

PROJECT TITLE: JOHN ADAMS MIDDLE SCHOOL ZONE ATLAS/DRNG. FILE #: J11/D19

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

LEGAL DESCRIPTION: _____

CITY ADDRESS: 5401 GLENRIO ROAD NWENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSENADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250OWNER: A.P.S. CONTACT: MYRON JOHNSONADDRESS: DEPT OF FPC PHONE: 242-5865ARCHITECT: NIMS-CALVANI CONTACT: JOE HARDESTYADDRESS: 525 SAN PEDRO NE PHONE: 255-6400SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: JEFF MORTENSENADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250CONTRACTOR: NOT SELECTED CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☒ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION
- ☐ OTHER

PRE-DESIGN MEETING:

- ☒ YES (FRED AGUIRRE)
- ☐ NO
- ☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY APPROVAL

GRADING PERMIT APPROVAL

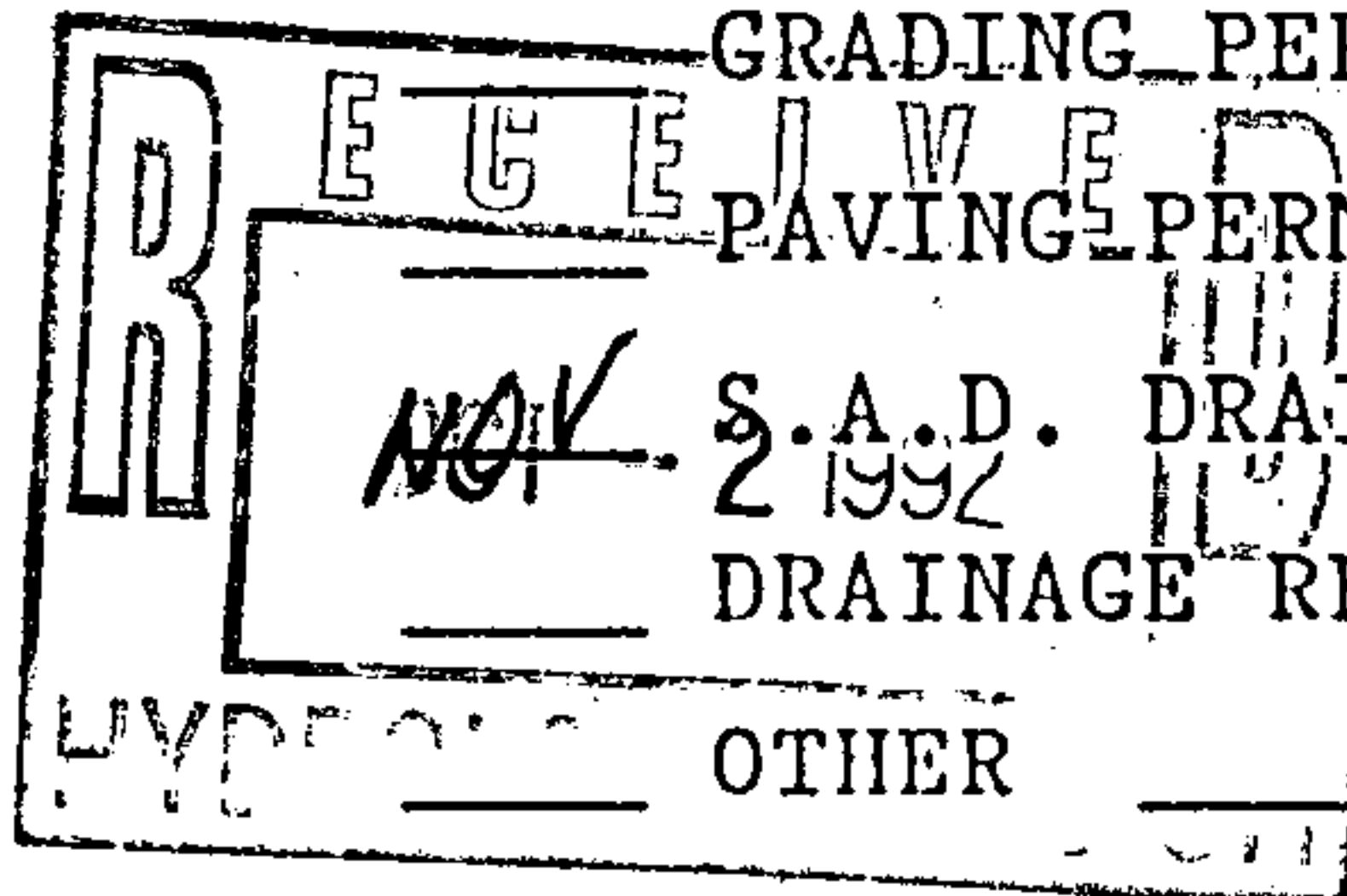
PAVING PERMIT APPROVAL

S.A.D. DRAINAGE REPORT

DRAINAGE REQUIREMENTS

OTHER _____

(SPECIFY)

DATE SUBMITTED: 11-02-92BY: JEFFREY G. MORTENSEN

ALBUQUERQUE PUBLIC SCHOOLS
DEPARTMENT OF FACILITIES PLANNING AND CONSTRUCTION

915 OAK STREET, S.E.
P. O. BOX 25704
ALBUQUERQUE, NEW MEXICO 87125-0704
(505) 242-5865

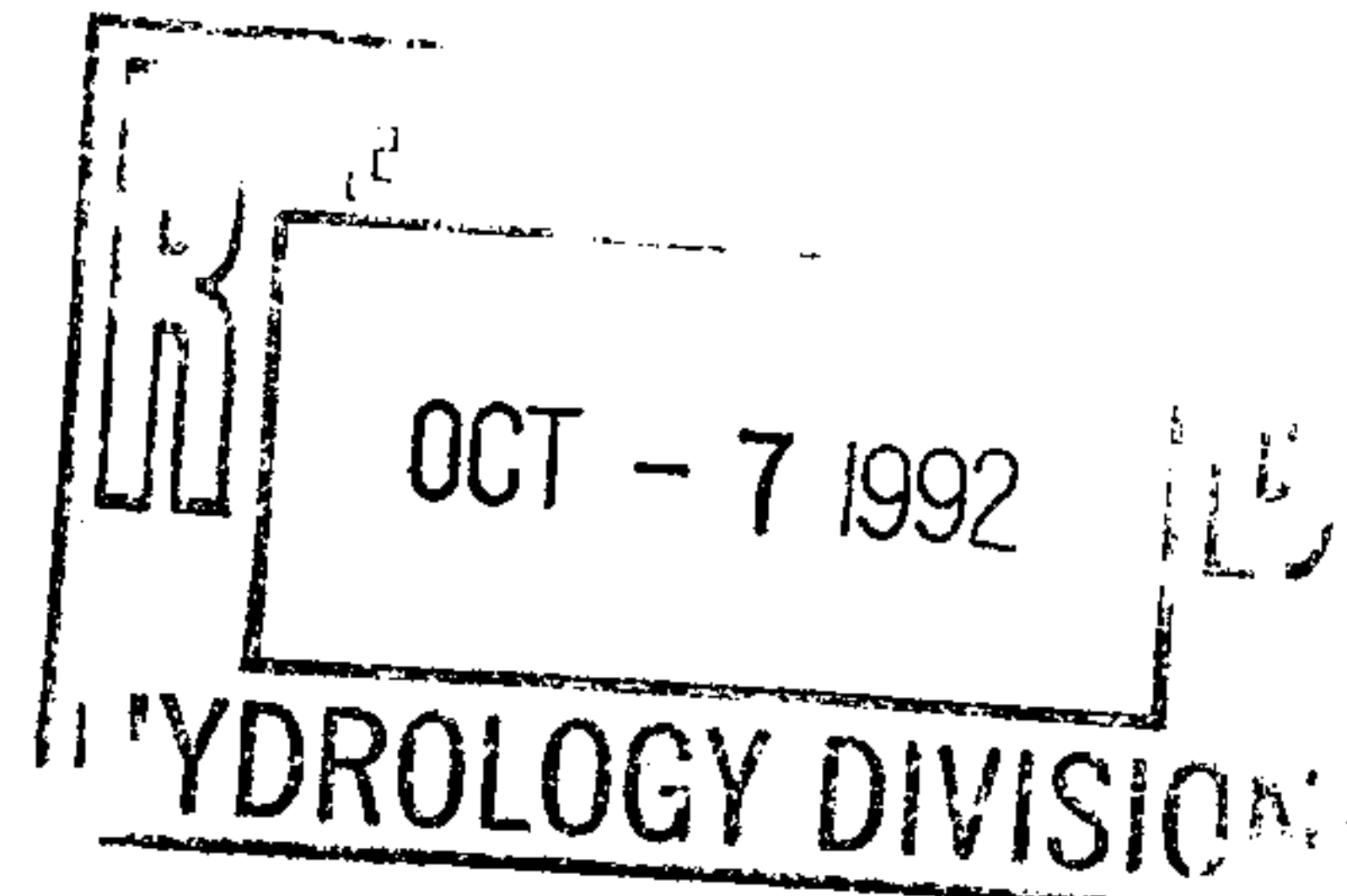
DR. JACK BOBROFF
SUPERINTENDENT

September 30, 1992

511/D19

DOLORES KLINGBEIL
ASSISTANT SUPERINTENDENT
FACILITIES PLANNING AND OPERATIONS
PAT McMURRAY
ACTING DIRECTOR

Mr. Fred Aguirre
City of Albuquerque
Public Works Department
Engineering Group
P.O. Box 1293
Albuquerque, NM 87103



Re: ADAMS-MIDDLE-SCHOOL-ADDITIONS-AND-RENOVATIONS
HYDROLOGY REQUIREMENTS

Dear Mr. Aguirre,

Thank you for taking the time to meet with us on Friday to discuss the Hydrology reject on the above referenced project. After review of the past work at Adams which included drainage studies the following was decided.

The current plans would be cleared by you for a building permit with the indication of the approved F.F. elevation. It is also understood that we are developing an existing impervious area with a 540 sq. ft. addition and little if any impact on existing drainage pattern will result.

You also have asked that the addition be certified as built at the time of C.O. with key elevations confirmed.

It is the District's intent to update the most recent drainage study of the site as soon as we can make arrangements with Jeff Mortensen.

Please call if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Myron Johnson".

Myron Johnson,
Staff Architect

MJ/est

cc: Joe Hardesty, Nims-Calvanni
Jeff Mortensen, JMA
file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 3, 1992

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

RE: DRAINAGE PLAN FOR AN ADDITION TO JOHN ADAMS MIDDLE SCHOOL (J11-D19)
ENGINEER'S STAMP DATED 10/30/92.

Dear Mr. Mortensen:

Based on the information provided on your November 2, 1992 submittal, the above referenced site is approved for Building Permit.

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

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya
Bernie J. Montoya, CE
Engineering Assistant

BJM/d1/WPHYD/7365

xc: Alan Martinez
(File)

PUBLIC WORKS DEPARTMENT

Mr. John P. Curtin, PE
April 11, 1996
Page 2

cfs - 19.75 cfs^v). All runoff affected by this renovation will be draining toward Glenrio Road. Peak discharge within these three basins was reduced from 10.3 cfs to 4.3 cfs, occurring within 14 minutes of the storm peak. Detail of the revised ponding and routing process is presented in supplemental calculations attached hereto.

If I can be of further assistance, please contact me.

Sincerely,

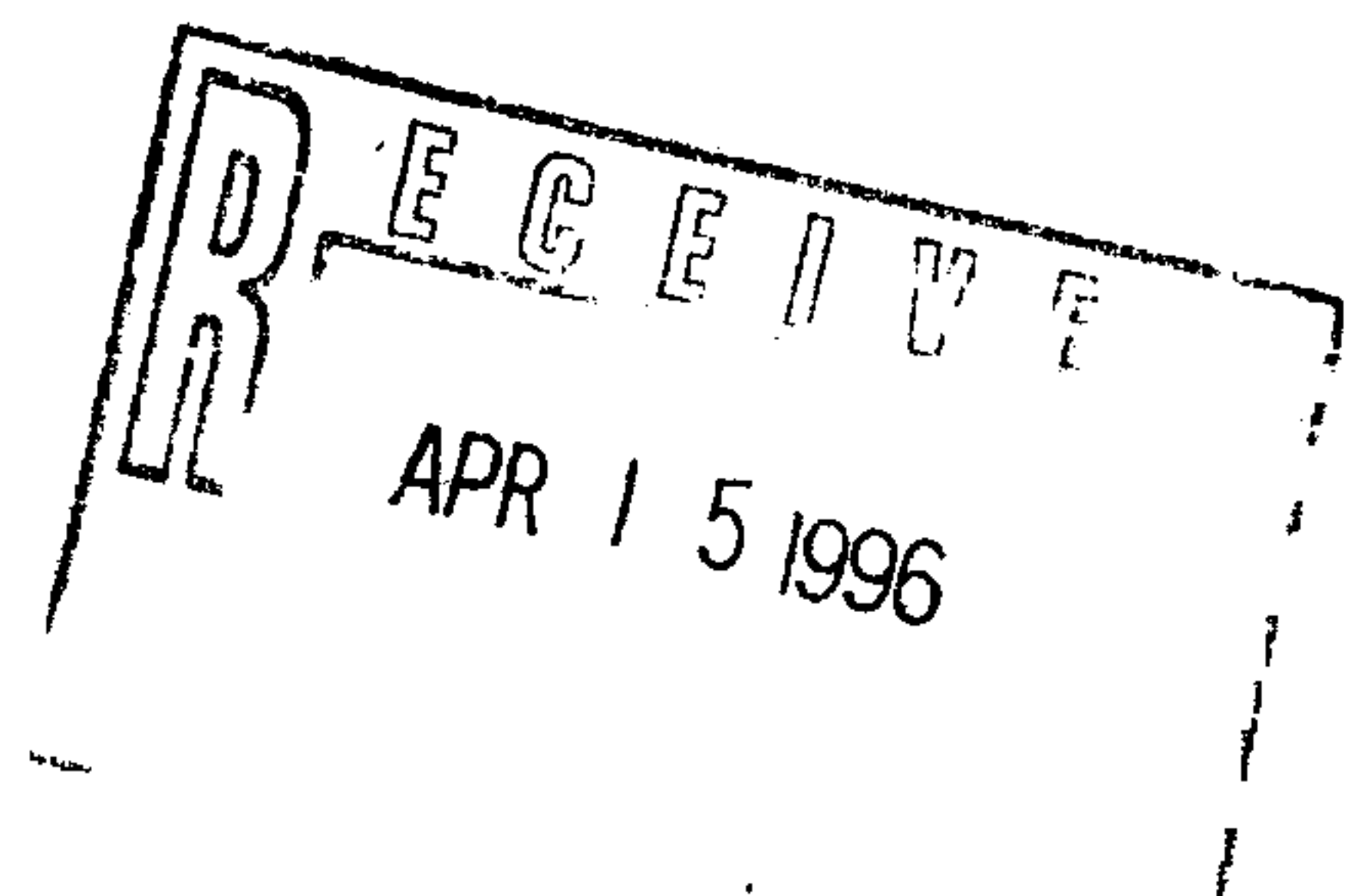
MARK GOODWIN & ASSOCIATES, P.A.



John M. MacKenzie, P.E.
Project Manager

JMM/sr

b:\johnadams\comments





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 29, 1995

John M. MacKenzie, PE
Mark Goodwin & Assoc.
PO Box 90606
Albuquerque, NM 87199

RE: DRAINAGE REPORT FOR JOHN ADAMS MID SCHOOL (J-11/D19)
RECEIVED DECEMBER 13, 1995 FOR BUILDING PERMIT
ENGINEER'S STAMP DATED 12/12/95

Dear Mr. MacKenzie:

Based on the information included in the submittal referenced above, City Hydrology has the following comments that must be addressed:

Where is the proposed canopy located? Include the erosion control plan on the G & D Plan. Provide topography for Basin F. The existing land treatments for Basin E do not match the AHYMO printout. Does the drainage analysis cover all of the site that drains to Glenrio Road?

The proposed drainage is much more complex than your analysis. The nomograph for circular pipes determines the discharge under non-pressure (gravity) conditions. In reality, the discharge will be controlled by a combination of the headwater in the pond and the tailwater in Glenrio Road. Figure 4-23 in Brater & King illustrates this condition. Based on the proposed spot elevations the pond in Basins A & B will overflow into Basin C when the water level reaches 93.84. The actual discharge to Glenrio Road can not be determined without routing Basins A, B & F through the reservoir and adding the hydrographs to determine the time of the peak.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer, Hydrology

c: Andrew Garcia

DRAINAGE INFORMATION SHEET

PROJECT TITLE: John Adams Middle School ZONE ATLAS/DRNG, FILE#: J-11-1419
 DRB #: _____ EPC #: _____ WORK ORDER #: _____
 LEGAL DESCRIPTION: _____
 CITY ADDRESS: 5401 Glenrio Road NW

ENGINEERING FIRM: <u>Mark Goodwin & Associates, PA</u>	CONTACT: <u>John M. MacKenzie PE</u>
ADDRESS: <u>PO Box 90606</u>	PHONE: <u>345-2010</u>
OWNER: <u>APS</u>	CONTACT: <u>Myron Johnson</u>
ADDRESS: <u>725 University SE</u>	PHONE: <u>842-8211</u>
ARCHITECT: <u>DCSW</u>	CONTACT: <u>K.C. Titsworth</u>
ADDRESS: <u>105 4th Street SW</u>	PHONE: <u>843-9639</u>
SURVEYOR: <u>ALS, Inc.</u>	CONTACT: <u>Tim Aldrich</u>
ADDRESS: <u>PO Box 30701</u>	PHONE: <u>884-1990</u>
CONTRACTOR: <u>N/A</u>	CONTACT: _____
ADDRESS: _____	PHONE: _____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

☒ YES
☐ NO
☒ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

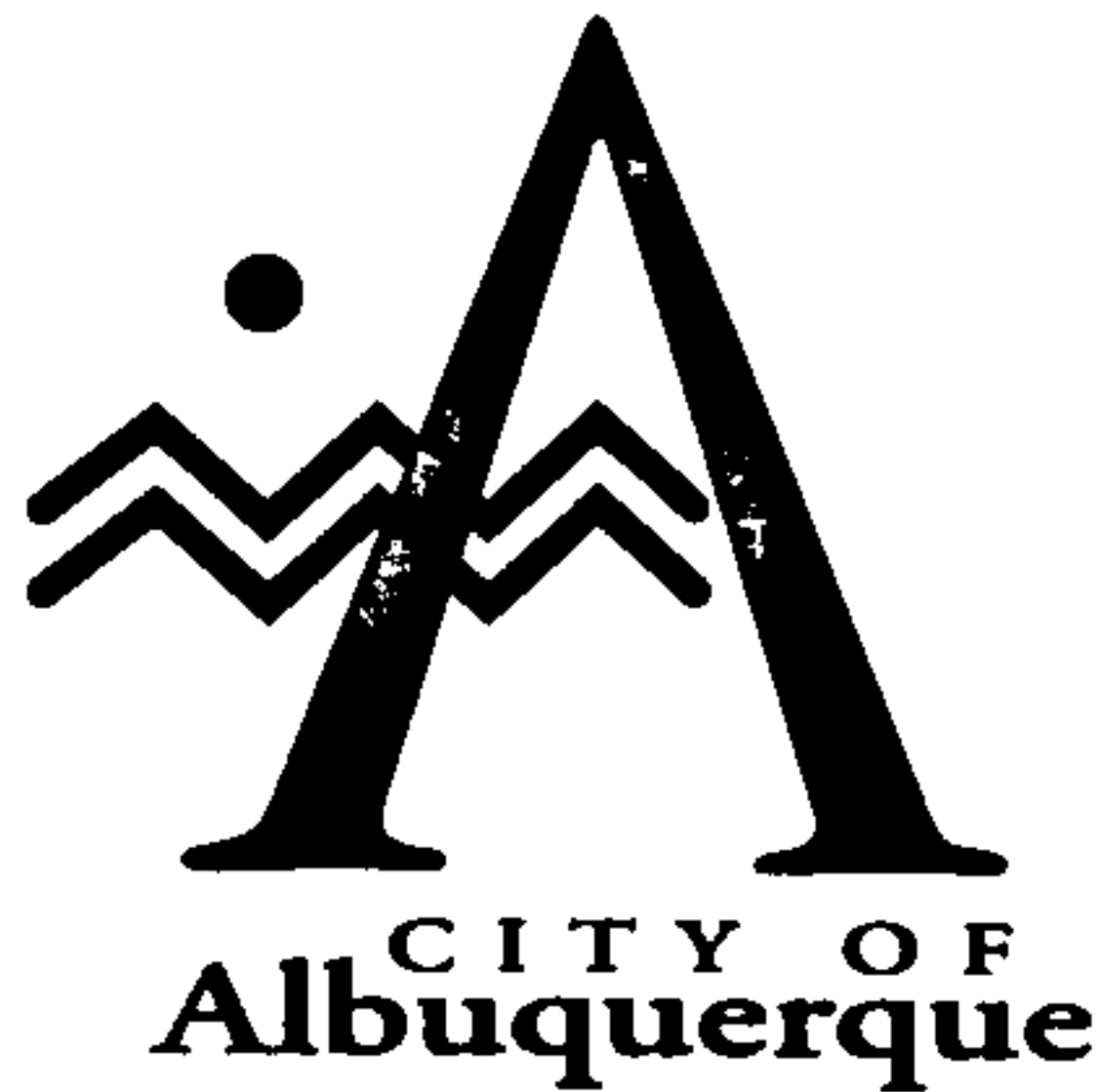
☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATION OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (Specify)

DATE SUBMITTED: 12/12/95

BY: John M. MacKenzie
 John M. MacKenzie PE

RECEIVED

DEC 13



P.O. Box 1293 Albuquerque, NM 87103

May 10, 1996

Martin J. Chávez, Mayor

John M. MacKenzie, PE
Mark Goodwin & Assoc.
PO Box 90606
Albuquerque, NM 87199

RE: DRAINAGE REPORT FOR JOHN ADAMS MID SCHOOL (J-11/D19),
RECEIVED APRIL 15, 1996 FOR BUILDING PERMIT
ENGINEER'S STAMP DATED 4-9-96

Dear Mr. MacKenzie:

Based on the information included in the submittal referenced above, City Hydrology accepts the drainage report for Building Permit.

Include a copy of the grading & drainage plan, dated 4-9-96, in the set of construction documents that will be submitted to Code Administration for the Building Permit.

A separate permit is required for construction of private drainage facilities within the City right of way. A copy of this letter must be on hand when applying for the excavation permit.

Engineer's Certification of grading & drainage per DPM checklist must be accepted by City Hydrology before any Certificate of Occupancy will be released.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer, Hydrology

c: Andrew Garcia
Arlene Portillo

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT TITLE: John Adams Middle School ZONE ATLAS/DRNG, FILE#: J-11-7019

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

LEGAL DESCRIPTION: _____

CITY ADDRESS: 5401 Glenrio Road NW

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: John M. MacKenzie PE

ADDRESS: PO Box 90606 PHONE: 345-2010

OWNER: APS CONTACT: Myron Johnson

ADDRESS: 725 University SE PHONE: 842-8211

ARCHITECT: DCSW CONTACT: K.C. Titsworth

ADDRESS: 105 4th Street SW PHONE: 843-9639

SURVEYOR: ALS, Inc. CONTACT: Tim Aldrich

ADDRESS: PO Box 30701 PHONE: 884-1990

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

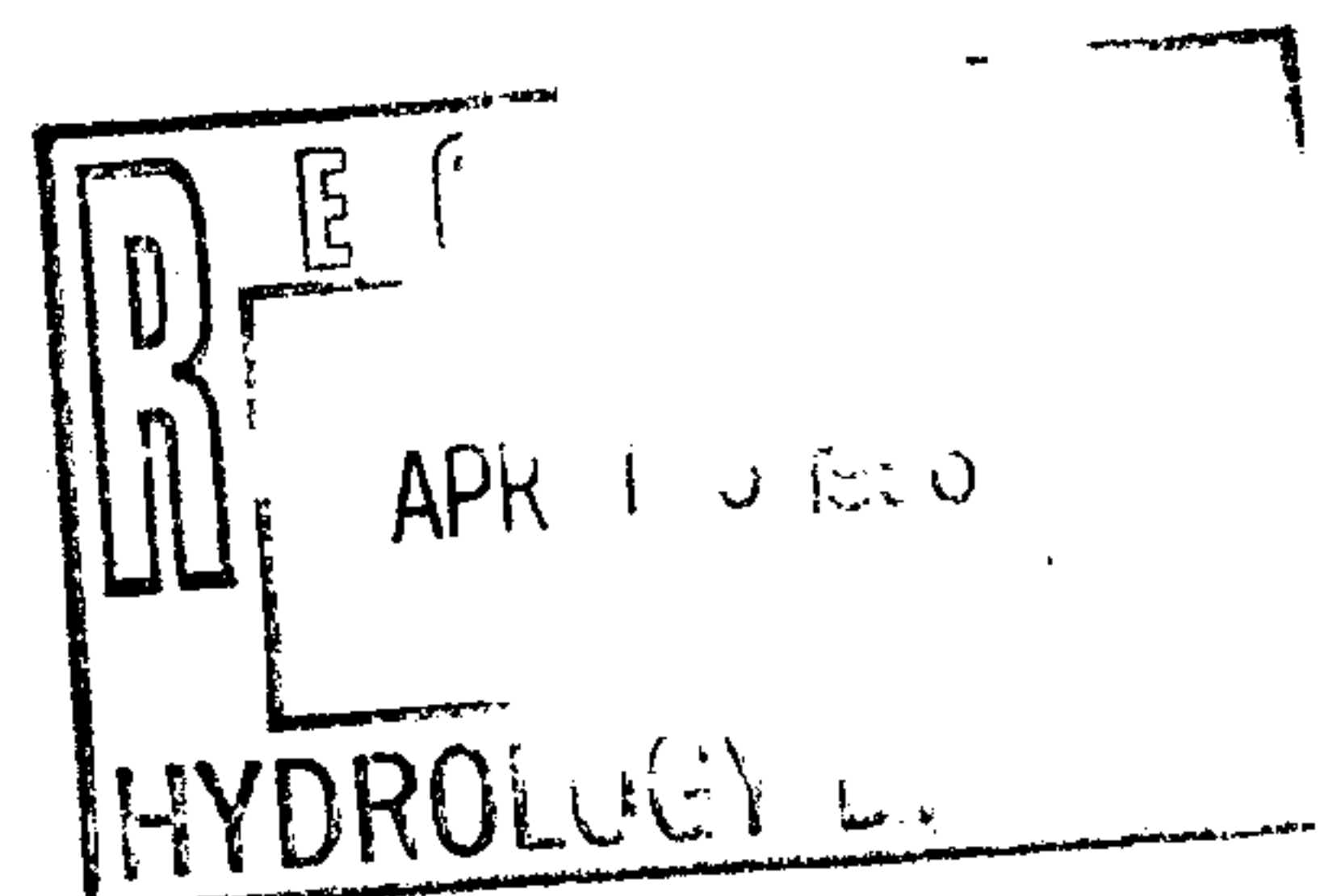
☒ YES
☐ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATION OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (Specify)

DATE SUBMITTED: 4/12/96

BY: John M. MacKenzie
John M. MacKenzie PE





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors
P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 345-2010

April 11, 1996

*Mr. John P. Curtin, PE
Hydrology Division
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103*

Re: *Drainage Report for John Adams Middle School (J11/D19), with Engineer's stamp dated 4/9/96*

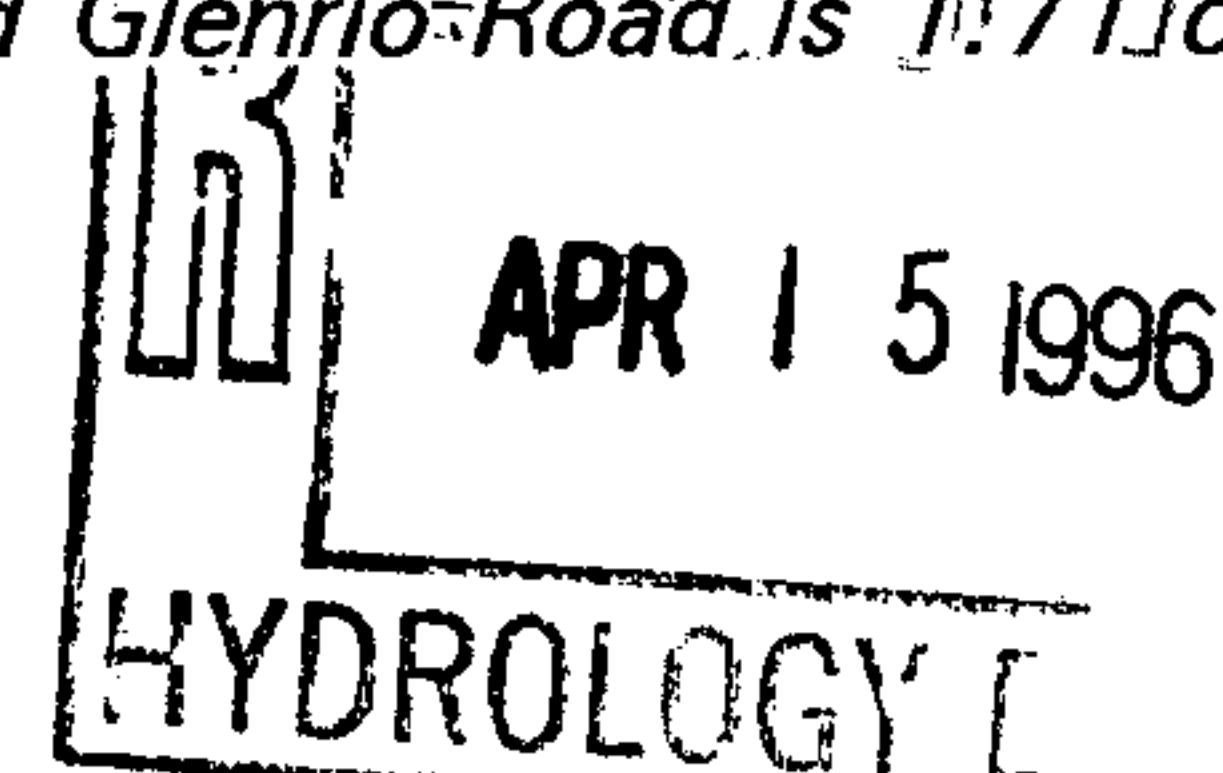
Dear Mr. Curtin:

In response to your outstanding comments, dated December 29, 1995, I have the following replies:

- 1. The proposed canopy is now called out on the plan.*
- 2. The erosion control plan is now shown on the plan.*
- 3. Basin F topography has now been provided on the plan.*
- 4. Basin E land treatments have been corrected on the plan.*
- 5. The additional topography allows for more accurate establishment of the boundary between Basin F and areas which drain north toward Hanover Road. From the new topography, this landscaped courtyard comprising Basin F appears to be essentially flat in the north - south direction with a slight slope to the west. There are three at-grade pedestrian entrances / exits to this courtyard, with two allowing runoff to outfall from the enclosed area. These two outfalls are located on the west side of the courtyard, at the north and south ends of an existing basketball court. Being at relatively the same elevation allows for an equivalent discharge rate for existing runoff to be established for these outfalls. As a result, I have designated a basin boundary down the middle of the courtyard as shown on the plan. The south half (Basin F) discharges into basin B and the north half into the Hanover basin to the north.*

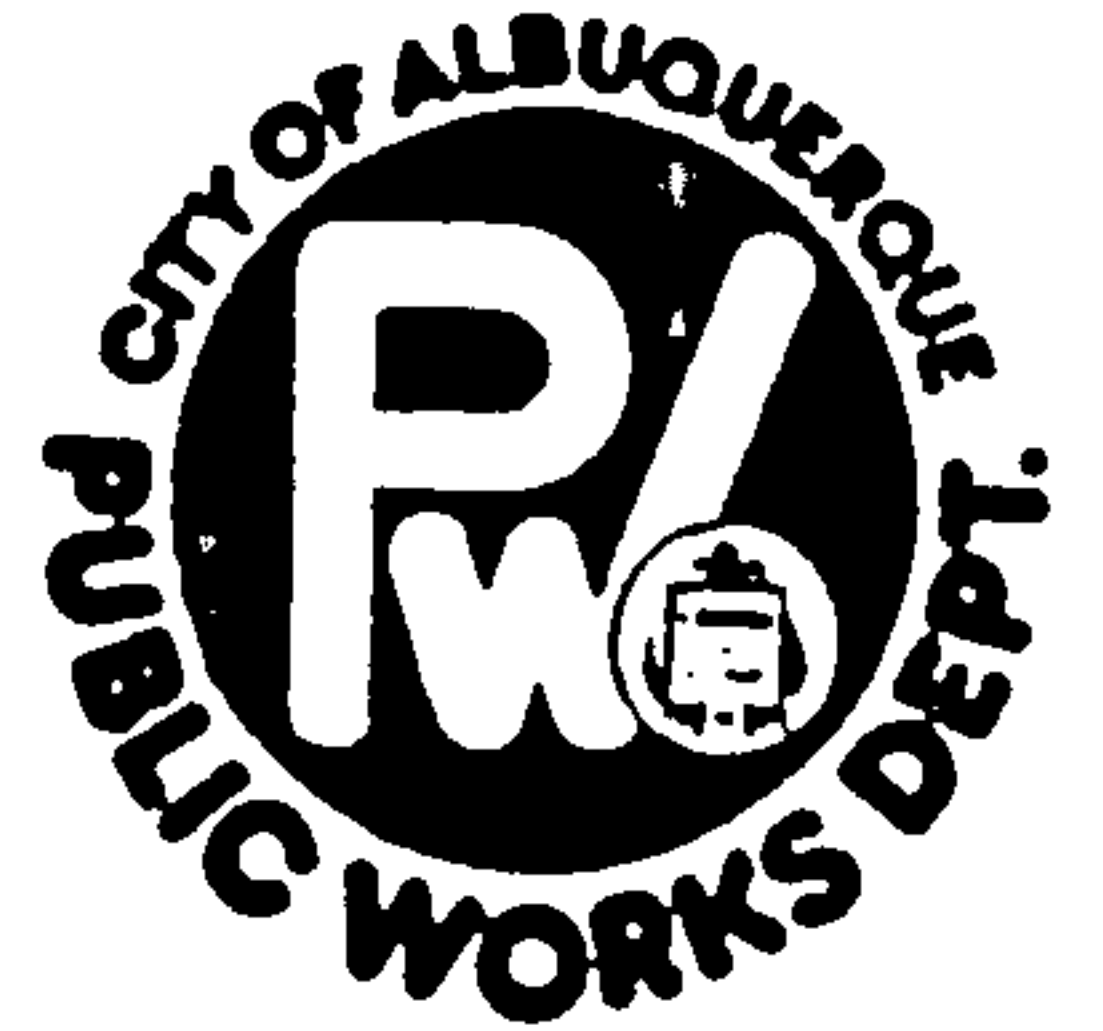
The northern drainage boundary of Basin A (the athletic field) along the west side of the school has also been better defined with the additional topography. These revisions address your question regarding the limits of the site drainage basins that drain toward Glenrio Road.

- 6. The previous drainage analysis has since been revised. As presented in the original report, storage volume of greater than the difference between existing and developed conditions must be provided on-site. Based upon results of AHYMO routing, the maximum water surface elevation is expected to be 93.33, whereby 0.146 Ac. Ft. of storage is provided. This is well in excess of the 0.097 Ac. Ft. required. An event greater than the typical design storm can be accommodated by substantial supplemental volume provided in these basins. After development, the difference in total peak discharge from all basins draining toward Glenrio Road is 1.71 cfs (21.46*



FILE COPY

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT



INTER-OFFICE CORRESPONDENCE

January 24, 1990

ENGINEERING GROUP

TO:

Desiderio Salas; Street Maintenance Division

FROM:

Fred J. Aguirre, Hydrologist; Engineering Group/PWD

SUBJECT:

PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHTS-OF-WAY/EASEMENT
JOHN ADAMS MIDDLE SCHOOL SOCCER FIELD (J-11/D19)

Transmitted herewith, is a copy of the approved drainage plan for the referenced project incorporating the S.O. #19 design.

In accordance with the new process, this plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed-off S.O. #19 is required by this office for Certificate of Occupancy release; hence your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation, and if you should have any questions and/or comments regarding the process, please feel free to call me at 768-2650.

FJA/bsj

Attachment

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 12, 1990

Jeff Mortensen, P.e.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR A SOCCER FIELD @ JOHN ADAMS MIDDLE SCHOOL
(J-11/D19) ENGINEER'S STAMP DATED DECEMBER 21, 1989

Dear Mr. Mortensen:

Based on the information provided on your submittal of December 21, 1989, the above referenced plan is approved for Grading and S.O. #19.

Please be advised that a separate permit is required for construction within City Right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

Also, prior to final approval at termination of project, we will need a copy of the Letter of Acceptance for Work Order 3961.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Darlene Saavedra

BJM/bsj
(WP+1151)

DRAINAGE INFORMATION SHEET

31416

JOHN ADAMS MIDDLE SCHOOL

PROJECT TITLE: COLLEN FRESH ZONE ATLAS/DRNG. FILE #: J11/D19
LEGAL DESCRIPTION: TRACTS 200-203 TOWN OF ARISCO GRANT
CITY ADDRESS: 5401 GLENRIO RD NW

ENGINEERING FIRM: JEFF MORTENSEN & ASSOCIATES INC CONTACT: JEFF MORTENSEN

ADDRESS: 811 DALLAS NE PHONE: 205-5611

OWNER: APS CONTACT: COLLEN FRESH

ADDRESS: _____ PHONE: 823-4012

ARCHITECT: CAMPBELL OKUMA PERKINS CONTACT: BILL PERKINS

ADDRESS: _____ PHONE: 242-9928

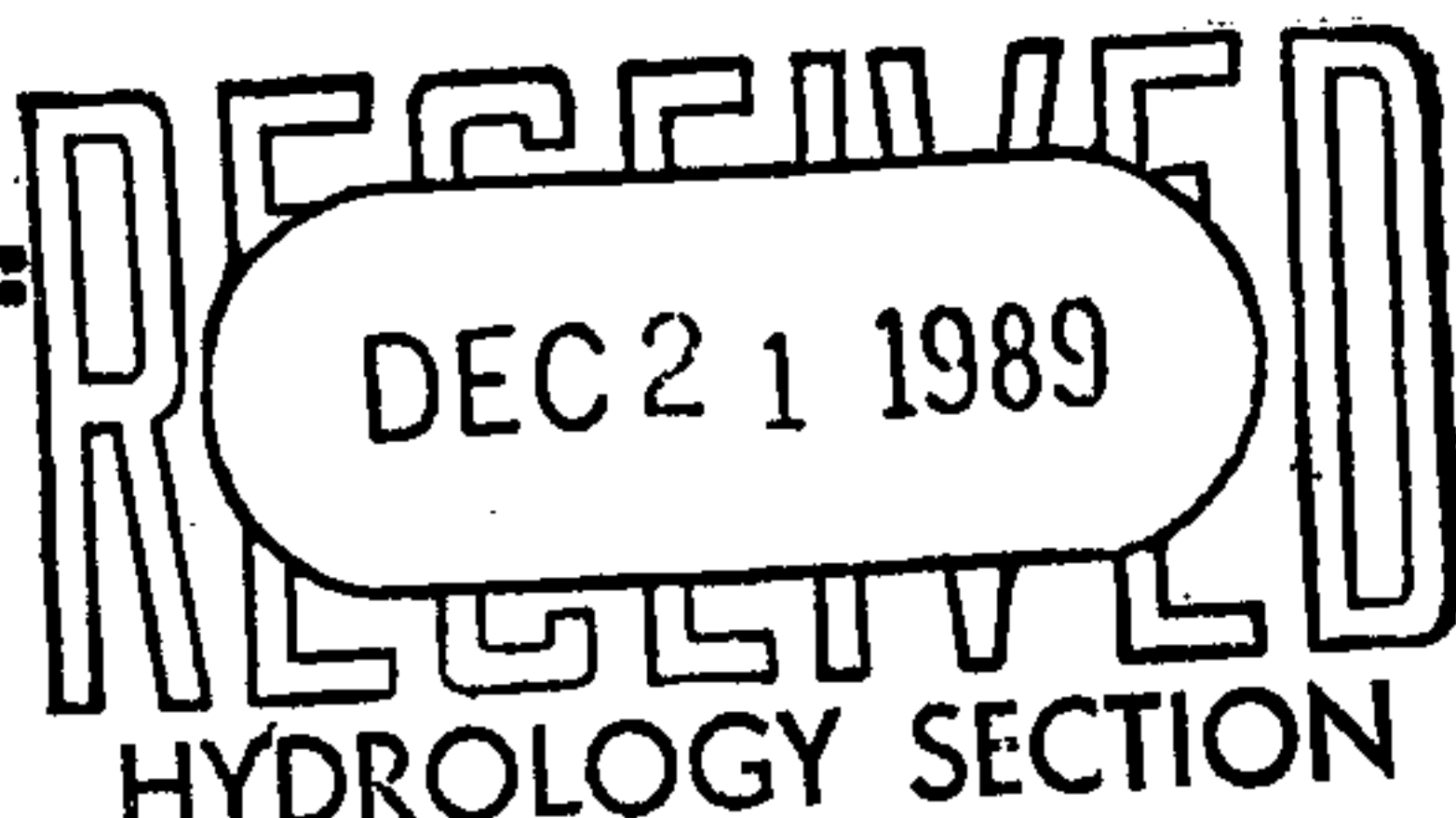
SURVEYOR: JMA CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: PARKS & RSC CONTACT: COLLEN FRESH

ADDRESS: _____ PHONE: 768-3550

PRE-DESIGN MEETING:

☒ YES☐ NO☒ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. 3961

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT☒ DRAINAGE PLAN☐ CONCEPTUAL GRADING & DRAINAGE PLAN☒ GRADING PLAN☐ EROSION CONTROL PLAN☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL☐ PRELIMINARY PLAT APPROVAL☐ SITE DEVELOPMENT PLAN APPROVAL☐ FINAL PLAT APPROVAL☐ BUILDING PERMIT APPROVAL☐ FOUNDATION PERMIT APPROVAL☐ CERTIFICATE OF OCCUPANCY APPROVAL☐ ROUGH GRADING PERMIT APPROVAL☐ GRADING/PAVING PERMIT APPROVAL☒ OTHER DRC (SPECIFY)

(Concept Approval)
+ SO #19

DATE SUBMITTED: JEFF MORTENSENBY: 12-21-89

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
UTILITY DEVELOPMENT DIVISION/HYDROLOGY SECTION

PRE-DESIGN CONFERENCE

DRAINAGE FILE/ZONE ATLAS PAGE NO.: J 11 DATE: 12/12/89

EPC NO.: _____ DRB NO.: _____ ZONE: _____

SUBJECT: John Adam Middle School (City Soccer Field)

STREET ADDRESS: _____

LEGAL DESCRIPTION: Tracts 200 - 203, Town of Aliso Arroyo

APPROVAL REQUESTED: _____ PRELIMINARY PLAT _____ FINAL PLAT
_____ SITE DEVELOPMENT PLAN _____ BUILDING PERMIT
X _____ GRADING/PAVING PERMIT _____ OTHER _____

ATTENDANCE: JEFF MORTENSEN WHO REPRESENTING
FRED J. AGUIRRE

FINDINGS:
• An approved drainage plan is required for a grading permit.
• Drainage of the Playa/Soccer Field into the storm drain in Hanover is acceptable if you can demonstrate that this increase runoff will not have a significant impact downstream.
This can be demonstrated by analyzing the present and fully developed watershed characteristics and compare the impact of full watershed development upon present conditions.

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

SIGNED: [Signature] SIGNED: [Signature]

TITLE: _____ TITLE: _____

DATE: 12/11/89 DATE: 12/11/89

****NOTE**** PLEASE PROVIDE A COPY OF THIS PRE-DESIGN FORM WITH THE DRAINAGE SUBMITTAL.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR DESIGN REVIEW COMMITTEE MEETING

11/28/89

3:00 P.M.

PROJECT: John Adams Middle School Soccer Field

PROJECT NO.: 3961

CONSULTANT: Campbell Okuma Perkins Associates

PRESENT: Roger Green, D.R.C. Chairman
 [Loren Mainz, Hydrology
 Ralph Garcia, Parks & Recreation
 Robert Martinez, Parks & Recreation
 Diane Scena, Parks & Recreation
 Bill Perkins, Consultant
 Robert Kane, Water/Wastewater
 Mary Lee Dereske, Water/Wastewater
 Danny Mitchell, Parks & Recreation

Roger

COMMENTS:

1. Coordinate required drainage plan with new Science Building Drainage Plan (if one exists).
2. Will need to submit drainage plan separately to Hydrology for review and approval.
3. Complete construction drawings prepared by an Engineer for storm drain construction through the work order process are required. Include the new water service as part of these plans and work order.

Next submittal should be for a preliminary plan review meeting when construction plans are at least 65% complete.

RG:cma

WP+124607

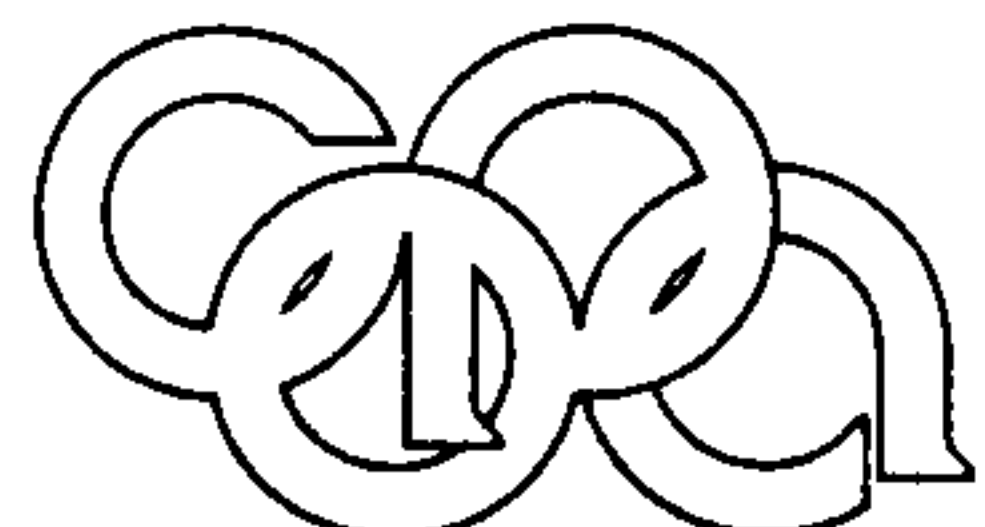
PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



campbell okuma perkins associates inc.

RECEIVED

SEP 20

HYDROLOGY

DATE: September 20, 1989

JOB: John Adams Middle School

TIME: 8:30 a.m.

ATTENDEES: Danny Mitchell, Parks and Recreation
Lorren Meinz, Hydrology ✓
Jeff Mortensen, Jeff Mortensen and Associates
Tracy Young, Campbell Okuma Perkins Assoc. Inc.

RE: Site Drainage

MEETING NOTES:

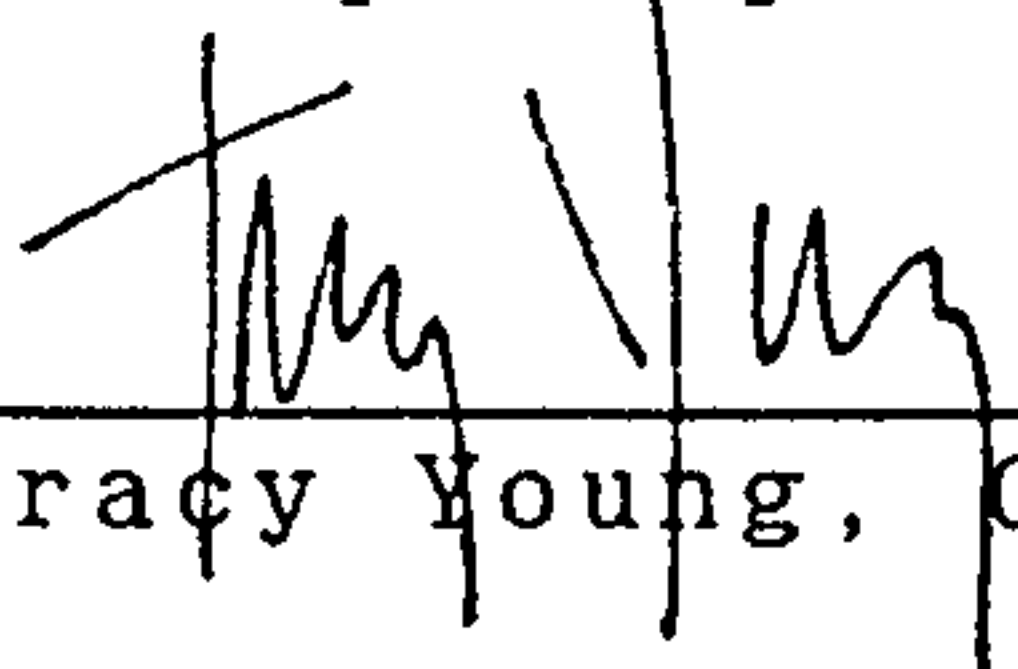
1. A retention pond is not an option if water is to be contained on-site. A detention pond with a positive outlet must be used.
2. New grading/drainage plan should duplicate existing on-site water storage. New detention pond outlet could be tied into the line at 54th Street.
3. Storm sewer line is under capacity. Inlet at 54th Street is under-sized which is one of the reasons for ponding in the area of Hanover Road.
4. New drainage system for the field can tie into the storm sewer line at the east side of the property.
5. Invert elevation of the inlet at 54th Street needs to be confirmed. Inlets in this area are generally three (3) to four (4) feet deep.
6. Material must be reinforced concrete pipe to inlet at a 0.3% slope minimum. (Other material will not withstand City maintenance machinery).
7. The design needs S019 approval from hydrology. Hydrology needs a general hydrology report and drainage/grading plan prepared by the Engineer.
8. COPA to finish schematic plan noting a connection to the existing sewer line. Further study of the grading and drainage will be included in the proposal for Design Development Phases.

SUMMARY NOTES:

From the above it appears this site will have a detention basin with a positive outfall to the storm drain at 54th Street. The basin will replicate existing volumes balanced with new flows out of the pipe. Some field run-off may be piped to the east storm drain if during final design it is cost effective.

Please review these notes and let me know if you see any deficiencies in our perception of the issues.

SIGNED:



Tracy Young, Campbell Okuma Perkins Assoc. Inc.

DISTRIBUTION: Attendees
Jerry Brown, APS

MARK GOODWIN

& ASSOCIATES
CONSULTING ENGINEERS

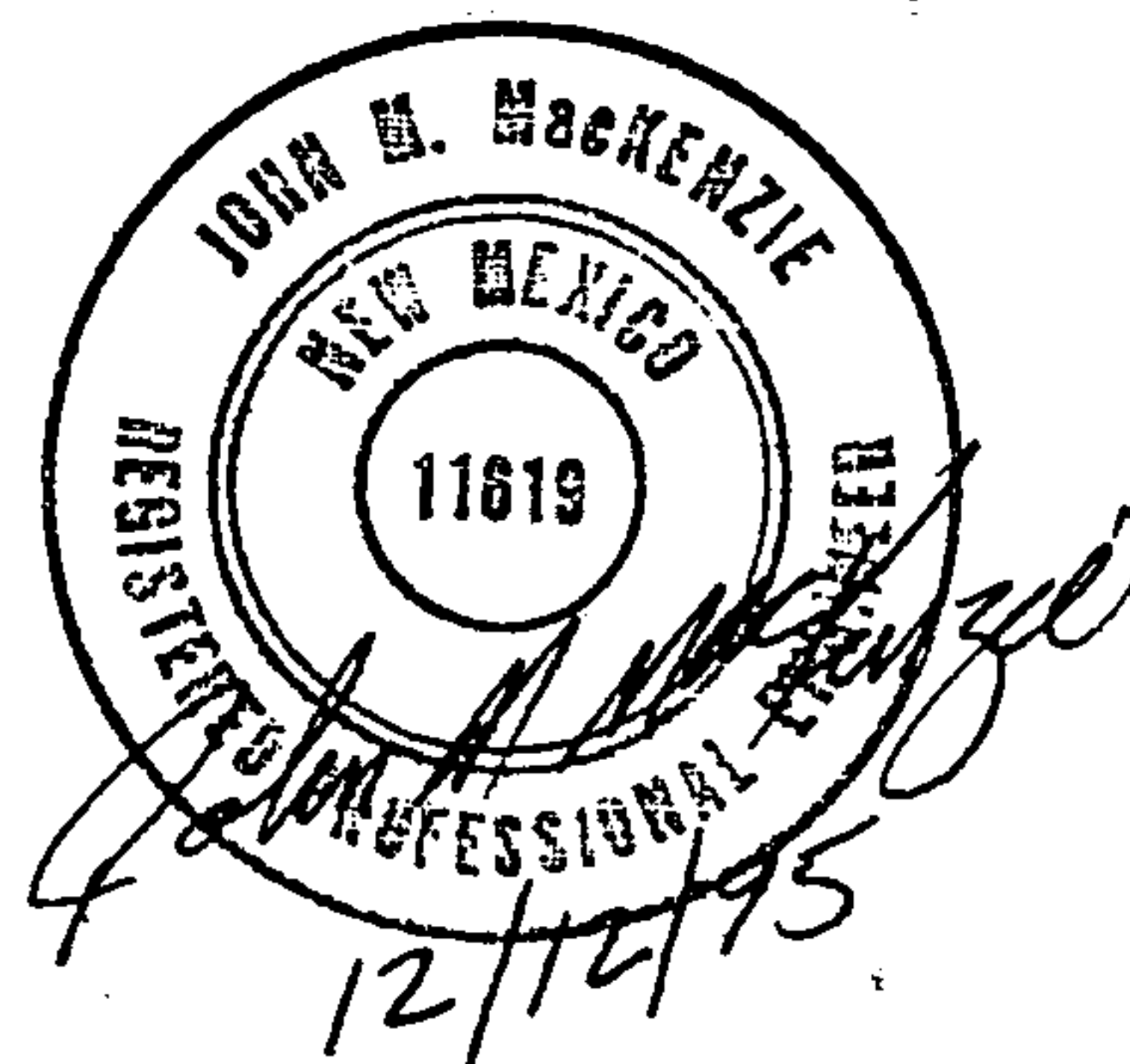
dmg

DRAINAGE REPORT
for
JOHN ADAMS MIDDLE SCHOOL

RECEIVED

DEC 13

December 1995



PURPOSE

The purpose of this report is to present hydrologic information gathered and analyzed in conjunction with proposed improvements to the John Adams Middle School. It has been determined by City of Albuquerque (COA) Hydrology that a complete review of existing and proposed conditions be conducted in order to grant building permit approval. We eventually hope to obtain a building permit upon approval of this report.

EXISTING CONDITIONS

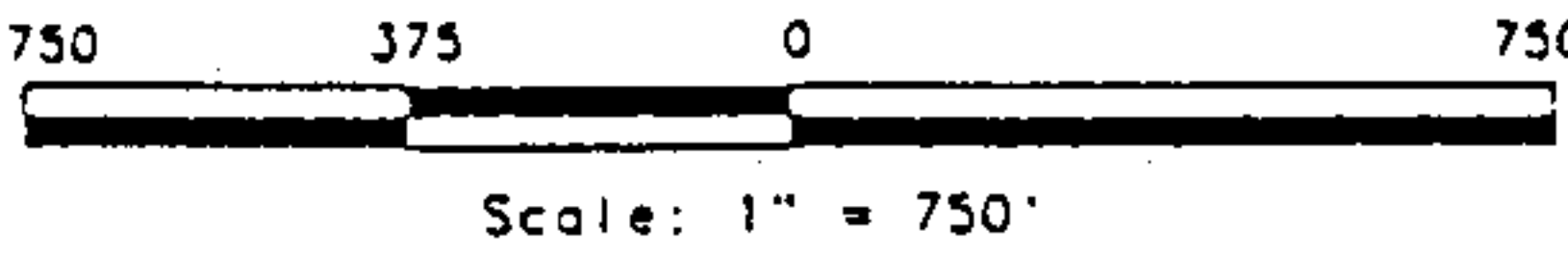
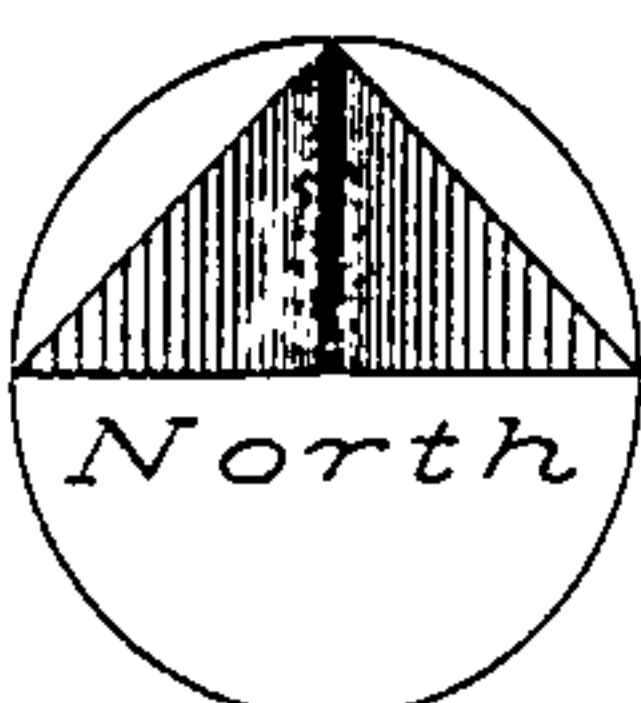
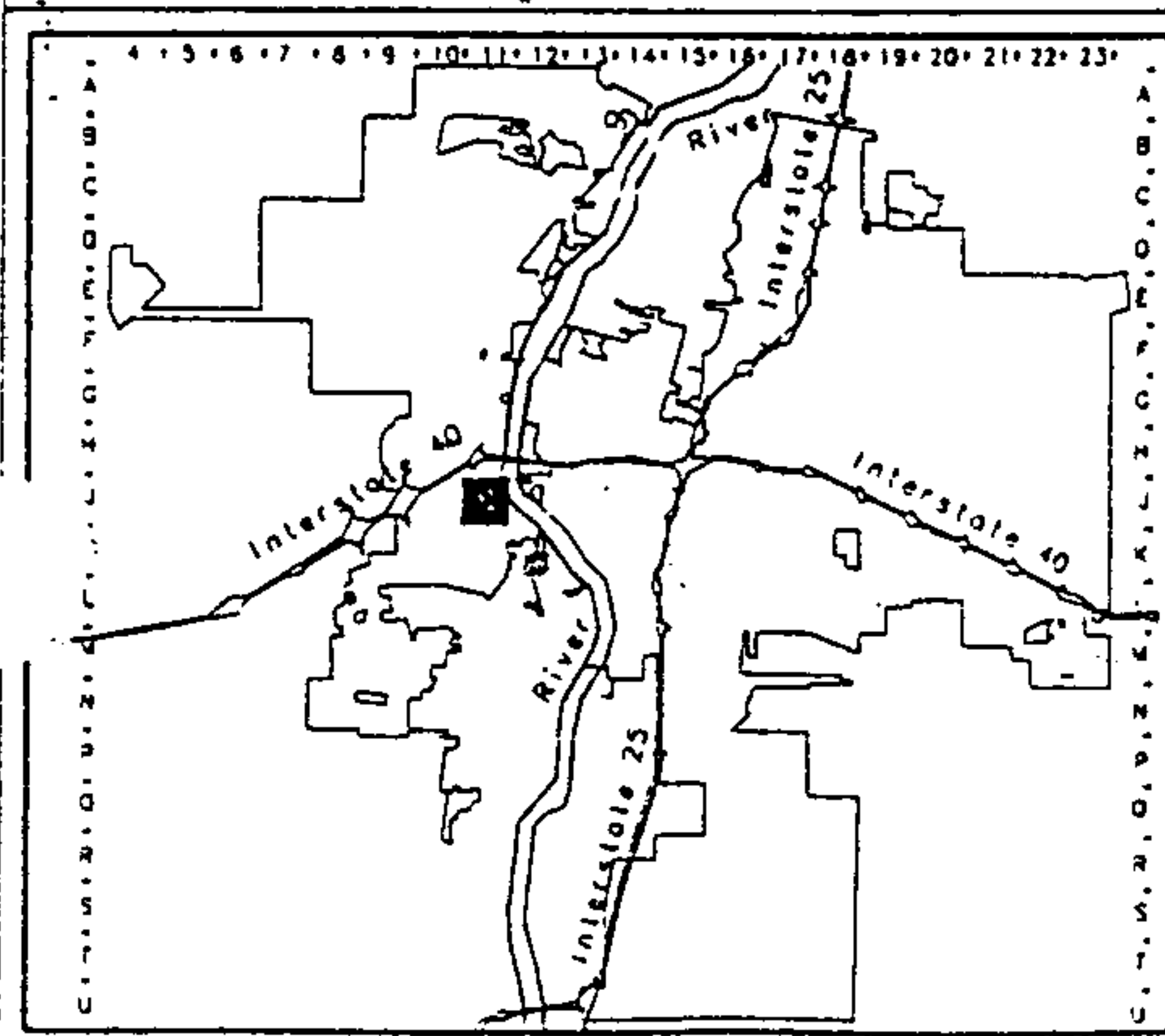
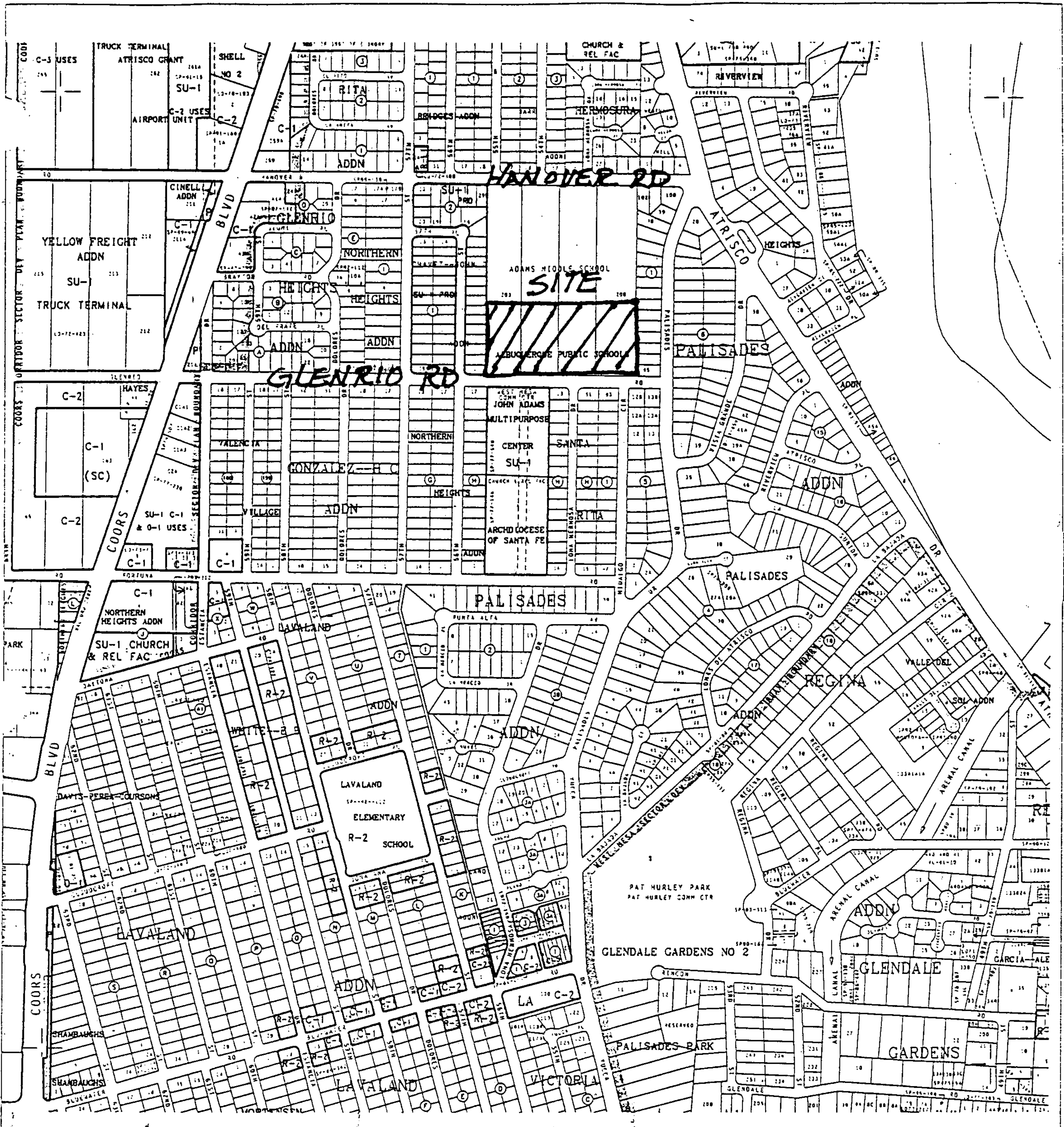
Albuquerque Public Schools (APS) presently owns and operates this facility on approximately 31 acres located between Glenrio Road and Hanover Road, approximately 1/2 mile east of Coors Blvd. A number of renovations and additions have occurred over many years while the surrounding watershed area has completely infilled and become somewhat stable. A City owned and maintained storm sewer system presently conveys runoff from this site and the surrounding watershed to the Rio Grande through a multi-sized pipe network. A 36" diameter portion of the system currently runs from the south to the northeast corner of the school's property. City ownership was confirmed by Mr. Glen Jurgenson, Director of the City Storm Drain Maintenance Department.

Because of concern for adequate capacity in this and other systems on the west side, the COA retained CH₂MHill to perform a comprehensive evaluation of all critical drainage facilities in the area, calling it the Isleta Watershed Study. CH₂MHill found that virtually the entire system was under capacity, recommending that improvements be implemented within the Glenrio—Riverview storm drain system, of which this property is a part. The estimated cost for such improvements would be \$1.36 million. The study found the potential impact of a large magnitude storm would result in moderate to severe flooding in streets, while private property is likely to suffer only minor damage. It appears the storm drain system has not been altered to date.

As stated previously, the John Adams Middle School has undergone numerous changes, with an inevitable increase in the degree of expansion expected due to presently available vacant property adjoining the existing facilities and enrollment expected to increase. Until now, past expansions have not been required to significantly mitigate the impact of development on the surrounding drainage system.

The focus of the proposed site renovations is centered in the southern portion of the main facility where there exists asphalt surfaced parking over the eastern two-thirds of the site and an unimproved native surface over the remaining parking area. It appears no well-conceived drainage plan was followed during construction of these improvements and existing drainage patterns guide runoff toward Glenrio Road in a sheet-flow fashion. Once in Glenrio Road, runoff is collected in storm drain inlets and conveyed to the Rio Grande in the previously referenced storm drain system.

Drainage calculations derived from AHYMO have been presented on the plan for both existing and proposed conditions within 6 individual basins. Off-site basins within the school grounds have been observed to discharge toward the north into storm drain inlets located in Hanover Road and inlets along the eastern edge of the school site. Residential subdivisions to the east and west of this site collect surficial runoff internally so the subject site is not impacted.



A G I S
 Albuquerque Geographic Information System
 City of Albuquerque

© Planning Department July 06, 1993

LEGAL DESCRIPTION

T10N
 R2E
 SEC 14

UNIFORM PROPERTY CODE

1-011-058

J-11-Z

PROPOSED MANAGEMENT PLAN

Under the proposed agreement worked out between COA Hydrology and APS, issuance of this requested building permit will be conditional upon approval of an acceptable grading and drainage plan. Since the proposed improvements are relatively narrow in scope, additional runoff generated by this round of site development can be accommodated by providing on-site detention ponding. Additional runoff generated by future development will not be allowed to adversely impact the already burdened storm drain system without a detailed review and analysis of the larger scale situation at the time new improvements are proposed.

As eluded to previously, the on-site area that is being influenced by the proposed improvements consists of six sub-basins, A through F. Basins A, B and F are too far from the existing storm drain in Glenrio Road to adequately surface drain, so a private storm drain is proposed for collection and conveyance to the back of the existing storm drain inlet in Glenrio Road. With the assistance of revised grading, Basins C, D and E will continue to sheet flow toward Glenrio Road via sidewalk culverts. See the calculations section of this report to review these culvert capacities.

Under the existing conditions all basins collectively total a discharge of 19.78 cfs while the proposed conditions are expected to generate 21.46 cfs. Existing volume would be 0.6742 Ac-Ft and proposed would be 0.829 Ac-Ft. Therefore, with these renovations there is expected to be an increase in peak discharge of 1.68 cfs and an added volume of 0.1548 Ac-Ft or 6,743 ft³. Throttling and detention of the appropriate minimum quantities will be handled by the physically restricting proposed on-site storm drain and parking lot pond storage. With the on-site storm drain consisting of 12" PVC pipe set at a slope of 0.5% there is an automatic flow restriction to 3 cfs (see attached nomograph). The resulting cumulative peak discharge from Basins A through F will then be 14.16 cfs, or a 28% decrease from the existing condition.

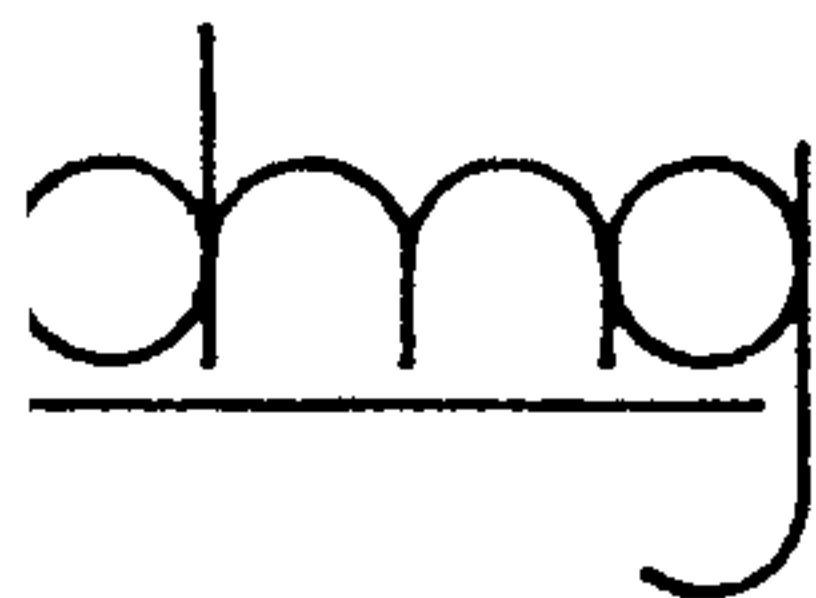
Pressure
Flow
will
increase
flow.

CONCLUSION

Under the recommended provisions of this plan, we find that the proposed on-site drainage scenario will not adversely impact the off-site storm drain system, but actually allow it to function more effectively under a decreased load.

$$14.16 = \overset{A,B,F}{3.0} + \overset{C}{2.73} + \overset{D}{5.07} + \overset{E}{3.36}$$

APPENDIX



D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT John Adams MS
SUBJECT Drainage
BY JMM DATE 4/9/96
CHECKED _____ DATE _____
SHEET 1 OF _____

ON SITE PONING (revised from 12/95)

Basin A

Elev	Area	Avg Area	Depth	Volume
93.00	0	10,045	0.50	5,022 CF
93.50	20,090			11.53 Ac-Ft

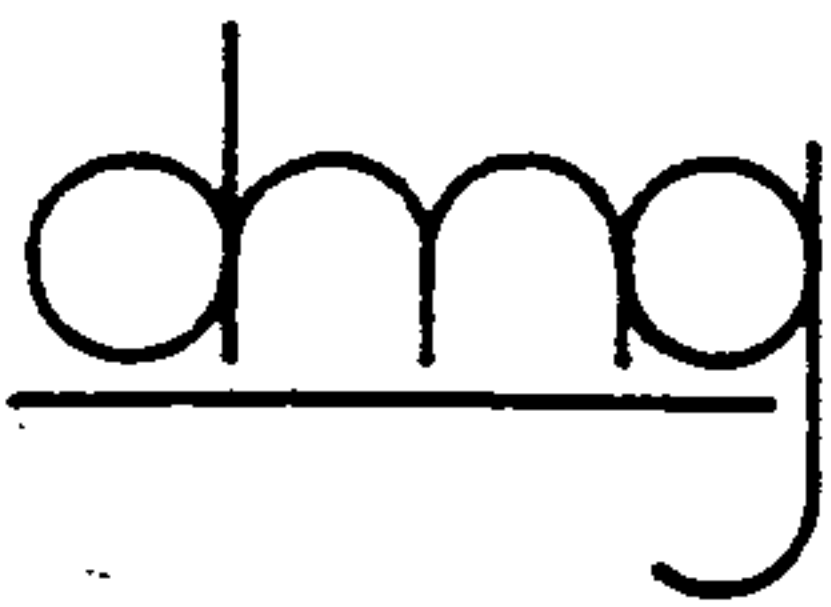
Basin B

92.65	0	3,500	0.85	2,975
93.50	7,000			0.683 Ac-Ft

Total Volume 7,997

0.184 Ac Ft.

When comparing the developed volume generated to the pre-development volume generated from AHYMO the difference is 0.0974 Ac.Ft. or 4243 Cu Ft. Actual storage volume provided through reservoir routing is 0.14 Ac.Ft. or 6377 Cu Ft.



D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT John Adams Middle School
SUBJECT Drainage
BY AMM DATE 12/11/95
CHECKED _____ DATE _____
SHEET 1 OF _____

ON-SITE PONDING

Basin A

Elev	Area	Avg. Area	Depth	Volume ft ³
93.00	0			
		3,200	0.55	1,760
93.55	6,400			

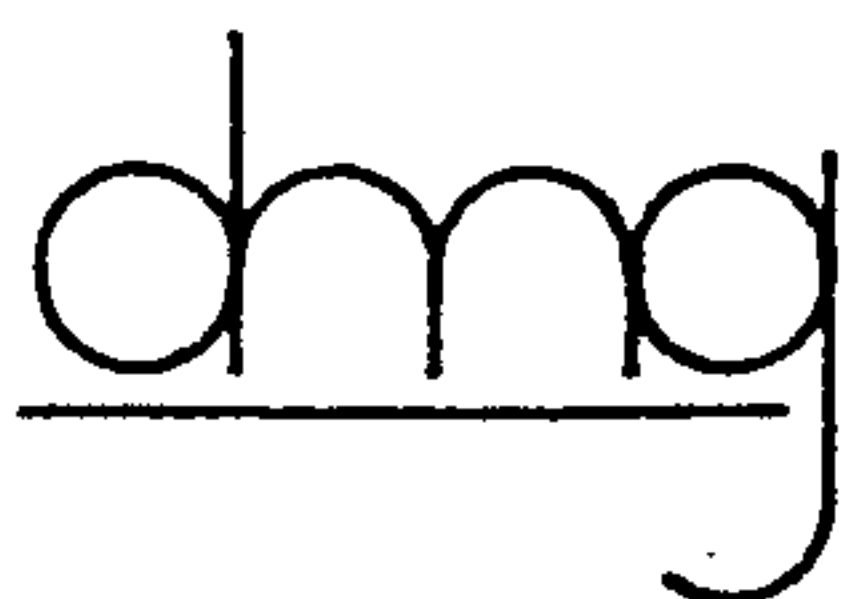
Basin B

Elev	Area	Avg. Area	Depth	Volume
92.65	0			
		5,600	1.15	6,440
93.80	11,200			

Total Ponding Volume

Basins A & B : 8,200 C.F.

total volume required is 6,743 C.F.



D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT John Adams MS
SUBJECT Drainage
BY JMM DATE 4/9/96
CHECKED _____ DATE _____
SHEET 2 OF _____

Basin B Ponding Conditions

Discharge from Basin B is controlled by the 12" storm drain located in the drop inlet designated by the symbol (C) on the dwgs. Flow through this orifice will dictate the resultant ponding detention volume and elevation of maximum water surface.

With the invert at 90.93, the maximum water surface of 93.50 will store a volume of 0.22 Ac.Ft. and result in a discharge of 5.4 cfs. These values are applied to the reservoir routing function in AHYMO to determine actual conditions in the field.

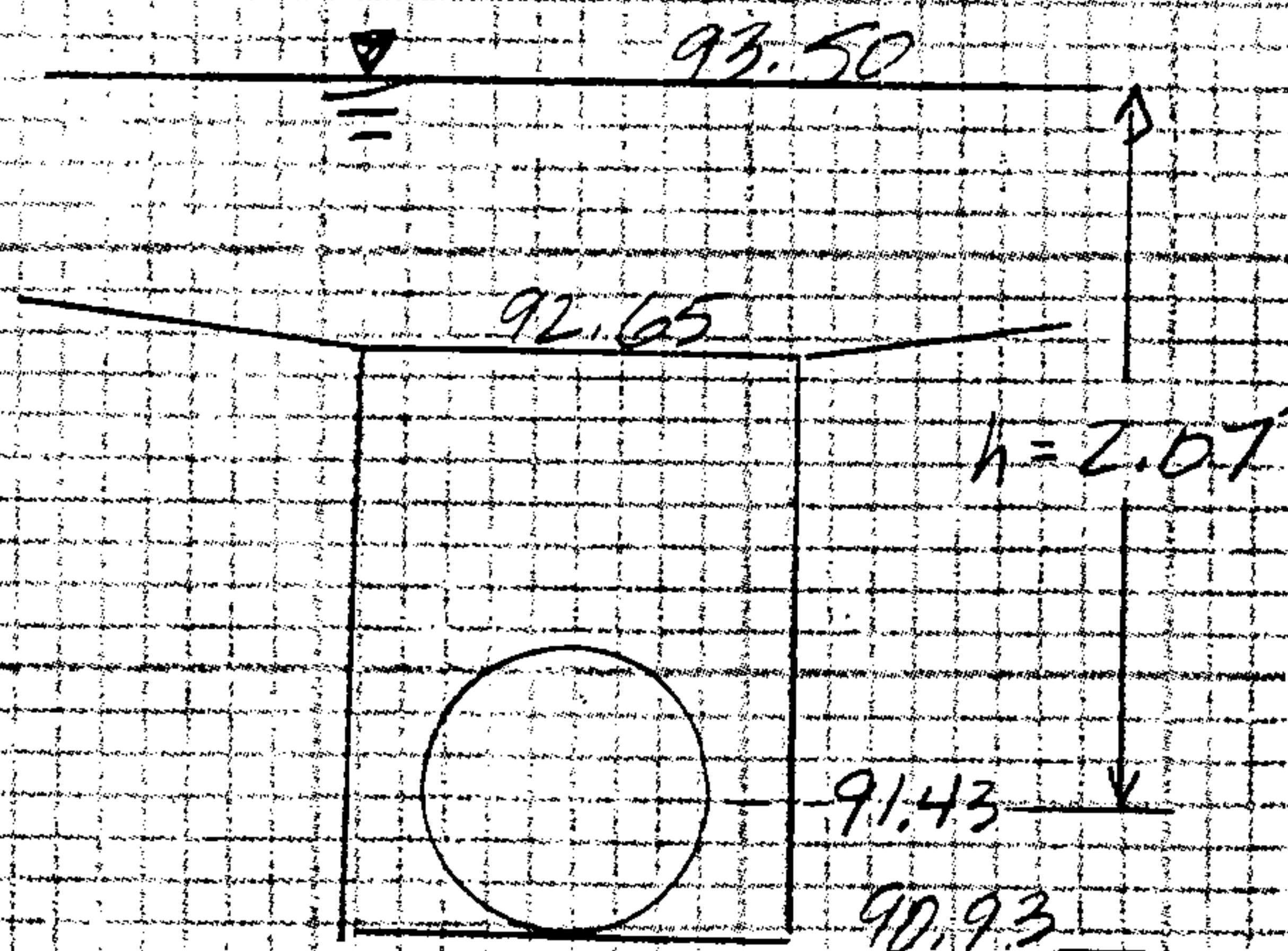
$$Q = C A \sqrt{2 g h}$$

$$C = 0.6 \quad A = 0.785$$

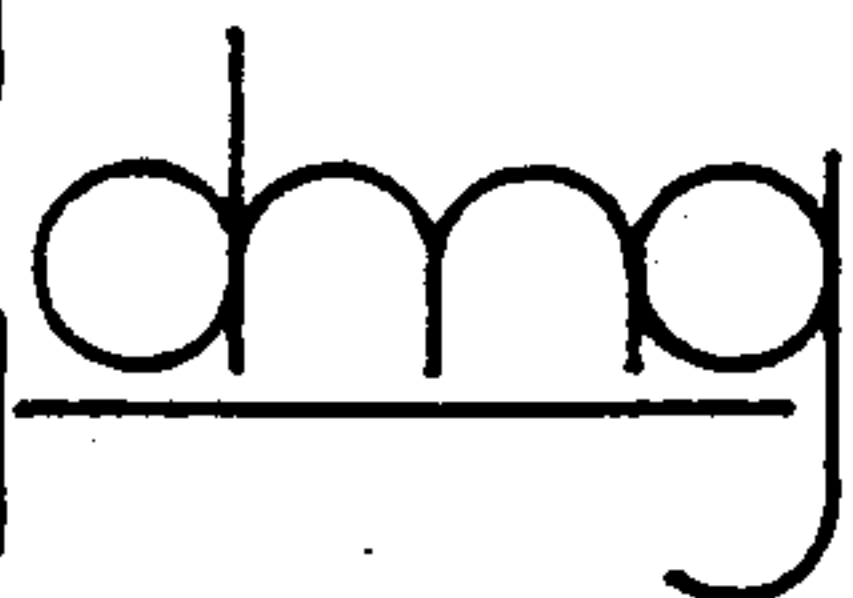
12"

$$Q = 0.6(0.785)\sqrt{2(32.2)(2.07)}$$

$$Q = 5.44 \text{ cfs}$$



Peak discharge after AHYMO routing is 4.30 cfs. See attached printout.



D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT John Adams Middle School
SUBJECT Drainage
BY JMM DATE 12/12/95
CHECKED _____ DATE _____
SHEET 2 OF _____

Capacity Analyses of Sidewalk Culverts

Basin C discharging into Glenrio Rd

$$L = \frac{2.73 cfs}{2.9(0.58)^{1.5}} = 2.11 \text{ ft} \quad \text{use 1-24" culvert with min 2'-2" opening width}$$

Basin D discharging into Glenrio Road

$$L = \frac{5.07 cfs}{2.9(0.58)^{1.5}} = 3.92 \text{ ft} \quad \text{use two-24" culverts}$$

Basin E discharging to Glenrio Rd.

$$L = \frac{3.36 cfs}{2.9(0.58)^{1.5}} = 2.60 \text{ ft} \quad \text{use one 24" culvert \& one 12" culvert}$$

Basin F discharging to Basin B

$$L = \frac{3.47 cfs}{2.9(0.58)^{1.5}} = 2.71 \text{ ft} \quad \text{use one 24" culvert with with expanded 2'-9" opening.}$$

skt. 3



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
UTILITY DEVELOPMENT DIVISION/HYDROLOGY SECTION

shf.4

PRE-DESIGN CONFERENCE

DRAINAGE FILE/ZONE ATLAS PAGE NO.: J 11-D 19 DATE: 10-18-95

EPC NO.: _____ DRB NO.: _____ ZONE: _____

SUBJECT: John Adams

STREET ADDRESS: _____

LEGAL DESCRIPTION: _____

APPROVAL REQUESTED: _____ PRELIMINARY PLAT _____ FINAL PLAT
_____ SITE DEVELOPMENT PLAN X BUILDING PERMIT
_____ GRADING/PAVING PERMIT _____ OTHER

ATTENDANCE: ^{WHO} John Mac Kenzie REPRESENTING _____
Myron Johnson _____
Keith Titsworth _____

FINDINGS:
An approved DRAINAGE plan is required for
Building permit approval. The major item of
concern that must be addressed in this plan are:
Capacity, of the existing S.D. on and downstream
of this site. Recommend you review existing
DRAINAGE FILES / Isleta Watershed Study.

Address ~~the~~ IF A DRAINAGE easement exists for
the existing 36" SD on-site. Workorder permit
required to connect to S.D. directly, with
the exception being that you ^{can} connect to
the back of or a catch basin with an S.D. 19
permit.

The ~~BE~~ DRAINAGE will need to include the basin the
development is within.

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

SIGNED: John Mac Kenzie

TITLE: _____

DATE: _____

SIGNED: John Mac Kenzie

TITLE: _____

DATE: _____

****NOTE**** PLEASE PROVIDE A COPY OF THIS PRE-DESIGN FORM WITH THE DRAINAGE SUBMITTAL.

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 RUN DATE (MON/DAY/YR) = 04/11/1996
 START TIME (HR:MIN:SEC) = 09:14:17 USER NO.= M_GOODWN.101
 INPUT FILE = JOHNADAM.DAT

START TIME=0.0

*****HYDROGRAPH FOR JOHN ADAMS MIDDLE SCHOOL RENOVATION PROJECT

*****AUGUST 1995

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.89 IN RAIN SIX=2.24 IN

RAIN DAY=2.66 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2

PEAK AT 1.40 HR.

DT = .033300 HOURS			END TIME = 5.994000 HOURS			
.0000	.0018	.0036	.0055	.0075	.0094	.0114
.0135	.0156	.0178	.0200	.0222	.0246	.0270
.0294	.0320	.0346	.0373	.0401	.0430	.0460
.0491	.0523	.0556	.0591	.0627	.0665	.0705
.0747	.0792	.0838	.0890	.0946	.1006	.1129
.1411	.1847	.2473	.3329	.4455	.5892	.7682
.9868	1.1966	1.2828	1.3552	1.4196	1.4781	1.5319
1.5819	1.6286	1.6724	1.7136	1.7524	1.7891	1.8239
1.8568	1.8880	1.9176	1.9457	1.9724	1.9799	1.9858
1.9915	1.9968	2.0020	2.0069	2.0117	2.0162	2.0206
2.0249	2.0290	2.0330	2.0369	2.0406	2.0443	2.0478
2.0513	2.0547	2.0580	2.0613	2.0644	2.0675	2.0705
2.0735	2.0764	2.0793	2.0821	2.0848	2.0875	2.0902
2.0928	2.0954	2.0979	2.1004	2.1028	2.1052	2.1076
2.1100	2.1123	2.1145	2.1168	2.1190	2.1212	2.1233
2.1255	2.1276	2.1296	2.1317	2.1337	2.1357	2.1377
2.1397	2.1416	2.1435	2.1454	2.1473	2.1491	2.1510
2.1528	2.1546	2.1564	2.1581	2.1599	2.1616	2.1633
2.1650	2.1667	2.1684	2.1700	2.1716	2.1733	2.1749
2.1765	2.1781	2.1796	2.1812	2.1827	2.1843	2.1858
2.1873	2.1888	2.1903	2.1917	2.1932	2.1946	2.1961
2.1975	2.1989	2.2003	2.2017	2.2031	2.2045	2.2059
2.2072	2.2086	2.2099	2.2113	2.2126	2.2139	2.2152
2.2165	2.2178	2.2191	2.2204	2.2216	2.2229	2.2242
2.2254	2.2266	2.2279	2.2291	2.2303	2.2315	2.2327
2.2339	2.2351	2.2363	2.2375	2.2386	2.2398	

***** EXISTING CONDITIONS BY EACH BASIN FOR BASINS A - F

***** EACH HYDROGRAPH WILL ADDED TO DETERMINE THE TOTAL

***** BASIN A

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0030 SQ MI

4

PER A=0 PER B=62 PER C=25 PER D=13

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 1.5397 CFS UNIT VOLUME = .9922 B = 526.28

P60 = 1.8900

AREA = .000390 SQ MI IA = .10000 INCHES INF = .04000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

K = .123586HR TP = .133300HR K/TP RATIO = .927127 SHAPE

CONSTANT, N = 3.816310

UNIT PEAK = 6.7106 CFS UNIT VOLUME = .9982 B = 342.73

P60 = 1.8900

AREA = .002610 SQ MI IA = .45690 INCHES INF = 1.12931 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .93222 INCHES = .1492 ACRE-FEET

PEAK DISCHARGE RATE = 4.98 CFS AT 1.499 HOURS BASIN AREA =

.0030 SQ. MI.

***** BASIN B

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.0006 SQ MI

PER A=0 PER B=0 PER C=100 PER D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .106092HR TP = .133300HR K/TP RATIO = .795892 SHAPE

CONSTANT, N = 4.504099

UNIT PEAK = 1.7441 CFS UNIT VOLUME = .9933 B = 387.48

P60 = 1.8900

AREA = .000600 SQ MI IA = .35000 INCHES INF = .83000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.01948 INCHES = .0326 ACRE-FEET
PEAK DISCHARGE RATE = 1.13 CFS AT 1.499 HOURS BASIN AREA =
0006 SQ. MI.

5

ADD HYD ID=1 HYD NO=103.1 ID=1 ID=2

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 103.10

RUNOFF VOLUME = .94665 INCHES = .1818 ACRE-FEET
PEAK DISCHARGE RATE = 6.11 CFS AT 1.499 HOURS BASIN AREA =
0036 SQ. MI.

***** BASIN C

COMPUTE NM HYD ID=3 HYD NO=101.3 AREA=0.0010 SQ MI

PER A=0 PER B=0 PER C=73 PER D=27

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 1.0660 CFS UNIT VOLUME = .9880 B = 526.28

P60 = 1.8900

AREA = .000270 SQ MI IA = .10000 INCHES INF = .04000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

K = .106092HR TP = .133300HR K/TP RATIO = .795892 SHAPE

CONSTANT, N = 4.504099

UNIT PEAK = 2.1220 CFS UNIT VOLUME = .9946 B = 387.48

P60 = 1.8900

AREA = .000730 SQ MI IA = .35000 INCHES INF = .83000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 101.30

RUNOFF VOLUME = 1.28543 INCHES = .0686 ACRE-FEET
PEAK DISCHARGE RATE = 2.15 CFS AT 1.499 HOURS BASIN AREA =

.0010 SQ. MI.

ADD HYD

ID=1 HYD NO=103.2 ID=1 ID=3

PRINT HYD

ID=1 CODE=1

6

PARTIAL HYDROGRAPH 103.20

RUNOFF VOLUME = 1.02024 INCHES = .2503 ACRE-FEET
PEAK DISCHARGE RATE = 8.26 CFS AT 1.499 HOURS BASIN AREA =
.0046 SQ. MI.

***** BASIN D

COMPUTE NM HYD

ID=4 HYD NO=101.4 AREA=0.0020 SQ MI

PER A=0 PER B=21 PER C=0 PER D=79

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 6.2379 CFS UNIT VOLUME = .9975 B = 526.28
P60 = 1.8900
AREA = .001580 SQ MI IA = .10000 INCHES INF = .04000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = 1.0328 CFS UNIT VOLUME = .9874 B = 327.79
P60 = 1.8900
AREA = .000420 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

PRINT HYD

ID=4 CODE=1

PARTIAL HYDROGRAPH 101.40

RUNOFF VOLUME = 1.72815 INCHES = .1843 ACRE-FEET
PEAK DISCHARGE RATE = 5.04 CFS AT 1.499 HOURS BASIN AREA =
0020 SQ. MI.

ADD HYD

ID=1 HYD NO=103.3 ID=1 ID=4

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 103.30

RUNOFF VOLUME = 1.23472 INCHES = .4346 ACRE-FEET
PEAK DISCHARGE RATE = 13.30 CFS AT 1.499 HOURS BASIN AREA =
0066 SQ. MI. 7

***** BASIN E

COMPUTE NM HYD ID=5 HYD NO=101.5 AREA=0.0012 SQ MI

PER A=0 PER B=0 PER C=6 PER D=94

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 4.4534 CFS UNIT VOLUME = .9969 B = 526.28
P60 = 1.8900
AREA = .001128 SQ MI IA = .10000 INCHES INF = .04000 I
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

K = .106092HR TP = .133300HR K/TP RATIO = .795892 SHAPE
CONSTANT, N = 4.504099
UNIT PEAK = .20929 CFS UNIT VOLUME = .9361 B = 387.48
P60 = 1.8900
AREA = .000072 SQ MI IA = .35000 INCHES INF = .83000 I
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 101.50

RUNOFF VOLUME = 1.94537 INCHES = .1245 ACRE-FEET
PEAK DISCHARGE RATE = 3.34 CFS AT 1.499 HOURS BASIN AREA =
.0012 SQ. MI.

ADD HYD ID=1 HYD NO=103.4 ID=1 ID=5

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 103.40

RUNOFF VOLUME = 1.34402 INCHES = .5591 ACRE-FEET
PEAK DISCHARGE RATE = 16.65 CFS AT 1.499 HOURS BASIN AREA =
.0078 SQ. MI.

***** BASIN F

COMPUTE NM HYD ID=6 HYD NO=101.6 AREA=0.0012 SQ MI

8

PER A=0 PER B=17 PER C=0 PER D=83

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 3.9323 CFS UNIT VOLUME = .9965 B = 526.28
P60 = 1.8900
AREA = .000996 SQ MI IA = .10000 INCHES INF = .04000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = .50165 CFS UNIT VOLUME = .9726 B = 327.79
P60 = 1.8900
AREA = .000204 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 101.60

RUNOFF VOLUME = 1.78078 INCHES = .1140 ACRE-FEET
PEAK DISCHARGE RATE = 3.10 CFS AT 1.499 HOURS BASIN AREA =
0012 SQ. MI.

***** TOTAL EXISTING RUNOFF CONDITIONS FOR BASINS A - F

ADD HYD ID=1 HYD NO=103.5 ID=1 ID=6

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 103.50

RUNOFF VOLUME = 1.40222 INCHES = .6731 ACRE-FEET
PEAK DISCHARGE RATE = 19.75 CFS AT 1.499 HOURS BASIN AREA =
.0090 SQ. MI.

***** EACH BASIN WILL BE EVALUATED INDIVIDUALLY & TOTALED

9

***** PROPOSED CONDITIONS WITHIN BASIN A

COMPUTE NM HYD ID=7 HYD NO=101.7 AREA=0.0030 SQ MI

PER A=0 PER B=66 PER C=0 PER D=34

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 4.0270 CFS UNIT VOLUME = .9965 B = 526.28

P60 = 1.8900

AREA = .001020 SQ MI IA = .10000 INCHES INF = .04000 I

NCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE

CONSTANT, N = 3.603328

UNIT PEAK = 4.8690 CFS UNIT VOLUME = .9975 B = 327.79

P60 = 1.8900

AREA = .001980 SQ MI IA = .50000 INCHES INF = 1.25000 I

NCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 101.70

RUNOFF VOLUME = 1.13605 INCHES = .1818 ACRE-FEET

PEAK DISCHARGE RATE = 5.53 CFS AT 1.499 HOURS BASIN AREA =

.0030 SQ. MI.

***** PROPOSED CONDITIONS WITHIN BASIN B

COMPUTE NM HYD ID=8 HYD NO=101.8 AREA=0.0006 SQ MI

PER A=0 PER B=5 PER C=0 PER D=95

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 2.2504 CFS UNIT VOLUME = .9941 B = 526.28

P60 = 1.8900

AREA = .000570 SQ MI IA = .10000 INCHES INF = .04000 I

NCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = .73772E-01CFS UNIT VOLUME = .8724 B = 327.79
P60 = 1.8900
AREA = .000030 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 101.80

RUNOFF VOLUME = 1.93868 INCHES = .0620 ACRE-FEET
PEAK DISCHARGE RATE = 1.67 CFS AT 1.499 HOURS BASIN AREA =
.0006 SQ. MI.

***** BASINS A & B WILL BE ADDED TOGETHER(ID=7), AND LATER,

***** BASIN F WILL BE ADDED TO THIS TOTAL PRIOR TO ROUTING

ADD HYD ID=7 HYD NO=103.6 ID=7 ID=8

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 103.60

RUNOFF VOLUME = 1.26966 INCHES = .2438 ACRE-FEET
PEAK DISCHARGE RATE = 7.20 CFS AT 1.499 HOURS BASIN AREA =
.0036 SQ. MI.

***** PROPOSED CONDITIONS WITHIN BASIN C

COMPUTE NM HYD ID=9 HYD NO=101.9 AREA=0.0010 SQ MI

PER A=0 PER B=8 PER C=0 PER D=92

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 3.6322 CFS UNIT VOLUME = .9960 B = 526.28
P60 = 1.8900
AREA = .000920 SQ MI IA = .10000 INCHES INF = .04000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = .19673 CFS UNIT VOLUME = .9298 B = 327.79

AREA = .000080 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=.033300 //

PRINT HYD ID=9 CODE=1

PARTIAL HYDROGRAPH 101.90

RUNOFF VOLUME = 1.89921 INCHES = .1013 ACRE-FEET
PEAK DISCHARGE RATE = 2.73 CFS AT 1.499 HOURS BASIN AREA =
.0010 SQ. MI.

***** ID=20 NOW CONTINUES AS THE CUMULATIVE HYDROGRAPH

ADD HYD ID=20 HYD NO=103.7 ID=7 ID=9

PRINT HYD ID=20 CODE=1

PARTIAL HYDROGRAPH 103.70

RUNOFF VOLUME = 1.40646 INCHES = .3450 ACRE-FEET
PEAK DISCHARGE RATE = 9.92 CFS AT 1.499 HOURS BASIN AREA =
.0046 SQ. MI.

***** PROPOSED CONDITIONS WITHIN BASIN D

COMPUTE NM HYD ID=10 HYD NO=101.10 AREA=0.0020 SQ MI

PER A=0 PER B=20 PER C=0 PER D=80

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 6.3169 CFS UNIT VOLUME = .9975 B = 526.28
P60 = 1.8900
AREA = .001600 SQ MI IA = .10000 INCHES INF = .04000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=.033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
CONSTANT, N = 3.603328
UNIT PEAK = .98363 CFS UNIT VOLUME = .9863 B = 327.79
P60 = 1.8900
AREA = .000400 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=.033300

RUNOFF VOLUME = 1.74131 INCHES = .1857 ACRE-FEET
 PEAK DISCHARGE RATE = 5.07 CFS AT 1.499 HOURS BASIN AREA =
 .0020 SQ. MI.

ADD HYD ID=20 HYD NO=103.8 ID=20 ID=10

PRINT HYD ID=20 CODE=1

PARTIAL HYDROGRAPH 103.80

RUNOFF VOLUME = 1.50788 INCHES = .5308 ACRE-FEET
 PEAK DISCHARGE RATE = 15.00 CFS AT 1.499 HOURS BASIN AREA =
 .0066 SQ. MI.

***** PROPOSED CONDITIONS WITHIN BASIN E

COMPUTE NM HYD ID=11 HYD NO=101.11 AREA=0.0012 SQ MI

PER A=0 PER B=3 PER C=0 PER D=97

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
 CONSTANT, N = 7.106420
 UNIT PEAK = 4.5955 CFS UNIT VOLUME = .9969 B = 526.28
 P60 = 1.8900

AREA = .001164 SQ MI IA = .10000 INCHES INF = .04000 I
 NCHES PER HOUR

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

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
 CONSTANT, N = 3.603328
 UNIT PEAK = .88527E-01CFS UNIT VOLUME = .8724 B = 327.79
 P60 = 1.8900

AREA = .000036 SQ MI IA = .50000 INCHES INF = 1.25000 I
 NCHES PER HOUR

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

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 101.11

RUNOFF VOLUME = 1.96500 INCHES = .1258 ACRE-FEET
 PEAK DISCHARGE RATE = 3.36 CFS AT 1.499 HOURS BASIN AREA =

ADD HYD ID=20 HYD NO=103.9 ID=20 ID=11

PRINT HYD ID=20 CODE=1

PARTIAL HYDROGRAPH 103.90

RUNOFF VOLUME = 1.57817 INCHES = .6565 ACRE-FEET
 PEAK DISCHARGE RATE = 18.35 CFS AT 1.499 HOURS BASIN AREA =
 0078 SQ. MI.

***** PROPOSED CONDITIONS WITHIN BASIN F

COMPUTE NM HYD ID=12 HYD NO=101.12 AREA=0.0012 SQ MI

PER A=0 PER B=17 PER C=0 PER D=83

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
 CONSTANT, N = 7.106420
 UNIT PEAK = 3.9323 CFS UNIT VOLUME = .9965 B = 526.28
 P60 = 1.8900
 AREA = .000996 SQ MI IA = .10000 INCHES INF = .04000 I
 NCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
 = .033300

K = .130640HR TP = .133300HR K/TP RATIO = .980045 SHAPE
 CONSTANT, N = 3.603328
 UNIT PEAK = .50165 CFS UNIT VOLUME = .9726 B = 327.79
 P60 = 1.8900
 AREA = .000204 SQ MI IA = .50000 INCHES INF = 1.25000 I
 NCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
 = .033300

PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 101.12

RUNOFF VOLUME = 1.78078 INCHES = .1140 ACRE-FEET
 PEAK DISCHARGE RATE = 3.10 CFS AT 1.499 HOURS BASIN AREA =
 0012 SQ. MI.

***** TOTAL PROPOSED RUNOFF CONDITIONS FOR BASINS A - F

ADD HYD ID=20 HYD NO=103.10 ID=20 ID=12

PRINT HYD ID=20 CODE=1

PARTIAL HYDROGRAPH 103.10

RUNOFF VOLUME = 1.60516 INCHES = .7705 ACRE-Feet
 PEAK DISCHARGE RATE = 21.46 CFS AT 1.499 HOURS BASIN AREA =
 .0090 SQ. MI..

***** BASIN F WILL BE ADDED TO THE PREVIOUS TOTAL FROM

***** BASINS A & B (ID=7) AND THEN ROUTED TO GLENRID INLET

ADD HYD ID=7 HYD NO=103.11 ID=7 ID=12

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 103.11

RUNOFF VOLUME = 1.39739 INCHES = .3577 ACRE-Feet
 PEAK DISCHARGE RATE = 10.30 CFS AT 1.499 HOURS BASIN AREA =
 .0048 SQ. MI..

ROUTE RESERVOIR ID=13 HYD NO=102 INFLOW ID=7 CODE=10

OUTFLOW(CFS)	STORAGE(AC FT)	ELEV(FT)
0.0	0.0	92.65
5.4	0.184	93.50

* * * * *

TIME INFLOW ELEV VOLUME OUTFLOW

(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
.00	.00	92.65	.000	.00
.33	.00	92.65	.000	.00
.67	.00	92.65	.000	.00
1.00	.00	92.65	.000	.00
1.33	2.32	92.70	.011	.31
1.67	5.39	93.31	.144	4.22
2.00	2.09	93.21	.122	3.58
2.33	.49	92.99	.074	2.17
2.66	.19	92.83	.039	1.13
3.00	.10	92.74	.020	.58
3.33	.07	92.70	.010	.30
3.66	.05	92.68	.006	.17
4.00	.05	92.67	.003	.10
4.33	.05	92.66	.002	.07
4.66	.05	92.66	.002	.06
5.00	.05	92.66	.002	.05
5.33	.05	92.66	.002	.05
5.66	.05	92.66	.002	.05
5.99	.06	92.66	.002	.05
6.33	.01	92.66	.001	.04
6.66	.00	92.65	.001	.02
6.99	.00	92.65	.000	.01
7.33	.00	92.65	.000	.00

PEAK DISCHARGE = 4.297 CFS - PEAK OCCURS AT HOUR 1.73
MAXIMUM WATER SURFACE ELEVATION = 93.326
MAXIMUM STORAGE = .1464 AC-FT INCREMENTAL TIME= .033300HR

PRINT HYD ID=13 CODE=10

PARTIAL HYDROGRAPH 102.00

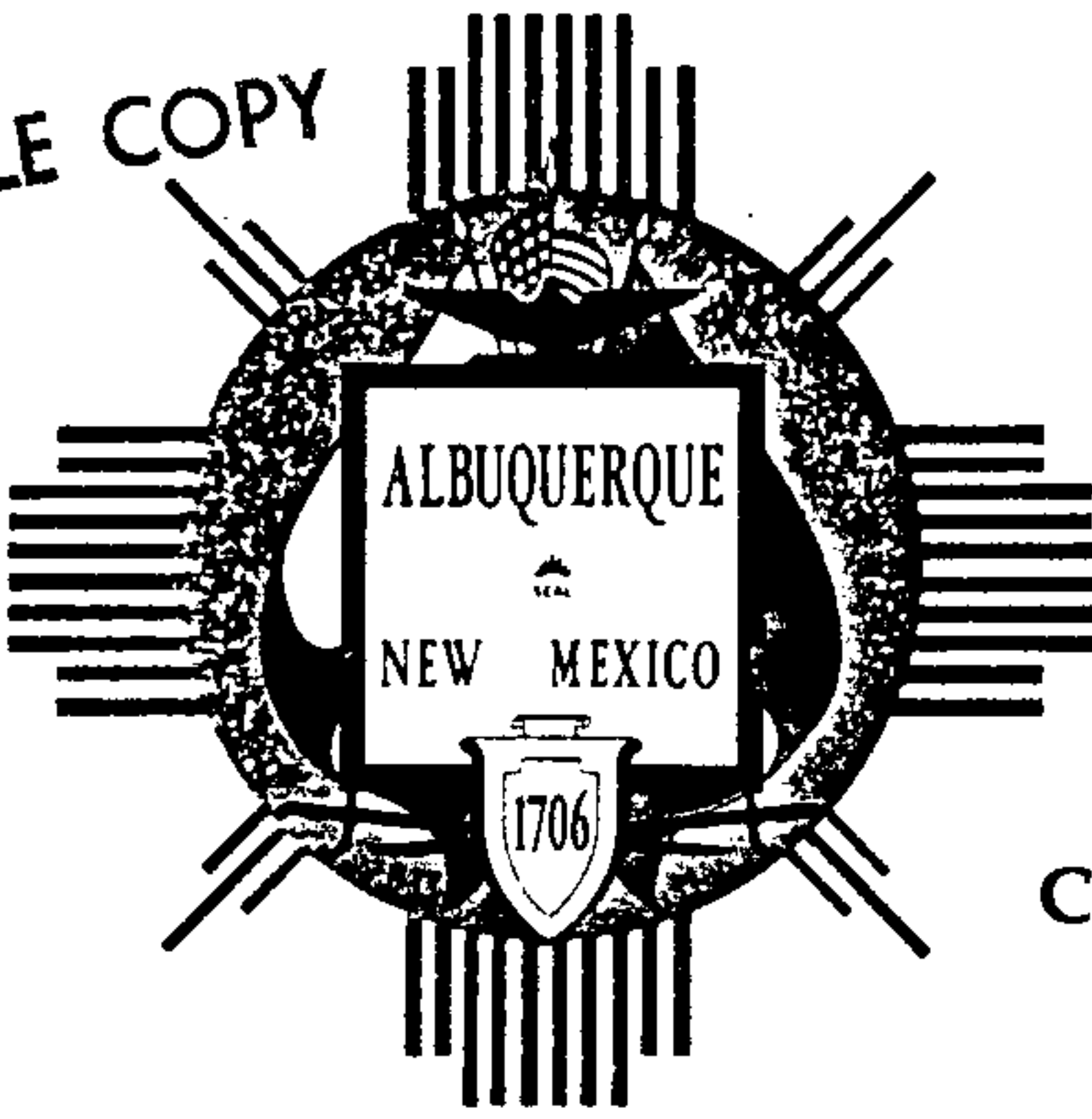
TIME FLOW			TIME FLOW			TIME FLOW	
TIME	FLOW		TIME	FLOW			
HRS	CFS		HRS	CFS		HRS	CFS
	.000	.0	1.665		4.2	3.330	.3
4.995	.1		6.660	.0			
	.333	.0	1.998		3.6	3.663	.2
5.328	.0		6.993	.0			
	.666	.0	2.331		2.2	3.996	.1
5.661	.1		7.326	.0			
	.999	.0	2.664		1.1	4.329	.1
5.994	.1		7.659	.0			
	1.332	.3	2.997		.6	4.662	.1
6.327	.0						

RUNOFF VOLUME = 1.39739 INCHES = .3577 ACRE-FEET
PEAK DISCHARGE RATE = 4.30 CFS AT 1.732 HOURS BASIN AREA =
.0048 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 10:19:11

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

CLARENCE V. LITHGOW
CHIEF
ADMINISTRATIVE OFFICER

DAN WEAKS
DEPUTY CAO
PUBLIC SERVICES

FRED E. MONDRAGON
DEPUTY CAO
DEVELOPMENT & ENTERPRISE SERVICES

RAY R. BACA
DEPUTY CAO
PUBLIC SAFETY

July 13, 1989

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR AN ADDITION TO JOHN ADAMS MIDDLE SCHOOL
(J-11/D19) ENGINEER'S STAMP DATED JUNE 28, 1989

Dear Mr. Mortensen:

Based on the information provided on your submittal of June 28, 1989, the above referenced plan is approved for Building Permit.

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

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1151)

DRAINAGE INFORMATION SHEET

PROJECT TITLE: JOHN ADAMS MIDDLE SCHOOL ZONE ATLAS/DRAINAGE FILE # J-11/D19

LEGAL DESCRIPTION: LOTS 200-208 JOHN ADAMS JR HIGH & CHAPARRAL

CITY ADDRESS: 5401 GLENRIO RD. N.W.

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: LEONARD P. UTTER

ADDRESS: 811 DALLAS N.E. PHONE: 265-5611

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: ARCHITECT

ADDRESS: _____ PHONE: _____

ARCHITECT: HOLMES-SABATINI EEDS CONTACT: VAN WEAVER

ADDRESS: 202 CENTRAL SE PHONE: 247-3705

SURVEYOR: JEFF MORTENSEN & ASSOC. CONTACT: LEONARD P. UTTER

ADDRESS: 811 DALLAS N.E. PHONE: 265-5611

CONTRACTOR: _____ CONTACT: VAN WEAVER

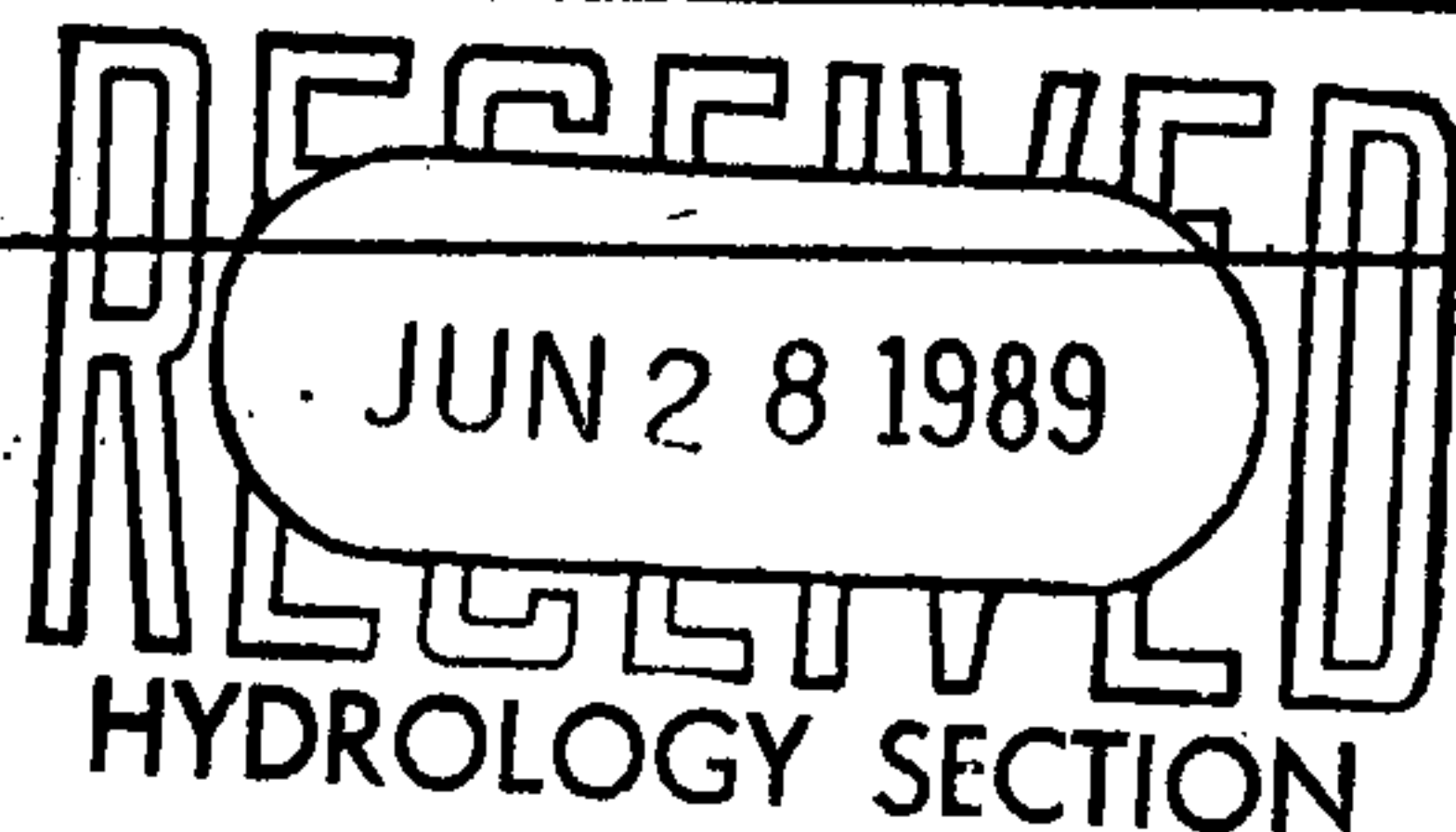
ADDRESS: _____ PHONE: 247-3705

PRE-DESIGN MEETING:

☒ YES

☐ NO

☒ COPY OF CONFERENCE
RECAP SHEET PROVIDED



DRB NO. _____

EPC NO. _____

PROJECT NO. _____

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

☒ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAIN PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SECTOR PLAN APPROVAL

☐ SKETCH PLAT APPROVAL

☐ PRELIMINARY PLAT APPROVAL

☐ SITE DEVELOPMENT PLAN APPROVAL

☐ FINAL PLAT APPROVAL

☒ BUILDING PERMIT APPROVAL

☐ FOUNDATION PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY
APPROVAL

☐ ROUGH GRADING PERMIT APPROVAL

☐ GRADING/PAVING PERMIT APPROVAL

OTHER

(SPECIFY)

DATE SUBMITTED: 06-28-89

BY: Leonard P. Utter

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

31412

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: J11-D19 DATE: 5/5/89
PLANNING DIVISION NOS: EPC: _____ DRB: _____
SUBJECT: John Adams Middle School (Science Bldg)
STREET ADDRESS (IF KNOWN): GLEN RD #
SUBDIVISION NAME: _____

APPROVAL REQUESTED:

_____ PRELIMINARY PLAT	RECEIVED JUN 28 1989 HYDROLOGY SECTION	_____ FINAL PLAT
_____ SITE DEVELOPMENT PLAN		_____ BUILDING PERMIT
_____ OTHER		_____ ROUGH GRADING

WHO REPRESENTING
ATTENDANCE: JEFF MORTENSEN _____
FRED J. AGUIRRE _____

FINDINGS:

EXPAND the PREVIOUSLY ^{APPROVED} plan (J11-D19) to
include the new Science Bldg. ~~FOOT~~
Provide SUFFICIENT ELEVATIONS to demonstrate
that the DEVELOPED FLOWS FROM the
SCIENCE Bldg REMAINS on-site.

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

SIGNED: [Signature] SIGNED: [Signature]
TITLE: _____ TITLE: _____
DATE: 5/5/89 DATE: 05-05-89

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