



Assessment and Taxation Department • Service de l'évaluation et des taxes

VALUATION OF INCOME-PRODUCING PROPERTIES

2010 General Assessment

City of Winnipeg
Assessment and Taxation Department
April 22, 2009

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Introduction

This document outlines the process used by the City of Winnipeg Assessment and Taxation Department to create mass appraisal valuation models for income-producing properties in Winnipeg. These models predict the full market value of the fee simple interest for each property as of the reference date of April 1, 2008.

Income approach models were developed using multiple regression analysis. These models are comprised of sub-models which predict the gross potential income (rental, parking and other income), vacancy and collection loss, operating expenses, and capitalization rates.

The ratio statistics for the income-producing models meet the *2007 Standard on Ratio Studies* published by the International Association of Assessing Officers (July 2007).

Data Collection

Physical Characteristics

The physical descriptions of land and improvements reside in the Assessment and Taxation Department's CAMA database. This data was supplemented with information from returned questionnaires as well as information filed in connection with revisions/appeals.

Sales

Basic details regarding transfers of land came from the provincial Land Titles Office. The sales were investigated to determine if they were bona fide arms-length transfers and if any unusual financing arrangements were in place. Questionnaires mailed to the purchasers assisted in this verification process.

Rents, Vacancy, and Expenses

The primary source of rents, vacancy rates, and operating expenses came from questionnaires mailed to property owners. In addition, rent, vacancy, and operating expense information published in various reports were considered (such as CMHC Rental Market Report, Colliers, The Johnson Report, Avison Young, etc). Additional information filed in connection with revisions/appeals was also used.

Model Description

Income-producing properties were valued for assessment purposes using direct capitalization of net operating income (income approach).

The basic equation for direct capitalization is as follows:

$$\text{Market Value} = \frac{\text{Net Annual Operating Income}}{\text{Capitalization Rate}}$$

Net annual operating income is calculated as follows:

$$\text{Net Operating Income} = \text{Potential Annual Income} - \text{Vacancy and collection loss} - \text{Non-recoverable Operating Expenses}$$

Valuation of Apartments

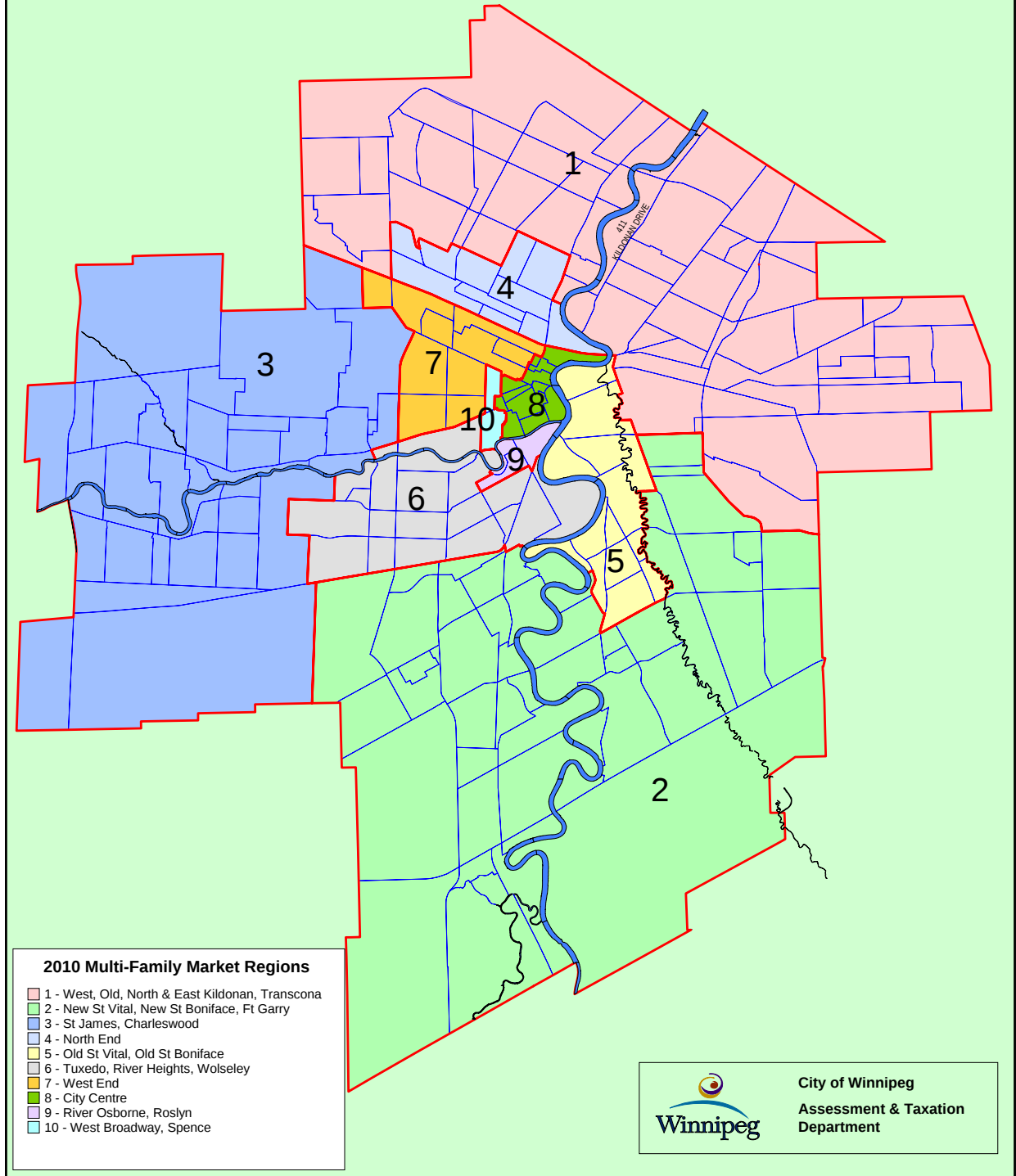
Market Regions

For valuation purposes, the city was divided into 10 market regions. They were established by taking into account the number of properties, the age and type of buildings, and sale prices.

Market Region	General Description
1	West, Old, North, and East Kildonan, Transcona
2	New St. Vital, New St. Boniface, Fort Garry
3	St. James, Charleswood
4	North End
5	Old St. Vital, Old St. Boniface
6	Tuxedo, River Heights, Wolseley
7	West End
8	City Centre
9	River Osborne, Roslyn
10	West Broadway, Spence

A map of the above regions is shown on the following page.

2010 Multi-Family Market Regions



Description of Apartment Inventory

The following tables show the inventory profile by market region, age, unit count, and storey count (note that all counts are approximate at the time of this report and represent single income stream properties):

Market Region	Count
1	400
2	148
3	138
4	117
5	247
6	207
7	221
8	128
9	162
10	168
Total	1,936

Effective Year Built	Count
Before 1946	385
1946 to 1959	455
1960 to 1974	718
1975 to 1997	336
1998 and after	42
Total	1,936

Unit Count	Count
12 or less	626
13 to 30	633
31 to 60	316
61 or more	361
Total	1,936

Storey Count	Count
Low-rise	1,709
High-rise	228
Total	1,936

Independent Variables

For the expense and capitalization rate models, the continuous variables for effective year built and storey count were sorted into groups as defined below:

Age Group	Effective Year Built
1	Before 1946
2	1946 to 1959
3	1960 to 1974
4	1975 to 1997
5	After 1997

Storey Group	Number of Storeys
Low-rise	1 to 5
High-rise	6 or more

Calibration of the Sub-models

Potential Gross Income

The variables that may affect the estimated potential gross income—which includes parking, laundry, and other income—are as follows:

- Number of rental units
- Market region
- Unit type mix
- Total gross floor area
- Average rental unit size
- Effective year built
- Tenant appeal rank
- Amount of parking
- Construction class
- Balconies
- Fireplaces
- Site influences

Vacancy and Collection Loss

Market region 4	2.6%
Market region 7	3.5%
Market region 10	2.7%
All others	1.4%

Operating Expenses

Variables	Expenses (% of EGI*)
Base rate	54.33
Age groups 4 & 5	-5.02
High-rise	-4.05
Market region 2	-3.15
Market region 4	5.27
Market region 7	5.07
Market region 8	-3.07
Market region 10	2.23

*EGI (effective gross income) is the potential gross income less vacancy and collection loss.

Using the above table, the market expense percentage for a low-rise building built in 1993 in market region 3 is calculated as follows:

$$54.33 - 5.02 = 49.31$$

Capitalization Rates

Capitalization rates were established using model-generated NOI estimates against sale prices that were time-adjusted to April 1, 2008. These capitalization rates were further supported by a review of industry-standard market reports and external property appraisals. The resulting capitalization rate model is shown in the following table:

Base rate	6.0%
Age group 1	1.75%
Market region 4	1.0%
Market region 7	1.0%
Market region 10	1.0%

Using the above table, the capitalization rate for an apartment built in 1925 is calculated as follows:

$$6.0 + 1.75 = 7.75$$

Valuation of Office and Retail Properties

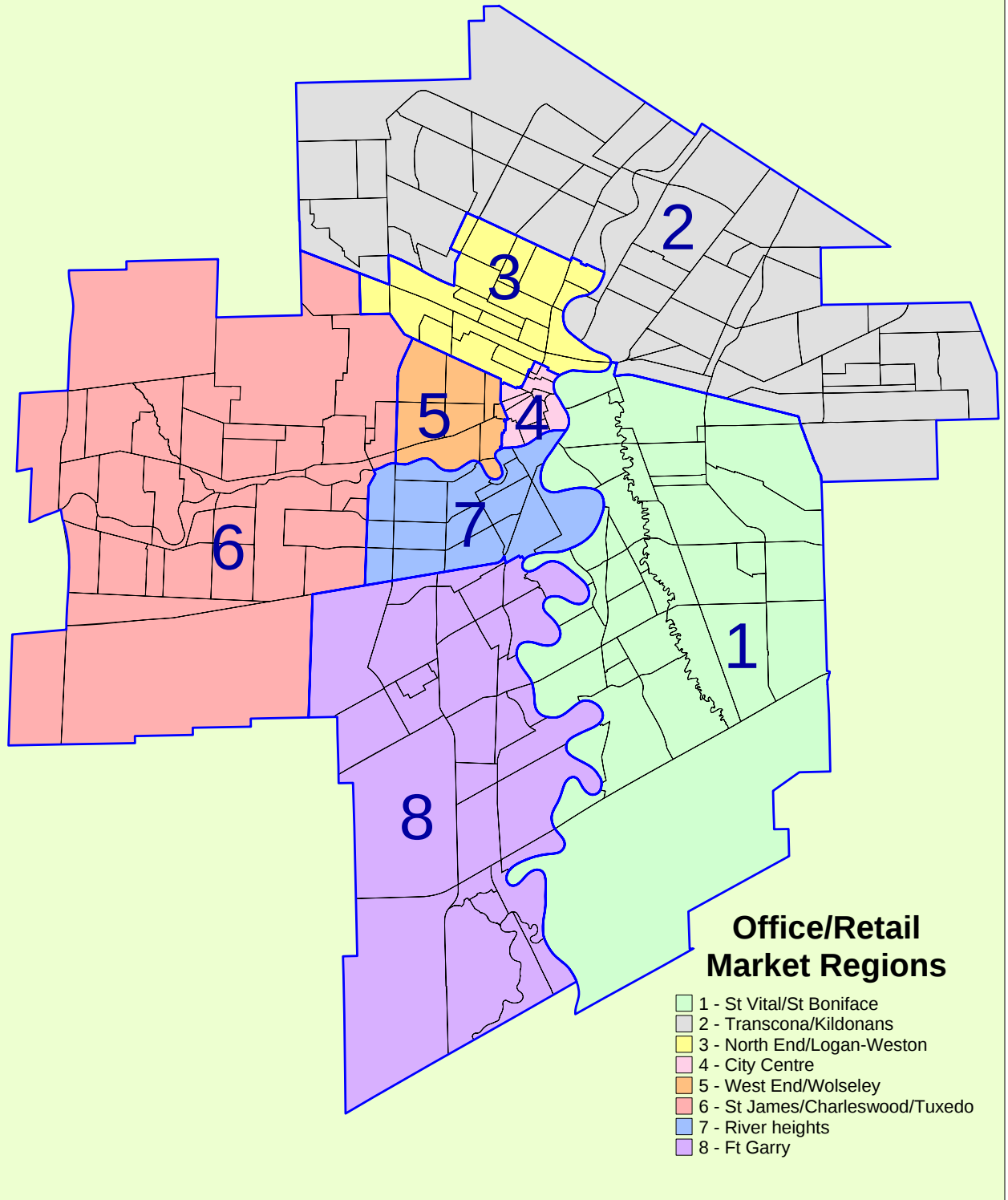
Market Regions

For valuation purposes, the city was divided into 8 market regions. They were established by taking into account the number of properties, the age and type of buildings, and sale prices.

Market Region	General Description
1	St Vital, St Boniface
2	Transcona, The Kildonans
3	North End, Logan-Weston
4	City Centre
5	West End, Wolseley
6	St James, Charleswood, Tuxedo
7	River Heights
8	Ft Garry

A map of the above regions is shown on the following page.

2010 Office/Retail Market Regions



Description of Office Retail Inventory

The following tables show the inventory profile by market region, age, and building size (note that all counts are approximate at the time of this report and represent single income stream properties):

Market Region	Count	
	Office	Retail
1	133	316
2	105	457
3	96	371
4	224	142
5	99	284
6	88	300
7	123	256
8	77	169
Total	945	2,295

Effective Year Built	Count	
	Office	Retail
Before 1926	65	146
1926 to 1945	71	262
1946 to 1974	397	893
1975 to 1997	330	783
1998 to 2002	30	109
After 2002	52	102
Total	945	2,295

Gross Floor Area (sq. ft.)	Count	
	Office	Retail
3,000 and less	183	789
3,001 to 7,000	276	749
7,001 to 15,000	195	387
15,001 to 70,000	199	315
Over 70,000	92	55
Total	945	2,295

Independent Variables

For the capitalization rate model, the continuous variable for effective year built was sorted into groups and converted into binary variables. These age groups, along with a list of the various property types, are shown below:

Age Group	Effective Year Built
1	Before 1926
2	1926 to 1945
3	1946 to 1974
4	1975 to 1997
5	1998 to 2002
6	After 2002

Office Property Types

OFA	Office–Class A
OFB	Office–Class B
OFC	Office–Class C (3 storeys or more)
OFD	Office–Old-Downtown (3 storeys or more)
OFS	Office (1-2 storeys; 3 storey suburban)
OFM	Office–Medical/Dental
OFG	Office–Government buildings
OFR	Office–Converted from residential
OCD	Office–Condominium
BNK	Banks & Credit Unions

Retail Property Types

COS	Convenience Store
CSC	Community Shopping Centre
CSP	Convenience Store with fuel pumps
DES	Department Store
DIC	Discount Store
MR1	Miscellaneous Retail – 1 Sty
MR2	Miscellaneous Retail – 2 Sty
MR3	Miscellaneous Retail – 3 Sty
NSC	Neighbourhood Shopping Centre
RRC	Retail–Converted from residential
RSC	Regional Shopping Centre
RTC	Restaurants (free-standing)–good quality including national chains
RTO	Restaurants (free-standing take-out only)
RTS	Restaurants (free-standing)–standard quality
RWC	Retail Warehouse

SUM	Supermarket
GRS	Grocery Store
VCD	Vehicle Dealership
VCW	Car Washes
VSG	Vehicle Service Garage (repair)
GSK	Gasoline Kiosk

Parking Property Types

PKL	Parking Lot
PST	Parking Structure.

Calibration of the Sub-models

Potential Gross Income

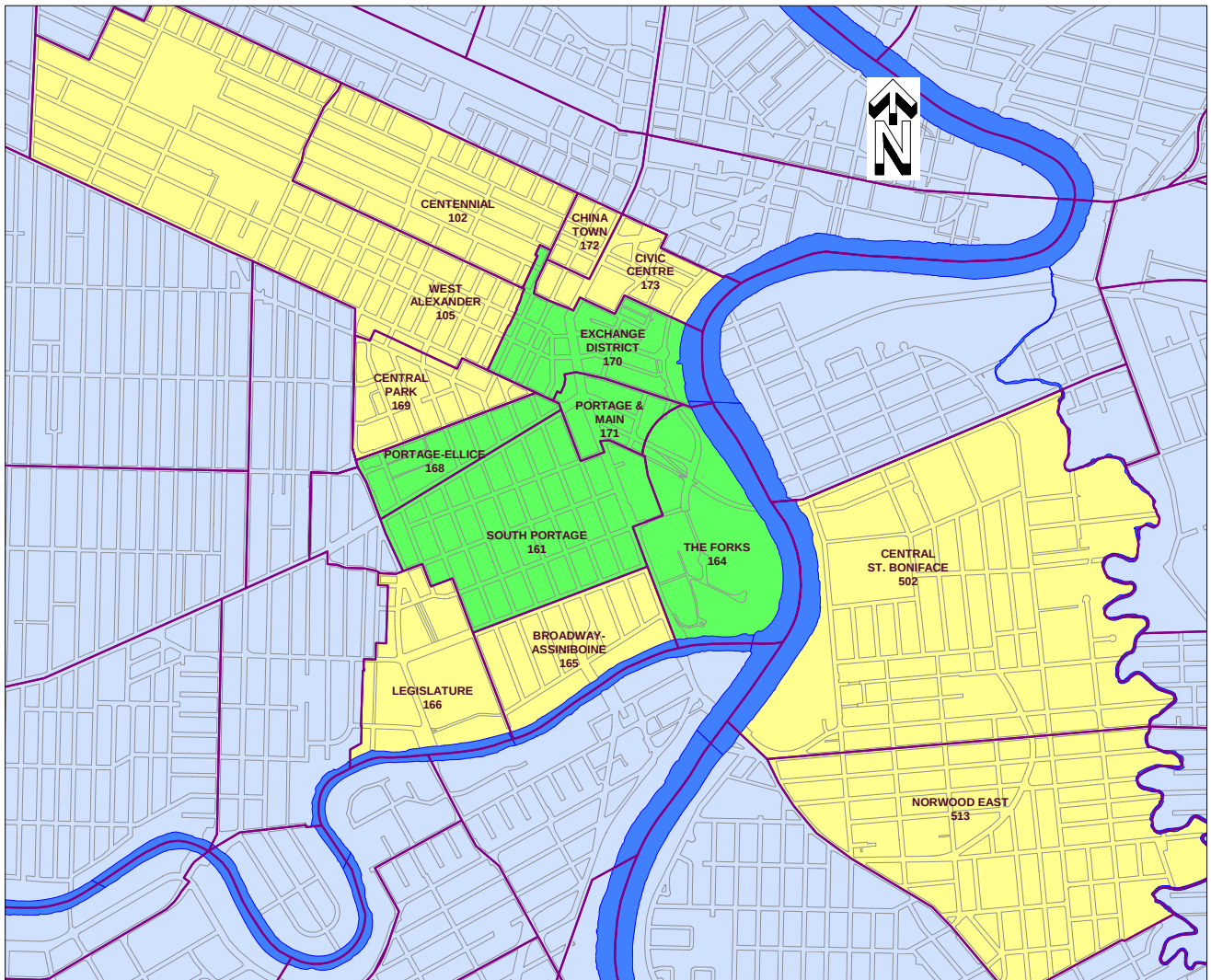
The variables that may affect the estimated potential gross income—which includes parking and other income—are as follows:

- Market region
- Leasable area
- Effective year built
- Property types
- Food Courts
- Tenant appeal rank
- Amount of parking
- Site influences
- Heat type

Parking Lots and Parking Structures

The following map and table shows the net monthly income per stall for surface parking lots and parking structures. These income rates are net of vacancy loss and operating expenses.

Surface Parking in NCAs 161, 164, 168, 170, 171 (green area)	\$70.00
Surface Parking in NCAs 102, 105, 165, 166, 169, 172, 173, 502, 513 (yellow area)	\$50.00
Surface Parking in all other NCAs (blue area)	\$17.00
All Parking Structures (Heated)	\$105.00
All Parking Structures (Not Heated)	\$85.00



Vacancy and Collection Loss

All Office types (except Class D)	6.0%
Office–Class D	12.0%
Banks & Credit Unions	2.5%
Retail (including MR1, MR2, MR3, RRC)	5.0%
Convenience stores with and without fuel pumps	5.0%
Retail warehouses, supermarkets, and grocery stores	2.0%
Department & discount stores	2.0%
All restaurants	5.5%
Neighbourhood & Community Shopping Centres	5.0%
Polo Park Shopping Centre	2.0%
St. Vital Shopping Centre	2.0%
Kildonan Place Shopping Centre	2.0%
Garden City Shopping Centre	5.0%
Portage Place Shopping Centre	5.5%
The Forks	5.0%
Vehicle Service Garages and Car Washes	5.0%
Vehicle Dealerships	2.0%

Non-recoverable Operating Expenses***Shortfall***

Office–Class A	\$12.00
Office–Class B	\$9.50
Office–Class C	\$8.50
Office–Class D	\$6.50
Office–Class M	\$8.50
Office–Class G & S (including OFR & OCD)	\$6.00
Banks & Credit Unions	\$6.50
Retail (including MR1, MR2, MR3, RRC)	\$5.00
Convenience stores	\$5.00
Convenience stores with fuel pumps	\$6.50
Retail warehouses, supermarkets, and grocery stores	\$6.00
Department & discount stores	\$6.00
Restaurants (free-standing)–full service including chains	\$9.00
All other restaurants (including RTO & RTS)	\$6.00

Neighbourhood Shopping Centres	\$5.50
Community Shopping Centres	\$9.50
Polo Park Shopping Centre	\$31.00
St. Vital Shopping Centre	\$31.00
Kildonan Place Shopping Centre	\$18.00
Garden City Shopping Centre	\$18.00
Portage Place Shopping Centre	\$18.00
The Forks	\$15.00
Vehicle Service Garages and Car Washes	\$4.00
Vehicle Dealerships	\$6.00

Management

All office and retail properties	5%
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Other expenses

All office and retail properties	2%
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Capitalization Rates

Capitalization rates were established using model-generated NOI estimates against sale prices that were time-adjusted to April 1, 2008. These capitalization rates were further supported by a review of industry-standard market reports and external property appraisals. The resulting capitalization rates are shown in the following tables:

Office–Class A	7.5%
Office–Class B	8.5%
Office–Class C	9.0%
Office–Class D	10.5%
Office–Class G	7.5%
Gas Kiosks	9.0%
Community Shopping Centres	8.5%
Polo Park Shopping Centre	7.5%
St. Vital Shopping Centre	7.5%
Kildonan Place Shopping Centre	8.0%
Garden City Shopping Centre	8.0%
Portage Place Shopping Centre	8.5%
The Forks	8.5%
Parking Lots (Downtown and surrounding NCAs – 102 105 161 164 165 166 168 169 170 171 172 173 502 503)	6.5%
Parking Lots (All Other Areas)	7.0%
Parking Structures All	8.5%

Property Type	Effective Age Group	Region 1 & 2	Region 3	Region 4 & 5	Region 6	Region 7 & 8
Office–Class S (including OFR & OCD) and Banks	All	8.5%	10.5%	9.0%	8.0%	7.5%
Office–Class M	All	9.0%	11.0%	9.5%	8.5%	8.0%

Property Type	Effective Age Group	Region 1 & 2	Region 3	Region 4 & 5	Region 6	Region 7 & 8
Neighbourhood Shopping Centres	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
Retail (including MR1, MR2, MR3, RRC)	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
Convenience stores with and without fuel pumps	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
Retail warehouses, supermarkets, and grocery stores	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
Department & discount stores	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
All Restaurants	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
Vehicle Service Garages and Car Washes	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%
Vehicle Dealerships	Before 1998	9.0%	11.0%	9.5%	8.5%	8.0%
	1998-2002	8.5%	10.5%	9.0%	8.0%	7.5%
	After 2002	8.0%	10.0%	8.5%	7.5%	7.0%

Valuation of Industrial Properties

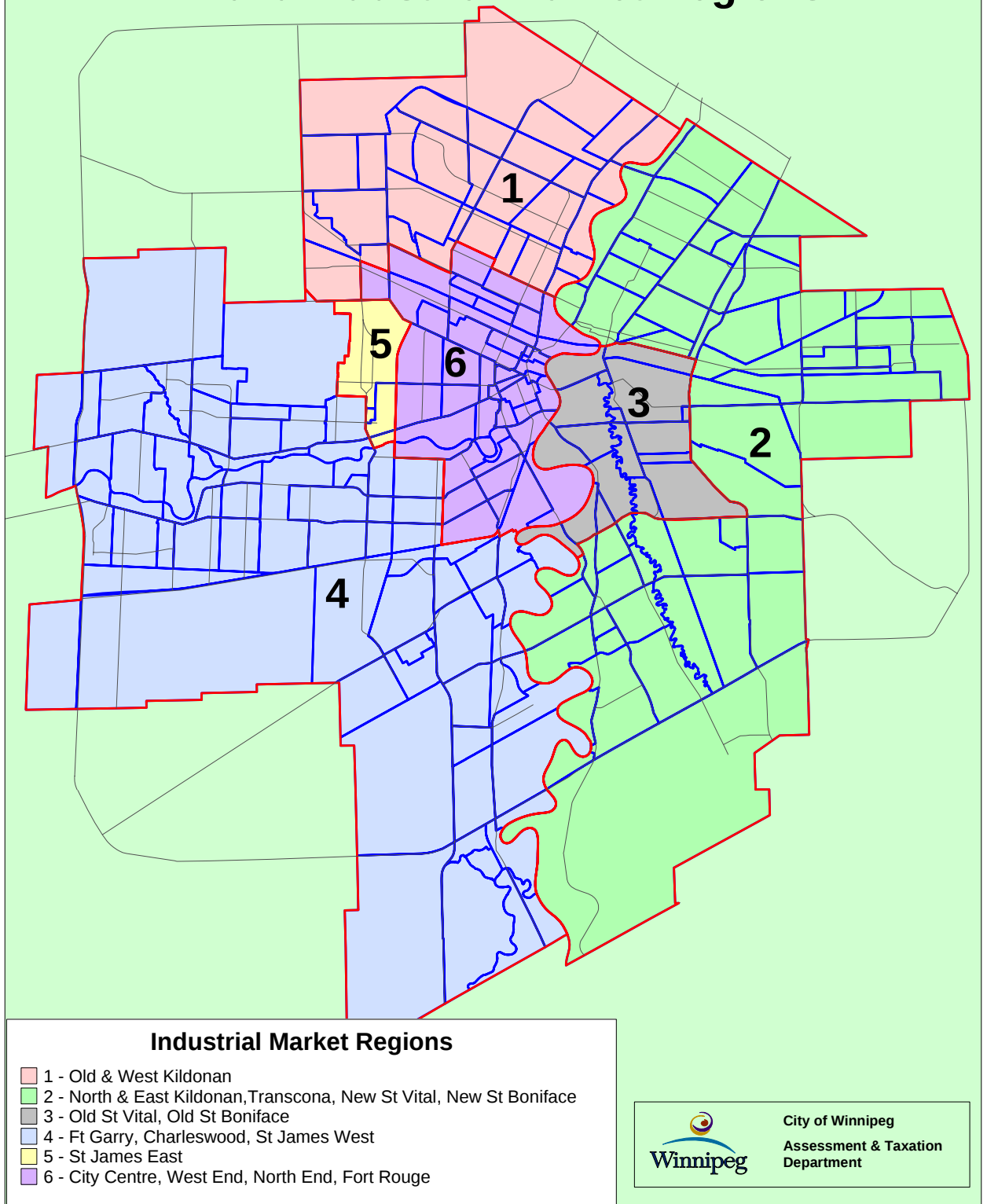
Market Regions

For valuation purposes, the city was divided into 6 market regions. They were established by taking into account the number of properties, the age and type of buildings, and sale prices.

Market Region	General Description
1	Old and West Kildonan
2	North and East Kildonan, Transcona, New St Vital and New St Boniface
3	Old St Vital and Old St Boniface
4	Ft Garry, Charleswood, Tuxedo, River Heights and St James West
5	St James East
6	City Centre, West End, North End and Ft Rouge

A map of the above regions is shown on the following page.

2010 Industrial Market Regions



Description of Industrial Inventory

The following tables show the inventory profile by market region, age, and building size (note that all counts are approximate at the time of this report and represent single income stream properties):

Market Region	Count
1	323
2	265
3	222
4	240
5	277
6	681
Total	2,008

Effective Year Built	Count
Before 1955	377
1955 to 1979	1,077
1980 to 1994	402
1995 and after	152
Total	2,008

Gross Floor Area (sq. ft.)	Count
15,000 and less	1,015
15,001 to 40,000	543
40,001 to 100,000	331
Over 100,000	119
Total	2,008

Independent Variables

For the capitalization rate model, the continuous variable for effective year built was sorted into groups and converted into binary variables. These age groups, along with a list of the various property types, are shown below:

Age Group	Effective Year Built
1	Before 1955
2	1955 to 1979
3	1980 to 1994
4	1995 and after

Industrial Property Types	
DWS	Distribution Warehouse – single occupant
DWT	Distribution Warehouse – with subtenant
FWF	Flex Warehouse – minimum 20% finish
FWS	Flex Warehouse – standard
LWH	Loft Warehouse – built before 1940
LWN	Loft Warehouse – built after 1970
LWO	Loft Warehouse – built between 1940 and 1969
MHS	Manufacturing – Heavy (single occupant)
MHT	Manufacturing – Heavy (with subtenants)
MLS	Manufacturing – Light (single occupant)
MLT	Manufacturing – Light (with subtenants)
SWS	Storage Warehouse – single occupant
SWT	Storage Warehouse – with subtenant
TRW	Transit Warehouse – Truck Terminal

Calibration of the Sub-models

Potential Gross Income

The variables that may affect the estimated potential gross income—which includes other income—are as follows:

- Market region
- Leasable area
- Effective year built
- Property types
- Tenant appeal rank
- Wall Height
- Excess Land
- Heat type

Vacancy and Collection Loss

Loft Warehouses (LWH, LWN, and LWO)	15.0%
Market region 1	6.0%
Market region 6	7.5%
All other regions	4.5%

Non-recoverable Operating Expenses***Shortfall***

All industrial properties	\$3.00
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Management

All industrial properties	5%
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Other expenses

All industrial properties	2%
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Capitalization Rates

Capitalization rates were established using model-generated NOI estimates against sale prices that were time-adjusted to April 1, 2008. These capitalization rates were further supported by a review of industry-standard market reports and external property appraisals. The resulting capitalization rates are shown in the following table:

Age group 1 (Before 1955)	9.5%
Age group 2 (1955-1979)	8.5%
Age group 3 (1980- 1994)	7.5%
Age group 4 (1995 and After)	7.5%

Testing and Evaluation of the Models

The ratio statistics for the income-producing models meet the *2007 Standard on Ratio Studies* published by the International Association of Assessing Officers (July 2007).

Mixed-use Properties

For properties with either residential units, commercial and/or industrial leasable space, the residential, commercial and industrial income streams were estimated separately using the appropriate models.