CITY OF ALBUQUERQUE

Planning Department David Campbell, Director



Mayor Timothy M. Keller

April 30, 2019

Amit Pathak, PE Bohannan Huston, Inc. 7500 Jefferson St NE Albuquerque, NM 87109

RE: Cooperative Educational Services (CES) 10601 Research Rd. SE Grading and Drainage Plan Engineer's Stamp Date: 04/15/19 Hydrology File: M21D021

Dear Mr. Pathak:

PO Box 1293 Based upon the information provided in your submittal received 04/15/2019, the Grading & Drainage Plan is not approved for Building Permit and Grading Permit. The following comments need to be addressed for approval of the above referenced project: Albuquerque 1. Per the DPM Chapter 22 Section 7, 24"x36" is currently the City's standard. This applies to all site plans, Grading & Drainage Plans, Traffic Circulation Plans, DRC Plans etc.. NM 87103 2. Per the DPM Chapter 22 Section 7 - Grading Plan Checklist, the following must be on the Grading Plan. Please ensure that items c, d, e, & f are on the Grading & Drainage Plan. www.cabq.gov a. Please provide an engineer's stamp with a signature and date. b. Please use 1'' = 20' for the scale. c. Please provide a Vicinity Map. d. Please provide the Benchmark information (location, description and elevation) for the survey contour information provided. e. Please provide the FIRM Map and flood plain note with effective date. f. Please provide a legal Description of the property. 3. Sheet C300. Please provide the benchmark information for the survey contour information provided. 4. Sheet C300. Please label the existing 35' Public Drainage Easement. Also please extend the easement into the adjacent property along the existing 36-inch storm pipe.

5. Sheet C300. Please label the existing 36-inch storm pipe.

CITY OF ALBUQUERQUE

Planning Department David Campbell, Director

PO Box 1293

www.cabq.gov



Mayor Timothy M. Keller

- 6. Sheet C300. At the SW entrance, please label the existing storm manhole rim elevation. This manhole also appears to be within the proposed gutter. Please ensure that this is buildable and that Transportation does not have an issue with this. Also please label the proposed new elevation of the manhole rim. This will have to be adjusted (lowered).
- 7. Sheet C300. The proposed storm drain pipe within the existing 35' Public Drainage Easement must be RCP. If the proposed private storm drain pipe is to be HDPE, then at the edge of the drainage easement please call out the connector from HDPE to RCP and provide a detail. The whole storm drain pipe at this location could also be RCP.
- 8. Please double check with the DRC personnel about having the proposed storm sewer manhole, the section of the RCP within the existing 35' Public Drainage Easement, and the existing storm manhole adjustment in a mini work order or does these items need to be on an Infrastructure List? If an IL is needed, then this will have to go the DRB for approval.
- 9. Please be advised that if maintenance of the public storm pipe is needed and since the depth of the existing 36 inch storm drain, the proposed retaining wall will be removed at the Owner's expense and the City is not responsible for replacing the retaining wall once any future maintenance is completed.
- Albuquerque
 10. Since the plat of Tracts F-2A and F-2B Sandia Science & Technology Part did not include the required language for a cross lot drainage easement, please create a paper blanket cross lot drainage easement specifying the beneficiary and maintenance agreement for Tracts F-1, F-2A, and F-2B.
 - 11. Sheet C300 & C302. Please label the site plan items on the adjacent property to the North as future development.
 - 12. Sheet C300. In Section A-A, please add the 35' Public Drainage Easement.
 - 13. Sheet C302. Please add the drainage arrows for site.
 - 14. Sheet C302. Please show the Stormwater Quality volume provided within each pond along with the water surface elevation of the SWQ volume in a chart.
 - 15. Sheet C302. Please use the broad crest weir equation in the DPM for the curb cuts. If you use a "C" value of 2.7, then the proposed 4 ft curb cuts can be reduced to a 2 ft curb cut and the 9 ft curb cut will be reduced to a 5 ft curb cut.
 - 16. 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

CITY OF ALBUQUERQUE

Planning Department David Campbell, Director



submitted to the Stormwater Quality Engineer (Curtis Cherne, PE, <u>ccherne@cabq.gov</u>, 924-3420) 14 days prior to any earth disturbance.

- 17. Also as a reminder, please provide and Drainage Covenant for the detention ponds and private storm drain 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.
- 18. Standard review fee of \$150 will be required at the time of resubmittal.

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

Sincerely,

Renée C. Brissette

PO Box 1293

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

Albuquerque

NM 87103

www.cabq.gov



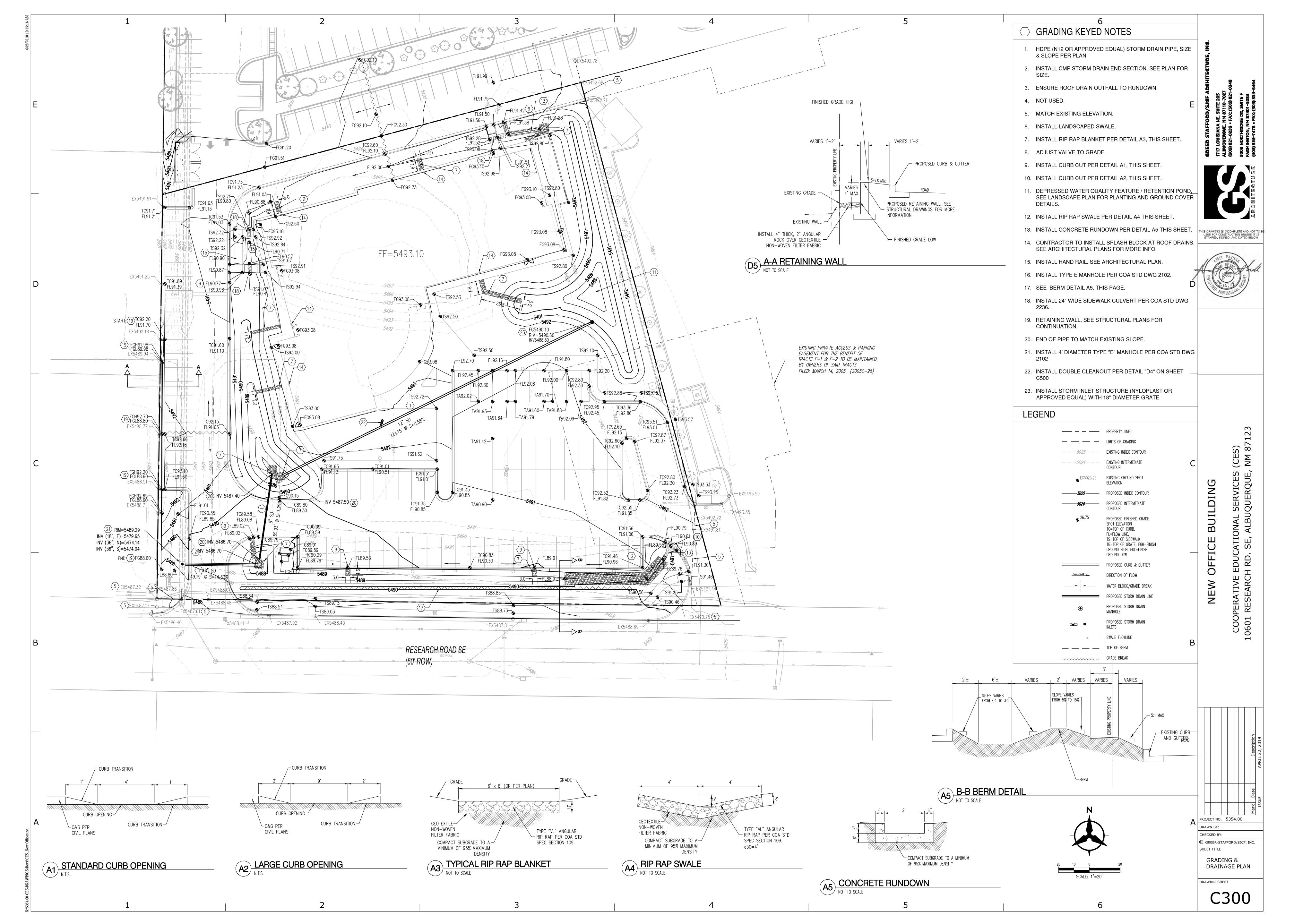
City of Albuquerque

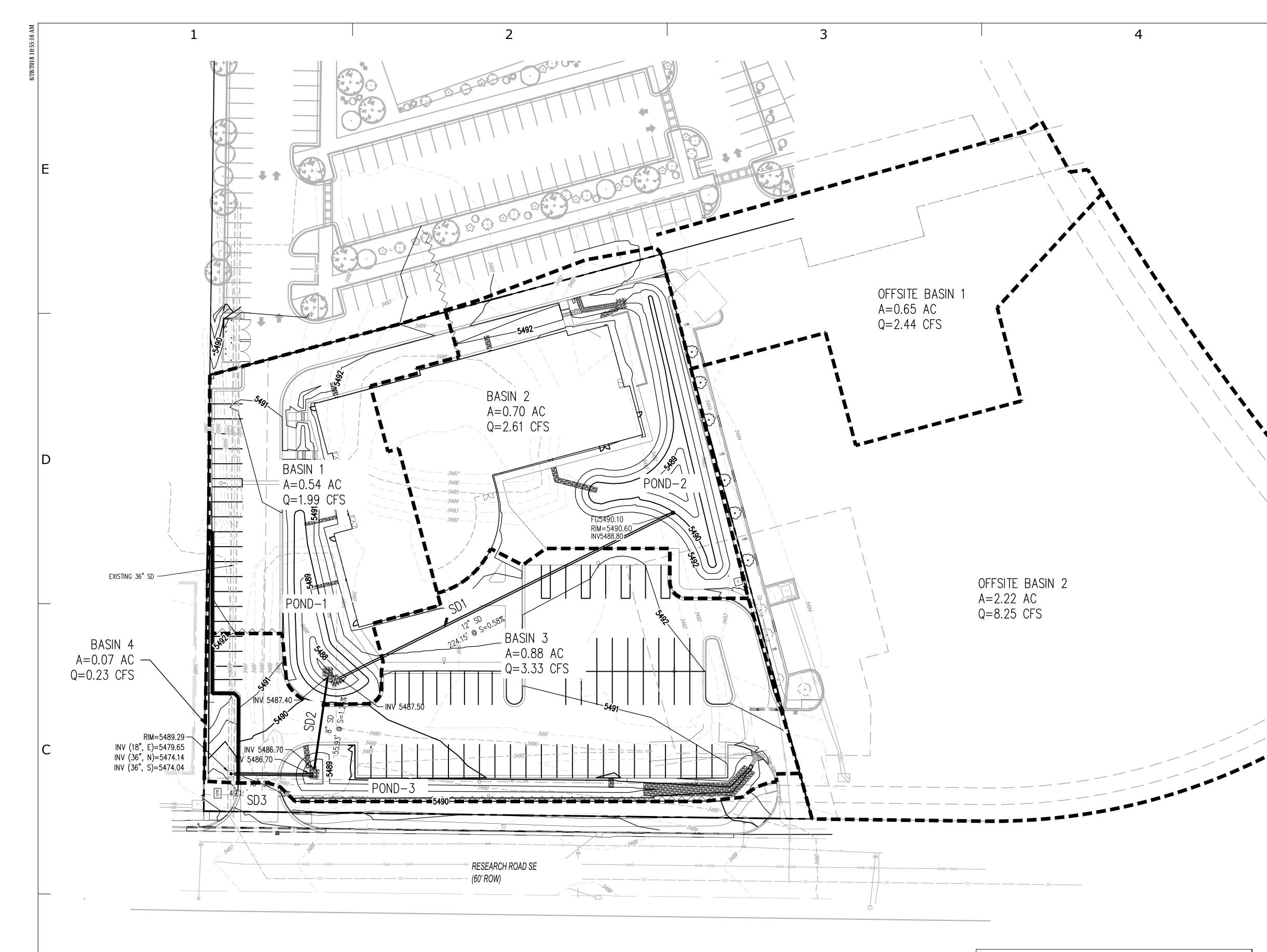
Planning Department Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Cooperative Educationa	I Services (CES) Building	Permit #:	Hydrology File #:		
			Work Order#:		
Legal Description: Tract F-2B, Sa					
City Address:					
Applicant: Bohannan Huston Inc.			Contact: Amit Pathak		
Address: 7500 Jefferson St NE CY2					
Phone#: 505-823-1000	Fax#:		E-mail: _apathak@bhinc.com		
Owner: Cooperative Educational Serv	vices (CES)		Contact: David Chavez		
Address: 4216 Balloon Park Road N	Ξ				
Phone#: 505-344-5470	Fax#: 505	-344-9343	E-mail: david@ces.org		
TYPE OF SUBMITTAL: PL IS THIS A RESUBMITTAL?:			3 SITE ADMIN SITE		
DEPARTMENT: TRAFFIC/	TRANSPORTATION	K HYDROLOGY/ DF	RAINAGE		
Check all that Apply:					
TYPE OF SUBMITTAL:			OVAL/ACCEPTANCE SOUGHT:		
ENGINEER/ARCHITECT CE	RTIFICATION		PERMIT APPROVAL		
PAD CERTIFICATION		CERTIFICATE OF OCCUPANCY PRELIMINARY PLAT APPROVAL			
CONCEPTUAL G & D PLAN		FRELIMINARY PLAT APPROVAL			
X GRADING PLAN		SITE PLAN FOR SUB D'ATTROVAL			
DRAINAGE MASTER PLAN		FINAL PLA			
× DRAINAGE REPORT		SIA/ RELEA	ASE OF FINANCIAL GUARANTEE		
FLOODPLAIN DEVELOPME	NT PERMIT APPLIC	FOUNDATI	ON PERMIT APPROVAL		
ELEVATION CERTIFICATE		X GRADING	PERMIT APPROVAL		
CLOMR/LOMR		SO-19 APPI	ROVAL		
TRAFFIC CIRCULATION LA	· /	PAVING PE	PAVING PERMIT APPROVAL		
TRAFFIC IMPACT STUDY (7		GRADING/	PAD CERTIFICATION		
OTHER (SPECIFY)		WORK ORD	WORK ORDER APPROVAL		
PRE-DESIGN MEETING?		CLOMR/LO	MR		
			IN DEVELOPMENT PERMIT		
		OTHER (SP	PECIFY)		

____By: Amit Pathak, P.E. DATE SUBMITTED: 04-16-2019

ELECTRONIC SUBMITTAL RECEIVED:





CES

Proposed Ultimate Development Conditions Basin Data Table						
This table	This table is based on the OPM Section 22.2, Zone: 3					
Basin	Area	Area	Lan	d Treatmei	nt Percenta	iges
ID	(SQ.FT)	(AC.)	A	В	C	D
Proposed						
1	23362	0.54	0.0%	0.0%	25.0%	75.0%
2	30463	0.70	0.0%	0.0%	44.0%	56.0%
3	38452	0.88	0.0%	0.0%	10.0%	90.0%
4	2897	0.07	0.0%	0.0%	100.0%	0.0%
Offsite Basin-1	28149	0.65	0.0%	5.0%	5.0%	90.0%
Offsite Basin-2	96874	2.22	0.0%	5.0%	5.0%	90.0%
TOTAL	220197	5.06				

	SCS	Lag Time	Q100	Q'Acre	Volume
Basin	Curve Number	(min)	(cfs)	(cfslacre)	(ac-ft)
Sasin 1	92	-	1.99	3.710	3.07
Sasin 2	92		2.61	3.732	J.10
Sasin 3	92	72	3 3 3	3.772	3.12
Offsite Basin: 1	92		244	3.774	3.09
Offsite Basin: 2	92		8 2 5	3.710	3.30

Pond Analysis Output								
Pond	Pea Infic		eak harge		eak rage	Maximum Y Surfac Elevatio	e	
	(cts	s) (c	fs)	ζa	c-fi)	(ft)		
Pond 1	3.1	12	.0	(),I	033	89.5		
Pond 2	5.1	1 1	.8	Q.	100	90.94		
Pond 3	12.	96	.9	Û,	CO4	88.4		
			-					
EISA		Area	Q10)0	Volu	me (Actual)	Volur	ne (REQ.)
RETENT	-	(acres)	(cfs	5)	(c	:fs/acre)		(cf)
TOTAL ON	ISITE	2.12	7.9	3		3136		2883
						STORM	DRA	JN PIPE
					-		_	

		ST	ORM DF	LAIN PIPE	E TABLE			
	Contributing				ACTJAL	PIFE	NYERT	MVER
P₽₽E≴	Basins and Storm Drains	Size	Siope	Capacity	FLOW	LENGTH	R	OUT
		in.		cfs	¢\$	t		
ONSIT	ONSITE							
SDr	Basin 2, OFSte Basin (12	3.50 -	267	- 5-	28.6	XX	E E
\$02	East Pire 2	Ξ	125 -	• 35	211	559	==	3) (-)
803	Basin 5, OFste Basin 2, Poro-1	16	· - X -	30.7		163	X D	19 63
1-0£280	'+ Cababhy Based of Haming's Eq.M. N= 10013							

CC	DNCRETE	WEIR (4' C	URBCU	T) CALCULA	TION
BOTTOM	ILENGTH =	4			
DEPTH =	0.50				
CREST =	CREST = SHARP			RADING AND D	RAINAGE
TYPE = T	RAPEZOID/	4L		PLAN - DETAIL	A1
SIDE SLO	SIDE SLOPE = 2:1				
DEPTH	Q (CFS)	AREA (sqft)	V (ft/s)	Top Width (ft)	Energy
0.05	0.141	0.21	0.69	4.20	0.06
0.10	0.408	0.42	0.97	4.40	0.11
0.15	0.764	0.65	1.18	4.60	0.17
0.20	1.198	0.88	1.36	4.80	0.23
0.25	1.705	1.13	1.52	5.00	0.29
0.30	2.282	1.38	1.65	5.20	0.34
0.35	2.927	1.65	1.78	5.40	0.40
0.40	3.639	1.92	1.90	5.60	0.46
0.45	4.417	2.21	2.00	5.80	0.51
0.50	5.261	2.50	2.10	6.00	0.57

CONCRETE WEIR (9' CURBCUT) CALCULATION BOTTOM LENGTH = 9

DEPTH = 0.50	
CREST = SHARP	SEE GRADING AND DRAINAGE
TYPE = TRAPEZOIDAL	PLAN - DETAIL A2
SIDE SLOPE = 4:1	

DEPTH	Q (CFS)	AREA (sqft)	V (ft/s)	Top Width (ft)	Energ
0.05	0.317	0.46	0.69	9.40	0.0
0.10	0.914	0.94	0.97	9.80	0.1
0.15	1.707	1.44	1.19	10.20	0.1
0.20	2.673	1.96	1.36	10.60	0.2
0.25	3.798	2.50	1.52	11.00	0.2
0.30	5.073	3.06	1.66	11.40	0.3
0.35	6.496	3.64	1.78	11.80	0.4
0.40	8.062	4.24	1.90	12.20	0.4
0.45	9.770	4.86	2.01	12.60	0.5
0.50	11.620	5.50	2.11	13.00	0.5



PROPOSED DRAINAGE NARRATIVE

INTRODUCTION:

THE PURPOSE OF THIS SUBMITTAL IS TO PRESENT THE PROPOSED DRAINAGE MANAGEMENT PLAN FOR THE COOPERATIVE EDUCATIONAL SERVICES (CES) NEW OFFICE BUILDING ON TRACT F-2B, SANDIA SCIENCE AND TECHNOLOGY PARK. THE SITE IS APPROXIMATELY 2.2 ACRES. IT IS BOUND TO THE NORTH BY AN UNDEVELOPED TRACT, ON THE SOUTH BY RESEARCH ROAD SE, WITH AN EXISTING DEVELOPMENT TO THE WEST AND EAST.

THIS ANALYSIS WILL QUANTIFY DISCHARGE RATES, ASSOCIATED VOLUMES AND CAPACITY OF THE DETENTION PONDS.

METHODOLOGY:

THE CITY IS IN THE PROCESS OF UPDATING THE DPM. ALTHOUGH THE DPM UPDATE HAS NOT BEEN OFFICIALLY ADOPTED, THE ANALYSIS METHODOLOGY IS PER THE PROPOSED UPDATE.

THE METHODOLOGY SELECTED TO COMPUTE RUNOFF VOLUME IS BASED ON THE SCS UNIT HYDROGRAPH. RAINFALL DATA WERE BASED ON THE PROPOSED VALUES FROM THE COA DPM. THE SITE WAS ANALYZED FOR A 100 YEAR 24 HOUR STORM EVENT USING THE US ARMY CORPS OF ENGINEERS HYDROLOGIC ENGINEERING CENTER'S HYDROLOGIC MODELING SYSTEM (HEC-HMS, VERSION 4.2). SURFACE CHARACTERISTICS AFFECTING INITIAL ABSTRACTION AND INFILTRATION RATES ARE PRESENTED BY CURVE NUMBERS. CURVE NUMBERS ARE BASED ON LAND TREATMENT AND AS SPECIFIED IN THE DPM UPDATE.

EXISTING CONDITIONS:

THE EXISTING SITE PRIMARILY CONSISTS OF NATIVE WEEDS AND GRASSES. THE SITE HAS MILD SLOPES FROM THE NORTHEAST TO THE SOUTHWEST. THERE IS AN EXISTING EARTHEN CHANNEL ALONG THE SOUTHERN PORTION OF THE SITE THAT CONVEYS DRAINAGE FROM THE DEVELOPED SITE TO THE EAST TO AN EXISTING DETENTION POND THAT ULTIMATELY DISCHARGES TO AN EXISTING 24" STORM DRAIN.

PROPOSED CONDITIONS:

BASED ON THE PROPOSED GRADING, THE SITE WILL BE DIVIDED INTO 4 BASINS, WITH ONE BASIN DRAINING OFFSITE (BASIN 4). EACH OF THE OTHER BASINS HAVE ONE DETENTION POND WHICH ULTIMATELY OUTFALLS TO THE EXISTING STORM DRAIN SYSTEM LOCATED WEST OF THE PROPOSED SITE.

BASIN 1 IS APPROXIMATELY 0.54 ACRES. IT CONSISTS OF A PORTION OF THE NEW BUILDING, DRIVEWAY AND POND-1. THE RUNOFF GENERATED FROM THIS BASIN SURFACE DRAINS TO POND-1.

BASIN 2 IS APPROXIMATELY 0.70 ACRES. THIS BASIN CONSISTS OF THE REST OF THE PORTION OF THE NEW BUILDING AND POND-2.

BASIN 3 IS LOCATED SOUTHEAST OF THE PROPOSED BUILDING. IT IS APPROXIMATELY 0.88 ACRES AND CONSISTS ENTIRELY OF PARKING LOT AND POND-3.

BASIN 4 IS APPROXIMATELY 0.07 ACRES AND IS LOCATED IN THE SOUTHWEST CORNER OF THE SITE. THE RUNOFF GENERATED FROM THIS BASIN IMMEDIATELY DRAINS OFF SITE TO THE SOUTH AND THEREFORE DOES NOT CONTRIBUTE TO THE DEMAND IMPOSED ON MANAGING DRAINAGE FOR THIS SITE.

THE EXISTING DEVELOPED SITE LOCATED EAST OF THE PROPOSED BUILDING SITE CONTRIBUTES IN OFFSITE RUNOFF. OFFSITE BASIN 1 IS APPROXIMATELY 0.65 ACRES. RUNOFF FROM THIS BASIN IS COLLECTED BY POND-2, LOCATED IN BASIN 2.

OFFSITE BASIN 2 IS APPROXIMATELY 2.22 ACRES. THE RUNOFF GENERATED FROM THIS BASIN FLOWS TO BASIN 3.

POND-2 AND POND-1 ARE CONNECTED BY A 12" STORM DRAIN PIPE. POND-2 DISCHARGES 1.8 CFS TO POND-1 AND POND-1 DISCHARGES 2.0 CFS TO POND-3 VIA A 12" STORM DRAIN PIPE. POND-3 DISCHARGES 6.9 CFS TO AN EXISTING 36" STORM DRAIN PIPE BY WAY OF A 18" STORM DRAIN PIPE.

EACH POND IS DESIGNED TO RETAIN RUNOFF TO MEET EISA 438 REQUIREMENTS. THE TOTAL RETENTION VOLUME PROVIDED BY PONDS 1-3 IS 3136 CF, THE REQUIRED RETENTION VOLUME IS 2883 CF, THUS THE PONDS MEET THE MINIMUM REQUIREMENT FOR RETENTION PER THE COA DPM.

PER THE APPROVED MASTER DRAINAGE PLAN OF SANDIA SCIENCE AND TECHNOLOGY PARK, PROJECT #050304, THE MAXIMUM DISCHARGE FROM THE SITE IS 1.57 CFS PER ACRE WHICH EQUATES TO 7.85 CFS FOR THE THIS SITE AND TRACT F-1. THE 18" OUTFALL PIPE OF POND-3 IS ORIFICE CONTROLLED AND ALLOWS PEAK DISCHARGE OF 6.9 CFS WHICH IS WITHIN THE ALLOWABLE DISCHARGE LIMIT.

CONCLUSION:

THE PEAK DISCHARGE FROM THE SITE IS LESS THAN THE ALLOWABLE PEAK DISCHARGE RATE. THEREFORE WE ARE IN CONFORMANCE WITH CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST BUILDING PERMIT APPROVAL.

LEGEND

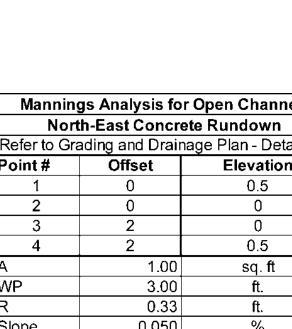
----- Property line ---- --- LIMITS OF GRADING

26.75

- — *5024* — EXISTING INTERMEDIATE CONTOUR \oplus 5025.25 EXISTING GROUND SPOT ELEVATION

PROPOSED FINISHED GRADE SPOT ELEVATION

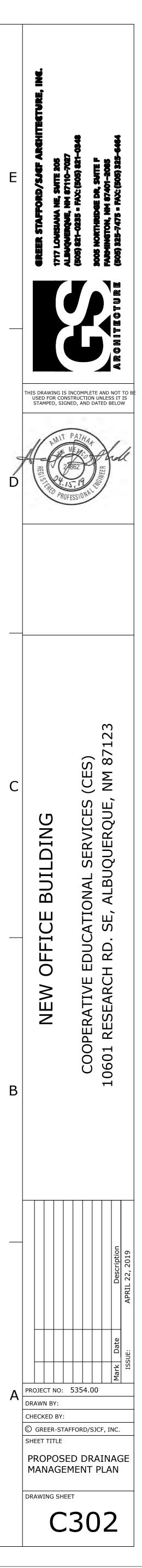
- TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK
- TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER PROPOSED RETAINING WALL
- <u>S=2.0%</u> DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
 - PROPOSED STORM DRAIN MANHOLE PROPOSED STORM DRAIN INLETS

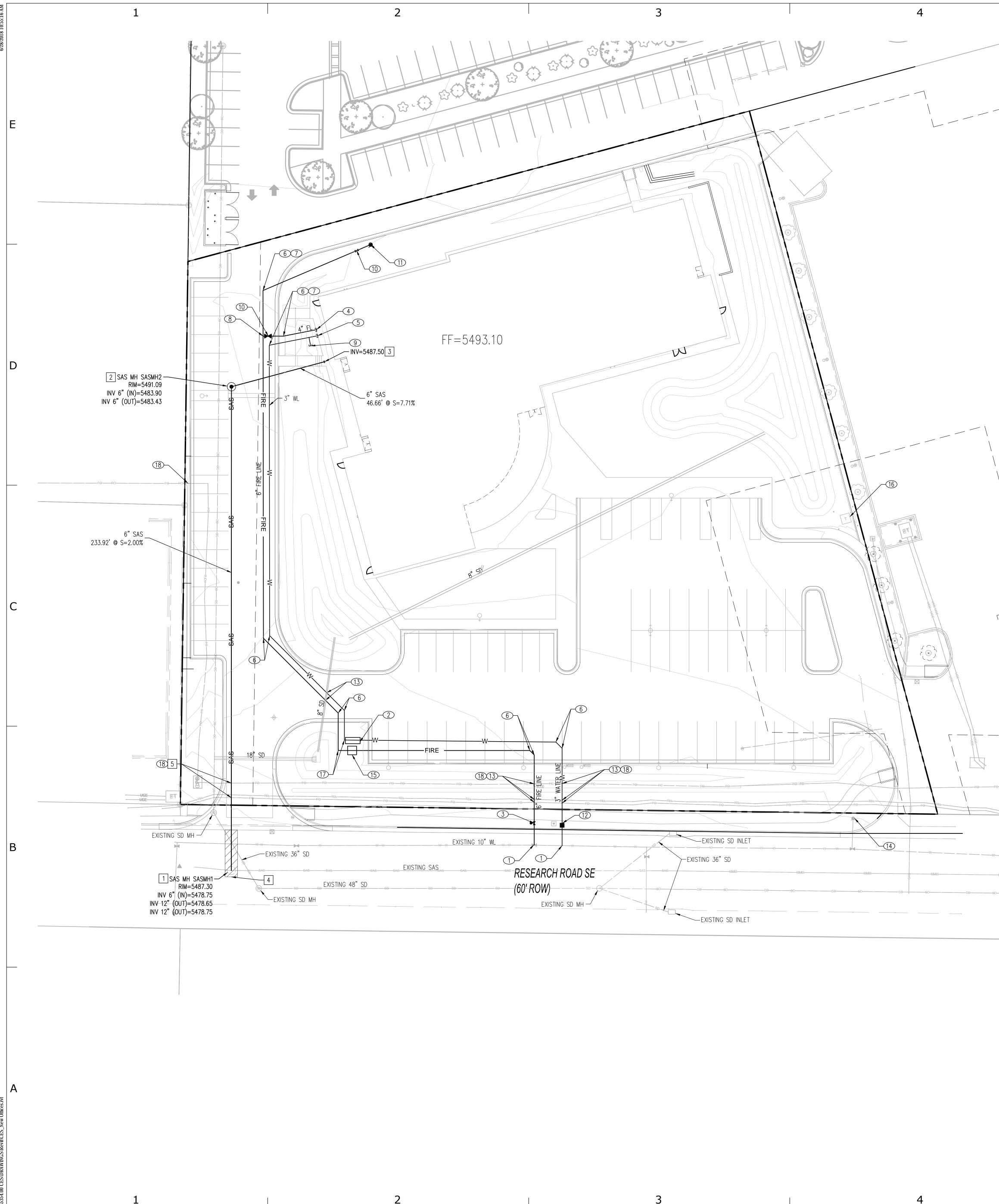


—	-	-
3	2	0
4	2	0.5
А	1.00	sq. ft
WP	3.00	ft.
R	0.33	ft.
Slope	0.050	%
n	0.013	
Q(max)=	12.3	cfs
Q(actual)=		cfs
V(max)=	12.3	ft/s

Manning	Mannings Analysis for Open Channel:				
Sout	h-East Cor	ncrete Rundown			
Refer to Gra	Refer to Grading and Drainage Plan - Detail A5				
Point #	Offset	Elevation			
1	0	0.5			
2	0	0			
3	2	0			
4	2	0.5			
А	1.00	sq. ft			
WP	3.00	ft.			
R	0.33	ft.			
Slope	0.100	%			
n	0.013				
Q(max)=	17.4	cfs			
Q(actual)=	14.75	cfs			
V(max)=	17.4	ft/s			

Mannings Analysis for Open Channel:					
North-East Concrete Rundown					
Refer to Grading and Drainage Plan - Detail A5					
Point #	Offset	Elevation			
1	0	0.5			
2	0	0			
3	2	0			
4	2	0.5			
A	1.00	sq. ft			
WP	3.00	ft.			
R	0.33	ft.			
Slope	0.050	%			
n	0.013				
Q(max)=	12.3	cfs			





○ WATER KEYNOTES

- 1. CONNECTION TO EXISTING WATER LINE. CONTRACTOR TO FIELD VERIFY EXISTING SIZE, LOCATION, AND INVERT AND CONTACT ENGINEER WITH ANY DISCREPANCIES. SEE NON IIA WORK ORDER SET (#XXXX).
- . INSTALL 3" DOMESTIC LINE REDUCED PRESSURE BACKFLOW PREVENTION DEVICE WITHIN A HEATED ENCLOSURE. INSTALL PER MANUFACTURER SPECIFICATIONS OR APPROVED EQUAL. SEE ELECTRICAL PLANS FOR POWER.
- 3. INSTALL POST INDICATOR VALVE PER DETAIL D-6 ON SHEET C-501.
- 4. INSTALL FIRE LINE STUB WITHIN 5' OF THE BUILDING. SEE PLUMBING PLANS FOR CONTINUATION..
- 5. INSTALL DOMESTIC WATER LINE STUB WITHIN 5' OF THE BUILDING. SEE
- PLUMBING PLANS FOR CONTINUATION. 6. INSTALL 45° BEND (SIZE PER PLAN) W/ RESTRAINED JOINTS.
- 7. INSTALL 22.5° BEND (SIZE PER PLAN) W/ RESTRAINED JOINTS.
- 8. INSTALL TEE (SIZE PER PLAN) W/ RESTRAINED JOINTS.
- 9. 1" IRRIGATION LINE, SEE LANDSCAPING PLAN FOR BACKFLOW PREVENTION AND CONTINUATION.
- 10. INSTALL GATE VALVE & LID PER ABCWUA STD DWG. 2326 (SIZE PER PLAN). 11. INSTALL FIRE HYDRANT PER COA STD DWG 2340.
- 12. DOMESTIC METER TO BE INSTALLED WITH NON IIA WORK ORDER SET (#XXX).
- 13. DIP WATER LINE UNDER UTILITY TO ENSURE MINIMUM 18" OF CLEARANCE.
- 14. EXISTING FIRE HYDRANT. 15. INSTALL 6" FIRE LINE REDUCED PRESSURE BACKFLOW PREVENTION DEVICE WITHIN A HEATED ENCLOSURE. INSTALL PER MANUFACTURER SPECIFICATIONS. SEE ELECTRICAL PLANS FOR POWER.
- 16. PROPOSED TRANSFORMER SPECIFICATION TO BE COORDINATED WITH UTILITY OWNER. SEE MEP PLAN FOR MORE INFORMATION.
- 17. INSTALL 90° BEND (SIZE PER PLAN) W/ RESTRAINED JOINTS.
- 18. CONTRACTOR TO POTHOLE EXISTING DRY UTILITY TO CONFIRM SIZE, LOCATION, AND INVERT AND CONTACT ENGINEER WITH ANY DISCREPANCIES.

□ SANITARY SEWER KEYNOTES

- 1. CONNECT TO EXISTING SANITARY SEWER MANHOLE BY CORE DRILLING NEW SERVICE. CONTRACTOR TO FIELD VERIFY EXISTING \square SIZE, INVERT AND LOCATION AND CONTACT ENGINEER WITH ANY DISCREPANCIES.
- 2. INSTALL TYPE "E" MANHOLE PER ABCWUA STD. DWG. 2102. 3. INSTALL STUB WITHIN 5' OF THE BUILDING. SEE PLUMBING PLANS
- FOR CONTINUATION. 4. SAWCUT, REMOVE, AND REPLACE EXISTING PAVEMENT PER COA
- STD. DETAIL 2405B. 5. CONTRACTOR TO POTHOLE EXISTING DRY UTILITY TO CONFIRM SIZE, LOCATION, AND INVERT AND CONTACT ENGINEER WITH ANY DISCREPANCIES.

LEGEND

	PROPERTY LINE
	EXISTING EASEMENT
	EXISTING SANITARY SEWER
	EXISTING WATER LINE
	EXISTING WATER METER
	EXISTING CAP
\bowtie	EXISTING VALVE
\bigcirc	EXISTING FIRE HYDRANT
\bigcirc	EXISTING SANITARY SEWER
	PROPOSED EASEMENT
SAS	PROPOSED SANITARY SEWE
	PROPOSED SANITARY SEWE
¢	PROPOSED CLEANOUT
W_	PROPOSED WATER LINE
	PROPOSED VALVE
<u> </u>	PROPOSED FIRE WATER LIN
Ŭ	PROPOSED HYDRANT
	PROPOSED CAP
	PROPOSED WATER METER
£	PROPOSED PIV

