

# KBC DEVELOPMENTS

## 502 RICHMOND STREET

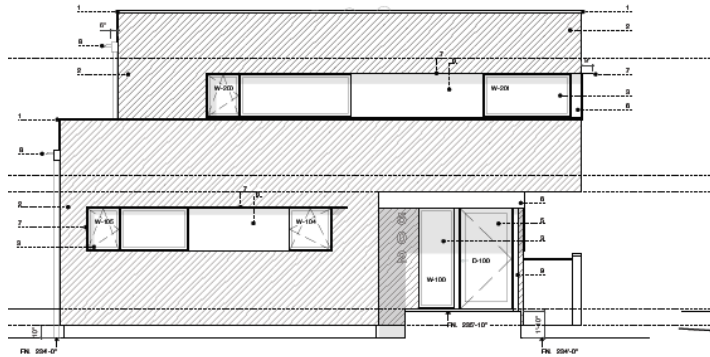


# BACKGROUND




- KBC Developments is family-owned and operated since 1959. Average 5 to 8 projects per year.
- Homeowner and project team **motivated to build better than code minimum** and attracted to City's suite of incentives and technical support offered to **support a better constructed home with enhanced benefits.**

# 502 RICHMOND STREET



- Single-detached custom home, conditioned floor space 2,647 ft<sup>2</sup>
- Designed by Randy Bens Architecture (RBA)
- Initial **EnerGuide rating of 79**  
*NOTE: As per plans and before new GJ rating.*
- Consultation with Energy Save New West and Energy Advisor (City Green) on Plan Evaluation Report led to **higher target EnerGuide rating of 85** and potential **ENERGY STAR® for New Home** certification.




**EnerGuide Rating System Plan Evaluation**  
**BCBC Performance Path Compliance**  
**502 Richmond St**  
**New Westminster, BC**

EnerGuide File Number: 7929P00023

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# ENERGY UPGRADES

## BUILDING ASSEMBLIES

### 1. Foundation

- Basement – R24
- Pony wall - R24
- Concrete slab - R20 under whole slab



### 2. Main Walls

- R24 + 1.5" (R6) Roxul exterior insulation



### 3. Attic and Roof

- R34

### 4. Exposed Floor

- R34



# ENERGY UPGRADES

## WINDOWS & DOORS

### 5. Window

- Double Glazed, Low-E, Argon, Insulated Spacer and ENERGY STAR® qualified for Zone 1

### 6. Doors

- ENERGY STAR® qualified for Zone 1



# ENERGY UPGRADES

## MECHANICAL SYSTEMS

### 7. Space Heating & Cooling

- Hydronic heating (IBC Boiler, 95% AFUE)

### 8. Heat Recovery Ventilation

- HRV (EnerReady Model 2000 NP, 80% SRE @ 0°C)

### 9. Domestic Hot Water

- 75G tank fired by boiler



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# ENERGY UPGRADES

## APPLIANCES & LIGHTING

### 10. Appliances

- ENERGY STAR® fridge, dishwasher, washer and dryer.

### 11. Lighting

- ENERGY STAR® qualified bulbs/fixtures

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**It's Simple**  
*Save Energy. Save Money.*



**Save Water.**

City of New Westminster is partnering with BC Hydro and FortisBC to help local residents save energy, money and water.

Between May 1<sup>st</sup> and June 30<sup>th</sup>, you can access \$50 to \$200 in rebates on select ENERGY STAR® refrigerators, clothes washers and dryers.

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# KEY LEARNING

1. **INTEGRATED PROCESS** – Taking a holistic approach to design and construction of 502 Richmond Street **helped align project objectives** and support team-based decision making.
2. **NEW MATERIALS & TECHNOLOGIES** – Our positive experience with new building materials (i.e., insulated concrete forms, Roxul exterior insulation) has **broadened our perspective** on the range of materials and systems.
3. **VALUE OF ENERGY MODELING** – Energy modeling helped our project team make **evidenced-based decisions on practical upgrade options** that were supported by performance data.
4. **HRV / HYDRONIC DESIGN** – Upfront mechanical design helped **right size the HVAC system and improve installation**. Addressing HRV systems at an earlier stage avoids potentially compromised ventilation performance.