

Martin J. Chávez, Mayor

October 22, 1997

Jeff Mortensen
Jeff Mortensen & Associates Inc.
6010-B Midway Park Blvd. NE
Albuquerque, New Mexico 87109

RE: GRADING/PAVING PLAN FOR LOS ALTOS PARK RENOVATION (K20-D37)
ENGINEER'S STAMP DATED 10/6/97

Dear Mr. Mortensen:

Based on the information provided on your October 6, 1997 submittal, the above referenced site is approved for Grading/Paving Plan.

Please be advised that Engineer Certification per the DPM checklist will be required after the construction is completed.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya CE
Associate Engineer



LOS ALTOS PARK

970691

PROJECT TITLE:

RENOVATION

ZONE ATLAS/DRNG. FILE #:

K 20⁰³⁷

DRB #:

EPC #:

WORK ORDER #:

5222.17

LEGAL DESCRIPTION:

TR 4, MUNICIPAL ADDN. NO. 2

CITY ADDRESS:

LOMAS BLVD NE

ENGINEERING FIRM:

JEFF MORTENSEN & ASSOC

CONTACT:

JEFF MORTENSEN

ADDRESS:

6010 B MIDWAY PARK BLVD NE

PHONE:

345-4250

OWNER:

CITY OF ALBUQUERQUE

CONTACT:

ARCHITECT

ADDRESS:

PARKS / C. I. P.

PHONE:

390-1815

ARCHITECT:

DESIGN WORKSHOP

CONTACT:

MINI BURNS

ADDRESS:

9621 4TH ST NW

PHONE:

890-1815

SURVEYOR:

CITY OF ALBUQUERQUE

CONTACT:

DAN MONTANO

ADDRESS:

SURVEY SECTION

PHONE:

CONTRACTOR:

NOT KNOWN

CONTACT:

ADDRESS:

PHONE:

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

- ☒ YES (CARLOS MONTANO)
☐ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

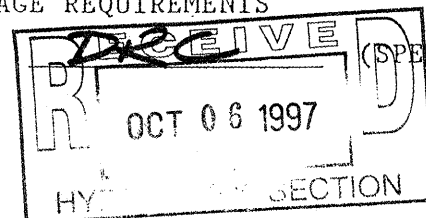
- ☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D. APPROVAL
☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☒ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☒ OTHER

DATE SUBMITTED:

10-06-97

BY:

JEFFREY G. MORTENSEN





DRAINAGE PLAN

The following items concerning the Los Altos Park Renovation Drainage Plan are contained herein:

1. Vicinity Map
2. Grading Plan
3. Sections and Details
4. Calculations

As shown by the Vicinity Map, the site is located within Los Altos Park. The site itself is located at the south end of the private access road which serves the Garden Center, as well as the park area from Lomas Boulevard N.E. The site is also bounded on the south by the Interstate 40 right-of-way. At present, the site is developed as a City of Albuquerque park.

As shown by FIRM Panel 358 of 825 published by the National Flood Insurance Program for Bernalillo County, New Mexico, and Incorporated Areas, dated September 20, 1996, this site does not lie within a designated flood hazard zone. Flooding is identified within Lomas Boulevard N.E. and Eubank Boulevard N.E. The flooding in those public streets is identified as Zone AO (Depth 1). The site, however, does not abut those flood zones and is separated from those streets by athletic fields. The site currently drains from northeast to southwest to an existing rundown at the southerly end of the access drive from Lomas Boulevard N.E. The rundown is heavily vegetated which allows for the dissipation of flows prior to discharge from the site to the north right-of-way of I-40. The north right-of-way is graded as a "V" ditch to accept highway and offsite flows and to convey those flows in a westerly direction.

Eventually the runoff within the "V" ditch area discharges to a series of randomly spaced inlets which connect to the Interstate 40 channel. The Interstate 40 channel represents the outfall for this site. The Interstate 40 channel is identified as a Zone A Special Flood Hazard Area where the "100-year flood (is) confined to (the) constructed channel". The proximity of the site to this outfall makes the continued free discharge of this project appropriate.

The Grading Plan shows: 1) existing proposed grades indicated by spot elevations and contours at 1'0" intervals as shown on a February 1997 Topographic Map prepared by the City of Albuquerque Public Works Department Engineering Group Survey Section (City Project No. 5614.71), 2) proposed grades indicated by spot elevations and contours at 1'0" intervals, 3) the limit and character of the existing improvements as shown on a February 1997 Topographic Map prepared by the City of Albuquerque Public Works Department Engineering Group Survey Section (City Project No. 5614.71) and supplemented by field measurements obtained by Design Workshop, Inc., 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed grades. As shown by this Plan, the proposed improvements consist of the resurfacing of the existing tennis courts, the repaving of the horseshoe area, the reconstruction of the playground area at the southeast corner of the tennis courts, the construction of a one-foot concrete rundown at the north edge of the tennis courts which will drain to the west and miscellaneous landscaping improvements. The proposed improvements will have negligible impact on the hydrology of the site. Existing grades will be altered minimally which will not have an adverse impact on the existing drainage patterns of the site. The grades of the tennis courts and the horseshoe area will be unchanged. Additional asphalt paving will be added at the southwest corner of the horseshoe area to accept the runoff generated by that area and to convey that runoff to the existing concrete rundown which lies between the horseshoe area and the Field Maintenance Office building. The addition of this paving will also serve to mitigate the erosion which is currently occurring at that location. The 1'-0" concrete rundown will accept runoff from the tennis courts and the softball field that lies to the north of the tennis courts. The concrete rundown will drain in a westerly direction and will discharge via a sidewalk culvert to the existing access drive. Playground area will undergo significant modifications which will alter its appearance but will not alter the existing drainage pattern. Runoff from the project site will continue to flow in a southwesterly direction into the existing parking lot and access drive which drain to the existing rundown referenced above.

Offsite flows do not impact this site due to the fact that the project is located within the Los Altos Park. The proximity of the site is separated from the existing flood hazard zones noted in Lomas Boulevard N.E. and Eubank Boulevard N.E.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated January, 1993, has been used to quantify the peak rate of discharge and volume of runoff generated. As shown by these calculations, a negligible increase in runoff is anticipated due to the proposed improvements.

CALCULATIONS

Site Characteristics

1. Precipitation Zone = 3
2. $P_{6,100} = P_{360} = 2.60$ in.
3. Total Area (A_T) = 82,000 sf/1.88 ac
4. Existing Land Treatment

Treatment	Area (sf/ac)	%
A	7,070/0.16	09
B	4,410/0.10	05
C	15,320/0.35	19
D	55,200/1.27	67
5. Developed Land Treatment

Treatment	Area (sf/ac)	%
A	5,800/0.13	07
B	10,760/0.25	13
C	3,660/0.09	05
D	61,780/1.41	75

Existing Condition

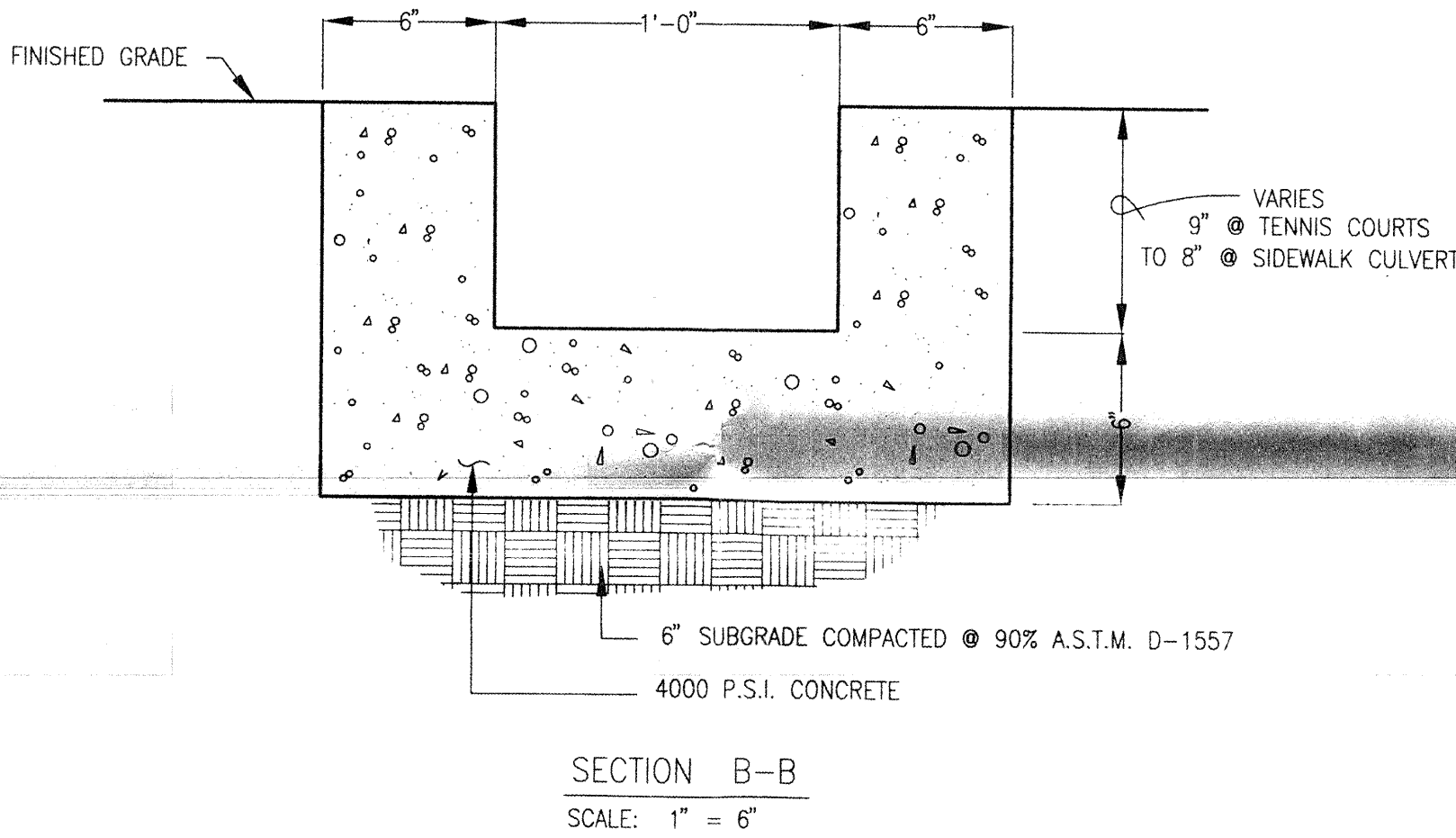
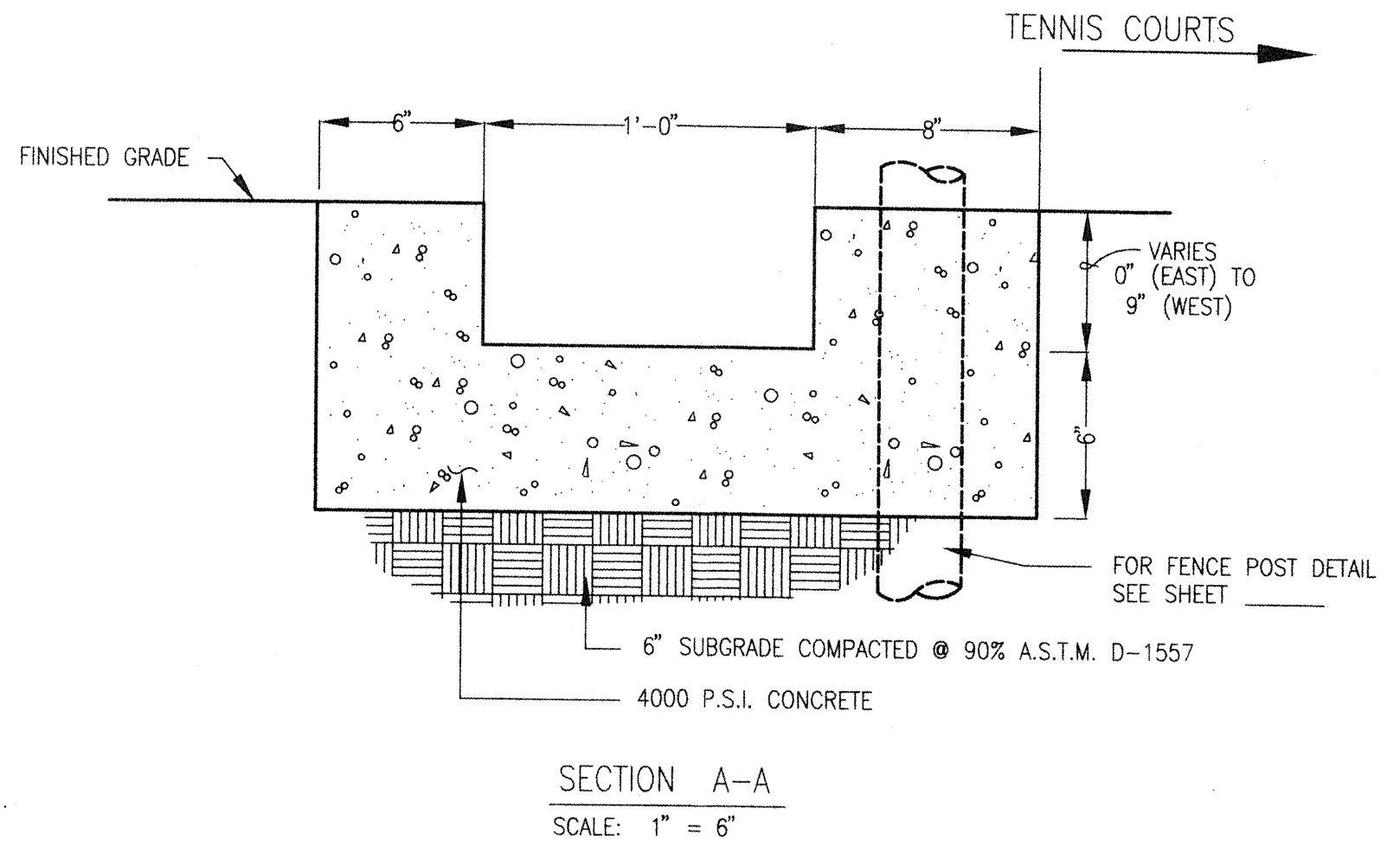
1. Volume
$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
$$E_W = [(0.66)(0.16) + (0.92)(0.10) + (1.29)(0.35) + (2.36)(1.27)] / 1.88 = 1.94 \text{ in.}$$
$$V_{100} = (E_W / 12) A_T$$
$$V_{100} = (1.94 / 12) 1.88 = 0.3039 \text{ ac.ft.; } 13,240 \text{ cf}$$
- 2. Peak Discharge
$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
$$Q_p = Q_{100} = (1.87)(0.16) + (2.60)(0.10) + (3.45)(0.35) + (5.02)(1.27) = 8.14 \text{ cfs}$$

Developed Condition

1. Volume
$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
$$E_W = [(0.66)(0.13) + (0.92)(0.25) + (1.29)(0.09) + (2.36)(1.41)] / 1.88 = 2.00 \text{ in.}$$
$$V_{100} = (E_W / 12) A_T$$
$$V_{100} = (2.00 / 12) 1.88 = 0.3133 \text{ ac.ft.; } 13,650 \text{ cf}$$
- 2. Peak Discharge
$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
$$Q_p = Q_{100} = (1.87)(0.13) + (2.60)(0.25) + (3.45)(0.09) + (5.02)(1.41) = 8.28 \text{ cfs}$$

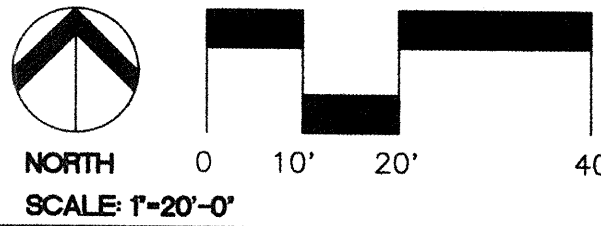
Comparison

1. $\Delta V_{100} = 13,650 - 13,240 = 410 \text{ cf} = 0.0094 \text{ ac. ft. (increase)}$
2. $\Delta Q_{100} = 8.28 - 8.14 = 0.14 \text{ cfs (increase)}$



DESIGNWORKSHOP

9621 4TH STREET NW
Albuquerque, NM 87114
(Tel.) 505.890.1815
(Fax) 505.890.1817



Jma

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505) 345-4250

JMA JOB NO. 970691

City Project No.
5222.17

Zone Map No.
K-20-Z

Sheet
7 Of

AS-BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEER'S SEAL			
CONTRACTOR	DATE	INSPECTOR	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE		
A.C.S. BENCH MARK "12-J-21" LOCATED IN THE NORTH EAST CORNER AT THE INTERSECTION OF EUBANK BLVD. NE. AND LOMAS BLVD. NE. STATION IS A 3 1/4" ALUMINUM CAP STAMPED "ACS 12-J21 1990".				NO.				NO.				NO.			
RECORDED BY				RECORDED BY				RECORDED BY				RECORDED BY			
NO.				NO.				NO.				NO.			

REVISIONS			
NO.	DATE	BY	REMARKS
1	09-1997	J.G.M.	DESIGN
2	09-1997	S.G.H.	
3	09-1997	J.G.M.	

CITY OF ALBUQUERQUE CAPITAL IMPLEMENTATION PROGRAM LANDSCAPE ARCHITECTURE AND CONSTRUCTION SERVICES			
TITLE: LOS ALTOS PARK RENOVATION DRAINAGE PLAN, CALCULATIONS, SECTIONS			
Design Review Committee		City Engineer Approval	
Last Design Update		Mo./Day/Yr.	