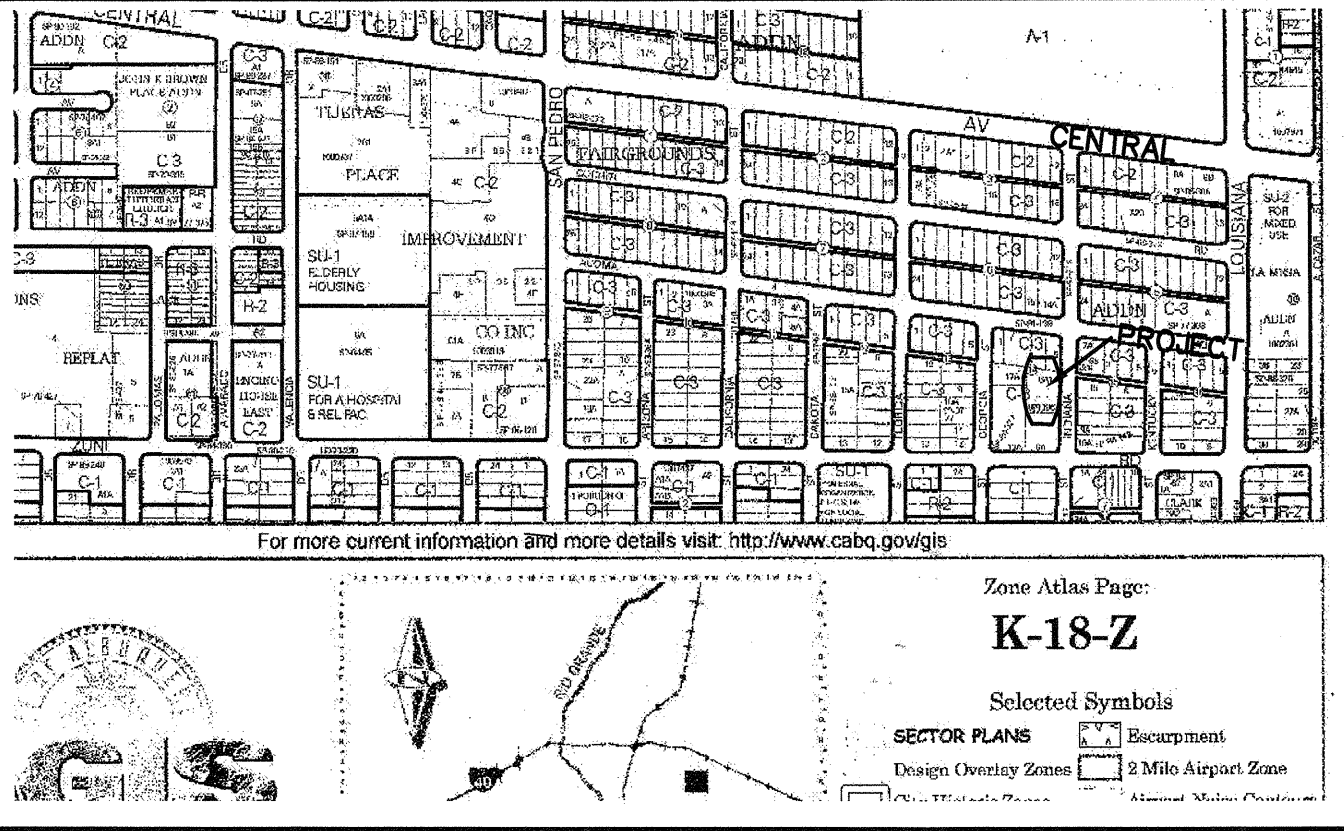


GRADING & DRAINAGE PLAN

LEGEND

- EXIST. SPOT ELEVATION (As Built) +24.0 11.3 or 11.2
- EXIST. CONTOUR
- NEW SPOT ELEVATION
- NEW CONTOUR
- NEW SWALE
- DRAINAGE DIRECTION, EXISTING
- BASIN BOUNDARY
- NEW CONCRETE CURB (0.5' HEIGHT)
- NEW P.C.C., CONCRETE
- TOP OF CURB, EXISTING
- FLOWLINE
- EXISTING POWER POLE
- FACE OF CURB/FACE OF CURB



VICINITY MAP ZONE K-18
1" = 750'

NOTES

- ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, W/ 8 UPDATES.
- AN EXCAVATION/CONSTRUCTION PERMIT 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.
- 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.
- ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL. ASPHALT PARKING AREA SHALL DRAIN DIRECTLY ALONG EXISTING HISTORIC LOCATION.
- CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
- REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1011, NATIVE SEED MIX.
- MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3' HORIZONTAL TO 1' VERTICAL, 3:1, ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.

PROJECT IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD ZONE

FIRM MAP PANEL # 354 H

CALCULATIONS

DESIGN CRITERIA
HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE ADOPTED BY THE COUNTY OF BERNALILLO
DISCHARGE RATE: $Q = Q_{PEAK} \times AREA$, "Peak Discharge Rates For Small Watersheds"
VOLUMETRIC DISCHARGE: $VOLUME = E_{WEIGHTED} \times AREA$
 $P100 = 2.60$ inches, Zone 3 Time of Concentration, TC = 10 Minutes
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

EXISTING CONDITIONS
LOT AREA = 0.51 ACRES, WHERE EXCESS PRECIP. 'C' = 1.29 IN. [0.62]
PEAK DISCHARGE, $Q100 = 1.76$ CFS [1], WHERE UNIT PEAK DISCHARGE 'C' = 3.45 CFS/AC. [2.0]
THEREFORE: $VOLUME 100 = 2388$ CF [1148]

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

AREA	LAND TREATM'T	Q Peak	E
UNDEVELOPED	---	---	---
LANDSCAPING	0.06 Ac. (12%)	1.87 [0.58]	0.66 [0.19]
GRAVEL & COMPACTED SOIL	0.04 Ac. (8%)	2.60 [1.19]	0.92 [0.36]
ROOF - PAVEMENT	0.41 Ac. (80%)	3.45 [2.00]	1.29 [0.62]
	0.51 Ac.	5.02 [3.39]	2.36 [1.50]

THEREFORE: $E_{WEIGHTED} = 2.10$ IN. [1.29] &
 $Q100 = 2.36$ CFS
 $Q10 = 1.53$ CFS

DETERMINE CAPACITY OF EAST BASIN TO HARVESTING AREA
BASIN AREA = 0.20 AC. THEREFORE $E100 \sim 2.1$ IN = 1500 C.F.±
THEN: 3887 CF-1500 CF = 2390± CF VOL. TO WEST.O.K

AREA	~Q100
BASIN A	0.17
BASIN B	0.27
BASIN C+ODB	0.32

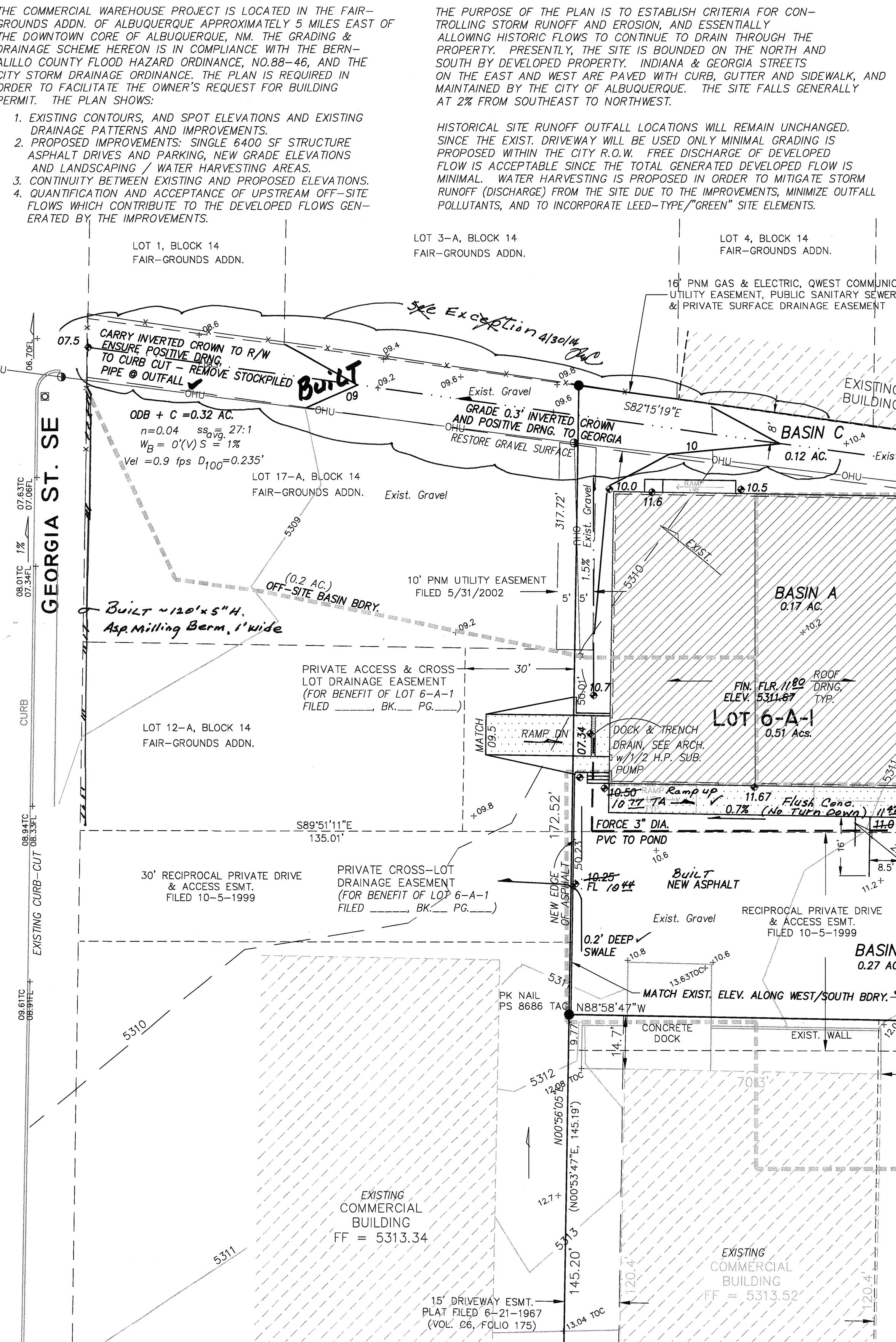
CHANNEL CALCULATOR

GIVEN INPUT DATA:

SHAPE: TRAPEZOIDAL
SOLVING FOR: FLOWRATE
SLOPE: 0.0100 FT/FT
MANNING'S N: 0.0400
DEPTH: 0.2320 FT
HEIGHT: 0.3000 FT
BOTTOM WIDTH: 0.0000 FT
LEFT SLOPE: 0.0370 FT/FT (V/H)
RIGHT SLOPE: 0.0370 FT/FT (V/H)

COMPUTED RESULTS:

FLOWRATE: 1.2848 CFS
VELOCITY: 0.8832 FPS
FULL FLOWRATE: 2.5499 CFS
FLOW AREA: 1.5447 FT²
FLOW PERIMETER: 12.5491 FT
HYDRAULIC RADIUS: 0.1159 FT
TOP WIDTH: 12.5405 FT
AREA: 2.4324 FT²
PERIMETER: 16.2273 FT
PERCENT FULL: 77.3333 %



Scale: 1" = 20'

DRAINAGE CERTIFICATION

I, Philip W. Clark, NMP#10265 OF THE FIRM Clark Consulting Engineers, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 8/18/13. THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BY REQUESTING A REQUEST FOR PERMANENT CERTIFICATE OF OCCUPANCY.

(DESCRIBE ANY EXCEPTIONS) Grading in Former Gravel Alley Area, Next Built 4/30/14

(DESCRIBE ANY DEFICIENCIES)

PROJECT DATA

LEGAL DESCRIPTION
LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION
Albuquerque, Bernalillo County, New Mexico

PROJECT BENCHMARK
Top of Curb at the Projection of the Project Southeast Corner
MSL Elevation = 5311.93, As Tied From COA BRASS
CAP, 7_K19, MSL 5325.99, NAVD88.

TOPOGRAPHIC DESIGN SURVEY
PERFORMED BY ALPHA PRO SURVEYING, LLC, Date DEC. 2012

I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

PHILIP W. CLARK NMP#10265

8/08/13 PHILIP W. CLARK NMP#10265

Clark Consulting Engineers
19 Ryan Road
Edgewood, New Mexico 87015
Tel: (505) 281-2444 Fax: (505) 281-2444

DATE	REVISION	LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION
12/12/13	As-Built	301 INDIANA STREET, NE ALBUQUERQUE
4/30/14	Built As-Planned	A KIPCO PROJECT

Grading & Drainage Plan

DESIGNED BY: PWC DRAWN BY: CCE JOB #: KIPCO_GD 1 OF 1
CHECKED BY: PWC DATE: 6/17/13 FILE #: G/D