DRAINAGE INFORMATION SHEET

PROJECT TITLE: APARTMENTS ZONE ATLAS/DRAINAGE FILE # K-16/D29

LEGAL DESCRIPTION: LOT 23, BLOCK 13, UNIV. HGTS. ADD'N., ALB., NM

CITY ADDRESS: 403 COLUMBIA ST., S.E., ALBUQUERQUE, NM

ENGINEERING FIRM: Weiss-Hines Engineering, Inc. CONTACT: STEVE

ADDRESS: 1100 Alvarado N.E. PHONE: 266-3444

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: DON KRUGER CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: RON FORSTBAUER CONTACT: _____

ADDRESS: RIO RANCHO PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

X YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJECT NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAIN PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

___ Resubmittal

CHECK TYPE OF APPROVAL SOUGHT:

___ SECTOR PLAN APPROVAL

___ 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)

RECEIVED
JUL 17 1987
HYDROLOGY SECTION

DATE SUBMITTED: _____

BY: Weiss-Hines Eng. Inc.

REV. 10/85

10

DATE RECEIVED _____

BY _____

FILE COPY

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

ENGINEERING GROUP

INTER-OFFICE CORRESPONDENCE July 24, 1987

TO: Tom Aragon, Transportation System Division

FROM: Fred J. Aguirre, Hydrologist; Engineering Group/PWD

SUBJECT: PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHTS-OF-WAY/EASEMENT
APARTMENTS - 403 COLUMBIA STREET, SE (K-19/D29)

Transmitted herewith, is a copy of the approved drainage plan for the referenced project incorporating the S.O. #19 design.

In accordance with the new process, this plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed-off S.O. #19 is required by this office for Certificate of Occupancy release; hence your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation, and if you should have any questions and/or comments regarding the process, please feel free to call me at 768-2650.

FJA/bsj

Attachment

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

July 22, 1987

Walter Hines
Weiss-Hines Engineering, Inc.
1100 Alvarado, NE Suite B
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR APARTMENTS AT 403 COLUMBAI, SE
(K-16/D29) ENGINEER'S STAMP DATED JULY 17, 1987

Dear Walt:

Based on the information provided on your submittal of July 17, 1987, the above referenced plan is approved for Building Permit.

Please be advised that a separate permit is required for construction within City right-of-way.

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

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

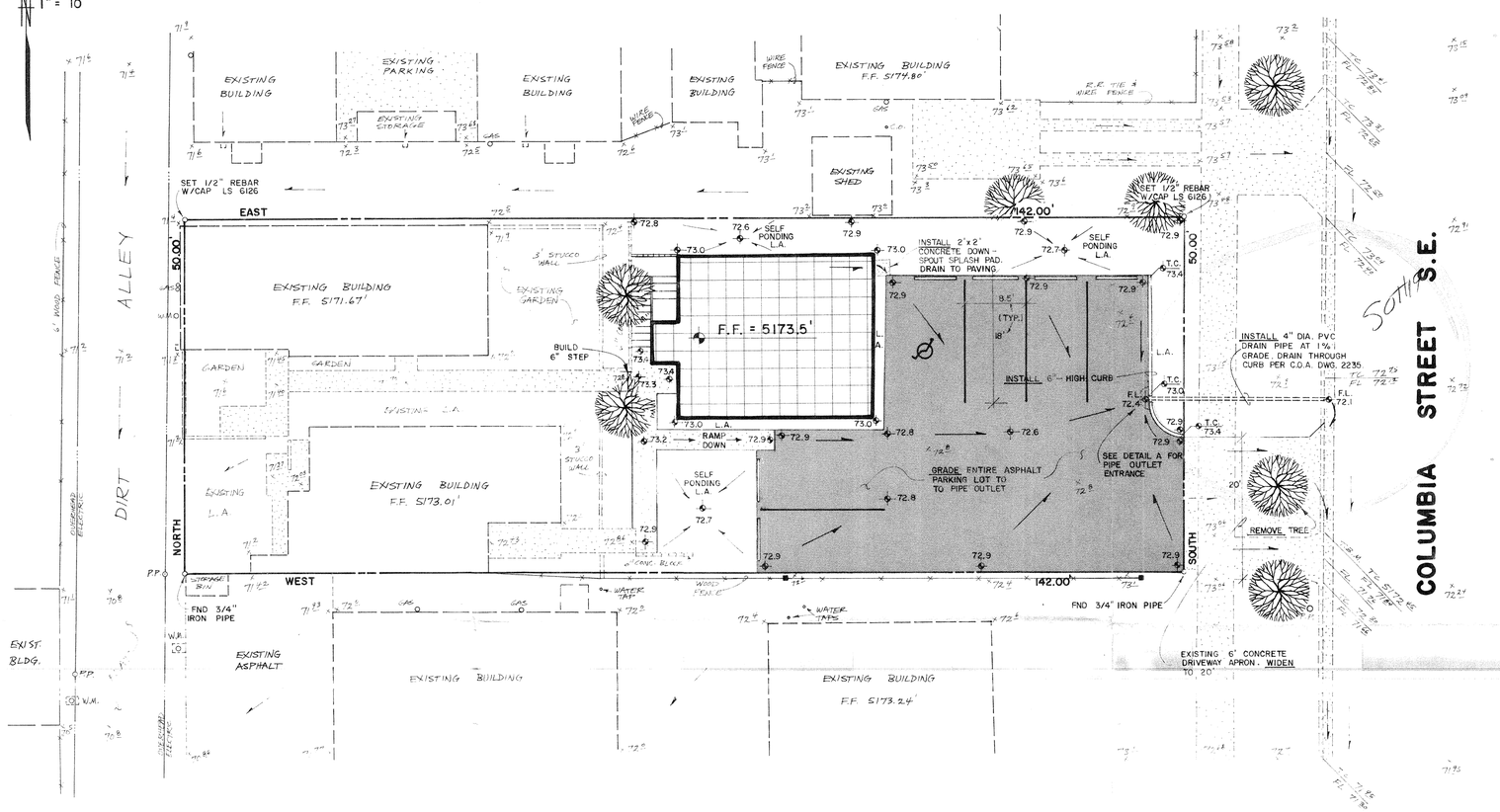
Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

cc: Becky Sandoval

BJM/bsj



SCOPE:

The proposed improvements are comprised of a two-story, two-unit apartment building, an asphalt paved 6-space parking lot, a 20'-wide concrete driveway entrance, a 1'-wide concrete drainage channel, and associated walkways and landscaped areas.

The present site is an undeveloped dirt parking area that serves two existing buildings and associated walks, landscaped areas and gardens, all of which were previously developed on the west half of the lot.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.

b) The extent of proposed site improvements, including buildings, walks and pavement.

c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

GENERAL NOTES: No changes are planned for the west half of the lot which is already fully developed. Because the alley is not used as access, no alley grades or other alley improvements are required. The east half of the lot will be developed as shown on the plan, with drainage runoff directed into Columbia Street, S.E.

LEGAL: Lot 23, Block 13, University Heights Addition, Albuquerque, NM.

SURVEYOR: Ronald Forstbauer Surveying, Rio Rancho, NM, July 1987.

B.M.: City of Albuquerque 12-K16, a triangle chiseled in top of curb at WNW curb return at the intersection of Garfield & Cornell Streets, S.E. Elevation = 5,160.55'.

T.B.M.: Painted mark on top of curb on north edge of existing driveway cut. Elevation = 5,172.45'.

SOILS: Reference: SCS Soil Survey for Bernalillo County, NM. Soil is WeB (Wink-Embudo Comples), Hydrologic Soil Group 'B'.

FLOOD HAZARD: The site is adjacent and south of a 100-year flood boundary zone. (FEMA Map No.29) Since Columbia Street drains to the south and away from the flood zone, free discharge is allowed into Columbia Street.

OFF-SITE DRAINAGE: No offsite flows affect the site. Surrounding area very flat, with undefined flow patterns.

EROSION CONTROL: The flat gradient of the site precludes any significant movement of sediment during development.

CALCULATIONS: Calculations are based on the City of Albuquerque D.P.M. Manual, Vol. II for the 100-year, 6-hour storm, using the Rational Formula to compare the existing and proposed runoff rates. The area of the site is calculated to be only that portion of Lot 23 that is being developed. The drainage procedures outlined in this plan follow the findings established during a pre-design conference on June 13, 1987 with City Hydrology.

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RATIONAL METHOD- Q = CIA

Area of site: 4,000 SF = 0.09 AC

Run-off Coefficient:

Existing site:	Developed Site:
Undeveloped Area = 4,000 FT²	Roof Area = 665 FT²
	Landscaped Area = 1,050 FT²
	Paved Area = 2,285 FT²
$C_u = \frac{4,000(0.40)}{4,000} = 0.40$	$C_r = \frac{665(0.90)}{4,000} = 0.15$
	$C_l = \frac{1,050(0.25)}{4,000} = 0.07$
	$C_p = \frac{2,285(0.95)}{4,000} = 0.54$
Composite C = 0.40	Composite C = 0.76

Majority of Landscaped Area is self ponding but was included in discharge area.

Rainfall Intensity:

$I = P_{6} (6.84) T_c^{-0.4} = 4.86"$ per hour

where $P_6 = 2.3"$ (DPM 22.2 D-1)

$T_c = 10$ minutes

Existing Condition:	Developed Condition:
$Q_{100} = (0.40)(4.86)(0.09)$	$Q_{100} = (0.76)(4.86)(0.09)$
$= 0.2$ cfs	$= 0.3$ cfs
$V_{100} = \frac{(0.40)(2.3)(4000)}{12} = 307$ FT³	$V_{100} = \frac{(0.76)(2.3)(4000)}{12} = 583$ FT³

SUMMARY:

$Q_{100} = (0.3)-(0.2) = 0.1$ cfs (increase)

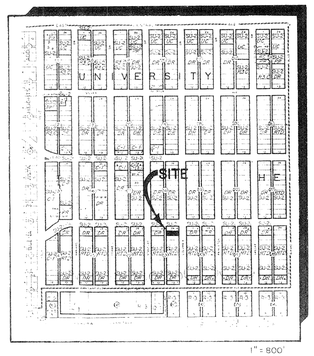
$V_{100} = (583)-(307) = 276$ FT³ (increase)

PIPE OUTLET CAPACITY:

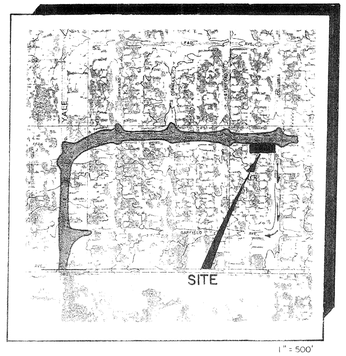
$Q = CA\sqrt{2gh}$

$= 0.6(0.09)\sqrt{32.2 \times 2 \times 0.5}$

$= 0.3$ cfs-OK



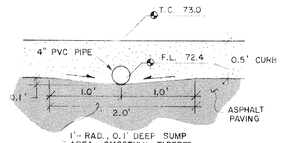
VICINITY MAP K-16



FLOOD HAZARD MAP

LEGEND

	SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
	PROPOSED ASPHALT
	BUILDING (EXISTING, PROPOSED)
	PROPERTY LINE
12.7 x	EXISTING SPOT ELEVATION
	EXISTING CONTOUR
12.6	PROPOSED SPOT ELEVATION
10	PROPOSED CONTOUR
	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
L.A.	LANDSCAPED AREA
T.G.W.	TOP OF GRADE WALL (LESS THAN 18" HIGH)
T.R.W.	TOP OF RETAINING WALL (MORE THAN 18" HIGH)
T.A.	TOP OF ASPHALT
T.C.	TOP OF CURB
F.L.	FLOW LINE
F.F.	FINISHED FLOOR



DETAIL A

PIPE OUTLET ENTRANCE

1" = 1'

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 Albuquerque Interim Standard Specifications for Public Works Construction.
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 within a minimum amount of delay.
5. Backfill compaction shall be according to residential street use.
6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.
7. Contractor is responsible for obtaining excavation permit for sidewalk culvert/drain.
8. Proof of acceptance will be required prior to sign off for Certificate of Occupancy (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: Bernard Montoya 7/22/87
Hydrology Section Date

INSPECTION APPROVAL: _____
Construction Section Date

ACCEPTANCE: _____
Construction Section/Permits Date

WEISS-HINES ENGINEERING INC.
1100 ALVARADO N.E. SUITE B
ALBUQUERQUE, NEW MEXICO 87110
(505) 266 - 3444

REVISIONS	DATE
DESIGNED	
DRAWN	SC
CHECKED	7/87

403 COLUMBIA ST. S.E. APTS.

GRADING / DRAINAGE PLAN

H ENGINEERING

Walter C. Hines 7-17-87

SHEET 1 OF 1