



City of
Richmond

Report to Development Permit Panel

To: Development Permit Panel

Date: March 18, 2016

From: Wayne Craig
Director of Development

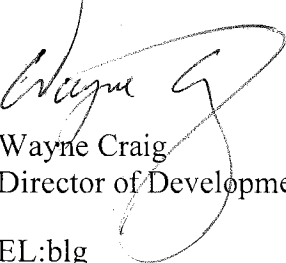
File: DP 14-671945

Re: Application by Zhao XD Architect Ltd. for a Development Permit at 9800, 9820, 9840 and 9860 Granville Avenue

Staff Recommendation

That a Development Permit be issued which would:

1. Permit the construction of 18 three-storey townhouse units at 9800, 9820, 9840 and 9860 Granville Avenue on a site zoned "Medium Density Townhouses (RTM2)"; and
2. Vary the provisions of Richmond Zoning Bylaw 8500 to increase the rate of tandem parking spaces from 50% to 62%.



Wayne Craig
Director of Development

EL:blg
Att.

Staff Report

Origin

Zhao XD Architect Ltd. has applied to the City of Richmond for permission to develop 18 three-storey townhouse units at 9800, 9820, 9840 and 9860 Granville Avenue. The site is being rezoned from “Single Detached (RS1/F)” zone to “Medium Density Townhouses (RTM2)” under Bylaw 9179 (RZ 14-658085), which received third reading following the Public Hearing on February 16, 2015. The site is currently vacant. A Servicing Agreement for road widening, frontage beautification, storm upgrades, and service connections is required prior to issuance of a Building Permit for the site.

Development Information

Please refer to the attached Development Application Data Sheet (Attachment 1) for a comparison of the proposed development data with the relevant Bylaw requirements.

Background

Development surrounding the subject site is as follows:

- To the north, across Granville Avenue, A.R. MacNeill Secondary School, on a site zoned “School & Institutional Use (SI)” and a seven (7) unit townhouse development on a site zoned “Town Housing (ZT60) – North McLennan (City Centre)”.
- To the east, two (2) single-family homes on large lots zoned “Single Detached (RS1/F)”, fronting No. 4 Road; currently under a rezoning application (RZ 15-708960) to rezone these properties to “Medium Density Townhouses (RTM2)” to facilitate a seven (7) unit townhouse development.
- To the south, a 22-unit townhouse development, on a site zoned “Low Density Townhouses (RTL1)”.
- To the west, a mix of newer and older single-family homes on large lots zoned “Single Detached (RS1/F)”, fronting Granville Avenue.

Rezoning and Public Hearing Results

The Public Hearing for the rezoning of this site was held on February 16, 2015. At the Public Hearing, a property owner of the adjacent townhouse development to the south at 7060 Bridge Street expressed concerns in regards to settlements, noise, and potential damage to their units due to construction.

In response, the applicant has advised staff that, prior to any construction, the project team is willing to conduct inspections of the adjacent site to determine predevelopment conditions, and will document this for the owners. This documentation will be used to determine any damage that may occur during construction. This has been shared with the adjacent resident by way of a letter from the applicant. No property damage to the neighbouring properties is anticipated based on studies prepared by professional geotechnical and structural engineers for the applicant. Construction management will be in accordance with City’s standards in terms of working hours and sound rating levels, as well as an approved Construction Traffic and Parking Management Plan.

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the significant urban design issues and other staff comments identified as part of the review of the subject Development Permit application. In addition, it complies with the intent of the applicable sections of the Official Community Plan (OCP) and is generally in compliance with the “Medium Density Townhouses (RTM2)” zone, except for the one (1) zoning variance noted below.

Zoning Compliance/Variations (staff comments in bold)

The applicant requests to vary the provisions of Richmond Zoning Bylaw 8500 to:

- 1) Increase the rate of tandem parking spaces from 50% to 62% to allow a total of 22 tandem parking spaces in 11 townhouse units;

(26 residential parking spaces are required for this 18-unit development; a maximum of nine (9) double car garages (18 residential parking spaces) can be in tandem arrangement. By permitting an extra two (2) tandem parking garages (4 residential parking spaces), the developer is able to provide 10 extra residential parking spaces on-site.

Tandem parking is generally supported, as it can reduce pavement area on-site and facilitate a more flexible site layout. With the extra residential parking spaces provided on-site and on-street parking available on Granville Avenue, staff do not envision any noticeable impact to parking in the immediate neighbourhood due to the proposed tandem parking variance.

This variance was identified in the Rezoning Report to Committee and no concerns were raised at the Public Hearing. A restrictive covenant to prohibit the conversion of the tandem garage area into habitable space has been secured at the rezoning stage.)

Advisory Design Panel Comments

The Advisory Design Panel supported the design of the project and the Design Panel’s suggested design changes have been incorporated into the proposal. A copy of the relevant excerpt from the Advisory Design Panel Minutes from Wednesday, April 1, 2015 is attached for reference (Attachment 2). The design response from the applicant has been included immediately following the specific Design Panel comments and is identified in ‘*bold italics*’.

Analysis

Conditions of Adjacency

- While the proposed rear yard setback meets the minimum zoning requirements (i.e., 3.0 m), there is no tree planting opportunity within the rear yards, as an existing sanitary statutory right-of-way (SRW) covers the entire 3.0 m wide rear setback area.
- Evergreen hedges and 1.8 m tall wood fence are proposed along the rear property line for screening between the subject and the neighbouring property to the south.
- Varied roof line, extra setback on the upper floors, reduced window sizes and window orientation are included in the architectural design to address potential adjacency issue.

- Second floor setback to the living room window is approximately 4.94 m to the rear (south) property line and there is no south facing bedroom windows on the third floor overlooking the neighbouring yards to the south.
- Perimeter drainage will be required as part of the Building Permit to ensure storm water is managed and addressed through the development and will not impact the neighbouring properties.
- Open fence at a maximum of 1.2 m (4 ft.) high is proposed along the east side property line to allow for a more open future outdoor amenity area on the adjacent development site to the east.

Urban Design and Site Planning

- The proposal consists of seven (7) clusters, including four (4) triplex and three (3) duplex buildings. Eleven (11) units have direct access from the Granville Avenue to the north and seven (7) units have access from the internal drive aisle.
- The internal road layout is a T-shaped, with future connections to the neighbouring properties to the east and west, secured by Statutory Right of Way (SRW).
- All units have two (2) vehicle parking spaces; seven (7) units have a side-by-side double car garage and 11 units have tandem garages. A Restrictive Covenant, prohibiting the conversion of tandem parking area into habitable area has been secured at rezoning.
- A total of four (4) visitor parking spaces, including an accessible visitor parking space, are proposed, which meets the minimum bylaw requirement. Both residential and visitor bicycle parking are provided in compliance with the Zoning Bylaw requirements.
- All units have private outdoor spaces consisting of front or rear yard and balconies on the second floors that can be accessed directly from the living space. The provision of private outdoor spaces exceeds the development guidelines (37 m² per unit).
- Outdoor amenity space is proposed opposite the site entry for maximum casual surveillance opportunity and sun exposure. The size and location of the outdoor amenity space is appropriate in providing open landscape and amenity space convenient to all of the units.
- A covered mailbox kiosk and short-term bicycle parking spaces are provided at the entrance of the outdoor amenity space.
- The required garbage, recycling and organic waste storage enclosures have been incorporated into the design of Building No. 2 (at the west side of the entry driveway) to minimize their visual impact.
- Additional outdoor amenity space (10% of the site area) as per the City Centre Amenity Space Provisions in the City Centre Area Plan is provided as landscaped area throughout the site.

Architectural Form and Character

- The architect advised that the architectural language adopted in the design is inspired from traditional Georgian style homes; with patterned fenestration, symmetrical or locally symmetrical façade composition. Individuality of dwelling units is expressed by their separate entry porches, differences in colours, and local massing variations. Building

components refer to various styles and architectural languages, and are intended to be integrated with each other using an eclectic approach that also reflects contemporary functional and constructional practices.

- The overall appearance of the proposal generally conforms to the design guidelines of the North McLennan area and should fit in well with the character of the surrounding area.
- A pedestrian scale is generally achieved along the public streets and internal drive aisle through the inclusion of variation in building projections, recesses, entry porches, varying material/colour combinations, landscape features, and the use of individual unit entrances.
- The impact of blank garage doors has been mitigated with panel patterned doors, transom windows, unit entrances, planting islands along the drive aisle, and planters on the second floor balconies.
- The proposed building materials (asphalt roof shingles, hardie board/siding/panel, and wood fascia/trim/column) are generally consistent with the Official Community Plan (OCP) Guidelines and compatible with the existing single-family character of the neighbourhood.
- Earth tone colours have been used for all siding materials to fit with the context of the neighbourhood. Strong contrasting colours are used on the accent walls to provide visual interest.

Landscape Design and Open Space Design

- Tree preservation was reviewed at rezoning stage, two (2) City trees along the frontage of the site and 16 trees on site are identified for removal.
- Based on the 2:1 tree replacement ratio goal stated in the Official Community Plan (OCP), 32 replacement trees are required. The applicant is proposing to plant 20 replacement trees on-site, including five (5) conifers and 15 deciduous trees. A voluntary contribution of \$6,000 to the City's Tree Compensation Fund in lieu of planting the remaining 12 replacement trees has been secured at rezoning.
- Four (4) trees on site, two (2) street trees, and two (2) trees located on the neighbouring property to the east are identified for retention. Tree protection fencing is required to be installed as per the Arborist Report recommendations prior to any construction activities (including demolition) occurring on-site. A Tree Survival Security will be required as part of the Landscape Letter of Credit as a condition to Development Permit issuance to ensure that these trees will be protected. No Landscape Letter of Credit will be returned until the post-construction assessment report, prepared by the Arborist, confirming the protected trees survived the construction, is reviewed by staff.
- A pedestrian-oriented streetscape along Granville Avenue is proposed; with a landscaped edge treatment, low metal fencing with masonry columns, and gates and walkways to individual townhouse unit front doors.
- Each unit will have a private yard with landscaping, lawn area and a patio. Various hedges, shrubs and ground covers, as well as perennials and grasses have been selected to ensure the landscape treatment remains interesting throughout the year.
- The location of outdoor amenity space provides the easy access and visual transparency and surveillance for the townhouse residents.

- A children's play area, designed for children aged 2 to 5 years old, is proposed for the outdoor amenity area. The play equipment includes a double slide, a curly climber, a rock climb, and a boarding net; it was chosen to fit into the provided space and to allow multiple children to play at the same time. The equipment provides different play opportunities for the development of social, imagination, balance, and motor skills. A bench is also provided for caregivers.
- The existing grade at the mature trees is retained to create a less formal natural play area. The natural play area provides opportunities for imaginative play and social interaction. The difference in grading provides interest for children of all ages.
- The entry driveway, surface parking stalls, and a portion of the internal drive aisle will be treated with permeable pavers for better water infiltration and variety in paving surfaces. Feature paving will be used to identify and enhance the pedestrian route from the site entrance to the internal units.
- In order to ensure that the proposed landscaping works are completed, the applicant is required to provide a landscape security of \$106,086.40 in association with the Development Permit.
- Indoor amenity space is not proposed on-site. An \$18,000 cash-in-lieu contribution (\$1,000 per unit) has been secured as a condition of rezoning approval, consistent with the OCP.

Crime Prevention Through Environmental Design

- Site lighting and clear site lines provide unobstructed views of surrounding area.
- Plantings near residential entries are low to maximize views and casual surveillance opportunities.
- All entrances are visible and overlooked by pedestrians or by neighbour's windows.
- The landscape design avoids hiding places that would conceal criminals.
- Security lights including wall mounted lighting for drive aisles and lighting at entries to provide adequate outdoor security illumination.

Sustainability

- A Restrictive Covenant specifying that all units are to be built and maintained to the EnerGuide rating of 82 or higher, and that all units are to be solar-hot-water-ready, has been secured at rezoning. A Certified Energy Advisor has confirmed that the proposed townhouse units will be designed to achieve an EnerGuide rating of 82. The report, prepared by the Energy Advisor, is on file and will be utilized through the Building Permit review process to ensure these measures are incorporated in the permit drawings.
- The developer also advises that the following sustainability features will be incorporated into the development:
 - Use of drought tolerant or native dominant plantings.
 - Use of permeable surfaces on a portion of the drive aisle and surface parking stalls.
 - Use of exterior building materials require low maintenance and provide highly durable surfaces (i.e., hardie siding).

Accessible Housing

- The proposed development includes two (2) convertible units that are designed with the potential to be easily renovated to accommodate a future resident in a wheelchair. The potential conversion of these units will require installation of a vertical lift in the stacked storage space (which has been dimensioned to allow for this in Unit B2 & B3 of Building 5) in the future, if desired.
- All of the proposed units incorporate aging in place features to accommodate mobility constraints associated with aging. These features include:
 - Stairwell hand rails.
 - Lever-type handles for plumbing fixtures and door handles.
 - Solid blocking in washroom walls to facilitate future grab bar installation beside toilets, bathtubs and showers.

Conclusion

The applicant has satisfactorily addressed staff's comments regarding conditions of adjacency, site planning and urban design, architectural form and character, and landscape design. The applicant has presented a development that fits into the existing context. On this basis, staff recommend support of this Development Permit application.



Edwin Lee
Planner I
(604-276-4121)

EL:blg

The following are to be met prior to forwarding this application to Council for approval:

- Adoption of Rezoning Bylaw 9179 (RZ 14-658085).
- Receipt of a Letter-of-Credit for landscaping and tree survival in the amount of \$106,086.40; Letter-of-Credit will not be released until the Letter of Assurance from the Landscape Architect confirming that landscaping are installed as per Development Permit, as well as the Post Construction Impact Assessment Report from the Arborist; confirming that the protected trees survived the construction, are reviewed by staff. The City will release 80% of the security after construction and landscaping on the proposed townhouse complex are completed, inspections are approved, and an acceptable post-construction impact assessment report is received. The remaining 20% of the security will be released one year later subject to inspection.

Prior to future Building Permit issuance, the developer is required to complete the following:

- Installation of appropriate tree protection fencing around all trees to be retained as part of the development prior to any construction activities, including building demolition, occurring on-site.
- Enter into a Servicing Agreement for the design and construction of road widening, frontage beautification, storm upgrades, and service connections.
- Incorporation of energy efficiency, CPTED, sustainability, and accessibility measures in Building Permit (BP) plans as determined via the rezoning and/or Development Permit processes.
- Payment of DCC's (City & GVS&DD), School Site Acquisition Charges, Address Assignment Fee, and all required servicing costs.
- If applicable, payment of latecomer agreement charges associated with eligible latecomer works.

- Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Division at 604-276-4285.
- Submission of a Construction Parking and Traffic Management Plan to the Transportation Division. Management Plan shall include location for parking for services, deliveries, workers, loading, application for any lane closures, and proper construction traffic controls as per Traffic Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic Regulation Section 01570.



DP 14-671945

Attachment 1

Address: 9800, 9820, 9840 and 9860 Granville Avenue

Applicant: Zhao XD Architect Ltd.

Owner: Zhang's Cubic Estates Holdings Ltd.

Planning Area(s): South McLennan Sub-Area (City Centre)

Floor Area Gross: 3,135.8 m²

Floor Area Net: 1,997.6 m²

	Existing	Proposed
Site Area:	3,076 m ²	No Change
Land Uses:	Single-Family Residential	Multiple-Family Residential
OCP Designation:	Neighbourhood Residential	No Change
Zoning:	CCAP: General Urban T4 South McLennan Sub-Area Plan: Residential, 2½ storey typical (3-storeys maximum) with 0.55 base FAR	No Change
Number of Units:	4	18

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	Max. 0.65	0.65 Max.	none permitted
Lot Coverage – Building:	Max. 40%	39.8%	none
Lot Coverage – Non-porous Surfaces:	Max. 65%	64.7%	none
Lot Coverage – Landscaping:	Min. 25%	25% Min.	none
Setback – Front Yard (m):	Min. 6.0 m	6.0 m Min.	none
Setback – East Side Yard (m):	Min. 3.0 m	3.0 m Min.	none
Setback – West Side Yard (m):	Min. 3.0 m	3.0 m Min.	none
Setback – Rear Yard (m):	Min. 3.0 m	3.63 Min.	none
Height (m):	Max. 12.0 m (3 storeys)	11.8 m (3 storeys)	none
Lot Width:	Min. 50.0 m	74.69 m	none
Off-street Parking Spaces – Regular (R) / Visitor (V):	1.4 (R) and 0.2 (V) per unit	2 (R) and 0.2 (V) per unit	none
Off-street Parking Spaces – Total:	30	40	none

Tandem Parking Spaces:	Max. 50% of proposed residential spaces in enclosed garages (36 x Max. 50% = 18)	22 spaces (62%)	Variance Requested
Small Car Parking Spaces	Max. 50% when 31 or more spaces are provided on site (40 x Max. 50% = 20)	0	none
Handicap Parking Spaces:	1	1	none
Amenity Space – Indoor:	Min. 70 m ² or Cash-in-lieu	Cash-in-lieu	none
Amenity Space – Outdoor:	Min. 6 m ² x 18 units = 108 m ²	108 m ²	none

**Excerpt from the Minutes from
The Design Panel Meeting**

**Wednesday, April 1, 2015 – 4:00 p.m.
Rm. M.1.003
Richmond City Hall**

Panel Discussion

Comments from the Panel were as follows:

- stairs at the back units appear institutional;
Larger head trims are added to windows on staircases, which reduces the punched window effect with the extra decoration adds more residential building character (see drawing A6, A8 & A8.1).
- driveways lack landscaping; consider reducing the setback from the street to provide more opportunities for landscaping;
Pathways to rear entry doors for front units are re-designed to make additional landscaping area for more plantations.
- colonial design of the entries to the front units does not fit with the rest of the project; triplexes have heavy columns; consider design development to simplify the unit entries;
The architectural language adopted in the design is inspired from traditional Georgia style homes with fenestration pattern and symmetrical or locally symmetrical design composition. Due to the nature of townhouse use, individuality of each units is expressed by separate entry porch among others factors. Porch as well as other parts of design elements is part of façade composition referring to various different styles and architectural language. The design philosophy is based on a more eclecticism architectural approach for a better functional, constructional and aesthetical adaptability. Front porches have been modified to reduce the apparent mass (see revised elevations drawing A7, A8). Two columns for front porches have been reduced from 24” to 18” for each which significantly reduces the porch massing.
- like the massing, setbacks and variation of townhouse units along Granville Avenue; however, proposed colours appear flat;
Unit A & Unit A7 are revised to have 6” projection of wall thickness that make up a recess for adjacent units. The staggered footprint created by the recess makes the transitions of different wall materials and color less flat (see plans A-3 & A-4).
- look at opportunities for introducing greens along the internal drive aisles;
Balcony planters are proposed (as shown on ADP package); extra plantation on the increased green areas adjacent to the combined path way to back doors should address the comments.

- look at softening the landscaping for the proposed amenity space and consider design development to allow more uses other than just a children's play area;
As already shown on the landscape architectural design, pathway and bench have been proposed in addition to other items merely for children's play. The pathway and bench can be used by adults – as a consideration to allow more uses other than just a children's play area.
- commend the applicant for retaining the trees; however, concerned that planting along the street frontage might encroach on the trunk of the tree; applicant needs to review the planting scheme;
No planting will encroach on the tree trunks. The design proposal is made based on arborist's recommendations.
- trees adjacent to the children's play area are boxed off and disconnected from the amenity area; look at opportunities to integrate them into the amenity area;
The sunken area around tree is paved with mulch and about 1'-8" lower than the formal play area. It can be used for a less formal play area for children. The difference in grading provides interest for children of different ages.
- look at the survivability of planting materials between the buildings;
As shown on the landscape plan, Western Sword Fern is mostly proposed in the areas between buildings. Sword ferns are very tough and can survive occasional dry periods, do well with light sunlight and prefer cool weather to overly warm.
- appreciate the decorative pavers at the entrance to the development; however, consider accentuating the utilities, e.g. garbage and recycling with distinct decorative pavers;
Utility space such as garbage/recycling enclosure and mailbox kiosk are accentuated by geometry of paving and curbs. The presence of garbage/recycling enclosure would however preferably not be accentuated too much. As shown on the landscape and architectural site plan, the width of access driveway from street into the subject site changes, and additional curbed-off area is provided for garbage/recycling enclosure. The curb line variation and pavement differentiation between driveway area and curbed-off area accentuates the enclosure presence. Since the garbage/recycling enclosure is just a utility space, we would not like to emphasize it too much. Similar case applies to the amenity area, but the accentuation of its presence is much more preferred.
- agree with comments regarding the disconnect between the design of the townhouse entries along the street and the overall architecture of the buildings.
As mentioned earlier, the design philosophy is based on a more eclecticism architectural approach for more flexibility. Porch design has been improved for the buildings facing Granville Ave. with additional details similar in scale to rest elements of each building (see drawings A7, A8), where the volume of the porch canopy has been broken into smaller segments to reduce massing of the porch as suggested. Eclecticism promotes a design approach that emphasizes more on pure architectural composition that compromise "different styles" into a "new" form rather than exclusion of one style from another. An approach called Neo-eclectic architecture as an example, is a name for an architectural style that has influenced residential building construction in North America in the later

part of the 20th century and early part of the 21st. The residential buildings built today are designed in the way incorporates many styles. Architects and designers call this new stylistic mix Neoelectic, or Neo-eclectic which is the "style" we are commonly using today.



City of Richmond

Development Permit

No. DP 14-671945

To the Holder: ZHAO XD ARCHITECT LTD.

Property Address: 9800, 9820, 9840 AND 9860 GRANVILLE AVENUE

Address: C/O XUEDONG ZHAO
255 - 11181 VOYAGEUR WAY
RICHMOND, BC V6X 3N9

1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
4. The "Richmond Zoning Bylaw 8500" is hereby varied to increase the rate of tandem parking spaces from 50% to 62% to allow a total of 22 tandem parking spaces in 11 townhouse units.
3. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #4 attached hereto.
4. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
5. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$106,086.40 to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Holder if the security is returned. The condition of the posting of the security is that should the Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the City may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Holder. Should the Holder carry out the development permitted by this permit within the time set out herein, the security shall be returned to the Holder. The City may retain the security for up to one year after inspection of the completed landscaping in order to ensure that plant material has survived.
6. If the Holder does not commence the construction permitted by this Permit within 24 months of the date of this Permit, this Permit shall lapse and the security shall be returned in full.

Development Permit

No. DP 14-671945

To the Holder: ZHAO XD ARCHITECT LTD.
Property Address: 9800, 9820, 9840 AND 9860 GRANVILLE AVENUE
Address: C/O XUEDONG ZHAO
255 - 11181 VOYAGEUR WAY
RICHMOND, BC V6X 3N9

7. The land described herein shall be developed generally in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part hereof.

This Permit is not a Building Permit.

AUTHORIZING RESOLUTION NO.
DAY OF

ISSUED BY THE COUNCIL THE

DELIVERED THIS DAY OF

MAYOR

DEVELOPMENT DATA

ADDRESS: 9800, 9820, 9840 & 9860 GRANVILLE AVENUE
 LEGAL DESCRIPTION: LOTS 80 TO 84 SECTION 15 BLOCK 4 NORTH RANGE 6 WEST NEW WESTMINSTER DISTRICT PLAN 47545
 P.I.D. NUMBERS: PID 003-606-392 (LOT 80), PID 003-596-443 (LOT 81), PID 003-457-915 (LOT 82), PID 003-558-886 (LOT 83)
 PLANNING AREA(S): 10 CITY CENTRE (OCP SCH: 2.10D) MCLENNAN SOUTH SUB-AREA PLAN

	EXISTING	PROPOSED
SITE SIZE (SM):	3076 SM (33111 S.F.)	3076 SM (33111 S.F.)
LAND USES:	SINGLE-FAMILY RESIDENTIAL	TOWNHOUSE
OCP DESIGNATION:	NEIGHBOURHOOD RESIDENTIAL	NEIGHBOURHOOD RESIDENTIAL
AREA PLAN DESIGNATION:	10 CITY CENTRE (OCP SCH: 2.10D)	10 CITY CENTRE (OCP SCH: 2.10D)
ZONING:	SINGLE DETACHED (RS-1E)	MEDIUM-DENSITY TOWN HOUSING (RTM2)
NUMBER OF UNITS:	4	18

	BYLAW REQUIREMENT	PROPOSED	VARIANCE
FLOOR AREA RATIO:	MAX. 0.65 (21522.2 SF)	0.65 (21501.7 SF)	
LOT COVERAGE - BUILDING:	MAX. 40% (13244.4SF)	39.8% (13160.0 SF)	NONE
LOT COVERAGE - LANDSCAPING (GREEN):	MIN. 25% (8277.0 SF)	MIN. 25% (8277.0 SF)	NONE
LOT COVERAGE - NON-POROUS AREA:	MAX. 70% (23177.7 SF)	64.7% (21424.4 SF)	
COVERED AREA (SF):	MAX. 10% OF FSR	4.8% OF FSR (1575.8 SF)	
SETBACK - ROAD SETBACK (NORTH):	MIN. 6.0M	6.0M	NONE
SETBACK - EAST SIDE YARD:	MIN. 3.0M	3.0M	NONE
SETBACK - WEST SIDE YARD:	MIN. 3.0M	3.0M	NONE
SETBACK - REAR YARD (SOUTH):	MIN. 3.0M	3.63M	NONE
HEIGHT:	12M (3 STOREYS)	12M (3 STOREYS)	NONE

	BYLAW REQUIREMENT	PROPOSED	VARIANCE
LOT SIZE (MIN. DIMENSIONS):	(MIN. 30M WIDE) (MIN. 35M DEEP)	71.6M WIDE 41.8M DEEP	NONE
RESIDENTIAL PARKING SPACES:	26 SPACES (1.4/UNIT)	36 SPACES (2.0/UNIT)	NONE
VISITOR PARKING SPACES:	0.2 SPACES/ UNIT = 4	4 SPACES	NONE
OFF-STREET PARKING SPACES-TOTAL:	30 SPACES	44 SPACES	NONE
SIDE-BY-SIDE PARKING SPACES:	MIN. 13 SPACES	14 SPACES	NONE
TANDEM PARKING SPACES:	13 SPACES MAX.	12 AMONG REQUIRED 26 STALLS	VARIANCE REQ'D
BICYCLE PARKING SPACE-CLASS-1:	1.25 SPACES PER UNIT	2.44 PER UNIT	NONE
BICYCLE PARKING SPACE-CLASS-2:	0.2 SPACES PER UNIT	0.22 PER UNIT	NONE
AMENITY SPACE - INDOOR:	MIN. 50 SM OR CASH-IN-LIEU	CASH-IN-LIEU	NONE
AMENITY SPACE - OUTDOOR:	MIN. 6 SM PER UNIT	1163 SF (6 SM PER UNIT)	NONE
PRIVATE OPEN SPACE:	MIN. 37 SM PER UNIT	45.9 SM PER UNIT (AVG.)	NONE

* INCL. UTILITY CLOSETS

AGING IN PLACE FEATURES FOR ALL UNITS:
 - SOLID BLOCKING IN WASHROOM WALLS FOR FUTURE GRAB BARS;
 - LEVER-TYPE HANDLES FOR PLUMBING AND DOOR HANDLES

2 CONVERTIBLE UNITS ARE PROPOSED FOR THIS PROJECT.

NOTE FOR LIFT:
 2 STOREY LIFT
 RISE LIFT BY THYSSENKRUPP DESTINY RESIDENTIAL ELEVATOR
 MIN. CLEAR HOISTWAY SIZE: 43"x60" (TYP.)
 DEPRESSIONED SLAB FOR LIFT

NOTE- NO ABOVEGROUND UTILITY INFRASTRUCTURE IMPROVEMENTS IS PERMITTED WITHIN THE FRONT YARD SETBACK, ALONG THE ENTRY DRIVEWAY, AND IN FRONT OR WITHIN THE OUTDOOR AMENITY SPACE.

F.A.R. CALCULATION: LOT AREA: 33111.0 SQ.FT.

F.A.R. PERMITTED: 0.65 FAR = 21522.2 SQ.FT.

UNIT 'A'	1120.7 SQ.FT.	X 3 =	3362.1 SQ.FT.
UNIT 'A1'	1120.7 SQ.FT.	X 1 =	1120.7 SQ.FT.
UNIT 'A2'	1120.7 SQ.FT.	X 2 =	2241.4 SQ.FT.
UNIT 'A3'	1120.7 SQ.FT.	X 1 =	1120.7 SQ.FT.
UNIT 'A4'	1120.7 SQ.FT.	X 1 =	1120.7 SQ.FT.
UNIT 'A5'	1120.7 SQ.FT.	X 1 =	1120.7 SQ.FT.
UNIT 'A6'	1120.7 SQ.FT.	X 1 =	1120.7 SQ.FT.
UNIT 'A7'	1120.7 SQ.FT.	X 1 =	1120.7 SQ.FT.
UNIT 'B'	1280.2 SQ.FT.	X 2 =	2560.4 SQ.FT.
UNIT 'B2'	1280.2 SQ.FT.	X 2 =	2560.4 SQ.FT.
UNIT 'B3'	1395.2 SQ.FT.	X 1 =	1395.2 SQ.FT.
UNIT 'B4'	1377.8 SQ.FT.	X 1 =	1377.8 SQ.FT.
UNIT 'B'	1280.2 SQ.FT.	X 1 =	1280.2 SQ.FT.

TOTAL PROPOSED = (0.65 FAR) 21501.7 SQ.FT.



ZHAO XD ARCHITECT LTD.

#255-11181 Voyageur Way,
 Richmond, BC V6X 3N9
 Tel. (604) 275-8882
 Fax (604) 909-1736

Email: info@zhaorarch.com
 Web: zhaorarch.com

This drawing shall not be used for construction unless it is countersigned by the CONSULTANT.

27MAY15 DP COMMENTS
 11MAR/14 REZONING
 Date: Issued For:

A A DETAIL NUMBER
 B B LOCATION SHEET
 C C DETAIL SHEET

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Project:
 TOWNHOUSE DEVELOPMENT GRANVILLE AVE

9800-9860 GRANVILLE AVE.
 RICHMOND, BC

Drawing Title:
 SITE PLAN & DATA

Date:

Scale:

Drawn By:

Checked By:

Project No.:

Drawing No.:

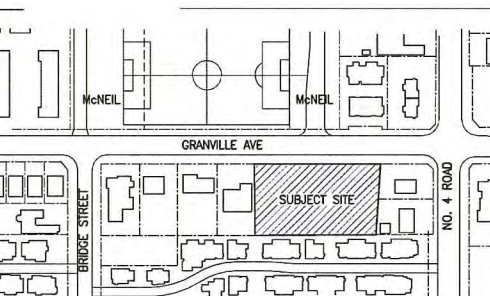
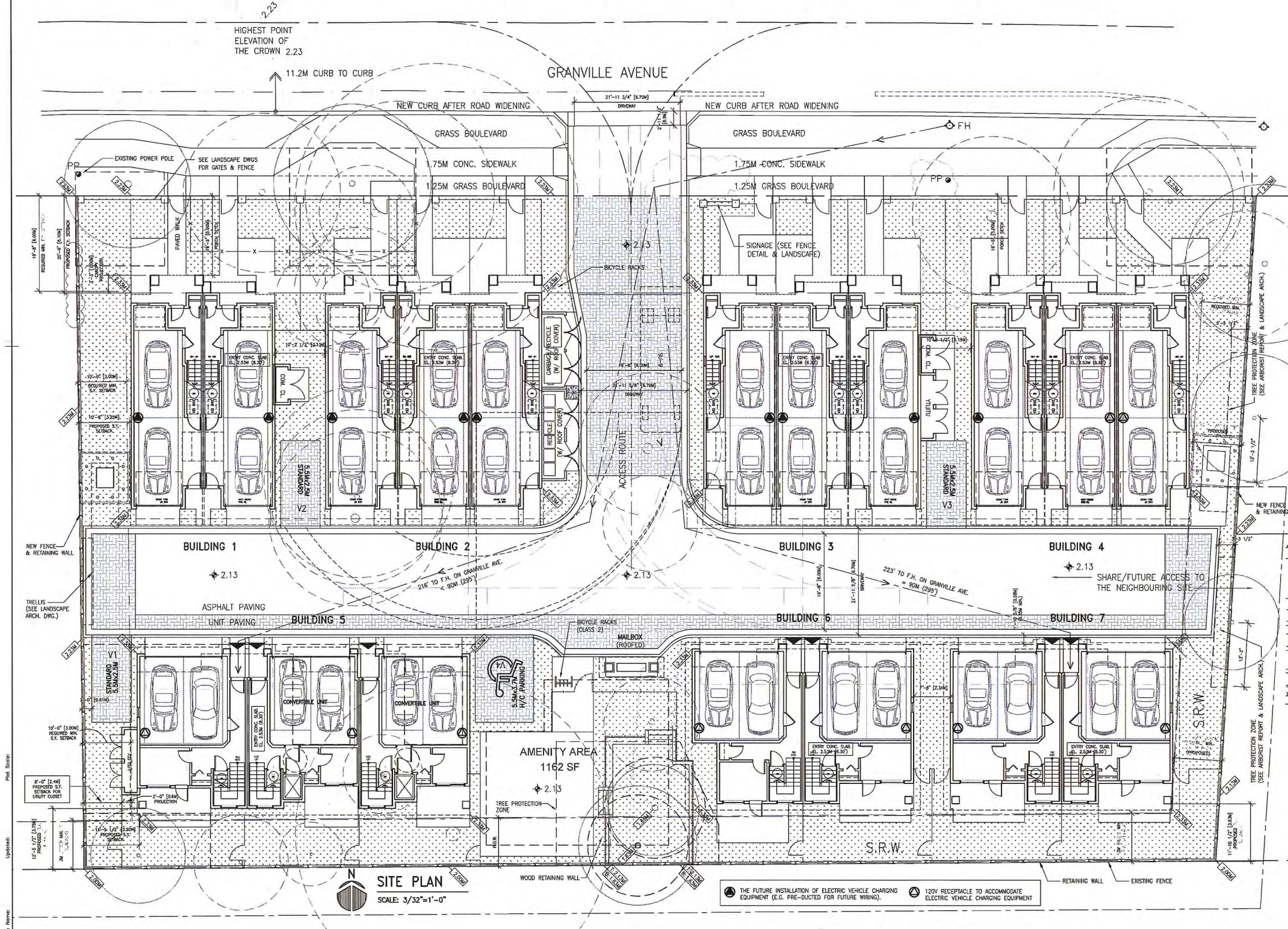
A1

MAR 18 2016

PLAN #1

DP 14-671945

DP 14-671945



- ENERGEUIDE RATING OF 82 OR ABOVE IS TO BE ACHIEVED FOR THE DEVELOPMENT PROJECT.
 - PRE-DUCT FOR SOLAR HOT WATER IS REQUIRED FOR EACH UNIT.

DP 14-671945
 PLAN #1

This drawing is NOT to be scaled. Use figured dimensions only.

- ENERGUIDE RATING OF 82 OR ABOVE IS TO BE ACHIEVED FOR THE DEVELOPMENT PROJECT.
 - PRE-DUCT FOR SOLAR HOT WATER IS REQUIRED FOR EACH UNIT.

GRANVILLE AVENUE

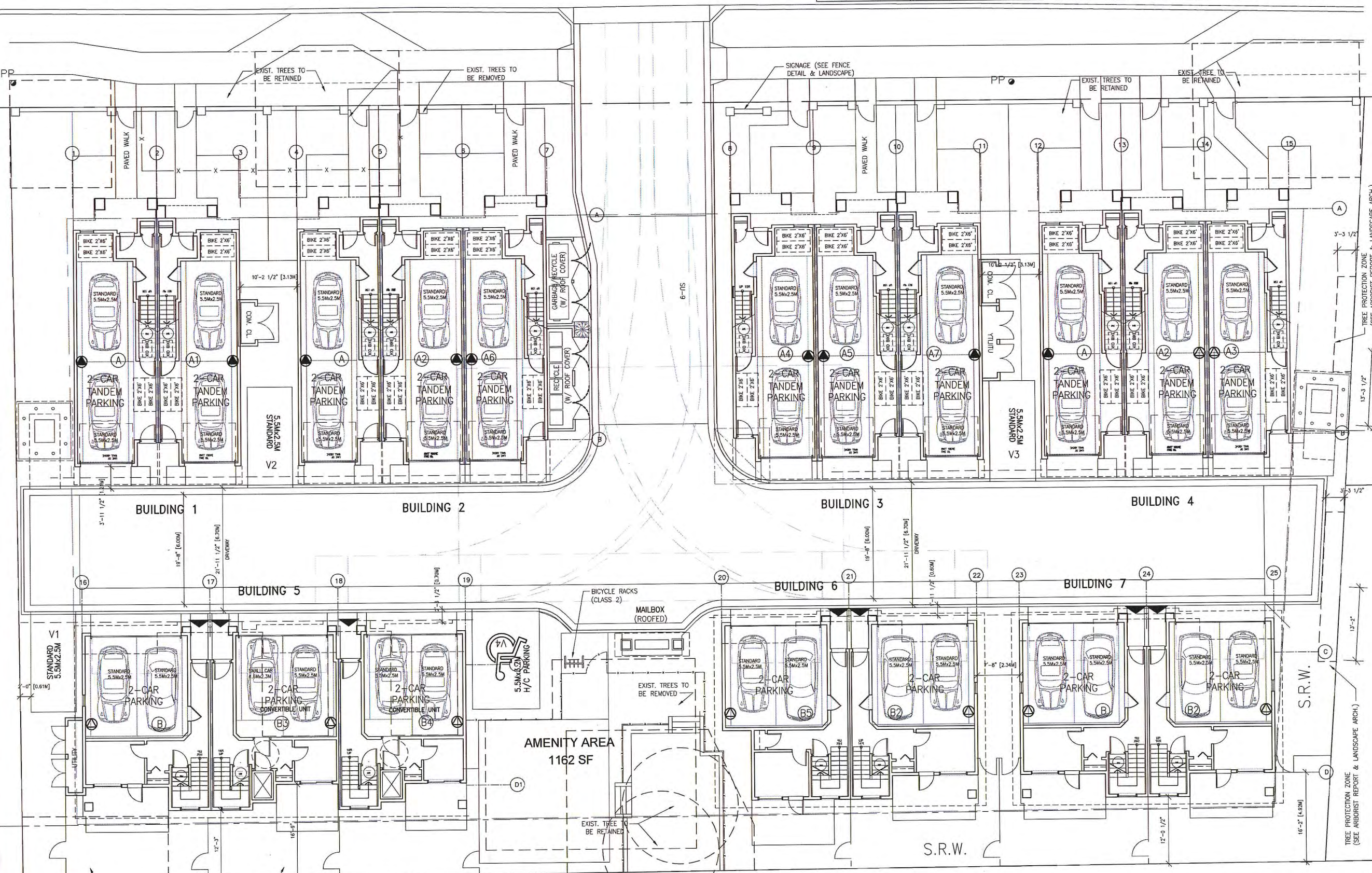
REQUIRED (20% OF STALLS) PROVIDED	3 SPACES	9 SPACES
	9 SPACES	9 SPACES



ZHAO XD ARCHITECT LTD.

#255-11181 Voyageur Way,
 Richmond, BC V6X 3M9
 Tel. (604) 275-8882
 Fax (604) 909-1735
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 Web: zhaarch.com

This drawing shall not be used for construction unless it is counter-signed by the CONSULTANT.



LOWER FLOOR PLAN (PARKING PLAN)

SCALE: 1/8"=1'-0" SEE STATS ON SITE PLAN DRAWING (A-1)

NOTE FOR LIFT:
 2 STOREY LIFT
 RISE LIFT BY THYSSENKRUPP DESTINY RESIDENTIAL ELEVATOR
 MIN. CLEAR HOISTWAY SIZE: 43'x60" (TYP.)
 DEPRESSED SLAB FOR LIFT

AGING IN PLACE FEATURES FOR ALL UNITS:
 -SOLID BLOCKING IN WASHROOM WALLS FOR FUTURE GRAB BARS;
 -LEVER-TYPE HANDLES FOR PLUMBING AND DOOR HANDLES
 2 CONVERTIBLE UNITS ARE PROPOSED FOR THIS PROJECT.

27MAY15	DP COMMENTS
11MAR/14	REZONING
Date:	Issued For:

A	A DETAIL NUMBER
B	B LOCATION SHEET
C	C DETAIL SHEET

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Project:
 TOWNHOUSE DEVELOPMENT
 GRANVILLE AVE

9800-9860 GRANVILLE AVE.
 RICHMOND, BC

Drawing Title:
 GROUND FLOOR PLAN (ENLARGED PARTIAL SITE PLAN)

Date:
 Scale:
 Drawn By:
 Checked By:

Project No.:

Drawing No.:

PLAN #2 DP 14-671945

A2

DP 14-671945 PLAN #1A MAR 18 2016

	BYLAW REQUIREMENT	PROPOSED	VARIANCE
RESIDENTIAL PARKING SPACES:	1.4 SPACES/ UNIT	36 SPACES	
VISITOR PARKING SPACES:	0.2 SPACES/ UNIT	4 SPACES	
OFF-STREET PARKING SPACES-TOTAL:	30	40 (INCL. 2 SMALL-CAR)	
SIDE-BY-SIDE PARKING SPACES:	MIN. 50% OF 26 STALLS	14	
TANDEM PARKING SPACES:	MAX. 50% OF 26 STALLS	12 AMONG REQUIRED 26 STALLS	VARIANCE REQ'D
BICYCLE PARKING SPACE-CLASS-1:	1.25 SPACES PER UNIT	44 SPACES (2.44 PER UNIT)	
BICYCLE PARKING SPACE-CLASS-2:	0.2 SPACES PER UNIT	4 SPACES (0.22 PER UNIT)	



**ZHAO XD
ARCHITECT
LTD.**

#255-11181 Voyageur Way,
Richmond, BC V6X 3N9
Tel. (604) 275-8852
Fax (604) 909-1736

Email: info@zhaorarch.com
Web: zhaorarch.com

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27MAY15 DP COMMENTS
11MAR/14 REZONING
Date: Issued For:

A A DETAIL NUMBER
B LOCATION SHEET
C DETAIL SHEET

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Project:
TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
PARKING PLAN

Date:

Scale:

Drawn By:

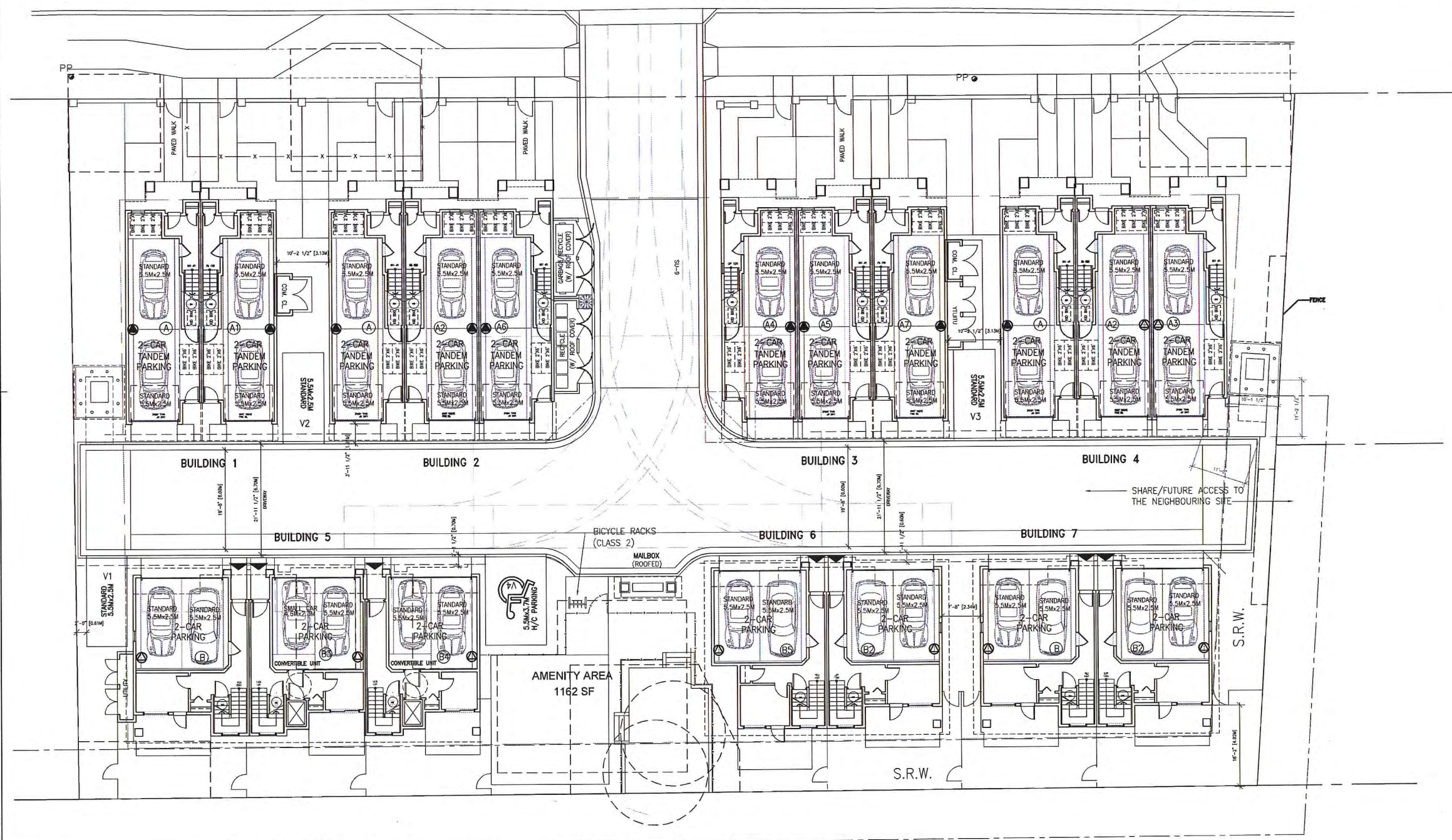
Checked By:

Project No.:

Drawing No.:

A2.1

MAR 18 2016
PLAN #2
DP 14-671945

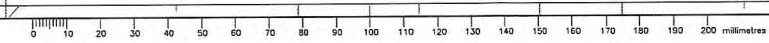


DP 14-671945
PLAN #2



PARKING PLAN
SCALE: 3/32"=1'-0"

	NUMBER OF PARKING SPACES TO BE PROVIDED WITH THE FUTURE INSTALLATION OF ELECTRIC VEHICLE CHARGING EQUIPMENT (E.G. PRE-DUCTED FOR FUTURE WIRING).	NUMBER OF PARKING SPACES TO BE PROVIDED WITH 120V RECEPTACLE TO ACCOMMODATE ELECTRIC VEHICLE CHARGING EQUIPMENT
REQUIRED (20% OF STALLS)	8 SPACES	9 SPACES
PROVIDED	9 SPACES	9 SPACES



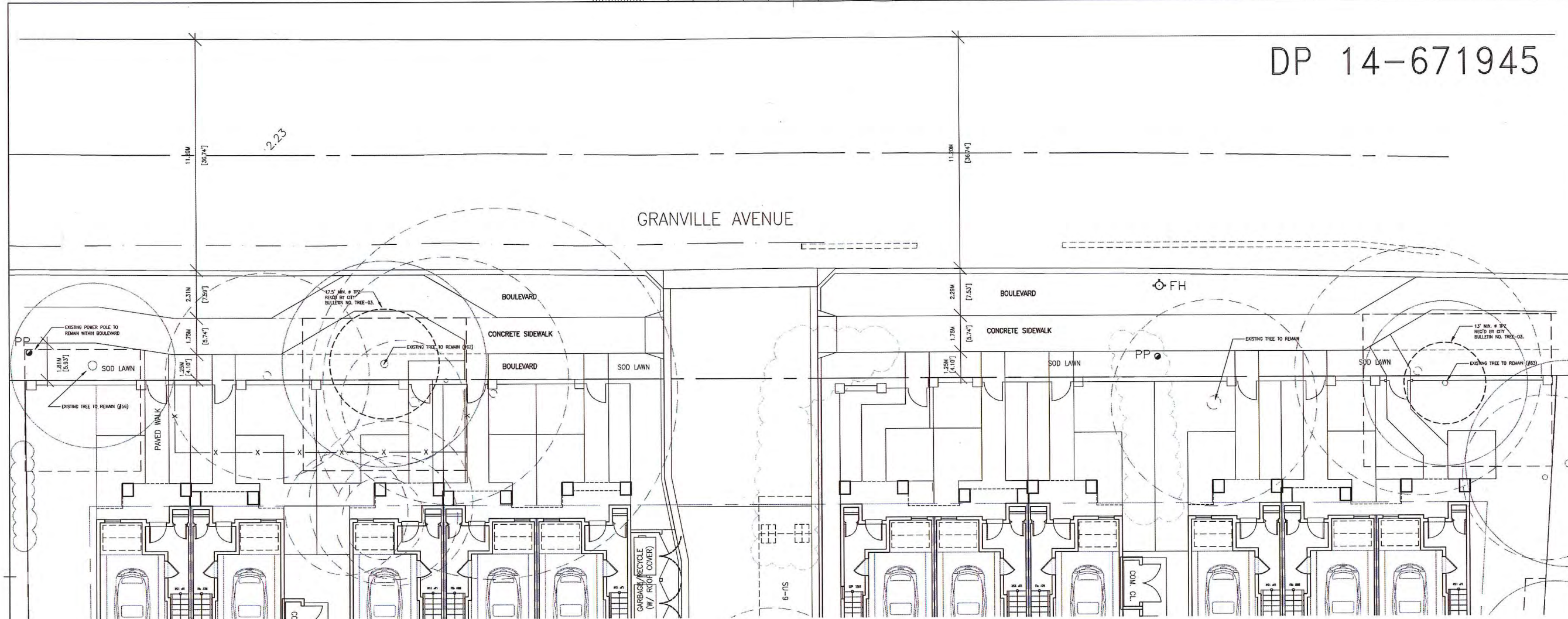
DP 14-671945



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27MAY15	DP COMMENTS
11MAR/14	REZONING
Date:	Issued For:

A	A DETAIL NUMBER
B	B LOCATION SHEET
C	C DETAIL SHEET

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Project:
TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

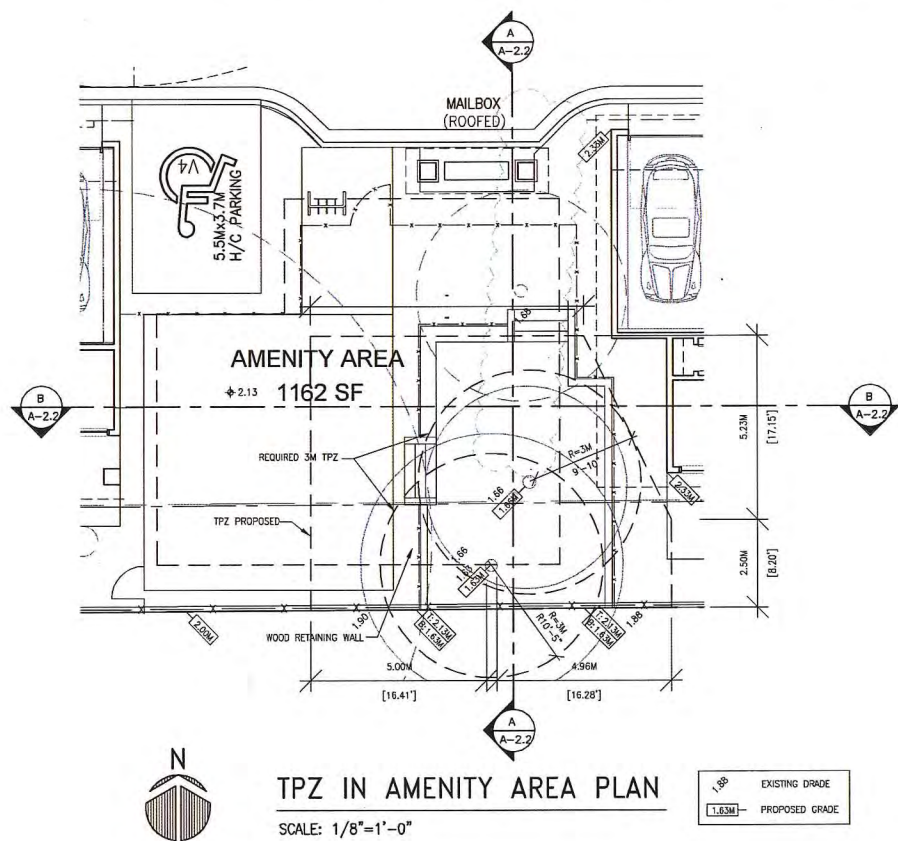
9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
SITE FRONTAGE
PLAN

Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:

A2.2

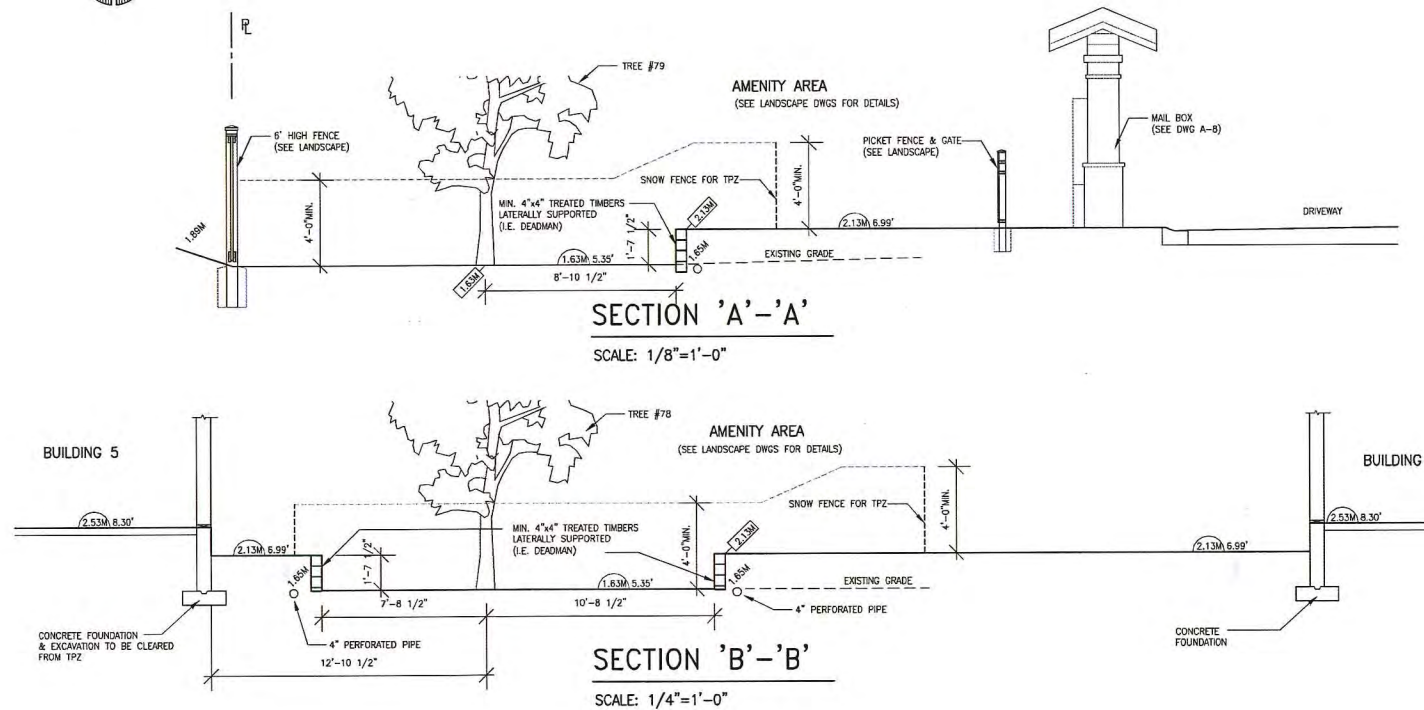
MAR 18 2016
PLAN # 3
DP 14-671945



SITE FRONTAGE PLAN

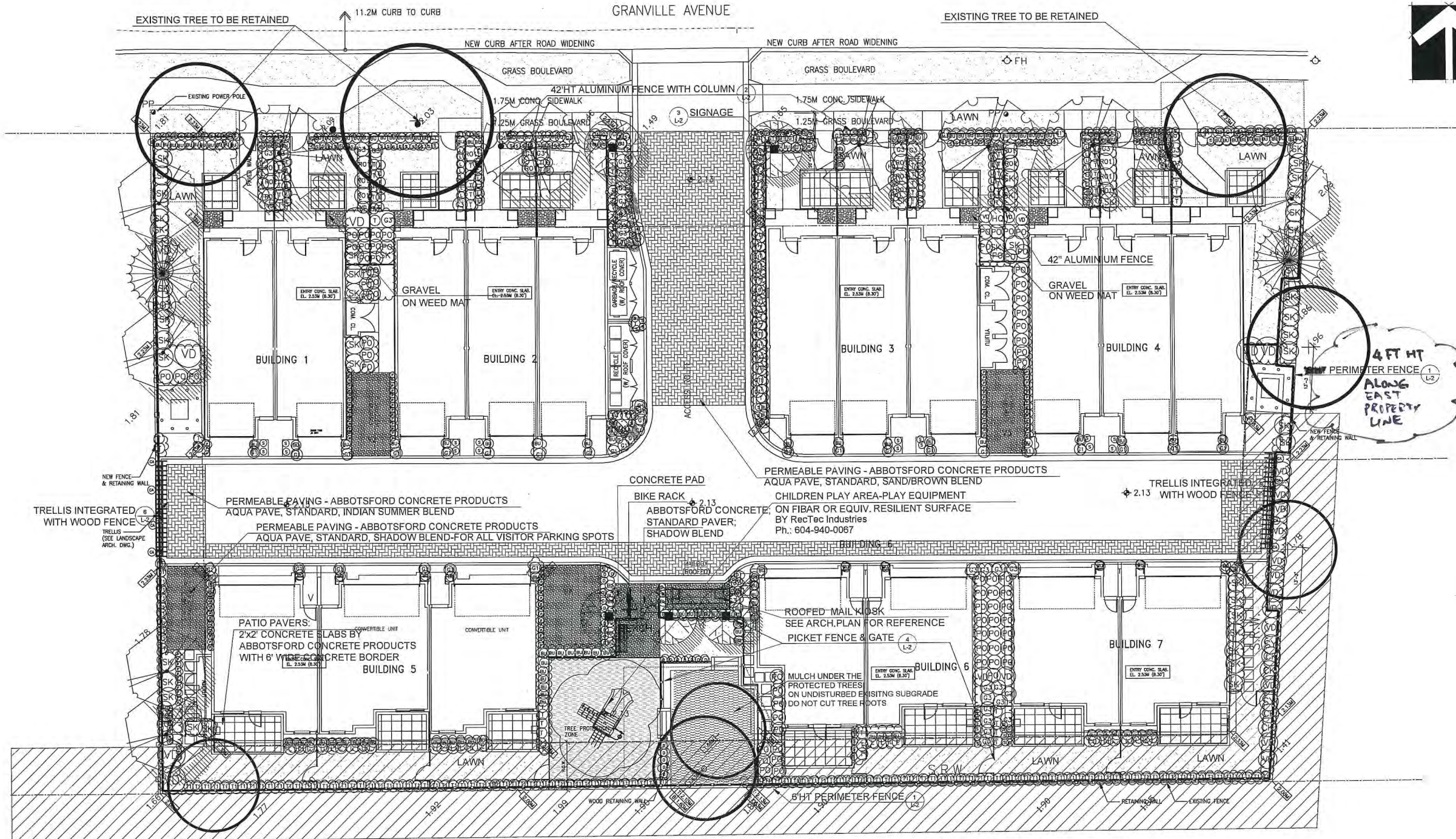
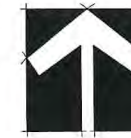
SCALE: 1/8"=1'-0"

REFER TO ARBORIST REPORT AND TREE MANAGEMENT PLAN FOR TREE PROTECTION ZONES



Plot Scale:
Update:
File Name:

SEAL:



MAR 18 2016

PLAN # 3A

DP 14-671945

NO.	DATE	REVISION DESCRIPTION	DR.
7	15-SEP-14	AS PER CITY REQUEST	DD
6	15-JUL-12	NEW SITE PLAN/CITY COMMENTS	MR
5	15-MAY-12	REVISION AS PER CITY COMMENTS	DD
4	14-DEC-14	NEW SITE PLAN/CITY COMMENTS	DD
3	14-NOV-10	REVISED TREE MANAGEMENT PLAN	DD
2	14-OCT-08	NEW SITE PLAN/CITY COMMENTS	DD
1	14-SEP-04	REV. PER CITY COMMENTS	BA

CLIENT: ZHANG CUBIC ESTATES HOLDINGS LTD.

WITH ZHAO XD ARCHITECT LTD.
PROJECT:

TOWNHOUSE DEV.

9800 GRANVILLE AVE
RICHMOND, BC

DRAWING TITLE:
**PLAN #3
LANDSCAPE**

DATE: April 25, 2014 DRAWING NUMBER:
SCALE: 3/32"=1'-0" **3.a**
DRAWN: DD DESIGN: DD CHK'D: PCM OF 5

PLANT SCHEDULE				PMG PROJECT NUMBER: 14-017
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
5		ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	8CM CAL; 2M STD; B&B
5		ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	8CM CAL; 2M STD; B&B
3		CHAMAECYPARIS OBUSA GRACILIS	SLENDER HINOKI FLASE CYPRESS	4M HT; B&B
2		PINUS NIGRA 'ARNOLD SENTINEL'	ARNOLD SENTINEL AUSTRIAN BLACK PINE	4M HT; B&B
5		STYRAX JAPONICUS	JAPANESE SNOWBELL	8CM CAL; 2M STD; B&B
SHRUB				
204		BUXUS SEMPERVIRENS	COMMON BOXWOOD	#3 POT; 40CM
4		CORNIUS ALBA 'ELEGANTISSIMA'	VARIEGATED SHRUB DOGWOOD	#2 POT; 50CM
1		HYDRANGEA QUERCIFOLIA 'RUBY SLIPPERS'	RUBY SLIPPERS HYDRANGEA	#3 POT
19		RHODODENDRON 'MRS. FURNIVAL'	RHODODENDRON; ROSE PINK; MAY	#2 POT; 30CM
47		SKIMMIA JAPONICA (10% MALE)	JAPANESE SKIMMIA	#2 POT; 30CM
2		SYMPHORICARPOS DOORENBOSII 'ARISO'	PURPLE SNOWBERRY	#2 POT; 30CM
100		TAXUS X MEDIA 'HICKSII'	HICKS' YEW	1.2M B&B
120		THUJA OCCIDENTALIS 'SMARAGO'	EMERALD GREEN CEDAR	1.8M HT; B&B
28		VIBURNUM P.T. 'SUMMER SNOWFLAKE'	SUMMER SNOWFLAKE VIBURNUM	#3 POT; 60CM

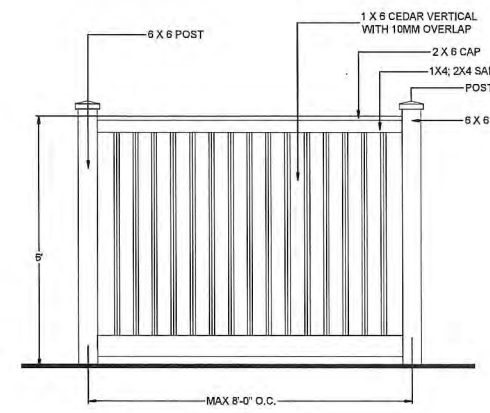
GRASS			
77	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#1 POT
35	MISCANTHUS SINENSIS 'PURPURASCENS'	FLAME GRASS	#1 POT
VINE			
8	CLEMATIS ARMANDII	EVERGREEN CLEMATIS	#2 POT; 60CM STAKED
PERENNIAL			
29	ERYSIMUM 'BOWLES MAUVE'	SHRUBBY WALLFLOWER; PURPLE	15 CM POT
39	HEMEROCALLIS LITTLE WINE CUP	LITTLE WINE CUP DAYLILY; RED	#1 POT; 1-2 FAN
3	HOSTA UNDULATA 'ALBO-MARGINATA'	WAVY LEAF HOSTA; WHITE VARIEGATED	#1 POT; 1 EYE
64	LAVENDULA ANGUSTIFOLIA 'HIDCOTE'	ENGLISH LAVENDER	#1 POT
187	SEDUM MATAMON JOSTY	SEDUM	15 CM POT
GC			
109	PACHYANDRA TERMINALIS	JAPANESE SPURGE	9CM POT; 25CM
75	POLYSTICHUM MUNIUM	WESTERN SWORD FERN	#1 POT; 25CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNITA STANDARDS. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. * AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD'S LATEST EDITION. ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY.

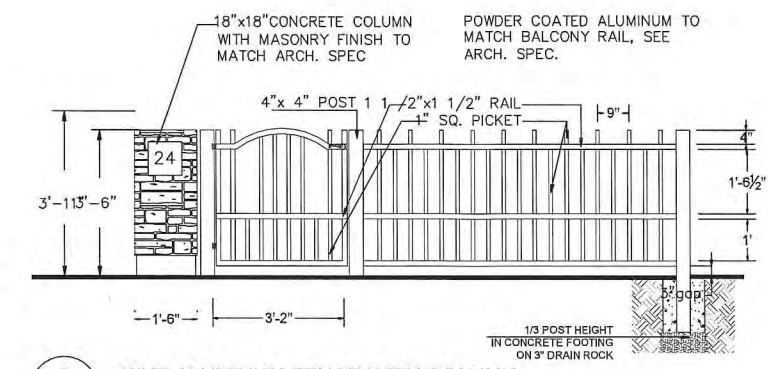
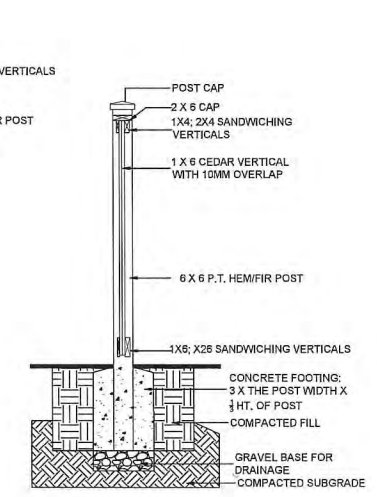
NOTE: NO ABOVEGROUND UTILITY INFRASTRUCTURE IMPROVEMENTS (I.E. KIOSKS, VAULTS, METERS, ETC.) IS PERMITTED WITHIN THE FRONT YARD SETBACK, ALONG THE ENTRY DRIVEWAY, AND IN FRONT OR WITHIN THE OUTDOOR AMENITY SPACE.

SEAL:

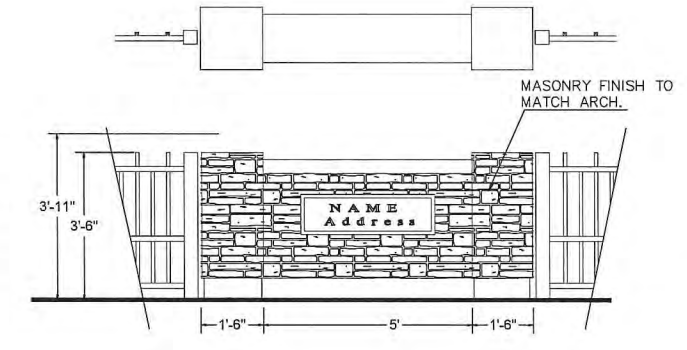
- NOTE**
1. ALL POSTS PRESSURE TREATED TO CSA STANDARD AND END CUTS TREATED WITH PRESERVATIVE.
 2. ALL OTHER MEMBERS TO BE CEDAR, #2 (CONSTRUCTION) GRADE MINIMUM.
 3. ALL HARDWARE HOT DIPPED GALVANIZED.
 4. APPLY 2 COATS EXTERIOR STAIN TO MANUFACTURERS SPECIFICATION. FINISH SELECTION AS APPROVED BY PROJECT ARCHITECT.
 5. ALL FENCES TO BE LEVEL. CHANGES IN GRADE TO BE IN 12"-18" STEPS (MAX.). GAPS TO GRADE TO FOLLOW FINISH GRADE. GAP TO BE 3-5".



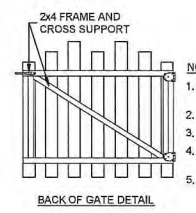
1
L-2
6' HT WOOD FENCE
SCALE: 3/8" = 1'-0"



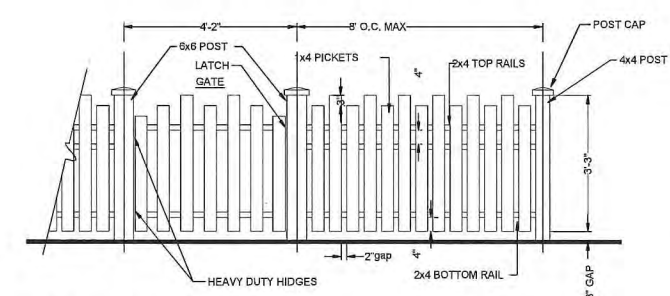
2
L-2
42'HT ALUMINUM FENCE WITH COLUMN
SCALE: 3/8" = 1'-0"



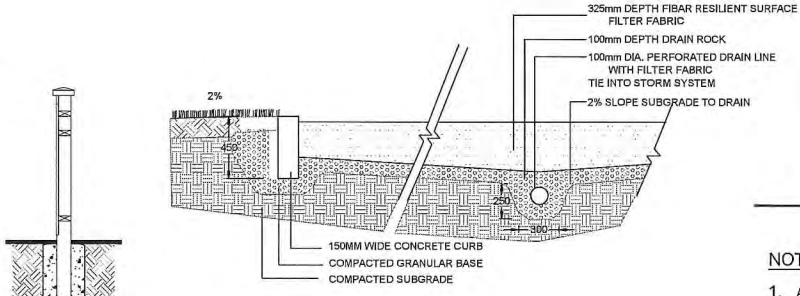
3
L-2
SIGNAGE
SCALE: 3/8" = 1'-0"



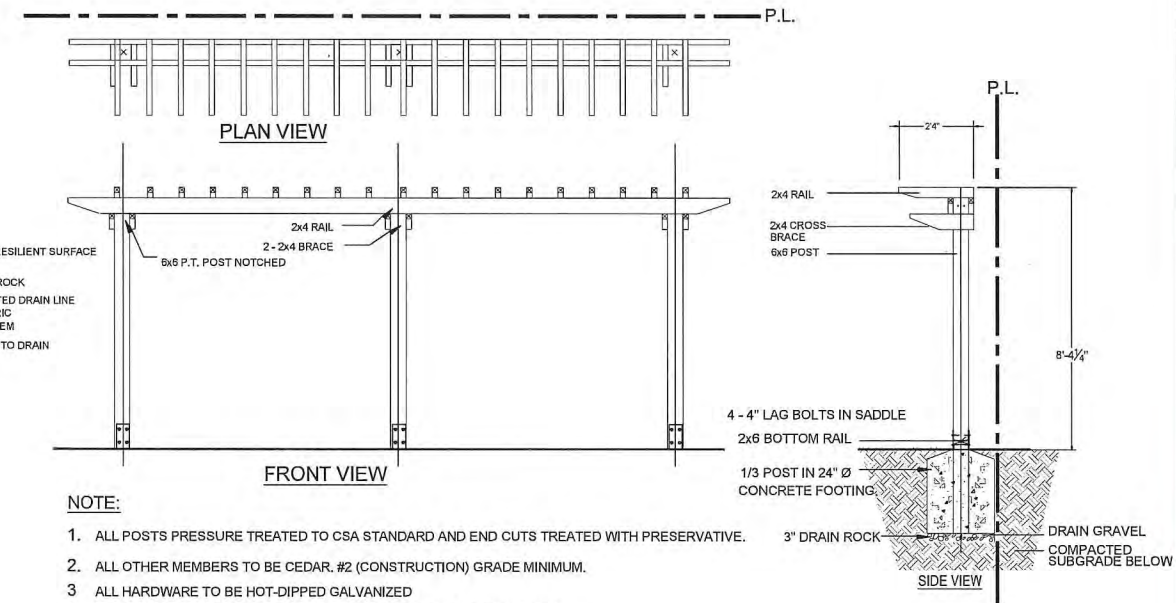
- NOTE**
1. ALL POSTS PRESSURE TREATED TO CSA STANDARD AND END CUTS TREATED WITH PRESERVATIVE.
 2. ALL OTHER MEMBERS TO BE CEDAR, #2 (CONSTRUCTION) GRADE MINIMUM.
 3. ALL HARDWARE HOT DIPPED GALVANIZED.
 4. APPLY 2 COATS EXTERIOR STAIN TO MANUFACTURERS SPECIFICATION. TO MATCH BLDG. TRIM; FINISH SELECTION AS APPROVED BY PROJECT ARCHITECT.
 5. ALL FENCES TO BE LEVEL. CHANGES IN GRADE TO BE IN 12"-18" STEPS (MAX.). GAPS TO GRADE TO FOLLOW FINISH GRADE. GAP TO BE 3-5".



4
L-2
PICKET FENCE & GATE
SCALE: 3/8" = 1'-0"



5
L-2
PLAY AREA DETAIL
SCALE: 3/8" = 1'-0"



- NOTE:**
1. ALL POSTS PRESSURE TREATED TO CSA STANDARD AND END CUTS TREATED WITH PRESERVATIVE.
 2. ALL OTHER MEMBERS TO BE CEDAR, #2 (CONSTRUCTION) GRADE MINIMUM.
 3. ALL HARDWARE TO BE HOT-DIPPED GALVANIZED
 4. APPLY 2 COATS EXTERIOR STAIN TO MANUFACTURERS SPECIFICATION. MATCH TRIM COLOUR PER ARCH SPEC, CONFIRM WITH ARCHITECT
 5. COAT ALL CUT SURFACES WITH SIMILAR PRESERVATIVE AS ABOVE

6
L2
TRELLIS STRUCTURE
3/8" = 1'-0"



MODENA PARK BENCH;
MODEL SFBR-3, BLACK COLOUR



WISHBONE BIKE RACK
MODEL SFBR-3, BLACK COLOUR



BIG TOYS
CABANA, MEC-650, NATURAL COLOUR

NO.	DATE	REVISION DESCRIPTION	DR.
7	15 SEP.14	AS PER CITY REQUEST	DD
6	15 JUL.12	NEW SITE PLAN/CITY COMMENTS	JMR
5	15 MAY.22	REVISION AS PER CITY COMMENTS	DD
4	14 DEC.16	NEW SITE PLAN/CITY COMMENTS	DD
3	14 NOV.20	REVISED TREE MANAGEMENT PLAN	DD
2	14 OCT.28	NEW SITE PLAN/CITY COMMENTS	DD
1	14 SEP.06	REV. PER CITY COMMENTS	BA

CLIENT:
ZHANG CUBIC ESTATES HOLDINGS LTD.

WITH ZHAO XD ARCHITECT LTD.
PROJECT:

TOWNHOUSE DEV.

9800 GRANVILLE AVE
RICHMOND, BC

DRAWING TITLE:
LANDSCAPE DETAILS

DATE: April 25, 2014
SCALE:
DRAWN: DD
DESIGN: DD
CHKD: PCM

DRAWING NUMBER:
3.b
OF 5

MAR 18 2016
PLAN # 3B
DP 14-671945



SEAL:

CLIENT: ZHANG CUBIC ESTATES HOLDINGS LTD.

WITH ZHAO XD ARCHITECT LTD. PROJECT:

TOWNHOUSE DEV. 9800 GRANVILLE AVE RICHMOND, BC

DRAWING TITLE: LANDSCAPE SPECIFICATIONS

DATE: April 25/2014 DRAWING NUMBER: SCALE: 3.e DESIGN: DD CHKD: PCM OF 5

PART ONE GENERAL REQUIREMENTS

11 REFERENCES

1. CBC 2008
2. B.C. Landscape Standard, 2008 Edition, prepared by the B.C. Society of Landscape Architects and the B.C. Landscape & Nursery Association, jointly, all work and materials shall meet standards as set in the B.C. Landscape Standard unless superseded by this specification or as directed by Landscape Architect with written instruction.
3. MASTER MUNICIPAL SPECIFICATIONS STANDARD DETAILS, 2008 edition, prepared by the Consulting Engineers of British Columbia, Road Builders and Heavy Construction Association, and the Municipal Engineers Division
4. STANDARD FOR LANDSCAPE IRRIGATION SYSTEM, 2008 Prepared by the Irrigation Industry Association of British Columbia.
5. MUNICIPAL BYLAWS AND ENGINEERING SPECIFICATIONS WHERE NOTED.

12 TESTING

1. A current test more than one month test for all growing medium to be used on this site is required. Provide and pay for testing by an independent testing facility pre-approved by the Landscape Architect. Deliver growing medium test results to Landscape Architect for review and approval prior to placement. Refer to Section 34 Growing Medium Testing for procedure.
2. Owner reserves the right to test or re-test materials. Contractor responsible to pay for testing if materials do not meet specification.

13 SUBMITTALS

1. Any alternate products differing from that contained in the contract documents must be pre-approved by the Landscape Architect.
2. Submittals to consist of product sample or manufacturer's product description.

14 SITE REVIEW

1. Under the terms of the Landscape Architect's Contract with the Owner and where the Landscape Architect is the designated reviewer, the Landscape Architect will observe construction as necessary to their opinion to confirm conformance to the plans and specifications. Contact Owner representative to arrange for site observation at the appropriate times. Allow two days notice. Observe schedule may include but will not be limited to the following:
 - 1.1 Start Up Site Meeting, General Contract Prior to any site disturbance, a meeting with the general contractor to review pre-preservation issues, general landscape issues and material requirements.
 - 1.2 Start Up Site Meeting, Landscape Contract: If separate At the start of work with Owner's Representative and Landscape Contractor, a meeting to be held to review expected work and to verify the acceptability of the subgrade and general site conditions to the Landscape Contractor. Provide growing medium test results for this meeting.
 - 1.3 Progress Site Visits: To observe materials and workmanship as necessary through the course of the work. Review of different aspects of the work may be dealt with on any single visit. Such elements may include Site Layout, Rough Grading, Growing Medium - quality, depth, finish grading, Drainage and Irrigation Materials, Lawns or Grass areas, Planting - plant material including applications with supports, nursery operations, plant sizes, quality, quantity, planting practices and layout, tree support, Muck Irrigation Systems, Play Equipment, Site Furniture and other elements of the site development where the Landscape Architect is the designated reviewer, such as: Retention/Fencing, Finish Structural walls and stairs, Ball Paving.
 - 1.4 Substantial Performance Review of all work, accounting of all installations, details, plant counts, preparation of deficiency list, and recommendations for completion.
 - 1.5 Certificate of Completion Upon the Declaration of Substantial Performance, a recommendation for the issuance of the Certificate of Completion will be made to the Payment Certifier as defined in the contract.
 - 1.6 Deficiency Review Prior to the completion of the holdback period, check for completion of deficiencies. Once completed, a Schedule "C" will be issued where required.
 - 1.7 Warranty Review Prior to the completion of the warranty period (i.e. 11 months after issuance of the Certificate of Completion), review all warranty material and report recommendations for warranty replacement.

15 WORKMANSHIP

1. Unless otherwise instructed in the Contract Documents, the preparation of the subgrade shall be the responsibility of the General Contractor. Placement of growing medium constitutes acceptance of the subgrade by the Landscape Architect. Any subsequent correction to the subgrade required are the responsibility of the Landscape Contractor.
2. All work under supervision shall be performed by personnel skilled in landscape contracting. In addition, all personnel applying herbicides and/or pesticides shall hold a current license issued by the appropriate authorities.
3. A site visit is required to become familiar with site conditions before bidding and before start of work.
4. Confirm location of all services before proceeding with any work.
5. Notify Landscape Architect of any discrepancies. Obtain approval from Landscape Architect prior to deviating from the plans.
6. Take appropriate measures to avoid environmental damage. Do not dump any waste materials into water bodies. Conform with all federal, provincial and local rules and guidelines.
7. Collect and dispose of all debris and/or excess material from landscape operations. Keep paved surfaces clean and repair damage resulting from landscape work. Repairs are to be completed prior to final acceptance.
8. Where new work connects with existing, and where existing work is altered, make good to match existing undisturbed conditions.

16 WARRANTIES

1. Guarantee all materials and workmanship for a minimum period of one full year from the date of Certificate of Completion.
2. Refer to individual sections for specific warranties.

PART TWO SCOPE OF WORK

21 SCOPE OF WORK

1. Other conditions of Contract may apply. Confirm Scope of Work at time of tender.
2. Work includes supply of all related items and performing all operations necessary to complete the work in accordance with the drawings and specifications and generally consists of the following:
 - 2.1 Retention of Existing Trees where shown on Drawings.
 - 2.2 Finish Grading and Landscape Drainage.
 - 2.3 Supply and placement of growing medium.
 - 2.4 Testing of imported growing medium and/or site layout.
 - 2.5 Supply and incorporation of additives to meet requirements of soil test and Table One.
 - 2.6 Preparation of planting beds, supply of plant material and planting.
 - 2.7 Preparation of rough grass areas, supply of materials and seeding.
 - 2.8 Preparation of lawn areas, supply of materials and seeding.
 - 2.9 Supply and placement of bark mulch.
 - 2.10 Maintenance of planted and seeded/soaked areas until accepted by Owner.
- 2.11 SEPARABLE ITEMS: Establishment Maintenance, Section 2.10.
- 2.12 Other work: Work other than this list, not specified by Landscape Architect.

22 MATERIALS

1. Growing Medium: Conforms to B.C. Landscape Standard for definitions of imported and on-site topsoil. Refer to Table One below.

Applications	Low Traffic Areas Trees and Large Shrubs	High Traffic Lawn Areas	Planting Areas and Planters
Growing Medium Types	ZL	ZH	ZP

TABLE ONE: PROPERTIES OF GROWING MEDIUM FOR LEVEL 1, GROWN AND LEVEL 2, MODIFIED AREAS
Condition System of Soil Classification Test Class "Leaky Sand" to "Sticky Loam"

Texture	Percent Of Dry Weight of Total Growing Medium		
Coarse Gravel larger than 25mm	0 - 1%	0 - 1%	0 - 1%
All Gravel larger than 2mm	0 - 5%	0 - 5%	0 - 5%
Percent Of Dry Weight of Growing Medium Excluding Gravel			
Sand larger than 0.075mm smaller than 2.0mm	50 - 85%	70 - 95%	40 - 80%
Silt larger than 0.002mm smaller than 0.075mm	10 - 25%	0 - 10%	10 - 25%
Clay smaller than 0.002mm	0 - 25%	0 - 10%	0 - 25%
Clay and Silt Combined	maximum 25%	maximum 10%	maximum 35%
Organic Content (peat)	3 - 10%	3 - 5%	10 - 20%
Organic Content (lignin)	3 - 5%	3 - 5%	10 - 20%
Acidity (pH)	6.0 - 7.0	6.5 - 7.0	4.5 - 6.5
Drainage	Percolation shall be such that no standing water is visible 60 minutes after at least 10 minutes of moderate to heavy rain or irrigation.		

2. Fertilizer: An organic and/or inorganic compound containing Nitrogen (N), Phosphorus (P), and Potassium (K) in proportions required by soil test.
3. Lime: Ground agricultural limestone. Meet requirements of the B.C. Landscape Standard.
4. Organic Additive: Commercial product to be used in the B.C. Landscape Standard, 6th edition and pre-approved by the Landscape Architect. Recommended suppliers: The Answer Garden Products, Fison, Richwood S&S & Fibre, Stream Organics Management.
5. Sand: Clean, washed pump sand to meet requirements of the B.C. Landscape Standard.
6. Composted Bark Mulch: Meet S147/151 fines F19/Finlock bark chips and fines, free of chert and stonks, dark brown in colour and free of all soil, stones, roots or other extraneous matter. Fresh green or cedar bark are ok.
7. Herbicides and Pesticides: If used, must conform to all federal, provincial and local statutes. Applies must hold current licenses issued by the appropriate authorities in the jurisdiction.
8. Filter Fabric: A non biodegradable material or other filtering membrane that will allow the passage of water but not fine soil particles. (Such as HRA1340, NLD, GEODUN 100 OR AMPRO 4555 or alternate product pre-approved by the Landscape Architect)
9. Drainage Piping if required: Schedule 40 PVC minimal sizes.
10. Drain Racks: Clean, round, inert, durable, and have a maximum size of 15mm and containing no material smaller than 10mm.
11. Plant Material: To the requirements of the B.C. Landscape Standard. Refer to 3.9, Plants and Planting. All plant material must be provided from a certified disease free nursery. Provide proof of certification.
12. Sod: Refer to individual sections in this specification.
13. Supplier and installers of seepage black walls to provide engineered drawings for all walls, signed and sealed drawings for all walls, individually, in excess of 10m, or combinations of walls collectively in excess of 10m. Installations shall be reviewed and signed off by Certified Professional Engineer, Involves cost of engineering services in tender price.
14. Miscellaneous: Any other material necessary to complete the project as shown on the drawings and described herein.

PART THREE SOFT LANDSCAPE DEVELOPMENT

31 RETENTION OF EXISTING TREES

1. Prior to any work on site - protect individual trees or plant groupings identified as retained on landscape plans as vegetation retention areas.
- 1.1 In some instances the Landscape Architect will tag trees or areas to retain. Discuss tree retention areas at a start-up meeting with the Landscape Architect.
2. A physical barrier must be installed to delineate clearing boundaries. Refer to physical barrier detail. If detail not provided, comply with local municipal requirements.
3. No machine travel through or within vegetation retention areas or under trunks of trees to be retained is allowed.
4. Do not stockpile soil, construction materials, or excavated materials within vegetation retention areas.
5. Do not park, fuel or service vehicles within vegetation retention areas.
6. No debris fires, clearing fires or trash burning shall be permitted within vegetation retention areas.
7. No excavations, drain or service trenches nor any other disruption shall be permitted within vegetation retention areas without a review of the proposed encroachment by the Landscape Architect.
8. Do not cut branches or roots of retained trees without the approval of the Landscape Architect.
9. Any damage to existing vegetation intended for preservation will be subject to evaluation by an I.S.A. Certified Arborist using the "Guide for Plant Appraisal", Eighth Edition, 1992.
10. Replacement planting of equivalent value to the disturbance will be required. The cost of the evaluation and of the replacement planting will be the responsibility of the General Contractor and/or the specific responsible for the disturbance.
11. In situations where required construction may disturb existing vegetation intended for preservation, contact Landscape Architect for review prior to commencing construction.

32 GRASS AREAS

1. Grass subgrade is prepared to conform to depths specified in Section 33, Growing Medium Supply, below. Where planting is indicated to take place in existing trees, prepare suitable planting pockets for material in the planting plan. Subgrade to eliminate free standing water and conform to the site grading and drainage plan.
2. Slopes in excess of 3:1 fresh subgrade across slope to 15mm @ 100mm minimum at 15m (5 ft) intervals minimum.
3. Scarify the entire subgrade immediately prior to placing growing medium. Re-cultivate where vehicular traffic results in compaction during the construction procedure. Ensure that all planting areas are suitably conditioned after light compaction to finished grades.
4. Eliminate standing water from all finished grades. Provide a smooth, firm and even surface and conform to grades shown on the Landscape Drawings. Do not exceed maximum slope of 3:1 as defined by B.C. Landscape Standard.
5. Construct swales free to line and grade, smooth and free of any high points. Minimum slope 2%, maximum side slopes 10%. Assure positive drainage to collection points.
6. Slope not to exceed the following maximums: Rough Grass 3:1, Lawn 4:1, Landscape plantings 2:1.
7. Finished soil/mulch elevation of building to comply with municipal requirements.
8. Inform Landscape Architect of completion of finish grade prior to placement of seed, sod, plants or mulch.

33 LANDSCAPE DRAINAGE

1. Detail and provide growing medium and Finish Grading, Grass areas, Trees Strips and Groundcovers, Planters, Curb Walls.
2. Work included: Site finish grading and surface drainage. Installation of any drainage systems detailed on landscape plans. Note Catch basins shown on landscape plans for concrete only, confirm sizes of work to be bid.
- 2.1 Determine all landscape drainage works with rest of site drainage. Refer to engineering drawings and specifications for connections and other drainage work.
- 2.2 Coordinate final location of all existing utilities and structures and coordinate meter utilities prior to commencing work, which may not be located on drawings and conduct work as to prevent interference of areas or damage to them. Protect existing structures and utility services and be responsible for damage caused.
- 2.3 Planter of drains on slab: Refer to Section 3.9, Installing Landscapes on Structures.
3. Execution
 - 3.1 Do trenching and backfilling in accordance with engineering details and specifications.
 - 3.2 Lay drains on prepared bed, from low line and grade with minimum 1% smooth and free of any high points. Ensure base of each pipe is in contact with bed throughout full length.
 - 3.3 Commence laying pipe by outlet and proceed to upstream direction.
 - 3.4 Lay perforated pipes with perforations at top and open positions.
 - 3.5 Make joints tight in accordance with manufacturer's directions.
 - 3.6 Do not allow water to flow through the pipes during construction except as approved by Engineer.
 - 3.7 Lay perforated pipes with perforations at top and open positions.
 - 3.8 Plug upstream ends of pipe with weatheright cast caps.
 - 3.9 Surround and cover pipe with drain rock in excess of 100mm layers to various depths as shown in details, minimum 10mm.
 - 3.10 Cover drain rock with top-soil free of debris till all edges and seams between stones.
 - 3.11 Assure positive drainage.
 - 3.12 Backfill remainder of trench as indicated.
 - 3.13 Protect subdrains from floatation during installation.

34 GROWING MEDIUM TESTING

1. Submit representative sample of growing medium proposed for use on this project to an independent laboratory. Provide test results to Landscape Architect prior to planting. Test results to include:
 - 1.1 Physical properties: K, content of gravel, sand, silt, clay and organic.
 - 1.2 Acidity (pH) and quantities of lime or sulphur required to bring within specified range.
 - 1.3 Nutrient levels of nitrogen and trace elements and recommendations for required soil amendments.
 - 1.4 Carbon Nitrogen ratio.

35 GROWING MEDIUM SUPPLY AND PLACEMENT

1. Supply all growing medium required for the performance of the Contract. Do not haul, transport or spread growing medium where it is so wet that its structure is likely to be damaged.
2. Supply all growing medium additives as required by the soil test. Amended growing medium must meet the specification for growing medium as defined in Table One for the various areas.
- 2.1 Thoroughly mix required amendments into the full depth of the growing medium.
- 2.2 Special mixes may be required for various situations. Refer to drawing notes for instructions.
3. Place the amended growing medium in all grass and planting areas. Spread growing medium in uniform layers not exceeding 10" (25mm), over uniform subgrade free of standing water.
 - 3.1 Minimum depths of growing medium placed and compacted to 100%:
 - 3.1.1 On-grade: 10" (25mm)
 - 3.1.2 Seeded and sodded lawn: 6" (150mm)
 - 3.1.3 Grass planted shrubs & groundcovers: 10" (250mm)
 - 3.1.4 Groundcover mix areas, if defined on plan: 10" (220mm)
 - 3.1.5 Tree & large shrub pits: depth to conform to depth of rootball - with shall be at least twice the width of the root ball with seaper shaped sides.
 - 3.2 On-Sub:
 - 3.2.1 Irrigated lawn: 7" (175mm)
 - 3.2.2 Groundcover areas: 10" (250mm)
 - 3.2.3 Mulch mulch underneath trees: 10" (250mm)
 - 3.2.4 Shrub & groundcover areas: 10" (250mm)
 - 3.2.5 Trees and specimen shrubs: 10" (250mm) from column and/or edge of slab (verify column locations on-site for tree locations).
 - 3.2.6 Depth noted includes 1" to 2" (25-50mm) sand over filter fabric.
 - 3.2.7 Minimum 10" depth growing medium except where mounted for trees over column plants.
4. Manually spread growing medium/planing soil around existing trees, shrubs and other plants.
5. In perimeter seeded grass areas, feather growing medium out to finishing at edges and blend into existing grades.
6. Finished grades shall conform to the elevations shown on landscape and site plans.

36 ROUGH GRASS AREA - SEEDING

1. General: Rough grass areas are noted on the drawings as "Rough Grass". Treat all areas defined as rough grass between all property lines of the project including all boulevards to edge of roads and lanes.
2. Preparation of Surface: To B.C. Landscape Standard Class A Areas (Rough grass) Section 7.1.13
- 2.1 Clean existing soil by mechanical means of debris over 5mm in any dimension.
- 2.2 Rough grass surfaces to allow for maintenance specified and for positive drainage.
3. Time of Seeding: Seed from early spring (generally April 1st) to late fall (September 31st) of each year. Further extensions may be obtained on concurrence of the Landscape Architect.
4. Seed Supply & Testing: All seed must be obtained from a recognized seed supplier and shall be 100% grass mixture delivered in containers bearing the following information:
 - 4.1 Analysis of the seed mixture.
 - 4.2 Percentage of each seed type.
5. Seed Mix: All varieties shall be rated as strong performers in the Pacific Northwest and are subject to client approval.
 - 5.1 B.C. Seeding Ref: Fescue 20% Annual Ryegrass 20% Summer Perennial Ryegrass 20% Kentucky Bluegrass 20% For Midwestern Areas use a mixture of Midwesterns with Blue Fescues (Terraclik Coastal Midwestern) with hard Fescue or pre-approved alternate.
6. Fertilizer: Mechanical seeding Apply a complete synthetic slow-release fertilizer with maximum 35% water soluble nitrogen and a formulation ratio of 18-18-18 - 50% sulphur urea coated, 102 kg/ha (1000kg/ha) using a mechanical spreader.
7. Seeding: Apply seed at a rate of 125kg/1000kg/ha Aerial with a mechanical spreader. Incorporate seed into the top 100" (5cm) of soil and lightly compact.
8. Acceptance: Provide adequate protection of the seeded areas until conditions of acceptance have been met. Comply with Section 3.7 Hydroseeding.

37 HYDROSEEDING

1. Hydroseeded is an alternative to mechanical seeding in rough grass areas.
2. May not be used in areas of lawn areas pre-approved by the Landscape Architect prior to bidding.
3. Preparation and Growing Medium
 - 3.1 In areas of Rough Grass Comply with Section 34 Rough Grass.
 - 3.2 Where approved for use in areas of lawn, comply with Section 33 Lawn Areas Seeding.
4. Protection: Ensure that fertilizer in solution does not come in contact with the foliage of any trees, shrubs, or other susceptible vegetation. Do not spray seed or mulch on objects not specified to be grass areas. Protect existing site equipment, roadways, landscaping, reference points, monuments, markers and structures from damage. Where contamination occurs, remove seeding slurry to satisfaction of and by means approved by the Landscape Architect.
5. Mulch shall consist of virgin wood or recycled paper fibre designed for hydrolic seeding and 40% of mulch of mulching application. If using recycled paper material for wood fibre substitute use 155% by weight. Conforms to B.C. Landscape Standard for Mulch requirements.
6. Water: Shall be free of any impurities which may have an injurious effect on the success of seeding or may be harmful to the environment.
7. Equipment: Use industry standard hydrolic seeder/mulcher equipment with the tank volume certified by an independent plant or sticker attached to the tank side on the equipment. The hydrolic water/mulch shall be applied in sufficient application to mix the material into a homogeneous slurry and to maintain the slurry in a homogeneous state until it is applied. The discharge pumps and gunnits shall be capable of applying the materials uniformly over the designated area.

PART THREE SOFT LANDSCAPE DEVELOPMENT - CONT

38 APPLICATION RATE

1. Application Rate:
 - 8.1 Sod/Thatch: 150 kg/ha (125 lbs/acre)
 - 8.2 Fertilizer: 102 kg/ha (100 lbs/acre)
 - 8.3 Coastal Midwestern Ryegrass: Where specified, apply 100kg/ha (100 lbs/acre) of grass seed.
 - 8.4 Water:
 - 8.5 The Use of Tender provides a complete chart of all components of the mix prepared including mulch, fertilizer, water etc. Staged sites require fertilizer.
 - 8.6 Fertilizer:
 - 8.6.1 Rough Grass if a soil analysis is available, comply with results.
 - 8.6.2 Lawn: Where hydroseeding is approved, comply with soil analysis recommendations.
2. Accurately measure the quantities of each of the materials to be applied into the tank either by mass or by a commonly accepted system of mass-calibrated volume measurements. The materials shall be added to the tank while it is being filled with water. In the following sequence: mulch, fertilizer, thoroughly mix with a homogeneous slurry. After charging, add no water or other material to the mixture. Do not leave slurry in the tank for more than four (4) hours.
3. Distribute slurry uniformly over the surface of the area to be hydroseeded. Blend application into previous applications and existing grass areas to form uniform surface.
4. Clean: Remove all materials and other debris resulting from hydroseeding from the job site.
5. Maintenance: Begin maintenance immediately after seeding and continue for 60 days after Substantial Completion and until accepted by the Owner. Re-seed at three week intervals where germination has failed. Protect seeded areas from damage with temporary wire or white fence complete with 100kg/ha (100 lbs/acre) urea by the Owner. It is the Owner's responsibility to supply water at an extra cost to the Contractor.
6. Acceptance of the Rough Grass Area: Proper germination of all specified grass species is the responsibility of the Landscape Contractor. The grass shall be reasonably well established, with no apparent dead or bare spots and shall be reasonably free of weeds. The B.C. Landscape Standard, Section 6 (Rough Grass). Sixty days after substantial completion, assess meeting the conditions above with a clean sweep by the Owner. Areas seeded in fall will be accepted in Spring one month after start of growing season, provided that the above conditions for acceptance are fulfilled.

39 LAWN AREAS - SEEDING

1. General: Treat all lawn areas defined as lawn areas on the landscape plan between all property lines of the project including all boulevards to edge of roads and lanes.
2. Growing Medium: Comply with Section 22.3, Growing Medium. Prior to seeding, request an inspection of the finished grade, and depth and condition of growing medium by the Landscape Architect.
3. Time of Seeding: Sod from April 1st to October 31st. Further extensions may be obtained on concurrence of the Landscape Architect.
4. Seed Supply: Conform to all conditions of B.C. Landscape Standard, Section 6, B.C. Standard for Turfgrass Sod.
5. Specified Turfgrasses by Area: Refer to Table 2 below.

Area	Description	Quality Grade	Major Species
CLASS 1	Lawn: All areas noted on drawings as lawn in urban development sites including boulevard grass	Min. 2 Standard	Kentucky Blue for sun, Fescues for shade
CLASS 2	Grass - public parks, industrial and institutional sites	No. 2 Standard	see hydroseeding
CLASS 3	Rough Grass	see hydroseeding	
SPECIAL			

6. Line: The line shall be as defined in Section 2.2.2, Materials. Apply at rates recommended in required soil test. Refer to Section 34 for method.
7. Fertilizer: Refer to Section 2.2.2, Materials. Apply specified fertilizer at rates shown in the required soil test. Apply with mechanical spreader. Cultivate into growing medium 18 hours prior to seeding. Apply separately from line.
8. Seeding: Prepare a smooth, firm, even surface for laying sod and staggered with sections closely butted, without overlapping or gaps, smooth and even with adjoining areas and tightly. Water to obtain moisture penetration of 3" to 4" (75 - 100mm). Comply with requirements of B.C. Landscape Standard Section 8, B.C. Standard for Turfgrass Sod.
9. Maintenance: Begin maintenance immediately after seeding and continue for 60 days after Substantial Completion and until accepted by the Owner. Protect seeded areas from damage with temporary wire or white fence complete with 100kg/ha (100 lbs/acre) urea by the Owner. Water to obtain moisture penetration of 3" to 4" (75 - 100mm) by the Owner. It is the Owner's responsibility to supply water at an extra cost to the Contractor. Provide adequate protection of seeded areas against damage until the sod has been taken over by Owner. Repair any damaged area, re-grade as necessary. Aeration may be required if in the Landscape Architect's opinion, drainage through the sod base medium is impaired.
10. Acceptance of Lawn Areas: The turf shall be reasonably well established, with no apparent dead or bare spots and shall be reasonably free of weeds. The B.C. Landscape Standard, Section 6 (Lawn Areas) and 2 (Hydroseeding) necessary for weed removal unless other conditions of contract forbid this one. After the lawn has been cut at least twice, assess meeting the conditions above will be taken over by the Owner.

40 PLANTS AND PLANTING

1. Conform to planting layout as shown on Landscape Plans.
2. Obtain approval of Landscape Architect for layout and preparation of planting prior to commencement of planting operations.
3. Make edge of beds with smooth clean defined lines.

A. Time of Planting

- 1.1 Plant trees, shrubs and groundcovers only during periods that are normal for such work as determined by local weather conditions where seasonal conditions are likely to ensure successful adaptation of plants to their new location.

B. Standards

- 1.1 All plant material shall conform to the requirements of the B.C. Landscape Standard, 7th edition 2008, unless extended by drawing Plant Schedule or this specification.
- 1.2 Refer to B.C. Landscape Standard, Section 5, Plants and Planting and Section 12, B.C. Landscape Standard for Container Grow Plants for minimum standards.
- 1.3 Refer to Plant Schedule for specific plant and container sizes and comply with requirements.
- 1.4 Plant material obtained from areas with soil cancer disease conditions shall be rejected with the site clearance.

C. Review

- 1.1 Review at the source of supply and/or container plant site and general submittal of any or all planting stock at the site.

D. Availability

- 1.1 Area of search includes the Lower Mainland and Fraser Valley. Refer to Plant Schedule for any extension of area.
- 1.2 Supply proof of the availability of the specified plant material within 30 days of the award of the Contract.

E. Substitutions

- 1.1 Obtain written approval of the Landscape Architect prior to making any substitutions to the specified material. Non-approved substitutions will be rejected.
- 1.2 Allow a maximum of 5% of plants to be substituted.
- 1.3 Substitutions are subject to B.C. Landscape Standard - Definition of Conditions of Availability.

F. Plant Species & Location

- 1.1 Plants shall be true to name and of the height, caliper and size of root ball as shown on the landscape/site plant schedule. Caliper of trees is to be 100mm (4") (ES) above grade.
- 1.2 Plant all specified species in the location as shown on the landscape drawings. Notify Landscape Architect of conflicting roots or underground/overhead services are encountered.
- 1.3 Definition of given planting location will only be allowed after review of the proposed deviation by the Landscape Architect.

G. Excavation

- 1.1 Trees and large shrubs: Excavate a saucer shaped tree pit to the depth of the rootball and to at least twice the width of the rootball. Assess that finished grades at the original grade the tree was grown at.

H. Drainage of Planting Holes

- 1.1 Provide drainage of planting pits where required. In sloped conditions, break out the side of the planting pit to allow drainage down slope; and in flat conditions, mound to raise the rootball above impervious layer. Notify the Landscape Architect where the drainage of planting holes is limited.

I. Planting and Fertilizing Procedures

- 1.1 Plant all trees and shrubs with the roots placed in their natural growing position. If bagged, loosen around the top of the ball and cut away or remove top. Do not pull bagging from under the ball. Carefully remove container without injuring the rootballs. After settled place, cut in/over. For wire baskets, cut and remove top three rows of wire.
- 1.2 Filling planting holes by gently firming the growing medium around the root system in 8" (200mm) layers. Settle the soil with water. Add soil as required to meet field grade. Leave no air voids. When 2/3 of the topsoil has been placed, apply fertilizer as recommended by the required soil test at the specified rates.
- 1.3 Where planting is indicated adjacent to existing trees, use special care to avoid disturbance of the root system or natural grades of such trees.
- 1.4 Where areas are in lawn areas, provide a clean cut mulch 100mm (4") diameter circle centered on the tree.

J. Staking of Trees

- 1.1 Use two 2"x2"x4" stakes, unless superseded by municipal requirements. Set stakes minimum 2 ft. in soil. Do not tie stakes through rootball.
- 1.2 Leave the tree carefully vertical.
- 1.3 Tie with pre-approved commercial, flat woven polypropylene fabric (not), minimum width three (3) ft. Approved product: Arbor Tie - available from DwyerSoft.
- 1.4 Confirm: Trees over 6 ft. height: Guy with three 3/8" strand steel (3) guy's. Use three stakes equidistant around the tree completely below grade.
- 1.5 Trees 6 ft. or less: on Wood or Concrete Decks. Guy as above using three wooden (6") 2"x2"x4" bored to the maximum possible depth instead of stakes.
- 1.6 Mark all guy wires with white flagging material.

K. Pruning

- 1.1 Limit pruning to the minimum necessary to remove dead or injured branches. Preserve the natural character of the plants, do not cut the leader. Use only clean, sharp tools. Make all cuts clean and cut to the branch collar leaving no stubs. Shape affected areas so as not to let water run. Remove damaged material.

L. Mulching

- 1.1 Mulch all planting areas with an even layer of mulch to 2-4" - 3" (50 - 75mm) depth. Centre placement of mulch in areas labeled "Groundcover Area" on drawings. Mulch 3 ft. (900mm) diameter circle around trees in lawn areas, clean a clean edge.

M. Acceptance

- 1.1 The establishment of all plant material is the responsibility of the Landscape Contractor.

N. Plant Material Maintenance

- 1.1 Maintain all plant material for 60 days after all landscape work has received a Certificate of Completion.
- 1.2 Watering: Conform to B.C. Landscape Standard, Section 6.1.2 - Watering and growing as indicated.
- 1.2.1 Water to supplement natural rainfall such that the soil moisture content is kept to 50% to 100% of field capacity. Water to the full depth of the root zone each time. The Owner is responsible to supply water at an extra cost to the Contractor. Confirm name of water prior to beginning work.
- 1.3 Use appropriate means to control pests or diseases damaging plant material. Comply with all local governing statutes and guidelines for chemical control.
- 1.4 Plant material which fails to survive shall be replaced in the most appropriate season as determined by the Landscape Architect.
- 1.5 Repair tree stumps, stakes, and guy wires, when necessary.
- 1.6 Maintain areas relatively weed free. Appearance level 2, B.C. Landscape Standard, Chapter 10.
- 1.7 Maintain mulch to specified depths.

O. Plant Warranty

- 1.1 Replace all unsuccessful plant material except those designated "Specimen" for a period of one (1) year after the Certificate of Completion. Replace all unsuccessful plant material designated "Specimen" for a period of two (2) years after the Certificate of Completion. Replace all unsuccessful trees and shrubs and continue to replace those until the specified number is established and satisfactory to the Landscape Architect. Such replacement shall be subject to the notification, inspection and approval as specified in the original planting, and shall not constitute an extra to the Contract.
- 1.2 These Plants, identified as such within one of the Canada Department of Agriculture (Lawn class for the area, specified by the Landscape Architect) and installed by the Landscape Contractor which are killed through natural temperature or below the average of the extreme minimum temperatures recorded in the area will be deemed to be dead. In the last 10 years, will not be replaced without cost of replacement borne by the Owner.
- 1.3 A review may be requested during the latter part of the warranty growing season. All plant material showing well developed foliage, healthy growth and bud formation will then be taken over.

MAR 18 2010

PLAN # 3E

DP 14-671945



DP 14-671945

PLAN #4

MAR 18 2016



9800-60 Granville Townhouses - Zhao XD Architect Ltd.

DP 14-671945 PLAN #4A

MAR 18 2016



9800-60 Granville Townhouses - Zhao XD Architect Ltd.

DP 14-671945 PLAN # 4B MAR 18 2016

0 1 2 3 4 5 6 7 8 inches



**ZHAO XD
ARCHITECT
LTD.**

#255-11181 Voyageur Way,
Richmond, BC V6X 3N9
Tel. (604) 275-8882
Fax (604) 909-1736

Email: info@zhaorarch.com
Web: zhaorarch.com

This drawing shall not be used for construction unless it is countersigned by the CONSULTANT.



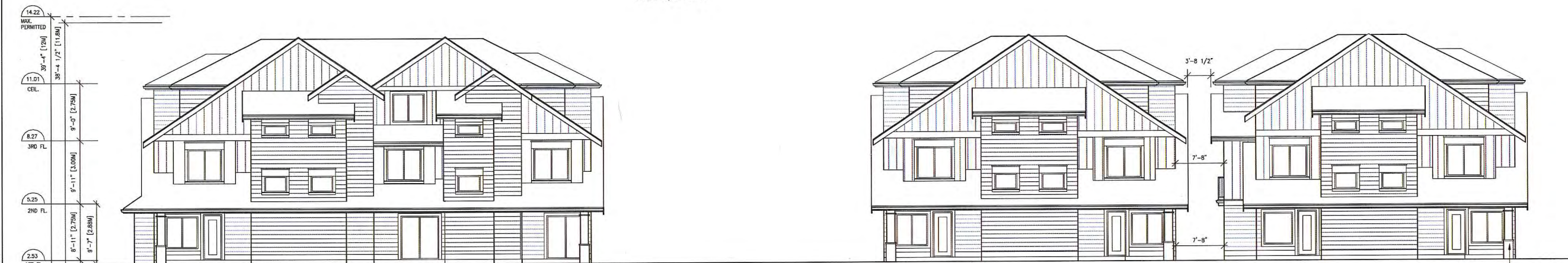
STREET ELEVATION ON GRANVILLE AVE.

SCALE: 1/8"=1'-0"



ELEVATION ON INTERNAL DRIVE AISLE (BUILDINGS 1-4)

SCALE: 1/8"=1'-0"



ELEVATION ALONG REAR PROPERTY LINE

SCALE: 1/8"=1'-0"

27MAY15	DP COMMENTS
11MAR/14	REZONING
Date:	Issued For:

A	A DETAIL NUMBER
B	B LOCATION SHEET
C	C DETAIL SHEET

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Project:
**TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE**

9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
SITE ELEVATIONS

Date:
Scale:
Drawn By:
Checked By:
Project No.:

Drawing No.:
A8.1

DP 14-671945 PLAN #4C MAR 18 2016

DP 14-671945

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

This drawing is NOT to be scaled. Use figured dimensions only.



**ZHAO XD
ARCHITECT
LTD.**

#255-11181 Voyageur Way,
Richmond, BC V6X 3N9
Tel. (604) 275-8882
Fax (604) 909-1736

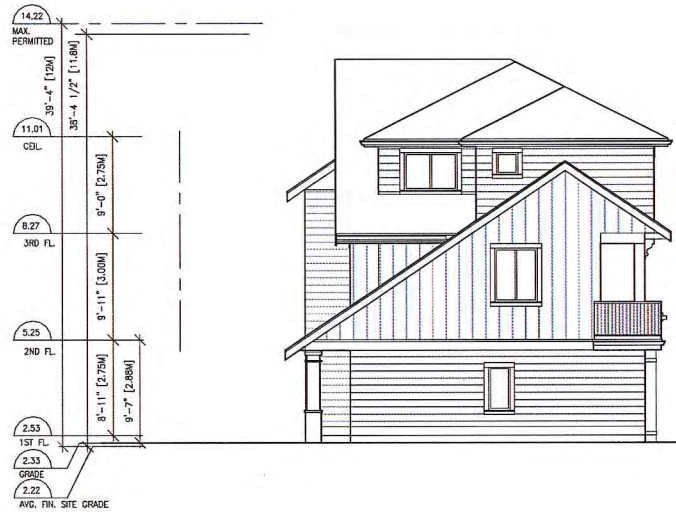
Email: info@zhaarch.com
Web: zhaarch.com

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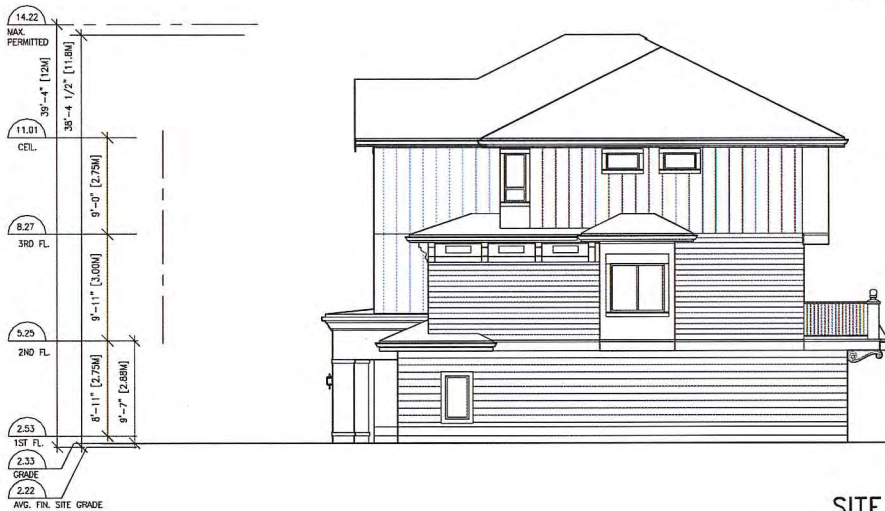
ELEVATION ON INTERNAL DRIVE AISLE (BUILDINGS 5-7)

SCALE: 1/8"=1'-0"



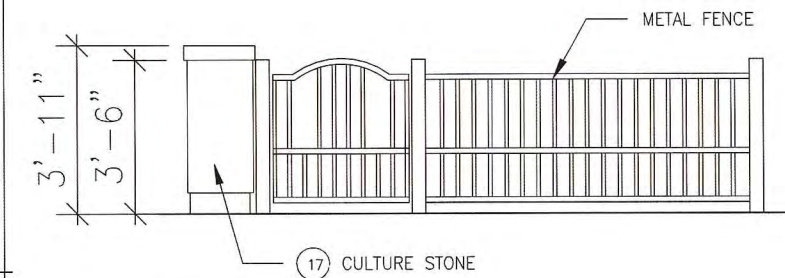
SITE ELEVATION (EAST)

SCALE: 1/8"=1'-0"



SITE ELEVATION (WEST)

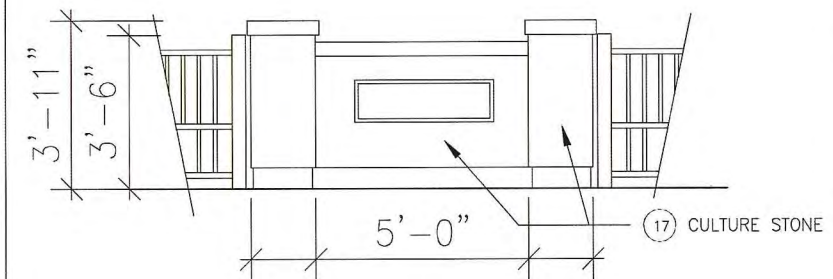
SCALE: 1/8"=1'-0"



FENCE DETAIL 1

SCALE: 1/2"=1'-0"

(SEE LANDSCAPE DWG. FOR MORE DETAILS)



FENCE DETAIL 2

SCALE: 1/2"=1'-0"

(SEE LANDSCAPE DWG. FOR MORE DETAILS)

27MAY15	DP COMMENTS
11MAR/14	REZONING
Date:	Issued For:

A	A DETAIL NUMBER
B	B LOCATION SHEET
C	C DETAIL SHEET

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Project:

TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
SITE ELEVATIONS

Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:

A8.2

MAR 18 2016

PLAN # 4D

DP 14-671945

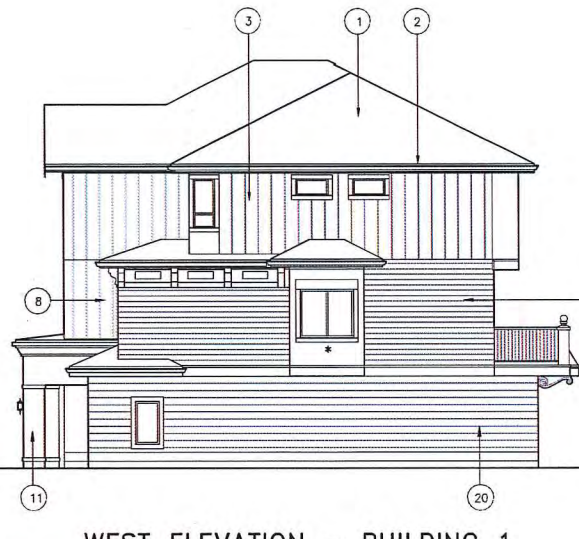
DP 14-671945

File Name: L:\DWG\14-671945\A8.2.dwg

DP 14-671945



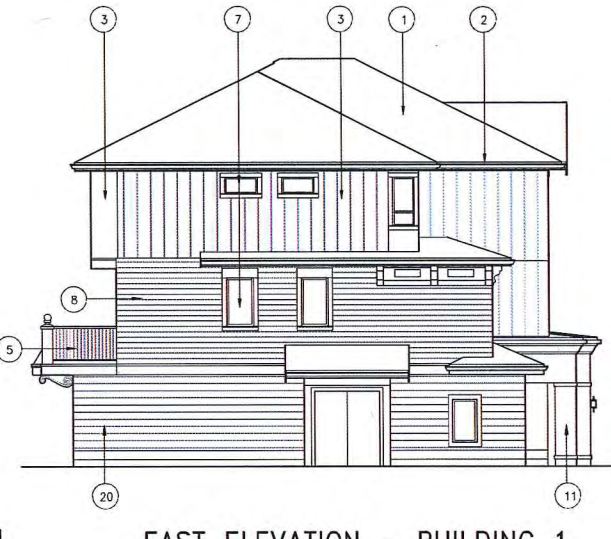
NORTH ELEVATION - BUILDING 1
SCALE: 1/8"=1'-0"



WEST ELEVATION - BUILDING 1
SCALE: 1/8"=1'-0"



SOUTH ELEVATION - BUILDING 1
SCALE: 1/8"=1'-0"



EAST ELEVATION - BUILDING 1
SCALE: 1/8"=1'-0"

- EXTERIOR FINISH & COLOR**
- ① ASPHALT SHINGLES - DUAL BLACK - IKO
 - ② 5" ALUM. GUTTER ON 2x6 WOOD FASCIA BOARD - PAINTED (TYP.) BK: AF-565 MYSTERIOUS
 - ③ HARDE BOARD (BOARD & BATTEN) - MONTEREY TAUPE
 - ④ 2x4 WOOD TRIM - MATCH THE SIDING COLOR
 - ⑤ ALUMIN. GUARDRAIL (BLACK)
 - ⑥ BUILT-UP WOOD CANOPY W/HARDIPANEL - PAINTED (TYP.) - IRON GRAY
 - ⑦ DOUBLE-GLAZED WINDOWS IN VINYL FRAMES C/W 2x4 SILL (SLOPE 15X) & 2x4 SIDE & TOP TRIM C/W FLASHING OVER TRIM PAINTED: BK: AF-720 SPARROW
 - ⑧ HARDE SIDING (7") - MONTEREY TAUPE
 - ⑨ LIGHT FIXTURE (MOTION SENSOR LED)
 - ⑩ SOLID CORE WOOD DOOR - BJ 2080-10 RASPBERRY TRUFFLE
 - ⑪ BUILT-UP WOOD COLUMN & POST W/HARDIPANEL-PAINTED (TYP.) - IRON GRAY
 - ⑫ GARAGE DOOR: BK: AF-380 COSTAL PATH
 - ⑬ POT LIGHTS AT EACH ENTRY
 - ⑭ 1x2 TRIM ON 2X12 HORIZONTAL TRIM BOARD - IRON GRAY
 - ⑮ 2X10 HORIZONTAL TRIM BOARD C/W FLASHING OVER - IRON GRAY
 - ⑯ HARDIPANEL-PAINTED (TYP.) - IRON GRAY
 - ⑰ CULTURE STONE (RESERVED)
 - ⑱ HARDE SIDING (7") - TUSCAN GOLD
 - ⑲ PLANTER (HARDIPANEL) - IRON GRAY
 - ⑳ HARDE SIDING (7") - BK: CSP-290 CAFE AU LAIT

*** BAY WINDOW NOTES:**
BAY WINDOW SEAT MIN. 2" ABOVE FINISHED FLOOR IS STRUCTURALLY PROTRUDED FROM THE WALL. NO FLOORING JOIST EXTENDS BEYOND THE WALL TO PREVENT A CONVERSION TO USABLE FLOOR SPACE.



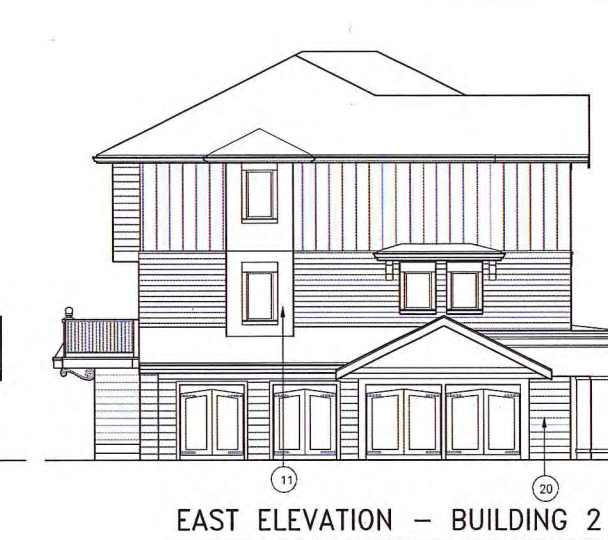
NORTH ELEVATION - BUILDING 2
SCALE: 1/8"=1'-0"



WEST ELEVATION - BUILDING 2
SCALE: 1/8"=1'-0"



SOUTH ELEVATION - BUILDING 2
SCALE: 1/8"=1'-0"



EAST ELEVATION - BUILDING 2
SCALE: 1/8"=1'-0"



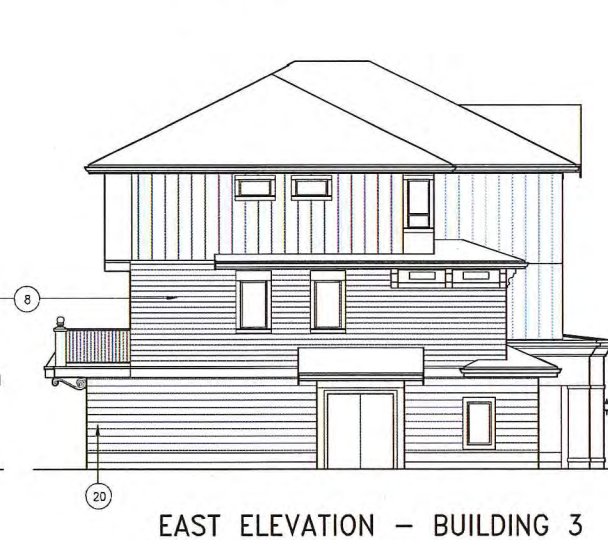
NORTH ELEVATION - BUILDING 3
SCALE: 1/8"=1'-0"



WEST ELEVATION - BUILDING 3
SCALE: 1/8"=1'-0"



SOUTH ELEVATION - BUILDING 3
SCALE: 1/8"=1'-0"



EAST ELEVATION - BUILDING 3
SCALE: 1/8"=1'-0"

ZHAO XD ARCHITECT LTD.
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27MAY15 DP COMMENTS
11MAR/14 REZONING
Date: Issued For:

A A DETAIL NUMBER
B B LOCATION SHEET
C C DETAIL SHEET

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Project:
TOWNHOUSE DEVELOPMENT GRANVILLE AVE

9800-9860 GRANVILLE AVE,
RICHMOND, BC

Drawing Title:
ELEVATIONS

Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:

A7

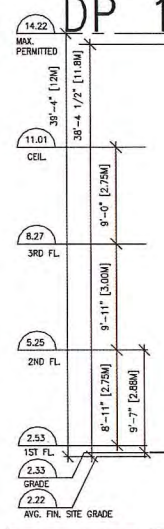
PLAN #5

MAR 18 2016

PLAN #47

DP 14-671945

DP 14-671945



NORTH ELEVATION - BUILDING 4
SCALE: 1/8"=1'-0"



WEST ELEVATION - BUILDING 4
SCALE: 1/8"=1'-0"



SOUTH ELEVATION - BUILDING 4
SCALE: 1/8"=1'-0"



EAST ELEVATION - BUILDING 4
SCALE: 1/8"=1'-0"

BAY WINDOW NOTES:
BAY WINDOW SEAT MAX. 2' ABOVE FINISHED FLOOR IS STRUCTURALLY PROTRUDED FROM THE WALL. NO FLOORING JOIST EXTENDS BEYOND THE WALL TO PREVENT A CONVERSION TO USABLE FLOOR SPACE.



NORTH ELEVATION - BUILDING 5
SCALE: 1/8"=1'-0"



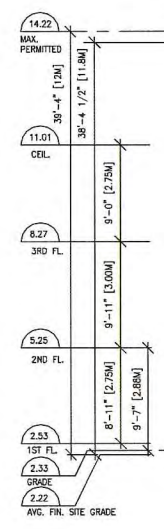
WEST ELEVATION - BUILDING 5
SCALE: 1/8"=1'-0"



SOUTH ELEVATION - BUILDING 5
SCALE: 1/8"=1'-0"



EAST ELEVATION - BUILDING 5
SCALE: 1/8"=1'-0"



NORTH ELEVATION - BUILDING 7
SCALE: 1/8"=1'-0"



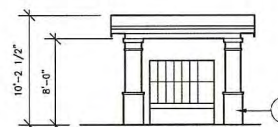
WEST ELEVATION - BUILDING 7
SCALE: 1/8"=1'-0"



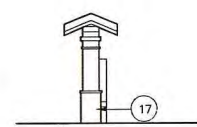
SOUTH ELEVATION - BUILDING 7
SCALE: 1/8"=1'-0"



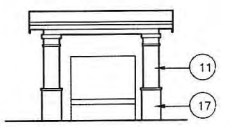
EAST ELEVATION - BUILDING 7
SCALE: 1/8"=1'-0"



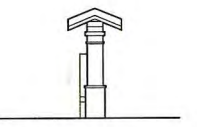
NORTH ELEVATION - MAILBOX
SCALE: 1/8"=1'-0"



WEST ELEVATION - MAILBOX
SCALE: 1/8"=1'-0"



SOUTH ELEVATION - MAILBOX
SCALE: 1/8"=1'-0"



EAST ELEVATION - MAILBOX
SCALE: 1/8"=1'-0"

EXTERIOR FINISH & COLOR	
① ASPHALT SHINGLES - DUAL BLACK - IKO	⑨ LIGHT FIXTURE (MOTION SENSOR LED)
② 5" ALUM. GUTTER ON 2x6 WOOD FASION BOARD - PAINTED (TYP.) BM: AF-555 MYSTERIOUS	⑩ SOLID CORE WOOD DOOR - BJ 2080-10 RASPBERRY TRUFFLE
③ HARDIE BOARD (BOARD & BATTEN) - MONTEREY TAUPE	⑪ BUILT-UP WOOD COLUMN & POST W/HARDIPANEL-PAINTED (TYP.) - IRON GRAY
④ 2x4 WOOD TRIM - MATCH THE SIDING COLOR	⑫ GARAGE DOOR: BM: AF-380 COSTAL PATH
⑤ ALUMN. GUARDRAIL (BLACK)	⑬ POT LIGHTS AT EACH ENTRY
⑥ BUILT-UP WOOD CANOPY W/HARDIPANEL-PAINTED (TYP.) - IRON GRAY	⑭ 1x2 TRIM ON 2X12 HORIZONTAL TRIM BOARD - IRON GRAY
⑦ DOUBLE-GLAZED WINDOWS IN VINYL FRAMES C/W 2x4 SILL (SLOPE 15X) & 2x4 SIDE & TOP TRIM C/W FLASHING OVER TRIM PAINTED: BM: AF-720 SPARRROW	⑮ 2X10 HORIZONTAL TRIM BOARD C/W FLASHING OVER - IRON GRAY
⑧ HARDIE SIDING (7') - MONTEREY TAUPE	⑯ HARDIPANEL-PAINTED (TYP.) - IRON GRAY
	⑰ CULTURE STONE (RESERVED)
	⑱ HARDIE SIDING (7') - TUSCAN GOLD
	⑲ PLANTER (HARDIPANEL) - IRON GRAY
	⑳ HARDIE SIDING (7') - BM: CSP-280 CAFE AU LAIT



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#255-11181 Voyageur Way,
Richmond, BC V6X 3N9
Tel. (604) 275-8852
Fax (604) 909-1736

Email: info@zhaoarch.com
Web: zhaoarch.com

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11MAR/14	REZONING
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B	B LOCATION SHEET
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Project:
TOWNHOUSE DEVELOPMENT GRANVILLE AVE
9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
ELEVATIONS

Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:

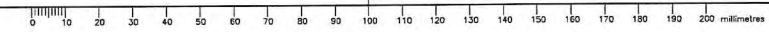
A8

PLAN #6

MAR 18 2016

PLAN # 4/F

DP 14-671945



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Richmond, BC V6X 3N9
Tel. (604) 275-8882
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11MAR/14	REZONING
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Project:
**TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE**

9800-9860 GRANVILLE AVE,
RICHMOND, BC

Drawing Title:
**UNIT PLANS &
AREA OVERLAYS
& ELEVATIONS**

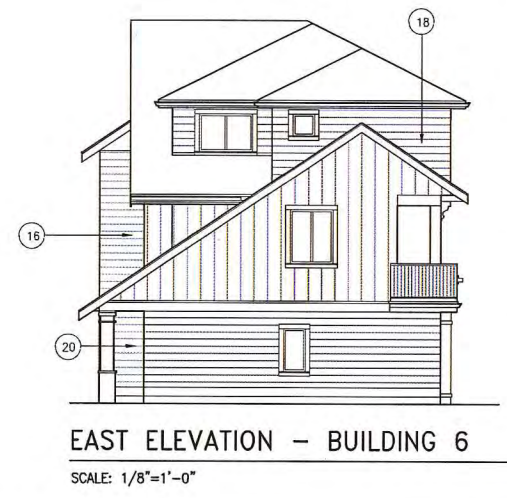
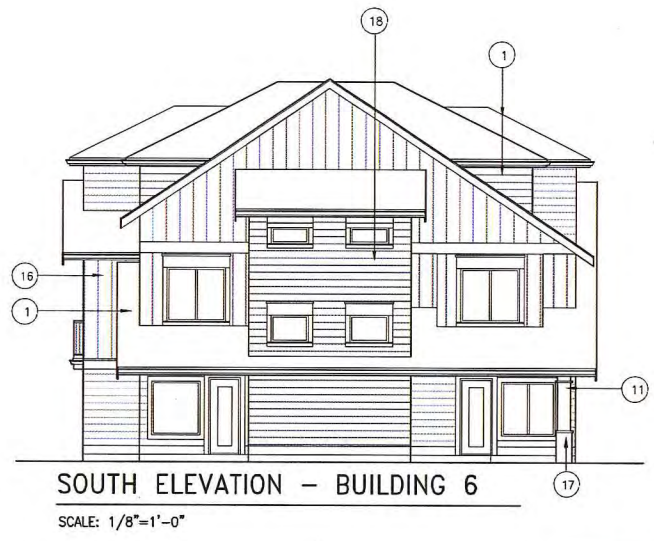
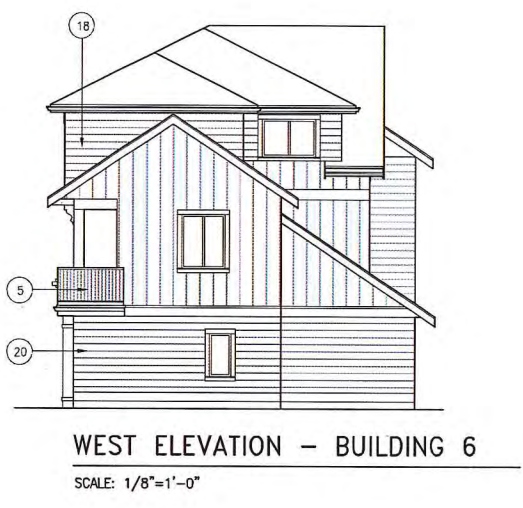
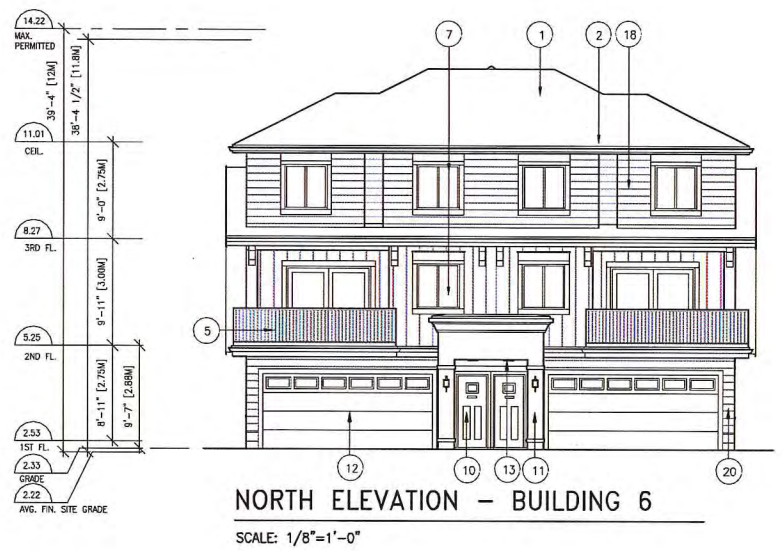
Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:

A6

MAR 18 2016

PLAN #4

DP 14-671945



EXTERIOR FINISH & COLOR	
1 ASPHALT SHINGLES - DUAL BLACK - WD	13 LIGHT FIXTURE (MOTION SENSOR LED)
2 5" ALUM. GUTTER ON	14 SOLID CORE WOOD DOOR - BJ 2080-10 RASPBERRY TRUFFLE
3 2X6 WOOD FASCIA BOARD - PAINTED (TYP.) BM: AF-565 MYSTERIOUS	15 BUILT-UP WOOD COLUMN & POST W/HARDIPANEL-PAINTED (TYP.) - IRON GRAY
4 HARDIE BOARD (BOARD & BATTEN) - MONTEREY TAUPE	16 GARAGE DOOR: BM: AF-380 COSTAL PATH
5 2X4 WOOD TRIM - MATCH THE SIDING COLOR	17 POT LIGHTS AT EACH ENTRY
6 ALUMN. GUARDRAIL (BLACK)	18 1X2 TRIM ON 2X12 HORIZONTAL TRIM BOARD - IRON GRAY
7 BUILT-UP WOOD CANTOPY W/HARDIPANEL - PAINTED (TYP.) - IRON GRAY	19 2X10 HORIZONTAL TRIM BOARD C/W FLASHING OVER - IRON GRAY
8 DOUBLE-GLAZED WINDOWS IN VINYL FRAMES C/W 2x4 SILL (SLOPE 15%) & 2x4 SIDE & TOP TRIM C/W FLASHING OVER TRIM PAINTED: BM: AF-720 SPARRROW	20 HARDIPANEL-PAINTED (TYP.) - IRON GRAY
9 HARDIE SIDING (7") - MONTEREY TAUPE	21 CULTURE STONE (RESERVED)
	22 HARDIE SIDING (7") - TUSCAN GOLD
	23 PLANTER
	24 HARDIE SIDING (7") - BM: CSP-290 CAFE AU LAIT

Plot Scale
Updated
File Name

DP 14-671945
PLAN #4

DP 14-671945

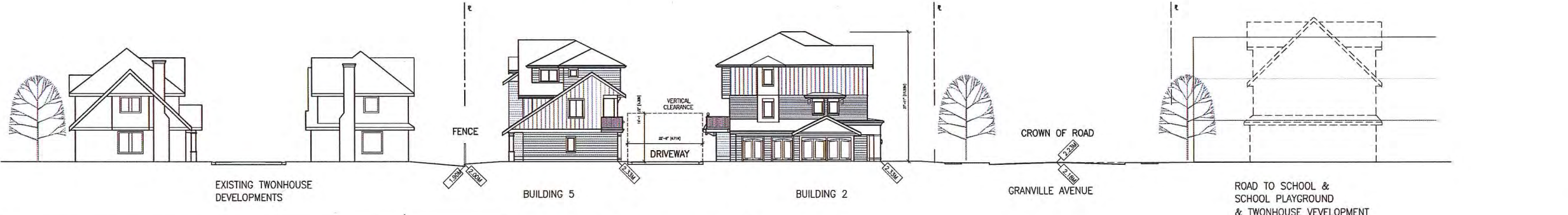
ZHAO XD ARCHITECT LTD.

#255-11181 Voyageur Way,
Richmond, BC V6X 3N9
Tel. (604) 275-8882
Fax (604) 909-1736

Email: info@zhaearch.com
Web: zhaearch.com



NORTH SITE ELEVATION - (GRANVILLE AVE.)
SCALE: 1/16"=1'-0"



EAST SITE ELEVATION
SCALE: 1/16"=1'-0"

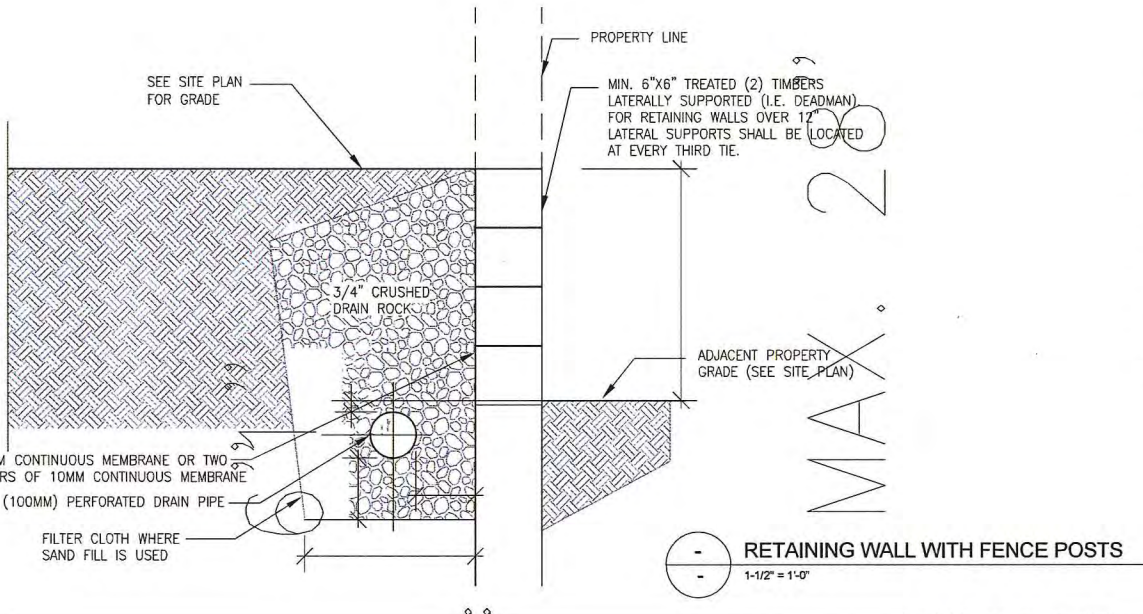
SPECIFICATIONS FOR ENERGUIDE 82:
by BUILDING BALANCE Consulting Inc

LOCATION (WEATHER FILE)	METRO VANCOUVER, BC
CEILING	TRUSSES @ 24" O/C, R-40 INSULATION
FLAT CEILING	2X10 @ 24" O/C, R-28 INSULATION
EXTERIOR WALLS ABOVE GRADE	2X6 @ 16" O/C, R-20
WINDOWS	ENERGY STAR EQUIVALENT WINDOWS
DOORS	STEEL WITH FOAM CORE (FRONT: SOLID WOOD)
EXPOSED FLOORS	2X10 @ 16" O/C, R-28 INSULATION
FLOOR ON GRADE	R-12 UNDER SLAB
AIRTIGHTNESS CONSERVATIVE AIRTIGHTNESS	LEVEL (6.5 ACH @ 50 PA WITH DEFAULT ELA)
HEATING	AIR SOURCE HEAT PUMP (HSPF 6.7) WITH ELECTRIC BACKUP
HOT WATER	ELECTRIC TANK
WALLS	2X6 FRAME, R-22 BATT INSULATION

AREA CALCULATIONS (PER UNIT)

	UNIT	OUTDOOR SPACE (SF):	GROSS FLOOR AREA (SF):*				EXEMPTED FLOOR AREA (SF):			NET FLOOR AREA (SF):	LOT COVERAGE (SF):	COVERED AREA (SF):	GARAGE AREA (SF):	
			1ST FLOOR	2ND FLOOR	3RD FLOOR	TOTAL	1ST FLOOR	2ND FLOOR	3RD FLOOR					
BUILDING 1	UNIT 'A'	417.30	698.5	583.6	547.78	1829.9	698.5	10.7	-	709.2	1120.7	698.5	73.5	528.2
	UNIT 'A1'	845.10	684.0	583.6	547.78	1815.4	684.0	10.7	-	694.7	1120.7	684.0	59.0	528.2
	UTILITY CL.					19.8						19.8		
BUILDING 2	UNIT 'A'	562.10	698.5	583.6	547.78	1829.9	698.5	10.7	-	709.2	1120.7	698.5	73.5	528.2
	UNIT 'A2'	417.30	684.0	583.6	547.78	1815.4	684.0	10.7	-	694.7	1120.7	684.0	59.0	528.2
	UNIT 'A6'	402.70	695.3	583.6	547.78	1826.7	695.3	10.7	-	706.0	1120.7	695.3	70.3	528.2
	GARBAGE/RECY					167.9						167.9		
BUILDING 3	UNIT 'A4'	402.70	695.3	583.6	547.78	1826.7	695.3	10.7	-	706.0	1120.7	695.3	70.3	528.2
	UNIT 'A5'	417.30	684.0	583.6	547.78	1815.4	684.0	10.7	-	694.7	1120.7	684.0	59.0	528.2
	UNIT 'A7'	562.10	698.5	583.6	547.78	1829.9	698.5	10.7	-	709.2	1120.7	698.5	73.5	528.2
	UTILITY CL.					65.5						65.5		
BUILDING 4	UNIT 'A'	562.10	698.5	583.6	547.78	1829.9	698.5	10.7	-	709.2	1120.7	698.5	73.5	528.2
	UNIT 'A2'	417.30	684.0	583.6	547.78	1815.4	684.0	10.7	-	694.7	1120.7	684.0	59.0	528.2
	UNIT 'A3'	417.30	698.5	583.6	547.78	1829.9	698.5	10.7	-	709.2	1120.7	698.5	73.5	528.2
	UTILITY CL.					65.5						65.5		
BUILDING 5	UNIT 'B'	497.60	737.6	628.7	540.1	1906.4	571.0	55.2	-	626.2	1280.2	737.6	140.5	378.1
	UNIT 'B3'	407.90	744.1	641.6	603.1	1988.8	548.6	45	-	593.6	1395.2	744.1	103.2	382.9
	UNIT 'B4'	423.8	717.9	651.7	595.8	1965.4	542.6	45	-	587.6	1377.8	717.9	102.0	378.1
	UTILITY CL.					44.3						44.3		
BUILDING 6	UNIT 'B5'	454.00	737.6	628.7	540.1	1906.4	571.0	55.2	-	626.2	1280.2	737.6	140.5	378.1
	UNIT 'B2'	524.70	737.6	628.7	540.1	1906.4	571.0	55.2	-	626.2	1280.2	737.6	140.5	378.1
BUILDING 7	UNIT 'B'	520.30	737.6	628.7	540.1	1906.4	571.0	55.2	-	626.2	1280.2	737.6	140.5	378.1
	UNIT 'B2'	623.30	737.6	628.7	540.1	1906.4	571.0	55.2	-	626.2	1280.2	737.6	140.5	378.1
	TOTAL:	8874.9	12769.1	10856.4	9925.0	33848.2	11565.3	483.7	-	12049.0	21501.7	13066.6	1651.8	8461.7

* INCLUDING GARAGE, COVERED AREA & STAIR ENTRY EXEMPTED AREA.



27MAY15 DP COMMENTS
11MAR/14 REZONING

Date: Issued For:

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Project:
TOWNHOUSE DEVELOPMENT GRANVILLE AVE

9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
STREETSCAPE

Date:

Scale:

Drawn By:

Checked By:

Project No.:

Drawing No.:

A9

MAR 18 2016

PLAN # 44

DP 14-671945



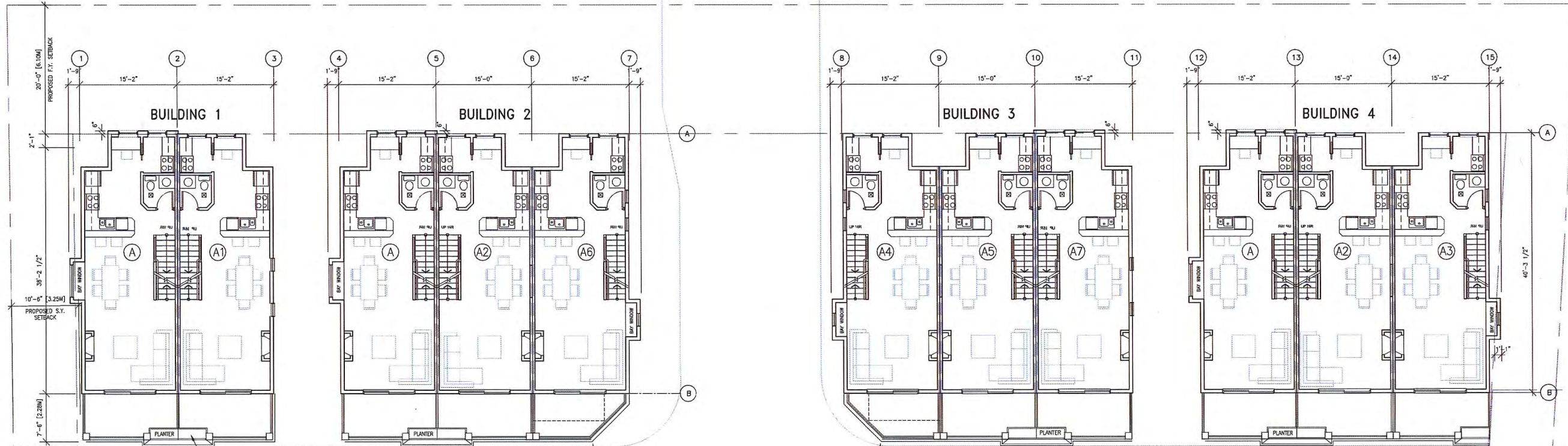
ZHAO XD ARCHITECT LTD.

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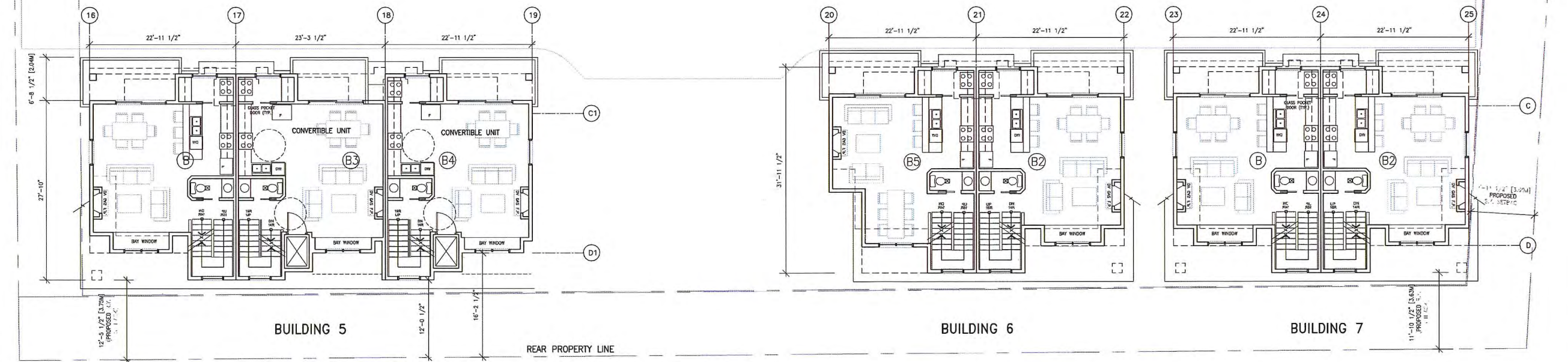
Email: info@zhaarch.com
Web: zhaarch.com

This drawing shall not be used for construction unless it is countersigned by the CONSULTANT.

MAR 18 2016



AGING IN PLACE FEATURES FOR ALL UNITS:
-SOLID BLOCKING IN WASHROOM WALLS FOR FUTURE GRAB BARS;
-LEVER-TYPE HANDLES FOR PLUMBING AND DOOR HANDLES



* BAY WINDOW NOTES:
BAY WINDOW SEAT MIN. 2' ABOVE FINISHED FLOOR IS STRUCTURALLY PROTRUDED FROM THE WALL. NO FLOORING JOIST EXTENDS BEYOND THE WALL TO PREVENT A CONVERSION TO USABLE FLOOR SPACE.



2ND FLOOR PLAN & PRIVATE OUTDOOR SPACES

SCALE: 1/8"=1'-0"

NOTE FOR LIFT:
2 STOREY LIFT
RISE LIFT BY THYSSENKRUPP DESTINY RESIDENTIAL ELEVATOR
MIN. CLEAR HOISTWAY SIZE: 43"x60" (TYP.)
DEPRESSED SLAB FOR LIFT

AGING IN PLACE FEATURES FOR ALL UNITS:
-SOLID BLOCKING IN WASHROOM WALLS FOR FUTURE GRAB BARS;
-LEVER-TYPE HANDLES FOR PLUMBING AND DOOR HANDLES
2 CONVERTIBLE UNITS ARE PROPOSED FOR THIS PROJECT.

- ENGERGUIDE RATING OF 82 OR ABOVE IS TO BE ACHIEVED FOR THE DEVELOPMENT PROJECT.
- PRE-DUCT FOR SOLAR HOT WATER IS REQUIRED FOR EACH UNIT.

27MAY15	DP COMMENTS
11MAR/14	REZONING
Date:	Issued For:

A	A DETAIL NUMBER
B	B LOCATION SHEET
C	C DETAIL SHEET

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Project:
**TOWNHOUSE DEVELOPMENT
GRANVILLE AVE**

9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
SECOND FLOOR PLAN

Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:

A3

DP 14-671945 REFERENCE PLAN



**ZHAO XD
ARCHITECT
LTD.**

#255-11181 Voyageur Way,
Richmond, BC V6X 3N9
Tel. (604) 275-8882
Fax (604) 909-1736

Email: info@zhaarch.com
Web: zhaarch.com

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27MAY15	DP COMMENTS
11MAR/14	REZONING
Date:	Issued For:

A	A DETAIL NUMBER
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The contractor shall check and verify all pertinent dimensions and report any discrepancies to the CONSULTANT before proceeding with the work.

Project:
**TOWNHOUSE DEVELOPMENT
GRANVILLE AVE**

9800-9860 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
THIRD FLOOR PLAN

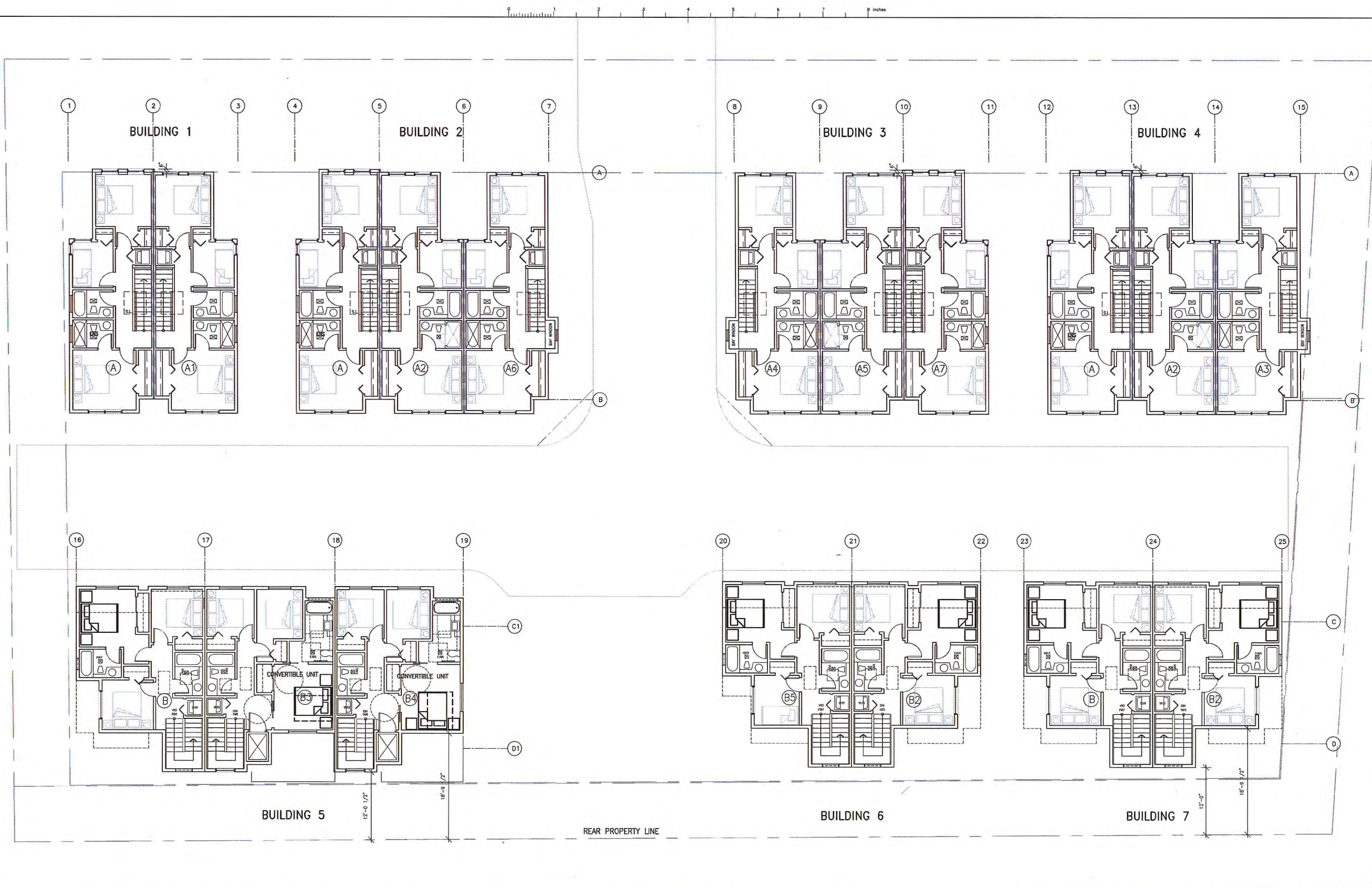
Date:
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Checked By:
Project No.:
Drawing No.:

A4

MAR 18 2016

REFERENCE PLAN

DP 14-671945



DP 14-671945

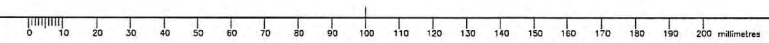
- ENGERGUIDE RATING OF B2 OR ABOVE IS TO BE ACHIEVED FOR THE DEVELOPMENT PROJECT.
- PRE-DUCT FOR SOLAR HOT WATER IS REQUIRED FOR EACH UNIT.

*** BAY WINDOW NOTES:**
BAY WINDOW SEAT MIN. 2' ABOVE FINISHED FLOOR IS STRUCTURALLY PROTRUDED FROM THE WALL. NO FLOORING JOIST EXTENDS BEYOND THE WALL TO PREVENT A CONVERSION TO USABLE FLOOR SPACE.

3RD FLOOR PLAN
SCALE: 1/8"=1'-0"

NOTE FOR LIFT:
2 STOREY LIFT
RISE LIFT BY THYSSENKRUPP DESTINY RESIDENTIAL ELEVATOR
MIN. CLEAR HOISTWAY SIZE: 43"x60" (TYP.)
DEPRESSED SLAB FOR LIFT

AGING IN PLACE FEATURES FOR ALL UNITS:
-SOLID BLOCKING IN WASHROOM WALLS FOR FUTURE GRAB BARS;
-LEVER-TYPE HANDLES FOR PLUMBING AND DOOR HANDLES
2 CONVERTIBLE UNITS ARE PROPOSED FOR THIS PROJECT.



This drawing is NOT to be scaled. Use figured dimensions only.

