CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

July 30, 2021

Jeremy Shell, P.E.
Respec
5971 Jefferson St. NE
Albuquerque, NM 8710

RE: Carlisle Crossing
Grading & Drainage Plan
Engineer's Stamp Date: 07/05/21
Hydrology File: H17D097

Dear Mr. Shell:

Based upon the information provided in your submittal received 06/16/2021, the Grading & Drainage Plan is approved for Work Order.

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.

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Carlisle Market Place Building Permit #: _____ Hydrology File #: H17D097

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

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

City Address: _____

Applicant: RESPEC Contact: Jeremy Shell

Address: 5971 Jefferson Street NE Suite 101 Albuquerque NM 87109

Phone#: (505) 253-9811 Fax#: _____ E-mail: jeremy.shell@respec.com

Owner: Carlisle Associates LP Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL: ____ PLAT (___# OF LOTS) ____ RESIDENCE _X_ DRB SITE ____ ADMIN SITE

IS THIS A RESUBMITTAL?: _____ Yes _X_ No

DEPARTMENT: ____ TRAFFIC/ TRANSPORTATION _X_ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
_X_ GRADING PLAN
____ DRAINAGE MASTER PLAN
_X_ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_X_ 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: 6/16/21 By: Jeremy Shell

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

DRAINAGE REPORT FOR CARLISLE CROSSING

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

APRIL 2021

I, Jeremy Shell, 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.

_____

Jeremy Shell, P.E.
NMPE No. 26341

04/16/2021

_____

Date

TABLE OF CONTENTS

1.0 INTRODUCTION 3

1.1 Purpose 3

1.2 Location and Description 3

Figure 1.2.1 – Project Location 3

2.0 METHODOLOGY 4

3.0 HYDROLOGY 4

3.1 Existing Conditions 4

Table 3.1.1 – Hydrologic Data - Existing 5

3.2 Proposed Conditions 5

Table 3.2.1 – Hydrologic Data - Proposed 6

4.0 HYDRAULICS 6

4.1 Storm Inlets and Storm Drains 6

5.0 CONCLUSION 6

APPENDIX A EXISTING SUB-BASINS

APPENDIX B PROPOSED SUB-BASINS

APPENDIX C HYDROLOGY CALCULATIONS

APPENDIX D HYDRAULIC CALCULATIONS

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this drainage report is to demonstrate that the proposed re-development of Tracts A-1 and B-1 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-1 and B-1 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-1 and an old K-Mart building and parking lot on Tract A-1 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) Chapter 6 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 0.26". All hydrologic and hydraulic calculations are included in this report.

3.0 HYDROLOGY

3.1 EXISTING CONDITIONS

Tracts A-1 & B-1 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 45.6 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 B generates 4.2 cfs.

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. Runoff collects at a low point in front of the dumpster area. Once the low point area has filled, water spills both through an existing opening in the wall to the east and to the north into Sub-basin B. Due to the elevation being the same at each point water is spilling, the flows split evenly between the east and the north. Sub-basin C generates a total of 7.6 cfs. Therefore, 3.8 cfs discharges east through the existing wall opening and 3.8 cfs flows north into Sub-basin B. The combined flow from Sub-basins B and C being collected by the existing drop inlet at the northeast corner of the property is 8.0 cfs.

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 into 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 combined total flow from Sub-basins D, E, and F discharging into Carlisle Boulevard is 24.4 cfs.

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%	9.5
B	0.96	0%	0%	0%	100%	4.2
C	1.83	0%	8%	8%	84%	7.6
D	4.98	0%	4%	4%	92%	21.1
E	0.54	0%	0%	0%	100%	2.4
F	0.20	0%	0%	0%	100%	0.9
TOTAL	**10.72**					**45.6**

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 44.2 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 9.5 cfs while the proposed flow is 9.4 cfs.

Sub-basin 2A and 2B contain the roof drainage for the larger building and the truck dock area and drive aisle located east and north of the building. Sub-basin 2A drains directly to the existing drop inlet at the northeast corner of the property. Sub-basin 2B collects to the low point in front of the dumpster. The low point area in front of the dumpster will not be modified so that flows that reach this area continue to match the existing drainage pattern at that location. The proposed flow from Sub-basin 2A is 3.8 cfs. The flow generated by Sub-basin 2B is 6.7 cfs, therefore, 3.35 cfs discharges east and 3.35 cfs flows north into Sub-basin 2A. The total proposed flow discharging to the existing drop inlet is 7.15 cfs. The total proposed flow discharging to the eastern property is 3.35 cfs. Therefore, due to the assumptions in this area the flow rate discharging to the existing drop inlet and eastern property is not increased.

Sub-basins 3A, 3B, 4, and 5 consist of the proposed building, parking south of the proposed building, and southwest corner of the property, which contains a majority of the parking lot and one new retail pad. Sub-basin 3A is collected in three drop inlets and is conveyed via storm drain into sub-basin 3B. Sub-basins 3B 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 four 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 24.4 cfs while the proposed flow is 24.5 cfs. The increase of 0.1 cfs is negligible.

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	2.27	0%	6%	6%	87%	9.4
2A	0.91	0%	6%	6%	87%	3.8
2B	1.61	0%	6%	6%	87%	6.7
3A	1.56	0%	6%	6%	87%	6.4
3B	1.54	0%	6%	6%	87%	6.4
4	1.90	0%	6%	6%	87%	7.9
5	0.91	0%	6%	6%	87%	3.8
TOTAL	**10.72**					**44.2**

The total required water quality volume for the site is 8,799 cubic feet (cf). The total on-site ponding is 2,284 cf. The owner has elected to pay the fee in lieu for any required stormwater quality volume above the provided in on-site ponds. Therefore, the required fee in lieu amount is 6,515 cf x $8/cf = $52,120.

4.0 HYDRAULICS

4.1 STORM INLETS AND STORM DRAINS

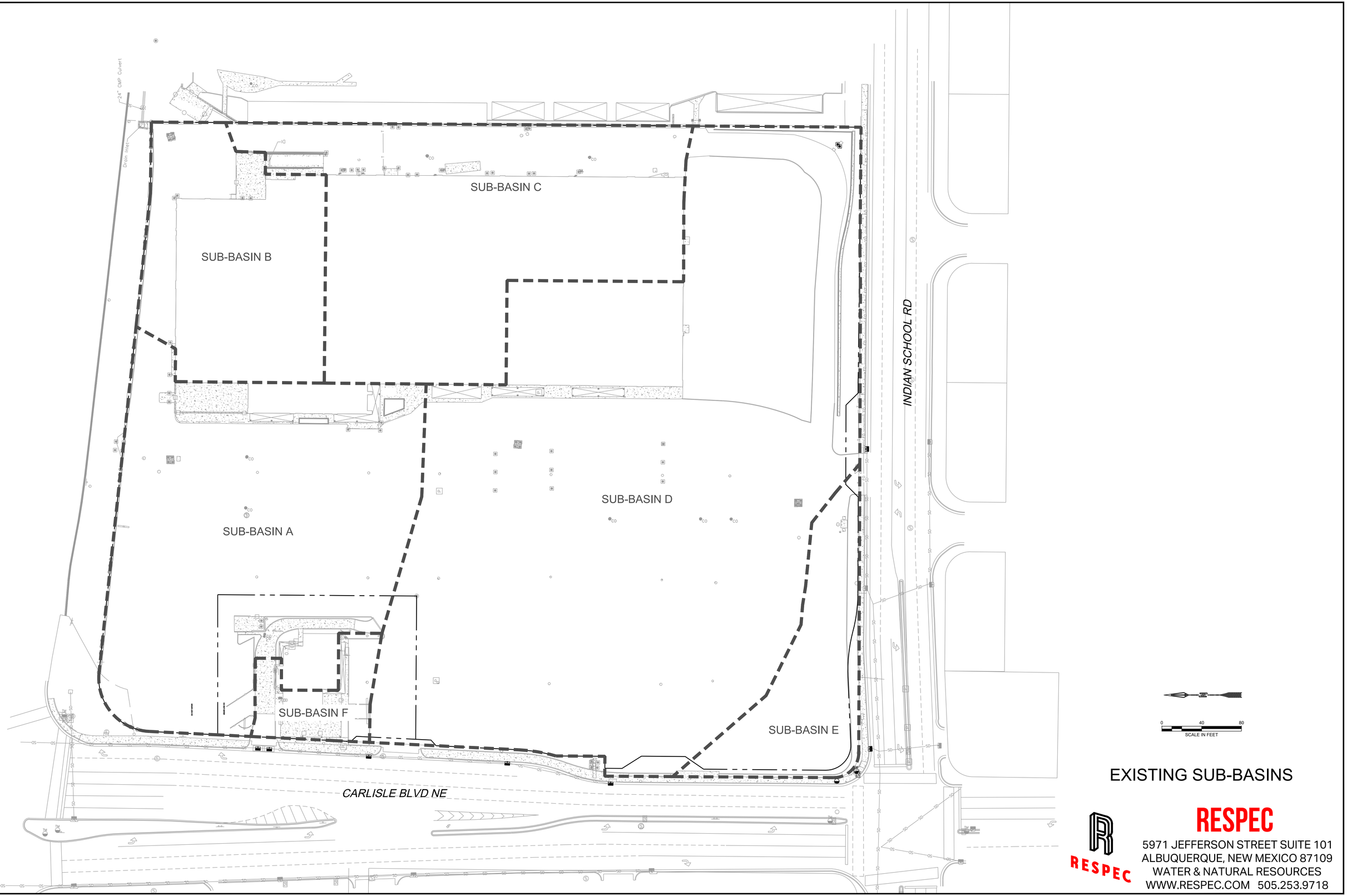
Flow intercepted by drainage inlets were determined using the orifice and weir equations based on the City of Albuquerque Type "D" inlets. All proposed storm drain capacities were determined using ManningSolver Version 1.019. For further information on drainage inlet and storm drain capacity calculations see Appendix D.

5.0 CONCLUSION

This drainage report is prepared in support of the new development for Tracts A-1 and B-1. 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 and hydraulic calculations are included in Appendix D.

APPENDIX A

EXISTING SUB-BASINS



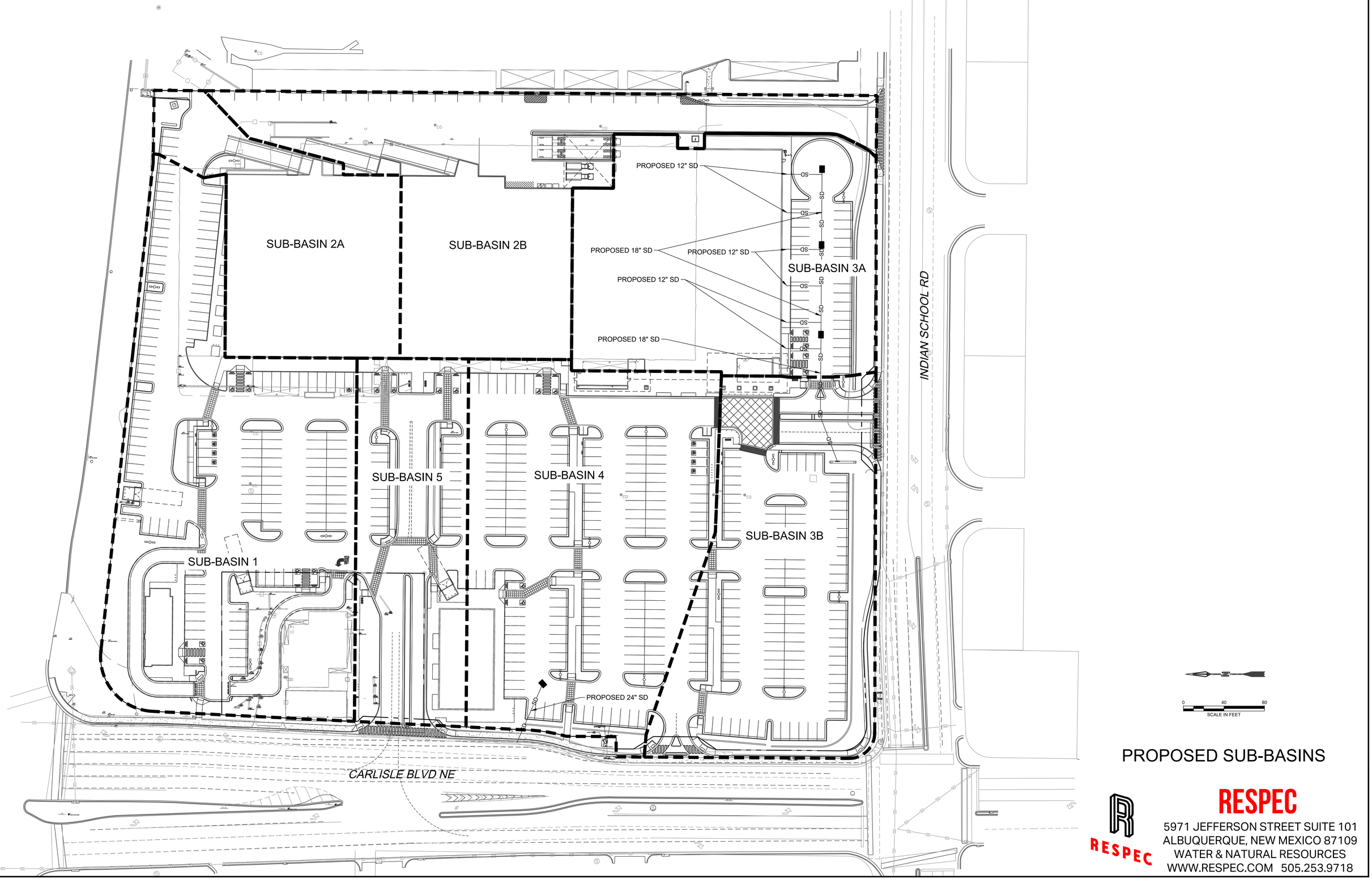
EXISTING SUB-BASINS

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

NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Xref\03738 Design Drainage.dwg PLOT DATE: Mar 18, 2021 10:56am

APPENDIX B

PROPOSED SUB-BASINS



PROPOSED SUB-BASINS

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

NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Xref\03738 Design Drainage.dwg PLOT DATE: Apr 13, 2021 2:45pm

APPENDIX C

HYDROLOGY CALCULATIONS

Hydrology Calculations

The following calculations are based on Albuquerque's Development Process Manual, Chapter 6

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	0.00	0.29	1.54	1.83
D	0.00	0.00	0.40	4.58	4.98
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	0.00	0.69	10.02	10.72

Peak Discharge values based on Zone 2 from Table 6.2.14

Q_A = 1.71 cfs/ac Q_B = 2.36 cfs/ac Q_C = 3.05 cfs/ac Q_D = 4.34 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation 6.6

Subbasin	Discharge (cfs)
A	9.5
B	4.2
C	7.6
D	21.1
E	2.4
F	0.9
Total	45.6

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	0.15	0.15	1.98	2.27
2A	0.00	0.06	0.06	0.79	0.91
2B	0.00	0.10	0.10	1.40	1.61
3A	0.00	0.10	0.10	1.36	1.56
3B	0.00	0.10	0.10	1.34	1.54
4	0.00	0.12	0.12	1.66	1.90
5	0.00	0.06	0.06	0.79	0.91
Total	0.00	0.70	0.70	9.32	10.72

Peak Discharge values based on Zone 2 from Table 6.2.14

Q_A = 1.71 cfs/ac Q_B = 2.36 cfs/ac Q_C = 3.05 cfs/ac Q_D = 4.34 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation 6.6

Subbasin	Discharge (cfs)
1	9.4
2A	3.8
2B	6.7
3A	6.4
3B	6.4
4	7.9
5	3.8
Total	44.2

Water Quality:

Required Water Quality volume for first flush of 0.26"

Subbasin	Req Volume (cu. ft.)	Provided Volume (cu. ft.)	Net Volume (cu. ft.)
1	1,866	709	1,158
2A	748	0	748
2B	1,323	0	1,323
3A	1,282	0	1,282
3B	1,268	892	376
4	1,562	683	879
5	749	0	749
Total	8,799	2,284	6,515

APPENDIX D

HYDRAULIC CALCULATIONS

Manning Formula: Proposed 12" SD Max Flow

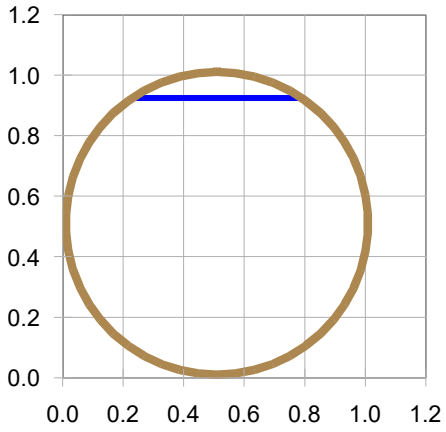
Circular Channel

Input

Flow	2.70 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	12 in

Output

Depth	0.915 ft
Flow Area	0.753 sf
Velocity	3.59 fps
Velocity Head	0.200 ft
Top Width	0.558 ft
Froude Number	0.544
Critical Depth	0.704 ft
Critical Slope	0.00806 ft/ft



Manning Formula: Proposed 18" SD Max Flow

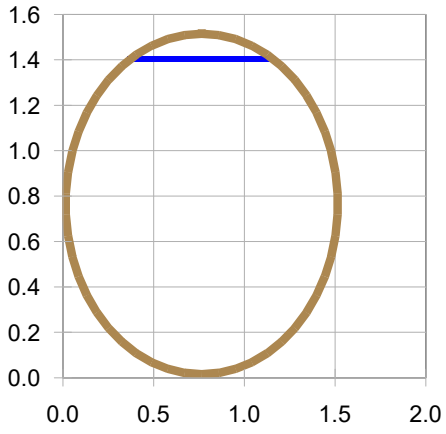
Circular Channel

Input

Flow	7.98 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	18 in

Output

Depth	1.388 ft
Flow Area	1.71 sf
Velocity	4.67 fps
Velocity Head	0.340 ft
Top Width	0.790 ft
Froude Number	0.561
Critical Depth	1.095 ft
Critical Slope	0.00741 ft/ft



Manning Formula: Proposed 24" SD Max Flow

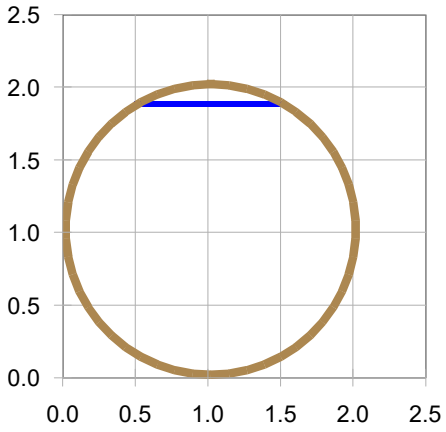
Circular Channel

Input

Flow	17.20 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	24 in

Output

Depth	1.862 ft
Flow Area	3.05 sf
Velocity	5.65 fps
Velocity Head	0.495 ft
Top Width	1.01 ft
Froude Number	0.574
Critical Depth	1.495 ft
Critical Slope	0.00701 ft/ft



Type D Inlet Calculation
Orifice (Unknown Q)

Head Water Depth (h):	0.5	ft	User Enter Desired Value
Discharge Coeff. (C_d):	0.6		
Open Area (A):	4.6900	ft^2	
Gravity (g):	32.2	ft/s^2	

Flow (Q) = C · A · (2 · g · h) ^ (0.5)

Flow (Q) = 16.0 cfs

Weir (Unknown Q):

Discharge Coeff. (C_w):	3.367	
Length (L):	10.67	ft

Flow (Q) = C_w · L · h ^ (1.5)

Flow (Q) = 12.7 cfs

RESPEC.COM

SHEET C-101

SHEET C-102

SHEET C-104

SHEET C-103

GRADES IN THIS AREA ARE NOT TO BE MODIFIED. EXISTING WALL OPENING IS TO REMAIN.

FF = 59.25

FUTURE RETAIL: EXISTING BUILDING TO REMAIN FOR RENOVATIONS

FF = 59.75

PROPOSED RAMP RETAINING WALL BY OTHERS

PROPOSED DRAINAGE CHANNEL

VALLEY GUTTER CONSTRUCTION UNDER THE PUBLIC WORK ORDER SCOPE CANNOT BE OMPLETED UNTIL THE EXISTING WALL IS REMOVED AND THE NEW RAMP IS CONSTRUCTED

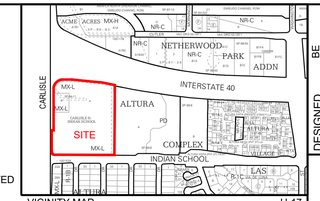
EXISTING RETAINING WALL TO BE REMOVED

FUTURE DEVELOPMENT

FUTURE DEVELOPMENT

LIMITS OF WORK ORDER APPROVAL AREA

WORK ORDER APPROVAL ONLY



VICINITY MAP H-17

NOTE:
1. THE EXISTING PARKING LOT AND BUILDINGS WILL BE DEMOLISHED UNLESS OTHERWISE SPECIFIED ON THIS PLAN.
2. PROPOSED PUBLIC INFRASTRUCTURE WILL BE INCLUDED ON PUBLIC WORK ORDER

GRADING NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
2. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO BE 1/2" BELOW EDGE OF PAVEMENT.
3. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
4. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
5. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
6. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
7. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
8. ALL DISTURBED AREAS TO BE RE-SEEDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.
9. REFER TO GEOTECHNICAL ENGINEERING SERVICES REPORT *PRELIMINARY GEOTECHNICAL ENGINEERING REPORT* BY TERRACON CONSULTANTS, INC. DATED FEBRUARY 4, 2021.
10. SEE ARCHITECTURAL SITE PLAN AND DETAILS FOR PAVEMENT DESIGN SECTIONS AND LOCATIONS.

LEGEND

GRADING LIMITS	
MAJOR CONTOUR	4985
MINOR CONTOUR	
EXISTING MAJOR CONTOUR	4985
EXISTING MINOR CONTOUR	
SLOPE ARROW	-1.5% -51.2%
SWALE	
HIGH POINT	
MATCHLINE	
FUTURE DEVELOPMENT	

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 07/30/21
BY: Ricardo Porcella
HydroTrans # H17D097

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY FROM REQUIRING THE CORRECTION OF ERRORS IN THE PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE USED, ALTERED WITHOUT AUTHORIZATION.

0 40' 80'
SCALE: 1" = 40'

DESIGNED	BE
DRAWN	BE
CHECKED	JS
DATE	7.30.2021

REVISION

RESPEC
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.753.9718

STAMP

JEREMY W SHELL
NEW MEXICO
26341
PROFESSIONAL ENGINEER
07/05/21

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

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

PROJECT NAME: CARLISLE CROSSING

SHEET TITLE: OVERALL GRADING PLAN

SUBMITTED FOR: CONSTRUCTION

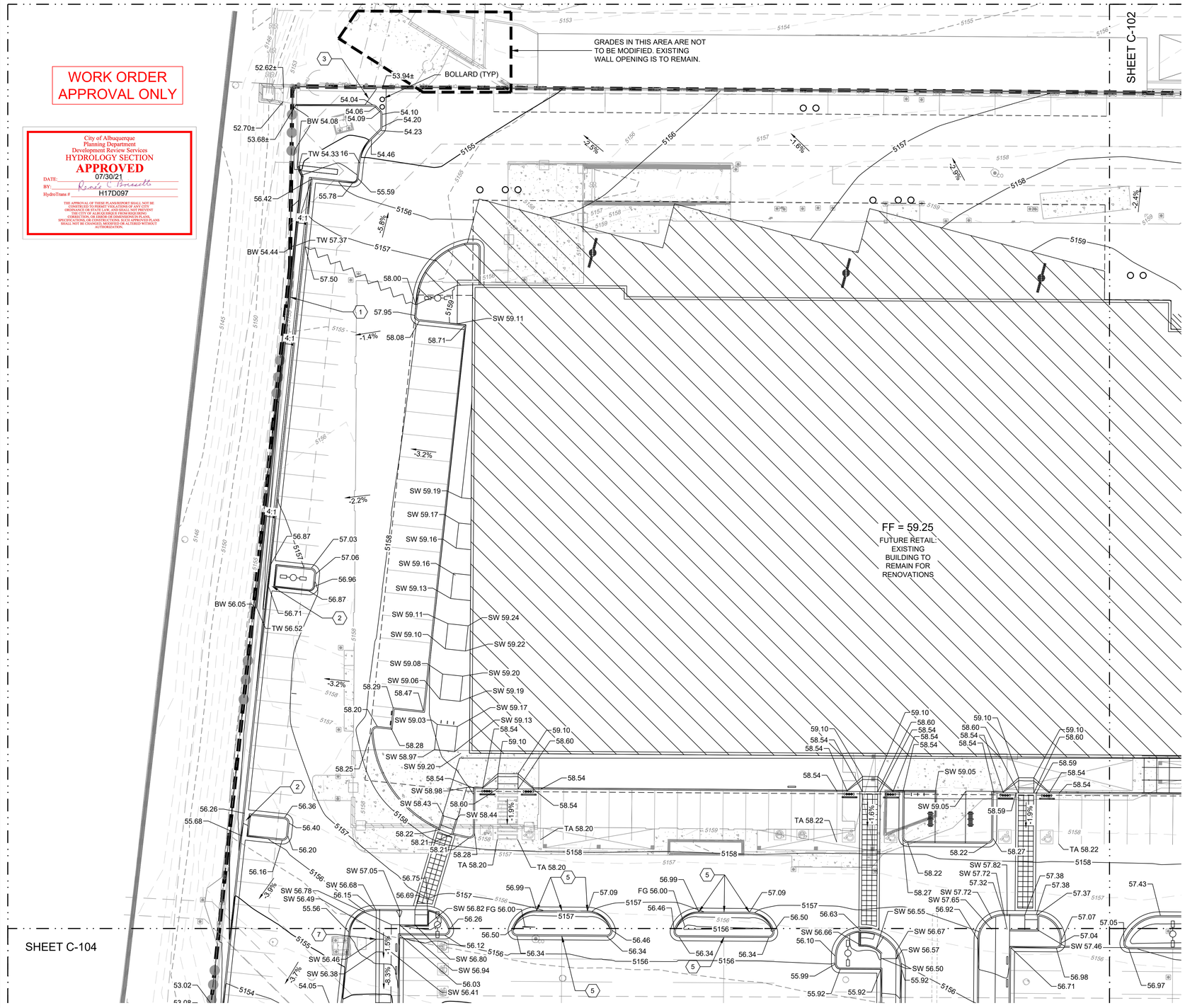
SHEET NUMBER: C-100

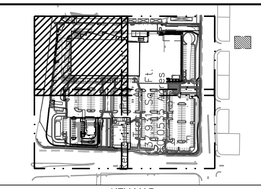
NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Overall Grading.dwg PLOT DATE: Jul 30, 2021 3:33pm

WORK ORDER
APPROVAL ONLY

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
07/30/21
DATE:
BY:
HydroTrans # H17D097

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO BE A VIOLATION OF THIS OR ANY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS/REPORT. SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.




KEY MAP

NOTE:
1. THE EXISTING PARKING LOT AND BUILDINGS WILL BE DEMOLISHED UNLESS OTHERWISE SPECIFIED ON THIS PLAN.
2. PROPOSED PUBLIC INFRASTRUCTURE WILL BE INCLUDED ON PUBLIC WORK ORDER.

KEYED NOTES

I.D.#	DESCRIPTION
1	INSTALL CMU RETAINING WALL. SEE DETAIL SHEET C-501.
2	INSTALL 2' CURB OPENING AND CHANNEL. SEE DETAIL SHEET C-500.
3	INSTALL CONCRETE DRAINAGE CHANNEL. SEE DETAIL SHEET C-501.
5	INSTALL 1' CURB OPENING. SEE DETAIL SHEET C-500.
7	INSTALL HANDRAIL FOR ADA RAMP BOTH SIDES OF RAMP.

GRADING NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
2. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO BE 1/2" BELOW EDGE OF PAVEMENT.
3. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
4. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
5. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
6. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
7. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
8. ALL DISTURBED AREAS TO BE RE-SEEDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.
9. REFER TO GEOTECHNICAL ENGINEERING SERVICES REPORT *PRELIMINARY GEOTECHNICAL ENGINEERING REPORT* BY TERRACON CONSULTANTS, INC. DATED FEBRUARY 4, 2021.

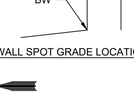
LEGEND

GRADING LIMITS	
MAJOR CONTOUR	4985
MINOR CONTOUR	
EXISTING MAJOR CONTOUR	4985
EXISTING MINOR CONTOUR	
SLOPE ARROW	-1.5% -57.2%
SWALE	
HIGH POINT	
MATCHLINE	
FUTURE DEVELOPMENT	

SPOT ELEVATION SYMBOLS

1. ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.

20.00 FLOWLINE
20.00± MATCH EX. GRADE ELEV. (APPROXIMATE)
BW 20.00 BOTTOM WALL
TW 20.00 TOP WALL
SW 20.00 SIDEWALK
FG 20.00 FINISHED GROUND
BS 20.00 BOTTOM STEP
TS 20.00 TOP STEP
TA 20.00 TOP ASPHALT



WALL SPOT GRADE LOCATIONS
NTS

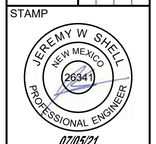
SCALE: 1" = 20'

DESIGNED BE
DRAWN BE
CHECKED JS
DATE 7.19.2021

REVISION

RESPEC
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.753.9718

STAMP

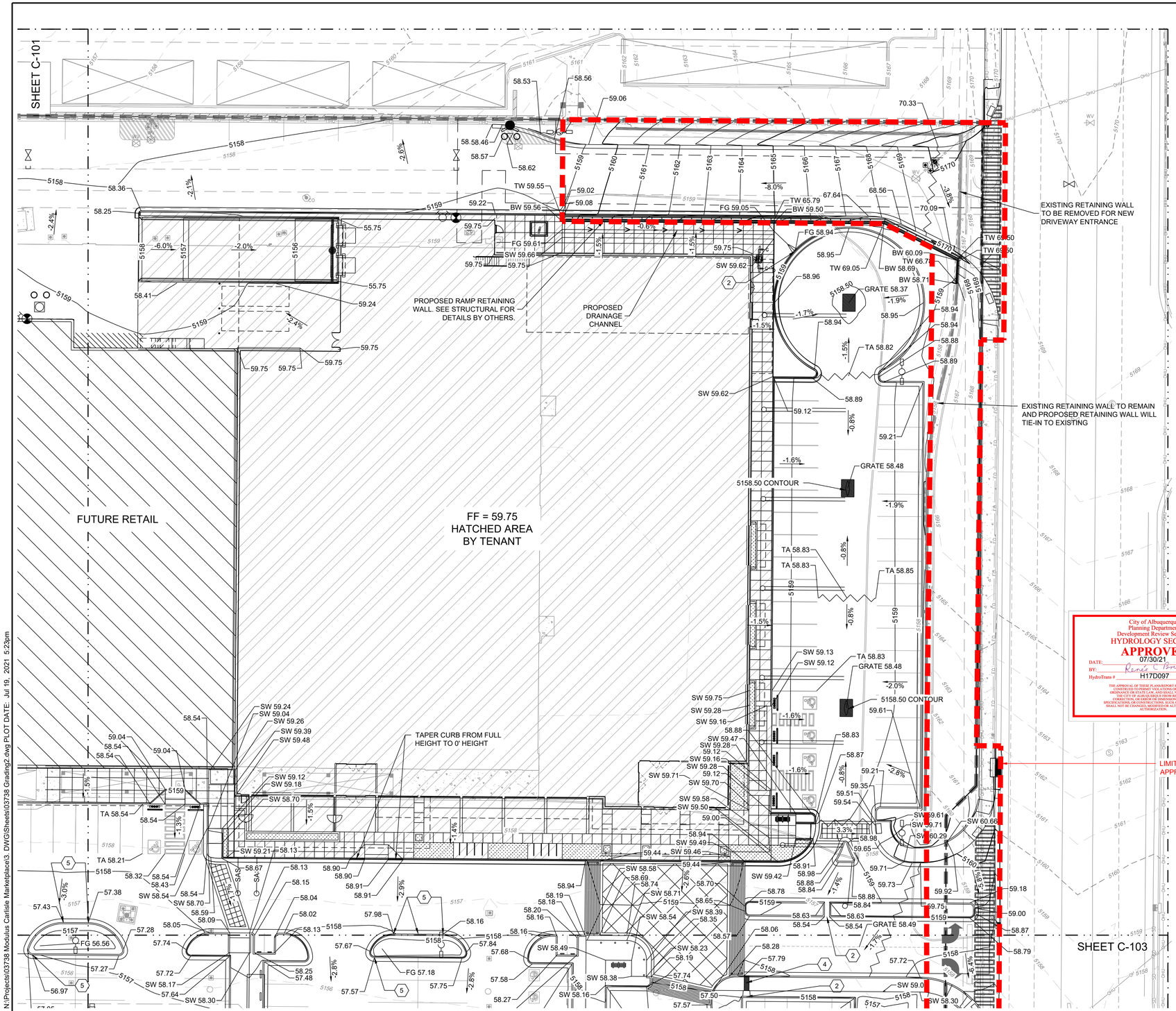


THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

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

PROJECT NAME: CARLISLE CROSSING
SHEET TITLE: GRADING PLAN 1
SUBMITTED FOR: CONSTRUCTION
SHEET NUMBER: C-101

NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Grading1.dwg PLOT DATE: Jul 19, 2021 5:19pm



NOTE:
1. THE EXISTING PARKING LOT AND BUILDINGS WILL BE DEMOLISHED UNLESS OTHERWISE SPECIFIED ON THIS PLAN.
2. PROPOSED PUBLIC INFRASTRUCTURE WILL BE INCLUDED ON PUBLIC WORK ORDER.

KEYED NOTES

I.D.#	DESCRIPTION
2	INSTALL 2' CURB OPENING AND CHANNEL. SEE DETAIL SHEET C-500.
4	2' SIDEWALK CULVERT PER COA STD DTL DWG 2236.
5	INSTALL 1' CURB OPENING. SEE DETAIL SHEET C-500.

GRADING NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
2. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO BE 1/2" BELOW EDGE OF PAVEMENT.
3. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
4. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
5. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
6. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
7. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
8. ALL DISTURBED AREAS TO BE RE-SEEDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.
9. REFER TO GEOTECHNICAL ENGINEERING SERVICES REPORT *PRELIMINARY GEOTECHNICAL ENGINEERING REPORT* BY TERRACON CONSULTANTS, INC. DATED FEBRUARY 4, 2021.

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
07/30/21
DATE:
BY: Renée C Brissette
HydroTrans # H17D097
THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY FROM REQUIRING THE CORRECTION OF ERRORS OR OMISSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

WORK ORDER APPROVAL ONLY

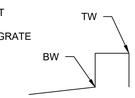
LEGEND

GRADING LIMITS	
MAJOR CONTOUR	4985
MINOR CONTOUR	
EXISTING MAJOR CONTOUR	4985
EXISTING MINOR CONTOUR	
SLOPE ARROW	-1.5% -51.2%
SWALE	
HIGH POINT	
MATCHLINE	
FUTURE DEVELOPMENT	

SPOT ELEVATION SYMBOLS

1. ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.

- 20.00 FLOWLINE
- 20.00± MATCH EX. GRADE ELEV. (APPROXIMATE)
- BW 20.00 BOTTOM WALL
- TW 20.00 TOP WALL
- SW 20.00 SIDEWALK
- FG 20.00 FINISHED GROUND
- BS 20.00 BOTTOM STEP
- TS 20.00 TOP STEP
- TA 20.00 TOP ASPHALT
- GRATE 20.00 TOP OF GRATE



WALL SPOT GRADE LOCATIONS
NTS

0 20' 40'
SCALE: 1" = 20'

RESPEC
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505-753-9718

DESIGNED BE
DRAWN BE
CHECKED JS
DATE 7.19.2021

REVISION

STAMP

JEREMY W SHELL
NEW MEXICO
26341
PROFESSIONAL ENGINEER
07/05/21

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

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

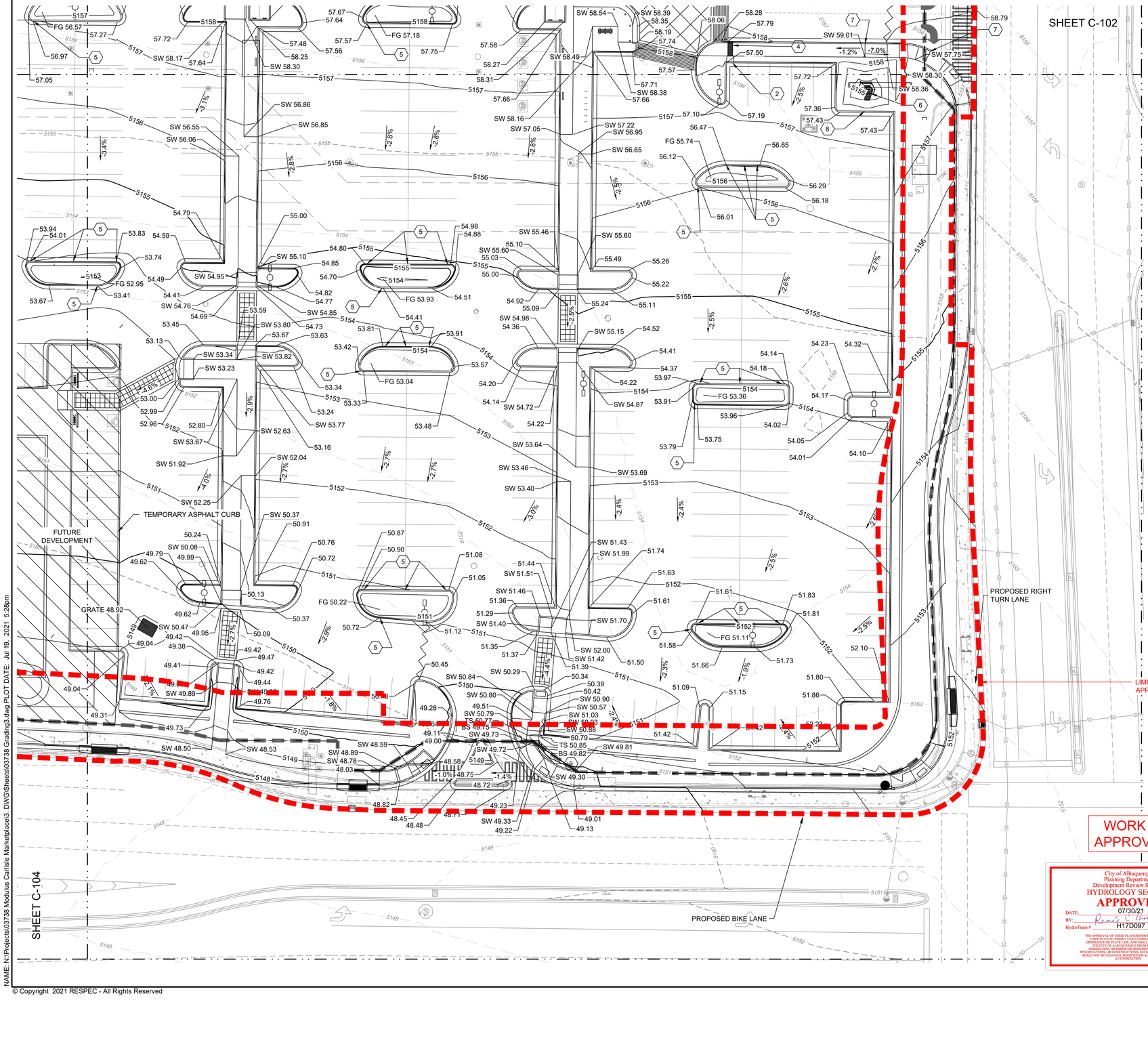
PROJECT NAME: CARLISLE CROSSING

SHEET TITLE: GRADING PLAN 2

SUBMITTED FOR: CONSTRUCTION

SHEET NUMBER: C-102

NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Grading2.dwg PLOT DATE: Jul 19, 2021 5:23pm



KEY MAP

NOTE:
1. THE EXISTING PARKING LOT AND BUILDINGS WILL BE DEMOLISHED UNLESS OTHERWISE SPECIFIED ON THIS PLAN.
2. PROPOSED PUBLIC INFRASTRUCTURE WILL BE INCLUDED ON PUBLIC WORK ORDER

KEYED NOTES

I.D.#	DESCRIPTION
2	INSTALL 2' CURB OPENING AND CHANNEL. SEE DETAIL SHEET C-500.
4	2' SIDEWALK CULVERT PER COA STD DTL DWG 2236.
5	INSTALL 1' CURB OPENING. SEE DETAIL SHEET C-500.
6	RIP RAP PLUNGE POOL. SEE DETAIL SHEET C-500.
7	INSTALL HANDRAIL FOR ADA RAMP BOTH SIDES OF RAMP.
8	INSTALL 6' CURB OPENING. SEE DETAIL SHEET C-500.
9	INSTALL TWO 6" STEPS.

GRADING NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
2. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO BE 1/2" BELOW EDGE OF PAVEMENT.
3. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
4. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
5. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
6. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
7. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
8. ALL DISTURBED AREAS TO BE RE-SEEDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.
9. REFER TO GEOTECHNICAL ENGINEERING SERVICES REPORT *PRELIMINARY GEOTECHNICAL ENGINEERING REPORT* BY TERRACON CONSULTANTS, INC. DATED FEBRUARY 4, 2021.

LEGEND

GRADING LIMITS
MAJOR CONTOUR 4985
MINOR CONTOUR
EXISTING MAJOR CONTOUR 4985
EXISTING MINOR CONTOUR
SLOPE ARROW -1.5% -51.2%
SWALE
HIGH POINT
MATCHLINE
FUTURE DEVELOPMENT

SPOT ELEVATION SYMBOLS

1. ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.

20.00 FLOWLINE
20.00± MATCH EX. GRADE ELEV. (APPROXIMATE)
BW 20.00 BOTTOM WALL
TW 20.00 TOP WALL
SW 20.00 SIDEWALK
FG 20.00 FINISHED GROUND
BS 20.00 BOTTOM STEP
TS 20.00 TOP STEP
TA 20.00 TOP ASPHALT
GRATE 20.00 TOP OF GRATE

WALL SPOT GRADE LOCATIONS NTS

SCALE: 1" = 20'

NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Grading3.dwg PLOT DATE: Jul 19, 2021 5:28pm

DESIGNED BE
DRAWN BE
CHECKED JS
DATE 7.19.2021

REVISION

RESPEC
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.753.9718

STAMP

JEREMY W SHELL
NEW MEXICO
26341
PROFESSIONAL ENGINEER
07/05/21

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

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

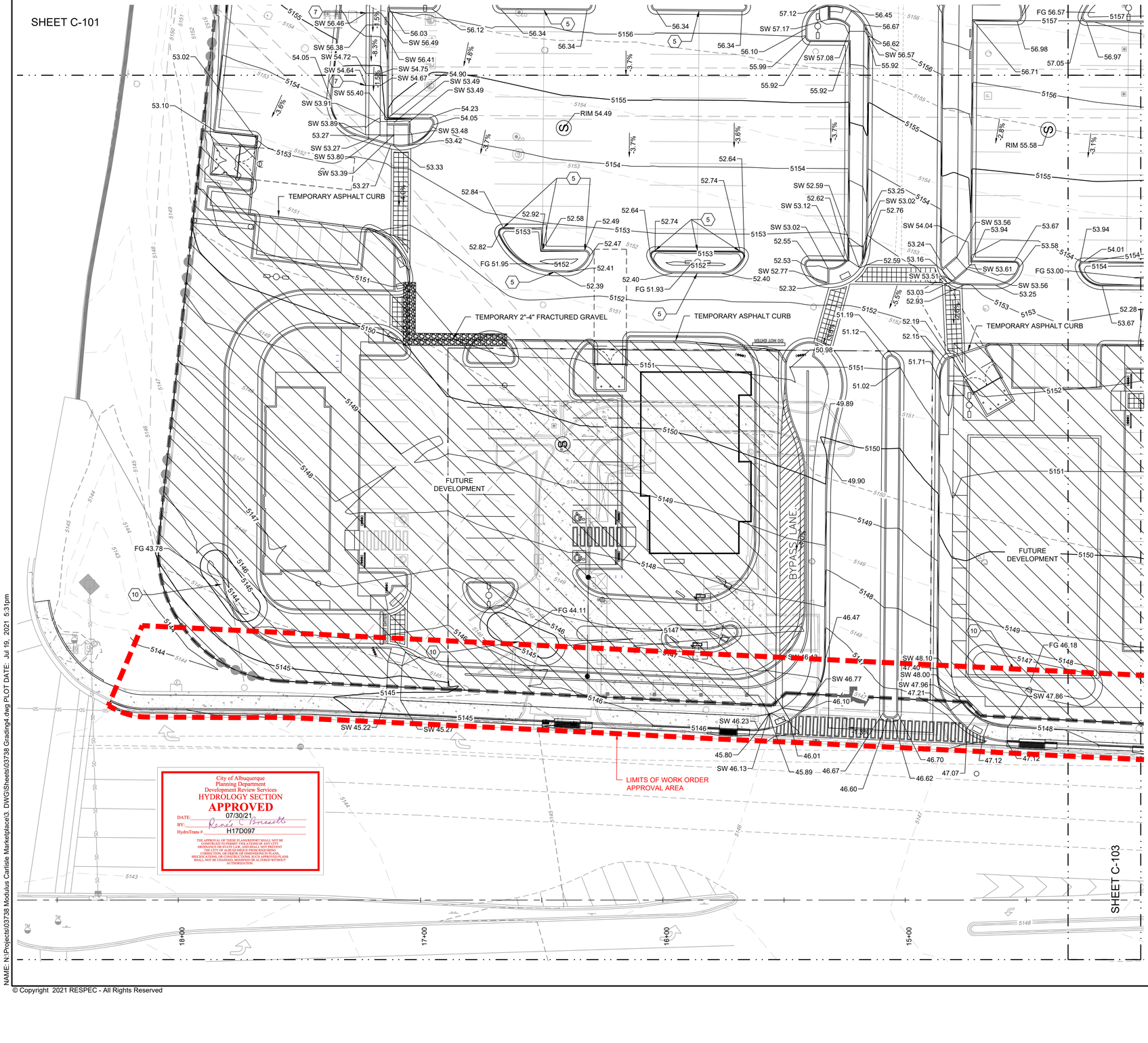
PROJECT NAME: CARLISLE CROSSING

SHEET TITLE: GRADING PLAN 3

SUBMITTED FOR: CONSTRUCTION

SHEET NUMBER: C-103

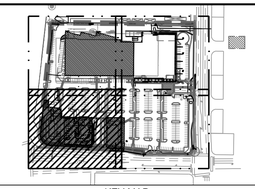
SHEET C-101



City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 07/30/21
BY: Randy Brissette
HydroTrans # H17D097

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY FROM REQUIRING THE CORRECTION OF ERRORS OR OMISSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

WORK ORDER APPROVAL ONLY



KEY MAP

NOTE:
1. THE EXISTING PARKING LOT AND BUILDINGS WILL BE DEMOLISHED UNLESS OTHERWISE SPECIFIED ON THIS PLAN.
2. PROPOSED PUBLIC INFRASTRUCTURE WILL BE INCLUDED ON PUBLIC WORK ORDER.

KEYED NOTES

I.D.#	DESCRIPTION
5	INSTALL 1' CURB OPENING. SEE DETAIL SHEET C-500.
7	INSTALL HANDRAIL FOR ADA RAMP BOTH SIDES OF RAMP.
10	INSTALL TEMPORARY SEDIMENT POND.

GRADING NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
2. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO BE 1/2" BELOW EDGE OF PAVEMENT.
3. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
4. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
5. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
6. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
7. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
8. ALL DISTURBED AREAS TO BE RE-SEEDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.
9. REFER TO GEOTECHNICAL ENGINEERING SERVICES REPORT *PRELIMINARY GEOTECHNICAL ENGINEERING REPORT* BY TERRACON CONSULTANTS, INC. DATED FEBRUARY 4, 2021.

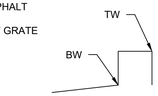
LEGEND

GRADING LIMITS
MAJOR CONTOUR 4985
MINOR CONTOUR
EXISTING MAJOR CONTOUR 4985
EXISTING MINOR CONTOUR
SLOPE ARROW -1.5% -51.2%
SWALE
HIGH POINT
MATCHLINE
FUTURE DEVELOPMENT

SPOT ELEVATION SYMBOLS

1. ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.

20.00 FLOWLINE
20.00± MATCH EX. GRADE ELEV. (APPROXIMATE)
BW 20.00 BOTTOM WALL
TW 20.00 TOP WALL
SW 20.00 SIDEWALK
FG 20.00 FINISHED GROUND
BS 20.00 BOTTOM STEP
TS 20.00 TOP STEP
TA 20.00 TOP ASPHALT
RIM 20.00 TOP OF GRATE



WALL SPOT GRADE LOCATIONS
NTS

0 20' 40'
SCALE: 1" = 20'

DESIGNED BE
DRAWN BE
CHECKED JS
DATE 7.19.2021

REVISION

RESPEC
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.753.9718

STAMP

JEREMY W SHELL
NEW MEXICO
26341
PROFESSIONAL ENGINEER
07/05/21

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

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

PROJECT NAME: CARLISLE CROSSING

SHEET TITLE: GRADING PLAN 4

SUBMITTED FOR: CONSTRUCTION

SHEET NUMBER: C-104

NAME: N:\Projects\03738 Modulus Carlisle Marketplace\3. DWG\Sheets\03738 Grading4.dwg PLOT DATE: Jul 19, 2021 5:31pm