HYDROLOGY

E17/D1w

CAPITAL

EQUIPMENT CO.

E17-D54

1 PLAN

40373

DRAINAGE INFORMATION SHEET

PROJECT TITLE: CAPITAL EQUIPMENT COMPANY ZONE ATLAS/DRNG. FILE #: E-17/D54

LEGAL DESCRIPTION: LOT 6A-1, BLOCK A, INTERSTATE INDUSTRIAL TRACT UNIT 1

CITY ADDRESS:

ENGINEERING FIRM: TOM MANN & ASSOCIATES CONTACT: JAY T. OLSON

ADDRESS: 811 DALLAS NE; 87110 PHONE: 265-5611

OWNER: BANES COMPANY CONTACT: HENRY TAYLOR

ADDRESS: 700 WEST PAISANO; EL PASO, TEXAS 79901 PHONE:

ARCHITECT: NOT KNOWN CONTACT: —

ADDRESS: — PHONE: —

SURVEYOR: TOM MANN CONTACT: JAY T. OLSON

ADDRESS: 811 DALLAS NE; 87110 PHONE: 265-5611

CONTRACTOR: N/A CONTACT: —

ADDRESS: — PHONE: —

PRE-DESIGN MEETING:

___ YES

✓ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. DRB-84-821

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ 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

✓ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

RECEIVED DEC 10 1984 HYDROLOGY SECTION

DATE SUBMITTED: DECEMBER 3, 1984

BY: Jay T. Olson

RICHARD E. LEONARD
EXECUTIVE ENGINEER

S. H. SWINBURNE, CHAIRMAN
WILLIAM V. HEREFORD, VICE-CHAIRMAN
FRANCES McCOY, SECRETARY-TREASURER
R. WARD HUNNICUTT, DIRECTOR
KLESTON LAWS, DIRECTOR

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

P. O. BOX 25651 - ALBUQUERQUE, N. M. 87125
TELEPHONE 884-2215

January 10, 1985

TO: City Engineering
Attn: Billy Goolsby

FROM: AMAFCA Dan Sabo

SUBJECT: Drainage Details
Casco Industrial Development D17/D54
Capital Equipment Co. E17/D54
Pella Rio Grande Warehouse Add'n. E17/D53

The rundown details into the AMAFCA channel side ditch are approved as meeting AMAFCA requirements.

ic
cc: Tom Mann & Associates
Attn: Jay T. Olson

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

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

January ~~11~~ 10, 1985

Jay Olson
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: GRADING & DRAINAGE PLAN FOR CAPITAL EQUIPMENT COMPANY
(E-17/D54) RECEIVED DECEMBER 10, 1984

Dear Jay:

I have reviewed the referenced submittal and forward these comments:

1. Downstream capacity has not been quantified. What is the capacity of the AMAFCA Right-of-Way ditch considering development downstream? What is the capacity of Osuna Road and the inlets respectfully?
2. Coordination with AMAFCA will be required for the use of and construction in the ditch.
3. Off-site flow has not been considered in the design of the outlet structures. Yet, you stated that it would be routed through.
4. There are dashed lines of the plan typically identifying easements. What are these? If they are easements, dimensions and purpose need to be shown.
5. What is the purpose of the sump shown on the property to the north? Is it for drainage control? Will it have an impact on this site in regard to future development?

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

Cordially,

Billy J. Goolsby

Billy J. Goolsby, C.E.
Design Hydrology Section

BJG/bsj

40373
RESUBMITTAL

DRAINAGE INFORMATION SHEET

PROJECT TITLE: CAPITAL EQUIPMENT COMPANY ZONE ATLAS/DRNG. FILE #: E-17

LEGAL DESCRIPTION: LOT 6A-1, BLOCK A, INTERSTATE INDUSTRIAL TRACT, UNIT 1

CITY ADDRESS:

ENGINEERING FIRM: TOM MANN & ASSOCIATES CONTACT: JAY T. OLSON

ADDRESS: 811 DALLAS NE; 87110 PHONE: 265-5611

OWNER: BANES COMPANY CONTACT: HENRY TAYLOR

ADDRESS: 700 W. PAISANO; EL PASO, TEXAS 79901 PHONE:

ARCHITECT: NOT KNOWN CONTACT: —

ADDRESS: — PHONE: —

SURVEYOR: TOM MANN CONTACT: JAY T. OLSON

ADDRESS: 811 DALLAS NE; 87110 PHONE: 265-5611

CONTRACTOR: N/A CONTACT: —

ADDRESS: — PHONE: —

PRE-DESIGN MEETING:

___ YES

✓ NO

___ COPY OF CONFERENCE RECORD SHEET PROVIDED

DRB NO. DEB-84-821

EPC NO.

PROJ. NO. E-17/054

RECEIVED
JAN 18 1985
HYDROLOGY SECTION

TYPE OF SUBMITTAL:

___ 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

✓ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: JANUARY 18, 1985

BY: Jay T. Olson

811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

Tom Mann Associates, Inc.
Engineers

40373
January 17, 1985

RECEIVED
JAN 18 1985
HYDROLOGY SECTION

Mr. Billy Goolsby
Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Capital Equipment Company - Grading and Drainage Plan
(E17/54)

Dear Billy:

I have reviewed the comments in your letter of January 10, 1985, and would like to submit the following responses:

1. The watershed that contributes runoff to the AMAFCA Right-of-Way Ditch is shown on the enclosure taken from Plate 16 of the Flood Boundary and Floodway Maps, City of Albuquerque, New Mexico, Bernalillo County. For calculating the peak discharge from the watershed, an impervious ratio equal to that of Basin 1 of the subject plan is assumed for the entire watershed. This is a very conservative estimate for the impervious ratio. As shown by the supplemental calculations, the AMAFCA Right-of-Way ditch has the capacity to control the runoff generated by the subject site and subsequent development within the watershed.

   Drainage Basin 3 is the only area that will contribute runoff to Osuna Road in the ultimate developed condition. It is anticipated that Drainage Basin 4 will drain east to west to the aforementioned AMAFCA ditch in the ultimate developed condition. Therefore, the additional runoff contributed to Osuna Road will be that generated by Basin 3, 1.1 cfs. This is a very negligible increase of runoff relative to the size of the watershed contributing runoff to Osuna Road. Further investigation reveals that the subject site is adjacent to the outfall point of the Osuna Road storm drainage facilities. Therefore, the additional runoff discharged to Osuna Road from the subject site will be in the AMAFCA Channel long before the peak runoff from the contributing watershed impacts the storm drainage facilities in Osuna Road.

2. Please see the note associated with the gravel rundown section on the subject plan concerning the coordination of construction within the AMAFCA Right-of-Way. Also, you will find enclosed a copy of the rundown construction details approval letter from Mr. Dan Sabo of AMAFCA.

3. It is evident that if the offsite flow is routed through the improvements in Drainage Basin 1, the capacity of the gravel rundown associated with Basin 1 would be exceeded. Therefore, the capacity of this gravel rundown has been increased to convey the additional offsite flow. The increased capacity of the gravel rundown for Basin 1 is shown in the supplemental calculations. The gravel rundown associated with Drainage Basin 2 provides adequate capacity at this time to convey the offsite flows and the runoff generated by Basin 2. The capacity of the gravel rundown for Basin 2 is shown in the supplemental calculations.

4. The dashed lines shown on the plan have been identified as easements.

5. The sump shown on the property to the north will have no impact on this site in regard to future development.

If you should have any further questions or comments concerning this information, please do not hesitate to call.

Sincerely,

TOM MANN & ASSOCIATES, INC.

Jay T. Olson

Jay T. Olson
Project Engineer

JTO:kl
Encls.

SUPPLEMENTAL CALCULATIONS

Runoff Calculations for Watershed

A_{total} = 15.0 Ac
% impervious = 93%; 'C' = 0.89 (DPM Plate 22.2C-1)
Q_{100}, contributing watershed = CiA = 0.89 (4.65)(15.0) = 62.1 cfs

AMAFCA Right-of-Way Ditch Capacity

$Q = 1.49/n\ R^{2/3}\ S^{1/2}\ A$ (Manning Equation)
where n = 0.030 (Earthlined Channel)
A = 43.7 sf
WP = 35.0 ft
R = A/WP = 43.7/35.0 = 1.25
S = 0.0030 ft/ft

$Q = 1.49/0.030\ (1.25)^{2/3}\ (0.0030)^{1/2}\ (43.7)$
Q = 138.1 cfs > Q_{100}, contributing watershed

Gravel Rundown Capacity (Basin 1)

$Q = 1.49/n\ R^{2/3}\ S^{1/2}\ A$ (Manning Equation)
where n = 0.040 (Rip-Rap)
A = 3.0 sf
WP = 12.0 ft
R = A/WP = 3.0/12.0 = 0.25
S = 0.0750 ft/ft

$Q = 1.49/0.040\ (0.25)^{2/3}\ (0.0750)^{1/2}\ (3.0)$
Q = 12.1 cfs > $Q_{1,100} + Q_{offsite\ basin}$
where $Q_{1,100} + Q_{offsite\ basin}$ = 9.5 + 1.4 = 10.9 cfs

Gravel Rundown Capacity (Basin 2)

$Q = 1.49/n\ R^{2/3}\ S^{1/2}\ A$ (Manning Equation)
where n = 0.040 (Rip-Rap)
A = 2.5 sf
WP = 10.0 ft
R = A/WP = 2.5/10.0 = 0.25
S= 0.0675 ft/ft

$Q = 1.49/0.040\ (0.25)^{2/3}\ (0.0675)^{1/2}\ (2.5)$
Q = 9.6 cfs > $Q_{2,100} + Q_{offsite\ basin}$
where $Q_{2,100} + Q_{offsite\ basin}$ = 3.7 + 1.4 = 5.1 cfs

RECEIVED
JAN 18 1985
HYDROLOGY SECTION

CORPORATE
LIMITS
100 YEAR FLOOD CONFINED TO CONSTRUCTED CHANNEL
WASHINGTON
STREET
CONFINED
HYDROLOGY SECTION

SCALE 1" = 5'

TYPICAL AMAFCA RIGHT-OF WAY DITCH SECTION

RECEIVED
JAN 18 1985
HYDROLOGY SECTION

40575

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

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

January 22, 1985

Mr. Jay T. Olson
Tom Mann & Associates
811 Dallas NE
Albuquerque, NM 87110

REF: DRAINAGE PLAN FOR CAPITAL EQUIPMENT COMPANY (E17-D54) RECEIVED 1/18/84

Dear Jay:

The above referenced plan, dated January 17, 1985 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

Billy J. Goolsby, PE
Civil Engineer/Hydrology

BJG:mrk

0440