CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Interim Director

Mayor Timothy M. Keller

August 16, 2018

Jeremy Shell
Respec
5971 Jefferson St. NE
Albuquerque, NM 87109

RE: Carlisle Marketplace
2100 Carlisle NE
Conceptual Grading Plan Stamp Date: none (7/19)
Drainage Report Stamp Date: none (7/19)
Hydrology File: H17D097

Dear Mr. Shell:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based on the submittal received on 7/23/19, the Conceptual Grading and Drainage Plan cannot be approved until the following corrections are made:

1. Please provide an engineer's stamp with a signature and date on the plan and use the current DTIS version (11/2018) when resubmitting.
2. Identify all existing drainage easements on the plan, as well as any proposed easements, vacations, and lot line adjustments.
3. Identify limits of grading, paving, and building construction. Identify what is to remain and what will be removed or replaced.
4. Include project benchmark and datum.
5. Show the grading and site work on the grading plan per the DPM Ch.22.7, *Grading Plan Checklist*.
6. Please provide the stormwater quality volume (SWQV) calculations for each basin draining to each pond. The stormwater quality ponds need to be sized for the areas draining to them.
7. Payment in Lieu of onsite management of the SWQV must be made prior to Building Permit, not C.O.
8. Please show and label the pond(s) and include a label on each with the SWQV and elevation, the 100-year volume and elevation, the peak 100 year inflow and outflow, the spillway crest elevation, and the spillway flow depth.

9. Additional comments should be expected, based on the outcome of the above remarks and level of detail shown on plans.

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

Sincerely,

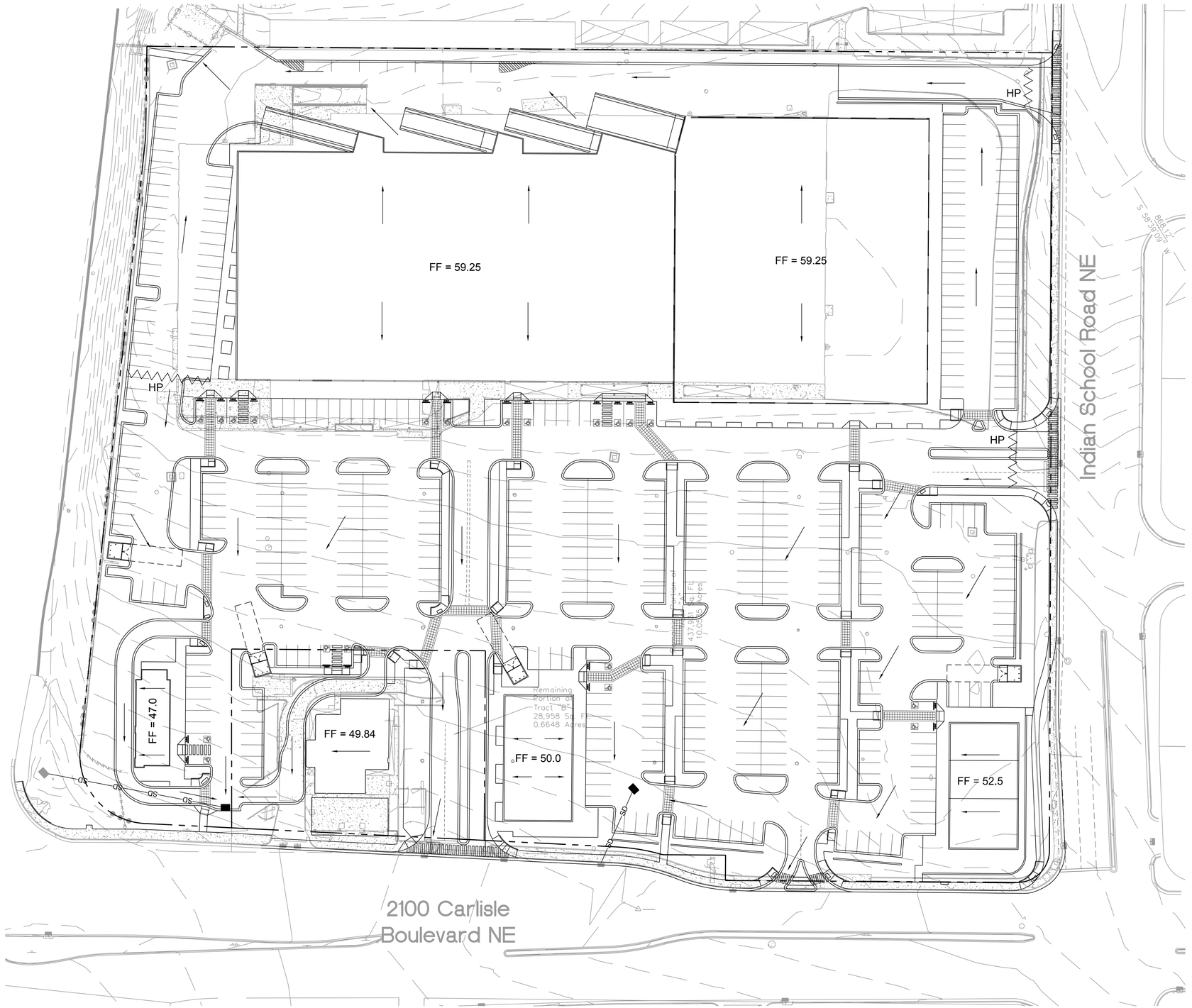
Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

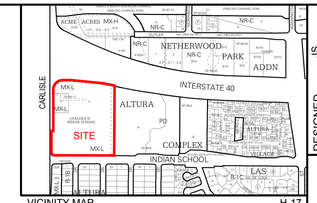
PO Box 1293

Albuquerque

NM 87103

www.cabq.gov





0 40' 80'

SCALE: 1" = 40'

DESIGNED JS
DRAWN JS
CHECKED SG
DATE 7.09.2019

REVISION

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WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.253.9718

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PRELIMINARY
NOT FOR CONSTRUCTION
7/2019

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nm811 Know what's below. Call before you dig.

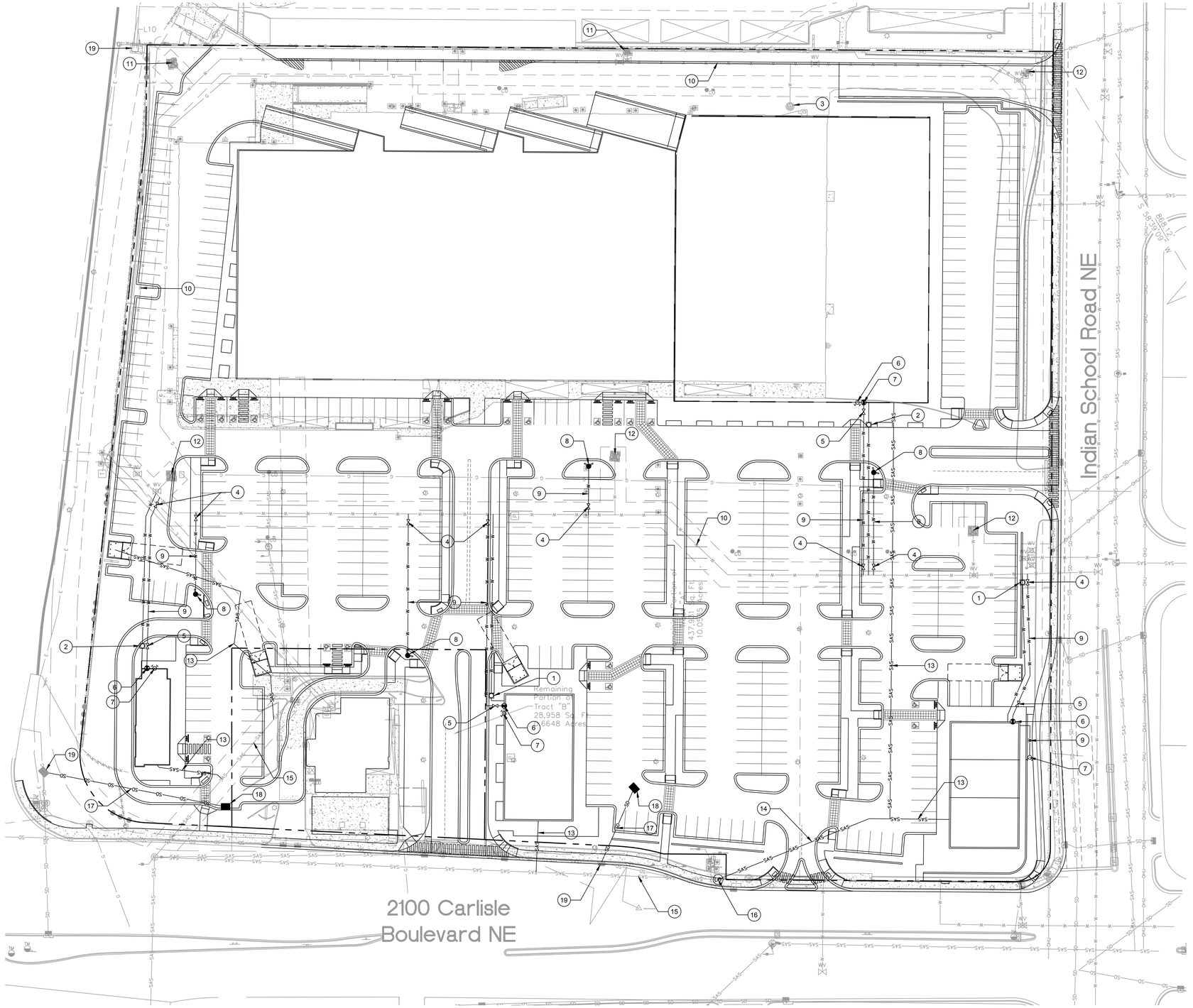
PROJECT NAME: CARLISLE MARKETPLACE

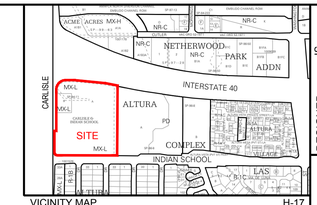
SHEET TITLE: CONCEPTUAL GRADING

SUBMITTED FOR: DRB SITE PLAN

SHEET NUMBER: C-1

NAME: I:\Active Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Grading.dwg PLOT DATE: Jul 09, 2019 2:25pm





KEYED NOTES

1. INSTALL 1" WATER SERVICE
2. INSTALL 1 ½" WATER SERVICE
3. EXISTING WATER SERVICE
4. INSTALL PUBLIC 6" GATE VALVE & VALVE BOX
5. INSTALL PRIVATE 6" GATE VALVE & VALVE BOX
6. INSTALL WALL INDICATOR VALVE
7. INSTALL FIRE DEPARTMENT CONNECTION
8. INSTALL PUBLIC FIRE HYDRANT
9. INSTALL 6" WATER LINE
10. EXISTING 10" PVC PUBLIC WATER LINE
11. EXISTING PUBLIC FIRE HYDRANT TO REMAIN
12. EXISTING PUBLIC FIRE HYDRANT TO BE REMOVED
13. INSTALL 4" SEWER SERVICE
14. INSTALL 6" SEWER SERVICE
15. EXISTING PUBLIC SEWER
16. INSTALL SEWER MANHOLE
17. INSTALL STORM DRAIN PIPE
18. INSTALL DROP INLET
19. EXISTING DROP INLET

LEGEND

- PROPERTY LINE
- WATER LINE
- SANITARY SEWER LINE
- STORM DRAIN
- EASEMENT
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- POST / WALL INDICATOR VALVE
- FIRE DEPARTMENT CONNECTION
- SANITARY SEWER MANHOLE
- DROP INLET

GENERAL NOTE

1. TYPE RBPA BACKFLOW PREVENTERS FOR ALL PROPOSED PRIVATE WATER LINES WILL BE PROVIDED INTERNAL TO EACH PROPOSED BUILDING PER COA STD DTL 2385. THE BACKFLOW PREVENTERS WILL BE THE SAME SIZE AS THE TAP/CONNECTION AT THE MAIN LINE.

0 40' 80'

SCALE: 1" = 40'

DESIGNED JS
DRAWN JS
CHECKED SG
DATE 7.09.2019

REVISION

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nm811 Know what's below. Call before you dig.

PROJECT NAME: CARLISLE MARKETPLACE

SHEET TITLE: CONCEPTUAL UTILITY

SUBMITTED FOR: DRB SITE PLAN

SHEET NUMBER: C-2

NAME: L:\Active Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Utility.dwg PLOT DATE: Jul 09, 2019 5:34pm

DRAINAGE REPORT FOR CARLISLE MARKETPLACE

PREPARED FOR
City of Albuquerque, Planning Department
Development Review Services, Hydrology Section

PREPARED BY
RESPEC, Inc.
5971 Jefferson St. NE, Suite 101
Albuquerque, NM 87109
505.253.9718

JULY 2019

I, Sheldon Greer, do hereby certify that this report was duly prepared by me or under my direction and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.

_____

Sheldon Greer, P.E.
NMPE No. 17154

[____DATE_____]

_____

Date

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this drainage report is to demonstrate that the proposed re-development of Tracts A and B of Carlisle and Indian School Subdivision safely conveys the peak 100-year storm runoff. The drainage intent for proposed conditions is to match current existing conditions for the site.

1.2 LOCATION AND DESCRIPTION

Tracts A and B are located at the northeast corner of the Carlisle Boulevard and Indian School Road intersection and contain approximately 10.7 acres. See Figure 1.2.1 below. The existing site includes a Burger King restaurant located on Tract B and an old K-Mart building and parking lot on Tract A that is currently vacant. The existing conditions are described in more detail in Section 3.1 and the proposed conditions are described in Section 3.2.

FIGURE 1.2.1 – PROJECT LOCATION

2.0 METHODOLOGY

The hydrologic analysis was performed for the site in accordance with the Albuquerque Development Process Manual (DPM) Section 22.2 using the Rational Method to calculate peak flow rates for the 100-year, 24-hour design storm in order to ensure all flow paths are sufficient to carry flows. The required water quality volume was calculated by multiplying the impervious area by the first flush runoff value of 0.34". All hydrologic and hydraulic calculations are included in this report.

3.0 HYDROLOGY

3.1 EXISTING CONDITIONS

Tracts A & B do not receive any offsite flows. The existing site has approximately 93% impervious area and 7% landscaped. The total flow generated by the property under existing conditions is 48.9 cfs. The site appears to have free discharge and does not have any existing ponds. The existing property has been split into six sub-basins. Appendix A shows the existing sub-basin boundaries for the site.

Sub-basin A consists of the northwest corner of the property and is primarily made up of parking area and also the Burger King restaurant. In general, the sub-basin slopes from southeast to northwest at varying slopes between 3%-5%. Runoff exits the property at the northwest corner of the site and is collected in a drop inlet.

Sub-basin B contains the northeast corner of the property and accounts for surface runoff from the northern portion of the existing building and the drive aisle north of the building. This area accumulates to the northeast corner of the site and discharges out of the property into a concrete rundown. From there, runoff is collected in a drop inlet.

Sub-basin C consists of a majority of the existing building and the drive aisle east of the building. This area flows north along the eastern curb. At the northeast corner of the Sub-basin, there is an opening in the wall that allows runoff to discharge into the adjacent property to the east. Flows that bypass this wall opening enter Sub-basin B.

Sub-basin D contains the southwest corner of the existing building and a majority of the existing parking area. This Sub-basin, in general, sheet flows from southeast to northwest at varying slopes between 2%-5%. Runoff then flows north along a curb along the western property boundary and discharges in Carlisle Boulevard through an existing driveway. From there, flows enter storm inlets located along the eastern curb of Carlisle Boulevard.

Sub-basin E consists of a small portion of the parking area at the southwest corner of the property. This area slopes from southeast to northwest and discharges from the site through an existing driveway. The runoff generated by this Sub-basin is then collected in storm inlets located along the eastern curb of Carlisle Boulevard.

Sub-basin F contains a small area west of the existing Burger King restaurant the flows west into Carlisle Boulevard. Runoff from this Sub-basin is collected in the Carlisle Boulevard storm drain system.

The hydrologic data table below depicts in further detail each sub-basin and its characteristics.

TABLE 3.1.1 – HYDROLOGIC DATA - EXISTING

HYDROLOGIC DATA - EXISTING						
		LAND USE PERCENTAGES				
SUB-BASIN	AREA (AC)	A	B	C	D	Q100
A	2.20	0%	0%	0%	100%	10.3
B	0.96	0%	0%	0%	100%	4.5
C	2.47	0%	8%	8%	100%	10.8
D	4.35	0%	4%	4%	100%	19.7
E	0.54	0%	0%	0%	100%	2.6
F	0.20	0%	0%	0%	100%	1.0
TOTAL	**10.72**					**48.9**

3.2 PROPOSED CONDITIONS

The proposed site development is to renovate the existing buildings and parking lot and add both commercial and retail pads along the Carlisle Boulevard property frontage. Under the proposed condition, approximately 87% of the site will consist of impervious area and 13% will be landscaped. The total flow generated by the proposed development is 47.6 cfs. Therefore, the discharge from the proposed site is less than the existing condition. The property has been split into five proposed sub-basins. Appendix B shows the proposed sub-basin boundaries for the site.

Sub-basin 1 consists of the northwest corner of the property and is made up of parking area, the existing Burger King restaurant, and a new commercial pad. In general, the sub-basin slopes from southeast to northwest. Runoff is collected in a proposed drop inlet in the new parking lot which discharges into a storm drain that will connect to the existing drop inlet, which is the location that this area is currently discharging to. The existing flow that reaches this inlet is 10.3 cfs while the proposed flow is 9.3 cfs.

Sub-basin 2 contains the roof drainage for the eastern half of the larger building and the truck dock area and drive aisle located east of the building. Runoff generated by this Sub-basin flows north to the northeast corner of the site where it enters a concrete channel. This channel will connect to the existing concrete rundown that discharges to the existing drop inlet. The existing flow that reaches the northeast corner of the property is 15.3 cfs while the proposed flow is 15.4 cfs. The additional 0.1 cfs is considered negligible. The flows that currently discharge to the neighboring property to the east will be cut off under the proposed condition.

Sub-basins 3, 4, and 5 consist of the southwest corner of the property, which contains a majority of the parking lot and the roof drainage from the western half of the larger building as well as two new retail pads. Sub-basins 3 and 5 free discharge from the site through two new driveways. Sub-basin 4 is collected in a drop inlet toward the northwest corner of the Sub-basin. These three Sub-basins all discharge to the existing storm drain system in Carlisle Boulevard. The existing flow that reaches the Carlisle storm drain under existing conditions is 23.3 cfs while the proposed flow is 22.9 cfs.

The hydrologic data table below depicts in further detail each sub-basin and its characteristics.

TABLE 3.2.1 – HYDROLOGIC DATA - PROPOSED

HYDROLOGIC DATA - PROPOSED						
		LAND USE PERCENTAGES				
SUB-BASIN	AREA (AC)	A	B	C	D	Q100
1	2.10	0%	6%	6%	87%	9.3
2	3.46	0%	6%	6%	87%	15.4
3	1.54	0%	6%	6%	87%	6.8
4	2.47	0%	6%	6%	87%	11.0
5	1.14	0%	6%	6%	87%	5.1
TOTAL	**10.72**					**47.6**

The total required water quality volume for the site is 11,526 cubic feet. The parking islands will be utilized for water quality storage and account for approximately 3,000 cubic feet, which reduces the amount of required ponding to 8,526 cubic feet. The owner has elected to pay the fee in lieu for the remaining stormwater quality volume. This payment will be a requirement of certificate of occupancy approval.

4.0 CONCLUSION

This drainage report is prepared in support of the new development for Tracts A and B. The existing buildings and parking area will be renovated and new commercial and retail pads will be added. The proposed conditions closely match the current conditions of the existing property. The hydrologic calculations are included in Appendix C.

APPENDIX A

EXISTING SUB-BASINS

EXISTING SUB-BASINS

RESPEC
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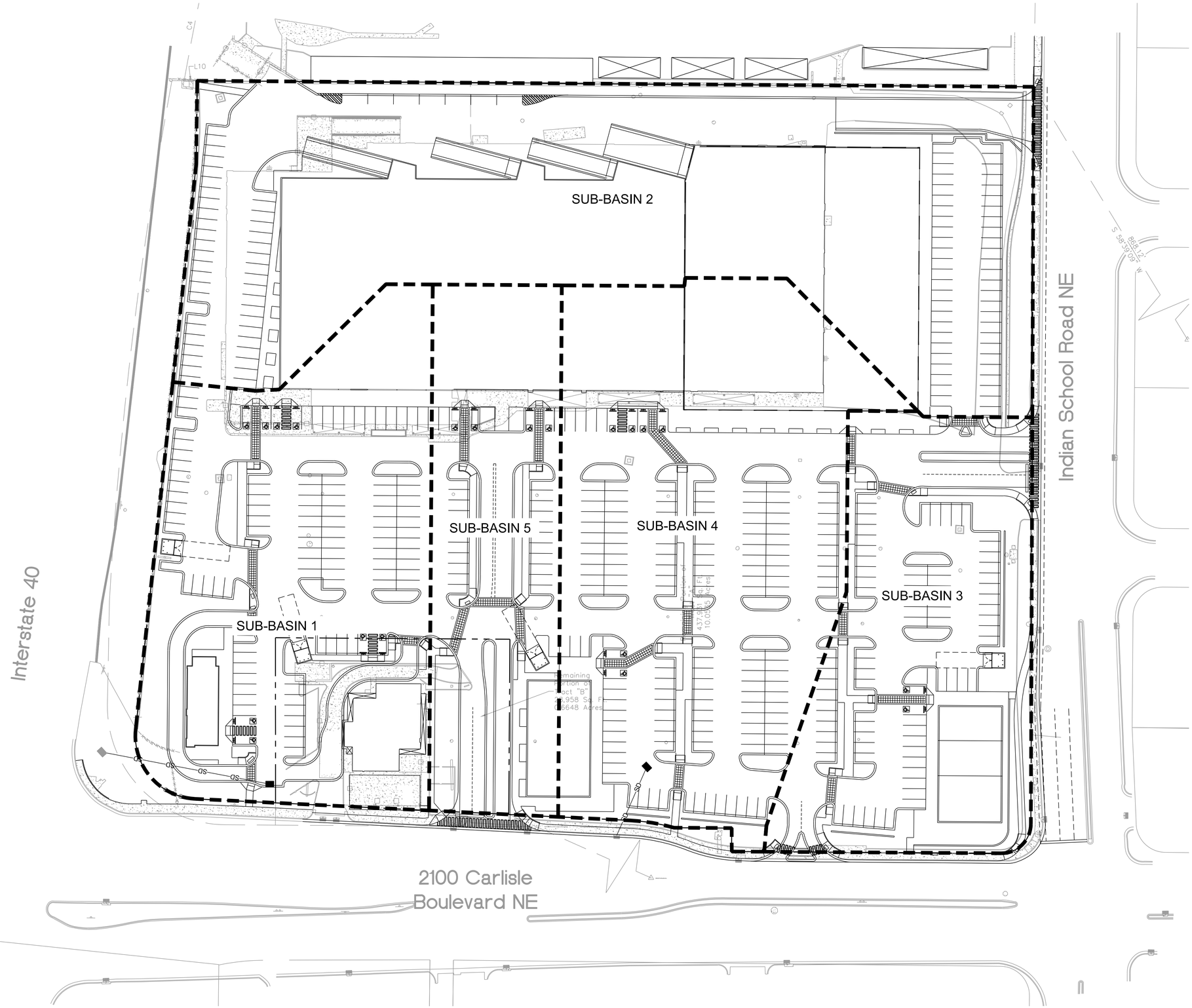
APPENDIX B

PROPOSED SUB-BASINS



PROPOSED SUB-BASINS

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APPENDIX C

HYDROLOGY CALCULATIONS

Hydrology Calculations

The following calcualtions are based on Albuquerque's Development Process Manual, Seciton 22.2

Existing Conditions

Runoff Rate:

Treatment Type Areas

Subbasin	$Area_A$ (ac)	$Area_B$ (ac)	$Area_C$ (ac)	$Area_D$ (ac)	Total (ac)
A	0.00	0.00	0.00	2.20	2.20
B	0.00	0.00	0.00	0.96	0.96
C	0.00	0.19	0.19	2.09	2.47
D	0.00	0.19	0.19	3.97	4.35
E	0.00	0.00	0.00	0.54	0.54
F	0.00	0.00	0.00	0.20	0.20
Total	0.00	0.38	0.38	9.96	10.72

Peak Discharge values based on Zone 2 from Table A-9

Q_A = 1.56 cfs/ac Q_B = 2.28 cfs/ac Q_C = 3.14 cfs/ac Q_D = 4.70 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10

Subbasin	Discharge (cfs)
A	10.3
B	4.5
C	10.8
D	19.7
E	2.6
F	1.0
Total	48.9

Proposed Conditions

Runoff Rate:

Treatment Type Areas

Subbasin	$Area_A$ (ac)	$Area_B$ (ac)	$Area_C$ (ac)	$Area_D$ (ac)	Total (ac)
1	0.00	0.14	0.14	1.83	2.10
2	0.00	0.22	0.22	3.02	3.46
3	0.00	0.10	0.10	1.34	1.54
4	0.00	0.16	0.16	2.15	2.47
5	0.00	0.07	0.07	0.99	1.14
Total	0.00	0.69	0.69	9.34	10.72

Peak Discharge values based on Zone 2 from Table A-9

Q_A = 1.56 cfs/ac Q_B = 2.28 cfs/ac Q_C = 3.14 cfs/ac Q_D = 4.70 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10

Subbasin	Discharge (cfs)
1	9.3
2	15.4
3	6.8
4	11.0
5	5.1
Total	47.6

Water Quality:

Required Water Quality volume for first flush of 0.34"

Subbasin	Volume (cu. ft.)
1	2,260
2	3,725
3	1,658
4	2,656
5	1,227
Total	11,526

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: _____ Building Permit #: _____ Hydrology File #: _____

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

Legal Description: Tracts A and B, Carlisle and Indian School Subdivision

City Address: _____

Applicant: RESPEC Contact: _____

Address: 5971 Jefferson Street NE Suite 101 Albuquerque, NM 87109

Phone#: (505) 253-9811 Fax#: _____ E-mail: Jeremy.shell@respec.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: 07-22-19 By: Jeremy Shell

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____