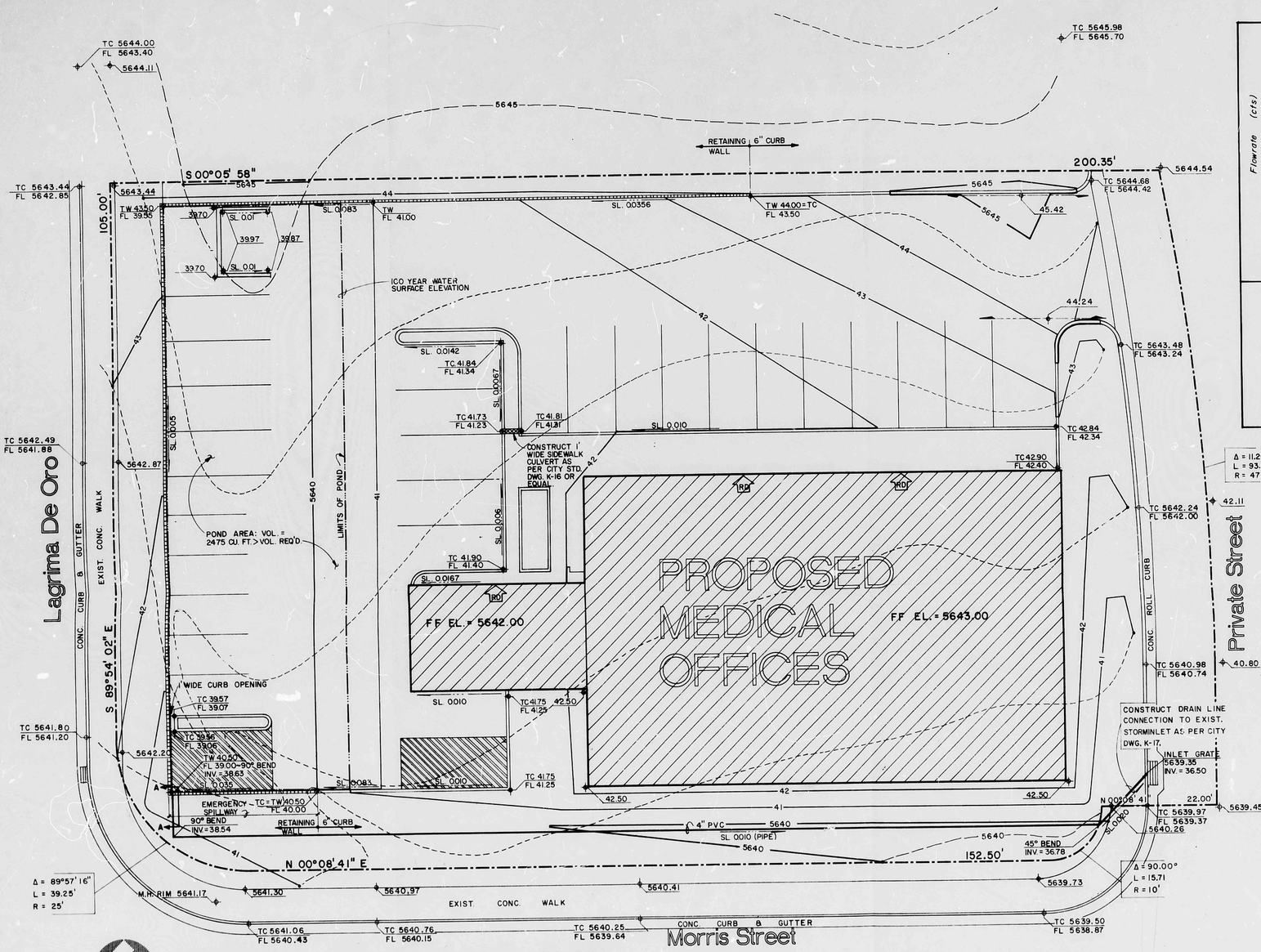
HYDROLOGY

F21/D37K
ONE PLAN

F 21-D 37K

1 PLAN



DRAINAGE AND GRADING PLAN

SCALE: 1"=10'-0"

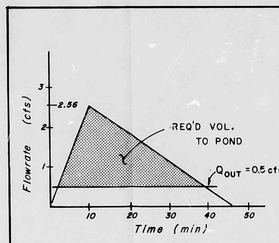
0 5 10 20 30 40 50

Professional Building

Albuquerque, New Mexico

Sun Country Construction, Builder
P.O. Box 1231
Corrales, New Mexico 87048
(505) 898-8142

Stephen C. Day, Architect
P.O. Box 2226
Corrales, New Mexico 87048
(505) 898-6402



REQ'D VOL. TO POND
=(2.56-0.5)(39.2-2.0)(60)/2 = 2299 cu. ft.

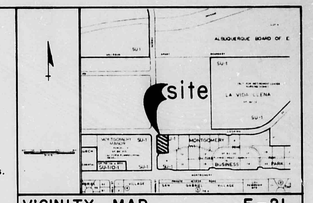
T=2 V/Q = (2)(3601)/(2.56)(60) = 47 min.

LEGEND:

CONTOUR (EXISTING)	----45----
CONTOUR (PROPOSED)	——45——
SPOT ELEVATION (EXISTING)	—✦—
SPOT ELEVATION (PROPOSED)	—✦—
PROPERTY LINE	—·—·—

VICTOR J. CHAVEZ STATE OF NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

1/30/86 Rev. 2/19/86



VICINITY MAP F-21

LEGAL:

LOT 1, MONTGOMERY BUSINESS PARK, ALBUQUERQUE, NEW MEXICO.

NOTES:

SURVEY DATA PROVIDED BY CHRISTOPHER DEHLER, N.M.R.L.S., CORRALES, NEW MEXICO, OCTOBER 21, 1985.

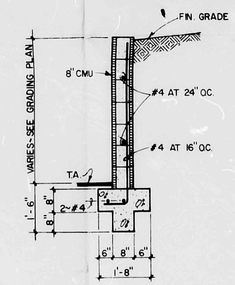
FLOOD HAZARD BOUNDARY MAP / PANEL NO. 18.

ACS BENCH MARK & PROJECT BENCH MARK:

THE STATION MARK IS A STANDARD ACS BRASS TABLET STAMPED "10-021", SET FLUSH WITH CURB AND IS LOCATED AT THE SOUTHWEST CORNER OF MONTGOMERY BLVD. AND MORRIS STREET N.W. ELEVATION = 5636.111 (SLD 1929)

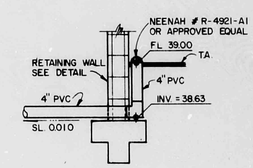
NOTICE TO CONTRACTOR:

1. THE CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS PUBLIC WORKS CONSTRUCTION, 1985 WILL BE REFERRED TO HEREON AS THE 'STANDARD SPECIFICATION'.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765- 1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
5. ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
6. CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL DURING THE CONSTRUCTION PHASE, INCLUDING ANY PROVISIONS THAT NEED TO BE TAKEN TO DIVERT ANY SEDIMENT FROM ENTERING THE CITY RIGHT-OF-WAY.



TYP. RETAINING WALL

1/2" = 1'-0"



SECTION A - A

1/2" = 1'-0"

DRAINAGE PLAN

PROFESSIONAL BUILDING

The site is located in Montgomery Business Park, Block A, Lot 1, at the intersection of Morris Street and Lagrima De Oro Road containing approximately 0.62 acres. The site is presently undeveloped and slopes from northeast to southwest with an average slope of approximately 3 percent. Flows from the site discharge to Morris Street and Montgomery Parkway West and then to Montgomery.

The site has an approved conceptual drainage report by Bohannan-Huston Inc., titled "Drainage Report for Montgomery Business Park", November, 1982. The report requires that each lot in Block A have a discharge into Montgomery parkway West of 1/2 c.f.s. and a maximum of one outlet.

The proposed conceptual drainage plan will comply with the "Drainage Report for Montgomery Business Park" which will reduce the peak runoff reaching the intersection of Morris Street and Montgomery Blvd.

CALCULATIONS:

Area = 0.62 acres
Soil Series - Etc
Hydrologic Soil Group - B
I = 2.2 in./hr. Plate 22.2 D-2
6-hour, 100-year rainfall = 2.5 in. Plate 22.2 D-1
i = (2.2)(2.5) = 5.50 in./hr.

EXISTING ON-SITE CONDITIONS:

Percent Impervious = 0%
C = 0.34 Plate 22.2 C-1
Q(100) = (0.34)(5.50)(0.62) = 1.16 cfs
Q(10) = (0.657)(1.16) = 0.76 cfs
CN = 75 Plate 22.2 C-2
Direct Runoff = 0.7 in. Plate 22.2 C-4
V(100) = (0.7)(0.62)(43560)/12 = 1575 cu. ft.
V(10) = (0.657)(1575) = 1035 cu. ft.

PROPOSED ON-SITE CONDITIONS:

Percent Impervious = 75%
C = 0.79 Plate 22.2 C-1
Q(100) = (0.79)(5.50)(0.62) = 2.49 cfs
Q(10) = (0.657)(2.56) = 1.68 cfs
CN = 90 Plate 22.2 C-2
Direct Runoff = 1.6 in. Plate 22.2 C-4
V(100) = (1.6)(0.62)(43560)/12 = 3601 cu. ft.
V(10) = (0.657)(3601) = 2366 cu. ft.

FLOW INTO INLET:

Q = CA $\sqrt{2gH}$
Where C = 0.60, A = 0.0055, H = 1.5'
Q = 0.50 cfs = Q allowable
Time to drain pond = 1.28 hrs.

RECEIVED FEB 18 1986 HYDROLOGY SECTION