HYDROLOGY K13/D16 2 PLANS

K13/D16

2 PLANS

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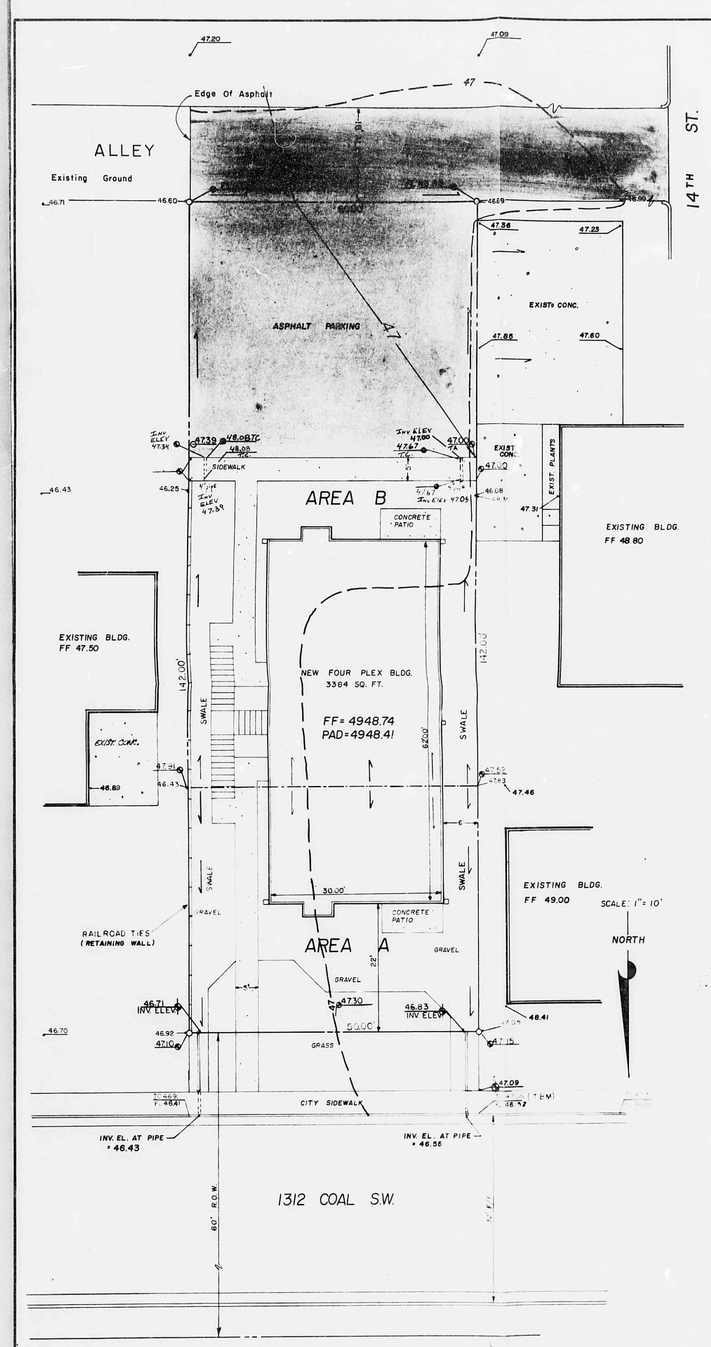
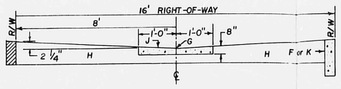
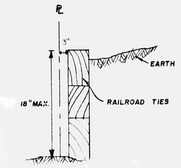
CITY OF ALBUQUERQUE



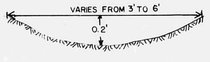


ALLEY SECTION DETAIL

SEE PROJECT NO. 2535

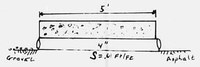


RAILROAD TIES (RETAINING WALL) SECTION DETAIL



SWALE DETAIL

NO SCALE



PIPE ON-SITE DETAIL

No Scale

Richard Hall

June 6, 1985

REVISED JUNE 25 1985

LEGEND

EXISTING SPOT ELEVATION	47.88
PROPOSED SPOT ELEVATION	47.52
EXISTING TOP OF CURB / FLOW LINE	TC / FL
EXISTING CONTOUR	47
PROPOSED CONTOUR	47
DRAINAGE SUBAREA DIVIDE	
DIRECTION OF FLOW	
DOWNSPOUT	

DRAINAGE & GRADING PLAN for TRACT A BLOCK 44 of RAYNOLDS ADDITION

DRAINAGE INFORMATION

I. References

A. City of Albuquerque, Development Process Manual (DPM), Volume 2, Design Criteria

B. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, U.S. Soil Conservation Service, Sheet

C. Flood Insurance Rate Map, City of Albuquerque, New Mexico Panel

II. General Information

A. Site Location and Elevation Data

1. Legal Description: Block 44 Raynolds Addition, Lots 7 & 8

2. Total Site Area: 7100 sq. ft. .1630 acres

3. City Address: 1312 Coal N.W.

4. City Bench Mark: 3-K13

5. County Zone Atlas: K-13

B. Soil Type (Reference A)

Hydrologic Soils Group B: Bernalillo Type A

C. 6-hour, 100-year rain, P_6 = 2.2inches Reference , Plate 22.2 D-1

D. Runoff Coefficient ("C" Factor) Reference , Plate

Undeveloped "C" Factor, Curve in

Developed "C" Factor, assume the following values:

Buildings and concrete surfaces

Asphalt concrete paving

Landscaping, same as natural soil

Weighted "C" Factor:

Type of Surface	"C"	Area (SF)	C x A
Roof	1.00	3,384	3,384
Asphalt	.90	2,175	2,131.5
Grass	.39	739	288
Concrete	1.00	930	930
Gravel	.76	372	283

Weighted "C" Factor = $\frac{\Sigma (\text{"C"} \times A)}{\Sigma A}$ = 7016.5 / 7600 = .92

E. Time of Concentration - Developed Area

Watershed length L = 350 ft

Watershed change in elevation h = .92

Watershed slope S = h/L = .0026

by Kirpich equation $T = .0078 (L^{0.77} / S^{0.385}) \leq 10$ minutes

T_c = 10 minutes minimum = 7.02 min use 10 minutes

F. Intensity Reference , Plate

G. Peak Discharge - Rational Method: Q = CIA

Q = .92 x 4.65 x (.163)

= .70 cfs

Q_{100} = (.70) (.55) = .39 cfs

Alley flow = CIA 114 ft x 16 ft = .042 acres

Q100 = (.98) (4.65) (.042) = .19 cfs

Q_{10} = (.69) (.42) = .12 cfs

Flow down Alley = .23 total flow = alley flow

Avg. Q10 = (.70) = .46 cfs

Flow down Coal = .23 cfs

Depth

Slope = .005 ft/ft

Flow = .23 cfs

Depth = .23 ft (DPM Plate 22.3 D-1)

Velocity: 1.3 ft/sec

Existing Conditions: 142 ft x 50 ft = 7100 sq ft = .163 acres

Q = CIA

C = .77 (DPM Plate 22.2 C-2)

I = 4.65

A = .163

Q_{100} = .77 (4.65) (.163) = .584 cfs, Q_{10} = .584 x .67 = .394 cfs

ΔQ_{100} = .70 - .584 = .116 cfs

ΔQ_{10} = .46 - .394 = .066 cfs

Flow in inlet on 14th Street, 15" RCP

Capacity of Inlet = 12.5 cfs Plate 22.3 D-6

Total area = 300 ft x 350 ft = 2.41 acres

Q = CIA

C = .77 (DPM Plate 22.2 C-2)

I = 4.65

A = 2.41

Q = .77 (4.65) (2.41) = 8.63 cfs < inlet capacity 12.5 cfs

Free discharge recommended

Erosion Control: Erosion shall be controlled on the east by the placement of railroad ties before proposed grade has been set. It will be controlled on the west by the existing slab which is presently higher than the proposed grade. Contractor shall promptly clean up the erosion on the right-of-way.

Discharge is recommended for the site because of the insignificant increase of the flow (.116 cfs) which is accepted by the inlet on 14th Street, before it contributes to the flood area.

There is no off-site flow.

BENCH MARK LOCATION

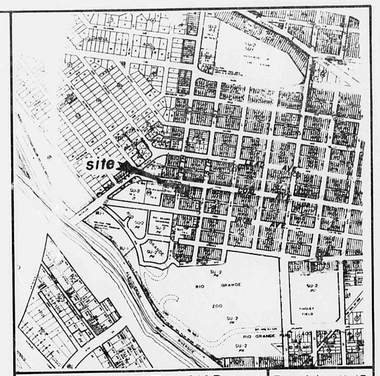
3-K13 , A SQUARE, ☑, CHISELED ON TOP OF CONCRETE CURB AT THE WSW CURB RETURN, LOCATED AT THE INTERSECTION OF 12th ST. & STOVER AVE. IN THE S.W. QUADRANT OF THE INTERSECTION. 3-K13 ELEV. 4945.006

TBM TOP OF CURB ALONG WEST PROPERTY LINE.

ELEV. 4941.06

NOTE TO CONTRACTOR:

THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.



VICINITY MAP | Zone Atlas K-13

FLOODWAY MAP

APPROVED FOR DRAINAGE

DATE

SIGNATURE

ADVISE DRAINAGE INSPECTOR WHEN CONSTRUCTION IS DONE

RECEIVED JUL 03 1985 HYDROLOGY SECTION

HALL ENGINEERING COMPANY INC.
537 EUBANK N.E., SUITE 103
ALBUQUERQUE, NEW MEXICO 87123
Phone: (505) 292-1115 & 292-1116

PROJECT NO. SHEET 1 OF 2

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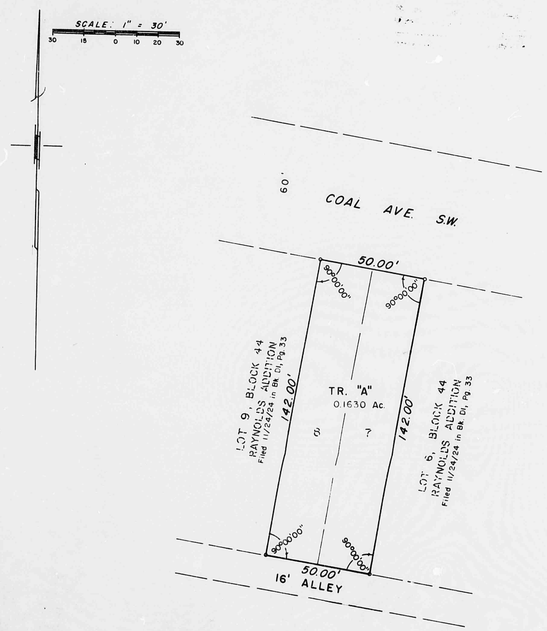
CITY OF ALBUQUERQUE

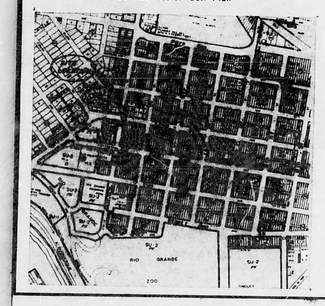
C D

SP 04-29-2251



VICINITY MAP

Not to Scale
Site appears on Zone Atlas K-13
Site is zoned SU-2, MFR
North Barelas Sector Dev. Plan



DISCLOSURE STATEMENT

The purpose of this plat is to eliminate the lot lines between Lot 7 and 8, Block 44 of Raynolds Addition, filed November 24, 1924 and making 1 Tract as shown hereon, meeting the required zoning and setback requirements of the Albuquerque Subdivision Ordinance. No bearings are shown on original plat of Raynolds Addition. No property corners have been set and no field work has been done.

State of New Mexico
County of Bernalillo } SS
This instrument was filed for record
MAY 21 1985
at o'clock ... m. Recorded in Vol. ...
Records of said County Folio .....
Clerk & Recorder
..... Deputy Clerk

85 39473

PLAT OF
TRACT "A", BLOCK 44
RAYNOLDS ADDITION
Albuquerque, New Mexico
(A Replat of Lots 7 & 8, Block 44)
APRIL, 1985

RECEIVED
JUN 06 1985
HYDROLOGY SECTION

DESCRIPTION:

A Replat of Lots numbered Seven (7) and Eight (8) in Block numbered Forty-four (44) of the RAYNOLDS ADDITION to the City of Albuquerque, New Mexico, as the same are shown and designated on the Plat of said Addition, filed in the office of the County Clerk of Bernalillo County, New Mexico, on November 24, 1924. (Now being Tract "A", Block 44, Raynolds Addition)

FREE CONSENT, DEDICATION

The undersigned owner(s) and proprietor(s) of the property described hereon, do hereby consent to the replatting of said property as shown on this Plat, and the same is with their free consent and in accordance with their desires.

James M. May, Jr. — June Ann May

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

On this ____ day of ____, 1985, the foregoing instrument was acknowledged before me by James M. May, Jr. and June Ann May

My commission expires Jan. 8, 1987 — Notary Public

SURVEYOR'S CERTIFICATE

I, Verlon E. Hall, do hereby certify that I am a registered Land Surveyor under the laws of the State of New Mexico, and that this plat was prepared by me or under my supervision, shows all easements noted in a title report prepared by Albuquerque Title Company, dated April 18, 1985, meets the minimum requirements for monumentation and surveys of the Albuquerque Subdivision Ordinance and is true and correct to the best of my belief and knowledge.

Verlon E. Hall, N.M.L.S. No. 3241

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

On this 2nd day of May, 1985, the foregoing instrument was acknowledged before me by Verlon E. Hall, N.M.L.S. No. 3241

My commission expires June 8, 1987 — Notary Public

SP 85-210
Subdivision No.

APPROVED AND ACCEPTED BY:

Planning Director	5-21-85 Date	Chief City Surveyor	owner Date
City Engineer	N.A Date	Property Management	5/10/85 Date
A.M.A.F.C.A.	NA. Date	Water Resources	5-17-85 Date
Traffic Engineer	NA. Date	Parks & Recreation	NA. Date

REGISTERED LAND SURVEYOR STATE OF NEW MEXICO NO. 3241 VERLON E. HALL

HALL SURVEYING CO.
2625 Pennsylvania Ave. N.E., Suite 350
Albuquerque, New Mexico 87110.
Phones: (505) 884-6200 & 884-6444

S-2658	F8 84-A	4/29/85

Client: Russel Mark

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CITY OF ALBUQUERQUE
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