

Vancouver's VanMap-based Business Applications



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**Home to the 2010 Winter
Olympics**

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Presentation Objectives



Web based Solutions to Infrastructure and Asset Management

- Introduce VanMap and the rationale for building business applications (Jonathan)
- Describe and demonstrate Custom Mapping (Zsigmond)
- Describe and demonstrate VanMap Notification (Meng)

The City's Objectives



Web based Solutions to Infrastructure and Asset Management

More and Better information

More people

More easily

The City's Objectives



Web based Solutions to Infrastructure and Asset Management

integrate **data**
with the **business** process
and **GIS** with
the **design** process

Where We've Been



Web based Solutions to Infrastructure and Asset Management

- Primary product is data viewer
- Primary focus was providing access to lots of data
- Business penetration = making data easier to see
- Developed some related applications

City's VanMap Directions



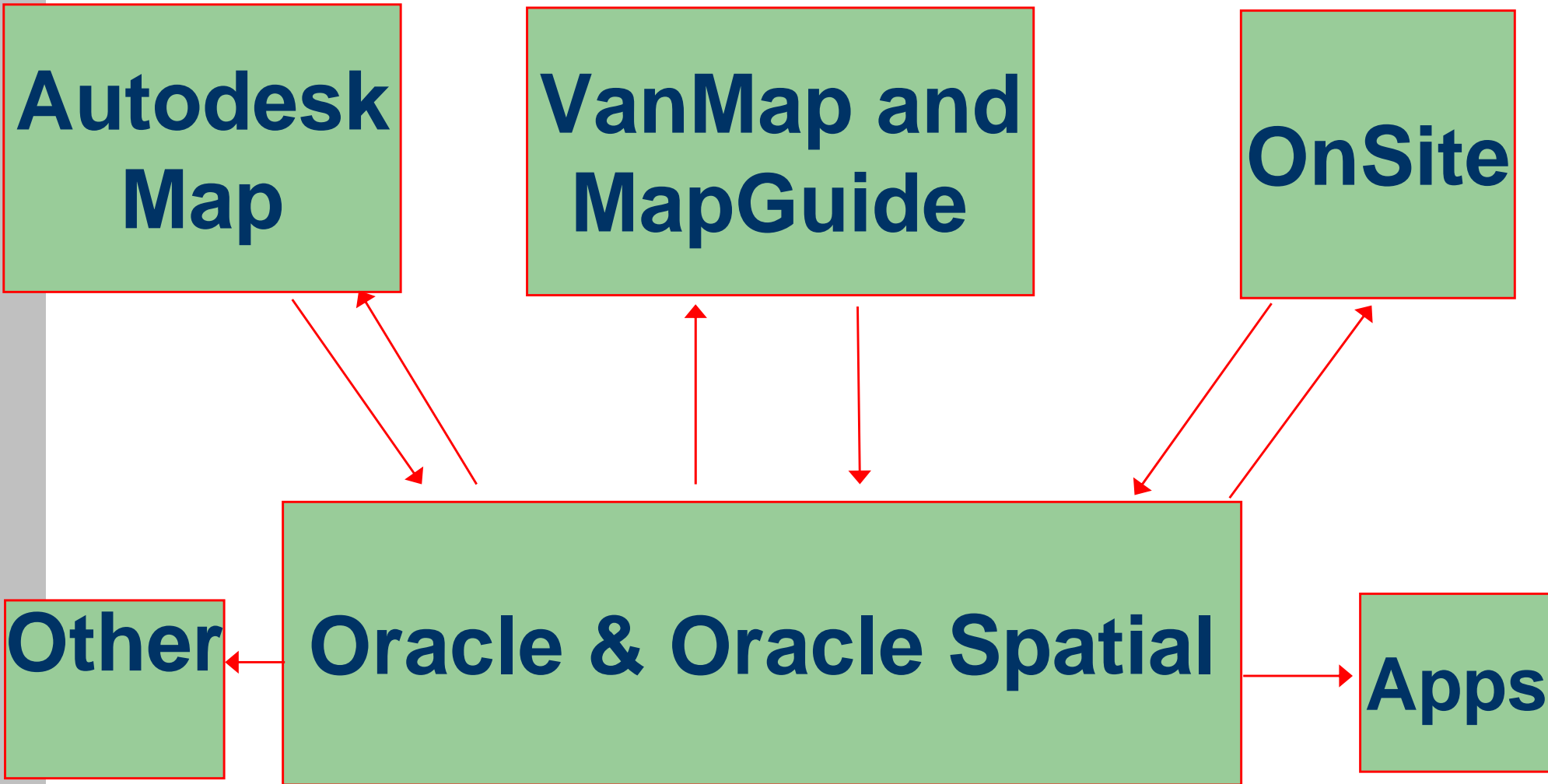
Web based Solutions to Infrastructure and Asset Management

- VanMap as integral part of business process
- Exploit benefits of VanMap being a web app
- Applications
 - Notification
 - Custom Mapping (redlining+)
 - Legend Manager
 - Reportal for property information
 - View Cone Height Calculator
 - Query Builder & Thematic Mapping

GIS Moving Forward



Web based Solutions to Infrastructure and Asset Management

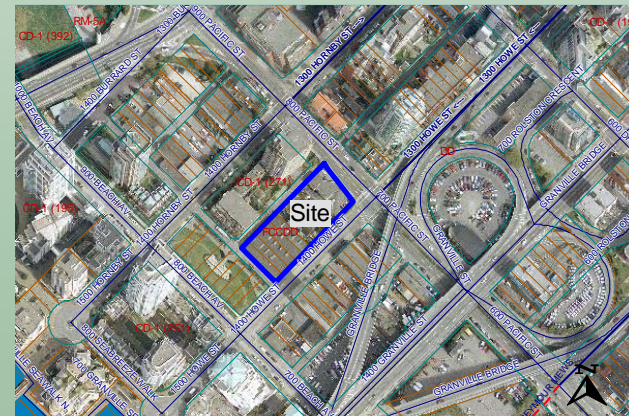
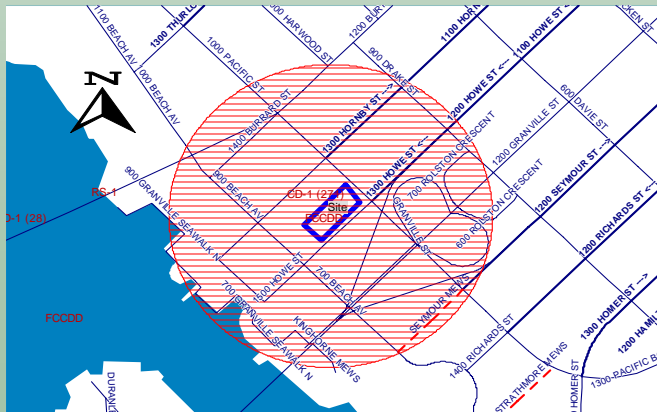


Custom Mapping



Web based Solutions to Infrastructure and Asset Management

VanMap's redlining tool



Custom Mapping - Objectives



Web based Solutions to Infrastructure and Asset Management

- ▶ Web based (intranet)
- ▶ User friendly
- ▶ Include all basic mark up functions
- ▶ Allow Saving / editing of custom maps

Custom Mapping - functionality



Web based Solutions to Infrastructure and Asset Management

- Symbols, polylines, polygons, circles and text labels
- Replicate map features to custom features
- Custom Map file management - (save/open/edit)

Custom Mapping - Interface



Web based Solutions to Infrastructure and Asset Management

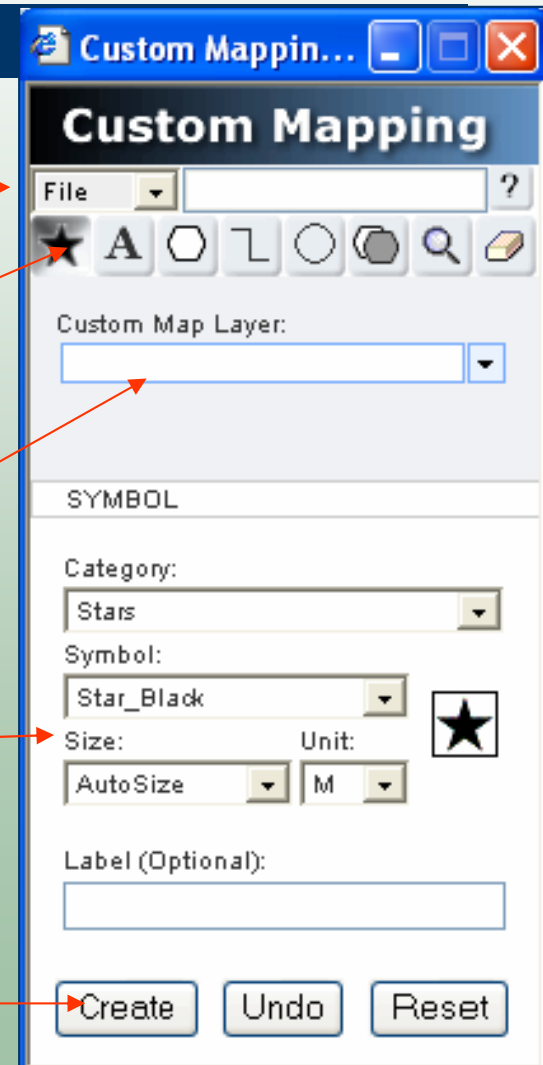
File Menu Bar

Select type of digitization

Custom Layer Name

Set attributes for feature in Digitization Form

Digitize in map



Custom Mapping – Digitization forms



Custom Mapping

File [] [?]

★ A ○ L ○ ● 🔍 📄

Custom Map Layer: []

SYMBOL

Category: Stars

Symbol: Star_Black [★]

Size: AutoSize [] Unit: M []

Label (Optional): []

Create Undo Reset

POLYLINE

Style: Solid [] Thickness: 1 []

Colour: 5 []

POLYGON

Edge Thickness: 1 [] Fill Style: None []

Colour: 7 [] Background: []

Category: Arrows [] Symbol: North Arrow []

Size: 100 [] Unit: M []

Label (Optional): []

Create Undo Reset

CIRCLE

Fill Style: None [] Background: Transparent []

Colour: 8 [] Radius (Optional): [] M []

ZOOM

Select Option:

Feature extents

Map Scale 10000 []

Map Width [] KM []

Create

DELETE

Select Option:

Delete Selection in Map

Clear Custom Map Layer

Delete Custom Map Layer

Delete Reset

Custom Mapping - Demo



Web based Solutions to Infrastructure and Asset Management

- ▶ Address search to Development Site
- ▶ Add a Development Site polygon
- ▶ Add a Site text label
- ▶ Add a North Arrow symbol
- ▶ Add a Notification circle
- ▶ Save / re-open Custom Map
- ▶ [Start Demo](#)



Address search to Development Site



Web based Solutions to Infrastructure and Asset Management

The screenshot displays the VanMap - Staff Edition - v5 interface within Microsoft Internet Explorer. The browser title bar reads "VanMap - Staff Edition - v5 - Microsoft Internet Explorer provided by the City of Vancouver".

Address Search Section:

- Number: 1475
- Street: Howe St
- Search Options: Search, Reset
- Legend Options: ?

Toolbox: Contains icons for navigation (pan, zoom, pan with scale, pan with scale and rotation, pan with scale and rotation and zoom), search, and help.

General Info: Print, SkyView, Help

Applications: Select Application: Business Licenses, Dog Licenses, Protected Licenses

Map View: Shows a street grid with property addresses. The selected address is 1475 Howe St. The map includes labels for streets such as 1600 BURBARD ST, 1400 HORNBY ST, 1600 HORNBY ST, 800 BEACH AV, 400 HOWE ST, 1400 HOWE ST, 800 HOWE ST, 700 BEACH AV, 1600 PACIFIC ST, 800 PACIFIC ST, 700 PACIFIC ST, GRANVILLE ST, GRANVILLE BRIDGE, and GRANVILLE EST.

Legend:

- Public Art
- Public Places
- The Road Ahead
- City Projects
- Licenses
- Non-Market Housing
- BC Hydro
- Hydro Pole
- Hydro Stub
- Hydro Distribution B
- Distribution Duct
- Transmission Duct
- Hydro Duct Label

Status Bar: Lat: 49.275635, Lon: -123.131968 | 1 'Property Addresses' selected | 1 : 1,964 | 1,045 x 677 (ft)

Windows Taskbar: Start button, Internet Explorer, 2 Microsoft Office Word documents, 3 Internet Explorer windows, NL, Local intranet, 8:35 AM

Add a Development Site polygon

The screenshot displays the VanMap web application interface. At the top, the browser title is "VanMap - Staff Edition - v5 - Microsoft Internet Explorer provided by the City of Vancouver". The interface includes an "Address Search" section with input fields for "Number" (1475) and "Street" (Howe St), and a "Search" button. A "Toolbox" with various navigation icons is located to the right. Below the search bar is a "Legend Options" dropdown. The main map area shows a street grid with a blue polygon overlaid on a property at 1475 Howe St. A "Custom Mapping" dialog box is open in the foreground, showing the "Custom Map Layer" set to "1475 Howe St DevSite". The dialog also shows "POLYGON" settings: "Edge Thickness" is 5, "Fill Style" is None, "Colour" is blue, and "Background" is Transparent. At the bottom of the dialog are "Create", "Undo", and "Reset" buttons. The status bar at the bottom of the map shows "Lat: 49.275068, Lon: -123.132445", "1 Property Addresses' selected", "1 : 1,964", and "1,045 x 677 (ft)". The Windows taskbar at the very bottom shows the "start" button and several open applications.

Adding a Site text label



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The screenshot displays the VanMap - Staff Edition - v5 interface within Microsoft Internet Explorer. The main window shows a map of a residential area with a blue rectangle highlighting a specific site. A text label 'Site' is placed within this rectangle. The 'Custom Mapping' dialog box is open, showing the 'TEXT LABEL' section with the following settings:

- File: [empty]
- Custom Map Layer: Site Label
- Site: [empty]
- Font: arial
- Size: 14
- Colour: [black]
- Rotation: [0]
- Background: Opaque

Buttons for 'Create', 'Undo', and 'Reset' are visible at the bottom of the dialog. The map background shows street names like Howe St, Pacific St, and Beach Av, along with various property addresses. The status bar at the bottom indicates '1 Property Addresses' selected, a scale of 1 : 1,964, and a size of 1,045 x 677 (ft).

Adding a notification area circle

The screenshot displays the VanMap - Staff Edition - v5 interface within Microsoft Internet Explorer. The main window shows a street map of Vancouver with a red circle drawn around a specific area, indicating a notification zone. A blue rectangle highlights a 'Site' on the map. The 'Custom Mapping' dialog box is open, showing the 'CIRCLE' layer selected. The 'Fill Style' is set to 'Horizontal' and the 'Background' is 'Transparent'. The 'Colour' is set to red, and the 'Radius' is 250 M. The 'Address Search' bar at the top shows '1475 Howe St'. The 'Applications' panel on the right lists 'Business Licenses', 'Dog Licenses', and 'Protected Licenses'. The status bar at the bottom indicates '0 feature(s) selected' and a scale of '1 : 5,659'.

Adding a North Arrow symbol

The screenshot displays the VanMap Staff Edition interface within Microsoft Internet Explorer. The main window title is "VanMap - Staff Edition - v5 - Microsoft Internet Explorer provided by the City of Vancouver". The interface includes an "Address Search" section with fields for "Number" (1475) and "Street" (Howe St), and a "Toolbox" with various navigation icons. A "Custom Mapping" dialog box is open in the foreground, showing a "SYMBOL" section where the "Category" is set to "Arrows" and the "Symbol" is "North Arrow". The size is set to "100" and the unit is "M". A "North Arrow" symbol is visible on the map, which is a street grid with a red circle highlighting a specific area. The status bar at the bottom shows coordinates (Lat: 49.276213, Lon: -123.133689), a scale of 1:6,000, and a distance of 3,193 x 2,052 (ft). The Windows taskbar at the bottom shows the start button and several open applications.

Saving your Custom Map



Web based Solutions to Infrastructure and Asset Management

The screenshot displays the VanMap - Staff Edition - v5 interface within Microsoft Internet Explorer. The main window shows an address search for '1475 Howe St' and a map with a red circle and a blue rectangle overlaid. A 'Custom Mapping - File Save' dialog box is open, prompting the user to enter a file path and name. The path 'C:\MyMaps\1475Howe\mwf' is entered, and the 'Save' button is highlighted. The background map shows a street grid with a red circle and a blue rectangle overlaid. The status bar at the bottom indicates the coordinates (Lat: 49.275644, Lon: -123.132699) and the scale (1 : 5,659).

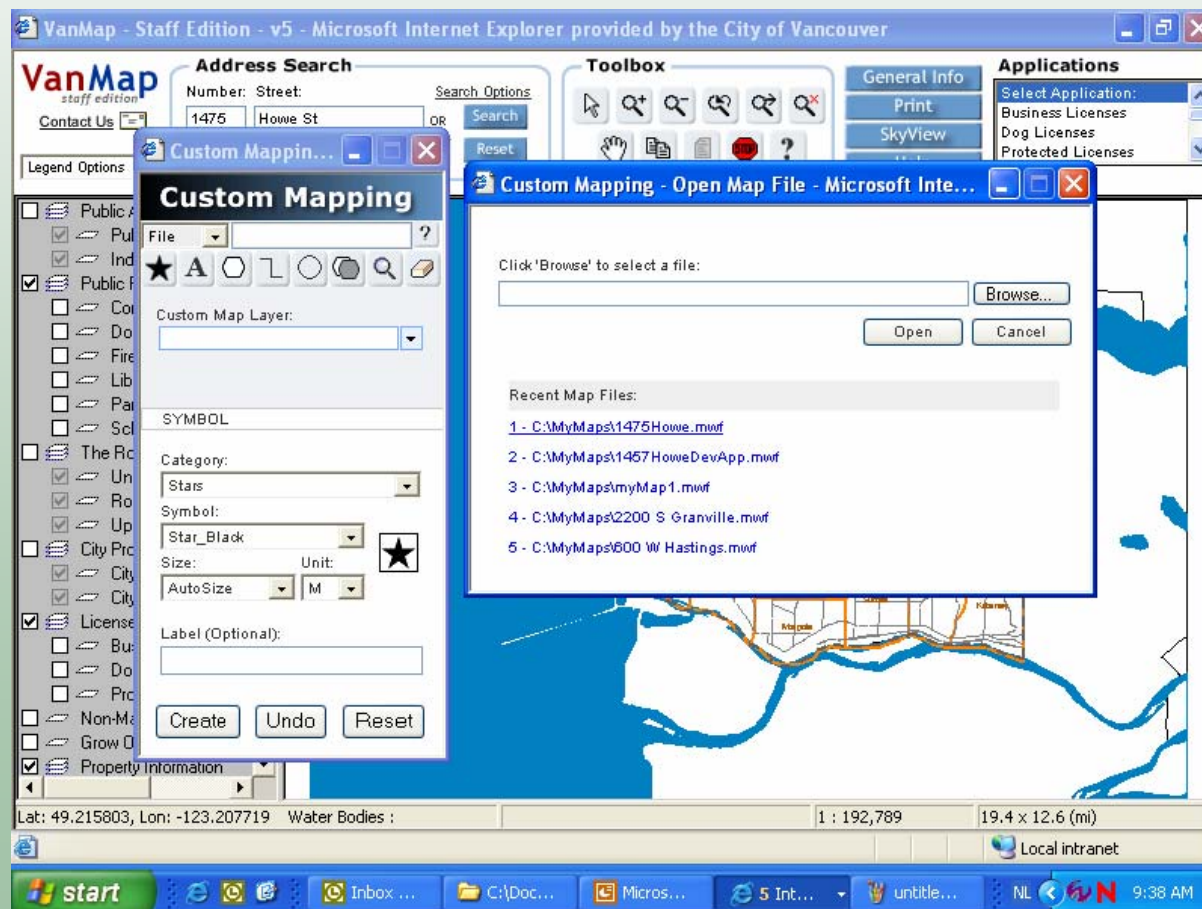
Opening a saved custom map



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The screenshot displays the VanMap - Staff Edition - v5 web application running in Microsoft Internet Explorer. The interface includes an address search bar with '1475 Howe St' entered, a toolbox with navigation icons, and an applications menu with options like 'Business Licenses' and 'Dog Licenses'. A 'Custom Mapping' dialog box is open, showing a 'File' menu with 'Open' selected. The dialog also features a 'SYMBOL' section with 'Stars' as the category and 'Star_Black' as the symbol. The background map shows a street grid of Vancouver, BC, with a scale of 1:192,789 and a size of 19.4 x 12.6 miles. The status bar at the bottom shows the Windows taskbar with the time 9:36 AM.

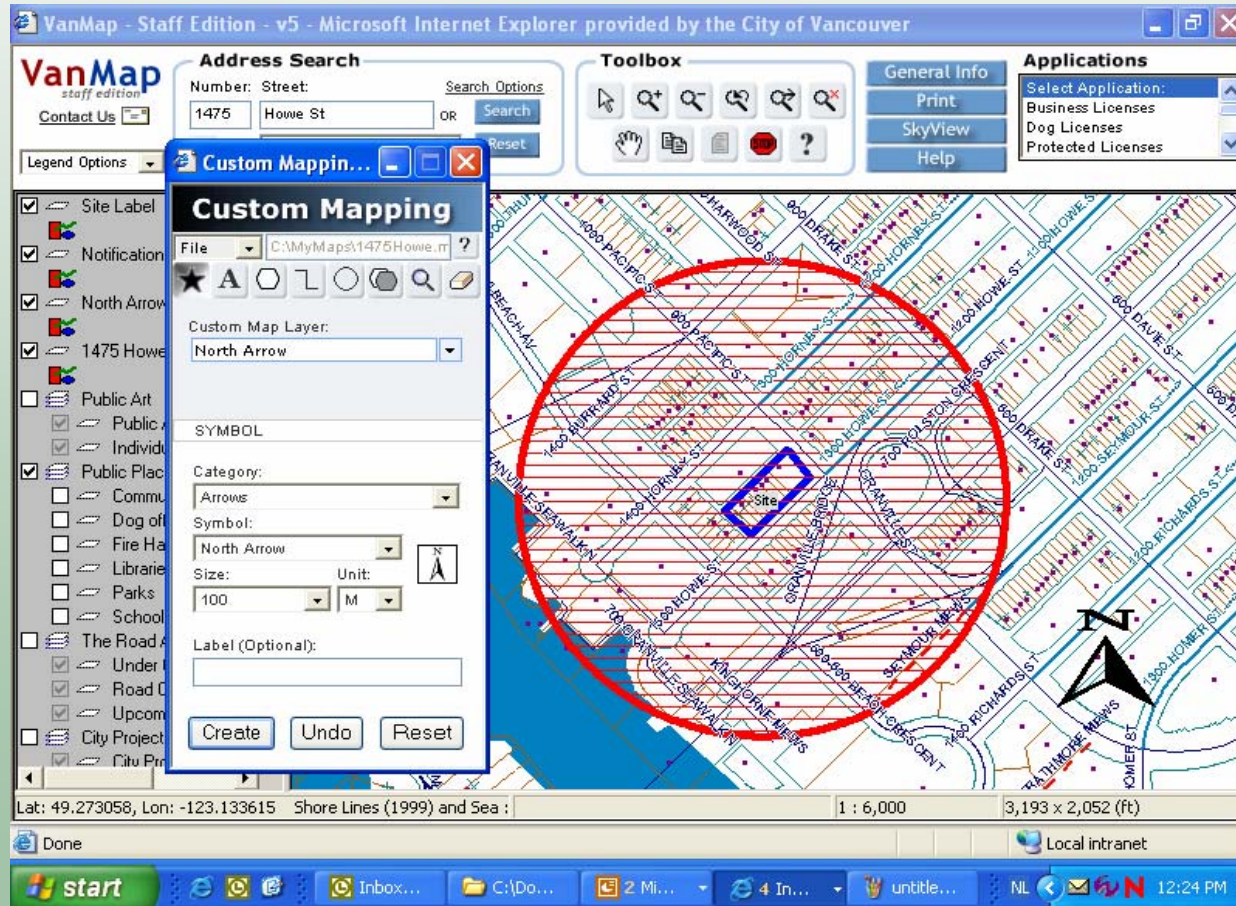
Selecting a Custom Map to open



Custom Map opens in Viewer



Web based Solutions to Infrastructure and Asset Management



Select properties for notification



Web based Solutions to Infrastructure and Asset Management

The screenshot displays the VanMap web application interface within a Microsoft Internet Explorer browser window. The browser title bar reads "VanMap - Staff Edition - v5 - Microsoft Internet Explorer provided by the City of Vancouver".

The interface includes several key components:

- Address Search:** Fields for "Number" (1475) and "Street" (Howe St) with a "Search" button and "Reset" option.
- Toolbox:** A set of navigation icons including pan, zoom in, zoom out, home, and search.
- General Info:** Buttons for "Print", "SkyView", and "Help".
- Applications:** A dropdown menu showing "Select Application:" with options: "Business Licenses", "Dog Licenses", and "Protected Licenses".
- Legend Options:** A list of map layers with checkboxes, including "Site Label", "Notification area", "North Arrow", "1475 Howe St DevSite", "Public Art", "Public Places", "Community Centres", "Dog off-leash Areas", "Fire Halls", "Libraries", "Parks", "Schools", "The Road Ahead", "Under Construction", "Road Closures", "Upcoming Projects", "City Projects", and "City Projects (Sites)".
- Map:** A street map of Vancouver with a red circular "Notification area" and a yellow rectangular "Site" highlighted. The map shows streets like Howe St, Drake St, and Howe St.
- Status Bar:** Displays coordinates "Lat: 49.275799, Lon: -123.133885", "Notification area : Notification 1 'Notification area' selected", and scale "1 : 6,000" (3,193 x 2,052 (ft)).
- Taskbar:** Shows the Windows start button, taskbar icons for "Inbox...", "C:\Do...", "2 Mi...", "4 In...", "untile...", and system tray icons for "NL", "12:25 PM".

Pasting into MS Word

CD-1 Rezoning - 1475 Howe Street.htm - Microsoft Word

File Edit View Insert Format Tools Table Window Help City of Vancouver

Type a question for help

100% Times New Roman 12 B I U

Final Showing Markup Show

1 2 3 4 5 6 7

...grammatico steps [www.urbanshapes.com](#) concept plan. The proposed SRV presents an additional 10% impervious coverage density above the 4.5 FSR suggested by the rezoning policies.

Staff recommend that the application be referred to a Public Hearing and be approved with conditions.

Site Surrounding Zoning 1475 Howe Street	City Of Vancouver

Draw AutoShapes

Page Sec At Ln Col REC TRK EXT OVR English (U.S)

Start Inb... Mic... 2 W 3 I... Ad... Ca... Wi... 2 M... EN 12:40 PM

Custom Mapping - Enhancements



Web based Solutions to Infrastructure and Asset Management

- ▶ Save custom map layers as permanent layers to staff VanMap
- ▶ Expand symbol selection
- ▶ Add polygon attribute options

VanMap Notification Application (VNA)



Web based Solutions to Infrastructure and Asset Management

- **Objective:**

VNA helps staff generate and output mailing lists of addresses based on a spatially defined area.

- **History:**

GNS: Generic Notification System, Unix-based desktop on V* GIS

- **Users and Requirements**

- Community Services Group, Engineering and City Clerk's
- Requirements for VNA from a meeting
- Migration and replacement of GNS

VanMap Notification - Interface components

Search for or zoom
goto a notification area



Web based Solutions to In

Select a type of area

Set up the notification
area

Choose a group to
notify

Generate and output a
mailing list of a chosen
stakeholder group

VanMap Notification Application (VNA) - Microsoft I...

VanMap Notification Application (VNA)

Type of Area: Buffered Area Digitized Area Predefined Area [Search Options](#)

Set Area: Select Object Digitize Point

Output File Name:

Set Buffer Object: Select Object Digitize Point

Set Buffer Parameters: Buffer Distance:

Create Buffer On:
(Layer name in legend)

Set Stakeholder: Property Owners Property Occupants Business License Holders

View Report: HTML Report (Excel/Label/Mailmerge)

Output As: List: CSV File CSG Notify98 File
Map: Word File Print Map

Locate and Set up the Area:



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VanMap - Staff Edition - v5 - Microsoft Internet Explorer provided by the City of Vancouver

Address Search: Number: 453, Street: W 12th Av

Legend Options: Public Art, Public Places, The Road Ahead, City Projects, Licenses, Non-Market Housing, Grow Operations(INTEP), Property Information, City-owned Properties, Survey Control Monume, Private Encroachment, Private Encroachment, Private Encroachment, Reserved Corridors, Contour Lines, 2-Metre Contour Lin, 10-Metre Contour Li, Street Lighting, Junction Boxes, Poles, Service Panels, Conduits, Traffic Related

Toolbox: General Info, Applications, Print, SkyView, Help

Applications: Select Application: Business Licenses, Dog Licenses, Protected Licenses

VanMap - Staff Edition - v5 - Microsoft Internet Explorer provided by the City of Vancouver

Address Search: Number: 453, Street: W 12th Av

Legend Options: Public Art, Public Places, The Road Ahead, City Projects, Licenses, Non-Market Housing, Grow Operations(INTEP), Property Information, City-owned Properties, Survey Control Monume, Reserved Corridors, Contour Lines, 2-Metre Contour Lin, 10-Metre Contour Li, Street Lighting, Junction Boxes, Poles, Service Panels, Conduits, Traffic Related, Sewer

Toolbox: General Info, Applications, Print, SkyView, Help

Applications: Select Application: Business Licenses, Dog Licenses, Protected Licenses

1 'Buffer layer1' selected

VanMap Notification Application (VNA) - Microsoft I...

VanMap Notification Application (VNA)

Type of Area: Buffered Area Digitized Area Predefined Area [Search Options](#) ?

Set Area: Output File Name: CityHall

Set Buffer Object: Select Object Digitize Point

Set Buffer Parameters: Buffer Distance: 300 m

Create Buffer On: Buffer layer1 (Layer name in legend)

Set Stakeholder: Property Owners Property Occupants Business License Holders

View Report: HTML Report (Excel/Label/Mailmerge)

Output As: List: CSV File CSG Notify98 File Word File Print Map

Select map objects and choose a group:



Web based Solutions to Infrastructure and Asset Management

VanMap Notification Application (VNA) - Microsoft I...

VanMap Notification Application (VNA)

Type of Area:

Buffered Area Digitized Area Predefined Area [Search Options](#) ?

Set Area: Output File Name:

Set Buffer Object: Select Object Digitize Point

Set Buffer Parameters: Buffer Distance: m

Create Buffer On:

(Layer name in legend)

Set Stakeholder:

Property Owners

Property Occupants

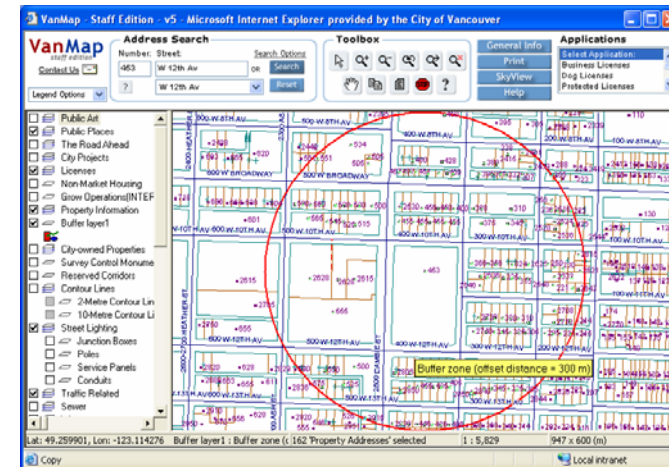
Business License Holders

View Report: HTML Report (Excel/Label/Mailmerge)

Output As:

List: CSV File CSG Notify98 File

Map: Word File Print Map



Owner Report for VanMap Staff Edition - Microsoft Internet Explorer provided by the City of Vancouver

Address: http://gisweb/reports/vmse_ownernotification0.cfm

678	68317183-0004	588738 BC LTD	146 17TH AVE W	VANCOUVER BC	V5Y1Z6	THE COMMON PROPERTY THERIN-- STRATA LOT 4 DL 526 STRATA PLAN-VR1475 & AN UNDIV 139/1000-SHARE IN THE COMMON PROPERTY THERIN--
679	68317183-0005	588738 BC LTD	146 17TH AVE W	VANCOUVER BC	V5Y1Z6	STRATA LOT 5 DL 526 STRATA PLAN-VR1475 & AN UNDIV 201/1000-SHARE IN THE COMMON PROPERTY THERIN--
680	68317197-0000	GALICHENKO VLADIMIR	305 13TH AVE W	VANCOUVER BC	V5Y1W2	----

Excel 97 or higher versions only
[Help for creating labels](#)
[Help for mail merge](#)

Generate Report and Save:



Web based Solutions to Infrastructure and Asset Management

CityHall.doc - Microsoft Word

File Edit View Insert Format Tools Table Window Help City of V

CITY OF VANCOUVER

VanMap Notific

Created on: Tuesday, May 18, 2004, Notific
layer1, Buffer Size: 300m

Created by: Anonymous User

Map Area: paste your notification area by p

Owner Report for VanMap Staff Edition - Microsoft Internet Explorer provided by the City of Vancouver

Address http://gisweb/reports/vmse_ownernotification0.cfm

Print date: 18-May-04,05:21 PM

Owner Notification Report

For internal staff use only
Source: weekly extract from Tax System (see [About Data](#) for the latest update.)

RECORD	TAX COORDINATE & STRATA	OWNER 1	OWNER 2	MAIL ADDRESS 1	MAIL ADDRESS 2	OWNER POSTCODE	LEGAL DESCRIPTION
1	17064604-0000	654570 BC LTD		2000-1040 GEORGIA ST W	VANCOUVER BC	V6E4H1	BLK 18 DL 302 PL 12682 EXC PL 17834- & 17949X---
2	17064825-0000	ROYAL BANK OF CANADA		C/O BLJC; ATTN: PROP TAX MGR	7400 BIRCHMOUNT RD PO BOX 4800	L3R4E6	LOT E BLK 340 PLN 21582 DL 526-EX PLN LMP20874---
3	17065097-0000	VANCOUVER CITY OF		453 12TH AVE W	VANCOUVER BC	V5Y1V4	----
4	17065445-0000	VANCOUVER CITY OF		453 12TH AVE W	VANCOUVER BC	V5Y1V4	----
5	17067093-0000	PLAZA 500 HOTELS LTD		500 12TH AVE W	VANCOUVER BC	V5Z1M2	----
6	17067096-	SHATO HOLDINGS		300-1088	VANCOUVER BC	V5Z2Y8	LOTS A TO C OF 15814

Local intranet

Page 1 Sec 1 1/1 At 2.8" Ln 13 Col 1 REC TRK EXT OVR English (Ca)

VanMap Notification – Future Enhancements



Web based Solutions to Infrastructure and Asset Management

1. Clip or selection mode options
2. More stakeholder groups to notify
3. Better and flexible output formats (e.g. Crystal Report)
4. Being able to save more notification settings
5. Better suited for a large area notification
6. To be based on Oracle Spatial

Summary



Web based Solutions to Infrastructure and Asset Management

- Web GIS-based applications VS desktop ones.
- VanMap for promoting GIS awareness and usefulness in the city.
- Challenges in both technical and management aspects.

Contact Information



Web based Solutions to Infrastructure and Asset Management

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- jonathan_mark@city.vancouver.bc.ca
- 604-873-7987

- IT Department, City of Vancouver

VanMap Staff Reportal



Web based Solutions to Infrastructure and Asset Management

Combined Property Reports for VanMap Staff Edition - Microsoft Internet Explorer

Address: http://gisweb/reports/vmse_parcelindex2.cfm?url=8&featnum=534794

Available Information

453 W 12TH AV

Report Name Links

Address Relationships

City-Owned Properties

Dog Licenses

Owner Notification

Tax Attributes

VanMap
staff edition

Print date: 15-

Tax Attributes Report

For internal staff use only
Source: Weekly extract from Tax System. (see [About Data](#) for the latest update.)

Record	Tax Coord	Civic Number	Street	Owner 1	Owner 2	Mail Address 1	Mail Address 2	Owner Postcode	Property Postcode	Year Built As of 1996	Big Improve Year As of 1996
1	67017007	453	W 12TH AV	CITY OF VANCOUVER		C/O PROPERTIES DIVISION	453 W 12TH AVE	V5Y1V4			

City of Vancouver

Done Local intranet

VanMap Legend Manager Application



Web based Solutions to Infrastructure and Asset Management

A screenshot of a web-based application window titled "Legend Manager - Microsoft...". The window has a dark blue header with the text "Legend Manager" in white. Below the header, there are four main sections: "Department", "Workgroup", "Legend", and "Layers". Each section has a dropdown menu. The "Department" dropdown is set to "Community Services Group", "Workgroup" is "Plan Checkers", and "Legend" is "PC-1". The "Layers" section contains a list of items: "City Projects", "City Projects (Streets-based)", "City Projects (Sites-based)", "Non-Market Housing", "Property Information", "Building Footprints (Downtown)", "Building Lines", "Block Outlines", "Property/Lot Lines", "Tie Lines", "Hooked Sites", "Lot Number", "Property Dimensions", and "Split Zones". To the left of the "Layers" list are three buttons: "Add", "Remove", and "Clear". At the bottom of the window, there are four buttons: "Admin", "Show", "Save", and "?".

Legend Manager - Microsoft...

Legend Manager

Department: Community Services Group

Workgroup: Plan Checkers

Legend: PC-1

Layers:

- City Projects
 - City Projects (Streets-based)
 - City Projects (Sites-based)
- Non-Market Housing
- Property Information
 - Building Footprints (Downtown)
 - Building Lines
 - Block Outlines
 - Property/Lot Lines
 - Tie Lines
 - Hooked Sites
 - Lot Number
 - Property Dimensions
 - Split Zones

Add

Remove

Clear

Admin Show Save ?

VanMap View Cone Application



Web based Solutions to Infrastructure and Asset Management

View Cone Application - Microsoft Internet Explorer p...

View Cones

1.
2.
3. Enter site elevation

OR
4.

View Cone Calculation Records

Site Coordinates		View		Site	Max
X	Y	ID	Name	Elevation	Height