HYDROLOGY

G18/D26

ONE PLAN

1 PLAN FOR

BOLACK INT'L OFFICE

BLDG.

G18-D26

VICINITY MAP G-18

SCALE 1" = 800'

SCALE: 1" = 20'

PROJECT BENCHMARK

A STANDARD ACS BRASS TABLET STAMPED "M-3A" LOCATED @ THE INTERSECTION OF MONTGOMERY BLVD. N.E. AND LOUISIANA BLVD. N.E. SET IN TOP OF A CONCRETE POST. PROJECTING 0.3 FT. ABOVE GROUND, IN THE MEDIAN OF MONTGOMERY BLVD. N.E. 192' ± WEST OF THE CENTERLINE OF LOUISIANA BLVD. N.E.

ELEV. = 5308.99 FT. (MSL D.)

T.B.M.

TOP OF CONCRETE CURB, A PROJECTION OF THE N.E. PROPERTY CORNER.

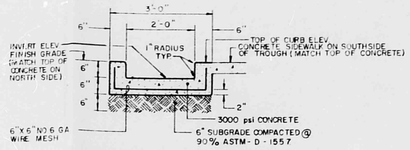
ELEV. = 5305.88 FT. (MSLD)

LEGAL DESCRIPTION

TRACT H-1-B, ALTAMONT ADDITION, UNIT 6

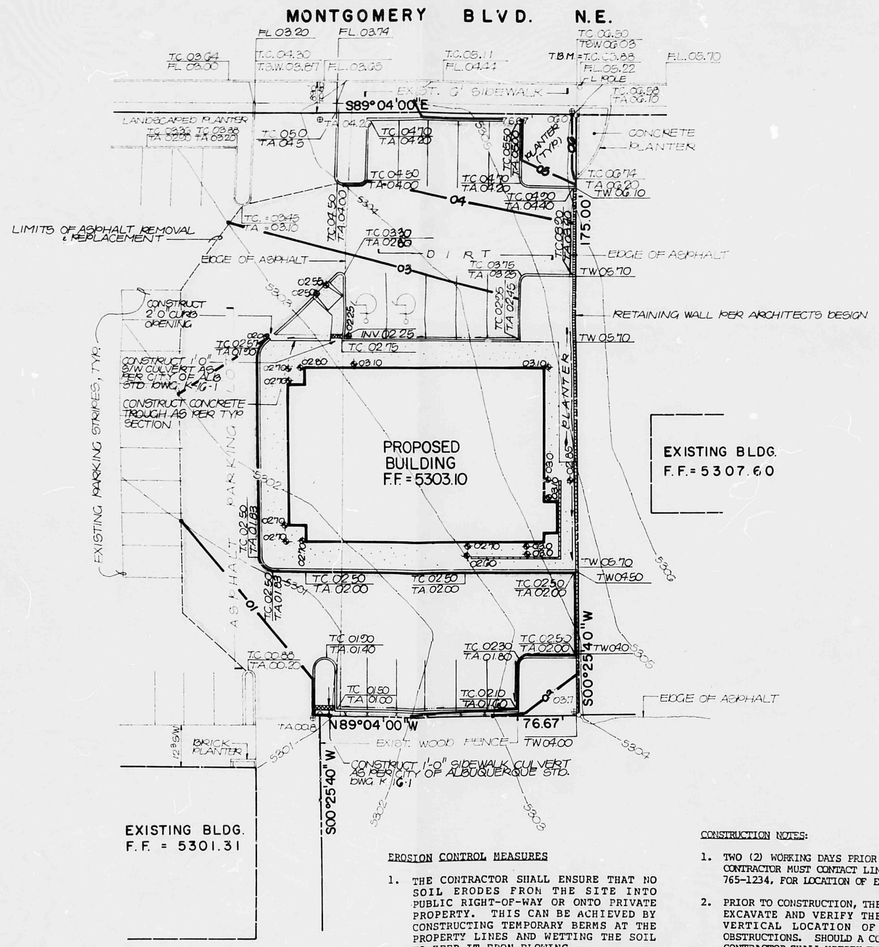
·LEGEND·

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- EXISTING CONCRETE
- EXISTING FENCE
- PROPERTY LINE
- PHASE LINE
- RETAINING WALL (PROPOSED)



CONCRETE TROUGH SECTION

SCALE 1" = 2'-0"



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.

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, 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 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.

DRAINAGE PLAN

The following items concerning the Office Building for Bolack International Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the south side of Montgomery Boulevard N.E. between Louisiana Boulevard N.E. and Georgia Street N.E. At present, the site is more or less developed. It is the remaining undeveloped portion of an existing shopping center. The majority of the surrounding area is also developed, making this an in-fill site.

As shown by Plate G-18 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. Furthermore, downstream flooding has not been identified on either that plate or the flood insurance maps. Because of this, the free discharge of runoff is appropriate. This is further reinforced by the fact that this is an in-fill site, the runoff from this site does not contribute to an existing flooding problem, and the area to be developed is extremely small with respect to the already developed area of the shopping center. These conclusions are consistent with the pre-design conference for this project held on November 2, 1984.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 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 site drains from east to west and discharges its runoff to Georgia Street N.E. From this point, the runoff flows south to Natalie Avenue N.E. where it turns and continues to flow in a westerly direction. At the intersection of Natalie Avenue N.E and San Pedro Avenue N.E., the water carried by the street again turns to the south where it is intercepted by the North Hahn Arroyo. According to the Albuquerque Master Drainage Study, all flows are contained within that arroyo. The construction of this new office building, along with adjacent asphalt paving and landscaping, will maintain the existing pattern of runoff present on this site.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event for that area affected by the proposed construction. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a relatively minor increase in runoff from the site which will probably have no effect on the overall watershed.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 21:
EtC Embudo-Tijeras Complex
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6(6.84)T_c^{-0.51} = 4.86$ in/hr
$P_6 = 2.3$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.3$ in (DPM Plate 22.2 D-1)
A = area, sf

Existing Condition

$A_{total} = 18{,}560$ sf = 0.43 Ac
$A_{imp} = 6{,}570$ sf; % impervious = 35%
'C' = 0.54 (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.54(4.86)(0.43) = 1.1$ cfs
$V_{100} = CP_6A = 0.54(2.3/12)(18{,}560) = 1{,}920$ cf

Developed Condition

$A_{total} = 18{,}560$ sf = 0.43 Ac
$A_{imp} = 17{,}080$ sf; % impervious = 92%
'C' = 0.88 (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.88(4.86)(0.43) = 1.8$ cfs
$V_{100} = CP_6A = 0.88(2.3/12)(18{,}560) = 3{,}130$ cf

Comparison

$Q_{100} = 1.8 - 1.1 = 0.7$ cfs (increase)
$V_{100} = 3{,}130 - 1{,}920 = 1{,}210$ cf (increase)

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