

## Identification\_Information:

### Citation:

#### Citation\_Information:

Originator: Commonwealth of Virginia, through the Virginia Geographic Network Division of its Department of Technology Planning (VGIN).

Publication\_Date: 03012003

Publication\_Time: Unknown

Title: Virginia Base Mapping Program (VBMP) 2002; Digital Terrain Model developed for 1"=200' scale Digital Orthophotography for the North Zone of the Virginia State Plane Grid

Geospatial\_Data\_Presentation\_Form: Vector digital data

Online\_Linkage: <http://www.vgin.state.va.us/VBMP/VBMP.htm>

### Description:

Abstract: These files contain rectified digital vector terrain model data. The vector files are uncompressed complete with coordinate information. The VBMP project encompasses the entire land area of the Commonwealth of Virginia. The State boundary is buffered by 1000 feet. Coastal areas of the State bordering the Atlantic Ocean or the Chesapeake Bay are buffered by 1000 feet or the extent of man-made features extending from shore. All hydrographic features are collected if they contain water. Streams will be single line up to 8 feet wide for 100 scale or 30' for 200 and 400 scale. Digital Terrain Data to generate 1-foot resolution digital orthoimagery was developed over the majority of urban/suburban areas of the Commonwealth covering approximately 7,167 square miles and for 2-foot resolution digital orthoimagery over the rural areas of the Commonwealth covering approximately 31,923 square miles as defined by VGIN. Digital Terrain Model data to develop 6-inch resolution digital orthoimagery was generated in limited urban areas covering approximately 1000 square miles. This version of the VBMP metadata accompanies initial data distribution. Updated metadata for this dataset will be maintained on the VGIN web site at the following address: <http://www.vgin.state.va.us/VBMP/VBMP.html>.

Purpose: In October of 2001 the Commonwealth of Virginia began work on an initiative termed the Virginia Base Mapping Program (VBMP), to develop digital orthoimagery for the entire land base of the Commonwealth. The VBMP was funded by the Public Safety Services Board to support statewide implementation of Phase II wireless E911 (E911 for Cell Phones) by establishing one consistent, accurate, foundational base map upon all local government and many regional, state and federal spatial data applications could be built in order to establish and maintain an efficient statewide spatial information infrastructure. The VBMP was implemented and administered by the Virginia Geographic Information Network, a division of the Department of Technology Planning under the Commonwealth's Secretary of Technology. It can also serve as a reference layer for GIS analysis.

Supplemental\_Information: Digital Terrain Models were collected for the purposes of orthorectification as well as a variety of other purposes including planning and hydrographic analysis.

### Time\_Period\_of\_Content:

#### Time\_Period\_Information:

##### Range\_of\_Dates/Times:

Beginning\_Date: 02012002

Beginning\_Time: unknown

Ending\_Date: 04012002

Ending\_Time: unknown

Currentness\_Reference: Ground condition

Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: None planned

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -79.200

East\_Bounding\_Coordinate: -76.742

North\_Bounding\_Coordinate: 39.364

South\_Bounding\_Coordinate: 37.759

Keywords:

Theme:

Theme\_Keyword\_Thesaurus:

Theme\_Keyword: Digital Terrain Model

Theme\_Keyword: Hydrography or hydrographic

Theme\_Keyword: Emergency management

Theme\_Keyword: Digital Elevation Model

Theme\_Keyword: Economic Development

Theme\_Keyword: Environment

Theme\_Keyword: Wetlands

Theme\_Keyword: Miscellaneous

Place:

Place\_Keyword: Commonwealth of Virginia

Place\_Keyword: Virginia

Place\_Keyword: USA

Access\_Constraints: The VBMP data are property of the Commonwealth of Virginia, copyright 2002.

Distribution of any of these data to anyone not licensed by the Commonwealth is strictly prohibited.

Use\_Constraints: This VBMP data has been developed using procedures designed to produce digital terrain data and is intended for the production of digital orthophotos at 1" = 200' scale. This data is not suitable for the production of contours, although the source material used to generate the data will support contour production.

Point\_of\_Contact:

Contact\_Information:

Contact\_Person\_Primary:

Contact\_Person: Robert Rike

Contact\_Organization: Virginia Geographic Information Network

Contact\_Address:

Address\_Type: Mailing address

Address: 110 South 7th Street, Suite 135

City: Richmond

State\_or\_Province: VA

Postal\_Code: 23219

Country: United States of America

Contact\_Voice\_Telephone: 804.786.6156

Contact\_Electronic\_Mail\_Address: VBMP@vgin.state.va.us

Browse\_Graphic:

Browse\_Graphic\_File\_Name: Not Available

Browse\_Graphic\_File\_Description: Not Available

Browse\_Graphic\_File\_Type: Not Available

Security\_Information:

Security\_Classification\_System: Not Available

Security\_Classification: Unclassified

Security\_Handling\_Description: Not Available

Native\_Data\_Set\_Environment: TBD

Cross\_Reference:

Citation\_Information:

Originator: Commonwealth of Virginia, through the Virginia Geographic Network Division of its Department of Technology Planning (VGIN).

Publication\_Date: 03012003

Publication\_Time: Unknown

Title: Virginia Base Mapping Program (VBMP) 2002; Digital Terrain Model and Hydrographic information (1"=200' scale) for the North Zone of the Virginia State Plane Grid

Online\_Linkage: <http://www.vgin.state.va.us/VBMP/VBMP.html>

Data\_Quality\_Information:

Logical\_Consistency\_Report: The dataset contains terrain models so the logical consistency report is not applicable. The file naming convention is based on the lower left/southwest corner of the image. Tile names are 14 characters long with a 3 character extension. An example tile name is: TM\_N17\_5100\_11.TIF. The first two characters represent the product code (TM = terrain model). After an underscore to separate the code, the following three characters are the Prefix to maintain uniqueness in the project. The first character indicates the state plane zone (N = North, S = South), and the next two numbers indicate the coordinate pairing of the million units of the Easting and Northing coordinates for the lower left/southwest corner of the tile. An underscore separates the Prefix from the BMU (Base Modular Unit) of the next four numbers. The Base Modular Unit designates the name for 1:4800 scale imagery tiles which correspond to a 10,000 foot grid based on even 10,000 increments of the Virginia State Plane. Following another separator is a two number suffix. The first digit of the Suffix number designates the quadrant of the BMU that a nested 5,000 foot tile grid occupies. Quadrants are numbered from 1 to 4 starting with the Lower Left quadrant of the BMU, increasing in a clockwise direction. The second digit of the Suffix number designates the quadrant of the 5,000 foot tile that a nested 2,500-foot tile grid occupies. Quadrants are numbered from 1 to 4 starting with the Lower Left quadrant and increasing in a clockwise direction.

Completeness\_Report: The project consisted of a total of 4806 total terrain models in the Virginia North State Plane Zone corresponding to the 1' = 200' scale imagery.

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report: See <http://www.vgin.state.va.us/VBMP/VBMP.html>

Quantitative\_Horizontal\_Positional\_Accuracy\_Assessment:

Horizontal\_Positional\_Accuracy\_Value: 1.49

Horizontal\_Positional\_Accuracy\_Explanation: Compiled to meet 4.9 feet horizontal accuracy at 95% confidence level in accordance with National Standards for Spatial Data Accuracy (NSSDA). Tested accuracy will be reported in future versions of the metadata posted at <http://www.vgin.state.va.us/VBMP/VBMP.html>

Vertical\_Positional\_Accuracy:

Vertical\_Positional\_Accuracy\_Report: See <http://www.vgin.state.va.us/VBMP/VBMP.html>

Quantitative\_Vertical\_Positional\_Accuracy\_Assessment:

Vertical\_Positional\_Accuracy\_Value: 1.49

Vertical\_Positional\_Accuracy\_Explanation: Compiled to meet or exceed 4.9 feet horizontal accuracy at 95% confidence level in accordance with National Standards for Spatial Data Accuracy (NSSDA). Tested accuracy will be reported in future versions of the metadata posted at <http://www.vgin.state.va.us/VBMP/VBMP.html>

Lineage:

Process\_Step:

Process\_Description: The Commonwealth is divided into three major production areas for this project. A different producer was assigned to each major area. The following is a general description of the process. For more specific information on each producer's methods and equipment by production block, go to the project procedures guide at the VGIN web site <http://www.vgin.state.va.us/vbmp/vbmp.html>. Aerial film was acquired and imaged in 2002. The imagery was scanned at 21 microns. Ground control used to support the compilation and was collected by identifying strategic locations on the aerial photography plan and then determining the coordinates by GPS ground survey techniques. The Aerial Triangulation was performed using softcopy workstations. Bundle adjustment was performed and Digital Elevation Models were created using standard photogrammetric collection techniques for breaklines and masspoints on soft copy workstations. A "DTM apron" was created around each elevated bridge for orthorectification purposes. Final deliverables in MicroStation dgn file format were placed on DVD, DLT or FireWire.

Process\_Date: 01012002

Cloud\_Cover: 0

Spatial\_Data\_Organization\_Information:

Direct\_Spatial\_Reference\_Method: Vector

Point\_and\_Vector\_Object\_Information:

SDTS\_Terms\_Description:

SDTS\_Point\_and\_Vector\_Object\_Type: Entity point

Point\_and\_Vector\_Object\_Count: Variable

SDTS\_Terms\_Description:

SDTS\_Point\_and\_Vector\_Object\_Type: String

Point\_and\_Vector\_Object\_Count: Variable

SDTS\_Terms\_Description:

SDTS\_Point\_and\_Vector\_Object\_Type: String

Point\_and\_Vector\_Object\_Count: Variable

Spatial\_Reference\_Information:

Horizontal\_Coordinate\_System\_Definition:

Geodetic\_Model:

Horizontal\_Datum\_Name: North American Datum of 1983 (HARN)

Ellipsoid\_Name: Geodetic Reference System 80

Semi-major\_Axis: 6378137.000000

Denominator\_of\_Flattening\_Ratio: 298.257222

Entity\_and\_Attribute\_Information:

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: Point

Entity\_Type\_Definition: Mass Point

Entity\_Type\_Definition\_Source: Elevation mass points derived by stereo autocorrelation

Attribute:

Attribute\_Label: FID

Attribute\_Definition: Internal Feature Number

Attribute\_Definition\_Source: Automatically generated feature identification number

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of points in the data

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Attribute:

Attribute\_Label: Entity

Attribute\_Definition: Entity

Attribute\_Definition\_Source: Entity attributes

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of points in the data

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Attribute:

Attribute\_Label: Layer

Attribute\_Definition: Layer

Attribute\_Definition\_Source: Layer value

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of points in the data

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Attribute:

Attribute\_Label: Level

Attribute\_Definition: Level

Attribute\_Definition\_Source: Level

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 58

Enumerated\_Domain\_Value\_Definition: Mass Points

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Enumerated\_Domain:

Enumerated\_Domain\_Value: 43

Enumerated\_Domain\_Value\_Definition: Water Point

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Enumerated\_Domain:

Enumerated\_Domain\_Value: 4

Enumerated\_Domain\_Value\_Definition: Dams and Spillways

Enumerated\_Domain\_Value\_Definition\_Source: Point measured by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 6

Enumerated\_Domain\_Value\_Definition: Bridges crossing hydrographic features

Enumerated\_Domain\_Value\_Definition\_Source: Point measured by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 21

Enumerated\_Domain\_Value\_Definition: Headwall/Culvert

Enumerated\_Domain\_Value\_Definition\_Source: Point measured by stereo compiler

Attribute:

Attribute\_Label: Color

Attribute\_Definition: Default Line Color

Attribute\_Definition\_Source: Default line color

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of points in the data

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Attribute:

Attribute\_Label: Linetype

Attribute\_Definition: Line Type

Attribute\_Definition\_Source: Line type

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of points in the data

Enumerated\_Domain\_Value\_Definition\_Source: Mass points generated by stereo autocorrelation

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: Polyline

Entity\_Type\_Definition: Breaklines

Entity\_Type\_Definition\_Source: Breaklines generated for the purpose of creating digital orthophotography

Attribute:

Attribute\_Label: FID

Attribute\_Definition: Internal Feature Number

Attribute\_Definition\_Source: Automatically generated feature identification number

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of breaklines in the data

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Attribute:

Attribute\_Label: Entity

Attribute\_Definition: Entity

Attribute\_Definition\_Source: Entity attributes

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of breaklines in the data

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Attribute:

Attribute\_Label: Layer

Attribute\_Definition: Layer

Attribute\_Definition\_Source: Layer

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of breaklines in the data

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Attribute:

Attribute\_Label: Level

Attribute\_Definition: Level

Attribute\_Definition\_Source: Level

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 61

Enumerated\_Domain\_Value\_Definition: Breaklines

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 7

Enumerated\_Domain\_Value\_Definition: Bridge Apron

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 40

Enumerated\_Domain\_Value\_Definition: Canals and Ditches

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 41

Enumerated\_Domain\_Value\_Definition: Shorelines

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 42

Enumerated\_Domain\_Value\_Definition: Water (shoreline)

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 44

Enumerated\_Domain\_Value\_Definition: Stream (single line)

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 45

Enumerated\_Domain\_Value\_Definition: Swamps and Marshes

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 5

Enumerated\_Domain\_Value\_Definition: Bridge

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Attribute:

Attribute\_Label: Color

Attribute\_Definition: Default Line Color

Attribute\_Definition\_Source: Default Line Color

Attribute\_Domain\_Values:

Attribute:

Attribute\_Label: Linetype

Attribute\_Definition: Line Type

Attribute\_Definition\_Source: Line type

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of breaklines in the data

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: Polygon

Entity\_Type\_Definition: Polygons for various features

Entity\_Type\_Definition\_Source: Polygons for hydrography and bridge decks

Attribute:

Attribute\_Label: FID

Attribute\_Definition: Internal Feature Number

Attribute\_Definition\_Source: Automatically generated feature identification number

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of polygons in the data

Enumerated\_Domain\_Value\_Definition\_Source: Polygons generated by stereo compiler

Attribute:

Attribute\_Label: Entity

Attribute\_Definition: Entity

Attribute\_Definition\_Source: Entity attributes

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of polygons in the data

Enumerated\_Domain\_Value\_Definition\_Source: Polygons generated by stereo compiler

Attribute:

Attribute\_Label: Layer

Attribute\_Definition: Layer

Attribute\_Definition\_Source: Layer

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of polygons in the data

Enumerated\_Domain\_Value\_Definition\_Source: Polygons generated by stereo compiler

Attribute:

Attribute\_Label: Level

Attribute\_Definition: Level

Attribute\_Definition\_Source: Level

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 5

Enumerated\_Domain\_Value\_Definition: Bridge

Enumerated\_Domain\_Value\_Definition\_Source: Polygons generated by stereo compiler

Enumerated\_Domain:

Enumerated\_Domain\_Value: 7

Enumerated\_Domain\_Value\_Definition: Bridge Apron

Enumerated\_Domain\_Value\_Definition\_Source: Breaklines generated by stereo compiler

Attribute:

Attribute\_Label: Color

Attribute\_Definition: Default Line Color

Attribute\_Definition\_Source: Default line color

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of polygons in the data

Enumerated\_Domain\_Value\_Definition\_Source: Polygons generated by stereo compiler

Attribute:

Attribute\_Label: Linetype

Attribute\_Definition: Line Type

Attribute\_Definition\_Source: Line type

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: 9999

Enumerated\_Domain\_Value\_Definition: Variable upon the number of polygons in the data

Enumerated\_Domain\_Value\_Definition\_Source: Polygons generated by stereo compiler

Distribution\_Information:

Distributor:

Contact\_Information:

Contact\_Person\_Primary:

Contact\_Person: Robert Rike

Contact\_Organization: Virginia Geographic Information Network

Contact\_Address:

Address\_Type: Mailing address

Address: 110 South 7th Street, Suite 135

City: Richmond

State\_or\_Province: VA

Postal\_Code: 23219

Country: United States of America

Contact\_Voice\_Telephone: 1.804.786.6156

Contact\_Electronic\_Mail\_Address: VBMP@vgin.state.va.us

Distribution\_Liability: he VBMP data are the property of the Commonwealth of Virginia, copyright 2002. Distribution of any of these data to anyone not licensed by the Commonwealth is strictly prohibited. VBMP license Agreement and distribution policies are available at <http://www.vgin.state.va.us/VBMP/VBMP.html>

Standard\_Order\_Process:

Digital\_Form:

Digital\_Transfer\_Information:

Format\_Name: DGN

File-Decompression\_Technique: no compression applied

Transfer\_Size: 0.154

Digital\_Transfer\_Option:

Online\_Option:

Computer\_Contact\_Information:

Network\_Address:

Network\_Resource\_Name: <http://www.vgin.state.va.us/VBMP/VBMP.html>

Access\_Instructions: <http://www.vgin.state.va.us/vbmp/vbmp.html>

Fees: Contact VGIN at <http://www.vgin.state.va.us/VBMP/VBMP.html>

Metadata\_Reference\_Information:

Metadata\_Date: 20030106

Metadata\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: Virginia Geographic Information Network

Contact\_Person: Robert Rike

Contact\_Address:

Address\_Type: mailing address

Address: 110 South 7th Street, Suite 135

City: Richmond

State\_or\_Province: VA

Postal\_Code: 23219

Country: United States of America

Contact\_Voice\_Telephone: 1.804.786.6156

Contact\_Electronic\_Mail\_Address: [VBMP@vgin.state.va.us](mailto:VBMP@vgin.state.va.us)

Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata\_Standard\_Version: FGDC-STD-001-1998

Metadata\_Time\_Convention: local time

Metadata\_Security\_Information:

Metadata\_Security\_Classification\_System: Not Available

Metadata\_Security\_Classification: Unclassified

Metadata\_Security\_Handling\_Description: Not Available

Metadata\_Extensions:

Online\_Linkage: This version of the VBMP metadata accompanies initial data distribution. Updated metadata for this dataset will be maintained on the VGIN web site at the following address: <http://www.vgin.state.va.us/VBMP/VBMP.html>

Profile\_Name: ESRI Metadata Profile