

STANLEY MOUNT

PRESIDENT

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WWW.MOUNTCORP.COM

2639 ALOYSIA LANE NW

ALBUQUERQUE, NM 87104



MOUNT
CORPORATION

DESIGN BUILD • DEVELOPMENT

Hydrology Comments 10-13-14

Project 1010177 AA

Hydrology does not have a record of receiving an engineer's certification for the improvements on Tract A1.

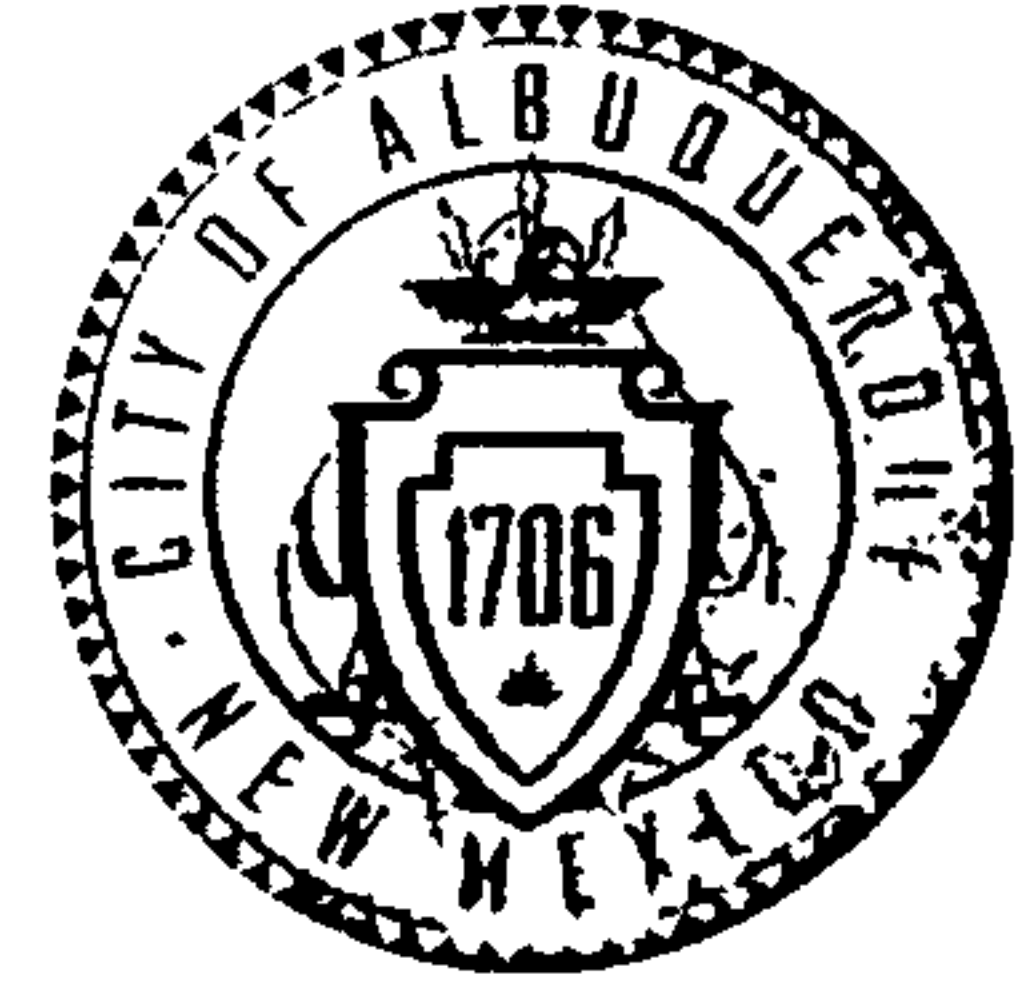
It also appears that some of the drainage improvements proposed in the approved grading and drainage plan, Mark Goodwin and Associates stamp date 6-27-08, were not constructed.

Therefore, Hydrology will conditionally approve the AA with the following conditions to be met for Building Permit approval: 1. A grading and drainage plan is submitted for the improvements shown on this proposed site plan and 2. The grading and drainage plan addresses all of Tract A1 and 3. An Engineer's certification is submitted to Hydrology for the existing buildings on Tract A1 before or concurrent with seeking certificate of occupancy on the proposed buildings.

Curtis Cherne, P.E.

Hydrology, 924-3986

CITY OF ALBUQUERQUE



September 10, 2008

Alvin S. Medina, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

Re: West Bluff Campus Grading and Drainage Plan
Engineer's Stamp dated 6-27-08 (H11/D026A)

Dear Mr. Medina,

Based upon the information provided in your submittal received 7-1-08, 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.

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

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

PROJECT TITLE: West Bluff Charter ZONE MAP/DRG. FILE # H-11 / D026A
DRB#: 03-00602 EPC#: 02-EPC-00636 & 02-EPC00637 WORK ORDER#: _____

LEGAL DESCRIPTION: Tracts B, Horizon Academy Subdivision
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA
ADDRESS: P.O. Box 90606
CITY, STATE: Albuquerque, NM

CONTACT: John M. MacKenzie
PHONE: 828-2200
ZIP CODE: 87199

OWNER: RB Saylor Properties, Inc.
ADDRESS: 5565 Eakes Road NW
CITY, STATE: Albuquerque, NM

CONTACT: Rick Saylor
PHONE: 343-9651
ZIP CODE: 87107

ARCHITECT: Masterworks Architects, Inc.
ADDRESS: 516 11th Street NW
CITY, STATE: Albuquerque, NM

CONTACT: Jim Clark
PHONE: 242-1866
ZIP CODE: 87102

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT
☐ ENGINEER/ARCHITECT CERT (TCL)
☐ ENGINEER/ARCHITECT (DRB SITE PLAN)
☐ OTHER

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
☐ 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:

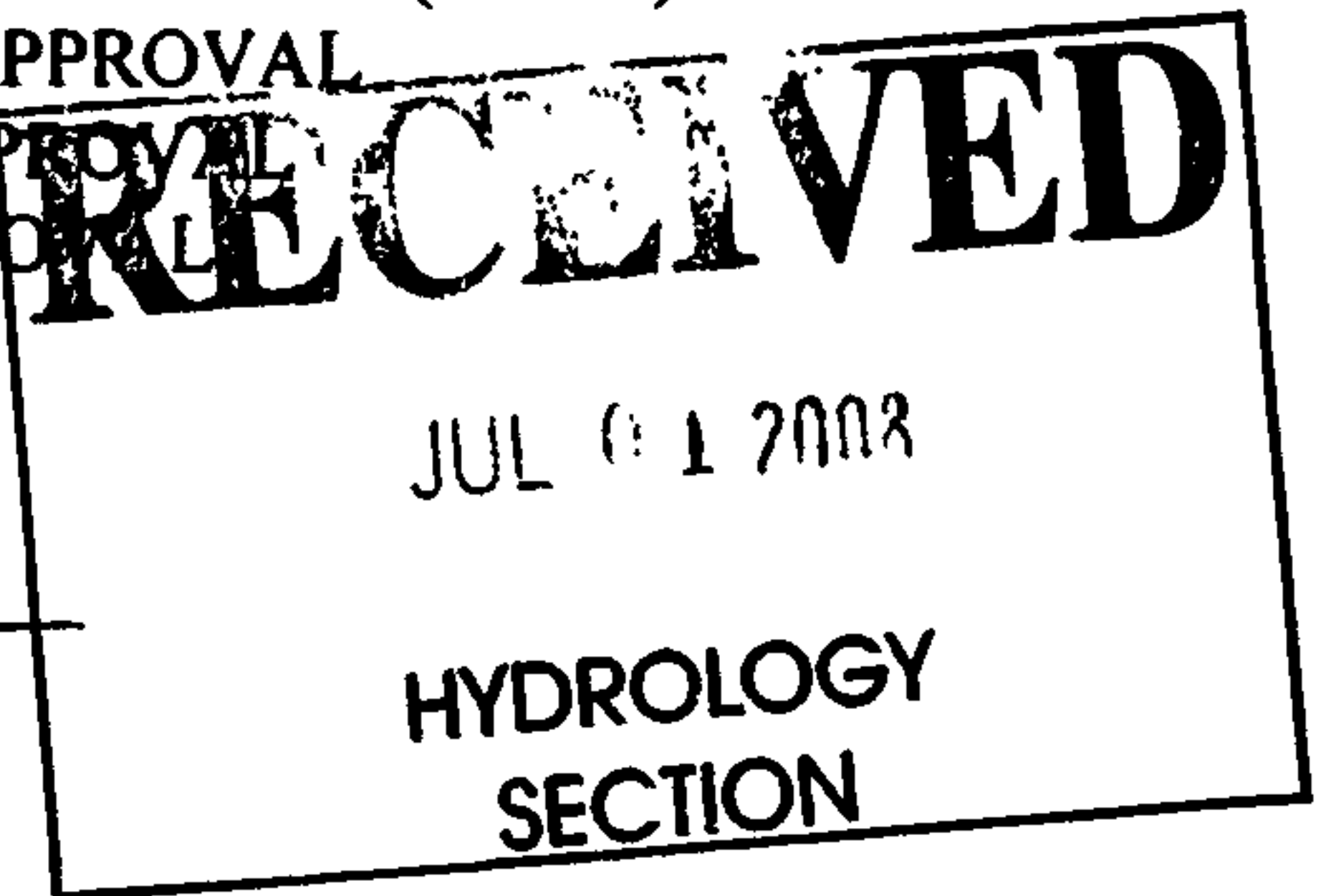
- ☐ YES
☒ NO
☐ COPY PROVIDED

ASO

SUBMITTED BY: Scott Medina, PE *SM* DATE: July 1, 2008

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

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





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 19, 2003

John MacKenzie PE
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

Re: Horizon Academy (Tract B) Grading and Drainage Plan
Engineer stamp dated 5-27-03 (H11/D26A)

Dear Mr. MacKenzie,

Based on information contained in your submittal dated 5-27-03, the above referenced plan is approved for Site Development Plan for Building Permit and Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Public Works Hydrology section at 768-3654 (Charles Caruso) or 768-3645 (Brian Wolfe).

Also, 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 924-3986.

Sincerely,

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

C: file

*The SO #18 approved for sidewalk
culvert on Miami Avenue
Carla A. Montoya
10-1-03*



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 3, 2004

John MacKenzie, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199


Re: Horizon Academy Addition Tract X, 2120 Atrisco NW, Site Development Plan

Engineer's Stamp dated 4-16-04 (H11-D26A)

Dear Mr. MacKenzie,

Based upon the information provided in your submittal received 4-16-04, the above referenced plan is approved for Site Development Plan for Building Permit action by the DRB.

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

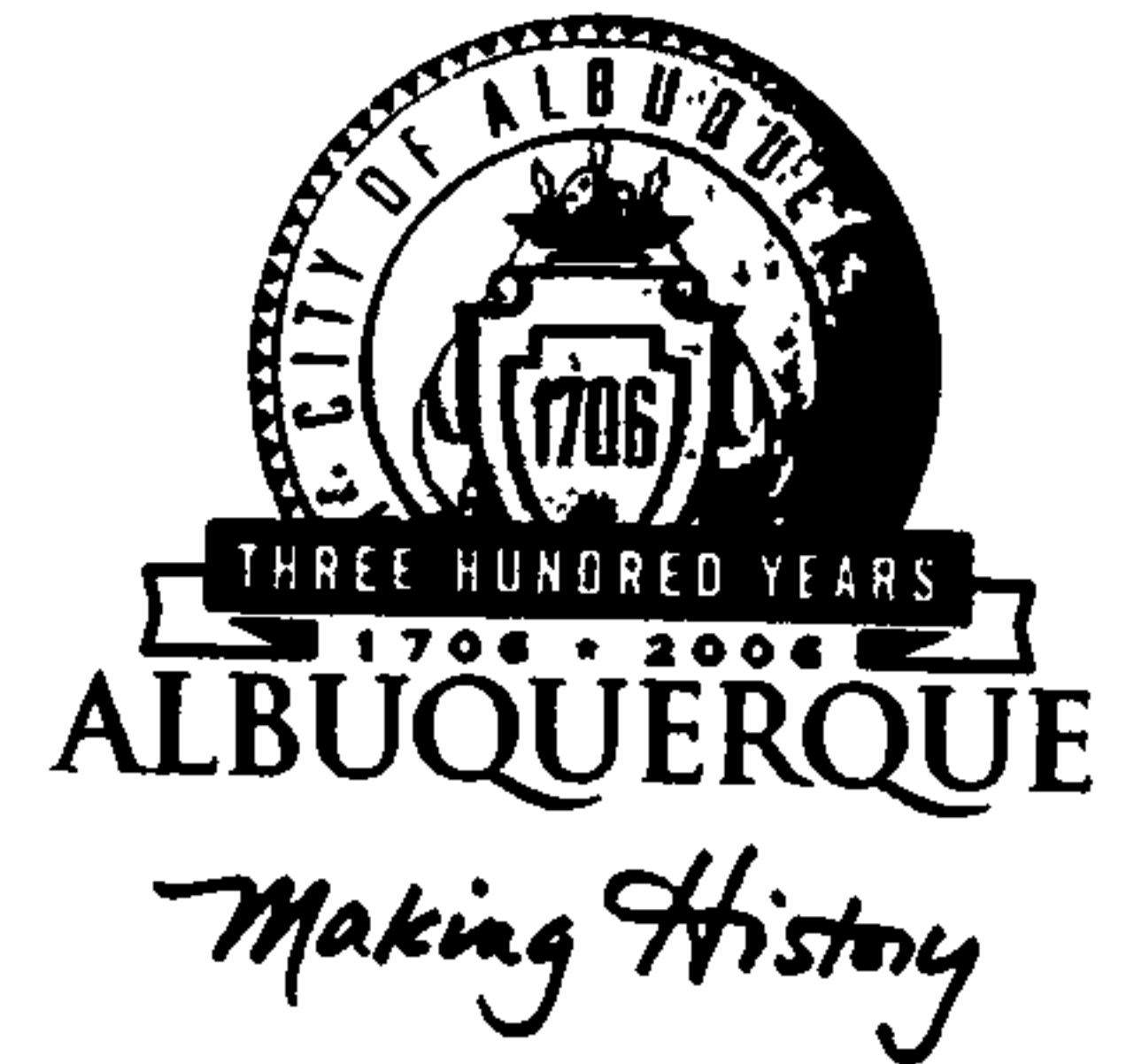
Sincerely,



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

C: Ed Adams, DMD
file

CITY OF ALBUQUERQUE



July 30, 2004

John MacKenzie, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

**Re: Horizon Academy Addition, Tract A Horizon Academy Subdivision,
Grading and Drainage Plan
Engineer's Stamp dated 7-15-04 (H11-D26A)**

Dear Mr. MacKenzie,

P.O. Box 1293

Based upon the information provided in your submittal received 7-16-04, 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.

Albuquerque

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Charles Caruso).

New Mexico 87103

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

www.cabq.gov

Sincerely,

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

C: Charles Caruso, DMD Storm Drainage Design
File

DRAINAGE INFORMATION SHEET
(REV. 1/28/2003rd)

PROJECT TITLE:	Horizon Academy Addition	ZONE MAP/DRG #:	H-11/D26A
DRB#	Project # 1000831	EPC #:	04EPC-00289 EPC 04EPC 00304
LEGAL DESCRIPTION: Tract ~~B~~ A, Horizon Academy Subdivision			
CITY ADDRESS:			
ENGINEERING FIRM:	Mark Goodwin & Associates, PA	CONTACT:	John M. MacKenzie, PE
ADDRESS:	PO Box 90606	PHONE:	828-2200
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87199
OWNER:	Saylor Properties	CONTACT:	Richard Saylor
ADDRESS:	5565 Eakes Rd. NW	PHONE:	345-9651
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87107
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- | | |
|---------------------------------------|--|
| ☐ | DRAINAGE REPORT |
| ☒ * | DRAINAGE PLAN 1 ST SUBMITTAL, req. 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) |
| ☐ | ENGINEER'S CERTIFICATION (TCL) |
| ☐ | ENGINEER'S CERTIFICATION (DRB-APPR. SITE PLAN) |
| ☐ | OTHER |
- * site plan went thru EPC, so TCL is not required

CHECK TYPE OF APPROVAL SOUGHT:

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

WAS A PRE-DESIGN CONFERENCE ATTENDED?

- | | |
|-------------------------------------|---------------|
| ☐ | YES |
| ☒ | NO |
| ☐ | COPY PROVIDED |

DATE SUBMITTED.

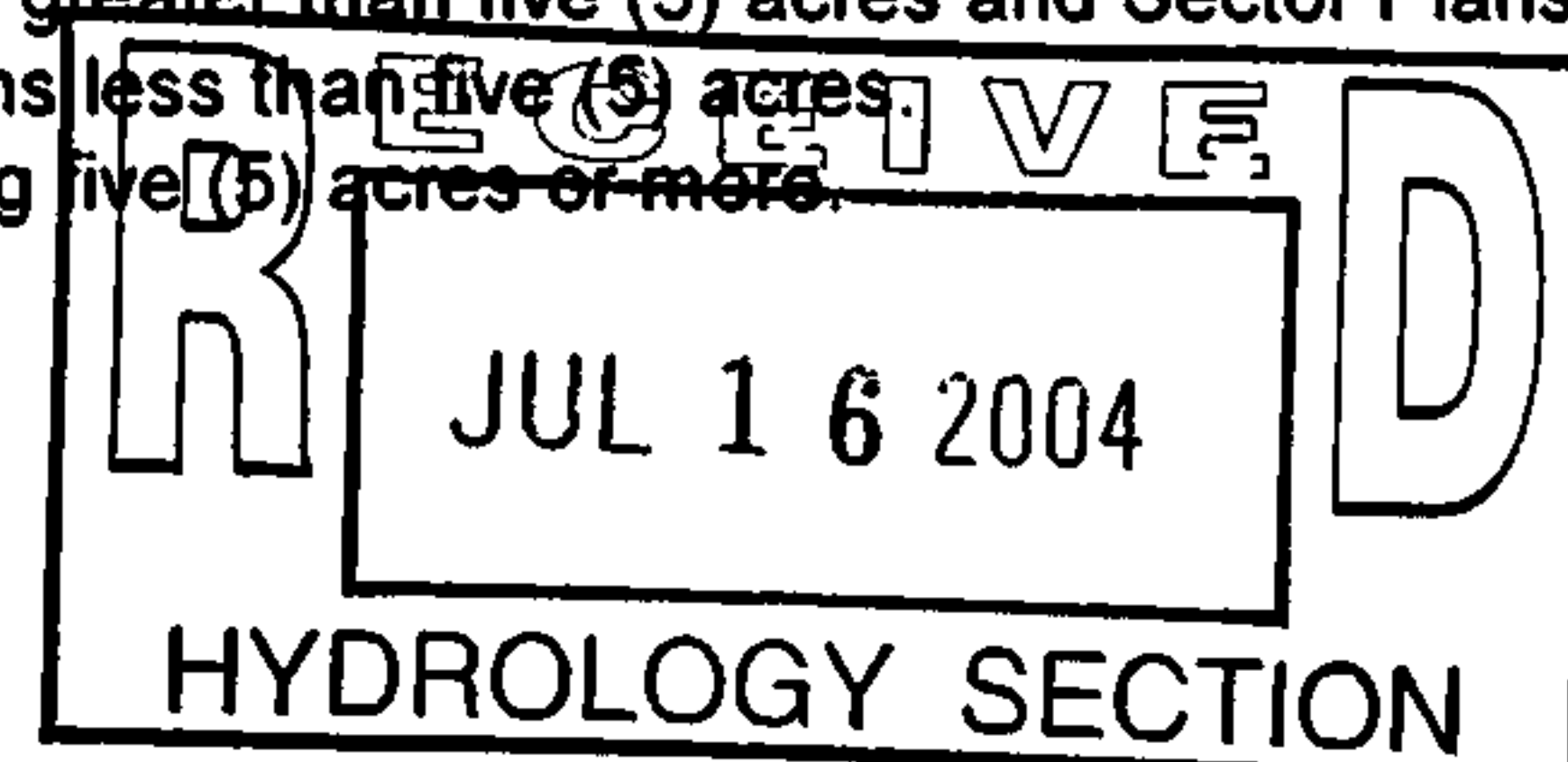
7/16/04

BY:

John M. MacKenzie
John M. MacKenzie, PE

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

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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.



AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994

RUN DATE (MON/DAY/YR) = 06/30/2004

START TIME (HR:MIN:SEC) = 16:53:25 USER NO.= M_GOODWN.I01

INPUT FILE = HORIZO2.DAT

START TIME=0.0

***** AHYMO - HORIZONADDITION.DAT

***** APRIL 4, 2003

***** HYDROGRAPH FOR HORIZON ACADEMY ADDITION @ WEST BLUFF

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.89 IN RAIN SIX=2.25 IN

RAIN DAY=2.65 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0019	.0039	.0058	.0079	.0100	.0121
.0142	.0165	.0188	.0211	.0235	.0260	.0285
.0311	.0338	.0365	.0394	.0423	.0454	.0485
.0518	.0552	.0587	.0624	.0662	.0702	.0744
.0789	.0835	.0885	.0937	.0992	.1052	.1175
.1457	.1893	.2519	.3375	.4501	.5938	.7728
.9914	1.2013	1.2874	1.3598	1.4242	1.4827	1.5366
1.5865	1.6332	1.6770	1.7182	1.7571	1.7938	1.8285
1.8614	1.8926	1.9223	1.9504	1.9771	1.9846	1.9906
1.9963	2.0017	2.0069	2.0119	2.0167	2.0214	2.0258
2.0301	2.0343	2.0384	2.0423	2.0461	2.0498	2.0535
2.0570	2.0604	2.0638	2.0671	2.0703	2.0735	2.0766
2.0796	2.0826	2.0855	2.0883	2.0911	2.0939	2.0966
2.0992	2.1019	2.1044	2.1070	2.1095	2.1119	2.1143
2.1167	2.1191	2.1214	2.1237	2.1260	2.1282	2.1304
2.1326	2.1347	2.1368	2.1389	2.1410	2.1431	2.1451
2.1471	2.1491	2.1510	2.1530	2.1549	2.1568	2.1587
2.1605	2.1624	2.1642	2.1660	2.1678	2.1695	2.1713
2.1730	2.1748	2.1765	2.1782	2.1798	2.1815	2.1831
2.1848	2.1864	2.1880	2.1896	2.1912	2.1928	2.1943
2.1959	2.1974	2.1989	2.2004	2.2019	2.2034	2.2049
2.2064	2.2078	2.2093	2.2107	2.2121	2.2135	2.2149
2.2163	2.2177	2.2191	2.2205	2.2218	2.2232	2.2245
2.2259	2.2272	2.2285	2.2298	2.2311	2.2324	2.2337
2.2350	2.2363	2.2375	2.2388	2.2400	2.2413	2.2425
2.2437	2.2450	2.2462	2.2474	2.2486	2.2498	

***** FROM THE ORIGINAL MASTER PLAN, EXISTING BASINS D AND
***** E ARE TO BE FURTHER SUBDIVIDED TO BETTER RERESENT
***** THE MORE DETAILED SITE BUILDING CONDITIONS

***** BASIN D DRAINS TO ATRISCO AND ALL OF BASIN E DRAINS
***** EAST TO THE CHANNEL DISCHARGING TO W. BLUFF OUTFALL

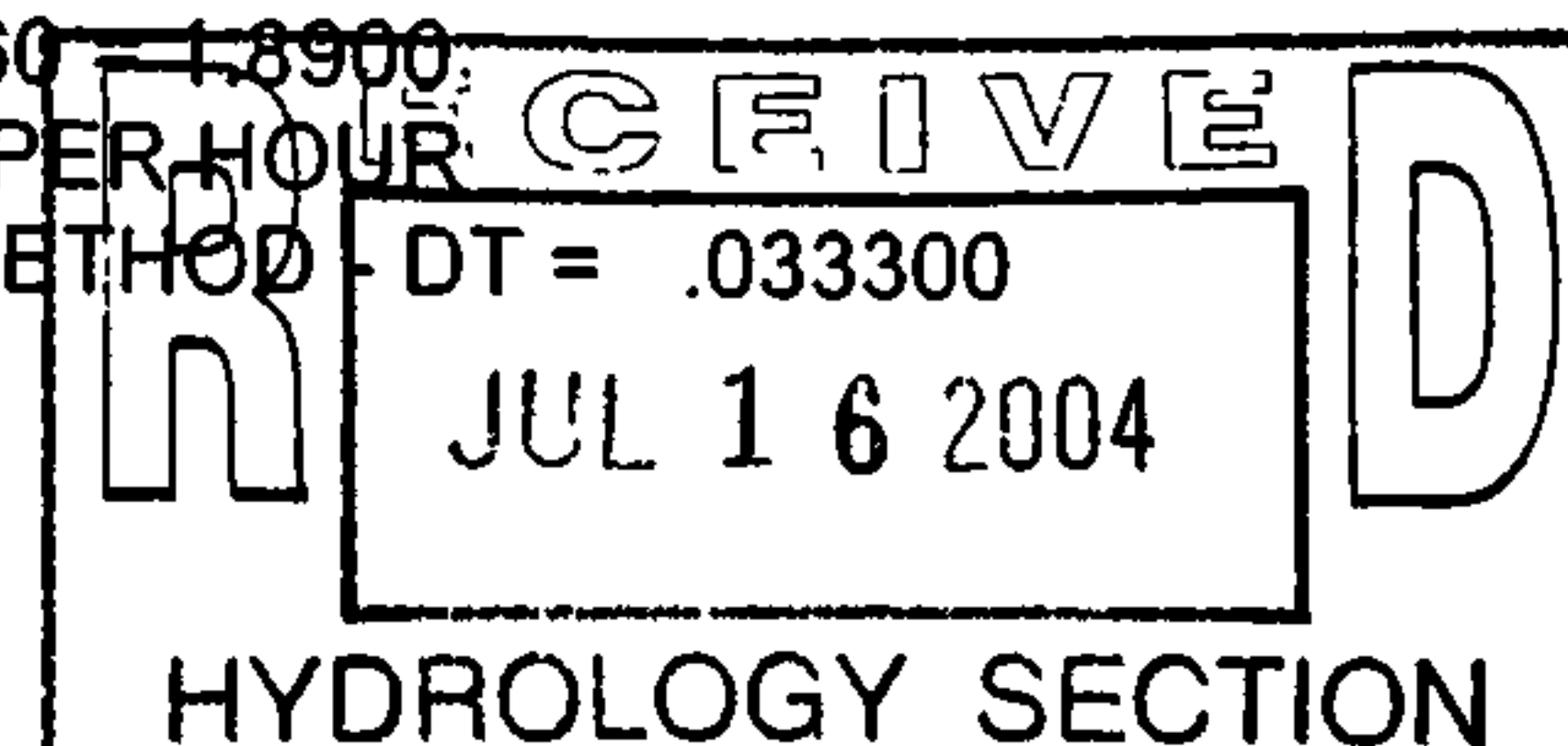
***** BASIN D1 - (0.72 ACRES) SCHOOL PARKING AREA
COMPUTE NM HYD ID=1 HYD NO=100.1 AREA=0.0011 SQ MI
PER A=0 PER B=10 PER C=5 PER D=85
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420

UNIT PEAK = 3.6914 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8900

AREA = .000935 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD DT = .033300



K = .122457HR TP = .133300HR K/TP RATIO = .918661 SHAPE CONSTANT, N = 3.853280
 UNIT PEAK = .42737 CFS UNIT VOLUME = .9700 B = 345.27 P60 = 1.8900
 AREA = .000165 SQ MI IA = .45000 INCHES INF = 1.11000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=1 CODE=24

PARTIAL HYDROGRAPH 100.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.332	.8	2.664	.1	3.996	.0	5.328	.0
.666	.0	1.998	.7	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = 1.82987 INCHES = .1074 ACRE-FEET
 PEAK DISCHARGE RATE = 2.91 CFS AT 1.499 HOURS BASIN AREA = .0011 SQ. MI.

***** BASIN D2 - (0.58 ACRES) SCHOOL COURTYARD
 COMPUTE NM HYD ID=2 HYD NO=100.2 AREA=0.0009 SQ MI
 PER A=0 PER B=0 PER C=10 PER D=90
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 3.1979 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8900
 AREA = .000810 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .106092HR TP = .133300HR K/TP RATIO = .795892 SHAPE CONSTANT, N = 4.504099
 UNIT PEAK = .26161 CFS UNIT VOLUME = .9534 B = 387.48 P60 = 1.8900
 AREA = .000090 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=2 CODE=24

PARTIAL HYDROGRAPH 100.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.332	.7	2.664	.0	3.996	.0	5.328	.0
.666	.0	1.998	.6	3.330	.0	4.662	.0	5.994	.0

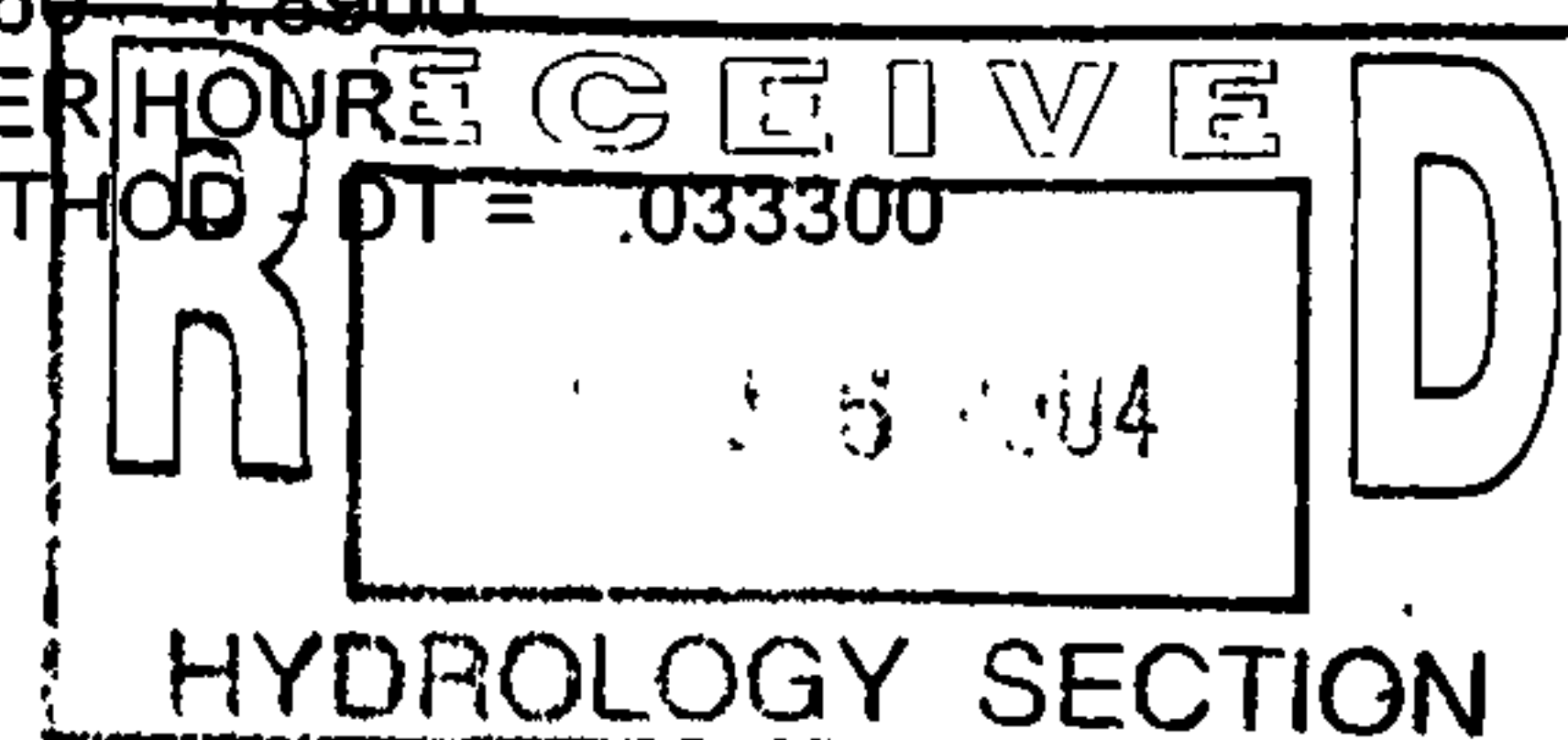
RUNOFF VOLUME = 1.91441 INCHES = .0919 ACRE-FEET
 PEAK DISCHARGE RATE = 2.48 CFS AT 1.499 HOURS BASIN AREA = .0009 SQ. MI.

***** BASIN D3 - (0.21 ACRES) EXISTING BUILDINGS OF
 ***** PORTION OF ORIGINAL HORIZON ACADEMY SITE DRAINING SOUTH TO CONCRETE SWALE

COMPUTE NM HYD ID=3 HYD NO=100.3 AREA=0.0003 SQ MI
 PER A=0 PER B=0 PER C=10 PER D=90
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.0660 CFS UNIT VOLUME = .9880 B = 526.28 P60 = 1.8900
 AREA = .000270 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .106092HR TP = .133300HR K/TP RATIO = .795892 SHAPE CONSTANT, N = 4.504099
 UNIT PEAK = .87205E-01CFS UNIT VOLUME = .8799 B = 387.48 P60 = 1.8900
 AREA = .000030 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300



PRINT HYD ID=3 CODE=24

PARTIAL HYDROGRAPH 100.30

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.332	.2	2.664	.0	3.996	.0	5.328	.0
.666	.0	1.998	.2	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = 1.91441 INCHES = .0306 ACRE-FEET
PEAK DISCHARGE RATE = .84 CFS AT 1.499 HOURS BASIN AREA = .0003 SQ. MI.

***** BASIN D4 - (0.83 ACRES)ATHLETIC FIELD AND BUILDINGS
COMPUTE NM HYD ID=4 HYD NO=100.4 AREA=0.0013 SQ MI
PER A=0 PER B=70 PER C=0 PER D=30
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.5397 CFS UNIT VOLUME = .9922 B = 526.28 P60 = 1.8900
AREA = .000390 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE CONSTANT, N = 3.603328
UNIT PEAK = 2.2378 CFS UNIT VOLUME = .9943 B = 327.79 P60 = 1.8900
AREA = .000910 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=24

PARTIAL HYDROGRAPH 100.40

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.332	.4	2.664	.0	3.996	.0	5.328	.0
.666	.0	1.998	.4	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = 1.08840 INCHES = .0755 ACRE-FEET
PEAK DISCHARGE RATE = 2.33 CFS AT 1.499 HOURS BASIN AREA = .0013 SQ. MI.

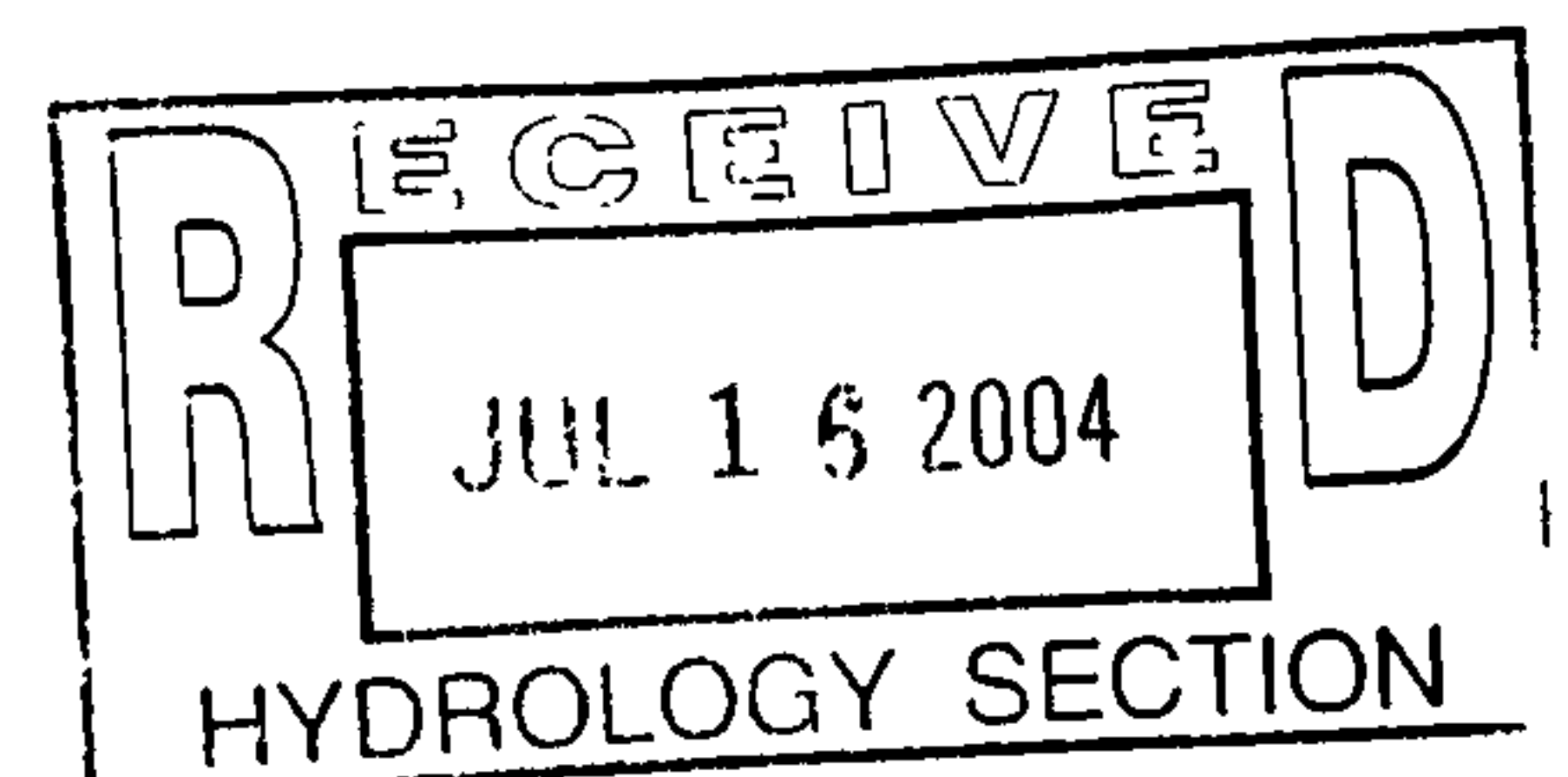
***** COMBINED RUNOFF DISCHARGING FROM BASIN D3 WITH
***** DISCHARGE FROM BASING D4 TO SIZE CONCRETE SIDEWALK
***** CULVERT CROSSING SIDEWALK ALONG NORTH PROPERTY LINE
ADD HYD ID=3 HYD NO=101.1 ID=3 ID=4
PRINT HYD ID=3 CODE=24

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	1.332	.6	2.664	.1	3.996	.0	5.328	.0
.666	.0	1.998	.6	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = 1.24294 INCHES = .1061 ACRE-FEET
PEAK DISCHARGE RATE = 3.17 CFS AT 1.499 HOURS BASIN AREA = .0016 SQ. MI.

***** COMBINED RUNOFF DISCHARGING FROM BASIN D3/D4 WITH
***** DISCHARGE FROM BASING D2 TO SIZE CONCRETE SWALE
***** RUNNING ALONG NORTH PROPERTY LINE EAST OF SW CROSSING
ADD HYD ID=2 HYD NO=101.2 ID=2 ID=3



PRINT HYD ID=2 CODE=24

PARTIAL HYDROGRAPH 101.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.332	1.3	2.664	.1	3.996	.0	5.328	.0
.666	.0	1.998	1.2	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = 1.48456 INCHES = .1979 ACRE-FEET
PEAK DISCHARGE RATE = 5.65 CFS AT 1.499 HOURS BASIN AREA = .0025 SQ. MI.

***** BASIN D5 - (0.46 ACRES)ATHLETIC FIELD AND BUILDINGS
COMPUTE NM HYD ID=5 HYD NO=100.5 AREA=0.0007 SQ MI
PER A=0 PER B=50 PER C=0 PER D=50
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.3818 CFS UNIT VOLUME = .9910 B = 526.28 P60 = 1.8900
AREA = .000350 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE CONSTANT, N = 3.603328
UNIT PEAK = .86068 CFS UNIT VOLUME = .9850 B = 327.79 P60 = 1.8900
AREA = .000350 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=5 CODE=24

PARTIAL HYDROGRAPH 100.50

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.332	.3	2.664	.0	3.996	.0	5.328	.0
.666	.0	1.998	.3	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = 1.35270 INCHES = .0505 ACRE-FEET
PEAK DISCHARGE RATE = 1.47 CFS AT 1.499 HOURS BASIN AREA = .0007 SQ. MI.

***** BASIN E1 - (0.47 ACRES)NORTH OF ATHLETIC FIELD
COMPUTE NM HYD ID=5 HYD NO=100.5 AREA=0.0025 SQ MI
PER A=0 PER B=90 PER C=0 PER D=10
TP=0.1333 HR MASS RAINFALL=-1

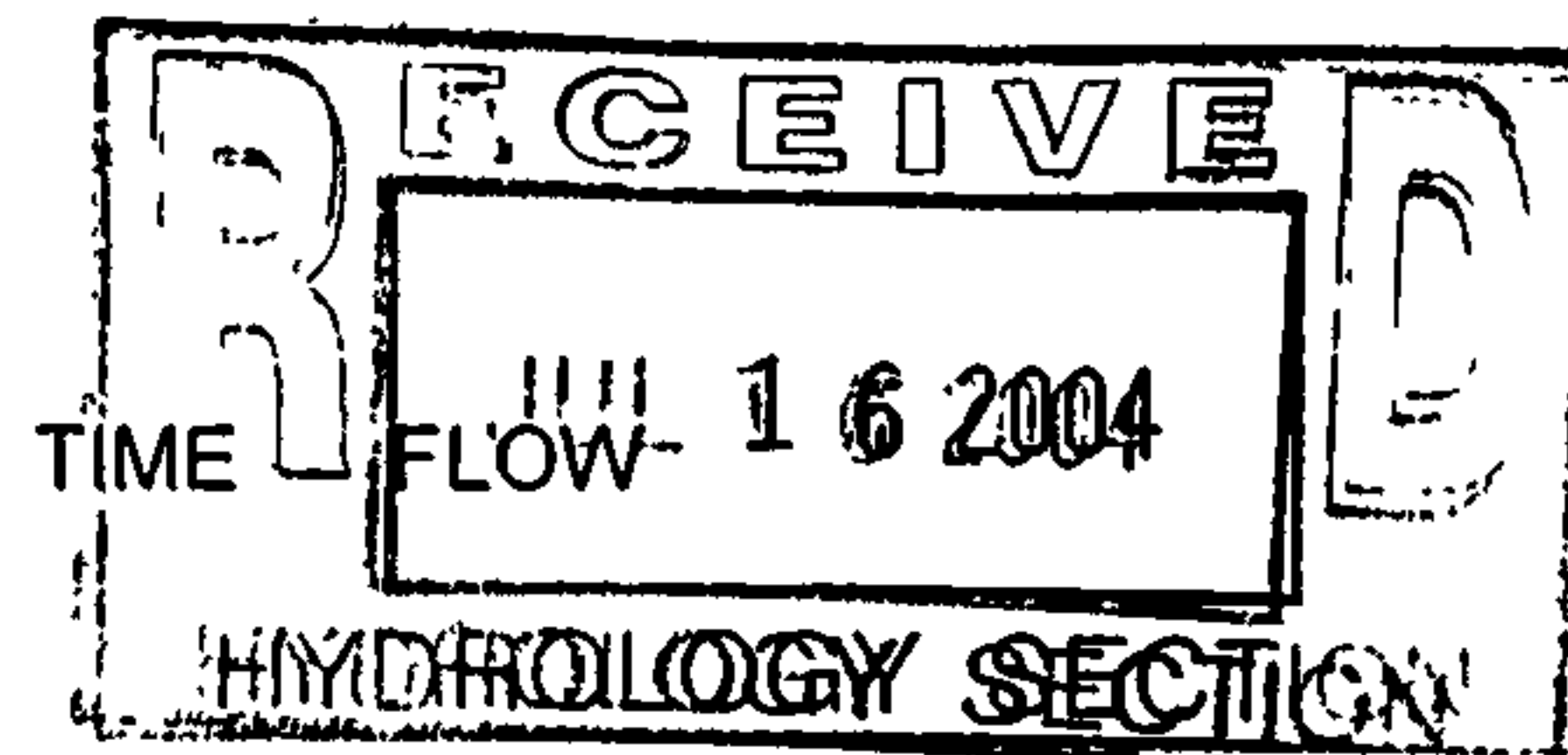
K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .98701 CFS UNIT VOLUME = .9880 B = 526.28 P60 = 1.8900
AREA = .000250 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE CONSTANT, N = 3.603328
UNIT PEAK = 5.5329 CFS UNIT VOLUME = .9978 B = 327.79 P60 = 1.8900
AREA = .002250 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=5 CODE=24

PARTIAL HYDROGRAPH 100.50

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
------	------	------	------	------	------	------	------



HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	1.332	.3	2.664	.1	3.996	.0	5.328	.0
.666	.0	1.998	.4	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = .82410 INCHES = .1099 ACRE-FEET
 PEAK DISCHARGE RATE = 3.72 CFS AT 1.499 HOURS BASIN AREA = .0025 SQ. MI.

***** BASIN E2 - (0.59 ACRES) SOUTH OF ATHLETIC FIELD
 COMPUTE NM HYD ID=6 HYD NO=100.6 AREA=0.0009 SQ MI
 PER A=0 PER B=90 PER C=0 PER D=10
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .35532 CFS UNIT VOLUME = .9663 B = 526.28 P60 = 1.8900
 AREA = .000090 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE CONSTANT, N = 3.603328
 UNIT PEAK = 1.9919 CFS UNIT VOLUME = .9932 B = 327.79 P60 = 1.8900
 AREA = .000810 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=6 CODE=24

PARTIAL HYDROGRAPH 100.60

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	1.332	.1	2.664	.0	3.996	.0	5.328	.0
.666	.0	1.998	.2	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = .82410 INCHES = .0396 ACRE-FEET
 PEAK DISCHARGE RATE = 1.35 CFS AT 1.499 HOURS BASIN AREA = .0009 SQ. MI.

***** COMBINED RUNOFF DISCHARGING FROM BASIN E1 WITH
 ***** DISCHARGE FROM BASING E2 TO SIZE CONCRETE PIPE
 ***** RUNNING UNDER ASPHALT PATH ALONG SE PROPERTY LINE
 ADD HYD ID=5 HYD NO=101.2 ID=5 ID=6
 PRINT HYD ID=5 CODE=24

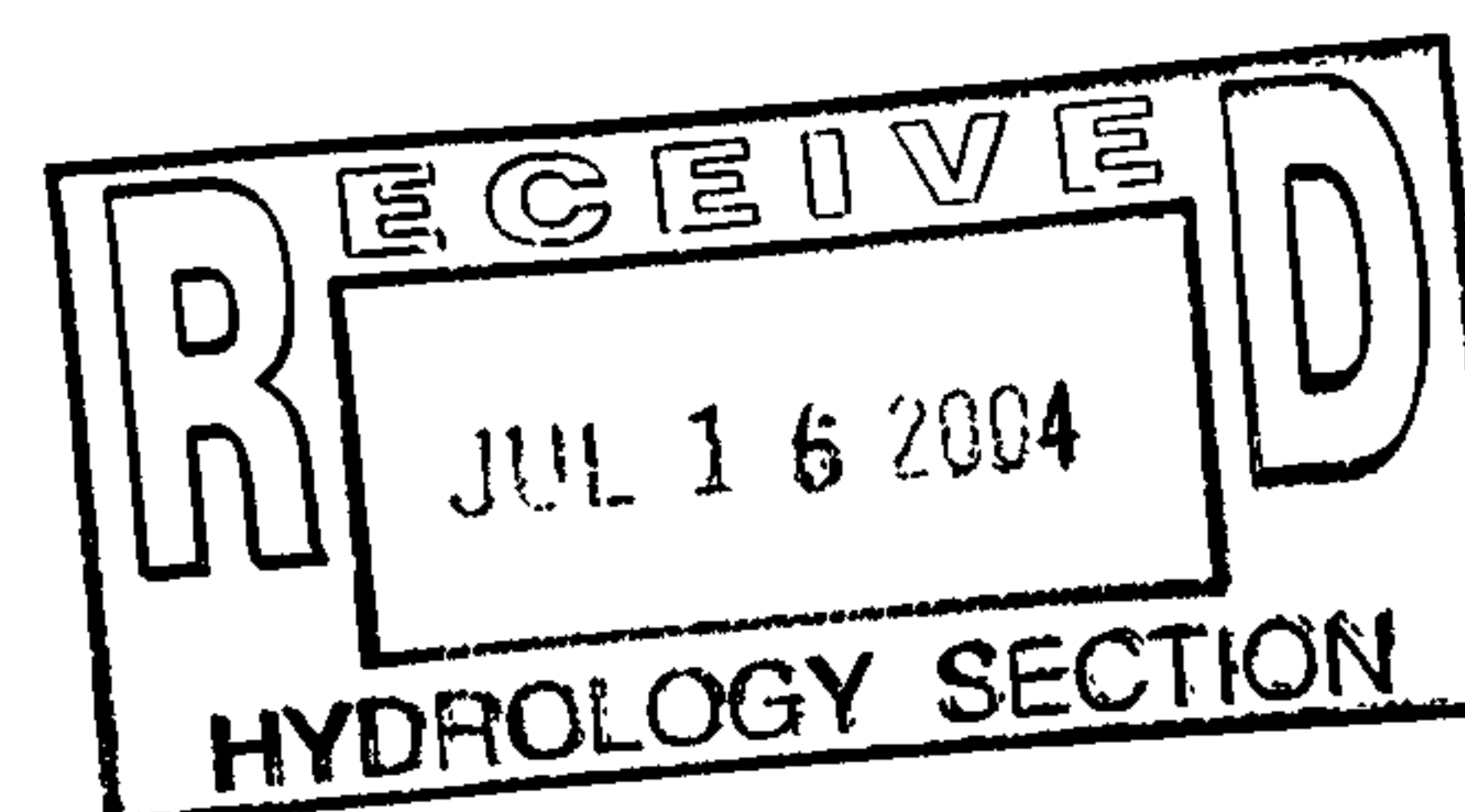
PARTIAL HYDROGRAPH 101.20

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	1.332	.4	2.664	.1	3.996	.0	5.328	.0
.666	.0	1.998	.6	3.330	.0	4.662	.0	5.994	.0

RUNOFF VOLUME = .82399 INCHES = .1494 ACRE-FEET
 PEAK DISCHARGE RATE = 5.08 CFS AT 1.499 HOURS BASIN AREA = .0034 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 16:53:26





D. Mark Goodwin & Associates, P.A.
Consulting Engineers
P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: goodwinengrs@comcast.net

PROJECT Horizon Academy Add.
SUBJECT Drainage
BY _____ DATE 6/30/04
CHECKED _____ DATE _____
SHEET _____ OF _____

Concrete Swale Capacities

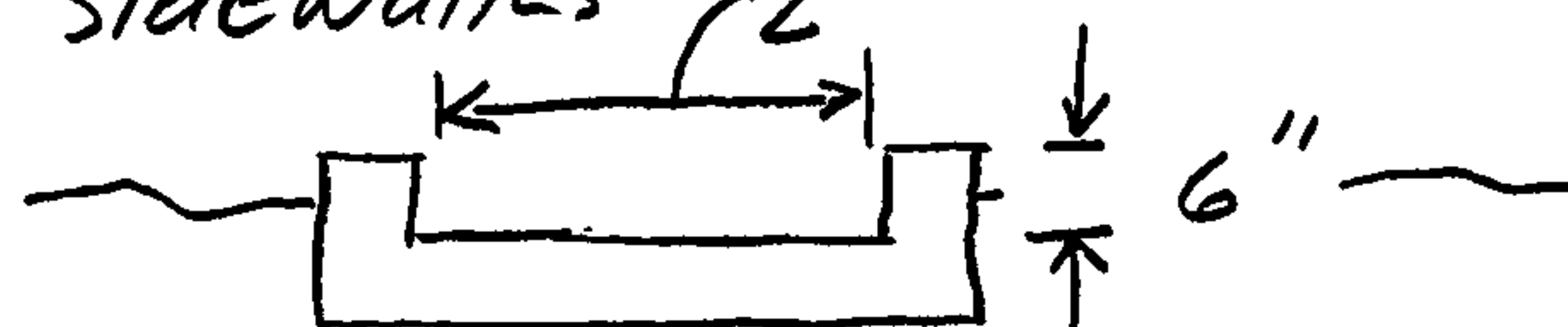
Along north property line W. of sidewalks

$$Q = \frac{1.49}{n} A r_H^{2/3} s^{1/2}$$

$$Q = \frac{1.49}{0.012} (1)(0.33)^{2/3} (0.01)^{1/2}$$

$$Q = 6.0 \text{ cfs}$$

OK - Basins D2 D3 & D4 generate 5.65 cfs



$$A = 1.0 \text{ SF} \quad n = 0.012$$

$$WP = 3 \text{ ft.}$$

$$r_H = 0.33$$

$$\text{slope} = 1.0\%$$

Along north property line E. of sidewalks

$$Q = \frac{1.49}{0.012} (1)(0.33)^{2/3} (0.005)^{1/2} \quad \text{same as above, but with } 0.5\% \text{ slope}$$

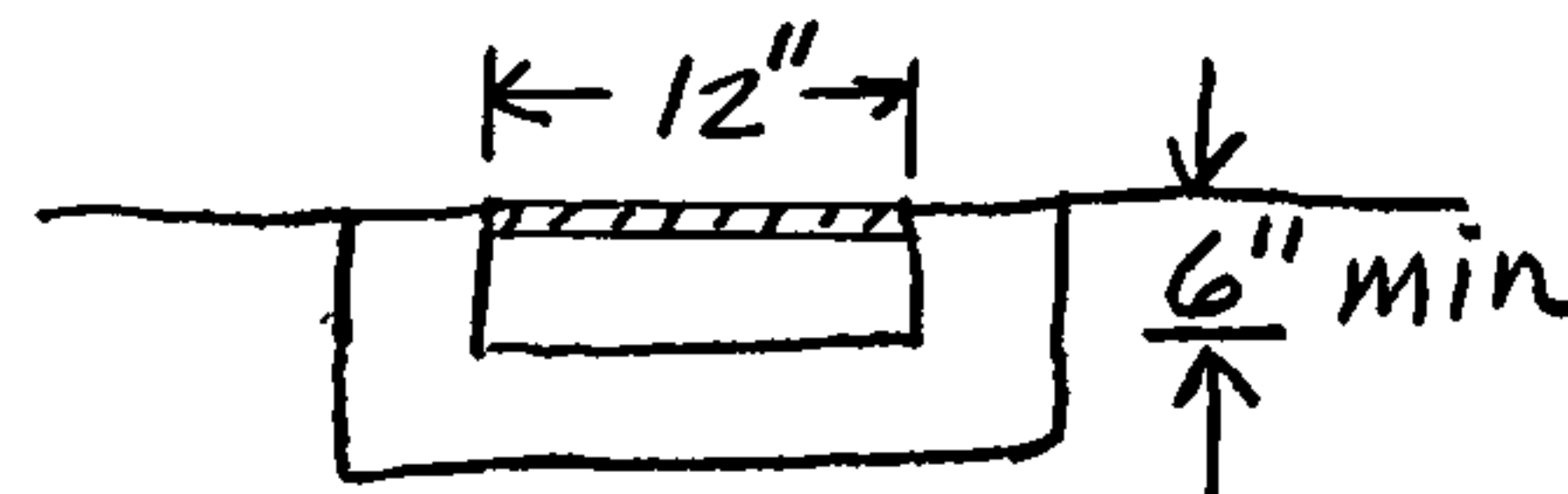
$$Q = 4.22 \text{ cfs} \quad \text{OK} \rightarrow 2.83 \text{ cfs generated}$$

Through central courtyard of Basin D2 draining north

$$Q = \frac{1.49}{0.012} (0.5)(0.25)^{2/3} (0.011)^{1/2}$$

$$Q = 2.58 \text{ cfs}$$

OK $\rightarrow$ 2.48 cfs generated

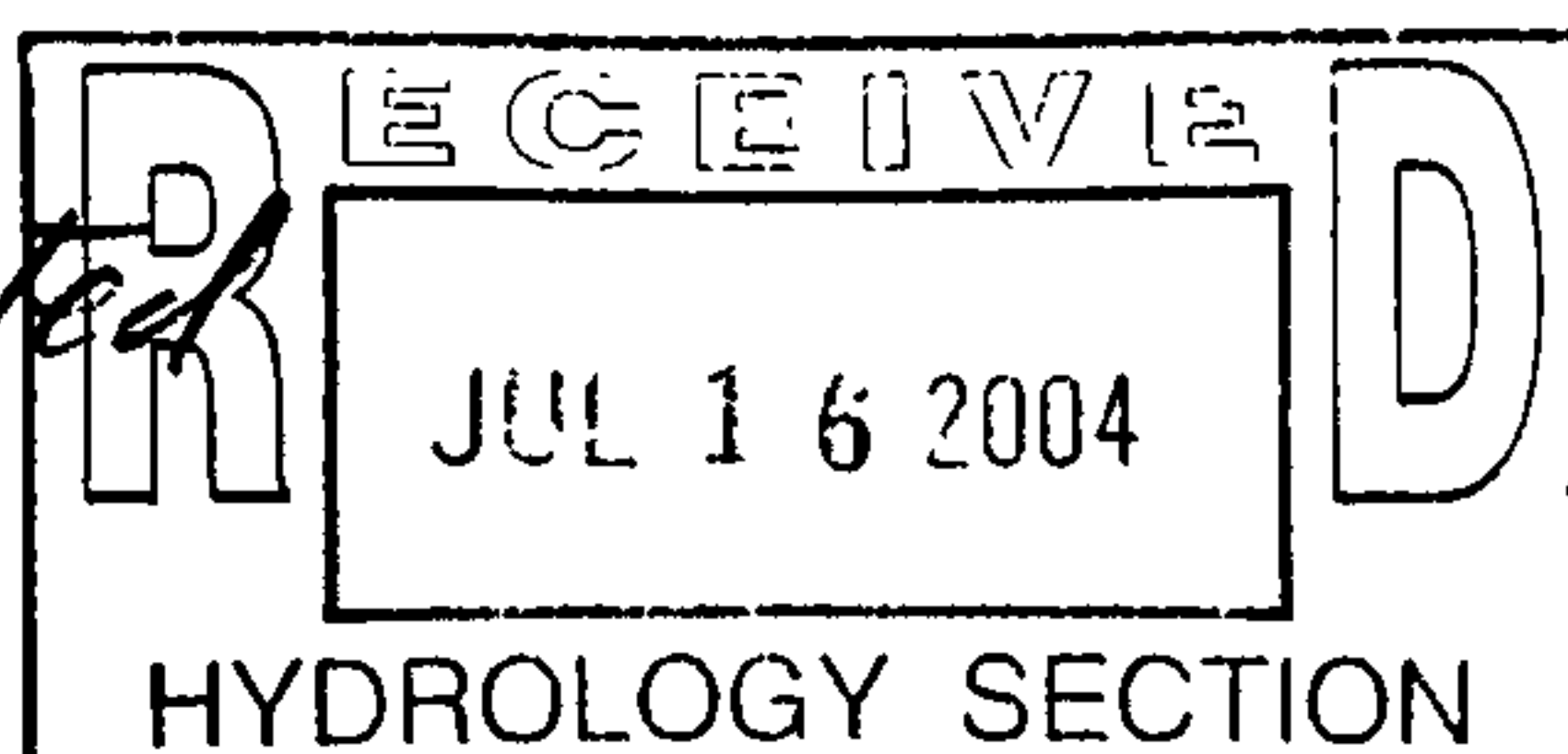


$$A = 0.5 \text{ SF}$$

$$WP = 2 \text{ ft.}$$

$$r_H = \frac{0.5}{2} = 0.25$$

$$\text{slope} = 1.1\% \text{ min}$$





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Consulting Engineers

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(505) 828-2200 FAX 797-9539
e-mail: goodwinengrs@comcast.net

PROJECT Horizon Academy Add.
SUBJECT Drainage
BY JMM DATE 6/30/04
CHECKED _____ DATE _____
SHEET _____ OF _____

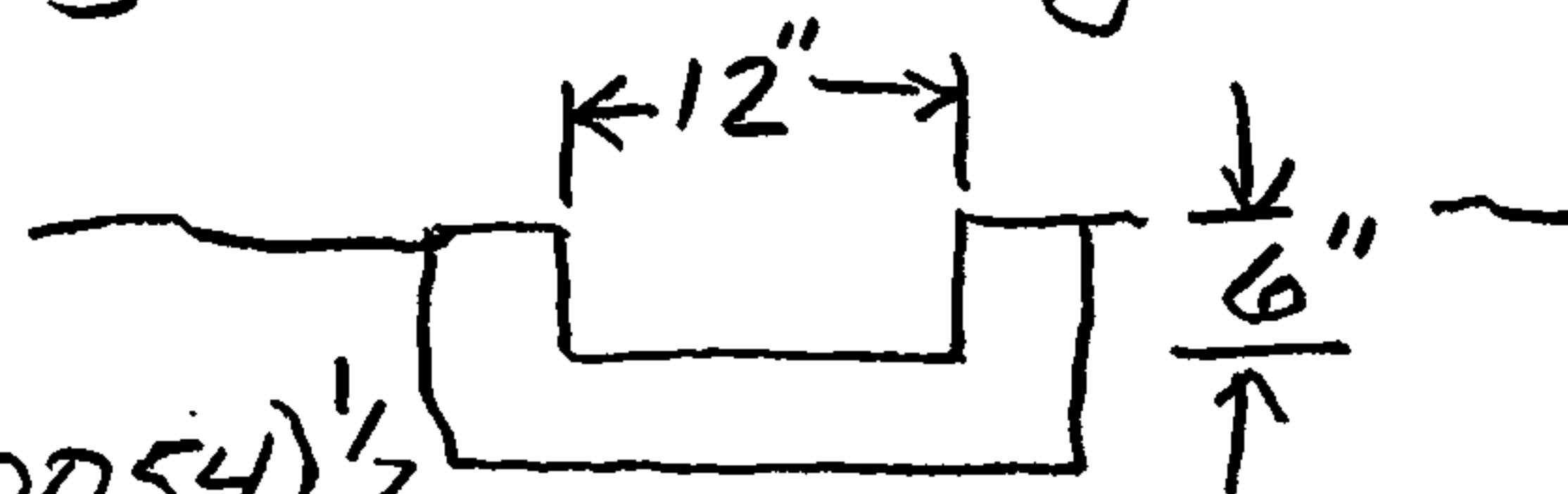
Concrete Swale Capacity (Cont.)

Swale along south property line draining west

$$Q = \frac{1.49}{0.012} (0.5) (0.25)^{2/3} (0.0054)^{1/2}$$

$$Q = 1.81 \text{ cfs}$$

OK $\rightarrow$ 1.47 cfs generated
in Basin DS



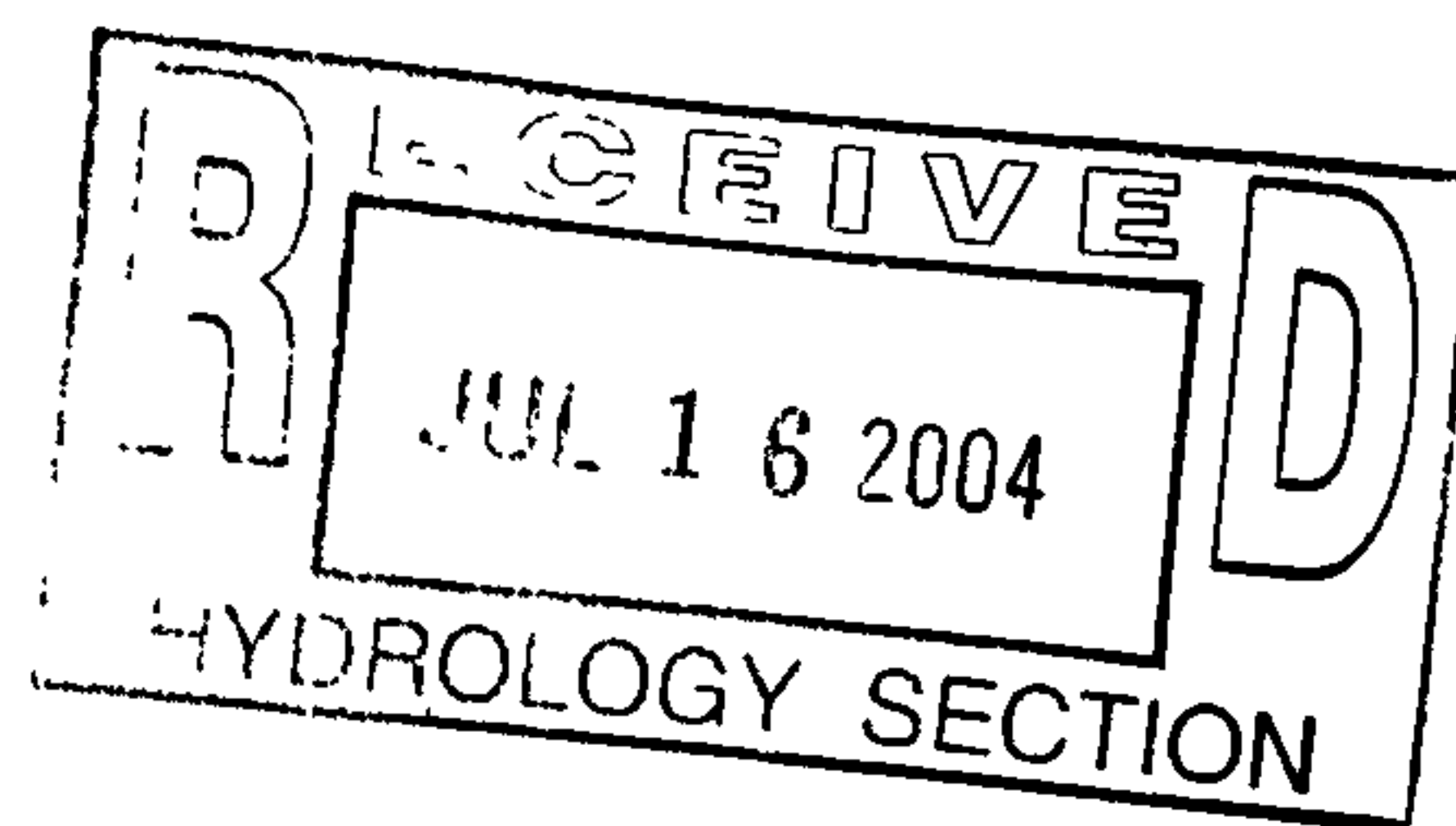
$$A = 0.5 \text{ SF}$$

$$WP = 2 \text{ ft.}$$

$$r_H = \frac{0.5}{2} = 0.25$$

$$S = 0.54\%$$

$$n = 0.012$$





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Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
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e-mail: goodwinengrs@comcast.net

July 15, 2004

Ms. Krystal Metro
City of Albuquerque
Hydrology Department
PO Box 1293
Albuquerque, NM 87103

Re: **Horizon Academy Addition, Tract ~~B~~ ^A (H11-D26A)**

Dear Ms. Metro:

This is a request for approval of our grading and drainage for the referenced project.

The additional improvements shown on the attached plan for the existing Horizon Academy are located on Tract B of the Horizon Academy Subdivision. On May 3, 2004 you approved the conceptual Grading and Drainage plan for this addition, although you referenced Tract A in your letter when the site is actually located on Tract B. That is my fault since I erroneously used Tract A on my Drainage Information Sheet. A corrected sheet for that submittal is attached hereto.

This is the Final Grading & Drainage Plan for the project. The only difference from the conceptual plan is that this plan provides more detail. A cross-lot drainage easement exists between the two lots that was granted by plat (enclosed) last year.

AHYMO was used to determine runoff generated on site and then private concrete channels were designed to convey that runoff to Atrisco Drive. See attached capacity calculations for these channels. A future gym and soccer field are to be built under a separate contract later, although the proposed design for that work is shown hereon.

Please contact me if I can be of further assistance..

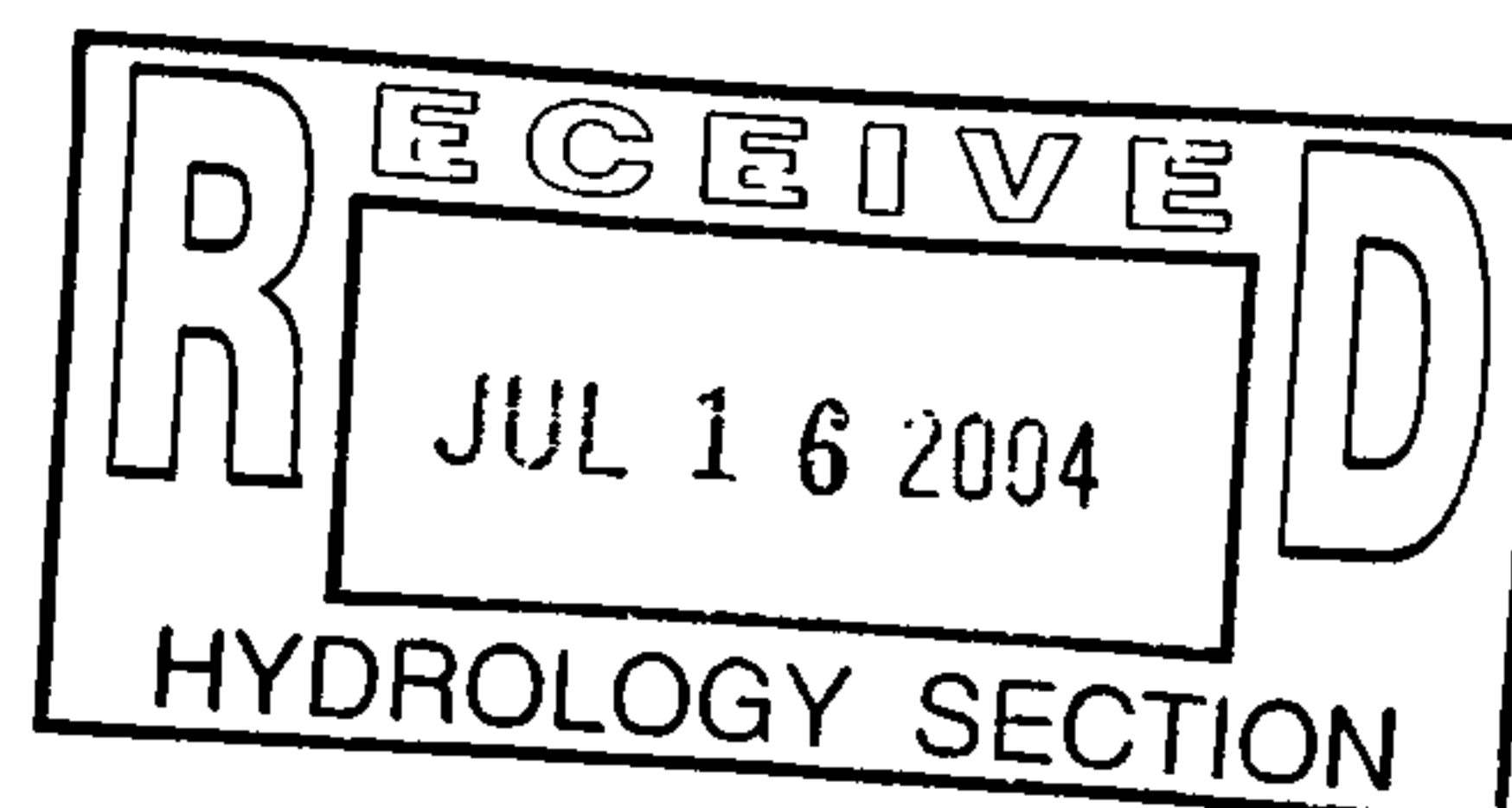
Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

John M. MacKenzie, PE
Vice President

JMM/bg

f:\a04030-horizon academy\g & d letter



CITY OF ALBUQUERQUE



August 28, 2009

Philip W. Clark, P.E.
Clark Consulting Engineers
19 Ryan Road
Edgewood, NM 87015

Re: West Bluff Charter Campus, 1800 Atrisco Dr NW, Grading and Drainage Plan

Engineer's Stamp date 8-16-09 (H11/D026A)

Dear Mr. Clark,

Based upon the information provided in your submittal received 8-20-09, 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 924-3695.

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 01/06 - KDM)

PROJECT TITLE: West Bluff Campus ZONE MAP: H-11/D26A
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: TR A-1
CITY ADDRESS: 1800 Arisco NW

ENGINEERING FIRM: Clark Consulting Engineers CONTACT: Phil
ADDRESS: 19 Ryan Road PHONE: 281-2444& FAX
CITY, STATE: Edgewood, NM ZIP CODE: 87015

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

ARCHITECT: Masterworks CONTACT: Jim Clark
ADDRESS: _____ PHONE: 242-1866
CITY, STATE: _____ ZIP CODE: _____

SURVEYING FIRM: Terrametrics of New Mexico LICENSED SURVEYOR: Phil Turner
ADDRESS: PO Box 30192 PHONE: 379-4301
CITY, STATE: Albuquerque NM ZIP CODE: 87190

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
- ☐ 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
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY) _____

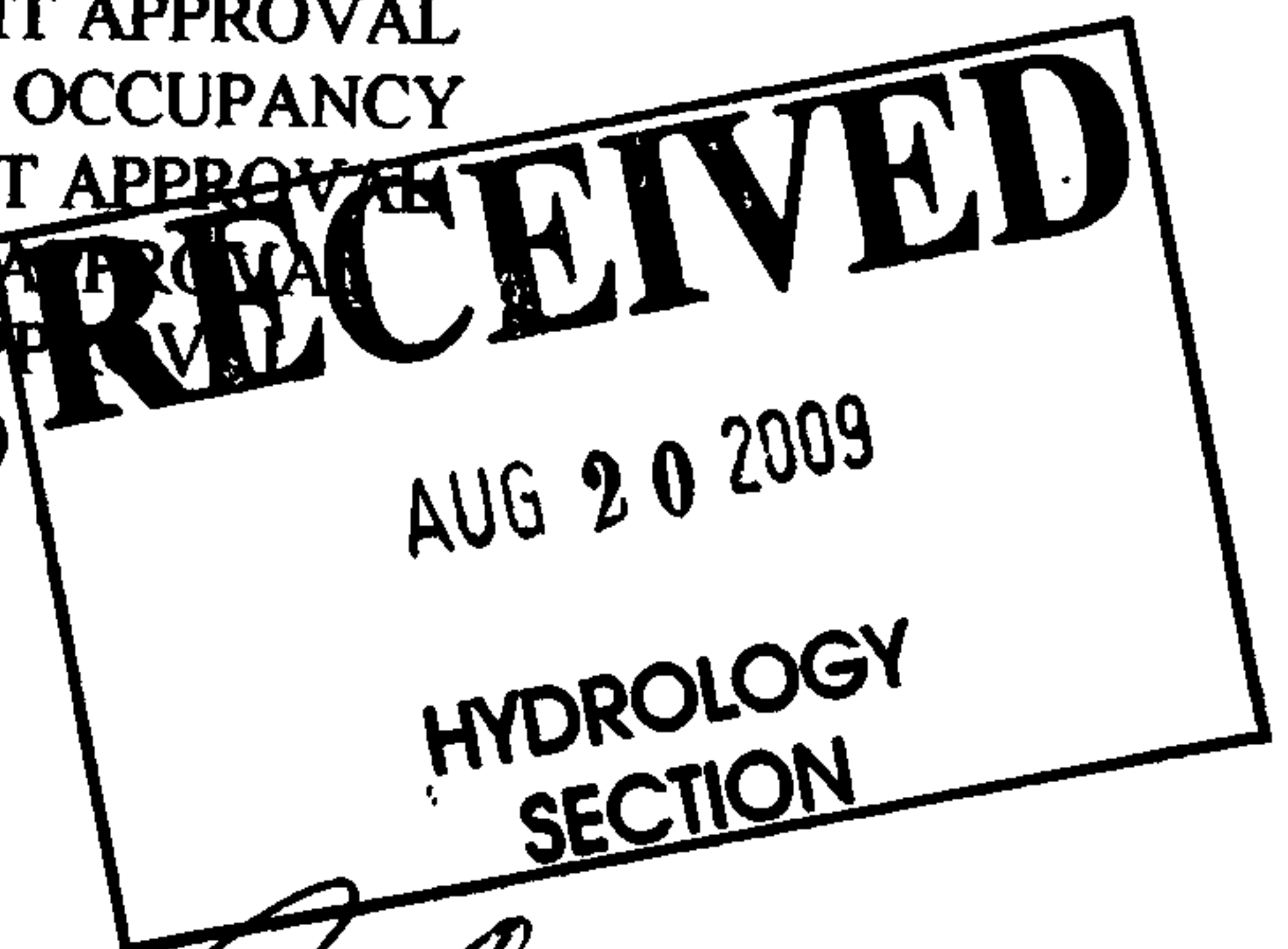
WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☒ YES (telecon w/ B.B.)
☐ NO
☐ COPY PROVIDED

DATE SUBMITTED: 8/19/09 BY: Or C

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.



MARK GOODWIN

& ASSOCIATES

dmg

DRAINAGE REPORT
for
WEST BLUFFS CAMPUS

Prepared for

RB Saylor Properties
5565 Eakes Road NW
Albuquerque NM 87107
(505) 343-9651

Prepared by

Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199
(505) 828-2200

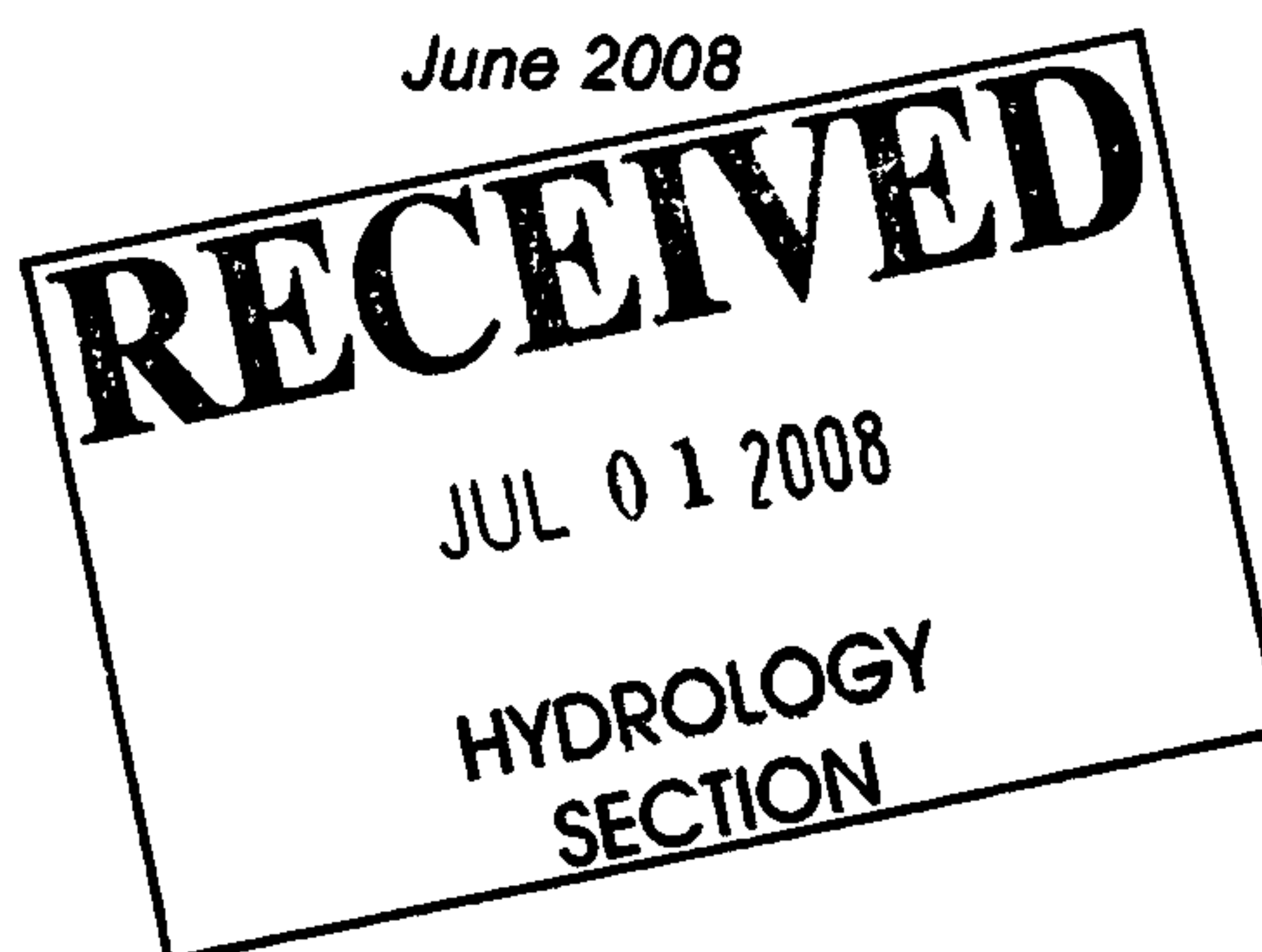


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- I. PROJECT DESCRIPTION AND PURPOSE
- II. DESIGN CRITERIA
- III. EXISTING DRAINAGE CONDITIONS
- IV. DEVELOPED DRAINAGE CONDITIONS

APPENDIX A - HYDROLOGY

AHYMO PRINTOUTS

EXHIBIT 1: BASIN MAP

I. PROJECT DESCRIPTION AND PURPOSE

The proposed site area consists of approximately 3 acres of property located on Atrisco Drive between West Bluff Wal-Mart and Interstate 40. The proposed development is part of the Horizon Academy Subdivision (DRB100831/CPN717081), Tract A. The proposed drainage plan will follow the previously approved drainage plan. The previously approved drainage plan is included in Appendix A for reference.

The purpose of this report is to present the drainage management plan for the proposed development in order to obtain the approval for foundation permit and ultimately building permit. Additional details pertaining to roads, drainage, and utility service will be provided as the construction plans are submitted for building permit.

II. DRAINAGE DESIGN CRITERIA

The design criteria used in this report was in accordance with Section 22.2 Hydrology of the Development Process Manual. The 100-year, 6-hour storm event was utilized to determine site runoff rates using $P(1\text{ hr}) = 1.89"$, $P(6\text{ hr}) = 2.25"$ and $P(24\text{ hr}) = 2.65"$, obtained from the latest NOAA Precipitation Atlas. The onsite land treatment values used were $B=15\%$, $C=0\%$, and $D=85\%$. AHYMO printouts are provided in Appendix A.

IV. DEVELOPED DRAINAGE CONDITIONS

Storm water runoff generated by this project will be managed in accordance with City of Albuquerque Development Process Manual. The site will be graded at a 0.75% slope towards Atrisco Drive. On-site storm water be collected in two (2) riprap swales and discharged into the existing roadway. The storm water will flow north on Artisco Drive where it will be intercepted by existing storm drain inlets previous designed to collect ~~the~~ developed flows.

no other flows

APPENDIX A
HYDROLOGY

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 04/04/2003
START TIME (HR:MIN:SEC) = 15:23:21 USER NO.= M_GOODWN.I01
INPUT FILE = HORIZON.DAT

START TIME=0.0

***** AHYMO - HORIZON.DAT
***** APRIL 4, 2003
***** GRADING AND DRAINAGE PLAN FOR HORIZON ACADEMY

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.89 IN RAIN SIX=2.25 IN
RAIN DAY=2.65 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK
AT 1.40 HR.

DT =	.033300 HOURS	END TIME =	5.994000 HOURS
.0000	.0019	.0039	.0058
.0142	.0165	.0188	.0211
.0311	.0338	.0365	.0394
.0518	.0552	.0587	.0624
.0789	.0835	.0885	.0937
.1457	.1893	.2519	.3375
.9914	1.2013	1.2874	1.3598
1.5865	1.6332	1.6770	1.7182
1.8614	1.8926	1.9223	1.9504
1.9963	2.0017	2.0069	2.0119
2.0301	2.0343	2.0384	2.0423
2.0570	2.0604	2.0638	2.0671
2.0796	2.0826	2.0855	2.0883
2.0992	2.1019	2.1044	2.1070
2.1167	2.1191	2.1214	2.1237
2.1326	2.1347	2.1368	2.1389
2.1471	2.1491	2.1510	2.1530
2.1605	2.1624	2.1642	2.1660
2.1730	2.1748	2.1765	2.1782
2.1848	2.1864	2.1880	2.1896
2.1959	2.1974	2.1989	2.2004
2.2064	2.2078	2.2093	2.2107
2.2163	2.2177	2.2191	2.2205
2.2259	2.2272	2.2285	2.2298
2.2350	2.2363	2.2375	2.2388
2.2437	2.2450	2.2462	2.2474

***** EXISTING ON-SITE BASIN (8.89 ACRES)

COMPUTE NM HYD ID=1 HYD NO=100.1 AREA=0.0139 SQ MI
PER A=35 PER B=10 PER C=25 PER D=30
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 16.463 CFS UNIT VOLUME = .9986 B = 526.28
P60 = 1.8900
AREA = .004170 SQ MI IA = .10000 INCHES INF = .04000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

K = .138143HR TP = .133300HR K/TP RATIO = 1.036330 SHAPE
CONSTANT, N = 3.406339
UNIT PEAK = 22.878 CFS UNIT VOLUME = .9995 B = 313.43
P60 = 1.8900

AREA = .009730 SQ MI IA = .52143 INCHES INF = 1.31000 INCHES
 PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 .033300

PRINT HYD ID=1 CODE=24

PARTIAL HYDROGRAPH 100.10

TIME	TIME	FLOW	TIME	FLOW	TIME	FLOW
	FLOW		TIME	FLOW		FLOW
HRS	HRS	CFS	HRS	HRS	HRS	CFS
	CFS		CFS	CFS		CFS
	.000	.0	1.998	4.1	3.996	.1
5.994	.1					
	.666	.0	2.664	.5	4.662	.1
6.660	.0					
	1.332	3.9	3.330	.1	5.328	.1

RUNOFF VOLUME = 1.06166 INCHES = .7870 ACRE-FEET
 PEAK DISCHARGE RATE = 23.87 CFS AT 1.499 HOURS BASIN AREA = .0139
 SQ. MI.

 ***** BASIN A - (0.71 ACRES)

COMPUTE NM HYD ID=2 HYD NO=100.2 AREA=0.0011 SQ MI
 PER A=0 PER B=10 PER C=5 PER D=85
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
 CONSTANT, N = 7.106420
 UNIT PEAK = 3.6914 CFS UNIT VOLUME = .9960 B = 526.28
 P60 = 1.8900
 AREA = .000935 SQ MI IA = .10000 INCHES INF = .04000 INCHES
 PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 .033300

K = .122457HR TP = .133300HR K/TP RATIO = .918661 SHAPE
 CONSTANT, N = 3.853280
 UNIT PEAK = .42737 CFS UNIT VOLUME = .9700 B = 345.27
 P60 = 1.8900
 AREA = .000165 SQ MI IA = .45000 INCHES INF = 1.11000 INCHES
 PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 .033300

PRINT HYD ID=2 CODE=24

PARTIAL HYDROGRAPH 100.20

TIME	TIME	FLOW	TIME	FLOW	TIME	FLOW
	FLOW		TIME	FLOW		FLOW
HRS	HRS	CFS	HRS	HRS	HRS	CFS
	CFS		CFS	CFS		CFS
	.000	.0	1.332	.8	2.664	.1
3.996	.0					
	.666	.0	1.998	.7	3.330	.0
4.662	.0					
		5.994		.0		

RUNOFF VOLUME = 1.82987 INCHES = .1074 ACRE-FEET
 PEAK DISCHARGE RATE = 2.91 CFS AT 1.499 HOURS BASIN AREA = .0011

HSINI1

SQ. MI.

***** BASIN B - (3.28 ACRES)

COMPUTE NM HYD ID=3 HYD NO=100.3 AREA=0.0051 SQ MI
PER A=0 PER B=50 PER C=0 PER D=50
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 10.068 CFS UNIT VOLUME = .9982 B = 526.28
P60 = 1.8900
AREA = .002550 SQ MI IA = .10000 INCHES INF = .04000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = 6.2706 CFS UNIT VOLUME = .9982 B = 327.79
P60 = 1.8900
AREA = .002550 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

PRINT HYD ID=3 CODE=24

PARTIAL HYDROGRAPH 100.30

TIME	TIME	FLOW	TIME	FLOW	TIME	FLOW
	FLOW		FLOW			
	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS		CFS			
	.000	.0	1.998	2.1	3.996	.0
5.994	.1					
	.666	.0	2.664	.2	4.662	.0
6.660	.0					
	1.332	2.3	3.330	.1	5.328	.1

RUNOFF VOLUME = 1.35270 INCHES = .3679 ACRE-FEET
PEAK DISCHARGE RATE = 10.63 CFS AT 1.499 HOURS BASIN AREA = .0051
SQ. MI.

***** BASIN C - (0.78 ACRES)

COMPUTE NM HYD ID=4 HYD NO=100.4 AREA=0.0012 SQ MI
PER A=0 PER B=15 PER C=10 PER D=75
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 3.5532 CFS UNIT VOLUME = .9960 B = 526.28
P60 = 1.8900
AREA = .000900 SQ MI IA = .10000 INCHES INF = .04000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

K = .120821HR TP = .133300HR K/TP RATIO = .906384 SHAPE
CONSTANT, N = 3.908413

UNIT PEAK = .78548 CFS UNIT VOLUME = .9836 B = 349.02
P60 = 1.8900
AREA = .000300 SQ MI IA = .44000 INCHES INF = 1.08200 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

PRINT HYD ID=4 CODE=24

PARTIAL HYDROGRAPH 100.40

TIME	TIME	FLOW	TIME	FLOW	TIME	FLOW
	FLOW		TIME	FLOW		
HRS	HRS	CFS	HRS	HRS	CFS	CFS
	.000	.0	1.332	.8	2.664	.1
3.996	.0	5.328	.0			
	.666	.0	1.998	.7	3.330	.0
4.662	.0	5.994	.0			

RUNOFF VOLUME = 1.71261 INCHES = .1096 ACRE-Feet
PEAK DISCHARGE RATE = 3.03 CFS AT 1.499 HOURS BASIN AREA = .0012
SQ. MI.

***** BASIN D - (1.38 ACRES)
COMPUTE NM HYD ID=5 HYD NO=100.5 AREA=0.0022 SQ MI
PER A=0 PER B=15 PER C=0 PER D=85
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 7.3829 CFS UNIT VOLUME = .9978 B = 526.28
P60 = 1.8900
AREA = .001870 SQ MI IA = .10000 INCHES INF = .04000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = .81149 CFS UNIT VOLUME = .9837 B = 327.79
P60 = 1.8900
AREA = .000330 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

PRINT HYD ID=5 CODE=24

PARTIAL HYDROGRAPH 100.50

TIME	TIME	FLOW	TIME	FLOW	TIME	FLOW
	FLOW		TIME	FLOW		
HRS	HRS	CFS	HRS	HRS	CFS	CFS
	.000	.0	1.332	1.6	2.664	.1
3.996	.0	5.328	.0			
	.666	.0	1.998	1.4	3.330	.0
4.662	.0	5.994	.0			

RUNOFF VOLUME = 1.81522 INCHES = .2130 ACRE-Feet
PEAK DISCHARGE RATE = 5.75 CFS AT 1.499 HOURS BASIN AREA = .0022
SQ. MI.

***** BASIN E - (1.64 ACRES)

COMPUTE NM HYD ID=6 HYD NO=100.6 AREA=0.0026 SQ MI
PER A=0 PER B=15 PER C=0 PER D=85
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 8.7252 CFS UNIT VOLUME = .9980 B = 526.28
P60 = 1.8900
AREA = .002210 SQ MI IA = .10000 INCHES INF = .04000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = .95904 CFS UNIT VOLUME = .9863 B = 327.79
P60 = 1.8900
AREA = .000390 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

PRINT HYD ID=6 CODE=24

PARTIAL HYDROGRAPH 100.60

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	.000	.0		1.998	1.6		3.996
5.994	.0			2.664	.1		4.662
6.660	.0			3.330	.1		5.328
	1.332	1.9					.0

RUNOFF VOLUME = 1.81522 INCHES = .2517 ACRE-FEET
PEAK DISCHARGE RATE = 6.79 CFS AT 1.499 HOURS BASIN AREA = .0026
SQ. MI.

***** BASIN F - (0.63 ACRES)

COMPUTE NM HYD ID=7 HYD NO=100.7 AREA=0.0010 SQ MI
PER A=0 PER B=100 PER C=0 PER D=0
TP=0.1333 HR MASS RAINFALL=-1

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = 2.4591 CFS UNIT VOLUME = .9948 B = 327.79
P60 = 1.8900
AREA = .001000 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES
PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033300

PRINT HYD ID=7 CODE=24

PARTIAL HYDROGRAPH 100.70

TIME	TIME FLOW HRS	FLOW CFS	TIME	TIME FLOW HRS	FLOW CFS	TIME	FLOW CFS
HRS	CFS		HRS	CFS		HRS	CFS
	.000	.0		.666	.0	1.332	.0
1.998	.1	2.664		.0			

RUNOFF VOLUME = .69195 INCHES = .0369 ACRE-FEET
 PEAK DISCHARGE RATE = 1.35 CFS AT 1.532 HOURS BASIN AREA = .0010
 SQ. MI.

***** BASIN G - (0.48 ACRES)
 COMPUTE NM HYD ID=8 HYD NO=100.8 AREA=0.0008 SQ MI
 PER A=0 PER B=100 PER C=0 PER D=0
 TP=0.1333 HR MASS RAINFALL=-1

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
 CONSTANT, N = 3.603328
 UNIT PEAK = 1.9673 CFS UNIT VOLUME = .9932 B = 327.79
 P60 = 1.8900
 AREA = .000800 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES
 PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 .033300

PRINT HYD ID=8 CODE=24

PARTIAL HYDROGRAPH 100.80

TIME	TIME FLOW HRS	FLOW CFS	TIME	TIME FLOW HRS	FLOW CFS	TIME	FLOW CFS
HRS	CFS		HRS	CFS		HRS	CFS
	.000	.0		.666	.0	1.332	.0
1.998	.1	2.664		.0			

RUNOFF VOLUME = .69195 INCHES = .0295 ACRE-FEET
 PEAK DISCHARGE RATE = 1.08 CFS AT 1.532 HOURS BASIN AREA = .0003
 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:23:21

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January,
 1994 RUN DATE (MON/DAY/YR) =04/04/2003
 INPUT FILE = HORIZON.DAT
 USER NO.= M_GOODWN.I01

RUNOFF		TIME TO	FROM	TO	PAGE =	1	PEAK
VOLUME	RUNOFF	HYDROGRAPH	CFS	ID	ID	AREA	DISCHARGE
COMMAND	PEAK	IDENTIFICATION	PER	NO.	NO.	(SQ MI)	(CFS)
(AC-FT)	(INCHES)	(HOURS)	ACRE	NOTATION			
START							
TIME=	.00						
RAINFALL	TYPE=	1					
RAIN6=	2.250						
COMPUTE NM HYD	100.10	-	1	.01390	23.87		
.787	1.06166	1.499	2.683	PER IMP=	30.00		
COMPUTE NM HYD	100.20	-	2	.00110	2.91		
.107	1.82987	1.499	4.137	PER IMP=	85.00		
COMPUTE NM HYD	100.30	-	3	.00510	10.63		
.368	1.35270	1.499	3.258	PER IMP=	50.00		
COMPUTE NM HYD	100.40	-	4	.00120	3.03		
.110	1.71261	1.499	3.942	PER IMP=	75.00		
COMPUTE NM HYD	100.50	-	5	.00220	5.75		
.213	1.81522	1.499	4.082	PER IMP=	85.00		
COMPUTE NM HYD	100.60	-	6	.00260	6.79		
.252	1.81522	1.499	4.081	PER IMP=	85.00		
COMPUTE NM HYD	100.70	-	7	.00100	1.35		
.037	.69195	1.532	2.105	PER IMP=	.00		
COMPUTE NM HYD	100.80	-	8	.00080	1.08		
.030	.69195	1.532	2.108	PER IMP=	.00		
FINISH							

LEGEND

DRAINAGE BASIN BOUNDARY

BASIN "F"

DRAINAGE BASIN ID

24

25

26

BASIN "A"

BASIN "C"

NAT. GAS
PIPELINE

ATRISCO DRIVE N.W.

ALAMOGORDO DRIVE N.E.



SCALE: 1" = 60'

WEST BLUFF CHARTER SCHOOL
DRAINAGE BASIN MAP



MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS

P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505)828-2200, FAX (505)797-9539

07-01-08\DER



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 10, 2003

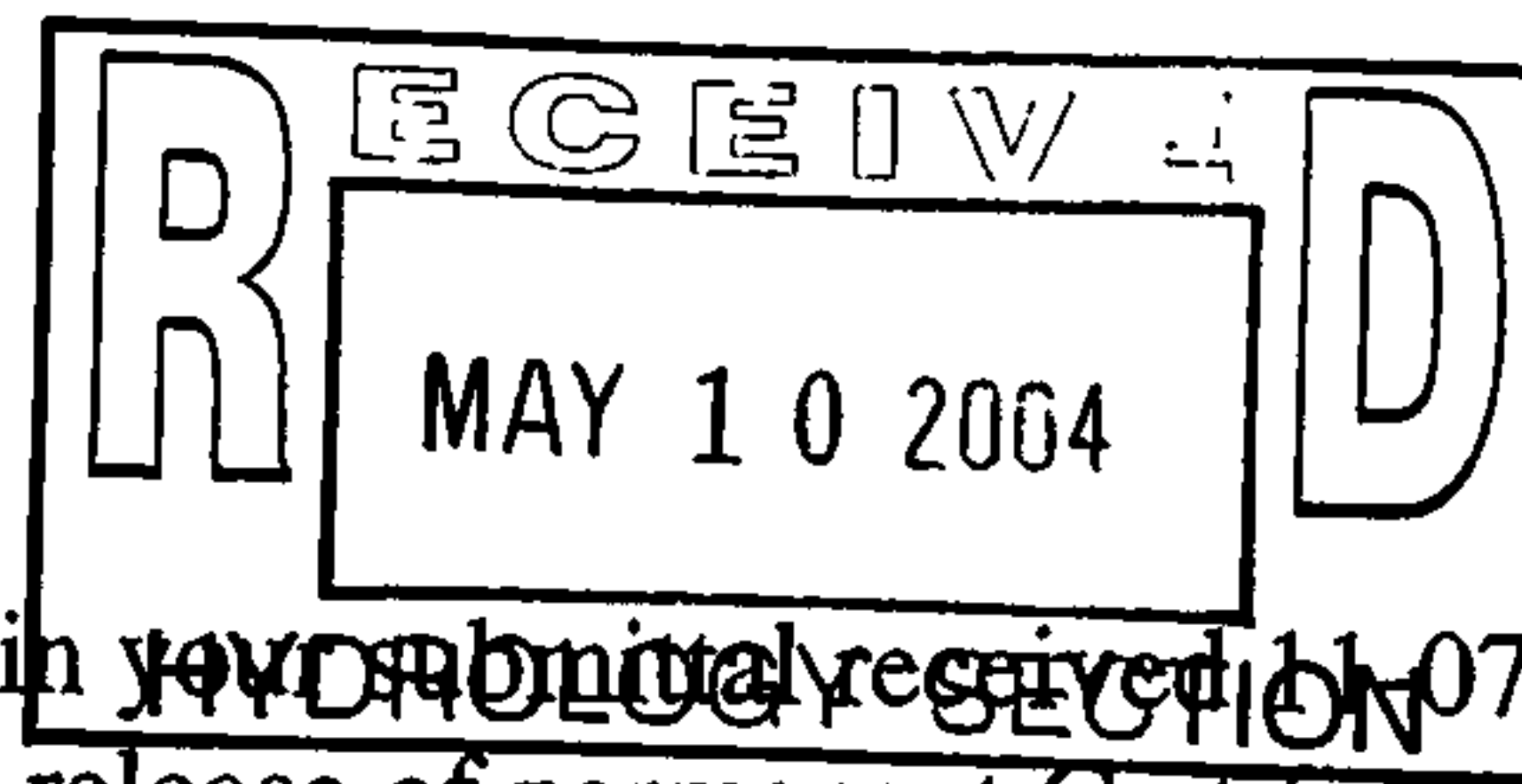
John MacKenzie, P.E.
Mark Goodwin & Associates, PA
PO Box 90606
Albuquerque, NM 87199

Re: Horizon Academy, Tract B Horizon Academy Subdivision, Certificate of Occupancy

Engineer's Stamp dated 5-27-03 (H11/D26A)

Certification dated 11-06-03

Dear Mr. MacKenzie,



Based upon the information provided in your submittal received 11-07-03, 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

HERASTROX™ FUEL SYSTEM

EXHIBIT A

TO SUBMISSION IMPROVEMENTS AGREEMENT
DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LIST

PROPOSED NAME OF PROJECT/SITE DEVELOPMENT PLAN

Portion of Tract A13, NE 1/4 and West Bull Canyon Subdivision, Tract 6, Town of Altoona Grant & Portion of Block 9, Parkside Addition

Date Submitted: 4/30/03
Date Site Plan Approved: 4/30/03
Date Preliminary Plat Approved: 4/30/03
Date Preliminary Plat Expires: N/A
DRB Project No.: 00001
DRB Application No.: 03DRB-00564

Following is a summary of P/UEU/CUR/CR/ATE infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SPA process a binder in the form of the construction drawings, if the DRC Chief determines that expenditures for infrastructure items have not been included in the infrastructure listing, the DRC Chief may include those items in the listing and related financial guarantees. Likewise, if the DRC Chief determines that expenditures for non-assessed items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chief, the User Organization and agreement. If such approvals are obtained, these revisions to the listing will be incorporated accordingly. In addition, any infrastructure items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of the construction permit close out by the City.

STA Sequence #	CDA DRC Project #	Slab 1010	Type of Improvement	Location	From	To	Private Inspector	City Inspector	City Cast Engineer
			TRANSPORTATION	Autoco Rd.	Union Dr.	Autoco and the east	/	/	/
			Paved Trail				/	/	/
			E. side				/	/	/
			Comp. Sidewalk	Alamogordo Dr.	NE Side Corner	Bridges Ave.	/	/	/
			W. side				/	/	/
			STD CTS	W. side	"	SE CORNER	/	/	/
			PUBLIC UTILITIES	ALAMOGORDO			/	/	/
			none	(MATCH EXIST)			/	/	/
			DRAINAGE				/	/	/
			none				/	/	/

NOTES

Contributions for off-office traffic in Section will be used by the applicant to the satisfaction of the Traffic Engineer.

OF TRAFFIC OPERATIONS DIVISION

AGENT / OWNER

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

John M. Mackenzie, PE

NAME (print)

MARK GOODWIN & ASSOCIATES

प्राप्त

SIGNATURE - date

MADE IN THE U.S.A. OWNED TO CONSTRUCT.

EXTENSION 7-2-03

DESIGN REVIEW COMMITTEE MEMBERS

MEMBER	DATE	IN CHARGE	USER DEPARTMENT	AGENT NUMBER
1	5/28/03	<i>[Signature]</i>	<i>Bruce D. Bork</i>	<i>John Marking</i>

john mackenzie

To: kenneth serafin
Subject: RE: Horizon Academy (Engineer's Stamp dated 4-9-03, H11/D26A)

-----Original Message-----

From: BBingham@cabq.gov [mailto:BBingham@cabq.gov]
Sent: Wednesday, May 21, 2003 12:52 PM
To: dmg@swcp.com
Subject: Re: Horizon Academy (Engineer's Stamp dated 4-9-03, H11/D26A)

I think you could have rough grading approval upon submittal. Bring a mylar and a paper copy (for my file) for me to sign and that is the Rough Grading Permit.

"John M.MacKenzie"
To: "Brad Bingham" <bbingham@cabq.gov>
dmg@swcp.com> cc:
Subject: Horizon Academy (Engineer's Stamp dated 4-9-03,
05/21/03 10:23 AM H11/D26A)

Brad,

On May 2, after you reviewed the G & D for the referenced project, you approved the plan for Site Development Plan for Subdivision and Preliminary Plat. One of the questions was that you wanted to know if this plan was to cover the hotel as well. The hotel is phase two of the project and it will not be built concurrently with the school. Therefore, in an effort to simplify the issue I will create another sheet that focuses on just the school site and shows the hotel as "information only." The original sheet will remain a conceptual grading and drainage plan for both properties. Now the plan is to have two submittals: one for the conceptual grading and drainage plan covering both sites and then there will be a building permit submittal for just the school site. That way you can issue a CO for the school in the end. The first three comments on your letter will have to be addressed on the revised conceptual G & D. With your review and issuance of conditions associated with the building permit for the school, it appears your remaining concerns are relatively minor. I plan to address those today and resubmit tomorrow. Upon receipt of the that submittal, is it possible to get rough grading approval for the school site shortly thereafter, and have the BP approval withheld until you can review my resubmittal? That would help the contractor to get going. They have been pressing me because they want to get the kids in by fall.

John MacKenzie
Mark Goodwin & Associates, P.A.
505-828-2200
505-797-9539 fax

November 14, 2003

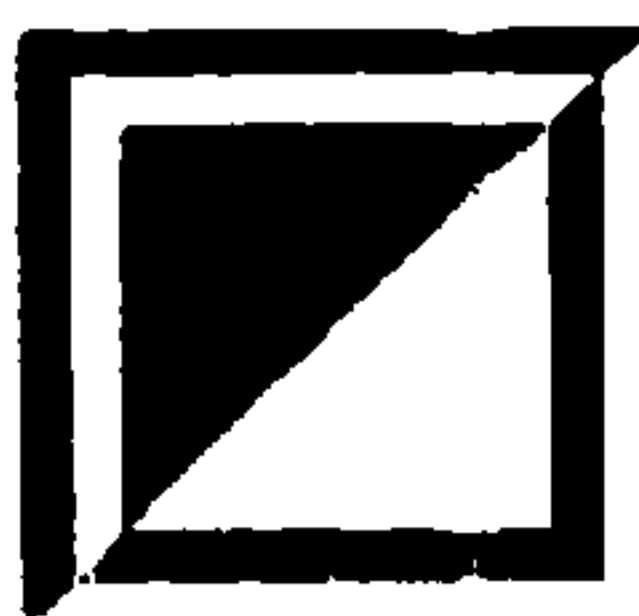
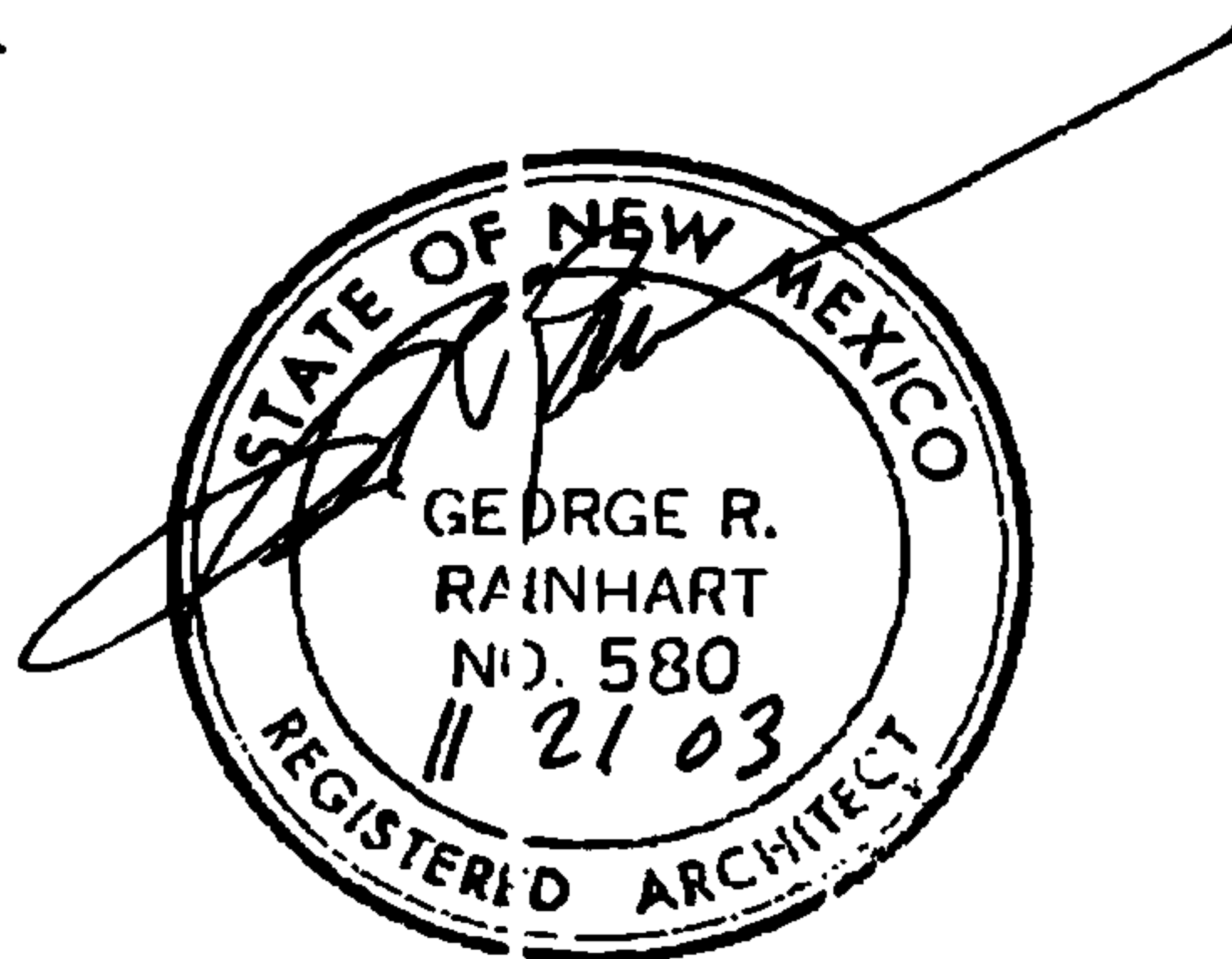
Mr. Wilfred Gallegos, PE
Albuquerque Hydrology & Transportation Department
Albuquerque, NM

Re: Site Certification for West Bluff Academy, 2120 Atrisco, NW
File #: DRB 1000831, EPC 00536-37

Dear Mr. Gallegos:

The West Bluff Academy Site was constructed in substantial compliance with the Approved Site Plan for Building Permit.

Respectfully,
George Rainhart, AIA



GEORGE RAINHART ARCHITECTS AND ASSOCIATES PC
2020 SAN PEDRO NE SUITE 200 ■ ALBUQUERQUE NEW MEXICO 87110
PHONE 505-837-9110 ■ FAX 505-837-9377 ■ Email: grra@graa.com



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

November 21, 2003

George Rainhart, Registered Architect
2325 San Pedro NE, Ste 2-B
Albuquerque, NM 87110

Re: Certification Submittal for Final Building Certificate of Occupancy for
West Bluff (Horizon) Academy, [H-11 / D26A]
2120 Atrisco NW
Architect's Stamp Dated 11/14/03

Dear Mr. Rainhart:

The TCL / Letter of Certification submitted on November 20, 2003 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-Fernandez, 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)

H-11/D26A

PROJECT TITLE: HORIZON ACADEMY ZONE MAP/DRG. FILE #: _____
 DRB #: 1000 831 EPC#: 00636-37 WORK ORDER#: _____

LEGAL DESCRIPTION: LOT 6 West Bluff Center, Lot A18 TOWN of ATRISCO GRANT, Lot 9 Block 9 PALISADES
 CITY ADDRESS: 2120 ATRISCO, NW

ENGINEERING FIRM: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

OWNER: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

ARCHITECT: George Rainhart + Assoc.
 ADDRESS: 2325 SAN PEDRO, NE #2B
 CITY, STATE: Albuquerque, NM 87110

CONTACT: Bill Johnson X204
 PHONE: 884-9110
 ZIP CODE: 87110

SURVEYOR: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

CONTRACTOR: ENTERPRISE BUILDERS
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

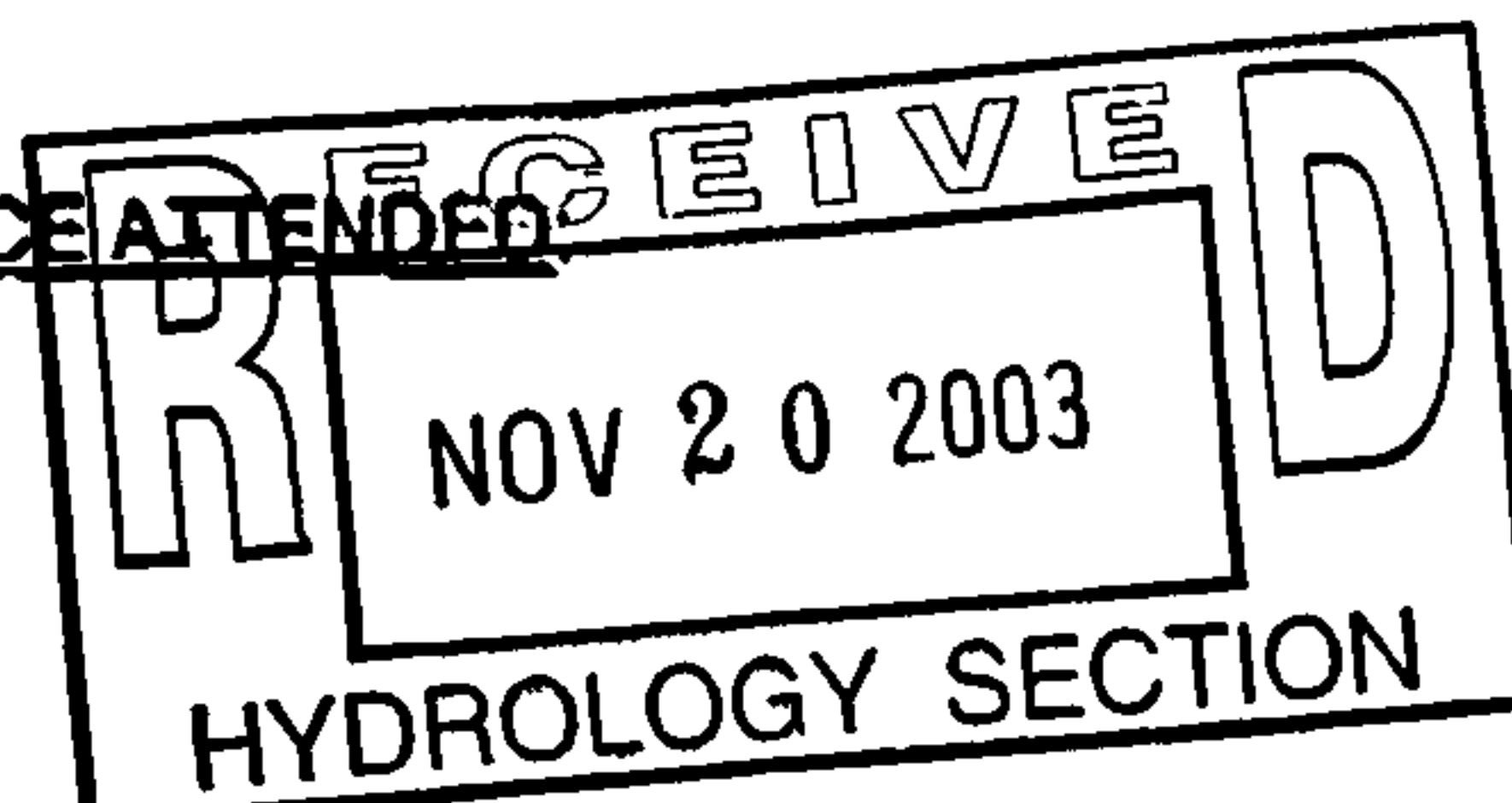
- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL, REQUIRES TCL or equal
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
☐ CLOMR/LOMR
☒ TRAFFIC CIRCULATION LAYOUT (TCL)
☒ ENGINEERS CERTIFICATION (TCL)
☐ ENGINEERS 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
☒ 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: 11/14/03 BY: Bill Johnson

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

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five (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.

November 14, 2003

Mr. Wilfred Gallegos, PE
Albuquerque Hydrology & Transportation Department
Albuquerque, NM

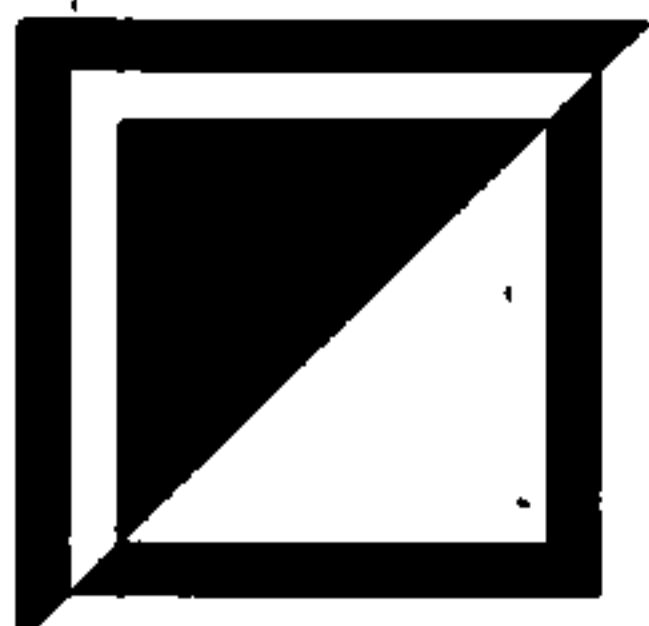
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File #: DRB 1000831, EPC 00636-37

Dear Mr. Gallegos:

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Respectfully,
George Rainhart, AIA



GEORGE RAINHART, ARCHITECT & ASSOCIATES P.C.
2325 SAN PEDRO NE SUITE 2-B ■ ALBUQUERQUE, NEW MEXICO 87110
PHONE: 505-884-9110 ■ FAX: 505-837-9877 ■ Email: graa@gra-arch.com

facsimile

TRANSMITTAL

to: Terri Martin
fax #: 924-3864
re: Horizon Academy (H11/D26A)
date: May 27, 2003
pages: 7, including this cover sheet.

Terri,

I found a portion of the submittal package for this application in my copy room, meaning that the submittal may be missing these materials. Please inset this papers into the application that was made today.

Thanks

From the desk of...

John M. MacKenzie
Senior Engineer
Mark Goodwin & Associates
Box 90606
Albuquerque, NM 87199

505-828-2200
Fax:

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 RUN DATE (MON/DAY/YR) = 05/23/2003
 START TIME (HR:MIN:SEC) = 08:10:24 USER NO. = M_GOODWIN.I01
 INPUT FILE = horizon.dat

START TIME=0.0
 ***** AHYMO - HORIZON.DAT
 ***** APRIL 4, 2003
 ***** GRADING AND DRAINAGE PLAN FOR HORIZON ACADEMY

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
 RAIN ONE=1.89 IN RAIN SIX=2.25 IN
 RAIN DAY=2.65 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
 DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0019	.0039	.0058	.0079	.0100	.0121
.0142	.0165	.0188	.0211	.0235	.0260	.0285
.0311	.0338	.0365	.0394	.0423	.0454	.0485
.0518	.0552	.0587	.0624	.0662	.0702	.0744
.0789	.0835	.0885	.0937	.0992	.1052	.1117
.1187	.1253	.1321	.1391	.1461	.1538	.1620
.1694	.1774	.1854	.1934	.2014	.2094	.2174
.2254	.2334	.2414	.2494	.2574	.2654	.2734
.2814	.2894	.2974	.3054	.3134	.3214	.3294
.3374	.3454	.3534	.3614	.3694	.3774	.3854
.3934	.4014	.4094	.4174	.4254	.4334	.4414
.4494	.4574	.4654	.4734	.4814	.4894	.4974
.5054	.5134	.5214	.5294	.5374	.5454	.5534
.5614	.5694	.5774	.5854	.5934	.6014	.6094
.6174	.6254	.6334	.6414	.6494	.6574	.6654
.6734	.6814	.6894	.6974	.7054	.7134	.7214
.7294	.7374	.7454	.7534	.7614	.7694	.7774
.7854	.7934	.8014	.8094	.8174	.8254	.8334
.8414	.8494	.8574	.8654	.8734	.8814	.8894
.8974	.9054	.9134	.9214	.9294	.9374	.9454
.9534	.9614	.9694	.9774	.9854	.9934	1.0014
1.0094	1.0174	1.0254	1.0334	1.0414	1.0494	1.0574
1.0654	1.0734	1.0814	1.0894	1.0974	1.1054	1.1134
1.1214	1.1294	1.1374	1.1454	1.1534	1.1614	1.1694
1.1774	1.1854	1.1934	1.2014	1.2094	1.2174	1.2254
1.2334	1.2414	1.2494	1.2574	1.2654	1.2734	1.2814
1.2894	1.2974	1.3054	1.3134	1.3214	1.3294	1.3374
1.3454	1.3534	1.3614	1.3694	1.3774	1.3854	1.3934
1.4014	1.4094	1.4174	1.4254	1.4334	1.4414	1.4494
1.4574	1.4654	1.4734	1.4814	1.4894	1.4974	1.5054
1.5134	1.5214	1.5294	1.5374	1.5454	1.5534	1.5614
1.5694	1.5774	1.5854	1.5934	1.6014	1.6094	1.6174
1.6254	1.6334	1.6414	1.6494	1.6574	1.6654	1.6734
1.6814	1.6894	1.6974	1.7054	1.7134	1.7214	1.7294
1.7374	1.7454	1.7534	1.7614	1.7694	1.7774	1.7854
1.7934	1.8014	1.8094	1.8174	1.8254	1.8334	1.8414
1.8494	1.8574	1.8654	1.8734	1.8814	1.8894	1.8974
1.9054	1.9134	1.9214	1.9294	1.9374	1.9454	1.9534
1.9614	1.9694	1.9774	1.9854	1.9934	2.0014	2.0094
2.0174	2.0254	2.0334	2.0414	2.0494	2.0574	2.0654
2.0734	2.0814	2.0894	2.0974	2.1054	2.1134	2.1214
2.1294	2.1374	2.1454	2.1534	2.1614	2.1694	2.1774
2.1854	2.1934	2.2014	2.2094	2.2174	2.2254	2.2334
2.2414	2.2494	2.2574	2.2654	2.2734	2.2814	2.2894
2.2974	2.3054	2.3134	2.3214	2.3294	2.3374	2.3454
2.3534	2.3614	2.3694	2.3774	2.3854	2.3934	2.4014
2.4094	2.4174	2.4254	2.4334	2.4414	2.4494	2.4574
2.4654	2.4734	2.4814	2.4894	2.4974	2.5054	2.5134
2.5214	2.5294	2.5374	2.5454	2.5534	2.5614	2.5694
2.5774	2.5854	2.5934	2.6014	2.6094	2.6174	2.6254
2.6334	2.6414	2.6494	2.6574	2.6654	2.6734	2.6814
2.6894	2.6974	2.7054	2.7134	2.7214	2.7294	2.7374
2.7454	2.7534	2.7614	2.7694	2.7774	2.7854	2.7934
2.8014	2.8094	2.8174	2.8254	2.8334	2.8414	2.8494
2.8574	2.8654	2.8734	2.8814	2.8894	2.8974	2.9054
2.9134	2.9214	2.9294	2.9374	2.9454	2.9534	2.9614
2.9694	2.9774	2.9854	2.9934	3.0014	3.0094	3.0174
3.0254	3.0334	3.0414	3.0494	3.0574	3.0654	3.0734
3.0814	3.0894	3.0974	3.1054	3.1134	3.1214	3.1294
3.1374	3.1454	3.1534	3.1614	3.1694	3.1774	3.1854
3.1934	3.2014	3.2094	3.2174	3.2254	3.2334	3.2414
3.2494	3.2574	3.2654	3.2734	3.2814	3.2894	3.2974
3.3054	3.3134	3.3214	3.3294	3.3374	3.3454	3.3534
3.3614	3.3694	3.3774	3.3854	3.3934	3.4014	3.4094
3.4174	3.4254	3.4334	3.4414	3.4494	3.4574	3.4654
3.4734	3.4814	3.4894	3.4974	3.5054	3.5134	3.5214
3.5294	3.5374	3.5454	3.5534	3.5614	3.5694	3.5774
3.5854	3.5934	3.6014	3.6094	3.6174	3.6254	3.6334
3.6414	3.6494	3.6574	3.6654	3.6734	3.6814	3.6894
3.6974	3.7054	3.7134	3.7214	3.7294	3.7374	3.7454
3.7534	3.7614	3.7694	3.7774	3.7854	3.7934	3.8014
3.8094	3.8174	3.8254	3.8334	3.8414	3.8494	3.8574
3.8654	3.8734	3.8814	3.8894	3.8974	3.9054	3.9134
3.9214	3.9294	3.9374	3.9454	3.9534	3.9614	3.9694
3.9774	3.9854	3.9934	4.0014	4.0094	4.0174	4.0254
4.0334	4.0414	4.0494	4.0574	4.0654	4.0734	4.0814
4.0894	4.0974	4.1054	4.1134	4.1214	4.1294	4.1374
4.1454	4.1534	4.1614	4.1694	4.1774	4.1854	4.1934
4.2014	4.2094	4.2174	4.2254	4.2334	4.2414	4.2494
4.2574	4.2654	4.2734	4.2814	4.2894	4.2974	4.3054
4.3134	4.3214	4.3294	4.3374	4.3454	4.3534	4.3614
4.3694	4.3774	4.3854	4.3934	4.4014	4.4094	4.4174
4.4254	4.4334	4.4414	4.4494	4.4574	4.4654	4.4734
4.4814	4.4894	4.4974	4.5054	4.5134	4.5214	4.5294
4.5374	4.5454	4.5534	4.5614	4.5694	4.5774	4.5854
4.5934	4.6014	4.6094	4.6174	4.6254	4.6334	4.6414
4.6494	4.6574	4.6654	4.6734	4.6814	4.6894	4.6974
4.7054	4.7134	4.7214	4.7294	4.7374	4.7454	4.7534
4.7614	4.7694	4.7774	4.7854	4.7934	4.8014	4.8094
4.8174	4.8254	4.8334	4.8414	4.8494	4.8574	4.8654
4.8734	4.8814	4.8894	4.8974	4.9054	4.9134	4.9214
4.9294	4.9374	4.9454	4.9534	4.9614	4.9694	4.9774
4.9854	4.9934	5.0014	5.0094	5.0174	5.0254	5.0334
5.0414	5.0494	5.0574	5.0654	5.0734	5.0814	5.0894
5.0974	5.1054	5.1134	5.1214	5.1294	5.1374	5.1454
5.1534	5.1614	5.1694	5.1774	5.1854	5.1934	5.2014
5.2094	5.2174	5.2254	5.2334	5.2414	5.2494	5.2574
5.2654	5.2734	5.2814	5.2894	5.2974	5.3054	5.3134
5.3214	5.3294	5.3374	5.3454	5.3534	5.3614	5.3694
5.3774	5.3854	5.3934	5.4014	5.4094	5.4174	5.4254
5.4334	5.4414	5.4494	5.4574	5.4654	5.4734	5.4814
5.4894	5.4974	5.5054	5.5134	5.5214	5.5294	5.5374
5.5454	5.5534	5.5614	5.5694	5.5774	5.5854	5.5934
5.6014	5.6094	5.6174	5.6254	5.6334	5.6414	5.6494
5.6574	5.6654	5.6734	5.6814	5.6894	5.6974	5.7054
5.7134	5.7214	5.7294	5.7374	5.7454	5.7534	5.7614
5.7694	5.7774	5.7854	5.7934	5.8014	5.8094	5.8174
5.8254	5.8334	5.8414	5.8494	5.8574	5.8654	5.8734
5.8814	5.8894	5.8974	5.9054	5.9134	5.9214	5.9294
5.9374	5.9454	5.9534	5.9614	5.9694	5.9774	5.9854
5.9934	6.0014	6.0094	6.0174	6.0254	6.0334	6.0414
6.0494	6.0574	6.0654	6.0734	6.0814	6.0894	6.0974
6.1054	6.1134	6.1214	6.1294	6.1374	6.1454	6.1534
6.1614	6.1694	6.1774	6.1854	6.1934	6.2014	6.2094
6.2174	6.2254	6.2334	6.2414	6.2494	6.2574	6.2654
6.2734	6.2814	6.2894	6.2974	6.3054	6.3134	6.3214
6.3294	6.3374	6.3454	6.3534	6.3614	6.3694	6.3774
6.3854	6.3934	6.4014	6.4094	6.4174	6.4254	6.4334
6.4414	6.4494	6.4574	6.4654	6.4734	6.4814	6.4894
6.4974	6.5054	6.5134	6.5214	6.5294	6.5374	6.5454
6.5534	6.5614	6.5694	6.5774	6.5854	6.5934	6.6014
6.6094	6.6174	6.6254	6.6334	6.6414	6.6494	6.6574
6.6654	6.6734	6.6814	6.6894	6.6974	6.7054	6.7134
6.7214	6.7294	6.7374	6.7454	6.7534	6.7614	6.7694
6.7774	6.7854	6.7934	6.8014	6.8094	6.8174	6.8254
6.8334	6.8414	6.8494	6.8574	6.8654	6.8734	6.8814
6.8894	6.8974	6.9054	6.9134	6.9214	6.9294	6.9374
6.9454	6.9534	6.9614	6.9694	6.9774	6.9854	6.9934
7.0014	7.0094	7.0174	7.0254	7.0334	7.0414	7.0494
7.0574	7.0654	7.0734	7.0814	7.0894	7.0974	7.1054
7.1134	7.1214	7.1294	7.1374	7.1454	7.1534	7.1614
7.1694	7.1774	7.1854	7.1934	7.2014	7.2094	7.2174
7.2254	7.2334	7.2414	7.2494	7.2574	7.2654	7.2734
7.2814	7.2894	7.2974	7.3054	7.3134	7.3214	7.3294
7.3374	7.3454	7.3534	7.3614	7.3694	7.3774	7.3854
7.3934	7.4014	7.4094	7.4174	7.4254	7.4334	7.4414
7.4494	7.4574	7.4654	7.4734	7.4814	7.4894	7.4974
7.5054	7.5134	7.5214	7.5294	7.5374	7.5454	7.5534
7.5614	7.5694	7.5774	7.5854	7.5934	7.6014	7.6094
7.6174	7.6254	7.6334	7.6414	7.6494	7.6574	7.6654
7.6734	7.6814	7.6894	7.6974	7.7054	7.7134	7.7214
7.7294	7.7374	7.7454	7.7534	7.7614	7.7694	7.7774
7.7854	7.7934	7.8014	7.8094	7.8174	7.8254	7.8334
7.8414	7.8494	7.8574	7.8654	7.8734	7.8814	7.8894
7.8974	7.9054	7.9134	7.9214	7.9294	7.9374	7.9454
7.9534	7.9614	7.9694	7.9774	7.9854	7.9934	8.0014
8.0094	8.0174	8.0254	8.0334	8.0414	8.0494	8.0574
8.0654	8.0734	8.0814	8.0894	8.0974		

.666 .0 2.664 .5 4.662 .1 6.660 .0
1.332 3.9 3.330 .1 5.328 .1

RUNOFF VOLUME = 1.06166 INCHES = .7870 ACRE-FEET
PEAK DISCHARGE RATE = 23.87 CFS AT 1.499 HOURS BASIN AREA = .0139 SQ. MI.

***** BASIN A - (0.71 ACRES)

COMPUTE NM HYD ID=2 HYD NO=100.2 AREA=0.0011 SQ MI
PER A=0 PER B=10 PER C=5 PER D=85
TP=0.1333 HR MASS RAINFALL=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
UNIT PEAK = 3.6914 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8900
AREA = .000935 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

3.853280 K = .122457HR TP = .133300HR K/TP RATIO = .918661 SHAPE CONSTANT, N =
UNIT PEAK = .42737 CFS UNIT VOLUME = .9700 B = 345.27 P60 = 1.8900
AREA = .000165 SQ MI IA = .45000 INCHES INF = 1.11000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=2 CODE=24

PARTIAL HYDROGRAPH 100.20

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS						
.000	.0	1.332	.8	2.664	.1	3.996	.0
5.328	.0						
.666	.0	1.998	.7	3.330	.0	4.662	.0
5.994	.0						

RUNOFF VOLUME = 1.82987 INCHES = .1074 ACRE-FEET
PEAK DISCHARGE RATE = 2.91 CFS AT 1.499 HOURS BASIN AREA = .0011 SQ. MI.

A

***** BASIN B - (2.75 ACRES)

COMPUTE NM HYD ID=3 HYD NO=100.3 AREA=0.0043 SQ MI
PER A=0 PER B=50 PER C=10 PER D=40
TP=0.1333 HR MASS RAINFALL=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
UNIT PEAK = 6.7907 CFS UNIT VOLUME = .9975 B = 526.28 P60 = 1.8900
AREA = .001720 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

3.723222 K = .126549HR TP = .133300HR K/TP RATIO = .949353 SHAPE CONSTANT, N =
UNIT PEAK = 6.5085 CFS UNIT VOLUME = .9980 B = 336.27 P60 = 1.8900
AREA = .002580 SQ MI IA = .47500 INCHES INF = 1.18000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=3 CODE=24

PARTIAL HYDROGRAPH 100.30

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW

HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	1.332	1.6	2.664	.2	3.996	.0
5.328	.0						
.666	.0	1.998	1.6	3.330	.1	4.662	.0
5.994	.0						

RUNOFF VOLUME = 1.24889 INCHES = .2864 ACRE-FeET
 PEAK DISCHARGE RATE = 8.55 CFS AT 1.499 HOURS BASIN AREA = .0043 SQ. MI.

(B)

***** BASIN C - (0.80 ACRES)

COMPUTE NM HYD

ID=4 HYD NO=100.4 AREA=0.0013 SQ MI
 PER A=0 PER B=15 PER C=10 PER D=75
 TP=0.1333 HR MASS RAINFALL=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
 UNIT PEAK = 3.8494 CFS UNIT VOLUME = .9965 B = 526.28 P60 = 1.8900
 AREA = .000975 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

3.908413 K = .120821HR TP = .133300HR K/TP RATIO = .906384 SHAPE CONSTANT, N =
 UNIT PEAK = .85094 CFS UNIT VOLUME = .9850 B = 349.02 P60 = 1.8900
 AREA = .000325 SQ MI IA = .44000 INCHES INF = 1.08200 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=4 CODE=24

PARTIAL HYDROGRAPH 100.40

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	1.332	.9	2.664	.1	3.996	.0
5.328	.0						
.666	.0	1.998	.7	3.330	.0	4.662	.0
5.994	.0						

RUNOFF VOLUME = 1.71261 INCHES = .1187 ACRE-FeET
 PEAK DISCHARGE RATE = 3.28 CFS AT 1.499 HOURS BASIN AREA = .0013 SQ. MI.

(C)

***** BASIN D - (1.34 ACRES)

COMPUTE NM HYD

ID=5 HYD NO=100.5 AREA=0.0021 SQ MI
 PER A=0 PER B=15 PER C=0 PER D=85
 TP=0.1333 HR MASS RAINFALL=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
 UNIT PEAK = 7.0473 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8900
 AREA = .001785 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

3.603328 K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE CONSTANT, N =
 UNIT PEAK = .77461 CFS UNIT VOLUME = .9822 B = 327.79 P60 = 1.8900
 AREA = .000315 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=5 CODE=24

PARTIAL HYDROGRAPH 100.50

TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS
.000	.0	1.332	1.6	2.664	.1	3.996	.0
5.328	.0						
.666	.0	1.998	1.3	3.330	.0	4.662	.0
5.994	.0						

RUNOFF VOLUME = 1.81522 INCHES = .2033 ACRE-FEET
 PEAK DISCHARGE RATE = 5.49 CFS AT 1.499 HOURS BASIN AREA = .0021 SQ. MI.

(D)

***** BASIN E - (1.58 ACRES)

COMPUTE NM HYD ID=6 HYD NO=100.6 AREA=0.0025 SQ MI
 PER A=0 PER B=15 PER C=0 PER D=85
 TP=0.1333 HR MASS RAINFALL=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
 UNIT PEAK = 8.3896 CFS UNIT VOLUME = .9980 B = 526.28 P60 = 1.8900
 AREA = .002125 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

3.603328 K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE CONSTANT, N =
 UNIT PEAK = .92215 CFS UNIT VOLUME = .9850 B = 327.79 P60 = 1.8900
 AREA = .000375 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=6 CODE=24

PARTIAL HYDROGRAPH 100.60

TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS
.000	.0	1.998	1.5	3.996	.0	5.994	.0
.666	.0	2.664	.1	4.662	.0	6.660	.0
1.332	1.9	3.330	.1	5.328	.0		

RUNOFF VOLUME = 1.81522 INCHES = .2420 ACRE-FEET
 PEAK DISCHARGE RATE = 6.53 CFS AT 1.499 HOURS BASIN AREA = .0025 SQ. MI.

(E)

***** BASIN F - (1.69 ACRES)

COMPUTE NM HYD ID=7 HYD NO=100.7 AREA=0.0026 SQ MI
 PER A=0 PER B=90 PER C=10 PER D=0
 TP=0.1333 HR MASS RAINFALL=-1

3.674104 K = .128185HR TP = .133300HR K/TP RATIO = .961630 SHAPE CONSTANT, N =
 UNIT PEAK = 6.4917 CFS UNIT VOLUME = .9981 B = 332.82 P60 = 1.8900
 AREA = .002600 SQ MI IA = .48500 INCHES INF = 1.20800 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=24

PARTIAL HYDROGRAPH 100.70

TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS	TIME TIME HRS HRS	FLOW FLOW CFS CFS
.000	.0	1.332	.1	2.664	.1		
.666	.0	1.998	.3	3.330	.0		

RUNOFF VOLUME = .72003 INCHES = .0998 ACRE-FEET
PEAK DISCHARGE RATE = 3.62 CFS AT 1.532 HOURS BASIN AREA = .0026 SQ. MI.

(F)

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 08:10:25

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 INPUT FILE = horizon.dat

RUN DATE (MON/DAY/YR) = 05/23/2003
 USER NO. = M_GOODWIN.101

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1	NOTATION
START											TIME= .00
RAINFALL TYPE= 1											RAIN6= 2.250
COMPUTE NM HYD	100.10	-	1	.01390	23.87	.707	1.06166	1.499	2.683		PER IMP= 30.00
COMPUTE NM HYD	100.20	-	2	.00110	2.91	.107	1.82987	1.499	4.137		PER IMP= 85.00
COMPUTE NM HYD	100.30	-	3	.00430	8.55	.286	1.24889	1.499	3.107		PER IMP= 40.00
COMPUTE NM HYD	100.40	-	4	.00130	3.28	.119	1.71261	1.499	3.939		PER IMP= 75.00
COMPUTE NM HYD	100.50	-	5	.00210	5.49	.203	1.81522	1.499	4.083		PER IMP= 85.00
COMPUTE NM HYD	100.60	-	6	.00250	6.53	.242	1.81522	1.499	4.081		PER IMP= 85.00
COMPUTE NM HYD	100.70	-	7	.00260	3.62	.100	.72003	1.532	2.174		PER IMP= .00
FINISH											