HYDROLOGY F14/D28 ONE PLAN

F14/D 28

1 PLAN

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

February 10, 1987

Robert Sykes
Wilson & Company
Post Office Box 3548
Albuquerque, New Mexico 87190

RE: REVISED DRAINAGE PLAN FOR ARBY'S RESTAURANT ON FOURTH
(F-14/D28) REVISION DATE FEBRUARY 9, 1987

Dear Mr. Sykes:

Based on the information provided on your resubmittal of February 9, 1987, the above referenced drainage plan is approved for Building Permit.

Please submit a copy of the approved filed replat when it becomes available.

Please attach a copy of this approved drainage plan to the construction sets prior to Hydrology sign-off.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

PUBLIC WORKS DEPARTMENT

Walter Nickerson, P.E., City Engineer

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

WILSON & COMPANY
ENGINEERS
ARCHITECTS

505 345-5345

ENGINEERS
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Office Location... 6611 GULTON CT., N.E. ■ ALBUQUERQUE, NEW MEXICO 87109

An Equal Opportunity Employer

Mailing Address... P.O. BOX 3548 ■ ALBUQUERQUE, NEW MEXICO 87190

RECEIVED
FEB 09 1987
HYDROLOGY SECTION

9 February 1987

Mr. Bernie J. Montoya
Utility Development Division - Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Resubmittal of Drainage Plan
#F-14/D28 - 4th Street Arby's
WCEA File: 87-502

Dear Mr. Monoya:

We have revised the Drainage Report to include computations for undeveloped conditions and the plans to show locations of roof drains.

Presently, approval for replatting of the property is on the DRB agenda for 17 February 1987.

Please call if you need additional information.

WILSON & COMPANY

William F. Brewster

William F. Brewster

kl

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Arby's on Fourth St. ZONE ATLAS/DRNG. FILE #: F-14

LEGAL DESCRIPTION: Lots 7,8 & 9 · Goodrich Park Addition

CITY ADDRESS: 5222 4th St. NW

ENGINEERING FIRM: Wilson & Company CONTACT: Bill Brewster

ADDRESS: P.O. Box 3548 8.190 PHONE: 345-5345

OWNER: Fresquez, Inc. CONTACT: Lenny Fresquez

ADDRESS: PHONE: 292-8803

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

RECEIVED FEB 09 1987 HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 87-82

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

X DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 9 Feb. 1987

BY: William F. Brewster

Resubmittal of Report with additional information. Report #F-14/D28

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Arby's on Fourth St. ZONE ATLAS/DRNG. FILE #: F-14

LEGAL DESCRIPTION: Lots 7,8 & 9 ; Goodrich Park Addition

CITY ADDRESS: 5222 4th St. NW

ENGINEERING FIRM: Wilson & Company CONTACT: Bill Brewster

ADDRESS: P.O. Box 3548 87190 PHONE: 345-5345

OWNER: Fresquez, Inc. CONTACT: Lenny Frequez

ADDRESS: PHONE: 292-8803

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SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

RECEIVED FEB 09 1987 HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 87-82

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

X DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

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___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

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___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 9 Feb. 1987

BY: William J. Brewster

Resubmittal of Report with additional information. Report #F-14/D28

ENGINEER'S DRAINAGE REPORT
FOR
ARBY'S RESTAURANT ON FOURTH STREET
BETWEEN
DELAMAR AVENUE
AND
NATALIE AVENUE

LOTS 7, 8 & 9
GOODRICH PARK ADDITION

ZONE MAP F-14

WILSON & COMPANY
EMGINEERS & ARCHITECTS
P.O. BOX 3548
ALBUQUERQUE, NEW MEXICO 87190

ROBERT F. SYKES
NEW MEXICO
5991
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
FEB 09 1987
HYDROLOGY SECTION

WILSON & COMPANY
ENGINEERS & ARCHITECTS

JANUARY 1987
(87-502)

ENGINEER'S DRAINAGE REPORT
FOR
ARBY'S RESTAURANT

LOCATION. The project is located on the east side of Fourth Street between Delamar Avenue and Natalie Avenue (Zone Map F-14).

LEGAL DESCRIPTION. Lots 7, 8 and 9, Goodrich Park Addition to the City of Albuquerque, Bernalillo County, New Mexico.

EXISTING CONDITIONS. The site is a 0.52 acre tract of land which has been cleared of an existing business building.

CRITERIA FOR HYDROLOGIC COMPUTATIONS. The Soil Conservation Service method is used to determine peak flows. The curve numbers, point rainfall, and runoff volume rate are determined from charts in Volume 2, of the City of Albuquerque Development Process Manual.

DISCUSSION. At the present time, the property is lower than the curb along Fourth Street and water ponds until it reaches sufficient depth to overflow into Fourth Street. The proposed improvement will require filling the site and will develop positive flow to Fourth Street. The probable 100-year peak discharge rate from the site is 4.25 cfs.

OFF-SITE FLOWS. There are no off-site flows entering the project. The property to the east drains east to Delamar Loop. The properties to the north and south drain west to Fourth Street.

RECOMMENDATIONS. It is recommended this site be developed without on-site detention. The site is "in-fill" location and there is an existing 24-inch storm drain in Fourth Street. The site is not within the 100-year floodplain.

ATTACHMENTS. The calculations for on-site 100-year peak discharge rate are attached along with the proposed grading plan and a site location map.

HYDROGRAPH COMPUTATION WORKSHEET

DATE
COMPUTED BY RFS
CHECK BY 9Feb87

PROJECT Arbys Restraurant Undeveloped

LOCATION 4th St. Bet. Delmar & Natalie

ANALYSIS POINT # 4th St.

(DR. AREA) A = 0.52 ACRES

T_c 10 MIN

POINT RAINFALL 2.2 IN. FROM PLATE 22.2 D-1

CN = 70 FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = 0.8 IN. FROM PLATE 22.2 C-4

COMPUTED T_p = 10 MIN. $T_p = T_c$
(Rounded to even minute)

$q_p = \frac{45.4A}{T_p}$ = 2.36 CFS./INCH OF RUNOFF

$(R \times q_p) = Q_{peak}$ = 0.94 CFS

$t(\text{COLUMN}) = (t/T_p)$ $t = T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}}$ $Q = y(Q_{peak})$

	(t/T_p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1	1	.03	.03
3	.2	2	.10	.09
4	.3	3	.190	.18
5	.4	4	.310	.29
6	.5	5	.470	.44
7	.6	6	.660	.62
8	.7	7	.820	.77
9	.8	8	.930	.87
10	.9	9	.990	.93
11	1.0	10	1.00	.94
12	1.1	11	.990	.93
13	1.2	12	.930	.87
14	1.3	13	.860	.81
15	1.4	14	.780	.73
16	1.5	15	.680	.64
17	1.6	16	.560	.53
18	1.7	17	.460	.43
19	1.8	18	.390	.37
20	1.9	19	.330	.31
21	2.0	20	.280	.26
22	2.2	22	.207	.19
23	2.4	24	.147	.14
24	2.6	26	.107	.10
25	2.8	28	.077	.07
26	3.0	30	.055	.05
27	3.2	32	.040	.04
28	3.4	34	.029	.03
29	3.6	36	.021	.02
30	3.8	38	.015	.01
31	4.0	40	.011	.01
32	4.5	45	.005	.004
33	5.0	50	.000	.000

PLATE 22.2 F-1

HYDROGRAPH COMPUTATION WORKSHEET

DATE
COMPUTED BY IZFS
CHECK BY

PROJECT ARBY'S RESTAURANT Developed

LOCATION 4th St. Bet Delaware & Natalie

ANALYSIS POINT # 4th St

(DR. AREA) A = 0.52 ACRES

T_c 10 MIN

POINT RAINFALL 2.2 IN. FROM PLATE 22.2 D-1

CN = 92 FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = 1.8 IN. FROM PLATE 22.2 C-4

COMPUTED T_p = 10 MIN. $T_p = T_c$
(Rounded to even minute)

$q_p = \frac{45.4A}{T_p}$ = 2.36 CFS./INCH OF RUNOFF

$(R \times q_p) = Q_{peak}$ = 4.25 CFS

$t(\text{COLUMN}) = (t/T_p)$ $t = T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}}$ $Q = y(Q_{peak})$

	(t/T_p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1	1	.03	0.13
3	.2	2	.10	0.43
4	.3	3	.190	0.81
5	.4	4	.310	1.32
6	.5	5	.470	2.00
7	.6	6	.660	2.81
8	.7	7	.820	3.49
9	.8	8	.930	3.95
10	.9	9	.990	4.21
11	1.0	10	1.00	4.25
12	1.1	11	.990	4.21
13	1.2	12	.930	3.95
14	1.3	13	.860	3.66
15	1.4	14	.780	3.32
16	1.5	15	.680	2.89
17	1.6	16	.560	2.38
18	1.7	17	.460	1.96
19	1.8	18	.390	1.66
20	1.9	19	.330	1.40
21	2.0	20	.280	1.19
22	2.2	22	.207	0.88
23	2.4	24	.147	0.62
24	2.6	26	.107	0.45
25	2.8	28	.077	0.33
26	3.0	30	.055	0.23
27	3.2	32	.040	0.17
28	3.4	34	.029	0.12
29	3.6	36	.021	0.09
30	3.8	38	.015	0.06
31	4.0	40	.011	0.05
32	4.5	45	.005	0.02
33	5.0	50	.000	0.00

$q_p = \frac{45.4 \times .52}{10} = 2.36$

$Q_p = 2.36 \times 1.8 = 4.25$ cfs

PLATE 22.2 F-1

Soil Group B.

Project Site

F-14-Z

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

February 2, 1987

Robert Sykes
Wilson & Company
Post Office Box 3548
Albuquerque, New Mexico 87190

RE: DRAINAGE PLAN FOR ARBY'S RESTAURANT ON FOURTH
(F-14/D28) RECEIVED JANUARY 28, 1987

Dear Mr. Sykes:

A preliminary review of your submittal for building permit and final plat approval has shown that the following information is lacking for this section to begin the review process:

INFORMATION NEEDED:

1. Computation work sheet for the undeveloped conditions.

2. Building Permit will not be released until approved recorded copy of replat is submitted to our office.

PLAN DRAWING:

1. Location and direction of roof drains (all roof runoff must be direct away from the building and onto the asphalt area to exit thru the drive pads).

Please provide this information so that we may process your request as expediently as possible.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/ds

DRAINAGE INFORMATION SHEET

PROJECT TITLE: 4th St. Arby's ZONE ATLAS/DRNG. FILE #: F-14/D20

LEGAL DESCRIPTION: Lots 7,8 & 9 Goodrich Park Addition

CITY ADDRESS:

ENGINEERING FIRM: Wilson & Company CONTACT: Bill Brewster

ADDRESS: P.O. Box 3548 87190 PHONE: 345-5345

OWNER: Fresquez, Inc. CONTACT: Lenny Fresquez

ADDRESS: 10753 Prospect NE 87112 PHONE: 298-8803

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

RECEIVED JAN 28 1987 HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 87-82

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

X DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

X FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 28 Jan. 1987

BY: William F. Brewster

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: F14 DATE: 1-26-87

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Building Permit for Burger King

STREET ADDRESS (IF KNOWN): Fourth Street between Natalie & Dallas

SUBDIVISION NAME: Lots 7 & 1 Gardner Park Addition

APPROVAL REQUESTED:

____ PRELIMINARY PLAT	X FINAL PLAT
____ SITE DEVELOPMENT PLAN	X BUILDING PERMIT
____ OTHER	____ ROUGH GRADING

ATTENDANCE:	WHO	REPRESENTING
	Bill Brewster	Wilson & Co.
	Roger Green	City Hydrology

FINDINGS:

(1) No Drainage Plan required for vacation request of 20' easement in Lot 7

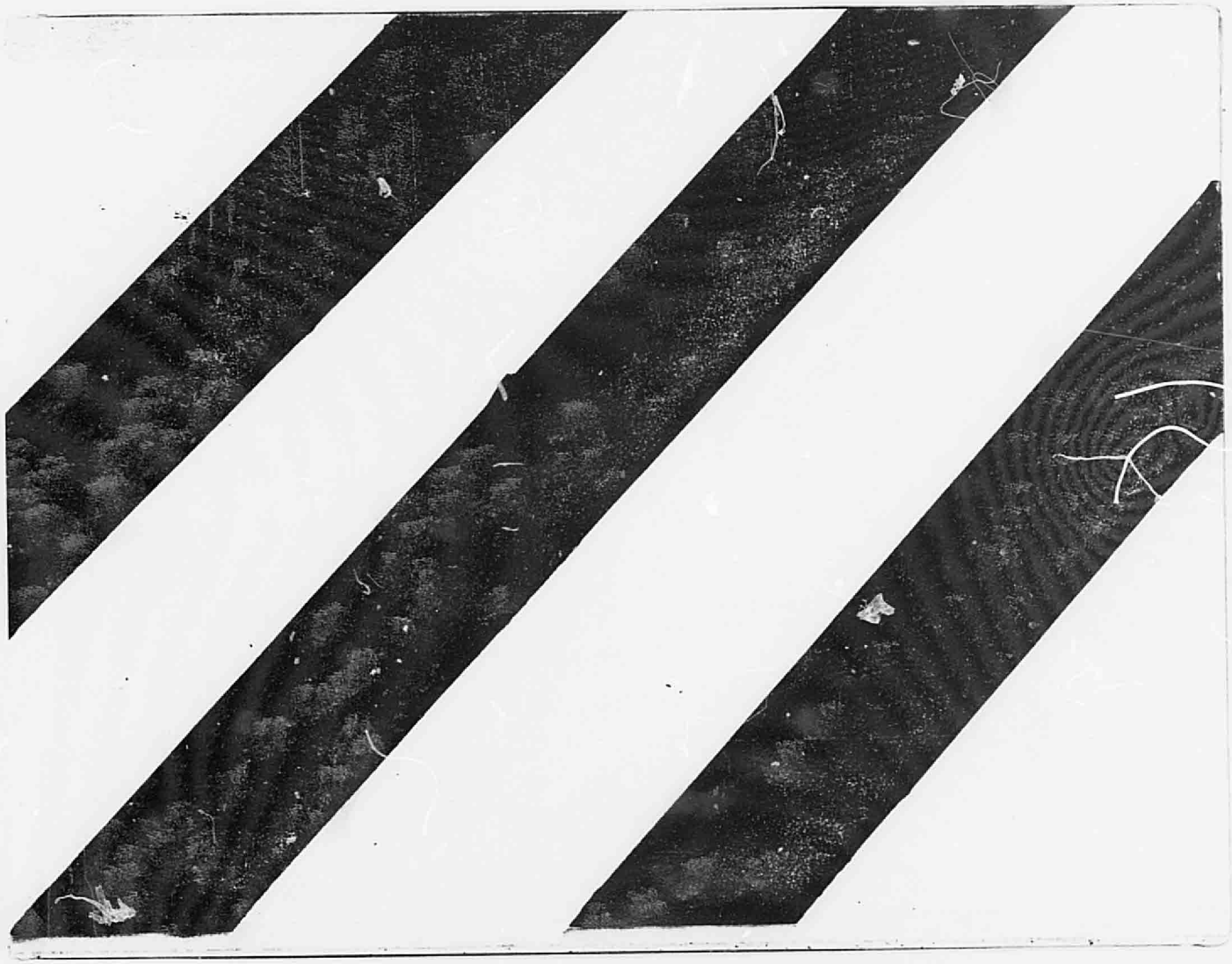
(2) An Approved Drainage & Grading Plan is required by Hydrology for sign off on building Permit DPM requirements must be followed.

(3) Existing 24" storm Drain in 4th street, Site is an in-fill site, & no 100 yr flood hazard areas near, therefore free discharge is approved.

(4) Lot lines should be eliminated with replat required for vacation action.

(5) Recommend a minimum slope of 0.5% from rear of lot to street to drain parking and asphalt areas.

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: Roger V. Green	SIGNED: William F. Brewster
TITLE: Civil Engineer	TITLE: Eng Tech
DATE: 1-26-87	DATE: 1/26/87

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL