

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

October 8, 2025

Luis Noriega  
Tierra West LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

**RE: Kairos Power – WATERJET  
5201 Hawking Drive SE  
Grading and Drainage Plans  
Engineer's Stamp Date: 07/23/2025  
Hydrology File: Q16DA5000D  
Case # HYDR-2025-00354**

Dear Mr. Noriega:

PO Box 1293

Based upon the information provided in your submittal received 10/01/2025, the Grading & Drainage Plan is approved 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.

Albuquerque

**PRIOR TO CERTIFICATE OF OCCUPANCY:**

NM 87103

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.

www.cabq.gov

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](mailto:jhughes@cabq.gov), 505-924-3420) 14 days prior to any earth disturbance.

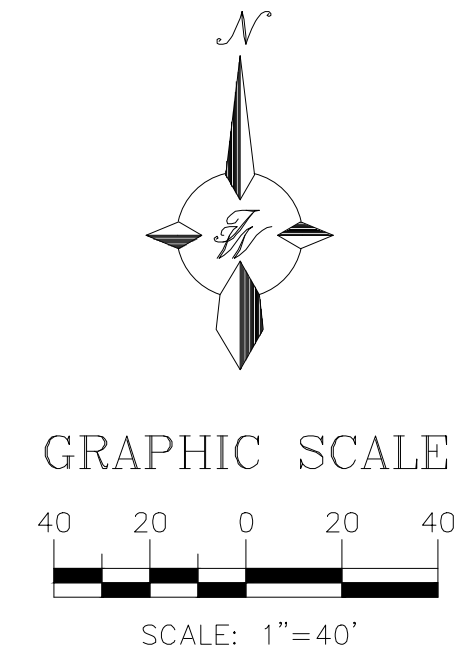
If you have any questions, please contact me at 505-924-3314 or [amontoya@cabq.gov](mailto:amontoya@cabq.gov).

Sincerely,

Anthony Montoya, Jr., P.E., CFM  
Senior Engineer, Hydrology  
Planning Department, Development Review Services

**LEGEND**

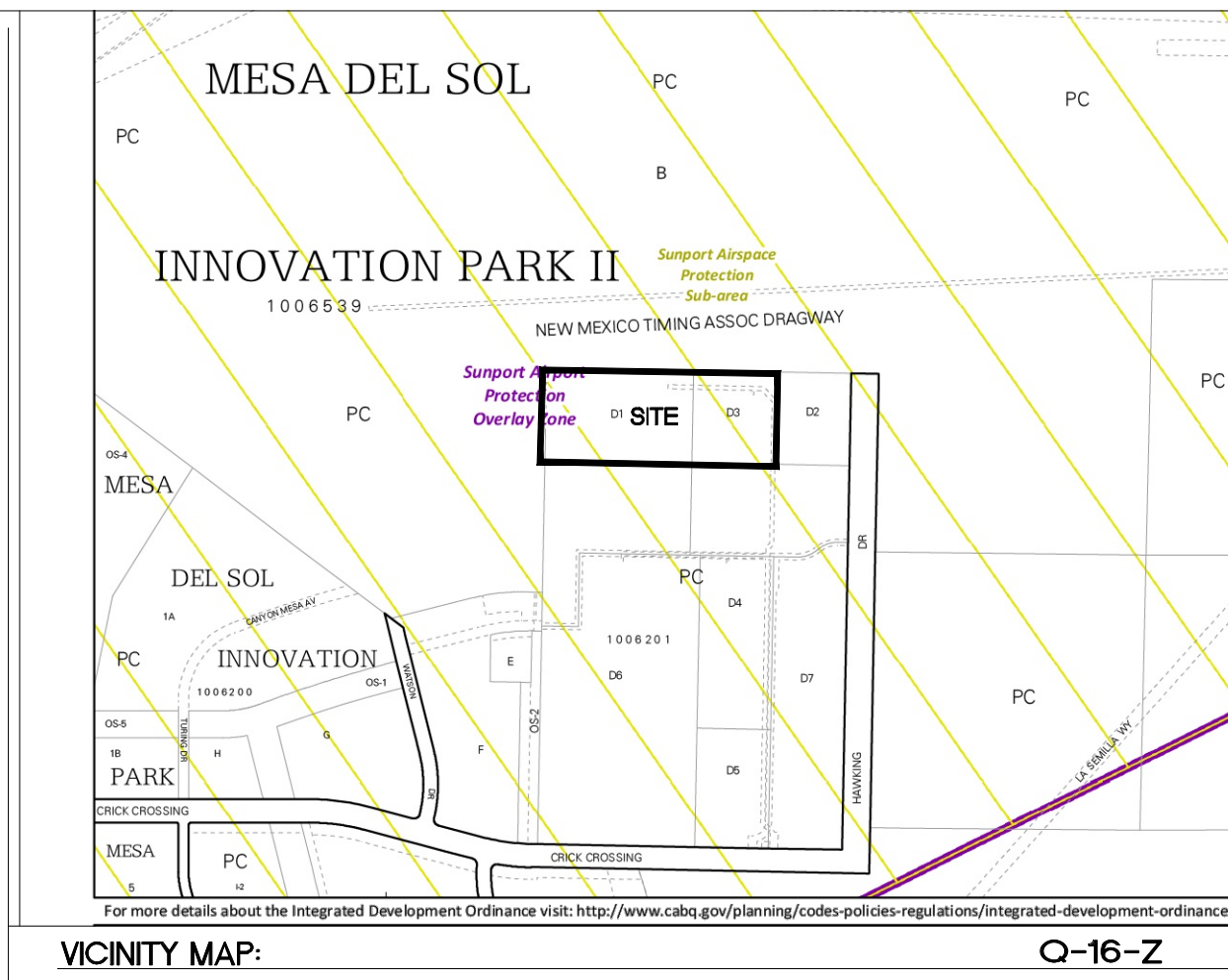
	CURB & GUTTER	x 5048.25	PROPOSED SPOT ELEVATION
	BOUNDARY LINE	x 5048.25	EXISTING SPOT ELEVATION
	EASEMENT BUILDING		FLOW ARROW
	SIDEWALK/CONCRETE		EXISTING CONCRETE STORM DRAIN PIPE
	STORM DRAIN		EXISTING PVC STORM DRAIN PIPE
	CONTOUR MAJOR	5010	EXISTING CONTOUR MAJOR
	CONTOUR MINOR	5011	EXISTING CONTOUR MINOR
	EXISTING FENCE	x x x	EXISTING FENCE



**HYDROLOGY NOTES**

THE PROJECT SITE IS LOCATED ON THE EAST SIDE OF ALBUQUERQUE WITHIN THE MESA DEL SOL INNOVATION PARK. IT LIES WITHIN A LARGER DRAINAGE BASIN AND IS INCLUDED IN THE KAIROS POWER FULLY DEVELOPED POND PROJECT (HYDRO NO. Q16DA5000). THE SITE CURRENTLY CONTAINS AN EXISTING 6,000 SF BUILDING AND AN ACCESS ROAD TO THE SOUTH. STORMWATER DISCHARGE FROM THE SITE IS CURRENTLY ROUTED TOWARD THE NEW RETENTION POND LOCATED ON THE WEST SIDE OF THE PROPERTY.

THE PROPOSED PROJECT INCLUDES CONSTRUCTION OF AN ADDITIONAL 4,000 SF BUILDING WEST OF THE EXISTING 6,000 SF STRUCTURE, ALONG WITH CONCRETE AND ASPHALT PAVING FOR A NEW LAYDOWN YARD. THE EXISTING RETENTION POND, AS CALCULATED IN THE KAIROS POWER FULLY DEVELOPED POND PROJECT (HYDRO NO. Q16DA5000), HAS SUFFICIENT CAPACITY TO ACCOMMODATE THE ADDITIONAL PROPOSED STORMWATER FLOWS.



VICINITY MAP: Q-16-Z

FIRM MAP: 35001C0363G

**LEGAL DESCRIPTION**

TR D-1-A PLAT OF TRACT D-1-A MESA DEL SOL INNOVATION PARK II (BEING A REPLAT OF TRACT D-1 & D-3 MESA DEL SOL INNOVATION PARK II)

**ACS BENCHMARK**

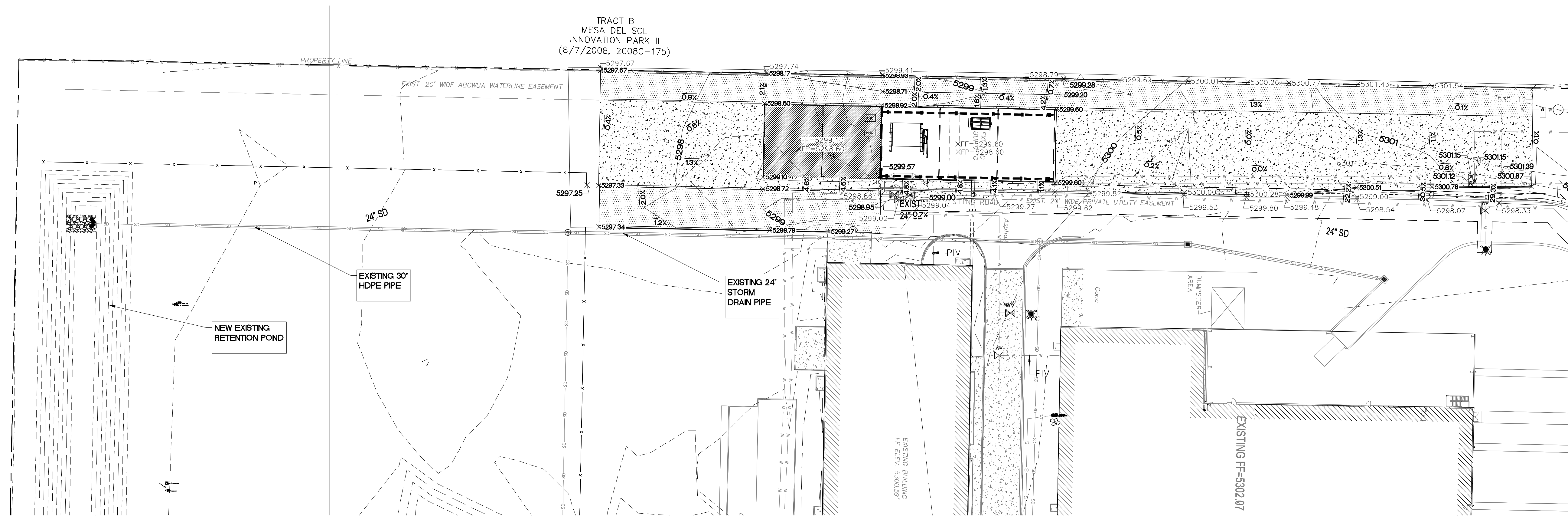
A.G.R.S. MONUMENT "4-016"  
 NEW MEXICO STATE PLANE COORDINATES  
 (CENTRAL ZONE-N.A.D. 1983)  
 PUBLISHED EL=5298.643 US SURVEY FT (NAVD 1988)

**SPOT ELEVATION LEGEND**

SW= TOP OF SIDEWALK  
 TC= TOP OF CURB  
 FL= FLOW LINE  
 FF= FINISHED FLOOR  
 FP= FINISHED PAD

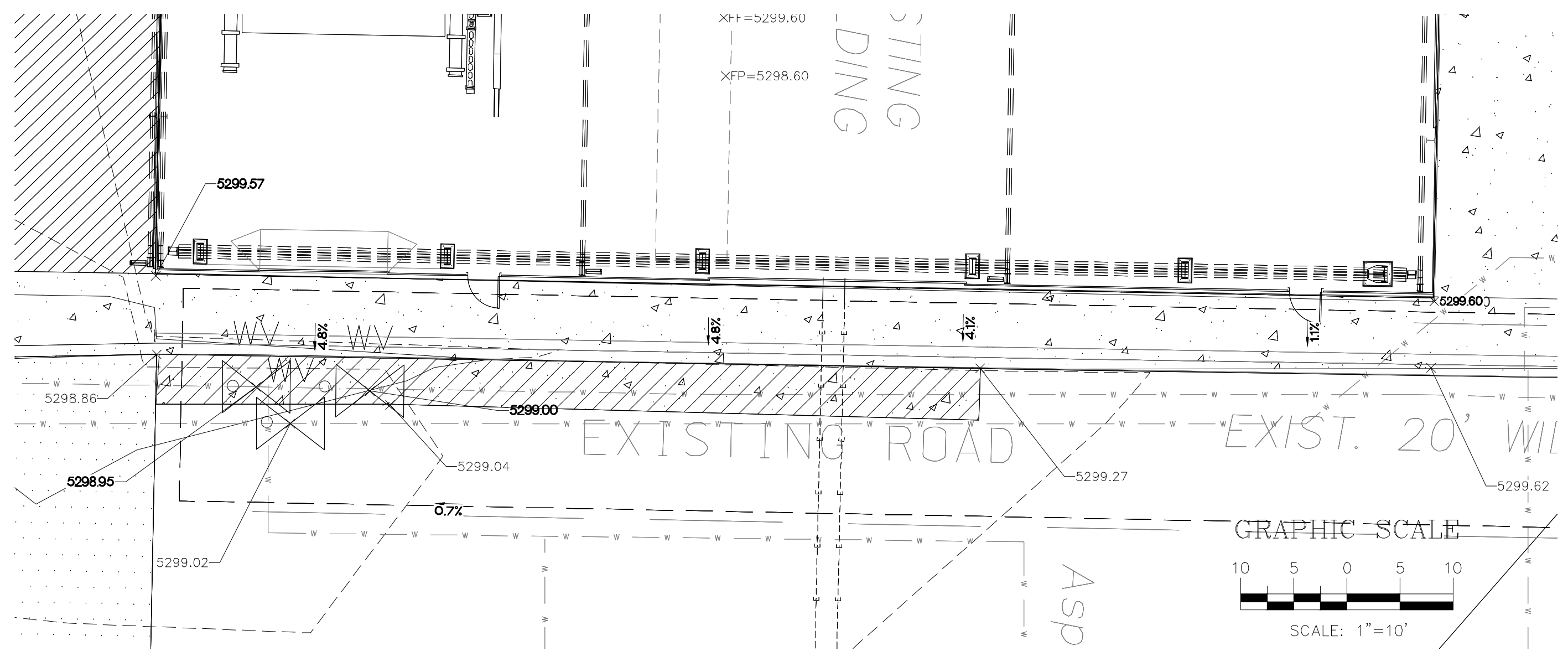
**SPOT ELEVATION NOTE:**

ALL PROPOSED SPOT ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.



**CAUTION**  
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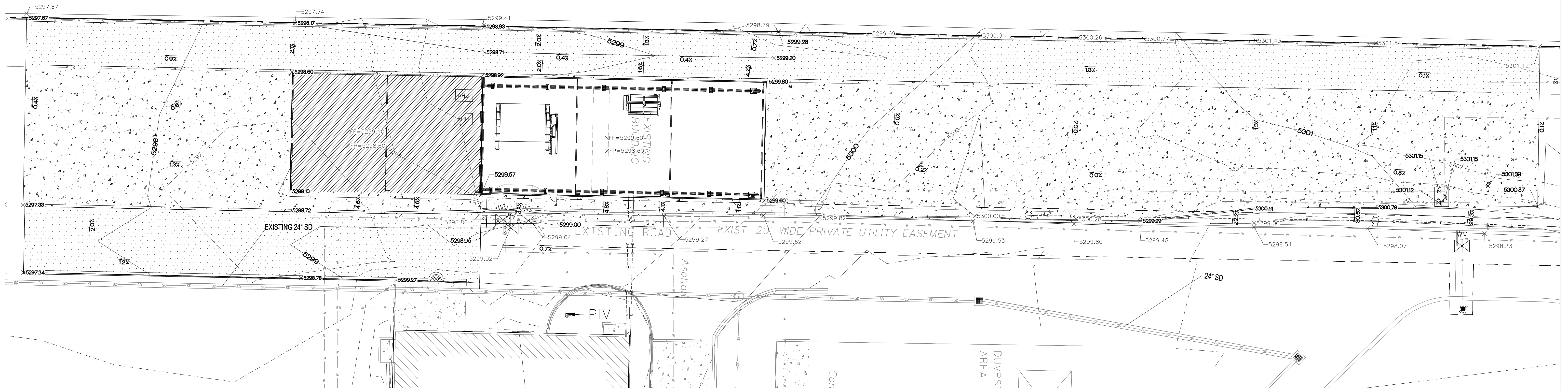
- EROSION CONTROL NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
  - CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING ROADWAY.
  - REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
  - ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



City of Albuquerque  
 Planning Department  
 Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
 DATE: 10/08/2025  
 BY: *Christina M...*  
 HydroTeam #: Q16DA50000  
THE APPROVAL OF THESE PLANS/REPORTS SHALL NOT BE CONSIDERED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUESTING CORRECTIONS FOR ERRORS OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTION DOCUMENTS. SUCH APPROVED PLANS/REPORTS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.  
 THE APPROVAL OF THESE PLANS/REPORTS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE IF NO BUILDING PERMIT HAS BEEN FILED BY THE DEVELOPER.

 ENGINEER'S SEAL RONALD R. BOHANNAN P.E. #7868	KAIROS POWER WATERJET ALBUQUERQUE, NM <b>GRADING &amp; DRAINAGE PLAN</b>	DRAWN BY LN DATE 07/23/2025 2023103_GRB-WJ
	TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	SHEET # <b>GR-1</b>
		JOB # 2023103

\\TWNAS-VZ-Drive\2023\2023103 Mesa Del Sol Innovation Park\_Pending.dwg Construction\2023103\_GRB-WJ.dwg Sep. 26, 2025 - 9:52am



**LEGEND**

	CURB & GUTTER	x 5048.25	PROPOSED SPOT ELEVATION
	BOUNDARY LINE	x 5048.25	EXISTING SPOT ELEVATION
	EASEMENT		FLOW ARROW
	BUILDING		EXISTING CONCRETE STORM DRAIN PIPE
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	STORM DRAIN		EXISTING CONTOUR MAJOR
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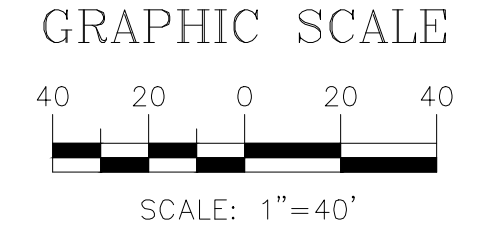
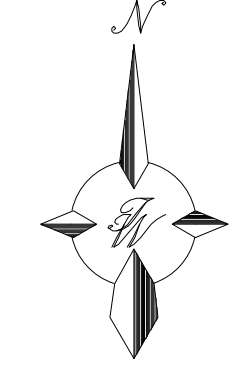
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\\TWNAS\_VZ\_Drive\2023\2023103 Mesa Del Sol Innovation Park\_Pending.dwg Construction\2023103\_GRB-WJ.dwg Sep. 26, 2025 - 9:54am

**City of Albuquerque**  
 Planning Department  
 Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
 DATE: 10/08/2025  
 BY: *Cherrie Moore*  
 HydroTrans # Q16DA5000D  
THE APPROVAL OF THESE PLANS/REPORTS SHALL NOT BE CONSIDERED TO PERMIT VIOLATION OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTIONS FOR ERRORS OR OMISSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTION DOCUMENTS. SUCH APPROVED PLANS/REPORTS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.  
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ENGINEER'S SEAL  
  
 RONALD R. BOHANNAN  
 P.E. #7868  
 07/23/2025

**KAIROS POWER WATERJET**  
 ALBUQUERQUE, NM  
**GRADING & DRAINAGE PLAN**  
  
 5571 MIDWAY PARK PLACE NE  
 ALBUQUERQUE, NM 87109  
 (505) 858-3100  
 www.tierrowestllc.com

DRAWN BY LN	SHEET # <b>GR-2</b>
DATE 07/23/2025	JOB # 2023103
2023103_GRB-WJ	

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

February 13, 2024

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

**RE: Mesa del Sol Innovation Park Ponding  
Grading & Drainage Plans  
Engineer's Stamp Date: 2/6/2024  
Hydrology File: Q16DA5000D**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 2/9/2024, this plan is approved for Grading Permit and for action by the DFT for Site Plan approval.

PO Box 1293

**PRIOR TO BUILDING PERMIT:**

Albuquerque

- Provide more detailed design as needed in order to obtain Hydrology's approval.

NM 87103

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](mailto:jhughes@cabq.gov), 924-3420) 14 days prior to any earth disturbance.

[www.cabq.gov](http://www.cabq.gov)

If you have any questions, please contact me at 505-924-3695 or [tchen@cabq.gov](mailto:tchen@cabq.gov).

Sincerely,

Tiequan Chen, P.E.  
Principal Engineer, Hydrology  
Planning Department, Development Review Services



# City of Albuquerque

Planning Department  
Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (DTIS)

Project Title: Mesa del Sol Innovation Park Ponding Hydrology File # \_\_\_\_\_

Legal Description: TR D-1 [AT PF TRACTS D-1 TJRI D-7 MESA DEL SOL INNOVATION PARK II (A SUBDIVISION OF TRACT 3 MESA DEL SOL INNOVATION PARK II)]

City Address, UPC, OR Parcel: 101605227017740201

Applicant/Agent: Tierra West LLC Contact: Luis Noriega  
Address: 5571 Midway Park PI NE Phone: 505-858-3100  
Email: lnoriega@tierrawestllc.com

Applicant/Owner: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

(Please note that a DFT SITE is one that needs Site Plan Approval & ADMIN SITE is one that does not need it.)

TYPE OF DEVELOPMENT:  PLAT (#of lots) \_\_\_\_\_  RESIDENCE  
 DFT SITE  ADMIN SITE

RE-SUBMITTAL:  YES  NO

DEPARTMENT:  TRANSPORTATION  HYDROLOGY/DRAINAGE

Check all that apply under Both the Type of Submittal and the Type of Approval Sought:

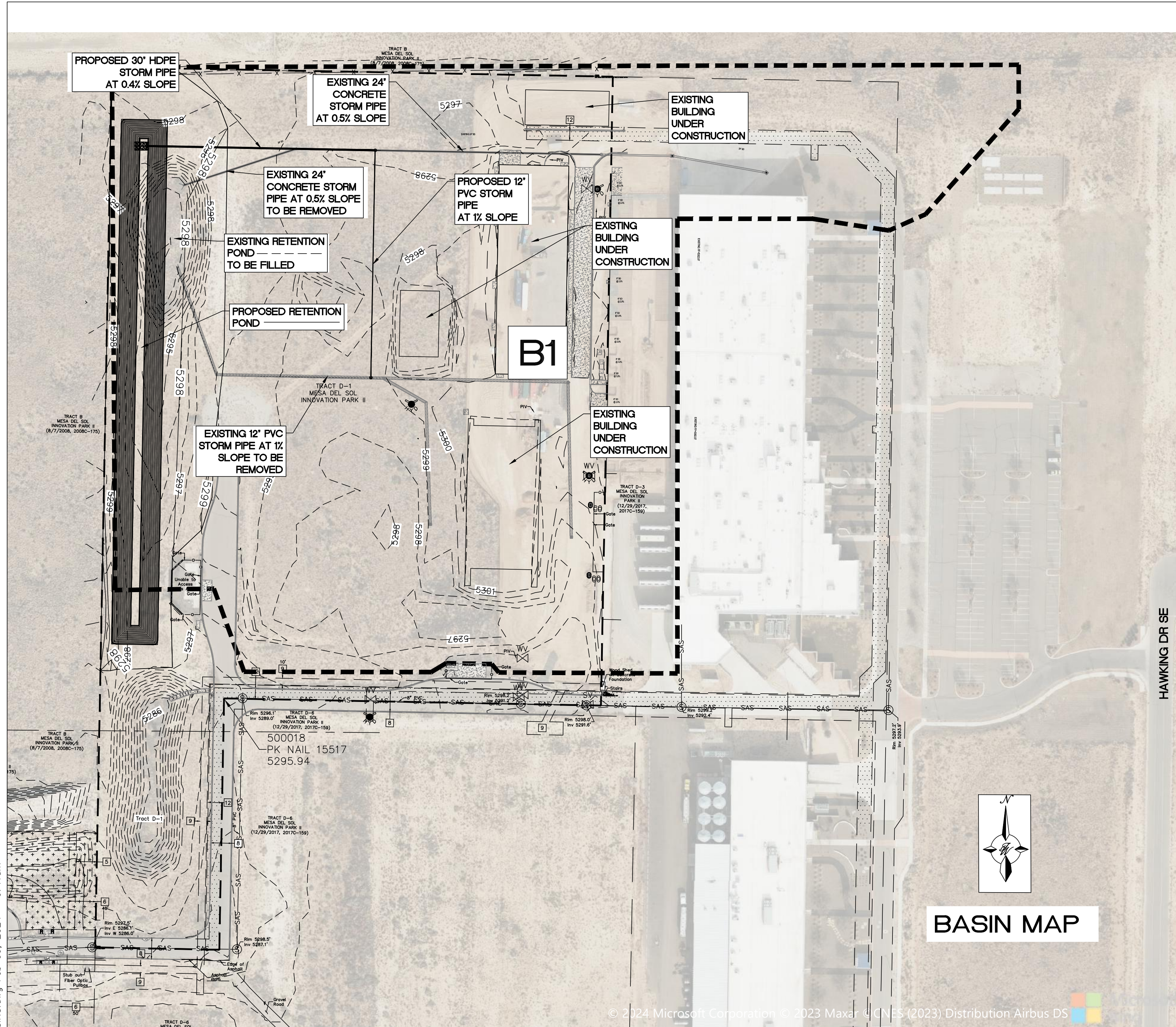
### TYPE OF SUBMITTAL:

- ENGINEER/ARCHITECT CERTIFICATION
- PAD CERTIFICATION
- CONCEPTUAL G&D PLAN
- GRADING & DRAINAGE PLAN
- DRAINAGE REPORT
- DRAINAGE MASTER PLAN
- CLOMR/LOMR
- TRAFFIC CIRCULATION LAYOUT (TCL) ADMINISTRATIVE
- TRAFFIC CIRCULATION LAYOUT FOR DFT APPROVAL
- TRAFFIC IMPACT STUDY (TIS)
- STREET LIGHT LAYOUT
- OTHER (SPECIFY) \_\_\_\_\_

### TYPE OF APPROVAL SOUGHT:

- BUILDING PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY
- CONCEPTUAL TCL DFT APPROVAL
- PRELIMINARY PLAT APPROVAL
- FINAL PLAT APPROVAL
- SITE PLAN FOR BLDG PERMIT DFT 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
- OTHER (SPECIFY) \_\_\_\_\_

DATE SUBMITTED: 02/09/2023



**LEGEND**

—	CURB & GUTTER	x 5048.25	SPOT ELEVATION
- - -	PROPERTY LINE	→	FLOW ARROW
- - -	EASEMENT	—	EXISTING CONCRETE STORM DRAIN PIPE
—	BUILDING	—	EXISTING PVC STORM DRAIN PIPE
—	SIDEWALK/CONCRETE	—	EXISTING CONTOUR MAJOR
—	STORM DRAIN	—	EXISTING CONTOUR MINOR
—	CONTOUR MAJOR	—	BASIN BOUNDARY LINE
—	CONTOUR MINOR	—	

**HYDROLOGY NOTES**

THE PROJECT SITE IS LOCATED ON THE EAST SIDE OF ALBUQUERQUE WITHIN THE MESA DEL SOL INNOVATION PARK. THE PROJECT BASIN AS OF 02/06/2024 HAS RECENTLY BEEN DEVELOPED AT ROUGHLY 50% WITH SEVERAL BUILDINGS AND INCLUDES PAVING, UTILITIES AND STORM DRAIN. STORM WATER WITHIN THE BASIN BOUNDARY CURRENTLY FLOWS TO A RETENTION POND LOCATED ON THE WEST SIDE OF THE BASIN BOUNDARY. THE INTEND OF THIS DRAINAGE REPORT IS TO IDENTIFY THE MINIMUM RETENTION POND SIZE REQUIRED TO CONTAIN THE 100 YR - 10 DAY STORM FOR FULLY DEVELOPED CONDITIONS.

THE SITE IS NOT LOCATED IN A 100YR FLOOD ZONE PER FEMA FIRM MAP

**DPM Weighted E Method**

Precipitation Zone 2  
 Area Vicinity  
 Site Name and Address: Mesa Del Sol Kairos Pond  
 TWLLC Date 2/6/2024

**Equations:**  
 Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed  
 Volume = Weighted E + Total Area  
 Flow = Qa\*Aa + Qb\*Ab + Qc\*Ac + Qd\*Ad

**HYDROLOGY CALCULATION TABLES**

**EXISTING CONDITIONS**

Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Basin Descriptions				100-Year, 10-Day							
				Treatment A %	Treatment B %	Treatment C %	Treatment D %	Weighted E (in)	Volume (ac-ft)	Flow cfs	Volume (cf)				
B1	783,028	17.98	0.02809	0%	0.000	0%	0.000	60%	10.786	40%	7.190	1.550	3.119	64.10	135855.046
<b>Total</b>	<b>783,028.00</b>	<b>17.976</b>	<b>0.02809</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>				<b>7.190</b>		<b>3.119</b>	<b>64.10</b>	<b>135855.05</b>

**FULLY DEVELOPED CONDITIONS**

Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Basin Descriptions				100-Year, 10-Day							
				Treatment A %	Treatment B %	Treatment C %	Treatment D %	Weighted E (in)	Volume (ac-ft)	Flow cfs	Volume (cf)				
B1	783,028	17.98	0.02809	0%	0.000	0%	0.000	15%	2.696	85%	15.279	2.135	4.892	74.54	213081.005
<b>Total</b>	<b>783,028.00</b>	<b>17.976</b>	<b>0.02809</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>				<b>15.279</b>		<b>4.892</b>	<b>74.54</b>	<b>213081.01</b>

**Retention Pond Volume Calculation**

Top Elevation	5,297.50	Ft.
Top Area	49,764	Sq. Ft.
Bottom Elevation	5,288.50	Ft.
Bottom Area	8,400	Sq. Ft.
Total Volume	261,738.00	Cubic Ft.
Max Water Elevation	5,296.50	Ft.
Max Water Elevation Area	44,880.00	Sq. Ft.
Max Water Volume	213,120.00	Cubic Ft.
Required Volume	213,081.01	Cubic Ft.
Design Free Board	1.00	Ft.

Note: Existing Pond Volume = 100,431 Cubic Ft.

**Pipe Sizing Calculation**

24" Conc Pipe Max Flow	16.00	CFS
12" PVC Pipe Max Flow	5.15	CFS
Combined Max Flow	21.15	CFS
30" HDPE Pipe Max Flow	28.10	CFS
Flow Required	21.15	CFS

Note: Previous Drainage Reports Q16DA5000A and Q16DA5000B indicate that the existing storm drain pipe system is flowing at max capacity.  
 Note: See pipe capacity charts for additional pipe information.



**LEGAL DESCRIPTION**  
 TR D-1 PLAT OF TRACTS D-1 THRU D-7 MESA DEL SOL INNOVATION PARK II (A SUBDIVISION OF TRACT D MESA DEL SOL INNOVATION PARK II) CONT 16.4161 AC

**ACS BENCHMARK**  
 A.G.R.S. MONUMENT "4-016"  
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\\TWNASVZ\_Drive\2023\2023103\_Mesa Del Sol Innovation Park\_Ponding.dwg Construction\2023103\_BASINS.dwg Feb 09, 2024 - 9:41 am

**24" CONCRETE PIPE CAPACITY**

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.013
Channel Slope	0.005 ft/ft
Normal Depth	24.0 in
Diameter	24.0 in
Discharge	16.00 cfs

v.1  
H:1

**12" PVC PIPE CAPACITY**

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.009
Channel Slope	0.010 ft/ft
Normal Depth	12.0 in
Diameter	12.0 in
Discharge	5.15 cfs

v.1  
H:1

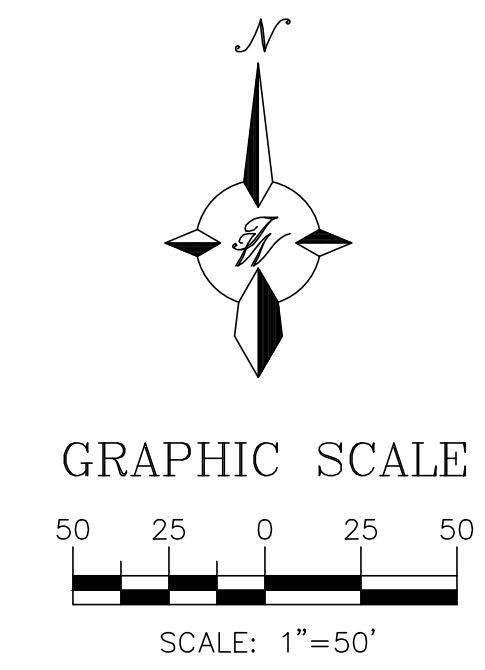
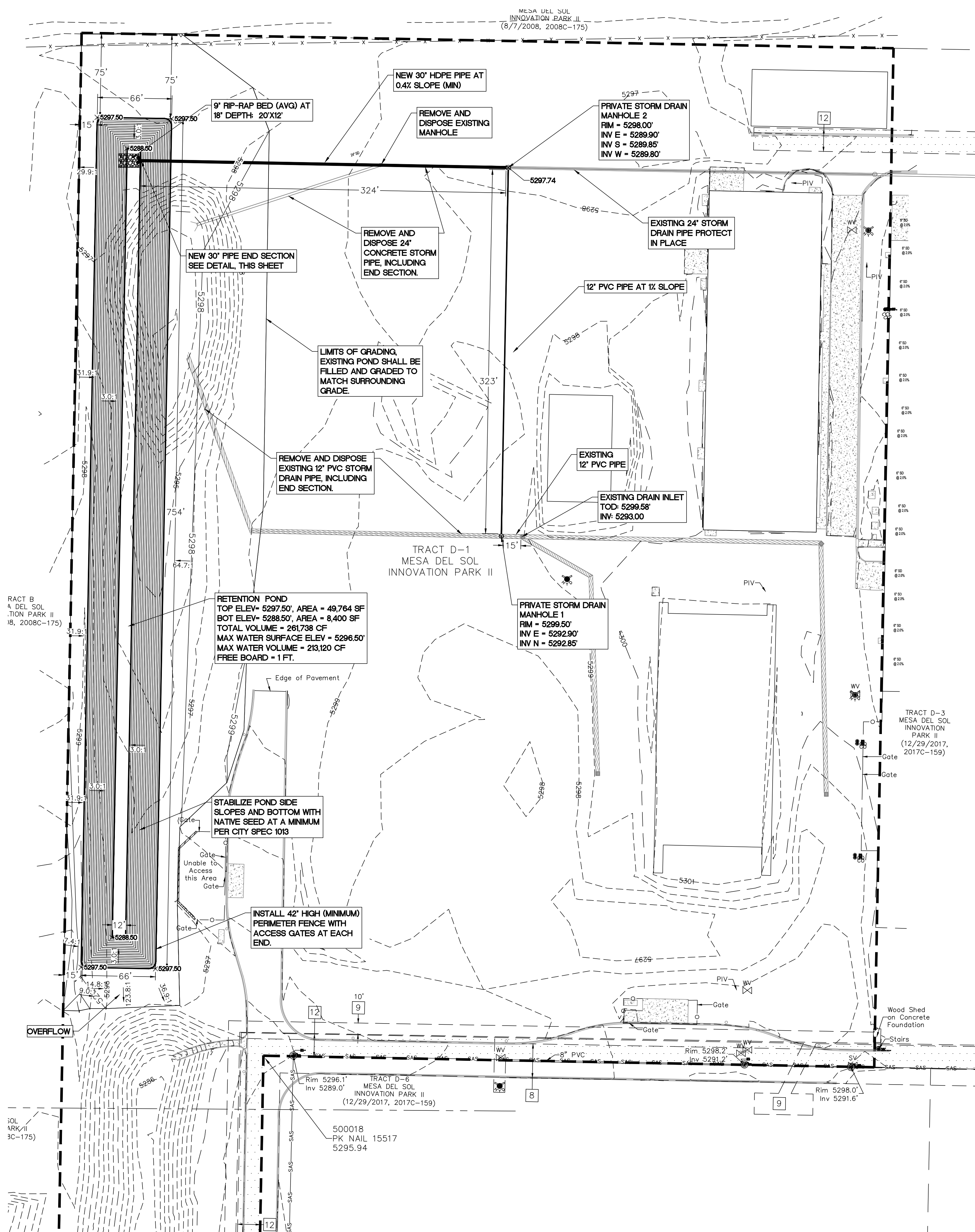
**30" HDPE PIPE CAPACITY**

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.012
Channel Slope	0.004 ft/ft
Normal Depth	30.0 in
Diameter	30.0 in
Discharge	28.10 cfs

v.1  
H:1

	<b>KAIROS FULLY DEVELOPED POND</b> <b>ALBUQUERQUE, NM</b>	DRAWN BY BF DATE 02/06/2024
	<b>GRADING AND DRAINAGE</b> <b>BASIN MAP</b>	2023103_BASINS
	<b>TERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	SHEET # <b>GR-0</b> JOB # 2023103

\\TWNAS-V-Drive\2023\2023103 Mesa Del Sol Innovation Park Ponding.dwg Construction\2023103\_GRB.dwg Feb 09, 2024 - 9:43am



City of Albuquerque  
 Planning Department  
 Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
 DATE: 2/13/2024  
 BY: [Signature]  
 HydroTrans # R16DA5000D

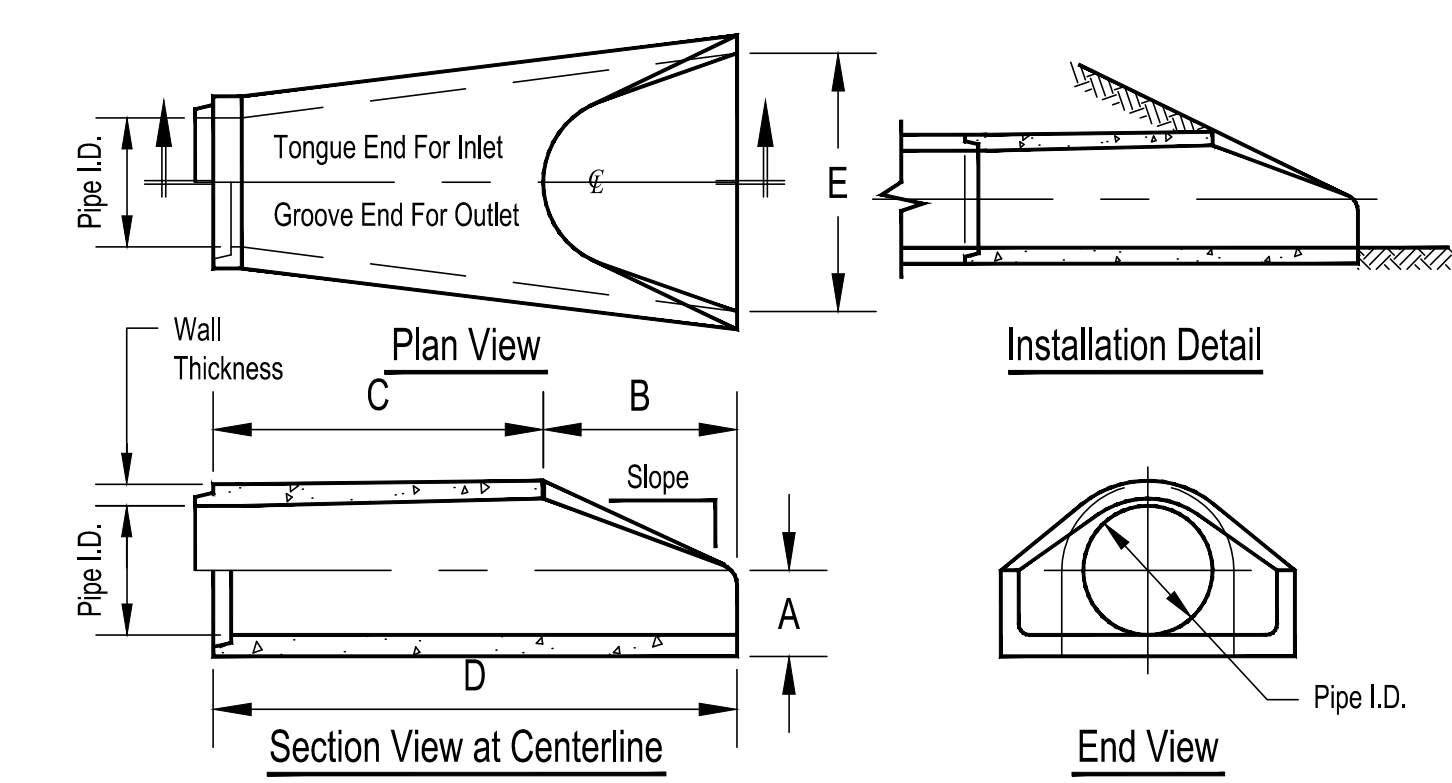
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- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
  - CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING ROADWAY.
  - REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
  - ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

**Flared End Section  
 12" - 72" Diameter Pipe**



Pipe Inner Diameter (inches)	Wall Thickness (inches)	A (inches)	B (inches)	C (inches)	D (inches)	E (inches)	Slope
12	2	4	24	48 7/8	72 7/8	30	3:1
15	2 1/4	6	27	46	73	30	3:1
18	2 1/2	9	27	46	73	36	3:1
24	3	9 1/2	43 1/2	30	73 1/2	48	3:1
30	3 1/2	12	54	19 3/4	73 3/4	60	3:1
36	4	15	63	34 3/4	97 3/4	72	3:1
42	4 1/2	21	63	35	98	78	3:1
48	5	24	72	26	98	84	3:1
54	5 1/2	27	65	35	100	90	2.4:1
60	6	30	60	39	99	96	2:1
66	6 1/2	32	78	21	99	102	2:1
72	7	34	78	21	99	108	2:1

- Notes:  
 1. Produced to meet ASTM specifications.  
 2. Contact a Concrete Pipe Division representative for details not listed on this sheet.

**FLARED END SECTION DETAIL**  
 NTS

ENGINEER'S SEAL  RONALD R. BOHANNAN P.E. #7868	KAIVOS FULLY DEVELOPED POND ALBUQUERQUE, NM	DRAWN BY BF
	<b>GRADING &amp; DRAINAGE PLAN</b>	DATE 02/06/2024
02/06/2024 TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	SHEET # <b>GR-1</b>	JOB # 2023103