CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

September 17, 2019

Sheldon Greer, P.E.
Respec
5971 Jefferson St. NE
Albuquerque, NM 8710

RE: UHaul 4th St & I40
2217 4th St NW
Revised Conceptual Grading and Drainage Plan
Engineer's Stamp Date: 09/11/19
Hydrology File: H14D110

Dear Mr. Greer:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 09/11/2019, the Revised Conceptual Grading & Drainage Plan and Drainage Report are approved for action by the DRB on Site Plan 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 (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

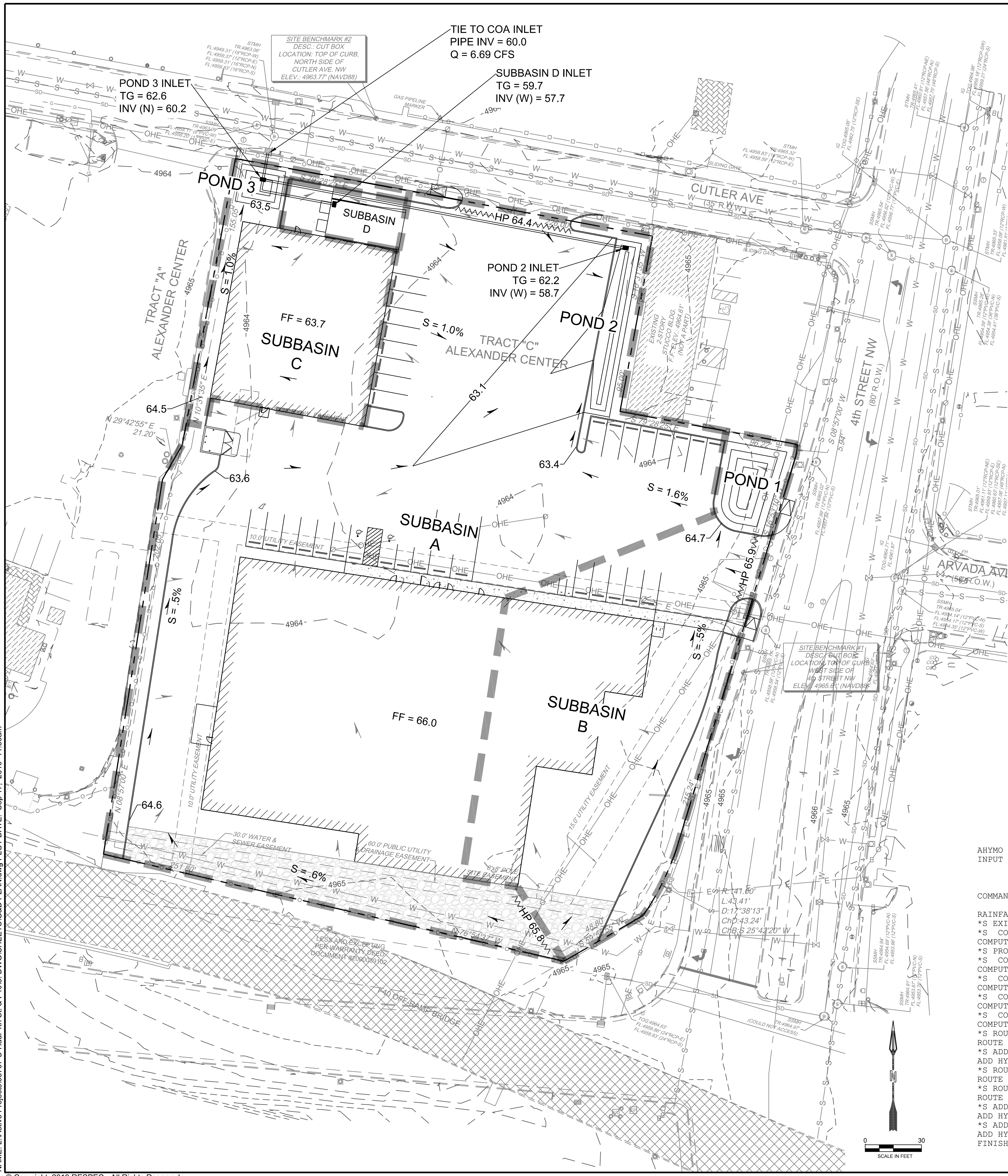
Also as a reminder, please provide a Drainage Covenant for the proposed Stormwater Quality Pond per Chapter 17 of the DPM prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A $25 fee will be required.

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



Background

Tract C, Alexander Center contains approximately 2.5 acres. The site is located on the southwest corner of Cutler Ave. and 4th St. The site is to be developed into a self-storage facility containing two buildings and a parking lot.

Methodology

The hydrology analysis was performed for the site in accordance with the Albuquerque Development Process Manual (DPM). AHYMO-S4 (April 2018) was used to develop peak flow rates for the 100-year 24-hour design storm in accordance with Section 22.2 of the DPM. Hydraulic calculations were performed using Section 22.3 of the DPM.

Existing Conditions

The site does not receive any offsite runoff from developed areas and is currently undeveloped with mild vegetation. The site appears to have been used for parking previously containing gravel surfacing creating mostly type "C" land treatment type. In general, the site surface drains from southeast to northwest at minimal slopes. The existing conditions of the site generate a peak runoff rate of 7.49 CFS.

Proposed Conditions

The proposed development will consist of two buildings and a paved parking lot with a basecourse access drive around the southern building. The site is divided into four proposed subbasins. The subbasin characteristics can be found in the tables below.

Subbasin A consists of approximately 60% of the southern building's roof drainage and most of the middle portion of the site. Subbasin B consists of the eastern portion of the site and approximately 40% of the southern building's roof drainage. Subbasin C consists of the northern building's roof drainage as well as the landscaping area at the northwest corner of the site. Subbasin D contains the ramp area for the loading dock.

Subbasin B drainage is conveyed through surface sheet flow and swales to Pond 1. The remaining stormwater is conveyed through a swale to Pond 2. Subbasin A surface drains directly to Pond 2. An inlet at the north end of the pond captures the stormwater and conveys it to Pond 3 via an 18" storm drain. Subbasin C surface drains to Pond 3. The inlet in pond 3 conveys the stormwater to the City's inlet located in the right-of-way via a proposed 18" RCP. Subbasin D drains directly to an inlet installed at the low point of the dock ramp, where an 18" pipe conveys stormwater to the Pond 3 inlet. In addition, a french drain tied to the inlet allows infiltration for water quality volume. The on-site detention system made up of the three ponds reduces the proposed flow rates to a peak discharge rate of 6.69 CFS to the City's Inlet.

The required water quality volume of 2616 cubic feet was calculated using a first flush value of 0.34". This volume will be exceeded by the on-site infiltration and ponding systems, which provides 3300 cubic feet of retention.

HYDROLOGY CALCULATIONS

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*  100 YEAR RAINFALL TABLE
RAINFALL                  TYPE=13  RAIN QUARTER=0 IN
                         RAIN ONE=2.01 IN  RAIN SIX=2.35 IN
                         RAIN DAY=2.75 IN  DT=0.03333 HR
*************************************************************
*S EXISTING CONDITIONS

*S  COMPUTE HYD BASIN EX
COMPUTE NM HYD          ID=1  HYDNO=101  DA=0.004SQ MI
                        PER A=0  PER B=30   PER C=70  PER D=0
                        TP=-0.13   RAIN=-1
PRINT HYD               ID=1  CODE=10

*************************************************************
*S PROPOSED CONDITIONS

*S  COMPUTE HYD BASIN A
COMPUTE NM HYD          ID=2  HYDNO=102  DA=0.0026SQ MI
                        PER A=0  PER B=4.1   PER C=10.8   PER D=85.1
                        TP=-0.13   RAIN=-1
PRINT HYD               ID=2  CODE=10

*S  COMPUTE HYD BASIN B
COMPUTE NM HYD          ID=3  HYDNO=103  DA=0.0009SQ MI
                        PER A=0   PER B=4.1    PER C=10.8    PER D=85.1
                        TP=-0.13   RAIN=-1
PRINT HYD               ID=3 CODE=10

*S  COMPUTE HYD BASIN C
COMPUTE NM HYD          ID=4  HYDNO=104  DA=0.0004SQ MI
                        PER A=0  PER B=4.1   PER C=10.8   PER D=85.1
                        TP=-0.13   RAIN=-1
PRINT HYD               ID=4  CODE=10

*S  COMPUTE HYD BASIN D
COMPUTE NM HYD          ID=5  HYDNO=105  DA=0.0001SQ MI
                        PER A=0   PER B=0    PER C=0    PER D=100
                        TP=-0.13   RAIN=-1
PRINT HYD               ID=5 CODE=10
```

LEGEND

- PROPERTY LINE
- EX SD MH
- EX INLET
- EX FLOW ARROW
- PROP FLOW ARROW
- PROP HIGH POINT
- PROP SUBBASIN BDRY
- PROP SD
- PROP INLET

WATER QUALITY PONDING

Area (ac)	% Imp.	Imp. Area (ac)	WQ Depth (in)	Required WQ Vol (cu ft)	Provided WQ Vol (cu ft)
2.491	85.1%	2.120	0.34	2616	3300

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)                    - Ver. S4.02a, Rel: 02a      RUN DATE (MON/DAY/YR) =09/03/2019
INPUT FILE = ibrary\ENG Tools\ahymo-s4-r2\DISK1\program files\AHYMO-S4\03707 Input.HMI    USER NO.= AHYMO-S4TempUser05901704

                               FROM  TO                  PEAK        RUNOFF                TIME TO    CFS      PAGE =   1
                   HYDROGRAPH   ID   ID        AREA    DISCHARGE     VOLUME     RUNOFF      PEAK      PER
COMMAND          IDENTIFICATION NO.  NO.     (SQ MI)     (CFS)      (AC-FT)    (INCHES)   (HOURS)    ACRE      NOTATION

RAINFALL  TYPE=13                                                                                        RAIN24=   2.750
*S EXISTING CONDITIONS
*S  COMPUTE HYD BASIN EX
COMPUTE NM HYD         101.00   -     1     0.00400       7.49      0.215     1.00848     1.500    2.926 PER IMP=   0.00
*S PROPOSED CONDITIONS
*S  COMPUTE HYD BASIN A
COMPUTE NM HYD         102.00   -     2     0.00260       7.47      0.318     2.29175     1.500    4.492 PER IMP=  85.10
*S  COMPUTE HYD BASIN B
COMPUTE NM HYD         103.00   -     3     0.00090       2.60      0.110     2.29175     1.500    4.511 PER IMP=  85.10
*S  COMPUTE HYD BASIN C
COMPUTE NM HYD         104.00   -     4     0.00040       1.17      0.049     2.29175     1.500    4.554 PER IMP=  85.10
*S  COMPUTE HYD BASIN D
COMPUTE NM HYD         105.00   -     5     0.00010       0.31      0.013     2.51483     1.500    4.878 PER IMP= 100.00
*S ROUTE BASIN B THROUGH POND 1
ROUTE RESERVOIR        501.00    3    6     0.00090       1.51      0.110     2.29141     1.633    2.617 AC-FT=    0.036
*S ADD ROUTED BASIN B AND BASIN A
ADD HYD                201.00  6& 2   7     0.00350       8.04      0.427     2.28783     1.533    3.590
*S ROUTE ID 7 THROUGH POND 2
ROUTE RESERVOIR        502.00    7    8     0.00350       5.69      0.427     2.28783     1.633    2.539 AC-FT=    0.049
*S ROUTE BASIN C THROUGH POND 3
ROUTE RESERVOIR        503.00    4    9     0.00040       1.14      0.049     2.29121     1.500    4.455 AC-FT=    0.001
*S ADD ROUTED BASIN C AND BASIN D
ADD HYD                202.00  9& 5  10     0.00050       1.45      0.062     2.33551     1.500    4.539
*S ADD ID 10 AND ID 8
ADD HYD                203.00 10& 8  11     0.00400       6.69      0.489     2.29377     1.567    2.614
FINISH
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REVISION

DESIGNED JL
DRAWN JMT
CHECKED SEG
DATE 9.11.2019

RESPEC
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.253.9718

STAMP

SHELDON E. GREER
NEW MEXICO
17154
LICENSED PROFESSIONAL ENGINEER

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

PROJECT NAME: UHAUL 4TH ST & I-40

SHEET TITLE: CONCEPTUAL G&D PLAN

SUBMITTED FOR: REVIEW

SHEET NUMBER: C 102

NAME: L:\Active Projects\03707 U-Haul 4th St. & I-40\3. DWG\SHEETS\G&D PLAN.dwg PLOT DATE: Sep 17, 2019 11:50am