



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 21, 2002

Frank Lovelady, P.E.
Lovelady & Assoc.
300 Alamosa NW
Albuquerque, New Mexico 87017

RE: JIFFY LUBE- OFFICE BLDG. (A-14/D15)
(3520 Calle Cuervo NW)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 8/23/2001
ENGINEERS CERTIFICATION DATED 3/21/2002

Dear Mr. Lovelady:

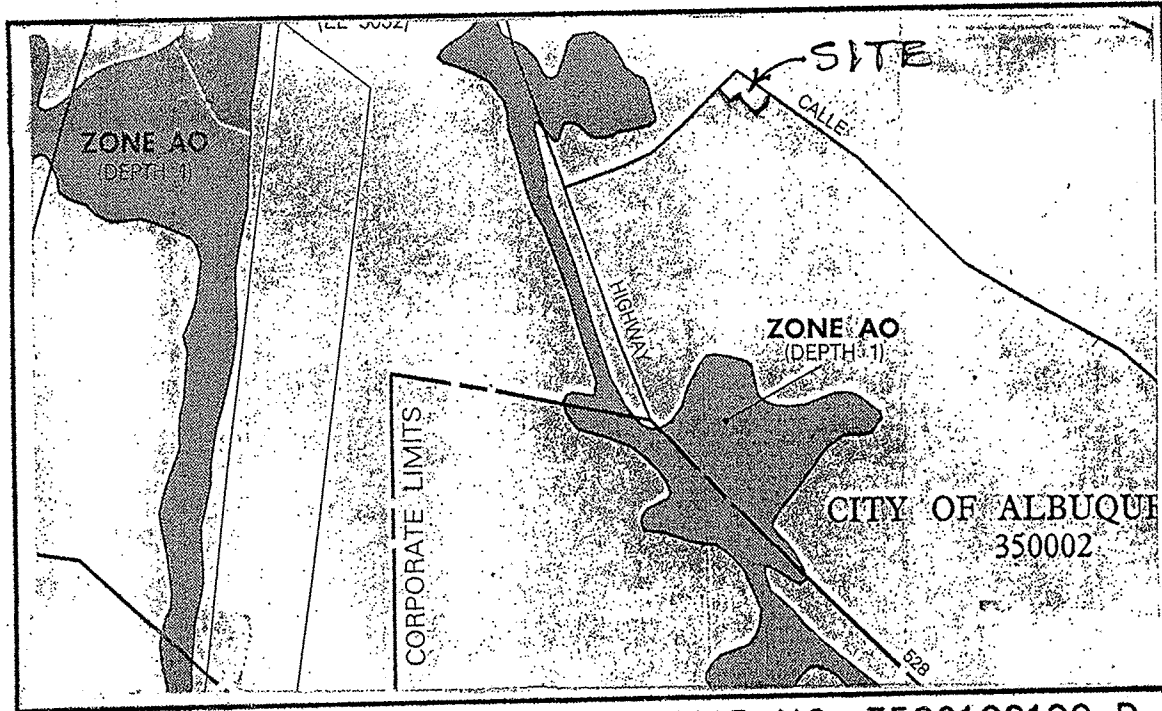
Based upon the information provided in your Engineers Certification submittal dated 3/21/2002, and the SO19 approval dated 3/20/2002, the above referenced site is approved for a Permanent Certificate of Occupancy.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BUB

C: Vickie Chavez, COA
✓ drainage file
approval file



FLOOD INSURANCE RATE MAP* MAP NO. 35001C0109 D

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N 61°48'48" E	7.50'
L2	S 61°48'48" W	45.00'
L3	S 61°48'48" W	42.50'
L4	N 28°11'12" W	64.50'
L5	N 45°52'16" E	78.16'

- KEYED NOTES:**
- NEW ASPHALT PAVEMENT.
 - 6" CONCRETE CURB.
 - 1' WIDE BREAK IN CURB FOR DRAINAGE.
 - 2' WIDE BREAK IN CURB FOR DRAINAGE.
 - BUILD RETAINING WALL OR CUTOFF WALL, AS REQUIRED, TOP ELEV. = 5018.00
 - PROPERTY LINE.
 - BUILD 18" SIDEWALK CULVERT PER C.D.A. STD. DWG. 2236.
 - BUILD CONCRETE ALLEY GUTTER PER C.D.A. STD. DWG. 2415.
 - LANDSCAPING AREA (SEE LANDSCAPING PLAN).
 - PRE-CAST PARKING BUMPER.
 - CONSTRUCT STORM INLET, SINGLE 'D', PER C.D.A. STD. DWG. 2206, 2216, 2220 & 2221
 - GRATE ELEV. = 5016.00
 - SE INV. ELEV. = 5012.50
 - NW INV. ELEV. = 5012.51
 - KEYSTONE RETAINING WALL ON THREE SIDES OF INLET AS SHOWN.

ENGINEERS CERTIFICATION:

HAVING FIELD-INSPECTED THE AS-CONSTRUCTED FACILITY AND HAVING TAKEN SPOT ELEVATIONS AT CRITICAL POINTS IN THE PARKING AREA AND THE FINISH FLOOR OF THE BUILDING, I HEREBY CERTIFY THAT THE AS-CONSTRUCTED FACILITY IS IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN WITH ENGINEER'S STAMP DATED AUGUST 23, 2001.

Frank D. Lovelady
Frank D. Lovelady, NMPE 6512

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	343.47'	139.03'	70.48'	138.08'	S 34°42'55" W	23°11'30"
C2	30.00'	43.38'	26.47'	39.70'	N 87°17'41" E	82°50'50"
C3	484.00'	58.04'	29.06'	58.01'	S 54°43'02" E	06°52'16"
C4	466.00'	117.64'	59.13'	117.33'	S 50°55'15" E	14°27'50"

CALCULATION OF TYPE "D" INLET INVERT ELEVATIONS:

380.24 c. to c. MH. 376.24 inv. to inv.
Upper MH, SE inv. Elev. = 5013.13
Lower MH, NW inv. Elev. = 5011.70
Diff. = 1.43' S = 1.43' / 376.24 = 0.0038 ft./ft.
Inv. Upper MH to E. PL = 166.56 (164.56 to SE inv. Inlet)
5013.13 - 164.56 x 0.0038 = 5012.50 (Inlet SE inv.)

Sanitary Sewer Manhole

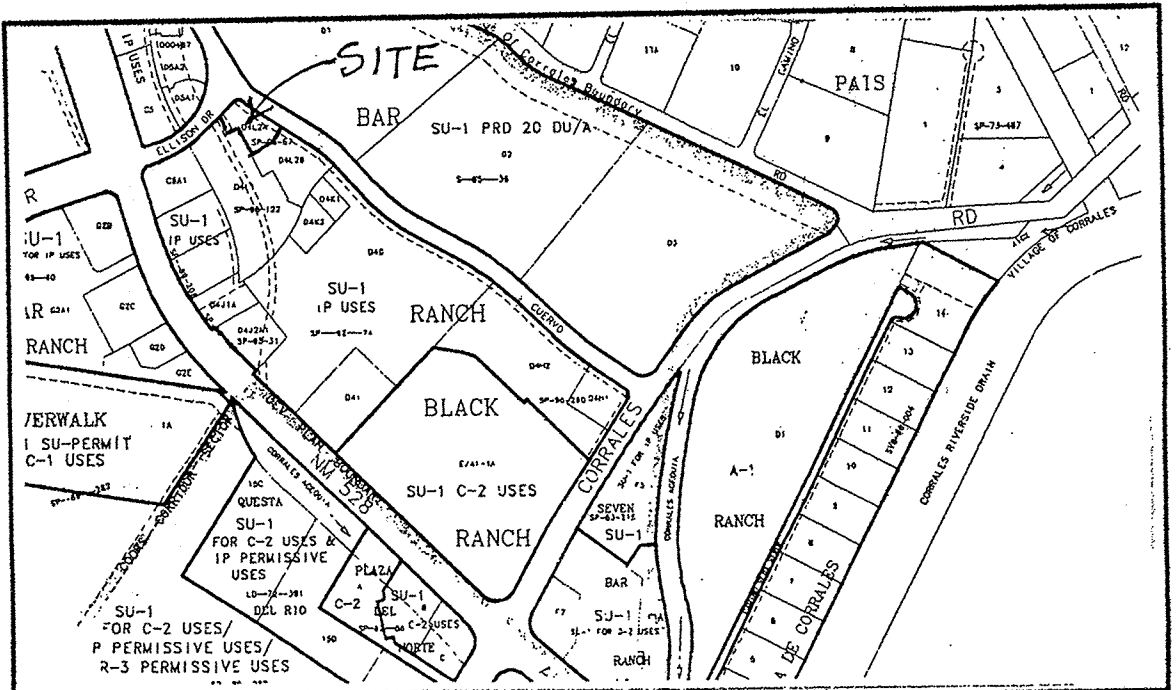
Rim Elev. = 5019.34
Inv. Elev. = 5010.14 NW
Inv. Elev. = 5010.04 SE

GENERAL NOTES:

- FOR DIMENSIONS OF CURB AND GUTTER LAYOUT, RADII DIMENSIONS, DESCRIPTION OF PARKING BUMPER ANCHORING, PARKING SPACE NUMBERING, ETC., SEE SITE PLAN.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THEREOF, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREOF. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATIONS OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF OR DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

LEGEND

- POWER POLE
- WATER VALVE
- SEWER CLEANOUT
- CONCRETE AREA
- PLANTED AREA
- CONCRETE CURB & GUTTER
- IRRIGATION VALVE
- UTILITY PEDESTAL
- TRAFFIC CONTROL BOX
- EXISTING TREE
- WATER METER
- DIRT AREA
- TRANSFORMER
- GAS METER/VALVE
- HYDRANT
- IRRIGATION CONTROL BOX
- WHEELCHAIR RAMP
- 5020 - EXIST. CONTOUR
- 18.48 - EXISTING SPOT ELEVATION
- 19.00 - NEW SPOT ELEVATION
- SHEET FLOW
- SLOPE IN FEET PER FOOT.



VICINITY MAP ZONE ATLAS NO. A - 14

DRAINAGE CALCULATIONS:

EXISTING CONDITIONS:

The site is located on the Southeast Corner of Ellison Drive, and Calle Cuervo NW. The project site is approximately 0.5510 acres in size. The site is bounded by Calle Cuervo on the North, Ellison Drive on the West, undeveloped land on the East, and Cubby Hole Self Storage on the South. The site is described as Tract D-4-L-2A, Seven Bar Ranch. Presently the site is undeveloped. Site topography slopes from the West to the East at approximately two percent slope. The site is covered with native grasses and weeds. The topographic survey of the site shows a pile of dirt on the site possibly left over from nearby construction.

DRAINAGE MASTERPLANS:

The drainage criteria for this site was established by previous drainage studies performed by Eastling and Associates and Bordenave Designs. These plans established allowable discharge and determined the capacity of the Cabelon Channel. Per the established criteria, the rate from the existing detention that was to serve all of Tract D-4-L-2 (1.6155 ac.) is 16.5 cfs. Tract D-4-L-2B contains 1.0645 acres. The prorated allowable discharge for the site is 16.5 (0.5510/1.6155) = 8.54 cfs

PROPOSED CONDITIONS:

It is proposed to construct an office building on the site as shown. The building does not have gutters and downspouts except at the entrance - drip edges at all other locations.

DRAINAGE CRITERIA:

The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January, 1993.

PRECIPITATION ZONE:

The site is West of the Rio Grande River and is, therefore, in Precipitation Zone 1.

LAND TREATMENT AREAS, EXCESS PRECIPITATION AND UNIT PEAK DISCHARGE:

The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 1 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREATMENT	q(cfs/acre)		E (in)		Existing Site Areas			Developed Site Areas		
	100-yr.	10-yr.	100-yr.	10-yr.	%	Sq. Ft.	Acres	%	Sq. Ft.	Acres
A	1.29	0.24	0.44	0.08	100.0	17,652	0.4052	0.0	0	0.0000
B	2.03	0.76	0.67	0.22	00.0	0	0.0000	7.5	1,812	0.0416
C	2.87	1.49	0.99	0.44	18.7	4,500	0.1033	7.3	1,760	0.0404
D	4.37	2.89	1.97	1.24	7.8	1,850	0.0425	85.2	20,430	0.4690
Totals					100.0	24,002	0.5510	100.0	24,002	0.5510

PEAK DISCHARGE:

EXISTING CONDITIONS:
Q100 = 0.4052 * 1.29 + 0.1033 * 2.87 + 0.0425 * 4.37 = 1.00 cfs
Q10 = 0.4052 * 0.24 + 0.1033 * 0.44 + 0.0425 * 1.24 = 0.20 cfs

DEVELOPED CONDITIONS:
Q100 = 0.0416 * 2.03 + 0.0404 * 2.87 + 0.4690 * 4.37 = 2.25 cfs
Q10 = 0.0416 * 0.76 + 0.0404 * 1.49 + 0.4690 * 2.89 = 1.45 cfs

VOLUME 100-YEAR, 6-HOUR:

EXISTING CONDITIONS:
V100 = (17,652 * 0.44 + 4,500 * 0.99 + 1,850 * 1.97) / 12 = 1,322 CF
V10 = (17,652 * 0.08 + 4,500 * 0.44 + 1,850 * 1.24) / 12 = 474 CF

DEVELOPED CONDITIONS:
V100 = (1,812 * 0.67 + 1,760 * 0.99 + 20,430 * 1.97) / 12 = 3,600 CF
V10 = (1,812 * 0.22 + 1,760 * 0.44 + 20,430 * 1.24) / 12 = 2,209 CF

SUMMARY OF VOLUMES AND PEAK DISCHARGE RATES:

	V100	V10	Q100	Q10
DEVELOPED	3,600	2,209	2.25	1.45
EXISTING	1,322	474	1.00	0.20
INCREASE	2,278	1,735	1.25	1.25

SIDEWALK CULVERT CALCULATIONS:

Use Weir Equation, $Q = CLH^{3/2}$ C = 3.0 L = 1.5' H = 0.67
 $Q = 3.0 * 1.5 * 0.67^{3/2} = 2.46 cfs > 2.25 cfs$

EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FOLLOWING:
- NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE FROM THE SITE DURING CONSTRUCTION.
 - DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING BY RUNOFF FROM THE SITE.
 - SHOULD THE CONTRACTOR FAIL TO PREVENT SEDIMENT-BEARING WATER FROM ENTERING PUBLIC RIGHT-OF-WAY, HE SHALL PROMPTLY REMOVE FROM THE PUBLIC RIGHT-OF-WAY ANY AND ALL SEDIMENT ORIGINATING FROM THE SITE.
 - CONTROL OF SEDIMENT-LADEN WATERS WILL BE ACCOMPLISHED BY USE OF A COMPACTED EARTH BERM OF ADEQUATE HEIGHT. THE BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETER OF THE PROPERTY.

LEGAL DESCRIPTION:
Tract D-4-L-2A of SEVEN-BAR RANCH, as the same are shown and designated on the replat entitled 'Tracts D-4-L-2A and D-4-L-2B, (being a replat of Tract D-4-L-2, Seven-Bar Ranch) Seven-Bar Ranch, City of Albuquerque, Bernalillo County, New Mexico', filed in the office of the Bernalillo County Clerk on March 19, 1996. In Volume 96C, folio 125 as Document No 96030978.

BENCH MARK:
Vertical datum shown hereon is based upon the New Mexico State Highway Commission Control Monument 'NM- 448-N12', having an elevation of 5023.41 feet (SLD 1929).

NOTE:
Area of 4' (plus or minus) high piles of dirt. Contour lines are approximate. (Cross hatched area)

TRACT D-4-L-2B
1.0645 Ac. = 46370 sq. ft.

TRACT D-4-L-1
SEVEN-BAR RANCH

Filed- July 21, 1993 Volume 93C, Folio 212

SCALE: 1" = 20'

CITY OF ALBUQUERQUE
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O. 19)
NOTICE TO CONTRACTORS

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED UNDER CONTRACT, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON. SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS UPDATED THROUGH REVISION NO. 6.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1950, FOR LOCATION FOR EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVAL FOR POC RUNDOWN	NAME	DATE
INSPECTOR		

FRANK D. LOVELADY, P.E.
REVISOR MARCH 21, 02

GRADING AND DRAINAGE PLAN
OFFICE BUILDING - JIFFYLUBE
3520 CALLE CUERVO NW
ALBUQUERQUE, NEW MEXICO

FRANK D. LOVELADY, P.E.
(505) 345-2267 • Fax (505) 345-2115 • 300 ALAMOSA RD. NW • Albuquerque, NM • 87107

JOB NO: 619
DATE: August 23, 2001
REVISIONS

SHEET NO.
1 OF 1

REGISTERED
MAR 21 2002
HYDROLOGY SECTION