CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

September 19, 2011

Ronald R. Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Place N.E.
Albuquerque, NM 87109

Re: Certification Submittal for a Permanent Certificate of Occupancy for
Snow Heights Commercial Shopping Center
11001 Menaul Blvd N.E.
Engineer's Stamp dated 09-17-12 (H-21/D043)

Dear Mr. Bohannan,

Based upon the information provided in your submittal received 09-18-12, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy.

This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

Sincerely,

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

C: File
CO Clerk

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: **Snow Heights Commercial Shopping Center** ZONE MAP/DRG. FILE # **H-21-Z/ D043**

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

LEGAL DESCRIPTION **Remaining Portion Block 88, Snow Heights Together with Vacated Portions of Menaul and Juan Tabo Boulevard**

CITY ADDRESS: **11001 and 11015 Menaul Blvd. NE**

ENGINEERING FIRM:	**TIERRA WEST, LLC**	CONTACT:	**JOEL HERNANDEZ**
ADDRESS:	**5571 MIDWAY PARK PLACE NE**	PHONE:	**(505) 858-3100**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87109**
OWNER:	**Foothills Partners, LTD.**	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	**TERRA LAND SURVEYS**	CONTACT:	**CHRIS MEDINA**
ADDRESS:	**PO BOX 2532**	PHONE:	
CITY, STATE:	**CORRALES**	ZIP CODE:	**87048**
CONTRACTOR:	**MICK RICH CONTRACTORS**	CONTACT:	**TYLER NUNN**
ADDRESS:	**8401 FIRESTONE LN**	PHONE:	**505-823-9783**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87199**

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- X ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANACIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ SO-19

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED
SEP 18 2012
LAND DEVELOPMENT SECTION

DATE SUBMITTED: **9/17/2012** BY: **JOEL HERNANDEZ, PE**

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

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

TIERRA WEST, LLC

5571 Midway Park Place NE Albuquerque, NM 87109
(505) 858-3100 Fax (505) 858-1118 1-800-245-3102
tierrawestllc.com

September 17, 2012

Ms. Kristal Metro, P.E.
Development and Building Services
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: AA SITE PLAN FOR BUILDING PERMIT
CERTIFICATION FOR PERMENANT CERTIFICATE OF OCCUPANCY
FOOTHILLS SHOPPING CENTER, 11001 AND 11015 MENAUL BLVD, NE

Dear Ms. Metro:

I, Ronald R. Bohannan, NMPE # 7868, of the firm Tierra West LLC, hereby request approval of the AA Site Plan for Building Permit for issuance of the Permanent Certificate of Occupancy for the project referenced above. This project is in substantial compliance as inspected on September 17, 2012, and is in accordance with the design intent of the Approved Administrative Amended Site Plan for Building Permit dated 9/23/11. This certification is submitted in support of the request for Permanent Certificate of Occupancy.

The items identified in City of Albuquerque correspondence dated September 12, 2011 granting a 60-day Temporary Certificate of Occupancy have been addressed as follows:

- *Comment: Need to provide 8-feet wide van accessible aisle instead of 5-feet access that has been provided for all van accessible stalls.*
  Response: Van accessible spaces were striped 11-feet wide (132 inches) with a 5-foot (60-inch) access aisle, as required by the 2010 ADA.

- *Comment: All striping will need to be completed and all equipment removed from site.*
  Response: We have verified all striping has been completed and all equipment removed from site during our site inspection.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Enclosed, please find the information sheet and the as-built Approved Administrative Amended Site Plan for Building Permit. Therefore, we request approval of the as-built Approved Administrative Amended Site Plan for Building Permit for a Permanent Certificate of Occupancy

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

Sincerely,

RONALD RAY BOHANNAN — NEW MEXICO — 7868 — REGISTERED PROFESSIONAL ENGINEER

Ronald R. Bohannan, P.E.

Enclosures

RECEIVED
SEP 13 2012
LAND DEVELOPMENT SECTION

JN: 2010077
RRB/BF/cla

Z:\2011\2011077 - Foothills Shopping Center\Correspondence\2011077 Kristal Metro Perm CO Letter 9-17-12.doc

CITY OF ALBUQUERQUE

September 12, 2012

Ronald Ray Bohannan, P.E. rrb@tierrawestllc.com
Tierra West, LLC.
5571 Midway Park Place N.E.
Albuquerque, NM 87109

Re: Snow Heights Commercial Shopping Center, 11001 Menaul Blvd NE,
Request for Permanent C.O. –Accepted
Engineer's Stamp dated: 07-21-11, (H21/D043)
Certification dated: 09-06-12

Dear Mr. Bohannan,

Based upon the information provided in the Certification received 09-7-12, the above referenced Certification is acceptable for a release of a Permanent Certificate of Occupancy by Hydrology.

Hydrology is asking for an electronic copy, in .pdf format, of this certification for our records. This certification can be e-mailed to me at: tsims@cabq.gov.

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

Sincerely,

Timothy E. Sims,
Plan Checker—Hydrology Section
Development and Building Services

C: CO Clerk—Katrina Sigala
File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

11001 Menaul Blvd. NE.

PROJECT TITLE: **Snow Heights Commercial Shopping Center** ZONE MAP/DRG. FILE # **H-21-Z/ D043**

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

LEGAL DESCRIPTION **Remaining Portion Block 88, Snow Heights Together with Vacated Portions of Menaul and Juan Tabo Boulevard**

CITY ADDRESS: **11001 and 11015 Menaul Blvd. NE**

ENGINEERING FIRM:	**TIERRA WEST, LLC**	CONTACT:	**JOEL HERNANDEZ**
ADDRESS:	**5571 MIDWAY PARK PLACE NE**	PHONE:	**(505) 858-3100**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87109**
OWNER:	**Foothills Partners, LTD.**	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	**TERRA LAND SURVEYS**	CONTACT:	**CHRIS MEDINA**
ADDRESS:	**PO BOX 2532**	PHONE:	
CITY, STATE:	**CORRALES**	ZIP CODE:	**87048**
CONTRACTOR:	**MICK RICH CONTRACTORS**	CONTACT:	**TYLER NUNN**
ADDRESS:	**8401 FIRESTONE LN**	PHONE:	**505-823-9783**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87199**

CHECK TYPE OF SUBMITTAL:

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- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER BERNCO PROJECT-CONCURRENT REVIEW

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- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ SO-19

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED
~~AUG~~ Sept 7 - 2012

DATE SUBMITTED: **9/6/2012** BY: **JOEL HERNANDEZ, PE**

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

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

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

September 12, 2011

Ronald R. Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Place N.E.
Albuquerque, NM 87109

Re: Certification Submittal for 60-Day Temporay of Occupancy for
Snow Heights Commercial Shopping Center
11001 Menaul Blvd N.E.
Engineer's Stamp dated 09-07-12 (H-21/D043)

Dear Mr. Bohannan,

The Letter of Certification submitted on 09-10-12 is sufficient for acceptance by this office for a 60-day Temporary Certificate of Occupancy (C.O.). The following items need to be addressed prior to an issuance of a Permanent C.O.:

- Need to provide 8-feet wide van accessible aisle instead of 5-feet access that has been provided for all van accessible stalls.
- All striping will need to be completed and all equipment removed from site.

Please resubmit an acceptable package along with fully completed Drainage Information Sheet to front counter personnel for log in and evaluation by Transportation, after above items have been addressed.

Sincerely,

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

C: File
CO Clerk

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: **Snow Heights Commercial Shopping Center** ZONE MAP/DRG. FILE # **H-21-Z/ D043**

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

LEGAL DESCRIPTION **Remaining Portion Block 88, Snow Heights Together with Vacated Portions of Menaul and Juan Tabo Boulevard**

CITY ADDRESS: **11001 and 11015 Menaul Blvd. NE**

ENGINEERING FIRM:	**TIERRA WEST, LLC**	CONTACT:	**JOEL HERNANDEZ**
ADDRESS:	**5571 MIDWAY PARK PLACE NE**	PHONE:	**(505) 858-3100**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87109**
OWNER:	**Foothills Partners, LTD.**	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	**TERRA LAND SURVEYS**	CONTACT:	**CHRIS MEDINA**
ADDRESS:	**PO BOX 2532**	PHONE:	
CITY, STATE:	**CORRALES**	ZIP CODE:	**87048**
CONTRACTOR:	**MICK RICH CONTRACTORS**	CONTACT:	**TYLER NUNN**
ADDRESS:	**8401 FIRESTONE LN**	PHONE:	**505-823-9783**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87199**

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- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- X ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

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- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
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- ____ BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM.)
- X CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ SO-19

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED
~~AUG~~ SEP 10 2012

DATE SUBMITTED: **9/10/2012** BY: **JOEL HERNANDEZ, PE**

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

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

All van accessible
aisles need to be
8 ft.

TIERRA WEST, LLC

5571 Midway Park Place NE Albuquerque, NM 87109
(505) 858-3100 Fax (505) 858-1118 1-800-245-3102
tierrawestllc.com

September 06, 2012

Ms. Kristal Metro, P.E.
Development and Building Services
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: AA SITE PLAN FOR BUILDING PERMIT
CERTIFICATION FOR TEMPORARY CERTIFICATE OF OCCUPANCY
FOOTHILLS SHOPPING CENTER, 11001 AND 11015 MENAUL BLVD, NE

Dear Ms. Metro:

I, Ronald R. Bohannan, NMPE # 7868, of the firm Tierra West LLC, hereby request approval of the AA Site Plan for Building Permit for issuance of the Temporary Certificate of Occupancy for the project referenced above. This project is in substantial compliance as inspected on September 06, 2012, and is in accordance with the design intent of the Approved Administrative Amended Site Plan for Building Permit dated 9/23/11. This certification is submitted in support of the request for Temporary Certificate of Occupancy to allow minor traffic striping to be completed when contractor support trailer and material storage is removed. The majority of the site is complete with traffic markings and signage. Handicapped-Parking areas are complete.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Enclosed, please find the information sheet and the as-built Approved Administrative Amended Site Plan for Building Permit. Therefore, we request approval of the as-built Approved Administrative Amended Site Plan for Building Permit for a Temporary Certificate of Occupancy

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

Sincerely,

RONALD RAY BOHANNAN NEW MEXICO 7868 REGISTERED PROFESSIONAL ENGINEER

9/7/12

Ronald R. Bohannan, P.E.

Enclosure/s

RECEIVED
AUG 10 2012
SEPT

JN: 2010077
RRB/BF/cla

Z:\2011\2011077 - Foothills Shopping Center\Correspondence\2011077 Kristal Metro Perm CO Letter 9-06-12.doc

CITY OF ALBUQUERQUE

August 24, 2011

Ronald Ray Bohannan, P.E.
Tierra West, LLC
5571 Midway Park PL NE
Albuquerque, NM 87109

Re: Snow Heights Commercial Shopping Center
Grading and Drainage Plan
Engineer's Stamp dated 7-21-11 (H21/D043)

Dear Mr. Bohannan,

Based upon the information provided in your submittal received 8-23-11, the above referenced plan is approved for Building Permit and Grading Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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

If you have any questions, you can contact me at 924-3695 or Rudy Rael 924-3977.

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

RER/SB
C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: **Snow Heights Commercial Shopping Center** ZONE MAP/DRG. FILE # **H-21-Z** D043

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

LEGAL DESCRIPTION **Remaining Portion Block 88, Snow Heights Together with Vacated Portions of Menaul and Juan Tabo Boulevard**

CITY ADDRESS: **11001 and 11015 Menaul Blvd. NE**

ENGINEERING FIRM:	**TIERRA WEST, LLC**	CONTACT:	**JOEL HERNANDEZ**
ADDRESS:	**5571 MIDWAY PARK PLACE NE**	PHONE:	**(505) 858-3100**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87109**
OWNER:	**Foothills Partners, LTD.**	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	**PRECISION SURVEYS**	CONTACT:	**LARRY MEDRANO**
ADDRESS:	**8500-A JEFFERSON STREET, NE**	PHONE:	**(505) 856-5700**
CITY, STATE:	**ALBUQUERQUE, NM**	ZIP CODE:	**87113**
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
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- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
- ___ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ___ OTHER BERNCO PROJECT-CONCURRENT REVIEW

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- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
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- ___ CERTIFICATE OF OCCUPANCY (TEMP.)
- X GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ SO-19

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ___ YES
- X NO
- ___ COPY PROVIDED

$50.00

RECEIVED
8-23-11
JUL 25 2011
HYDROLOGY SECTION

DATE SUBMITTED: **7/22/2011** BY: **JOEL HERNANDEZ, PE**

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

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DRAINAGE REPORT

for

Snow Heights – Commercial Shopping Center

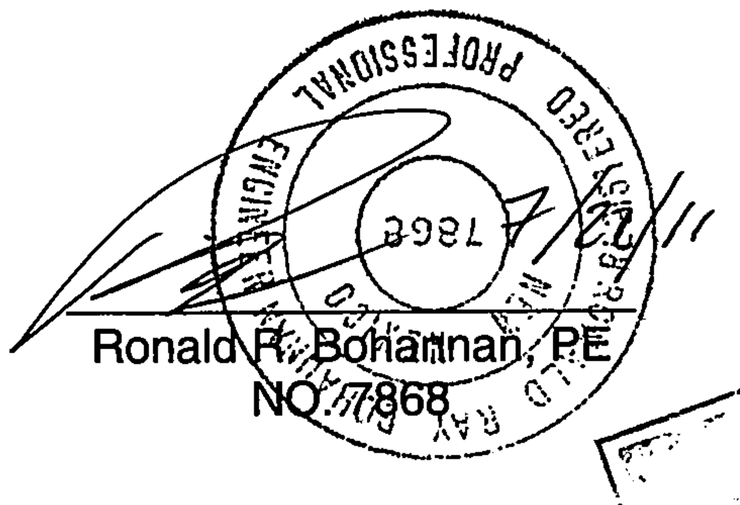
11001 and 11015 Menaul Blvd. NE
Albuquerque, New Mexico

Prepared by:

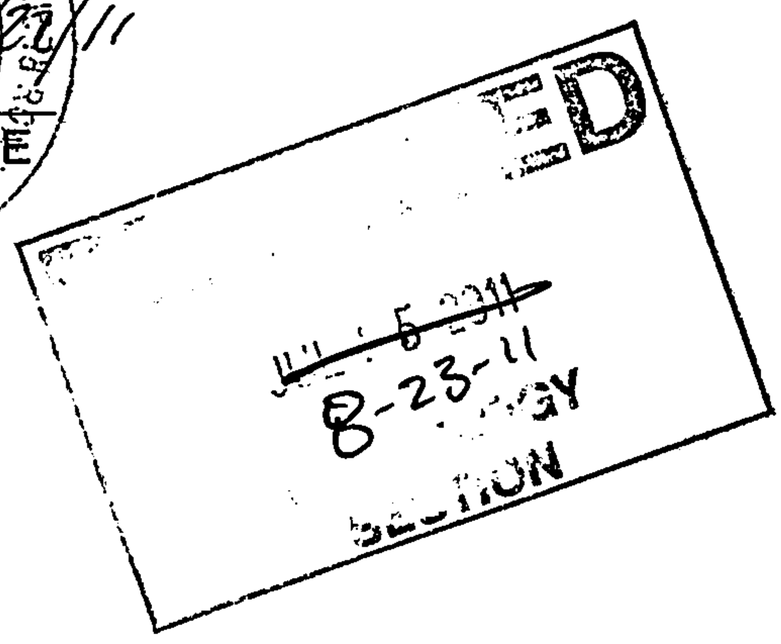
Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, New Mexico 87109

July, 2011

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the State of New Mexico in good standing.



Ronald R. Bohannan, P.E.
NO. 7868



Job No 2010077

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Proposed Conditions 6
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Appendices

Existing and Proposed Drainage Basin Exhibits ..... APPENDIX A

Hydrologic and Hydraulic Analysis ..... APPENDIX B

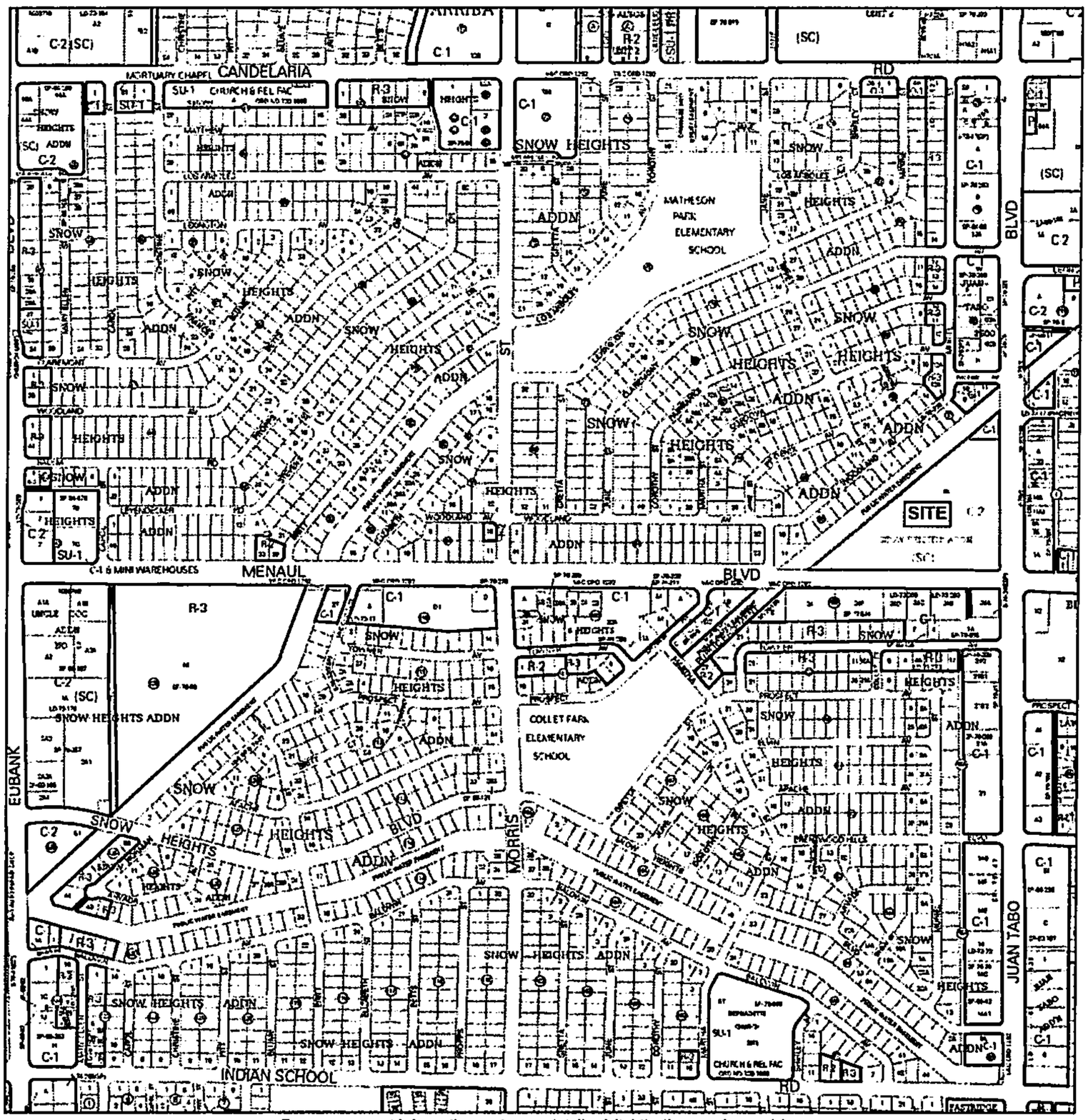
PURPOSE

The purpose of this report is to describe the existing drainage characteristics for the subject site and to provide the drainage management plan for a proposed renovation and 1,065 square foot expansion of a portion of the commercial shopping center in Albuquerque New Mexico in accordance with the City of Albuquerque Development Process Manual, Chapter 22 – Hydrology – Part A – Procedure for 40 Acre and Smaller Basins. This document details the hydrology analysis and drainage management plan for the re-development, and aims to provide an accurate record for future reference upon approval of this report.

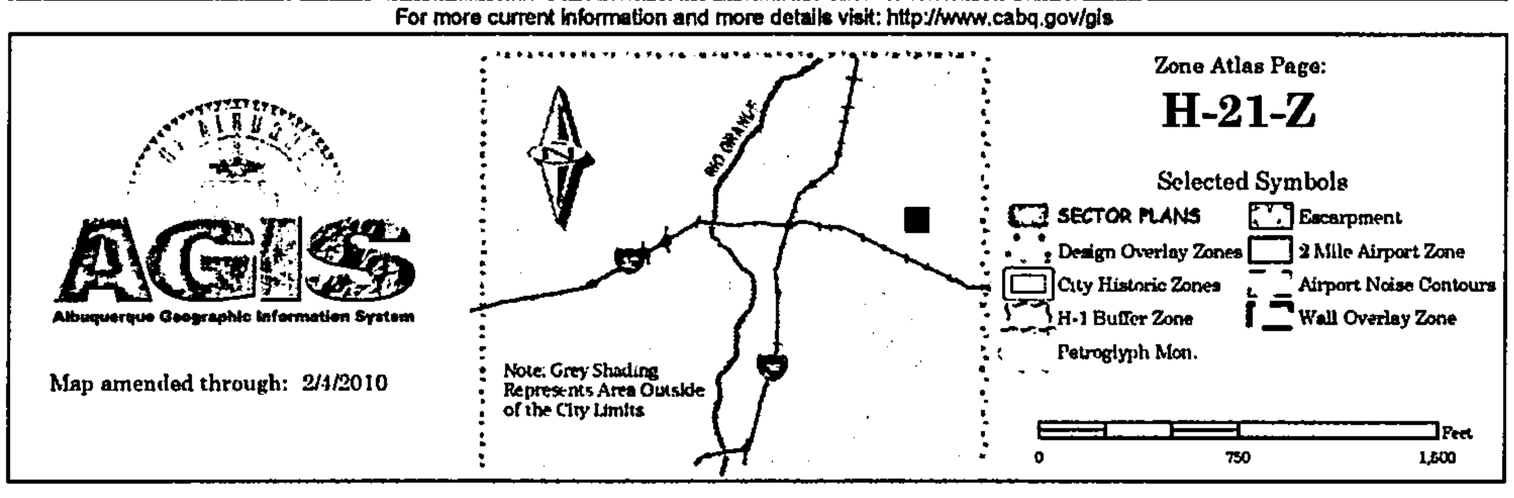
INTRODUCTION

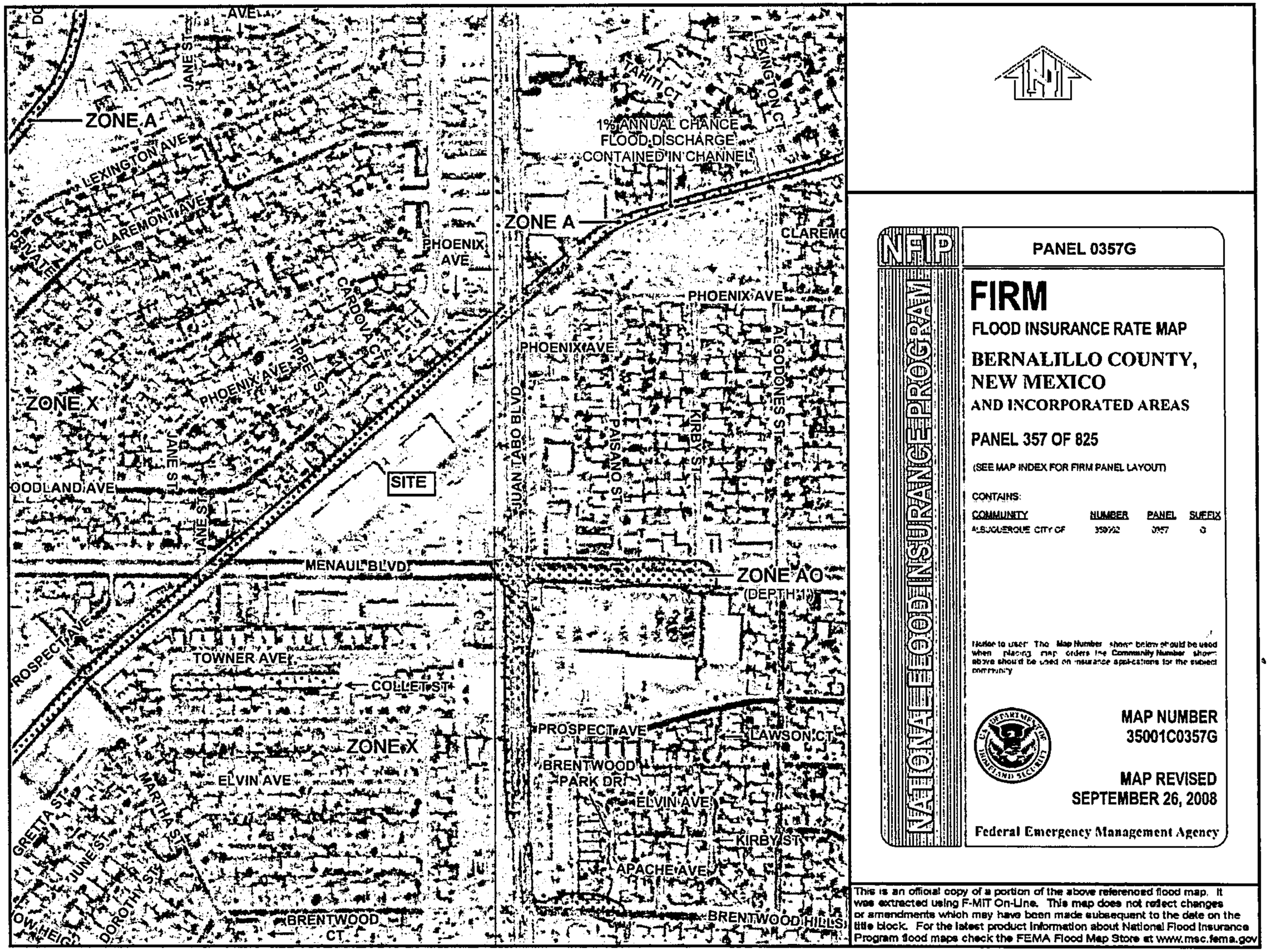
The subject of this report, as shown in Exhibit A – Vicinity Map, is an 8.61-acre parcel of land located in Albuquerque New Mexico, at the northwest corner of Menaul Blvd. and Juan Tabo Blvd. The site appears on the City of Albuquerque Zone Atlas page H-21-Z, lying in the Northeast Heights area of Albuquerque, and is currently fully developed with a commercial retail shopping center. As shown in Exhibit B – FIRM Map 35001C0357G, the subject property is outside the mapped flood zones. According to DPM Table A-1, the subject parcel is contained within Precipitation Zone 4.

Exhibit A- Vicinity Map H-21-Z



For more current information and more details visit: http://www.cabq.gov/gis





NFIP

PANEL 0357G

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 357 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0357	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
35001C0357G

MAP REVISED
SEPTEMBER 26, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

EXISTING CONDITIONS

The 8.61 acre site currently contains a commercial shopping center with cumulative square footages of 81,874 and 10,521 respectively, asphalt concrete parking areas, Portland Cement concrete pavement on portions of truck delivery routes, sidewalks, curb and gutter, as well as landscaped areas containing soil, grass, shrubs, and trees.

The existing site has been delineated into three drainage basins; (Existing) BASIN A, BASIN B, and BASIN C, utilizing surveyed topography and elevations, and should be referred to in Appendix A, Exhibit C – Existing Drainage Basins.

Further details regarding basin areas, land treatment percentages, volumes, and discharge rates for the 100-year, 10-year, and 2-year storm events can be seen in Appendix B in the table detailing "Existing Basins".

Existing drainage patterns convey approximately half (**22.48 cfs**) of the total storm water flows falling on the site to a drop inlet structure located at the southwest corner of the existing commercial building, northeast of the existing driveway access off Menaul Blvd (**Basin A**, Analysis Point 1 (**AP-1**)). This water is then delivered to the concrete drainage channel bordering the northwest edge of the site by a 24" Corrugated Metal Pipe.

A majority of the remaining flows (**20.90 cfs**) are conveyed via surface drainage to a curb cut and concrete apron near the west edge of the property, and discharge into the concrete drainage channel as well (**Basin B**, **AP-2**).

The remaining storm water flows (**2.26 cfs**) falling within **Basin C** surface flow into the Menaul Boulevard Right of Way. **AP-3** was used as the analysis point for flows leaving Basin C.

PROPOSED CONDITIONS

Redevelopment of a portion of the onsite 81,874 sf commercial building will include demolition and reconstruction of the far west commercial space and expand the building by a net

1,065 sf with a Finished Floor Elevation of 5586.77 to match the adjacent tenant. Minimal, localized grading to accommodate Accessible parking in front of the reconstructed area, adjustment to parking layout and the main driveway access entrance, and additional landscaping utilizing passive water harvesting will also accompany this work. The net effect of the building and site alterations will decrease the impervious area by increasing the landscaped areas.

Appendix A, Exhibit D – Proposed Drainage Basins, shows the delineated basins and corresponding analysis points under these proposed conditions; BASIN A (AP-1), BASIN B (AP-2), BASIN C (AP-3), and BASIN D (AP-4). Appendix B contains the table for Proposed Basins, detailing basin areas, land treatment, and volume and flow quantities for the 100-year, 10-year, and 2-year storm events.

(Proposed) **Basin D** will produce **3.31 cfs** of storm water run-off during the 100-year event and convey flows to **AP-4**, an under-sidewalk concrete culvert, and discharge into proposed Basin A and continue to Analysis Point 1. (Appendix B provides the calculation check for the sidewalk culvert, illustrating the capacity for the 3.31 cfs storm event normal depth of 0.37 ft.)

Analysis Point 1 (**AP-1**) would therefore experience 18.97 cfs from (proposed) **Basin A**, and the additional discharge from (proposed) Basin D of 3.31 cfs, for a total flow of **22.28 cfs** during the 100-year event. This water is then delivered to the concrete drainage channel (running the length of the site) by the same 24" Corrugated Metal Pipe. The proposed Double "D" drop inlet (AP-1) has been modeled using the Orifice Equation ($Q_{max} = CA(2gH)^{1/2}$), assuming a 50% clogging factor, and can be seen in Appendix B, yielding a maximum discharge of 18.0 cfs. During 10-year and 2-year storm events the drop inlet structure and 24" CMP will have capacity for flow from Basin A and Basin D. During the 100-year storm event, assuming 50% of the grate is clogged, the additional volume of water will flow over the water break and around the southwest corner of the building along the curb, to continue across the parking lot in Basin B to the curb cut, discharging into the concrete drainage channel.

(Proposed) **Basin B** will continue to discharge surface flows of **21.07 cfs** to the curb cut at **AP-2.**

(Proposed) **Basin C** will continue to discharge flows falling in this basin (**2.11 cfs**) into the Menaul Boulevard Right of Way, **AP-3**.

These proposed conditions will therefore not increase the peak discharge, volume run-off, nor divert historic flows to the surrounding properties, Menaul Blvd. Right of Way, or the concrete drainage channel according to this hydrologic and hydraulic analysis. The proposed drainage management plan thus illustrates adequate capacity to safely and effectively handle the 100-year, 6-hour storm event.

SUMMARY AND RECOMMENDATIONS

Following a detailed analysis of existing and proposed drainage conditions guided by DPM Section 22 – Weighted E Method, storm water discharge resulting from the 100-year, 6-hr storm event indicates that the proposed commercial shopping center redevelopment and corresponding grading and drainage design will accommodate the proposed development, and correspondingly not increase run-off volumes or alter historic discharge locations. It is therefore recommended that this development be approved for grading and Site Plan Development for Building Permit based upon these findings.

MAP POCKET A

SITE GRADING AND DRAINAGE PLAN

APPENDIX A

EXISTING AND PROPOSED DRAINAGE BASINS

EXHIBIT "C"
EXISTING DRAINAGE BASINS

N

NTS

Tippet Street, N.E.

Woodland Avenue, N.E.

Juan Tabo Boulevard, N.E.

Menaul Boulevard, N.E.

BLOCK 87

BLOCK 86

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9

PUBLIC EASEMENT

Block 88
Together with Vacated
Portions of Menaul and
Juan Tabo Boulevards
AREA=8.6106 ACRES ±
375,079 SQ. FT. ±

BASIN A

BASIN B

BASIN C

AP–1

AP–2

AP–3

EXISTING DRIVEWAY ACCESS

N 89°39'50" W
944.76'

N 89°39'50" W
121.70'

S 00°20'10" W
72.00'

N 00°20'10" E
72.00'

T 11

EXHIBIT "D"
PROPOSED DRAINAGE BASINS

N

NTS

BASIN A

BASIN B

BASIN C

BASIN D

NOT A PART

NOT A PART

AP-1

AP-2

AP-3

AP-4

LOT 1

LOT 2

LOT 3

LOT 4

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

SNOW HEIGHTS
(BLOCK 86)

PUBLIC DRAINAGE EASEMENT

EXISTING BUILDING

MENAUL BLVD NE

JUAN TABO BLVD NE (130'R/W)

APPENDIX B

HYROLOGIC AND HYDRAULIC ANALYSIS

Weighted E Method

Snow Heights Commercial Shopping Center, Menaul Blvd. and Juan Tabo Blvd. - Zone #4

Existing Basins

Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year, 6-Hr Weighted E (ac-ft)	100-Year, 6-Hr Volume (ac-ft)	100-Year, 6-Hr Flow cfs	10-Year, 6-Hr Weighted E (ac-ft)	10-Year, 6-Hr Volume (ac-ft)	10-Year, 6-Hr Flow cfs	2-Year, 6-Hr Weighted E (ac-ft)	2-Year, 6-Hr Volume (ac-ft)	2-Year, 6-Hr Flow cfs
A	191202.83	4.389	0.00686	0%	0	0%	0.000	9%	0.403826	91%	3.994	2.537	0.928	22.48	1.605	0.587	15.17	0.944	0.345	9.07
B	173894.06	3.992	0.00624	0%	0	0%	0.000	1%	0.039921	99%	3.952	2.628	0.874	20.90	1.680	0.559	14.20	1.003	0.334	8.62
C	20475.97	0.470	0.00073	0%	0	0%	0.000	29%	0.136318	71%	0.334	2.298	0.090	2.26	1.412	0.055	1.50	0.795	0.031	0.86
Total	**385572.86**	**8.852**	**0.01383**										**1.892**	**45.63**		**1.201**	**30.87**		**0.710**	**18.55**

Proposed Basins

Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year, 6-Hr Weighted E (ac-ft)	100-Year, 6-Hr Volume (ac-ft)	100-Year, 6-Hr Flow cfs	10-Year, 6-Hr Weighted E (ac-ft)	10-Year, 6-Hr Volume (ac-ft)	10-Year, 6-Hr Flow cfs	2-Year, 6-Hr Weighted E (ac-ft)	2-Year, 6-Hr Volume (ac-ft)	2-Year, 6-Hr Flow cfs
A	162047.52	3.720	0.00581	0%	0	0%	0.000	10%	0.37201	90%	3.348	2.522	0.782	18.97	1.594	0.494	12.79	0.936	0.290	7.64
B	175329.15	4.025	0.00629	0%	0	0%	0.000	1%	0.04025	99%	3.985	2.628	0.882	21.07	1.680	0.564	14.32	1.003	0.336	8.69
C	19012.65	0.436	0.00068	0%	0	0%	0.000	27%	0.117847	73%	0.319	2.321	0.084	2.11	1.431	0.052	1.40	0.810	0.029	0.81
D	28364.49	0.651	0.00102	0%	0	0%	0.000	11%	0.071628	89%	0.580	2.510	0.136	3.31	1.584	0.086	2.23	0.929	0.050	1.33
Total	**384753.81**	**8.833**	**0.01380**										**1.884**	**45.46**		**1.196**	**30.74**		**0.706**	**18.46**

Equations:

Weighted E = $E_a*A_a + E_b*A_b + E_c*A_c + E_d*A_d$ / (Total Area)

Volume = Weighted D * Total Area

Flow = $Q_a * A_a + Q_b * A_b + Q_c * A_c + Q_d * A_d$

Double "D" Grate Inlet - Analysis Point 1 (AP-1)

Orifice Equation

$Q_{max} = CA(2gH)^{1/2}$

Q_{max} = Maximum Discharge from Orifice
C = Unitless Coefficient
A = Effective Area of Grate, ft^2
g = Acceleration of Gravity, constant, 32.2 ft/s^2
H = Available Head, ft

C =	0.6
A =	4.18 ft^2
g =	32.2 ft/s^2
H =	0.8 ft
Q_{max} =	18.00 ft^3/s

Awning - To Front Drain Line

Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment D %	Treatment D (acres)	100-Year, 6-Hr Weighted E (ac-ft)	100-Year, 6-Hr Volume (ac-ft)	100-Year, 6-Hr Flow cfs	10-Year, 6-Hr Weighted E (ac-ft)	10-Year, 6-Hr Volume (ac-ft)	10-Year, 6-Hr Flow cfs	2-Year, 6-Hr Weighted E (ac-ft)	2-Year, 6-Hr Volume (ac-ft)	2-Year, 6-Hr Flow cfs
Awning	1166.61	0.027	0.00004	100%	0.027	2.640	0.006	0.14	1.690	0.004	0.10	1.010	0.002	0.06

Roof - To Back Drain Line

Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment D %	Treatment D (acres)	100-Year, 6-Hr Weighted E (ac-ft)	100-Year, 6-Hr Volume (ac-ft)	100-Year, 6-Hr Flow cfs	10-Year, 6-Hr Weighted E (ac-ft)	10-Year, 6-Hr Volume (ac-ft)	10-Year, 6-Hr Flow cfs	2-Year, 6-Hr Weighted E (ac-ft)	2-Year, 6-Hr Volume (ac-ft)	2-Year, 6-Hr Flow cfs
Roof	35012.80	0.804	0.00126	100%	0.804	2.640	0.177	4.22	1.690	0.113	2.87	1.010	0.068	1.74

Existing 24" CMP Capacity Check

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.024		
Channel Slope	0.01900	ft/ft	
Diameter	2.00	ft	
Discharge	**18.00**	**ft³/s**	**$Q_{100\text{-}yr}$ Assuming 50% Clog Factor**

Results

Normal Depth	1.80	ft	
Flow Area	2.98	ft²	
Wetted Perimeter	5.00	ft	
Hydraulic Radius	0.60	ft	
Top Width	1.20	ft	
Critical Depth	1.53	ft	
Percent Full	90.0	%	
Critical Slope	0.02486	ft/ft	
Velocity	6.04	ft/s	
Velocity Head	0.57	ft	
Specific Energy	2.37	ft	
Froude Number	0.68		
Maximum Discharge	**18.17**	**ft³/s**	**> 18.0 cfs, therefore OK**
Discharge Full	16.89	ft³/s	
Slope Full	0.02158	ft/ft	
Flow Type	SubCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	89.99	%
Downstream Velocity	Infinity	ft/s

Proposed Sidewalk Culvert Capacity Check

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00890	ft/ft
Bottom Width	2.00	ft
Discharge	3.31	ft^3/s

Results

Normal Depth	**0.37**	**ft**	**< 6" therefore OK**
Flow Area	0.74	ft^2	
Wetted Perimeter	2.74	ft	
Hydraulic Radius	0.27	ft	
Top Width	2.00	ft	
Critical Depth	0.44	ft	
Critical Slope	0.00526	ft/ft	
Velocity	4.49	ft/s	
Velocity Head	0.31	ft	
Specific Energy	0.68	ft	
Froude Number	1.30		
Flow Type	Supercritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.37	ft
Critical Depth	0.44	ft
Channel Slope	0.00890	ft/ft
Critical Slope	0.00526	ft/ft

Proposed 12" PVC Front Drain Line Check

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.02000	ft/ft
Diameter	1.00	ft
Discharge	0.14	ft³/s

Results

Normal Depth	**0.10**	**ft**	**< 1.0 ft, During 100-yr, 6-hr event Therefore OK.**
Flow Area	0.04	ft²	
Wetted Perimeter	0.65	ft	
Hydraulic Radius	0.06	ft	
Top Width	0.60	ft	
Critical Depth	0.15	ft	
Percent Full	10.1	%	
Critical Slope	0.00357	ft/ft	
Velocity	3.37	ft/s	
Velocity Head	0.18	ft	
Specific Energy	0.28	ft	
Froude Number	2.26		
Maximum Discharge	7.05	ft³/s	
Discharge Full	6.55	ft³/s	
Slope Full	0.00001	ft/ft	
Flow Type	SuperCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	10.11	%
Downstream Velocity	Infinity	ft/s

Proposed 12" PVC Rear Drain Line Check

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.02000	ft/ft
Diameter	1.00	ft
Discharge	4.22	ft^3/s

Results

Normal Depth	**0.58**	**ft**	**< 1.0 ft during 100-yr, 6-hr event Therefore OK.**
Flow Area	0.48	ft^2	
Wetted Perimeter	1.74	ft	
Hydraulic Radius	0.27	ft	
Top Width	0.99	ft	
Critical Depth	0.87	ft	
Percent Full	58.4	%	
Critical Slope	0.00762	ft/ft	
Velocity	8.86	ft/s	
Velocity Head	1.22	ft	
Specific Energy	1.80	ft	
Froude Number	2.25		
Maximum Discharge	7.05	ft^3/s	
Discharge Full	6.55	ft^3/s	
Slope Full	0.00830	ft/ft	
Flow Type	SuperCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	58.40	%
Downstream Velocity	Infinity	ft/s

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
HYDROLOGY DEVELOPMENT SECTION

DEVELOPMENT REVIEW BOARD MEMO

DRB PROJECT NO: 1004607

AGENDA ITEM NO: 5

SUBJECT:

Amended Infrastructure List

ENGINEERING COMMENTS:

A couple of months ago we met to go through this. Please provide the marked up list.

Why shouldn't the inlets be required on Scenic Road?

RESOLUTIONCOMMENTS:

SIGNED:

Curtis Cherne
Hydrology Section
City Engineer Designee
AMAFCA Designee
924-3986

DATE: 8-17-11

Need cover sheet for AA

Approved AA req'd for

Building permits.

CL

E-17-4