CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

June 17, 2024

J. Graeme Means, P.E.
High Mesa Consulting Group
6010 B Midway Park Blvd NE
Albuquerque, NM 87109

RE: Cibola Loop Multigenerational Center
Revised Conceptual Grading & Drainage
Plans Engineer's Stamp Date: 04/08/24
Hydrology File: A13D025

Dear Mr. Means:

Based upon the information provided in your submittal received 06/11/2024, the Revised Conceptual Grading & Drainage Plans are preliminary approved for Grading Permit and action by the Development Facilitation Team (DFT) on Site Plan for Building Permit.

PRIOR TO BUILDING PERMIT:

1. Please submit a more detailed Grading & Drainage Plan to Hydrology for review and approval. This digital (.pdf) is emailed to PLNDRS@cabq.gov along with the Drainage Transportation Information Sheet.

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

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (DTIS)

Project Title: COA CIBOLA LOOP MULTIGENERATIONAL CENTER (PROJECT #7882.16) Hydrology File # A13-D011
Legal Description: TRACT 1-2, CIBOLA LOOP SUBDIVISION
City Address, UPC, OR Parcel: 101306630817840305

Applicant/Agent: HIGH MESA, A BOWMAN COMPANY Contact: GRAEME MEANS (ENGINEER)
Address: 6010-B MIDWAY PARK BLVD NE Phone: 505-345-4250
Email: GMEANS@BOWMAN.COM

Applicant/Owner: COA DEPARTMENT OF SENIOR AFFAIRS Contact: ANNA SANCHEZ (DIRECTOR)
Address: Phone: 505-768-3606
Email: AMSANCHEZ@CABQ.GOV

(Please note that a DFT SITE is one that needs Site Plan Approval & ADMIN SITE is one that does not need it.)

TYPE OF DEVELOPMENT: ☐ PLAT (#of lots) _____ ☐ RESIDENCE
☑ DFT SITE ☐ ADMIN SITE

RE-SUBMITTAL: ☑ YES ☐ NO

DEPARTMENT: ☐ TRANSPORTATION ☑ HYDROLOGY/DRAINAGE

Check all that apply under Both the Type of Submittal and the Type of Approval Sought:

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
- ☐ PAD CERTIFICATION
- ☑ CONCEPTUAL G&D PLAN
- ☐ GRADING & DRAINAGE PLAN
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE MASTER PLAN
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL) ADMINISTRATIVE
- ☐ TRAFFIC CIRCULATION LAYOUT FOR DFT APPROVAL
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ STREET LIGHT LAYOUT
- ☐ OTHER (SPECIFY)_____

TYPE OF APPROVAL SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ CONCEPTUAL TCL DFT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☑ SITE PLAN FOR BLDG PERMIT DFT 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
- ☐ OTHER (SPECIFY)_____

DATE SUBMITTED: 06/11/2024

REV. 09/13/23

DRAINAGE CALCULATIONS

I. **SITE CHARACTERISTICS**

A. PRECIPITATION ZONE = 1

B. $P_{100,\ 6\ HR}$ = 2.17 IN P_{360} = 9.14 IN

C. TOTAL PROJECT AREA (A_T) = 398,234 SF / 9.14 AC

D. LAND TREATMENTS

1.

EXISTING LAND TREATMENT				PROPOSED LAND TREATMENT			
BASIN 1	398,234 SF / 9.14 AC			PHASE 1	398,234 SF / 9.14 AC		
LAND TREATMENT	AREA (SF/AC)		%	LAND TREATMENT	AREA (SF/AC)		%
A	349,155 SF / 8.02 AC		88%	A			
B				B			
C	49,079 SF / 1.13 AC		12%	C	338,092 SF / 7.76 AC		85%
D				D	60,142 SF / 1.38 AC		15%

PROPOSED LAND TREATMENT		
PHASE 1 + 2	398,234 SF / 9.14 AC	
LAND TREATMENT	AREA (SF/AC)	%
A		
B		
C	262,092 SF / 6.02 AC	66%
D	136,142 SF / 3.13 AC	34%

II. **HYDROLOGY**

A. **EXISTING CONDITION 100 YEAR STORM**

1 **BASIN 1**

a. VOLUME 100-YR, 6-HR

$WT_E = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D)/A_T$

$\Rightarrow (0.55 \cdot 8.02) + (0.73 \cdot 0.00) + (0.95 \cdot 1.13) + (2.24 \cdot 0.00)/9.14 =$ **0.60 IN**

$V_{100,\ 6\ HR} = (E_W/12) \cdot A_T \Rightarrow (0.60/12) \cdot 9.14 =$ **0.4571 AC-FT =** **19,910 CF**

b. PEAK DISCHARGE 100-YR

$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$

$\Rightarrow (1.54 \cdot 8.02) + (2.16 \cdot 0.00) + (2.87 \cdot 1.13) + (4.12 \cdot 0.00) =$ **15.6 CFS**

B. **PROPOSED CONDITION 100 YEAR STORM - PHASE 1**

1 **BASIN 1**

A. VOLUME 100-YR, 6-HR

$WT_E = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D)/A_T$

$\Rightarrow (0.55 \cdot 0.00) + (0.73 \cdot 0.00) + (0.95 \cdot 7.76) + (2.24 \cdot 1.38)/9.14 =$ **1.14 IN**

$V_{100,6\ HR} = (E_W/12) \cdot A_T \Rightarrow (1.14/12) \cdot 9.14 =$ **0.8685 AC-FT =** **37,830 CF**

B. VOLUME 100-YR, 10-DAY

$V_{10DAYS} = V_{360} + A_D * (P_{10DAYS} - P_{360}) / 12$ in/ft =

$\Rightarrow 0.8685 + 1.38 * (3.900 - 2.170) / 12$ in/ft = **1.0674 AC-FT =** **46,500 CF**

C. PEAK DISCHARGE 100-YR

$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$

$\Rightarrow (1.54 \cdot 0.00) + (2.16 \cdot 0.00) + (2.87 \cdot 7.76) + (4.12 \cdot 1.38) =$ **28.0 CFS**

C. **PROPOSED CONDITION 100 YEAR STORM - FULL BUILD OUT**

1 **BASIN 1**

A. VOLUME 100-YR, 6-HR

$WT_E = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D)/A_T$

$\Rightarrow (0.55 \cdot 0.00) + (0.73 \cdot 0.00) + (0.95 \cdot 6.02) + (2.24 \cdot 3.13)/9.14 =$ **1.39 IN**

$V_{100,6\ HR} = (E_W/12) \cdot A_T \Rightarrow (1.39/12) \cdot 9.14 =$ **1.0590 AC-FT =** **46,130 CF**

B. VOLUME 100-YR, 10-DAY

$V_{10DAYS} = V_{360} + A_D * (P_{10DAYS} - P_{360}) / 12$ in/ft =

$\Rightarrow 1.059 + 3.13 * (3.900 - 2.170) / 12$ in/ft = **1.5101 AC-FT =** **65,780 CF**

C. PEAK DISCHARGE 100-YR

$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$

$\Rightarrow (1.54 \cdot 0.00) + (2.16 \cdot 0.00) + (2.87 \cdot 6.02) + (4.12 \cdot 3.13) =$ **30.1 CFS**

D. **COMPARISON 100 YEAR STORM - FULL BUILD OUT**

1. **BASIN 1**

a. VOLUME 100-YR, 6-HR

$\Delta V_{100,\ 6\ HR} = 46130 - 19910 =$ **26,220 CF** **(INCREASE)**

b. PEAK DISCHARGE 100-YR

$\Delta Q_{100} = 30.1 - 15.6 =$ **14.5 CFS** **(INCREASE)**

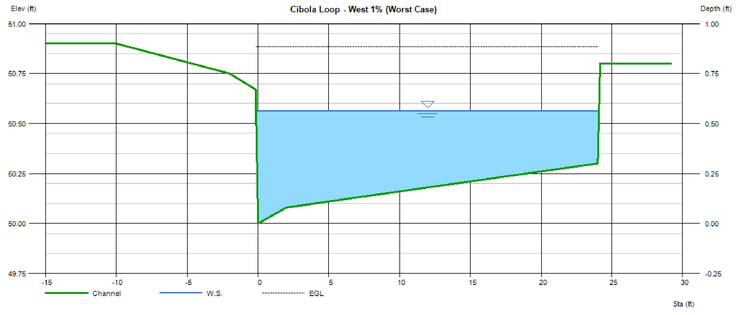
E. **RETENTION POND VOLUME CALCULATIONS**

Elevation	Area (SF)	Volume (CF)	Sum (CF)
5,089	8250		
		9740	9740
5,090	11,230		
		12690	22430
5,091	14,150		
		15820	38250
5,092	17,490		
		19180	57430
5,093	20,870		
		22640	80070
5,094	24,410		

F. **CIBOLA LOOP STREET ANALYSIS**

CIBOLA LOOP WEST BASIN = 1.6 AC: CONSERVATIELY ASSUME 100% TREATMENT D.
Q_{100} = 1.6 * 4.12 CFS/ACRE = 6.7 CFS
MAX 100-YEAR STREET FLOW IS 11.6 + 3.2 + 20.6 + 6.7 = 42.1 CFS
(CAN BE CONTAINED WITHIN EXISTING TEMPORARY SECTION)

CIBOLA LOOP EAST BASIN = 1.7 AC: CONSERVATIELY ASSUME 100% TREATMENT D.
Q100 = 1.7 * 4.12 CFS/ACRE = 7.0 CFS
+ 6. MAX 100-YEAR STREET FLOW IS 8.5 CFS FROM NORTH SUB-BASIN + 7.0 = 13.5 CFS
(CAN BE CONTAINED WITHIN EXISTING TEMPORARY SECTION)



Depth	Q	Area	Veloc	Wp	Yc	TopWidth	Energy
(ft)	(cfs)	(sqft)	(ft/s)	(ft)	(ft)	(ft)	(ft)
0.56	42.31	9.304	4.55	24.86	0.64	24.23	0.88

DRAINAGE PLAN

I. **INTRODUCTION AND EXECUTIVE SUMMARY**

THIS SITE IS LOCATED IN NORTHWEST ALBUQUERQUE, NORTH OF ELLISON DRIVE NW. THIS CONCEPTUAL DRAINAGE AND ROUGH GRADING PLAN HAS BEEN PREPARED TO SUPPORT DFT SITE PLAN AND ROUGH GRADING APPROVALS FOR THE FIRST PHASE OF SITE WORK AND BUILDING CONSTRUCTION FOR THE PROPOSED CITY OF ALBUQUERQUE MULTI-GENERATIONAL CENTER. THERE WILL BE A FORTHCOMING GRADING AND DRAINAGE PLAN SUBMITTAL FOR BUILDING PERMIT APPROVAL.

II. **PROJECT DESCRIPTION**

THE EXISTING LEGAL DESCRIPTION IS TRACT A-2, CIBOLA LOOP SUBDIVISION, FILED 2/14/2017 (2017C-17, DOC. # 2017013734). THE SITE IS ZONED MX-L. THE SITE IS CURRENTLY UNDEVELOPED. AS INDICATED BY PANEL 108 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, REVISED 09/26/2008, THE SITE NOT ENCUMBERED BY, NOR DOES IT DIRECTLY DISCHARGE TO ANY MAPPED FLOOD HAZARD ZONES.

III. **BACKGROUND DOCUMENTS & RESEARCH**

THE PREPARATION OF THIS PLAN RELIED UPON REVIEW OF CITY OF HYDROLOGY FILES A13-D011, A13-D012, A13-D011B, A13-D002, A13-D003, AND A-130004 THAT ALL FRONT CIBOLA LOOP NW AS WELL AS THE RECORD INFRASTRUCTURE PLANS FOR CPNS 6069.81, 5752.81, AND 3727.90 AS DESCRIBED BY THE FOLLOWING:

1. CONCEPTUAL DRAINAGE PLANS FOR CIBOLA LOOP SUBDIVISION DATED 4/02/2008 AND 9/09/2016 BY MARK GOODWIN & ASSOCIATES (A13-D011). THESE PLANS ESTABLISHED THE OVERALL DRAINAGE CONCEPT AND SUPPORTED SITE PLAN AND SUBDIVISION AND BULK LAND PLATTING FOR A-1 THROUGH A-4. PURSUANT TO THESE PLANS THE OVERALL SUBDIVISION SITE IS DIVED INTO TWO SUB-BASINS (NORTH AND SOUTH) THAT HAVE DISCHARGE RESTRICTIONS OF 0.65 CFS/ACRE WITH THE NORTH BASIN DISCHARGING TO CIBOLA LOOP NORTHWEST AND THE SOUTH BASIN DISCHARGING TO A PUBLIC DETENTION/SURGE POND LOCATED ON TRACT A-1.
2. MASTER DRAINAGE REPORT FOR TRES PLACITAS DATED 12/31/1998 BY ISAACSON & ARFMAN (A13-D012). THIS REPORT ADDRESSED AND SUPPORTED THE GRADING AND DRAINAGE, PLATTING, AND STREET AND DRAINAGE INFRASTRUCTURE FOR THE TRES PLACITAS SUBDIVISION ON THE WEST SIDE OF CIBOLA LOOP. A PORTION OF CIBOLA LOOP NW AND THE DOWNSTREAM DRAINAGE INFRASTRUCTURE ON CIBOLA LOOP (WEST) WAS CONSTRUCTED PURSUANT TO THIS PLAN WITH CPN 6069.81.
3. CONCEPTUAL DRAINAGE PLAN FOR TRACT B-1, CIBOLA LOOP SUBDIVISION DATED 2/28/2023 BY ISACSON & ARFMAN (A13-D011B). THIS PLAN FOR TRACT B-1 WAS APPROVED FOR PRELIMINARY/FINAL PLAT AND PRESENTS AND CONFORMS TO AND REINFORCES THE SAME ESTABLISHED CONCEPTS, ALLOWABLE DISCHARGES, AND BASINS FROM A13-D011 AND A13-D012.
4. GRADING PLAN AND DRAINAGE REPORT FOR VISTA DEL PARQUE SUBDIVISION DATED 8/07/1997 BY BOHANNAN-HUSTON (A13-D002). THIS REPORT ADDRESSED AND SUPPORTED THE GRADING AND DRAINAGE, PLATTING, AND STREET AND DRAINAGE INFRASTRUCTURE FOR THE VISTA DEL PARQUE SUBDIVISION ON THE NORTH SIDE OF CIBOLA LOOP. A PORTION OF CIBOLA LOOP NW AND THE DOWNSTREAM DRAINAGE INFRASTRUCTURE ON CIBOLA LOOP (EAST) WAS CONSTRUCTED PURSUANT TO THIS PLAN WITH CPN 5752.81.
5. GRADING PLAN FOR SEVEN BAR APARTMENTS DATED 2/07/1996 BY BURY+PITTMAN (A13/D003) AND GRADING PLAN FOR CORRALES POINTE APARTMENTS, NMPE 7322, DATED 12/17/1985 (A13/D003A). THESE GRADING PLANS WERE FOR THE CONSTRUCTION OF APARTMENT COMPLEXES ON THE NORTHEAST AND WEST SIDES OF CIBOLA LOOP (WEST). AS SHOWN BY BOTH PLANS, THEY DRAIN TO THE WEST AND NOT TO CIBOLA LOOP.
6. DESIGN PLANS FOR ELLISON DRIVE PREPARED BY BOHANNAN-HUSTON FOR THE CITY OF ALBUQUERQUE, AS-BUILTS DATED 2/17/1997 (CPN 3727.90). THESE PLANS CONSTRUCTED STORM DRAINAGE IMPROVEMENTS IN ELLISON DRIVE THAT INCLUDE THE OUTFALL FROM, AND A 24" STORM DRAIN EXTENSION UP CIBOLA LOOP (EAST) ALONG WITH 4 STORM INLETS IN CIBOLA LOOP (EAST).

IV. **EXISTING CONDITIONS**

THE SITE IS CURRENTLY UNDEVELOPED. TRACT A-2 GENERALLY SLOPES FROM NORTHWEST TO THE SOUTH AND SOUTHEAST ONTO TRACTS A-1 AND A-3 AT APPROXIMATELY 3%, BOTH ALSO OWNED BY THE CITY AND PURSUANT TO THE EXISTING CROSS-LOT AND RECIPROCAL DRAINAGE EASEMENT CREATED BY PREVIOUS PLATTING. THERE IS A STEEP (25%) SLOPE AT THE NORTHERN EDGE OF THE SITE UP TO CIBOLA LOOP NW. CIBOLA LOOP NW IS A 60 FTH RIGHT-OF-WAY THAT HAS STANDARD CURB AND GUTTER, SIDEWALK, AND A HALF-WIDTH OF PERMANENT PAVEMENT ON THE OUTSIDE (OPPOSITE SIDE FROM TRACT A-2) SIDE OF THE STREET. THE NEAR SIDE DOES NOT HAVE FULL WIDTH PAVING, CURB AND GUTTER, OR A SIDEWALK. THE NEAR SIDE DOES HAVE AN EXTRUDED CURB ON THE EDGE OF THE TEMPORARY PAVEMENT ON THE TRACT A-2 SIDE OF THE CENTERLINE.

THERE IS A HIGH POINT IN CIBOLA LOP NW LOCATED ON THE NORTHERMOST POINT NEAR LUNA PARK STREET NW, AND STREET RUNOFF FLOWS EAST AND WEST FROM THIS POINT. AS SHOWN BY THE CALCULATIONS FROM THE 1998 AND 2023 ISAACSON & ARFMAN PLANS AND REPORTS (REFERENCES 2 AND 3), OFFSITE FLOWS IN THE AMOUNTS OF 11.6 CFS, 3.2 CFS, AND 20.6 CFS DRAIN TO CIBOLA LOOP (WEST) FROM THE UNDEVELOPED ARE AT THE NORTHWEST, THE PARK, AND A PORTION OF THE TRES PLACITAS SUBDIVISION AT CUBA ROAD NW. THESE FLOWS, PLUS RUNOFF FROM THE CIBOLA LOOP ROW CONSERVATIVELY CALCULATED TO BE 6.7 CFS BASED UPON THE FULL WIDTH OF 60 FEET BEING LAND TREATMENT D COMBINE TO A PEAK 100-YEAR CUMULATIVE FLOW OF 42.1 CFS THAT DRAINS TO THE SOUTH TO A SAG CONDITION JUST SOUTH OF MILL ROAD NW WHERE THERE ARE TWO TYPE 'A' DOUBLE WING INLETS THAT HAVE A COMBINED INLET CAPACITY OF 69 CFS PER REFERENCE 2, (AP-20). AS SHOWN BY THE STREET SECTION HYDRAULICS HEREON, THIS RUNOFF CAN BE CARRIED WITHIN THE EXISTING PARTIAL STREET SECTION AT THE WORST CASE (DOWNSTREAM AND FLATTEST) LOCATION.

THE VISTA DEL PARQUE SUBDIVISION NEAR THE HIGH POINT AT THE NORTHERNMOST POINT IN CIBOLA LOOP DRAINS TO AN INTERNAL STORM DRAIN SYSTEM AND DOES NOT INTRODUCE STREET FLOW. AS SHOWN BY THE GRADING AND DRAINAGE PLAN AND REPORT, AND BY THE INFRASTRUCTURE PLANS (REFERENCE 4 AND CPN 5752.81) THE SUBDIVISION DRAINS TO AN EXISTING DETENTION POINT THAT HAS CONTROLLED OUTFALL TO A 24" STORM DRAIN IN CIBOLA LOOP (EAST) THAT DRAINS SOUTH TOWARDS ELLISON AND CONNECTS TO THE 24" STUB THAT WAS EXTENDED BY CPN 3727.90, REFERENCE 6 WHERE THERE ARE A SINGLE GRATE AND A DOUBLE GRATE INLET ON EACH SIDE (4 TOTAL STRUCTURES / 6 GRATES) PRIOR TO THE ELLISON INTERSECTION. THE SEVEN BAR AND CORRALES POINTE APARTMENTS ON THE NORTHEAST AND EAST SIDE OF CIBOLA LOOP (EAST) DRAIN TO THE WEST AND DO NOT DRAIN TO CIBOLA LOOP. AS SUCH, THE TOTAL FLOW IN CIBOLA LOOP AT THE WORST-CASE LOCATION (JUST UPSTREAM OF THE INLETS AND AT THE SOUTHEAST CORNER OF TRACT A-3 WILL BE THE ALLOWABLE DISCHARGE FROM THE NORTH SUB-BASIN (8.5 CFS) AND THE CIBOLA LOOP (EAST) ROW CONSERVATIVELY ESTIMATED AS BEING 7.0 CFS ASSUMING LAND TREATMENT D FOR THE 60 FT WIDTH FOR A TOTAL OF 13.5 CFS. AS DEMONSTRATED FOR THE WEST SIDE, THE EXISTING HALF SECTION OF STREET CAN CARRY IN EXCESS OF 40 CFS BELOW CURB HEIGHT.

V. **DEVELOPED CONDITIONS**

THE PROPOSED DFT CONSTRUCTION WILL BE THE FIRST PHASE OF THE CITY MULTI-GENERATION CENTER WITH ASSOCIATED PAVED PARKING AND CIRCULATION, AND SITE LANDSCAPING IMPROVEMENTS. FUTURE PHASES WILL EXPAND UPON THE BUILDING AND SITE WORK, INCLUDING ADDITIONAL PARKING AREAS. THE PAVED AREAS AND BUILDING ROOF DRAINS WILL DRAIN TO AN INTERNAL STORM DRAIN SYSTEM THAT WILL DRAIN TO A NEW TEMPORARY RETENTION POND THAT IS SIZED TO HOLD IN EXCESS OF THE 100-YEAR, 10-DAY RUNOFF FROM THE FUTURE FULLY DEVELOPED CONDITION. UPON DEVELOPMENT OF TRACT A-3 AND A DOWNSTREAM RECEIVING SYSTEM, THIS POND MAY BE REDUCED IN SIZE AND CONVERTED TO A DETENTION POND THAT LIMITS DISCHARGE TO THE ALLOWABLE RATE OF 0.65 CFS PER ACRE PER REFERENCE 1.

IN CONJUNCTION WITH THIS PROJECT, THE OUTSTANDING FULL WIDTH PERMANENT STREET PAVING, CURB AND GUTTER, AND SIDEWALK WILL ALSO BE CONSTRUCTED ON THE NEAR SIDE OF CIBOLA LOOP ACROSS THE PROJECT FRONTAGE. AS DEMONSTRATED BY THE EXISTING PRECEDING EXISTING CONDITIONS NARRATIVE, THE EXISTING PARTIAL SECTIONS OF CIBOLA LOOP ON THE WEST AND EAST SIDES FRONTING TRACTS A-1 AND A-3, RESPECTIVELY, HAVE ADEQUATE STREET AND DOWNSTREAM INFRASTRUCTURE CAPACITY TO CARRY THE RUNOFF GENERATED BY THE EXISTING AND ADDED PAVEMENT WIDTHS. AS SUCH, PERMANENT IMPROVEMENTS SUCH AS STREET WIDENING, STORM DRAIN EXTENSIONS, OR ADDITIONAL INLETS ARE NOT NECESSARY NOR PROPOSED BY THIS PROJECT. TRANSITIONS WITH CURB AND GUTTER WILL BE CONSTRUCTED AT THE TWO DOWNSTREAM ENDS (WEST AND EAST) TO TRANSITION FROM THE SITE FRONTAGE FULL IMPROVEMENTS TO THE DOWNSTREAM HALF-SECTION IMPROVEMENTS.

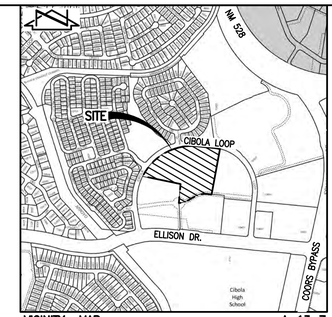
VI. **CALCULATIONS**

CALCULATIONS ANALYZING THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100 YEAR, 6-HOUR AND 100-YEAR, 10-DAY RAINFALL EVENTS HAVE BEEN PREPARED FOR THE FULLY DEVELOPED CONDITION. THE DPM PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN DPM 6-2(A) HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. 100% OF THE SITE RUNOFF WILL DRAIN TO A TEMPORARY RETENTION POND, SO STORMWATER QUALITY CALCULATIONS WERE NOT PERFORMED. CIBOLA LOOP HYDRAULIC CAPACITY CALCULATIONS WERE PERFORMED USING CIVILJD HYDRAFLOW EXPRESS WITH N=0.017.

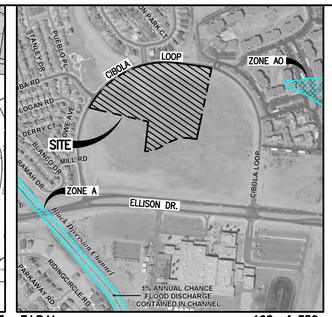
VII. **SUMMARY AND CONCLUSIONS**

1. AS A PRIORITY CITY PROJECT, THE PROPOSED CONSTRUCTION WILL BEGIN WITH ROUGH GRADING IN ADVANCE OF BUILDING PERMIT APPROVAL. A SUBSEQUENT SUBMITTAL WILL BE MADE FOR BUILDING PERMIT APPROVAL.
2. THIS PLAN IS SUBMITTED TO SUPPORT DFT SITE PLAN AND ROUGH GRADING APPROVALS, AND TO ALSO SUPPORT A FUTURE WORK ORDER THAT WILL WIDEN THE STREET FRONTAGE.
3. THIS PROJECT WILL CONSTRUCT A TEMPORARY RETENTION POND SIZED TO HOLD IN EXCESS OF THE FULLY DEVELOPED 100-YEAR, 10-DAY STORM.
4. UPON DEVELOPMENT OF TRACT A-3 AND A RECEIVING SYSTEM, THE TEMPORARY RETENTION POND WILL BE ABLE TO BE CONVERTED TO DETENTION TO THE ALLOWABLE RATE OF 0.65 CFS PER ACRE.
5. THIS PROJECT GRADING AND DRAINAGE SCHEME CONFIRMS TO ALL PREVIOUSLY APPROVED AND ESTABLISHED GRADING AND DRAINAGE PLANS, REPORTS, AND INFRASTRUCTURE PLANS APPLICABLE TO THE SITE.

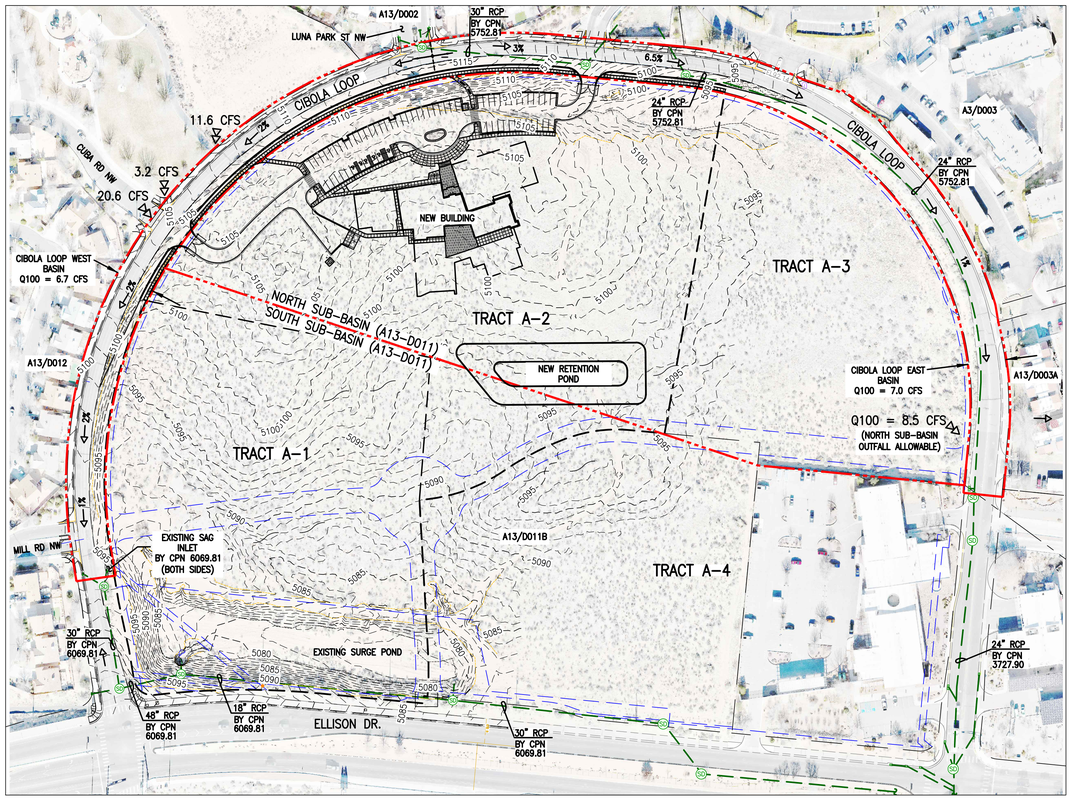
City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED
DATE: 06/17/24
BY: Renée C. Brissette
HydroTrans #: A13D025
THESE PLANS AND/OR REPORT ARE CONCEPTUAL ONLY. MORE INFORMATION MAY BE NEEDED IN THEM AND SUBMITTED TO HYDROLOGY FOR BUILDING PERMIT APPROVAL.



VICINITY MAP A-13-Z
SCALE: 1" = 750' (APPROX.)



F.I.R.M.
SCALE: 1" = 500'



BASIN AND STORM DRAIN MAP
SCALE: 1" = 100'

2024.001.3

PROJECT BENCHMARK #202 (P.B.M.)

A #5 REBAR W/CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN DIRT NEAR THE SOUTHWEST CORNER OF THE PROJECT SITE, APPROXIMATELY 136' EAST OF THE STORM DRAIN INLET ON THE EAST SIDE OF WEST CIBOLA LOOP NW AND 233' NORTH OF THE BACK OF CURB ON THE NORTH SIDE OF ELLISON DR NW, AS SHOWN ON SHEET VF-105
MODIFIED GROUND COORDINATES:
NORTHING = 1,530,887.18 FEET
EASTING = 1,516,155.43 FEET
ELEVATION = 5090.57 FEET (NAVD 1988)

TEMPORARY BENCHMARK #203 (T.B.M.)

A #5 REBAR W/CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN DIRT NEAR THE SOUTHWEST CORNER OF THE PROJECT SITE, APPROXIMATELY 200' EAST OF THE STORM DRAIN INLET ON THE EAST SIDE OF WEST CIBOLA LOOP NW AND 200' NORTH OF THE BACK OF CURB ON THE NORTH SIDE OF ELLISON DR NW, AS SHOWN ON SHEET VF-105
MODIFIED GROUND COORDINATES:
NORTHING = 1,530,854.64 FEET
EASTING = 1,516,222.95 FEET
ELEVATION = 5089.64 FEET (NAVD 1988)

TEMPORARY BENCHMARK #204 (T.B.M.)

A #5 REBAR WITH CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN DIRT NEAR THE NORTH END OF THE PROJECT SITE, APPROXIMATELY 349' SOUTH OF THE BACK OF CURB ON THE SOUTH SIDE OF WEST CIBOLA LOOP NW AND 47' WEST OF A DIRT ROAD RUNNING DOWN THE CENTER OF THE PROJECT SITE, AS SHOWN ON SHEET VF-104
MODIFIED GROUND COORDINATES:
NORTHING = 1,531,357.44 FEET
EASTING = 1,516,704.85 FEET
ELEVATION = 5102.33 FEET (NAVD 1988)

TEMPORARY BENCHMARK #206 (T.B.M.)

A #5 REBAR W/CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN DIRT NEAR THE SOUTHEAST CORNER OF THE PROJECT SITE, APPROXIMATELY 66' EAST OF A DIRT ROAD RUNNING DOWN THE CENTER OF THE PROJECT SITE AND 170' NORTH OF THE BACK OF CURB ON THE NORTH SIDE OF ELLISON DR NW, AS SHOWN ON SHEET VF-105
MODIFIED GROUND COORDINATES:
NORTHING = 1,530,781.43 FEET
EASTING = 1,516,671.67 FEET
ELEVATION = 5086.13 FEET (NAVD 1988)

LEGAL DESCRIPTION

TRACTS A-1, AND A-2, CIBOLA LOOP SUBDIVISION, ALBUQUERQUE, NEW MEXICO

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6501 Americas Parkway NE, Suite 300
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505.883.5200
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STRUCTURAL
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INTERIORS
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p_505.243.9287

AS BUILT INFORMATION
CONTRACTOR — DATE
WORK STAKED BY — DATE
INSPECTORS ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE
MICRO-FILM INFORMATION — DATE
RECORDED BY
NO.

BENCH MARKS
SURVEY INFORMATION
FIELD NOTES
BY — DATE
NO.

ENGINEER SEAL
06-07-2024
J. GRAEME McCANS
NEW MEXICO
13676
REGISTERED PROFESSIONAL ENGINEER
04-08-2024 03-25-2024

NO.	DATE	REMARKS	
1		DESIGN	G.M.
2		DESIGNED BY:	J.Y.R.
3		DRAWN BY:	G.M.
4		CHECKED BY:	

CITY OF ALBUQUERQUE

PROJECT TITLE:
COA CIBOLA LOOP MULTIGENERATIONAL CENTER
Cibola Loop NW
Albuquerque, NM 87114

DFT SITE PLAN AND EARLY WORK PACKAGE
MARCH 25, 2024

DRAWING TITLE: CONCEPTUAL GRADING AND DRAINAGE PLAN
SHEET TITLE:

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

City Project No. | Zone Map No. | DWG. | Sheet: CG-001

HIGH MESA
a Bowman company
6010-B Midway Park Blvd. NE, Albuquerque, NM 87109
P:505.345.4250 highmesacg.com | bowman.com

108 of 350
DATE: 9-26-2008

File Name: P:\data\2024\2024.001.3\ENG\Early Work Package\240013_Design Basin-1_R1.dwg - CG-001_R2 Plot Date: 6/11/24 Plot Time: 10:06

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED
DATE: 06/17/24
BY: Renee C. Brissette
HydroTrans # A13D025
THESE PLANS AND/OR REPORT ARE CONCEPTUAL ONLY. MORE INFORMATION MAY BE NEEDED IN THEM AND SUBMITTED TO HYDROLOGY FOR BUILDING PERMIT APPROVAL.

CIBOLA LOOP ROAD (SOUTH HALF) AND 6' PUBLIC SIDEWALK TO BE CONSTRUCTED BY FORTHCOMING COA PUBLIC WORK ORDER

CIBOLA LOOP ROAD (SOUTH HALF) AND 6' PUBLIC SIDEWALK TO BE CONSTRUCTED BY FORTHCOMING COA PUBLIC WORK ORDER

30 0 60
15 30

TRACT A-1

TRACT A-2

TRACT A-3

TRACT A-4

PROPOSED BUILDING (PHASE 1)
FF=5106.00
PAD ⑥ 5105.6

10' PUBLIC UTILITY EASEMENT

10' PUBLIC UTILITY EASEMENT

5089
PROPOSED TEMPORARY RETENTION POND
V=80,070 CF ⑥ 5094
V 10-DAY PHASE 1 = 46,500CF
V 10-DAY FULL BUILDOUT = 65,780CF

40' PRIVATE ACCESS EASEMENT AND PRIVATE WATERLINE, SANITARY AND DRAINAGE EASEMENT

SAS MH RIM=5114.69 (E)INV=02.1 8" PVC

SAS MH RIM=5114.81 (E)INV=02.1 8" PVC

SAS MH RIM=5114.49 (E)INV=06.6 8" PVC

SAS MH RIM=5097.95 (E)INV=92.3 8" PVC

RIM ⑥ 5.0 INV94.5

RIM ⑥ 4.8 INV97.9

T.B.M. #204 ELEV.=5102.33

INV89.0 (5) (6)

INV89.0 (5) (6)

INV98.6

TG3.2 INV99.2 (2) (7)

TG3.2 INV99.0 (2) (1)

IN96.5

IN96.4

INV94.2

INV90.8

INV11.0

CONSTRUCTION NOTES:

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR APPROVED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS–PUBLIC WORKS CONSTRUCTION–2020 EDITION (JUNE 2020).
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE–SPOTTING) OF EXISTING PUBLIC UTILITIES.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
4. 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.
5. UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY CONDUCTED BY THIS FIRM DATED 02/23/2024 AND INCLUDED AS SHEETS VF–106 AND VF–107 OF THIS PLAN SET. THAT UTILITY SURVEY AND SUBSURFACE UTILITY ENGINEERING EFFORT IS NOT ALL–INCLUSIVE AND MAY NOT REPRESENT UTILITIES/INFRASTRUCTURE THAT HAVE BEEN ABANDONED–IN–PLACE, WERE INACCESSIBLE, OR OTHERWISE UNDETECTABLE DUE TO UNFORESEEN AND UNCONTROLLABLE SITE AND/OR UTILITY CONDITIONS. FURTHER, THAT UTILITY INVESTIGATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE PROPERTY OWNER, DEVELOPER, OR CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUES, NEW MEXICO EXCAVATION LAWS (NMB11), MUNICIPAL AND LOCAL ORDINANCES, SITE SPECIFIC RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE UTILITY LINES AND FACILITIES.
6. ALL UTILITIES WITHIN THE PROJECT LIMITS THAT ARE RENDERED OBSOLETE AND / OR UNUSED AS A RESULT OF THIS PROJECT SHALL NOT BE ABANDONED IN PLACE, BUT SHALL INSTEAD BE COMPLETELY REMOVED WITHIN THE PROJECT AREA AND CAPPED AT THE PROJECT LIMITS, UNLESS OTHERWISE NOTED.
7. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
8. **THE GRADES INDICATED ON THIS PLAN ARE FINISHED GRADES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING SUBGRADE AT ELEVATIONS THAT SHALL ACCOMMODATE PROPOSED IMPROVEMENTS AS INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO, SURFACE DRAINAGE STRUCTURES, PAVING AND LANDSCAPING SURFACING.**

KEYED NOTES:

1. NEW TYPE "C" INLET (SINGLE GRATE) PER COA STD DWG 2205 – BY BUILDING PERMIT, NOT PART OF ROUGH GRADING / EARLY WORK PACKAGE
2. NEW TYPE "D" INLET (SINGLE GRATE) PER COA STD DWG 2206 – BY BUILDING PERMIT, NOT PART OF ROUGH GRADING / EARLY WORK PACKAGE
3. CONSTRUCT 4' DIAMETER STORM DRAIN MANHOLE TYPE "E" PER COA STD DWG 2209
4. INSTALL 18" HDPE ADS STORM DRAIN
5. INSTALL 18" HDPE PRE–FORMED END SECTION
6. CONSTRUCT ENERGY DISSIPATOR PER TYPICAL DETAIL, SHEET CG–502
7. NEW 18" HDPE ADS STORM DRAIN – BY BUILDING PERMIT, NOT PART OF ROUGH GRADING / EARLY WORK PACKAGE
8. INSTALL TEMPORARY STORM DRAIN PLUG AS PART OF ROUGH GRADING / EARLY WORK PACKAGE. PLUG TO BE REMOVED AND PIPING EXTENDING WITH BUILDING PERMIT
9. NEW 18" 11.25° BEND – BY BUILDING PERMIT, NOT PART OF ROUGH GRADING / EARLY WORK PACKAGE

TEMPORARY BENCHMARK #204 (T.B.M.)

A #5 REBAR WITH CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN DIRT NEAR THE NORTH END OF THE PROJECT SITE, APPROXIMATELY 349' SOUTH OF THE BACK OF CURB ON THE SOUTH SIDE OF WEST CIBOLA LOOP NW AND 47' WEST OF A DIRT ROAD RUNNING DOWN THE CENTER OF THE PROJECT SITE, AS SHOWN ON THIS SHEET.

MODIFIED GROUND COORDINATES:
NORTHING = 1,531,357.44 FEET
EASTING = 1,516,704.85 FEET
ELEVATION = 5102.33 FEET (NAVD 1988)

NOTE:
THIS IS NOT A BOUNDARY SURVEY OR A RIGHT–OF–WAY SURVEY. APPARENT PROPERTY CORNERS, RIGHT–OF–WAY LINES, OR PROPERTY LINES AS SHOWN ARE DERIVED FROM RECORD SURVEY PLATS, RIGHT–OF–WAY MAPS, OR DEEDS REFERENCED HEREON AND ARE NOT GUARANTEED OR TO BE RELIED ON FOR THE ESTABLISHMENT OF PROPERTY LINES.
THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON A BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 02/23/2024 (2024.001.2). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 02/23/2024 (2024.001.2).

A1 GRADING PLAN
SCALE: 1" = 30'

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CITY OF ALBUQUERQUE

PROJECT TITLE:
COA CIBOLA LOOP MULTIGENERATIONAL CENTER
Cibola Loop NW
Albuquerque, NM 87114

DFT SITE PLAN AND EARLY WORK PACKAGE
MARCH 25, 2024

DRAWING TITLE: CONCEPTUAL AND ROUGH GRADING PLAN
SHEET TITLE:

2024.001.3

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P:505.345.4250 highmesacg.com | bowman.com

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

City Project No.	Zone Map No.	DWG.	Sheet
			CG-101

AS BUILT INFORMATION
CONTRACTOR / DATE
WORK STAKED BY / DATE
INSPECTORS ACCEPTANCE BY / DATE
FIELD VERIFICATION BY / DATE
DRAWINGS CORRECTED BY / DATE
MICRO-FILM INFORMATION / DATE
RECORDED BY
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. / BY / DATE

ENGINEER SEAL
06-07-2024
J. GRAEME MCAMIS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER
04-08-2024 03-25-2024

ADDRESS DFT COMMENTS

NO.	DATE	REVISIONS	DESIGNED BY:	DRAWN BY:	CHECKED BY:
4	06/2024	REMARKS	G.M.	J.Y.R.	G.M.
3					
2					
1					

File Name: P:\data\2024\2024.001.3\ENG\Early Work Package\240913_Design Base-1_R1.dwg - CG-101_R2 Plot Date: 6/6/24 Plot Time: 18:02