CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

May 2, 2019

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

RE: Starbucks at Menaul & Carlisle
3535 Menaul Blvd. NE
Grading and Drainage Plan
Engineer's Stamp Date: 04/16/19
Hydrology File: H16D083E

Dear Mr. Thompson:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your resubmittal received 04/24/2019, the Grading and Drainage Plan is approved for Building Permit, Grading Permit and SO-19 Permit and for action by the DRB on the Preliminary/Final Plat.

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 (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

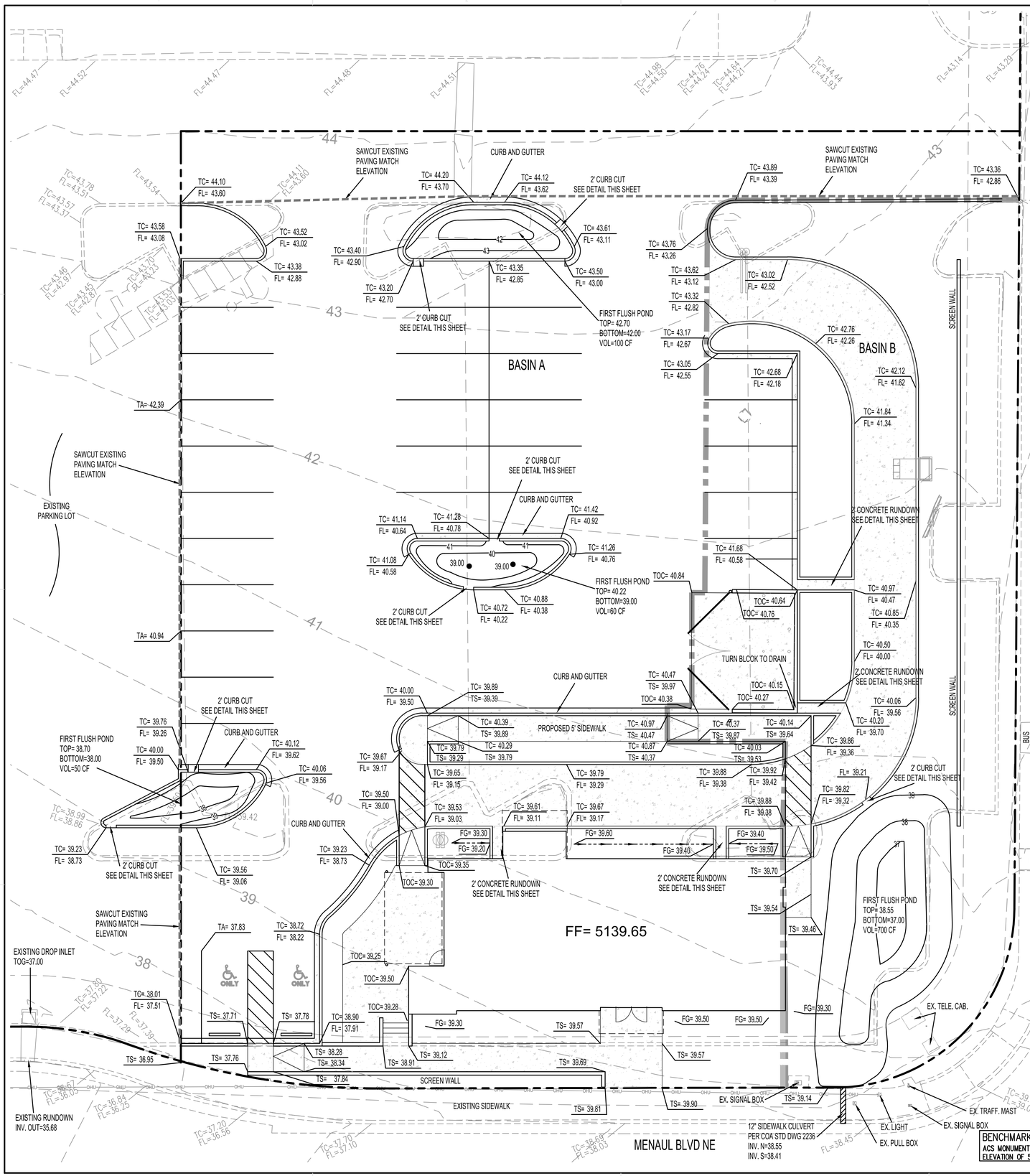
Also as a reminder, please provide Drainage Covenant for the stormwater quality ponds per Chapter 17 of the DPM prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A $25 fee will be required.

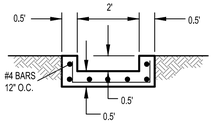
If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

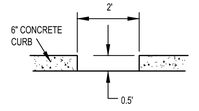
Renée C. Brissette

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

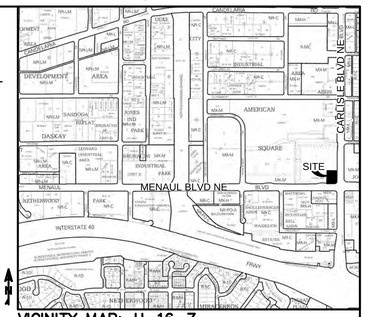




2' WIDE CONCRETE RUNDOWN
NTS



2' CURB CUT
NTS



VICINITY MAP: H–16–Z

DRAINAGE PLAN

LEGAL DESCRIPTION: FUTURE PARCEL FROM OF LOT 2, AMERICAN SQUARE

SITE AREA: 0.686 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35001C0351H) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN.

EXISTING DRAINAGE CONDITIONS:

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH SETION 22 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM), ENTITLED "DRAINAGE, FLOOD CONTROL, AND EROSION CONTROL." THE DESIGN STORM USED FOR BOTH UNDEVELOPED AND DEVELOPED CONDITIONS IS THE 100-YEAR, 24-HOUR STORM EVENT FOR RUNOFF. THE SITE IS LOCATED IN ZONE 1 SO THE 100-YEAR, 24-HOUR STORM EVENT IS 2.66 INCHES. UNDER EXISTING CONDITIONS, THE FUTURE PARCEL IS A PARKING LOT WITH LAND TREATMENTS B, C, AND D.

THE FUTURE PARCEL IS LOCATED IN THE NEAR NORTHEAST ALBUQUERQUE AT THE CORNER OF THE CARLISLE/MENAUL INTERSECTION. CURRENTLY THE SITE DRAINS FROM NORTHEAST TO SOUTHWEST TO THE AMERICAN FURNITURE PARKING AREA. THE EXISTING PEAK RUNOFF FROM THE FUTURE PARCEL UNDER EXISTING CONDITIONS IS 3.13 CFS AND 5,070 CUBIC FEET OF RUNOFF VOLUME DURING A 100-YEAR, 6-HOUR STORM. THERE ARE NO OFF-SITE FLOWS THAT REACH THE PROPERTY.

DEVELOPED DRAINAGE CONDITIONS:

THIS PROJECT INVOLVES THE CONSTRUCTION OF A STARBUCKS COFFEE SHOP WITH PARKING AND LANDSCAPING. THE SITE HAS BEEN DIVIDED INTO TWO DRAINAGE BASINS. BASIN A INCLUDES THE WESTERN MAJORITY OF THE SITE. BASIN A DRAINS TO THE SOUTHWEST CORNER OF THE SITE TO AN EXISTING INLET WEST OF THE SITE. FIRST FLUSH PONDS ARE LOCATED IN SOME OF THE LANDSCAPED ISLANDS. THE RUNOFF FROM BASIN A IS 2.24 CFS. BASIN B INCLUDES THE EAST PROTION OF THE SITE. BASIN B WILL DRAIN TO THE SOUTHEAST PART OF THE SITE TO A FIRST FLUSH POND, WHICH HAS AN OVERFLOW INTO MENAUL BLVD. THROUGH A 24-INCH SIDEWALK CULVERT. RUNOFF FROM BASIN B IS 0.63 CFS. FIRST FLUSH POND VOLUME TOTALS 1,010 CUBIC FEET.

FIRST FLUSH = (0.34IN/12INFT) x (((0.50 x .892) + (0.186 x .33)) x 43,560SF/AC) = 626 CF REQUIRED, 910 CF PROVIDED

SIDEWALK CULVERT CAPACITY, WEIR EQUATION = (2.7) x (1FT) X (7IN/12IN/FT)^1.5 = 1.2 CFS

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT A (%)	B (%)	C (%)	D (%)	WEIGHTED E (in)	100-YEAR PRECIPITATION V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(24-hr) (acre-ft)	V(24-hr) (cu-ft)	Q (cfs)
EXISTING CONDITIONS											
SITE	0.6880	0.00	3.60	92.80		2.04	0.12	5,085	0.14	6,012	3.14
TOTAL RUNOFF	0.688						0.12	5,085	0.14	6,012	3.14
PROPOSED CONDITIONS											
BASIN A	0.4760	0.00	6.40	6.50	87.10	1.97	0.08	3,404	0.09	4,006	2.12
BASIN B	0.2120	0.00	31.20	31.20	37.60	1.39	0.02	1,072	0.03	1,168	0.73
TOTAL RUNOFF	0.688						0.10	4,476	0.12	5,193	2.85
EXCESS PRECIP.		0.53	0.78	1.13	2.12	E_c (in)					
PEAK DISCHARGE		1.56	2.28	3.14	4.7	Q_m (cfs)					

WEIGHTED E (in) = $(E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$
V_{6HR} (acre-ft) = (WEIGHTED E)(AREA)/12
V_{100DAY} (acre-ft) = $V_{6HR} + (Ac)(P_{100DAY} - P_{6HR})/12$
Q (cfs) = $(Q_m)(A_A) + (Q_m)(A_B) + (Q_m)(A_C) + (Q_m)(A_D)$

ZONE = 2
P_{6HR} (in.) = 2.35
P_{24HR} (in.) = 2.75
P_{100DAY} (in.) = 3.95

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 HENRY BLAIR AT (505) 203-7358 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE AN INSPECTION.

LEGEND

TC= TOP OF CURB	EXISTING STORM INLET
FL= FLOW LINE	PROPOSED CURB
TS= TOP OF SIDEWALK	PROPOSED CURB AND GUTTER
TOC= TOP OF CONCRETE	PROPOSED HANDICAP RAMP
TA= TOP OF ASPALT	PROPERTY BOUNDARY
FG= FINISHED GRADE	BASIN BOUNDARY
EXISTING CONTOURS	PROPOSED CHEVRON STRIPES
EXISTING CURB & GUTTER	PROPOSED CONCRETE
EXISTING SIDEWALK	PROPOSED SWALE
EXISTING STORM DRAIN	

Thompson Engineering Consultants, Inc.
tecnm@yahoo.com
P.O. BOX 65760 ALBUQUERQUE, NM 87193
PHONE: (505) 271-2199
FAX: (505) 830-9246

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10 5 0 5 10

SCALE: 1"=10'

ARCHITECT

ENGINEER

PROJECT

Starbucks Shell
Grading and Drainage Plan
Northwest Corner of Carlisle & Menaul
Albuquerque, New Mexico

REVISIONS

DRAWN BY	DEM
REVIEWED BY	DBT
DATE	4-2-19
PROJECT NO.	X
DRAWING NAME	

Starbucks Shell
Grading and Drainage Plan

SHEET NO.

C1 OF 3