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|-------|------------------------------------------------------|-------|-------------------------------------------------|
| To:   | Gary Noble<br>City of Nanaimo<br>Planning Department | From: | Stefan Schulson, Architect AIBC<br>Victoria, BC |
| File: | 144316181                                            | Date: | March 26, 2018                                  |

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**Reference:** NRGH – Thermal Energy Centre Design Rationale

The Thermal Energy Centre (TEC) is a new proposed building for the Nanaimo Regional General Hospital (NRGH) campus; the TEC will house the new boiler infrastructure for the hospital, replacing the existing boilers that are currently located in the main hospital building.

The TEC is sited at the southwest corner of the NRGH site, adjacent to the Water Supply Building (WSB) and near the entrance to the existing Rehabilitation Building. This location is proximal to the hospital's other service buildings, further consolidating the hospital service infrastructure into a defined district within the overall campus.

The TEC building is conceived as two distinct blocks: a larger 9 meter high mass that fronts onto Boundary Avenue and houses the boilers and other machinery; and a smaller 5.5 meter high annex that faces back to the main hospital block and encapsulates the administrative functions of the building. The architecture of the larger mass is a continuation of the theme established by the WSB, incorporating the brown brick that is thematic of the entire hospital facility, as well as the glazed curtain wall facing out to Boundary Avenue. The brown brick flanks the north and south walls of the boiler room and is capped by a band of vertically-oriented insulated metal panel and perforated metal screening at the tops of the glazing. The mass of the north and south walls are also broken up by tall vertical strips of glazing, as well as the inclusion of a modular trellis system which will serve as the substrate for the growth of climbing plants.

Whereas the inner functions of the WSB are hidden behind opaque glazing, the TEC will offer a clear view of its inner workings to the street; the curtain wall system facing Boundary Avenue will utilize clear glazing and capless mullions to showcase the machinery at work. Vertical strips of acoustic vents punctuate the curtain wall system, adding verticality to an otherwise horizontal mass; at the upper portion of the glazing perforated metal screening will create an interesting effect as it disperses the interior light escaping the boiler room, while also offering some diffusion of sunlight entering the space. The base of the east and west walls of the larger mass will be clad in black corrugated metal panels, a traditional west coast industrial material.

The annex portion of the TEC materially differentiates itself from the larger boiler house through the use of an elongated charcoal brick that is visually detached from the larger block by strips of vertical glazing. The main entrance to the building is clearly marked though the introduction of red metal panels which clad the entry canopy. The mechanical equipment that is located on the roof of the annex will be screened by the same perforated metal material that is used at the top of the curtain wall glazing.

The TEC building is set back 6.0 meters from the property line along Boundary Avenue; this setback strip will be landscaped with new trees, native grasses and boulders to create a natural buffer zone between the building and the street and enhance the overall relationship between the hospital campus and the adjoining neighbourhood. The area between the TEC and the existing Rehabilitation Building will be seeded with grass and planted with a few select trees to create a communal intermediary space between the hospital and the rest of the campus service area.



March 26, 2018

Gary Noble

Page 2 of 2

**Reference:** NRGH – Thermal Energy Centre Design Rationale

**STANTEC ARCHITECTURE LTD.**



**Stefan Schulson, M.Arch, Architect AIBC**

Architect

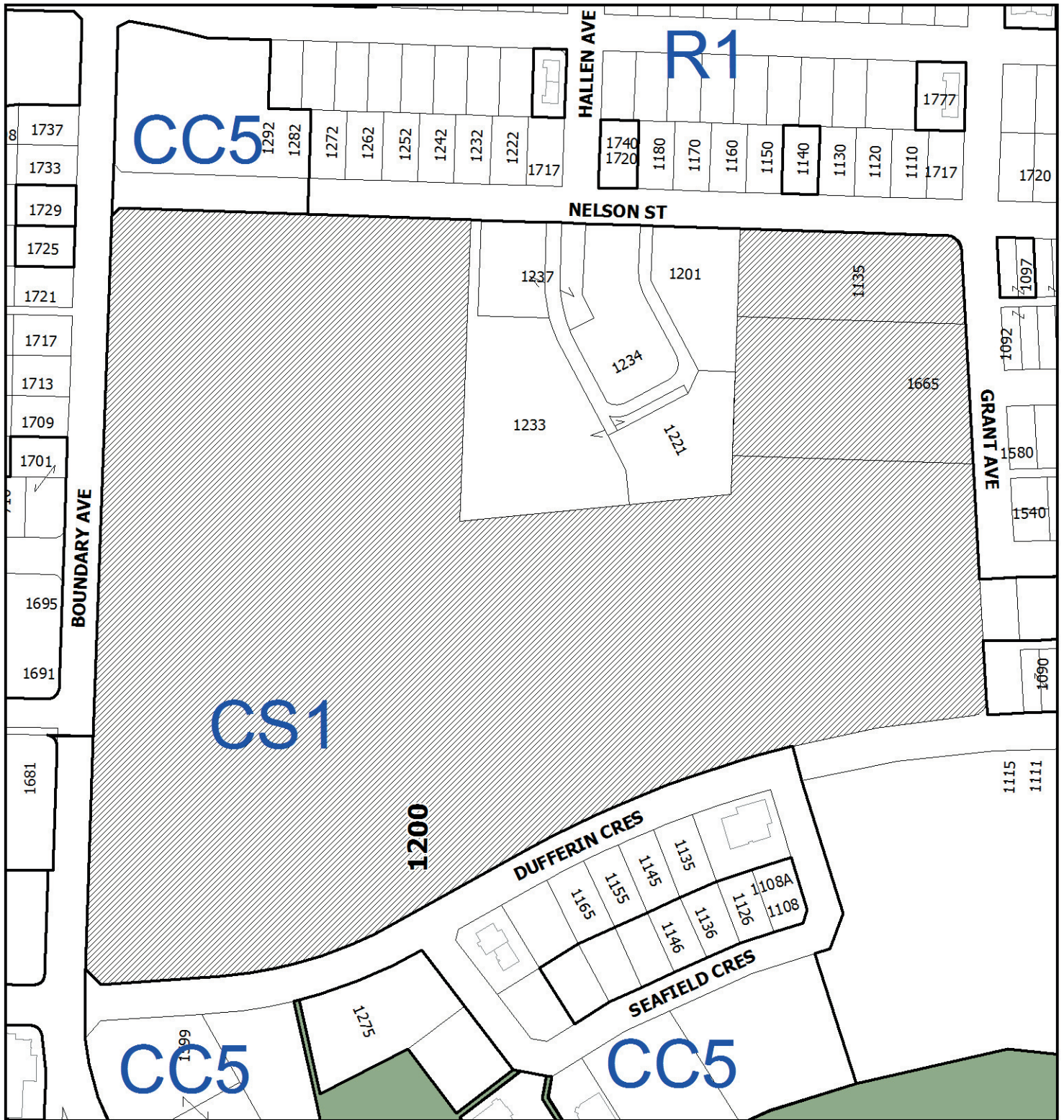
Phone: 250.389.2509

Cell: 250.217.2686

stefan.schulson@stantec.com

**Attachment:** Attachment

c. C.C.



DEVELOPMENT PERMIT NO. DP001099

## LOCATION PLAN

 **Subject Property**



Civic: 1200 Dufferin Crescent  
 Lot A, District Lot 97-G, Newcastle Reserve,  
 Section 1, Nanaimo District, Plan 50077,  
 Except that Part in Plan VIP51807

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1200 Dufferin Crescent, Nanaimo, BC

## RENDERINGS

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Project No.  
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| Revision | Drawing No. |
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Sheet of

**A-003**

NORTH-WEST MAIN ENTRY VIEW OF THE NEW THERMAL ENERGY CENTRE BUILDING, FROM BESIDE REHAB BUILDING LOOKING TOWARD BOUNDARY AVENUE.



SOUTH-EAST VIEW OF THE NEW THERMAL ENERGY CENTRE BUILDING'S STREET-SIDE FACADE, FROM BOUNDARY AVENUE.



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Title  
SITE PLAN - NEW

Project No. 144316181  
Revision  
Scale 1:200  
Drawing No.

Sheet of **A-101**

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**1 SITE PLAN - NEW**  
A-101 1:200



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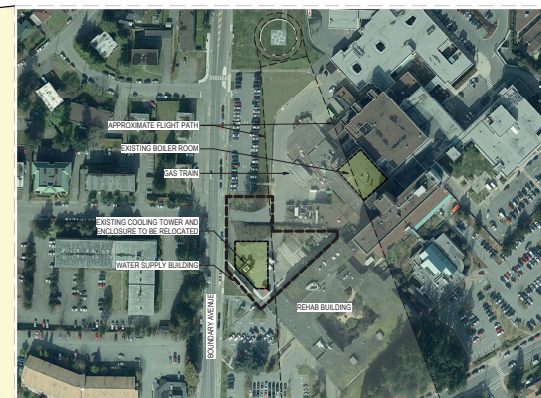
## SITE AND PROJECT INFORMATION

|                          |             |
|--------------------------|-------------|
| Project No.<br>144316181 | Scale       |
| Revision                 | Drawing No. |

Sheet of **A-001**

### 1 PROJECT SITE LOCATION

|       |     |
|-------|-----|
| A-001 | NTS |
|-------|-----|



## 2 SITE CONTEXT - EXISTING

A-001

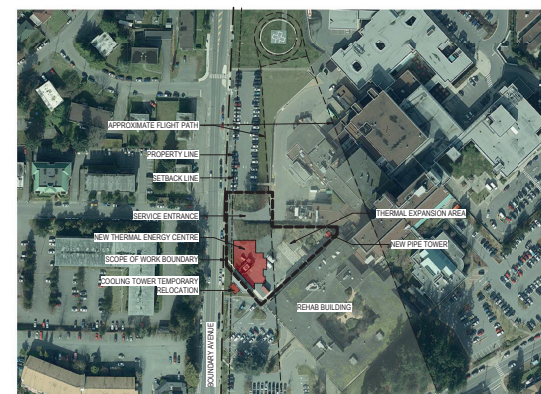
| PROJECT SUMMARY        |                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| ADDRESS                | 1202 DUFFERIN CRESCENT,<br>NANAIMO, V9S 2S7<br>BRITISH COLUMBIA                                                                    |
| LEGAL DESCRIPTION      | LOT 4 DISTRICT LOT 81-G,<br>NEIGHBORLY RESERVING, SECTION 1,<br>NANAIMO DISTRICT, PLAN 58077,<br>EXCEPT THAT PART IN PLAN V9S/1607 |
| LOCATION               | 48-1852-123-9608                                                                                                                   |
| ZONE                   | C1 (COMMUNITY SERVICE ZONE)                                                                                                        |
| AREA                   |                                                                                                                                    |
| EXISTING BUILDING AREA | 146370 m <sup>2</sup>                                                                                                              |
| NEW BUILDING AREA*     | 438172 m <sup>2</sup>                                                                                                              |
| TOTAL BUILDING AREA    | 660172 m <sup>2</sup>                                                                                                              |
|                        | 444781 m <sup>2</sup>                                                                                                              |
| ZONING                 | PROVIDED                                                                                                                           |
| SITE COVERAGE          | 40% 30.4%                                                                                                                          |
| SETBACKS               |                                                                                                                                    |
| FRONT YARD             | 6.0 m 6.0 m                                                                                                                        |
| SIDE YARD              | 4.0 m n/a                                                                                                                          |
| FLANKING SIDE YARD     | 6.0 m n/a                                                                                                                          |
| REAR YARD              | 7.5 m n/a                                                                                                                          |
| LOADING                | CROSS FLOOR AREA LESS<br>THAN 200m <sup>2</sup> REQUIRES 1<br>STALL 1 PROVIDED                                                     |
| PARKING                | 1 SPACE FOR EVERY 50m <sup>2</sup><br>OF GROSS FLOOR AREA<br>12 REQUIRED 6 PROVIDED                                                |
| BUILDING HEIGHT        | 14 m MAXIMUM 9 m HIGH                                                                                                              |
| VARIANCES REQUESTED    | NONE                                                                                                                               |

\*AS DEFINED IN BCBC 2012

| BUILDING CODE SUMMARY   |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| GOVERNING CODES         | BC BUILDING CODE 2012 (BCBC)<br>ASHRAE 2016                                                                  |
| MAJOR OCCUPANCY         | D OFFICE ANNEX<br>F2 BOILER ROOM                                                                             |
| FIREWALLS               | NONE                                                                                                         |
| ARTICLE OF CONSTRUCTION | 3.2.2.61 GROUP D, UP TO 2 STORIES, SPRINKLERED<br>3.2.2.77 GROUP F, DIVISION 2, UP TO 2 STORIES, SPRINKLERED |
| NUMBER OF STREETS       | BUILDING FACES 1 STREET                                                                                      |

| BUILDING SPATIAL SEPARATION            |         |        |        |         |
|----------------------------------------|---------|--------|--------|---------|
| EXPOSING FACE                          | NORTH   | SOUTH  | EAST   | WEST    |
| LIMITING DISTANCE                      | 14.95 m | 1.29 m | 6.85 m | 12.17 m |
| AREA OF ALLOWABLE UNPROTECTED OPENINGS | 100%    | 8%     | 100%   | 84%     |
| AREA OF UNPROTECTED OPENINGS           | 14.47%  | 23.07% | 42.51% | 56.28%  |

\* GLAZING ON SOUTH ELEVATION TO BE SPRINKLER PROTECTED.



## 3 SITE CONTEXT - NEW

A-001

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Current Planning & Subdivision



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A-102

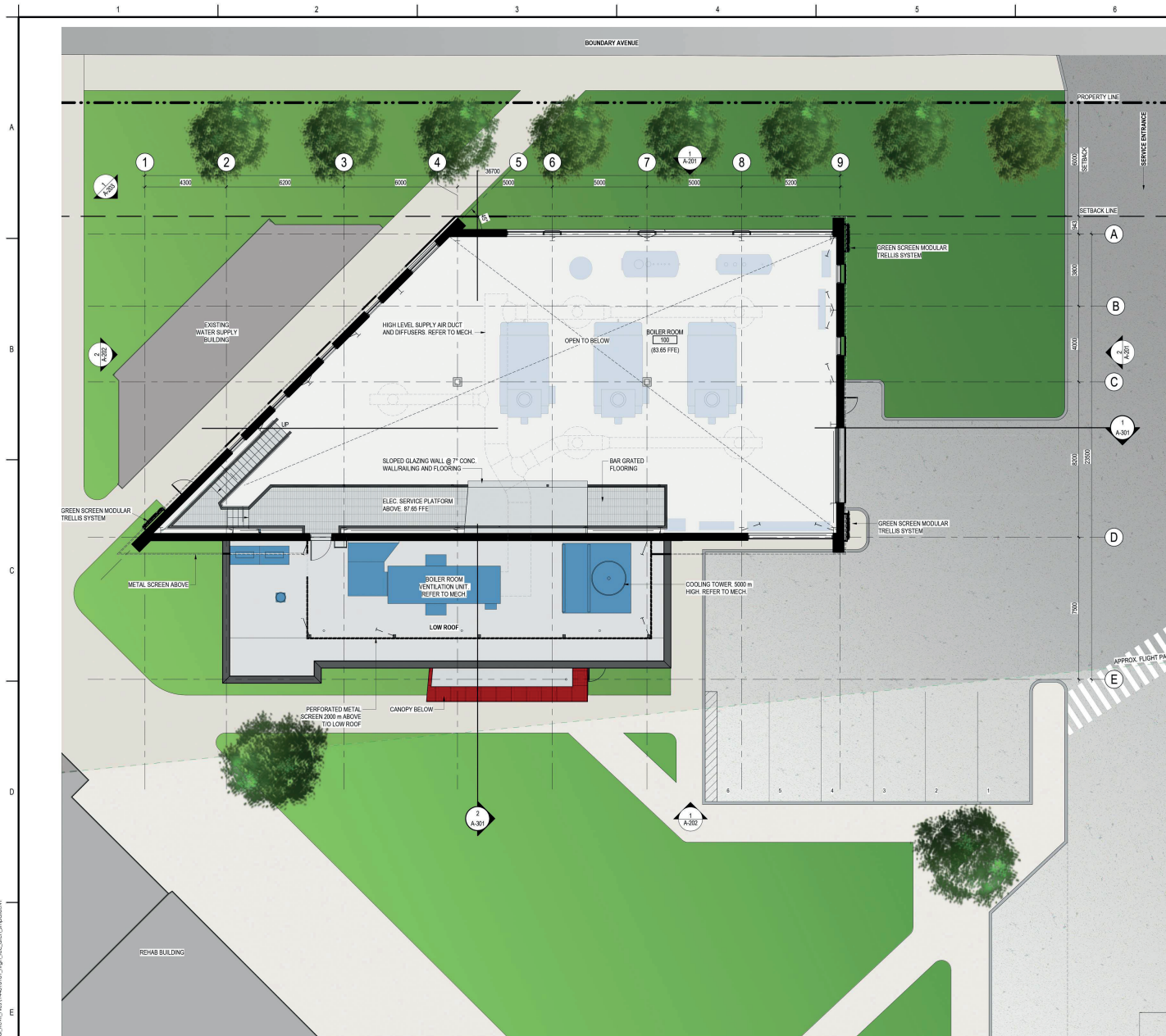


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Current Awareness in Biological Sciences



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**1 SERVICE PLATFORM LEVEL AND LOWER ROOF PLAN**  
A-103 1:100



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**1 HIGH ROOF PLAN**  
A-104 1:100

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Notes

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NRGH THERMAL ENERGY CENTRE

1200 Dufferin Crescent, Nanaimo, BC

Title  
ELEVATIONS

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|--------------------------|----------------|
| Project No.<br>144316181 | Scale<br>1:100 |
| Revision                 | Drawing No.    |

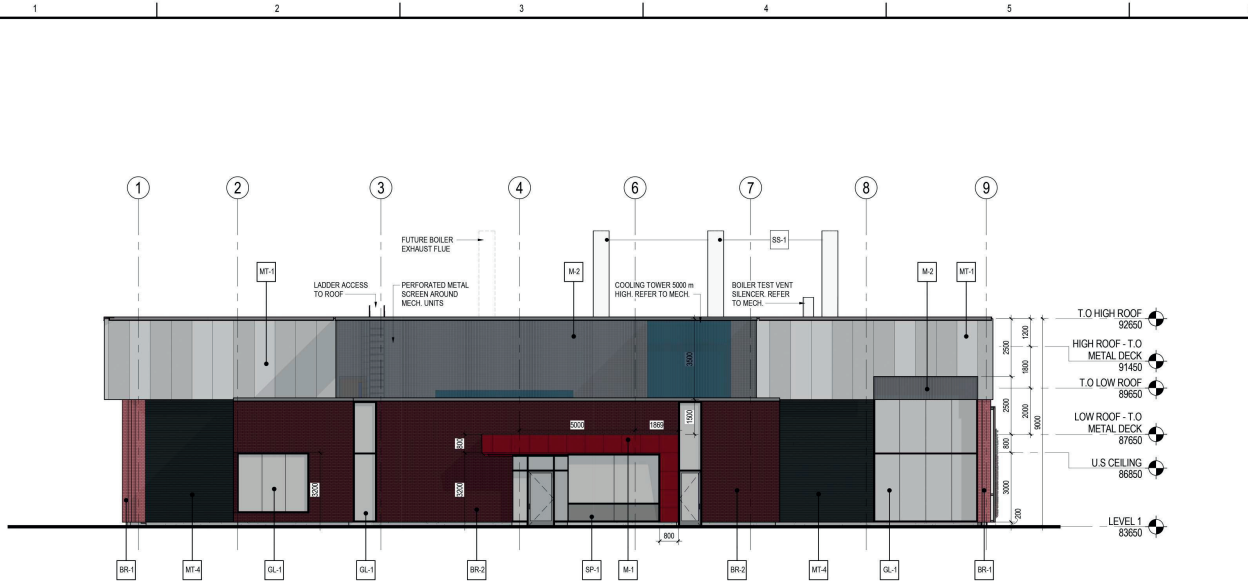
Sheet \_\_\_\_\_ of \_\_\_\_\_ **A-201**



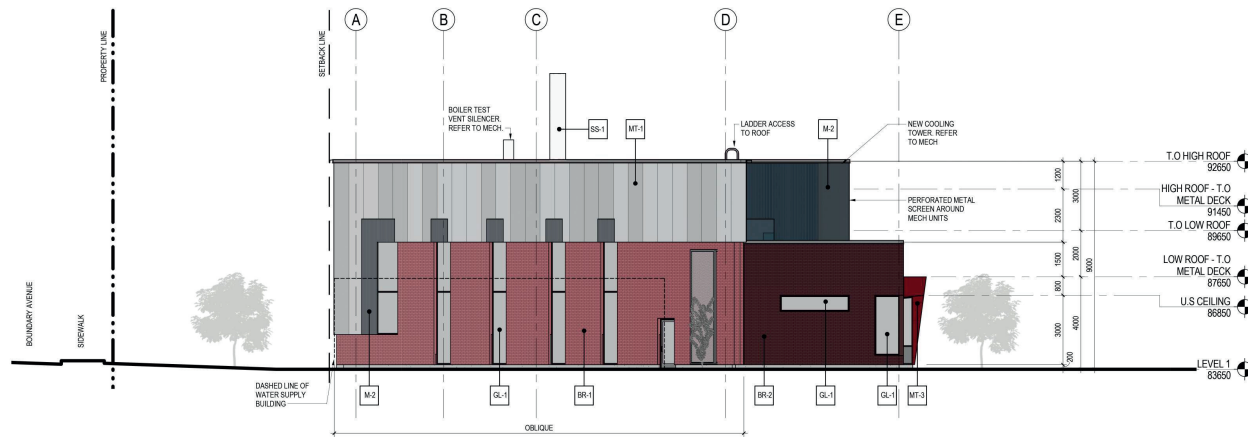
| MATERIAL LEGEND |                                                       |                        |
|-----------------|-------------------------------------------------------|------------------------|
| TAG             | MATERIAL                                              | FINISH COLOUR          |
| MT-1            | KINGSPIR INSULATED METAL PANELS                       | TWO TONED GREY         |
| MT-2            | PERFORATED METAL PANELS                               | DARK GREY              |
| MT-3            | KINGSPIR INSULATED METAL PANELS                       | COLONIAL RED           |
| MT-4            | HORIZONTAL CORRUGATED METAL PANELS                    | BLACK                  |
| GL-1            | CURTAIN WALL GLAZING                                  | -                      |
| BR-1            | STANDARD BRICK                                        | BROWN VARIETONE        |
| BR-2            | NORMAN BRICK                                          | BROWN VARIETONE        |
| CO-1            | CONCRETE FACED INSULATION                             | TED                    |
| L-1             | ACOUSTICALLY RATED VENTILATION LOUVER (50% FREE AREA) | BLACK, ALUMINUM FINISH |
| TR-1            | GREEN SCREEN MODULAR TIRELLI SYSTEM                   | BLACK                  |
| SP-1            | SPANDREL PANELS                                       | DARK GREY              |
| SS-1            | STAINLESS STEEL BOILER EXHAUST DUCT                   | STAINLESS STEEL FINISH |

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**1 EAST ELEVATION**  
A-202  
1:100



**2 SOUTH ELEVATION**  
A-202  
1:100

| TAG  | MATERIAL                                              | FINISH COLOUR          |
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| MT-1 | KINGSPAN INSULATED METAL PANELS                       | TWO TONED GREY         |
| MT-2 | PERFORATED METAL PANELS                               | DARK GREY              |
| MT-3 | KINGSPAN INSULATED METAL PANELS                       | COLONIAL RED           |
| MT-4 | HORIZONTAL CORRUGATED METAL PANELS                    | BLACK                  |
| GL-1 | CURTAIN WALL GLAZING                                  | -                      |
| BR-1 | STANDARD BRICK                                        | BROWN VARI-TONE        |
| BR-2 | NORMAN BRICK                                          | ESBONY MISSION         |
| CO-1 | CONCRETE FACED INSULATION                             | TBD                    |
| L-1  | ACOUSTICALLY RATED VENTILATION LOUVER (50% FREE AREA) | BLACK, ALUMINUM FINISH |
| TR-1 | GREEN SCREEN MODULAR TRELLIS SYSTEM                   | BLACK                  |
| SP-1 | SPANDREL PANELS                                       | DARK GREY              |
| SS-1 | STAINLESS STEEL BOILER EXHAUST FLUE                   | STAINLESS STEEL FINISH |

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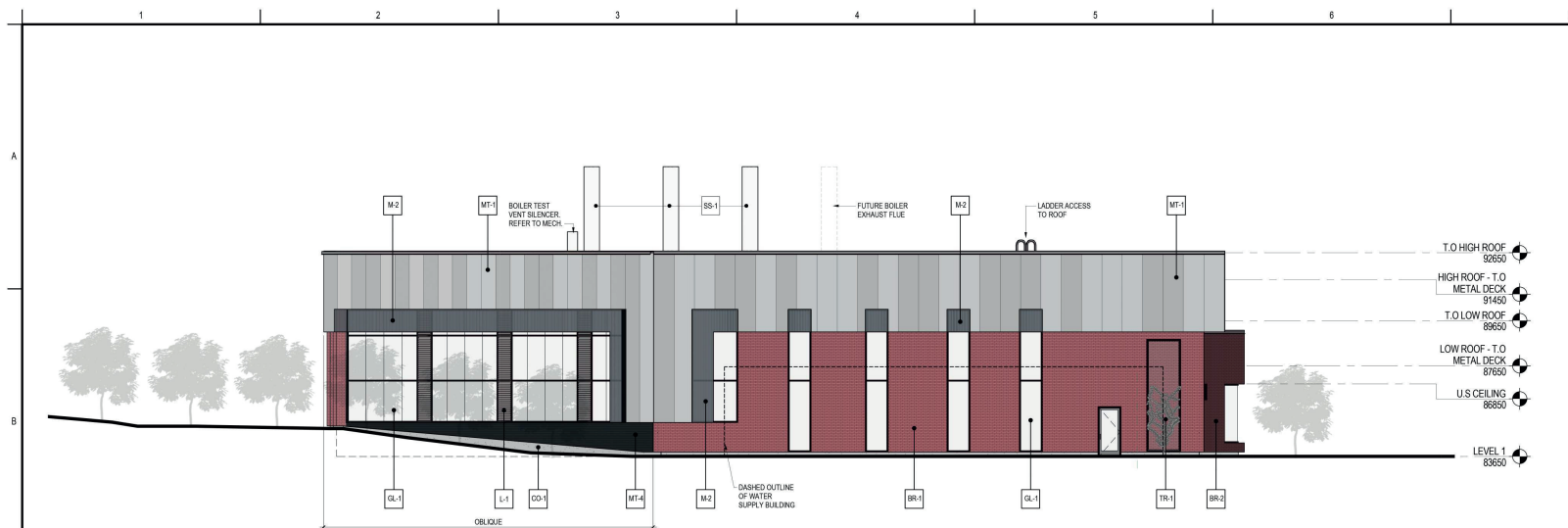
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AUTHORITY  
NRGH THERMAL ENERGY CENTRE

1200 Dufferin Crescent, Nanaimo, BC

Title  
ELEVATIONS

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Sheet \_\_\_\_\_ of \_\_\_\_\_ **A-203**



**1 SOUTH-WEST ELEVATION**  
A-203 1:100

| MATERIAL LEGEND |                                                       |                         |
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| TAG             | MATERIAL                                              | FINISH COLOUR           |
| MT-1            | KINGSPIR INSULATED METAL PANELS                       | TWO TONED GREY          |
| MT-2            | PERFORATED METAL PANELS                               | DARK GREY               |
| MT-3            | KINGSPIR INSULATED METAL PANELS                       | COLONIAL RED            |
| MT-4            | HORIZONTAL CORRUGATED METAL PANELS                    | BLACK                   |
| GL-1            | CURTAIN WALL GLAZING                                  | -                       |
| BR-1            | STANDARD BRICK                                        | BROWN VARIATION         |
| BR-2            | NORMAN BRICK                                          | EBONY MISSION           |
| CO-1            | CONCRETE FACED INSULATION                             | TBD                     |
| L-1             | ACOUSTICALLY RATED VENTILATION LOUVER (50% FREE AREA) | BLACK, ALUMINIUM FINISH |
| TR-1            | GREEN SCREEN MODULAR TRELLIS SYSTEM                   | BLACK                   |
| SP-1            | SPANDREL PANELS                                       | DARK GREY               |
| SS-1            | STAINLESS STEEL BOILER EXHAUST FLUE                   | STAINLESS STEEL FINISH  |

# MATERIAL BOARD

WALLS  
Basis of Design: BC Brick Supplies Ltd.

BROWN VARITONE | Standard 7.5" long x 2.5" tall x 3.5" deep



EBONY MISSION | Norman 11.5" long x 2.5" tall x 3.5" deep



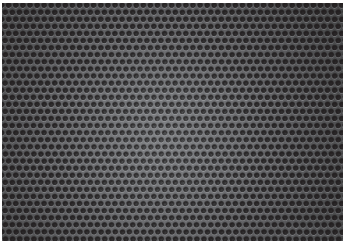
WALLS  
Basis of Design: Galvalume Corrugated Metal Panels

BLACK | Horizontal Panels



WALLS  
Basis of Design: Perforated Metal Panels

DARK GREY | Mesh-like pattern above Glazing



WALLS  
Basis of Design: Kingspan Insulated Metal Panels

LIGHT GREY



DARK GREY



COLONIAL RED | Entrance Canopy



WALLS  
Basis of Design: Anodized Aluminum Mechanical Louvre

BLACK | Acoustically rated Ventilation Louvres (50% Free Area)



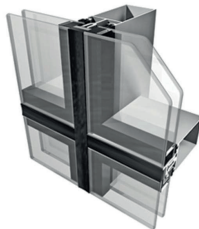
WALLS  
Basis of Design: Anodized Aluminum Curtain Wall Spandrel Panels

DARK GREY



WALLS  
Basis of Design: Anodized Aluminum Curtain Wall Mullions (Capless)

BLACK WITH CLEAR GLAZING



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NRGH THERMAL ENERGY CENTRE | 144316181 | VANCOUVER ISLAND HEALTH AUTHORITY | March 2018



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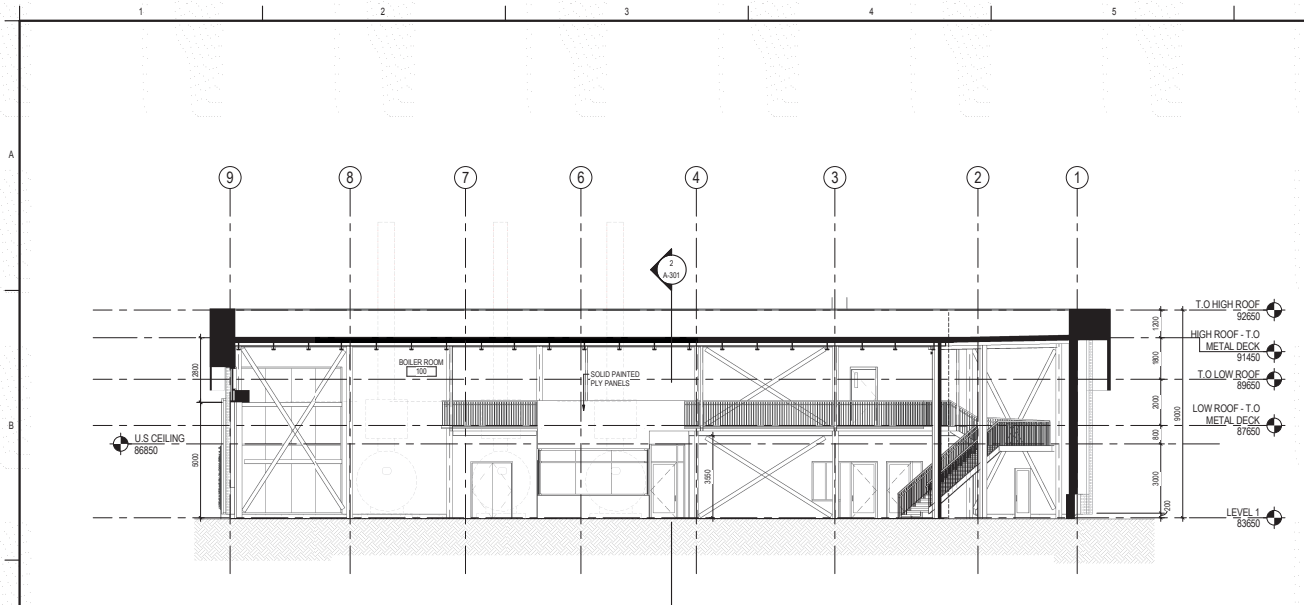


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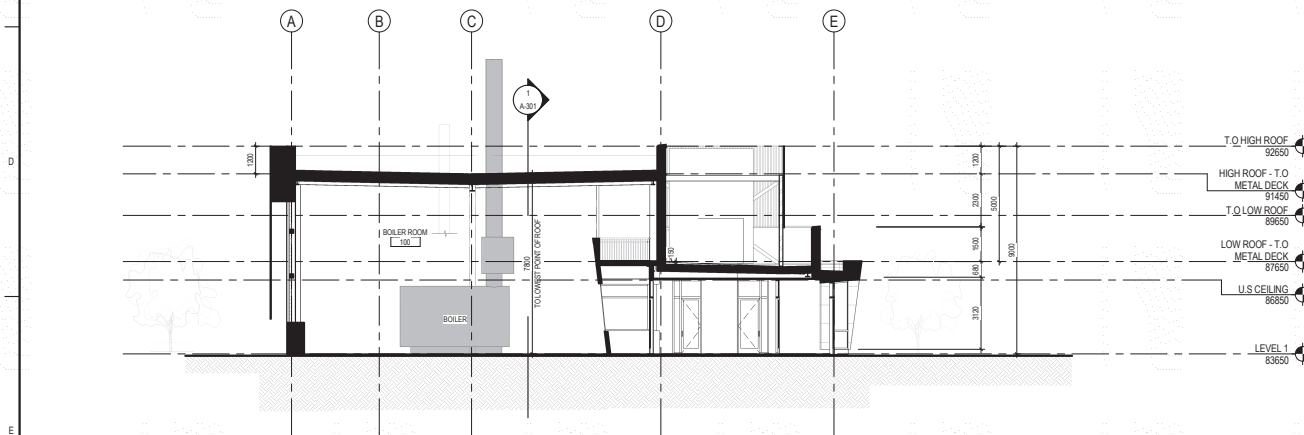
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**1 SECTION 1**  
A-301 1:100



**2 SECTION 2**  
A-301 1:100



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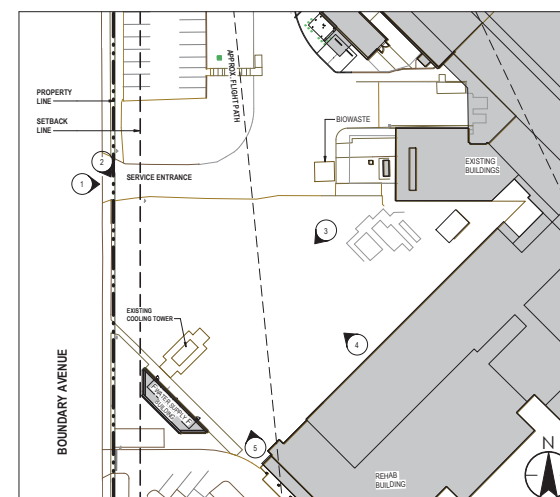
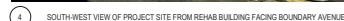
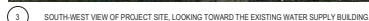
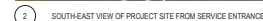
1200 Dufferin Crescent, Nanaimo, BC

Title  
PHOTOGRAPHS OF EXISTING  
CONDITIONS

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Sheet of

**A-002**



1 PHOTO KEY PLAN

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Aerial Photo



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