

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

April 21, 2020

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

**RE: U-Haul
2217 4TH St. NW
Grading & Drainage Plan
Engineer's Stamp Date: 04/20/20
Hydrology File: H14D110**

Dear Mr. Bohannon:

PO Box 1293

Based upon the information provided in your submittal received 04/16/2020, the Grading & Drainage Plan is approved for Building Permit and SO-19 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

Also as a reminder, please provide a Drainage Covenant for the proposed Stormwater Quality Ponds and retention 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, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: U-Haul 4th St & I-40 Building Permit #: _____ Hydrology File #: _____
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: TR C of Alexander Center (Excl S'ly Port Out to R/W)
City Address: 2217 4th ST NW Albuquerque, NM

Applicant: Tierra West, LLC Contact: Jonathan Niski
Address: 5571 Midway Park Place NE Albuquerque NM 87109
Phone#: 505-858-3100 Fax#: 505-858-1118 E-mail: jniski@tierrawestllc.com

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

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: 4-16-2020 By: Jonathan Niski

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



TIERRA WEST, LLC

April 16, 2020

Renee C. Brissette, PE
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

**RE: U-HAUL -2217 4TH ST. NW
GRADING & DRAINAGE PLAN
ENGINEER'S STAMP DATE 01/28/20
HYDROLOGY FILE: H14D110**

Dear Ms. Brissette:

Please find the following responses addressing your comments listed below:

1. Please use the latest SO-19 Notes. See attachment.
The SO-19 notes were updated.
2. Please update your use of "First Flush". This is an old 1990s term and please update it with "Stormwater Quality" instead.
All of the wording was changed to stormwater quality.
3. Please provide an emergency spillway for both retention ponds by way of sidewalk culverts.
Sidewalk culverts were added to both ponds and daylight onto 4th Street.
4. Please provide a cross section of both retention ponds showing the 100 yr – 10 day volume, top of pond, bottom of pond, and the elevation of the emergency spillway (sidewalk culvert).
Cross-sections were added for both retention ponds with the information requested added to each cross-section.
5. Please add the broad crest weir equation (equation 6.60 in the DPM) for the 2ft curb cuts and the sidewalk culverts. A coefficient of 2.7 is typically used for the equation $Q=CLH^{2/3}$.
The equation was added to the sheet for each rundown.
6. Please reference City of Albuquerque standard detail No. 2236 – Sidewalk Culvert with steel Plate Top at the sidewalk culvert.
This referenced was added to the note calling out the sidewalk culverts.
7. Please update the SO-19 Permit Notes. See Attachment
The notes were updated.

5571 Midway Park Pl. NE
(505) 858-3100
Albuquerque, NM 87109
fax (505) 858-1118
1-800-245-3102
tierrawestllc.com

8. Please show and label the slump pump along with the force main. Also provide the cut sheet for the pump along with the performance curve.

The sump pump is labeled and a detail sheet with all of the pump information was created.

9. 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.

Erosion Control Plans are already approved by the City. The NOI will be completed once a contractor is selected and that paperwork will be sent to Doug at that time.

10. Also as reminder, please provide a Drainage Covenant for the proposed Stormwater Quality Ponds and retention 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.

The Drainage Covenants will be completed once we receive approval of the Grading and Drainage Plan and submitted prior to CO for the building.

11. Standard review fee of \$150 will be required at the time of resubmittal.

The fee will be submitted following the new guidelines at this time.

If you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

Sincerely,

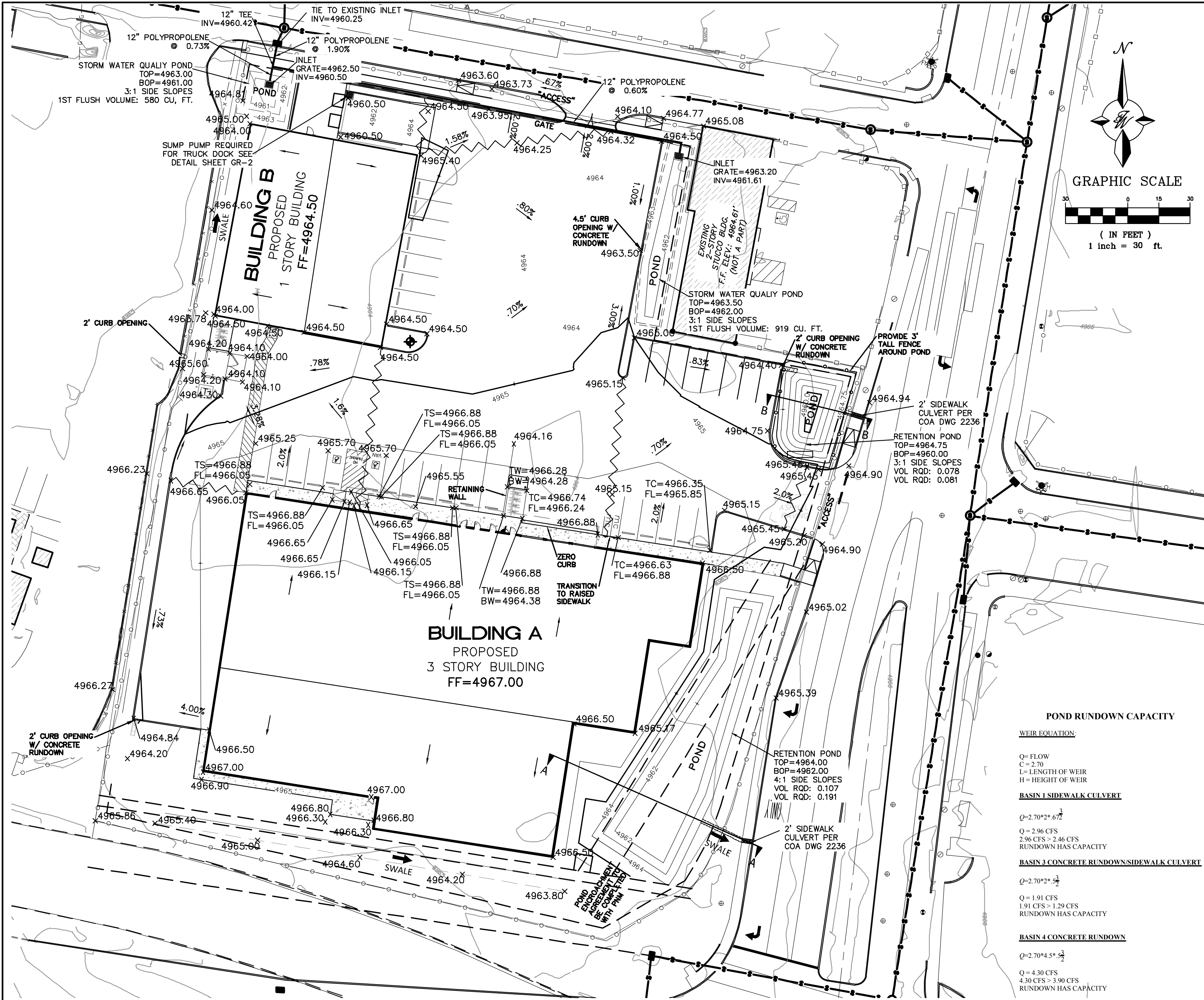


Ronald R. Bohannon, PE

cc:

JN: 2019070

RRB/jn/kw



LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- SIDEWALK
- RETAINING WALL
- CONTOUR MAJOR
- CONTOUR MINOR
- SPOT ELEVATION (FLOWLINE)
- FLOW ARROW
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR
- EXISTING SPOT ELEVATION
- EXISTING LIGHT STANDARD
- PHASE LINE

EXISTING DRAINAGE CONDITION:
THE SITE IS AN EXISTING UNDEVELOPED 2.5 ACRE LOT. THE SITE DRAINS FROM SOUTH TO NORTH AND THE SURFACE RUNOFF IS DISCHARGED INTO CUTLER AVE. WHERE IT IS CAPTURED BY AN EXISTING DROP INLET NEAR THE NORTHWEST CORNER OF THE SITE. THERE IS NO OFFSITE RUNOFF THAT ENTERS THE SITE. THE SITE MAY HAVE BEEN USED AS A GRAVEL PARKING LOT IN THE PAST. AS SUCH THE EXISTING LAND TREATMENT WAS CONSIDERED COMPACT GRAVEL WITH TREATMENT "C" GENERATING A RUNOFF OF 7.93 CFS. A PORTION OF THE SITE IS LOCATED IN SHADED ZONE X WITH THE REST IN ZONE X.

PROPOSED DRAINAGE CONDITION:
THE SITE WAS DIVIDED UP INTO SEVEN BASINS AS SHOWN ON THE BASIN MAP ON THIS SHEET. BASIN ONE CONSISTS OF THE BACK HALF OF THE LARGE BUILDING AND THE REAR LANDSCAPED AREA. THIS BASIN WILL DRAIN FROM WEST TO EAST IN A SWALE TO A RETENTION POND LOCATED BETWEEN THE BUILDING AND 4TH STREET. THE POND IS SIZED FOR THE 100YR, 10 DAY STORM AND IS ONLY 2 FEET DEEP. THAT POND WILL DISCHARGE INTO AN EXISTING OVERHEAD POWERLINE EASEMENT FOR WHICH AN ENCROACHMENT AGREEMENT WILL BE EXECUTED WITH PNM.

BASIN 2 CONTAINS THE WESTERN PORTION OF THE SITE AND THE BACK HALF OF THE SMALL BUILDING. THE RUNOFF WILL FLOW IN A SWALE BEHIND THE SMALL BUILDING TO A STORM WATER QUALITY POND LOCATED AT THE NORTHWEST CORNER OF THE SITE. THE POND IS SIZED TO HOLD THE FIRST FLUSH VOLUME BEFORE DISCHARGING 1.86 CFS INTO A DROP INLET.

BASIN 3 CONTAINS THE EASTERN PARKING LOT AND A SMALL PORTION OF THE LARGE BUILDING. THE RUNOFF WILL SURFACE FLOW TO A RETENTION POND SIZED FOR THE 100YR, 10 DAY STORM AND IS 4 FEET DEEP. THIS POND WILL BE SURROUNDED BY A FENCE TO KEEP PEDESTRIANS OUT.

BASIN 4 CONTAINS MOST OF THE PARKING LOT AND THE FRONT PORTION OF BOTH BUILDINGS. THE RUNOFF WILL SURFACE FLOW TO A STORM WATER QUALITY POND LOCATED IN THE NORTHEAST CORNER OF THE SITE. THE POND IS SIZED TO HOLD THE FIRST FLUSH VOLUME PRIOR TO DISCHARGING 5.90 CFS INTO A DROP INLET. THE STORM WATER FROM BASINS 2, 3 AND 4 WILL DISCHARGE 5.76 CFS VIA STORM SEWER TO THE EXISTING DROP INLET IN CUTLER AVE.

BASIN 5 CONSISTS OF A LOADING DOCK THAT WILL DRAIN TO A SUMP PUMP. THE SUMP PUMP WILL DISCHARGE THE STORM WATER INTO THE STORM WATER QUALITY POND BEHIND THE LOADING DOCK.

BASINS 6 AND 7 CONSIST OF THE ENTRANCE WATER BLOCKS AND WILL DISCHARGE A TOTAL OF .25 CFS TO CUTLER AVE AND 4TH STREET. THE TOTAL STORM WATER DISCHARGED FROM THE PROPOSED PROJECT IS 7.42 CFS WHICH IS BELOW THE EXISTING DISCHARGE OF 7.93.

POND RUNDOWN CAPACITY

WEIR EQUATION:

Q = FLOW
C = 2.70
L = LENGTH OF WEIR
H = HEIGHT OF WEIR

BASIN 1 SIDEWALK CULVERT

Q = 2.70 * 2 * 6.75
Q = 2.96 CFS
2.96 CFS > 2.46 CFS
RUNDOWN HAS CAPACITY

BASIN 3 CONCRETE RUNDOWN/SIDEWALK CULVERT

Q = 2.70 * 2 * 5.5
Q = 1.91 CFS
1.91 CFS > 1.29 CFS
RUNDOWN HAS CAPACITY

BASIN 4 CONCRETE RUNDOWN

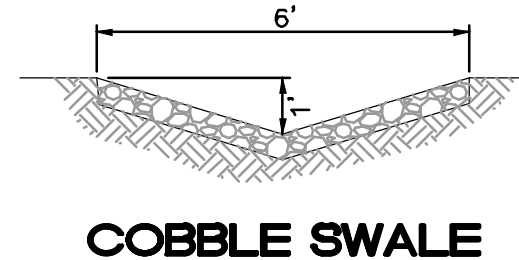
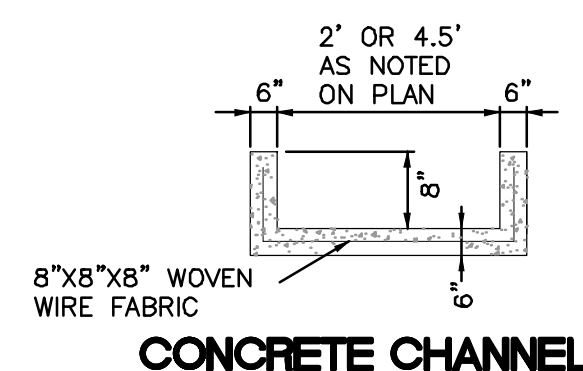
Q = 2.70 * 4 * 5.5
Q = 4.39 CFS
4.39 CFS > 3.90 CFS
RUNDOWN HAS CAPACITY

Pipe Capacity

Pipe	D (in)	Slope (%)	Area (ft²)	R	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
1	12	0.6	0.79	0.250	3.27	3.90	4.97
2	10	0.73	0.55	0.208	2.22	1.86	3.41
3	12	1.9	0.79	0.250	5.82	5.76	7.33

Manning's Equation:
 $Q = 1.49 \text{ in}^3 \cdot A \cdot R^{2/3} \cdot S^{1/2}$

A = Area
R = D/4
S = Slope
n = 0.011



Weighted E Method

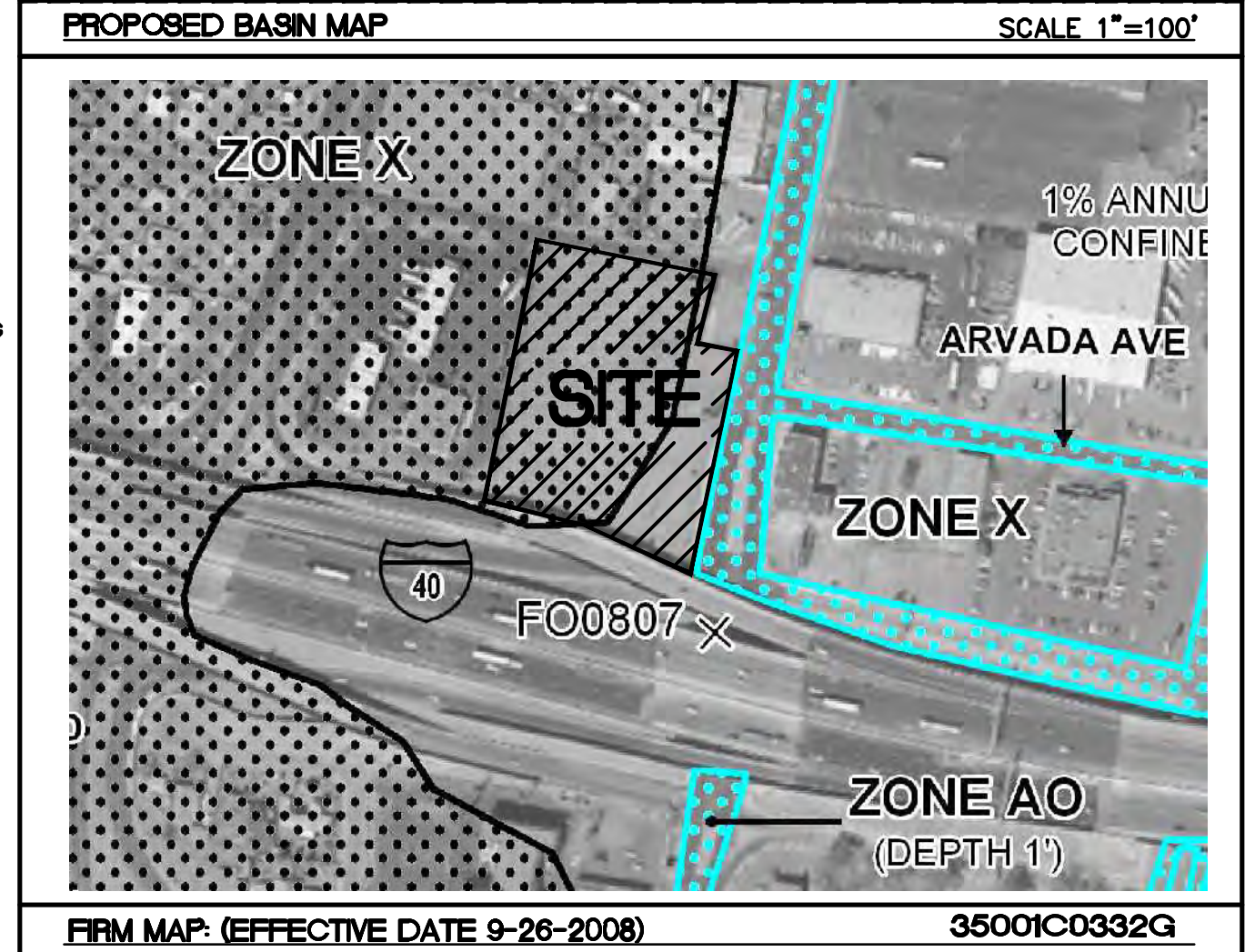
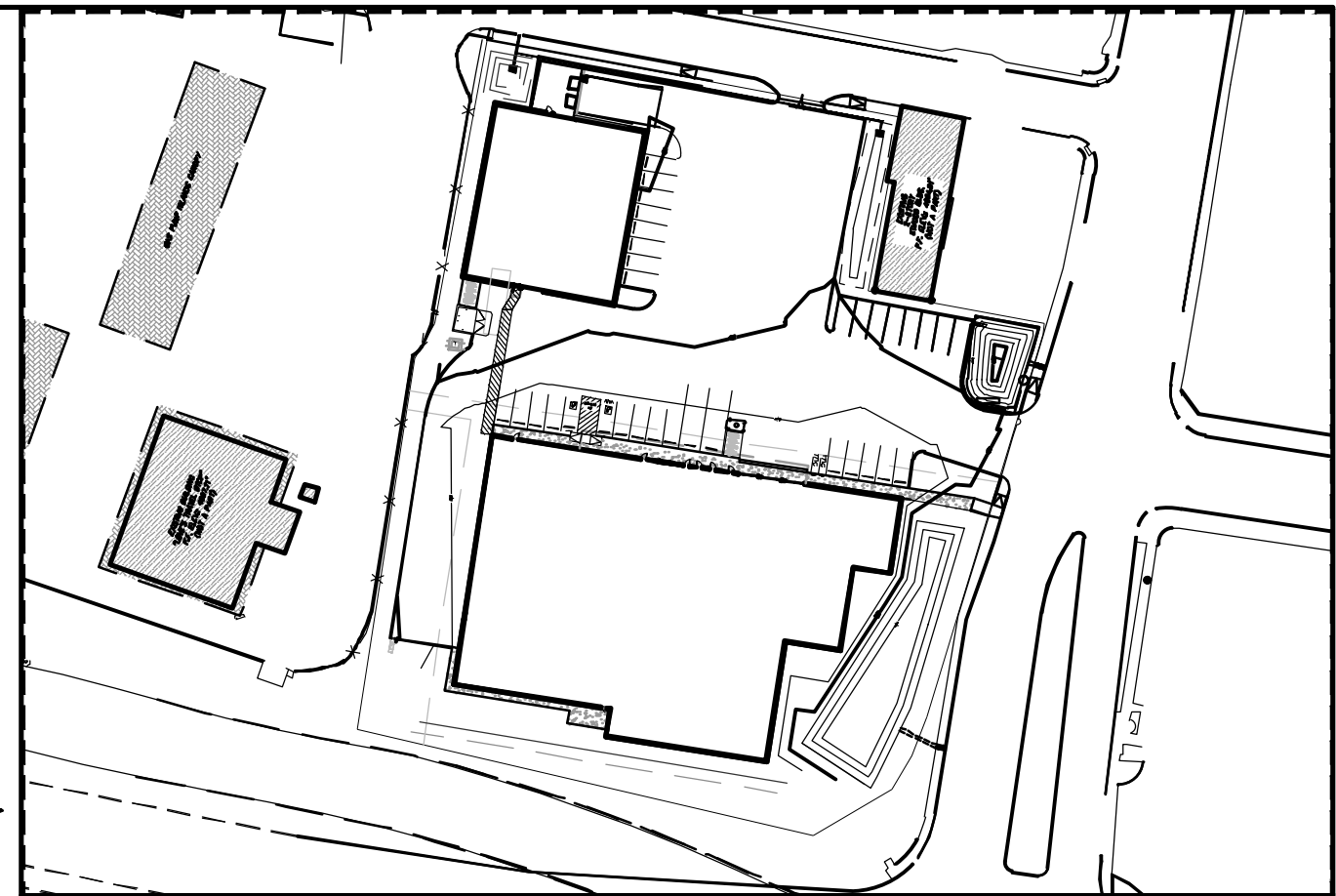
Developed On-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A %	100-Year, 6-Hr				Flow cfs	10-Year, 6-Hr				Flow cfs
				Treatment B %	Treatment C %	Treatment D %	Weighted E		Treatment B %	Treatment C %	Treatment D %	Weighted E	
1	36,471	0.84	0%	73%	0%	27%	1.142	0.080	0%	0%	0%	0.566	1.29
2	19,484	0.45	0%	22%	0%	78%	1.825	0.068	0%	0%	0%	1.107	1.19
3	13,027	0.30	0%	16%	0%	84%	1.906	0.047	0%	0%	0%	1.170	0.83
4	37,672	0.86	0%	8%	0%	92%	2.013	0.145	0%	0%	0%	1.255	2.56
5	1,106	0.03	0%	0%	0%	100%	2.120	0.004	0%	0%	0%	1.340	0.08
6	1,739	0.04	0%	0%	0%	100%	2.120	0.007	0%	0%	0%	1.340	0.13
7	600	0.01	0%	0%	0%	100%	2.120	0.002	0%	0%	0%	1.340	0.04

Total Discharge 6.13

Undeveloped On-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A %	100-Year, 6-Hr				Flow cfs
				Treatment B %	Treatment C %	Treatment D %	Weighted E	
1	110,000	2.53	0%	0%	0%	100%	1.130	7.93



Private Drainage Facilities within City Right-Of-Way
Notice to Contractor
(Special Order 19 ~ "SO-19")

1. An excavation permit will be required before beginning any work within City Right-Of-Way.
2. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
3. Two working days prior to any excavation, the contractor must contact New Mexico One Call, dial "811" [or (505) 260-1990] for the location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to traffic/street use.
6. Maintenance of the facility shall be the responsibility of the owner of the property being served.
7. Work on arterial streets may be required on a 24-hour basis.
8. Contractor must contact Augie Armijo at (505) 857-8607 and Construction Coordination at 924-3416 to schedule an inspection.

STORMWATER QUALITY

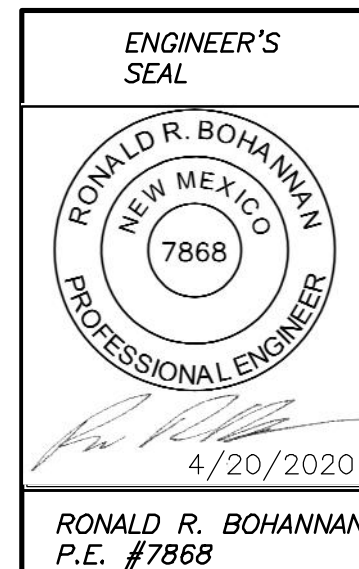
WATER QUALITY MEASURES WILL CONSIST OF RETENTION PONDS SIZED TO RETAIN THE STORMWATER QUALITY VOLUME FROM THE DEVELOPED AREAS. FLOWS WILL BE CONVEYED TO THE PONDS PRIMARILY BY SURFACE DRAINAGE AS WELL AS A PRIVATE STORM DRAIN SYSTEM BETWEEN BUILDINGS "A" AND "B". DRAINAGE VOLUMES IN EXCESS OF THE STORMWATER QUALITY WILL BE DISCHARGED THROUGH A PROPOSED STORM DRAIN SYSTEM AND INTO THE EXISTING PUBLIC STORM DRAIN WITHIN 4TH STREET.

STORMWATER QUALITY CALCULATIONS

BASIN 1: 9847 x .32"/12" = 213 CU.FT.
BASIN 2: 15246 x .32"/12" = 329 CU.FT.
BASIN 3: 10890 x .32"/12" = 237 CU.FT.
BASIN 4: 34848 x .32"/12" = 751 CU.FT.
BASIN 5: 1307 x .32"/12" = 94 CU.FT.
BASIN 6: 1742 x .32"/12" = 38 CU.FT.
BASIN 7: 436 x .32"/12" = 15 CU.FT.
TOTAL STORMWATER QUALITY VOLUME = 1877 CU.FT.

CAUTION:

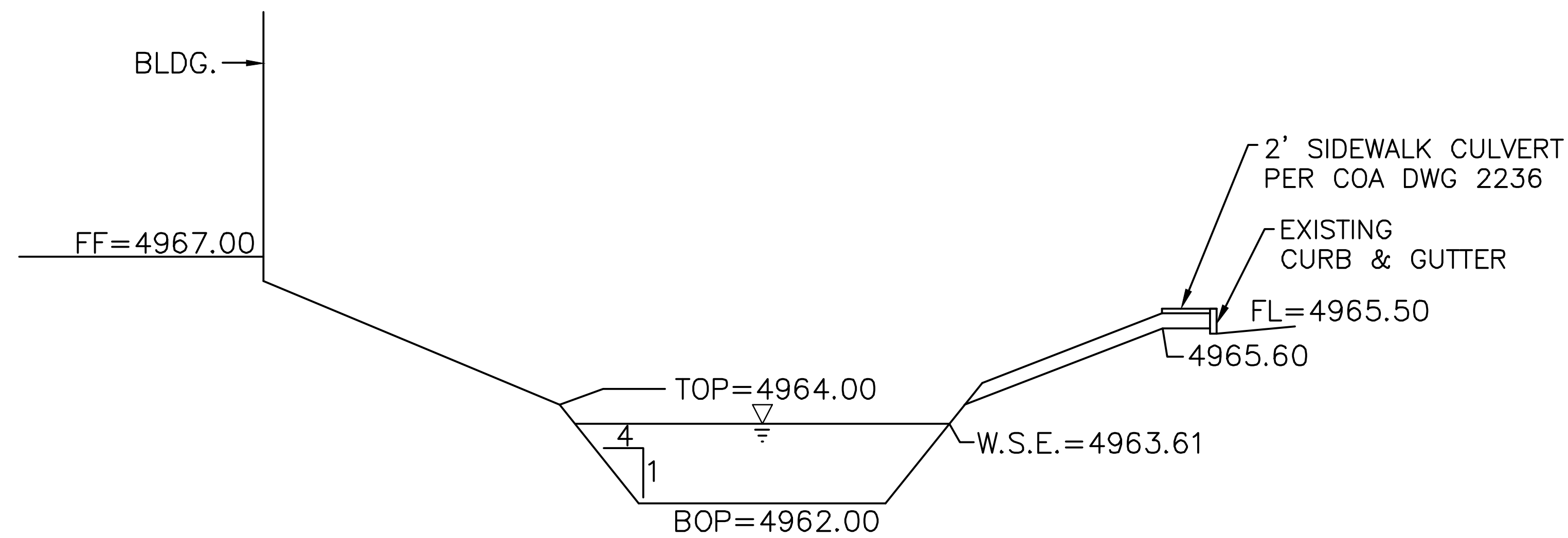
ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND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



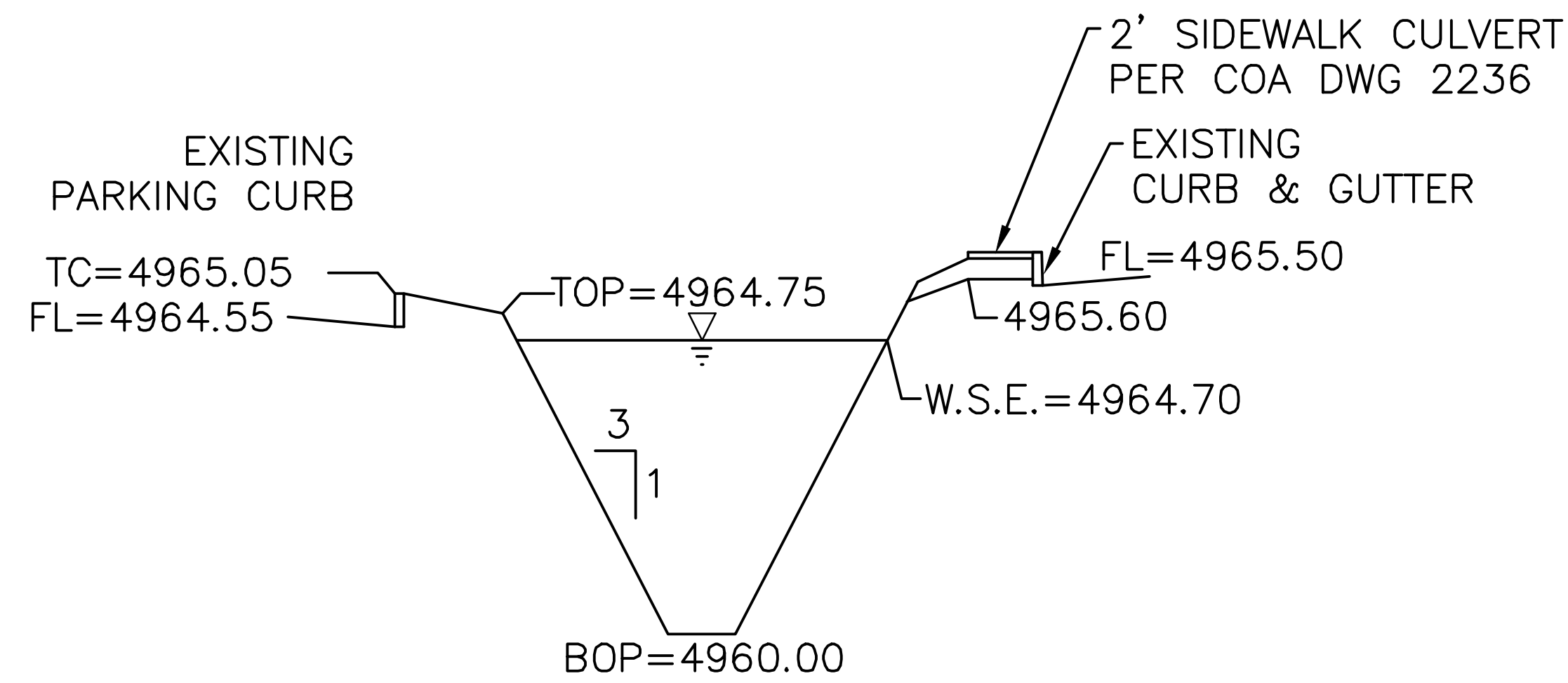
U-HAUL
4TH AND I-40
GRADING AND DRAINAGE
PLAN

TERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
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
DRAWN BY
RMG
DATE
04/20/2020
2019070-GR
SHEET #
C-2
JOB #
2019070



SECTION A-A
NTS



SECTION B-B
NTS

ENGINEER'S SEAL  RONALD R. BOHANNAN P.E. #7868	U-HAUL		DRAWN BY RMG
	4TH AND I-40		DATE 04/20/2020
	GRADING AND DRAINAGE PLAN - SECTIONS		2019070-GR
	 TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com		SHEET # C-4
			JOB # 2019070