

# **METRO**

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The Metropolitan Service District, your regional government, handles regionwide concerns in the urban areas of Clackamas, Multhomah and Washington counties. Metro is responsible for solid waste management, operation of the Metro Washington Park Zoo and the Oregon Convention Center, transportation and land-use planning, urban growth boundary management and technical services to local governments.

Executive officer Rena Cusma

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# **BUILDING A WORKING**

#### MODEL

In March 1989, the Metropolitan Service District began developing a Regional Land Information System (RLIS) covering its three-county service area. The first step was to build a system prototype to identify:

- 1. data requirements
- 2. development methodologies
- 3. production time requirements

Conceptually, RLIS is a series of computer map overlays registered to a parcel base map. There are 10 map layers:

Tax assessor data Vacant land Zoning Comprehensive plans Flood plains Sewer and water Parks and open space Transportation Boundaries Parcel base map



Portland General Electric's digital parcel map serves as the base layer for the nine overlays which contain land information from several sources, including:

- assessors
- building permits
- comprehensive plans
- zoning ordinances
- aerial photography

- utility providers
- transportation agencies
- U.S. Census Bureau
- U.S. Army Corps of Engineers

Geographically encoding these data sources to the parcel base map creates a spatial link between each source. They can then be combined as overlays to support complex queries. Once the *system* is in place, it is possible to produce new sets of information (layers) that may have taken days or months using existing manual techniques. For example, locating all land parcels in the region zoned industrial, more than 20 acres in size and ready for development would be a routine query. The results can be displayed as a map with an accompanying tabular report on parcels meeting the search criteria.

Vacant residentially zoned land 2 acres or larger

ILN0	DINER	OWNER ADDRESS
1S1068A00100	BOLLIGER, RALPH	TARLOW PC ATTORNEYS
1S106A800200	HOUK, JEANETTE	75 SW 173RD AVE
1N131DC01200	BENJERAN DEVELOPMENT INC	501 SE HAWTHORNE STE 295
151054400700	BENJERAN DEVELOPMENT, INC	501 SE HAWTHORNE, STE 295
1S106M00600	LORENZEN, WACK H BEVERLY	X BENJERAN DEVELOPMENT, INC
1210910001000	BENJERAN DEVELOPMENT INC	501 SE HAIRTHORNE BLVD
1S106A800300	PARK, KONG-TATK & CHEON-JA	155 SW 173RD AVE
151064800500	BUSTROW, HAROLD T	190 SW 173RD AVE
151064400600	LUNCALEN, MALA H BEYERLT	A BENJI KAN DEVELUPHENI, INC
15106000/00	BENJIKAN DEVELUPBENT, THU	SUT SE HANTHURSE, STE 295
151004000000	POTENSEAND, AKTHOR/DORUTHI	HUVERSLAND, GORDON/ MITKINA
151050001000	ULDCUALI DANCIAL	DUI SE NAVINURE DETU
151054900000	HADID CAU K	13500 CC DIVED DD
1510544001000	DENTERAN DEVELOPMENT INC	ANT OF UNWITHOUT DI VIT
1510544001010	SENJERAN DEVELOPMENT INC	SOT SE HANTHORNE BLYD
151054000100	BENJERAN DEVELOPMENT, INC.	P0 P0X 6400
1S106A000103	BENJERAN DEVELOPMENT, INC.	P0 R0X 5400
1S105AD01101	BEAVERTON SCHOOL	DISTRICT NO 48J
1S105AD00104	BENJERAN DEVELOPMENT, INC	PO BOX 5400
1S106AC01200	MCKNIGHT, JOHN S / JAMES A	SELBY, BEVERLY N
1S106AC00300	NIELSEN, KAARE M	640 SW 173RD AVE
1S106AD01000	STEELE, EARL L	16975 W BASELINE RD
1S1068C03600	PANZER, FRED W AND GAIL K	1065 SW 181ST
1S106AD00700	GERBRACHT, DOEKE N	ANTHONIA
1S106AC00700	TENLY PROPERTIES CORP	P0 B0X 414
151054000500	IUFFLI, ARTHUK A AND	MARCELLENE M
151064000000	SOLT THACEL CADE W AND	16565 W BASELINE NU
15106400200	TENTY DOODEDTIES MOD	WEITER, DOUGLASS
151064000600	TIEFT I APTIER A AND	VIDCLICK W
15105CA00100	SCH OTTWAN PAYNOND H	CHARLOTTE N
151068003702	PANZER ALERED AND CALL K	1055 SW IRIST
1\$1058003500	PANZER, ERED W AND GALL K	1065 SW 1815T
1510604002000	WILSON, HOWARD F	16880 W BASELINE RD
1S1060A00100	WILSON, HOWARD E ELLEN	16880 W BASELINE RD
1S1068C03800	PANZER, ALFRED O ET AL	X PANZER NURSERY
1S1050B01000	FREEMAN, DAVID KENNETH	8629 TOLOFF
IS105C800200	KIMBLE, HARRIS C	1140 SW 185TH AVE
1S106CA00100	SCHLOTTMANN, RAYMOND H	CHARLOTTE W
151060400100	WILSON, HOWARD E ELLEN	16880 W BASELINE RD
IS1060B01100	WALTERS, MARIE E	1355 SW 170TH AVE
1S1060B00800	KOLSTAD, GOTFRED	17470 SW BASELINE RD
1510608003000	LIBERTY BAPTIST CHURCH	1200 SW 185TH AVENUE
151060800300	NABB, C E DORIS M	17400 W BASELINE
1510000000	TAVOS CONADO ID	INCRESA P
15105000400	ULDTY CUL V	THE CALL THE
151050000100	LECKER DOCER & COMA D	17335 SW DIVE ST
15105/000500	RUES INE CHATEL R	1825 SW 12010 AVC
151050000200	WORCEN FRED J AND JUDITH A	17390 SW WARTY LANE
151060000500	BILES JOE C HATEL B	1825 SH 1701H AVE
151060000800	BILES, JOE & HAZEL	PO BOX 5393
1010000000101	VANCINGY FINCHE I AND	CONTYA C

Sample list of owners



# **Multi-Layer Data Query**

Example of a search for developable residential sites in the study area.

# **PRODUCTION PLANNING**

Experience gained from the pilot project has been used to estimate production time requirements. It is estimated to require approximately 26 months, using currently budgeted Metro staff resources, to produce a fully operational geographic information system (GIS) for this region. Using this "base scenario" as a beginning point, strategies for compressing the production time frame were explored.

Production time requirements were developed by estimating a time factor per map section. Some factors were the same for every section in the region (e.g., flood plains). Others varied, usually depending upon the type of location (e.g., suburban or urban). The map below outlines the portion of the region to be included in RLIS. This totals 544 sections, 186 of which are considered urban and 358 suburban. In addition, Clark County is implementing a GIS for the Washington state portion of the region.



Parcel Database Extent

There is considerable interest among future government and business users of RLIS in compressing the development time frame. Three possibilities exist:

- · joint development projects with jurisdictions developing GIS programs;
- contracting out certain production steps;
- · eliminating some system elements.





The following table shows the potential for accelerating the production process through the use of contractual services and joint development projects with local governments.

	Base case scenario (Metro-unassisted)	Accelerated development scenario (Metro-assisted)			
Map data layer		Metro	Contractor	Mem	bers
Parcel base map	15.0		15.0	3.3	months
Tax assessor data/ land use	1.5	1.5			months
Vacant land	1.6	1.1	.5	.2	months
Zoning	2.8	2.8			months
Comprehensive plans	1.6	1.6			months
Flood plains	.4		.4	.1	months
Sewer and water	.5	.5			months
Parks and open space	.3	.3			months
Transportation	.5	.2	.3		months
Boundaries	1.4	1.4			months
Collect source material	1.0	1.0			months
Total	26.2	10.4	16.2	3.7	months

#### **Contract services**

Several elements of the database could be contracted out and could move the completion date up from March 1992 to May 1991.

This will require additional one-time developmental funding for RLIS. This option will be presented to the Metro executive officer for consideration as part of the budget planning process for FY 1990-91.

#### Joint development projects

By assisting local GIS efforts, Metro can initially serve to facilitate local startup and development. In the long-term, Metro's role will shift to integrating independent local systems into a seamless regional system. By teaming up with local GIS efforts, it may be possible to reduce the time by 3.7 months. Of course, not all of the region's 24 cities and three counties will be developing GIS systems in the near future. However, not all of the work requires having access to a GIS computer (e.g., aerial photo interpretation for the vacant land layer) allowing agencies to participate prior to installing their own systems.

#### System reductions

There is limited potential for shortening the delivery time by eliminating RLIS components. Each of the 10 map data layers are interrelated. Removing one or more will seriously impact system capabilities. For example, if the parks and open space layer is removed, it is not possible to use the vacant land layer to differentiate between park lands and those available for development.

Therefore, the 10 layers and their attendant data structures are probably the functional minimum for a land information system with the user requirements of RLIS. In addition, it does not appear feasible to save time by simplifying some of the map layers. Considerable work has already been done to reduce unnecessary complexity and non-essential data items. For example, the infrastructure layer includes the minimum set necessary, the presence or absence of sewer/water facilities and the service provider.

#### Conclusion

It appears feasible to compress the RLIS development timeline by 10 months. If full funding of the contractual service option were obtained, delivery could be by May 1991. Including assistance from member jurisdictions, contractual costs could be reduced by 22 percent.

# **PRODUCTION METHODS**

AND FINDINGS

his section describes each of the map data layers produced for the pilot project, the procedures employed, and subsequent findings and conclusions.

# TAX LOT BASE MAP

he tax lot base map and street right-of-ways were obtained from Portland General Electric. This map is referenced to a geodetic control grid having a positional accuracy averaging plus or minus 10 feet.

#### Findings

The following graphic elements were imported from the PGE files:

- streets (double line)
- street names
- lot lines
- section boundaries
- section labels
- section corners

- railroads
- railroad names
- county boundaries
- streams and creeks
- rivers and lakes
- water names

A substantial amount of editing was required to bring the PGE quartersection maps into conformance with the most current tax maps. PGE's map maintenance procedures appear to adequately capture new subdivision plats but not changes such as lot splits (minor partitions), lot line adjustments, street right-of-way vacations, and street right-of-way dedication not part of a platting process. In addition, the PGE street right-of-way width is not a direct representation from the tax maps but reflects the average width along a street. For example, 50 feet for local streets and 60 feet for collectors.

The work done on contract for the Wolf Creek Highway Water District does reflect actual right-of-way width and more accurately conforms to the tax maps. Potential users of RLIS see this as a shortcoming of the PGE data for small-area planning and site development analysis.

In addition to the pilot area, a single quarter-section was also imported from Clackamas and Multnomah counties. The Multnomah tax map covered an area in mid-county experiencing only moderate land development. This area required minimal editing and leads us to expect that the region's developing ring in suburban areas will require the most amount of editing time. The Clackamas County map was in the Boones Ferry Road and Kruse Way area. In spite of this being a developing area, it required less editing than many of the quarter-sections in the pilot area.

In conclusion, base map editing is the single-most time-consuming task required for developing a regionwide GIS, with areas experiencing rapid land development requiring the most work.



1" = 200'

#### Procedures

The source material came in digital format (Intergraph) from PGE's computer mapping system. The Intergraph binary files were converted to ASCII code using a FORTRAN program. These coordinate data were then imported into Metro's ARC/INFO system using the "generate" command.

The PGE map elements were edited as necessary to conform to the most recent Washington County Assessor's maps.

A second digital base map became available during the course of the pilot work. This was a joint project of the Unified Sewerage Agency (USA) and the Wolf Creek Highway Water District to digitize the most current tax maps using the USA's orthographic photography for geodetic control. A test copy for the pilot area was provided Metro in AutoCAD DXF format and imported into ARC/INFO. The two base maps were superimposed for comparison of registry and tax map conformance.

#### PROPERTY ASSESSMENT

#### **INFORMATION**

hese data were obtained from the county assessor's property records. To link this tabular data to the tax map, it was necessary to encode each parcel on the digital base map file with its tax lot number. Having done this, any queries on the assessment records can be graphically displayed on the parcel base map.

#### Findings

It was possible to develop efficient and accurate procedures for integrating the PGE parcel base map and county assessor tabular data. Integrating these two digital products in ARC/INFO produces a powerful information tool. The INFO database manager supports complex queries which can produce map displays of query results.

Maintenance of the property assessment database will require periodic updates using current county assessment records. An issue at the time of updating will be conformance with the parcel map. For instance, records with no corresponding parcel on the map base.

Issues related to initial development of the property assessment layer have been resolved by the pilot project. The primary remaining issue involves ongoing maintenance. It is important for these data to be current and for updating to be an efficient and error-free process. How often the database will be updated (e.g., annually, quarterly) is yet to be decided, but is dependent upon the frequency of available updates, user needs and system resources.

#### Procedures

The following data items were imported from the Washington County Department of Land Use and Transportation (DLUT), which uses property tax assessment records as the basis for a land use and transportation planning database (non-graphic). The only item DLUT added to the assessment records was the transportation analysis zone.

- tax lot number
- owner name
- owner address
- building value
- land value
- transportation analysis zone
- situs address
- property use
- building square footage
- number of units, SF
- number of units, MF
- tax district

The database includes three other items which will be included in RLIS for this portion of the region.

- building permit activity
- building permit date
- trip use code (ITE manual)

The source material was delivered in ASCII format on floppy disk. These data were then loaded into the INFO RDBMS. For large county coverage files, nine-track media will be used.

No editing was necessary, but special programming was required to deal with tax lots having multiple records. This occurs in each county, usually on mobile home sites.

The most challenging task was building the topographic link to the property files – putting the tax lot number on the parcel base map. This was accomplished by writing a computer program (ARC/INFO AML) to copy the tax lot number from the property file and attach it to the correct tax lot polygon ID in ARC/INFO. The tax lot number transfer routine uses a mouse to point and click on the appropriate parcel. This is done in a sequential order, from block to block, which traps out-of-sequence coding. Direct digital transfer of tax lot numbers also eliminates potential data entry errors.



No value or zero \$1-25,000 \$25,001-50,000 \$50,001-75,000 \$75,001-100,000 \$100,001-250,000 \$250,001-1,000,000 Over \$1,000,000



**Total Assessed Value** 

# LAND USE

his layer is built from the assessor's property classification for assessment (PCA) codes. These codes have been grouped into general land-use categories for local planning and analysis purposes.

#### Findings

The codes are useful for producing a standard land-use scheme, but because the categories are broad, they are only suitable for producing generalized land-use maps. For example, commercial or industrial uses with no sub-category detail. The reliability of these data was not field-checked. It is assumed that changes in use are tracked via the building/occupancy permit process and subsequent reappraisal cycles.

Land-use maps have always been a labor intensive and, therefore, expensive piece of information for land planning and development applications. Using available digital records is an obvious benefit. The positives are somewhat tempered by the lack of detail and frequency of maintenance by the assessor's office.

#### **Procedures**

Below are the codes grouped by land-use category.

Assessor's land-use classification system			
RLIS category	Assessor's PCA code number*		
Residential			
Single-family	101		
Mobile home	110, 111, 210, 310, 710, 800, 801		
Condominium	191		
Residential acreage	401, 410, 411		
(single dwelling with land for partitioning)			
Multi-family	701, 711		
Commercial	201, 211, 281		
Industrial	301, 311, 381		
Farm/forest	501, 502, 503, 600, 601		
(tax deferred or EFU)			
Tax exempt properties	900s		
(e.g., public/semi-public)			
Unimproved land	100, 200, 300, 400, 700		

\*The code definitions are included as an addendum.







## VACANT LAND

his layer was produced by combining assessment records and aerial photography. The result is identification of all vacant land parcels.

#### Findings

This procedure proved the assessor records to be quite accurate for this purpose. This is to be expected because "missed" land improvements result in lost tax revenues, the assessor's raison d'être. However, there is a lag between construction and the time it takes for an improvement to appear on the tax roles. Building permit records will plug this time gap.

Vacant land data can be produced and maintained in a reasonably accurate form, although it is subject to becoming outdated over a short time in rapidly developing areas. To maintain this layer will require annual aerial photo flights, building permit tracking and updates of the property records. Metro has budgeted to re-fly the region in March 1990. Building permit records are now collected monthly and maintained in a computer database.

For assessing land development, this coverage offers a useful tool when used in conjunction with other layers such as comprehensive plan designation, development constraints and infrastructure availability.

#### **Procedures**

The two-step process first required that the assessor records be searched for all vacant properties. These properties were then plotted at the scale of Metro's aerial photography series (1"=400') and superimposed on a light table. This process allowed the vacant portions of partially developed lots to be located and mapped.



Vacant Land

# ZONING

his coverage includes the land-use zoning designations of the three jurisdictions having this authority in the pilot area: Beaverton, Hillsboro and Washington County.

#### Findings

The zoning coverage has both local and multi-jurisdictional analytical capabilities. Each jurisdiction's zoning designations are captured at the time of data entry and can later be displayed on the parcel base map and/ or in conjunction with other map data layers. In addition, local zoning records can be linked, via a bridge table, to a common zoning system for multi-jurisdictional display or comparative analysis.

#### Procedures

The cities' zoning was entered using on-screen digitizing with paper zoning maps as the source material. This method allowed precise registry with the property lines. The county's data came as part of the tax lot records, permitting direct downloading and equally precise registry.

Each jurisdiction has separate and distinct zoning designations. A zoning "bridge table" was developed to produce a common set of zoning categories. The common zoning classifications are listed below. The RLIS database contains a table that correlates each jurisdiction's zoning designations to the common set. This work has been completed for the region's 24 cities and three counties and is included as an addendum.

Overlay zones add a level of complexity to this map coverage. It was decided to include overlays as a separate but related coverage and put a flag on the common zone system which warns of either a natural environmental restriction (O/NE) or a built environmental restriction (O/BE).

# Land-use regulation classification system

#### Farm and forest

**F/F** Agricultural or forestry – activities suited to commercial scale production, typically with lot sizes of 30 acres or more.

#### Residential

**RR/FU** Rural or future urban – Residential uses permitted in rural or areas designated for future urban development with *minimum lot sizes of one acre or more.* 

SFR/1 Single-family – detached housing with minimum lot sizes ranging from 10,001 to 40,000 square feet (one to three dwelling units per net acre)

**SFR/2** Single-family – detached housing with minimum lot sizes ranging from 7,001 to 10,000 square feet (three to four dwelling units per net acre)

SFR/3 Single-family – detached housing with minimum lot sizes usually ranging from 5,000 to 7,000 square feet (four to six dwelling units per net acre)

MFR/1 Multi-family – housing and/or duplex, townhouse and attached single family structures allowed outright. Maximum net allowable densities range from 8 to 25 units per acre, with height limits usually set at 2 1/2 or 3 stories.

MFR/2 Multi-family – housing accommodating *densities in excess of 25 units per acre.* Buildings higher than three stories are usually permitted and often include high rise structures.

**PUD** Planned unit development/mixed use – applies where planned developments are mapped as a separate zone; some commercial uses may be encompassed within individual residential developments. Also applies to special mixed-use zones with residential emphasis.

#### Commercial

**CN** Neighborhood commercial – small-scale commercial districts permitting retail and service activities such as grocery stores and laundromats supporting local residential community; commercial floor space usually limited to 5,000 to 10,000 square feet.

**CG** General commercial – larger scale commercial districts, often with a more regional orientation. Businesses offering a wide variety of goods and services are permitted and includes highway and strip commercial zones.

**CC** Central commercial – allows a full range of commercial activities typically associated with central business districts. More restrictive than general commercial in the case of large lot and highway oriented uses, but usually allows for multi-story development.

**CO** Office commercial – districts accommodating a range of business, professional and medical office facilities, typically as a buffer between residential areas and more intensive uses. Mixed use structures incorporating higher density residential and limited commercial uses are often allowed.

#### Industrial

IL Light industrial – districts permitting warehousing and light processing and fabrication activities. May allow some commercial activities.

**IH** Heavy industrial – districts permitting light industrial and more intensive industrial activity such as bottling, limited chemical processing, heavy manufacturing and similar uses.

**IMU** Mixed use industrial – districts accommodating a mix of light manufacturing, office and retail uses.

#### Overlay zones

**O/NE** Natural environment overlays – restrictions associated with environmental constraints such as flood plains and steep slopes for the purpose of environmental protection.

**O/BE** Built environment overlays – restrictions used for the protection and enhancement of the built environment, such as historical or architectural review districts.

Comprehensive plan designations (where different than zoning)

**P/OS** Parks and open space – comprehensive plan classifications (rather than zoning, unless otherwise noted) for parks and open space.

**P/F** Public facilities – comprehensive plan classifications for public facilities such as schools, hospitals, or government buildings.

Single family 5000-7500 sq ft lot Multi-family 8-25 units/acre Multi-family over 25 units/acre General commercial Office commercial Light industrial Mixed use industrial Parks/open space





# LAND USE PLANS

This coverage includes the land-use designations included on comprehensive plan maps and is the companion to the zoning layer described previously. The same procedures were used to develop this layer. The common land-use classification system also applies.



Single family 5000-7500 sq ft lot Multi-family 8-25 units/acre Multi-family over 25 units/acre General commercial Office commercial Light industrial Mixed use industrial Parks/open space





DEVELOPMENT

### **CONSTRAINTS**

his coverage includes environmental development constraints included within a jurisdiction's zoning ordinance (e.g., flood plain and extreme slope). The scope of this coverage may be expanded if soil and slope data are included in RLIS.

# Findings

The U.S. Army Corps of Engineers' aerials provided adequate source data but a larger scale planimetric series is preferable. It is assumed that many jurisdictions will have larger scale planimetrics available for this purpose. However, the aerials will suffice in cases where higher quality planimetrics are not available.

#### Procedures

The flood plain data was digitized from aerial photography from the Corps and Washington County Department of Land Use and Transportation.



Flood Plains

Steep Slopes Soil Limitations



**Development Constraints** 

25

#### SEWER AND WATER

his layer will contain information as to the provider and availability of sewer and water services to a site. Availability is restricted to answering the question – is sewer and/or water service present or within 300 feet of the subject land parcel? Determinations of service adequacy for development proposals are subject to changing system conditions, beyond the scope of the RLIS project.

Therefore, the RLIS database will support queries regarding the *presence* of sewer and water services and the service provider to contact for further information regarding adequacy for specific land development proposals; that is, the city, county or special service district providing service to the site.

#### Findings

The source material received from the service providers was adequate for the intended uses of sewer and water information for RLIS applications. It is not feasible to map the service providers' systems in detail, with items such as pipe sizes or ages. When information from this coverage is used, it will be important to dissuade users from speculating about system adequacy to support a given project. This is the sole domain of the service provider, the name of which will be available.

#### Procedures

Each of the sewer and water providers inside Metro's service area were contacted. Their number totaled 76, comprising cities, counties and special service districts. For each provider, two types of information were collected:

- jurisdictional boundaries; and
- physical location of facilities.

The boundaries and facilities (perimeter pipe locations) are being digitized from the maps provided. A 300-foot buffer extending beyond the current terminus of sewer or water lines is then created using the ARC/INFO buffer command.





Areas Served by Sewer

#### TRANSPORTATION

Street system functional classification For the pilot, the street system was classified by function into the following categories:

Regional arterials – Freeways and principal routes

*Freeways* – Freeway routes are intended to move traffic and not to provide direct access to land-use activities. Access to freeways will be limited to interchange points.

*Principals* – Access to principal routes will be managed in an effort to minimize the degradation to capacity while providing access to abutting land uses.

**Major arterials** – Major arterials are intended to serve as the primary route for travel between areas of principal traffic generation and major urban activity centers and for trips between non-adjacent areas. Major arterials should also be used for access to regional arterials.

**Minor arterials** – Minor arterials are intended to serve as the primary route for travel within and between community subareas and to augment the Major Arterial system. Access to minor arterials will be primarily from the collector system.

**Major collectors** – Major collectors are intended to serve traffic from local streets to arterials and are public thoroughfares with a lesser degree of present or future traffic than an arterial.

Collectors - City designation.

Minor collectors – Minor collectors are primarily intended to provide access to abutting properties and to serve local access needs of a neighborhood including limited through traffic. Additional minor collectors will be identified through the development review process.

**Local streets** – A local street is intended to provide direct property access. A "local street" is not intended to serve through traffic.

**Corridors** – A proposed road where the actual location has not been identified.

Study areas – An existing road where the functional classification has not been determined.

A longer term project will be to import information from Metro's regional transportation database into RLIS. This will include items such as traffic volumes, capacities, speeds per street segment and improvement projects contained in the Regional Transportation Plan (RTP) and those currently funded in the Transportation Improvement Program (TIP).

#### **EXISTING ROUTES**



#### PROPOSED ROUTES

— — – Minor arterials — — – Major collectors

#### INTERIM CLASSIFICATION

..... Minor arterials

••••• Major collectors

Source: Washington Co. Land Use and Transportation



**Street Classification System** 

# PARKS AND OPEN SPACE

These lands are identified using three sources:

- Metro's 1988 inventory of parks and recreation facilities
- County assessor records (exempt properties)
- · Aerial photography (visual confirmation).

In addition to identifying parks and open spaces, this layer is necessary when identifying developable vacant land.



Parks and Open Space

# **BOUNDARIES**

 $T_{\text{he potential list of boundaries is considerable.}} \text{ The following are currently being used as the initial set to include in RLIS:}$ 

- County
- City
- Urban growth boundary

- Metro boundary
  Taxing district (assessor's file)
  1990 census tracts and block groups
- Traffic analysis zones



City of Beaverton City of Hillsboro

Unincorporated Washington Co.



**City Boundaries** 



# ADDENDUM

#### Washington County assessor PCA code description

	Vacant land	Land and improvements	Land only w/ mobile home	Land and imp. w/ mobile home	Condo- minium
Residential	100	101	110	111	191
Commercial	200	201	210	211	281
Industrial	300	301	310	311	381
Tract	400	401	410	411	
Multi-family	700	701	710	711	

"Residential" includes most all of the developed single-family residential parcels; typical lot size at 0.2 ac ±. This category also includes duplex, tri-plex and four-plex structures which are not differentiated from singlefamily. "Residential" generally equates to a plan designation of R-5, R-6 or R-9. There may be some areas where PCA codes do not reflect recent plan changes which is possible for any category.

"Tract" land refers to those parcels planned for residential use, but have not been subdivided or partitioned into subdivision lots. The "tract" parcels typically will have acreage listed on the assessment rolls.

"Multi-family" generally includes land that is planned at R-15 densities or greater. There may be some cases where a property is planned multi-family, but it is currently in single-family residential use. In this case, the PCA code will likely be 101 rather than 701. In addition, where several small contiguous parcels are vacant and planned multi-family, they may have a PCA of 100 rather than 700.

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