Date: 23 April 2026

City of Vancouver
Department of Planning, Urban Design and Sustainability
Address 515 West 10th Avenue, Vancouver, BC V5Z 4A8
Attention: Director of Planning

Application for Development Permit
Reference: 26635
Site Address: 1677, 1687, 1695 West 2ND Avenue, Vancouver, BC

TECHNICAL DATA SUMMARY

- **Zoning:** IC-2
- **Use:** Commercial, Retail, Self-Storage and Offices
- **Site Area:** 1,380.1 sq.m. (14,855 sq.ft.)
- **Site Dimensions:** Approximately 38.1 m X 36.0m (125 ft X 118 ft)
- **Density Ratio:** 4.5
- **Total Gross Area:** 6,798 sq,m, (73,172 sq.ft.)
- **Height**: 30.43 m (99.84 ft)

1. SITE CONTEXT

1.1 URBAN CONTEXT

Situated at the corner of West 2nd Avenue and Pine Street, this development site occupies a prime position within Vancouver's vibrant Fairview neighborhood. Located in the Burrard Slopes area just southwest of Granville Island, the location is a distinguished hub for high-end automotive showrooms, curated furniture galleries, and boutique design studios.

- Lifestyle & Accessibility: The area is exceptionally walkable and bike-friendly, serving as a premier destination for fine arts, designer fashion, and luxury vehicles.
- Culinary Scene: Beyond its retail appeal, the neighborhood is a "hidden gem" for fine dining.

- Urban Fabric: The local architecture is characterized by a compact, high-density design. Buildings are typically situated close to property lines, a deliberate urban planning choice intended to foster a sense of community and encourage active public engagement at the street level.
- Mini-storage demand: Regional mini-storage facilities are currently at or near peak capacity. A critical supply gap exists in Downtown Vancouver, the West Side, and the Broadway Corridor; notably, even the nearest facility, located about one block away, is unable to meet this surging local demand.

1.2 ZONING

The subject site is currently zoned IC-2 (Industrial-Commercial), a specialized "hybrid" designation unique to Vancouver's urban planning. The primary intent of this zone is to serve as a transitional buffer, bridging the gap between heavy industrial districts and polished commercial or residential corridors.

- Architectural Standards: Unlike traditional industrial zones, IC-2 mandates "external design regulations." This ensures that developments maintain a high-quality, continuous aesthetic along major thoroughfares to enhance the streetscape.
- Synergetic Retail: The zone permits retail uses that are "compatible with and complementing" light industry. This creates a unique ecosystem where luxury furniture showrooms, for example, can operate alongside on-site workshops or assembly spaces.
- Mixed-Use Flexibility: General Office is permitted as an outright use, provided it is integrated into a mixed-use light industrial building.
- Confirmed Land Use: Following a formal inquiry in late 2025, (Development Enquiry Case 201002982874) the City of Vancouver's Planning, Urban Design & Sustainability department confirmed that Mini-Storage Warehouse use is supported in principle at this location.

1.3 SITING

Occupying the corner of West 2nd Avenue and Pine Street, the subject site is currently improved with 3 two-story structures built to their property lines on three sides. The proposed development seeks to modernize this footprint by introducing strategic setbacks along both street frontages, significantly enhancing the pedestrian experience through expanded landscaping and greenery.

- Public Realm Enhancement: By pulling the building back from the lot lines, the design creates a more inviting, breathable environment for the community compared to the existing "lot-to-lot" configuration.
- Street Animation: Leveraging its prominent corner profile, the ground-floor commercial and retail units will feature entrances on both West 2nd and Pine. This is intended to stimulate street-level activity and foster natural public interaction.
- Infrastructure Alignment: In accordance with City of Vancouver policy, a 2.0 feet dedication will be provided at the rear of the property (north side of 1687 West 2nd Ave.) to facilitate lane widening and improve local logistics.

1.4 LOCAL TRANSPORTATION

To optimize the site's footprint and prioritize the public realm, the proposed development includes a full basement for underground parking. All vehicular access is strategically routed through the rear lane to minimize street-side disruptions.

- Service Operations: Loading, unloading, and refuse collection will be contained either within the building's ground level or restricted to the immediate vicinity of the rear lane to maintain clear traffic flow.
- Cycling Infrastructure: Dedicated on-site bicycle storage is provided, further supporting the neighborhood's established reputation as a bike-friendly hub.
- The proposed development adheres to the Mini-storage Warehouse Guidelines, as it is situated a significant distance from rapid transit stations per the designated catchment areas in Maps A through D.

2. DESIGN RATIONALE

2.1 PROGRAM

The proposed development features a versatile floor plan designed to maximize the site's commercial potential. The ground plane will accommodate up to six retail units, anchored by a formal entrance and customer service lounge dedicated to the mini-storage warehouse. The project's architectural and operational framework adheres to the City of Vancouver's Mini-Storage Warehouse Guidelines.

- Employment Hub: The Mini-Storage floors (Level 2 to 6) are designed with the flexibility to serve as professional office or industrial spaces, potentially increasing local employment opportunities and daytime density within the neighborhood.
- Innovative Parking Solutions: Due to the site's compact dimensions, a conventional parking ramp would be inefficient. Instead, the building will utilize a car elevator to access the basement. This technical solution ensures a sufficient supply of parking stalls to support diverse commercial uses, including high-traffic tenants such as restaurants.
- Operational Efficiency: By utilizing an elevator system, the project overcomes significant site constraints to provide the necessary infrastructure for a thriving, multi-use commercial environment.

2.2 URBAN DESIGN / MASSING

The proposed development strictly adheres to the permitted building height and Floor Space Ratio (FSR) regulations. To balance density with visual appeal, the building's massing is strategically "lightened" through a fully transparent glazed base along the West 2nd Avenue and Pine Street frontages, creating an inviting, open street presence.

- Industrial Heritage: The above-ground mini-storage component is designed with an aesthetic that pays homage to shipping containers - a subtle nod to the area's industrial character.
- Refined Detailing: This container concept is elevated through the use of high-quality punched windows and integrated sun-shading devices, ensuring the structure is both functional and sophisticated.
- Visual Vitality: The facade is further enriched by a dynamic palette of colored walls and windows. These elements not only reinforce the shipping container motif but also serve to break up the building's volume, adding texture and vibrancy to the overall urban fabric.

2.3 FORM & CHARACTER

The proposed design adopts a contemporary architectural language that balances a sense of "ordered randomness" with a disciplined, underlying logic. This ad-hoc aesthetic creates a dynamic visual profile while remaining grounded in a predictable pattern and cohesive structural set.

- Adaptive Ground Plane: The commercial and retail units on the main floor utilize a less "rigid" design framework. This intentional flexibility allows the architecture to seamlessly accommodate a wide variety of tenant operations and service requirements.

- Industrial Resonance: The mini-storage component serves as a focal point for the building's identity. By utilizing cladding systems with rustic textures and earthy tones, the design offers a modern interpretation of the neighborhood's industrial heritage.
- Materiality: This combination of contemporary form and rugged materiality ensures the building feels both innovative and deeply rooted in its local context.

3. LANDSCAPE

The landscape design proposal introduces robust shrub planting with seasonal interest to soften the building edges and enhance the public pedestrian experience along Pine Street and West 2nd Avenue. New replacement tree planting is proposed along West 2nd Avenue to strengthen the streetscape and add vertical structure. In accordance with CPTED principles, planting is kept low and limited to areas directly adjacent to the building, maintaining open sightlines and an unobstructed view at the corner of the block. Proposed trees are specified with clear stems to support visibility and reduce opportunities for concealment.

4. CIVIL DESIGN

The civil engineering scope for this development includes site servicing, roadworks, and rainwater management in accordance with City of Vancouver (CoV) requirements and the Vancouver Building By-law (VBBL). A utility key plan will be produced to coordinate all off-site upgrades, including roadworks, servicing, and 3rd party utility work, to identify and mitigate potential conflicts. Site sewer and water services will be coordinated with COV and designed to CoV standards. The rainwater management design utilizes a detention tank and flow control structure to manage peak discharge rates, which mitigates the need for off-site sewer upgrades and reduces the frequency of downstream combined sewer overflows (CSOs) into local water bodies. To enhance environmental sustainability, the system will be engineered to prioritize gravity flow where elevations permit, eliminating the energy consumption and maintenance requirements associated with mechanical pumping. This approach ensures the development meets VBBL sustainable design practices while minimizing its impact on municipal infrastructure.

5. SUSTAINABILITY & MECHANICAL SYSTEM

Please refer to the appended Mechanical Design Write Up by Pontem Group.

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MEMORANDUM

From:	Tasrif Rahman, M.A.Sc., P.Eng.	PG260115 April 17, 2026
Project Name: Project Address:	Commercial & Self-Storage Development 1677,1687,1695 West 2nd Avenue, Vancouver, BC	Revised: N/A
Subject:	**Mechanical Design Write up**	

To:	Company:	Contact:
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1 INTRODUCTION

The following report outlines the basis of design used to evaluate and select the heating, cooling, ventilation, and domestic hot water systems for the proposed 6-storey mixed-use development located at 1677–1695 West 2nd Avenue, Vancouver.

The development consists of commercial retail units (CRUs) at grade, self-storage occupancies primarily on Levels 2 through 4, anticipated IT-intensive office tenancy on Levels 5 and 6, and one level of below-grade parkade.

The mechanical design is based on providing energy-efficient, code-compliant systems tailored to each occupancy type, while maintaining flexibility for future tenant fit-out conditions, particularly at the upper office levels where enhanced internal heat gains may be anticipated.

2 DESIGN STANDARDS & CLIMATIC DATA

The design is based on compliance with the 2025 Vancouver Building By-law, National Energy Code of Canada for Buildings 2020 Performance Path, and relevant ASHRAE standards.

The project is located within Climate Zone 4C (Marine), which supports significant economizer operation during a large portion of annual hours, subject to ambient humidity limitations.

Parameter	Summer (2.5%)	Winter
Outdoor Design Temperature	28.0°C DB / 20.0°C WB	-8.0°C DB
Indoor Setpoint (Office – L5–L6)	22.0°C	21.0°C
Indoor Setpoint (Storage – L2–L4)	N/A	14.9°C

3 HVAC SYSTEM DESCRIPTION

3.1 FLEXIBLE OFFICE INFRASTRUCTURE (LEVELS 5–6)

Levels 5 and 6 are designed as flexible office tenancy areas with provisions for enhanced electrical and cooling capacity to accommodate potential future high internal heat gain scenarios.

A dedicated rooftop chilled water plant is provided to support these allowances in a scalable manner.

3.1.1 COOLING PLANT CONFIGURATION

- Modular 225-ton air-cooled chiller plant in an N+1 (4+1) configuration
- Designed to ensure operational redundancy and maintainability
- Capacity selected based on conservative allowance for future tenant internal load scenarios

3.1.2 EFFICIENCY STRATEGY

The system incorporates integrated water-side economizer capability to enable free cooling during favourable ambient conditions.

This reduces compressor operation and improves annual energy performance, consistent with Vancouver's Climate Zone 4C conditions.

3.1.3 REFRIGERANT STRATEGY

Low-GWP refrigerants will be utilized in accordance with applicable regulatory requirements and evolving environmental standards.

3.2 COMMERCIAL, STORAGE & CUSTOMER LOUNGE ZONES

3.2.1 SPACE CONDITIONING

High-efficiency Variable Refrigerant Flow (VRF) systems are proposed for CRUs, customer lounge, and support spaces, providing fully electric heating and cooling.

Self-storage floors (L2–L4) are conditioned using tempered heating and ventilation systems designed to meet code minimum requirements and operational storage temperature targets.

This approach supports electrification objectives and simplifies system distribution.

3.2.2 PARKADE VENTILATION (BELOW-GRADE LEVEL)

The below-grade parkade is mechanically ventilated in accordance with applicable Vancouver Building By-law requirements and life safety provisions.

Ventilation is provided via a demand-controlled ventilation (DCV) system using CO and NO_2 sensors, modulating exhaust fan operation based on vehicle emissions levels.

The system is integrated with the fire alarm system to support emergency operation modes, including smoke control where required.

3.2.3 DEDICATED VERTICAL SERVICE SPACE

All primary mechanical risers are housed within a dedicated 2-hour fire-rated vertical service space, coordinated with the Code Consultant.

This improves distribution efficiency, enhances maintainability, and reduces reliance on floor-by-floor fire dampers for major risers, subject to final code review.

Early shaft reservation is required to maintain design coordination and future flexibility.

4 ENERGY & SUSTAINABILITY STRATEGY

The project follows the NECB 2020 Performance Path and supports electrification and greenhouse gas reduction objectives.

Measure	Description	Compliance Impact
Heat Recovery	ERVs with high-efficiency sensible/latent performance	Reduced heating demand and improved TEDI

Setpoint Optimization	Storage maintained at 14.9°C	Improved NECB compliance performance
Free Cooling	Water-side economizer operation	Reduced annual cooling energy
Electrification	Fully electric HVAC and DHW systems	Elimination of on-site fossil fuel use

Mechanical feasibility remains contingent upon confirmation of available electrical service capacity, standby power strategy, and tenant-specific requirements for enhanced cooling provisions at upper levels.

5 PLUMBING AND FIRE PROTECTION

5.1.1 PLUMBING

Low-flow plumbing fixtures are specified throughout the building to support municipal water conservation objectives.

Domestic hot water (DHW) is provided via decentralized electric storage-type water heaters located on each floor, serving washroom groups at that level. This approach eliminates the need for a centralized recirculation system, reduces distribution heat losses, simplifies piping infrastructure, and minimizes mechanical shaft requirements.

This strategy is well suited to the low and intermittent DHW demand associated with the self-storage occupancies.

5.1.2 FIRE PROTECTION

The building will be fully sprinklered in accordance with NFPA 13.

Enhanced fire protection systems, including pre-action provisions, are anticipated for upper-level tenant areas subject to final design requirements and occupancy classification.

6 ARCHITECTURAL, STRUCTURAL, AND COORDINATION REQUIREMENTS

The rooftop mechanical plant and below-grade systems require early coordination with architectural, structural, electrical, and acoustical consultants.

6.1.1 STRUCTURAL SUPPORT

- Rooftop equipment support and dunnage design
- Seismic restraint and vibration isolation

- Point load and slab reinforcement considerations
- Parkade ventilation shaft coordination

Structural reinforcement may be required depending on final equipment selection and layout.

6.1.2 ACOUSTICS

Mechanical systems must comply with City of Vancouver property-line noise bylaws. An acoustical review is recommended during design development.

6.1.3 ELECTRICAL

Mechanical feasibility is contingent upon confirmation of electrical service capacity, standby power strategy, and emergency power integration for critical mechanical systems, including upper-level cooling and parkade ventilation.

7 CONCLUSION

The proposed mechanical strategy provides a technically feasible, scalable, code-compliant, and energy-efficient solution aligned with the City of Vancouver's environmental objectives and permit requirements.

The design supports long-term flexibility for office tenancy with enhanced infrastructure allowances, while maintaining efficient operation for self-storage, commercial retail, and parkade occupancies.

Further coordination with all disciplines will be required during design development to confirm final system capacities, routing, standby power provisions, and acoustical compliance requirements.

Prepared by,

Tasrif Rahman, M.A.Sc., P.Eng.

[redacted]

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