HYDROLOGY N13/D1 1 PLAN

N13/D1

1 Plan

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CITY OF ALBUQUERQUE

DRAINAGE PLAN

The following items concerning the Dixie Petro-Chem Drainage Plan are contained herein:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the west side of between South Broadway Boulevard S.E. and the north of Rosemont and just south of an existing entrance road easement. At present, the site is undeveloped. The proposed improvements include the construction of a warehouse along with adjacent paving.

As shown by Panel 40 of the National Flood Insurance Program Flood Boundary and Floodway Map City of Albuquerque, New Mexico, the site does not appear to be within a designated Flood Hazard Zone. In addition, the site does not appear to contribute to an existing downstream flooding condition. Offsite flows generated by the land to the west of this site are intercepted by the existing Rail Spur. Flows generated by the land to the north are blocked by the existing roadway located along the north boundary of the site. No flows enter the site from the south - east.

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 proposed improvements, and 3) continuity between existing and proposed grades. As shown by this plan, the majority of the runoff generated by the proposed building will be directed toward a proposed pond as shown by the grading plan. This pond has more than ample volume to handle the excess runoff (2300 cf) generated by the proposed improvements. The pond will have an approximate depth of 0.5 feet which will not be a problem. The pond will also not have a fence because the site is located below the adjacent public right-of-way, South Broadway Boulevard S.E. Also, the adjacent street does have curb and gutter or a bar ditch to convey street waters.

The Calculations which appear hereon analyze both existing and developed conditions for the 100-year, 6-hour rainfall event. 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 only increase the peak runoff by 1.4 cfs. This is considered a negligible increase which will have an insignificant impact on the overall watershed in view of the pending providing.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 40:

Qm Glendale Clay loam
Hydrologic Soil Group B

Rational Method

Discharge: Q = CiA

where C values

$i = B/(c.88)T_c^{-0.21}$ = 4.65 in/hr
B_6^{10} = 3.3 in (DPM Plate 22.2 D-1)
T_c = 10 min (minimum)
A = area, acres

Volume: $V = CP_6A(1/2)$

where C values

P_6 = 2.2 in (DPM Plate 22.2 D-1)
A = area; sf

Existing Condition

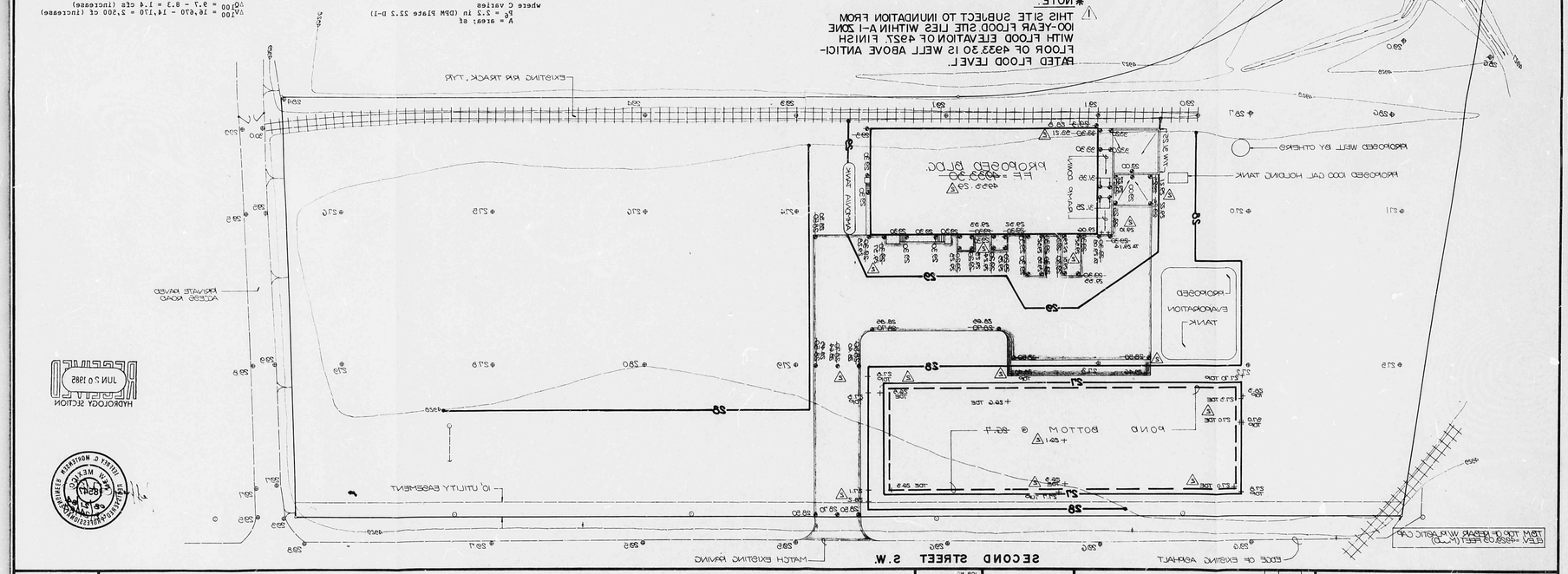
A_{total} = 227,340 sf = 5.22 AC
A_{imp} = 0 sf; % impervious = 0%
C_{100} = 0.34 (DPM Plate 22.2 C-1)
Q_{100} = CiA = 0.34(4.65)(5.22) = 8.3 cfs
V_{100} = CP_6A = 0.34(2.2)(1/2)(227,340) = 14,170 cf

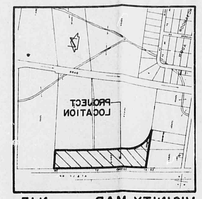
Developed Condition

A_{total} = 227,340 sf = 5.22 AC
A_{imp} = 31,520 sf; % impervious = 14%
C_{100} = 0.40 (DPM Plate 22.2 C-1)
Q_{100} = CiA = 0.40(4.65)(5.22) = 9.7 cfs
V_{100} = CP_6A = 0.40(2.2)(1/2)(227,340) = 16,070 cf

Comparison

ΔQ_{100} = 9.7 - 8.3 = 1.4 cfs (increase)
ΔV_{100} = 16,070 - 14,170 = 2,500 cf (increase)





VICINITY MAP N-13
SCALE 1" = 800'

SCALE 1" = 30'

CERTIFICATION

Review of the as-built conditions as shown hereon reveals substantial compliance with the approved plan. Most importantly, the finished floor was constructed well above anticipated 100-year flood level.

Jeffrey G. Mortensen, P.E. 6-19-85

PROJECT BENCHMARK:
A STANDARD MRGCD BRASS CAP STAMPED "BTA-NM-47-SS" SET IN A CONCRETE MONUMENT FLUSH WITH THE GROUND LOCATED IN THE SOUTH-EAST QUADRANT OF THE INTERSECTION OF RIO GRANDE BLVD. AND SECOND ST., S.W. (STATE ROAD 47).
ELEV. = 4999.39 FEET (MSL).

* NOTE:
THIS SITE SUBJECT TO INUNDATION FROM 100-YEAR FLOOD. SITE LIES WITHIN A-1 ZONE WITH FLOOD ELEVATION OF 4927. FINISH FLOOR OF 4933.30 IS WELL ABOVE ANTICIPATED FLOOD LEVEL.

·LEGEND·

	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
50	PROPOSED CONTOUR
5050	EXISTING CONTOUR
	SWALE
	PROPERTY LINE
	CONCRETE
	PROPOSED ASPHALT
	PROPOSED FENCE
x x x	EXISTING FENCE
TC 0.00	TOP OF CURB
FL 0.00	FLOW LINE
+	AS BUILT SPOT ELEVATION

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT THE 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 CONFLICTING UTILITIES. 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 GOVERNING 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.

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 PERIODICALLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUBSCRIBED TO BEING WASHED DOWN THE STREET.

DRAWING 8 DRAINAGE PLAN
DIXIE PETRO-CHEM

DESIGNED BY	JGM
DRAWN BY	CGC
APPROVED	JGM
JOB NO.	4-1181
DATE	5/84

NO	DATE	BY	REVISIONS
1	8/86	JGM	ADD NOTE
2	6/85	JGM	AS BUILT & CERTIFICATION

MARK WILSON ASSOCIATES, INC.
ENGINEERS
8 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 8710

SHEET 1 OF 1
FILE NO

CITY OF ALBUQUERQUE
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