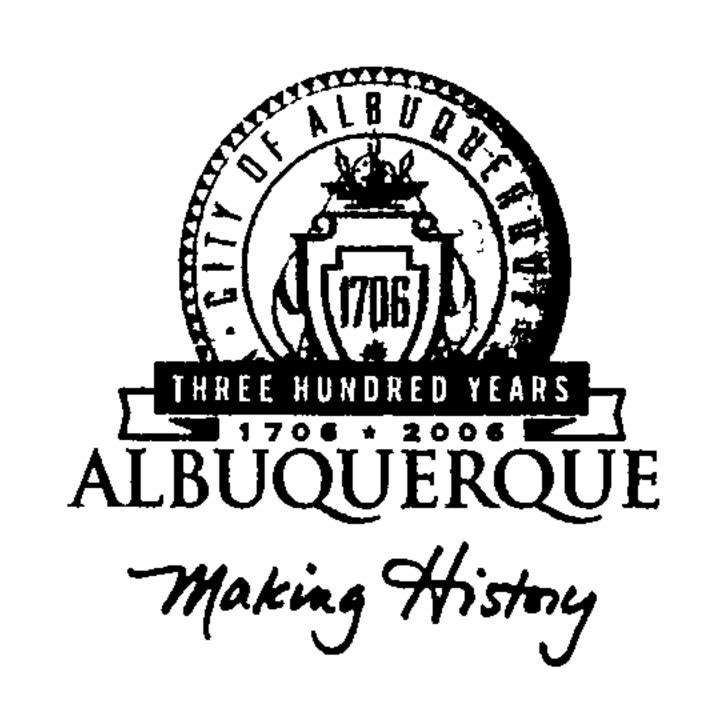
CITY OF ALBUQUERQUE



February 20, 2006

Mr. Guy Jackson, P.E.

ASCG AND GJA

6501 Americas Parkway NE, Suite 400

Albuquerque, NM 87110

Re: AUTOZONE 2 QUAIL & 57TH STREET

5700 Quail Rd. NW

Approval of Permanent Certificate of Occupancy (C.O.)

Engineer's Stamp dated 02/14/2005 (H-11/D65)

Certification dated 02/17/2006

Dear Guy,

P.O. Box 1293

Based upon the information provided in your submittal received 02/17/2006, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

Albuquerque

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

New Mexico 87103

Sincerely,

www.cabq.gov

Arlene V. Portillo

Plan Checker, Planning Dept. - Hydrology

Development and Building Services

Aline V. Portillo

C:

CO Clerk

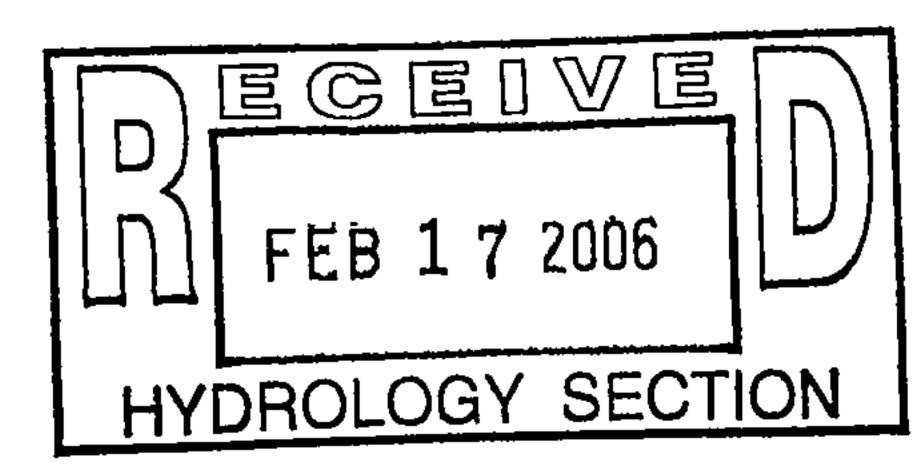
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE AutoZone DQuail & 5	7 ZONE /	ATLAS/DRWG. FILE # H-11 / Du 5
DRB#: 1101275	EPC #	WORK ORDER #
LEGAL DESCRIPTION: Tract C-1 of Tracts	A-1 and C-1 Alb	uquerque West, Albuquerque New Mexico
CITY ADDRESS: <u>5700 Quail Rd. NW</u>		
ENGINEERING FIRM: ASCG and GJA		CONTACT: Guy Jackson, GJA
ADDRESS: 6501 Americas Parkway NE, Suit	e 400, 87110	PHONE: <u>235-1426</u>
OWNER: AutoZone, Inc.	CONTA	CT: <u>Arthur Nave</u>
ADDRESS: 123 South Front St. Memphis TN	, 38103	PHONE: 901-495-8714
ARCHITECT: See Owner ADDRESS:		CT: <u>See Owner</u> See Owner
SURVEYOR: <u>Harris Surveying</u>	CONTACT: Ton	<u>y Harris</u>
ADDRESS: 2412 Monroe, NE	PHONE: <u>889-80</u>	<u>56</u>
CONTRACTOR: JCS Johnson		CONTACT: Dean Mobley
ADDRESS:	PHONE	972-488-9900
TYPE OF SUBMITTAL:	CHECK	TYPE OF APPROVAL SOUGHT:
DRAINAGE REPORT DRAINAGE PLAN CONCEPTUAL GRADING & DRAINAGE GRADING PLAN EROSION CONTROL PLAN X_ ENGINEER'S CERTIFICATION OTHER PRE-DESIGN MEETING: YES NO COPY PROVIDED		_ 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 _ BUILDING PERMIT APPROVAL _ X_ CERTIFICATE OF OCCUPANCY APPROVAL _ GRADING PERMIT APPROVALS _ PAVING PERMIT APPROVAL _ S.A.B. DRAINAGE REPORT _ DRAINAGE REQUIREMENTS

DATE SUBMITTED: February 17, 2006

BY: Guy Jackson, PE



February 17, 2006

Bradley L. Bingham, PE
Section Head, Hydrology
Development & Building Services Division
Planning Department
PO Box 1293
Albuquerque, New Mexico 87103

Re: AutoZone -5700 Quail Rd. NW, Albuquerque, NM (Zone Atlas Map H-11)

Dear Brad:

Attached for Final Certificate of Occupancy request are the following:

One Certified Grading Plan One Revised Drainage Plan One Revised Calcs

Please review my certification on the attached plans requesting approval of the site for Certificate of Occupancy based upon my recommendations...

If you have any questions, please contact me at (505) 235-1426.

Sincerely,

Guy Jackson & Associates, LLC

President

BPLW

Architects and Engineers 体的,多类的。心中心的强性,他们的一种心的,他们的人们的人们的人们的人们的人们的人们的人们的人们的人们的人们的

PROJECT AUTOZONE 57TH & QUAIL

PROJECT NO. A04029

DATE 02/17/06

BY Guy Jackson

DPM Section 22.2 - Hydrology

Part A-Watersheds less than 40 acres. January, 1993

INSTRUCTIONS

* Spread sheet requires three input areas (dark cells):

Location

>A.1 Precipitation Zone

>A.3 Land Treaments

- * Values from the tables are automatically placed using "if" statements.
- * Table values should be checked for correctness for each use.

SUMMARY

Location	BASIN 1	BASIN 2	BASIN 3	TOTALS	
Precipitation Zone	1	1	1	1	
Land Area	0.52	0.32	0.63	1.47	acres
Excess Precipitation Volume					
>>> 100-year 6-hour (design)	0.07	0.04	0.04	0.14	acre-ft
10-year 6-hour	0.04	0.02	0.01	0.08	acr e -ft.
2-year 6-hour	0.02	0.01	0.00	0.04	acr e -ft
100-year 24-hour	0.08	0.05	0.04	0.17	acr o -ft
Peak Discharge Rates (DPM)					
>>> Q100 (design)	1.90	1.16	1.28	4.34	cfs
Q10	1.16	0.71	0.48	2.35	cfs
Q2	0.61	0.37	0.02	1.01	cfs

Proposed Hyd.

INPUT AND CALCULATIONS

LOCATION	BASIN 1	BASIN 2	BASIN 3		
>A.1 PRECIPITATION ZONE (from Table A-1)	1	1	1	1	
				TOTALS	
>A.2 DEPTHS				li li a l'a l'a l'a l'a l'a l'a la la	
(from Table A-2)					
100-YEAR STORM (P60)	1.87	1.87	1.87	1.87	inche
100-YEAR STORM (P360)	2.20	2.20	2.20	2.20	inche
100-YEAR STORM (P1440)	2.66	2.66	2.66	2.66	inche
10-YEAR (P360) (Calculated: P360*RPF10)	1.47	1.47	1.47	1.47	inche
2-YEAR (P360) (Calculated: P360*RPF2)	0.95	0.95	0.95	0.95	inche
					
>A.3 LAND TREATMENTS (AI)				TOTALS	
Treatment A	0.00	0.00	0.00	TOTALS 0.00	acres
	0.00 0.16	0.00 0.10	0.00		acres
Treatment A				0.00	
Treatment A Treatment B	0.16	0.10	0.63	0.00 0.89	acres
Treatment A Treatment B Treatment C	0.16	0.10	0.63	0.00 0.89 0.00	acres
Treatment A Treatment B Treatment C Treatment D	0.16 0.00 0.36	0.10 0.00 0.22	0.63 0.00 0.00	0.00 0.89 0.00 0.58	acres acres

INPUT AND CALCULATIONS (CON'T)

>A.5 EXCESS PRECIPITATION 6 HOUR AND 24 HO	UR (EI)				
from Tabl a A-8				TOTALS	
100-year 6-hour					
Treatment A	0.44	0.44	0.44	0.44	inches
Treatment B	0.67	0.67	0.67	0.67	inches
Treatment C	0.99	0.99	0.99	0.99	inches
Treatment D	1.97	1.97	1.97	1.97	inches
WEIGHTED E (Sum El*Al/A)	1.57	1.56	0.67	1.18	inches
VOLUME V100:6h (E*A)	0.07	0.04	0.04	0.14	асг е -ft.
	2,963.53	1,816.45	1,532.22	6,312.21	ft^3
10-year 6-hour				===================================	
Treatment A	0.08	0.08	0.08	0.08	inches
Treatment B	0.22	0.22	0.00	0.22	inches
Treatment C	0.44	0.44	0.44	0.44	inches
Treatment D	1.24	1.24	1.24	1.24	inches
					
WEIGHTED E (Sum Ei*Al/A)	0.93	0.92	0.22	0.62	inches
VOLUME V10:6h (E*A)	0.04	0.02	0.01	0.08	acr e -ft.
	1,748.21	1,070.12	503.12	3,321.45	ft^3
2-year 6-hour					
Treatment A	0.00	0.00	0.00	0.00	inches
Treatment B	0.01	0.01	0.01	0.01	inches
Treatment C	0.12	0.12	0.12	0.12	inches
Treatment D	0.72	0.72	0.72	0.72	inches
WEIGHTED E (Sum Ei*Al/A)	0.50	0,50	0.01	0.29	inches
VOLUME V2:6h (E*A)	0.02	0.01	0.00	0.04	acr e -ft.
	946.70	578.62	22.87	1,548.20	ft^3
ላ በነገር ነው መስመር ነው		=======================================	======================================		
100-year 24-hour VOLUME V100:24h					
(V100-6h+Ad*P1440-P360)/12)		α ΛΕ	Δ α 4	Δ 4 7	225- T
(VIOU-DIITMU TI44U-PODU)/12)	3,564,68	0.05 2,183.81	9,04	0.17 7 220 60	acr o -ft.
	3,904, 0 0	Z, 100.01	1,532.22	7,280.69	ft^3

INPUT AND CALCULATIONS (CON'T)

TOTA	TOTALS
1.29	1.29 cfs/act
2.03	2.03 cfs/act
2.87	2.87 cfs/act
4.37	4.37 cfs/ac
1.28	4.34 cfs
	
0.24	0.24 cfs/aci
0.76	0.76 cfs/ac
1.49	1.49 cfs/aci
2.89	2.89 cfs/ac
0.48	2,35 cfs
	
0.00	0.00 cfs/aci
0.03	0.03 cfs/aci
0.47	0.47 cfs/aci
1.69	1.69 cfs/aci
0.02	1.01 cfs

DEVELOPED CONDITIONS AND DRAINAGE PATTERNS

THE PROPOSED SITE WILL BE SPLIT INTO THREE (3) DIFFERENT SUBBASINS. BY USE OF DETENTION PONDS TO BE LOCATED IN THE NORTHEASTERN PORTION OF THE SITE ADJACENT TO 57TH ST. THE TOTAL DEVELOPED DISCHARGE FROM THE SITE WILL BE CONTROLLED TO THE HISTORIC 100YR-6 HOUR EVENT.

PROPOSED BASIN 1 WILL CONSIST OF 0.52AC WITH AN ANTICIPATED FLOWRATE OF 1.9 CFS. THIS DISCHARGE WILL BE CONTROLLED TO 1.5 CFS BY THE USE OF DETENTION PONDS, A PERFORATED COVER AND AN 18-INCH CONNECTION TO THE EXISTING 43" x 68" STORM DRAIN IN 57TH ST. WHICH FLOWS SOUTH.

PROPOSED BASIN 2 WILL CONSIST OF 0.32AC WITH A DISCHARGE RATE OF 1.16 CFS. THESE DEVELOPED FLOWS WILL DRAIN DIRECTLY NORTH INTO THE QUAIL RD. RIGHT-OF-WAY AND EXISTING STORM SYSTEM. THIS EXISTING STORM DRAIN THEN FLOWS EAST WHERE IT JOINS THE EXISTING 43" X 68" STORM DRAIN IN 57TH ST. AS DESCRIBED ABOVE.

PROPOSED BASIN 3 HAS A CONTRIBUTING AREA OF 0.63ACRES AND A DISCHARGE RATE OF 1.28 CFS WHICH WILL CONTINUE TO FLOW EAST INTO THE 57TH ST. RIGHT-OF-WAY. IT IS ANTICIPATED THAT THIS BASIN WILL REMAIN UNDEVELOPED DURING THE CONSTRUCTION OF THE AUTOZONE SITE.

CALCULATIONS

THE CALCULATIONS, WHICH ARE ATTACHED, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED.

CONCLUSION

AS STATED ABOVE, THE NET DEVELOPED FLOWS FROM THE PROPOSED THREE BASINS (1.5CFS + 1.16CFS +1.28CFS = 3.94CFS), WHICH IS APPROXIMATELY 0.94 CFS GREATER THAN THE HISTORIC DISCHARGE RATE OF 3.0CFS DESCRIBED IN THE EXISTING CONDITIONS.

CITY OF ALBUQUERQUE



Planning Department Transportation Development Services Section

November 3, 2004

Guy Jackson, P.E. 6501 Americas Parkway NE, Ste. 400 Albuquerque, NM 87110

Re:

Certification Submittal for Final Building Certificate of Occupancy for

Auto Zone, [H-11 / D65] 5700 Quail Rd NW

Engineer's Stamp Dated 11/03/05

Dear Mr. Jackson:

P.O. Box 1293

The TCL / Letter of Certification submitted on November 3, 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

www.cabq.gov Planning Department

c:

Engineer

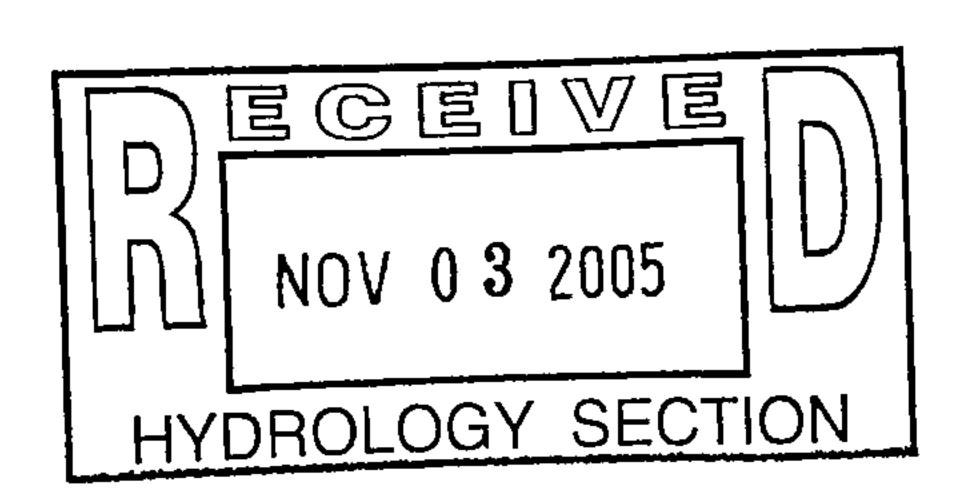
Hydrology file CO Clerk

DRAINAGE INFORMATION SHEET

PROJECT TITLE <u>AutoZone</u> ZON	NE ATLAS/DRWG. FILE # H-11/7 65
DRB#: <u>1101275</u> EPC #	WORK ORDER #
LEGAL DESCRIPTION: Tract C-1 of Tracts A-1 and C-1	Albuquerque West, Albuquerque New Mexico
CITY ADDRESS: <u>5700 Quail Rd. NW</u>	
ENGINEERING FIRM: ASCG and GJA	CONTACT: Guy Jackson, GJA
ADDRESS: 6501 Americas Parkway NE, Suite 400, 87110	PHONE: <u>235-1426</u>
OWNER: AutoZone, Inc. CON	ITACT: <u>Arthur Nave</u>
ADDRESS: 123 South Front St. Memphis TN, 38103	PHONE: <u>901-495-8714</u>
•	TACT: <u>See Owner</u> NE: <u>See Owner</u>
SURVEYOR: <u>Harris Surveying</u> CONTACT: _	Tony Harris
ADDRESS: 2412 Monroe, NE PHONE: 889	<u>9-8056</u>
CONTRACTOR: JCS Johnson	CONTACT: Dean Mobley
ADDRESS: PHO	NE: <u>972-488-9900</u>
TYPE OF SUBMITTAL: CHE	CK TYPE OF APPROVAL SOUGHT:
DRAINAGE REPORT DRAINAGE PLAN CONCEPTUAL GRADING & DRAINAGE PLAN GRADING PLAN EROSION CONTROL PLAN X_ ENGINEER'S CERTIFICATION (Traffic Circulation) OTHER PRE-DESIGN MEETING: YES NO COPY PROVIDED	SKETCH PLAT APPROVALPRELIMINARY PLAT APPROVALS. DEV. PLAN FOR SUB'D APPROVALS. DEV. PLAN FOR BLDG. PERMIT APPROVALSECTOR PLAN APPROVALSECTOR PLAN APPROVALBUILDING PERMIT APPROVALX_CERTIFICATE OF OCCUPANCY APPROVALGRADING PERMIT APPROVALSPAVING PERMIT APPROVALS.A.B. DRAINAGE REPORTDRAINAGE REQUIREMENTS

DATE SUBMITTED: November 3, 2005

BY: Guy Jackson, PE



November 3, 2005

Nilo Salgado-Fernandez
Transportation Development Section
City of Albuquerque Public Works
PO Box 1293
Albuquerque, New Mexico 87103

Re: AutoZone –5700 Quail Rd, Albuquerque, NM (H-11)

Dear Nilo:

On behalf of ASCG I'm submitting the following documents for final Certificate of Occupancy:

- One (1) Drainage Information Sheet for Traffic Circulation Plan
- One (1) copy of the Certified Site Plan

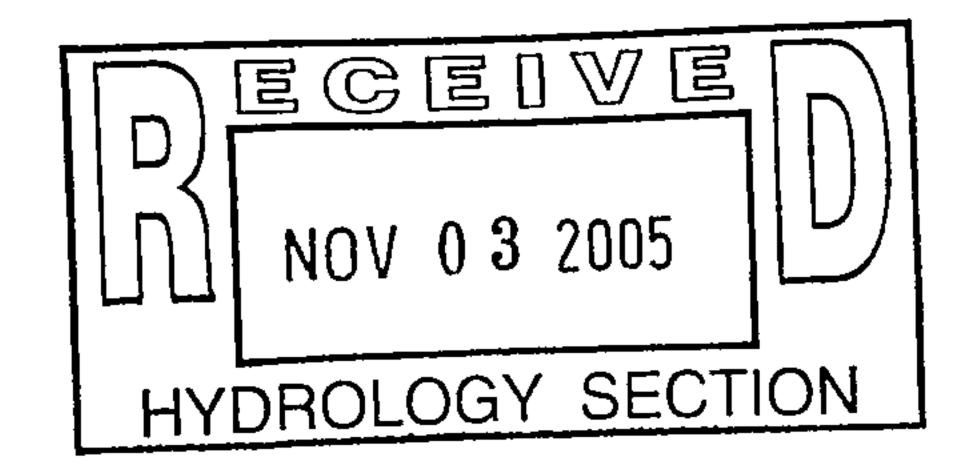
If you have any questions, please contact me at (505) 235-1426.

Sincerely,

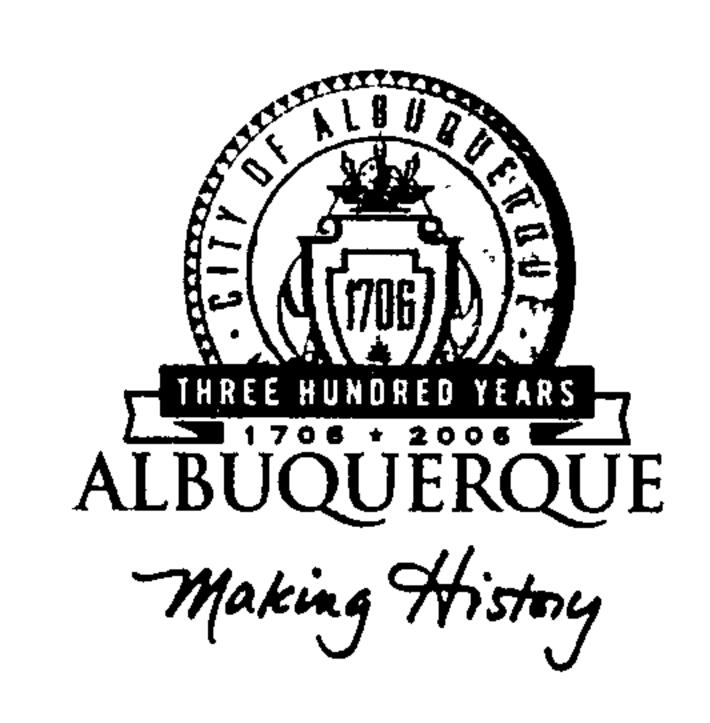
GUY JACKSON & ASSOCIATES, LLC

Guy Jackson, PE

President 235-1426



CITY OF ALBUQUERQUE



November 2, 2005

Mr. Guy Jackson, P.E. **GUY JACKSON & ASSOCIATES, LLC**10522 Florence Ave. NE

Albuquerque, NM 87122

Re: AUTOZONE

5700 Quail Rd. NW

Approval of Temporary Certificate of Occupancy (C.O.)

Approved Engineer's Stamp dated 02\$/14/200\$ (H-11/D65)

Certification dated 11/02/2005

Dear Guy:

P.O. Box 1293

Based upon the information provided in your submittal received 11/02/2005, the above referenced certification is approved for release of 30-day Temporary Certificate of Occupancy by Hydrology.

Albuquerque

Upon acceptance of noted exception(s) and the required SO-19 listed in your Drainage Certification, please resubmit an updated Certification for Permanent C.O.

New Mexico 87103

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

www.cabq.gov

Arlene V. Portillo

Plan Checker, Planning Dept. - Hydrology

Development and Building Services

Sincerely, Orlene V. Pottello

C:

Phyllis Villanueva

File



November 2, 2005

Bradley L. Bingham, PE Section Head, Hydrology Development & Building Services Division Planning Department PO Box 1293 Albuquerque, New Mexico 87103 14-11/D65

Re: AutoZone -5700 Quail Rd. NW, Albuquerque, NM (Zone Atlas Map H-11)

Dear Brad:

The referenced property is anticipating opening their doors on Friday November 4, 2005. Although most of the site improvements have been completed, upon reviewing the mostly completed as-built information from the surveyor, there are numerous items that need to be addressed prior to submitting for Final Certificate of Occupancy. The items needing to be addressed or completed are as follows:

- 1) The grading west of the building has not been completed.
- 2) The curb cuts at the north entrance (Quail Rd.) and at the southeast portion of the property have not been installed.
- 3) The detention pond adjacent to 57th Street has not been graded to completion.
- 4) The elevations of the new pavement north of the building have not been built to design grades. The water block near the northwest corner of the building has not been constructed.
- 5) The retaining wall along the southern portion of the building (south property line) has not been installed.
- 6) As-builts have not been completed for the trash enclosure.

AutoZone's contractor has indicated to me that the items listed above will be addressed accordingly and are requesting a "Temporary Certificate of

Bradley L. Bingham November 2, 2005 Page 2

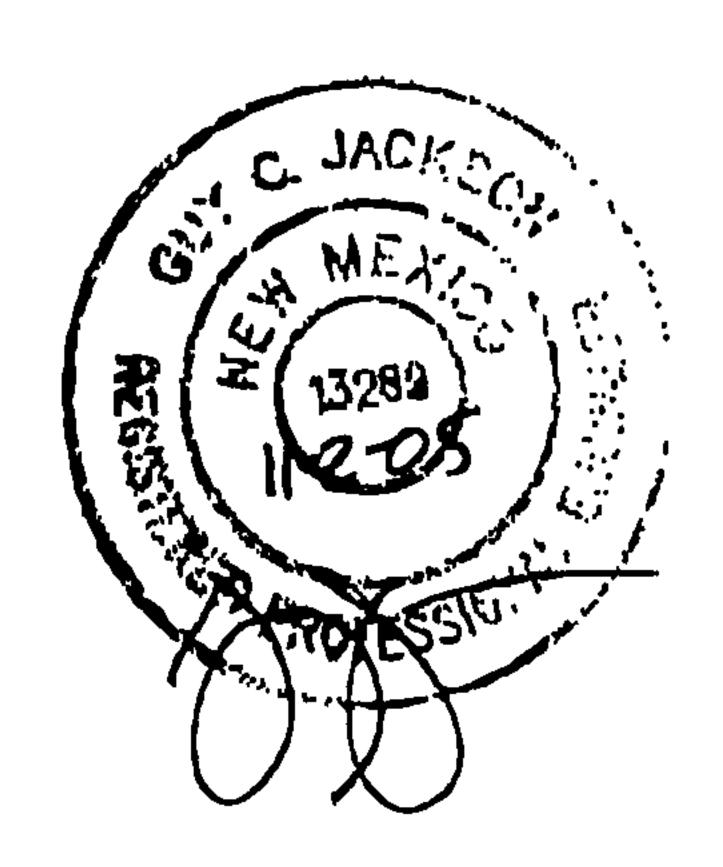
Occupancy" until the site meets the requirements/intent of the approved plan.

If you have any questions, please contact me at (505) 235-1426.

Sincerely,

Guy Jackson & Associates, LLC

President



Guy Jackson & Associates, LLC 235-1426

FAX COVER SHEET

DATE:

11/2/05

TIME:

2:44 PM

TO:

Ariene Portillo

PHONE:

924-3982

COA Hydrology

FAX:

924-3864

FROM:

Guy Jackson

PHONE:

(505) 235-1426

GJA, LLC

FAX:

(505) 821-5798

RE;

AutoZone & 5700 Quail Rd. NW

cc:

Number of pages including cover sheet: 3

MESSAGE:

Arlene,

Per your voice mail to me, I've attached a copy of the letter requesting Temporary C.O for the referenced site listing the items that need to be completed prior to submitting for Final C.O. Please call if you have any questions or comments.

Thanks,

Guy J.

Guy Jackson & Associates, LLC 235-1426

FAX COVER SHEET

DATE: 11/2/05 TIME: 2:44 PM

TO: Arlene Portillo PHONE: 924-3982 COA Hydrology FAX: 924-3864

FROM: Guy Jackson PHONE: (505) 235-1426

GJA, LLC FAX: (505) 821-5798

RE: AutoZone & 5700 Quail Rd. NW

cc:

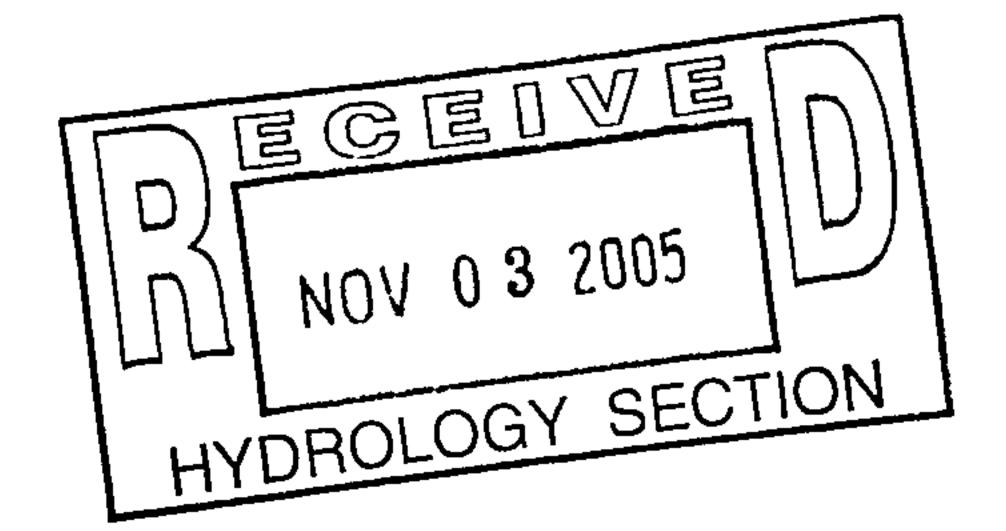
Number of pages including cover sheet: 3

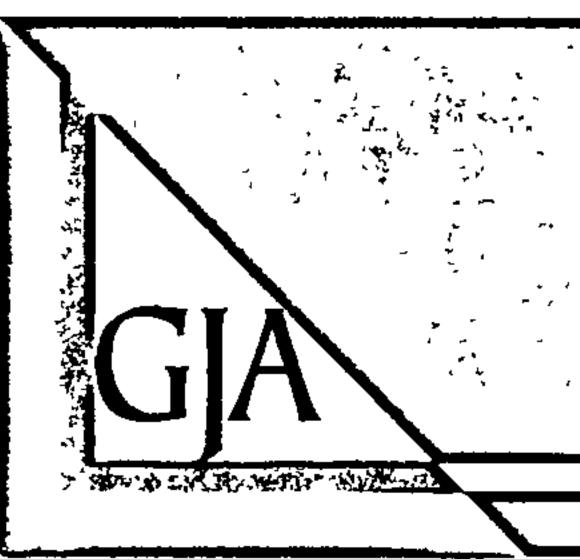
MESSAGE:

Arlene,

Per your voice mail to me, I've attached a copy of the letter requesting Temporary C.O for the referenced site listing the items that need to be completed prior to submitting for Final C.O. Please call if you have any questions or comments. Thanks,

Guy J.





Civil Engineering for Commercial and Residential Development

November 2, 2005

Bradley L. Bingham, PE
Section Head, Hydrology
Development & Building Services Division
Planning Department
PO Box 1293
Albuquerque, New Mexico 87103

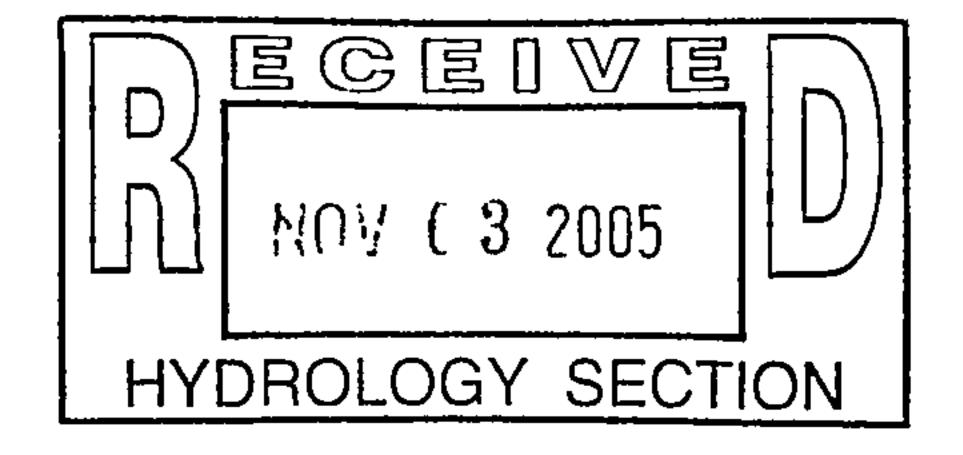
Re: AutoZone –5700 Quail Rd. NW, Albuquerque, NM (Zone Atlas Map H-11)

Dear Brad:

The referenced property is anticipating opening their doors on Friday November 4, 2005. Although most of the site improvements have been completed, upon reviewing the mostly completed as-built information from the surveyor, there are numerous items that need to be addressed prior to submitting for Final Certificate of Occupancy. The items needing to be addressed or completed are as follows:

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AutoZone's contractor has indicated to me that the items listed above will be addressed accordingly and are requesting a "Temporary Certificate of



Bradley L. Bingham November 2, 2005 Page 2

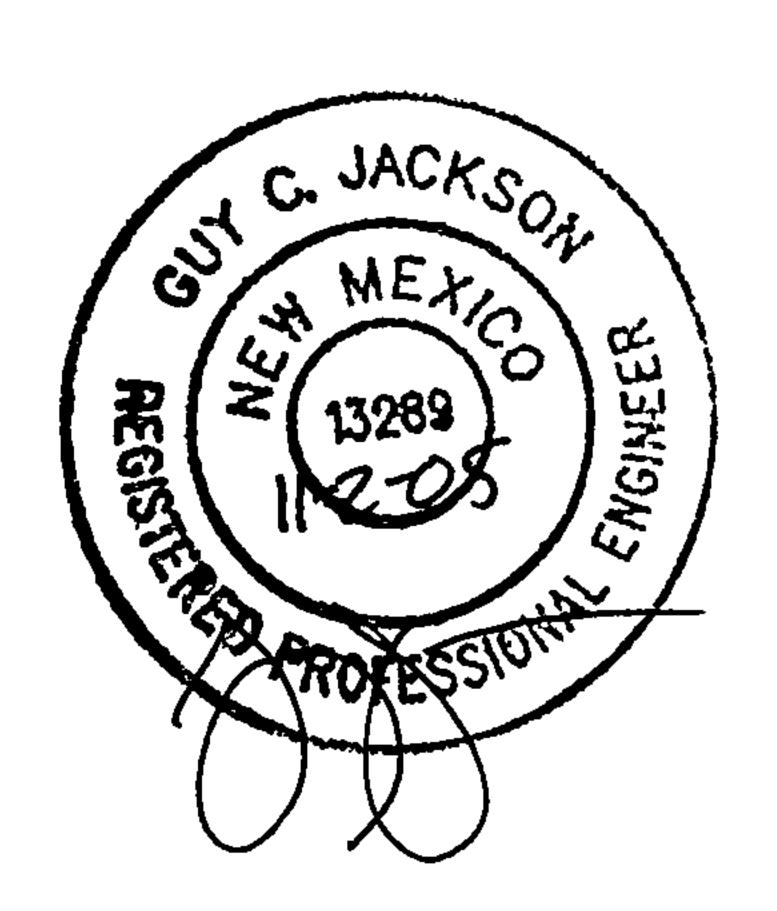
Occupancy" until the site meets the requirements/intent of the approved plan.

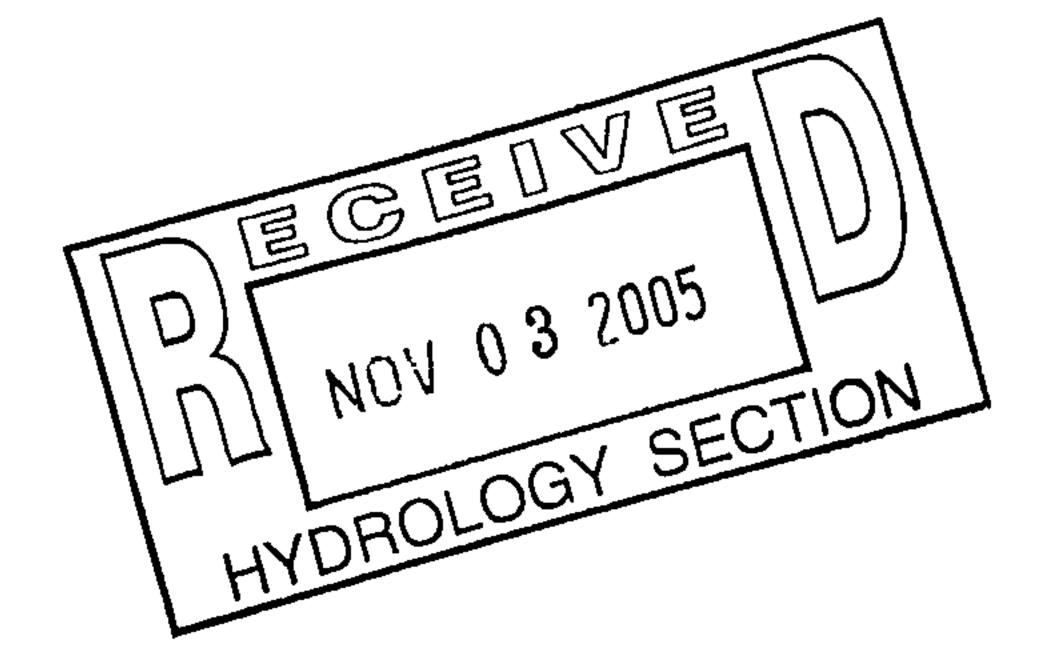
If you have any questions, please contact me at (505) 235-1426.

Sincerely,

Guy Jackson & Associates, LLC

President





CITY OF ALBUQUERQUE



March 25, 2005

Guy C. Jackson, PE BPLW Architects & Engineers, Inc 6200 Uptown Blvd. - Suite 400 NE Albuquerque, NM 87110

Re: AutoZone @ 57th & Quail, Tract C-1 of the Plat of Tracts A-1 & C-1, Grading & Drainage Plan - Engineer Stamp dated 02-14-05 (H11/D65)

Dear Mr. Jackson,

P.O. Box 1293

Albuquerque

www.cabq.gov

New Mexico 87103

Based upon the information provided in your submittal dated 02-22-05, the above referenced plan is approved for Building Permit and S019 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

This project requires a National Pollutant Discharge Elimination System (NPDES) Permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso).

If you have any other questions, you can contact me at 924-3990.

Associate Engineer, Planning Department
Development and Building Services

Sincerely,

Phillip J. Lovato, E.I.

Phillip J. Lovett

C: Chuck Caruso, DMD
Pam Lujan, Excavation & Barricading
Matt Cline, Storm Drain Maintenance
file

Albuquerque - Making History 1706-2006

DRAINAGE INFORMATION SHEET

PROJECT TITLE <u>AutoZone @ 57th & Quail</u>	ZONE ATLAS/DRWG. FILE # H-11 / D 65
DRB#: <u>110176</u> EPC #	WORK ORDER #
	NE (C-1), OF THE PLAT OF TRACTS A-1 AND C-1, BUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
CITY ADDRESS: <u>5700 Quail Rd. NW</u>	
ENGINEERING FIRM: BPLW	CONTACT: Guy Jackson
ADDRESS: 6200 Uptown Blvd., Suite 400	PHONE: <u>881-2759</u>
OWNER: AutoZone, Inc.	CONTACT: Arthur Nave
ADDRESS: 123 South Front St. Memphis TN, 38103	PHONE: <u>901-495-8714</u>
ARCHITECT: See Owner ADDRESS:	CONTACT: See Owner PHONE: See Owner
SURVEYOR: <u>Harris Surveying</u>	CONTACT: Tony Harris
ADDRESS: <u>2412 Monroe NE, 87110</u>	PHONE: <u>889-8056</u>
CONTRACTOR: TBD	CONTACT: Need BP Lee
ADDRESS:	PHONE:
TYPE OF SUBMITTAL:	CHECK TYPE OF APPROVAL SOUGHT:
DRAINAGE REPORT X_ DRAINAGE PLANCONCEPTUAL GRADING & DRAINAGE PLAN X_ GRADING PLAN EROSION CONTROL PLANENGINEER'S CERTIFICATIONOTHER PRE-DESIGN MEETING:YES XNOCOPY PROVIDED	SKETCH PLAT APPROVALPRELIMINARY PLAT APPROVALS. DEV. PLAN FOR SUB'D APPROVALSECTOR PLAN APPROVALSECTOR PLAN APPROVALFINAL PLAT APPROVALSUILDING PERMIT APPROVALCERTIFICATE OF OCCUPANCY APPROVALGRADING PERMIT APPROVALSPAVING PERMIT APPROVALS.A.B. DRAINAGE REPORTDRAINAGE REQUIREMENTSYSO~\G
DATE SUBMITTED: FEBRUARY 22, 2005 BY: Guy Jackson, PE	D) 国 (C) 国 (D) FEB 2 2 2005 HYDROLOGY SECTION

BPIW

Architects & Engineers, Inc.

6200 Uptown Blvd. NE Suite 400 Albuquerque, New Mexico 87110 (505) 881-BPLW (2759) FAX (505) 881-1230 Web site: http://www.bplw.com

Officers

William L. Burns, AIA
Ronald L. Peters, AIA, AICP
Joseph D. Long, Emeritus, AIA, PE
Bill J. Waters, Emeritus, AIA
Eugene A. Valentine, AIA, CCS
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L. Fontaine Sanchez
Molly E. Smith, REFP

February 22, 2004

Bradley L. Bingham, PE Section Head, Hydrology City of Albuquerque Public Works PO Box 1293 Albuquerque, New Mexico 87103

Re: AutoZone -57th & Quail, Albuquerque, NM (H11), DRB # 1001763
BPLW Project Number: A04029

Dear Brad:

Attached for review, comment and/or approval are the following:

- One (1) Drainage Information Sheet
- One (1) copy of the Grading Plan
- One (1) copy of the Drainage Plan
- One (1) copy of Supporting Drainage Calculations

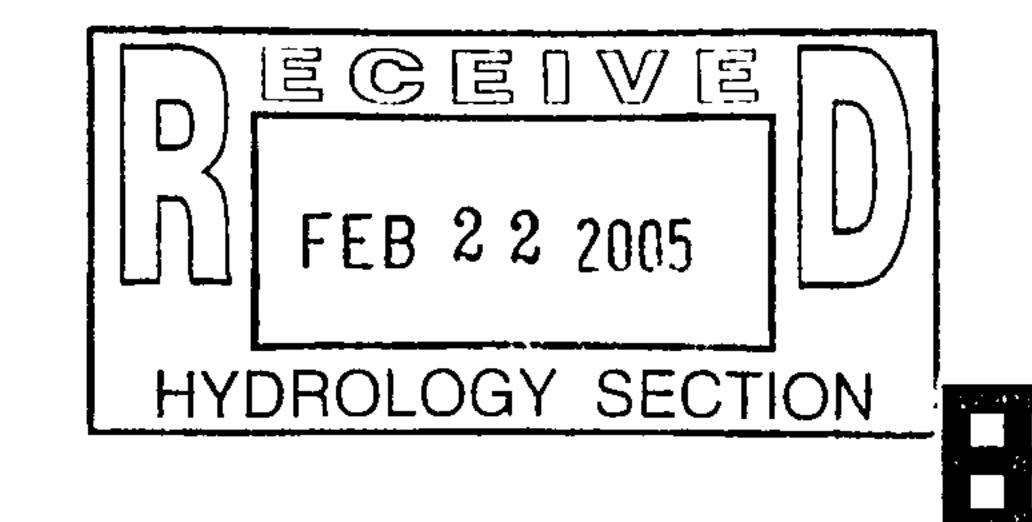
The proposed AutoZone project is located at 5700 Quail NW. The site is currently undeveloped. The current legal description for the site is "TRACT LETTERED C-ONE (C-1), OF THE PLAT OF TRACTS A-1 AND C-1, ALBUQUERQUE WEST, A SUBDIVISION IN ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO". On December 20, 2004 the Conceptual Grading and Drainage Plan was approved for Site Plan for Subdivision and Site Plan for Building Permit (see attached copy of approval letter). Per the approval letter, the attached grading plan is comprehensive with applicable spot elevations and SO#19 Permit Notes. The site plan and accompanying site details have been included in the permit set to the City. The plan being submitted is the AutoZone on Tract C-1 for Building Permit. I've highlighted the applicable drainage calculations to assist you in your review. If you have any questions, please contact me at (505) 881-2759.

Sincerely,

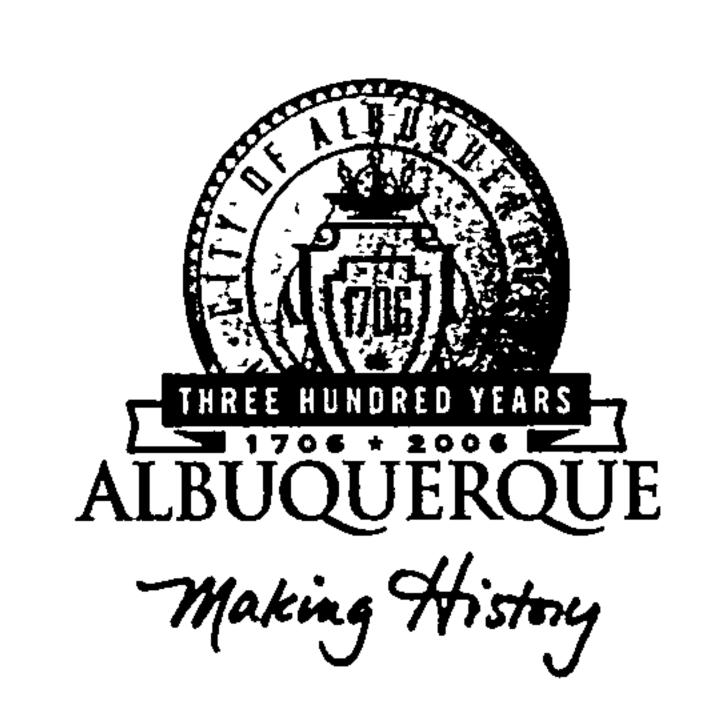
BPLW ARCHITECTS & ENGINEERS, INC.

Guy Jackson, PE

Birector of Civil Engineering



CITY OF ALBUQUERQUE



December 20, 2004

Guy Jackson, PE **BPLW** 6200 Uptown Blvd, Ste 400 Albuquerque, NM 87110

Autozone at 57th/Quail Conceptual Grading and Drainage Plan Re: Engineer's Stamp dated 11-8-04 (H11/D65)

Dear Mr. Jackson,

Based upon the information provided in your submittal dated 11-8-04, the above referenced plan is approved for Site Plan for Subdivision and Site Plan for Building Permit action by the DRB. Prior to Building Permit approval, please resubmit a bound (stapled) set of the calculations, stamped and signed by the engineer of record, and a more comprehensive grading plan with all critical spot elevations, build notes and details needed to construct this project. An SO#19 Permit would be needed as well.

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

New Mexico 87103

www.cabq.gov

P.O. Box 1293

Albuquerque

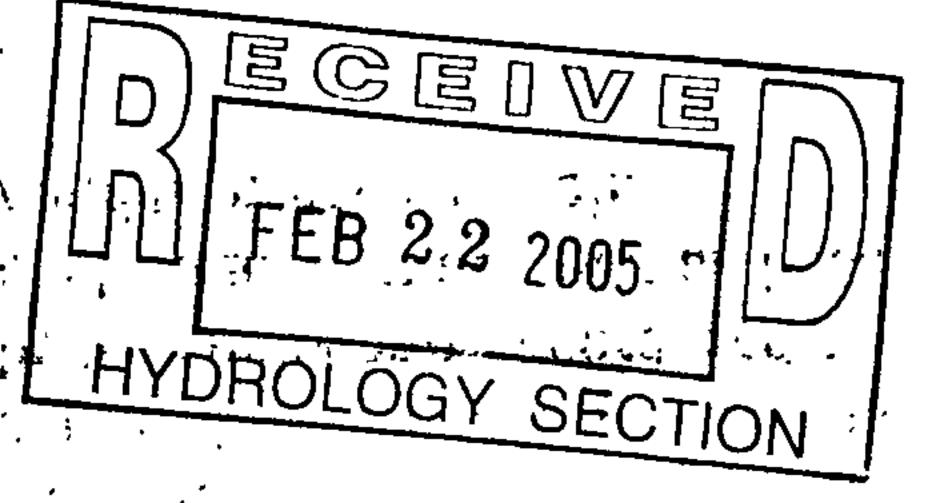
Sincerely,

Bradley L. Bingham, PE

Principal Engineer, Planning Dept. Development and Building Services

file

TEB 2:2 2005. HYDROLOGY SECTION



Drainage Summary

Project: AUTOZONE 57TH & QUAIL

Project Numbe: A04029
Date: 10/02/04
By: JON PENA

Site Location

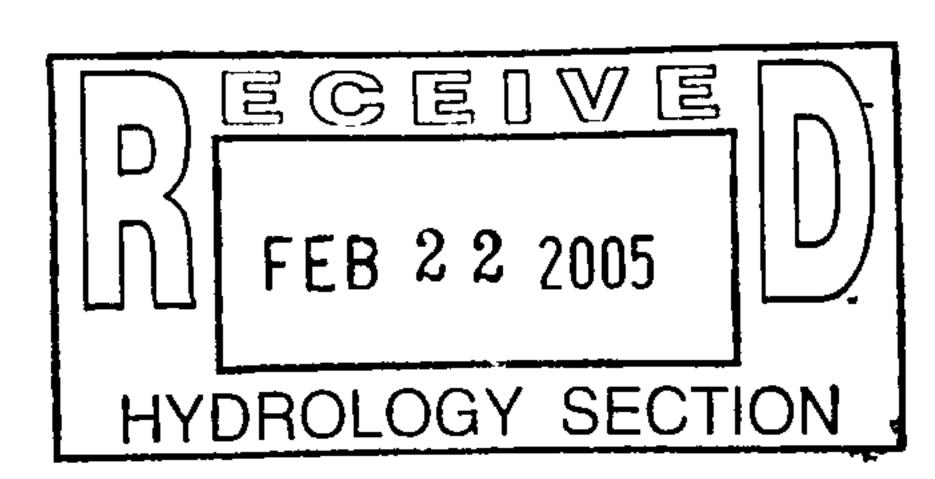
Precipitation Zone 1 Per Table A-1 COA DPM Section 22.2

Existing summary

Basin Name		BASIN 1			TOTAL
Soil Treatment (acres)					
Area "A"		0.00	0.00	0.00	0.00
Area "B"		1.47	0.00	0.00	1.47
Area "C"		0.00	0.00	0.00	0.00
Area "D"		0.00	0.00	0.00	0.00
	TOTAL	1.47	0.00	0.00	1.47
Excess Runoff (acre-feet)					
100yr. 6hr.		0.08	#DIV/0!	#DIV/0!	#DIV/0!
10yr. 6hr.		0.03	#DIV/0!	#DIV/0!	#DIV/0!
2yr. 6hr.		0.00	#DIV/0!	#DIV/0!	#DIV/0!
100yr. 24hr.		0.08	#DIV/0!	#DIV/0!	#DIV/0!
	TOTAL	0.19	#DIV/0!	#DIV/0!	#DIV/0!
Peak Discharge (cfs)		•			
100 yr.		2.98	0.00	0.00	2.98
10yr.		1.12	0.00	0.00	1.12
2yr.		0.04	0.00	0.00	0.04
	TOTAL	4.15	0.00	0.00	4.15

Proposed summary

Basin Name		BASIN 1	BASIN 2	BASIN 3	TOTAL
Soil Treatment (acres)					
Area "A"		0.00	0.00	0.00	0.00
Area "B"		0.14	0.10	0.63	0.87
Area "C"		0.00	0.00	0.00	0.00
Area "D"		0.30	0.30	0.00	0.60
	TOTAL	0.44	0.40	0.63	1.47
Excess Runoff (acre-feet)					•
100yr. 6hr.		0.06	0.05	0.04	0.11
10yr. 6hr.		0.03	0.03	0.01	0.07
2yr. 6hr.		0.02	0.02	0.00	0.04
100yr. 24hr.		0.07	0.07	0.04	0.13
	TOTAL	0.18	0.17	0.08	0.35
Peak Discharge (cfs)		(,)		•	
100 yr.		1.60	1.51	1.28	4.39
10yr.		0.97	0.94	0.48	2.40
2yr.		0.51	0.51	0.02	1.04
	TOTAL	3.08	2.97	1.78	7.82



BPLW

Architects and Engineers

PROJECT AUTOZONE 57TH & QUAIL

PROJECT NO. A04029
DATE 10/02/04
BY JON PENA

DPM Section 22.2 - Hydrology

Part A-Watersheds less than 40 acres. January, 1993

INSTRUCTIONS

* Spread sheet requires three input areas (dark cells):

Location

>A.1 Precipitation Zone

>A.3 Land Treaments

- * Values from the tables are automatically placed using "if" statements.
- * Table values should be checked for correctness for each use.

SUMMARY

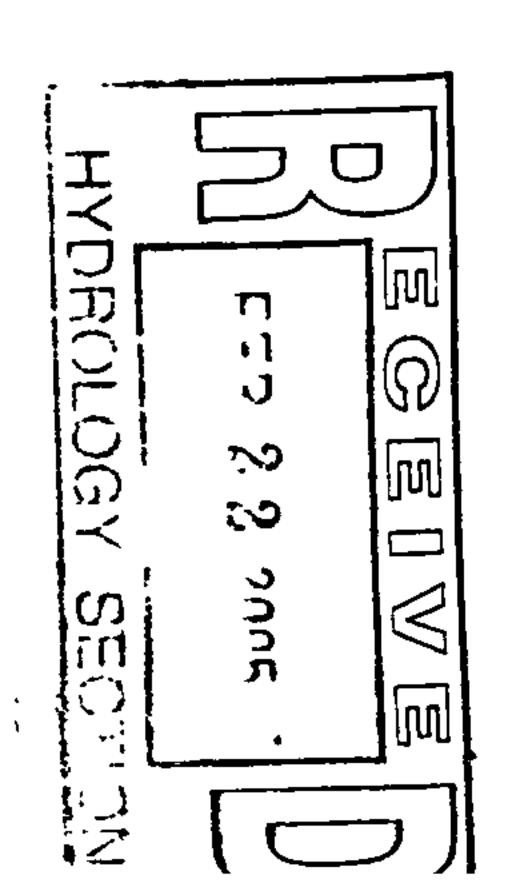
Location	0	BASIN 1	0.00	0.00	0.00	TOTALS	
Precipitation Zone		1	1	1	1	1	
Land Area		, 1.47	0.00	0.00	0.00	1.47	acres
Excess Precipitation Volume							••
>>> 100-year 6-hour (design)		0.08 '	#DIV/0!	#DIV/0!	#DIV/0!	0.08	acre-ft.
10-year 6-hour		0.03	#DIV/0!	#DIV/0!	#DIV/0!	0.03	acre-ft.
2-year 6-hour		0.00	#DIV/0!	#DIV/0!	#DIV/0!	0.00	acre-ft.
100-year 24-hour		0.08	#DIV/0!	#DIV/0!	#DIV/0!	0.08	acre-ft.
Peak Discharge Rates (DPM)		4					
>>> Q100 (design)		2.98 ~	0.00	0.00	0.00	2.98	cfs 🗸
Q10		1.12	0.00	0.00	0.00	1.12	cfs
Q2		0.04	0.00	0.00	0.00	0.04	cfs



INPUT AND CALCULATIONS

LOCATION	BASIN 1	0.00	0.00	0.00		
>A.1 PRECIPITATION ZONE (from Table A-1)	1	1	1	1	1	
>A.2 DEPTHS			·		- 	·
(from Table A-2)					TOTALS	
100-YEAR STORM (P60)	1.87	1.87	1.87	1.87	1.87	inche
100-YEAR STORM (P360)	2.20		2.20	2.20	2.20	inche
100-YEAR STORM (P1440)	2.66	2.66	2.66	2.66	2.66	inche
10-YEAR (P360) (Calculated: P360*RPF10)	1.47~	1.47	1.47	1.47	1.47	inche
2-YEAR (P360) (Calculated: P360*RPF2) • 434	0.95	0.95	0.95	0.95	0.95	inche
>A.3 LAND TREATMENTS (Ai)		····		<u>, </u>		
Treatment A	0.00	0.00	0.00	0.00	0.00	acres
Treatment B	1.47	0.00	0.00	0.00	1.47	acres
Treatment C	0.00	0.00	0.00	0.00	0.00	acres
Treatment D	0.00	0.00	0.00	0.00	0.00	acres
Total Area	1.47	0.00	0.00	0.00	1.47	acres
			=======================================	=======================================	=======	
>A.4 ABSTRACTIONS						

CALCULATIONS FOLLOW



INPUT AND CALCULATIONS (CON'T)

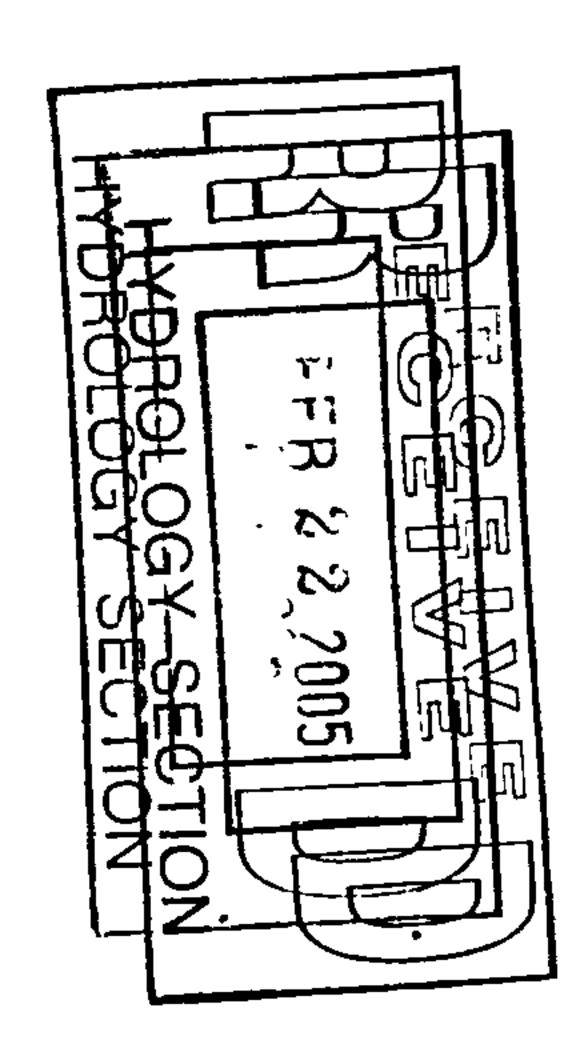
from Table A-8						
100-year 6-hour					TOTALS	
Treatment A	0.44	0.44	0.44	0.44	0.44	inches
Treatment B	0.67	0.67	0.67	0.67	0.67	inches
Treatment C	0.99 -	/ 0.99	0.99	0.99	0.99	inches
Treatment D	1.97	1.97	1.97	1.97	1.97	inches
WEIGHTED E (Sum Ei*Ai/A)	(0.67) #DIV/0!	#DIV/0!	#DIV/0!	0.67	inches
VOLUME V100:6h (E*A)	0.08	#DIV/0!	#DIV/0!	#DIV/0!	0.08	acre-ft
	3,575.19	#DIV/0!	#DIV/0!	#DIV/0!	3,575.19	ft^3
10-year 6-hour						
Treatment A	0.08	0.08	0.08	0.08	0.08	inches
Treatment B	0.22	0.22	0.22	0.22	0.22	inches
Treatment C	0.44	0.44	0.44	0.44	0.44	inches
Treatment D	1.24	1.24	1.24	1.24	1.24	inches
WEIGHTED E (Sum Ei*Ai/A)	0.22	#DIV/0!	#DIV/0!	#DIV/0!	0.22	inches
VOLUME V10:6h (E*A)	0.03	#DIV/0!	#DIV/0!	#DIV/0!	0.03	acre-ft
	1,173.94	#DIV/0!	#DIV/0!	#DIV/0!	1,173.94	ft^3
2-year 6-hour						
Treatment A	0.00 -	0.00	0.00	0.00	0.00	inches
Treatment B	0.01	0.01	0.01	0.01	0.01	inches
Treatment C	0.12	0.12	0.12	0.12	0.12	inches
Treatment D	0.72	0.72	0.72	0.72	0.72	inches
WEIGHTED E (Sum Ei*Ai/A)	(0.01)	#DIV/0!	#DIV/0!	#DIV/0!	0.01	inches
VOLUME V2:6h (E*A)	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0.00	acre-ft
	53.36 	#DIV/0!	#DIV/0!	#DIV/0!	53.36	ft^3
100-year 24-hour						
VOLUME V100:24h						
(V100-6h+Ad*P1440-P360)/12)	0.08	#DIV/0!	#DIV/0!	#DIV/0!	0.08	acre-ft
	3,575.19	#DIV/0!	#DIV/0!	#DIV/0!	3,575.19	ft^3
	======= =	=======	=======================================	=======================================	=======	

B 医医IVE HYDROLOGY SECTION

INPUT AND CALCULATIONS (CON'T)

>A.b PEAK	DISCHARGE RATE FOR SMALL WATERS	SHEDS (QI)					
	from Table A-9						
	100-year					OTALS	
	Treatment A	1.29	1.29	1.29	1.29	1.29	cfs/acre
	Treatment B	2.03	2.03	2.03	2.03	2.03	cfs/acre
	Treatment C	2.87	2.87	2.87	2.87	2.87	cfs/acre
	Treatment D	4.37	4.37	4.37	4.37	4.37	cfs/acre
	Q100 (Sum Qi	i*Ai) / 2.98	0.00	0.00	0.00	2.98	cfs
			===== ==	===== ===	=======================================	======	
	10-year						
	Treatment A	0.24	0.24	0.24	0.24	0.24	cfs/acre
	Treatment B	0.76	0.76	0.76	0.76	0.76	cfs/acre
	Treatment C	1.49	1.49	1.49	1.49	1.49	cfs/acre
	Treatment D	2.89	2.89	2.89	2.89	2.89	cfs/acre
	Q10 (Sum Qi	i*Ai) 1.12	0.00	0.00	0.00	1.12	cfs
				======		======	
	2-year						
	Treatment A	0.00	0.00	0.00	0.00	0.00	cfs/acre
	Treatment B	0.03	0.03	0.03	0.03	0.03	cfs/acre
	Treatment C	0.47	0.47	0.47	0.47	0.47	cfs/acre
Į	Treatment D	1.69	1.69	1.69	1.69	1.69	cfs/acre
	Q2 (Sum Qi	i*Ai) 0.04	0.00	0.00	0.00	0.04	cfs

CALCULATIONS FOLLOW



BPLW

Architects and Engineers

PROJECT AUTOZONE 57TH & QUAIL

PROJECT NO. A04029
DATE 10/02/04
BY JON PENA

DPM Section 22.2 - Hydrology

Part A-Watersheds less than 40 acres. January, 1993

INSTRUCTIONS

* Spread sheet requires three input areas (dark cells):

Location

>A.1 Precipitation Zone

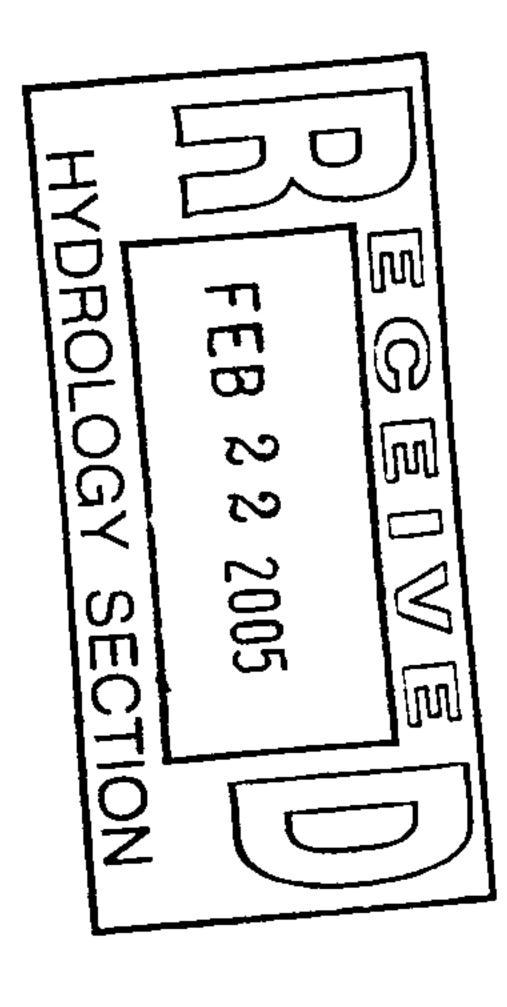
>A.3 Land Treaments

- * Values from the tables are automatically placed using "if" statements.
- * Table values should be checked for correctness for each use.

SUMMARY

Location	BASIN 1	BASIN 2	BASIN 3	TOTALS	
Precipitation Zone	1	1	1	1	
Land Area	0.44	0.40	0.63	1.47	acres
Excess Precipitation Volume					
>>> 100-year 6-hour (design)	0.06	0.05	0.04	0.15	acre-f
10-year 6-hour	0.03	0.03	0.01	0.08	acre-fi
2-year 6-hour	0.02	0.02	0.00	0.04	acre-fi
100-year 24-hour	0.07	0.07	0.04	0.17	acre-fi
Peak Discharge Rates (DPM)		_			
>>> Q100 (design)	1.60	1.51	1.28	4.39	cfs
Q10	0.97	0.94	0.48	2.40	cfs
Q2	0.51	0.51	0.02	1.04	cfs

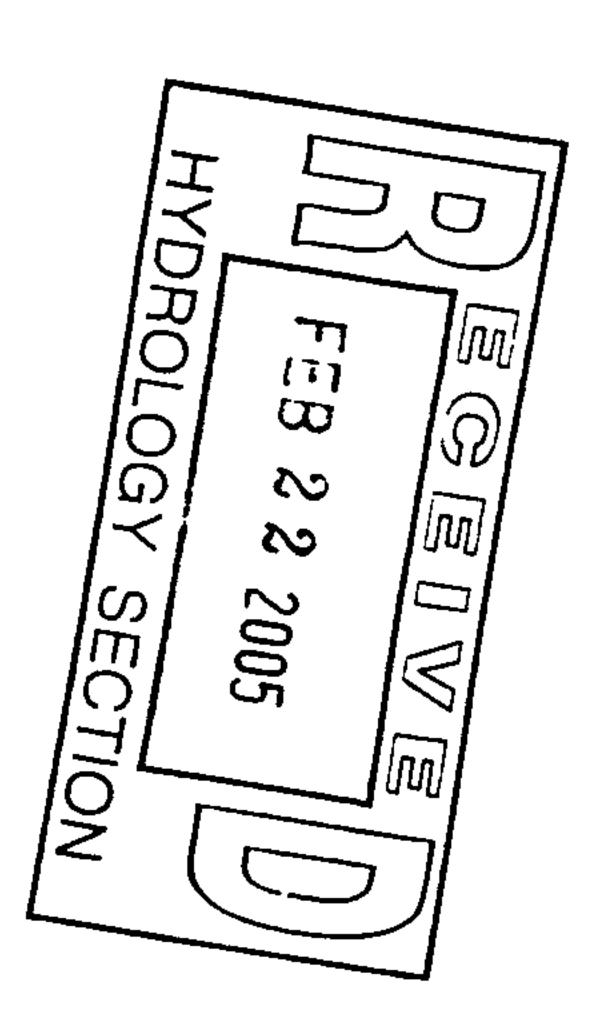




INPUT AND CALCULATIONS

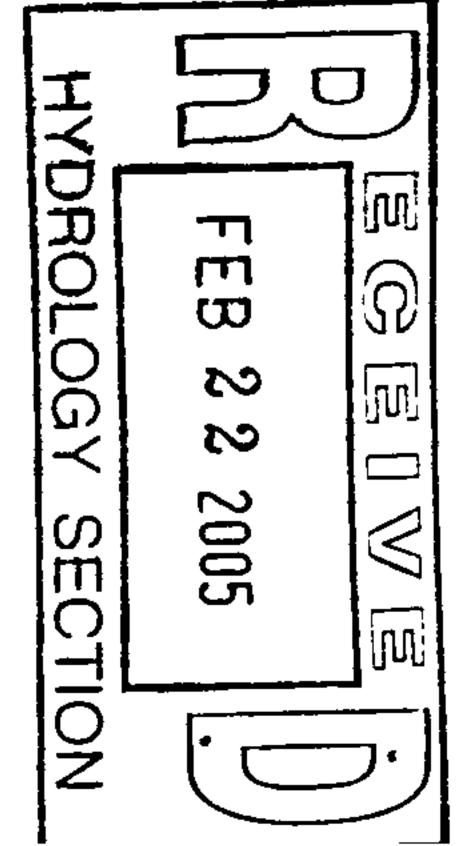
LOCATION	BASIN 1	BASIN 2	BASIN 3		
>A.1 PRECIPITATION ZONE (from Table A-1)	1	1	1	1	
				TOTALS	
>A.2 DEPTHS					
(from Table A-2)					
100-YEAR STORM (P60)	1.87	1.87	1.87	1.87	inche
100-YEAR STORM (P360)	2.20	2.20	2.20	2.20	inche
100-YEAR STORM (P1440)	2.66	2.66	2.66	2.66	inche
10-YEAR (P360) (Calculated: P360*RPF10)	1.47	1.47	1.47	1.47	inche
2-YEAR (P360) (Calculated: P360*RPF2)	0.95	0.95	0.95	0.95	inche
>A.3 LAND TREATMENTS (Ai)				TOTALS	
Treatment A	0.00	0.00	0.00	0.00	acres
Treatment B	0.14	0.10	0.63	0.87	acres
Treatment C	0.00	0.00	0.00	0.00	acres
Treatment D	0.30	0.30	0.00	0.60	acres
Total Area	0.44	0.40	0.63	1.47	acres
	=======================================		======= ==		

CALCULATIONS FOLLOW



INPUT AND CALCULATIONS (CON'T)

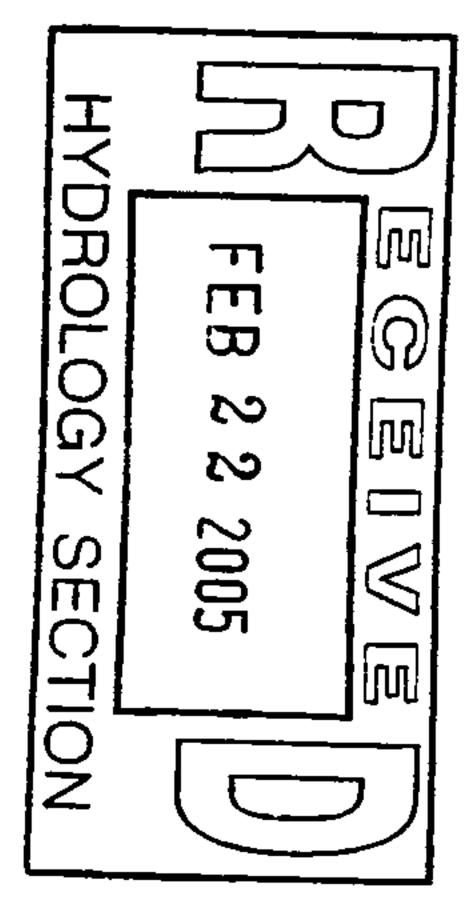
form Table A O					
from Table A-8		1	3	TOTALS	
100-year 6-hour	•				
Treatment A	0.44	0.44	0.44	0.44	inches
Treatment B	0.67	0.67	_0.67	0.67	inches
Treatment C	0.99	0.99	0.99	0.99	inches
Treatment D	1.97	1.97	1.97	1.97	inches
WEIGHTED E (Sum Ei*Ai/A)	1.56	1.65	0.67	1.20	inches
VOLUME V100:6h (E*A)	0.06	0.05	0.04	0.15	acre-ft
	2,485.82	2,388.5 4	1,532.22	6,406.59	ft^3
	========		=======	========	
10-year 6-hour					
Treatment A	0.08	0.08	0.08	0.08	inches
Treatment B	0.22	0.22	0.22	0.22	inches
Treatment C	0.44	0.44	0.44	0.44	inches
Treatment D	1.24	1.24	1.24	1.24	inches
WEIGHTED E (Sum Ei*Ai/A)	0.92	0.99	0.22	0.64	inches
VOLUME V10:6h (E*A)	0.03	0.03	0.01	0.08	acre-ft
	1,462.16	1,430.22	503.12	3,395.50	ft^3
2-year 6-hour					
Treatment A	0.00	0.00	0.00	0.00	inches
Treatment B	0.01	0.01	0.01	0.01	inches
Treatment C	0.12	0.12		0.12	inches
Treatment D	0.72	0.72		0.72	inches
WEIGHTED E (Sum Ei*Ai/A)	0.49	0.54	0.01	0.30	inches
VOLUME V2:6h (E*A)	0.02	0.02	0.00	0.04	acre-ft
	789.16	787.71	22.87	1,599.74	ft^3
	=========	~======		=======	
100-year 24-hour				•	
VÓLUME V100:24h	1				
(V100-6h+Ad*P1440-P360)/12)	0.07	0.07	0.04	0.17	acre-ft
	2,986.76	2,889.48	1,532.22	7,408.47	ft^3



CALCULATIONS FOLLOW

INPUT AND CALCULATIONS (CON'T)

		•	_	` \ `	>A.6 PEAK DISCHARGE RATE FOR SMALL WATERSH from Table A-9
 	TOTALS		-		100-year
cfs/acre	1.29	1.29	1.29	1.29	Treatment A
cfs/acre	2.03	2.03	2.03	2.03	Treatment B
cfs/acre	2.87	2.87	2.87	2.87	Treatment C
cfs/acre	4.37	4.37	4.37	4.37	Treatment D
cfs	4.39	1.28	1.51	1.60	Q100 (Sum Qi*Ai)
					10-year
cfs/acre	0.24	0.24	0.24	0.24	Treatment A
cfs/acre	0.76	0.76	0.76	0.76	Treatment B
cfs/acre	1.49	1.49	1.49	1.49	Treatment C
cfs/acre	2.89	2.89	2.89	2.89	Treatment D
cfs	2.40	0.48	0.94	0.97	Q10 (Sum Qi*Ai)
					2-year
cfs/acre	0.00	0.00	0.00	0.00	Treatment A
cfs/acre	0.03	0.03	0.03	0.03	Treatment B
cfs/acre	0.47	0.47	0.47	0.47	Treatment C
cfs/acre	1.69	1.69	1.69	1.69	Treatment D
cfs	1.04	0.02	0.51	0.51	Q2 (Sum Qi*Ai)

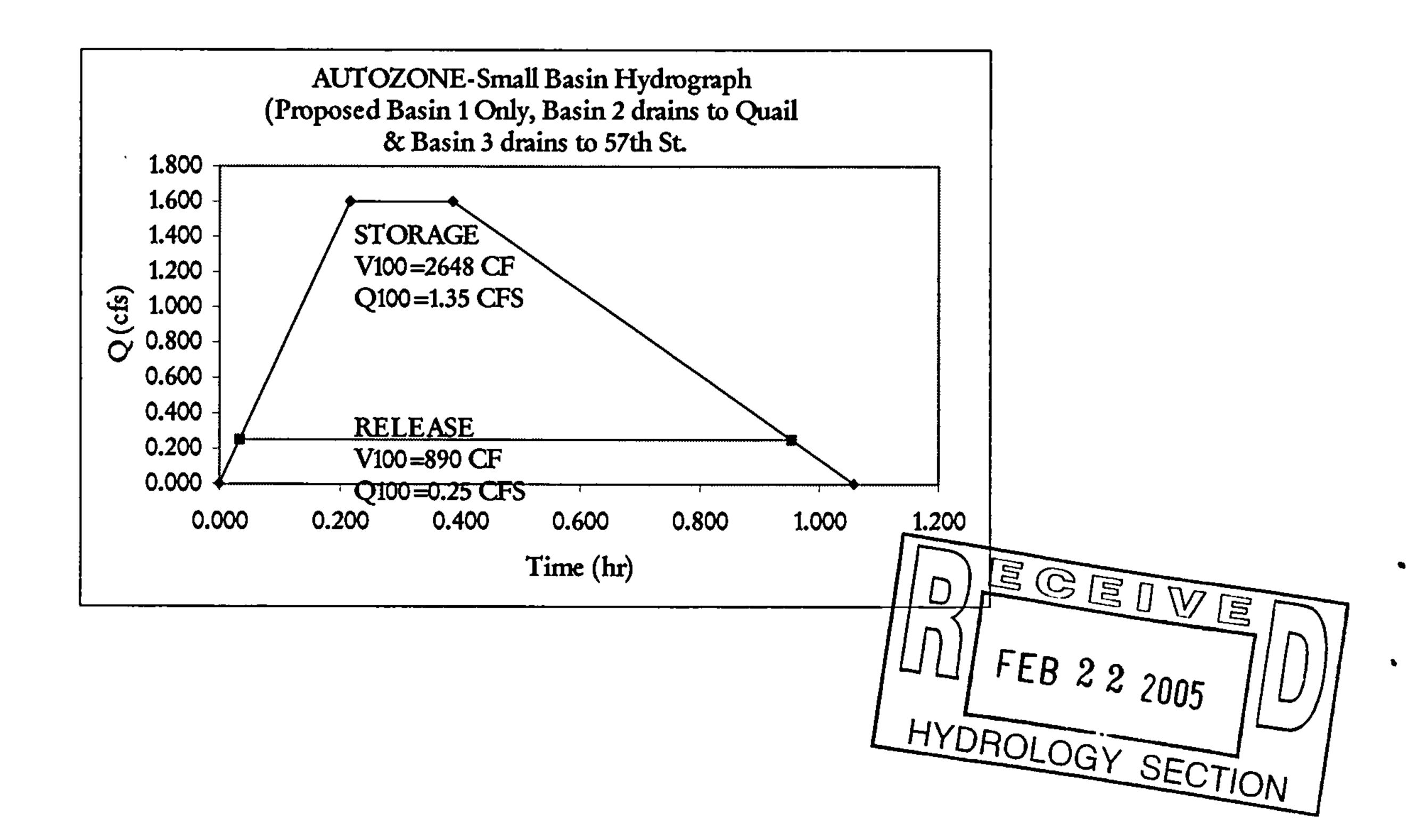


CALCULATIONS FOLLOW

	Project Name:	AUT	OZONE-57TH 8	τ Quail	
	Project #:	A04029			
	Date:	1/31/2005			
	Prepared By:		Jon Pena		
	Hydrograph	i Developmei	it Spreadsheet		
	Discharge Rate of	Pond	$Q_{\mathbb{R}}(cfs)$	0.250	
	Discharge Rate of	Pond	Q _R (cfh)	900.00	
	Excess Percipita	tion	E _D (in)	2.120	
E	100 Year Peak Dishcarge Rate		Q _p (cfs)	1.600 🗸	
	100 Year Peak Dishcarge Rate		Qp (css cfl	5760.00	
	Total Discharge	Area	A _T (acres)	0.440	
	Area of Treatment D		A _D (acres)	0.300	
	Time of Concentration		t _c (hrs)	0.200	
	Base Time		t _B (hours)	1.058	
***************************************	Time to Peak Ho	ours	t _P (hours)	0.217	
	Duration of Pe	ak	T _{pk} (hours)	0.170	
	Flow Difference	ce	Q _{dif} (cfs)	1.350	
1	Flow Difference	ce	Q _{dif} (cfh)	4860.00	
	Triangle Base 1 V	alue	X ₁ (hr)	0.1827	
0	Triangle Base 2 V	Value	X ₂ (hr)	0.5661	
	Storage of Por	ıd	Vp (cf)	2648.00	
	Total Flow Volu	ıme	V _T (cf)	3537.74	
	Total Release Vo	lume	V _R (cf)	889.73	
	Total Pond Storage	Volume	V _P (cf)	2648.00	

Unit]	Hydrograph			
Hydrograph Values	Times (hr) 0.000	Flows (cfs) 0.000		
Trydrograph values	0.217	1.6		
	1.058	0.000		
Flow Release Values	0.034	0.250		
	0.953	0.250		

Proposed Pond Volume							
Elevations	Area (ft²)	Volume (ft ³)	Cumm. Volume (ft ³)				
5104.000	5522.000	0.000	0.000				
5103.000	2261.000	3891.500	3891.500				
5102.5	971	808.000	4699.500				
	Total		4699.500				



CITY OF ALBUQUERQUE



December 20, 2004

Guy Jackson, PE BPLW 6200 Uptown Blvd, Ste 400 Albuquerque, NM 87110

Re: Autozone at 57th/Quail Conceptual Grading and Drainage Plan Engineer's Stamp dated 11-8-04 (H11/D65)

Dear Mr. Jackson,

Based upon the information provided in your submittal dated 11-8-04, the above referenced plan is approved for Site Plan for Subdivision and Site Plan for Building Permit action by the DRB. Prior to Building Permit approval, please resubmit a bound (stapled) set of the calculations, stamped and signed by the engineer of record, and a more comprehensive grading plan with all critical spot elevations, build notes and details needed to construct this project. An SO#19 Permit would be needed as well.

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

New Mexico 87103

P.O. Box 1293

Albuquerque

www.cabq.gov

Sincerely,

Bradley L. Bingham, PE

Principal Engineer, Planning Dept.

Development and Building Services

C: file

DRAINAGE INFORMATION SHEET

ZONE ATLAS/DRWG. FILE # H-11
WORK ORDER #
NE (C-1), OF THE PLAT OF TRACTS A-1 AND C-1, LBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
CONTACT: Guy Jackson D
PHONE: 880-9670 NOV 0 8 2004
HYDROLOGY SECTION 3 PHONE: 901-495-8714
CONTACT: See Owner PHONE: See Owner
CONTACT: Tony Harris
PHONE: <u>889-8056</u>
CONTACT:
PHONE:
CHECK TYPE OF APPROVAL SOUGHT:
SKETCH PLAT APPROVALPRELIMINARY PLAT APPROVAL N S. DEV. PLAN FOR SUB'D APPROVALSECTOR PLAN APPROVAL FINAL PLAT APPROVALBUILDING PERMIT APPROVALCERTIFICATE OF OCCUPANCY APPROVALGRADING PERMIT APPROVALS PAVING PERMIT APPROVALS.A.B. DRAINAGE REPORTDRAINAGE REQUIREMENTS

DATE SUBMITTED: NOVEMBER 8, 2004

BY: Guy Jackson, PE

BPLW

Architects & Engineers, Inc.

6200 Uptown Blvd. NE Suite 400 Albuquerque, New Mexico 87110 (505) 881-BPLW (2759) FAX (505) 881-1230 Web site: http://www.bplw.com

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Bruce A. Schneider, PE
Maureen M. Walter, AIA, CCS

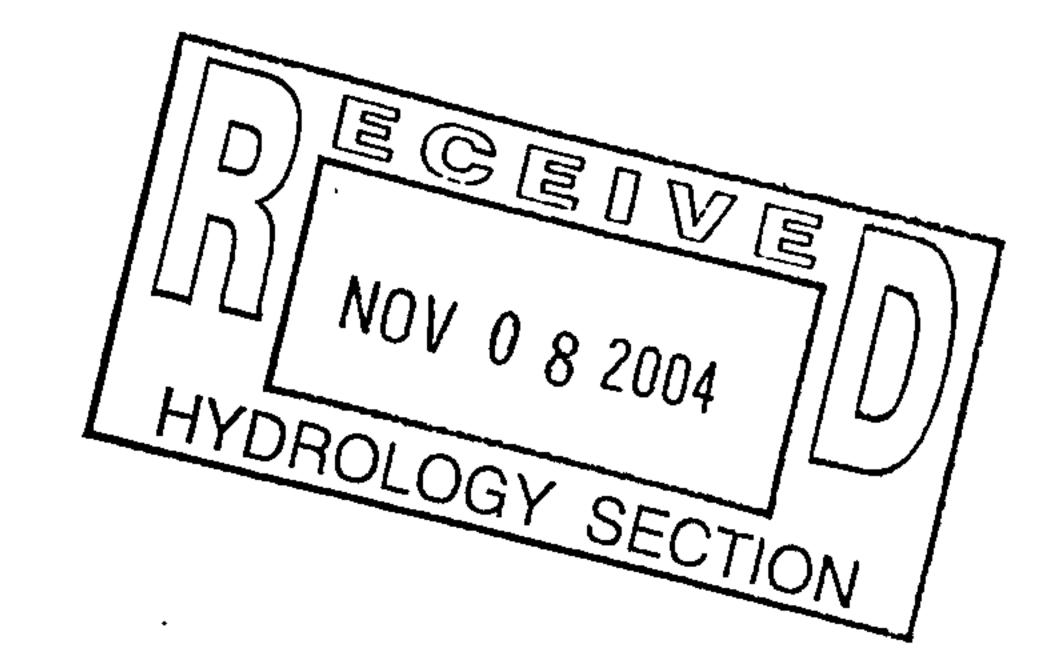
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Mary Ann Modzelewski, AIA
Daniel R. Partida, AIA
L. Fontaine Sanchez
Molly E. Smith, AICP

November 8, 2004

Bradley L. Bingham, PE
Section Head, Hydrology
City of Albuquerque Public Works
PO Box 1293
Albuquerque, New Mexico 87103

Re: AutoZone -57TH & QUAIL (Zone Atlas Map H-11) BPLW Project Number: A04029



Dear Brad:

Attached for review, comment and/or approval are the following:

- One (1) Drainage Information Sheet
- One (1) copy of the Conceptual Grading & Drainage Plan
- One (1) copy of Supporting Drainage Calculations

The proposed AutoZone project is located at SE corner of the 57th and Quail intersection. The current legal description for the site is "TRACT LETTERED C-ONE (C-1), OF THE PLAT OF TRACTS A-1 AND C-1, ALBUQUERQUE WEST, A SUBDIVISION IN ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO". The plan being submitted is the AutoZone on Tract C-1 for EPC Approval. The applicable drainage calculations have been highlighted to assist you in your review.

If you have any questions, please contact me at (505) 881-2759.

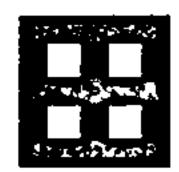
Sincerely,

Guy Jackson, PE

BPLW ARCHITECTS & ENGINEERS, INC.

Senior Vice President

Director of Civil Engineering



Drainage Summary

Project:

AUTOZONE 57TH & QUAIL

Project Numbe:

A04029

Date:

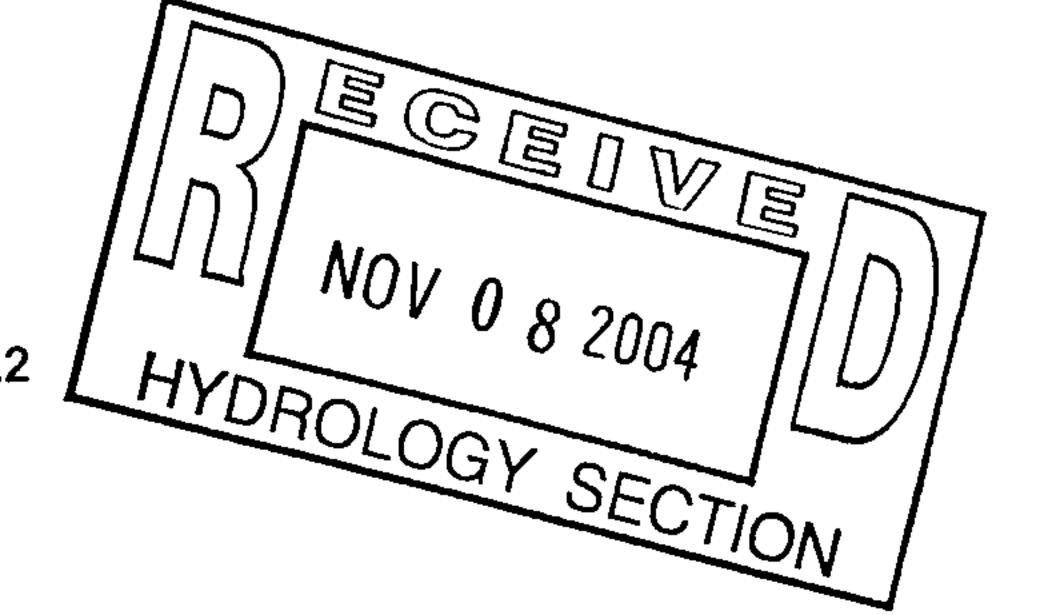
By:

10/02/04 JON PENA

Site Location

Precipitation Zone

1 Per Table A-1 COA DPM Section 22.2



Existing summary

Basin Name		BASIN 1			TOTAL
Soil Treatment (acres)					
Area "A"		0.00	0.00	0.00	0.00
Area "B"		1.47	0.00	0.00	1.47
Area "C"		0.00	0.00	0.00	0.00
Area "D"		0.00	0.00	0.00	0.00
	TOTAL	1.47	0.00	0.00	1.47
Excess Runoff (acre-feet)					
100yr. 6hr.		0.08	#DIV/0!	#DIV/0!	#DIV/0!
10yr. 6hr.		0.03	#DIV/0!	#DIV/0!	#DIV/0!
2yr. 6hr.		0.00	#DIV/0!	#DIV/0!	#DIV/0!
100yr. 24hr.		0.08	#DIV/0!	#DIV/0!	#DIV/0!
	TOTAL	0.19	#DIV/0!	#DIV/0!	#DIV/0!
Peak Discharge (cfs)		* ····································			
100 yr.		2.98	0.00	0.00	2.98
10yr.		1.12	0.00	0.00	1.12
2yr.		0.04	0.00	0.00	0.04
	TOTAL	4.15	0.00	0.00	4.15

Proposed summary

Basin Name		BASIN 1	BASIN 2	BASIN 3	TOTAL
Soil Treatment (acres)					
Area "A"		0.00	0.00	0.00	0.00
Area "B"		0.14	0.10	0.63	0.87
Area "C"		0.00	0.00	0.00	0.00
Area "D"		0.30	0.30	0.00	0.60
	TOTAL	0.44	0.40	0.63	1.47
Excess Runoff (acre-feet)					
100yr. 6hr.		₹0.06}	0.05	0.04	0.11
10yr. 6hr.		0.03	0.03	0.01	0.07
2yr. 6hr.		0.02	0.02	0.00	0.04
100yr. 24hr.		0.07	0.07	0.04	0.13
	TOTAL	0.18	0.17	0.08	0.35
Peak Discharge (cfs)					
100 yr.		1.60	-1.51	1.28	4.39
10yr.		0.97	0.94	0.48	2.40
2yr.		0.51	0.51	0.02	1.04
	TOTAL	3.08	2.97	1.78	7.82

BPLW

Architects and Engineers

PROJECT

AUTOZONE 57TH & QUAIL

PROJECT NO. A04029
DATE 10/02/04

10/02/04 JON PENA

DPM Section 22.2 - Hydrology

Part A-Watersheds less than 40 acres. January, 1993

INSTRUCTIONS

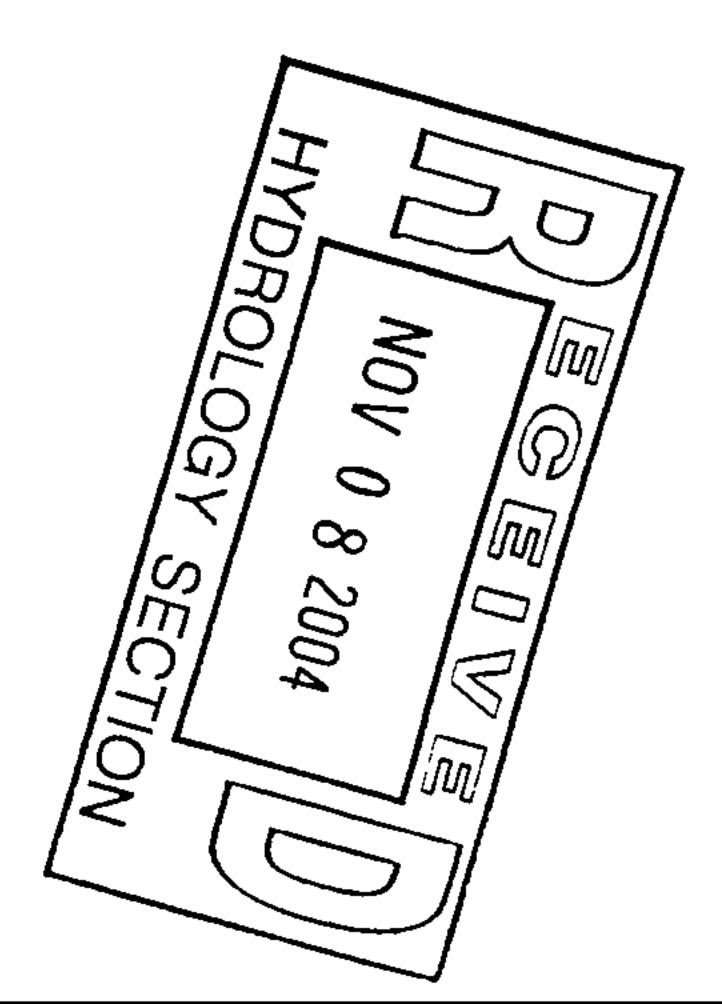
* Spread sheet requires three input areas (dark cells):

Location

>A.1 Precipitation Zone

>A.3 Land Treaments

- * Values from the tables are automatically placed using "if" statements.
- * Table values should be checked for correctness for each use.

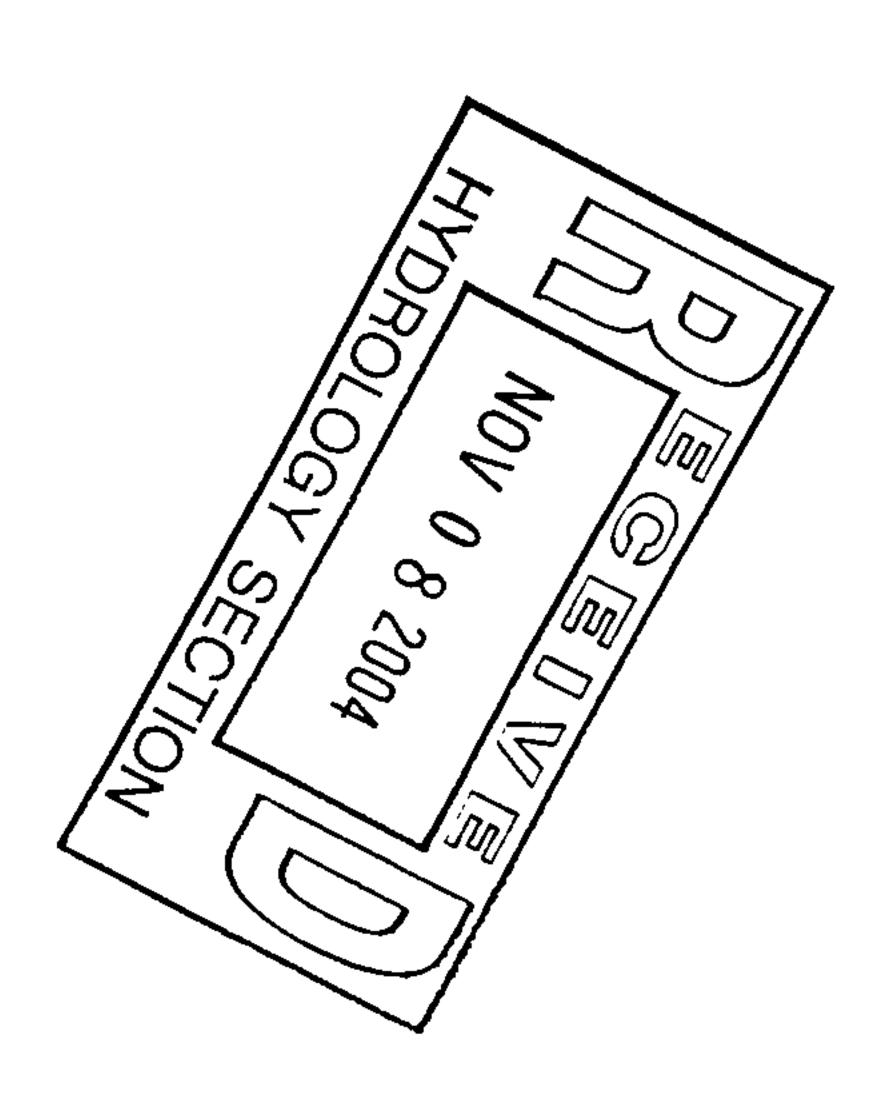


SUMMARY

Location	0	BASIN 1	0.00	0.00	0.00	TOTALS	
Precipitation Zone		· 1	1	1	1	1	
Land Area		1.47	0.00	0.00	0.00	1.47	acres
Excess Precipitation Volume							
>>> 100-year 6-hour (design)		0.08	#DIV/0!	#DIV/0!	#DIV/0!	0.08	acre-ft
10-year 6-hour		0.03	#DIV/0!	#DIV/0!	#DIV/0!	0.03	acre-ft
2-year 6-hour		0.00	#DIV/0!	#DIV/0!	#DIV/0!	0.00	acre-ft
100-year 24-hour		0.08	#DIV/0!	#DIV/01	#DIV/0!	0.08	acre-ft
Peak Discharge Rates (DPM)		, 					
>>> Q100 (design)		2.98	0.00	0.00	0.00	2.98	cfs
` Q10		1.12	0.00	0.00	0.00	1.12	cfs
Q2		0.04	0.00	0.00	0.00	0.04	cfs

INPUT AND CALCULATIONS

LOCATION	BASIN 1	0.00	0.00	0.00		
>A.1 PRECIPITATION ZONE (from Table A-1)	1	1	1	1	1	
>A.2 DEPTHS		······································			= . = . = . = .	
(from Table A-2)					TOTALS	
100-YEAR STORM (P60)	1.87	1.87	1.87	1.87	1.87	inche
100-YEAR STORM (P360)	2.20	2.20	2.20	2.20	2.20	inche
100-YEAR STORM (P1440)	2.66	2.66	2.66	2.66	2.66	inche
10-YEAR (P360) (Calculated: P360*RPF10)	1.47	1.47	1.47	1.47	1.47	inche
2-YEAR (P360) (Calculated: P360*RPF2)	0.95	0.95	0.95	0.95	0.95	inche
>A.3 LAND TREATMENTS (Ai)			· · · · · · · · · · · · · · · · · · ·	۲		
Treatment A	0.00	0.00	0.00	0.00	0.00	acres
Treatment B	1.47	0.00	0.00	0.00	1.47	acres
Treatment C	0.00	0.00	0.00	0.00	0.00	acres
Treatment D	0.00	0.00	0.00	0.00	0.00	acres
Total Area	1.47	0.00	0.00	0.00	1.47	acres
	=======================================	====== =	ereree e:		======	
>A.4 ABSTRACTIONS	See A.5	See A.5	See A.5	See A.5	See A.5	



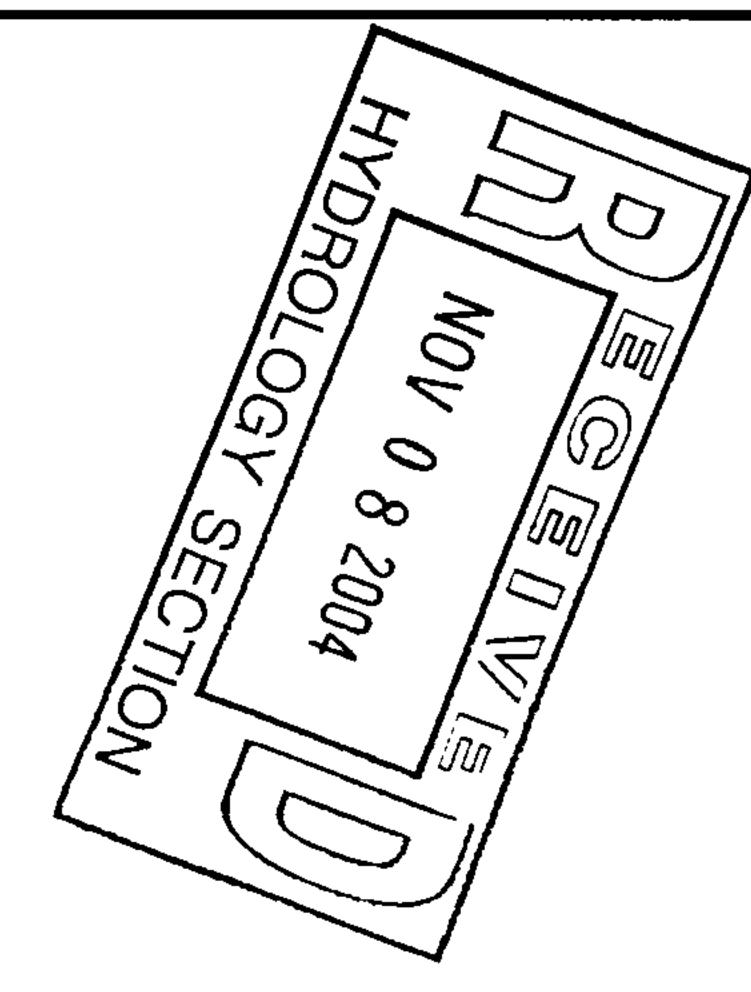
INPUT AND CALCULATIONS (CON'T)

>A.5 EXCESS PRECIPIT	ATION 6 HOUR AND 24 HOUR (Ei)			a.			
fr	om Table A-8						
	100-year 6-hour					TOTALS	
ī	reatment A	0.44	0.44	0.44	0.44	0.44	inches
T	reatment B	0.67	0.67	0.67	` 0.67	0.67	inches
T	reatment C	0.99	0.99	0.99	0.99	0.99	inches
T	reatment D	1.97	1.97	1.97	1.97	1.97	inches
	WEIGHTED E (Sum Ei*Ai/A)	0.67	#DIV/0!	#DIV/0!	#DIV/0!	0.67	inches
	VOLUME V100:6h (E*A)	0.08	#DIV/0!	#DIV/0!	#DIV/0!	0.08	acre-ft.
		3,575.19	#DIV/0!	#DIV/0!	#DIV/0!	3,575.19	ft^3
	10-year 6-hour			====== =			
T	reatment A	0.08	0.08	0.08	0.08	0.08	inches
	reatment B	0.22	0.22	0.22	0.22	0.22	inches
	reatment C	0.44	0.44	0.44	0.44	0.44	inches
	reatment D	1.24	1.24	1.24	1.24	1.24	inches
	WEIGHTED E (Sum Ei*Ai/A)	0.22	#DIV/0!	#DIV/0!	#DIV/0!	0.22	inches
	VOLUME V10:6h (E*A)	0.03	#DIV/0!	#DIV/0!	#DIV/0!	0.03	acre-ft.
		1,173.94	#DIV/0!	#DIV/0!	#DIV/0!	1,173.94	ft^3
	2-year 6-hour						
15 5	neatment A	0.00	0.00	0.00	0.00	0.00	inches
16,40	reatment B	0.01	0.01	0.01	0.01	0.01	inches
	reatment C	0.12	0.12	0.12	0.12	0.12	inches
$I \cap I \cap I \cap I$	reatment D	0.72	0.72	0.72	0.72	0.72	inches
	WEIGHTED E (Sum Ei*Ai/A)	0.01	#DIV/0!	#DIV/0!	#DIV/0!	0.01	inches
	VOLUME V2:6h (E*A)	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0.00	acre-ft.
2001 SES 2018		53.36	#DIV/0!	#DIV/0!	#DIV/0!	53.36	ft^3
	100-year 24-hour						
	VOLUME V100:24h						
	(V100-6h+Ad*P1440-P360)/12)	0.08	#DIV/0!	#DIV/0!	#DIV/0!	0.08	aoro fi
	(* 100-011 Ma F 1440-1300)/ 12)	3,575.19	#DIV/0!	#DIV/0!	#DIV/0!	3,575.19	acre-ft. ft^3
	-	J,J/J.13 :====================================	#514/01	#514101	#DIVIUI	3,373.13 =======	II. 3
				 			
	CALCUL ATIONIC FOLLOW						

Existing hyd.

INPUT AND CALCULATIONS (CON'T)

>A.6 PEAK DISCHARGE RATE FOR	•	(Qi)					
from Table A-9							
•	00-year					TOTALS	
Treatment A		1.29	1.29	1.29	1.29	1.29	cfs/acre
Treatment B	•	2.03	2.03	2.03	2.03	2.03	cfs/acre
Treatment C	•	2.87	2.87	2.87	2.87	2.87	cfs/acre
Treatment D		4.37	4.37	4.37	4.37	4.37	cfs/acre
	Q100 (Sum Qi*Ai)	2.98	0.00	0.00	0.00	2.98	cfs
	==:		======	======	========	=======	
	10-year				······		· · · · · · · · · · · · · · · · · · ·
Treatment A		0.24	0.24	0.24	0.24	0.24	cfs/acre
Treatment B		0.76	0.76	0.76	0.76	0.76	cfs/acre
Treatment C		1.49	1.49	1.49	1.49	1.49	cfs/acre
Treatment D		2.89	2.89	2.89	2.89	2.89	cfs/acre
	Q10 (Sum Qi*Ai) ===:	1.12 ===================================	0.00	0.00	0.00	1.12	cfs
	2-year	<u> </u>	······································				· <u>-</u>
Treatment A		0.00	0.00	0.00	0.00	0.00	cfs/acre
Treatment B		0.03	0.03	0.03	0.03	0.03	cfs/acre
Treatment C		0.47	0.47	0.47	0.47	0.47	cfs/acre
Treatment D		1.69	1.69	1.69	1.69	1.69	cfs/acre
	Q2 (Sum Qi*Ai)	0.04	0.00	0.00	0.00	0.04	cfs



BPLW

Architects and Engineers

PROJECT AUTOZONE 57TH & QUAIL

PROJECT NO. A04029
DATE 10/02/04
BY JON PENA

DPM Section 22.2 - Hydrology

Part A-Watersheds less than 40 acres. January, 1993

INSTRUCTIONS

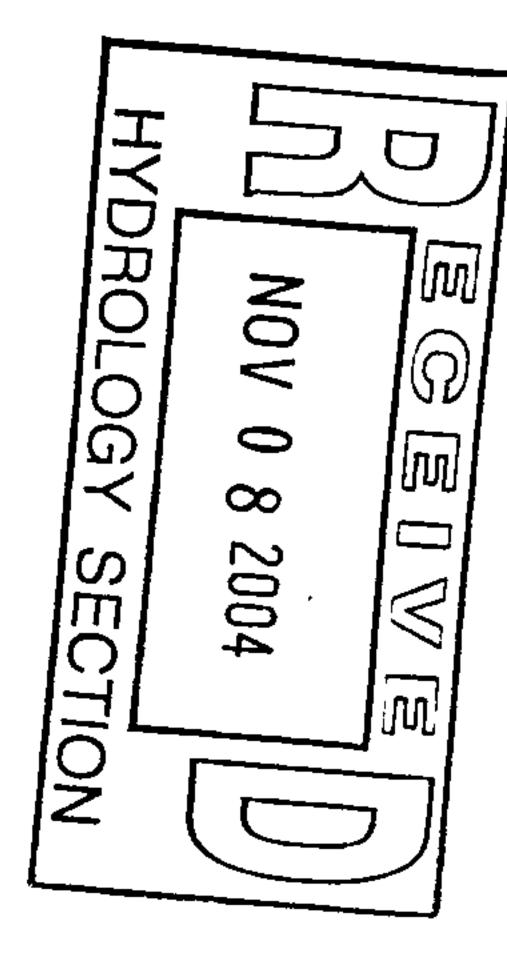
* Spread sheet requires three input areas (dark cells):

Location

>A.1 Precipitation Zone

>A.3 Land Treaments

- * Values from the tables are automatically placed using "if" statements.
- * Table values should be checked for correctness for each use.



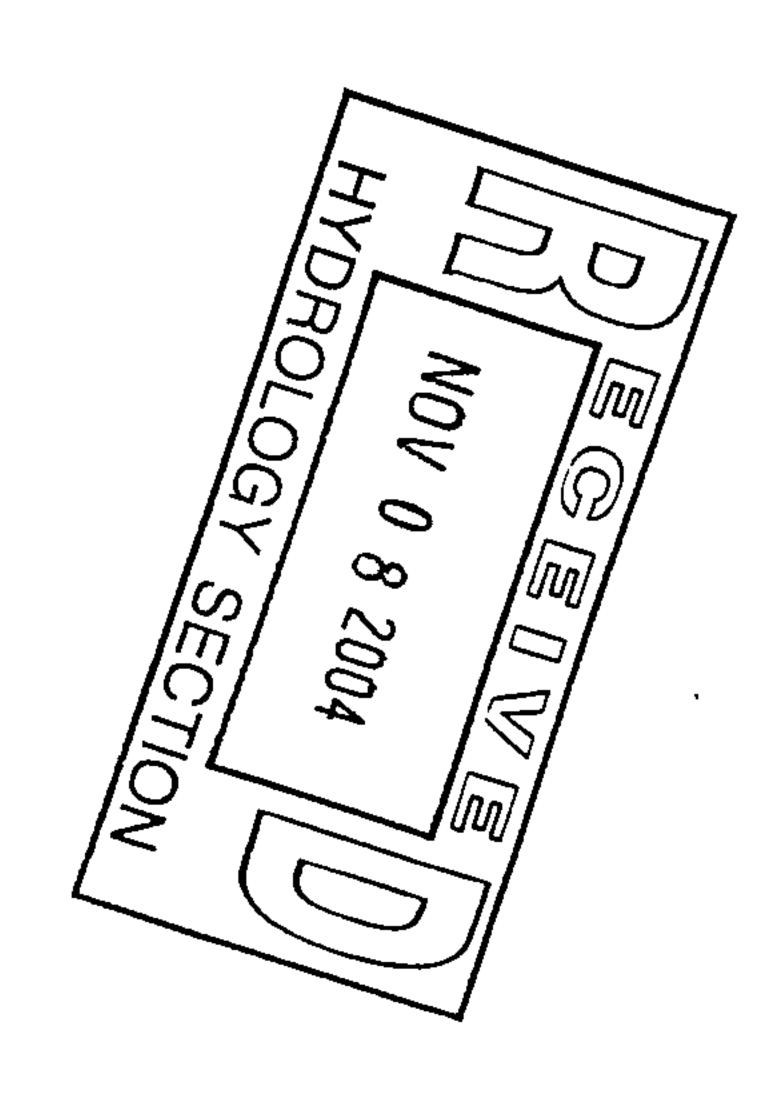
SUMMARY

Location	BASIN 1	BASIN 2	BASIN 3	TOTALS	
Precipitation Zone	1	1	1	1	
Land Area	0.44	0.40	0.63	1.47	acres
Excess Precipitation Volume					
>>> 100-year 6-hour (design)	0.06	0.05	0.04	0.15	acre-ft
10-year 6-hour	0.03	0.03	0.01	0.08	acre-ft.
2-year 6-hour	0.02	0.02	0.00	0.04	acre-ft.
100-year 24-hour	0.07	0.07	0.04	0.17	acre-ft.
Peak Discharge Rates (DPM)			_		
>>> Q100 (design)	1.60	1.51	1.28	4.39	cfs
Q10	0.97	0.94	0.48	2.40	cfs
Q2	0.51	0.51	0.02	1.04	cfs

Proposed Hyd.

INPUT AND CALCULATIONS

LOCATION	BASIN 1	BASIN 2	BASIN 3		
>A.1 PRECIPITATION ZONE (from Table A-1)	1	1	1	1	
				TOTALS	
>A.2 DEPTHS					
(from Table A-2)					
100-YEAR STORM (P60)	1.87	1.87	1.87	1.87	inche
100-YEAR STORM (P360)	2.20	2.20	2.20	2.20	inche
100-YEAR STORM (P1440)	2.66	2.66	2.66	2.66	inche
10-YEAR (P360) (Calculated: P360*RPF10)	1.47	1.47	1.47	1.47	inche
2-YEAR (P360) (Calculated: P360*RPF2)	0.95	0.95	0.95	0.95	inche
>A.3 LAND TREATMENTS (Ai)		<u> </u>		TOTALS	
Treatment A	0.00	0.00	0.00	0.00	acres
Treatment B	0.14	0.10	0.63	0.87	acres
Treatment C	0.00	0.00	0.00	0.00	acres
Treatment D	0.30	0.30	0.00	0.60	acres
Total Area	0.44	0.40	0.63	1.47	acres
>A.4 ABSTRACTIONS	See A.5	See A.5	See A.5	See A.5	



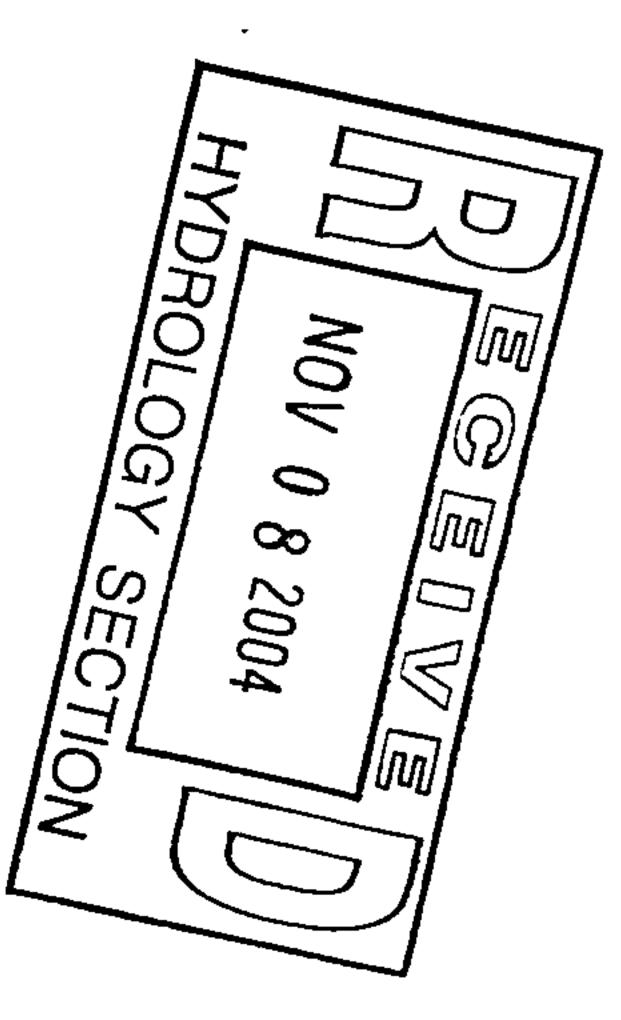
INPUT AND CALCULATIONS (CON'T)

>A.5 EXCESS PRECIPITATION 6 HOUR AND 24 HOU from Table A-8				TOTALS	
100-year 6-hour		<u> </u>	· · · · · · · · · · · · · · · · · · ·	IOIALO	
Treatment A	0.44	0.44	0.44	0.44	inche
Treatment B	0.67	0.67	0.67	0.67	inche
Treatment C	0.99	0.99	0.99	0.99	inche
Treatment D	1.97	1.97	1.97	1.97	inche
				4 00	! I
WEIGHTED E (Sum Ei*Ai/A)	1.56	1.65	0.67	1.20	inche
VOLUME V100:6h (E*A)	0.06	0.05	0.04	0.15	acre-f
	- 2,485.82	2,388.54	_1,532.22	6,406.59	ft^3
10-year 6-hour					
Treatment A	0.08	0.08	0.08	0.08	inche
Treatment B	0.22	0.22	0.22	0.22	inche
Treatment C	0.44	0.44	0.44	0.44	inche
Treatment D	1.24	1.24	1.24	1.24	inche
 WEIGHTED E (Sum Ei*Ai/A)	0.92	0.99	0.22	0.64	inche
 VOLUME V10:6h (E*A)	0.03	0.03	0.01	0.08	acre-f
	1,462.16	1,430.22	503.12	3,395.50	ft^3
2-year 6-hour					
Treatment A	0.00	0.00	0.00	0.00	inche
Treatment B	0.01	0.01	0.01	0.01	inche
Treatment C	0.12	0.12	0.12	0.12	inche
Treatment D	0.72	0.72	0.72	0.72	inche
WEIGHTED E (Sum Ei*Ai/A)	0.49	0.54	0.01	0.30	inche
 VOLUME V2:6h (E*A)	0.02	0.02	0.00	0.04	acre-f
	789.16	787.71	22.87	1,599.74	ft^3
100-year 24-hour					
VOLUME V100:24h		.	.		
(V100-6h+Ad*P1440-P360)/12)	0.07	0.07	0.04	0.17	acre-f
	2,986.76	2,889.48	1,532.22	7,408.47	ft^3

Proposed Hyd.

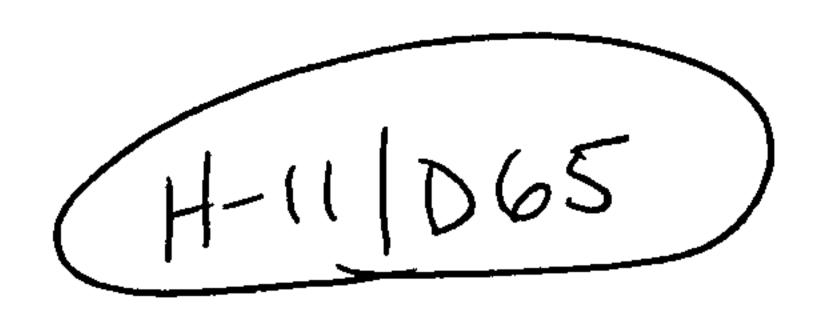
INPUT AND CALCULATIONS (CON'T)

>A.6 PEAK DISCHARGE RATE FOR SMALL WATERSH	IEDS (Qi)				
from Table A-9		····			
100-year				TOTALS	
Treatment A	1.29	1.29	1.29	1.29	cfs/acre
Treatment B	2.03	2.03	2.03	2.03	cfs/acre
Treatment C	2.87	2.87	2.87	2.87	cfs/acre
Treatment D	4.37	4.37	4.37	4.37	cfs/acre
Q100 (Sum Qi*Ai)	-1.60	1.51	1.28	4.39	cfs
	=======================================	===== ===	====== ==		
10-year	· · · · · · · · · · · · · · · · · · ·				
Treatment A	0.24	0.24	0.24	0.24	cfs/acre
Treatment B	. 0.76	0.76	0.76	0.76	cfs/acre
Treatment C	1.49	1.49	1.49	1.49	cfs/acre
Treatment D	2.89	2.89	2.89	2.89	cfs/acre
Q10 (Sum Qi*Ai)	0.97	0.94	0.48	2.40	cfs
2-year	0.00	0.00	0.00	0.00	ofo.loore
Treatment A Treatment B	0.00	0.00	0.00	0.00	cfs/acre
Treatment C	0.03 0.47	0.03 0.47	0.03 0.47	0.03 0.47	cfs/acre
Treatment D	1.69	1.69	1.69	1.69	cfs/acre
Q2 (Sum Qi*Ai)	0.51	0.51	0.02	1.04	cfs



DRAINAGE INFORMATION SHEET

(REV. 11/01/2001)



PROJECT TITLE: Laundroma		ZONE MAP/DRG. FILE #: H-11	
DRB #	EPC#	WORK ORDER #:	
LEGAL DESCRIPTION: Tract C	1 Albuqueroue Most		
CITY ADDRESS:	- I Mibuduel due AAest		
	······································		
ENGINEERING FIRM: Claudio		CONTACT: Arthur Blessen	
ADDRESS: 1801 Ric		PHONE: 842-1113	•
CITY, STATE: Albuque	rque, NM	ZIP CODE: 87104	<u> </u>
OWNER: Howard Mock		CONTACT:	
ADDRESS: 2906 Broa	adway	PHONE:	
CITY, STATE: Albuque	rque, NM	ZIP CODE: 87107	
ADCHITECT: Claudia V	/iail Arabitaata	CONTACT.	
	/igil Architects Grande Bldv	CONTACT: 842-1113	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	· · · · · · · · · · · · · · · · · · ·	CONTACT:	
ADDRESS:	- u · · · · · · · · · · · · · · · · · · 	PHONE:	
CITY, STATE		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:	· · · · · · · · · · · · · · · · · · ·	PHONE:	······································
CITY, STATE:		ZIP CODE:	
TYPE OF SUBMITTAL: DRAINAGE REPORT DRAINAGE PLAN X CONCEPTUAL GRADING GRADING PLAN EROSION CONTROL PLA ENGINEER'S CERTIFICA CLOMR/LOMR TRAFFIC CIRCULATION L ENGINEERS CERTIFICA ENGINEERS CERTIFICA OTHER	AN TION (HYDROLOGY) AYOUT (TCL) TION (TCL)	CHECK TYPE OF APPROVAL SOUGHT: SIA / FINANCIAL GUARANTEE RELEASE PRELIMINARY PLAT APPROVAL X S. DEV. PLAN FOR SUB'D APPROVAL S. DEV. PLAN FOR BLDG. PERMIT APPROVAL FINAL PLAT APPROVAL FOUNDATION PERMIT APPROVAL BUILDING PERMIT APPROVAL CERTIFICATE OF OCCUPANCY APPROVAL GRADING PERMIT APPROVAL PAVING PERMIT APPROVAL WORK ORDER APPROVAL OTHER (SPECIFY)	L (PERM)
WAS A PRE-DESIGN CONFERE YESXNOCOPY PROVIDED	ENCE ATTENDED:	JUN 1 7 2002 HYDROLOGY SECTION	
DATE SUBMITTED	BY:	•	

Requests for approval of Site Development Plan 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 if submittal may be required based on the following:

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



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 1, 2002

Arthur Blessen, PE Claudio Vigil Architects 1801 Rio Grande Blvd. NW Albuquerque, NM 87109

RE: Laundromat / Car Wash Conceptual Grading and Drainage Plan (H11-D65) Engineer's Stamp Dated March 6, 2002

Dear Mr. Blessen:

I have reviewed the referenced conceptual grading and drainage plan received June 17, 2002 and forward the following comments and questions:

- Please provide existing grades and conceptual proposed grades.
- Are there any offsite flows?
- What is the downstream capacity?
- Is there cross lot drainage from Basin A to Basin B?
- Provide finish floor elevation.

If you have any questions please call me at 924-3982

Sincerely,

Cald Municipality

Carlos A. Montoya, PÉ

City Floodplain Administrator