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TO: **Mayor & Council**

FROM: **General Manager, Planning and Development**

DATE: **June 10, 2019** FILE: **7917-0559-00**

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RE: **Item B.6, Regular Council – Land Use Agenda  
Development Application No. 7917-0559-00**

With respect to Item B.6 on the June 10, 2019 Regular Council – Land Use Agenda, Planning recommendation 3(a) on page 3, is to be revised to correct an error related to the proposed setback variance. The variance should be corrected to refer to the minimum side yard on a flanking street setback, not the minimum front yard setback. The recommendation is to be revised as follows:

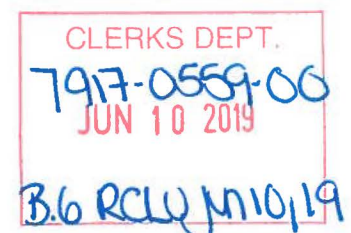
- (a) to reduce the minimum side yard on a flanking street setback of the RA Zone from 7.5 metres (25 ft.) to 4.1 metres (13 ft.) for an existing accessory building on proposed Lot 27.

Replacement pages for the Development Variance Permit are attached.



Jean Lamontagne  
General Manager,  
Area Planning & Development

L4M



CITY OF SURREY

(the "City")

DEVELOPMENT VARIANCE PERMIT

NO.: 7917-0559-00

Issued To:

(the "Owner")

Address of Owner:

1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 006-500-111  
West Half Lot 4 Section 24 Township 2 New Westminster District Plan 5556

16174 - 80 Avenue

(the "Land")

3. (a) As the legal description of the Land is to change, the City Clerk is directed to insert the new legal description for the Land once title(s) has/have been issued, as follows:

Parcel Identifier:

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- (b) If the civic address(es) change(s), the City Clerk is directed to insert the new civic address(es) for the Land, as follows:

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4. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
  - (a) to reduce the minimum side yard on a flanking street setback of the RA Zone from 7.5 metres (25 ft.) to 4.1 metres (13 ft.) for an existing accessory building on proposed Lot 27.
5. This development variance permit applies to only that portion of the buildings and structures on the Land shown on Schedule A which is attached hereto and forms part of this development variance permit. This development variance permit does not apply to additions to, or replacement of, any of the existing buildings shown on attached Schedule A, which is attached hereto and forms part of this development variance permit.
6. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.
7. This development variance permit shall lapse unless the subdivision, as conceptually shown on Schedule A which is attached hereto and forms part of this development variance permit, is registered in the New Westminster Land Title Office within three (3) years after the date this development variance permit is issued.
8. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.
9. This development variance permit is not a building permit.

AUTHORIZING RESOLUTION PASSED BY THE COUNCIL, THE      DAY OF      , 20 .  
ISSUED THIS      DAY OF      , 20 .

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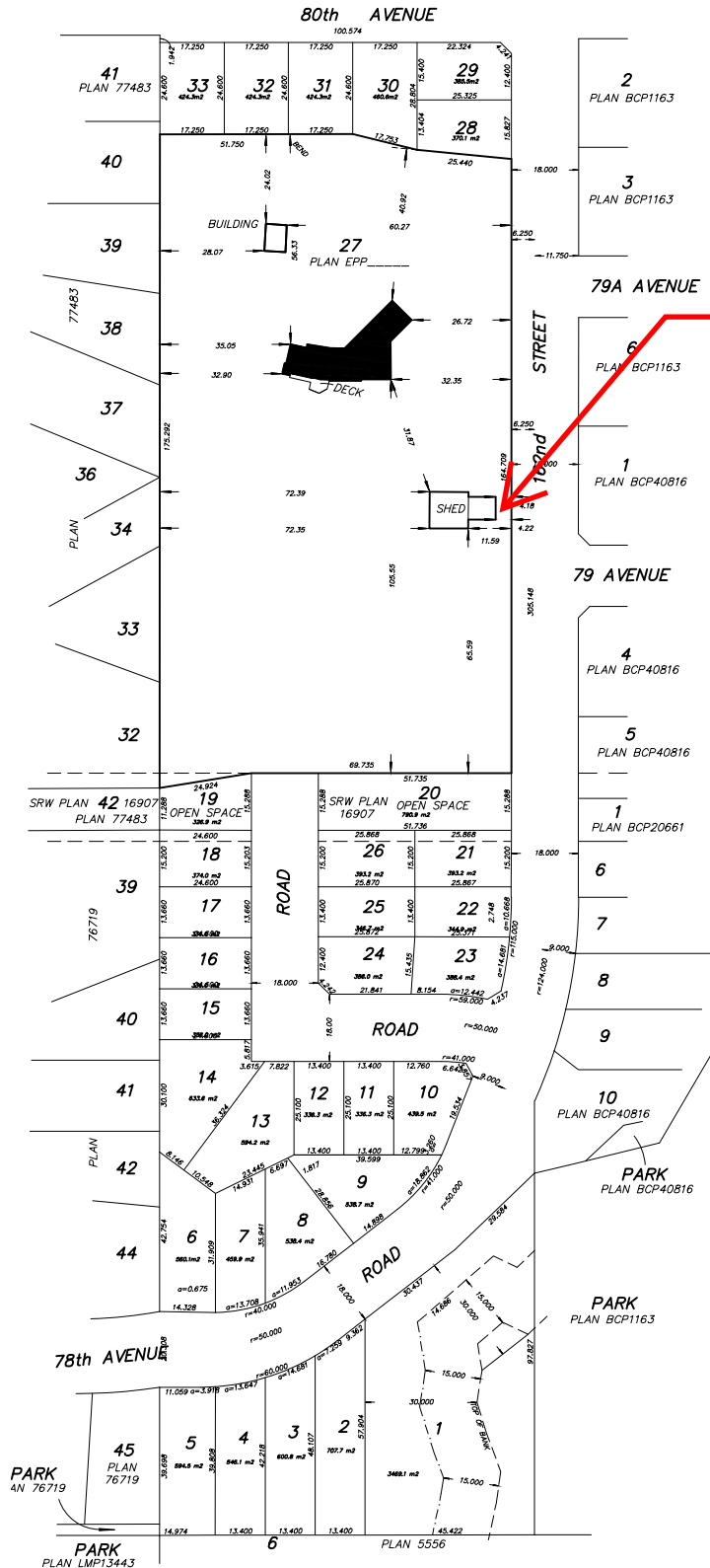
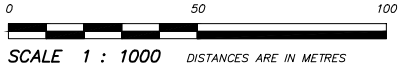
Mayor – Doug McCallum

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City Clerk – Jennifer Ficocelli

SCHEDULE A

B.C. LAND SURVEYORS BUILDING LOCATION CERTIFICATE  
 SHOWING IMPROVEMENTS ON LOT 26  
 SECTION 24 TOWNSHIP 2  
 NEW WESTMINSTER DISTRICT PLAN EPP



Reduce the minimum side yard on a flanking street setback of the RA Zone from 7.5 metres to 4.1 metres for an existing accessory building on proposed Lot 27.

THIS BUILDING LOCATION CERTIFICATE HAS BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE AND IS CERTIFIED CORRECT THIS 15th DAY OF OCTOBER, 2018.

DRAFT 2019-MAY-09

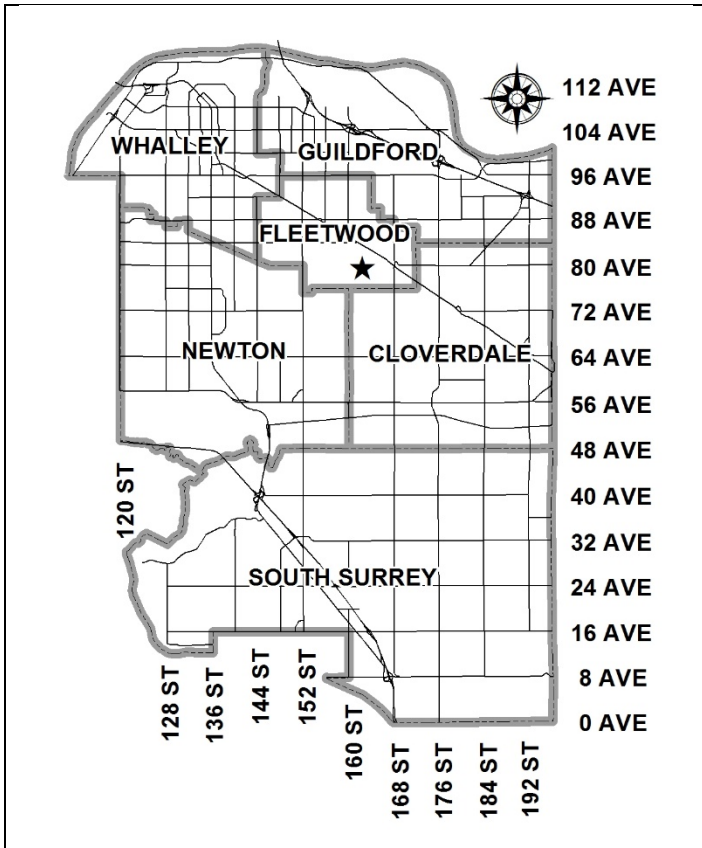
GARY SUNDVICK B.C.L.S.

This document is not valid unless originally signed and sealed.

FOR MUNICIPAL AND OR MORTGAGE PURPOSES ONLY, NOT TO BE USED TO DEFINE PROPERTY BOUNDARIES.

**BUTLER SUNDVICK**  
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 File: 4098  
 Dwg: 4098-GE2

Planning Report Date: June 10, 2019



**PROPOSAL:**

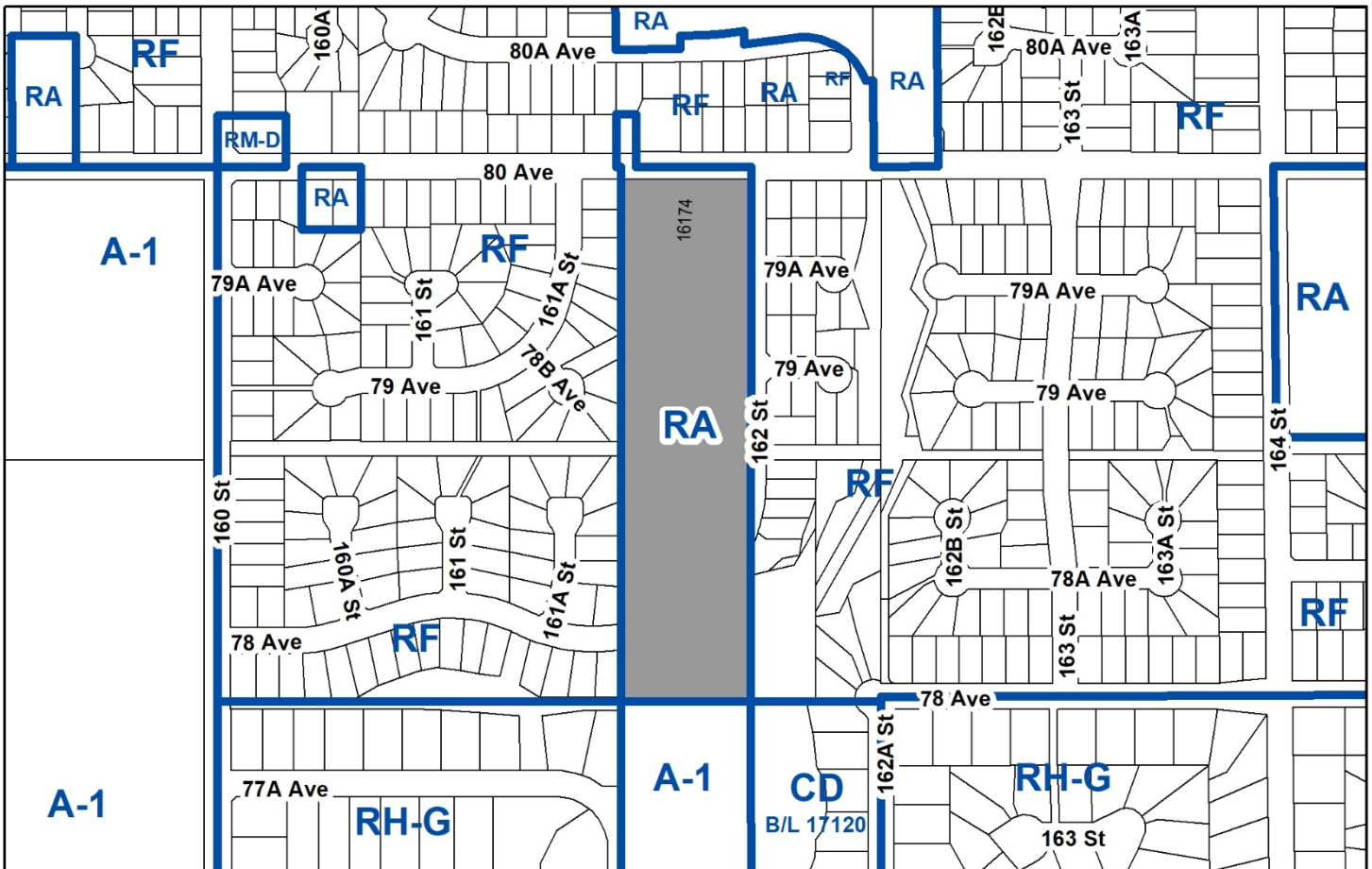
- **Rezoning** a portion from RA to RF-13
- **Development Permit**
- **Development Variance Permit**

to allow subdivision into 29 small single family lots, one remnant lot, and 3 park lots.

**LOCATION:** 16174 - 80 Avenue

**ZONING:** RA

**OCP DESIGNATION:** Urban



### RECOMMENDATION SUMMARY

- By-law Introduction and set date for Public Hearing for Rezoning of portions of the property.
- Approval to draft Development Permit for Sensitive Ecosystems and Hazard Lands.
- Approval for Development Variance Permit to proceed to Public Notification.

### DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- Seeking a variance to reduce the front yard setback for an existing accessory building on a remnant lot.

### RATIONALE OF RECOMMENDATION

- Complies with the Urban designation in the Official Community Plan (OCP) which allows a density up to 36 units per hectare (15 upa).
- The proposed small urban lots are considered to have merit in this part of Fleetwood, providing more variety in housing options. The proposal will create a streetscape that is consistent with the existing RF-zoned pattern of development in the area and will complement the existing neighbourhood character.
- Staff do not anticipate the designated density on the subject site to exceed the density of the RF-13 Zone (28 uph/11.5 upa) once the Fraser Highway Corridor Stage 1 review is completed.
- The proposal includes conveyance of three park lots, with a combined area of 4,587 square metres (49,373 sq.ft.) and amounting to 7.6% of the gross area of the parent property. Proposed Park Lots 19 and 20 over the Fortis right-of way will provide pedestrian connectivity in the neighbourhood and proposed Park Lot 1 will be conveyed for riparian area protection.
- The setback variance on proposed Lot 27 (remnant lot) will allow the retention of an existing accessory building until such time that the lot develops.
- The proposal provides additional road connectivity in the neighbourhood.

RECOMMENDATION

The Planning & Development Department recommends that:

1. A By-law be introduced to rezone a portion of the subject site shown as Block I and Block II on the attached Survey Plan (Appendix I) from "One-Acre Residential Zone (RA)" to "Single Family Residential 13 Zone (RF-13) and a date be set for Public Hearing.
2. Council authorize staff to draft Sensitive Ecosystems and Hazard Lands Development Permit No. 7917-0559-00 in accordance with the Ecosystem Development Plan prepared by Tracy Anderson, *R.P. Bio.*, of Envirowest Consultants Inc. and the geotechnical report prepared by Mehwish Rahman, *P. Eng.*, of GeoPacific Consultants Ltd.
3. Council approve Development Variance Permit No. 7917-0559-00 (Appendix VII) varying the following, to proceed to Public Notification:
  - (a) to reduce the minimum front yard setback of the RA Zone from 18 metres (59 ft.) to 4.1 metres (13 ft.) for an existing accessory building on proposed Lot 27.
4. Council instruct staff to resolve the following issues prior to final adoption:
  - (a) ensure that all engineering requirements and issues including restrictive covenants, dedications, and rights-of-way where necessary, are addressed to the satisfaction of the General Manager, Engineering;
  - (b) submission of a subdivision layout to the satisfaction of the Approving Officer;
  - (c) submission of a finalized tree survey and a statement regarding tree preservation to the satisfaction of the City Landscape Architect;
  - (d) completion of all FortisBC requirements;
  - (e) the applicant address the concern that the development will place additional pressure on existing park facilities to the satisfaction of the General Manager, Parks, Recreation and Culture;
  - (f) demolition of existing buildings and structures to the satisfaction of the Planning and Development Department;
  - (g) the applicant satisfy the deficiency in tree replacement on the site, to the satisfaction of the Planning and Development Department;
  - (h) finalization of an Ecosystem Development Plan;
  - (i) finalization of a Geotechnical Report;
  - (j) the applicant satisfy the requirements for a P-15 Agreement; and
  - (k) registration of a Section 219 Restrictive Covenant to stipulate driveway location on proposed Lots 10 and 24.

REFERRALS

Engineering: The Engineering Department has no objection to the project subject to the completion of Engineering servicing requirements as outlined in Appendix III.

School District: **Projected number of students from this development:**

15 Elementary students at William Watson Elementary School  
7 Secondary students at Fleetwood Park Secondary School

William Watson Elementary is currently operating above capacity (117%), however the School District is considering the need to build another future elementary school in the area to accommodate longer term demand.

Fleetwood Secondary School is currently operating above capacity (127%), however as part of the District's 2019/20 Five Year Capital Plan submission, there is a request for a 300 capacity addition targeted to open in 2024.

(Appendix IV)

The applicant has advised that the dwelling units in this project are expected to be constructed and ready for occupancy by September 2020.

Parks, Recreation & Culture: Parks have some concerns about the pressure this project will place on existing Parks, Recreation and Culture facilities in the neighbourhood. The applicant has volunteered a \$889/lot Parks Amenity Contribution, totaling \$25,781 for the 29 newly created lots, and Parks has accepted this amount to address these concerns.

Parks will accept the Streamside Protection Area as parkland. A P-15 Agreement is required for monitoring and maintenance of re-plantings in the conveyed area.

FortisBC FortisBC has no concerns with the proposed road dedication over the transmission line and relinquishment of their right-of-way, subject to further review.



SITE CHARACTERISTICS

Existing Land Use: 15-acre lot with one existing single family dwelling and accessory buildings to be retained on the remnant lot.

Adjacent Area:

Direction	Existing Use	OCP Designation	Existing Zone
North (Across 80 Avenue):	Single family dwellings	Urban	RF
East (Across 162 Street):	Single family dwellings	Urban	RF
South:	Single family dwelling on 10-acre lot	Suburban	A-1
West:	Single family dwellings	Urban	RF

DEVELOPMENT CONSIDERATIONSBackground & Context

- The 6.0-hectare (14.9-acre) subject site is comprised of one lot located on the south side of 80 Avenue at 162 Street in Fleetwood. The subject site is designated Urban in the Official Community Plan (OCP) and is currently zoned "One-Acre Residential Zone (RA)".
- The subject site contains one single family dwelling and accessory buildings with access from 80 Avenue to the north.
- The site slopes down from north to south and is bisected by an 8-metre (26-ft.) wide Fortis right-of-way.
- The site is directly south of the Fleetwood Town Centre boundary which is 80 Avenue, and is 400 metres (1,312 ft.) north of the Agricultural Land Reserve (ALR).
- The subject site is within the Fraser Highway Corridor Study Area, however staff do not anticipate the densities of the RF-13 Zone (28 uph/11.5 upa) to be exceeded for this site as a result of the Fraser Highway Corridor Stage 1 review. The site is within an established single family residential neighbourhood approximately 1 kilometre (0.6 miles) south of Fraser Highway.
- The site is subject to the Hazard Lands Development Permit Area and Sensitive Ecosystem Development Permit Area requirements of the Official Community Plan (OCP), given the on-site grades and the off-site Class A watercourse and Class B tributary to the southeast.

### Current Proposal

- The applicant is proposing to rezone portions of the subject site from "One-Acre Residential Zone (RA)" to "Single Family Residential 13 Zone (RF-13)" in order to allow subdivision into 29 small single family lots, one remnant lot and three (3) park lots.
- The proposed RF-13 lots range in area from 336 square metres (3,617 sq.ft.) to 707 square metres (7,610 sq.ft.) and meet the minimum area (336 square metres) and dimensional (12-metre width/28-metre depth) requirements of the RF-13 Zone.
- The applicant is proposing to retain the existing house and accessory buildings on proposed Lot 27, which will remain zoned RA (1.6 hectares/3.9 acres). The applicant has provided a Location Certificate confirming that the existing structures conform to the requirements of the RA Zone, with the exception of a setback. A Development Variance Permit is required to reduce the minimum front yard setbacks for an existing accessory building (see By-law Variances Section).
- The surrounding neighbourhood is characterized predominantly by single family, RF-zoned lots. The proposed RF-13 lots will be the first small urban lot zoning in this neighbourhood. The proposed lots (Lots 30-33) fronting 80 Avenue exceed the minimum lot width (15 metres / 50 ft.) of the RF Zone and as such will fit the streetscape character of existing homes on 80 Avenue.
- The applicant has provided a concept plan to demonstrate how remnant Lot 27 could develop into RF-13 lots in the future (Appendix IX).

### Parkland Considerations

- The proposal includes dedication of two (2) park lots (Lots 19 and 20) over the area encumbered by the Fortis right-of-way, with a combined area of 1,118 square metres (12,032 sq.ft.), amounting to 1.9% of the gross area of the parent property. These lots will provide future west-east connectivity along the utility corridor from Fleetwood Park to William Watson Park.
- Parks, Recreation and Culture have accepted the conveyance of these portions of the parent property to the City as parkland, toward satisfying a portion of the 5% parkland dedication requirements of Section 510 of the Local Government Act. The 5% parkland requirement for proposed remnant Lot 27 will be collected at the time of future subdivision.
- For purposes of calculating the parkland dedication, the park area will be discounted at a rate of 50% since it is encumbered by the Fortis right-of-way. Applying the 50% discount to the encumbered portions results in a total area of 559 square metres (6,017 sq.ft.), representing 1.26% of the gross site area (excluding proposed remnant Lot 27). Parks will accept cash-in-lieu for the remaining 3.74%.
- Parks, Recreation and Culture will accept the riparian area (Lot 1) as parkland, without compensation. A P-15 Agreement is required as a condition of final adoption of the rezoning by-law to facilitate storm upgrades.

### Access and Road Dedication

- The completion of 162 Street to 78 Avenue is generally consistent with the concept that was provided as part of Development Application No. 7996-0071-00, which was approved by Council in July 2002, and will provide additional road connectivity in the neighbourhood.
- A traffic circle will be installed at 162 Street and the new 78A Avenue in order to mitigate any sightline issues. Additionally, a Restrictive Covenant will be registered on proposed Lots 10 and 24 to restrict driveway access onto 78A Avenue.
- Proposed Lots 30-33 will have driveway access from 80 Avenue to the north. The applicant will be required to complete the construction of 80 Avenue to the Collector Road Standard along the site frontage.
- Proposed Lots 21, 22, 28 and 29 will have driveway access from 162 Street to the east. The applicant will be required to complete 162 Street to the Through Local Standard along the site frontage.
- Proposed Lots 2-9 will have driveway access from 78 Avenue. The applicant will be required to complete 78 Avenue to the Through Local Standard along the site frontage.
- Proposed Lots 10-13 and 23 will have driveway access from 78A Avenue. The applicant will be required to complete 78A Avenue to the Through Local Standard along the site frontage.
- Proposed Lots 14-18 and 24-26 will have driveway access from 161B Street. The applicant will be required to complete 161B Street to the Through Local Standard along the site frontage.

### Neighbourhood Character Study and Building Scheme

- Mike Tynan, of Tynan Consulting Ltd., prepared the Neighbourhood Character Study and Building Scheme for the subject site. The Character Study involved reviewing a number of existing homes in the neighbourhood in order to establish suitable design guidelines for the proposed subdivision.
- The Character Study found that there are only a few homes in the immediate neighbourhood that could be considered to provide acceptable architectural context for future redevelopment. The guidelines, a summary of which is attached (Appendix V), propose "mid-scale" proportional massing, as well as high trim and construction material standards in line with post-2017 RF-13 development standards. Preferred styles for dwellings constructed on the subject site include a "Neo-Traditional", "Neo-Heritage" and compatible forms of "West Coast Contemporary".
- The Design Consultant has incorporated provisions within the Building Scheme for dwellings on proposed Lots 2, 18, 21 and 26 in order to address safety and the overall pedestrian experience within the adjacent existing and proposed parkland:
  - Fencing along the park boundary (north lot line of proposed Lots 18, 21 and 26, as well as the east lot line of proposed Lot 2) shall be view-permeable with a height of no more than 1.2 metres (4 ft.); and

- Landscaping installed along lot lines shared with existing and proposed parkland to the north and east shall consist solely of species with a mature height of 1.2 metres (4 ft.) or less, in order to protect lines of sight.

### Proposed Lot Grading

- Preliminary lot grading plans were prepared and submitted by Coastland Engineering and Surveying Ltd. and the plans have been reviewed by staff and are generally acceptable.
- The applicant is proposing fill in excess of 0.5 metres (1.5 ft.) in depth on portions of lots in order to achieve in-ground basements.
- Basements are proposed for all lots. Final confirmation on whether in-ground basements are achievable will be determined once final Engineering drawings have been reviewed and accepted by the City's Engineering Department.

### Affordable Housing

- On April 9, 2018, Council approved the City's Affordable Housing Strategy (Corporate Report No. R066; 2018) requiring that all new rezoning applications for residential development contribute \$1,000 per unit to support the development of new affordable housing. The funds collected through the Affordable Housing Contribution will be used to purchase land for new affordable rental housing projects.
- As the subject application was instream on April 10, 2018, the contribution does not apply.

### PRE-NOTIFICATION

Prenotification letters were sent on October 18, 2018 and a Development Proposal Sign was installed on October 1, 2018. Staff received eight (8) responses with the following concerns (*staff comments in italics*):

- Two residents expressed concern that the RF-13 density was not compatible with the existing neighbourhood, which is predominantly RF-zoned.

*(From a land use perspective, rezoning the lots to RF-13 has merit, in consideration of the proximity to Fleetwood Town Centre Plan Area and other local amenities, including parks and schools.*

*The proposed RF-13 lots will be the first small lot zoning in this neighbourhood. The proposed lots (Lots 30-33) fronting 80 Avenue exceed the minimum lot width (15 metres / 50 ft.) of the RF Zone and as such will fit the streetscape character of existing homes on 80 Avenue.)*

- Two residents expressed concern that the construction of the west half of 162 Street and the associated land use would increase traffic volumes which would exacerbate parking issues and would have impacts for residents in terms of noise, privacy and safety.

*(That portion of 162 Street abutting the subject site currently consists of a constructed half-road. Staff have always anticipated that the completion of 162 Street to the Through Local Road Standard, including full pavement width, curbs and gutters, grassed boulevards and sidewalks, would occur through dedication and construction associated with the development of the subject site. A traffic circle will be installed at 162 Street and 78A Avenue in order to mitigate any sightline issues. Once 162 Street is completed and in operation, staff may assess the roads suitability for additional traffic calming measures, should it be requested by area residents.*

*The proposed layout and road alignment is generally in keeping with the concept that was provided as part of Development Application No. 7996-0071-00 to the east, which was approved by Council in July 2002.*

*All of the lots proposed under Development Application No. 7917-0559-00 will be able to accommodate the minimum required number of off-street parking spaces. The completion of all road frontages will provide additional on-street parking.)*

- Two residents expressed concern that the construction of the proposed lots would exacerbate drainage and flooding issues that they are experiencing on their lots.

*(The applicant will be required to design proper lot drainage as part of the detailed Engineering design.*

*Some of the flooding is likely associated with existing storm pipe at the south end of 162 Street, which is too small to handle existing storm flows. As part of the subject application, the applicant will be required to upgrade the existing storm pipe to accommodate post-development flows.)*

- One resident expressed concern that the proposed linear park on the Fortis right-of-way will increase crime and graffiti in the neighbourhood.

*(The linear park will allow for future pedestrian connectivity along the utility corridor from Fleetwood Park to William Watson Park.*

*The fencing and landscaping along the park boundaries will be view-permeable with a height of no more than 1.2 metres (4 ft.).)*

- Three residents requested further information, which staff provided, but had no concerns.
- The Fleetwood Community Association did not provide comments in response to the pre-notification letter.

## DEVELOPMENT PERMITS

### Hazard Lands (Steep Slopes) Development Permit Area

- The subject property falls within the Hazard Lands (Steep Slope) Development Permit Area (DPA) in the OCP, given that the site contains steep slopes in excess of 20% gradient. The Hazard Land (Steep Slope) Development Permit is required to mitigate developments from hazardous conditions.
- The site slopes gently from north to south with moderately sloping grades at the centre of the site. Relatively steeper grades of up to 45% exist at the southeast end of the site adjacent to the existing watercourse.
- A geotechnical report, prepared by Mehwish Rahman, *P. Eng.*, of GeoPacific Consultants Ltd. and dated July 18, 2018, was reviewed by staff and found to be generally complete, with some modifications to content of the report still required. The finalized geotechnical report will be incorporated into the Development Permit.
- The geotechnical report investigated issues related to slope stability and natural storm water drainage, from a geotechnical perspective, to determine the feasibility of developing the site and proposing recommendations to ensure the ongoing stability of the slope.
- The consultant has determined that the development is feasible provided that the recommendations in their report are incorporated into the overall design of the site, including a 10-metre geotechnical setback from top-of-bank. This geotechnical setback area is within the required 30-metre streamside setback area.

### Sensitive Ecosystems (Streamside Area) Development Permit Area

- The subject property falls within the Sensitive Ecosystems Development Permit Area (DPA) for Streamside Areas in the OCP, given the location of the existing off-site Class A (red-coded) and Class B (yellow-coded) watercourses to the southeast of the subject site. The Sensitive Ecosystems (Streamside Areas) Development Permit is required to protect aquatic and terrestrial ecosystems associated with streams from the impacts of development.
- In accordance with Part 7A Streamside Protection setbacks of the Zoning By-law, a Class A stream requires a minimum streamside setback of 30 metres (98 ft.) and a Class B stream requires a minimum streamside setback of 15 metres (50 ft.), as measured from the top of bank. The applicant is proposing to utilize the flex provision in the Zoning By-law. The applicant is proposing a net gain of 30 square metres (323 sq.ft.) of riparian area (Appendix VIII).
- The riparian area is proposed to be conveyed to the City as Lot 1 as a condition of rezoning approval.
- Parks, Recreation and Culture will accept the riparian area as parkland, without compensation. A P-15 Agreement is required as a condition of final adoption of the rezoning by-law to facilitate storm upgrades that are required in the area.

- An Ecosystem Development Plan, prepared by Tracy Anderson, *R.P. Bio.*, of Envirowest Consultants Inc. and dated May 13, 2019 was reviewed by staff and found to be generally acceptable, with some modifications to content and format of the report still required. The finalized report and recommendations will be incorporated into the Development Permit.

## TREES

- Trevor Cox, ISA Certified Arborist of Diamond Head Consulting prepared an Arborist Assessment for the subject property. The table below provides a summary of the tree retention and removal by tree species:

**Table 1: Summary of Tree Preservation by Tree Species:**

Tree Species	Existing	Remove	Retain
<b>Alder and Cottonwood Trees</b>			
Alder	172	172	0
Cottonwood	23	20	3
<b>Deciduous Trees (excluding Alder and Cottonwood Trees)</b>			
Plum	2	1	1
Cherry	2	1	1
Locust	2	1	1
Maple	22	14	8
Hazelnut	1	1	0
Birch	1	1	0
Walnut	1	1	0
Horsechesnut	2	0	2
Hawthorn	1	0	1
<b>Coniferous Trees</b>			
Cedar	8	5	3
Douglas Fir	5	2	3
Cedrus	1	0	1
<b>Total (excluding Alder and Cottonwood Trees)</b>	<b>48</b>	<b>27</b>	<b>21</b>
<b>Additional Trees in the proposed Riparian Area</b>	<b>66</b>	<b>26</b>	<b>40</b>
<b>Total Replacement Trees Proposed (excluding Boulevard Street Trees)</b>		<b>69</b>	
<b>Total Retained and Replacement Trees</b>		<b>90</b>	
<b>Contribution to the Green City Fund</b>		<b>\$70,800</b>	

- The Arborist Assessment states that there is a total of 48 protected trees on the site, excluding Alder and Cottonwood trees. One hundred and ninety-five (195) existing trees, approximately 80% of the total trees on the site, are Alder and Cottonwood trees. It was determined that 24 trees can be retained as part of this development proposal. The proposed tree retention was assessed taking into consideration the location of services, building footprints, road dedication and proposed lot grading.
- Table 1 includes an additional 66 protected trees that are located within the proposed riparian area. The trees within the proposed riparian area will be retained, except where removal is required due to hazardous conditions or to complete required storm upgrades. This will be determined at a later time, in consultation with the Parks, Recreation and Culture Department.
- A detailed planting plan prepared by a Registered Professional Biologist (R.P. Bio.) and an associated P-15 agreement are required for the monitoring and maintenance of the proposed trees to be planted in the conveyed riparian area.
- For those trees that cannot be retained, the applicant will be required to plant trees on a 1 to 1 replacement ratio for Alder and Cottonwood trees, and a 2 to 1 replacement ratio for all other trees. This will require a total of 246 replacement trees on the site. Since only 69 replacement trees can be accommodated on the site (based on an average of 3 trees per lot), the deficit of 177 replacement trees will require a cash-in-lieu payment of \$70,800 representing \$400 per tree, to the Green City Fund, in accordance with the City's Tree Protection By-law.
- In addition to the replacement trees, boulevard street trees will be planted on 80 Avenue, 162 Street, 78 Avenue, 161B Street and 78A Avenue. This will be determined by the Engineering Department during the servicing design review process.
- In summary, a total of 90 trees are proposed to be retained or replaced on the site with a contribution of \$70,800 to the Green City Fund.

### SUSTAINABLE DEVELOPMENT CHECKLIST

The applicant prepared and submitted a sustainable development checklist for the subject site on December 6, 2017. The table below summarizes the applicable development features of the proposal based on the seven (7) criteria listed in the Surrey Sustainable Development Checklist.

<b>Sustainability Criteria</b>	<b>Sustainable Development Features Summary</b>
1. Site Context & Location (A1-A2)	<ul style="list-style-type: none"> <li>• Adjacent to the Fleetwood Town Centre Plan Area.</li> <li>• 1 kilometre from Fraser Highway.</li> </ul>
2. Density & Diversity (B1-B7)	<ul style="list-style-type: none"> <li>• Consistent with the Urban designation in the Official Community Plan.</li> <li>• One secondary suite is permitted in each future home.</li> </ul>
3. Ecology & Stewardship (C1-C4)	<ul style="list-style-type: none"> <li>• The applicant is dedicating the riparian area associated with the Class A and Class B watercourses to the south east of the site.</li> </ul>



Sustainability Criteria	Sustainable Development Features Summary
4. Sustainable Transport & Mobility (D1-D2)	<ul style="list-style-type: none"> <li>• None proposed.</li> </ul>
5. Accessibility & Safety (E1-E3)	<ul style="list-style-type: none"> <li>• The fencing and landscaping along the park boundaries will be view-permeable with a height of no more than 1.2 metres (4 ft.).</li> </ul>
6. Green Certification (F1)	<ul style="list-style-type: none"> <li>• None proposed.</li> </ul>
7. Education & Awareness (G1-G4)	<ul style="list-style-type: none"> <li>• None proposed.</li> </ul>

### BY-LAW VARIANCE AND JUSTIFICATION

(a) Requested Variance:

- To reduce the minimum front yard setback of the RA Zone from 18 metres (59 ft.) to 4.1 metres (13 ft.) for an existing accessory building on proposed Lot 27.

Applicant's Reasons:

- The minimum front yard setback is proposed to be reduced to retain an existing accessory structure (shed) as part of the proposed development.

Staff Comments:

- The home on the subject site is currently addressed from 80 Avenue.
- The existing home and accessory structures will remain on proposed remnant Lot 27, which will remain zoned RA. Proposed Lot 27 will be addressed from 162 Street.
- The existing shed is located 4.1 metres (13 ft.) from the new front lot line (east) of proposed Lot 27 and will not impact the functionality of the yard space.
- The proposed variance will only apply to the existing shed and new construction will be subject to the minimum requirements of the RA Zone.
- Staff support the requested variance.

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

Appendix I.	Project Data Sheets and Survey Plan
Appendix II.	Proposed Subdivision Layout
Appendix III.	Engineering Summary
Appendix IV.	School District Comments
Appendix V.	Building Design Guidelines Summary
Appendix VI.	Summary of Tree Survey and Tree Preservation
Appendix VII.	Development Variance Permit No. 7917-0559-00
Appendix VIII.	Streamside Setbacks
Appendix IX.	Concept Plan

*original signed by Ron Gill*

Jean Lamontagne  
General Manager  
Planning and Development

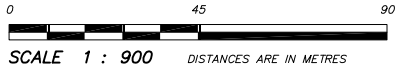
LM/cm

## SUBDIVISION DATA SHEET

Proposed Zoning: RF-13 &amp; RA

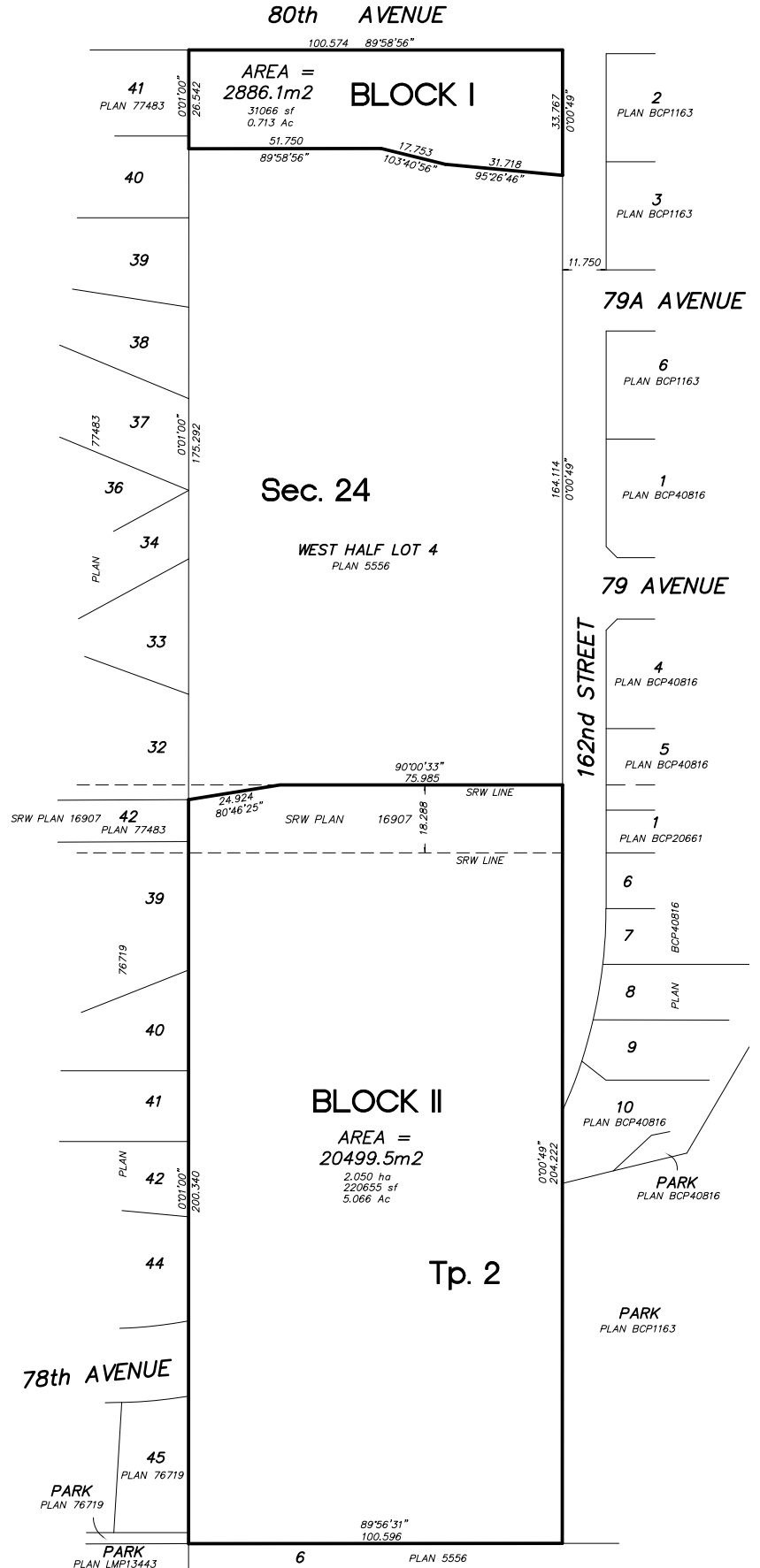
<b>Requires Project Data</b>	<b>Proposed</b>
<b>GROSS SITE AREA</b>	
Acres	6.0 hectares
Hectares	14.9 acres
<b>NUMBER OF LOTS</b>	
Existing	1
Proposed	29 RF-13, 1 remnant RA & 3 Park lots
<b>SIZE OF LOTS</b>	
Range of lot widths (metres)	13.4 m - 17.25 m
Range of lot areas (square metres)	336 m <sup>2</sup> - 707 m <sup>2</sup>
<b>DENSITY</b>	
Lots/Hectare & Lots/Acre (Gross)	4.8 uph & 1.9 upa
Lots/Hectare & Lots/Acre (Net)	22 uph & 9 upa
<b>SITE COVERAGE (in % of gross site area)</b>	
Maximum Coverage of Principal & Accessory Building	31.1%
Estimated Road, Lane & Driveway Coverage	13.4%
Total Site Coverage	44.5%
<b>PARKLAND</b>	
Area (square metres)	1,118 m <sup>2</sup>
% of Gross Site	1.9%
	<b>Required</b>
<b>PARKLAND</b>	
5% money in lieu	YES
<b>TREE SURVEY/ASSESSMENT</b>	YES
<b>MODEL BUILDING SCHEME</b>	YES
<b>HERITAGE SITE Retention</b>	NO
<b>FRASER HEALTH Approval</b>	NO
<b>DEV. VARIANCE PERMIT required</b>	
Road Length/Standards	NO
Works and Services	NO
Building Retention	NO
Setbacks for Accessory Structure	YES

**BLOCK SURVEY PLAN TO ACCOMPANY CITY OF SURREY  
 REZONING BYLAW NO: \_\_\_\_\_ OF  
 PART OF WEST HALF LOT 4  
 SECTION 24 TOWNSHIP 2  
 NEW WESTMINSTER DISTRICT PLAN 5556**



THE INTENDED PLOT SCALE OF THIS PLAN IS 560 mm  
 IN WIDTH BY 864 mm IN HEIGHT (D SIZE) WHEN  
 PLOTTED AT A SCALE OF 1:900.

INTEGRATED SURVEY AREA No. 1, SURREY, NAD83(CSRs) 4.0.0.BC.1.GVRD



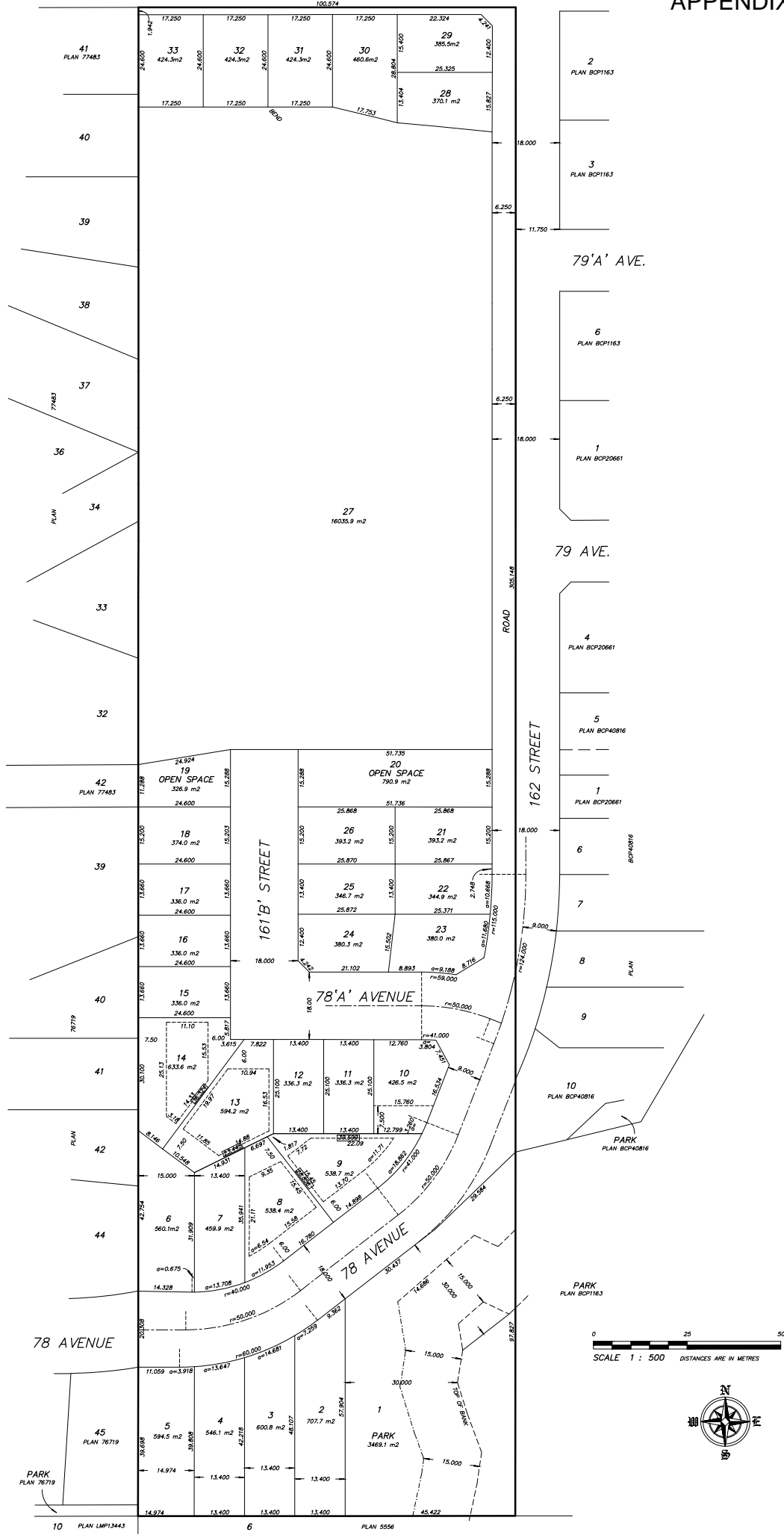
CERTIFIED CORRECT  
 THIS 15th DAY OF MAY, 2019

*G. Sundick*  
 GARY SUNDICK B.C.L.S.

THIS PLAN LIES WITHIN THE METRO VANCOUVER REGIONAL DISTRICT

**BUTLER  
 SUNDICK**  
 4 - 19089 94th Ave  
 Surrey, BC V4N 3S4  
 www.butlersundick.ca  
 Tel. 604-513-9611

File: 4098  
 Dwg: 4098-ZN1



## INTER-OFFICE MEMO

---

TO: **Manager, Area Planning & Development  
- North Surrey Division  
Planning and Development Department**

FROM: **Development Engineer, Engineering Department**

DATE: **Jun 05, 2019** PROJECT FILE: **7817-0559-00**

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RE: **Engineering Requirements  
Location: 16174 80 Avenue**

**REZONE/SUBDIVISION*****Property and Right-of-Way Requirements***

- Dedicate 1.942m on 80 Ave for ultimate 12.0 m Collector Road allowance from centre line.
- Dedicate 3.0 m by 3.0 m corner cut at the intersection of 80 Avenue and 162 Street.
- Dedicate necessary lands on 162 Street and 78 Avenue to secure ultimate 18.0 m wide Through Local Road allowance.
- Dedicate 6.0 m by 6.0 m corner cuts at the intersection of 162 Street and 78A Avenue.
- Dedicate 18.0 m for 78A Avenue and 161B Street for the Through Local Road allowance.
- Dedicate 3.0 m by 3.0 m corner cut at the intersection of 78A Avenue and 161A Street.
- Register 0.5 m SRW along all frontages where sidewalk is located adjacent to property line.
- Register SRW over the section of 1050 mm storm trunk that passes through the Park land.

***Works and Services***

- Reconstruct 1.8 m wide concrete sidewalk on 80 Avenue adjacent to property line; ensure 12.2m existing pavement, and adequate street lighting; upgrade if required.
- Construct 162 Street, 78 Avenue, 78A Avenue and 161B Street to the Through Local Road standard with 8.5 m pavement width.
- Construct traffic circle at 78A Avenue and 162 Street to mitigate sightline issues.
- Construct the ultimate east curb and boulevard fronting 7838-7858 162 Street.
- Construct temporary turnaround at the end of 161B Street due to interim dead-end.
- Provide storm water calculation to confirm downstream storm system capacity.
- Construct storm sewers on all new roads to service the proposed lots and drain the roads.
- Abandon/decommission existing temporary 300 mm PVC outlet pipe on 162 Street.
- The storm servicing is proposed to be routed through the riparian area. The applicant will be required to provide detailed design for the proposed pipe and headwall within the riparian area, and to demonstrate how erosion and other concerns are being addressed.
- Maintain base flows to the Class B watercourse.
- The proposed temporary 1050 mm outlet pipe into the Class A creek will require Water Act Notification.
- Provide onsite sustainable drainage works ***to meet the stormwater management requirements outlined in the Fleetwood-Greenway-North Creek ISMP.***

NOTE: Detailed Land Development Engineering Review available on file

- Perform sewer analysis to confirm sanitary servicing for the proposed development, including feasibility to connect to existing sanitary main on 78 Avenue.
- Subject to available funding, the applicant will be required to decommission the existing 162 St SS Sanitary Lift Station and discharge any associated SRWs at the City's expense.
- Construct minimum 200 mm sanitary mains on all new roads.
- Pay Water and Sanitary Latecomers charges relative to projects #7807-0042-00.

A Servicing Agreement is required prior to Rezone/Subdivision.

#### **DEVELOPMENT PERMIT/DEVELOPMENT VARIANCE PERMIT**

There are no engineering requirements relative to issuance of the Development Permit/ Development Variance Permit except for the requirements listed above.



Tommy Buchmann, P.Eng.  
Development Services Manager

IK<sub>1</sub>



Planning

May 15, 2019

**THE IMPACT ON SCHOOLS**

**APPLICATION #:** 17 0559 00 (Updated May 15, 2019)

**SUMMARY**

The proposed are estimated to have the following impact on the following schools:

29 Single family with suites

**Projected # of students for this development:**

Elementary Students:	15
Secondary Students:	7

**September 2018 Enrolment/School Capacity**

<b>William Watson Elementary</b>	
Enrolment (K/1-7):	34 K + 356
Operating Capacity (K/1-7)	76 K + 256
<b>Fleetwood Park Secondary</b>	
Enrolment (8-12):	1523
Capacity (8-12):	1200

**School Enrolment Projections and Planning Update:**

The following tables illustrate the enrolment projections (with current/approved ministry capacity) for the elementary and secondary schools serving the proposed development.

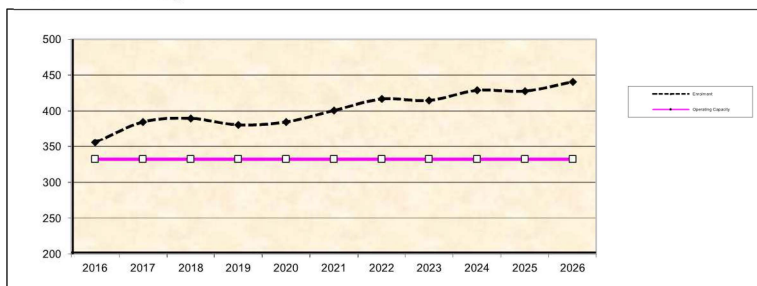
William Watson Elementary is currently over capacity. Rapid enrolment growth is expected into the foreseeable future with the continued construction of The Enclave. With the Eaglequest Golf Course approved housing development and the potential to increase housing density to serve the potential Skytrain extension along Fraser Highway, both will play a significant role in impacting enrolment in future years. As of September 2018, the school has 2 portables on site for enrolling space. It is anticipated more portables will be placed on the site in the coming years.

With 152nd Street to the west, Fraser Highway to the North and the ALR to the south, the Fleetwood area is contained within these barriers. Three elementary schools and one Secondary serve this community. The elementary schools consist of: William Watson, Walnut Road and Coyote Creek. As both 152nd and Fraser Highway are major arterial roads, catchments have been created to ensure families/children do not have to cross such major roadways for safety reasons. Therefore, all new enrolling spaces constructed to relieve pressure in the Fleetwood area must fall within the Fleetwood boundaries as described.

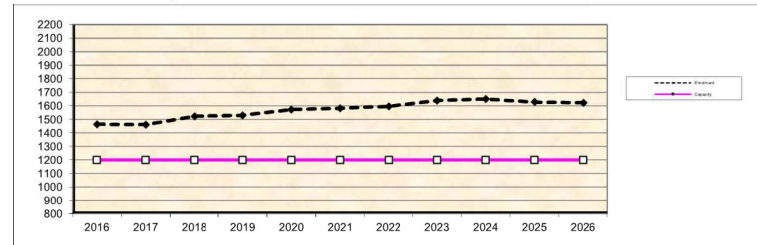
Currently, William Watson Elementary is operating at 120% and is projected to grow to 130% in 2025. As part of the Surrey School District's 2019/2020 Capital Plan submission to the Ministry of Education, the District is requesting a 100 capacity at Coyote Creek and a 300 capacity addition at William Watson to relieve the short term pressure in the Fleetwood Area. (The addition to William Watson has not been approved by the Ministry to move to design and construction) The District is considering the need to build another future elementary school in the area to accommodate longer term demand.

Fleetwood Secondary total enrollment, as of September 2018, is 1523 and is projected to grow to over 1600 over the next 10 years. As part of the district's 2019/2020 5 Year Capital Plan, the District is asking for a 300 capacity addition targeted to open in 2024. There has been no approval for this project at this time.

**William Watson Elementary**



**Fleetwood Park Secondary**



\* Nominal Capacity is estimated by multiplying the number of enrolling spaces by 25 students.  
Maximum operating capacity is estimated by multiplying the number of enrolling spaces by 27 students.



## **BUILDING GUIDELINES SUMMARY**

Surrey Project no: 17-0559-00  
Project Location: 16174 and 16180 - 80 Avenue, Surrey, B.C.  
Design Consultant: Tynan Consulting Ltd., (Michael E. Tynan)

**The draft Building Scheme proposed for this Project has been filed with the City Clerk. The following is a summary of the Residential Character Study and the Design Guidelines which highlight the important features and form the basis of the draft Building Scheme.**

### **1. Residential Character**

#### **1.1 General Description of the Existing and/or Emerging Residential Character of the Subject Site:**

The subject site is a single large RA zoned lot, spanning from 78 Avenue at the south to 80 Avenue the north. It is intersected on the east side by 79 Avenue and by 79A Avenue, and is intersected on the west side by 78 Avenue. As a result, there are three neighbourhoods constructed in different eras, each with a different character, that will be joined by development of this site.

There are three distinct character areas including the 16100 and 16200 blocks of 80 Avenue, the 7800 and 7900 blocks of 162 Street, and the 16100 block of 78 Avenue. The first of these, along 80 Avenue, has considerable variation in theme and character due to the wide era of construction (1970's to the post year 2010's). The style of most homes can be described as "Neo-Traditional", "West Coast Traditional", or "old urban". There are two Basement Entry type homes with desirable mid-scale massing characteristics. There is one 1970's Cathedral Entry home with box-like massing. There are two 1990's, 3500 sq.ft. Two-Storey homes that provide acceptable context. There are four context homes (16151, 16177, 16185, and 16197 - 80 Avenue), one at 2600 sq.ft. and the others 3000 sq.ft. These homes meet modern massing design standards, in which homes have mid-scale massing designs that area well balanced and consistently proportioned. These homes have 8:12 main common hip roofs with three or more street facing common gable projections at a 12;12 slope. Roofs are surfaced with shake profile asphalt shingles. Gable ends are articulated with shingles or other wood detailing. Homes are clad with Hardiplank (or other fibre cement board) at the front and vinyl siding at the sides and rear, and all have a substantial stone accent.

The second character area, located along the 7800 and 7900 blocks of 162 Street contains homes regulated under Surrey project numbers 96-0071-00 and 07-0042-00. These homes are 10 - 20 year old, 2900 sq.ft. "Neo-Traditional" and "Neo-Heritage" Two style homes, all with acceptable mid-scale massing designs. Front entrances range from one to 1.1/2 storeys in height. Roof slopes range from 8:12 to 12:12, with the exception of two homes with a 16:12 slope. Thirty percent of these homes have an asphalt shingle roof and 70 percent are surfaced with concrete roof tiles. Wall cladding materials include vinyl, stucco, Hardiplank, wood shingles, and stone. Landscape quality is average to above average for post year 2000's developments.

The third character area, in the 16100 block of 78 Avenue, contains 1980's - 1990's, 2800 - 3500 sq.ft. Two-Storey and Basement Entry type homes. Massing designs are mid-scale and area considered common for the era of construction. Roof slopes range from 4:12 to 7:12, with the exception of one home with 12:12 slope feature projection. All of these homes have an asphalt shingle roof, and all are clad in vinyl siding, some with masonry accent and some without. Landscapes range from "modest" to above average.

## 1.2 Features of Surrounding Dwellings Significant to the Proposed Building Scheme:

- 1) **Context Homes:** There are a few homes in this area that could be considered to provide acceptable architectural context. However, massing design, construction materials, and trim and detailing standards for new homes constructed in RF-13 zone subdivisions now meet or exceed standards evident on most of the context homes. The recommendation therefore is to adopt standards commonly found in post year 2017 RF-13 zoned subdivisions, rather than to emulate specific components of the aforesaid context homes
- 2) **Style Character :** There are a mix of old urban and modern urban styles in this neighbourhood, including "Neo-Traditional", "Neo-Heritage", "West Coast Traditional", and "old urban". Preferred styles for this site include "Neo-Traditional", "Neo-Heritage", and compatible styles including compatible manifestations of the "West Coast Contemporary" style as determined by the consultant, that provide a style bridge between old urban and modern urban. Note that style range is not restricted in the building scheme. However, the consultant refers to the character study when reviewing plans for meeting style-character intent.
- 3) **Home Types :** There are a wide range of home types evident, and so some flexibility is justified. Home type (Two-Storey, Bungalow, Basement Entry, Split Level, etc..) will not be regulated in the building scheme.
- 4) **Massing Designs :** Massing designs should meet new standards for RF-13 zoned subdivisions. New homes should exhibit "mid-scale" massing. Various elements and projections on the front of the home should be interesting architecturally, and should be in pleasing natural proportions to one another. These elements and projections should be located so as to create balance across the façade.
- 5) **Front Entrance Design :** Front entrance porticos range from one to 1 ½ storeys in height. The recommendation is to limit the range of entrance portico heights to between one storey and 1 ½ storeys to ensure there is not proportional overstatement of this one element.
- 6) **Exterior Wall Cladding :** A wide range of cladding materials have been used in this area, including vinyl, cedar, aluminum, stucco, fibre cement board, brick, and stone. Reasonable flexibility should therefore be permitted, including the use of vinyl siding, provided the overall quality of wall cladding materials meets or exceeds common standards for post 2017 developments.
- 7) **Roof surface :** Roof surfacing materials used in this area include concrete roof tiles and asphalt shingles. Some flexibility in roof surface materials is warranted. The recommendation is to permit cedar shingles, shake profile concrete roof tiles, shake profile asphalt shingles with a raised ridge cap, and new environmentally sustainable roof products that have a strong shake profile. Where required by the BC Building Code for lower slope applications membrane roofing products can be permitted subject to consultant approval. Small decorative metal roofs should also be permitted.
- 8) **Roof Slope :** The recommendation is to set the minimum roof slope at 6:12. Steeper slopes will be encouraged, especially on street facing roof projections. However, a relatively low 6:12 slope may be required to meet maximum height as specified in the RF-13 bylaw. A provision is also recommended to allow slopes less than 6:12 where it is determined by the consultant that the design is of such high architectural integrity that the roof slope reduction can be justified, or that lower slopes are needed on feature projections or at the front entrance veranda to ensure upper floor windows can be installed without interference with the roof structure below.

**Streetscape:** There are a wide variety of architectural styles, and home types, massing designs, roof slopes, roofing materials, cladding materials, and trim and detailing standards due to the wide era of construction (1970's to post year 2010's). Styles include "Neo-Traditional", "Neo-Heritage", "West Coast Traditional" and "Old Urban". Home types include Two-Storey (dominant), Basement Entry, and Cathedral Entry. Most homes have desirable mid-scale massing characteristics, but there are high mass box-like homes in the area. Front entrances range from one to 1 ½ storeys in height. Roof slopes range from 4:12 to 16:12, and roofing materials include only asphalt shingles and shake profile concrete roof tiles. Cladding materials include vinyl, stucco, cedar, fibre cement board, and stone. Landscapes range from "modest" to above-average for the era of construction.

## 2. Proposed Design Guidelines

### 2.1 Specific Residential Character and Design Elements these Guidelines Attempt to Preserve and/or Create:

- the new homes are readily identifiable as one of the following styles: "Traditional", "Heritage", "Neo-Traditional", "Neo-Heritage", compatible forms of "West Coast Contemporary", or other compatible styles with appropriate transitions in massing and character, as determined by the design *consultant*. Note that the proposed style range is not contained within the building scheme, but is contained within the residential character study which forms the basis for interpreting building scheme regulations.
- a new single family dwelling *constructed* on any *lot* meets year 2017's design standards, which include the proportionally correct allotment of mass between various street facing elements, the overall balanced distribution of mass within the front facade, readily recognizable style-authentic design, and a high trim and detailing standard used specifically to reinforce the style objectives stated above.
- trim elements will include several of the following: furred out wood posts, articulated wood post bases, wood braces and brackets, louvered wood vents, bold wood window and door trim, highly detailed gable ends, wood dentil details, stone or brick feature accents, covered entrance verandas and other style-specific elements, all used to reinforce the style (i.e. not just decorative).
- the development is internally consistent in theme, representation, and character.
- the entrance element will be limited in height (relative dominance) to 1 to 1 ½ storeys.

### 2.2 Proposed Design Solutions:

#### **Interfacing Treatment with existing dwellings)**

There are homes in this area that could be considered to provide acceptable architectural context. However, massing design, construction materials, and trim and detailing standards for new homes constructed in most new (post year 2017) RF13 zone subdivisions now exceed standards evident on the context homes. The recommendation therefore is to adopt standards commonly found in post year 2017 RF13 zoned subdivisions, rather than to specifically emulate the aforesaid two context homes.

<b>Exterior Materials/Colours:</b>	Stucco, Cedar, Vinyl, Fibre-Cement Board, Brick, and Stone. Vinyl limited to maximum 25% of wall area on the front façade.
	“Natural” colours such as browns, greens, clays, and other earth-tones, and “Neutral” colours such as grey, white, and cream are permitted. “Primary” colours in subdued tones such as navy blue, colonial red, or forest green can be considered providing neutral trim colours are used, and a comprehensive colour scheme is approved by the consultant. “Warm” colours such as pink, rose, peach, salmon are not permitted. Trim colours: Shade variation of main colour, complementary, neutral, or subdued contrast only.
<b>Roof Pitch:</b>	Minimum 6:12, with exceptions to prevent roof ridges from becoming too high (overshadowing of neighbouring lots), to allow for veranda roofs that do not cover upper floor windows, to allow for artistic expression in feature roofs, and to provide a path for exceptional designs with lower slope roofs to be approved subject to consultant approval.
<b>Roof Materials/Colours:</b>	Cedar shingles, shake profile concrete roof tiles, shake profile asphalt shingles with a raised ridge cap, and new environmentally sustainable roofing products should be permitted, providing that the aesthetic properties of the new materials are equal to or better than that of the traditional roofing products. Greys, black, or browns only. Membrane roofs permitted where required by B.C. Building Code, and small metal feature roofs also permitted.
<b>In-ground basements:</b>	In-ground basements are subject to determination that service invert locations are sufficiently below grade to permit a minimum 50 percent in-ground basement to be achieved. If achievable, basements will appear underground from the front.
<b>Treatment of Corner Lots:</b>	Significant, readily identifiable architectural features are provided on both the front and flanking street sides of the dwelling, resulting in a home that architecturally addresses both streets. One-storey elements on the new home shall comprise a minimum of 40 percent of the width of the front and flanking street elevations of the single family dwelling. The upper floor is set back a minimum of 0.9 metres [3'- 0"] from the one-storey elements.
<b>Landscaping:</b>	<i>Moderate modern urban standard:</i> Tree planting as specified on Tree Replacement Plan plus minimum 20 shrubs of a minimum 3 gallon pot size. Corner lots shall have an additional 10 shrubs of a minimum 3 gallon pot size, planted in the flanking street sideyard. Sod from street to face of home. Driveways: exposed aggregate, interlocking masonry pavers, stamped concrete, or coloured concrete in dark earth tones or medium to dark grey only.

**Park:**

There is a public park adjacent to the east *lot* line on *lot* 2, and the north lot line on lots 18, 21, and 26. CPTED principles will therefore apply, in which low (4 ft. max.) transparent type fencing with dwarf shrubs are installed along the park interface to provide opportunities for passive surveillance of the park by residents. Also, windows are required in high traffic rooms on said sides of the dwelling to provide unrestricted views of the park. Lastly, due to the constant exposure to the public, the massing design and finishing quality on park facing sides of the dwelling should result in a thoughtfully designed and articulated interface to present to the public.

**Compliance Deposit:** \$5,000.00

**Summary prepared and submitted by:** Tynan Consulting Ltd.      **Date:** May 15, 2019

**Reviewed and Approved by:**

A handwritten signature in blue ink, appearing to read "Michael Egan", is written over a horizontal line.

**Date:** May 15, 2019

## 4.0 Tree Preservation Summary

Table 5: City of Surrey tree preservation summary table for on-site and off-site trees, including the number of replacement trees proposed.

Surrey Project Number: 17-0559


Site Address: 16174, 16180 and 7882 162 Street

Registered Arborist: Michael Harry (PN-8025A)

On-Site Trees	Number of Trees
<b>Protected Trees Identified</b> (On-site and shared trees, including trees within boulevards and proposed streets and lanes, but excluding trees in proposed open space or riparian areas)	<b>243</b>
<b>Protected Trees to be Removed</b>	<b>219</b>
<b>Protected Trees to be Retained</b> (excluding trees within proposed open space or riparian areas)	<b>24</b>
<b>Total Replacement Trees Required:</b> - Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio 192 X one (1) = 192 - All other Trees Requiring 2 to 1 Replacement Ratio 27 X two (2) = 54	<b>246</b>
<b>Replacement Trees Proposed</b>	<b>69</b>
<b>Replacement Trees in Deficit</b>	<b>177</b>
<b>Protected Trees to be Retained in Proposed Open Space / Riparian Areas</b>	<b>40</b>

Off-Site Trees	Number of Trees
<b>Protected Off-Site Trees to be Removed</b>	<b>0</b>
<b>Total Replacement Trees Required:</b> - Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio X one (1) = 0 - All other Trees Requiring 2 to 1 Replacement Ratio X two (2) = 0	<b>0</b>
<b>Replacement Trees Proposed</b>	<b>0</b>
<b>Replacement Trees in Deficit</b>	<b>0</b>

Summary, report and plan prepared and submitted by

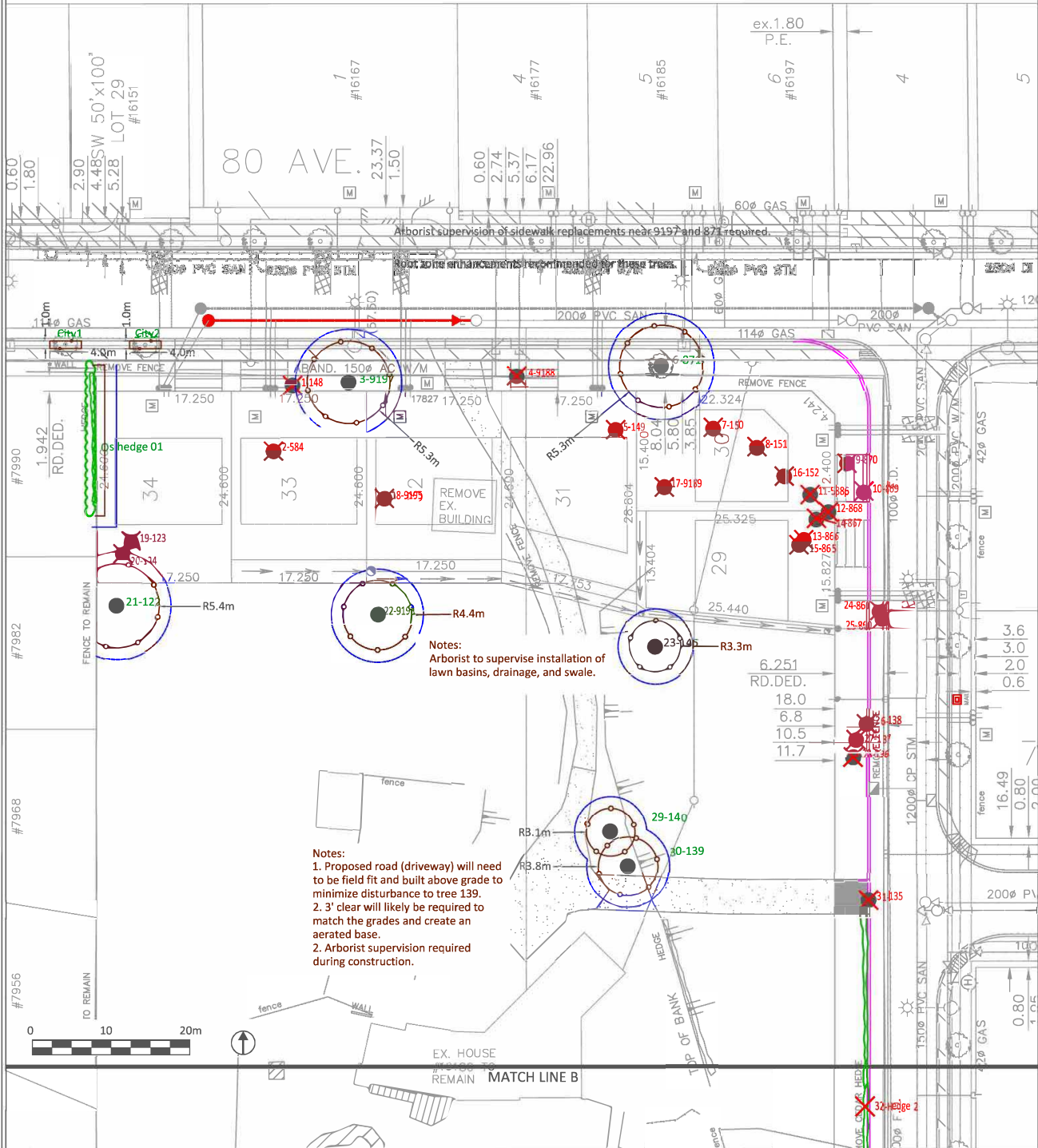
  
**Signature of Arborist**

February 28, 2019

**Date**

**Notes:**

1. TPZ fencing to be field fit around existing conditions.
2. Any alterations or upgrades to existing hardscape must be done under arborist supervision.



Notes:  
Arborist to supervise installation of lawn basins, drainage, and swale.

Notes:  
1. Proposed road (driveway) will need to be field fit and built above grade to minimize disturbance to tree 139.  
2. 3' clear will likely be required to match the grades and create an aerated base.  
2. Arborist supervision required during construction.

LEGEND  
— CRITICAL ROOT ZONE  
— NO-BUILD ZONE  
○ TREE PROTECTION ZONE AND FENCE  
○ UN-SURVEYED TREE  
● TREE TO BE RETAINED  
✖ TREE TO BE REMOVED

REFERENCE DRAWINGS  
 1. Base Survey and Key Plan provided by client

NOTES

1. The location of un-surveyed trees on this plan is approximate. Their location and ownership cannot be confirmed without being surveyed by a Registered BC Land Surveyor.
2. All tree protection fencing must be built to the relevant municipal bylaw specifications. The dimensions shown are from the outer edge of the stem of the tree.
3. The tree protection zone shown is a graphical representation of the critical root zone, measured from the outer edge of the stem of the tree. (½ the trees diameter was added to the graphical tree protection circles to accommodate the survey point being in the center of the tree)
4. No work is permitted within the Tree Protection Zone with the exception of swales. Swale construction is only permitted under the direct supervision of an arborist.
5. The 1.5m area No Build Zone does not allow for any building foundation wall encroachment. Excavation is permitted within this area under the direct supervision of an arborist.
6. Drainage works such as lawn basins, associated piping or services are permitted within the No Build Zone under the direct supervision of an arborist.
7. This plan is based on a topographic and tree location survey provided by the owners' Registered British Columbia Land Surveyor (BCLS) and layout drawings provide by the owners' Engineer (P Eng).
8. This plan is provided for context only, and is not certified as to the accuracy of the location of features or dimensions that are shown on this plan. Please refer to the original survey plan and engineering plans.

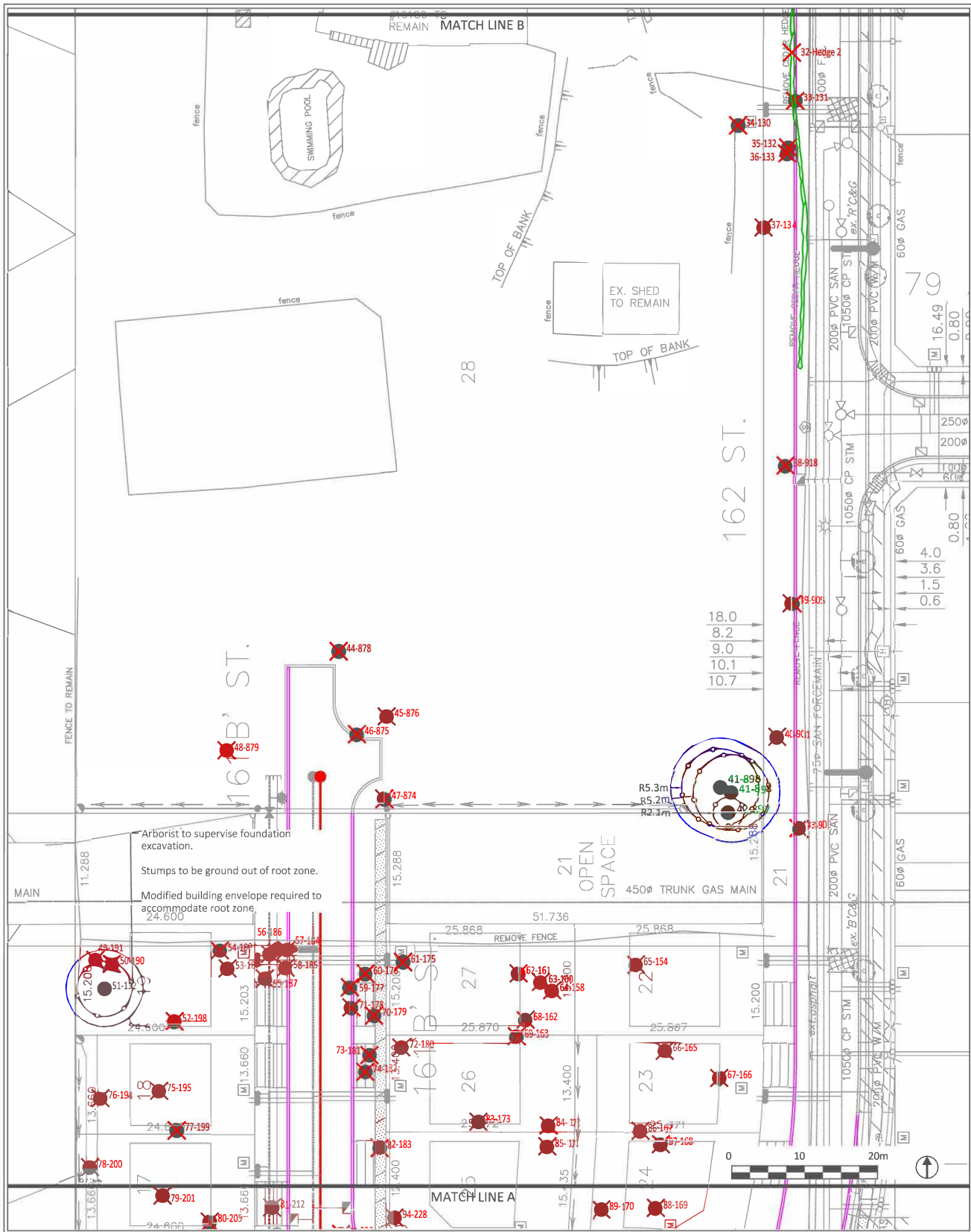


3559 COMMERCIAL STREET  
 VANCOUVER BC | V5N 4E8  
 T 604.733.4886 | F 604.733.4879

Drawing title: Tree Management Plan - Northern Section  
 Project address: 16174, 16180-80 Ave. & 7882-162 St., Surrey, BC  
 Client: C. Kavolinas & Associates

Drawing No: 003  
 Date: 2019/03/14  
 Drawn by: DB  
 Page Size: TABLOID 11"x17"

Page #  
 3 of 6



LEGEND	CRITICAL ROOT ZONE	TREE PROTECTION ZONE AND FENCE	UN-SURVEYED TREE
	NO-BUILD ZONE	TREE TO BE RETAINED	TREE TO BE REMOVED

REFERENCE DRAWINGS
1. Base Survey and Key Plan provided by client

- NOTES
- The location of un-surveyed trees on this plan is approximate. Their location and ownership cannot be confirmed without being surveyed by a Registered BC Land Surveyor.
  - All tree protection fencing must be built to the relevant municipal bylaw specifications. The dimensions shown are from the outer edge of the stem of the tree.
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  - The 1.5m area No Build Zone does not allow for any building foundation wall encroachment. Excavation is permitted within this area under the direct supervision of an arborist.
  - Drainage works such as lawn basins, associated piping or services are permitted within the No Build Zone under the direct supervision of an arborist.
  - This plan is based on a topographic and tree location survey provided by the owners' Registered British Columbia Land Surveyor (BCLS) and layout drawings provide by the owners' Engineer (P Eng).
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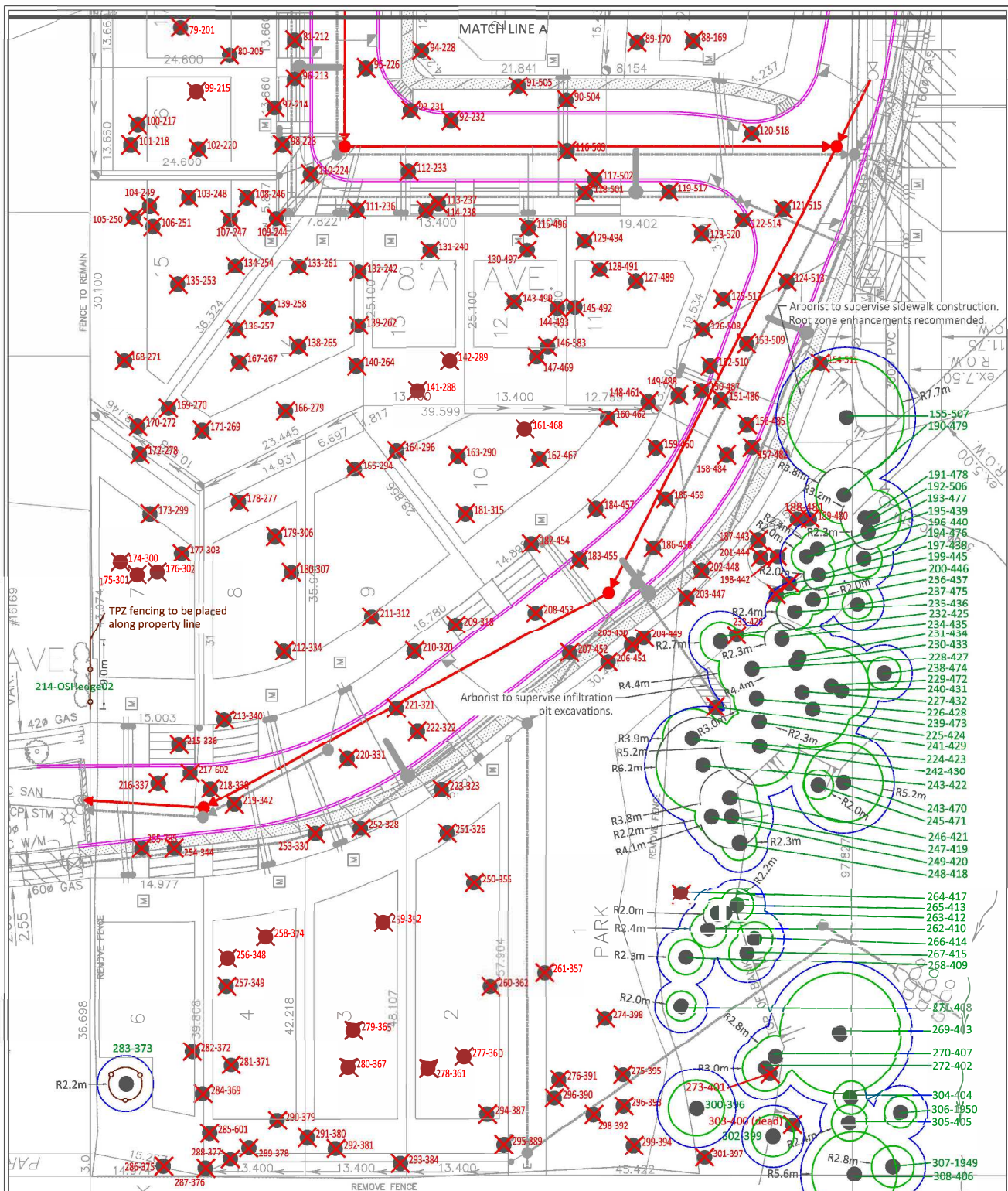
3559 COMMERCIAL STREET  
VANCOUVER BC | V5N 4E8  
T 604.733.4886 | F 604.733.4879

Drawing title: Tree Management Plan - Central Section  
Project address: 16174, 16180-80 Ave. & 7882-162 St., Surrey, BC  
Client: C. Kavolinas & Associates

Drawing No: 002  
Date: 2019/03/14  
Drawn by: DB  
Page Size: TABLOID 11"x17"

Page #  
2 of 6





- Notes:
1. Storm outfall pipe to be built above grade and installed under arborist supervision.
  2. Prework meeting with arborist recommended.
  3. A crane is to be used to bring materials to base of outfall
  4. Pruning of tree 399, 406, and 1949 for clearance required.
  5. We recommend stockpiling some wood mulch on site for use as a temporary crane pad and to reduce erosion.

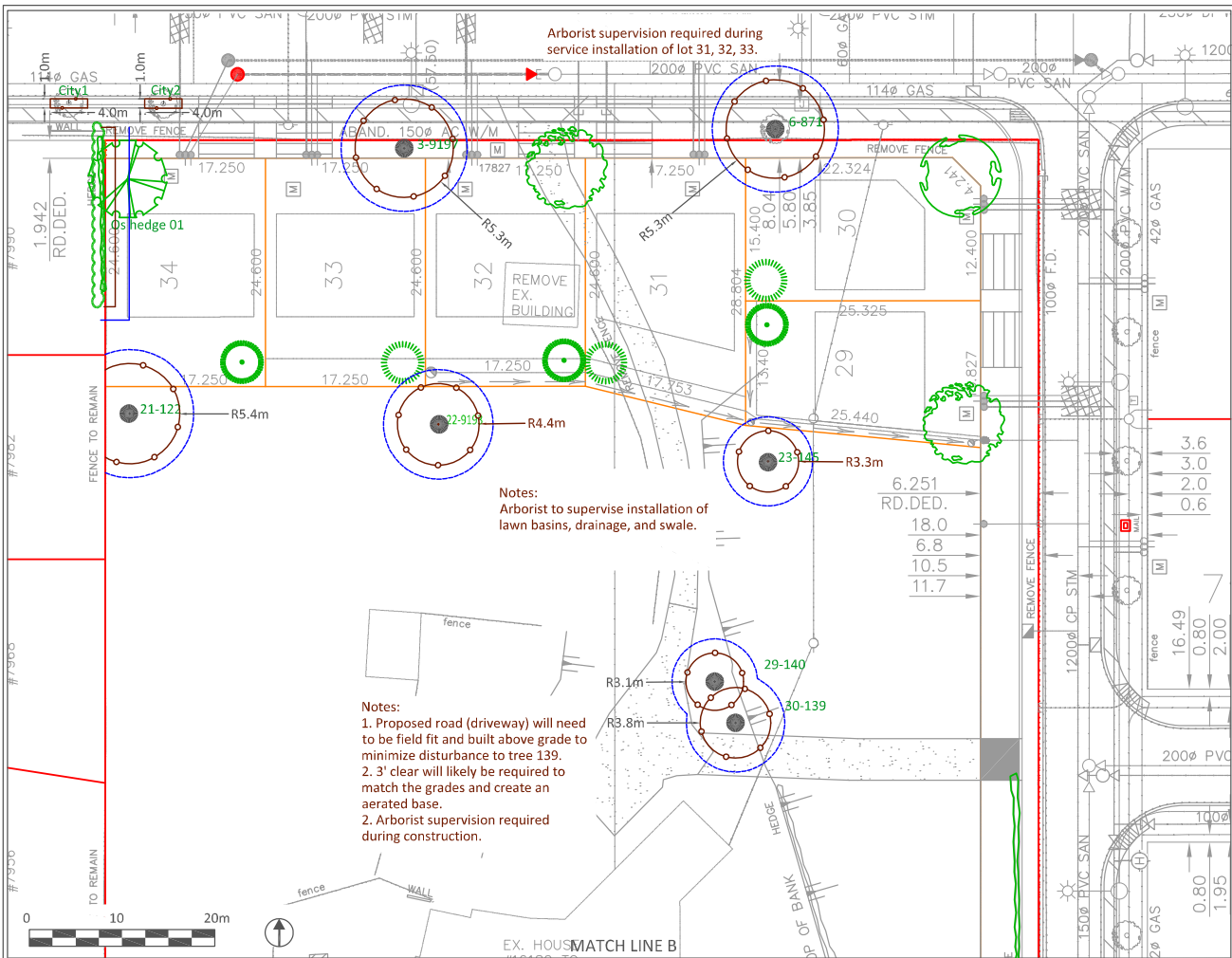
LEGEND	CRITICAL ROOT ZONE	TREE PROTECTION ZONE AND FENCE	UN-SURVEYED TREE
	NO-BUILD ZONE	TREE TO BE RETAINED	TREE TO BE REMOVED

REFERENCE DRAWINGS

1. Base Survey and Key Plan provided by client

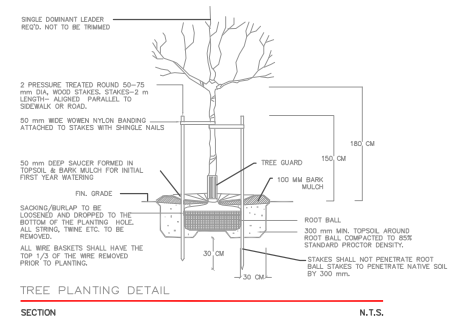
NOTES

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4. No work is permitted within the Tree Protection Zone with the exception of swales. Swale construction is only permitted under the direct supervision of an arborist.
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7. This plan is based on a topographic and tree location survey provided by the owners' Registered British Columbia Land Surveyor (BCLS) and layout drawings provide by the owners' Engineer (P Eng).
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KEY	BOTANICAL NAME	REPLACEMENT TREE LIST	QTY.	SIZE	SPACING	REMARKS
	SYRINGA RETICULATA 'MORY SIL'	LILAC TREE	1	4 CM CAL.	AS SHOWN	R. & B.
	PRUNUS VERRUCOSA 'AUREO'	GAYWREAK CHERRY	1	4 CM CAL.	AS SHOWN	R. & B.
	CORNUS FLORIDA 'NORBAM'	RED TROMBEO DOGWOOD	2	4 CM CAL.	AS SHOWN	R. & B.
	PISEA OMBRICA	SIBIRIAN SPRUCE	3	3.00 METERS	AS SHOWN	R. & B.
	CHAMAECYPARUS NODOSISSIMA PENDULA	KEEPPING NODOSA CYPRESS	3	3.00 METERS	AS SHOWN	R. & B.

- NOTES / GENERAL**
- PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO BC LANDSCAPE STANDARD 'LATEST EDITION'. CONTAINER SIZES ARE SPECIFIED AS PER 'ONTA STANDARDS'. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. SEARCH AND REVIEW MAKE PLANT MATERIAL AVAILABLE FOR ORIGINAL REVIEW BY 'LANDSCAPE ARCHITECT' AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER HAWKLAND AND FRASER VALLEY. 'SUBSTITUTIONS' MUST OBTAIN WRITTEN APPROVAL FROM THE 'LANDSCAPE ARCHITECT' PRIOR TO MAKING ANY SUBSTITUTIONS TO SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE WORKING DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO 'B.C. LANDSCAPE STANDARD'
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  - MIN. GROWING MEDIUM DEPTHS OVER PREPARED SUBGRADE SHALL BE :  
LAWN AREAS 450 mm  
GROUND COVER AREAS 450 mm  
SHRUB AREAS 450 mm  
TREE PITS 300 mm AROUND ROOT BALL
  - GROWING MEDIUM SHALL HAVE PHYSICAL AND CHEMICAL PROPERTIES AS DESCRIBED IN THE STANDARDS FOR LEVEL 2 AND LEVEL 3 AREAS, EXCEPT FOR AREAS OVER STRUCTURES WHERE THE MEDIUM SHALL CONFORM TO THE REQUIREMENTS FOR LEVEL 1 APPLICATIONS. PROCESSING AND MIXING OF GROWING MEDIUM COMPONENTS SHALL BE DONE OFF-SITE USING A MECHANIZED SCREENING PROCESS. PROPOSED GROWING MEDIUM SHALL BE TESTED BY A RECOGNIZED LABORATORY. THE CONTRACTOR SHALL GUARANTEE THAT THE SOIL SUBMITTED FOR TESTING IS A REPRESENTATIVE SAMPLE TAKEN FROM THE SOIL THAT WILL BE USED AT THE SITE.
  - ON-SITE OR IMPORTED SOILS SHALL SATISFY THE REQUIREMENTS OF THE STANDARDS FOR GROWING MEDIUM. SOILS SHALL BE VIRTUALLY FREE FROM SUBSOIL, WOOD NAIL, WOODY PLANT PARTS, WEED OR REPRODUCTIVE PARTS OF WEEDS, PLANT PATHOGENIC ORGANISMS, TOXIC MATERIALS, STONES OVER 30 MM AND FOREIGN OBJECTS.
  - ALL PLANTING BEDS SHALL RECEIVE MIN. 50 MM BARK MULCH.
  - PLANT SPECIES AND VARIETIES MAY NOT BE SUBSTITUTED WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.
  - THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) FULL YEAR FROM THE DATE OF FINAL ACCEPTANCE, UNLESS OTHERWISE SPECIFIED. ALL PLANT MATERIAL NOT SURVIVING OR IN POOR CONDITION DURING THE GUARANTEE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
  - THE CONTRACTOR SHALL CLEAR AWAY FROM THE SITE ALL RUBBISH AS IT ACCUMULATES, AND SHALL, AT THE COMPLETION OF THE WORK, LEAVE THE WORK AND THE SITE THEREOF IN A CLEAN AND PRESENTABLE CONDITION, FREE FROM ALL OBSTRUCTIONS.



<b>LEGEND</b>	CRITICAL ROOT ZONE	TREE PROTECTION ZONE AND FENCE	UN-SURVEYED TREE	<b>REFERENCE DRAWINGS</b>
	NO-BUILD ZONE	TREE TO BE RETAINED	TREE TO BE REMOVED	1. Base Survey, Key Plan and Tree Planting Detail provided by client

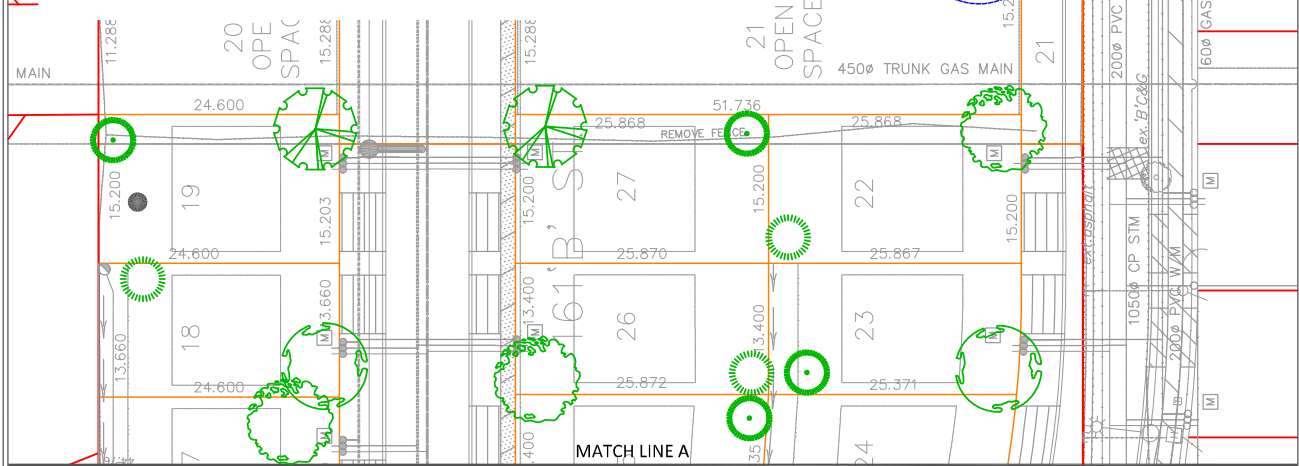
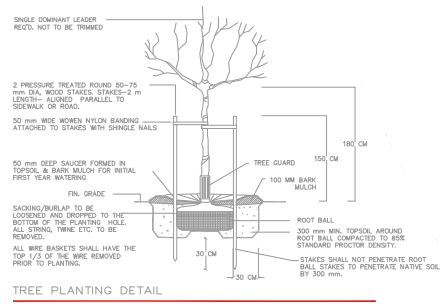
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KEY	BOTANICAL NAME	REPLACEMENT TREE LIST	COMMON NAME	QTY.	SIZE	SPACING	REMARKS
	SHRIMP PECTENATA 'VORY SLIK'		LIAC TREE	2	6 CM CAL.	AS SHOWN	B. & B.
	PRUNUS 'REDONDA' 'MORNING'		BAYBARK CHERRY	2	6 CM CAL.	AS SHOWN	B. & B.
	CORNUS FLORIDA 'RUBRIF'		RED FLOWERING DOGWOOD	3	6 CM CAL.	AS SHOWN	B. & B.
	PECEA OMORHA		SERBIAN SPRUCE	4	3.00 METERS	AS SHOWN	B. & B.
	CHAMAECYPARUS NODOSUS/PENDULA		WEeping NOOTKA CYPRESS	3	3.00 METERS	AS SHOWN	B. & B.

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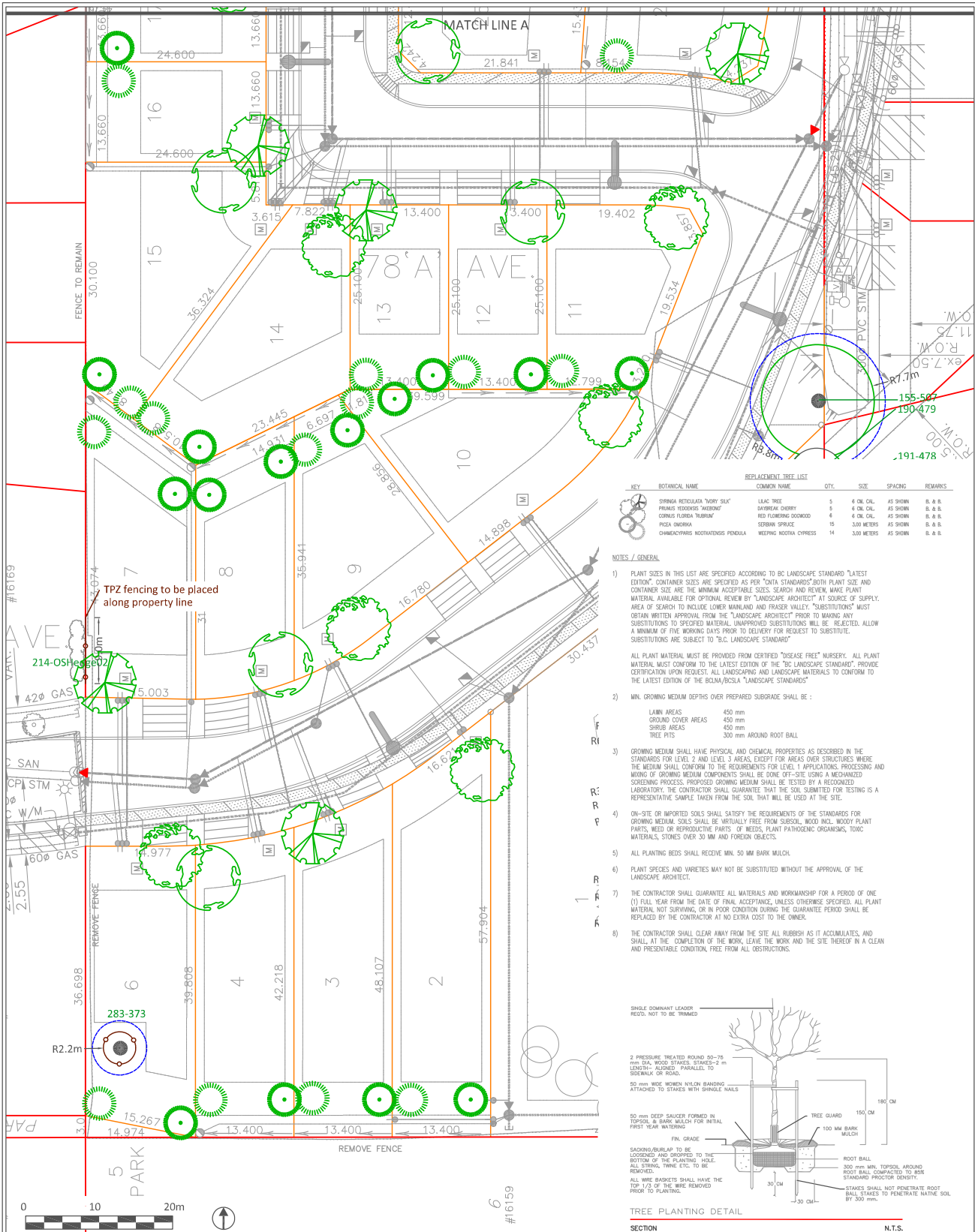
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	CRITICAL ROOT ZONE		TREE PROTECTION ZONE AND FENCE		UN-SURVEYED TREE	<b>REFERENCE DRAWINGS</b>	
	NO-BUILD ZONE		TREE TO BE RETAINED		TREE TO BE REMOVED	1. Base Survey, Key Plan and Tree Planting Detail provided by client	

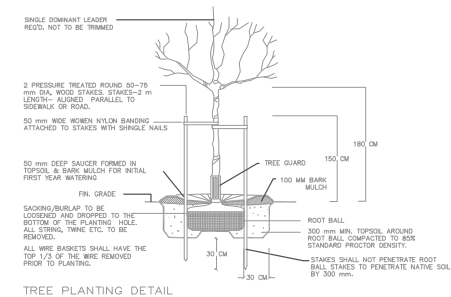
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	3555 COMMERCIAL STREET VANCOUVER BC   V5N 4E8 T 604.733.4886   F 604.733.4879	Drawing title: Tree Replacement Plan - Central Section Project address: 16174, 16180-80 Ave. & 7882-162 St., Surrey, BC Client: C. Kavolinas & Associates	Drawing No: 005 Date: 2018/12/18 Drawn by: DB Page Size: TABLOID 11"x17"	Page # 5 of 6
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KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	REMARKS
	SYRINGA MOUTANENSIS 'MIRY SUE'	LAUR TREE	5	6 CM. O.C.	AS SHOWN	B. & B.
	PRUNUS PENSILVANICA 'AERBOND'	DAYBREAK CHERRY	5	6 CM. O.C.	AS SHOWN	B. & B.
	CORNUS FLORIDA 'FLORIDA'	RED FLOWERING DOGWOOD	6	6 CM. O.C.	AS SHOWN	B. & B.
	PRUNUS SPINOSA	SPRING PRUNELLA	10	3.00 METERS	AS SHOWN	B. & B.
	CHAMAECYPARUS NODOSUS/PENDULA	WEeping NODOSA CYPRESS	14	3.00 METERS	AS SHOWN	B. & B.

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	CRITICAL ROOT ZONE		TREE PROTECTION ZONE AND FENCE		UN-SURVEYED TREE
	NO-BUILD ZONE		TREE TO BE RETAINED		TREE TO BE REMOVED

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CITY OF SURREY

(the "City")

DEVELOPMENT VARIANCE PERMIT

NO.: 7917-0559-00

Issued To:

(the "Owner")

Address of Owner:

- 1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
- 2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 006-500-111  
 West Half Lot 4 Section 24 Township 2 New Westminster District Plan 5556  
 16174 - 80 Avenue

(the "Land")

- 3. (a) As the legal description of the Land is to change, the City Clerk is directed to insert the new legal description for the Land once title(s) has/have been issued, as follows:

Parcel Identifier:

\_\_\_\_\_

- (b) If the civic address(es) change(s), the City Clerk is directed to insert the new civic address(es) for the Land, as follows:

\_\_\_\_\_

- 4. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
  - (a) to reduce the minimum front yard setback of the RA Zone from 18 metres (59 ft.) to 4.1 metres (13 ft.) for an existing accessory building on proposed Lot 27.

5. This development variance permit applies to only that portion of the buildings and structures on the Land shown on Schedule A which is attached hereto and forms part of this development variance permit. This development variance permit does not apply to additions to, or replacement of, any of the existing buildings shown on attached Schedule A, which is attached hereto and forms part of this development variance permit.
  
6. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.
  
7. This development variance permit shall lapse unless the subdivision, as conceptually shown on Schedule A which is attached hereto and forms part of this development variance permit, is registered in the New Westminster Land Title Office within three (3) years after the date this development variance permit is issued.
  
8. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.
  
9. This development variance permit is not a building permit.

AUTHORIZING RESOLUTION PASSED BY THE COUNCIL, THE      DAY OF      , 20 .  
ISSUED THIS      DAY OF      , 20 .

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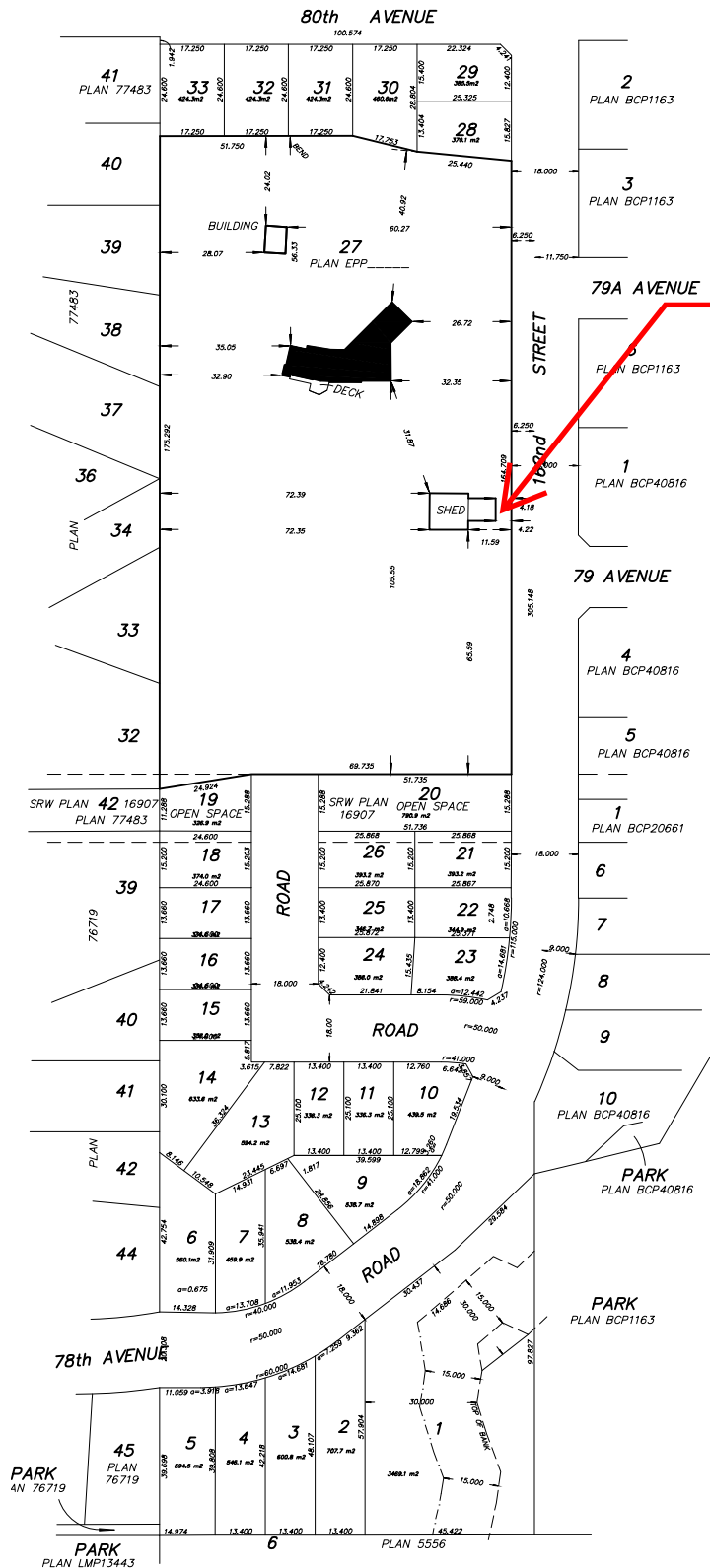
Mayor – Doug McCallum

---

City Clerk – Jennifer Ficocelli

SCHEDULE A

B.C. LAND SURVEYORS BUILDING LOCATION CERTIFICATE  
 SHOWING IMPROVEMENTS ON LOT 26  
 SECTION 24 TOWNSHIP 2  
 NEW WESTMINSTER DISTRICT PLAN EPP



Reduce the minimum front yard setback of the RA Zone from 18 metres to 4.1 metres for an existing accessory building on proposed Lot 27.

THIS BUILDING LOCATION CERTIFICATE HAS BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE AND IS CERTIFIED CORRECT THIS 15th DAY OF OCTOBER, 2018.

DRAFT 2019-MAY-09

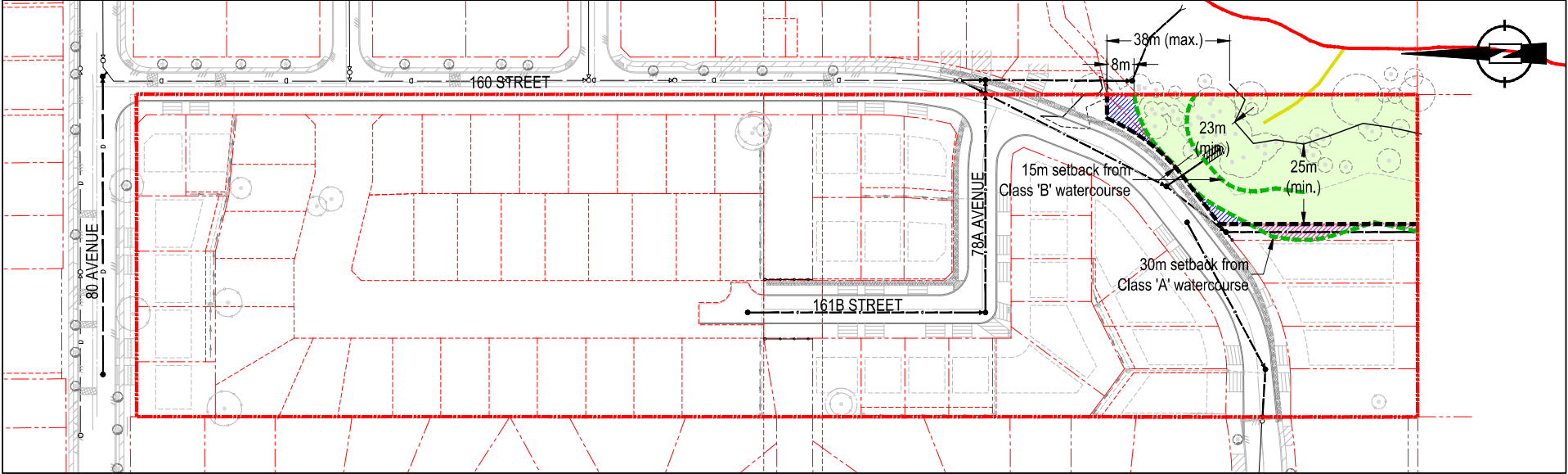
GARY SUNDVICK B.C.L.S.

This document is not valid unless originally signed and sealed.

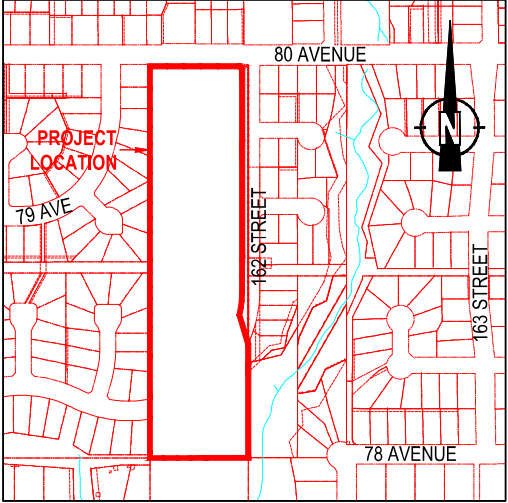
FOR MUNICIPAL AND OR MORTGAGE PURPOSES ONLY, NOT TO BE USED TO DEFINE PROPERTY BOUNDARIES.

BUTLER SUNDVICK  
 4 - 19089 94th Ave  
 Surrey, BC V4N 3S4  
 www.butlersundvick.ca  
 Tel. 604-513-9611  
 File: 4098  
 Dwg: 4098-GE2

PLAN  
SCALE 1:1250



LOCATION  
SCALE 1:5000



**LEGEND**

Property Line	Streamside Protection Area (3207m <sup>2</sup> )
Class 'A' Watercourse	Setback Area Gain (153m <sup>2</sup> )
Class 'B' Watercourse	Setback Area Loss (133m <sup>2</sup> )
Bylaw Setback	
Proposed Setback	

**REFERENCE DRAWINGS**  
 1. Email: 2618 BASE.dwg, Received May 02, 2019; Coastland Engineering Services Ltd.  
 2. 2017 Legal Base from City of Surrey.

TRI-LEGACY DEVELOPMENTS LTD.

16174 80 AVENUE  
Surrey, BC



**envirowest consultants inc.**  
 Suite 101 - 1515 Broadway Street  
 Port Coquitlam, British Columbia  
 Canada V3C 6M2  
 office: 604-944-0502  
 facsimile: 604-944-0507  
[www.envirowest.ca](http://www.envirowest.ca)

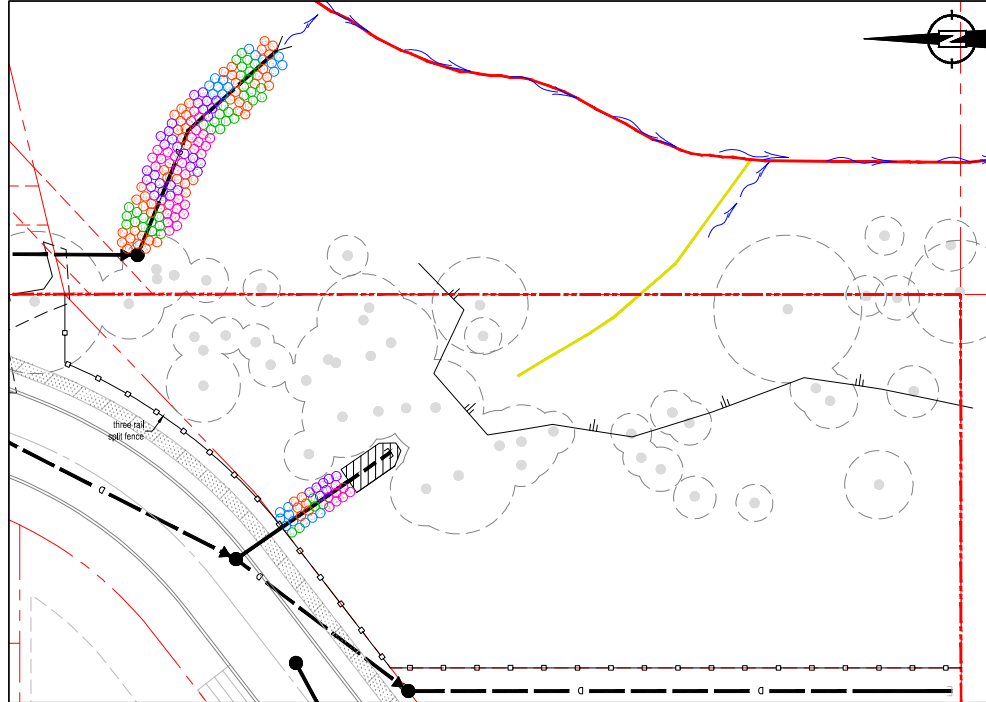
**SETBACKS**

DESIGN: TA	DRAWN: CEV	CHECKED: IWW	REVISION: 02	REVISION DATE: May 13, 2019
SCALE: As Shown			DRAWING NUMBER: 2461-01-01	
DATE: April 02, 2018				

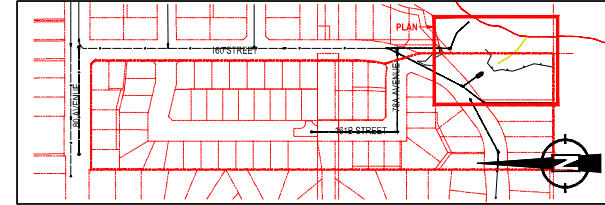
DATE: 2019/04/10 - 3:40pm  
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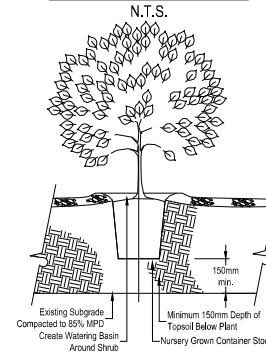
PLAN  
SCALE 1:250



KEY PLAN  
SCALE 1:2000

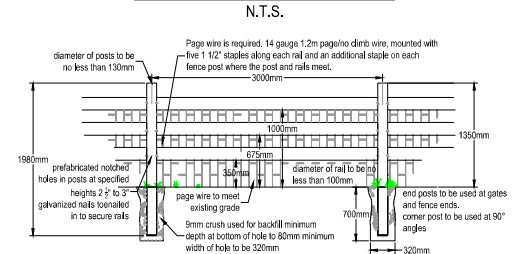


CITY OF SURREY  
SHRUB PLANTING DETAIL



- NOTES
1. Plant Using Rooting Powder Approved by Owner's Representative According to Manufacturer's Recommendations.
  2. Space Plants as Indicated in Planting Plan.
  3. Planting to Conform to BCSLA/BCNTA Landscape Standard - Current Edition.
  4. Minimum 50mm Bark Mulch Settled Depth.

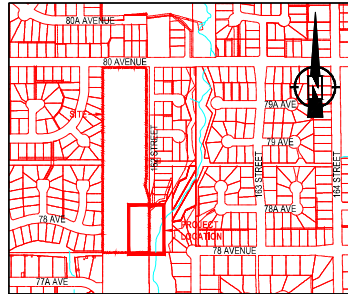
CITY OF SURREY  
THREE RAIL SPLIT FENCE DETAIL



GENERAL LANDSCAPE SPECIFICATIONS

1. Plant material and the planting of such material are to be in accordance with the British Columbia Landscape Standard (latest edition) jointly published by the British Columbia Society of Landscape Architects and the British Columbia Landscape Nursery Association.
2. All works are to be conducted in accordance with the sediment control provisions of the "Standards and Best Practices for Instream Works" (Ministry of Water, Land & Air Protection, 2004).
3. Works is to be inspected by a qualified Environmental Professional.
4. Work is to conform to the City of Surrey Parks Standard Construction Documents (2011) available at [http://www.surrey.ca/files/City\\_of\\_Surrey\\_Spec\\_2011.pdf](http://www.surrey.ca/files/City_of_Surrey_Spec_2011.pdf).
5. All plant material is to be inspected and approved by Envirowest prior to installation.
6. Growing medium is to be free of any subsoils, roots, noxious grass, weeds, toxic materials, stone over 30 mm diameter, foreign objects, and possess an acidity range (pH) of 5.5 to 7.5. Growing medium is to be inspected by Envirowest prior to placement.
7. All debris and/or excess material from landscape operations are to be collected and disposed offsite in accordance with all regulatory requirements.
8. Disturbed areas to be seeded with City of Surrey reclamation seed mixture.
9. All invasive plant species must be removed off-site. The site must be free of invasive plant species at end of maintenance term. Invasive plant species include but are not limited to Himalayan blackberry (*Rubus discolor*), evergreen blackberry (*R. laciniatus*), Scotch broom (*Cytisus scoparius*), English Ivy (*Hedera helix*), morning glory (*Convolvulus arvensis*), and, deadnettle (*Lamium* spp.).
10. All plants must be of native stock; any outlays are not to be planted.
11. 150mm of imported topsoil to COS standards to be filled into native soil throughout the area of disturbance / replanting where augmentation only is required. All areas lacking suitable planting medium shall have 400mm of imported top soil installed.
12. In the critical root zone (8X DBH) of trees to be retained (regardless of size), all invasive removal to be completed by hand or under direct arborist supervision.
13. No fill is to be added into the CRZ of retained trees, unless under direct arborist supervision.
14. No machines or storage of materials is permitted inside the CRZ of trees to be retained.
15. Any activities supervised by a consulting arborist require follow up letters.
16. City of Surrey Parks Development Inspector to be contacted for onsite pre-construction meeting and upon completion of the construction of the works at (604) 501-5166.
17. The contractor is to provide five (5) years of plant maintenance. Plant maintenance is to include watering, selective pruning and clearing of all invasive species. Species survivorship is to equal one-hundred (100) percent five (5) years from planting. Replacement of dead stock may be required to fulfill this specification. Replacement stock is also subject survivorship five (5) years from planting.

LOCATION  
SCALE 1:5000



PLANT SPECIES LIST AND SPECIFICATIONS

SYMBOL	COMMON NAME	LATIN NAME	NUMBER	COMMENTS
●	black twinberry	<i>Lonicera involucrata</i>	40	no. 2 pot; densely branched; well established
●	Indian plum	<i>Osmarania cerasiformis</i>	37	no. 2 pot; densely branched; well established
●	red elderberry	<i>Sambucus racemosa</i>	36	no. 2 pot; densely branched; well established
●	red-osier dogwood	<i>Cornus stolonifera</i>	23	no. 2 pot; densely branched; well established
●	salmonberry	<i>Rubus spectabilis</i>	57	no. 2 pot; multi-stemmed; densely branched; well established

REFERENCE DRAWINGS

1. Email: 2618 BASE.dwg, Received May 02, 2019; Coastland Engineering Services Ltd.
2. 2017 Legal Base from City of Surrey.

TRI-LEGACY DEVELOPMENTS LTD.

16174 80 AVENUE  
Surrey, BC



envirowest consultants inc.

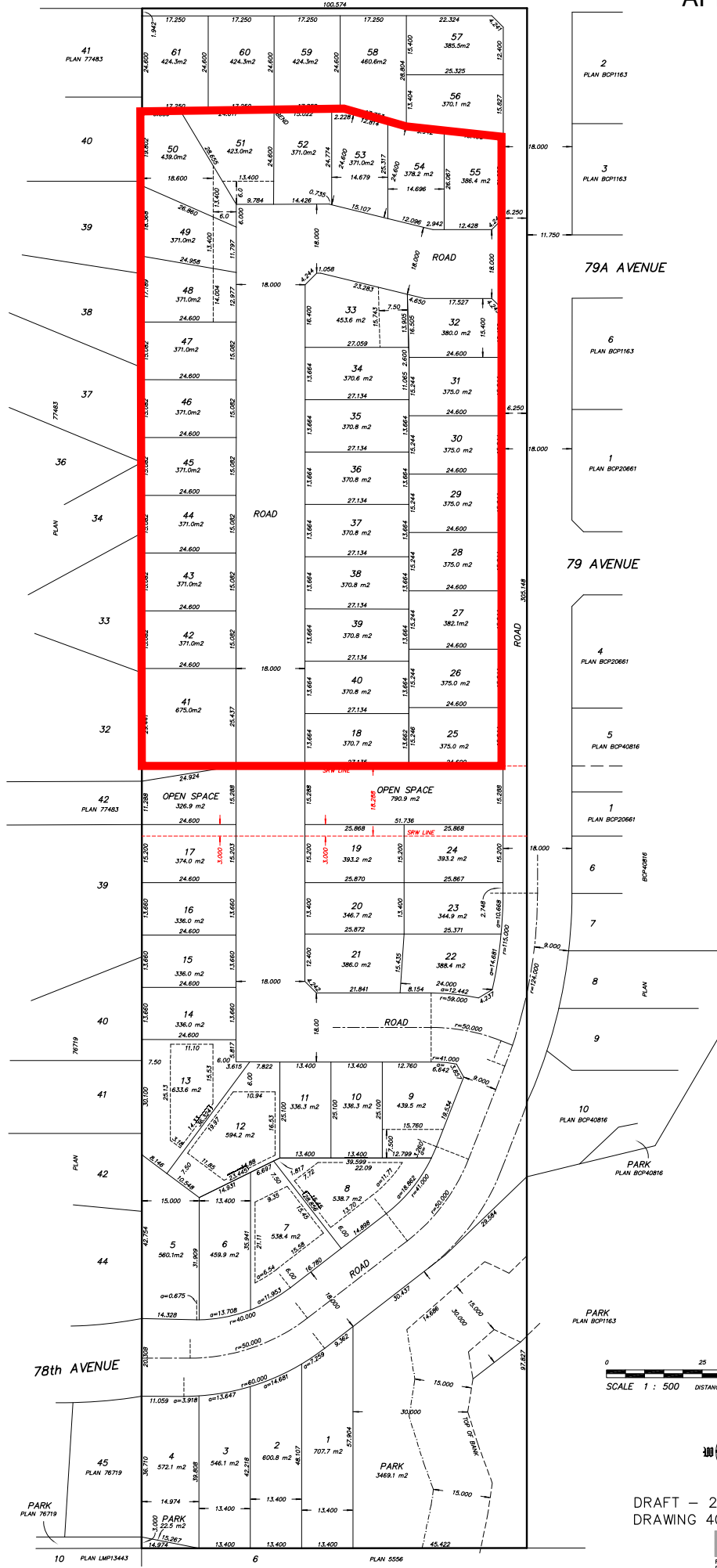
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LANDSCAPE RESTORATION PLAN  
DETAILS AND SPECIFICATIONS

DESIGN: TA	DRAWN: CEV	CHECKED: RWS	REVISION: 02	REVISION DATE: May 13, 2019
SCALE: As Shown		DRAWING NUMBER: 2461-01-02		
DATE: July 09, 2018				

80th AVENUE



79A AVENUE

79 AVENUE

OPEN SPACE

ROAD

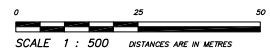
ROAD

ROAD

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DRAFT - 2017-12-06  
DRAWING 4098-1

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File: 4098  
Dwg: 4098-1

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PLAN 5556