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

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

February 14, 1986

Frank Lovelady
Lovelady & Associates
7408 Morrow Road, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR ZEPHYR CENTER
RECEIVED FEBRUARY 7, 1986 (L-22/D42)

Dear Mr. Lovelady:

The referenced plan, dated February 7, 1986, is approved for Building Permit sign-off.

If you have any questions regarding this project, call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

BJM:CAM/bsj

# DRAINAGE INFORMATION SHEET

PROJECT TITLE: ZEPHYR CENTER ZONE ATLAS/DRNG. FILE #: L22-D42

LEGAL DESCRIPTION: TRACT A, BLOCK 2, GALLAGHER ADDITION

CITY ADDRESS: 12500 CENTRAL AVE. N.E.

ENGINEERING FIRM: LOVELADY & ASSOC CONTACT: FRANK LOVELADY

ADDRESS: 7408 MARROW Rd. N.E. PHONE: 883-7973

OWNER: BURMA GROUP CONTACT: CHARLES' HARPER

ADDRESS: P.O. BOX 11926, ABQ PHONE: 299-1341

ARCHITECT: KEN HOVEY DESIGN CONTACT: KEN HOVEY

ADDRESS: 335 JEFFERSON ST. PHONE: 255-9400

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

RECEIVED
FEB 07 1986
HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X Replat

CHECK TYPE OF APPROVAL SOUGHT:

___ 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)

DATE SUBMITTED: FEB 7, 1986

BY: HERMAN Hood

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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


December 9, 1985

Frank Lovelady
Lovelady & Associates
7408 Morrow Road, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR ZEPHYR CENTER
RECEIVED NOVEMBER 22, 1985 (L-22/D42)

Dear Frank:

Based on the information provided on your November 22, 1985 submittal, listed you will find certain concerns that will need to be addressed before final approval is granted:

1. New information sheet with resubmittal designation.

2. Engineer's stamp with signature and revision date.

3. May be advisable to inter-connect your proposed sidewalk culvert with a concrete rundown to the prepared asphalt parking area so as to eliminate erosion.

4. Copy of approved replat showing lot line removal.

5. Note on plan indicating that a separate drainage submittal will be required when future restaurant is constructed.

If you have any questions regarding this project, please call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

BJM:CAM/bsj

# DRAINAGE INFORMATION SHEET

D42

PROJECT TITLE: ZEPHYR CENTER ZONE ATLAS/DRNG. FILE #: C-22

LEGAL DESCRIPTION: TRACT A, BLOCK 2, GALLAGHER ADDITION

CITY ADDRESS: _____

ENGINEERING FIRM: LOVELADY & ASSOC. CONTACT: FRANK LOVELADY PE

ADDRESS: 2408 MARROW Rd NE PHONE: 883-7973

OWNER: BURMA GROUP CONTACT: CHARLES HARPER

ADDRESS: P.O. BOX 11926, ABQ PHONE: 299-1341

ARCHITECT: KEN HOVEY DESIGN CONTACT: KEN HOVEY

ADDRESS: 335 JEFFERSON ST PHONE: 255-9400

SURVEYOR: SAME AS Engineer CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

RECEIVED
NOV 22 1985
HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

X EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ 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)

Nw
NO DRB

DATE SUBMITTED: 11/22/85

BY: HERMAN HOOD

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGI G DIVISION/DESIGN HYDROLOGY ON

## CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: L 22 DATE: 9-11-85

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Central - Buena Shopping Ctr.

STREET ADDRESS (IF KNOWN): Lot 1-12 & 17-20 Blk 2

SUBDIVISION NAME: Gallagher Addition

## APPROVAL REQUESTED:

| | | | |
|---|---|---|---|
| _____ | PRELIMINARY PLAT | _____ | FINAL PLAT |
| _____ | SITE DEVELOPMENT PLAN | X | BUILDING PERMIT |
| _____ | OTHER | _____ | ROUGH GRADING |

_____

WHO REPRESENTING

ATTENDANCE: George Rodriguez _____
Carlos A Montoya _____
_____ _____

RECEIVED
NOV 22 1985
HYDROLOGY SECTION

FINDINGS:

(1) Drainage plan per DPM

(2) Free discharge appears appropriate however must address
(A) infill site
(B) minimum flooding in central
(C) minimum impact on downstream conditions
(D) storm drains in Central

(3) flows across lot lines require easements, covenants, or replatting

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlos A Montoya SIGNED: George J. Rodriguez
TITLE: _____ TITLE: _____
DATE: 9-11-85 DATE: 9-11-85

**NOTE** PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

# CITY OF ALBUQUERQUE

***Planning Department***
***Transportation Development Services Section***

June 21, 2012

Devin Cannady, R.A.
Devin Cannady Architect Studio
332 Adams St. SE
Albuquerque, NM 87108-2837

Re: **Certification for Permanent Building Certificate of Occupancy (C.O.)**
Salvation Army, [L-22/D042]
12601 Central Ave. NE
Architect's Stamp Dated 06/14/12

Dear Mr. Cannady:

Based upon the information provided in your submittal received 06-20-12, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy.

This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact me at (505)924-3630.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

# CITY OF ALBUQUERQUE

***Planning Department***
***Transportation Development Services Section***

June 18, 2012

Devin Cannady, R.A.
Devin Cannady Architect Studio
332 Adams St. SE
Albuquerque, NM 87108-2837

Re: **Certification for Permanent Building Certificate of Occupancy (C.O.)**
Salvation Army, [L-22/D042]
12601 Central Ave. NE
Architect's Stamp Dated 06/14/12

Dear Mr. Cannady:

Based upon the information provided in your submittal received 06-15-12, Transportation Development has **REJECTED** the issuance of a Permanent Certificate of Occupancy. The following must be complied in order to obtain a Permanent Certificate Approval:

- Provide the approved Site Plan (Traffic Circulation Layout approved 01/13/12 by Kristal Metro).

If you have any questions, please contact me at (505)924-3630.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

# DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2012)

PROJECT TITLE: SALVATION ARMY ZONE MAP: L-22 / D042.
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: LOT A BLOCK 2 GALLAGHER ADDN
CITY ADDRESS: 12601 CENTRAL AVE NE

ENGINEERING FIRM: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____
EMAIL: _____

OWNER: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

ARCHITECT: DEVIN CANNADY CONTACT: DEVIN CANNADY
ADDRESS: 300 ADAMS ST SE PHONE: 299-1111
CITY, STATE: ALB NM ZIP CODE: 87108
EMAIL: devin@cannadystudio.com

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

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ 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
__X__ ENGINEER'S CERT (TCL)
_____ ENGINEER'S CERT (DRB SITE PLAN)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:
_____ SIA/FINANCIAL GUARANTEE RELEASE
_____ PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D APPROVAL
_____ S. DEV. FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
_____ BUILDING PERMIT APPROVAL
__X__ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ GRADING CERTIFICATION
_____ OTHER (SPECIFY) SO-19

RECEIVED
JUN 15 2012
HYDROLOGY SECTION

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

DATE SUBMITTED: 06.15.12 BY: DEVIN CANNADY

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 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 (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

January 13, 2012

Devin Cannady, R.A.
Devin Cannady Architect Studio
332 Adams St. SE
Albuquerque, NM 87108-2837

Re: Salvation Army, 12601 Central Ave NE, Traffic Circulation Layout
Architect's Stamp dated 01-04-12 (L22-D042)

Dear Mr. Cannady;

The TCL submittal received 01-04-12 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

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

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

# DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 12/2005)

L-22/D042

PROJECT TITLE: SALVATION ARMY - CENTRAL ZONE MAP: _____

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

LEGAL DESCRIPTION: LOT A BLOCK 2 : GALLAGNER SUBDIVISION

CITY ADDRESS: 12601 CENTRAL AVE. NE

ENGINEERING FIRM: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

ARCHITECT: DC ARCHITECT STUDIO CONTACT: DEVIN CANADY

ADDRESS: 300 ADAMS STREET SE PHONE: 299-1111

CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87108

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ 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
X TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER'S CERT (TCL)
_____ ENGINEER'S CERT (DRB SITE PLAN)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

_____ SIA/FINANCIAL GUARANTEE RELEASE
_____ PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D APPROVAL
_____ S. DEV. FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

_____ YES
_____ NO
_____ COPY PROVIDED

DATE SUBMITTED: _____

RECEIVED
JAN 04 2012
HYDROLOGY SECTION

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 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 (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**
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 2, 1999

Chris Weiss, P.E.
C.L. Weiss Engineering
P.O. Box 97
Sandia Park, NM 87047

Attn: Bryan Bobrick

***RE: BOARDWALK MOBILE HOMES (L22-D42). RESUBMITTAL OF GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED FEBRUARY 17, 1999.***

Dear Mr. Weiss:

The information provided on your February 17, 1999 resubmittal is duely noted. The approval for the Building Permit, dated November 18, 1998, remains in effect. Your diligence is appreciated. City Hydrology would prefer to have the Engineer cover changes such as this in the Certification.

Prior to Certificate of Occupancy approval, an Engineer's Certification per the DPM will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Andrew Garcia
√File

## DRAINAGE INFORMATION SHEET

PROJECT TITLE: Boardwalk Mobile Homes ZONE ATLAS / DRNG. FILE #: L-22 10-42

LEGAL DESCRIPTION: Tract A, Block 2, Gallagher Addition, Albuquerque, NM

CITY ADDRESS: N/A

ENGINEERING FIRM: C.L. Weiss Engineering CONTACT: Chris Weiss

ADDRESS: P.O. Box 97, Sandia Park NM, 87047 PHONE: 281-1800

OWNER: Boardwalk Mobile Homes CONTACT:

ADDRESS: PHONE:

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: Forstbauer Surveying Co. CONTACT: Ron Forstbauer

ADDRESS: 1100 Alvarado Dr. NE - 87110 PHONE: 268-2112

CONTRACTOR FIRM: N/A CONTACT:

ADDRESS: PHONE:

**PRE-DESIGN MEETING:**

_____YES

___X___NO

_____COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO._____

EPC NO._____

PROJ. NO._____

**TYPE OF SUBMITTAL:**

___X___DRAINAGE PLAN

_____CONCEPTUAL GRADING & DRAINAGE PLAN

___X___GRADING PLAN

_____EROSION CONTROL PLAN

_____ENGINEER'S CERTIFICATION

**CHECK TYPE OF APPROVAL SOUGHT:**

_____SKETCH PLAT

_____PRELIMINARY PLAT

_____SITE DEVELOPMENT PLAN

_____FINAL PLAT

___X___BUILDING PERMIT

_____FOUNDATION PERMIT

_____CERT. OF OCCUPANCY

_____ROUGH GRADING PERMIT

_____GRADING / PAVING PERMIT

_____OTHER

DATE SUBMITTED: February 17, 1999 - **RESUBMITTAL**

BY: C.L. Weiss Engineering, Inc.

C.L. Weiss Engineering, Inc
Post Office Box 97
Sandia Park, N.M. 87047

Phone / Fax (505) 281-1800
Alvarado Office (505) 266-3444

February 10, 1999

Mr. John P. Murray, P.E.
City of Albuquerque Hydrology Dept.
PO Box 1293
Albuquerque, NM 87103

RE: RESUBMITTAL OF DRAINAGE / GRADING PLAN FOR BOARDWALK MOBILE HOMES (L22-D42)

Dear Mr. Murray,

We received a phone call from our client informing us of additional changes to the site plan currently under construction. Mainly, the changes involve the minor parking configuration / striping changes along Central Avenue. Because so much of the project has been completed, we explained to the client that a new survey of the as-built work to date would be required so that we could re-analyze the actual construction as part of our submittal. Reviewing the calculations (enclosed), the new analysis indicates no significant change in flow patterns / rates from the previously approved plan.

To date, the construction is in substantial compliance with the approved Drainage / Grading plan. Enclosed with this letter is one copy of the revised Drainage and Grading Plan. In addition, one set of revised calculations with minor sub-basin area changes is provided.

We would appreciate any way you could expedite this resubmittal. Please don't hesitate to call me at 266-3444 or Chris Weiss at 281-1800 with any questions or comments.

Sincerely,

Bryan J. Bobrick
C. L. Weiss Engineering, Inc.

FEBRUARY 17, 1999

# SUPPLEMENTAL CALCULATIONS

FOR THE

# BOARDWALK MOBILE HOMES

Albuquerque, New Mexico

BY

C.L.WEISS ENGINEERING, INC.
Post Office Box 97 * Sandia Park, NM 87047
Phone / Fax (505) 281-1800
1100 Alvarado Dr. NE * Albuquerque, NM 87110
Phone / Fax (505) 266-3444

# CONTENTS

## CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

### ON-SITE

**AREA OF SITE: Upper portion only** | 95940 | SF | = | 2.202 | Ac.

**HISTORIC FLOWS:**

On-Site Historic Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 0 | SF |
| Area c | = | 65940 | SF |
| Area d | = | 30000 | SF |
| Total Area | = | 95940 | SF |

**DEVELOPED FLOWS:**

On-Site Developed Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 5500 | SF |
| Area c | = | 24040 | SF |
| Area d | = | 66400 | SF |
| Total Area | = | 95940 | SF |

**EXCESS PRECIPITATION:**

Precip. Zone 3

Ea = 0.66
Eb = 0.92
Ec = 1.29
Ed = 2.36

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted E} = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

| | | | | | |
|---|---|---|---|---|---|
| Historic E | = | 1.62 in. | Developed E | = | 2.01 in. |

On-Site Volume of Runoff: V360 = E*A / 12

| | | | | | |
|---|---|---|---|---|---|
| Historic V360 | = | 12989 CF | Developed V360 | = | 16065 CF |

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 3

| | | | | | |
|---|---|---|---|---|---|
| Qpa | = | 1.87 | Qpc | = | 3.45 |
| Qbb | = | 2.60 | Qpd | = | 5.02 |

| | | | | | |
|---|---|---|---|---|---|
| Historic Qp | = | 8.7 CFS | Developed Qp | = | 9.9 CFS |

### SUB-BASIN 1 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET

Area of sub-basin flows | 39483 SF | = | 0.9 Ac. | Precip. Zone | 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 2.09 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 6867 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 4.2 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 13% |
| C = | 8% |
| D = | 79% |

To be routed through second leg of on-site storm drain system (these flows enter the system at Inlet #2). The pipe size required to carry this flowrate (+ the 2.1 cfs from sub-basin 3) is 12" dia. pvc. See Supplemental Information for additional information.

## SUB-BASIN 2 - TO BE RELEASED INTO BURMA DRIVE NEW

| Area of sub-basin flows | 36066 SF | = | 0.8 Ac. | Precip. Zone | 3 |
|---|---|---|---|---|---|

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

| Weighted E = | 1.91 in. |
|---|---|

Sub-basin Volume of Runoff (see formula above)

| V360 = | 5742 CF |
|---|---|

Sub-basin Peak Discharge Rate: (see formula above)

| Qp = | 3.6 cfs |
|---|---|

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 42% |
| D = | 58% |

To be released into Burma Drive NE at the existing northwest access drive. Note: Based on survey information, flows will be carried south to Central Avenue to enter the Central Avenue storm sewer system downstream from the site.

## SUB-BASIN 3 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET

| Area of sub-basin flows | 20355 SF | = | 0.5 Ac. | Precip. Zone | 3 |
|---|---|---|---|---|---|

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

| Weighted E = | 1.94 in. |
|---|---|

Sub-basin Volume of Runoff (see formula above)

| V360 = | 3295 CF |
|---|---|

Sub-basin Peak Discharge Rate: (see formula above)

| Qp = | 2.1 cfs |
|---|---|

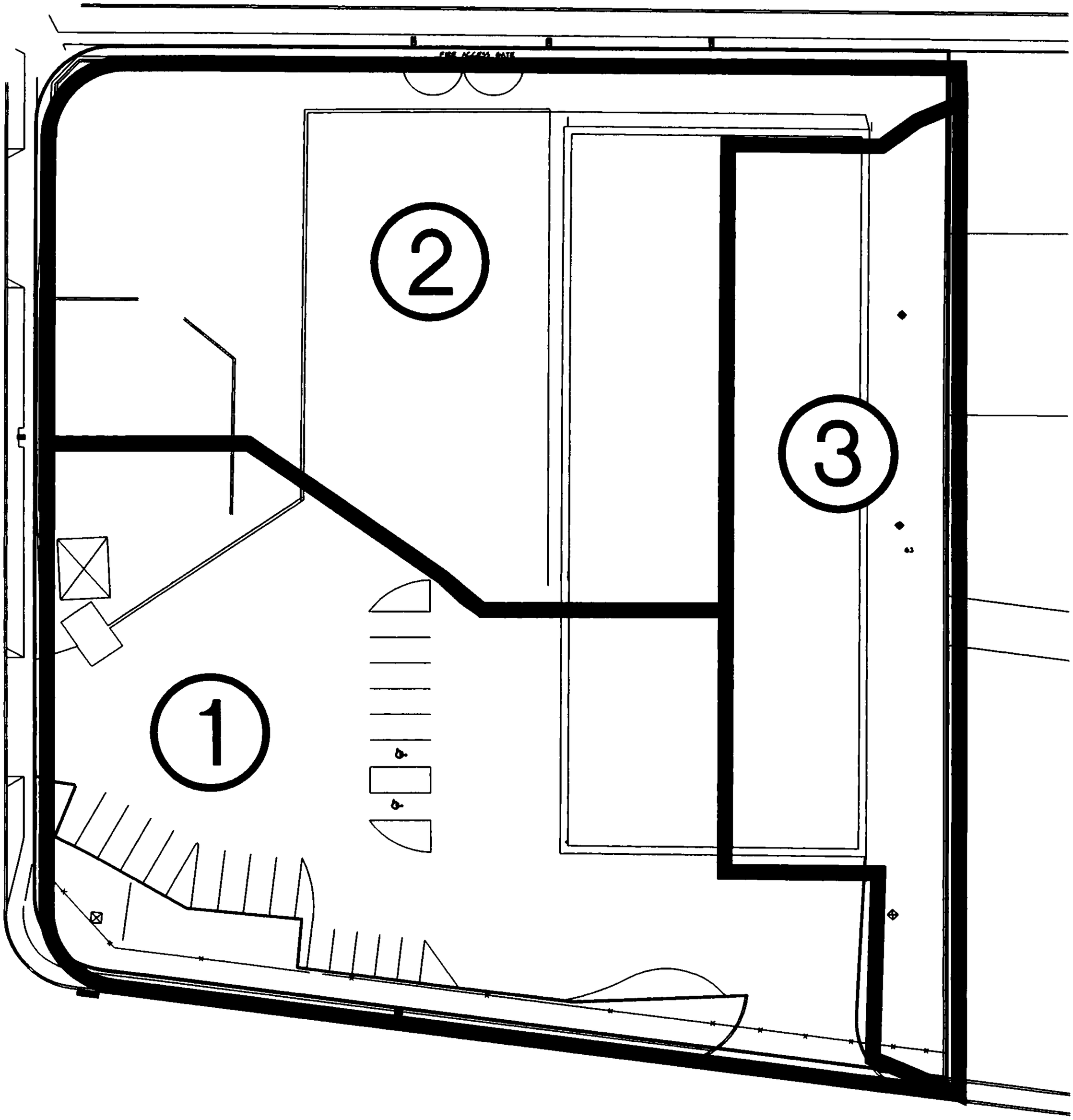
| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 39% |
| D = | 61% |

To be routed through first leg of on-site storm drain system (these flows enter the system at Inlet #1). The pipe size required to carry this flowrate is a 10" dia. pvc. See Supplemental Information for additional information.

## SUMMARY

| | | | | |
|---|---|---|---|---|
| The Historic Discharge Rate | = | 8.7 | CFS | |
| The Developed Discharge Rate | = | 9.9 | CFS | |
| Difference to be routed to storm drain | = | 1.2 | CFS | see calculations above |

The flows to the Central Avenue storm drain system will increase by 1.2 cfs. This is an infill project in an area that is, for the most part, completely developed. The effect on downstream conditions by this increase will be insignificant.




# SITE SUB-BASIN KEY

dg.dwg 02/17/99 10:12:33

N.T.S.

C.L.WEISS ENGINEERING, INC.

POST OFFICE BOX 97 · SANDIA PARK, N.M. · 87047 - (505) 281-1800
1100 ALVARADO DR. NE · ALBUQUERQUE, N.M. · 87110 - (505) 266-3444

Boardwalk Mobile Homes
Actual Q through this pipe section is 2.1 cfs from Sub-Basin 3

**INPUT INFORMATION**

This is a Round Culvert

Pipe diameter = 0.83 ft

**Entrance Shape:**

Sharp Projecting

Culvert Length = 264.00 ft
Culvert Slope = 0.0100 ft/ft
Roughness Coef. = 0.0100
Orifice Coef. of Discharge = 0.700
Entry Loss Coef. 'Kc' = 0.500

Water Head above bottom of Culv. at entrance = 3.00 ft

**Output:**

Flow Capacity 'Q' = 3.46 cfs
Flow Velocity 'V' = 6.34 fps

Under Pressure

Boardwalk Mobile Homes
Actual Q through this pipe section is 2.1 cfs from Sub-Basin 3 +
4.2 cfs from Sub-Basin 1 = 6.3 cfs

**INPUT INFORMATION**

This is a Round Culvert

Pipe diameter = 2.00 ft

**Entrance Shape:**

Sharp Projecting

Culvert Length = 36.00 ft
Culvert Slope = 0.0100 ft/ft
Roughness Coef. = 0.0100
Orifice Coef. of Discharge = 0.700
Entry Loss Coef. 'Ke' = 0.500

Water Head above bottom of Culv. at entrance = 3.00 ft

**Output:**

Flow Capacity 'Q' = 24.96 cfs
Flow Velocity 'V' = 9.36 fps

Not under pressure, slope > crit. entrance controls

Boardwalk Mobile Homes - Inlet 2 (existing)
Actual Q through grate is 4.2 cfs from Sub-Basin 1

**INPUT INFORMATION**

This is a Grate Inlet!

Water Depth = 0.70 ft
Width of Grate = 1.60 ft
Length of Grate = 2.40 ft
Perimeter of Grate which flow passes over = 5.60 ft

**Output Information**

Flow Capacity 'Q' = 9.84 cfs

Boardwalk Mobile Homes - Inlet 1 (existing)
Actual Q through grate is 2.1 cfs from Sub-Basin 3

**INPUT INFORMATION**

This is a Grate Inlet!

Water Depth = 1.50 ft
Width of Grate = 1.60 ft
Length of Grate = 2.40 ft
Perimeter of Grate which flow passes over = 5.60 ft

**Output Information**

Flow Capacity 'Q' = 22.64 cfs

CITY OF
Albuquerque

November 18, 1998

Chris Weiss, P.E.
C.L. Weiss Engineering
P.O. Box 97
Sandia Park, NM 87047

Attn: Bryan Bobrick

***RE: BOARDWALK MOBILE HOMES (L22-D42). GRADING AND DRAINAGE PLAN RESUBMITTAL FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED NOVEMBER 17, 1998.***

Dear Mr. Weiss:

Based on the information provided on your November 17, 1998 submittal updating the plan stamped September 10, 1998, the above referenced project again is approved for Building Permit. The prior SO#19 approval remains in force. A copy of this latest G&D Plan is being furnished to Street Maintenance.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Arlene Portillo
D. Salas, St. Maint.
Andrew Garcia
File

J17-D22CITY OF ALBUQUERQUE

# PUBLIC WORKS DEPARTMENT

**NOVEMBER 17, 1998**

INTEROFFICE CORRESPONDENCE HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: John P. Murray, P.E., Hydrology, PWD

SUBJECT: **PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY DRAINAGE FILE NUMBER (L22-D42).**

---

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 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, please feel free to call me at 924-3984.

Attachment

**DRAINAGE INFORMATION SHEET**

PROJECT TITLE: Boardwalk Mobile Homes ZONE ATLAS / DRNG. FILE #: L-22 D42

LEGAL DESCRIPTION: Tract A, Block 2, Gallagher Addition, Albuquerque, NM

CITY ADDRESS: N/A

ENGINEERING FIRM: C.L. Weiss Engineering CONTACT: Chris Weiss

ADDRESS: P.O. Box 97, Sandia Park NM, 87047 PHONE: 281-1800

OWNER: Boardwalk Mobile Homes CONTACT:

ADDRESS: PHONE:

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: Forstbauer Surveying Co. CONTACT: Ron Forstbauer

ADDRESS: 1100 Alvarado Dr. NE - 87110 PHONE: 268-2112

CONTRACTOR FIRM: N/A CONTACT:

ADDRESS: PHONE:

**PRE-DESIGN MEETING:**

_____YES

___X__NO

_____COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO._____

EPC NO._____

PROJ. NO._____

**TYPE OF SUBMITTAL:**

_____DRAINAGE REPORT

___X___DRAINAGE PLAN

_____CONCEPTUAL GRADING & DRAINAGE PLAN

___X___GRADING PLAN

_____EROSION CONTROL PLAN

_____ENGINEER'S CERTIFICATION

**CHECK TYPE OF APPROVAL SOUGHT:**

_____SKETCH PLAT

_____PRELIMINARY PLAT

_____SITE DEVELOPMENT PLAN

_____FINAL PLAT

___X___BUILDING PERMIT

_____FOUNDATION PERMIT

_____CERT. OF OCCUPANCY

_____ROUGH GRADING PERMIT

_____GRADING / PAVING PERMIT

_____OTHER

RECD
NOV 17 1998
HYDROLOGY SECTION

DATE SUBMITTED: November 17, 1998 - **RESUBMITTAL**

BY: C.L. Weiss Engineering, Inc.

Weiss Engineering

C.L. Weiss Engineering, Inc
Post Office Box 97
Sandia Park, N M. 87047

Phone / Fax (505) 281-1800
Alvarado Office (505) 266-3444

November 17, 1998

Mr. John P. Murray, P.E.
City of Albuquerque Hydrology Dept.
PO Box 1293
Albuquerque, NM 87103

RE: RESUBMITTAL OF DRAINAGE / GRADING PLAN FOR BOARDWALK MOBILE HOMES (L22-D42)

Dear Mr. Murray,

We received a phone call from our client informing us of a change to his site plan. He will be paving an additional 80' wide x 120' long area in front of the proposed building (currently designated as gravel on the approved drainage / grading plan). Reviewing the calculations (enclosed), this would represent an increase in flows of 0.3 cfs to be free discharged to Burma Drive N.E. The client currently has the paving crews on site doing the original paving and is going to pave the 80' x 120' at this time in order to minimize his costs.

Enclosed with this letter are two copies of the revised Drainage and Grading Plan indicating the changes to the paving. In addition, one set of revised calculations with changes highlighted is also provided.

We would appreciate any way you could expedite this resubmittal. Please don't hesitate to call me at 266-3444 or Chris Weiss at 281-1800 with any questions or comments.

Sincerely,

Bryan J. Bobrick
C. L. Weiss Engineering, Inc.

## CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

### ON-SITE

**AREA OF SITE: Upper portion only** | 95940 | SF | = | 2.202 | Ac.

**HISTORIC FLOWS:**

On-Site Historic Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 0 | SF |
| Area c | = | 65940 | SF |
| Area d | = | 30000 | SF |
| Total Area | = | 95940 | SF |

**DEVELOPED FLOWS:**

On-Site Developed Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 5500 | SF |
| Area c | = | 24040 | SF |
| Area d | = | 66400 | SF |
| Total Area | = | 95940 | SF |

**EXCESS PRECIPITATION:**

Precip. Zone 3

Ea = 0.66
Eb = 0.92
Ec = 1.29
Ed = 2.36

TREATMENT D INCREASED BY 9600 SF

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted E} = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

| | | | | | |
|---|---|---|---|---|---|
| Historic E | = | 1.62 in. | Developed E | = | 2.01 in. |

On-Site Volume of Runoff: V360 = E*A / 12

| | | | | | |
|---|---|---|---|---|---|
| Historic V360 | = | 12989 CF | Developed V360 | = | 16065 CF |

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 3

| | | | | | |
|---|---|---|---|---|---|
| Qpa | = | 1.87 | Qpc | = | 3.45 |
| Qbb | = | 2.60 | Qpd | = | 5.02 |

| | | | | | |
|---|---|---|---|---|---|
| Historic Qp | = | 8.7 CFS | Developed Qp | = | 9.9 CFS |

FROM 9.5 cfs

### SUB-BASIN 1 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET

Area of sub-basin flows | 41807 SF | = | 1.0 Ac. | Precip. Zone | 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 2.03 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 7085 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 4.3 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 13% |
| C = | 13% |
| D = | 74% |

To be routed through second leg of on-site storm drain system (these flows enter the system at Inlet #2). The pipe size required to carry this flowrate (+ the 2.0 cfs from sub-basin 3) is 12" dia. pvc. See Supplemental Information for additional information.

### SUB-BASIN 2 - TO BE RELEASED INTO BURMA DRIVE NEW

Area of sub-basin flows | 34405 SF | = | 0.8 Ac. | Precip. Zone | 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.91 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 5481 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 3.4 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 42% |
| D = | 58% |

FROM 3.1 cfs

To be released into Burma Drive NE at the existing northwest access drive. Note: Based on survey information, flows will be carried south to Central Avenue to enter the Central Avenue storm sewer system downstream from the site.

**SUB-BASIN 3 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET**

| Area of sub-basin flows | 19728 SF | = | 0.5 Ac. | Precip. Zone | 3 |
|---|---|---|---|---|---|

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

| Weighted E = | 1.94 in. |
|---|---|

Sub-basin Volume of Runoff (see formula above)

| V360 = | 3194 CF |
|---|---|

Sub-basin Peak Discharge Rate: (see formula above)

| Qp = | 2.0 cfs |
|---|---|

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 39% |
| D = | 61% |

To be routed through first leg of on-site storm drain system (these flows enter the system at Inlet #1). The pipe size required to carry this flowrate is a 10" dia. pvc. See Supplemental Information for additional information.

**SUMMARY**

| | | | | |
|---|---|---|---|---|
| The Historic Discharge Rate | = | 8.7 | CFS | |
| The Developed Discharge Rate | = | 9.9 | CFS | |
| Difference to be routed to storm drain | = | 1.2 | CFS | see calculations above |

The flows to the Central Avenue storm drain system will increase by 1.2 cfs. This is an infill project in an area that is, for the most part, completely developed. The effect on downstream conditions by this increase will be insignificant.

FROM 0.9 cfs

**Please hand deliver to John Murray after logging in.**
**Thank you,**

**Bryan Bobrick**
**C.L. Weiss Engineering, Inc.**

I have File.
PLEASE LOG IN
Thanks!

CITY OF
Albuquerque

September 14, 1998

Chris Weiss, P.E.
C.L. Weiss Engineering
P.O. Box 97
Sandia Park, NM 87047

***RE: BOARDWALK MOBILE HOMES (L22-D42). GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT AND SO#19 PERMIT APPROVALS. ENGINEER'S STAMP DATED 9/10/98.***

Dear Mr. Weiss:

Based on the information provided on your September 11, 1998 submittal, the above referenced project is approved for Building Permit and SO#19 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 Certificate of Occupancy, an Engineer's Certification per the DPM will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Arlene Portillo
D. Salas, St. Maint.
Andrew Garcia
File

CITY OF ALBUQUERQUE

# PUBLIC WORKS DEPARTMENT

**SEPTEMBER 14, 1998**

INTEROFFICE CORRESPONDENCE HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: John P. Murray, P.E., Hydrology, PWD

SUBJECT: **PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY DRAINAGE FILE NUMBER (L22-D42).**

---

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 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, please feel free to call me at 924-3984.

Attachment

## DRAINAGE INFORMATION SHEET

PROJECT TITLE: Boardwalk Mobile Homes ZONE ATLAS / DRNG. FILE #: L-22 42

LEGAL DESCRIPTION: Tract A, Block 2, Gallagher Addition, Albuquerque, NM

CITY ADDRESS: N/A

ENGINEERING FIRM: C.L. Weiss Engineering CONTACT: Chris Weiss

ADDRESS: P.O. Box 97, Sandia Park NM, 87047 PHONE: 281-1800

OWNER: Boardwalk Mobile Homes CONTACT:

ADDRESS: PHONE:

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: Forstbauer Surveying Co. CONTACT: Ron Forstbauer

ADDRESS: 1100 Alvarado Dr. NE - 87110 PHONE: 268-2112

CONTRACTOR FIRM: N/A CONTACT:

ADDRESS: PHONE:

**PRE-DESIGN MEETING:**

_____YES

___X___NO

_____COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO._____

EPC NO._____

PROJ. NO._____

**TYPE OF SUBMITTAL:**

_____DRAINAGE REPORT

___X___DRAINAGE PLAN

_____CONCEPTUAL GRADING & DRAINAGE PLAN

___X___GRADING PLAN

_____EROSION CONTROL PLAN

_____ENGINEER'S CERTIFICATION

RECEIVED
SEP 11 1998
HYDROLOGY SECTION

**CHECK TYPE OF APPROVAL SOUGHT:**

_____SKETCH PLAT

_____PRELIMINARY PLAT

_____SITE DEVELOPMENT PLAN

_____FINAL PLAT

___X___BUILDING PERMIT

_____FOUNDATION PERMIT

_____CERT. OF OCCUPANCY

_____ROUGH GRADING PERMIT

_____GRADING / PAVING PERMIT

___X___OTHER SO#19

DATE SUBMITTED: September 10, 1998 - **RESUBMITTAL**

BY: C.L. Weiss Engineering, Inc.

C.L. Weiss Engineering, Inc
Post Office Box 97
Sandia Park, N.M. 87047

Phone / Fax (505) 281-1800
Alvarado Office (505) 266-3444

September 10, 1998

Mr. John P. Murray, P.E.
City of Albuquerque Hydrology Dept.
PO Box 1293
Albuquerque, NM 87103

RE: REVISED DRAINAGE / GRADING PLAN FOR BOARDWALK MOBILE HOMES (L22-D42)

Dear Mr. Murray,

Based on your comments dated September 4, 1998, we are submitting two revised Drainage / Grading Plans for the above mentioned project. Revisions made in response to your comments are as follows:

1. 24" diameter storm drain was based on a miscalculation. The correct size storm drain outlet to the existing Central Ave. inlet is actually 12" a minimum slope of 0.0200'/'.
    - Keyed note #13: "*install 36 lf 12" dia. PVC storm drain from new storm drain inlet to back of existing storm drain inlet within Central Blvd. Minimum slope = 2.0%. Contractor to field verify existing storm drain inlet flowline to and notify engineer if minimum slope cannot be met.*
    - Invert modified to accommodate minimum 2.0% slope.
    - Supplemental Calculations revised (highlited in blue) as required.

We would appreciate any way you could expedite this resubmittal. Please don't hesitate to call me at 266-3444 or Chris Weiss at 281-1800 with any questions or comments.

Sincerely,

Bryan J. Bobrick
C. L. Weiss Engineering, Inc.

SEPTEMBER 10, 1998

# SUPPLEMENTAL CALCULATIONS

FOR THE

# BOARDWALK MOBILE HOMES

Albuquerque, New Mexico

BY

C.L WEISS ENGINEERING, INC.
Post Office Box 97 * Sandia Park, NM 87047
Phone / Fax (505) 281-1800
1100 Alvarado Dr. NE * Albuquerque, NM 87110
Phone / Fax (505) 266-3444

# CONTENTS

## CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

### ON-SITE

**AREA OF SITE: Upper portion only** | 95940 | SF | = | 2.202 | Ac.

**HISTORIC FLOWS:**

On-Site Historic Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 0 | SF |
| Area c | = | 65940 | SF |
| Area d | = | 30000 | SF |
| Total Area | = | 95940 | SF |

**DEVELOPED FLOWS:**

On-Site Developed Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 5500 | SF |
| Area c | = | 33640 | SF |
| Area d | = | 56800 | SF |
| Total Area | = | 95940 | SF |

**EXCESS PRECIPITATION:**

Precip. Zone 3

Ea = 0.66

Eb = 0.92

Ec = 1.29

Ed = 2.36

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E = $\frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Historic E | = | 1.62 | in. | Developed E | = | 1.90 | in. |

On-Site Volume of Runoff: V360 = E*A / 12

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Historic V360 | = | 12989 | CF | Developed V360 | = | 15209 | CF |

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 3

| | | | | | |
|---|---|---|---|---|---|
| Qpa | = | 1.87 | Qpc | = | 3.45 |
| Qbb | = | 2.60 | Qpd | = | 5.02 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Historic Qp | = | 8.7 | CFS | Developed Qp | = | 9.5 | CFS |

### SUB-BASIN 1 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET

Area of sub-basin flows | 41807 SF | = | 1.0 Ac. | Precip. Zone | 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 2.03 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 7085 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 4.3 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 13% |
| C = | 13% |
| D = | 74% |

To be routed through second leg of on-site storm drain system (these flows enter the system at Inlet #2). The pipe size required to carry this flowrate (+ the 2.0 cfs from sub-basin 3) is 12" dia. pvc? See Supplemental Information for additional information.

### SUB-BASIN 2 - TO BE RELEASED INTO BURMA DRIVE NEW

Area of sub-basin flows | 34405 SF | = | 0.8 Ac. | Precip. Zone | 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.61 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 4625 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 3.1 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 70% |
| D = | 30% |

To be released into Burma Drive NE at the existing northwest access drive. Note: Based on survey information, flows will be carried south to Central Avenue to enter the Central Avenue storm sewer system downstream from the site.

**SUB-BASIN 3 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET**

| Area of sub-basin flows | 19728 SF | = | 0.5 Ac. | Precip. Zone | 3 |
|---|---|---|---|---|---|

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

| Weighted E = | 1.94 in. |
|---|---|

Sub-basin Volume of Runoff (see formula above)

| V360 = | 3194 CF |
|---|---|

Sub-basin Peak Discharge Rate: (see formula above)

| Qp = | 2.0 cfs |
|---|---|

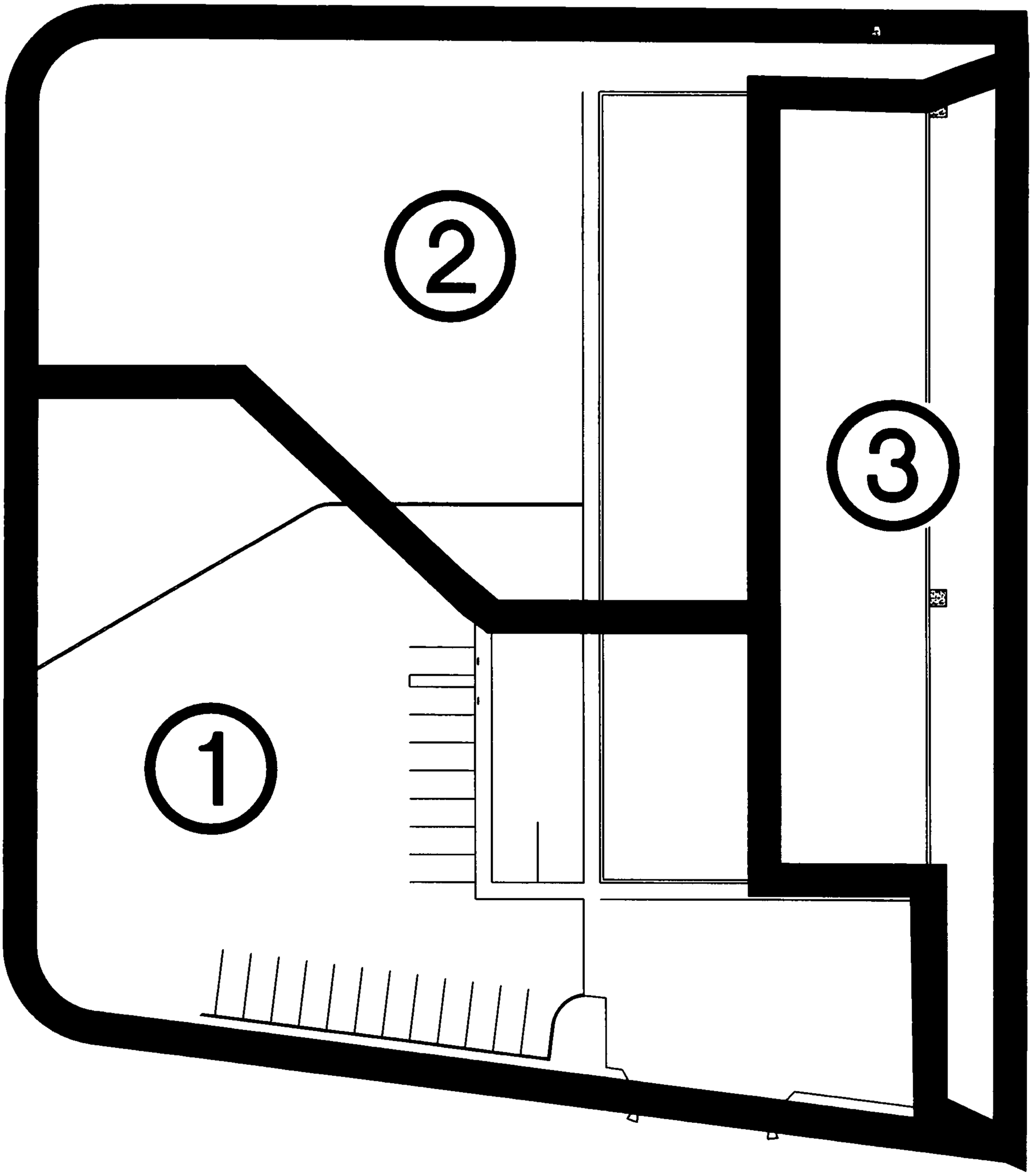
| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 39% |
| D = | 61% |

To be routed through first leg of on-site storm drain system (these flows enter the system at Inlet #1). The pipe size required to carry this flowrate is a 10" dia. pvc. See Supplemental Information for additional information.

**SUMMARY**

| | | | | |
|---|---|---|---|---|
| The Historic Discharge Rate | = | 8.7 | CFS | |
| The Developed Discharge Rate | = | 9.5 | CFS | |
| Difference to be routed to storm drain | = | 0.9 | CFS | see calculations above |

The flows to the Central Avenue storm drain system will increase by 0.9 cfs. This is an infill project in an area that is, for the most part, completely developed. The effect on downstream conditions by this increase will be insignificant.




# SITE SUB-BASIN KEY

dg_boardwalk2.dwg 07/16/98 14:43:27 N.T.S.

C.L.WEISS ENGINEERING, INC.
POST OFFICE BOX 97 · SANDIA PARK, N.M. · 87047 - (505) 281-1800
1100 ALVARADO DR. NE · ALBUQUERQUE, N.M. · 87110 - (505) 266-3444

Boardwalk Mobile Homes
Note: Actual Q through this pipe section is 2.0 cfs
from Sub-Basin 3

**INPUT INFORMATION**

This is a Round Culvert

Pipe diameter = 0.83 ft

**Entrance Shape:**

Sharp Flush

Culvert Length = 264.00 ft
Culvert Slope = 0.0100 ft/ft
Roughness Coef. = 0.0100
Orifice Coef. of Discharge = 0.700
Entry Loss Coef. 'Ke' = 0.500

Water Head above bottom of Culv. at entrance = 3.00 ft

**Output:**

Flow Capacity 'Q' = 3.46 cfs
Flow Velocity 'V' = 6.34 fps

Under Pressure

{ 12" Diameter Storm Drain }
Worksheet for Circular Channel

| Project Description | |
|---|---|
| Project File | c:\haestad\fmw\boardwal.fm2 |
| Worksheet | Storm Drain to Existing Inlet |
| Flow Element | Circular Channel |
| Method | Manning's Formula |
| Solve For | Full Flow Capacity |

| Input Data | | |
|---|---|---|
| Mannings Coefficient | 0.010 | |
| Channel Slope | 0.020000 | ft/ft |
| Diameter | 12.00 | in |

| Results | | |
|---|---|---|
| Depth | 1.00 | ft |
| Discharge | 6.55 | cfs |
| Flow Area | 0.79 | $ft^2$ |
| Wetted Perimeter | 3.14 | ft |
| Top Width | 0.00 | ft |
| Critical Depth | 0.97 | ft |
| Percent Full | 100.00 | |
| Critical Slope | 0.017560 | ft/ft |
| Velocity | 8.34 | ft/s |
| Velocity Head | 1.08 | ft |
| Specific Energy | FULL | ft |
| Froude Number | FULL | |
| Maximum Discharge | 7.05 | cfs |
| Full Flow Capacity | 6.55 | cfs |
| Full Flow Slope | 0.020000 | ft/ft |

ACTUAL Q THROUGH THIS PIPE SECTION IS 2.0 CFS FROM SUB-BASIN 3 + 4.3 cfs FROM SUB-BASIN 1 = 6.3 CFS < 6.55 cfs

OK

Boardwalk Mobile Homes - Inlet #1
Note: Actual Q through grate is 2.0 cfs at Sub-Basin 3

## INPUT INFORMATION

This is a Grate Inlet!

Water Depth = 1.50 ft
Width of Grate = 1.60 ft
Length of Grate = 2.40 ft
Perimeter of Grate which flow passes over = 5.60 ft

## Output Information

Flow Capacity 'Q' = 22.64 cfs

Boardwalk Mobile Homes - Inlet #2
Note: Actual Q through grate is 4.3 cfs at Sub-Basin 1

**INPUT INFORMATION**

This is a Grate Inlet!

Water Depth = 0.70 ft
Width of Grate = 1.60 ft
Length of Grate = 2.40 ft
Perimeter of Grate which flow passes over = 5.60 ft

**Output Information**

Flow Capacity 'Q' = 9.84 cfs

# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Boardwalk Mobile Homes ZONE ATLAS / DRNG. FILE #: L-22 42

LEGAL DESCRIPTION: Tract A, Block 2, Gallagher Addition, Albuquerque, NM

CITY ADDRESS: N/A

ENGINEERING FIRM: C.L. Weiss Engineering CONTACT: Chris Weiss

ADDRESS: P.O. Box 97, Sandia Park NM, 87047 PHONE: 281-1800

OWNER: Boardwalk Mobile Homes CONTACT:

ADDRESS: PHONE:

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: Forstbauer Surveying Co. CONTACT: Ron Forstbauer

ADDRESS: 1100 Alvarado Dr. NE - 87110 PHONE: 268-2112

CONTRACTOR FIRM: N/A CONTACT:

ADDRESS: PHONE:

**PRE-DESIGN MEETING:**

_____YES

___X__NO

_____COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO._____

EPC NO._____

PROJ. NO._____

**TYPE OF SUBMITTAL:**

_____DRAINAGE REPORT

___X___DRAINAGE PLAN

_____CONCEPTUAL GRADING & DRAINAGE PLAN

___X___GRADING PLAN

_____EROSION CONTROL PLAN

_____ENGINEER'S CERTIFICATION

**CHECK TYPE OF APPROVAL SOUGHT:**

_____SKETCH PLAT

_____PRELIMINARY PLAT

_____SITE DEVELOPMENT PLAN

_____FINAL PLAT

___X____BUILDING PERMIT

_____FOUNDATION PERMIT

_____CERT. OF OCCUPANCY

_____ROUGH GRADING PERMIT

_____GRADING / PAVING PERMIT

_____OTHER

DATE SUBMITTED: July 17, 1998

BY: C.L. Weiss Engineering, Inc.

RECEIVED
JUL 17 1998
HYDROLOGY SECTION
Recd 1:45

CITY OF
Albuquerque

September 4, 1998

Chris Weiss, P.E.
C.L. Weiss Engineering
P.O. Box 97
Sandia Park, NM 87047

***RE: BOARDWALK MOBILE HOMES (L22-D42). GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 7/17/98.***

Dear Mr. Weiss:

Based on the information provided on your July 17, 1998 submittal, City Hydrology has the following comments :

The maximum size pipe allowed for a drain line connection to an existing storm inlet is 12-inches (See DWG 2237 enclosed). This limitation, unfortunately, will negate the drainage plan which you have presented.

We shall endeavor to expedite the G&D Plan resubmittal.

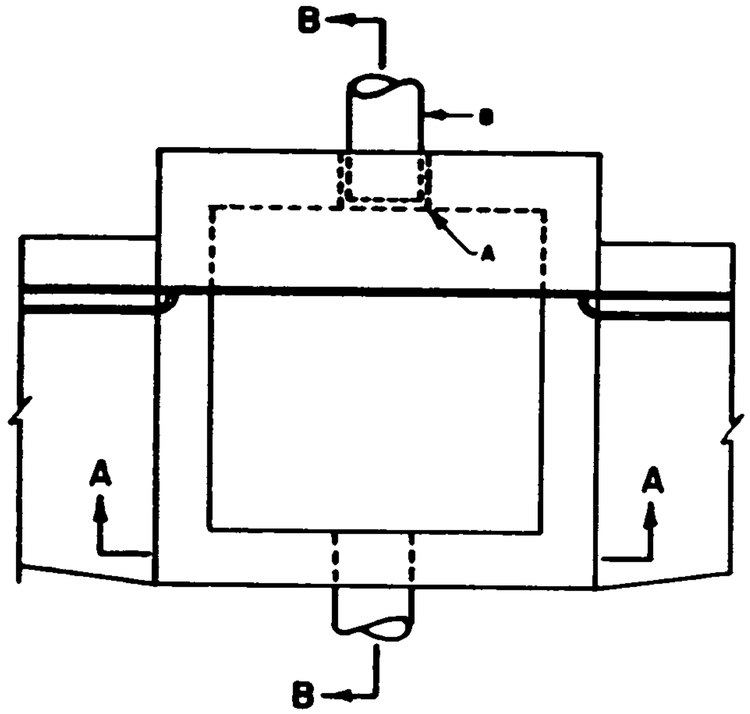
If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

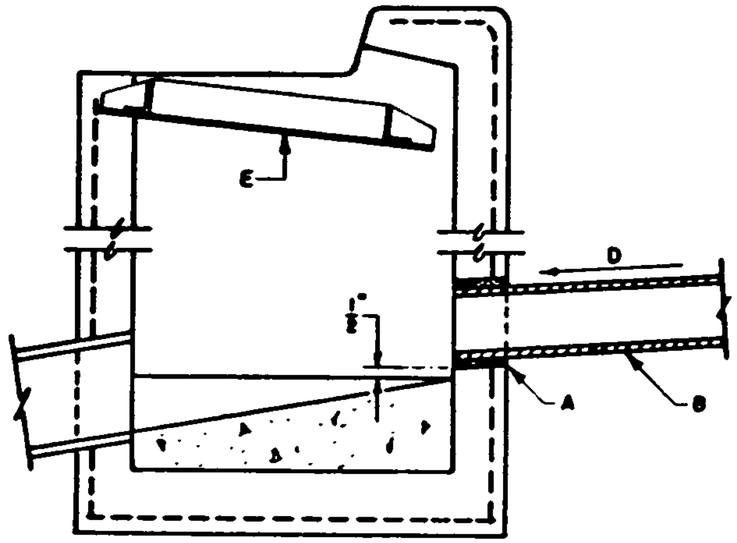
John P. Murray, P.E.
Hydrology

Encl:DWG 2237

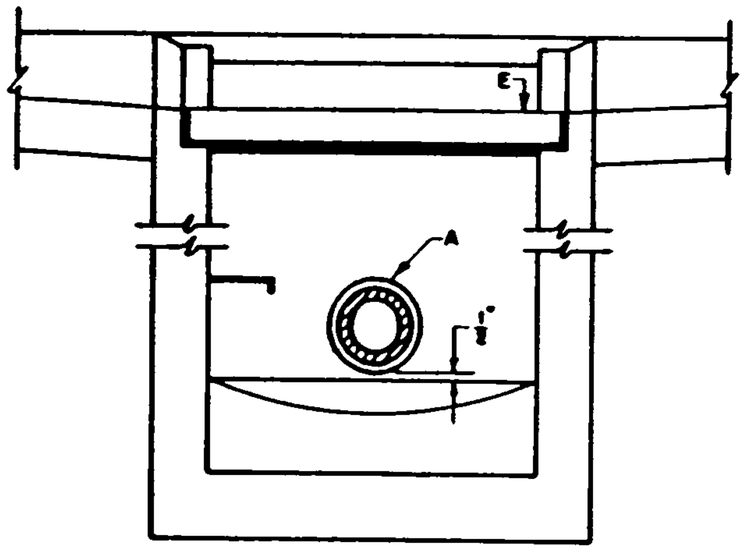
c: Andrew Garcia
File




PLAN




SECTION B-B




SECTION A-A

## GENERAL NOTES:

1. THE CITY DOES NOT ACCEPT RESPONSIBILITY FOR MAINTENANCE FOR ANY DRAIN LINES INSTALLED BY OR FOR PRIVATE PROPERTY OWNERS.

2. FOR DOUBLE "C" OR "D" STORM INLETS THE PRIVATE DRAIN LINE CONNECTION MUST BE ALIGNED WITH THE LONGITUDINAL CENTER OF EITHER GRATE FRAME.

## CONSTRUCTION NOTES:

A. CORE DRILL INTO BACK OF EXIST. CATCH BASIN WITH INVERT OF DRILLED OPENING 2" ABOVE EXIST. CONC. FILL. GROUT WITH NONSHRINK, NONMETALLIC GROUT.

B. NEW DRAIN LINE TO BE SCH. 40 P.V.C., REIN. CONC OR DUCTILE IRON PIPE. DRAIN SIZE TO BE AT LEAST ONE SIZE SMALLER THAN OUTLET PIPE WITH A MAX. SIZE OF 12".

C. EXIST. CONC. FILL.

D. SLOPE .02 FT.PER FT.MIN.WITHIN R.O.W.

E. FRAME & GRATE.

CITY OF ALBUQUERQUE

| REVISIONS |
| --- |
| |

DRAINAGE
DRAIN LINE CONNECTION
TO EXIST. STORM INLET
DWG. 2237 AUG. 1986.

JULY 16, 1998

# SUPPLEMENTAL CALCULATIONS

FOR THE

# BOARDWALK MOBILE HOMES

Albuquerque, New Mexico

BY



C.L WEISS ENGINEERING, INC.
Post Office Box 97 * Sandia Park, NM 87047
Phone / Fax (505) 281-1800
1100 Alvarado Dr. NE * Albuquerque, NM 87110
Phone / Fax (505) 266-3444

# CONTENTS

## CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

### ON-SITE

**AREA OF SITE: Upper portion only** | 95940 SF = 2.202 Ac.

**HISTORIC FLOWS:**

On-Site Historic Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 0 | SF |
| Area c | = | 65940 | SF |
| Area d | = | 30000 | SF |
| Total Area | = | 95940 | SF |

**DEVELOPED FLOWS:**

On-Site Developed Land Condition

| | | | |
|---|---|---|---|
| Area a | = | 0 | SF |
| Area b | = | 5500 | SF |
| Area c | = | 33640 | SF |
| Area d | = | 56800 | SF |
| Total Area | = | 95940 | SF |

**EXCESS PRECIPITATION:**

Precip. Zone 3

Ea = 0.66
Eb = 0.92
Ec = 1.29
Ed = 2.36

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E = $\frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$

| | | | | | | |
|---|---|---|---|---|---|---|
| Historic E | = | 1.62 in. | | Developed E | = | 1.90 in. |

On-Site Volume of Runoff: V360 = E*A / 12

| | | | | | | |
|---|---|---|---|---|---|---|
| Historic V360 | = | 12989 | CF | Developed V360 | = | 15209 CF |

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 3

| | | | | | |
|---|---|---|---|---|---|
| Qpa | = | 1.87 | Qpc | = | 3.45 |
| Qbb | = | 2.60 | Qpd | = | 5.02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Historic Qp | = | 8.7 | CFS | Developed Qp | = | 9.5 CFS |

### SUB-BASIN 1 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET

Area of sub-basin flows: 41807 SF = 1.0 Ac. | Precip. Zone 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 2.03 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 7085 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 4.3 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 13% |
| C = | 13% |
| D = | 74% |

To be routed through second leg of on-site storm drain system (these flows enter the system at Inlet #2). The pipe size required to carry this flowrate (+ the 2.0 cfs from sub-basin 3) is 24" dia. pvc. See Supplemental Information for additional information.

### SUB-BASIN 2 - TO BE RELEASED INTO BURMA DRIVE NEW

Area of sub-basin flows: 34405 SF = 0.8 Ac. | Precip. Zone 3

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.61 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 4625 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 3.1 cfs

| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 70% |
| D = | 30% |

To be released into Burma Drive NE at the existing northwest access drive. Note: Based on survey information, flows will be carried south to Central Avenue to enter the Central Avenue storm sewer system downstream from the site.

**SUB-BASIN 3 - TO BE RELEASED INTO CENTRAL STORM DRAIN INLET**

| Area of sub-basin flows | 19728 SF | = | 0.5 Ac. | Precip. Zone | 3 |
|---|---|---|---|---|---|

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

| Weighted E | = | 1.94 in. |
|---|---|---|

Sub-basin Volume of Runoff (see formula above)

| V360 | = | 3194 CF |
|---|---|---|

Sub-basin Peak Discharge Rate: (see formula above)

| Qp | = | 2.0 cfs |
|---|---|---|

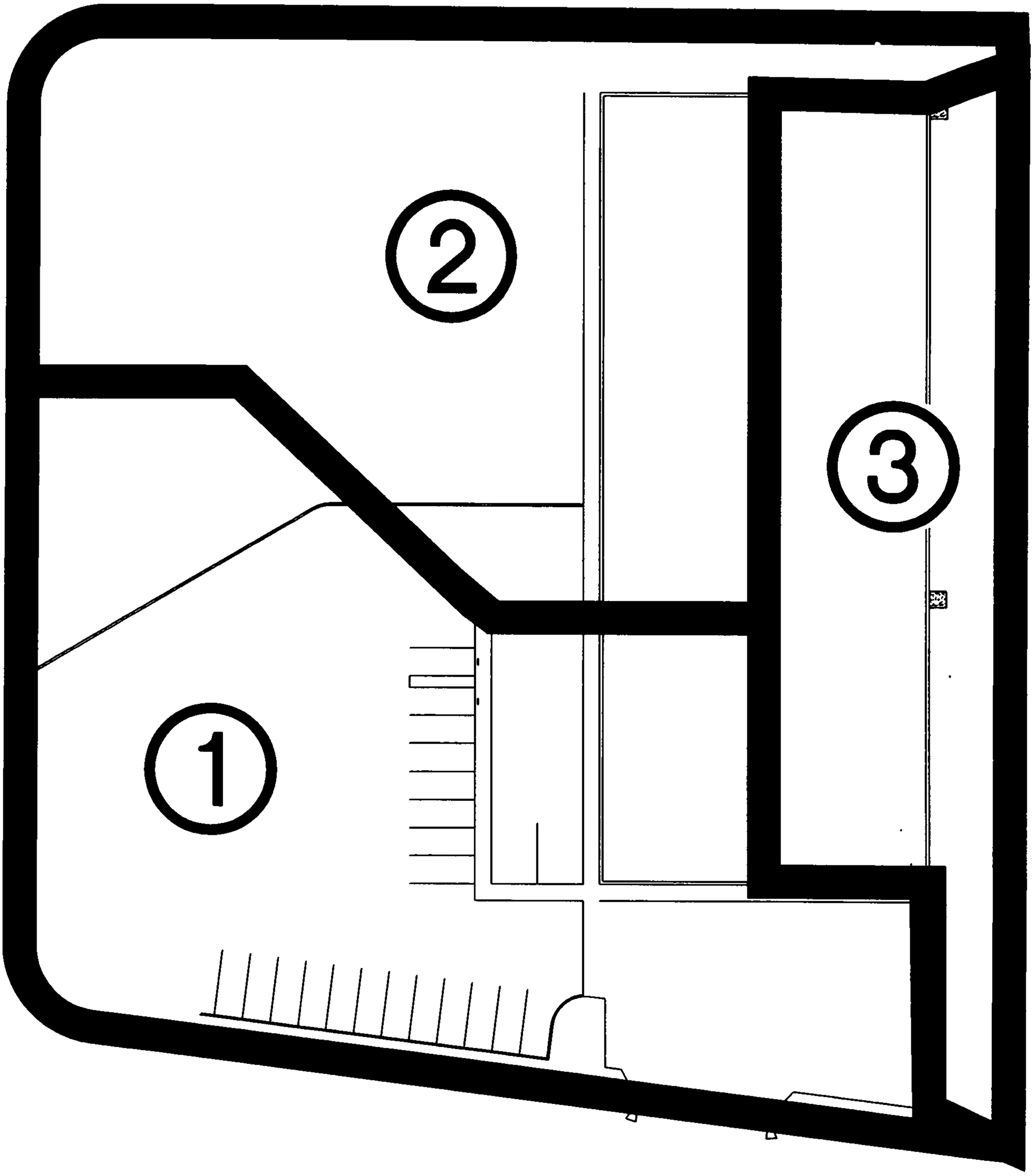
| TREATMENT | |
|---|---|
| A = | 0% |
| B = | 0% |
| C = | 39% |
| D = | 61% |

To be routed through first leg of on-site storm drain system (these flows enter the system at Inlet #1). The pipe size required to carry this flowrate is a 10" dia. pvc. See Supplemental Information for additional information.

**SUMMARY**

| | | | | |
|---|---|---|---|---|
| The Historic Discharge Rate | = | 8.7 | CFS | |
| The Developed Discharge Rate | = | 9.5 | CFS | |
| Difference to be routed to storm drain | = | 0.9 | CFS | see calculations above |

The flows to the Central Avenue storm drain system will increase by 0.9 cfs. This is an infill project in an area that is, for the most part, completely developed. The effect on downstream conditions by this increase will be insignificant.




# SITE SUB-BASIN KEY

dg_boardwalk2.dwg 07/15/98 10:05:18 N.T.S.

C.L.WEISS ENGINEERING, INC.
POST OFFICE BOX 97 · SANDIA PARK, N.M. · 87047 - (505) 281-1800
1100 ALVARADO DR. NE · ALBUQUERQUE, N.M. · 87110 - (505) 266-3444

Boardwalk Mobile Homes
Note: Actual Q through this pipe section is 2.0 cfs from Sub-basin 3

**INPUT INFORMATION**

This is a Round Culvert

Pipe diameter = 0.83 ft

**Entrance Shape:**

Sharp Flush

Culvert Length = 264.00 ft
Culvert Slope = 0.0100 ft/ft
Roughness Coef. = 0.0100
Orifice Coef. of Discharge = 0.700
Entry Loss Coef. 'Ke' = 0.500

Water Head above bottom of Culv. at entrance = 3.00 ft

**Output:**

Flow Capacity 'Q' = 3.46 cfs
Flow Velocity 'V' = 6.34 fps

Under Pressure

Boardwalk Mobile Homes
Note: Actual Q through this pipe section is 2.0 cfs from Sub-basin 3 + 4.3 cfs from Sub-basin 1 = 6.3 cfs.

**INPUT INFORMATION**

This is a Round Culvert

Pipe diameter = 2.00 ft

**Entrance Shape:**

Sharp Flush

Culvert Length = 36.00 ft
Culvert Slope = 0.0100 ft/ft
Roughness Coef. = 0.0100
Orifice Coef. of Discharge = 0.700
Entry Loss Coef. 'Ke' = 0.500

Water Head above bottom of Culv. at entrance = 3.00 ft

**Output:**

Flow Capacity 'Q' = 24.96 cfs
Flow Velocity 'V' = 9.36 fps

Not under pressure, slope > crit. entrance controls

Boardwalk Mobile Homes - Inlet #1
Note: Actual Q through grate is 2.0 cfs at Sub-basin 3.

**INPUT INFORMATION**

This is a Grate Inlet!

Water Depth = 1.50 ft
Width of Grate = 1.60 ft
Length of Grate = 2.40 ft
Perimeter of Grate which flow passes over = 5.60 ft

**Output Information**

Flow Capacity 'Q' = 22.64 cfs

Boardwalk Mobile Homes - Inlet #2
Note: Actual Q through grate is 4.3 cfs at Sub-basin 1.

**INPUT INFORMATION**

This is a Grate Inlet!

Water Depth = 0.70 ft
Width of Grate = 1.60 ft
Length of Grate = 2.40 ft
Perimeter of Grate which flow passes over = 5.60 ft

**Output Information**

Flow Capacity 'Q' = 9.84 cfs

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

CLARENCE V. LITHGOW
CHIEF ADMINISTRATIVE OFFICER

DAN WEAKS
DEPUTY CAO PUBLIC SERVICES

FRED E. MONDRAGON
DEPUTY CAO DEVELOPMENT & ENTERPRISE SERVICES

RAY R. BACA
DEPUTY CAO PUBLIC SAFETY


July 21, 1989

Frank Lovelady, P.E.
Lovelady & Associates
7408 Morrow, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR FUNTIME R.V.
(L-22/D42) RECEIVED JUNE 12, 1989

Dear Mr. Lovelady:

Based on the information provided on your submittal of June 12, 1989, listed are some concerns that will need to be addressed prior to final approval.

1. Your existing contours drop 400 feet in elevation at the west side of the property, please clarify.

2. You indicate that from .436 acres, 11 cfs of runoff is created. This amount is substantial for the amount of area. Please clarify.

3. You may advise your client that there may be some paving required by zoning. If there is, then please include with your submittal.

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

BJM/bsj
(WP+1158)

FILE COPY

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103



July 21, 1989

Frank Lovelady, P.E.
Lovelady & Associates
7408 Morrow, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR FUNTIME R.V.
(L-22/D42) RECEIVED JUNE 12, 1989

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Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1158)

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

## CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: L-22 DATE: 5/23/89 @ 1000

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Fun Time RV.

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: Tract A Block 2 Gallagher Addition

## APPROVAL REQUESTED:

| | | | |
|---|---|---|---|
| _____ | PRELIMINARY PLAT | _____ | FINAL PLAT |
| _____ | SITE DEVELOPMENT PLAN | _X_ | BUILDING PERMIT |
| _____ | OTHER | _____ | ROUGH GRADING |

_____

| | WHO | REPRESENTING |
|---|---|---|
| ATTENDANCE: | Frank Lovelady | Lovelady & Associates |
| | ~~Bernie Montoya~~ | ~~Hydrology Section~~ |
| | Carlos Montoya | |

RECEIVED
JUN 12 1989
HYDROLOGY SECTION

FINDINGS:

(1) Drainage plan per DPM

(2) Free discharge allowed to Central or Buena Dr.

(3) Need downstream capacity if discharging to Linn Ave.

(4) Site is not in a 100 year floodplain. The site is an infill site. Storm drain in Central Ave.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

| | | | |
|---|---|---|---|
| SIGNED: | Carlos A Montoya | SIGNED: | Frank D. Lovelady |
| TITLE: | _____ | TITLE: | _____ |
| DATE: | 5-23-89 | DATE: | 5/23/89 |

## DRAINAGE INFORMATION SHEET

NEW STORAGE BUILDING FOR
**PROJECT TITLE:** FUN TIME RV CENTER **ZONE ATLAS/DRNG. FILE #:** L-22/D-47

**LEGAL DESCRIPTION:** TRACT "A", BLOCK 2, GALLAGHER ADDITION

**CITY ADDRESS:**

**ENGINEERING FIRM:** Lovelady & Associates **CONTACT:** Frank Lovelady

**ADDRESS:** 7408 Morrow Ave. NE 87110 **PHONE:** 883-7973

**OWNER:** FUN TIME RV CENTER **CONTACT:** DEL JACK, ARCHITECT

**ADDRESS** 12601 CENTRAL AVE.N.E. 87123 **PHONE:** 292-8182

**ARCHITECT:** Del Jack, Architect **CONTACT:** Del Jack

**ADDRESS:** **PHONE:** 345-5090

**SURVEYOR:** LOVELADY & ASSOCIATES **CONTACT:** Frank Lovelady

**ADDRESS:** 7408 Morrow Ave. N.E. 87110 **PHONE:** 883-7973

**CONTRACTOR:** **CONTACT:**

**ADDRESS:** **PHONE:**

**PRE-DESIGN MEETING:**

RECEIVED
JUN 12 1989
HYDROLOGY SECTION

X **YES**

____ **NO**

X **COPY OF CONFERENCE RECAP SHEET PROVIDED**

**DRB NO.**

**EPC NO.**

**PROJECT NO.**

**TYPE OF SUBMITTAL:**

____ **DRAINAGE REPORT**

X **DRAINAGE PLAN**

____ **CONCEPTUAL GRADING & DRAIN. PLAN**

____ **GRADING PLAN**

____ **EROSION CONTROL PLAN**

____ **ENGINEER'S CERTIFICATION**

**CHECK TYPE OF APPROVAL SOUGHT:**

____ **SKETCH PLAT APPROVAL**

____ **PRELIMINARY PLAT APPROVAL**

____ **SITE DEVELOPMENT PLAN APPROVAL**

____ **FINAL PLAT APPROVAL**

X **BUILDING PERMIT APPROVAL**

____ **FOUNDATION PERMIT APPROVAL**

____ **CERTIFICATE OF OCCUPANCY APPROVAL**

____ **ROUGH GRADING PERMIT APPROVAL**

____ **GRADING/PAVING PERMIT APPROVAL**

**OTHER** ____ **(SPECIFY)**

**DATE SUBMITTED:** June 12, 1989

**BY:** Frank D. Lovelady
Frank D. Lovelady, P.E.

x-tra


# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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


February 14, 1986

Frank Lovelady
Lovelady & Associates
7408 Morrow Road, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR ZEPHYR CENTER
RECEIVED FEBRUARY 7, 1986 (L-22/D42)

Dear Mr. Lovelady:

The referenced plan, dated February 7, 1986, is approved for Building Permit sign-off.

If you have any questions regarding this project, call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

BJM:CAM/bsj