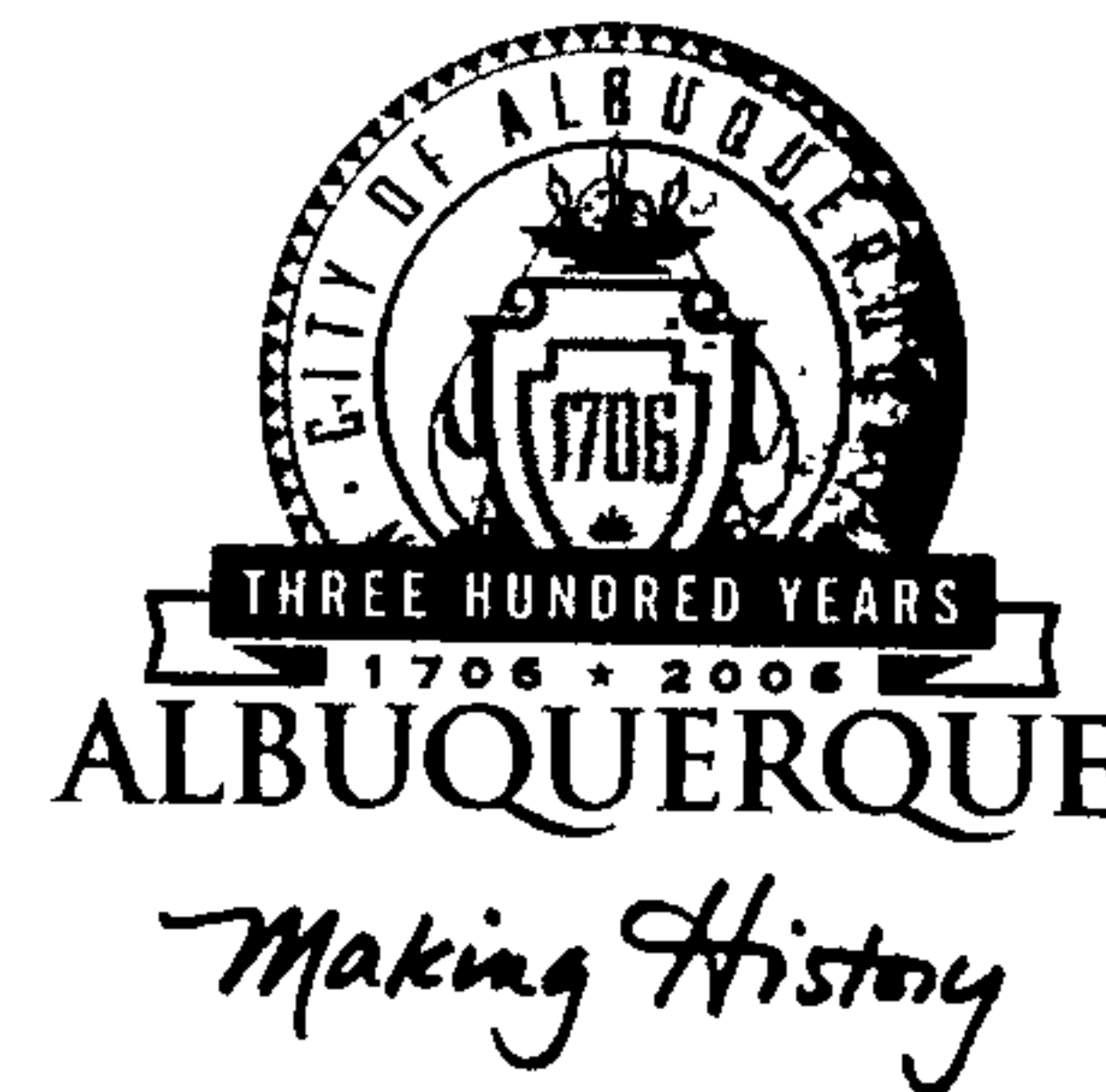


CITY OF ALBUQUERQUE



April 12, 2005

Mr. Ronald R. Bohannon, P.E.
TIERRA WEST, LLC
8509 Jefferson St. NE
Albuquerque, NM 87113

Re: RIVERSIDE PLAZA, TRACT 6A-1
6311 Riverside Drive NW
Approval of Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 07/23/2004 (E-12/D14)
Certification dated 04/11/2005

P.O. Box 1293

Dear Ron:

Albuquerque

Based upon the information provided in your submittal received 04/12/2005, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

New Mexico 87103

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

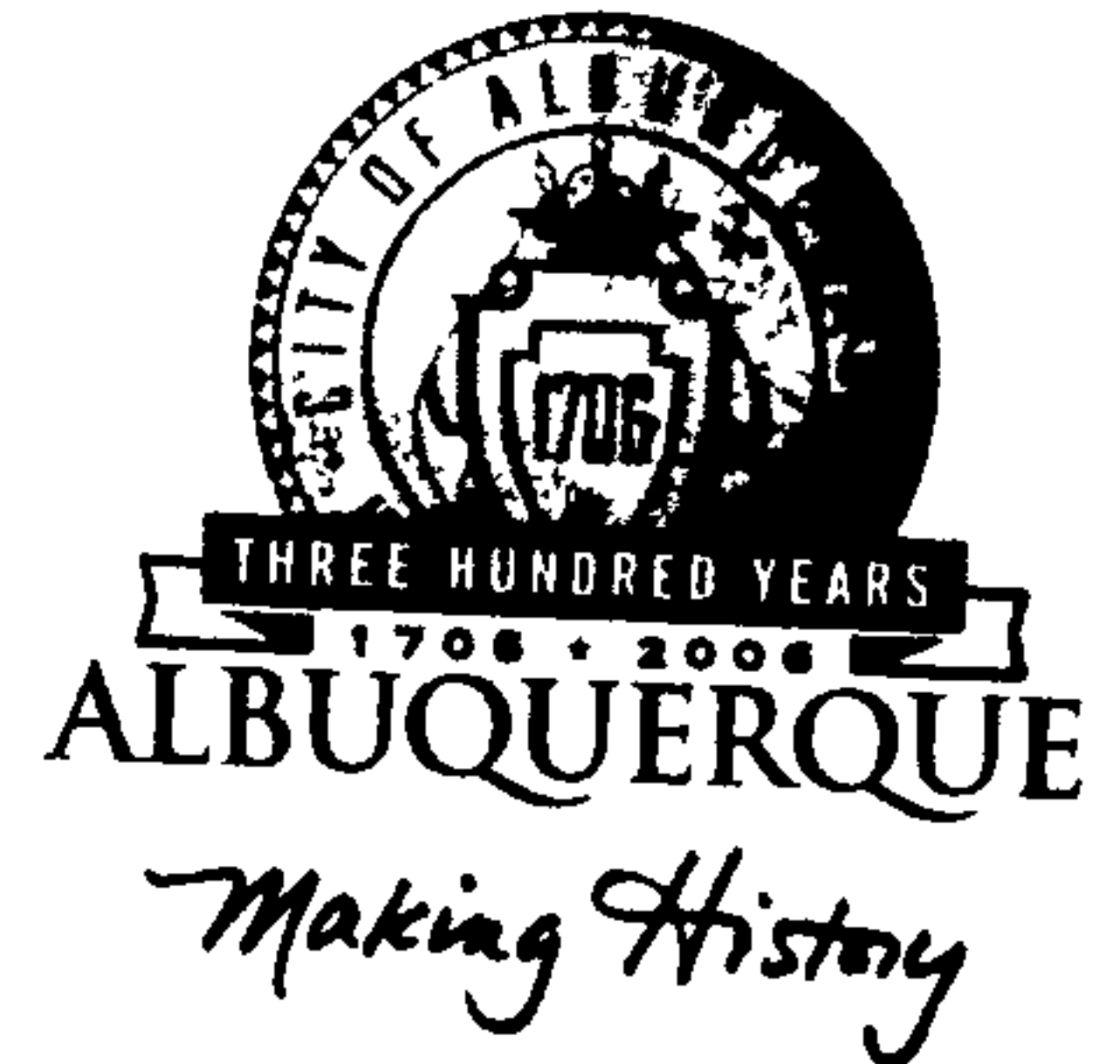
Sincerely,

Arlene V. Portillo
Plan Checker, Planning Dept. - Hydrology
Development and Building Services

www.cabq.gov

C: Phyllis Villanueva
File

CITY OF ALBUQUERQUE



January 19, 2005

Mr. Ron Bohannon, P.E.
TIERRA WEST, LLC
8509 Jefferson St. NE
Albuquerque, NM 87113

Re: RIVERSIDE PLAZA, TRACT 5A5
6330 Riverside Plaza Lane NW
Approval of Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 05/13/2004 (E-12/D14)
Certification dated 01/19/2005

P.O. Box 1293

Dear Ron,

Albuquerque

Based upon the information provided in your submittal received 01/19/2005, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

New Mexico 87103

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

www.cabq.gov

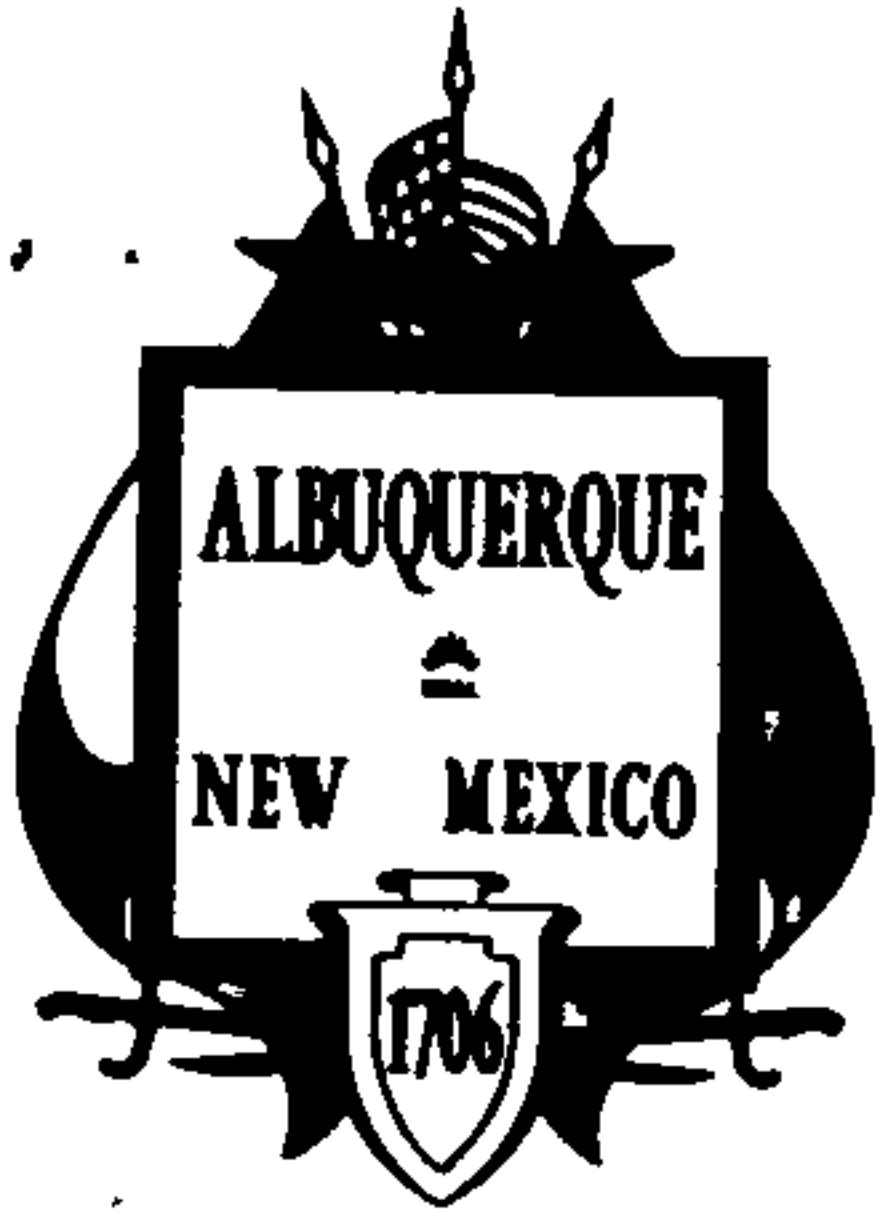
Sincerely,

Arlene V. Portillo

Arlene V. Portillo
Plan Checker, Planning Dept. - Hydrology
Development and Building Services

C: Phyllis Villanueva
Sara Lavy

File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 9, 2003

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Riverside Plaza Building M, 6341 Riverside Plaza Lane NW, Certificate of Occupancy

Engineer's Stamp dated 5-21-03 (E12/D14)

Certification dated 12-04-03

Dear Ms. Lavy,

Based upon the information provided in your submittal received 12-08-03, 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



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 16, 2003

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Riverside Plaza Building N, 6341 Riverside Plaza Lane NW, Certificate of Occupancy

Engineer's Stamp dated 5-21-03 (E12/D14)

Certification dated 10-15-03

Dear Ms. Lavy,

Based upon the information provided in your submittal received 10-15-03, 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



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 19, 2003

Ronald R. Bohannon, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA TRACT-5A-2 (E-12/D14)
(6260 Riverside Plaza Lane nw)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 7/2/2002
ENGINEERS CERTIFICATION DATED 3/18/2003

Dear Mr. Bohannon:

Based upon the information provided in your Engineers Certification submittal dated 3/18/2003, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

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

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



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 15, 2002

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA TRACT.6 (Bldg. L-1) (E-12/D14)
(6301 Riverside Plaza Lane NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 5/3/2002
ENGINEERS CERTIFICATION DATED 10/14/2002

Dear Sara:

Based upon the information provided in your Engineers Certification submittal dated 10/15/2002, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin

Hydrology Plan Checker

Development & Bldg. Services Division

BUB

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



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 15, 2002

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA TRACT 4 (PHASE 2) (E-12/D14)
(6271 Riverside Plaza Lane NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 11/3/2000
ENGINEERS CERTIFICATION DATED 10/10/2002

Dear Sara:

Based upon the information provided in your Engineers Certification submittal dated 10/15/2002, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Development & Bldg. Services Division
BLB

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



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 12, 2002

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA TRACT. 6 BLDG. L-2 (E-12/D14)
(6321 Riverside Plaza Lane NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/4/2002 Rev. 5/3/2002
ENGINEERS CERTIFICATION DATED 7/12/2002

Dear Ms. Lavy:

Based upon the information provided in your Engineers Certification submittal dated 7/12/2002, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

C: Vickie Chavez, COA
✓ drainage file
approval file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 2, 2002

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA TR. 5A-4 (E-12/D14)
(6320 Riverside Plaza Lane NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/14/2002
ENGINEERS CERTIFICATION DATED 7/1/2002

Dear Ms. Lavy:

Based upon the information provided in your Engineers Certification submittal dated 7/1/2002, the above referenced site is approved for Permanent Certificate of Occupancy for Tr. 5A-4 only.

Per your letter dated 7/1/2002, certification for Tract 5A-2 will be submitted when the building construction is complete.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department

BuB

C: Vickie Chavez, COA
drainage file
approval file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 21, 2002

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA TRACT 4 PHASE 1 (E-12/D14)
(6241, 6251, & 6261 Riverside Plaza Lane NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 11/30/2000
ENGINEERS CERTIFICATION DATED 3/20/2002

Dear Ms. Lavy:

Based upon the information provided in your Engineers Certification submittal dated 3/21/2002, the above referenced site is approved for Permanent Certificate of Occupancy for Phase 1.

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

Sincerely,

Teresa A. Martin

Hydrology Plan Checker

Public Works Department

BB

C: Vickie Chavez, COA
✓ drainage file
approval file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 10, 2001

Sara Lavy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RIVERSIDE PLAZA PHASE 2 (E-12/D14)
(6300 Riverside Plaza Lane NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/24/2000
ENGINEERS CERTIFICATION DATED 10/8/2001

Dear Ms. Lavy:

Based upon the information provided in your Engineers Certification submittal dated 10/9/2001, the above referenced site is approved for Permanent Certificate of Occupancy for Phase 2.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BUB

C: Vickie Chavez, CAO
✓ drainage file
approval file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 20, 2001

Ronald R. Bohannon, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

**RE: Grading and Drainage Certification
Riverside Plaza (E-12/D14)
Submitted for Release of Financial Guarantees
Engineers Stamp dated 3/31/1999
Engineer's Certification Stamp Dated 3/19/2001**

Dear Mr. Bohannon:

Based upon the information provided in your submittal dated 3/19/2001, the above referenced plan is adequate to satisfy the Grading and Drainage Certification requirements for Release of Financial Guaranty.

Please note that this certification is for the mass grading of the site.

Also keep in mind, that each individual lot needs to be separately certified as construction of the buildings and parking lots are accomplished. These certifications must also cover the retaining walls as they are built with the site specific lots.

If you have any questions, please call me at 924-3986.

Sincerely,

Bradley L. Bingham, P.E.
Senior Civil Engineer, Hydrology
Public Works Dept., C.O.A.

C: Arlene Portillo, PWD – #608981

File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 23, 2003

Ronald Bohannon, PE
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

RE: Tract 6 at Riverside Plaza Grading and Drainage Plan (E12-D14)
Engineer's Stamp Dated ~~6-10-03~~ 5-21-03 

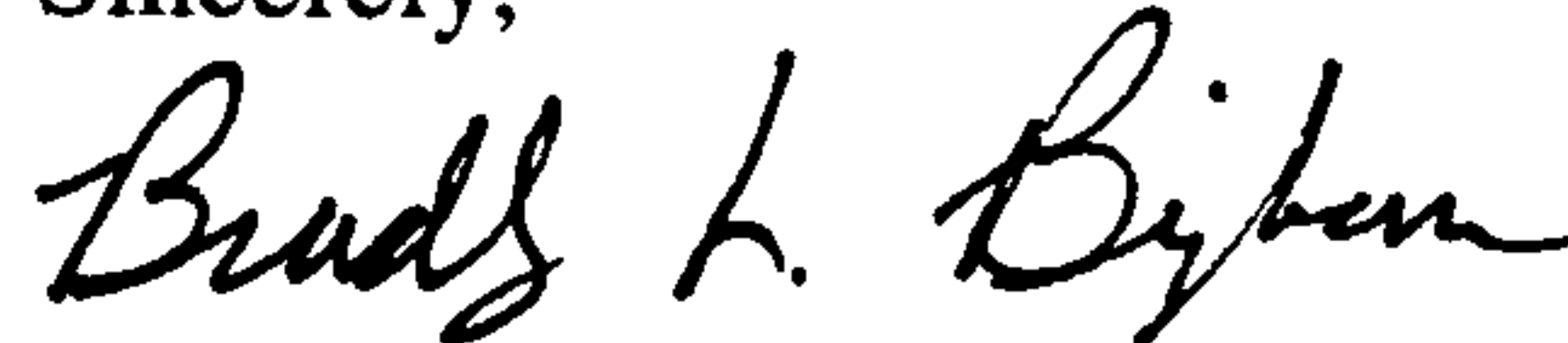
Dear Mr. Bohannon:

The above referenced grading and drainage plan received 6-10-03 is approved for Grading Permit and Building Permit. Please attach a copy of the approved plan to the construction set. Prior to Certificate of Occupancy approval, an Engineer's Certification per the Development Process Manual is required on the above referenced plan.

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).

If you have any questions please call me at 924-3986.

Sincerely,



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

C: Charles Caruso, Public Works Hydrology
File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 24, 2002

Ron Bohannon
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

**RE: Grading and Drainage Plan for Riverside Plaza Tract 6 (E12-D14) Dated
May 3, 2002**

Dear Mr. Bohannon:

Based on the information in your submittal dated 5-3-02, the above referenced plan is approved for Site Plan for Subdivision as well as Site Plan for Building Permit Action by the DRB, and for Building Permit release.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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

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

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

--



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 12, 2002

Sara Lavy, PE
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

**RE: Tract 5A-2 at Riverside Plaza Grading and Drainage Plan (E12-D14)
Engineer's Stamp Dated July 2, 2002**

Dear Ms. Lavy:

Based on the information contained in your submittal dated July 3, 2002, the above referenced plan is approved for Site Plan for Subdivision, Site Plan for Building Permit Action by the DRB, and for Building Permit. Prior to Certificate of Occupancy approval, an Engineer's Certification per the DPM will be required.

If you have any questions, please call me at 924-3986.

Sincerely,

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

C: File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 19, 2002

Ronald Bohannon, PE
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

**Re: Tract 5A-2/ 5A-4 at Riverside Plaza Grading and Drainage Plan
Engineer's Stamp Dated 3-14-02, (E12/D14)**

Dear Mr. Bohannon,

Based on the information contained in your submittal dated 3-14-02, the above referenced plan is approved for Site Plan for Building Permit Action by the DRB, and for Building Permit release.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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

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

Sincerely,

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

c: Terri Martin, Hydrology
~~File (2)~~



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 28, 1999

Ronald R. Bohannon, P.E.
Tierra West, LLC
4421 McLeod Rd. NE, Suite D
Albuquerque, New Mexico 87109

RE: Additional Information for Riverside Plaza (E12/D14), Submitted for Final Plat Approval, Letter Dated 6/9/99.

Dear Mr. Bohannon:

Based on the information provided with the submittal of June 10, 1999, it appears that all of my previous comments have been addressed for Final Plat approval.

The existing topography for Basin 5, provided on June 22, 1999, shows that this basin drains east toward the Lower Corrales Riverside Drain, and not toward Winter Haven Drive to the south. Therefore, development within Basin 5 will require that any runoff that is directed to Winter Haven in the future be in compliance with the approved Riverside Plaza master drainage plan.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Ben Spencer, Argus Development Co.
File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 21, 2000

Ronald R. Bohannon, P.E.
Sara Lavy, EIT
Tierra West, LLC
8509 Jefferson, NE
Albuquerque, NM 87113

RE: GRADING & DRAINAGE PLAN FOR TRACT FOUR RIVERSIDE PLAZA (E-12 /D014) ENGINEER'S STAMP DATED NOVEMBER 30, 2000, SUBMITTED FOR SITE DEVELOPMENT PLAN FOR SUBDIVISION & BUILDING PERMIT APPROVALS, PLATTING APPROVAL, AND GRADING PERMIT APPROVAL

Dear Mr. Bohannon,

Based upon the information provided in your November 3, 2000, submittal, the project referred to above is approved for Platting, Site Development Plan for Subdivision & Building Permits, Building Permit and Grading Permit. Please attach copies of this approved plan to the construction sets prior to sign-off by Hydrology.

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

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

Sincerely,

Stuart Reeder, P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: Whitney Reiersen

☒ file



City of Albuquerque

March 30, 2000

Ronald R. Bohannon, P.E.
Tierra West Development Management Service
4421 McCleod Road., NE, Suite D
Albuquerque, NM 87109

RE: GRADING & DRAINAGE PLAN FOR RIVERSIDE PLAZA PHASE II (E-
12/D014) ENGINEERS STAMP DATED 3/27/00 SUBMITTED FOR BUILDING
PERMIT APPROVAL

2A

Dear Mr. Bohannon,

Based upon the information provided in your March 27, 2000, submittal, the project referred to above is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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

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

Sincerely,

Stuart Reeder, P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: Whitney Reiersen

✓ File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ronald R. Bohannon, P.E.
Tierra West, LLC
4421 McLeod Rd. NE, Suite D
Albuquerque, New Mexico 87109

RE: Grading and Drainage Plan for Phase I of Riverside Plaza (E12/D14), Submitted for Site Development Plan for Building Permit Approval and Building Permit Release, Engineer's Stamp Dated 6/9/99.

Dear Mr. Bohannon:

Based on the information provided in the submittal of June 10, 1999, the above referenced plan is approved for Site Development Plan for Building Permit approval by the DRB and for Building Permit release.

As you are aware, the Engineer's Certification is required prior to release of the Certificate of Occupancy for the proposed buildings. Since a portion of this development drains to Winter Haven Drive, the certification must indicate that Winter Haven has been constructed and accepted by the City.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Ben Spencer, Argus Development Co.
File

DRAINAGE REPORT

for

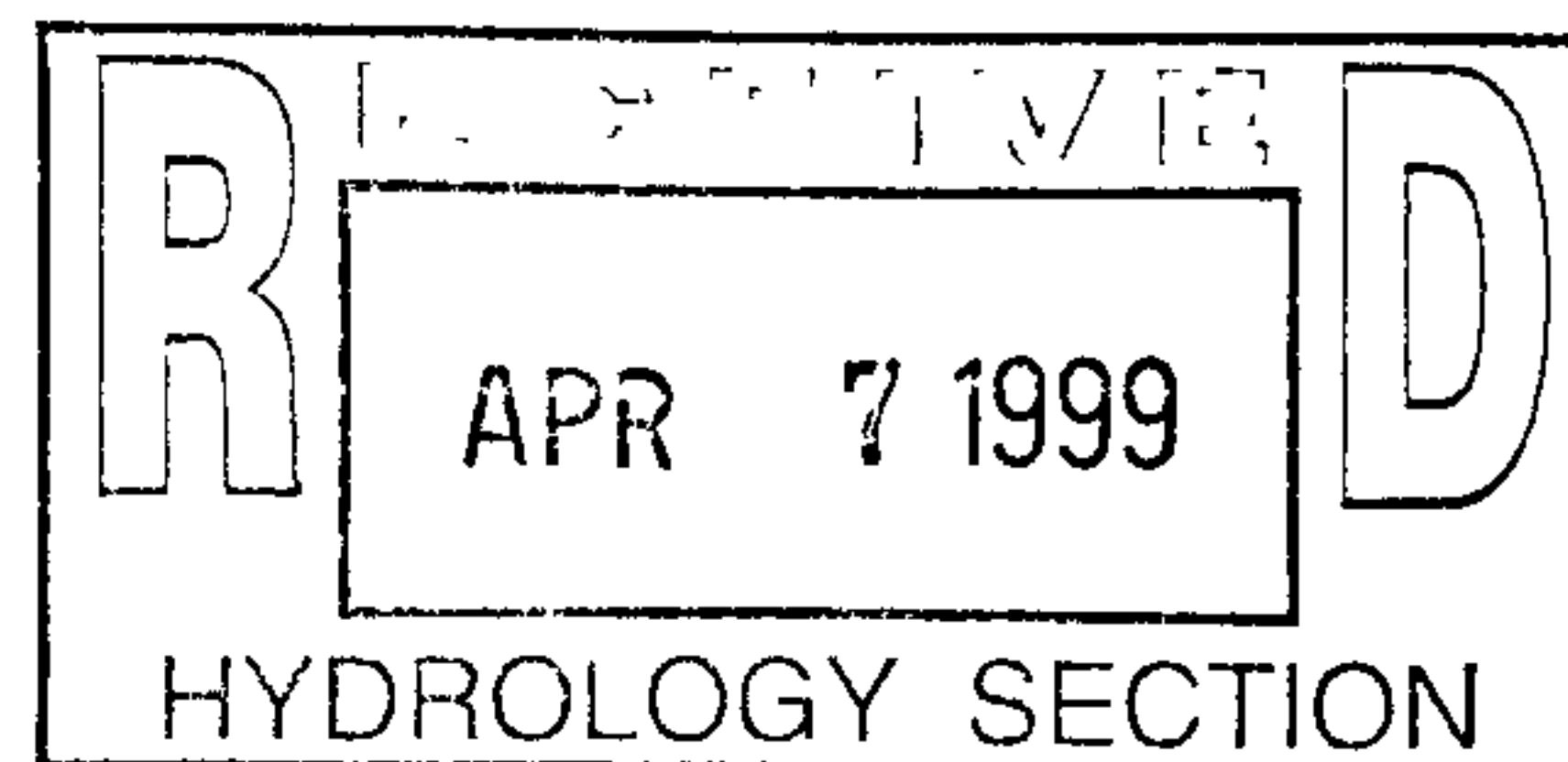
Riverside Plaza

Prepared by

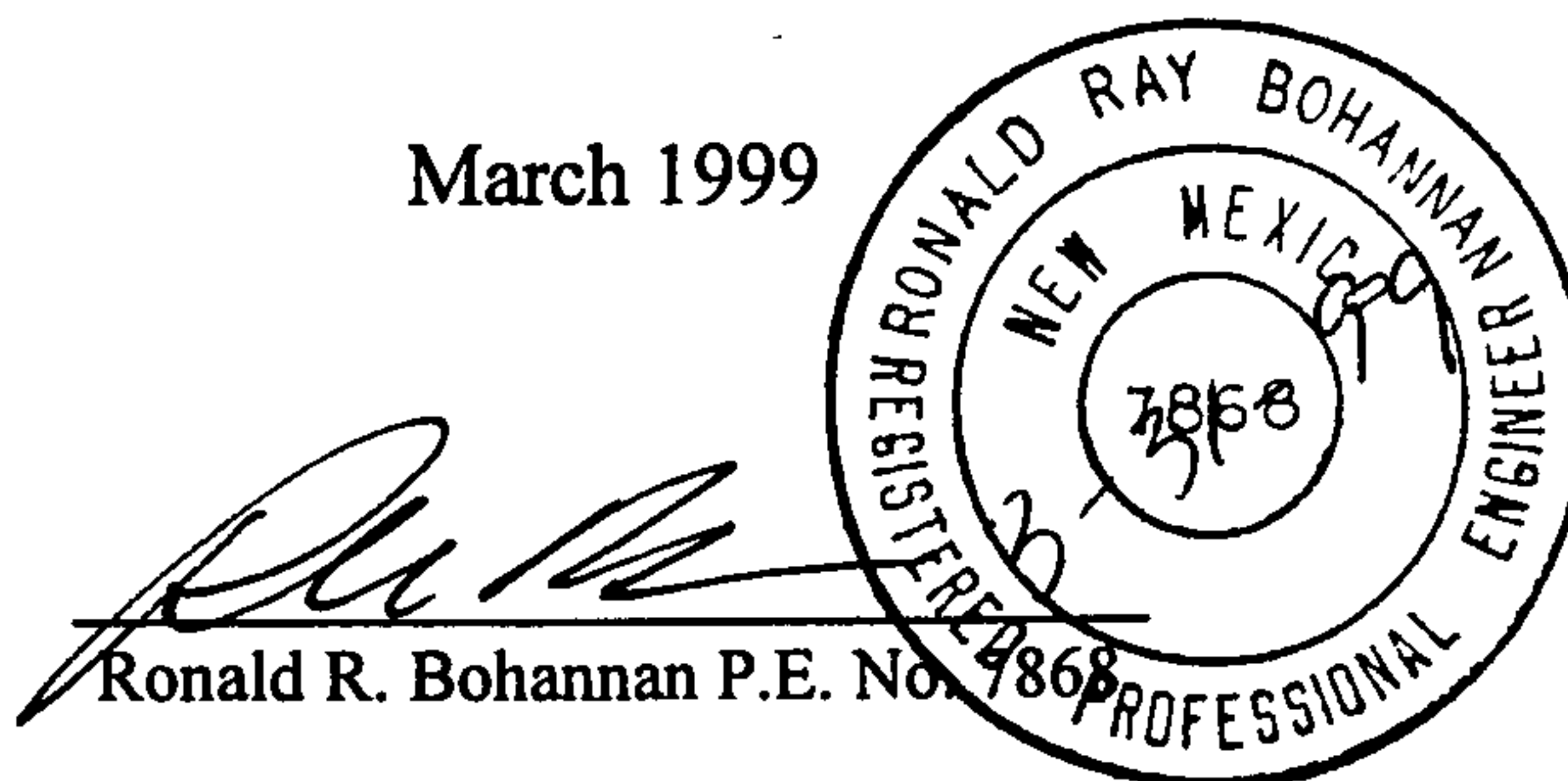
Tierra West, LLC
4421 McLeod Road NE, Suite D
Albuquerque, New Mexico 87109

Prepared for

Ben Spencer
Argus Development Company
6400 Uptown Blvd NE Suite 200-W
Albuquerque, New Mexico 87110



March 1999



Location

Montano Commercial is a proposed 25.6 acre commercial and retail development. It is located north of Montano Plaza Drive and east of Coors Boulevard. The site is shown on the attached Zone Atlas Map E-12 and is identified as Tract A1A1 Lands of Joel P. Taylor. The purpose of this report is to provide the drainage analysis and management plan for the site.

Existing Drainage Conditions

The site is currently undeveloped. There is one existing undeveloped basin on the site (Map 1). It sheets flows with 51.98 cfs to the east and into the Lower Corrales Riverside Drain.

Off-site flows enter the site from two separate culverts that consist of a pair of 30" pipes that extend west across Coors Boulevard. The La Orilla Drainage Plan prepared by Easterling & Associates addressed the drainage problems for the area and proposed a solution. The plan proposed to construct detention ponds on the west side of Coors that will drain to the City storm sewer system. These ponds have been constructed and eliminate a portion of the off-site flows entering the site.

There are seven basins identified in the La Orilla drainage report (Map 2). The Montano Commercial site is identified as Basin 6 in the La Orilla Plan. Basin 1 will drain east towards culverts that will convey the flows east across Coors to enter Basin 5. Basins 2 and 3 will drain to the proposed detention ponds. Basin 4B drains east towards Coors in the current undeveloped condition. Culverts under Coors allow the undeveloped flow to cross Coors and enter the site (Basin 6). When Riverside Plaza is developed a swale will be graded along the west side Coors. The swale will carry the undeveloped flow from Basin 4B away from the culverts and into the Coors Detention Ponds. In the future developed condition, Basin 4B will drain southeast into the Coors Detention Pond and will not affect the site. Basin 5 is located north of the site and drains east towards the Lower Corrales Riverside Drain and currently does

not affect the site. However, the future proposed solution for Basin 5 is to drain through the Montano Commercial site to the Montano box culvert outfall. Basin 4A is located west of Coors Boulevard and will continue to drain east to culverts that will convey the flow into the site (Basin 6).

A proposed storm drain system on the Montano Commercial site will collect the flows from off-site Basin 4A as they exit the existing 30" culverts and enter the site. This proposed storm drain system will daylight in a landscaped median and then be routed through the site to Winter Haven Road. The developed flows from offsite Basin 5 will drain to Winter Haven Road through a separate future storm drain system that will be designed when Basin 5 is developed. Winter Haven Road will convey the flows from both the on-site and off-site basins to the box culvert under Montano Boulevard.

FIRM Map and Soil Conditions

The site is located on FIRM Maps 35001C0116 D and 35001C0118 D as shown on the attached excerpt (Map 3). The map shows that the site does not lie within any 100 year flood plains.

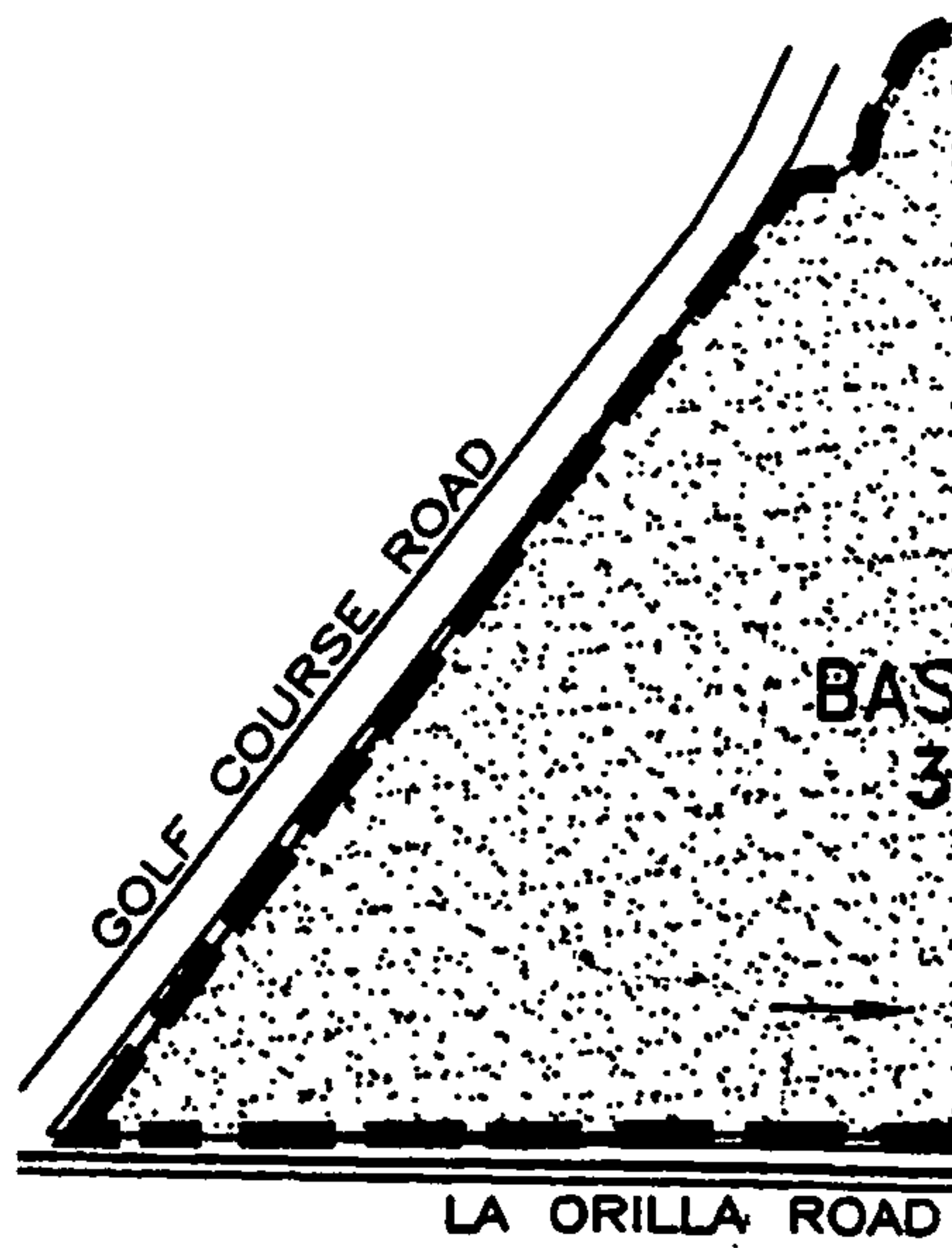
The site contains one soil type from the Soil Conservation Service Soil Survey of Bernalillo County. It is a Bluepoint loamy fine sand which has slow runoff and a severe hazard of soil blowing. This soil also has rapid permeability.

On-Site Drainage Management Plan

There are six proposed basins on the site (Map 4). Basin 1 consists of the south portion of the site. This basin will discharge 15.21 cfs of developed flows through three 24" sidewalk culverts to Winter Haven Road. Basin 2 consists of the south-central portion of the site. This basin will discharge 42.09 cfs of developed flow through a driveway to Winter Haven Road.



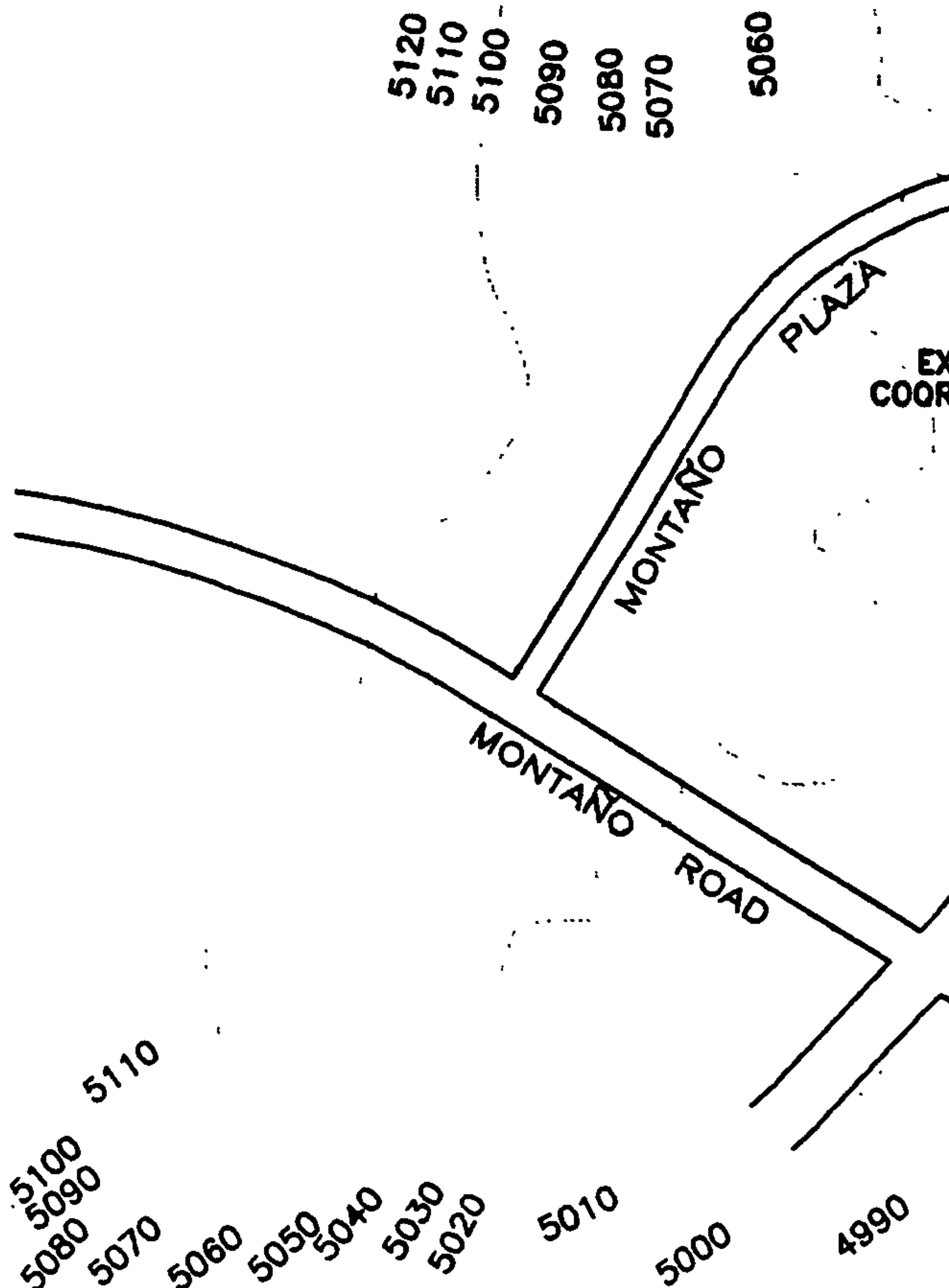
SCALE: 1"=600' (APPROX)



HYDROLOGY SUMMARY

JULY 1994

BASIN	TIME TO PEAK, TP (HRS)	LAND USE TYPES (%)				ONSITE GENERATED RUNOFF 100-YR., 24-HR. EVENT P=2.33		RECOMMENDED DETENTION AND DISCHARGE		NOTES
		A	B	C	D	Q _{peak} (CFS)	VOL ₁₀₀ (AC-FT)	Q _{peak} (CFS)	STORAGE ₁₀₀ (AC-FT)	
15	0.13	70	20	5	5	48	1.5	29	0.3	ALL COLLECTED RUNOFF TO BE DETAINED IN POND. MAX. STORAGE =3.2 AC-FT. MAX Q _{peak} =110 CFS. DISCHARGE WILL CROSS OVER INVERSIDE DRAIN TO BOSQUE WHERE IT WILL BE CONVEYED TO 100 GRADE OR DISPERSED TO CREATE WETLAND AREA.
23	0.13	0	10	10	80	80	2.6	60	0	
18	0.13	0	10	10	80	46	2.0	46	0	
16	0.13	5	5	5	85	117	5.3	117	0	
13	0.13	70	20	5	5	35	1.1	3	3.3	BOTH BASINS 2 & 3 WILL BE DETAINED IN A HYDRAULICALLY CONNECTED POND. WILL DISCHARGE < 5 CFS TO LA ORILLA ROAD STORM DRAIN.
17	0.13	80	10	5	5	90	2.7			
8	0.13	0	10	10	80	41	1.8	N/A	N/A	RUNOFF FROM BASIN 48 TO BE COLLECTED IN EXTENSION OF EXISTING COORS POND. WORK TO BE DONE WHEN BASIN 48 DEVELOPS.



MAP 2

LA ORILLA DRAINAGE PLAN

CURRENT PLAN SCHEMATIC

JULY 1994

LEGEND

- 5080 CONTOUR LINES, 10' INTERVALS
- EXISTING DRAINAGE FACILITIES
- PROPOSED DRAINAGE FACILITIES
- BASINS DISCHARGING TO PLAZA DRIVE OUTFALL
- BASINS DISCHARGING TO MONTAÑO OUTFALL
- LA ORILLA DRAINAGE PLAN BASINS, BY EASTERLING & ASSOCIATES, INC.
- WATERSHED DIVIDE BETWEEN MONTAÑO AND PLAZA DRIVE OUTFALLS

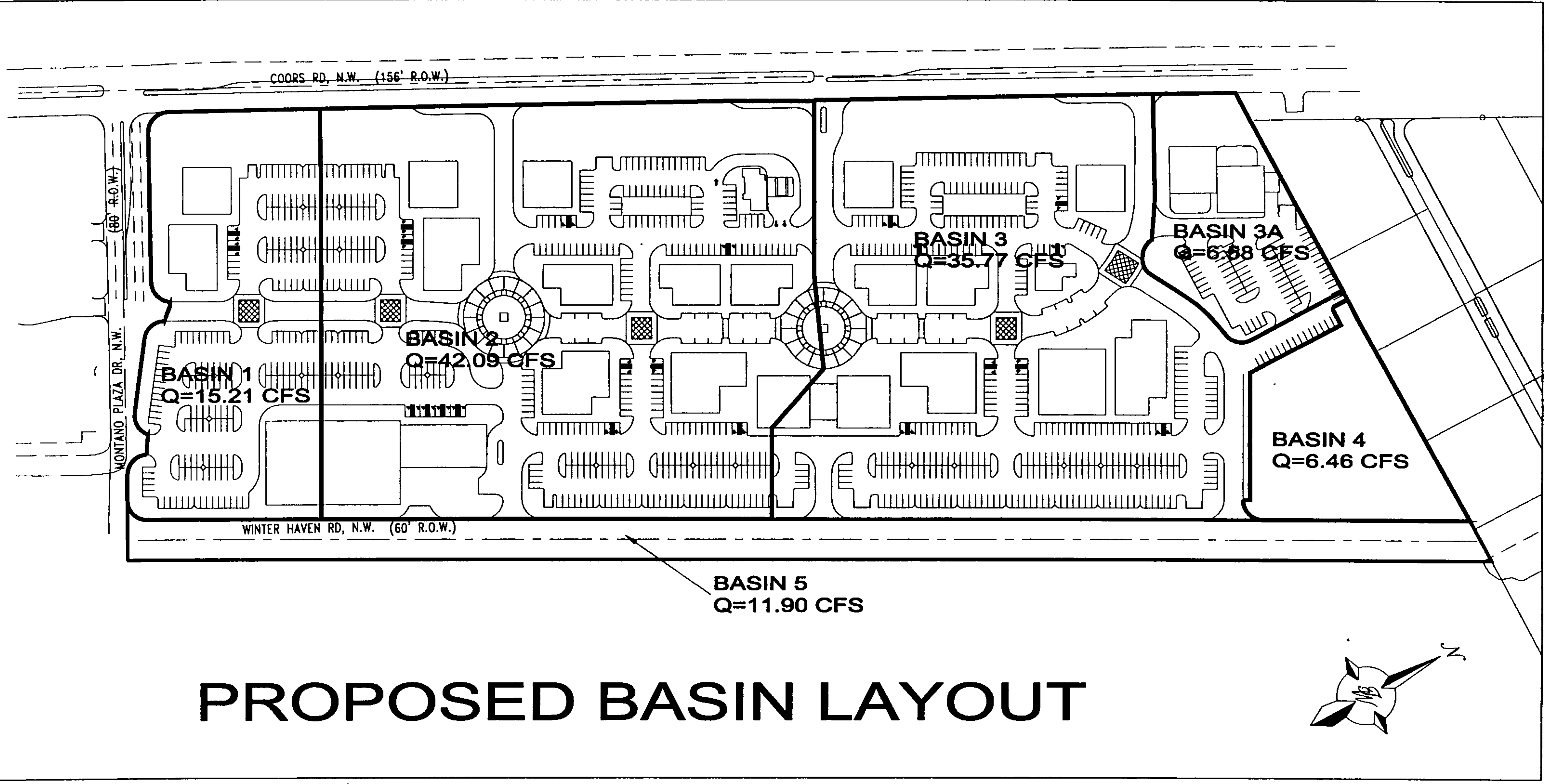
Basin 3, with a developed discharge rate of 35.77 cfs, consists of the northern portion of the site. This basin will discharge through a driveway to Winter Haven Road. Basin 3A consists of the northwest corner of the site and has a developed flow of 6.58 cfs. Two sidewalk culverts will convey the flows to Basin 3 where they will eventually discharge to Winterhaven Road. Basin 4 consists of the northern tip of the site. This basin has a developed flow of 6.46 cfs and will flow west to Winter Haven Road. No development is proposed for Basin 4 at this time, however, the basin was assumed fully developed for purposes of designing the outfall for the site. Basin 5 consists of Winter Haven Road which will be developed with this project.

There is a limited capacity to Winter Haven Road. The depth of water in the road can not exceed one foot. To achieve this, there will be restrictions to the amount of drainage the upstream basins can discharge. The upstream basins will be able to discharge 0.57 cfs per acre. Consequently, Offsite Basin 1 will be allowed to discharge 12.68 cfs. Offsite Basin 4A will have an allowable discharge of 8.39 cfs and Offsite Basin 5 will have an allowable discharge of 6.57 cfs.

The flows will be routed in Winterhaven Road to an existing detention pond located in the Montano Plaza Shopping Center on the northeast corner of Coors and Montano. A cattle guard inlet will capture the 124.21 cfs in Winter Haven Road and will convey the flows to the detention pond. An existing 6' x 4' box culvert acts as an outfall for the pond and connects to the existing 6' x 10' box culvert under Montano Road. A proposed 12" RCP will be constructed adjacent to the 6' x 4' culvert to act as an additional outfall from the pond. The pond has capacity for the additional flows with the proposed 12" RCP.

Winter Haven Road

Winter Haven Road has a super-elevated cross-section that was designed specifically for this project. Currently, the road has existing temporary pavement and is in poor condition.



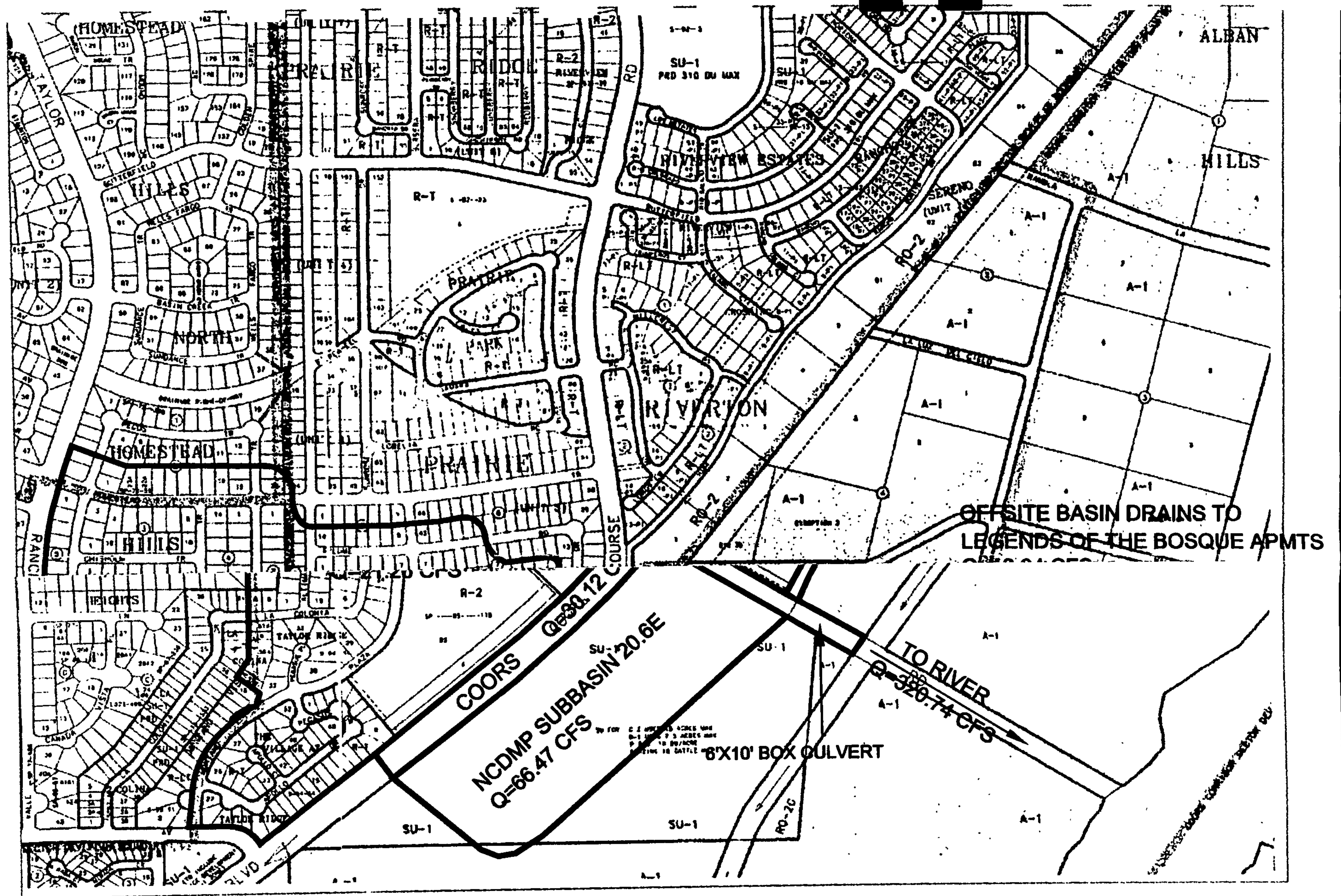
PROPOSED BASIN LAYOUT

The slope of the existing road according to both the as-builts and a field survey is 0.4%. This is less than the minimum allowable slope of 0.6%. However, the road was originally designed with the addition of the Montano Plaza Shopping Center. The shopping center has several existing entrances to Winter Haven Road. Changing the slope of the road to meet the minimum slope requirement is impossible with the existing shopping center. We are proposing to improve Winter Haven from the Riverside Plaza site to Montano Road. The road will convey the on-site and off-site flows to the 6' x 10' box culvert located under Montano Boulevard. The road has capacity for the flows as shown in the street capacity section of this report. At Winter Haven just south of the site, 162.38 cfs of discharge will be present in the street. After being routed down the length of Winter Haven to Montano Road, there will be 124.21 cfs of discharge in the street. The height of the discharge will be 1.04' or 12.48" when the discharge is 162.38 cfs. This height will be reduced as the flow is routed to Montano to 0.94' or 11.22". The super-elevated section will allow the nuisance flows to be collected on one side of the street and be conveyed to the outfall system. The road will be constructed along the property line of the site and also the length of the reach to the outfall system at Montano Boulevard.

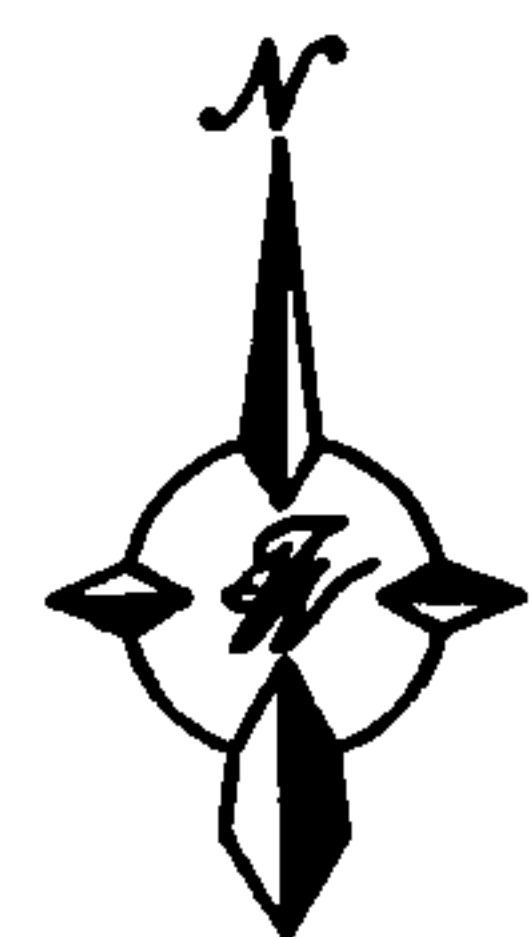
Box Culvert Capacity

An AHYMO run has been completed for the 6' x 10' box culvert under Montano Road to show it has capacity for the entire area, including the new development of Montano Commercial. The six on-site basins on the Montano Commercial site were assumed to free discharge to Winterhaven Road. The restricted flows from the three offsite basins (Basins 1, 4A, and 5) were routed to Winterhaven Road where they were combined with the on-site flows to be conveyed to the box culvert.

The program also includes the flows from the Coors Detention Ponds located in Taylor Ranch on the west side of Coors Boulevard. The AHYMO for the upland basins that drain to



OVERALL BASIN MAP FOR BOX CULVERT CAPACITY



the Coors Detention Ponds was supplied by Easterling & Associates, Inc. from the La Orilla Drainage Plan. This plan analyzes the Coors Detention Pond system which includes Taylor Ranch and the Prairie Ridge Subdivision.

The existing Montano Plaza Shopping Center (E12-D3) located on the northeast corner of Coors and Montano also drains to the box culvert under Montano Road. The AHYMO for the on-site basins and ponds was taken from the approved report by Chavez-Grieves Engineering (E12-D3) and incorporated into the new AHYMO run. The existing Taylor Ridge Subdivision (E11-D26) by Isaacson & Arfman was also included in the AHYMO for the box culvert. Other miscellaneous basins included in the AHYMO run are Montano Road itself, the undeveloped flows from sub-basin 20.6E, from the North Coors Drainage Management Plan, located on the southeast corner of Coors and Montano, and Montano Plaza Drive, Winterhaven Road, and Coors Boulevard. The 6' x 10' box culvert under Montano road has capacity for 598.09 cfs which is greater than the 254.49 cfs from the combined upstream basins.

The basins below Winterhaven Road will be ponded on-site and released at a controlled rate to the Lower Corrales Riverside Drain. These basins will not impact the 6' x 10' culvert under Montano Road.

Summary

Basins 1 through 4 are located on-site, and basin 5 consists of Winterhaven Road. The Offsite Basins 1, 4A and 5 will be restricted to 0.578 cfs per acres. Offsite Basins 1 and 4A are located west of Coors Boulevard. The flows from these basins are conveyed across Coors by existing 30" culverts. A portion of Offsite Basin 4A drains to Riverside Plaza and will be routed to Winter Haven Road. The rest of Offsite Basin 4A and Basin 1 will drain to Offsite Basin 5. Currently, Off-site Basin 5 is undeveloped and flows east towards the Lower Corrales Riverside Drain. Offsite Basin 5 will drain to Winterhaven Road when it is developed in the future. The

off-site and on-site flows will be conveyed via Winterhaven Road to a proposed outfall system and the 6' x 10' box culvert under Montano Boulevard, which has capacity for the additional flows.

RUNOFF CALCULATIONS

The site is @ Zone 1

LAND TREATMENT

Proposed

B = 10 %

D = 90 %

Existing

B = 100%

DEPTH (INCHES) @ 100-YEAR STORM

$P_{60} = 1.87$ inches

$P_{360} = 2.20$ inches

$P_{1440} = 2.66$ inches

DEPTH (INCHES) @ 10-YEAR STORM

$P_{60} = 1.87 \times 0.667$
 $= 1.25$ inches

$P_{360} = 1.47$

$P_{1440} = 1.77$

See the summary output from AHYMO calculations.

On-Site Developed Drainage Basins

Existing

BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
1	1117196.60	25.6473	0.040074

Proposed

BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
1	160138.05	3.6763	0.005744
2	443273.77	10.1762	0.015900
3	376653.86	8.6468	0.013511
3A	69275.53	1.5903	0.002485
4	67855.40	1.5577	0.002434
5	118573.14	2.7221	0.004253
Total	1235769.74	28.3694	0.044327

Runoff Calculation Results

Existing

BASIN	Q-100 CFS	Q-10 CFS	V-100 AC-FT	V-10 AC-FT
1	51.98	19.65	1.426	0.479

Proposed

BASIN	Q-100 CFS	Q-10 CFS	V-100 AC-FT	V-10 AC-FT
1	15.21	9.85	0.562	0.348
2	42.09	27.26	1.557	0.964
3	35.77	23.16	1.323	0.819
3A	6.58	4.26	0.243	0.150
4	6.46	4.18	0.238	0.148
5	11.90	7.88	0.446	0.281
Total	118.01	76.59	4.369	2.710

OFFSITE BASIN SUMMARY

Basin	Area (mi ²)	Area (acres)	Existing Discharge (cfs)	Developed Discharge (cfs)	Allowable Discharge 0.57 cfs/acre (cfs)
1	0.03475	22.24	28.85	36.60	12.68
4A	0.023	14.72	29.84	58.65	8.39
4B	0.016	10.24	20.76	40.80	n/a
5	0.018	11.52	23.36	45.90	6.57
Coors	0.004	2.56	11.19	11.19	n/a
Total	0.09575	61.28	114.00	193.14	

Land Treatment

Basin 1: A=70%, B=20%, C=5%, D=5%

Basin 4A: B=10%, C=10%, D=80%

Basin 4B: B=10%, C=10%, D=80%

Basin 5: B=10%, C=10%, D=80%

Coors: D=100%

Calculations for Riverside Plaza Drainage

Total Basin Area

Basin 1 = 22.24 acres

Basin 4A = 14.72 acres

Basin 5 = 11.52 acres

Riverside Plaza (includes Winter Haven) = 28.37 acres

Total = 76.85 acres

Street Capacity

36' F-F normal crown street section = 43.86 cfs

48' F-F super-elevated street section = 147.53 cfs

Difference in street section capacities = 103.67 cfs

Allowable Discharges

43.86 cfs (36' F-F street section) ÷ 76.85 acres (Total Basin Area) = 0.57 cfs/acre

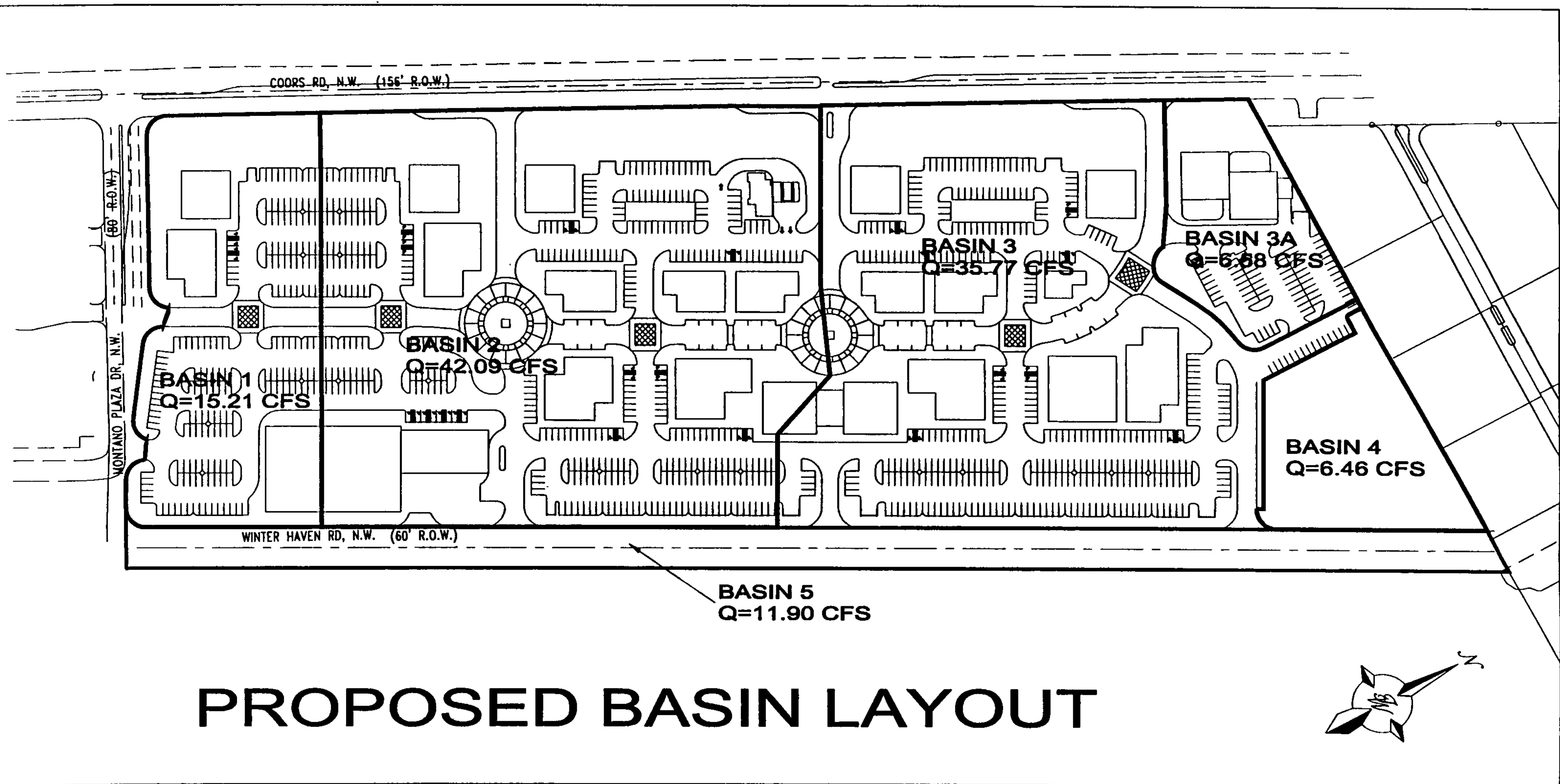
Riverside Plaza Allowable Discharge

28.37 acres * 0.57 cfs/acre = 16.17 cfs

16.17 cfs + 103.67 cfs (Difference in street section capacities) = 119.84 cfs

Developed Discharge from Riverside Plaza = 118.0 cfs

119.84 cfs > 118.00 cfs



Street Capacity Calculations

WINTER HAVEN RD - WITH 3/4% SLOPE TO GUTTER

48' F-F Street Section with 8" curb

Slope= 0.004

For water depths less than 0.125 feet

Y= Water depth
 Area = $8 \cdot Y^2$
 P= $\text{SQRT}(257 \cdot Y^2) + Y$
 n= 0.017

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.010	0.0008	0.1703	0.0047	0.0001	0.1551	0.0016	0.2733	0.0013
0.040	0.0128	0.6812	0.0188	0.0050	0.3907	0.0156	0.3443	0.0079
0.070	0.0392	1.1922	0.0329	0.0222	0.5674	0.0397	0.3779	0.0162
0.100	0.08	1.7031	0.0470	0.0576	0.7197	0.0720	0.4011	0.0256
0.125	0.125	2.1289	0.0587	0.1044	0.8352	0.1044	0.4163	0.0340

For water depths greater than 0.125 ft but less than 0.455 ft

Y1= Y-0.125
 A2= $A1 + 2 \cdot Y1 + 66.67 \cdot Y1^2$
 P2= $P1 + \text{SQRT}(17778.78 \cdot Y1^2) + Y1$

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.125	0.1250	2.1289	0.0587	0.1044	0.8352	0.1044	0.4163	0.0340
0.210	0.7767	13.5476	0.0573	0.6384	0.8220	0.1726	0.3161	0.0358
0.295	2.3918	24.9662	0.0958	2.7684	1.1575	0.3415	0.3756	0.0677
0.380	4.9702	36.3849	0.1366	7.2881	1.4663	0.5572	0.4192	0.1047
0.455	8.0454	46.4601	0.1732	13.8183	1.7176	0.7815	0.4487	0.1401

For water depths greater than 0.470 ft but less than 0.580 ft

Y2= Y - 0.455
 A3= $A2 + Y2 \cdot 46 + 8 \cdot Y2^2$
 P3= $P2 + \text{SQRT}(257 \cdot Y2^2) + Y2$

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.455	8.0454	46.4601	0.1732	13.8183	1.7176	0.7815	0.4487	0.1401
0.500	10.1316	47.2265	0.2145	20.0726	1.9812	0.9906	0.4938	0.1794
0.530	11.5404	47.7375	0.2417	24.7586	2.1454	1.1371	0.5193	0.2059
0.560	12.9636	48.2484	0.2687	29.8413	2.3019	1.2891	0.5421	0.2326
0.580	13.9204	48.5890	0.2865	33.4445	2.4026	1.3935	0.5559	0.2504

For water depths greater than 0.580 ft but less than 0.667 ft

Y3= Y - 0.580
 A4= $A3 + 48 \cdot Y3$
 P4= $P3 + 2 \cdot Y3$

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.580	13.9204	48.5890	0.2865	33.4445	2.4026	1.3935	0.5559	0.2504
0.620	15.8404	48.6690	0.3255	41.4356	2.6158	1.6218	0.5854	0.2897
0.640	16.8004	48.7090	0.3449	45.6798	2.7190	1.7401	0.5989	0.3095
0.650	17.2804	48.7290	0.3546	47.8626	2.7698	1.8003	0.6054	0.3195
0.667	18.0964	48.7630	0.3711	51.6644	2.8550	1.9043	0.6160	0.3365

For water depths greater than 0.667 ft but less than 0.787 ft

$$Y4 = Y - 0.667$$

$$A5 = A4 + Y4 * 48 + 25 * Y4^2$$

$$P5 = P4 + \text{SQRT}(2501 * Y4^2) + Y4$$

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.667	18.0964	48.7630	0.3711	51.6644	2.8550	1.9043	0.6160	0.3365
0.683	18.8903	49.5996	0.3809	54.8713	2.9047	1.9851	0.6192	0.3474
0.717	20.5589	51.3135	0.4007	61.7699	3.0045	2.1543	0.6253	0.3699
0.742	21.8370	52.5888	0.4152	67.1932	3.0770	2.2832	0.6295	0.3866
0.787	24.2164	54.8842	0.4412	77.5919	3.2041	2.5216	0.6365	0.4169

For water depths greater than 0.787 ft but less than 1.247 ft

$$Y5 = Y - 0.787$$

$$A6 = A5 + 54 * Y5$$

$$P6 = P5 + 2 * Y5$$

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.799	24.8374	54.9072	0.4524	80.9138	3.2577	2.6013	0.6425	0.4289
1.000	35.7184	55.3102	0.6458	147.5306	4.1304	4.1304	0.7279	0.6444
1.019	36.7552	55.3486	0.6641	154.6652	4.2080	4.2888	0.7345	0.6654
1.189	45.9460	55.6890	0.8250	223.4424	4.8632	5.7842	0.7858	0.8547
1.247	49.0564	55.8042	0.8791	248.8746	5.0732	6.3263	0.8006	0.9199

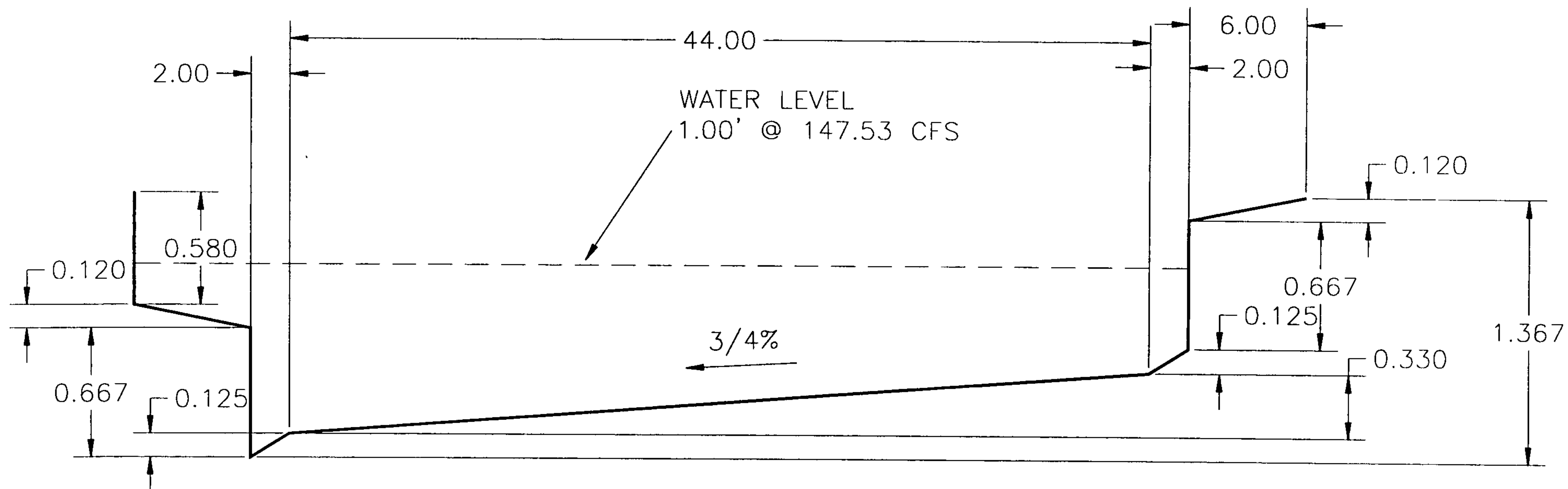
For water depths greater than 1.247 ft but less than 1.367 ft

$$Y6 = Y - 1.247$$

$$A7 = A6 + 54 * Y6 + 25 * Y6^2$$

$$P7 = P6 + Y6 * \text{SQRT}(2501 * Y6^2)$$

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
1.247	49.0564	55.8042	0.8791	248.8746	5.0732	6.3263	0.8006	0.9199
1.273	50.4883	57.1407	0.8836	257.0126	5.0905	6.4813	0.7950	0.9301
1.301	52.0679	58.5792	0.8888	266.1062	5.1107	6.6511	0.7895	0.9414
1.337	54.1189	60.3951	0.8961	278.0863	5.1384	6.8701	0.7831	0.9562
1.367	55.8964	61.9254	0.9026	288.6200	5.1635	7.0585	0.7783	0.9690



PROPOSED STREET SECTION FOR WINTERHAVEN ROAD

Street Capacity Calculations

WINTER HAVEN RD - WITH 3/4% SLOPE TO GUTTER

48' F-F Street Section with 8" curb

Slope= 0.004

For water depths less than 0.125 feet

Y= Water depth
 Area = $8 \cdot Y^2$
 P= $\text{SQRT}(257 \cdot Y^2) + Y$
 n= 0.017

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.010	0.0008	0.1703	0.0047	0.0001	0.1551	0.0016	0.2733	0.0013
0.040	0.0128	0.6812	0.0188	0.0050	0.3907	0.0156	0.3443	0.0079
0.070	0.0392	1.1922	0.0329	0.0222	0.5674	0.0397	0.3779	0.0162
0.100	0.08	1.7031	0.0470	0.0576	0.7197	0.0720	0.4011	0.0256
0.125	0.125	2.1289	0.0587	0.1044	0.8352	0.1044	0.4163	0.0340

For water depths greater than 0.125 ft but less than 0.455 ft

Y1= Y-0.125
 A2= $A1 + 2 \cdot Y1 + 66.67 \cdot Y1^2$
 P2= $P1 + \text{SQRT}(17778.78 \cdot Y1^2) + Y1$

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.125	0.1250	2.1289	0.0587	0.1044	0.8352	0.1044	0.4163	0.0340
0.210	0.7767	13.5476	0.0573	0.6384	0.8220	0.1726	0.3161	0.0358
0.295	2.3918	24.9662	0.0958	2.7684	1.1575	0.3415	0.3756	0.0677
0.380	4.9702	36.3849	0.1366	7.2881	1.4663	0.5572	0.4192	0.1047
0.455	8.0454	46.4601	0.1732	13.8183	1.7176	0.7815	0.4487	0.1401

For water depths greater than 0.470 ft but less than 0.580 ft

Y2= Y - 0.455
 A3= $A2 + Y2 \cdot 46 + 8 \cdot Y2^2$
 P3= $P2 + \text{SQRT}(257 \cdot Y2^2) + Y2$

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.455	8.0454	46.4601	0.1732	13.8183	1.7176	0.7815	0.4487	0.1401
0.500	10.1316	47.2265	0.2145	20.0726	1.9812	0.9906	0.4938	0.1794
0.530	11.5404	47.7375	0.2417	24.7586	2.1454	1.1371	0.5193	0.2059
0.560	12.9636	48.2484	0.2687	29.8413	2.3019	1.2891	0.5421	0.2326
0.580	13.9204	48.5890	0.2865	33.4445	2.4026	1.3935	0.5559	0.2504

For water depths greater than 0.580 ft but less than 0.667 ft

Y3= Y - 0.580
 A4= $A3 + 48 \cdot Y3$
 P4= $P3 + 2 \cdot Y3$

Depth (ft)	Area (ft ²)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.580	13.9204	48.5890	0.2865	33.4445	2.4026	1.3935	0.5559	0.2504
0.620	15.8404	48.6690	0.3255	41.4356	2.6158	1.6218	0.5854	0.2897
0.640	16.8004	48.7090	0.3449	45.6798	2.7190	1.7401	0.5989	0.3095
0.650	17.2804	48.7290	0.3546	47.8626	2.7698	1.8003	0.6054	0.3195
0.667	18.0964	48.7630	0.3711	51.6644	2.8550	1.9043	0.6160	0.3365

For water depths greater than 0.667 ft but less than 0.787 ft

$$Y4 = Y - 0.667$$

$$A5 = A4 + Y4 * 48 + 25 * Y4^2$$

$$P5 = P4 + \text{SQRT}(2501 * Y4^2) + Y4$$

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.667	18.0964	48.7630	0.3711	51.6644	2.8550	1.9043	0.6160	0.3365
0.683	18.8903	49.5996	0.3809	54.8713	2.9047	1.9851	0.6192	0.3474
0.717	20.5589	51.3135	0.4007	61.7699	3.0045	2.1543	0.6253	0.3699
0.742	21.8370	52.5888	0.4152	67.1932	3.0770	2.2832	0.6295	0.3866
0.787	24.2164	54.8842	0.4412	77.5919	3.2041	2.5216	0.6365	0.4169

For water depths greater than 0.787 ft but less than 1.247 ft

$$Y5 = Y - 0.787$$

$$A6 = A5 + 54 * Y5$$

$$P6 = P5 + 2 * Y5$$

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.935	32.1868	55.1794	0.5833	124.2254	3.8595	3.6071	0.7035	0.5734
1.000	35.7184	55.3102	0.6458	147.5306	4.1304	4.1304	0.7279	0.6444
1.040	37.8622	55.3896	0.6836	162.4264	4.2899	4.4602	0.7414	0.6879
1.189	45.9460	55.6890	0.8250	223.4424	4.8632	5.7842	0.7858	0.8547
1.247	49.0564	55.8042	0.8791	248.8746	5.0732	6.3263	0.8006	0.9199

For water depths greater than 1.247 ft but less than 1.367 ft

$$Y6 = Y - 1.247$$

$$A7 = A6 + 54 * Y6 + 25 * Y6^2$$

$$P7 = P6 + Y6 * \text{SQRT}(2501 * Y6^2)$$

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
1.247	49.0564	55.8042	0.8791	248.8746	5.0732	6.3263	0.8006	0.9199
1.273	50.4883	57.1407	0.8836	257.0126	5.0905	6.4813	0.7950	0.9301
1.301	52.0679	58.5792	0.8888	266.1062	5.1107	6.6511	0.7895	0.9414
1.337	54.1189	60.3951	0.8961	278.0863	5.1384	6.8701	0.7831	0.9562
1.367	55.8964	61.9254	0.9026	288.6200	5.1635	7.0585	0.7783	0.9690

Entrance Capacity

Manning's Equation:

$$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$$

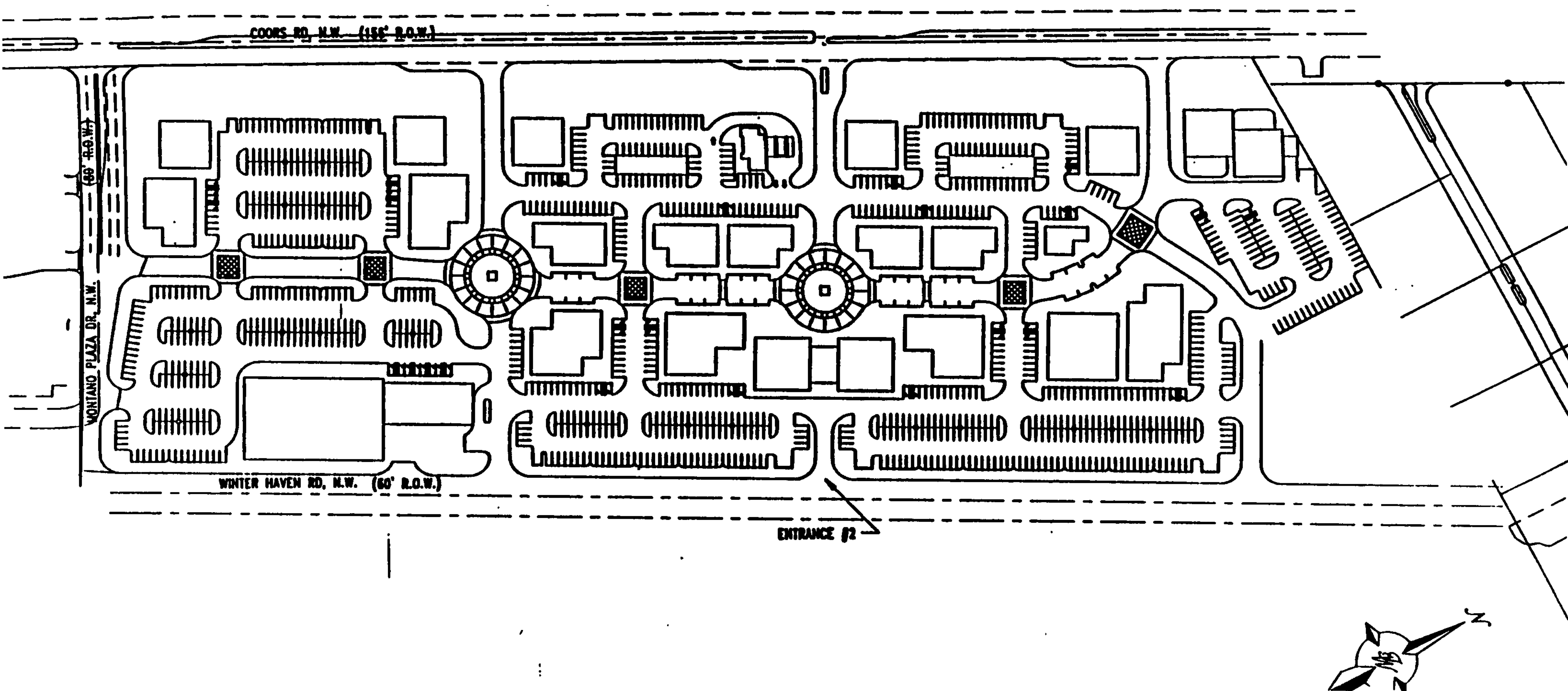
A = Area
R = D/4
S = Slope
n = 0.017

	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
ENTRANCE 2	24	24	0.67	16.08	25.34	0.63457	1.39	122.70	47.94	2.98

Offsite basins contribute 5.59 cfs.

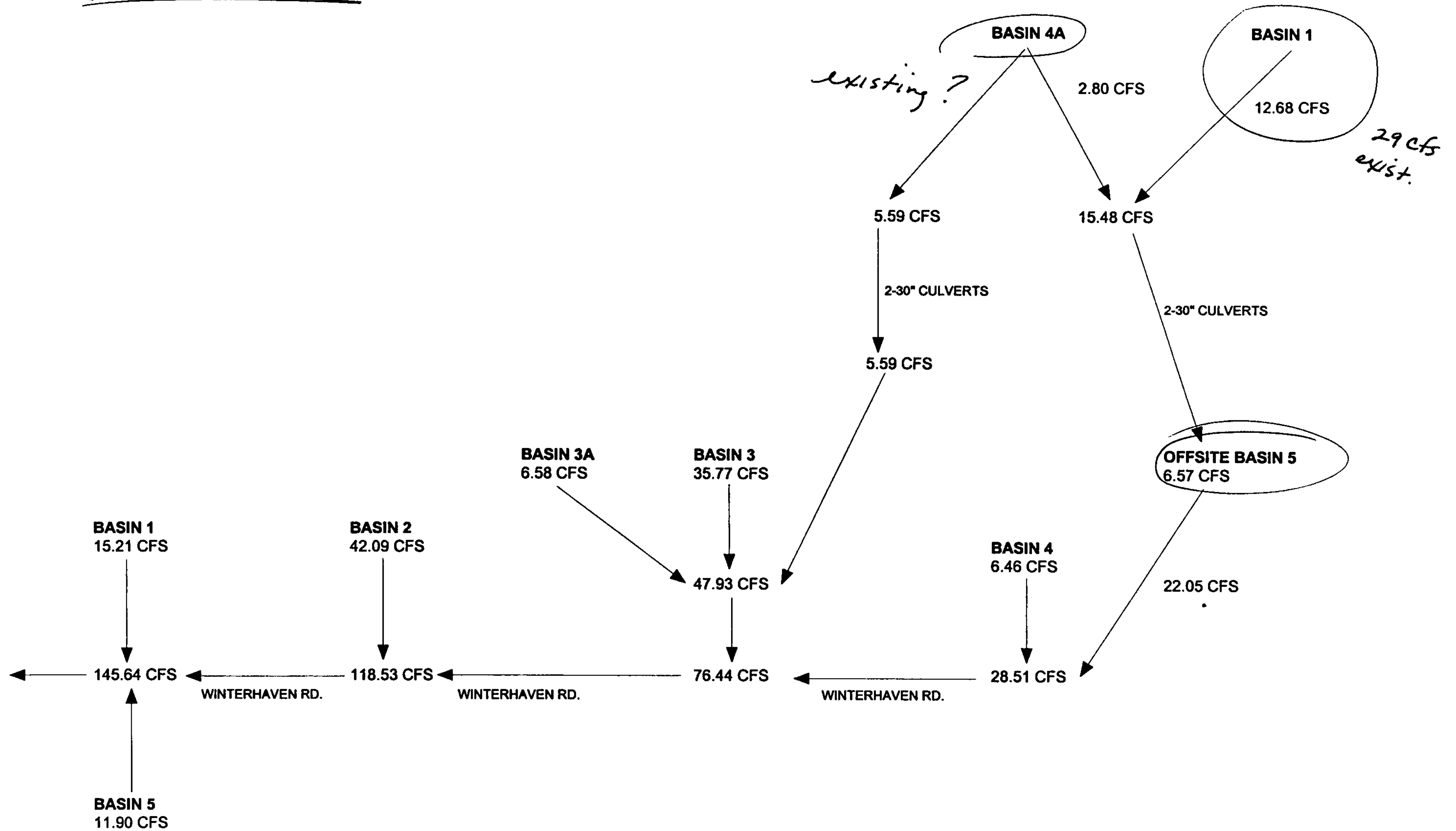
On-site basins contribute 42.34 cfs.

Total flow through entrance = 47.94 cfs.



MONTANO COMMERCIAL RUNOFF FLOW PATH

FULLY DEVELOPED CONDITIONS



Sidewalk Culvert for Basin 1

Manning's Equation:

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

Q = Flow (cfs)

n = 0.013

A = Area

R = Hydraulic Radius

S = Slope

$$A = 0.50 * 2 = 1.00$$

$$WP = 2 * 0.50 + 2 = 3.00$$

$$R = \frac{A}{WP} = \frac{1.0}{3.00} = 0.333$$

Manning's Equation:

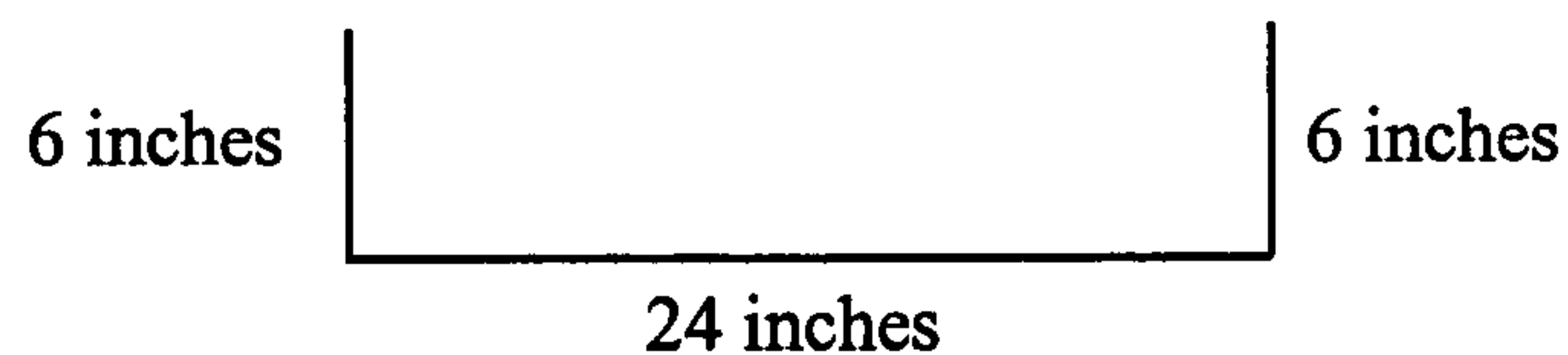
$$Q = \frac{1.49}{0.013} * 1.00 * 0.333^{2/3} * 0.01^{1/2}$$

$$Q = 5.47 \text{ cfs}$$

Capacity of 24" sidewalk culvert = 5.47 cfs

Use three 24" sidewalk culverts = 16.41 cfs

15.21 cfs < 16.41 cfs



Sidewalk Culvert for Basin 3A

Manning's Equation:

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

Q = Flow (cfs)

n = 0.013

A = Area

R = Hydraulic Radius

S = Slope

$$A = 0.50 * 2 = 1.00$$

$$WP = 2 * 0.50 + 2 = 3.00$$

$$R = \frac{A}{WP} = \frac{1.0}{3.00} = 0.333$$

Manning's Equation:

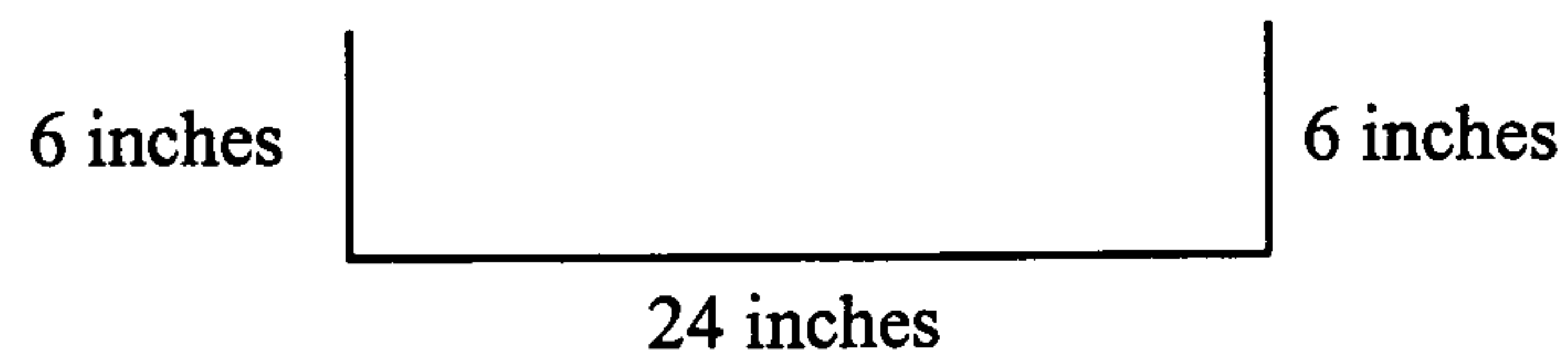
$$Q = \frac{1.49}{0.013} * 1.00 * 0.333^{2/3} * 0.01^{1/2}$$

$$Q = 5.47 \text{ cfs}$$

Capacity of 24" sidewalk culvert = 5.47 cfs

Use two 24" sidewalk culverts = 10.94 cfs

6.58 cfs < 10.94 cfs



Northern Culvert Outfall Sidewalk Culvert

Manning's Equation:

$$Q = \frac{1.49}{n} AR^{2/3} S^{1/2}$$

Q = Flow (cfs)

n = 0.013

A = Area

R = Hydraulic Radius

S = Slope

$$A = 0.50 * 1 = 0.50$$

$$WP = 2 * 0.50 + 1 = 2.00$$

$$R = \frac{A}{WP} = \frac{0.5}{2.00} = 0.25$$

Manning's Equation:

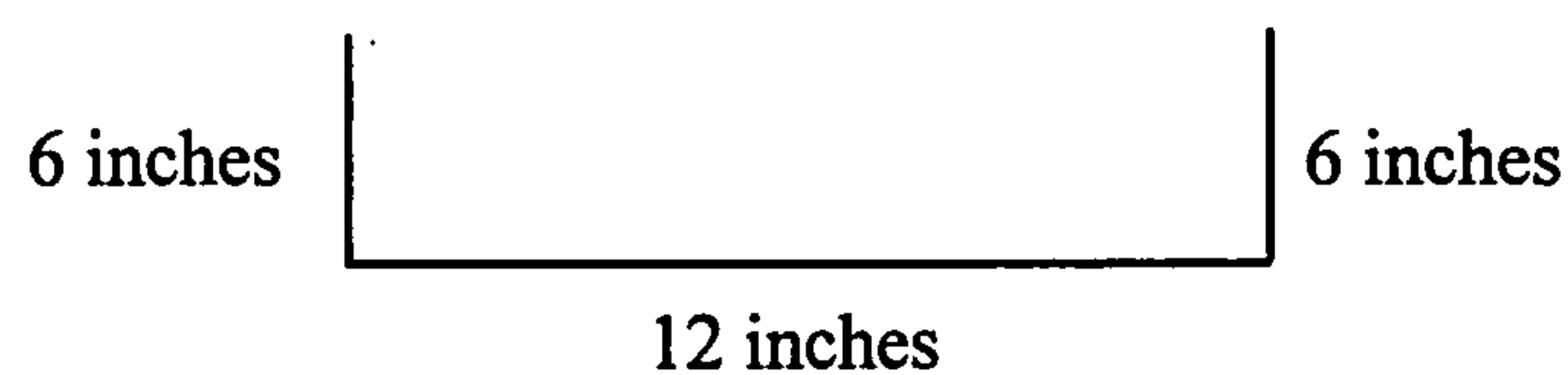
$$Q = \frac{1.49}{0.013} * 0.50 * 0.25^{2/3} * 0.01^{1/2}$$

$$Q = 2.27 \text{ cfs}$$

Capacity of 12" sidewalk culvert = 2.27 cfs

Use three 12" sidewalk culverts = 6.82 cfs

6.06 cfs < 6.82 cfs



Northern Culvert Outfall

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
Culvert Outfall	15	2	1.23	0.3125	9.16	6.06	4.94

Manning's Equation:

$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$

A = Area

R = D/4

S = Slope

n = 0.013

Southern Culvert Outfall

Channel Capacity

	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
South Culvert On-site	4	4	1	4.00	6.00	0.666667	0.6	14.09	11.19	2.80

Manning's Equation:

$$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$$

A = Area

R = D/4

S = Slope

n = 0.013

0.025

Curb Cut

	Flow	Height	Length
	(cfs)	(ft)	(ft)
South Culvert Outfall	11.19	1	3.79

Weir Equation:

$$Q = C * L * H^{(3/2)}$$

C = 2.95

L = Length

H = Height

Sidewalk Culvert for Southern Culvert Outfall

Manning's Equation:

$$Q = \frac{1.49}{n} AR^{2/3} S^{1/2}$$

Q = Flow (cfs)

n = 0.013

A = Area

R = Hydraulic Radius

S = Slope

$$A = 0.50 * 1 = 0.50$$

$$WP = 2 * 0.50 + 1 = 2.00$$

$$R = \frac{A}{WP} = \frac{0.50}{2.00} = 0.25$$

Manning's Equation:

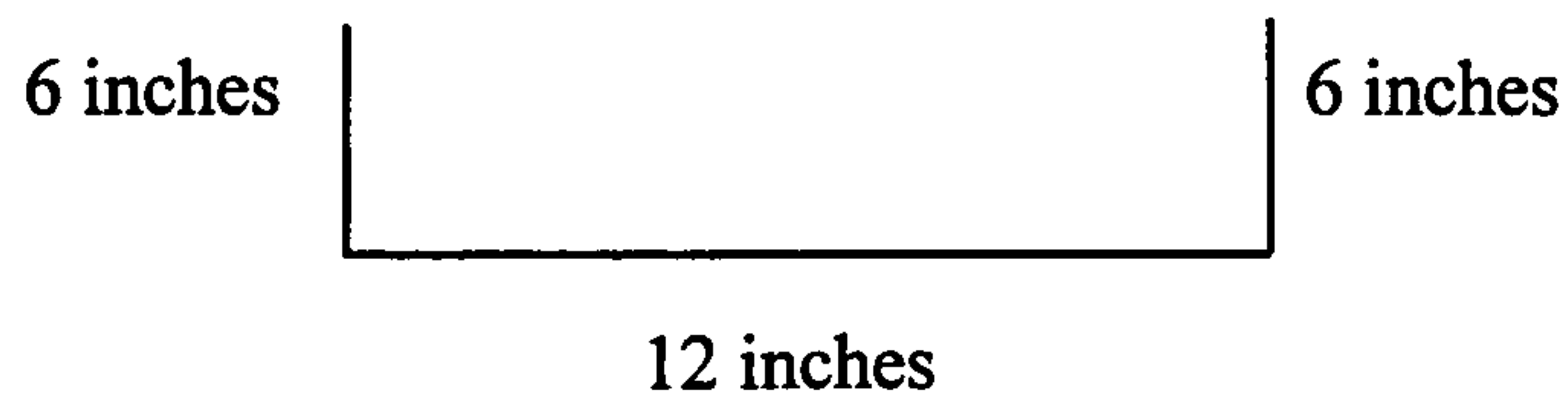
$$Q = \frac{1.49}{0.013} * 0.50 * 0.25^{2/3} * 0.0133^{1/2}$$

$$Q = 2.63 \text{ cfs}$$

Capacity of 12" sidewalk culvert = 2.63 cfs

Use five 12" sidewalk culverts = 13.13 cfs

11.19 cfs < 13.13 cfs



STORM DROP INLET-EFFECTIVE AREA

Modified Cattle Guard Inlet

Area at the grate:

$$\begin{aligned} L &= 38.375'' - 7\left(\frac{1}{2}'' \text{ middle bars}\right) \\ &= 34.875'' \\ &= 2.906' \end{aligned}$$

$$\begin{aligned} W &= 25.5'' - 13\left(\frac{1}{2}'' \text{ middle bars}\right) \\ &= 19'' \\ &= 1.583' \end{aligned}$$

$$\begin{aligned} \text{Area} &= 1.583' \times 2.906' \\ &= 4.601 \text{ ft}^2 \end{aligned}$$

$$\begin{aligned} \text{Effective Area} &= 4.601 - 4.601 (0.5 \text{ clogging factor}) \\ &= 2.30 \text{ ft}^2 \text{ at the grate} \end{aligned}$$

Area at the throat:

$$\begin{aligned} L &= 35.375'' \\ &= 2.95' \end{aligned}$$

$$\begin{aligned} H &= 10\frac{3}{4}'' - 4\frac{1}{2}'' \\ &= 6\frac{1}{4}'' \\ &= 0.5208' \end{aligned}$$

$$\begin{aligned} \text{Area} &= 2.95' \times 0.5208' \\ &= 1.54 \text{ ft}^2 \text{ at the throat} \end{aligned}$$

Area of Sweepers:

$$\begin{aligned} L &= 42.00'' \\ &= 3.50' \end{aligned}$$

$$\begin{aligned} H &= 10\frac{3}{4}'' - 4\frac{1}{2}'' \\ &= 6\frac{1}{4}'' \\ &= 0.5208' \end{aligned}$$

$$\begin{aligned} \text{Area} &= 3.50' \times 0.5208' \\ &= 1.83 \text{ ft}^2 \text{ for one sweeper} \\ &= 1.83 \times 2 = 3.66 \text{ ft}^2 \end{aligned}$$

Total Area:

$$\begin{aligned} \text{Area} &= 6 \times 2.30_{\text{grate}} + 6 \times 1.54_{\text{throat}} + 3.66_{\text{sweepers}} \\ &= 26.70 \text{ ft}^2 \end{aligned}$$

DROP INLET CALCULATIONS

for Cattle Guard Drop Inlet in Winterhaven Road

LOCATION	TYPE OF INLET	AREA (SF)	Q (CFS)	H (FT)	H ALLOW (FT)
Winterhaven	Cattle Guard	26.70	124.21	0.93	1

ORIFICE EQUATION

$$Q = CA \sqrt{2gH}$$

$$C = 0.6$$

$$g = 32.2$$

HYDRAULIC GRADE LINE
6' x 10' BOX CULVERT

MANNING'S EQUATION

$Q=1.49/n * A * R^{(3/2)} * S^{(1/2)}$

DEPTH (IN)	DEPTH (FT)	AREA (FT^2)	SLOPE (%)	WP	R	Q (CFS)
49.08	4.09	40.90	0.10	18.18	2.25	254.49

Outlet for Inlet at Winter Haven

Opening from Inlet to Box Culvert

Location	Length (ft)	Height (ft)	Area (sf)	Q (cfs)	H (ft)	H Allow (ft)
Inlet	5.5	2.88	15.84	124.21	2.65	3.88

ORIFICE EQUATION

$$Q = CA \sqrt{2gH}$$

$$C = 0.6$$

$$g = 32.2$$

Box Culvert from Inlet to Channel

Length (ft)	Height (ft)	Slope (%)	Area (ft ²)	R	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
5.5	2.88	0.6	15.84	0.95	135.43	124.21	7.84

Manning's Equation:

$$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$$

$$A = \text{Area}$$

$$WP = \text{Wetted Perimeter}$$

$$R = A / WP$$

$$S = \text{Slope}$$

$$n = 0.013$$

Channel from Inlet to Existing Pond

Length (ft)	Height (ft)	Slope (%)	Area (ft ²)	R	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
8	2.25	0.6	18.00	0.88	146.53	124.21	6.90

Manning's Equation:

$$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$$

$$A = \text{Area}$$

$$WP = \text{Wetted Perimeter}$$

$$R = A / WP$$

$$S = \text{Slope}$$

$$n = 0.013$$

POND CALCULATIONS

MONTANO PLAZA DETENTION POND

DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
0.00	0.0000	0.0000
0.25	0.0754	2.2919
0.50	0.1531	6.7069
0.75	0.2331	12.7338
1.00	0.3153	20.2400
1.50	0.4869	39.5164
2.00	0.6682	64.4316
2.50	0.8595	94.3160
3.00	1.0612	131.6670
3.50	1.2737	160.4210
3.89	1.4967	179.6500

12" Pipe

Diameter (in) 12
 Area (ft²)= 0.785398
 H (Ft) = Depth of water
 Q (CFS)= Flow

6' x 4' Weir

Length (ft) 6
 Height (ft) 4
 Area (ft²) 24
 H (Ft) = Depth of water
 Q (CFS)= Flow

Orifice Equation

$Q = CA * \text{SQRT}(2gH)$
 C=0.65

Weir Equation

$Q = CLH^{(1/2)}$
 C=2.95

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
INPUT FILE = A:ESITE.DAT

RUN DATE (MON/DAY/YR) =04/29/1998
USER NO.= R_BOHANN.I01

		FROM	TO			PEAK	RUNOFF			CFS	PAGE = 1
HYDROGRAPH		ID	ID	AREA	DISCHARGE	VOLUME	RUNOFF	TIME TO	PER		
COMMAND	IDENTIFICATION	NO.	NO.	(SQ MI)	(CFS)	(AC-FT)	(INCHES)	(HOURS)	ACRE	NOTATION	
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.200
COMPUTE NM HYD	100.10	-	1	.04007	51.98	1.426	.66738	1.533	2.027	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	1.470
COMPUTE NM HYD	110.10	-	1	.04007	19.65	.479	.22437	1.533	.766	PER IMP=	.00
FINISH											

RUN DATE (MON/DAY/YR) =09/21/1998
USER NO.= R BOHANN.I01

		FROM	TO			PEAK	RUNOFF			CFS	PAGE = 1
HYDROGRAPH		ID	ID	AREA	DISCHARGE			TIME TO			
COMMAND	IDENTIFICATION	NO.	NO.	(SQ MI)	(CFS)	VOLUME	RUNOFF	PEAK	PER	NOTATION	
						(AC-FT)	(INCHES)	(HOURS)	ACRE		
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.200
COMPUTE NM HYD	100.10	-	1	.00574	15.21	.562	1.83567	1.500	4.138	PER IMP=	90.00
COMPUTE NM HYD	100.20	-	1	.01590	42.09	1.557	1.83567	1.500	4.136	PER IMP=	90.00
COMPUTE NM HYD	100.30	-	1	.01351	35.77	1.323	1.83567	1.500	4.136	PER IMP=	90.00
COMPUTE NM HYD	100.3A	-	1	.00248	6.58	.243	1.83567	1.500	4.144	PER IMP=	90.00
COMPUTE NM HYD	100.40	-	1	.00243	6.46	.238	1.83567	1.500	4.144	PER IMP=	90.00
COMPUTE NM HYD	100.50	-	1	.00425	11.90	.446	1.96548	1.500	4.373	PER IMP=	100.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	1.470
COMPUTE NM HYD	110.10	-	1	.00574	9.85	.348	1.13650	1.500	2.680	PER IMP=	90.00
COMPUTE NM HYD	110.20	-	1	.01590	27.26	.964	1.13650	1.500	2.678	PER IMP=	90.00
COMPUTE NM HYD	110.30	-	1	.01351	23.16	.819	1.13650	1.500	2.679	PER IMP=	90.00
COMPUTE NM HYD	110.3A	-	1	.00248	4.26	.150	1.13650	1.500	2.683	PER IMP=	90.00
COMPUTE NM HYD	110.40	-	1	.00243	4.18	.148	1.13650	1.500	2.683	PER IMP=	90.00
COMPUTE NM HYD	110.50	-	1	.00425	7.88	.281	1.23785	1.500	2.895	PER IMP=	100.00
FINISH											

RUN DATE (MON/DAY/YR) =03/11/1999
USER NO.= R BOHANN.I01

		FROM	TO			PEAK	RUNOFF		TIME TO	CFS	PAGE =	1
COMMAND	HYDROGRAPH IDENTIFICATION	ID NO.	ID NO.	AREA (SQ MI)	DISCHARGE (CFS)	VOLUME (AC-FT)	RUNOFF (INCHES)	PEAK (HOURS)	PER ACRE	NOTATION		
START											TIME=	.00
RAINFALL TYPE= 1											RAIN6=	2.200
COMPUTE NM HYD	100.10	-	1	.03475	36.60	1.070	.57720	1.533	1.646	PER IMP=	5.00	
COMPUTE NM HYD	100.4A	-	1	.02300	58.65	2.129	1.73552	1.500	3.984	PER IMP=	80.00	
COMPUTE NM HYD	100.4B	-	1	.01600	40.80	1.481	1.73552	1.500	3.984	PER IMP=	80.00	
COMPUTE NM HYD	100.50	-	1	.01800	45.90	1.666	1.73552	1.500	3.984	PER IMP=	80.00	
COMPUTE NM HYD	100.C	-	1	.00400	11.19	.419	1.96548	1.500	4.373	PER IMP=	100.00	
START											TIME=	.00
RAINFALL TYPE= 1											RAIN6=	1.470
COMPUTE NM HYD	110.10	-	1	.03475	11.07	.330	.17808	1.533	.498	PER IMP=	5.00	
COMPUTE NM HYD	110.4A	-	1	.02300	37.26	1.293	1.05385	1.500	2.531	PER IMP=	80.00	
COMPUTE NM HYD	110.4B	-	1	.01600	25.92	.899	1.05385	1.500	2.531	PER IMP=	80.00	
COMPUTE NM HYD	110.50	-	1	.01800	29.16	1.012	1.05385	1.500	2.531	PER IMP=	80.00	
COMPUTE NM HYD	110.C	-	1	.00400	7.41	.264	1.23785	1.500	2.895	PER IMP=	100.00	
START											TIME=	.00
RAINFALL TYPE= 1											RAIN6=	2.200
COMPUTE NM HYD	101.10	-	1	.03475	28.85	.814	.43925	1.533	1.297	PER IMP=	.00	
COMPUTE NM HYD	101.4A	-	1	.02300	29.84	.819	.66738	1.533	2.027	PER IMP=	.00	
COMPUTE NM HYD	101.4B	-	1	.01600	20.76	.569	.66738	1.533	2.027	PER IMP=	.00	
COMPUTE NM HYD	101.50	-	1	.01800	23.36	.641	.66738	1.533	2.027	PER IMP=	.00	
COMPUTE NM HYD	101.C	-	1	.00400	11.19	.419	1.96548	1.500	4.373	PER IMP=	100.00	
START											TIME=	.00
RAINFALL TYPE= 1											RAIN6=	1.470
COMPUTE NM HYD	111.10	-	1	.03475	5.47	.153	.08264	1.533	.246	PER IMP=	.00	
COMPUTE NM HYD	111.4A	-	1	.02300	11.28	.275	.22437	1.533	.766	PER IMP=	.00	
COMPUTE NM HYD	111.4B	-	1	.01600	7.85	.191	.22437	1.533	.766	PER IMP=	.00	
COMPUTE NM HYD	111.50	-	1	.01800	8.83	.215	.22437	1.533	.766	PER IMP=	.00	
COMPUTE NM HYD	111.C	-	1	.00400	7.41	.264	1.23785	1.500	2.895	PER IMP=	100.00	
FINISH												

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 INPUT FILE = a:plza-100.dat

RUN DATE (MON/DAY/YR) =03/12/1999
 USER NO.= R_BOHANN.I01

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= 2										RAIN24= 2.660
COMPUTE NM HYD	206.10	-	30	.05156	66.47	1.832	.66636	1.500	2.014	PER IMP= .00
COMPUTE NM HYD	201.M	-	31	.00361	9.93	.467	2.42724	1.500	4.300	PER IMP= 100.00
COMPUTE NM HYD	201.P	-	41	.00103	2.85	.134	2.42724	1.500	4.308	PER IMP= 100.00
COMPUTE NM HYD	201.NC	-	32	.00220	6.06	.285	2.42724	1.500	4.302	PER IMP= 100.00
COMPUTE NM HYD	201.C	-	33	.00400	11.01	.518	2.42724	1.500	4.299	PER IMP= 100.00
COMPUTE NM HYD	201.SC	-	34	.01095	30.12	1.418	2.42724	1.500	4.298	PER IMP= 100.00
COMPUTE NM HYD	201.W	-	42	.00316	8.71	.410	2.42724	1.500	4.300	PER IMP= 100.00
ADD HYD	201.W	41&42	43	.00420	11.56	.543	2.42710	1.500	4.302	
COMPUTE NM HYD	100.10	-	51	.01926	37.18	1.419	1.38134	1.500	3.016	PER IMP= 38.00
COMPUTE NM HYD	100.20	-	52	.00310	7.93	.352	2.12607	1.500	3.999	PER IMP= 79.00
ADD HYD	101.20	51&52	52	.02236	45.11	1.770	1.48456	1.500	3.152	
ROUTE	201.20	52	53	.02236	45.13	1.770	1.48460	1.500	3.153	
COMPUTE NM HYD	100.30	-	54	.00868	20.24	.858	1.85325	1.500	3.644	PER IMP= 64.00
ADD HYD	102.30	53&54	54	.03104	65.37	2.628	1.58765	1.500	3.291	
ROUTE	202.30	54	55	.03104	65.36	2.628	1.58768	1.500	3.290	
COMPUTE NM HYD	100.40	-	56	.02176	52.88	2.356	2.03051	1.500	3.797	PER IMP= 77.00
ADD HYD	103.40	55&56	56	.05280	118.24	4.985	1.77016	1.500	3.499	
COMPUTE NM HYD	100.50	-	57	.00251	4.96	.186	1.38632	1.500	3.085	PER IMP= 36.00
ROUTE	200.50	57	58	.00251	4.98	.186	1.38649	1.500	3.101	
COMPUTE NM HYD	100.60	-	59	.01794	39.11	1.609	1.68139	1.500	3.406	PER IMP= 55.00
ADD HYD	105.60	58&59	59	.02045	44.09	1.794	1.64513	1.500	3.369	
ROUTE	200.60	59	60	.02045	35.81	1.794	1.64517	1.550	2.736	
ROUTE	200.70	56	61	.05280	102.94	4.985	1.77017	1.550	3.046	
ADD HYD	105.60	61&60	61	.07325	138.74	6.779	1.73526	1.550	2.960	
ROUTE RESERVOIR	70.00	61	62	.07325	21.26	6.779	1.73525	2.200	.453	AC-FT= 3.759
COMPUTE NM HYD	101.00	-	1	.02810	67.29	2.913	1.94369	1.500	3.742	PER IMP= 70.00
COMPUTE NM HYD	102.00	-	2	.02720	63.52	2.703	1.86310	1.500	3.649	PER IMP= 65.00
COMPUTE NM HYD	103.30	-	3	.01470	23.05	1.235	1.57510	1.600	2.450	PER IMP= 50.00
ROUTE	103.30	3	20	.01470	20.70	1.235	1.57512	1.650	2.201	
COMPUTE NM HYD	103.20	-	6	.02500	55.92	2.415	1.81093	1.500	3.495	PER IMP= 65.00
ADD HYD	103.23	20& 6	3	.03970	65.66	3.649	1.72359	1.500	2.584	
ROUTE	103.23	3	18	.03970	61.52	3.649	1.72361	1.550	2.421	
COMPUTE NM HYD	103.40	-	6	.02360	35.17	1.838	1.46014	1.600	2.328	PER IMP= 40.00
ROUTE	103.30	6	19	.02360	34.37	1.838	1.46015	1.650	2.276	

ROUTE	103.14	19	20	.02360	32.63	1.838	1.46015	1.700	2.161		
COMPUTE NM HYD	103.10	-	7	.04420	98.85	4.269	1.81093	1.500	3.495	PER IMP=	65.00
ADD HYD	103.14	20& 7	8	.06780	108.18	6.107	1.68882	1.500	2.493		
ADD HYD	103.00	8&18	4	.10750	166.64	9.756	1.70166	1.550	2.422		
ROUTE	103.00	4	3	.10750	167.29	9.756	1.70167	1.550	2.432		
COMPUTE NM HYD	104.00	-	4	.04090	83.32	3.185	1.46014	1.500	3.183	PER IMP=	40.00
COMPUTE NM HYD	105.70	-	5	.08340	106.18	6.495	1.46014	1.650	1.989	PER IMP=	40.00
ROUTE RESERVOIR	105.70	5	6	.08340	8.83	6.091	1.36930	2.650	.165	AC-FT=	4.472
ROUTE	105.70	6	7	.08340	8.83	6.090	1.36906	2.650	.165		
COMPUTE NM HYD	105.60	-	8	.00800	14.55	.573	1.34387	1.500	2.842	PER IMP=	40.00
ADD HYD	105.67	8& 7	9	.09140	14.87	6.663	1.36685	1.500	.254		
STORE HYD	105.50	-	10	.07280	1.40	2.041	.52575	2.000	.030		
ROUTE	105.50	10	11	.07280	1.40	2.023	.52107	2.050	.030		
ROUTE	105.67	9	12	.09140	14.60	6.661	1.36651	1.500	.250		
ADD HYD	105.57	12&11	13	.16420	15.88	8.684	.99167	1.500	.151		
ROUTE	105.57	13	14	.16420	15.20	8.679	.99104	1.550	.145		
COMPUTE NM HYD	105.40	-	15	.01260	29.43	1.252	1.86310	1.500	3.650	PER IMP=	65.00
ROUTE RESERVOIR	105.40	15	16	.01260	1.09	1.140	1.69716	2.400	.135	AC-FT=	.909
ADD HYD	105.47	16&14	16	.17680	15.71	9.819	1.04137	1.550	.139		
COMPUTE NM HYD	105.30	-	17	.00670	14.00	.584	1.63484	1.500	3.266	PER IMP=	55.00
COMPUTE NM HYD	105.20	-	18	.00970	19.77	.755	1.46014	1.500	3.185	PER IMP=	40.00
ROUTE	105.20	18	19	.00970	15.98	.755	1.46019	1.550	2.574		
COMPUTE NM HYD	105.10	-	20	.00880	17.94	.685	1.46014	1.500	3.185	PER IMP=	40.00
ROUTE	105.10	20	6	.00880	15.76	.685	1.46020	1.550	2.798		
ADD HYD	105.12	6&19	7	.01850	31.74	1.441	1.46013	1.550	2.680		
ROUTE	105.47	16	8	.17680	15.65	9.818	1.04124	1.550	.138		
ROUTE	105.47	8	9	.17680	15.86	9.815	1.04089	1.600	.140		
ADD HYD	105.17	9& 7	10	.19530	46.67	11.256	1.08060	1.550	.373		
COMPUTE NM HYD	105.00	-	20	.05340	76.52	4.158	1.46014	1.600	2.239	PER IMP=	40.00
ROUTE	105.17	10	6	.19530	46.69	11.255	1.08056	1.600	.374		
COMPUTE NM HYD	202.00	-	7	.03320	34.61	1.060	.59858	1.500	1.629	PER IMP=	5.00
ROUTE	202.00	7	8	.03320	34.51	1.060	.59859	1.500	1.624		
COMPUTE NM HYD	203.00	-	9	.08700	87.83	2.680	.57768	1.500	1.577	PER IMP=	5.00
ADD HYD	202.20	9& 8	10	.12020	122.34	3.740	.58345	1.500	1.590		
ROUTE RESERVOIR	202.20	10	11	.12020	2.92	3.615	.56390	2.600	.038	AC-FT=	3.199
ROUTE	202.20	11	7	.12020	2.92	3.615	.56387	2.600	.038		
ADD HYD	105.20	7& 6	8	.31550	48.92	14.870	.88371	1.600	.242		
ROUTE	105.20	8	6	.31550	49.50	14.867	.88357	1.600	.245		
ROUTE	105.17	6	13	.31550	49.91	14.862	.88322	1.600	.247		
ROUTE	105.17	13	14	.31550	49.91	14.860	.88309	1.600	.247		
ADD HYD	105.07	14&20	15	.36890	126.43	19.018	.96662	1.600	.535		
ROUTE	105.00	15	5	.36890	125.92	19.011	.96626	1.650	.533		
COMPUTE NM HYD	106.00	-	6	.00685	7.90	.220	.60125	1.500	1.803	PER IMP=	.00

COMPUTE NM HYD	204.00	-	11	.01590	39.98	1.785	2.10487	1.500	3.929	PER IMP=	80.00
ADD HYD	101.12	1& 2	1	.05530	130.81	5.616	1.90404	1.500	3.696		
ADD HYD	101.13	1& 3	1	.16280	286.85	15.372	1.77041	1.500	2.753		
ADD HYD	101.14	1& 4	1	.20370	370.17	18.557	1.70811	1.500	2.839		
ADD HYD	101.15	1& 5	1	.57260	455.60	37.568	1.23017	1.550	1.243		
ADD HYD	101.16	1& 6	1	.57945	463.14	37.787	1.22273	1.550	1.249		
ADD HYD	101.24	1&11	1	.59535	498.17	39.572	1.24629	1.550	1.307		
ROUTE RESERVOIR	100.00	1	20	.59535	66.74	38.055	1.19852	2.300	.175	AC-FT=	17.463
COMPUTE HYD	100.A	-	1	.00473	14.31	.534	2.11833	1.400	4.726	CN=	95.00
COMPUTE HYD	100.A	-	2	.00036	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.A	1& 2	1	.00509	14.31	.534	1.96849	1.400	4.392		
ROUTE	201.A	1	2	.00509	13.76	.455	1.67621	1.417	4.225		
COMPUTE HYD	100.B	-	3	.00656	19.00	.741	2.11833	1.400	4.525	CN=	95.00
COMPUTE HYD	100.B	-	4	.00050	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.B	3& 4	3	.00706	19.00	.741	1.96829	1.400	4.204		
COMPUTE HYD	100.G	-	4	.00027	.81	.030	2.11833	1.400	4.746	CN=	95.00
ADD HYD	101.A	2& 3	1	.01215	32.41	1.087	1.67686	1.417	4.168		
ADD HYD	101.G	1& 4	1	.01242	33.20	1.112	1.67936	1.417	4.177		
ROUTE	201.G	1	3	.01242	33.03	1.112	1.67876	1.417	4.157		
COMPUTE HYD	100.F	-	1	.00085	2.57	.096	2.11833	1.400	4.704	CN=	95.00
COMPUTE HYD	100.F	-	2	.00009	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.F	1& 2	1	.00095	2.57	.096	1.91026	1.400	4.242		
ADD HYD	101.F	1& 3	1	.01336	35.55	1.194	1.67486	1.417	4.157		
ROUTE	201.F	1	3	.01336	35.27	1.193	1.67439	1.434	4.124		
COMPUTE HYD	100.E	-	1	.00152	4.61	.172	2.11833	1.400	4.739	CN=	95.00
COMPUTE HYD	100.E	-	2	.00006	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.E	1& 2	1	.00157	4.61	.172	2.04427	1.400	4.574		
ADD HYD	101.E	1& 3	1	.01494	39.60	1.339	1.68127	1.434	4.142		
ROUTE	201.E	1	3	.01494	38.04	1.339	1.68091	1.450	3.979		
COMPUTE HYD	100.H	-	1	.00299	8.96	.338	2.11833	1.400	4.682	CN=	95.00
COMPUTE HYD	100.H	-	2	.00089	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.H	1& 2	1	.00388	8.96	.338	1.63072	1.400	3.604		
ADD HYD	101.H	1& 3	1	.01882	46.26	1.627	1.62064	1.434	3.840		
ROUTE	201.H	1	3	.01882	42.42	1.626	1.61972	1.467	3.522		
COMPUTE HYD	100.M	-	1	.00294	8.31	.332	2.11833	1.400	4.414	CN=	95.00
COMPUTE HYD	100.M	-	2	.00265	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.M	1& 2	1	.00559	8.31	.332	1.11442	1.400	2.322		
ADD HYD	101.M	1& 3	1	.02442	49.98	1.909	1.46595	1.450	3.198		
ROUTE	201.M	1	3	.02442	49.74	1.909	1.46569	1.467	3.183		
COMPUTE HYD	100.K	-	1	.00226	7.14	.255	2.11833	1.400	4.947	CN=	95.00
COMPUTE HYD	100.K	-	2	.00004	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.K	1& 2	1	.00230	7.14	.255	2.07870	1.400	4.854		
COMPUTE HYD	100.O	-	4	.00080	.00	.000	.00102	24.000	.000	CN=	44.00

ADD HYD	101.K	1& 3	1	.02671	55.81	2.125	1.49181	1.450	3.264		
ADD HYD	101.O	1& 4	1	.02751	55.81	2.125	1.44854	1.450	3.170		
ROUTE	201.K	1	3	.02751	54.57	2.124	1.44785	1.467	3.099		
COMPUTE HYD	100.L	-	1	.00073	1.65	.082	2.11833	1.500	3.531	CN=	95.00
COMPUTE HYD	100.L	-	2	.00110	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.L	1& 2	1	.00183	1.65	.082	.84324	1.500	1.406		
COMPUTE HYD	100.Q	-	4	.00126	3.82	.142	2.11833	1.400	4.746	CN=	95.00
COMPUTE HYD	100.Q	-	5	.00043	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.Q	4& 5	4	.00169	3.82	.142	1.58147	1.400	3.544		
ADD HYD	101.K	1& 3	1	.02934	56.00	2.194	1.40197	1.467	2.982		
ADD HYD	101.O	1& 4	1	.03103	59.37	2.315	1.39903	1.450	2.990		
COMPUTE HYD	100.D	-	3	.00578	13.67	.653	2.11833	1.500	3.699	CN=	95.00
ROUTE	201.D	3	2	.00578	13.65	.555	1.80230	1.500	3.693		
ROUTE	201.B	2	3	.00578	13.14	.554	1.79966	1.517	3.554		
COMPUTE HYD	100.J	-	7	.00218	5.79	.246	2.11833	1.450	4.157	CN=	95.00
COMPUTE HYD	100.J	-	8	.00049	.00	.000	.00102	24.000	.000	CN=	44.00
ADD HYD	100.J	7& 8	7	.00267	5.79	.246	1.72728	1.450	3.390		
ADD HYD	101.P	3& 7	8	.00845	17.53	.764	1.69552	1.500	3.243		
ADD HYD	110.AB	8& 1	45	.03948	75.87	3.079	1.46248	1.467	3.003		
COMPUTE NM HYD	100.10	-	11	.00574	14.97	.690	2.25115	1.500	4.072	PER IMP=	90.00
COMPUTE NM HYD	100.20	-	12	.01590	41.41	1.909	2.25115	1.500	4.070	PER IMP=	90.00
COMPUTE NM HYD	100.30	-	13	.01351	35.19	1.622	2.25115	1.500	4.070	PER IMP=	90.00
COMPUTE NM HYD	100.3A	-	16	.00249	6.49	.298	2.25115	1.500	4.078	PER IMP=	90.00
COMPUTE NM HYD	100.40	-	14	.00243	6.35	.292	2.25115	1.500	4.078	PER IMP=	90.00
COMPUTE NM HYD	100.50	-	15	.00425	11.09	.511	2.25115	1.500	4.073	PER IMP=	90.00
COMPUTE NM HYD	100.10	-	3	.03475	36.15	1.109	.59858	1.500	1.626	PER IMP=	5.00
COMPUTE NM HYD	100.1A	-	91	.01498	12.68	.360	.45025	1.500	1.323	PER IMP=	.00
COMPUTE NM HYD	100.40	-	4	.02300	57.78	2.582	2.10488	1.500	3.925	PER IMP=	80.00
COMPUTE NM HYD	100.10	-	94	.01000	8.39	.238	.44661	1.500	1.311	PER IMP=	.00
DIVIDE HYD	104.N	94	5	.00330	2.77	.079	.44660	1.500	1.311		
	104.S	AND	6	.00670	5.62	.160	.44660	1.500	1.311		
DIVIDE HYD	104.10	6	7	.00335	2.81	.080	.44660	1.500	1.311		
	104.20	AND	8	.00335	2.81	.080	.44660	1.500	1.311		
ROUTE	204.S1	7	6	.00335	2.86	.080	.44690	1.500	1.334		
ROUTE	204.S2	8	7	.00335	2.86	.080	.44690	1.500	1.334		
ADD HYD	104.S	6& 7	6	.00670	5.72	.160	.44668	1.500	1.334		
ROUTE	200.S	6	7	.00670	5.84	.160	.44690	1.550	1.362		
ADD HYD	101.40	3& 5	4	.03805	38.92	1.188	.58539	1.500	1.598		
DIVIDE HYD	104.10	4	5	.01903	19.46	.594	.58539	1.500	1.598		
	104.20	AND	6	.01903	19.46	.594	.58539	1.500	1.598		
ROUTE	204.N1	5	9	.01903	19.36	.594	.58542	1.500	1.590		
ROUTE	204.N2	6	10	.01903	19.36	.594	.58542	1.500	1.590		
ADD HYD	104.N	9&10	8	.03805	38.72	1.188	.58538	1.500	1.590		

ADD HYD	101.54	13& 7	6	.02021	40.83	1.782	1.65299	1.500	3.157	
ADD HYD	101.54	6&16	6	.02270	47.32	2.080	1.71847	1.500	3.258	
COMPUTE NM HYD	100.50	-	5	.01800	45.22	2.021	2.10488	1.500	3.925	PER IMP= 80.00
COMPUTE NM HYD	100.5A	-	95	.00701	6.57	.185	.49482	1.500	1.464	PER IMP= .00
ADD HYD	101.51	95& 8	5	.04506	45.29	1.373	.57129	1.500	1.570	
ADD HYD	101.46	5&14	5	.04749	51.64	1.665	.65737	1.500	1.699	
ROUTE	200.40	5	4	.04749	47.86	1.665	.65739	1.550	1.574	
ADD HYD	101.34	4& 6	6	.07019	90.14	3.745	1.00048	1.550	2.007	
ROUTE	200.30	6	7	.07019	86.67	3.745	1.00050	1.550	1.929	
ADD HYD	101.24	33&12	12	.01990	52.42	2.427	2.28652	1.500	4.116	
ADD HYD	101.24	12& 7	6	.09009	132.46	6.172	1.28456	1.550	2.297	
ROUTE	200.20	6	7	.09009	130.10	6.172	1.28457	1.550	2.256	
ADD HYD	101.14	11& 7	6	.09583	143.19	6.862	1.34249	1.550	2.335	
ADD HYD	101.15	6&15	6	.10009	152.88	7.372	1.38110	1.550	2.387	
ROUTE	200.10	6	7	.10009	152.38	7.372	1.38111	1.550	2.379	
ADD HYD	101.P	7&43	7	.10429	162.44	7.916	1.42321	1.550	2.434	
ROUTE	200.20	7	10	.10429	124.21	7.916	1.42319	1.650	1.861	
ADD HYD	101.P	45&10	45	.14376	160.71	10.049	1.31059	1.650	1.747	
ADD HYD	101.90	45&20	45	.73911	193.07	34.945	.88649	1.650	.408	
ROUTE RESERVOIR	501.10	45	18	.73911	175.74	34.655	.87914	1.784	.372	AC-FT= 1.451
ADD HYD	610.00	18&31	20	.74272	179.42	35.034	.88445	1.784	.377	
ADD HYD	610.10	20&62	20	.81597	198.92	40.992	.94194	1.800	.381	
ADD HYD	610.20	20&30	20	.86753	220.75	42.824	.92556	1.684	.398	
ADD HYD	610.30	20&34	20	.87848	236.17	44.049	.94017	1.650	.420	
ROUTE	202.CBC	20	1	.87848	235.13	43.996	.93904	1.667	.418	
FINISH										

Weighted E Method

Developed Basins

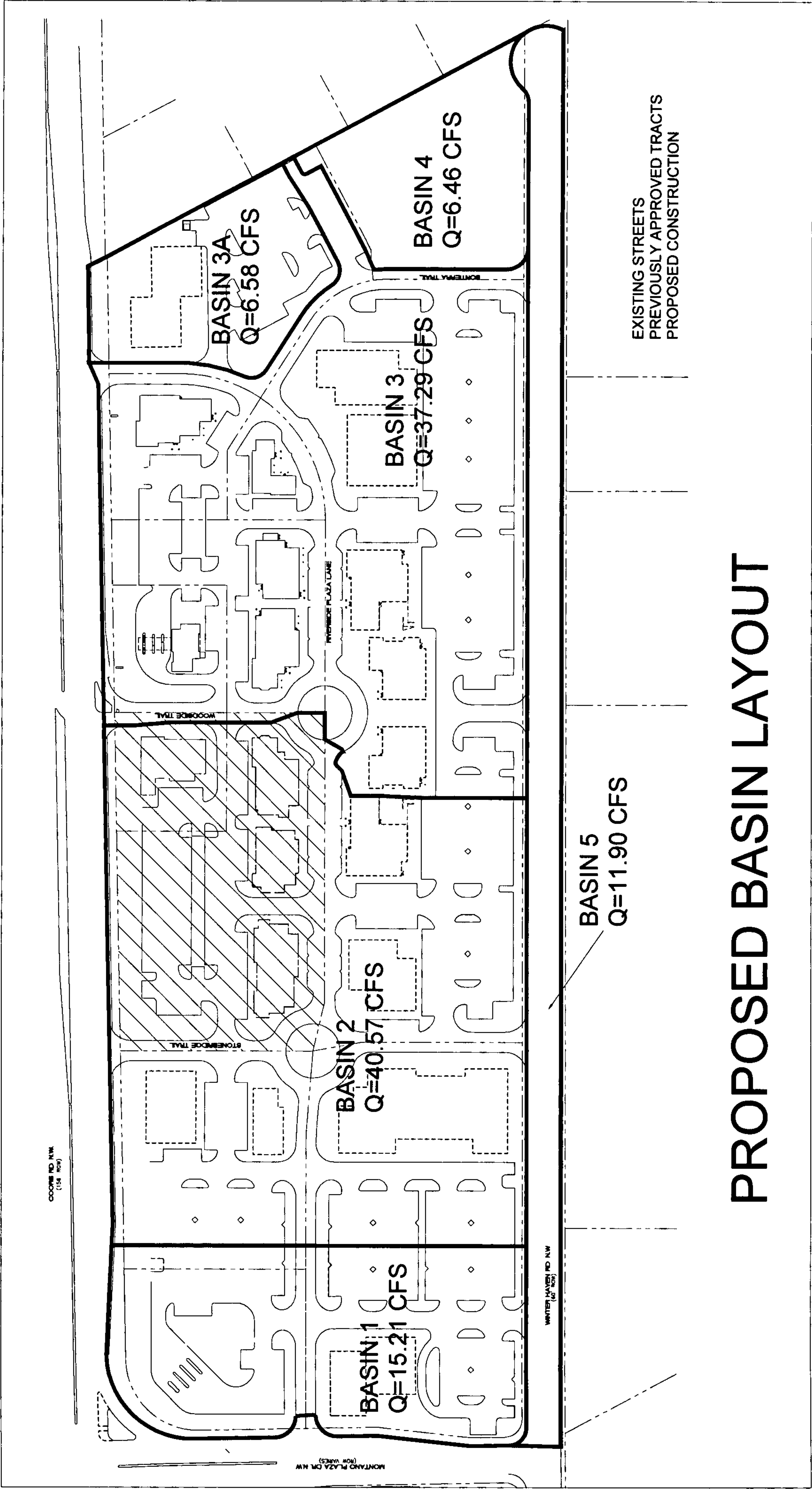
											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
2	443274	10.176	0%	0	10%	1.018	0%	0	90%	9.159	1.840	1.560	42.09	1.138	0.965	27.24
Tract 4	133364	3.062	0%	0	10%	0.306	0%	0	90%	2.755	1.840	0.469	12.66	1.138	0.290	8.20

Equations:

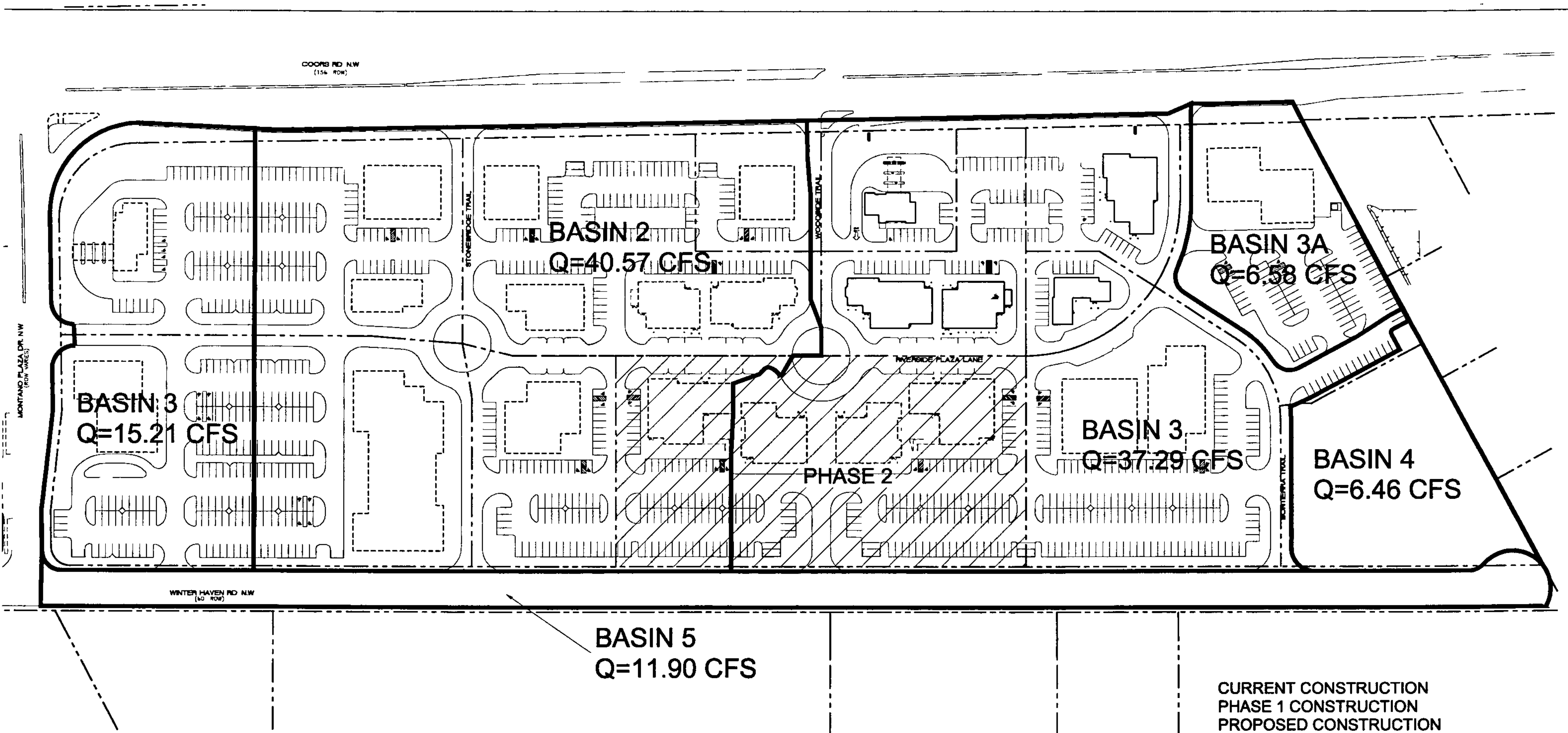
Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad



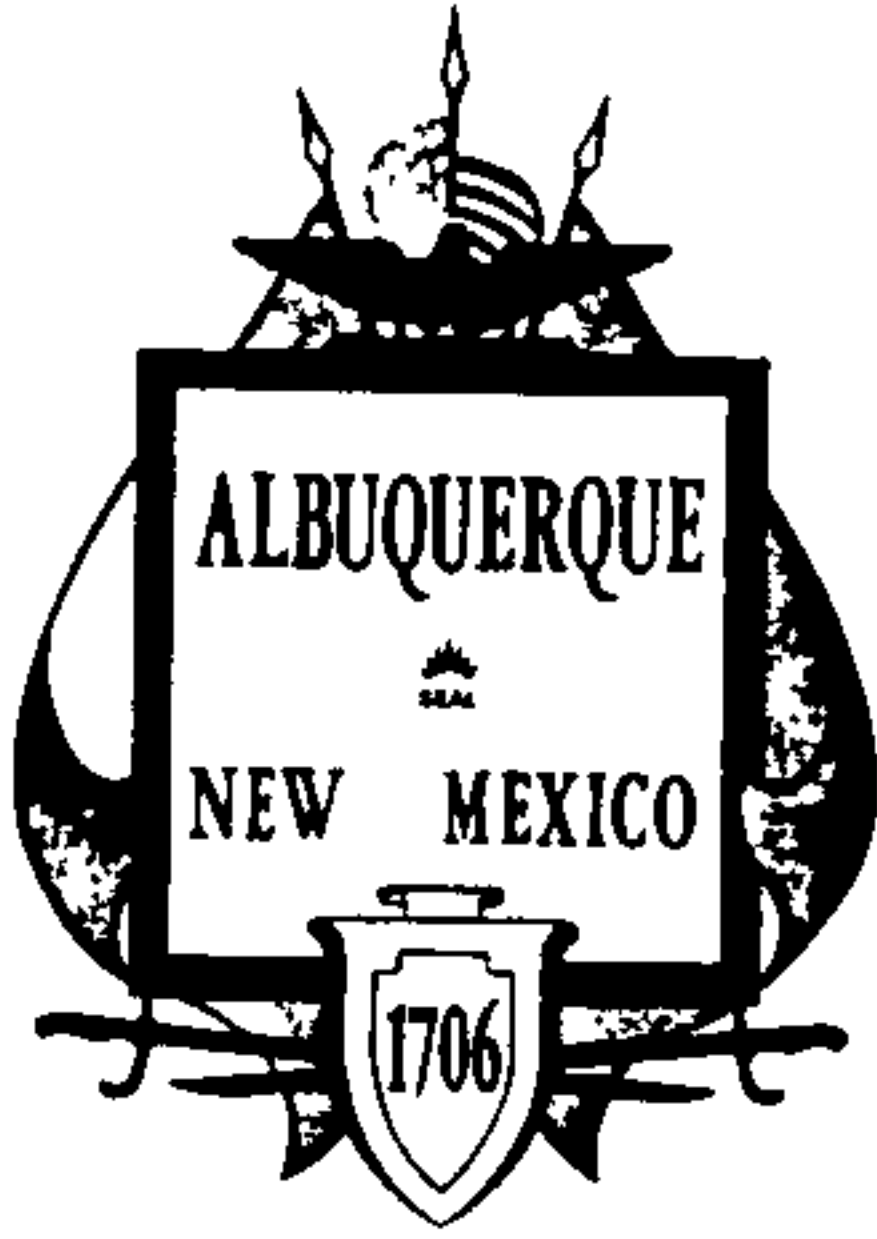
PROPOSED BASIN LAYOUT



PROPOSED BASIN LAYOUT



RECEIVED
MAR 27 2000
HYDROLOGY SECTION



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

***Public Works Department
Transportation Development Services Section***

October 19, 2001

E-12/D-14

Clay H. Gatewood for
Dale Dekker, Registered Architect
Dekker / Perich / Sabatini
6801 Jefferson NE, Suite 100
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for
Executive Office Building
6300 Riverside Plaza Lane NW
Certification Letter Dated 10/11/01

Dear Mr. Gatewood:

The TCL / Letter of Certification submitted is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to Building and Safety and final C.O. has been logged in by Vicki Chavez in the Building Safety Section downstairs.

On all future certification submittals for final C.O., please stamp, sign, and date certification letter and TCL. Certification statement is to be stamped or adhered to TCL submitted for final C.O. Place engineer's / architect's stamp on sheet, please sign and date.

Sincerely,

Mike Zamora
Commercial Plan Checker
Development and Building Services
Public Works Department

c: Terri Martin
Office File

MZ:gds



Dekker/Perich/Sabatini

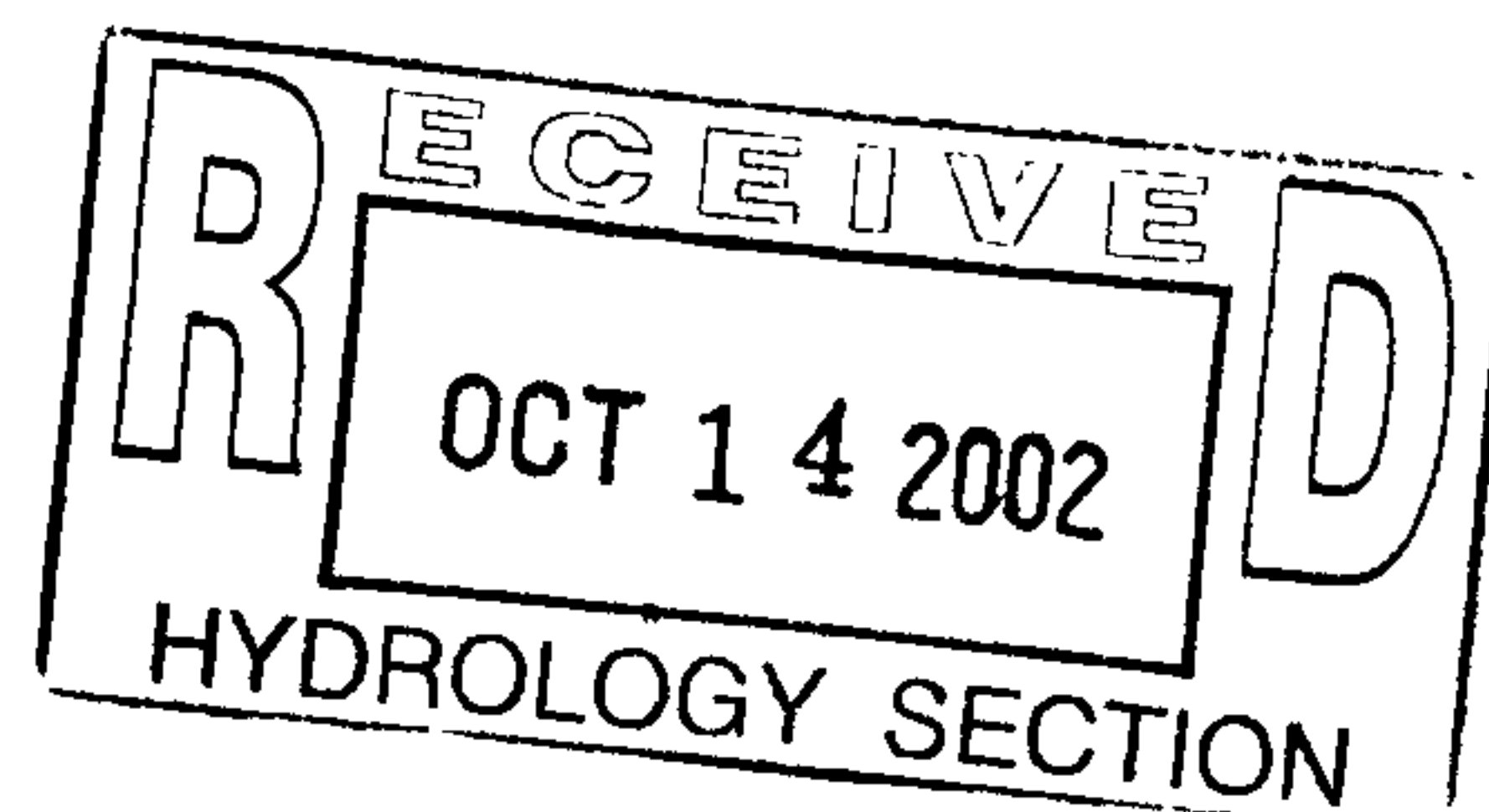
architecture
interiors
planning
engineering

ARCHITECTS CERTIFICATION

I, Ann Marie Christian, licensed under the laws of the State of New Mexico, do hereby certify that this project (Riverside Plaza Development; Building D, tract 4) was constructed in substantial compliance with the improvements shown on the approved Traffic Circulation Layout for the Riverside Plaza Development at Coors and Montano Plaza Road.

Ann Marie Christian

Date: October 11, 2002



■ ■ ■
6801 Jefferson NE
Suite 100
Albuquerque NM
87109
505 761.9700
fax 761.4222
dps@dpsabq.com



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

November 4, 2002

Ann Christian, Registered Architect
Deker Perich Sabatini
6801 Jefferson NE
Suite 100
Albuquerque, NM, 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for Tract 4
Riverside Plaza, ~~11-2-02~~ Stamp Dated 10-03-02

Dear Ms. Christian:

The TCL / Letter of Certification submitted on 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,

Richard Dourte,
Development and Building Services
Planning Department

c: file
Hydrology file



Dekker/Perich/Sabatini

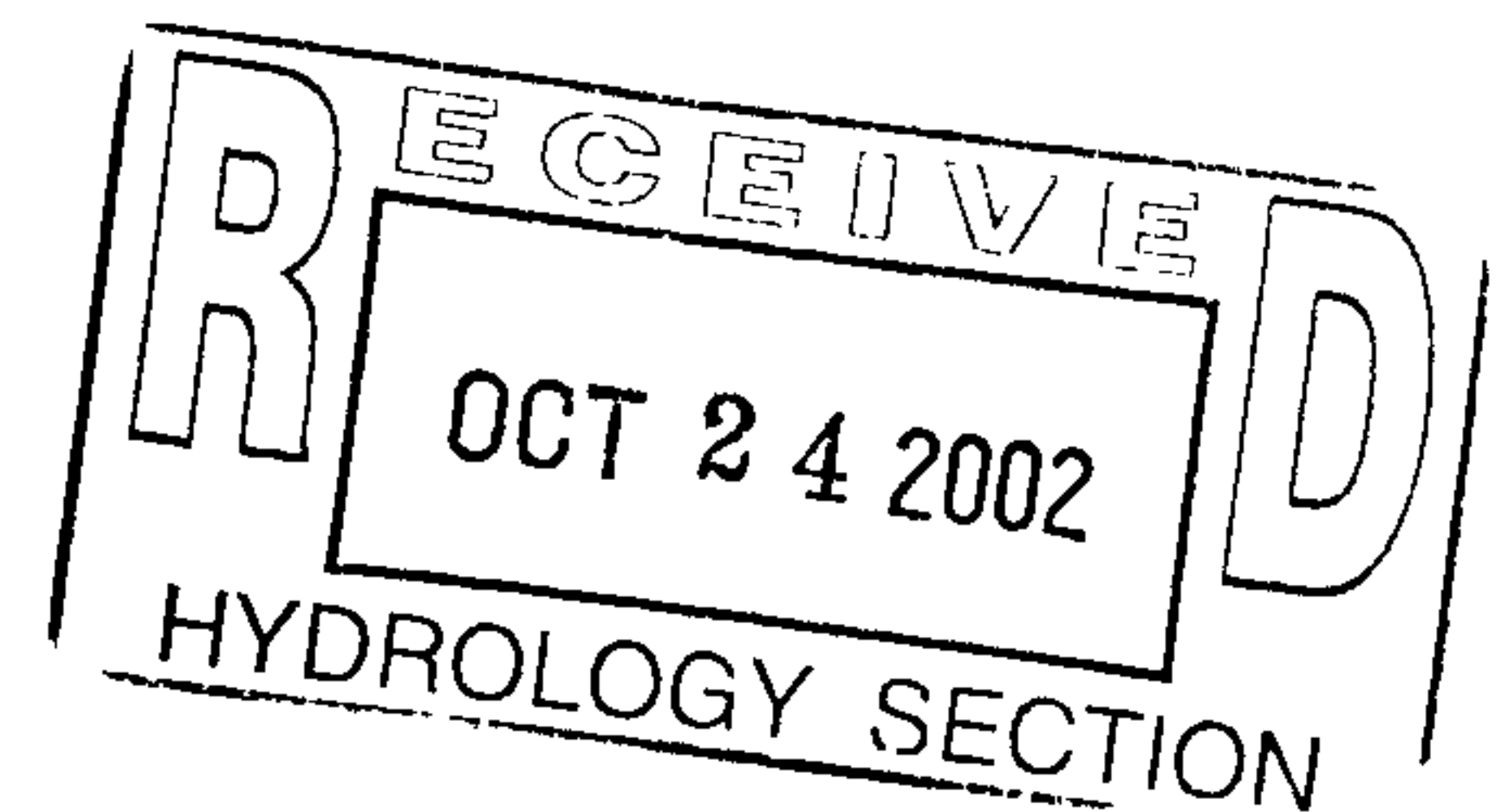
architecture
interiors
planning
engineering

ARCHITECTS CERTIFICATION

I, Ann Marie Christian, licensed under the laws of the State of New Mexico, do hereby certify that this project (Riverside Plaza Development; Building L-1, tract 6) was constructed in substantial compliance with the improvements shown on the approved Traffic Circulation Layout (Site Plan for Building Permit) for the Riverside Plaza Development at Coors and Montano Plaza Road. Minor changes have been noted on the attached site plan.

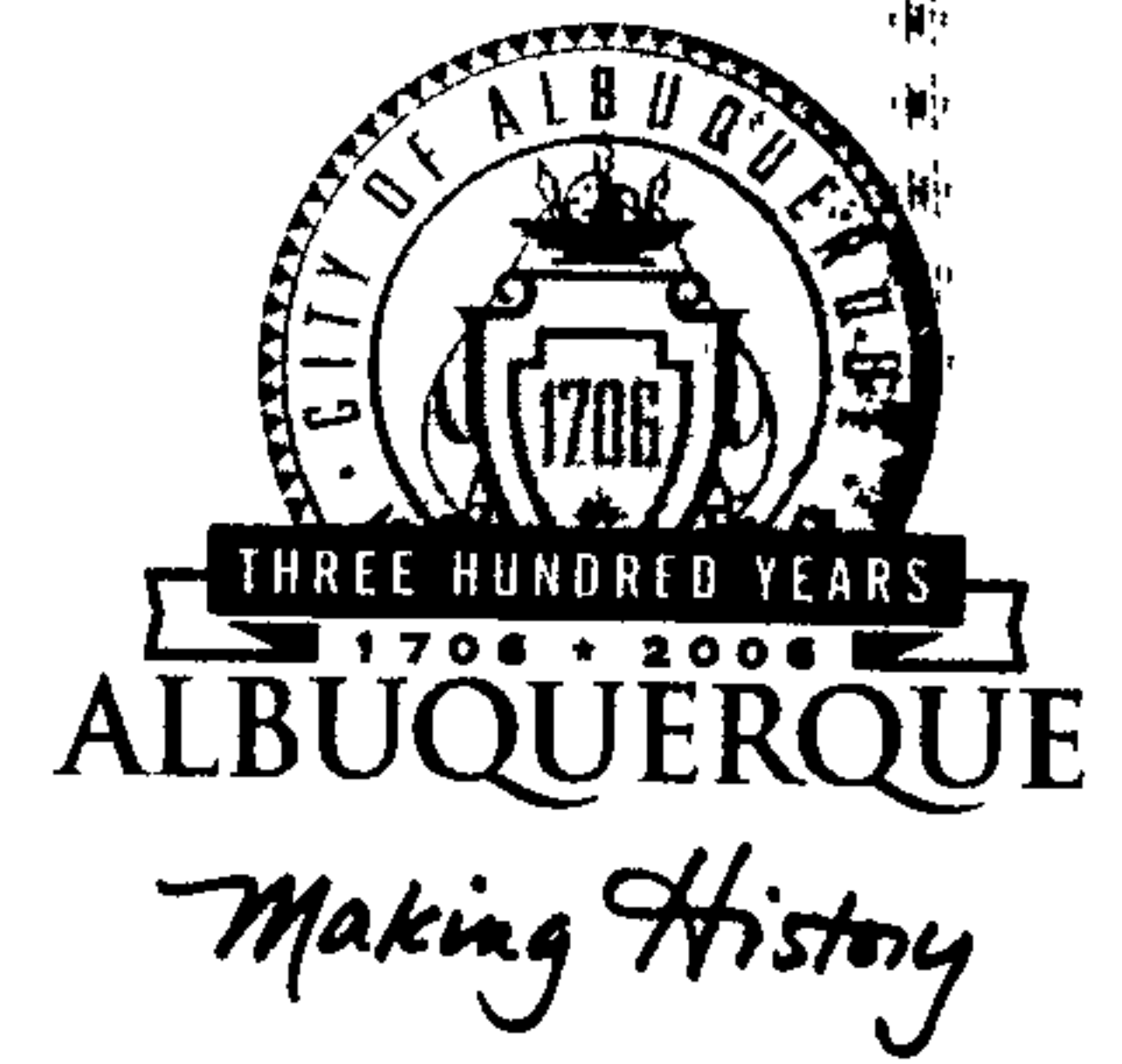
Ann Marie Christian

Date: October 23, 2002



■ ■ ■
6801 Jefferson NE
Suite 100
Albuquerque NM
87109
505 761.9700
fax 761.4222
dps@dpsabq.com

CITY OF ALBUQUERQUE



**Planning Department
Transportation Development Services Section**

April 21, 2005

Christopher Gunning, Registered Architect
6801 Jefferson St, NE, Ste. 100
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for
Riverside Plaza Retail Bldg K, [E-12 / D14]
6311 Riverside Plaza Lane
Architect's Stamp Dated 04/21/05

Dear Mr. Gunning:

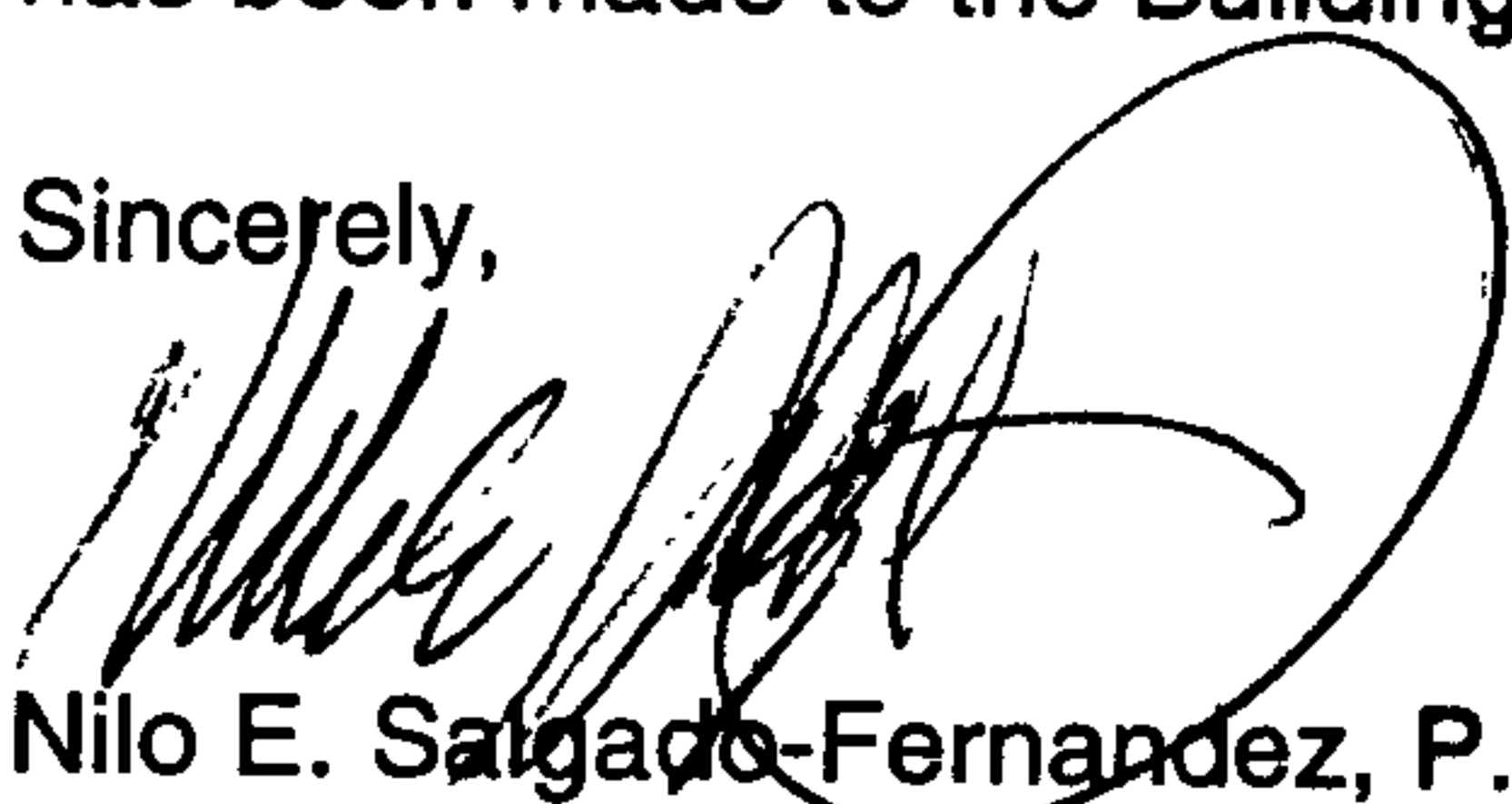
P.O. Box 1293

The TCL / Letter of Certification submitted on April 21, 2005 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Albuquerque

Sincerely,

New Mexico 87103


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

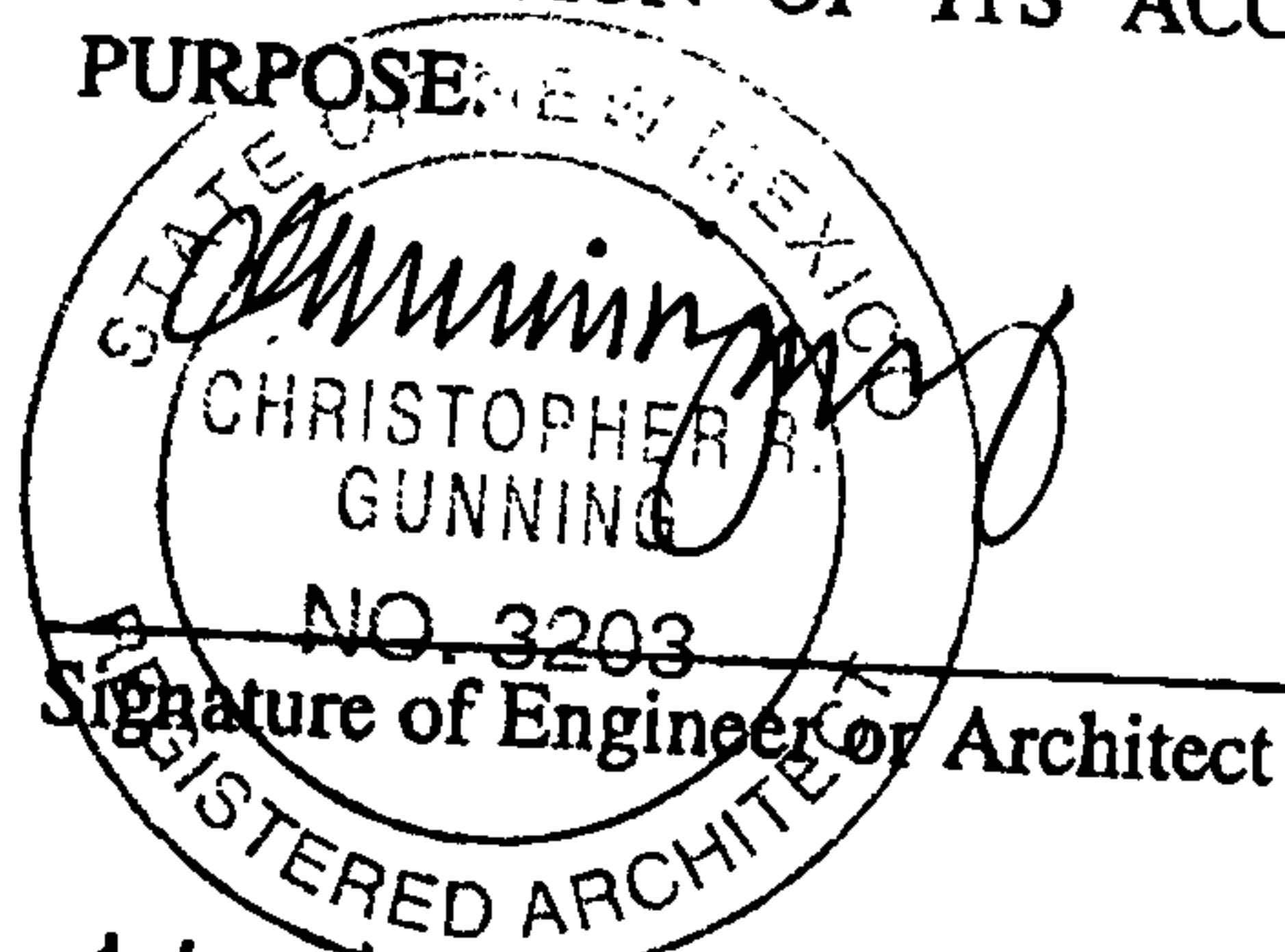
www.cabq.gov

c: Engineer
Hydrology file
CO Clerk

TRAFFIC CERTIFICATION

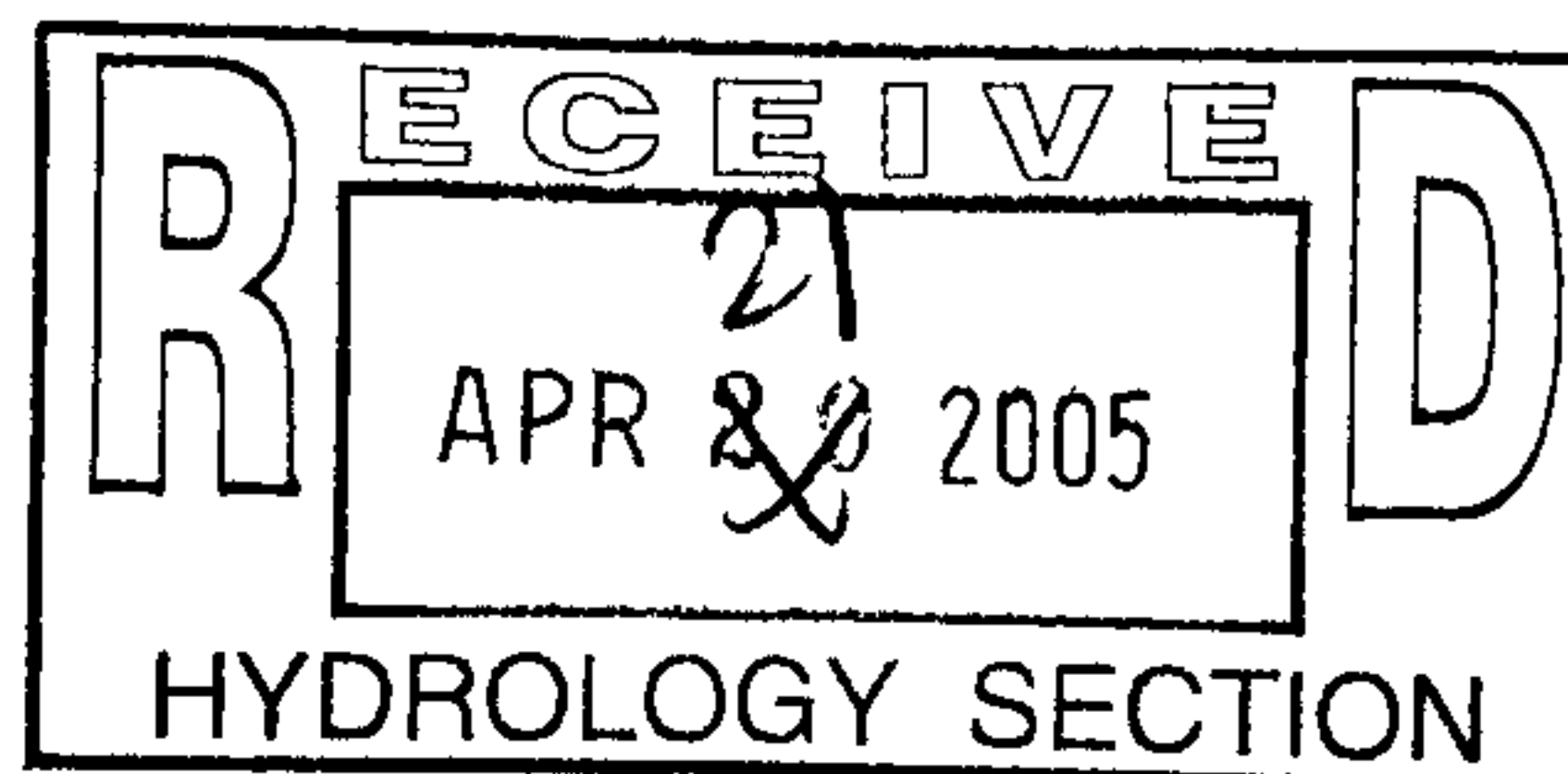
I, CHRISTOPHER R. GUNNING NMPE OR NMRA 3203, OF THE FIRM Dekker/Perich/Sabatini, HEREBY CERTIFY THAT THIS PROJECT HAS IS IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 17th Sept. 04. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY CURTIS PROCTOR OF THE FIRM P/PK. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 4/15/05 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. * THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE TRAFFIC ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.



4/21/05
Date

ENGINEER'S OR ARCHITECT'S STAMP



* With the following exceptions:

1. 132 SF of landscaping area, North of the trash enclosure was replaced with one motorcycle parking space. The contractor has agreed to paint the space with the word "MOTORCYCLE". All required landscape areas are still in compliance. Riverside Plaza ~~was~~ has the adequate parking required to accommodate all parking requirements for their planned and intended uses.



Dekker/Perich/Sabatini

architecture
interiors
planning
engineering

APRIL 15, 2005
~~December 29, 2004~~

Mr. Richard Dourte
City of Albuquerque
Public Works Department - Transportation Development Services Section
Albuquerque, New Mexico 87103

Re: Architect's Certification for Permanent C.O.
Riverside Plaza - Building K Tract 6A-1
6311 Riverside Plaza Lane
Albuquerque, NM 87120

Dear Mr. Dourte:

Attached is a copy of the approved Site Plan for Building Permit for the above mentioned project. Our office has visited the site at regular intervals appropriate to the stages of construction. Such visits and observations are not intended to be an exhaustive check or detailed inspection of the Contractor's work but rather are to allow our office, as experienced professionals, to become generally familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with the Contact Documents.

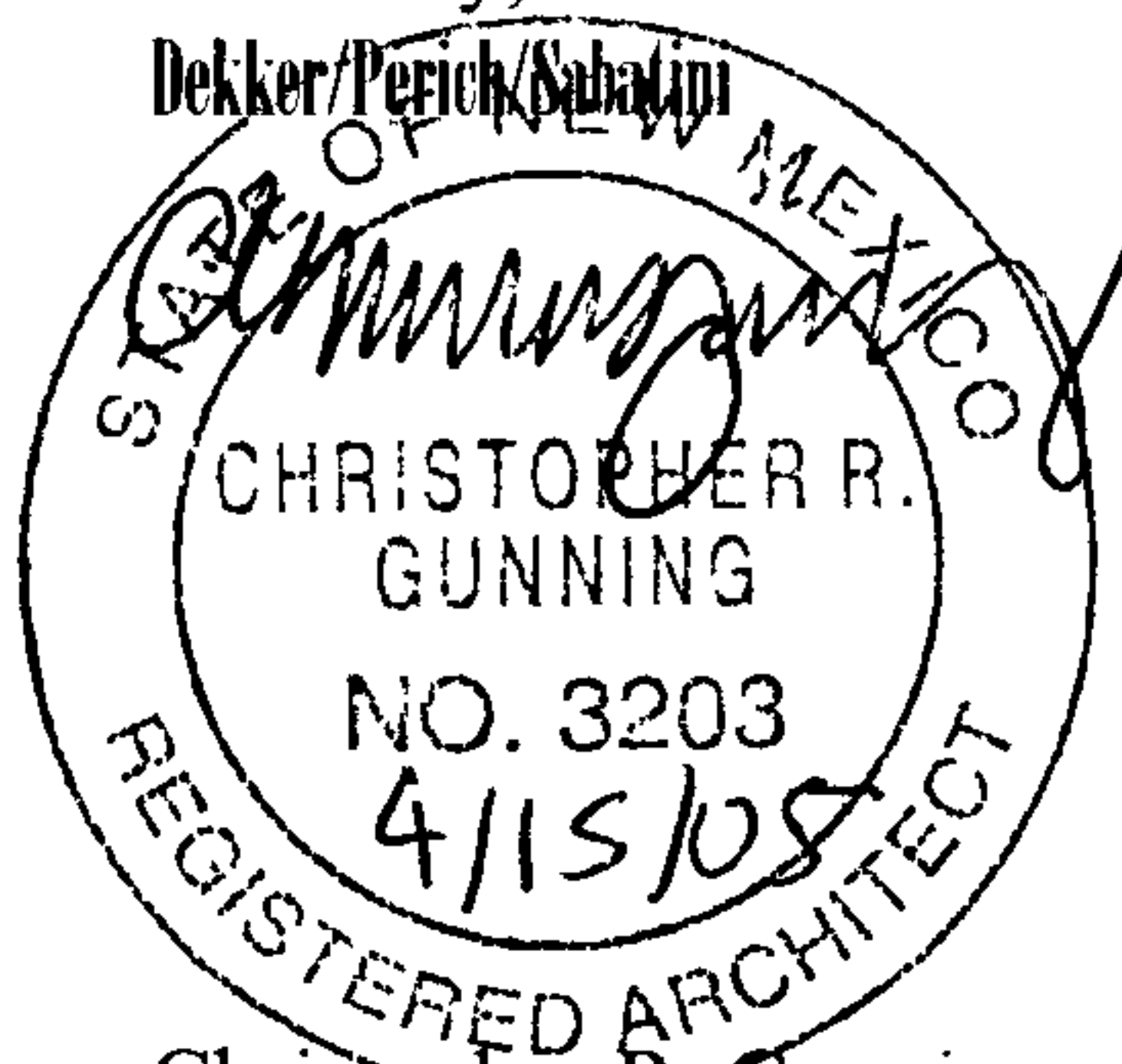
Based on our observations we hereby certify that this site has been constructed in substantial compliance with the site plan submitted for build for Building Permit, with the following exceptions:

1. 132 sf of landscaping area, North of the trash enclosure was replaced with one motorcycle parking space. The contractor has agreed to paint the space with the word "MOTORCYCLE".
All required landscape areas are still in compliance. Riverside Plaza has the adequate parking required to accommodate all parking requirements for their planned and intended uses.

If you have any concerns or questions regarding this, please feel free to contact us.

Sincerely,

Dekker/Perich/Sabatini



Christopher R. Gunning, AIA
Principal

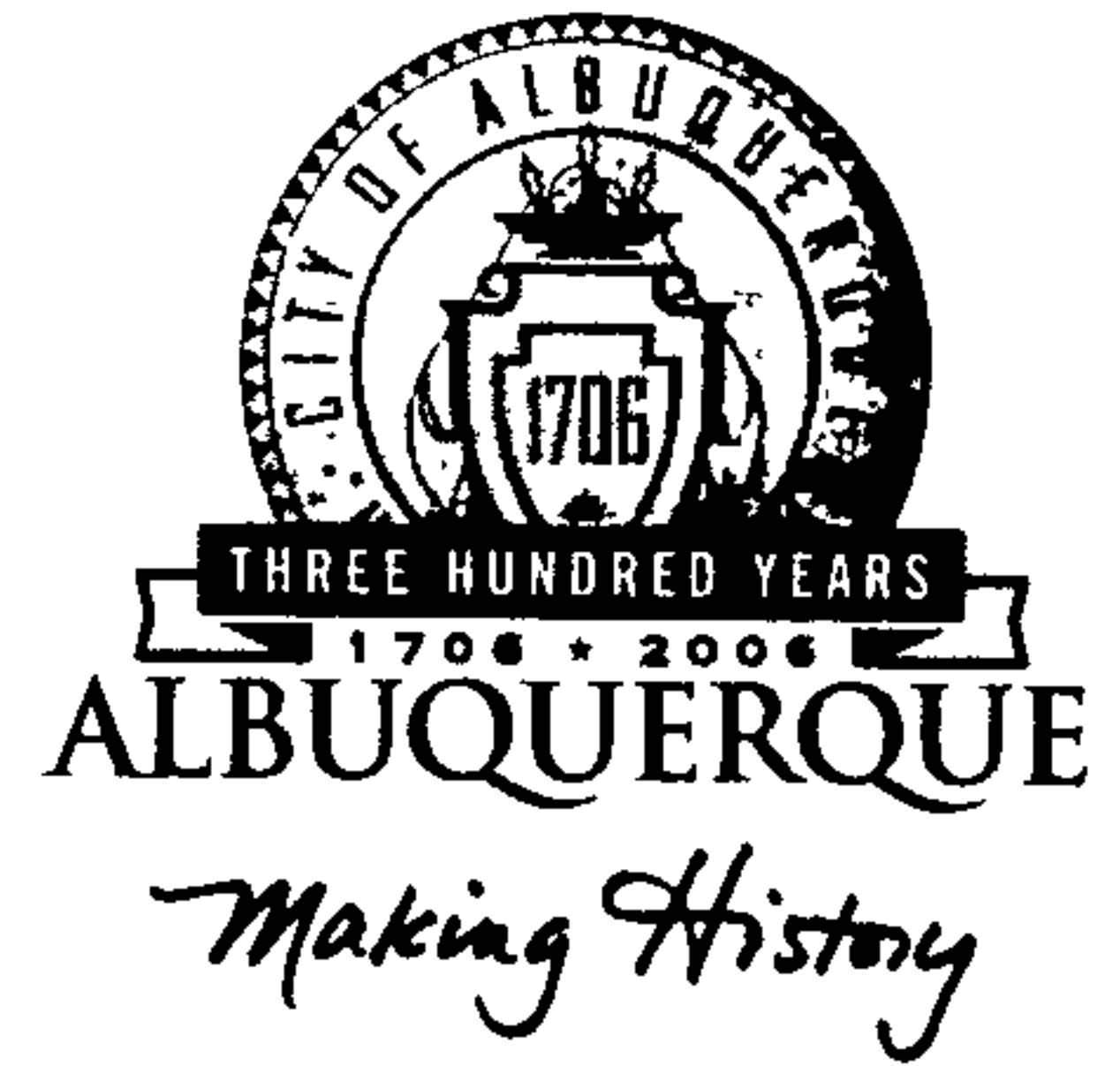
Cc: John Bonney, Reid and Associates
Glen Mills, Reid and Associates
file

Enclosures



1001

CITY OF ALBUQUERQUE



**Planning Department
Transportation Development Services Section**

December 28, 2004

Christopher Gunning, Registered Architect
6801 Jefferson, Ste 100
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for
Riverside Plaza, [E-127-D14]
6330 Riverside Plaza
Architect's Stamp Dated 12/22/04

Dear Mr. Gunning:

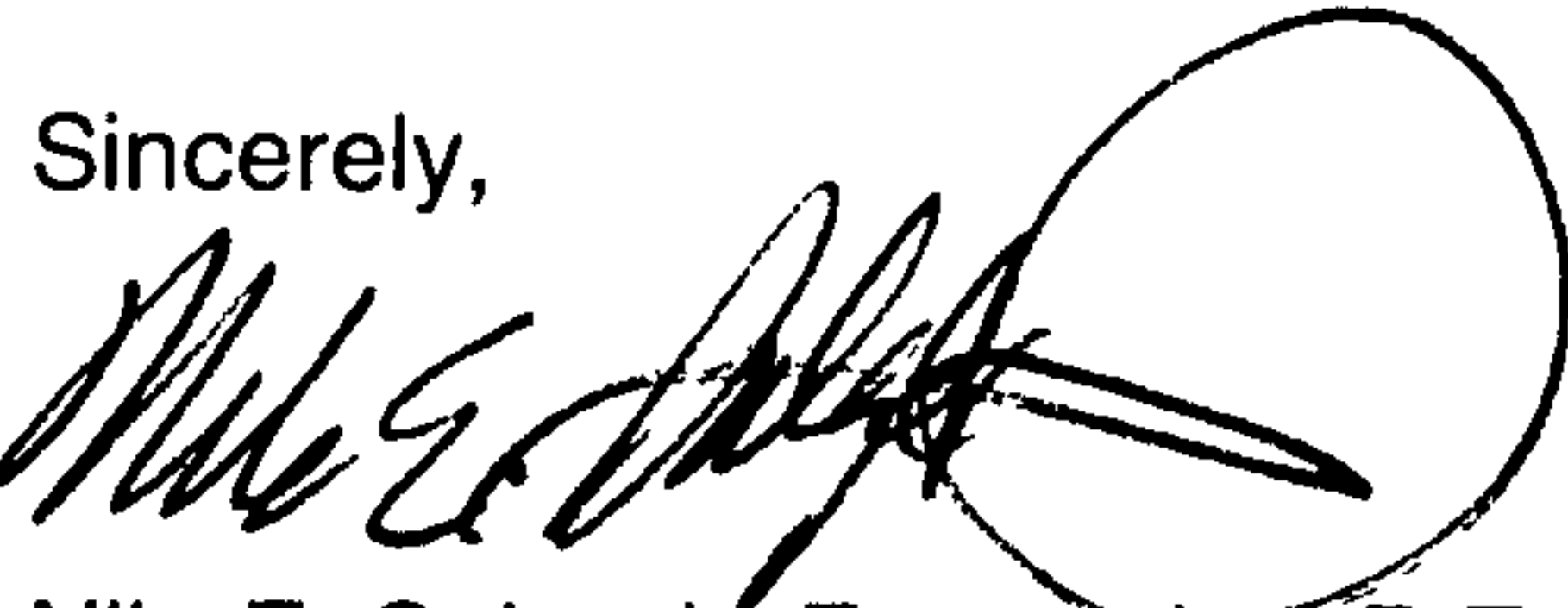
P.O. Box 1293

The TCL / Letter of Certification submitted on December 28, 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.

Albuquerque

Sincerely,

New Mexico 87103


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

www.cabq.gov

c: Engineer
~~Hydrology file~~
CO clerk



Dekker/Perich/Sabatini

architecture
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December 22, 2004

Mr. Richard Dourte
City of Albuquerque
Public Works Department - Transportation Development Services Section
Albuquerque, New Mexico 87103

Re: Architect's Certification for Permanent C.O.
6330 Riverside Plaza Lane
Tract 5A-5
Albuquerque, NM 87120
DRB Case No. 1000089

Dear Mr. Dourte:

Attached is a copy of the approved Administrative Amendment to the Site Development Plan for Building Permit for the above mentioned project, and a copy of the Building permit Site Plan, with changes made during construction clouded. Our office has visited the site at regular intervals appropriate to the stages of construction. Such visits and observations are not intended to be an exhaustive check or detailed inspection of the Contractor's work but rather are to allow our office, as experienced professionals, to become generally familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with the Contact Documents.

Based on our observations we hereby certify that this site has been constructed in substantial compliance with the approved Site Development Plan for Building Permit, with only three notable exceptions:

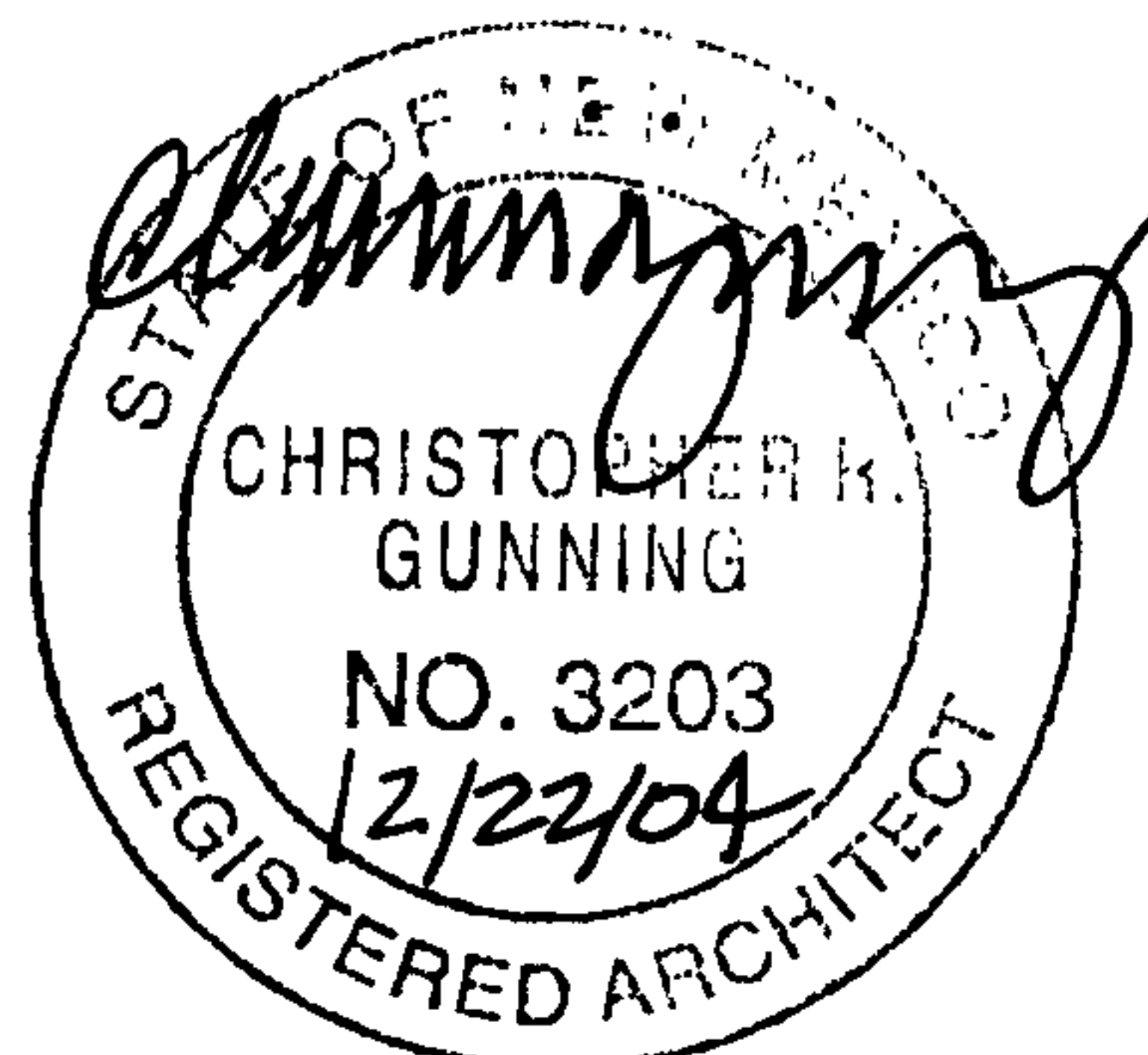
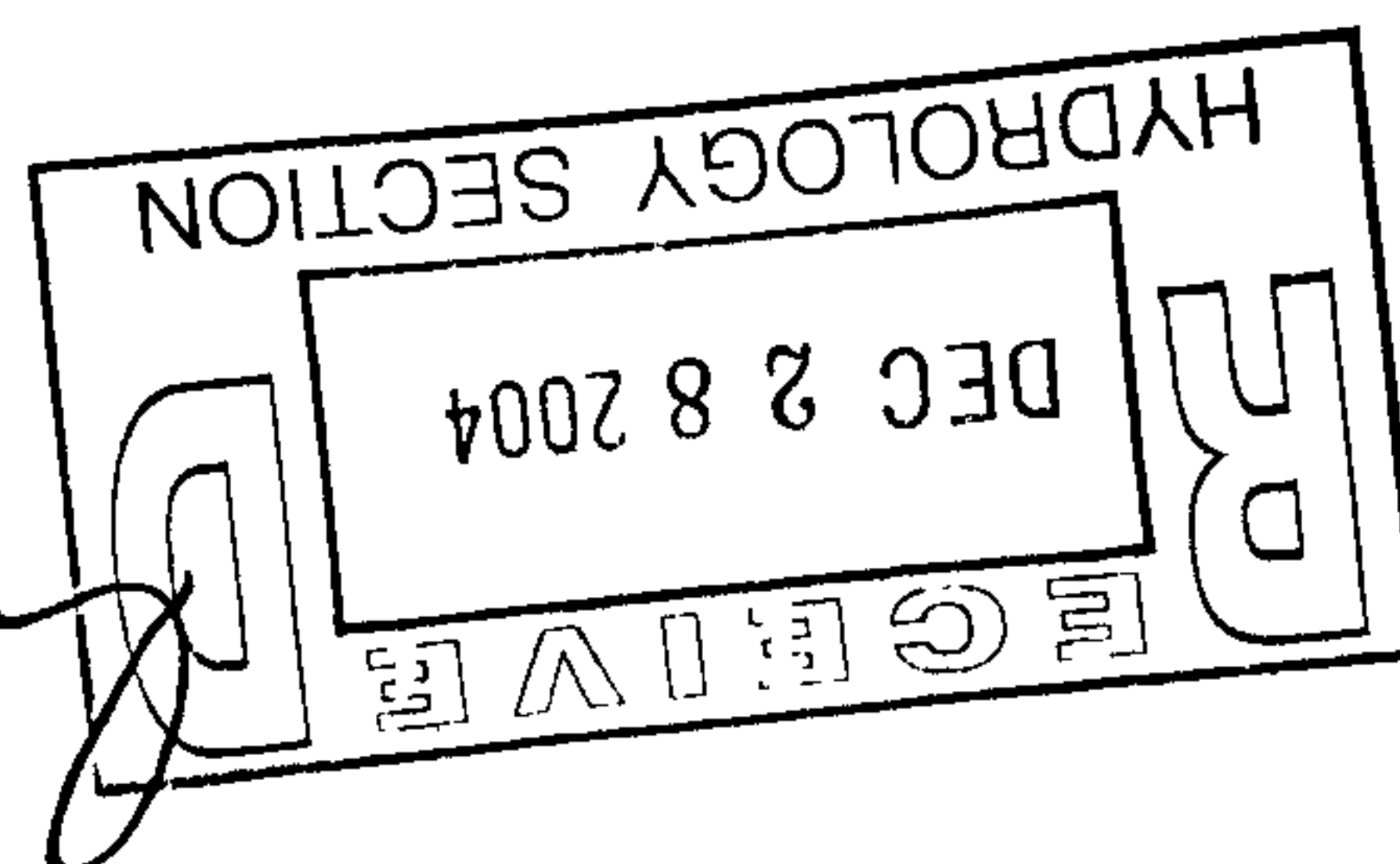
1. One existing parking stall was reduced to 7'-0" in width, as a result of the construction of an accessible curb ramp. The 7'-0" space is not an acceptable automobile space, the contractor shall label the space for motorcycle parking only, with white traffic paint.
2. On the west side of the building, one parallel parking space had to be eliminated. Due to extreme grade elevations the southern most parallel parking space would have had a 1'-0" curb adjacent to it. This would have been highly irregular and posed a serious risk of injury to pedestrians and those parking the cars in that location. We have eliminated that space and extended the sidewalk accordingly.
3. One pair of traffic arrows was inadvertently left out, at the northern most entry of the east parking lot. The contractor has agreed to paint in the traffic arrows.

According to our parking calculations submitted with our Building Permit application, this individual lot was over parked by (4) parking spaces. Therefore we feel that losing the two spaces should be acceptable.

If you have any concerns or questions regarding this, please feel free to contact us.

Sincerely,
Dekker/Perich/Sabatini

Christopher R. Gunning, AIA
Principal



Cc: John Bonney, Reid and Associates,
file

Enclosures



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

October 16, 2003

Sara Lavy, P.E.
8509 Jefferson NE
Albuquerque, NM 87113

Re: Certification Submittal for Final Building Certificate of Occupancy for
Riverside Plaza, Bldg N & M , [E-12 / D14]
6341 Riverside Plaza Lane NW
Engineer's Stamp Dated 10/15/03

Dear Mr. Lavy:

The TCL / Letter of Certification submitted on October 15, 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

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

(505) 858-3100
fax (505) 858-1118

twllc@tierrawestllc.com
1-800-245-3102

October 15, 2003

Mr. Nilo Salgado-Fernandez, PE
Public Works Department
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

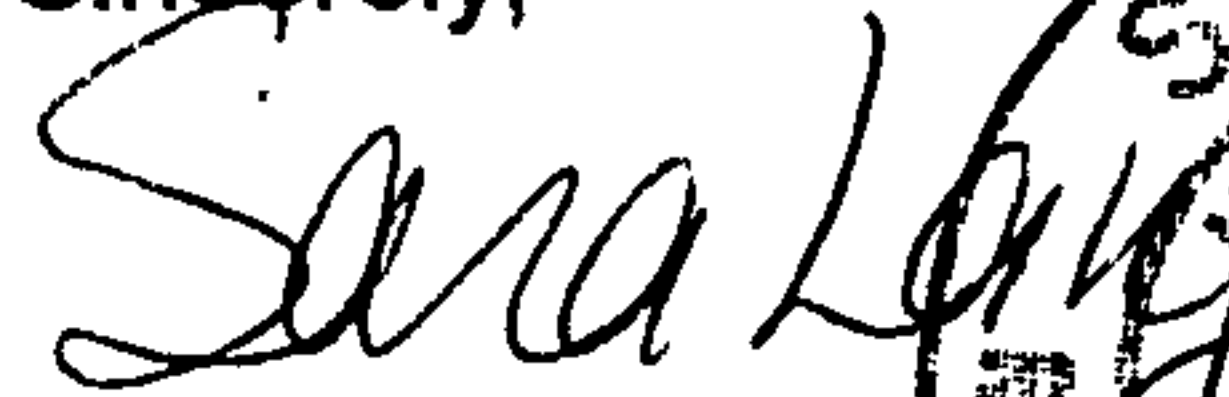
**RE: Final Certification of Transportation for Certificate of Occupancy
Tracts 6A4 and 6A5 (Buildings M and N), Riverside Plaza
6341 and 6361 Riverside Plaza Lane, NW**

Dear Nilo:

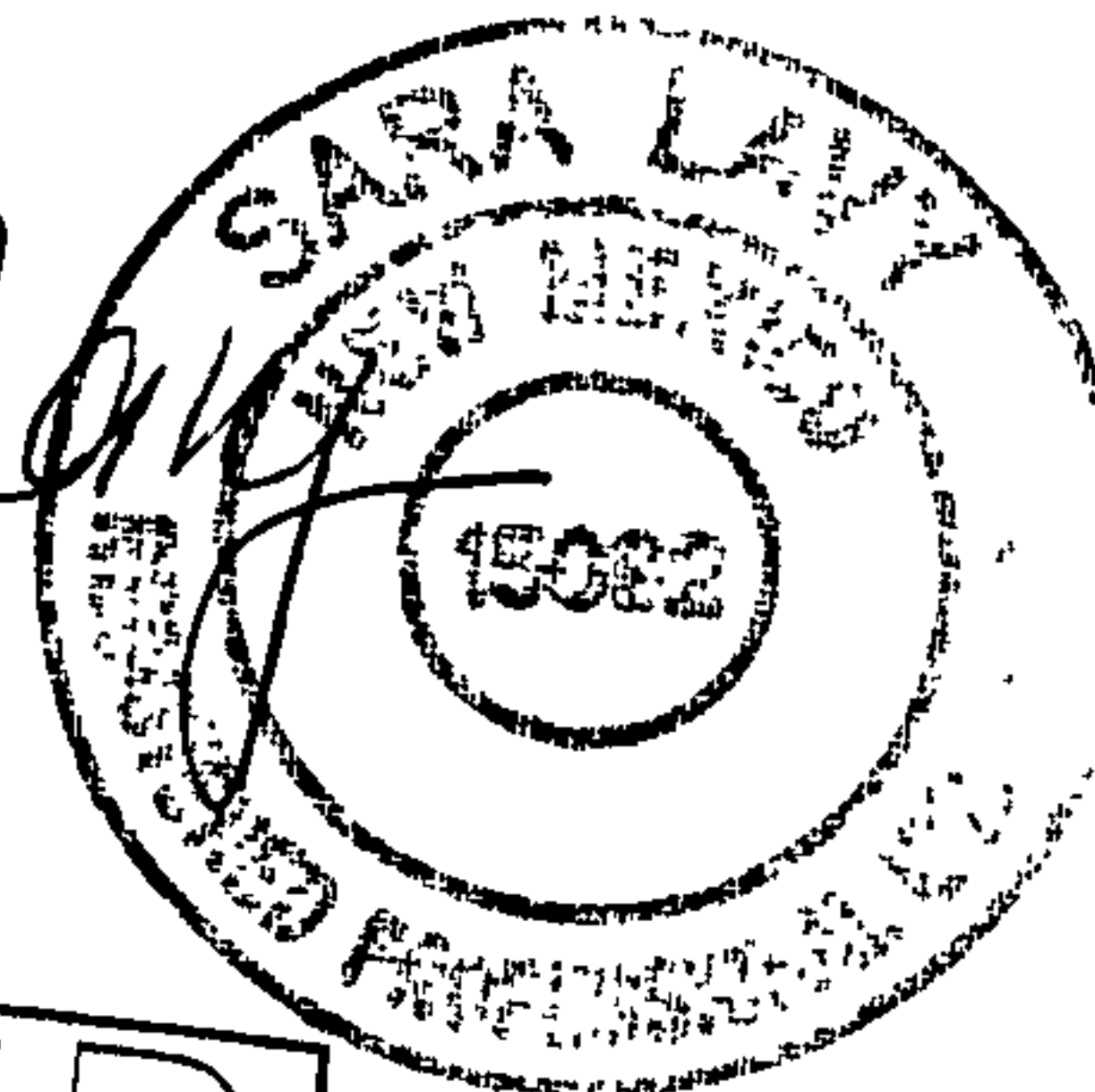
Enclosed please find one copy of the as-built Traffic Control Layout (DRB Amended Site Plan) original Site Plan and information sheet for Tracts 6A1 through 6A5 of Riverside Plaza. Reid and Associates completed the sidewalk construction adjacent to the buildings N and M. Curb and gutter, paving and striping of the parking lot was completed during construction of Tracts 6A2 and 6A3. Landscaping for Tracts 6A2 through 6A5 is complete. As-built information was field verified by our office and the site is in substantial compliance with the DRB approved plan. We are, therefore, requesting Final Certification of Transportation for Certificate of Occupancy. Certification for Tract 6A1 will be completed when design and construction is complete.

If you have any questions regarding this matter, please do not hesitate to call me.

Sincerely,



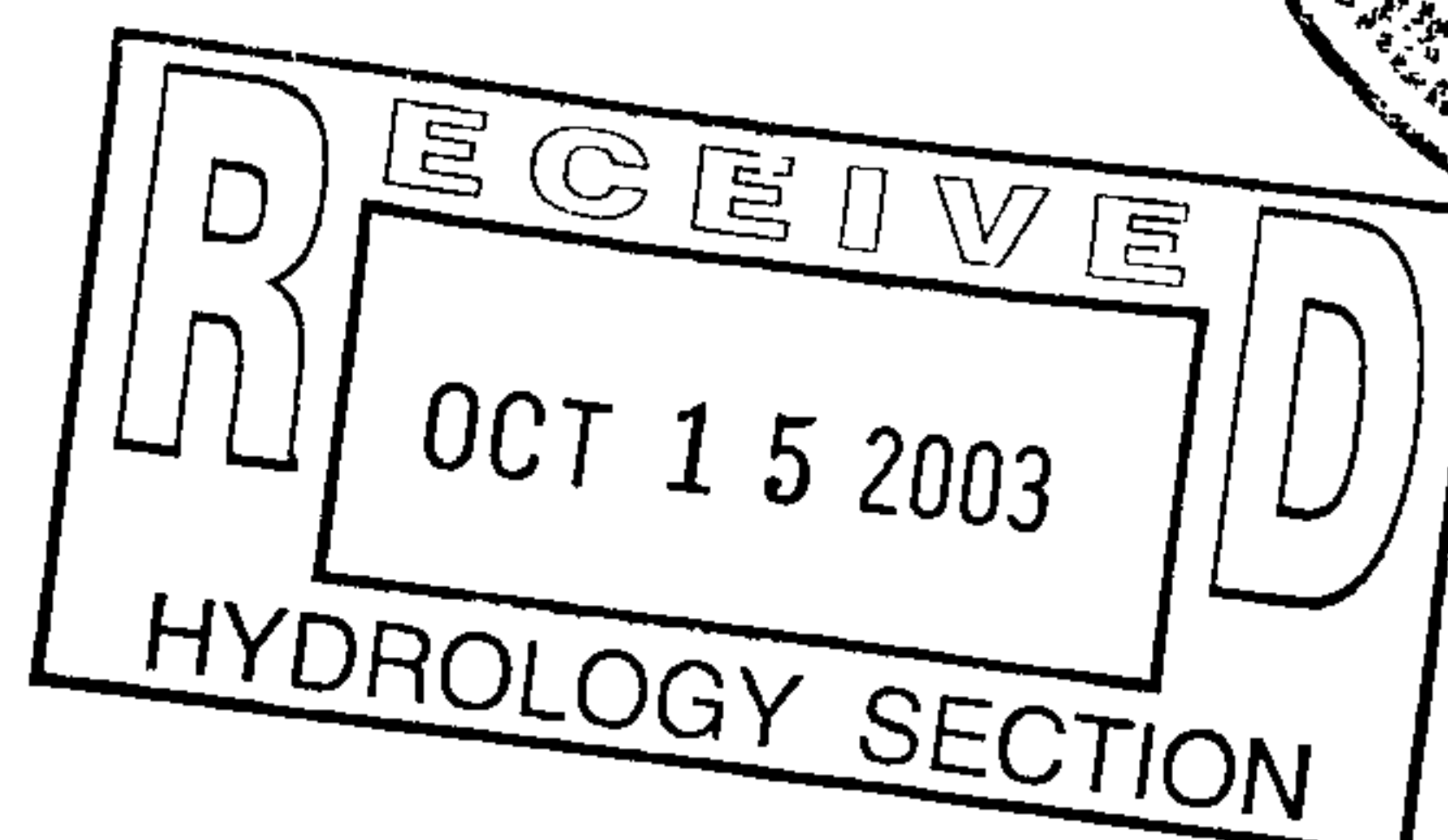
Sara Lavy, PE



Enclosures

cc: Ben Spencer
Jennifer Smith

JN: 210099
RRB/rw



210099 Final CO Transportation ltr



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

February 12, 2003

Sara Levy, P.E.
8509 Jefferson NE
Albuquerque, NM 87103

Re: Certification Submittal for Final Building Certificate of Occupancy for
Riverside Plaza(Tract 5-A-2), [E-12 / D14]
6260 Riverside Plaza Lane NW
Engineer's Stamp Dated 02/07/03

Dear Mr. Levy:

The TCL / Letter of Certification submitted on February 7, 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

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

(505) 858-3100
fax (505) 858-1118

twllc@tierrawestllc.com
1-800-245-3102

February 7, 2003

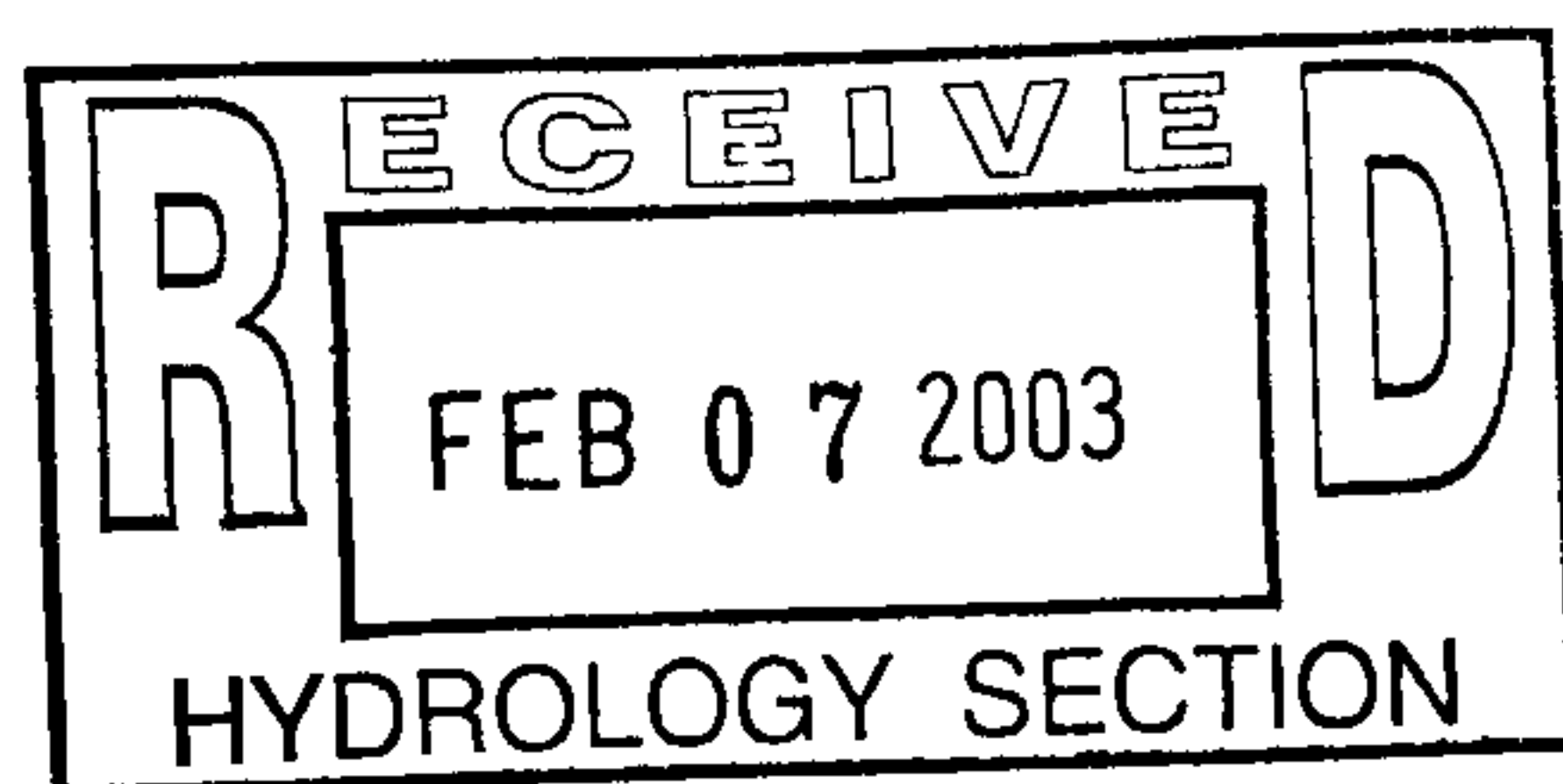
Ms. Terri Martin
Development and Building Services
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

**RE: Final Transportation Certification for Certificate of Occupancy
Tract 5-A-2 Riverside Plaza, 6260 Riverside Plaza Lane, NW**

Dear Ms. Martin:

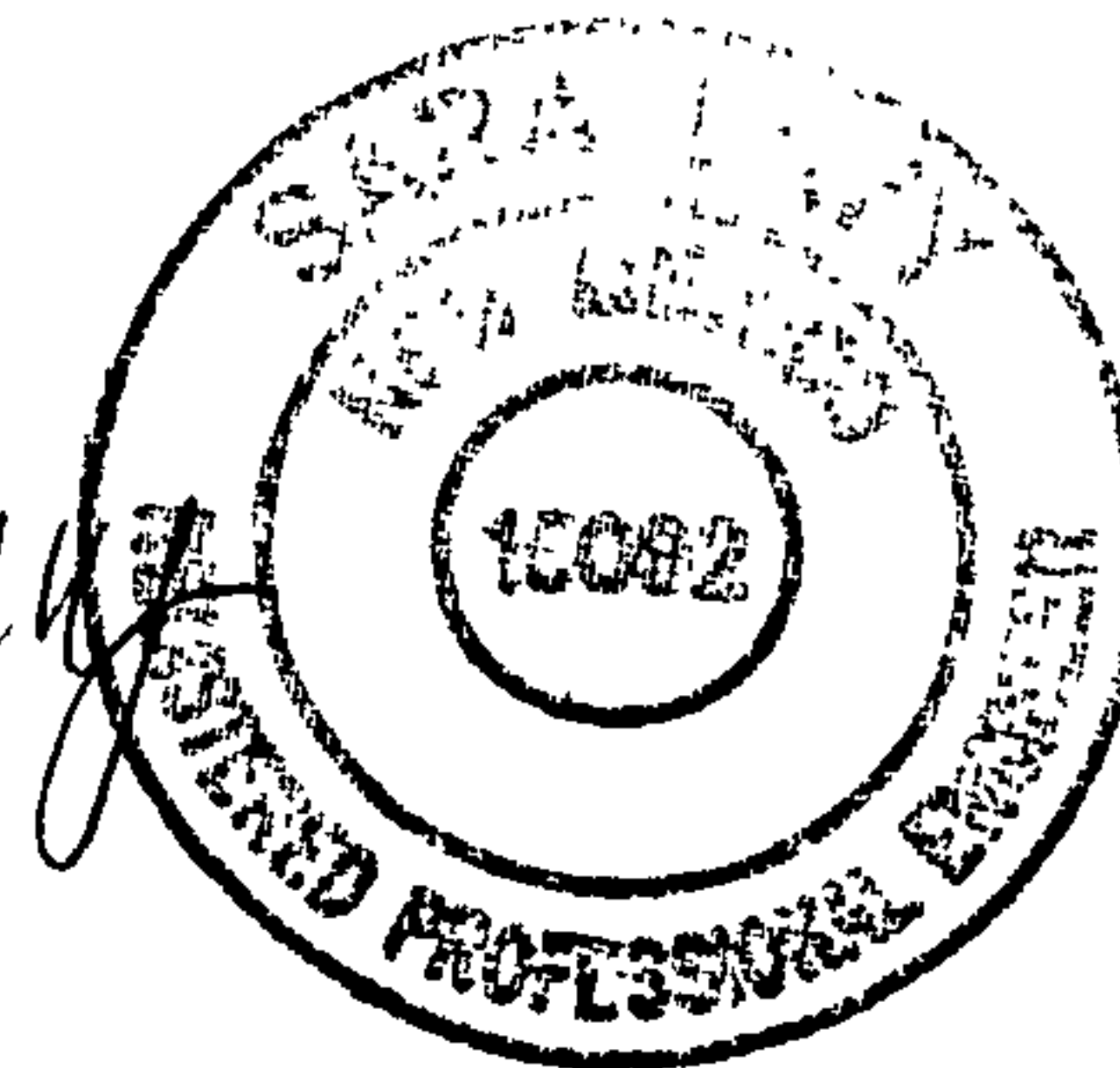
Tierra West, LLC requests Final Certification of the Site Plan (Traffic Control Plan) for the above-referenced site located in Riverside Plaza. Enclosed please find one copy of the Approved Amended Site Plan for Subdivision, Site Plan for Building Permit and Information Sheet for the above referenced project. Fuller Homes completed the building and sidewalks, curb and gutter was completed with Tract 5-A-3. Our office completed Field verification of the Site Plan. All paving, curb work, striping and sidewalks are in substantial compliance with the approved Site Plan for Building Permit.

If you have any questions or need additional information regarding this matter, please do not hesitate to call me.



Sincerely,

Sara Lavy
Sara Lavy, PE



Enclosure/s

cc: Ben Spencer
Wade Wingfield

JN: 21106
SCL/rw



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

***Public Works Department
Transportation Development Services Section***

July 25, 2002

Ronald Bohannon, P.E.,
Tierra West LLC
8509 Jefferson N.E.
Albuquerque, NM 87113

Re: Certification Submittal for Final Building Certificate of Occupancy for
Tract 5A-4 Riverside Plaza - Office, [E-12 / D014]
6320 Riverside Plaza Lane N.W.
Engineer's Stamp Dated July 1, 2002

Dear Mr. Bohannon:

The TCL / Letter of Certification submitted on July 1, 2002 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to Building and Safety and final C.O. has been logged in by Vicki Chavez in the Building Safety Section downstairs.

Sincerely,

Mike Zamora, Commercial Plan Checker
Development and Building Services
Planning Department

c: Hydrology file
Mike Zamora

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/11/2002)

PROJECT TITLE: Tract 5A-4 Riverside Plaza
DRB #: _____ EPC #: _____

ZONE MAP/DRG. FILE #: E12/D14
WORK ORDER #: _____

LEGAL DESCRIPTION Tract 5A-4 Riverside Plaza
CITY ADDRESS: 6320 Riverside Plaza Lane

ENGINEERING FIRM: Tierra West, LLC
ADDRESS: 8509 Jefferson NE
CITY, STATE: Albuquerque, NM

CONTACT: RONALD R. BOHANNAN OR SARA LAVY
PHONE: (505) 858-3100
ZIP CODE: 87113

OWNER: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

ARCHITECT: Dekker-Perich-Sabatini
ADDRESS: 6801 Jefferson NE, Suite 100
CITY, STATE: Albuquerque, NM

CONTACT: Jeff Fleming
PHONE: 761-9700
ZIP CODE: 87109

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTRACTOR: Reid & Associates
ADDRESS: 6300 Riverside Plaza Lane, NW
CITY, STATE: Albuquerque, NM

CONTACT: Jennifer Smith
PHONE: 891-2528
ZIP CODE: 87120

CHECK TYPE OF SUBMITTAL:

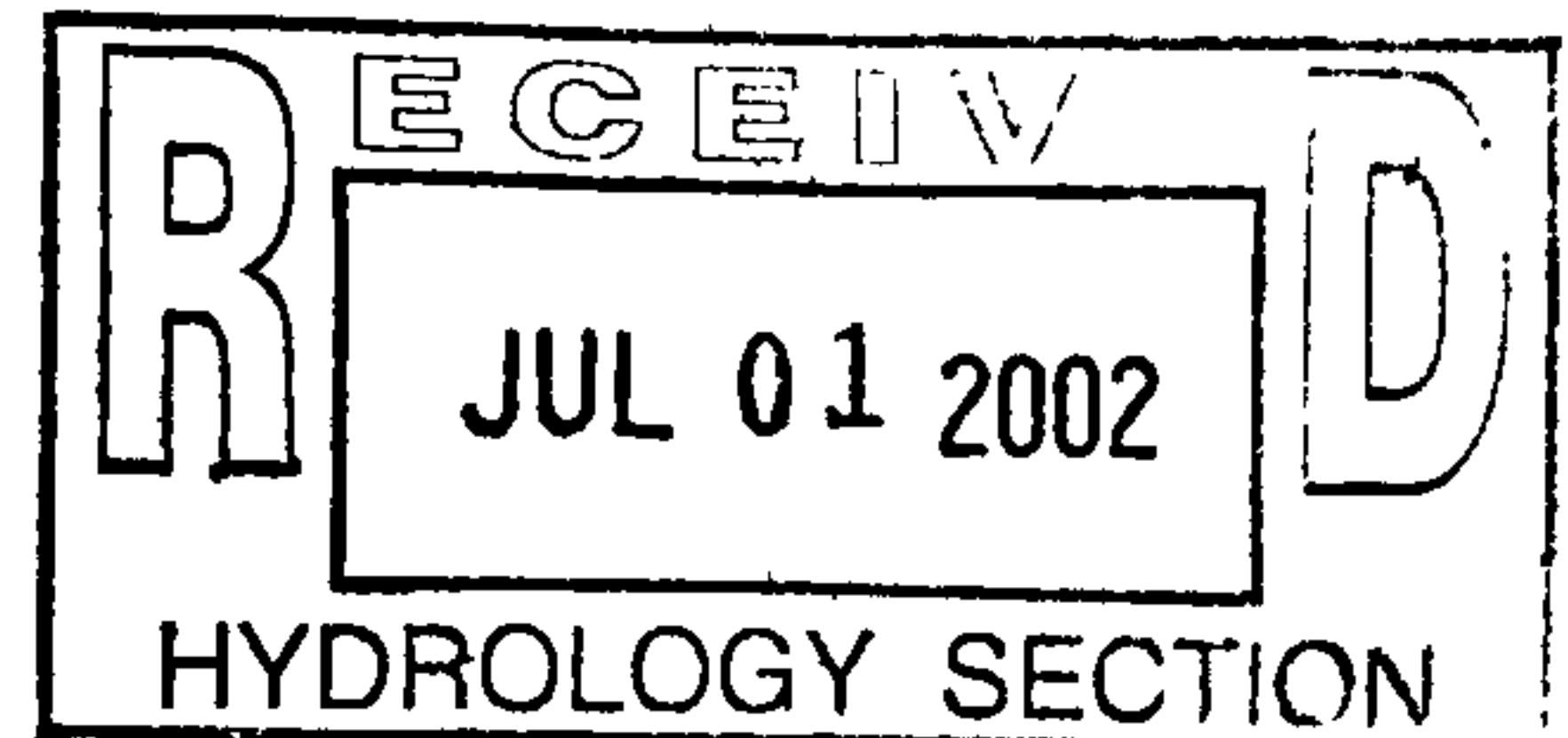
- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☒ ENGINEERS' CERTIFICATION (TCL)
☒ ENGINEERS' CERTIFICATION (DRB APPR. SITE PLAN)
☐ OTHER _____

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL 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: 7/1/02 BY: Ron Wright

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 Plans:** Required for approval of Site Development Plans greater than five (5) acres
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.

*7/17/02 - C'd on 30t for Vicki; 7/30 - Sent letter (dated 7/17/02) - 10974
C'd Eng. Need Clarif'n on what Remains. / C'd in 60 To Vicki follow up Call from Sara; 7/17/02 - 11*

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

(505) 858-3100
fax (505) 858-1118

twllc@tierrawestllc.com
1-800-245-3102

July 1, 2002

Mr. Mike Zamora
Development and Building Services
Public Works Department
PO Box 1293
Albuquerque, NM 87103

RE: 30-day Temporary Traffic Certification for Certificate of Occupancy
Tract 5-A-4 Riverside Plaza, 6320 Riverside Plaza Lane, NW

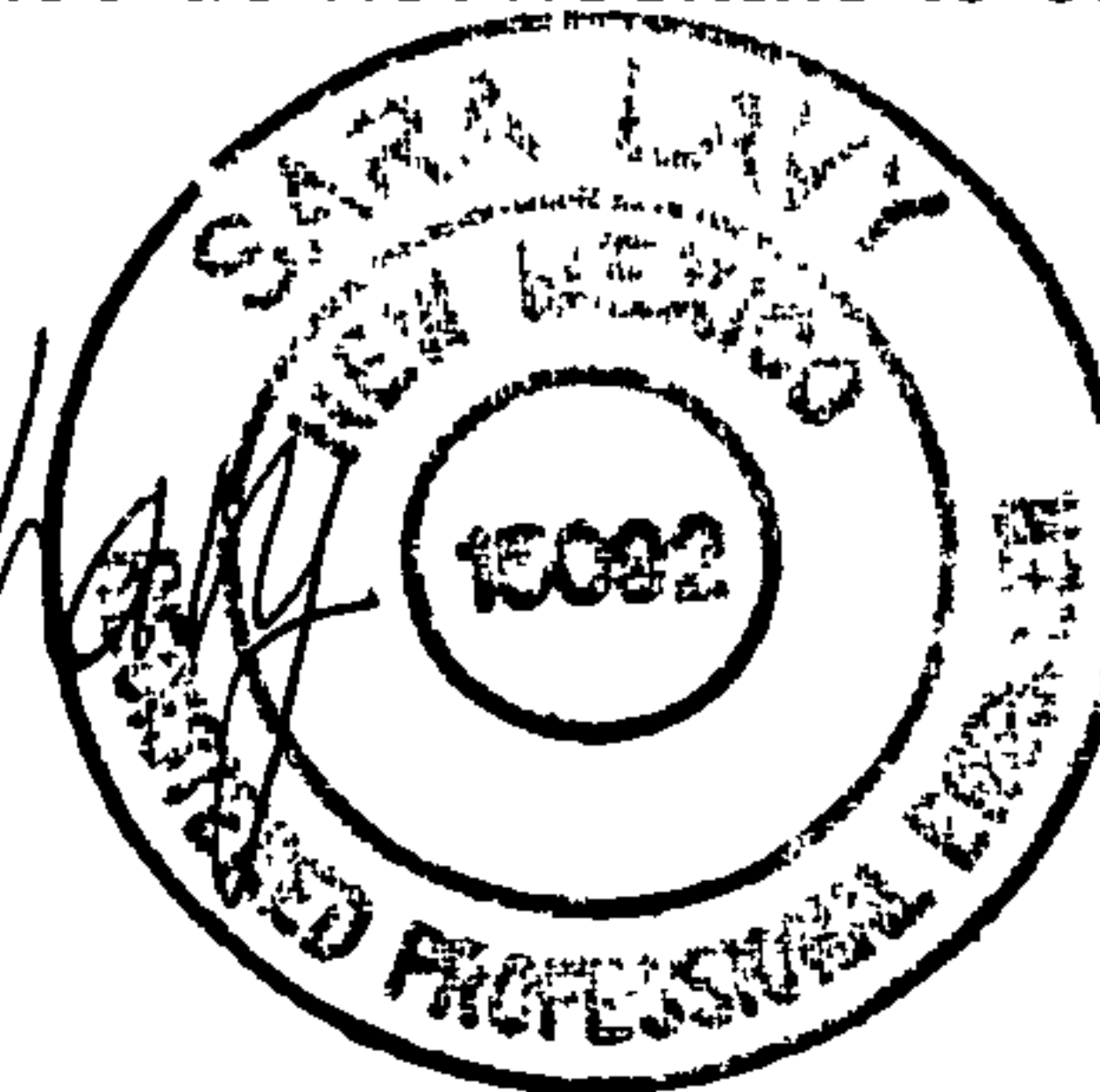
Dear Mr. Zamora:

Final - [Signature]
We are requesting a ~~30-day Temporary~~ Traffic Certification of the Site Plan for the above referenced site located in Riverside Plaza. Enclosed please find one copy of the Site Plan for Building Permit with as-built information and information sheet for the above referenced project. Reid & Associates completed the building, curb and gutter and sidewalks. Field verification of the Site Plan was completed by our office. We are verifying the required number of handicap parking spaces. With the exception noted, all paving, curb work and striping is in substantial compliance with the approved Site Plan.

If you have any questions regarding this matter, please do not hesitate to call me.

Sincerely,

Sara Lavy
Sara Lavy, PE

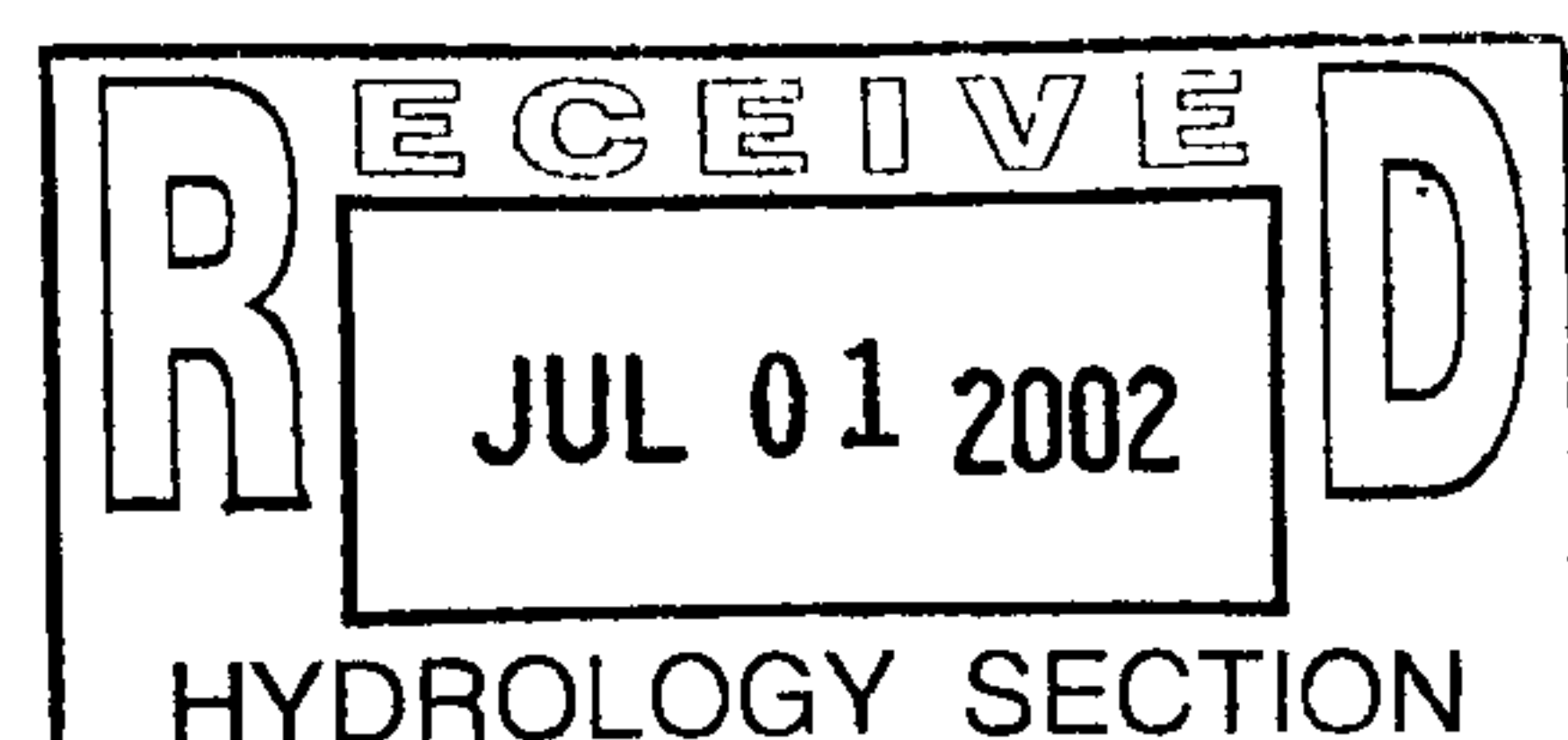


Enclosure/s

cc: Ben Spencer
Jennifer Smith

JN: 21106
scl

21106: 21106 temp CO traffic ltr.doc





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department Transportation Development Services Section

January 29, 2002

Dale Dekker, Registered Architect
Dekker, Perich, Sabatini, Ltd.
6801 Jefferson N.E., Suite 100
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for
Riverside Plaza Retail Shops - Bldgs. A, B, & C; [E12 / D014]
6241, 6251, 6261 Riverside Plaza Lane N.W.
Architect's Stamp Dated 01/23/02

Dear Mr. Dekker:

The TCL / Letter of Certification submitted on Jan. 25, 2002 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to Building and Safety and final C.O. has been logged in by Vicki Chavez in the Building Safety Section downstairs.

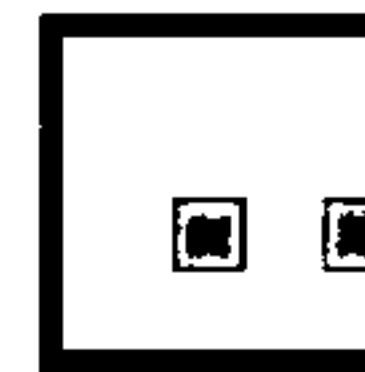
When completing the Drainage Information Sheet, fill out as close to 100% as possible so the appropriate parties can be contacted regarding current status.

Sincerely,

Mike Zamora, Commercial Plan Checker
Development and Building Services
Public Works Department

c: Engineer
Hydrology file
Mike Zamora

January 23, 2002

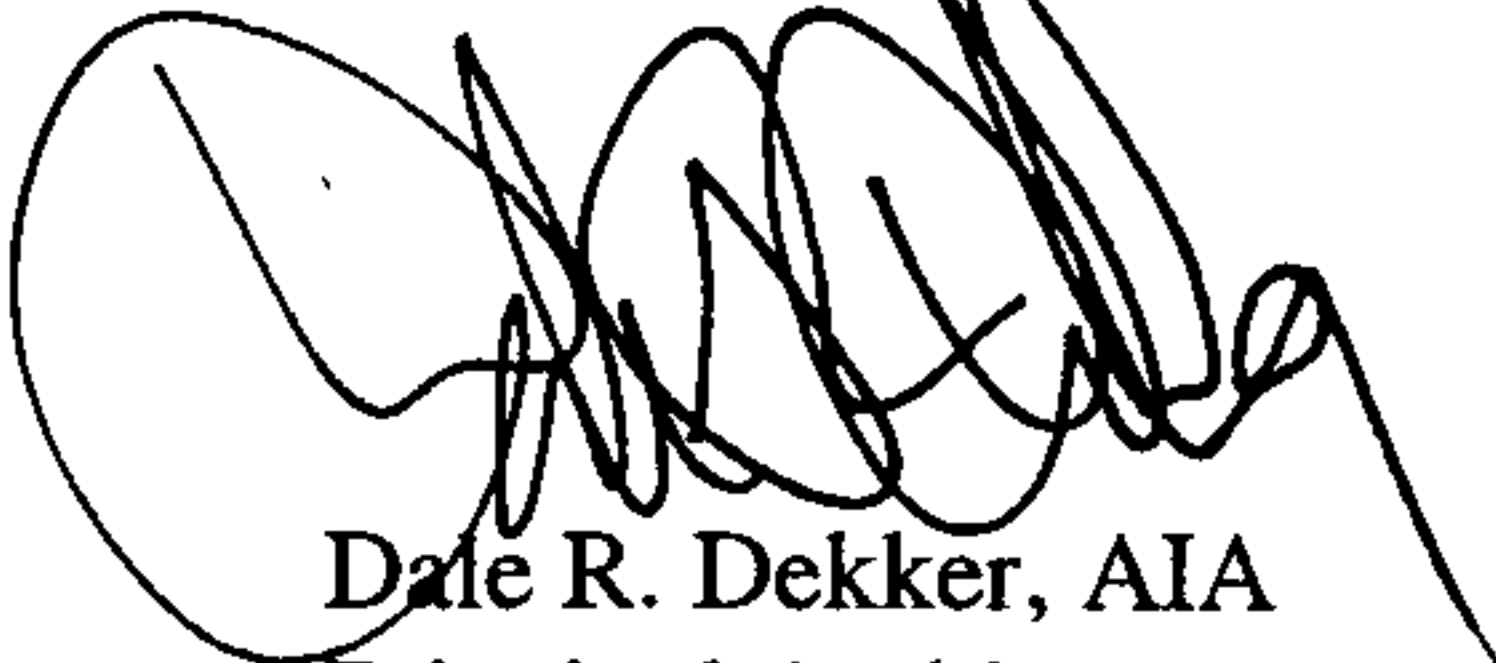


Dekker/Perich/Sabatini

architecture
interiors
planning
engineering

ARCHITECTS CERTIFICATION

I, Dale R. Dekker, licensed under the laws of the State of New Mexico, do hereby certify that this project was constructed in substantial compliance with the improvements shown on the approved Traffic Circulation Layout for Retail Buildings A,B and C located at 6241, 6251 and 6261 Riverside Plaza Lane NW, Albuquerque, NM.


Dale R. Dekker, AIA
Principal Architect

Date



RECEIVED
JAN 25 2002
HYDROLOGY SECTION

6801 Jefferson NE
Suite 100
Albuquerque NM
87109
505 761.9700
fax 761 4222
dps@dpsabq.com



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department Transportation Development Services Section

October 02, 2001

Dale R. Dekker, Registered Architect,
Dekker, Perich, Sabatini,
6801 Jefferson N.E.
Albuquerque, N.M 87109

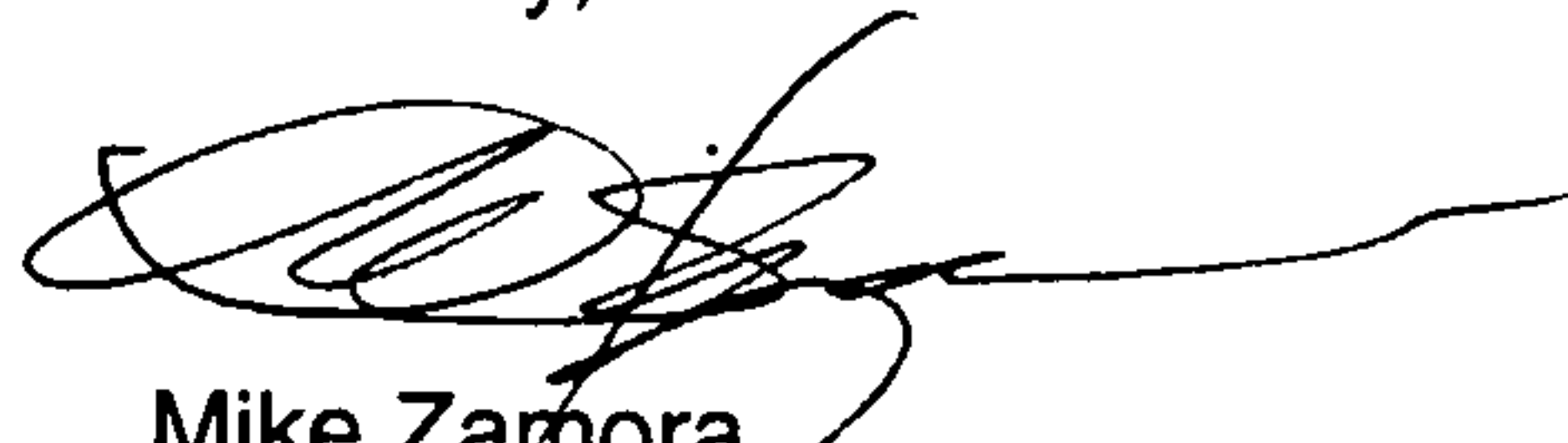
Re: Certification submittal for final building Certificate of Occupancy for
Riverside Office Building-Lot 1-[E12/D014],
6300 Riverside Plaza Lane,
Architect's Stamp dated 9/07/2001.

Dear Mr. Miller,

The TCL/ Letter of Certification submitted is not sufficient for acceptance by this office for Final Certificate of Occupancy(C.O.).

The TCL (or DRB Site Plan) submitted for Final C.O. needs to be the exact copy of the approved TCL which is in the Building Permit Plan Set. This will be the latest edition, which may have redlined comments, initialled and dated by the designer-of-record.

Sincerely,



Mike Zamora,
Commercial Plan Checker

cc:
Engineer
Terri Martin
Office File

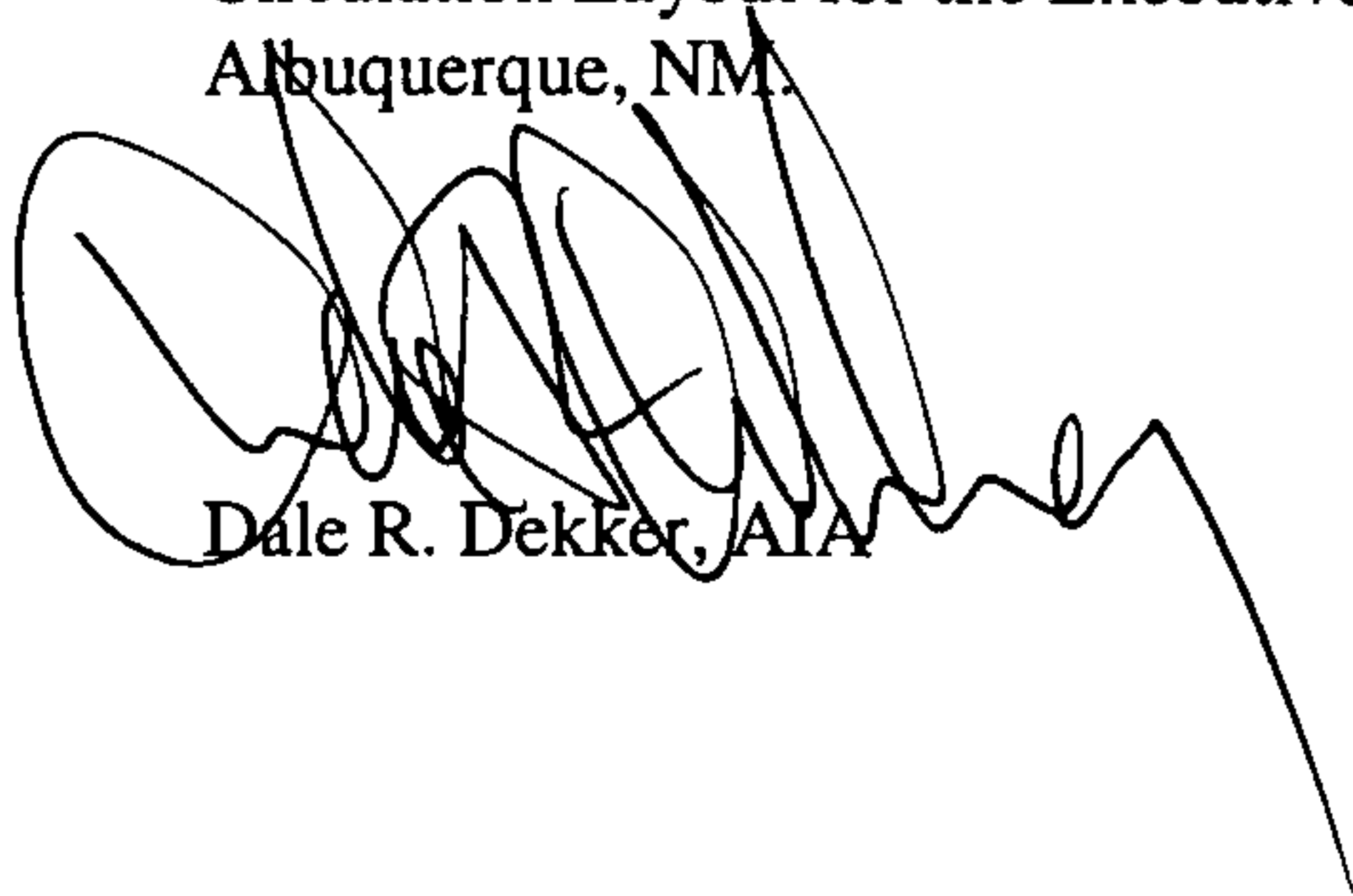


Dekker/Perich/Sabatini

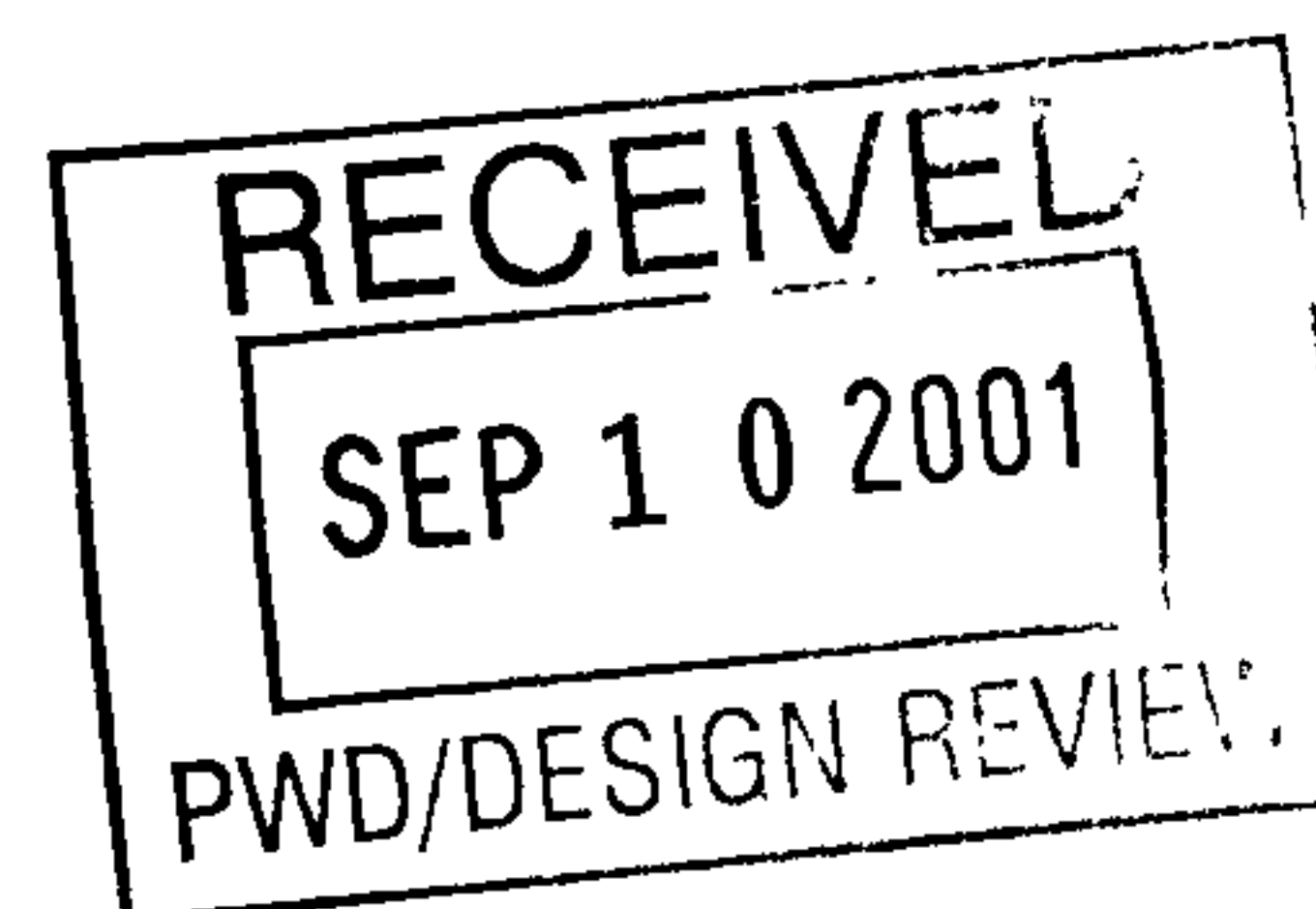
architecture
interiors
planning
engineering

ARCHITECTS CERTIFICATION

I, Dale R. Dekker, licensed under the laws of the State of New Mexico, do hereby certify that this project was constructed in substantial compliance with the improvements shown on the approved Traffic Circulation Layout for the Executive Office Building located at 6300 Riverside Plaza Lane NW, Albuquerque, NM.


Dale R. Dekker, AIA

9/7/01
Date



6801 Jefferson NE
Suite 100
Albuquerque NM
87109

505 761-9700

fax 761.4222

dps@dpsabq.com