

City of Surrey  
**PLANNING & DEVELOPMENT REPORT**

Application No.: 7919-0113-00

Planning Report Date: November 22, 2021

**PROPOSAL:**

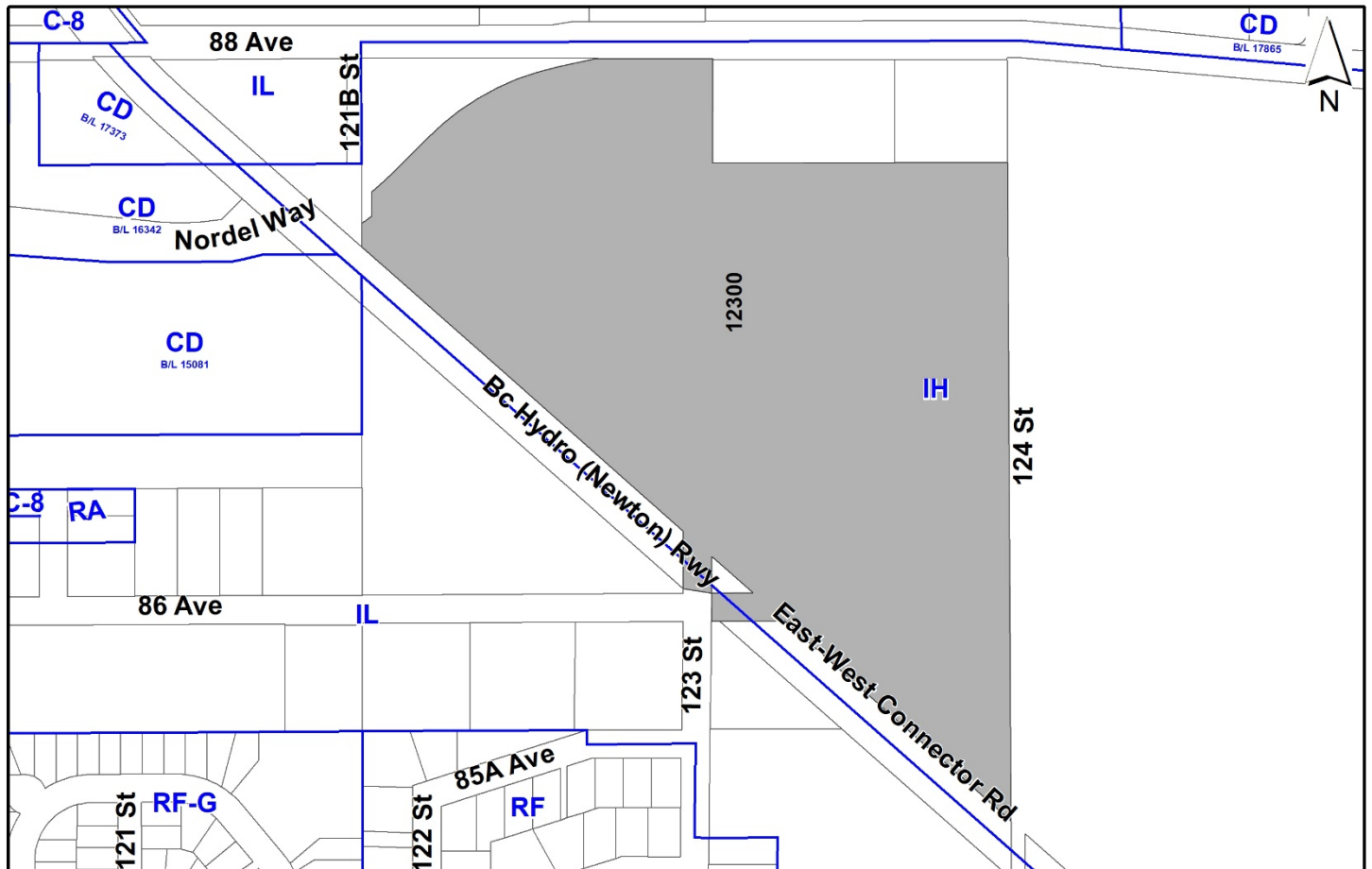
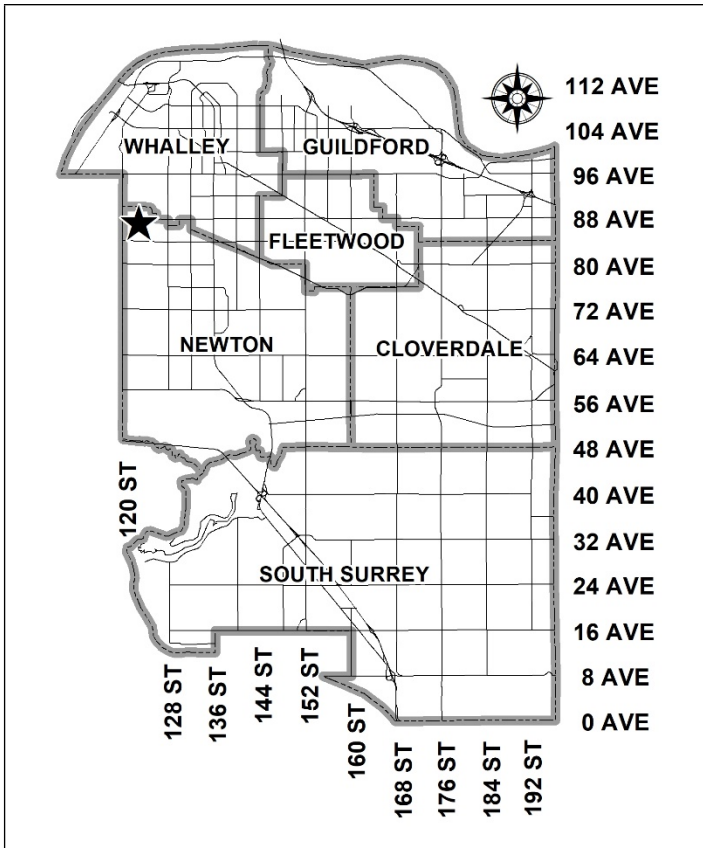
- **Development Permit**

to permit the expansion of a BC Hydro facility inclusive of Transformer, Salvage and Administration Buildings.

**LOCATION:** 12300 - 88 Avenue

**ZONING:** IH

**OCP DESIGNATION:** Industrial



**RECOMMENDATION SUMMARY**

- Approval to draft Development Permit for Form and Character, and Sensitive Ecosystems.

**DEVIATION FROM PLANS, POLICIES OR REGULATIONS**

- None.

**RATIONALE OF RECOMMENDATION**

- The proposal complies with the Industrial designation in the Official Community Plan (OCP).
- The proposal complies with the Industrial designation in the Metro Vancouver Regional Growth Strategy (RGS).
- The proposed density and building form are appropriate for this part of Newton.
- The proposal complies with the Development Permit requirements in the OCP for Sensitive Ecosystems (Streamside Areas).
- The proposal complies with the Development Permit requirements in the OCP for Form and Character.
- The proposed sign has been comprehensively designed to be integrated with the design of the building and provides a comprehensive look for the development.

## RECOMMENDATION

The Planning & Development Department recommends that:

1. Council authorize staff to draft Development Permit No. 7919-0113-00 generally in accordance with the attached drawings (Appendix I) and the finalized Ecosystem Development Plan.
2. Council instruct staff to resolve the following issues prior to final approval:
  - (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) resolution of all urban design issues to the satisfaction of the Planning and Development Department;
  - (c) submission of a finalized landscaping plan and landscaping cost estimate to the specifications and satisfaction of the Planning and Development Department;
  - (d) submission of a finalized tree survey and a statement regarding tree preservation to the satisfaction of the City Landscape Architect;
  - (e) the applicant satisfy the deficiency in tree replacement on the site, to the satisfaction of the Planning and Development Department;
  - (f) submission of a finalized Ecosystem Development Plan and Impact Mitigation Plan to the satisfaction of City staff; and
  - (g) registration of a combined Statutory Right-of-Way / Section 219 Restrictive Covenant over the designated Streamside Protection Area for both "No Build" and conveyance access.

## SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP Designation	Existing Zone
Subject Site	BC Hydro	Industrial	IH
North (Across 88 Avenue):	BC Hydro / SSR Roof Supply company	Industrial	IL
East:	BC Hydro	Industrial	IH
South:	Multi-tenant industrial development	Industrial	IL
West (Across railway):	Merit Kitchens	Industrial	IL

## Context & Background

- The subject property is 13.3 hectares (33 acres) in area, designated "Industrial" in the Official Community Plan (OCP), and zoned "High Impact Industrial Zone (IH)".
- The site is currently owned and occupied by BC Hydro and has several buildings located on it. The subject application is for new buildings on the northwest portion of the site. The portion of the site subject to the Development Permit is approximately 3.3 hectares (8 acres) in area, and faces 88 Avenue. The existing buildings on that portion of the site are proposed to be removed.

## DEVELOPMENT PROPOSAL

### Planning Considerations

- The applicant is proposing a Development Permit for Form and Character and for Sensitive Ecosystem (Streamside Areas), to permit the expansion of industrial and office buildings for BC Hydro. The overall site is 13.3 hectares, with the proposed new buildings to be concentrated on the northwest portion of the site, within an approximate area of 3.3 hectares.
- The proposal includes 3 buildings: a transformer building, a material returns and processing building, and an administration/office building. The new buildings have a combined area of 6,624 square metres (FAR 0.2). Some outdoor storage is proposed between the buildings which will not be visible from the street.
- There are existing buildings on site to be retained, which have a total floor area of approximately 15,478 square metres. The total floor area with the proposed additions will be 22,371 square metres, which results in approximately 0.20 FAR for the entire site.
- The site has some watercourses and wetlands identified on the northwest portion of the site. The proposal complies with all municipal and provincial setbacks and no relaxations are proposed. All buildings are proposed at the applicable environmental setbacks.

	Proposed
<b>Lot Area</b>	
Gross Site Area:	133,871.29 square metres
Road Dedication:	n/a
Undevelopable Area:	Environmental areas and BC Hydro power lines
Net Site Area:	133,871.29 square metres
<b>Number of Lots:</b>	1
<b>Building Height:</b>	10.65 metres
<b>Unit Density:</b>	n/a
<b>Floor Area Ratio (FAR):</b>	0.2
<b>Floor Area</b>	
Industrial:	5,641.89 square metres
Office:	981.88 square metres
Total:	6,623.77 square metres



## Referrals

Engineering:	The Engineering Department has no objection to the project subject to the completion of Engineering servicing requirements as outlined in Appendix II.
Ministry of Environment (MOE)	The MOE has provided a release letter for the proposal, and no further investigations or reports are required.
Fire Department:	No concerns. Comments provided to applicant.
Advisory Design Panel:	The application was not referred to the ADP but was reviewed by staff and found satisfactory.

## Transportation Considerations

- There are no road dedications associated with this proposal.
- A new driveway is proposed on 88 Avenue, as a requirement from the Fire Department. The site will maintain all of its current accesses through BC Hydro's other property to the east, that shares a north/south drive aisle with the subject site.

## Natural Area Considerations

There are three watercourses identified on or adjacent to the site:

- A Class C (green-coded) watercourse was depicted along an approximate 75 metre section of the southern property line near the southwest corner.
- A Class C (green-coded) watercourse continued along the BC Hydro (Newton) Railway to the southwest.
- A Class B (yellow-coded) watercourse was depicted crossing Nordel Way and flowing along the west property line, connecting to the green-coded watercourse adjacent to the railway.

In addition, a wetland feature located within the undeveloped portion of the Site was classified as a Class B watercourse.

The proposed development is outside of both the RAPR and City's required environmental setbacks, and no variances are proposed. Minimum safe-guarding, in the form of registration of a combined Statutory Right-of-Way / Section 219 Restrictive Covenant over the designated Streamside Protection Area for both "No Build" and conveyance access. These documents are to emphasize that no buildings can be built within the riparian setback and that the City can access the watercourses, if needed.

## Sustainability Considerations

- The applicant has met all of the typical sustainable development criteria, as indicated in the Sustainable Development Checklist.

**POLICY & BY-LAW CONSIDERATIONS**

**Regional Growth Strategy**

- The proposal complies with the "Industrial" land use designation in the Metro Vancouver Regional Growth Strategy.

**Official Community Plan**

Land Use Designation

- The proposal complies with the "Industrial" land use designation in the Official Community Plan.

Themes/Policies

- C2.38 Ensure the loading and on-site access of goods delivery vehicles is considered in conjunction with overall urban development site design.

*(Loading areas are behind the building and not visible from 88 Avenue).*

- D1.4 Preserve riparian areas and watercourses in their natural state and link them with upland natural areas to develop a connected network of natural areas throughout Surrey.
- D3.1 Support land development and construction that minimizes impacts on the natural environment and that enhances environmental sustainability.

*(The watercourses and wetland on site will be protected by a SROW/Easement combo, and all required environmental setbacks are being adhered to).*

- E1.5 Encourage the full utilization and efficient use of industrial and other employment lands in order to maximize jobs and economic activity per hectare.
- E2.7 Maintain strategic partnerships with energy stakeholders (e.g. BC Hydro, SFU and Fortis BC) to facilitate the growth of clean energy businesses in Surrey.

*(The proposed development further utilizes land already owned by BC Hydro and is already zoned High Impact Industrial Zone [IH]).*

**Zoning By-law**

- The applicant proposes to a Development Permit complying with the existing "High Impact Industrial Zone (IH)".
- The table below provides an analysis of the development proposal in relation to the requirements of the Zoning By-law, including the "High Impact Industrial Zone (IH)", streamside setbacks and parking requirements.

IH Zone (Part 49)	Permitted and/or Required	Proposed
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IH Zone (Part 49)	Permitted and/or Required	Proposed
<b>Unit Density:</b>	n/a	n/a
<b>Floor Area Ratio:</b>	1.00	0.20
<b>Lot Coverage:</b>	60%	23.4%
<b>Yards and Setbacks</b>		
North:	7.5 metres	7.5 metres
East:	3.6 metres	7.5 metres
South:	7.5 metres	Larger than 7.5 metres
West:	7.5 metres	7.5 metres
<b>Height of Buildings</b>		
Principal buildings:	18 metres	10.65 metres
Accessory buildings:	18 metres	10.65 metres
<b>Streamside (Part 7A)</b>	<b>Required</b>	<b>Proposed</b>
<b>Streamside Setbacks</b>		
Class B (yellow-coded) Stream:	7 metres	7 metres
Class B wetland	15 metres	15 metres
<b>Parking (Part 5)</b>	<b>Required</b>	<b>Proposed</b>
<b>Number of Stalls</b>		
Industrial:	BC Hydro facility is not open to the public and requires a different number of parking stalls	38
Total:		38

## PUBLIC ENGAGEMENT

- Development Proposal Signs were installed on November 08, 2021. Staff received no responses from neighbours.

## DEVELOPMENT PERMITS

### Sensitive Ecosystems (Streamside Areas) Development Permit Requirement

- The subject property falls within the Sensitive Ecosystems Development Permit Area (DPA) for Streamside Areas in the OCP, given the location of an existing Class B (yellow-coded) watercourse which flows on the northwest portion of the 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 B (yellow-coded) watercourse requires a minimum streamside setback of 7 metres, as measured from the top of bank. The proposed setbacks comply with the requirements outlined in the Zoning By-law.

- The riparian area will be protected through the registration of a combined Restrictive Covenant/Right-of-Way against the property to ensure safeguarding and maintenance of the Protection Area in perpetuity, in compliance with the OCP.
- An Ecosystem Development Plan, prepared by Nancy Elliott, *R.P. Bio.*, of SLR Consulting and dated September 2021 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.

### **Form and Character Development Permit Requirement**

- The proposed development is subject to a Development Permit for Form and Character.
- The proposed development generally complies with the Form and Character Development Permit guidelines in the OCP.
- The applicant has worked with staff to break up the massing, add colours to the buildings, and provide high quality fencing. The applicant is still committed to continue to look for improvement options for the fences.
- The proposal consists of three additional buildings: transformer building, salvage building, and an administration building. An existing building on the northwestern portion of the site will be demolished. Several other buildings on the remainder of the site will be retained.
- The transformer building is the largest at 5,233.18 square metres and closer to 88 Avenue. An outdoor storage area is proposed south of the building, and the salvage and office buildings are proposed side by side, south of the storage area. The outdoor storage area is proposed under the power lines, where no building is allowed.

### Landscaping

- Landscaping includes Columnar Swedish Aspen, Mountain Ash, and a variety of shrubs, including Saskatoon Berry, Oceanpray, Red Flowering Currant, Sitka Mountain Ash and Evergreen Huckleberry.

### Outstanding Items

- There are a limited number of Urban Design items that remain outstanding, and which do not affect the overall character or quality of the project. These generally include further screening and enhanced landscaping, particularly along 88 Avenue. The applicant will further develop colour variation along the northern façade of the Transformer Building, which is the closest to 88 Avenue. The applicant will also further investigate fencing options and remove chain link whenever possible.
- The applicant has been provided a detailed list identifying these requirements and has agreed to resolve these prior to Final Approval of the Development Permit, should the application be supported by Council.

### **TREES**

- Florian Fisch, ISA Certified Arborist of Durante Kreuk 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:**

<b>Tree Species</b>	<b>Existing</b>	<b>Remove</b>	<b>Retain</b>
<b>Deciduous Trees</b> (excluding Alder and Cottonwood Trees)			
Birch	2	2	0
<b>Coniferous Trees</b>			
Western Red Cedar	9	5	4
Scots Pine	4	4	0
<b>Total (excluding Alder and Cottonwood Trees)</b>	<b>15</b>	<b>11</b>	<b>4</b>
<b>Total Replacement Trees Proposed</b> (excluding Boulevard Street Trees)		<b>22</b>	
<b>Total Retained and Replacement Trees</b>		<b>26</b>	
<b>Contribution to the Green City Program</b>		<b>n/a</b>	

- The Arborist Assessment states that there is a total of 15 mature trees on the site, with no Alder and Cottonwood trees. It was determined that 4 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.
- For those trees that cannot be retained, the applicant will be required to plant trees on a 2 to 1 replacement ratio. This will require a total of 22 replacement trees on the site. The applicant is proposing 22 replacement trees, meeting City requirements.

- In summary, a total of 26 trees are proposed to be retained or replaced on the site with no contribution to the Green City Program.

### INFORMATION ATTACHED TO THIS REPORT

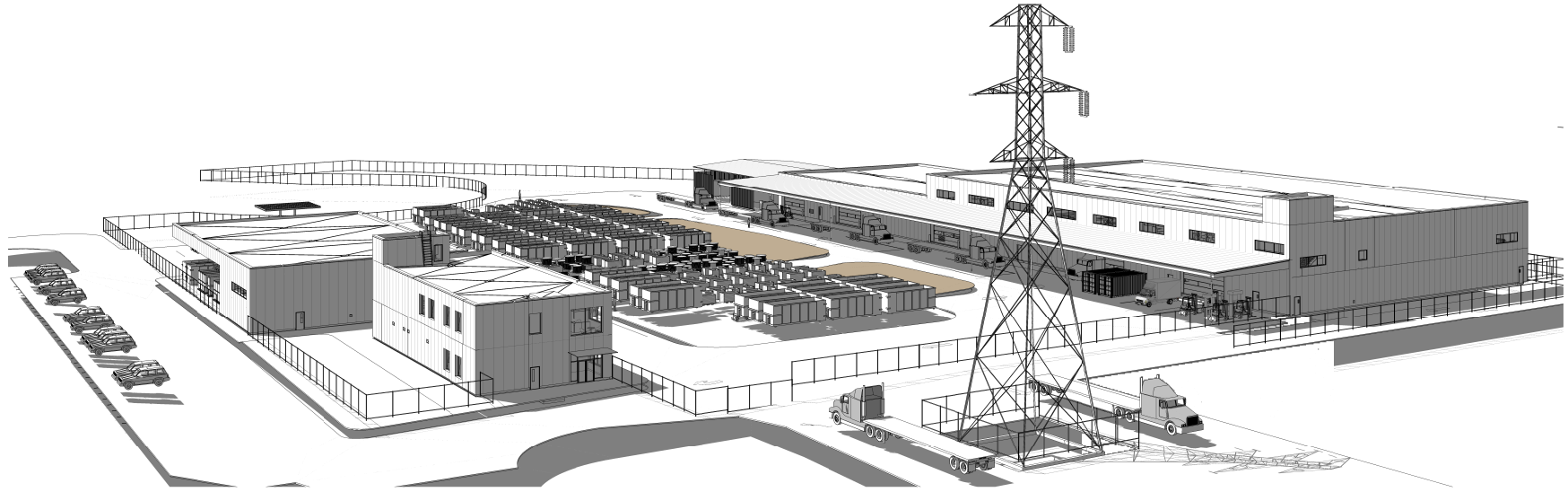
The following information is attached to this Report:

- Appendix I. Survey Plan, Site Plan, Building Elevations and Landscape Plans
- Appendix II. Engineering Summary
- Appendix III. Summary of Tree Survey and Tree Preservation

*approved by Shawn Low*

Ron Gill  
Acting General Manager  
Planning and Development

LFM/cm



# BC HYDRO - MATERIALS CLASSIFICATION FACILITY

12345 88 AVENUE, SURREY, BC

ISSUED FOR DP RE-SUBMISSION

2021 11 03



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**BC HYDRO**

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**Electrical Consultant**  
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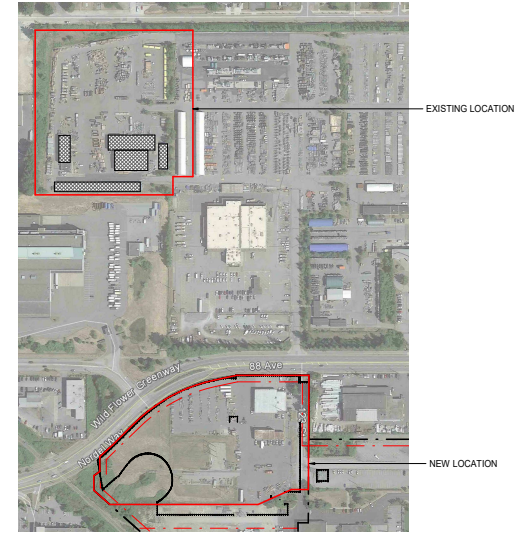
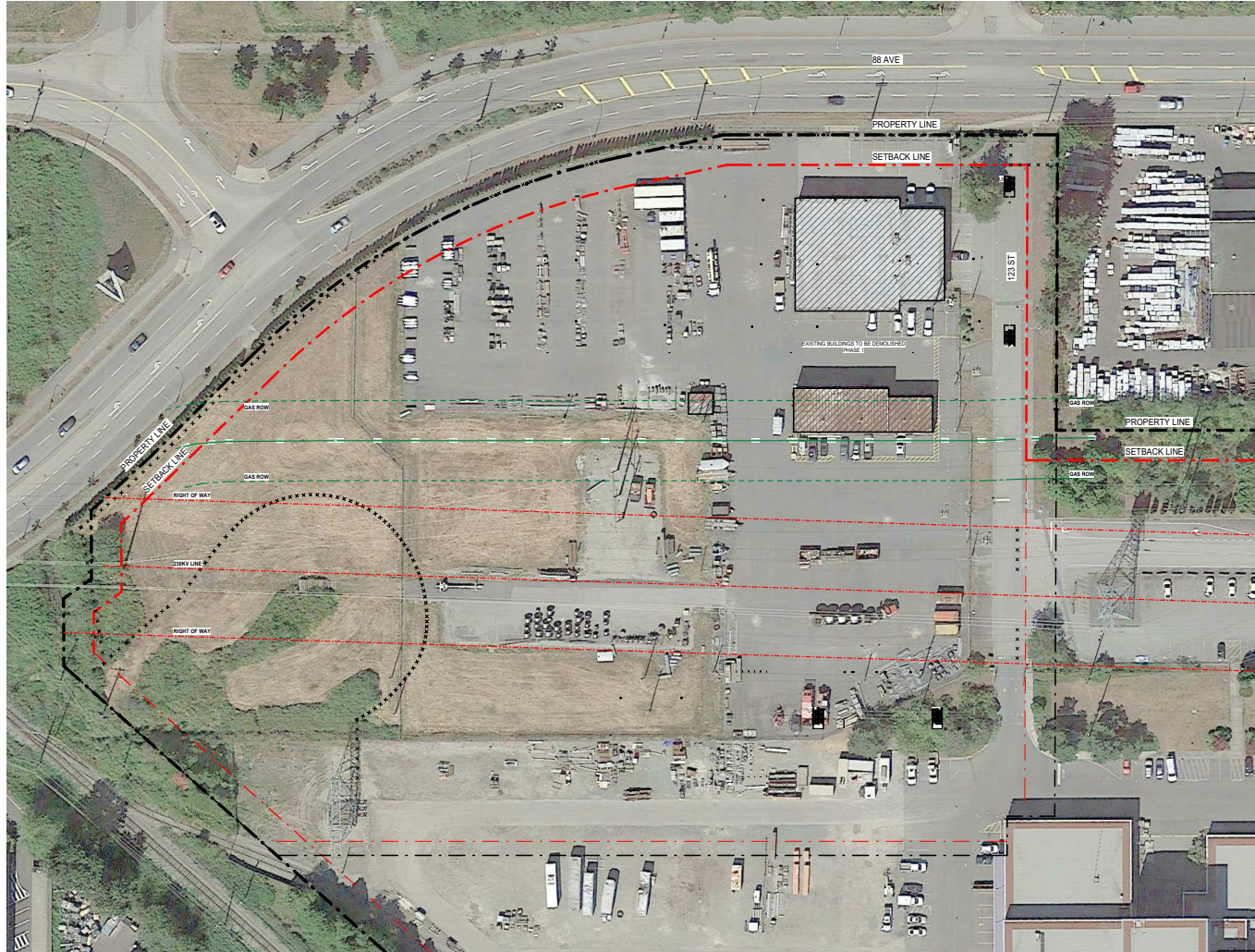
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KEY MAP

LEGEND

- PROPERTY LINE
- ZONING SETBACK
- POWER LINE RIGHT OF WAY
- GAS LINE RIGHT OF WAY
- EXISTING BUILDING ON NEW MCF SITE TO BE DEMOLISHED - PHASE 1
- EXISTING BUILDING ON OLD MCF SITE TO BE DEMOLISHED - PHASE 2

1 EXISTING SITE PLAN  
SCALE: 1:400

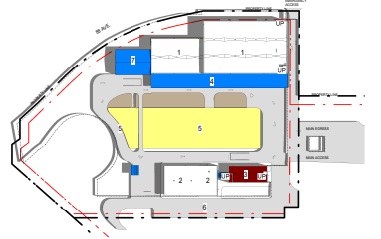
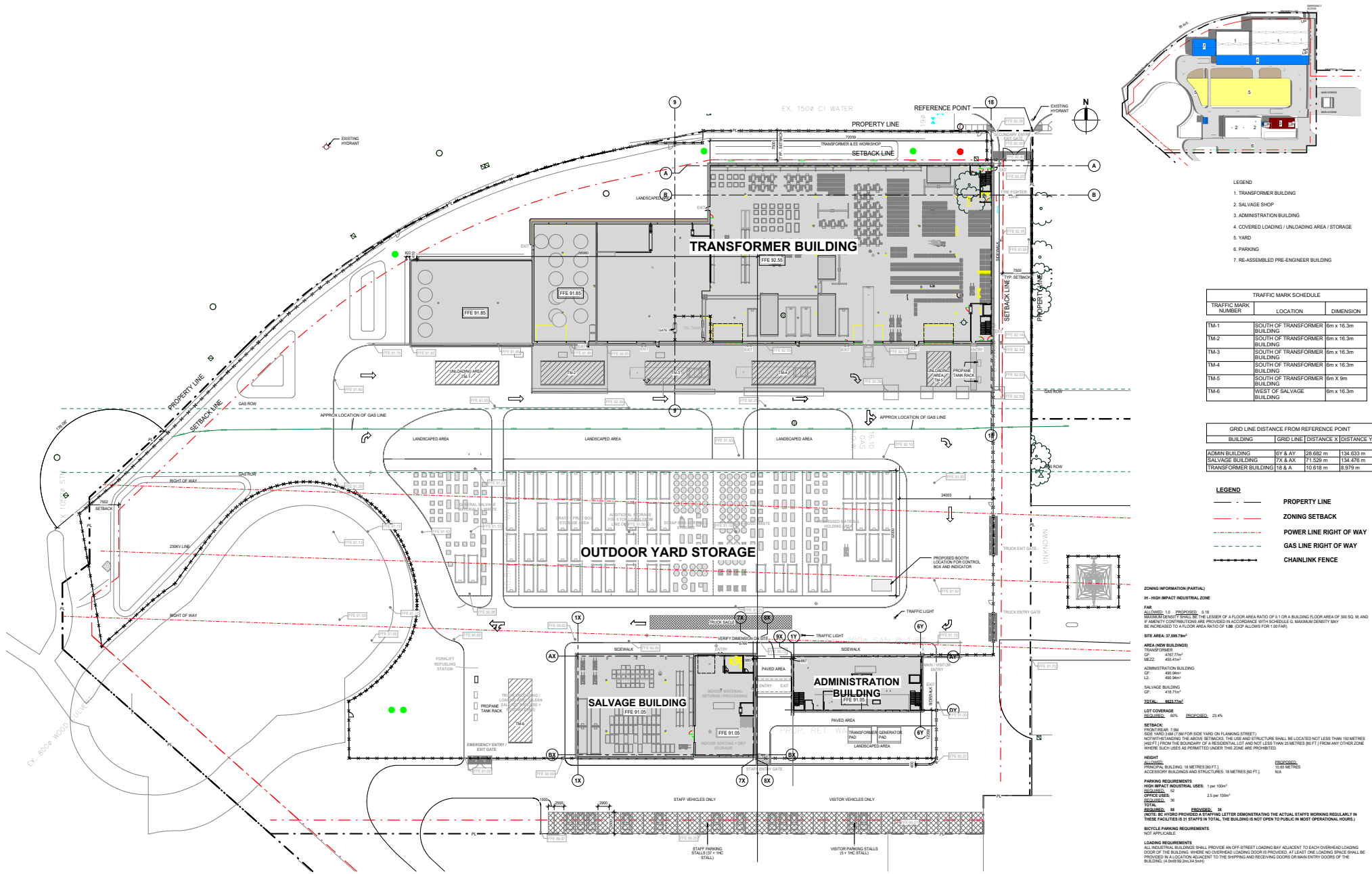
CLIENT	BC Hydro	ARCHITECT / ARCHITECTURE	kasian
PRIME CONSULTANT	wsp	CONSULTANT	

SEALED / TAMPON	
REVISION	APPR

2	2021-11-03	ISSUED FOR DP RE-SUBMISSION
1	2020-10-14	ISSUED FOR CONSTRUCTION
REV.	YYYY-MM-DD	REVISION

PROJECT ADDRESS / PROJECT ADDRESS	BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF) 12251 88 AVENUE, SURREY, B.C.	DRAWING NAME / DRAWING PLAN	EXISTING SITE PLAN
DRAWN BY / DESIGNER	CYC	DRAWING NUMBER / STANDARD PLAN	A-010
ISSUED FOR DP RE-SUBMISSION		PROJECT NUMBER / MANDATORY PROJECT	2000055
SCALE / SCALE	As indicated	DATE	2021 11 03
PROJECT MANAGER	CT	REV	2





- LEGEND**
1. TRANSFORMER BUILDING
  2. SALVAGE SHOP
  3. ADMINISTRATION BUILDING
  4. COVERED LOADING / UNLOADING AREA / STORAGE
  5. YARD
  6. PARKING
  7. RE-ASSEMBLED PRE-ENGINEER BUILDING

**TRAFFIC MARK SCHEDULE**

TRAFFIC MARK NUMBER	LOCATION	DIMENSION
TM-1	SOUTH OF TRANSFORMER BUILDING	6m x 16.3m
TM-2	SOUTH OF TRANSFORMER BUILDING	6m x 16.3m
TM-3	SOUTH OF TRANSFORMER BUILDING	6m x 16.3m
TM-4	SOUTH OF TRANSFORMER BUILDING	6m x 16.3m
TM-5	SOUTH OF TRANSFORMER BUILDING	6m x 9m
TM-6	WEST OF SALVAGE BUILDING	6m x 16.3m

**GRID LINE DISTANCE FROM REFERENCE POINT**

BUILDING	GRID LINE DISTANCE X	DISTANCE Y	
ADMIN BUILDING	BY & AY	28,662 m	134,633 m
SALVAGE BUILDING	7X & AX	71,529 m	134,476 m
TRANSFORMER BUILDING	1B & A	10,618 m	8,979 m

- LEGEND**
- PROPERTY LINE
  - ZONING SETBACK
  - POWER LINE RIGHT OF WAY
  - GAS LINE RIGHT OF WAY
  - CHAINLINK FENCE

**ZONING INFORMATION (PARTIAL):**  
 S1 - HIGH IMPACT INDUSTRIAL ZONE  
 ALLOCATED: 1.0 PROPOSED: 0.18  
 MAXIMUM FLOOR AREA RATIO: 0.18  
 MAXIMUM GROUND COVER: 10%  
 MAXIMUM BUILDING HEIGHT: 10 METRES (33 FT)  
 MAXIMUM LOT COVERAGE: 10%  
 MAXIMUM LOT AREA: 10,000 SQ M (24,710 SQ FT)  
 MAXIMUM LOT WIDTH: 100 METRES (328 FT)  
 MAXIMUM LOT DEPTH: 100 METRES (328 FT)  
 MAXIMUM LOT AREA RATIO: 0.18  
 MAXIMUM GROUND COVER: 10%  
 MAXIMUM BUILDING HEIGHT: 10 METRES (33 FT)  
 MAXIMUM LOT COVERAGE: 10%  
 MAXIMUM LOT AREA: 10,000 SQ M (24,710 SQ FT)  
 MAXIMUM LOT WIDTH: 100 METRES (328 FT)  
 MAXIMUM LOT DEPTH: 100 METRES (328 FT)

**AREA NEW BUILDINGS:**  
 TRANSFORMER: 4107.77m<sup>2</sup>  
 SALVAGE: 454.94m<sup>2</sup>  
 ADMINISTRATION: 400.96m<sup>2</sup>  
 SALVAGE BUILDING: 410.77m<sup>2</sup>  
 TOTAL: 8522.74m<sup>2</sup>

**LOT COVERAGE:**  
 ALLOCATED: 10% PROPOSED: 23.4%

**SETBACK:**  
 FRONT: 7.62m  
 SIDE: 3.05m (5m FOR SIDE YARD ON FLANKING STREET)  
 REAR: 3.05m  
 NOTWITHSTANDING THE ABOVE SETBACKS, THE USE AND STRUCTURE SHALL BE LOCATED NOT LESS THAN 15M METRES (50 FT) FROM THE BOUNDARY OF A RESIDENTIAL LOT AND NOT LESS THAN 30M METRES (98 FT) FROM ANY OTHER ZONE WHERE SUCH USES AS PERMITTED UNDER THIS ZONE ARE PROHIBITED.

**HEIGHT:**  
 ALLOCATED: 10 METRES (33 FT) PROPOSED: 10.6 METRES (35 FT)  
 ACCESSORY BUILDINGS AND STRUCTURES: 18 METRES (59 FT)

**PARKING REQUIREMENTS:**  
 HIGH IMPACT INDUSTRIAL USE: 1 per 100m<sup>2</sup>  
 ALLOCATED: 52 OFFICE USE: 2.5 per 100m<sup>2</sup>  
 TOTAL: 38

**NOTES:**  
 1. NOTE: BC HYDRO PROVIDED A STAFFING LETTER DEMONSTRATING THE ACTUAL STAFFS WORKING REGULARLY IN THESE FACILITIES IS 31 STAFFS IN TOTAL. THE BUILDING IS NOT OPEN TO PUBLIC IN MOST OPERATIONAL HOURS.  
 2. BICYCLE PARKING REQUIREMENTS NOT APPLICABLE.

**LOADING REQUIREMENTS:**  
 ALL INDUSTRIAL BUILDINGS SHALL PROVIDE AN OFF-STREET LOADING BAY ADJACENT TO EACH OVERHEAD LOADING DOOR OF THE BUILDING WHERE NO OVERHEAD LOADING DOOR IS PROVIDED, AT LEAST ONE LOADING SPACE SHALL BE PROVIDED IN A LOCATION ADJACENT TO THE SHIPPING AND RECEIVING DOORS OR MAIN ENTRY DOORS OF THE BUILDING. (SEE 2000.00.00)

**NOTE:** ELEVATIONS AND ALL SITE ELEMENTS SHOWN IN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR SITE INFORMATION AND ELEVATIONS. FOR LANDSCAPING REFER TO LANDSCAPE DRAWINGS FOR INFORMATION.

1 SITE PLAN  
 SCALE: 1:300

CLIENT: **BC Hydro**  
 ARCHITECT / ARCHITECTURE: **kasian**  
 PRIME CONSULTANT: **wsp**  
 CONSULTANT: **wsp**

REVISIONS

REV.	DATE	DESCRIPTION	BY	APPR.
1	2020-10-14	ISSUED FOR CONSTRUCTION		
2	2020-11-26	ISSUED FOR SI		
3	2021-08-30	ISSUED FOR DFP		
4	2021-11-03	ISSUED FOR DP RE-SUBMISSION		

PROJECT ADDRESS: PROJECT ADDRESS  
**BC HYDRO MATERIAL CLASSIFICATION FACILITY (MCF)**  
 12251 18 AVENUE, SURREY, B.C.  
 DRAWING NAME: MCF-001-01  
 DRAWING NUMBER: MCF-001-01  
 SCALE: AS INDICATED  
 DATE: 2021 11 03

**SITE PLAN**  
 DRAWING NUMBER: MCF-001-01  
 PROJECT NUMBER: MCF-001-01  
 PROJECT TITLE: MCF-001-01  
 PROJECT NUMBER: MCF-001-01  
 PROJECT TITLE: MCF-001-01  
 PROJECT NUMBER: MCF-001-01  
 PROJECT TITLE: MCF-001-01



1 - 2 STOREY BUILDING - EAST VIEW



6 - LOOKING SOUTH FROM NORTH



8 - EQUIPMENT AND STORAGE ON SITE



2 - 2 STOREY BUILDING - WEST VIEW



7 - EQUIPMENT AND STORAGE ON SITE



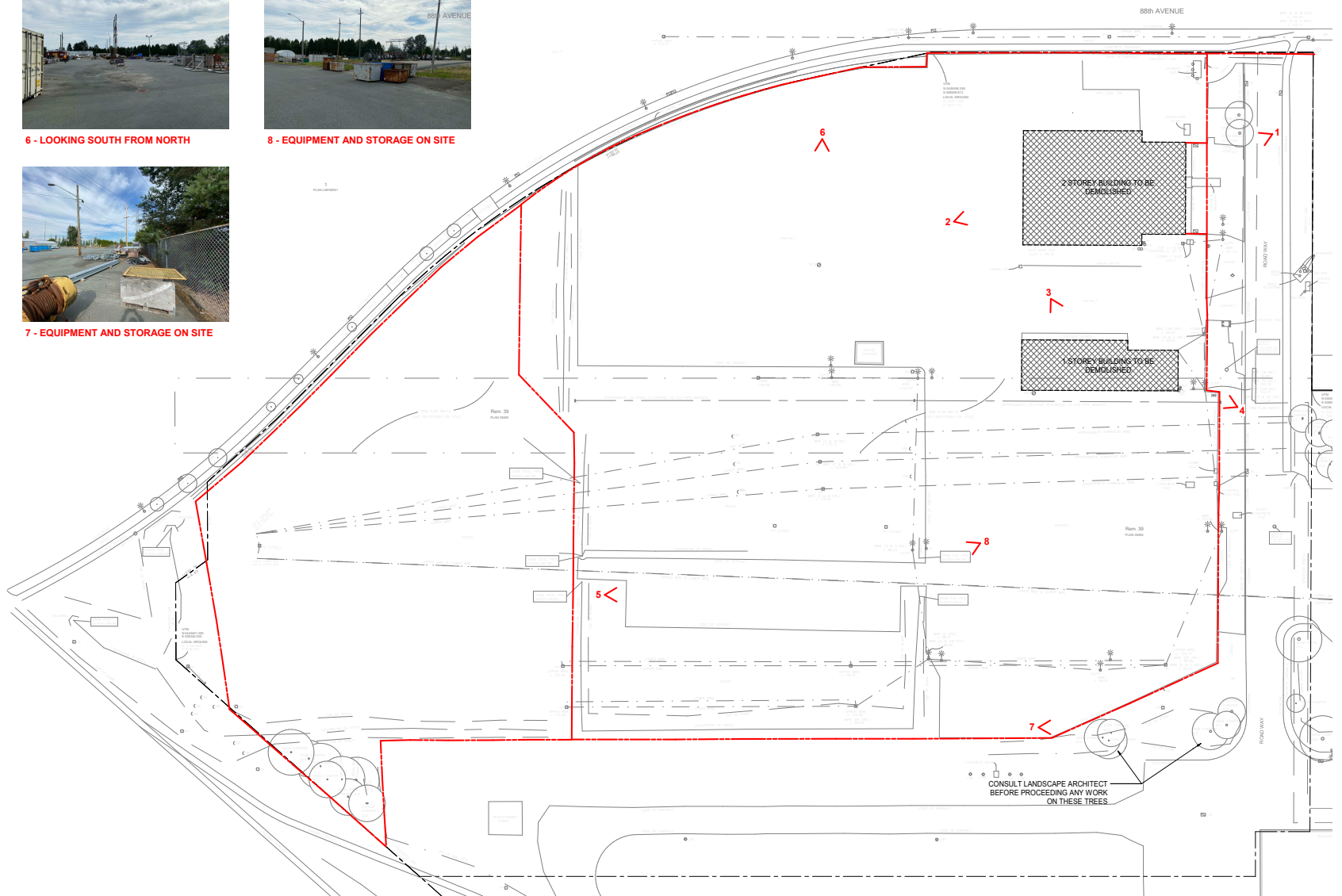
3 - 1 STOREY BUILDING - NORTH VIEW



4 - 1 STOREY BUILDING - SOUTHEAST VIEW



5 - EQUIPMENT AND STORAGE ON SITE



1 DEMOLITION PLAN  
SCALE: 1:300

GENERAL NOTES

1. TO HAVE A SITE COORDINATION MEETING WITH THE ATTENDANCE OF BC HYDRO REPRESENTATIVE AND CONSULTANT TEAM BEFORE PROCEEDING THE WORK.
2. TO COORDINATE WITH BC HYDRO TO REMOVE ALL EQUIPMENT ON SITE IMMEDIATELY BEFORE THE DEMOLITION WORK STARTED.
3. ALL EXISTING STEEL AND CONCRETE STRUCTURES, CONCRETE FOOTING, FOUNDATION AND CONCRETE SLAB ON GRADE TO BE DEMOLISHED AND REMOVED FROM SITE.
4. ALL EXISTING STEEL AND CONCRETE STRUCTURES, CONCRETE FOOTING, FOUNDATION AND CONCRETE SLAB ON GRADE TO BE DEMOLISHED AND REMOVED FROM SITE.
5. BEFORE CUTTING DOWN ANY EXISTING TREES, PLEASE GET AN APPROVAL FROM LANDSCAPE ARCHITECT AND WSP DESIGN MANAGER BEFORE PROCEEDING THE WORK.
6. FOR ALL THE MECHANICAL EQUIPMENT AND DUCTS NEEDED TWO EXISTING BUILDING, PLEASE REFER TO MECHANICAL DEMOLITION PLAN. CONSULT WITH BC HYDRO IF ANY MECHANICAL EQUIPMENT REQUIRED TO BE RE-USED. LOCATE THESE EQUIPMENT TO THE LOCATION REQUIRED BY BC HYDRO.
7. FOR ANY UNDERGROUND SERVICES, LINE NOT SHOWN IN SURVEY DRAWINGS, CONSULT WITH CIVIL ENGINEER BEFORE REMOVE OR REDUCATE THESE LINES.
8. FOR ANY UNDERGROUND STRUCTURES, CONSULT WITH STRUCTURAL AND CIVIL ENGINEER BEFORE PROCEEDING ANY WORK.
9. IF ANY CONTAMINATION HAS FOUND ON SITE, PLEASE INFORM BC HYDRO PROJECT MANAGER AND WSP DESIGN MANAGER IMMEDIATELY BEFORE CONTINUE THE SITE WORK.
10. ANY TREES OR PLANT REQUIRE TO BE KEPT, PROVIDE SUFFICIENT TREE AND ROOT PROTECTION BEFORE THE DEMOLITION WORK.
11. PROVIDE THE EROSION PROTECTION FOR THE SOUTHWEST CORNER OF ENVIRONMENTAL SENSITIVE AREA DURING THE DEMOLITION PROCESS.

**LEGEND**

- PROPERTY LINE
- EXISTING BUILDING TO BE DEMOLISHED
- EXISTING CHAINLINK FENCE AND GATE TO BE DEMOLISHED
- PHOTO VIEW POINT

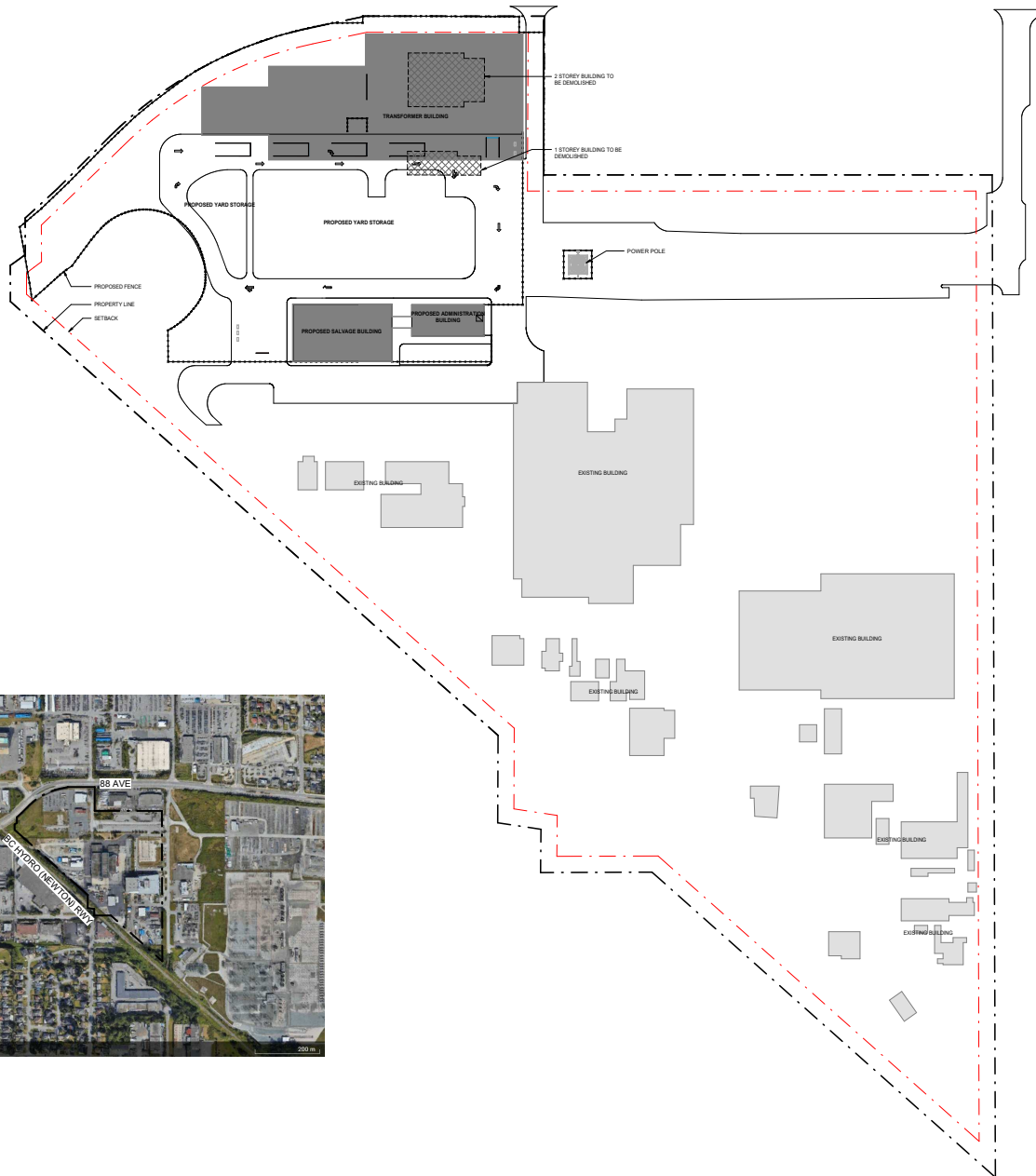
CLIENT: **BC Hydro**  
 ARCHITECT / ARCHITECTURE: **kasian**  
 PRIME CONSULTANT: **wsp**  
 CONSULTANT:

REV.	YYYY-MM-DD	ISSUED FOR DP RE-SUBMISSION	REVISION	APPR.
1	2021-11-03	ISSUED FOR DP RE-SUBMISSION		

PROJECT ADDRESS	PROJECT NUMBER	DRAWING NAME	DATE
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)	12251 88 AVENUE, SURREY, B.C.	DEMOLITION PLAN	2021 11 03

DESIGNED BY	DRAWN BY	CHECKED BY	DATE
CT	CT	CT	2021 11 03

PROJECT NUMBER	REVISION	DATE
A-012	1	20200505



- LEGEND**
- PROPERTY LINE
  - ZONING SETBACK
  - EXISTING BUILDING
  - BUILDING TO BE DEMOLISHED
  - NEW BUILDING

**ZONING INFORMATION (WHOLE SITE)**

**R1 - HIGH IMPACT INDUSTRIAL ZONE**  
 FAR ALLOWED: 1.0 **PROPOSED: 0.17**  
 EXISTING FLOOR AREA TO BE DEMOLISHED: 10% OF FLOOR AREA RATIO OF 0.1 OR A BUILDING FLOOR AREA OF 300 SQ. M. AND IF ADJACENT CONTIGUOUS ARE PROVIDED IN ACCORDANCE WITH SCHEDULE 6, MAXIMUM DENSITY MAY BE INCREASED TO A FLOOR AREA RATIO OF 1.0% (SOP ALLOWED FOR 100 FAR)

**SITE AREA: 133,671.29m<sup>2</sup>**

**AREA NEW BUILDINGS**

TRANSFORMER 4767.77m<sup>2</sup>  
 YARD 958.64m<sup>2</sup>  
 ADMINISTRATION BUILDING 400.54m<sup>2</sup>  
 LI 400.54m<sup>2</sup>

**SALVAGE BUILDING 818.73m<sup>2</sup>**

**TOTAL NEW: 6623.77m<sup>2</sup>**

**AREA EXISTING BUILDINGS**

**TOTAL EX: 14,476m<sup>2</sup>**

**GRAND TOTAL: 22,971.77m<sup>2</sup>**

**LOT COVERAGE**

**REQUIRED: 95% **PROPOSED: 79.5%****

**SETBACK:**

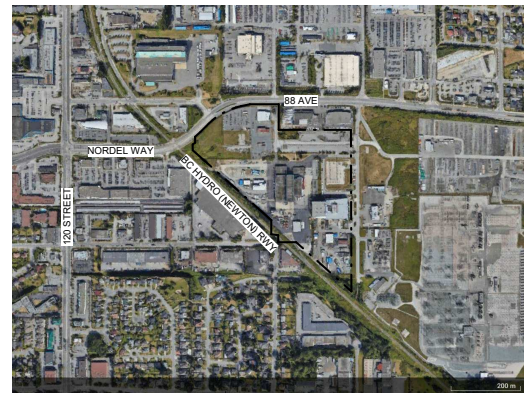
FRONT YARD: 7.5M  
 SIDE YARD: 1.5M OR 3M FOR SIDE YARD ON FLANKING STREET  
 REAR YARD: 1.5M OR 3M FOR REAR YARD ON FLANKING STREET  
 NOTIFICATIONS AND THE ABOVE SETBACKS: THE USE AND STRUCTURE SHALL BE LOCATED NOT LESS THAN 90 METERS AND 7.5 METERS (FROM THE BOUNDARY OF A RESIDENTIAL LOT AND NOT LESS THAN 5 METERS (7.5 FT) FROM ANY OTHER ZONE THESE EXCLUSIONS ARE PERMITTED UNDER THIS ZONE ARE PROHIBITED)

**HEIGHT:**

**SALVAGE: 18 METRES (60 FT) **PROPOSED: 10 METRES****

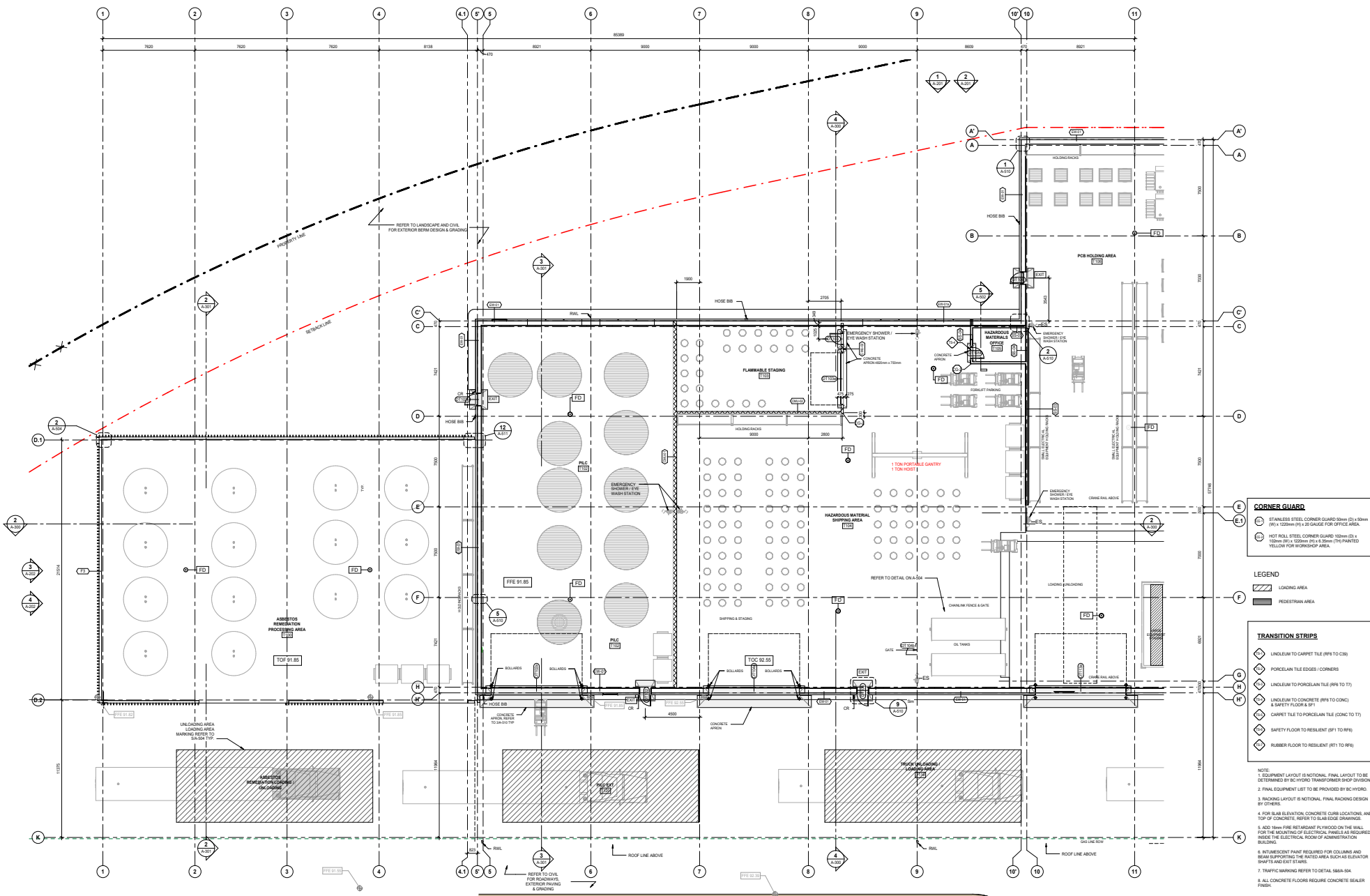
**EXISTING: 18 METRES (60 FT) **PROPOSED: 18 METRES****

**ACCESSORY BUILDINGS AND STRUCTURES: 18 METRES (60 FT) **N/A****



2 Key Plan  
 SCALE: 1:500

CLIENT  ARCHITECT / ARCHITECTURE		SEAL / TAMPON	PROJECT ADDRESS: PROJECT ADDRESS:			DRAWING NAME: NORDDELWAY <b>BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)</b> 12251 18 AVENUE, SURREY, B.C.	<b>CONTEXT PLAN</b> DRAWING NUMBER: NORDDELWAY AUTHOR: _____ PROJECT NUMBER: NORDDELWAY PROJECT NUMBER: 2000005	
PRIME CONSULTANT  CONSULTANT		REVISION: _____ 2021-11-03 ISSUED FOR DP RE-SUBMISSION REV. YYYY-MM-DD	REVISION: _____ 2021-11-03 ISSUED FOR DP RE-SUBMISSION REV. YYYY-MM-DD	APPROVAL: _____ APPROVER: APRR	ISSUED FOR DP RE-SUBMISSION SCALE: 1/8"=1'-0" DATE: 2021 11 03	CHECKER: _____ CHECKER:	REV: 1	



**CORNER GUARD**

- 1 STAINLESS STEEL CORNER GUARD 150mm (D) x 100mm (W) x 1200mm (H) - 20 GAUGE FOR OFFICE AREA.
- 2 HOT ROLL STEEL CORNER GUARD 100mm (D) x 100mm (W) x 1200mm (H) x 4.50mm (TYP) PAINTED YELLOW FOR WORKSHOP AREA.

**LEGEND**

- LOADING AREA
- PEDESTRIAN AREA

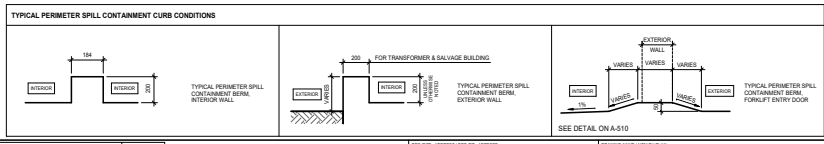
**TRANSITION STRIPS**

- 1 UNCLEM TO CARPET TILE (RFR TO CSR)
- 2 PORCELAIN TILE EDGES (CORNERS)
- 3 UNCLEM TO PORCELAIN TILE (RFR TO T7)
- 4 UNCLEM TO CONCRETE (RFR TO CONC)
- 5 CARPET TILE TO PORCELAIN TILE (CONC TO T7)
- 6 SAFETY FLOOR TO RESILIENT (RFR TO RFR)
- 7 RUBBER FLOOR TO RESILIENT (RFR TO RFR)

**NOTE:**

- EQUIPMENT LAYOUT IS NOTIONAL. FINAL LAYOUT TO BE DETERMINED BY BC HYDRO TRANSFORMER SHOP DIVISION.
- FINAL EQUIPMENT LIST TO BE PROVIDED BY BC HYDRO.
- RACKING LAYOUT IS NOTIONAL. FINAL RACKING DESIGN BY OFFICE.
- FOR RAB ELEVATION, CONCRETE CURB LOCATIONS AND TOP OF CONCRETE REFER TO RAB DSGE DRAWINGS.
- ADD 150mm FIRE RETARDANT PLYWOOD ON THE WALL FOR THE MOUNTING OF ELECTRICAL PANELS AS REQUIRED INSIDE THE ELECTRICAL ROOM OF ADMINISTRATION BUILDING.
- NON-SKID PAINT REQUIRED FOR COLLARS AND BEAM SUPPORTING THE RAISED AREA SUCH AS ELEVATOR SHIP LIFT AND STAIRS.
- TRAFFIC MARKING REFER TO DETAIL S88A-04.
- ALL CONCRETE FLOORS REQUIRE CONCRETE SEALER FINISH.

2 TRANSFORMER SHOP FLOOR PLAN WEST  
SCALE: 1:100



CLIENT **BC Hydro**

ARCHITECT / ARCHITECTURE **kasian**

PRIME CONSULTANT **wsp**

ARCHITECT / ARCHITECTURE **kasian**

CONSULTANT **wsp**

REV	DATE	DESCRIPTION	BY	CHKD
2	2021-11-03	ISSUED FOR DP PRE-SUBMISSION		
1	2020-10-14	ISSUED FOR CONSTRUCTION		
REV	YYYY-MM-DD	DESCRIPTION	BY	CHKD

PROJECT: KASIAN PROJECT - ARCHITECTURE

PROJECT: BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)

12251 88 AVENUE, SURREY, B.C.

ISSUED FOR DP RE-SUBMISSION

SCALE: 1:50 (AS INDICATED)

DATE: 2021 11 03

DRAWING NAME: BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)

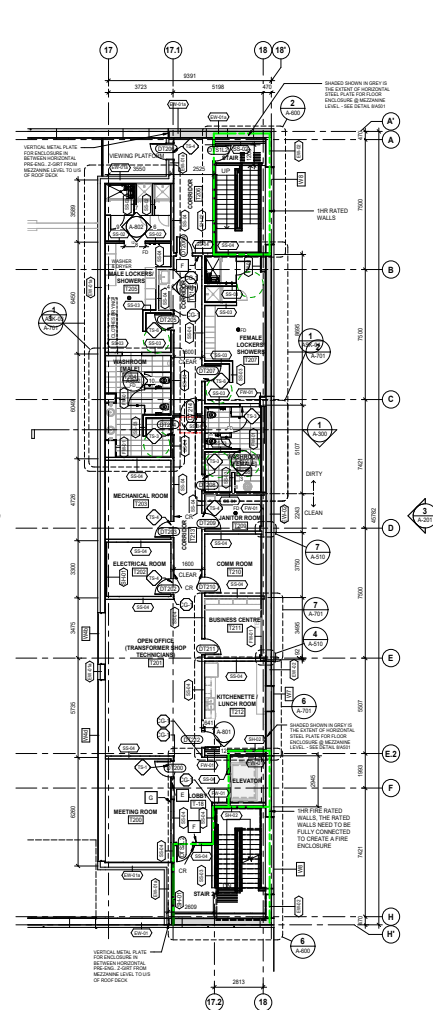
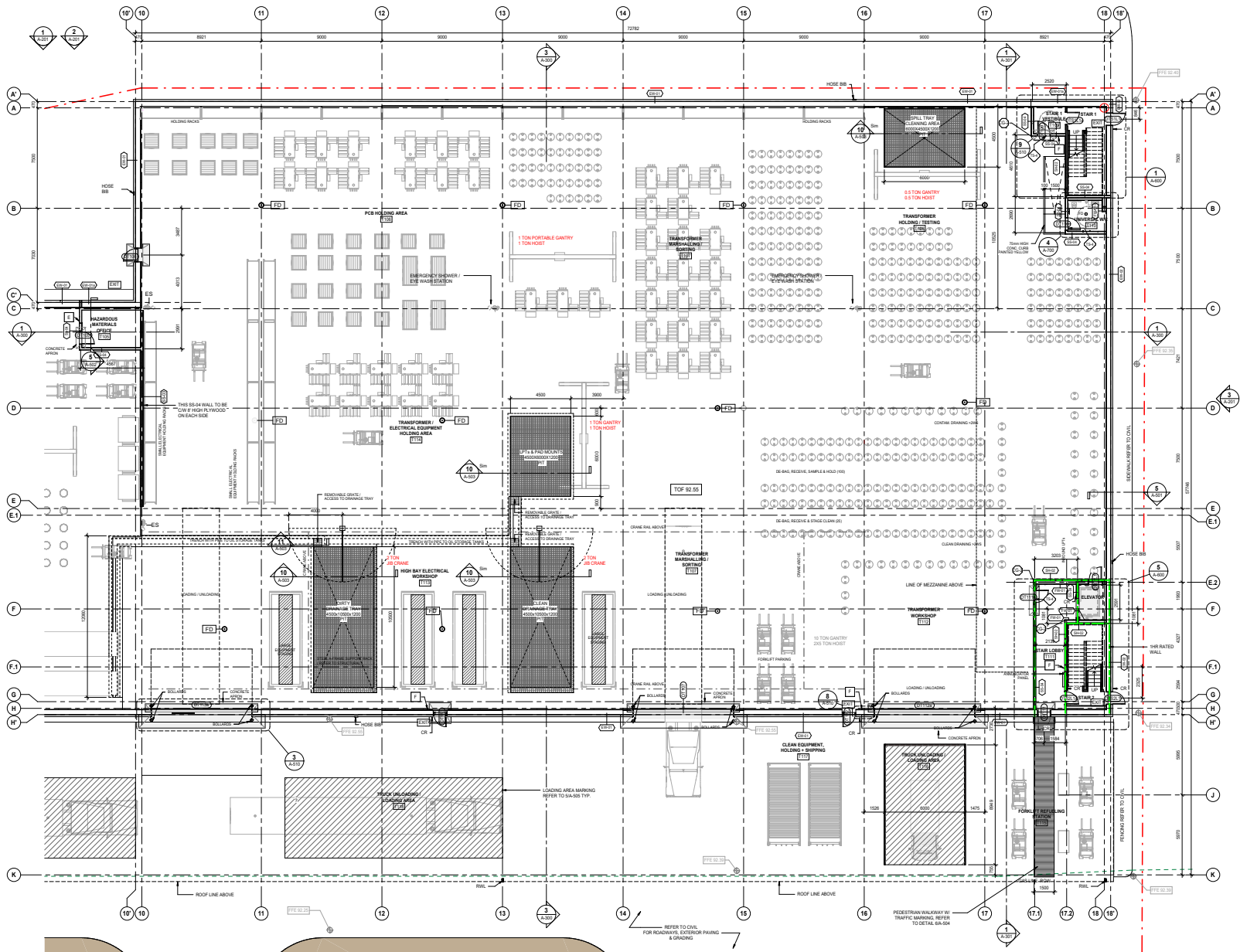
TRANSFORMER SHOP WEST - LEVEL 1 FLOOR PLAN

DRAWING NUMBER: A-100

PROJECT NUMBER: 200005

REV: 2





- 2 TRANSFORMER SHOP MEZZANINE FLOOR PLAN**  
SCALE: 1:100
- TRANSITION STRIPS**
- ◆ LINOLEUM TO CARPET TILE (RFS TO C35)
  - ◆ PORCELAIN TILE EDGES @ CORNERS
  - ◆ LINOLEUM TO PORCELAIN TILE (RFS TO T7)
  - ◆ LINOLEUM TO CONCRETE (RFS TO CONC)
  - ◆ LINOLEUM TO CONCRETE (RFS TO CONC) @ SAFETY FLOOR S/S
  - ◆ CARPET TILE TO PORCELAIN TILE (CONC TO T7)
  - ◆ SAFETY FLOOR TO RESILIENT (RFS TO RFS)
  - ◆ RUBBER FLOOR TO RESILIENT (RFS TO RFS)
- NOTE:**
1. EQUIPMENT LAYOUT IS NOTIONAL. FINAL LAYOUT TO BE DETERMINED BY BC HYDRO TRANSFORMER SHOP DIVISION.
  2. FINAL EQUIPMENT LIST TO BE PROVIDED BY BC HYDRO.
  3. RACKING LAYOUT IS NOTIONAL. FINAL RACKING DESIGN BY OTHERS.
  4. FOR RAB ELEVATION, CONCRETE CURB LOCATIONS AND TOP OF CONCRETE REFER TO RAB SIDE DRAWINGS.
  5. ADD 15mm FIRE RETARDANT PLYWOOD ON THE WALL FOR THE MOUNTING OF ELECTRICAL PANELS AS REQUIRED INSIDE THE ELECTRICAL ROOM OF ADMINISTRATION BUILDING.
  6. RUBBERCOT PAINT REQUIRED FOR COLLARS AND BEAM SUPPORTING THE RATED AREA SUCH AS ELEVATOR SHAFT AND EXIT STAIRS.
  7. TRAFFIC MARKING REFER TO DETAIL SBA-004.
  8. ALL CONCRETE FLOORS REQUIRE CONCRETE SEALER FINISH.

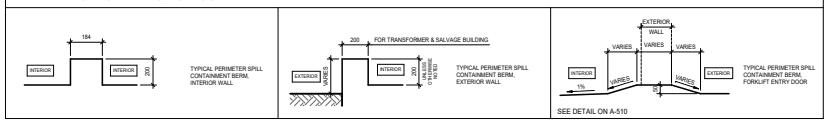
**1 TRANSFORMER SHOP FLOOR PLAN EAST**  
SCALE: 1:100

- INTERIOR SIGNAGE**  
REFER TO A-200 FOR SIGNAGE TYPES
- SIGN TYPE A
  - SIGN TYPE F
  - SIGN TYPE G
  - SIGN TYPE M

- CORNER GUARD**
- WIRELESS STEEL CORNER GUARD 50mm (2) x 10mm (1) x 1200mm (1) x 20 GAUGE FOR OFFICE AREA
  - HOT ROLL STEEL CORNER GUARD 100mm (2) x 100mm (1) x 1200mm (1) x 18 (3mm) (1) PAINTED YELLOW FOR WORKSHOP AREA

- LEGEND**
- ▨ LOADING AREA
  - ▨ PEDESTRIAN AREA

**TYPICAL PERIMETER SPILL CONTAINMENT CURB CONDITIONS**



CLIENT: **BC Hydro**

ARCHITECT / ARCHITECTURE: **kasian**

PRIME CONSULTANT: **wsp**

CONSULTANT:

REVISIONS

NO.	DATE	DESCRIPTION
1	2021-11-03	ISSUED FOR DP PRE-SUBMISSION
2	2020-10-14	ISSUED FOR CONSTRUCTION

PROJECT: **BC HYDRO MATERIAL CLASSIFICATION FACILITY (MCF)**  
12251 BAY AVENUE, SURREY, B.C.

DRAWING NAME: **TRANSFORMER SHOP EAST - LEVEL 1 FLOOR PLAN**

DESIGNED BY: **ADDIE DIAZ**

DRAWN BY: **CYC**

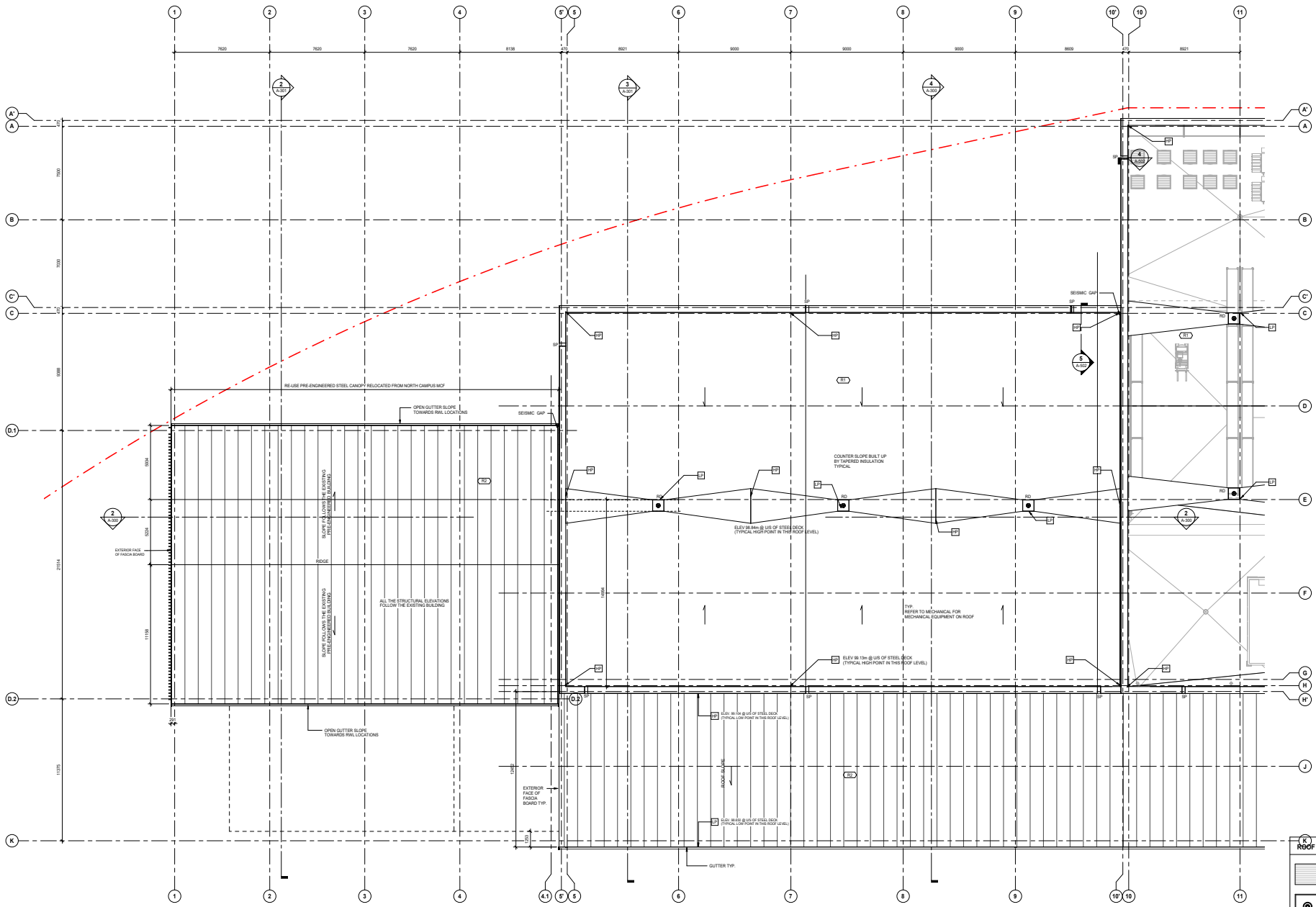
ISSUED FOR: **DP PRE-SUBMISSION**

SCALE: **As indicated**

DATE: **2021 11 03**

PROJECT NUMBER: **A-101**

REV: **2**



1 TRANSFORMER SHOP ROOF PLAN WEST  
SCALE: 1:100

**ROOF LEGEND**

- ROOF CRIBKIT  
TAPERED INSULATION  
ROOF-MEMBRANE ROOF
- ROOF DRAIN
- HIGH POINT  
ELEV 15.1m @ USE OF STEEL DECK  
(TYPICAL HIGH POINT IN THIS ROOF LEVEL)
- LOW POINT  
ELEV 15.1m @ USE OF STEEL DECK  
(TYPICAL HIGH POINT IN THIS ROOF LEVEL)
- STANDARD SCUPPER 250mm (x)150mm (H)  
BOTTOM OF SCUPPER 150mm ABOVE HP

CLIENT **BC Hydro** ARCHITECT / ARCHITECT kasian  
PRIME CONSULTANT **wsp** CONSULTANT

SEAL / TAMPON

REV.	YYYY-MM-DD	REVISION	APPR.

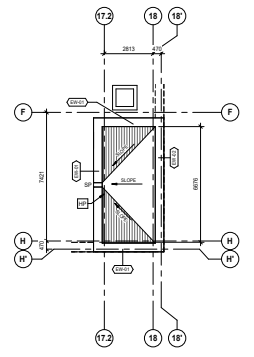
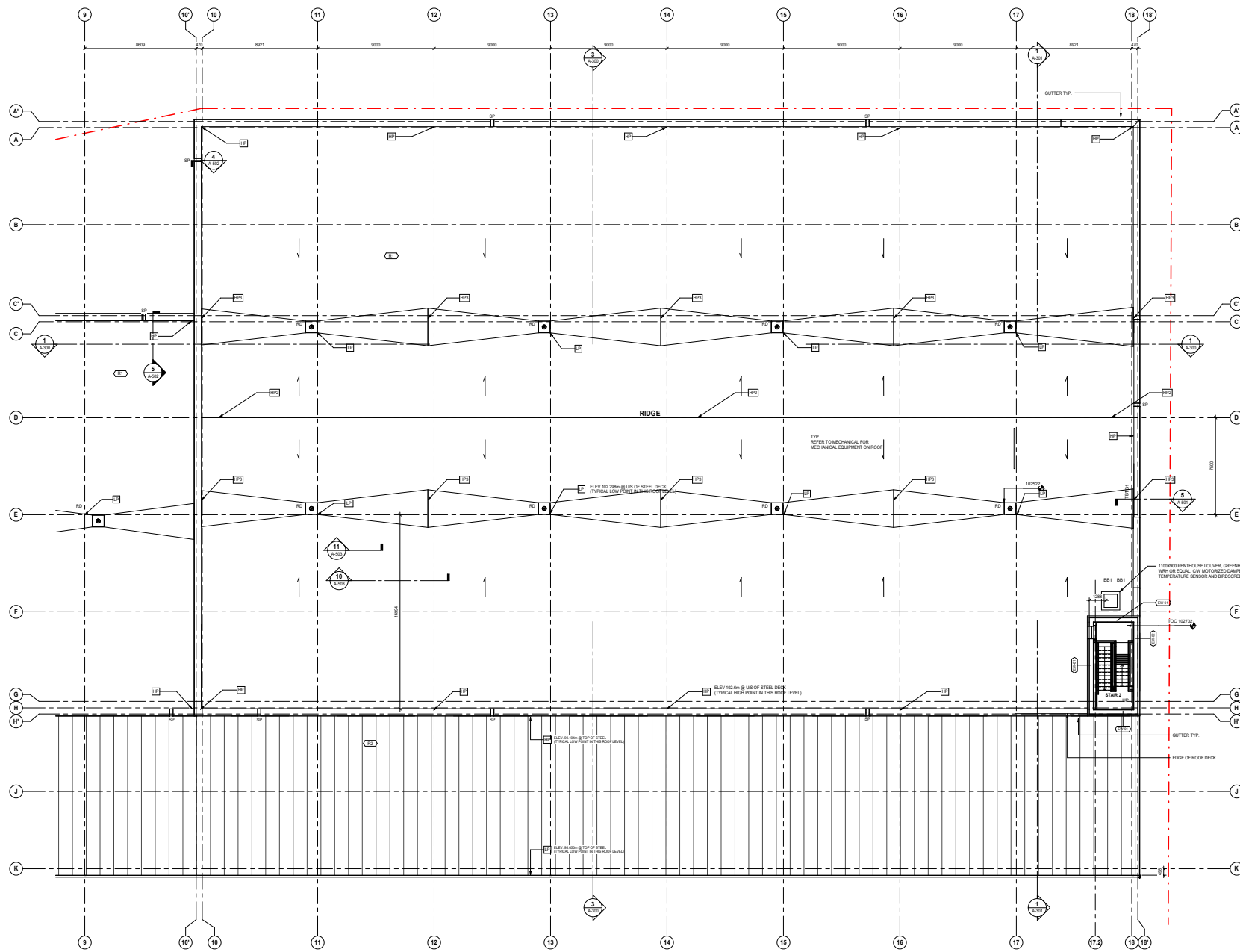
PROJECT ADDRESS: PROJECT ADDRESS  
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)  
12251 88 AVENUE, SURREY, B.C.

ISSUED FOR DP RE-SUBMISSION

SCALE: 1:100 DATE: 2021 11 03

DRAWING NAME: TRANSFORMER SHOP ROOF PLAN WEST

DRAWN BY: JESSIE DIAZ	DRAWING NUMBER: TRANSFORMER SHOP ROOF PLAN WEST
CYC	A-102
REVIEWED BY: REV/PWA	PROJECT NUMBER: TRANSFORMER SHOP ROOF PLAN WEST
CT	2000000
PROJECT MANAGER: CT	REV: 2



2 ACCESS STAIR ROOF PLAN  
SCALE: 1:100

1 SV TRANSFORMER SHOP ROOF PLAN EAST  
SCALE: 1:100

ROOF LEGEND	
	ROOF CRICKET TAPERED INSULATION RIDGE MINERAL WOOL
	ROOF DRAIN
	HIGH POINT ELEV 102.6m @ US OF STEEL DECK
	HIGH POINT 2 ELEV 102.45m @ US OF STEEL DECK
	LOW POINT 1 ELEV 102.65m @ T.O. CRICKET
	LOW POINT ELEV 102.28m @ US OF STEEL DECK
	STANDARD SCUPPER 250mm (10" DIA) 90° BOTTOM OF SCUPPER 150mm ABOVE SF

CLIENT **BC Hydro**

PRIME CONSULTANT **wsp**

ARCHITECT / ARCHITECT **kasian**

CONSULTANT

SEA / TAMPON

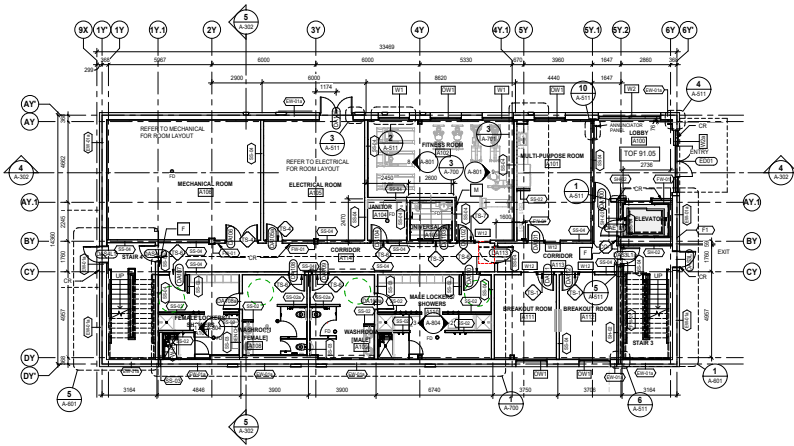
REV.	DATE	DESCRIPTION	BY	CHK
2	2021-11-03	ISSUED FOR DP RE-SUBMISSION		
1	2020-10-14	ISSUED FOR CONSTRUCTION		

REV. YYYY-MM-DD	REVISION	APPR
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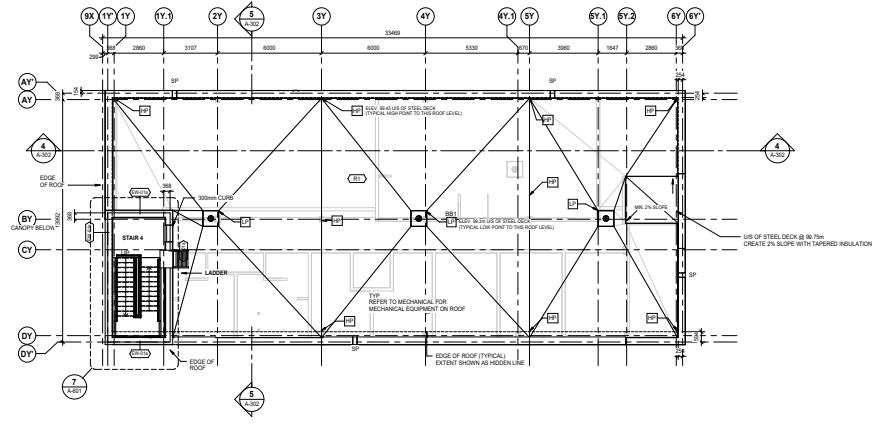
PROJECT ADDRESS: PROJECT ADDRESS  
 BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)  
 12251 88 AVENUE, SURREY, B.C.

DRAWN BY: JESSIE DIAZ	PROJECT NUMBER: 2000055
DESIGNED BY: REVIVE PVA	PROJECT NAME: TRANSFORMER SHOP ROOF PLAN EAST
CT	REV

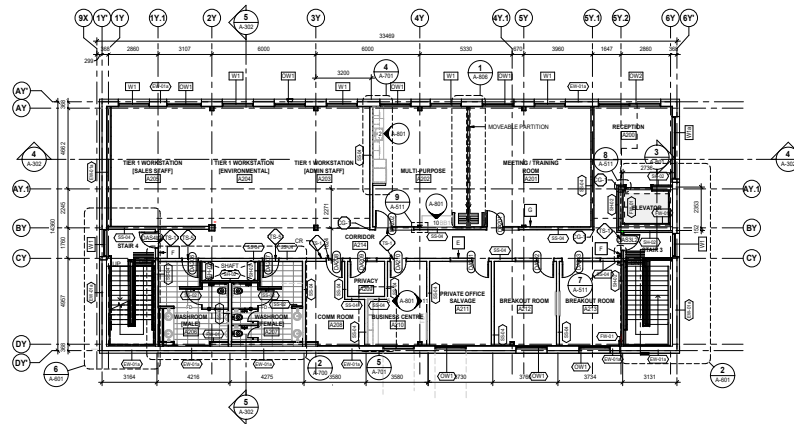
PROJECT NUMBER: 2000055	PROJECT NAME: TRANSFORMER SHOP ROOF PLAN EAST
REV	2



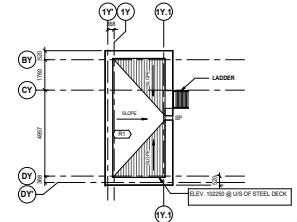
1 ADMINISTRATION BUILDING LEVEL 1 FLOOR PLAN  
SCALE: 1:100



3 ADMINISTRATION BUILDING ROOF PLAN  
SCALE: 1:100



2 ADMINISTRATION BUILDING LEVEL 2 FLOOR PLAN  
SCALE: 1:100



4 ADMINISTRATION ROOF ACCESS PLAN  
SCALE: 1:100

NOTE:  
1. ADD 150mm FIRE RETARDANT PLYWOOD ON THE WALL FOR THE MOUNTING OF ELECTRICAL PANELS AS REQUIRED INSIDE THE ELECTRICAL ROOM OF ADMINISTRATION BUILDING.  
2. ADD 150mm WOOD BLOCKING FOR THE MOUNTING OF MONITOR SCREENS FOR BREAKOUT ROOMS AND MEETING ROOM.

NOTE:  
1. EQUIPMENT LAYOUT IS NOTIONAL. FINAL LAYOUT TO BE DETERMINED BY BC HYDRO TRANSFORMER SHOP DIVISION.  
2. FINAL EQUIPMENT LIST TO BE PROVIDED BY BC HYDRO.  
3. RACKING LAYOUT IS NOTIONAL. FINAL RACKING DESIGN BY OTHERS.  
4. FOR SLAB ELEVATION, CONCRETE CURB LOCATIONS, AND TOP OF CONCRETE, REFER TO 3-D EASE DRAWINGS.  
5. ADD 150mm FIRE RETARDANT PLYWOOD ON THE WALL FOR THE MOUNTING OF ELECTRICAL PANELS AS REQUIRED INSIDE THE ELECTRICAL ROOM OF ADMINISTRATION BUILDING.  
6. STAINLESS STEEL CORNER GUARD LOCATIONS AND BEAM SUPPORTING THE RATED AREA SUCH AS ELEVATOR SHAFTS AND EXIT STAIRS.

ROOF LEGEND	
	ROOF CROCKET TAPERED INSULATION ROOF FINISH: WOOD
	ROOF DRAIN
	HIGH POINT ELEV: 98.45 US OF STEEL DECK
	LOW POINT ELEV: 98.34 US OF STEEL DECK
	STANDARD SCUPPER 200mm (8") x 150mm (6") BOTTOM OF SCUPPER 150mm ABOVE HP

INTERIOR SIGNAGE	
REFER TO A-600 FOR SIGNAGE TYPES	
	SIGN TYPE E
	SIGN TYPE F
	SIGN TYPE G
	SIGN TYPE M

CORNER GUARD	
	STAINLESS STEEL CORNER GUARD 30mm (D) x 50mm (H) x 125mm (W) 304 GRADE FOR OFFICE AREA
	HOT ROLL STEEL CORNER GUARD 100mm (D) x 100mm (H) x 125mm (W) x 4.35mm (TH) PAINTED YELLOW FOR WORKSHOP AREA

TRANSITION STRIPS	
	LINCOLN TO CARPET TILE (R9 TO C9)
	PORCELAIN TILE EDGES / CORNERS
	LINCOLN TO PORCELAIN TILE (R9 TO T7)
	LINCOLN TO CONCRETE (R9 TO COG) & SAFETY FLOOR & SF1
	CARPET TILE TO PORCELAIN TILE (COG TO T7)
	SAFETY FLOOR TO RESILIENT (SF1 TO R9)
	RUBBER FLOOR TO RESILIENT (R71 TO R9)

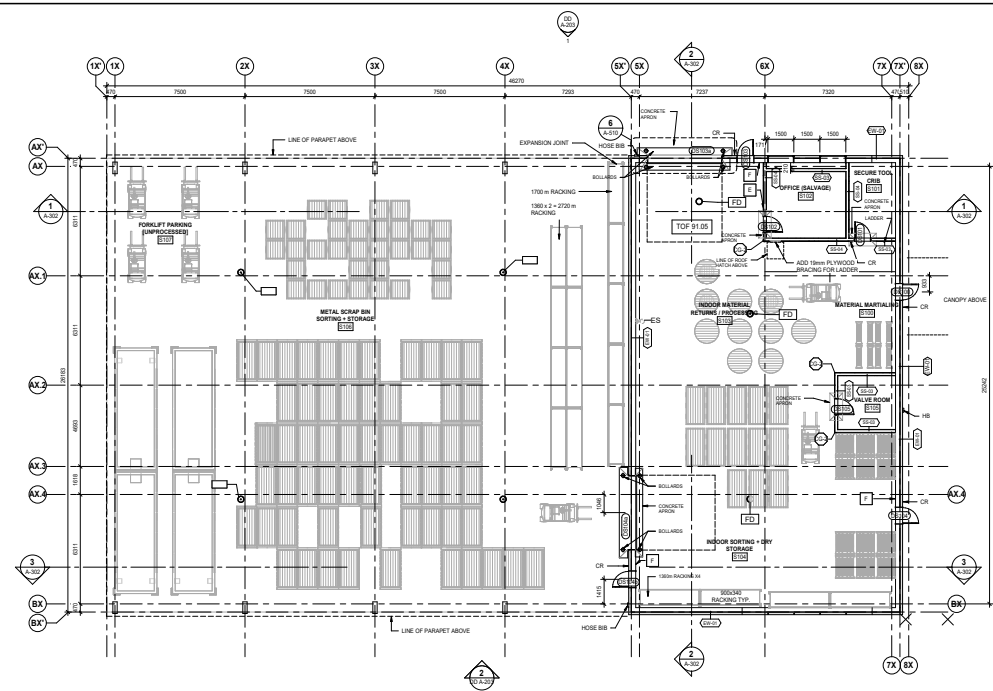
TYPICAL PERIMETER SPILL CONTAINMENT CURB CONDITIONS	
	TYPICAL PERIMETER SPILL CONTAINMENT BERM, INTERIOR WALL
	TYPICAL PERIMETER SPILL CONTAINMENT BERM, EXTERIOR WALL
	TYPICAL PERIMETER SPILL CONTAINMENT BERM, FORKLIFT ENTRY DOOR

CLIENT: **BC Hydro**  
 ARCHITECT / ARCHITECT: **kasian**  
 SEAL: TAMPON  
 PRIME CONSULTANT: **wsp**  
 CONSULTANT:

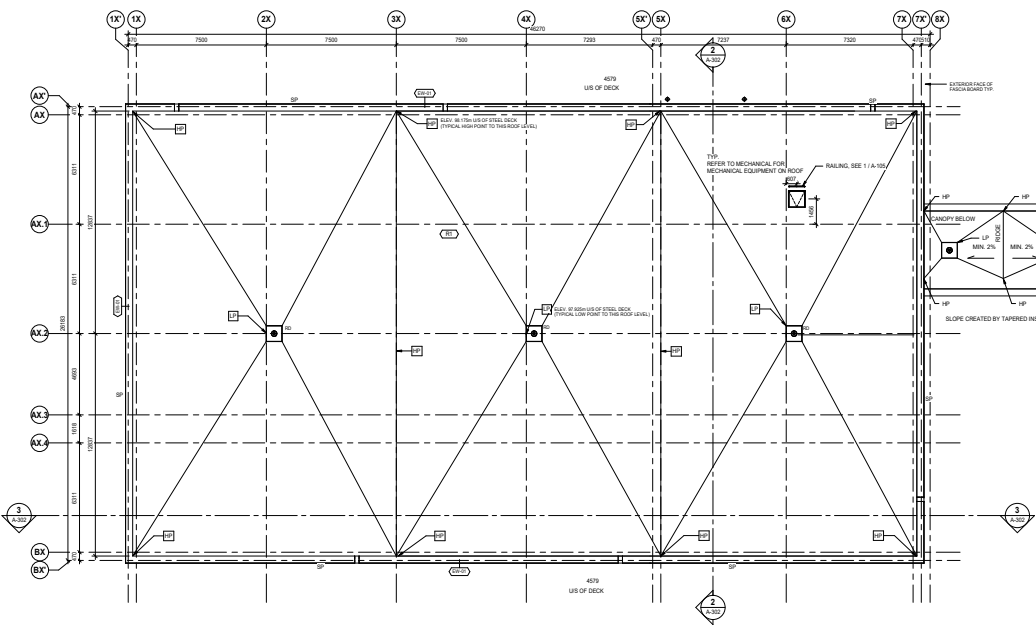
REV.	YYYY-MM-DD	REVISION	APPR.
3	2021-11-03	ISSUED FOR DP RE-SUBMISSION	
2	2020-11-04	ISSUED FOR SI	
1	2020-10-14	ISSUED FOR CONSTRUCTION	

PROJECT ADDRESS: PROJECT ADDRESS		DRAWING NAME: ADMIN BUILDING - LEVELS 1 & 2	
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF) 12251 88 AVENUE, SURREY, B.C.		DRAWN BY: JESSIE DIAZ	
ISSUED FOR DP RE-SUBMISSION		CHECKED BY: REVIVE PATEL	
SCALE: 10:1	DATE: 2021 11 03	PROJECT NUMBER: 200005	REV: 3





3 SALVAGE SHOP LEVEL 1 FLOOR PLAN  
SCALE: 1:100



2 SALVAGE SHOP ROOF PLAN  
SCALE: 1:100

**INTERIOR SIGNAGE**

REFER TO A-600 FOR SIGNAGE TYPES

- E SIGN TYPE E
- F SIGN TYPE F
- G SIGN TYPE G
- M SIGN TYPE M

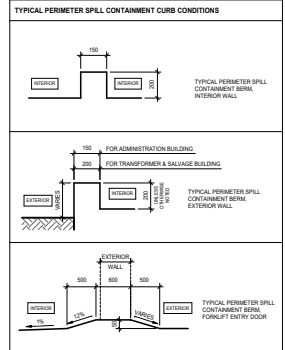
**CORNER GUARD**

- 1 STAINLESS STEEL CORNER GUARD 50mm (2) x 50mm (W) x 1225mm (H) x 20 GAUGE FOR OFFICE AREA.
- 2 HOT ROLL STEEL CORNER GUARD 125mm (2) x 125mm (W) x 1225mm (H) x 3.05mm (TH) PAINTED YELLOW FOR WORKSHOP AREA.

- NOTE:
1. EQUIPMENT LAYOUT IS NOTIONAL. FINAL LAYOUT TO BE DETERMINED BY BC HYDRO TRANSFORMER SHOP DESIGN.
  2. FINAL EQUIPMENT LIST TO BE PROVIDED BY BC HYDRO.
  3. RACKING LAYOUT IS NOTIONAL. FINAL RACKING DESIGN BY OTHERS.
  4. FOR SLAB ELEVATION, CONCRETE CURB LOCATIONS AND TOP OF CONCRETE. REFER TO SLAB EDGE DRAWINGS.
  5. ADD 38mm FIRE RATED BATT PLYWOOD ON THE WALL FOR THE SUPPORTING OF ELECTRICAL PANELS AS REQUIRED INSIDE THE ELECTRICAL ROOM OF ADMINISTRATION BUILDING.
  6. INTUMESCENT PAINT REQUIRED FOR COLUMN AND BEAM SUPPORTING THE RATIO AREA SUCH AS ELEVATOR SHOPS AND EXIT STAIRS.
  7. REFER TO DETAIL FOR THE ROOF ABOVE THE INTERIOR FLOOR.
  8. ADD 38mm PLYWOOD AS BANDING FOR ACCESS LADDER TO ROOF HATCH IN SALVAGE BUILDING.

**ROOF LEGEND**

- ROOF CRICKET
- TAPERED INSULATION
- RIGID MINERAL WOOL
- ROOF DRAIN
- HIGH POINT ELEV. 98.175m US OF STEEL DECK
- LOW POINT ELEV. 97.825m US OF STEEL DECK
- STANDARD SCUPPER 225mm (H) x 150mm (W) BOTTOM OF SCUPPER 105mm ABOVE RP



CLIENT: **BC Hydro** | ARCHITECT / ARCHITECT: **kasian** | SEAL / TAMPON: \_\_\_\_\_

PRIME CONSULTANT: **wsp** | CONSULTANT: \_\_\_\_\_

REV.	YYYY-MM-DD	REVISION	APPROV.
3	2021-11-03	ISSUED FOR DP RE-SUBMISSION	
2	2020-11-04	ISSUED FOR SI	
1	2020-10-14	ISSUED FOR CONSTRUCTION	

DRAWING NAME: **INDUSTRIAL**  
**BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)**  
 12251 88 AVENUE, SURREY, B.C.

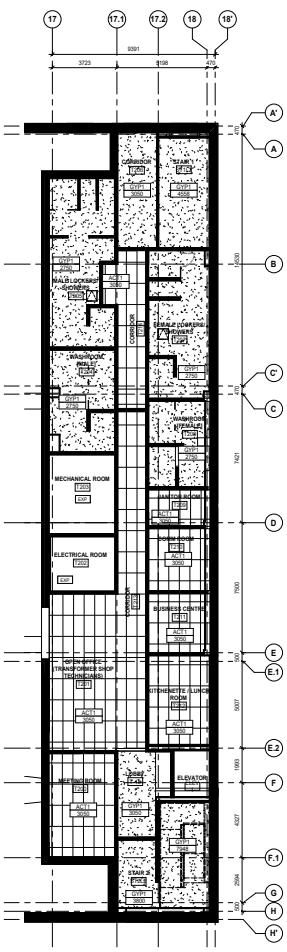
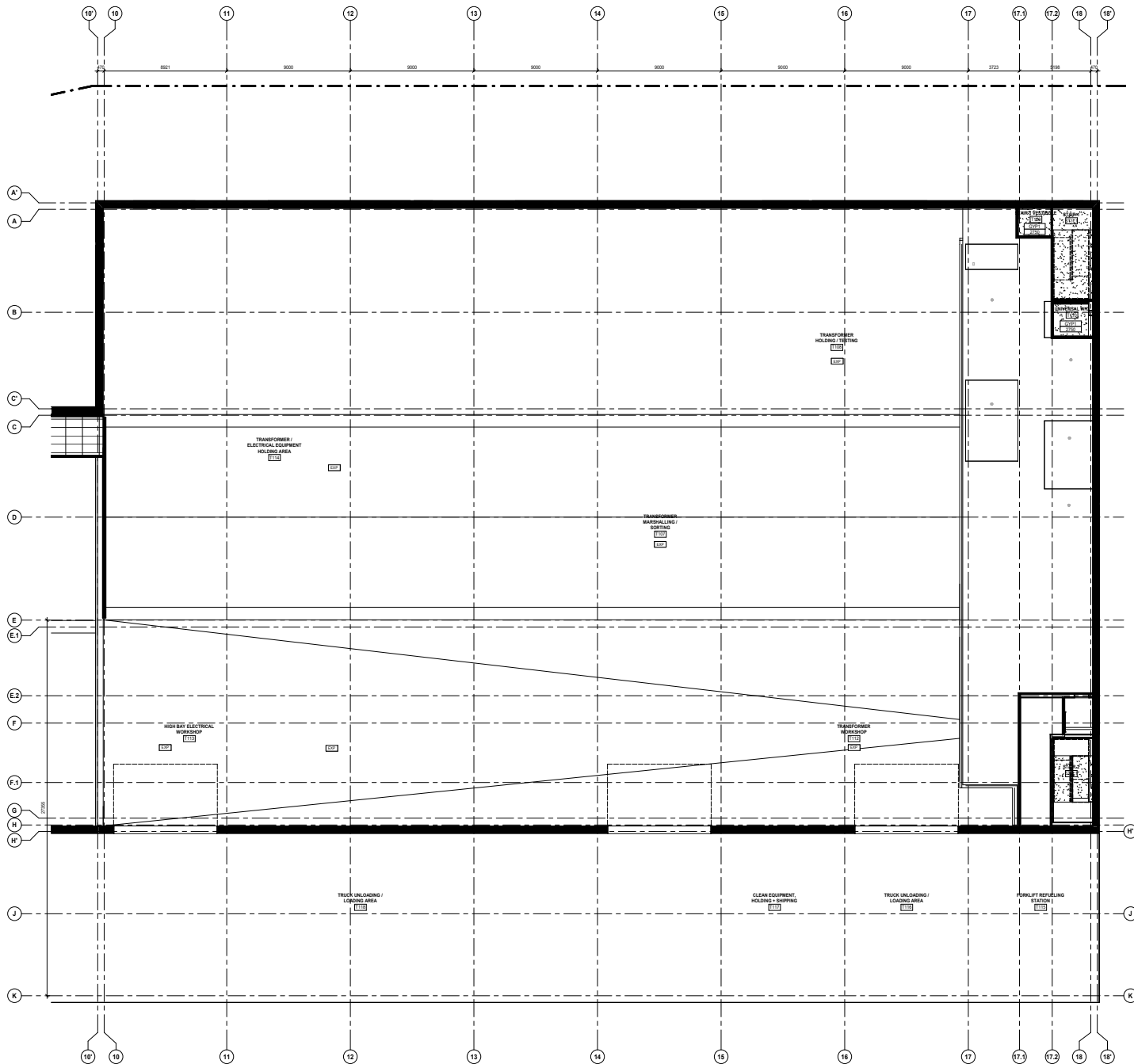
PROJECT NUMBER: **A-105**  
 PROJECT NUMBER: **NADRO/REG/ST/200005**

ISSUED FOR DP RE-SUBMISSION

SCALE: AS SHOWN | DATE: 2021 11 03

PROJECT NUMBER: **CT** | REV: **3**





**CEILING LEGEND**

	ACEL 1-GAR CEILING WITH ACOUSTIC CEILING TILES
	GWPL GYPSUM WALL BOARD CEILING
	EXP. OPEN TO PAINTED STRUCTURE ABOVE
	SM PRE-FINISHED METAL PERFORATED COFFER PANELS

	EMERGENCY/NIGHT LIGHT LUMINAIRE
	1' x 4' SURFACE MOUNTED LUMINAIRE
	1' x 4' SURFACE MOUNTED LUMINAIRE
	RECESSED VANITY LUMINAIRE
	1' x 4' SUSPENDED LUMINAIRE
	2' x 4' SURFACE MOUNTED LUMINAIRE
	2' x 4' RECESSED LUMINAIRE
	2' x 2' RECESSED LUMINAIRE
	STRIP LIGHT
	RECESSED DOWNLIGHT
	SURFACE MOUNTED DOWNLIGHT
	PENDANT LUMINAIRE
	EXIT SIGN- ARROWS AS INDICATED
	PLUG-IN POWER POLE
	CCTV CAMERA
	FIRE ALARM HORN
	CEILING MOUNTED SPEAKER/AV-WAY SPEAKER/ SUB-SUBWOOFER SPEAKER (REFER TO ELECTRICAL)
	CEILING MOUNTED FIRE ALARM SPEAKER STROBE (REFER TO ELECTRICAL)
	12 INCH OCTAGONAL CEILING MTD SPEAKER
	CLOCK
	SMOKE DETECTOR (REFER TO ELECTRICAL)
	THERMAL DETECTOR (REFER TO ELECTRICAL)
	SUPPLY DIFFUSER
	RETURN INLET
	ACCESS PANEL (REFER TO MECHANICAL)
	EXHAUST INLET
	CEILING FAN
	DIFFUSER
	RECESSED PENDANT SPRINKLER
	ED UPRIGHT SPRINKLER
	UPRIGHT SPRINKLER
	UPRIGHT SPRINKLER W/ GUARDS
	DRY PENDANT SPRINKLER
	SIDE WALL SPRINKLER
	HSW W/ GUARDS

**GENERAL NOTE:**  
 1. QUANTITY OF OCCUPANCY SENSORS, SPEAKERS, PEOPLE PROJECTORS, SMOKE DETECTORS, REFER TO ELECTRICAL FOR GENERAL INFORMATION.  
 2. QUANTITY OF DIFFUSERS, ACCESS PANELS, RETURN AND EXHAUST INLET, REFER TO MECHANICAL FOR GENERAL INFORMATION.  
 3. REFER TO MECHANICAL FOR SPRINKLER AND EXTINGUISHER TYPE AND FOR LOCATIONS.  
 ELECTRICAL AND MECHANICAL INFORMATION ARE SHOWN FOR COORDINATION PURPOSES. REFER TO ELECTRICAL DRAWINGS AND MECHANICAL DRAWINGS FOR GENERAL INFORMATION AND LOCATIONS.

1  
 LEVEL 1 REFLECTED CEILING PLAN -  
 TRANSFORMER SHOP EAST  
 SCALE: 1/160

2  
 MEZZANINE REFLECTED CEILING PLAN -  
 TRANSFORMER SHOP  
 SCALE: 1/160

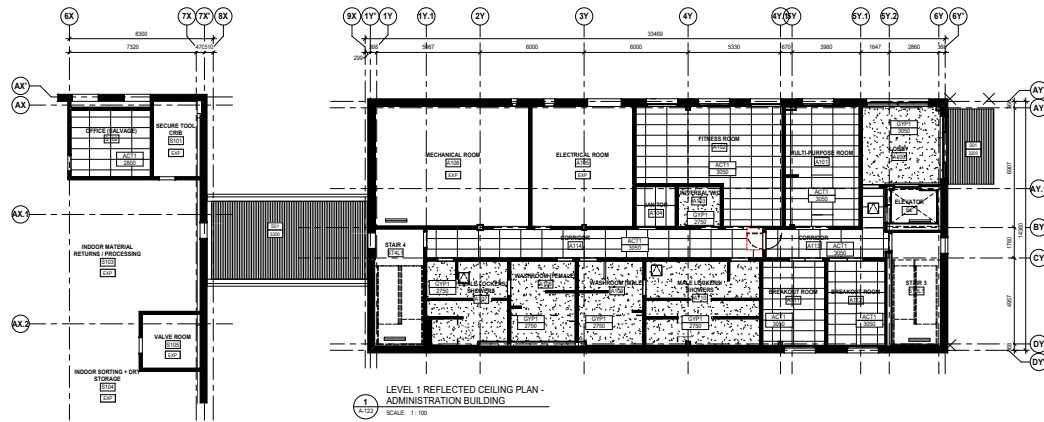
CLIENT: **BC Hydro**  
 ARCHITECT / ARCHITECT: **kasian**  
 PRIME CONSULTANT: **wsp**  
 CONSULTANT: **wsp**

SEA / TAMPON

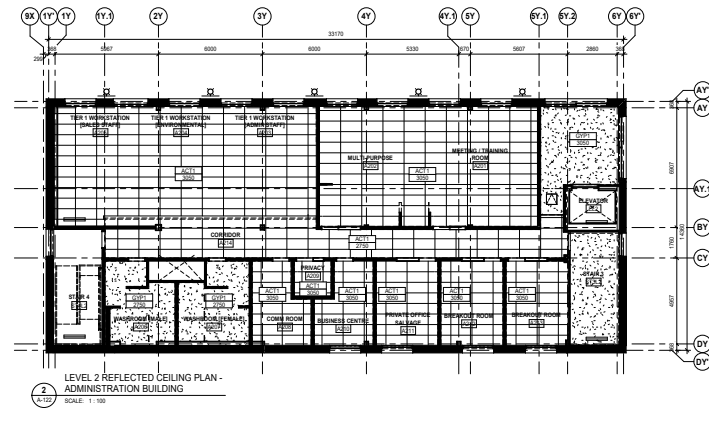
REV.	DATE	DESCRIPTION	BY	APP.
1	2021-11-03	ISSUED FOR DP RE-SUBMISSION		
2	2020-11-04	ISSUED FOR SI		
1	2020-10-14	ISSUED FOR CONSTRUCTION		

PROJECT: ADDRESS: PROJECT: ADDRESS	DRAWING NAME: PROJECT: ADDRESS
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF) 12251 88 AVENUE, SURREY, B.C.	LEVEL 1 REFLECTED CEILING PLAN - TRANSFORMER SHOP EAST
ISSUED FOR DP RE-SUBMISSION	
SCALE: 1/160	DATE: 2021 11 03

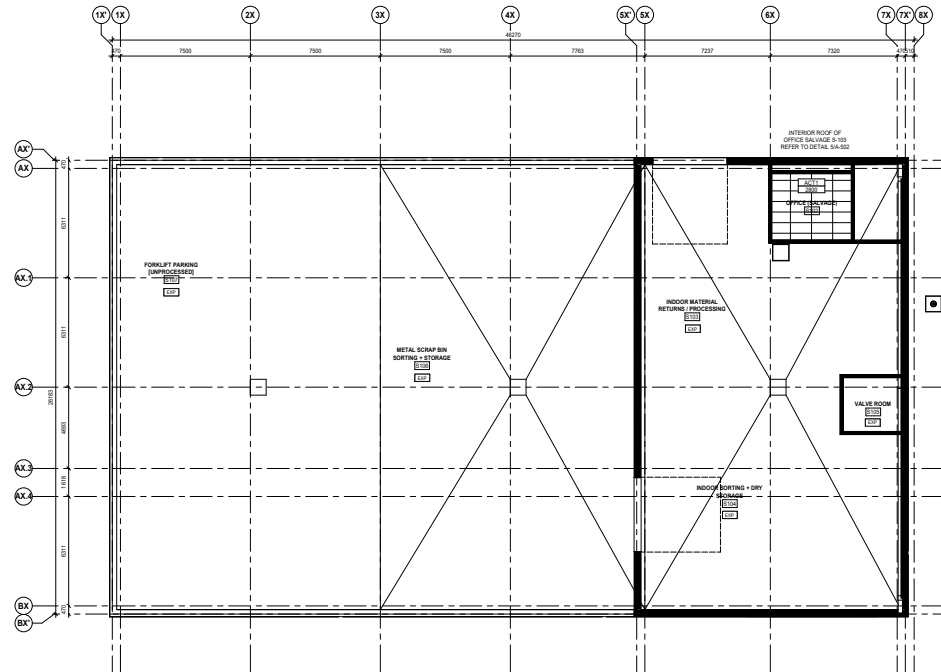
DESIGNED BY: OFFICE	DRAWING NUMBER: 2000005
REVIEWED BY: REVISE	PROJECT NUMBER: 2000005
CT	REV: 3



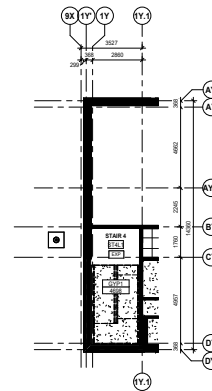
1  
A-122  
LEVEL 1 REFLECTED CEILING PLAN -  
ADMINISTRATION BUILDING  
SCALE: 1:100



2  
A-123  
LEVEL 2 REFLECTED CEILING PLAN -  
ADMINISTRATION BUILDING  
SCALE: 1:100



3  
A-124  
LEVEL 1 REFLECTED CEILING PLAN - SALVAGE  
SHOP  
SCALE: 1:100



**CEILING LEGEND**

- ACT1, T-BAR CEILING WITH ACOUSTIC CEILING TILES
- GYPM GYPSUM WALL BOARD CEILING
- EXM OPEN TO PAINTED STRUCTURE
- SB1 PREFORMED METAL PERFORATED SOFT PANEL
  
- EMERGENCY/NIGHT LIGHT LUMINAIRE
- 1 x 4 SURFACE MOUNTED LUMINAIRE
- 1 x 4 SURFACE MOUNTED LUMINAIRE
- RECESSED VANITY LUMINAIRE
- 1 x 4 RECESSED LUMINAIRE
- 2 x 4 SURFACE MOUNTED LUMINAIRE
- 2 x 4 RECESSED LUMINAIRE
- 2 x 2 RECESSED LUMINAIRE
- STRIP LIGHT
- RECESSED DOWNLIGHT
- SURFACE MOUNTED DOWNLIGHT
- PENDANT LUMINAIRE
- EXIT SIGN-ARROWS AS INDICATED
- PLUG-IN POWER POLE
- CCTV CAMERA
- FIRE ALARM HORN
- CEILING MOUNTED SPEAKER 6W/AV SPEAKER (SUB-BASS/BOYCOPPER SPEAKER REFER TO ELECTRICAL)
- CEILING MOUNTED FIRE ALARM SPEAKER STROBE (REFER TO ELECTRICAL)
- 12 INCH OCTAGONAL CEILING MTD SPEAKER
- CLOCK
- SMOKE DETECTOR (REFER TO ELECTRICAL)
- THERMAL DETECTOR (REFER TO ELECTRICAL)
- SUPPLY DIFFUSER
- RETURN INLET
- ACCESS PANEL (REFER TO MECHANICAL)
- EXHAUST INLET
- CEILING FAN
- DIFFUSER
- RECESSED PENDANT SPRINKLER
- ED UPRIGHT SPRINKLER
- UPRIGHT SPRINKLER
- UPRIGHT SPRINKLER W/ GUARDS
- DRY PENDANT SPRINKLER
- SIDE WALL SPRINKLER
- HW W/ GUARDS

**GENERAL NOTE:**

1. QUANTITY OF OCCUPANCY SENSOR, SPEAKERS, PACSOLE PROJECTORS, SMOKE DETECTORS REFER TO ELECTRICAL FOR GENERAL INFORMATION.
2. QUANTITY OF DIFFUSERS, ACCESS PANEL, RETURN AND EXHAUST INLET, REFER TO MECHANICAL FOR GENERAL INFORMATION.
3. REFER TO MECHANICAL FOR SPRINKLER AND EXTINGUISHER TYPE AND FOR LOCATIONS.

ELECTRICAL AND MECHANICAL INFORMATION ARE SHOWN FOR COORDINATION PURPOSES. REFER TO ELECTRICAL DRAWINGS AND MECHANICAL DRAWINGS FOR GENERAL INFORMATION AND LOCATIONS.

CLIENT **BC Hydro** ARCHITECT / ARCHITECT **kasian** SEAL / TAMPON

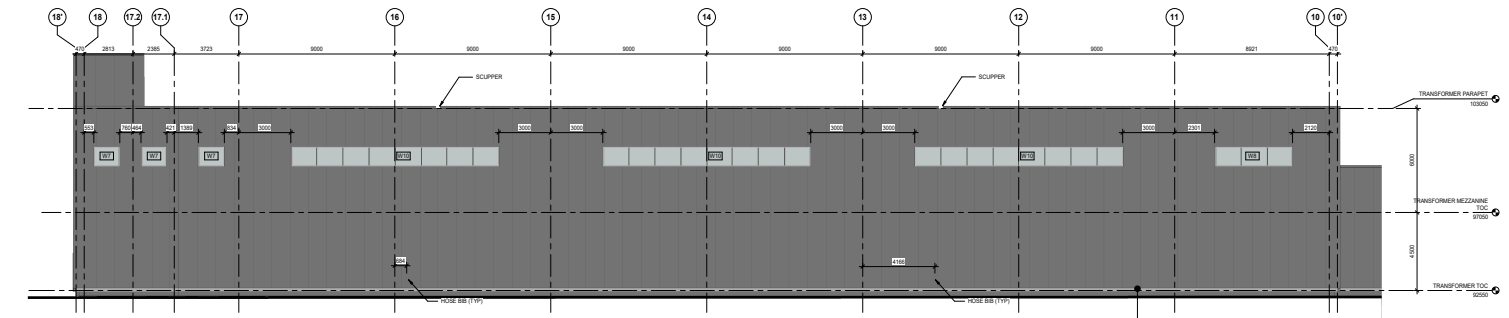
PRIME CONSULTANT **wsp** CONSULTANT

REV.	YYYY-MM-DD	REVISION	APPR.
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2	2020-11-04	ISSUED FOR SI	
1	2020-10-14	ISSUED FOR CONSTRUCTION	

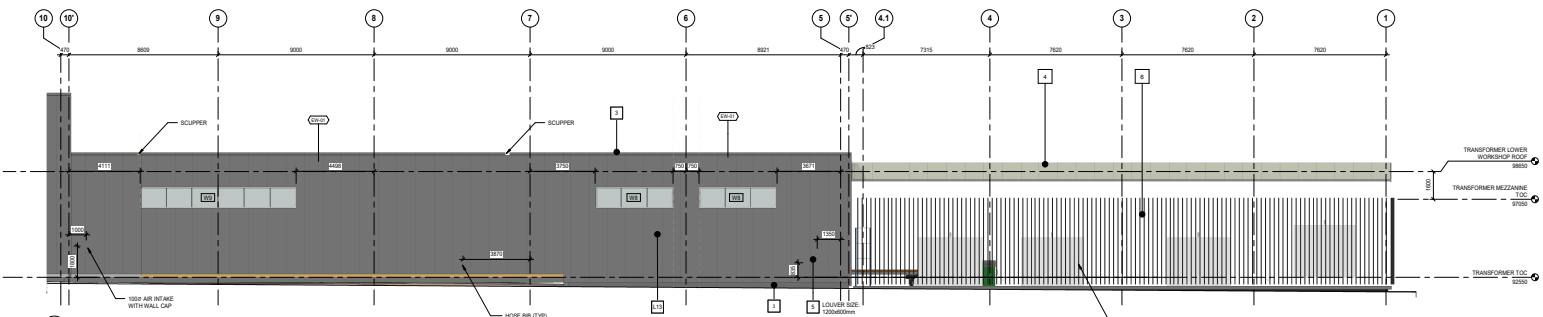
PROJECT ADDRESS: PROJECT ADDRESS  
**BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)**  
 12251 88 AVENUE, SURREY, B.C.

DRAWING NAME: **LEVELS 1 & 2 REFLECTED CEILING PLAN - ADMINISTRATION BUILDING & SALVAGE SHOP**

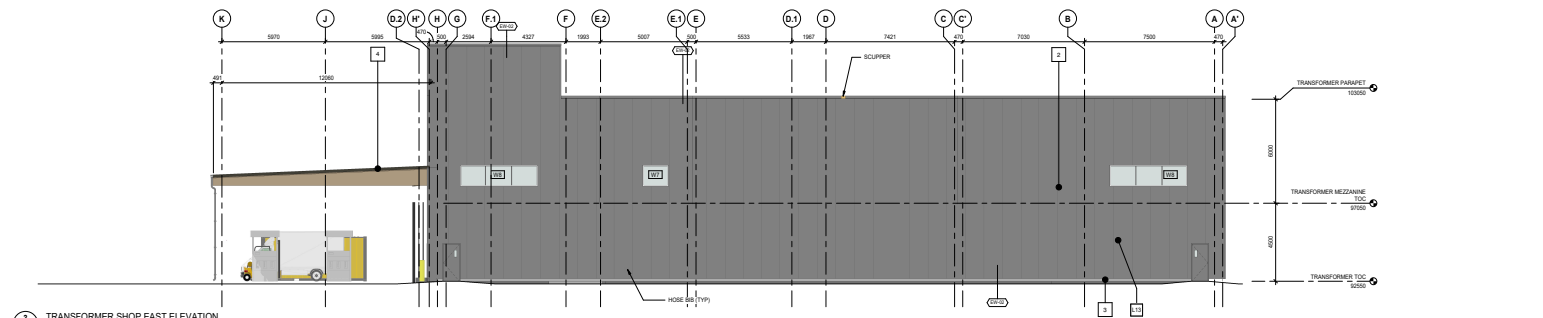
DESIGNED BY: **MD** DRAWING NUMBER: **A-122**  
 CHECKED BY: **CT** PROJECT NUMBER: **200005**  
 ISSUED FOR DP RE-SUBMISSION  
 SCALE: AS SHOWN DATE: 2021 11 03  
 PROJECT NUMBER: **200005** REV: **3**



1 TRANSFORMER SHOP NORTH ELEVATION  
SCALE: 1:100



2 TRANSFORMER SHOP NORTH ELEVATION  
SCALE: 1:100



3 TRANSFORMER SHOP EAST ELEVATION  
SCALE: 1:100

**EXTERIOR FINISH MATERIALS LEGEND**

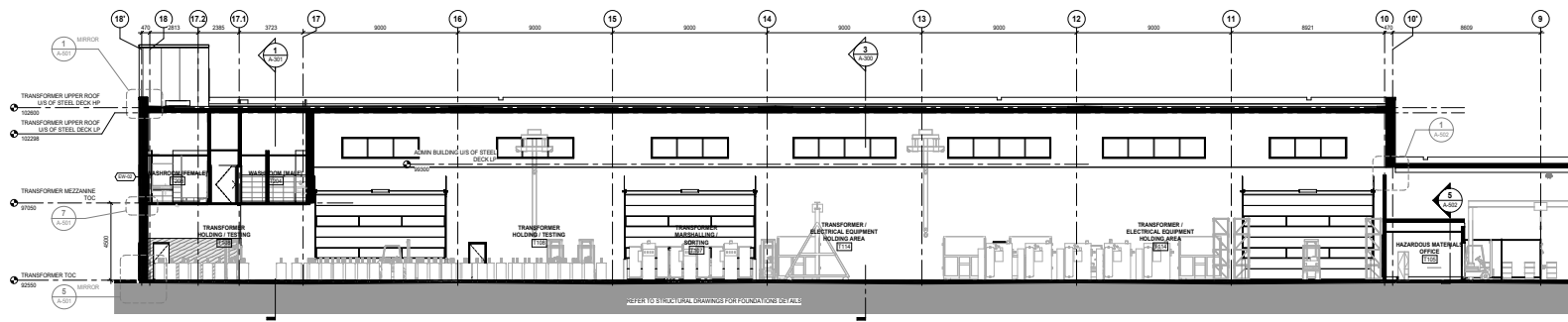
- 1 PREFINISHED CORRUGATED METAL SIDING, FIELD COLOUR METALLIC PEWTER
- 2 IMP COLOUR PEWTER
- 3 CEMENT FACED RIGID INSULATION PANEL
- 4 PREFINISHED STANDING BEAM METAL ROOF COLOUR METALLIC PEWTER
- 5 ALUMINUM LOUVERS
- 6 METAL SCREEN
- 7 CHAINLINK FENCING
- 8 PAVE
- 9 EXTERIOR LIGHTING. SEE ELECTRICAL DRAWINGS FOR DETAILS
- 10 EXTERIOR LIGHTING. SEE ELECTRICAL DRAWINGS FOR DETAILS
- 11 EXTERIOR LIGHTING. SEE ELECTRICAL DRAWINGS FOR DETAILS
- 12 EXTERIOR LIGHTING. SEE ELECTRICAL DRAWINGS FOR DETAILS
- 13 EXTERIOR LIGHTING. SEE ELECTRICAL DRAWINGS FOR DETAILS
- 14 EXTERIOR LIGHTING. SEE ELECTRICAL DRAWINGS FOR DETAILS

NOTE:  
1. MATERIAL & COLOR SAMPLES TO BE SUBMITTED FOR CONSULTANT'S REVIEW BEFORE INSTALLATION.  
2. ALL STEEL MEMBERS EXPOSED TO EXTERIOR WEATHER CONDITION WILL BE GALVANIZED AND PAINTED.  
3. ALL INTERIOR STEEL MEMBERS WILL BE PRIMED AND PAINTED.

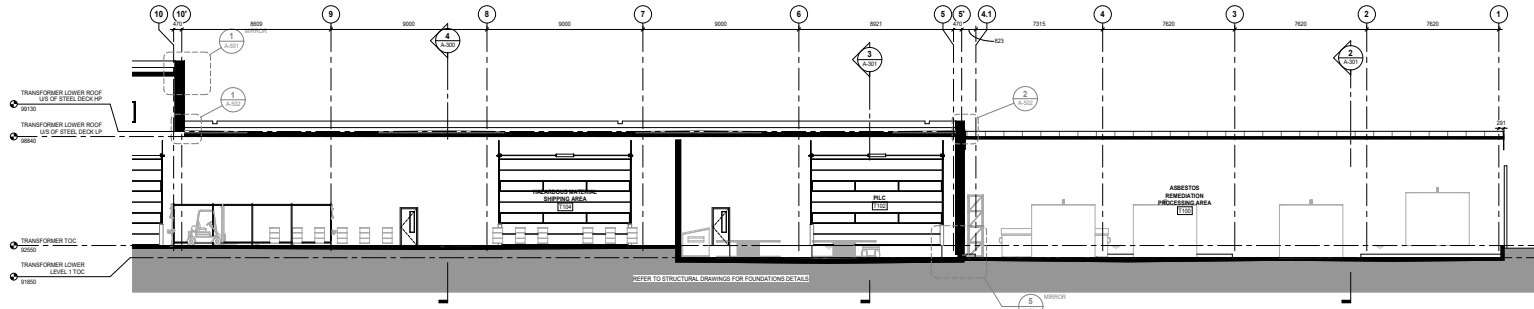
CLIENT	<b>BC Hydro</b>	ARCHITECT / ARCHITECT	<b>kasian</b>	SEAL / TAMPON	
PRIME CONSULTANT	<b>wsp</b>	CONSULTANT			

REV.	DATE	DESCRIPTION	BY	CHKD	APPD
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2	2021-11-03	ISSUED FOR DP PRE-SUBMISSION			
REV.	YYYY-MM-DD	REVISION			APPD

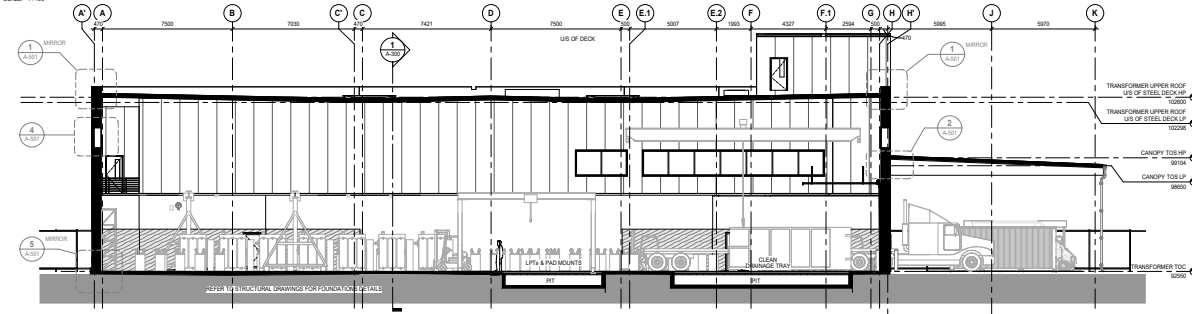
PROJECT ADDRESS: PROJECT ADDRESS	DRAWING NAME: NORTH PLAN
<b>BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)</b>	<b>TRANSFORMER SHOP EXTERIOR ELEVATIONS</b>
12251 88 AVENUE, SURREY, B.C.	
DRAWN BY: JESSIE DIAZ	DRAWING NUMBER: N4500-PLAN
CYC	<b>A-201</b>
REVIEWED BY: REVIEWSER	PROJECT NUMBER: N4500-PROJECT
CT	2000005
<b>ISSUED FOR DP RE-SUBMISSION</b>	REV
SCALE: 1:100	DATE: 2021 11 03
	PROJECT MANAGER
	CT



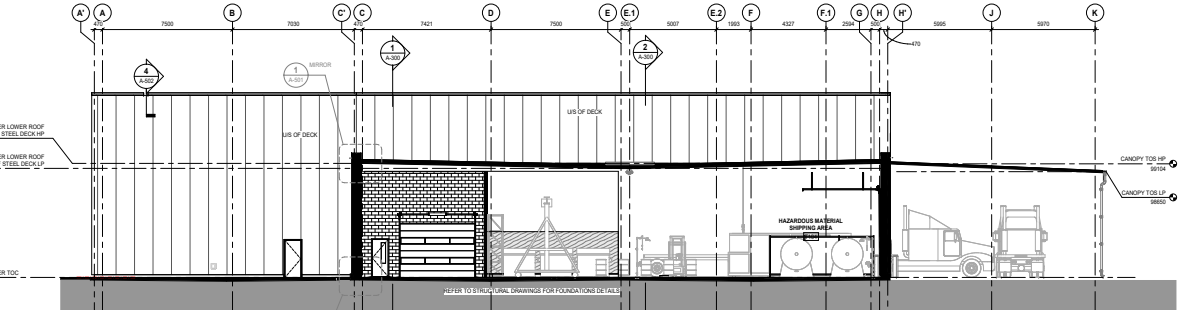
1 TRANSFORMER BUILDING SECTION 1  
SCALE: 1:100



2 TRANSFORMER BUILDING SECTION 2  
SCALE: 1:100



3 TRANSFORMER BUILDING SECTION 3  
SCALE: 1:100



4 TRANSFORMER BUILDING SECTION 4  
SCALE: 1:100

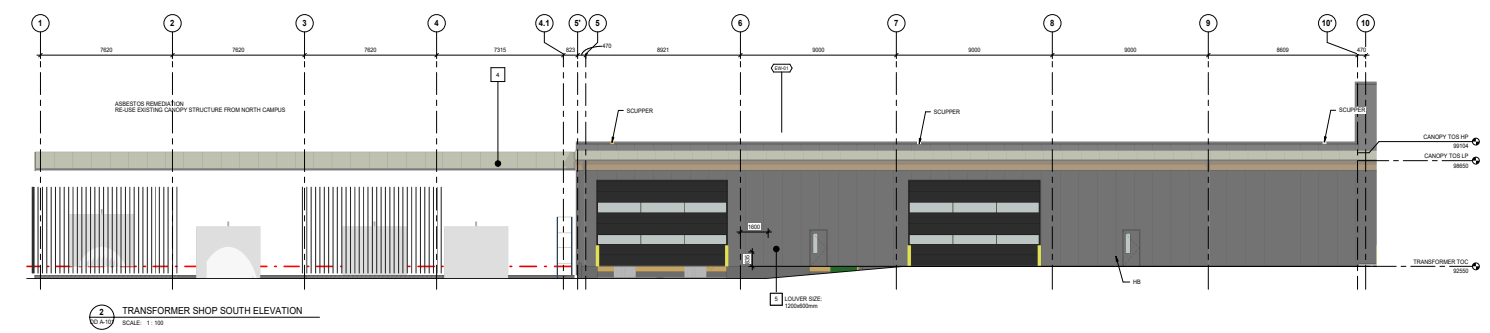
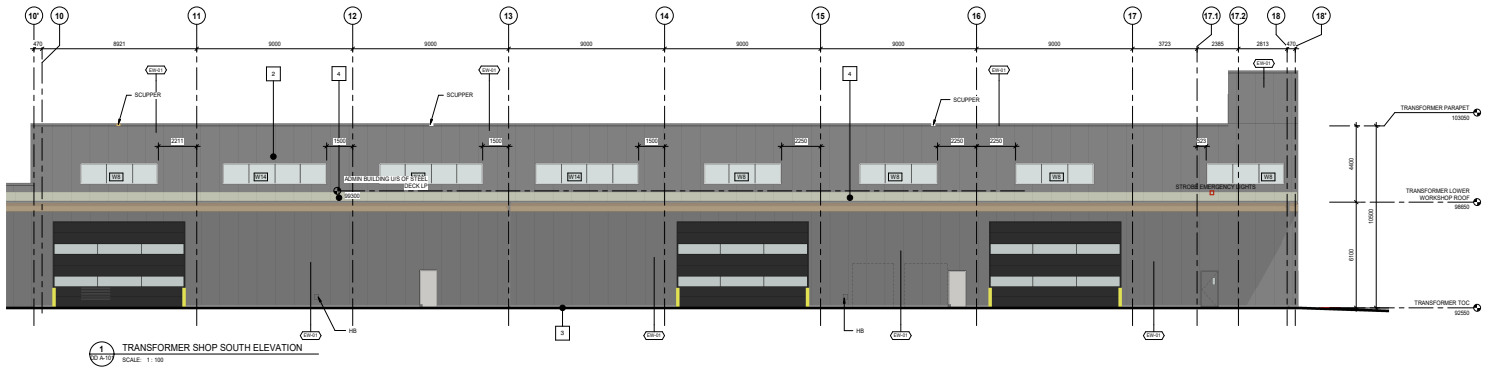
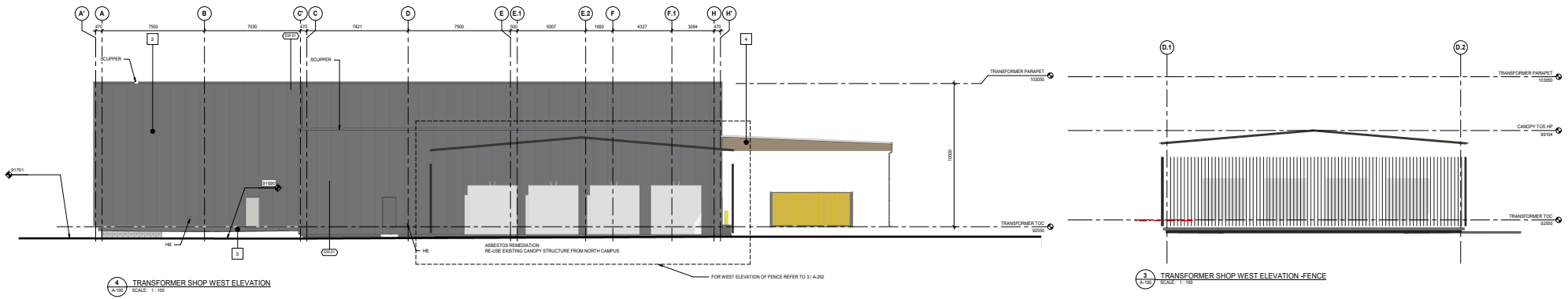
CLIENT **BC Hydro** ARCHITECT / ARCHITECTURE **kasian** SEAL / TAMPON

PRIME CONSULTANT **wsp** CONSULTANT

REV.	DATE	DESCRIPTION	BY	CHKD
2	2021-11-03	ISSUED FOR DP RE-SUBMISSION		
1	2020-10-14	ISSUED FOR CONSTRUCTION		
REV.	YYYY-MM-DD	REVISION		APPR.

PROJECT ADDRESS: PROJECT ADDRESS  
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)  
12251 85 AVENUE, SURREY, B.C.

DRAWING NAME: SHOP BUILDING SECTIONS  
DRAWN BY: JESSIE DIAZ  
CHECKED BY: REVIEWS  
PROJECT NUMBER: MCF001-PRJ01  
PROJECT NAME: MCF001-PRJ01  
PROJECT NUMBER: 2000005  
ISSUED FOR DP RE-SUBMISSION  
SCALE: 1:100 DATE: 2021 11 03  
PROJECT NUMBER: CT  
REV: 2



- EXTERIOR FINISH MATERIALS LEGEND**
- 1 PREFINISHED CORRUGATED METAL SIDING, FIELD COLOUR METALLIC PEWTER
  - 2 R1P COLOUR PEWTER
  - 3 CEMENT FACED RIGID INSULATION PANEL
  - 4 PREFINISHED STANDING SEAM METAL ROOF, COLOUR METALLIC PEWTER
  - 5 ALUMINUM LOUVERS
  - 6 METAL SCREEN
  - 7 CHAINLINK FENCING
  - 8 RWL
  - 9A EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 9B EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 9C EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 9D EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 9E EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
- NOTE:**  
 1. MATERIAL & COLOR SAMPLE TO BE SUBMITTED FOR CONSULTANTS REVIEW BEFORE INSTALLATION.  
 2. ALL STEEL MEMBERS EXPOSED TO EXTERIOR WEATHER CONDITION WILL BE GALVANIZED AND PAINTED.  
 3. ALL INTERIOR STEEL MEMBERS WILL BE PRIME AND PAINTED.

CLIENT: **BC Hydro**

ARCHITECT / ARCHITECT: **kasian**

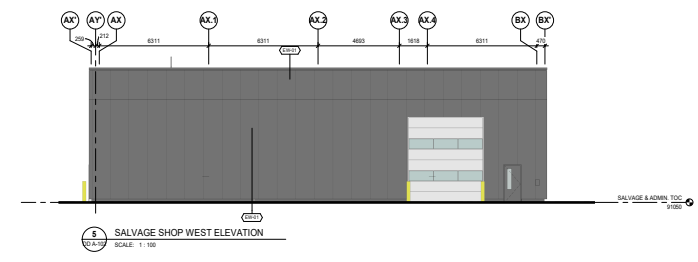
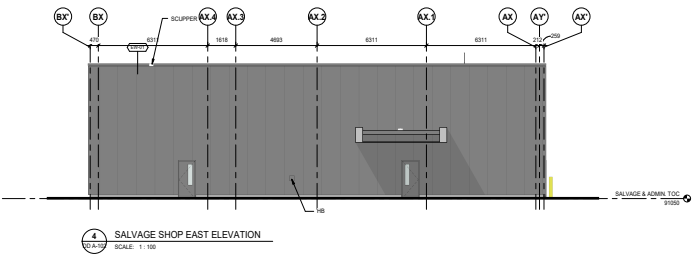
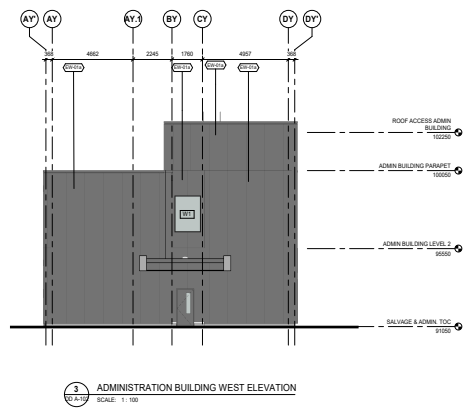
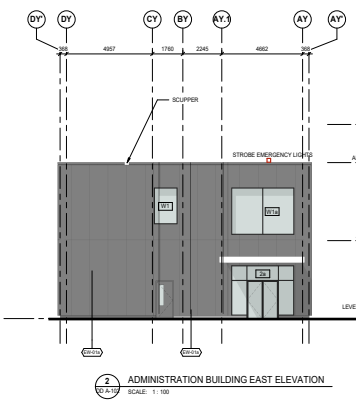
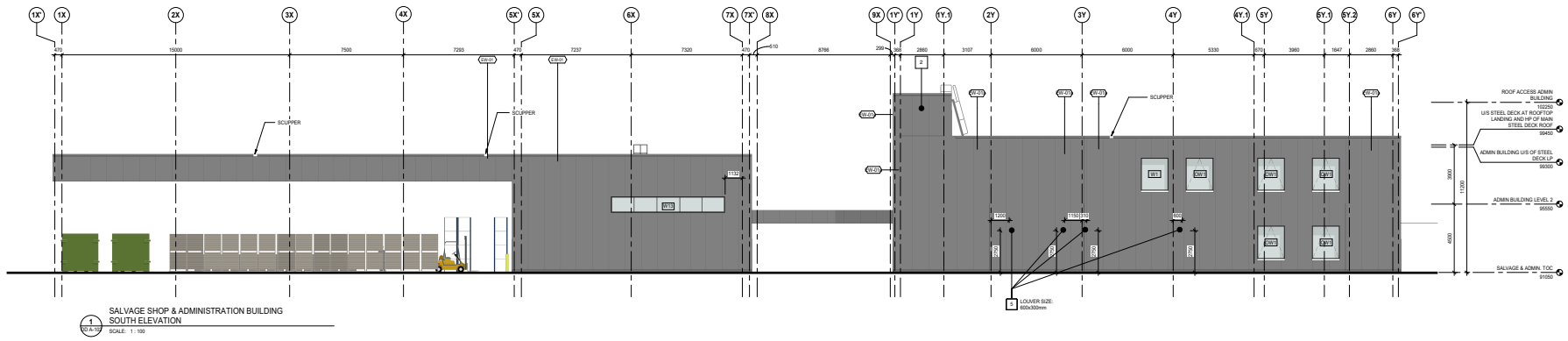
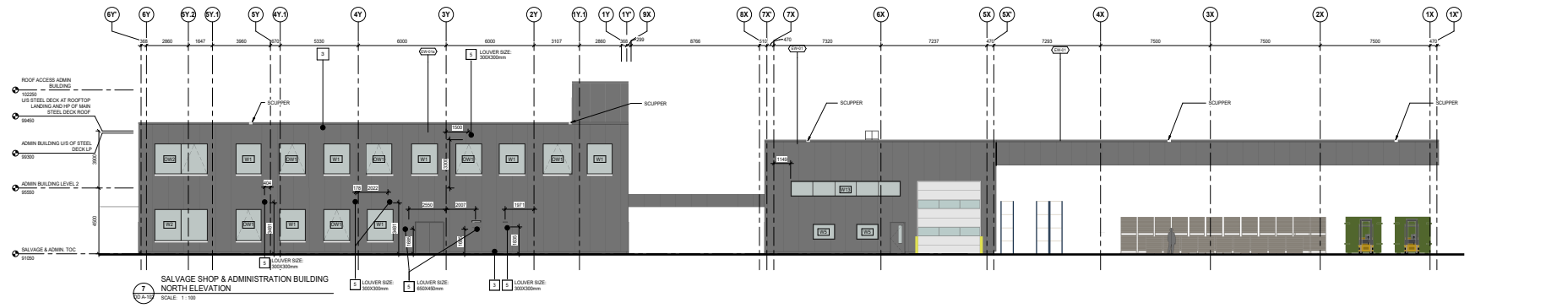
PRIME CONSULTANT: **wsp**

CONSULTANT:

SEALED/STAMPED

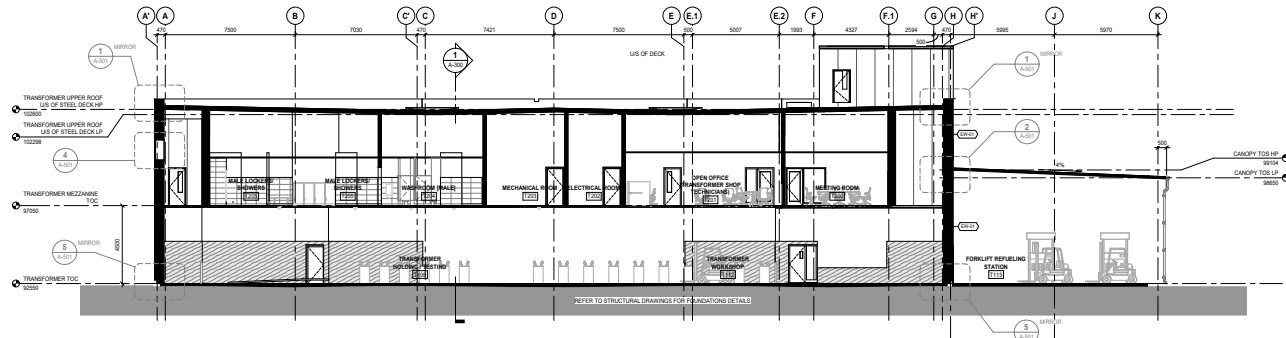
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3	2021-11-03	ISSUED FOR DP RE-SUBMISSION		
2	2021-04-15	ISSUED FOR SH-03		
1	2020-10-14	ISSUED FOR CONSTRUCTION		
REV.	YYYY-MM-DD	REVISION		APP.

PROJECT ADDRESS: PROJECT ADDRESS	DRAWING NAME: NORTH PLAN
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)	TRANSFORMER SHOP EXTERIOR ELEVATIONS
12251 88 AVENUE, SURREY, B.C.	
DESIGNED BY: JESSIE DIAZ	DRAWING NUMBER: NASHD01-24A
REVIEWED BY: REVIVER PUA	CYC
ISSUED FOR DP RE-SUBMISSION	PROJECT NUMBER: NASHD01-24A
SCALE: 1:100	DATE: 2021-11-03
	PROJECT BRANCH: CT
	REV: 3

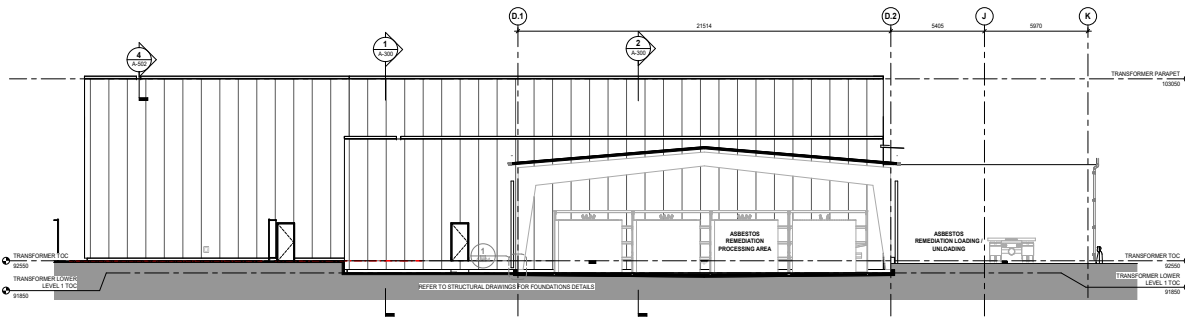


- EXTERIOR FINISH MATERIALS LEGEND**
- 1 PREFINISHED CORRUGATED METAL SIDING, FIELD COLOUR METALLIC PEWTER
  - 2 IMP COLOUR PEWTER
  - 3 CEMENT FACED RIGID INSULATION PANEL
  - 4 PREFINISHED STANDING SEAM METAL, ROOF COLOUR METALLIC PEWTER
  - 5 ALUMINUM LOUVERS
  - 6 METAL SCREEN
  - 7 CHAINLINK FENCING
  - 8 RWL
  - 9 EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 10 EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 11 EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 12 EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 13 EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
  - 14 EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS FOR DETAILS
- NOTE:**
1. MATERIAL & COLOR SAMPLE TO BE SUBMITTED FOR CONSULTANT'S REVIEW BEFORE INSTALLATION.
  2. ALL STEEL MEMBERS EXPOSED TO EXTERIOR WEATHER CONDITION WILL BE GALVANIZED AND PAINTED.
  3. ALL INTERIOR STEEL MEMBERS WILL BE PRIME AND PAINTED.

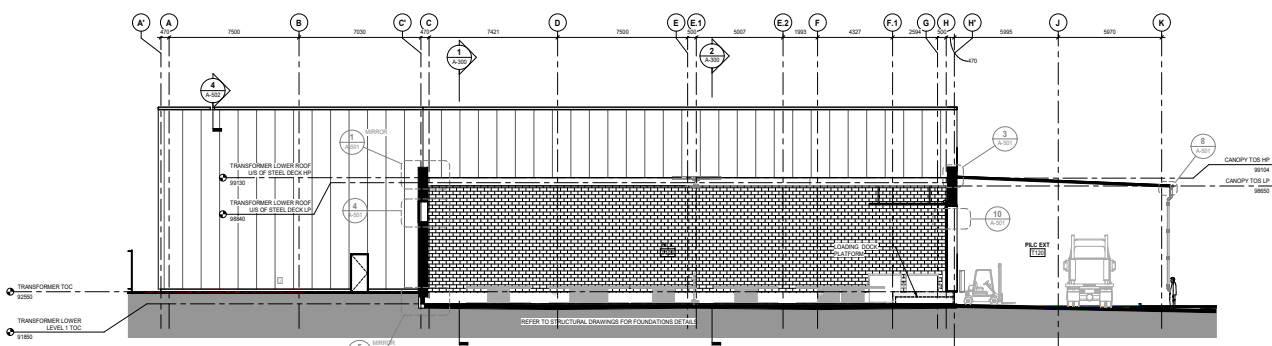




1 TRANSFORMER BUILDING SECTION 5  
SCALE: 1:100



2 TRANSFORMER BUILDING SECTION 6  
SCALE: 1:100

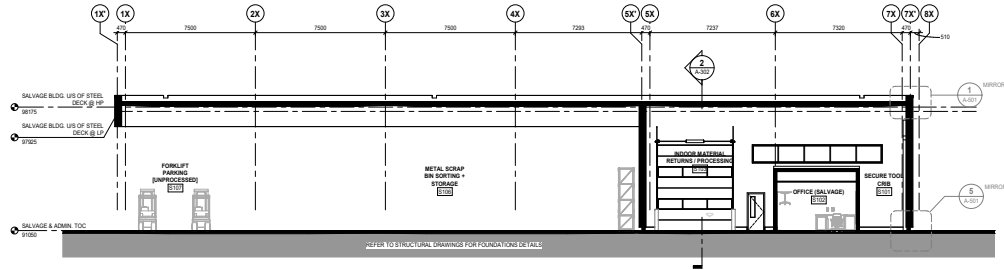


3 TRANSFORMER BUILDING SECTION 7  
SCALE: 1:100

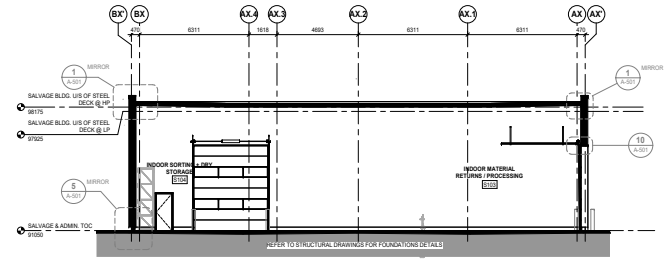
CLIENT <b>BC Hydro</b>	ARCHITECT / ARCHITECT <b>kasian</b>	SEAL / TAMPON
PRIME CONSULTANT <b>wsp</b>	CONSULTANT	

REV.	DATE	DESCRIPTION	BY	CHK	APP
1	2020-10-14	ISSUED FOR CONSTRUCTION			
2	2021-11-03	ISSUED FOR DP RE-SUBMISSION			
REV.	YYYY-MM-DD	REVISION			APPR.

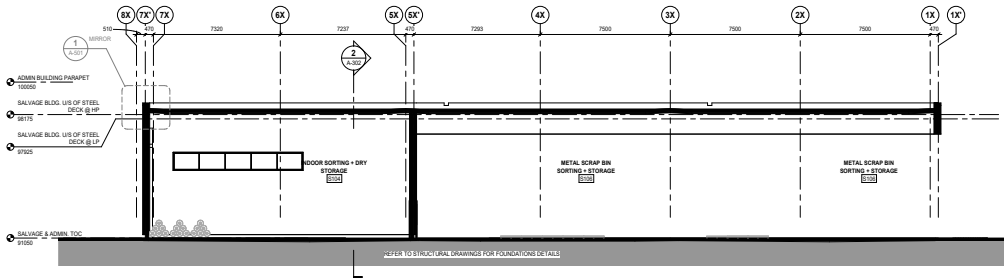
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DRAWN BY: JESSIE DIAZ <b>CYC</b>	DRAWING NUMBER: STANDARD PLAN <b>A-301</b>
ISSUED FOR DP RE-SUBMISSION	PROJECT NUMBER: MCF001/P001 <b>2000005</b>
SCALE: 1:100	DATE: 2021 11 03
PROJECT MANAGER <b>CT</b>	REV <b>2</b>



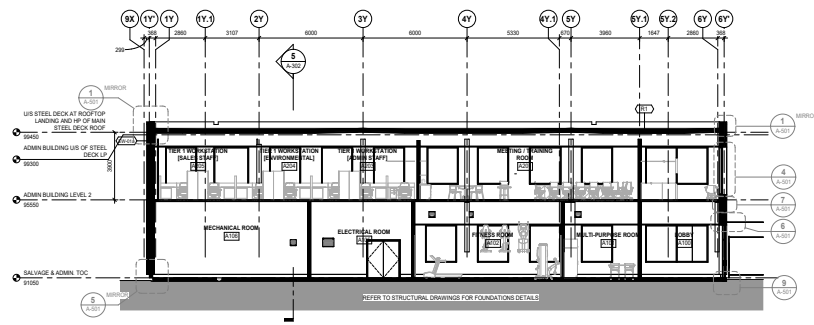
1 SALVAGE BUILDING SECTION 8  
SCALE: 1:100



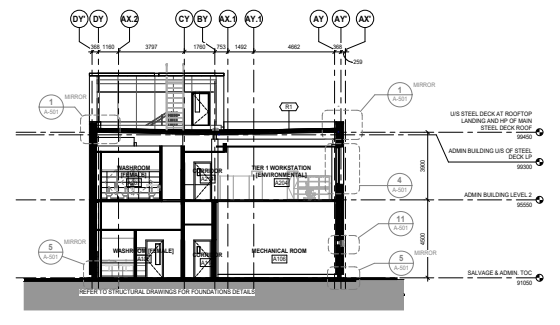
2 SALVAGE BUILDING SECTION 9  
SCALE: 1:100



3 SALVAGE BUILDING SECTION 10  
SCALE: 1:100



4 ADMINISTRATION BUILDING SECTION 12  
SCALE: 1:100



5 ADMINISTRATION BUILDING SECTION 13  
SCALE: 1:100

CLIENT: **BC Hydro**  
PRIME CONSULTANT: **wsp**

ARCHITECT / ARCHITECT: **kasian**  
CONSULTANT:

SEA / TAMPON:

REV.	DATE	DESCRIPTION	BY	CHK
2	2021-11-03	ISSUED FOR DP PRE-SUBMISSION		
1	2020-10-14	ISSUED FOR CONSTRUCTION		
REV.	YYYY-MM-DD	REVISION		APPR.

PROJECT ADDRESS: PROJECT ADDRESS  
BCH SURREY MATERIAL CLASSIFICATION FACILITY (MCF)  
12251 88 AVENUE, SURREY, B.C.

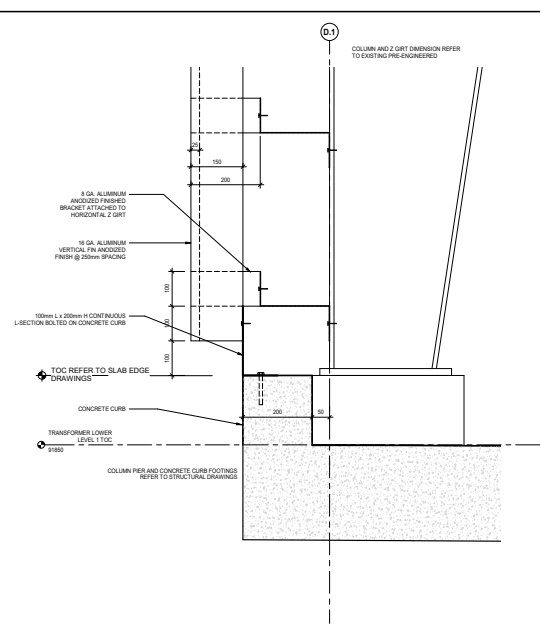
DRAWING NAME: REVISIONS  
SALVAGE AND ADMINISTRATION BUILDING SECTIONS

DRAWN BY: JESSIE DIAZ  
CYC

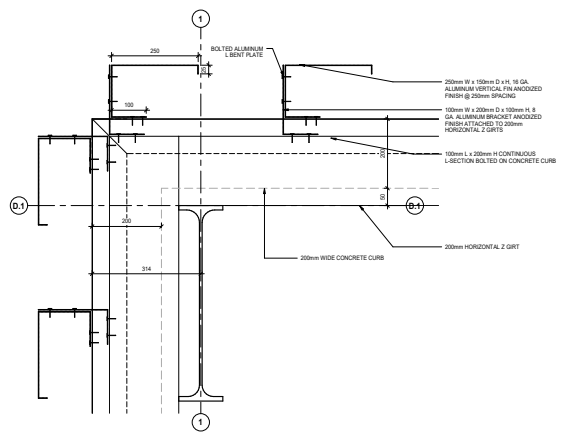
PROJECT NUMBER: 2000055  
A-302

ISSUED FOR DP RE-SUBMISSION

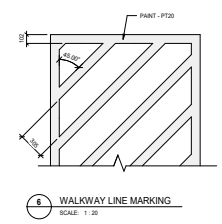
SCALE: 1:100 DATE: 2021 11 03 PROJECT NUMBER: 2000055



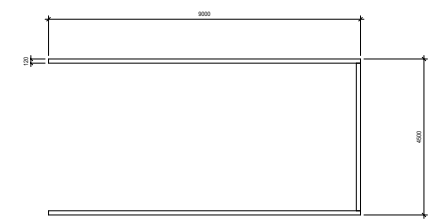
1 SCREEN DETAIL - SECTION  
SCALE: 1 : 5



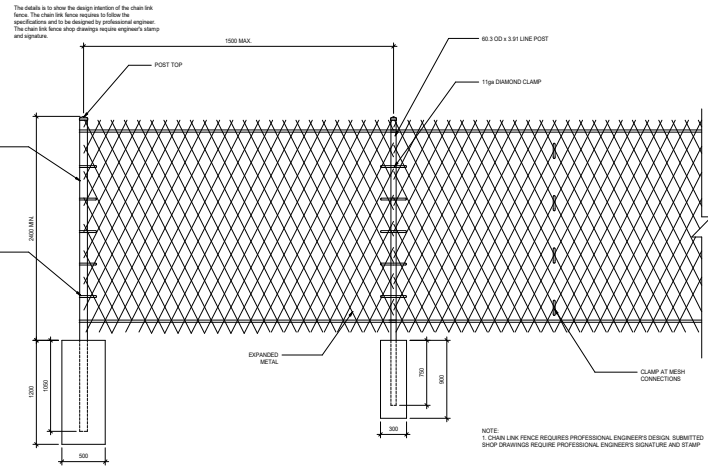
2 SCREEN DETAIL - PLAN  
SCALE: 1 : 5



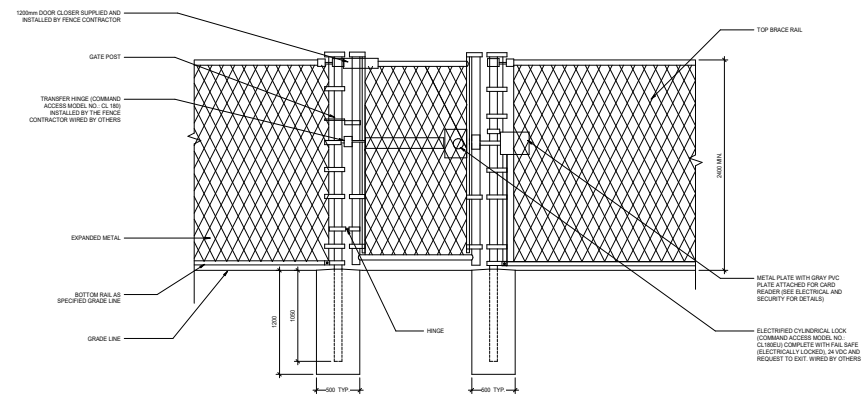
6 WALKWAY LINE MARKING  
SCALE: 1 : 20



5 MARKING FOR LOADING AREA  
SCALE: 1 : 50

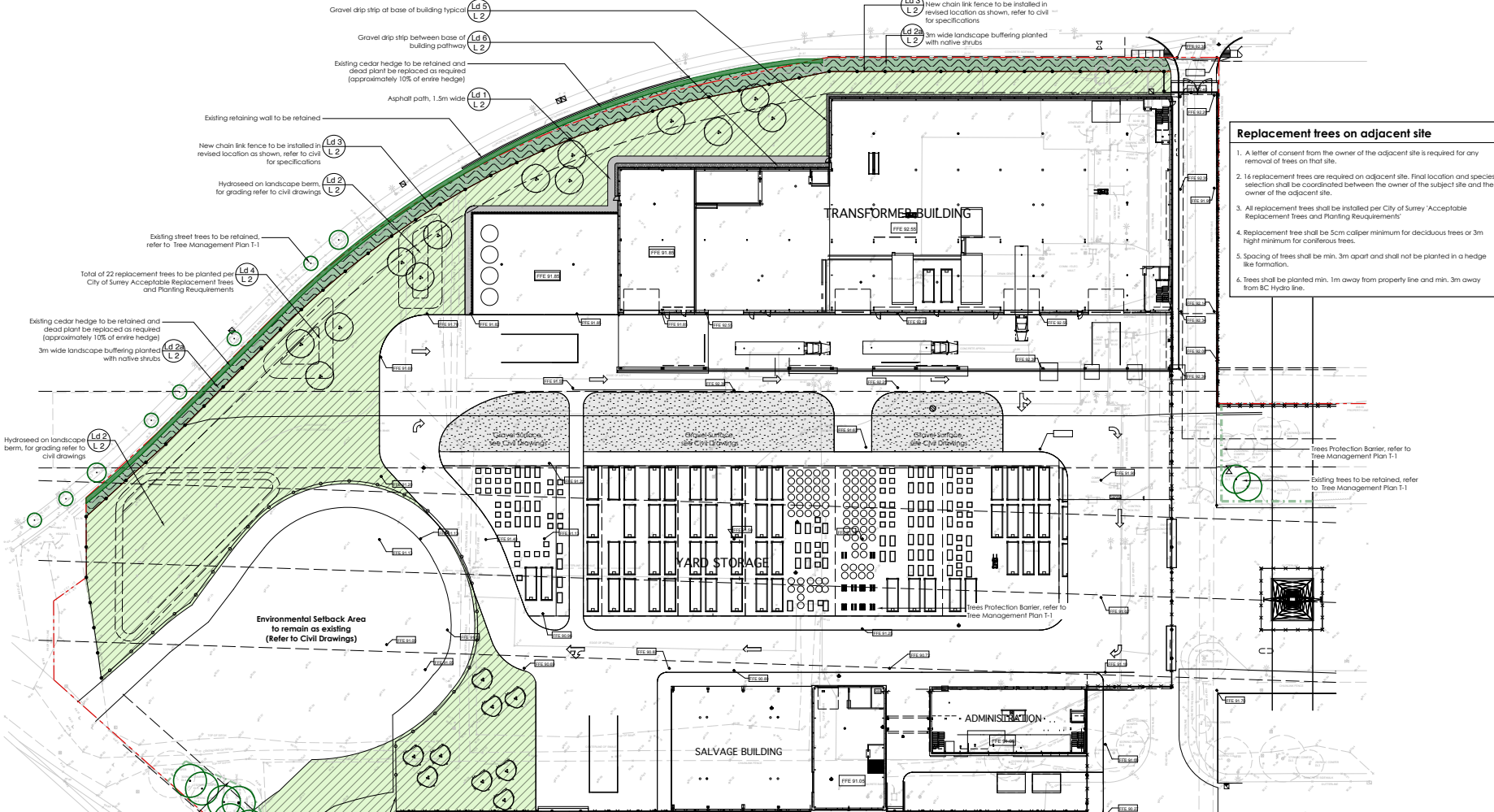
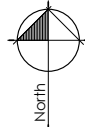


3 FENCE DETAILS  
SCALE: 1 : 20



4 FENCE DETAILS SECTION  
SCALE: 1 : 10

3 FENCE DETAILS  
SCALE: 1 : 20



**Replacement trees on adjacent site**

1. A letter of consent from the owner of the adjacent site is required for any removal of trees on that site.
2. 16 replacement trees are required on adjacent site. Final location and species selection shall be coordinated between the owner of the subject site and the owner of the adjacent site.
3. All replacement trees shall be installed per City of Surrey 'Acceptable Replacement Trees and Planting Requirements'.
4. Replacement tree shall be 5cm caliper minimum for deciduous trees or 3m high minimum for coniferous trees.
5. Spacing of trees shall be min. 3m apart and shall not be planted in a hedge like formation.
6. Trees shall be planted min. 1m away from property line and min. 3m away from BC Hydro line.

5	2021-04-29	Revision 3 DP Submission
4	2020-10-14	IFC
3	2020-08-27	Revision 1 DP Submission
2	2019-02-21	Issued for 100% DD
1	2018-12-11	Issued for DP
no. / date:		Items:

Revisions:



Project:  
**BCH SURREY MCF**  
**12345 88 AVENUE**  
**SURREY, B.C.**

Drawn by: FF  
 Checked by: SV  
 Date: 2021-04-29  
 Scale: 1:400  
 Drawing Title:

**Landscape Plan**

Project No.:  
**18015**  
 Sheet No.:

**Fence Notes**

1. Fence along Property Line to be retained or reinstalled unless otherwise noted.
2. All fences shown for reference only. For construction refer to Civil or Architectural drawings.

**Replacement trees on subject site**

1. Install 22 replacement trees per City of Surrey 'Acceptable Replacement Trees and Planting Requirements'
2. Replacement tree shall be 5cm caliper minimum.
3. Spacing of trees shall be min. 3m apart and shall not be planted in a hedge like formation.
4. Trees shall be planted min. 1m away from property line and min. 3m away from BC Hydro line.

**PLANT LIST**

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE
<b>TREES</b>				
⊙	9	Populus tremuloides 'Erecta'	columnar Swedish aspen	5cm cal. B&B
⊙	13	Sorbus aucuparia	mountain ash	5cm cal. B&B
<b>SHRUBS</b> (planted in random sequence in groups of 10 to 20 plants)				
■	100	Amelanchier alnifolia	Saskatoon Berry	#3 pot, 48"o.c.
■	100	Holodiscus discolor	oceanspray	#3 pot, 48"o.c.
■	100	Ribes Sanguineum	Red flowering current	#3 pot, 48"o.c.
■	100	Sorbus stichensis	Sitka mountain ash	#3 pot, 48"o.c.
■	100	Vaccinium ovatum	evergreen huckleberry	#3 pot, 48"o.c.

**Denbow** PLANT REVEGETATION SOLUTIONS

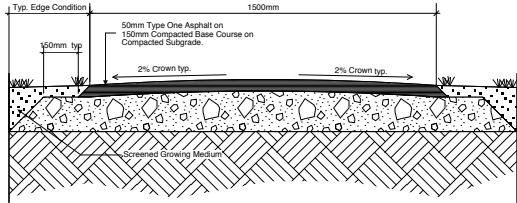
**Low Grow Reclamation Mix with Wildflowers**

Common Name	Weight	Count	Latin Name	Code
Creeping Red Fescue	20.00%	18.65%	Festuca rubra	T2976-000
Tall Fescue	20.00%	9.32%	Festuca arundinacea	R3122-000
Hard Fescue	15.00%	18.18%	Festuca duriuscula	R3039-000
Perennial Ryegrass	20.00%	8.95%	Lolium perenne	A4312-000
Sheep Fescue	15.00%	16.38%	Festuca ovina	R3206-000
Red Top	1.00%	10.28%	Agrostis alba	R1164-000
Canada Bluegrass	2.00%	9.88%	Poa compressa	R1904-000
Alsike Clover - QwikGrow	4.00%	5.59%	Trifolium hybridum	L2204-011
Clover White - QwikGrow	1.00%	1.40%	Trifolium repens	L2304-011
Coastal Native Wildflowers	2.00%	1.40%	Ground Cover	L2304-011
	100.00%	99.99%	Grade	Canada No. 1 Ground Cover

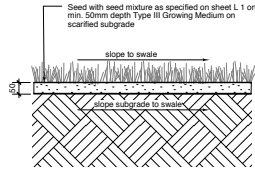
*-Quick, low-growing mix with a compliment of wildflower seed adapted to coastal BC.  
 -Excellent Erosion Control properties.  
 -Excellent drought (fire) resistance.  
 -Ideal for Reclamation/Revegetation work where aesthetics and Erosion Control are important.  
 -Wildflower content will be a mixture of the following Natives based on availability: Wild Strawberry, Yarrow, Columbine, Small leaved Lupine, Alumroot, Corn Poppy, California Poppy, Pearly Everlasting, Godetia, Plains cowpeas.*

**General Landscape Notes**

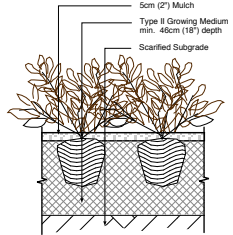
1. Swales as shown on Civil drawings.
2. Grading of berms and landscape area as shown on Civil drawings.
3. Erosion control measures on berms if required as per Civil drawings.



**Ld 1 L 2 Asphalt Pathway**  
Scale 1:10

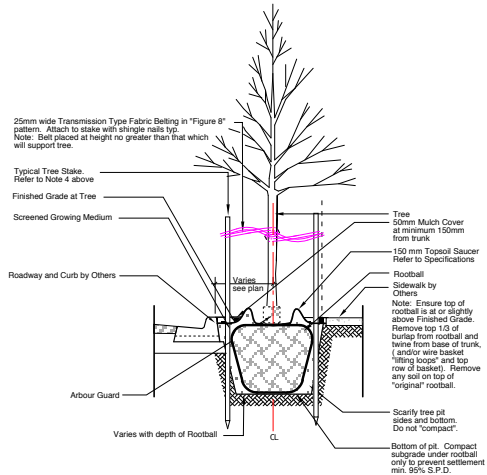


**Ld 2 L 2 Hydroseed Areas**  
Scale 1:10



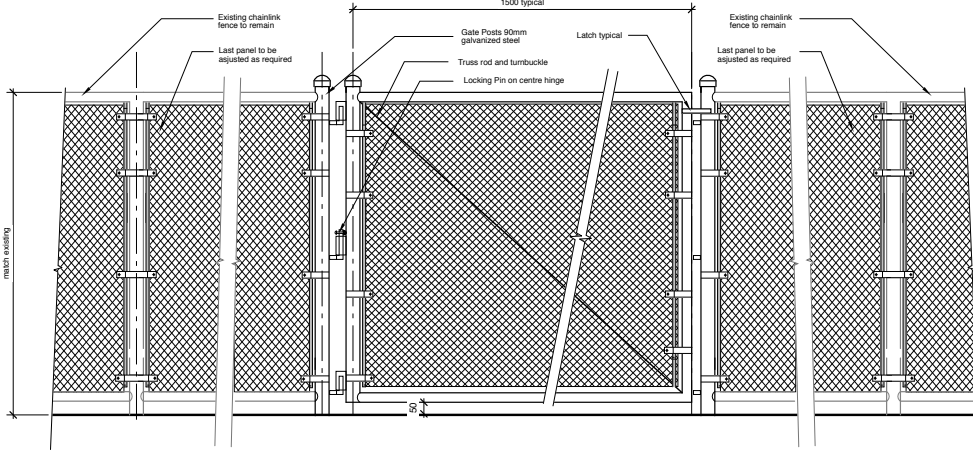
**Ld 2a L 2 Planting Areas**  
Scale 1:10

- General Notes:**
1. Do not cut Leader.
  2. Protect tree from damage during planting. Ensure rootball protected from Sun, Frost or Desiccation.
  3. Ensure tree location does not conflict with Underground Services. "Call before digging".
  4. All street trees to be staked with 2 - 100mmØ x 2.5m long cedar stakes. Minimum depth of stake embedment is 1m. Ensure stakes do not penetrate or damage rootball. Ensure all stakes are aligned parallel to sidewalk/road on tree pit centreline.
  5. Provide min. 5 cubic meters of growing medium per tree.
  6. Refer to Growing Medium Chart below for surface area depth of Growing Medium.



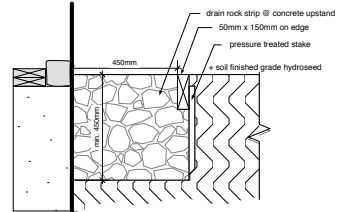
**Ld 4 L 2 Tree Planting typical**  
Scale 1:30

5	2021-04-29	Revision 3 DP Submission
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Revisions:		

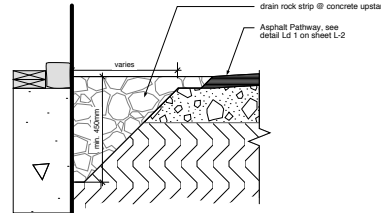


- Metalwork Notes:**
1. For metal members size refer to landscape specifications
  2. All metal to be galvanized
  3. Gates to be all weld construction. (Grind all welds and paint w/ Galvalume)
  4. Provide locking hasp and cane bolt to one side of each access gate.

**Ld 3 L 2 Chainlink Gate within existing Fence**  
Scale 1:10



**Ld 5 L 2 Gravel Drip Strip typical**  
Scale 1:10



**Ld 6 L 2 Gravel Drip Strip typical**  
Scale 1:10

Project:  
**BCH SURREY MCF**  
**12345 88 AVENUE**  
**SURREY, B.C.**

Drawn by: FF  
Checked by: SV  
Date: 2021-04-29  
Scale: as shown

**Landscape Details**

Project No.:  
**18015**  
Sheet No.:





**SECTION 32 83 00: Plants**

- 1. GENERAL**
- 1.1 DOCUMENTS**  
1 This section of the contract documents forms part of the Contract Documents and is to be read, interpreted and coordinated with other parts.
- 1.2 DESCRIPTION**  
1 Work included: Furnish all labour, equipment, material and services necessary for complete supply and installation of plant material as shown on the drawings and hereinafter specified.  
2 Related Work in Other Sections  
1 Soil Preparation
- 1.3 QUALITY ASSURANCE**  
1 All materials and work shall conform to the latest edition of the following standards or as otherwise specified:  
2 British Columbia Standards for Nursery Stock  
2 British Columbia Landscape Standard  
2 Plant sizes and related container classes are specified according to the B.C. Landscape Standard current edition. For container classes #3 and #5, plant sizes shall be as shown in the chart list and the Standard; for all other plants, both plant size and container class shall be as shown in the plant list. Specifically, when the plant list calls for #5 container containers, these shall be as defined in the British Columbia Landscape Standard.
- 1.4 AREA OF SEARCH**  
1 Area of search for specified plant material shall include the Lower Mainland of British Columbia, Vancouver Island, Washington and Oregon States.
- 1.5 PROVENANCE**  
1 All plant material used on this project shall be hardy in this climate. Plant types have been selected with this as a primary criteria. The Contractor shall guarantee that material supplied has equal provenance, as it is developed from cuttings or seeds collected in an area of similar climatic characteristics. Submit proof of equal provenance to the Consultant.
- 1.6 NURSERY CERTIFICATION**  
1 All plants incorporated into this project shall be supplied from a nursery that is certified as such with a nursery certification program approved by the BC Landscape and Nursery Association and the Canadian Food Inspection Agency.
- 1.7 DELIVERY AND STORAGE**  
1 Dig and handle all plant material in a manner suitable for each species to prevent injury to or removal of fibrous roots. All plant material arriving on site with broken or loose rootballs or roots will be rejected. Take precautions to avoid burring of plants by soil or wind during delivery and shipping.  
2 Keep rootballs and container soil moist before planting by covering with bark mulch or soil, water as required to ensure moist rootballs.  
3 All plant material shall be acclimatized to the final location before delivery and planting. The Contractor will be held responsible for plant losses caused by inadequate acclimatization.
- 1.8 INSPECTION**  
1 Notify the Consultant, giving at least 48 hours notice when plants are assembled for inspection in one location (not 110 days prior to scheduled planting time).  
2 If inspection is more than one location becomes necessary, the contractor shall reimburse the Consultant for the additional time required at the current hourly rates of the Consultant.  
3 All plants are subject to inspection and may be rejected for failure to comply with this specification at any time until Acceptance. Rejected material and remove from the site at no cost to the Owner.  
4 Plants required for the work may be inspected and tagged at the place of growth before being dug. Inspection and tagging at the place of growth shall not affect the right to reject such plants once they are delivered to the site.  
5 The Contractor or its authorized representative shall be present during all required inspections as specified or as may be required.
- 1.9 CONDITIONS FOR SUBSTANTIAL PERFORMANCE, COMPLETION, ACCEPTANCE AND FINAL PAYMENT**  
1 This section of the specification is governed by the Contract (based on the current CCDC2 Stipulated Price Contract), which sets out conditions for Substantial Performance of the Work or part of the Work, completion of the Work, payments, holdbacks, Final Payment and Warranty. Use procedures stated in the General Conditions to apply for and obtain certification of Substantial Performance and Final Payment.  
2 Acceptance by the Owner based on certification by the Consultant is required. The conditions of Acceptance of landscape areas and for turning over the landscape areas to the Owner for subsequent maintenance are:  
1 Substantial Performance for the complete project shall have been achieved in accordance with the Contract, except that if the Owner has agreed to accept the landscape component or a defined part of it as substantially performed, then Substantial Performance for the landscape or defined parts shall have been certified by the Consultant.  
2 Each landscape area, plant or other component shall have been maintained for at least 45 days from the time of installation.  
3 All plants in the whole project or the defined area shall be healthy and established to the satisfaction of the Consultant.  
4 All grasses and lawn areas in the whole project or the defined area shall be healthy and established to the satisfaction of the Consultant.  
5 All deficiencies with regard to landscape work shall have been rectified.  
6 The date of Acceptance shall be as determined by the Consultant on the basis of review for Acceptance. Contractor shall request review for Acceptance, giving at least 48 hrs. notice.
- 1.10 SUBSTITUTIONS**  
1 Substitutions in plant material will not be considered unless written proof is submitted thirty (30) days prior to scheduled installation stating a specified plant cannot be obtained within the specified area of search. Upon submission of such proof, a proposal will be considered for using the nearest equivalent size or variety with an equivalent adjustment of the Contract price.
- 1.11 WARRANTY**  
1 Warranty requirements are governed by the Contract (based on the current CCDC2 Stipulated Price Contract) which states that the warranty period is one year from Substantial Performance of the Work or part of the Work, however the General Conditions allow for extended warranties as specified in the Contract Documents. The Contractor shall obtain extended warranties as required in this specification section.  
2 Rootballs for a period of 11 years after Substantial Performance of the landscape component of this project, all unsatisfactory plant material and continue to replace such plant material until the replacement is acceptable, at no cost to the Owner.  
3 The warranty is based on adequate maintenance by Owner after Acceptance. The Contractor will not be responsible for plant loss due to extreme climatic conditions such as abnormal freezing temperatures or hail which occur after Acceptance. The Contractor shall be responsible for plant loss due to inadequate acclimatization of plants for their planted location.  
4 Adequacy of acclimatization and avoidance of extreme climatic conditions shall be as determined by the Consultant on the basis of plant variety, location, recorded temperatures for the locale, time of planting and other factors pertinent to the situation.
- 1.12 EXTENDED WARRANTY ON LANDSCAPE COMPONENTS**  
1 The one year warranty period for landscape components of the work shall begin at the date of acceptance for the whole project or defined parts of the project as determined by the Consultant and agreed by the Owner.  
2 Plants or grassed areas replaced or repaired under warranty shall be subject to a new one year warranty period beginning at the time of replacement or repair.  
3 Replace plants found to be not thriving during any extended warranty period required by the Consultant.  
4 If because of climatic or other conditions reformed beyond the control of the Contractor, there are items of work that cannot be performed, these items may be defined and made subject to a new one year warranty period beginning when they have been performed and certified as Accepted.  
5 If the successful establishment of certain plants or grassed areas is in doubt at the time of site review for Acceptance, Final Payment, or end of one year warranty, the Consultant may require a further extension of the warranty for one more growing season.
- 1.13 PERMITS**  
1 Obtain and pay for all permits required for the work, including such permits as may be required for planting and related work on municipal property (e.g. street trees).

**2. PRODUCTS**

- 2.1 PLANT MATERIAL**  
1 Plant material shall be of the sizes and quantities as shown in plant lists on Landscape Drawings and shall be nursery grown unless specifically described as "collected".  
2 Plant material shall conform to the Canadian Nursery Trade Association Canadian Standards for Nursery Stock. In particular:  
1 Nursery stock shall be true to name, and of the size and grade stated.  
2 Quality shall be normal for the species when grown under proper cultural conditions (able, substantially free from pests and disease, and undamaged).  
3 Roots shall not be subject to long exposure to drying winds, sun or frost, between digging and delivery.  
4 Rootballs shall be free from pernicious perennial weeds.  
5 Roots shall be transplanted or root-pruned at least once within the year prior to planting.  
6 Take precautions during digging, handling and shipping of plant material to avoid injury to stems and root systems.  
7 Plants shall not be pruned prior to delivery.  
8 All plants shall be measured when the branches are in the normal position. Measurements shall be as set out in the BCNTA Standard for Container Grown Plants. Caliper of trees shall be measured 6 inches above the ground. The height of trees trunked not be as specified if the required height can be obtained by pruning the lower branches without leaving unsightly scars or otherwise damaging the trunk. No pruning of branches to achieve the required height shall be done prior to delivery of the material to the site without the Consultant's written approval.  
9 Trees shall have straight trunks with a single leader intact. There shall be no abrasion of the bark and no fresh cuts of fibrils over 1/8" which have not completely calloused over.  
10 Plants larger in size than specified in the itemized plant list may be used if approved, but the use of larger plants shall not increase the Contract price. If the use of larger plants is approved, the ball of earth or spread of roots shall be increased in proportion to the size of the plant.  
11 The size specified is the size of plant required at the time of delivery to the construction site. Sizes shown are minimum sizes.

**SECTION 32 83 00: Plants (Cont'd)**

- 2.2 RELATED MATERIALS**  
1 Tree Ties: Flexible non-abrasive flat woven webbing ties specifically designed for tree staking and guying, minimum 15mm (3/4") wide, of lengths to suit each location, minimum 400 kg (900 lb) break strength. Acceptable brands include: Tree Ties from Allstar Products Canada Inc., telephone (604) 684-6725 or 1-800-561-3883. Colour: black or olive green.  
2 Fertilizer: As specified in sections 31.11.3.
- 2.3 MULCH**  
1 Bark Mulch: 25mm Douglas Fir or Hemlock bark chips and fines, or a combination of the two, free of chunks and sticks, dark brown in colour, and free of soil, stones, rocks or other extraneous material.  
2 Bark Mulch: 25mm Douglas Fir or Hemlock bark chips and fines, or a combination of the two, free of chunks and sticks, dark brown in colour, and free of soil, stones, rocks or other extraneous material.
- 2.4 SUPPLEMENTARY TREE WATERING WITH GATOR BAGS**  
1 Where the availability of water from irrigation system or other means is not adequate for proper establishment of newly planted trees, install a tree gator slow release irrigation bag or similar device at each tree.
- 3. EXECUTION**
- 3.1 PLANTING SEASON**  
1 Plant only during the season or seasons which are normal for such work, as determined by weather conditions and as approved.  
2 Do not plant during freezing, abnormal froth, dry or wet weather or when damaging climatic conditions can be anticipated.  
3 The Contractor will be responsible for the death or deterioration of plants caused by exposure to damaging climatic conditions, planting under conditions itemized above or inadequate acclimatization of plant material.
- 3.2 DELIVERY**  
1 Dig and handle all plant material in a manner suitable for each species to prevent injury to or removal of fibrous roots. All plant material delivered with broken or loose rootballs or containers will be rejected by the Consultant and replaced by the Landscape Contractor at no additional cost to the Owner. Take precautions to avoid burring of plants by soil or wind during handling and transporting.  
2 Keep rootballs and container soil moist prior to delivery by covering with bark mulch or soil or water as required to ensure moist rootballs.  
3 Coordinate the delivery of plant materials with other work on site to ensure timely protection and installation.
- 3.3 PLANT LAYOUT**  
1 Stake location of all trees for approval to positioning. Notify Consultant at least 48 hours before planting of major trees. Consultant will be present during planting of major trees to ensure proper planting and location.  
2 4" x 4" stakes
- 3.4 TREE PLANTING SITES**  
1 For all trees, excavate tree planting sites with sloping sides, to accommodate as large a volume of growing medium as possible. See landscape plans and details for growing medium volumes and depths:  
1 Minimum depth 60cm (2'-0")  
2 Preferred depth 75cm (2'-6") to 90cm (3'-0")  
3 Recommended and Maximum depth 90cm (3'-0")  
2 Scarify the sides of tree planting sites.  
3 Check all tree pits for adequate drainage. Advise Consultant if any do not drain adequately.  
4 Fill with growing medium as specified.  
5 Remove excavated subsoil material from site, or use on site in an approved manner.
- 3.5 PLANTING PROCEDURE**  
1 Install all plants at height grown in Nursery.  
2 Backfill around rootball with prepared growing medium, tamping and watering to ensure firm support for the plant and eliminating all air pockets around the rootball. Ensure water penetration into the rootballs during planting procedures.  
3 Ensure a 150 mm (6") deep saucer around all trees for the full width of the planting pit.
- 3.6 FERTILIZER APPLICATION**  
1 Place fertilizer as per recommendations of soil analysis, Section 32 91 13.
- 3.7 STAKING**  
1 Stake all trees immediately after planting as required. Drive two (2) stakes per tree vertically into ground to depth of 1000mm. Plant material not staked or guyed immediately shall be rejected if damaged.  
2 Trees shall stand plumb on completion of this operation.  
3 Tree ties shall be installed to the trunk at stakes 150mm below major branches and shall be installed such that injury to bark will not occur. Secure at tree with a slightly loose square knot leaving approximately 5mm in the loop. Secure to trees by tying, slipping or nailing.
- 3.8 PLACING MULCH**  
1 After finish grading is complete and immediately after each area requiring mulch is planted, place mulch in an even layer over all growing medium except at grass areas and except where shown otherwise.  
2 Moisten uniformly and spread to a uniform depth of 50 mm in shrub planting areas and 25 mm in ground cover areas. Depth to be measured after settlement.
- 3.9 MAINTENANCE**  
1 Begin maintenance at time of planting and continue for at least forty-five (45) days until Acceptance, at which time the Owner will take over maintenance.  
2 Maintain all plants in a healthy growing condition by watering, weeding, cultivating, pruning and any other necessary operations required for first class maintenance.  
3 Water all planted areas as necessary to provide optimum conditions for plant growth. Thoroughly soak the growing medium of these areas to its full depth at least twice weekly.
- 3.10 SUPPLEMENTARY TREE WATERING WITH GATOR BAGS**  
1 Where the availability of water from irrigation system or other means is not adequate for proper establishment of newly planted trees, install a tree gator slow release irrigation bag or similar device at each tree. Fill bags and use them to maintain adequate moisture in the growing medium immediately around the tree until Acceptance. Leave supplementary tree watering devices in place as a permanent part of the project at the time of acceptance and turnover.
- 3.11 WEED CONTROL**  
1 During the maintenance period required before Acceptance, kill or remove all weeds at least every three weeks, with the final weeding taking place not more than 7 days before site review for Acceptance, at which time the entire landscape area is visually weed free to the time of site review for Acceptance.

**END OF SECTION**

**SECTION 32 91 13: Chain Link Fence**

- 1. GENERAL**
- 1.1 DOCUMENTS**  
1 This section of the specification forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.
- 1.2 DESCRIPTION**  
1 Furnish all labour, materials, equipment and service necessary for the complete installation of fencing as indicated on the drawings and as hereinafter specified.  
2 The work of this section shall include the supply and installation of the following:  
1 Exterior chain link fabric and hardware  
2 Concrete footings for fencing line posts and terminal posts.  
3 Work includes supply and installation of all hinges, lockable latches and/or lockable throw bolts for all man gates and vehicular gates as applicable.
- 1.3 SUBMITTALS**  
1 Where the availability of water from irrigation system or other means is not adequate for proper establishment of newly planted trees, install a tree gator slow release irrigation bag or similar device at each tree.  
2 Provide samples of proposed vinyl coated chain link fabric prior to installation.
- 1.4 PRODUCT DELIVERY, STORAGE AND HANDLING**  
1 Store packaged material in original containers with manufacturer's seals and labels intact.  
2 Prevent damage to materials during handling and storage. Keep materials under and free from dampness.
- 1.5 APPROVED EQUALS**  
1 All items as specified or pre-approved equals.
- 2. PRODUCTS**
- 2.1 MATERIALS**  
1 All pipe, wires, tension wires and bands, connectors, fittings, hinges, throw-bolts and/or latches and hardware shall be hot-dipped galvanized.  
2 Pipe to CAN2-138.2.M0, Table 1 Medium Duty, Schedule 40 (wall thicknesses as shown below), standard continuous weld, modulus of elasticity 20,000.  
3 Tension Bar: 16 x 6mm (5/8" x 3/16"), length to match entire height of fabric.  
4 The Wire: 3.5mm (3/16") galvanized galvanized.  
5 30mm Tensile Wire (welded to fabric) 4.8mm (3/16") lead by hog rings.  
5 Woven fabric: to CAN2-138.1.M80, Hot dipped galvanized. See 2.1.7, for gauge and mesh size. Top and bottom selvages to have knuckled finish. Wire diameters shall be as follows for the specified wire gauges:  
Specified Gauge Wire Diameter  
6 ga. 4.8mm (0.192")  
9 ga. 3.8mm (0.1456")  
11 ga. 3.18mm (0.125")  
6 Concrete Footings: compressive strength 18 MPa at 28 days.  
7 Component Size and Description for each Location  
Note: pipe sizes shown are outside diameter.
- | Component     | Backstop      | Dugouts       | Tennis Courts | Fences        |
|---------------|---------------|---------------|---------------|---------------|
| Bottom Rail   | 41mm (1 5/8") | 41mm (1 5/8") | 41mm (1 5/8") | 41mm (1 5/8") |
| Top Rail      | 41mm (1 5/8") | 41mm (1 5/8") | 41mm (1 5/8") | 41mm (1 5/8") |
| Line Post     | 60mm (3 7/8") | 60mm (2 3/8") | 60mm (2 3/8") | 60mm (2 3/8") |
| End Post      | 60mm (3 7/8") | 73mm (2 7/8") | 60mm (2 3/8") | 60mm (2 3/8") |
| Gate Post     | 60mm (3 7/8") | 41mm (1 5/8") | 60mm (2 3/8") | 60mm (2 3/8") |
| Mid Rail      | 41mm (1 5/8") | 41mm (1 5/8") | 41mm (1 5/8") | 41mm (1 5/8") |
| Overhang Rail | 35mm (1 3/8") | N/A           | N/A           | N/A           |
- 8 Touch up paint: Zinc rich organic ready-mixed coating to CGSB-P-181.  
9 Roof for Dugouts: Ribbed 24-gauge hot-dipped galvanized steel. Primed and painted with two coats of enamel to MPCA requirements. Fasteners #4 x 50 self-tapping screws with low profile head and washer.  
10 Lumber (including bench): Select No. 1 Hem/Fir free from splinters.  
11 Gate Hardware: Galvanized pan-type hinges and latch. Latch designed to receive padlock. All sized to suit the gate they are installed on.

**3. EXECUTION**

- 3.1 POST SPACING**  
1 Maximum post spacing 3 metres on centre. Set end posts of straight runs and adjust on centre spacing of line posts equally between.
- 3.2 FOOTINGS**  
1 All footings shall be set relative to finished surfaces as detailed.  
2 Minimum footing dimensions, except where detailed otherwise: footing depth 1200 mm, footing diameter 150mm larger than outside post diameter, post depth 75mm from bottom of footing.  
3 All posts shall be installed in footings for each section of fence before welding in the rails for that section.
- 3.3 FENCE CONSTRUCTION**  
1 All fabric posts to be all welded construction. Weld all ends continuously to adjoining member. Grind all welds smooth.  
2 Couple all posts to accept top rail.  
2 Couple all mid braces and bottom rails to top posts.  
3 Cut angle iron to fit backstop posts.  
2 Couple all Connections. NO crimping or flattening will be permitted. Any connection not meeting this specification will be rejected and replaced with specified construction by the contractor's efforts.  
3 Mid braces shall be installed at all end sections and at all sections adjacent to gate and corners, for all fences. All fences 2 AM (8' high or higher) shall have horizontal mid rails installed continuously in all sections.
- 3.4 Tack Welding**  
1 Tack weld ALL 6 gauge galy. wire mesh in lieu of the wire as described in item Table One above. Spacing for tack welds shall match specified toe wire spacing and as detailed.
- 3.5 TENSION BANDS**  
1 Install tension bands where fabric terminates at all terminal, corner and gate posts.
- 3.6 PAINTING**  
1 Clean all welds and other breaks in the galvanized surface. Touch up with zinc rich paint.
- 3.7 CLEANUP**  
1 Clean up all excess and waste material and remove from the site.

**End of section**

5	2021-04-29	Revision 3 DP Submission
4	2020-10-14	IFC
3	2020-08-27	Revision 1 DP Submission
2	2019-02-21	Issued for 100% DD
1	2018-12-11	Issued for GP

no., date, items.

Revisions:



Project:

**B238 SURREY MCF  
12435 88 AVENUE  
SURREY, B.C.**

Drawn by:	FF
Checked by:	SV
Date:	2020-10-14
Scale:	N/A
Drawing Title:	

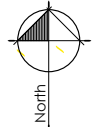
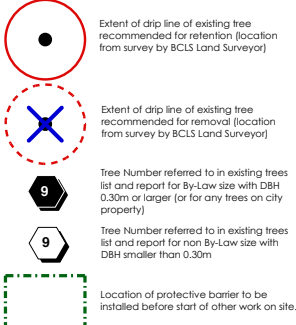
**Landscape Specifications**

Project No:

**18015**

Sheet No.:

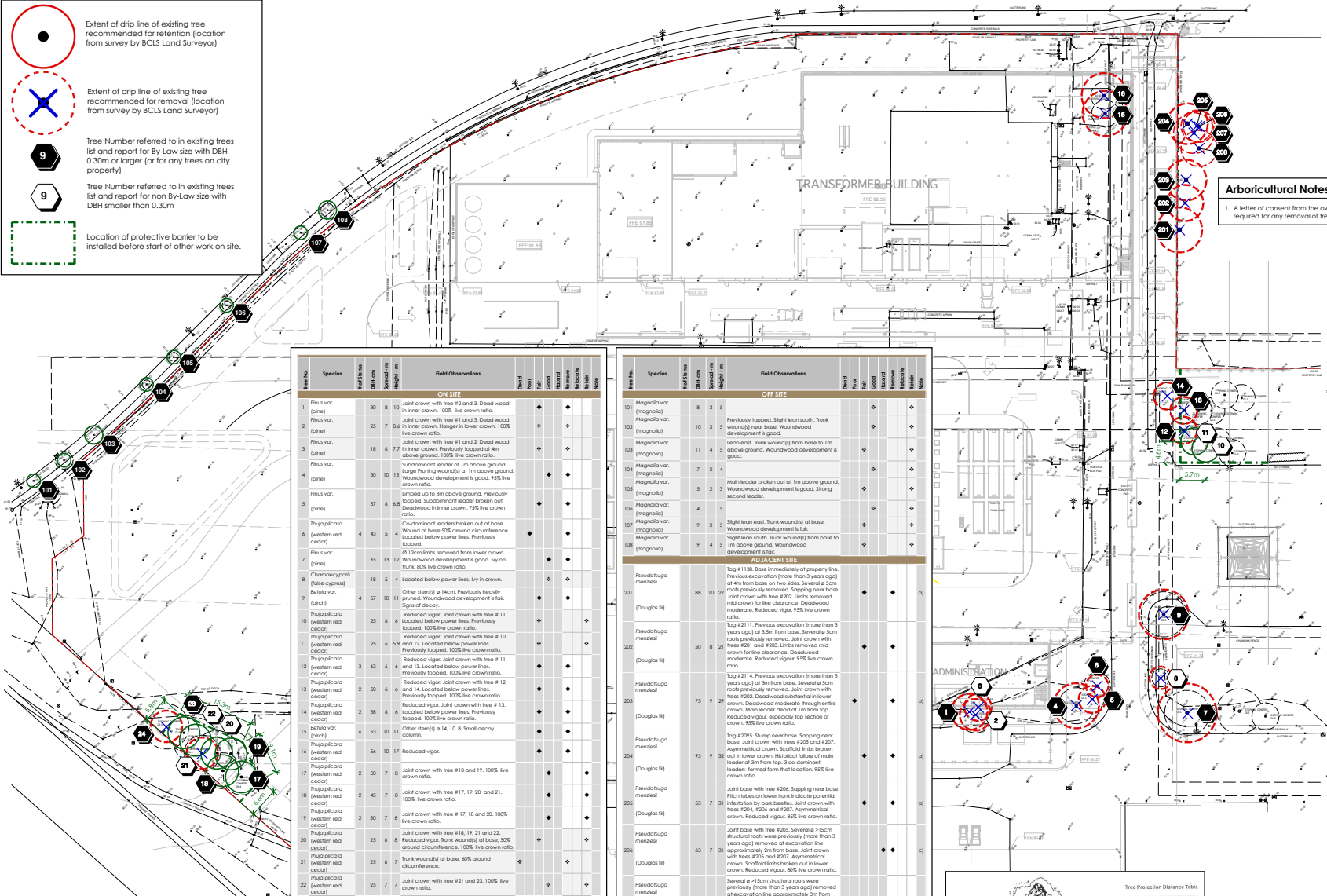
**DRAWING KEY**



Observations and recommendations by Florian Fisch, ISA Certified Arborist PN-7921A.  
 Observations made March 05, 2018 and December 07, 2018.  
 This drawing is to be read in conjunction with Existing Trees Report for this site by Durante Kruk Ltd., dated December 11, 2018.

**Arboricultural Notes for Adjacent Site**

1. A letter of consent from the owner of the adjacent site is required for any removal of trees on that site.



Tree No.	Species	F&E Status	DBH (cm)	Height (m)	Field Observations	Defect	Risk	Retention	Removal	Notes
<b>ON SITE</b>										
1	Pinus var. (pine)	30	6	10	Joint crown with tree #2 and 3. Dead wood in inner crown. 100% live crown ratio.					
2	Pinus var. (pine)	25	7	8	Joint crown with tree #1 and 3. Dead wood in inner crown. Hanger in lower crown. 100% live crown ratio.					
3	Pinus var. (pine)	18	4	7	Joint crown with tree #1 and 2. Dead wood in inner crown. Previously topped at 4m above ground. 100% live crown ratio.					
4	Pinus var. (pine)	50	10	13	Subdominant leader of 1m above ground. Large pruning wounds at 1m above ground. Woundwood development is good. 95% live crown ratio.					
5	Pinus var. (pine)	37	4	6.8	Upriser up to 3m above ground. Previously topped. Subdominant leader broken out. Deadwood in inner crown. 75% live crown ratio.					
6	Thuja plicata (western red cedar)	4	4	5	Co-dominant leader broken out of base. Wound at base 80% around circumference. Located below power lines. Previously topped.					
7	Pinus var. (pine)	65	12	12	12cm limbs removed from lower crown. Woundwood development is good. Ivy on trunk. 85% live crown ratio.					
8	Chamaecyparis (false cypress)	18	5	4	Located below power lines. Ivy in crown. Other stems @ 14cm. Previously heavily pruned. Woundwood development is fair. Signs of decay.					
9	Thuja plicata (western red cedar)	25	4	6	Reduced vigor. Joint crown with tree # 11. Located below power lines. Previously topped. 100% live crown ratio.					
10	Thuja plicata (western red cedar)	25	4	5.3	Reduced vigor. Joint crown with tree # 10 and 12. Located below power lines. Previously topped. 100% live crown ratio.					
11	Thuja plicata (western red cedar)	3	4	6.3	Reduced vigor. Joint crown with tree # 11 and 13. Located below power lines. Previously topped. 100% live crown ratio.					
12	Thuja plicata (western red cedar)	2	5	4	Reduced vigor. Joint crown with tree # 12 and 14. Located below power lines. Previously topped. 100% live crown ratio.					
13	Thuja plicata (western red cedar)	2	5	4	Reduced vigor. Joint crown with tree # 12 and 14. Located below power lines. Previously topped. 100% live crown ratio.					
14	Thuja plicata (western red cedar)	2	3	4	Reduced vigor. Joint crown with tree # 13. Located below power lines. Previously topped. 100% live crown ratio.					
15	Thuja plicata (western red cedar)	4	5	10	Other stems @ 14, 10, 8, 5m tall decay column.					
16	Thuja plicata (western red cedar)	5	10	17	Reduced vigor.					
17	Thuja plicata (western red cedar)	2	5	7	Joint crown with tree #18 and 19. 100% live crown ratio.					
18	Thuja plicata (western red cedar)	2	4	5	Joint crown with tree #17, 19, 20 and 21. 100% live crown ratio.					
19	Thuja plicata (western red cedar)	2	5	7	Joint crown with tree # 17, 18 and 20. 100% live crown ratio.					
20	Thuja plicata (western red cedar)	2	5	4	Joint crown with tree #18, 19, 21 and 22. Reduced vigor. Trunk wounds of base. 50% around circumference. 100% live crown ratio.					
21	Thuja plicata (western red cedar)	2	5	4	Trunk wound(s) of base. 45% around circumference.					
22	Thuja plicata (western red cedar)	2	5	7	Joint crown with tree #21 and 23. 100% live crown ratio.					
23	Thuja plicata (western red cedar)	3	7	7	Joint crown with tree #20 and 24. Reduced vigor. 100% live crown ratio.					
24	Thuja plicata (western red cedar)	3	7	7	Joint crown with tree #20 and 24. Reduced vigor. 100% live crown ratio.					

Tree No.	Species	F&E Status	DBH (cm)	Height (m)	Field Observations	Defect	Risk	Retention	Removal	Notes
<b>OFF SITE</b>										
101	Magnolia var. (magnolia)	6	3	3	Previously topped. Slight lean south. Trunk wound(s) near base. Woundwood development is good.					
102	Magnolia var. (magnolia)	10	3	5	Previously topped. Slight lean south. Trunk wound(s) near base. Woundwood development is good. Lean east. Trunk wound(s) from base to 1m above ground. Woundwood development is good.					
103	Magnolia var. (magnolia)	11	4	5	Previously topped. Slight lean south. Trunk wound(s) from base to 1m above ground. Woundwood development is fair.					
104	Magnolia var. (magnolia)	7	2	4	Main leader broken out at 1m above ground. Woundwood development is good. Strong second leader.					
105	Magnolia var. (magnolia)	5	2	3	Woundwood development is good. Strong second leader.					
106	Magnolia var. (magnolia)	4	1	3	Slight lean east. Trunk wound(s) of base. Woundwood development is fair.					
107	Magnolia var. (magnolia)	9	3	5	Slight lean south. Trunk wound(s) from base to 1m above ground. Woundwood development is fair.					
108	Magnolia var. (magnolia)	9	4	5	Slight lean south. Trunk wound(s) from base to 1m above ground. Woundwood development is fair.					
<b>ADJACENT SITE</b>										
201	Paulownia (Paulownia)	88	10	27	Tag #113. Tree immediately on property line. Previous excavation (more than 3 years ago) at 1m from base of tree. Several 5cm roots previously removed. Sapping near base. Joint crown with tree #202. Limbs removed mid crown for line clearance. Deadwood moderate. Reduced vigor. 95% live crown ratio.					
202	Paulownia (Paulownia)	50	8	21	Tag #211. Previous excavation (more than 3 years ago) at 3.5m from base. Several 5cm roots previously removed. Sapping near base. Joint crown with tree #201 and #203. Limbs removed mid crown for line clearance. Deadwood moderate. Reduced vigor. 95% live crown ratio.					
203	Paulownia (Paulownia)	75	9	29	Tag #214. Previous excavation (more than 3 years ago) at 3m from base. Several 5cm roots previously removed. Joint crown with tree #202. Deadwood substantial in lower crown. Deadwood moderate through entire crown. Main leader dead at 1m from top. Reduced vigor. Sapping base section of crown. 95% live crown ratio.					
204	Paulownia (Paulownia)	93	10	32	Tag #205. Slump near base. Sapping near base. Joint crown with tree #206 and #207. Asymmetrical crown. Scaffold limbs broken out in lower crown. Historical failure of main leader of 3m from top. 3 co-dominant leaders. Former fern that location. 95% live crown ratio.					
205	Paulownia (Paulownia)	53	7	21	Joint base with tree #204. Sapping near base. 19cm limb on lower trunk indicate potential infestation by bark beetles. Joint crown with tree #206 and #207. Asymmetrical crown. Reduced vigor. 85% live crown ratio.					
206	Paulownia (Paulownia)	43	7	31	Joint base with tree #205. Several 15cm structural roots were previously (more than 3 years ago) removed of excavation line approximately 2m from base. Phototropic lean. Joint crown with tree #204, #206 and #207. Asymmetrical crown. Scaffold limbs broken out in lower crown. Reduced vigor. 85% live crown ratio.					
207	Paulownia (Paulownia)	62	9	31	Several 15cm structural roots were previously (more than 3 years ago) removed of excavation line approximately 3m from base. Sapping near base. Joint crown with tree #204, #206 and #207. Asymmetrical crown. Scaffold limbs broken out in lower crown. Reduced vigor. 85% live crown ratio.					
208	Paulownia (Paulownia)	72	8	29	Several 15cm structural roots were previously (more than 3 years ago) removed of excavation line approximately 3m from base. Sapping near base. Joint crown with tree #207. Asymmetrical crown. Deadwood substantial in lower crown. Deadwood moderate through entire crown. Reduced vigor. 85% live crown ratio.					

**NOTES**

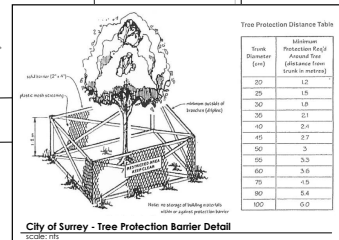
- Install tree protection barriers to City of Surrey requirements and maintain throughout construction. (See detail Ld-1.)
- Trees, their environment, and their health and stability change with time. Our recommendations to protect and retain trees are based on observations made on the date noted, and on a visual assessment of the trees using normal visual assessment procedures. Durante Kruk Ltd. cannot guarantee that trees recommended for retention will remain whole or stable. Durante Kruk Ltd. assumes no responsibility for tree protection unless we have been contracted to provide services in that regard, and provided appropriate notice when work on or near the trees is to be done.
- Tree protection measures and all work on trees in City of Surrey road allowances shall be pre-approved by Vancouver Board of Parks and Recreation Street Tree Division. Pruning etc., if required, must be done by Street Trees Division unless they have directed otherwise.

**GLOSSARY**

CS	City of Surrey
CRZ	Critical Roof Zone (see section 7 for more information)
DM	Trunk Diameter or Breast Height (see section 7 for more information)
LCR	Live Crown Ratio
PL	Property Line
PT	Tree Protection Area (see section 7 for more information)
TPB	Tree Protection Barrier (see section 7 for more information)

**TREE NOTES**

- Non-bayle trees under 0.30 DBH and dead trees listed on shaded background.
- Bayle trees over 0.30 DBH are listed on a white background.
- Indicator of potential fractures in trunk or root collar. If tree be recommended for retention, further investigation would be required to confirm stability.
- Indicator of potential root rot. If tree be recommended for retention, further investigation would be required to confirm stability.
- Historical removal of substantial structural roots within close proximity to the base potentially destabilized this tree. This tree may be at high risk of complete failure and should be removed.



5	2021-04-29	Revision 3 GP Submission
4	2020-10-14	IFC
3	2020-08-27	Revision 1 GP Submission
2	2019-02-21	Issued for 100% DD
1	2018-12-11	Issued for GP



Project:  
**BCS SURREY MCF  
 12345 88 AVENUE  
 SURREY, B.C.**

Drawn by: FF  
 Checked by: SV  
 Date: 2021-04-29  
 Scale: 1:400  
 Drawing Title:

**Existing Trees Management Plan**

Project No.:  
**18015**  
 Sheet No.:



---

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

FROM: **Acting Development Services Manager, Engineering Department**

DATE: **November 15, 2021** PROJECT FILE: **7819-0113-00**

---

RE: **Engineering Requirements (Commercial/Industrial)  
Location: 12300 88 Ave**

### DEVELOPMENT PERMIT

The following are required as a condition of the proposed Development Permit:

- Restrictive Covenant for on-lot detention and flow control;
- Restrictive Covenant for the water quality/sediment control inlet chamber; and
- Confirmation that all displaced groundwater to be mitigated with on-site drainage features

A Servicing Agreement is not required, but the legal documents must be administered through Engineering.



Jeff Pang, P.Eng.  
Acting Development Services Manager

MS

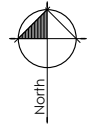
## APPENDIX C – CITY OF SURREY SUMMARY OF TREE PRESERVATION BY TREE SPECIES

Table 1: Summary of Tree Preservation by Tree Species:

Tree Species	Existing	Remove	Retain
<b>Alder and Cottonwood Trees</b>			
Alder	0	0	0
Cottonwood	0	0	0
<b>Deciduous Trees</b> (excluding Alder and Cottonwood Trees)			
Apple	0	0	0
Mountain Ash	0	0	0
Trembling Aspen	0	0	0
Birch	2	2	0
Cherry	0	0	0
Crabapple	0	0	0
Katsura	0	0	0
Maidenhair Tree	0	0	0
Red Maple	0	0	0
<b>Coniferous Trees</b>			
Atlas Cedar	0	0	0
Deodar Cedar	0	0	0
Western Red Cedar	9	5	4
Douglas Fir	0	0	0
Falsecypress	0	0	0
Scots Pine	4	4	0
Spruce	0	0	0
Norway Spruce	0	0	0
<b>Total</b> (excluding Alder and Cottonwood Trees)	15	11	4
<b>Additional Trees in the proposed Open Space / Riparian Area</b>			
<b>Total Replacement Trees Proposed</b> (excluding Boulevard Street Trees)		22	
<b>Total Retained and Replacement Trees</b>		26	

Surrey Project No: \_\_\_\_\_ Arborist: Florian Fisch PN 7921A  
Address: 12345 88 Avenue \_\_\_\_\_ Date: November 2, 2021

## APPENDIX D – EXISTING TREE MANAGEMENT PLAN



Observations and recommendations by Florian Fuchs, ISA Certified Arborist PH-7921A. Observations originally made March 05, 2018 and December 07, 2018. Observations refreshed October 29, 2021.

This drawing is to be read in conjunction with Existing Trees Report for this site by Duranto Kreak Ltd, dated November 2, 2021.

**Arboricultural Notes for Adjacent Site**

1. A letter of consent from the owner of the adjacent site is required for any removal of trees on that site.

4	2021-11-02	Issued with rev. Arborist Report
3	2021-04-29	Revision 3 DP Submission
4	2020-10-14	IFC
3	2020-08-27	Revision 1 DP Submission
2	2019-02-21	Issued for 10/05 DD
1	2018-12-11	Issued for DP
not applicable		Items:



Duranto Kreak Ltd.  
102 - 1827 West 5th Avenue  
Vancouver, BC V6J 1N8  
t: 604 684 4511  
f: 604 684 0577  
www.dk.ca

Project:

**BCH SURVEY MCF  
12345 88 AVENUE  
SURREY, B.C.**

Drawn by:

FF

Checked by:

SV

Date:

2021-11-02

Scale:

not to scale / reduced to 11" x 17"

Drawing Title:

**Existing Trees Management Plan**

Project No.:

18015

Sheet No.:

T-1

Tree No.	Species	DBH (cm)	Height (m)	Field Observations	Health	Root	Canopy	Structure	Retention	Removal	Pruning	Notes
1	Pinus var. (pine)	31	9	Joint crown with tree #1 and 3. Deadwood in inner crown. 100% live crown ratio.								
2	Pinus var. (pine)	27	7	Joint crown with tree #1 and 3. Deadwood in inner crown. Hanger in lower crown. 100% live crown ratio.								
3	Pinus var. (pine)	20	6	Joint crown with tree #1 and 2. Deadwood in inner crown. Previously topped at an above ground. 100% live crown ratio.								
4	Pinus var. (pine)	15	5	Subdominant leader of 1m above ground. Large Purring wound(s) of 1m above ground. Woundwood development is good. 95% live crown ratio.								
5	Pinus var. (pine)	16	4	Limited up to 3m above ground. Previously topped. Subdominant leader broken out. Deadwood in lower crown. Substantial. 45% of crown is dead.								
6	Thuja plicata (western red cedar)	3	4	5. Located below power line. Co-dominant leader broken out of base. Woundwood of base 50% around circumference. Previously topped. Poor structure. One leader (3' 10m) nearly removed.								
7	Pinus var. (pine)	46	13	3' 10m limbs removed from lower crown. Poor pruning cuts. Woundwood development is poor. Hanger on trunk. 85% live crown ratio.								
8	Chromolaena (olive green)	19	5	Located below power line. Hanger on trunk. Deadback within top of crown. Reduced alger.								
9	Betula var. (weiborn red cedar)	4	4	Other stem(s) at 1.4m. Previously heavily pruned. Woundwood development is fair. Sign of decay.								
10	Thuja plicata (western red cedar)	28	4	Located below power line. Joint crown with tree #11. Previously topped. Deadback throughout crown. Reduced alger. 100% live crown ratio.								
11	Thuja plicata (western red cedar)	24	4	Located below power line. Joint crown with tree #10 and #12. Previously topped. Deadback throughout crown. Reduced alger. 100% live crown ratio.								
12	Thuja plicata (western red cedar)	34	4	Located below power line. Joint crown with tree #11 and #13. Previously topped. Deadback throughout crown. Reduced alger. 100% live crown ratio.								
13	Thuja plicata (western red cedar)	22	4	Located below power line. Joint crown with tree #12 and #14. Previously topped. Deadback throughout crown. Reduced alger. 100% live crown ratio.								
14	Thuja plicata (western red cedar)	2	4	Located below power line. Joint crown with tree #13. Previously topped. Deadback throughout crown. Reduced alger. 100% live crown ratio.								
15	Betula var. (pine)	16	10	Other stem(s) at 1.4. 10.8. Small decay column.								
16	Thuja plicata (western red cedar)	54	10	70% dead from top-down.								
17	Thuja plicata (western red cedar)	2	12	Joint crown with tree #18 and 19. 100% live crown ratio.								
18	Thuja plicata (western red cedar)	4	7	Joint crown with tree #17, 19, 22 and 21. 100% live crown ratio.								
19	Thuja plicata (western red cedar)	5	7	Joint crown with tree #17, 18 and 20. 100% live crown ratio.								
20	Thuja plicata (western red cedar)	24	8	Joint crown with tree #18, 19, 21 and 22. Turb. wound(s) of base. 50% around circumference. 100% live crown ratio.								
21	Thuja plicata (western red cedar)	26	4	Turb. wound(s) of base. 45% around circumference.								
22	Thuja plicata (western red cedar)	26	7	Joint crown with tree #21 and 23. 100% live crown ratio.								
23	Thuja plicata (western red cedar)	31	7	Joint crown with tree #22 and 24. 100% live crown ratio.								
24	Thuja plicata (western red cedar)	31	7	Joint crown with tree #22 and 24. 100% live crown ratio.								
<b>OFF SITE</b>												
25	Alnus var. (almond)	9	3	Deadback throughout crown from top-down.								
26	Alnus var. (almond)	11	3	Previously topped. Slight lean south. Turb. wound(s) near base. Woundwood development is good.								
27	Alnus var. (almond)	12	4	Lean east. Turb. wound(s) from base to 1m above ground. Woundwood development is good.								
28	Not feeding			Tree has been removed.								
29	Alnus var. (almond)	4	2	Turb. wound of base. Woundwood development is good. Main leader broken out of 1m above ground. Woundwood development is good. Strong second leader.								
30	Alnus var. (almond)	5	1	Turb. wound of base. Woundwood development is good.								
31	Alnus var. (almond)	10	3	Slight lean east. Turb. wound(s) of base. Woundwood development is fair. Deadback throughout crown.								
32	Alnus var. (almond)	10	4	Slight lean south. Turb. wound(s) from base to 1m above ground. Woundwood development is fair. Deadback throughout crown.								
<b>ADJACENT SITE</b>												
33	Fraxinus mandshurica (Douglas fir)	89	27	Tag #138. Base immaturity of property line. Previous excavation (more than 4 weeks ago) of 4m from base on two sides. Several 40cm bolts previously removed. Sapping near base. Joint crown with tree #20. Limbs removed mid crown for clearance. Deadback moderate. Reduced alger. Deadback from top down substantial. Top 10% dead. 95% live crown ratio.								
34	Fraxinus mandshurica (Douglas fir)	51	21	Tag #211. Previous excavation (more than 4 weeks ago) of 3.5m from base. Several 40cm bolts previously removed. Joint crown with trees #20 and #203. Limbs removed mid crown for clearance. Deadback moderate. Reduced alger. Deadback throughout crown. Main leader dead(s) of 1m from top. Reduced alger. Sapping top section of crown. 95% live crown ratio.								
35	Fraxinus mandshurica (Douglas fir)	19	32	Tag #205. Slump near base. Sapping near base. Joint crown with trees #22 and #207. Asymmetrical crown. Scaffold limbs broken out in lower crown. Historical fall(s) of main leader of 3m from top. Co-dominant leader. Limbs from 1m from top. Sapping near base. PFLZ tubes on lower trunk indicate potential infestation by bark beetles. Joint crown with tree #24. #26 and #27. Asymmetrical crown. Reduced alger. 85% live crown ratio.								
36	Fraxinus mandshurica (Douglas fir)	44	7	Lean north with tree #25. Sapping near base. PFLZ tubes on lower trunk indicate potential infestation by bark beetles. Joint crown with tree #24. #26 and #27. Asymmetrical crown. Reduced alger. 85% live crown ratio.								
37	Fraxinus mandshurica (Douglas fir)	47	7	Lean north with tree #25. Sapping near base. PFLZ tubes on lower trunk indicate potential infestation by bark beetles. Joint crown with tree #24. #26 and #27. Asymmetrical crown. Reduced alger. 85% live crown ratio.								
38	Fraxinus mandshurica (Douglas fir)	49	9	Lean north with tree #25. Sapping near base. PFLZ tubes on lower trunk indicate potential infestation by bark beetles. Joint crown with tree #24. #26 and #27. Asymmetrical crown. Reduced alger. 85% live crown ratio.								
39	Fraxinus mandshurica (Douglas fir)	73	29	Lean north with tree #25. Sapping near base. PFLZ tubes on lower trunk indicate potential infestation by bark beetles. Joint crown with tree #24. #26 and #27. Asymmetrical crown. Reduced alger. 85% live crown ratio.								
<b>TREE NOTES</b>												
* Non - below trees under 0.30m and dead trees listed on shaded background.												
* Below trees over 30.20m and any tree on city street or in white background.												
* Indication of potential fracture in trunk or root or visible. Tree to be recommended for retention, further investigation would be required to confirm feasibility.												
* Indication of potential soil sit. If tree be recommended for retention, further investigation would be required to confirm feasibility.												
* Historical removal of substantial structure within close proximity to the base potentially destabilized this tree. This tree may be of high risk of complete failure and/or limb loss.												

Street Tree has been removed and is no longer existing

Dead Tree may be left in place as wildlife snag

Dead Tree may be left in place as wildlife snag

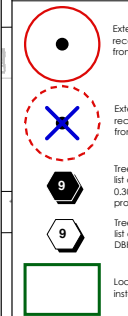
**NOTES**

1. Install tree protection barriers to City of Surrey requirements and maintain throughout construction. (See detail d-1.)
2. Trees, their environment, and their health and stability change with time. Our recommendations to protect and retain trees are based on observations made on the date noted, and on a visual assessment of the trees using normal visual assessment procedures. Duranto Kreak Ltd. cannot guarantee that trees recommended for retention will remain whole or stable. Duranto Kreak Ltd. assumes no responsibility for tree protection unless we have been contacted to provide services in that regard, and provided appropriate notice when work on or near the trees is to be done.
3. Tree protection measures and all work on trees in City of Surrey road allowances shall be pre-approved by Vancouver Board of Parks and Recreation Street Tree Division, Pruning etc., if required, must be done by Street Trees Division unless they have directed otherwise.

**GLOSSARY**

CoD	City of Surrey
CzE	Critical Root Zone (see section 7 for more information)
DBH	Trunk Diameter at Breast Height (see section 7 for more information)
LCR	Live Crown Ratio
PL	Property Line
PTA	Tree Protection Area (see section 7 for more information)
TFB	Tree Protection Barrier (see section 7 for more information)

**DRAWING KEY**



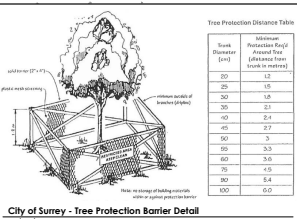
Extent of drip line of existing tree recommended for retention (location from survey by BCUS Land Surveyor)

Extent of drip line of existing tree recommended for removal (location from survey by BCUS Land Surveyor)

Tree Number referred to in existing trees list and report for non-Low size trees with DBH 0.30m or larger (or for any trees on city property)

Tree Number referred to in existing trees list and report for non-Low size trees with DBH smaller than 0.30m

Location of protective barrier to be installed before start of other work on site.



Tree Protection Distance Table

Tree Diameter (cm)	Minimum Retention Depth (Excludes Tree Trunk in meters)
20	1.2
25	1.5
30	1.8
35	2.1
40	2.4
45	2.7
50	3.0
55	3.3
60	3.6
65	3.9
70	4.2
75	4.5
80	4.8
85	5.1
90	5.4
95	5.7
100	6.0

