

# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



Richard J. Berry, Mayor

December 11, 2015

Mr. Phillip W. Clark, P.E.  
Clark Consulting Engineers  
19 Ryan Rd.  
Edgewood, NM 87015

**RE: Frank Sanchez Warehouse Addition  
2339 Second Street SW  
Grading & Drainage Plan  
Engineer's Stamp Date 12-8-2015 (File: M14D029A)**

Dear Mr. Clark:

Based upon the information provided in your submittal received 12-8-2015, the above referenced Grading and Drainage Plan is approved for Building Permit. Please attach a copy of this approved plan in the construction sets when submitting for a building permit.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions you can contact me at 924-3986.

Sincerely,

Abiel Carrillo, P.E.  
Principal Engineer, Planning Dept.  
Development Review Services

Orig: Drainage file



SUBJECT PROPERTY IS NOT ADJACENT TO A FLOOD HAZARD ZONE.  
IT IS WITHIN A SHADDED ZONE X.

FIRM MAP  
PANEL # 342 G

GRADING & DRAINAGE PLAN

THE WAREHOUSE/MANUFACTURING PROJECT IS LOCATED IN THE SOUTHWESTERN VALLEY AREA OF ALBUQUERQUE, APPROXIMATELY 2 MILES SOUTH OF THE DOWNTOWN CORE OF ALBUQUERQUE, N.M. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO.88-46, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS, AND EXISTING IMPROVEMENTS, INCLUDING UTILITIES, AND EXISTING POND
2. PROPOSED IMPROVEMENTS: TWO 4050 SF METAL WAREHOUSE STORAGE BUILDINGS, ASPHALT/CONC. PARKING, GRAVEL DRIVES, NEW GRADE ELEVATIONS, FLATWORK AND LANDSCAPING.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ACCEPTANCE OF ALL ON-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS ROUTED TO RETENTION POND.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS LOCATED ON THE SOUTHWEST VALLEY AREA, WHICH IS A FLOOD HAZARD ZONE. THE SITE IS LOCATED ON THE EAST IS PAVED WITHOUT CURB OR SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY DRAINS AT 1-2% FROM SOUTH TO NORTH. HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED, SINCE SECOND STREET IS IMPROVED ONLY MINIMAL GRADING (DRIVEWAY CONSTR~N) IS PROPOSED WITHIN THE CITY R.O.W. THE CURRENT POND WILL BE RECONFIGURED SLIGHTLY. THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF-SITE DRAINAGE FLOWS. MINIMAL RUN-OFF ENTERS FROM THE CENTRELINE OF SECOND ST. ALONG PORTIONS OF THE FRONTAGE.

CALCULATIONS

**DESIGN CRITERIA**  
HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE ADOPTED BY THE COUNTY OF BERNALILLO  
DISCHARGE RATE: Q=PEAK x AREA, Peak Discharge Rates For Small Watersheds\*  
VOLUMETRIC DISCHARGE: VOLUME = Eweighted x AREA  
P100 = 2.35 inches, Zone 2 P10-Day = 3.95" Time of Concentration, TC = 10 Minutes  
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [ ] = 10 YEAR VALUES

**EXISTING CONDITIONS**  
LOT AREA = 0.94 ACRES, WHERE EXCESS PRECIP. "A" = 0.53 in. [0.13]  
PEAK DISCHARGE, Q100 = 1.5 CFS [0.4] WHERE UNIT PEAK DISCHARGE "A" = 1.56 CFS/AC. [0.38]  
THEREFORE: VOLUME 100 = 1808 CF [443]

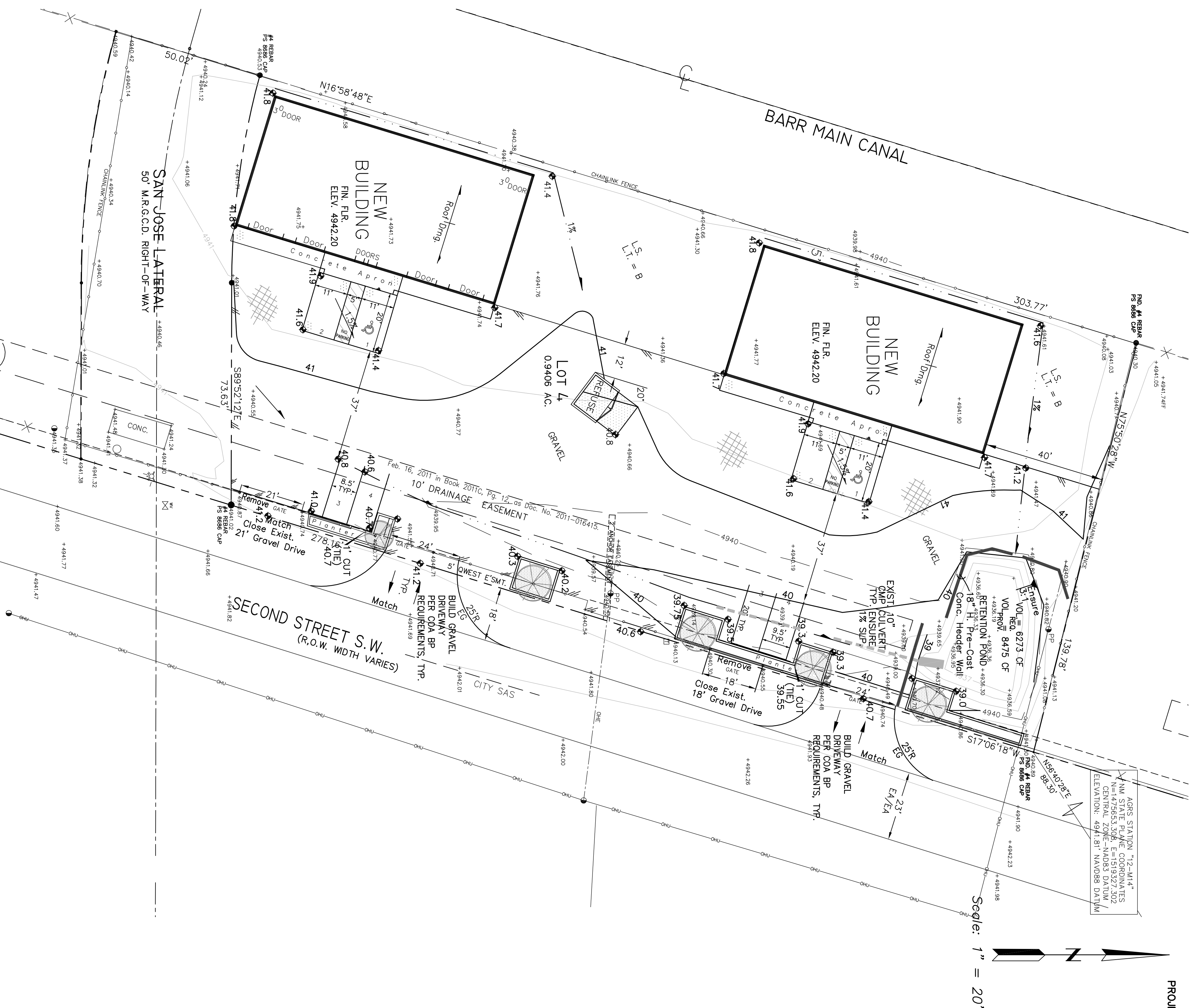
**DEVELOPED CONDITIONS**  
DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

	AREA	LAND TREATMENT	Q Peak	E
UNDEVELOPED/POND	0.99 AC (15%)	A	1.56 [0.38]	0.53 [0.13]
LANDSCAPING	0.99 AC (15%)	B	2.28 [0.95]	0.78 [0.28]
GRAVEL & COMPACTED SOIL	2.44 AC (34%)	C	3.14 [1.71]	1.13 [0.52]
ROOF - PAVEMENT	2.38 AC (38%)	D	4.70 [3.14]	2.12 [1.34]
	0.94 AC.			
THEREFORE: Eweighted	= 1.43 in. [0.11] &			
Q100 = xx CFS		VOLUME 100 = 4079 CF		
Q10 = xx CFS		VOLUME 10 = xxxx CF		

SIZE REQUIRED RETENTION POND

Vol 100(Req.) = 4879 CF  
Vol 10-Day = Vol 100(Req.) + Area "D" (P10-Day - P100 ) /12  
= 4879 CF + 0.24(16)/12 x 43560 = 6273 CF

RECOMMEND : 1) ROUTE DEVELOPED RUNOFF THROUGH EXISTING/UPGRADED SOFT LANDSCAPING INCLUDING DEPRESSED LANDSCAPING  
2) DEPRESSED LANDSCAPING SHALL RETAIN THE "FIRST FLUSH" VOLUME OF: 0.1725 INCHES X LOT AREA (SF)/12 = 0.11 X 0.94 (43560/12) = 384 CF



NOTES

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 1986, 9TH UPDATE.
2. AN EXCAVATION /CONSTRUCTION DEBIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL, ASPHALT/GRAVEL PARKING AREA SHALL DRAIN DIRECTLY TO NEW RETENTION POND
5. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
6. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1012, NATIVE SEED MIX.
7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL, TO 1 VERTICAL, 3:1. ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.

LEGEND

- EXIST. SPOT ELEVATION +24.0
- EXIST. CONTOUR 10
- NEW SPOT ELEVATION 24.0
- NEW CONTOUR 12
- NEW SHALE DRAINAGE DIRECTION, EXISTING
- NEW CONCRETE CURB OR R.R. TIE (0.5' HEIGHT)
- NEW P.C.C., CONCRETE
- FLOWLINE
- EXISTING POWER POLE
- EDGE OF ASPHALT
- TYPE "VUL" RIPRAP, 6" BURY (AVG. DIA. 4")
- FL
- O P.P.
- EA

PROJECT DATA

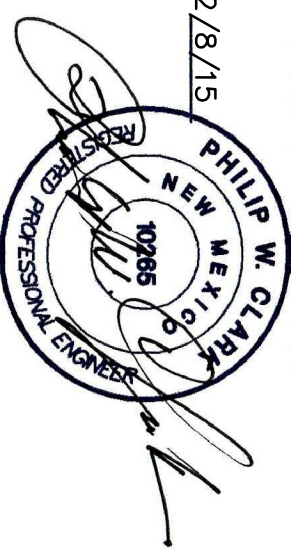
**LEGAL DESCRIPTION**  
LOT 4, LANDS OF FRANK S. SANCHEZ  
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

**PROJECT BENCHMARK**  
TOP OF AGES MONUMENT OFF THE PROJECT NORTHEAST CORNER.  
ELEVATION = 4941.81, SEE PLAN. NO.10088.

**TOPOGRAPHIC DESIGN SURVEY**  
PROVIDED BY ALPHA PRO SURVEYING, LLC. DATED NOVEMBER 2015

**Clark Consulting Engineers**  
19 Ryan Road  
Edgewood, New Mexico 87015

DESIGNED BY: PWC	DRAWN BY: CCE	JOB # SANCHEZ-FA	1 OF 1
CHECKED BY: PWC	DATE: NOV2015	FILE # C/D	
DATE: 12/7/15	REVISION	LOT 4, LANDS OF FRANK S. SANCHEZ, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO	
12/7/15	UPDATED TOPO (ADD HEADER WALL)	2339 SECOND STREET, SW	
	ADD REVISION	A FRANK SANCHEZ DEVELOPMENT	
		Grading & Drainage Plan	



I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, HEREBY CERTIFY THAT I HAVE LISTED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO NOT REPRESENT ANY EARTHWORK OR ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

PHILIP W. CLARK N.M.P.E. #10265