HYDROLOGY

F18/D40

THE CLEAN MACHINE

CAR WASH

F18 - D40

1 PLAN

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

PRE-DESIGN CONFERENCE RECAP

HYDROLOGY SECTION PROJECT NO.: F18 DATE: 4-3-85

PLANNING DIVISION NOS. EPC: _____ DRB: _____

SUBJECT: Car Wash

LEGAL DESCRIP.: Tract H Barber Union Lite of Tr. A & B

APPROVAL REQUESTED

_____ PRELIMINARY PLAT _____ FINAL PLAT

_____ SITE DEVELOPMENT PLAN X BUILDING PERMIT

_____ ROUGH GRADING

	WHO:	REPRESENTING:
ATTENDANCE:	Tucker Green	
	Carlos P. Montoya	

_____ Conceptual Drainage Plan/Report required for Preliminary Plat and/or Site Development Plan sign-off.

X Approved Drainage Plan/Report required for Final Plat and/or Building Permit sign-off.

_____ Subdivision Improvements Agreement or Financial Security required.

FINDINGS: ① DRAINAGE PLAN PER DPM ② Fill Ditch, infill site ③ Drainage across other property will require easement or drainage covenant

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:	[illegible]
TITLE:	EE/Hydrol	TITLE:	CE
DATE:	4-3-85	DATE:	4-3-85

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

DRAINAGE INFORMATION SHEET

PROJECT TITLE: The Clean Machine Car Wash ZONE ATLAS / DRNG FILE: F-18 /D40

LEGAL DESCRIPTION: Tract H, Banker's Union Life Subdivision

CITY ADDRESS: 4714 San Mateo Blvd NE

ENGINEERING FIRM: Engineering Associates CONTACT: Tucker Green

ADDRESS: 532 Adams NE 87102 PHONE: 865-6545

OWNER: Bob Still CONTACT: Bob Still

ADDRESS: 2920 Palo Verde NE #A 87112 PHONE: 292-5563

ARCHITECT: Rick Bennett CONTACT: Rick Bennett

ADDRESS: 3803 Riverview Pl.NW PHONE: 831-3150

SURVEYOR: Alpha Surveying Group CONTACT: Gary Gritsko

ADDRESS: 623 Amherst NE 87108 PHONE: 265-5538

CONTRACTOR: Greg Zwoyer CONTACT: Greg Zwoyer

ADDRESS: 7340 Guadalupe Tr. 87107 PHONE: 898-7447

PREDESIGN MEETING:

_X_YES
___NO
_X_COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ——
EPC NO.
PROJ. NO.

TYPE OF SUBMITTAL:
___DRAINAGE REPORT
_X_DRAINAGE PLAN
___CONCEPTUAL GRADING & DRAINAGE PLAN
_X_GRADING PLAN
___EROSION CONTROL PLAN
___ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:
___SKETCH PLAT
___PRELIMINARY PLAT
___SITE DEVELOPMENT PLAN
___FINAL PLAT APPROVAL
_X_BUILDING PERMIT APPROVAL
___CERTIFICATE OF OCCUPANCY
___ROUGH GRADING PERMIT
___GRADING/PAVING PERMIT
___OTHER (SPECIFY)

DATE SUBMITTED: 5-10-85

BY: August L. Moana

RECEIVED
MAY 10 1985
HYDROLOGY SECTION

DRAINAGE REPORT
FOR
THE CLEAN MACHINE CAR WASH

Lot H, Banker's Union Life Subdivision
City Map No. F-18

PROJECT DESCRIPTION

A seven-bay coin-operated car wash will be built on a now-vacant lot behind Checker Auto Parts (4710 San Mateo Blvd. NE). The 0.367 acre site slopes gently from east to west and has a steeper rise of roughly 1 foot to San Mateo Lane at its the eastern edge. The site has a gravel surface and is used for occasional parking. There are no buildings within 25 feet of the site.

At present, approximately two-thirds of the runoff from the site flows southwest to a 20 x 45 retention pond on the Checker Auto Parts lot and the rest eventually reaches paved areas on the north and south. See site plan. Because of the curb and gutter in San Mateo Ln. and the existing topography there is no offsite flow to consider.

Under proposed conditions the portion of the site not covered by the building will be completely paved except for required landscaping. It will be graded to direct flow generally to the northwest and out to San Mateo Blvd via the paved parking on the north side of the Checker lot. The owners of that lot have agreed to a drainage easement.

It was established at the predesign conference that free discharge would be permitted because the site is a infill site - most of the surrounding area is developed - and because of the minimal hydrologic impact, provided that proper permission be obtained for routing flow across other property to the street.

The site is not in a 100-year flood plain. Because the site is an infill site and is not in a one-hundred flood plain, no attempt has been made to raise the property line 0.33 feet above the adjacent top of curb.

EXISTING CONDITIONS

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HYDROLOGY SECTION

The flow area is 16000 sq. ft. or 0.3673 acres.
The flow area is 50% impervious
(Approx. for unpaved lightly used parking)
The soil is Group B, Type Etc (SCS Soil Survey Sheet 21
The "C" factor is 0.58 (DPM Pl. 22.2 C-1)
The runoff Length L is 170 ft.
The slope S is 2 %
The time of concentration Tc is 0.0078*(L^.77)/(S^.385) = 1.84 min
(Use 10 minutes minimum)
The average velocity is L / (Tc x 60) = 0.28 ft/sec.
The 100-yr 6-hr precipitation amount AMT is 2.3 in (Pl 22.2 D_1)
The 100-yr intensity I is 2.15 x 2.3 = 4.95 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIAc = 0.58 x 4.95 x 0.367 = 1.05 cfs.
The 100-yr volume is 0.58 x 0.192 x 16000 = 1779 cu. ft.
The 10-yr values are 65.7 % of the 100-yr values
for amount, intensity, rate, and volume. (Pl 22.2 D-1)

OFFSITE FLOW

There is no flow from offsite.

PROPOSED CONDITIONS

The flow area is 16000 sq. ft. or 0.3673 acres.
The flow area is 94 % impervious
The soil is Group B, Type Etc (SCS Soil Survey Sheet 21)
The "C" factor is 0.84 (DPM Pl. 22.2 C-1)
The runoff Length L is 255 ft.
The slope S is 0.5 %
The time of concentration Tc is 0.0078*(L^.77)/(S^.385) = 4.23 min
(Use 10 minutes minimum)
The average velocity is L / (Tc x 60) = 0.43 ft/sec.
The 100-yr 6-hr precipitation amount AMT is 2.3 in (Pl 22.2 D_1)
The 100-yr intensity I is 2.15 x 2.3 = 4.95 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIAc = 0.84 x 4.95 x 0.367 = 1.53 cfs.
The 100-yr volume is 0.84 x 0.192 x 16000 = 2576 cu. ft.
The 10-yr values are 65.7 % of the 100-yr values
for amount, intensity, rate, and volume. (Pl 22.2 D-1)

Most of the runoff, including that from the roof, will flow to the north side of the lot and thence to the northwest corner. A small portion will flow in a swale on the south side of the site, along a paved channel at the west end of the building, and thence to the nortwest corner. This amount must be calculated in order to verify the capacity of the swale and the channel.

The area is 160 x 25 = 4000 sq ft = 0.092 Ac. (conservative assumption)
The "C" factor is 1
The 100-yr intensity is 4.95 in/hr (max, for small, paved area)
The 100-yr flow rate is 1 x 4.95 x .092 = 0.46 cfs

RUNOFF CONTROL

The site will be graded as shown on the plans. Runoff will fow in the swales and the small channel to the northwest corner of the site. From there it will flow along the Checker paved parking area out to San Mateo Blvd. There is an existing drainage channel crossing San Mateo approximately 500 ft. south of the site.

The plans direct the contractor to control erosion during construction by constructing a low berm along the south and west (downhill) property lines. Thet also direct him to control dust during construction.

END OF REPORT

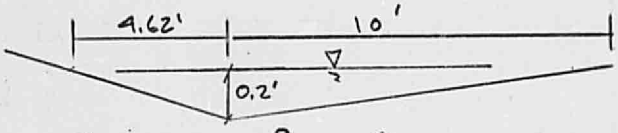
BY THG DATE 5-9-85 SUBJECT CLEAN MACHINE SHEET NO ____ OF ____
CHKD. BY ____ DATE ____ CLIENT RICK BENNETT JOB NO ____

engineering associates, inc. • 532 Adams Street, NE • Albuquerque, NM 87108 • (505) 242-7522
265-6545

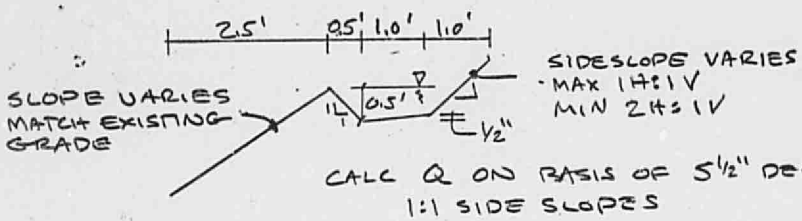
DRAINAGE SECTIONS & CAPACITIES NO SCALE

ALL SECTIONS ASPHALT $N = 0.017$
$S = 0.005$

MANNING'S EQN $Q_{CFS} = \frac{1.49}{n} \cdot \frac{A^{5/3}}{P^{2/3}} S^{1/2}$

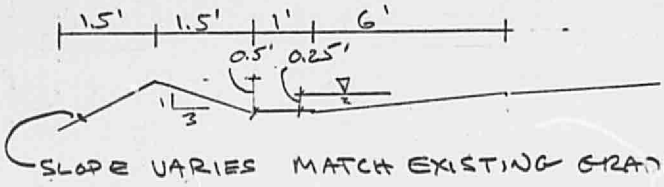


SECTION A $Q_{CAP} = 1.95$ CFS > 0.46 OK



CALC Q ON BASIS OF 5 1/2" DEPTH & 1:1 SIDE SLOPES

SECTION B $Q_{CAP} = 1.82$ CFS > 0.46 OK



SECTION C $Q_{CAP} = 1.83$ CFS > 0.46 OK

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

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

June 6, 1985

August F. Mosiman
Engineering Associates
532 Adams, NE
Albuquerque, New Mexico 87102

RE: DRAINAGE PLAN FOR THE CLEAN MACHINE CAR WASH (F-18/D40)
RECEIVED MAY 10, 1985

Dear Mr. Mosiman:

Based on the information provided on your May 10, 1985, submittal, listed are certain items that will need to be addressed before final approval is granted.

1. New information sheet with resubmittal designation.
2. Engineer's stamp with signature and revision date.
3. Plan drawing size 24" x 36" (Identify that it is a drainage and grading plan.)
4. Please identify the zone atlaz map index number on your vicinity map.
5. Runoff across property lines will require a drainage easement.

If you have any questions or comments, please call me at 766-7644.

Cordially,

Carlos A. Montoya

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM:BJM/bsj

THE **AUTOMOTIVE DIVISION**
OF Lucky STORES

June 28, 1985

City of Albuquerque
Hydrology Department
123 Central Avenue N.W.
Albuquerque, New Mexico 87102

Dear Mr. Montoya:

This letter is in response to a request by the owner of a property adjacent to the east of our store located at 4710 San Mateo Blvd. N.E. Our understanding is that their request is to use an existing 20' wide easement that crosses our property, to allow rainwater to drain to a storm sewer located on San Mateo Blvd. N.E. We have no objection to this request as long as the runoff is, in fact, that caused only by rainwater.

The parcel in question will be occupied by a car wash. As a result, we cannot allow water runoff from the use of their facility to be permitted. If, in fact, this proves to be the case, we will withdraw our permission for their use of the easement and hold the owners of the car wash property responsible for solving the problem and any damages caused.

If there are further questions, please contact us in this regard.

Very truly yours,

David Bunch
Real Estate Representative

DB:es

cc: Rick Bennett
Bob Still
Del Helm
Chuck Greenwalt
Jim Kaleta

2540 NORTH 29th AVENUE PHOENIX, ARIZONA 85009 PHONE: (602) 269-1982

DRAINAGE INFORMATION SHEET
**** RESUBMITTAL / ADDENDUM ****

PROJECT TITLE: The Clean Machine Car Wash ZONE ATLAS / DRNG FILE: F-18/D-40

LEGAL DESCRIPTION: Tract H, Banker's Union Life Subdivision

CITY ADDRESS: _____

ENGINEERING FIRM: Engineering Associates CONTACT: Tucker Green

ADDRESS: 532 Adams NE 87102 PHONE: 265-6545

OWNER: Bob Still CONTACT: Bob Still

ADDRESS: 2920 Palo Verde NE #A 87112 PHONE: 292-5563

ARCHITECT: Rick Bennett CONTACT: Rick Bennett

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ADDRESS: 623 Amherst NE 87108 PHONE: 265-5538

CONTRACTOR: Greg Zwoyer CONTACT: Greg Zwoyer

ADDRESS: 7340 Guadalupe TR 87107 PHONE: 898-7447

RECEIVED
JUL 05 1985
HYDROLOGY SECTION

PREDESIGN MEETING:

_X_YES
___NO
_X_COPY OF CONFERENCE RECAP SHEET PROVIDED (WITH ORIGINAL REPORT)

DRB NO.
EPC NO.
PROJ. NO.

TYPE OF SUBMITTAL:
___DRAINAGE REPORT
_X_DRAINAGE PLAN
___CONCEPTUAL GRADING & DRAINAGE PLAN
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___ENGINEER'S CERTIFICATION

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_X_BUILDING PERMIT APPROVAL
___CERTIFICATE OF OCCUPANCY
___ROUGH GRADING PERMIT
___GRADING/PAVING PERMIT
___OTHER (SPECIFY)

DATE SUBMITTED:

BY: 7/2/85

Albert T. Mosness

ALBERT T. MOSNESS
STATE OF NEW MEXICO
NO. 6148
REGISTERED PROFESSIONAL ENGINEER

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

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

July 11, 1985

August F. Mosiman
Engineering Associates
532 Adams, NE
Albuquerque, New Mexico 87102

RE: REVISED DRAINAGE & GRADING PLAN FOR THE CLEAN MACHINE CAR WASH (F-18/D40) RECEIVED JULY 5, 1985

Dear Mr. Mosiman:

Based on the information provided on the referenced plan dated July 2, 1985, approval for building permit sign-off is given.

In future submittals and resubmittals, a complete package provided by your office would help expedite the review process. In this case, information provided by the architect (Rick Bennett) helped to expedite a speedier approval.

If you have any questions or comments, please feel free to call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant
Design Hydrology Section

BJM/bsj

cc: Rick Bennett