CONTENTS

Papers	Page
HIGH PRECISION LEVELS WITH AUTOMATIC INSTRUMENTS by Elmer F. Kulp	121
DI-10 DISTOMAT SYSTEM by Kenneth E. Reynolds	137
NATIONAL MAPPING FOR URBAN AREAS by Robert H. Lyddan	143
NEW DISTANCE MEASURING INSTRUMENTS by Raymond W. Tomlinson	149
CHART COMPILATION—FIELD AND OFFICE by William J. Monteith	157
NEW ZEISS ELECTRO-OPTICAL INSTRUMENTATION by Dieter F. Schellens	173
MISSION OF U.S. LAKE SURVEY by James E. Bunch	181
COORDINATES VERSUS CONFUSION by Robert T. Howe	191
SURVEY OF GEOGRAPHIC BASE FILES by George P. Leyland	201
A NEW PHILOSOPHY ON PRESERVATION OF SURVEY EVIDENCE by R. B. Buckner	213
(over)	210

This Journal is published aperiodically by the American Society of Civil Engineers. Publications office is at 2500 South State Street, Ann Arbor, Michigan 48104. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription price is \$6.00 per year with discounts to members and libraries. CO, UP, PO, PP, SU.

	Page
LASER ALIGNMENT TECHNIQUES IN TUNNELING by Austin Cooney	229
CONTROL SURVEYS: HISTORICAL SUMMARY, PREFACE, AND CHAPTER 1 by the Task Committee on the Preparation of a Manual on Control Surveys	245
ANALYTICAL PLOTTER SYSTEM	410
by James R. Skidmore	253
INSTANT RELIEF WITH NEW STEREO IMAGE ALTERNATOR by John E. Leonarz	257
CHARTING NEW TRANSPORTATION ENVIRONMENT by John A. Osborn	265
ADVANCING TECHNOLOGY IN ELECTRONIC SURVEYING by Charles G. Romaniello	287
DISCUSSION	
Proc. Paper 7501	
MAPPING FOR CHANGING ENVIRONMENT, a by Morris M. Thompson (Oct., 1969).	
by Philip Kissam	301 302

INFORMATION RETRIEVAL

The key words, abstract, and reference "cards" for each article in this Journal represent part of the ASCE participation in the EJC information retrieval plan. The retrieval data are placed herein so that each can be cut out, placed on a 3 x 5 card and given an accession number for the user's file. The accession number is then entered on key word cards so that the user can subsequently match key words to choose the articles he wishes. Details of this program were given in an August, 1962 article in CIVIL ENGINEERING, reprints of which are available on request to ASCE headquarters.

^a Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.