CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

October 5, 2022

Dennis Lorenz, PE
Lorenz Design & Consulting LLC
3308 Calle De Daniel NW
Albuquerque, NM 87104

RE: Congress Apartments
Grading and Drainage Plans
Engineer's Stamp Date: 08/5/22
Hydrology File: C13D033

Dear Mr. Lorenz:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 8/5/2022, the Grading & Drainage Plan is not approved for Building Permit until the following comments are addressed:

1. Provide stormwater quality for Basin A. The site appears to be too steep for ponding along the driveway, therefore it could be piped to the pond in the southeast corner or the drive entrance super-elevated so it is low on the south side. An inlet near Bldg B (59.79) would capture most of the flows from Basin A.

2. Due to the large scope of determining the downstream capacity in the Coors Blvd storm drain, it would be preferable for the proposed peak flow rate to not exceed the existing peak flow rate, however, due to site constraints the proposed discharge should be less than or equal to 5 cfs. To help reduce the discharge rate:

   a. The pond in the southeast corner could have vertical walls to increase the volume.
   b. There is room for a pond south of Bldg B and south of the refuse containers between buildings A and B.

3. Pond comments in comment 2 above, would also help the site meet the first flush volume requirement.

4. To help the first flush volume infiltrate, the pond bottom could be amended (raked with bucket or similar).

5. Provide the invert where the 12" storm drains connect.

6. On the retaining wall plan , provide TW/BW rather than TW/FG as sometimes FG grade is higher and lower than the TW grade.

7. What is the significance of the linework that juts into the drive north of the parking area between buildings B and C?

8. For Sections B, C, D and E on Sht C.4 provide the depth of the invert in the landscape area.

9. Pond slopes are to have aggregate. This comment may be moot per comment 2.a.

10. From reviewing contours in out GIS, it appears that north-bound Eagle Ranch Rd is lower than south-bound Eagle Ranch Rd. Please confirm with spot elevations at the northbound flowline to justify not providing the standard water block of 0.87 inches at the property line.

11. Please increase the font size for the First Flush Criteria.

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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 924-3999 or sbiazar@cabq.gov

Sincerely,

Shahab Biazar, P.E. CFM
City Engineer, Planning
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 #: B13 D002C

DRB#: NA EPC#: NA Work Order#: NA

Legal Description: Tract 2-D-1 Eagle Ranch

City Address: 9999 Eagle Ranch Road NW Albuquerque, NM 87114 UPC 101306424351021233

Applicant: Lorenz Design & Consulting LLC Contact: Dennis Lorenz

Address: 3308 Calle de Daniel NW, Albuquerque, NM 87104

Phone#: 505-220-0869 Fax#: _____ E-mail: dennisl@lorenznm.com

Owner: Cornerstone Capital LLC Contact: Peter Gineris

Address: 6509 Coors Blvd NW, Albuquerque, NM 87120

Phone#: 505-250-4697 Fax#: _____ E-mail: Peter.Gineris@cbre.com

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) ____ RESIDENCE ____ DRB SITE __X__ 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?

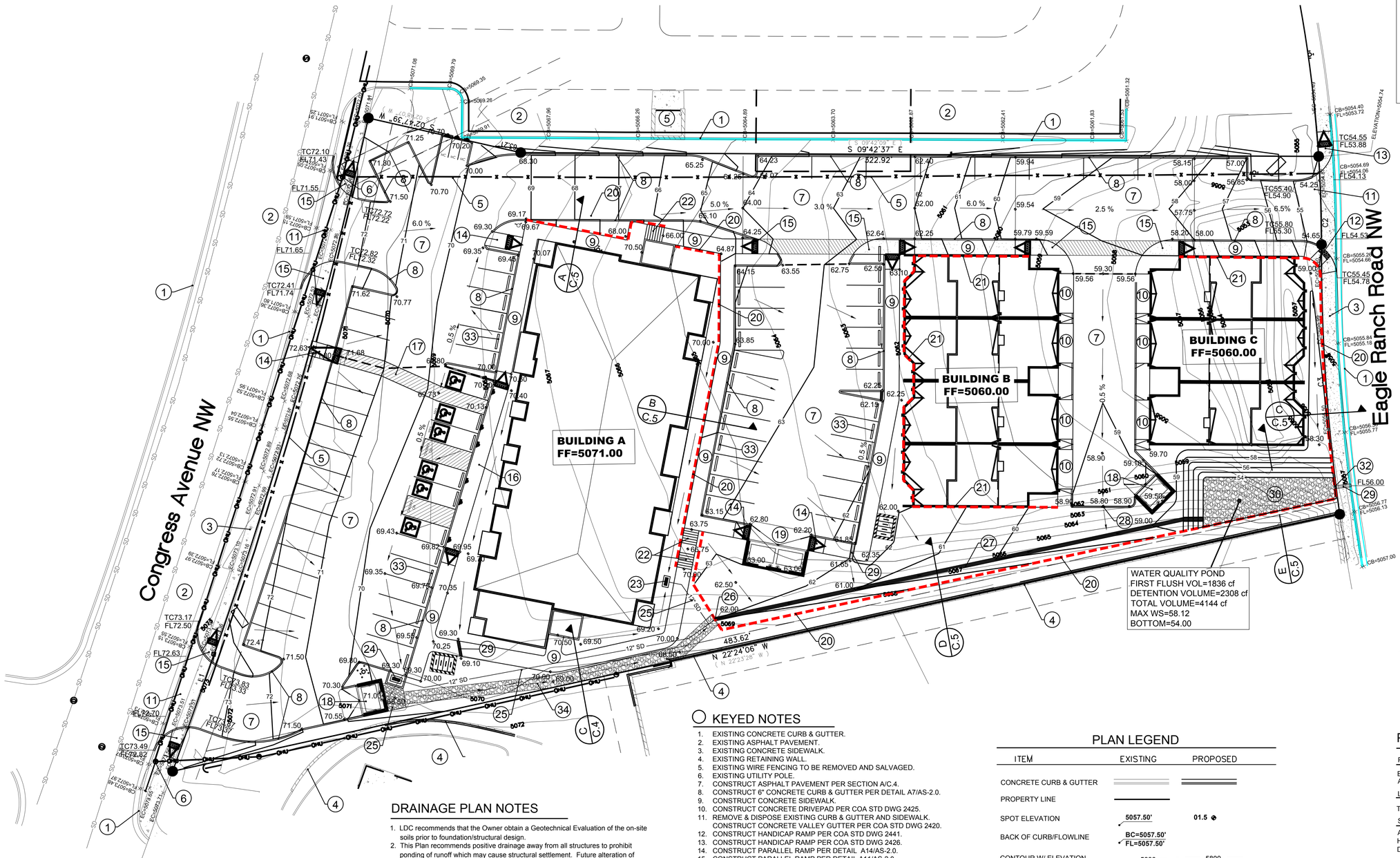
TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

__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: Agust 5, 2022 By: Dennis Lorenz PE

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



KEYED NOTES

1. EXISTING CONCRETE CURB & GUTTER.
2. EXISTING ASPHALT PAVEMENT.
3. EXISTING CONCRETE SIDEWALK.
4. EXISTING RETAINING WALL.
5. EXISTING WIRE FENCING TO BE REMOVED AND SALVAGED.
6. EXISTING UTILITY POLE.
7. CONSTRUCT ASPHALT PAVEMENT PER SECTION A/C.4.
8. CONSTRUCT 6" CONCRETE CURB & GUTTER PER DETAIL A7/AS-2.0.
9. CONSTRUCT CONCRETE SIDEWALK.
10. CONSTRUCT CONCRETE DRIVEPAD PER COA STD DWG 2425.
11. REMOVE & DISPOSE EXISTING CURB & GUTTER AND SIDEWALK. CONSTRUCT CONCRETE VALLEY GUTTER PER COA STD DWG 2420.
12. CONSTRUCT HANDICAP RAMP PER COA STD DWG 2441.
13. CONSTRUCT HANDICAP RAMP PER COA STD DWG 2426.
14. CONSTRUCT PARALLEL RAMP PER DETAIL A14/AS-2.0.
15. CONSTRUCT PARALLEL RAMP PER DETAIL A11/AS-2.0.
16. CONSTRUCT ACCESSIBLE RAMP PER DETAIL A10/AS-2.0.
17. PEDESTRIAN LINK TO CONGRESS AVENUE.
18. CONSTRUCT SINGLE REFUSE ENCLOSURE PER DETAIL A1/AS-2.0.
19. CONSTRUCT DOUBLE REFUSE ENCLOSURE PER DETAIL A1/AS-2.0.
20. CONSTRUCT RETAINING WALL. SEE PLAN SHEET G/C.4 FOR WALL LOCATIONS AND ELEVATIONS. DESIGN BY OTHERS.
21. CONSTRUCT BUILDING STEM/RETAINING WALL. DESIGN BY OTHERS.
22. CONSTRUCT CONCRETE STAIRS. DESIGN BY OTHERS.
23. CONSTRUCT SINGLE TYPE 'D' STORM INLET PER COA STD DWG 2206.
24. CONSTRUCT DOUBLE TYPE 'D' STORM INLET PER COA STD DWG 2206, WITH OVERFLOW WEIR PER DETAIL E/C.4.
25. CONSTRUCT 12" STORM DRAIN.
26. PROVIDE 12" STORM DRAIN PENETRATION THROUGH RETAINING WALL. DESIGN BY OTHERS.
27. CONSTRUCT 18" WIDE CONCRETE VALLEY GUTTER PER DETAIL B/C.4.
28. PROVIDE 12" CURB BLOCKOUT FOR DRAINAGE.
29. CONSTRUCT 12" WIDE SIDEWALK CULVERT PER COA STD DWG 2236.
30. INSTALL RIP RAP ROCK ON POND BOTTOM PER DETAIL D/C.4.
31. CONSTRUCT RIP RAP EROSION CONTROL AT STORM INLET OVERFLOW PER DETAIL D/C.4.
32. CONSTRUCT WATER QUALITY POND OUTLET PER DETAIL F.C.4.
33. INSTALL WHEEL BUMPERS PER DETAIL A13/AS-2.0.
34. CONSTRUCT ROCK LINED SWALE PER SECTION C/C.4.

DRAINAGE PLAN NOTES

1. LDC recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
2. This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
3. Irrigation within 10 feet of any proposed structure is not recommended. Introduction of irrigation water into subsurface soils adjacent to the structure could cause settlement.
4. This Plan is prepared to establish on-site drainage and grading criteria only. LDC assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
5. Local codes may require all footings to be placed in natural undisturbed soil. If the Contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer will be required. If the contractor wishes LDC to prepare the Certification, we must be notified PRIOR to placement of the fill.
6. LDC recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
7. The property boundary shown on this Plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey. A boundary survey performed by a licensed New Mexico Registered Professional Surveyor is recommended prior to construction.
8. All spot elevations are top of pavement unless noted otherwise.

IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DRAINAGE ORDINANCE, EFFECTIVE MAY 12, 2014, ALL NEW DEVELOPMENT PROJECTS ARE REQUIRED TO MANAGE THE RUNOFF WHICH OCCURS DURING THE 90TH PERCENTILE STORM EVENT. IN ORDER TO COMPLY WITH THIS CRITERIA, WHERE PRACTICAL, ALL SURFACE DRAINAGE SHALL BE ROUTED THROUGH LANDSCAPED AREAS BEFORE RELEASE INTO DOWNSTREAM DRAINAGE FACITLITIES. THIS PLAN RECOMMENDS ALL LANDSCAPED AREAS BE DEPRESSED A MINIMUM OF 3-INCHES BELOW THE ADJACENT PAVED SURFACE TO RETAIN THE FIRST FLUSH RUNOFF.

PLAN LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
PROPERTY LINE		
SPOT ELEVATION	5057.50'	01.5
BACK OF CURB/FLOWLINE	BC=5057.50' FL=5057.50'	
CONTOUR W/ ELEVATION	5800	5800
DIRECTION OF FLOW		
STORM DRAIN	SD	SD
UTILITY POLE	PP	
OVERHEAD UTILITY	OHE	
RETAINING WALL		
CONCRETE		
RIP RAP ROCK		

PROJECT DATA

PROPERTY ADDRESS:

EAGLE RANCH ROAD NW
ALBUQUERQUE, NM 87114

LEGAL DESCRIPTION:

TRACT 2-D-1, EAGLE RANCH

SURVEY:

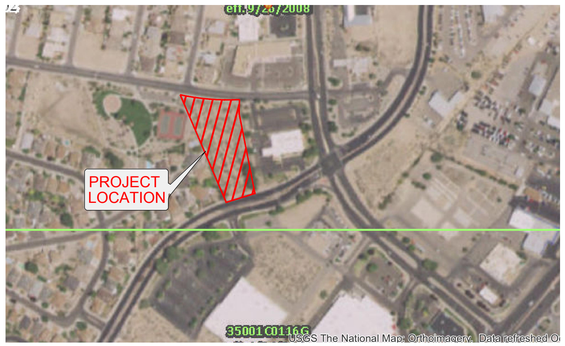
ALL PROJECT SURVEYING BY
HARRIS SURVEYS INC
DATE OF SURVEY: MAY 2022

CONGRESS APARTMENTS
GRADING AND DRAINAGE PLAN

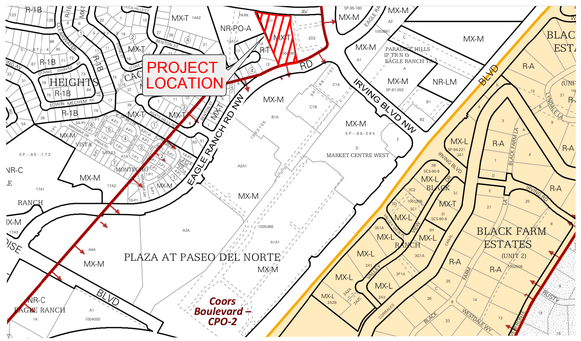
DENNIS A. LORENZ
NEW MEXICO
9647
REGISTERED PROFESSIONAL ENGINEER
08-05-2022

LORENZ
LAND DEVELOPMENT & CONSULTING, LLC
Civil Engineering | Construction Management
3308 Calle de Daniel NW
Albuquerque, New Mexico 87104
Ph: 505-888-6088

DRAWN BY: DAL	DATE: AUGUST 2022
CHECKED BY: DAL	C.1
FILE: 21-003	



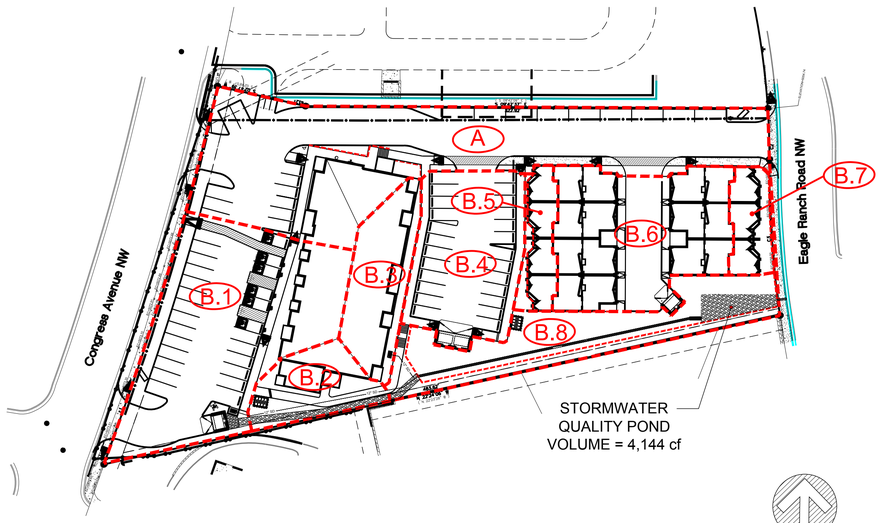
FIRM PANEL 35001C0108G
NOT TO SCALE



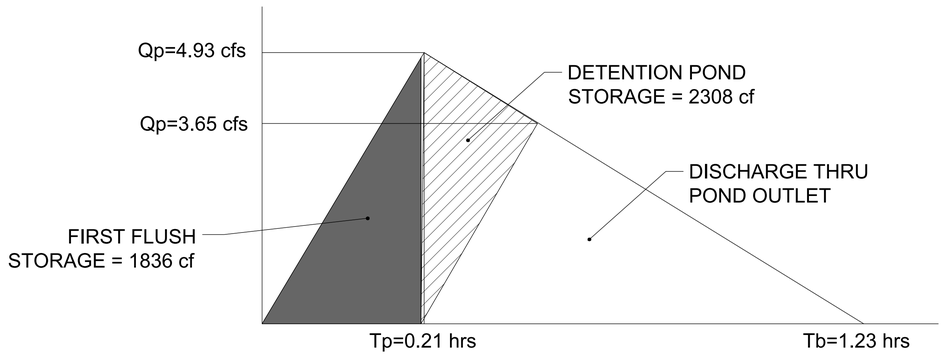
LOCATION MAP IDO ZONE ATLAS C-13
NOT TO SCALE

Private Drainage Facilities within City Right-of-Way
Notice to Contractor
(Special Order 19 ~ "SO-19")

1. An excavation permit will be required before beginning any work within City Right-Of-Way.
2. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
3. Two working days prior to any excavation, the contractor must contact **New Mexico One Call, dial "811"** [or (505) 260-1990] for the location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to traffic/street use.
6. Maintenance of the facility shall be the responsibility of the owner of the property being served.
7. Work on arterial streets may be required on a 24-hour basis.
8. Contractor must contact Augie Armijo at (505) 857-8607 and Construction Coordination at 924-3416 to schedule an inspection.



DRAINAGE BASIN MAP
NTS
A
C.2



DETENTION POND HYDROGRAPH
Not to Scale
B
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 south and 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 north and south 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 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 proposed first flush volume of 1,836 cf is short of the calculated requirement of 2,272 cf, however, Basin B will be routed through landscaping which will retain additional excess runoff, although difficult to calculate given the steep grades. The proposed detention storage of 2,308 cf will reduce the total site discharge to 5.66 cfs, compared to the existing discharge of 4.01 cfs. 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' will free discharge to Eagle Ranch Road NW.

Basin B will be routed through landscaping to a first flush/detention pond located at the southeast corner of the site. First flush storage of 1,836 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

First Flush Storage = 1,836 CF
Detention Pond Storage = 2,308 cf
Total Storage = 4,144 cf

TOTAL DEVELOPED DISCHARGE

Basin A = 2.01 CFs
Basin B = 3.65 CFs
Total Developed Discharge = 5.66 CFs

PROJECT HYDROLOGY
CONGRESS APARTMENTS
AHYMO

ZONE:	1
P_{6HOUR}	2.17
$P_{10\ DAY}$	3.90

EXISTING CONDITIONS

BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
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)	E	Q (cfs)	VOL (ac ft)
SITE	1.90	0.00	0.32	0.09	1.49	1.92	7.09	0.305
A	0.55	0.00	0.03	0.04	0.48	2.06	2.16	0.095
B	1.35	0.00	0.29	0.05	1.01	1.87	4.93	0.210
B.1	0.39	0.00	0.03	0.03	0.33	2.02	1.51	0.066
B.2	0.08	0.00	0.02	0.01	0.05	1.70	0.28	0.011
B.3	0.11	0.00	0.01	0.01	0.09	1.99	0.42	0.018
B.4	0.20	0.00	0.00	0.00	0.20	2.24	0.82	0.037
B.5	0.05	0.00	0.01	0.00	0.04	1.94	0.19	0.008
B.6	0.25	0.00	0.00	0.00	0.25	2.24	1.03	0.047
B.7	0.05	0.00	0.01	0.00	0.04	1.94	0.19	0.008
B.8	0.21	0.00	0.21	0.00	0.00	0.73	0.45	0.013

FIRST FLUSH CRITERIA

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.

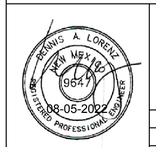
90th percentile depth 0.42"
Site Area Type D (Ad) = 1.49 ac.
Storage requirement = Ad(0.42") =1.49 ac(43,560 sf/ac)(0.42"/12"/ft) =2,272 cf

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

POND STORAGE TABLE			
ELEVATION	AREA (sf)	VOL (cf)	VOL (ac-ft)
54.00	766	0	0.0000
55.00	916	841	0.0193
56.00	1075	1836.5	0.0422
57.00	1241	2994.5	0.0687
58.00	1416	4323	0.0992

FIRST FLUSH STORAGE

CONGRESS APARTMENTS
GRADING AND DRAINAGE PLAN



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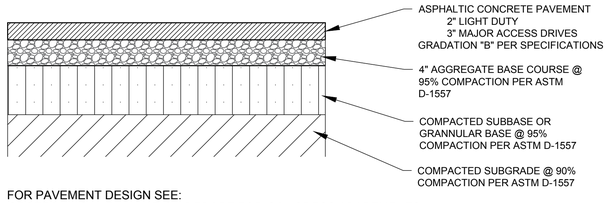
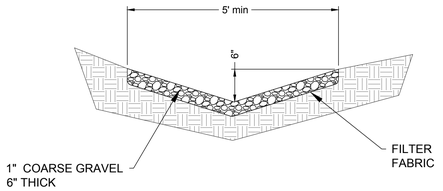
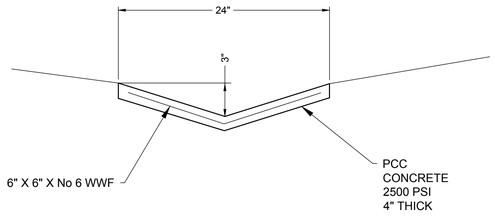


FOR PAVEMENT DESIGN SEE:
GEOTECHNICAL EVALUATION REPORT FOR CONGRESS APARTMENTS

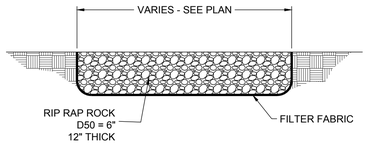
ASPHALT PAVEMENT SECTION — A / C.4
NTS



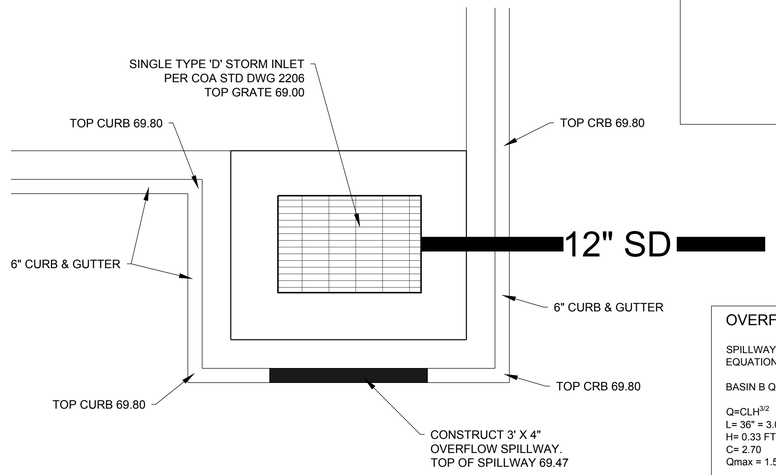
ROCK LINED SWALE SECTION — C / C.4
NTS



VALLEY GUTTER DETAIL — B / C-4
NTS



RIP RAP EROSION CONTROL — D / C.4
NTS



STORM INLET OVERFLOW DETAIL — E / C.4
NTS

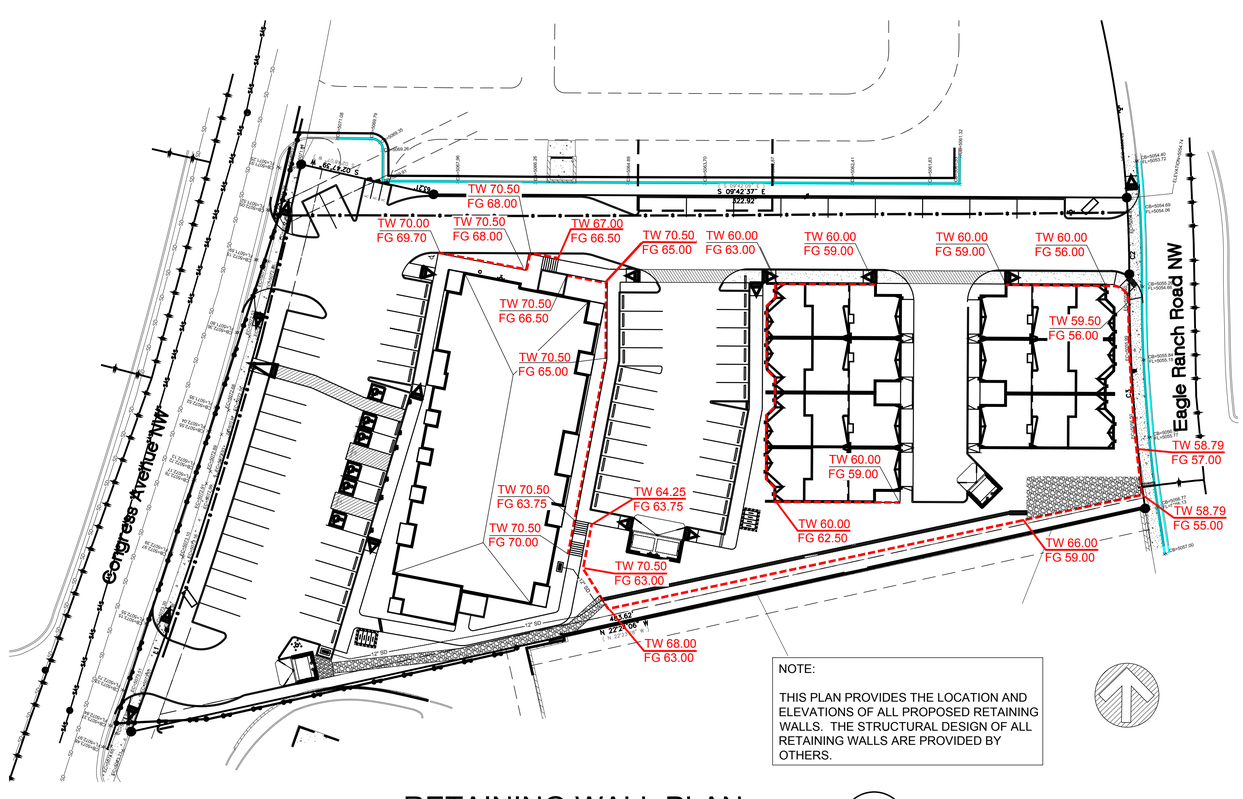
OVERFLOW SPILLWAY CAPACITY

SPILLWAY CAPACITY IS DETERMINED BY THE WEIR EQUATION:

BASIN B Q100 = 1.5cfs

$Q=CLH^{3/2}$
L= 36" = 3.0'
H= 0.33 FT
C= 2.70
Qmax = 1.53 cfs

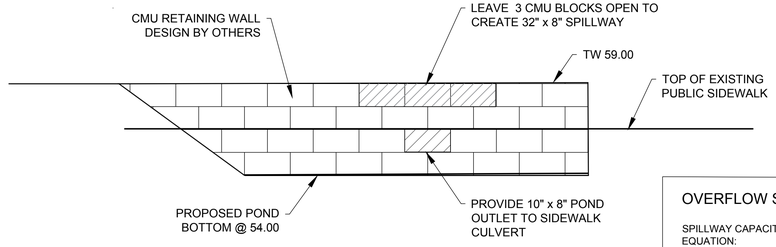
CULVERT CAPACITY EXCEEDS Q100



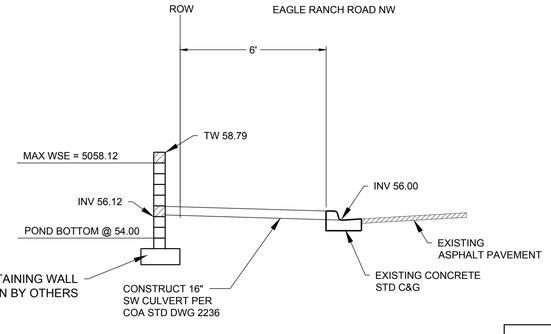
NOTE:

THIS PLAN PROVIDES THE LOCATION AND ELEVATIONS OF ALL PROPOSED RETAINING WALLS. THE STRUCTURAL DESIGN OF ALL RETAINING WALLS ARE PROVIDED BY OTHERS.

RETAINING WALL PLAN — G / C.4
NTS



ELEVATION



SECTION

OVERFLOW SPILLWAY CAPACITY

SPILLWAY CAPACITY IS DETERMINED BY THE WEIR EQUATION:

BASIN B Q100 = 5.0cfs

$Q=CLH^{3/2}$
L= 48" = 4.0'
H= 0.67 FT
C= 2.70
Qmax = 5.9 cfs

CULVERT CAPACITY EXCEEDS Q100

POND OUTLET CAPACITY

CULVERT CAPACITY IS DETERMINED BY THE ORIFACE EQUATION:

Q BASIN B = 5.0 CFS

$Q=CA(2gH)^{1/2}$
C= 2.70
A= 0.56 SF
H=1.83'
Qmax = 3.65 cfs (ALLOWS DETENTION STORAGE)

WATER QUALITY POND OUTLET — F / C.4
NTS

CONGRESS APARTMENTS
SITE DETAILS

DENNIS A. LORENZ — NEW MEXICO — 9547 — REGISTERED PROFESSIONAL ENGINEER — STATE OF NEW MEXICO
08-05-2022

LORENZ
ENGINEERING & CONSULTING, LLC
Civil Engineering | Construction Management
3308 Calle de Daniel NW
Albuquerque, New Mexico 87104
Ph: 505-888-6088

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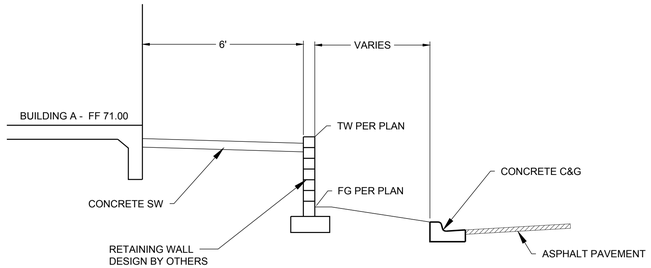
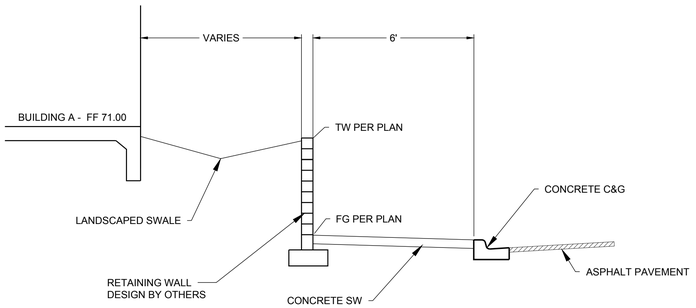
FILE: 21-003	



SECTION A C.4
NTS



SECTION B C.4
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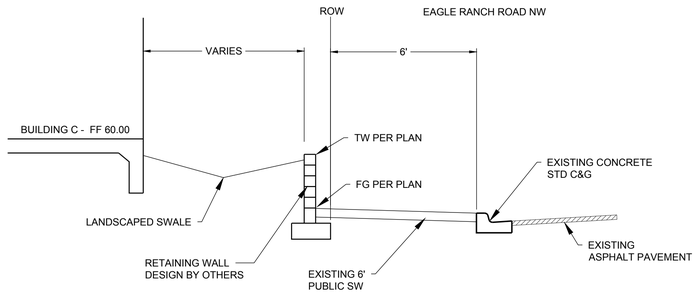

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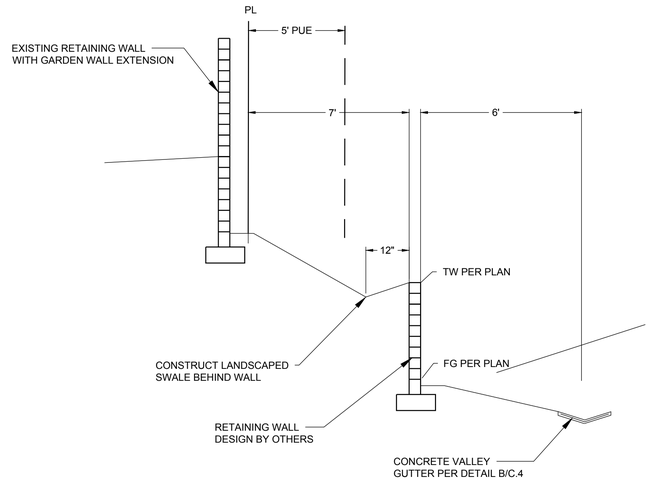

SECTION D C.4
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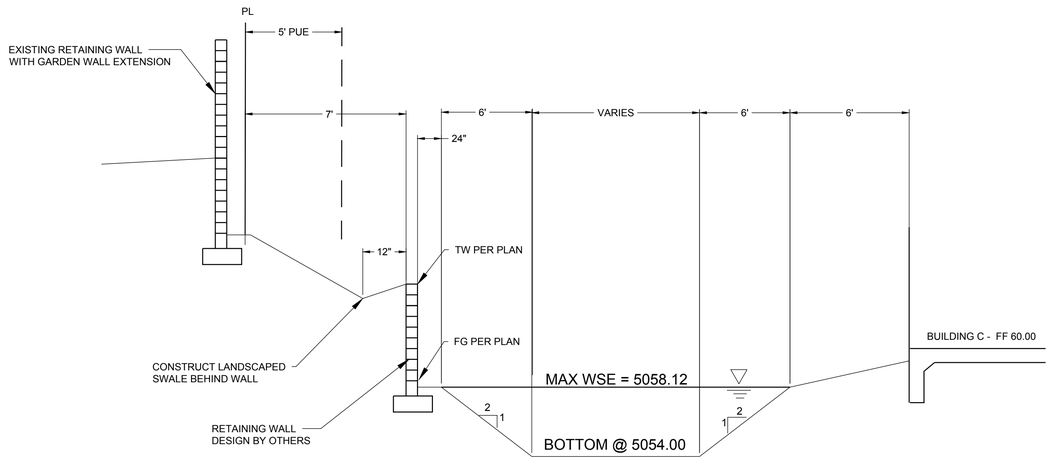

SECTION E C.4
NTS

CONGRESS APARTMENTS
SITE DETAILS

LORENZ
LAND DEVELOPMENT, LLC
Civil Engineering | Construction Management
3308 Calle de Daniel NW
Albuquerque, New Mexico 87104
Ph: 505-888-6088

DALLAS A. LORENZ
NEW MEXICO
9647
08-05-2022
REGISTERED PROFESSIONAL ENGINEER

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