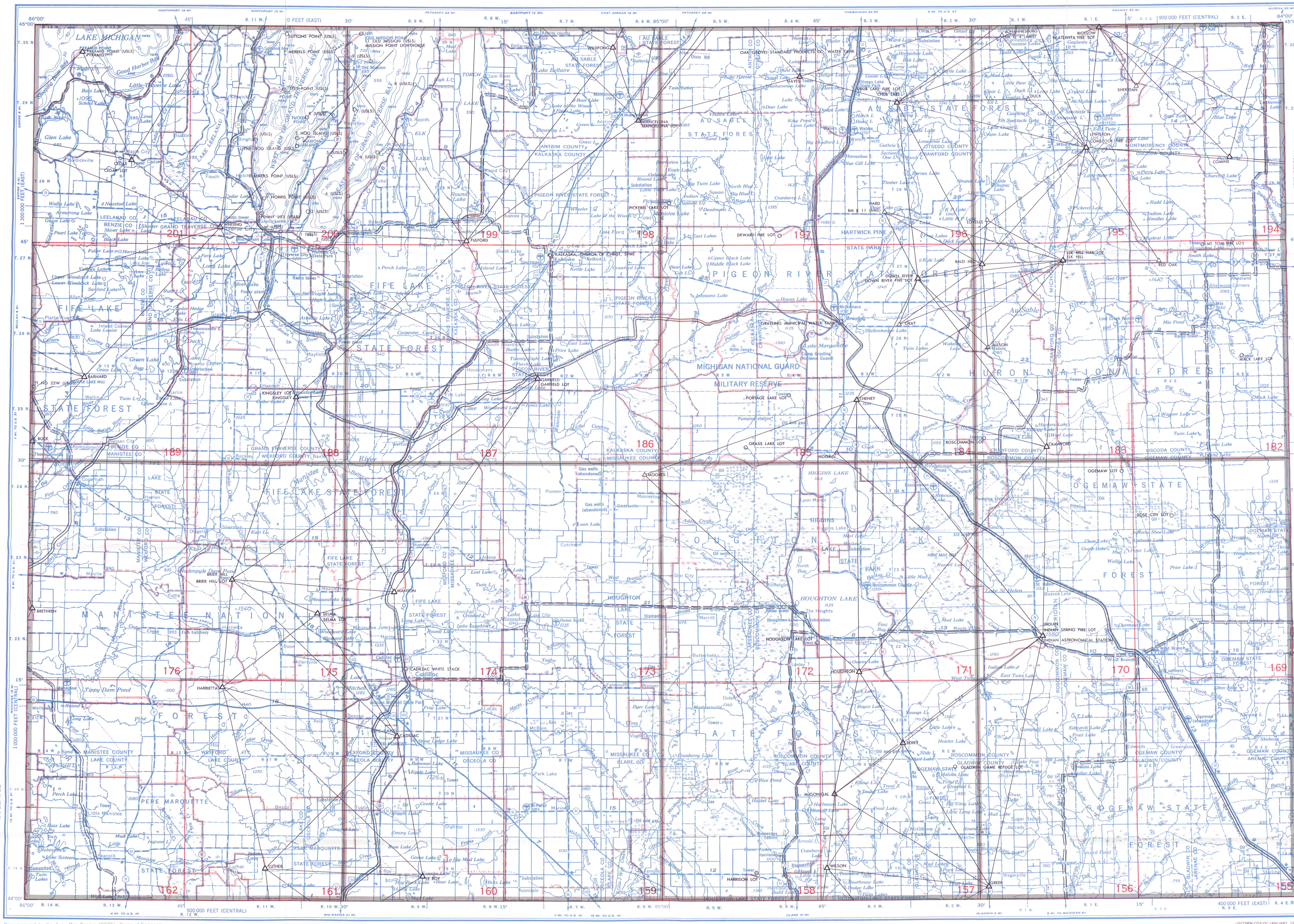
UNITED STATES
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

GEODETIC CONTROL DIAGRAM

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



TRAVERSE CITY, MICHIGAN (NK 16-12)
AUGUST 1960
REPRINT

USCOMM-CGS-DC-JANUARY 1962 A-4747

Base prepared by the Army Map Service (BEGE), Corps of Engineers, U. S. Army, Washington, D. C. Compiled in 1955 by photogrammetric methods and from U.S. Lake Charts Survey 705, 706, 1953 (reliability good). Horizontal and vertical control by USGS, USC&GS, and CE. Aerial photography 1953. Photography field annotated 1954.

100,000-FOOT PLANE COORDINATE GRID TICK SYMBOLS

— MICHIGAN CENTRAL - - - MICHIGAN EAST

INDEX TO COUNTY BOUNDARIES
(See county designations list for identification)

MICHIGAN

PLANE COORDINATE ZONES

MICHIGAN CENTRAL MICHIGAN EAST

HORIZONTAL CONTROL

Coast & Geodetic Survey	Geological Survey	
△		Monumented Point - First Order
△		Monumented Point - Second Order
▲	▲	Monumented Point - Third Order
○	○	Located Object - Third Order
60		See separate index for names of numbered stations
WASHINGTON		Station reported not recovered
		Measured Base - Electronic or Taped
		Line of triangulation observed
		Line of triangulation observed from one end only
		Measured Length - Electronic or Taped
		Theodolite Traverse - Electronic Distance
		Transit Traverse - Taped Distance Third Order
		Transit Traverse and Leveling Third Order

VERTICAL CONTROL

Coast & Geodetic Survey	Geological Survey	
		First Order
		Second Order
		Third Order

STATE SURVEY CONTROL

Horizontal or Vertical

Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

25,000 0 25,000 50,000 75,000 100,000 Feet

SECTIONIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

TRANSVERSE MERCATOR PROJECTION

TOWNSHIP OR RANGE LINE
LAND GRANT BOUNDARY

LOCATION DIAGRAM FOR NL 16-12

WIS. ESCANABA NL 16-8 CHEBOYGAN NL 16-9 ALPENA NL 17-7 CAN. L. MICHIGAN TRAVERSE CITY NL 16-12 NL 17-10 (41-B) TAWAS CITY NL 16-11 MANITOWOC NK 16-2 MILWAUKEE MIDLAND NK 16-3 MICHIGAN FLINT NK 17-1 (40-C) L. HURON 88° 46° 82° 43°

LEGEND
ROAD DATA 1954

ROADS
Hard surface, heavy duty
More than two lanes wide — 3 LANES | 4 LANES
Two lanes wide; Federal route marker
Hard surface, medium duty
More than two lanes wide — 3 LANES | 4 LANES
Two lanes wide; State route marker
Improved light duty
Unimproved Dirt
Trail

RAILROADS — Single track — Double or Multiple
Standard gauge
Narrow gauge

BOUNDARIES
International
State
County
Park or reservation

Landmarks: School; Church; Other
Horizontal control point
Spot elevation in feet — 221
Marsh or swamp
Intermittent or dry stream
Power line

COAST AND GEODETIC SURVEY
THIRTY MINUTE QUADRANGLE DESIGNATION

INDEX TO COUNTY BOUNDARIES

44 085 4	44 085 1	44 084 4	44 084 1
44 085 3	44 085 2	44 084 3	44 084 2

MICHIGAN

ORDER CONTROL DATA IN BLACK BY 30 MINUTE QUADRANGLE UNITS FROM DIRECTOR, COAST AND GEODETIC SURVEY, WASHINGTON 25, D.C.

COUNTY DESIGNATIONS

1 Leelanau
2 Benzie
3 Manistee
4 Lake
5 Wexford
6 Grand Traverse
7 Antrim
8 Kalkaska
9 Missaukee
10 Osceola
11 Clare
12 Roscommon
13 Crawford
14 Otsego
15 Montmorency
16 Oscoda
17 Ogemaw
18 Gladwin
19 Arenac

GEOLOGICAL SURVEY
FIFTEEN MINUTE QUADRANGLE DESIGNATION

INDEX TO COUNTY BOUNDARIES

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176	175	174	173	172	171	170	169
162	161	160	159	158	157	156	155

MICHIGAN	MICHIGAN (Cont.)	MICHIGAN (Cont.)
155 Alger	172 Houghton Lake	188 Kingsley
156 Butman	173 Lake City	189 Thompsonville
157 Nolan	174 Manton	194 Comins
158 Harrison	175 Mesick	195 Lewiston
159 McBain	176 Copemish	196 Otsego Lake
160 Tustin	182 Mio	197 Alba
161 Luther	183 Jackpine	198 Bellaire
162 Peacock	184 Grayling	199 Rapids
169 Rose City	185 Fletcher	200 Traverse City
170 Beaver Lake	186 Kalkaska	201 Maple City
171 Prudenville	187 Fife Lake	

ORDER CONTROL DATA IN RED BY 15 MINUTE QUADRANGLE UNITS FROM DIRECTOR GEOLOGICAL SURVEY, WASHINGTON 25, D.C.

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