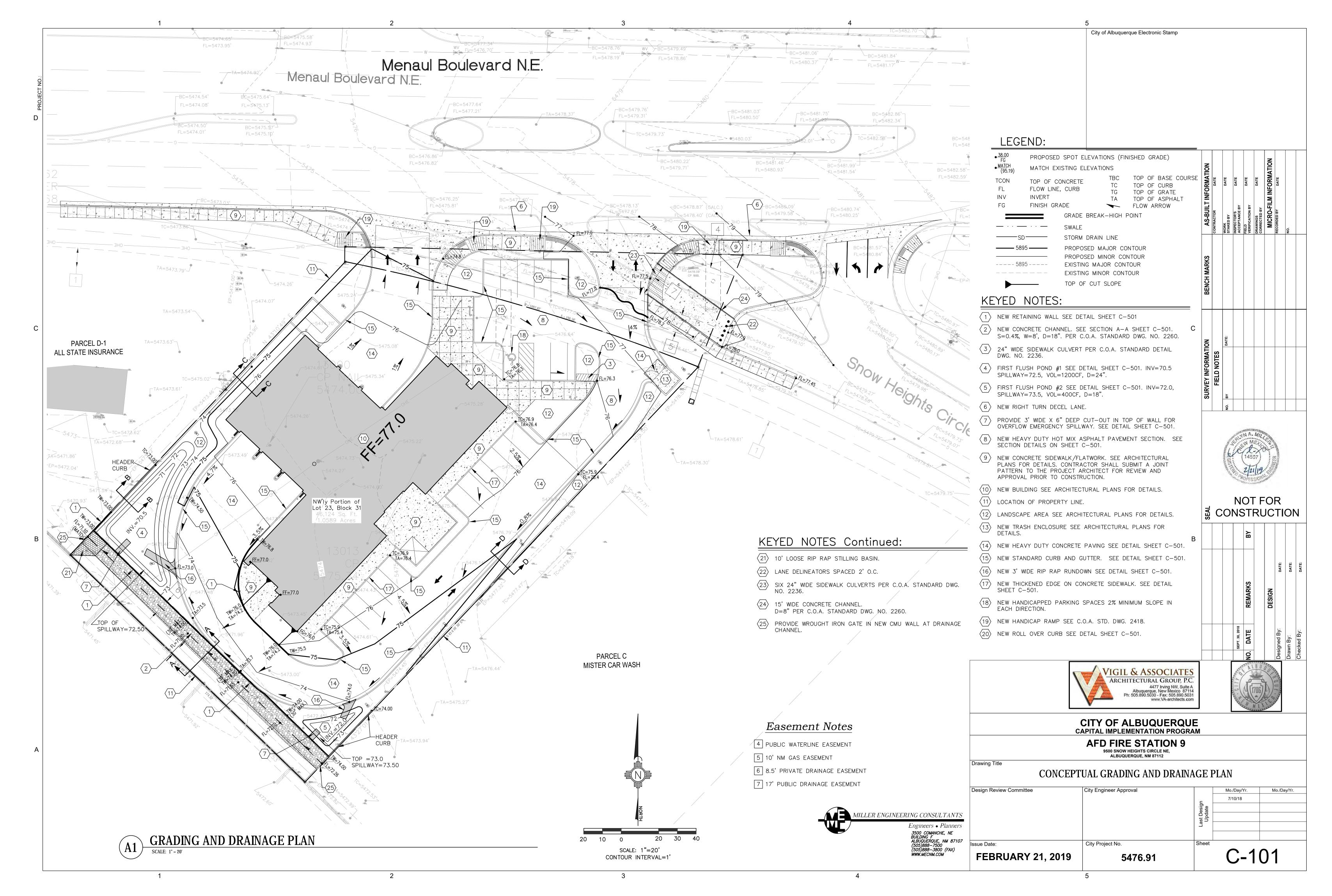




date: FEBRUARY 22, 2019 checked by:

DRB SUBMITTAL



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FLOOD ZONE MAP FLOOD ZONE MAP: 35001C0356H

SITE LOCATION

THE PROPOSED SITE IS LOCATED ON SNOW HEIGHTS CIRCLE STREET AND MENAUL BOULEVARD. THE SITE CURRENTLY CONSISTS OF A VACANT LOT WITH NO DEVELOPMENT. THE SITE IS BOUND BY MENUAL BLVD. AND SNOW HEIGHTS CIRCLE ON THE NORTH SIDE, RESIDENTIAL DEVELOPMENT ON THE SOUTH SIDE, AN EXISTING

COMMERCIAL DEVELOPMENT ON THE EAST AND WEST SIDES. THE PROPOSED

EXISTING ON SITE CONDITIONS

DEVELOPMENT WILL INCLUDE A NEW FIRE STATION.

THE EXISTING SITE IS CURRENTLY UNDEVELOPED AND IS COVERED WITH SPARSE VEGETATIVE COVER. THE LACK OF VEGETATION SUGGESTS THAT THE SITE IS EXPERIENCING DISTURBANCE FROM HUMAN ACTIVITY. THERE IS A SMALL LOW POINT AT THE WESTERN PORTION OF SITE WITH AN EXISTING DRAIN INLET. IT IS UNKNOWN IF THE INLET IS CONNECTED TO ANYTHING, IT APPEARS TO BE POSSIBLY CONNECTED TO SOME TYPE OF FRENCH DRAIN. EXISTING STORM WATER FLOWS SHEET FLOW WEST TOWARD THE EXISTING LOW POINT. THERE IS A SIGNIFICANT OFFSITE DRAINAGE BASIN OF APPROXIMATELY 10 ACRES THAT DISCHARGE TO THE SOUTHWEST CORNER OF THE SITE. THE OFFSITE FLOWS ARE ROUTED THROUGH THE WESTERN PORTION OF THE SITE NORTH TO THE ADJACENT PROPERTY AND EVENTUALLY DOWNSTREAM TO PARSIFAL STREET.

PROPOSED CONDITIONS

THE PROPOSED IMPROVEMENTS WILL INCLUDE A NEW FIRE STATION, DRIVEWAY, ASSOCIATED PARKING, AND CONCRETE HARDSCAPE. SITE DRAINAGE WILL BE ROUTED VIA OVERLAND FLOW TOWARD TWO WATER HARVEST AREAS (WATER QUALITY PONDS) LOCATED NEAR THE WESTERN EDGE OF THE SITE. THESE WATER HARVESTING AREAS WILL BE USED TO MANAGE THE 90TH PERCENTILE STORM EVENTS (REQUIRED VOLUME = (0.34 IN. * 32.945 SF)/12 = 933 CF). OVERFLOW FROM THE PONDING AREAS WILL SPILL THROUGH A CONCRETE SPILLWAY ON THE PROPOSED RETAINING WALL SECTION. OFFSITE DRAINAGE TO THE SITE WILL BE COLLECTED IN A NEW TRAPEZOIDAL CONCRETE CHANNEL SYSTEM AND ROUTED THROUGH THE SITE TO ITS HISTORICAL LOCATION.

THE INCREASED RUNOFF FROM THE PROPOSED BUILDING ADDITION IS ESTIMATED AT 0.064 ACRE-FEET AND 0.76 CFS DURING THE 100-YEAR EVENT. THE INCREASED RUNOFF FROM THE PROPOSED PROJECT WILL BE RETAINED BY THE TWO WATER HARVEST PONDING AREAS, WHICH WILL HELP ALLEVIATE INCREASED FLOW DOWNSTREAM. THE INCREASE IN STORM WATER RUNOFF FROM THE PROPOSED PROJECT IS MINIMAL SHOULD NOT ADVERSELY IMPACT ADJACENT OR DOWNSTREAM PROPERTIES, PARTICULARLY WITH THE WATER HARVEST PONDS IN PLACE. THIS PLAN DOES NOT CHANGE HISTORICAL DRAINAGE PATTERNS.

THE PROPOSED WATER HARVEST AREAS VOLUME IS APPROXIMATELY 1600 CUBIC FEET WHICH IS GREATER THAN THE REQUIRED FIRST FLUSH VOLUME OF 933 CUBIC FEET. ALL ROOF DRAINAGE AND PROPOSED ASPHALT PARKING AREAS WILL DISCHARGE INTO

THE DRAINAGE PATTERNS TO DOWNSTREAM PROPERTIES WILL REMAIN UNCHANGED FROM EXISTING CONDITIONS. THE CAPACITY OF DOWNSTREAM FACILITIES HAS BEEN EVALUATED BY THE CITY THROUGH ITS CONSULTING ENGINEER, SMITH ENGINEERING. IT HAS BEEN CONCLUDED THAT THERE IS ADEQUATE DOWNSTREAM CAPACITY IN THE

GENERAL NOTES:

- 1. EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS WAS PROVIDED BY CSI CARTESIAN SURVEYS, INC. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
- 2. ACS STA A-438 BENCH MARK THE TOP OF A STAINLESS STEEL ROD SET BENEATH A 5-1/2" NGS ACCESS COVER STAMPED "A-438 1984" SET FLUSH WITH THE GROUND, LOCATED IN THE NORTHWEST QUADRANT OF MENAUL BOULEVARD AND THE A.T. & S.F. RAILROAD TRACKS INTERSECTION. ELEV. 4975.35 (NAVD 1988)
- TBM FOUND 1/2" REBAR WITH CAP "LS 11463" ELEV. 4965.21
- 3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES DURING THE CONSTRUCTION PHASE.
- 4. CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE CITY OF ALBUQUERQUE, PRIOR TO ANY GRADING OR CONSTRUCTION.
- 5. TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OF EXISTING
- 6. ALL EMBANKMENTS SHALL BE PLACED AND COMPACTED IN LIFTS OF MAXIMUM OF 8". THE EMBANKMENTS SHALL BE WETTED AND COMPACTED TO 95% OPTIMUM DENSITY PER ASTM D1557 AND 95% UNDER ALL STRUCTURES INCLUDING DRIVEWAYS AND PARKING LOTS.
- 7. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
- 8. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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9. APPROX. HALF OF SUBJECT PROPERTY IS LOCATED WITHIN ZONE X (SOUTH EASTERN % OF 4TH STREET FRONTAGE). THE REMAINING WESTERN AND NORTHERN PORTION OF THE PROPERTY IS LOCATED IN ZONE X (500 YEAR) DESIGNATING AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLANE ACCORDING TO THE FLOOD INSURANCE RATE MAP, ALBUQUERQUE, NEW MEXICO AND UNINCORPORATED AREAS PER MAP NO 35001C 0332G.

- 10. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE STORM DRAINAGE REGULATIONS. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE "GRADING AND DRAINAGE DESIGN REQUIREMENTS AND POLICIES FOR LAND DEVELOPMENT."
- 11. THE OWNER, CONTRACTOR AND/OR BUILDER SHALL COMPLY WITH ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
- 12. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE AND REASONABLE MEASURES TO PREVENT SEDIMENT OR POLLUTANT LADEN STORM WATER FROM EXITING THE SITE DURING CONSTRUCTION. STORMWATER MAY BE DISCHARGED IN A MANNER, WHICH COMPLIES WITH THE APPROVED GRADING AND DRAINAGE PLAN.
- 13. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO PREVENT THE MOVEMENT OF CONSTRUCTION RELATED SEDIMENT, DUST, MUD, POLLUTANTS, DEBRIS, WASTE, ETC FROM THE SITE BY WIND, STORM FLOW OR ANY OTHER METHOD EXCLUDING THE INTENTIONAL, LEGAL TRANSPORTATION OF SAME IN A MANNER ACCEPTABLE BY
- 14. THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THE AREAS SHOWN AS "SLOPE LIMITS" ON THE GRADING AND DRAINAGE PLAN.
- 15. SEE ARCHITECTURAL DRAWINGS FOR SIDEWALK AND HANDICAPPED RAMPS, DETAILS AROUND THE BUILDING.
- 16. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.
- 17. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, ALL SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 15:1.
- 18. ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL CONTACT PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THIS REQUIREMENT.
- 19. THE CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS, CUT SHEETS AND SHOP DRAWINGS FOR ALL CIVIL RELATED ITEMS FOR REVIEW PRIOR TO CONSTRUCTION.
- 20. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS (UPDATE 8, AMENDMENT 1)
- 21. ALL EXISTING MANHOLES, VALVES AND METERS SHALL BE ADJUSTED TO NEW FINISH GRADE.

RIGHT-OF-WAY NOTICE TO CONTRACTOR

- 1) AN EXCAVATION 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 FOR HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7
- 3) TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL 260-1990, FOR LOCATION OF EXISTING
- 4) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACT SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 5) BACK FILL 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 SHALL BE PERFORMED ON A 24 HOUR BASIS. 8) CONTRACTOR MUST CONTACT JASON RODRIGUEZ AT 235-8016 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE AN INSPECTION

NOT FOR CONSTRUCTION

			REMARKS		DESIGN	DATE:	DATE:	DATE:
		SEPT. 30, 2018	DATE			Designed By:	Drawn By:	Checked By:
			NO.			Des	Dra	Che
			AL	BU				

file name:

ARCHITECTURAL GROUP, P.C.

City of Albuquerque Electronic Stamp

VIGIL & ASSOCIATES 4477 Irving NW, Suite A Albuquerque, New Mexico 87114 Ph: 505.890.5030 - Fax: 505.890.5031

CITY OF ALBUQUERQUE CAPITAL IMPLEMENTATION PROGRAM AFD FIRE STATION 9

ALBUQUERQUE, NM 87112 Drawing Title GRADING AND DRAINAGE HYDROLOGY REPORT City Engineer Approval Mo./Day/Yr. 7/10/18

9500 SNOW HEIGHTS CIRCLE NE,

FEBRUARY 21, 2019

Design Review Committee Mo./Day/Yr. City Project No. C-100



OFF SITE-1 MAP

DRAINAGE DATA

HYDROLOGY

Precipitation Zone 3 - 100-year Storm				P(360) =		in 3	P(1440) =	3.1	in
	Basin	L	and Treatr	ment Factor	rs				
Basin	Area (Ac)	А	B (Acres	C s)	D	Ew (in)	V(100-6) (af)	(af)	Q(100) (cfs)
Existing Cond	itions								
OS-1	8.10			7.01					44.02 *
OS-2	4.50	0.00	0.00	0.45	4.05	2.25	0.845	1.014	21.88
Site	1.06	0.00	0.00	0.80	0.26	1.55	0.137	0.148	4.07
Total	13.66						-		25.95
Proposed Cor	nditions								
Site	1.06	0.00	0.00	0.31	0.75	2.05	0.181	0.212	4.83

* Peak flow rate per Smith Enginering drainage study conducted by the City for downstream analysis.

Precipitation Z	one 3 - 10-ye	ear Storm		P(360) =	1.73	3 in	P(1440) =	2.07	in
	Basin	Land Treatment Factors			3				
Basin	Area	Α	В	С	D	Ew	V(10-6)	V(10-24)	Q(10)
	(Ac)	- "	(Acre	s)		(in)	(af)	(af)	(cfs)
Existing Condi	tions								
OS-1				LELEGI					NA
OS-2	4.50	0.00	0.00	0.45	4.05	1.41	0.530	0.698	14.63
Site	1.06	0.00	0.00	0.80	0.26	0.84	0.074	0.081	2.48
Total	5.56								17.11
Proposed Cor	ditions								
Site	1.06	0.00	0.00	0.31	0.75	1.24	0.110	0.141	3.16
Total	1.06						1		3.16

CONCLUSION

WATER HARVEST AREAS LOCATED AT THE WEST SIDE OF THE PROJECT SITE.

STREET SECTIONS LOCATED DOWNSTREAM OF THIS SITE.

FIRST FLUSH CALCULATIONS

 $V_{FF} = (0.34 \text{ IN } *32,945 \text{ SF})/12$ $V_{FF} = 933 \text{ CF}$

VOLUME PROVIDED = 1600 CF

MILLER ENGINEERING CONSULTANTS

ALBUQUERQUE, NM 87107 (505)888-7500 (505)888-3800 (FAX) WWW.MECNM.COM

3500 COMANCHE, NE BUILDING F

Engineers • Planners

5476.91

