HYDROLOGY H16/D36C 2 PLANS

H 16/D36C

2 PLANS

Address 2625 Vassar N.E Engr/Arch ~~[illegible]~~ (HARRISON)

Plans Approved 9/21/82 Cond.

Comments: #16 D37

Inspection Requested 1-7-83 Contractor Richard Brunacini

Appr. 3/24/83 Disappr. 1-10-83 30 Day Temp.

Comments: None-compliance on portions of approved drainage plan (1-10-83) ponding area on paint store not built to plan - drainage channel on Ferry supply yard not acceptable

Reinspection and/or comments:

1. 11/2/82 — Letter from Owner on schedule time of completion on ? plus also advised owner that special order 19 requires approval by Inspection Dept.

Final

2. 1-10-83

a) South east corner of lot below grade, flooded to south of discharge to adjacent prop. - need revised plan or grade as per plan

b) Southwest corner of "Lean-to" below grade and require fill, roof drains could pond here vs. detention ponds.

c) Roof drains not completed.

d) Pond Volume must be field verify. Pond discharge point must be verified. Storage not allowed in Pond.

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

RECEIVED

JUL 21 1982

ENGINEERING

H16-036

DRAINAGE REPORT INFORMATION SHEET

PROJECT TITLE Conceptual Grading Plan, Brunacini Industrial Park Unit 6

ZONE ATLAS PAGE NO. H-16 CITY ADDRESS 2625 Vassar NE

LEGAL ADDRESS Lots m 1-4 Brunacini Industrial Park Unit 6

ENGINEERING FIRM Ray Harrison & Assoc. CONTACT Ray L Harrison

ADDRESS 1517 A Girard NE 87106 PHONE 265 4276

OWNER Jim, George, And Richard Brunacini CONTACT George Brunacini

ADDRESS 2405 Candelaria NE PHONE 884 0345

ARCHITECT/SURVEYOR Same CONTACT

ADDRESS PHONE

DATE SUBMITTED 7/21/82

BY Ray Harrison

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

1ST Submittal - revised

DRAINAGE REPORT INFORMATION SHEET

PROJECT TITLE WAREHOUSE FOR PERRY SUPPLY COMPANY

ZONE ATLAS PAGE NO. H - 16 - D31 CITY ADDRESS 2625 Vassar Dr. NE

LEGAL ADDRESS Lot 1, Brunacini Industrial Park Unit 6

ENGINEERING FIRM Ray Harrison & Associates CONTACT Ray Harrison

ADDRESS 1517 A Girard NE PHONE 265 4276

OWNER Jim, George & Richard Brunacini CONTACT George

ADDRESS 2405 Candelaria Rd. NE PHONE 884 0345

ARCHITECT/SURVEYOR same CONTACT

ADDRESS PHONE

DATE SUBMITTED 8/17/82

BY

RECEIVED

AUG 18 1982

ENGINEERING

MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer ENGINEERING DIVISION Telephone (505) 766-7487

Reference H16-036

H16-037 is for a portion of H16-036 (lot 1)

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

September 20, 1982

Mr. Ray L. Harrison & Assoc.
1517-A Girard Blvd. NE
Albuquerque, New Mexico 87106

Ref: Perry Supply Company ~~HT6D37~~ C
H16/D368

Dear Mr. Harrison:

Consider this letter a notice of approval for your drainage report.

As per our conversation, please submit the revised plan for the roof drain for the west carport to drain the roof through the detention pond.

The building permit shall be approved by this office upon submittal of evidence of the City approved "Special Order 19" for the drainage outfall in the public right-of-way on Phoenix.

Please direct any questions you may have in regards to this project approval to Fred Aguirre or me.

Sincerely,

Andre Houle, PE
Civil Engineer

AH/el

cc: ✓ Drainage File
Reading File

RAY L. HARRISON & ASSOCIATES
CONSULTING ENGINEERS

1517-A GIRARD BLVD. NE
ALBUQUERQUE, NEW MEXICO 87106
(505) 265-4276

September 20, 1982

Andre Houle, PE Civil Engineer/Hydrology
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Drainage Plan - Perry Supply Company
File No. H16-D36

Ref: Memorandum, Andre Houle PE to Ray L. Harrison on same subject, dated September 1, 1982.

Dear Mr. Houle,

The following is a reply to your comments in the referenced memorandum.

1. Easement, copy of filed easement on plat attached. This easement was checked by Brian Burnett before filing.

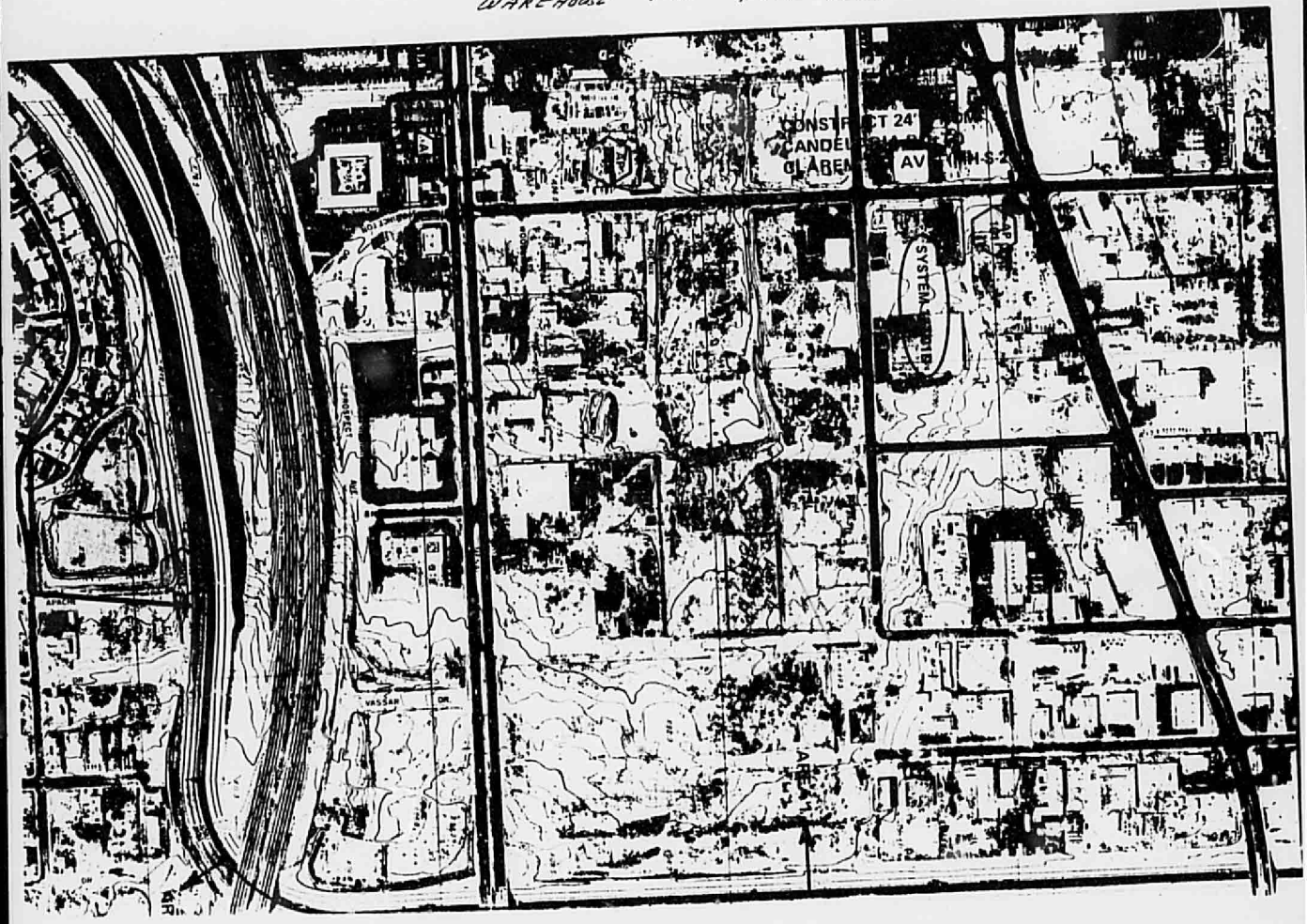
2. Phoenix Boulvard construction is 90% completed and there are no inlets that a pipe can be routed to, the closest inlet is 110 feet down stream, (west).

3. The finish contour 83 is the top of the pond and the mound containing the pond has a top elevation of 83.5 so thete is an 83 contour on each side of the mound top. The finish floor is 88.05 and the elevations go down from that 87 - 84. ?

4. The flow arrow on the north side show the direction of roof drain.

5. The swale on the South side has been better defined.

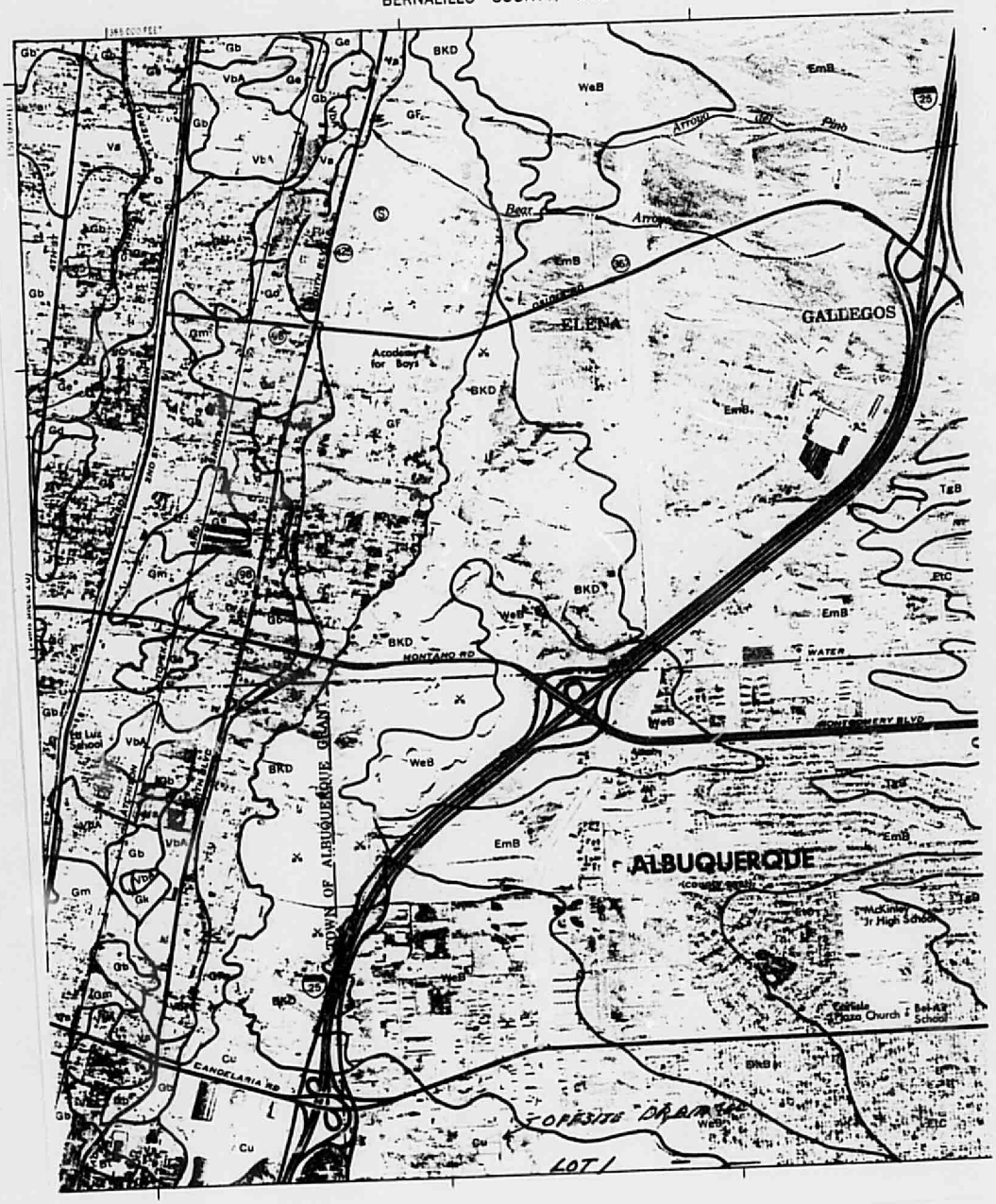
MASTER DRAINAGE STUDY H-16
WAREHOUSE FOR PERRY SUPPLY CO.

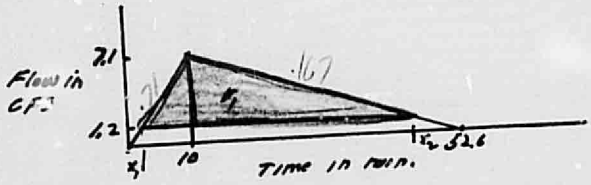


WAREHOUSE FOR PERRY SUPPLY CO.

SCS SOIL MAP

BERNALILLO COUNTY, AND PARTS OF SANDOVAL AND VALENCIA





6. The storm will be routed through the pond as follows:

Hydrograph reference plate 22.2 E - 1 DPM

$C = .92\ T_c = T_p =$, 10 min (small area)

$Q_p = .92 \times 2.2 \times 2,3 \times 1.52 = 7.1$ CFS

$V = .92 \times 2.2/12 \times 1.52 \times 43560 = 11,200$

$T = 2V/Q_p = 3155$ sec $= 52.6$ min

$S_1 = 7.1/10 = .71$ $S_2 = 7.1/52.6 - 10 = .167$

Flow out of pond 8" pipe s = .01 n = .013
Table 6-2 K & B Q = 1.2 CFS

O.K.

$Q = CA\sqrt{2gh}$

$(.6)(.349)\sqrt{2(32.2)(1.5)}$

$= 2.1$ cfs

Volume after outflow V_1

$X_1 = 1.2/.71 = 1.6$ X_2

$V_1 = [52.6 - (1.6 + 7.2)] \times [7.1 - 1.2] \times 60 = 7,800\ ft^2$

Ponding furnished = 8,000 ft^2

If there are any minor problems that can be corrected through a phone call I would appricated a call.

Ray L. Harrison

Ray L. Harrison

RAY L. HARRISON & ASSOCIATES
CONSULTING ENGINEERS
1517-A GIRARD BLVD. NE
ALBUQUERQUE, NEW MEXICO 87106
(505) 265-4276

RECEIVED
AUG 18 1982
ENGINEERING

DRAINAGE PLAN

WAREHOUSE
FOR
PERRY SUPPLY COMPANY

August 16, 1982

PLANNING HISTORY: Replated 8/5/82, Conceptual grading plan submitted, zoned properly.

PROFESSIONAL CERTIFICATION: Survey, drainage plan and grading plan by Ray L. Harrison P. E. & L. S 2198.

FLOOD HAZARD: Delineation of site on Master Drainage study attached, down stream flood prone, valley ponding required.

WATERSHED SOILS Delineation of site and offsite drainage area on soil survey map attached.

SOILS: No ponding within 15' of the building. The Foundation Engineer and the SCS soil survey map recomment no ponding on the property. The soil is Cu (Cut and Fill), Hydrological Soil Group A" .

Erosion Control Plan: Soil is Hydrological Group"A" with very little runoff and no erosion control problems. developed area will be paved or gravel surfaced.

OFF-SITE CONDITIONS:

WATERSHED AREA: Delineation of off-site watershed area on ortho photo topo map attached.

STORM FLOW: Off-site flow is sheet flow with no defined channels. Watershed area = 0.75 acres C = .92 (developed) 98% imprevious, Soil group "A".

10 year 2.3 X 2.2 X .657 X 0.75 X .92 = 2.3 CFS
100 year 2.3 X 2.2 X .75 X .92 = 3.3 CFS

FLOW DEPTH AND VELOCITY: No defined channels.

OTHER CONDITIONS: This tract is located at the site of the old Embudo Arroyo which was diverted by the North Diversion Channel. There is 10 - 15 feet of fill. It has been tested for methane with negitive results and the foundation is designed relative to the problem.

PROPOSED TREATMENT: The off-sire flow will flow on to the site as sheet flow, be diverted through the pond and out to the street through the positive discharge pipes and the Lot 2 channel.

Easements: a private drainage easement was provided on the replat.

ON-SITE FLOWS:

FLOW VOLUMES AND RATES:
Undeveloped flow, o% imprevious Soil group A C = .16
10 year .16 X 2.3 X 2.2 X .657 X 1.52 = .81 CFS
100 year .16 X 2.3 X 2.2 X 1.52 = 1.23 CFS

Developed flow 98% imprevious, soil group A C = .92
10 year .92 X 2.3 X 2.2 X .657 X 1.52 = 4.04 CFS
100 year .92 2.2 X 2.3 X 1.52 = 7.1 CFS

FLOW DEPTH AND VELOCITY:
Capacity of concrete channel on Lot 2
D = .71 ft. b = 2.0 ft. s = 2% side slope ½:1
D/b = .355 K = 3.78 Table 7-12 K & B

$Q = \frac{K}{n} D^{8/3} s^{\frac{1}{2}} = 12.5$ CFS 8.6 cfs

Flow to channel off-site flow = 3.3 CFS
on-site flow = 7.1 CFS
Total 10.1 CFS

PROPOSED TREATMENT: Most of the on-site and all the off-site drainage will be diverted to a pond and drained to the lot 2 channel through controled flow pipes.

Pond volume required (Vally Ponding)
2.2/12 X 1.52 X 43560 X .92 = 11,200 cu. ft.

Pond volume furnished, see section 1-1 Grading Plan
10,400 Cu ft.

PROPOSED TREATMENT: Con't

Positive discharge
2 - 6" pipes on a 1% slope will carry 1.2 CFS
(Table 6-2 K & B)

$Q_2 = 2.2 \times 2.3 \times .445 \times 1.52 \times .92 = 3.1$ CFS

Emergency spillway calculations,
Spillway is equivlant to a weir Fig 5-16 K & B
See section 1-3 , Grading Plan
C = 3.32 Table 5-13 K & B
H = 0.5 ft. L = 10 ft.

$Q = CLH^{3/2} = 11.7$ CFS

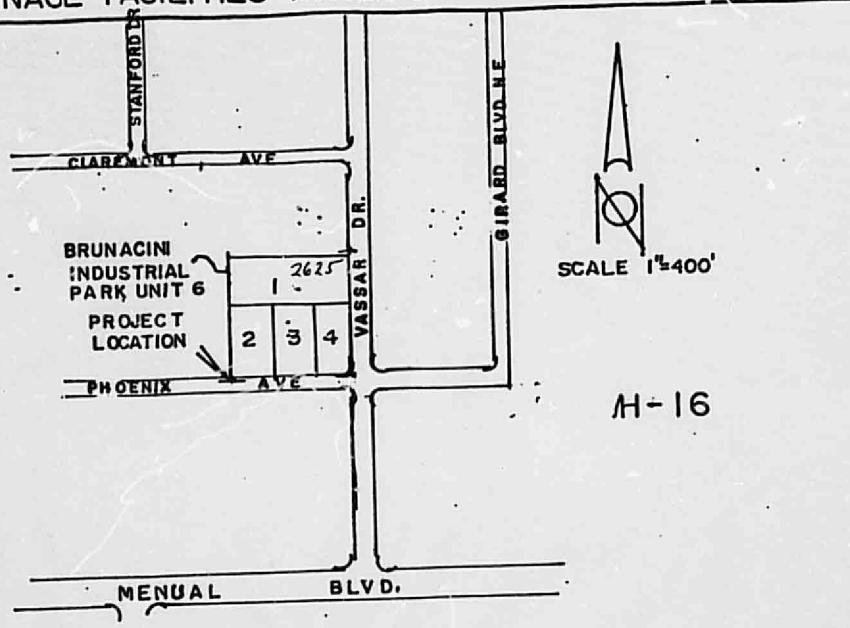
$Q_{100} = 7.1$ CFS + 3.3 CFS = 10.4 CFS

Enclosures
Grading plan
Drainage channel Lot 2
S. O. 19
Ortho Photo Topo Map
Soil Survey Map
Info Sheet

Ray L. Harrison

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



LOCATION PLAN

OWNER
Jim, George, & Richard Brunacini
2405 Candelaria Rd. NE
87107
Phone 884 0345

H16-36A

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 2198 STATE OF NEW MEXICO RAY L. HARRIS

8/13/82

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "Contract Documents for City-Wide Utilities and Cash Paving No. 30 ___"
3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to COLLECTOR (Arterial) street use.

B-45

APPROVALS	NAME	DATE	TITLE: BRUNACINI INDUSTRIAL PARK UNIT 6, LOT 2 2401 PHOENIX AVE NE 24" SIDEWALK CULVERT	
A.C.E./DESIGN	[illegible]	5/17/82		
INSPECTOR	[illegible]	3-14-83	PERMIT NO.	MAP NO. H-16
A.C.E./FIELD	[illegible]	3-18-83	SHEET 1 OF 2	