PUBLIC WORKS/HYDROLOGY

D23/D3

0000 0000 1135

D23/D3

25×10

0000 0000 1136

FILE COPY

BOARD OF COUNTY COMMISSIONERS
PATRICK J. BACA, CHAIRMAN
DISTRICT 1
PATRICIA "PAT" CASSIDY, VICE CHAIR
DISTRICT 4
ALBERT "AL" VALDEZ, MEMBER
DISTRICT 2
EUGENE M. GILBERT, MEMBER
DISTRICT 3
JACQUELYN SCHAEFER, MEMBER
DISTRICT 5
ALEX ABEYTA, JR., COUNTY MANAGER

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA N.W.
ALBUQUERQUE, NEW MEXICO 87102

RAY GALLAGHER, SHERIFF
PATRICK J. PADILLA, TREASURER
GLADYS M. DAVIS, CLERK
MARK J. CARRILLO, ASSESSOR
THOMAS J. MESCALL, PROBATE JUDGE

March 14, 1991

James Ullrich, Owner
Post Office Box 1356
Tijeras, New Mexico 87059

RE: DRAINAGE PLAN FOR BUILDING PERMIT 91-91, FOR TRACT J-2-A, LANDS OF JAMES ULLRICH, (D32/D3), ENGINEER'S STAMP DATED MARCH 8, 1991

Dear Mr. Ullrich:

Based on the information provided on the referenced drainage submittal received March 11, 1991, the plan is approved for Building Permit based on the installation of two 8' diameter culverts.

Please be advised that prior to requesting final inspection from Building Code, an Engineers Certification must be submitted and approved by this office.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz

Gilbert Aldaz, P.E. & P.S.
City/County Floodplain Administrator

xc: Bob Fogelsong, County Public Works
Raymond Quintana, County Building Code

GA
wp+2535

25 x 10

0000 0000 1137

DRAINAGE INFORMATION SHEET BP 91-91 D3

PROJECT TITLE: WALKER RESIDENCE ZONE ATLAS/DRNG. FILE #: D32 ~~E32~~

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT J-2-A, LANDS OF JAMES ULRICH

CITY ADDRESS: _____

ENGINEERING FIRM: TOM MARTINEZ CONTACT: TOM MARTINEZ

ADDRESS: _____ PHONE: 281-5616

OWNER: JAMES ULRICH CONTACT: JAMES ULLRICH

ADDRESS: P.O. BOX 1356, ALBERAS, NM 87059 PHONE: 281-3799

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: JAMES ULLRICH CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
X DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER

PRE-DESIGN MEETING:

X YES
___ NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ S. DEV. PLAN FOR SUB'D. APPROVAL
___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
___ SECTOR PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER _____ (SPECIFY)

RECEIVED MAR 11 1991 HYDROLOGY DIVISION

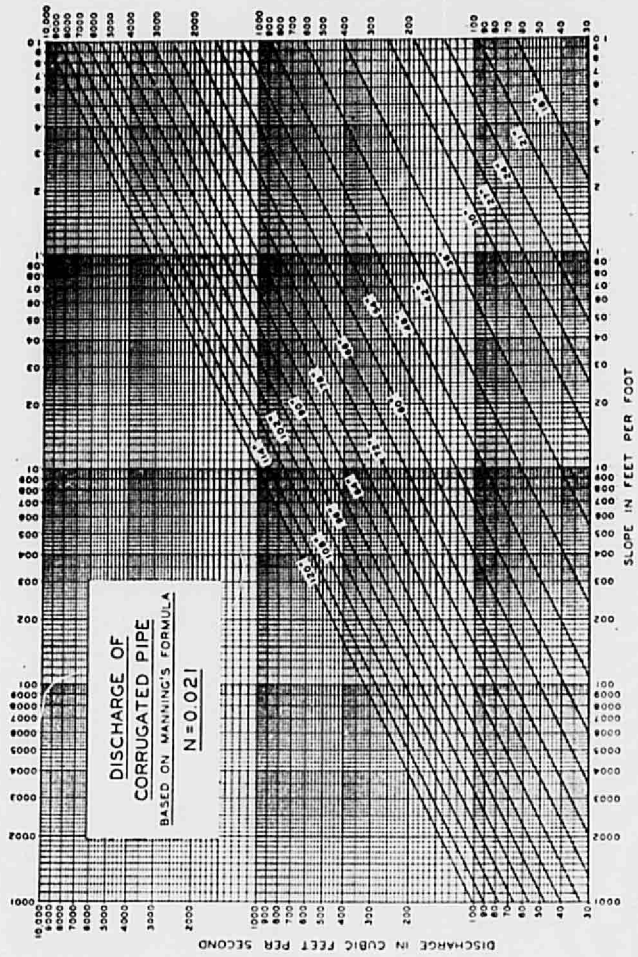
DATE SUBMITTED: _____

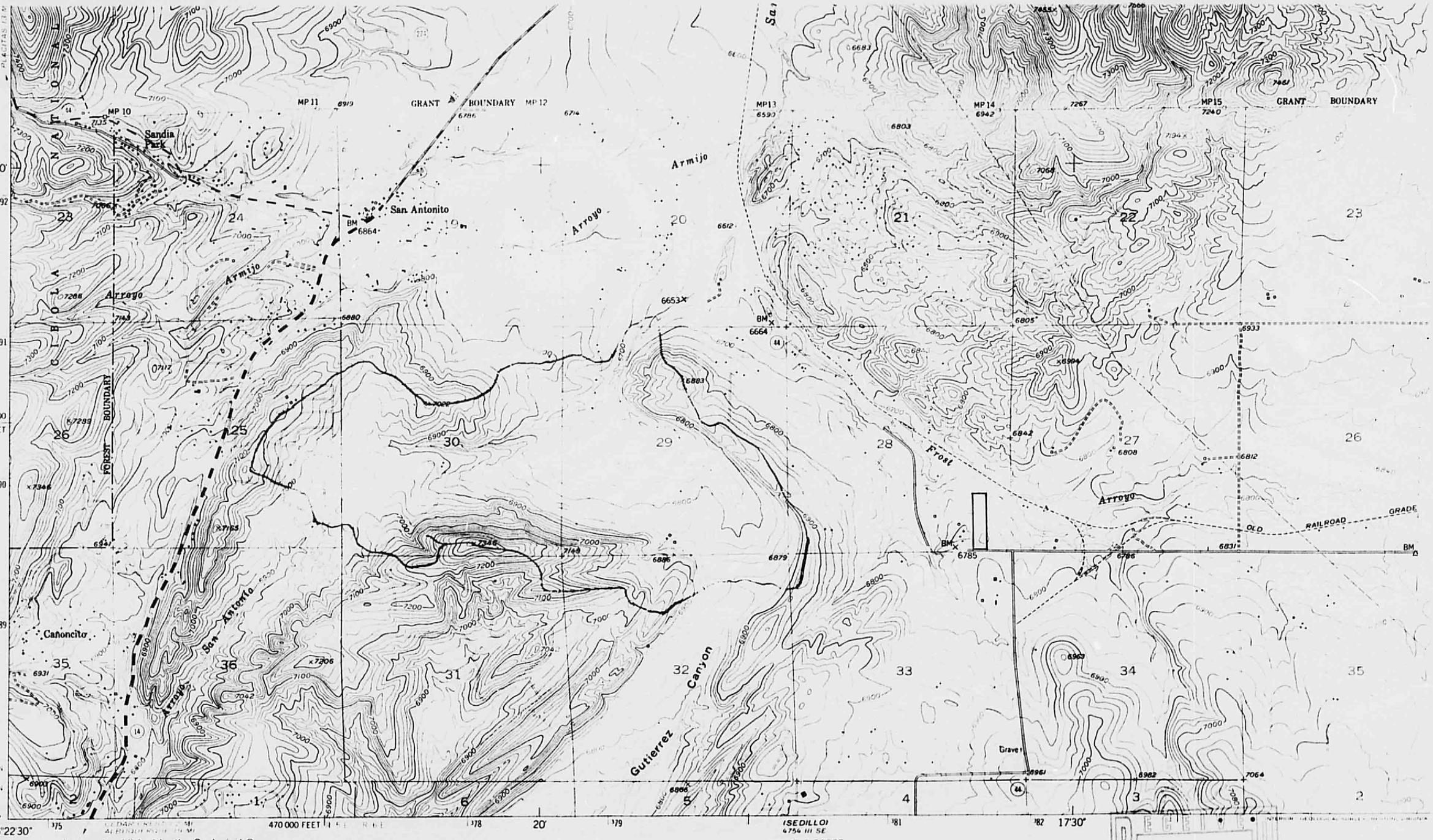
BY: _____

WP + 2535

25 X

Fig. No. 25. CARRYING CAPACITY





Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1951. Field check 1954

Polyconic projection. 1927 North American datum
10,000-foot grid based on New Mexico coordinate system, central zone

SCALE 1:24 000

1 MILE
7000 FEET
1 KILOMETER

CONTOUR INTERVAL 20 FEET

MAR 1 1991

NEW MEXICO

Medium duty

25×10 32×10 25×10

0000 0000 1140

PLANS/PLATS ON FILE

FILE DESC: D23/D3

PLANS/PLATS 1

25×10

0000 0000 1141

25x10

HYDROLOGY D2 3/D3 1 PLAN

D23/D3

1 PLAN

PRELIMINARY
DRAINAGE PLAN
for the
ALFRED LORD TENNYSON PROPERTY

RECEIVED
SEP 21 198
ENGINEERING

Prepared by:

Isaacson & Arfman, P.A.
2727 San Pedro Dr. N.E.
Albuquerque, New Mexico

September, 1981

INTRODUCTION

The sole purpose of this study is to show that the subject property can be safely protected from the offsite storm waters generated by the design storm (100 yr. - 6 hr.), prior and independent of any drainage master planning for the general area. The recommendations presented in this preliminary drainage plan will not dictage nor hinder future drainage consideration.

INVESTIGATION

This study is primarily concerned with the offsite flow characteristics of the land to the east, a portion of Sandia Heights South. It is assumed and understood that all onsite drainage solutions may be handled by onsite detention/retention ponding that would be incorporated into the development's landscaping. Also, it has been suggested that the future onsite drainage solution be based on the retention of all flows less than that of the 2 or 5 yr. storm (to be determined by the City Hydrologist). Greater flows would then be allowed to discharge.

The offsite investigation concerned itself with the lands within the Sandia Heights South development north of Arroyo del Pino and south of the North Pino Arroyo. This land area was field investigated to confirm the results of drainage basin limits that were derived from the topographical maps of the area. The drainage areas, as shown on the Offsite Drainage Sub-Areas Map, will generate flows that intersect the site's eastern property line at four locations. The southern three basins will have storm water runoff intersecting the site to the south of the site's high point. These storm waters will flow over Tramway Blvd. and then be diverted southward to Arroyo del Pino. The north basin's flows are passed under Tramway by means of an existing 30" RCP calvert. If this culvert becomes clogged, flows will then overflow Tramway and be directed by means of a berm/channel system

that shall force the flows back into the historical drainage course which runs along the site's northern property line.

The storm water runoff generated by the southern drainage basins have been computed by use of the Rational Formula and the flow intersection points with the site's east boundary have been plotted. It is recommended that a perimeter berm be designed into the site's landscaping in order to stop these flows from entering onto the site. Therefore, this berm will effectively deflect all flows to the south and into the Pino. If and when a drainage masterplan for the area is designed and implemented, this berm could remain as a permanent fixture of the developed site.

The east perimeter berm/channel shall be constructed in such a manner that the berm, channel and all captured storm waters are situated on the Tennyson Tract. The east face of the berm acts as one side of the channel. The opposite side of the channel end at the property line, while both side slopes are at 3:1. A total of 21.7 cfs of storm water flow is expected to be in the channel at the south outfall point. The channel's ultimate capacity is 49 cfs, therefore a safety factor of 2.2 is designed into this channel. Channel flow carrying capacities for the triangular cross-section channel have been computed and shown on the accompanying drainage exhibit.

The northern portion of the site is protected by a similar berm. This berm is desirable to protect that portion of the site in the event that the 30" RCP should ever clog, thereby forcing the flows over Tramway Blvd. These flows would be intercepted by the berm/channel and then be directed toward the historical watercourse located along the north boundary.

CONCLUSIONS AND RECOMMENDATIONS

Due to the site's topographical characteristics, that

of being "high and dry" and having a major arroyo's flood plain on it's south border and a minor watercourse on the north boundary, it is felt that the property can be protected from the offsite storm waters without adversely affecting the surrounding property owners or hindering any future drainage or traffic masterplans.

The following recommendations are for offsite flow consideration.

1. A berm/channel system be constructed at time of site development. The berm and channel shall be entirely located on the subject tract. The berm/channel shall be capable of handling all flows generated from the 100 yr. design storm.
2. Slope and channel protection shall be provided at the outfall point into the Pino Arroyo. All cost associated with this protection shall be the burden of the developer.
3. The developer shall have the option to; a) dedicate as an easement that portion of land which is covered by the limits of the 100 yr. flood along the Pino Arroyo, or b) improve the channel along the south boundary at the time of site development.
4. A similar berm/channel be constructed alont the east property line from the site's high point to the north. This collection system is to protect the site in the event that the existing 30" RCP located under Tramway is ever clogged. Storm waters would then empty into the existing watercourse. This watercourse shall be improved at time of site development by being incorporated into the landscaping or parking facility.

This preliminary drainage study for the Alfred Lord Tennyson Tract was prepared by Isaacson & Arfman, P.A. under the direction of

Fred C. Arfman 9-18-81

Fred C. Arfman, P.E. Date

FRED C. ARFMAN NEW MEXICO 7322 REGISTERED PROFESSIONAL ENGINEER

Concurred:

Chuck Easterling 9/21/81

Chuck Easterling
Drainage Engineer
City of Albuquerque

0 3 0 0