



POPULATED PLACES

Built-up areas: Dense, Sparse or moderate, Not intact, Shantytown, Settlement, Buildings

ROADS

All weather, hard surface: Divided highway: Wide separation, Narrow separation, Not intact divided, Four or more lanes wide, Two or three lanes wide, One lane wide, All weather, loose surface: Four or more lanes wide, Two or three lanes wide, One lane wide, Not intact loose surface, Street: Hard, Loose

RAILWAYS

Standard gauge, Single track, Double track, Electric (standard gauge), Station, Tunnels

BOUNDARIES

First-order administrative, Military installation

CULTURAL FEATURES

Building: Important, Ordinary, Islamic, Christian, Pagan, Shrine, Temple, School, Dispensary, Postal office, Hospital, Market, Not intact, Burial, Holding pen, Surface bunker, Greenhouse, Point, Area

LEGEND

Cemetery: Christian, Islamic, Unknown, Buddhist, Unknown, River: Communication, Non-communication, Water, Light: Cooling, Water intake, Dish aerial, Smokestack, Flare pipe, Windmill, Wind turbine, Crane, Mooring mast, Ski jump, Rig, Checkpoint, Power substation, Storage tank, Non-water well, Miscellaneous: Intact, Not intact, UNESCO World Heritage Site, Dam: Hard, Loose, Lock, Sluice/Water gate, Tunnel: Road, Railway, Bridge, Culvert: Road, Railway, Pipeline: Road, Railway, Well: Fence, Pipeline, Surface, Underground, Elevated, Sports ground, Vehicle lot

VERTICAL OBSTRUCTIONS (VO) (>= 46m)

Spot elevation, VO Power/Communication line, Height of obstruction top above sea level, Height of obstruction top above ground level, Offshore Vertical Obstruction with Helipad

VEGETATION

Wood: Deciduous, Evergreen, Mixed, Unknown, Scattered, thicket, Thicket, Grassland, Orchard, Cropland, Other: Permanent irrigation, Row of trees, Hedge/row, Tree

COASTAL HYDROGRAPHIC FEATURES

Exposed: Rock, Vireck, Reef, Nipa/Palm, Mangrove

HYDROGRAPHIC FEATURES

River: Less than 25m wide, 25m wide or more, Disappearing, Disappearing, Ditch, Natural pool (spring), Water well, Lake, Reservoir, Underground aqueduct with gauging, Waterhole, Cistern, Salt evaporator, Rice: Land subject to inundation, Riparian, Swamp, Other, Nipa/Palm, Mangrove

HYPOGRAPHIC FEATURES

Spot elevation, Highest, Normal, Water, Survey point, Geomatics, Benchmark, Mountain pass, Cave mouth, Riverbank, Rock, Volcano, Steep terrain face, Levee/Dike, Cut line, Fill, Sand, Gravel/Moraine, Distorted surface, Other

VEGETATION

Wood: Deciduous, Evergreen, Mixed, Unknown, Scattered, thicket, Thicket, Grassland, Orchard, Cropland, Other: Permanent irrigation, Row of trees, Hedge/row, Tree

COASTAL HYDROGRAPHIC FEATURES

Exposed: Rock, Vireck, Reef, Nipa/Palm, Mangrove

HYDROGRAPHIC FEATURES

River: Less than 25m wide, 25m wide or more, Disappearing, Disappearing, Ditch, Natural pool (spring), Water well, Lake, Reservoir, Underground aqueduct with gauging, Waterhole, Cistern, Salt evaporator, Rice: Land subject to inundation, Riparian, Swamp, Other, Nipa/Palm, Mangrove

HYPOGRAPHIC FEATURES

Spot elevation, Highest, Normal, Water, Survey point, Geomatics, Benchmark, Mountain pass, Cave mouth, Riverbank, Rock, Volcano, Steep terrain face, Levee/Dike, Cut line, Fill, Sand, Gravel/Moraine, Distorted surface, Other

MAP INFORMATION AS OF 2022

TO INSURE THAT THIS MAP WAS PRINTED AT THE CORRECT SCALE, 10,000 METERS (10 UTM GRID SQUARES) SHOULD MEASURE EXACTLY 20 CENTIMETERS (2 INCHES).

Scale 1:50,000

Meters 1000 500 0 1 2 3 4 5 Kilometers

1 1/2 0 1 2 3 Statute Miles

2 Nautical Miles

ELEVATIONS IN METERS

CONTOUR INTERVAL 20 METERS

SUPPLEMENTARY CONTOURS 10 METERS

NOTES

VECTOR FEATURE DATA CAPTURED FROM 1:50,000 VECTOR DATA (2018-2022). A LINE ON THIS MAP IS CONSIDERED TO BE AT LEAST 2.5 METERS (8.2 FEET) WIDE. ROAD CLASSIFICATION SHOULD BE REFERRED TO WITH CAUTION. ONLY THROUGH ROUTES ARE CLASSIFIED IN BUILT-UP AREAS. FORCES ON RIVERS HAVE ONLY BEEN CAPTURED WHERE VISIBLE ON 1:50,000 VECTOR DATA. ROADWAY GAUGE IS 1.067 METERS (3.5 FEET). TO CONVERT METERS TO FEET USE THIS FACTOR: 1 METER = 3.28 FEET. GRID REFERENCE POINTS WERE COLLECTED FOR THE GREATER PROJECT AREA AND CAN BE REQUESTED FROM THE NSGA. MAP INFORMATION AS OF 2022

100 METER REFERENCE

1. Road target numbers labeling the VERTICAL grid line left of point and estimate length (100 meters) from grid line to point. 12 3

2. Road target numbers labeling the HORIZONTAL grid line below point and estimate length (100 meters) from grid line to point. 45 7

Example: 123456

Example: 123456

Example: 123456

Example: 123456

SLOPE GUIDE

PERCENTAGE 15% 14% 13% 12% 11% 10% 9% 8% 7% 6% 5%

DEGREE 8.5° 8.0° 7.5° 7.0° 6.5° 6.0° 5.5° 5.0° 4.5° 4.0° 3.5° 3.0°

AB=HORIZONTAL DISTANCE BETWEEN CONTOURS

AC=HORIZONTAL DISTANCE BETWEEN INCH CONTOURS

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH

SUBTRACT G-M ANGLE

TO CONVERT A GRID AZIMUTH TO A MAGNETIC AZIMUTH

ADD G-M ANGLE

GRID CONVERGENCE

FOR 12.15 MILS EAST FOR CENTER OF SHEET

BOUNDARIES: NIGERIA

Enugu State, Edo State, Benue State

ADJOINING SHEETS

6138-1, 6238-4, 6138-2, 6238-3, 6764, 6237-4

ELEVATION GUIDE

175, 150, 100, 50, 0, 50, 100, 150, 175

140, 130, 120

170, 160, 150, 140, 130, 120

LIMITED DISTRIBUTION

Distribution authorized to Ministry of Mines and Steel Development or Producing Agency. Removal of this caveat is prohibited.

WGS 84

CAUTION: VERIFY RED-LIGHT READABILITY

IGUMALE SE, NIGERIA 6138-2 G764G EDITION 1-WLP

Prepared and published in 2022 by Woolpert, Inc. using MGCP data produced by Woolpert, Inc.

MINISTRY OF Mines and Steel Development

Woolpert

Published under the authority of the FEDERAL GOVERNMENT OF NIGERIA

Nigerian Geological Survey Agency

Reproduction of all or part of this MGCP/V2 Topographic map standard requires the permission of the NSGA. © Government of the Federal Republic of Nigeria, 2023

Copies can be obtained from Nigerian Geological Survey Agency, Headquarters, Abuja

REF. NO. G764X61382