

**USDA Service Center Agencies  
Geospatial Data Management Team  
Data Management Plan For**

**Dynamap /2000 Tele Atlas North America Dataset**

**May 2009**

**Ken Becker, Laura Davenport and Randy Frosh**

**I. Purpose and Scope (business case)**

**A. Purpose**

The Service Center Agencies have purchased licensed use of the Tele Atlas Dynamap /2000 data for use by headquarters, state, and county employees. Dynamap/2000 is a vector based, digital, nationwide street network geographic database in which streets and other features are represented as line segments, polygons or points. The Dynamap/2000 database contains addressed and un-addressed street segments as well as highways, railroads, airports, point features (ex. churches, schools, public buildings, hospitals), and water features. Dynamap/2000 also contains Census and ZIP layers.

Some of these data are available from U.S. Census Tiger data; however streets and other features are represented as line segments, polygons or points. The Dynamap/2000 road and streets data is continually updated, more accurate than Tiger data, and provides for geocoding capabilities.

The Dynamap/2000 map database contains several attributed geospatial datasets for supporting USDA program business needs. In addition to the improved transportation networks, Dynamap/2000 provides water features, postal and census related layers, land use, administrative areas and places, and points of general interest. The Service Center Agencies have a licensing agreement with Tele Atlas to use their digital map database and for any purpose including address geocoding. Data can be used freely by the licensed agencies, but digital Dynamap/2000 data cannot be distributed to external organizations or the general public. Hard copy maps created using Dynamap/2000 data can be distributed freely, but must indicate that Dynamap/2000 data were used in the map.

The majority of data in the Dynamap/2000 product is taken from the TANA/GDT core internal database, which contains nearly every street in the nation. TANA/GDT continuously builds and updates this database that contains core streets and addresses, through a constant blending of geographic data from many verified sources.

Many of the data feeds are from official government sources such as; the U.S. Census Bureau, the U.S. Postal Service, and the U.S. Geological Survey. TANA/GDT has also established working relationships with counties across the U.S. as well as most cities, towns, and chambers of commerce. TANA/GDT maintains relationships with state departments of transportation, state and regional GIS departments, and many other state, regional, and local governmental agencies. TANA/GDT relies on relationships with more than 33,000 resource providers, strategic development partnerships, and data enhancement feedback loops for baseline data sources.

The Service Center Agencies' Geospatial Data Management Team selected 21 layers for delivery from the Geospatial Data Gateway in the SCA standard file naming format.

## **B. Scope**

The scope of the Tele Atlas Dynamap/2000 dataset includes the 50 states of the United States, the District of Columbia and Puerto Rico. This is roughly 3,219 counties or equivalents. The street file contains over 56 million addresses and geocoding services reportedly match over 99 percent of the addresses.

The map extent is usually a state or county.

## **II. Acquisition**

### **A. Data Source**

#### **1. Producer Information**

##### **a. Name**

Tele Atlas North America

##### **b. Location of Headquarters**

Tele Atlas North America  
11 Lafayette Street  
Lebanon, NH 03766

##### **c. Internet Address**

<http://www.Tele Atlas.com>

#### **2. Publisher Information**

##### **a. Name**

Tele Atlas North America

##### **b. Location of Headquarters**

Tele Atlas North America  
11 Lafayette Street  
Lebanon, NH 03766

##### **c. Internet Address**

<http://www.Tele Atlas.com>

#### **3. Acquisition Information**

##### **a. Delivery Media**

DVD or CD

##### **b. Download URL**

None. This is a licensed dataset. All rights in the Licensed Products not expressly granted to Licensee by the Agreements and the Agreements do not constitute a transfer of any title or interest in the Licensed Products.

##### **c. Projected Data Availability Schedule**

The data is currently available. The data set is updated twice a year.

## **B. Standards Information**

### 1. Geospatial Data Standard

- a. Standard Name and Steward Information

None

- b. Standard Version

None

- c. Standard URL

None

### 2. Metadata Standard

- a. Standard Name and Steward Information

None

- b. Description of Metadata Captured

- c. Metadata Accuracy and Completeness Assessment

## **C. Acquired Data Structure**

### 1. Geospatial Data Format

- a. Format (raster, vector, etc.)

Vector

- b. Format Name

ESRI Arc SDE Export of Tele Atlas Dynamap/2000

- c. Data Extent

The data extent is the 50 states of the United States, the District of Columbia and Puerto Rico.

- d. Horizontal and Vertical Resolution

None stated but probably no more than one meter.

- e. Absolute Horizontal and Vertical Accuracy

Tele Atlas guarantees a degree of accuracy between 5 and 12 meters, but strives for much less deviation from the real world. Updates are based on corrections from aerial photographs that should improve the placement accuracy of roads.

- f. Nominal Scale

None given.

- g. Horizontal and Vertical Datum

- Horizontal\_Datum\_Name: North American Datum of 1983 (NAD83)  
Ellipsoid\_Name: GRS1980.

- Precision: Six decimal degrees.

h. Projection

Geographic

i. Coordinate Units

Decimal degrees.

j. Average Data Set Size

The average size is irrelevant because all maps are combined into a single national layer. See table below in section III, 2, b

k. Symbology

None

## 2. Attribute Data Format

a. Format Name

DBMS tables from ArcSDE export files.

b. Database Size

Incorporated with vector coordinates.

## 3. Data Model

a. Geospatial Data Structure

ESRI ArcSDE

b. Attribute Data Structure

ESRI ArcSDE

c. Database Table Definition

Varies by layer. See

[http://www.geographic.com/teleatlas/teleatlassupport/docs/D200017\\_07\\_1.pdf](http://www.geographic.com/teleatlas/teleatlassupport/docs/D200017_07_1.pdf)  
for definition of the fields in each layer.

d. Data Relationship Definition

Varies by layer. See

[http://www.geographic.com/teleatlas/teleatlassupport/docs/D200017\\_07\\_1.pdf](http://www.geographic.com/teleatlas/teleatlassupport/docs/D200017_07_1.pdf)  
for definition of the fields in each layer.

e. Data Dictionary

Varies by layer. See [http://www.geographic.com/teleatlas/teleatlassupport/docs/D200017\\_07\\_1.pdf](http://www.geographic.com/teleatlas/teleatlassupport/docs/D200017_07_1.pdf) for definition of the fields in each layer.

## **D. Policies**

### **1. Restrictions**

#### **a. Use Constraints**

The Tele Atlas Dynamap/2000 transportation data and geocoding services are only available to the SCA and USDA agencies that have a current paid subscription. Dynamap/2000 data can be used to produce digital and hard copy map products, but Tele Atlas Dynamap/2000 geospatial vector and attribute data are not to be redistributed outside of USDA. Tele Atlas Dynamap/2000 data will be available through the Data Gateway to those licensed USDA agencies.

#### **b. Access Constraints**

See above use constraints.

#### **c. Certification Issues**

USDA eAuth username and password is required to be able to download the data from the Data Gateway.

### **2. Maintenance**

#### **a. Temporal Information**

Tele Atlas relies on relationships with more than 33,000 resource providers, strategic development partnerships and data enhancement feedback loops for baseline data sources. These ongoing relationships have developed into an effective mechanism to gather local information such as a new subdivision or a change in a street name. Tele Atlas also partners with many customers, including delivery companies and utilities, to identify new neighborhoods and confirm addresses.

Certain data layers in the Dynamap/2000 product are dependent upon specific outside sources.

##### **• Census Boundaries**

Most of these boundaries are updated only once every 10 years, resulting from each decennial census. The one exception is the County Boundaries layer, which is updated every time a new version of TIGER/Line files becomes available to Tele Atlas with a county boundary or name change. (If the TIGER files are received with the county change before July of that year, then the change is incorporated into the following January release of Tele Atlas products.) Tele Atlas produces quarterly extracts of all census boundaries used in Dynamap/2000 (block group through state) to ensure that these boundaries continually line up with Tele Atlas streets and other features.

##### **• ZIP Codes**

The ZIP Code Boundary & Inventory files contain cartographic representations for all valid United States Postal Service (USPS) 5-digit ZIP Codes. The Boundary file is extracted quarterly from the Dynamap-Tele Atlas 2000 database using current USPS ZIP Code information provided monthly by the U.S. Postal Service.

#### **b. Average Update Cycle**

The data set is updated twice a year.

## **E. Acquisition Cost**

### **1. Cooperative Agreement**

#### a. Description of Agreement

General Provisions Agreement (the "GP Agreement") is entered into by Tele Atlas North America, Inc., a corporation located at 11 Lafayette Street, Lebanon, NH 03766, USA, ("TANA") and the United States Department of Agriculture, a department of the United States Government located at 300 7<sup>th</sup> Street SW, Washington, D.C. 20024, ("Licensee"), in conjunction with USDA BPA # 45-3142-03-1120.

#### b. Status of Agreement

Currently in effect.

### **2. Cost to Acquire Data**

Unknown

## Integration

### **A. Value Added Process**

#### **1. Benefit to the Service Center**

A process must be run to assign state and county FIPS codes (FIPS\_C) to the RAILROAD theme. All other layers have FIPS codes embedded. Subsequent to this processing, all the themes can then be delivered by county, state or minimum bounding rectangle.

#### **2. Process Model**

##### a. Flow Diagram

For the RR theme

Create new table with fields ObjectID, FIPS\_C

-Find the county the feature is 'intersected by'

-Using that county get the FIPS\_C from the County layer

-Write the object ID of the feature to the new table.

-Write the FIPS\_C to the new table

On completion, form a view of the feature table and the new table joining on the object ID. Use this view in all subsequent selects.

##### b. Process Description

For loading the data received from Teleatlas into SDE, see the Tele Atlas ArcSDE UserManual.pdf located with the data received on CD. This process will build a complete national layer from the county maps provided on the CD.

FIPS codes must be assigned to the RAILROAD theme so that the features can be selected by state and county, using the FIPS\_C field. All other layers can be selected by state and county FIPS code by using the STATE\_FIPS and COUNTY\_FIP field, or other existing fields which contain the necessary FIPS codes.

Set the grid size in SDE to be that shown below. Use ArcMap 9.2 /ArcToolBox/Data Management Tools/ Feature Class/Calculate Default Spatial Grid Index. The objective of the tool is to create an index with an average features per grid < 256, a maximum features per grid < 4000 and a grid/feature ratio as close to one as possible.

Average KB Size	Data Layer	Sde Layer Name	Grid Size	Avg # of features Per Grid
257	Census Block Groups	BLOCK_GROUP	.28	19.30
260	Census Tracts	TRACT	.4	24.87
998	Postal Boundaries	POSTAL_BOUNDARY	3.0	262.64
638	Postal Inventory	POSTAL_INVENTORY	.37	7.53
2441	Places	PLACE	.27	4.99
103	Minor Civil Divisions	MCD	1.1	43.69
2010	County Boundaries	COUNTY	12.92	208.4
847	State Boundaries	STATE	19.06	96.06
1407	Water - Lines	WATER	.1	79.23
301	Water - Areas	WATER_POLYGON	.5	138.56
5181	Water -Major Areas	MWATER	3.1	141.65
2	Retail Locations	RETAIL	.85	10.57
2	Recreational Areas	RECAREA	.56	8.7
256	Airports	AIRPORT	.05	3.34
34	Parks	PARK	3.0	277.28
24	Institutions	INSTITUTION	.13	11.06
43	Transportation Terminals	TRANSTERM	.1	3.89
29	Area Landmarks	AREALANDMARK	.08	6.3
145	Railroads	RAILROAD	.15	53.29
9545	Streets and Roads	STREET	.02	23.57
328	Highways	HIGHWAY	.08	20.57

In SQLserver, for each layer, index the state and county fields. The exception is the FIPS\_C field for RailROAD because it a LIKE phrase is used in the SQL select.

SDE Layer Name	Type	Description	SQL Select
BLOCK_GROUP	area	Dynamap Census Block Groups by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
TRACT	area	Dynamap Census Tracts by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
POSTAL_BOUNDARY	area	Dynamap Postal Boundaries by State	SELECT * FROM _view WHERE ST_FIPS = '<st>'
POSTAL_INVENTORY	point	Dynamap Postal Inventory by State	SELECT * FROM _view WHERE ST_FIPS = '<st>'
PLACE	area	Dynamap Places by State	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
MCD	area	Dynamap Minor Civil Divisions by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
COUNTY	area	Dynamap Counties by State	SELECT * FROM _view WHERE STATE_FIPS = <st>
STATE	area	Dynamap States by State	SELECT * FROM _view WHERE STATE_FIPS = <st>
WATER	line	Dynamap Water – Lines by County	SELECT * FROM _view WHERE ( STATE00_L = '<st>'

			AND CTY00_L = '<nnn>') OR ( STATE00_R = '<st>' AND CTY00_R = '<nnn>')
WATER_POLYGON	area	Dynamap Water – Areas by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
MWATER	area	Dynamap Water - Major Areas by State	SELECT * FROM _view WHERE STATE_FIPS = <st>
RETAIL	point	Dynamap Retail Locations by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
RECREA	point	Dynamap Recreation Areas by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
AIRPORT	area	Dynamap Airports by State	SELECT * FROM _view WHERE STATE_FIPS = <st>
PARK	area	Dynamap Parks by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
INSTITUTION	point	Dynamap Institutions by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
TRANSTERM	point	Dynamap Transportation Terminals by State	SELECT * FROM _view WHERE STATE_FIPS = <st>
AREALANDMARK	area	Dynamap Area Landmarks by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>
RAILROAD	line	Dynamap Railroads by County	SELECT * FROM _view WHERE FIPS_C LIKE '% <st><nnn>%'
STREET	line	Dynamap Streets by County	SELECT * FROM _view WHERE ( STATE00_L = '<st>' AND CTY00_L = '<nnn>') OR ( STATE00_R = '<st>' AND CTY00_R = '<nnn>')
HIGHWAY	line	Dynamap Highways by County	SELECT * FROM _view WHERE STATE_FIPS = <st> AND COUNTY_FIP = <nnn>

## TeleAtlas/Dynamap Instructions for Completing the Gateway Steps for a Version Refresh

To help you check things off as you go, print out the "1ProductNCGC" table located in the ZoneMBRdb.mdb database on ims2 in this directory: D:\GatewayDBs

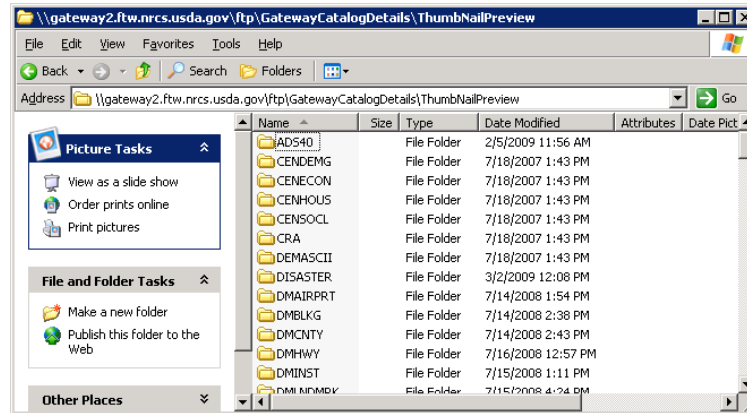
For each of the 21 TeleAtlas products (do all steps below consecutively for one product before starting on the next product):

1. Rename the Thumbnail Preview folder to a "-old" naming convention. Then create a new folder with original name. This is required because if a county no longer has any features for the product, the DataService will see the old .jpg and think something is missing from the new SDE database.

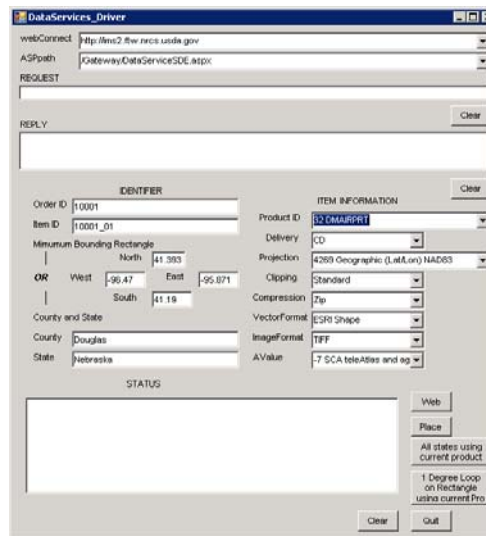
For example, change the directory "DMAIRPRT" to "DMAIRPRT-old".

The locations of the directories are here:

[\\gateway2.ftw.nrcs.usda.gov/ftp/GatewayCatalogDetails/ThumbNailPreview](http://gateway2.ftw.nrcs.usda.gov/ftp/GatewayCatalogDetails/ThumbNailPreview)



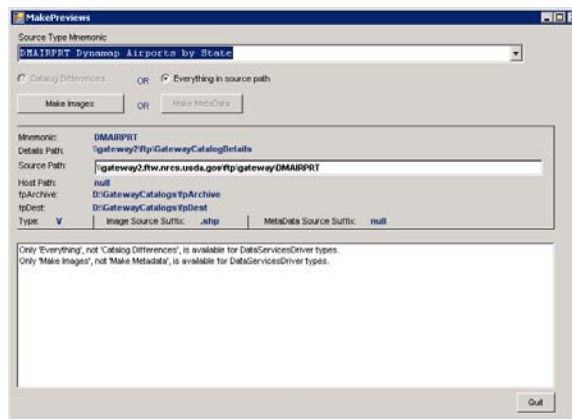
2. On the ims2 Gateway server, run the DataServicesDriver.exe (typically located in D:\GatewayWeb\bin) on the product to generate the shape files for order estimation. Select the product then push the button “All states using current product”.



3. Check for the word “Error” in the DataServicesDriver.log located in D:\GatewayLogs after each use. Research and correct problem if errors occur in the log file then run DataServices Driver once again. If there are no errors, delete the log.
4. Still on the ims2 server, Run MakeCatalogs (typically located at D:\GatewayCatalogs) on the product. Check for any problems (including deleted counties) in the log for the product (typically located in D:\GatewayCatalogs\fpDest\DM{product}). Research and correct the problem if errors occur in log file then run catalogs on the product again.



5. On ims2, run MakePreviews (typically located at D:\GatewayCatalogs) on the product. There is no metadata so only use the Images button. The “Everything in source path” option is used instead of “Catalog Differences”. Check that there are no errors in the log after running. If there are no errors, delete the MakePreviews.log file otherwise correct problems and run again.



6. Delete the “-old” previews directory from step one above.
7. Delete the DataServicesDriver output directory \\gateway2\ftp\Gateway\DM{product}
8. Update the corresponding ArcMap DM{product}.mxd from D:\StatusMaps\maps\ArcMap to update the status map based on the Catalog results from Step 4 above ensuring that map layers are pointing to the D:\GatewayCatalogs\fpDest directory. Export the status map to a JPEG located in [\\gateway2\ftp\GatewayStatusMaps](http://gateway2\ftp\GatewayStatusMaps).
9. After all steps are complete for all products, create a News file showing the updates since the last date TeleAtlas was updated. Place file in [\\gateway2.ftw.nrcs.usda.gov\ftp\GatewayNews](http://gateway2.ftw.nrcs.usda.gov/ftp/GatewayNews).
10. Update the identification\_date, source\_publication\_date, source\_title, and process\_date fields in the GatewayMetadata table in zoneMBRdb.mdb.
11. Finally, notify the Fort Collins Gateway team that there are new catalogs, status maps and an updated news file. Also, notify Fort Collins, of the updated GatewayMetadata table to be distributed onto all other dataservice machines.

### 3. Technical Issues

#### a. Tiling

As ArcSDE exports, each layer is one continuous map without tiles.

#### b. Compression

Coordinates are compressed internally to SDE to a specified resolution.

- c. Scale

None given.

- d. Tonal Matching

No tonal matching because the data set is vector data.

- e. Edge-matching

Each layer is delivered edge matched.

#### 4. Quality Control

- a. Procedures

Produce status maps of each theme to check if all counties that should have data do indeed have data. Compare to TIGER data where applicable.

- b. Acceptance Criteria

None.

#### 5. Data Steward

- a. Name and Organization

National Cartography and Geospatial Center  
Natural Resources Conservation Service  
US Department of Agriculture  
501 Felix Street, Building 23  
P. O. Box 6567  
Fort Worth, Texas 76115-0567 USA

- b. Responsibilities

Load data, apply updates, ensure availability to applications using data.

### ***B. Integrated Data Structure***

#### 1. Geospatial Data Format

- a. Format (raster, vector, etc.)

Vector

- b. Format Name

ESRI Arc SDE

- c. Data Extent

The data extent is the 50 states of the United States, the District of Columbia and Puerto Rico.

- d. Horizontal and Vertical Resolution

No more than one meter.

e. Absolute Horizontal and Vertical Accuracy

Tele Atlas guarantees a degree of accuracy between 5 and 12 meters, but strives for much less deviation from the real world. Updates are based on corrections from aerial photographs that should improve the placement accuracy of roads.

f. Nominal Scale

None given.

g. Horizontal and Vertical Datum

- Horizontal\_Datum\_Name: North American Datum of 1983 (NAD83)  
Ellipsoid\_Name: GRS1980.

- Precision: Six decimal degrees.

h. Projection

Geographic

i. Coordinate Units

Decimal degrees

j. Symbology

<http://www.itc.nrcs.usda.gov/scdm/docs/SPG-StandardforGeospatialSymbology.pdf>

## 2. Attribute Data Format

a. Format Name

DBMS tables in ArcSDE database.

b. Database Size

Incorporated with vector data. Varies with each theme.

## 3. Data Model

a. Geospatial Data Structure

ArcSDE DBMS tables.

b. Attribute Data Structure

ArcSDE DBMS tables.

c. Database Table Definition

ArcSDE DBMS tables.

d. Data Relationship Definition

ArcSDE DBMS tables.

- e. Data Dictionary

ArcSDE DBMS tables.

### C. Resource Requirements

#### 1. Hardware and Software

The hardware required is a machine with enough memory, disk and a powerful enough CPU to run a large SQL Server DBMS and SDE for several users. Currently, the machine is a SUN e480.

#### 2. Staffing

Unknown.

### D. Integration Cost

#### 1. Hardware and Software

Unknown.

#### 2. Staffing

Unknown.

## III. Delivery

### A. Specifications

#### 1. Directory Structure

- a. Folder Theme Data is Stored In

F:/geodata

#### 2. File Naming Convention

<http://www.itc.nrcs.usda.gov/scdm/scgdm.htm>

- a. List of Theme Files and The File Naming Convention

Mnemonic	Theme	Description	SDE Layer	Data Type	Package by	File Name
DMBLKG	Census	Dynamap Census Block Groups	BLOCK_GROUP	area	county	block_group_dm_
DMTRACT	Census	Dynamap Census Tracts	TRACT	area	county	tract_dm_a_<stnm
DMPOSTI	Government Units	Dynamap Postal Inventory	POSTAL_INVENTORY	point	state	postal_inv_dm_p_
DMCNTY	Government Units	Dynamap Counties	COUNTY	area	state	county_dm_a_<str
DMMCD	Government Units	Dynamap Minor Civil Divisions	MCD	area	county	mcd_dm_a_<stnm
DMPOSTA	Government Units	Dynamap Postal Boundaries	POSTAL_BOUNDARY	area	state	postal_dm_a_<st>
DMSTATE	Government Units	Dynamap State	STATE	area	state	state_dm_a_<st>
DMPLACE	Government	Dynamap Places	PLACE	area	state	place_dm_a_<st>

	Units					
DMWATERP	Hydrography	Dynamap Water Polygons	WATER_POLYGON	area	county	water_dm_p_<stn
DMMWAT	Hydrography	Dynamap Major Water	MWATER	area	state	major_water_dm_
DMWATERL	Hydrography	Dynamap Water Lines	WATER	line	county	water_dm_l_<stn
DMRETL	Landmarks	Dynamap Retail Locations	RETAIL	point	county	retail_dm_p_<stn
DMREC	Landmarks	Dynamap Recreation Areas	RECAREA	point	county	recarea_dm_p_<st
DMAIRPT	Landmarks	Dynamap Airports	AIRPORT	area	state	airport_dm_a_<st
DMPARK	Landmarks	Dynamap Parks	PARK	area	county	park_dm_a_<stn
DMINST	Landmarks	Dynamap Institutions	INSTITUTION	point	county	institution_dm_p_
DMTRANST	Landmarks	Dynamap Transportation Terminals	TRANSTERM	point	state	transterm_dm_p_<
DMLNDMK	Landmarks	Dynamap Area Landmarks	AREALANDMARK	area	county	landmark_dm_a_<
DMRAIL	Transportation	Dynamap Railroad	RAILROAD	line	county	railroad_dm_l_<st
DMSTREET	Transportation	Dynamap Streets	STREET	line	county	street_dm_l_<stn
DMHWY	Transportation	Dynamap Highways	HIGHWAY	line	county	highway_dm_l_<s

## **B. User Information**

### **1. Accuracy Assessment**

#### **a. Alignment with Other Theme Geospatial Data**

All Tele Atlas Dynamap/2000 data aligns with itself. The roads and water lines align reasonably well with the ortho photos.

#### **b. Content**

### **2. Appropriate Uses of the Geospatial Data**

#### **a. Display Scale**

Should not exceed 1:7920

#### **b. Plot Scale**

Should not exceed 1:12,000

#### **c. Area Calculations**

As accurate as the source data, capture scale, and the algorithm used in the ArcView/ArcInfo software. Compute as need when map is in a rectangular projection.

#### **d. Decision Making**

As need.

## **C. Maintenance and Updating**

### **1. Recommendations and Guidelines**

#### **a. Original data location and structure**

The integrated Tele Atlas Dynamap/2000 layer for distribution will reside in the Geodata Warehouse (GDW) in ArcSDE. The data is also delivered to the Service Center.

#### **b. Update Cycle**

The data set is updated twice a year.

c. Availability

Make the updates available as soon as the database is updated.

d. Change Control

When the revised Tele Atlas Dynamap/2000 data becomes available, it should be refreshed on SCA systems.