City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Planning Department
Transportation Development Services Section

April 30, 2004

Kristen Callori, Registered Architect
320 Central Ave. SW
Albuquerque, NM 87102

Re: Certification Submittal for Final Building Certificate of Occupancy for
Sound and Signal Addition, [G-16 / D90]
3233 Stanford NE
Architect's Stamp Dated 04/29/04

Dear Mr. Callori:

The TCL / Letter of Certification submitted on April 30, 2004 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

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

c: Engineer
Hydrology file
CO Clerk

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: SOUND + SIGNAL STORAGE BLD. ZONE MAP/DRG. FILE #: G-16 | D90
DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: _____
CITY ADDRESS: 3233 Stanford NE

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

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

ARCHITECT: EDI Environmental Dynamics CONTACT: KENT BEIERLE
ADDRESS: 320 CENTRAL SW. PHONE: 505.242.7851
CITY, STATE: ABQ NM ZIP CODE: 87102

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

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

CHECK TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL, *REQUIRES TCL or equal*
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION (HYDROLOGY)
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
X ENGINEERS CERTIFICATION (TCL)
____ ENGINEERS 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
X 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

RECEIVED
APR 30 2004
HYDROLOGY SECTION

DATE SUBMITTED: 4/30/04 BY: KB

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

ENVIRONMENTAL
DYNAMICS, INC.

April 27, 2004

Planning Department
Development and Building Services

Re: Certification TCL for Sound and Signal Addition, 3233 Stanford NE

To Whom It May Concern:

I have visited the site and have verified constructed features related to our construction drawings. Please accept this letter as formal certification that the addition and site upgrades for the Sound and Signal building at 3233 Stanford NE are in substantial compliance with the drawings approved by the City of Albuquerque on 4.20.04. Please also find attached the completed Drainage and Transportation Information Sheet per your directive of 4.20.04.

If there is anything further necessary for final C.O. issuance, please contact me.

Thank you for your attention to this matter.

Sincerely,

kent beierle

kris callori

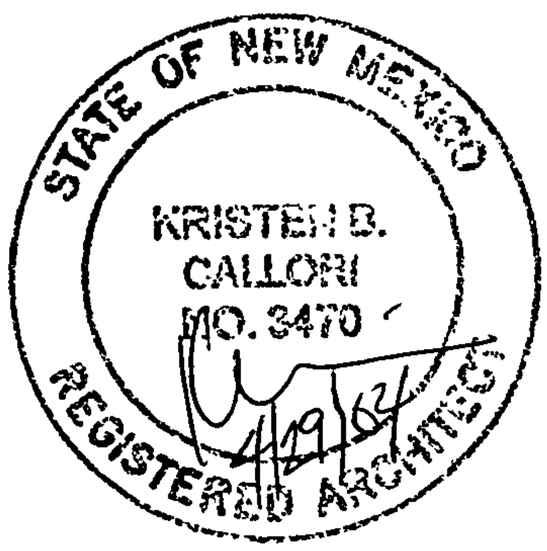
j. stace mcgee

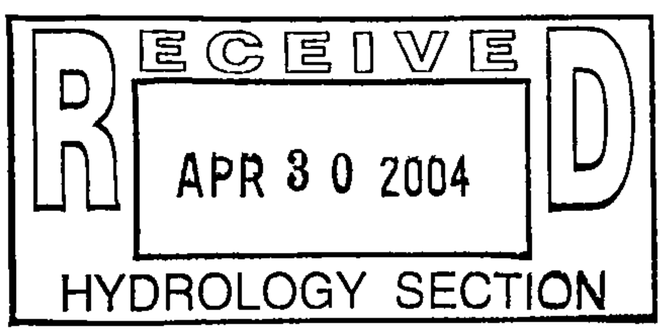
michael ryan

Kristen Callori, RA
Principal

Enclosure: Drainage and Transportation Information Sheet

Cc: file





ph: 505.242.2851
fx: 505.242.2852

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 20, 2004

Kristen Callori, R.A.
Environmental Dynamics Inc.
320 Central Ave. SW
Albuquerque, NM 87102

Re: Sound and Signal Addition, 3233 Stanford NE, Traffic Circulation Layout
Architect's Stamp dated 4-14-04 (G16/D90)

Dear Ms. Callori,

The TCL submittal received 4-20-04 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.

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
Engineering Associate, Planning Dept.
Development and Building Services

cc: file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: SOUND + SIGNAL ZONE MAP/DRG. FILE #: G-16/D90
DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: _____
CITY ADDRESS: 3233 Stanford NE

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

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

ARCHITECT: EDL Dynamics Inc. Environmental CONTACT: KENT BEIERLE
ADDRESS: 320 CENTRAL AVE SW PHONE: 505-242-2851
CITY, STATE: ABQ NM 87102 ZIP CODE: 87102

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

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

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, *REQUIRES TCL or equal*
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- X TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS 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
- 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: 4/20/04 BY: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot 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.
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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

April 8, 2004

Mike Walla, P.E.
Walla Engineering Ltd.
6100 Indian School Rd. NE
Albuquerque, NM 87110

Re: Sound and Signal Addition, 3233 Stanford NE, Certificate of Occupancy
Engineer's Stamp dated 9-16-03 (G16/D90)
Certification dated 4-07-04

Dear Mr. Walla,

Based upon the information provided in your submittal received 4-07-04, 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 924-3981.

Sincerely,

Kristal D. Metro
Engineering Associate, Planning Dept.
Development and Building Services

C: Phyllis Villanueva
file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: SOUND & SIGNAL ADD'N ZONE MAP/DRG. FILE #: G16 / D090
DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: _____
CITY ADDRESS: _____

ENGINEERING FIRM: WALLA ENGINEERING, LTD CONTACT: MIKE WALLA, PE
ADDRESS: 6100 UNSER SCHOOL RD NE PHONE: 881-3008
CITY, STATE: ALBQ., NM ZIP CODE: 87110

OWNER: SOUND & SIGNAL CONTACT: _____
ADDRESS: 3233 STANFORD NE PHONE: _____
CITY, STATE: ALBUQ, NM ZIP CODE: _____

ARCHITECT: EDJ CONTACT: KENT BEIERLE
ADDRESS: 320 CENTRAL SW PHONE: 247-2851
CITY, STATE: ALB, NM ZIP CODE: 87102

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

CONTRACTOR: DUTTON & MCINTOSH INC CONTACT: ERIC DUTTON
ADDRESS: 3021 ARNO NE PHONE: 344-4324
CITY, STATE: ALBUQ., NM ZIP CODE: 87107

CHECK TYPE OF SUBMITTAL:

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

Mike Walla → stamp date 9/16/03
Cert date → 4/7/04 by MikeWalla

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 (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED
APR 07 2004
HYDROLOGY SECTION

DATE SUBMITTED: 4/7/04 BY: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot 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.
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3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

924-3981
KRISTAL

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 3, 2003

Mike Walla, P.E.
Walla Engineering Ltd.
6100 Indian School Rd. NE
Albuquerque, NM 87110

Re: Sound and Signal Addition, 3233 Stanford NE, Grading and Drainage Plan
Engineer's Stamp dated 9-16-03 (G16/D90)

Dear Mr. Walla,

Based upon the information provided in your submittal received 12-3-03, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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

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

Sincerely,

Kristal D. Metro
Engineering Associate, Planning Dept.
Development and Building Services

Bub

C: file

Walla ENGINEERING LTD
Structural Engineering • Civil Engineering

December 2, 2003

Mr. Bradley L. Bingham, PE
Senior Engineer
City of Albuquerque
Planning Dept. Development and Building Services
Albuquerque, New Mexico 87103

Re: Sound and Signal Addition Grading & Drainage Plan
3233 Stanford NE (G16/D90)

Brad,

I have received your design review comments dated October 21, 2003 and offer the following response to these comments:

1. All existing Drainage Easements and drainage structures have been shown on the plan submitted and dated 9/30/03. New curb and gutter proposed in the construction has been identified on the plan as well (there is none).

2. The site currently accepts no appreciable offsite drainage. All site developed flows are directed to Stanford NE and the proposed addition will not change that pattern. The developed area adjacent to this property is graded relatively the same as this site in that drainage flows on neighboring properties flow to Stanford as well.

If you have any questions regarding this information please don't hesitate to call me.

Sincerely,

Michael J. Walla P.E.
President, Walla Engineering, Ltd.

MJW/Hs

MIKE J. WALLA
NEW MEXICO
11038
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
DEC 03 2003
HYDROLOGY SECTION

6100 Indian School Road NE • Suite 210
Albuquerque • New Mexico • 87110
(505) 881-3008 • Facsimile (505) 884-5390

Mike J. Walla P.E. • Larry E. Kennedy

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 21, 2003

Mike Walla, P.E.
Walla Engineering Ltd.
6100 Indian School Rd. NE
Albuquerque, NM 87110

Re: Sound and Signal Addition, 3233 Stanford NE, Grading and Drainage Plan
Engineer's Stamp dated 9-16-03 (G16/D90)

Dear Mr. Walla,

Based upon the information provided in your submittal received 9-30-03, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. Please list any existing easements, drainage structures, and curb and gutter.
2. Please show the entrance points and flow quantities for offsite flow, if any.

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

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Planning Dept.
Development and Building Services

C: file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: SOUND & SIGNAL ADDITION ZONE MAP/DRG. FILE #: G-16 / D90

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

LEGAL DESCRIPTION: SOUTHERLY 100 FEET OF TRACT P IN SECTION 3, TOWNSHIP 10, NANGE 3 EAST, NM PRINCIPAL MERIDIAN

CITY ADDRESS: 3233 STANFORD NE, ALBUQ, NM 87107

ENGINEERING FIRM: WALLA ENGINEERING, LTD CONTACT: MIKE J. WALLA PE

ADDRESS: 6100 WILKO SCHOOL RD NE PHONE: 881.3008

CITY, STATE: ACR, NM ZIP CODE: 87110

OWNER: SOUND & SIGNAL CONTACT: _____

ADDRESS: 3233 STANFORD NE PHONE: _____

CITY, STATE: ALBUQ, NM ZIP CODE: 87107

ARCHITECT: EDI CONTACT: KENT BIERLE

ADDRESS: 320 CENTRAL AVE SW PHONE: 242-2851

CITY, STATE: ALB, NM ZIP CODE: 87102

SURVEYOR: _____ CONTACT: _____

ADDRESS _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- ___ DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ___ DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- X GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
- ___ ENGINEERS 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
- 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:

- X YES
- X NO
- ___ COPY PROVIDED

RECEIVED
SEP 30 2003
HYDROLOGY SECTION

DATE SUBMITTED: 9/30/03 BY: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot 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:

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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

October 6, 1998

Larry Read, P.E.
Larry Read & Associates
P.O. Box 90233
Albuquerque, NM 87199

RE: SOUND AND SIGNAL EXPANSION (G16-D90). GRADING AND DRAINAGE PLAN FOR BUILDING AND SO #19 PERMIT APPROVALS. ENGINEER'S STAMP DATED SEPTEMBER 2, 1998.

Dear Mr. Read:

Based on the information provided on your September 9, 1998 submittal, the above referenced project is approved for Building and SO #19 Permits.

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 approval, and 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

J17-D22CITY OF ALBUQUERQUE

PUBLIC WORKS DEPARTMENT

OCTOBER 6, 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 (G16-D90).**

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

G4 D90

PROJECT TITLE: SOUND AND SIGNAL EXPANSION ZONE ATLAS/DRNG. FILE: K-16-Z

LEGAL DESCRIPTION: Lot A-1, LANDS OF TED JORGENSEN

CITY ADDRESS: 3233 STANFORD DRIVE NE

ENGINEERING FIRM: LARRY READ & ASSOCIATES CONTACT: LARRY READ

ADDRESS: P. O. BOX 90233 ALB, NM 87199 PHONE: 858-3165

OWNER: CONTACT:

ADDRESS: PHONE:

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PREDESIGN MEETING:

_____ YES
__X__ NO

_____ COPY OF CONFERENCE RECAP SHEET

PROVIDED

TYPE OF TRANSMITTAL:

_____ DRAINAGE REPORT

__X__ DRAINAGE PLAN

_____ PRELIMINARY GRADING AND DRAINAGE

__X__ GRADING PLAN

_____ EROSION CONTROL PLAN

_____ ENGINEER'S CERTIFICATION

DATE SUBMITTED: SEPTEMBER 3, 1998

BY: LARRY READ

DRB NO.
EPC NO.
PROJECT NO.

RECEIVED
SEP 09 1998
HYDROLOGY SECTION

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL

_____ PRELIMINARY PLAT APPROVAL

_____ SITE DEVELOPMENT PLAN APPROVAL

_____ FINAI

__X__ BUILI

_____ FOUN

_____ CERTI OVAL

E10 D10

_____ ROUGH GRADING PERMIT APPROVAL

_____ GRADING/PAVING PERMIT APPROVAL

__X__ OTHER SO#19 (SPECIFY)

DRAINAGE REPORT

for

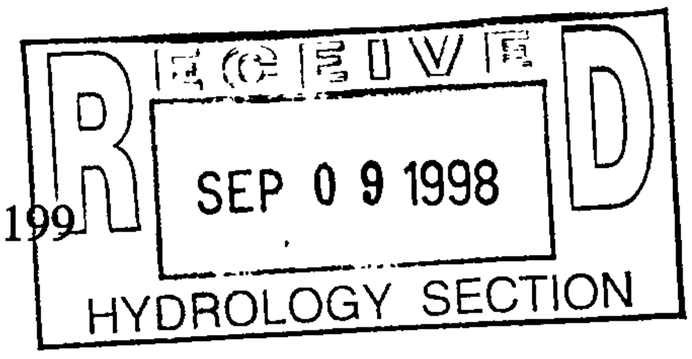
SOUND AND SIGNAL FACILITY EXPANSION

LOT A-1, LANDS OF TED JORGENSEN

ALBUQUERQUE, NEW MEXICO

September 3, 1998

Prepared by
Larry D. Read, P.E.
P. O. Box 90233
Albuquerque, New Mexico 87199
(505) 858-3165



DRAINAGE REPORT

for

SOUND AND SIGNAL FACILITY EXPANSION

LOT A-1, LANDS OF TED JORGENSEN

ALBUQUERQUE, NEW MEXICO

September 3, 1998

LOCATION & DESCRIPTION

The proposed site is a 0.79 acre parcel located at 3233 Stanford Drive N.E., which is located in the first block of Stanford Drive NE north of Candelaria. The site is currently developed with several existing buildings. The main building is the center of the lot is a 4160 square foot, single story facility. Additionally, there is a metal storage building along the west property line in the southwest corner that encloses 2160 square feet and a parking awning along the west property line in the northwest corner that covers about 2000 square feet. Finally, there is a metal and masonry building along the north property in the northwest corner that encloses about 1915 square feet. There is about 10,800 square feet of asphalt paved parking and concrete sidewalks on the east side of the lot.

EXISTING CONDITIONS

The existing site, developed as discussed above, is divided into 4 drainage basins as shown on Sheet C2 of the Drainage Plans at the end of this report. The existing grading is very flat with only minor slopes toward the north and east. The slopes are typically so flat that runoff tends to pond throughout the site. The drainage basins are described as follows:

Basin A consists of about the southwest quarter of the site. This basin contains a portion of the main building and all of the metal storage building at the southwest corner of the site. All drainage from this basin ponds in the dirt area south of the main building and east of the metal

storage building.

Basin B consists of about the southeast quarter of the site. this basin contains the remainder of the main building, a small asphalt paved parking area, and the turfed landscape area between the main building and Stanford Drive. The runoff from this basin slowly sheet flows east into Stanford Drive.

Basin C is the northeast corner of the lot and contains the parking awning, a small wing of the metal and masonry building along the north property line, and a dirt storage area. The runoff from this basin ponds in the dirt storage area east of the parking canopy.

Basin D is the remaining northeast quadrant of the lot. This basin is almost all asphalt paved except a very small turfed area between the main building and Stanford. The runoff from this basin sheet flows very slowly in a north east direction into Stanford.

Basin E is the main east/west wing of the metal/masonry building along the north property line. This basin discharges across the north property line into the adjacent property as discussed below. ✓

OFFSITE DRAINAGE

Since the entire area surrounding this site is very flat, it is almost impossible to determine is runoff from any of the three adjacent lots discharge into this site. As shown in the Existing Conditions section of Sheet C2 at the end of this report, the lands west of the site tend to slope west away from the property line. Runoff from the facility south of this site is blocked by a building at the property line. Again as shown on Sheet C2, the paved parking lot along the north property line of this site is at the same elevation as the spots on this sight or slightly below this site. It would appear that the paved parking has more slope in the east/west direction than in the north/south direction so runoff affecting this site would be minimized, located only near the property line, and short duration.

Runoff from this site affecting adjacent site should only happen in one location, the roof of the metal/masonry building at the north property line slopes north. Since the building is constructed on the property line, the roof runoff discharges into the adjacent parcel. A portion ✓ of this runoff discharging into the adjacent lot will be removed since the masonry portion of the building is proposed to be demolished. The remaining portion is almost impossible to fix since it is on the property line. Also, the parking awning and metal storage building along the west property line slope toward the west. However, the runoff from these roofs typically falls in the 5' wide utility easement (along the property line) and returns to the site as shown on the Existing Conditions on Sheet C2.

Runoff retained in pond is restricted from crossing the north property line by a concrete

retaining wall placed 6" inside the property line. The wall is a minimum of 6" inches above the adjacent grade and about 3-1/2" above the maximum water level from a 100-storm. To prevent the wall from being overtopped, the east segment of wall, adjacent to Stanford has been lowered 2-1/2" from the north wall to form a hardened spillway allowing storms in excess of the 100-year event to spill into the street instead on the adjacent property.

PROPOSED CONDITIONS

The owner has proposed to demolish the existing masonry portion (east end) of the metal and masonry building along the north property line, build a 3000 square foot addition on the north side of the central main building, and pave additional parking area in the northeast quadrant of the site.

Since there is minimal (0.4% of less) slope in Stanford and no storm drain system, we are proposing to detain the runoff on-site and discharge through a 4" pipe into Stanford. The detention pond has been formed by depressing the north edge of the new parking pavement and placing a retaining wall 6" inside the property line as shown on Sheet C3 at the end of this report. All runoff from Proposed Basin C-1 will collect in the pond and discharge at a lessor rate. The design of the pond & spillway are discussed in OFFSITE DRAINAGE above.

There are no proposed changes in the existing Basins A and B.

FLOODPLAIN STATUS

This project, as shown on FEMA Flood Insurance Rate Map 35001C0351D, Effective September 20, 1996, is not within any designated 100-year floodplain.

METHODOLOGY

The hydrology for this project was analyzed using the January 1994 release of the AHYMO computer modeling program as developed by AMAFCA. All procedures are in accordance with those shown in the January 1993 release of the City of Albuquerque Development Process Manual, Section 22.2.

The specific values used for this analysis are as follows:

-Precipitation Zone 2

-Design Storm 100-year, 6-hour duration
i = 2.35 inches (t_c = 0.2 hours)

PEAK RUNOFF QUANTITIES

The AHYMO printouts, summary sheets, and miscellaneous calculations to support these analyses are included in Appendix A and B of this report for reference.

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

19 March, 1999

Larry Read, P.E.
Larry Read & Associates
P.O. Box 90233
Albuquerque, NM 97199

RE: SOUND AND SIGNAL EXPANSION (G16/D90) AS-BUILT SUBMITTAL FOR CERTIFICATE OF OCCUPANCY APPROVAL. ENGINEER'S CERTIFICATION DATED 3-10-99

Dear Mr. Read:

Based upon the information provided in your 3-10-99 As-Built submittal, the subject project is approved for Certificate of Occupancy.

If I can be of additional assistance, feel free to contact me at 924-3986.

Sincerely,

Scott Davis
PWD, Hydrology Division

c: Andrew Garcia
file

DRAINAGE INFORMATION SHEET

PROJECT TITLE: SOUND AND SIGNAL EXPANSION ZONE ATLAS/DRNG. FILE: ~~K-16-Z~~ G-16/D 90

LEGAL DESCRIPTION: Lot A-1, LANDS OF TED JORGENSEN

CITY ADDRESS: 3233 STANFORD DRIVE NE

ENGINEERING FIRM: LARRY READ & ASSOCIATES CONTACT: LARRY READ

ADDRESS: P. O. BOX 90233 ALB, NM 87199 PHONE: 858-3165

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PREDESIGN MEETING:

_____ YES
__X__ NO

_____ COPY OF CONFERENCE RECAP SHEET

PROVIDED

TYPE OF TRANSMITTAL:

_____ DRAINAGE REPORT

_____ DRAINAGE PLAN

_____ PRELIMINARY GRADING AND DRAINAGE

_____ GRADING PLAN

_____ EROSION CONTROL PLAN

__X__ ENGINEER'S CERTIFICATION

DRB NO. _____
EPC NO. _____

PROJECT NO. _____

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL

_____ PRELIMINARY PLAT APPROVAL

_____ SITE DEVELOPMENT PLAN APPROVAL

_____ FINAL PLAT APPROVAL

_____ BUILDING PERMIT APPROVAL

_____ FOUNDATION PERMIT APPROVAL

__X__ CERTIFICATE OF OCCUPANCY APPROVAL

_____ ROUGH GRADING PERMIT APPROVAL

_____ GRADING/PAVING PERMIT APPROVAL

_____ OTHER _____ (SPECIFY)

RECEIVED
MAR 1 0 1999
HYDROLOGY SECTION

DATE SUBMITTED: MARCH 10, 1999

BY: LARRY READ

APPENDIX A

SUPPORTING CALCULATIONS

100-YEAR STORM

```
    AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
         RUN DATE (MON/DAY/YR) = 09/07/1998
         START TIME (HR:MIN:SEC) = 12:22:01     USER NO.= AHYMO-I-9702a0100001A-SH
         INPUT FILE = d:\ahymo\Stanford.dat

START               TIME=0   PUNCH=0  PRINT LINES=-6
*S     COMPUTE 100 YR. 6 HR. HYDROGRAPHS FOR SOUND & SIGNAL
*S     STANFORD.DAT     -    HYMO PER JAN 1993 DPM REVISIONS
*S
*S ANALYSIS OF DEVELOPMENT USING DETENTION POND
*S
*--------------------------------------------------------------------
*--------------------------------------------------------------------
RAINFALL            TYPE=-1  RAIN QUAR=0 RAIN ONE=2.01 RAIN SIX=2.35
                    RAIN DAY=2.75 DT=0.03

               COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
               DT =     .030000 HOURS       END TIME =     6.000000 HOURS
*--------------------------------------------------------------------
*--------------------------------------------------------------------
*S
*S COMPUTE RUNOFF FOR EXISTING CONDITIONS
*S
*--------------------------------------------------------------------
*S
*S  BASIN A
COMPUTE NM HYD      ID=1   HYD NO= 101.1   DA=0.0003431 SQ MI
                    PER A=0 PER B=0 PER C=51  PER D=49 TP=-.133
                    RAIN=-1

     K =    .072485HR     TP =    .133000HR     K/TP RATIO =    .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =    .66524     CFS   UNIT VOLUME =     .9833       B =   526.28      P60 = 2.0100
     AREA =       .000168 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .030000


     K =    .107204HR     TP =    .133000HR     K/TP RATIO =    .806046     SHAPE CONSTANT, N =  4.440701
     UNIT PEAK =    .50461     CFS   UNIT VOLUME =     .9738       B =   383.55      P60 = 2.0100
     AREA =       .000175 SQ MI     IA =     .35000 INCHES     INF =     .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .030000

PRINT HYD           ID=1      CODE=10

                                PARTIAL HYDROGRAPH   101.10

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
      .000       .0          1.500        .9         3.000       .0          4.500       .0          6.000       .0
      .300       .0          1.800        .3         3.300       .0          4.800       .0
      .600       .0          2.100        .1         3.600       .0          5.100       .0
      .900       .0          2.400        .0         3.900       .0          5.400       .0
     1.200       .0          2.700        .0         4.200       .0          5.700       .0
     RUNOFF VOLUME =      1.61200 INCHES     =         .0295 ACRE-FEET
     PEAK DISCHARGE RATE =         .87 CFS  AT    1.500 HOURS    BASIN AREA =    .0003 SQ. MI.


*S
*S  BASIN B
COMPUTE NM HYD      ID=2   HYD NO= 102.1   DA=0.0002612 SQ MI
                    PER A=0 PER B=9 PER C=0  PER D=91 TP=-.133
                    RAIN=-1

     K =    .072485HR     TP =    .133000HR     K/TP RATIO =    .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =    .94054     CFS   UNIT VOLUME =     .9873       B =   526.28      P60 = 2.0100
     AREA =       .000238 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .030000


     K =    .131790HR     TP =    .133000HR     K/TP RATIO =    .990905     SHAPE CONSTANT, N =  3.563124
     UNIT PEAK =    .57428E-01CFS   UNIT VOLUME =     .8638       B =   324.91      P60 = 2.0100
     AREA =       .000024 SQ MI     IA =     .50000 INCHES     INF =    1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .030000

PRINT HYD           ID=2      CODE=10
```

PARTIAL HYDROGRAPH 102.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.8	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.3	3.300	.0	4.800	.0		
.600	.0	2.100	.1	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.99611 INCHES = .0278 ACRE-FEET
PEAK DISCHARGE RATE = .76 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

```
*S
*S  BASIN C
COMPUTE NM HYD      ID=3   HYD NO= 101.1   DA=0.0003196 SQ MI
                    PER A=0 PER B=0 PER C=62  PER D=38 TP=-.133
                    RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .48056 CFS UNIT VOLUME = .9748 B = 526.28 P60 = 2.0100
AREA = .000121 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = .57143 CFS UNIT VOLUME = .9761 B = 383.55 P60 = 2.0100
AREA = .000198 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

```
PRINT HYD           ID=3      CODE=10
```

PARTIAL HYDROGRAPH 101.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.8	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.3	3.300	.0	4.800	.0		
.600	.0	2.100	.1	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.50318 INCHES = .0256 ACRE-FEET
PEAK DISCHARGE RATE = .78 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

```
*S
*S  BASIN D
COMPUTE NM HYD      ID=4   HYD NO= 104.1   DA=0.0003694 SQ MI
                    PER A=0 PER B=0 PER C=5  PER D=95 TP=-.133
                    RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.3886 CFS UNIT VOLUME = .9916 B = 526.28 P60 = 2.0100
AREA = .000351 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = .53264E-01CFS UNIT VOLUME = .8723 B = 383.55 P60 = 2.0100
AREA = .000018 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

```
PRINT HYD           ID=4      CODE=10
```

PARTIAL HYDROGRAPH 104.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	1.1	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.4	3.300	.0	4.800	.0		
.600	.0	2.100	.2	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		

```
 1.200        .0          2.700        .0          4.200        .0          5.700        .0

    RUNOFF VOLUME =      2.06709 INCHES      =         .0407 ACRE-FEET
    PEAK DISCHARGE RATE =        1.11 CFS  AT    1.500 HOURS    BASIN AREA =    .0004 SQ. MI.


*s
*S  BASIN E
COMPUTE NM HYD       ID=5    HYD NO= 105.1    DA=0.0000497 SQ MI
                     PER A=0 PER B=0 PER C=0  PER D=100 TP=-.133
                     RAIN=-1

     K =    .072485HR     TP =    .133000HR     K/TP RATIO =    .545000      SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =    .19666     CFS    UNIT VOLUME =     .9426        B =    526.28       P60 = 2.0100
     AREA =       .000050 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .030000

PRINT HYD            ID=5       CODE=10

                                   PARTIAL HYDROGRAPH    105.10

     TIME       FLOW          TIME       FLOW          TIME       FLOW          TIME       FLOW          TIME       FLOW
      HRS        CFS           HRS        CFS           HRS        CFS           HRS        CFS           HRS        CFS
      .000        .0          1.500         .2         3.000        .0          4.500        .0          6.000        .0
      .300        .0          1.800         .1         3.300        .0          4.800        .0
      .600        .0          2.100         .0         3.600        .0          5.100        .0
      .900        .0          2.400         .0         3.900        .0          5.400        .0
     1.200        .0          2.700         .0         4.200        .0          5.700        .0

    RUNOFF VOLUME =      2.11656 INCHES      =         .0056 ACRE-FEET
    PEAK DISCHARGE RATE =         .16 CFS  AT    1.500 HOURS    BASIN AREA =    .0000 SQ. MI.


*s
*S TOTAL DISCHARGE TO STANFORD IN EXISTING CONDITION
ADD HYD              ID=51 HYD NO=151.1 ID I 2 ID II 4
PRINT HYD            ID=51 CODE 10

                                   PARTIAL HYDROGRAPH    151.10

     TIME       FLOW          TIME       FLOW          TIME       FLOW          TIME       FLOW          TIME       FLOW
      HRS        CFS           HRS        CFS           HRS        CFS           HRS        CFS           HRS        CFS
      .000        .0          1.500        1.9         3.000        .0          4.500        .0          6.000        .0
      .300        .0          1.800         .7         3.300        .0          4.800        .0
      .600        .0          2.100         .3         3.600        .0          5.100        .0
      .900        .0          2.400         .1         3.900        .0          5.400        .0
     1.200        .0          2.700         .0         4.200        .0          5.700        .0

    RUNOFF VOLUME =      2.03686 INCHES      =         .0685 ACRE-FEET
    PEAK DISCHARGE RATE =        1.87 CFS  AT    1.500 HOURS    BASIN AREA =    .0006 SQ. MI.


*-----------------------------------------------------------------------
*-----------------------------------------------------------------------
*S
*S COMPUTE RUNOFF FOR DEVELOPED CONDITIONS
*S
*-----------------------------------------------------------------------
*S
*S NOTE:  BASINS A AND B HAVE NO PROPOSED CHANGES OR DEVELOPMENT
*S        IN THIS PROJECT.  THEREFORE, THE EXISTING CONDITIONS
*S        SHOWN ABOVE STILL APPLY.
*S
*S  BASIN C-1  (INCLUDES ALL OF EXISTING BASINS C AND D PLUS PART
                OF BASIN E WHERE BUILDING HAS BEEN REMOVED)
*S
COMPUTE NM HYD       ID=6    HYD NO= 106.1    DA=0.0005423 SQ MI
                     PER A=0 PER B=0 PER C=31  PER D=69 TP=-.133
                     RAIN=-1

     K =    .072485HR     TP =    .133000HR     K/TP RATIO =    .545000      SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =    1.4806     CFS    UNIT VOLUME =     .9916        B =    526.28       P60 = 2.0100
     AREA =       .000374 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
```

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = .48481 CFS UNIT VOLUME = .9738 B = 383.55 P60 = 2.0100
AREA = .000168 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=6 CODE=10

PARTIAL HYDROGRAPH 106.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	1.5	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.5	3.300	.0	4.800	.0		
.600	.0	2.100	.2	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.80987 INCHES = .0523 ACRE-FEET
PEAK DISCHARGE RATE = 1.48 CFS AT 1.500 HOURS BASIN AREA = .0005 SQ. MI.

```
*S
*S  BASIN E-1    (BASIN REDUCED DUE TO PART OF BUILDING REMOVED)
*S
COMPUTE NM HYD       ID=7   HYD NO= 107.1   DA=0.0000365 SQ MI
                     PER A=0 PER B=0 PER C=0  PER D=100 TP=-.133
                     RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .14443 CFS UNIT VOLUME = .9244 B = 526.28 P60 = 2.0100
AREA = .000037 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=7 CODE=10

PARTIAL HYDROGRAPH 107.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.900	.0	1.800	.0	2.700	.0		
.300	.0	1.200	.0	2.100	.0	3.000	.0		
.600	.0	1.500	.1	2.400	.0				

RUNOFF VOLUME = 2.11656 INCHES = .0041 ACRE-FEET
PEAK DISCHARGE RATE = .12 CFS AT 1.500 HOURS BASIN AREA = .0000 SQ. MI.

```
*s
*----------------------------------------------------------------------
*----------------------------------------------------------------------
*S
*S ROUTE DEVELOPED FLOWS THROUGH DETENTION POND
*S
*----------------------------------------------------------------------
*S
ROUTE RESERVOIR      ID=66  HYD=POND.007 INFLOW ID=6  CODE=10
                     OUTFLOW(CFS)    STORAGE(AC-FT)    ELEV(FT)
                       0.0               0.0             1
                       0.08              0.00022644      1.25
                       0.28              0.00069591      1.50
                       0.37              0.00140800      1.75
                       0.44              0.0236312       2

  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

    TIME       INFLOW     ELEV       VOLUME     OUTFLOW
    (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      .00         .00       1.00        .000        .00
      .30         .00       1.00        .000        .00
```

.60	.00	1.00	.000	.00
.90	.00	1.00	.000	.00
1.20	.02	1.03	.000	.01
1.50	1.48	1.83	.009	.39
1.80	.51	1.97	.021	.43
2.10	.24	1.95	.019	.43
2.40	.05	1.87	.012	.40
2.70	.02	1.77	.003	.37
3.00	.01	1.04	.000	.01
3.30	.01	1.03	.000	.01
3.60	.01	1.02	.000	.01
3.90	.01	1.02	.000	.01
4.20	.01	1.02	.000	.01
4.50	.01	1.02	.000	.01
4.80	.01	1.02	.000	.01
5.10	.01	1.02	.000	.01
5.40	.01	1.02	.000	.01
5.70	.01	1.02	.000	.01
6.00	.01	1.02	.000	.01
6.30	.00	1.00	.000	.00

PEAK DISCHARGE = .432 CFS - PEAK OCCURS AT HOUR 1.89
MAXIMUM WATER SURFACE ELEVATION = 1.972
MAXIMUM STORAGE = .0211 AC-FT INCREMENTAL TIME= .030000HRS

*S
PRINT HYD ID=66 CODE=10

HYDROGRAPH FROM AREA POND.007

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.4	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.4	3.300	.0	4.800	.0	6.300	.0
.600	.0	2.100	.4	3.600	.0	5.100	.0		
.900	.0	2.400	.4	3.900	.0	5.400	.0		
1.200	.0	2.700	.4	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.80932 INCHES = .0523 ACRE-FEET
PEAK DISCHARGE RATE = .43 CFS AT 1.890 HOURS BASIN AREA = .0005 SQ. MI.

*S
*S CALCULATE TOTAL DISCHARGE TO STANFORD FROM DEVELOPED CONDITIONS
ADD HYD ID=52 HYD NO=152.1 ID I 2 ID II 66
PRINT HYD ID=52 CODE 10

PARTIAL HYDROGRAPH 152.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	1.2	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.7	3.300	.0	4.800	.0	6.300	.0
.600	.0	2.100	.6	3.600	.0	5.100	.0		
.900	.0	2.400	.4	3.900	.0	5.400	.0		
1.200	.0	2.700	.4	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.86970 INCHES = .0801 ACRE-FEET
PEAK DISCHARGE RATE = 1.16 CFS AT 1.500 HOURS BASIN AREA = .0008 SQ. MI.

*S
FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 12:22:01
←(s0p10h4099T←&l6D

10-YEAR STORM

```
    AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
         RUN DATE (MON/DAY/YR) = 09/07/1998
         START TIME (HR:MIN:SEC) = 13:28:07     USER NO.= AHYMO-I-9702a0100001A-SH
         INPUT FILE = d:\ahymo\Stan10.dat

START                TIME=0    PUNCH=0   PRINT LINES=-6
*S     COMPUTE 10 YR. 6 HR. HYDROGRAPHS FOR SOUND & SIGNAL
*S     STANFORD.DAT     -    HYMO PER JAN 1993 DPM REVISIONS
*S
*S ANALYSIS OF DEVELOPMENT USING DETENTION POND
*S
*--------------------------------------------------------------------
*--------------------------------------------------------------------
RAINFALL             TYPE=-1  RAIN QUAR=0 RAIN ONE=1.34 RAIN SIX=1.57
                     RAIN DAY=1.833 DT=0.03

                COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                DT =    .030000 HOURS       END TIME =     6.000000 HOURS
*--------------------------------------------------------------------
*--------------------------------------------------------------------
*S
*S COMPUTE RUNOFF FOR EXISTING CONDITIONS
*S
*--------------------------------------------------------------------
*S
*S  BASIN A
COMPUTE NM HYD       ID=1    HYD NO= 101.1    DA=0.0003431 SQ MI
                     PER A=0 PER B=0 PER C=51  PER D=49 TP=-.133
                     RAIN=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   .66524    CFS   UNIT VOLUME =    .9833       B =   526.28      P60 = 1.3400
     AREA =      .000168 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .030000


     K =   .106876HR    TP =   .133000HR    K/TP RATIO =   .803581     SHAPE CONSTANT, N =  4.455904
     UNIT PEAK =   .50586    CFS   UNIT VOLUME =    .9741       B =   384.49      P60 = 1.3400
     AREA =      .000175 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .030000

PRINT HYD            ID=1      CODE=10

                                PARTIAL HYDROGRAPH   101.10

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
      .000       .0          1.500        .5         3.000        .0         4.500        .0         6.000        .0
      .300       .0          1.800        .2         3.300        .0         4.800        .0
      .600       .0          2.100        .1         3.600        .0         5.100        .0
      .900       .0          2.400        .0         3.900        .0         5.400        .0
     1.200       .0          2.700        .0         4.200        .0         5.700        .0

    RUNOFF VOLUME =      .91585 INCHES     =        .0168 ACRE-FEET
    PEAK DISCHARGE RATE =        .53 CFS  AT   1.500 HOURS   BASIN AREA =   .0003 SQ. MI.


*s
*S  BASIN B
COMPUTE NM HYD       ID=2    HYD NO= 102.1    DA=0.0002612 SQ MI
                     PER A=0 PER B=9 PER C=0  PER D=91 TP=-.133
                     RAIN=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   .94054    CFS   UNIT VOLUME =    .9873       B =   526.28      P60 = 1.3400
     AREA =      .000238 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .030000


     K =   .140002HR    TP =   .133000HR    K/TP RATIO =  1.052645     SHAPE CONSTANT, N =  3.354139
     UNIT PEAK =   .54709E-01CFS   UNIT VOLUME =    .8646       B =   309.53      P60 = 1.3400
     AREA =      .000024 SQ MI    IA =    .50000 INCHES    INF =   1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .030000

PRINT HYD            ID=2      CODE=10

                                PARTIAL HYDROGRAPH   102.10

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
      .000       .0          1.500        .5         3.000        .0         4.500        .0         6.000        .0
      .300       .0          1.800        .2         3.300        .0         4.800        .0
      .600       .0          2.100        .1         3.600        .0         5.100        .0
      .900       .0          2.400        .0         3.900        .0         5.400        .0
```

1.200	.0	2.700	.0	4.200	.0	5.700	.0

RUNOFF VOLUME = 1.24338 INCHES = .0173 ACRE-FEET
PEAK DISCHARGE RATE = .49 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

```
*s
*S  BASIN C
COMPUTE NM HYD      ID=3   HYD NO= 101.1   DA=0.0003196 SQ MI
                    PER A=0 PER B=0 PER C=62  PER D=38 TP=-.133
                    RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .48056 CFS UNIT VOLUME = .9748 B = 526.28 P60 = 1.3400
AREA = .000121 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .106876HR TP = .133000HR K/TP RATIO = .803581 SHAPE CONSTANT, N = 4.455904
UNIT PEAK = .57284 CFS UNIT VOLUME = .9764 B = 384.49 P60 = 1.3400
AREA = .000198 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

```
PRINT HYD           ID=3      CODE=10
```

PARTIAL HYDROGRAPH 101.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.5	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.1	3.300	.0	4.800	.0		
.600	.0	2.100	.1	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = .82463 INCHES = .0141 ACRE-FEET
PEAK DISCHARGE RATE = .47 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

```
*S
*S  BASIN D
COMPUTE NM HYD      ID=4   HYD NO= 104.1   DA=0.0003694 SQ MI
                    PER A=0 PER B=0 PER C=5  PER D=95 TP=-.133
                    RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.3886 CFS UNIT VOLUME = .9916 B = 526.28 P60 = 1.3400
AREA = .000351 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .106876HR TP = .133000HR K/TP RATIO = .803581 SHAPE CONSTANT, N = 4.455904
UNIT PEAK = .53395E-01CFS UNIT VOLUME = .8728 B = 384.49 P60 = 1.3400
AREA = .000018 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

```
PRINT HYD           ID=4      CODE=10
```

PARTIAL HYDROGRAPH 104.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.7	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.3	3.300	.0	4.800	.0		
.600	.0	2.100	.1	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.29732 INCHES = .0256 ACRE-FEET
PEAK DISCHARGE RATE = .73 CFS AT 1.500 HOURS BASIN AREA = .0004 SQ. MI.

```
*s
*S  BASIN E
COMPUTE NM HYD      ID=5   HYD NO= 105.1   DA=0.0000497 SQ MI
                    PER A=0 PER B=0 PER C=0  PER D=100 TP=-.133
                    RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .19666 CFS UNIT VOLUME = .9426 B = 526.28 P60 = 1.3400
AREA = .000050 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

```
PRINT HYD           ID=5      CODE=10
```

PARTIAL HYDROGRAPH 105.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.600	.0	1.200	.0	1.800	.0	2.400	.0
.300	.0	.900	.0	1.500	.1	2.100	.0	2.700	.0

RUNOFF VOLUME = 1.33879 INCHES = .0035 ACRE-FEET
PEAK DISCHARGE RATE = .10 CFS AT 1.500 HOURS BASIN AREA = .0000 SQ. MI.

```
*s
*S TOTAL DISCHARGE TO STANFORD IN EXISTING CONDITION
ADD HYD             ID=51 HYD NO=151.1 ID I 2 ID II 4
PRINT HYD           ID=51 CODE 10
```

PARTIAL HYDROGRAPH 151.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	1.2	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.4	3.300	.0	4.800	.0		
.600	.0	2.100	.2	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.27424 INCHES = .0429 ACRE-FEET
PEAK DISCHARGE RATE = 1.22 CFS AT 1.500 HOURS BASIN AREA = .0006 SQ. MI.

```
*-----------------------------------------------------------------------
*-----------------------------------------------------------------------
*S
*S COMPUTE RUNOFF FOR DEVELOPED CONDITIONS
*S
*-----------------------------------------------------------------------
*S
*S NOTE:  BASINS A AND B HAVE NO PROPOSED CHANGES OR DEVELOPMENT
*S        IN THIS PROJECT.  THEREFORE, THE EXISTING CONDITIONS
*S        SHOWN ABOVE STILL APPLY.
*S
*S  BASIN C-1  (INCLUDES ALL OF EXISTING BASINS C AND D PLUS PART
                OF BASIN E WHERE BUILDING HAS BEEN REMOVED)
*S
COMPUTE NM HYD      ID=6   HYD NO= 106.1   DA=0.0005423 SQ MI
                    PER A=0 PER B=0 PER C=31  PER D=69 TP=-.133
                    RAIN=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.4806 CFS UNIT VOLUME = .9916 B = 526.28 P60 = 1.3400
AREA = .000374 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .106876HR TP = .133000HR K/TP RATIO = .803581 SHAPE CONSTANT, N = 4.455904
UNIT PEAK = .48600 CFS UNIT VOLUME = .9741 B = 384.49 P60 = 1.3400
AREA = .000168 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

```
PRINT HYD           ID=6      CODE=10
```

PARTIAL HYDROGRAPH 106.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.9	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.3	3.300	.0	4.800	.0		
.600	.0	2.100	.1	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.08171 INCHES = .0313 ACRE-FEET
PEAK DISCHARGE RATE = .94 CFS AT 1.500 HOURS BASIN AREA = .0005 SQ. MI.

```
*S
*S  BASIN E-1   (BASIN REDUCED DUE TO PART OF BUILDING REMOVED)
*S
COMPUTE NM HYD      ID=7   HYD NO= 107.1   DA=0.0000365 SQ MI
                    PER A=0 PER B=0 PER C=0  PER D=100 TP=-.133
```

```
                    RAIN=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   .14443    CFS   UNIT VOLUME =    .9244       B =   526.28      P60 = 1.3400
     AREA =      .000037 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .030000

PRINT HYD           ID=7      CODE=10

                                PARTIAL HYDROGRAPH   107.10

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
      .000       .0           .600       .0          1.200       .0          1.800       .0          2.400       .0
      .300       .0           .900       .0          1.500       .1          2.100       .0

    RUNOFF VOLUME =     1.33879 INCHES     =        .0026 ACRE-FEET
    PEAK DISCHARGE RATE =        .08 CFS  AT   1.500 HOURS   BASIN AREA =   .0000 SQ. MI.


*s

*---------------------------------------------------------------------
*S
*S ROUTE DEVELOPED FLOWS THROUGH DETENTION POND
*S
*---------------------------------------------------------------------
*S
ROUTE RESERVOIR     ID=66  HYD=POND.007 INFLOW ID=6  CODE=10
                    OUTFLOW(CFS)    STORAGE(AC-FT)    ELEV(FT)
                      0.0               0.0             1
                      0.08              0.00022644      1.25
                      0.28              0.00069591      1.50
                      0.37              0.00140800      1.75
                      0.44              0.0236312       2

  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

    TIME       INFLOW     ELEV       VOLUME     OUTFLOW
    (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      .00         .00       1.00        .000        .00
      .30         .00       1.00        .000        .00
      .60         .00       1.00        .000        .00
      .90         .00       1.00        .000        .00
     1.20         .00       1.00        .000        .00
     1.50         .94       1.78        .004        .38
     1.80         .31       1.83        .008        .39
     2.10         .14       1.78        .004        .38
     2.40         .03       1.10        .000        .03
     2.70         .01       1.03        .000        .01
     3.00         .00       1.02        .000        .01
     3.30         .00       1.01        .000        .00
 PEAK DISCHARGE =          .393 CFS - PEAK OCCURS AT HOUR    1.71
 MAXIMUM WATER SURFACE ELEVATION =         1.833
 MAXIMUM STORAGE =          .0088 AC-FT      INCREMENTAL TIME=      .030000HRS
*S
PRINT HYD           ID=66 CODE=10

                                HYDROGRAPH FROM AREA POND.007

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
      .000       .0          1.500       .4          3.000       .0          4.500       .0          6.000       .0
      .300       .0          1.800       .4          3.300       .0          4.800       .0
      .600       .0          2.100       .4          3.600       .0          5.100       .0
      .900       .0          2.400       .0          3.900       .0          5.400       .0
     1.200       .0          2.700       .0          4.200       .0          5.700       .0

    RUNOFF VOLUME =     1.08128 INCHES     =        .0313 ACRE-FEET
    PEAK DISCHARGE RATE =        .39 CFS  AT   1.710 HOURS   BASIN AREA =   .0005 SQ. MI.


*S
*S CALCULATE TOTAL DISCHARGE TO STANFORD FROM DEVELOPED CONDITIONS
ADD HYD             ID=52 HYD NO=152.1 ID I 2 ID II 66
PRINT HYD           ID=52 CODE 10

                                PARTIAL HYDROGRAPH   152.10

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
```

HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	1.500	.9	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.6	3.300	.0	4.800	.0		
.600	.0	2.100	.5	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.13363 INCHES = .0486 ACRE-FEET
PEAK DISCHARGE RATE = .87 CFS AT 1.500 HOURS BASIN AREA = .0008 SQ. MI.

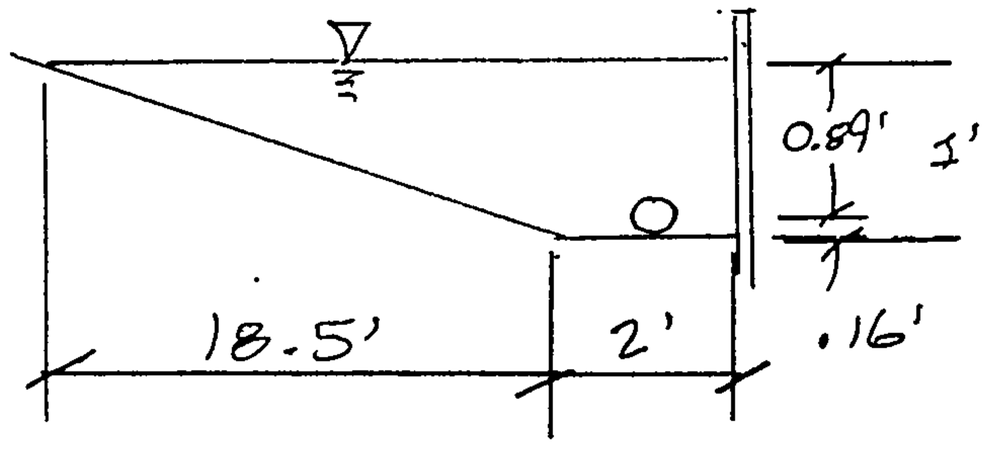
*S
FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 13:28:07
←(s0p10h4099T←&16D

POND OUTFLOW

9-3-98

DISCHARGE TYPE 4" DIP PIPE



OUTFLOW

DEPTH 0.25' h = 0.25 - 0.16 = 0.09'

$Q_{WEIR} = (2.67)(0.68)(0.09)^{3/2} = 0.05$ cfs

DEPTH 0.50' h = 0.50 - 0.16 = 0.34'

$Q_{ORIFICE} = (.67)(0.09)\sqrt{2g(0.34)'} = 0.28$ cfs

DEPTH 0.75' h = 0.75 - 0.16 = 0.59'

$Q_{ORIFICE} = (.67)(0.09)\sqrt{2g(0.59)'} = 0.37$ cfs

DEPTH 1.00' h = 1.0 - .16 = 0.84'

$Q_{ORIFICE} = (.67)(0.09)\sqrt{2g[0.84'} = 0.49$ cfs

APPENDIX B

RUNOFF SUMMARY

100-YEAR STORM

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -          - VERSION: 1997.02c     RUN DATE (MON/DAY/YR) =09/07/1998
INPUT FILE = d:\ahymo\Stanford.dat                USER NO.= AHYMO-I-9702a0100001A-SH

                    FROM TO          PEAK      RUNOFF        TIME TO  CFS    PAGE =  1
          HYDROGRAPH  ID  ID      AREA    DISCHARGE    VOLUME    RUNOFF   PEAK    PER
COMMAND    IDENTIFICATION  NO.  NO.    (SQ MI)    (CFS)     (AC-FT)  (INCHES) (HOURS)  ACRE    NOTATION

START                                                          TIME=     .00
*S    COMPUTE 100 YR. 6 HR. HYDROGRAPHS FOR SOUND & SIGNAL
*S    STANFORD.DAT    -    HYMO PER JAN 1993 DPM REVISIONS
*S
*S ANALYSIS OF DEVELOPMENT USING DETENTION POND
*S
RAINFALL  TYPE= 1                                              RAIN6=   2.350
*S
*S COMPUTE RUNOFF FOR EXISTING CONDITIONS
*S
*S
*S  BASIN A
COMPUTE NM HYD      101.10  -   1      .00034       .87      .029     1.61200   1.500   3.984 PER IMP=  49.00
*s
*S  BASIN B
COMPUTE NM HYD      102.10  -   2      .00026       .76      .028     1.99611   1.500   4.566 PER IMP=  91.00
*s
*S  BASIN C
COMPUTE NM HYD      101.10  -   3      .00032       .78      .026     1.50318   1.500   3.824 PER IMP=  38.00
*S
*S  BASIN D
COMPUTE NM HYD      104.10  -   4      .00037      1.11      .041     2.06709   1.500   4.680 PER IMP=  95.00
*s
*S  BASIN E
COMPUTE NM HYD      105.10  -   5      .00005       .16      .006     2.11656   1.500   4.983 PER IMP= 100.00
*s
*S TOTAL DISCHARGE TO STANFORD IN EXISTING CONDITION
ADD HYD             151.10 2& 4  51    .00063      1.87      .069     2.03686   1.500   4.633
*S
*S COMPUTE RUNOFF FOR DEVELOPED CONDITIONS
*S
*S
*S NOTE:  BASINS A AND B HAVE NO PROPOSED CHANGES OR DEVELOPMENT
*S       IN THIS PROJECT.  THEREFORE, THE EXISTING CONDITIONS
*S       SHOWN ABOVE STILL APPLY.
*S
*S  BASIN C-1  (INCLUDES ALL OF EXISTING BASINS C AND D PLUS PART
*S
COMPUTE NM HYD      106.10  -   6      .00054      1.48      .052     1.80987   1.500   4.268 PER IMP=  69.00
*S
*S  BASIN E-1   (BASIN REDUCED DUE TO PART OF BUILDING REMOVED)
*S
COMPUTE NM HYD      107.10  -   7      .00004       .12      .004     2.11656   1.500   5.081 PER IMP= 100.00
*s
*S
*S ROUTE DEVELOPED FLOWS THROUGH DETENTION POND
*S
*S
ROUTE RESERVOIR     POND.007   6  66    .00054       .43      .052     1.80932   1.890   1.245 AC-FT=    .021
*S
*S
*S CALCULATE TOTAL DISCHARGE TO STANFORD FROM DEVELOPED CONDITIONS
ADD HYD             152.10 2&66  52    .00080      1.16      .080     1.86970   1.500   2.248
*S
FINISH
```

PEAK FLOW INTO STANFORD

EXISTING - 1.87 cfs
PROPOSED - 1.16 cfs
REDUCTION 0.71 cfs

TOTAL VOLUME INTO STANFORD

EXISTING - .069 ac-ft
PROPOSED .080 ac-ft
INCREASE 0.011 ac-ft
(479 cu ft.)

10 - YEAR STORM

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -                    - VERSION:  1997.02c      RUN DATE (MON/DAY/YR) =09/07/1998
INPUT FILE = d:\ahymo\Stan10.dat                                                      USER NO.= AHYMO-I-9702a0100001A-SH

                                FROM  TO                    PEAK        RUNOFF                  TIME TO    CFS       PAGE =    1
                   HYDROGRAPH    ID   ID        AREA      DISCHARGE     VOLUME      RUNOFF        PEAK      PER
COMMAND        IDENTIFICATION    NO.  NO.     (SQ MI)      (CFS)       (AC-FT)    (INCHES)     (HOURS)    ACRE      NOTATION

START                                                                                                    TIME=       .00
*S     COMPUTE 10 YR. 6 HR. HYDROGRAPHS FOR SOUND & SIGNAL
*S     STANFORD.DAT     -    HYMO PER JAN 1993 DPM REVISIONS
*S
*S ANALYSIS OF DEVELOPMENT USING DETENTION POND
*S
RAINFALL  TYPE= 1                                                                                        RAIN6=    1.570
*S
*S COMPUTE RUNOFF FOR EXISTING CONDITIONS
*S
*S
*S  BASIN A
COMPUTE NM HYD        101.10   -     1        .00034        .53        .017       .91585    1.500    2.435 PER IMP=  49.00
*s
*S  BASIN B
COMPUTE NM HYD        102.10   -     2        .00026        .49        .017      1.24338    1.500    2.956 PER IMP=  91.00
*s
*S  BASIN C
COMPUTE NM HYD        101.10   -     3        .00032        .47        .014       .82463    1.500    2.287 PER IMP=  38.00
*S
*S  BASIN D
COMPUTE NM HYD        104.10   -     4        .00037        .73        .026      1.29732    1.500    3.072 PER IMP=  95.00
*s
*S  BASIN E
COMPUTE NM HYD        105.10   -     5        .00005        .10        .004      1.33879    1.500    3.294 PER IMP= 100.00
*s
*S TOTAL DISCHARGE TO STANFORD IN EXISTING CONDITION
ADD HYD               151.10  2& 4  51        .00063       1.22        .043      1.27424    1.500    3.024
*S
*S COMPUTE RUNOFF FOR DEVELOPED CONDITIONS
*S
*S
*S NOTE:  BASINS A AND B HAVE NO PROPOSED CHANGES OR DEVELOPMENT
*S        IN THIS PROJECT.  THEREFORE, THE EXISTING CONDITIONS
*S        SHOWN ABOVE STILL APPLY.
*S
*S  BASIN C-1  (INCLUDES ALL OF EXISTING BASINS C AND D PLUS PART
*S
COMPUTE NM HYD        106.10   -     6        .00054        .94        .031      1.08171    1.500    2.700 PER IMP=  69.00
*S
*S  BASIN E-1   (BASIN REDUCED DUE TO PART OF BUILDING REMOVED)
*S
COMPUTE NM HYD        107.10   -     7        .00004        .08        .003      1.33879    1.500    3.358 PER IMP= 100.00
*s
*S
*S ROUTE DEVELOPED FLOWS THROUGH DETENTION POND
*S
*S
ROUTE RESERVOIR     POND.007    6    66        .00054        .39        .031      1.08128    1.710    1.133 AC-FT=      .009
*S
*S
*S CALCULATE TOTAL DISCHARGE TO STANFORD FROM DEVELOPED CONDITIONS
ADD HYD               152.10  2&66  52        .00080        .87        .049      1.13363    1.500    1.696
*S
FINISH
~(s0p10h4099T-&16D
```

PEAK FLOW INTO STANFORD

EXISTING - 1.22 cfs
PROPOSED - 0.87 cfs
REDUCTION 0.35 cfs

TOTAL VOLUME INTO STANFORD

EXISTING - 0.043 ac-ft
PROPOSED - 0.049 ac-ft
INCREASE 0.006 ac-ft
(261 cu-ft)

APPENDIX C

GRADING PLANS AND DETAILS