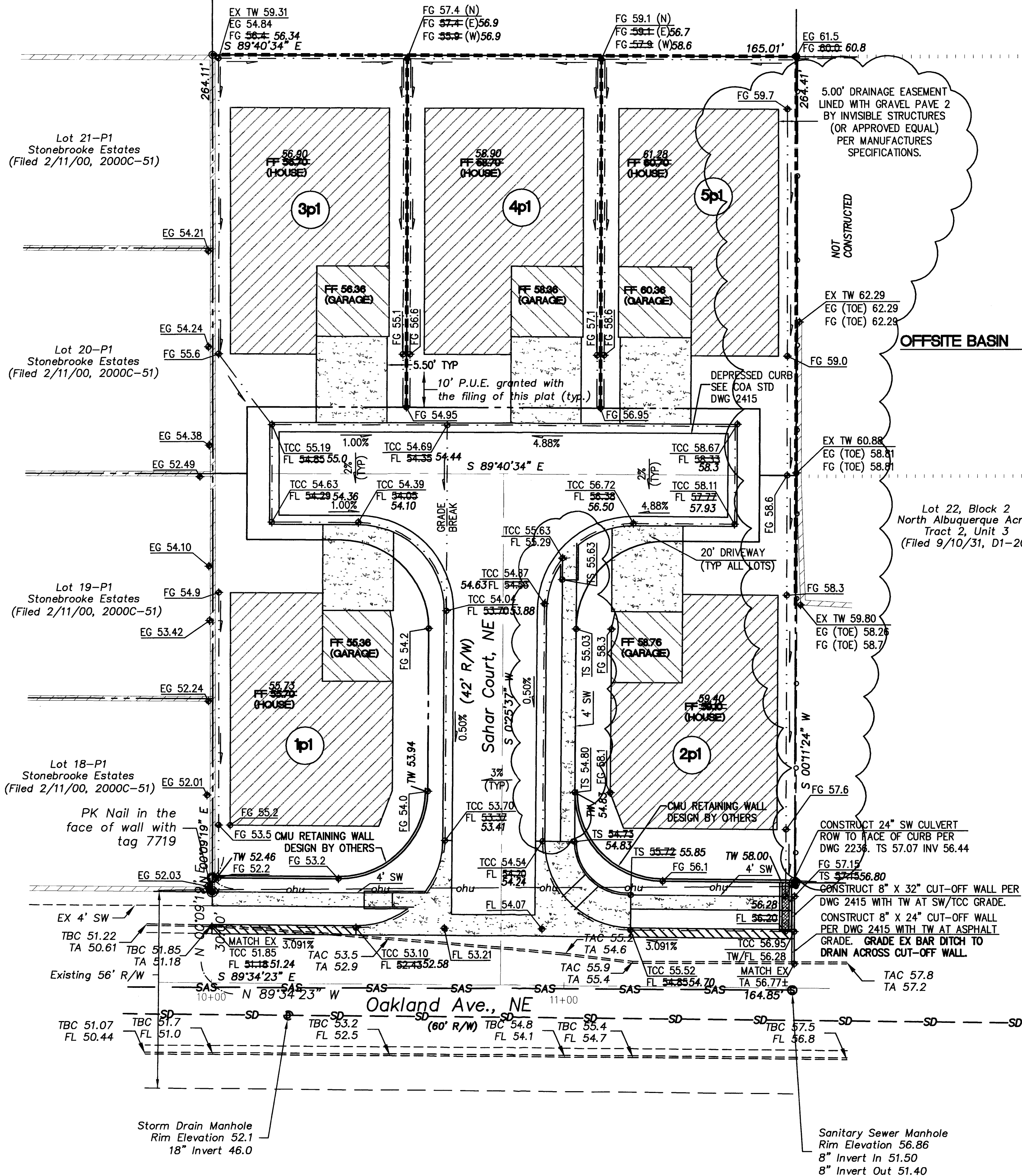


Lot 9, Block 2
North Albuquerque Acres
Tract 2, Unit 3
(Filed 9/10/31, D1-20)

Lot 10, Block 2
North Albuquerque Acres
Tract 2, Unit 3
(Filed 9/10/31, D1-20)

Lot 11, Block 2
North Albuquerque Acres
Tract 2, Unit 3
(Filed 9/10/31, D1-20)



DRAINAGE INFORMATION

LOCATION & DESCRIPTION

THE PROPOSED SITE IS 0.90 ACRES LOCATED ON THE NORTH SIDE OF OAKLAND AVENUE APPROXIMATELY MIDWAY BETWEEN LOUISIANA BOULEVARD AND WYOMING BOULEVARD AS SEEN ON THE ATTACHED VICINITY MAP. THE SITE IS CURRENTLY UNDEVELOPED WITH A TYPICAL DEVELOPED ONE ACRE NORTH ALBUQUERQUE ACRES LOT TO THE EAST, UNDEVELOPED PROPERTY TO THE NORTH, AND HIGHER DENSITY WALLED COMMUNITIES TO THE SOUTH AND WEST. THE PROPOSED DEVELOPMENT WILL BE FIVE (5) SINGLE FAMILY RESIDENTIAL LOTS ON A CUL-DE-SAC.

FLOODPLAIN STATUS

THIS PROJECT, AS SHOWN ON FEMA'S FLOOD INSURANCE RATE MAP 35001C0137 E, DATED APRIL 2, 2002 IS NOT WITHIN A DESIGNATED 100-YEAR FLOODPLAIN. AN EXHIBIT WITH THE SITE SHOWN ON THE FIRM PANEL IS INCLUDED ON THIS SHEET.

METHODOLOGY

THE HYDROLOGY FOR THIS PROJECT WAS ANALYZED USING THE QUICK CALCULATIONS OF THE JUNE 1997 RELEASE OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2.

PRECIPITATION

THE 100-YR 6-HR DURATION STORM WAS USED AS THE DESIGN STORM FOR THIS ANALYSIS. THIS SITE IS WITHIN ZONE 3 AS IDENTIFIED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2. TABLES WITHIN THIS SECTION WAS USED TO ESTABLISH THE 6-HOUR PRECIPITATION, EXCESS PRECIPITATION, AND PEAK DISCHARGE.

EXISTING DRAINAGE

THIS SITE IS LOCATED WITH THE NORTH BOUNDARY AT THE NATURAL HIGH POINT WITH THE PROPERTY TO THE NORTH OF THE SITE DRAINING AWAY FROM THE PROPERTY AND THIS SITE DRAINING SOUTH TO OAKLAND AVENUE. THE NORTH ALBUQUERQUE ACRE LOT TO THE EAST IS ALREADY DEVELOPED WITH APPROXIMATELY THREE QUARTERS OF IT DRAINING TO OAKLAND AVENUE AND THE NORTHWEST QUARTER DRAINING ONTO THIS PROPERTY. THIS OFFSITE BASIN IS IDENTIFIED ON THE GRADING PLAN ON THIS SHEET AND IS DEVELOPED WITH APPROXIMATELY 50% TYPE C AND 50% TYPE D LAND TREATMENTS. THE SOUTH HALF OF OAKLAND AVENUE HAS BEEN CONSTRUCTED ADJACENT TO THIS PROPERTY AND THE FULL 36' STREET SECTION HAS BEEN CONSTRUCTED WEST OF THE SITE. THERE IS AN EXISTING BAR DITCH EAST OF THE SITE ON THE NORTH SIDE OF OAKLAND AVENUE THAT CONVEYS FLOW FROM THE EAST TO THE FULL STREET SECTION WEST OF THE SITE.

DEVELOPED CONDITION

THIS SITE WILL BE DEVELOPED WITH A SINGLE STREET INTERCEPTING ALL OF THE SITE RUNOFF AND THE OFFSITE BASIN. THE RUNOFF WILL FREE DISCHARGE INTO OAKLAND AVENUE. DUE TO DEVELOPING THE FULL WIDTH STREET SECTION ADJACENT TO THIS PROPERTY, AN APPROXIMATE 8.5' OPENING BETWEEN THE PERMANENT CURB AND GUTTER AND THE EXISTING ASPHALT CURB ON THE NORTH SIDE OF OAKLAND AVENUE WILL BE CREATED. THIS OPENING WILL BE USED TO INTERCEPT THE RUNOFF FROM THE EXISTING BAR DITCH AND BRING IT INTO THE ASPHALT STREET. THIS OPENING WILL NOT CREATE AN OBSTRUCTION FOR TRAFFIC SINCE IT WILL CREATE A WIDER DRIVING LANE FOR WEST BOUND TRAFFIC. STRIPING WILL BE USED BETWEEN THE OPENING AT THE EAST END OF THIS PROJECT AND THE SITE ENTRANCE TO TRANSITION TRAFFIC FROM THE HALF STREET SECTION TO THE FULL SECTION IN A SIMILAR MANNER TO HOW THE CURRENT ASPHALT CURB FUNCTIONS. GREATER CONTROL OF THE BAR DITCH RUNOFF WILL BE GAINED AS IT ENTERS THE PERMANENT STREET BY DEVELOPING THE STREET IN THIS MANNER. THE ATTACHED HYDROLOGIC CALCULATIONS SHOW EXISTING AND PROPOSED CONDITIONS FOR THIS SITE. THE INCREASE FROM 2.64 CFS TO 4.66 CFS FOR THE 100-YEAR PEAK RUNOFF IS INSIGNIFICANT AND WILL HAVE MINIMAL IMPACT ON DOWNSTREAM FACILITIES BY DEVELOPING THE STREET IN THIS MANNER.

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT				WEIGHTED E (in)	V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(10 day) (acre-ft)	V(10 day) (cu-ft)	Q (cfs)
		A (%)	B (%)	C (%)	D (%)						
EXISTING CONDITIONS											
OFFSITE	0.2256	0.00	0.00	50.00	50.00	1.83	0.03	1,494	0.06	2,436	0.96
SITE	0.9022	100.00	0.00	0.00	0.00	0.86	0.05	2,162	0.05	2,162	1.69
TOTAL	1.1278						0.08	3,656	0.11	4,597	2.64
PROPOSED CONDITIONS											
OFFSITE	0.2256	0.00	0.00	50.00	50.00	1.83	0.03	1,494	0.06	2,436	0.96
SITE	0.9022	0.00	23.00	23.00	54.00	1.78	0.13	5,838	0.23	9,906	3.70
TOTAL	1.1278						0.17	7,333	0.28	12,342	4.66
EXCESS PRECIP.											
	0.86	0.92	1.29	2.36	E (in)						
PEAK DISCHARGE											
	1.87	2.6	3.45	5.02	Qm (cfs)						
WEIGHTED E (in) = (E _A)(A%) + (E _B)(B%) + (E _C)(C%) + (E _D)(D%)											
V _{6hr} (acre-ft) = (WEIGHTED E)(AREA)/12											
V _{10day} (acre-ft) = V _{6hr} + (A ₀)(P _{6hr} - P _{10day})/12											
Q (cfs) = (Q _{6h})(A ₀) + (Q _{10d})(A ₀) + (Q _{24h})(A ₀) + (Q _{48h})(A ₀)											
ZONE = 3											
P _{6hr} (in.) = 2.60											
P _{10day} (in.) = 3.10											
P _{24hr} (in.) = 4.90											

TEMPORARY DRAINAGE CERTIFICATION

I, Larry D. Read, NMPE 10998, of the firm Larry Read & Associates, Inc., 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 9/29/02. The record information edited onto the original design document has been obtained by Will Plotner Jr., NMPS 14271, of the firm Cartesian Survey. I further certify that I have personally visited the project site on 10/4/2004 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for Certificate of Occupancy.

Exceptions: The gravel swale on the east side has not been constructed since the developer of this subdivision has secured the land to the east and a proposed Grading and Drainage Plan (Shaheen Subdivision) is in for Preliminary Plat and Grading and Drainage review. Construction of Shaheen Subdivision will remove the need for this swale.

The developer elected to construct a short retaining wall (design by others) on both the east and west sides of Abis Court near the entrance to provide flatter yards for the two corner houses.

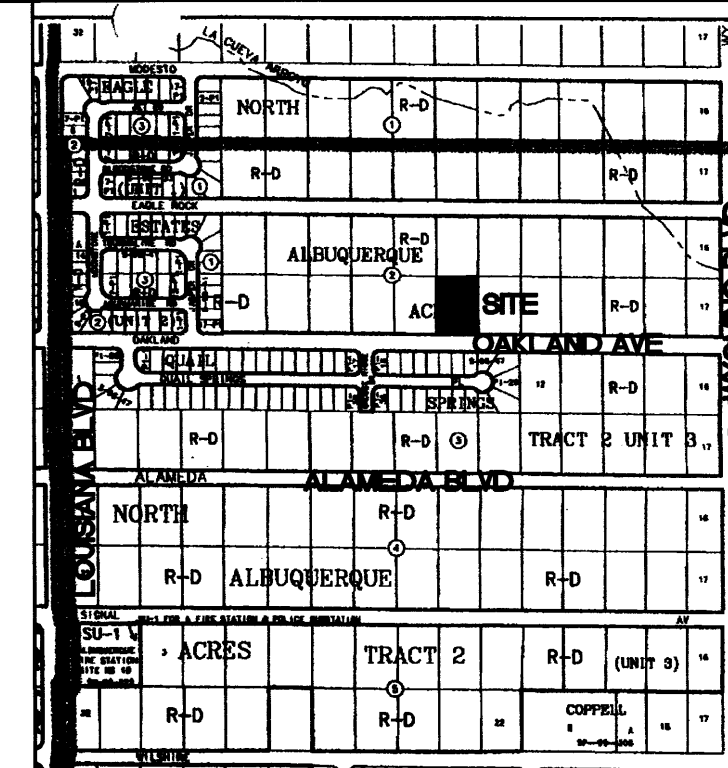
Construction of houses on these lots will disturb the grading outside the footprint. Therefore, the builder will need to reestablish the swales and yard grading to provide positive drainage when the houses are complete.

The sidewalk along the east side of Sahar Court has been built in the wrong location (against the back of curb) and must be moved before I request permanent drainage certification.

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 before using it for any other purpose.

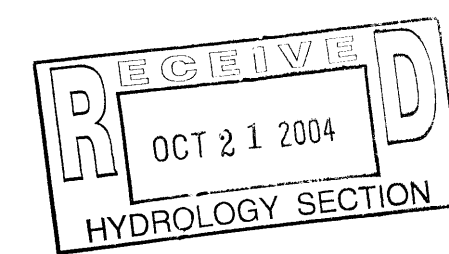
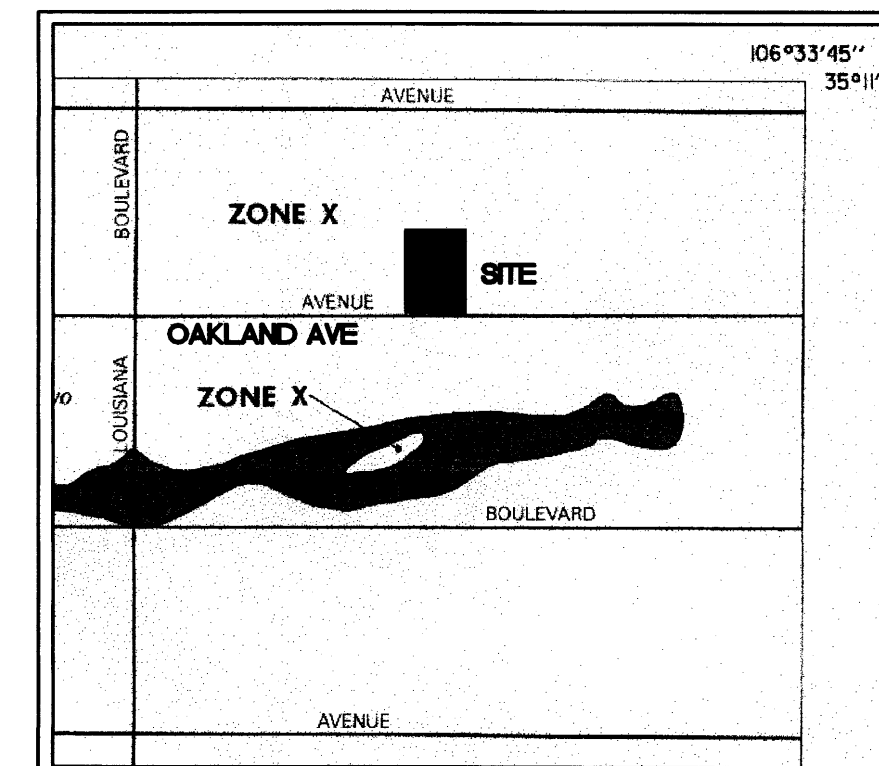
TC 73.30 73.21 VERIFIED SPOT ELEVATION

FG 71.30 EARTH SPOT ELEVATION MATCHES DESIGN



LOT 23, BLOCK 2, TRACT 2, UNIT 3, NORTH ALBUQUERQUE ACRES, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON SEPTEMBER 10, 1931, IN PLAT BOOK D1, PAGE 20.

LEGAL DESCRIPTION



LARRY READ & ASSOCIATES, Inc.
Civil Engineers
4800-C Juan Tabo Blvd. NE
Albuquerque, New Mexico 87111
(505) 237-8421

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
TITLE: SAHAR SUBDIVISION GRADING AND DRAINAGE PLAN	
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
PROJECT NO. 6986.81	MAP NO. C-19
SHEET 3 OF 8	