HYDROLOGY

F21/D37G

ONE PLAN

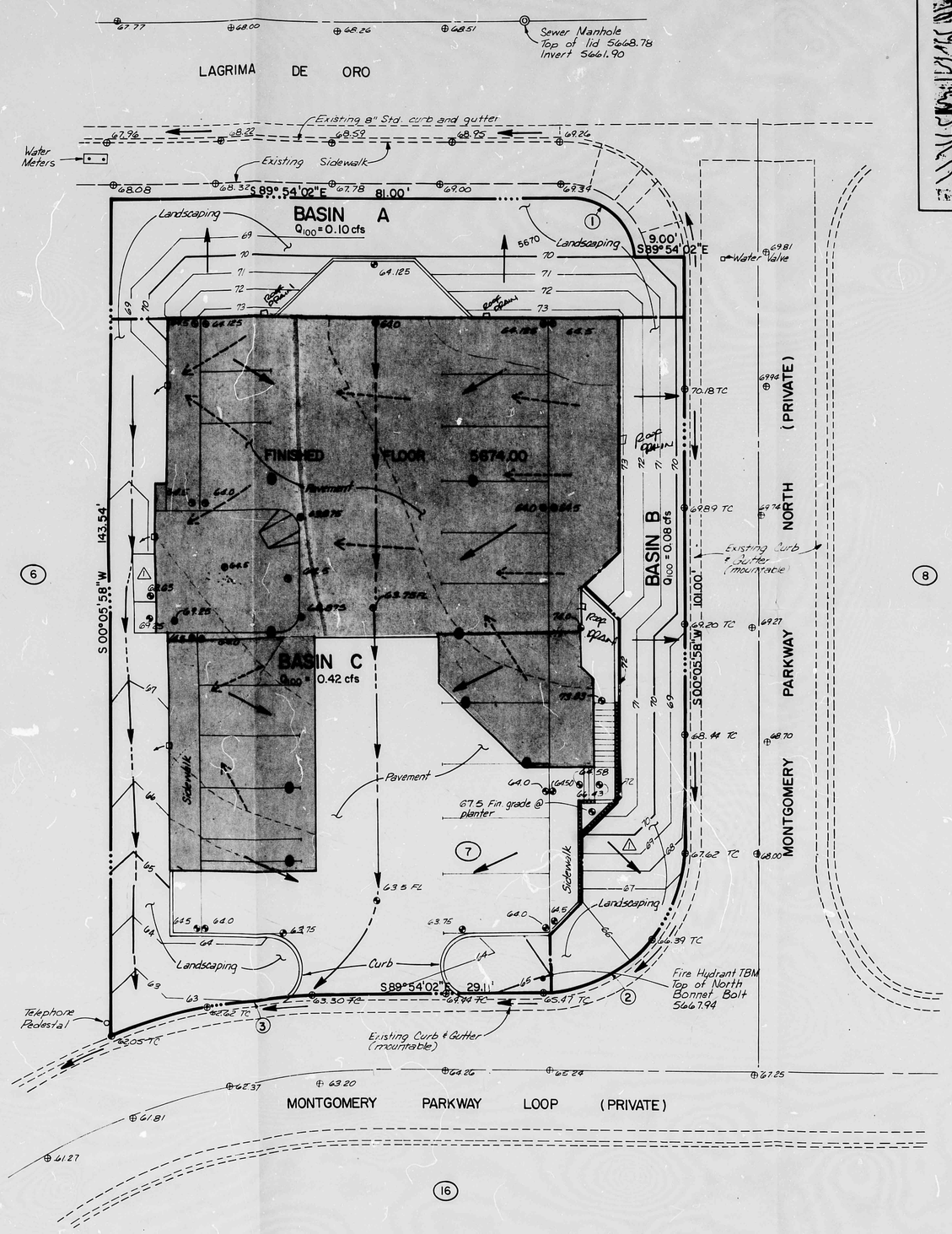
MONTGOMERY

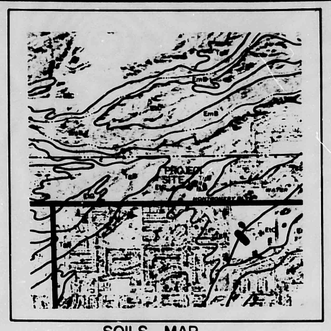
BUSINESS PARK

LOT 7

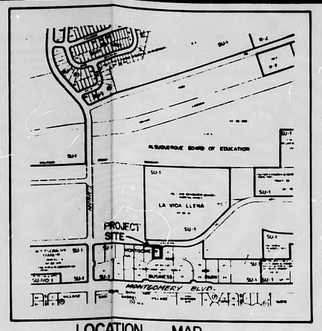
F21 / D37G

1 PLAN





SOILS MAP
REFERENCE: SCS
BERNALILLO COUNTY
SOIL SURVEY



LOCATION MAP
ZONE ATLAS PAGE F-21

CONCEPTUAL DRAINAGE & GRADING PLAN

Legal Description

Lot 7, Montgomery Business Park, Albuquerque, New Mexico, filed May 18, 1983.

Introduction

This site is subject to the conditions set forth by the Drainage Report for Montgomery Business Park prepared by Bohannan-Huston, Inc. in November, 1982. The report was approved by the City by letter dated January 20, 1983. The site is not located in a flood hazard zone as determined in the report.

Parking is at ground level and shall be paved with concrete. The building (the shaded area on the plan) shall be above the parking lot.

Existing Conditions

The 0.3818 acre site is bounded on three sides by improved streets with concrete curb and gutter and asphalt paving. The western (downstream) side of the site is bounded by undeveloped land. No offsite runoff enters the undeveloped site. The eastern and southern 13 feet of the site are within the access easement which is part of the improved street.

Existing Runoff (Sheet Flow)

T_c = 10 min. R = 2.5 in. I = 5.28 in/hr. Area = 0.3818 Ac.

IMP = 18.6% Soil Type - B C = 0.42

Q_{100} = (5.28) 0.3818(0.42) = 0.85 cfs Q_{10} = 0.56 cfs

Vol_{100} = 2.5/12(43560)0.3818(0.42) = 1455 cu.ft.

Proposed Conditions

Per the Montgomery Business Park Drainage Report referred to above, the site is limited to 0.5 cfs discharge to Montgomery Parkway Loop. The site will be divided into three drainage basins because of the physical constraints of having paved streets on three sides. Basin A, along Lagrima de Oro, contains 0.05 acre and will discharge 0.10 cfs of runoff to Lagrima de Oro as sheet flow. Basin B, along Montgomery Parkway North, contains 0.04 acre and will discharge 0.08 cfs to Montgomery Parkway North as sheetflow. Basin C, the remaining area, contains 0.22 acre and is allowed a discharge of 0.42 cfs. The maximum q generated on Basin C is 0.93 cfs. To limit the discharge to 0.42 cfs an attempt will be made to control the flow from the roof by the use of scuppers for a total maximum discharge of 0.21 cfs from the roof. The scuppers shall be placed on the roof to direct the roof runoff to the paved parking area and Montgomery Parkway Loop. The flow from the remaining areas will be 0.21 cfs for a total of 0.42 cfs from Basin C.

Proposed Runoff

Basin A

T_c = 10 min. R = 2.5 in. I = 5.28 in/hr. Area = 0.05 Ac.

IMP. = 13% Soil Type - B C = 0.40

Q_{100} = (5.28)0.05(0.40) = 0.10 cfs Q_{10} = 0.07 cfs

Vol_{100} = 2.5/12(43560)0.05(0.40) = 182 cu.ft.

Basin B

T_c = 10 min. R = 2.5 in. I = 5.28 in/hr. Area = 0.04 Ac.

IMP. = 0% Soil Type - B C = 0.34

Q_{100} = (5.28)0.04(0.34) = 0.07 cfs Q_{10} = 0.05 cfs

Vol_{100} = 2.5/12(43560)0.04(0.34) = 123 cu.ft.

Basin C

Building

T_c = 10 min. R = 2.5 in. I = 5.28 in/hr. Area = 0.15 Ac.

IMP. = 100% Soil Type - B C = 1.00

Q_{100} = (5.28)0.15(1.00) = 0.79 cfs Q_{10} = 0.52 cfs

(Q_{100} to be limited to 0.21 cfs by controlled outlets)

Vol_{100} = 2.5/12(43560)0.15(1.00) = 1361 cu.ft.

Other Area

T_c = 10 min. R = 2.5 in. I = 5.28 in/hr. Area = 0.07 Ac.

IMP. = 51% Soil Type - B C = 0.58

Q_{100} = (5.28)0.07(0.58) = 0.21 cfs Q_{10} = 0.14 cfs

Vol_{100} = 2.5/12(43560)0.07(0.58) = 368 cu.ft.

Total Area

T_c = 10 min. R = 2.5 in. I = 5.28 in/hr. Area = 0.22 Ac.

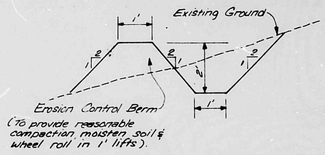
IMP. = 84% Soil Type - B C = 0.80

Q_{100} = (5.28)0.22(0.80) = 0.93 cfs Q_{10} = 0.61 cfs

Vol_{100} = 2.5/12(43560)0.22(0.80) = 1597 cu.ft.

Erosion Control Plan

A berm with the dimension shown below shall be built along the western and southern boundaries. The purpose of the berm is to prevent eroded soil from leaving the site. The berm must be maintained during construction to provide maximum protection against soil erosion.



CURVE DATA

	Δ	R	L	T
1	90°00'00"	10.00'	15.71'	10.00'
2	90°00'00"	24.00'	37.70'	24.00'
3	20°38'38"	133.00'	47.92'	24.22'

LEGEND

- EXISTING CONTOURS
- 67 — PROPOSED CONTOURS
- ⊕ 66.43 EXISTING SPOT ELEVATIONS
- ⊕ 63.50 PROPOSED SPOT ELEVATIONS
- PROPOSED BASIN BOUNDARY
- DIRECTION OF FLOW (at ground level)
- PROPOSED BUILDING
- PROJECT PHASE BOUNDARY
- (16) LOT NUMBER
- PROPOSED RETAINING WALL
- PROPOSED ROOF DRAIN
- BUILDING COLUMNS
- DIRECTION OF FLOW (on bldg. roof)

BENCH MARK

The station is located on the nose of the Western median at the intersection of Montgomery Blvd. N.E. and Tara Dr. N.E. The station mark is a standard ACS brass tablet stamped "21-F21 1978."
Elevation = 5690.558

RECEIVED
APR 18 1985
HYDROLOGY SECTION

Date	Revision
4/18/85	△ Revised for Final

FINAL DRAINAGE & GRADING PLAN OF LOT 7 MONTGOMERY BUSINESS PARK

Project No.

Seal

Daniel J. Huston 2/28/85

F21/D37G

Job No. 42970	Sheet 5 Of 5
Drawn By: TG	Date: 2/25/85
Checked By: DG	Scale: 1" = 10'

BRUNING 44-132 64256