

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

6/25/2025

Jesus Lopez, P.E.
Smith Engineering Company
2201 San Pedro Dr NE
Albuquerque, NM 87110

RE: Mesa del Sol Regional Sports Complex
5601 University Blvd. SE
Drainage Master Plan
Engineer's Stamp Date: 6/19/2025
Hydrology File: R15D002B

Dear Mr. Lopez:

Based upon the information provided in your submittal received 6/24/2025, the Drainage Master Plan is approved for Grading Permit. Prior to each phase of development, a detailed Grading and Drainage Plan will need to be prepared and submitted to the City of Albuquerque Hydrology for review and approval.

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.

If you have any questions, please contact me at 924-3695 or tchen@cabq.gov.

Sincerely,

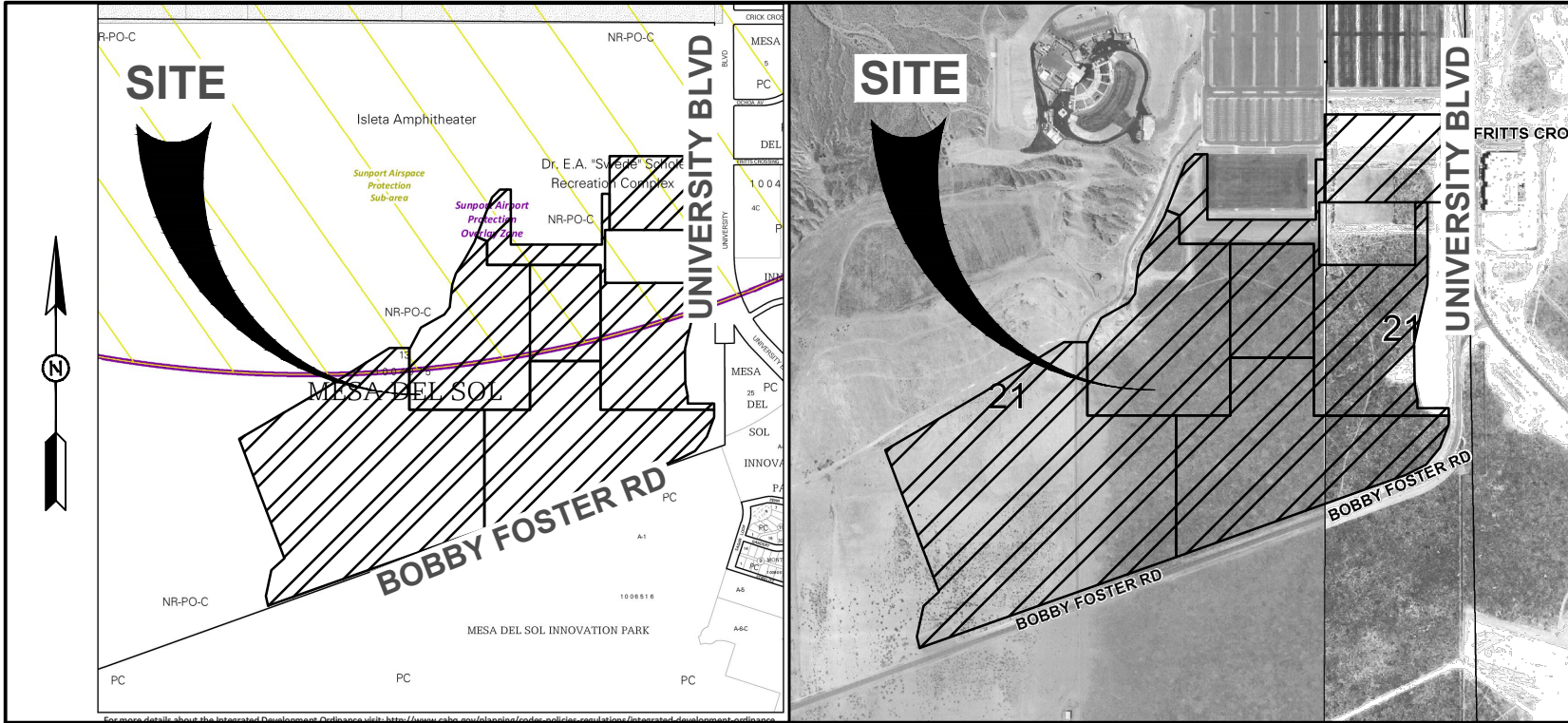
Tiequan Chen, P.E.
Principal Engineer, Hydrology
Planning Department, Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



VICINITY MAP: R-15-Z FIRM: FM35001C0535G

BACKGROUND
THE SPORTS COMPLEX AT MESA DEL SOL IS AN APPROXIMATELY 207-ACRE DEVELOPMENT TO INSTALL SOCCER FIELDS AND VARIOUS AMENITIES FOR INDOOR AND OUTDOOR RECREATION. THE SITE IS LOCATED ON THE NORTHWEST CORNER OF UNIVERSITY BLVD. AND BOBBY FOSTER RD. THE SITE LIES WITHIN FEMA FLOOD ZONE X, AN AREA OF MINIMAL FLOOD RISK, PER FIRM PANEL 35001C0535G AND H, EFFECTIVE SEPTEMBER 2008 AND AUGUST 2012, RESPECTIVELY.

METHODOLOGY
THE CITY OF ALBUQUERQUE DPM CHAPTER 6 WAS USED TO PERFORM HYDROLOGIC CALCULATIONS FOR THE SITE. THIS PLAN UPDATES THE CITY-APPROVED DRAINAGE MANAGEMENT PLAN (CITY HYDROLOGY FILE R15D002) PREPARED BY BOHANNAN HUSTON, 2019. THE BASINS WERE UPDATED TO MATCH THE LATEST SITE DEVELOPMENT PLAN. POND SIZING CALCULATIONS DEMONSTRATE CAPACITY FOR THE 100-YEAR 10-DAY VOLUME WITH ONE FOOT OF FREEBOARD AS REQUIRED BY THE DMP.

EXISTING CONDITIONS
THE SITE IS PARTIALLY DEVELOPED (PHASES 1-3, INCLUDING BASINS P1-P8, P18-P20) WITH 15 SOCCER FIELDS, VARIOUS STORAGE AREAS, SIDEWALKS, PARKING LOTS, TRAIL, AND PONDS. A RETENTION POND (WEST UNIVERSITY POND, BASIN P6) EXISTS AT THE EAST END OF THE PROPERTY WHERE MOST OF THE STORMWATER FLOWS INTO. THE REMAINDER OF THE SITE IS UNDEVELOPED, MODERATELY DISTURBED AREAS WITH FLAT SLOPES.

PROPOSED CONDITIONS
FUTURE DEVELOPMENT WILL INSTALL APPROXIMATELY 16 NEW FIELDS, PARKING, A FIELD HOUSE, STORM DRAIN, MEMORIAL, AND SIDEWALK/TRAILS.

BASINS P1-P8, P14 AND P18 WILL DRAIN TO THE WEST UNIVERSITY POND.

BASINS P1, P3 AND P4 WILL SURFACE DRAIN TO THE NORTH END OF THE WEST UNIVERSITY POND VIA THE EXISTING SWALE. P2 RUNOFF WILL BE ROUTED BY STORM DRAIN TO THE EXISTING SWALE SOUTH OF THE BASIN WITH EVENTUAL DISCHARGE TO THE WEST UNIVERSITY POND. BASIN P18 INCLUDES A PORTION OF THE EXISTING SOCCER FIELD AND THE NEW PARKING AT THE NORTHWEST POINT OF THE SITE. THE BASIN WILL SURFACE DRAIN TO THE WEST UNIVERSITY POND.

BASINS P5, P7, P8 AND P14 SURFACE FLOW INTO A SERIES OF PONDS WITH EVENTUAL OUTFALL INTO THE WEST UNIVERSITY POND. 4-30" DIAMETER CULVERTS CONVEY THE FLOWS FROM THE EAST END OF P7 UNDER THE PARKING LOT AND INTO THE WEST UNIVERSITY POND.

BASINS P9-P12 WILL SURFACE FLOW INTO RETENTION PONDS TO BE INSTALLED IN FUTURE PHASES. THESE PONDS ARE LABELED A-D AND I.

BASIN P13 WILL SURFACE DRAIN WEST INTO POND E. BASIN P15 WILL SURFACE DRAIN SOUTHEAST INTO BASIN P10 AND EVENTUALLY TO POND C. BASIN P16 INCLUDES A NEW DEVELOPMENT TO BE DONE BY OTHERS, IT IS ASSUMED THE SITE WILL BE SELF CONTAINED IN POND F. BASIN P17 WILL SURFACE DRAIN WEST INTO POND G.

BASIN P19 IS PARTIALLY DEVELOPED WITH A SHALLOW RETENTION POND. BASIN P19 SURFACE DRAINS INTO POND H. UPON FURTHER DEVELOPMENT POND H WILL REQUIRE ADDITIONAL VOLUME.

BASIN P20 INCLUDES AN EXISTING ROAD WHICH IS FULLY PAVED AND DRAINS TO THE WEST. BASIN P21 INCLUDES A PORTION OF THE PREVIOUSLY MENTIONED ROAD AND SITE PARKING. THIS BASIN WILL DRAIN WEST INTO POND G.

IN ADDITION TO THE MAJOR RETENTION PONDS, A SERIES OF SMALL-SCALE RETENTION PONDS AND DEPRESSED AREAS WILL BE INSTALLED THROUGHOUT THE SITE USING BERNALILLO COUNTY'S "GREEN STORMWATER INFRASTRUCTURE" SPECIFICATIONS AND PRACTICES TO FURTHER CAPTURE STORMWATER PRIOR TO DISCHARGING INTO THE MAJOR RETENTION PONDS. THIS ALLEVIATES THE MAJOR RETENTION PONDS CAPACITY REQUIREMENTS BUT THE REDUCTION IS NOT INCLUDED IN THESE CALCULATIONS. THIS IS USED AS A BEST MANAGEMENT PRACTICE WHICH PROVIDES A CONSERVATIVE DESIGN APPROACH.

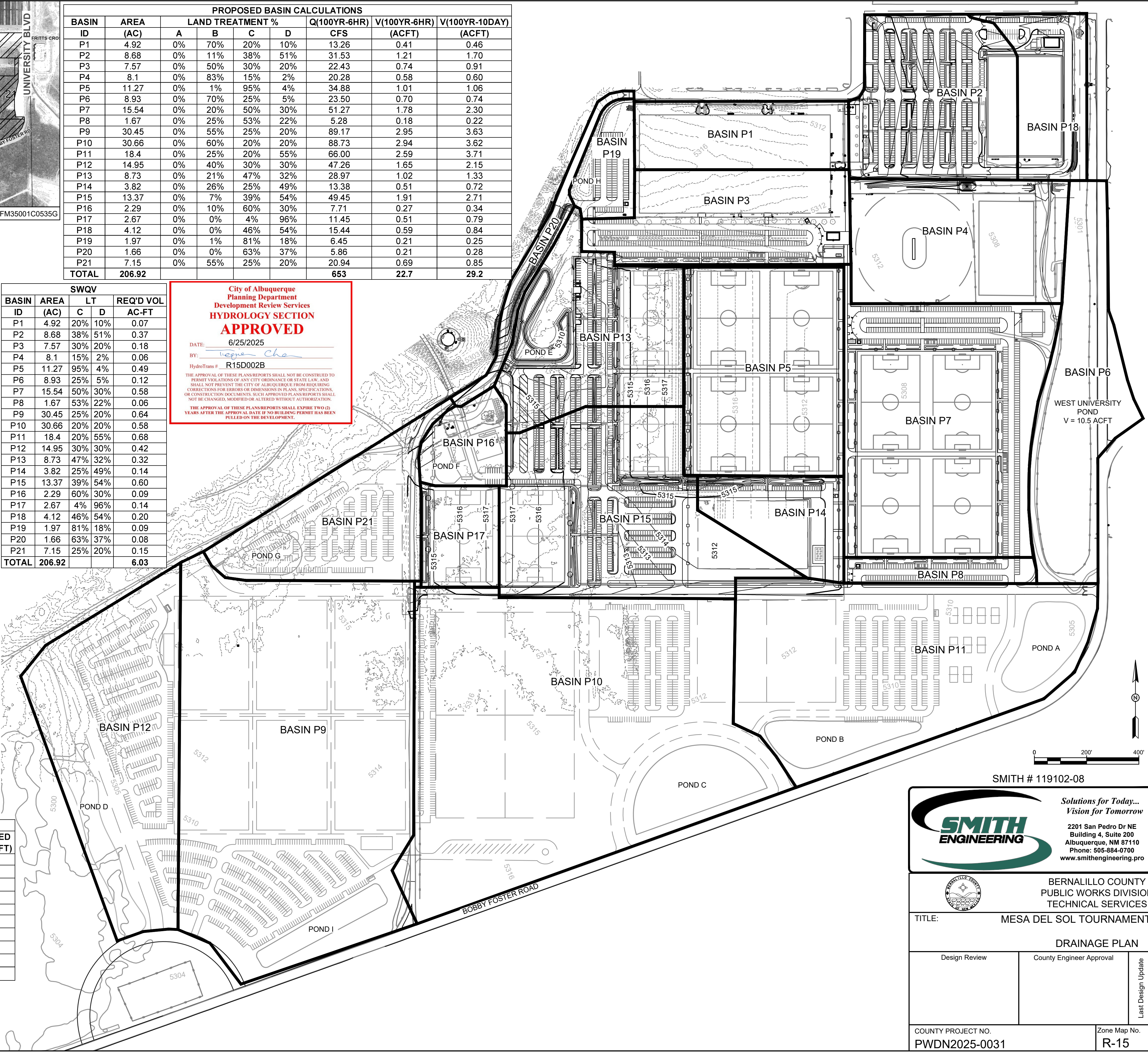
POND CAPACITIES TABLE				
POND	BASINS	REQ RETENTION VOL (ACFT)	REQ SWQV VOL (ACFT)	PROVIDED VOL (ACFT)
WEST UNIVERSITY	P1-P8, P14, P-18	9.55	2.27	10.50
A, B	P11	3.71	0.68	3.71 ⁽³⁾
C	P-10, P-15	6.33	1.18	6.33 ⁽³⁾
D	P-12	2.15	0.42	2.15 ⁽³⁾
E	P-13	1.33	0.32	1.46
F	P-16	0.34	0.09	0.34 ⁽³⁾
G	P-17, P-21	1.64	0.29	1.64 ⁽³⁾
H	P-19	0.25 ⁽¹⁾	0.09	0.06 ⁽¹⁾
I	P-9	3.63	0.64	3.63 ⁽³⁾
TOTAL		28.9 ⁽²⁾	6.0	29.8 ⁽³⁾

PROVIDED VOLUME INCLUDES 1' FREEBOARD
⁽¹⁾REQUIRED VOLUME UNDER DEVELOPED CONDITIONS.
⁽²⁾BASIN P20 DOES NOT INCLUDE A RETENTION POND
⁽³⁾PROPOSED FUTURE POND VOLUME

PROPOSED BASIN CALCULATIONS								
BASIN ID	AREA (AC)	LAND TREATMENT %				Q(100YR-6HR)	V(100YR-6HR)	V(100YR-10DAY)
		A	B	C	D	CFS	(ACFT)	(ACFT)
P1	4.92	0%	70%	20%	10%	13.26	0.41	0.46
P2	8.68	0%	11%	38%	51%	31.53	1.21	1.70
P3	7.57	0%	50%	30%	20%	22.43	0.74	0.91
P4	8.1	0%	83%	15%	2%	20.28	0.58	0.60
P5	11.27	0%	1%	95%	4%	34.88	1.01	1.06
P6	8.93	0%	70%	25%	5%	23.50	0.70	0.74
P7	15.54	0%	20%	50%	30%	51.27	1.78	2.30
P8	1.67	0%	25%	53%	22%	5.28	0.18	0.22
P9	30.45	0%	55%	25%	20%	89.17	2.95	3.63
P10	30.66	0%	60%	20%	20%	88.73	2.94	3.62
P11	18.4	0%	25%	20%	55%	66.00	2.59	3.71
P12	14.95	0%	40%	30%	30%	47.26	1.65	2.15
P13	8.73	0%	21%	47%	32%	28.97	1.02	1.33
P14	3.82	0%	26%	25%	49%	13.38	0.51	0.72
P15	13.37	0%	7%	39%	54%	49.45	1.91	2.71
P16	2.29	0%	10%	60%	30%	7.71	0.27	0.34
P17	2.67	0%	0%	4%	96%	11.45	0.51	0.79
P18	4.12	0%	0%	46%	54%	15.44	0.59	0.84
P19	1.97	0%	1%	81%	18%	6.45	0.21	0.25
P20	1.66	0%	0%	63%	37%	5.86	0.21	0.28
P21	7.15	0%	55%	25%	20%	20.94	0.69	0.85
TOTAL	206.92					653	22.7	29.2

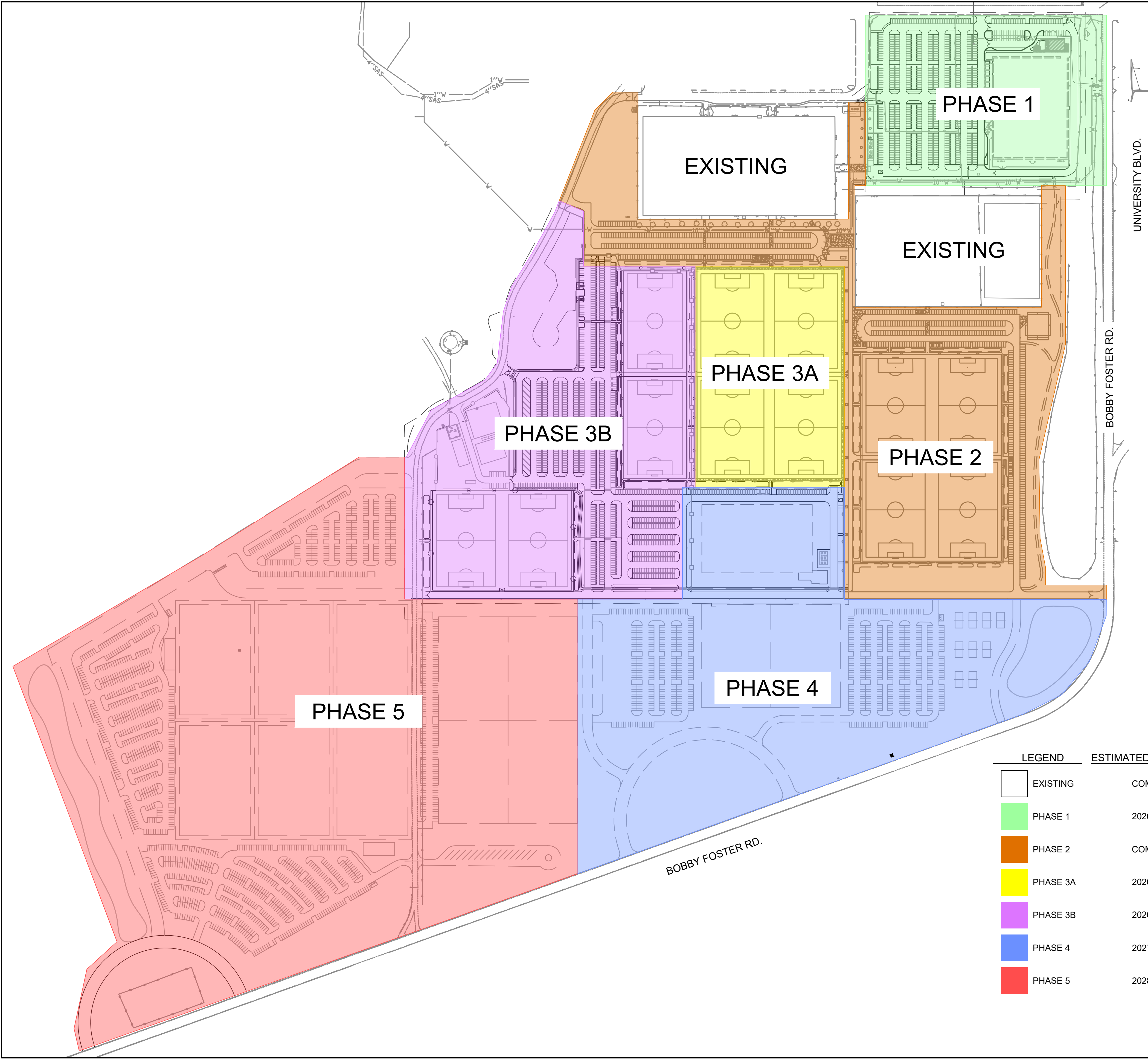
SWQV				
BASIN ID	AREA (AC)	C	D	AC-FT
P1	4.92	20%	10%	0.07
P2	8.68	38%	51%	0.37
P3	7.57	30%	20%	0.18
P4	8.1	15%	2%	0.06
P5	11.27	95%	4%	0.49
P6	8.93	25%	5%	0.12
P7	15.54	50%	30%	0.58
P8	1.67	53%	22%	0.06
P9	30.45	25%	20%	0.64
P10	30.66	20%	20%	0.58
P11	18.4	20%	55%	0.68
P12	14.95	30%	30%	0.42
P13	8.73	47%	32%	0.32
P14	3.82	25%	49%	0.14
P15	13.37	39%	54%	0.60
P16	2.29	60%	30%	0.09
P17	2.67	4%	96%	0.14
P18	4.12	46%	54%	0.20
P19	1.97	81%	18%	0.09
P20	1.66	63%	37%	0.08
P21	7.15	25%	20%	0.15
TOTAL	206.92			6.03

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 6/25/2025
BY: *Hegner Cha*
HydroTrans # R15D002B
THE APPROVAL OF THESE PLANS/REPORTS SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS 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.
THE APPROVAL OF THESE PLANS/REPORTS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.



SMITH # 119102-08
SMITH ENGINEERING
Solutions for Today...
Vision for Tomorrow
2201 San Pedro Dr NE
Building 4, Suite 200
Albuquerque, NM 87110
Phone: 505-884-0700
www.smithengineering.pro

BERNALILLO COUNTY PUBLIC WORKS DIVISION TECHNICAL SERVICES	
TITLE: MESA DEL SOL TOURNAMENT FIELDS	
DRAINAGE PLAN	
Design Review	County Engineer Approval
Last Design Update	
Mo./Day/Yr.	Mo./Day/Yr.
NO.	DATE
REMARKS	REVISIONS
BY	
COUNTY PROJECT NO. PWDN2025-0031	
Zone Map No. R-15	Sheet DR



LEGEND	ESTIMATED COMPLETION
EXISTING	COMPLETE
PHASE 1	2026
PHASE 2	COMPLETE
PHASE 3A	2026
PHASE 3B	2026
PHASE 4	2027
PHASE 5	2028

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TITLE: MESA DEL SOL TOURNAMENT FIELDS

Design Review

County Engineer Approval

Last Design Update

Mo./Day/Yr.

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COUNTY PROJECT NO.
PWDN2025-0031

Zone Map No.
R-15

Sheet
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ENGINEER'S SEAL		REMARKS	
		DATE	
		BY	