



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Permanet C.O. released on 9-5-95

July 21, 1995

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

RE: ENGINEER CERTIFICATION FOR NORTH VALLEY MULTI-SERVICE
CENTER (G14-D53) CERTIFICATION STATEMENT DATED 7/5/95.

Dear Mr. MacKenzie:

Based on the information provided on your July 10, 1995
submittal, Engineer Certification for the above referenced site
is acceptable.

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

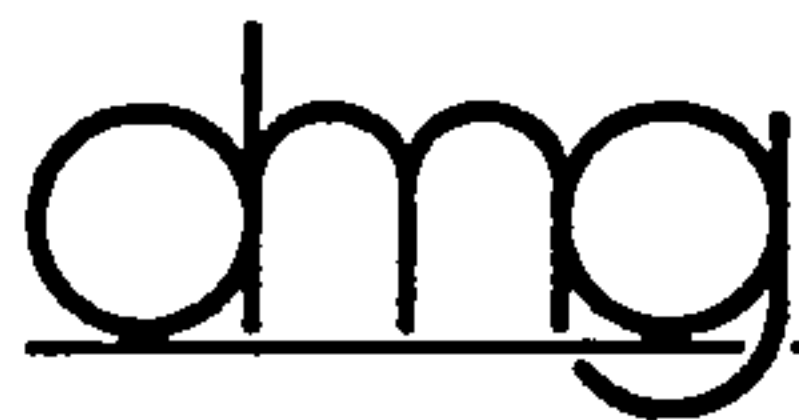
Sincerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 345-2010

July 7, 1995

*Mr. Bernie Montoya
Hydrology Division
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103*

Re: North Valley Multi-Service Center (G14-D53)

Dear Mr. Montoya:

The referenced grading and drainage plan has been revised due to incorrect survey information provided by the City's topographic survey of this site. As a result, the proposed drop inlet and storm drain designed to discharge into the existing storm drain in Candelaria Road NW had to be moved south to its new location.

Please review the changes and comment or call me if you have any questions.

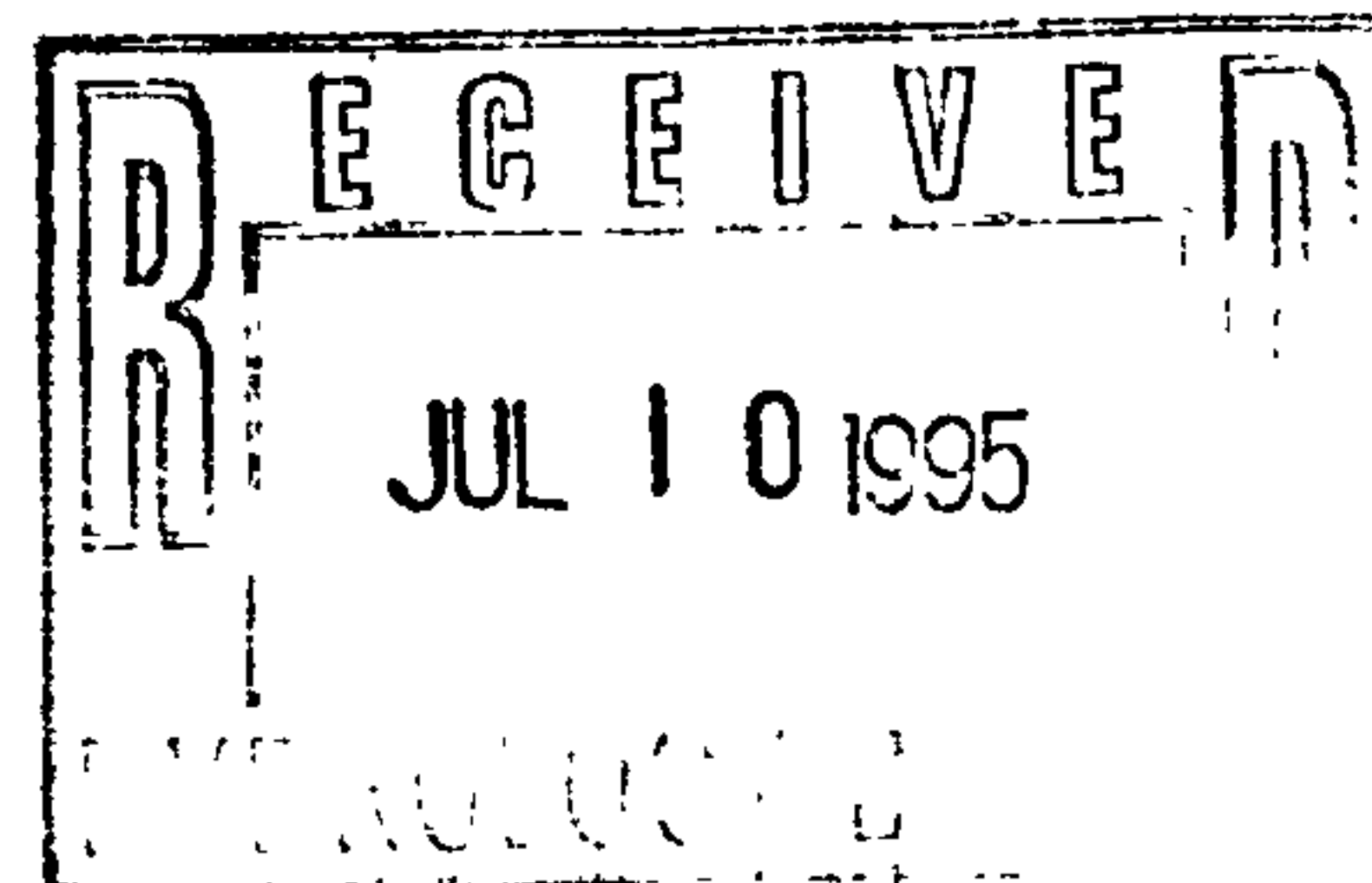
Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

A handwritten signature in cursive script, reading 'John M. MacKenzie'.

John M. MacKenzie, P.E.

JMM/smr



DRAINAGE INFORMATION SHEET

PROJECT TITLE: North Valley Multi-Service Center ZONE ATLAS/DRNG, FILE #: G14-D53
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract A, Lands of Robinson and Traub
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: John M. MacKenzie, PE
ADDRESS: P.O. Box 90606 PHONE: 828-2200
OWNER: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
ARCHITECT: Claudio Vigil Architects CONTACT: Lloyd Goldrick
ADDRESS: 825 Pennsylvania NE PHONE: 265-3000
SURVEYOR: City of Albuquerque CONTACT: _____
ADDRESS: P.O. Box 1293 PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_____ DRAINAGE PLAN
_____ CONCEPTUAL GRADING & DRAINAGE PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
X ENGINEER'S CERTIFICATION
_____ OTHER

PRE-DESIGN MEETING:

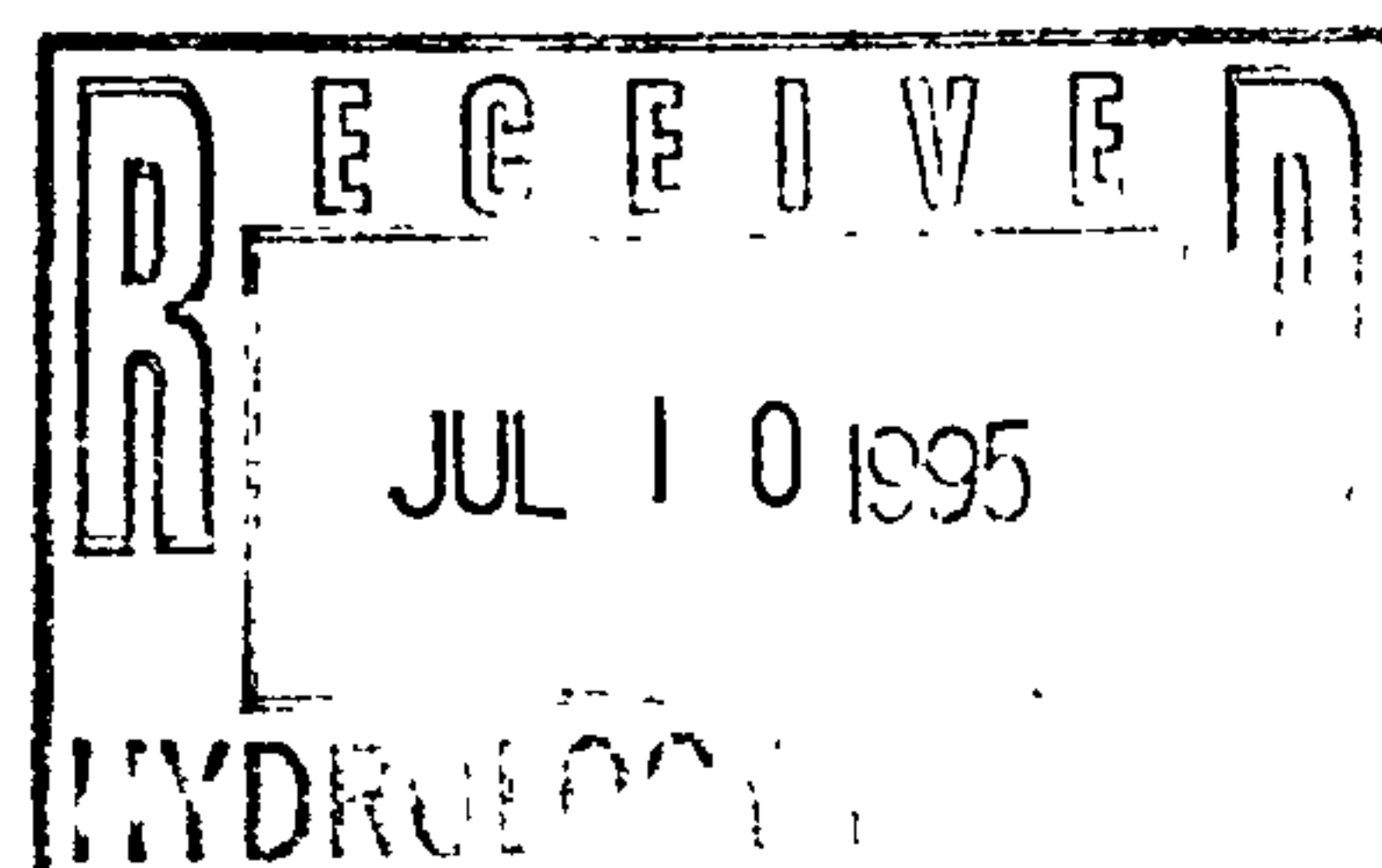
_____ YES
X NO
_____ COPY PROVIDED

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
X CERTIFICATION OF OCCUPANCY APPROVAL
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ S.A.D. DRAINAGE REPORT
_____ DRAINAGE REQUIREMENTS
_____ OTHER _____ (Specify)

DATE SUBMITTED: 7/7/95

BY: John M. MacKenzie
John M. MacKenzie, PE





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 6, 1993

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

RE: DRAINAGE PLAN FOR NORTH VALLEY MULTI-SERVICE CENTER (G14-D53)
REVISION DATED 12/2/93.

Dear Mr. Goodwin:

Based on the information provided on your December 3, 1993 resubmittal, 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.

Also, a separate permit is required for construction within City Right-of-Way. A copy of this approved letter must be on hand when applying for the excavation permit.

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

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

Sincerely,

Bernie J. Montoya
Bernie J. Montoya, CE
Engineer Associate

BJM/d1/WPHYD/8122

xc: Alan Martinez
Darlene Saavedra
File

PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 22, 1993

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

RE: REVISED DRAINAGE PLAN FOR NORTH VALLEY MULTI-SERVICE CENTER
(G14-D53) REVISION DATED 11/17/93.

Dear Mr. Goodwin:

Based on the information provided on your November 18, 1993 resubmittal, the above referenced site is approved for Building Permit.

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

Also, 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.

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

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

Sincerely,

Bernie J. Montoya, CE
Engineer Associate

BJM/d1/WPHYD/7977

xc: Alan Martinez
Darlene Saavedra
File

PUBLIC WORKS DEPARTMENT

DRAINAGE INFORMATION SHEET

PROJECT TITLE: North Valley Multi-Service Center ZONE ATLAS/DRNG, FILE #: G14-D53
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract A, Lands of Robinson and Traub
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: John M. MacKenzie, PE
ADDRESS: P.O. Box 90606 PHONE: 828-2200
OWNER: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
ARCHITECT: Claudio Vigil Architects CONTACT: Lloyd Goldrick
ADDRESS: 825 Pennsylvania NE PHONE: 265-3000
SURVEYOR: City of Albuquerque CONTACT: _____
ADDRESS: P.O. Box 1293 PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
X DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

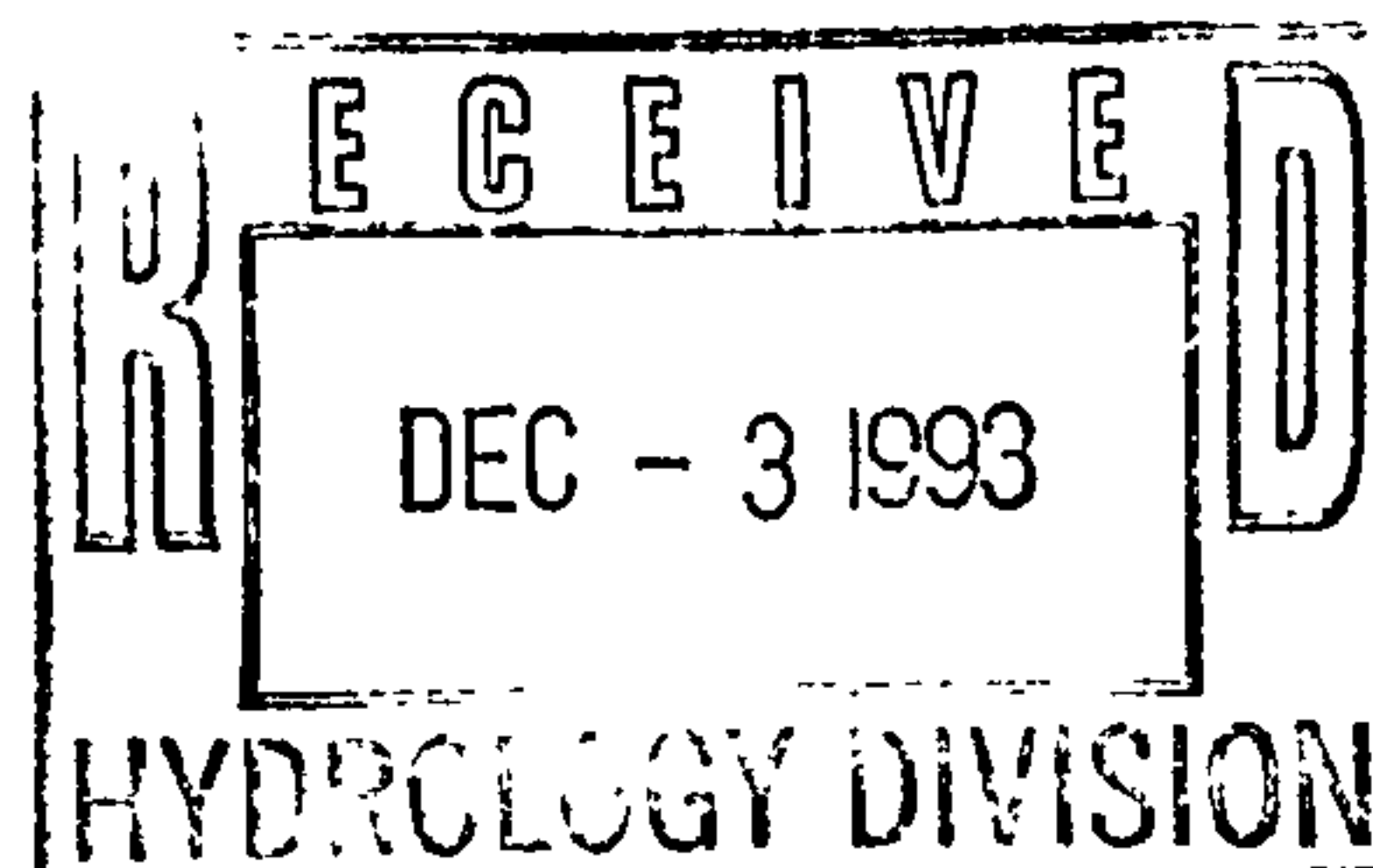
____ YES
X NO
____ COPY PROVIDED

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
X BUILDING PERMIT APPROVAL
____ CERTIFICATION OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ OTHER _____ (Specify)

DATE SUBMITTED: 12/3/93

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) 828-2200

December 3, 1993

Mr. Bernie Montoya, CE
Hydrology Department
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87199

Re: North Valley Multi-Service Center, Revised Grading and Drainage Plan (G14-D53)

Dear Mr. Montoya:

At the request of the Architect, we have made some minor changes to the referenced plan.

The joint between the edge of the sidewalk and the front of the handicap ramp will now be flush. Slopes in the handicap spaces have been slightly adjusted to conform to ADA.

If you should have any questions about this resubmittal, please do not hesitate to contact me.

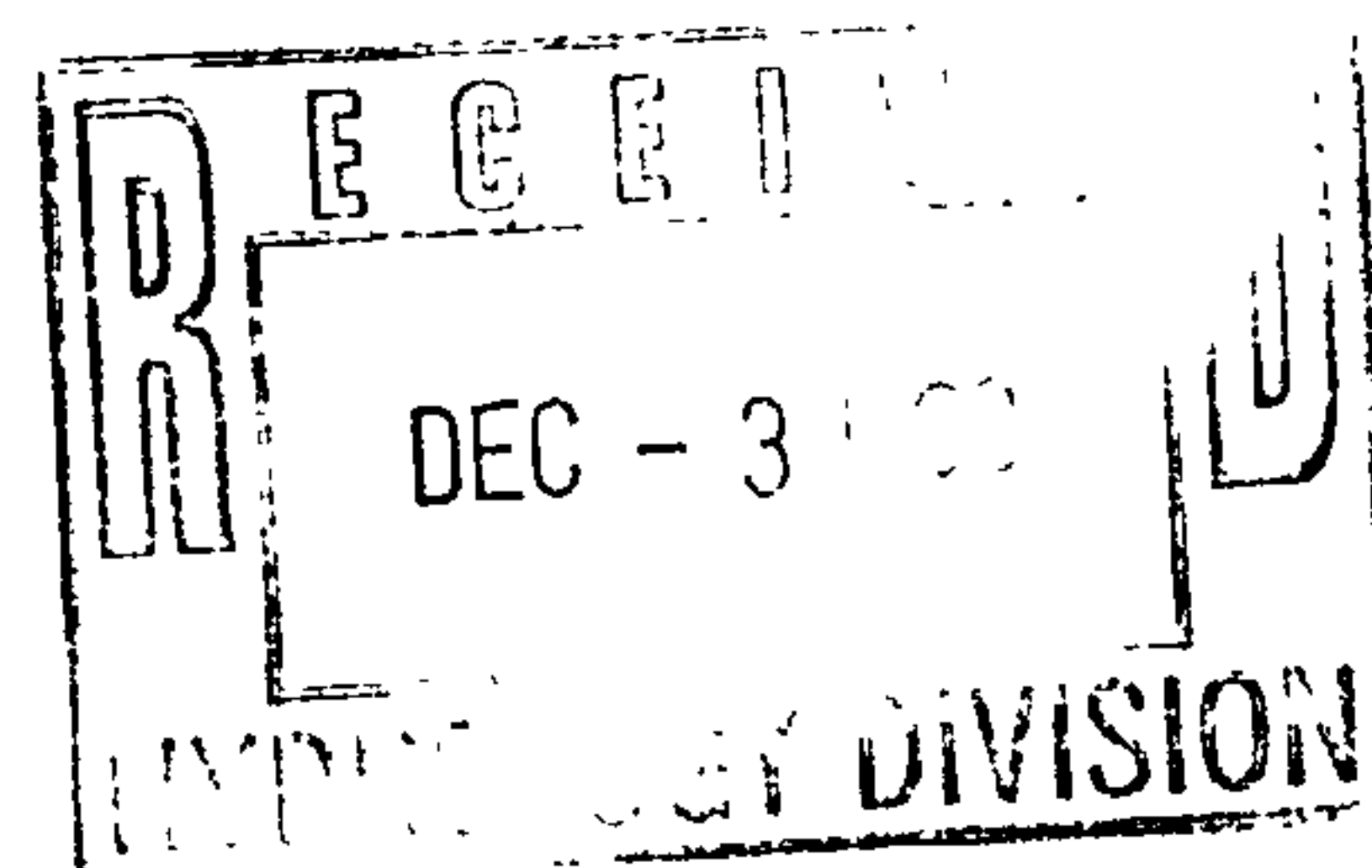
Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

A handwritten signature in cursive script that reads 'John M. MacKenzie'.

John M. MacKenzie, P.E.

JMM/smr





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 2, 1993

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

RE: DRAINAGE PLAN FOR NORTH VALLEY MULTI-SERVICE CENTER (G14-D53)
ENGINEER'S STAMP DATED 10/15/93.

Dear Mr. Mackenzie:

Based on the information provided on your October 21, 1993 submittal, listed are some concerns that will need to be addressed prior to final approval:

1. D.W.G. 2237 City of Albuquerque Standard Specs. allows a maximum of 12" diameter pipe to be connected. Please address.
2. Hydraulics for the proposed pipe 12" maximum.
3. Capacity of proposed inlet assumed to be in a sump condition. Show Hydraulics.
4. Connect proposed roof leaders on the north side of building to the proposed concrete channel.
5. Run-off from the southwest side of the building must be routed towards the asphalt area. I need more information for contractor.
6. T.B.M. must be permanently marked.
7. Six notes & sign-off block from the S.O. 19 format within plan drawing (two copies of plan with resubmittal).
8. Vicinity map must be within the plan drawing.

PUBLIC WORKS DEPARTMENT

John MacKenzie
Page 2

9. Specify the City of Albuquerque Spec. No. for the connection to the catch basin within plan drawing (DWG 2237).

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

Sincerely,


Bernie J. Montoya, Ce
Engineer Associate

BJM/d1/WPHYD/8078

xc: File



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

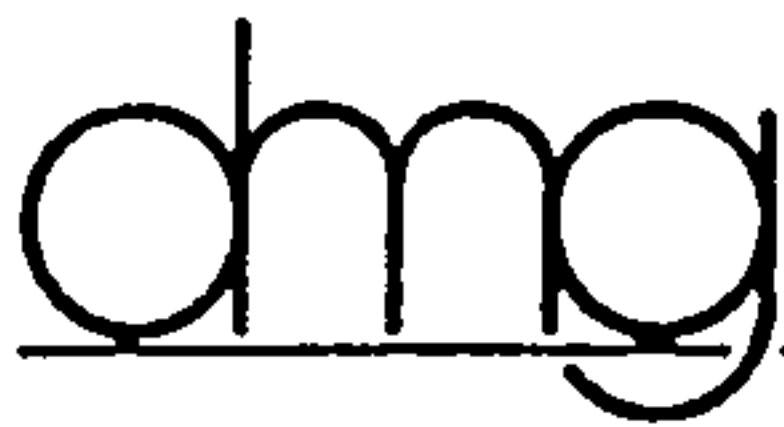
PROJECT North Valley Multi Purp. Ctr
SUBJECT Drainage
BY JMM DATE 11/17/93
CHECKED _____ DATE _____
SHEET 1 OF _____

NEW ON-SITE STORM DRAIN

Due to comments, the 18" RCP will be replaced with a 12" PVC pipe to drain the parking lot pond into the existing storm drain in the Candelaria R/W. When we maintain the same soffit elevation as before, the new 12" PVC will have a new slope that is approximately 2%. The maximum capacity of this pipe will be 6 cfs. There will now be no 11 1/2" diameter orifice since the flow will be restricted by the pipe. However, the pond will need to larger:

<u>PONDING AREA</u>				
Elev.	Area	Avg. Area	Depth	Volume
63.52	0	1355	0.48	650
64.00	2710	14977	1.01	15127
65.01	27244			
				15777

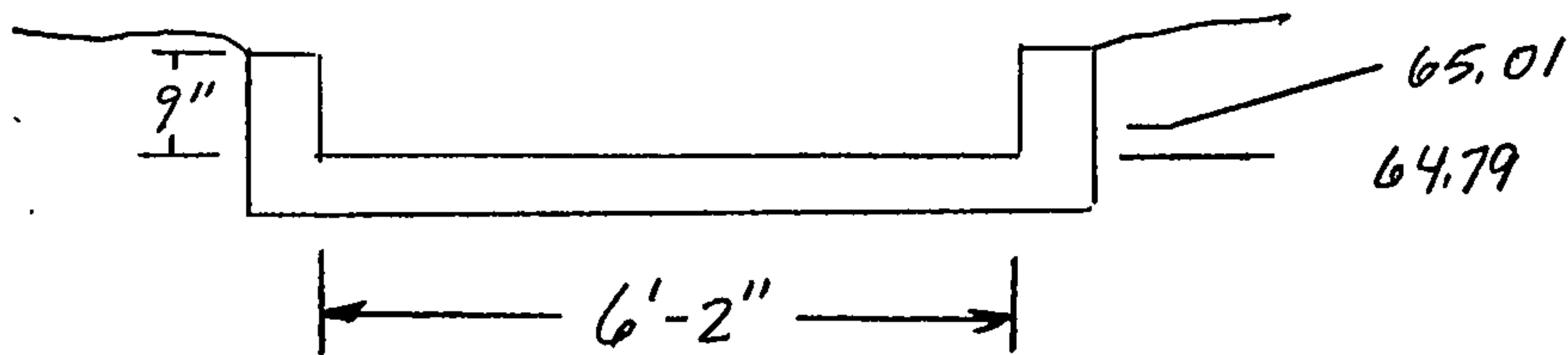
Based upon the volumes generated by AHYMO, instead of 8032 ft³, the pond will need to hold 15605 ft³ due to the flow restriction.



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT N. Valley Multi-Purpose Ctr.
SUBJECT Drainage
BY QMM DATE 11/17/93
CHECKED _____ DATE _____
SHEET 2 OF _____

CONCRETE EMERGENCY SPILLWAY



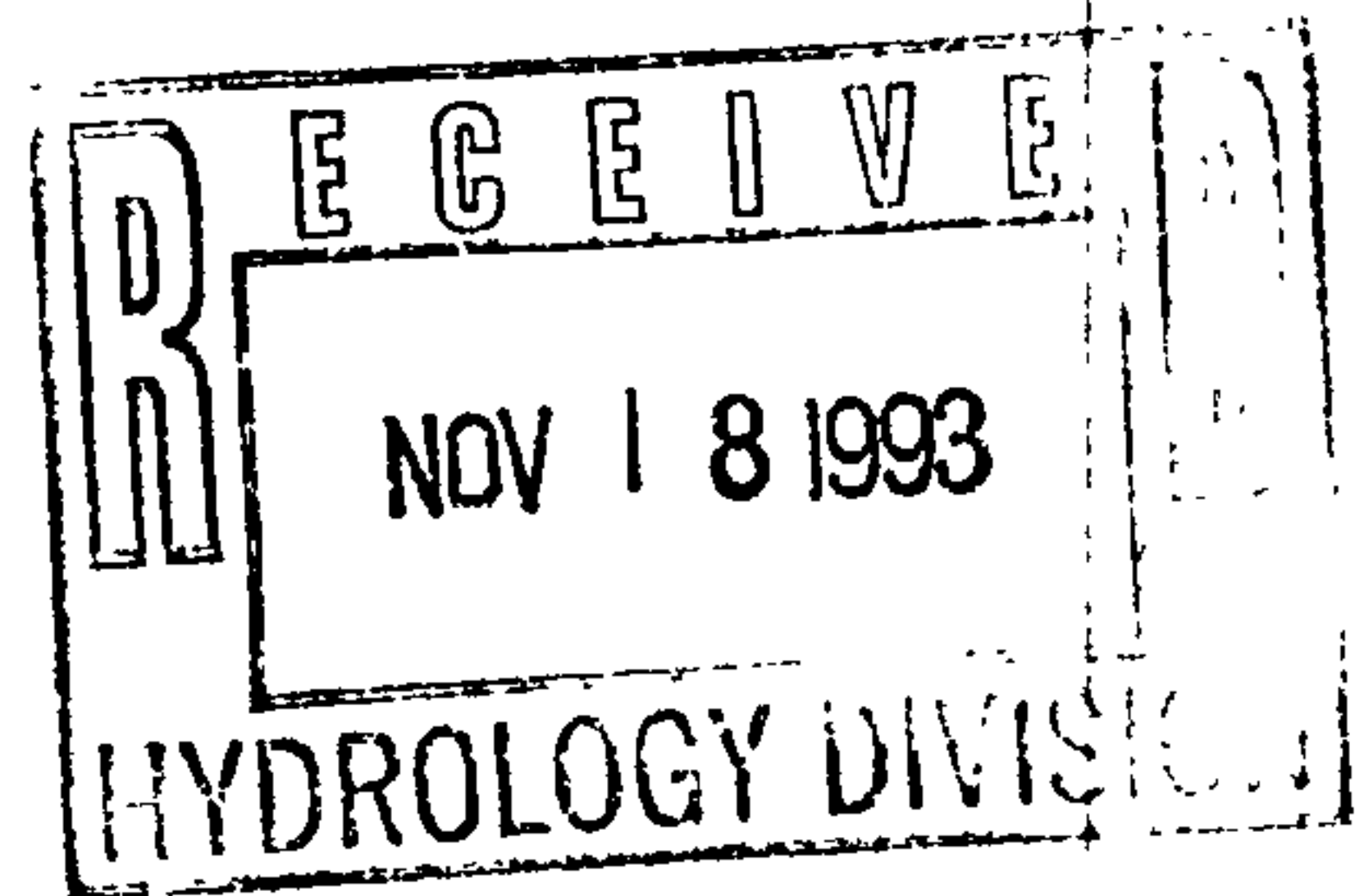
As discussed, the 100 year storm will now be discharging 6 cfs through the 12" PVC storm drain and detaining the remainder in the parking lot's pond. When the detained water reaches an elevation of 65.01, the following will be discharged:

Area of flow through spillway at elev. 65.01

$$A = 1.35 \text{ ft}^2 \quad H = 0.22 \text{ ft} \quad L = 6.15'$$

$$Q = 2.9 (6.15) (0.22)^{1.5} = 1.84 \text{ cfs}$$

$$Q_{\text{total}} = 6.0 + 1.84 = 7.84 \text{ cfs}$$



So, with storage of the 100yr storm in the parking lot pond, the combined discharge through the PVC storm drain and the portion over the spillway will total 7.84 cfs, which is less than the historical rate of 8.10 cfs (from prior submittal). Should the storm drain totally clog, the spillway will still have the sufficient capability to discharge at the fully developed rate of 11.58 cfs, as presented on the first submittal, since the spillway design has not changed.



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors
P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200

November 17, 1993

Mr. Bernie Montoya, *CE*
City of Albuquerque
Hydrology Department
P.O. Box 1293
Albuquerque, NM 87199

Re: Comments on Drainage Plan for North Valley Multi-Service Center (G14-D53)

The following replies pertain to each of the received comments:

1. We have revised the drawing to indicate use of a 12" diameter PVC pipe.
2. Hydraulics of the 12" diameter PVC have been presented on the following calculation sheets.
3. Capacity calculations are also shown on the following calculation sheets.
4. The drawing displays splash blocks from the edge of the building to the concrete channel.
5. Run-off from the southwest side of the building is now routed via a landscaped swale to the northeast corner of the parking lot.
6. Since the City of Albuquerque did not place a TBM on site after completion of their survey, our plan directs the contractor to use the ACS monument since it's only 500 feet away. It would be wise for the contractor to go back to the ACS anyway, rather than rely on a temporary benchmark.
7. The S.O. 19 has been added to the plan.
8. The vicinity map has been added to the plan.
9. The drawing number has been specified on the plan.

If you should have any further questions, please do not hesitate to call.

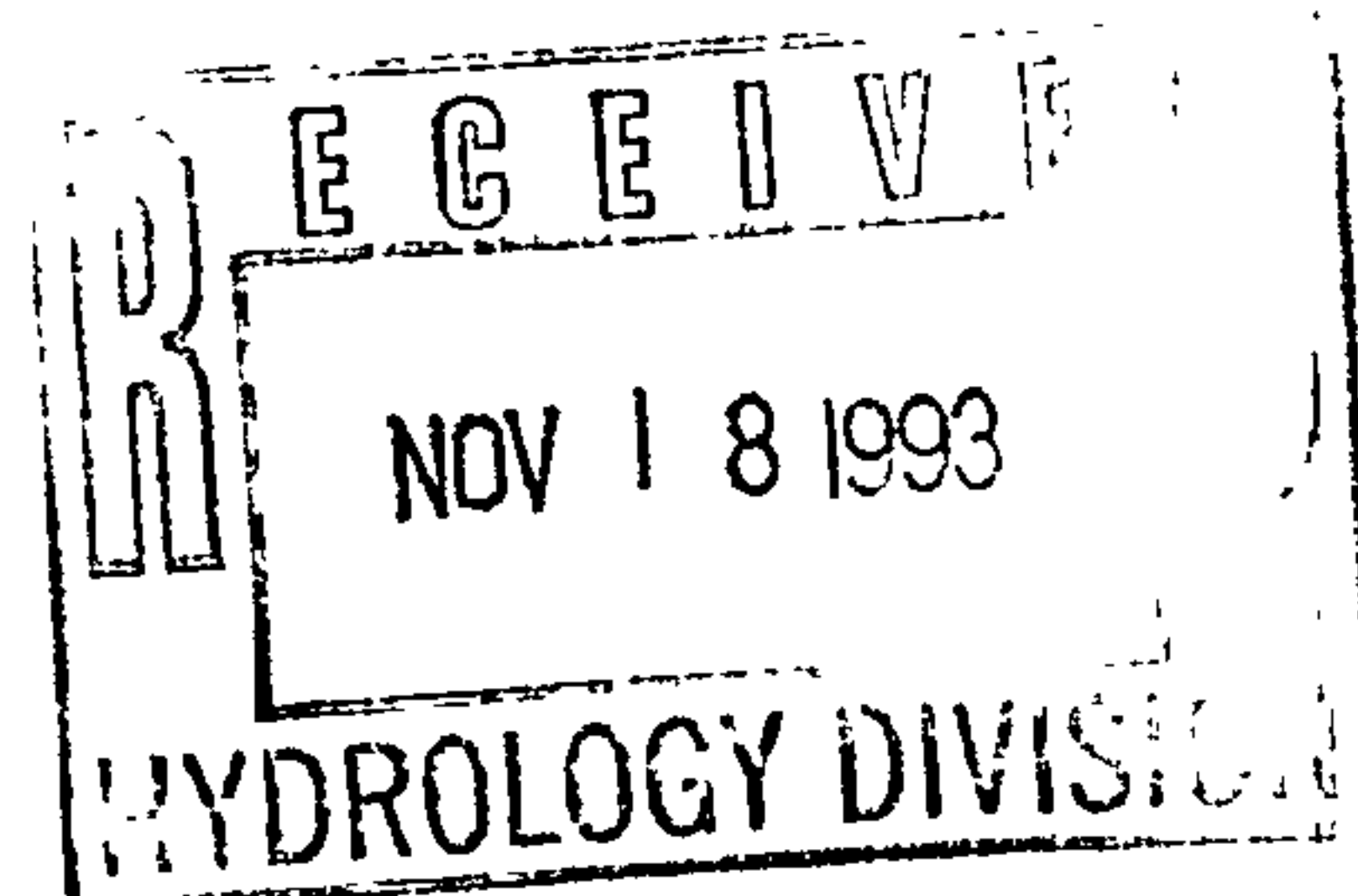
Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

John M. MacKenzie, P.E.

JMM/smr

Attachments





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT N. Valley Multi-Service Ctr.
SUBJECT Drainage
BY JMM DATE 11/17/93
CHECKED _____ DATE _____
SHEET 3 OF _____

From City Std. Dwg. 2220, the open area through which surface runoff may enter is 4.438 ft^2 . In a sump condition such as we have the capacity of this grate is as follows:

$$Q = CA \sqrt{2gh} \quad \text{where } h = \text{potential height of water surface above grate.}$$

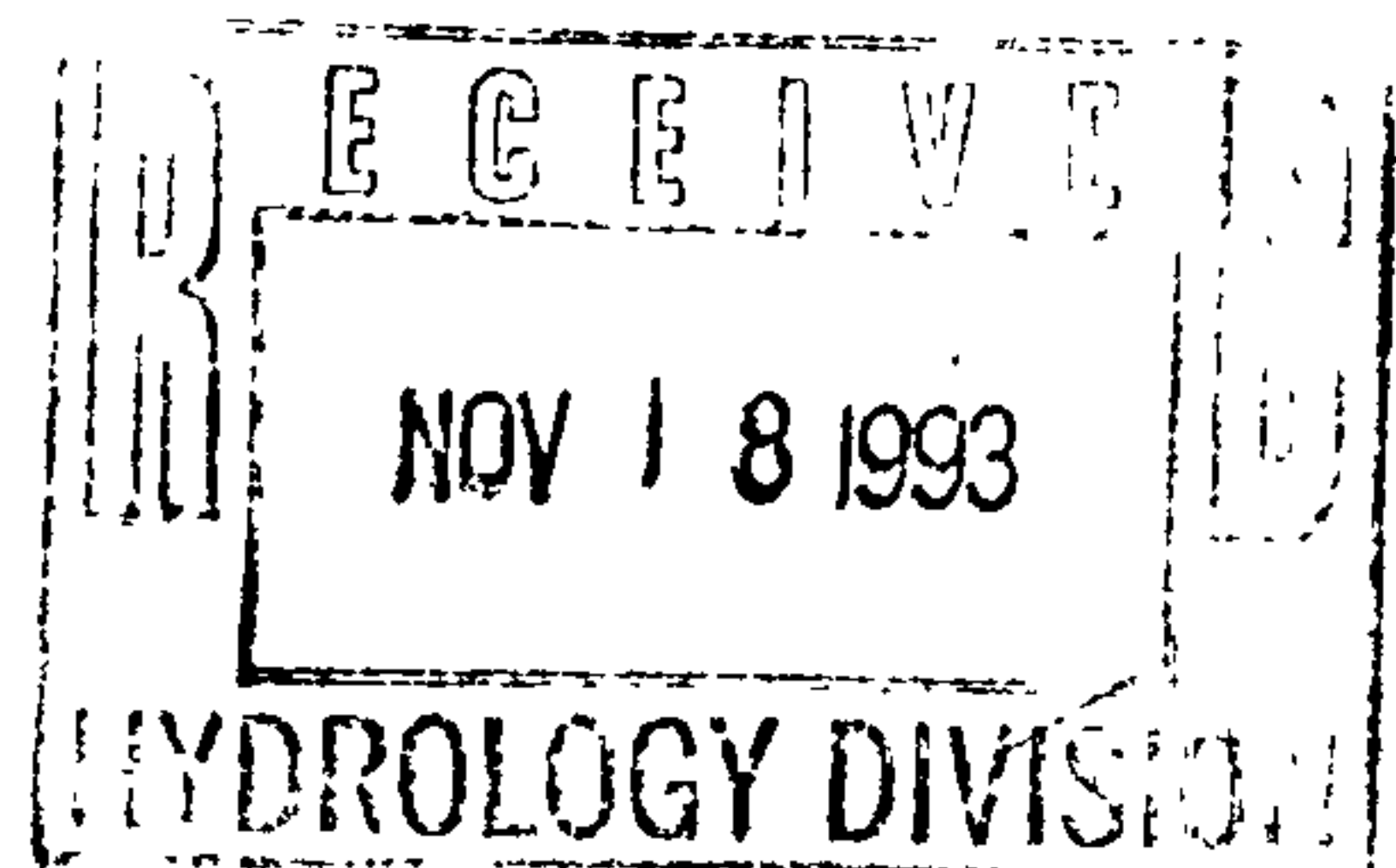
$$h = 65.01 - 63.52 = 1.49$$

At the maximum potential water surface, the grate capacity is:

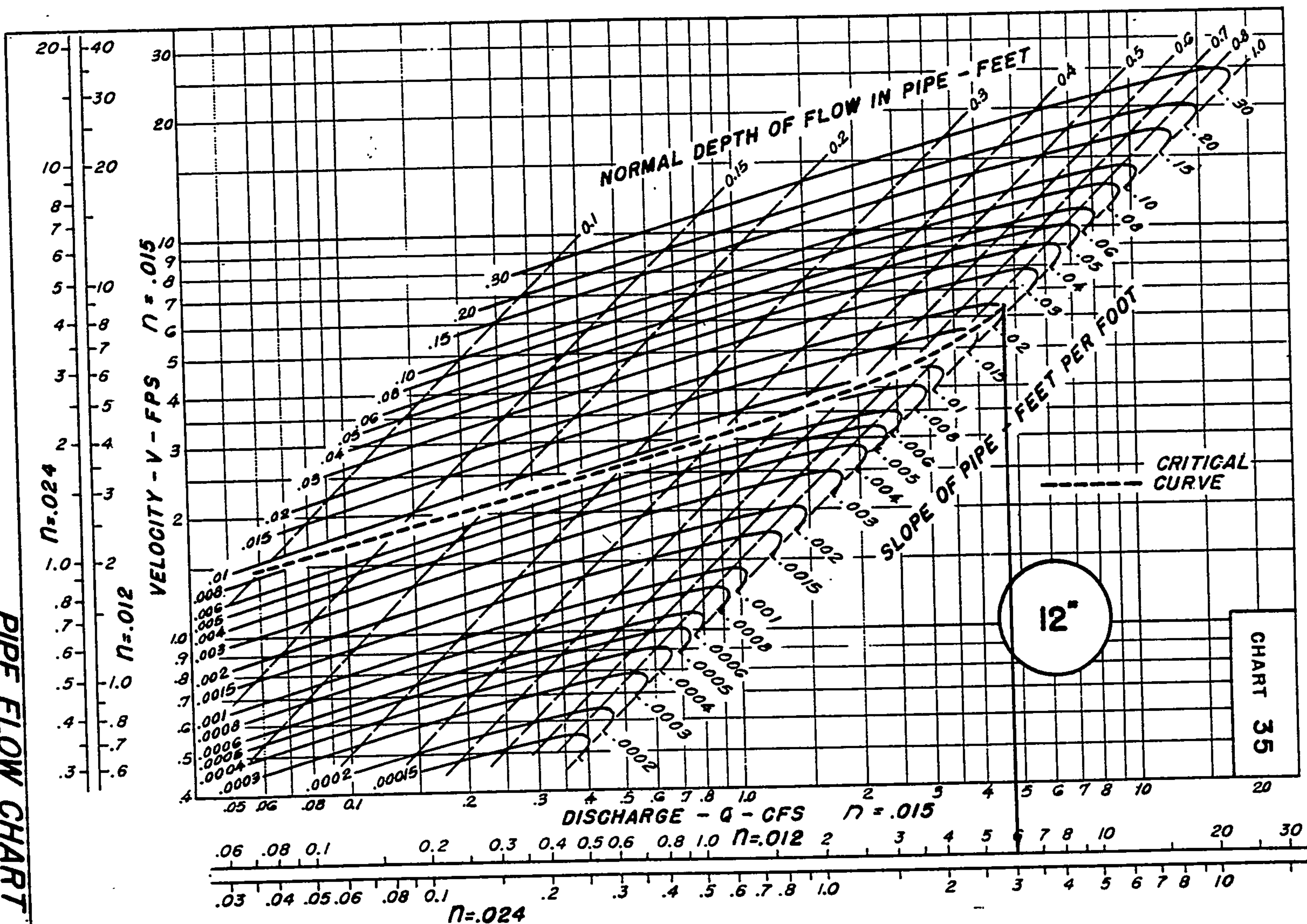
$$Q = (0.8)(4.438) \sqrt{2g(1.49)}$$

$$Q = 34.78 \text{ cfs}$$

If 80% of the grate were to become clogged, the PVC storm drain would still be in control of the flow.



PIPE FLOW CHART 12-INCH DIAMETER



P.4

DRAINAGE INFORMATION SHEET

PROJECT TITLE: North Valley Multi-Service Center ZONE ATLAS/DRNG, FILE#: G14-D53
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract A, Lands of Robinson and Traub
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: John M. MacKenzie, PE
ADDRESS: P.O. Box 90606 PHONE: 828-2200
OWNER: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
ARCHITECT: Claudio Vigil Architects CONTACT: Lloyd Goldrick
ADDRESS: 825 Pennsylvania NE PHONE: 265-3000
SURVEYOR: City of Albuquerque CONTACT: _____
ADDRESS: P.O. Box 1293 PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
X DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

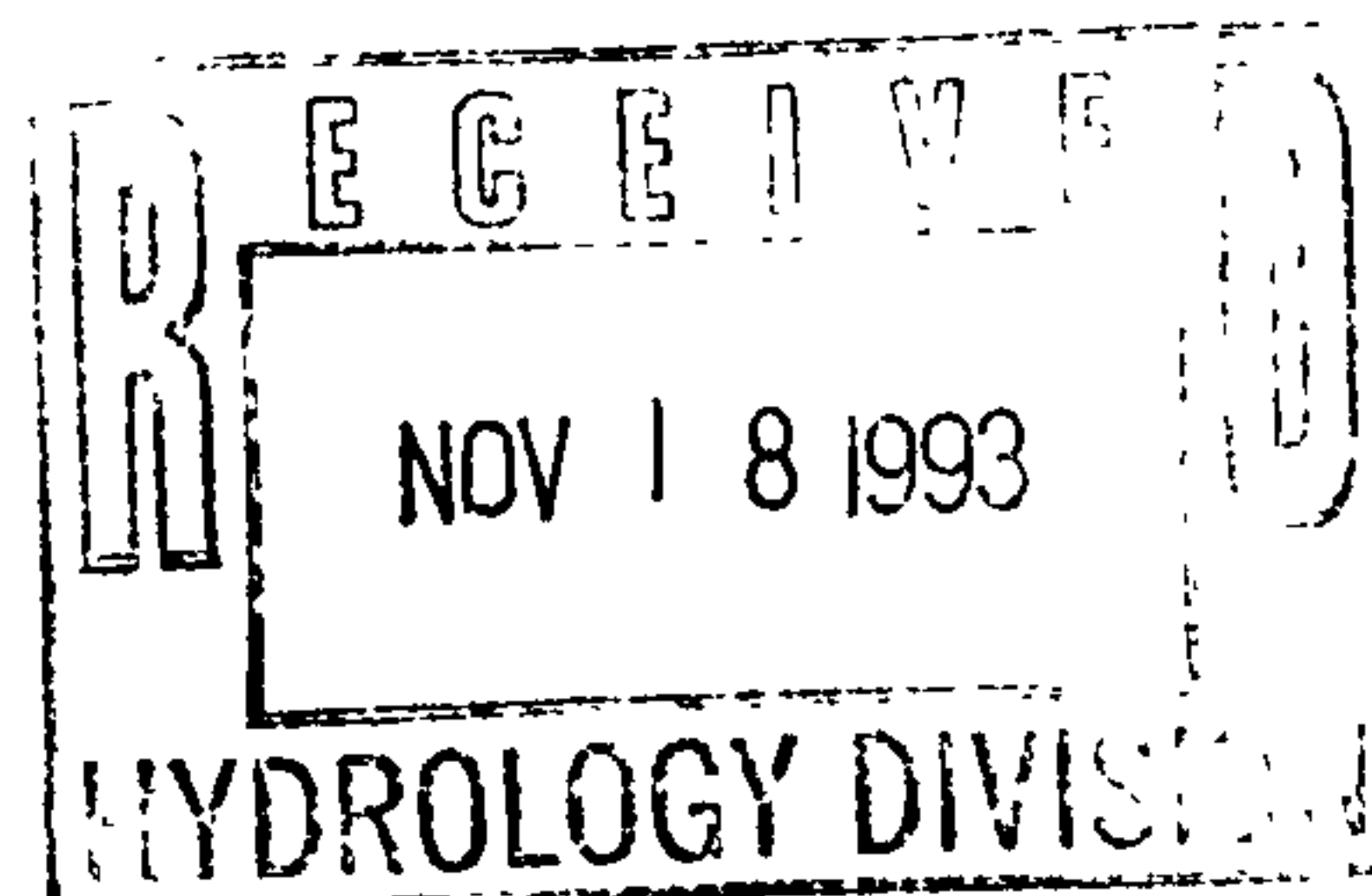
____ YES
X NO
____ COPY PROVIDED

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
X BUILDING PERMIT APPROVAL
____ CERTIFICATION OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ OTHER _____ (Specify)

DATE SUBMITTED: 11/18/93

BY: John M. MacKenzie
John M. MacKenzie, PE





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT North Valley Multi Service
SUBJECT Drainage
BY JMM DATE 10/14/93
CHECKED _____ DATE _____
SHEET 1 OF _____

The proposed Multi Service Center will be built on a 2.78 acre lot that is presently vacant and bounded by a block wall on three sides. Existing runoff either ponds on-site because the area is so flat, or flows toward Candelaria Blvd. N.W. From AHYMO (attached), the existing condition yields 8.58 cfs at a 100% type C land treatment. Based upon the developed condition, the site will yield a total of 11.58 cfs. The extra volume generated from the undeveloped to the developed condition is 8032 ft³. This volume will be detained in the western parking lot and discharged through an orifice. An 18" storm drain running from a new inlet in the parking lot to the existing drop inlet in Candelaria will convey all on-site run off. Over the mouth of the 18" pipe inside the new inlet will be placed an 11½" diameter flow restrictor. This will create a pond with a maximum water surface at elevation 64.51. Due to on-site grading considerations, this water surface elevation will not be high enough to reach the invert of the emergency spillway. The spillway, at a width of 6'2" and sidewalls at a height of 9", will be able to convey the developed on-site runoff of 11.58 cfs between elevation 64.79 and 65.54. This possible maximum water surface of 65.54 would remain below the tops of all curbs and well

HYDROLOGY DIV.

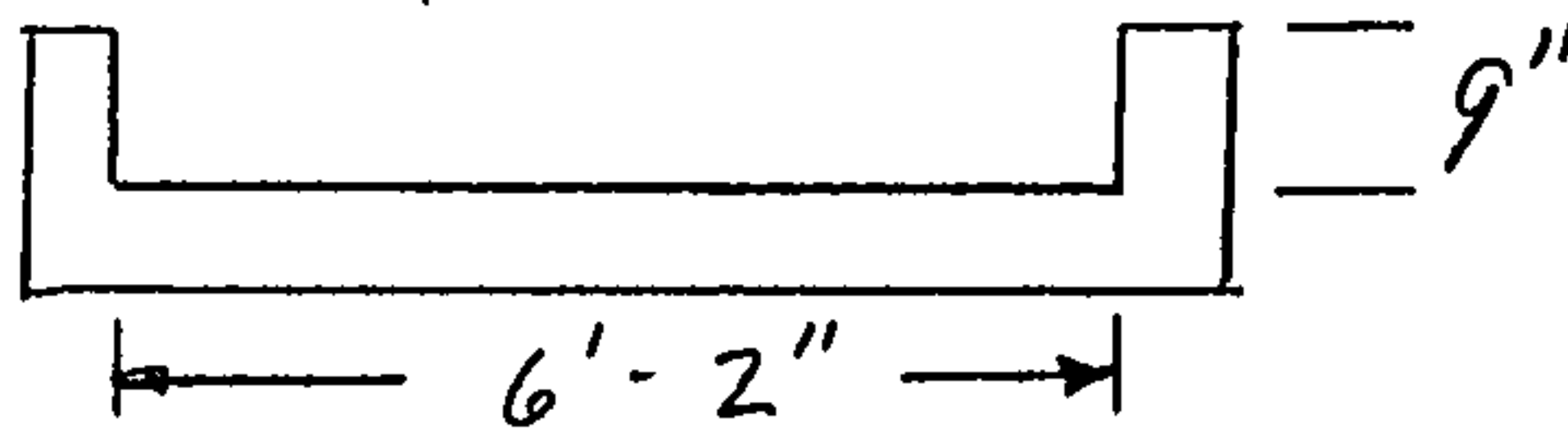


D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT North Valley Multi Service
SUBJECT Drainage
BY GMM DATE 10/15/93
CHECKED _____ DATE _____
SHEET 2 OF _____

below the building's finished floor. The net result is that the pond will have a significant supplemental capacity should the on-site inlet become clogged.

CONCRETE EMERGENCY SPILLWAY (AT PARKING LOT EDGE)



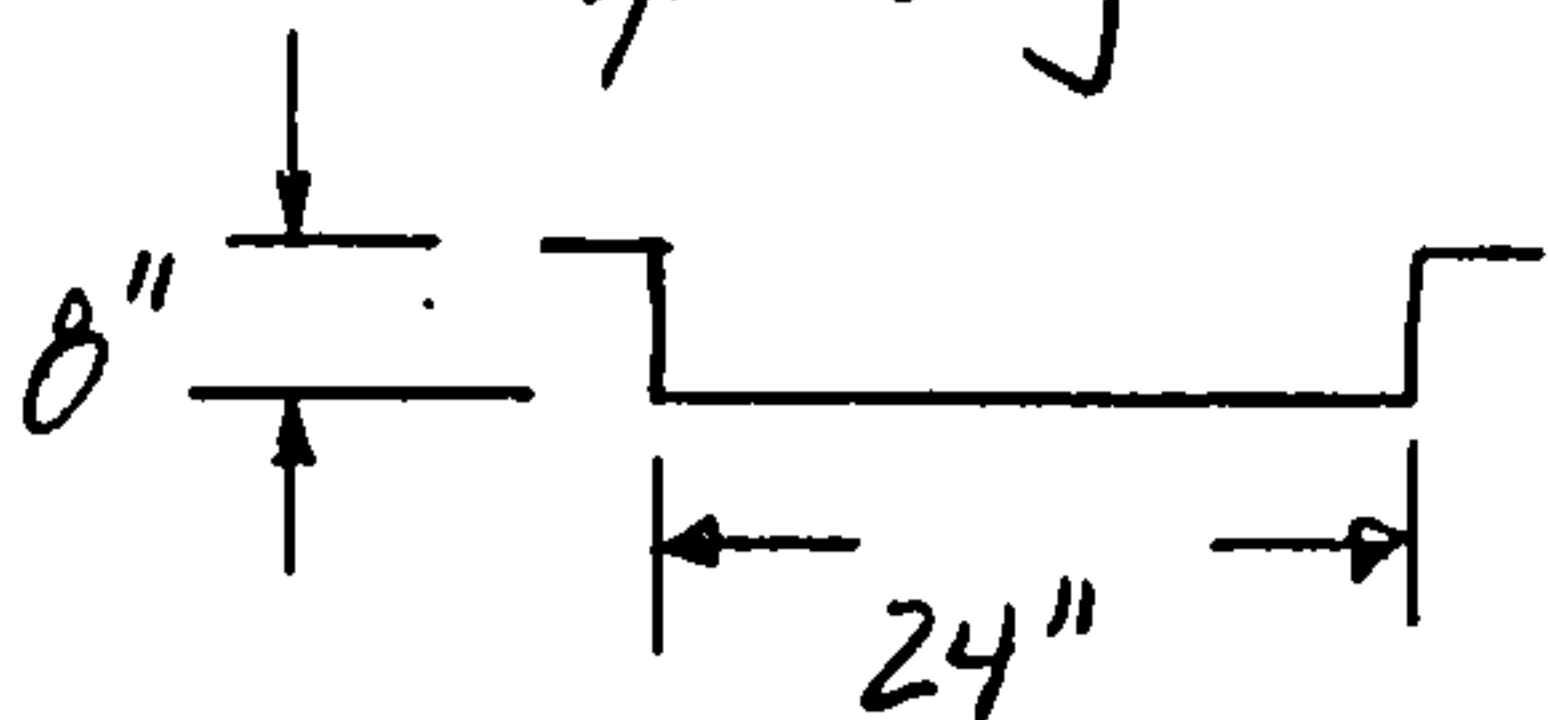
$$L = \frac{Q}{2.9 H^{1.5}} = \frac{11.58}{2.9 (.75)^{1.5}} = 6.15'$$

spillway channel capacity between parking & street

$$A = 4.61 \text{ ft}^2 \quad WP = 7.65' \quad r_H = \frac{4.61}{7.65} = 0.603 \quad S = 0.004$$

$$Q = \frac{1.49}{.017} (4.61) (.603)^{.67} (0.004)^{.5} = 18.2 \text{ cfs}$$

spillway channel capacity through sidewalk culverts



$$Q = 2.9 (2) (0.67)^{1.5} = 3.18 \text{ cfs/culvert}$$

use 4 - 24" culverts to convey 11.58 cfs.

OCT 21 1993



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT North Valley Multi Service
SUBJECT Drainage
BY QMM DATE 10/15/93
CHECKED _____ DATE _____
SHEET 3 OF _____

NEW ON-SITE STORM DRAIN INLET ORIFICE

The allowable flow from the site is 8.10 cfs.
The parking lot will pond water to elevation 64.51
during the 100 year - 6 hour storm. This will result
in an h of 3.03 ft. with a pipe invert at 60.72.

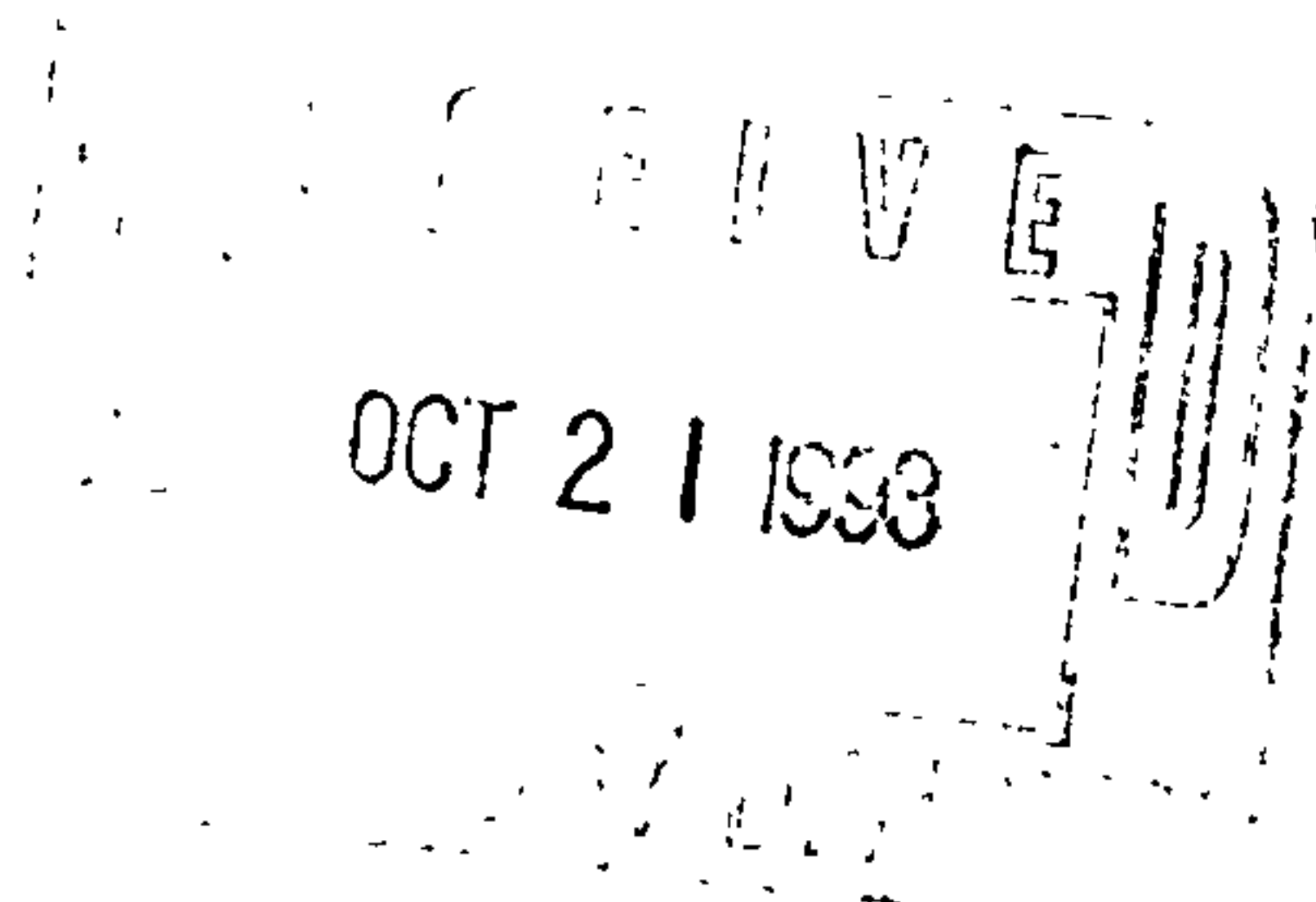
$$A = \frac{Q}{0.8 \sqrt{2gh}} = \frac{8.1}{0.8 \sqrt{2(32.2)3.04}} = 0.725 \text{ ft}^2 \quad d = 0.96 \text{ ft}$$

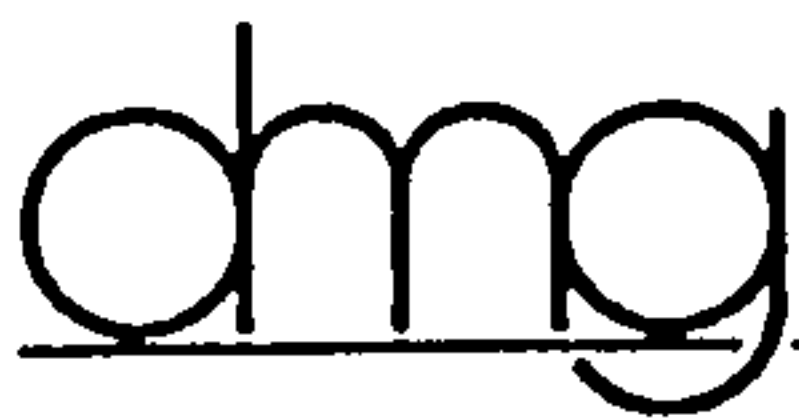
use 11 1/2" opening

ON SITE PONDING AREA TABLE

Elev.	Area	Avg Area	Depth	Volume
63.52	0			
		1355	0.48	650
64.0	2710			
		14764	1.0	14764
65.00	26818			

A volume of 8032 ft³ must be detained in this pond.
This volume is achieved at approximately half way
between elevation 64.0 and 65.0 (64.51)





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT North Valley Multi-Service
SUBJECT Drainage
BY Jmm DATE 10/15/93
CHECKED _____ DATE _____
SHEET 4 OF _____

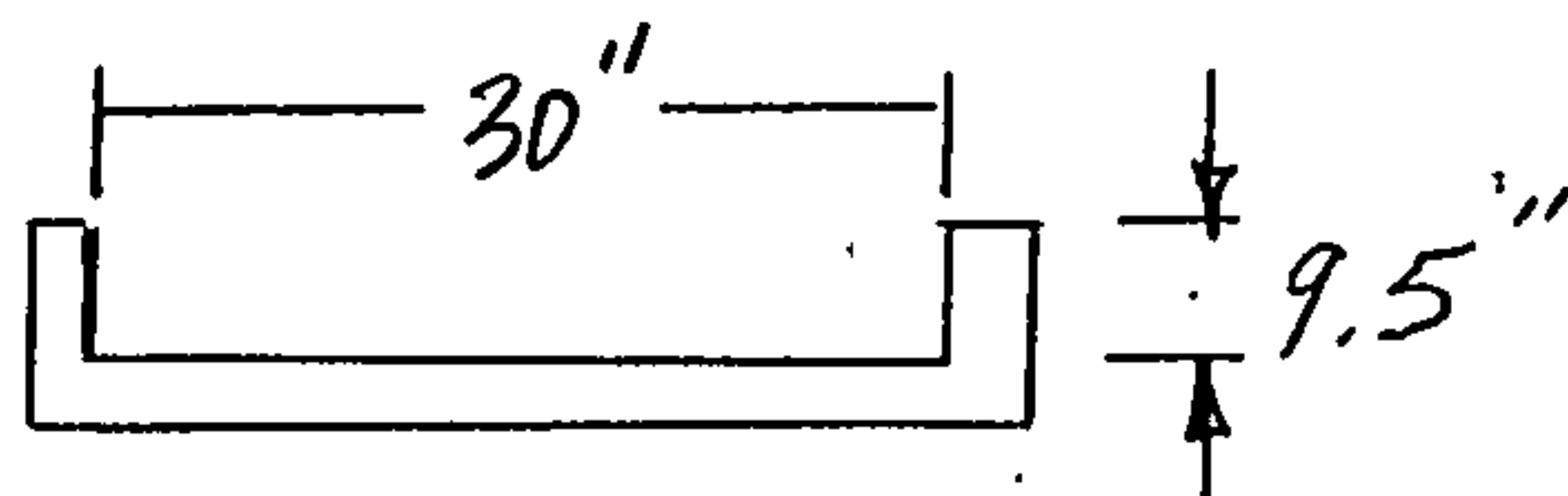
CONCRETE CHANNEL ALONG NORTH SIDE OF BUILDING

The attached site drainage boundary map shows this channel conveys flow from an area of 51240 ft^2 (the area enclosed in blue). As a portion of the total site runoff, this channel will need to have a capacity of 4.90 cfs where it passes the northwest corner of the building.

As a weir:

$$Q = 2.9 L H^{1.5}$$

$$Q = 2.9 (2.5) (.79)^{1.5} = 5.11 \text{ cfs}$$



Manning's:

$$\text{Area} = 1.98 \text{ ft}^2 \quad \text{WP} = 4.08 \text{ ft}$$

$$R_H = \frac{1.98}{4.08} = .485 \quad S = 0.0025$$

$$Q = \frac{1.49}{.017} (1.98) (.485)^{.67} (0.0025)^{.5}$$

$$Q = 5.34 \text{ cfs}$$

CONCRETE CHANNEL AT SOUTHWEST CORNER OF EAST PARKING LOT

The attached drainage basin boundary map shows this channel conveys flow from an area of 10534 ft^2 . As a portion of the total site runoff of 11.58 cfs, this channel will be required to carry 1.01 cfs.

As a weir:

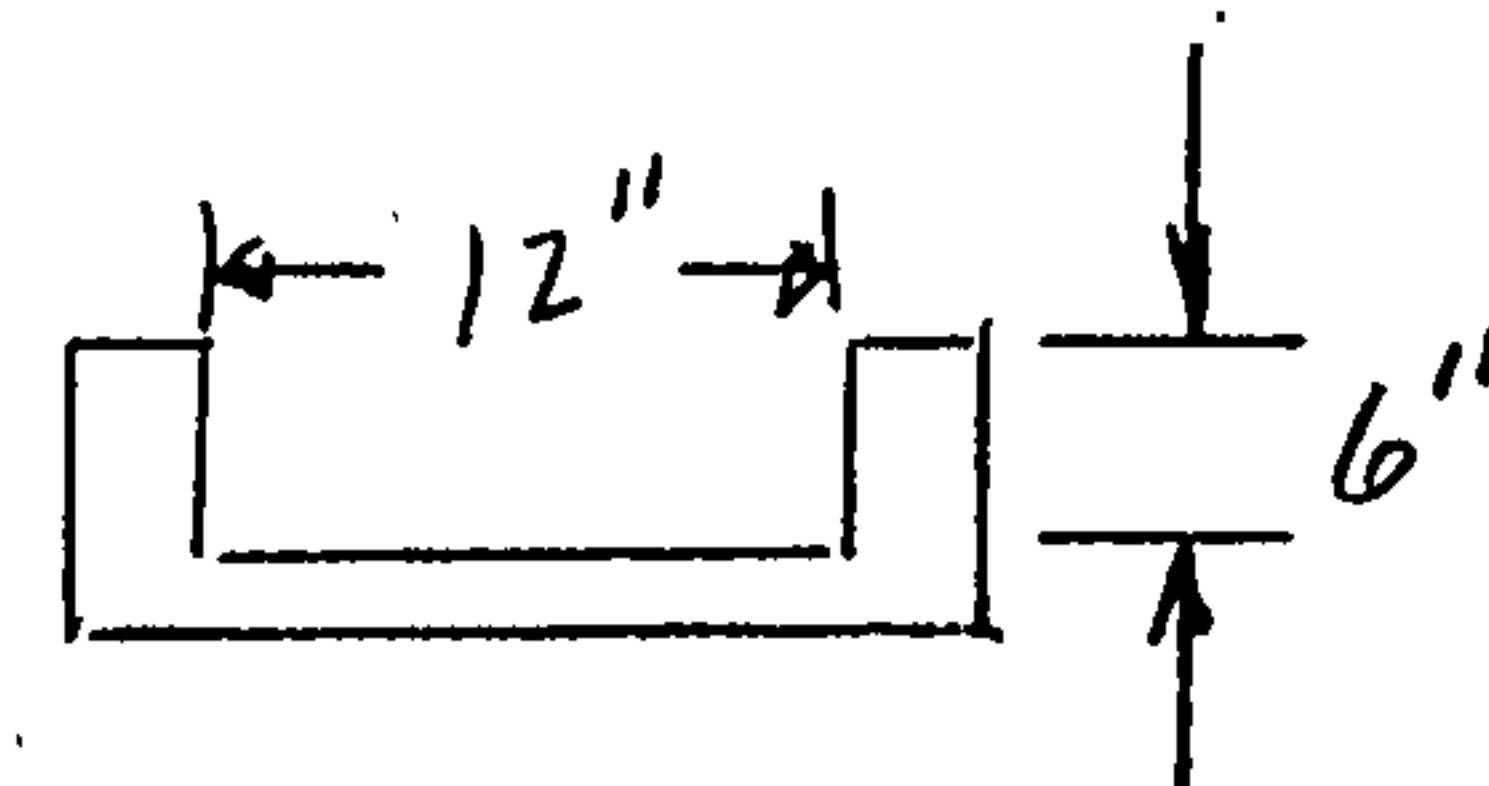
$$Q = 2.9 (1) (.5)^{1.5}$$

$$Q = 1.03 \text{ cfs}$$

$$A = 0.5$$

$$\text{WP} = 2$$

Manning's

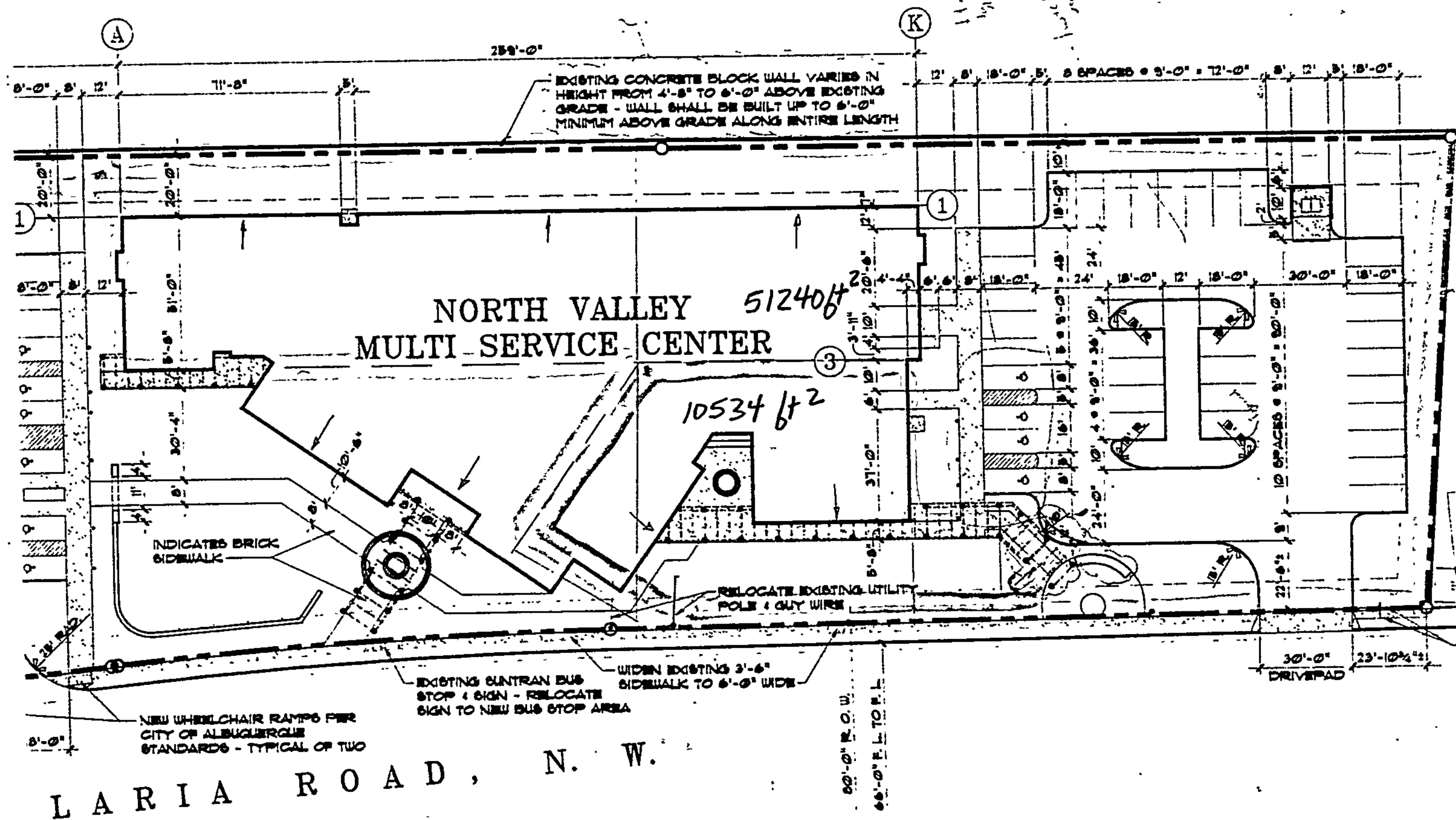


$$R_H = .25 \quad S = 0.0035$$

$$Q = \frac{1.49}{.017} (.5) (.25)^{.67} (.0035)^{.5} = 1.02 \text{ cfs}$$

OCT 21 1993

OCT 21 1951



AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
 RUN DATE (MON/DAY/YR) = 10/11/1993
 START TIME (HR:MIN:SEC) = 13:59:43 USER NO. = Z_GOODWN.S92
 INPUT FILE = MULTI.DAT

START TIME=0.0
 ***** HYDROGRAGH FOR THE MULTI-SERVICE CENTER
 RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
 RAIN ONE=1.90 IN RAIN SIX=2.19 IN
 RAIN DAY=2.60 IN DT=0.03333 HR

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

R.

DT =	.033330 HOURS			END TIME = 5.999400 HOURS		
.0000	.0012	.0025	.0038	.0051	.0065	.0079
.0093	.0108	.0123	.0138	.0154	.0170	.0186
.0203	.0221	.0239	.0258	.0277	.0297	.0318
.0340	.0362	.0385	.0410	.0435	.0462	.0490
.0519	.0550	.0583	.0635	.0691	.0752	.0880
.1169	.1612	.2249	.3119	.4262	.5720	.7535
.9750	1.1806	1.2665	1.3390	1.4035	1.4621	1.5161
1.5663	1.6131	1.6571	1.6984	1.7374	1.7742	1.8091
1.8421	1.8734	1.9032	1.9314	1.9581	1.9641	1.9695
1.9747	1.9796	1.9843	1.9888	1.9931	1.9972	2.0012
2.0050	2.0087	2.0123	2.0158	2.0191	2.0224	2.0256
2.0287	2.0317	2.0346	2.0375	2.0403	2.0430	2.0457
2.0483	2.0508	2.0533	2.0558	2.0582	2.0606	2.0629
2.0652	2.0674	2.0696	2.0718	2.0739	2.0760	2.0780
2.0801	2.0821	2.0840	2.0860	2.0879	2.0898	2.0916
2.0935	2.0953	2.0971	2.0988	2.1006	2.1023	2.1040
2.1057	2.1073	2.1090	2.1106	2.1122	2.1138	2.1153
2.1169	2.1184	2.1199	2.1214	2.1229	2.1244	2.1258
2.1273	2.1287	2.1301	2.1315	2.1329	2.1343	2.1357
2.1370	2.1383	2.1397	2.1410	2.1423	2.1436	2.1449
2.1461	2.1474	2.1486	2.1499	2.1511	2.1523	2.1535
2.1547	2.1559	2.1571	2.1583	2.1594	2.1606	2.1617
2.1629	2.1640	2.1651	2.1663	2.1674	2.1685	2.1696
2.1706	2.1717	2.1728	2.1738	2.1749	2.1760	2.1770
2.1780	2.1791	2.1801	2.1811	2.1821	2.1831	2.1841
2.1851	2.1861	2.1871	2.1881	2.1890	2.1900	

OCT 21 1993

HYDROLOGY DEPT

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.004358 SQ MI
PER A=0.0 PER B=0.0 PER C=100.0 PER D=0.0
TP=0.1333 HR MASS RAINFALL=-1

4.498737 K = .106205HR TP = .133300HR K/TP RATIO = .796738 SHAPE CONSTANT, N =
00 UNIT PEAK = 12.657 CFS UNIT VOLUME = .9995 B = 387.15 P60 = 1.90
AREA = .004358 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.00968 INCHES = .2347 ACRE-FEET
PEAK DISCHARGE RATE = 8.10 CFS AT 1.500 HOURS BASIN AREA = .0044 SQ. MI.

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.004358 SQ MI
PER A=0.0 PER B=12.0 PER C=0.0 D=88.0
TP=0.1333 HR MASS RAINFALL=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
00 UNIT PEAK = 15.141 CFS UNIT VOLUME = .9987 B = 526.28 P60 = 1.90
AREA = .003835 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

3.599930 K = .130761HR TP = .133300HR K/TP RATIO = .980950 SHAPE CONSTANT, N =
00 UNIT PEAK = 1.2850 CFS UNIT VOLUME = .9894 B = 327.55 P60 = 1.90
AREA = .000523 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.80317 INCHES = .4191 ACRE-FEET
PEAK DISCHARGE RATE = 11.58 CFS AT 1.500 HOURS BASIN AREA = .0044 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 13:59:47

OCT 21

HYDROLOGY DIVISION

DRAINAGE INFORMATION SHEET

614/053

PROJECT TITLE: North Valley Multi-Service Center ZONE ATLAS/DRNG, FILE #: G-13/14

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

LEGAL DESCRIPTION: Lot A, Lands of Robinson and Traub

CITY ADDRESS: 1250 Candelaria Blvd NW

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

ADDRESS: P.O. Box 90606 PHONE: 828-2200

OWNER: City of Albuquerque CONTACT: _____

ADDRESS: P.O. Box 1293 PHONE: _____

ARCHITECT: Claudio Vigil Architects CONTACT: Lloyd Goldrick

ADDRESS: 825 Pennsylvania NE PHONE: 265-3000

SURVEYOR: City of Albuquerque CONTACT: _____

ADDRESS: P.O. Box 1293 PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
X DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

____ YES
X 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
X BUILDING PERMIT APPROVAL
____ CERTIFICATION OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ OTHER _____ (Specify)

DATE SUBMITTED: 10/15/93

BY: John M. MacKenzie
John M. MacKenzie, PE

OCT 21 1993

