AUGUST 21, 2024

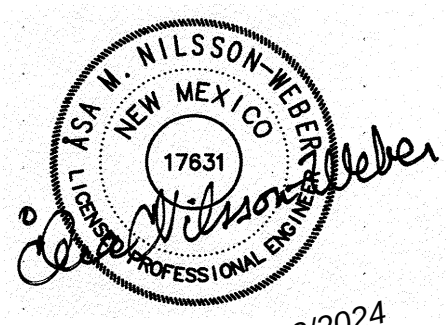
SENSITIVE LANDS ANALYSIS

FOR

GLENDALE SUBDIVISION

CITY OF ALBUQUERQUE, NEW MEXICO

PREPARED BY



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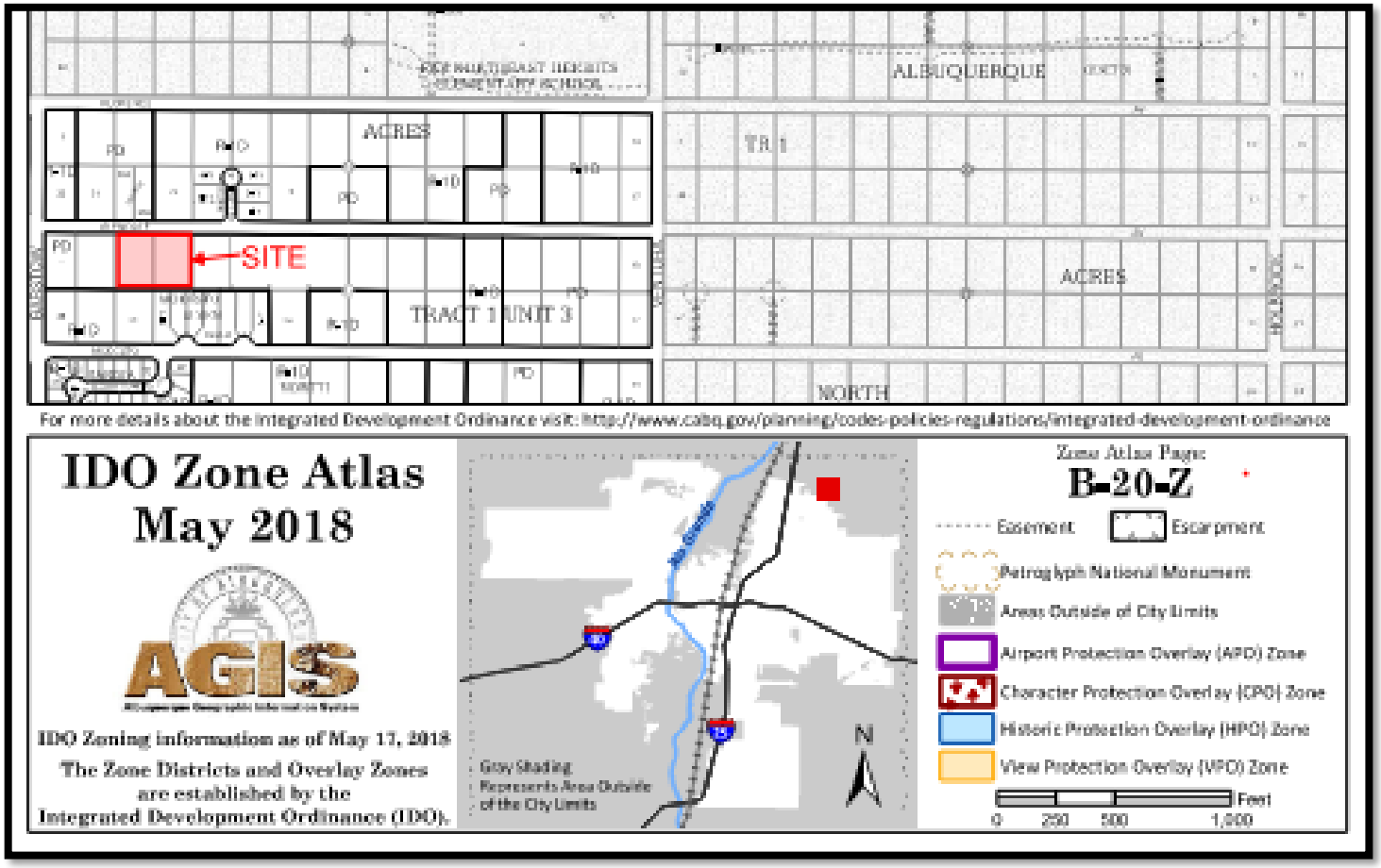
APPENDICES:

I. STUDY AREA

This 1.77-acre site is located south of Glendale Ave. and east of Barstow St and is comprised of Lots 3 & 4, Bl. 1; Tract 1, Block 17, North Albuquerque Acres (location map below). The proposed platting action will combine the two existing lots into three lots. There is an existing earthen channel south of the site, the El Camino Arroyo, and an AMAFCA detention pond west of the site. The property is comprised of vacant land and drains to the Arroyo and the pond.

This analysis will identify sensitive land features and demonstrate how the features will be protected during construction. See Appendix A for site photographs and Appendix D for a site exhibit.



LOCATION MAP

II. FLOODPLAINS AND FLOOD HAZARD AREAS

This subject property is within Zone X (Area of Minimal Flood Hazard) and Zone AO as shown on FEMA panel 35001C0133H. See Appendix B for the FEMA FIRMETTE Map.

No construction will occur within the Floodplain Zone AO.

III. STEEP SLOPES

There are no steep slopes within the subject property.

IV. UNSTABLE SOILS

The subject property does not contain unstable soils.

The site is comprised of soil types EmB (Embudo gravely fine sandy loam) and EtC (Embudo-Tijeras complex). See Appendix C for the USDA Natural Conservation Service Soil Report.

V. WETLANDS

There are no wetlands within the subject property.

VI. ARROYOS

The south portion of the site is encumbered by the El Camino Arroyo.

Construction for this development will include a scour wall adjacent to the arroyo. Wall notches and erosion protection for drainage to the arroyo will also be installed to serve the proposed lots. An easement over the Arroyo and wall will be granted to the City of Albuquerque or AMAFCA (to be determined). No construction will occur within the Floodplain Zone AO.

VII. IRRIGATION FACILITIES

There are no irrigation facilities (acequias) within the subject property.

VIII. ESCARPMENTS

There are no escarpments within the subject property.

IX. ROCK OUTCROPPINGS

There are no rock outcroppings within the subject property.

X. LARGE STAND OF MATURE TREES

There are no large stands of mature trees within the subject property.

XI. ARCHAEOLOGICAL SITES

The site is below the 5 acre, the requirement for archaeological certification.

XII. PROCEDURES FOR PROTECTING SENSITIVE LAND FEATURES

The sensitive land features identified and described in this report consist of a floodplain and arroyo which will be protected and preserved during construction activities. The features will also be placed within easements to be granted to the City of Albuquerque or AMAFCA (to be determined) with the recordation of the Final Plat. A Grading and Drainage Plan and Drainage Report will also be submitted to the City of Albuquerque and AMAFCA to define the limits of the easement and placement of the scour wall.

The following are AMAFCA procedures for protecting sensitive land features:

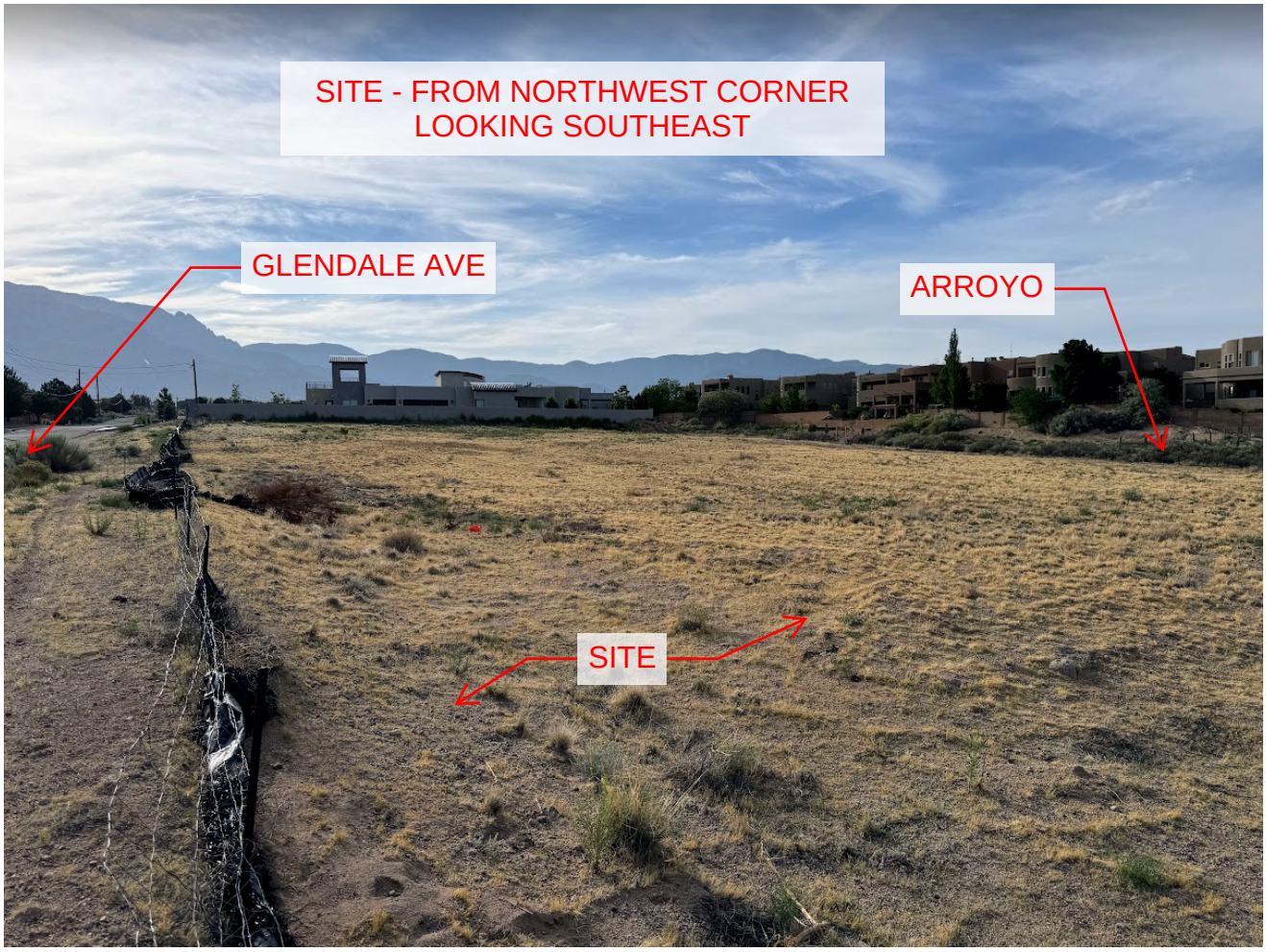
- Proposed drainage easements must be surveyed and staked out prior to adjacent work occurring. This will be to verify that there are no unapproved encroachments into the drainage easements.
- Retaining wall design along the floodplain or drainage easements must be submitted to AMAFCA before construction. This will be to verify reinforcement and determine where the footing of the wall will fall in relation to the drainage easement.

APPENDIX A

Site Photographs


ARROYO MID SITE - LOOKING EAST
SITE
ARROYO


ARROYO MID SITE - LOOKING WEST
ARROYO
SITE


SITE - FROM NORTHWEST CORNER
LOOKING SOUTHEAST
GLENDALE AVE
ARROYO
SITE

APPENDIX B

FEMA FIRMETTE Map

National Flood Hazard Layer FIRMette

FEMA

106°33'18"W 35°11'38"N

106°32'40"W 35°11'9"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/14/2024 at 4:14 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX C

USDA Natural Conservation Service Soil Report

Map Scale: 1:1,740 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico
Survey Area Data: Version 18, Sep 7, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 22, 2020—Jan 1, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EmB	Embudo gravelly fine sandy loam, 0 to 5 percent slopes	3.7	30.2%
EtC	Embudo-Tijeras complex, 0 to 9 percent slopes	8.6	69.8%
Totals for Area of Interest		**12.3**	**100.0%**

Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Dwellings and Small Commercial Buildings

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Dwellings and Small Commercial Buildings–Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EmB—Embudo gravelly fine sandy loam, 0 to 5 percent slopes							
Embudo	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Dwellings and Small Commercial Buildings–Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EtC—Embudo-Tijeras complex, 0 to 9 percent slopes							
Embudo	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Tijeras	35	Not limited		Not limited		Somewhat limited	
						Slope	0.14

Data Source Information

Soil Survey Area: Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico
Survey Area Data: Version 18, Sep 7, 2023

APPENDIX D

Site Exhibit

LOT 31–B

LOT 30–A

LOT 30–B

LOT 29

LOT 5–P1

GLENDALE AVENUE NE (60' R/W)

RIM=85.36
INV=74.56

S89°22'24"E

109.89'

109.89'

109.88'

329.66'

234.27'

233.66'

ZONE X

ZONE X

ZONE X

PROPOSED
BUILDING PAD

234.08'

233.88'

LOT 3–A
0.5899 ACRES

LOT 3–B
0.5895 ACRES

LOT 3–C
0.5890 ACRES

AMAFCA POND

LOT 2
BLOCK 17, TRACT 1, UNIT 3,
NORTH ALBUQUERQUE ACRES
(09–10–1931, D00–121)

LOT 5
BLOCK 17, TRACT 1, UNIT 3,
NORTH ALBUQUERQUE ACRES
(09–10–1931, D00–121)
(08–13–2001, 2001S–083)

ZONE AH (EL 5474 FEET)

ZONE X

PROPOSED
SCOUR WALL

N00°10'38"E

S00°14'53"W

N00°19'07"E

S00°23'20"W

ZONE AO (DEPTH 2')

109.60'

109.60'

109.59'

328.79'

N89°28'28"W

ZONE X

FEMA FLOODPLAIN
LIMITS

ZONE X

SITE EXHIBIT

SCALE: 1"=40'