT OF LOTS 10A, 11A & 12A, UNIT 1 PARADISE HILLS INVESTMENT PROPERTIES)

City Address: 5512, Buglo NW Albuquerque

Applicant: Don Briggs Engineering LLC **Contact:** Don Briggs

Address: 5324 Oakledge Ct. NW Albuquerque, NM, 87120

Phone#: 505-249-4843 **Fax#:** _____ **E-mail:** donbriggsengineering@gmail.com

Owner: John Lowe **Contact:** John Lowe

Address: 449 Live Oak Lp. NE Albuquerque, NM 87122

Phone#: 505-6886834 **Fax#:** _____ **E-mail:** jlowe14@comcast.net

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:

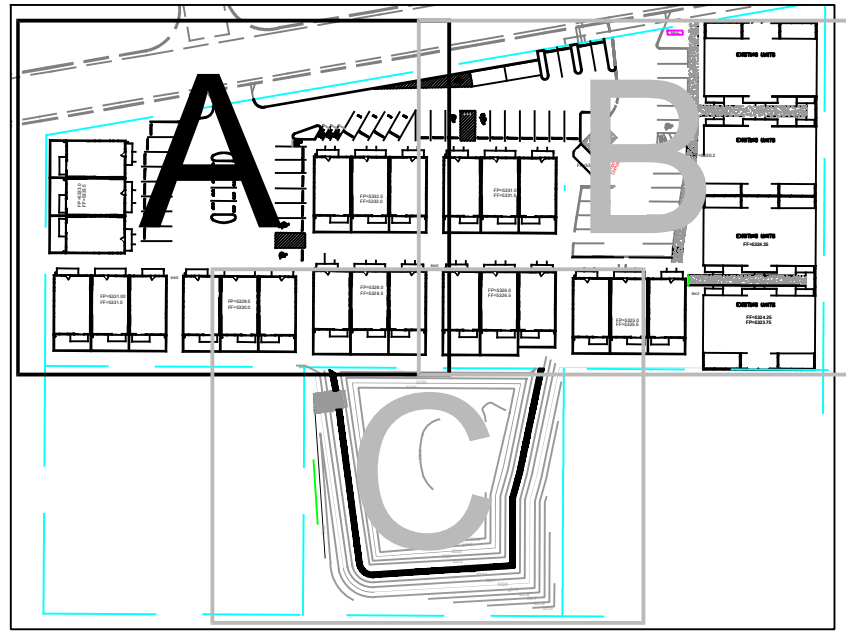
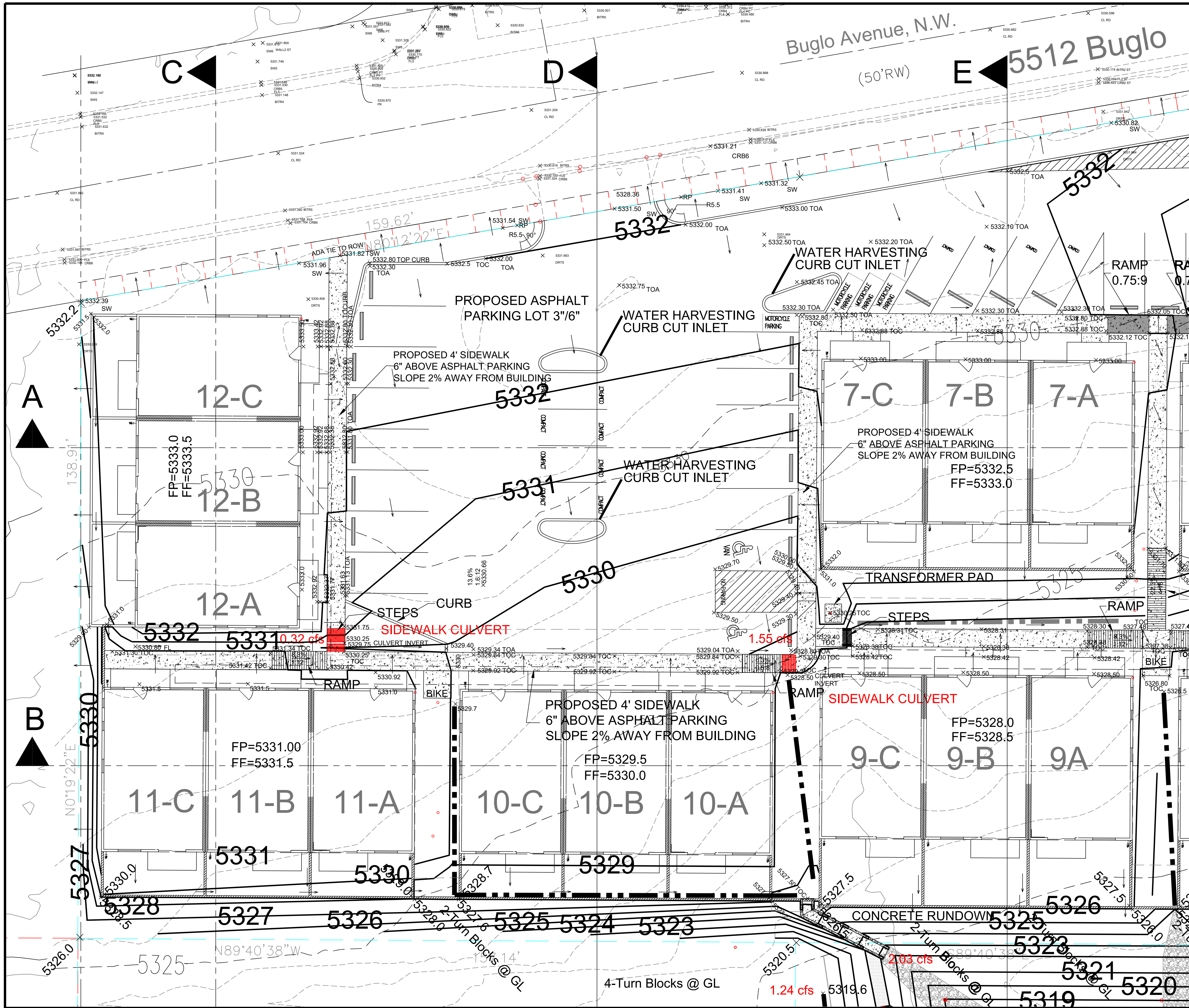
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ SITE PLAN FOR SUB'D APPROVAL
- ☒ SITE PLAN FOR BLDG. PERMIT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ SO-19 APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ GRADING/ PAD CERTIFICATION
- ☐ WORK ORDER APPROVAL
- ☐ CLOMR/LOMR
- ☐ FLOODPLAIN DEVELOPMENT PERMIT
- ☒ OTHER (SPECIFY) PR-2019-0023333 Revision

DATE SUBMITTED: 7/25/2021 **By:** Don Briggs

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

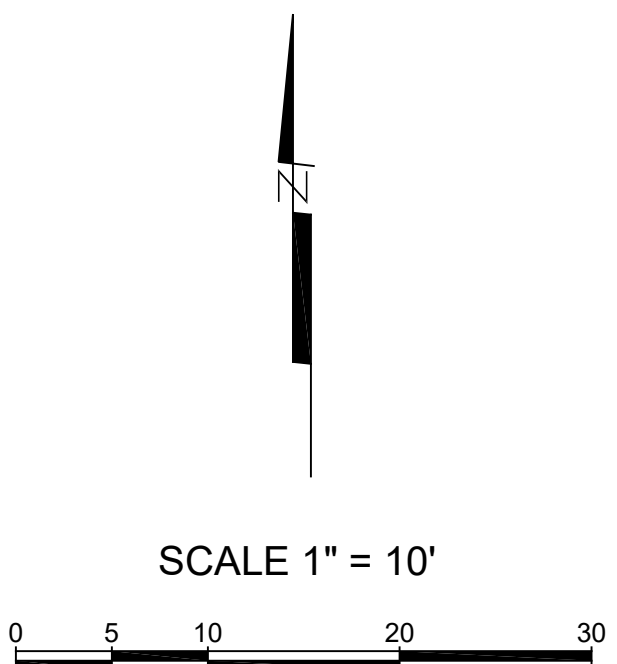
FEE PAID: _____



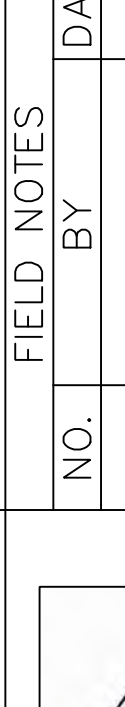
SHEET INDEX



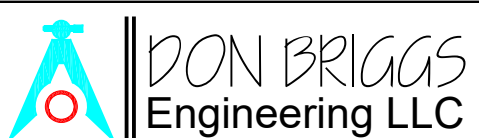
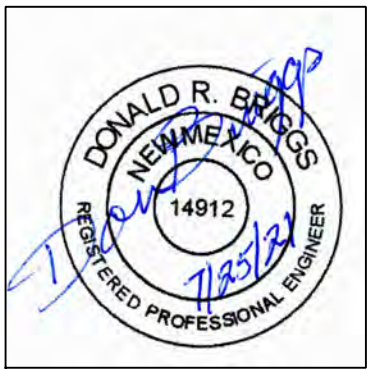
- LEGEND**
- Existing Contour
 - Design Contour
 - CMU Wall
 - Drainage Swale
 - Existing Spot Elevation
 - Proposed Spot Elevation
 - Flow Direction Arrow
 - Concrete
 - Property Line
 - RipRap



AS BUILT INFORMATION				BENCHMARKS		SURVEY INFORMATION		ENGINEER'S SEAL		BY	
CONTRACTOR		DATE		NO.		FIELD NOTES		NO.		REMARKS	
WORKED BY		DATE		BY				CORRECTED BUILDING 12 FF ELEVATION		DB	
INSPECTOR'S		DATE						REV BLDG 8, 9, DUMPSITE, TOOL SHED		DB	
ACCEPTANCE BY		DATE									
VERIFICATION BY		DATE									
DRAWINGS		DATE									
RECORDING INFORMATION		DATE									
NO.		DATE									

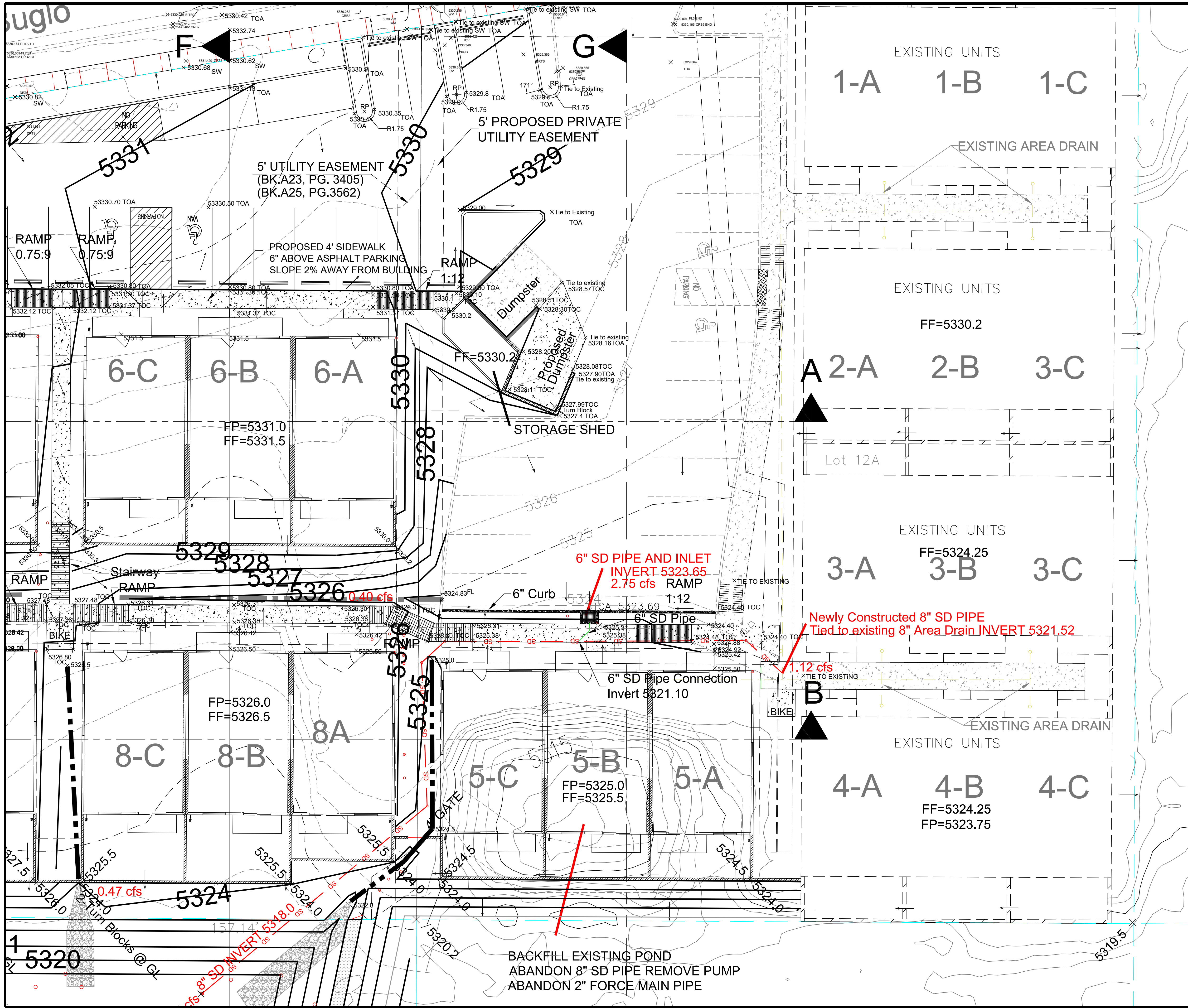


DESIGNED BY		DB	DATE	5/26/2020
DRAWN BY		DB	DATE	5/26/2020
CHECKED BY			DATE	



TITLE: VIVA PARADISE TOWN HOMES
REVISED GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo. / Day / Yr.	Mo. / Day / Yr.
City Project No. PR-2019-2333	Zone Map No. B-11-Z	Sheet 1A	Of 4	

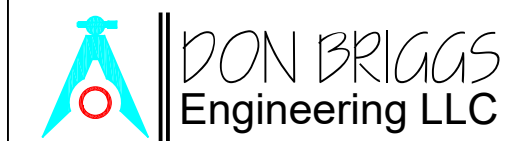
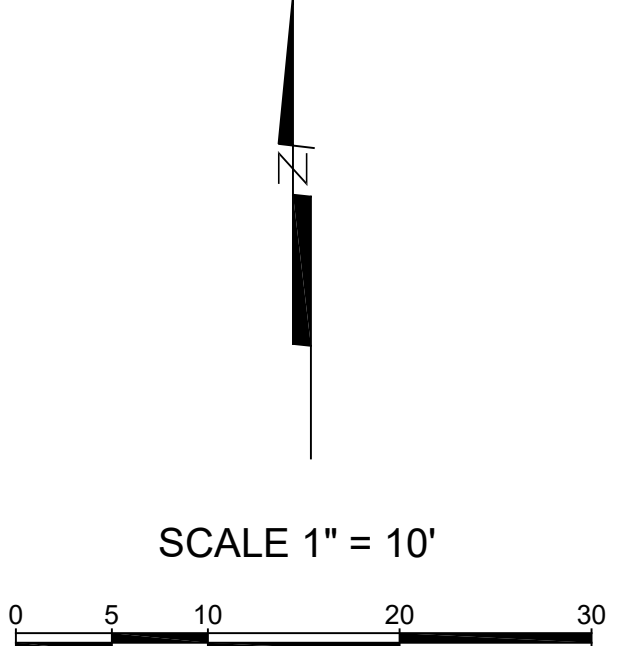
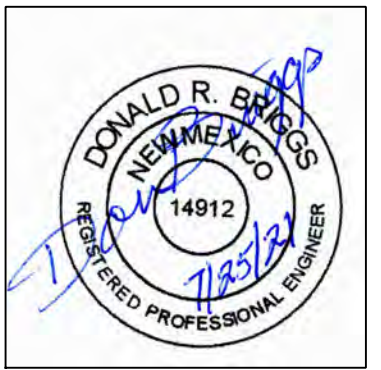


SHEET INDEX



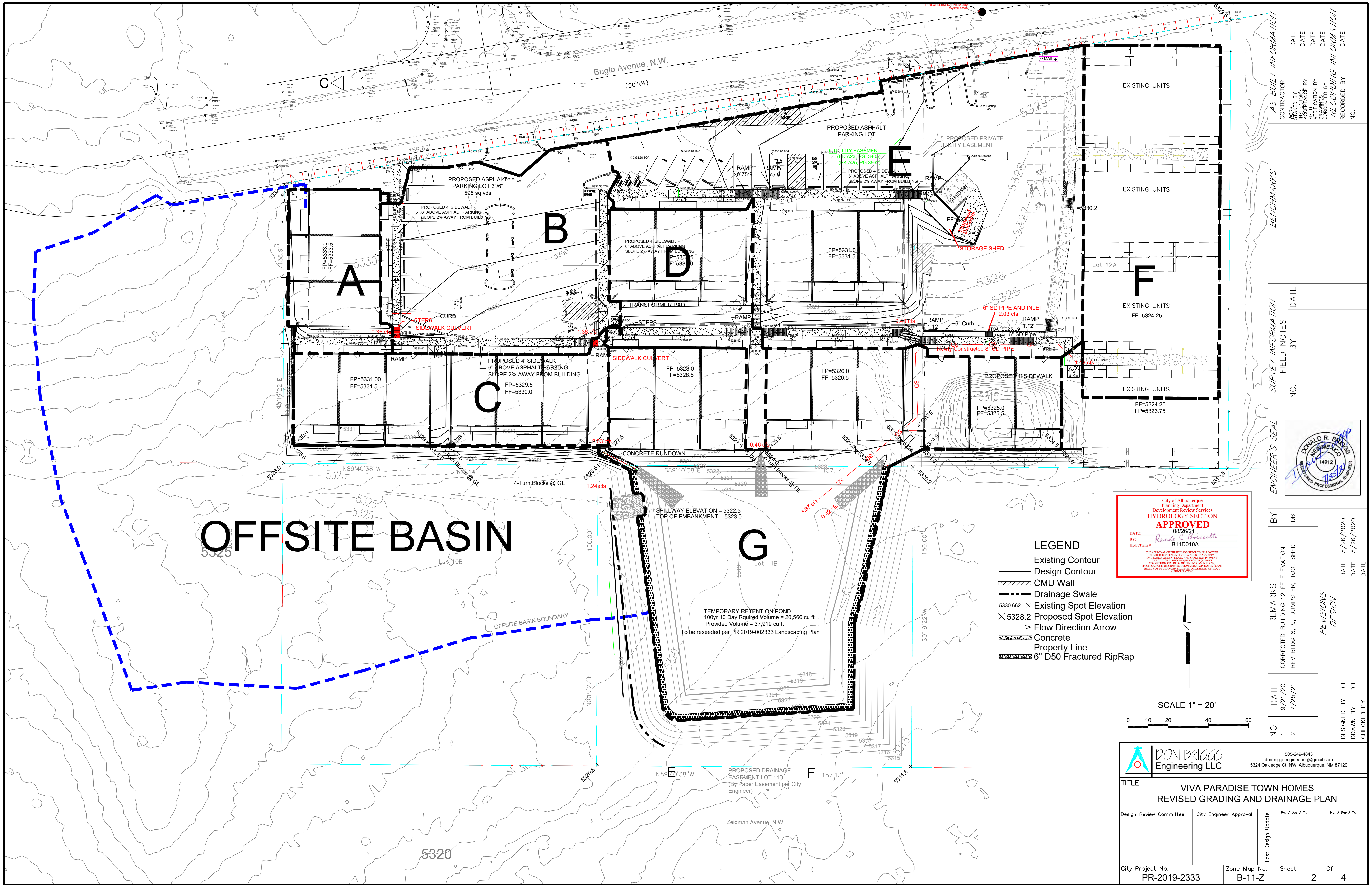
LEGEND

- Existing Contour
- Design Contour
- CMU Wall
- Drainage Swale
- Existing Spot Elevation
- Proposed Spot Elevation
- Flow Direction Arrow
- Concrete
- Property Line
- RipRap



TITLE: VIVA PARADISE TOWN HOMES
REVISED GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo. / Day / Yr.	
			Mo. / Day / Yr.	Mo. / Day / Yr.
City Project No. PR-2019-2333	Zone Map No. B-11-Z	Sheet 1B	Of 4	



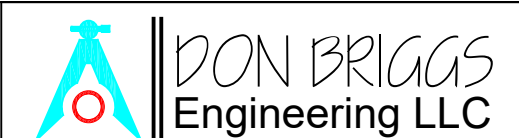
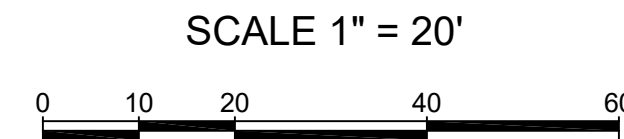
AS BUILT INFORMATION		BENCHMARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN	
CONTRACTOR	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
WORK BY	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
INSPECTORS	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
ACCEPTANCE BY	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
VERIFICATION BY	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
DRAWINGS	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
CHECKED BY	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE
RECORDING INFORMATION	DATE	NO.	BY	NO.	DATE	BY	DATE	NO.	DATE	NO.	DATE



City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 08/26/21
BY: *Renee C. Brissette*
HydroTrans # B11D010A

THE APPROVAL OF THESE PLANS AND REPORT SHALL NOT BE CONSIDERED TO BE AN ENDORSEMENT OF ANY CITY OR ORGANIZATION OR A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE IS NOT PROVIDING ANY GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE IS NOT PROVIDING ANY GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE IS NOT PROVIDING ANY GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

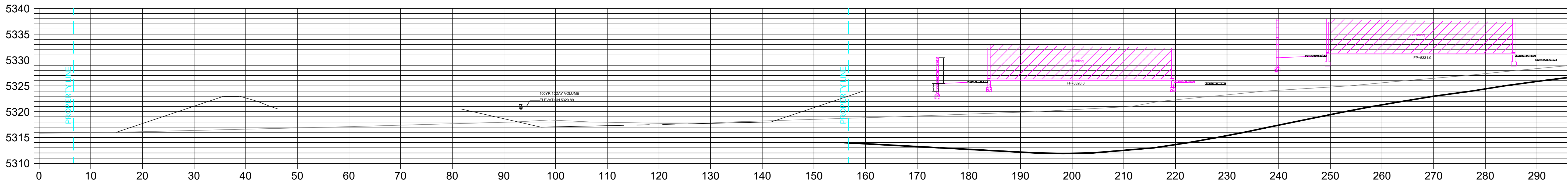
- LEGEND**
- Existing Contour
 - Design Contour
 - CMU Wall
 - Drainage Swale
 - 5330.662 × Existing Spot Elevation
 - × 5328.2 Proposed Spot Elevation
 - Flow Direction Arrow
 - Concrete
 - Property Line
 - 6" D50 Fractured RipRap



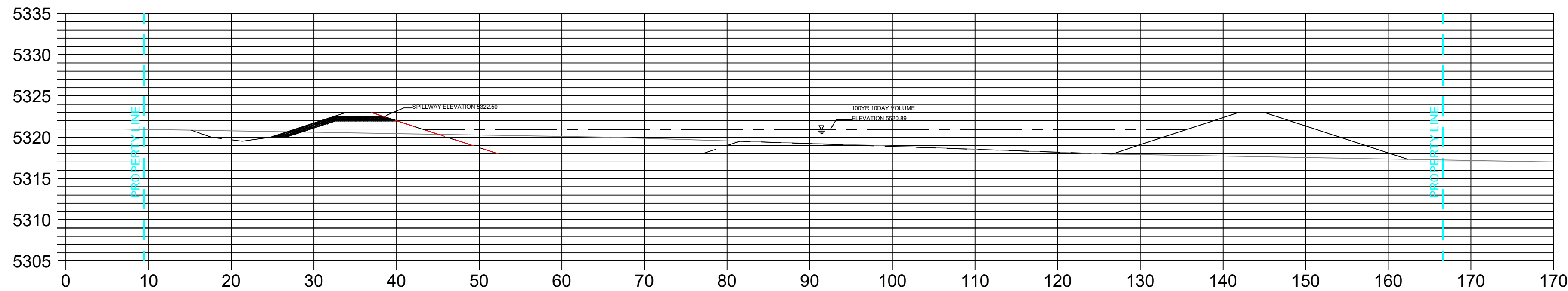
TITLE: **VIVA PARADISE TOWN HOMES**
REVISED GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.	No. / Day / Yr.

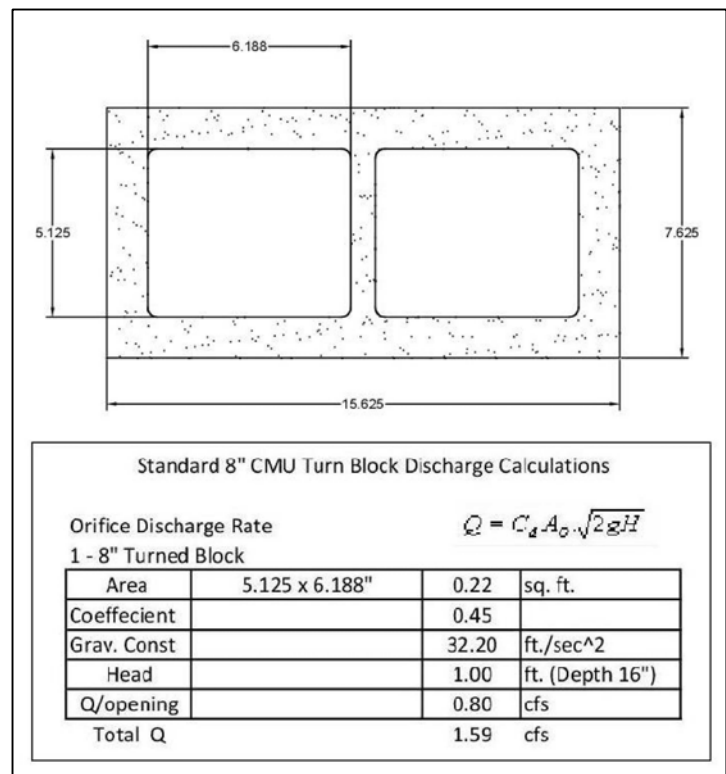
City Project No. **PR-2019-2333** Zone Map No. **B-11-Z** Sheet **2** Of **4**



POND CROSS SECTION F-F



POND CROSS SECTION H-H



DRAINAGE NARRATIVE

This grading & drainage plan was prepared to support a rough grading and building permit application for Phase II of an existing town home development located at 5512 Buglo Ave. NW. This project is required to retain the 100 year 10 day runoff volume in a temporary retention pond as downstream infrastructure has not been constructed. This plan was prepared using the hydrology methodology presented in Chapter 22.2 of the City of Albuquerque's Development Process Manual (abbreviated table).

The site is a 2.52 acre parcel (not including offsite retention pond) located in Precipitation Zone 1 and Floodzone X (Unshaded). It slopes from the north west to the south east at about 8.5%. The site is minimally impacted by cross lot runoff from the adjacent properties to the west. Buglo Ave. is constructed with curb, gutter.

Storm water is routed through the development using landscaped swales, sidewalk culverts, a new area drain and an existing area drain associated with the Phase I development. The existing Phase I storm water pond will be backfilled and the storm water from the area drain rerouted to the new pond with an extension to the 8" area drain pipe and the addition of a 6" inlet pipe and inlet. Storm water from a small offsite basin is routed around the development with a small swale.

Total disturbance is expected to impact a little over 2 acres of the 2.52 ac site. A SWPPP will be prepared for this project.

GENERAL NOTES

Contractor is responsible for utility spots and controlling sediment deposition and erosion during construction.

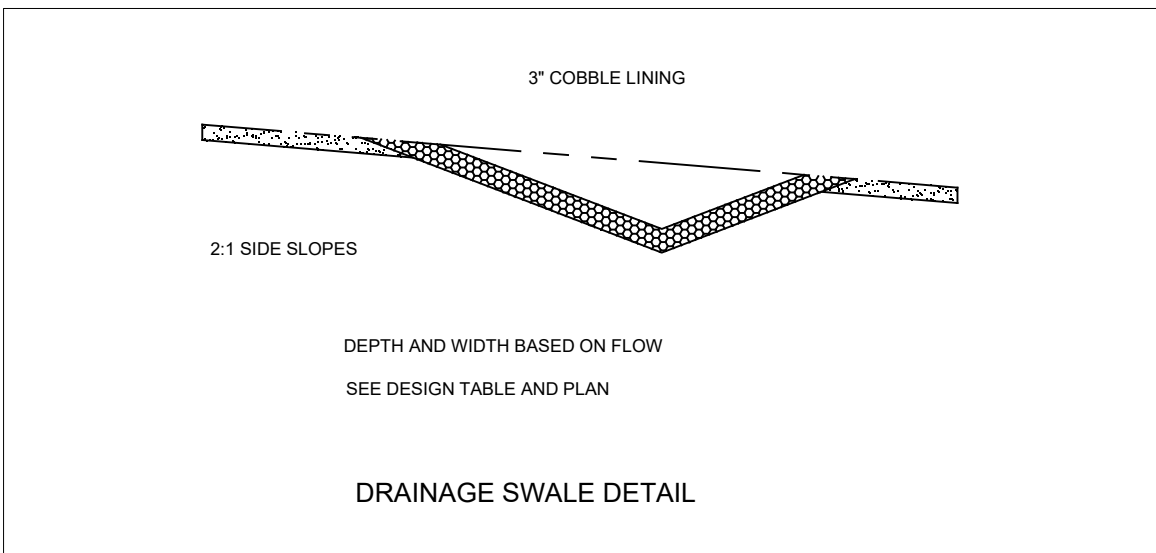
A concrete washout bin must be provided as per City of Albuquerque MS4 Permit requirements.

All disturbed area due to construction must be reseeded or landscaped following construction.

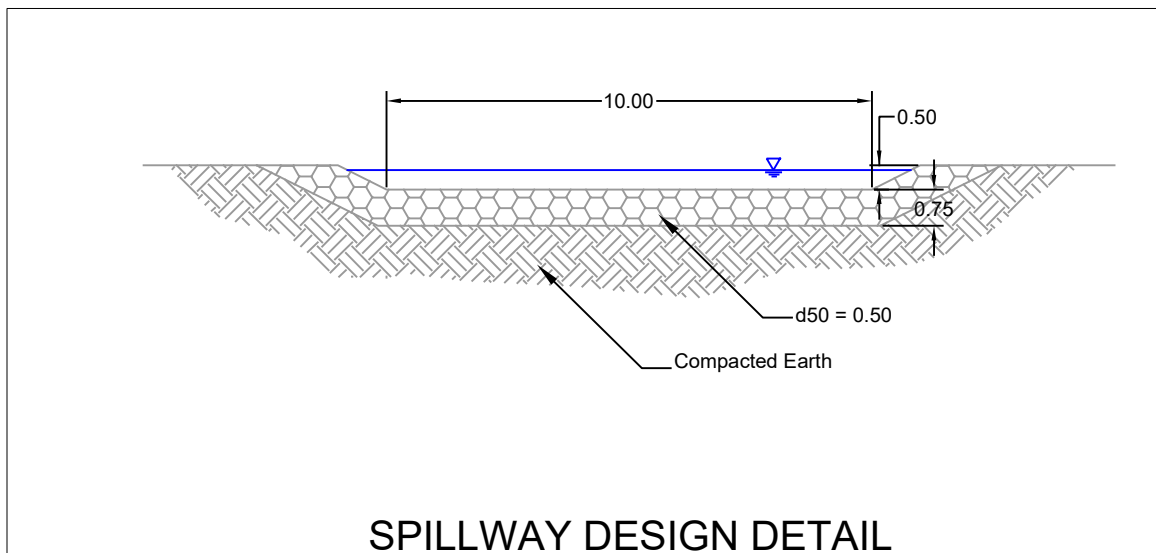
FULL RETENTION POND VOLUME 3:1 SIDE SLOPES BERMED Revised					
ELEVATION	AREA	AVE AREA	DEPTH	CUM DEPTH	CUM VOLUME
5318.00	653.14				
		4125.82	1.00	1.00	4125.82
5319.00	7598.50				
		8151.32	1.00	2.00	8151.32
5320.00	8704.15				
		9279.26	1.00	3.00	9279.26
5321.00	9854.37				
		10470.54	1.00	4.00	10470.54
5322.00	11086.71				
		11784.40	1.00	5.00	11784.40
5323.00	12482.09				
Required Volume = 20388 cu ft					
Required Volume Elevation = 5320.89 ft					
Berm Elevation = 5323.00 ft					
Spillway Elevation = 5322.50 ft					
Spillway Volume = 37919 cu ft					



STAGE - DISCHARGE TABLE MANNING EQUATION FOR TRAPEZOIDAL CHANNEL VIVA PARADISE TOWN HOMES SWALE DESIGN												
Q100=	VARIES											
ELEV=	0.00	Thalweg Elevation (ft)										
N=	0.031	Mannings N										
d50=	0.250	Rip Rap (ft)										
S=	0.07000	Channel Slope (ft/ft)										
SS=	2	Average Side Slopes (SS:1)										
W=	0	Bottom Width (ft)										
A=	W*D + SS*D ² /3											
WP=	2*(D ² + SS*D ²)/2 + W											
EG=	V ² /2g g=32.2											
d50=	V(S) ^{1.77} /5.88 2:1 SS Max.											
N for Riprap	N=0.0395(0.50 ^{1/6}) = 0.031											
	Denver Urban Drainage Design Manual											
D	WS Elev	EG Elev	d50	Q	A	V	WP	1.49/N	(A/WP) ^{2/3}	(S) ^{1/2}		
0.10	0.10	0.10	0.00	0.01	0.02	0.37	4.00	48.06	0.07922	0.26458		
0.20	0.20	0.21	0.01	0.07	0.08	0.93	4.02	48.06	0.07344	0.26458		
0.30	0.30	0.34	0.03	0.29	0.18	1.60	4.04	48.06	0.12558	0.26458		
0.40	0.40	0.48	0.06	0.75	0.32	2.33	4.08	48.06	0.18325	0.26458		
0.50	0.50	0.65	0.11	1.56	0.50	3.12	4.12	48.06	0.24500	0.26458		
0.60	0.60	0.84	0.18	2.84	0.72	3.94	4.18	48.06	0.30977	0.26458		
0.70	0.70	1.06	0.27	4.70	0.98	4.79	4.24	48.06	0.37675	0.26458		
0.80	0.80	1.30	0.38	7.25	1.28	5.66	4.31	48.06	0.44526	0.26458		
0.90	0.90	1.57	0.50	10.60	1.62	6.55	4.39	48.06	0.51476	0.26458		
1.00	1.00	1.86	0.65	14.87	2.00	7.44	4.47	48.06	0.58480	0.26458		
1.10	1.10	2.18	0.81	20.16	2.42	8.33	4.57	48.06	0.65500	0.26458		
1.20	1.20	2.52	1.00	26.55	2.88	9.22	4.66	48.06	0.72506	0.26458		
1.30	1.30	2.89	1.20	34.16	3.38	10.11	4.77	48.06	0.79473	0.26458		
1.40	1.40	3.27	1.41	43.06	3.92	10.98	4.88	48.06	0.86382	0.26458		
1.50	1.50	3.68	1.65	53.34	4.50	11.85	5.00	48.06	0.93217	0.26458		
1.60	1.60	4.11	1.89	65.09	5.12	12.71	5.12	48.06	0.99967	0.26458		
1.70	1.70	4.55	2.15	78.37	5.78	13.56	5.25	48.06	1.06625	0.26458		
1.80	1.80	5.02	2.43	93.27	6.48	14.39	5.38	48.06	1.13184	0.26458		
1.90	1.90	5.49	2.71	109.85	7.22	15.21	5.52	48.06	1.19640	0.26458		
2.00	2.00	5.99	3.01	128.18	8.00	16.02	5.66	48.06	1.25992	0.26458		

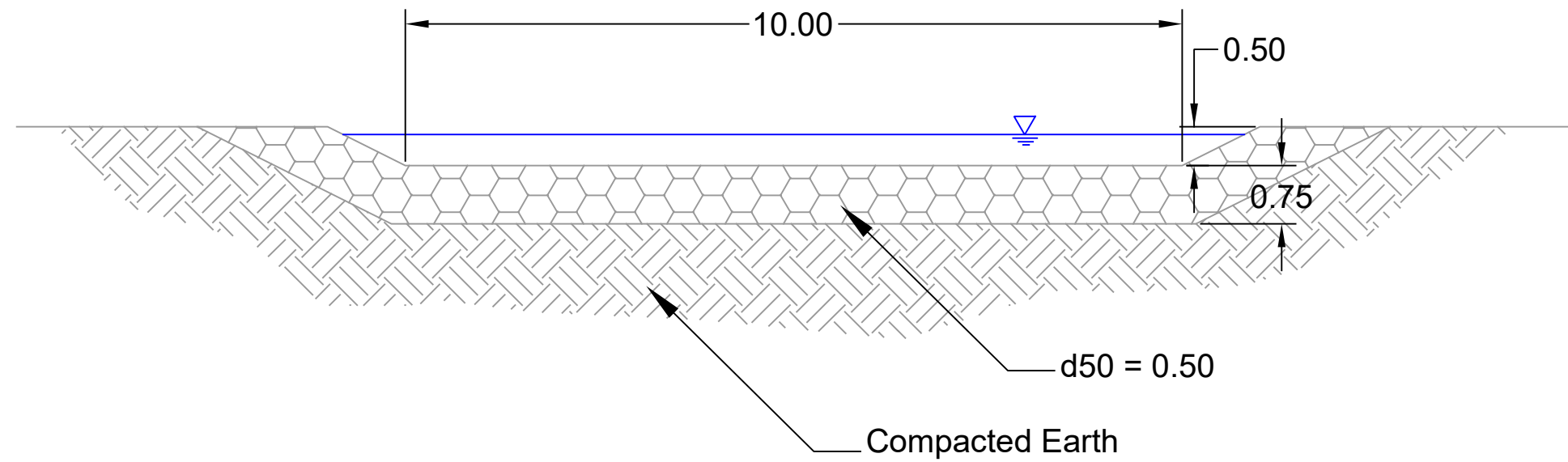


STAGE - DISCHARGE TABLE MANNING EQUATION FOR TRAPEZOIDAL CHANNEL												
VIVA PARADISE TOWN HOMES TEMPORARY POND SPILLWAY DESIGN												
Q100=	8.26											
ELEV=	0.00 Thalweg Elevation (ft)											
N=	0.035 Mannings N											
d50	0.500 Rip Rap (ft)											
S=	0.01000 Channel Slope (ft/ft)											
SS=	2 Average Side Slopes (SS:1)											
W=	10.0 Bottom Width (ft)											
A=	$W*D + SS*D^2/3$											
WP=	$2*(D^2 + SS^2*D^2)/2 + W$											
EG=	$V^2/2g$ g=32.2											
d50=	$V(S)^{1.77}/5.88$ 2:1 SS Max.											
N for Riprap	$N=0.0395(0.50^{1/6}) = 0.035$ Denver Urban Drainage Design Manual											
D	WS Elev	EG Elev	d50	Q	A	V	WP	1.49/N	(A/WP) ^{2/3}	(S) ^{1/2}		
0.10	0.10	0.11	0.00	0.76	1.02	0.74	14.00	42.57	0.17440	0.10000		
0.20	0.20	0.22	0.01	2.48	2.08	1.19	14.02	42.57	0.28025	0.10000		
0.30	0.30	0.34	0.02	5.03	3.18	1.58	14.04	42.57	0.37149	0.10000		
0.40	0.40	0.46	0.02	8.17	4.32	1.94	14.08	42.57	0.45492	0.10000		
0.50	0.50	0.58	0.03	12.49	5.50	2.27	14.12	42.57	0.53328	0.10000		
0.60	0.60	0.70	0.04	17.39	6.72	2.59	14.18	42.57	0.60796	0.10000		
0.70	0.70	0.83	0.05	23.09	7.98	2.89	14.24	42.57	0.67978	0.10000		
0.80	0.80	0.96	0.06	29.60	9.28	3.19	14.31	42.57	0.74928	0.10000		
0.90	0.90	1.09	0.07	36.93	10.62	3.48	14.39	42.57	0.81680	0.10000		
1.00	1.00	1.22	0.09	45.09	12.00	3.76	14.47	42.57	0.88260	0.10000		
1.10	1.10	1.35	0.10	54.10	13.42	4.03	14.57	42.57	0.94688	0.10000		
1.20	1.20	1.49	0.11	63.96	14.88	4.30	14.66	42.57	1.00976	0.10000		
1.30	1.30	1.62	0.13	74.71	16.38	4.56	14.77	42.57	1.07137	0.10000		
1.40	1.40	1.76	0.14	86.34	17.92	4.82	14.88	42.57	1.13181	0.10000		
1.50	1.50	1.90	0.16	98.88	19.50	5.07	15.00	42.57	1.19114	0.10000		
1.60	1.60	2.04	0.17	112.34	21.12	5.32	15.12	42.57	1.24943	0.10000		
1.70	1.70	2.18	0.19	126.73	22.78	5.56	15.25	42.57	1.30675	0.10000		
1.80	1.80	2.32	0.20	142.06	24.48	5.80	15.38	42.57	1.36315	0.10000		
1.90	1.90	2.47	0.22	158.35	26.22	6.04	15.52	42.57	1.41866	0.10000		
2.00	2.00	2.61	0.24	175.62	28.00	6.27	15.66	42.57	1.47334	0.10000		



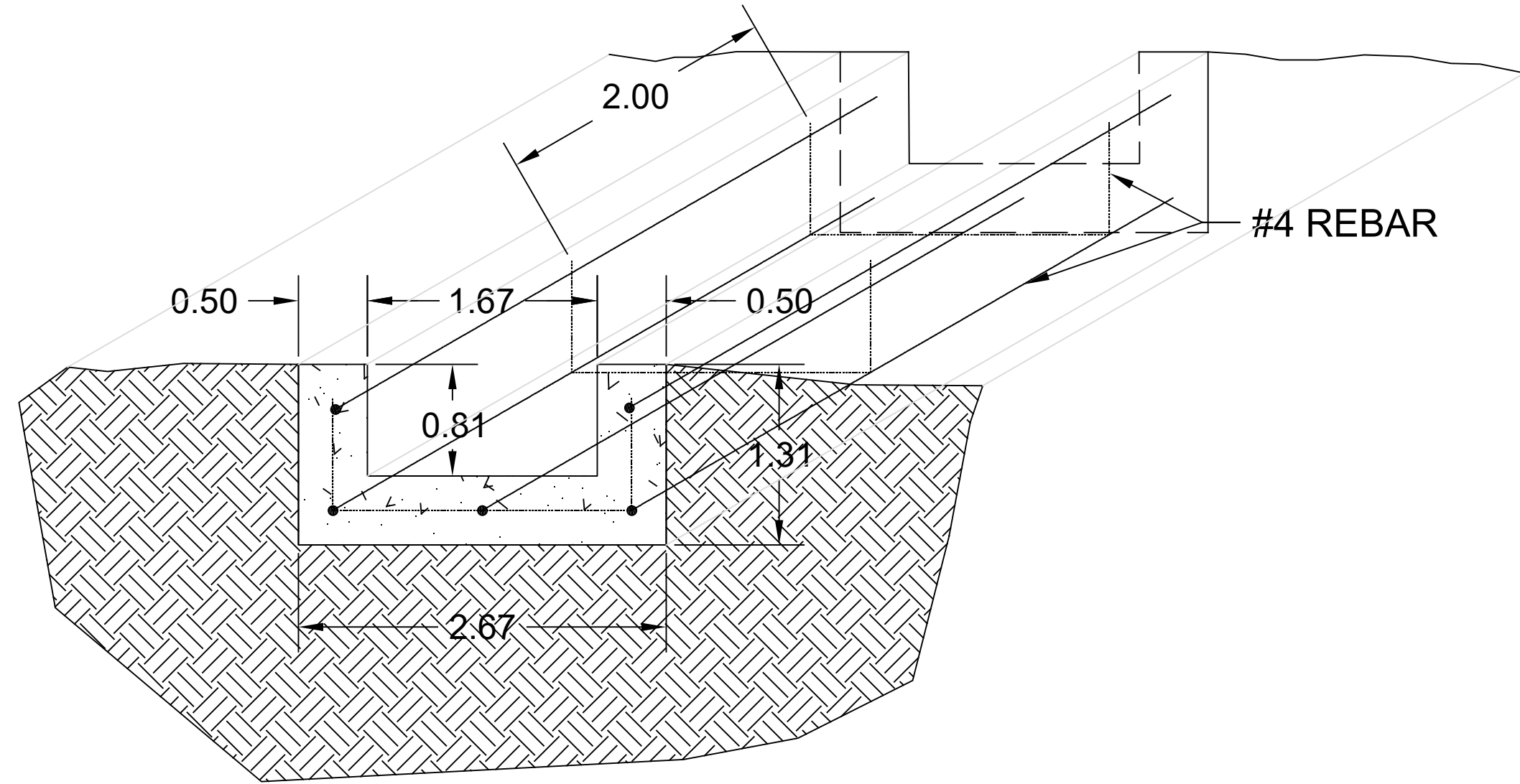
ZONE 1 DMP VALUES					
LAND TREATMENTS		LT-A	LT-B	LT-C	LT-D
UNIT PEAK DISCHARGE	(cfs/ac)	1.29	2.03	2.87	4.37
EXCESS PRECIPITATION	(in)	0.44	0.67	0.99	1.97

2.51 ac SITE CONDITIONS						
BASIN	AREA	LT-A	LT-B	LT-C	LT-D	DISCHARGE
	(sq ft)	(sq ft)	(sq ft)	(sq ft)	(sq ft)	(cfs)
EXISTING	109771	76820.72	0.00	13496.48	19454.00	5.12
100YR 10DAY TOTAL						9880
DEVELOPED	109771	20001.83	3202.62	27305.23	59261.52	8.49
100YR 10DAY TOTAL						839

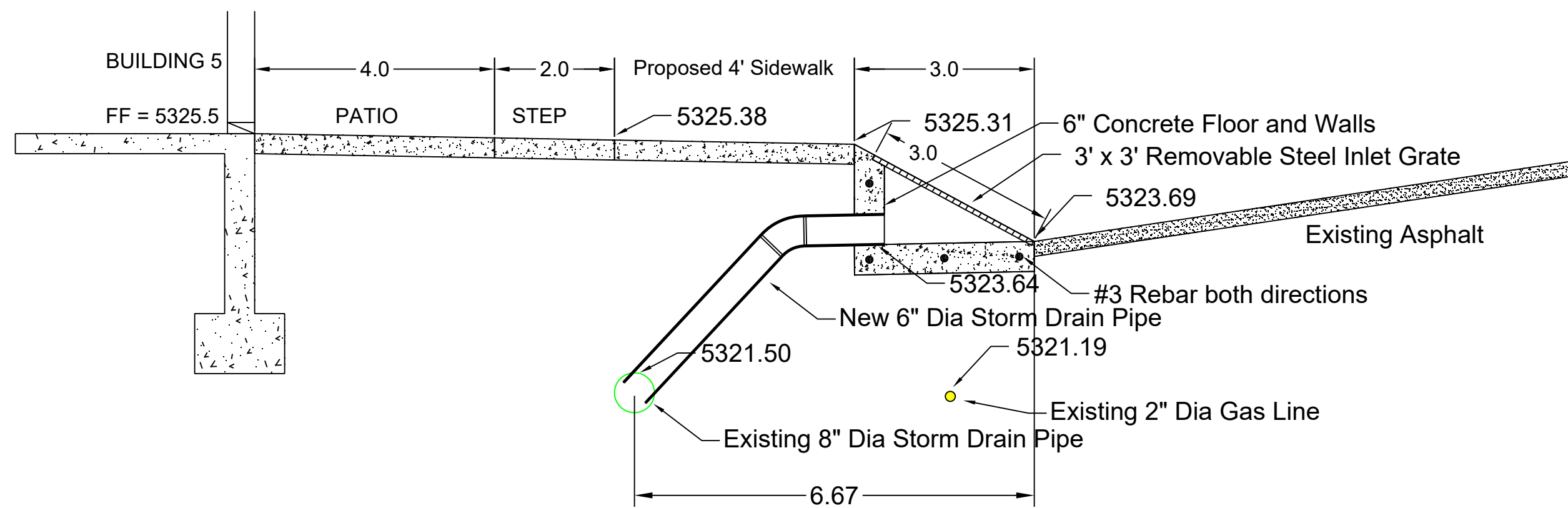


SPILLWAY DESIGN DETAIL

SCALE 1" = 2'

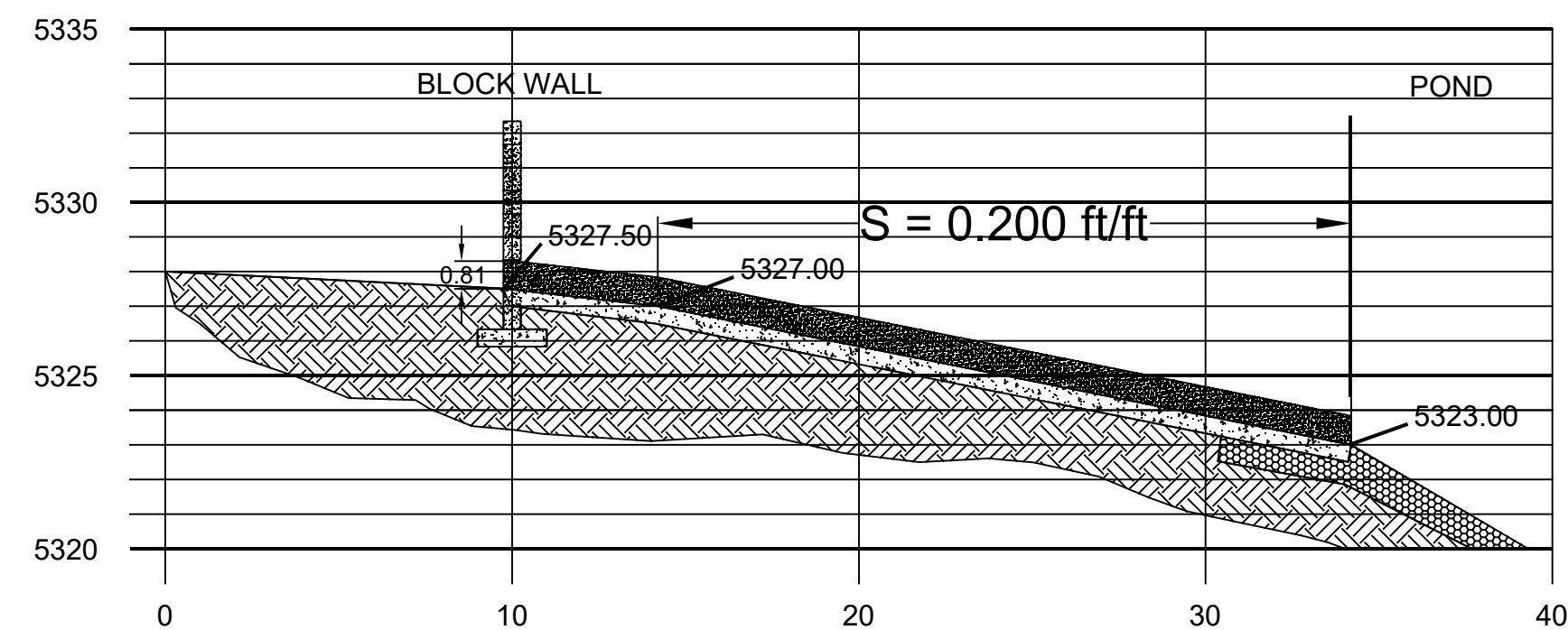


CONCRETE RUNDOWN CROSS SECTION

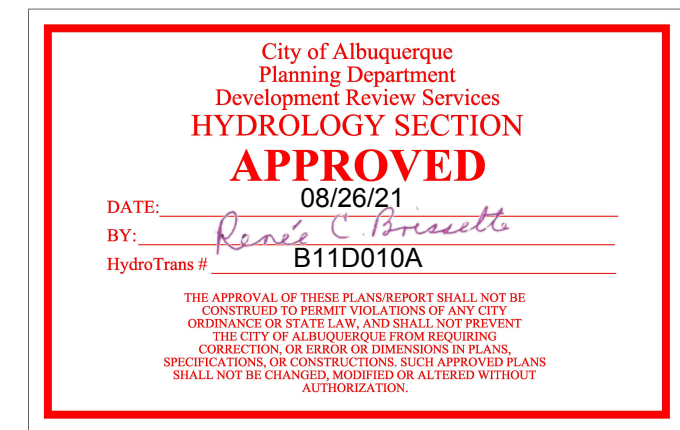
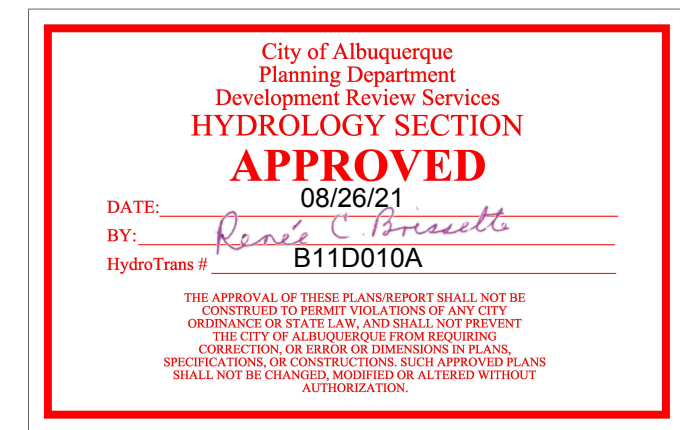


STORMDRAIN INLET DETAIL

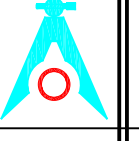
SCALE 1" = 2'



CONCRETE RUNDOWN PROFILE



AS BUILT INFORMATION		BENCHMARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		REMARKS		BY	
CONTRACTOR	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
WORK BY	DATE	INSPECTOR'S	DATE	ACCEPTANCE BY	DATE	VERIFICATION BY	DATE	DRAWINGS	DATE	CHECKED BY	DATE	DESIGNED BY	DATE
RECORDING INFORMATION	DATE	NO.											

 DON BRIGGS Engineering LLC		505-249-4843 donbriggseengineering@gmail.com 5324 Oakledge Ct. NW, Albuquerque, NM 87120	
TITLE: VIVA PARADISE TOWN HOMES REVISED GRADING AND DRAINAGE PLAN			
Design Review Committee	City Engineer Approval	Lost Design Update	Mo. / Day / Yr.
City Project No. PR-2019-2333	Zone Map No. B-11-Z	Sheet 4	Of 4