Hydrology H14/D35 OFFICE & WAREHOUSE

7H4 / D35

OFFICE AND

WAREHOUSE

1 PLAN

VICINITY MAP H-14

SCALE 1" = 800'

SCALE 1" = 10'

·LEGEND·

- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- 5G — PROPOSED CONTOUR
- 5885 — EXISTING CONTOUR
- SWALE
- PROPERTY LINE
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED FENCE
- EXISTING FENCE
- T.C. 0200 — TOP OF CURB
- FL 0165 — FLOW LINE

PROJECT BENCHMARK:

A STANDARD ACS BRASS TABLET STAMPED "1124" SET IN TOP OF A CONCRETE POST PROJECTING ABOUT 0.2 FT ABOVE GROUND LOCATED @ THE INTERSECTION OF MENAUL BLVD AND THE ATSF RAILROAD. THE STATION IS IN THE CENTER OF THE MEDIAN OF MENAUL BLVD. ABOUT 21 FT. EAST OF THE EAST RAIL OF THE EASTERN-MOST TRACK.

ELEV. - 4979.24 FEET (M.S.L.D.)

T.B.M.:

TOP OF A CONCRETE CURB @ PROJECTION OF N.E. PROPERTY CORNER.

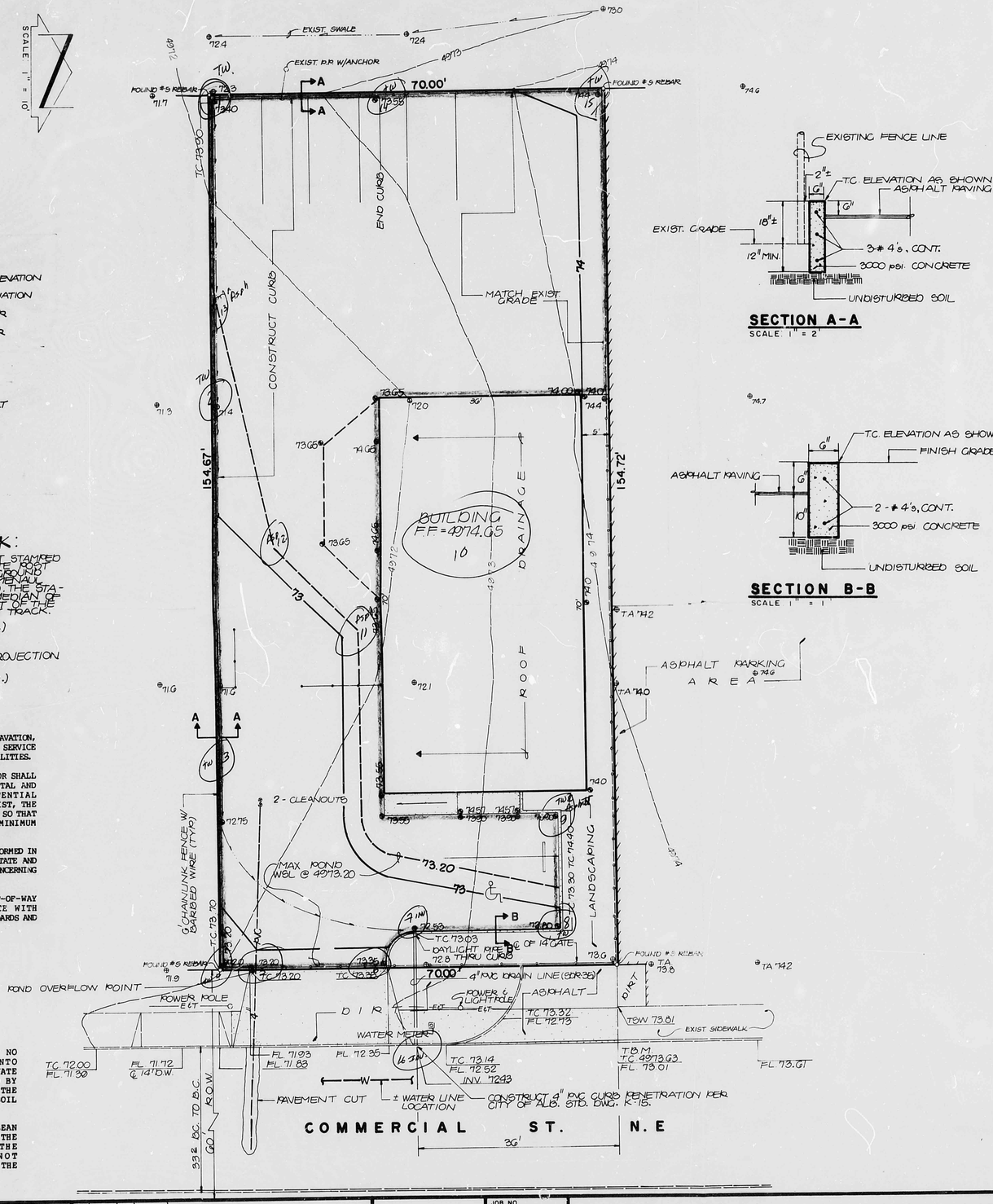
ELEV. - 4973.63 FEET (M.S.L.D.)

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.

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.



SECTION A-A

SCALE 1" = 2'

SECTION B-B

SCALE 1" = 1'

DRAINAGE PLAN

The following items concerning the Ramirez Drywall Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the proposed improvements are located on the west side of Commercial Street N.E. opposite the intersection with Prospect Avenue N.E. At present, the site is being used as a construction yard. The surrounding area is currently developed.

As shown by Plate H-14 of the Albuquerque Master Drainage Study, flooding does exist in Commercial Street N.E. adjacent to this property. Because of this, the finish floor of the building has been established at an elevation which is two feet higher than the corresponding flow line of the street. This is in accordance with the pre-design conference conducted with the Hydrology Section.

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 proposed improvements consists of the construction of a building along with adjacent paving and adjacent landscaping. At present, the site drains toward the neighbor to the south. The proposed drainage pattern will route all onsite waters through a positive discharge pond and discharge the runoff to Commercial Street N.E. From visual inspection, there does not appear to be any offsite flows affecting this site. Minor flows may be generated along the north property line, however, these flows should be negligible because the contributing area is largely undeveloped and is smaller in size than this parcel. Because of this, offsite flows should be less than 1 cfs in magnitude. These offsite flows, should they exist, will be accepted and conveyed through the subject project site.

The Calculations which appear hereon analyze both the 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 development of this site will not increase the peak discharge of runoff. The pond release rate has been determined based upon the Orifice Equation. The pond volume has been determined based upon the Average End-Area Method.

CALCULATIONS

RECEIVED
SEP 12 1984
HYDROLOGY SECTION

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 30:
Gb Gila Loam
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84) T_c^{-0.51} = 4.65$ in/hr
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V_{100} = CP_6A(1/12)$
where C varies
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
A = area, sf

Existing Condition

$A_{total} = 10,830$ sf = 0.25 Ac
$A_{imp} = 0$ sf; % impervious = 0%
$C_{DPM} = 0.34$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = 0.34(4.65)(0.25) = 0.4$ cfs
$V_{100} = CP_6A = 0.34\ (2.2/12)(10,830) = 675$ cf

Developed Condition

$A_{total} = 10,830$ sf = 0.25 Ac
$A_{imp} = 10,000$ sf; % impervious = 92%
$C_{DPM} = 0.90$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = 0.90(4.65)(0.25) = 1.0$ cfs
$V_{100} = CP_6A = 0.90(2.2/12)(10,830) = 1790$ cf

$Q_{release} = CA\sqrt{2gh} = 0.4$ cfs
where C = 0.8
$A = 0.0873$ sf (4" dia pipe)
$g = 32.2$ ft/sec^2
$h = 73.20 - 72.53 - 0.17 = 0.5'$

$V_{required} = 630$ cf (by hydrograph analysis)
$V_{pond} = \frac{1}{2}[(A_{72.53} + A_{73.20})(73.20 - 72.53)]$
$= \frac{1}{2}(2600)(0.67) = 870$ cf $> V_{required}$

Comparison

$\Delta Q_{100} = 0.4 - 0.4 = 0$ cfs (no change)
$\Delta V_{100} = 1785 - 675 = 1110$ cf (increase)

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NEW MEXICO
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ENGINEERS

NO.	DATE	BY	REVISIONS

DESIGNED BY: J.G.M.
DRAWN BY: jmc
APPROVED: J.G.M.
JOB NO. 4123.1
DATE 8-84

GRADING & DRAINAGE PLAN
RAMIREZ DRYWALL

FILE NO.
SHEET 1 OF 1

N40867