JMA # 2000.113.5

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Aspen Ridge Apartments – Phases 3 and 4 **ZONE ATLAS/DRNG. FILE #:** L-19/D061

DRB #: 1000166 **EPC #:** **WORK ORDER #:** 628681

LEGAL DESCRIPTION: Tract A, Aspen Ridge Apartments

CITY ADDRESS: 820 Louisiana Blvd SE – Buildings 3, 8, 9, and 10

ENGINEERING FIRM:	Jeff Mortensen & Associates, Inc.	**CONTACT:**	J. Graeme Means
ADDRESS:	6010-B Midway Pk. N.E., Albuquerque, NM 87109	**PHONE:**	(505)345-4250
OWNER:	Simpson Housing Solutions, LLC	**CONTACT:**	J.D. Thompson
ADDRESS:	320 Golden Shore, Ste 200, Long Beach CA 90802	**PHONE:**	562-256-2000
ARCHITECT:	Contact Owner	**CONTACT:**	
ADDRESS:		**PHONE:**	
SURVEYOR:	Jeff Mortensen & Associates, Inc.	**CONTACT:**	Charles Cala
ADDRESS:	6010-B Midway Pk. N.E., Albuquerque, NM 87109	**PHONE:**	(505) 345-4250
CONTRACTOR:	T.A. Wallick	**CONTACT:**	Mark Donaldson
ADDRESS:		**PHONE:**	(505) 301-3180

TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAINAGE PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION
- OTHER - (SPECIFY)

PRE-DESIGN MEETING:

- YES
- X NO
- COPY PROVIDED

CHECK TYPE OF APPROVAL(S) 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
- BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY APPROVAL *BUILDINGS – 4, 5, 6, 11 AND 12*
- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- S.A.D. DRAINAGE REPORT
- DRAINAGE REQUIREMENTS
- OTHER (SPECIFY)

DATE SUBMITTED: August 27, 2001

BY: J. Graeme Means

RECEIVED
AUG 28 2001
HYDROLOGY SECTION

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 28, 2001

Graeme Means, P.E.
Jeff Mortensen & Assoc.
6010-B Midway Park Blvd NE
Albuquerque, New Mexico 87109

RE: ASPEN RIDGE APARTMENTS PHASES 3 & 4 (BLDGS. 4-6 & 11-12)
(820 Louisiana Blvd SE) (L-19/D61)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/8/2000
ENGINEERS CERTIFICATION DATED 8/28/2001

Dear Mr. Means:

Based upon the information provided in your Engineers Certification submittal dated 8/28/2001, the above referenced site is approved for Permanent Certificate of Occupancy for Aspen Ridge Apartments Phases 3 & 4 (Bldgs. 4-6 & 11-12).

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BCB

C: Vickie Chavez, COA
approval file
drainage file

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 8, 2001

J. Graeme Means, P.E.
Jeff Mortensen & Associates
6010-B Midway Pk NE
Albuquerque, New Mexico 87109

RE: ASPEN RIDGE APARTMENTS (L-19/D61)
(Phase 2- Bldgs. 8, 9, & 10, including Phase 1- Bldg. 3)
(820 Louisiana Blvd SE)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/8/2000
ENGINEERS CERTIFICATION DATED8/3/2001

Dear Mr. Means:

Based upon the information provided in your submittal dated 8/3/2001, Engineers Certification for Certificate of Occupancy for Phase 2-- Bldgs. 8, 9, & 10 including Phase 1- Bldg. 3) of the above referenced site is approved.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

C: Vickie Chavez, COA
approval file
drainage file

JMA # 2000.113.3

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Aspen Ridge Apartments – Phase 2 **ZONE ATLAS/DRNG. FILE #:** L-19/D061

DRB #: 1000166 **EPC #:** **WORK ORDER #:** 628681

LEGAL DESCRIPTION: Tract A, Aspen Ridge Apartments

CITY ADDRESS: 820 Louisiana Blvd SE – Buildings 3, 8, 9, and 10

ENGINEERING FIRM:	Jeff Mortensen & Associates, Inc.	**CONTACT:**	J. Graeme Means
ADDRESS:	6010-B Midway Pk. N.E., Albuquerque, NM 87109	**PHONE:**	(505)345-4250
OWNER:	Simpson Housing Solutions, LLC	**CONTACT:**	J.D. Thompson
ADDRESS:	320 Golden Shore, Ste 200, Long Beach CA 90802	**PHONE:**	562-256-2000
ARCHITECT:	Contact Owner	**CONTACT:**	
ADDRESS:		**PHONE:**	
SURVEYOR:	Jeff Mortensen & Associates, Inc.	**CONTACT:**	Charles Cala
ADDRESS:	6010-B Midway Pk. N.E., Albuquerque, NM 87109	**PHONE:**	(505) 345-4250
CONTRACTOR:	T.A. Wallick	**CONTACT:**	Mark Donaldson
ADDRESS:		**PHONE:**	(505) 301-3180

TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAINAGE PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION
- OTHER - (SPECIFY)

PRE-DESIGN MEETING:

- YES
- X NO
- COPY PROVIDED

CHECK TYPE OF APPROVAL(S) 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
- BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY APPROVAL *BUILDINGS 3, 8, 9, and 10*
- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- S.A.D. DRAINAGE REPORT
- DRAINAGE REQUIREMENTS
- OTHER (SPECIFY)

DATE SUBMITTED: August 3, 2001

BY: J. Graeme Means

RECEIVED
AUG 03 2001
HYDROLOGY SECTION

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 6, 2001

Jeff Mortensen, PE
Jeff Mortensen & Associates, Inc
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Aspen Ridge Apartments Grading and Drainage Plan
Engineer's Stamp dated 3-8-00 (L19/D61)
Engineer's Certification date 7-3-01

Dear Mr. Mortensen,

Based upon the information provided in your submittal dated 7-5-01, Engineering Certification for Certificate of Occupancy for Phase 1 (Bldgs 1,2,7 and Rec bldg) of the above referenced site is approved. Bldg 3 is not granted a Certificate of Occupancy at this time.

Please include this phase when certifying the entire site after the last phase.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: Vicki Chavez
file

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 6, 2001

Jeff Mortensen, PE
Jeff Mortensen & Associates, Inc
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Aspen Ridge Apartments Grading and Drainage Plan
Engineer's Stamp dated 3-8-00 (L19/D61)
Engineer's Certification date 7-3-01

Void

Dear Mr. Mortensen,

Based upon the information provided in your submittal dated 7-5-01, Engineering Certification for Certificate of Occupancy for Phase 1 of the above referenced site is approved.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: Vicki Chavez
file

JEFF MORTENSEN AND ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

FAX TRANSMITTAL:

To:	Terri Martin	**From:**	Graeme Means
Fax:	924-3864	**Pages:**	2
Phone:	924-3981	**Date:**	07/05/01
Re:	Aspen Ridge Apartments C19/D61	**cc:**	99.063.8

☐ **Urgent** ☐ **For Review** ☑ **For Your Info.** ☐ **Please Reply** ☐ **As Requested**

Transmitted herewith is a copy of the storm drain maintenance inspector's signature for SO 19 approval of the sidewalk culvert for the subject project (C19/D61).

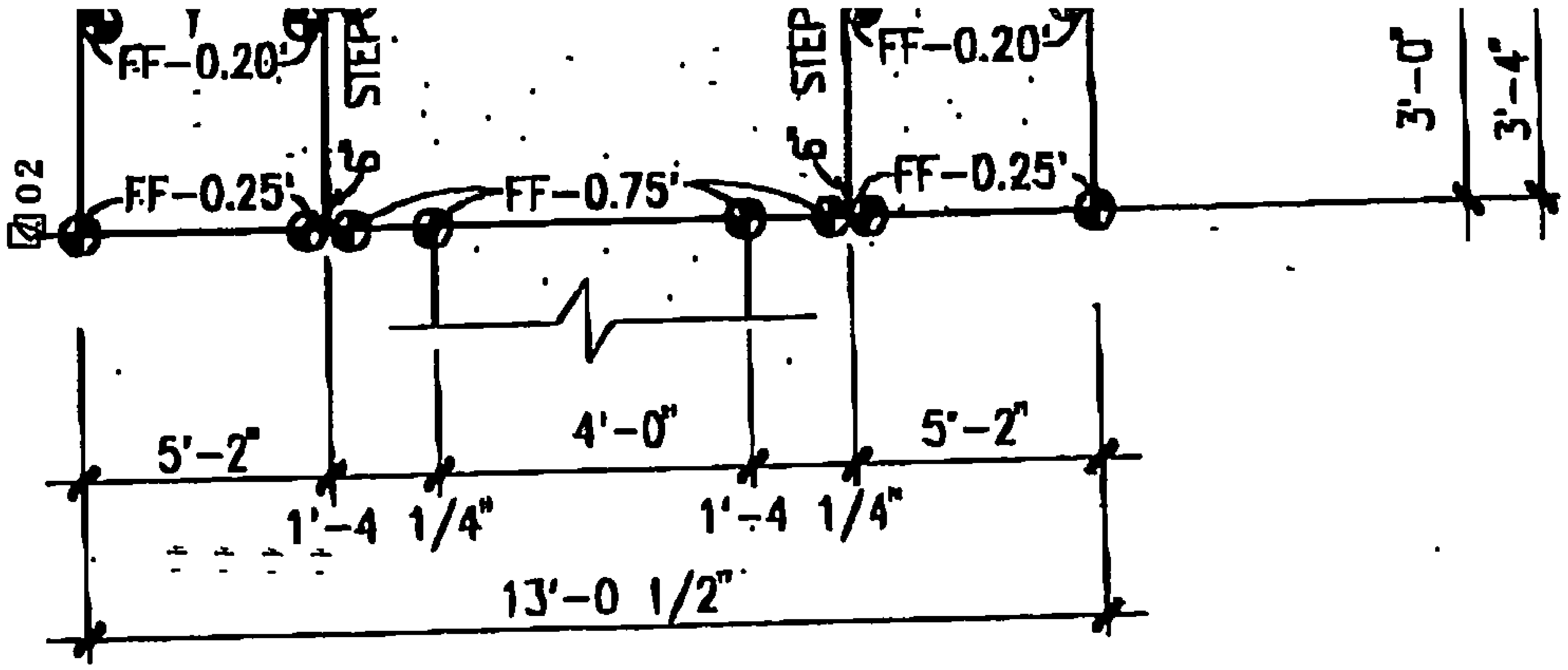
We submitted the Engineer's Certification this morning, but forgot to include a copy of this signoff. Please include this information with the submittal.

Sorry we forgot to include this with the submittal. Please call if you have any questions or comments.

RECEIVED
JUL 05 2001
HYDROLOGY SECTION

RECEIVED
JUL 05 2001
HYDROLOGY SECTION

J. Graeme Means



L LANDING STEP DETAIL—BUILDING TYPE 'B'

1'=4'

2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

APPROVALS	NAME	DATE
HYDROLOGY		
SIDEWALK INSPECTOR		
STORM DRAIN MAINTENANCE	COA [signature]	6/25/0-

SO 19 2046177

ALBUQUERQUE BUILDING & SAFETY
MAR 27 2000
U.B.C. PLAN CHECK SECTION

JEFFREY G. MORTENSEN
NEW MEXICO
8547
REGISTERED PROFESSIONAL ENGINEER

03-08-2000 02-18-2000

NO.	DATE	BY	REVISIONS

RECEIVED
JUL 05 2001
HYDROLOGY SECTION

...NED BY G.M.
...N BY J.Y.R./D.L.M.
...VED BY J.G.M.

JOB NO. 990633
DATE 02-2000
SHEET 7 OF 10

GRADING

DRAINAGE INFORMATION SHEET

JMA 99.068.8

PROJECT TITLE: Aspen Ridge Apartments – Phase 1 ZONE ATLAS/DRNG. FILE #: L-19/D061
DRB #: 1000166 EPC #: WORK ORDER #: 628681

LEGAL DESCRIPTION: Tract A, Aspen Ridge Apartments
CITY ADDRESS: 820 Louisiana Blvd SE

ENGINEERING FIRM:	Jeff Mortensen & Assoc., Inc.	CONTACT:	J. Graeme Means
ADDRESS:	6010-B Midway Park Blvd. NE	PHONE:	(505) 345-4250
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87109
OWNER:	Simpson Housing Solutions, LLC	CONTACT:	J.D. Thompson
ADDRESS:	320 Golden Shore, Suite 200	PHONE:	562-256-2000
CITY, STATE:	Long Beach CA	ZIP CODE:	90802
ARCHITECT:	Contact Owner	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Jeff Mortensen & Assoc, Inc.	CONTACT:	Charles G. Cala
ADDRESS:	6010-B Midway Park Blvd. NE	PHONE:	(505) 345-4250
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87109
CONTRACTOR:	T.A. Wallick	CONTACT:	Mark Donaldson
ADDRESS:		PHONE:	505-301-3180
CITY, STATE:		ZIP CODE:	

TYPE OF SUBMITTAL:
- ___ DRAINAGE REPORT
- ___ DRAINAGE PLAN
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ GRADING PLAN
- ___ EROSION CONTROL PLAN
- X **ENGINEER'S CERTIFICATION**
- ___ CLOMR/LOMR
- ___ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:
- ___ YES
- X NO
- ___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:
- ___ SIA/FINANCIAL GUARANTEE RELEASE
- ___ 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
- ___ BUILDING PERMIT APPROVAL
- X **CERTIFICATE OF OCCUPANCY APPROVAL****
- ___ GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (SPECIFY)

** **Perm. C.O. for BLDGS 1, 2, 3, 7, and Rec. Bldg,**

RECEIVED
JUL 05 2001
HYDROLOGY SECTION

DATE SUBMITTED: 07/05/01 BY: J. Graeme Means, P.E.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based upon the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

City of Albuquerque

March 8, 2000

Jeff Mortensen, P.E.
Graeme Means
Jeff Mortensen & Associates, Inc.
6010B Midway Park Boulevard, NE
Albuquerque, NM 87109

RE: GRADING AND DRAINAGE PLAN FOR **ASPEN RIDGE APARTMENTS**
SUBMITTED FOR BUILDING PERMIT APPROVAL & SO 19 **(L-19/D061)**

Dear Mr. Mortensen,

Based upon the information provided in your February 21, 2000, submittal, the project, referred to above, is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within the city right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

Prior to release of the Certificate of Occupancy, an Engineer Certification, per the DPM checklist, will be required.

If you have any questions, please call me at 924-3988.

Sincerely,

Stuart Reeder, P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: Pam Lujan, Permits
Whitney Reierson
File

PUBLIC WORKS DEPARTMENT

February 24, 2000

INTEROFFICE CORRESPONDENCE HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: Stuart Reeder, PE, Hydrology Div., PWD Stuart Reeder, P.E.

SUBJECT: ASPEN RIDGE APARTMENTS (L-19/D061)

Transmitted herewith is a copy of the approved drainage plan for the referenced project incorporating the SO 19 design. 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 SO 19 is required by this office for Certificate of Occupancy release; therefore your expeditious processing of this plan will be greatly appreciated and will avoid any unnecessary delay in the release of Certificate of Occupancy.

If you have any question, please call me at 924-3988.

w/attachment

xc: file

990633

DRAINAGE INFORMATION SHEET

PROJECT TITLE: ASPEN RIDGE APTS ZONE ATLAS/DRNG. FILE #: L-19/D61

DRB #: 1000166 EPC #: _____ WORK ORDER #: 628681

LEGAL DESCRIPTION: Lovelace Foundation Tract

CITY ADDRESS: 820 Louisiana S.E.

ENGINEERING FIRM: Jeff Mortensen + Assoc. CONTACT: Graeme Means

ADDRESS: 6010-B Midway Park Blvd N.E. PHONE: 345-4250

OWNER: KAUFMAN + BROAD MULTI-HOUSING GROUP CONTACT: Patrick Simar

ADDRESS: 320 Golden Shore Suite 200 LONG BEACH CA 90802 PHONE: 562-256-2024

ARCHITECT: OWNER CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JWA CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: TA-WALLICK CONTACT: Denny Crawman

ADDRESS: _____ PHONE: 239-8034

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

X DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

____ OTHER

PRE-DESIGN MEETING:

X YES

____ NO

X 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

X OTHER SO#19 (SPECIFY)

DATE SUBMITTED: 02-21-00

BY: J. Graeme Means

RECEIVED
FEB 22 2000
HYDROLOGY SECTION

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO. L-19 DATE: 7/29/99
PLANNING DIVISION NO'S: EPC: ZONING:R-3 DRB:
SUBJECT: Aspen Plaza Apts
STREET ADDRESS (IF KNOWN):
SUBDIVISION NAME: Lovelace Foundation
APPROVAL REQUESTED: Building Permit

ATTENDANCE: Fred J. Aguirre-City Hydrologist
Graem Means

FINDINGS:
An approved drainage plan is required for building permit approval. The drainage concept for this infill site could be a qualitative approach in which you would address the information below. If you can demonstrate that this infill development will have a negligible impact on the downstream drainage system, free discharge would be acceptable.

- a comparison of the proposed development to its overall drainage basin with respect to area and/or the relationship of the increased runoff to the existing basin's runoff. The AMDS Drainage Study can be used for basin information.
- impacts on downstream flood plains
- potentials offsite problems created by this development -in other words, will this development have an adverse affect on adjacent properties with respect to drainage
- the downstream affect resulting from the development of the remaining infill sites using the same concept.
- discuss any recent downstream storm drain improvements

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION.

SIGNED: Fred J. Aguirre
TITLE : City Hydrologist

SIGNED:
TITLE :

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.

RECEIVED
FEB 22 2000
HYDROLOGY SECTION

City of Albuquerque

Public Works Department
Transportation Development Services Section

March 1, 2000

Mr. Jeff Mortenson, P.E.
Jeff Mortenson & Associates
6010 -B Midway Park Boulevard NE
Albuquerque, New Mexico 87109

Re: Site Plan submittal for building permit approval for Kaufman & Broad Multi-Housing Group - Aspen Ridge Apartments, 820 Louisiana Boulevard SE; [L-19 / D061]
Lovelace Foundation Tract;
Engineer's Stamp dated 2/13/2000.

Dear Mr. Mortenson,

Based upon the information provided in your submittal dated February 22, 2000, the above reference Traffic Circulation Layout (TCL) is not acceptable. The TCL requires modification prior to "Building Permit Release" as stated on the attached written comments and red-lined TCL.

Please revise the TCL by addressing the required modifications as noted. Your updated TCL must be submitted with the attached written comments and red-lined plan for final review. Please provide an addittional revised copy of replat for my files. Also verification from stated sections is needed. If you have questions please come by so I can clarify as necessary.

Sincerely,

Mike Zamora,
Commercial Plan Checker

cc: Hydrology
Office File

Written Comments: File # L-19 / D061

- Dedication of additional right-of-way on Louisiana Boulevard for a total 10 feet behind the curb.
- Note # 7 is missing.
- Information on the number and dimension of parking stalls along north end of the project are missing.
- The plan must contain street address and legal description [lot or tract & subdivision name].
- Place a note on the plan stating the following:

  "The designer of record's certification required by Transportation Development Services must include certification that the site has been constructed in accordance with the TCL before a CO is released."
- Due to the preliminary natural of this review, subsequent review by the Zoning Section may require alteration to the layout, if modification is required by Zoning, approval of this TCL will be void and a new plan review will be required.
- Parking stall adjacent to refuse enclosures must be 10 feet in width for sight distance improvement.
- The direction the current inspection process has taken in the field has shown that some agents certifying the TCLs for Certificate of Occupancy prefer not to inspect a site in phases as called out on the City Permit Plan set, but they prefer to CO the entire site all at once. For CO purposes it may be in the developer's best interest to choose that a separate permit be requested for each phase independently. If this option is selected, construction of a concrete curb will be required to separate the undeveloped areas for future phases.
- For Handicapped parking spaces - Place concrete wheel stop 18 feet from the rear of the stall. Use # 6 rebar anchors, 18 inches in length.

X:\eng\pwdjdm\asp-rdg-apts.tcl
820 Louisiana Boulevard SE
3/01/2000

JEFF MORTENSEN & ASSOCIATES, INC.
ENGINEERS & SURVEYORS

6010-B MIDWAY
PARK BLVD. NE
ALBUQUERQUE
NEW MEXICO
87109

PRINCIPALS

JEFFREY G. MORTENSEN, P.E.
CHARLES G. CALA, JR., P.S.
JUAN M. CALA

TEL:505·345·4250
FAX:505·345·4254
jmainc@swcp.com

99.063.3

March 10, 2000

Mike Zamora
Commercial Plan Checker
Transportation Development Services Section
City of Albuquerque Public Works Department
600 Second Street N.W.
Plaza Del Sol – Second Floor
Albuquerque, NM 87102

Re: Aspen Ridge Apartments (L-19/D061)

Dear Mike,

Transmitted herewith are the following items relative to the subject project:

- Two (2) Copies of Revised TCL and Detail Sheet
- Copy of Your Comment Letter Dated 03-01-00 With Red-Line Markup
- Copy of Plat Which Dedicates Additional Right-of-Way.

We have prepared this revised plan in response to your comments. We respond to and addresses your written and marked up comments as follows:

- Plan now shows the dedication of R.O.W. This dedication is also shown on the plat.
- I have added note #7 which addresses the concrete valley gutter construction.
- The parking stall dimension string and information along the north end of the project are shown on the north side of the property line.
- I have added the street address to the Site Information area. Because we have a proposed replat, I have expanded the legal description at the top of the sheet to include both the existing and proposed descriptions.
- The Certification Note is located below the Site Information area.
- We are aware that there is a separate review by Zoning which may impact the Plan.

Approved T.C.L. No Stamped, Signed T.C.L. included in pkg. T.D.M. Reviewed & App'd.

- I have widened the parking spaces to 10 feet which are adjacent to refuse containers as shown on your markup.

- We are aware that a phased Certification for CO purposes may have additional requirements.

- Please refer to the accessible parking detail shown on the sections and detail sheet. I have developed this detail based upon a discussion with Joe David Montano. Instead of using a wheel stop, I have extended the 6" high turndown elevation as a curb poured monolithically with the sidewalk. This will provide a continuous wheelstop for the entire length of parking.

Please review this revised plan at your earliest convenience. If you should have any questions or comments concerning this information, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means, P.E.

GM:*

xc: Patrick Simons w/enclosures
Denny Gauman w/enclosures

Enclosures

990633

City of Albuquerque

Public Works Department
Transportation Development Services Section

March 1, 2000

Mr. Jeff Mortenson, P.E.
Jeff Mortenson & Associates
6010 -B Midway Park Boulevard NE
Albuquerque, New Mexico 87109

Re: Site Plan submittal for building permit approval for Kaufman & Broad Multi-Housing Group - Aspen Ridge Apartments, 820 Louisiana Boulevard SE; [L-19 / D061]
Lovelace Foundation Tract;
Engineer's Stamp dated 2/13/2000.

Dear Mr. Mortenson,

Based upon the information provided in your submittal dated February 22, 2000, the above reference Traffic Circulation Layout (TCL) is not acceptable. The TCL requires modification prior to "Building Permit Release" as stated on the attached written comments and red-lined TCL.

Please revise the TCL by addressing the required modifications as noted. Your updated TCL must be submitted with the attached written comments and red-lined plan for final review. Please provide an addittional revised copy of replat for my files. Also verification from stated sections is needed. If you have questions please come by so I can clarify as necessary.

Sincerely,

Mike Zamora,
Commercial Plan Checker

cc: Hydrology
Office File

Written Comments: File # L-19 / D061

- Dedication of additional right-of-way on Louisiana Boulevard for a total 10 feet behind the curb.
- Note # 7 is missing.
- Information on the number and dimension of parking stalls along north end of the project are missing.
- The plan must contain street address and legal description [lot or tract & subdivision name].
- Place a note on the plan stating the following:

  "The designer of record's certification required by Transportation Development Services must include certification that the site has been constructed in accordance with the TCL before a CO is released."
- Due to the preliminary natural of this review, subsequent review by the Zoning Section may require alteration to the layout, if modification is required by Zoning, approval of this TCL will be void and a new plan review will be required.
- Parking stall adjacent to refuse enclosures must be 10 feet in width for sight distance improvement.
- The direction the current inspection process has taken in the field has shown that some agents certifying the TCLs for Certificate of Occupancy prefer not to inspect a site in phases as called out on the City Permit Plan set, but they prefer to CO the entire site all at once. For CO purposes it may be in the developer's best interest to choose that a separate permit be requested for each phase independently. If this option is selected, construction of a concrete curb will be required to separate the undeveloped areas for future phases.
- For Handicapped parking spaces - Place concrete wheel stop 18 feet from the rear of the stall. Use # 6 rebar anchors, 18 inches in length.

X:\eng\pwdjdm\asp-rdg-apts.tcl
820 Louisiana Boulevard SE
3/01/2000

City of Albuquerque

March 13, 2000

Jeff Mortensen, P.E.
Graeme Means
Jeff Mortensen & Associates, Inc.
6010 B Midway Park Boulevard, NE
Albuquerque, NM 87109

RE: GRADING AND DRAINAGE PLAN FOR **ASPEN RIDGE APARTMENTS**
RESUBMITTED FOR BUILDING PERMIT APPROVAL & SO 19 (L-19/D061)

Dear Mr. Mortensen,

Based upon the information provided in your March 10, 2000, resubmittal, with your engineering stamp dated 3-8-2000, the project, referred to above, is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within the city right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

Prior to release of the Certificate of Occupancy, an Engineer Certification, per the DPM checklist, will be required.

If you have any questions, please call me at 924-3988.

Sincerely,

Stuart Reeder, P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: Pam Lujan, Permits
Whitney Reierson
File

PUBLIC WORKS DEPARTMENT

March 13, 2000

INTEROFFICE CORRESPONDENCE HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: Stuart Reeder, PE, Hydrology Div., PWD Stuart Reeder, P.E.

SUBJECT: **ASPEN RIDGE APARTMENTS** (L-19/D061)

Transmitted herewith is a copy of the approved drainage plan for the referenced project incorporating the SO 19 design. 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 SO 19 is required by this office for Certificate of Occupancy release; therefore your expeditious processing of this plan will be greatly appreciated and will avoid any unnecessary delay in the release of Certificate of Occupancy.

If you have any question, please call me at 924-3988.

w/attachment

xc: ✓ file

DRAINAGE INFORMATION SHEET

99.0633

PROJECT TITLE: ASPEN RIDGE APS. ZONE ATLAS/DRNG. FILE #: L19/D61

DRB #: 1000166 EPC #: WORK ORDER #: 628681

LEGAL DESCRIPTION: Tract A, Aspen Ridge Apts.

CITY ADDRESS: 820 Louisiana S.E.

ENGINEERING FIRM: JMA CONTACT: Graeme Means

ADDRESS: PHONE: 345-4250

OWNER: Kaufman + Broad CONTACT: Engineer

ADDRESS: PHONE:

ARCHITECT: Kaufman + Broad CONTACT: Engineer

ADDRESS: PHONE:

SURVEYOR: JMA CONTACT: Chuck Cala

ADDRESS: PHONE: 345-4250

CONTRACTOR: TA WALLICK CONTACT: Engineer

ADDRESS: PHONE:

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
* DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN (AMENDED)
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER

PRE-DESIGN MEETING:

X YES
___ NO
X COPY PROVIDED

* This plan previously Approved, amended to address transp. comments

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
X OTHER SO #19 (S.W. culvert) (SPECIFY)

RECEIVED
MAR 10 2000
HYDROLOGY SECTION

DATE SUBMITTED: 03/10/00 (RESUBMITTAL)

BY: GRAEME MEANS

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO. L-19 DATE: 7/29/99
PLANNING DIVISION NO'S: EPC: ZONING:R-3 DRB:
SUBJECT: Aspen Plaza Apts
STREET ADDRESS (IF KNOWN):
SUBDIVISION NAME: Lovelace Foundation

APPROVAL REQUESTED: Building Permit

ATTENDANCE: Fred J. Aguirre-City Hydrologist
Graem Means

FINDINGS:
An approved drainage plan is required for building permit approval. The drainage concept for this infill site could be a qualitative approach in which you would address the information below. If you can demonstrate that this infill development will have a negligible impact on the downstream drainage system, free discharge would be acceptable.

- a comparison of the proposed development to its overall drainage basin with respect to area and/or the relationship of the increased runoff to the existing basin's runoff. The AMDS Drainage Study can be used for basin information.
- impacts on downstream flood plains
- potentials offsite problems created by this development -in other words, will this development have an adverse affect on adjacent properties with respect to drainage
- the downstream affect resulting from the development of the remaining infill sites using the same concept.
- discuss any recent downstream storm drain improvements

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION.

SIGNED: Fred J. Aguirre
TITLE : City Hydrologist

SIGNED:
TITLE :

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 5, 2002

Daniel Aguirre, P.E.
Wilson & Company
4900 Lang Ave NE
Albuquerque, New Mexico 87109

RE: VAN BUREN MIDDLE SCH.- ADMIN. OFFICES (L-19/D47)
(700 Louisiana Blvd SE)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 9/14/2001
ENGINEERS CERTIFICATION DATED 12/3/2002

Dear Mr. Aguirre:

Based upon the information provided in your Engineers Certification submittal dated 12/3/2002, and the completion of the SO19 sidewalk culvert improvements, the above referenced site is approved for Permanent Certificate of Occupancy.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Development & Bldg. Ser. Division
BUD

C: Certificate of Occupancy Clerk, COA
approval file
drainage file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

L-19/047

(REV. 1/11/2002)

PROJECT TITLE: Van Buren Middle School ZONE MAP/DRG. FILE#: ~~L-18/L-19~~

DRB#: N/A EPC#: N/A WORK ORDER #: N/A

LEGAL DESCRIPTION: Section 25, Township 10N, Range 3E, Map No. L-18/L-19

CITY ADDRESS: 700 Louisiana Blvd., SE

ENGINEERING FIRM: Wilson & Company CONTACT: John A. Tellez

ADDRESS: 2600 The American Rd. SE, Suite 100 PHONE: (505) 348-4128

CITY, STATE: Rio Rancho, NM ZIP CODE: 87124

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: Pat McMurray

ADDRESS: 915 Oak St., SE PHONE: (505) 242-5865

CITY, STATE: Albuquerque, NM ZIP CODE: 87106

ARCHITECT: H. Barker Architects CONTACT: Rupal Engineer

ADDRESS: 209 Gold Avenue, SW PHONE: (505) 842-6789

CITY, STATE: Albuquerque, NM ZIP CODE: 87102

SURVEYOR: Wilson & Company CONTACT: Scott Croshaw

ADDRESS: 4900 Lang Ave., NE PHONE: (505) 348-4035

CITY, STATE: Albuquerque, NM ZIP CODE: 87109

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_____ DRAINAGE PLAN
_____ CONCEPTUAL GRADING & DRAINAGE PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEERS CERTIFICATION (HYDROLOGY)
_____ CLOMR\LOMR
_____ TRAFFIC CIRCULTAION LAYOUT (TCL)
_____ ENGINEERS CERTIFICATION (TCL)
_____ ENGINEERS CERTIFICATION (DRB. APPR. SITE PLAN)
X Final TCL and Grading & Drainage As-Builts

CHECK TYPE OF APPROVAL SOUGHT:

_____ SIA / FINANCIAL GUARANTEE RELEASE
_____ 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
_____ BUILDING PERMIT APPROVAL
X CERTIFICATION OF OCCUPANCY (PERM.)
_____ CERTIFICATION OF OCCUPANCY (TEMP.)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

X YES
_____ NO
_____ COPY PROVIDED

RECEIVED
DEC 03 2002
HYDROLOGY SECTION

Date Submitted: December 3, 2002 By: John A. Tellez

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

November 29, 2010

Jeffrey G. Mortensen, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Van Buren Middle School Track & Field, 700 Louisiana Blvd. SE, (L-19/D047), Engineer's Stamp Date: 02/18/2010
Certification Date: 11-24-10

Dear Mr. Mortensen,

Thank you for providing an Engineer Certification for the Grading/Drainage Plan received on 11-29-10, for the above referenced plan. This information will be placed in the project file.

If you have any questions, I can be contacted at 924-3982.

Sincerely,

Timothy E. Sims
Plan Checker, Planning Dept.-Hydrology
Development and Building Services

C: file

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

HMCG 2010.001.3

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: VAN BUREN MS SOFTBALL FIELD ZONE ATLAS/DRNG. FILE #:L19 D047
DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: UNPLATTED LANDS OF THE BOARD OF EDUCATION
CITY ADDRESS: 700 LOUSIANA BLVD SE

ENGINEERING FIRM:	HIGH MESA CONSULTING GROUP	CONTACT:	JEFF MORTENSEN
ADDRESS:	6010-B MIDWAY PARK BLVD. NE	PHONE:	(505) 345-4250
CITY, STATE:	ALBUQUERQUE, NM	ZIP CODE:	87109
OWNER:	ALBUQUERQUE PUBLIC SCHOOLS	CONTACT:	ANNELLE DARBY
ADDRESS:	915 OAK SE	PHONE:	848-8829
CITY, STATE:	ALBUQUERQUE, NM	ZIP CODE:	87106
ARCHITECT:	WESTWIND LANDSCAPE	CONTACT:	ELIZABETH CALHOON
ADDRESS:	2739 VASSAR PLACE NE	PHONE:	881-8925
CITY, STATE:	ALBUQUERQUE, NM	ZIP CODE:	87107
SURVEYOR:	HIGH MESA CONSULTING GROUP (NMPS 11184)	CONTACT:	CHARLES G. CALA, JR
ADDRESS:	6010-B MIDWAY PARK BLVD. NE	PHONE:	(505) 345-4250
CITY, STATE:	ALBUQUERQUE, NM	ZIP CODE:	87109
CONTRACTOR:	WESTWIND LANDSCAPE	CONTACT:	ELIZABETH CALHOON
ADDRESS:	2739 VASSAR PLACE NE	PHONE:	881-8925
CITY, STATE:	ALBUQUERQUE, NM	ZIP CODE:	87107

TYPE OF SUBMITTAL:
- ___ DRAINAGE REPORT
- ___ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ___ DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ GRADING PLAN ***(REVISION)***
- ___ EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEER'S CERTIFICATION (TCL)
- ___ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- ___ OTHER -

CHECK TYPE OF APPROVAL SOUGHT:
- ___ SIA/FINANCIAL GUARANTEE RELEASE
- ___ 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
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM.)
- ___ CERTIFICATE OF OCCUPANCY (TEMP.)
- ___ GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- X OTHER – GRADING APPROVAL CONDITION

WAS A PRE-DESIGN CONFERENCE ATTENDED:
- ___ YES
- X NO
- ___ COPY PROVIDED

RECEIVED
NOV 29 2010
HYDROLOGY SECTION

DATE SUBMITTED: 11/24/2010 BY: JEFFREY G. MORTENSEN
XC: ANNELLE DARBY W/ 1 SET MYLARS

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based upon the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
KEN SCHULTZ

CHIEF ADMINISTRATIVE OFFICER
GENE ROMO

DEPUTY CAO DEVELOPMENT & ENTERPRISE SERVICES
LARRY LARRANAGA

DEPUTY CAO PUBLIC SERVICES
DAN WEAKS

August 16, 1988

Mike Kibbee
DMJM
6501 Americas Parkway, NE Suite 690
Albuquerque, New Mexico 87110

RE: REVISED CONCEPTUAL DRAINAGE REPORT FOR PHIL CHACON PARK, PHASE I, RECEIVED JULY 20, 1988 FOR SITE DEVELOPMENT PLAN APPROVAL (L-19/D45)

Dear Mr. Kibbee:

The above referenced submittal, dated June 1, 1988, is approved for Site Development Plan sign-off by the City Engineer.

At time of Grading and Paving Permit request, a more detailed Grading and Drainage Plan will be required. A Topsoil Disturbance Permit from the Environmental Health Department will also be required at that time.

Development of Phase II will require a detailed analysis of the 30" RCP outfall system to determine the timing and capacity for release of developed flows into this system.

If you have any questions, please call me at 768-2650.

Cordially,

Roger A. Green, PE

Roger A. Green, P.E.
C.E./Hydrology Section

xc: Sandy Zuschlag
Julia Niemann

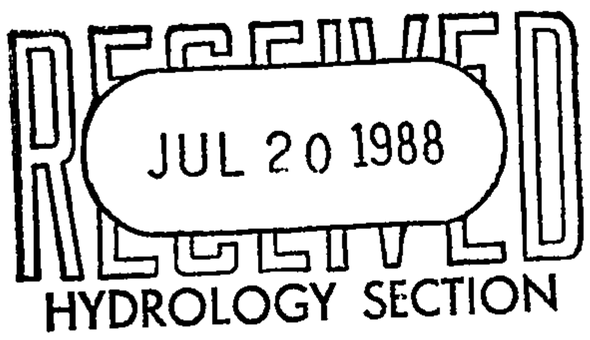
RAG/bsj

[redacted]

DMJM

Daniel, Mann, Johnson, & Mendenhall

CONCEPTUAL
DRAINAGE REPORT
FOR
PHIL CHACON PARK
PHASE I



PREPARED FOR: City of Albuquerque
P. O. Box 1293
Albuquerque, N. M. 87103

PREPARED BY: DMJM
6501 Americas Parkway N.E.
Suite 690
Albuquerque, N. M. 87110
(505)884-4031

TABLE OF CONTENTS

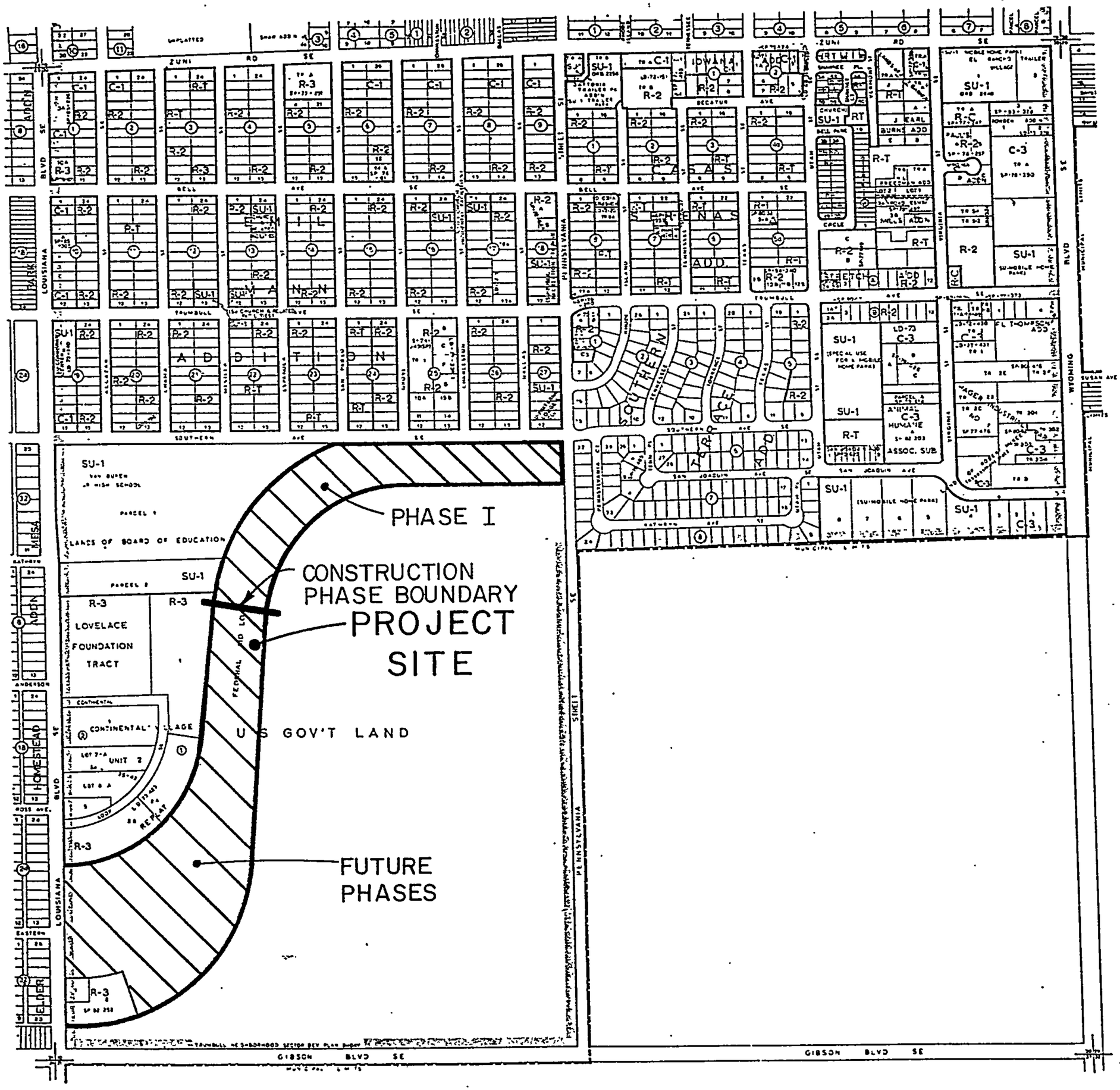
PURPOSE:

The purpose of this report is to present the method for controlling surface runoff from the proposed development in a manner which is acceptable to the City of Albuquerque and the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA). In addition, this report presents a design that will ensure that the project site will be protected from storm runoff and that the proposed development of the site will not increase the flooding potential to adjacent properties and downstream areas.

LOCATION AND DESCRIPTION:

The project site is located in Albuquerque's Southeast quadrant and is bounded on the south and east by Kirtland Air Force Base, on the north by Southern Blvd. S. E. and on the west by Van Buren Middle School and the Warren Apartments complex. The location of the project site is graphically depicted on vicinity Map L-19 (Figure 1).

The project site is currently undeveloped and contains approximately 50.4 acres of which approximately 25.9 acres will be developed at the present time. The natural topography slopes from east to west at a grade of approximately 1.3%. The major soil groups present within the project site are Madurez-Wink association, Tijeras, Embudo-Tijeras association and Wink-Embudo association. The USDA Soil Conservation Service has classified all of the above soil groups into hydrologic type "B". Plate 31 of the Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, 1977 graphically depicts the soil types within the project site (figure #2).



LEGAL DESCRIPTION
T 10 N
R 4 E
SEC 30

UNIFORM PROPERTY CODE
1-013-056

MAP AMENDED THROUGH
MARCH 1986

L-19-Z

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT

FIGURE 1

BERNALILLO COUNTY, AND PARTS OF SANDOVAL AND VALENCIA COUNTIES, NEW MEXICO — SHEET NUMBER 31

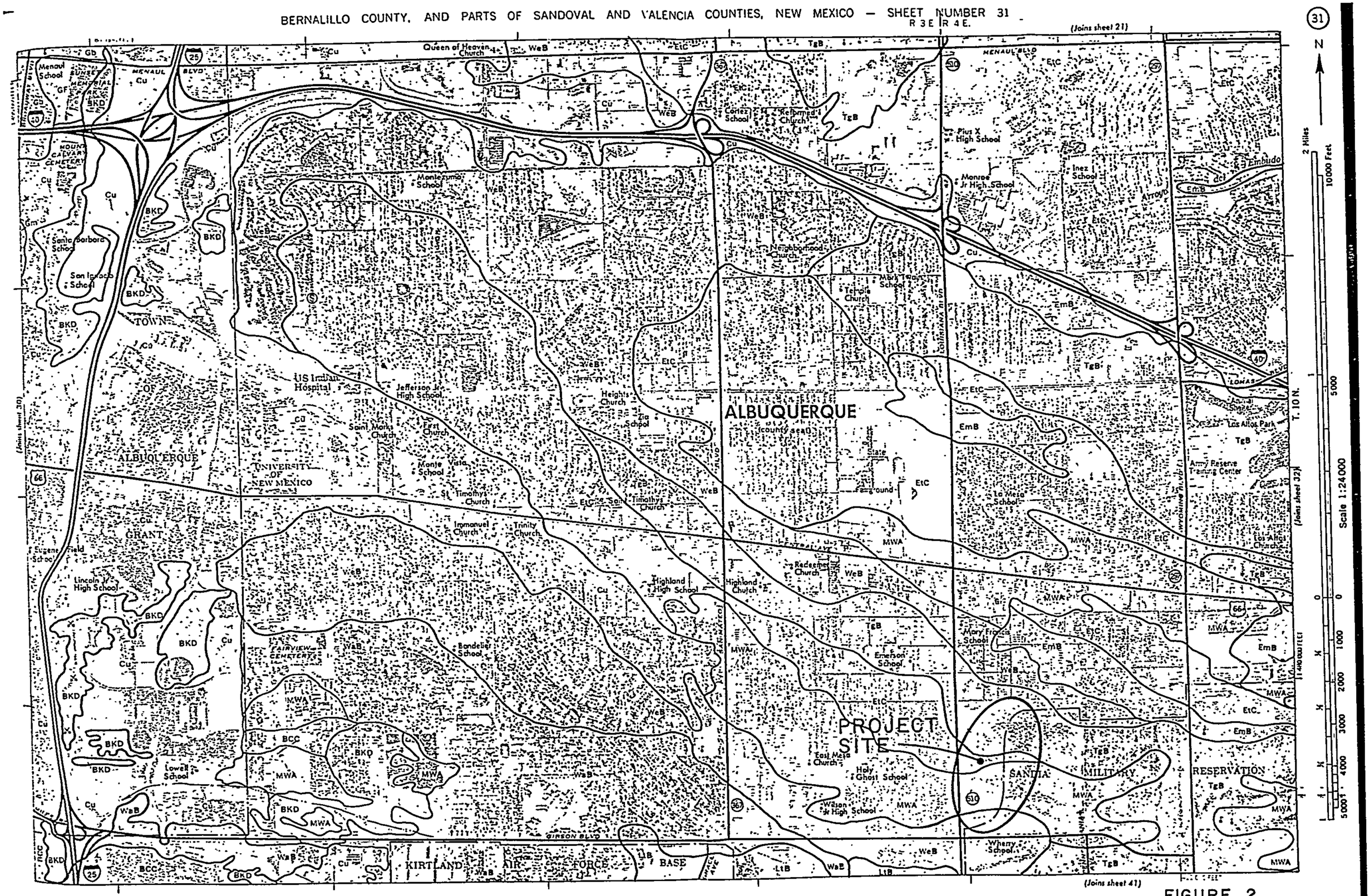


FIGURE 2

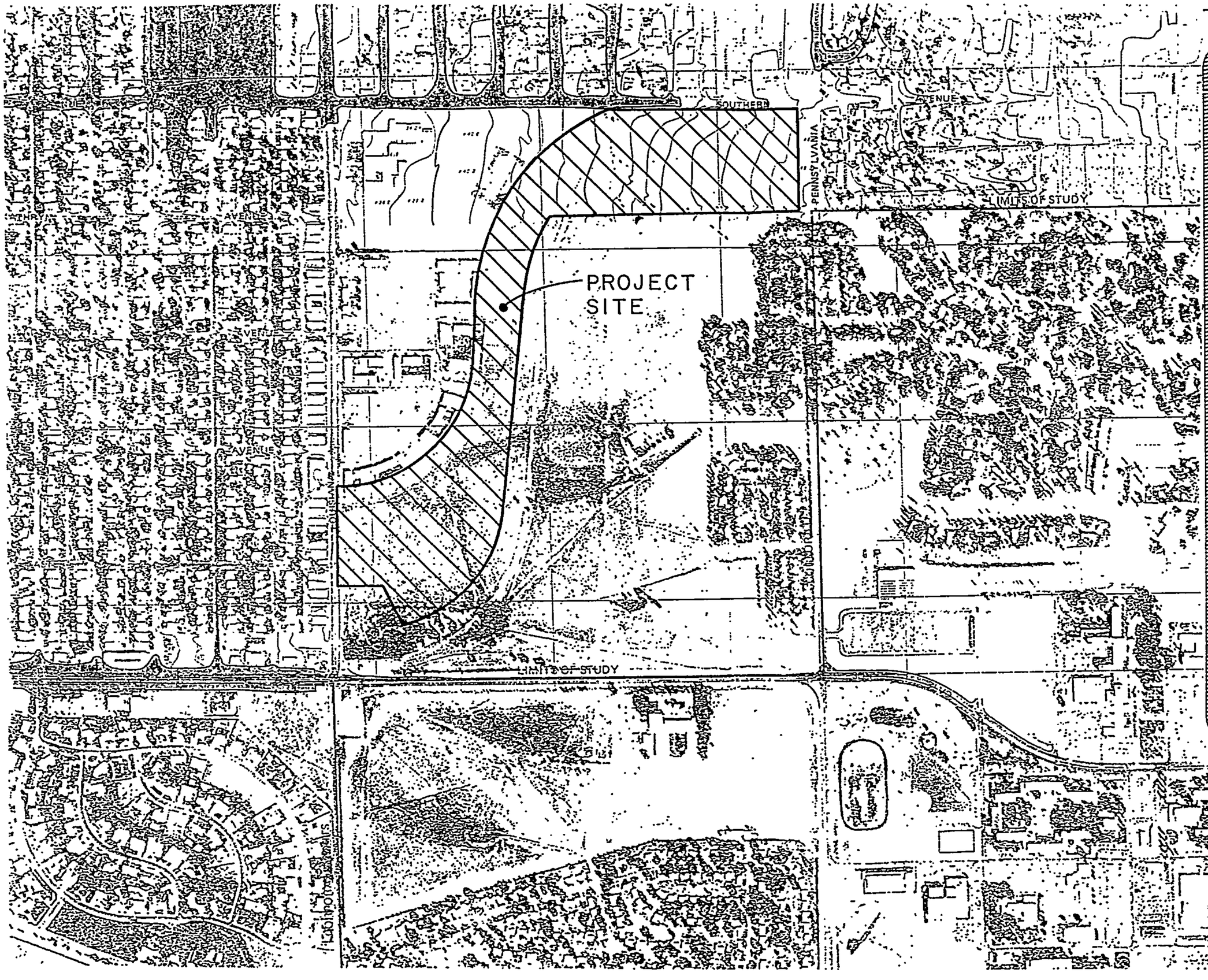
EXISTING DRAINAGE CONDITIONS:

The project site is currently undeveloped and does not lie within a flood hazard zone as indicated by FEMA Floodway Map panel 31 (Figure #3). The only offsite drainage encroaching the project site is generated on the land adjacent to the east property line and contains approximately 39.63 acres, all of which lies within the jurisdiction of Kirtland Air Force Base and is maintained by the City of Albuquerque. The above offsite drainage basin is graphically depicted in the Offsite Drainage Map (rear pocket). Runoff from the offsite area enters the project site along the east property line as overland sheet flow. Storm runoff passes through the project site from east to west as overland sheet flow until it is intercepted in an earthen swale running along the west property line. The swale carries the runoff south and west along the property line then discharges into Louisiana Blvd. SE. Once in Louisiana Blvd. SE the runoff is carried south to Gibson Blvd. SE then west on Gibson SE as surface flow until it is captured by an underground storm drain system in Gibson Blvd. SE.

PROPOSED DRAINAGE CONDITIONS:

The project site will be developed into a city park (see Phil Chacon Park Master Plan). Construction of the park will take place in multiple phases: Phase I, consisting of the northeast half of the project site, will be developed immediately. Future phases consisting of the south west half of the project site will be left in its existing condition until it's development at some future date. The construction phase boundary as well as other proposed drainage conditions are graphically depicted in the Phil Chacon Park Drainage Plan (rear pocket).

Runoff generated within the project site will be treated by several methods. First, runoff from natural landscape areas will be retained on site. This treatment will effectively reduce runoff rates as well as reduce maintenance costs by containing any sediment dislodged from these areas. Secondly, runoff from parking lot areas will be directly discharged into the adjacent streets or underground storm drain systems. This treatment will prevent runoff tainted with oils and other pollutants potentially deadly to lawns and foliage from being released onto landscaped areas. Lastly, runoff from sodded and planted areas will be carried by a series of swales to the construction phase boundary and released into the existing drainage path in the future phase area. The permanent treatment for the sodded and planted areas of Phase I (Basin C-1 of the grading and drainage plan) will be designed and constructed with future phases of the park and will have the following scheme: Runoff from the sodded and planted



NATIONAL FLOOD INSURANCE PROGRA

FLOODWAY

FLOOD BOUNDARY AND FLOODWAY MAP

CITY OF

ALBUQUERQUE, NEW MEXICO

BERNALILLO COUNTY

PANEL 36 OF 50

COMMUNITY-PANEL NUMBE

350002 003

EFFECTIVE DATE

OCTOBER 14, 198

Federal Emergency Management Agen

FIGURE 3

areas of Phase I as well as all runoff from future phases will be carried by a series of swales to the southwest corner of the park where it will be discharged into an underground storm drain system. This system will connect to the existing 30" RCP storm drain known as the Kirtland Detention Basin North Basin Drain (Included in City of Albuquerque Project No. 1674) and is identified in the Restudy of Albuquerque Master Drainage Study Volume II (AMDSII) as APU 48SS. The location of these storm drain systems can be seen on the offsite drainage map in the rear pocket. This treatment will prevent all nuisance flows as well as major storm flows from being discharged into adjacent roadways as surface runoff thus reducing pedestrian and traffic safety concerns.

All runoff generated within the offsite basin will be prevented from entering the project site. This will be accomplished with the expansion of Gibson Boulevard through the offsite basin (see South Urban Area Corridor Study Gibson Boulevard East Sheets 7 and 8). Until construction of the Gibson Boulevard East project is underway, storm runoff from the offsite basin will be controlled by constructing a series of temporary contour ditch/dyke sections throughout the offiste basin. This will effectively capture and retain all runoff generated within this area in small volumes, as well as keep erosion to a minimum.

EROSION CONTROL PLAN:

Interim erosion control during construction of all phases of the project will be accomplished by placing a series of earthen dikes and silt fences in the drainage paths. This will limit runoff to manageable volumes and areas and will also limit sediment transport from disturbed soil areas.

There will be no physical erosion control measures taken between the construction of Phase I and future phases. This is due to three facts: First, runoff from Phase I will be significantly reduced from the existing condition. Secondly, runoff from Phase I that enters the future phases area will do so at the same point as in the existing condition. Lastly, the future phase area will be left in its existing condition until it's time of development and there is no evidence of erosion at this time.

SUMMARY

1. All criteria established by the Drainage Ordinance have been met.
2. Developed runoff rates have been significantly reduced from the existing rates.
3. All offsite runoff will be prevented from entering the project site.
4. Allowable surface runoff rates established by AMDSII have been reduced by the development of this project site.

CALCULATIONS

HYDROGRAPH COMPUTATION WORKSHEET

DATE 5-25-88
COMPUTED BY MK
CHECK BY

Analysis Point "A"
Existing Conditions (Q by Rational Method, V by SCS Method)

Job # 6368.00

PROJECT Phil Chacon Park - Phase I
Project Site + offsite Basin I-A
LOCATION + offsite Basin I-B

ANALYSIS POINT # "A" NW property corner

(DR. AREA) A = 90.07 ACRES

T_c 32.48 MIN

POINT RAINFALL 2.4 IN. FROM PLATE 22.2 D-1

CN = 77 FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = 0.68 IN. FROM PLATE 22.2 C-4

COMPUTED T_p = 33 MIN. $T_p = T_c$
(Rounded to even minute)

$q_p = \frac{45.4A}{T_p}$ = — CFS./INCH OF RUNOFF

~~$(R \times q_p)$~~ = Q_{peak} = 99.42 CFS

t(COLUMN)=(t/T_p) $t = T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}}$ $Q = y(Q_{peak})$

	(t/T_p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1	3.3	.03	2.98
3	.2	6.6	.10	9.94
4	.3	9.9	.190	18.89
5	.4	13.2	.310	30.82
6	.5	16.5	.470	46.73
7	.6	19.8	.660	65.62
8	.7	23.1	.820	81.52
9	.8	26.4	.930	92.46
10	.9	29.7	.990	98.43
11	1.0	33	1.00	99.42
12	1.1	36.3	.990	98.43
13	1.2	39.6	.930	92.46
14	1.3	42.9	.860	85.50
15	1.4	46.2	.780	77.55
16	1.5	49.5	.680	67.61
17	1.6	52.8	.560	55.68
18	1.7	56.1	.460	45.73
19	1.8	59.4	.390	38.77
20	1.9	62.7	.330	32.81
21	2.0	66	.280	27.84
22	2.2	72.6	.207	20.58
23	2.4	79.2	.147	14.61
24	2.6	85.8	.107	10.64
25	2.8	92.4	.077	7.66
25	3.0	99.0	.055	5.47
27	3.2	105.6	.040	3.98
28	3.4	112.2	.029	2.88
29	3.6	118.8	.021	2.09
30	3.8	125.4	.015	1.49
31	4.0	132.0	.011	1.09
32	4.5	148.5	.005	0.50
33	5.0	165.0	.000	0

t_c:

$L = 4200'$

$S = 0.007$

$t_c = .0078 \frac{4200^{.77}}{0.007^{.385}}$

$t_c = 32.48$ min

$I = 2.4\,(6.84)\,33^{-.51} = 2.759$ in/hr (2.4" 6 hr - 100yr storm)

$C = 0.40$ (undeveloped)

$Q_{100} = (0.40)(2.759)(90.07)$

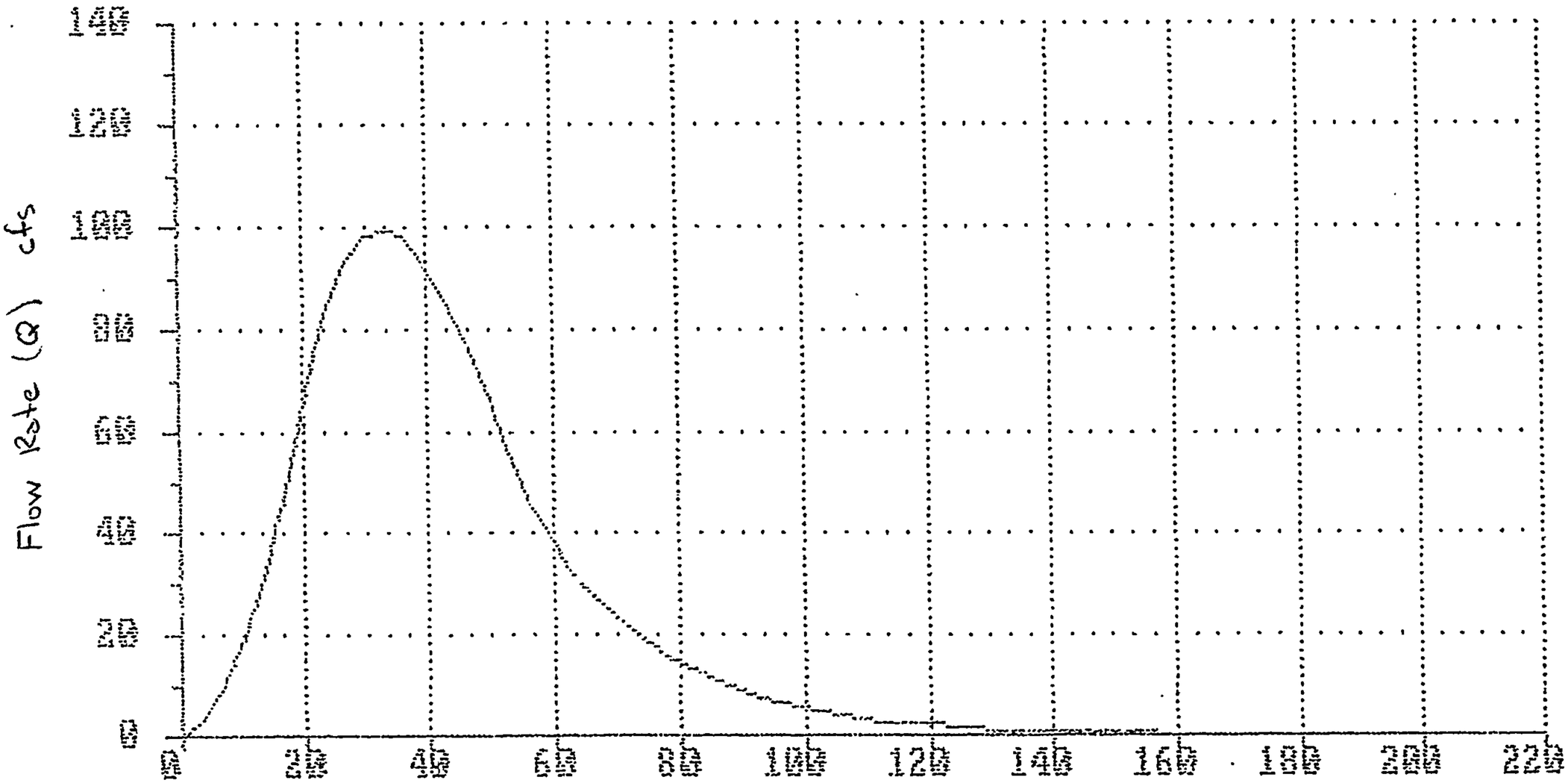
PLATE 22.2 F-1

$\Rightarrow Q_{100} = 99.42$ cfs $\qquad Q_{10} = 65.32$ cfs

$V_{100} = (90.07)(43560)(0.68)(\frac{1}{12})$

$\Rightarrow V_{100} = 222,329$ ft^3 (5.10 Ac-ft) $\qquad V_{10} = 146,071$ ft^3 (3.35 Ac-ft)

Existing Condition Hydrograph : Analysis Point "A" (offsite Basin + Project site)



Q_p = 99.42 cfs
t_p = 33 minutes

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	BY: MK	DATE: 5-25-99	PAGE: 10

SUBJECT: Developed Onsite Conditions

Basin A-1 (Retained Onsite)

$A = 51360$ ft² (1.18 Ac)

$C = 0.40$ (Natural landscape)

$t_c = 10$ min

$I = (2.4)(6.84)\ 10^{-.51} = 5.07$ in/hr (2.4" 6 hr - 100 yr storm)

$Q_{100} = (0.40)(5.07)(1.18)$

$\rightarrow$ $Q_{100} = 2.39$ cfs $\qquad Q_{10} = 1.57$ cfs

CN = 77 DPM Vol #2 Plate 22.2 C-2

Direct Runoff (R) = 0.68 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = (51360)(0.68)(\frac{1}{12})$

$\rightarrow$ $V_{100} = 2911$ ft³ $\qquad V_{10} = 1913$ ft³

Retention Pond Capacity: (V_p) Pond A-1

Surface Area (A_S) = 8384 ft² (5362 contour)
Bottom Area (A_B) = 0
Min. Depth (d) = 0.75 ft

$V_p = \frac{A_S + A_B}{2} d = 0.375\ A_S = (.375)(8384)$

$\rightarrow$ $V_p = 3144$ ft³ $> V_{100} = 2911$ ft³ ok ✓

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	PAGE: 11
		BY: MK	DATE: 5-25-89
SUBJECT: Developed Onsite Conditions			

Basin A-2 (Retained Onsite)

A = 51,936 ft² (1.19 Ac)

C = 0.40 (Natural landscape)

t_c = 10 min

$I = (2.4)(6.84)\ 10^{-.51} = 5.07$ in/hr (2.4" 6hr-100yr storm)

$Q_{100} = (0.40)(5.07)(1.19)$

→ $Q_{100} = 2.41$ cfs $\qquad Q_{10} = 1.59$ cfs

CN = 77 DPM Vol #2 Plate 22.2 C-2

Direct Runoff (R) = 0.68 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 51936\ (.68)(\frac{1}{12})$

→ $V_{100} = 2944$ ft³ $\qquad V_{10} = 1934$ ft³

Retention Pond Capacity : (V_p) Pond A-2

Surface Area (A_s) = 8928 (5365 contour)
Bottom Area (A_B) = 0
Min Depth (d) = 0.75 ft

$V_p = \frac{A_s + A_B}{2} d = 0.375\, A_s = (.375)(8928)$

→ $V_p = 3348$ ft³ > $V_{100} = 2944$ ft³ ok

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	BY: MK	DATE: 5-24-88	PAGE: 12

SUBJECT: Developed Onsite Conditions

Basin A-3 (Retained Onsite)

$A = 39{,}398$ ft² (0.90 A_c)

$C = 0.40$ (Natural Landscape)

$t_c = 10$ min

$I = 2.4(6.84)\,10^{-.51} = 5.07$ in/hr (2.4" 6hr-100yr storm)

$Q_{100} = (0.40)(5.07)(0.90)$

→ $Q_{100} = 1.83$ cfs $\qquad Q_{10} = 1.20$ cfs

CN = 77 DPM Vol #2 Plate 22.2 C-2

Direct Runoff (R) = 0.68 DPM Vol #2 Plate 22.2 C-4

$V_{100} = (0.68)(\frac{1}{12})(39398)$

→ $V_{100} = 2233$ ft³ $\qquad V_{10} = 1467$ ft³

Retention Pond Capacity: (V_p) Pond A-3

Surface Area $A_s = 6013$ ft²

Bottom Area $A_B = 0$

Min Depth $d = 0.75$ ft.

$V_p = \frac{A_s + A_B}{2} d = 0.375\, A_s = (.375)(6013)$

→ $V_p = 2255$ ft³ > $V_{100} = 2233$ ft³ ok!

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6369.00	BY: MK	DATE: 5-25-88	PAGE: 13

SUBJECT: Developed Onsite Conditions

Basin A-4 (Retained Onsite)

A = 20,672 ☐ (0.47 Ac)

C = 0.40 (Natural landscape)

t_c = 10 min

$I = 2.4\,(6.84)\,10^{-.51} = 5.07$ in/hr (2.4" 6 hr-100yr storm)

$Q_{100} = (0.40)(5.07)(0.47)$

→ $Q_{100} = 0.95$ cfs $\qquad Q_{10} = 0.63$ cfs

CN = 77 DPM Vol #2 Plate 22.2 C-2

Direct Runoff (R) = 0.68 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = (20,672)(.68)(\frac{1}{12})$

→ $V_{100} = 1172$ ft^3 $\qquad V_{10} = 770$ ft^3

Retention Pond Capacity (V_p) Pond A-4

Surface Area (A_s) = 5696
Bottom Area (A_B) = 0
Min Depth (d) = 0.75 ft.

$V_p = \frac{A_s + A_B}{2} d = 0.375\, A_s = .375\,(5696)$

→ $V_p = 2136$ ft^3 > $V_{100} = 1172$ ft^3 ok ✓

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO. 6368.00	PAGE 14
		BY MK	DATE 5-24-88
SUBJECT: Developed Onsite Drainage			

Basin A-5 (Retained Onsite)

$A = 25088$ ft^2 $(0.56\ A_c)$

$C = 0.40$ (Natural landscape)

$t_c = 10$ min

$I = 2.4(6.84)\ 10^{-.51} = 5.07$ in/hr (2.4" 6hr-100yr storm)

$Q_{100} = (0.40)(5.07)(0.56)$

$\longrightarrow$ $Q_{100} = 1.14$ cfs $\qquad Q_{10} = 0.75$ cfs

CN = 77 DPM Vol #2 Plate 22.2 C-2

Direct Runoff (R) = 0.68 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 25088\ (.68)(\frac{1}{2})$

$\longrightarrow$ $V_{100} = 1422$ ft^3 $\qquad V_{10} = 935$ ft^3

Retention Pond Capacity (V_p) Pond A-5

Surface Area (A_s) = 3849

Bottom Area (A_B) = 0

Min Depth (d) = 0.75 ft

$V_p = \frac{A_s + A_B}{2} d = 0.375\ A_s = (.375)(3849)$

$\longrightarrow$ $V_p = 1444$ ft^3 $\qquad > V_{100} = 1422$ ok ✓

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	PAGE: 15
		BY: MK	DATE: 5-25-99

SUBJECT: Developed Onsite Conditions

Basin B-1 (Direct discharge into Southern Ave SE)*

A = 41578 ft² (0.95 Ac)

Composite Rational "C" factor

Area Type	Area ft²	C	CA
Paved	32578	0.95	30949.1
Lawn	9000	0.25	2250.0
Σ	41578	-	33199.1

$$C = \frac{\Sigma CA}{\Sigma A} = \frac{33199.1}{41578}$$

$C = 0.80$

$t_c = 10$ min

$I = 2.4\,(6.84)\,10^{-.51} = 5.07$ in/hr (2.4" 6 hr - 100yr storm)

$Q_{100} = (0.80)(5.07)(0.95)$

→ $Q_{100} = 3.85$ cfs $\qquad Q_{10} = 2.53$ cfs

Weighted CN

Area Type	Area ft²	% of Total	CN *
Paved	32578	78.35	98
Lawn	9000	21.65	61
Σ	41578	100	-

* DPM Vol #2 Plate 22.2 C-2

$CN = .7835\,(98) + .2165\,(61)$

$CN = 90$

Direct Runoff (R) = 1.44 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 41{,}578\,(1.44)\left(\frac{1}{12}\right)$

→ $V_{100} = 4990$ ft³ $\qquad V_{10} = 3279$ ft³

* Direct discharge of Basin B-1 into Southern Ave SE is permissible due to the following:

1. Basin B-1 is a portion of Basin U-20 of the Restudy of Albuquerque Master Drainage Study Volume II (AMDS II). Basin U-20 has been significantly reduced in size by the development of Phil Chacon Park, therefore reducing total runoff in this basin
2. AMDS II Makes no restrictions in Basin U-20 regarding direct discharge.

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6388.00	BY: MK	DATE: 5-25-98	PAGE: 16
SUBJECT: Developed Onsite Conditions					

Basin B-2 (Direct discharge to Louisiana Blvd SE via future police substation parcel being designed by others.)

A = 245 376 ft² (5.63 Ac)

Composite Rational "C" Factor

Area Type	Area ft²	C	CA
Paved	98000	0.95	93100
Lawn	147376	0.25	36844
Σ	245376	–	129944

$$C = \frac{\Sigma CA}{\Sigma A} = \frac{129944}{245376}$$

$$C = 0.53$$

Time of Concentration (t_c)

① L = 480' e S = 0.01

$$t_{c_1} = .0078 \frac{480^{.77}}{.01^{.385}} = 5.33 \text{ min} \approx 6$$

② L = 680' e S = .005

$$t_{c_2} = .0078 \frac{680^{.77}}{.005^{.385}} = 9.10 \text{ min} \approx 9$$

$t_c = t_{c_1} + t_{c_2} = 9+6$

$t_c = 15$ min

$I = 2.4(6.84)\,15^{-.51} = 4.125$ in/hr (2.4" 6hr-100yr storm)

$Q_{100} = (.53)(4.125)(5.63)$

→ $Q_{100} = 12,31$ cfs

$Q_{10} = 8.09$ cfs

Weighted CN

Area Type	Area ft²	CN *	A(CN)
Paved	98000	98	9604000
Sod	147 376	61	8989936
Σ	245376	–	18593936

* DPM Vol #2 Plate 22.2 C-2

$$CN = \frac{\Sigma A(CN)}{\Sigma A} = \frac{18,593,936}{245,376}$$

$$CN = 76$$

Direct Runoff (R) = 0.63 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 245376\,(0.63)\,(1/2)$

→ $V_{100} = 12,981$ ft³

$V_{10} = 8529$ ft³

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00		PAGE: 17
		BY: MK	DATE: 5-24-88	
SUBJECT: Developed Onsite Conditions				

Basin B-2 (continued)

Direct discharge of Basin B-2 into Louisiana Blvd SE via future police substation parcel is permisible due to the following:

1. Basin B-2 is a portion of Basin U-30 of AMDS II. Basin U-30 has been significantly reduced by the development of Phil Chacon Park, therefore reducing total runoff in this basin.
2. AMDS II makes no restrictions in Basin U-30 regarding direct discharge.
3. The police substation parcel will also serve as an access way to the park. therefore drainage will be transported through this access way to Louisiana Blvd. SE.,
4. Louisiana Blvd SE will not be flooded by this drainage. This is due to Louisiana being at a high point in this location and therefore has little other contributing runoff sources.

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	BY: MK	DATE: 5-25-88	PAGE: 18

SUBJECT: Developed Onsite Conditions

Basin C-1 (Direct discharge at Analysis Point "B")

A = 652592 ± (14.98 Ac)

Composite Rational "C" Factor

Area Type	Area ±	C	CA
Paved	51200	0.95	48640
Lawn	601392	0.25	150348
Σ	652592	-	198988

$$C = \frac{\Sigma CA}{\Sigma A} = \frac{198988}{652592}$$

C = 0.30

Time of Concentration (t_c)

① L = 300' @ S = .0233 t_{c_1} = 2.68
② L = 360' @ S = .0055 t_{c_2} = 5.38
③ L = 680' @ S = .0118 t_{c_3} = 6.54
④ L = 990' @ S = .0009 t_{c_4} = 21.48

$t_c = \Sigma t_{c_i}$ = 2.68 + 5.38 + 6.54 + 21.48

t_c = 36 min

$I = 2.4\,(6.84)\,36^{-.51}$ = 2.64 in/hr (2.4" 6hr - 100yr storm)

$Q_{100} = (0.30)(2.64)(14.98)$

→ Q_{100} = 11.86 cfs Q_{10} = 7.79 cfs

Weighted CN

Area Type	Area ±	CN *	A(CN)
Paved	51200	98	5017600
Lawn	601392	61	36684912
Σ	652592	-	41702512

* DPM Vol #2 Plate 22.2 C-2

$$CN = \frac{\Sigma A(CN)}{\Sigma A} = \frac{41702512}{652592}$$

CN = 64

Direct Runoff (R) = 0.24 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 652592\ (0.24)\left(\frac{1}{12}\right)$

→ V_{100} = 13,052 ft³ V_{10} = 8576 ft³

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	PAGE: 19
		BY: MK	DATE: 5-25-88

SUBJECT: Developed Conditions : Analysis Point "A"

Contributory Area :

Offsite Basin I-B:	$A = 22.42\ A_c$	undeveloped
Basin C-1 :	$A = 14.98\ A_c$	developed park
Phase II Area :	$A = 24.54\ A_c$	undeveloped
	$A_T = 61.94\ A_c$	

Composite Rational "C" Factor

Area Type	Area (A_c)	C	CA
undeveloped	46.96	0.40	18.784
Basin C-1	14.98	0.30	4.494
Σ	61.94	-	23.278

$$C = \frac{\Sigma CA}{\Sigma A} = \frac{23.278}{61.94}$$

$$C = 0.38$$

Time of Concentration (t_c)

① t_{c_1} = t_c of Basin C-1 to Analysis Point "B" = 36 minutes

② t_{c_2} = time from Analysis point "B" to Analysis point "A"

$L = 1700$ ft

$S = 0.006$

$$t_{c_2} = .0078 \frac{1700^{.77}}{.006^{.385}} = 17 \text{ minutes}$$

$t_c = \Sigma t_{c_i} = 36 + 17$

$t_c = 53$ minutes

$I = 2.4\,(6.84)\,53^{-.51} = 2.167$ in/hr (2.4" 6hr-100yr storm)

$Q_{100} = (0.38)(2.167)(61.94)$

→ $Q_{100} = 51.0$ cfs $\qquad Q_{10} = 33.5$ cfs

Weighted CN

Area Type	Area (A_c)	CN	A(CN)
Undeveloped	46.96	77 *	3615.92
Basin C-1	14.98	64	958.72
Σ	61.94	-	4574.64

* DPM Vol #2 Plate 22.2 C-2

$$CN = \frac{\Sigma(CN)A}{\Sigma A} = \frac{4574.64}{61.94}$$

$CN = 74$

Direct Runoff (R) = 0.55 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 61.94\,(0.55)\,(\frac{1}{12})$

→ $V_{100} = 2.85\ A_c \cdot ft\ (124{,}305\ ft^3)$ $\qquad V_{10} = 1.87\ A_c \cdot ft.\ (81669\ ft^3)$

DMJM	PROJECT	PROJECT NO.		PAGE
	Phil Chacon Park Phase I	6368.00		20
		BY MK"	DATE 5-25-99	

SUBJECT Developed Conditions: Analysis Point "A" (continued)

Direct discharge at Analysis Point "A" into Louisiana Blvd SE is permissible due to the following:

1. The developed runoff rate (Q_{100} = 51.0 cfs) has been reduced by 51.0 % of the existing runoff rate (Q_{100} = 99.42 cfs).

2. Direct discharge at Analysis Point "A" is a temporary condition. Ultimately, all runoff from basin C-1 and all future phases will be routed to an underground storm drain system which will be located in the southwest corner of the park. See the Offsite Drainage Map for further information. In addition all offsite runoff will be prevented from entering the project site.

HYDROGRAPH COMPUTATION WORKSHEET

DATE 5-25-88
COMPUTED BY NK
CHECK BY _____
Job # 6369.00

Analysis Point "A" (Q by Rational Method
Developed conditions V by SCS Method)

PROJECT Phil Chacon Park - Phase I
Offsite Basin I-B, Basin C-1

LOCATION Future Phases Area

ANALYSIS POINT # "A" NW property corner

(DR. AREA) A = 61.94 ACRES

T_C 53 MIN

POINT RAINFALL ___ IN. FROM PLATE 22.2 D-1

CN = _____ FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = ___ IN. FROM PLATE 22.2 C-4

COMPUTED T_p = _____ MIN. $T_p = T_C$
(Rounded to even minute)

$q_p = \frac{45.4A}{T_p}$ = _____ CFS./INCH OF RUNOFF

~~$(R \times q_p)$~~ = Q_{peak} = 51.0 CFS

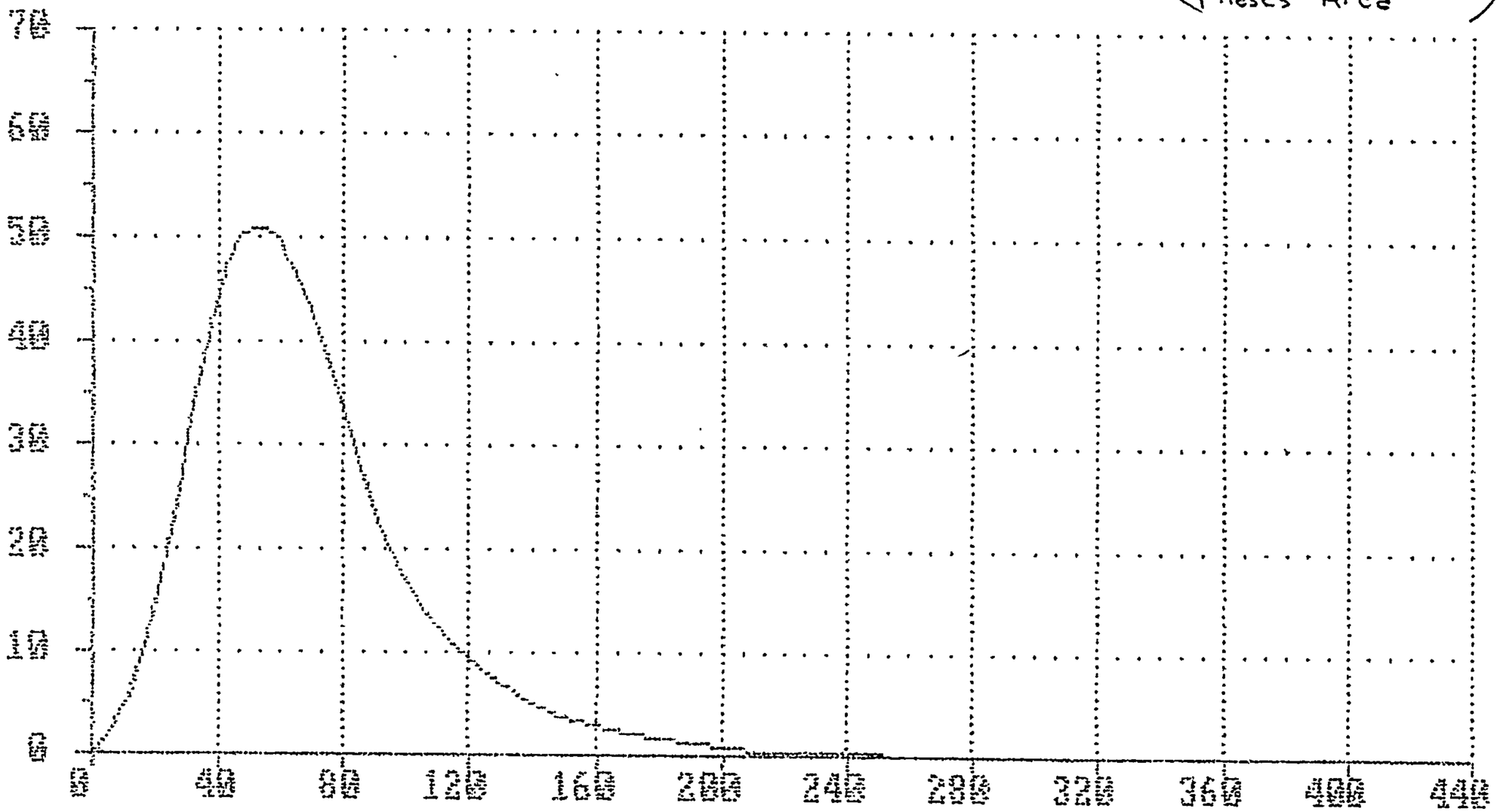
t(COLUMN)=(t/T_p) $t=T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}}$ $Q = y(Q_{peak})$

	(t/T_p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1	5.3	.03	1.53
3	.2	10.6	.10	5.1
4	.3	15.9	.190	9.69
5	.4	21.2	.310	15.81
6	.5	26.5	.470	23.97
7	.6	31.8	.660	33.66
8	.7	37.1	.820	41.82
9	.8	42.4	.930	47.43
10	.9	47.7	.990	50.49
11	1.0	53	1.00	51.0
12	1.1	58.3	.990	50.49
13	1.2	63.6	.930	47.43
14	1.3	68.9	.860	43.86
15	1.4	74.2	.780	39.78
16	1.5	79.5	.680	34.68
17	1.6	84.8	.560	25.56
18	1.7	90.1	.460	23.46
19	1.8	95.4	.390	19.89
20	1.9	100.7	.330	16.83
21	2.0	106	.280	14.28
22	2.2	116.6	.207	10.56
23	2.4	127.2	.147	7.50
24	2.6	137.8	.107	5.46
25	2.8	148.4	.077	3.93
25	3.0	159	.055	2.81
27	3.2	169.6	.040	2.04
28	3.4	180.2	.029	1.48
29	3.6	190.8	.021	1.07
30	3.8	201.4	.015	0.77
31	4.0	212	.011	0.56
32	4.5	238.5	.005	0.26
33	5.0	265	.000	0

PLATE 22.2 F-1

Developed Conditions Hydrograph Analysis Point "A" (offsite Basin I-B, Basin C-1, Future Phases Area)



Q_p = 51.0 cfs
t_p = 53 minutes

DMJM	PROJECT: Phil Chacon Park Phase I	PROJECT NO.: 6368.00	PAGE: 23
		BY: MK	DATE: 7-18-88
SUBJECT: Ultimate Drainage Conditions: Analysis Point "C" (Park Fully Developed)			

Contributory Area:

Basin C-1 A = 14.98 Ac
Future Phases * A = 24.54 Ac. } Fully Developed Park

* All of the runoff from future phases will be routed to Analysis Point "C". There will be no discharge into Louisiana Blvd. S.E.

Composite Rational "C" Factor

Area Type	Area (A_c)	C	$\cdot CA$
Basin C-1	14.98	0.30	4.494
Future Phase	24.54	0.46 *	11.288
Σ	39.52	-	15.78

* Assumes:
50% landscape C = .25
25% natural C = .40
25% paved C = .95

$$C = \frac{\Sigma CA}{\Sigma A} = \frac{15.78}{39.52}$$

$$C = 0.40$$

Time of Concentration (t_c)

① t_{c_1} = t_c of Basin C-1 to Analysis Point "B" = 36 min

② t_{c_2} = t_c from Analysis Point "B" to Analysis Point "C"

$L = 1700'$
$S = 0.006$

$$t_{c_2} = .0078 \frac{1700^{.77}}{.006^{.385}} = 17 \text{ minutes}$$

$$t_c = \Sigma t_{c_i} = 36 + 17$$

$t_c = 53$ minutes

$I = 2.4\,(6.84)\,(53)^{-.51} = 2.167$ in/hr (2.4" 6hr - 100yr storm)

$Q_{100} = (0.40)\,(2.167)\,(39.52)$

→ $Q_{100} = 34.26$ cfs $Q_{10} = 22.51$ cfs

Weighted CN

Area Type	Area (A_c)	CN	A(CN)
Basin C-1	14.93	64	958.72
Future Phases	24.54	74 *	1815.96
Σ	39.52	-	2774.68

* Assumes
50% landscape CN = 61
25% natural CN = 77
25% Paved CN = 98

DMJM	PROJECT Phil Chacon Park Phase I	PROJECT NO. 6368.00		PAGE 24
		BY NK	DATE 7-18-88	

SUBJECT Ultimate Drainage Conditions : Analysis Point "C"
(Park Fully Developed)

Weighted CN (continued)

$$CN = \frac{\sum A(CN)}{\sum A} = \frac{2774.68}{39.52}$$

$$CN = 70$$

Direct Runoff (R) = 0.41 in DPM Vol #2 Plate 22.2 C-4

$V_{100} = 39.52\ (0.41)\ \frac{1}{12}$

$\longrightarrow$ $V_{100} = 1.35\ A_c\text{-ft}$ $(58,818\ ft^3)$

$\longrightarrow$ $V_{10} = 0.89\ Ac\text{-ft}$ $(38,643\ ft^3)$

All runoff at Analysis Point "C" will be discharged into an underground storm drain system (see offsite Drainage Map for location) which will connect to the existing 30" RCP Kirtland Detention Basin North Basin Drain. This storm drain system will be constructed with the development of the future phases of the park

CITY OF ALBUQUERQUE

May 1, 2009

Scott McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street N.E.
Albuquerque, NM 87108

Re: Phil Chacon Park Ph VIII, 1100 Louisiana Blvd. SE,
Approval of Permanent Certificate of Occupancy, (L-19/D045)
Engineer's Stamp Dated: 5-12-06
Certification Stamp Dated: 4-29-09

Dear Mr. McGee,

Based upon the information provided on 4/30/09, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3982.

Sincerely,

Timothy E. Sims
Plan Checker-Hydrology, Planning Dept
Development and Building Services

C: CO Clerk—Katrina Sigala
file

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(Rev. 12/05)

PROJECT TITLE: NM VETS MEMORIAL PARK MAINT. YARD STORAGE BUILDING ZONE MAP/DRG.FILE# L-19/D045
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: A PORTION OF THE 'FEDERAL AID LOOP'
CITY ADDRESS: _____

ENGINEERING FIRM: ISAACSON AND ARFMAN
ADDRESS: 128 MONROE N.E.
CITY, STATE: ALBUQUERQUE, NM
CONTACT: SCOTT MCGEE
PHONE: 268-8828
ZIP CODE: 87108

OWNER: C O A
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

ARCHITECT: CHERRY SEE REAMES
ADDRESS: 220 A GOLD SW
CITY, STATE: ABQ, NM
CONTACT: TINA REAMES
PHONE: 842-1278
ZIP CODE: 87102

SURVEYOR:
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

CONTRACTOR:
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

TYPE OF SUBMITTAL:
- ☐ ___ DRAINAGE REPORT
- ☐ ___ DRAINAGE PLAN 1st SUBMITTAL
- ☐ ___ DRAINAGE PLAN RESUBMITTAL
- ☐ ___ CONCEPTUAL G & D PLAN
- ☐ ___ GRADING PLAN
- ☐ ___ EROSION CONTROL PLAN
- ☒ ___ ENGINEER'S CERT (HYDROLOGY)
- ☐ ___ CLOMR/LOMR
- ☐ ___ TRAFFIC CIRCULATION LAYOUT
- ☐ ___ ENGINEER/ARCHITECT CERT (TCL)
- ☐ ___ ENGINEER/ARCHITECT CERT (DRB S.P.)
- ☐ ___ ENGINEER/ARCHITECT CERT (AA)
- ☐ OTHER (SPECIFY)_____

CHECK TYPE OF APPROVAL SOUGHT:
- ☐ _____ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ _____ RELIMINARY PLAT APPROVAL
- ☐ _____ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ _____ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ _____ SECTOR PLAN APPROVAL
- ☐ _____ FINAL PLAT APPROVAL
- ☐ _____ UNDATION PERMIT APPROVAL
- ☐ _____ BUILDING PERMIT APPROVAL
- ☒ _____ CRTIFICATE OF OCCUPANCY (PERM)
- ☐ _____ CRTIFICATE OF OCCUPANCY (TEMP)
- ☐ _____ GADING PERMIT APPROVAL
- ☐ _____ PAVING PERMIT APPROVAL
- ☐ _____ WORK ORDER APPROVAL
- ☐ _____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:
- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED

RECEIVED
APR 30 2009
HYDROLOGY SECTION

SUBMITTED BY: SCOTT MCGEE
Isaacson & Arfman, P.A.
DATE: 4/29/09

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope to the proposed development define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.

2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.

3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

August 25, 2006

Scott McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Phil Chacon - New Mexico Veterans Memorial Park, Grading and Drainage Master Plan
Engineer's Stamp dated 8-08-06 (L19-D45)

Dear Mr. McGee,

Based upon the information provided in your submittal received 8-09-06, the above referenced plan is approved for Master Plan requirements. Please note that a site specific grading and drainage plan will need to be submitted for each phase of this project.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

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

December 22, 1999

Jeff Mortensen, PE
Jeff Mortensen & Associates, Inc
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Aspen Ridge Apartments Conceptual Grading and Drainage Plan
Engineer's Stamp dated 11-04-99 (L19/D61)

Dear Mr. Mortensen,

Based upon the information provided in your submittal dated 11-5-99, the above referenced Conceptual Drainage Plan is acceptable. Direct discharge to Louisiana Blvd only will be allowed. If your final Site Plan requires discharging to Continental Loop, a hydrologic and hydraulic analysis of that road will be required.

If you have any questions, you can contact me at 924-3986

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

DRAINAGE INFORMATION SHEET

990632

PROJECT TITLE: ASPEN RIDGE APARTMENTS ZONE ATLAS/DRNG. FILE #: L-19 / D089

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

LEGAL DESCRIPTION: LOVELACE FOUNDATION TRACT

CITY ADDRESS: LOUISIANA BOULEVARD S.E.

ENGINEERING FIRM: JMA CONTACT: GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD N.E. PHONE: 345-4250

OWNER: KAUFMAN + BROAD MULTI HOUSING CONTACT: PATRICK SIMONS

ADDRESS: 320 GOLDEN SHORE SUITE 200 LONG BEACH, CA 90802 PHONE: 562-256-2024

ARCHITECT: CONTACT OWNER CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JMA CONTACT: Chuck Cala

ADDRESS: _____ PHONE: 345 4250

CONTRACTOR: T.A. WALLICK CONTACT: Denny Gauman

ADDRESS: _____ PHONE: 239-8034

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

X YES
____ NO
X COPY PROVIDED

RECEIVED
NOV 05 1999
HYDROLOGY SECTION

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
____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
X OTHER DRAINAGE CONCEPT (SPECIFY)

DATE SUBMITTED: 11/04/99

BY: J. Graeme Means

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO. L-19 **DATE:** 7/29/99
PLANNING DIVISION NO'S: EPC: ZONING:R-3 **DRB:**
SUBJECT: Aspen Plaza Apts
STREET ADDRESS (IF KNOWN):
SUBDIVISION NAME: Lovelace Foundation

APPROVAL REQUESTED: Building Permit

ATTENDANCE: Fred J. Aguirre-City Hydrologist
Graem Means

FINDINGS:
An approved drainage plan is required for building permit approval. The drainage concept for this infill site could be a qualitative approach in which you would address the information below. If you can demonstrate that this infill development will have a negligible impact on the downstream drainage system, free discharge would be acceptable.

- a comparison of the proposed development to its overall drainage basin with respect to area and/or the relationship of the increased runoff to the existing basin's runoff. The AMDS Drainage Study can be used for basin information.
- impacts on downstream flood plains
- potentials offsite problems created by this development -in other words, will this development have an adverse affect on adjacent properties with respect to drainage
- the downstream affect resulting from the development of the remaining infill sites using the same concept.
- discuss any recent downstream storm drain improvements

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION.

SIGNED: Fred J. Aguirre
TITLE : City Hydrologist

SIGNED:
TITLE :

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.

RECEIVED
NOV 05 1999
HYDROLOGY SECTION