

# CITY OF ALBUQUERQUE

*Planning Department*  
Brennon Williams, Director



*Mayor Timothy M. Keller*

May 28, 2021

Donald Briggs, P.E.  
Don Briggs Engineering LLC  
5324 Oakledge Ct. NW  
Albuquerque, New Mexico 87120

**RE: 8500 Glendale Ave. NE**  
**Permanent CO - Approved**  
**Engineers Stamp Date; 12/4/20**  
**Certification Stamp Date; 5/16/21**

Dear Mr. Briggs,

The construction of the scour wall does not match the approved drawings nor do they match City standards. After expressing concern with this you have stated that you are willing to certify this design. Therefore, based solely upon the information provided in your certification received 5/20/2021 this plan is approved for Certificate of Occupancy release by Hydrology.

Please note based on our discussion on 5/28/21 this approval is contingent on the slope of the scour wall must be seeded with native seed mix per City specification 1012.2 to help stabilize the slope. Also the property owner is responsible for maintaining the scour wall up to replacing it if necessary.

Also be aware there is still an active work order regarding this property that must be completed.

If you have any questions, please contact me at 924-3999 or [earmijo@cabq.gov](mailto:earmijo@cabq.gov).

Sincerely,

Ernest Armijo, P.E.  
Principal Engineer, Planning Dept.  
Development Review Services

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

**Project Title:** \_\_\_\_\_ **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_

**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_

**Legal Description:** \_\_\_\_\_

**City Address:** \_\_\_\_\_

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Owner:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**TYPE OF SUBMITTAL:** \_\_\_\_\_ PLAT (\_\_\_\_# OF LOTS) \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE \_\_\_\_\_ ADMIN SITE

**IS THIS A RESUBMITTAL?:** \_\_\_\_\_ Yes \_\_\_\_\_ No

**DEPARTMENT:** \_\_\_\_\_ TRAFFIC/ TRANSPORTATION \_\_\_\_\_ HYDROLOGY/ DRAINAGE

Check all that Apply:

### TYPE OF SUBMITTAL:

- \_\_\_\_\_ ENGINEER/ARCHITECT CERTIFICATION
- \_\_\_\_\_ PAD CERTIFICATION
- \_\_\_\_\_ CONCEPTUAL G & D PLAN
- \_\_\_\_\_ GRADING PLAN
- \_\_\_\_\_ DRAINAGE MASTER PLAN
- \_\_\_\_\_ 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:

- \_\_\_\_\_ 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:** \_\_\_\_\_ **By:** \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

FEE PAID: \_\_\_\_\_



May 15, 2021

Mr. Shahab Biazar, P.E.  
City Engineer  
Development Review Services  
City of Albuquerque  
Via email sbiazar@cabq.gov

Dear Mr. Biazar:

Based on discussions with City staff I have performed a review of the materials and construction of the scour wall installation at 8500 Glendale NE. The results I have presented here are based on multiple site visits, field measurements, photographs and a re-examination of the above ground rip rap material.

The approved design of the scour wall called for the installation of Type L (9" mean particle size) angular rip rap in a 1.2' thick layer. The top of the rip rap layer was to extend below grade in the arroyo channel to an elevation 4.5' below the thalweg of the channel. Cut stakes for this area were provided by Dehler Surveying. A site visit I completed on 9/9/2020 showed the excavation for the placement of the below grade material met or exceeded the design requirements. I have attached a photo of the excavation. The recycled concrete placed in the excavation area does not meet the exact particle size distribution for Type L rip rap as presented in Section 109 as much of the material is larger than the 9" mean particle size and some of the material is smaller than the 3" minimum (see photo 10/5/2020). However, I believe the material will meet the intent for scour protection based on the larger size and also the length between the toe of the slope and the south edge of the scour protection is more than twice the design requirement of 5' (see G&D plan B20D067).

The rip rap material placed on the slope was examined on 3/3/21 for the purpose of certification of the project. The material again is significantly larger than the 9" Type L requirement. There were some piles of dirt and construction debris on the surface of the rip rap. This material was not addressed in the certification as it does not affect the integrity of the scour wall.

On 5/5/21 I revisited the site to document the size and construction of the rip rap. I have attached photos of the material with a measuring tape that shows the size of the material. I also examined the pore spaces between the rip rap blocks to check that the smaller dirt material and construction debris was placed on top rather than within the layer. The layer had many open spaces which indicate the finer material was not brought in with the rip rap. However I did find some isolated pieces of broken concrete block that did appear to have come in with the rip rap. There were very few of these.

During this visit I observed that the amount of construction debris was significantly more than I saw at my previous visit. The Owner indicated he would have his landscaper remove the debris, break up and redistribute some of the larger (4'+) concrete slabs and plate the rip rap with dirt to promote vegetative growth.

My last visit on 5/14/21 found the work completed. I have provided photos of the completed work.

I will certify the material and construction of the scour wall based on the above information. I would like to thank your staff for questioning this project as it was not constructed under the required work order procedures. I picked up this project after it had been started and was unaware of this requirement.

As this is a scour wall and is not intended to protect the home over time I would suggest making sure the Covenant makes clear that the Owner is responsible for maintaining the infrastructure in its current condition.

Sincerely

Don Briggs PE  
Cc: John Jones













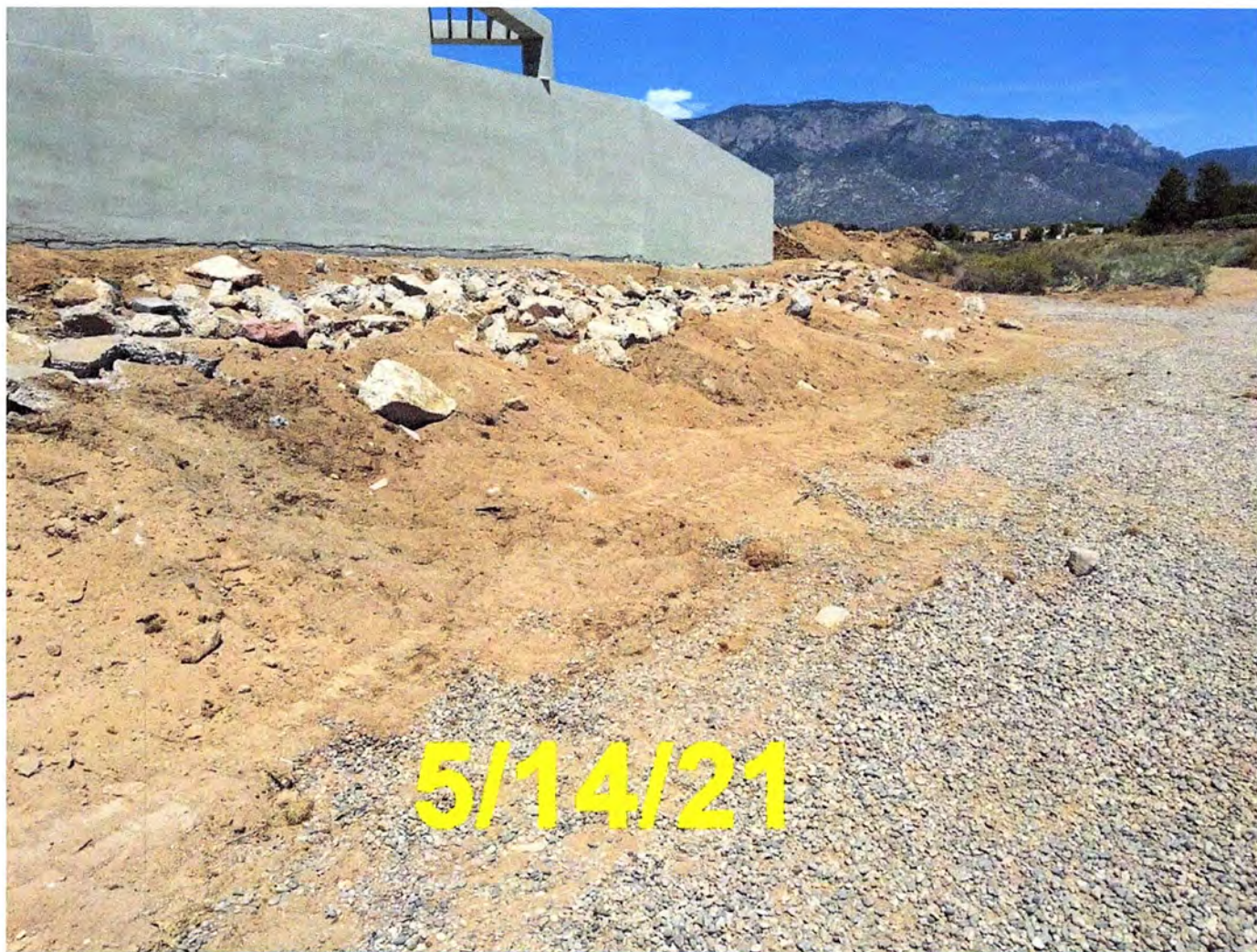












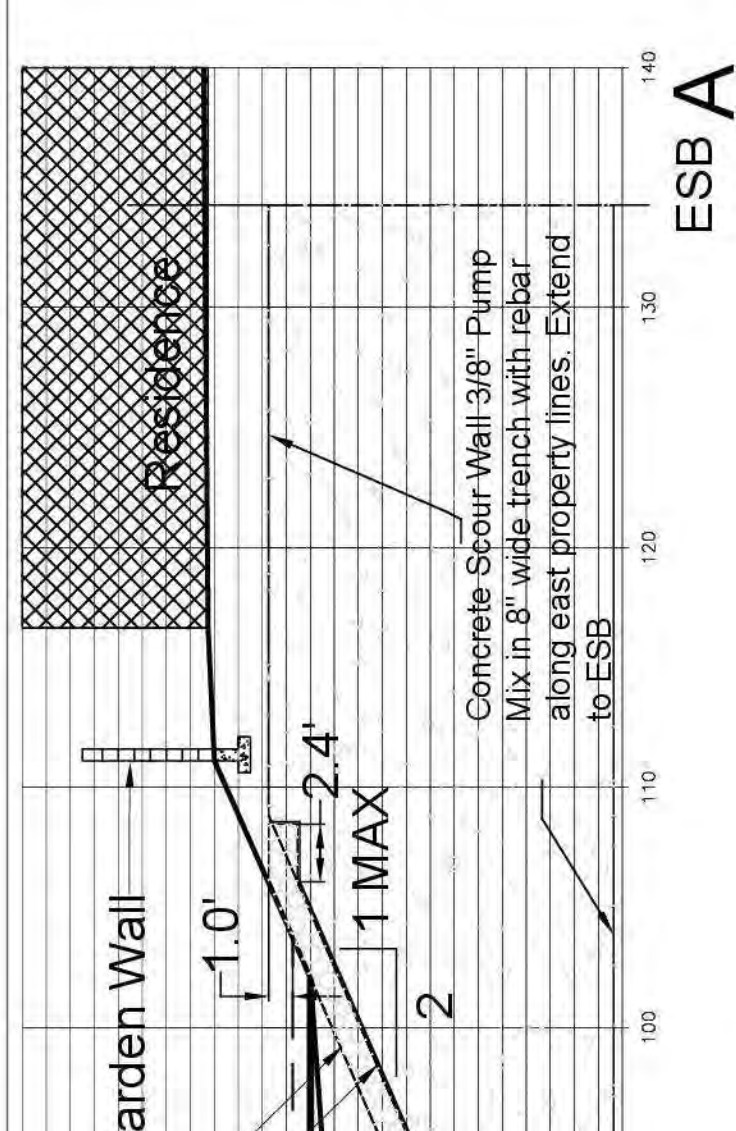
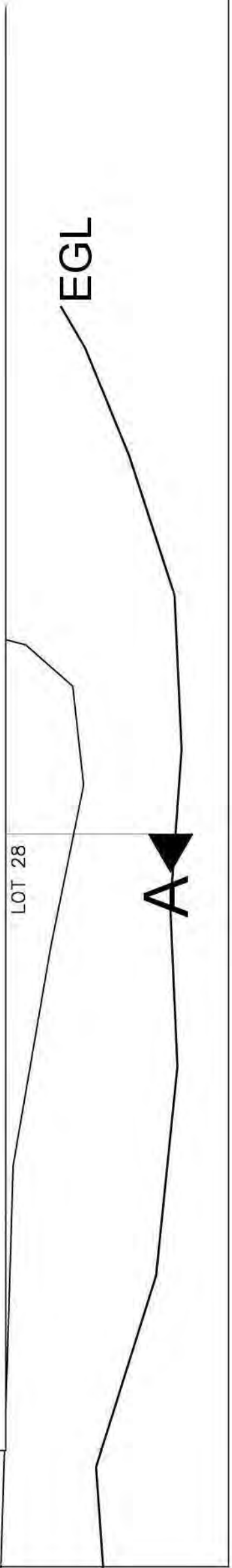
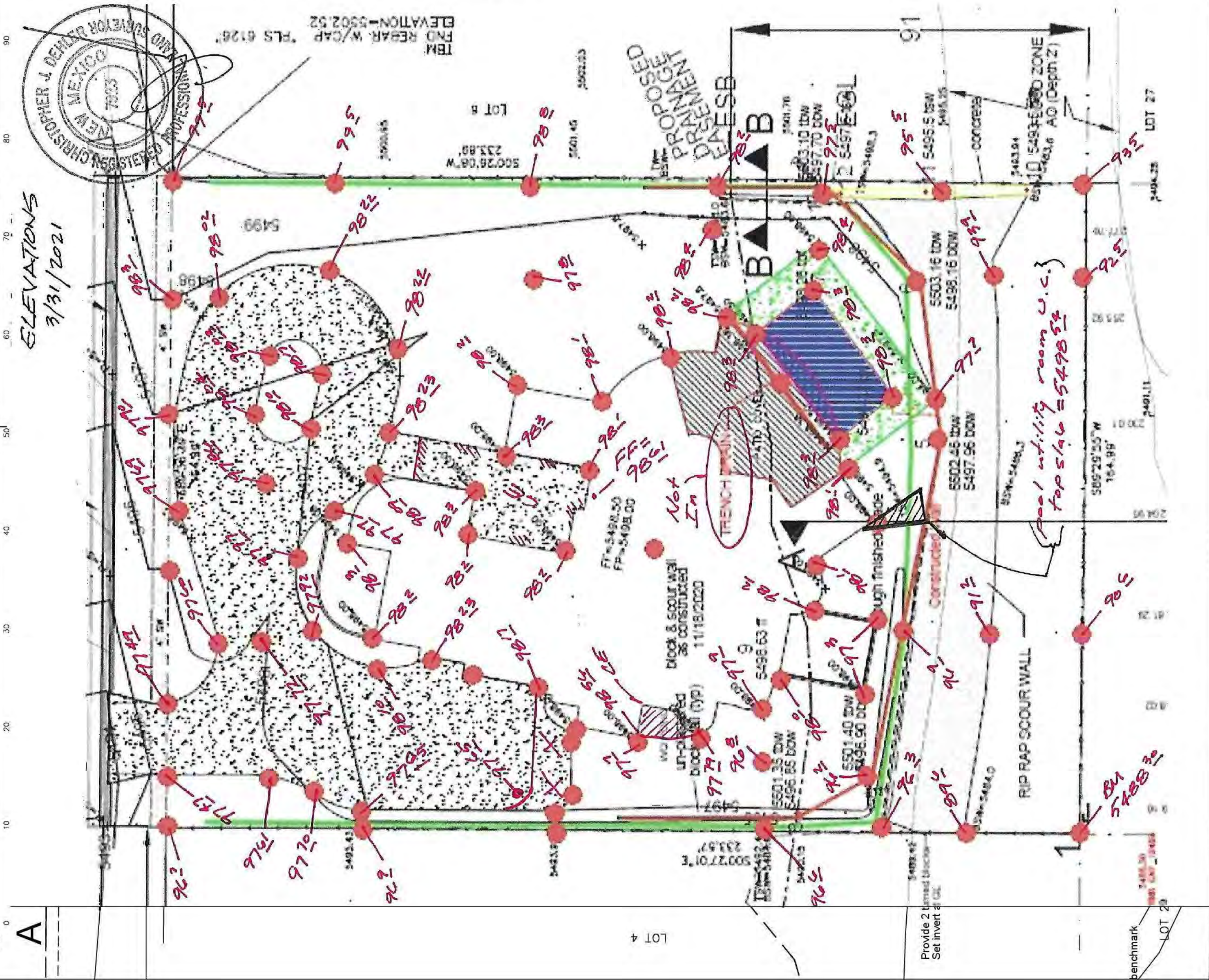
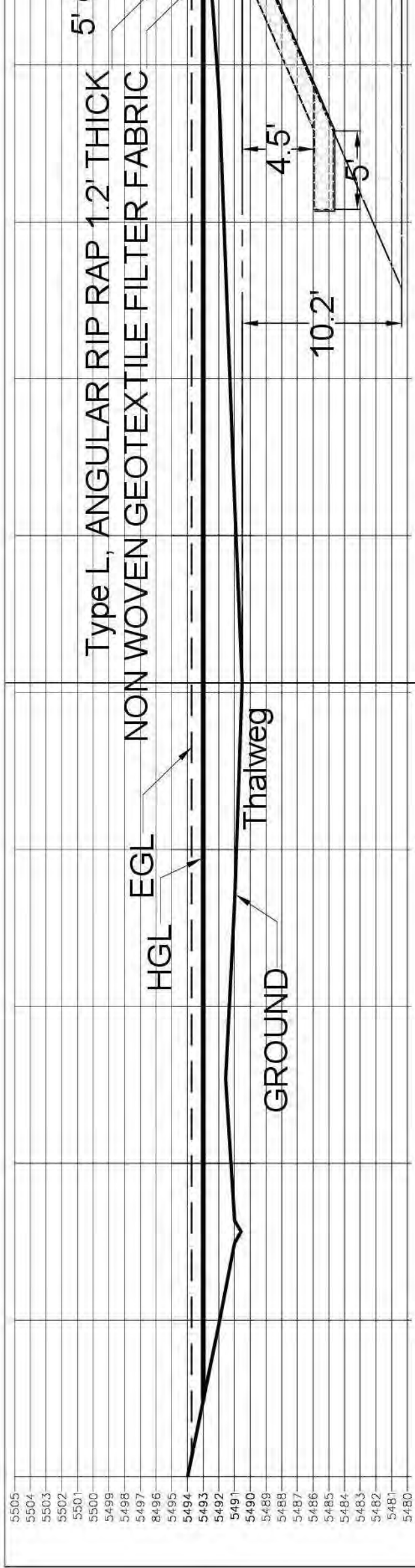




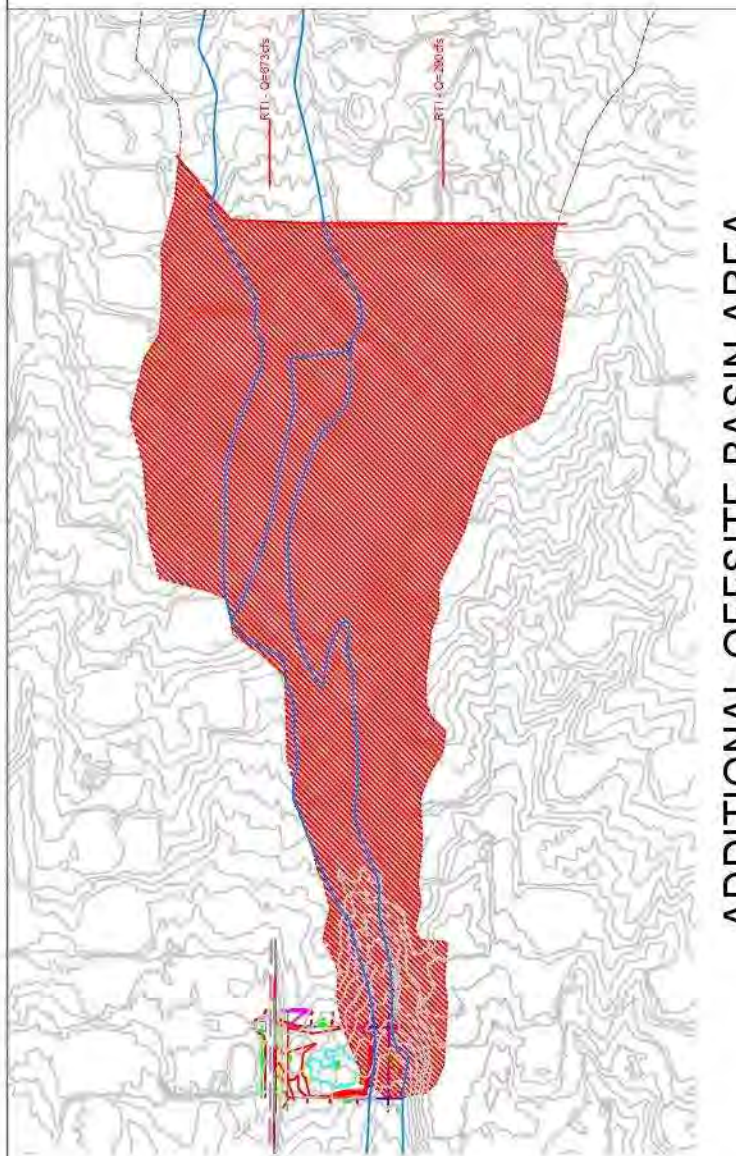
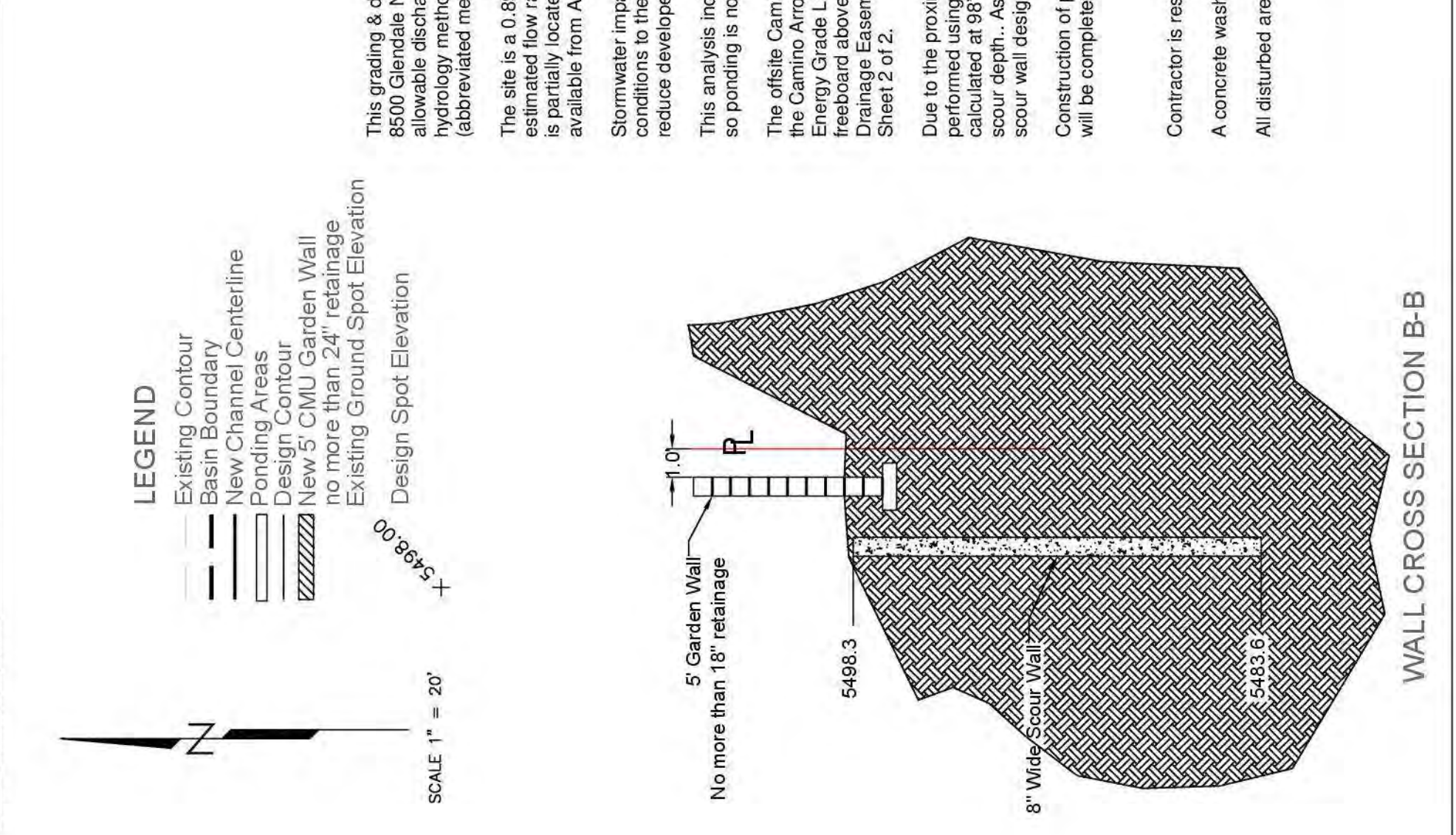








Hydrology Calculations 8500 Glendale NE																
Precipitation Zone 3 100 yr 6 in Storm Historic (Allowable)																
Land Treatment	Percent	Area (ac)	Excess Precipitation (in.)	Unit Peak Discharge (cfs/ac)	Runoff Volume (ac ft)	Peak Discharge (cfs)	Comments	Determined by DB								
								A	20.00%	0.18	0.66	1.97	0.01	0.33	Natural Ground	
								B	20.00%	0.18	0.92	2.60	0.01	0.46	Landscape Areas	
								C	20.00%	0.30	1.29	3.45	0.03	1.04	Compacted earth	
								D	26.00%	0.23	2.36	5.02	0.05	1.16	Impervious Areas	
TOTAL		100.00%	0.89	1.37	3.00	3.00	cu ft									
Proposed																
Land Treatment	Percent	Area (ac)	Excess Precipitation (in.)	Unit Peak Discharge (cfs/ac)	Runoff Volume (ac ft)	Peak Discharge (cfs)	Comments	Determined by DB								
								A	10.00%	0.09	0.66	1.97	0.00	0.17	Natural Ground	
								B	36.00%	0.32	0.92	2.60	0.02	0.83	Landscape Areas	
								C	36.00%	0.27	1.29	3.45	0.03	0.92	Compacted earth	
								D	24.00%	0.21	2.36	5.02	0.04	1.07	Impervious Areas	
TOTAL		100.00%	0.89	1.35	3.00	3.00	cu ft									
Water Quality Retention Volume = 0.47' x 390.416' sq ft = 325.65' cu ft																
DIFFERENCE																
Pond only Water Quality Volume																



ADDITIONAL OFFSITE BASIN AREA

Hydrology Calculations Additional Offsite Watershed Assuming Full Development									
Precipitation Zone 3 100 yr 6 in Storm Historic (Allowable)									
24.6124 ac.			1077.117.1 cu ft			Determined by DB			
Land Treatment	Percent	Area (ac.)	Excess Precipitation (in.)	Unit Peak Discharge (cfs/ac)	Runoff Volume (ac ft)	Peak Discharge (cfs)	Comments		
A	20.00%	4.92	0.66	1.87	0.27	9.21	Natural Ground		
B	20.00%	4.92	0.92	2.60	0.38	12.90	Landscape Area		
C	20.00%	8.37	2.29	3.45	0.50	25.87	Compacted earth		
D	20.00%	6.40	2.56	3.92	0.54	35.57	Imperious Area		
TOTAL	100.00%	24.61	1.37		2.83	83.00			
RTI Flows at Ventura (Camino Arroyo)							290		
							693		
Total							1046.00		

**DRAINAGE CERTIFICATION**

I, Don Briggs, NMPE 14912, OF THE FIRM, Don Briggs Engineering LLC, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 12/4/2021. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY Chris Dehler, NMPS 7923, OF THE FIRM Dehler Surveying LLC.

I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 10/5/2020 AND 3/21/2021 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND IS INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.



**DRAINAGE NARRATIVE**

This grading & drainage plan was prepared to support a building permit application for a new residence located at 8500 Glendale NE, Lot 15, Block 17, Add'l Unit 3, NMAI in Northern New Mexico. The plan was prepared using the hydrology methodology presented in Chapter 22.2 of the City of Albuquerque's Development Process Manual (abbreviated method).

The site is a 0.89 acre parcel located in Precipitation Zone 3. The site is impacted by the Camino Arroyo with an estimated flow rate of 1046 cfs (RTI Flows @ Ventura + additional developed basin flow) at the property. The property is partially located in FEMA Flood Zone AO (Depth 2) as shown on panel 35001C0133H. Sewer and water service is available from ABQWUA.

Stormwater impacts and mitigation requirements are determined by comparing runoff from the proposed developed conditions to the NMA allowable conditions (see Site Hydrology on this plan). Mitigation measures are designed to reduce developed runoff to at or below the NMA allowable.

This analysis indicates that the site developed runoff will not exceed the allowable runoff in a 100yr. 6hr. rainfall event so ponding is not required.

The offsite Camino Arroyo flow is passed through the property in its natural channel location. A hydraulic analysis of the Camino Arroyo was performed using the US Army's HEC-RAS software to determine the Hydraulic Grade Line, Energy Grade Line and flow velocity. The results of this analysis indicated the developed lot will have a minimum 2' depth above the Energy Grade Line and a 1' depth above the Hydraulic Grade Line. The HEC-RAS analysis is presented on Sheet 2 of 2.

Due to the proximity of the home to the Camino Arroyo a scour analysis is required. Scour calculations were performed using the equations presented in ANAFCA's Sediment and Erosion Design Guide. The Erosion Setback is calculated at 98' and the parallel scour depth at 4.5' (3.5' + 1' Safety Factor) and 10.2' (9.2' + 1') for the perpendicular scour depth. As the home will be located within the Erosion Setback a scour wall is required for this development. The scour wall design is presented on this plan.

Construction of public infrastructure is required with this development. This infrastructure is shown on Sheet 3 of 3 and will be completed through the Development Review Board process.

**GENERAL NOTES**

Contractor is responsible for utility spots and controlling sediment disposition and erosion during construction.

A concrete washout bin must be provided as per Bernalillo County MS4 Permit requirements.

All disturbed area due to construction must be reseeded or landscaped following construction.

ENGINEER'S SEAL			
NO.		BY	DATE
FIELD NOTES			
SURVEY INFORMATION			
BENCHMARKS			
CONTRACTOR			
WORK STAMPED BY		DATE	
INSPECTOR'S APPROVAL BY		DATE	
FIELD VERIFICATION BY		DATE	
DRAWINGS CORRECTED BY		DATE	
RECORDING INFORMATION		DATE	
RECORDED BY		NO.	

NO.		DATE		REMARKS		By
1	5/28/2019	Address Comments		DB		
2	10/16/2020	Add Pool		DB		
<i>REVISIONS</i>						
<i>DESIGN</i>						
DESIGNED BY		DB		DATE 4/25/2019		
DRAWN BY		DB		DATE 4/25/2019		
CHECKED BY				DATE		

Hydrology Calculations Additional Offsite Watershed Assuming Full Development										
Precipitation Zone 3 100 yr 6 in Storm Historic (Allowable)										
Land Treatment	Percent	Area (ac)	Excess Precipitation (in.)	Unit Peak Discharge (cfs/ac)	Runoff Volume (ac ft)	Peak Discharge (cfs)	Comments	Determined by DB		
A	20.00%	0.86	3.07	9.27	0.27	9.21	Natural Ground			
B	20.00%	0.86	4.30	12.90	0.38	12.90	Landscape Area			
C	20.00%	0.86	6.40	19.20	0.57	19.20	Imperious Area			
D	20.00%	0.86	9.27	27.81	0.86	27.81	Imperious Area			
TOTAL	100.00%	3.44	19.04	56.57	2.07	69.33				
RTI Flows at Ventura (Concrete Arroyo)										
							290			
							693			
							1044.04			







