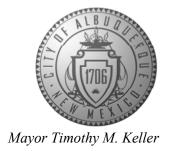
CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



March 10, 2023

Dennis Lorenz, P.E. Lorenz Design & Consulting LLC 3308 Calle De Daniel NW Albuquerque, NM 87104

RE: Congress Apartments

Grading and Drainage Plans Engineer's Stamp Date: 2/8/2023

Hydrology File: C13D033

Dear Mr. Lorenz:

Based upon the information provided in your submittal received 3/10/2023, the Grading & Drainage Plan is approved for Building Permit approval. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PO Box 1293

PRIOR TO CERTIFICATE OF OCCUPANCY:

Albuquerque

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.

NM 87103

2. Please provide the executed paper Drainage Covenant (latest revision) printed on one-side only with Exhibit A and a check for \$25 made out to "Bernalillo County" for the stormwater quality ponds per Article 6-15(C) of the DPM to Hydrology for review. Once the review is done, Hydrology will send back an email stating our approval/comments.

www.cabq.gov

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, 505-924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 505-924-3695 or tchen@cabq.gov.

Sincerely,

Tiequan Chen, P.E.

Principal Engineer, Hydrology

Planning Department, Development Review Services



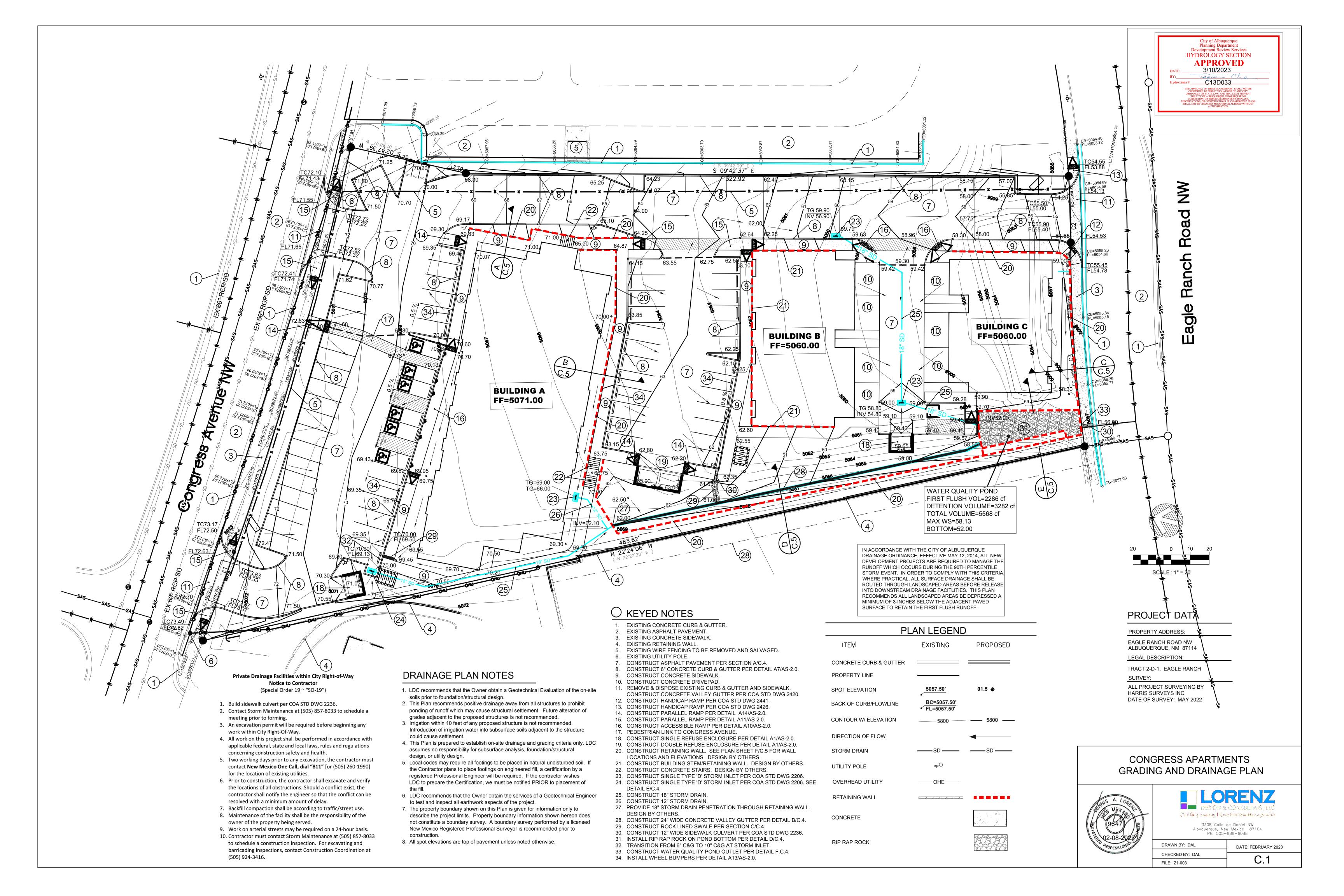
City of Albuquerque

Planning Department Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Congress Apartments	Building	Permit #:	Hydrology File #: C13 D033
DRB#: NA	EPC#: <u>NA</u>	4	Work Order#: NA
Legal Description: Tract 2-D-1 Eagle Rand			
City Address: 9441 Eagle Ranch Road NW A		37114 UPC 1013064	24351021233
Applicant: Lorenz Design & Consulting LLC Address: 3308 Calle de Daniel NW, Albuquerq	ue, NM 87104 Fax#:		Contact: Dennis Lorenz E-mail: dennisl@lorenznm.com Contact: Peter Gineris
TYPE OF SUBMITTAL: PLAT (# IS THIS A RESUBMITTAL?: X DEPARTMENT: TRAFFIC/ TRANS	Yes	No	
Check all that Apply: TYPE OF SUBMITTAL: ENGINEER/ARCHITECT CERTIFICA PAD CERTIFICATION CONCEPTUAL G & D PLAN X GRADING PLAN DRAINAGE MASTER PLAN X DRAINAGE REPORT FLOODPLAIN DEVELOPMENT PERM ELEVATION CERTIFICATE CLOMR/LOMR TRAFFIC CIRCULATION LAYOUT (TRAFFIC IMPACT STUDY (TIS) OTHER (SPECIFY) PRE-DESIGN MEETING?	MIT APPLIC TCL)	X BUILI CERT PRELI SITE I SITE I FINAI SIA/ R FOUN GRAD SO-19 PAVIN GRAD WORK CLOM FLOO	APPROVAL/ACCEPTANCE SOUGHT: DING PERMIT APPROVAL IFICATE OF OCCUPANCY IMINARY PLAT APPROVAL PLAN FOR SUB'D APPROVAL PLAN FOR BLDG. PERMIT APPROVAL PLAT APPROVAL RELEASE OF FINANCIAL GUARANTEE DATION PERMIT APPROVAL DING PERMIT APPROVAL APPROVAL NG PERMIT APPROVAL OING/PAD CERTIFICATION CORDER APPROVAL IR/LOMR DPLAIN DEVELOPMENT PERMIT R (SPECIFY)
DATE SUBMITTED: March 10, 2023		Dennis Lorenz PE	
COA STAFF:		NIC SUBMITTAL RECE	IVED:

FEE PAID:___





ESTATES PLAZA AT PASEO DEL NORTE

FIRM PANEL

35001C0108G

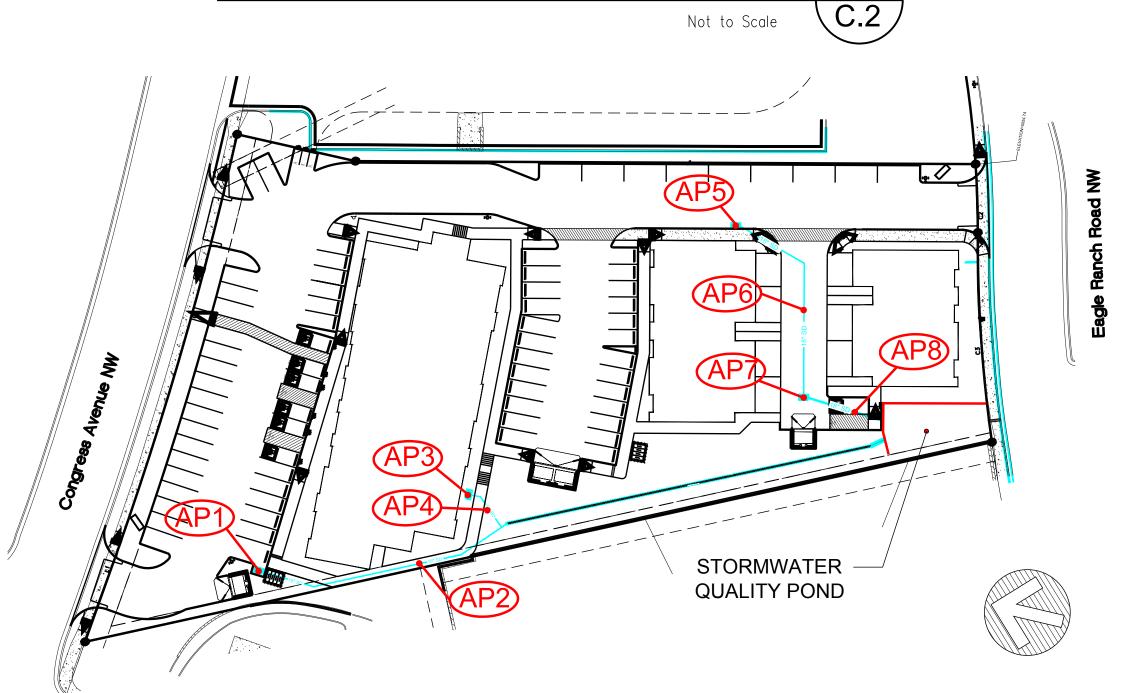
DRAINAGE BASIN MAP

LOCATION MAP

IDO ZONE ATLAS C-13 NOT TO SCALE



STORMWATER — **QUALITY POND**



DRAINAGE STRUCTURE INVENTORY Not to Scale

C.2

GRADING AND DRAINAGE PLAN

PURPOSE AND SCOPE

Pursuant to the Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Grading and Drainage Plan outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the construction of the Congress Apartments, a 49 unit high density infill project. The purpose of this Plan is to provide details required to support building permit and construction, and to provide a detailed drainage study for existing and developed conditions. The scope of this plan is to present grading and drainage criteria for the safe management of excess runoff impacting the site from upstream drainage basins, and controlling excess runoff from the project site in a well-managed, non-erosive manner.

EXISTING CONDITIONS

The property is located on Eagle Ranch Road NW, just west of Irving Blvd NW. The site is presently undeveloped. Site topography slopes to the south and is vegetated by native grasses and shrubs. The site presently drains south into Eagle Ranch Road. Existing public storm drainage improvements collect and convey all runoff east to the Calabacillas Arroyo, located approximately one-half mile from the site.

Properties to the east and west drain to Eagle Ranch Road and the public storm described above. Existing public storm drains located within Congress Avenue protect the site from off site flows originating to the north. As shown by the attached FIRM Panel the site does not lie within a mapped 100 year Flood Zone.

PROPOSED IMPROVEMENTS

As stated above, the site is to be developed as the Congress Apartments. All drainage flows will be managed by grading and drainage improvements recommended by this plan. All excess runoff will be routed through storm drains and landscaping improvements, and a first flush/detention pond prior to discharge to Eagle Ranch Road and downstream public drainage improvements. This is an infill site with very steep grades. All excess runoff will drain south to Eagle Ranch Road. Flows in Eagle Ranch Road drain to Irving Blvd, which drains southeast to Coors Blvd where flows are conveyed to the Calabacitas Arroyo by existing public storm drainage improvements.

The site will provide first flush and detention storage to the extent possible. The site will provide first flush volume of 2,286 cf and detention storage of 3,282 cf for a total of 5,568 cf. The total site discharge of 4.71 cfs, is slightly more the existing peak flow rate of 4.10 cfs, but below the 5.0 cfs mandated by the City Engineer. Given the existing steep gradients and density proposed on this site, this plan attempts to meet the drainage management criteria required by the DPM to the maximum extent possible.

Construction will disturb an area in excess of 1.0 acres; therefore a Storm Water Pollution Prevention Plan will be required. The SWPPP and an Erosion and Sediment Control Plan will be prepared by others, detailing the erosion control measures required during construction and for the interim period prior to future development of the property.

CALCULATIONS

The calculations shown hereon define the 100-year/6 hour design storm falling within the project area under existing and proposed conditions. Project hydrology and first flush ponding criteria is per "Chapter 6, Development Process Manual, dated June 8, 2020.

SITE PONDING REQUIREMENT

This is an infill site with very steep grades. All excess runoff drains south to Eagle Ranch Road. Flows in Eagle Ranch Road drain to Irving Blvd, which drains southeast to Coors Blvd where flows are managed by existing public storm drainage improvements. The site will provide first flush and detention storage to the maximum extent possible.

Site excess runoff will be managed as follows:

Basin 'A.2' will free discharge to Eagle Ranch Road NW.

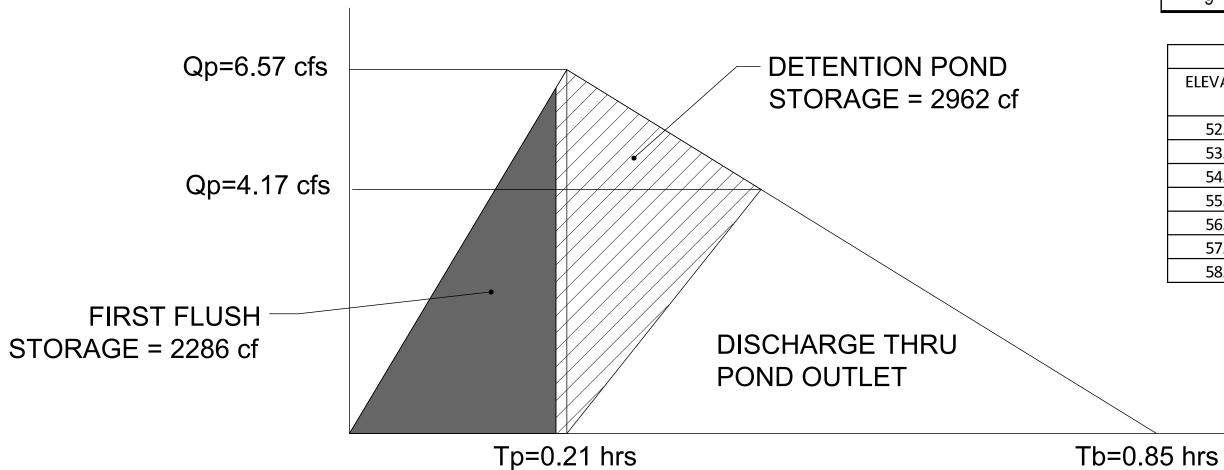
Basins A.1 and B will be routed through storm drains and landscaping to a first flush/water quality pond located at the southwest corner of the site. First flush storage of 2,286 cf and detention storage of 3,282 cf will be provided. The remaining runoff will be routed through a perimeter wall, discharging thru a sidewalk culvert to Eagle Ranch Road NW.

TOTAL ONSITE STORAGE PROVIDED

First Flush Storage = 2,286 CF Detention Pond Storage = 3,282 cf Total Storage = 5,568 cf

TOTAL DEVELOPED DISCHARGE

Basin A.2 = 0.54 CFs - free dischage to Eagle Ranch Road Basin B = 4.17 cfs - routed through SWQ Pond Total Developed Discharge = 4.71 cfs - Less than 5.0 cfs allowed



DETENTION POND HYDROGRAPH C

Not to Scale

Planning Department Development Review Services **HYDROLOGY SECTION APPROVED** 3/10/2023

	PROJECT HYDROLOGY
	CONGRESS APARTMENTS
	AHYMO
1	
2.17	
3.90	

EXISTING CONDITIONS								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	Ш	Q (cfs)	VOL (ac
SITE	1.90	0.00	1.90	0.00	0.00	0.73	4.10	0.116

PROPOSED CONDITIONS								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	Ш	Q (cfs)	VOL (ac ft)
SITE	1.90	0.00	0.31	0.09	1.50	1.93	7.11	0.306
Α	0.55	0.00	0.03	0.04	0.48	2.06	2.16	0.095
A.1	0.42	0.00	0.02	0.03	0.36	2.07	1.61	0.073
A.2	0.13	0.00	0.01	0.01	0.12	2.04	0.54	0.022
В	1.35	0.00	0.28	0.05	1.02	1.88	4.95	0.211
B.1	0.44	0.00	0.04	0.03	0.37	2.01	1.70	0.074
B.2	0.15	0.00	0.02	0.01	0.12	1.95	0.57	0.024
B.3	0.25	0.00	0.00	0.01	0.24	2.19	1.02	0.046
B.4	0.25	0.00	0.00	0.00	0.25	2.24	1.03	0.047
B.5	0.05	0.00	0.01	0.00	0.04	1.94	0.19	0.008
B.6	0.21	0.00	0.21	0.00	0.00	0.73	0.45	0.013

FIRST FLUSH CRITERIA

P_{6HOUR}

 $\mathsf{P}_{\mathsf{10~DAY}}$

By ordinance the site is required to retain the 90th percentile rainfall depth. In order to comply with this criterion, where practical, all surface areas will be routed through landscaped areas before release to downstream public drainage facilities. In addition to the volume within the landscaped areas, excess runoff will stored within the proposed Water Quality Pond. Storage in excess of the 90th percentile rainfall will be provided as illustrated below.

90th percentile depth 0.42"

Site Area Type D (Ad) = 1.50 ac.

Storage requirement = Ad(0.42'') = 1.50 ac(43,560 sf/ac)(0.42''/12''/ft) = 2,286 cf

First flush storage to be provided within the Basin A water quality pond and onsite landscaping improvements.

ANALYSIS	CONTRIB	Q100	DRAINAGE	PIPE SLOPE	CAPACITY
POINT	BASINS	cfs	STRUCTURE	%	cfs
1	B.1	1.70	TYPE D INLET	NA	5.5
2	B.1	1.70	18" SD	3.0	12.2
3	B.2	0.57	TYPE D INLET	NA	5.5
4	B.2	0.57	12" SD	16.0	9.6
5	B.1+B.2	2.27	18" SD	3.0	12.2
6	A.1	1.61	TYPE D INLET	NA	5.5
7	A.1	1.61	18" SD	2.4	10.9
8	B.4	1.03	TYPE D INLET	NA	5.5
9	A 1+B 4	2.64	18" SD	6.7	18.2

POND STORAGE TABLE						
ELEVATION	AREA	VOL	VOL			
	(sf)	(cf)	(ac-ft)			
52.00	830	0	0.0000			
53.00	830	830	0.0191			
54.00	830	1660	0.0381			
55.00	830	2490	0.0572			
56.00	830	3320	0.0762			
57.00	830	4150	0.0953			
58 13	1010	5070	0 1164			

POND VOLUME PROVIDED

Total Volume Required = 5,248 cf Volume Provided to Pond bottom @ 52.00 = 5,070 CF Volume within 2' layer of 6" fractured rock below pond bottom @ 30% void ratio = 498 cf Total Storage Provided = 5,568 cf

CONGRESS APARTMENTS GRADING AND DRAINAGE PLAN





DRAWN BY: DAL	DATE: FEBRUARY 2023
CHECKED BY: DAL	
FILE: 21-003	7 C.2

