

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

October 10, 2024

David Thompson, PE  
Thompson Engineering Consultants  
PO Box 65760  
Albuquerque, NM 87193

**RE: Solare Collegiate Charter School  
Grading and Drainage Plan  
Engineer's Stamp Date: 9/16/24  
Hydrology File: M09D031A**

Dear Mr. Thompson:

Based upon the information provided in your submittal received 10/04/2024, 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.

**PRIOR TO CERTIFICATE OF OCCUPANCY:**

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.
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 detention ponds per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.

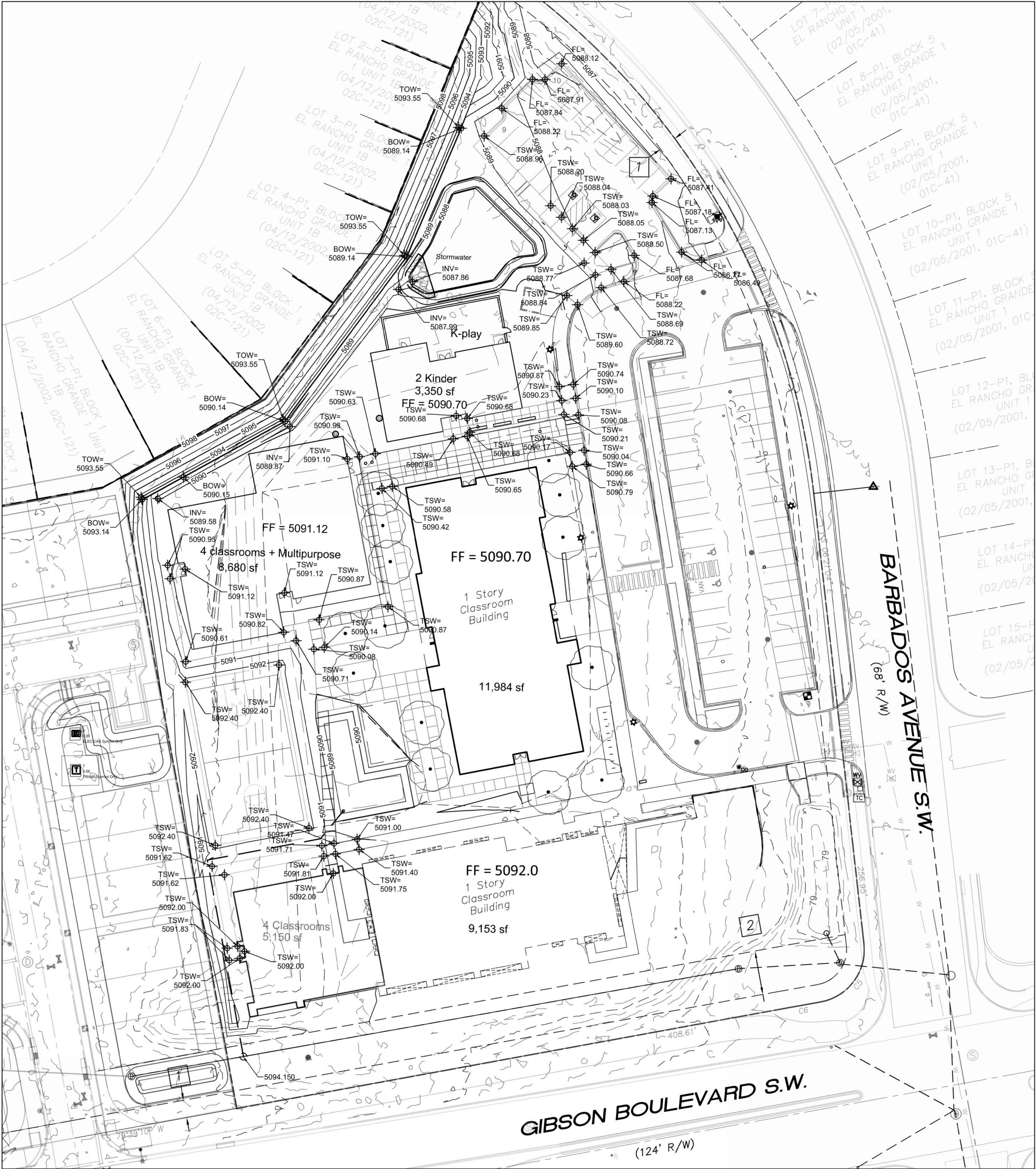
As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer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

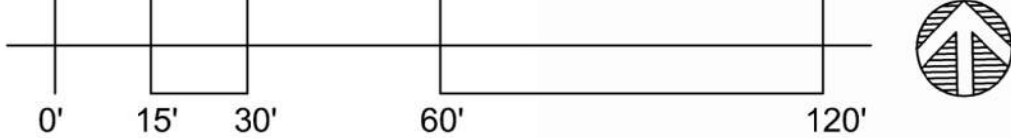
Sincerely,

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





**A1 SITE GRADING PLAN**  
SCALE: 1" = 30'-0"



**LEGEND**

---	PROPERTY LINE
---	EASEMENT
TSW	TOP OF SIDEWALK
FL	FLOWLINE
INV	INVERT
TOW	TOP OF WALL (FINISHED GRADE)
BOW	BOTTOM OF WALL (FINISHED GRADE)

City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 10-10-2024  
BY: *[Signature]*  
HydroTrans # M09D031A

THE APPROVAL OF THESE PLANS/REPORTS SHALL NOT BE  
CONSIDERED TO BE A GUARANTEE OF ANY CITY  
OFFICIALS OR EMPLOYEES. THE CITY OF ALBUQUERQUE  
MAINTAINS NO LIABILITY FOR ANY DAMAGE, LOSS, OR  
INJURY TO PERSONS OR PROPERTY, OR FOR ANY  
CONSTRUCTION OR CONSTRUCTION DEFECTS, OR FOR  
ANY OTHER CAUSE, ARISING OUT OF OR FROM THE  
USE OF THESE PLANS/REPORTS, OR FOR ANY OTHER  
REASON, WITHOUT REGARD TO WHETHER SUCH  
DAMAGE, LOSS, OR INJURY IS CAUSED IN WHOLE OR  
IN PART BY THE NEGLIGENCE OF ANY CITY  
OFFICIALS OR EMPLOYEES.

APPROVAL OF GRADING & DRAINAGE PLAN(S) SHALL EXPIRE  
TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO  
BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.



ARCHITECT/ENGINEER



**SOLARE COLLEGIATE  
CHARTER SCHOOL**

8801 GIBSON BLVD SW  
ALBUQUERQUE, NM 87121

**CONSTRUCTION  
DOCUMENTS**

REVISION	DATE
----------	------

DATE 9-12-24

PROJECT NO

**SITE  
GRADING  
PLAN**

SHEET NO.

**C201**

Tompson  
Engineering  
Consultants, Inc.  
tccm@yahoo.com

P.O. BOX 65760  
ALBUQUERQUE, NM 87193

PHONE: (505) 271-2199  
FAX: (505) 830-9245

City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 10-10-2024  
BY: *[Signature]*  
HydroTrans # M09D031A

THE APPROVAL OF THESE PLANS OR PORTION SHALL NOT BE  
CONSIDERED AN ENDORSEMENT OR GUARANTEE OF THE  
DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY OF ALBUQUERQUE  
MAKES NO REPRESENTATION OR WARRANTY AS TO THE  
ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE  
SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING REASONABLE  
ATTORNEY'S FEES, ARISING OUT OF OR FROM ANY SUCH APPROVAL.  
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ARCHITECT/ENGINEER

SOLARE COLLEGIATE  
CHARTER SCHOOL

8801 GIBSON BLVD SW  
ALBUQUERQUE, NM 87121

CONSTRUCTION  
DOCUMENTS

REVISION

DATE

DATE

9-12-24

PROJECT NO

EXISTING  
CONDITION  
DRAINAGE PLAN

SHEET NO.

CD-1

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I. PURPOSE AND SCOPE

THE PURPOSE OF THIS DRAINAGE PLAN IS TO PRESENT THE EXISTING AND PROPOSED DRAINAGE CONDITIONS FOR THE PROPOSED EXPANSION OF THE SOLARE COLLEGIATE CHARTER SCHOOL. THE SITE IS LOCATED ON GIBSON BOULEVARD SW, WEST OF BARBADOS AVE, SW, IN SOUTHWEST ALBUQUERQUE. THE ZONE ATLAS PAGE FOR THE SITE IS M-09-Z.

II. SITE DESCRIPTION AND HISTORY

THE PROJECT SITE IS LOCATED ON THE NORTH SIDE OF GIBSON BOULEVARD SW, WEST OF BARBADOS AVENUE SW. THE SITE IS PARTIALLY DEVELOPED WITH TWO CLASSROOM BUILDINGS. PROPERTIES TO THE NORTH HAVE BEEN DEVELOPED AND CONTAIN STORMWATER MANAGEMENT TO DIRECT STORMWATER RUNOFF INTO THE PUBLIC STREETS. THE SOMBRA DEL OESTE SUBDIVISION TO THE WEST IS SCHEDULED TO BEGIN CONSTRUCTION IN SEPTEMBER OF 2024. ONCE THE SUBDIVISION IS CONSTRUCTED OFFSITE FLOW FROM THE WEST WILL BE ELIMINATED.

III. COMPUTATIONAL PROCEDURES

HYDROLOGIC ANALYSIS WAS PERFORMED UTILIZING THE DESIGN CRITERIA BASED ON CHAPTER 6, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL RELEASED 2020. TABLES WITHIN CHAPTER 6, WERE USED TO AID IN THE STUDY OF THE SITE HYDROLOGY.

IV. PRECIPITATION

THE STORM EVENT USED FOR THE FOLLOWING CALCULATIONS IS THE 100YR-24HR STORM. THE PROJECT SITE IS LOCATED IN ZONE 1 (WEST OF RIO GRANDE).

V. EXISTING DRAINAGE CONDITIONS

THE SITE IS CURRENTLY PARTIALLY DEVELOPED AND CONTAINS TWO CLASSROOM BUILDINGS. THE SITE GENERALLY DRAINS TO AN EXISTING STORMWATER MANAGEMENT POND LOCATED AT THE CORNER OF GIBSON AND BARBADOS. THIS POND HAS BEEN SIZED TO ACCEPT RUNOFF FROM THE PROJECT SITE, AS WELL AS FROM THE EMPTY LAND TO THE WEST, THAT IS NOW BECOMING THE SOMBRA DEL OESTE SUBDIVISION. THE SUBDIVISION IS SCHEDULED TO BEGIN CONSTRUCTION IN SEPTEMBER OF 2024. WE HAVE INCLUDED THE BACKGROUND FOR SOMBRA DEL OESTE ON THIS PLAN TO ILLUSTRATE SOME OF THE STORMWATER IMPROVEMENTS THAT ARE INCLUDED IN THE APPROVED SUBDIVISION DRAINAGE PLANS.

SOMBRA DEL OESTE SUBDIVISION WILL BE CONSTRUCTING A RETAINING WALL APPROXIMATELY 6' TALL ALONG THE WESTERN PROPERTY LINE OF THE PROJECT SITE.

NO RUNOFF FROM ADJACENT SITES IS ANTICIPATED. FURTHERMORE, THE POND THAT IS ON SITE WAS DESIGNED TO CONTAIN SOME RUNOFF FROM THE SITE TO THE WEST.

LEGEND

	PROPERTY LINE
	EASEMENT
TSW	TOP OF SIDEWALK
FL	FLOWLINE
INV	INVERT
TOW	TOP OF WALL (FINISHED GRADE)
BOW	BOTTOM OF WALL (FINISHED GRADE)



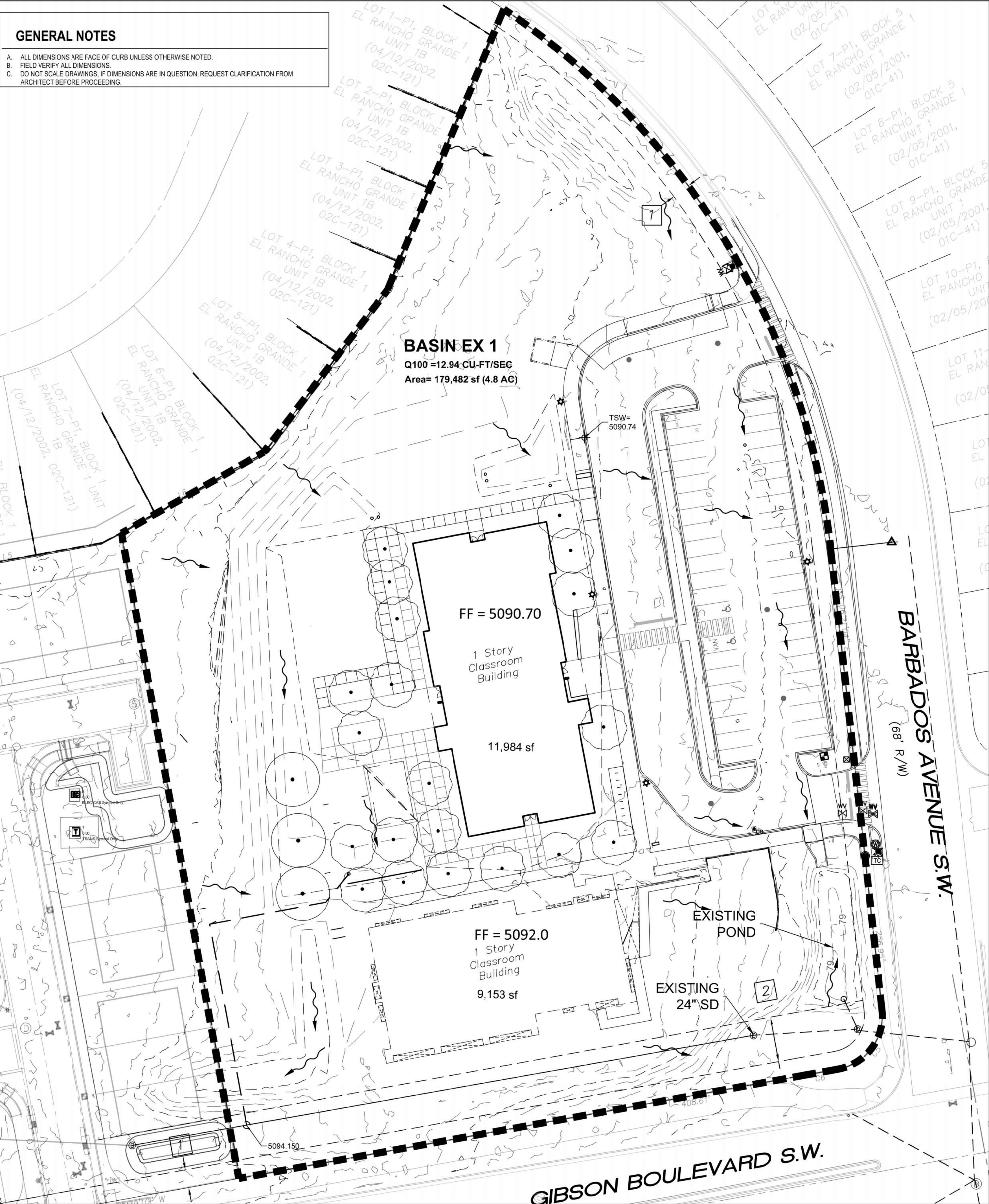
A4

FEMA FIRMETTE  
NOT TO SCALE  
FEMA FLOOD INSURANCE RATE MAP  
35001C0336H DATED 8/16/2012



A5

ZONE ATLAS PAGE M-09-Z  
NOT TO SCALE



A1

EXISTING CONDITIONS DRAINAGE PLAN  
SCALE: 1" = 30'-0"

City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY REVIEW SECTION**  
**APPROVED**  
DATE: 10-10-2024  
BY: [Signature]  
HydroTeam 6: M090031A

THE APPROVAL OF THESE PLANS DOES NOT IMPLY  
CONSENT TO PERMIT VIOLATIONS OF ANY CITY  
ORDINANCE, STATE OR FEDERAL LAW, NOR DOES IT  
GUARANTEE THE ACCURACY OF THE INFORMATION  
THE CITY OF ALBUQUERQUE PROVIDES. THE CITY  
SPECIFICATIONS OR CHANGES TO THE CITY SPECIFICATIONS  
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT  
AUTHORIZATION.

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TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO  
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ARCHITECT/ENGINEER

SOLARE COLLEGIATE  
CHARTER SCHOOL

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CONSTRUCTION  
DOCUMENTS

REVISIONDATE

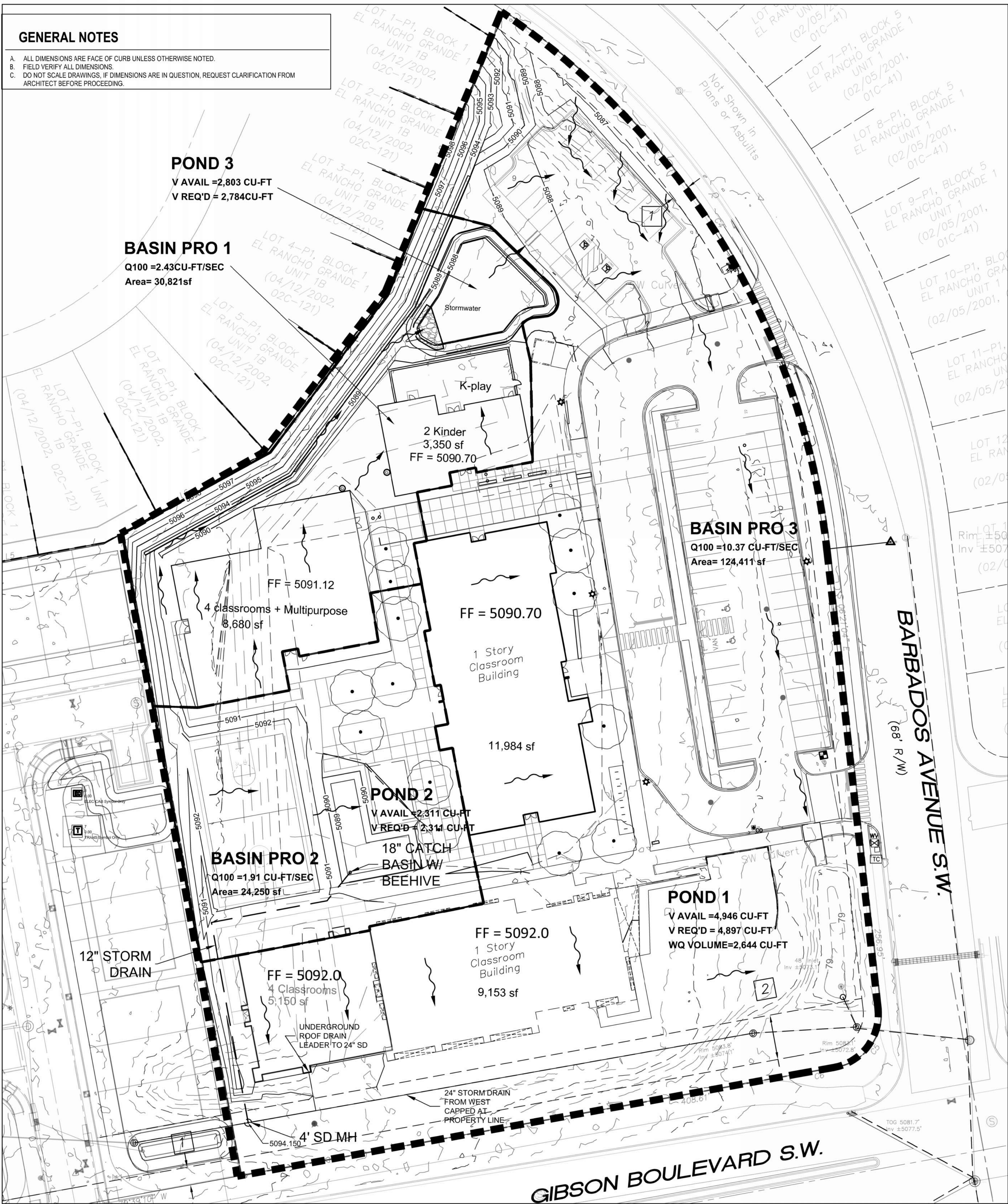
DATE9-12-24

PROJECT NO

DEVELOPED  
DRAINAGE  
PLAN

SHEET NO.

CD-2



## VI. PROPOSED DRAINAGE CONDITIONS

THE NEW BUILDINGS WILL ADD A TOTAL OF 17,180SF OF NEW ROOF. NEW SIDEWALKS, BASKETBALL COURT AND PARKING WILL ADD 16,614SF OF NEW IMPERVIOUS. THIS WILL REQUIRE AN ADDITIONAL 957CUBIC FEET OF NEW WATER QUALITY VOLUME (BASED ON 0.34\"/>

WITH THE CREATION OF THE SOMBRA DEL OESTE SUBDIVISION TO THE WEST, THERE WILL BE A SIGNIFICANT REDUCTION IN FLOW RATE ENTERING THE EXISTING STORMWATER MANAGEMENT POND LOCATED AT THE CORNER OF GIBSON BOULEVARD AND BARBADOS AVE, SW. CURRENTLY THERE IS A 24\"/>

THE NEW PEAK RUNOFF RATE FOR THE FULLY DEVELOPED SITE WILL INCREASE FROM 12.94 TO 14.95 CFS FOR THE 100-YEAR, 6-HOUR EVENT. AS MENTION ABOVE THE POND AT THE SE CORNER WILL NOW HAVE LESS FLOW RATE (REMOVING 25.9-CFS) ENTERING THAT OCCURRED HISTORICALLY.

THIS WILL GENERATE AVAILABLE VOLUME WITHIN THE STORM POND FOR BOTH INCREASE IN PEAK RUNOFF RATES AND VOLUME, BUT ALSO TO STORM THE REQUIRED WATER QUALITY VOLUME.

PRIOR PHASES OF THE SITE DID NOT INCLUDE PROVISIONS FOR CONVEYING STORM RUNOFF FROM THIS PHASE. TO COMPENSATE, A SHALLOW PONDING AREA WILL NEED TO BE CREATED NEAR THE BASKETBALL COURT. THIS WILL ACT AS A DETENTION POND FOR THE RUNOFF FROM THE CURRENT COURTYARD AND THE NEW BASKETBALL COURT. A 12\"/>

NEW ROOFS WILL ALL DRAIN AWAY FROM THE COURTYARD. THE SOUTHERN BUILDING WILL DISCHARGE INTO AN EXISTING SWALE ALONG GIBSON. THIS SWALE DRAINS TO THE EXISTING POND LOCATED AT THE SE CORNER OF THE PROJECT SITE.

NORTHERN BUILDINGS WILL HAVE THE ROOFS DIRECTING WATER TO A SWALE ALONG THE NORTHERN SIDE OF THE SITE. A NEW SHALLOW PONDING AREA WILL BE CREATED BETWEEN THE KINDERGARTEN BUILDING AND THE NEW PARKING LOT TO HARVEST SOME OF THE RUNOFF. A SIDEWALK CULVERT WILL ALLOW THE EXCESS RUNOFF FROM THE POND TO ENTER THE NEW PARKING LOT. THE SITES NATURAL SLOPE IS TO THE SE, AND THE RUNOFF WILL BE DIRECTED TO THE LARGE POND.

## VII. CONCLUSIONS

THE PRIOR SITE PLANS INCLUDED RUNOFF FROM THE PARCEL TO THE WEST. THE CREATION OF THE SOMBRA DEL OESTE SUBDIVISION HAS ELIMINATED THE OFFSITE FLOWS THAT FORMERLY ENTERED THE PROJECT SITE. OFFSITE FLOW ACCOUNTED FOR 25.9CFS (ACCORDING TO THE DMG PLANS). THE CURRENT DESIGN IS SHOWING AN OVERALL REDUCTION IN ON-SITE FLOWS DUE TO ADDITIONAL PONDING AREAS.

## LEGEND

- PROPERTY LINE
- EASEMENT

Drainage Summary				
Project:	Solare Collegiate Charter School			
Project Number:	TEC Solare			
Date:	09/02/24			
By:	MTD			
Site Location				
Precipitation Zone:	1 Per COA DPM Chapter 6			
Existing summary				
Basin Name	Ex Basin 1			
Area (sf)	179492			
Area (acres)	4.12			
%A Landtreatment	0			
%B Landtreatment	50			
%C Landtreatment	0			
%D Landtreatment	50			
Soil Treatment (acres)	0.00			
Area "A"	2.05			
Area "B"	0.00			
Area "C"	0.00			
Area "D"	2.05			
Excess Runoff (acre-feet)				
100yr. 6hr.	0.5089	acre-ft.		
2yr. 6hr.	0.2901	acre-ft.		
2yr. 24hr.	0.1597	acre-ft.		
100yr. 24hr.	0.5648	acre-ft.		
Peak Discharge (cfs)		cfs		
100 yr.	12.84	cfs		
2yr.	0.95	cfs		
2yr.	0.30	cfs		
Proposed summary				
Basin Name	Pro Basin 1	Pro Basin 2	Pro Basin 3	
Area (sf)	20621	24250	124411	
Area (acres)	0.708	0.557	2.855	
%A Landtreatment	35	35	25	
%B Landtreatment	0	0	0	
%C Landtreatment	65	65	75	
%D Landtreatment	0	0	0	
Soil Treatment (acres)	0.00	0.00	0.00	
Area "A"	0.00	0.00	0.00	
Area "B"	0.25	0.19	0.71	
Area "C"	0.00	0.00	0.00	
Area "D"	0.45	0.36	2.14	
Excess Runoff (acre-feet)				
100yr. 6hr.	0.1009	0.0794	0.4433	acre-ft.
2yr. 6hr.	0.0502	0.0473	0.2707	acre-ft.
2yr. 24hr.	0.0305	0.0279	0.1648	acre-ft.
100yr. 24hr.	0.1193	0.0939	0.5290	acre-ft.
100yr. 24hr.	0.1672	0.1395	0.7521	acre-ft.
Peak Discharge (cfs)				
100 yr.	2.43	1.91	10.37	cfs
2yr.	1.38	1.09	6.08	cfs
2yr.	0.72	0.57	3.36	cfs
Water Quality Ponding Volume (cf)	587.6	446.6	2843.7	cf
Water Quality Acre Feet	0.0130	0.0103	0.0657	acre-ft.

Pond Routing and Volumes		Pond 1	Pond 2	Ex. Pond	
Incoming Flow Rate	Qin	2.43	1.78	11.62	cfs
Allowable Discharge Rate	Qout	0.6	0.056	6.8	cfs
Hydrology Zone		1	1		per Figure A-1
Area Total	At	0.708	0.557	2.855	acres
Area Type A	Aa	0	0	0	%
Area Type B	Ab	35	47	25	%
Area Type C	Ac	0	0	0	%
Area Type D Imperious	Ad	65	53	75	%
Excess runoff rates	A	0.55	0.55	0.55	
	B	0.73	0.73	0.73	
	C	0.95	0.95	0.95	
	D	2.24	2.24	2.24	
Weighted E (Excess Runoff)		1.71	1.53	1.86	
Time of Concentration		0.2	0.2	0.2	hours
Time to Peak		0.219	0.229	0.211	hours
Time to Peak		0.219	0.229	0.211	hours
Time of Peak		0.888	0.875	0.828	hours
Duration of Peak		0.163	0.132	0.180	hours
Time to end of peak		0.382	0.361	0.380	hours
Time when storage begins		0.054	0.007	0.100	hours
Time when storage ends		0.763	0.859	0.563	hours
Time incoming is less than discharge					
Volume Required during storm	acre-inch	0.767	0.842	1.374	acre inch
Volume Required during storm	cf	2784	3057	4986	cubic feet
Volume Stored in Pond during storm	cf	2893	2311	4940	cubic feet

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