CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

August 7, 2023

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

RE: ACE Leadership High School Student Parking
Grading and Drainage Plans
Engineer's Stamp Date: 06/26/23
Hydrology File: J13D099

Dear Mr. Means:

Based upon the information provided in your submittal received 07/26/2023, the Grading & Drainage Plans are approved for Grading Permit and Retaining Wall Permit. Once the grading and retaining wall of the project is complete, please provide an as-built for the City's records since there is no CO attached to the project.

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

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 (REV 6/2018)

Project Title: ACE Leadership HS Student Parking Building Permit #: _____ Hydrology File #: J13/D099

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tract B, Plat of Tracts A-D, Sawmill Industrial (2014C-22)

City Address: 1240 Bellamah Ave NW, Albuquerque, NM 87104

Applicant: High Mesa Consulting Group Contact: Graeme Means

Address: 6010-B Midway Park Blvd, Albuquerque NM 87109

Phone#: 505-345-4250 Fax#: 505-345-4254 E-mail: gmeans@highmesacg.com

Other Contact: ACE Leadership High School (Owner) Contact: Ralph Gonzales

Address: 1240 Bellamah Ave NW, Albuquerque, NM 87104

Phone#: 505-227-4098 Fax#: _____ E-mail: rgonzo@aceleadership.org

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL? _____ Yes X No

DEPARTMENT _____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
X GRADING PLAN
____ DRAINAGE REPORT
____ DRAINAGE MASTER PLAN
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ STREET LIGHT LAYOUT
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

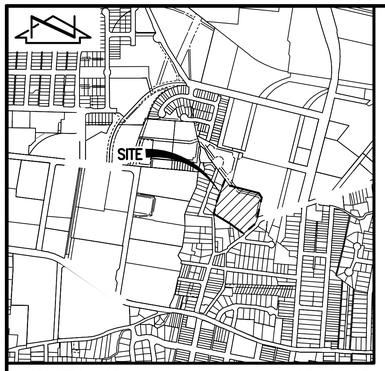
____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL

____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
X GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

DATE SUBMITTED: 6/26/2023 By: Graeme Means

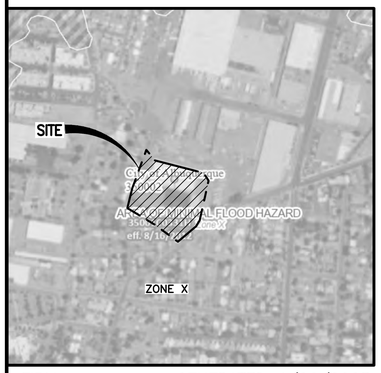
COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



VICINITY MAP H-12 & 13

SCALE: 1" = 750'



FIRM GENERATED 4/26/2023

NOT TO SCALE

LEGAL DESCRIPTION:

TRACT B, TRACT A THRU D, SAWMILL INDUSTRIAL
(3/24/2014, BK 2014C, PG 22

PROJECT BENCHMARK

AN AGRS BRASS DISK STAMPED "5-J13A", SET ON TOP OF A CONCRETE CURB, ON THE NORTH SIDE OF THE INTERSECTION OF MOUNTAIN ROAD NW AND 19th STREET.
ELEVATION = 4960.50 FEET (NAVD 1988)

TEMPORARY BENCHMARK #201 (T.B.M.)

A #5 REBAR W/CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN CRUSHER FINES NEAR THE NORTHEAST CORNER OF THE PROJECT SITE, AS SHOWN ON SHEET 2.
ELEVATION = 4961.66 FEET (NAVD 1988)

TEMPORARY BENCHMARK #202 (T.B.M.)

A MAG NAIL W/WASHER, SET IN CONCRETE CURB JOINT NEAR THE NORTHWEST CORNER OF THE PROJECT SITE, AS SHOWN ON SHEET 2.
ELEVATION = 4961.81 FEET (NAVD 1988)

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

A #5 REBAR W/CAP STAMPED "HMCG CONTROL NMPS 11184", SET IN GRAVEL ON THE SOUTH SIDE OF THE PROJECT SITE IN THE BOTTOM OF THE DRAINAGE AREA, AS SHOWN ON SHEET 2.
ELEVATION = 4958.61 FEET (NAVD 1988)

CALCULATIONS:

HYDROLOGIC CALCULATIONS

BASIN AREA	TREATMENT A	TREATMENT B	TREATMENT C	TREATMENT D	PRECIP ZONE	V100, 6 HR	Q100, 6 HR
3.95 AC	0.0 AC (0%)	0.32 AC (8%)	1.85 AC (47%)	1.78 AC (45%)	2	22,370 CF	114.1 CFS

POND VOLUME CALCULATIONS

ELEVATION	CONTOUR AREA (SF)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (SF)
4958.00	0	0	0
4958.25	368	81	81
4958.50	457	58	139
4958.75	549	70	209
4959.00	4465	150	359
4959.25	7719	965	1324
4959.50	8506	2028	3352
4959.75	9305	2226	5578
4960.00	10125	2429	8007
4960.25	10965	2636	10643
4960.50	11726	2836	13479
4960.75	12516	3030	16509
4961.00	8199	1567	18076

ORIFICE CALCULATIONS – 6" OUTLET PIPE, A=0.1964 SF, C=0.6, INV 57.80

OUTFLOW (CFS)	HEAD (FT)	W.S.L.	RATIO*
0.189*	N/A*	4958.00	0.4
0.425*	N/A*	4958.25	0.9
0.47	0.25	4958.30	
0.63	0.45	4958.50	
0.92	0.95	4959.00	
1.14	1.45	4959.50	
1.32	1.95	4960.00	
1.48	2.45	4960.50	
16.24	2.95	4961.00	

*** FOR UNSUBMERGED CONDITION MULTIPLY BY RATIO OF DEPTH TO DIAMETER**

AHYMO ROUTING MODEL

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.02a, Rel: 02a RUN DATE (MON/DAY/YR) =06/05/2023
INPUT FILE = P:\data\2023\2023.024.3\ENG\Hydrology\ACE Proposed 2023.txt USER NO.= AHYMO-TempUser05901704

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= 0.00
RAINFALL TYPE= 1 NOAA 14										RAIN6= 2.23
COMPUTE NM HYD	BASIN_A	-	1	0.00618	13.74	0.468	1.42195	1.533	3.475	PER IMP= 45
ROUTE RESERVOIR	OUTFLOW	1	2	0.00618	1.48	0.468	1.42191	2.033	0.375	AC-FT=0.312
FINISH										

DRAINAGE PLAN:

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SITE IS LOCATED IN THE SAWMILL AREA ON THE WEST OF THE INTERSECTION OF 12H STREET NW AND SAWMILL ROAD AND IS OWNED BY ACE LEADERSHIP HIGH SCHOOL. THIS PLAN HAS BEEN PREPARED AND SUBMITTED FOR GRADING APPROVAL TO SUPPORT A PROPOSED EXPANSION OF THEIR STUDENT PARKING AREA.

THE PROPOSED STUDENT PARKING LOT EXPANSION WILL ENCROACH INTO AN EXISTING DETENTION POND. AS DESCRIBED BY THE FOLLOWING, A PORTION OF THE EXISTING POND WILL BE EXPANDED TO PARTIALLY OFFSET THE DISPLACED VOLUME, AND THE EXISTING APPROVED WATER SURFACE LEVEL AND ALLOABLE DISCHARGE RATE WILL BE MAINTAINED.

II. PROJECT DESCRIPTION

THE EXISTING LEGAL DESCRIPTION IS TRACT B, PLAT OF TRACTS A-D, SAWMILL INDUSTRIAL.

AS INDICATED BY PANEL 331 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, EFFECTIVE AUGUST 16, 2012, THE SITE IS LOCATED WITHIN ZONE X AND DOES NOT HAVE A SPECIAL FLOOD HAZARD ZONE DESIGNATION.

III. BACKGROUND DOCUMENTS & RESEARCH

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENT:

- GRADING AND DRAINAGE PLAN FOR ACE LEADERSHIP HIGH SCHOOL PREPARED BY BOHANNAN-HUSTON DATED 4/3/2014 (J13-D099) NMPE 14171 AND CERTIFIED 1/19/2015. THIS PLAN ADDRESSED THE ORIGINAL SITE CONSTRUCTION.

IV. EXISTING CONDITIONS

THE SITE IS BOUNDED ON THE EAST BY SAWMILL ROAD NW, SINGLE FAMILY RESIDENCES TO THE SOUTH AND WEST, AND BY DEVELOPED COMMERCIAL PROPERTY TO THE NORTH. SAWMILL ROAD IS A FULLY DEVELOPED PUBLIC STREET WITH CURB AND GUTTER AND A PUBLIC 15 INCH RCP STORM DRAIN.

THE SITE IS DEVELOPED AND DRAINS TO AN EXISTING DETENTION POND AT THE SOUTHERN END OF THE SITE THAT RELEASES VIA CONTROLLED DISCHARGE TO THE EXITING PUBLIC STROM DRAIN IN SAWMILL RAOD NW THROUGH A 6" STORM DRAIN CONNECTION. PER THE BHI REFERENCE DOCUMENT, THE SITE IS ALLOWED TO RELEASE UP TO 2.0 CFS BASED UPON THE CRITERION OF 0.5 CFS / ACRE AND THE ACTUAL APPROVED AND CERTIFED PLAN RELEASES 1.5 CFS WITH A MAXIMUM WATRER SURFACE ELEVATION OF 1.5 CFS THAT IS LESS THAN THE ALLOWABLE.

V. DEVELOPED CONDITIONS

THE PROPOSED STUDENT PARKING AREA WILL BE EXPANDED AS SHOWN ON SHEET 2. THE NEW PARKING AREA WILL BE GRAVEL SIMILAR TO THE EXISTING PARKING AND DRIVE LANES. THE NEW PARKING AREA WILL ENCROACH INTO THE EXISTING DETENTION POND AND WILL REQUIRE A RETAINING WALL TO MAINTAIN AS MUCH OF THE EXSITING VOLUME AS IS POSSIBLE. ADDITIONALLY, A PORTION OF THE POND WILL BE REGRADED TO PARTIALLY OFFSET THE DISPLACED VOLUME. THE NEW EXPANDED PARKING AREA WILL CONTINUE TO DRAIN TO THE POND VIA RUNDOWNS ON THE EXISTING CIRCULATION LANE.

VI. CALCULATIONS

CALCULATIONS ANALYZING THE DEVELOPED CONDITIONS FOR THE 100 YEAR, 6-HOUR RAINFALL EVENT HAVE BEEN PREPARED FOR THE SITE. 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. THESE CALCULATIONS TAKE INTO ACCOUNT THE CURRENT AS-CONSTRUCTED SITE LAND TREATMENT AREAS AS MODIFIED TO REFLECT THE PROPOSED EXPANSION OF PARKING. IN PERFORMING THE SITE ANALYSIS AND CALCUALTIONS, IT WAS NOTED THAT THE PREVIOUS BHI CALCULATIONS WERE CONSERVATIVE WITH RESPECT TO THE IMPERVIOUS AREA (55% VS THE CURRENT 45% DUE TO THE USE OF GRAVEL PAVING FOR THE SOUTHERN CIRCULATION LANE AND STUDENT PARKING) AND DID NOT REFLECT A 14,000 SF TURF FIELD (TREATMENT B) THAT WAS CONSTRUCTED IN 2019. AS SUCH, THE REVISED PEAK RATE AND VOLUME OF DISCHARGE IS LESS THAN WAS CALCULATED BY BHI IN 2015.

THE ORIGINAL BHI PLAN INCLUDED ORIFICE AND STAGE DISCHARGE TABLES AND USED AHYMO FOR THE DETENTION POND ROUTING. REVISED ORIFICE CALCULATIONS, STAGE DISCHARGE CALCUALTIONS, AND A NEW AHYMO ANALYIS MODEL WERE COMPLETED TO SUPPORT THIS PARKING LOT EXPANSION BASED UPON THE AS-BUILT OUTLET PIPE INVERT (4957.8 AS-BUILT VS 4960.0 DESIGN) AND THE PROPOSED POND RECONFIGURATION.

AS DEMONSTRATED BY THESE CALCULATIONS AND MODEL, THE PROPOSED SITE WILL MATCH THE PREVIOUS PLAN MAXIMUM WATER SURFACE LEVEL OF 4960.5 AND DISCHARGE RATE OF 1.5 CFS, THEREBY MATCHING THE APPROVED PLAN CONDITIONS. THE MAXIMUM RETAINED STORAGE VOLUME WILL BE REDUCED FROM 0.41 AC-FT TO 0.31 AC-FT, AND THE VOLUME RELEASED WILL BE REDUCED FROM 24,031 CF TO 22,370 CF.

VII. CONCLUSIONS

1. THIS DRAINAGE PLAN ADDRESSES REDEVELOPMENT OF THE SITE TO EXPAND THE STUDENT PARKING AREA AND WILL RESULT IN THE SAME DISCHARGE RATE AND WATER SURFACE LEVEL AS THE APPROVED PLAN FROM 2015.
2. THE MAXIMUM POND STORAGE WILL BE REDUCED FROM 0.41 AC-FT TO 0.31 AC-FT AS PART OF THIS REDEVELOPMENT.
3. THIS PROJECT WILL REDUCE THE TOTAL VOLUME OF RUNOFF DISCHARGING TO THE DOWNSTREAM PUBLIC STORM DRAIN SYSTEM AS DEMONSTRATED BY THE UPDATED HYDROLOGIC CALCULATIONS.

08/07/23
J13D099

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. BOUNDARY INFORMATION, INCLUDING RECORD BEARINGS AND DISTANCES, SHOWN FOR INFORMATION ONLY AND ARE BASED UPON PLAT FOUND IN BOOK 2014C, PAGE 22, DOC. #2014023551, FILED IN THE OFFICE OF THE COUNTY CLERK, BERNALILLO COUNTY. TOPOGRAPHIC INFORMATION IS FROM THE TOPOGRAPHIC AND UTILITY STURVEY CONDUCTED BY THIS FIRM DATED 04/28/2023. NMPS 11184.

J. GRAEME MCANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER 06/26/2023

HIGH MESA Consulting Group
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6010-B Midway Park Blvd. NE • Albuquerque, New Mexico 87109
Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

DRAINAGE PLAN AND CALCULATIONS
ACE LEADERSHIP HIGH SCHOOL STUDENT PARKING
ALBUQUERQUE, NM

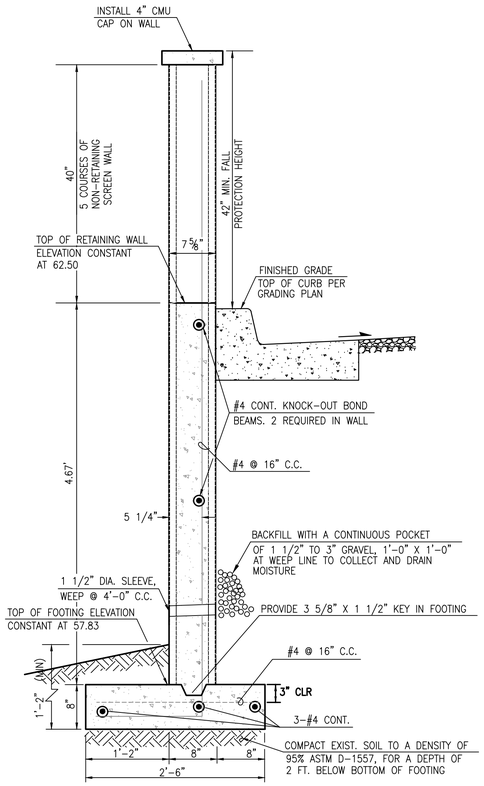
DESIGNED BY G.M.
DRAWN BY J.Y.R.
APPROVED BY G.M.

NO.	DATE	BY	REVISIONS

JOB NO. 2023.024.3
DATE 06-2023
SHEET 1 OF 2

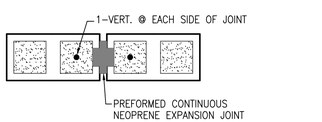
CONSTRUCTION NOTES:

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 04/28/2023 AND INCLUDED AS SHEET VF101–VF103 OF THIS PLAN SET. UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE. BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE 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.



RETAINING WALL SECTION–TYPE Ⓒ

SCALE: 1" = 1'



TYPICAL MASONRY CONTROL JOINT DETAIL

SCALE: 1" = 1'– 0"

RETAINING WALL NOTES:

1. 8"X8"X16" CMU OF UBC STD. 24–4 OR 24–5.
2. USE KNOCK–OUT BOND BEAM BLOCK AT 4'–0" MAX C.C., VERTICALLY, AND 1 #4 CONTINUOUS.
3. FILL ALL BLOCK VOIDS WITH 3000 PSI CONCRETE. FOR RETAINING PORTION. FILL EVERY OTHER VOID FOR THE NON–RETAINING PORTION (THE ONES WITH REBAR)
4. REINFORCING TO BE INTERMEDIATE GRADE STEEL. fs=20,000 psi
5. IN LIEU OF CONTINUOUS KNOCK–OUT BOND BEAMS, CONTRACTOR MAY INSTALL DUR–O–WALL REINFORCING EVERY SECOND COURSE.
6. SPLICE SHALL BE 40 BAR DIA. MINIMUM FOR VERTICAL BARS. ALL OTHER SHALL BE 20 BAR DIA. MINIMUM.
7. CONCRETE FILL SHALL BE 21 DAYS OLD OR ACHIEVE 70% OF DESIGN STRENGTH PRIOR TO BACKFILLING.
8. INSTALL MASONRY CONTROL JOINTS PER TYPICAL DETAIL AT UNIFORM SPACINGS OF 20' (MIN.) TO 24' (MAX.).

LEGEND

ⓒ	COMM PULLBOX	+ 20.05	EXISTING SPOT ELEVATION
	ELEC CONDUIT	• 17.25	PROPOSED SPOT ELEVATION
○●	GATEPOST		EXISTING FLOWLINE
—/—o—	FENCE		PROPOSED FLOWLINE
△	IRR ANTI–SIPHON VALVE	— 4920 —	EXISTING CONTOUR
Ⓘ	IRR VALVE BOX	20	PROPOSED CONTOUR
WPP	WOODEN POWER POLE		EXISTING DIRECTION OF FLOW
Ⓢ	SAS SINGLE CO		PROPOSED DIRECTION OF FLOW
Ⓢ	SAS MANHOLE		RIGHT OF WAY LINE
SD	SD MANHOLE		PUBLIC EASEMENT LINE
	TRASH CAN		HIGH POINT / DIVIDE
▷◁	WATER VALVE BOX		

C&G	CURB AND GUTTER
CONC	CONCRETE
CRD	CONCRETE RUNDOWN
EC	EDGE OF CONCRETE
FL	FLOW LINE
INV	INVERT ELEVATION
MLP	METAL LIGHT POLE
OHE(2)	OVERHEAD ELECTRIC (# OF LINES)
PVC	POLYVINYL CHLORIDE
SAS	SANITARY SEWER
SD	STORM DRAIN
SS	WOOD SCHOOL SIGN
STP	STEEL POLE
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TP	TOP OF PIPE
VCP	VITRIFIED CLAY PIPE

CONIFEROUS TREE AND DIAMETER

DECIDUOUS TREE AND DIAMETER

APWA UTILITY COLOR CODE UTILITY LINE TYPES

SUE QUALITY LEVEL B (QLB)–SOURCE: DESIGNATION/PAINT MARK

RED – ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES	– E QLB– – – – E QLB– – – –
ORANGE – COMMUNICATION, FIBER OPTIC LINES	– FO QLB– – – – FO QLB– – – –
BLUE – POTABLE WATER	– W QLB– – – – W QLB– – – –
GREEN –SANITARY SEWER AND DRAIN LINES	– SAS QLB– – – – SAS QLB– – – –
GREEN –STORM SEWER AND DRAIN LINES	– SD QLB– – – – SD QLB– – – –

SUBSURFACE UTILITY KEY NOTES:

① SIGNAL APPLIED TO WATER LINE ABRUPTLY STOPS AT POINT INDICATED ON SURVEY. LOCATION OF WATER LINE COULD NOT BE DETERMINED BEYOND THIS POINT. DESIGNATION IS INCOMPLETE.

08/07/23
Ronald C. Brunacini
J13D099

HIGH MESA Consulting Group
Engineers, Surveyors & Subsurface Utility Coordinators
6010–B Midway Park Blvd. NE • Albuquerque, New Mexico 87109
Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

GRADING PLAN
ACE LEADERSHIP HIGH SCHOOL STUDENT PARKING
ALBUQUERQUE, NM

DESIGNED BY G.M.
DRAWN BY J.Y.R.
APPROVED BY G.M.

NO.	DATE	BY	REVISIONS

JOB NO. 2023.024.3
DATE 06–2023
SHEET 2 OF 2