

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

March 9, 2023

Åsa Nilsson-Weber, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

**RE: Tract B-1, Cibola Loop Subdivision
Conceptual Drainage Plan and Drainage Report
Engineer's Stamp Date: 02/28/23
Hydrology File: A13D011B**

Dear Ms. Nilsson-Weber:

Based upon the information provided in your submittal received 02/28/2023, the Conceptual Grading & Drainage Plans are approved for action by the Development Hearing Officer (DHO) on Preliminary/Final Plat.

PRIOR TO DHO SUBMISSION:

1. Please provide the Temporary Drainage Easement for the detention pond east of the private road and a check for **\$25.00** made out to "**Bernalillo County**" to Hydrology for review at Plaza de Sol.

PRIOR TO PLAT RECORDING:

2. Please provide the executed paper Drainage Covenant (latest revision) printed on one-side only with Exhibit A and a check for **\$25.00** made out to "**Bernalillo County**" for the two detention ponds with both property owners signatures per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.

PRIOR TO BUILDING PERMIT:

1. Please submit a more detailed Grading & Drainage Plan to Hydrology for review and approval. This digital (.pdf) is emailed to PLNDRS@cabq.gov along with the Drainage Transportation Information Sheet.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the

CITY OF ALBUQUERQUE

Planning Department
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Mayor Timothy M. Keller

Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,



Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

Project Title: Tract B-1 Cibola Loop ^{Subdivision} Building Permit # _____ Hydrology File # A13
DRB# PR-2022-007518 EPC# _____
Legal Description: Tract B-1, North Albuquerque Acres City Address OR Parcel 101306632712340310

~~Applicant~~/Agent: Isaacson & Arfman, Inc. Contact: Asa Nilsson-Weber
Address: 128 Monroe Street NE Phone: (505) 268-8828
Email: asaw@iacivil.com

~~Applicant~~/Owner: VIENTECILLO, LLC Contact: _____
Address: _____ Phone: _____
Email: _____

TYPE OF DEVELOPMENT: ☒ PLAT (#of lots) 1 RESIDENCE ___ DRB SITE ___ ADMIN SITE: ___
RE-SUBMITTAL: ___ YES ☒ NO

DEPARTMENT: ___ TRANSPORTATION ☒ HYDROLOGY/DRAINAGE

Check all that apply:

TYPE OF SUBMITTAL:

___ ENGINEER/ARCHITECT CERTIFICATION
___ PAD CERTIFICATION
___ CONCEPTUAL G&D PLAN
☒ GRADING PLAN/DRAINAGE PLAN
___ DRAINAGE REPORT
___ DRAINAGE MASTER PLAN
___ FLOOD PLAN DEVELOPMENT PERMIT APP.
___ ELEVATION CERTIFICATE
___ CLOMR/LOMR
___ TRAFFIC CIRCULATION LAYOUT (TCL)
ADMINISTRATIVE
___ TRAFFIC CIRCULATION LAYOUT FOR DRB
APPROVAL
___ TRAFFIC IMPACT STUDY (TIS)
___ STREET LIGHT LAYOUT
___ OTHER (SPECIFY)
___ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY
___ CONCEPTUAL TCL DRB APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ 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
___ FLOOD PLAN DEVELOPMENT PERMIT
___ OTHER (SPECIFY) _____

DATE SUBMITTED: February 28, 2023

FEBRUARY 28, 2023

SUPPLEMENTAL INFORMATION

FOR

TRACT B-1 CIBOLA LOOP SUBDIVISION

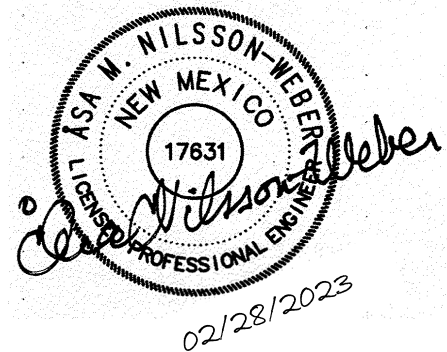
ALBUQUERQUE, NEW MEXICO

PREPARED BY

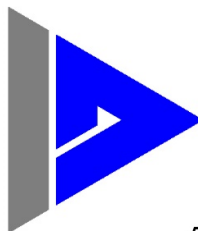
City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED

DATE: 03/09/23
BY: *Renée C. Brissette*
HydroTrans # A13D011B

THESE PLANS AND/OR REPORT ARE
CONCEPTUAL ONLY. MORE INFORMATION MAY
BE NEEDED IN THEM AND SUBMITTED TO
HYDROLOGY FOR BUILDING PERMIT APPROVAL.



Isaacson & Arfman, Inc.
Civil Engineering Consultants



128 Monroe Street NE
Albuquerque, NM 87108
505-268-8828 | www.iacivil.com

- **TRACT B-1 PRELIMINARY DRAINAGE AND
STORM DRAIN CALCULATIONS**
- **EXCERPTS FROM MASTER DRAINAGE REPORT
FOR TRES PLACITAS**
- **PLAN & PROFILES OF STORM DRAIN IN
CIBOLA LOOP AND POND GRADING PLAN
FROM TRES PLACITAS**
- **EMAIL CORRESPONDENCE BETWEEN FRED
ARFMAN, ISAACSON & ARFMAN AND SHAHAB
BIAZAR, CITY OF ALBUQUERQUE**

CALCULATIONS: 2494 - Tract B-1, Cibola Loop Subdivision (Larkspar Senior Living) :

Based on City of Albuquerque DMP, Article 6-2 Hydrology dated June 26, 2020

100-YEAR, 6-HOUR CALCULATIONS

AREA OF SITE:			225555	SF	=	5.18	ACRE
100-year, 6-hour							
DEVELOPED FLOWS:				EXCESS PRECIP:			
	Treatment SF	%		Treatment SF	%	Precip. Zone	1
Area A	=	169166	75%	Area A	=	0	0%
Area B	=	33833	15%	Area B	=	22556	10%
Area C	=	22556	10%	Area C	=	11278	5%
Area D	=	0	0%	Area D	=	191722	85%
Total Area	=	225555	100%	Total Area	=	225555	100%
On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)							
Weighted E =		$\frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$					
Historic E	=	0.62 in.	Developed E	=	2.02 in.		
On-Site Volume of Runoff: $V_{360} = E * A / 12$							
Historic V_{360}	=	11597 CF	Developed V_{360}	=	38053 CF		
On-Site Peak Discharge Rate: $Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D / 43,560$							
For Precipitation Zone 1							
Q_{pA}	=	1.54	Q_{pC}	=	2.87		
Q_{pB}	=	2.16	Q_{pD}	=	4.12		
Historic Q_p	=	9.1 CFS	Developed Q_p	=	20.0 CFS		

HYDROGRAPH FOR SMALL WATERSHED - DPM SECTION 6-2(A)(7)

Base time, t_B , for a small watershed hydrograph is (Equation 6.8):

$$t_B = (2.107 * E * A / Q_P) - (0.25 * A_D / A)$$

Where

E	=	2.02 inches
A	=	5.18 acres
A_D	=	4.40 acres
Q_P	=	20.0 cfs

t_B	=	0.89 hours
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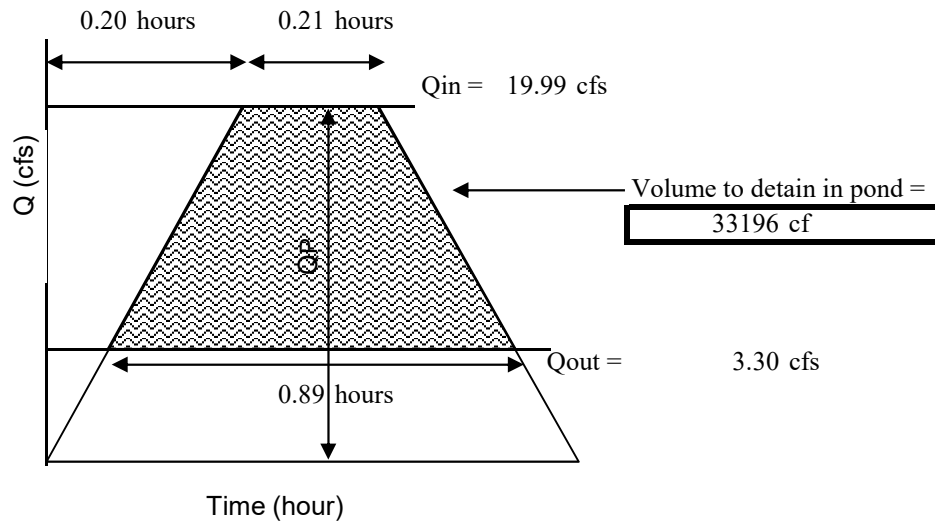
E is the excess precipitation in inches (from DPM TABLE 6.2.13), Q_P is the peak flow, A_D is the area (acres) of treatment D, and A_T is the total area in acres. Using the time of concentration, t_C (hours), the time to peak in hours is:

$$t_p = (0.7 * t_C) + ((1.6 - (A_D / A)) / 12)$$

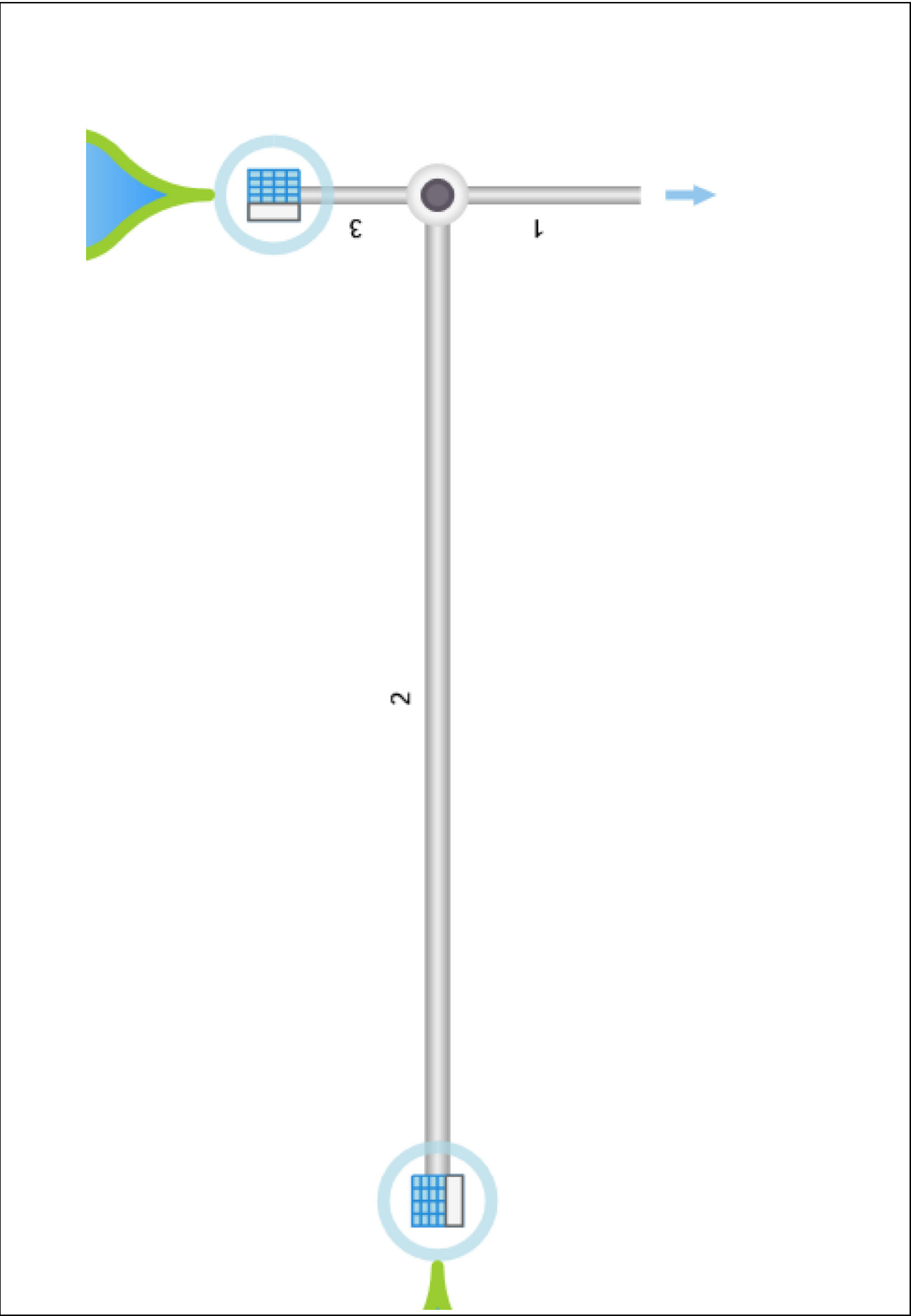
Where

t_C	=	0.20 hours
t_p	=	0.20 hours

Continue the peak for $0.25 * A_D / A_T$ hours. When A_D is zero, the hydrograph will be triangular. When A_D is not zero, the hydrograph will be trapezoidal. see the graph below:



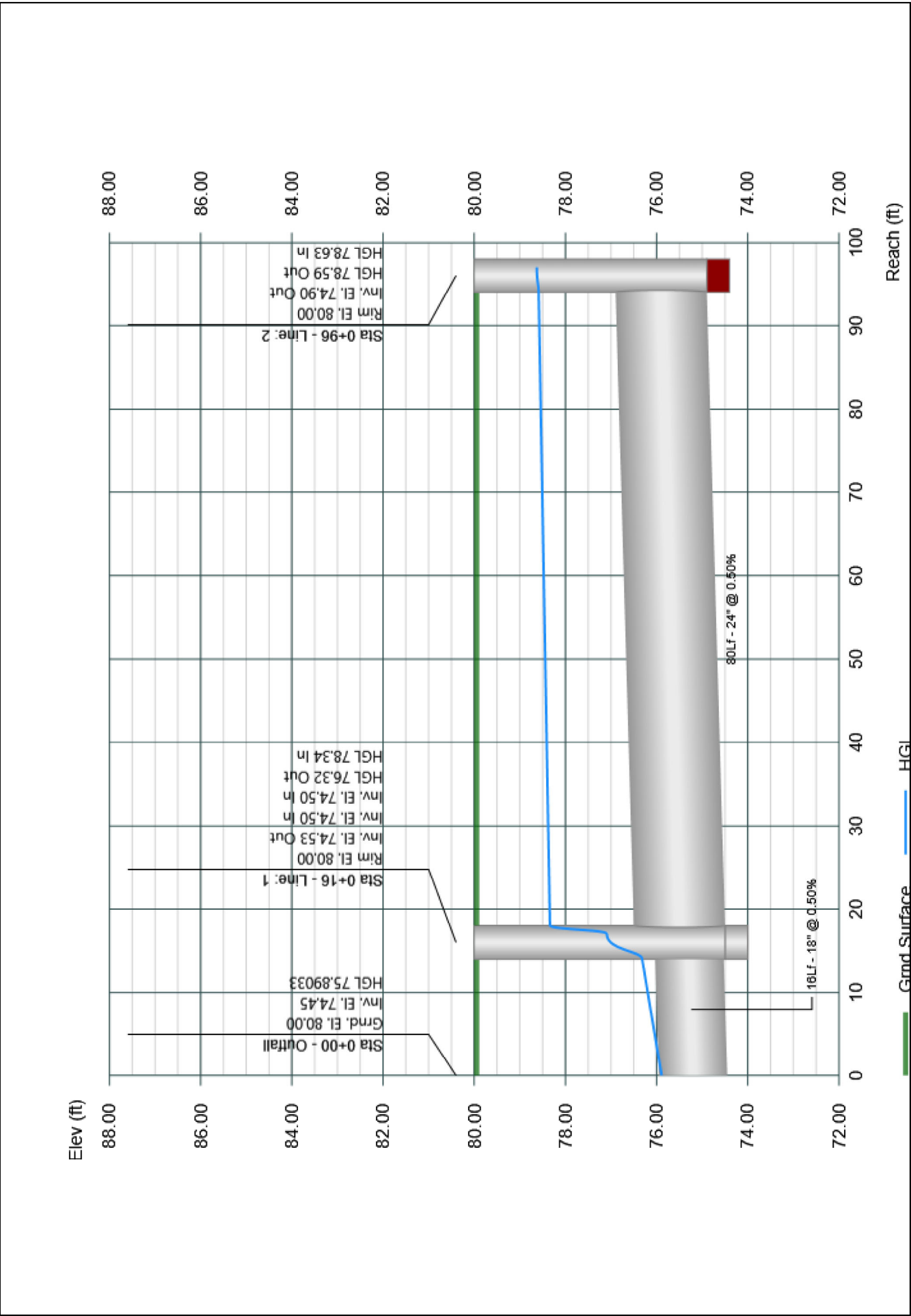
INFLOW / OUTFLOW HYDROGRAPH



Profile View

Stormwater Studio 2021 v 3.0.0.25

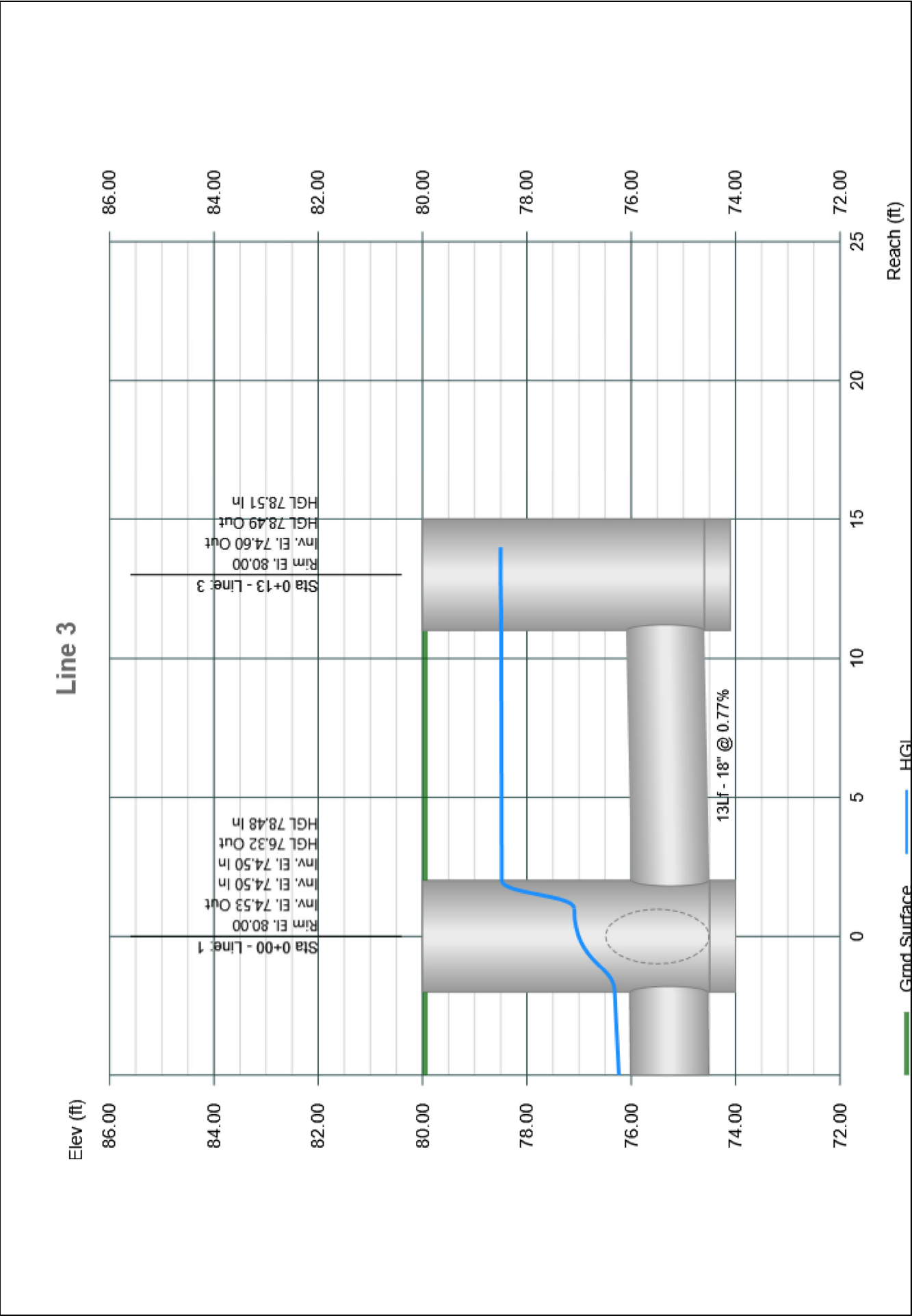
Project Name: 2494 SD
02-27-2023



Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: 2494 SD
02-27-2023



Energy Grade Line Calculations

Stormwater Studio 2021 v 3.0.0.25

Project Name: 2494 SD

02-27-2023

Line No	Line Size (in)	Q (cfs)	Downstream							Length (ft)	Upstream							Pipe		Junction		
			Invert Elev (ft)	Depth (ft)	Area (sqft)	HGL Elev (ft)	Vel (ft/s)	Vel Head (ft)	EGL Elev (ft)		Invert Elev (ft)	Depth (ft)	Area (sqft)	HGL Elev (ft)	Vel (ft/s)	Vel Head (ft)	EGL Elev (ft)	n Value	Enrgy Loss (ft)	HGLa Elev (ft)	EGLa Elev (ft)	Enrgy Loss (ft)
1	18	16.90	74.45	1.44'	1.74	75.89	9.69	1.46	77.35	74.53	1.50	1.77	76.32	9.56	1.42	77.74	0.013	0.388	77.09	78.51	0.78	
2	24	13.60	74.50	2.00	3.14	78.34	4.33	0.29	78.63	74.90	2.00	3.14	78.59	4.33	0.29	78.88	0.012	0.247	78.63	78.92	0.04	
3	18	3.30	74.50	1.50	1.77	78.48	1.87	0.05	78.54	74.60	1.50	1.77	78.49	1.87	0.05	78.55	0.012	0.011	78.51	78.56	0.01	

Notes: Return Period = 2-yr^s. ¹ Critical depth.

Project File: 2494 SD.sws

MASTER DRAINAGE REPORT

FOR

TRES PLACITAS

**A 254 LOT SINGLE FAMILY
RESIDENTIAL SUBDIVISION**

**ALBUQUERQUE, NEW MEXICO
NOVEMBER 1998**

Prepared by:

**ISAACSON & ARFMAN, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828**



Scott M McGee
Scott M. McGee, PE

11/10/98
Date

INTRODUCTION

This report shall serve as a Master Drainage Report for Tres Placitas Subdivision, which will consist of 254 single family lots. The drainage for this area was previously discussed within SAD No. 223. As shown on the attached portion of the SAD map, part of this site will drain to Black's Diversion Channel and the remainder will flow south along Cibola Loop to Ellison Drive. The allowable discharge into Ellison Drive as determined by the SAD report is 20.60 cfs.

The drainage solution outlined in the following report varies slightly from the approved SAD No. 223 solution. This variation, however, does not increase the total discharge into the Ellison Drive Storm Drain or to the downstream detention facility. Since the existing infrastructure is not compromised in any way, and since the SAD map states that the method of conveying storm waters from Tract B-9G shall be determined at the time of development, the drainage solution offered is in compliance with SAD No. 223.

The proposed variation with the SAD is that flows will be detained in an offsite pond instead of in an onsite pond. Runoff which discharges to the east will be allowed to enter either Cibola Loop or directly to a storm drain which will convey the flows to the pond. Runoff discharging to the Black's Diversion Channel will be allowed free discharge (see Appendix B).

storm drain stub in Ellison Drive which ends just west of (East) Cibola Loop. Cibola Loop has not been developed along the property frontage yet.

PROPOSED CONDITIONS:

The site is planned to be developed as a single unit with 254 lots. A portion of the land adjacent to the Black's Diversion Channel and Skyview Drainage Channel will be dedicated to AMAFCA with the final plat of this site. The previously approved outflow rate of 20.6 cfs to Ellison Drive will be achieved by the construction of an offsite detention pond.

The northeastern quarter of the site (Miera Drive to the east) will drain to the east and enter Cibola Loop at Analysis Point 19 (AP 19). Runoff from the 5-acre park will be decreased to account for onsite water harvesting by incorporating small depressed areas within the site grading. Flows exiting the park will discharge through a 12" sidewalk culvert (maximum $Q = 4$ cfs, refer to attached FlowMaster sheet) into Cuba Road. Runoff will then be carried via street flow along Cibola Loop to Analysis Point 20 (AP 20) (see Table 2 for street flow depth calculations). At this point the flows will be collected by two sump inlets (see the Sump Calculation Sheet) and conveyed east via storm drain to the detention facility.

All of the land south of Cuba Road will drain via street flow to the southeast property corner (AP 21). Flow depths for the streets are listed in Table 2. At the southeast property corner the runoff will be collected by a sump inlet and conveyed via storm drain to the detention facility.

The runoff from Analysis Points 20 and 21 will combine and flow east to the detention facility located to the south of Cibola Loop within Tract B-9E, Seven Bar Ranch. The Owner of this tract (COA) has agreed to the location of this pond and will grant the necessary drainage easements to accommodate this facility. The pond and outfall line have both been sized to accommodate the developed conditions of Tract B-9E. ?

The maximum outflow from the pond was limited to 34.25 cfs. This discharge rate was obtained by combining the allowable discharge rates (as outlined in SAD No. 223) for Tres Placitas (20.6 cfs), a portion of Tract B-9E (8.67 cfs), Cibola Loop developed flows (1.8 cfs), and the parks flows from Tract B-9H (3.18 cfs). Developed flows from Tres Placitas will divide at the western edge of the pond. An 18" diameter storm drain will run along the pond boundary to allow nuisance flows (up to 17.26 cfs) to bypass the pond. A larger 36" diameter line will direct the remaining flows into the pond. This line is designed to be completely dry (inv @ pond = 81.37) when the pond reaches its maximum water surface elevation. The pond will be

drained by an 18" diameter outlet pipe. This line and the bypass pipe will contribute to a 30" diameter line which will connect to the existing 30" diameter stub located at East Cibola Loop. All storm drain calculations including HGL and Manhole Rim elevations are located in the FlowMaster sheets. An emergency spillway will be located at the eastern pond edge. In the case of an overflow situation flows will enter Ellison Drive and flow to the east.

The northwestern portion of the property (from Miera Drive to the west) will be graded to drain to Black's Diversion Channel. This area will be allowed to discharge freely at a developed flow rate of 35.48 cfs. A hydrologic analysis of the effects that Tres Placitas will have on the Diversion Channel has been provided in Appendix B. All runoff while on site will be carried via the streets (refer to Table 2). At Analysis Point 10 (AP 10) an inlet functioning in sump condition will collect all of the flows and convey them via storm drain to Black's Diversion Channel (see attached Sump Capacity Calculations). An emergency overflow swale will be graded from the inlet to the Diversion Channel. All necessary onsite drainage easements will be granted to the City of Albuquerque. Please refer to the attached FlowMaster sheets for storm drain sizing calculations.

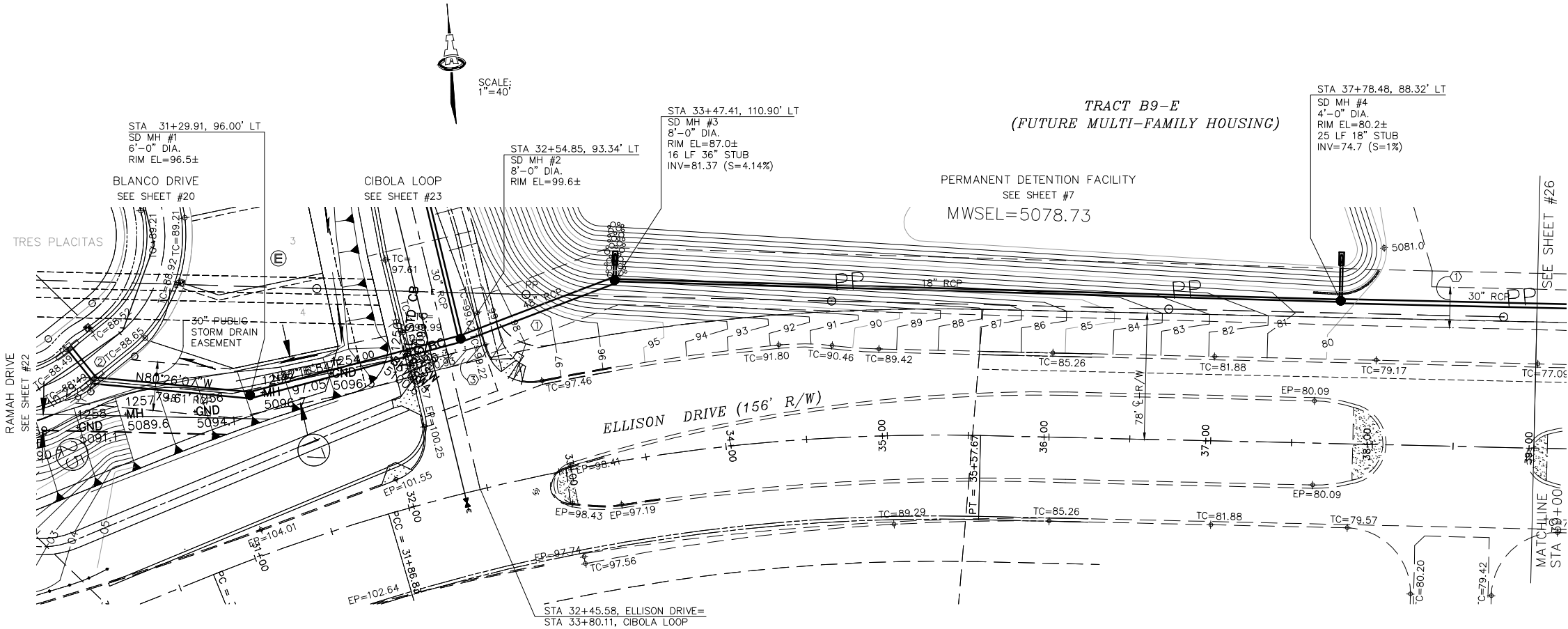
DETENTION POND FLOOD ROUTING SUMMARY

DATA / RESULT DESCRIPTION		DETENTION POND(S)		
DETENTION POND ANALYSIS POINT NUMBER		1		
RETURN PERIOD / DURATION	(yr / hr)	100 yr - 6 hr		
DEVELOPMENT CONDITION		Developed		
TOTAL DRAINAGE AREA	(sq mi)	0.0666		
INFLOW TIME TO PEAK	(hrs)	1.533		
INFLOW PEAK DISCHARGE	(cfs)	125.22		
INFLOW TOTAL RUNOFF VOLUME	(ac-ft)	3.4824		
OUTFLOW TIME TO PEAK	(hrs)	2.033		
OUTFLOW PEAK DISCHARGE	(cfs)	16.93		
OUTFLOW MAXIMUM STORAGE VOLUME AT PEAK	(ac-ft)	2.6929		
OUTFLOW TOTAL RUNOFF VOLUME	(ac-ft)	3.4824		
MAXIMUM STORAGE VOLUME AT EMERGENCY SPILLWAY ELEVATION	(ac-ft)	3.86		
DEAD STORAGE VOLUME (Between reservoir invert elev. and principal spillway invert elev.)	(ac-ft)	3.86		
TOTAL RESERVOIR STORAGE TIME	(hrs)	12.17		
RESERVOIR INVERT ELEVATION	(ft)	5081.37		
PRINCIPAL SPILLWAY ELEVATION (a) 18" ϕ RCP	(ft)	5074.7		
EMERGENCY SPILLWAY ELEVATION (b) 45' crest lgth, 5' crest width; riprap	(ft)	5080.0		
TOP OF EMBANKMENT ELEVATION	(ft)	5081.0		
MAXIMUM WATER SURFACE ELEVATION	(ft)	5078.73		
MAXIMUM WATER DEPTH	(ft)	4.03		
FREEBOARD TO EMERGENCY SPILLWAY ELEVATION	(ft)	1.27		
FREEBOARD TO TOP OF EMBANKMENT	(ft)	2.27		
EMERGENCY SPILLWAY DESIGN RETURN PERIOD	(yr / hr)	100 yr - 6 hr		
EMERGENCY SPILLWAY DESIGN FLOW	(cfs)	135		
EMERGENCY SPILLWAY DESIGN DEPTH	(ft)	1		

(a) - Provide brief description for example - One 36-inch RCP with "projecting" entrance without an orifice plate.

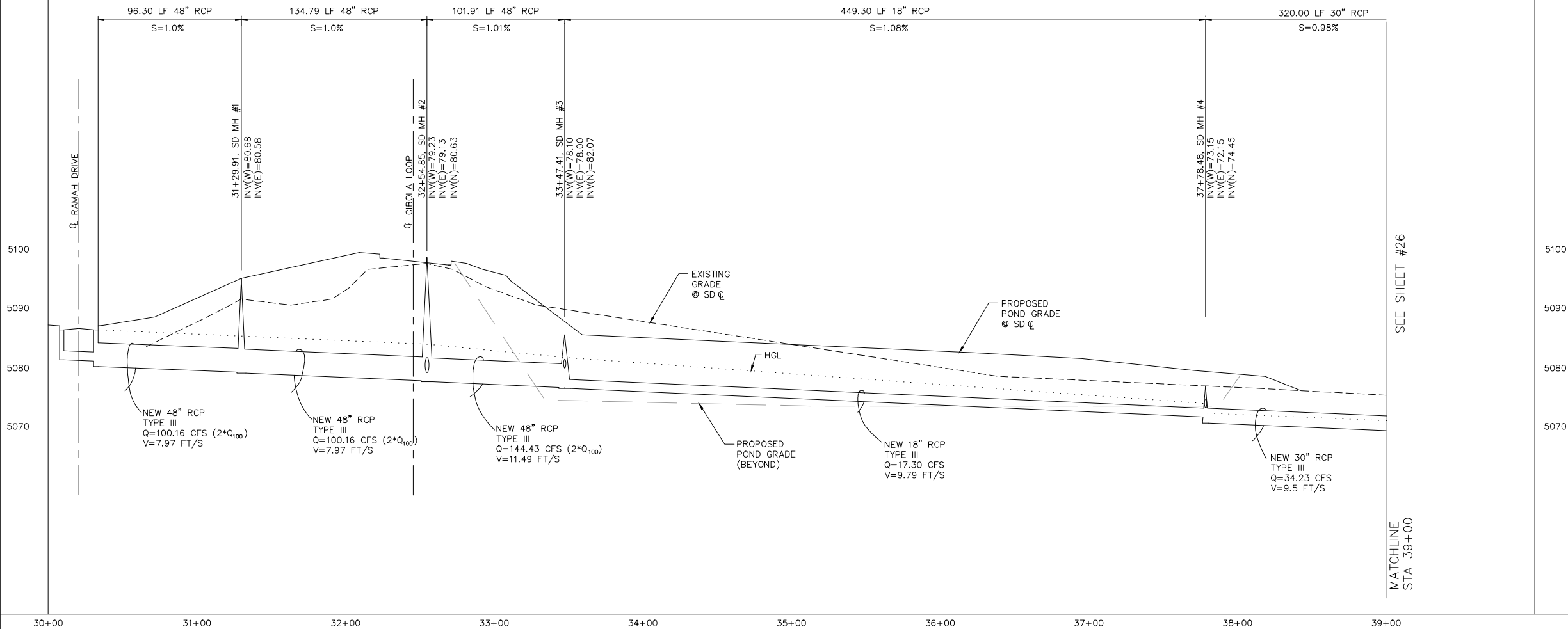
(b) - Provide brief description for example - Reinforced Concrete - 30 ft. crest length (perpendicular to flow), 10 ft. crest width (parallel with flow), trapezoidal shape to match dam embankment with side slopes of 1V:3H on embankment approach and outfall, and 1V:2H on sides of spillway above the crest.

filenameC:\hydforms\resrout.doc



OFFSITE STORM DRAIN

SCALE:
1"=40' (HOR)
1"=10' (VERT)



- KEYED CONSTRUCTION NOTES**
- TRENCH LIMITS. TRENCH BOX SHALL BE USED AS NECESSARY TO COMPLY WITH OSHA AND COA SAFETY REQUIREMENTS AND TO AVOID OVERHEAD POWER POLES.
 - FOR STORM DRAIN INLET INFORMATION, SEE SHEET #22.
 - REMOVE AND REPLACE 16 LF STANDARD CURB & GUTTER AND 40 SY PAVING PER CIBOLA LOOP SECTION ON SHEET #9.

SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
1	ALS	9/98	ACS STATION "BLACK 2, 1977" SET FLUSH IN THE GROUND 217' SOUTH OF MCMAHON ROAD NW AND 305' WEST OF GOLF COURSE ROAD NW.	CONTRACTOR	NO.
			ELEVATION = 5213.928 FEET	WORK BY	DATE
				STATION BY	DATE
				ACCEPTANCE BY	DATE
				MODIFICATION BY	DATE
				DRAWINGS BY	DATE
				CORRECTED BY	DATE
				MICRO-FILM INFORMATION	
				RECORDED BY	DATE

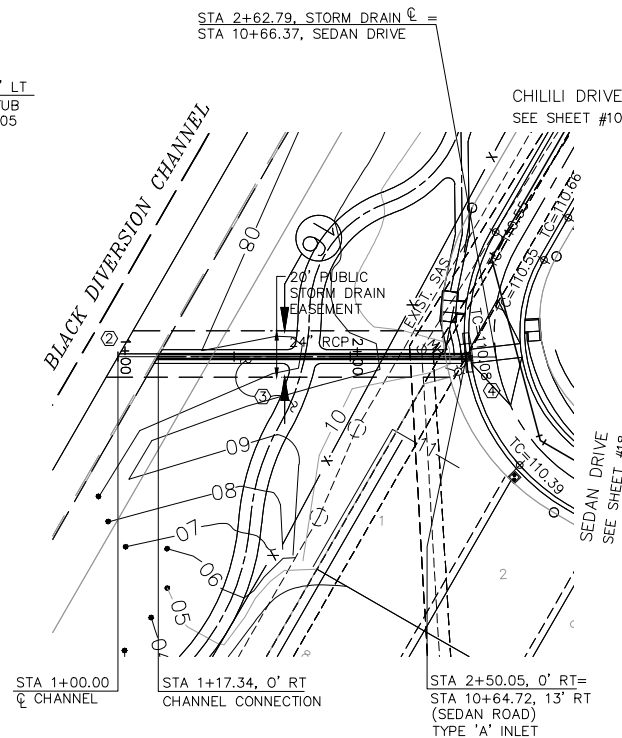


ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico
001PV14.DWGanw 03/26/99

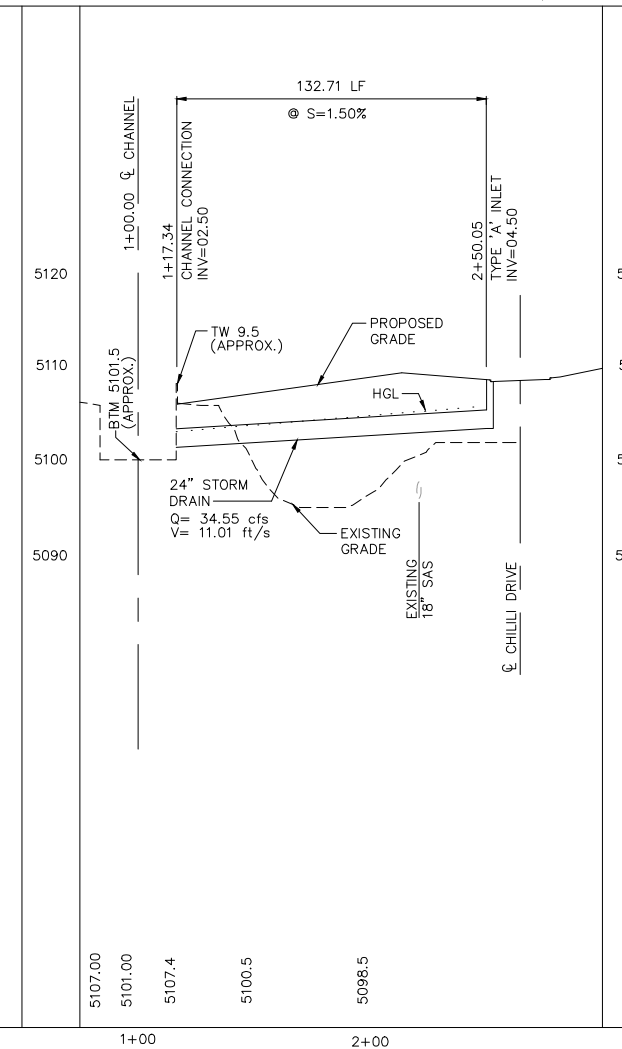
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE:
**TRES PLACITAS
ELLISON DRIVE STORM DRAIN
STORM DRAIN PLAN & PROFILE**

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.



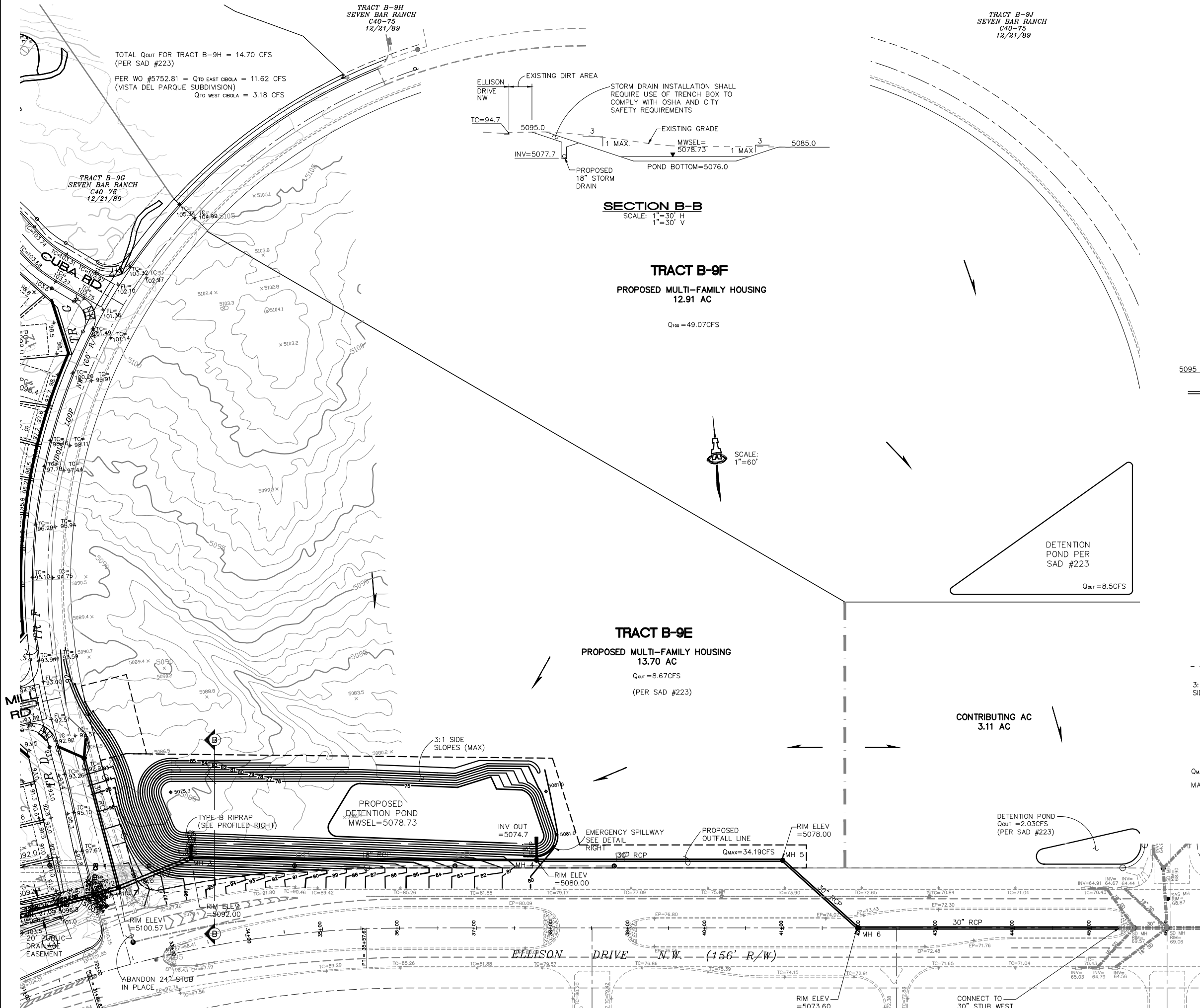
SCALE:
1"=40' (HOR)
1"=10' (VERT)



- | SURVEY INFORMATION | | | BENCH MARKS | AS-BUILT INFORMATION |
|--------------------|-------------|------|--|---|
| | FIELD NOTES | | ACS STATION "BLACK 2, 1977" SET FLUSH IN THE GROUND 217" | |
| 1 | ALS | 9/98 | SOUTH OF MCMAHON ROAD NW AND 305' WEST OF GOLF COURSE
ROAD NW.

ELEVATION = 5213.926 FEET | WORK
STARTED BY _____
ACCEPTANCE BY _____
DATE _____ |
| | | | | FIELD REVISION BY _____
DRAWINGS
CORRECTED BY _____
DATE _____ |
| | | | | MICRO-FILM INFORMATION
REPRODUCED BY _____
DATE _____ |
| | | | | NO. |

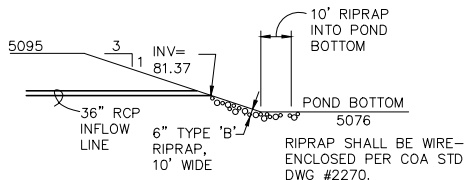
[illegible]



WATER SURFACE ELEV	DEPTH (FT)	STORAGE (AC/FT)	Q _{out} (CFS)
5075	0	(SEDIMENT)	0
5076	1	0.62	7
5077	2	1.30	10
5078	3	2.07	14
5079	4	2.92	18
5080	5	3.86	18.3
MAX WSEL = 5078.73			

LEGEND

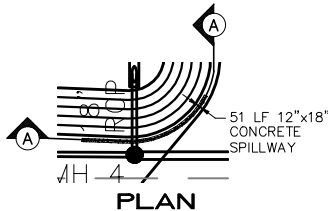
- ===== EXISTING CURB & GUTTER
- ===== PROPOSED CURB & GUTTER
- ===== PROPOSED STORM DRAIN
- ===== EXISTING STORM DRAIN
- ===== PROPOSED INLET
- ===== EXISTING INLET



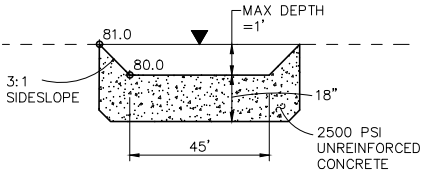
RIPRAP PROFILE

SCALE: 1"=30'

EMERGENCY SPILLWAY



PLAN



SECTION A-A

SCALE: 1"=30' H
1"=3' V

Q_{MAX} @ ELEV 5081 = CLH 2 = 3.0(45)(1)^{1.5} = 135 CFS
MAX Q_{INTO} POND = 126.61 CFS

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
001GRD2.DWGems 03/24/99

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRES PLACITAS
OFFSITE GRADING PLAN

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.

AS-BUILT INFORMATION			
CONTRACTOR	WORK	DATE	DATE
	STANDARD	BY	BY
	ACCEPTANCE	DATE	DATE
	MODIFICATION	DATE	DATE
	DRAWINGS	DATE	DATE
	CORRECTED	DATE	DATE
	RECORDED	DATE	DATE

BENCH MARKS			
ACS STATION "BLACK 2, 1977"	SET FLUSH IN THE GROUND 217'		
	SOUTH OF MCMAHON ROAD NW AND 305' WEST OF GOLF COURSE		
	ROAD NW.		
	ELEVATION = 5213.928 FEET		

SURVEY INFORMATION			
FIELD	NOTES		
1	ALS		

ENGINEER'S SEAL			



REVISIONS			
NO.	DATE	REMARKS	BY

DESIGNED BY	DATE	11/98
DRAWN BY	DATE	11/98
CHECKED BY	DATE	11/98



Asa Weber <asaw@iacivil.com>

Re: Larkspar - Ellison Drive

1 message

Fred Arfman <freda@iacivil.com>

Mon, Feb 13, 2023 at 11:48 AM

To: "Biazar, Shahab" <sbiazar@cabq.gov>

Cc: "Chen, Tiequan" <tchen@cabq.gov>, Åsa Nilsson-Weber <asaw@iacivil.com>, David Hoff <david@imprintpg.com>

Shahab,

Agreed, the note will be placed on the final plat.

Thanks for your help on this project.

Fred

Fred C. Arfman, P.E.
Principal/ President
Isaacson & Arfman, Inc.
Civil Engineering Consultants
128 Monroe St. N.E.
Albuquerque, NM 87108
Phone: (505)268-8828
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On Mon, Feb 13, 2023 at 11:42 AM Biazar, Shahab <sbiazar@cabq.gov> wrote:

Hi,

One additional note that will be needed on the plat would be that "Adjacent property will be allowed to modify outlet structure (after coordination with the property owner) if needed as part of the their development.

Thanks

**SHAHAB BIAZAR, P.E.**

city engineer

development review services

o 505.924.3999

e sbiazar@cabq.gov

cabq.gov/planning

From: Fred Arfman <freda@iacivil.com>
Sent: Monday, February 13, 2023 11:29 AM
To: Biazar, Shahab <sbiazar@cabq.gov>; Chen, Tiequan <tchen@cabq.gov>
Cc: Åsa Nilsson-Weber <asaw@iacivil.com>; David Hoff <david@imprintpg.com>
Subject: Larkspar - Ellison Drive

[EXTERNAL] Forward to phishing@cabq.gov and delete if an email causes any concern.

Shahab,

Thank you for the productive meeting this morning. As we discuss, I&A is providing the following as the agreed-upon items that were discussed at the meeting and as the basis for how this project will be allowed to proceed through the platting and Site Plan processes.

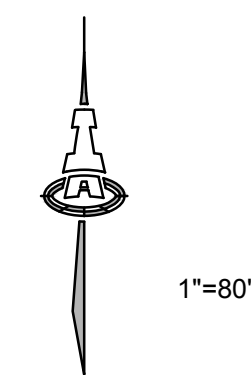
1. A Temporary Public Drainage Easement must be provided to the City covering the existing easement on the east side of the private road centerline that is the subject of the vacation action.
2. Owner to provide a Drainage Covenant to the City stating that the Property Owner or their assigns will be responsible for the maintenance of the pond. In addition, some or all of the proposed site First Flush retained volume may be stored in the pond.
3. The future reconfigured pond must accommodate one-half of the displaced stormwater volume from the proposed roadway embankment.
4. Adjustment of the westerly portion of the pond will be the responsibility of the development of the underlying land owner at the time of site development.
5. Pond improvements must be identified on the Required Infrastructure List tied to the Site Development Plan for Tract B-1 (future Tract B-1A).

Please let us know if there are any omissions to the key points of our discussion. We will follow up with the drainage/volume calculations of the embankment displacement volume and the proposed pond stormwater volume requirement.

Fred

Fred C. Arfman, P.E.

Principal/ President
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Civil Engineering Consultants
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- CONTOURS SHOWN ARE BERNALILLO COUNTY AERIAL 1-FOOT CONTOURS
- EXISTING STORM DRAINS ARE SHOWN SCHEMATICALLY.

THE MASTER DRAINAGE REPORT FOR TRES PLACITAS BY ISAACSON & ARFMAN DATED 11/10/1998 BREAKS UP THE ALLOWABLE FLOWS TO BE DISCHARGED TO THE STORM DRAIN SYSTEM AS FOLLOWS:

17.3 CFS OF THE TOTAL ALLOWABLE DISCHARGE FROM THE POND IS BYPASSED IN AN 18-INCH STORM DRAIN AND 16.9 CFS IS DISCHARGED FROM THE POND TO THE STORM DRAIN SYSTEM IN AN 18-INCH OUTFALL PIPE. THE TRES PLACITAS DMP STATED THAT EXISTING DETENTION POND WAS SIZED FOR DEVELOPED FLOWS FROM BASIN 9E. AHYMO CALCULATIONS FROM THE TRES PLACITAS DMP WERE NOT AVAILABLE AND NOT VERIFIED.

PROPOSED CONDITIONS:
THIS DRAINAGE STUDY SEPARATES BASIN 9E INTO TWO SUB-BASINS: BASIN 9E-1 (TRACT B-1) AND BASIN 9E-2 (TRACT A-1 & A PORTION OF TRACT A-2). THE ALLOWABLE DISCHARGE TO THE STORM DRAIN SYSTEM IS 0.64 CFS/AC (8.67 CFS/13.49 AC).

TRACT A-1 & PORTION OF TRACT A-2
TRACT A-1 AND A PORTION OF A-2 ARE
EXISTING POND MAY BE RECONFIGURED
THE STORM WATER QUALITY (SWQ) V
(INCLUDING 5.3 CFS FROM TRACT A-1)

TRACT B-1:
TRACT B-1 SHALL PROVIDE A DETENTION POND WITH AN OUTFALL PIPE DISCHARGING MAX. 3.3 CFS TO THE EXISTING 18" OUTFALL PIPE. THE POND VOLUME SHALL ALSO INCLUDE THE VOLUME OF THE EXISTING POND DISPLACED BY HALF THE PRIVATE ROADWAY (V=20,040 CF).

THE TRES PLACITAS DMP STATED THAT THE EXISTING POND WAS DESIGNED TO ACCOUNT FOR DEVELOPED FLOW FROM BASIN 9E, BUT THERE WERE NO CALCULATIONS FOUND TO SUBSTANTIATE THIS. THEREFORE, AN ASSUMPTION WAS MADE THAT THE POND WAS SIZED FOR HISTORICAL FLOW FROM TRACT B-1.

AS PART OF THE INITIAL ENTITLEMENTS FOR TRACT B-1, A RE-PLAT SHALL BE PROCESSED AND RECORDED TO VACATE A PORTION OF THE EXISTING PUBLIC DRAINAGE EASEMENT LOCATED ON TRACT B-1. PRIOR TO THIS PLAT BEING RECORDED, A PRIVATE DRAINAGE EASEMENT DOCUMENT OVER THE APPROXIMATE AREA OF A NEW DETENTION POND SHALL BE RECORDED. A DRAINAGE COVENANT SHALL BE RECORDED FOR THE PRIVATE DRAINAGE EASEMENT WHICH SHALL BE MAINTAINED BY THE OWNER OF TRACT B-1.

ONCE TRACT B-1 DEVELOPS, THE PRIVATE DRAINAGE EASEMENT AND COVENANT MAY BE RELEASED AND A NEW EASEMENT AND DRAINAGE COVENANT RECORDED IF NECESSARY DEPENDING ON THE ULTIMATE CONFIGURATION OF THE ONSITE DETENTION / SWO RETENTION POND. A STORM DRAIN PIPE SHALL ALSO BE INSTALLED FROM THE EXISTING POND ON TRACT A-1 UNDER THE PRIVATE ROADWAY AND CONNECT TO THE NEW MANHOLE AT THE EXISTING 18-INCH OUTFALL PIPE.

TRACT B-1 PRELIMINARY DRAINAGE CALCULATIONS:
SEE SUPPLEMENTAL INFORMATION PACKAGE FOR PRELIMINARY CALCULATIONS FOR DRAINAGE, POND
VOLUME REQUIRED AND STORM DRAIN AND THIS SHEET FOR DISPLACED VOLUME CALCULATIONS.

- Q100YR-6HR = 20.0 CFS
- TOTAL SWQ VOLUME = 6,710 CF
- EXISTING VOLUME FROM TRACT B-1= 11,600 CF
- VOLUME TO BE DETAINED FROM TRACT B-1= 33, 196 CF
- DISPLACED VOLUME FROM HALF OF ROADWAY EMBANKMENT = 20,040 CF
- HISTORIC VOLUME ACCOUNTED FOR IN EXISTING POND FROM BASIN 9E-2 = 11,600 CF
- TOTAL DETAINED VOLUME REQUIRED=33,196+20,040-11,600=41,636 CF

THE STORM DRAIN PIPES AND POND SHALL BE DESIGNED WITH THE DEVELOPMENT OF TRACT B-1. DETENTION / SWQ RETENTION POND MAY NEED TO BE SUPPLEMENTED WITH UNDERGROUND DETENTION / RETENTION STORAGE AS NECESSARY--TO BE DETERMINED WITH FINAL DESIGN.

