CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

July 9, 2020

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

RE: Meridian Business Park
541 Silver Creek Rd. NW
Grading and Drainage Plan
Engineer's Stamp Date: 06/30/20
Hydrology File: K10D023I

Dear Mr. Bohannan:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 07/01/2020, the Grading & Drainage Plan is approved for Building Permit, SO-19 Permit, and for action by the DRB on Site Plan for Building Permit.

Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter. Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

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

Also as a reminder, please provide Drainage Covenant for the detention pond per Chapter 17 of the DPM prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A $25 fee will be required.

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

Sincerely,

Renée C. Brissette

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

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Lot 22 Meridian Business Park Building Permit #: _____ Hydrology File #: _____

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

Legal Description: LT 22 Lots 1 Thru 23 Meridian Business Park

City Address: 541 Silver Creek Rd NW Albuquerque, NM 87121

Applicant: Tierra West, LLC Contact: Vince Carrica

Address: 5571 Midway Park Place NE Albuquerque, NM 87109

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

Other Contact: _____ Contact: _____

Address: _____

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

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL? _____ Yes X No

DEPARTMENT _____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
X GRADING PLAN
X DRAINAGE REPORT
____ DRAINAGE MASTER PLAN
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ STREET LIGHT LAYOUT
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

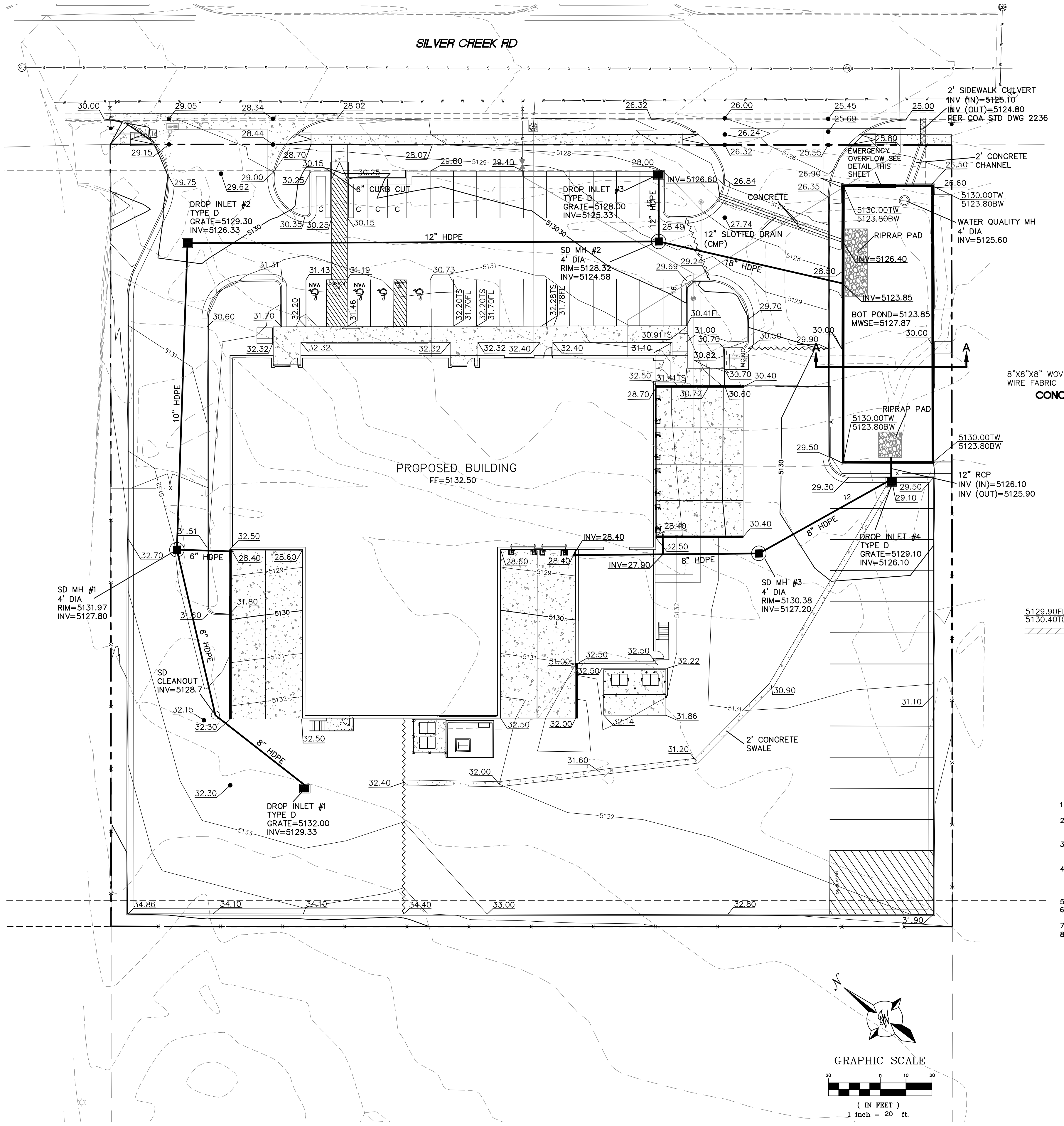
____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
X SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL

____ 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
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

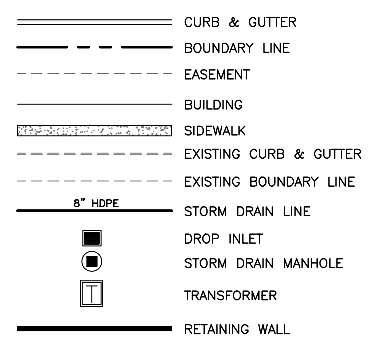
DATE SUBMITTED: 6/30/2020 By: Vince Carrica

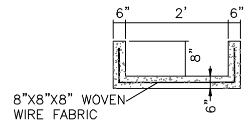
COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

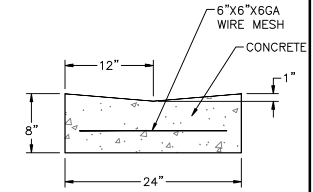


LEGEND

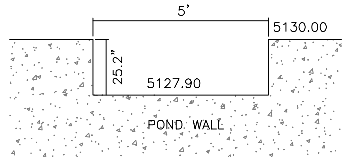




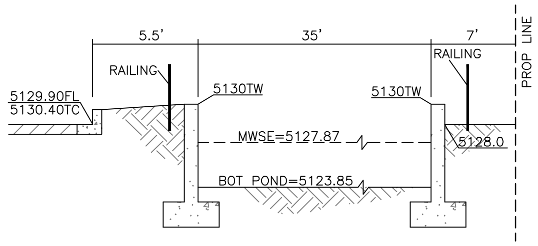
CONCRETE CHANNEL



CONCRETE SWALE DETAIL
IN PARKING LOT



EMERGENCY OVERFLOW



SECTION A-A

VICINITY MAP K-10-Z

FIRM MAP 35001C0328J

PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
NOTICE TO CONTRACTOR
(SPECIAL ORDER 19 "SO-19")

1. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL, DIAL "811" [OR (505) 260-1990] FOR THE LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. 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 USE.
6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
8. CONTRACTOR MUST CONTACT AUGIE ARMIJO AT (505) 857-8607 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE AN INSPECTION.

NOTICE TO CONTRACTORS

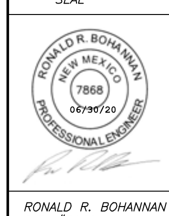
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR 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 CONNECTIONS. 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 USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

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.
6. ALL SLOPES NOT STABILIZED AT THE END OF THE PROJECT SHALL BE STABILIZED IN ACCORDANCE WITH COA SPECS OR ¾" GRAVEL

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.

ENGINEER'S SEAL	MERIDIAN BUSINESS PARK ALBUQUERQUE, NM	DRAWN BY pm
	LOT 22 GRADING AND DRAINAGE PLAN	DATE 6-30-2020
		DRAWING 2020033-GR
	TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	SHEET # GR-1
RONALD R. BOHANNAN P.E. #7868		JOB # 2020033

DRAINAGE REPORT

For

541 Silver Creek Rd.
ALBUQUERQUE, NEW MEXICO

Prepared by

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

Prepared for

Lot 22 Meridian Business Park
Albuquerque, NM

June 29, 2020

Ron Bohannan, PE #7868

RONALD R BOHANNAN
NEW MEXICO
7868
REGISTERED PROFESSIONAL ENGINEER

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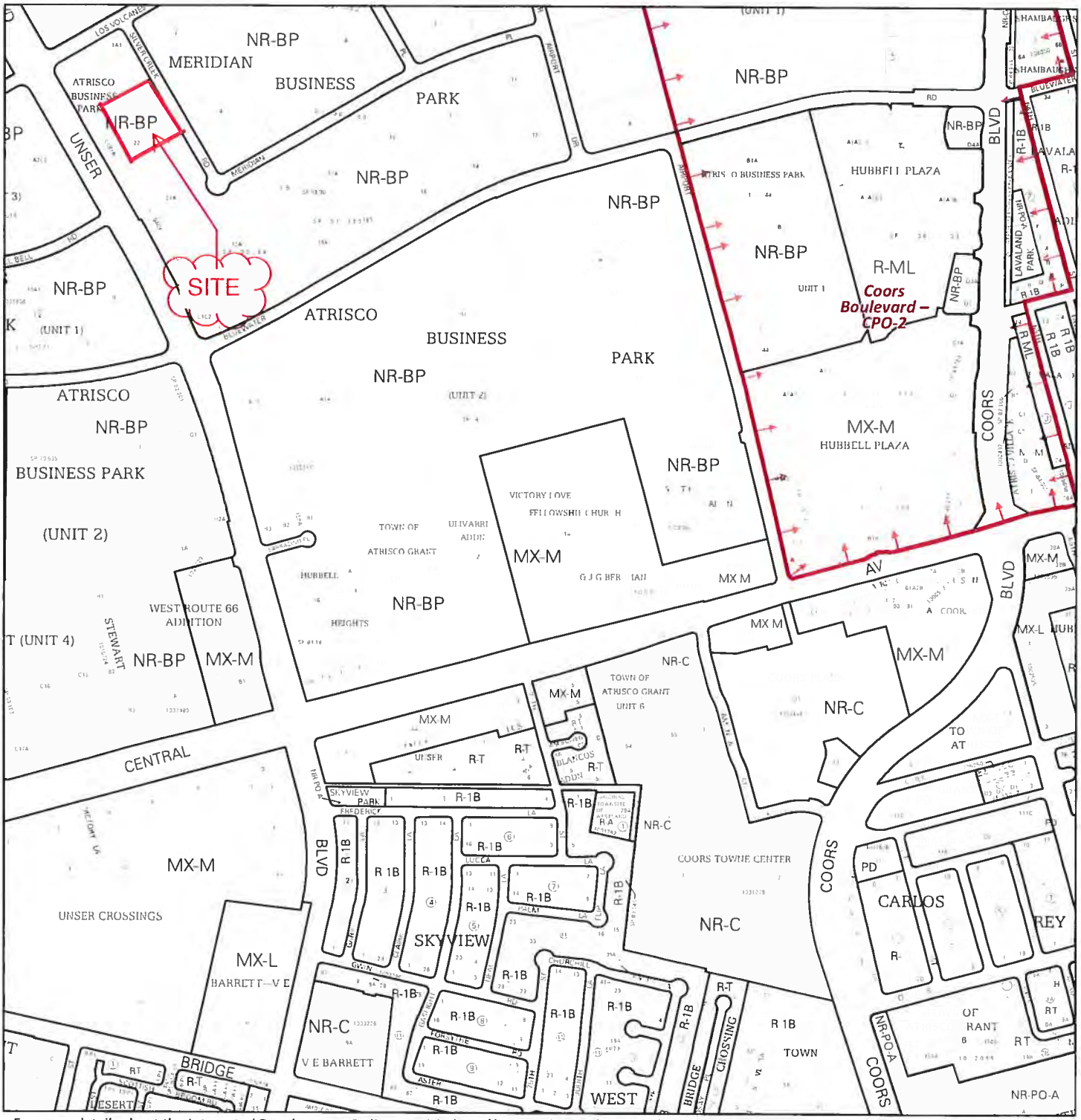


For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development ordinance

IDO Zone Atlas
May 2018

Albuquerque Geographic Information System

IDO Zoning information as of May 17, 2018

The Zone Districts and Overlay Zones are established by the Integrated Development Ordinance (IDO).

Zone Atlas Page:

K-10-Z

- Easement
- Escarpment
- Petroglyph National Monument
- Areas Outside of City Limits
- Airport Protection Overlay (APO) Zone
- Character Protection Overlay (CPO) Zone
- Historic Protection Overlay (HPO) Zone
- View Protection Overlay (VPO) Zone

Feet: 0 250 500 1,000

LOCATION

The proposed commercial development is located off Silver Creek Rd south of Interstate 40, east of Unser Blvd and south of Los Volcanes Rd in southwest Albuquerque. It is comprised of approximately 2.25 acres zoned NR-BP. This report represents a drainage management and grading plan for approval by the City of Albuquerque, for Site Plan, grading and Building Permit submittal.

DRAINAGE BASIN DESIGNATION

The drainage basins for proposed conditions are as indicated on the BASIN MAP included in this report. The site is broken into ten onsite drainage basins and one upland offsite basin.

EXISTING DRAINGE CONDITIONS

The site is currently vacant with an earthen detention pond constructed in the southeast corner of the site. It drains predominantly northwest to southeast. Runoff from an undeveloped upland basin west of the subject property drains onto the site. This runoff is combined with the onsite runoff and routed through an existing detention pond before being released to Silver Creek Rd, which then drains to the south per the Atrisco Business Park Master Drainage Plan for fully developed conditions, dated February of 1992.

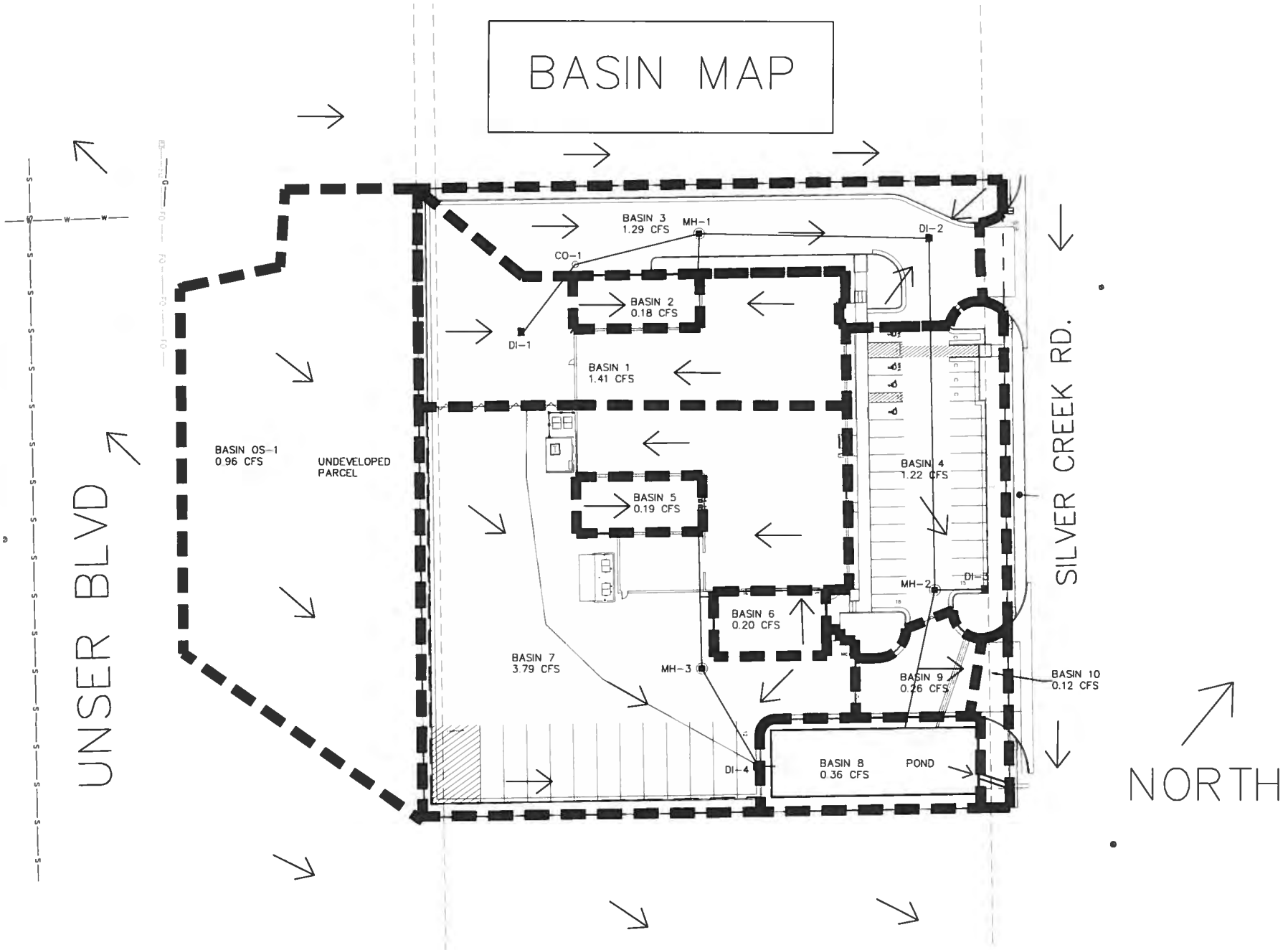
FIRM MAP

The site is not located in a flood plain as is shown on designated Flood Hazard Zone Map No. 35001C0328J dated 11/4/2016.

DESIGN-CRITERIA

The drainage plan presented in this report was prepared in accordance with the City of Albuquerque Drainage Ordinances and the Development Process Manual DPM. The hydrological analysis is based on the 100-year frequency, 6-hour duration storm. The plan will also include retention of the first flush in on-site drainage ponds. See attached Weighted E Table for excess precipitation values calculated for this site.

BASIN MAP


UNSER BLVD
SILVER CREEK RD.
NORTH
BASIN 3
1.29 CFS
MH-1
DI-2
CO-1
BASIN 2
0.18 CFS
DI-1
BASIN 1
1.41 CFS
BASIN OS-1
0.96 CFS
UNDEVELOPED
PARCEL
BASIN 4
1.22 CFS
BASIN 5
0.19 CFS
MH-2
DI-5
BASIN 6
0.20 CFS
BASIN 7
3.79 CFS
MH-3
BASIN 9
0.26 CFS
BASIN 10
0.12 CFS
DI-4
BASIN 8
0.36 CFS
POND

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/31/2019 at 6:28:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

DEVELOPED-DRAINAGE CONDITIONS

The site is proposed to be developed with a single office / warehouse building. No offsite flows will enter the site with the exception of the undeveloped upland basin in the west of the property, which will continue to be routed through the subject site. Runoff from the site will be routed through onsite underground drainage culverts and surface swales to a storm drain detention pond, which will retain the required 1st Flush runoff volume and discharge remaining flows to Silver Creek roadway with a controlled discharge rate equal to or less than the allowable 0.1 cfs per acre. This is in compliance with the Atrisco Business Park Master Drainage Plan for fully developed conditions dated February of 1992. The storm drain pond will retain the first flush retention volumes as required by the drainage ordinance.

Refer to enclosed Weighted E computation spreadsheet for developed runoff conditions. Storm drain capacities are listed in a table in the appendix. A spreadsheet of retained and detained volumes is also included in the appendix.

SUMMARY

The proposed grading and drainage plan for the proposed development of the existing undeveloped property includes surface flows and an onsite storm drain to convey runoff to an onsite detention pond before discharging to the Silver Creek Roadway at a controlled discharge rate of equal to or less than 0.1 cfs per acre.

Weighted E Method

Zone #1

Developed Basins

Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year			2-Year		
				%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
1	14326.00	0.329	0.00051	0%	0	0%	0.000	5%	0.016444	95%	0.312	1.921	0.053	1.41	1.200	0.033	0.93	0.690	0.019	0.54
2	1808.00	0.042	0.00006	0%	0	0%	0.000	0%	0	100%	0.042	1.970	0.007	0.18	1.240	0.004	0.12	0.720	0.002	0.07
3	14346.00	0.329	0.00051	0%	0	0%	0.000	30%	0.098802	70%	0.231	1.676	0.046	1.29	1.000	0.027	0.81	0.540	0.015	0.44
4	13577.00	0.312	0.00049	0%	0	0%	0.000	30%	0.093506	70%	0.218	1.676	0.044	1.22	1.000	0.026	0.77	0.540	0.014	0.41
5	1881.00	0.043	0.00007	0%	0	0%	0.000	0%	0	100%	0.043	1.970	0.007	0.19	1.240	0.004	0.12	0.720	0.003	0.07
6	1957.00	0.045	0.00007	0%	0	0%	0.000	0%	0	100%	0.045	1.970	0.007	0.20	1.240	0.005	0.13	0.720	0.003	0.08
7	40295.00	0.925	0.00145	0%	0	0%	0.000	5%	0.046252	95%	0.879	1.921	0.148	3.97	1.200	0.093	2.61	0.690	0.053	1.51
8	5400.00	0.124	0.00019	0%	0	0%	0.000	100%	0.123967	0%	0.000	0.990	0.010	0.36	0.440	0.005	0.18	0.120	0.001	0.06
9	2581.00	0.059	0.00009	0%	0	0%	0.000	0%	0	100%	0.059	1.970	0.010	0.26	1.240	0.006	0.17	0.720	0.004	0.10
10	1398.00	0.032	0.00005	0%	0	0%	0.000	45%	0.014442	55%	0.018	1.529	0.004	0.12	0.880	0.002	0.07	0.450	0.001	0.04
OS-1	32256.00	0.740	0.00116	100%	0.740496	0%	0.000	0%	0	0%	0.000	0.440	0.027	0.96	0.080	0.005	0.18	0.000	0.000	0.00
Total	129825.00	2.980	0.00466								1.846		0.363	10.15		0.210	6.10		0.115	3.31

Equations:

1st Flush 2,279 CU FT

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

VOLUME CALCULATIONS

LOT 22 MERIDIAN

DETENTION POND W/ 1ST FLUSH RETENTION

Ab - Bottom Of The Pond Surface Area
At - Top Of The Pond Surface Area
D - Water Depth
Dt - Total Pond Depth
C - Change In Surface Area / Water Depth

Volume = Ab * D + 0.5 * C * D^2
C = (At - Ab) / Dt

Ab =	3,745.00	B.O.P.=	5123.85
At =	3,745.00	T.O.P. =	5130.00
Dt =	6.15		
C =	0.00		
B Elev. =	5,123.85		

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5123.85	0	0	0.000
5124.85	1.00	0.0860	0.000
5125.60	1.75	0.1505	0.000
5126.60	2.75	0.2364	0.174
5127.60	3.75	0.3224	0.264
5128.60	4.75	0.4084	0.331
5129.60	5.75	0.4943	0.386
5130.00	6.15	0.5287	0.406

Orifice Equation
Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	2.75
Area (ft^2)=	0.041247039
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

LOT 22 MERIDIAN - CULVERT ANALYSIS

HYDRAULIC GRADES

FROM	RIM ELEV	TO	RIM ELEV	Length (ft)	CONTRIBUTING BASINS	Q (CFS)	Inv In	Inv Out	Slope	DIA. (in)	DEPTH (FT)	Q (CFS)	v
DI-1	32	CO-1	32.22	44	1	1.41	29.33	28.7	0.014	8	0.67	1.45	4.15
CO-1	32.22	MH-1	31.97	63	1	1.41	28.7	27.8	0.014	8	0.67	1.45	4.15
NW DOCK WELL	-	MH-1	31.97	20	2	0.18	28.5	27.8	0.035	6	0.50	1.05	5.36
MH-1	31.97	DI-2	31.97	115	1,2	1.59	27.8	26.33	0.013	10	0.83	2.48	4.55
DI-2	29.3	MH-2	28.32	178	1,2,3	2.88	26.33	24.58	0.010	12	1.00	3.54	4.51
DI-3	28	MH-2	28.32	22	4	1.22	25.33	24.58	0.034	12	1.00	6.60	8.40
MH-2	28.32	POND	-	71	1,2,3,4	4.1	24.58	23.85	0.010	18	1.50	10.68	6.04
SW DOCK WELL	-	MH-3	30.38	70	5	0.19	28.5	27.2	0.019	8	0.67	1.65	4.73
MH-3	30.38	DI-4	29.1	53	5,6	0.39	27.2	26.1	0.021	8	0.67	1.75	5.00

```
**************************************************************
*                  LOT 22 MERIDIAN PARK                      *
**************************************************************
* 100-YEAR, 24-HR STORM  (UNDER PROPOSED CONDITIONS) W/ routing *
**************************************************************
START               TIME=0.0
*
*
RAINFALL            TYPE=2 RAIN QUARTER=0.0 IN
                    RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                    RAIN DAY=2.66 IN DT=0.05 HR
*
*
*BASIN 1
*
COMPUTE NM HYD      ID=1 HYD NO=100.1 AREA=0.00051 SQ MI
                    PER A=0.00 PER B=0.00 PER C=5.00 PER D=95.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=1 CODE=1
*
*
*BASIN 2
*
COMPUTE NM HYD      ID=2 HYD NO=100.2 AREA=0.00006 SQ MI
                    PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=2 CODE=1
*
*
*BASIN 3
*
COMPUTE NM HYD      ID=3 HYD NO=100.3 AREA=0.00051 SQ MI
                    PER A=0.00 PER B=0.00 PER C=30.0 PER D=70.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=3 CODE=1
*
*
*BASIN 4
*
COMPUTE NM HYD      ID=4 HYD NO=100.4 AREA=0.00049 SQ MI
                    PER A=0.00 PER B=0.00 PER C=30.0 PER D=70.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=4 CODE=1
*
*
*BASIN 5
*
COMPUTE NM HYD      ID=5 HYD NO=100.5 AREA=0.00007 SQ MI
                    PER A=0.00 PER B=0.00 PER C=0.0 PER D=100.00
                    TP=-0.1333 HR MASS RAINFALL=-1
```

```
PRINT HYD           ID=5 CODE=1
*
*
*BASIN 6
*
COMPUTE NM HYD      ID=6 HYD NO=100.6 AREA=0.00007 SQ MI
                    PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=6 CODE=1
*
*
*BASIN 7
*
COMPUTE NM HYD      ID=7 HYD NO=100.7 AREA=0.00151 SQ MI
                    PER A=0.00 PER B=0.00 PER C=5.00 PER D=95.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=7 CODE=1
*
*
*BASIN 8
*
COMPUTE NM HYD      ID=8 HYD NO=100.8 AREA=0.00019 SQ MI
                    PER A=0.00 PER B=0.00 PER C=100.0 PER D=0.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=8 CODE=1
*
*
*BASIN 9
*
COMPUTE NM HYD      ID=9 HYD NO=100.9 AREA=0.00009 SQ MI
                    PER A=0.00 PER B=0.00 PER C=0.0 PER D=100.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=9 CODE=1
*
*
*BASIN 10
*
COMPUTE NM HYD      ID=10 HYD NO=100.10 AREA=0.00005 SQ MI
                    PER A=0.00 PER B=0.00 PER C=45.0 PER D=55.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=9 CODE=1
*
*
*BASIN OS-1
*
COMPUTE NM HYD      ID=11 HYD NO=100.11 AREA=0.00116 SQ MI
                    PER A=100.00 PER B=0.00 PER C=0.0 PER D=0.00
                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=11 CODE=1
*
```

```
*
ADD HYD             ID=20 HYD NO=100.20 ID=1  ID=2
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=3
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=4
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=5
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=6
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=7
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=8
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=9
ADD HYD             ID=20 HYD NO=100.20 ID=20 ID=11
*
*
*ROUTE BASIN 1 THRU 9 & OS-1 THROUGH DETENTION POND
*
*
ROUTE RESERVOIR     ID=55 HYD NO=200.1 INFLOW ID=20 CODE=24
                    OUTFLOW (CFS) STORAGE(AC-FT) ELEVATION(FT)
                    0.000          0.0000             23.85
                    0.010          0.0860             24.85
                    0.020          0.1505             25.60
                    0.174          0.2364             26.60
                    0.264          0.3224             27.60
                    0.331          0.4084             28.60
                    0.386          0.4943             29.60
                    0.406          0.5287             30.00
*
PRINT HYD           ID=55  CODE=1
*
*
ADD HYD             ID=60 HYD NO=100.60 ID=10 ID=55
*
PRINT HYD           ID=60  CODE=1
*
*
FINISH
```

```
        AHYMO PROGRAM (AHYMO-S4)                    - Version: S4.01a - Rel: 01a
             RUN DATE (MON/DAY/YR) = 06/24/2020
             START TIME (HR:MIN:SEC) = 13:39:25     USER NO.=
AHYMO_Temp_User:20122010
             INPUT FILE = Z:\2020\2020033-Lot 22 Meridian Business
Park\Drainage\hymoLot22.txt

    ************************************************************
    *                 LOT 22 MERIDIAN PARK                     *
    ************************************************************
    * 100-YEAR, 24-HR STORM  (UNDER PROPOSED CONDITIONS) W/ routing *
    ************************************************************
    START               TIME=0.0
    *
    *
    RAINFALL            TYPE=2 RAIN QUARTER=0.0 IN
                        RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                        RAIN DAY=2.66 IN DT=0.05 HR

                  24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
AREAS (NM & AZ) - D1
                  DT =   0.050000 HOURS       END TIME =    24.000002 HOURS
                    0.0000  0.0022  0.0045  0.0069  0.0096  0.0123  0.0154
                    0.0197  0.0264  0.0336  0.0412  0.0494  0.0578  0.0664
                    0.0753  0.0844  0.0946  0.1052  0.1168  0.1387  0.1657
                    0.2020  0.2430  0.2937  0.3614  0.4375  0.5689  0.7733
                    1.1234  1.3695  1.5635  1.6610  1.7465  1.8079  1.8568
                    1.8994  1.9306  1.9592  1.9828  1.9979  2.0087  2.0183
                    2.0273  2.0352  2.0426  2.0499  2.0568  2.0625  2.0659
                    2.0692  2.0724  2.0754  2.0784  2.0813  2.0842  2.0870
                    2.0896  2.0923  2.0949  2.0974  2.0999  2.1023  2.1046
                    2.1069  2.1092  2.1115  2.1136  2.1158  2.1179  2.1199
                    2.1220  2.1240  2.1260  2.1280  2.1299  2.1318  2.1337
                    2.1356  2.1374  2.1392  2.1411  2.1428  2.1446  2.1463
                    2.1481  2.1498  2.1514  2.1531  2.1548  2.1564  2.1580
                    2.1596  2.1612  2.1628  2.1643  2.1658  2.1674  2.1689
                    2.1704  2.1718  2.1733  2.1747  2.1762  2.1776  2.1790
                    2.1804  2.1818  2.1832  2.1845  2.1859  2.1872  2.1885
                    2.1899  2.1912  2.1924  2.1937  2.1950  2.1963  2.1975
                    2.1988  2.2000  2.2013  2.2026  2.2038  2.2051  2.2064
                    2.2077  2.2089  2.2102  2.2115  2.2128  2.2141  2.2153
                    2.2166  2.2179  2.2192  2.2204  2.2217  2.2230  2.2243
                    2.2256  2.2268  2.2281  2.2294  2.2307  2.2319  2.2332
                    2.2345  2.2358  2.2371  2.2383  2.2396  2.2409  2.2422
                    2.2434  2.2447  2.2460  2.2473  2.2486  2.2498  2.2511
                    2.2524  2.2537  2.2549  2.2562  2.2575  2.2588  2.2601
                    2.2613  2.2626  2.2639  2.2652  2.2664  2.2677  2.2690
                    2.2703  2.2716  2.2728  2.2741  2.2754  2.2767  2.2779
                    2.2792  2.2805  2.2818  2.2831  2.2843  2.2856  2.2869
```

```
                    2.2882  2.2894  2.2907  2.2920  2.2933  2.2946  2.2958
                    2.2971  2.2984  2.2997  2.3009  2.3022  2.3035  2.3048
                    2.3061  2.3073  2.3086  2.3099  2.3112  2.3124  2.3137
                    2.3150  2.3163  2.3176  2.3188  2.3201  2.3214  2.3227
                    2.3239  2.3252  2.3265  2.3278  2.3291  2.3303  2.3316
                    2.3329  2.3342  2.3354  2.3367  2.3380  2.3393  2.3406
                    2.3418  2.3431  2.3444  2.3457  2.3469  2.3482  2.3495
                    2.3508  2.3521  2.3533  2.3546  2.3559  2.3572  2.3584
                    2.3597  2.3610  2.3623  2.3636  2.3648  2.3661  2.3674
                    2.3687  2.3699  2.3712  2.3725  2.3738  2.3750  2.3763
                    2.3776  2.3789  2.3802  2.3814  2.3827  2.3840  2.3853
                    2.3865  2.3878  2.3891  2.3904  2.3917  2.3929  2.3942
                    2.3955  2.3968  2.3980  2.3993  2.4006  2.4019  2.4032
                    2.4044  2.4057  2.4070  2.4083  2.4095  2.4108  2.4121
                    2.4134  2.4147  2.4159  2.4172  2.4185  2.4198  2.4210
                    2.4223  2.4236  2.4249  2.4262  2.4274  2.4287  2.4300
                    2.4313  2.4325  2.4338  2.4351  2.4364  2.4377  2.4389
                    2.4402  2.4415  2.4428  2.4440  2.4453  2.4466  2.4479
                    2.4492  2.4504  2.4517  2.4530  2.4543  2.4555  2.4568
                    2.4581  2.4594  2.4607  2.4619  2.4632  2.4645  2.4658
                    2.4670  2.4683  2.4696  2.4709  2.4722  2.4734  2.4747
                    2.4760  2.4773  2.4785  2.4798  2.4811  2.4824  2.4837
                    2.4849  2.4862  2.4875  2.4888  2.4900  2.4913  2.4926
                    2.4939  2.4952  2.4964  2.4977  2.4990  2.5003  2.5015
                    2.5028  2.5041  2.5054  2.5067  2.5079  2.5092  2.5105
                    2.5118  2.5130  2.5143  2.5156  2.5169  2.5182  2.5194
                    2.5207  2.5220  2.5233  2.5245  2.5258  2.5271  2.5284
                    2.5297  2.5309  2.5322  2.5335  2.5348  2.5360  2.5373
                    2.5386  2.5399  2.5412  2.5424  2.5437  2.5450  2.5463
                    2.5475  2.5488  2.5501  2.5514  2.5527  2.5539  2.5552
                    2.5565  2.5578  2.5590  2.5603  2.5616  2.5629  2.5642
                    2.5654  2.5667  2.5680  2.5693  2.5705  2.5718  2.5731
                    2.5744  2.5757  2.5769  2.5782  2.5795  2.5808  2.5820
                    2.5833  2.5846  2.5859  2.5872  2.5884  2.5897  2.5910
                    2.5923  2.5935  2.5948  2.5961  2.5974  2.5987  2.5999
                    2.6012  2.6025  2.6038  2.6050  2.6063  2.6076  2.6089
                    2.6102  2.6114  2.6127  2.6140  2.6153  2.6165  2.6178
                    2.6191  2.6204  2.6217  2.6229  2.6242  2.6255  2.6268
                    2.6280  2.6293  2.6306  2.6319  2.6332  2.6344  2.6357
                    2.6370  2.6383  2.6395  2.6408  2.6421  2.6434  2.6447
                    2.6459  2.6472  2.6485  2.6498  2.6510  2.6523  2.6536
                    2.6549  2.6562  2.6574  2.6587  2.6600
*
*
*BASIN 1
*
COMPUTE NM HYD      ID=1 HYD NO=100.1 AREA=0.00051 SQ MI
                    PER A=0.00 PER B=0.00 PER C=5.00 PER D=95.00
                    TP=-0.1333 HR MASS RAINFALL=-1
```

```
         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =   1.9128    CFS   UNIT VOLUME =   0.9941       B =   526.28
 P60 = 1.8700
         AREA =     0.000485 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.105867HR    TP =  0.133300HR    K/TP RATIO =  0.794199     SHAPE
CONSTANT, N =  4.514592
         UNIT PEAK =  0.74249E-01CFS   UNIT VOLUME =   0.8908       B =   388.14
 P60 = 1.8700
         AREA =     0.000026 SQ MI    IA =   0.35000 INCHES    INF =   0.83000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=1 CODE=1

                                      PARTIAL HYDROGRAPH   100.10


        RUNOFF VOLUME =     2.34917 INCHES     =       0.0639 ACRE-FEET
        PEAK DISCHARGE RATE =       1.45 CFS  AT   1.500 HOURS   BASIN AREA =
0.0005 SQ. MI.



    *
    *
    *BASIN 2
    *
    COMPUTE NM HYD      ID=2 HYD NO=100.2 AREA=0.00006 SQ MI
                        PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =  0.23688    CFS   UNIT VOLUME =   0.9593       B =   526.28
 P60 = 1.8700
         AREA =     0.000060 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=2 CODE=1
```

```
                                        PARTIAL HYDROGRAPH   100.20

        RUNOFF VOLUME =     2.41566 INCHES     =       0.0077 ACRE-FEET
        PEAK DISCHARGE RATE =       0.18 CFS  AT   1.500 HOURS   BASIN AREA =
0.0001 SQ. MI.



    *
    *
    *BASIN 3
    *
    COMPUTE NM HYD      ID=3 HYD NO=100.3 AREA=0.00051 SQ MI
                        PER A=0.00 PER B=0.00 PER C=30.0 PER D=70.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =   1.4095    CFS   UNIT VOLUME =   0.9911       B =   526.28
 P60 = 1.8700
         AREA =     0.000357 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.105867HR    TP =  0.133300HR    K/TP RATIO =  0.794199     SHAPE
CONSTANT, N =  4.514592
         UNIT PEAK =  0.44550    CFS   UNIT VOLUME =   0.9748       B =   388.14
 P60 = 1.8700
         AREA =     0.000153 SQ MI    IA =   0.35000 INCHES    INF =   0.83000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=3 CODE=1

                                        PARTIAL HYDROGRAPH   100.30


        RUNOFF VOLUME =     2.01673 INCHES     =       0.0549 ACRE-FEET
        PEAK DISCHARGE RATE =       1.35 CFS  AT   1.500 HOURS   BASIN AREA =
0.0005 SQ. MI.



    *
    *
    *BASIN 4
```

```
    *
    COMPUTE NM HYD      ID=4 HYD NO=100.4 AREA=0.00049 SQ MI
                        PER A=0.00 PER B=0.00 PER C=30.0 PER D=70.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =   1.3542    CFS   UNIT VOLUME =   0.9911       B =   526.28
 P60 = 1.8700
         AREA =     0.000343 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.105867HR    TP =  0.133300HR    K/TP RATIO =  0.794199     SHAPE
CONSTANT, N =  4.514592
         UNIT PEAK =  0.42803    CFS   UNIT VOLUME =   0.9748       B =   388.14
 P60 = 1.8700
         AREA =     0.000147 SQ MI    IA =   0.35000 INCHES    INF =   0.83000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=4 CODE=1

                                      PARTIAL HYDROGRAPH   100.40


        RUNOFF VOLUME =     2.01673 INCHES     =       0.0527 ACRE-FEET
        PEAK DISCHARGE RATE =       1.29 CFS  AT   1.500 HOURS   BASIN AREA =
0.0005 SQ. MI.



    *
    *
    *BASIN 5
    *
    COMPUTE NM HYD      ID=5 HYD NO=100.5 AREA=0.00007 SQ MI
                        PER A=0.00 PER B=0.00 PER C=0.0 PER D=100.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =  0.27636    CFS   UNIT VOLUME =   0.9593       B =   526.28
 P60 = 1.8700
         AREA =     0.000070 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
```

```
0.050000

    PRINT HYD           ID=5 CODE=1

                                        PARTIAL HYDROGRAPH   100.50


        RUNOFF VOLUME =     2.41566 INCHES     =       0.0090 ACRE-FEET
        PEAK DISCHARGE RATE =       0.21 CFS  AT   1.500 HOURS   BASIN AREA =
0.0001 SQ. MI.



    *
    *
    *BASIN 6
    *
    COMPUTE NM HYD      ID=6 HYD NO=100.6 AREA=0.00007 SQ MI
                        PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =  0.27636    CFS   UNIT VOLUME =   0.9593       B =   526.28
 P60 = 1.8700
         AREA =     0.000070 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=6 CODE=1

                                        PARTIAL HYDROGRAPH   100.60


        RUNOFF VOLUME =     2.41566 INCHES     =       0.0090 ACRE-FEET
        PEAK DISCHARGE RATE =       0.21 CFS  AT   1.500 HOURS   BASIN AREA =
0.0001 SQ. MI.



    *
    *
    *BASIN 7
    *
    COMPUTE NM HYD      ID=7 HYD NO=100.7 AREA=0.00151 SQ MI
                        PER A=0.00 PER B=0.00 PER C=5.00 PER D=95.00
                        TP=-0.1333 HR MASS RAINFALL=-1

        K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
```

```
CONSTANT, N =  7.106428
         UNIT PEAK =    5.6635    CFS    UNIT VOLUME =    0.9971       B =    526.28
 P60 = 1.8700
         AREA =     0.001435 SQ MI     IA =    0.10000 INCHES     INF =    0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.105867HR    TP =  0.133300HR    K/TP RATIO =  0.794199     SHAPE
CONSTANT, N =  4.514592
         UNIT PEAK =  0.21984    CFS    UNIT VOLUME =    0.9426       B =    388.14
 P60 = 1.8700
         AREA =     0.000076 SQ MI     IA =    0.35000 INCHES     INF =    0.83000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=7 CODE=1

                                        PARTIAL HYDROGRAPH   100.70


        RUNOFF VOLUME =     2.34917 INCHES      =       0.1892 ACRE-FEET
        PEAK DISCHARGE RATE =       4.28 CFS  AT    1.500 HOURS    BASIN AREA =
0.0015 SQ. MI.



    *
    *
    *BASIN 8
    *
    COMPUTE NM HYD      ID=8 HYD NO=100.8 AREA=0.00019 SQ MI
                        PER A=0.00 PER B=0.00 PER C=100.0 PER D=0.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.105867HR    TP =  0.133300HR    K/TP RATIO =  0.794199     SHAPE
CONSTANT, N =  4.514592
         UNIT PEAK =  0.55323    CFS    UNIT VOLUME =    0.9787       B =    388.14
 P60 = 1.8700
         AREA =     0.000190 SQ MI     IA =    0.35000 INCHES     INF =    0.83000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=8 CODE=1

                                        PARTIAL HYDROGRAPH   100.80
```

```
        RUNOFF VOLUME =     1.08591 INCHES      =       0.0110 ACRE-FEET
        PEAK DISCHARGE RATE =       0.39 CFS  AT   1.500 HOURS   BASIN AREA =
0.0002 SQ. MI.



    *
    *
    *BASIN 9
    *
    COMPUTE NM HYD      ID=9 HYD NO=100.9 AREA=0.00009 SQ MI
                        PER A=0.00 PER B=0.00 PER C=0.0 PER D=100.00
                        TP=-0.1333 HR MASS RAINFALL=-1

        K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
        UNIT PEAK =  0.35532    CFS   UNIT VOLUME =   0.9674       B =   526.28
 P60 = 1.8700
        AREA =     0.000090 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=9 CODE=1

                                      PARTIAL HYDROGRAPH   100.90


        RUNOFF VOLUME =     2.41566 INCHES      =       0.0116 ACRE-FEET
        PEAK DISCHARGE RATE =       0.27 CFS  AT   1.500 HOURS   BASIN AREA =
0.0001 SQ. MI.



    *
    *
    *BASIN 10
    *
    COMPUTE NM HYD      ID=10 HYD NO=100.10 AREA=0.00005 SQ MI
                        PER A=0.00 PER B=0.00 PER C=45.0 PER D=55.00
                        TP=-0.1333 HR MASS RAINFALL=-1

        K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
        UNIT PEAK =  0.10857    CFS   UNIT VOLUME =   0.8994       B =   526.28
 P60 = 1.8700
        AREA =     0.000028 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
```

```
0.050000


         K =  0.105867HR    TP =  0.133300HR    K/TP RATIO =  0.794199     SHAPE
CONSTANT, N =  4.514593
         UNIT PEAK =  0.65514E-01CFS   UNIT VOLUME =   0.8908       B =   388.14
 P60 = 1.8700
         AREA =     0.000023 SQ MI    IA =   0.35000 INCHES    INF =   0.83000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=9 CODE=1

                                      PARTIAL HYDROGRAPH   100.90


        RUNOFF VOLUME =     2.41566 INCHES     =       0.0116 ACRE-FEET
        PEAK DISCHARGE RATE =       0.27 CFS  AT   1.500 HOURS   BASIN AREA =
0.0001 SQ. MI.



    *
    *
    *BASIN OS-1
    *
    COMPUTE NM HYD      ID=11 HYD NO=100.11 AREA=0.00116 SQ MI
                        PER A=100.00 PER B=0.00 PER C=0.0 PER D=0.00
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.163684HR    TP =  0.133300HR    K/TP RATIO =  1.227936     SHAPE
CONSTANT, N =  2.899626
         UNIT PEAK =   2.3804    CFS   UNIT VOLUME =   0.9922       B =   273.54
 P60 = 1.8700
         AREA =     0.001160 SQ MI    IA =   0.65000 INCHES    INF =   1.67000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=11 CODE=1

                                      PARTIAL HYDROGRAPH   100.11


        RUNOFF VOLUME =     0.62863 INCHES     =       0.0389 ACRE-FEET
        PEAK DISCHARGE RATE =       1.29 CFS  AT   1.550 HOURS   BASIN AREA =
0.0012 SQ. MI.
```

```
*
*
ADD HYD                          ID=20 HYD NO=100.20 ID=1  ID=2

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=3

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=4

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=5

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=6

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=7

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=8

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=9

ADD HYD                          ID=20 HYD NO=100.20 ID=20 ID=11

*
*
*ROUTE BASIN 1 THRU 9 & OS-1 THROUGH DETENTION POND
*
*
ROUTE RESERVOIR     ID=55 HYD NO=200.1 INFLOW ID=20 CODE=24
                        OUTFLOW (CFS) STORAGE(AC-FT) ELEVATION(FT)
                                0.000          0.0000             23.85

                                0.010          0.0860             24.85

                                0.020          0.1505             25.60

                                0.174          0.2364             26.60

                                0.264          0.3224             27.60

                                0.331          0.4084             28.60

                                0.386          0.4943             29.60

                                0.406          0.5287             30.00


  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

    TIME       INFLOW     ELEV       VOLUME     OUTFLOW
    (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)
```

0.00	0.00	23.85	0.000	0.00
1.20	1.32	24.03	0.015	0.00
2.40	0.32	27.87	0.346	0.28
3.60	0.02	27.64	0.326	0.27
4.80	0.03	27.37	0.302	0.24
6.00	0.04	27.14	0.283	0.22
7.20	0.05	26.94	0.266	0.21
8.40	0.05	26.77	0.251	0.19
9.60	0.05	26.62	0.238	0.18
10.80	0.05	26.48	0.226	0.16
12.00	0.05	26.36	0.216	0.14
13.20	0.05	26.27	0.208	0.12
14.40	0.05	26.19	0.201	0.11
15.60	0.05	26.12	0.195	0.10
16.80	0.05	26.06	0.190	0.09
18.00	0.05	26.02	0.186	0.08
19.20	0.05	25.98	0.183	0.08
20.40	0.05	25.94	0.180	0.07
21.60	0.05	25.92	0.178	0.07
22.80	0.05	25.89	0.176	0.07
24.00	0.05	25.87	0.174	0.06
25.20	0.00	25.81	0.169	0.05
26.40	0.00	25.76	0.164	0.04
27.60	0.00	25.71	0.160	0.04
28.80	0.00	25.67	0.157	0.03
30.00	0.00	25.64	0.154	0.03
31.20	0.00	25.61	0.152	0.02
32.40	0.00	25.59	0.149	0.02
33.60	0.00	25.57	0.148	0.02
34.80	0.00	25.54	0.146	0.02
36.00	0.00	25.52	0.144	0.02
37.20	0.00	25.50	0.142	0.02
38.40	0.00	25.48	0.140	0.02
39.60	0.00	25.46	0.138	0.02
40.80	0.00	25.44	0.136	0.02
42.00	0.00	25.42	0.135	0.02
43.20	0.00	25.40	0.133	0.02
44.40	0.00	25.38	0.131	0.02
45.60	0.00	25.36	0.130	0.02
46.80	0.00	25.34	0.128	0.02
48.00	0.00	25.32	0.126	0.02
49.20	0.00	25.30	0.125	0.02
50.40	0.00	25.28	0.123	0.02
51.60	0.00	25.26	0.122	0.02
52.80	0.00	25.25	0.120	0.02
54.00	0.00	25.23	0.119	0.02
55.20	0.00	25.21	0.117	0.01
56.40	0.00	25.19	0.116	0.01
57.60	0.00	25.18	0.114	0.01
58.80	0.00	25.16	0.113	0.01

60.00	0.00	25.14	0.111	0.01
61.20	0.00	25.13	0.110	0.01
62.40	0.00	25.11	0.109	0.01
63.60	0.00	25.10	0.107	0.01
64.80	0.00	25.08	0.106	0.01
66.00	0.00	25.07	0.105	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
67.20	0.00	25.05	0.103	0.01
68.40	0.00	25.04	0.102	0.01
69.60	0.00	25.02	0.101	0.01
70.80	0.00	25.01	0.100	0.01
72.00	0.00	25.00	0.099	0.01
73.20	0.00	24.98	0.097	0.01
74.40	0.00	24.97	0.096	0.01
75.60	0.00	24.96	0.095	0.01
76.80	0.00	24.94	0.094	0.01
78.00	0.00	24.93	0.093	0.01
79.20	0.00	24.92	0.092	0.01
80.40	0.00	24.90	0.091	0.01
81.60	0.00	24.89	0.090	0.01
82.80	0.00	24.88	0.089	0.01
84.00	0.00	24.87	0.088	0.01
85.20	0.00	24.86	0.087	0.01
86.40	0.00	24.85	0.086	0.01
87.60	0.00	24.83	0.085	0.01
88.80	0.00	24.82	0.084	0.01
90.00	0.00	24.81	0.083	0.01
91.20	0.00	24.80	0.082	0.01
92.40	0.00	24.79	0.081	0.01
93.60	0.00	24.78	0.080	0.01
94.80	0.00	24.77	0.079	0.01
96.00	0.00	24.76	0.078	0.01
97.20	0.00	24.75	0.077	0.01
98.40	0.00	24.74	0.076	0.01
99.60	0.00	24.73	0.075	0.01
100.80	0.00	24.72	0.075	0.01
102.00	0.00	24.71	0.074	0.01
103.20	0.00	24.70	0.073	0.01
104.40	0.00	24.69	0.072	0.01
105.60	0.00	24.68	0.071	0.01
106.80	0.00	24.67	0.070	0.01
108.00	0.00	24.66	0.070	0.01
109.20	0.00	24.65	0.069	0.01
110.40	0.00	24.64	0.068	0.01
111.60	0.00	24.63	0.067	0.01
112.80	0.00	24.62	0.066	0.01
114.00	0.00	24.61	0.066	0.01

115.20	0.00	24.60	0.065	0.01
116.40	0.00	24.60	0.064	0.01
117.60	0.00	24.59	0.063	0.01
118.80	0.00	24.58	0.063	0.01
120.00	0.00	24.57	0.062	0.01
121.20	0.00	24.56	0.061	0.01
122.40	0.00	24.55	0.061	0.01
123.60	0.00	24.55	0.060	0.01
124.80	0.00	24.54	0.059	0.01
126.00	0.00	24.53	0.058	0.01
127.20	0.00	24.52	0.058	0.01
128.40	0.00	24.51	0.057	0.01
129.60	0.00	24.51	0.056	0.01
130.80	0.00	24.50	0.056	0.01
132.00	0.00	24.49	0.055	0.01
133.20	0.00	24.48	0.055	0.01

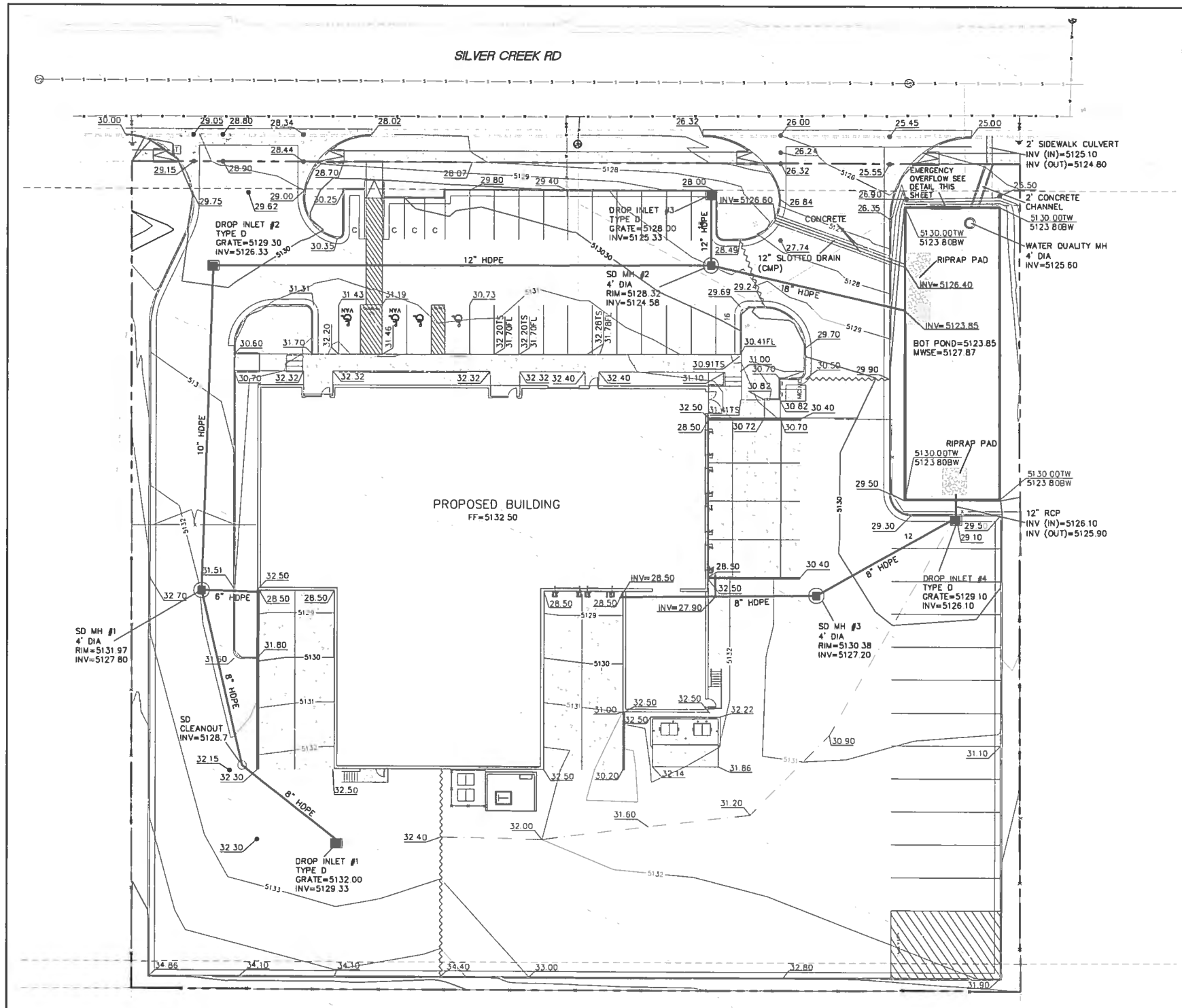
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
134.40	0.00	24.48	0.054	0.01
135.60	0.00	24.47	0.053	0.01
136.80	0.00	24.46	0.053	0.01
138.00	0.00	24.46	0.052	0.01
139.20	0.00	24.45	0.052	0.01
140.40	0.00	24.44	0.051	0.01
141.60	0.00	24.44	0.050	0.01
142.80	0.00	24.43	0.050	0.01
144.00	0.00	24.42	0.049	0.01
145.20	0.00	24.42	0.049	0.01
146.40	0.00	24.41	0.048	0.01
147.60	0.00	24.40	0.048	0.01
148.80	0.00	24.40	0.047	0.01
150.00	0.00	24.39	0.046	0.01
151.20	0.00	24.38	0.046	0.01
152.40	0.00	24.38	0.045	0.01
153.60	0.00	24.37	0.045	0.01
154.80	0.00	24.37	0.044	0.01
156.00	0.00	24.36	0.044	0.01
157.20	0.00	24.35	0.043	0.01
158.40	0.00	24.35	0.043	0.00

PEAK DISCHARGE = 0.282 CFS - PEAK OCCURS AT HOUR 2.45
MAXIMUM WATER SURFACE ELEVATION = 27.870
MAXIMUM STORAGE = 0.3456 AC-FT INCREMENTAL TIME= 0.050000HRS

*
PRINT HYD ID=55 CODE=1

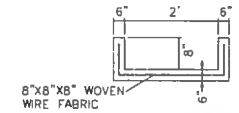
PARTIAL HYDROGRAPH 200.10

```
        RUNOFF VOLUME =     1.67964 INCHES     =       0.4174 ACRE-FEET
        PEAK DISCHARGE RATE =       0.28 CFS  AT   2.450 HOURS   BASIN AREA =
0.0047 SQ. MI.



    *
    *
    ADD HYD                         ID=60 HYD NO=100.60 ID=10 ID=55

    *
    PRINT HYD           ID=60  CODE=1

                                        PARTIAL HYDROGRAPH   100.60


        RUNOFF VOLUME =     1.67808 INCHES     =       0.4215 ACRE-FEET
        PEAK DISCHARGE RATE =       0.28 CFS  AT   2.350 HOURS   BASIN AREA =
0.0047 SQ. MI.



    *
    *
    FINISH

        NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 13:39:25
```

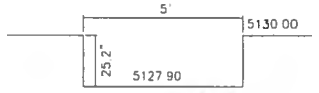


LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- BUILDING
- SIDEWALK
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- 8" HDPE — STORM DRAIN LINE
- DROP INLET
- STORM DRAIN MANHOLE
- T — TRANSFORMER
- RETAINING WALL

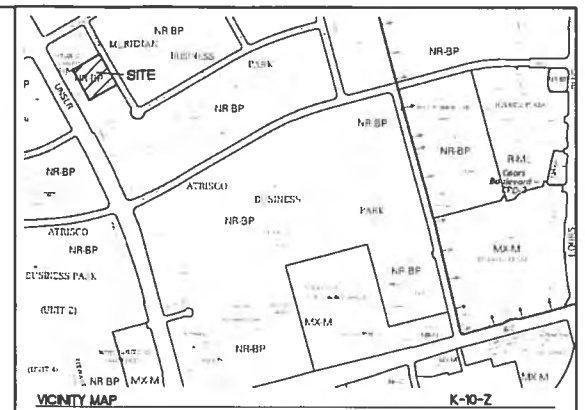


CONCRETE CHANNEL



POND WALL

EMERGENCY OVERFLOW



VICINITY MAP K-10-Z

FIRM MAP 35001C0328J

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 HEREIN, 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 CONNECTIONS. 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 USE
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS

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
6. ALL SLOPES NOT STABILIZED AT THE END OF THE PROJECT SHALL BE STABILIZED IN ACCORDANCE WITH COA SPECS OR ¾" GRAVEL

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

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

ENGINEER'S SEAL

RONALD R BOHANNAN NEW MEXICO 7858 PROFESSIONAL ENGINEER 7/17/01 2020

RONALD R. BOHANNAN
P.E. #7858

MERIDIAN BUSINESS PARK
ALBUQUERQUE, NM

LOT 22 MASTER UTILITY PLAN

TIERRA WEST, LLC
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DRAWN BY	pm
DATE	7-18-2020
DRAWING	2020033-GR
SHEET #	GR-1
JOB #	2020033