

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

December 22, 2023

Jesse Sullivan, P.E.
Matrix Design Group, Inc.
2435 Research Parkway, Suite 300
Colorado Springs, CO 80920

RE: Circle K – 9620 Eagle Ranch Rd. NW
Grading & Drainage Plans
Engineer's Stamp Date: 09/22/23
Hydrology File: C13D028

Dear Mr. Sullivan:

Based upon the information provided in your submittal received 12/11/2022, the Grading & Drainage Plan is approved for Building Permit and Grading Permit. 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 **\$25.00** made out to "**Bernalillo County**" for the stormwater quality pond per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.

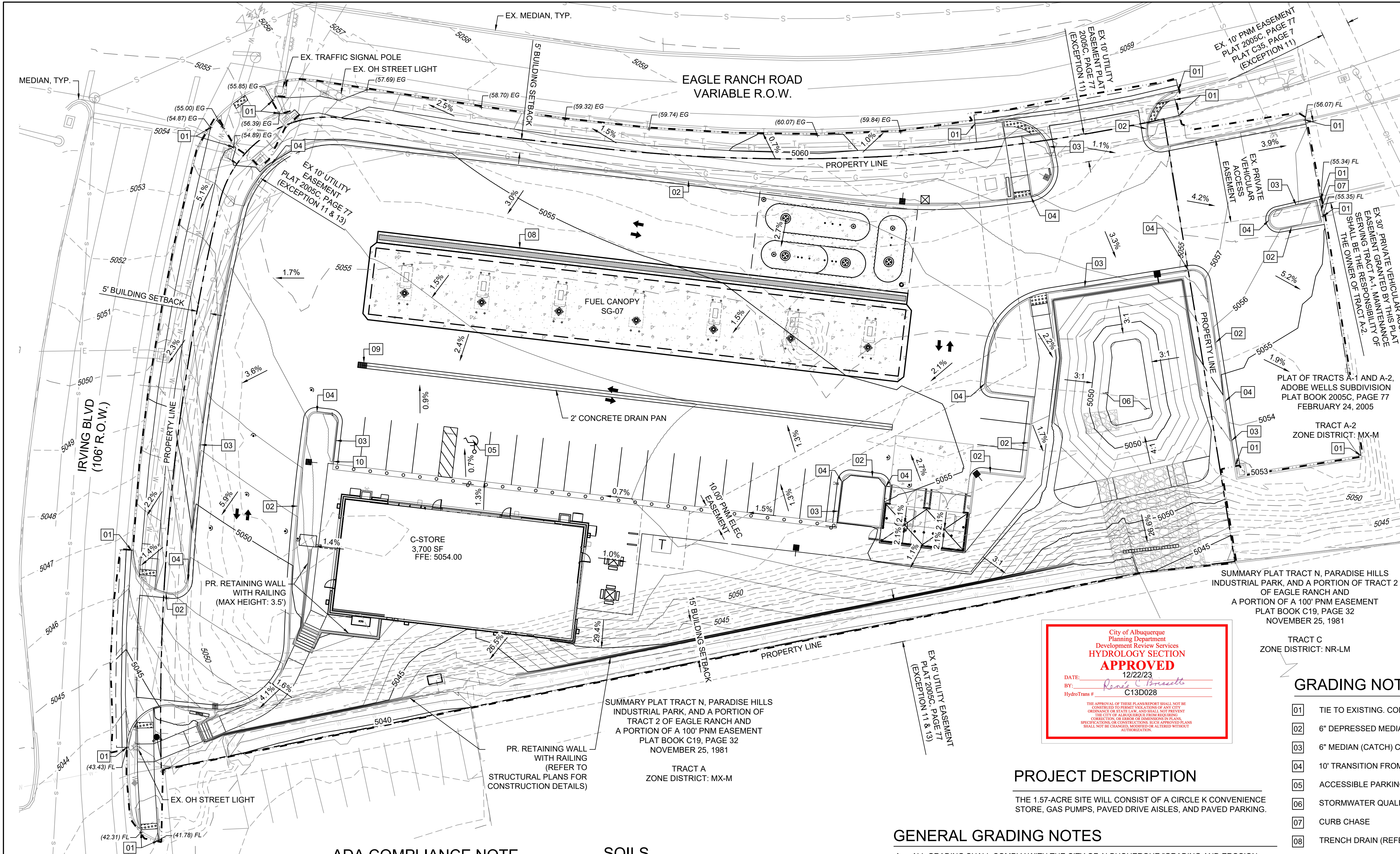
www.cabq.gov

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, 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, P.E. CFM
Senior Engineer, Hydrology
Planning Department



Know what's below.
Call before you dig.

GRAPHIC SCALE

20' 0' 20' 40'

(IN FEET)

1 inch = 20 ft.

GRADING LEGEND

PROPOSED CONTOURS

EXISTING CONTOURS

6" MEDIAN C & G

6" MEDIAN DEPRESSED C & G

LIMITS OF GRADING

PROPOSED SPOT ELEVATION:

EXISTING SPOT ELEVATION:

FG = FINISHED GROUND
FL = FLOWLINE
TBC = TOP BACK OF CURB
FFE = FINISHED FLOOR ELEVATION
GP = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
TOW = TOP OF WALL
BOW = BOTTOM OF WALL

NOTE:

1. TBC TO BE 6" ABOVE FL UNLESS OTHERWISE NOTED.

2. ADD 5000' TO ALL SPOT GRADE ELEVATIONS.

ALL WORK (DRIVEWAY, CURB AND GUTTER, SIDEWALK) IN PUBLIC ROW TO FOLLOW CITY OF ALBUQUERQUE STANDARDS

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION

APPROVED

DATE: 12/22/23

BY: *Randy C. Bruneau*

HydroTrans # C13D028

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSIDERED AN ENDORSEMENT OR GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED OR ANY OTHER INFORMATION. THE CITY OF ALBUQUERQUE IS NOT RESPONSIBLE FOR ANY CHANGES, ALTERATIONS, OR USE OF CONSTRUCTION DOCUMENTS PRIOR TO JURISDICTIONAL APPROVAL.

PROJECT DESCRIPTION

THE 1.57-ACRE SITE WILL CONSIST OF A CIRCLE K CONVENIENCE STORE, GAS PUMPS, PAVED DRIVE AISLES, AND PAVED PARKING.

GENERAL GRADING NOTES

- ALL GRADING SHALL COMPLY WITH THE CITY OF ALBUQUERQUE "GRADING AND EROSION CRITERIA" (REF. CITY OF ALBUQUERQUE, DEVELOPMENT PROCESS MANUAL, ARTICLE 6-4).
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE EPA OR APPLICABLE STATE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- PRIOR TO INSTALLATION OF SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
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- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
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- NO GRADING AND/OR SPILLING BEYOND THE CONSTRUCTION LIMITS. ANY SPILLING THAT CAUSES ADVERSE EFFECTS TO THE SLOPES AND/OR OPEN SPACE AREAS SHOULD BE "IMMEDIATELY RESTORED TO ITS NATURAL STATE."

ADA COMPLIANCE NOTE

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SOILS

THE ON-SITE SOILS INCLUDE BLUEPOINT-KOKAN ASSOCIATION (BKD) PER THE NATIONAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY. BKD IS RATED HYDROLOGIC GROUP A. THE INFILTRATION RATE IS 5 MINUTES PER INCH, ACCORDING TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC., DATED APRIL 21, 2021, PROJECT NUMBER 661215073.

LEGAL DESCRIPTION

TRACT A-1, AS SHOWN ON THE PLAT OF PLAT OF TRACTS A-1 AND A-2, ADODE WELLS SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON FEBRUARY 24, 2005, IN PLAT BOOK 2005C, PAGE 77, AS DOCUMENT NO. 2005026221; AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN NGS BENCHMARK FOR A 3" BRASS CAP MARKED REEVES 2 FOUND AT THE EAST EDGE OF CONCRETE DRAINAGE CHANNEL STRUCTURE, THENCE M.66°28'16"W., 19,058.32 FEET TO A ½" IRON ROD FOUND WITH CAP 11184 FOR THE TRUE POINT OF BEGINNING AT THE SOUTHEAST CORNER OF THIS TRACT;

THENCE S.43°18'52"W., 34.74 FEET TO A ½" IRON ROD FOUND WITH CAP 11184 FOR A CORNER OF THIS TRACT;

THENCE S.38°37'12"W., 358.97 FEET TO A ½" IRON ROD SET CAP 23259 FOR THE SOUTHWEST CORNER OF THIS TRACT AT THE EAST RIGHT-OF-WAY OF IRVING BOULEVARD NW;

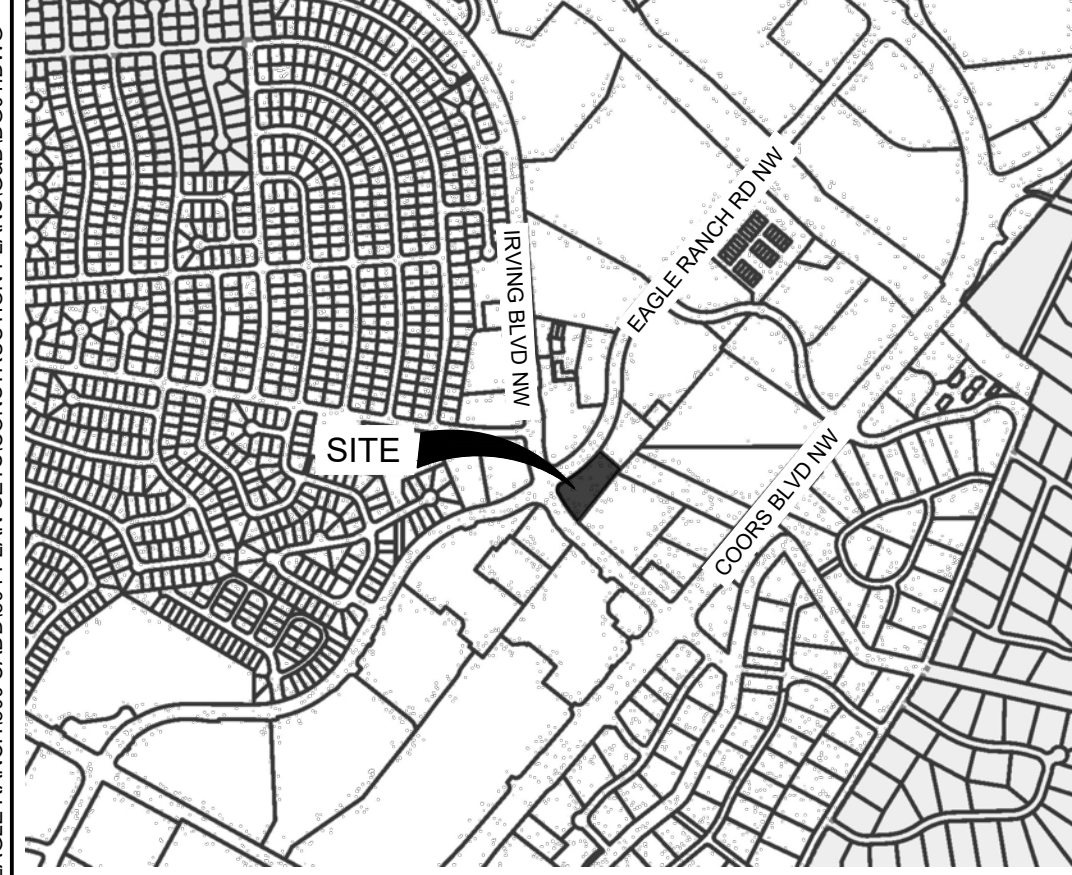
THENCE ALONG THE SAID RIGHT-OF-WAY, AROUND THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 786.30 FEET, AN ARC LENGTH OF 205.62 FEET, THROUGH A CENTRAL ANGLE OF 14°58'58" AND WHOSE LONG CHORD BEARS N.34°08'01"W., A DISTANCE OF 205.03 FEET TO A ½" IRON ROD SET CAP 23259 FOR THE NORTHWEST CORNER OF THIS TRACT AND THE POINT OF CONTINUOUS CURVATURE;

THENCE AT THE SOUTHERLY RIGHT-OF-WAY OF EAGLE RANCH ROAD NW, AROUND THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 40.00 FEET, AN ARC LENGTH OF 58.24 FEET, THROUGH A CENTRAL ANGLE OF 83°25'20" AND WHOSE LONG CHORD BEARS N.14°58'02"E., A DISTANCE OF 53.23 FEET TO A ½" IRON ROD SET CAP 23259 FOR THE POINT OF TANGENCY;

THENCE ALONG THE RIGHT-OF-WAY, N.56°40'32"E., 90.11 FEET TO A ½" IRON ROD FOUND WITH CAP 11184 FOR A CORNER OF THIS TRACT;

THENCE ALONG THE SAID RIGHT-OF-WAY, AROUND THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 628.00 FEET, AN ARC LENGTH OF 208.05 FEET, THROUGH A CENTRAL ANGLE OF 18°58'55" AND WHOSE LONG CHORD BEARS N.47°11'36"E., A DISTANCE OF 207.10 FEET TO A ½" IRON ROD FOUND WITH CAP 11184 FOR A THE NORTHEAST CORNER OF THIS TRACT;

THENCE LEAVING THE SAID RIGHT-OF-WAY, S.49°06'04"E., 161.34 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING 1.57 ACRES OF LAND, MORE OR LESS.



BENCHMARK

NGS BENCHMARK REEVES 2
NORTHING = 1,516,569.77 (NMWSPC)
EASTING = 1,534,308.56 (NMWSPC)
ELEVATION = 5076.00
COMBINED FACTOR = 0.99967343

GRADING NOTES

- TIE TO EXISTING. CONTRACTOR TO VERIFY EXISTING LOCATION & ELEVATION.
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- 6" MEDIAN (CATCH) CURB & GUTTER
- 10' TRANSITION FROM DEPRESSED CURB TO STANDARD CURB
- ACCESSIBLE PARKING STALL. SLOPE TO BE 2% MAX IN ANY DIRECTION IN THIS AREA
- STORMWATER QUALITY POND
- CURB CHASE
- TRENCH DRAIN (REFER TO STORM SHEET-SD01 IN CONSTRUCTION DOCUMENT)
- INLET
- TAPER CURB FROM 6" TO 0" OVER 2'



FLOOD ZONE:

IT IS DETERMINED THAT THE SUBJECT PROPERTY RESIDES IN THE FOLLOWING FLOOD ZONE "X" AS DETERMINED BY OR SHOWN BY FIRM COMMUNITY PANEL NO. 35001C01086 DATED 09/26/2008

CONSULTANTS:

Excellence by Design

2435 RESEARCH PARKWAY, SUITE 300
COLORADO SPRINGS, CO 80920
PHONE: (719) 575-0100
FAX: (719) 575-0208

LAND DEVELOPMENT CONSULTANTS, LLC

950 S. CHERRY STREET, SUITE 512
DENVER, CO 80246

OWNER/DEVELOPER:

ROCKY MOUNTAINS DIVISION
5500 S QUEBEC STREET, SUITE 100
GREENWOOD VILLAGE, CO 80111

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MOST RECENT PROJECT CONSTRUCTION DOCUMENTS. MATRIX DESIGN GROUP IS NOT RESPONSIBLE FOR CHANGES, ALTERATIONS, OR USE OF CONSTRUCTION DOCUMENTS PRIOR TO JURISDICTIONAL APPROVAL.

VICINITY MAP: NTS

PROJECT:

CIRCLE K STORES INC.

GRADING & DRAINAGE PLAN

9620 EAGLE RANCH ROAD NW
ALBUQUERQUE, NM 87114

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.001

DRAWN BY: BL, MR

DESIGNED BY: RPD

CHECKED BY: NMS

SHEET TITLE:

GRADING PLAN

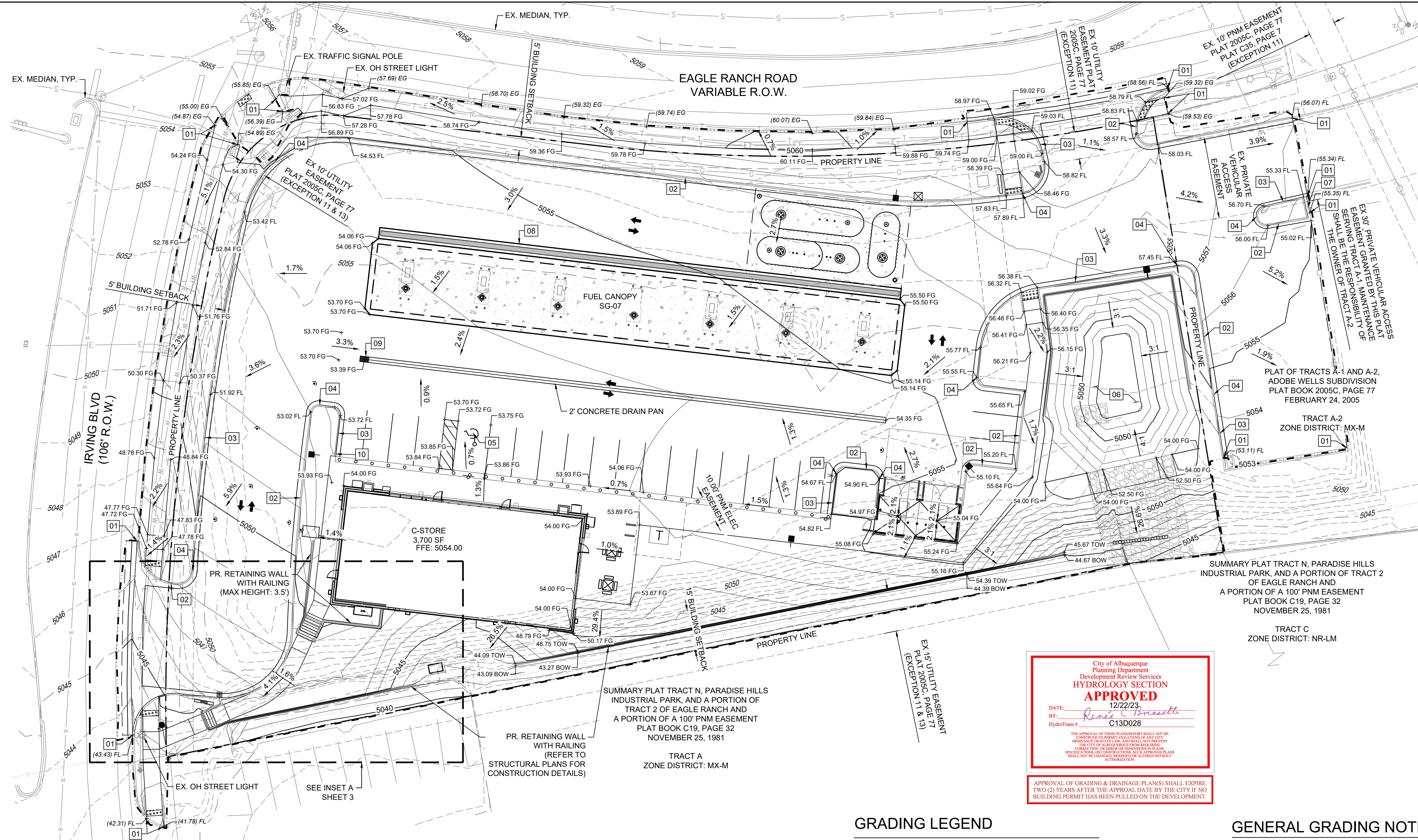
DG01

SHEET 1 OF 5

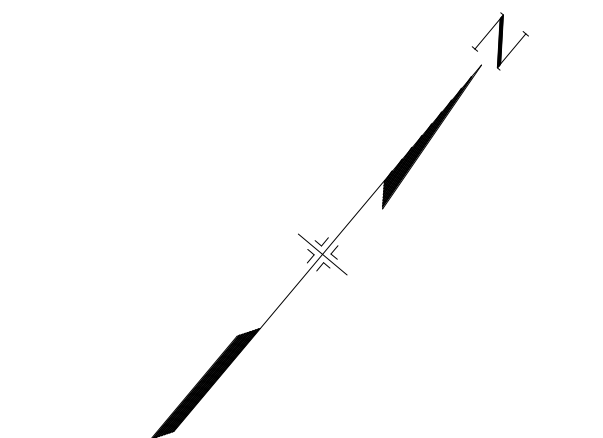
DATE: DECEMBER 2023

FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\500 CAD\500A PLAN SETS\CONSTRUCTION PLANS\DG01.DWG

FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\504 CAD\504 PLAN SETS\CONSTRUCTION PLANS\DG02.DWG



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CONSULTANTS:



Excellence by Design

2435 RESEARCH PARKWAY, SUITE
300 COLORADO SPRINGS, CO 80920
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LAND DEVELOPMENT
CONSULTANTS, LLC

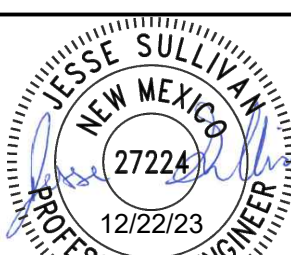
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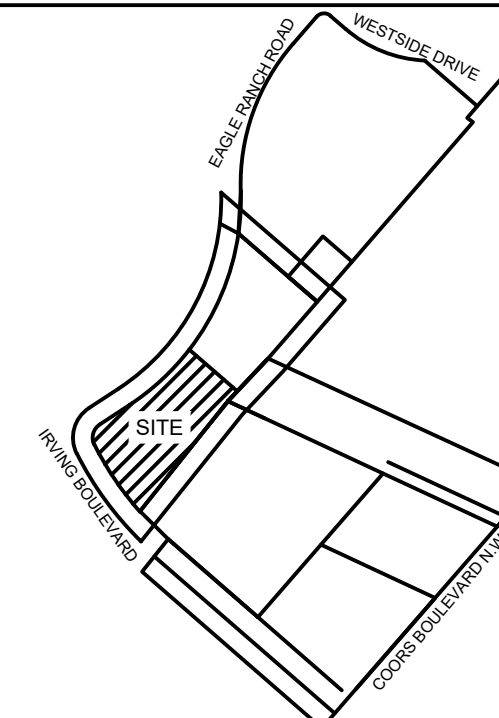
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VICINITY MAP: NTS



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CIRCLE K STORES INC.

GRADING & DRAINAGE PLAN

9620 EAGLE RANCH ROAD NW
ALBUQUERQUE, NM 87114

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.001

DRAWN BY: BL, MR

DESIGNED BY: RPD

CHECKED BY: NMS

SHEET TITLE:

DETAILED
GRADING PLAN

DG02

SHEET 2 OF 5

DATE: DECEMBER 2023

ADA COMPLIANCE NOTE

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ALL WORK (DRIVEWAY, CURB AND GUTTER, SIDEWALK)
IN PUBLIC ROW TO FOLLOW CITY OF ALBUQUERQUE
STANDARDS

GRADING NOTES

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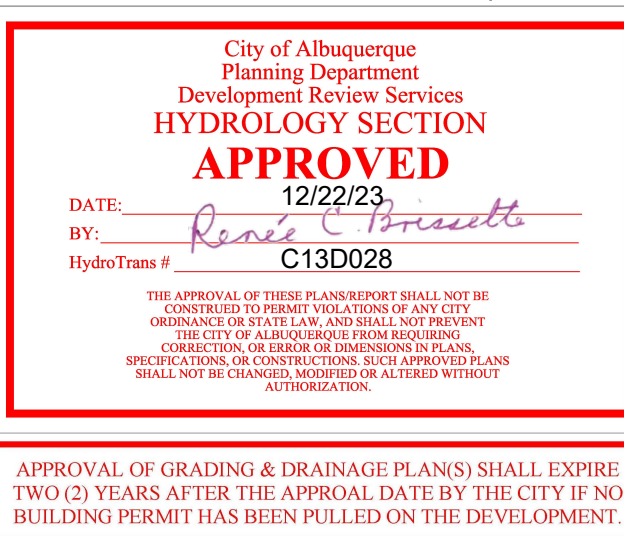
GRADING LEGEND

- | | |
|--|---------------------------|
| | PROPOSED CONTOURS |
| | EXISTING CONTOURS |
| | 6" MEDIAN C & G |
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| | LIMITS OF GRADING |

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APPROVAL OF GRADING & DRAINAGE PLANS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.

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FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\500 CADD\504 PLAN SETS\CONSTRUCTION PLANS\G&D\DG03.DWG



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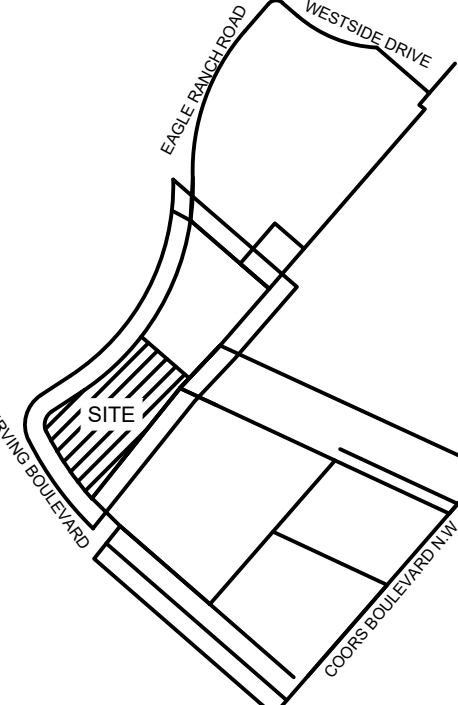
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REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

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DRAWN BY: BL, MR

DESIGNED BY: RPD

CHECKED BY: NMS

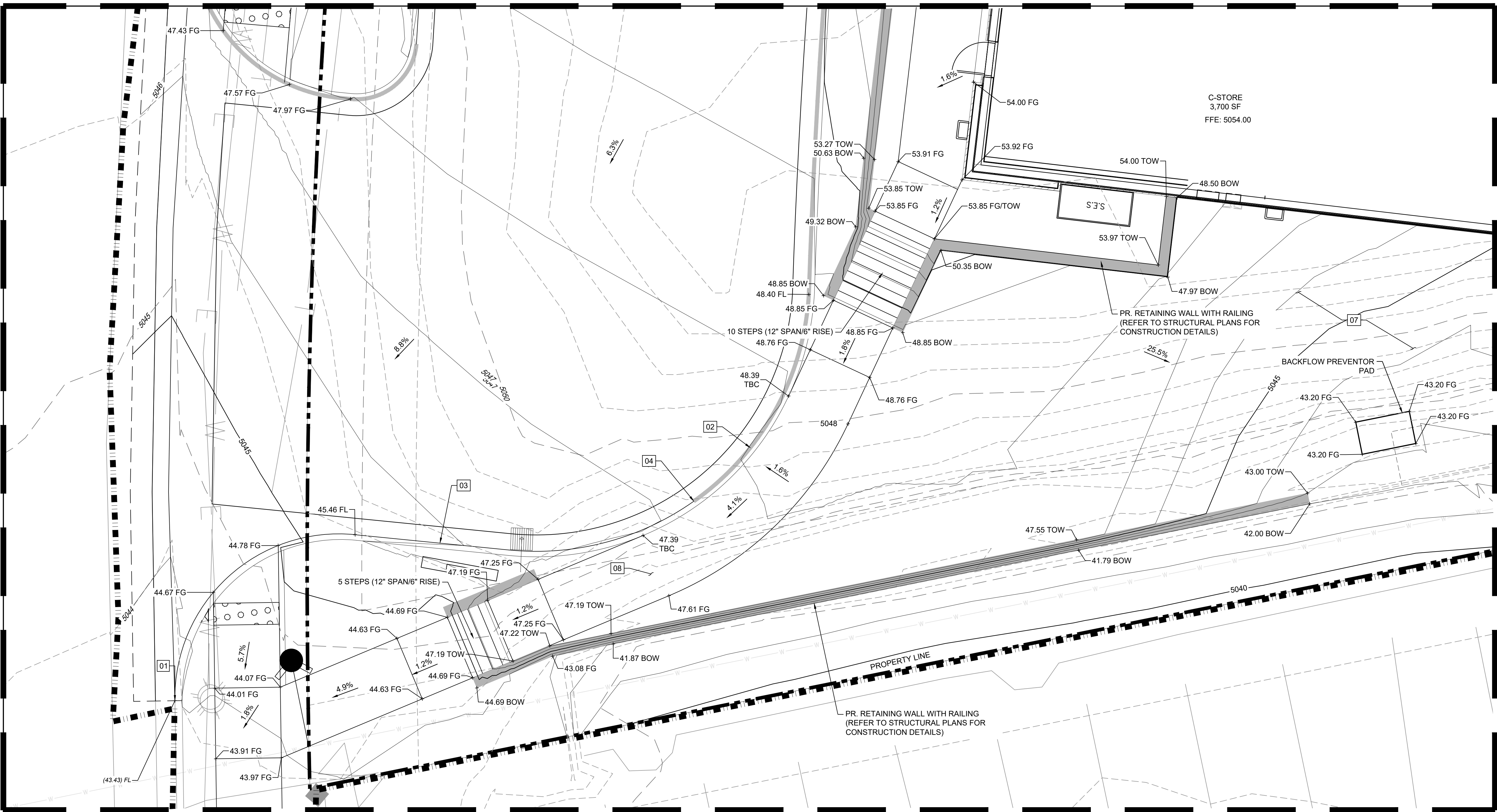
SHEET TITLE:

DETAILED
GRADING PLAN

DG03

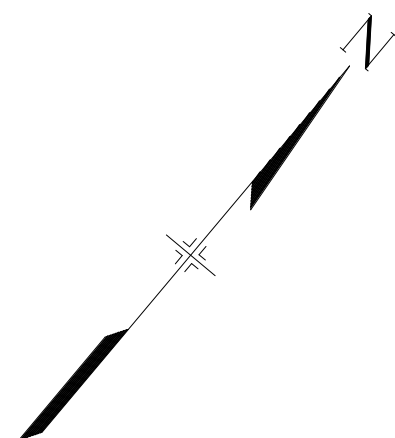
SHEET 3 OF 5

DATE: DECEMBER 2023



INSET A

SCALE: 1"=5'



GRAPHIC SCALE



(IN FEET)
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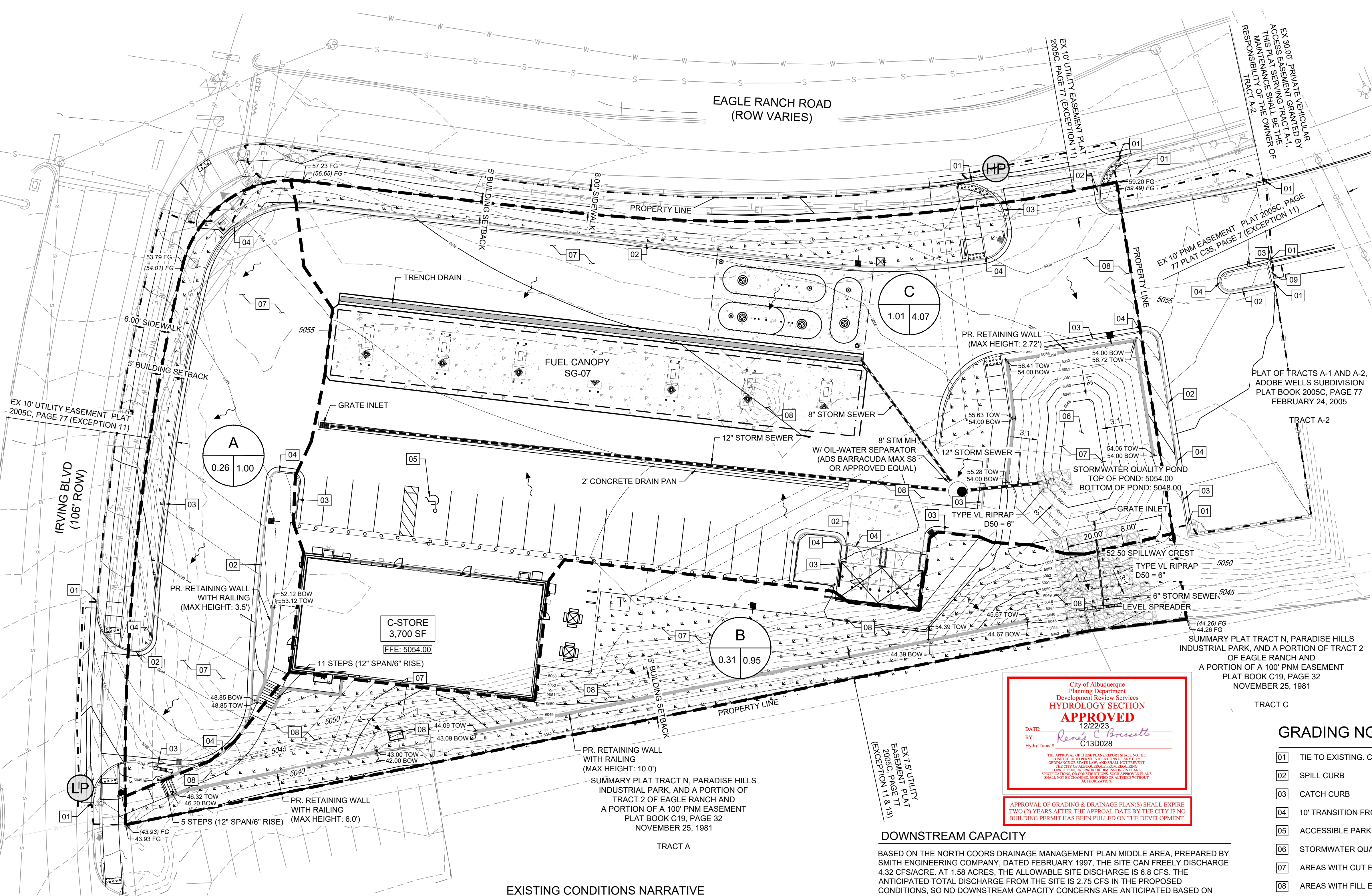



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GENERAL GRADING NOTES

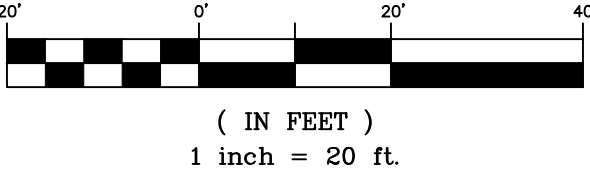
- ALL GRADING SHALL COMPLY WITH THE CITY OF ALBUQUERQUE "GRADING AND EROSION CRITERIA" (REF. CITY OF ALBUQUERQUE, DEVELOPMENT PROCESS MANUAL, ARTICLE 6-4).
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE EPA OR APPLICABLE STATE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- PRIOR TO INSTALLATION OF SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
- ALL EXISTING AND PROPOSED SIDEWALKS, BARRIER FREE RAMPS, HANDICAP PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH A.D.A. AND CITY OF ALBUQUERQUE REQUIREMENTS. EXISTING INFRASTRUCTURE NOT COMPLYING SHALL BE REMOVED AND REPLACED TO MEET STANDARDS.
- NO GRADING AND/OR SPILLING BEYOND THE CONSTRUCTION LIMITS. ANY SPILLING THAT CAUSES ADVERSE EFFECTS TO THE SLOPES AND/OR OPEN SPACE AREAS SHOULD BE "IMMEDIATELY RESTORED TO ITS NATURAL STATE."

FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\500 CAD\504 PLAN SETS\CONSTRUCTION PLANS\GR02.DWG



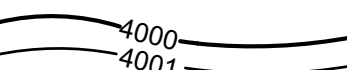
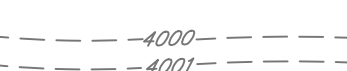
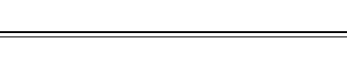



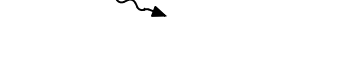
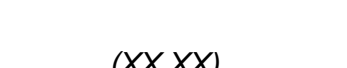




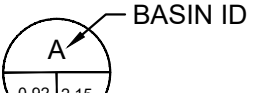
Know what's below.
Call before you dig.



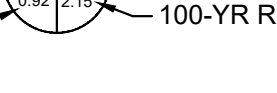
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

GRADING LEGEND


	PROPOSED CONTOURS
	EXISTING CONTOURS
	CONCRETE CATCH CURB
	CONCRETE SPILL CURB
	LIMITS OF GRADING
	PERVIOUS AREA
	DRAINAGE BASIN BOUNDARY
	FLOW DIRECTION
	PROPOSED SPOT ELEVATION:
	EXISTING SPOT ELEVATION:
FG = FINISHED GROUND FL = FLOWLINE TBC = TOP BACK OF CURB FFE = FINISHED FLOOR ELEVATION GB = GRADE BREAK HP = HIGH POINT LP = LOW POINT	



BASIN ID



BASIN AREA [AC]



100-YR RUNOFF [CFS]

GRADING NOTES

- TIE TO EXISTING. CONTRACTOR TO VERIFY EXISTING LOCATION & ELEVATION.
- SPILL CURB
- CATCH CURB
- 10' TRANSITION FROM SPILL CURB TO CATCH CURB
- ACCESSIBLE PARKING STALL. SLOPE TO BE 2% MAX IN ANY DIRECTION IN THIS AREA
- STORMWATER QUALITY POND
- AREAS WITH CUT EXCEEDING 1'
- AREAS WITH FILL EXCEEDING 1'
- CURB CHASE

PONDING AND OUTLET DESIGN

THE WATER QUALITY POND WILL CAPTURE FLOWS FROM THE MAJORITY OF THE SITE AND MANAGE THE STORMWATER QUALITY VOLUME (SWQV). THE REQUIRED SWQV IS 0.042 AC-FT. THE DESIGNED POND VOLUME IS 0.124 AC-FT. SEE SWQV CALCULATION BELOW:

STORMWATER QUALITY VOLUME	
1.20	impervious area [ac]
0.42	inches (for new development site)
1,829.5	SWQV [cf]
0.042	SWQV [ac-ft]

THE SWQV IS ANTICIPATED TO INFILTRATE THROUGH THE POND BOTTOM DUE TO THE SANDY SOILS. BASED ON THE INFILTRATION RATE (5 MINUTES PER INCH) DETERMINED IN THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC., DATED APRIL 21, 2021, THE SWQV DRAINS IN 2.31 HOURS. TO BE CONSERVATIVE, A DRAIN TIME OF 7 HOURS IS ASSUMED.

THE POND INCLUDES A GRATE INLET SET AT 5051.9, ABOVE THE MAXIMUM SWQV WATER SURFACE ELEVATION (5050.40). THE GRATE INLET ROUTES FLOWS, VIA A 6" STORM SEWER AND LEVEL SPREADER, TO THE SOUTHEASTERN PROPERTY LINE.

IN THE EVENT THAT THE POND OVERTOPS, THE FLOW WILL BE ROUTED VIA AN EMERGENCY SPILLWAY AND SOIL RIPRAP RUNDOWN TO THE SOUTHEASTERN PROPERTY LINE. THE SPILLWAY CREST ELEVATION IS SET AT 5052.5.

EXISTING CONDITIONS NARRATIVE

THE EXISTING SITE IS PREDOMINATELY UNDISTURBED SANDY SOIL, MODERATELY VEGETATED WITH VARIOUS SHRUBS AND GRASSES. GENERAL EXISTING TOPOGRAPHY OF THE SITE, AND WITHIN 100 FEET OF THE PROPERTY LINE, SLOPES TO THE SOUTHEAST AT ABOUT 5-8%. AN EXISTING EARTHEN WALL RUNS NEAR AND PARALLEL TO THE SOUTHEAST PROPERTY LINE.

THE MAJORITY OF THE SITE (BASIN EX-B) DRAINS TO THE SOUTHEAST PROPERTY LINE AND ONTO THE ADJACENT PROPERTY. THE REMAINDER OF THE SITE (BASIN EX-A) DRAINS TO IRVING BOULEVARD AND IS ROUTED TO THE SOUTHEAST VIA EXISTING CURB AND GUTTER.

DOWNSTREAM CAPACITY

BASED ON THE NORTH COORS DRAINAGE MANAGEMENT PLAN MIDDLE AREA, PREPARED BY SMITH ENGINEERING COMPANY, DATED FEBRUARY 1997, THE SITE CAN FREELY DISCHARGE 4.32 CFS/ACRE. AT 1.58 ACRES, THE ALLOWABLE SITE DISCHARGE IS 6.8 CFS. THE ANTICIPATED TOTAL DISCHARGE FROM THE SITE IS 2.75 CFS IN THE PROPOSED CONDITIONS, SO NO DOWNSTREAM CAPACITY CONCERNS ARE ANTICIPATED BASED ON THE DEVELOPMENT OF THE SITE.

FURTHERMORE, AS SHOWN IN THE EXISTING CONDITIONS GRADING PLAN, MOST OF THE EXISTING SITE RUNOFF (Q100 = 3.88 CFS) FLOWS ONTO THE ADJACENT SITE TO THE SOUTHEAST. BASED ON STREET VIEW AND SATELLITE IMAGERY, IT APPEARS THE ADJACENT PROPERTY CAN HANDLE THE OFFSITE FLOW WITHOUT EXPERIENCING PROPERTY DAMAGE. THE ANTICIPATED RUNOFF FROM THE SITE IN THE PROPOSED CONDITIONS IS SIGNIFICANTLY LOWER, THEREFORE, NO DOWNSTREAM CAPACITY CONCERNS ARE ANTICIPATED BASED ON THE DEVELOPMENT OF THIS SITE.

PROPOSED CONDITIONS NARRATIVE

THE PROPOSED SITE WILL TYPICALLY DRAIN FROM NORTHWEST TO SOUTHEAST. THE MAJORITY OF SITE RUNOFF (FROM BASIN C) WILL BE ROUTED, VIA CONCRETE PANS AND STORM SEWER, TO THE PROPOSED WATER QUALITY POND IN THE NORTHEAST PORTION OF THE SITE.

RUNOFF FROM BASIN A (Q100 = 1.00 CFS) WILL FLOW SOUTH/SOUTHEAST TO IRVING BOULEVARD. THE ANTICIPATED 100-YEAR FLOW IS SIGNIFICANTLY LESS THAN THE ALLOWABLE DISCHARGE (6.8 CFS), THEREFORE, NO DOWNSTREAM IMPACTS ARE ANTICIPATED.

RUNOFF FROM BASIN B (Q100 = 0.95 CFS) WILL FLOW SOUTHEAST TO THE SOUTHEASTERN PROPERTY LINE, WHERE IT ENTERS THE ADJACENT PROPERTY. THE ANTICIPATED 100-YEAR FLOW IS SIGNIFICANTLY LESS THAN THE EXISTING RUNOFF (EXQ100 = 3.88 CFS) TO THE SOUTHEASTERN PROPERTY LINE, THEREFORE NO DOWNSTREAM IMPACTS ARE ANTICIPATED.

RUNOFF FROM BASIN C (Q100 = 4.07 CFS, POND DISCHARGE Q100 = 0.80 CFS) IS ROUTED VIA CONCRETE PANS AND STORM SEWER TO THE WATER QUALITY POND LOCATED IN THE NORTHEAST PORTION OF THE SITE. THE POND IS DESIGNED TO INFILTRATE THE STORMWATER QUALITY VOLUME (SWQV), TAKING ADVANTAGE OF THE EXISTING SANDY SOILS FOUND ON-SITE. THE POND INCLUDES A GRATE INLET SET AT AN ELEVATION ABOVE THE SWQV WATER SURFACE ELEVATION. THE GRATE INLET WILL DISCHARGE (Q100 = 0.80 CFS) VIA A 6" STORM SEWER, TO THE SOUTHEASTERN PROPERTY LINE. A LEVEL-SPREADER WILL DISSIPATE THE FLOW FROM THE STORM SEWER IN ORDER TO MITIGATE THE EROSION EFFECT OF CONCENTRATED FLOWS. IN THE EVENT THAT THE POND OVERTOPS, THE STORMWATER WILL BE ROUTED VIA AN EMERGENCY SPILLWAY AND SOIL RIPRAP RUNDOWN TO THE SOUTHEASTERN PROPERTY LINE. THE ANTICIPATED 100-YEAR FLOW ROUTED THROUGH THE POND IS SIGNIFICANTLY LESS THAN THE EXISTING 100-YEAR RUNOFF THAT FLOWS ONTO THE SOUTHEASTERN PROPERTY LINE (EXQ100 = 3.88 CFS). THEREFORE, NO DOWNSTREAM IMPACTS ARE ANTICIPATED. NOTE THAT THE RUNOFF FROM BASINS B AND C ARE NOT COMBINED BECAUSE THE PEAK FLOWS FROM EACH BASIN WILL EXIT THE SITE AT DIFFERENT TIMES DUE TO THE TIME THE POND TAKES TO FILL UP TO THE LEVEL OF THE GRATE INLET.

EXISTING CONDITIONS RUNOFF SUMMARY (RATIONAL METHOD)									
BASIN ID	Area [ac]			100 yr, 6-hr Excess Precipitation, E*		100-yr-Prak Discharge [cfs/ac]**		Peak Discharge	
	Land Treat. C	Land Treat. D	Total	Land Treat. C	E [in]	Land Treat. C	Land Treat. D	[cfs]	Notes
EX-A	0.22	0.00	0.22	0.95	2.24	0.95	2.87	0.64	Flows overland to Irving Blvd curb & gutter
EX-B	1.35	0.00	1.35	0.95	2.24	0.95	2.87	3.88	Flows overland to Southern Property line
Total	1.58	0	1.58		1.90			4.52	

*Values per DPM Table 6.2.13.


**Values per DPM Table 6.2.14.

PROPOSED CONDITIONS RUNOFF SUMMARY (RATIONAL METHOD)									
Basin ID	Area [ac]			100-yr, 6-hr Excess Precipitation, E*		100-yr Peak Discharge [cfs/ac]**		Peak Discharge	
	Land Treat. C	Land Treat. D	Total	Land Treat. C	E [in]	Land Treat. C	Land Treat. D	[cfs]	Notes
A	0.05	0.21	0.26	0.95	2.24	1.98	2.87	4.12	1.00 Flows routed via onsite curb and gutter to Irving Blvd. curb and gutter.
B	0.25	0.06	0.31	0.95	2.24	1.18	2.87	4.12	0.95 Flows overland to southern property line.
C	0.08	0.94	1.01	0.95	2.24	2.14	2.87	4.12	4.07 Flows routed via concrete pans and storm sewer to WQ infiltration pond.
Total	0.38	1.20	1.58		5.31			0.80 2.75	Flows routed through grate inlet in pond and 6" storm sewer discharges to southeastern property line through level spreader.

*Values per DPM Table 6.2.13.


**Values per DPM Table 6.2.14.

CONSULTANTS:



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Excellence by Design


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COLORADO SPRINGS, CO 80920
PHONE: (719) 575-0100
FAX: (719) 575-0208



LAND DEVELOPMENT
CONSULTANTS, LLC


950 S. CHERRY STREET, SUITE 512
DENVER, CO 80246

OWNER/DEVELOPER:



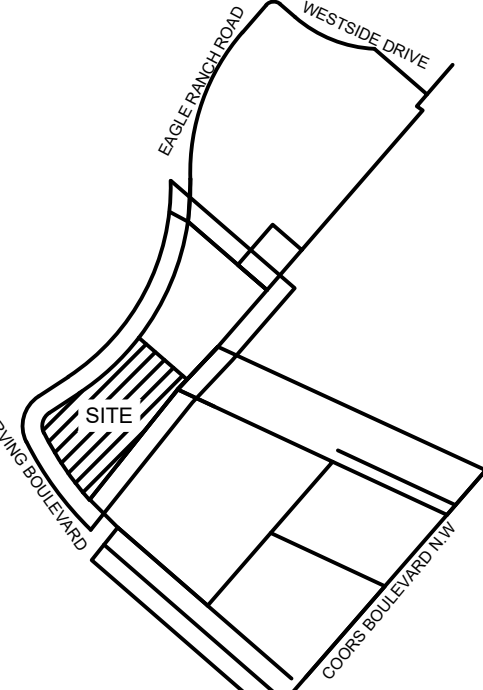
ROCKY MOUNTAINS DIVISION
5500 S QUEBEC STREET, SUITE 100
GREENWOOD VILLAGE, CO 80111

SEAL



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MATRIX DESIGN GROUP IS NOT RESPONSIBLE FOR CHANGES, ALTERATIONS, OR USE OF CONSTRUCTION DOCUMENTS PRIOR TO JURISDICTIONAL APPROVAL.

VICINITY MAP: NTS



PROJECT:

CIRCLE K STORES INC.

GRADING & DRAINAGE PLAN

9620 EAGLE RANCH ROAD NW
GRADING & DRAINAGE PLAN

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.001

DRAWN BY: RPD

DESIGNED BY: NMS

CHECKED BY:

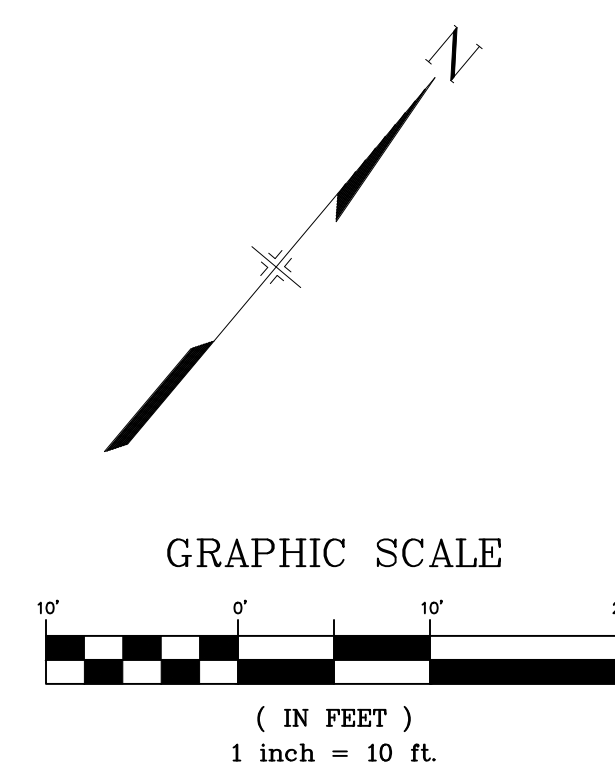
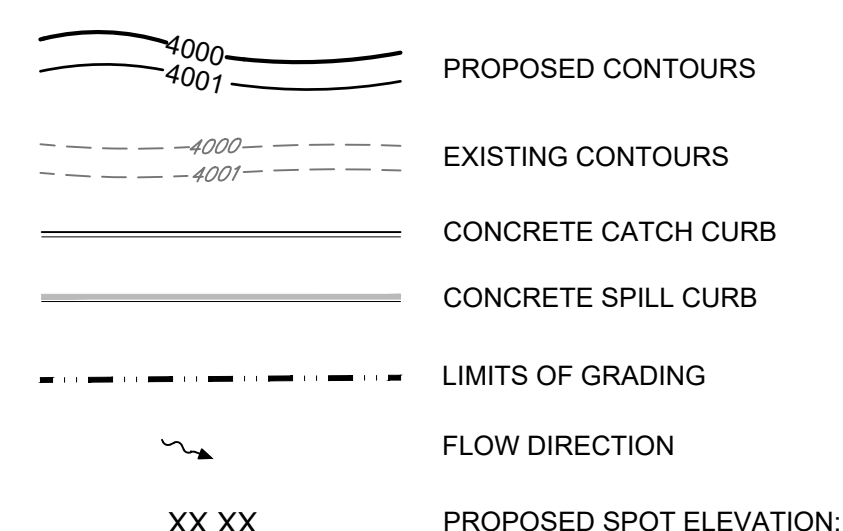
SHEET TITLE:

DRAINAGE PLAN

GR02

SHEET 4 OF 5

DATE: DECEMBER 2023



NOTE:
1. REFERENCE CONSTRUCTION DOCUMENTS SHEET SD01 AND DT03 FOR STORM INFORMATION

