

**Implementation of the P.D. No. 1096 (1977 NBCP)
and its 2004 Revised IRR
Solved Test Problem No. 2 on the Computation of Development
Potential (Firewall and Arcades Allowed on Property)
(Revised October 2005)**

Problem: Establish the maximum development potential of a property with the following attributes:

- a) a Total Lot Area (TLA) of eight hundred square meters (800.0 sqm), i.e., 25.0 meters (m) wide by 32.0 m deep inside (or regular) lot located in a reclamation project planned in mid-2005 and to be completed by 2006;
- b) a metropolitan level commercial zoning classification (C-3), allowing for a high to very high intensity commercial structure and land use;
- c) the deed of restrictions for the property and local ordinances **allow firewalls and arcades** for the property; and
- d) direct access from a fourteen (14.0) m wide road-right-of-way (RROW).

A. Development Potential to be Determined	B. Reference in the 2005 Revised IRR of the NBC (PD1096)	C. Finding/s for Comparative Use
1. Is the C-3 property of the minimum recommended lot size?	Table VIII.G.7 (Guidelines)	Yes
2. What is the general classification of use/ character of occupancy allowed for the proposed building/ structure?	Table VII.1 (IRR)	Division E Structure
3. What are the required setbacks for the proposed building/ structure?	Table VIII.3 (IRR); see also Figures VIII.12 through 15 and 20 (IRR); and Figure VIII.G.13 (Guidelines)	<p style="text-align: right;">Front Setback – 5.0 m</p> <p style="text-align: center;"><u>Yard</u> Computation as follows: a) Front at 5.0mX25.0m=125.0sqm; <u>Court</u> Computation as follows: b) Front Yard Area at 125.0mX50.0%=62.5.sqm;</p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p style="text-align: right;">187.5 Sq.M <u>(yard and court for building with firewall)</u></p>
4. What are the Allowable Maximum Building Footprint (AMBF) and the	Check against allowed setbacks and choose firewall options from Figures VIII.12 through	Assuming that the maximum firewalls are proposed for the property (as in Figures VIII.14 and 15), the AMBF shall be 612.5 sqm

Maximum Allowable Percentage of Site Occupancy (PSO) if the property is to be developed with firewalls on 3 sides and a court at the center of the structure?	15 (IRR) ; refer also to Table VIII.G.6 (Guidelines)	(resulting in a PSO of 76.56%) <i>Note: PSO = AMBF/ TLA</i>
5. Check Against Maximum Allowable Percentage of Site Occupancy (PSO)	Table VIII.1 (IRR)	90.0% max. allowable PSO if with firewall (use the 77.56% PSO which is setback compliant)
6. What is the Building Height Limit (BHL)	Table VII.2 (IRR) if there is no covering ordinance	16.0 – 60.0 storeys (48.0 m to 180.0 m)
7. Check Application of Angles/ Slopes to Satisfy Natural Light and Ventilation Requirements	Table VII.G.3 (Guidelines), Figure VIII.20 (IRR); and Figure VIII.G.13 (Guidelines)	Resultant Floor Plates for a building with firewalls (at 16.0 storeys or 180.0 m BHL) excluding basement level shall be as follows: a) G/F through 9/F (612.5 SqM* x 9 = 5,512.5SqM); b) 10/F (587.5 SqM)**; c) 11/F (562.5 SqM); d) 12/F (537.5 SqM); e) 13/F (512.5 SqM); f) 14/F (487.5 SqM); g) 15/F (462.5 SqM); h) 16/F (437.5 SqM); i) Deck Roof Level or 17/F (412.5 SqM) <u>TGFA of 9,512.5 Sq.M (at 16.0 storeys plus deck)</u> *AMBF for a development with maximum firewall construction and which excludes the front yard and the court, i.e., 800.0 sqm (TLA) – 125.0sqm (front yard) – 62.5.sqm (court) = 612.5 SqM. ** excludes 1.0m total incremental setback, i.e., 27.0m (max. building <u>depth</u> at ground through 9 th floor) – 1.0 m (front incremental setback) = 26.0 m (max. building <u>depth</u> at the 10th floor).

		<p><i>The resultant floor plate at the 10th floor and all upper floors should therefore be incrementally reduced by 25.0 sqm, i.e., 25.0m (max. building <u>width</u> at ground through 9th floor)</i></p> <ul style="list-style-type: none"> - 1.0m (incremental setback) <p><i>= 25.0 sqm incremental reduction per upper floor starting at the 10th floor.</i></p> <p>j) 18/F (387.5 SqM); k) 19/F (362.5 SqM); l) 20/F (337.5 SqM); m) 21/F (312.5 SqM); n) 22/F (287.5 SqM); o) 23/F (262.5 SqM); p) 24/F (237.5 SqM); q) 25/F (212.5 SqM); r) 26/F (187.5 SqM); s) 27/F (162.5 SqM); t) 28/F (137.5 SqM); u) 29/F (112.5 SqM); v) 30/F (87.5 SqM); w) 31/F (62.5 SqM); x) 32/F (37.5 SqM); y) Deck Roof Level or 33/F (12.5 SqM)</p> <p style="text-align: center;"><u>TGFA of 3,200.0 Sq.M</u> <u>(for 18th to 32nd storeys plus deck)</u></p> <p style="text-align: center;"><u>Grand TGFA of 12,712.5 Sq.M</u> <u>(at 32.0 storeys plus deck)</u></p>
<p>8. What is the Max. Total Gross Floor Area (TGFA) based on the applicable Max. GFA?</p> <p><i>(Checking)</i></p>	<p>Table VII.G.2 (Guidelines)</p>	<p>The Max. TGFA shall be 10,800.0 SqM at a Max. GFA of 7,200.0 SqM <i>(at 16.0 storeys or 180.0 m BHL)</i></p> <p style="text-align: right;">while</p> <p>the max. TGFA shall be 40,800 SqM at a Max. GFA of 27,200.0 SqM <i>(at 60.0 storeys or 180.0 m BHL which is <u>not applicable in this case</u>)</i></p> <p style="text-align: center;"><u>Conclusion: The resultant TGFA of 12,712.5 SqM (as computed in item 7 above) is within the allowed range for Max. TGFA's for a C-3 property.</u></p>
<p>9. What is the Maximum Gross Floor Area (GFA)</p>	<p>Multiply TLA of 800.0 SqM by applicable FLAR information from</p>	<p>The Max. GFA is 7,200.0 SqM at FLAR 9.0 <i>(at 16.0 storeys or 180 m BHL)</i></p>

based on the applicable FLAR? (Checking)	Table VII.G.1 (Guidelines)	while the Max. GFA shall be 27,200.0 SqM at FLAR 34.0 (at 60.0 storeys or 180.0 m BHL which is <u>not applicable in this case</u>) <u>Checking:</u> The resultant TGFA (as computed in item 8 above) <u>divided by 1.5</u> (a conversion multiplier from Table VII.G.2) yields a 8,475.0 SqM Max. GFA for the subject C-3 property. <u>Conclusion:</u> The resultant GFA (as computed above) is within the allowed range for Max. GFAs for a C-3 property.
10. What is the Floor to Lot Area Ratio (FLAR) Designation/ Rights <u>above grade</u> ? (Checking)	Table VII.G.1 (Guidelines)	FLAR 9.0 (at 16.0 storeys or 180.0 m BHL) up to FLAR 34.0 (at 60.0 storeys or 180.0 m BHL which is <u>not applicable in this case</u>) <u>Checking:</u> The resultant Max. GFA of 8,475.0 SqM (as computed in item 9 above) <u>divided by the Total Lot Area</u> (TLA) of 800.0 SqM yields a 10.59 FLAR for the subject C-3 property. <u>Conclusion:</u> The resultant FLAR (as computed above) is within the allowed range for FLARs for a C-3 property.
11. Check Minimum Required Off-RRROW/ Onsite Parking	Table VII.4 (IRR)	Parking slot number and type shall depend on the intended or declared use of the proposed building or structure
12. Basement	See Figure VIII.G.23 (Guidelines); check also local ordinances concerning basement construction limitations (if any)	Basement TGFA may approximate the TGFA above grade, effectively doubling the development potential of the property above grade.
13. Arcades	check local ordinances concerning arcade construction limitations (if any)	Arcade shall only be inside the property line

Answers:

The maximum development potential of the subject property is as follows:

- 1) **an AMBF of 612.5 SqM** (from item 4);
- 2) **a PSO of 77.56% of the TLA** (from item 4);
- 3) **a Max. TGFA of 12,712.5 SqM** (from item 7 and 8);
- 4) **a Max. GFA of 8,475.0 SqM** (from item 9); **and**
- 5) **a 10.59 FLAR** (from item 10).

Nothing follows.