CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

February 14, 2017

Joel Hernandez, P.E.
Tierra West, LLC
5571 Midway Park Place, NE
Albuquerque, NM, 87109

RE: **U-Haul at West Bluff**
Atrisco Drive NW
Grading Plan (Stamp Date 1/30/17) and Drainage Report (Stamp Date 12/5/16)
Hydrology File: H11D059

Dear Mr. Hernandez:

Based upon the information provided in your submittal received on 2/1/17, the Grading Plan and Drainage Report are approved for Building Permit and Grading Permit.

Work within the City Right-of-Way to install the manholes will require a city work order. If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: U-Haul at West Bluff Building Permit #: _____ City Drainage #: H11D059

DRB#: _____ EPC#: 16EPC-40045 Work Order#: _____

Legal Description: Tract 306-A, Town of Atrisco Unit 8

City Address: Atrisco Drive, NW

Engineering Firm: Tierra West, LLC Contact: Joel Hernandez, PE

Address: 5571 Midway Park Place, NE

Phone#: 505.858.3100 Fax#: 505.858.1118 E-mail: joeldhernandez@tierrawestllc.com

Owner: AMERCO Real Estate Company Contact: Jenn Roldan

Address: 2727 N. Central Ave., Phoenix, AZ 85004

Phone#: (602) 263-6502 x516506 Fax#: _____ E-mail: jenn_roldan@uhaul.com

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
___ TRAFFIC/ TRANSPORTATION
___ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

___ ENGINEER/ ARCHITECT CERTIFICATION

___ CONCEPTUAL G & D PLAN
X GRADING PLAN
___ DRAINAGE MASTER PLAN
X DRAINAGE REPORT
___ CLOMR/LOMR

___ TRAFFIC CIRCULATION LAYOUT (TCL)
___ TRAFFIC IMPACT STUDY (TIS)
___ EROSION & SEDIMENT CONTROL PLAN (ESC)

___ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY *Need WO

___ PRELIMINARY PLAT APPROVAL
___ SITE PLAN FOR SUB'D APPROVAL
X SITE PLAN FOR BLDG. PERMIT APPROVAL SU. 25a.
___ FINAL PLAT APPROVAL
___ SIA/ RELEASE OF FINANCIAL GUARANTEE
___ FOUNDATION PERMIT APPROVAL
X GRADING PERMIT APPROVAL
___ SO-19 APPROVAL
___ PAVING PERMIT APPROVAL
___ GRADING/ PAD CERTIFICATION
___ WORK ORDER APPROVAL
___ CLOMR/LOMR

___ PRE-DESIGN MEETING
___ OTHER (SPECIFY) _____

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IS THIS A RESUBMITTAL?: X Yes ___ No

DATE SUBMITTED: 2/01/2017 By: Joel Hernandez

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

TOW

TIERRA WEST, LLC

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

February 1, 2017

Mr. Dana Peterson, P.E.
Planning Department- Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: U-Haul at West Bluff Grading & Drainage (File: H11D059)

Please find the following responses addressing staff comments from correspondence dated January 17, 2017 listed below:

1. The North detention pond appears to be bounded by a CMU retaining wall as high as 8 feet in some places. This will need to be enclosed with a fence at least 42 inches high.

Response: We have updated the plan (Sheet GR-1) to include a pedestrian barrier/fence.

2. Call out Class IV RCP for the north detention pond outfall pipe under the retaining wall.

Response: We have revised the plan (Sheet GR-1) to specify Class IV RCP for this section of pipe.

3. Additional detail is required for the two curb cuts and their associated water blocks to ensure ADA compliance for pedestrian traffic along Atrisco. Provide section views at these locations, including flow line elevation, slope, and waterblock elevations.

Response: We have revised the grading plan to show proposed grades for the waterblock and pedestrian paths in greater detail on Sheet GR-2, as requested.

4. Project Benchmark and Vertical Datum is missing from the sheets. The Drainage Management Plan addresses the NGVD29 to NAVD88 shift, but sheets need this information as well.

Response: We have updated the plan (Sheet GR-1) with a benchmark elevation in NAVD88.

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5. A portion of the sidewalk is within the parcel property, if there is no existing sidewalk easement, one will need to be provided.

Response: Additional right of way for public sidewalk was dedicated to the City of Albuquerque by plat (recorded 10/28/2016) for the portions of sidewalk formerly beyond the public ROW. A copy of the plat is attached for reference.

6. Verify that the two drop inlets are capable of handling twice the 100-yr flow at the sump on Atrisco. It appears this location has a single-C and double-C on each side of the road. If these inlets are insufficient, additional inlets will be needed on the new lateral from the north pond to prevent flows from spilling over into the north pond.

Response: We have analyzed the capacity of the drop inlets considering a 50% clogging factor and determined sufficient capacity exists with the existing infrastructure. Additionally, the grading scheme allows for positive overflow so as to maintain the proposed structures above any potential localized flooding should the storm drain system become clogged. The FlowMaster calculation worksheet attached will be included in Appendix B of the report.

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

Sincerely,

Joel Hernandez, PE

JN: 2016061
RRB/jh/jg

I40 RAMP
COORS
MIAMI
6211
6211
6211
6211
5565
5565
I40 WESTBOUND
I40 EASTBOUND
I40 RAMP

Plat of

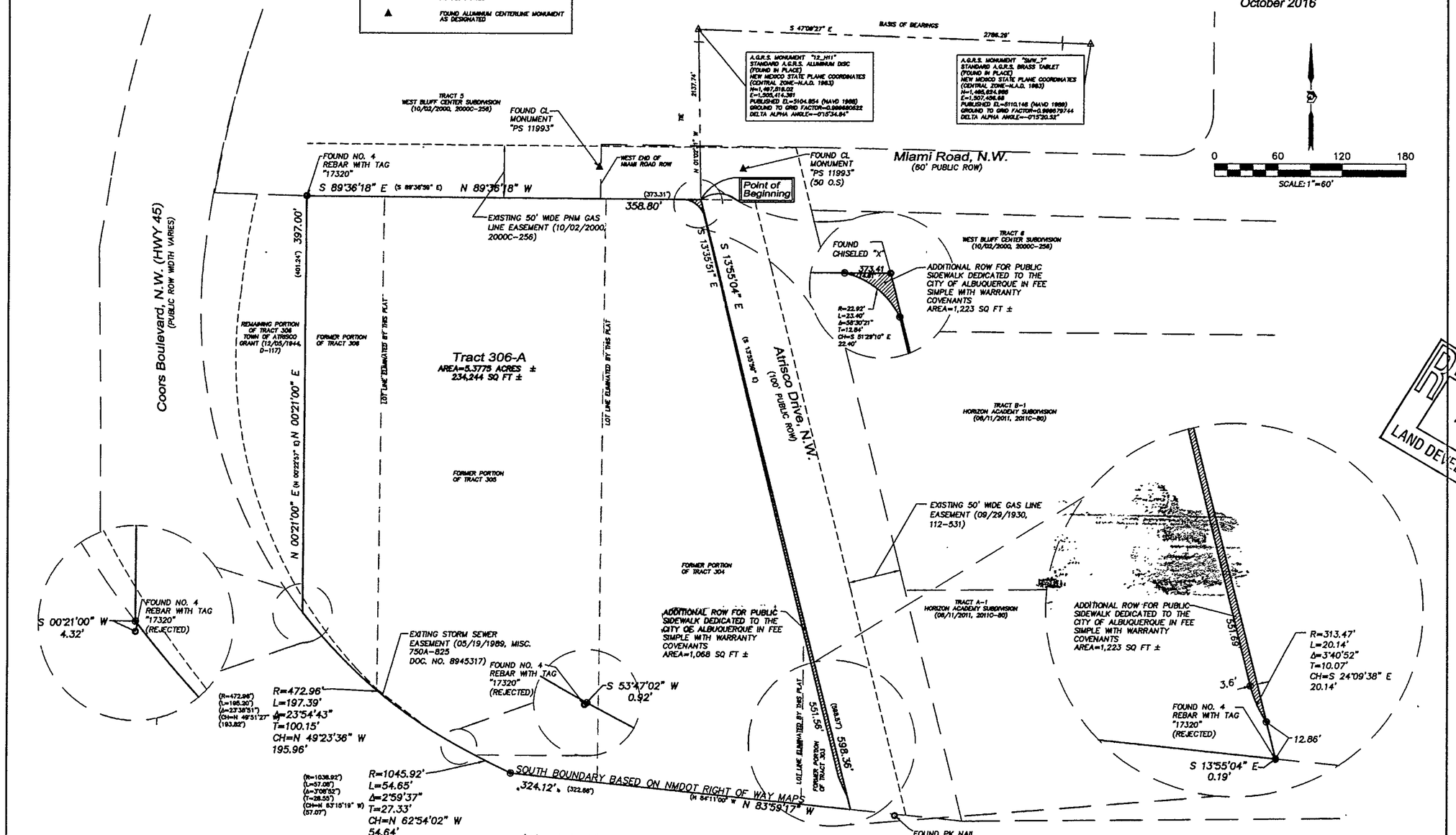
Tract 306-A
Town of Atrisco Unit 8

Town of Atrisco Grant Projected Section 11,
Township 10 North, Range 02 East, N.M.P.M.
Albuquerque, Bernalillo County, New Mexico
October 2016

RECORDING STAMP
DOC# 2016101887
10/20/2016 09:33 AM Page: 2 of 2
PLAT A 125 96 B 2016C P: 0133 M Toulouse Oliver, Bernalillo Cou

Legend

N 90°00'00" E	MEASURED BEARING AND DISTANCES
(N 90°00'00" E)	RECORD BEARINGS AND DISTANCES
○	FOUND AND USED MONUMENT AS DESIGNATED
●	DENOTES NO. 4 REBAR WITH YELLOW PLASTIC CAP "PS 11993" SET THIS SURVEY
△	FOUND ALUMINUM AGRS MONUMENT AS DESIGNATED
▲	FOUND ALUMINUM CENTERLINE MONUMENT AS DESIGNATED



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INDEXING INFORMATION FOR COUNTY CLERK	
OWNER	WEST BLUFF CENTER LLC
SECTION 11, TOWNSHIP 10 N, RANGE 02 E,	
SUBDIVISION	TOWN OF ATRISCO BLUFF BUISINESS CENTER
UPC NO TRACT 306	101105922524031701
UPC NO TRACT 305	101105923923631702
UPC NO TRACT 304	101105925823031703
UPC NO TRACT 303	101105927120931704

PRECISION SURVEYS, INC.

OFFICE LOCATION:
8200 San Mateo Boulevard, NE
Albuquerque, NM 87113

505.856.5700 PHONE
505.856.7900 FAX

PSI JOB NO 168122P

DRAINAGE MANAGEMENT PLAN

For

West Bluff Business Center

SWC Miami Street and Atrisco Drive, NW
Albuquerque, New Mexico

Prepared by:

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

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DEC 09 2016
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2/1/17 - updated
Appx B

December, 2016

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
NEW MEXICO
7868
PROFESSIONAL ENGINEER

12/8/16

Ronald R. Bohannan, PE
NO. 7868

TW Job No. 2016061

TABLE OF CONTENTS

Introduction 1

Vicinity Map 1

Pre-Developed Condition 2

FIRMap 2

Post-Developed Condition 3

Water Quality Management 3

Conclusion 4

Appendices

On-Site Hydrology and Hydraulic Calculations ..... APPENDIX A

Off-Site Hydraulic Capacity Analysis – Atrisco Drain StormCAD ..... APPENDIX B

Drainage Report for SAD 219 (excerpt for reference) ..... APPENDIX C

Map Pockets

Grading and Drainage Plan ..... Map Pocket

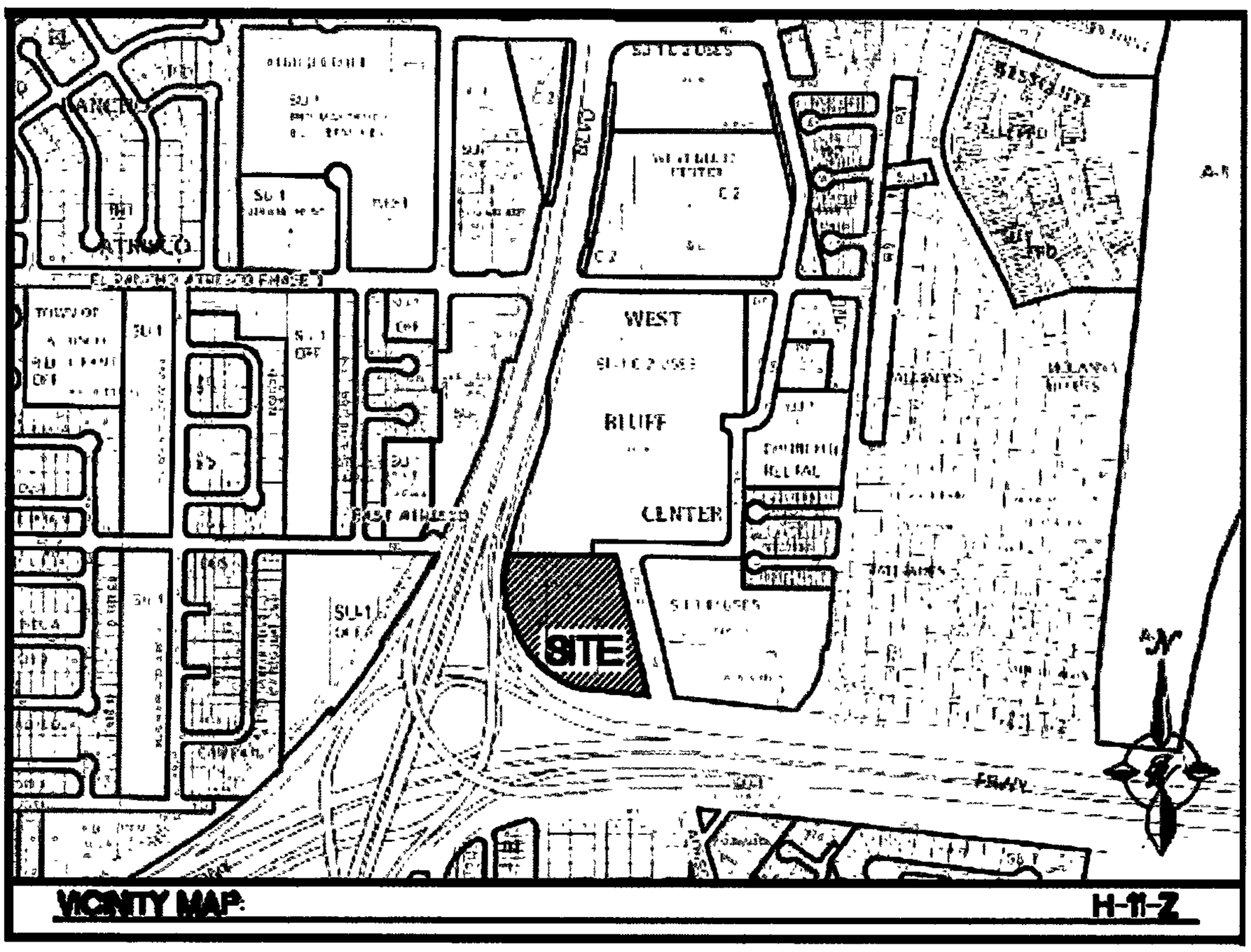
Introduction:

The purpose of this drainage report is to present a drainage solution for the proposed storage facility development consisting of four buildings and associated parking facility. This report accompanies the request for approval of the Grading and Drainage Plan for Site Development Plan for Building Permit.

This site in its entirety was previously analyzed by the Drainage Report for SAD 219 (see Appendix C) and falls within Drainage Basin H11-3 which was designated to discharge all developed flows from the site to the existing 14' x 14' CBC with a storm drain connection. This report will demonstrate the storm drain system in Atrisco Drive has sufficient capacity to accommodate the developed flows as indicated on the proposed grading and drainage plan.

Project Location Map:

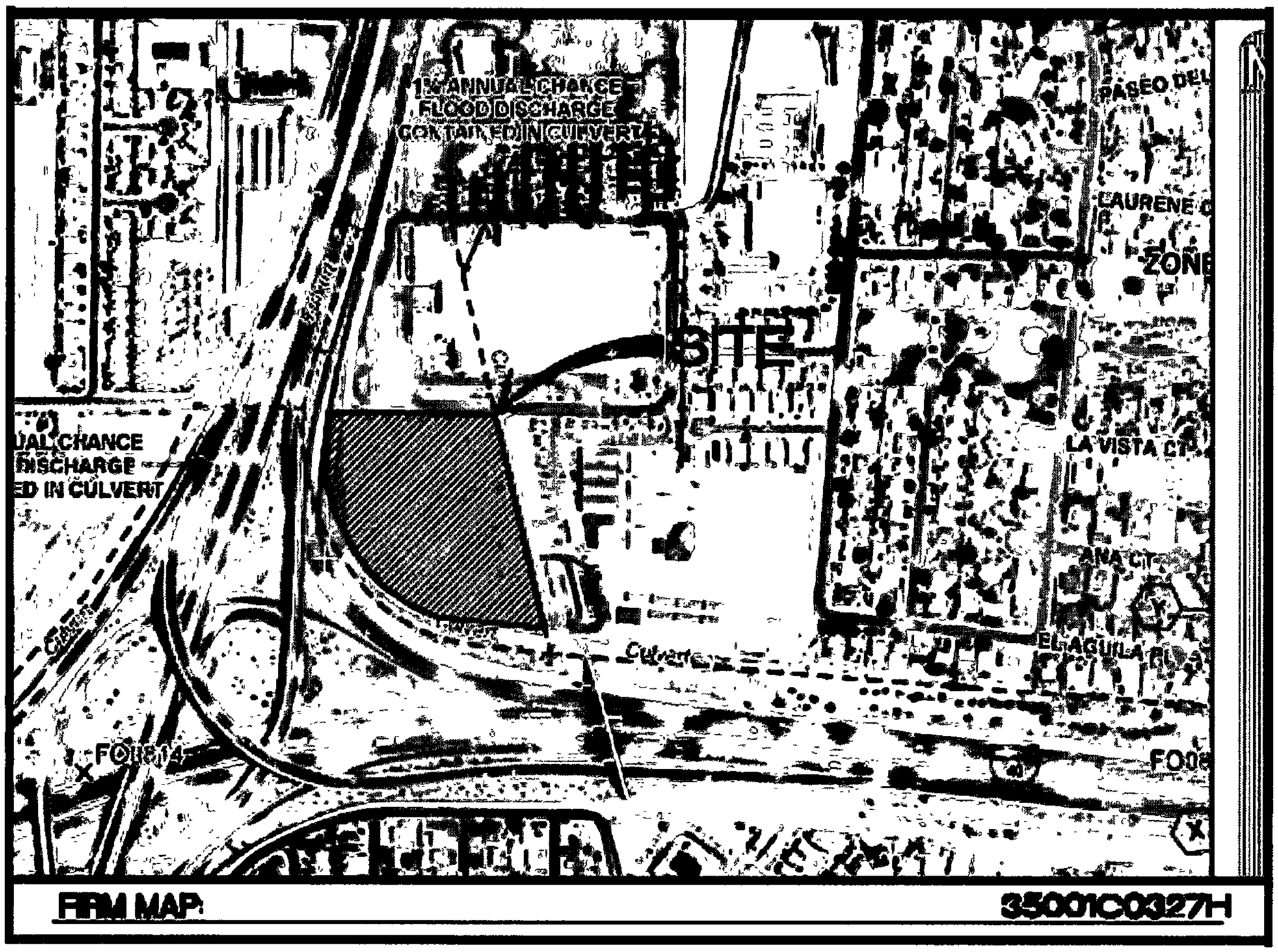
The 5.18-acre site is comprised of an undeveloped parcel (recently consolidated from four lots) located at the southwest corner of Miami Street and Atrisco Drive, NW.



Pre-Developed Conditions:

The site is bound on the north by the Miami Street public roadway improvements and an existing retail facility, on the east by Atrisco Drive, on the south by Interstate 40, and on the west by the off-ramp from I-40 to Coors Boulevard. Site terrain is gently sloping and generally drains by sheet flow from northeast to southwest onto the I-40 off-ramp. There is an existing 54-inch storm drain within Atrisco Drive (Atrisco Drain) and a 14'X14' concrete box culvert (CBC) with the public right-of-way along the westerly property boundary. The 54-inch Atrisco Drain connects to the 14'X14' CBC just south of the Atrisco Drive southerly terminus, where it continues toward the east to discharge into the Rio Grande.

Existing conditions, analyzed as a single basin with a runoff rate of 15.27 cfs, generally sheet flow from northeast to southwest discharging onto the Coors Boulevard off-ramp from I-40. No offsite runoff enters the site. The site is located outside any mapped 100-year floodplain, as indicated on FEMA FIRM Map 35001C0327H.



Post-Developed Conditions:

The proposed grading scheme directs storm runoff toward the east by means of surface sheet flow to the extent possible into two water quality retention ponds which then discharge into the existing storm drain system in Atrisco Drive (Atrisco Drain). An onsite private storm drain system will also be employed to capture drainage from areas where sheet flow is impractical. A slope area (Basin C) along the westerly property boundary will flow onto the adjacent slope toward the west, although the flows expected are miniscule (0.27 cfs) especially when compared to the historic flow of 15.27 cfs which were historically conveyed to this area. The onsite storm drain system capacity calculations were performed using FlowMaster and are included in Appendix B. Storm drain lateral connections into the Atrisco Drain will require construction of a new storm drain manhole for the north basin, and connection into an existing manhole in Atrisco Drive for the south basin.

A downstream capacity analysis of the Atrisco Drain was performed by modeling the existing system using StormCAD to assess the system capacity. As a conservative measure, the attenuation effect of the retention ponds was unaccounted for in the analysis. The model was developed using as-built drawing information (included in Appendix C) for the existing system and includes the proposed lateral storm drain connections from the retention ponds. As a matter of clarity, all elevations in the StormCAD model reflect the NGVD 29 Datum, including those of the proposed storm drain lateral connections. Adjusting for the difference between NGVD 29/NAVD88 Datum (approximately 2.80'), the HGL at 100-year peak flows is expected to be 5087.74' at the north lateral, and 5091.24' at the south lateral, both of which are below the retention bond bottom elevations of 5091.00' and 5092.50', respectively. The results indicate the Atrisco Drain has sufficient capacity to accommodate the developed flows from the site without detention ponds.

Water Quality Management

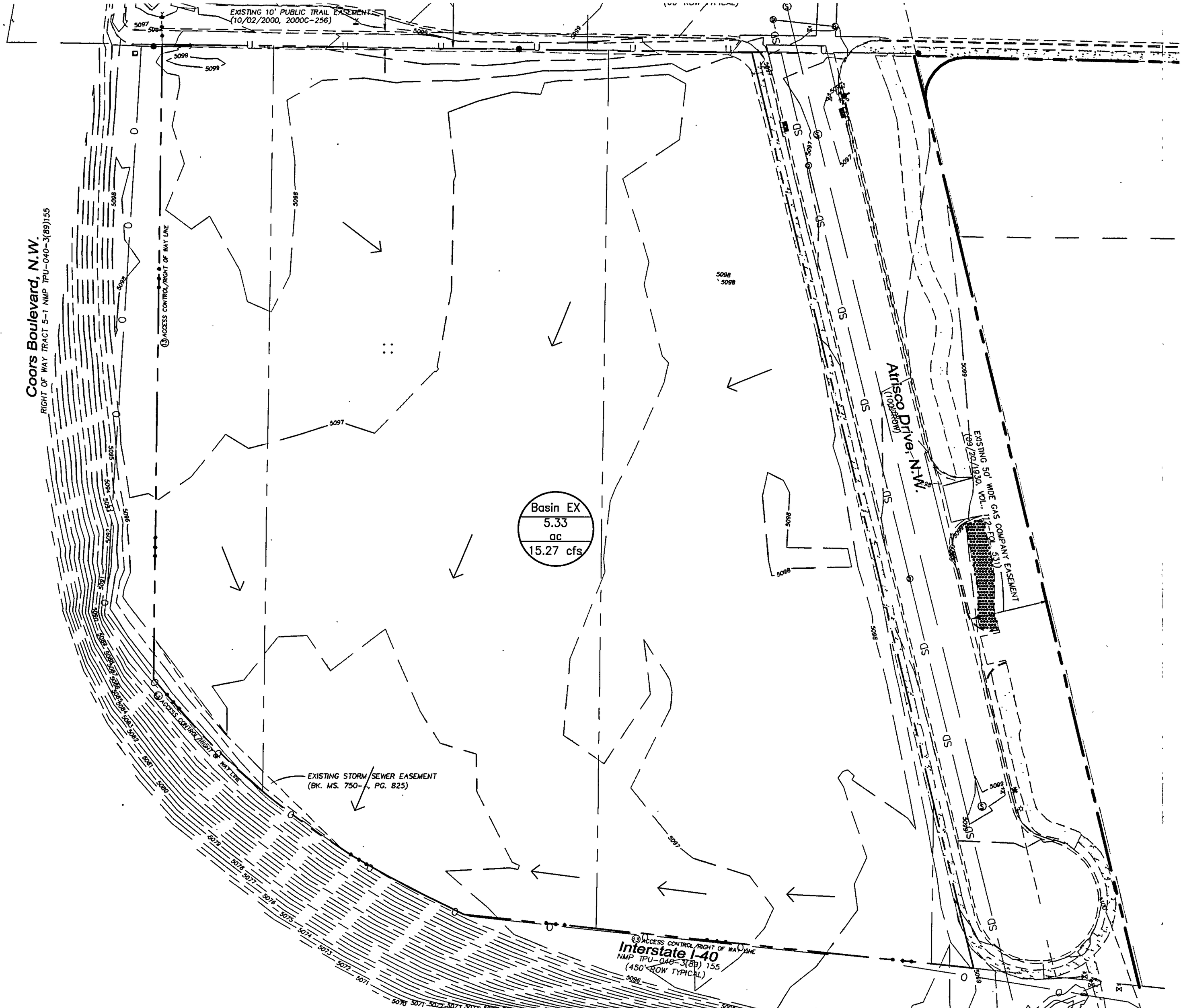
Low Impact Development strategies are implemented in the grading and drainage design by incorporating gravel-lined swales, retention ponds, and CMP risers outfitted with trash racks prior to releasing flows from developed impervious areas. The majority of the surface drainage is conveyed to the retention ponds through gravel-lined swales which act to capture sediment and other debris before reaching the retention ponds. Retention volume is achieved within the ponds and controlled by the crest elevation of the corresponding CMP risers which are sized to convey the 100-year storm at the maximum water surface elevations indicated on the grading and drainage plan. Calculations for required retention volumes, pond volumes, and CMP riser headwater elevations are included in Appendix A.

Conclusion:

This Drainage Management Plan provides for grading and drainage elements which are capable of safely conveying the 100-year, 6-hour storm and which meet the DPM requirements. With this submittal we request Drainage Report and Grading Plan approvals for the Site Development Plan for Building Permit application.

APPENDIX A

On-Site Hydrology and Hydraulics
Excerpt for Reference



N

NTS

LEGEND

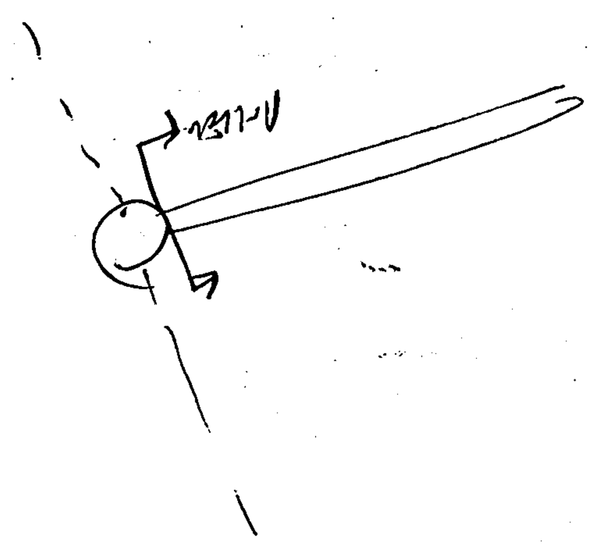
DRAINAGE BASIN

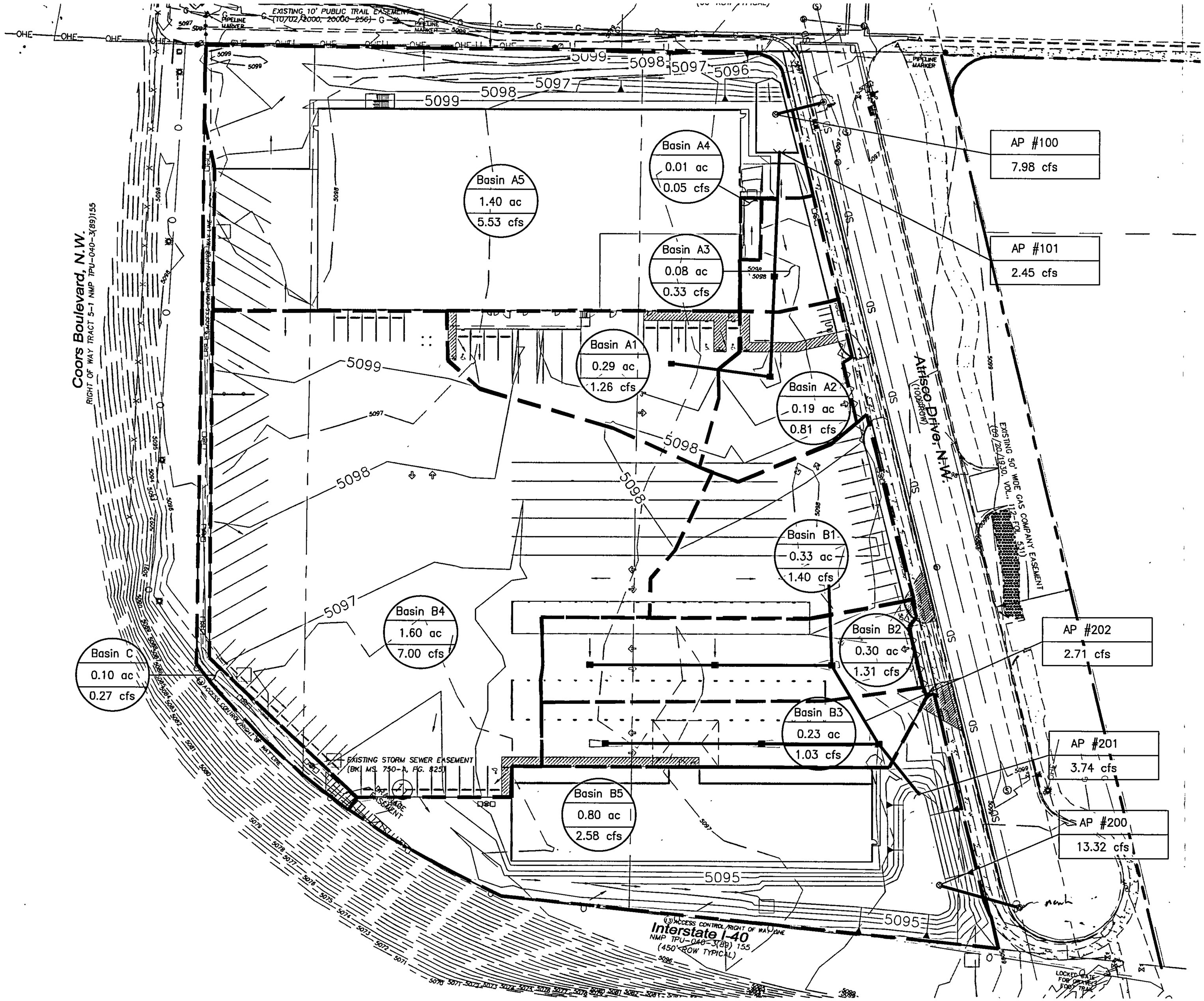
FLOW DIRECTION

Basin ID
Basin Area
Q_{100} (cfs)

Analysis Point
Q100

PRE-DEVELOPMENT DRAINAGE BASINS





POST-DEVELOPMENT DRAINAGE BASINS

U-HAUL AT WEST BLUFF

Existing Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 1

BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100) (cfs/ac.)	Q(100) (CFS)	V(100) (inches)	V(100) (CF)
EXISTING CONDITIONS										
EX	231788	5.32	0.0%	0.0%	100.0%	0.0%	2.87	*15.27*	*0.99*	*19123*
TOTAL		**5.32**						***15.27***	***0.99***	***19123***

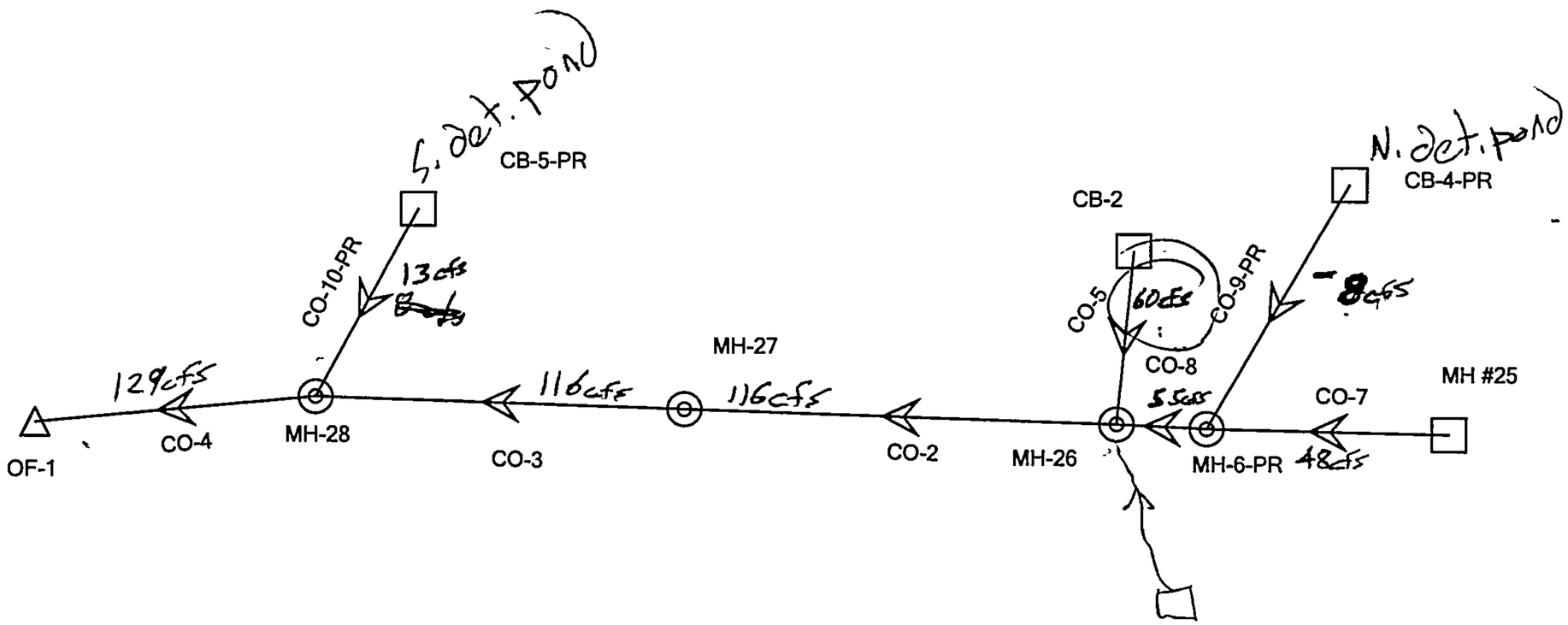
Proposed Conditions Basin Data Tables

BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100) (cfs/ac.)	Q(100) (CFS)	V(100) (inches)	V(100) (CF)
PROPOSED CONDITIONS										
A1	12557	0.29	0.0%	0.0%	0.0%	100.0%	4.37	*1.26*	*1.97*	*2061*
A2	8128	0.19	0.0%	0.0%	2.0%	98.0%	4.34	*0.81*	*1.95*	*1321*
A3	3457	0.08	0.0%	0.0%	13.0%	87.0%	4.18	*0.33*	*1.84*	*531*
A4	530	0.01	0.0%	0.0%	0.0%	100.0%	4.37	*0.05*	*1.97*	*87*
A5	60973	1.40	0.0%	0.0%	28.0%	72.0%	3.95	*5.53*	*1.70*	*8615*
TOTAL		**1.97**						***7.98***	***1.97***	***12616***

BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100) (cfs/ac.)	Q(100) (CFS)	V(100) (inches)	V(100) (CF)
PROPOSED CONDITIONS										
B1	14177	0.33	0.0%	0.0%	4.0%	96.0%	4.31	*1.40*	*1.93*	*2281*
B2	13057	0.30	0.0%	0.0%	0.0%	100.0%	4.37	*1.31*	*1.97*	*2144*
B3	10227	0.23	0.0%	0.0%	0.0%	100.0%	4.37	*1.03*	*1.97*	*1679*
B4	69786	1.60	0.0%	0.0%	0.0%	100.0%	4.37	*7.00*	*1.97*	*11457*
B5	34751	0.80	0.0%	0.0%	76.0%	24.0%	3.23	*2.58*	*1.23*	*3548*
TOTAL		**3.26**						***13.32***	***1.93***	***21108***

BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100) (cfs/ac.)	Q(100) (CFS)	V(100) (inches)	V(100) (CF)
PROPOSED CONDITIONS										
C	4145	0.10	0.0%	0.0%	100.0%	0.0%	2.87	*0.27*	*0.99*	*342*
TOTAL		**0.10**						***0.27***	***0.99***	***342***

Scenario: Base



FIRST FLUSH RETENTION VOLUME CALCULATIONS

NORTH POND (A) RETENTION VOLUME CALCULATIONS

ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5091	707	0	0
5092	757	732	732
5093	809	783	1515
5094*	853	831	**2346**

VOLUME PROVIDED: **2346**

VOLUME REQUIRED:

IMPERVIOUS AREA (Ai): 67,236 sf

VOLUME REQ'd= Ai(0.44-0.1)/12= **1,905**

OK

*CMP RISER ELEVATION

SOUTH POND (B) RETENTION VOLUME CALCULATIONS

ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5092.5	2447	0	0
5093.5	4155	3301	3301
5094*	5171	2331.5	**5633**

VOLUME PROVIDED: **5633**

VOLUME REQUIRED:

IMPERVIOUS AREA (Ai): 120,893 sf

VOLUME REQ'd= Ai(0.44-0.1)/12= **3,425**

OK

*CMP RISER ELEVATION

Water Quality CMP Riser-Orifice Calculations

ONSITE POND A (NORTH POIND) HEADWATER CALCULATION

Orifice Equation (Solved for H)

$$H = \frac{\left(\frac{Q}{C_d A_o}\right)^2}{2g}$$

C =	0.6	
Diameter (in)	**18**	
Area (ft^2)=	1.767	
g =	32.2	
Q (CFS)=	7.98	(FROM AP #100)
H (Ft) =	0.88	

CALCULATE MAXIMUM WATER SURFACE ELEVATION (WSE)

WSE= [RISER ELEVATION]+ [HEADWATER]

Riser Elavation:	5094.0
MAX WSE=	**5094.9**

ONSITE POND B (SOUT POIND) HEADWATER CALCULATION

Orifice Equation (Solved for H)

$$H = \frac{\left(\frac{Q}{C_d A_o}\right)^2}{2g}$$

C =	0.6	
Diameter (in)	**30**	
Area (ft^2)=	4.909	
g =	32.2	
Q (CFS)=	13.32	(FROM AP #200)
H (Ft) =	0.32	

CALCULATE MAXIMUM WATER SURFACE ELEVATION (WSE)

WSE= [RISER ELEVATION]+ [HEADWATER]

Riser Elavation:	5094.0
MAX WSE=	**5094.3**

Worksheet for Circular Pipe - A Outlet

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.01000	ft/ft
Diameter	12	in
Discharge	2.45	ft^3/s

Results

Normal Depth	0.52	ft
Flow Area	0.41	ft^2
Wetted Perimeter	1.60	ft
Hydraulic Radius	0.26	ft
Top Width	1.00	ft
Critical Depth	0.67	ft
Percent Full	51.7	%
Critical Slope	0.00448	ft/ft
Velocity	5.98	ft/s
Velocity Head	0.56	ft
Specific Energy	1.07	ft
Froude Number	1.65	
Maximum Discharge	4.98	ft^3/s
Discharge Full	4.63	ft^3/s
Slope Full	0.00280	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	51.70	%
Downstream Velocity	Infinity	ft/s

Worksheet for Circular Pipe - B Outlet

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.01000	ft/ft
Diameter	12	in
Discharge	3.74	ft^3/s

Results

Normal Depth	0.68	ft
Flow Area	0.57	ft^2
Wetted Perimeter	1.94	ft
Hydraulic Radius	0.29	ft
Top Width	0.93	ft
Critical Depth	0.82	ft
Percent Full	68.1	%
Critical Slope	0.00647	ft/ft
Velocity	6.56	ft/s
Velocity Head	0.67	ft
Specific Energy	1.35	ft
Froude Number	1.48	
Maximum Discharge	4.98	ft^3/s
Discharge Full	4.63	ft^3/s
Slope Full	0.00652	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	68.11	%
Downstream Velocity	Infinity	ft/s

Worksheet for Circular Pipe - PB2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.00500	ft/ft
Diameter	12	in
Discharge	2.71	ft^3/s

Results

Normal Depth	0.69	ft
Flow Area	0.58	ft^2
Wetted Perimeter	1.97	ft
Hydraulic Radius	0.30	ft
Top Width	0.92	ft
Critical Depth	0.71	ft
Percent Full	69.4	%
Critical Slope	0.00478	ft/ft
Velocity	4.66	ft/s
Velocity Head	0.34	ft
Specific Energy	1.03	ft
Froude Number	1.03	
Maximum Discharge	3.52	ft^3/s
Discharge Full	3.27	ft^3/s
Slope Full	0.00342	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	69.40	%
Downstream Velocity	Infinity	ft/s

Worksheet for Triangular Channel - A5

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.041	
Channel Slope	0.01000	ft/ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Discharge	5.53	ft^3/s

Results

Normal Depth	0.94	ft
Flow Area	2.62	ft^2
Wetted Perimeter	5.91	ft
Hydraulic Radius	0.44	ft
Top Width	5.61	ft
Critical Depth	0.73	ft
Critical Slope	0.03672	ft/ft
Velocity	2.11	ft/s
Velocity Head	0.07	ft
Specific Energy	1.00	ft
Froude Number	0.54	
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
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.94	ft
Critical Depth	0.73	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.03672	ft/ft

Worksheet for Triangular Channel - B4

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.041	
Channel Slope	0.01000	ft/ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Discharge	7.00	ft^3/s

Results

Normal Depth	1.02	ft
Flow Area	3.13	ft^2
Wetted Perimeter	6.46	ft
Hydraulic Radius	0.48	ft
Top Width	6.13	ft
Critical Depth	0.81	ft
Critical Slope	0.03559	ft/ft
Velocity	2.24	ft/s
Velocity Head	0.08	ft
Specific Energy	1.10	ft
Froude Number	0.55	
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
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.02	ft
Critical Depth	0.81	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.03559	ft/ft

APPENDIX B

Off-Site Hydraulics Capacity Analysis
Atrisco Drain

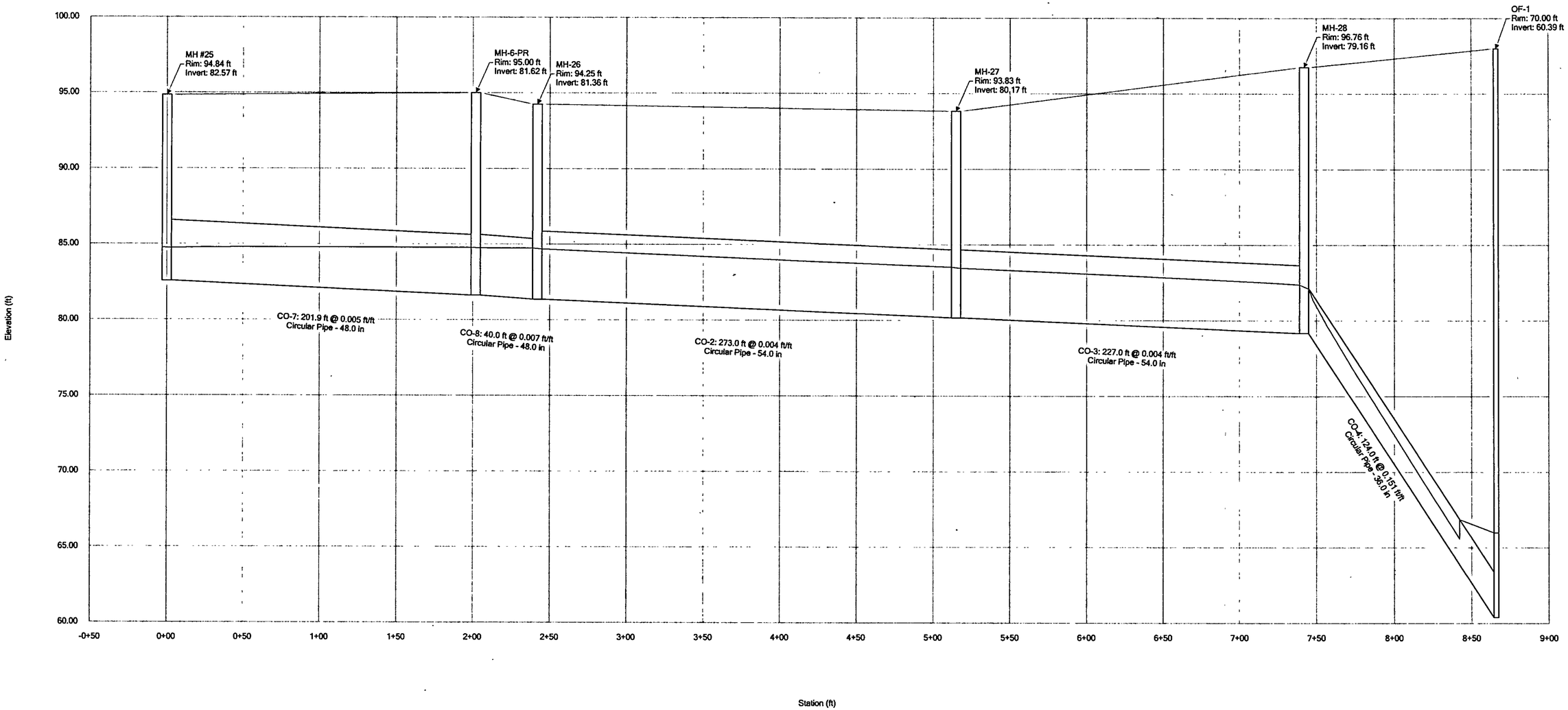
Scenario: Base
Current Time Step: 0.000Hr
Conduit FlexTable: Combined Pipe/Node Report

Label	Start Node	Stop Node	Length (Unified) (ft)	Capacity (Full Flow) (ft³/s)	Flow (Link) (ft³/s)	Velocity (Average) (ft/s)	Slope (ft/ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Invert (Downstream) (ft)	Invert (Upstream) (ft)
CO-10-PR	CB-5-PR	MH-28	50.0	10.50	13.32	7.54	0.010	88.44	87.56	86.20	86.70
CO-9-PR	CB-4-PR	MH-6-PR	30.0	10.50	7.98	4.52	0.010	84.94	84.77	82.90	83 20
CO-5	CB-2	MH-26	31.0	112.45	60.00	36.38	0.247	91.65	84.74	82.00	89.66
CO-8	MH-6-PR	MH-26	40.0	115.80	55.98	9.14	0.007	84.75	84.74	81.36	81.62
CO-7	MH #25	MH-6-PR	201.9	98.52	48.00	7.79	0.005	84.73	84.77	81.62	82.57
CO-4	MH-28	OF-1	124.0	259.49	129.30	36.68	0.151	82.12	66.00	60.39	79.16
CO-3	MH-27	MH-28	227.0	131.16	115.98	9.31	0.004	83.46	82.38	79.16	80.17
CO-2	MH-26	MH-27	273.0	129.83	115.98	9.23	0.004	84.68	83.53	80.17	81.36

Z:\2016\2016061 U-Haul West Bluff\Working Documents\2016061 Atrisco Storm proposed.stc

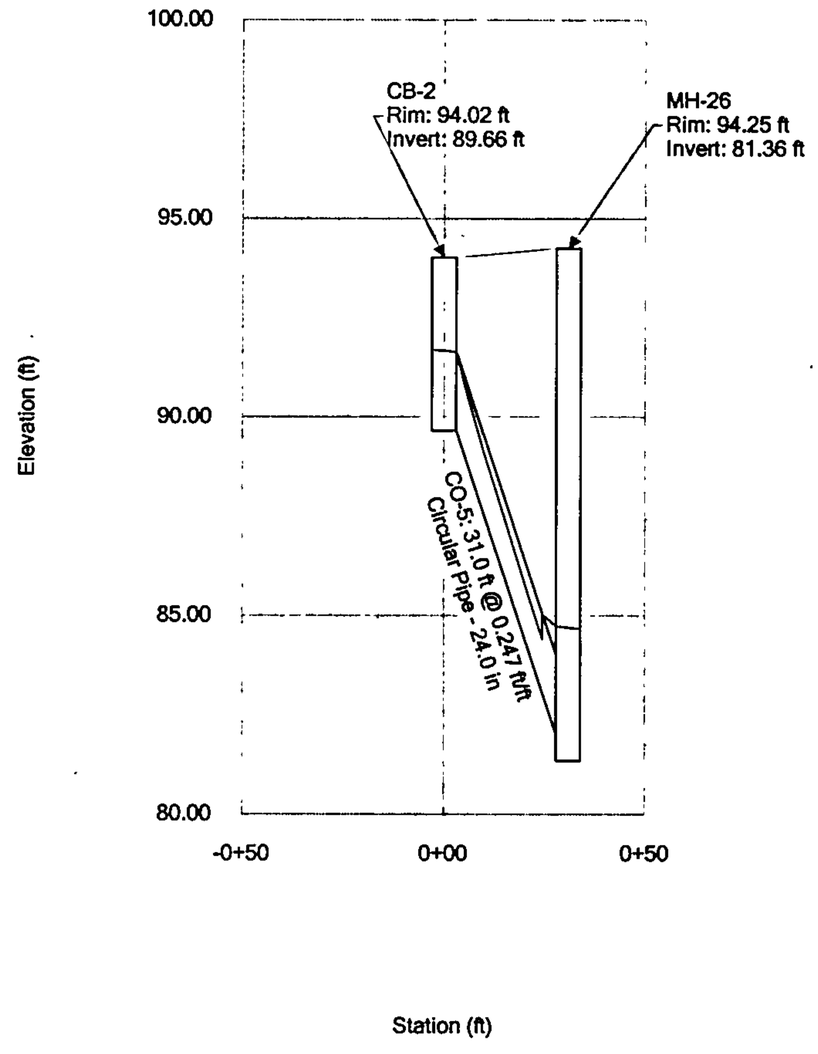
Profile Report

Engineering Profile - Profile - 1-Atrisco Trunk (2016061 Atrisco Storm proposed.stc)



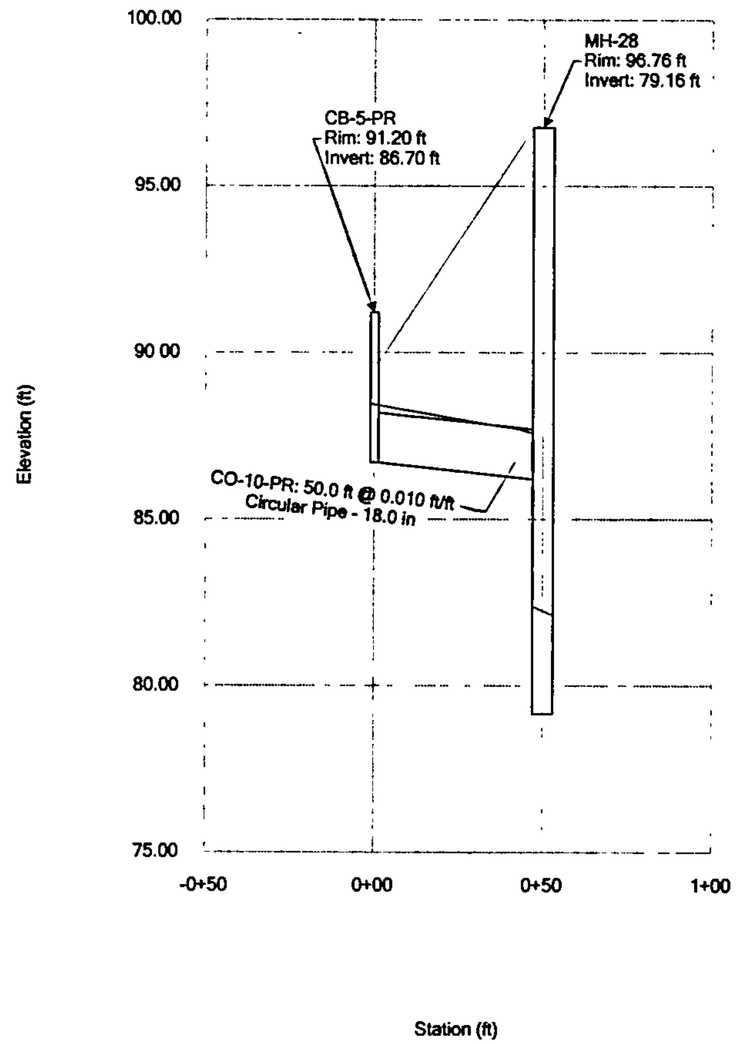
Profile Report

Engineering Profile - Profile - 2-Lateral @ MH#26 (2016061 Atrisco Storm proposed.stc)



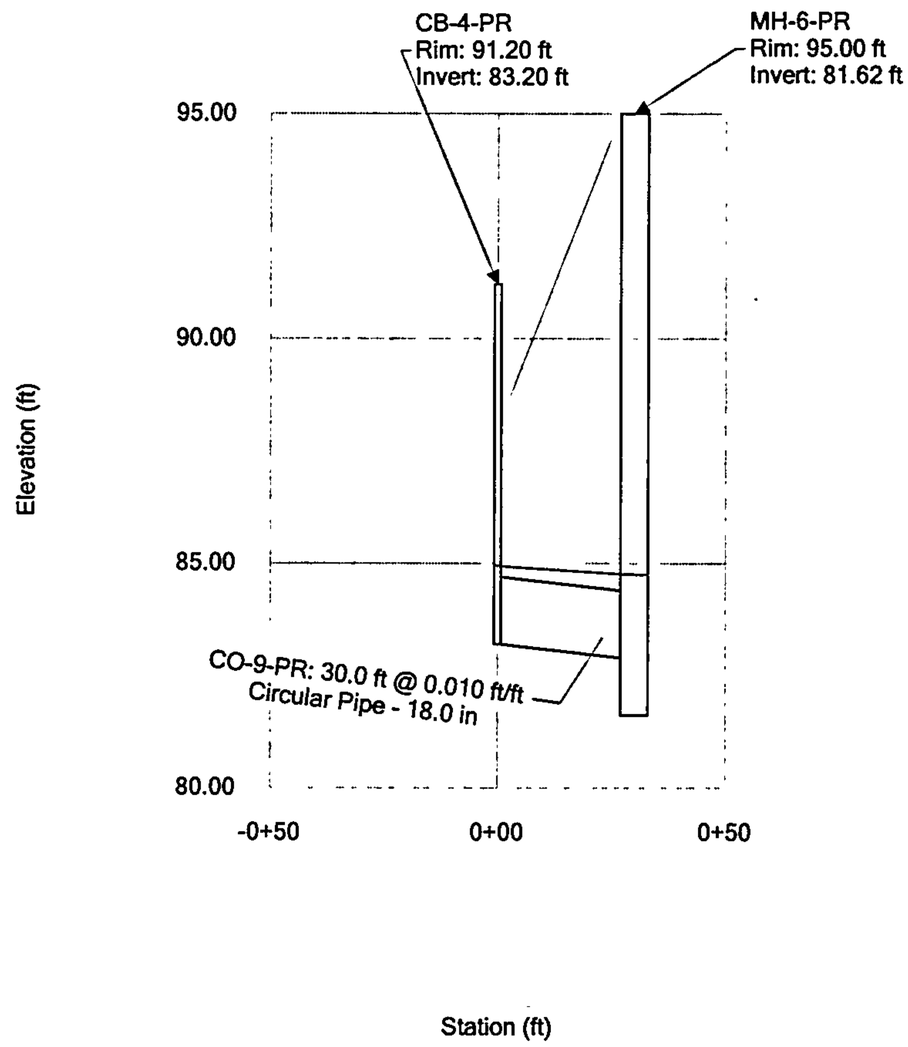
Profile Report

Engineering Profile - Profile - 3- New South Lateral (2016061 Atrisco Storm proposed.stc)



Profile Report

Engineering Profile - Profile - 4-New North Lateral (2016061 Atrisco Storm proposed.stc)



2/1/17

APPENDIX B

Worksheet for Exist. Single C- Atrisco

Project Description

Solve For	Spread

Input Data

Discharge	10.00	ft³/s	Q PER INLET (60 CFS/6)
Gutter Width	2.00	ft	
Gutter Cross Slope	0.02	ft/ft	
Road Cross Slope	0.02	ft/ft	
Local Depression	2.00	in	
Local Depression Width	4.00	ft	
Grate Width	2.00	ft	
Grate Length	3.33	ft	
Grate Type	P-30 mm (P-1-7/8")		
Clogging	50.00	%	
Curb Opening Length	4.00	ft	
Opening Height	0.50	ft	
Curb Throat Type	Horizontal		
Throat Incline Angle	90.00	degrees	

Options

Calculation Option	Use Both

Results

Spread	21.88	ft	
Depth	0.44	ft	<0.67', THEREFORE OK.
Gutter Depression	0.00	ft	
Total Depression	0.17	ft	
Open Grate Area	2.00	ft²	
Active Grate Weir Length	5.33	ft	

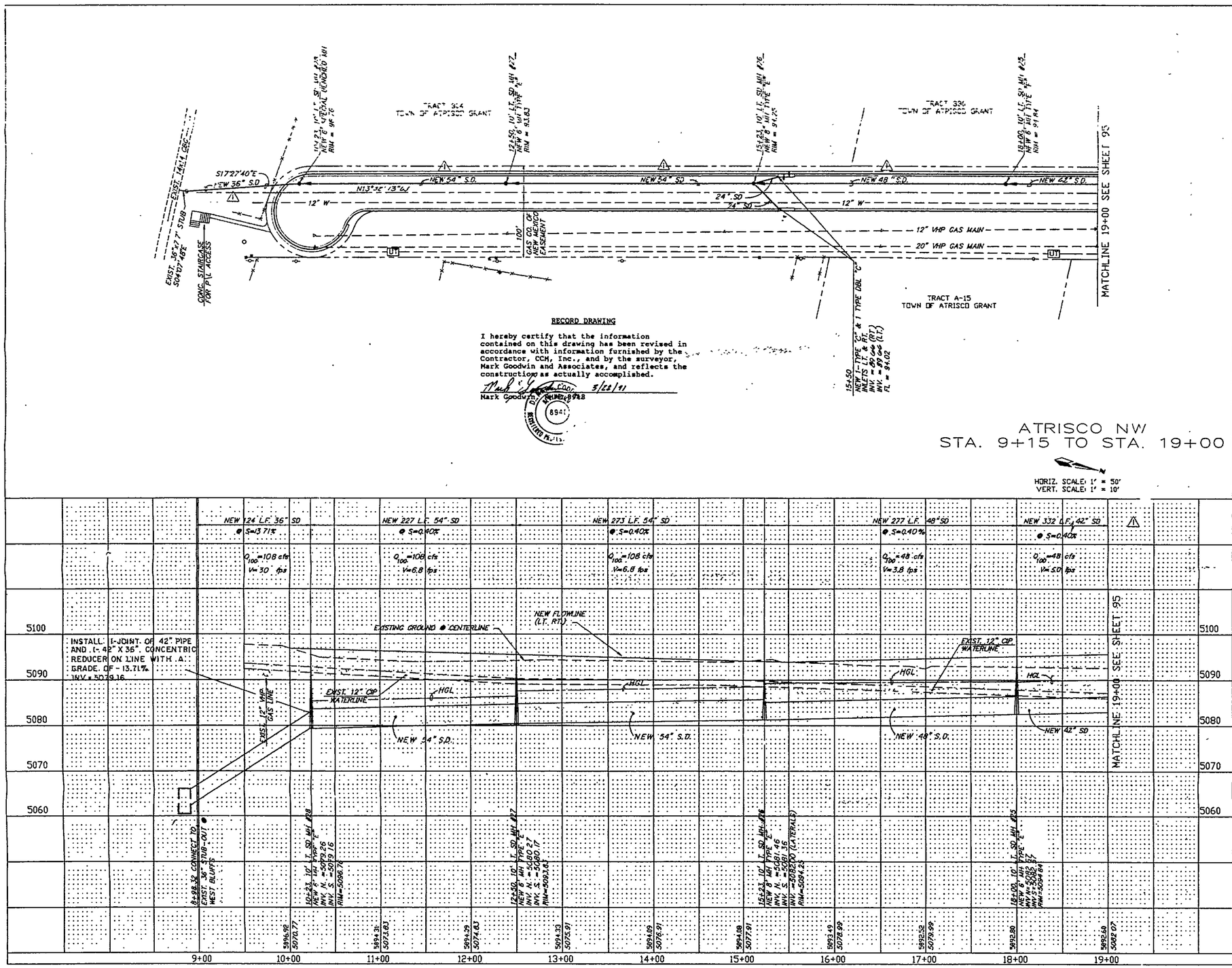
APPENDIX C

Drainage Report for SAD 219
Excerpt for Reference

SAD 219 DRAINAGE SUMMARY SHEET

ATRISCO / CORONA AREA

Area Designation	Area (Acres)	Rainfall Intensity (i)	C Factor	100 year Runoff Rate
West Bluffs Channel Outfall				
H11-1a	5.10	4.65	0.90	21.30
H11-1b	11.50	4.65	0.90	48.10
H11-2	19.51	4.65	0.90	81.65
H11-3	9.09	4.65	0.90	38.04



* CAUTION:
CONTRACTOR IS RESPONSIBLE TO LOCATE HORIZONTAL AND VERTICAL LOCATION OF EXISTING BURIED 12" & 20" VHP (VERY HIGH PRESSURE) GAS PIPE LINES IN THE 100' ATRISCO R/W PRIOR TO EXCAVATING.
THESE LINES BELONG TO GAS COMPANY OF NEW MEXICO. ANY EXCAVATION WITHIN 100' WIDE R/W ATRISCO ALIGNMENT MUST BE COORDINATED WITH THE FOLLOWING REPRESENTATIVE TO THE GAS COMPANY OF NEW MEXICO:

STU ASCEUM, DISTRICT ENGINEER
SAN JUAN OPERATIONS
GAS COMPANY OF NEW MEXICO
P.O. BOX 1899
BLOOMFIELD, NEW MEXICO 87143
TELEPHONE (505)632-3311

GAS COMPANY OF NEW MEXICO – POLICY NOTE

EXISTING GAS COMPANY OF NEW MEXICO GAS TRANSMISSION 12" AND 20" PIPELINES AND RELATED FACILITIES SHALL IN ALL CASES AND IN ALL AREAS BE PRESERVED AND PROTECTED AND ALL EXISTING RIGHTS SHALL BE MAINTAINED. ANY AND ALL PRESENT OR FUTURE DESIGNS, CONSTRUCTION AND PLANNING INVOLVING DEVELOPMENT, ADDITIONS, IMPROVEMENTS, LANDSCAPING OR OTHER CHANGES OVER, ACROSS OR ADJACENT TO THE PIPELINES SHALL BE SUBMITTED FOR FORMAL REVIEW, APPROVAL AND CONSTRUCTION INSPECTION TO:

GAS COMPANY OF NEW MEXICO
P. O. BOX 1899
BLOOMFIELD, NEW MEXICO 87413

CONTACTS ARE: MARK BROGGER,
PIPELINE OPERATIONS ENGINEER
BLOOMFIELD, NEW MEXICO
(505) 632-4278 OR
(505) 632-3311

MAINLINE MAINTENANCE CREW
ALBUQUERQUE, NEW MEXICO
(505) 345-1877

AT NO TIME SHALL EXPOSED AND UNSUPPORTED LENGTHS OF THESE PIPELINES EXCEED TWENTY-ONE FEET. EXPOSED LENGTHS BEYOND 21 FEET SHALL BE PROPERLY SUPPORTED AS APPROVED BY GAS COMPANY OF NEW MEXICO. NO DIGGING SHALL BE DONE NEAR THE PIPELINES WITHOUT GAS COMPANY OF NEW MEXICO'S FORMAL APPROVAL AND ON SITE INSPECTION. THESE PIPELINES CAN POTENTIALLY BE VERY DANGEROUS AND SHOULD BE TREATED ACCORDINGLY.

NOTES:

1. CONTRACTOR SHALL PROVIDE EXCAVATION AND SHORING PLAN TO CONSTRUCTION COORDINATOR FOR REVIEW PRIOR TO CONSTRUCTION.

2. SOUTH OF MH #28, CONTRACTOR SHALL REMOVE CHAINLINK FENCE AND 1 1/2" ROCK BLANKET PRIOR TO EXCAVATION AND REPLACE FOLLOWING COMPLETION OF CONSTRUCTION.

3. CONTRACTOR SHALL SHAPE THE BOTTOM OF MH #28 IN ACCORDANCE WITH SPECIAL BENCHED MH DETAILS, SHEET 105.

APR 5 1991
HYDROLOGY DIVISION

dmg D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS
P.O. BOX 21307
ALBUQUERQUE, NEW MEXICO 87154
(505) 265-0905

AS BUILT INFORMATION

CHANGES TO "RED" SINGLE LINE ACCEPTABLE	CCM, Inc.	DATE 2/91	
VERIFICATION BY	MGA	DATE 5/91	
DRAWING TO BE CORRECTED BY	MGA	DATE 5/91	
RECORDED BY		DATE	

BENCH MARKS

THE STATION IS LOCATED NEAR THE INTERSECTION OF ATRISCO RD. AND PETROGLYPH STATE PARK RD.	X = 361072.73 Y = 1514194.22 Z = 5.3N
THE STATION IS A 3-1/4" BRASS CAP AND IS STAMPED "ACS 13-D10, 1986".	

SURVEY INFORMATION

NO.	BY	DATE	FIELD NOTES

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
1	12-20-90	Change Order No 1	TOB

REVISIONS

		DATE
DESIGNED BY	ZNC	3/90
DRAWN BY	STAFF	3/90
CHECKED BY	DMC	3/90

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: SPECIAL ASSESSMENT DISTRICT NO. 219
ATRISCO NW STA. 9+15 TO STA. 19+00
STORM DRAIN IMPROVEMENTS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWK	8-14-90
TRANSPORTATION	N/A	7-11-90	WASTE WATER	N/A RWK	8-14-90
HYDROLOGY		5-22-90			

PROJECT NO.	MAP NO.	SHEET	OF
3558	E11	94	112

ATRSD1

III. CORONA AREA / I-40 AREA

Proposed street improvements for SAD 219 in the Corona Area consist of the following: (1) Atrisco Drive from I-40 to Corona, and (2) Corona from Atrisco Drive to Ouray Road.

A. Hydrology

Hydrologic analysis criteria used for this area of study are listed as follows:

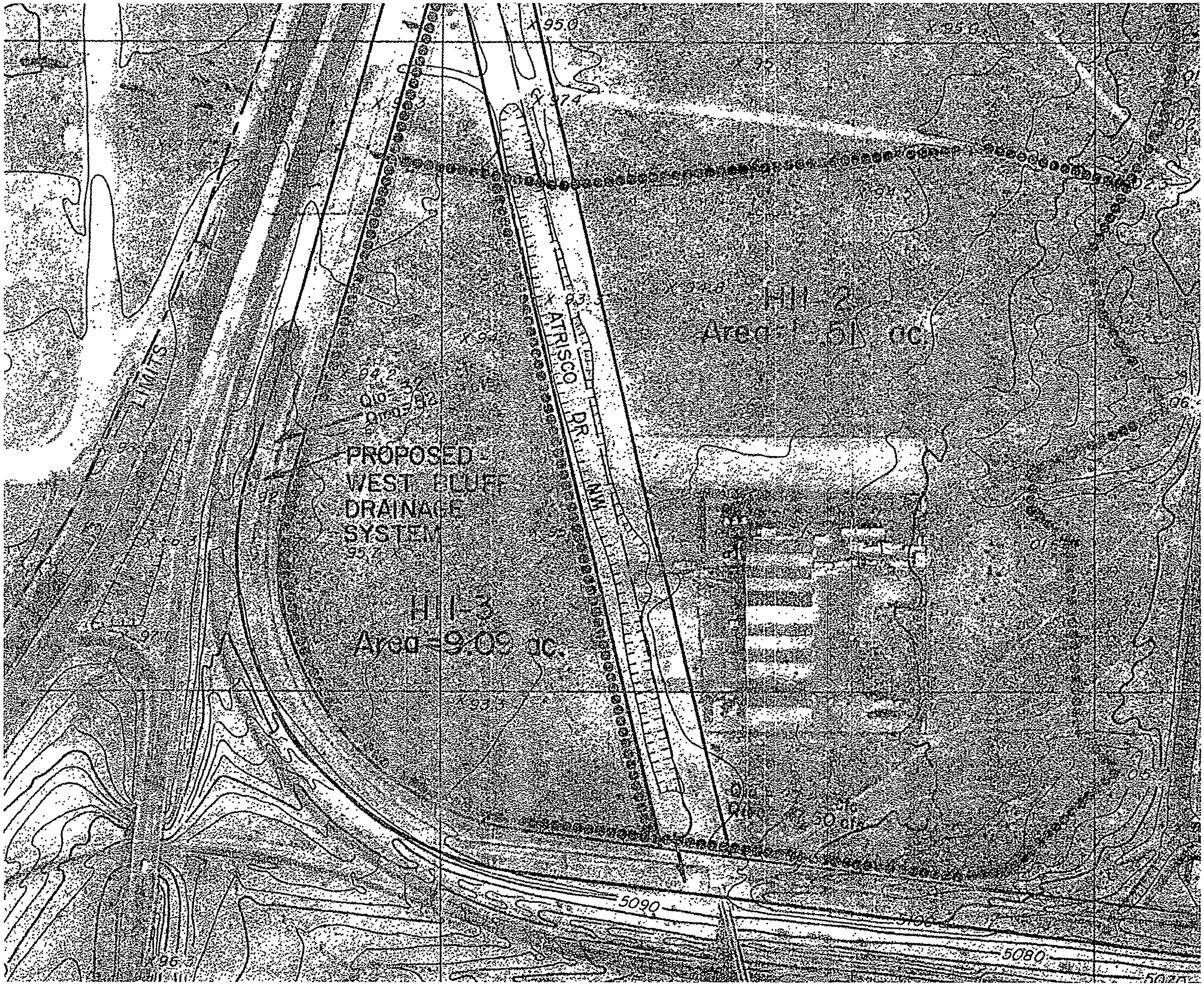
1. City of Albuquerque Development Process Manual (DPM)
2. Albuquerque Master Drainage Study
3. West Bluff Drainage Study

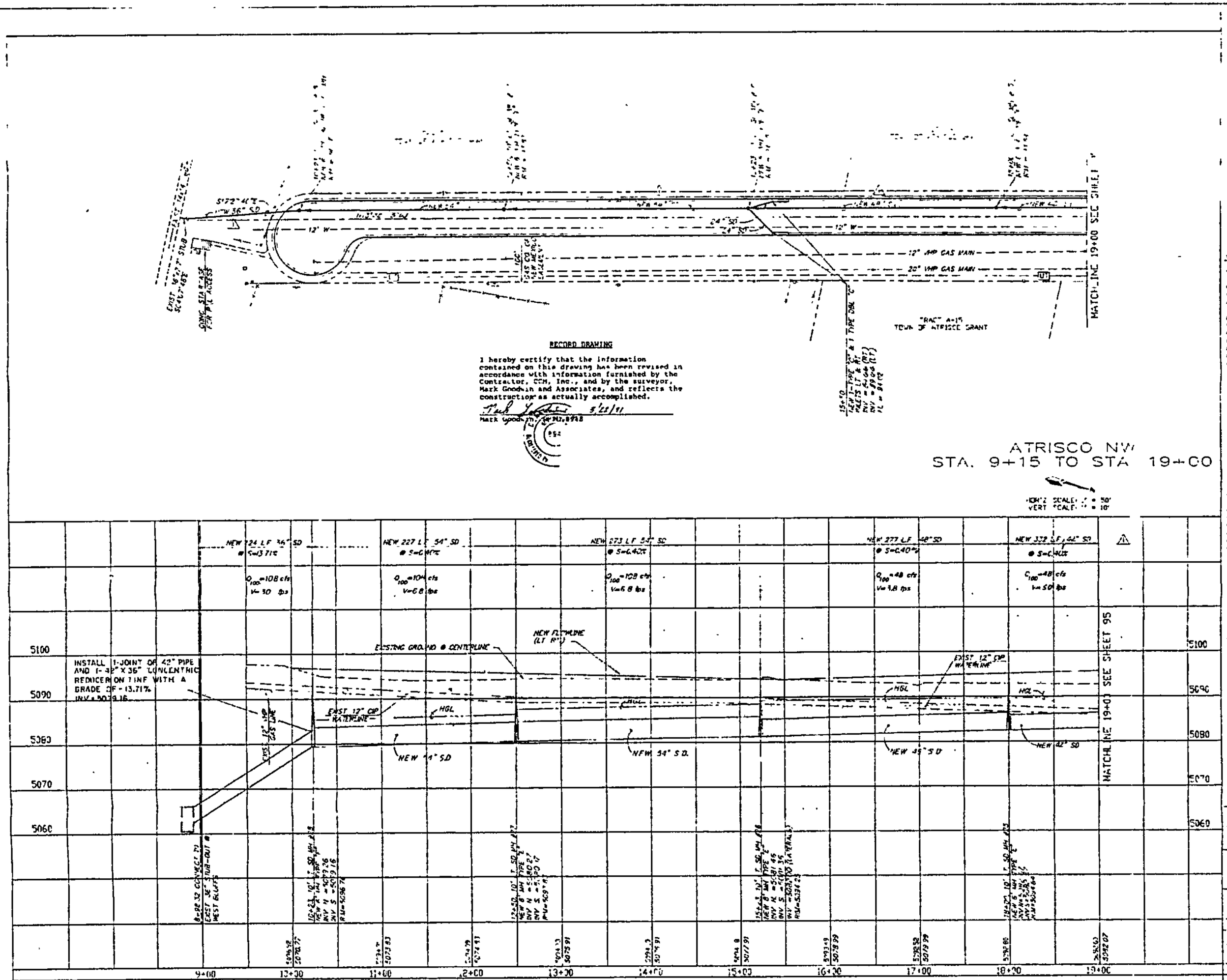
The prevalent hydrologic soil classification for this area of SAD 219 is Class B. The current zoning is predominantly SU-1 for C-2. Therefore, a C Factor of 0.90 was used. Based on this criteria, the Rational formula was used to calculate runoff for the three drainage basins defined on Sheet 2 of 9 located in the map pockets at the end of this report. Also shown on that sheet are the discharge rates for the 100 year storm for each of the drainage basins.

B. Hydraulics

The area is relatively flat, and it is anticipated that the proposed street grades will be approximately 0.50%. Therefore, the capacity of the streets will be approximately 52 cfs. There are four drainage basins defined as shown on Drainage Map H-11 (Sheet 2 of 9) in the map pockets of this report. It is proposed to discharge the 48 cfs runoff from Area H-11-1b into the West Bluffs System via a 36" and 42" RCP pipe running down Corona and Atrisco. Drainage Area H11-2 (82 cfs) will be carried via a combination of street and channel surface flow to Atrisco, and then conveyed to the West Bluffs System via drop inlets and a 42" RCP pipe on Atrisco. Flows generated on the north cul-de-sac of Atrisco (Area H11-1a) will be picked up by a proposed drop inlet in the end of the cul-de-sac, and carried to the West Bluffs drainage pipe along Coors Boulevard by way of an existing 60" storm drain, or can be routed to the existing drop inlet on the south side of Ouray ± 600 feet east of Coors Boulevard.

Drainage basin H11-3 will generate peak flows of 38 cfs during the 100 year rainfall event. It is proposed that these flows be carried on site to the west, and collected at the central point at which time they will be directly discharged into the West Bluff storm sewer system. The point of discharge for this drainage basin will be the 14' x 14' CBC section with a 2,349 cfs capacity. Time of concentration for this drainage basin in SAD 219 is 0.12 hours (7 minutes). As each tract in Area H11-3 is developed, the drainage system should be constructed which will convey the developed flows into the adjacent West Bluffs system. The collection system for Area H11-3 is not proposed to be part of SAD 219. Additionally, stormwater runoff from Drainage Area H11-3 should not be permitted to drain onto Atrisco Drive.


95.0
95.0
95.3
97.4
94.3
94.8
ATRISCO DR
HILL 2
Area = 5.1 ac.
LIMITS
94.2
PROPOSED
WEST BLUFF
DRAINAGE
SYSTEM
95.7
HILL 3
Area = 9.09 ac.
5090
5080



GAS COMPANY OF NEW MEXICO – POLICY NOTE

FURNISHING GAS COMPANY OF NEW MEXICO GAS TRANSMISSION 12" AND 20" PIPELINES AND RELATED FACILITIES SHALL IN ALL CASES AND IN ALL AREAS BE PRESERVED AND PROTECTED AND ALL EXISTING RIGHTS SHALL BE MAINTAINED. ANY AND ALL PRESENT OR FUTURE DESIGNS, CONSTRUCTION AND PLANNING INVOLVING DEVELOPMENT, ADDITIONS, IMPROVEMENTS, LANDSCAPING OR OTHER CHANGES OVER, ACROSS OR ADJACENT TO THE PIPELINES SHALL BE SUBMITTED FOR FORMAL REVIEW, APPROVAL AND CONSTRUCTION INSPECTION TO:

GAS COMPANY OF NEW MEXICO
P.O. BOX 1888
BLOOMFIELD, NEW MEXICO 87413

CONTACTS ARE: MARK BROOGER
PIPELINE OPERATIONS ENGINEER
BLOOMFIELD, NEW MEXICO
(505) 632-4078 OR
(505) 632-3111

MANDRE MAINTENANCE CREW
ALBUQUERQUE, NEW MEXICO
(505) 345-1877

AT NO TIME SHALL EXPOSED AND UNSUPPORTED LENGTHS OF THESE PIPELINES EXCEED TWENTY-ONE FEET. EXPOSED LENGTHS BEYOND 21 FEET SHALL BE PROPERLY SUPPORTED AS APPROVED BY GAS COMPANY OF NEW MEXICO AND BACKFILLED. NO EQUIPMENT SHALL BE DRIVE NEAR THE PIPELINES WITHOUT GAS COMPANY OF NEW MEXICO'S FORMAL APPROVAL AND ON SITE INSPECTION. THESE PIPELINES CAN POTENTIALLY BE VERY DANGEROUS AND SHOULD BE TREATED ACCORDINGLY.

NOTES

1. CONTRACTOR SHALL PROVIDE EXCAVATION AND GROUNDING PLAN TO CONSTRUCTION COORDINATOR FOR REVIEW PRIOR TO CONSTRUCTION.
2. SOUTH OF MH #28, CONTRACTOR SHALL REMOVE CHAINLINK FENCE AND 1 1/2" ROCK BLANKET PRIOR TO EXCAVATION AND REPLACE FOLLOWING COMPLETION OF CONSTRUCTION.
3. CONTRACTOR SHALL SHAPE THE BOTTOM OF MH #29 IN ACCORDANCE WITH SPECIAL BENCHED MH DETAILS, SHEET 105

MAY 5 1998
HYDROLOGY DIVISION

dmg
D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS
P.O. BOX 21367
ALBUQUERQUE, NEW MEXICO 87154
(505) 294-7904

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: SPECIAL ASSESSMENT DISTRICT NO. 219
ATRISCO NW STA. 9+15 TO STA. 19+00
STORM DRAIN IMPROVEMENTS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A	
TRANSPORTATION			WASTE WATER	N/A	
HYDROLOGY					

PROJECT NO 3558 | MAP NO E11 | SHEET 94 OF 112

ENGINEER'S SEAL

SURVEY INFORMATION
FIELD NOTES
BY
DATE

BENCH MARKS
THE STATION IS LOCATED NEAR THE INTERSECTION ATRISCO RD. AND PETROLEUM STATE BANK N.A.
THE STATION IS A 2-1/2" BRASS CAP AND IS STAMPED "ACS 13-D16, 1946"
X = 361072.71 Y = 1514124.22

Change Order No. 1
REVISIONS
DESIGN
DESIGNED BY JMG DATE 3/90
DRAWN BY STAFF DATE 3/90
CHECKED BY JMG DATE 3/90

CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

January 17, 2017

Joel Hernandez, P.E.
Tierra West, LLC
5571 Midway Park Place, NE
Albuquerque, NM, 87109

RE: **U-Haul at West Bluff**
Atrisco Drive NW
Grading Plan and Drainage Report
Engineer's Stamp Date 12-5-2016 (File: H11D059)

Dear Mr. Hernandez:

Based upon the information provided in your submittal received 12-9-2016, the Grading Plan and Drainage Report are not approved for Building Permit. The following comments need to be addressed for approval of the referenced project:

1. The North detention pond appears to be bounded by a CMU retaining wall as high as 8 feet in some places. This will need to be enclosed with a fence at least 42 inches high.

2. Call out Class IV RCP for the north detention pond outfall pipe under the retaining wall.

3. Additional detail is required for the two curb cuts and their associated water blocks to ensure ADA compliance for pedestrian traffic along Atrisco. Provide section views at these locations, including flow line elevation, slope, and waterblock elevations.

4. Project Benchmark and Vertical Datum is missing from the sheets. The Drainage Management Plan addresses the NGVD29 to NAVD88 shift, but sheets need this information as well.

5. A portion of the sidewalk is within the parcel property, if there is no existing sidewalk easement, one will need to be provided.

6. Verify that the two drop inlets are capable of handling twice the 100-yr flow at the sump on Atrisco. It appears this location has a single-C and double-C on each side of the road. If these inlets are insufficient, additional inlets will be needed on the new lateral from the north pond to prevent flows from spilling over into the north pond.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Please prepare and submit an Erosion and Sediment Control Plan to the storm water quality section for review. Work within the City Right-of-Way will require a city work order. If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: U-Haul at West Bluff Building Permit #: _____ City Drainage #: H11D059

DRB#: _____ EPC#: 16EPC-40045 Work Order#: _____

Legal Description: Tract 306-A, Town of Atrisco Unit 8

City Address: Atrisco Drive, NW

Engineering Firm: Tierra West, LLC Contact: Joel Hernandez, PE

Address: 5571 Midway Park Place, NE

Phone#: 505.858.3100 Fax#: 505.858.1118 E-mail: joeldhernandez@tierrawestllc.com

Owner: AMERCO Real Estate Company Contact: Jenn Roldan

Address: 2727 N. Central Ave., Phoenix, AZ 85004

Phone#: (602) 263-6502 x516506 Fax#: _____ E-mail: jenn_roldan@uhaul.com

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
X GRADING PLAN
____ DRAINAGE MASTER PLAN
X DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

RECEIVED
DEC 09 2016
LAND DEVELOPMENT SECTION

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
X SITE PLAN FOR BLDG. PERMIT APPROVAL (SPBP)
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
X GRADING PERMIT APPROVAL (GP)
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ____ Yes X No

DATE SUBMITTED: 12/07/2016 By: Joel Hernandez

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: West Bluff Center LLC Building Permit #: _____ City Drainage #: H11D059

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Remaining Portion of Tracts 304, 305 and 306 Town of Atrisco Grant Unit #8 of a Portions of Tracts Allotted from the Town of Atrisco Grant

City Address: _____

Engineering Firm: Tierra West, LLC Contact: Joel Hernandez

Address: 5571 Midway Park Place NE Albuquerque, NM 87109

Phone#: 505-858-3100 Fax#: 505-858-1118 E-mail: jdhernandez@tierrawestllc.com

Owner: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

x CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
x DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

RECEIVED
JUL 28 2016
LAND DEVELOPMENT SECTION

$100.00

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
x SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ____ Yes ____ No

DATE SUBMITTED: 07/28/2016 By: Joel Hernandez

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

CONCEPTUAL DRAINAGE MANAGEMENT PLAN

For

West Bluff Business Center

SWC Miami Street and Atrisco Drive, NW
Albuquerque, New Mexico

Prepared by:

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

July, 2016

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
NEW MEXICO
7868
REGISTERED PROFESSIONAL ENGINEER
7/28/16

Ronald R. Bohannan, PE
NO. 7868

TW Job No. 2016024

TABLE OF CONTENTS

Introduction 1

Vicinity Map 1

FIRMap 1

Pre-Developed Condition 2

Post-Developed Condition 2

Conclusion 2

Basin Map 3

Appendices

Drainage Report for SAD 219 (excerpt for reference) ..... APPENDIX A

Map Pockets

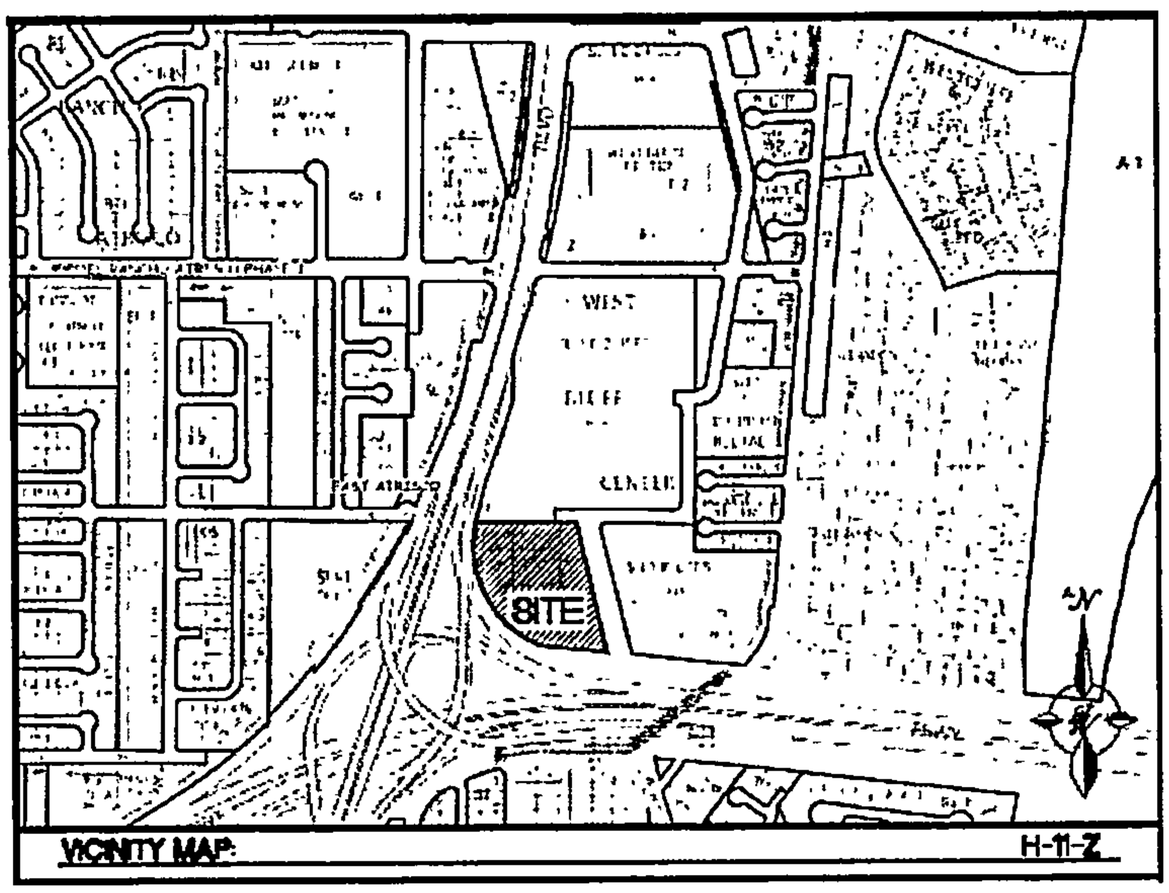
Grading and Drainage Plan ..... Map Pocket

Introduction:

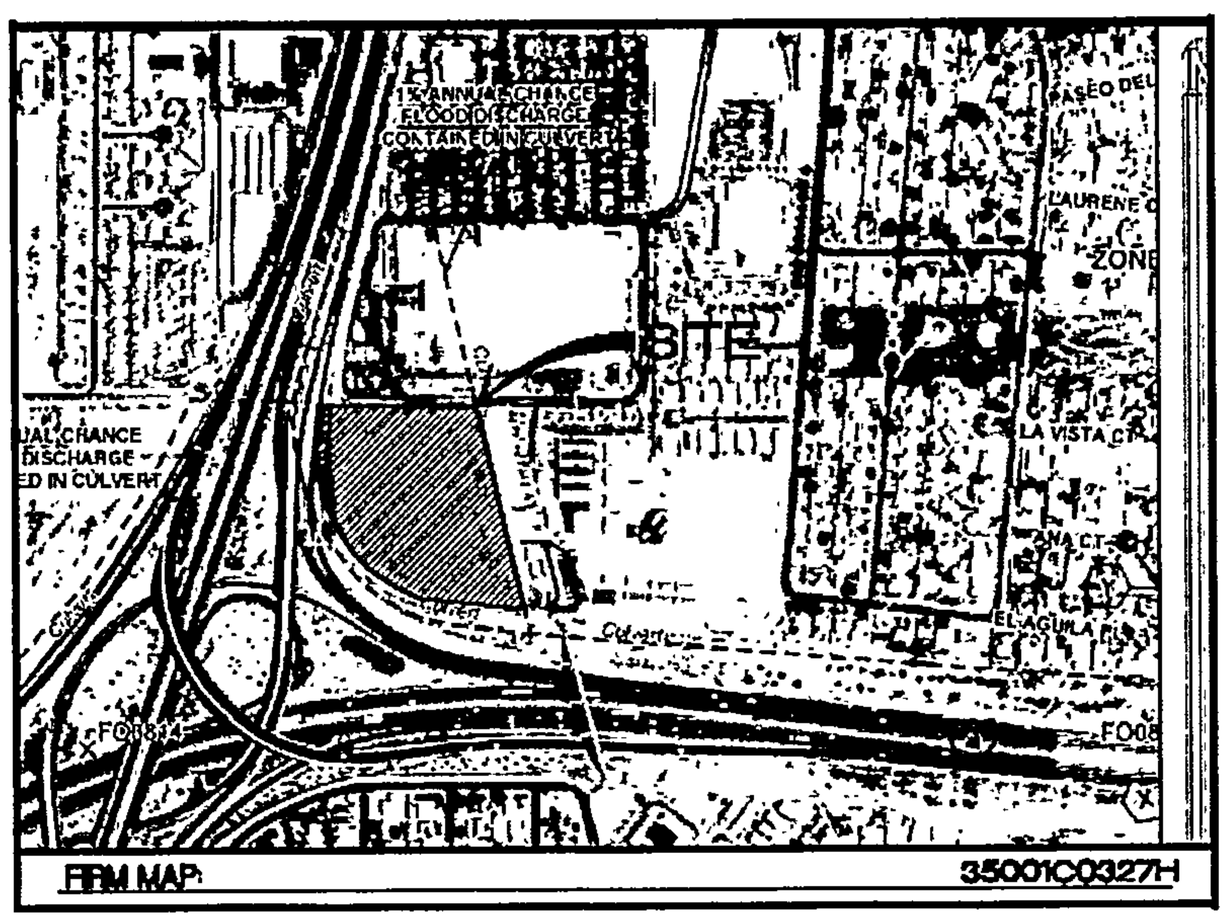
This project requests approval of a Site Development Plan for Subdivision in order to consolidate three contiguous parcels into a single parcel. The 5.18-acre site is comprised of three undeveloped parcels located at the southwest corner of Miami Street and Atrisco Drive, NW. Zoning designation was conditionally approved for SU-1 for C-2 Permissive Uses excluding Residential Uses. Future development is anticipated to consist of an indoor storage facility for household goods and moving services.

The purpose of this report is to outline the grading and drainage considerations approval of the Conceptual Grading and Drainage Plan as part of the Site Development Plan for Subdivision and identify existing and required infrastructure necessary for the anticipated development.

Vicinity Map:



FIRM MAP:



Pre-Developed Conditions:

The site is bound on the north by the Miami Street public roadway improvements and an existing retail facility, on the east by Atrisco Drive, on the south by Interstate 40, and on the west by the off-ramp from I-40 to Coors Boulevard. Site terrain is gently sloping and generally drains by sheet flow from northeast to southwest onto the I-40 off-ramp. There is an existing 54-inch storm drain within Atrisco Drive and a 14'X14' concrete box culvert with the public right-of-way along the westerly property boundary.

Post-Developed Conditions:

The Site Development Plan for Subdivision request seeks to eliminate the existing lot lines to consolidate the three parcels into a single parcel; no grading or drainage facilities are anticipated or proposed for this action. This site in its entirety was previously analyzed by the Drainage Report for SAD 219 (see Appendix A) and falls within Drainage Basin H11-3 which is designated to discharge all developed flows from the site to the existing 14' x 14' CBC with a storm drain connection. Retention ponds are not anticipated to be required since the downstream capacity anticipates developed flows at a rate of 4.18 CFS/Acre.

Conclusion:

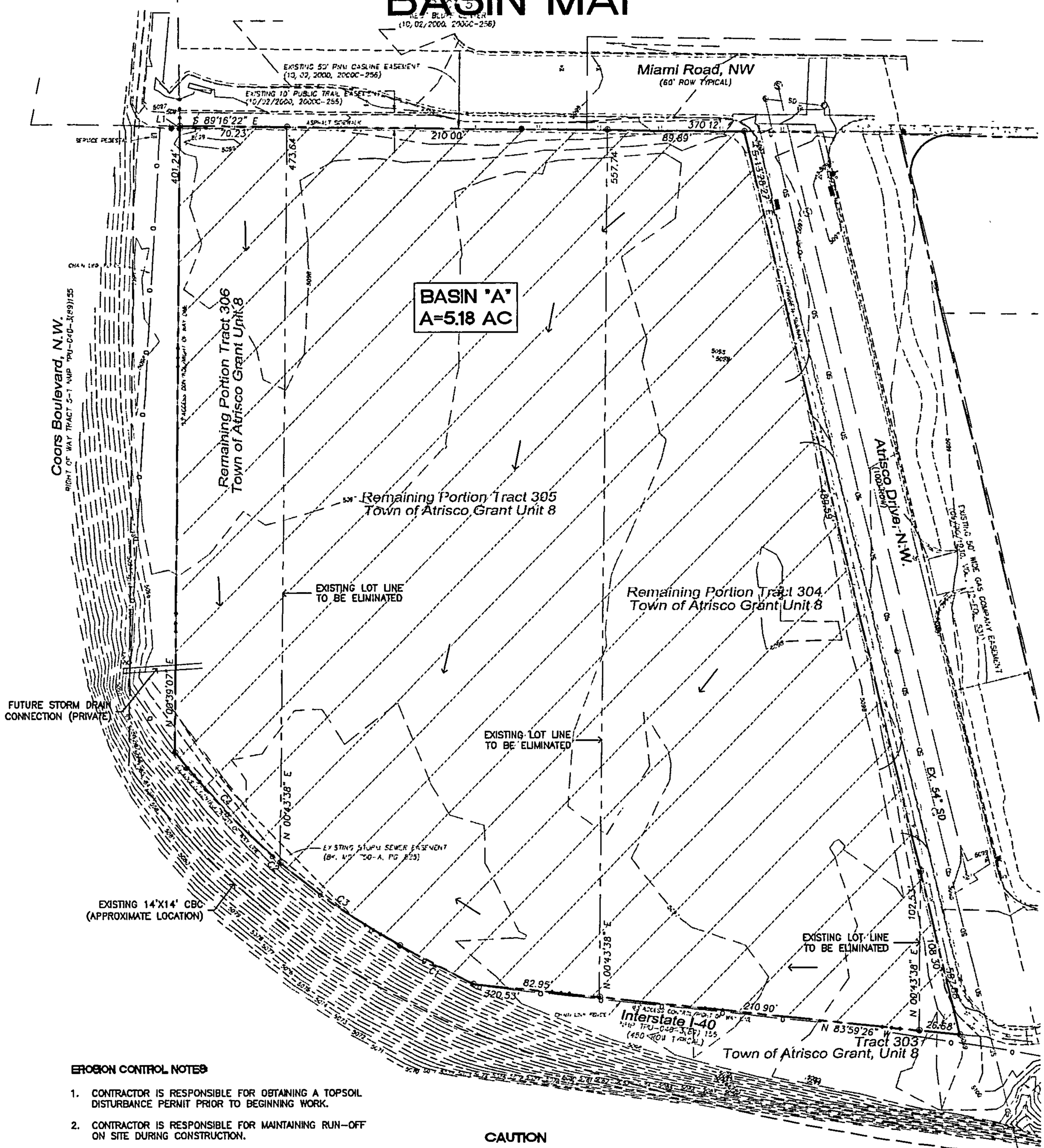
Re-platting of the project site to consolidate the lots into a single parcel will not require grading or drainage improvements. Existing infrastructure consisting of a 14' X 14' concrete box culvert adjacent to the site's westerly boundary has the capacity to accommodate the developed flows, per the analysis of SAD 219.

Future site development will require a detailed grading and drainage plan indicating the location of a storm drain connection to the 14' x 14' CBC, in addition to water quality measures to accommodate the first-flush. A storm drain connection to the existing 54-inch storm drain may also be considered should there be sufficient pipe flow capacity in that system.

APPENDIX A

Drainage Report for SAD 219
Excerpt for Reference

BASIN MAP



EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.

CAUTION

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

APPENDIX A

Drainage Report for SAD 219
Excerpt for Reference

III. CORONA AREA / I-40 AREA

Proposed street improvements for SAD 219 in the Corona Area consist of the following: (1) Atrisco Drive from I-40 to Corona, and (2) Corona from Atrisco Drive to Ouray Road.

A. Hydrology

Hydrologic analysis criteria used for this area of study are listed as follows:

1. City of Albuquerque Development Process Manual (DPM)
2. Albuquerque Master Drainage Study
3. West Bluff Drainage Study

The prevalent hydrologic soil classification for this area of SAD 219 is Class B. The current zoning is predominantly SU-1 for C-2. Therefore, a C Factor of 0.90 was used. Based on this criteria, the Rational formula was used to calculate runoff for the three drainage basins defined on Sheet 2 of 9 located in the map pockets at the end of this report. Also shown on that sheet are the discharge rates for the 100 year storm for each of the drainage basins.

B. Hydraulics

The area is relatively flat, and it is anticipated that the proposed street grades will be approximately 0.50%. Therefore, the capacity of the streets will be approximately 52 cfs. There are four drainage basins defined as shown on Drainage Map H-11 (Sheet 2 of 9) in the map pockets of this report. It is proposed to discharge the 48 cfs runoff from Area H-11-1b into the West Bluffs System via a 36" and 42" RCP pipe running down Corona and Atrisco. Drainage Area H11-2 (82 cfs) will be carried via a combination of street and channel surface flow to Atrisco, and then conveyed to the West Bluffs System via drop inlets and a 42" RCP pipe on Atrisco. Flows generated on the north cul-de-sac of Atrisco (Area H11-1a) will be picked up by a proposed drop inlet in the end of the cul-de-sac, and carried to the West Bluffs drainage pipe along Coors Boulevard by way of an existing 60" storm drain, or can be routed to the existing drop inlet on the south side of Ouray ± 600 feet east of Coors Boulevard.

Drainage basin H11-3 will generate peak flows of 38 cfs during the 100 year rainfall event. It is proposed that these flows be carried on site to the west, and collected at the central point at which time they will be directly discharged into the West Bluff storm sewer system. The point of discharge for this drainage basin will be the 14' x 14' CBC section with a 2,349 cfs capacity. Time of concentration for this drainage basin in SAD 219 is 0.12 hours (7 minutes). As each tract in Area H11-3 is developed, the drainage system should be constructed which will convey the developed flows into the adjacent West Bluffs system. The collection system for Area H11-3 is not proposed to be part of SAD 219. Additionally, stormwater runoff from Drainage Area H11-3 should not be permitted to drain onto Atrisco Drive.

SAD 219 DRAINAGE SUMMARY SHEET

ATRISCO / CORONA AREA

Area Designation	Area (Acres)	Rainfall Intensity (i)	C Factor	100 year Runoff Rate
West Bluffs Channel Outfall				
H11-1a	5.10	4.65	0.90	21.30
H11-1b	11.50	4.65	0.90	48.10
H11-2	19.51	4.65	0.90	81.65
H11-3	9.09	4.65	0.90	38.04

Carrillo, Abiel X.

From: Carrillo, Abiel X.
Sent: Wednesday, September 21, 2016 1:55 PM
To: 'JDHernandez@tierrawestllc.com'
Subject: 1002717 - H11D059 - Miami and Atrisco Property

Joel,

I have no adverse comments for the Site Plan for Subdivision DRB Action. As mentioned in my EPC comments, any grading that is later planned will require an ESC Plan and Permit prior to any work.

I'll keep this email in the DRB file for later reference.

Abiel Carrillo, PE, CFM

Principal Engineer - Hydrology
Planning Department
Development Review Services Division
City of Albuquerque
505-924-3986
acarrillo@cabq.gov
600 2nd Street NW
Albuquerque, NM 87102

15.00

H11/D059
#646681

PERMANENT EASEMENT

1/17/2002

Grant of Permanent Easement, between Wal-Mart Stores East, Inc., an Arkansas corporation (Grantor), whose address is 2001 S.E. 10th Street, Bentonville, Arkansas, 72712, and the City of Albuquerque, a New Mexico municipal corporation (City), whose address is PO Box 1293, Albuquerque, New Mexico 87103.

Grantor grants to the City an exclusive, permanent easement (Easement) in, over, upon and across the real property described on Exhibit "A" attached hereto (Property) for the construction, installation, maintenance, repair, modification, replacement and operation of drainage, together with the right to remove tress, bushes, undergrowth and any other obstacles upon the Property if the City determines they interfere with the appropriate use of this Easement.

In the event Grantor constructs any improvements (Improvements) within the Easement, the City has the right to enter upon Grantors property at any time and perform whatever inspection, installation, maintenance, repair modification or removal (Work) it deems appropriate without liability to the City. If the Work effects any improvements of encroachments made by the Grantor, the City will not be financially or otherwise responsible for rebuilding or repairing of improvements or encroachments. If in the opinion of the City, the Work to be performed by the City could endanger the structural integrity or otherwise damage the improvements of encroachments, the Grantor shall, at its own expense, take whatever protective measures are required to safeguard the improvements or encroachments.

Grantor covenants and warrants that Grantor is the owner in fee simple of the Property, that Grantor has a good lawful right to convey the Property or any part thereof and that Grantor will forever warrant and defend the title to the Property against all claims from all persons or entities.

The grant and other provisions of this Easement constitute covenants running with the Property for the benefit of the City and its successors and assigns until terminated.

See Exhibit B attached hereto.

WITNESS my hand and seal this 21st day of November. 2001.

APPROVED
CITY OF ALBUQUERQUE

GRANTOR: Wal-Mart Stores East, Inc.,
an Arkansas corporation

By: Robert M. Ferland

Its: Assistant Vice President

CITY ENGINEER

1-17-02
DATED

Approved as to legal terms only
by George Rocco
Wal-Mart Legal Team
Date: 11-21-01

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Page: 1 of 5
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Bk-A30 Pg-8082

Mary Herrera Bern. Co. EASE R 15.00

STATE OF Arkansas)
) SS.
COUNTY OF Benton)

This instrument was acknowledged before me on 21st day of November, 2001, by ROBERT M. BEDARD, of Wal-Mart Stores East, Inc., an Arkansas corporation, on behalf of the corporation.

Bianca Maria Thornton
Notary Public

"OFFICIAL SEAL"
BIANCA MARIA THORNTON
Notary Public, State of Arkansas
Benton
My Commission Exp. 07/01/2010

My Commission Expires:

(Exhibit "A, B, ATTACHED)

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Page: 2 of 5
01/18/2002 11:40A
Bk-A30 Pg-8082
R 15.00
Mary Herrera Bern. Co. EASE

EXHIBIT A

LEGAL DESCRIPTION – PUBLIC DRAINAGE EASEMENT

AN EASEMENT LYING AND SITUATE WITHIN TRACT NUMBERED FIVE (5) OF WEST BLUFF CENTER SUBDIVISION AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT ENTITLED "TRACTS 1, 2, 3, 4, 5, 6 AND 7 WEST BLUFF CENTER SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON OCTOBER 2, 2000 IN BOOK 2000C, PAGE 256 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHERNMOST CORNER OF SAID DESCRIBED EASEMENT, FROM WHICH POINT A TIE TO A.C.S. MONUMENT "12-H11" BEARS N 15°02'02" W A DISTANCE OF 1,362.36 FEET;

THENCE FROM SAID BEGINNING POINT S 29°50'26" E A DISTANCE OF 271.64 FEET TO A FOUND REBAR WITH CAP "PS 11993";

THENCE S 00°33'15" W A DISTANCE OF 60.00 FEET TO A FOUND REBAR WITH CAP "PS 11993";

THENCE S 90°00'00" W A DISTANCE OF 55.99 FEET TO AN ANGLE POINT;

THENCE N 45°00'00" W A DISTANCE OF 8.96 FEET TO AN ANGLE POINT;

THENCE S 90°00'00" W A DISTANCE OF 20.81 FEET TO AN ANGLE POINT;

THENCE N 10°09'16" W A DISTANCE OF 291.93 FEET TO THE POINT OF BEGINNING.

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Page: 3 of 5
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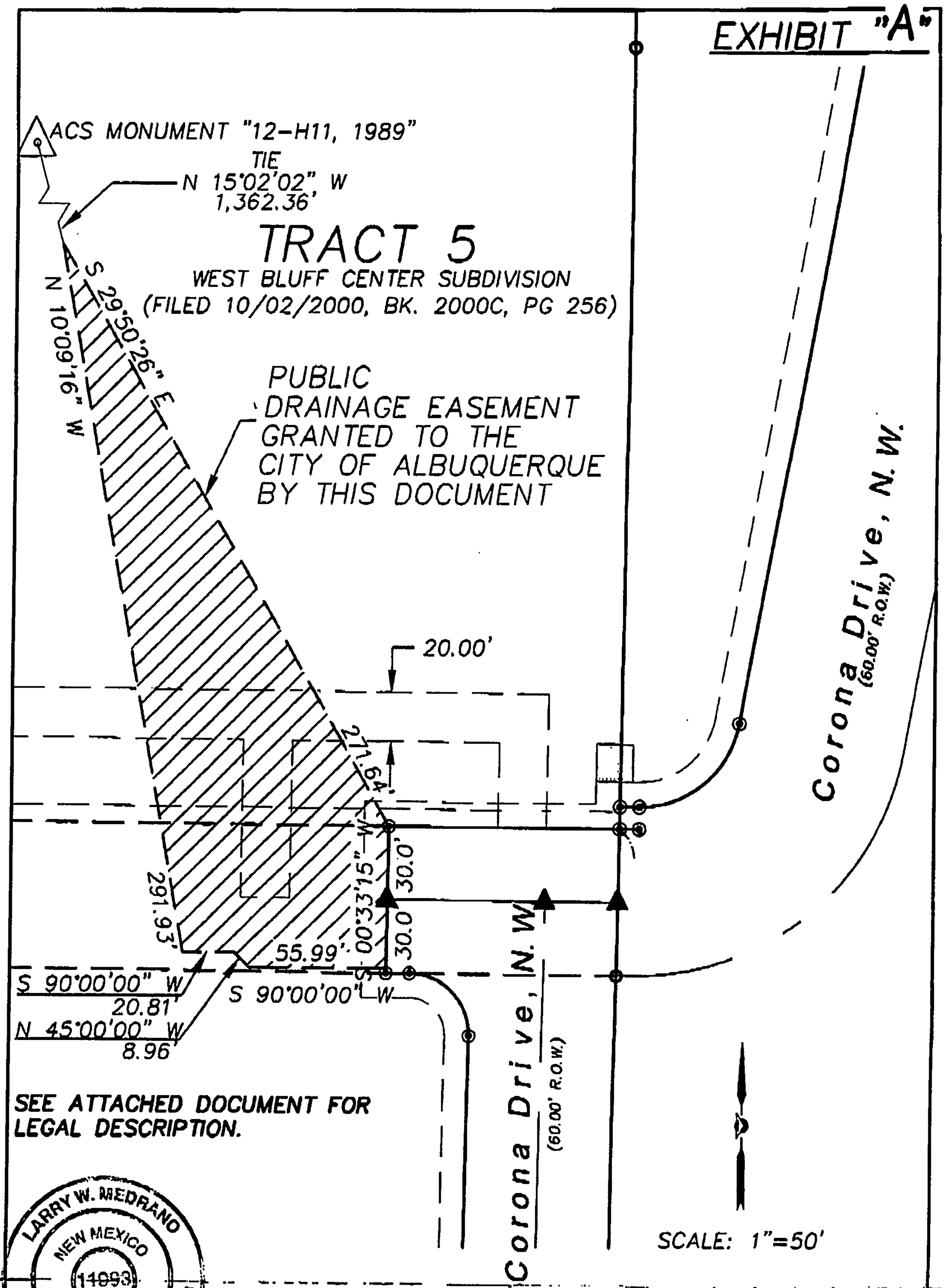
R 15.00 Bern. Co. EASE
Mary Herrera

EXHIBIT "A"



SEE ATTACHED DOCUMENT FOR LEGAL DESCRIPTION.

LARRY W. MEDRANO
NEW MEXICO
11993
REGISTERED PROFESSIONAL SURVEYOR

SURVEYOR'S CERTIFICATE

I, LARRY W. MEDRANO LICENSED UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY WAS PREPARED BY ME OR UNDER MY DIRECTION FROM NOTES OF AN ACTUAL FIELD SURVEY, AND THE SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

6/26/2001

LARRY W. MEDRANO N.M.L.S. NO. 11993

PRECISION SURVEYS
8414-D JEFFERSON ST, NE PHONE 505 858 6700
ALBUQUERQUE, NEW MEXICO 87113 FAX 505 858 7900

997153fx

EXHIBIT "B"

Grantee agrees to use due care in any use of the Easement herein granted and in the construction, installation, repair, replacement and maintenance and either Grantee's improvements or the easement area as provided for herein so as not to unreasonably disturb Grantor's use of its property. Grantee agrees to replace any sod, landscaping and paving, which existed prior to Grantees repair, replacement or maintenance of Grantees improvements within the Easement.

Grantee shall not interfere with Grantor's business operations during the months of November and December while utilizing this Easement, except in emergency circumstances.

CONTRACT CONTROL FORM

PRELIMINARY REVIEW

Project # 646681
CCN# 200100470
~~New or~~ Ext. #

Contact Person KATHY JARAMILLO
Phone No. 924-3996

Type of Agreement: Drainage easement

Description/Project Name: West Bluff Center
Public Works Dept./Div.: DESIGN REVIEW
Developer: Wal-Mart Stores East, Inc.
Contract Amount $ -0- ~~SIA~~ Contract Period: 1/17/02 - 12/31/2021
Contract Amount $ SIA Contract Period: -
Contract Amount $ S/W Contract Period: -

DRAFT CONTRACT:
Rec'd by Legal: Rejected/Returned to Dept.: KJL, 11/28/01
Returned to Legal: 11/28/01 Appproved: KJL, 9/10/01 Initials:

FINANCIAL GUARANTY:
Letter of Credit No.: Date: Attached: Yes___ No.___ Initial
Other: Type Date: Attached: Yes___ No.___ Initial

FINAL CONTRACT REVIEW

APPROVALS REQUIRED:

	Date Delivered	Returned to Dept.	Approved By	Approval Date
Utilitiy Div				
Hydrology Div	9/5/01	9/6/01	9/6/01	BJB
Transportation Div				
DRC Chairman	9/6/01	9/7/01	9/7/01	
Legal Dept	9/7/01	11/7/02	KJL	1/17/02
City Engineer	1/17/02	1/18/02	RA	1/17/02
PWD Director				
Finance				
City Clerk				
CAO				

DISTRIBUTION:

	Date:	By:
User Department.	1/18/2001	
Vendor		
City Clerk	1/22/02	
Treasury		
Other:		

RECEIVED
02 JAN 22 PM 2 28
ALBUQUERQUE CITY CLERK

9.00

TERMINATION AND RELEASE OF TEMPORARY SEWER EASEMENT

THIS TERMINATION AND RELEASE OF TEMPORARY SEWER EASEMENT is made and entered into as of the 14th day of August, 2002, by the City of Albuquerque, (the "City").

WHEREAS, WEST BLUFF CENTER, LLC , a New Mexico Limited Liability Company, as Grantor, entered into a Temporary Sewer Easement Agreement dated October 25, 2000, (the "Easement"), with the City of Albuquerque, as Grantee, which Easement was recorded October 27, 2000, in the office of the County Clerk of Bernalillo County, New Mexico, in Book A11, Pages 6203; as Document No. 2000106618; and

WHEREAS, the City of Albuquerque has determined that the Easement is no longer required.

THEREFORE, City of Albuquerque, terminates the Easement and hereby releases and discharges the Property described in the grant of Easement:

IN WITNESS WHEREOF, the undersigned has executed this Termination and Release of Temporary Sewer Easement as of the day and year first above written.

CITY OF ALBUQUERQUE
a municipal corporation

By: _____ 8/7/02 8/9/02
City Engineer

8-14-02
Dated

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on August 14, 2002, by Fred J. Aguirre for the City of Albuquerque, a New Mexico municipal corporation on behalf of said corporation.

Gloria D. Saavedra
Notary Public

My Commission Expires:

11-15-2003

Mary Herrera Bern. Co. TERM R 9.00

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Page: 1 of 1
08/14/2002 03:54P
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TEMPORARY SEWER EASEMENT

This grant of Easement ("Easement"), between WEST BLUFF CENTER, LLC, a New Mexico limited liability company ("Grantor"), whose address is 408 Canyon Court NE, Albuquerque, New Mexico 87111 and CITY OF ALBUQUERQUE, a New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, is made in Albuquerque, Bernalillo County, New Mexico, and is entered into as of the date Grantor signs this Easement.

1. Recital. Grantor is the owner of certain real property located in Bernalillo County, New Mexico, further described on Exhibit A attached hereto (the "Property").

2. Grant of Easement. The Grantor grants to the City an exclusive, temporary easement for a public sanitary sewer line as shown on Exhibit A attached hereto (the "Easement Property"), together with the right of the City to enter upon the Easement Property at any time for the inspection, installation, maintenance, repair or modification of the sanitary sewer line and the right to remove trees, bushes, undergrowth and any other obstacles upon the Property if the City determines they interfere with the appropriate use of the Easement.

3. Term of Easement. This Easement shall remain in force until Grantor completes construction of, and the City Engineer accepts in writing, a replacement sewer line within the right of way of Ouray Rd., N.W., City Project # 646681, after which City shall release this Easement.

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Page: 1 of 5
10/27/2000 10:06A
Judy D. Woodward Bern. Co. EASE R 15.00 Bk-A11 Pg-6203

4 Warranty. Grantor covenants and warrants that it is the owner in fee simple of the of the Property and that is has a good lawful right to convey the Property or any part thereof, that the Property is free from all encumbrances except encumbrances of record and taxes due and owing the Treasurer of Bernalillo County, and that the Grantor will forever warrant and defend the title to the Property against all claims from all persons or entities.

5 Binding on Grantor's Property. The grant and other provisions of this Easement constitute covenants running with the Property for the benefit of the City and its successors and assigns until terminated.

6. This Easement shall not be effective until approved by the City Engineer in the signature block below.

Witness my hand and seal this 25th day of October, 2000.

APPROVED:

City Engineer

10/26/00

WEST BLUFF CENTER, LLC, a New Mexico limited liability company

By: Paul L. Silverman
Paul L. Silverman
Manager

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on October 25, 2000, by Paul L. Silverman, Manager of West Bluff Center, LLC, a New Mexico limited liability company.

Suzanne G. Sybar
Notary Public

My commission expires:

1/30/03

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Page: 3 of 5
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Exhibit A

PROPERTY

Tracts 1 and 3 of CBRL Subdivision, as the same is shown and designated on the Plat thereof recorded March 17, 2000 in Book 2000C, Page 81, records of Bernalillo County, New Mexico

EASEMENT PROPERTY

The southerly 40 feet of the above-described Property.

2000106618
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Page: 4 of 5
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Judy D. Woodward Bern. Co. EASE R 15.00 Bk-A11 Pg-6203

Plat of

Tracts 1, 2 and 3

CBRL Subdivision

City of Albuquerque, Bernalillo County, New Mexico
December 1999

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

Legend

(N 90°00'00" E)	RECORD BEARINGS AND DISTANCES SHOWN IN PARENTHESIS
N 90°00'00" E	MEASURED BEARINGS AND DISTANCES
○	POINT FOUND AND USED AS SHOWN
●	POINT SET BY THIS SURVEY – REBAR WITH CAP "PS 11993"
N 90°00'00" E(u)	MEASURED EASEMENT BEARINGS AND DISTANCES

Easement Notes

1. EXISTING JOINT ACCESS EASEMENT SERVING TRACTS A-2021 & A-2122-A (4/22/87, C33-103).
2. EXISTING JOINT ACCESS EASEMENT SERVING TRACTS A-2021 & A-2122 (3/20/87, C33-47).
3. EXISTING P.N.M. EASEMENT (12/2/86, C32-49).
4. EXISTING 40' SANITARY SEWER EASEMENT (1/20/72, VOL. 244, FOL. 632-633).
5. EXISTING 10' P.N.M. & M.S.T.&T. EASEMENT (5/1/68, MS. 103, PG 553) (8/7/70, MS. 183, PG 532).
6. EXISTING P.N.M. & M.S.T.&T. ANCHOR EASEMENT (6/29/54, BK. D355, PG 334-336, DOCUMENT NO. 99236). VACATED BY THIS PLAT V-99-
7. 20' PRIVATE SANITARY SEWER EASEMENT GRANTED BY THIS PLAT.

Monument Information

A.C.S. MONUMENT "11-H11"
STANDARD A.C.S. ALUMINUM CAP (FOUND IN PLACE)
NEW MEXICO STATE PLANE COORDINATES (CENTRAL ZONE – NAD 1927)
X=364,763.94
Y=1,495,852.97
EL=5098.514
GRID TO GROUND FACTOR=0.99967720
DELTA ALPHA ANGLE=-0°15'38"

N.M.S.H.C. MONUMENT "STA 1-40-18"
STANDARD N.M.S.H.C. BRASS TABLET (FOUND IN PLACE)
NEW MEXICO STATE PLANE COORDINATES (CENTRAL ZONE – NAD 1927)
X=364,033.58
Y=1,484,376.82
EL=5103.978
GRID TO GROUND FACTOR=0.99967708
DELTA ALPHA ANGLE=-0°15'41"

A.C.S. MONUMENT "12-H11"
STANDARD A.C.S. ALUMINUM CAP (FOUND IN PLACE)
NEW MEXICO STATE PLANE COORDINATES (CENTRAL ZONE – NAD 1927)
X=365,168.46
Y=1,497,456.42
EL=5102.189
GRID TO GROUND FACTOR=0.99967688
DELTA ALPHA ANGLE=-0°15'34"

PRECISION SURVEYS, INC.
6414-D JEFFERSON ST., N.E. PHONE 505 856 5700
ALBUQUERQUE, NEW MEXICO 87113 FAX 505 856 7900

Project No. 99-
Sheet 2 of 2

Exhibit A

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Page: 5 of 5
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Judy D. Woodward Bern. Co. EASE R 15.00 Bk-A11 Pg-6203

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department
Transportation Development Services Section

November 19, 2001

Sara Lavy for Ronald R.Bohannon, Registered Architect
8509 Jefferson N.E.
Albuquerque, NM 87113

Re: Approval of Temporary Certificate of Occupancy (C.O.) for
West Bluff Ctr., Tract 3-Phase2, - - - - - - - [H11 / D059]
2800 Coors Blvd. N.W.
No Engineer's Stamp

Dear Ms. Lavy:

Based on the information provided on your submittal, the above referenced project is approved for a 30-day Temporary C.O. A Temporary C.O. has been issued for 30 days, allowing the outstanding issues to be completed within this time period. The perimeter of the parking lot and current work must be curbed or sufficiently barricaded to safely separate pedestrians and vehicles from work or from adjacent site not yet complete or begun. When these remaining issues have been fully completed, are in substantial compliance, and a final Certification has been resubmitted to the City's Hydrology office for approval, a Permanent C.O. will be issued.

The Certification package for Final C.O. must include an ***exact*** copy of the approved TCL, or signed off D.R.B. Site Plan, which is in each of the two City Permit Plan Sets. The package also must include a letter of certification on designer's letterhead. The TCL or the letter must be stamped with his seal and signed--they must be dated per the submittal of the cert. package. The address of the site, *development name* and Hydrology file number need to be included in the letter or on the TCL.

All staff members of the design company must be made aware of these revisions to the procedure toward finalization of each commercial building project for Transportation/ Hydrology.

For future submittals, for Temporary C.O., all work not completed needs to be shown and labeled clearly on TCL. Also, show barricading layout, if necessary, on submittal for Temp.

If you have any questions, please call me at 924-3620.

Sincerely,

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

c: Terri Martin – Hydrology
Office file

DRAINAGE INFORMATION SHEET

(REV. 11/01/2001)

BLDG. 4 PH. 2 11/19/01

PROJECT TITLE: Tracts 10 and 11 West Bluff Center ZONE ATLAS/DRG. FILE #: H11/D59A

DRB #: EPC #: WORK ORDER #: 11/19/01

LEGAL DESCRIPTION Tract 10 West Bluff Center and Tract A-2021-A Town of Atrisco Grant Northeast Unit

CITY ADDRESS: Northeast corner of Ouray and Coors – 2670 Coors NW

ENGINEERING FIRM:	TIERRA WEST, LLC	CONTACT:	RONALD R. BOHANNAN OR SARA LAVY
ADDRESS:	8509 JEFFERSON NE	PHONE:	(505) 858-3100
CITY, STATE:	ALBUQUERQUE, NM	ZIP CODE:	87113
OWNER:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Precision Surveys	CONTACT:	Larry Medrano
ADDRESS:	8414-D 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:

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

CHECK TYPE OF APPROVAL SOUGHT:

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

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED NOV 15 2001 HYDROLOGY SECTION

DATE SUBMITTED: 11/14/01 BY: Ron Wright

NOTE: on letter mention ~~[illegible]~~ each Cert. is only for one Address.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a dranage 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
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.

11/19/01 – Cld in 30t; 12/4/01 – Sent in letter Dated 11/19/01; logged in TCL of T.M.

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

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

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

November 14, 2001

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

RE: 30-Day Temporary Traffic Circulation Layout Certification
Buildings 4 and 7 at Middle Six Acres at West Bluff
2670 Coors [redacted] NW

Dear Mr. Zamora:

We are requesting a 30-day Temporary Certification of the Traffic Circulation Layout (TCL). Enclosed please find one copy of the approved TCL with as-built information for the above referenced project. We show Buildings 4 and 7 as Phase 2 of the Middle Six Acres. Enterprise Builders has completed the on-site paving, curb and gutter and sidewalks. The parking lot is striped and the landscaping is underway. Field verification of the TCL was completed by our office. All work is in substantial compliance with the approved TCL.

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

Sincerely,

Sara Lavy

Sara Lavy, PE

RECEIVED
NOV 15 2001
HYDROLOGY SECTION

Enclosures

cc: Paul Silverman
Pat Abel

JN: 980063
scl

980063: 9863 bldg 4 & 7 temp traffic CO.ltr

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 17, 2002

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

RE: WEST BLUFF CTR TR. 2 Phase 3 (H-11/D59)
(2810 Coors Blvd NW)
CERTIFICATE OF OCCUPANCY APPROVAL-*Temporary*
ENGINEERS CERTIFICATION DATED 1/16/2002

Dear Ms. Lavy:

Based on the information provided in your 1/16/2002 submittal, the above referenced project is approved for a **TEMPORARY** Certificate of Occupancy.

A Temporary Certificate of Occupancy has been issued for 30 days, allowing the remaining drainage issues in your 1/16/2002 Engineers Certification to be completed within this time scope.

Upon completion of the remaining drainage issues, final certification will be required for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

c: Vickie Chavez, COA
Drainage file
Approval file

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 12, 2002

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

RE: WEST BLUFF CTR. Tract 2 Phase 3 (H-11/D59)
(2810 Coors Blvd NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/1/2000
ENGINEERS CERTIFICATION DATED 2/8/2002

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 2/11/2002, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

C: Vickie Chavez, COA
approval file
drainage file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 7, 2001

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

RE: HOME DEPOT @ WEST BLUFF CENTER (H-11/D59)
(Coors & I-40 NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/12/2000
ENGINEERS CERTIFICATION DATED 9/5/2001

Dear Mr.Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 9/5/2001, the above referenced site is approved for a Permanent Certificate of Occupancy for the Home Depot Bldg site only. Engineers Certification is still required prior to issuance of Certificate of Occupancy for all other buildings regarding this site.

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

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BB

C: Vickie Chavez, COA
approval file
drainage file

Incoming
Drainage
cc: Paul Silvern

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 4, 2000

Ron Bohannan, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: West Bluff Shopping Center Drainage Report
Engineer's Stamp dated 3-1-00 (H11/D59)

Dear Mr. Bohannan,

Based upon the information provided in your resubmittal dated 3-2-00 and your letter dated 4-13-00, the above referenced plan was approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit. You are now approved for Preliminary Plat action by DRB. This includes the Infrastructure List which should be submitted to me for comment.

Please be advised that City Engineer signature on the Final Plat will not happen until the Site Plan is approved, the Subdivision Improvements Agreement is executed and the required Financial Guaranty is recorded.

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

Also, please be aware that all work in the R/W will be done under Work Order. Your Building Permit is for your on-site work only. Certificate of Occupancy will be granted once the downstream infrastructure is built and accepted by the City.

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

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

Street capacity calculations were not provided because street flow is minimal in the street. The inlets are existing and the locations have not been changed. I have provided a street capacity analysis for Ouray and Corona to show the flows to not overtop the curbs. In some instances the street is being widened and the inlets will be relocated to the new curb.

5. **On the grading plan, please provide more existing spot elevations around the perimeter of the site, especially along the east and south sides. Also provide proposed elevations where Basins 27 and 29 are located to show how they drain.**
I have added more spot elevations along the perimeter of the site. Basins 27 and 29 are not part of the site. However, these have been included in this drainage master plan. The basins will drain to the east in the future as shown on the basin map. However, no grades are shown as these are not being developed at this time.

6. **Where are the proposed retaining walls located? The plans show a detail, however, no symbol for retaining walls is shown in the legend. Since these must be certified, their locations must be clear.**
A retaining wall symbol has been added to the legend. A 2 foot retaining wall is located along the south and east sides of the site near the Wal-Mart.

7. **Prior to Building permit approval, the plan must show that the required one-foot water blocks are provided at all entrances to keep the street runoff from entering the site.**
A water block has been provided at all entrances to the site.

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

Sincerely,

Sara Lavy

Sara Lavy

cc: Paul Silverman

JN: 980063
scl

980063 9863walmart-hyd-submittal ltr

RECEIVED
MAR 02 2000
HYDROLOGY SECTION

SIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

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

e-mail: twdms@aol.com
1-800-245-3102

March 2, 2000

Ms. Susan Calongne
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: West Bluff (H11-D59)

Dear Ms. Calongne:

We are resubmitting the drainage report and the grading and drainage plan in response to your comments. The comments are addressed in the following manner:

1. **Ultimate street grades were not provided for Quail Road, Corona Drive or Coors Boulevard adjacent to the site. The plans must clearly show which way these streets drain. Provide elevations at the Quail Road/Corona Drive intersection to demonstrate the drainage patterns in this area. Also show how the runoff in Coors will be intercepted.**
   We provided street grades for Quail Road, Corona Drive, and Coors Boulevard. These streets are existing and we are not proposing to change the grades. We are not proposing any changes at the entrances to our site that would affect Coors. There is an existing drop inlet in Coors near Ouray Road that captures 54 cfs. This flow has been incorporated into our storm drain capacity calculations.

2. **The storm drain capacity calculations are difficult to follow and it is unclear if all basins were taken into account, especially on Ouray. Please identify which basins enter the storm drain at each location.**
   I have added a "Storm Drain Schematic" drawing to the Storm Sewer Calculations section of the report to clarify the storm drain capacity calculations. I have also added a section to the capacity table showing which basins have been added.

3. **The storm drain table states that street flows enter the system at pipe 22, however, the drainage basin discharging to this pipe was not identified. From this pipe to the outfall, what amount of runoff enters the system from Coors and from west of Coors? Is downstream capacity exceeded with this additional runoff?**
   At pipe 22 flows enter the system from west of Coors. This flow is a total of 131.0 cfs according to the as-builts. There is also 54.0 cfs entering the site from Coors at pipe 21. The drainage basins are not identified as this is not part of our site. I have included a copy of the as-builts with this resubmittal. There are no other connections to the Coors system. Downstream capacity is not exceeded, as shown by the storm drain capacity calculations.

4. **Street capacity calculations were not provided. How was it determined where the inlets were needed, i.e. where the runoff cannot be contained within the curbs?**

RECEIVED
MAR 02 2000
HYDROLOGY SECTION

980063
Drainage

City of Albuquerque

March 27, 2000

Ron Bohannan, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: West Bluff Shopping Center Drainage Report
Engineer's Stamp dated 3-1-00 (H11/D59)

Dear Mr. Bohannan,

Based upon the information provided in your resubmittal dated 3-2-00, the above referenced plan is approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit.

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

Also, 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 924-3986

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

RECEIVED
APR 1 4 2000
PWD/DESIGN REVIEW

DEVELOPMENT & BUILDING SERVICE CENTER
ONE STOP
600 SECOND ST. N.W./2ND FLOOR
ATTENTION: Mitch Reynolds
505-924-3900

Records Withdrawal Form

Project No. 411/0059 Date: 2/7/01

Project Title: West Bluff

a. File b. Mylars c. Redlines/Comments
d. Other _____

Requested By: Scott Armstrong Bohannan Huston Phone No.: 798 7832
Company

Comments:
(1) 5/4/2000 letter
(2) 3/27/00 letter
(3) Drainage Report for W. Bluff w/inserts
(4) Drainage Info Sheet attachments
(5) 1/28/99 letter
(6) Conceptual Grading Plan sheet C-2

Anticipated Return Date: 2/8/01

Receipt Acknowledged

I here by accept full responsibility for the security of the above noted records/plans until return receipt acknowledgement is completed. Records/plans will be returned to the Development & Building Services Center on or before the indicated anticipated return date.

Delivery Picked Up By:

Name: Ray Ponce Organization: Alb Repro
Print

Signed: Ray Ponce Date: 02-08-01
Phone No. 884-0885

Office Use Only

Return Acknowledged

Received by: _____ Date: _____
Print

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 12, 1999

Ronald R. Bohanan, P.E.
Tierra West, LLC
4421 McLeod NE
Suite D
Albuquerque, NM 87109

RE: PROPOSED RETAIL CENTER AT COORS AND I-40 (H11-D59). CONCEPTUAL GRADING AND DRAINAGE PLAN FOR DRAINAGE REQUIREMENTS. ENGINEER'S STAMP DATED JANUARY 27, 1999.

Dear Mr. Bohanan:

Based on the information provided in your January 28, 1999 submittal, City Hydrology has the following comments:

Aside from giving the location of the proposed project, this submittal is pretty much devoid of information.

There are requisite processes/proceedures available for you to follow for replat, vacation, relocation, and, of course, grading and drainage.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Andrew Garcia
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 15, 2001

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

RE: WEST BLUFF CENTER TR. 3- Phase 2 (H-11/D59)
(2800 Coors NW)
CERTIFICATE OF OCCUPANCY APPROVAL-*Temporary*
ENGINEERS CERTIFICATION DATED 11/14/2001

Dear Ms. Lavy:

Based on the information provided in your November 15, 2001 submittal, the above referenced project is approved for a **TEMPORARY** Certificate of Occupancy.

A Temporary Certificate of Occupancy has been issued for 30 days, allowing the remaining drainage issues in your 11/14/2001 Engineers Certification to be completed within this time scope.

Upon completion of the remaining drainage issues, final certification will be required for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

c: Vickie Chavez, COA
Drainage file
Approval file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 12, 2002

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

RE: WEST BLUFF CTR. Tract 3 Phase 2 (H-11/D59)
(2800 Coors Blvd NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/1/2000
ENGINEERS CERTIFICATION DATED 2/8/2002

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 2/11/2002, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Public Works Department

C: Vickie Chavez, COA
approval file
drainage file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 13, 2002

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

RE: WEST BLUFF CENTER (WALMART TR. 5) (H-11/D59)
(2550 Coors Blvd NW)
CERTIFICATE OF OCCUPANCY APPROVAL-*Temporary*
ENGINEERS CERTIFICATION DATED 5/10/2002

Dear Mr. Bohannan:

Based on the information provided in your May 10, 2002 submittal, and the approval of the SO19 (dated 5/3/2002) by the City's Storm Drainage Maintenance Inspector, the above referenced project is approved for a Temporary Certificate of Occupancy.

A Temporary Certificate of Occupancy has been issued for 30 days, allowing for the remaining drainage issues to be completed within this time scope.

Upon completion of the remaining drainage issues, final certification will be required to be resubmitted to this office for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin

Teresa A. Martin
CAM Hydrology Plan Checker
Public Works Department

c: Vickie Chavez, COA
Drainage file
Approval file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 4, 2001

Ron Bohannan, P.E.
Tierra West LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: SO #19 for West Bluff Shopping Center (H11-D59) Dated November 27, 2001

Dear Mr. Bohannan:

The above referenced three connections to public Right-Of-Way is approved. The notes are attached to the drainage plan. The approval letter sent by Bradley L. Bingham on May 4, 2000 still applies and I am just approving the SO #19 permit. Sign-off by the City's field inspector for the SO #19, is required for Hydrology final approval and Certificate of Occupancy.

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

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

C: Matt Cline, Arroyo Maintenance w/attached plan
Pam Lujan, Excavation Permits

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque

March 27, 2000

Ron Bohannan, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: West Bluff Shopping Center Drainage Report
Engineer's Stamp dated 3-1-00 (H11/D59)

Dear Mr. Bohannan,

Based upon the information provided in your resubmittal dated 3-2-00, the above referenced plan is approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit.

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

Also, 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 924-3986

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 4, 2000

Ron Bohannan, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: West Bluff Shopping Center Drainage Report
Engineer's Stamp dated 3-1-00 (H11/D59)

Dear Mr. Bohannan,

Based upon the information provided in your resubmittal dated 3-2-00 and your letter dated 4-13-00, the above referenced plan was approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit. You are now approved for Preliminary Plat action by DRB. This includes the Infrastructure List which should be submitted to me for comment.

Please be advised that City Engineer signature on the Final Plat will not happen until the Site Plan is approved, the Subdivision Improvements Agreement is executed and the required Financial Guaranty is recorded.

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

Also, please be aware that all work in the R/W will be done under Work Order. Your Building Permit is for your on-site work only. Certificate of Occupancy will be granted once the downstream infrastructure is built and accepted by the City.

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

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

DRAINAGE REPORT

for

West Bluff

Prepared by

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

Prepared for

Paul Silverman
Geltmore Inc. Real Estate Services
4408 Canyon Court NE
Albuquerque, New Mexico 87111-3010

February 2000

Ronald R. Bohannan P.E. No. 7868

RONALD RAY BOHANNAN REGISTERED PROFESSIONAL ENGINEER NEW MEXICO 7868

3-1-2000

H-11/59

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MAR 02 2000
HYDROLOGY SECTION

TABLE OF CONTENTS

Zone Atlas Map H-11 1

Location 2

Existing Drainage Conditions 2

FIRM Map and Soil Conditions 2

FIRM Map 35001C0327 D 3

On-Site Drainage Management Plan 4

Criteria 5

Summary 5

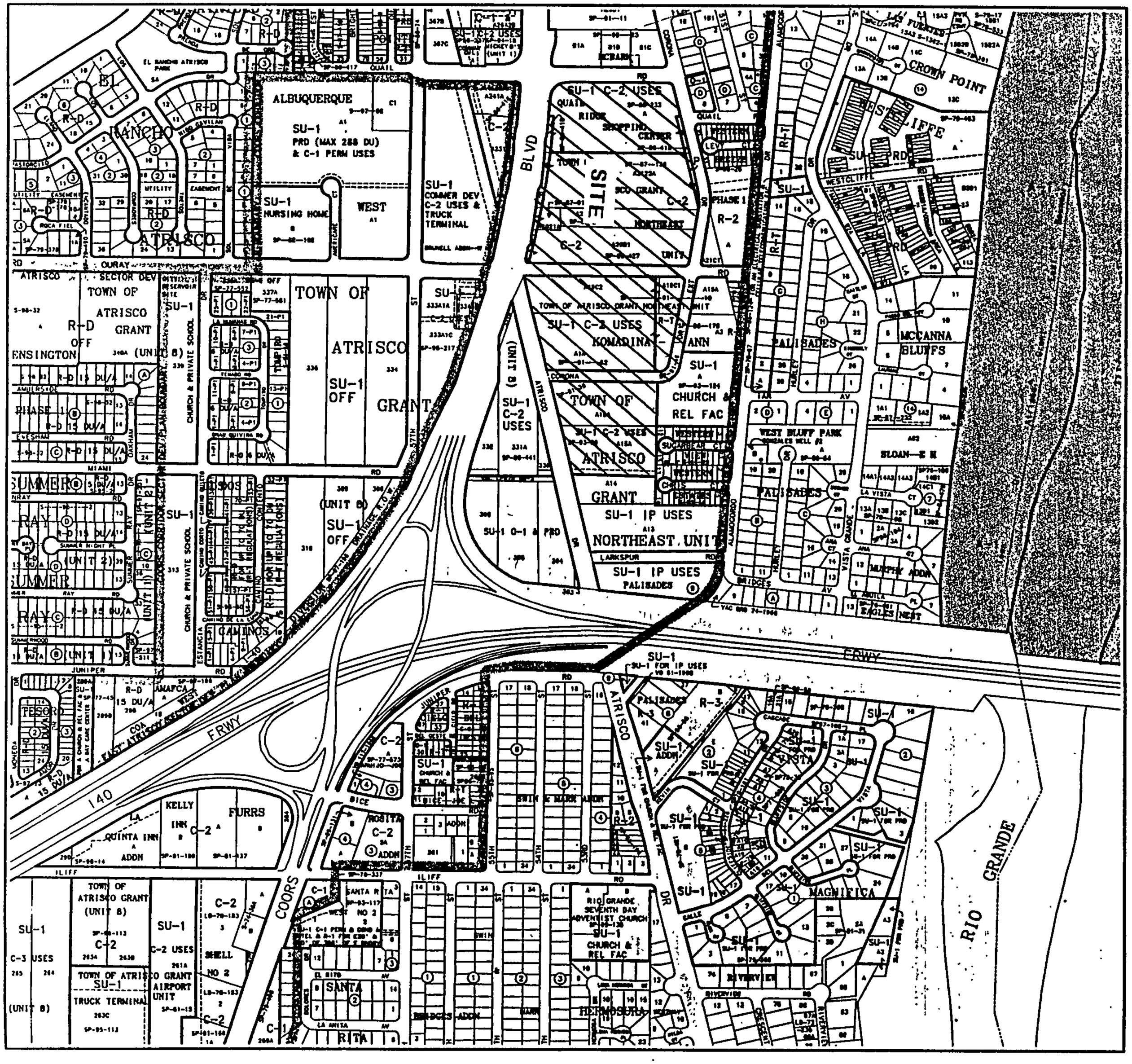
Developed Basin Layout 6

Runoff Calculations 8

Storm Sewer Calculations 13

Street Capacity 16

Infrastructure List 19


ALBUQUERQUE
SU-1
PRD (MAX 288 DU)
& C-1 PERM USES
SU-1
NURSING HOME
WEST
SU-1
COMMER DEV
C-2 USES &
TRUCK
TERMINAL
SITE
SU-1 C-2 USES
QUAIL RIDGE SHOPPING CENTER
NORTHEAST UNIT
TOWN OF ATRISCO GRANT NORTHEAST UNIT
SU-1 C-2 USES
KOMADINA
ANN
SU-1
CHURCH & REL FAC
TOWN OF ATRISCO GRANT
SU-1 C-2 USES
SU-1 IP USES
NORTHEAST UNIT
SU-1 IP USES
PALISADES
SU-1 C-2 USES
SU-1 O-1 & PRD
SU-1 C-2 USES
SU-1 OFF
TOWN OF ATRISCO GRANT
SU-1 OFF
TOWN OF ATRISCO GRANT (UNIT 8)
SU-1 C-2 USES
CROWN POINT
WESTCLIFFE
PALISADES
MCCANNA BLUFFS
WEST BLUFF PARK
SLOAN—E H
PALISADES
MURPHY ADDN
EAGLES NEST
BRIDGES
SU-1
SU-1 FOR IP USES
PALISADES
R-3
SU-1
ADDN
VISTA
MAGNIFICA
RIVERVIEW
RIO GRANDE SEVENTH DAY ADVENTIST CHURCH
SU-1
CHURCH & REL FAC
HERMOSURA
SANTA RITA
KELLY INN
FURRS
QUINTA INN
ROSITA
SHELL NO 2
TOWN OF ATRISCO GRANT (UNIT 8)
SU-1
C-3 USES
(UNIT 8)
TOWN OF ATRISCO GRANT
SU-1
TRUCK TERMINAL
SU-1
C-2 USES
ATRISCO GRANT AIRPORT UNIT
BLVD
FRWY
140
COORS
RIO GRANDE
ATRISCO
ILIFF
JUNIPER
RAY
SUMMER
MIAMI
OURAY
QUAIL
CAMINOS
TESORO
ANAPCA
EL RANCHO ATRISCO PARK
ROCA FIEL
ALBUQUERQUE
NEW MEXICO
CITY OF
Albuquerque
Albuquerque Geographic Information System
PLANNING DEPARTMENT
©Copyright 1998
N
W
E
S
GRAPHIC SCALE IN FEET
250
0
500
1000
Interstate 40
Zone Atlas Page
H-11-Z
Map Amended through
June 30, 1998

Location

The site is the location of an approximately 42 acre commercial development. The site is located on Coors Boulevard between I-40 and Quail and is shown on the attached Zone Atlas Map H-11. The southern half of the site is a proposed Wal-Mart SuperCenter and the northern half of the site is a proposed Home Depot. A gas station and two other out-buildings comprise the site. The approximately six acres located between Wal-Mart and Home Depot is not part of this development but the drainage is being addressed in this report.

Existing Drainage Conditions

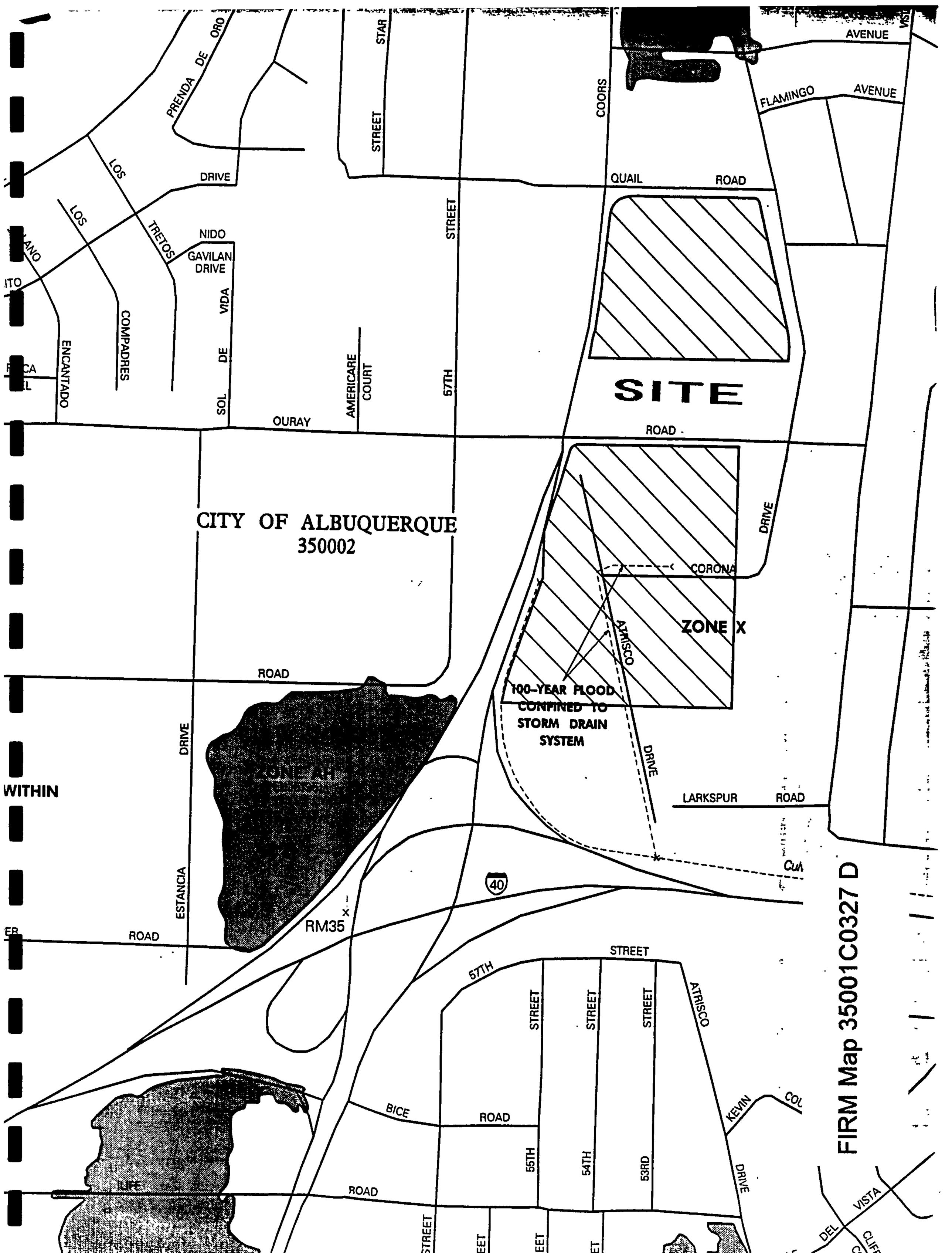
The site is currently a mixture of developed and undeveloped areas. There are several existing storm drains on the site ranging from 24" RCP to 72" RCP. The storm drains are located in Corona, Ouray and Atrisco. The storm sewers discharge to the West Bluff Outfall that is located near Coors Boulevard.

These storm drains were built with SAD 217 and SAD 219. The drainage report for SAD 219 evaluates the storm drain line located in Atrisco and the south side of the site. This report was used to estimate the downstream capacity of the existing lines. The drainage report for SAD 217 is missing from the City of Albuquerque's files. The engineer who did the report no longer has a copy. For this reason, we have recreated the existing basins. Should the City find a copy of the report during the approval, we can modify our report to match these conditions. However, we have field verified the basins and they represent actual conditions.

FIRM Map and Soil Conditions

The site is located on FIRM Map section 35001C0327 D as shown on the attached excerpt. The map shows that the site does not lie within any 100 year flood plains.

The site contains two different soils from the Soil Conservation Service Soil Survey of


PRENDA DE ORO
STAR
STREET
COORS
AVENUE
FLAMINGO
AVENUE
LOS
DRIVE
QUAIL
ROAD
LOS
TRETOS
NIDO
GAVILAN
DRIVE
STREET
VIDA
COMPADRES
ENCANTADO
DE
SOL
AMERICARE
COURT
57TH
SITE
OURAY
ROAD
CITY OF ALBUQUERQUE
350002
DRIVE
CORONA
ZONE X
ATRISCO
100-YEAR FLOOD
CONFINED TO
STORM DRAIN
SYSTEM
ROAD
DRIVE
WITHIN
ZONE AH
DRIVE
LARKSPUR
ROAD
ESTANCIA
40
RM35
ROAD
STREET
57TH
STREET
STREET
STREET
ATRISCO
BICE
ROAD
55TH
54TH
53RD
KEVIN
DRIVE
ROAD
DEL
VISTA
FIRM Map 35001C0327 D

Bernalillo County. The first soil is a Bluepoint loamy fine sand and the second type is a Madurez-Wink association. Both soils have slow runoff and the hazard of soil blowing is severe.

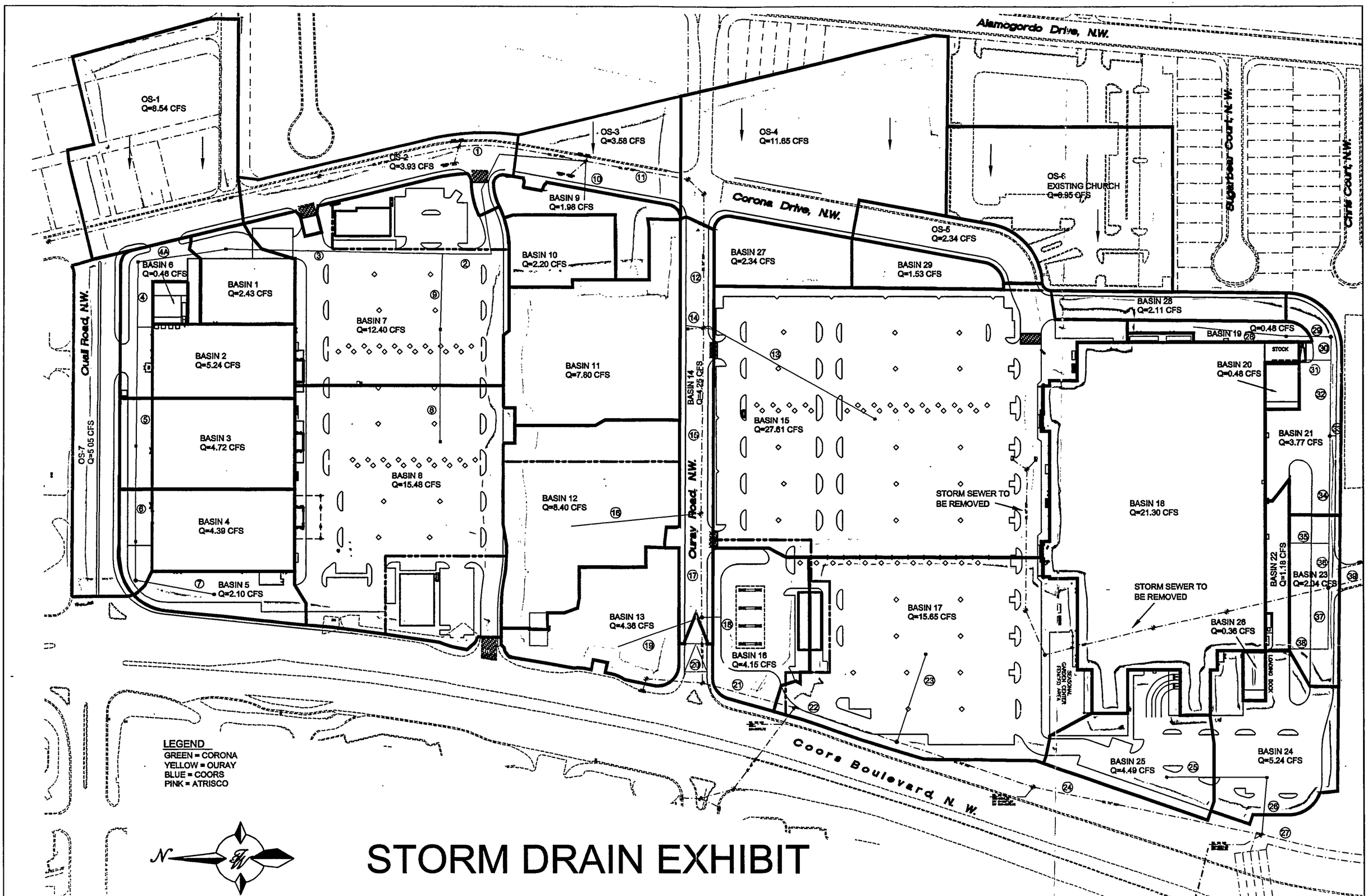
On-Site Drainage Management Plan

Shown on the attached drainage basin maps are the proposed drainage basins. We have broken the site into twenty-nine basins to calculated the flows and corresponding storm sewer sizes. The proposed on-site storm drains will free discharge to the existing storm drains located in Corona, Ouray, and Atrisco. As mentioned, the existing storm drains were constructed under SAD 217 and SAD 219. We are proposing modifications to those storm drain lines to accommodate the new development.

In reviewing the existing lines and the proposed basins, all of the on and off-site storm sewers discharge to the West Bluff Outfall. The West Bluff Outfall collects all of the flow from the site along with the Diversion Channel to the west and conveys the flows to the Rio Grande River. The Outfall has capacity for the flows as it was designed for developed conditions. Because of the site's proximity to the West Bluff Outfall, the drainage from the site will reach the Outfall and be discharged before any other areas.

SAD 219

Basins 18 - 23, 26, and 28 drain to the storm drain system installed with SAD 219. A new 30" RCP storm drain system will be built with this project and connected to the existing 48" pipe in Atrisco. The existing storm drain system in Atrisco south of the property line will be removed. The existing line to be removed is located within the old Corona right-of-way that is being vacated with this project. According to the as-builts, the 42" existing storm drain in Corona has a 100 year flow rate of 48.00 cfs. We will be discharging 31.72 cfs to the existing



STORM DRAIN EXHIBIT

storm drain in Atrisco. The storm drain has capacity as we are discharging less than the original storm drain in Corona.

SAD 217

The basins for SAD 217 were recreated because the drainage report could not be located. Onsite basins 1-17, 24, 25, 27, 29 and off-site basins OS1-OS7 drain to the existing storm drains built with SAD 217. Offsite Basin 6 (OS6) was analyzed in a previous drainage report under H11/D33. The report states that 8.95 cfs from the church drains to Corona Avenue. The attached "Storm Drain Exhibit" is color coded to show which basins drain to the existing storm drains.

We computed the capacities from the as-builts for all of the existing pipes and the pipes can handle the developed flow. The exhibit titled "Storm Drain Exhibit" shows the existing and proposed storm drains on the site. All the pipes are labeled and the capacities have been evaluated. The pipes capacities were calculated using Manning's equation and assumed to be full. At one point in Ouray (Pipe #15) the storm drain does not have capacity for all the flow. If the pipe were evaluated under pressure flow it could be assumed that the pipe would have capacity for the additional flow. For this reason, we do not feel that Pipe #15 is a concern.

DOES ponding effect

The entire development along with the six acres in the middle of the site will contribute 165.29 cfs to the system. This, combined with the offsite flows, totals 366.26 cfs discharging into the West Bluff Outfall

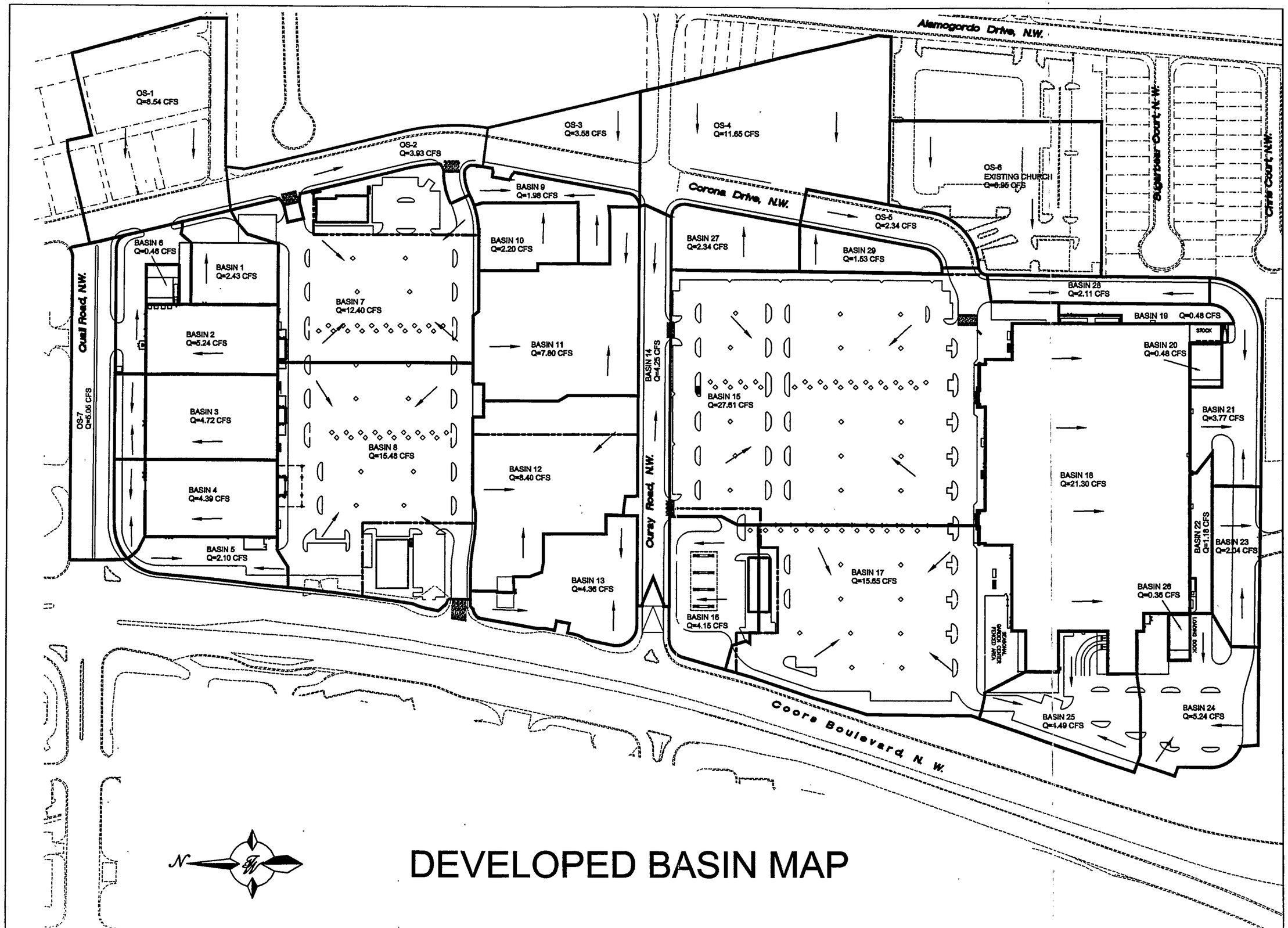
Criteria

The site was analyzed using the procedures from the Development Process Manual Volume 2, Chapter 22. The Weighted-E method was used for estimating the volume and flow rate of runoff from each basin.

Summary

The site will discharge to the existing storm drains in the adjacent streets. The south side of the site will discharge 31.72 cfs to the existing storm drain in Atrisco. The storm drain has capacity for the flows from the site. The storm drain in Atrisco drains to the West Bluff Outfall downstream of the site. The northern side of the project will drain to the storm sewers built in Corona, Ouray, and Coors. This side of the site will discharge 366.26 cfs into the existing West Bluff Outfall located near Coors. This flow includes both the on and off-site basins. It also includes flows from the storm drains in Coors and the east side of Ouray.

Runoff Calculations



DEVELOPED BASIN MAP

Weighted E Method

Existing Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
1	25639.93	0.589	0%	0	100%	0.589	0%	0	0%	0.000	0.670	0.033	1.19	0.220	0.011	0.45
2	55138.29	1.266	0%	0	100%	1.266	0%	0	0%	0.000	0.670	0.071	2.57	0.220	0.023	0.96
3	49699.93	1.141	0%	0	100%	1.141	0%	0	0%	0.000	0.670	0.064	2.32	0.220	0.021	0.87
4	46237.06	1.061	0%	0	100%	1.061	0%	0	0%	0.000	0.670	0.059	2.15	0.220	0.019	0.81
5	22112.84	0.508	0%	0	100%	0.508	0%	0	0%	0.000	0.670	0.028	1.03	0.220	0.009	0.39
6	4609.46	0.106	0%	0	100%	0.106	0%	0	0%	0.000	0.670	0.006	0.21	0.220	0.002	0.08
7	130560.57	2.997	0%	0	100%	2.997	0%	0	0%	0.000	0.670	0.167	6.08	0.220	0.055	2.28
8	162987.99	3.742	0%	0	100%	3.742	0%	0	0%	0.000	0.670	0.209	7.60	0.220	0.069	2.84
9	20899.26	0.480	0%	0	100%	0.480	0%	0	0%	0.000	0.670	0.027	0.97	0.220	0.009	0.36
10	23175.94	0.532	0%	0	100%	0.532	0%	0	0%	0.000	0.670	0.030	1.08	0.220	0.010	0.40
11	82104.79	1.885	0%	0	100%	1.885	0%	0	0%	0.000	0.670	0.105	3.83	0.220	0.035	1.43
12	88440.62	2.030	0%	0	100%	2.030	0%	0	0%	0.000	0.670	0.113	4.12	0.220	0.037	1.54
13	45957.95	1.055	0%	0	100%	1.055	0%	0	0%	0.000	0.670	0.059	2.14	0.220	0.019	0.80
14	44757.02	1.027	0%	0	100%	1.027	0%	0	0%	0.000	0.670	0.057	2.09	0.220	0.019	0.78
15	290788.71	6.676	0%	0	100%	6.676	0%	0	0%	0.000	0.670	0.373	13.55	0.220	0.122	5.07
16	43734.25	1.004	0%	0	100%	1.004	0%	0	0%	0.000	0.670	0.056	2.04	0.220	0.018	0.76
17	164781.27	3.783	0%	0	100%	3.783	0%	0	0%	0.000	0.670	0.211	7.68	0.220	0.069	2.87
18	224353.41	5.150	0%	0	100%	5.150	0%	0	0%	0.000	0.670	0.288	10.46	0.220	0.094	3.91
19	10269.55	0.236	0%	0	100%	0.236	0%	0	0%	0.000	0.670	0.013	0.48	0.220	0.004	0.18
20	5009.94	0.115	0%	0	100%	0.115	0%	0	0%	0.000	0.670	0.006	0.23	0.220	0.002	0.09
21	37576.59	0.863	0%	0	100%	0.863	0%	0	0%	0.000	0.670	0.048	1.75	0.220	0.016	0.66
22	11768.71	0.270	0%	0	100%	0.270	0%	0	0%	0.000	0.670	0.015	0.55	0.220	0.005	0.21
23	25928.73	0.595	0%	0	100%	0.595	0%	0	0%	0.000	0.670	0.033	1.21	0.220	0.011	0.45
24	55220.71	1.268	0%	0	100%	1.268	0%	0	0%	0.000	0.670	0.071	2.57	0.220	0.023	0.96
25	47272.63	1.085	0%	0	100%	1.085	0%	0	0%	0.000	0.670	0.061	2.20	0.220	0.020	0.82
26	3559.93	0.082	0%	0	100%	0.082	0%	0	0%	0.000	0.670	0.005	0.17	0.220	0.001	0.06
27	26138.18	0.600	0%	0	100%	0.600	0%	0	0%	0.000	0.670	0.034	1.22	0.220	0.011	0.46
28	21056.51	0.483	0%	0	100%	0.483	0%	0	0%	0.000	0.670	0.027	0.98	0.220	0.009	0.37
29	17071.49	0.392	0%	0	100%	0.392	0%	0	0%	0.000	0.670	0.022	0.80	0.220	0.007	0.30
Total	1748724.26	40.145		0		40.145		0		0.000		2.241	81.49		0.736	30.51

Equations:

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

Volume = Weighted D * Total Area

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

Weighted E Method

Developed Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E ~~(ac-ft)~~	Volume (ac-ft)	Flow cfs	Weighted E ~~(ac-ft)~~	Volume (ac-ft)	Flow cfs
1	25639.93	0.589	0%	0	10%	0.059	0%	0	90%	0.530	1.840	0.090	2.43	1.138	0.056	1.58
2	55138.29	1.266	0%	0	10%	0.127	0%	0	90%	1.139	1.840	0.194	5.24	1.138	0.120	3.39
3	49699.93	1.141	0%	0	10%	0.114	0%	0	90%	1.027	1.840	0.175	4.72	1.138	0.108	3.05
4	46237.06	1.061	0%	0	10%	0.106	0%	0	90%	0.955	1.840	0.163	4.39	1.138	0.101	2.84
5	22112.84	0.508	0%	0	10%	0.051	0%	0	90%	0.457	1.840	0.078	2.10	1.138	0.048	1.36
6	4609.46	0.106	0%	0	0%	0.000	0%	0	100%	0.106	1.970	0.017	0.46	1.240	0.011	0.31
7	130560.57	2.997	0%	0	10%	0.300	0%	0	90%	2.698	1.840	0.460	12.40	1.138	0.284	8.02
8	162987.99	3.742	0%	0	10%	0.374	0%	0	90%	3.368	1.840	0.574	15.48	1.138	0.355	10.02
9	20899.26	0.480	0%	0	10%	0.048	0%	0	90%	0.432	1.840	0.074	1.98	1.138	0.045	1.28
10	23175.94	0.532	0%	0	10%	0.053	0%	0	90%	0.479	1.840	0.082	2.20	1.138	0.050	1.42
11	82104.79	1.885	0%	0	10%	0.188	0%	0	90%	1.696	1.840	0.289	7.80	1.138	0.179	5.05
12	88440.62	2.030	0%	0	10%	0.203	0%	0	90%	1.827	1.840	0.311	8.40	1.138	0.193	5.44
13	45957.95	1.055	0%	0	10%	0.106	0%	0	90%	0.950	1.840	0.162	4.36	1.138	0.100	2.82
14	44757.02	1.027	0%	0	10%	0.103	0%	0	90%	0.925	1.840	0.158	4.25	1.138	0.097	2.75
15	290788.71	6.676	0%	0	10%	0.668	0%	0	90%	6.008	1.840	1.024	27.61	1.138	0.633	17.87
16	43734.25	1.004	0%	0	10%	0.100	0%	0	90%	0.904	1.840	0.154	4.15	1.138	0.095	2.69
17	164781.27	3.783	0%	0	10%	0.378	0%	0	90%	3.405	1.840	0.580	15.65	1.138	0.359	10.13
18	224353.41	5.150	0%	0	10%	0.515	0%	0	90%	4.635	1.840	0.790	21.30	1.138	0.488	13.79
19	10269.55	0.236	0%	0	100%	0.236	0%	0	0%	0.000	0.670	0.013	0.48	0.220	0.004	0.18
20	5009.94	0.115	0%	0	10%	0.012	0%	0	90%	0.104	1.840	0.018	0.48	1.138	0.011	0.31
21	37576.59	0.863	0%	0	0%	0.000	0%	0	100%	0.863	1.970	0.142	3.77	1.240	0.089	2.49
22	11768.71	0.270	0%	0	0%	0.000	0%	0	100%	0.270	1.970	0.044	1.18	1.240	0.028	0.78
23	25928.73	0.595	0%	0	40%	0.238	0%	0	60%	0.357	1.450	0.072	2.04	0.832	0.041	1.21
24	55220.71	1.268	0%	0	10%	0.127	0%	0	90%	1.141	1.840	0.194	5.24	1.138	0.120	3.39
25	47272.63	1.085	0%	0	10%	0.109	0%	0	90%	0.977	1.840	0.166	4.49	1.138	0.103	2.91
26	3559.93	0.082	0%	0	0%	0.000	0%	0	100%	0.082	1.970	0.013	0.36	1.240	0.008	0.24
27	26138.18	0.600	0%	0	20%	0.120	0%	0	80%	0.480	1.710	0.086	2.34	1.036	0.052	1.48
28	21056.51	0.483	0%	0	0%	0.000	0%	0	100%	0.483	1.970	0.079	2.11	1.240	0.050	1.40
29	17071.49	0.392	0%	0	20%	0.078	0%	0	80%	0.314	1.710	0.056	1.53	1.036	0.034	0.97
Total	1748724.26	40.145		0		4.333		0		35.812		6.121	165.29		3.780	106.79

Equations:

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

Volume = Weighted E * Total Area

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

Weighted E Method

Off-site Developed Basins

Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year Weighted E (ac-ft)	100-Year Volume (ac-ft)	100-Year Flow cfs	10-Year Weighted E (ac-ft)	10-Year Volume (ac-ft)	10-Year Flow cfs
OS-1	103226.81	2.370	0%	0	20%	0.474	20%	0.474	60%	1.422	1.514	0.299	8.54	0.876	0.173	5.18
OS-2	39161.99	0.899	0%	0	0%	0.000	0%	0.000	100%	0.899	1.970	0.148	3.93	1.240	0.093	2.60
OS-3	39938.84	0.917	0%	0	20%	0.183	0%	0.000	80%	0.733	1.710	0.131	3.58	1.036	0.079	2.26
OS-4	130042.62	2.985	0%	0	20%	0.597	0%	0.000	80%	2.388	1.710	0.425	11.65	1.036	0.258	7.36
OS-5	23372.82	0.537	0%	0	0%	0.000	0%	0.000	100%	0.537	1.970	0.088	2.34	1.240	0.055	1.55
OS-7	50349.06	1.156	0%	0	0%	0.000	0%	0.000	100%	1.156	1.970	0.190	5.05	1.240	0.119	3.34
Total	312370.26	8.863		0		1.254		0.473952		7.135		1.280	35.09		0.778	22.28

Equations:

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

Volume = Weighted D * Total Area

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

RUNOFF CALCULATIONS

The site is @ Zone 1

LAND TREATMENT

Proposed
B = 10 %
D = 90 %

Existing
B = 100 %

EXCESS PRECIPITATION, E (INCHES)

100-Year	10-Year
E_a = 0.44	E_a = 0.08
E_b = 0.67	E_b = 0.22
E_c = 0.99	E_c = 0.44
E_d = 1.97	E_d = 1.24

PEAK DISCHARGE (CFS/ACRE)

100-Year	10-Year
Q_a = 1.29	Q_a = 0.24
Q_b = 2.03	Q_b = 0.76
Q_c = 2.87	Q_c = 1.49
Q_d = 4.37	Q_d = 2.89

Storm Sewer Calculations

Storm Drain Capacity for Developed Conditions in Existing and Proposed Pipes

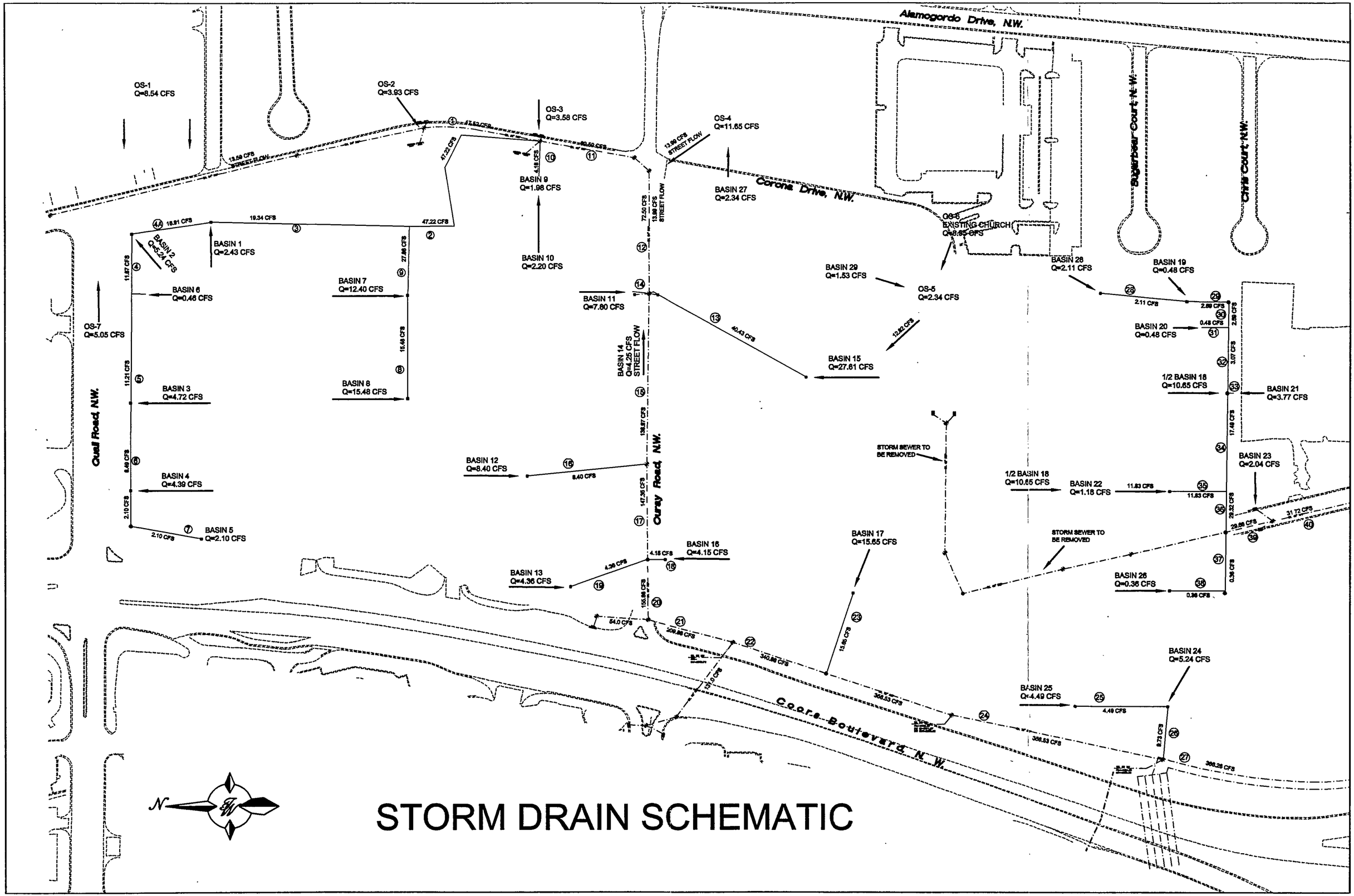
Pipe	Location	Status	Basins Added	D (in)	Slope (%)	Area (ft^2)	R	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
* 1	Corona	Exist	OS1, OS2, OS7	36	0.338	7.07	0.75	38.88	17.52	2.48
2	Entrance	New		36	1	7.07	0.75	66.88	47.22	6.68
3	Basin 7	New	1	24	1	3.14	0.5	22.68	19.34	6.16
4	Basin 2	New	6	24	1	3.14	0.5	22.68	11.67	3.71
4A	Basin 2	New	2	24	1	3.14	0.5	22.68	16.91	5.38
5	Basin 3	New	3	24	1	3.14	0.5	22.68	11.21	3.57
6	Basin 4	New	4	18	1	1.77	0.375	10.53	6.49	3.67
7	Basin 5	New	5	10	1	0.55	0.208333	2.20	2.10	3.85
8	Basin 8	New	8	24	1	3.14	0.5	22.68	15.48	4.93
9	Basin 7	New	7	30	1	4.91	0.625	41.13	27.88	5.68
10	Basin 9	New	9, 10	15	1	1.23	0.3125	6.48	4.18	3.41
11	Corona	Exist	OS3	48	0.3	12.57	1	78.89	72.50	5.77
12	Ouray	Exist		54	0.3	15.90	1.125	108.00	72.50	4.56
13	Basin 15	New	OS5, OS6, 15, 29	30	1	4.91	0.625	41.13	40.43	8.24
14	Basin 11	New	11	15	2	1.23	0.3125	9.16	7.80	6.36
* 15	Ouray	Exist	OS4, 14, 27	60	0.2	19.63	1.25	116.79	138.97	7.08
16	Basin 12	New	12	18	1	1.77	0.375	10.53	8.40	4.75
17	Ouray	Exist		60	0.5	19.63	1.25	184.66	147.37	7.51
18	Basin 16	New	16	15	1	1.23	0.3125	6.48	4.15	3.38
19	Basin 13	New	13	15	1	1.23	0.3125	6.48	4.36	3.55
20	Ouray	Exist		60	0.5	19.63	1.25	184.66	155.88	7.94
21	Coors	Exist	Offsite Coors	60	1.68	19.63	1.25	338.48	209.88	10.69
22	Coors	Exist	Offsite Ouray	72	1.68	28.27	1.5	550.41	340.88	12.06
23	Basin 17	New	17	24	1	3.14	0.5	22.68	15.65	4.98
24	Coors	Exist		72	1.68	28.27	1.5	550.41	356.53	12.61
25	Basin 25	New	25	15	1	1.23	0.3125	6.48	4.49	3.66
26	Basin 24	New	24	18	1	1.77	0.375	10.53	9.73	5.51
27	Coors	Exist		CBC					366.26	
28	Site	New	28	10	1	0.55	0.208333	2.20	2.11	3.87
29	Site	New	19	12	1	0.79	0.25	3.57	2.59	3.30
30	Site	New		12	1	0.79	0.25	3.57	2.59	3.30
31	Site	New	20	6	1	0.20	0.125	0.56	0.48	2.44
32	Site	New		12	1	0.79	0.25	3.57	3.07	3.91
33	Site	New	21, 1/2-18	24	1	3.14	0.5	22.68	14.42	4.59
34	Site	New		24	1	3.14	0.5	22.68	17.49	5.57
35	Site	New	1/2-18, 22	24	1	3.14	0.5	22.68	11.83	3.77
36	Site	New		30	1	4.91	0.625	41.13	29.32	5.97
37	Site	New		6	1	0.20	0.125	0.56	0.36	1.83
38	Site	New	26	6	1	0.20	0.125	0.56	0.36	1.83
39	Atrisco	Exist		48	0.4	12.57	1	91.09	29.68	2.36
40	Atrisco	Exist	23	48	0.4	12.57	1	91.09	31.72	2.52

* Note: At these points street flow enters the storm drain system.

<u>Manning's Equation:</u>

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

A = Area
R = D/4
S = Slope
n = 0.013



STORM DRAIN SCHEMATIC

Street Capacity

Street Capacity Calculations

Ouray Road
40' F-F Street Section with 8" curb
Slope= 0.0088
Max Q = 18.25 cfs

For water depths less than 0.125 feet

Y= Water depth
Area = 8*Y^2
P= SQRT(257*Y^2) + Y
n= 0.017

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.01	0.001	0.170	0.005	0.000	0.000	0.230	0.002	0.405	0.003
0.02	0.003	0.341	0.009	0.001	0.002	0.365	0.007	0.455	0.006
0.04	0.013	0.681	0.019	0.007	0.015	0.580	0.023	0.511	0.015
0.06	0.029	1.022	0.028	0.022	0.044	0.759	0.046	0.546	0.025
0.08	0.051	1.362	0.038	0.047	0.094	0.920	0.074	0.573	0.036
0.1	0.080	1.703	0.047	0.085	0.171	1.068	0.107	0.595	0.048
0.12	0.115	2.044	0.056	0.139	0.278	1.205	0.145	0.613	0.060
0.125	0.125	2.129	0.059	0.155	0.310	1.239	0.155	0.617	0.063

For water depths greater than 0.125 ft but less than 0.485 ft

Y1= Y-0.125
A2= A1 + 2*Y1 + 25*Y1^2
P2= P1 + SQRT(2501*Y1^2)

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.125	0.125	2.129	0.059	0.155	0.310	1.239	0.155	0.617	0.063
0.17	0.266	4.424	0.060	0.334	0.668	1.257	0.214	0.537	0.070
0.215	0.508	6.720	0.076	0.744	1.487	1.465	0.315	0.557	0.093
0.26	0.851	9.015	0.094	1.446	2.891	1.699	0.442	0.587	0.122
0.305	1.295	11.311	0.114	2.504	5.008	1.933	0.590	0.617	0.154
0.35	1.841	13.606	0.135	3.977	7.955	2.161	0.756	0.644	0.189
0.395	2.488	15.902	0.156	5.922	11.844	2.381	0.940	0.668	0.224
0.44	3.236	18.197	0.178	8.390	16.779	2.593	1.141	0.689	0.262
0.485	4.085	20.493	0.199	11.431	22.861	2.798	1.357	0.708	0.300

For water depths greater than 0.485 ft but less than 0.667 ft

Y2= Y - 0.485
A3= A2 + Y2*20
P3= P2 + Y2

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.485	4.085	20.493	0.199	11.431	22.861	2.798	1.357	0.708	0.300
0.51	4.585	20.518	0.223	13.845	27.690	3.020	1.540	0.745	0.340
0.535	5.085	20.543	0.248	16.438	32.877	3.233	1.730	0.779	0.380
0.56	5.585	20.568	0.272	19.204	38.408	3.439	1.926	0.810	0.420
0.585	6.085	20.593	0.295	22.136	44.273	3.638	2.128	0.838	0.460
0.61	6.585	20.618	0.319	25.230	50.460	3.831	2.337	0.864	0.501
0.64	7.185	20.648	0.348	29.148	58.296	4.057	2.596	0.894	0.550
0.667	7.725	20.675	0.374	32.861	65.723	4.254	2.837	0.918	0.594

For water depths greater than 0.667 ft but less than 0.867 ft

Y3= Y - 0.667
A4= A3 + 20 * Y3 + 25 * Y3^2
P4= P3 + SQRT(2501 * Y3^2)

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.667	7.725	20.675	0.374	32.861	65.723	4.254	2.837	0.918	0.594
0.73	9.084	23.825	0.381	39.168	78.336	4.312	3.148	0.889	0.623
0.75	9.557	24.825	0.385	41.473	82.946	4.339	3.255	0.883	0.634
0.77	10.050	25.826	0.389	43.928	87.855	4.371	3.366	0.878	0.645
0.79	10.563	26.826	0.394	46.534	93.068	4.405	3.480	0.873	0.658
0.82	11.370	28.326	0.401	50.734	101.469	4.462	3.659	0.868	0.677
0.867	**12.725**	**30.677**	**0.415**	**58.037**	**116.074**	**4.561**	**3.954**	**0.863**	**0.710**

Street Capacity Calculations

Corona Drive
48' F-F Street Section with 8" curb
Slope= 0.004
Max Q = 17.52 cfs

For water depths less than 0.125 feet

Y= Water depth
Area = 8*Y^2
P= SQRT(257*Y^2) + Y
n= 0.017

Depth (ft)	rea (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.01	0.00	0.17	0.00	0.00	0.00	0.16	0.00	0.27	0.001319
0.02	0.00	0.34	0.01	0.00	0.00	0.25	0.00	0.31	0.003239
0.04	0.01	0.68	0.02	0.01	0.01	0.39	0.02	0.34	0.007916
0.06	0.03	1.02	0.03	0.01	0.03	0.51	0.03	0.37	0.013323
0.08	0.05	1.36	0.04	0.03	0.06	0.62	0.05	0.39	0.019258
0.1	0.08	1.70	0.05	0.06	0.12	0.72	0.07	0.40	0.025613
0.12	0.12	2.04	0.06	0.09	0.19	0.81	0.10	0.41	0.032322
0.125	0.13	2.13	0.06	0.10	0.21	0.84	0.10	0.42	0.034048

For water depths greater than 0.125 ft but less than 0.565 ft

Y1= Y-0.125
A2= A1 + 2*Y1 + 25*Y1^2
P2= P1 + SQRT(2501*Y1^2)

Depth (ft)	rea (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.13	0.14	2.38	0.06	0.11	0.22	0.82	0.11	0.40	0.033106
0.18	0.31	4.93	0.06	0.27	0.54	0.87	0.16	0.36	0.039061
0.25	0.77	8.51	0.09	0.85	1.70	1.11	0.28	0.39	0.061472
0.3	1.24	11.06	0.11	1.60	3.19	1.29	0.39	0.41	0.080922
0.3841	2.32	15.35	0.15	3.64	7.29	1.57	0.60	0.45	0.117239
0.401	2.58	16.21	0.16	4.19	8.39	1.62	0.65	0.45	0.124954
0.4136	2.78	16.85	0.17	4.64	9.27	1.66	0.69	0.46	0.130784
0.5604	5.74	24.34	0.24	12.10	24.19	2.11	1.18	0.50	0.202859
0.565	5.85	24.57	0.24	12.41	24.81	2.12	1.20	0.50	0.205226

For water depths greater than 0.565 ft but less than 0.667 ft

Y2= Y - 0.565
A3= A2 + Y2*22
P3= P2 + Y2

Depth (ft)	rea (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.57	5.96	24.58	0.24	12.79	25.59	2.15	1.22	0.50	0.209635
0.5758	6.08	24.58	0.25	13.25	26.51	2.18	1.25	0.51	0.214762
0.5935	6.47	24.60	0.26	14.69	29.38	2.27	1.35	0.52	0.230483
0.6	6.62	24.61	0.27	15.23	30.46	2.30	1.38	0.52	0.236285
0.61	6.84	24.62	0.28	16.08	32.16	2.35	1.44	0.53	0.245239
0.6188	7.03	24.63	0.29	16.84	33.69	2.40	1.48	0.54	0.253148
0.6484	7.68	24.66	0.31	19.51	39.02	2.54	1.65	0.56	0.279939
0.667	8.09	24.68	0.33	21.26	42.52	2.63	1.75	0.57	0.296918

For water depths greater than 0.667 ft but less than 0.847 ft

Y3= Y - 0.667
A4= A3 + 22 * Y3 + 25 * Y3^2
P4= P3 + SQRT(2501 * Y3^2)

Depth (ft)	rea (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.7	8.84	26.33	0.34	23.62	47.24	2.67	1.87	0.56	0.307839
0.73	9.57	27.83	0.34	25.99	51.98	2.71	1.98	0.56	0.318626
0.75	10.09	28.83	0.35	27.69	55.38	2.75	2.06	0.56	0.326222
0.77	10.62	29.83	0.36	29.50	58.99	2.78	2.14	0.56	0.334115
0.79	11.17	30.83	0.36	31.40	62.80	2.81	2.22	0.56	0.342282
0.82	12.04	32.33	0.37	34.46	68.91	2.86	2.35	0.56	0.355011
0.847	**12.86**	**33.68**	**0.38**	**37.42**	**74.83**	**2.91**	**2.46**	**0.56**	**0.366915**

Infrastructure List

EXHIBIT "A"
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LISTING
(LEGAL DESCRIPTION OF SUBDIVISION)
West Bluff
(NAME and UNIT OF SUBDIVISION)

Application No: 00450-00000-00235
DRC Project Number:
Prelim. Plat Approved:
Prelim. Plat Expires:
Site Plan Approved:

Date Submitted:

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA processs and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair detemines that appurtenant or non essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and the agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Size	Type Improvement	Location	From	To
12' F-E	Arterial Paving	Coors Boulevard	Quail Road	Redlands Road
	Curb & Gutter, 6' Sidewalks			
12' F-E	Arterial Paving for Right Turn Lane	Coors Boulevard	550' South of Quail	Quail Road
	Curb and Gutter			
12' F-E	Arterial Paving for Decel Lane	Coors Boulevard	150' South of Ouray	Ouray Road
	Curb and Gutter			
10'	Asphalt Trail	Coors Boulevard	Quail Road	South Property Line
10'	Asphalt Trail	South Property Line	Coors Boulevard	Atrisco Drive
	Arterial Paving	Quail Road	Coors Boulevard	Corona Drive
	Curb & Gutter, 6' Sidewalks			
	(Widen to 75' F-F)			
	(In Accordance with TIS)			
40' F-F	Arterial Paving	Ouray Road	Coors Boulevard	Corona Drive
	Curb & Gutter, Sidewalks 6'			
12' F-E	Arterial Paving	Corona Drive	Quail Road	Wal-mart East Property Line
	West Curb & Gutter, 6' Sidewalks			
	(Widen to 48' F-F)			
40' F-F	Arterial Paving	Corona Drive	Wal-mart East Property Line	Atrisco Drive
	Curb & Gutter			
	6' Sidewalks on East and South			
36"	RCP Storm Sewer	Corona Drive	700' South of Quail Road	870' South of Quail Road
18"	RCP Storm Sewer	Corona Drive	370' West of Atrisco Drive	225' West of Atrisco Drive
24"	RCP Storm Sewer	Corona Drive	225' West of Atrisco Drive	35' West of Atrisco Drive
30"	RCP Storm Sewer	Corona Drive	35' West of Atrisco Drive	Atrisco Drive
18"	RCP Storm Sewer	Corona Drive	Atrisco	100' East of Atrisco Drive
8"	SAS Gravity Line	Corona Drive	Wal-mart East Property Line	Atrisco Drive
Alternate #1				
8"	Water PVC Line	Corona Drive	Wal-mart East Property Line	Atrisco Drive
12"	Water PVC Line	West Side of Property	Atrisco Drive	Northwest Corner of Wal-mart
Alternate #2				
12"	Water PVC Line	Corona Drive	Wal-mart East Property Line	Atrisco Drive
12"	Water PVC Line	North Side of Wal-mart Building	Wal-mart East Property Line	200' East of Property Line

	Removal of Existing Water, Sanitary Sewer, and Storm Drain Lines in Atrisco and Corona			
	Intersection Improvements at Quail/Coors in accordance with the TIS (including signal modifications).			
	Water Infrastructure to include Valves, Fittings, Valve Boxes, and Fire Hydrants as required.			
	Sanitary Sewer to include Manholes and Service Connections as required.			
	Catch basins and RCP included with Storm Sewer.			
	Residential Street Lights per DPM.			
	Certified Grading & Drainage with Private Walls & Private Drainage (Non-work order item) Required for SIA/Financial Release			

Agent/Owner Name: _____

Agent/Owner Name: Ronald R. Bohannan, P.E.

Firm: Tierra West LLC

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

Transportation Dev.	Date	Utility Dev.	Date	Parks & GS.	Date
City Engineer	Date	AMAFCA	Date	DRB Chairman	Dat

DRC REVISIONS

Revisions	Date	DRC Chair	User Department	Agent/Owner

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 13, 2002

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

RE: WALMART (WEST BLUFF CTR. TR. 5) (H-11/D59)
(2550 Coors Blvd NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/1/2000
ENGINEERS CERTIFICATION DATED 6/13/2002

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 6/13/2002, and the previous approval of the SO19 by the City's Storm Drainage Maintenance inspector, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

C: Vickie Chavez, COA
approval file
drainage file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 25, 2000

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

RE: Drainage Report and Grading and Drainage Plan for West Bluff (H11/D59), Submitted for Site Development Plan for Subdivision Approval, Site Development Plan for Building Permit Approval, Building Permit Approval and Grading Permit Approval, Engineer's Stamp Dated 12/28/99.

Dear Mr. Bohannan:

Prior to approval of the above referenced plan for Site plan approval by the DRB, the following comments must be addressed:

1. Ultimate street grades were not provided for Quail Road, Corona Drive or Coors Boulevard adjacent to the site. The plans must clearly show which way these streets drain. Provide elevations at the Quail Road/Corona Drive intersection to demonstrate the drainage patterns in this area. Also show how the runoff in Coors will be intercepted.

2. The storm drain capacity calculations are difficult to follow and it is unclear if all basins were taken into account, especially on Ouray. Please identify which basins enter the storm drain at each location.

3. The storm drain table states that street flows enter the system at pipe 22, however the drainage basin discharging to this pipe was not identified. From this pipe to the outfall, what amount of runoff enters the system from Coors and from west of Coors? Is downstream capacity exceeded with this additional runoff?

4. Street calculations were not provided. How was it determined where the inlets were needed, i.e. where the runoff cannot be contained within the curbs?

5. On the grading plan, please provide more existing spot elevations around the perimeter of the site, especially along the east and south sides. Also provide proposed elevations where Basins 27 and 29 are located to show how they drain.

6. Where are the proposed retaining walls located? The plans show a detail, however, no symbol for retaining walls is shown in the legend. Since these must be certified, their locations must be clear.

7. Prior to Building permit approval, the plan must show that the required one-foot water blocks are provided at all entrances to keep the street runoff from entering the site.

If you have any questions regarding these comments, please call me at 924-3982.

Sincerely,

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

c: File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: *West Bluff* **ZONE ATLAS/DRNG. FILE #:** *H-11 / D059*

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

LEGAL DESCRIPTION: _____

CITY ADDRESS: *Northeast Corner of Coors Blvd and I-40*

ENGINEERING FIRM: *TIERRA WEST, LLC* **CONTACT:** *RONALD R. BOHANNAN OR SARA LAVY*

ADDRESS: *4421 McCleod Rd. NE Suite D, 87109* **PHONE:** *(505) 883-7592*

OWNER: _____ **CONTACT:** _____

ADDRESS: _____ **PHONE:** _____

ARCHITECT: _____ **CONTACT:** _____

ADDRESS: _____ **PHONE:** _____

SURVEYOR: *Precision Surveys* **CONTACT:** *Larry Medrano*

ADDRESS: *8414-D Jefferson Street, NE* **PHONE:** *(505)856-5700*

CONTRACTOR: _____ **CONTACT:** _____

ADDRESS: _____ **PHONE:** _____

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

- ___ YES
- X NO
- ___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SKETCH PLAN APPROVAL
- ___ PRELIMINARY PLAT APPROVAL
- X S. DEV. PLAN FOR SUB'D. APPROVAL
- X S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY APPROVAL
- X GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ S. A. D. DRAINAGE REPORT
- ___ DRAINAGE REQUIREMENTS
- ___ *OTHER*

RECEIVED
DEC 29 1999
HYDROLOGY SECTION

DATE SUBMITTED: *12/29/99*

BY: *Sara Lavy*

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 20, 2001

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

RE: WEST BLUFF CENTER (H-11/D59)
(Mass Grading Certification for Walmart and Home Depot Sites)
Engineers Certification For Release of Financial Guaranty
Engineers Stamp dated 3/1/2000
Engineer's Certification dated 7/11/2001

Dear Mr. Bohannan:

Based upon the information provided in your submittal dated 7/12/2001, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for City Hydrology requirements; *However*, prior to release of the SIA and Financial Guaranty, as per the infrasturcture list dated 8/9/2000, "A design for an Eastbound on-ramp of I-40 at Coors must be submitted and approved prior to release of the SIA and Financial Guaranty".

NOTE: As per City Hydrology letter dated 3/26/2001, an Engineers Certification is still required prior to issuance of Certificate of Occupancy for any building permitted.

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

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Public Works Department

C: Arlene Portillo, PWD – #646681
file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. Box 1293 Albuquerque, NM 87103
Public Works Department

July 10, 2001

Certificate of Work Order Completion

City Engineer
600 Second St.
Plaza Del Sol
Albuquerque, NM 87102

Re: West Bluff Center Project No. 6466.81
Map No. H-11

Dear Sir:

This is to certify that Project No. 6466.81 has been completed according to approved plans and construction specifications. Please be advised this Certificate of Work-Order Completion does not constitute acceptance of the city infrastructure until all requirements of the subdivision improvements agreement have been satisfied and a Certificate of Completion and Acceptance is issued by the City Engineer.

The project is described as follows:
The West Bluff project is a new commercial development located north of Interstate 40 and East of Coors Boulevard. A total of 7 tracts were created and the following items constructed as part of infrastructure for the above-mentioned project.

Paving:
A 12' F-E Arterial Paving right turn lane was constructed in Coors Boulevard from Quail Road to Redlands Road with curb and gutter and 6' sidewalks.

A 12' F-E Arterial Paving right turn lane was constructed in Coors Boulevard from 550' south of Quail Road to Quail Road with curb and gutter.

A 12' F-E Arterial Paving deceleration lane is existing in Coors Boulevard from 150' south of Ouray Road to Ouray Road with curb and gutter.

A 10' Asphalt Trail was constructed adjacent to Coors Boulevard from Quail Road to the south property line.

A 10' Asphalt Trail was constructed on the South Property Line from Coors Boulevard to Atrisco Drive.

A 12' F-E Arterial Paving was constructed in Quail Road from Coors Boulevard to Corona Drive with curb and gutter and 6' sidewalk.

A 40' F-F Arterial Paving was constructed in Ouray Road from Coors Boulevard to Corona Drive with curb and gutter and 6' sidewalks both sides.

A 12' F-E Arterial Paving was constructed in Corona drive from Quail Road to the Wal-mart east property line with curb and gutter and 6' sidewalk.

A 40' F-F Arterial Paving was constructed in Corona Drive from the Wal-mart east property line to Atrisco Drive with curb and gutter and 6' sidewalk on the east and south sides.

A $60,000 SIA was established for paving improvements and design of an eastbound I-40 ramp from Coors Boulevard to I-40.

Storm Sewer:

A 36" RCP Storm Sewer was installed in Corona Drive from 700' south of Quail Road to 870' south of Quail road.

A 18" RCP Storm Sewer was installed in Corona Drive from 370' west of Atrisco Drive to 225' west of Atrisco Drive.

A 24" RCP Storm Sewer was installed in Corona Drive from 225' west of Atrisco Drive to 35' west of Atrisco Drive.

A 30" RCP Storm Sewer was installed in Corona Drive from 35' west of Atrisco Drive to Atrisco Drive.

An 18" RCP Storm Sewer was installed in Corona Drive from Atrisco Drive to 100' east of Atristo Drive.

Sanitary Sewer:

A 8" SDR-35 gravity sewer line was installed in Corona Drive from the Wal-mart east property line to Atrisco Drive.

Water:

A 12" C-900 PVC water line was installed in Corona Drive from the Wal-mart east property line to Atrisco Drive.

A 12" C-900 PVC water line was installed on the north side of the Wal-mart Building from the Wal-mart east property Line to 200' East of the Wal-mart west property line.

Misc:

A 18" SDR-35 gravity sewer line was installed in Ouray Road from Coors Boulevard to Corona Drive.
Removal of existing water, sanitary sewer, and storm drain lines in Atrisco and Corona.
Sanitary sewer to included manholes and service connections as required.

Intersection improvements at Quail/Coors in accordance with the TIS (including signal modifications).
Water infrastructure included valves, fittings, valve boxes, and fire hydrants as required.

Catch basins and RCP included with Storm Sewer.

Residential street lights were installed per the DPM.
Grading and drainage has been certified

The contractor's correction period will begin the date of the City Engineers Certificate of Completion and Acceptance letter and is effective for a period of one (1) year.

Sincerely,

Peter Chang 7/10/01

Peter Chang, P.E.
Chief Construction Engineer
Public Works Department

c: Franklins Earthmoving
Tierra West LLC
Master Scheduler
Project Administrator
Martin Barker, Materials Testing Lab
Sam Hall, Water Systems
Dave Harmon, Traffic Engineering, PWD
Josie Jaramillo, New Meter Sales, PWD
George King, Maps & Records, PWD
Project No. 6466.81
Warranty:Contract

NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.

2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.

3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.

4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET US

6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY O THE OWNER OF THE PROPERTY SERVED.

7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

RECEIVED
MAY 1 0 2002
HYDROLOGY SECTION

APPROVAL	NAME	DATE
INSPECTOR	COA SDM Matt Clin SO19# 2052703	5/3/02

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

RECEIVED
MAY 1 0 2002
HYDROLOGY SECTION

December 4, 2001

Ron Bohannan, P.E.
Tierra West LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: SO #19 for West Bluff Shopping Center (H11-D59) Dated November 27, 2001

Dear Mr. Bohannan:

The above referenced three connections to public Right-Of-Way is approved. The notes are attached to the drainage plan. The approval letter sent by Bradley L. Bingham on May 4, 2000 still applies and I am just approving the SO #19 permit. Sign-off by the City's field inspector for the SO #19, is required for Hydrology final approval and Certificate of Occupancy.

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

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

C: Matt Cline, Arroyo Maintenance w/attached plan
Pam Lujan, Excavation Permits

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

H11/D059 6466.81

1ST AMENDMENT TO REVOCABLE PERMIT

NAME OF PROJECT: West Bluff Center LLC
CITY PROJECT # 6466.81

THIS 1ST AMENDMENT is made this 14th day of August 20 03, by the City of Albuquerque, New Mexico ("City") and West Bluff Center LLC., the ("Permittee") whose address is 4408 Canyon Court NE, Albuquerque, NM 87111-3010 and whose telephone number is 505-294-8625, is made in Albuquerque, New Mexico and is entered into as of the date of final execution on this Agreement.

WHEREAS, the Permittee was the developer/subdivider of the (Name of Project:) West Bluff Center, ("Project") City Project No: 6466.81; and

WHEREAS, in connection with the Project, the City and Permittee entered into a Revocable Permit on June 13, 2002 ("Permit"), which was recorded on June 14, 2002 in the records of the Bernalillo County Clerk at Book A37, Pages 5646 through 5646, wherein City agreed to allow Permittee to construct a shopping center sign and landscaping on City property.

WHEREAS, the City and Permittee wish to amend the Permit.

THEREFORE, the City and Permittee agree:

1. Paragraph 3 titled Compensation is deleted in its entirety and replaced with the following paragraph:

> 3. Compensation. As compensation for this Permit, the Permittee shall pay the City the lump sum of $863.50 for the term this Permit is in effect (hereinafter referred to as the "one time Fee").
>
> The one-time Fee shall be paid to the City upon execution of this Permit.

2. Other Terms Unchanged: Except as amended herein, the terms and conditions of the Permit will remain unchanged and will continue in full force and effect unless there is a conflict between the terms and conditions of this Amendment, and the terms and conditions of the Permit, in which case the terms and conditions of the First Amendment will control.

3. Entire Agreement: This Amendment contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

4. Changes to Agreement: Changes to this 1st Amendment are not binding unless made in writing, signed by all parties.

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Page: 1 of 3
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Mary Herrera Bern. Co. AMND R 13.00

5. Form not Changed: City and Permittee agree that changes to this form are not binding unless initialed by both on this form.

6. Authority to Execute: If the Permittee signing below was not the prior owner of the subdivision, or the Assignee is not the present owner of the Subdivision, the true past and/or present owner(s) must execute and deliver to the City a Power of Attorney or other evidence of authority which is acceptable to the City, establishing the authority of the City and/or Permittee to sign this Amendment.

Executed on the date stated in the first paragraph of this Amendment.

City of Albuquerque:
By (Signature): _____
Name: FRED AGUIRRE
Title: City Engineer
Dated: 8-14-03

Permittee:
By (Signature): _____
Name: West Bluff Center LLC, by Geltmore, Inc, Managing Member

Dated: August 4, 2003

Geltmore, Inc.
By (Signature): _____
Name: Paul L. Silverman
Title: Vice President
Dated: August 4, 2003

PERMITTEE NOTARY

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on Aug. 4th, 2003 by Paul L. Silverman (name of person) Vice President on behalf of Geltmore, Inc., Managing Member of West Bluff Center LLC.

_____
Notary Public

My Commission Expires: 09-25-06

OFFICIAL SEAL
JANNA MYRICK
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires 09-25-06

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Page: 2 of 3

CITY OF ALBUQUERQUE:

By: _____

Fred J. Aguirre, City Engineer
Public Works Department

Date: 8-14-03

CITY'S NOTARY

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on August 14, 20 03 by Fred J. Aguirre, City Engineer, ~~Public Works~~ Planning Department of the City of Albuquerque, a municipal corporation, on behalf of the municipal corporation.

_____
Notary Public

My Commission Expires:
11-15-2003

GELTMORE NOTARY

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on Aug 4, 20 03 by Paul L. Silverman, Vice President, on behalf of Geltmore, Inc.

_____
Notary Public

My Commission Expires:
09-25-06

OFFICIAL SEAL
JANNA MYRICK
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires 09-25-06

Agrekjc/1stAmendtoRevocablePermit

Mary Herrera Bern. Co. AMND R 13.00

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Page: 3 of 3
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CONTRACT CONTROL FORM

PRELIMINARY REVIEW

Project # 646681
CCN# 200100470

Contact Person Kathy Jaramillo
Phone No. 924-3996

New or Ext. #

Type of Agreement: Revocable permit (1st amendment)

Description/Project Name: West Bluff Center
Planning Dept./Div .: Design Review
Developer: West Bluff Center, LLC
Contract Amount $ 863.50 one time
SIA Contract Period: 8/14/03 - 6/30/2022
Contract Amount $
SIA Contract Period: -
Contract Amount $
S/W Contract Period: -

DRAFT CONTRACT:
Rec'd by Legal: Rejected/Returned to Dept.: /
Returned to Legal: / Approved: Initials:

FINANCIAL GUARANTY:
Letter of Credit No.: Date: Attached: Yes___ No.___ Initial
Other: Type Date: Attached: Yes___ No.___ Initial

FINAL CONTRACT REVIEW

APPROVALS REQUIRED:

	Date Delivered	Returned to Dept.	Approved By	Approval Date
Utility Div				
Hydrology Div				
Transportation Div				
DRC Chairman	8/6/2003	8/6/03		8/6/03
Legal Dept	8/6/03	8/8/03		
City Engineer	8/13/03	8/14/03		8/14/03
PWD Director				
Finance				
City Clerk				
CAO				

DISTRIBUTION:

	Date:	By:
User Department.	8/18/03	
Vendor		
City Clerk	8/19/03	
Treasury		
Other:		

1700.

#646681

REVOCABLE PERMIT

THIS REVOCABLE PERMIT, made and entered into this 13th day of June, 2002, by and between the City of Albuquerque, New Mexico, a municipal corporation (hereinafter referred to as the "City") as grantor and WEST BLUFF CENTER LLC (hereinafter referred to as the "Permittee") as permittee.

WITNESSETH, that in consideration of the mutual obligations and covenants herein, the parties hereto do mutually agree as follows:

1. Permit. Subject to the terms and conditions of this Permit, the City grants Permittee the right to construct, install, operate, maintain, replace and remove SIGN & LANDSCAPING (hereinafter referred to as the "Facility") within the public rights-of-way at the following locations, as more particularly shown on the drawing which is attached hereto as Exhibit A and made a part of this Permit:

590 FEET SOUTH OF OURAY ROAD AND 56 FEET EAST OF COORS BOULEVARD RIGHT-OF-WAY

(hereinafter referred to as the "Location")

2. Use. The Permittee shall use the location solely for PLACEMENT OF SHOPPING CENTER SIGN & LANDSCAPING REQUIREMENTS and will not use it for any other purpose whatsoever without first obtaining the written consent of the City.

3. Compensation. As compensation for this Permit, the Permittee shall pay the City the sum of NINE HUNDRED FORTY-NINE & NO/CENTS Dollars ($ 949.00) for each year this Permit is in effect (hereinafter referred to as the "Annual Fee").

The Annual Fee shall be paid to the City upon execution of this Permit, and by the same month and day each year thereafter for the term of this Permit.

4. Term, Termination and Removal. This Permit will remain in effect for a period of TWENTY (20) years from the date of execution of this Permit (hereinafter referred to as the "Term"), unless terminated and revoked as a result of:

a. The Permittee's breach of any provision of or default in the performance of any obligation pursuant to this Permit. If Permittee breaches any of the provisions hereof or is in default in the performance of any obligation imposed hereunder, the City may give thirty (30) days written notice (the "Notice Period") to the Permittee of the termination of this Permit. If the Permittee remains in default or the breach of any provision hereof remains incurred at the end of the Notice Period, this Permit shall terminate; or

b. The City's giving the Permittee written notice ninety (90) days in advance of termination; or

c. The Permittee's giving the City written notice ninety (90) days in advance of termination; or

Mary Herrera Bern. Co. AGRE R 19.00
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Page: 1 of 7
06/14/2002 01:27P
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d. An order of a court of competent jurisdiction.

Upon termination of this Permit and any renewal hereof, the Permittee shall abandon the use of the Facility, and shall remove the Facility and restore the right-of-way as nearly as possible to the condition it was in prior to removal, all at the sole expense of the Permittee.

If, after termination and within thirty (30) days after being directed to do so by the City, the Permittee fails to remove the Facility and restore the right-of-way, the City may perform the work and the Permittee shall reimburse the City within thirty (30) days after the City submits a bill to the Permittee for the costs of such work.

Termination of this Permit for any reason shall not release the Permittee from any liability or obligation relating to the installation, operation, maintenance or removal of the Facility or any other term of this Permit.

5. Renewal of Permit. If both the City and the Permittee wish to extend the Term of this Permit, then, before the expiration of the Term, the City and the Permittee shall enter into good faith negotiations, the object of which will be to agree upon the terms of a renewal of this Permit. The agreement of the City shall not be withheld unreasonably. If an agreement is reached, all terms, including the agreed-upon consideration, shall be reduced to a writing signed by both parties.

6. Location, Installation, Maintenance and Removal. At its own expense, the Permittee shall install and construct the Facility of such material, and in a manner that will not at any time be a source of danger to, or interfere with the City's present or future use of the right-of-way, or the use of the right-of-way by any utility presently franchised by the City, or interfere with its use as a public way. If during installation it becomes evident that the Permittee's proposed installation will interfere with existing City installations or any existing underground installations, then the Permittee shall modify its installation at the Location to avoid the conflict, after obtaining the City's approval for the change, at the sole expense of the Permittee. All permits required by the City for work within the right-of-way will be the responsibility of the Permittee's contractor.

After installation of the Facility, the Permittee shall backfill, compact, repair and repave all resulting trenches, curbs, gutters and pavement to the satisfaction of the City, restoring them to as close to their original condition as is reasonably possible.

If, in the judgement of the City, the Permittee at any time fails to perform its obligations under this section, the City, at the City's option, may perform whatever work the City deems necessary for the public safety, health and welfare, and the Permittee shall reimburse the City within thirty (30) days after the City submits a bill to the Permittee for the costs of performing such work. However, the City is not required to perform such work, and any failure by the City to perform the Permittee obligations shall not release the Permittee from liability for any loss or damage caused by the Permittee's failure to perform its obligations.

Installation, maintenance and removal of the Facility shall be accomplished in a manner which will not unreasonably impede traffic adjacent to the Location or impede its use as a public way, as determined by the City. The timing and manner of such construction, maintenance and removal shall be done in compliance with the City's requirements.

If the Facility or any part thereof is the cause of an emergency condition, and the City determines that the situation makes it unreasonable to notify the Permittee or await action by the Permittee, the City may take whatever actions it deems necessary to remedy the emergency situation at he sole expense of the Permittee, which will reimburse the City within thirty (30) days after the City submits a bill to the Permittee for the costs of such actions.

7. As-Builts. Upon completion of the construction and installation of the Facility, the Permittee shall promptly provide the City with one set of reproducible as-built, record drawings, reflecting construction and installation as actually accomplished.

8. Insurance. During the Term of this Permit, including renewals, if any, the Permittee shall obtain and maintain liability insurance in an amount of not less than $1,000,000 combined single limit for accidents or occurrences which cause bodily injury, death or property damage to any member of the public caused by or related to the construction, installation, operation, maintenance, replacement, removal or other activity related to the Facility. The insurance policy shall name the City of Albuquerque, its employees and elected officials, as their interest may appear, as additional insured. Any cancellation provision must provide that if the policy is cancelled prior to the expiration date of the Permit, materially changed or not renewed, the issuing company will mail thirty (30) days written notice to the City, Attention: Risk Management. A certificate of insurance in compliance with the above must be furnished to the City with the execution of this Permit and prior to commencement of construction.

9. Indemnity/Liability. At all times the Permittee shall defend indemnify and save harmless the City, its officers, agents and employees against all claims, demands, damages and causes of action which results from or arises out of the construction, installation, operation, maintenance, replacement or removal of the Facility including any loss, damage or expense arising out of loss of or damage to property, injury to or death of persons, or mechanics' or other liens of any character, or taxes or assessments of any kind, except to the extent of degree that the City itself is found contributorily negligent. To the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the indemnitee, or the agents or employees of the indemnitee; or (2) the giving of or the failure to give direction or instructions by the indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property. The indemnification required hereunder shall not be limited as a result of the specifications of any applicable insurance coverage. Nothing herein is intended to impair any right or immunity under the laws of the State of New Mexico.

Mary Herrera Bern. Co. AGRE R 19.00
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Page: 3 of 7
06/14/2002 01:27P
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10. Entire Agreement. This Permit contains the entire agreement of the parties regarding the Facility and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

11. Changes. Changes to this Permit are not binding unless made in writing, signed by both parties.

12. Captions. The captions to the sections or paragraphs of this Permit are not part of this Permit and will not affect the meaning or construction of any of its provision.

13. Binding Effect. This Permit is binding upon and inures to the benefit of the successors and/or assigns of the parties.

14. Compliance with Laws. The Permittee and its contractors shall comply with all federal, state and local laws, ordinances, regulations and rules and will not discriminate illegally against any person. The Permittee's attention is specifically drawn to 62-14-1 et seq. NASA, (1978 Comp., 1984 Repl. Pamphlet) regarding excavation damage to pipelines and underground utility lines.

15. Applicable Law. This Permit is governed by and construed and enforced in accordance with the laws of the State of New Mexico.

16. Construction and Severability. If any part of this Permit is held to be invalid or unenforceable, the remainder of this Permit will remain valid and enforceable if the remainder of the Permit is reasonably capable of completion.

17. Assignment. The Permittee shall not assign any interest in this Agreement and shall not transfer any interest in this Agreement (whether by assignment or novation).

18. Notice. For purposes of giving formal written notice to the Permittee, the Permittee's address is:

WEST BLUFF CENTER LLC
ATTN: PAUL SILVERMAN
4408 CANYON COURT NE, ALBUQUERQUE, NM 87111
PHONE #: (505)294-8625

For purposes of giving formal, written notice of the City, the City's address is:

Mayor
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Copies of any notices to the City must also be given to:

Director, Public Works Department
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Written notice must be made either personally or by certified United States Mail. If the notice is mailed, the notice will be complete when deposited in the United States Mail, postage paid, and addressed as required in this Section. Notice of change of address will be given in the same manner as required by this Section.

19. Approval Required. This Permit Agreement shall not become effective or binding until approved by the City's Public Works Department Director.

IN WITNESS WHEREOF, the City and the Permittee have executed this Permit Agreement the day and year first above written.

CITY OF ALBUQUERQUE

Approved by:

City Engineer
Public Works Department

Date: 6-13-02

Permittee: **WEST BLUFF CENTER LLC**

By: Paul Silver

Title: Manager

6/11/02 of 6/11/02

Mary Herrera Bern. Co. AGRE R 19.00

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Page: 5 of 7
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CITY'S NOTARY

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on 13th day of June, 2002, by Fred J. Aguirre, City Engineer, Public Works Department of the City of Albuquerque, a municipal corporation on behalf of said corporation.

Gloria D. Saavedra
NOTARY PUBLIC

My Commission Expires:

11-15-2003

PERMITTEE'S NOTARY

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on 16th day of May, 2002, by PAUL SILVERMAN, MANAGER of WEST BLUFF CENTER LLC, a New Mexico Limited Liability Company on behalf of said WEST BLUFF CENTER.

Karen Stewart
NOTARY PUBLIC

My Commission Expires:

OFFICIAL SEAL
Karen Stewart
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 01-06-03

Mary Herrera Bern. Co. AGRE R 19.00
2002075862
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Page: 7 of 7
06/14/2002 01:27P
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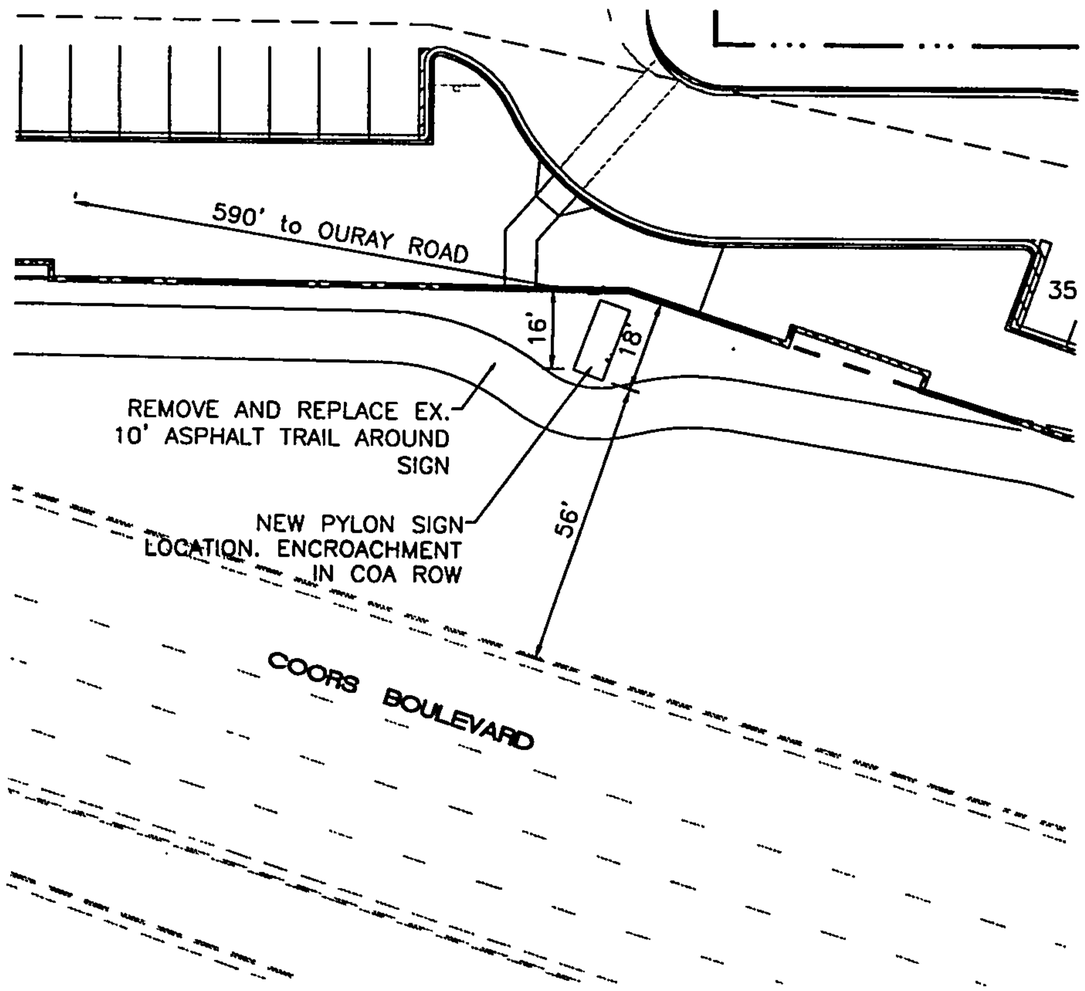
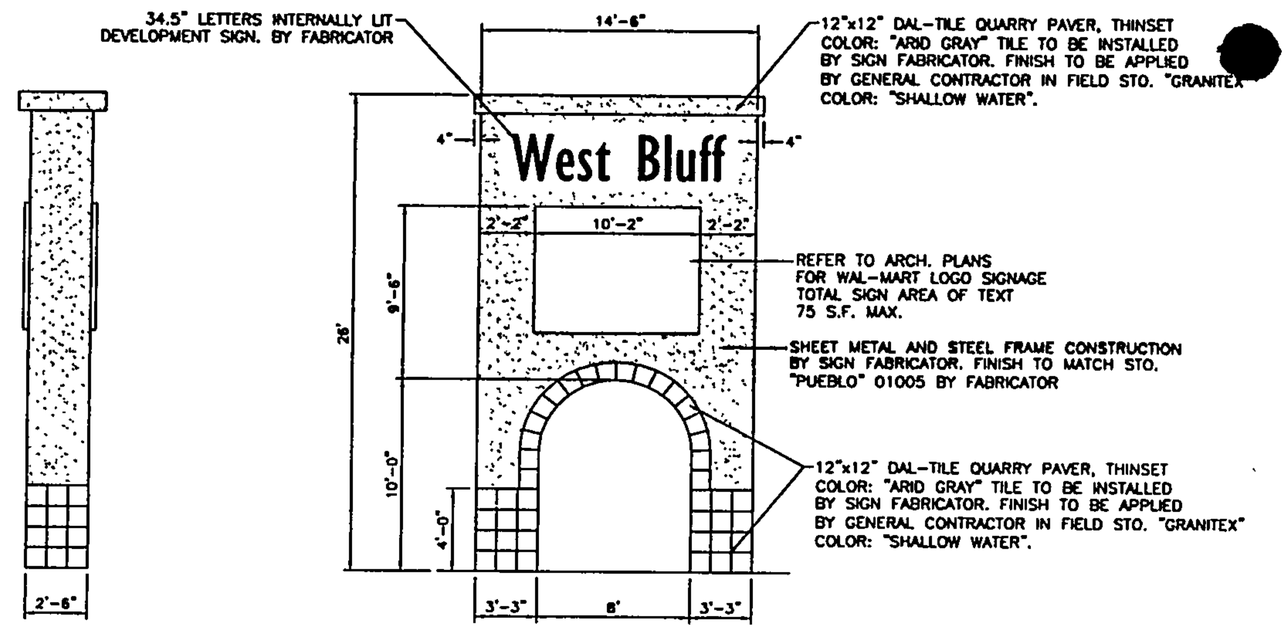


ENCROACHMENT EXHIBIT



NOTE: MONUMENT SIGNS TO BE LOCATED IN DESIGNATED AREAS AS INDICATED ON THE SITE PLAN.

PYLON SIGN DETAIL
NTS

CONTRACT CONTROL FORM

PRELIMINARY REVIEW

Project # 646681
CCN# 200100470
Contact Person KATHY JARAMILLO
Phone No. 924-3996
~~New~~ or Ext. #

Type of Agreement: Revocable permit

Description/Project Name: West Bluff Center
Public Works Dept./Div.: DESIGN REVIEW
Developer: West Bluff Center LLC
Contract Amount $ 949.00 ~~or~~ yrly ~~SIA~~ Contract Period: 6/13/02 - 6/13/2022
Contract Amount $ SIA Contract Period: -
Contract Amount $ S/W Contract Period: -

DRAFT CONTRACT:
Rec'd by Legal: Rejected/Returned to Dept.: /
Returned to Legal: / Appproved: Initials:

FINANCIAL GUARANTY:
Letter of Credit No.: Date: Attached: Yes___ No.___ Initial
Other: Type Date: Attached: Yes___ No.___ Initial

FINAL CONTRACT REVIEW

APPROVALS REQUIRED:

	Date Delivered	Returned to Dept.	Approved By	Approval Date
Utilitiy Div				
Hydrology Div				
Transportation Div				
DRC Chairman	6/6/02	6/7/02		6/7/02
Legal Dept	6/4/02	6/11/02		6/11/02
City Engineer	6/12/02	6/13/02		6/13/02
PWD Director				
Finance				
City Clerk				
CAO				

DISTRIBUTION:

	Date:	By:
User Department.	6/14/02	
Vendor		
City Clerk	6/25/02	
Treasury		
Other:		

JN 980063
Incoming 6X
DRB
cc: Paul Silver

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

JANUARY 24, 2002

CERTIFICATE OF COMPLETION AND ACCEPTANCE

Paul Silverman, Manager
WEST BLUFF CENTER LLC
4408 Canyon Court N.E.
Albuquerque, New Mexico 87111-3010

RE: WEST BLUFF CENTER; CITY PROJECT NO. 646681

Dear Mr. Silverman:

This is to certify that the City of Albuquerque accepts the construction of the infrastructure provided in the Work Order Construction Plans, City Project No. **646681** in compliance with the completion of the required public infrastructure listed in the Subdivision Improvements Agreement, PROCEDURE B, between **WEST BLUFF CENTER LLC** and the City of Albuquerque executed on **SEPTEMBR 27, 2000.**

Having satisfied the requirements referenced above, the SIA and any associated Financial Guaranty, held by the City, can now be released (Processing the release paperwork will take approximately 2 weeks). The Contractors one-year warranty period started at the date of acceptance by the City Engineer, dated **JANUARY 24, 2002.**

Please be advised this Certificate of Completion and Acceptance shall only become effective upon final plat approval and filing in the office of the Bernalillo County Clerk's Office.

Should you have any questions or issues regarding this project, please contact me 505-924-3999.

Sincerely,

Fred J. Aguirre, City Engineer
Dev. & Bld. Services Div.
Public Works Department

1/25/02

c. Tierra West, LLC
Mary Sandoval, Construction, PWD
f/Project file

H-11/D59

CITY OF ALBUQUERQUE
PERMIT FOR EXCAVATION, CONSTRUCTION AND BARRICADING

CONTRACTOR	RUDGERS PLUMBING INC
LICENSE	6F09
ADDRESS	1570 BRIDGE BLVD. S.W. ALBUQUERQUE, NM 87105 [illegible]
SITE	2550 COORS BD NW

PERMIT NUMBER	20012703
PROJECT NUMBER	
PERMIT ISSUE DATE	12/18/2001
BARRICADED BY	
BLUE STAKE	1870
PAVING BY	CON
EXCAVATION 443008-5810000	42.00 EX
SIDEWALK 443012-5810000	0.00 SW
DRIVEPAD 443011-5810000	0.00 DP
CURB/GUTTER 443010-5810000	0.00 CG
BARRICADING 443009-5810000	25.00 BR
RESTORATION 443017-5810000	0.00 RS
TOTAL FEE	67.00

PERMIT AND DETOUR PLAN COMMENTS

50419 (SW CORNER) LETTER ON FILE NO PLANS ATTACHED.

START DATE	COMPLETION DATE	PERMIT EXPIRES	INSURANCE EXPIRES	BOND EXPIRES	ZONE ATLAS
12/18/2001	12/28/2001	12/28/2001	04/01/2002	12/31/2001	

APPLICANT

ISSUED BY

VOID UNTIL VALIDATED BY CITY TREASURER

PERMITTEE AGREES TO ASSUME ALL LIABILITY, INCLUDING IDEMNIFYING, DEFENDING AND HOLDING THE CITY HARMLESS FOR ALL DAMAGES OR INJURY TO PERSONS OR PROPERTY RESULTING FROM PERMITTEE'S EXCAVATION AND/OR BARRICADE WORK. THIS PERMIT IS GRANTED IN CONSIDERATION OF PERMITTEE'S ASSUMING SAID LIABILITY AND IS APPROVED FOR THE WORK DESCRIBED ABOVE. IN ACCORDANCE WITH SECTION 6-5-2-1 ET SEQ. R.O. (1994), PERMITTEE AGREES TO COMPLY WITH ALL APPLICABLE CITY RULES, REGULATIONS AND ORDINANCES. AND WHEN EXCAVATING, TO PATCH OR PLATE PRIOR TO OPENING TO TRAFFIC IN ACCORDANCE WITH APPLICABLE RULES, REGULATIONS AND ORDINANCES. PLEASE CALL 768-2551 FOR ADDITIONAL INFORMATION.

CAUTION: PROTECT UNDERGROUND UTILITIES CALL 260-1990, 48 HOURS IN ADVANCE FOR LINE STAKING

PWD 003 REV 07/98

DATE EXCAVATION STARTED _____

Backfill: Started _____ Completed _____ Accepted _____

Paved Cleared _____ Site Cleared _____ Warranty Exp _____

Restoration Fee Refund Authorized Yes _____ NO _____ BY: _____

Cash Disbursement Prepared for Refund Dated _____

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Rodgers Plumbing
Pulled permit on
12/18/01 # 2052703

December 4, 2001

Ron Bohannan, P.E.
Tierra West LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: SO #19 for West Bluff Shopping Center (H11-D59) Dated November 27, 2001

Dear Mr. Bohannan:

The above referenced three connections to public Right-Of-Way is approved. The notes are attached to the drainage plan. The approval letter sent by Bradley L. Bingham on May 4, 2000 still applies and I am just approving the SO #19 permit. Sign-off by the City's field inspector for the SO #19, is required for Hydrology final approval and Certificate of Occupancy.

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

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

C: Matt Cline, Arroyo Maintenance w/attached plan
Pam Lujan, Excavation Permits

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER