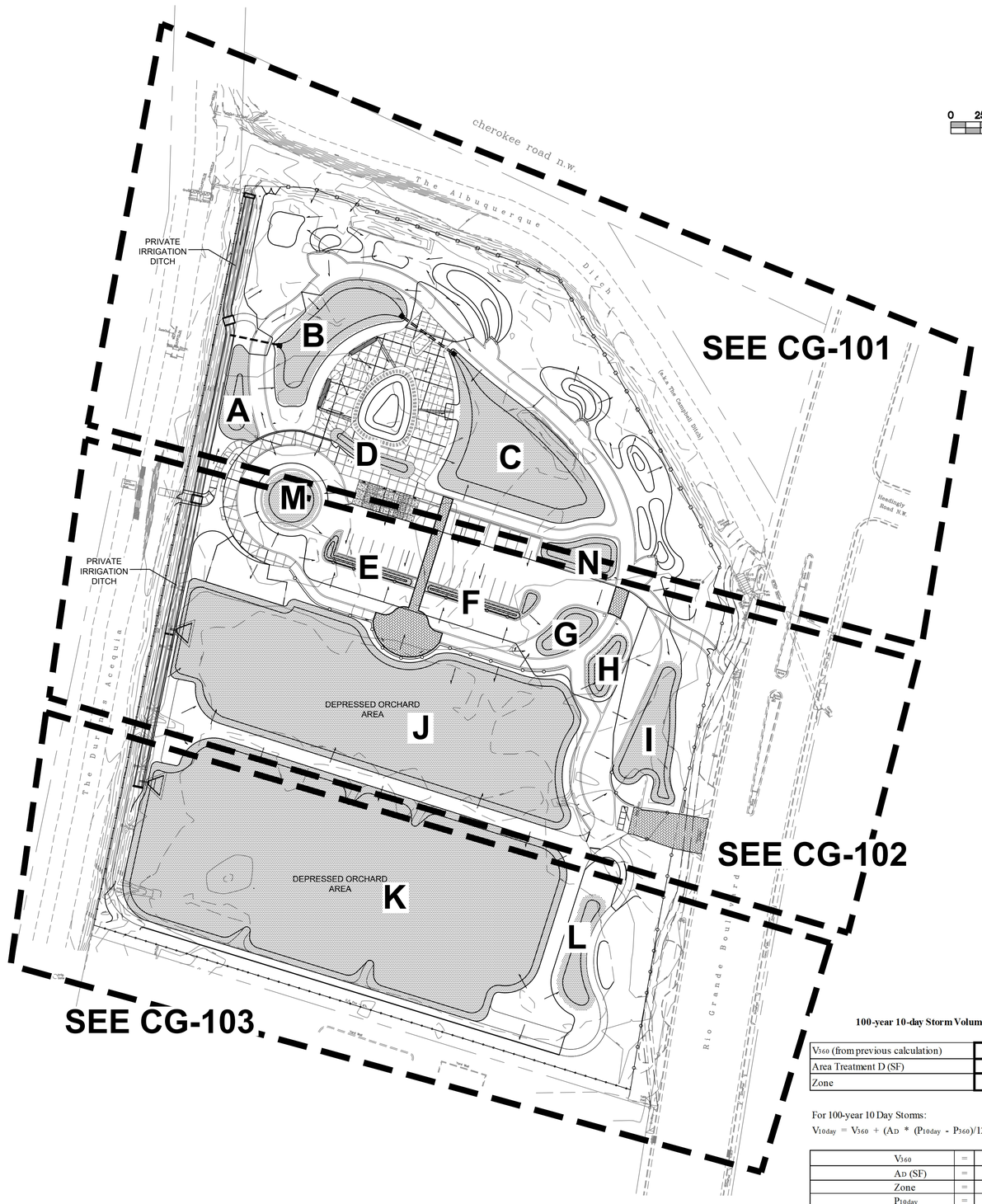
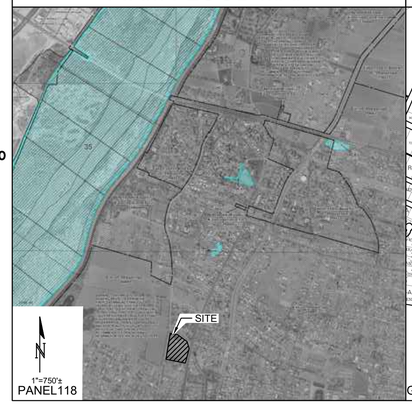


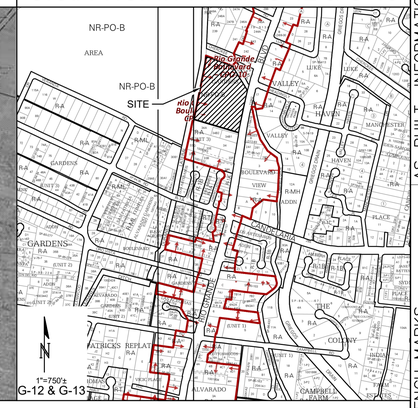
0 25 50 100 150

SCALE 1"=50'

FIRM FLOOD MAP



C.O.A VICINITY MAP G-12 & G-13



GENERAL NOTES

A. 0.5' DESIGN CONTOURS SHOWN DASHED WHERE NECESSARY TO CLARIFY GRADING CONCEPT.

B. GRADES SHOWN ARE FINAL SURFACE GRADES(TOP OF CONCRETE, TOP OF LANDSCAPE MATERIAL, ETC.)

C. ALL DRAINAGE IMPROVEMENTS SHOWN ON THE APPROVED GRADING & DRAINAGE PLAN MUST BE COMPLETED BEFORE ENGINEERS CERTIFICATION OF SUBSTANTIAL COMPLIANCE CAN BE ISSUED.

D. NO WORK SHAL BE PERFORMED IN THE PUBLIC R/W WITHOUT AN APPROVED WORK ORDER OR

E. EROSION PROTECTION MUST BE PLACED TO PERMIT STORMWATER TO PASS SMOOTHLY. HAND PLACE AT CURB OPENINGS AND SWALES TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY.

POND VOLUMES

POND	VOLUME	Column1
A	966	CF
B	4308	CF
C	7164	CF
D	375	CF
E	647	CF
F	689	CF
G	999	CF
H	703	CF
I	2440	CF
J	35960	CF
K	48555	CF
L	787	CF
M	1650	CF
N	1197	CF
TOTAL	106439	CF

REQUIRED POND VOLUME BASED ON THE PROPOSED 100-YEAR 10-DAY STORM VOLUME = 24,069 CF.

PROVIDED VOLUME WITHIN 15 STORMWATER RETENTION PONDING AREAS = 106,439 CF.

21,924 CF OF VOLUME IS PROVIDED IN PONDS A-I & L-N) - THE NON ORCHARD AREAS.

PROJECT INFORMATION

PROPERTY: THIS PROPERTY IS A PREVIOUSLY UNDEVELOPED PROPERTY BOUNDED TO THE NORTH BY THE CAMPBELL DITCH & CHEROKEE RD NW, TO THE EAST BY RIO GRANDE BLVD NW, TO THE SOUTH BY A DEVELOPED RESIDENTIAL PROPERTY, AND TO THE WEST BY THE DURANES ACEQUIA.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE GENERAL GRADING OF THE SITE, A NEW WALKING PATH WITH ASSOCIATED PARKING AND PAVING, AND AN IRRIGATION DITCH WITH ASSOCIATED PONDS FOR WATER DISTRIBUTION THROUGHOUT THE SITE.

AREA TO BE DEVELOPED: 6.93 ACRES±

LEGAL: TRACT A-1-B REVISED PLAT OF TRACTS A-1 A-2 B-1 & B-2

BENCHMARK: ELEVATIONS ARE BASED UPON AGRS MONUMENT STAMPED 17-F13 NAVD 1988. HAVING AN ELEVATION OF 4973.25

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0118G EFF. 9/26/2008. THIS SITE IS LOCATED WITHIN FLOOD ZONE 'X' DESIGNATED AS AREAS WITH REDUCED FLOOD RISK DUE TO LEVEE.

SURVEYOR: RIO GRANDE SURVEYING CO., POB 7155, ABQ, NM 87194

DRAINAGE PLAN CONCEPT: IN THE PROPOSED CONDITION WATER IS DIRECTED TO MULTIPLE PONDS THROUGHOUT THE SITE. POND CAPACITY EXCEEDS 100-YEAR 10-DAY VOLUME.

LEGEND

94 PROPOSED 1.0' CONTOUR

AVAILABLE PONDING

ADA COMPLIANCE

SIDEWALK(S) AND RAMP(S):
TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%. LONGITUDINAL SLOPE SHALL NOT EXCEED 5%.

ACCESSIBLE RAMP(S):
TARGET LONGITUDINAL SLOPE = 7% LONGITUDINAL SLOPE SHALL NOT EXCEED 12:1 (8.3%). TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%.

ACCESSIBLE PARKING:
TARGET SLOPE = 1% TO 1.5%. SLOPE SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION

100-year 10-day Storm Volume

V_{360} (from previous calculation)	21894
Area Treatment D (SF)	15090
Zone	1

For 100-year 10 Day Storms:

$V_{10day} = V_{360} + (A_D * (P_{10day} - P_{360})/12"$ per foot)

V_{360}	=	21894
A_D (SF)	=	15090
Zone	=	1
P_{10day}	=	3.9
P_{360}	=	2.17
V_{360}	=	21894
+ imp. area	=	2176
Total Volume ($V_{10\ day}$)	=	24069

CALCULATIONS: Rio Grande Tree Farm : JULY 26, 2024

Based on City of Albuquerque DMP, Article 6-2 Hydrology dated June 26, 2020

100-YEAR, 6-HOUR CALCULATIONS

AREA OF SITE: 301806 SF = 6.93 ACRE

100-year, 6-hour

PRE-DEVELOPED FLOWS:		Treatment SF	%	DEVELOPED FLOWS:		Treatment SF	%	EXCESS PRECIP:
Area A	=	15090	5%	Area A	=	9054	3%	Precip. Zone 1
Area B	=	150903	50%	Area B	=	181084	60%	E_A = 0.55
Area C	=	132795	44%	Area C	=	96578	32.0%	E_B = 0.73
Area D	=	3018	1%	Area D	=	15090	5.0%	E_C = 0.95
Total Area	=	301806	100%	Total Area	=	301806	100%	E_D = 2.24

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E = $\frac{E_AA_A + E_BA_B + E_CA_C + E_DA_D}{A_A + A_B + A_C + A_D}$

Pre-develop 1	=	0.83	in.	Developed E	=	0.87	in.

On-Site Volume of Runoff: V360 = E*A / 12

Pre-deveop V_1	=	20948	CF	Developed V_{360}	=	21894	CF

On-Site Peak Discharge Rate: $Qp = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D$ / 43,560

For Precipitation Zone 1

Q_{pA}	=	1.54		Q_{pC}	=	2.87	
Q_{pB}	=	2.16		Q_{pD}	=	4.12	
Pre-develop Q	=	17.1	CFS	Developed Q_p	=	17.1	CFS

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CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

RIO GRANDE TREE NURSERY

OVERALL GRADING & DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet
	G12, G13	CG-100

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS

ELEVATIONS ARE BASED UPON AGRS MONUMENT STAMPED 17-F13 NAVD 1988. HAVING AN ELEVATION OF 4973.25

AS-BUILT INFORMATION

CONTRACTOR
WORK STAKED BY: DATE
ACCEPTANCE: DATE
FIELD CHANGES BY:
DRAWINGS CORRECTED BY: DATE

MICRO-FILM INFORMATION

RECORDED BY: DATE
NO.

ARCHITECTURAL SEAL

GENEVIEVE L. DONART
NEW MEXICO
15088
LICENSED PROFESSIONAL ENGINEER
7-31-2024

REVISIONS

NO.	DATE	REMARKS	BY

DESIGNED BY:	BJB	DATE	07/26/2024
DRAWN BY:	BJB/BK	DATE	07/26/2024
CHECKED BY:	FCA	DATE	07/26/2024

DATE: JULY 26, 2024

RIO GRANDE TREE NURSERY

PROJECT# XXXXXX

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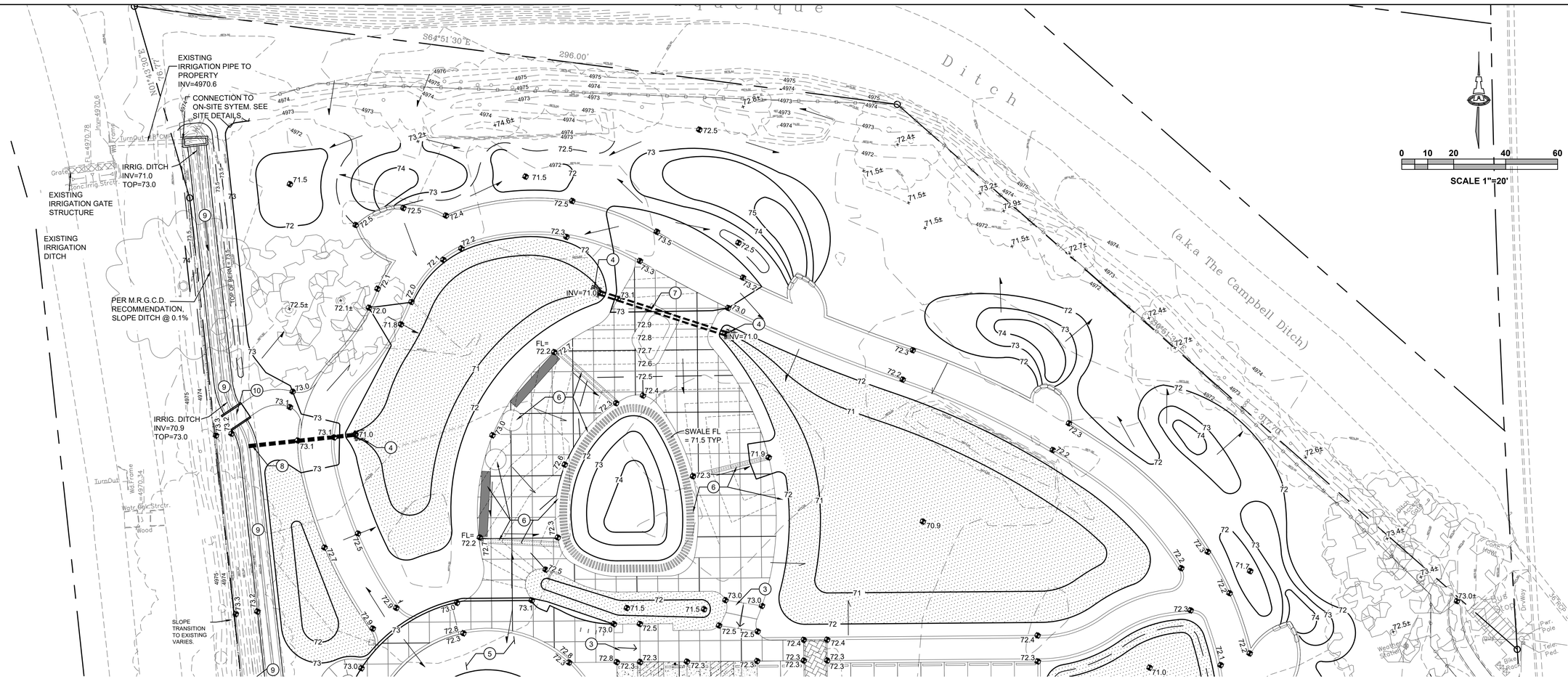

KEYED NOTES

THESE NOTES ARE REFERENCED ON SHEETS CG-101, CG-102, AND CG-103. NOT ALL NOTES AREA USED ON EACH SHEET.

1. TYPICAL ALL EDGER COBBLE: TOP OF CONCRETE SAND FILLER AT EDGER COBBLES ¾" BELOW TOP OF PAVEMENT TO PERMIT STORMWATER TO PASS.
2. ADA COMPLIANT PARKING SPACES AND ACCESS AISLES.
3. ADA COMPLIANT CURB RAMP.
4. ANGULAR ROCK EROSION PROTECTION TO LIMITS HATCHED.
5. PAVING AT ELEVATIONS SHOWN. SEE ARCHITECTURE SITE DETAILS.
6. SEE ARCHITECTURAL FOR OPTIONAL IRRIGATION EXHIBIT DETAILS (CISTERNS, TRENCH DRAINS, MICROSWALES).
7. TWO 8"Ø CMP EQUALIZER PIPES.
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10. WALKING BRIDGE TO BE DESIGNED BY OTHERS. SEE ARCH SITE PLAN.
11. NOT USED
12. 2' WIDE CONCRETE ALLY GUTTER. SEE CG-102 FOR DETAIL.
13. ADA COMPLIANT PEDESTRIAN WALK.
14. STORMWATER RETENTION POND AT ELEVATIONS SHOWN.

LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED 1.0' CONTOUR
- PROPOSED 0.5' CONTOUR
- PROPOSED SPOT ELEVATION
- FLOW DIRECTION
- PROPOSED .1' CONTOUR
- EROSION PROTECTION
- AVAILABLE PONDING

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS

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AS-BUILT INFORMATION

CONTRACTOR
WORK STAKED BY: DATE
AS-BUILTS ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
CORRECTIONS DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

ARCHITECTURAL SEAL

GENEVIEVE L. DIMART
NEW MEXICO
15088
REGISTERED PROFESSIONAL ENGINEER
7-31-2024

REVISIONS

NO.	DATE	REMARKS	BY

DESIGNED BY: BJB 07/26/2024
DRAWN BY: BJB/BK 07/26/2024
CHECKED BY: FCA 07/26/2024

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CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

RIO GRANDE TREE NURSERY

GRADING & DRAINAGE PLAN 1 OF 3

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.

Zone Map No. G12, G13

Sheet CG101

RIO GRANDE TREE NURSERY

PROJECT# XXXXXX

DATE: JULY 26, 2024

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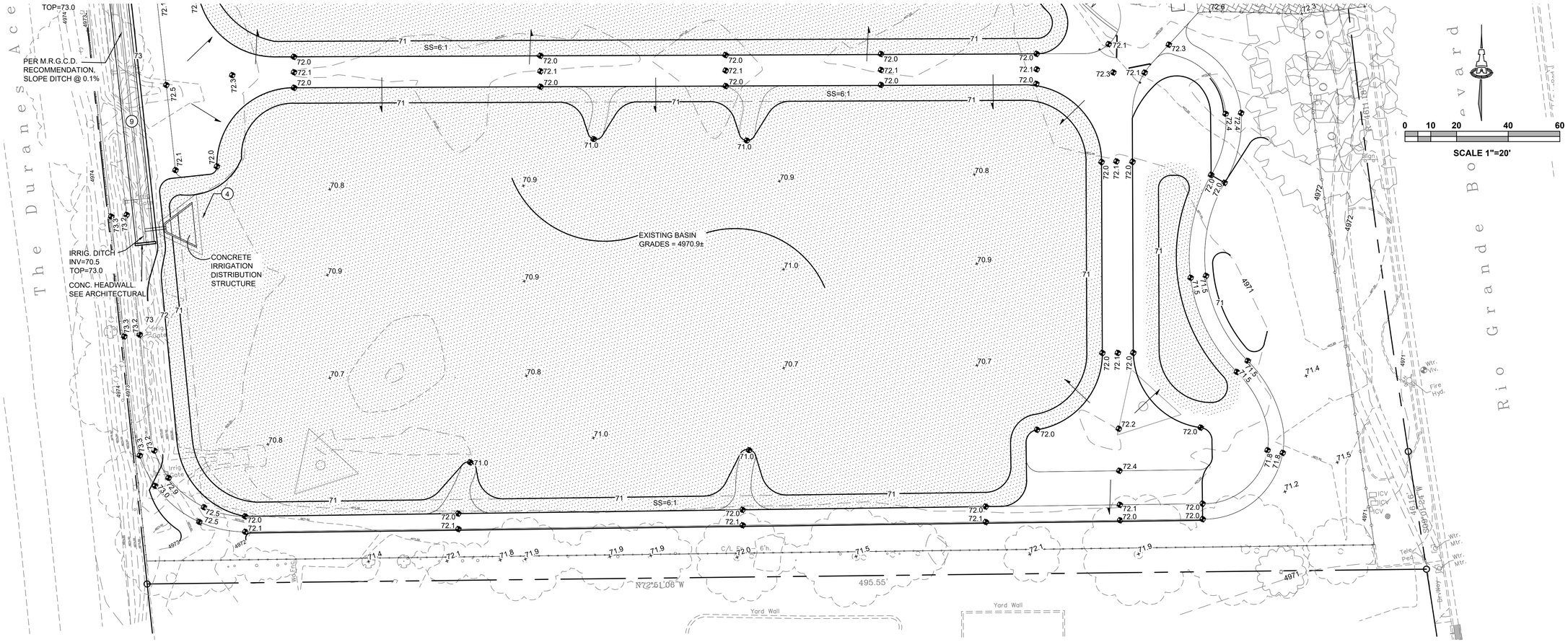

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LEGEND

- 5794 — EXISTING CONTOUR
- 5974.0 + EXISTING SPOT ELEVATION
- 94 — PROPOSED 1.0' CONTOUR
- 93.5 — PROPOSED 0.5' CONTOUR
- 93.5 PROPOSED SPOT ELEVATION
- FLOW DIRECTION
- 94.1 PROPOSED .1' CONTOUR
- EROSION PROTECTION
- AVAILABLE PONDING

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REVISIONS

NO.	DATE	REMARKS	BY

DESIGNED BY: BJB 07/26/2024
DRAWN BY: BJB/BK 07/26/2024
CHECKED BY: FCA 07/26/2024

CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

RIO GRANDE TREE NURSERY

GRADING & DRAINAGE PLAN 3 OF 3

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No. | Zone Map No. G12, G13 | Sheet CG103

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS
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AS-BUILT INFORMATION
CONTRACTOR
WORK STAKED BY: DATE
AS-BUILTS ACCEPTANCE BY: DATE
FIELD INSPECTION BY: DATE
RECORD DRAWINGS CORRECTED BY: DATE
MICRO-FILM INFORMATION
RECORDED BY: DATE
NO.

ARCHITECTURAL SEAL

GENEVIEVE L. DONART
NEW MEXICO
15088
LICENSED PROFESSIONAL ENGINEER
7-31-2024

RIO GRANDE TREE NURSERY
DATE: JULY 26, 2024
PROJECT# XXXXXX

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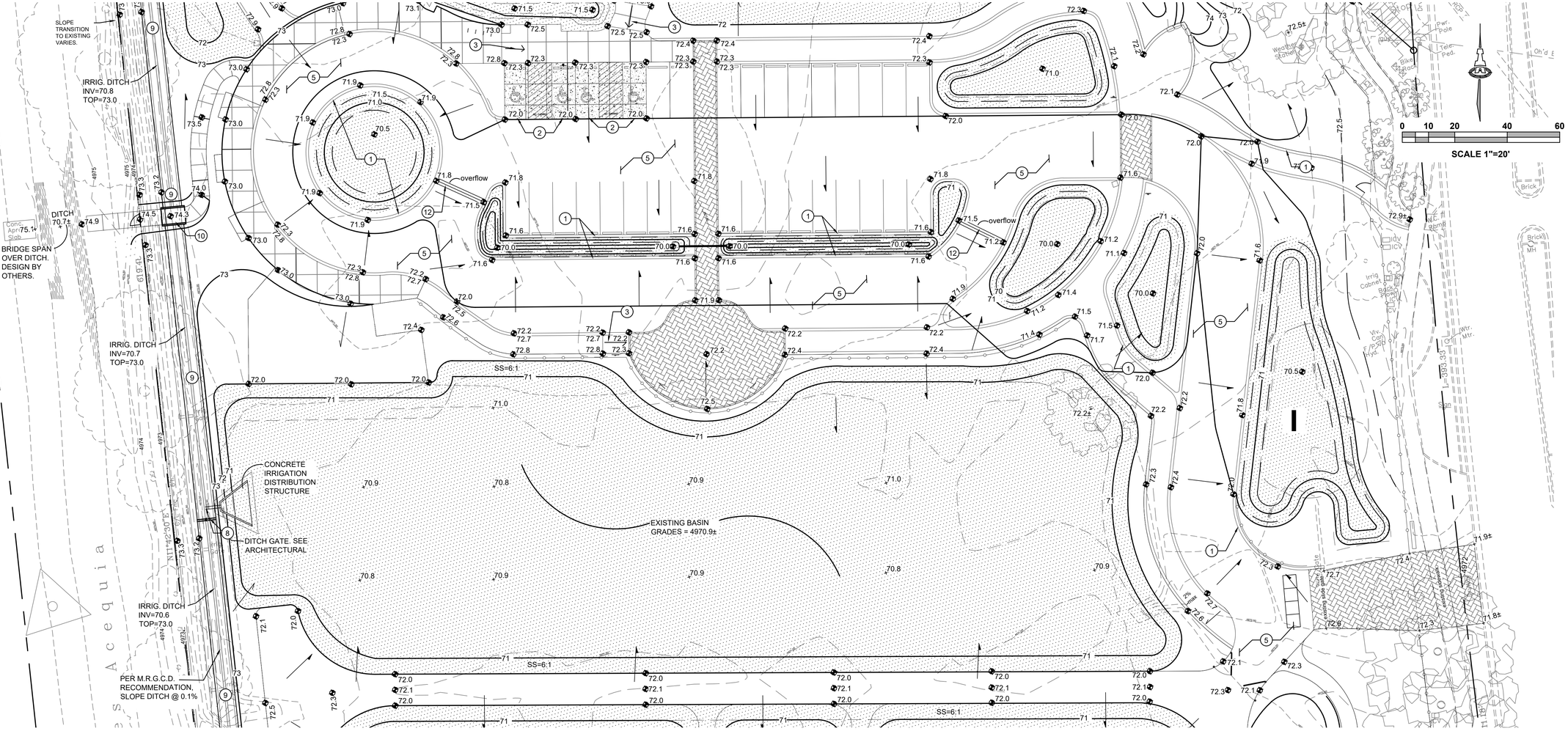

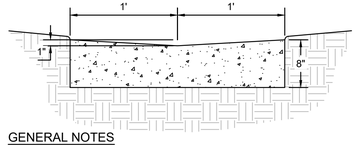

GENERAL NOTES

1. SEALED CONTROL JOINTS @ 4' MIN.
2. FINISHED EDGE OF ASPHALT PAVING TO BE 1/2" ABOVE EDGE OF CONCRETE (TYP).

2' WIDE CONCRETE ALLEY GUTTER

SCALE: N.T.S.

KEYED NOTES

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SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

AS-BUILT INFORMATION

BENCH MARKS

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FIELD VERIFICATION BY	
DRAWINGS CORRECTED BY:	

MICRO-FILM INFORMATION

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PARKS AND RECREATION DEPARTMENT

RIO GRANDE TREE NURSERY

GRADING & DRAINAGE PLAN 2 OF 3

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet
	G12, G13	CG102

RIO GRANDE TREE NURSERY

DATE: JULY 26, 2024

PROJECT# XXXXXX

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