City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 24, 1992

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Boulevard, NE
Albuquerque, New Mexico 87109

RE: DRAINAGE PLAN FOR AN ADDITION TO ALBUQUERQUE SCHWINN CYCLERY
(H-17/D27) ENGINEER'S STAMP DATED JANUARY 20, 1992

Dear Mr. Mortensen:

Based on the information provided on your submittal of January 21, 1992, the above referenced plan is approved for Building Permit.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

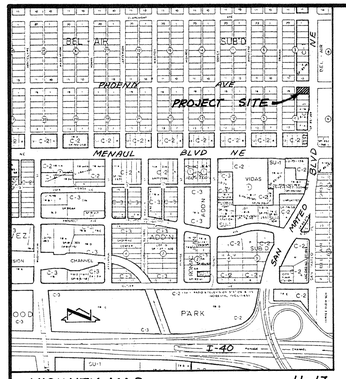
Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bsj
(WP+3164)

142347



VICINITY MAP H-17
SCALE: 1" = 800' (APPROX)

PROJECT BENCHMARK

9-G17; LOCATED IN THE NW QUADRANT OF THE INTERSECTION OF CANDELARIA RD. NE & SAN MATEO BLVD NE. BENCHMARK IS A CUT "□" ON TOP OF THE CONCRETE CURB AT THE WNW CURB RETURN. ELEV. = 5204.30 FT. (MSLD)

TBM

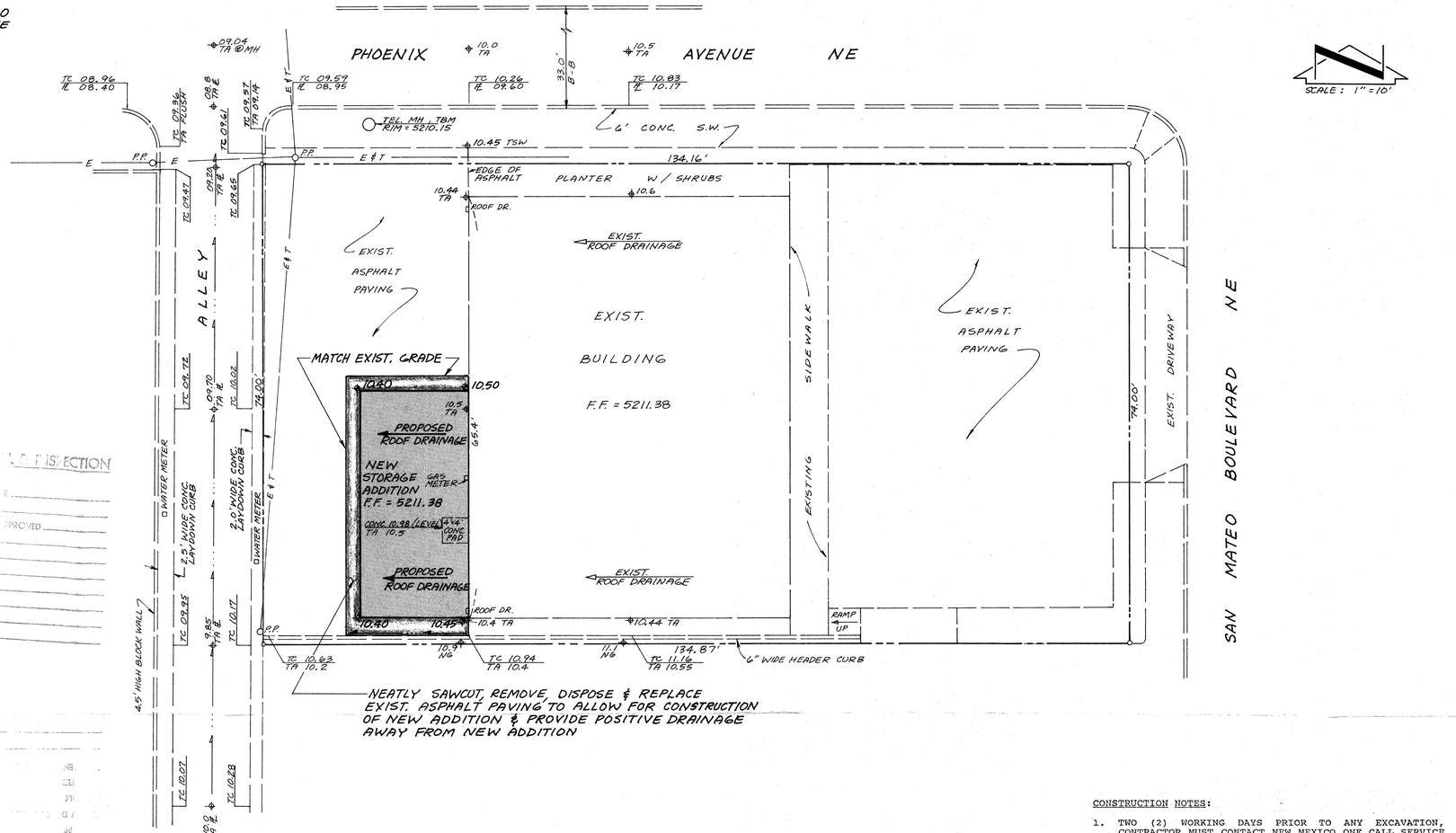
RIM OF TELEPHONE MANHOLE LOCATED AT THE PROJECT SITE NW OF EXISTING BUILDING. ELEVATION = 5210.15 (MSLD)

LEGAL DESCRIPTION

LOT 1, BLOCK 4 OF BEL-AIR SUBDIVISION

LEGEND

TC	TOP OF CURB
TA	TOP OF ASPHALT
Ⓕ	FLOWLINE
TSW	TOP OF SIDEWALK
NG	NATURAL GROUND
	EXISTING FLOWLINE
	PROPOSED FLOWLINE
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
O P.P.	POWER POLE
E & T	EXISTING OVERHEAD ELEC. & TEL LINES
E	EXISTING OVERHEAD ELEC. LINE
	PROPOSED ASPHALT



SCALE: 1" = 10'

HYDROLOGY APPROVAL/FIELD INSPECTION
APPROVED FOR BUILDING PERMIT
ENGINEER
INSPECTION REQUESTED
APPROVAL DATE
APPROVED
FINAL APPROVAL DATE
SURVEY DATE
HYDROLOGY BOOK: PAGE NO.
SURVEYED BY
COMMENTS

DRAINAGE PLAN

The following items concerning the Albuquerque Schwinn Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located at the southwest corner of the intersection of San Mateo Boulevard N.E. and Phoenix Avenue N.E. At present, the site is developed as the Albuquerque Schwinn retail store. The site is fully developed with an existing building, asphalt paving, and associated landscaping. Both San Mateo Boulevard N.E. and Phoenix Avenue N.E. are developed, public streets. A paved alley lies to the west of the site. This alley drains from south to north onto Phoenix Avenue N.E. The alley is bounded on the west by an existing block wall which has no openings to the alley. Overall, this project represents a modification to an existing site within an infill area.

As shown by Panel 23 of 50 of the National Flood Insurance Program Flood Insurance Rate Maps prepared for the City of Albuquerque, New Mexico, dated October 14, 1983, this site does not lie within a designated flood hazard zone. Further review of this map does not indicate that this site contributes runoff to a designated flood hazard zone.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations, 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements, and 4) continuity between existing and proposed grades. As shown by this plan, the proposed construction consists of the removal and disposal of existing asphalt paving, the construction of a building addition within the area of removal, and the patching of asphalt paving around the new building. This construction will not alter the existing drainage pattern of the site. This portion of the site will continue to drain from east to west into the existing paved alley. The alley, as previously discussed, drains from south to north into Phoenix Avenue N.E. Not only will the proposed construction not alter the existing drainage pattern, but it will not create any additional impervious area on this site. It is because of this, combined with the fact that this is a modification to an existing site within an infill area, and that this site does not appear to contribute runoff to a designated flood hazard area, that the free discharge of runoff from this site is appropriate.

The calculations which appear heron analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The peak rate of discharge has been quantified using the Rational Method, while the SCS Method has been used to calculate the volume of runoff generated. As shown by these calculations, no change in runoff characteristics is expected. This further reinforces the continuance of free discharge from this site.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate 21: EtC - Embudo Tijeras Complex
Hydrologic Soil Group: B
Existing Pervious CN = 61 (DPM Plate 22.2 C-2;
Open Space - Good condition)

Time of Concentration/Time to Peak

$T_c = 0.0078\ L^{0.77}/S^{0.385}$ (Kirpich Equation)

$T_p = T_c = 10$ min.

Point Rainfall

$P_6 = 2.26$ in. (DPM Plate 22.2 D-1)

Rational Method

Discharge: $Q = CiA$

where C varies
$i = P_6\ (6.84)\ T_c^{-0.51} = 4.78$ in/hr
$P_6 = 2.26$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

SCS Method

Volume: $V = 3630(DRO)\ A$

Where DRO = Direct runoff in inches
A = area, acres

Existing Condition

$A_{total} = 9954$ sf $= 0.23$ Ac
Roof area = 3100 sf (0.31)
Paved area = 6390 sf (0.64)
Landscaped area = 464 sf (0.05)
C = 0.90 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.90(4.78)(0.23) = 1.0$ cfs
% impervious = 95 %
Composite CN = 96 (DPM Plate 22.2 C-3)
DRO = 1.85 in (DPM Plate 22.2 C-4)
$V_{100} = 3630\ (DRO)A = 1540$ cf

Developed Condition

$A_{total} = 9954$ sf $= 0.23$ Ac
Roof area = 3770 sf (0.38)
Paved area = 5720 sf (0.57)
Landscaped area = 464 sf (0.05)
C = 0.90 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.90(4.78)(0.23) = 1.0$ cfs
% impervious = 95 %
Composite CN = 96 (DPM Plate 22.2 C-3)
DRO = 1.85 in (DPM Plate 22.2 C-4)
$V_{100} = 3630\ (DRO)A = 1540$ cf

Comparison

$\Delta Q_{100} = 1.0 - 1.0 = 0$ cfs (no change)
$\Delta V_{100} = 1540 - 1540 = 0$ cf (no change)

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

RECEIVED
JAN 21 1992

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SERVICE 260-1990 FOR LOCATION OF EXISTING UTILITIES.
2. 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.
3. 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.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY 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 UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, 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. 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.

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505)345-4250

GRADING AND DRAINAGE PLAN

ALBUQUERQUE SCHWINN CYCLERY

DESIGNED BY J.G.M.
DRAWN BY C.E.N.
APPROVED BY J.G.M.

NO.	DATE	BY	REVISIONS

JOB NO. 920021
DATE 01/92
SHEET 1 OF 1