

SUBJECT PROPERTY IS NOT ADJACENT TO A FLOOD HAZARD ZONE.

FIRM MAP PANEL # 353 G

## GRADING & DRAINAGE PLAN

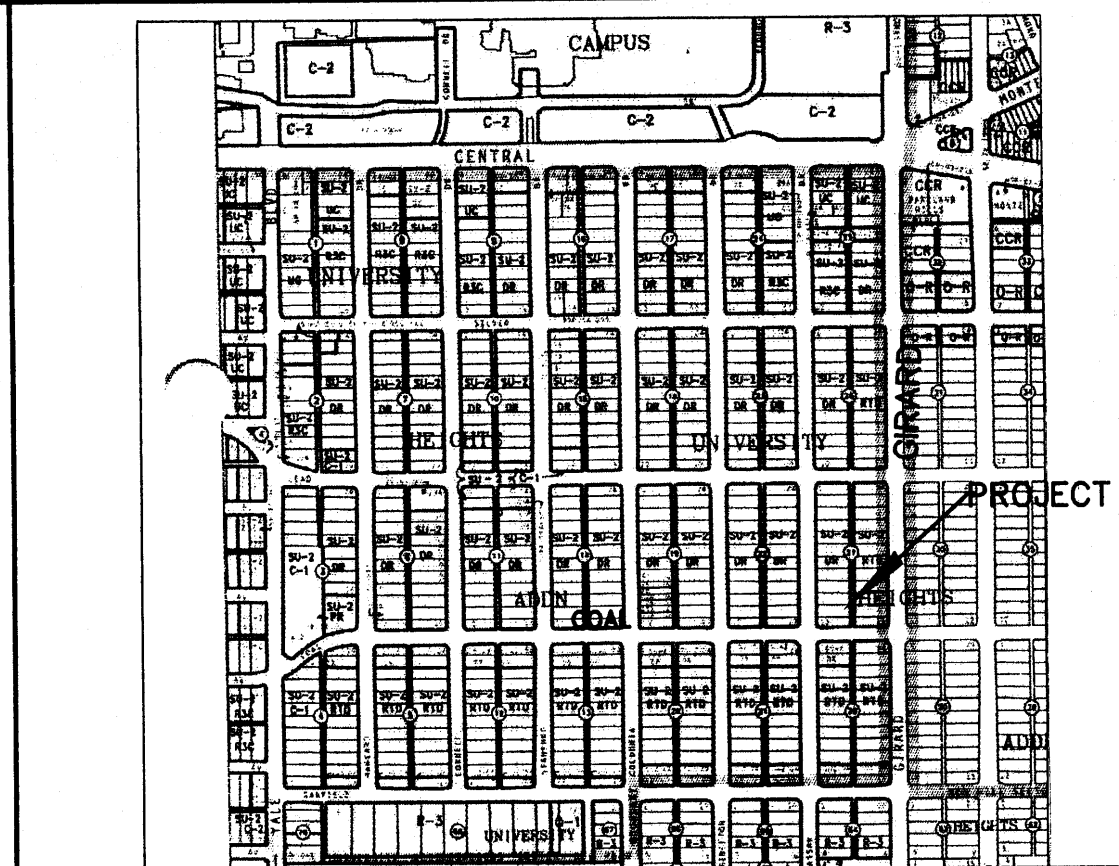
THE MULTI-FAMILY/TOWNHOME PROJECT IS LOCATED IN THE UNIVERSITY HEIGHTS OF ALBUQUERQUE APPROXIMATELY 2.5 MILES EAST OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO.68-46, AND THE CITY STORM DRAINAGE ORDINANCE. 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 EXISTING FLATWORK.
2. PROPOSED IMPROVEMENTS: 2800 SF BUILDING STRUCTURE, NEW CONCRETE DRIVEPADS AND OUTDOOR PATIO AREAS, NEW GRADE ELEVATIONS, WALLS, FLATWORK AND LANDSCAPING.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

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 BOUNDED ON THE NORTH BY RESIDENTIAL USE TO THE EAST BY COMMERCIAL PUBLIC ALLEY. COAL AVENUE & VASSAR DRIVE ON THE SOUTH AND WEST ARE PAVED WITH CURB, GUTTER AND SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY DRAINS AT 1% FROM EAST TO WEST.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. SINCE BOTH STREETS ARE IMPROVED ONLY MINIMAL GRADING (DRIVEPAD RECONSTR-N) IS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE THE TOTAL INCREASE OF DEVELOPED FLOW IS MINIMAL, AND CAPACITY EXISTS DOWNSTREAM.

THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF-SITE DRAINAGE FLOWS.



VICINITY MAP ZONE K-16

## 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, 7TH EDITION W/ UPDATES.
2. 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.
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 PARKING AREA SHALL DRAIN DIRECTLY TO NEW CURB CUT OR SDWK CULVERT.
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. 1011, 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 SWALE	
DRAINAGE DIRECTION, EXISTING	
NEW CONCRETE CURB (0.5' HEIGHT)	
NEW P.C.C., CONCRETE	
TOP OF CURB, EXISTING	TC
FLOWLINE	FL
EXISTING POWER POLE	O
FACE OF CURB/FACE OF CURB	F-F
WATER BLOCK	

## PROJECT DATA

### LEGAL DESCRIPTION

LOT 12, BLOCK 27, UNIVERSITY HEIGHTS  
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

### PROJECT BENCHMARK

TOP OF REBAR/CAP AT THE PROJECT SOUTHEAST CORNER MSL  
ELEVATION = 5186.05, AS TIED FROM COA 3-1/4" DIAMETER ALUM  
DISK SET IN TOP OF CURB, 20'-18" MSL, MAY 88, 5210.84, LOCATED  
114' SOUTH OF THE INTERSECTION OF GIRARD AND BURTON AVENUE, SE.

### TOPOGRAPHIC DESIGN SURVEY

PROVIDED BY HARRIS SURVEYING, INC. UNDER THE DIRECTION OF TONY  
HARRIS, N.M.P.S. 11463, DATED APRIL 2010.

Clark Consulting Engineers

19 Ryan Road  
Edgewood, New Mexico 87015

Tele: (505) 281-2444 Fax: (505) 281-2444

DATE REVISION LOT 12, BLK. 27, UNIVERSITY HEIGHTS  
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

324 VASSAR DRIVE SE  
ALBERT TOWNHOMES  
Grading & Drainage  
Plan

DESIGNED BY: PWC DRAWN BY: CCE JOB #ALBERT\_Ths  
CHECKED BY: PWC DATE: 5/4/10 FILE # G/D 1 OF 1

## 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:  $Q = Q_{PEAK} \times AREA$ , "Peak Discharge Rates For Small Watersheds"  
VOLUMETRIC DISCHARGE:  $VOLUME = E_{Weighted} \times AREA$   
 $P100 = 2.35$  Inches, Zone 2 Time of Concentration, TC = 10 Minutes  
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [ ] = 10 YEAR VALUES

### EXISTING CONDITIONS

TOTAL AREA = 0.16 ACRES, WHERE EXCESS PRECIP. 'W' = 1.13 in. [0.52]  
PEAK DISCHARGE,  $Q100 = 0.50$  CFS [0.27], WHERE UNIT PEAK DISCHARGE 'W' = 3.1 CFS/AC. [1.7]  
THEREFORE:  $VOLUME 100 = 656$  CF [302]

### DEVELOPED CONDITIONS

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

	AREA	LAND TREATM'T	$Q_{Peak}$	$E$
UNDEVELOPED	Ac.	A	1.56[0.35]	0.53[0.13]
LANDSCAPING	0.03 Ac.(16%)	A	2.28[0.95]	0.78[0.28]
GRAVEL & COMPACTED SOIL	0.02 Ac.(15%)	C	3.14[1.71]	1.13[0.52]
ROOF - PAVEMENT	0.11 Ac.(69%)	D	4.70[3.14]	2.12[1.34]
	0.16 Ac.			

THEREFORE:  $E_{Weighted} = 1.76$  in.[1.06] &  
 $Q100 = 0.65$  CFS  
 $Q10 = 0.41$  CFS

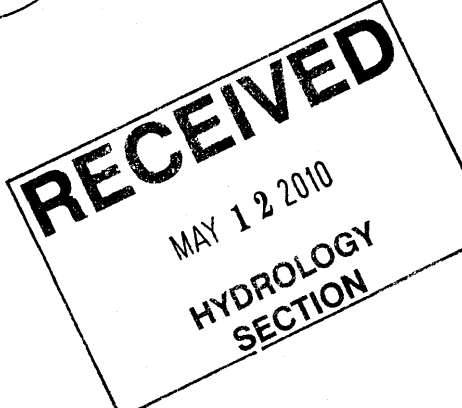
VOLUME 100 = 1022 CF  
VOLUME 10 = 616 CF

RECOMMEND: ROUTE DEVELOPED RUNOFF THROUGH SOFT LANDSCAPING

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 NMPE #10265

Scale: 1" = 10'





# GRADING & DRAINAGE PLAN

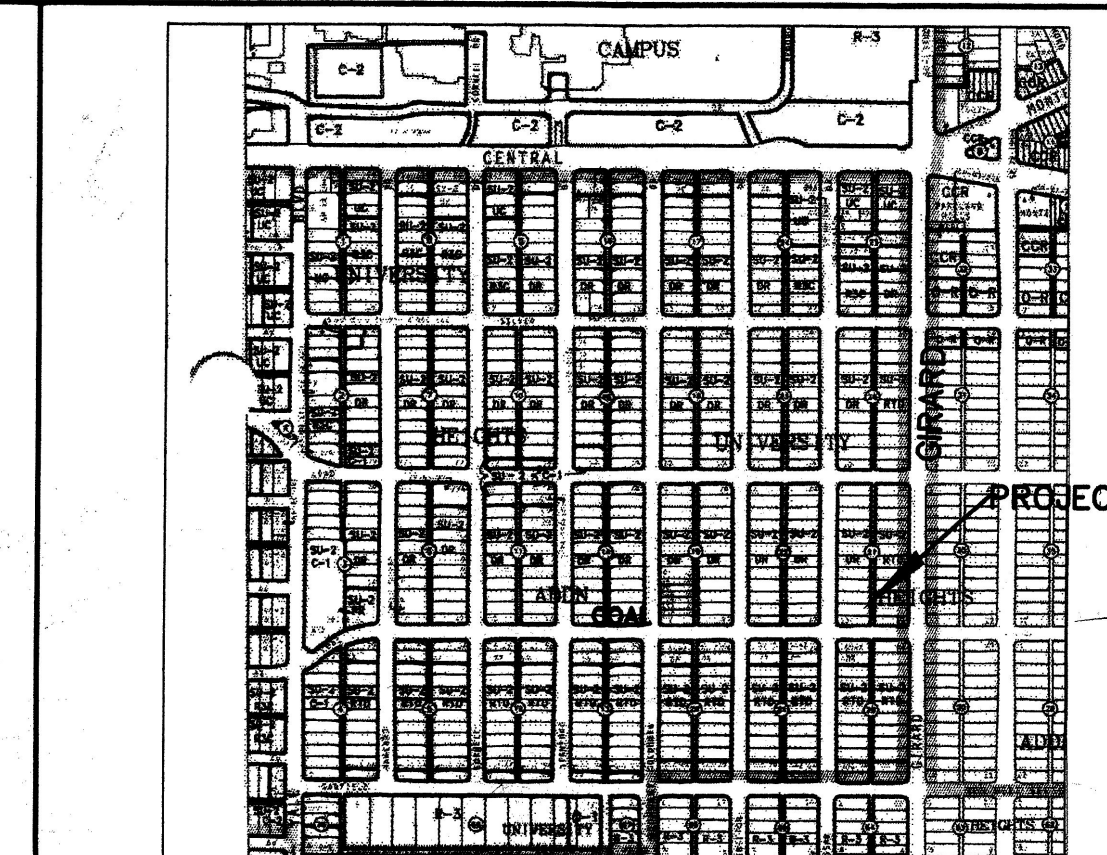
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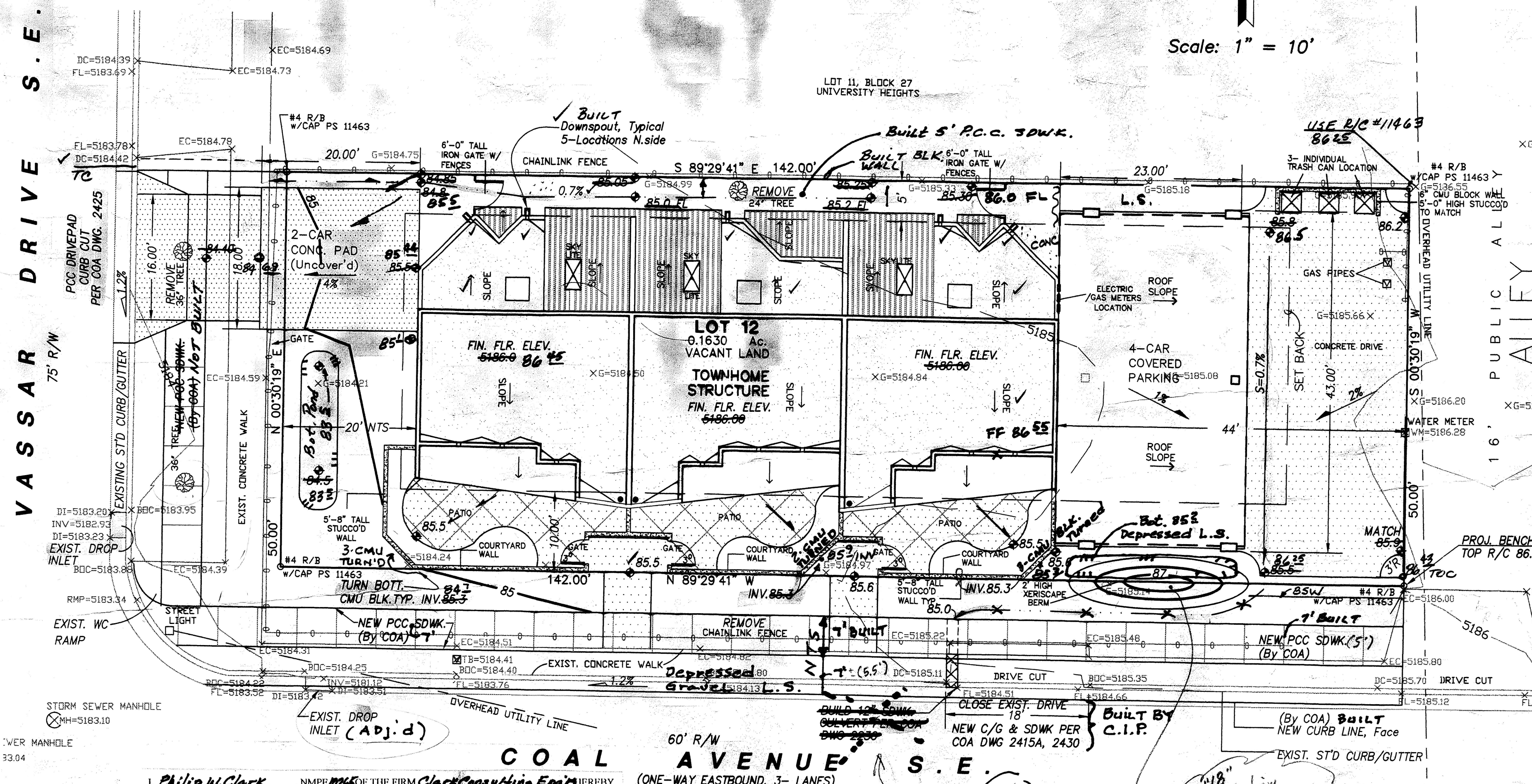
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PROVIDED BY HARRIS SURVEYING, INC. UNDER THE DIRECTION OF TONY HARRIS, N.M.P.S. 11463, DATED APRIL 2010.

## FIRM MAP

PANEL # 353 G

Scale: 1" = 10'



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RECOMMEND: ROUTE DEVELOPED RUNOFF THROUGH SOFT LANDSCAPING

Philip W. Clark, N.M.P.E. #10265, of the firm Clark Consulting Engineers, hereby CERTIFY THAT THIS PROJECT HAS BEEN GRADDED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 5/13/10. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION. I HAVE SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY Harris Surveying, N.M.P.S. #11463, OF THE FIRM HARRIS SURVEYING, INC. (HARRIS), AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR PERMANENT C.O.

(DESCRIBE ANY EXCEPTIONS) Per S.B./E.S. mtg. - SDWK culvert deleted, increase Routing thru L.S. (2) locations.  
(DESCRIBE ANY DEFICIENCIES)

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 USING IT FOR ANY OTHER PURPOSE.

Philip W. Clark, N.M.P.E. #10265

DATE

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Philip W. Clark, N.M.P.E. #10265

## Clark Consulting Engineers

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

DATE: 3-26-14 REVISION: As-Bilt LOT 12, BLK. 27, UNIVERSITY HEIGHTS ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO 324 VASSAR DRIVE SE

## ALBERT TOWNHOMES Grading & Drainage Plan

DESIGNED BY: PWC DRAWN BY: COE JOB #: ALBERT\_Ths 1 OF 1  
CHECKED BY: PWC DATE: 5/4/10 FILE #: G/D

