HYDROLOGY

L20/D22

TUMBLEWEED PARK

L 20—D 22

1 PLAN

Jacobs

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. L-20 DATE: 8-14-84

PLANNING DIVISION NO. _____

CONFERENCE RECAP

SUBJECT: Tumbleweed Park Lot 6 New Warehouse

	WHO	REPRESENTING
ATTENDANCE:	Chris Wilson	
	Carlos Montoya	

FINDINGS: (1) Approved drainage plan as per DPM is required prior to issuance of building permit.
(2) Drainage across lot lines to be covered by drainage covenant.
(3) Address volume of existing pond to prove added flows can be inputed.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlos Montoya SIGNED: Chris Wilson

TITLE: Civil Engr TITLE: CTS Inc.

DATE: 8-14-84 DATE: 8-14-84

L-20-D22

INFORMATION SHEET

PROJECT TITLE TUMBLEWEED PARK TYPE OF SUBMITTAL DRAINAGE AND GRADING

ZONE ATLAS PAGE NO. L-20 CITY ADDRESS 9935 Trumbull S.E.

LEGAL DESCRIPTION Lot 6, Replat of Tract B, Skyline Heights, Albuq. N.M.

ENGINEERING FIRM C.T.S. Inc. CONTACT Chris WEiss

ADDRESS 1100 Alvarado N.E. PHONE 266-3444

OWNER _____ CONTACT _____

ADDRESS _____ PHONE _____

ARCHITECT _____ CONTACT _____

ADDRESS _____ PHONE _____

SURVEYOR Ron Forstbauer Survey CO. CONTACT Ron

ADDRESS 520 Chama N.E. PHONE _____

CONTRACTOR _____ CONTACT _____

ADDRESS _____ PHONE _____

PRE-DESIGN MEETING:

___ YES
XX NO.
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
XX BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

RECEIVED
AUG 31 1984
HYDROLOGY SECTION

DATE SUBMITTED: August 30, 1984

BY: Christopher Weiss

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

September 20, 1984

Mr. Chris Weiss
C.T.S. Inc.
1100 Alvarado N.E.
Albuquerque, New Mexico 87110

RE: LOT 6, TUMBLEWEED PARK GRADING AND DRAINAGE REPORT (L20-D22) RECEIVED AUGUST 31, 1984

Dear Mr. Weiss:

The above referenced plan, dated August 31, 1984 is approved.

Please attach a copy of this approved plan to the construction set prior to hydrology sign-off.

If I can be of further assistance, please contact me at 766-7644.

Sincerely yours,

Billy J. Goolsby
Civil Engineer/Hydrology

BJG/bm

84 72546

GRANT OF EASEMENT
FOR
PRIVATE DRAINAGE

THIS INDENTURE made and executed this 15th day of September, 1984 by and between Robert G. Jacobs and Elizabeth A. Jacobs, his wife state that we are sole owners of the property known as Lot 5 of Tumbleweed Park, City of Albuquerque in the County of Bernalillo and State of New Mexico as designated on plot filed in the office of The Bernalillo County Clerk on July 13, 1983 in Bk. C21 Page 184 Hereinafter called the Grantors.

Witnesseth, that the Grantor for consideration paid by the Grantee, the receipt of which is herby acknowledged, the Grantors have this day bargained and sold and by the presents sell, convey and deliver unto Lot 6, a permanent private drainage easement including the permanent right to enter upon the real estate hereinafter described at any time that it may see fit, to maintain and repair said private drainage easement, across and through the lands hereinafter described and the further right to remove trees, bushes, undergrowth and obstructions interfering with the location, use and maintenance of said private drainage easement.

The land affected by the grant of this easement and right of way is located in the County of Bernalillo and State of New Mexico and is more particularly described as follows:

SEE ATTACHED EXHIBIT "A"

TO HAVE AND TO HOLD the said right and easement for the uses and purposes aforesaid, unto Grantee its successors and assigns for so long as said easement shall not be abandoned for use as a surface private drainage easement.

The Grantors do hereby covenant with Grantee that they are lawfull seized and possessed of the real estate above described and that they have a good and lawful right to convey it or any part thereof, that it is free from all encumbrances except those of record and taxes due and owing the Treasurer of Bernalillo County and that they will forever warrant and defend the title thereto against the lawful claims of all persons whomsoever.

As a part of the consideration for this grant, the Grantors do hereby release any and all claims for damages for whatsoever cause incidental to the exercise of the rights herein granted provided, however, that the Grantee agrees to save Grantors harmless from any and all liability that may arise as a

result of the construction and use of the easement for the pruposes set forth.

IN WITNESS WHEREOF, the parties have set their hands and seals this 19th day of September, 1984.

Robert G. Jacals
Elizabeth Jacals

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } ss

The foregoing instrument was acknowledged before me this 19th day of September, 1984

Debbie Stanovcak

My commission expires:
8/1/87

OFFICIAL SEAL
DEBBIE STANOVCAK
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires _____

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1984 SEP 20 PM 12: 16

M 1524 354-357

DOLORES C. MALO
CO. CLERK & RECORDER

DEPUTY

GRANT OF EASEMENT

84 72547 FOR

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Elizabeth A. Jacobs

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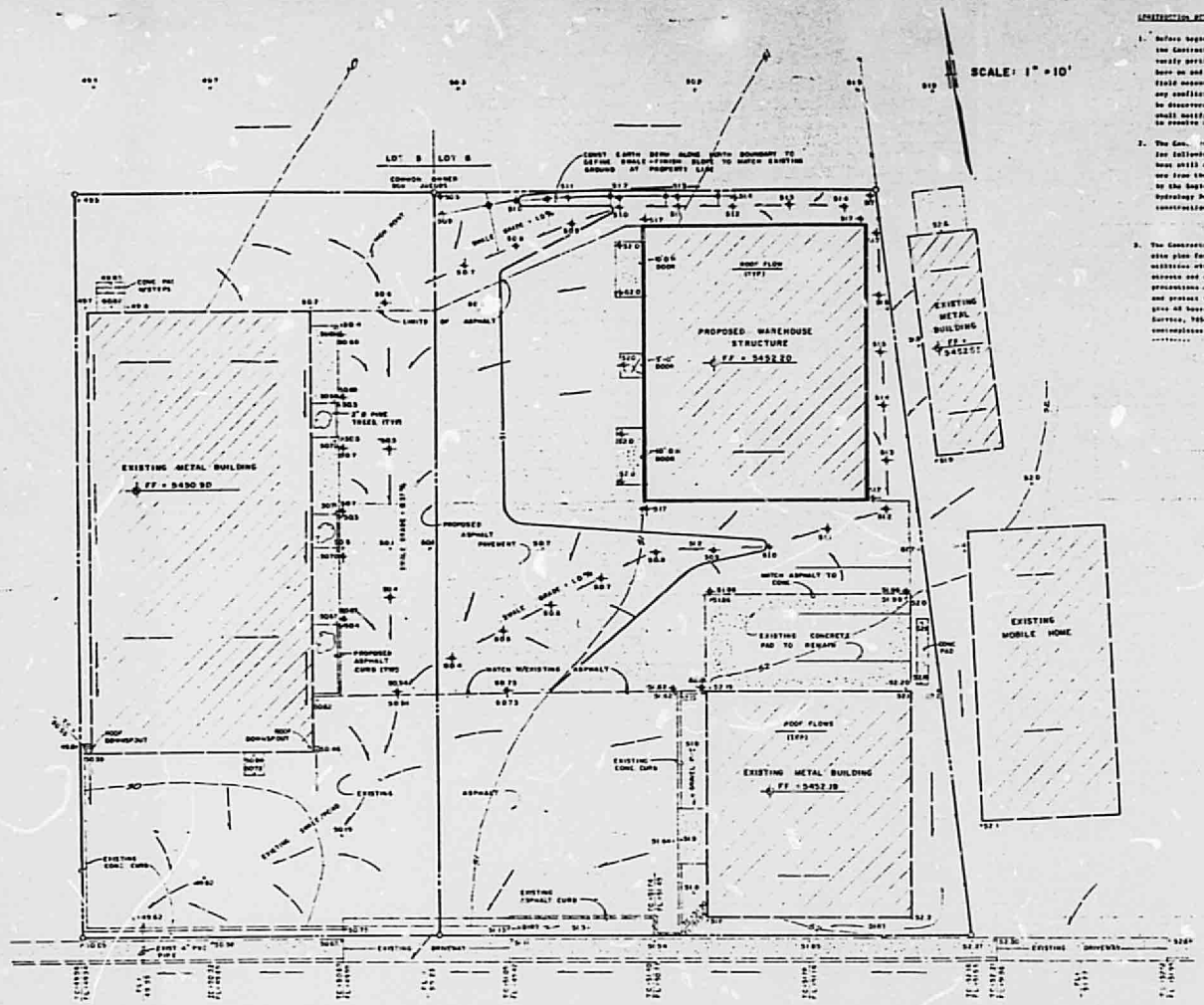
STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1984 SEP 20 PM 12: 16

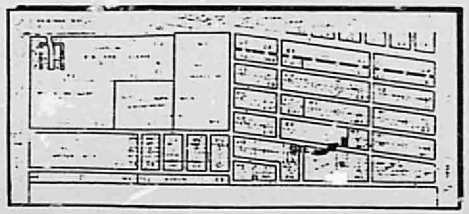
BK _____ PG _____
DOLORES C. WALLER
CO. CLERK & RECORDER
_____ DEPUTY



LEGEND

- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- 512.3 — EXISTING SPOT ELEVATION
- 10 — EXISTING CONTOUR
- 512.5 — PROPOSED SPOT ELEVATION
- 10 — PROPOSED CONTOUR
- SURFACE FLOW DIRECTION

VICINITY MAP L2C



CONSTRUCTION NOTES:

1. Before beginning construction, the Contractor shall check and verify pertinent figures shown here on and all applicable field measurements. Should any conflict, error or discrepancy be discovered, the Contractor shall notify the Engineer at once to resolve the problem.
2. The Contractor shall be responsible for following the plans using his best skill and attention. Any deviation from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.
3. The Contractor shall check the site plan for locations of overlying utilities either on adjacent r.o.w. or easements and shall take all necessary precautions and efforts to locate and protect these utilities. He shall give 48 hours notice to Line Locating Service, 765-2734, for any work that he contemplates would interfere with such utilities.

Scope

The proposed improvements consisted of a new warehouse structure and paved parking area. It involved an 8000 square ft. s.f., work in part of general repair, Drain Tract and Drainage Area. The present site is partially drainage as well as natural drainage accepted the from portion of the lot. The owner of the site, Mr. Bob Jacobs, would like to utilize the adjacent lot a drainage facilities to control runoff from the proposed improvements. He requested this owner in order to keep from having to provide and repair the existing metal pipe adjacent to the street. Mr. Jacobs owns both lots, and will provide the necessary drainage easements for crossing the common lot line.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to adequate drainage outlets.

b) The extent of proposed site improvements, including buildings, walks and pavement.

c) The flow quantities of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The interrelation of marine improvements with existing neighboring property to insure an orderly transition across property/boundary points.

General Data

Legal: Lot 6, Replat of Tract "B", Silver Heights, Albuquerque, New Mexico

Surveyor: Sun Surveyors Survey Company

B.M.: MB B.M. "Sunset", a std. NGS/ACS brass tablet stamped "Sunset 1969" located on S.F. corner of Edgewood and 12 area at the intersection of Sunset Ave. and Garcia Dr. N.W., El. = 5,244.49 (NGS)

TB.: Top of each N.W. corner of site at Sec Line proportion El. 5,450.93.

Soils: MB Soils Map #32, Soil type "MWA", Hydrologic Soil Group "D"

Flood Hazard: Site is not located in or a reduction adjacent to Flood Hazard Zone. Nearest Flood zone is located on Map No. 1A000 (-0)

Offsite Drainage: Site has overlook grade form east to west carrying the drainage at a slope of 2%. Offsite flows from the adjacent lot to the east are given and enter the property line in the form of over flow for eventual running to Trumbell.

Proposed Control Plan: The proposed improvements will not be placed over structures, or there is no anticipated conditions exists that would be subject to erosion.

Calculations: Based on a pre-design meeting with City Hydrology on 9-6-84, the following criteria established.

a) The proposed drainage outlets for Site to be control by drainage easement.

b) outlines the minor requirements and requiring capacity of pond to determine effect of increased runoff.

Calculations are based on the City of Albuquerque DPM Manual, Vol. II for the 100 year/6 hour storm, using the Rational Formula to compute the existing and proposed runoff rates.

Rational Method Q=CIA

Area of Site: 21,500 ft² = 0.37 acre

Area of Proposed Improvement: 7400 ft² = 0.17 acre

Runoff Coefficient

Exist Site	Developed Site
Q impervious = 0.1 acre	Q impervious = 0.17 acre
Q pervious = 0.2	Q pervious = 0.1310.17 = 7%2
"c" = 0.24 (DPM 22.2 D-1)	"c" = 0.72 (DPM 22.2 D-1)

Rainfall Intensity

$I = P_6 (6.6)^{-0.51} = 2.10$"/hr

where P_6 = 2.43 in (DPM 22.2 D-1), and

Tc = 10 minutes (Tc)

Existing Conditions - Onsite to Lot 5

Q_{exist} = (0.24)(2.10)(0.37)

= 0.2 cfs

V_{exist} = (Tbase)(Tc)(360 sec/hr)

2

= 130 ft³ (Hydrograph method)

Developed Conditions - Onsite to Lot 5

Q_{dev} = (0.72)(2.10)(0.17)

= 0.6 cfs

V_{dev} = (0.6)(360)(10)

2

= 906 ft³

Capacities of Existing Pond - Lot 5
(From Drainage Plan for L.E. 8787)

Pond flow to pond from Lot 5 = 0.6 cfs
Discharge rate from pond = 0.4 cfs
* required pond = 130 ft³
% provided to pond = 386 ft³ at surface area of 1920 ft²

Summary of Results

Q_{dev} = 0.6 - 0.2 = 0.3 cfs (increase)

V_{dev} = 906 - 130 = 450 ft³ (increase)

Total area draining to pond =
0.37 acre (lot 5) + 0.17 acre (lot 6) = 0.54 acre

Average composite "c" = 0.70 (0.17/0.54) + 0.2 (0.37/0.54) = 0.71

Q_{max} = (0.71)(2.10)(0.54)

= 1.2 cfs

* required = (1.2)(2.1)(360)

2

= 907 ft³

Total pond capacity = 386 ft³ @ El. 50.0 ft surface area = 1920 ft²

Excess volume in pond = 907 - 386 = 521 ft³

The effect on outlet pond area would be to raise water level by 0.3". The actual elevation increase would be less due to an actual larger area for the water to spread out over, plus the outlet would then be submerged for a water above the elevation of 50.0. The potential elevation rise of the water surface will not affect any of the existing improvements for lot 5, and will the increased runoff rate from lot 6 is a problem because the rate is less than 1 cfs.

C.T.B. INC.
Consulting Engineers
1100 ALVARADO N.W. SUITE A
ALBUQUERQUE, NEW MEXICO 87110
(505) 265-9660

REVISIONS	DATE

DESIGNED
DRAWN
CHECKED
DATE

DRAINAGE / GRADING PLAN
TUMBLEWEED PARK
9935 TRUMBELL S.E.

SHEET 1 OF 1

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT