

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

February 3, 2020

Richard Dourte, P.E.
RHD Engineering, LLC.
4305 Purple Sage Ave. NW
Albuquerque, NM 87120

RE: **Community Baptist Church**
3030 Todo Santos NW
Grading Plan Stamp Date 1/25/20
Hydrology File: G10D029J

Dear Mr. Dourte:

Based on the submittal received on 1/27/20, this project is approved for Building Permit. 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.

Prior to Certificate of Occupancy (For Information):

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.
2. A Bernalillo County Recorded [Private Facility Drainage Covenant](#) is required for the stormwater quality pond. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee (\$25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Dana Peterson".

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

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Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

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: Community Baptist Church Building Permit #: _____ Hydrology File #: _____

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

Legal Description: Lot 3, Volcano Business Park

City Address: 3030 Todo Santos St. NW

Applicant: RHD Engineering, LLC Contact: Richard Dourte

Address: 4305 Purple Sage Ave. NW, Alb. NM, 87120

Phone#: 505.288.1621 Fax#: _____ E-mail: rhengineering@outlook.com

Other Contact: Simons Architecture PC Contact: Joe Simons

Address: _____

Phone#: _____ Fax#: _____ E-mail: joe@simonsarchitecture.com

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE ADMIN SITE

IS THIS A RESUBMITTAL? _____ Yes No

DEPARTMENT _____ TRANSPORTATION HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- ENGINEER/ARCHITECT CERTIFICATION
- PAD CERTIFICATION
- 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
- 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: January 25, 2020 By: Richard Dourte

COA STAFF: _____

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

APPENDIX A
FOR THE
COMMUNITY BAPTIST CHURCH
AT
3030 TODO SANTOS ST. NW

START TIME=0.0

***** TEST

RAINFALL TYPE=1 RAIN QUARTER=0.0IN
RAIN ONE=1.87 IN RAIN SIX=2.2 IN
RAIN DAY=2.66 IN DT=0.03333 HR

*****Developed Conditions

COMPUTE NM HYD ID=1 HYD NO=102 AREA=0.0016 SQ MI
PER A=0 PER B=0 PER C=31 PER D=69
TP=0.1500 HR MASS RAINFALL =-1

PRINT HYD ID=1 CODE=1

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR

ROUTE RESERVOIR	ID=3	HYD NO=106.02	INFLOW=1	CODE=1
	OUTFLOW(CFS)	STORAGE(AC-FT)	ELEV(FT)	
	0.0	0.00	28.75	
	0.1	.024	29.75	
	0.5	.125	32.0	

PRINT HYD ID=1 CODE=1

FINISH

AHYMO PROGRAM (AHYMO-S4) - Version:
 S4.01a - Rel: 01a
 RUN DATE (MON/DAY/YR) = 01/25/2020
 START TIME (HR:MIN:SEC) = 09:59:12 USER NO.=
 RHD-EngNMSingleA58820657
 INPUT FILE = d\Documents\Richard\RHD Engineering\5
 Simons Arch\125 Todos Santos\pondroute.txt

START TIME=0.0
 ***** TEST *****
 RAINFALL TYPE=1 RAIN QUARTER=0.0IN
 RAIN ONE=1.87 IN RAIN SIX=2.2 IN
 RAIN DAY=2.66 IN DT=0.03333 HR

6-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14
 FOR CONVECTIVE AREAS (NM & AZ) - D1

DT = 0.033330 HOURS		END TIME =				
5.999400	HOURS	0.0000	0.0015	0.0029	0.0045	0.0061
0.0077	0.0096	0.0114	0.0133	0.0154	0.0175	0.0219
0.0264	0.0311	0.0361	0.0412	0.0466	0.0521	0.0577
0.0635	0.0693	0.0753	0.0814	0.0878	0.0946	0.1014
0.1091	0.1168	0.1296	0.1477	0.1657	0.1898	0.2140
0.2429	0.2767	0.3105	0.3612	0.4120	0.4810	0.5686
0.6562	0.8890	1.1224	1.3042	1.4336	1.5629	1.6282
1.6932	1.7463	1.7873	1.8282	1.8567	1.8850	1.9097
1.9304	1.9512	1.9670	1.9827	1.9942	2.0015	2.0087
2.0151	2.0215	2.0273	2.0326	2.0378	2.0426	2.0474
2.0521	2.0568	2.0614	2.0636	2.0659	2.0681	2.0702
2.0724	2.0744	2.0764	2.0784	2.0803	2.0823	2.0842
2.0860	2.0879	2.0896	2.0914	2.0931	2.0948	2.0965
2.0982	2.0999	2.1015	2.1030	2.1046	2.1062	2.1077
2.1092	2.1107	2.1122	2.1136	2.1150	2.1164	2.1178
2.1192	2.1206	2.1220	2.1233	2.1246	2.1260	2.1273
2.1286	2.1299					

2.1374	2.1386	2.1312	2.1324	2.1337	2.1349	2.1362
2.1457	2.1469	2.1398	2.1410	2.1422	2.1434	2.1446
2.1536	2.1547	2.1480	2.1492	2.1503	2.1514	2.1525
2.1612	2.1622	2.1558	2.1569	2.1580	2.1591	2.1601
2.1684	2.1693	2.1633	2.1643	2.1653	2.1663	2.1673
2.1752	2.1762	2.1703	2.1713	2.1723	2.1733	2.1742
2.1818	2.1827	2.1771	2.1781	2.1790	2.1799	2.1809
2.1881	2.1890	2.1836	2.1845	2.1854	2.1863	2.1872
2.1941	2.1950	2.1898	2.1907	2.1916	2.1924	2.1933
2.2000		2.1958	2.1967	2.1975	2.1983	2.1992

 *****Developed Conditions

COMPUTE NM HYD ID=1 HYD NO=102 AREA=0.0016 SQ MI
 PER A=0 PER B=0 PER C=31 PER D=69
 TP=0.1500 HR MASS RAINFALL =-1

 K = 0.081750HR TP = 0.150000HR K/TP RATIO =
 0.545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 3.8734 CFS UNIT VOLUME = 0.9971
 B = 526.28 P60 = 1.8700
 AREA = 0.001104 SQ MI IA = 0.10000 INCHES
 INF = 0.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION
 NUMBER METHOD - DT = 0.033330

 K = 0.119130HR TP = 0.150000HR K/TP RATIO =
 0.794199 SHAPE CONSTANT, N = 4.514592
 UNIT PEAK = 1.2834 CFS UNIT VOLUME = 0.9897
 B = 388.14 P60 = 1.8700
 AREA = 0.000496 SQ MI IA = 0.35000 INCHES
 INF = 0.83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION
 NUMBER METHOD - DT = 0.033330

PRINT HYD ID=1 CODE=1

102.00

PARTIAL HYDROGRAPH

RUNOFF VOLUME = 1.68482 INCHES = 0.1438
 ACRE-FEET
 PEAK DISCHARGE RATE = 4.05 CFS AT 1.533 HOURS
 BASIN AREA = 0.0016 SQ. MI.

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR
 ROUTE RESERVOIR ID=3 HYD NO=106.02 INFLOW=1 CODE=1
 OUTFLOW(CFS) STORAGE(AC-FT)
 ELEV(FT)

0.0	0.00	28.75
0.1	.024	29.75
0.5	.125	32.0

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	28.75	0.000	0.00
0.03	0.00	28.75	0.000	0.00
0.07	0.00	28.75	0.000	0.00
0.10	0.00	28.75	0.000	0.00
0.13	0.00	28.75	0.000	0.00
0.17	0.00	28.75	0.000	0.00
0.20	0.00	28.75	0.000	0.00
0.23	0.00	28.75	0.000	0.00
0.27	0.00	28.75	0.000	0.00
0.30	0.00	28.75	0.000	0.00
0.33	0.00	28.75	0.000	0.00
0.37	0.00	28.75	0.000	0.00
0.40	0.00	28.75	0.000	0.00
0.43	0.00	28.75	0.000	0.00
0.47	0.00	28.75	0.000	0.00
0.50	0.00	28.75	0.000	0.00
0.53	0.00	28.75	0.000	0.00
0.57	0.00	28.75	0.000	0.00
0.60	0.00	28.75	0.000	0.00
0.63	0.00	28.75	0.000	0.00
0.67	0.00	28.75	0.000	0.00
0.70	0.00	28.75	0.000	0.00
0.73	0.00	28.75	0.000	0.00
0.77	0.00	28.75	0.000	0.00
0.80	0.00	28.75	0.000	0.00
0.83	0.00	28.75	0.000	0.00
0.87	0.00	28.75	0.000	0.00
0.90	0.01	28.75	0.000	0.00
0.93	0.03	28.75	0.000	0.00

0.97	0.05	28.76	0.000	0.00
1.00	0.09	28.77	0.000	0.00
1.03	0.14	28.78	0.001	0.00
1.07	0.20	28.80	0.001	0.00
1.10	0.26	28.82	0.002	0.01
1.13	0.32	28.86	0.003	0.01
1.17	0.37	28.89	0.003	0.01
1.20	0.44	28.94	0.005	0.02
1.23	0.51	28.99	0.006	0.02
1.27	0.62	29.05	0.007	0.03
1.30	0.77	29.13	0.009	0.04
1.33	0.98	29.22	0.011	0.05
1.37	1.25	29.35	0.014	0.06
1.40	1.70	29.51	0.018	0.08
1.43	2.42	29.73	0.024	0.10
1.47	3.23	29.91	0.031	0.13
1.50	3.83	30.12	0.040	0.16
1.53	4.05	30.35	0.051	0.21
1.57	3.92	30.58	0.061	0.25
1.60	3.55	30.79	0.071	0.28
1.63	3.09	30.97	0.079	0.32
1.67	2.63	31.13	0.086	0.35
1.70	2.21	31.26	0.092	0.37
1.73	1.86	31.36	0.096	0.39
1.77	1.58	31.44	0.100	0.40
1.80	1.35	31.50	0.103	0.41
1.83	1.16	31.56	0.105	0.42

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
1.87	1.01	31.60	0.107	0.43
1.90	0.89	31.63	0.108	0.43
1.93	0.79	31.65	0.109	0.44
1.97	0.71	31.67	0.110	0.44
2.00	0.62	31.69	0.111	0.44
2.03	0.55	31.70	0.111	0.45
2.07	0.47	31.70	0.111	0.45
2.10	0.41	31.70	0.111	0.45
2.13	0.36	31.69	0.111	0.45
2.17	0.32	31.69	0.111	0.44
2.20	0.29	31.68	0.111	0.44
2.23	0.26	31.67	0.110	0.44
2.27	0.23	31.66	0.110	0.44
2.30	0.21	31.64	0.109	0.44
2.33	0.19	31.63	0.108	0.43
2.37	0.18	31.61	0.108	0.43
2.40	0.16	31.60	0.107	0.43
2.43	0.14	31.58	0.106	0.43
2.47	0.12	31.56	0.105	0.42
2.50	0.11	31.54	0.105	0.42
2.53	0.09	31.53	0.104	0.42

2.57	0.08	31.51	0.103	0.41
2.60	0.07	31.48	0.102	0.41
2.63	0.06	31.46	0.101	0.40
2.67	0.05	31.44	0.100	0.40
2.70	0.04	31.42	0.099	0.40
2.73	0.04	31.40	0.098	0.39
2.77	0.03	31.38	0.097	0.39
2.80	0.03	31.36	0.096	0.39
2.83	0.02	31.33	0.095	0.38
2.87	0.02	31.31	0.094	0.38
2.90	0.02	31.29	0.093	0.37
2.93	0.02	31.27	0.092	0.37
2.97	0.01	31.25	0.091	0.37
3.00	0.01	31.22	0.090	0.36
3.03	0.01	31.20	0.089	0.36
3.07	0.01	31.18	0.088	0.35
3.10	0.01	31.16	0.087	0.35
3.13	0.01	31.14	0.086	0.35
3.17	0.01	31.12	0.085	0.34
3.20	0.01	31.10	0.085	0.34
3.23	0.01	31.08	0.084	0.34
3.27	0.01	31.06	0.083	0.33
3.30	0.01	31.04	0.082	0.33
3.33	0.01	31.02	0.081	0.33
3.37	0.01	31.00	0.080	0.32
3.40	0.01	30.98	0.079	0.32
3.43	0.01	30.96	0.078	0.32
3.47	0.01	30.94	0.078	0.31
3.50	0.01	30.92	0.077	0.31
3.53	0.01	30.91	0.076	0.31
3.57	0.01	30.89	0.075	0.30
3.60	0.01	30.87	0.074	0.30
3.63	0.01	30.85	0.073	0.30
3.67	0.01	30.83	0.073	0.29
3.70	0.01	30.82	0.072	0.29

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

3.73	0.01	30.80	0.071	0.29
3.77	0.01	30.78	0.070	0.28
3.80	0.01	30.76	0.070	0.28
3.83	0.01	30.75	0.069	0.28
3.87	0.01	30.73	0.068	0.27
3.90	0.01	30.71	0.067	0.27
3.93	0.01	30.70	0.067	0.27
3.97	0.01	30.68	0.066	0.27
4.00	0.01	30.67	0.065	0.26
4.03	0.01	30.65	0.064	0.26
4.07	0.01	30.64	0.064	0.26
4.10	0.01	30.62	0.063	0.25
4.13	0.01	30.60	0.062	0.25

4.17	0.01	30.59	0.062	0.25
4.20	0.01	30.58	0.061	0.25
4.23	0.01	30.56	0.060	0.24
4.27	0.01	30.55	0.060	0.24
4.30	0.01	30.53	0.059	0.24
4.33	0.01	30.52	0.058	0.24
4.37	0.01	30.50	0.058	0.23
4.40	0.01	30.49	0.057	0.23
4.43	0.01	30.48	0.057	0.23
4.47	0.01	30.46	0.056	0.23
4.50	0.01	30.45	0.055	0.22
4.53	0.01	30.44	0.055	0.22
4.57	0.01	30.42	0.054	0.22
4.60	0.01	30.41	0.054	0.22
4.63	0.01	30.40	0.053	0.22
4.67	0.01	30.38	0.052	0.21
4.70	0.01	30.37	0.052	0.21
4.73	0.01	30.36	0.051	0.21
4.77	0.01	30.35	0.051	0.21
4.80	0.01	30.34	0.050	0.20
4.83	0.01	30.32	0.050	0.20
4.87	0.01	30.31	0.049	0.20
4.90	0.01	30.30	0.049	0.20
4.93	0.01	30.29	0.048	0.20
4.97	0.01	30.28	0.048	0.19
5.00	0.01	30.27	0.047	0.19
5.03	0.01	30.26	0.047	0.19
5.07	0.01	30.24	0.046	0.19
5.10	0.01	30.23	0.046	0.19
5.13	0.01	30.22	0.045	0.18
5.17	0.01	30.21	0.045	0.18
5.20	0.01	30.20	0.044	0.18
5.23	0.01	30.19	0.044	0.18
5.27	0.01	30.18	0.043	0.18
5.30	0.01	30.17	0.043	0.17
5.33	0.01	30.16	0.042	0.17
5.37	0.01	30.15	0.042	0.17
5.40	0.01	30.14	0.042	0.17
5.43	0.01	30.13	0.041	0.17
5.47	0.01	30.12	0.041	0.17
5.50	0.01	30.11	0.040	0.16
5.53	0.01	30.10	0.040	0.16
5.57	0.01	30.10	0.039	0.16
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	0.01	30.09	0.039	0.16
5.63	0.01	30.08	0.039	0.16
5.67	0.01	30.07	0.038	0.16
5.70	0.01	30.06	0.038	0.16
5.73	0.01	30.05	0.038	0.15

5.77	0.01	30.04	0.037	0.15
5.80	0.01	30.03	0.037	0.15
5.83	0.02	30.03	0.036	0.15
5.87	0.02	30.02	0.036	0.15
5.90	0.02	30.01	0.036	0.15
5.93	0.02	30.00	0.035	0.14
5.97	0.02	29.99	0.035	0.14
6.00	0.02	29.99	0.035	0.14
6.03	0.02	29.98	0.034	0.14
6.07	0.02	29.97	0.034	0.14
6.10	0.01	29.96	0.034	0.14
6.13	0.01	29.96	0.033	0.14
6.17	0.01	29.95	0.033	0.14
6.20	0.01	29.94	0.033	0.13
6.23	0.00	29.93	0.032	0.13
6.27	0.00	29.92	0.032	0.13
6.30	0.00	29.92	0.031	0.13
6.33	0.00	29.91	0.031	0.13
6.37	0.00	29.90	0.031	0.13
6.40	0.00	29.89	0.030	0.13
6.43	0.00	29.89	0.030	0.12
6.47	0.00	29.88	0.030	0.12
6.50	0.00	29.87	0.029	0.12
6.53	0.00	29.86	0.029	0.12
6.57	0.00	29.86	0.029	0.12
6.60	0.00	29.85	0.028	0.12
6.63	0.00	29.84	0.028	0.12
6.67	0.00	29.83	0.028	0.12
6.70	0.00	29.83	0.027	0.11
6.73	0.00	29.82	0.027	0.11
6.77	0.00	29.81	0.027	0.11
6.80	0.00	29.81	0.027	0.11
6.83	0.00	29.80	0.026	0.11
6.87	0.00	29.79	0.026	0.11
6.90	0.00	29.79	0.026	0.11
6.93	0.00	29.78	0.025	0.11
6.97	0.00	29.77	0.025	0.10
7.00	0.00	29.77	0.025	0.10
7.03	0.00	29.76	0.025	0.10
7.07	0.00	29.76	0.024	0.10
7.10	0.00	29.75	0.024	0.10
7.13	0.00	29.74	0.024	0.10
7.17	0.00	29.73	0.023	0.10
7.20	0.00	29.71	0.023	0.10
7.23	0.00	29.70	0.023	0.10
7.27	0.00	29.69	0.023	0.09
7.30	0.00	29.68	0.022	0.09
7.33	0.00	29.67	0.022	0.09
7.37	0.00	29.66	0.022	0.09
7.40	0.00	29.65	0.022	0.09
7.43	0.00	29.64	0.021	0.09

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
7.47	0.00	29.63	0.021	0.09
7.50	0.00	29.62	0.021	0.09
7.53	0.00	29.61	0.021	0.09
7.57	0.00	29.60	0.020	0.09
7.60	0.00	29.59	0.020	0.08
7.63	0.00	29.58	0.020	0.08
7.67	0.00	29.57	0.020	0.08
7.70	0.00	29.56	0.019	0.08
7.73	0.00	29.55	0.019	0.08
7.77	0.00	29.54	0.019	0.08
7.80	0.00	29.53	0.019	0.08
7.83	0.00	29.53	0.019	0.08
7.87	0.00	29.52	0.018	0.08
7.90	0.00	29.51	0.018	0.08
7.93	0.00	29.50	0.018	0.07
7.97	0.00	29.49	0.018	0.07
8.00	0.00	29.48	0.018	0.07
8.03	0.00	29.47	0.017	0.07
8.07	0.00	29.47	0.017	0.07
8.10	0.00	29.46	0.017	0.07
8.13	0.00	29.45	0.017	0.07
8.17	0.00	29.44	0.017	0.07
8.20	0.00	29.43	0.016	0.07
8.23	0.00	29.43	0.016	0.07
8.27	0.00	29.42	0.016	0.07
8.30	0.00	29.41	0.016	0.07
8.33	0.00	29.40	0.016	0.07
8.37	0.00	29.40	0.015	0.06
8.40	0.00	29.39	0.015	0.06
8.43	0.00	29.38	0.015	0.06
8.47	0.00	29.37	0.015	0.06
8.50	0.00	29.37	0.015	0.06
8.53	0.00	29.36	0.015	0.06
8.57	0.00	29.35	0.014	0.06
8.60	0.00	29.35	0.014	0.06
8.63	0.00	29.34	0.014	0.06
8.67	0.00	29.33	0.014	0.06
8.70	0.00	29.33	0.014	0.06
8.73	0.00	29.32	0.014	0.06
8.77	0.00	29.31	0.013	0.06
8.80	0.00	29.31	0.013	0.06
8.83	0.00	29.30	0.013	0.05
8.87	0.00	29.29	0.013	0.05
8.90	0.00	29.29	0.013	0.05
8.93	0.00	29.28	0.013	0.05
8.97	0.00	29.28	0.013	0.05
9.00	0.00	29.27	0.012	0.05
9.03	0.00	29.26	0.012	0.05
9.07	0.00	29.26	0.012	0.05

9.10	0.00	29.25	0.012	0.05
9.13	0.00	29.25	0.012	0.05
9.17	0.00	29.24	0.012	0.05
9.20	0.00	29.23	0.012	0.05
9.23	0.00	29.23	0.011	0.05
9.27	0.00	29.22	0.011	0.05
9.30	0.00	29.22	0.011	0.05
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
9.33	0.00	29.21	0.011	0.05
9.37	0.00	29.21	0.011	0.05
9.40	0.00	29.20	0.011	0.05
9.43	0.00	29.20	0.011	0.04
9.47	0.00	29.19	0.011	0.04
9.50	0.00	29.19	0.010	0.04
9.53	0.00	29.18	0.010	0.04
9.57	0.00	29.18	0.010	0.04
9.60	0.00	29.17	0.010	0.04
9.63	0.00	29.17	0.010	0.04
9.67	0.00	29.16	0.010	0.04
9.70	0.00	29.16	0.010	0.04
9.73	0.00	29.15	0.010	0.04
9.77	0.00	29.15	0.010	0.04
9.80	0.00	29.14	0.009	0.04
9.83	0.00	29.14	0.009	0.04
9.87	0.00	29.14	0.009	0.04
9.90	0.00	29.13	0.009	0.04
9.93	0.00	29.13	0.009	0.04
9.97	0.00	29.12	0.009	0.04
10.00	0.00	29.12	0.009	0.04
10.03	0.00	29.11	0.009	0.04
10.07	0.00	29.11	0.009	0.04
10.10	0.00	29.11	0.009	0.04
10.13	0.00	29.10	0.008	0.04
10.17	0.00	29.10	0.008	0.03
10.20	0.00	29.09	0.008	0.03
10.23	0.00	29.09	0.008	0.03
10.27	0.00	29.09	0.008	0.03
10.30	0.00	29.08	0.008	0.03
10.33	0.00	29.08	0.008	0.03
10.37	0.00	29.07	0.008	0.03
10.40	0.00	29.07	0.008	0.03
10.43	0.00	29.07	0.008	0.03
10.47	0.00	29.06	0.008	0.03
10.50	0.00	29.06	0.007	0.03
10.53	0.00	29.06	0.007	0.03
10.57	0.00	29.05	0.007	0.03
10.60	0.00	29.05	0.007	0.03
10.63	0.00	29.05	0.007	0.03
10.67	0.00	29.04	0.007	0.03

10.70	0.00	29.04	0.007	0.03
10.73	0.00	29.04	0.007	0.03
10.77	0.00	29.03	0.007	0.03
10.80	0.00	29.03	0.007	0.03
10.83	0.00	29.03	0.007	0.03
10.87	0.00	29.02	0.007	0.03
10.90	0.00	29.02	0.006	0.03
10.93	0.00	29.02	0.006	0.03
10.97	0.00	29.01	0.006	0.03
11.00	0.00	29.01	0.006	0.03
11.03	0.00	29.01	0.006	0.03
11.07	0.00	29.00	0.006	0.03
11.10	0.00	29.00	0.006	0.03
11.13	0.00	29.00	0.006	0.02
11.17	0.00	29.00	0.006	0.02

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	0.00	28.99	0.006	0.02
11.23	0.00	28.99	0.006	0.02
11.27	0.00	28.99	0.006	0.02
11.30	0.00	28.99	0.006	0.02
11.33	0.00	28.98	0.006	0.02
11.37	0.00	28.98	0.006	0.02
11.40	0.00	28.98	0.005	0.02
11.43	0.00	28.97	0.005	0.02
11.47	0.00	28.97	0.005	0.02
11.50	0.00	28.97	0.005	0.02
11.53	0.00	28.97	0.005	0.02
11.57	0.00	28.96	0.005	0.02
11.60	0.00	28.96	0.005	0.02
11.63	0.00	28.96	0.005	0.02
11.67	0.00	28.96	0.005	0.02
11.70	0.00	28.95	0.005	0.02
11.73	0.00	28.95	0.005	0.02
11.77	0.00	28.95	0.005	0.02
11.80	0.00	28.95	0.005	0.02
11.83	0.00	28.95	0.005	0.02
11.87	0.00	28.94	0.005	0.02
11.90	0.00	28.94	0.005	0.02
11.93	0.00	28.94	0.005	0.02
11.97	0.00	28.94	0.004	0.02
12.00	0.00	28.93	0.004	0.02
12.03	0.00	28.93	0.004	0.02
12.07	0.00	28.93	0.004	0.02
12.10	0.00	28.93	0.004	0.02
12.13	0.00	28.93	0.004	0.02
12.17	0.00	28.92	0.004	0.02
12.20	0.00	28.92	0.004	0.02
12.23	0.00	28.92	0.004	0.02
12.27	0.00	28.92	0.004	0.02

12.30	0.00	28.92	0.004	0.02
12.33	0.00	28.91	0.004	0.02
12.37	0.00	28.91	0.004	0.02
12.40	0.00	28.91	0.004	0.02
12.43	0.00	28.91	0.004	0.02
12.47	0.00	28.91	0.004	0.02
12.50	0.00	28.91	0.004	0.02
12.53	0.00	28.90	0.004	0.02
12.57	0.00	28.90	0.004	0.02
12.60	0.00	28.90	0.004	0.02
12.63	0.00	28.90	0.004	0.01
12.67	0.00	28.90	0.004	0.01
12.70	0.00	28.90	0.003	0.01
12.73	0.00	28.89	0.003	0.01
12.77	0.00	28.89	0.003	0.01
12.80	0.00	28.89	0.003	0.01
12.83	0.00	28.89	0.003	0.01
12.87	0.00	28.89	0.003	0.01
12.90	0.00	28.89	0.003	0.01
12.93	0.00	28.88	0.003	0.01
12.97	0.00	28.88	0.003	0.01
13.00	0.00	28.88	0.003	0.01
13.03	0.00	28.88	0.003	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
13.07	0.00	28.88	0.003	0.01
13.10	0.00	28.88	0.003	0.01
13.13	0.00	28.88	0.003	0.01
13.17	0.00	28.87	0.003	0.01
13.20	0.00	28.87	0.003	0.01
13.23	0.00	28.87	0.003	0.01
13.27	0.00	28.87	0.003	0.01
13.30	0.00	28.87	0.003	0.01
13.33	0.00	28.87	0.003	0.01
13.37	0.00	28.87	0.003	0.01
13.40	0.00	28.86	0.003	0.01
13.43	0.00	28.86	0.003	0.01
13.47	0.00	28.86	0.003	0.01
13.50	0.00	28.86	0.003	0.01
13.53	0.00	28.86	0.003	0.01
13.57	0.00	28.86	0.003	0.01
13.60	0.00	28.86	0.003	0.01
13.63	0.00	28.86	0.003	0.01
13.67	0.00	28.85	0.002	0.01
13.70	0.00	28.85	0.002	0.01
13.73	0.00	28.85	0.002	0.01
13.77	0.00	28.85	0.002	0.01
13.80	0.00	28.85	0.002	0.01
13.83	0.00	28.85	0.002	0.01
13.87	0.00	28.85	0.002	0.01

13.90	0.00	28.85	0.002	0.01
13.93	0.00	28.84	0.002	0.01
13.97	0.00	28.84	0.002	0.01
14.00	0.00	28.84	0.002	0.01
14.03	0.00	28.84	0.002	0.01
14.07	0.00	28.84	0.002	0.01
14.10	0.00	28.84	0.002	0.01
14.13	0.00	28.84	0.002	0.01
14.17	0.00	28.84	0.002	0.01
14.20	0.00	28.84	0.002	0.01
14.23	0.00	28.84	0.002	0.01
14.27	0.00	28.83	0.002	0.01
14.30	0.00	28.83	0.002	0.01
14.33	0.00	28.83	0.002	0.01
14.37	0.00	28.83	0.002	0.01
14.40	0.00	28.83	0.002	0.01
14.43	0.00	28.83	0.002	0.01
14.47	0.00	28.83	0.002	0.01
14.50	0.00	28.83	0.002	0.01
14.53	0.00	28.83	0.002	0.01
14.57	0.00	28.83	0.002	0.01
14.60	0.00	28.83	0.002	0.01
14.63	0.00	28.82	0.002	0.01
14.67	0.00	28.82	0.002	0.01
14.70	0.00	28.82	0.002	0.01
14.73	0.00	28.82	0.002	0.01
14.77	0.00	28.82	0.002	0.01
14.80	0.00	28.82	0.002	0.01
14.83	0.00	28.82	0.002	0.01
14.87	0.00	28.82	0.002	0.01
14.90	0.00	28.82	0.002	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.93	0.00	28.82	0.002	0.01
14.97	0.00	28.82	0.002	0.01
15.00	0.00	28.82	0.002	0.01
15.03	0.00	28.82	0.002	0.01
15.07	0.00	28.81	0.002	0.01
15.10	0.00	28.81	0.002	0.01
15.13	0.00	28.81	0.002	0.01
15.17	0.00	28.81	0.001	0.01
15.20	0.00	28.81	0.001	0.01
15.23	0.00	28.81	0.001	0.01
15.27	0.00	28.81	0.001	0.01
15.30	0.00	28.81	0.001	0.01
15.33	0.00	28.81	0.001	0.01
15.37	0.00	28.81	0.001	0.01
15.40	0.00	28.81	0.001	0.01
15.43	0.00	28.81	0.001	0.01
15.47	0.00	28.81	0.001	0.01

15.50	0.00	28.81	0.001	0.01
15.53	0.00	28.80	0.001	0.01
15.57	0.00	28.80	0.001	0.01
15.60	0.00	28.80	0.001	0.01
15.63	0.00	28.80	0.001	0.01
15.67	0.00	28.80	0.001	0.01
15.70	0.00	28.80	0.001	0.01
15.73	0.00	28.80	0.001	0.01
15.77	0.00	28.80	0.001	0.01
15.80	0.00	28.80	0.001	0.00

PEAK DISCHARGE = 0.446 CFS - PEAK OCCURS AT HOUR

2.07

MAXIMUM WATER SURFACE ELEVATION = 31.699

MAXIMUM STORAGE = 0.1115 AC-FT INCREMENTAL TIME= 0.033330HRS

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH

102.00

RUNOFF VOLUME = 1.68482 INCHES = 0.1438 ACRE-FEET

PEAK DISCHARGE RATE = 4.05 CFS AT 1.533 HOURS
 BASIN AREA = 0.0016 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 09:59:12

DRAINAGE NARRATIVE:

1. THE MASTER DRAINAGE PLAN FOR THIS AREA ALLOTS 0.5CFS PER ACRE DISCHARGE TO THE REAR OF THE LOT. THE EASTERMOST 20' OF THIS LOT CONTAINS A DRAINAGE EASEMENT FOR THIS DISCHARGE. THE SITE IS 1.01ac, THUS THE SITE IS PERMITTED 0.5x1.01=0.50CFS DISCHARGE. THE PEAK DISCHARGE IS 0.45CFS (REFER TO SHEET 15 OF APPENDIX A).
2. THE STORM WATER QUALITY DISCHARGE REQUIREMENT IS 860CF. THE STORM WATER QUALITY POND PROVIDED IS 1060 CF, THE POND PROVIDED IS GREATER THAN THAT REQUIRED.
3. THE OUTFALL FOR THIS SITE WILL BE VIA A PIPE.
 THUS $Q = CA\sqrt{t(2GH)}$,
 WHERE $Q = 0.5CFS$
 $C = 0.60$
 $G = 32.2FT/S^2$
 $H = 2.0FT$
 THUS $A = 0.0734SF$ OR $D = 3.7"$, USE A 4" PIPE.
4. THE MAXIMUM WSE FOR THIS DISCHARGE FOR THIS SITE IS 31.70 (REFER TO SHEET 15 OF APPENDIX A).
5. APPENDIX A CONTAINS THE COMPUTATIONS FOR THE STORMWATER DISCHARGE WITH RESPECT TO THIS SITE.

GENERAL NOTES:

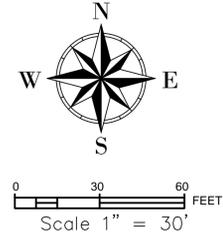
1. THIS SITE IS NOT LOCATED IN A FEMA FLOOD HAZARD ZONE (REFER TO THE FIRM MAP 35001C0326J, EXCERPT ATTACHED).
2. RHD ENGINEERING, LLC RECOMMENDS THAT THE OWNER OBTAIN A GEOTECHNICAL REPORT PRIOR TO DESIGN OF BUILDING FOOTING/FOUNDATION.
3. SLOPE STABILIZATION SHALL BE USED ON SLOPES GREATER THAN A 3:1 SLOPE, PER MANUFACTURER RECOMMENDATIONS.
4. MODIFICATIONS OR ADJUSTMENTS TO EXISTING DRAINAGE STRUCTURES/EROSION MITIGATION IMPROVEMENTS SHALL BE DONE IN THE SAME MANNER AS THE ORIGINAL IMPROVEMENT.
5. ALL SWPPP REQUIREMENTS SHALL BE ADHERED TO.
6. ALL WORK ON THIS PLAN SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARDS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO WORK COMMENCING.
7. ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARDS.
8. THIS GRADING PLAN IS TO BE UTILIZED AND A COPY PROVIDED TO THE CITY WHEN APPLYING FOR THE CONSTRUCTION OF ANY GARDEN OR RETAINING WALLS, WITH RESPECT TO THIS SITE.
9. THE SURVEY INFORMATION WAS PROVIDED BY CONSTRUCTION SURVEYS TECHNOLOGIES, INC.
10. FOR SITE DIMENSIONS, BUILDING AND INFRASTRUCTURE LOCATION REFER TO THE SITE PLAN.
11. DO NOT PLACE ADDITIONAL FILL OR LOADING ON ADJACENT WALLS WITHOUT APPROVAL OF A STRUCTURAL ENGINEER. CONTACT A STRUCTURAL ENGINEER FOR ADEQUACY OF THE EXISTING PERIMETER WALLS W/RESPECT TO THIS GRADING PLAN.

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

CAUTION:

EXISTING UTILITIES ARE NOT SHOWN; IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



VICINITY MAP: G-10-Z



FIRM MAP: 35001C0326J

LEGAL DESCRIPTION:

LOT 3, VOLCANO BUSINESS PARK
 CITY OF ALBUQUERQUE
 BERNALILLO COUNTY, NEW MEXICO

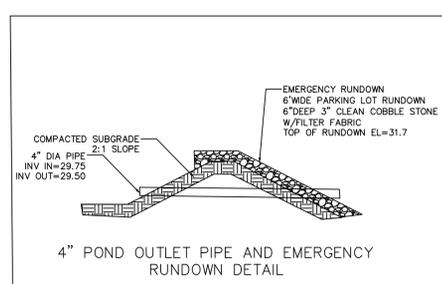
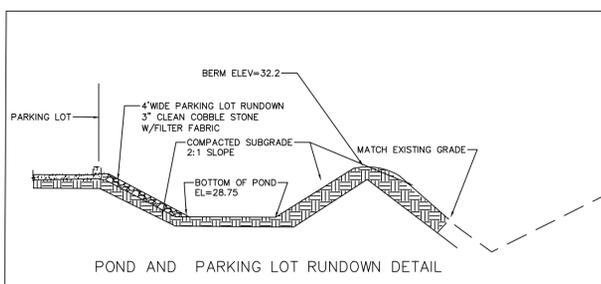
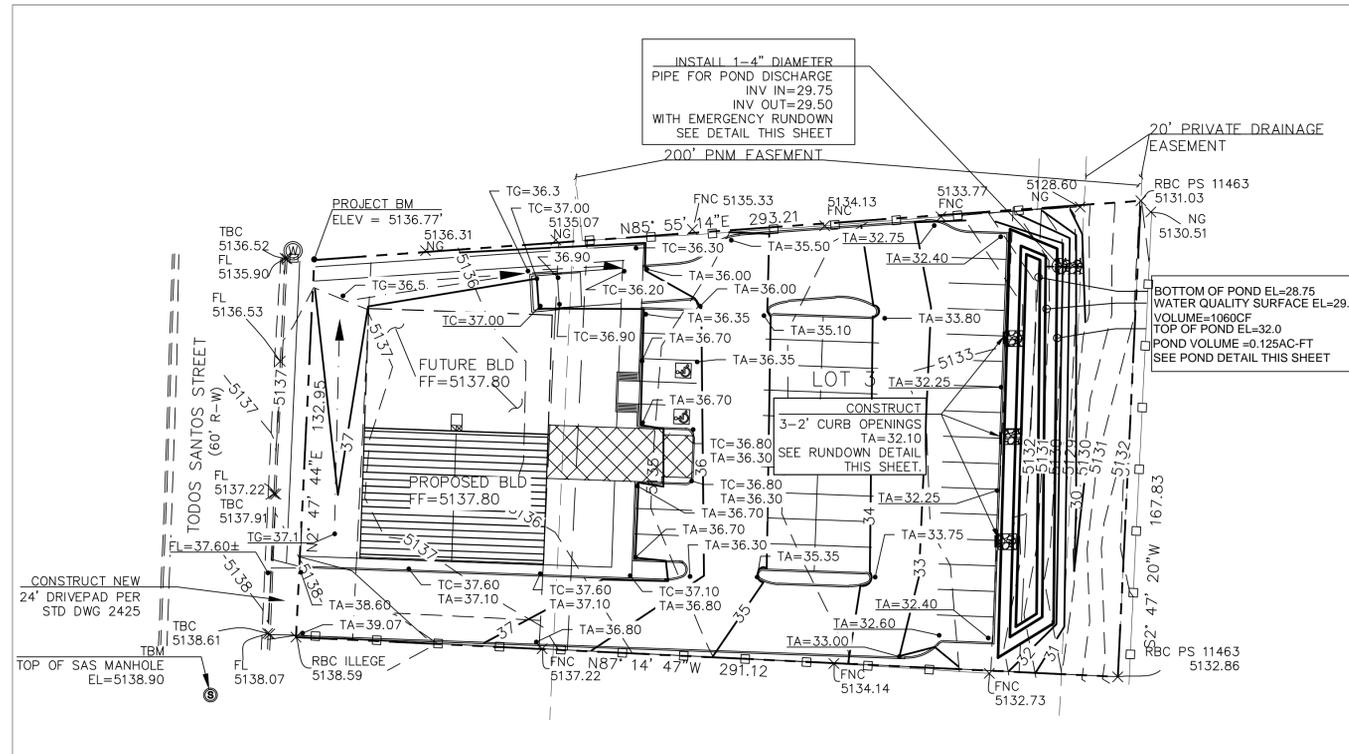
NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. RETAIN THE FIRST .34' OF STORM RUNOFF FROM ENTIRE DEVELOPMENT TO CONFORM TO THE WATER QUALITY REQUIREMENTS

LEGEND

- 36.00 PROPOSED SPOT ELEVATION
- NG=44.00 EXISTING SPOT ELEVATION
- 5601--- EXISTING CONTOUR EXISTING
- 5600--- INDEX CONTOUR PROPOSED
- 5601--- CONTOUR PROPOSED INDEX
- 5600--- CONTOUR
- LOT LINE
- EXISTING WALL
- EXISTING CURB AND GUTTER
- PROPOSED RETAINING WALL
- PROPOSED WALL
- PROPOSED EDGE OF CONCRETE
- PROPOSED FLOWLINE (.5'± SWALE)
- PROPOSED BASIN BOUNDARY

Project: Community Baptist Church - 3030 Todos Santos NW					
Drainage Calculations - Zone 1					
Depth (inches) at 100yr Storm					
Zone	P60	P360	P1440	P4days	P10days
1	1.87	2.20	2.66	3.12	3.67
2	2.01	2.35	2.75	3.30	3.95
3	2.14	2.60	3.10	3.95	4.90
4	2.23	2.90	3.65	4.70	5.95
Excess Precipitation, E(inches) - 6 HR Treatment					
Zone	A	B	C	D	
1	0.44	0.67	0.99	1.97	
2	0.53	0.78	1.13	2.12	
3	0.66	0.92	1.29	2.36	
4	0.80	1.08	1.46	2.64	
Peak Discharge (CFS/ACRE) 100 YR Treatment					
Zone	A	B	C	D	
1	1.29	2.03	2.87	4.37	
2	1.56	2.28	3.14	4.70	
3	1.87	2.60	3.45	5.02	
4	2.20	2.92	3.73	5.25	
Weighted E = ((Ea*As)+(Eb*Ab)+(Ec*Ac)+(Ed*Ad))/(Aa+Ab+Ac+Ad)					
V360 = (Weighted E * P360)/12 in/ft					
V1440 = V360*Ad*(P1440-P360)/12 in/ft					
V4days = V360*Ad*(P4days-P360)/12 in/ft					
V10days = V360*Ad*(P10days-P360)/12 in/ft					
*****EXISTING CONDITIONS*****					
Area	SQ. FT	Acres	% Total	Design Flows (CFS)	
A=	0	0.000	0%	Area SQ. FT Acres Peak Discharge (100 YR)	
B=	43780	1.005	100%	A= 0 0.000 0.00	
C=	0	0.000	0%	B= 43780 1.005 2.04	
D=	0	0.000	0%	C= 0 0.000 0.00	
Total	43780	1.005	100%	D= 0 0.000 0.00	
Weighted E=	0.670			Total (CFS) 2.04	
*****PROPOSED CONDITIONS*****					
Area	SQ. FT	Acres	% Total	Design Flows (CFS)	
A=	0	0.000	0%	Area SQ. FT Acres Peak Discharge (100 YR)	
B=	0	0.000	0%	A= 0 0.000 0.00	
C=	13417	0.308	31%	B= 0 0.000 0.00	
D=	30363	0.697	69%	C= 13417 0.308 0.88	
Total	43780	1.005	100%	D= 30363 0.697 3.05	
Weighted E=	1.670			Total (CFS) 3.93	
The 100 year peak flows for this developed site is 3.9 CFS and the existing flows are 2 CFS for an increase of 1.9 CFS. The 100 year 6 hr volume increase is 6091-2444 = 3647CF.					
Storm Water Quality Ponding Requirement = Ad * 0.34 in/12in/ft = 860 CF					



TEMPORARY BENCH MARK
 1-NW PROPERTY CORNER EL=5136.77
 2-EXISTING SAS MANHOLE EL=5138.90

I HAVE PERSONALLY INSPECTED THE PROPERTY ON 1-3-20. NO EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTENT WITH THE TOPO SHOWN.
 Richard Dourte
 Richard Dourte P.E. #10854 DATE

ENGINEER'S SEAL	Title: COMMUNITY BAPTIST CHURCH 3030 TODOS SANTOS NW	DRAWN BY
	GRADING AND DRAINAGE PLAN	DATE
	RHD Engineering, LLC 4305 Purple Sage Ave. NW ALBUQUERQUE, NM 87120 (505) 288-1621	SHEET # 1 of 1
Richard Dourte P.E. #10854	1-25-20	JOB #